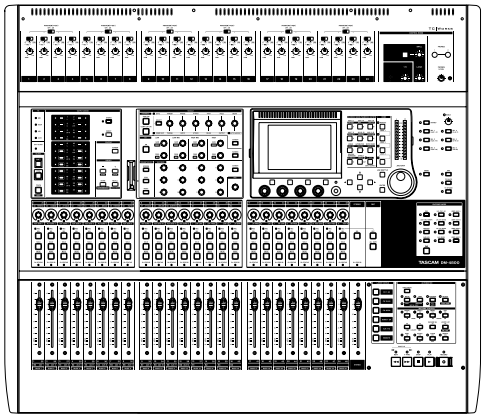

TASCAM
TEAC Professional Division

SERVICE MANUAL

DM-4800

Digital Mixing Console

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INSTRUCTIONS FOR SERVICE PERSONNEL

BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

Effective : February, 2008

S-0169

1. SPECIFICATIONS
仕様

Analog audio I/O

All specifications are given with the factory reference level of –16 dBFS.

MIC inputs (channels 1 through 24)
Balanced XLR-type female connectors[a]
Adjustable input level: (–60 dBu (TRIM max) to –4 dBu (0 dB pad)) (–40 dBu (TRIM max) to +16 dBu (–20 dB pad))
Input impedance 2.2kΩ

PHANTOM (+48V) +48 V phantom power. Switchable in blocks of 4 channels (1–4, 5–8, 9–12, 13–16)

LINE IN (BAL) inputs (channels 1 through 24)
Balanced 1/4" jacks
Adjustable input level (–44 dBu (TRIM max) to +12 dBu (TRIM min))
Input impedance 10kΩ

INSERT connections (channels 1 through 24)
1/4" TRS jacks
Send: nominal output level –2dBu, maximum output level +14 dBu, impedance 100Ω
Return: nominal input level –2dBu, headroom 16 dB, impedance 10 kΩ

ASSIGNABLE RETURNS (BAL) (1 through 8)
Balanced 1/4" jacks
Nominal input level: +4 dBu
Headroom: 16 dB
Input impedance: 5 kΩ

ASSIGNABLE SENDS (1 through 8)
Pseudo-balanced 1/4" jacks
Nominal output level: –2 dBu
Maximum output level: +14 dBu
Output impedance: 100 Ω

2 TR IN (L/R) 2 x RCA pin jacks
Nominal input level –10 dBV
Headroom: 16 dB
Input impedance: 10 kΩ

STEREO OUTPUT(L/R) Balanced XLR-type male connectors
Nominal output level: +4 dBu
Maximum output level: +20 dBu
Output impedance: 100 Ω

アナログオーディオ入出力

＊アナログオーディオ出力仕様は基準レベル＝－16dBFS（Full Scale）のとき（標準設定）の仕様を表示しています。

MIC 入力（CH1～24）
コネクター：XLR-3-31タイプ、バランス
（1：GND、2：HOT、3：COLD）
入力インピーダンス： 2.2 kΩ
入力レベル：
パッドオフ時： －60dBu（TRIM最大）～－4dBu（TRIM最小）
パッドオン時： －40dBu（TRIM最大）～＋16dBu（TRIM最小）

PHANTOM（＋ 48V）
＋48Vのファントム電源を4チャンネル単位（1-4、5-8、9-12、13-16）でオン／オフ可能

LINE IN（BAL）入力（CH1～24）
コネクター：6φステレオホンジャック、バランス
（チップ：HOT、リング：COLD、スリーブ： GND）
入力インピーダンス： 10kΩ
入力レベル： －44dBu～＋12dBu

INSERT（CH1～24）
コネクター：
6φ3極（TRS）ホンジャック、アンバランス（チップ：センド、リング：リターン、スリーブ：GND）
センド（チップ）
出力インピーダンス：100Ω
規定出力レベル： －2dBu
最大出力レベル： ＋14dBu
リターン（リング）
入力インピーダンス：10kΩ
規定入力レベル： －2dBu
最大入力レベル： ＋14dBu

ASSIGNABLE RETURNS（BAL）（1～8）
コネクター：6φステレオホンジャック、バランス
規定入力レベル： ＋4dBu
ヘッドルーム： 16dB
入力インピーダンス： 5kΩ

ASSIGNABLE SENDS（1～8）
コネクター：6φステレオホンジャック、疑似バランス
規定出力レベル： －2dBu
最大出力レベル： ＋14dBu
出力インピーダンス： 100Ω

2TR IN（L, R）
コネクター：RCAピンジャック、アンバランス
規定入力レベル： －10dBV
ヘッドルーム： 16dB
入力インピーダンス： 10kΩ

STEREO OUTPUT（L, R）
コネクター：XLR-3-32 タイプ、バランス
（1：GND、2：HOT、3：COLD）
規定出力レベル： ＋4dBu
最大出力レベル： ＋20dBu
出力インピーダンス： 100Ω

MONITOR OUTPUTS (LARGE (BAL))
Balanced 1/4" jacks
Nominal output level: +4 dBu
Maximum output level: +20 dBu
Output impedance: 100 Ω

MONITOR OUTPUTS (SMALL (BAL))
Balanced 1/4" jacks
Nominal output level: +4 dBu
Maximum output level: +20 dBu
Output impedance: 100 Ω

MONITOR OUTPUTS (STUDIO)
RCA pin jacks
Nominal output level –2 dBu
Maximum output level: +14 dBu
Output impedance: 100 Ω

PHONES 2 x 1/4" stereo jacks
50 mW + 50 mW totald
32 Ω

a. all XLR-type connectors are wired 1=ground, 2="hot", 3="cold"
b. all balanced 1/4" jacks are wired sleeve=ground, ring=cold, tip=hot
c. all TRS 1/4" jacks are wired sleeve=ground, ring=return, tip=send
d. Maximum with both PHONES jacks driven at maximum

Digital audio I/O

DIGITAL INPUTS(1, 2) 2 x XLR-type female connectors (input impedance 110 Ω) or
2 x RCA pin jacks (input impedance 75 Ω) (selectable)
AES3-1992 or IEC60958 data format (automatically detected)
24-bit word length
Switchable sampling frequency conversion available

DIGITAL OUTPUTS(1, 2)
2 x XLR-type male connectors (output impedance 110 Ω)
2 x RCA pin jacks (output impedance 75 Ω)
AES3-1992 or IEC60958 data format (software selectable)
24-bit word length

TDIF-1(1, 2, 3) 3 x 25-pin (female) D-sub connectors (metric lock screws)
Conform to TDIF-1 standard
24-bit word length

MONITOR OUTPUTS - LARGE（BAL）
コネクター：6φホンジャック、バランス
（チップ：HOT、リング：COLD、スリーブ： GND）
規定出力レベル： ＋4dBu
最大出力レベル： ＋20dBu
出力インピーダンス： 100Ω

MONITOR OUTPUTS - SMALL（BAL）
コネクター：6φホンジャック、バランス
（チップ：HOT、リング：COLD、スリーブ： GND）
規定出力レベル： ＋4dBu
最大出力レベル： ＋20dBu
出力インピーダンス： 100Ω

MONITOR OUTPUTS - STUDIO
コネクター：RCAピンジャック、アンバランス
規定出力レベル： －2dBu
最大出力レベル： ＋14dBu
出力インピーダンス： 100Ω

PHONES（1、2）出力
コネクター：6φステレオホンジャック
最大出力レベル： 50mW＋50mW
（32Ω負荷、両ジャックに接続時）

デジタルオーディオ入出力

DIGITAL INPUTS（1、2）
コネクター： XLR-3-31またはRCAピンジャック(選択可)
データフォーマット： AES3-1992（AES/EBU）またはIEC60958（S/PDIF）規格準拠（自動検出）
ワード長： 24ビット
サンプリング周波数変換機能内蔵（オン／オフ可）

DIGITAL OUTPUT（1、2）
コネクター： XLR-3-32またはRCAピンジャック（パラ出力）
データフォーマット： AES3-1992（AES/EBU）またはIEC60958（S/PDIF）規格準拠（選択可）
ワード長： 24ビット

TDIF -1（1、2、3）
コネクター： 25ピンDサブ(メス)コネクター
データフォーマット： TDIF-1規格準拠
ワード長： 24ビット

ADAT IN/OUT 2 x "Lightpipe" optical connectors
Conform to ADAT OPTICAL specifications
24-bit word length

Sampling frequencies Internal 44.1 kHz/48 kHz, 88.2 kHz/96 kHz (high sampling frequencies)
External ±6.0%

Signal delay < 1.8 ms -- Fs = 48 kHz, LINE IN to STEREO OUTPUT
< 0.9 ms -- Fs = 96 kHz, LINE IN to STEREO OUTPUT

Miscellaneous I/O connections

WORD SYNC IN BNC connector
Switchable 75 Ω termination
TTL level

WORD SYNC OUT/THRU BNC connector
Switchable between through and output
TTL level

MIDI IN, OUT, THRU/MTC OUT
3 x 5-pin DIN connectorsÅ\conform to MIDI specifications

USB USB 1.1 "B" type connector (12 Mbps)

TIME CODE IN RCA pin jack
Conforms to SMPTE specifications

FOOT SW 1/4" mono jack

TO METER 25-pin female D-sub connector (non-metric lock screws)
For use with the optional MU-1000

RS-422 (for Sony 9-pin) 9-pin female D-sub connector (non-metric lock screws) wired to RS-422 standards

GPI (for Machine start) 9-pin female D-sub connector (non-metric lock screws) wired for GPI control
Pin 1=GP11, Pin 2=GPI2, Pin 3=GPI3, Pin 4=GPI4, Pin 5=GND, Pin 6=GPI5, Pin 7=GPI6, Pin 8=GPI7, Pin 9=GP18

ADAT IN/OUT
コネクター： TOSLINK「ライトパイプ」オプティカルタイプ
データフォーマット： ADAT規格準拠
ワード長： 24ビット

サンプリング周波数：
44.1kHz、48kHz、88.2kHz、96kHz
（外部同期時の許容周波数偏差：±6%）

信号遅延：
1.8ms以内
（Fs＝48kHz、LINE IN→STEREO OUTPUT）
0.9ms以内
（Fs＝96kHz、LINE IN→STEREO OUTPUT）

その他の入出力

WORD SYNC IN入力：
コネクター： BNC（アンバランス）
TTLレベル、75Ω終端ON/OFF切替

WORD SYNC THRU/OUT出力：
コネクター： BNC（アンバランス）
THRUとOUTを選択可
TTLレベル、75Ω

MIDI IN、OUT、THRU/MTC：
コネクター： 5ピンDIN コネクター
MIDI 規格準拠

USB：
コネクター： USB1.1 Bタイプコネクター
（12Mbps）

TIME CODE IN入力：
コネクター： RCAピン（アンバランス）
SMPTE規格準拠

FOOT SW：
コネクター： 6φ、2極ホンジャック

TO METER：
コネクター： 25ピンDサブ（メス）
オプションのメーターユニット（MU-1000）接続用

RS-422：
コネクター： 9ピンDサブ（メス）
RS-422 準拠、ソニー9 ピンシリアルプロトコル（P2）によるマシンコントロール用

GPI：
コネクター： 9ピンDサブ（メス）、GPIコントロール用に配線
（#1＝GPI 1, #2＝GPI 2, #3＝GPI 3, #4＝GPI 4, #5＝GND, #6＝GPI 5, #7＝GPI 6, #8＝GPI 7, #9＝GPI 8）マシンスタート用

Equalization

EQ switch	On/Off	
HIGH filter	Gain:	±18 dB, 0.5 dB resolution
	Frequency:	31 Hz to 19 kHz
	Q:	0.27 to 8.65
	Type:	Hi-shelving, Peak, LPF
HI MID filter	Gain:	±18 dB, 0.5 dB resolution
	Frequency:	31 Hz to 19 kHz
	Q:	0.27 to 8.65
	Type:	Peak, Notch
LO MID filter	Gain:	±18 dB, 0.5 dB resolution
	Frequency:	31 Hz to 19 kHz
	Q:	0.27 to 8.65
	Type:	Peak, Notch
LOW filter	Gain:	±18 dB, 0.5 dB resolution
	Frequency:	31 Hz to 19 kHz
	Q:	0.27 to 8.65
	Type	Low-shelving, Peak, HPF

All filters are fitted with "gain flat" switches

System performance

THD (maximum level,1 kHz, TRIM: minimum)

20 Hz – 22 kHz LINE IN to INSERT SEND	< 0.005%
LINE IN to STEREO OUTPUT	< 0.008%

Frequency response (nominal level, 1 kHz, TRIM: minimum)

0.5dB/-1.0dB MIC/LINE to INSERT SEND	20 Hz – 20 kHz (44.1/48 kHz)
0.5dB/-1.5dB MIC/LINE to INSERT SEND	20 Hz – 40 kHz (88.2/96 kHz)
0.5dB/-1.0dB MIC/LINE to STEREO OUTPUT[a]	20 Hz – 20 kHz (44.1/48 kHz)
0.5dB/-1.5dB MIC/LINE to STEREO OUTPUT[a]	20 Hz – 40 kHz (88.2/96 kHz)

Noise level (20 Hz –22 kHz, TRIM: max, 150 Ω)

MIC in (PAD off) to INSERT SEND (A weight)	< –128 dBu (EIN)
STEREO OUT (Input no assign)	< –83 dBu
ASSIGNABLE RETURN to ASSIGNABLE SEND	< –85 dBu
2TR IN to CR OUTPUT (CR: max, 0dB)	< –78 dBu
2TR IN to STUDIO OUT (STUDIO OUT 0dB)	< –88 dBu

Crosstalk @ 1 kHz

STEREO/BUSS/AUX OUTPUTS	> 90 dB
MONITOR OUTPUTS	> 90 dB

a. MIC/LINE to channel module to STEREO OUTPUT, channel and stereo faders at 0 dB, pan hard left or hard right

イコライザー

EQスイッチ： オン／オフ

HIGH：	ゲイン：	±18dB, 0.5dBステップ
	周波数：	31Hz～19kHz
	Q：	0.27～8.65
	タイプ：	ハイシェルビング、ピーク、LPF
HIGH MID：	ゲイン：	±18dB, 0.5dBステップ
	周波数：	31Hz～19kHz
	Q：	0.27～8.65
	タイプ：	ピーク、ノッチ
LO MID：	ゲイン：	±18dB, 0.5dBステップ
	周波数：	31Hz～19kHz
	Q：	0.27～8.65
	タイプ：	ピーク、ノッチ
HIGH：	ゲイン：	±18dB, 0.5dBステップ
	周波数：	31Hz～19kHz
	Q：	0.27～8.65
	タイプ：	ローシェルビング、ピーク、LPF

すべてのバンドごとにゲインフラットスイッチを装備。

アナログオーディオ特性

歪率（THD）（最大レベル、1kHz、TRIM最小）：
0.005%以下
（20Hz～22kHz 、LINE IN→INSERT SEND）
0.008%以下
（LINE IN→STEREO OUTPUT）

周波数特性（規定レベル、1kHz、TRIM最小）：
20Hz～20kHz（44.1/48kHz）、+0.5dB/－1.0dB
（MIC/LINE IN → INSERT SEND）
20Hz～40kHz（88.2/96kHz）、+0.5dB/－1.5dB
（MIC/LINE IN → INSERT）
20Hz～20kHz（44.1/48kHz）、+0.5dB/－1.0dB
（MIC/LINE IN → STEREO OUTPUT＊）
20Hz～40kHz（88.2/96kHz）、+0.5dB/－1.5dB
（MIC/LINE IN → STEREO OUTPUT＊）

ノイズレベル（150 Ω、20Hz～22kHz、TRIM最大）：
－128dBu 以下（EIN）、MIC IN（パッドオフ）→ INSERT SEND、A-weighted
－83dBu 以下、STEREO OUTPUT（入力アサインなし）
－85dBu 以下、ASSIGNABLE RETURN→ ASSIGNABLE SEND
－78dBu 以下、2TR IN→CR OUTPUT（CR ：最大、0dB）
－88dBu 以下、2TR IN→STUDIO OUTPUT（STUDIO OUT 0dB）

クロストーク（@1kHz）：
90dB 以上（STEREO/BUSS/AUX OUTPUTS）
90dB 以上（MONITOR OUTPUTS）

＊「MIC/LINE IN →チャンネルモジュール→ STEREO OUTPUT」時。チャンネルフェーダーおよびステレオフェーダーは0dB位置。パンは右一杯または左一杯。

Physical characteristics

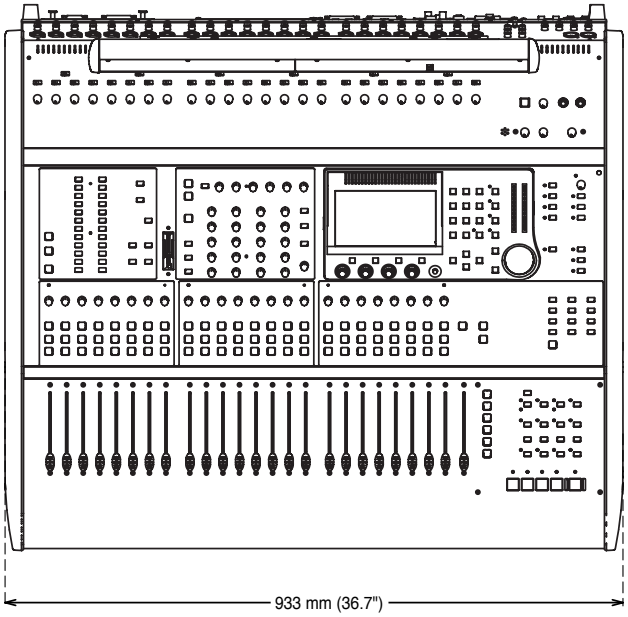
Displays	Backlit 320 x 240 LCD with contrast control 2 x 12-segment LED meters
Faders	17 x 100 mm stroke, motor-driven touch-sensitive faders
Maximum overall dimensions (w x d x h) including rest	933 x 824 x 230 (mm) 36.75 x 32.4 x 9.1 (in)
Weight	35 kg (71 lbs)
Voltage requirements	120 VAC, 60 Hz 230 VAC, 50 Hz 240 VAC, 50 Hz
Power consumption	90 W
Supplied accessories	Power cord, Quick Reference guide, CF memory card, USB cable, CD-ROM, warranty card

一般仕様

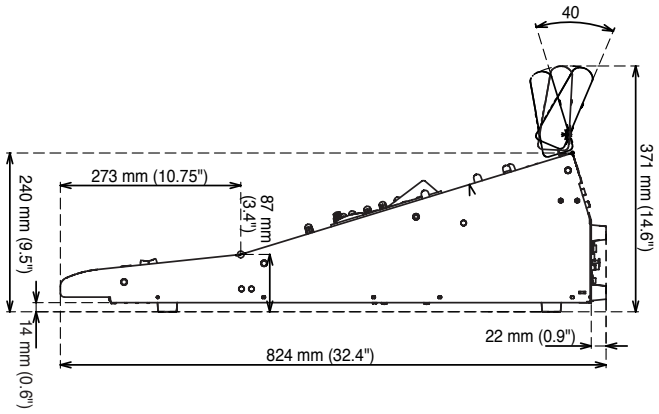
ディスプレイ：	バックライト式320 x 240 LCD（コントラストコントロール可能） 12セグメントLEDメーター（×2）
フェーダー：	100mmストローク、モータードライブ、タッチセンス付き
外形寸法：	933(W)×824(D)×240(H) mm （寸法図参照）
質量：	35kg
電源：	100V、50/60Hz AC
消費電力：	90W
付属品：	電源コード、CFメモリーカード、USBケーブル、CD-ROM、保証書

● 仕様・外観などは、改善のため予告なく変更することがあります。

Dimensional drawing



寸法図

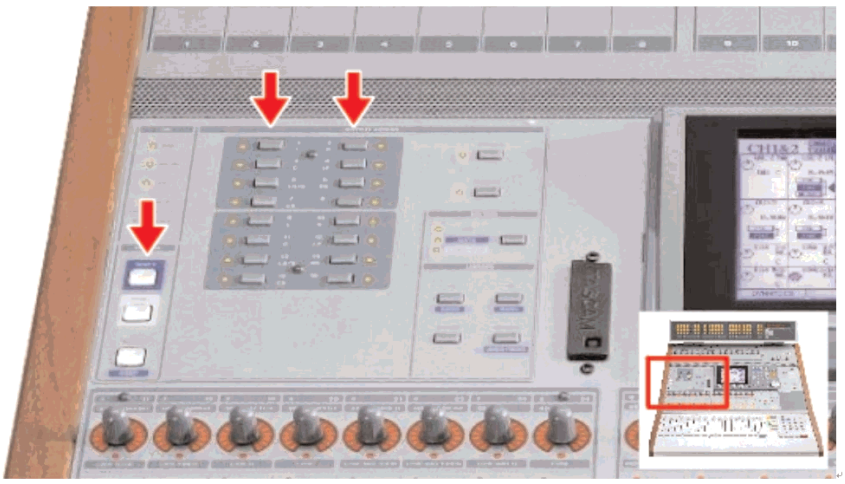


CAUTION
Danger of explosion if the battery is incorrectly replaced.
Replace the battery only with the same or equivalent type.

2. SELF DIAGNOSTIC FUNCTION
自己診断機能

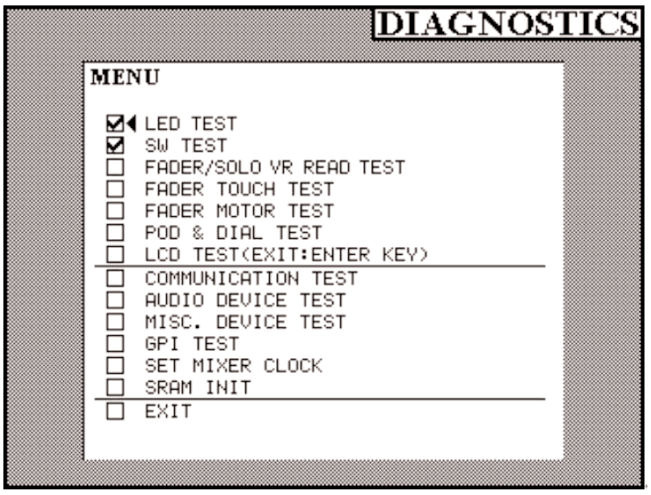
Apply power to the DM-4800 while holding down the SHIFT + Output Assign 1 + Output Assign 2 keys. (You need to hold down these keys until "TASCAM" starts scrolling across the start-up screen).

SHIFTキー+Output Assign 1キー+Output Assign 2キーを押しながら電源投入する。(起動画面の“TASCAM”の文字のスクロールが始まるまで押したままにしておく。)



A diagnostics menu such as shown below appears.
Use the cursor keys or the Jog/Dial to select options and press the ENTER key and the corresponding test modes are enabled.

次のようなDIAGメニューが表示されます。
カーソルキーまたは、JOG/DIALで各テスト項目にカーソルを合わせ、ENTERキーを押すと、それぞれのテストモードに移ります。

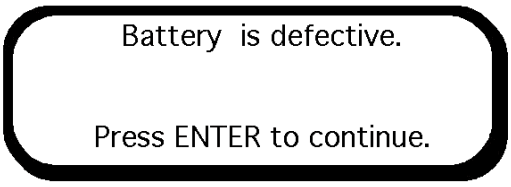


～Ver 1.30 (Ver1.30以前)

Ver 1.30～ (Ver1.30以降)

When staring up the self-diagnostic function, the battery for SPRAM/RTC is checked and if its voltage is less than 2.3 V a pop-up warning message will appear.

また、DIAG起動時、SRAM/RTC用の電池の電圧チェックを行い、2.3V未満であれば、pop-upで警告します。



■ **SRAM INIT for Factory(After Ver1.30)**
This mode allows you to set the SRAM to factory test settings.

NOTES: Store current status to the project on a CF card beforehand since data stored in the console will be lost as a result ofinitializing the SRAM.

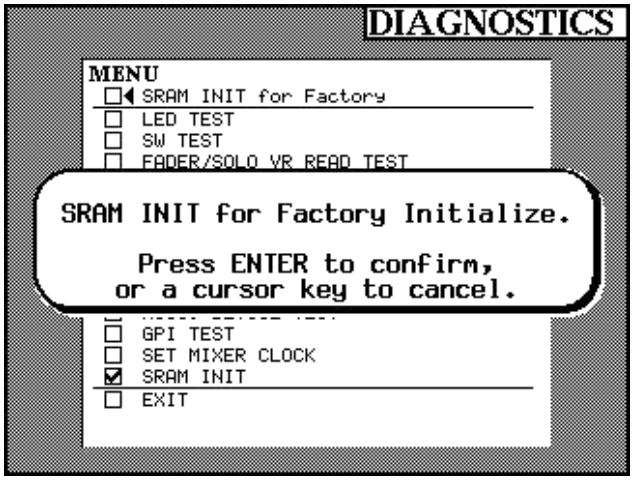
1. When SRAM INIT mode is engaged, the following pop-up message will appear.

■ SRAM INIT for Factory(Ver1.30以降)
SRAMを工場テストの値に初期化する。

注意

SRAMを初期化すると、内蔵の各種データは初期化されるため、CFカードにProject保存しておくこと。

1. SRAM INITモードに入ると、次のpop-upが表示されます。



2. Press the ENTER key to get the SRAM initialized. Upon completion of the initialization, the pop-up window goes out,bringing you back to the diagnostics menu in which the corresponding box is checked.
3. Pressing a cursor key aborts the initialization.

2. ＥＮＴＥＲキーを押すとSRAMの初期化が行なわれる。

初期化が完了したらpop-upが消え、DIAGメニュー画面に戻り、チェックボックスにチェックが付きます。

3.カーソルキーでキャンセルとなります。

■ **LED TEST**
This mode checks for proper lighting of all LEDs by turning all LEDs on.

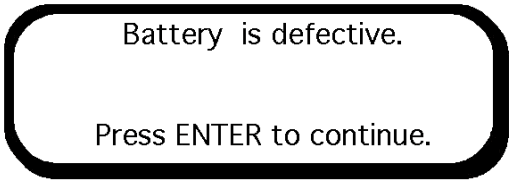
1. When LED test mode is engaged, a pop-up message such as shown below appear and at the same time all LEDs are lit up.

＊ If the meter bridge (MU-1000) is connected, their LEDs also are lit up.

■ LED TEST
各LEDの点灯チェックを行う。

1.LED TESTモードに入ると次のpop-upメッセージが表示され、LEDが全点灯します。

＊メーターブリッジ(MU-1000)が接続されていれば、同時に点灯します。



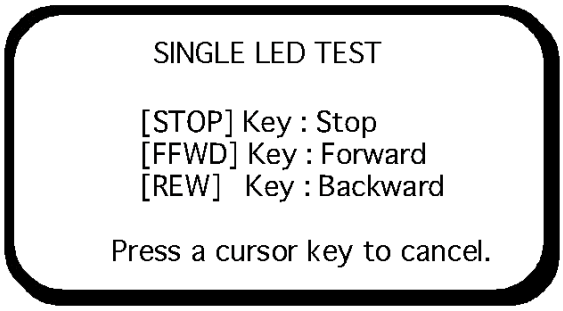
2. Pressing a cursor key brings you back to the diagnostic menu screen and a check mark is put by the menu item LED TEST.
3. When ALL LED TEST is running, pressing the SHITF + ENTER keys causes a pop-up message such as shown below to appear and the LEDs turn on one by one in sequence. (The LEDs on the meter bridge is out of scope of this check.)
   Pressing the transport STOP key stops the SINGLE LED TEST process. By pressing the FFWD/REW keys, you can control the LEDs to check for lighting.
   Pressing a cursor key brings you back to the diagnostic menu screen.

2.カーソルキーを押すとDIAGメニューに戻る。LED TESTの項目にチェックマークが付きます。

3.ALL LED TEST中に、SHIFTキー+ENTER キーを押すと、次のpop-upメッセージが表示され、各LEDが順番に点灯します。(メーターブリッジは、このテストは行なわない。)

この時、トランスポートキーのStopキーを押すことで、点灯LEDの自動移動が停止する。FFWDキー/REWキーを押す事で点灯LEDの位置を移動できます。

カーソルキーを押すとDIAGメニューに戻ります。



■ SW TEST

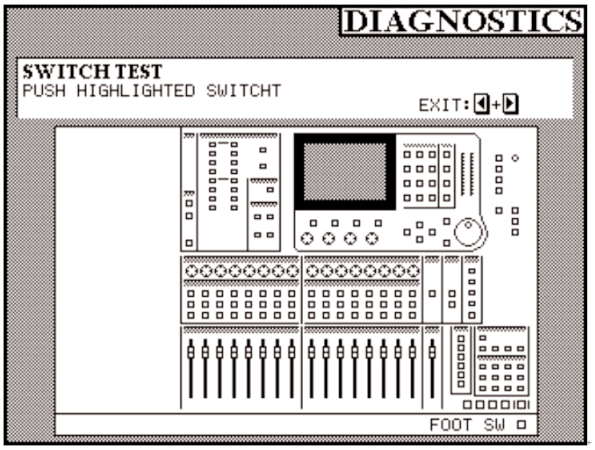
Switch test mode allows you to check each button on the control surface for proper ON/OFF functioning.
The layer status is automatically set for CH1-16.

1. When Switch test mode is engaged, the following screen will appear:

■ SW TEST

各スイッチのON/OFFチェックを行う。
この時、LAYER STATUSは自動的にCH1-16にセットされます。

1. SW TESTモードに入ると、次の画面が表示されます。

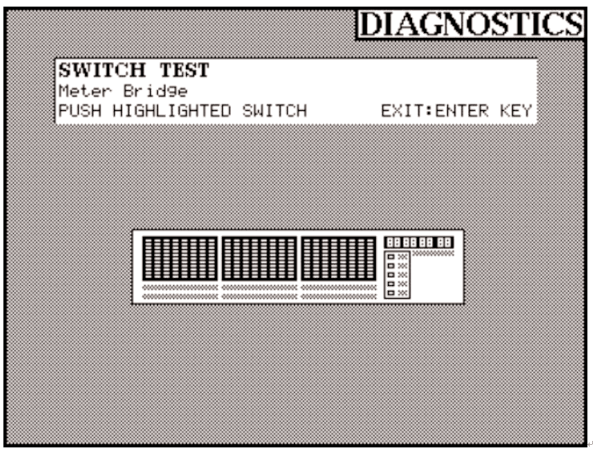


2. Press the blinking switch and it goes out of the screen and the next switch to be pressed starts blinking.
   This repeats as you press the next switch. When pressing a switch associated with an LED, this turns on and off as the switch is engaged and disengaged.
3. Once all switches are checked, the screen is switched back to show the diagnostic menu and a check mark is put by the menu item SW TEST.

* To abort the switch test process, press both the left and right arrow cursor keys at the same time.
* To run the switch test on the meter bridge (MU-1000), press the SHIFT and ENTER keys at the same time when the console is in switch test mode. The way of performing the test is the same as with the console.

2. 画面上で点滅しているスイッチを順に押していくと、押されたスイッチの表示が消える。この時、押されたスイッチに連動するLEDがあれば、スイッチがONの時点灯し、OFFの時消灯します。
3. 全てのスイッチのチェックが終了すると、DIAGメニュー画面に戻り、SW TEST項目にチェックマークが付きます。

* 途中で強制終了する場合は、カーソルキーの左右を同時に押します。
* 本体のSW TEST中にSHIFTキーとENTER キーを同時に押すと、メーターブリッジ(MU-1000)のSW TESTに入る。ENTERキーを押すとDIAGメニューに戻ります。テスト方法は本体と同様です。



■ FADER/SOLO VR READ TEST

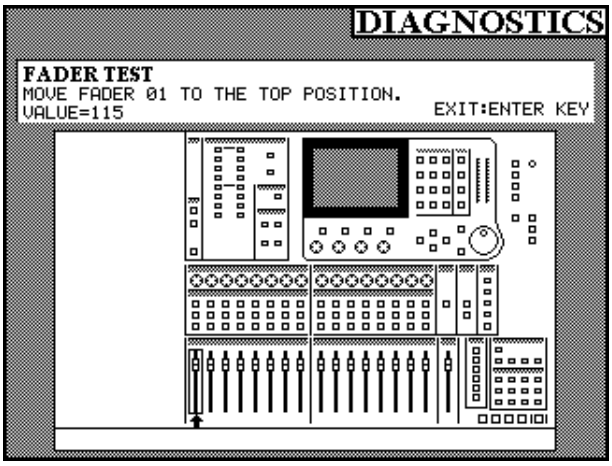
This test allows you to check each fader for proper reading. The layer status is automatically set for CH-1-16.

1. When Fader/Solo VR read test mode is engaged, the following screen will appear.

■ FADER/SOLO VR READ TEST

各フェーダーの読み取り値が正常かどうかをチェックする。この時、LAYER STATUSは自動的にCH1-16にセットされます。

1. FADER/SOLO VR READTESTモードに入ると、次の画面を表示します。



2. An arrow mark is displayed below the fader to be moved. Move that fader. The fader you are moving is framed on the screen. The corresponding channel number and the read-in value are indicated in the upper portion of the screen.
3. When the maximum and minimum values are successfully read in, the test moves on to the next fader. The fader image goes out as it is finished checking.
4. Once all fader are checked, An arrow mark is displayed below the SOLO knob.
5. Once the maximum and minimum values for the SOLO knob are successfully read in, the screen is switched back to show the diagnostic menu and a check mark is put by the menu item FADER/SOLO VR TEST.

∗ Even if a maximum or minimum value is read in when the fader or solo knob is not at the maximum or minimum position, the test result is judged ok and a check mark is put, but remember, if this is the case, it is possible that the FADER/SOLO VR is defective.

∗ To abort the test process, press the ENTER key.

2. 動かすべきフェーダーの下に矢印が表示されるので、そのフェーダーを動かす。動かしているフェーダーには枠が表示されます。また画面の上部に読み取り値とCHが表示されます。
3. 最大値と最小値が読めたら次のフェーダーへ移動する。この時、チェック済みとなったフェーダーの絵は消えます。
4. 全てのフェーダーが終了すると、SOLOつまみに矢印が表示されます。
5. SOLOつまみの最大値と最小値が読めたら、DIAGメニュー画面に戻り、FADER/SOLO VR TEST項目にチェックマークが付きます。

∗ 最大値/最小値が、一番上/一番下以外の位置で読み取られる場合は、FADER/SOLO VRの異常が考えられます。ただしこの場合も、テストは正常とみなされチェックマークは付いてしまうので注意が必要です。

∗ 途中で強制終了する場合は、ENTERキーを押します。

■ FADER TOUCH TEST

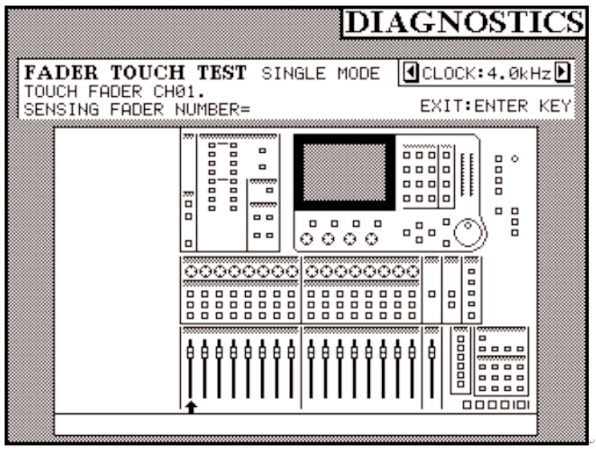
This test mode allows you to check the faders for proper touch sensing, namely, whether the console recognizes only the fader you touch and whether, when touching multiple faders, the console properly identifies them.

1. When Fader touch test mode is engaged, the following screen appears.

■ FADER TOUCH TEST

ＦADERのタッチセンス機能をチェックを行う。触れているフェーダーのみタッチを認識するかどうかや、複数のフェーダーを同時にふれた時に正しく認識するかをチェックする。

1. FADER TOUCH TESTモードに入ると、以下の画面を表示します。



2. An arrow mark is displayed below the fader to be touched. Touch that fader.
   The number assigned to the fader to be touched and the number assigned to the fader you are touching are indicated in the upper portion of the screen. In addition, the knob of the fader you are touching is indicated black.
3. Once the touching fader is properly recognized, the test moves on to the next fader. The fader image you've done with goes out of the screen.
4. Once all faders are checked, the screen is switched back to show the diagnostics menu and a check mark is put by the menu item FADER TOUCHE TEST.

＊ If there is a fader that is not properly recognized, try changing the clock frequency setting for fader sensitivity using the left and right arrow cursor keys.
IMPORTANT: Changing the fader sensitivity at this stage affects the normal operation of the console.
With version 1.22 and earlier models, the SRAM INT is not capable of restoring the defaults.

＊ To abort the test process, press the ENTER key.

2. 触れるべきフェーダーの下に矢印が表示されるので、そのフェーダーに触れる。
   この時、画面の上部に触れるべきフェーダーナンバーと触れているフェーダーナンバーが表示される。また、触れているフェーダーのノブは黒く表示されます。
3. 触れたフェーダーがただしく認識されたなら、次のフェーダーに移動する。この時、チェック済みとなったフェーダーの絵は消えます。
4. 全てのフェーダーチェックが終了すると、DIAGメニュー画面に戻り、FADER TOUCH TEST項目にチェックマークが付きます。

＊ 正しく認識されない場合は、カーソルキーの左右で、FADER SENSITIVITYのCLOCK周波数の設定を変えてみる。

注意

- ここでのFader sensitivity設定は通常のMixer動作時の設定にも反映される。また、V1.22以前の場合はSRAM INTを行っても初期値には戻らない。

＊ 途中で強制終了する場合は、ENTERキーを押します。

■ FADER MOTOR TEST

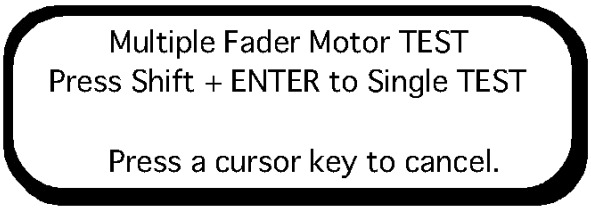
This test mode allows you to check a single fader motor or multiple fader motors for proper operation.

1. When Fader motor test mode is engaged, the following pop-up message will appear and the multiple fader motor test starts.
   All faders will move from the MIN value position to the MAX value position and back to the MIN position before moving to the 15 dB position (or 25 dB with the STERERO fader).

■ FADER MOTOR TEST

一つまたは複数のフェーダーのモーターが正常に動作するかをチェックする。

1. FADER MOTOR TESTモードに入ると、次のPop-upメッセージが表示され、Multiple Fader Motor TESTが開始されます。
   この時全フェーダーがMIN値→MAX値→MIN値→15dB(STERE Oフェーダーは、25dB)と移動します。

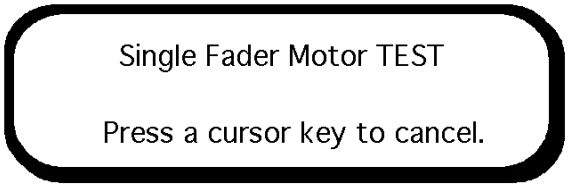


2. Even upon completion of the multiple fader motor test, the pop-up window does not go out unless you press the ENTER key.
   When you press the ENTER key, the screen is switched back to show the diagnostics menu and a check mark is put by the menu item FADER MOTOR TEST.

* Pressing the SHIFT and ENTER keys when the multiple fader motor test is running, the following pop-up message will appear and the single fader motor test will start.
  The faders will move in sequence, starting with the CH1 fader, from the MIN position to the MAX position and back to the MIN position. To abort the test process, press a cursor key.

2. Multiple Fader Motor TESTが終わってもENTERキーを押すまでpop-upは消えません。終了した場合、DIAGメニューに戻りFADER MOTOR TESTにチェックが表示されます。

* Multiple Fader Motor TEST中にSHIFTキー+ENTERキーを押すと、次のpop-upメッセージが表示され、Single Fader Motor TESTが開始されます。
  この時、フェーダーはCH1から順番にMIN値→MAX値→MIN値と移動します。途中で強制終了する場合は、カーソルキーを押して下さい。



■ POD&DIAL TEST

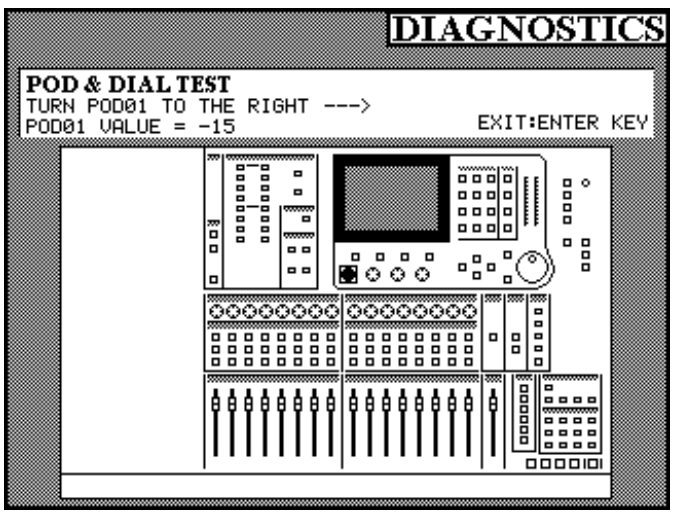
This test mode allows you to check whether the console recognizes the direction in which the individual PODs are rotated.

1. When POD & Dial test mode is engaged, the following screen will appear.

■ POD&DIAL TEST

各PODを回した時に左右の方向の認識が正しいかをチェックする。

1.POD&DIAL TESTモードに入ると、以下の画面を表示します。



2. A blinking frame is displayed around the check target POD.
3. Turn the POD by 20 clicks in the negative direction (i.e., leftwards) and then similarly turn the POD by 20 clicks in the positive direction (i.e., rightwards). The next POD will be enclosed in a blinking frame.
4. Once all PODs are checked, the screen is switched back to show the diagnostics menu and a check mark is put by the menu item POD & DIAL TEST.

* To abort the test process, press the ENTER key.

■ LCD TEST

This test mode allows you to check the LCD screen for irregularities.

1. When the LCD test mode is engaged, the screen cycles through "All off" (about 1 seconds) > "All on" (about 1 seconds) > Diagnostics menu (about 1 seconds).
2. Pressing the ENTER key brings you back to the diagnostics menu and a check mark is put by the menu item LCD TEST.

■ COMMUNICATION TEST

This test mode allows you to check the MIDI I/O, RS-422, USB, and CASCADE terminals for problems.

1. When Communication test mode is engaged, the following screen will appear.

2. チェック対象のPODに点滅枠が表示されます。
3. −方向(左)に20クリック操作した後、+方向(右)に20クリック操作すると、次のPODに移動します。
4. 全てのPODのチェックが終了すると、DIAGメニューに戻り、POD&DIAL TEST項目にチェックマークが付きます。

＊ 途中で強制終了する場合は、ENTERキーを押してください。

■ LCD TEST

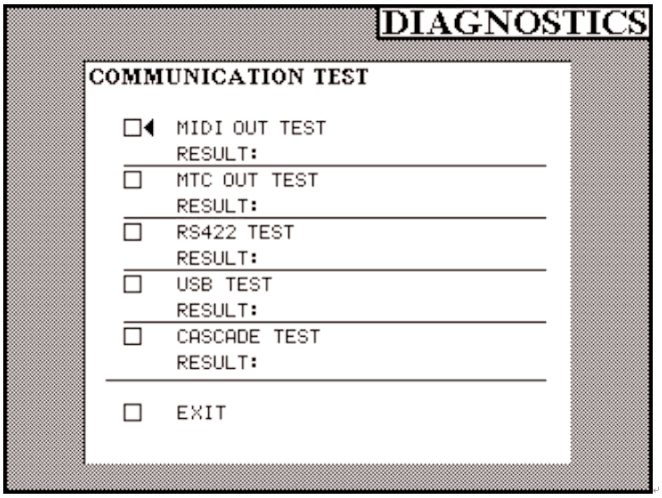
液晶画面に不具合がないかをチェックする。

1. LCD TESTモードに入ると、画面は全消灯（約一秒）→全点灯（約一秒）→DIAG メニュー（約一秒）を繰り返します。
2. ENTERキーを押すと、DIAGメニュー画面に戻り、LCD TEST項目にチェックマークが付きます。

■ COMMUNICATION TEST

MIDI I/OとRS-422とUSBとカスケードの不良をチェックする。

1. COMMUNICATION TESTに入ると、以下の画面が表示されます。



2. To perform each of the tests provided, make the following connections:
   For MIDI OUT TEST:
   • Connect MIDI OUT to MIDI IN using a MIDI cable.
   For MTC OUT TEST:
   • Connect THRU/MTC OUT to MIDI IN using a MIDI cable.
   For RS-422 TEST:
   • You need a male 9-pin D-SUB connector. Create a short-circuit between pins 2 and 8, and 3 and 7, and plug this connector into the RS-422 connector.
   For USB TEST:
   • Using a USB cable, connect the console to a PC within which the TM Companion is installed. Get the console started up, followed by the TM Companion, in advance.
   For CASCADE TEST:
   • Fabricate a looped Cascade connector and plug this into the CASCADE connector.
3. Move the cursor to a test item and press the ENTER key to get the test started.
4. When the test is successfully completed, the following pop-up message will appear. This pop-up window automatically goes out and a check mark is put by the item just tested.

2. 各テストを行う為に、接続を行なう。

MIDI OUT TEST:
• MIDI OUTとMIDI INをMIDIケーブルで接続する。

MTC OUT TEST:
• THRU/MTC OUTとMIDI INをMIDIケーブルで接続する。

RS-422 TEST:
• 9-Pin D-subオスコネクタを用意し、2-8,3-7を短絡したコネクタを作成し、RS-422端子に接続する。

USB TEST:
• TM CompanionのインストールされたPCとUSBケーブルで接続する。ミキサー起動後にTM Companionを起動しておく。

CASCADE TEST:
• ループされたカスケードコネクタを作成し、カスケードコネクタに接続する。

3. カーソルを各テスト項目に移動させENTERキーを押すとテストが開始されます。
4. テスト結果が正常な場合、以下のpop-upが表示される。このpop-upは自動的に消え、チェックを行った項目にチェックが付きます。

5. If a time-out occurs, the following pop-up message will appear.
   Pressing a cursor key gets this message gone out. No check mark is put by the test item got time-outed and "NG" is displayed in the RESULT field.

5. タイムアウトが発生した場合は、次のpop-upが表示されます。カーソルキーで、このpop-upメッセージは消え、チェックボックスには、チェックマークは付きません。また、RESULTにNGが表示されます。

6. Move the cursor to EXIT on the COMMUNICATION TEST screen and press the ENTER key to go back to the diagnostics menu. If you do this when a check mark is put by every COMMUNICATION TEST item, a check mark is put by the menu item COMMUNICATION TEST.

6. COMMUNICATION TEST画面のEXITにカーソルを移動しENTERキーを押すと、DIAGメニュー画面に移動します。この時、COMMUNICATION TESTの項目全てにチェックがついている場合は、DIAGメニューのCOMMUNICATION TEST項目にチェックマークが付きます。

■ **AUDIO DEVICE TEST**

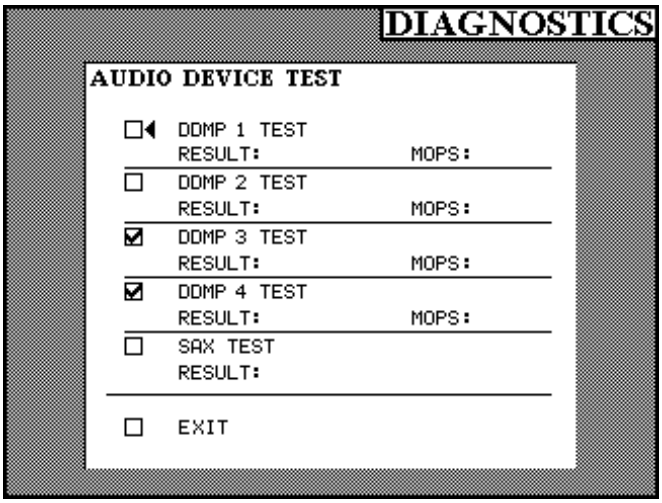
This test mode allows you to check the DDMP (Audio Device) and SAX FPGA (internal routing) for problems.

1. When Audio device test mode is engaged, the following screen will appear.

■ AUDIO DEVICE TEST

DDMP （Audio Device） とSAX FPGA (内部ルーティング) の不良をチェックする。

1. AUDIO DEVICE TESTに入ると、以下の画面が表示されます。



2. Moving the cursor to a DDMP TEST (or SAX TEST) and pressing the ENTER key get the corresponding test started. Each DDMP TEST takes several seconds. (There is no need to run DDMP 3 TEST and DDMP 4 TEST because those devices are not mounted to the DM-4800.)
3. When a test is successfully finished, "OK" is displayed in the RESULT field and a check mark is put by the corresponding test item.
4. When a DDMP test is not successfully finished, the RESULT display will read as follows:

   RESULT: MOPS ERR
   - If no new MOPS value is displayed, there was a failure in downloading/launching the MOPS measuring program.
   - If a new MOPS value is displayed, the measured value is out of the specs.

   * MOPS refers to a value obtained as a result of measuring the internal processing speed of DDMP.

   RESULT: BOOT ERR
   - There was a failure in downloading/launching the DDMP program.

   RESULT: SDRAM ERR
   - There was a failure in the read/write check of the SDRAM connected to the DDMP.
5. When the SAX test is not successfully finished, "NG" is displayed in the RESULT field. If this is the case, there was a failure in launching the SAX FPGA or in the read/write.
6. Move the cursor to EXIT on the AUDIO DEVICE TEST screen and press the ENTER key to go back to the diagnostics menu. If you do this with a check mark put by the items DDMP 1 TEST, DDMP 2 TEST and SAX TEST, a check mark will be put by the menu item AUDIO DEVICE TEST.

2. DDMP TESTかSAX TESTにカーソルを移動し、ENTERキーを押すとテストが開始されます。それぞれのDDMP TESTには数秒かかります。（DDMP 3 TESTとDDMP 4 TESTはDM-4800ではデバイスが実装されていない為、テストは行なわなくてよい。）
3. テストが正常に終了すると、RESULTにOKと表示され、テスト対象にチェックが付きます。
4. DDMPのテストが正常に終了しない場合は以下のようにRESULTが表示されます。

RESULT: MOPS ERR

- ・ＭＯＰＳ値の表示が更新されない場合、MOPS計測用プログラムダウンロード/起動に失敗している。
- ・MOPS値の表示が更新されている場合、MOPS計測値が規定値外。

＊MOPSとはDDMPの内部処理速度を計測した結果。

RESULT: BOOT ERR

- ・ DDMPのプログラムダウンロード/起動に失敗。

RESULT: SDRAM ERR

- ・ DDMPに接続されているSDRAMのR/Wチェックにエラーが発生。

5. SAXのテストが正常に終了しない場合はRESULTにNGと表示されます。この場合、SAX FPGAの起動もしくはR/Wが失敗しています。
6. AUDIO DEVICE TESTのEXITにカーソルを移動し、ENTERキーを押すと、DIAGメニューに移動します。この時、DDMP 1 TESTとDDMP 2 TESTとSAX TESTにチェックが付いている場合、DIAGメニューのAUDIO DEVICE TESTにチェックが付きます。

■ **MISC. DEVICE TEST**

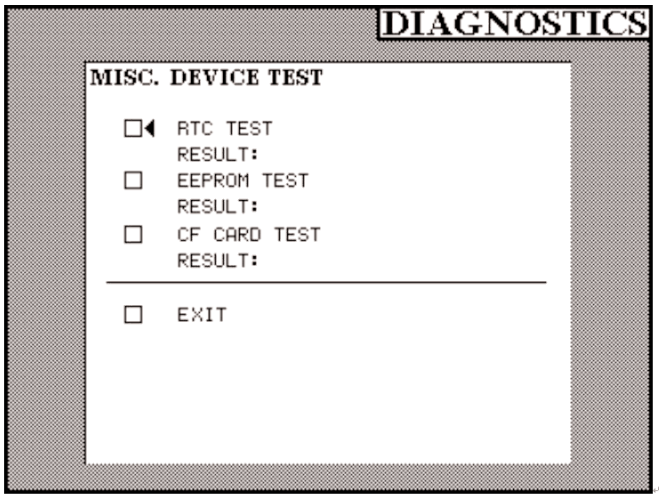
This test mode allows you to check the RTC, EEPROM and CF card for irregularities.

1. When Misc. device test mode is engaged, the following screen will appear.

■ MISC. DEVICE TEST

RTCとEEPROMとCFカード部の不良チェックを行う。

1. MISC. DEVICE TESTに入ると、以下の画面が表示されます。



2. Move the cursor to the desired item and press the ENTER key to get the test started.
   (To run the CF CARD TEST, you need to have plugged in a CF card.)
3. When the test is successfully finished, "OK" is displayed in the RESULT field and a check mark is put by the corresponding test item.
   These tests are carried out by writing a given data and checking whether or not it is correctly read out.
4. When the test is not successfully finished, "NG" is displayed in the RESULT field.
5. Move the cursor to EXIT on the MISC. DEVICE TEST screen and press the ENTER key to go back to the diagnostics menu. If a check mark is put by every test item on the MISC. DEVICE TEST screen, a check mark is put by the menu item MISC. DEVICE TEST.
   NOTE: As a result of running the RTC TEST, the clock IC in the console is reset to "2004/1/2". So you need to correct the clock setting on the console. For details, refer to "Setting Clock (TMC)".

2. テストを行ないたい項目にカーソル移動しENTERキーを押すとテストが開始されます。
   (CF CARD TESTの場合CFカードを挿入しておく必要がある。)
3. テストが正常に終了すると、RESULTにOKと表示され、各項目にチェックが付きます。
   これらのテストは任意のデータを書き、正しく読めるかで正否を判断しています。
4. テストが正常に終了しない場合、RESULTにNGと表示されます。
5. MISC.DEVICE TEST画面のEXITにカーソルを移動しENTERキーを押すと、DIAGメニューに移動します。MISC. DEVICE TEST画面の全ての項目にチェックがついている場合、DIAGメニューのMISC. DEVICE TESTにチェックが付きます。

注意

RTC TESTを行うとMixerの時計ICが"2004年1月2日"にリセットされるので、RTC TEST実行後には必ずMixerの時刻設定を行う必要がある。詳細はClock設定方法 (TMC)を参照。

■ **GPI TEST**

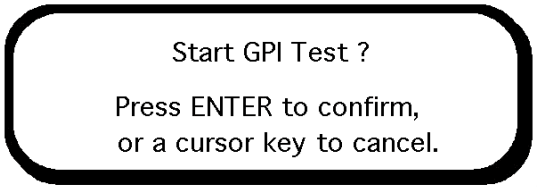
This test mode allows to check the GPI for irregularities.

1. Move the cursor to GPI TEST and press the ENTER key and the following pop-up message will appear.
   You need to have plugged an appropriate device into the GPI connector to ascertain that there is a voltage of 0-5 volts.

■ GPI TEST

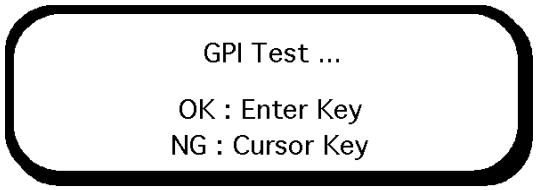
GPIの不良チェックを行う。

1. GPI TESTにカーソルを移動しENTERキーを押すと以下のpop-upが表示されます。
   GPI端子にテスト用に0-5Vの電圧が確認できる、専用ジグを接続しておく。



2. Press the ENTER key to get the GPI TEST started.
When the test is running, the following pop-up message is seen.

2. ENTERキーを押すとGPI TESTが開始されます。
   GPI TEST中は以下のpop-upが表示されます。



3. When the test is successfully finished and you press the ENTER key, the pop-up message goes out and a check mark is put by the item GPI TEST in the diagnostics menu.
4. If the test is not successfully finished, the pop-up message goes out when you press a cursor key.

3. 正常に終了した場合、ENTERキーを押す。pop-upが消えDIAGメニューのGPI TESTにチェックが付きます。
4. 正常に終了しなかった場合、カーソルキーを押す。同時にpop-upが消えます。

■ **SET MIXER CLOCK**

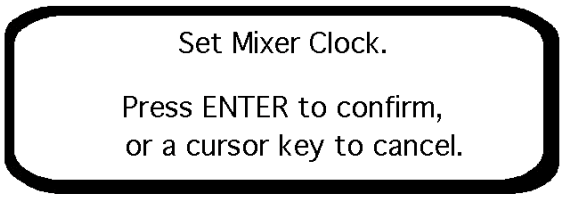
This option allows you to write the time on the connected PC into the real-time clock IC on the mixer. To do this, you need to make a USB connection to the PC in which the TMC is installed.

1. Selecting this option gets the following pop-up message displayed.

■ SET MIXER CLOCK

MIXER上のリアルタイムクロックICに接続されたPCの時刻を書き込む。TMCのインストールされたPCとUSBケーブルで接続し、TMCを起動する必要があります。

1. SET MIXER CLOCKを実行すると以下のpop-upが表示されます。

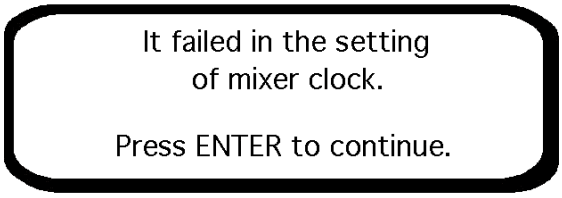


2. Press the ENTER key to get the write process started. Pressing a cursor key will abort the process and the pop-up message will goes out.
3. When the write process is successfully finished, the following pop-up message is displayed. This message automatically goes out in several seconds and a check mark is put by the menu item SET MIXER TIME.

2. ENTERキーを押すと時間書き込みを開始する。Cursor Keyを押すとキャンセルとなり、pop-upが消えます。
3. 正常に終了した場合、以下のPop-upは表示される。このpop-upは数秒で自動的に消え、SET MIXER CLOCKにチェックが付きます。

4. If the write process is not successfully finished, the following pop-up message will appear. Pressing the ENTER key gets the message gone out.

4. 正常に終了しなかった場合、以下のpop-upが表示される。ENTER Keyでpop-upは消えます。



■ SRAM INIT

This mode allows you to reset the SRAM to factory default.

NOTE: Store current status to the project on a CF card beforehand since data stored in the console will be lost as a result of initializing the SRAM.

1. When SRAM INIT mode is engaged, the following pop-up message will appear.

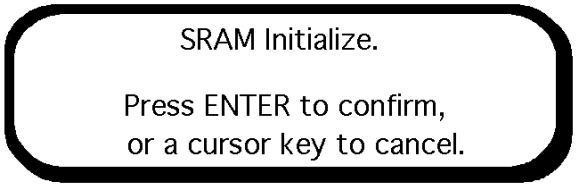
■ SRAM INIT

SRAMを工場出荷時の値に初期化する。

注意

SRAMを初期化すると、内蔵の各種データは初期化されるため、CFカードにProject保存しておくこと。

1. SRAM INITモードに入ると、次のpop-upが表示されます。



2. Press the ENTER key to get the SRAM initialized. Upon completion of the initialization, the pop-up window goes out, bringing you back to the diagnostics menu in which the corresponding box is checked.
3. Pressing a cursor key aborts the initialization.

2. ＥＮＴＥＲキーを押すとSRAMの初期化が行なわれる。初期化が完了したらpop-upが消え、DIAGメニュー画面に戻り、チェックボックスにチェックが付きます。
3. カーソルキーでキャンセルとなります。

■ REBOOT

1. Move the cursor to EXIT on the diagnostics screen and press the ENTER key to get the console rebooted.

■ REBOOT

1. DIAGメニュー画面のEXITにカーソルを移動しENTERキーを押すと再起動します。

3. Setting Main Shorting Pins on PCB

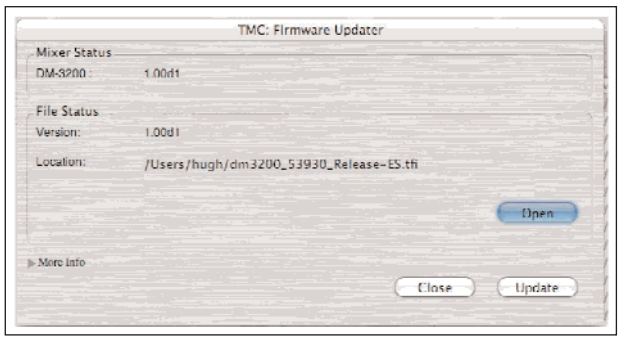
PCB,MAIN SHORT PIN設定

P/N 部番	Purpose 項目	Pin Setting (●:Default) ピン設定（●：初期）		Description 内容
P2	Setting FPGA Configuration FPGA Configuration設定	●	OPEN	For when selecting Normal mode NORMALモード時選択
			1-2 shorted	For when setting FPGA Config. through JTAG FPGAのConfigをJTAG経由で行うときに選択
P3	Setting NMI connector inputs NMI端子入力設定	●	OPEN/1-2 shorted	For when selecting Normal mode (inputting reset signal: PW RESET) NORMALモード時選択（ﾘｾｯﾄ信号(PW_RESET)を入力）
			2-3 shorted	Setting for in Debug mode (inputting NMIOUT of ICE) DEBUGモードﾞ時設定（ICEのNMIOUT信号を入力）
P4	Setting CPU modes CPUモード設定	●	OPEN	Setting to Normal mode NORMALモードに設定
			1-2 shorted	Setting to Debug mode (CPU enters ASE mode and H-UDI and Emulate functions become ready for use) DEBUGモードに設定(CPUがASEモードになりH-UDI、ｴﾐｭﾚｰﾄ機能が有効)
P5	Setting CPU/RXD0 functions CPU/RXD0機能設定		OPEN	For use as RS-232C (serial cable connected to P38) RS-232Cとして使用する（P38にSerialケーブルを接続）
		●	1-2 shorted	For use as Cascade functionality (nothing connedted to P38) CASCADE機能として使用（P38には何も接続しないこと）
P15	Setting Boundary Scan ROUT Boundary Scan ROUT設定	●	OPEN	For scanning through boundaries including DDMP CoPCB DDMP CoPCBを含めたBoundary Scanを行う
			1-2 shorted	For performing Boundary Scan within single MAIN PCB MAIN PCB単体でBoundary Scanを行う
P34	Clock Settings クロック設定	●	OPEN	For in Normal mode (clock oscillation) NORMALモード時に設定（クロック発振）
			1-2 shorted	For in Boundary Scan mode (clock stopped) BoundaryScanモード時に設定（クロック停止）
P39	TCK supply settings TCK供給設定		1-2 shorted	For in Boundary Scan/JTAG modes (TCK/TMS signals suuplied to all JTAG-ready devices) BoundaryScan/JTAGモード時に設定 （全JTAG対応ﾃﾞﾊﾞｲｽにTCK/TMS信号を供給）
		●	2-3 shorted	For in Normal/Debug modes (TCK/TMS signals supplied to CPU only) NORMAL／DEBUGモード時に設定 （CPUのみにTCK/TMS信号を供給）
P40	TRST settings TRST設定		1-2 shorted	For when using JTAG downloading cable (TRST pulled up) JTAG ダウンロードケーブル使用時に設定(TRSTをPullUp)
		●	2-3 shorted	For in Normal mode (TRST pulled down) NORMALモード時に設定（TRSTをPullDown）

4. Firmware Update
ファームウェアーアップデート

1. Firmware Upadate

From time to time, TASCAM will make updates available from the Web site or through your TASCAM distributor. To install these updates, use the Firmware Update window (accessed from the Windows menu) in the TMC software:



Press the on-screen Open button to open a file browser, where you can select the firmware update (these always have a .tfi extension).

The version of the mixer firmware and the version of the new firmware are shown in the Mixer Status and File Status fields, respectively.

More information, including whether the file actually performs a recommended upgrade or not, is available by using the More Info foldout (not shown in Figure 2.4, Firmware update).

To update the DM-4800

Press the Update button in the TMC Firmware updater window. A status bar in the window graphically shows the update progress. This is also shown in the DM-4800 screen. The process takes about 5 minutes, including the time necessary for the DM-4800 to reboot.

NOTE

The DM-4800 should not be turned off during the update process or subsequent reboot, although it has a "safety-net" built in which allows the unit to be started without a full operating system.

Use the Close button to close the window without updating the unit.

2. Forced System Update Mode

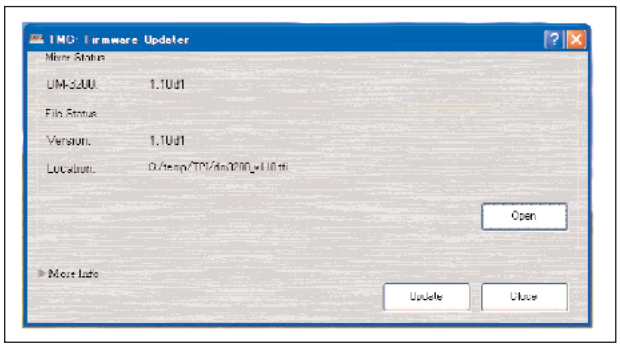
If the DM-4800 unexpectedly stops at the startup screen or does not normally start up for any reason, you may correct the problem by getting the mixer forcibly restarted in System Update Mode and updating the firmware.

Procedure

1. Switch off the DM-4800.
2. Hold down the right-arrow cursor and ENTER keys and switch on the DM-4800 and "SYSTEM UPDATE MODE" is displayed in the upper center in addition to the normal startup screen.
3. When the TASCAM Logo scrolls to the end, the screen is switched to show a screen in the center of which "SYSTEM UPDATE" is displayed wide.
4. Now update the firmware from the TMC by following the steps discussed under "1. Firmware Upadate".

1. ファームウェアのアップデート

TASCAM のウェブサイトおよびTASCAM 販売店ではファームウェアのアップデートを提供しています。このアップデートをインストールするには、TMC ソフトウェアのWindows メニューからFirmware Update を選択します。



画面上のOpen ボタンをクリックしてファイルブラウザを開き、ファームウェアのアップデート（.tfi という拡張子が付いたファイル）を選択します。
ミキサーの現在のファームウェアと新規ファームウェアのバージョンがそれぞれMixer Status 欄とFile Status 欄に表示されます。
そのファイルによって実際に推奨アップグレードされるかどうかなどのファイルについての詳細は、More Info 欄を拡張表示させてください（図2.4、ファームウェアのアップデート画面では拡張表示されていません）。

DM-4800 のアップデート方法

TMC Firmware updaterのウインドウ上のUpdate ボタンをクリックします。
アップデートの進行状況がグラフ表示され、DM-4800 の画面でも進行状況が表示されます。DM-4800 の再起動も含めてアップデートにはおよそ5 分ほどかかります。

メモ

アップデート中およびアップデート後の再起動中はDM-4800 の電源を絶対に切らないでください。ただし、万一電源が切れてしまった場合は、システムソフトウェアが不完全のまま再起動します。

アップデートせずに画面を閉じるには、Close ボタンをクリックします。

2. 強制 System Update Modeについて

DM-4800が何らかの原因で起動画面から先に進まなくなるなど正常に起動できなくなった場合は、Mixerを強制的にSystem Update Modeで再起動してFirmware Updateを行う事で、正常起動できる可能性があります。

手順

1. DM-4800の電源を切ります。
2. 右カーソルキーとENTERキーを押したままDM-4800の電源を投入すると　通常期動画面に加え画面中央上部に"SYSTEM UPDATE MODE"と表示されます。
3. TASCAM Logoのスクロールが終わると中央に大きく"SYSTEM UPDATE"と表示された画面に切り替わります。
4. 以後は、1. ファームウェアのアップデートの手順でTMCからFirmwareをUpdateします。

5. Setting Clock (TMC)

Clock 設定方法 (TMC)

You can get the time on the PC or Mac reflected on the DM-4800.

After starting up the TMC, select the Preference menu, and press the "Set Mixer Clock" button in the lower part of the resulting screen, so that the time on the PC or Mac (i.e., the time indicated in the upper line of the button) is sent to and set on the DM-4800.

PC/Macの現在設定されてい時計の時間をDM-4800に設定することができます。

TMC起動後Preferenceメニューを選び現れる画面の下部にある"Set Mixer Clock"ボタンを押すことでPC/Macの時間情報（ボタンの上の行に表示されているものと同じ）がDM-4800に送られ、その時間が設定されます。

6. Version Display
バージョン表示の方法

DM-4800: Checking different Firmware Versions

Method 1: at Utility System screen

What you can check:
CPU Firmware Version
Mother PCB Version (after V1.60)

Method 2: at Debug screen

What you can check:
CPU Firmware Version
DSP-PLD(U30) Firmware Version
PTA-FPGA Firmware Version
SAX-FPGA Firmware Version
Mother PCB Version & Mother PLD Firmware (after V1.60)

How to check these:

1. Hold down the ALT key and press twice the Automation TRIM and Automation REVERT keys.
   The Debug window with letters only is displayed in the LCD screen.
2. Hold down the ALT key and press the POD1 and POD4 keys.
   The version information is displayed in the LCD screen.
3. Hold down the ALT key and press once the Automation TRIM and Automation REVERT keys to go back to the normal screen.

* You cannot check the OutputPort-PLD (U117) Firmware Version.

DM-4800：各種Firmware Versionの確認方法

方法1）Utility.System画面での確認

＜確認できる内容＞
CPU Firmware Version
Mother PCB Version　(V1.60以降)

方法2）Debug画面での確認

＜確認できる内容＞
CPU Firmware Version
DSP-PLD(U30) Firmware Version
PTA-FPGA Firmware Version
SAX-FPGA Firmware Version
Mother PCB Version & Mother PLD Firmware　(V1.60以降)

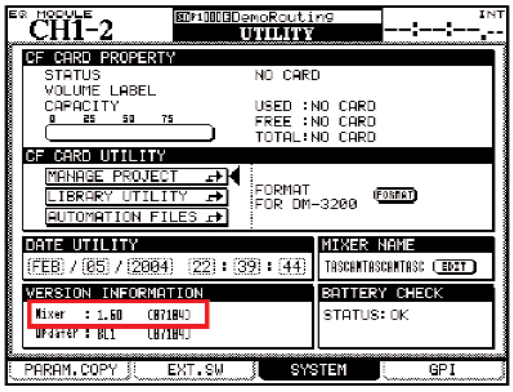
＜確認手順＞

1. ALT + AutomationTRIM + AutomationREVERTの組合せでKeyを二回押します。
   (LCD画面に文字表示のみのDebug画面が表示される)
2. ALT + POD1-Key + POD4-Keyを押します。
   ⇒LCD画面にVersion情報が表示されます。
3. ALT + AutomationTRIM + AutomationREVERTの組合せでKeyを一回押すと通常画面に戻ります。

※ OutputPort-PLD(U117) Firmware Versionは確認出来ません。

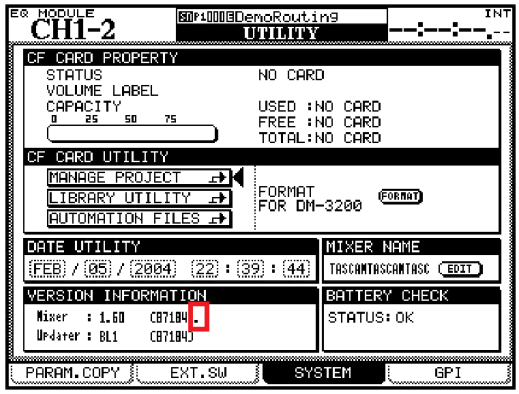
Checking whether or not the mother DM48 PCB is mounted in the DM-3200/DM-4800

No dot displayed at the end of the build number in the Mixer Version column in the Utility System screen:
This indicates that the mother DM PCB is mounted.



Utility System 画面の Mixer Version 表記においてビルド番号末尾に「.」なし：PCB, MOTHER DM が装着されている。

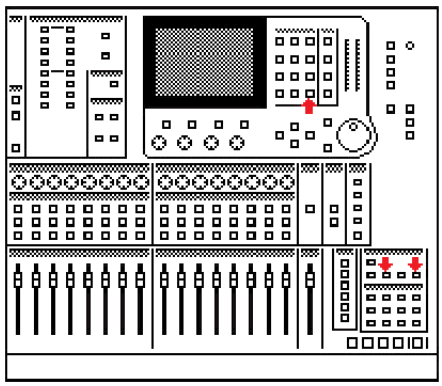
A dot displayed at the end of the build number: This indicates that the mother DM48 PCB is mounted.



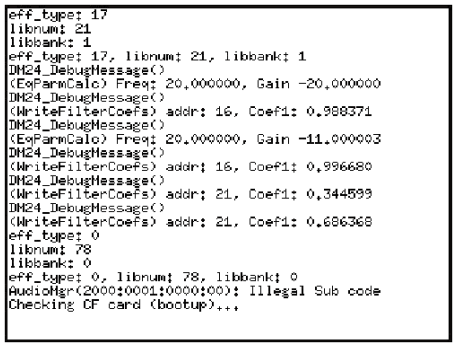
ビルド番号末尾に「.」あり：PCB, MOTHER DM48 が装着されている。

Checking PLD Firmware Version of Mother DM48 PCB

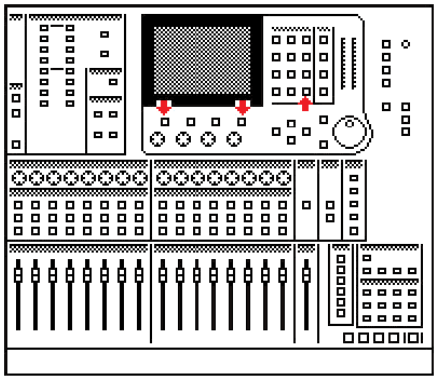
1. Hold down the ALT key and press twice the Automation TRIM and Automation REVERT keys.



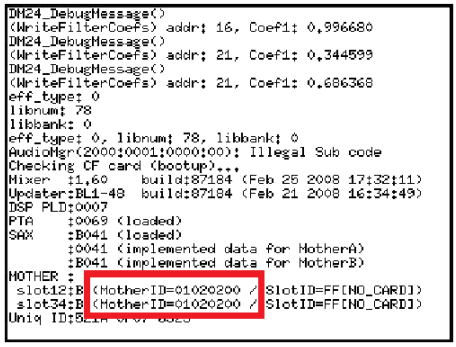
The LCD screen is switched to show the Debug window, as shown at right.



2. Hold down the ALT key and press the LCD FUNCTION 1 and 4 keys.



The screen now looks like as shown at right.
Here is the breakdown of the 8-digit Mother ID number shown:
The left 4 digits represent a hardware ID;
The next 4 digits plus 00 represent a firmware ID.
This Mother ID number is shown when the MOTHER DM (mother A) PCB is mounted.
The number varies depending on the mounted slot card.
When the MOTHER DM48 (mother B) PCB is mounted, the mother ID number is shows as 01020200 as of 2008-02-27.



PCB, Mother DM48 のPLD Firmware Versionの確認方法

1.ALT+AUTOMATION TRIM+AUTOMATION REVERTの組み合わせのキーを2回押す。

LCD画面が左図のようなDebug画面に切り替わる。

2.ALT+LCD FUNCTION1+LCD FUNCTION4の組み合わせキーを押す。

左図のようにLCD画面に表示される。

[MotherIDと表示される8桁の数字の内訳]

上位4 桁：HardwareID

下位4 桁：FirmwareID+00

PCB, MOTHER DM(MotherA)が装着されている場合のMotherID 値

装着しているSlot Card によって値が変わる。

PCB, MOHTER DM48(MotherB)が装着されている場合のMotherID 値

2008.02.27現在では"01020200"と表示される。

Message shown when the new and old mother PCBs are mounted mixed

The mother DM PCB and the mother DM48 PCB cannot be used mixed.

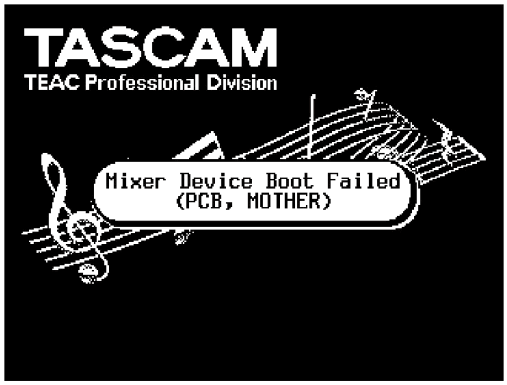
If they are both mounted, the message shown below appears when you try to start the mixer and the start-up process does not go on. If you sure that two mother DM48 PCBs are mounted and this message appears, the cause may be poor connections or a fault in the wiring (power supply or control) on either PCB.

新旧Motherが混在してしまった場合のメッセージ画面

PCB, MOTHER DM とPCB, MOTHER DM48は混在して使用できない。

そのため、混在した状態でMixerを起動すると画面に下記メッセージを表示した状態で停止し、通常起動できない。

PCB, MOTHER DM48を二枚装着したはずなのに下記メッセージが表示される場合はどちらか一方のPCB配線(電源/制御線)の接続不良/接続ミスが考えられる。



TMCompanion: Checking Version

Method 1: DM-4800 not USB-connected

Checking procedure:

1. Start up the TMCompanion.
2. After a minute, a window with a message "No compatible mixer was found" appears on the display.

   This window also shows the version of the TMCompanion.

\Method 2: DM-4800 connected through USB

Checking procedure:

1. Connect the DM-4800 to the PC/Mac through USB and switch on the system.
2. Get the TMCompanion started.
3. With Windows XP
   Click File ⇒ About in the menu.
   A window containing the TMCompanion version information is seen.

With Mac OSX

Click TMCompanion ⇒ About TMCompanion in the menu.
A window containing the TMCompanion version information is seen.

Method 3: See version information of TMCompanion

With Mac OSX

1. Use the Finder to open the application folder.
2. Select the TMCompanion.exe file.
3. Click File ⇒ See Info.
   A window containing the TMCompanion version information is seen.

TMCompanion：Versionの確認方法

方法1）DM-4800をUSB接続しない状態

＜確認手順＞「

1. TMCompanionを起動する。
2. しばらくすると"No compatible mixer was found"と書かれたウィンドウが表示されます。

   このウィンドウにTMCompanionのVersion情報が表示されます。

方法2）DM-4800をUSB接続した状態

＜確認手順＞

1. DM-4800をPC/MacとUSB接続して電源を入れます。
2. TMCompanionを起動する。(WinXPの場合)

(WindowsXPの場合)

3. メニュー：File⇒Aboutをクリックすると、TMCompanionのVersion情報が書かれたウィンドウが表示されます。

(MacOSXの場合)

3. メニュー：TMCompanion⇒About TMCompanionをクリックするとTMCompanionのVersion情報が書かれたウィンドウが表示されます。

方法3）TMCompanionのファイル情報を見る。

＜MacOSX確認手順＞

1.Finderでアプリケーションフォルダを開きます。

2.TMCompanion.exeのファイルを選択します。

3.メニュー：ファイル⇒情報を見る をクリックするとTMCompanionのVersion情報が書かれたウィンドウが表示されます。

With Windows XP

1. Use the Explorer to open the directory in which the TMCompanion.exe file is stored.
   (By default, C:¥Program Files¥TASCAM¥TMCompanion)
2. Right-click the TMCompanion.exe file (or the TMCompanion file if the extension is not shown), and then click the Properties.
3. Hit the version information tab, select More Info ⇒ Items: File Version or Product Version and the TMCompanion version information is seen in the "Values" field.

＜WinXP確認手順＞

1. ExplorerでTMCompanion.exeのインストールディレクトリを開きます。(Default "C:¥ Program Files ¥TASCAM ¥TMCompanion"
2. TMCompanion.exe(拡張子が表示されない設定の場合は、TMCompanion)のファイルを右クリック＞プロパティ をクリックする。
3. バージョン情報タブを選択し、詳細⇒項目：ファイルバージョン もしくは 製品バージョンをクリックすると「値」欄にTMCompanionのVersion情報が表示されます。

7. Error Message
エラーメッセージ

System Error:
tt-eeeeeeee-iiii
aaaaaaaa
bbbbbbbb
cccccccc

Please note for reference

	tt [decimal number]	eeeeeeee [hexadecimal number]	iiii [decimal number]	aaaaaaaa [hexadecimal number]	bbbbbbbb [hexadecimal number]	cccccccc [hexadecimal number]
CPU Exception	99	Exception Code	01	CPU Program Counter when exception is generated	CPU Status Register when exception is generated	Address of exception generation origin
CPU Address Error (READ)	99	0000 00E0	01			
CPU Address Error (WRITE)	99	0000 0100	01			
General Illegal Instruction	99	0000 0180	01			
RTOS Error	0 :non-Task 1..: TaskID	Upper4:OS resource ID Lower4: RTOS error code	line number of source code	Charactercode of the 1-4th character of error generation former file name.	Charactercode of the 5-8th character of error generation former file name.	Charactercode of the 9-12th character of error generation former file name.

NOTES:

1) If firmware version is before V1.52,"Fatal Error" is displayed instead of "System Error"
ファームウェアバージョンがV1.52以前の場合は、「System Error」の代わりに「Fatal Error」を表示します。
2) The additional information might be obtained by the switching to the Debag screen by pushing ALT+TRIM+REVERT twice.
ALTL+TRIM+REVERTキーを二回押してDebug画面に切り替えることで追加情報が得られるかもしれません。

DM-4800 Special Error Message pop-up

1. Main CPU Fatal Error

This indication means that Main CPU Errors.
(see 7. Error Message)

System Error:
tt-eeeeeeee-iiii
aaaaaaaa
bbbbbbbb
cccccccc

Please note for reference

2. Hardware initialize error

This indication means that Hardware initialization error.

Mixer Device Boot Failed
(Device Name)

<Device Name>	[notes]
DSP-A/B	(U29, U37)
FPGA	(U15, U23)
PLL	(U51, circuit around U51)
RTC	(U108)
PCB, MOTHER	(Only after V1.60)
Slot* : IF-AE/DM	(optional slot card)
Slot* : IF-SM/DM	(optional slot card)

<Presumed cause>

when <Device Name> is not "PCB, MOTHER"
- Defective soldering of each device
- Defect of each device
- Other causes of not forecasting

when <Device Name> is "PCB, MOTHER"
- The kind of two "PCB, MOTHER" is different.
- Loose connection of cables to "PCB, MOTHER"

3. Audio Device Error

This indication means that Mixer Audio Device (DDMP) cannot execute normal operation.

The audio device
is not operating normally.
All sound stopped.
Please contact TASCAM service.

Press ENTER to continue.

<Presumed cause>
- Loose connection between DDMP PCB and Main PCB
- Defect of DDMP PCB
- Firmware Bug
- Other causes of not forecasting

DM-4800 Special Error Message pop-up

1.Main CPU System Error

この表示はMain CPUエラーが発生したことを示します。
(7. Error Message参照)

2.Hardware initialization error

この表示は<Device Name>で示されるハードウェアの初期化エラーが発生したことを示します。

<Device Name>	[notes]
DSP-A/B	(U29, U37)
FPGA	(U15, U23)
PLL	(U51, U51周辺回路)
RTC	(U108)
PCB, MOTHER	(V1.60以降のみ)
Slot* : IF-AE/DM	(optional slot card)
Slot* : IF-SM/DM	(optional slot card)

<考えられる要因>

<Device Name>が"PCB, MOTHER"以外の場合
- 各デバイスの半田不良
- 各デバイス自体の不良
- その他予測しない原因

<Device Name>が"PCB, MOTHER"の場合
- 2枚の"PCB, MOTHER"のVersionが異なる
- "PCB, MOTHER"へのケーブル接続不良

3.Audio Device Error

この表示はMixerのAudio Device(DDMP)が正常動作出来ない状態になったことを示します。

<考えられる要因>
- DDMP PCBとMain PCBの接触不良
- DDMP PCB不良
- Firmware不具合
- その他予測しない原因

4. Under 3.3 volts

This indication means that Power Supply Voltage became to under 3.3 volts

4.Under 3.3 volt

この表示は電源電圧が3.3V以下になったことを示します。

```
Power Supply Voltage (+3.3V) is too Low
for stable operation.

Please Restart DM-* * * * .
```

<Presumed cause>
- Occurrence of momentary power failure.
- Defect of Power Supply Unit.
- Other causes of not forecasting

<考えられる要因>
- 瞬停が発生した
- 電源ユニット不良
- その他予測しない原因

5. Sram Range Over

This indication means that Mixer setting data backed up with battery became illegal value.
If pushing ENTER Key then Mixer setting data is initialized to right value.

5.Sram Range Over

この表示は電池バックアップされているMixer設定データが不正値になったことを示します。

ここでENTERキーを押せばMixer設定データが正当な値に初期化されます。

```
Out of Sram Range !
Initialize Sram Data?
chnn(aaa) dataname

Press ENTER to confirm,
or a cursor key to cancel.
```

<Presumed cause>
- The first boot-up (after MainPCB is assembled)
- Shortage of battery voltage
- Defective soldering of SRAM device (U28) or backup battery for data backup
- Defect of SRAM device (U28) for data backup
- Firmware Bug
- Other causes of not forecasting

<Corresponding method>
[1] Pushing ENTER Key to initialize Mixer setting data to right value.
[2] In case of shortage of battery voltage.
1.Change a battery
2.Restart Mixer
3.If this message is displayed again, execute [1] method.

<Confirm method in battery state>
The battery state can be confirmed at "BATTERY CHECK" display in the right bottom area of the UtilitySystem screen

<考えられる要因>
- MainPCB組立後、最初の起動
- Backup Batteryの電圧低下
- SRAM Device(U28) か バックアップ電池の半田不良
- SRAM Device(U28)の不良
- Firmware Bug
- その他予測しない原因

<対策方法>
[1] Mixer設定データを正当な値に初期化するためにENTERキーを押す。
[2] 電池電圧不足の場合
1.電池を交換
2.Mixerを再起動
3.再度、本メッセージが表示されたら[1]を実施

<電池状態の確認方法>
電池の状態はUtility.System画面右下の"BATTERY CHECK"欄で確認が出来る。

6. Initialize Sram Data

This indication is execution confirmation message of Sram Data initialization.

6. Initialize Sram Data

この表示はSram Data初期化処理の実施確認メッセージです。

```
Initialize Sram Data? !

Press ENTER to confirm,
or a cursor key to cancel.
```

<Presumed cause>
- Mixer was started while pushing CTRL+BUSS1+BUSS2.
- "PCB, ASSIGN" is not connected.
- Loose connection of cable connected with "PCB, ASSIGN"
- Cable loose connection of PCB related to Panel (see following reference)

<DM-4800 : Outline of cable connection chart of PCB related to Panel>

[PCB,Main:P27] → [P1:PCB,MONITOR:P3] → [P1:PCB,SCREEN:P3] → [P1:PCB,MODULE:P2] → [P1:PCB,ASSIGN]
[:PCB,MONITOR:P4] → [P2:PCB,SCREEN]

<考えられる要因>
- CTRL+BUSS1+BUSS2を押しながら起動した。
- "PCB,ASSIGN" が接続されていない
- "PCB,ASSIGN" に接続されているケーブルの接触不良
- Panel関連PCBのケーブル接触不良(下記参照)

<DM-4800 : Panel関連PCBのケーブル接続図 概略>

7. DIAGNOSTIC MODE

This indication means that Mixer started with Diagnostics mode

7.DIAGNOSTIC MODE

この表示はMixerがDiagnostics modeで起動したことを示します。

DIAGNOSTIC MODE

<Presumed cause>
- Mixer was started while pushing SHIFT+BUSS1+BUSS2.
- "PCB, ASSIGN" is not connected.
- Loose connection of cable connected with "PCB, ASSIGN"
- Cable loose connection of PCB related to Panel (see following reference)

<DM-4800 : Outline of cable connection chart of PCB related to Panel>

[PCB,Main:P27] → [P1:PCB,MONITOR:P3] → [P1:PCB,SCREEN:P3] → [P1:PCB,MODULE:P2] → [P1:PCB,ASSIGN]
[:PCB,MONITOR:P4] → [P2:PCB,SCREEN]

<考えられる要因>
- SHIFT+BUSS1+BUSS2を押しながら起動した。
- "PCB,ASSIGN" が接続されていない
- "PCB,ASSIGN" に接続されているケーブルの接触不良
- Panel関連PCBのケーブル接触不良(下記参照)

<DM-4800 : Panel関連PCBのケーブル接続図 概略>

Secret Key Combination（Secret Keyの組み合わせ）				**Action（動作）**
When turning on power, 電源投入時に	CTRL	BUSS1	BUSS2	Starting Mixer with Diagnostics mode. Diagnostic modeでMixerを起動させる
When turning on power, 電源投入時に	ENTER	[→]		Starting Mixer with System Update mode. System Update modeでMixerを起動させる
When turning on power, 電源投入時に	SHIFT	BUSS1	BUSS2	Starting the SRAM initialization processing. SRAM初期化処理を起動する
	ALT	TRIM	REVERT	Switching the normal screen/white screen/debug screen. 通常画面/白画面/Debug画面を切り替える
	ALT	LCD FUNC1	LCD FUNC4	Displaying various version information on the Debug screen. Debug画面に各種Version情報を表示する
	ALT	[←]	[→]	Clearing the Debug screen. Debug画面をクリアする

Main PCB Chip LED Pattern

	LED Patterns at Unexpected Stop 停止時のLED Pattern				Stopped at: 停止ステップ	OS OS	Probable Hardware Problem Resulting in Stop 停止要因となりうるHardware不良				
	D93	D92	D91	D90							
	0	0	0	0	PowerOn	Updater	Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良		
0	-	-	-	-	InitFrqc		Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in LED D39-90 device/soldering CPU用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in PLD2 device/soldering/ faulty write PLD2ﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ/書込不良
1	-	-	-	0	InitBsc		Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering CPU用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
2	-	-	0	-	InitBootScr		Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering CPU用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
3	-	-	0	0	StartUpdaterMain		Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering CPU用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
4	-	0	-	-	StartUpdaterOs		Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering CPU用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
5	-	0	-	0	JumpToMixerOs		Faulty write to Flash ROM (Mixer OS) FlashROM書込不良 (MixerOS)	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering CPU用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
6	-	0	0	-	StartMixerOsBoot	Mixer	Faulty write to Flash ROM (Mixer OS) FlashROM書込不良 (MixerOS)	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering DSP用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
7	-	0	0	0	StartMixerMain		Faulty write to Flash ROM (Mixer OS) FlashROM書込不良 (MixerOS)	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering DSP用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
8	0	-	-	-	StartMixerInitCpu		Faulty write to Flash ROM (Mixer OS) FlashROM書込不良 (MixerOS)	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering DSP用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
9	0	-	-	0	StartMixerSetAudio Mute		Faulty write to Flash ROM (Mixer OS) FlashROM書込不良 (MixerOS)	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering DSP用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
A	0	-	0	-	StartMixerDisable Codec		Faulty write to Flash ROM (Mixer OS) FlashROM書込不良 (MixerOS)	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering DSP用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
B	0	-	0	0	StartMixerBootFpga		Defect in FPGA decide/soldering FPGAﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良		Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良		
C	0	0	-	-	StartMixerBootDsp		Defect in DSP device/soldering DSPﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in PLD1 device/ soldering/faulty write PLD1ﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ/書込不良		Defect in SDRAM for DSP, device/soldering DSP用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
D	0	0	-	0	StartMixerInitRtc		Defect in DSP device/soldering RTCﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良				
E	0	0	0	-	StartMixerSramCheck		No problem if stopped at this stage when starting up for the first time after completion of mounting Main PCB MainPCB組立後最初の起動時はここで停止しても問題なし	Fault in Backup battery voltage/defect in soldering Backup電池電圧/ﾊﾝﾀﾞ不良			

0 : ON
- : OFF

(*1) May be produced when for example the system recognizes that SecretKey (ALT + SOLO15 + STOP) is pressed.
(*1) SecretKey[ALT+SOLO15+STOP]が押されたように認識されてしまう時に発生しうる

※Trouble on Firmware may produce any error conditions above, resulting in unexpected stop.
※停止ステップ全般に渡ってFirmware不具合も停止要因になりうる

	LED Patterns at Unexpected Stop 停止時のLED Pattern				Stopped at: 停止ステップ	OS OS	Probable Hardware Problem Resulting in Stop 停止要因となりうるHardware不良				
	D93	D92	D91	D90							
F	o	o	o	o	StartMixerOs	Mixer	Faulty write to Flash ROM (Mixer OS) FlashROM書込不良 (MixerOS)	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering CPU用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
	"o" scrolls left/right oが左右ｽｸﾛｰﾙ				(Running MixerOS or UpdaterOS)	both					
Blinking A 点滅A	O	-	O	-	Fatal Error in debugging Debug用のFatal Error	both	Defect in FPGA device/ soldering (*1) FPGAﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良(*1)	Defect in Panel PCB device/soldering (*1) PanelPCBﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良(*1)			Trouble on Firmware (Firmware不具合)
Blinking B 点滅B	O	-	O	O	Fatal Error due to trouble on firmware Firmware不具合による Fatal Error	both					Trouble on Firmware (Firmware不具合)
Blinking C 点滅C	O	O	-	-	Fatal Error due to drop in supply voltage 電源電圧低下による Fatal Error	both	Fault in power supply 電源不良		Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良		
Blinking D 点滅D	O	O	-	O	OS Error OS Error	both	Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for Trouble on Firmware CPU用SDRAM ﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Trouble on Firmware (Firmware不具合)
Blinking E 点滅E	O	O	O	-	Exception error in CPU after OS started up OS起動後のCPU例外 エラー	both	Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for Trouble on Firmware CPU用SDRAM ﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Trouble on Firmware (Firmware不具合)
Blinking F 点滅F	O	O	O	O	Exception error in CPU after OS started up OS起動後のCPU例外 エラー	-	Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for Trouble on Firmware (Firmware不具合) ﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Trouble on Firmware (Firmware不具合)

O : ON

- : OFF

(*1) May be produced when for example the system recognizes that SecretKey (ALT + SOLO15 + STOP) is pressed.

(*1) SecretKey[ALT+SOLO15+STOP]が押されたように認識されてしまう時に発生しうる

※Trouble on Firmware may produce any error conditions above, resulting in unexpected stop.

※停止ステップ全般に渡ってFirmware不具合も停止要因になりうる

Messages and troubleshooting

This provides an alphabetical list of the messages that you may see on the DM-4800, which provide information on the operation that you are performing.

Not all of these messages are error messages.

"Information" messages, i.e. those which pop up briefly and provide information about a change in status, etc., are marked with a ●.

"Confirm" messages, where a response may be necessary (usually confirm with the **ENTER** key or cancel with the cursor keys) are marked with a ✔.

Messages demanding action other than a simple confirmation are shown with a (✖), but even these do not necessarily indicate an error.

メッセージとトラブルシューティング

以下に、本機のLCD 画面上に表示されるポップアップメッセージをアルファベット順に紹介します。メッセージには以下のタイプがあります。すべてがエラーメッセージというわけではありません。

情報メッセージ：
状態などの変化に関する情報を表示するメッセージです。
以下の表では、「種類」欄に●印が付いている項目が情報メッセージです。

確認メッセージ：
操作の確認を行なうメッセージです。通常、操作を続ける場合はENTER キーを押し、操作を取り消す場合はカーソルキーを押します。以下の表では、「種類」欄に✔印が付いている項目が確認メッセージです。

エラーメッセージなど：
操作を受け付けないことを表示したり、別の操作を促すメッセージです。以下の表では、「種類」欄に✖印が付いているメッセージです。

Action(種類)	Message（メッセージ）	Meaning（内容）
●	Already assigned.	The RECORD key has already been assigned to a remote unit. RECORDキーがすでにリモート機器にアサインされています。
✔	Are you sure to delete this project ? project name Press ENTER to confirm, or a cursor to cancel.	Confirmation when deleting a project. プロジェクトを削除するときの確認（二回目）。
✖	Automation Bank Memory is full. Check the Bank memory. Press ENTER to continue.	An attempt is being made to store automation data to memory bank that is already full. オートメーションバンクメモリーがいっぱいです。
✖	Automation data and Current Status have different timecode types. Press ENTER to continue.	The automation data uses a timecode of a different frame type from the current timecode. オートメーションデータのタイムコードフレームタイプと本機の現在のタイムコードフレームタイプが異なります。
✖	Automation data and Current Status use different Fs. Press ENTER to continue.	The automation data uses a sampling frequency of a different value from the current sampling frequency. オートメーションデータのサンプリング周波数と本機の現在のサンプリング周波数が異なります。
✖	Automation Data is not modified, execute the KEEP? Press ENTER to confirm, or a cursor key to cancel.	Confirmation that you want to store (keep) unmodified automation data. データが変更されていない状態でKEEP操作をした場合の確認メッセージ。
●	Automation data was recalled.	The selected automation data has been recalled into memory. 選択されたオートメーションデータがメモリーに呼び出されました。
●	Automation data was stored.	The current automation data has been stored to card. 現在のオートメーションデータがカードに保存されました。
✖	Automation Memory is consumed 95% Please Stop TC and Store Current Automation data, Right Now Press ENTER to continue.	The automation memory is getting full. Stop the timecode source, and store the automation data. オートメーションメモリの95%を消費しています。 タイムコードを止めて現在のオートメーションデータを保存してください。

Action(種類)	Message（メッセージ）	Meaning（内容）
✖	Automation memory is consumed 100% You cannot go on writing any more! without slicing or erasing these data Press ENTER to continue.	The automation memory is completely full. Some automation data will have to be erased. Automationメモリをすべて消費しました。これ以上イベントを記録できません。
●	Automation Redo executed.	An undo/redo operation has been successfully performed. オートメーションリドゥ時のメッセージ
●	Automation Undo executed.	An undo/redo operation has been successfully performed. オートメーションアンドゥ時のメッセージ
✔	AUX1-2 Level Copy Aux1-2Level -> Ch Fader Level? Press ENTER to confirm, or a cursor key to cancel.	Copying the AUX 1-2 pan and balance settings to the channels. AUX 1-2のレベル設定を、チャンネルのレベル設定にコピーします。
✔	AUX1-2 Level Copy Ch Fader Levels -> Aux1-2 Level? Press ENTER to confirm, or a cursor key to cancel.	Copying the channel fader levels to the Aux 1-2 levels. チャンネルのフェーダーレベル設定をAUX 1-2のレベル設定にコピーします。
✔	AUX 1-2 Level Set up Ch parameters? Press ENTER to confirm, or a cursor key to cancel	Used when batch copying parameters from channel to Aux 1-2 settings. AUX 1-2レベルを一括設定します。
✔	AUX1-2 Pan/Bal Copy Aux 1-2Pan/Bal -> Ch Fader Pan/Bal? Press ENTER to confirm, or a cursor key to cancel	Copying the AUX 1-2 pan and balance settings to the channels. AUX 1-2のパン／バランス設定を、チャンネルのパン／バランス設定にコピーします。
✔	AUX1 Pan/Bal Copy Ch Pan/Bal -> Aux1-2 Pan/Bal? Press ENTER to confirm, or a cursor key to cancel	Copying the channel pan and balance levels to the Aux 1-2 pan and balance. チャンネルのパン／バランス設定をAUX 1-2のパン／バランス設定にコピーします。
✔	AUX1-2 to STEREO is assigned Press ENTER to continue.	In the master buss assignment, this message appears if an attempt is made to override an existing assignment (“Routing & assignment” on page 58). BUSSアサイン中、現在のアサインを変更しようとするときに表示されます。(→XXページ「第4章　ルーティングとアサイン」)
✖	Battery is defective Can’t save system data. Please contact TASCAM service. Press ENTER to continue	The internal battery is defective, or has lost charge, so data can't be stored. Contact TASCAM service or your distributor for a replacement battery. 内蔵バッテリーが機能していないため、システムデータを保存できません。バッテリーを交換する必要がありますので、タスカム修理センターにご連絡ください。
●	Cannot assign fader grouping layer.	An attempt has been made to make an invalid fader group フェーダーグループを作成できません。
✖	Cannot Copy parameters within Module. Press ENTER to continue.	A message produced when an unsuccessful attempt has been made to copy parameters inside the same module. 同じモジュール内でコピーを試みたが、成功しなかった事を示すメッセージ。

Action(種類)	Message（メッセージ）	Meaning（内容）
✖	Cannot create more than 128 projects.	There is a limit of 128 projects that can be created on one CF card. Delete an unwanted CFカードに128個のプロジェクトがすでに作成されていて、これ以上のプロジェクトを作成できません。不要なプロジェクトを削除してください。
✖	Cannot switch the cascade ID when cascade is on. Press ENTER to continue.	Can't change between master and slave modes when a cascade is active. カスケードがオンのときは、カスケードIDの設定を変更できません。
✖	Can't Change Mode during TRIM ALL.	Can't change the automation mode while TRIM ALL mode is active. TRIM ALLのとき、タイムコード走行中にモードを切り換えることができません。
✖	Can't copy library data. The CF Card is full.	An attempt has been made to copy library data to a full CF card. CFカードに空きがないため、ライブラリーデータのコピーができません。
✖	Press ENTER to continue. Can't copy project. The CF Card is full.	An attempt has been made to copy a project on a full CF card. CFカードの空き容量がないため、プロジェクトをコピーできません。
✖	Press ENTER to continue. Can't create project. The CF Card is full.	An attempt has been made to create a project on a full CF card. CFカードの空き容量がないため、プロジェクトを作成できません。
✖	Press ENTER to continue. Can't DELETE Automation data	An attempt has been made to delete protected automation data. プロテクトしてあるオートメーションデータを削除することはできません。
✖	Cannot do this	Some operations cannot be performed while automation is on. オートメーション走行中、この操作はできません。
✖	while automation is running. Can't Enter Initial Edit Mode during Chase Process.	It's not possible to enable the automation initial edit mode while chasing. オートメーションイベント追跡中はイニシャルエディットを実行できません。
✖	Can't Enter Initial Edit Mode	It's not possible to enable the automation initial edit mode while stopped. オートメーション停止処理中はイニシャルエディットを実行できません。
✖	during Stop Process. Can't Enter Initial Edit Mode during Writing.	It's not possible to enable the automation initial edit mode while writing. オートメーションイベントの書き込み中はイニシャルエディットを実行できません。
✖	Can't delete xxxx Bank N-n. Press ENTER to continue.	An attempt to delete a library entry has failed. ライブラリーデータを削除できません。
✖	Can't load project. Press ENTER to continue.	Couldn't load the last stored project when boot. 本機の電源を入れたとき、最後に保存したプロジェクトを自動的に呼び出すことができません。
✖	Can't recall COMP/EXP Library Bank a-bbb	The named compressor/expander library item cannot be recalled. The data may be missing or corrupt. 指定されたコンプレッサー／エキスパンダーライブラリーデータを呼び出すことができません。データが破損しているか失われている可能性があります。
✖	Can't recall COMP/EXP Library Preset 1-bbb	The named compressor/expander library preset cannot be recalled. The data may not exist or may be corrupt. 指定されたコンプレッサー／エキスパンダーライブラリープリセットを呼び出すことができません。データが破損しているか失われている可能性があります。

Action(種類)	Message（メッセージ）	Meaning（内容）
✖	Can't recall Effect Bank a-bbb	The named effect library item cannot be recalled. The data may be missing or corrupt. 指定されたエフェクトライブラリーデータを呼び出すことができません。データが破損しているか失われている可能性があります。
✖	Can't recall Effect Preset 1-bbb	The named effect library preset cannot be recalled. The data may not exist or may be corrupt. 指定されたエフェクターライブラリープリセットを呼び出すことができません。データが破損しているか失われている可能性があります。
✖	Can't recall EQ Library Bank a-bbb	The named EQ library item cannot be recalled. The data may be missing or may becorrupt. 指定されたEQライブラリーデータを呼び出すことができません。データが破損しているか失われている可能性があります。
✖	Can't recall EQ Library Preset 1-bbb	The named EQ library preset cannot be recalled. The data may not exist or may be corrupt. 指定されたEQライブラリープリセットを呼び出すことができません。データが破損しているか失われている可能性があります。
✖	Can't recall GATE Library Bank a-bbb	The named gate library item cannot be recalled. The data may be missing or corrupt. 指定されたゲートライブラリーデータを呼び出すことができません。データが破損しているか失われている可能性があります。
✖	Can't recall GATE Library Preset a-bbb	The named gate library preset cannot be recalled. The data may not exist or may be corrupt. 指定されたゲートライブラリープリセットを呼び出すことができません。データが破損しているか失われている可能性があります。
✖	Can't recall snapshot Bank a-bbb	The named snaphot cannot be recalled. The data may be missing or corrupt. 指定されたスナップショットデータを呼び出すことができません。データが破損しているか失われている可能性があります。
✖	Can't recall snapshot Preset 1-bbb	The named snaphot preset cannot be recalled. The data may not exist or may be corrupt. 指定されたスナップショットプリセットを呼び出すことができません。データが破損しているか失われている可能性があります。
●	Can't recall to this Module.	An attempt has been made to recall the wrong sort of data to the selected module (e.g.an effect to an Aux module). このモジュールにはデータを呼び出すことができません。
✖	Can't select this port. Item is not TIME EVENT. Press ENTER to continue.	An attempt has been made to assign a timecode value to a GPI even that is not classified as timecode. GPIのタイムイベントに設定していないポートをタイムイベントリストで選択したことを警告。
✖	Can't Store Automation data. This file is protected.	An attempt has been made to store automation data to a file which has had protection applied. Select another file as a destination or un-protect this file. プロテクトされているファイルにオートメーションデータを保存しようとしています。別のファイルに保存するか、あるいはこのファイルのプロテクトを解除してください。
✖	Can't store library data. The CF Card is full. Press ENTER to continue.	An attempt has been made to store library data to a full CF card. CFカードが一杯で、ライブラリーデータを保存できません。
✖	Can't store project. The CF Card is full. Press ENTER to continue.	An attempt has been made to store a project to a full CF card. CFカードの空き容量がないため、プロジェクトを保存できません。

Action(種類)	Message（メッセージ）	Meaning（内容）
✔	Can’t turn Fs convert On Digital In1 is chosen as Master Clock Press ENTER to continue.	Frequency sampling conversion cannot be used when one of the DIGITAL INs is being used as a word sync source. いずれかのDIGITAL INがワードシンクソースとして使われている場合、サンプリング周波数変換ができません。
✖	Can't undo COMP/EXP Library-Recall. Press ENTER to continue.	The library recall can’ t be undone. COMP/EXPライブラリーのリコールをUndoできません。
✖	Can't undo EffectN-Recall. Press ENTER to continue.	The library recall can't be undone. エフェクトNのリコールをUndoできません。
✖	Can't undo EQ Library-Recall. Press ENTER to continue.	The library recall can't be undone. EQライブラリーのリコールをUndoできません。
✖	Can't undo GATE Library-Recall. Press ENTER to continue.	The library recall can't be undone. GATEライブラリーのリコールをUndoできません。
✖	Can't undo Snapshot-Recall. Press ENTER to continue.	The library recall can't be undone. スナップショットのリコールをUndoできません。
✖	Cascade communication stopped. Please check cascade cable. Press ENTER to continue.	The cascade connection has unexpectedly ended - it is possible the cable is unplugged. カスケード接続が切断されました。ケーブルの接続状況を確認してください。
✔	CASCADE Connection ended. Please choose new clock master. Set Internal Clock ? Press ENTER to confirm, or a cursor to cancel.	The cascade connection to a slave has been broken and the message invites resetting with the unit’ s internal clock. カスケード接続が終了しました。クロックマスターをInternalに切り替えますか？
●	Cascade connection established. Press ENTER to continue.	Successful cascade connection. カスケード接続が確立されました。
✖	Cascade Slave not found. Cascade connection not established. Press ENTER to continue.	An attempt has been made to make a cascade, but no slave is available. カスケードスレーブ機が見つからないため、カスケード接続ができません。
✔	CF card is not available. Can’t delete automation data on CF card. Press ENTER to continue.	Automation data stored on CF card cannot be deleted. Reinsert the card or retry with another card. CFカードが正常でないため、CFカード上のオートメーションデータを削除できません。
✖	CF card is not available. Can’t store automation data on CF card. Press ENTER to continue.	Automation data can't be stored. Reinsert the card or retry with another card. CFカードにオートメーションデータを保存できません。カードを入れ直すか、別のカードを入れてください。
✔	CF card is not available. Can’t store current project. Turn off power? Press ENTER to confirm, or a cursor key to cancel.	An attempt to shut down the DM-4800 has failed, because a CF card is not available.Reinsert the card or retry with another card. CFカードがセットされていない（あるいは本機がカードを認識できない）ため、本機を終了できません。カードを入れ直すか、別のカードを入れてください。
✖	CF card is not available Press ENTER to continue.	An attempt has been made to read or write to a CF card that is not inserted, etc. Reinsert the card or retry with another card. CFカードをセットしていないとき（あるいは本機がCFカードを認識できないときなど）に、CFカードからの読み込みやCFカードへの書き出しを実行しようとすると表示されます。カードを入れ直すか、別のカードを入れてください。

Action(種類)	Message（メッセージ）	Meaning（内容）
✔	CH DELAY Time Update setup? Press ENTER to confirm, or a cursor key to cancel	Shown when performing bulk setup of the channel delay time. チャンネルディレイタイムの一括設定を行なうときに表示されます。
✔	CH Module LFE LEVEL Ch parameters setup? Press ENTER to confirm, or a cursor key to cancel	Shown when performing bulk setup of the channel LFE level. チャンネルLFEレベルの一括設定を行なうときに表示されます。
✔	CH Module PAN/BAL Ch parameters setup? Press ENTER to confirm, or a cursor key to cancel	Shown when performing bulk setup of the channel pan and balance parameters. チャンネルパン／バランスの一括設定を行なうときに表示されます。
●	CH xx EQ Library undo completed.	Shown when undoing or redoing library operations. ライブラリー操作のアンドゥやリドゥが正常終了したときに表示されます。
●	CH xx COMP/EXP Library undo completed	
●	CH xx COMP/EXP Library redo completed	
●	CH xx EQ Library redo completed	
●	CH xx GATE Library redo completed	
●	CH xx GATE Library undo completed	
✔	Clear all fader grouping layers? Press ENTER to confirm, or a cursor key to cancel.	Shown when all grouping layers are to be cleared. フェーダーグループレイヤーをすべてクリアーするときに表示されます。
✔	Clear Current Automation ALL data? Press ENTER to confirm, or a cursor key to cancel.	Confirmation when starting a new automation project - all current automation data will be cleared. 全オートメーションデータの削除を確認。 （Auto Files画面でのNEW実行時のメッセージ）
✔	Clear Current Automation Event Data? Press ENTER to confirm, or a cursor key to cancel.	When setting up automation, this message appears to confirm the clearing of all current data. オートメーションのイベントデータの削除を確認。 （CLEAR DATA実行時のメッセージ）
✔	Clear this fader grouping? Press ENTER to confirm, or a cursor key to cancel.	Shown when the currently selected fader grouping is to be cleared. 現在のフェーダーグループをクリアーするときに表示されます。

Action(種類)	Message（メッセージ）	Meaning（内容）
✔	Clock Check Results Current Fs: 48kHz Sources Word : 44.1kHz0.0% Digi IN 1 : Out of Range Digi IN 2 : Fs convert On TDIF 1 : 44.1kHz0.0% TDIF 2 : 44.1kHz0.0% TDIF 3 : Unusable ADAT : 44.1kHz+1.0% SLOT 1 : 48kHz+0.2% SLOT 2 : Unusable Press ENTER to continue.	Results of performing a word sync check. ワードクロックのチェックを行なったときに表示されます。
●	ClockInfo: CASCADE Fs: fff kHz Press ENTER to confirm, or a cursor key to cancel.	Informational message on slave about new cascade clock setting. カスケード確立後、クロック状況が所定の周波数であることを示しています。
✖	ClockInfo: CASCADE No signal Press ENTER to continue.	If the clock is meant to be the cascade clock, but no valid clock signal is found, this message appears. カスケードのクロックが供給されていないときに表示されます。
✖	Clock Info: Digital In1 C-bit : Illegal data. Press ENTER to continue.	Shown when badly-formed digital audio is received at one of the DIGITAL INs. DIGITAL IN端子から入力されるデジタル信号のクロックが不正であるときに表示されます。
✖	Clock Info: Digital In1 Fs mode : Not indicated Check D-IN MANUAL SETUP Press ENTER to continue.	An attempt is made to use a clock source, but the sampling frequency cannot be determined. DIGITAL IN 1をクロックソースに選択しようとしたとき、入力信号のFs mode情報に不備があった場合に表示されます。
✔	Clock Info: INTERNAL Fs: 44.1kHz Press ENTER to confirm, or a cursor key to cancel.	A valid clock source has been selected. 正常なクロックソースが選択されています。
✖	Clock Info: WORD New clock source is out of range. Master clock is unchaged. Press ENTER to continue.	A clock source has been changed, but the new clock is out of the permissible range. クロックソースを変更したとき、新しいソースのサンプリング周波数が本機の許容範囲外です。
✖	Clock Info: WORD No signal Press ENTER to continue.	A clock source has been selected, but no signal is present. ワードクロックソースにWORDが選択されているのに、ワード信号が入力されていないときに表示されます。
●	COMP/EXP Library Bank a-bbb recalled.	A library entry has been recalled (compressor/expander). ライブラリーデータが呼び出されました（コンプレッサー／エキスパンダー）。
✖	COMP/EXP Library Preset 1-bbb is Read-only!	An attempt has been made to store to a protected library entry (compressor/expander). プロテクトされているライブラリーデータに保存しようとしたときに表示されます（コンプレッサー／エキスパンダー）。

Action(種類)	Message（メッセージ）	Meaning（内容）
●	COMP/EXP Library Preset 1-bbb recalled.	A library preset entry has been recalled (compressor/expander). ライブラリープリセットデータが呼び出されました（コンプレッサー／エキスパンダー）。
✔	COMP/EXP Library BANK a-bbb Name : TASCAM DATA Create data: DEC/15/2004 20: 35: 45 Project Name: PROJECT ORCA Project FS: 44.1kHz Press ENTER to continue.	Information about a library entry (compressor/expander). ライブラリーデータ情報表示（コンプレッサー／エキスパンダー）。
✔	COMP/EXP Library Preset a-bbb Name : TASCAM DATA Press ENTER to continue.	Information about a library preset entry (compressor/expander). ライブラリープリセットデータ情報表示（コンプレッサー／エキスパンダー）。
●	Completed.	The selected operation (e.g. format or creation of project) has been completed successfully. An automation operation has been successfully completed. オートメーションやプロジェクトの操作が無事に完了しました。
✔	Confirm LIST Auto Detect? Press ENTER to confirm, or a cursor key to cancel.	Confirming the auto-detection of machine control list. マシンコントロールリストの自動検出の確認。
✔	Confirm TRA Auto Detect? Press ENTER to confirm, or a cursor key to cancel.	Confirming the auto-detection of transport control mapping. トランスポートコントロールマッピングの自動検出の確認。
✔	Copy from Ch2 Automation configuration	Confirmation when copying automation configuration. オートメーションコンフィギュレーションをコピーするときの確認。
●	Copy Module parameters to CHn.	Notification that a parameter copy operation between modules has been carried out correctly. パラメーターコピーがモジュール間で正常に行えたときに知らせるメッセージ。
✔	Copy Module parameters to CHn? Press ENTER to confirm, or a cursor key to cancel.	Confirmation that parameters are to be copied to another module. 他のチャンネル・モジュールへコピー処理を行う場合の確認メッセージ。
✔	Copy parameters within Module? Press ENTER to confirm or a cursor key to cancel.	Confirmation when performing a parameter copy operation within the same module. 同一モジュール内でのコピーを行う場合の確認
✔	Copy to xxxx fader level Press ENTER to confirm, or a cursor key to cancel	Confirmation when copying fader levels. xxxx may be ALL, ALL MASTER, Aux 1-8, groups of 8 busses, or groups of 8 channels. フェーダーレベルを一括コピーするときの確認。
●	Copy was completed.	Popup message on completion of copy operation. コピー操作が無事に完了しました。
●	Copying project. Do not remove the CF card.	Shown while a project is being copied on the CF card. プロジェクトのコピー中。CFカードを取り出さないでください。

Action(種類)	Message（メッセージ）	Meaning（内容）
●	Creating project. Do not remove the CF card.	Warning not to remove CF card during project completion. プロジェクト作成中。CFカードを取り出さないでください。
✔	Create project? Press ENTER to confirm, or a cursor key to cancel.	Confirming creation of a project. プロジェクト作成の確認。
✖	Current Data initialized. Fs has changed. Mixer will reboot. Press ENTER to confirm or a cursor key to cancel.	Notice to restart the DM-4800 following a change of reinitialization and sampling frequency. 現在のデータを再イニシャライズし、サンプリング周波数を変更しました。 DM-4800を再起動するにはENTERキーを押します。（PROJECT＞CLOCK画面のMixer configration項目をオフに設定したとき）
✔	Current project is protected. Can't STORE current project. ENTER key : Shut down CURSOR key : Cancel	An attempt has been made to shut down the DM-4800 while the current project's version on card is protected (meaning that it cannot be saved). シャットダウン時にカレントのプロジェクトがプロテクトされている場合に表示。
●	Data change was applied.	Date and time have been changed. 日時が変更されました。
●	Data has not been changed.	Date and time have not been changed. 日時が変更されませんでした。
●	Deleting project. Do not remove the CF card.	Shown while a project is being deleted from the CF card. プロジェクト削除中。CFカードを取り出さないでください。
✖	Device is not active.	A device selected for transport control is not active. トランスポートコントロール対象として選択した機器がアクティブでありません。
✖	Digital In1: Error Not audio signal Press ENTER to continue.	The DIGITAL IN audio source is not providing digital audio data. DIGITAL INからデジタルオーディオデータが供給されません。
✖	Digital In1: Error Not audio signal Source Fs unlocked Press ENTER to continue.	The DIGITAL IN clock source is not providing digital audio data, and the sync clock is now unlocked. DIGITAL INからデジタルオーディオデータが供給されず、同期クロックがロックしません。
✖	Digital In1: Error Source Fs unlocked Press ENTER to continue.	The DIGITAL IN clock source has experienced an error, and the sync clock is now unlocked. DIGITAL INクロックソースにエラーが発生し、同期クロックがロックしません。
✖	Digital INPUT1 : Fs convert On Can’t select master clock. Press ENTER to continue.	It is not possible to use a source as a word clock when sampling frequency conversion is turned on. サンプリング周波数コンバーターをオンにしているときは、ソース信号をワードクロックマスターにすることができません。
✔	DIGITAL TRIM Update setup? Press ENTER to confirm, or a cursor key to cancel	Confirmation that the digital trim values are to be updated. デジタルトリム値をアップデートするときの確認。
✖	DSP DMA didn't done yet!	An internal error has occurred. Contact your TASCAM service center. DSPとのDMAが正常終了しません。
✖	DSP DMA didn't done yet x100 times!	上記のメッセージ（DSP DMA didn't done yet!）が100回表示された次に表示。 ［考えられる原因］ DSPデバイス不良、DSP-CPU間のハードウェア不良、DSP PLD不具合、DSPファーム不具合、CPUファーム不具合

Action(種類)	Message（メッセージ）	Meaning（内容）
✖	Effect Preset a-bbb is Read-only!	An attempt has been made to store to a protected library entry (effect). プロテクトされているエフェクトライブラリーデータに保存しようとしたときに表示。
●	Effect 1 redo completed.	The redo operation is now complete. EFFECT 1のリドゥ操作が完了しました。
●	Effect 1 undo completed.	The undo operation is now complete. EFFECT 1のアンドゥ操作が完了しました。
✔	Effect BANK a-bbb Name : TASCAM DATA Effect Type: TASCAM Delay Create data: DEC/15/2004 20:35:45 Project Name: PROJECT ORCA Project FS: 44.1kHz Press ENTER to continue.	Information about a library entry (compressor/expander). ライブラリーデータ情報表示（エフェクト）。
●	Effect Bank a-bbb recalled To Effect x	A library entry has been recalled (effect). エフェクトライブラリーデータが呼び出されました。
●	Effect Preset 1-bbb recalled To Effect x	A library preset entry has been recalled (effect). ライブラリープリセットデータが呼び出されました（エフェクト）。
●	Effect x redo completed.	Shown when undoing or redoing effect library operations. エフェクトライブラリー操作のアンドゥ、リドゥを実行したときに表示。
●	Effect x undo completed.	
●	EQ Library Bank a-bbb recalled.	A library entry has been recalled (EQ). EQライブラリーデータが呼び出されました。
✖	EQ Library Preset 1-bbb is Read-only!	An attempt has been made to store to a protected library entry (EQ). プロテクトされているEQライブラリーデータを呼び出そうとしたときに表示。
●	EQ Library Preset 1-bbb recalled.	A library entry has been recalled (EQ). EQプリセットライブラリーデータが呼び出されました。
✔	EQ Library BANK a-bbb Name : TASCAM DATA Create data : DEC/15/2004 20: 35: 45 Project Name: PROJECT ORCA Project FS: 44.1kHz Press ENTER to continue.	Information about a library entry (EQ). EQライブラリーデータに関する情報。
✔	EQ Library Preset a-bbb Name : TASCAM DATA Press ENTER to continue.	Information about a library preset entry (EQ). EQプリセットライブラリーデータに関する情報。

Action(種類)	Message（メッセージ）	Meaning（内容）
✖	External Control List Full Press ENTER to continue.	An attempt has been made to create more than eight devices in the external control list. 8つを越えるエクスターナル・コントロールをリストに追加しようとしたときに発生するエラーメッセージ。
✔	Firewire connection is active, are you sure? Press ENTER to confirm, or a cursor to cancel.	The DM-4800 is still connected via FireWire to a computer, and an attempt has been made to change the clock source. FWカードがPCと1394ケーブルで接続されている場合に、クロックを切り替えようとしたときの確認。
✔	Format CF Card? All data on the card will be deleted. Press ENTER to confirm, or a cursor key to cancel.	Confirmation before formatting a CF card. CFカードをフォーマットする前の確認。
✔	Format CF Card? Press ENTER to confirm, or a cursor key to cancel.	
✔	Format failed. Retry? Press ENTER to confirm, or a cursor key to cancel.	A CF card format operation has failed. CFカードのフォーマットに失敗しました。もう一度行いますか？
●	Formatting now. Please do not turn off power while formatting.	Warning not to remove power while card is being formatted. フォーマット中ですので、電源を切らないでください。
✖	Fs has changed. Mixer will reboot. Press ENTER to confirm or a cursor key to cancel.	Notice to restart the DM-4800 following a change of sampling frequency. サンプリング周波数を変更しましたので、DM-4800を再起動するにはENTERキーを押してください。
✔	FS mode after loading and FS mode before loading is different. Fs is switched and Reboot. Press ALT+STOP+PLAY to reboot.	A project has been loaded which has changed the sampling frequency. 現在のFSモードと異なるFSモードがロードされているときに再起動を促す表示。
✖	FS modes do not match. Cascade connection not established. Press ENTER to continue.	Cascade master and slave must use the same sampling frequency. Fsモードが一致していないのでカスケード接続できません。
●	GATE Library Bank a-bbb recalled.	A library entry has been recalled (gate). ゲートライブラリーデータを呼び出しました。
✖	GATE Library Preset 1-bbb is Read-only!	An attempt has been made to store to a protected library entry (EQ). ゲートのライブラリープリセットデータに保存しようとしたときに表示。
●	GATE Library Preset a-bbb recalled.	A library preset entry has been recalled (gate). ゲートライブラリープリセットデータを呼び出しました。

Action(種類)	Message（メッセージ）	Meaning（内容）
✔	GATE Library BANK a-bbb Name : TASCAM DATA Create data: DEC/15/2004 20: 35: 45 Project Name: PROJECT ORCA Project FS: 44.1kHz Press ENTER to continue.	Information about a library entry (gate). ゲートライブラリーデータに関する情報
✔	GATE Library Preset a-bbb Name : TASCAM DATA Press ENTER to continue.	Information about a library preset entry (gate). ゲートライブラリープリセットデータに関する情報表示。
●	Group x is not grouped.	A group does not exist to be used as a grouping layer. グループが存在しないため、グループレイヤーとして使用できません。
✔	Grouping Link (Fader→Mute) Press ENTER to confirm, or a cursor key to cancel.	Confirmation that fader groups should be linked to mute groups. フェーダーグループをミュートグループにリンクするときの確認。
✔	Grouping Link (Mute→Fader) Press ENTER to confirm, or a cursor key to cancel.	Confirmation that mute groups should be linked to fader groups. ミュートグループをフェーダーグループにリンクするときの確認。
●	HUI DAW Control Emulator optimized for ProTools Press ENTER to continue.	Information on external control. エクスターナルコントロールの情報表示。
✔	Invert source ? Press ENTER to confirm, or a cursor key to cancel.	Confirmation when changing between Input and Return sources. インプットとリターンを入れ替えるときの確認。
✔	Invert source CHxx-CHxx? Press ENTER to confirm, or a cursor key to cancel.	Confirmation when making a batch change between Input and Return sources. インプットとリターンを一括して入れ替えるときの確認。
●	Loading project. Do not remove the CF card.	Warning not to remove the card while a project is loading. プロジェクト呼び出し中のため、CFカードを取り出さないよう警告。
●	Mackie Control Emulator optimized for Apple Logic Press ENTER to continue.	Information on external control. エクスターナルコントロールの情報表示。
●	Mackie Control Emulator optimized for Cakewalk Sonar Press ENTER to continue.	Information on external control. エクスターナルコントロールの情報表示。
●	Mackie Control Emulator optimized for MOTU Digital Performer Press ENTER to continue.	Information on external control. エクスターナルコントロールの情報表示。

Action(種類)	Message（メッセージ）	Meaning（内容）
●	Mackie Control Emulator optimized for Steinberg Cubase 2.2 + Nuendo 2.2 and later versions Press ENTER to continue.	Information on external control. エクスターナルコントロールの情報表示。
●	Maps a MIDI Controller onto the first 16 faders	Information on external control. 最初の16フェーダーに割り当てられたMIDIコントローラーの情報表示。
✔	Master DELAY Time Update setup? Press ENTER to confirm, or a cursor key to cancel	Confirmation that the delay values are to be updated. ディレイ値をアップデートするときの確認。
✔	MC Transport Maps 0 : MMC open ID=120 1 : MTC Generate 2 : None 3 : None 4 : None 5 : None 6 : None 7 : None 8 : None 9 : None Press ENTER.	Current MMC transport maps. 現在のマシンコントロールトランスポートマップ。
✖	MIDI Ch1 is already assigned. Press ENTER to continue.	Warning that a MIDI channel has already been used for Program Change recall of library entries. 使おうとしたMIDIチャンネルが、プログラムチェンジによるライブラリーデータの呼び出し用にすでに使われていることを表示。
✖	MIDICh1{Control No.1} is already assigned. Press ENTER to continue.	Warning that a MIDI control number and/or channel has already been used when setting up Control Change messages. MIDIコントロールチェンジメッセージを設定するときに、MIDIコントロールナンバーとチャンネル、又はどちらかがすでに使われていた場合の警告メッセージ。
✖	Mixer Device Boot Failed (device-name)	A major component of the DM-4800has failed. Make a note of the device name, which will be one of the following, and contact your TASCAM service center: DSP-A/B, DSP-A, DSP-B, DSP-A/B SRAM, DSP-A SRAM, DSP-B SRAM, FPGA, PLL, DDMP,RTC, Slot (slot card). ミキサーデバイスの起動不良。
✔	Mixer will mute while checking. OK to continue? Press ENTER to confirm or a cursor key to cancel.	Confirmation that a named digital input source check may change the clock rate, and therefore the audio output is muted during the check. デジタル入力ソースチェックによりクロックレートが変わる可能性があるため、オーディオ出力をミュートすることを確認。
✔	Name/Memo is 17 or more characters. If name is changed on mixer, it will be shortened to 16 or fewer characters. Press ENTER to confirm, or a cursor key to cancel.	Reminder that stored names and memos must be 16 characters or less in length. 保存する名前やメモは16文字以下でなければなりません。
✖	No Automation Undo data. (/ No Automation Redo data.)	There is no automation data in the undo buffer. アンドゥ／リドゥするデータがありません。

Action(種類)	Message（メッセージ）	Meaning（内容）
✖	No copy parameter is selected. Press ENTER to continue.	An attempt has been made to copy data, without a parameter's checkbox being selected. パラメータチェックボックスが選択されていない状態でデータをコピーしようとしています。
●	Now copying... Do not disconnect CF card.	A copy is being carried out. コピー中のため、CFカードを取り出さないでください。
✔	OK to Copy? From Project: TASCAM Project 2 Snapshot Bank a-bbb To Project: TASCAM Project Snapshot Bank c-ddd Press ENTER to confirm, or a cursor key to cancel.	Conformation that a library entry (EQ, snapshot, etc. can be copied from one project to another. ライブラリーデータ（EQ、スナップショットなど）をプロジェクト間でコピーするときの確認。
✔	OK to Copy? From Project: TASCAM Project 2 Snapshot Preset 1 To Project: TASCAM Project Snapshot Bank c Press ENTER to confirm, or a cursor key to cancel.	Conformation that a library bank can be copied from the preset bank to a project bank. プリセットバンクをユーザーバンクにコピーするときの確認。
✔	OK to Copy? From Project: TASCAM Project 2 xxxxxxxx BANK 1 To Project: TASCAM Project xxxxxxxxx BANK1 Press ENTER to confirm, or a cursor key to cancel.	Conformation that a library bank (EQ, snapshot, etc.) can be copied from one project to another. ライブラリーバンク（EQ、スナップショットなど）をプロジェクト間でコピーするときの確認。
✔	OK to delete automation file [File Name] Press ENTER to confirm, or a cursor key to cancel.	Confirmation about the deletion of an automation file. オートメーションファイルを削除するときの確認。
✔	OK to delete project. projectname Press ENTER to confirm, or a cursor to cancel.	Confirmation when deleting a project. プロジェクトを削除するときの確認（一回目）。
✔	OK to Delete xxxxxx Bank a-bbb Press ENTER to confirm, or a cursor key to cancel.	Confirmation before deleting data. データを削除するときの確認。

Action(種類)	Message（メッセージ）	Meaning（内容）
✔	OK to Overwrite Automation data Overwrite file [xxxx] Keep file[yyyy] Press ENTER to confirm, or a cursor key to cancel.	An attempt is being made to overwrite existing automation data. オートメーションデータのファイル"xxxx"をファイル"yyyy"で上書きします。
✔	OK to Overwrite Automation File [File name] Press ENTER to confirm, or a cursor key to cancel.	Confirmation before overwriting automation data. オートメーションデータを上書きするときの確認。
✔	OK to Overwrite Automation data [PROJECT DM4800#] Press ENTER to confirm, or a cursor key to cancel	Confirmation before overwriting automation data (keep confirmation). オートメーションデータを上書きするときの確認（KEEP CONFIRMATION機能オン時に表示）。
✔	OK to Overwrite Effect Bank a-bbb from Effect x Press ENTER to confirm, or a cursor key to cancel.	Confirmation before overwriting effect library item from x (either effect 1 or effect 2). エフェクトライブラリーデータを上書きするときの確認。
✔	OK to Overwrite Snapshot Bank a-bbb Press ENTER to confirm, or a cursor key to cancel.	Confirmation before overwriting a snapshot library entry. スナップショットライブラリーデータを上書きするときの確認。
✔	OK to Overwrite Transport Map? Press ENTER to confirm, or a cursor key to cancel.	Confirmation shown when replacing the current transport control map. 現在のトランスポートコントロールマップを上書きするときの確認
✔	OK to Overwrite xxx Library BANK a-bbb from Chy? Press ENTER to confirm, or a cursor key to cancel.	Confirmation before overwriting a gate or compressor/expander or EQ library item (xxx) from the selected channel (y). 選択チャンネルからゲート、コンプレッサー／エキスパンダーまたはEQのライブラリーデータを上書きするときの確認。
✖	Operation failure. Press ENTER to continue.	Something has gone wrong with an operation involving the CF card. Try again with another card. 操作に失敗しました。
✔	Paste Buffer data to Chx? Press ENTER to confirm, or a cursor key to cancel.	Confirmation shown before pasting copied configuration data to a channel. コピーしたコンフィギュレーションデータをチャンネルにペーストする前の確認。
✔	Paste Ch2 Automation configuration.	Confirmation shown before pasting copied automation configuration data to a channel. コピーしたオートメーションコンフィギュレーションデータをチャンネルにペーストする前の確認。
●	Performing delete...	Automation File Delete. オートメーションファイル削除中のメッセージ。
●	Performing Keep...	An automation keep operation is in progress. KEEPによるオートメーションファイル保存中のメッセージ。

Action(種類)	Message（メッセージ）	Meaning（内容）
✔	Please set cascade on/off from the cascade master machine. Press ENTER to continue.	An attempt has been made to break the cascade connection from the slave. カスケードマスター機でカスケードのオン／オフを設定してください。
✔	Program Change Table OK to perform Batch Setup? Press ENTER to confirm, or a cursor key to cancel.	Confirmation shown before making a batch change to the Program Change table. プログラムチェンジテーブルを一括設定するときの確認。
✔	Project data and resume data are different. The project data is loaded ENTER key : from internal memory. CURSOR key : from CF card.	Shown on power-up. Data has been changed since the project was saved; should this changed data be loaded? 起動時にミキサーの内部メモリに格納されているミキサーデータと、CF上の自動ロードされるプロジェクトのミキサーデータが、何かしらの原因で異なっている場合に表示されます。 ENTERキーを押すと、プロジェクトをロードしますが、ミキサーデータは内部メモリの物となります。 CURSORキーを押すと、CF上のプロジェクトをロードし、ミキサーデータはそのプロジェクトのデータとなります。
✖	Project is not on CF card.	Shown if a referenced project is not actually on the CF card. プロジェクトがCFカード上に存在しません。
✖	Real time control of common MIDI Control Change parameters Press ENTER to continue.	Information on external control. エクスターナルコントロールの情報表示。
✔	Re-assign fader grouping layer? Press ENTER to confirm, or a cursor key to cancel.	Confirmation when re-assigning a grouping layer master. フェーダーグループのレイヤーマスターを再アサインするときの確認。
✔	Re-assign fader (mute) group? Press ENTER to confirm, or a cursor key to cancel.	Confirmation when changing a setting. グループの設定を変更するときの確認。
●	Re-building current Automation Data +----------+ :#### 20% +----------+	pop-up message shown when timecode is stopped, and timecode data is being written. オートメーションデータを再構成中（タイムコード停止処理中のポップアップメッセージ）
✔	Recall Automation data? Current data will be erased. Press ENTER to confirm, or a cursor key to cancel.	The recall of stored automation data will overwrite the data currently in memory. オートメーションデータをリコールするときの確認。 （現在のデータが消去されます。）
●	Renaming project. Do not remove the CF card.	Shown while a project is being renamed on the CF card. プロジェクト名変更中。CFカードを取り出さないでください。
✔	Scanning for cascade slave... Press a cursor key to cancel.	The master machine of a cascade is looking for a slave unit. カスケードスレーブを探索しています。
✔	SELECT xxxx MODE Press ENTER to confirm, or a cursor key to cancel	Confirmation that the surround mode will change (to STEREO, 5.1, 6.1 or LRCS). サラウンドモードを変更するときの確認。

Action(種類)	Message（メッセージ）	Meaning（内容）
✔	Shutdown was not performed correctly last time. The project data is loaded: ENTER key : from internal memory Cursor key : from CF card.	On power-up - a shutdown was not performed properly. Should data changed after the project was last stored be loaded? 前回、正しく終了しなかった場合、起動時に表示。 ENTERキーを押すと、前回終了時のデータがDM-4800の内部メモリーから呼び出され、カーソルキーを押すと、CFカードに最後に保存したデータが呼び出されます。
✔	Shut down? Press ENTER to confirm, or a cursor key to cancel.	Confirmation of shutdown (after pressing SHIFT+CTRL+ALT). SHIFT＋CTRL＋ALTの同時押した後、シャットダウン（終了）の確認。
✖	Signal info : Digital In1 No signal Press ENTER to continue.	No signal received at a digital input when detail is requested. デジタル入力の詳細表示。信号が入力されていません。
✔	Signal info : Digital out1 Format : AES/EBU Contents : Audio Emphasis : On Channel Mode : Stereo FS : 44.1kHz Word Length : 24bit Press ENTER to continue.	Detail information pop-up for digital audio output. デジタルオーディオ出力の詳細情報。
✔	Signal info : Slot1 AES3 Card INPUT LINE1 Format : AES/EBU Contents : Audio Emphasis : None Channel Mode : Stereo FS : 44.1kHz Word Length : 24bit Press ENTER to continue.	Detail information pop-up for digital audio I/O (AES card). AESカード上のデジタルオーディオ出力の詳細情報。
✔	Signal info : TDIF1 Input Rx mode : Double-line Fs : 192kHz Word Length : 24bit Emphasis : None Output Tx mode : Normal FS : 44.1kHz Word Length : 24bit Emphasis : No Press ENTER to continue.	Detail information pop-up for digital audio I/O (TDIF). TDIFデジタルオーディオI/Oの詳細情報表示。
✖	Slot AES3 Card INPUT LINE1 Error Not audio signal Press ENTER to continue.	Digital audio data error from AES card (non-audio data). AESカードの入力のエラー（デジタルオーディオ信号が入力されていません）。

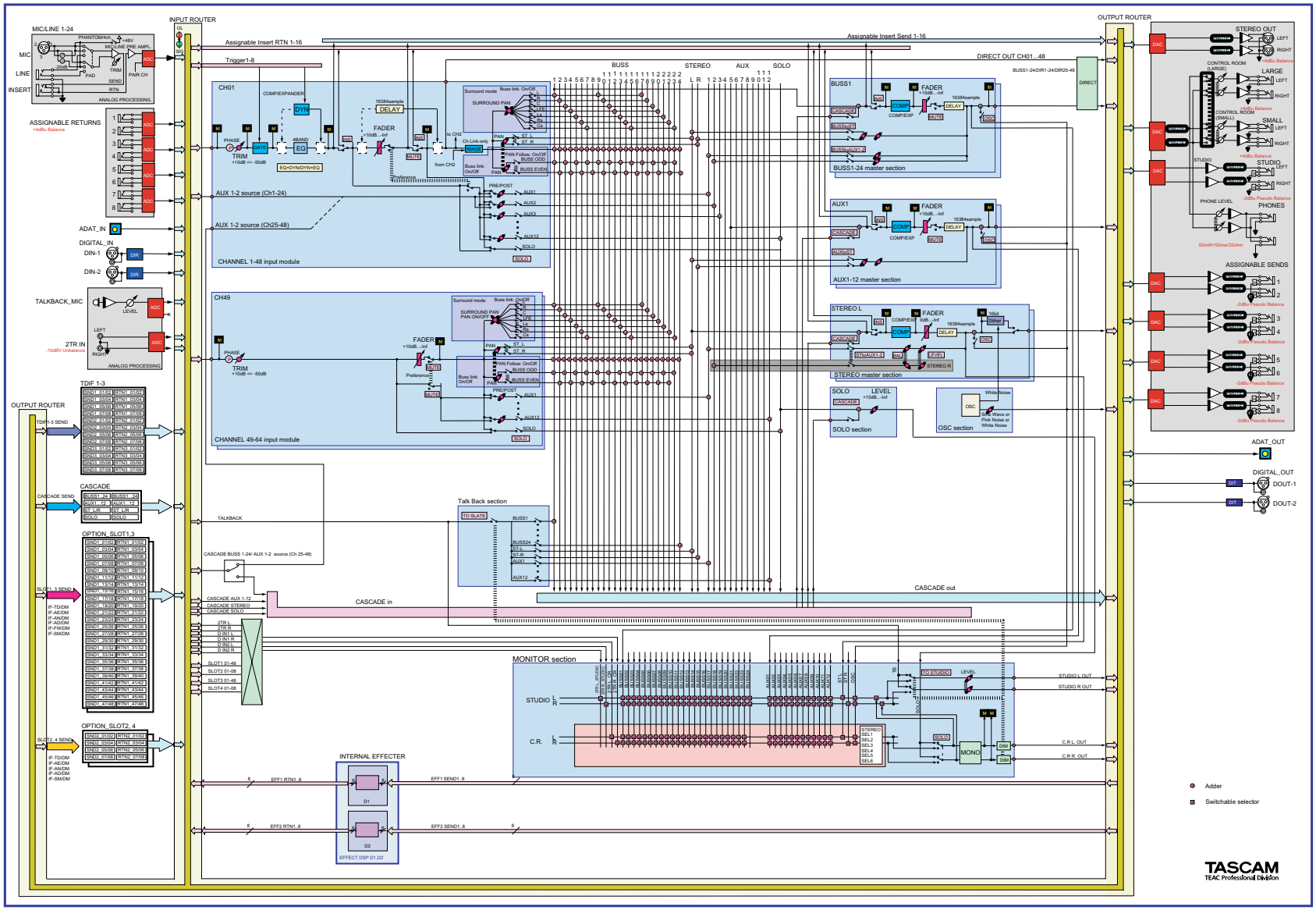
Action(種類)	Message（メッセージ）	Meaning（内容）
✖	Slot AES3 Card INPUT LINE1 Error Source Fs unlocked Not audio signal Press ENTER to continue.	Digital audio data error from AES card (non-audio data has caused loss of word sync). AESカードの入力のエラー（オーディオ信号が入力されていないため、ワードシンクがロックしていません）。
✖	Slot AES3 Card INPUT LINE1 Error Source Fs unlocked Press ENTER to continue.	Digital audio data error from AES card (loss of word sync). AESカードの入力のエラー（ワードシンクがロックしていません）。
●	Snapshot Bank a-bbb recalled.	A snapshot has been recalled. スナップショットが呼び出されました。
✖	Snapshot Preset 1-bbb is Read-only!	An attempt has been made to overwrite or delete a preset snapshot. プリセットスナップショットを上書きあるいは消去しようとしたときに表示。
●	Snapshot Preset 1-bbb recalled	A snapshot preset has been recalled. スナップショットプリセットが呼び出されました。
✔	Snapshot BANK a-bbb Name : TASCAM DATA Xtion Time : 9.9ms Create data : DEC/15/2004 20: 35: 45 Project Name : PROJECT ORCA Project FS : 44.1kHz Press ENTER to continue.	Information on a snapshot. スナップショットバンクの詳細情報。
✔	Snapshot Preset 1-bbb NAME : TASCAM DATA Press ENTER to continue.	Information on a preset snapshot. プリセットスナップショットの詳細情報。
●	Snapshot redo completed.	A snapshot redo operation is complete. スナップショットのリドゥ操作が完了しました。
●	Snapshot undo completed.	A snapshot undo operation is complete. スナップショットのアンドゥ操作が完了しました。
✔	Source Invert Ch1-Ch8 Press ENTER to confirm, or a cursor key to cancel.	Confirmation of bulk change of input from input to return (or vice versa). チャンネルのインプットとリターンの一括切り換え。
✖	STEREO to AUX1-2 is assigned Press ENTER to continue.	Stereo buss is assigned to Aux 1-2. ステレオバスをAUX 1-2にアサインします。
●	Stored to EFFECT Library BANK a-bbb	Stored an effect library entry. エフェクトライブラリーデータを保存しました。
●	Stored to Snapshot Bank a-bbb	Stored a snapshot. スナップショットを保存しました。

Action(種類)	Message（メッセージ）	Meaning（内容）
●	Stored to xxxx Library BANK a-bbb from CHx.	Stored a library entry where xxxx is EQ, gate or compressor/expander from the selected channel. ゲート、コンプレッサー／エキスパンダー、EQライブラリーにチャンネルデータを保存しました（xxxxはGate, Comp/ExpまたはEQ）。
●	Storing project. Do not remove the CF card.	Shown while a project is being written to the CF card. プロジェクト保存中の表示です。ＣＦカードを抜かないでください。
✖	Target machine has same ID. Cascade connection not established. Press ENTER to continue.	In a cascade, there can be only one each of the master and slave. カスケードIDが同じため、カスケード接続ができません。
✖	Target machine is not supported. Cascade connection not established. Press ENTER to continue.	The target machine of the cascade pair is not suitable for the cascade (wrong type,firmware revision, etc.). 接続対象機器がカスケード機能をサポートしていないため、カスケード接続ができません。
✖	TC Running!	Some automation operations cannot be carried out with timecode running. タイムコード同期中に受け付けない操作を行なったときに表示。
✖	Template project is not selected. Press ENTER to continue.	An attempt has been made to create a new project from an unselected template. 新しくプロジェクトを作成するときに、プロジェクトが存在しない状態でテンプレートが選択されている場合に表示。
✖	The audio device is not operating normally. All sound stopped. Please contact TASCAM service. Press ENTER to continue.	A serious hardware error has occurred within the audio portion of the DM-4800. Contact your TASCAM service agent or dealer for repair. DDMPが不正な状態にある場合に表示。
●	The automation data has been built +--------------------+ I###100%### +--------------------+ Done!	Shown when the automation data has been successfully built, following the stopping of the timecode. オートメーションデータの再構成完了（タイムコード停止処理完了時のポップアップメッセージ）
✔	The current project is changed. Store current project? ENTER key : Store and Create CURSOR key : Create	Changes have been made to the current project before a project creation. プロジェクト作成時、現在のプロジェクトが変更されている場合に表示。 ENTERキーを押すと現在のプロジェクトが保存されてから新規プロジェクトが作成されます。
✔	The current project is not on the CF card. Store the current project? Cannot copy automation data and library data. ENTER key : Store and Shut down CURSOR key : Shut down	An attempts has been made to shut down the DM-4800 with no project stored on the card. シャットダウン時にカレントプロジェクトがCFカード上にない場合に表示。
✖	The current project is protected. Press ENTER to continue.	Trying to overwrite a protected project. 変更を加えたプロジェクトを保存しようとした場合に、プロジェクトがプロテクトされていた場合に表示。

Action(種類)	Message（メッセージ）	Meaning（内容）
✔	The format of this CF card is unsupported. Format CF card ? Press ENTER to confirm, or a cursor to cancel.	An unrecognized CF card has been inserted - this message suggests reformatting the card in DM-4800 format. CFカードのフォーマットが未対応である場合、カードのフォーマットを促す表示。
✔	The last stored project cannot be found. Create project? Press ENTER to confirm, or a cursor key to cancel.	At power-on, the last stored project cannot be found (maybe the card has been changed). 起動時、前回最後に保存したプロジェクトが見つからないとき（カードを交換した場合など）に表示。 プロジェクトを作成する場合はENTERキーを押してください。
●	The project reload was completed.	A project has been successfully reloaded. 起動時に前回のプロジェクトが正常にロードされたことを告げるメッセージ。
✖	The project name is not inputted. Press ENTER to continue.	An attempt has been made to create a project without giving it a name. プロジェクト名が入力されていません。
✖	There is no project loaded.	When storing, no project is currently loaded, so the data can't be stored. プロジェクトが呼び出されていないために保存ができません。
✖	This name is already assigned.	The name of the newly-created project already exists on the card as a project name. 新規作成したプロジェクトの名前がすでに存在しているときに表示。
✖	This project is protected.	The project to be renamed is protected. このプロジェクトはプロテクトされています。
✖	This project is the current project Can't change.	The current project cannot be renamed. 現在のプロジェクトですので、変更できません。
✖	Timecode running!	An attempt has been made to create a project, etc. while timecode is still running. Stop the timecode and try again. タイムコード走行中にプロジェクトを作成しようとしたときなどに表示。 タイムコードを停止してやり直してください。
✔	Turn cascade off ? Press ENTER to confirm, or a cursor key to cancel.	Confirmation that the cascade is to be turned off. カスケードをオフにすることを確認。
✔	Turn cascade on ? Press ENTER to confirm, or a cursor key to cancel.	Confirmation that the cascade is to be turned on. カスケードをオンにすることを確認。
●	Turn off power now. Press ALT + STOP + PLAY to reboot.	The shutdown process is now complete, and the power can be turned off, or the DM-4800 can be rebooted. 終了の準備が完了したので、電源をオフにしてください。

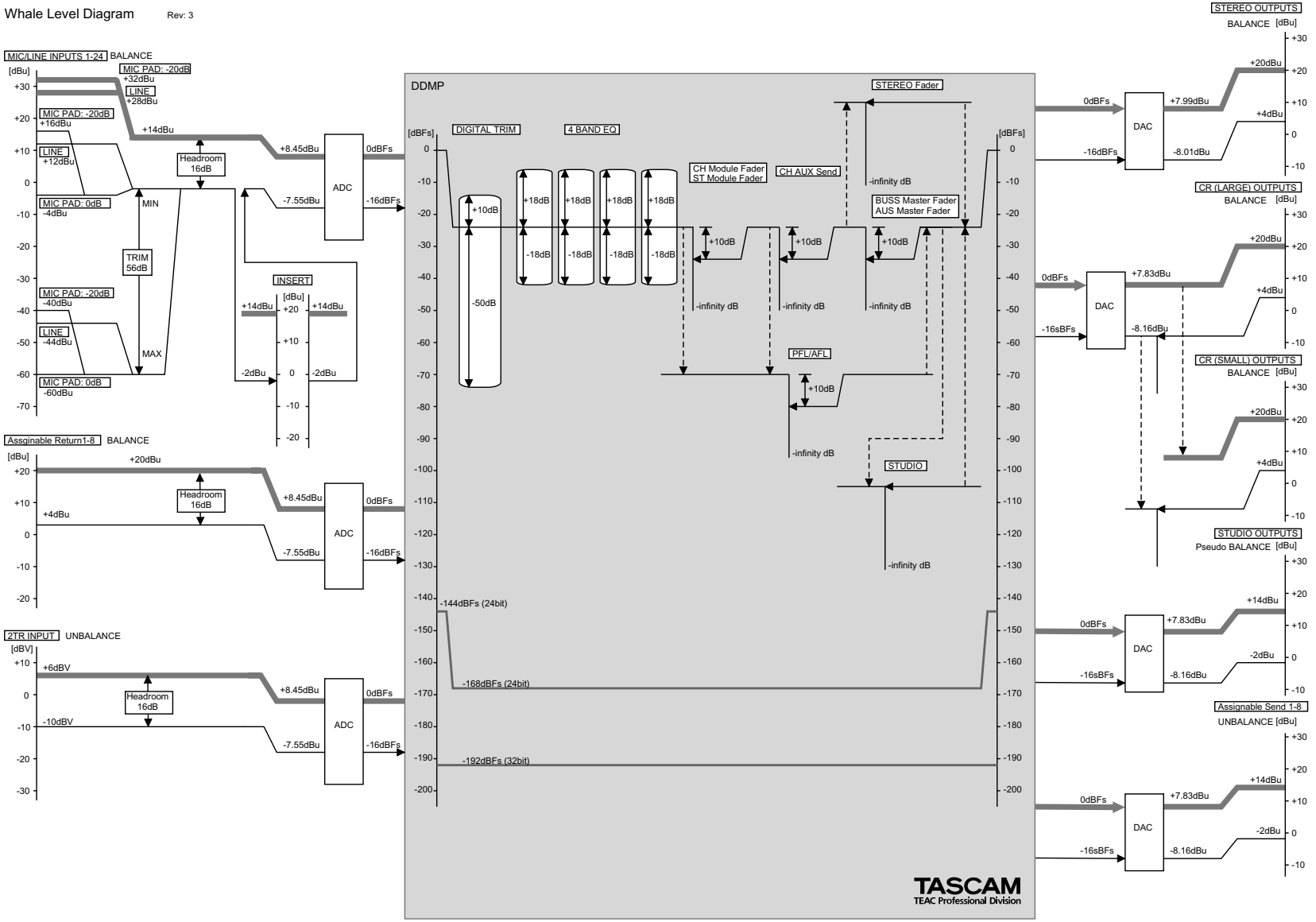
8. BLOCK DIAGRAMS
ブロックダイアブラム

1. AUDIO BLOCKDIAGRAM

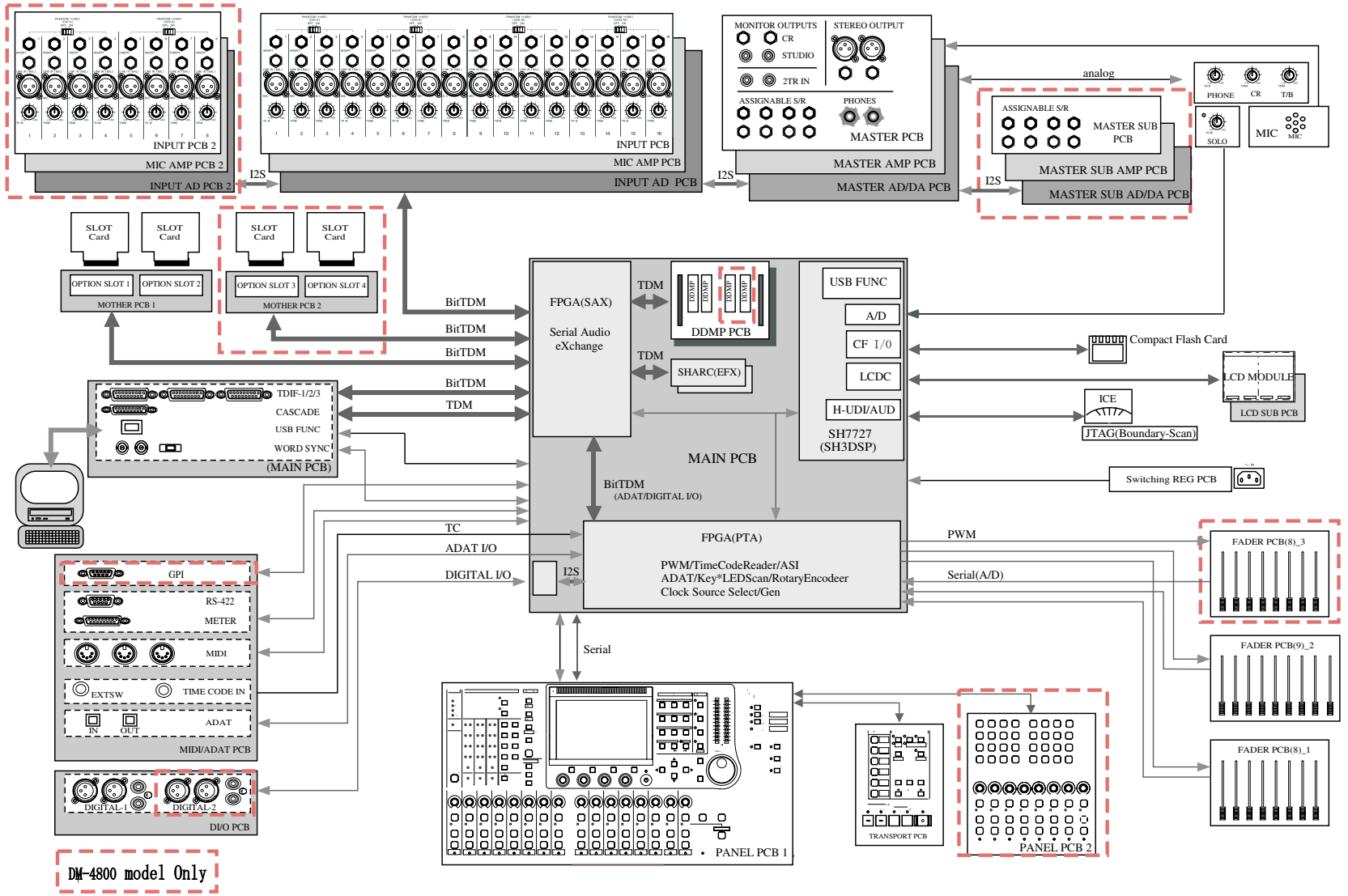


Whale Mixer Audio Block Diagram rev: 9

2. AUDIO LEVELDIAGRAM



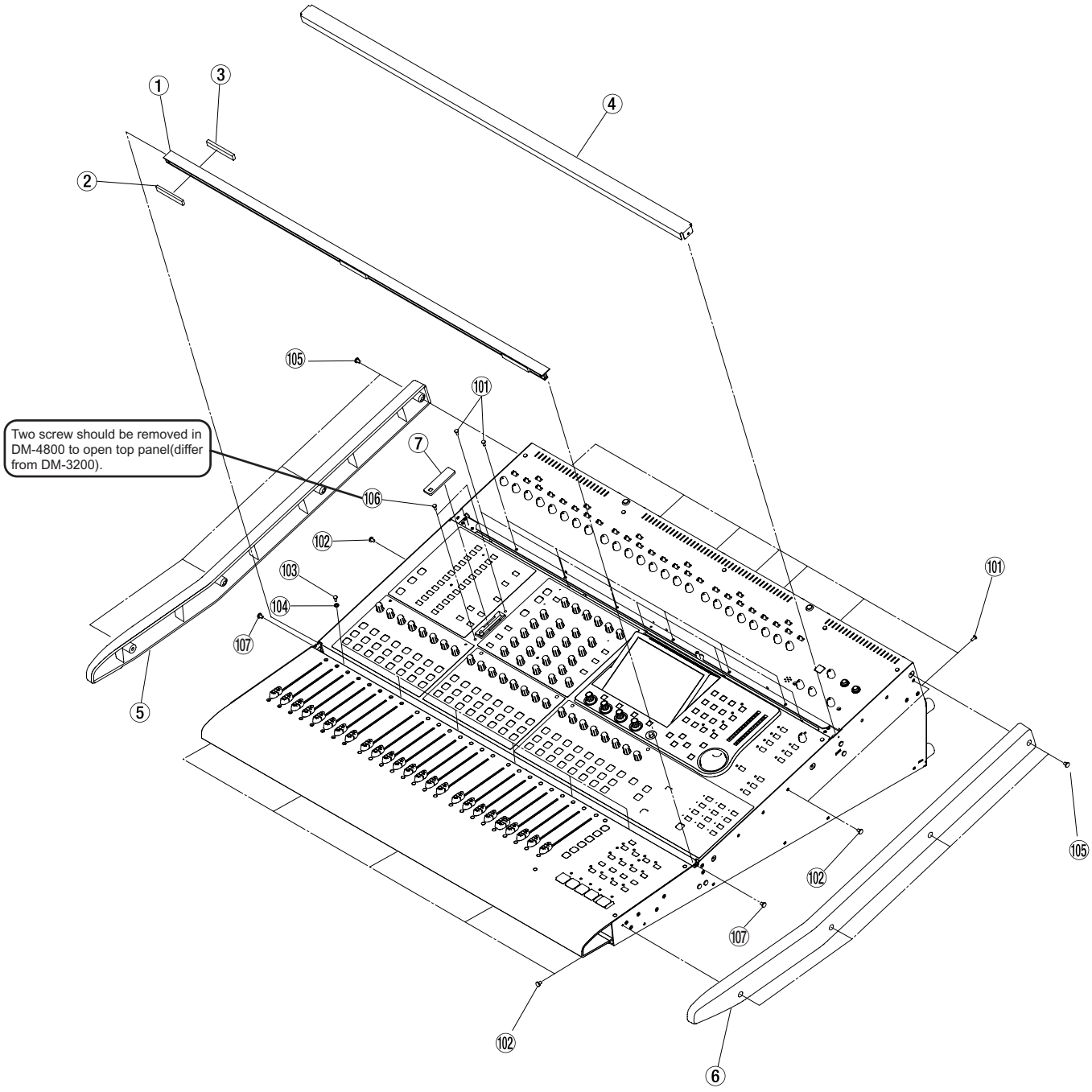
3. HARDWARE BLOCKDIAGRAM



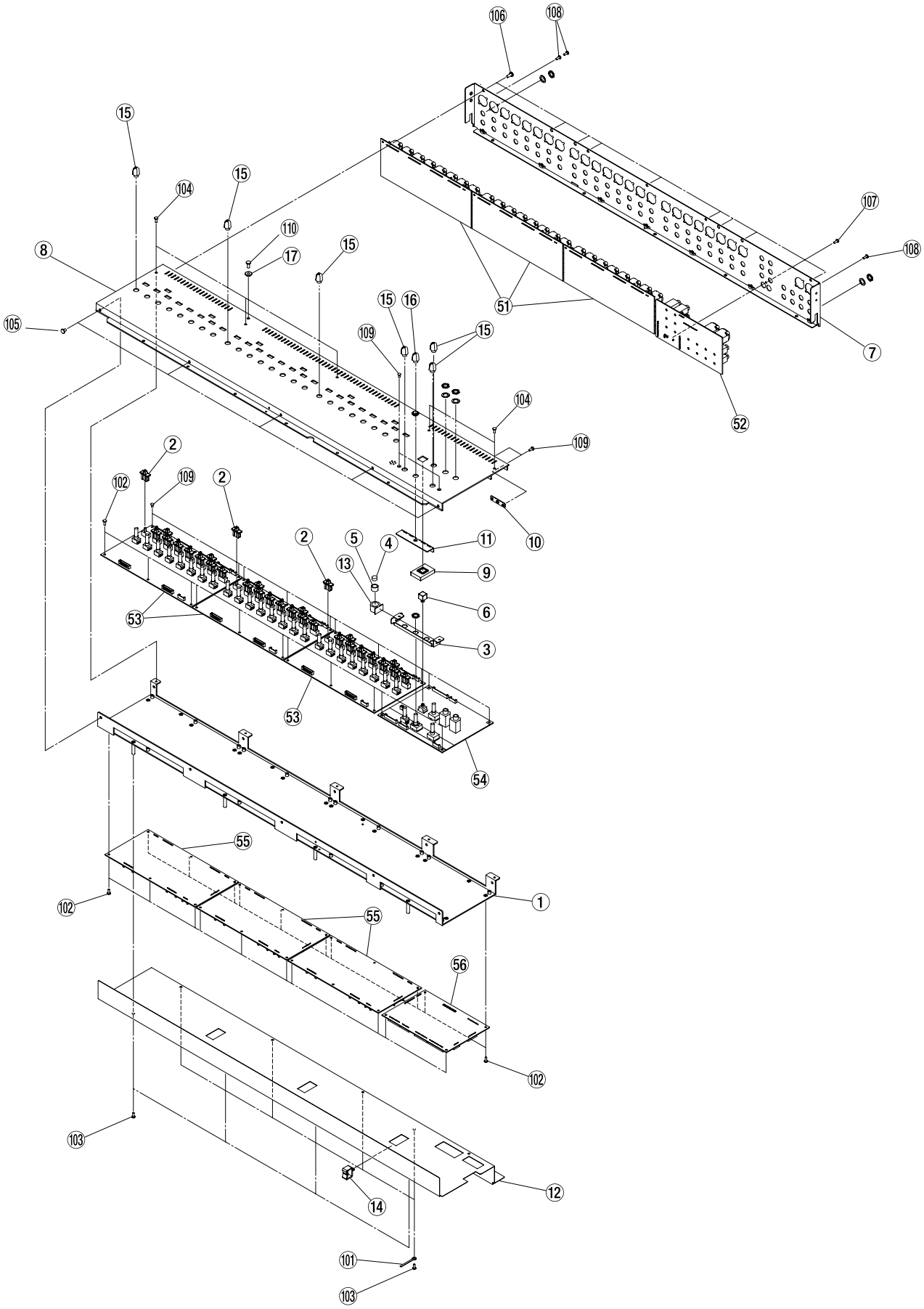
9. EXPLODED VIEWS AND PARTS LIST

分解図とパーツリスト

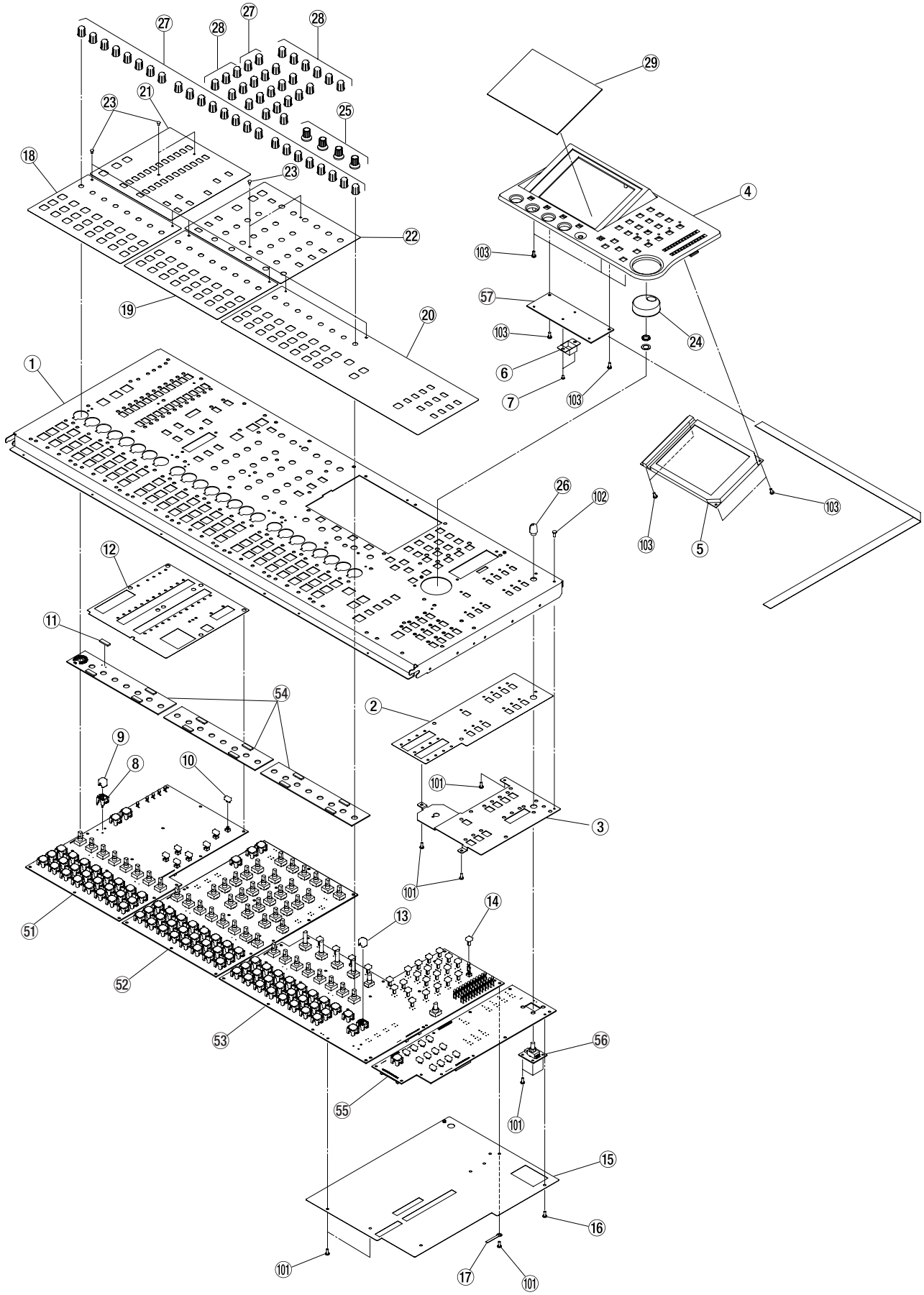
EXPLODED VIEW-1 (Exterior section)



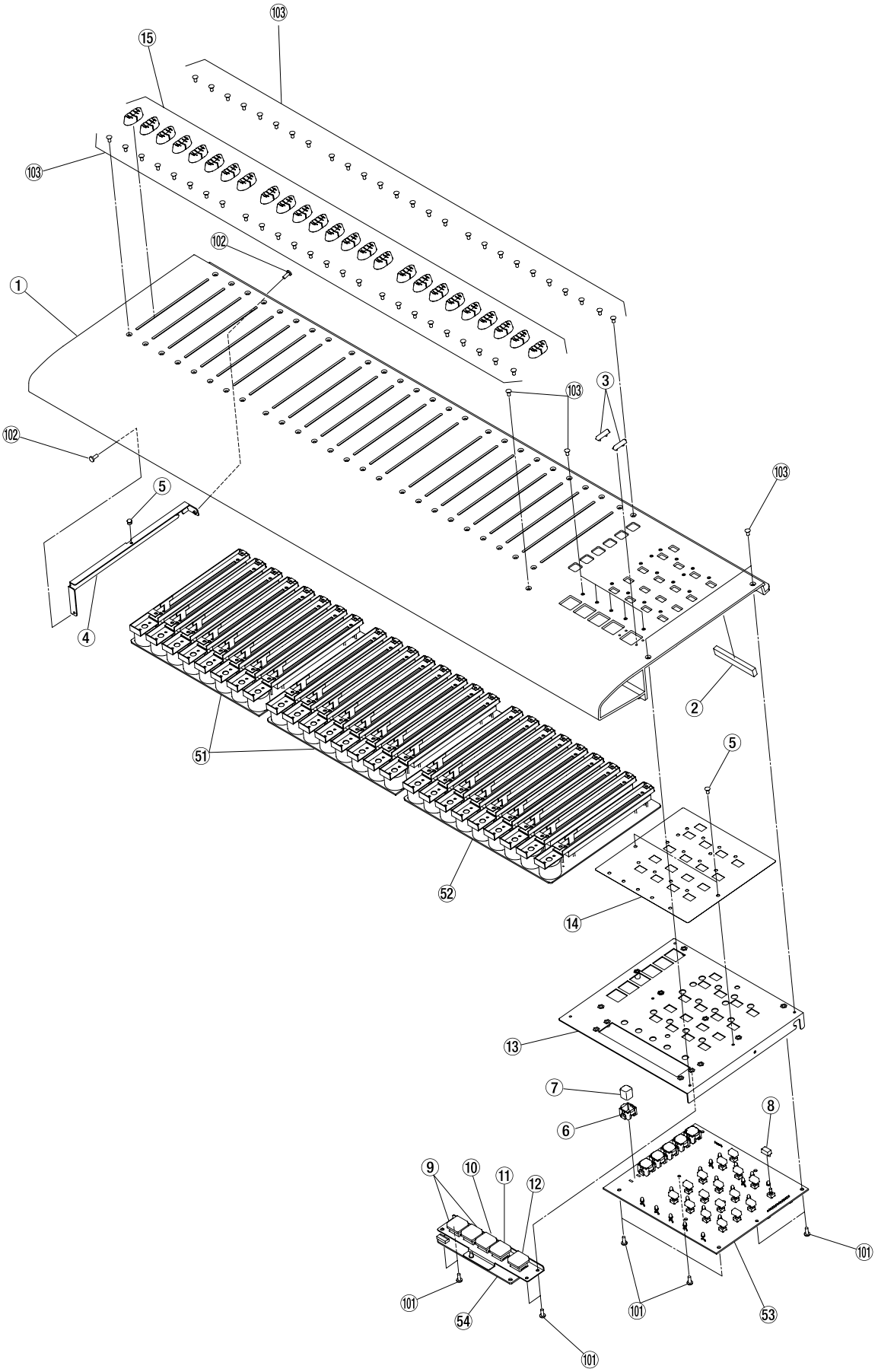
EXPLODED VIEW-2 (Analog Section)



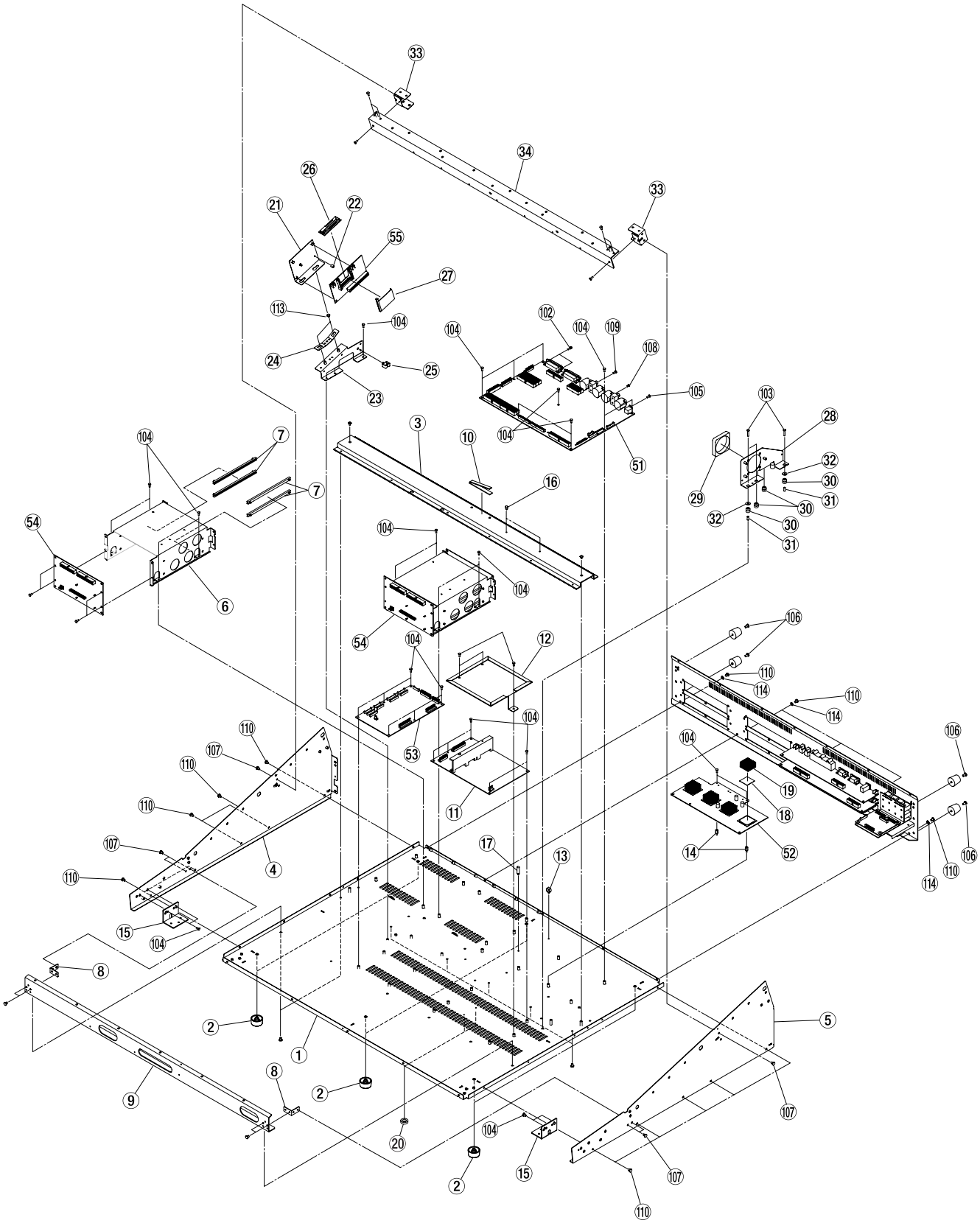
EXPLODED VIEW-3 (Panel section)



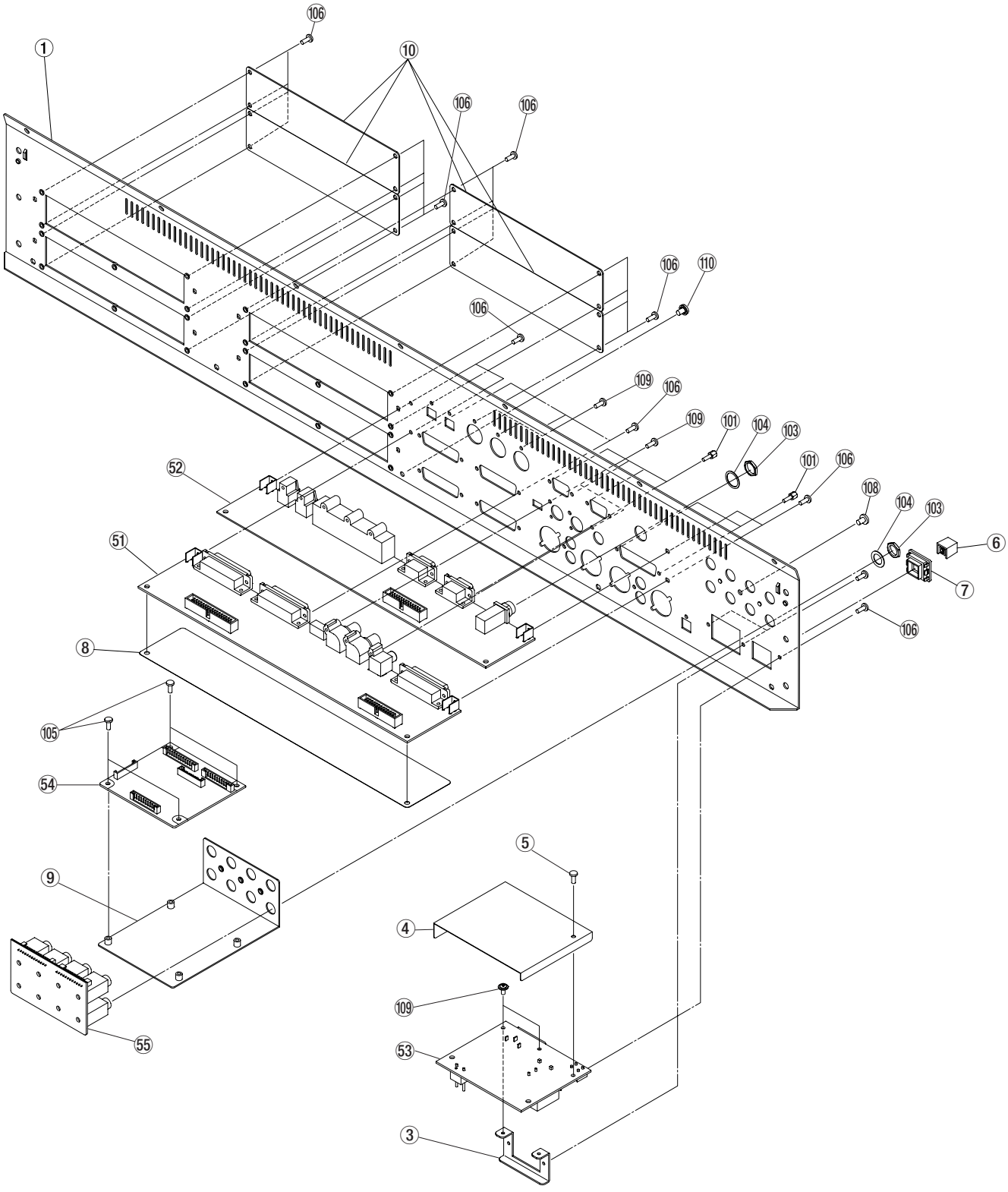
EXPLODED VIEW-4 (Fader section)



EXPLODED VIEW-5 (Bottom section)



EXPLODED VIEW-6 (Rear section)



EXPLODED VIEW-1 (Exterior Section)

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
1-1	M02270600A	PLATE,TOP 4800 G	
1-2	M01912400B	CUSHION,PLATE TOP G	
1-3	M02190400A	CUSHION,PLATE TOP UPPER	
1-4	M02392300B	COVER,TOP 4800 G	
1-5	M01911500A	SIDE PAD,L G	
1-6	M01911600A	SIDE PAD,R G	
1-7	M01469200A	COVER,DUST X-17 G	
	T0013630	CF CARD,CF128-231 G	ALL
	T0009050	CF CARD,HB26D032C8C	(old type>JPN,JEX,T/C,KOR,TM)
1-101	B00171406A	SCREW,BPA 3*6 FZB G	
1-102	B00171506A	SCREW,BPA 4*6FZB G	
1-103	B00197612A	SCREW,PPSU 3*12 FZB G	
1-104	M02457500A	WASHER,LOCK D3 FNI G	
1-105	B00171510A	SCREW BPA 4*10FZB G	
1-106	B00237406A	SCREW,BPA 3*6 FNI	
1-107	B00199712A	SCREW,BPB 3*12 FZB G	

EXPLODED VIEW-2 (Analog Section)

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
2-1	M01911100A	CHASSIS,ANALOG 3200 G	
2-2	M01912800A	KNOB,SLIDE N62 G	
2-3	M01911000B	BRACKET,MIC G	
2-4	9179000200	MIC CONDENSER ECM-60	
2-5	M02144100A	TAPE,MIC G	
2-6	3M024900	WIRE MOUNT,WL-1 G	
2-7	3M0182200A	HAR NESS CLIP 4.2*7.5*70G	
2-8	M01910000C	PANEL,ANALOG JACK 3200 G	
2-9	M01910100C	PANEL,ANALOG TOP 3200 G	
2-10	M01992000A	PLATE NUT,M4	
2-11	M02125000A	BRACKET,METER G	
2-12	M01911300B	SHIELD,ANALOG 3200 G	
2-13	M01898802A	KNOB,TRIM N61/N64 G	
2-14	M02113200A	SPACER,MU1000	
2-51		PCB Assy,INPUT JACK DM G	GATHER PCBA,INPUT JACK DM G (Refer tp page77)
2-52		PCB Assy,MSTR JACK DM48 G	GATHER PCBA,MSTR JACK DM48 G (Refer tp page79)
2-53		PCB Assy,INPUT AMP DM G	GATHER PCBA,INPUT AMP DM G (Refer tp page78)
2-54		PCB Assy,MST AMP DM48 G	GATHER PCBA,MST AMP DM48 G (Refer tp page80
2-55		PCB Assy,INPUT AD DM G	GATHER PCBA,INPUT AD DM G (Refer tp page78)
2-56		PCB Assy,MST ADDA DM48G	GATHER PCBA,MST ADA DM48 G (Refer tp page79)
2-101	B00171510A	SCREW BPA 4*10 FZB G	
2-102	B00171406A	SCREW,BP 3*6 FZB G	
2-103	B00174006A	SCREW,BPA 3*6 FZC G	
2-104	B00237406A	SCREW,BPA 3*6 FNI	
2-105	B00171506A	SCREW,BPA 4*6 FZB G	
2-106	B00199712A	SCREW,BPB 3*12 FZB G	
2-107	B00192708A	SCREW,BPP 3*8 FZB G	
2-108	3B0704806A	SCREW,FPA M3*6 FNI G	
2-109	B00171508A	SCREW,BPA 4*8 FZB G	
2-110	B00171510A	SCREW,BPA 4*10 FZB G	

EXPLODED VIEW-3 (Panel Section)

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
3-1	M02270100B	PANEL,TOP 4800 G	
3-2	M02147400B	SHEET,MONITOR LED GUIDE G	
3-3	M01910900B	BRACKET,MONITOR G	
3-4	M02520100A	ESCUTCHEON,LCD 4800 G	
3-5	E0134290	LCD,MG3224C3-SBF G	
3-6	M01911200A	SHIELD COVER,LCD G	
3-7	3M0155300A	PUSH RIVET SR345 G	
3-8	M01531610A	BUTTON,BASE(BLK) G	
3-9	M01531700C	BUTTON,CLEAR	
3-10	M01531800A	BUTTON,6010 N63 G	
3-11	M01912300A	CUSHION,RING LED G	
3-12	M02225700A	SHEET,ASSIGN LED GUIDE G	
3-13	M01531701C	BUTTON,RED	
3-14	M01912700C	BUTTON,8*8 N62 G	
3-15	M01922400D	PROTECTION SHEET,FFC G	
3-16	3M0155300A	PUSH RIVET SR345 G	
3-17	3M0182200A	HAR NESS CLIP 4.2*7.5*70G	
3-18	M02392400A	SHEET,TOP 1-8 4800 G	
3-19	M02392500A	SHEET,TOP 9-16 4800 G	
3-20	M02392600A	SHEET,TOP 17-ST 4800 G	
3-21	M02392700A	SHEET,ASSIGN 4800 G	
3-22	M02393300B	SHEET,MODULE 4800 G	
3-23	3M0213401A	RIVET,SR2.6-3.2 N65 G	
3-24	M01352900C	KNOB,JOG US-224	
3-25	M00630600C	KNOB,POD(N61) US-428	
3-26	M01898802A	KNOB,TRIM N61/N64 G	
3-27	M01534700A	KNOB,ENCORDER N64 G	
3-28	M01534720A	KNOB,ENCORDER N62 G	
3-29	M01912200A	WINDOW,LCD G	
3-51		PCB Assy,ASSIGN DM48 G	Refer tp page73
3-52		PCB Assy,MODULE DM G	Refer tp page74
3-53		PCB Assy,SCREEN DM G	Refer tp page75
3-54		PCB Assy,RING LED G	GATHER PCBA,RING LED DM G (Refer tp page75)
3-55		PCB Assy,MONITOR DM48 G	GATHER PCBA,MONITOR DM48 G (Refer tp page76)
3-56		PCB Assy,SOLO G	GATHER PCBA,MONITOR DM48 G (Refer tp page76)
3-57		PCB Assy,LCD SUB DM G	GATHER PCBA,SYNC DM G (Refer tp page69)
3-101	B00174006A	SCREW,BPA 3*6 FZC G	
3-102	B00237406A	SCREW,BPA 3*6 FNI	
3-103	B00198906A	SCREW,BPP 2.6*6 FZC G	

EXPLODED VIEW-4 (Fader Section)

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
4-1	M02270000C	PANEL,FADER 4800 G	
4-2	M01912400B	CUSHION,PLATE TOP G	
4-3	M00207800A	ESCUTCHEON GUARD	
4-4	M01910700C	BRACKET,PANEL FDR G	
4-5	3M0213401A	RIVET,SR2.6-3.2 N65 G	
4-6	M01531610A	BUTTON,BASE(BLK) G	
4-7	M01531700C	BUTTON,CLEAR	
4-8	M01531800A	BUTTON,6010 N63 G	
4-9	3M0217700A	BUTTON REW G	
4-10	3M0217800A	BUTTON STOP G	
4-11	3M0217900A	BUTTON PLAY G	
4-12	3M0218000A	BUTTON REC G	
4-13	M02521200A	BRACKET,LAYER 4800 G	
4-14	M02147500A	SHEET,LAYED LED GUIDE G	
4-15	M01832300C	KNOB,FADER PATING G	
4-51		PCB Assy,FADER FE8 G	(Refer tp page84/85)
4-52		PCB Assy,FADER RM FW G	(Refer tp page81/82)
4-53		PCB Assy,LAYER DM G	GATHER PCBA,LAYER DM G (Refer tp page73)
4-54		PCB Assy,TRANSPORT DM G	GATHER PCBA,LAYER DM G (Refer tp page73)
4-101	B00171406A	SCREW,BPA 3*6 FZB G	
4-102	B00198606A	SCREW,BPS 3*6 FZB G	
4-103	B0025240	SCREW,FPA 3*6 FNI	

EXPLODED VIEW-5 (Bottom Section)

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
5-1	M02269500B	CHASSIS,BOTTOM 4800 G	
5-2	3M0187400A	FOOT FF015 G	
5-3	M02269600A	FRAME,A 4800 G	
5-4	M01909500E	CHASSIS,SIDE L 3200 G	
5-5	M01909600E	CHASSIS,SIDE R 3200 G	
5-6	M01910400A	BRACKET,SLOT G	
5-7	3M024880	CARD GUIDE,CG-600 G	
5-8	M01910500A	BRACKET,FRAME B G	
5-9	M02269700B	FRAME,B 4800 G	
5-10	3M0250200A	CABLE MOUNT,FCT-1 G	
5-11	E00918800C	SW POWER UNIT,TA-01	
5-12	M01912600A	COVER,SWPWR G	
5-13	M0249740	SPACER,LIO-10.5 G	
5-14	M01922700A	SPACER,DDMP G	
5-15	M02155600A	BRACKET,SIDE G	
5-16	3M024890	SPACER SUPPORT,DCB-5 G	
5-17	3M0250100A	SPACER SUPPORT,LBS-19 G	
5-18	M02214800A	SHEET,8530AD 27*27 G	
5-19	M01922600B	HEATSINK,DDMP G	
5-20	3M0209100A	SCREW COVER G	

EXPLODED VIEW-5 (Bottom Section)

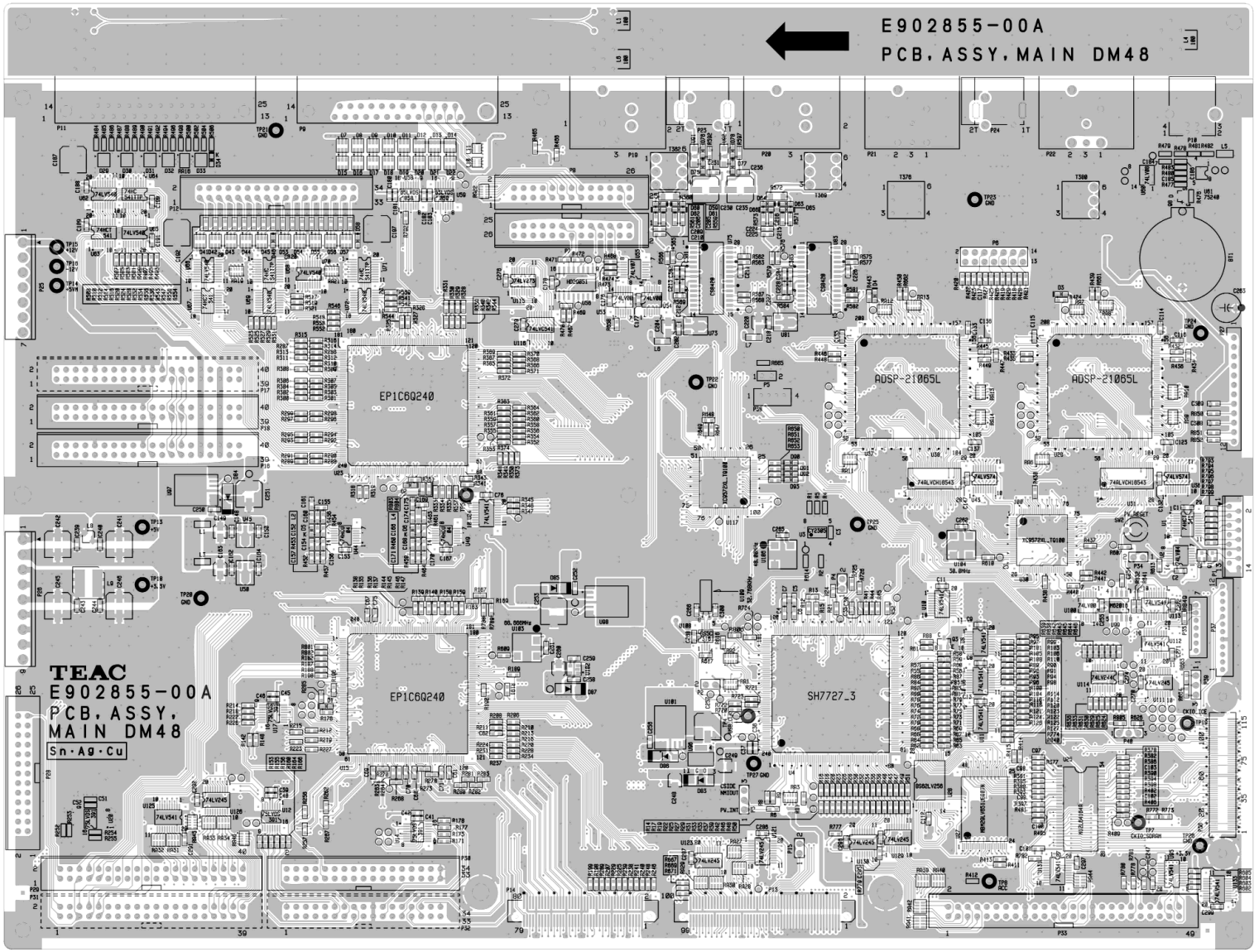
REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
5-21	M02392800A	HOLDER,CF 4800 G	
5-22	3M024890	SPACER SUPPORT,DCB-5 G	
5-23	M02392900A	BASE,CF 4800 G	
5-24	M02437800A	SPRING,BASE CF G	
5-25	M0249750	WIRE HOLDER,CHR-11 G	
5-26	M01443300A	ESCUTCHEON,CF CARD G	
5-27	3M0130300B	CF,SLOT 752D-ESC00003 G	
5-28	M02393100A	BRACKET,FAN 4800 G	
5-29	M02440300A	FAN MOT ASSY,MF52A12L007 G	
5-30	M0192800	BUSHING,DANPER HED1111	
5-31	M01967600A	COLLAR,BUSH D4(D3)*L10 G	
5-32	3M0060100A	PLAIN WASHER,M3 D11.5	
5-33	M01910600A	BRACKET,FRAME C G	
5-34	M02269800B	FRAME,C 4800 G	
5-51		PCB Assy,MAIN DM48 G	Refer to page 66/67
5-52		PCB Assy,DDMP4 DM48 G	Refer to page 71/72
5-53		PCB Assy,POWER SUB DM48 G	GATHER PCBA,PWR SUB DM48 G (Refer tp page 70)
5-54		PCB Assy,MOTHER DM G	GATHER PCBA,MOTHER DM G (Refer tp page 68)
		PCB Assy,MOTHER DM48 G	GATHER PCBA,MOTHER DM48 G (Refer tp page 68)
5-55		PCB Assy,CF CARD DM G	GATHER PCBA,PWR SUB DM48 G (Refer tp page 70)
5-57	3E026350G	BATTERY,CR2032 BULK G	
5-101	3B0013000A	D-SUB SCREW 003-HEX G	
5-102	3B0013300A	D-SUB SCREW,HEX-26/440 G	
5-103	3M0131000A	NUT, M12X2.3 G	
5-104	3M0131100B	PLAIN WASHER M12 BLK G	
5-105	B00198316A	SCREW BPS M*16 FZC	
5-106	B00174006A	SCREW,BPA 3*6 FZC G	
5-107	B00171406A	SCREW,BPA 3*6 FZB G	
5-108	B00171512A	SCREW,BPA 4*12FZB G	
5-109	B00171506A	SCREW,BPA 4*6FZB G	
5-110	B00199606A	SCREW,BPB 2.6*6 FZB G	
5-111	B00199708A	SCREW,BPB 3*8 FZB G	
5-112	B00199808A	SCREW,BPB 4*8 FZB G	
5-113	B00198606A	SCREW,BPS 3*6 FZB G	
5-114	B00174812A	SCREW,PPA 4*12 FZC G	
5-115	B00171006A	SCREW,PPAU 3*6 FZB G	
5-116	3M0209300A	WASHER,LOCK4	

EXPLODED VIEW-6 (Rear Section)

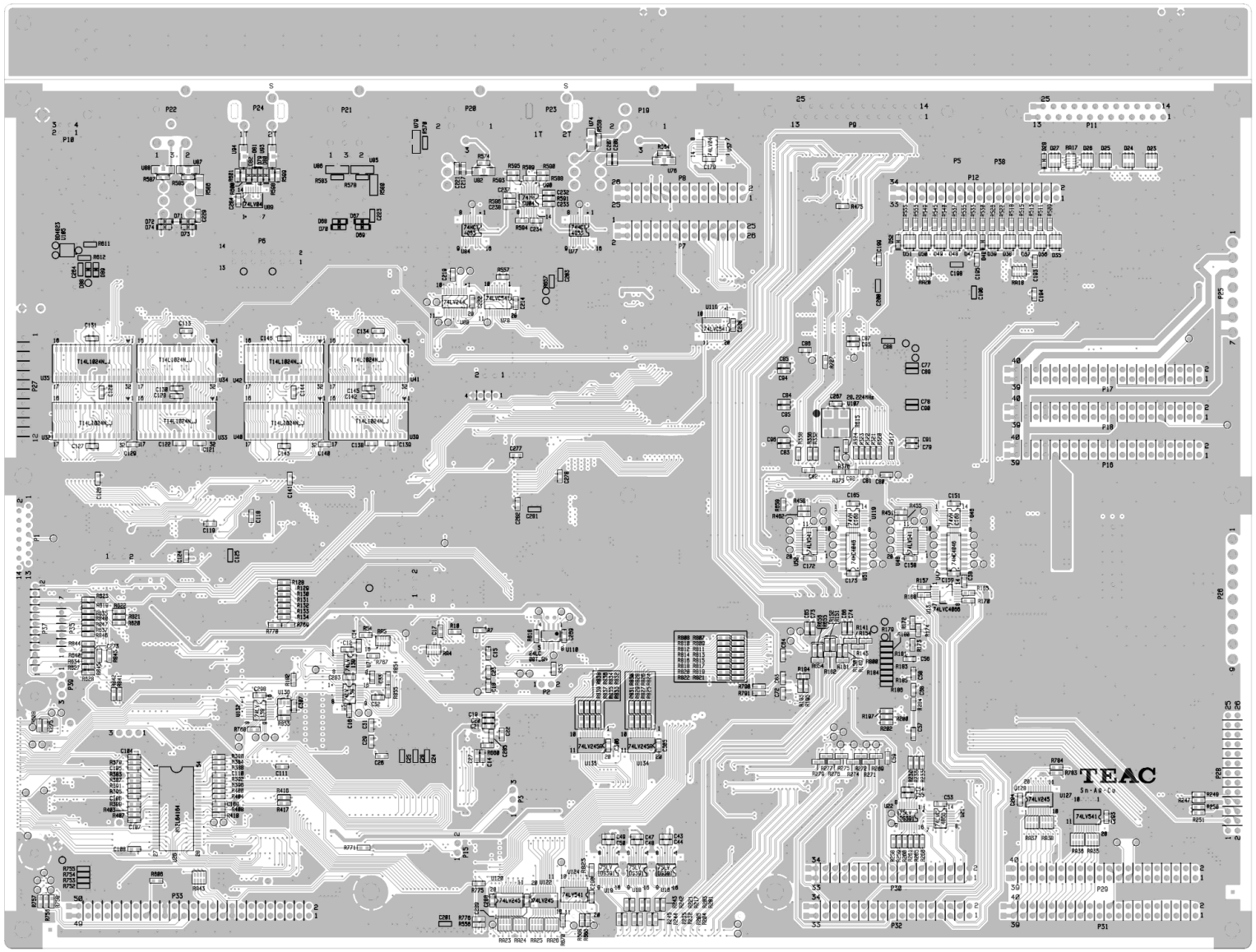
REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
6-1	M02269900C	PANEL,REAR 4800 G	
6-2	3M024870	FOOT,FFT-4 G	
6-3	3M0203300B	BRACKET,PWRSW DAX1000 G	
6-4	M01912500A	INSUL SHEET,INLET G	
6-5	3M0155300A	PUSH RIVET SR345 G	
6-6	5801503800	BUTTON EJECT(P-N15-A)	
6-7	M01510000A	ESCUTCHEON,POWER G	
6-8	M02536100A	SHEET,PROTECTION SYNC G	
6-9	M02393000A	BRACKET,EXT IO 4800 G	
6-10	M02101500B	BLANK PANEL,SLOT G	
6-51		PCB Assy,SYNC DM G	GATHER PCBA,SYNC DM G (Refer tp page 69)
6-52		PCB Assy,MIDI DM G	GATHER PCBA,SYNC DM G (Refer tp page 69)
6-53		PCB Assy,INLET DM48 G	GPCBA,MSTR JACK DM48 G (Refer tp page 79)
6-54		PCB ASSY, EXT ADDA DM48	GATHER PCBA,EXT IO DM48 G (Refer tp page 81)
6-55		PCB ASSY,EXT JACK DM48	GATHER PCBA,EXT IO DM48 G (Refer tp page 81)
6-101	3B0013000A	D-SUB SCREW 003-HEX G	CASCADE,,RS-422,GPI,METER
6-102	3B0013300A	D-SUB SCREW,HEX-26/440 G	TDIF-1
6-103	3M0131000A	NUT, M12X2.3 G	
6-104	3M0131100B	PLAIN WASHER M12 BLK G	
6-105	B00174006A	SCREW,BPA 3*6 FZC G	
6-106	B00171406A	SCREW,BPA 3*6 FZB G	
6-107	B00171512A	SCREW,BPA 4*12FZB G	
6-108	B00171506A	SCREW,BPA 4*6FZB G	
6-109	B00199708A	SCREW,BPB 3*8 FZB G	
6-110	B00199808A	SCREW,BPB 4*8 FZB G	

10. PC BOARDS AND PARTS LIST
基板図とパーツリスト

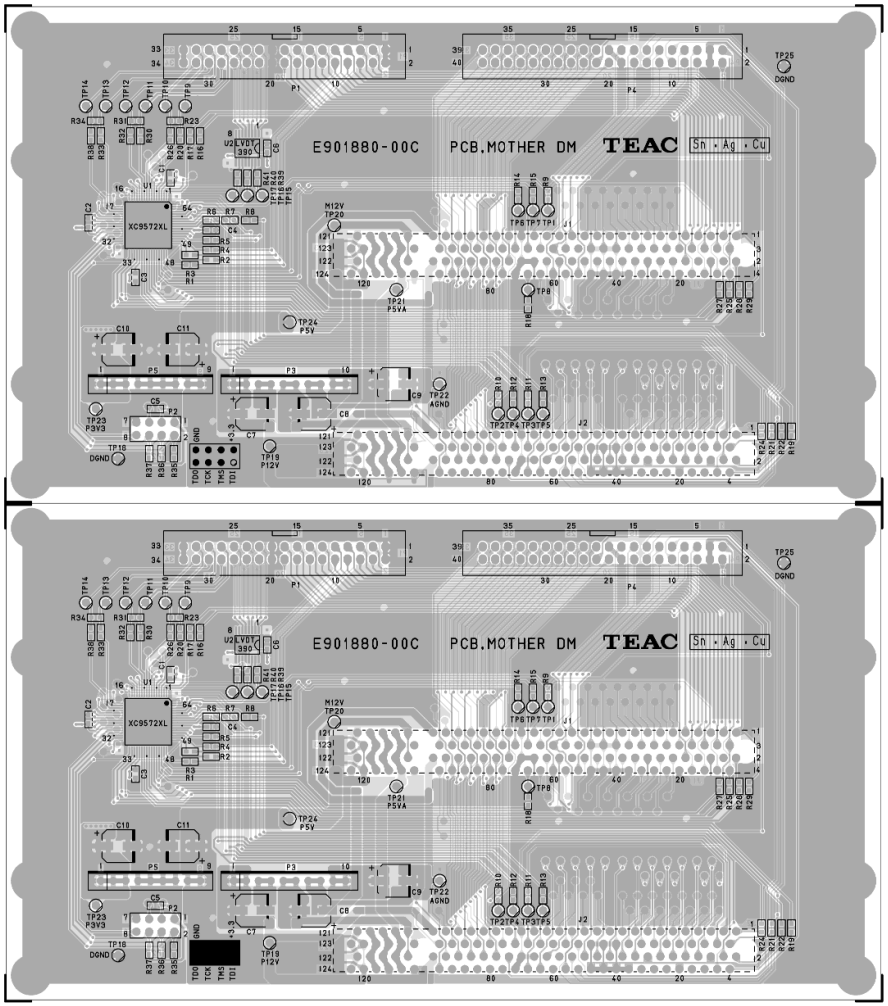
PCB ASSY, MAIN DM48 G (SIDE A)



PCB ASSY, MAIN DM48 G (SIDE B)

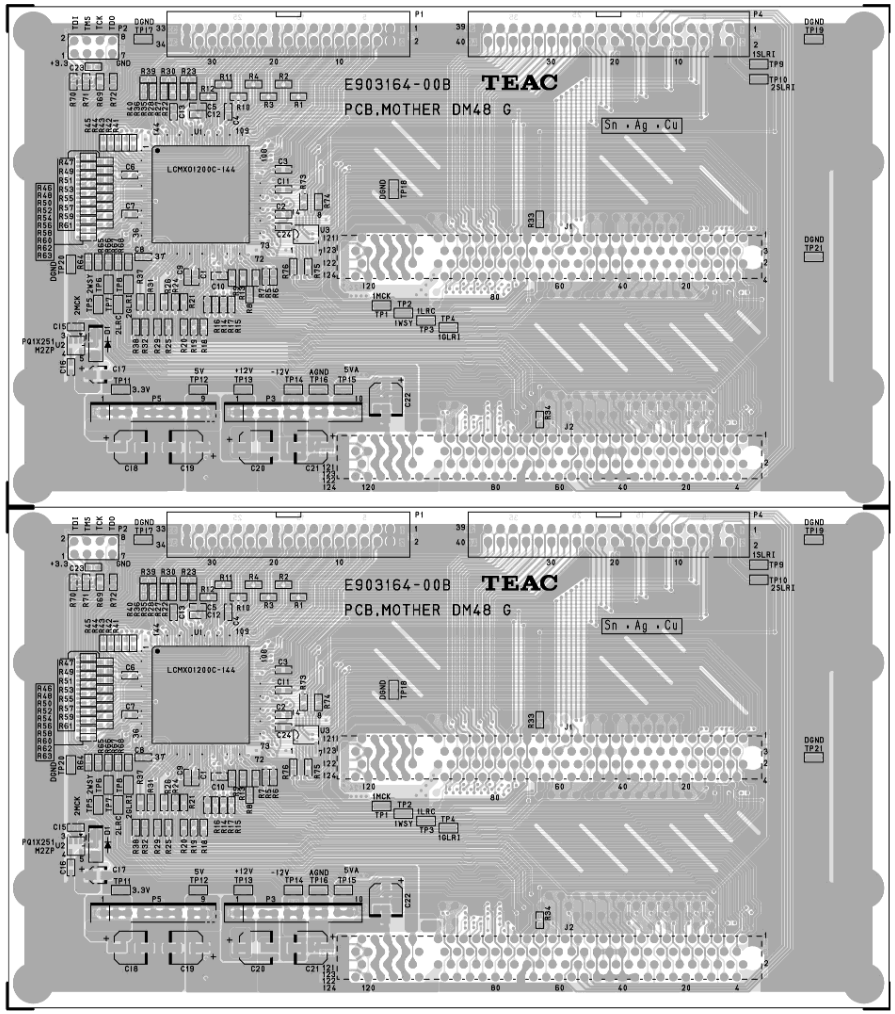


GATHER PCB ASSY, MOTHER DM G



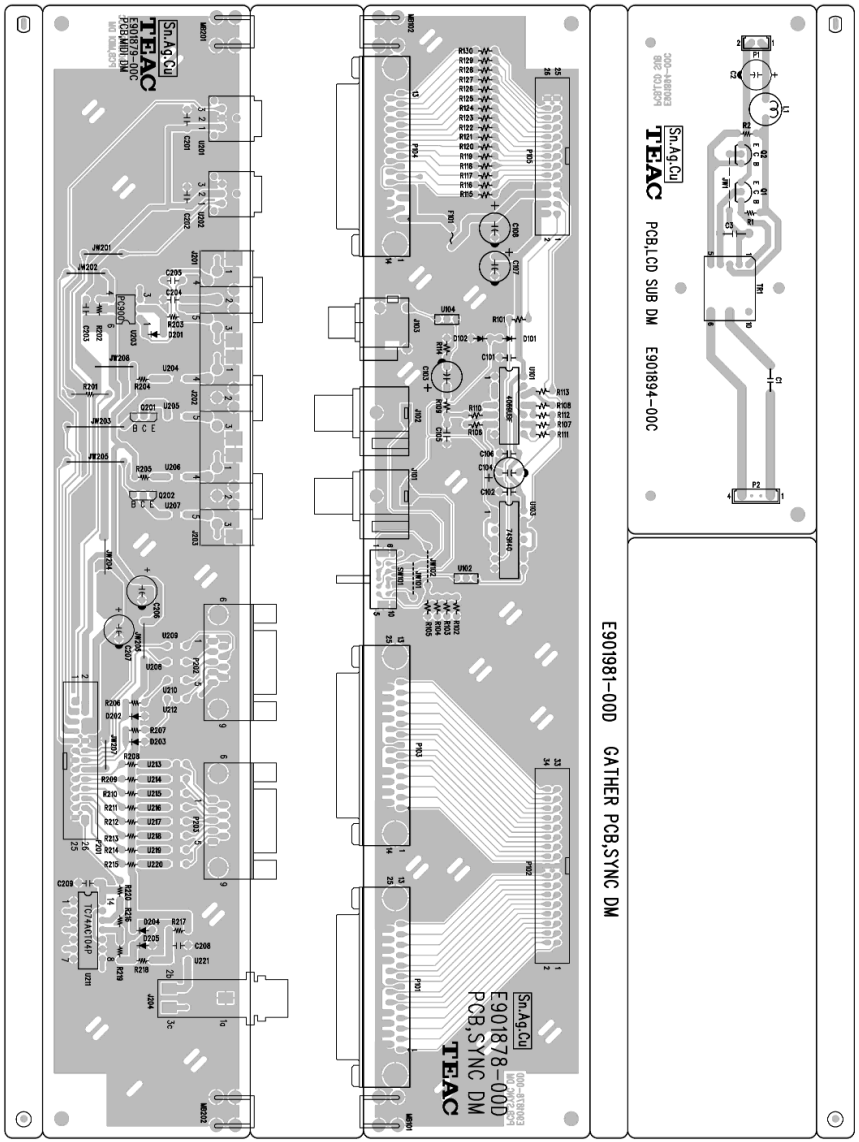
E901982-00C GATHER PCB,MOTHER DM

GATHER PCB ASSY, MOTHER DM48 G

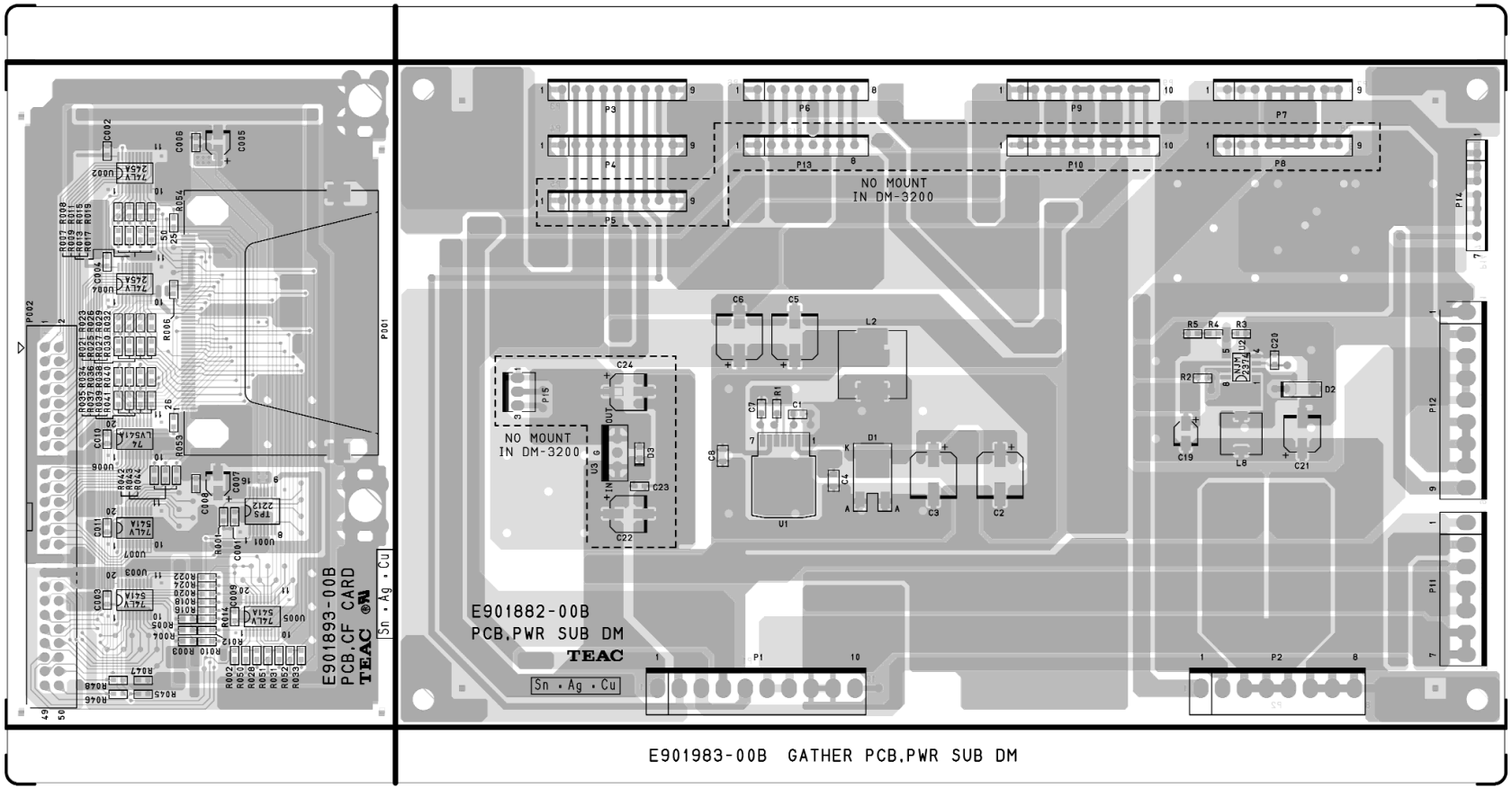


E903163-00B GATHER PCB,MOTHER DM48 G

GATHER PCB ASSY, SYNC DM G (PCB SYNC DM/ PCB MIDI DM/ PCB LCD SUB DM)

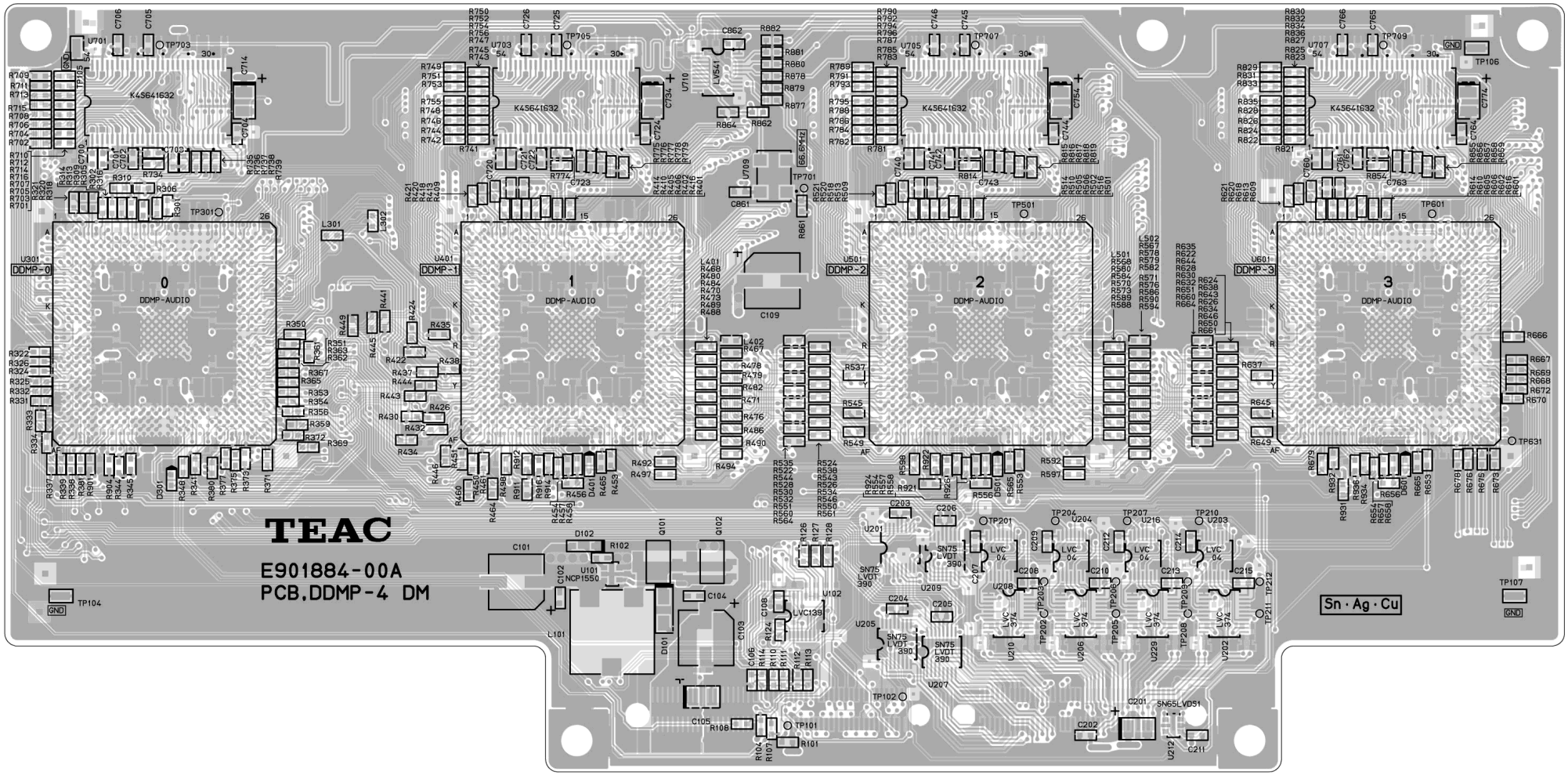


GATHER PCB ASSY, PWR SUB DM48 G (PCB PWR SUB/ PCB CF CARD)

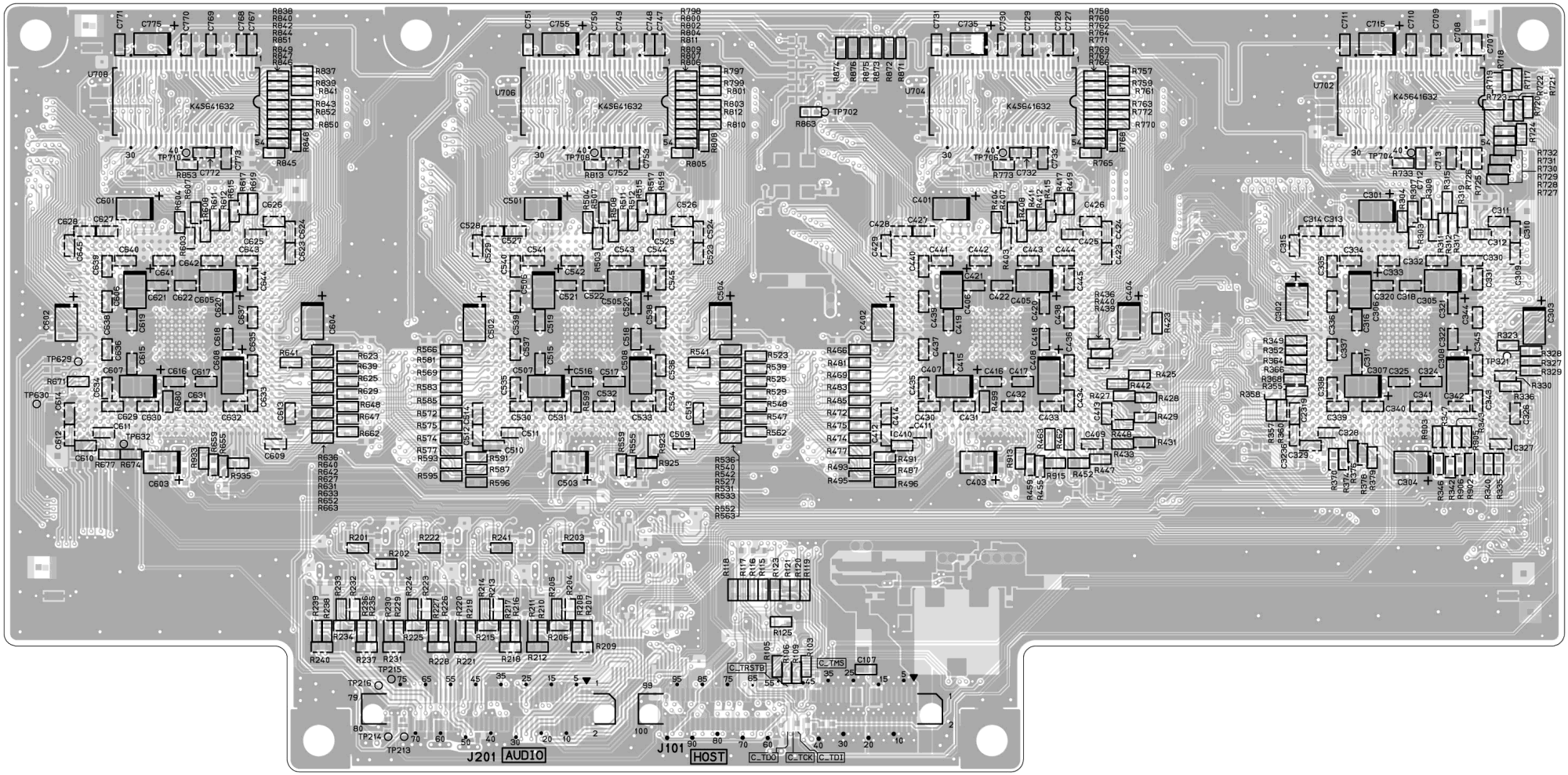


E901983-00B GATHER PCB,PWR SUB DM

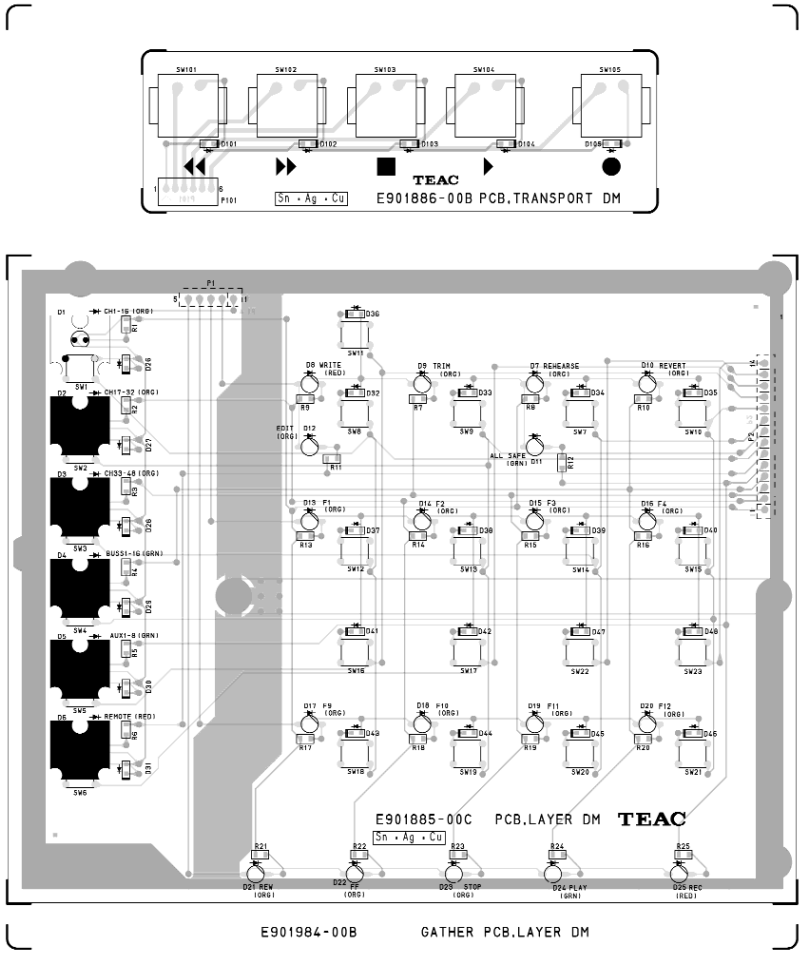
PCB ASSY, DDMP4 DM G (SIDE A)



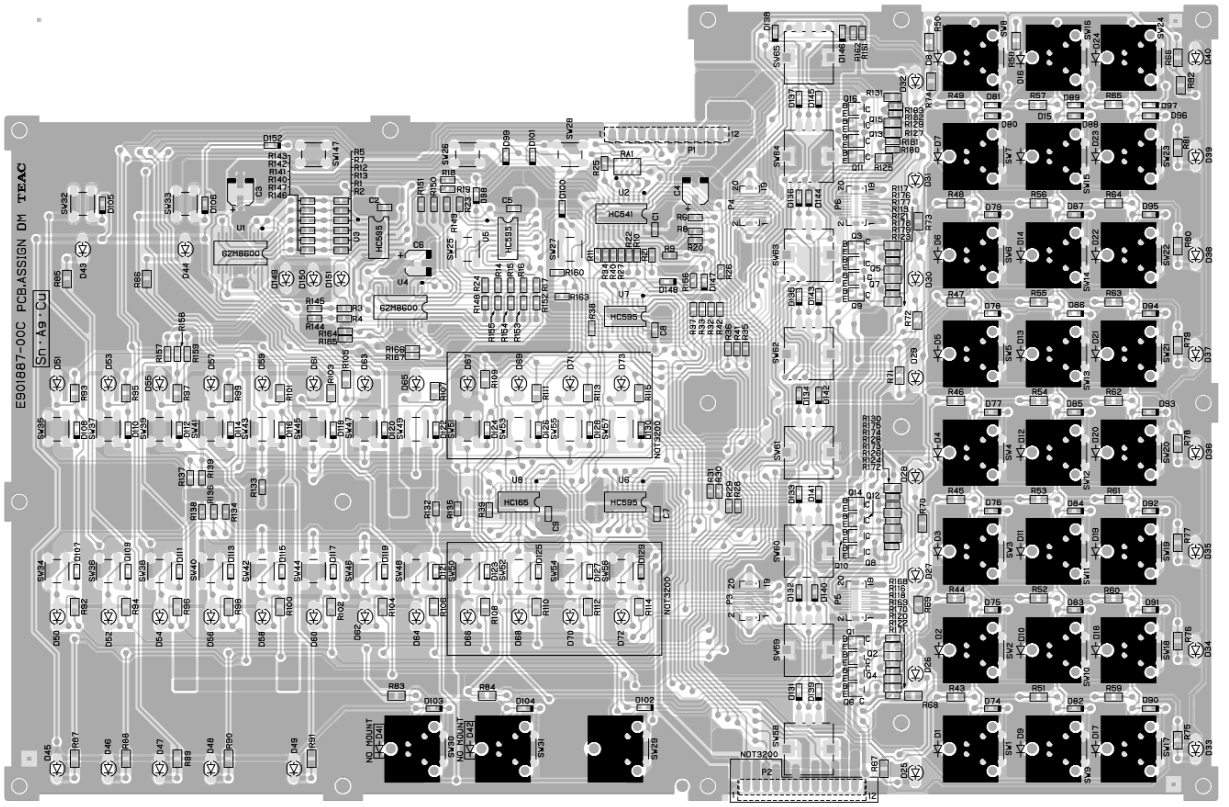
PCB ASSY, DDMP4 DM G (SIDE B)



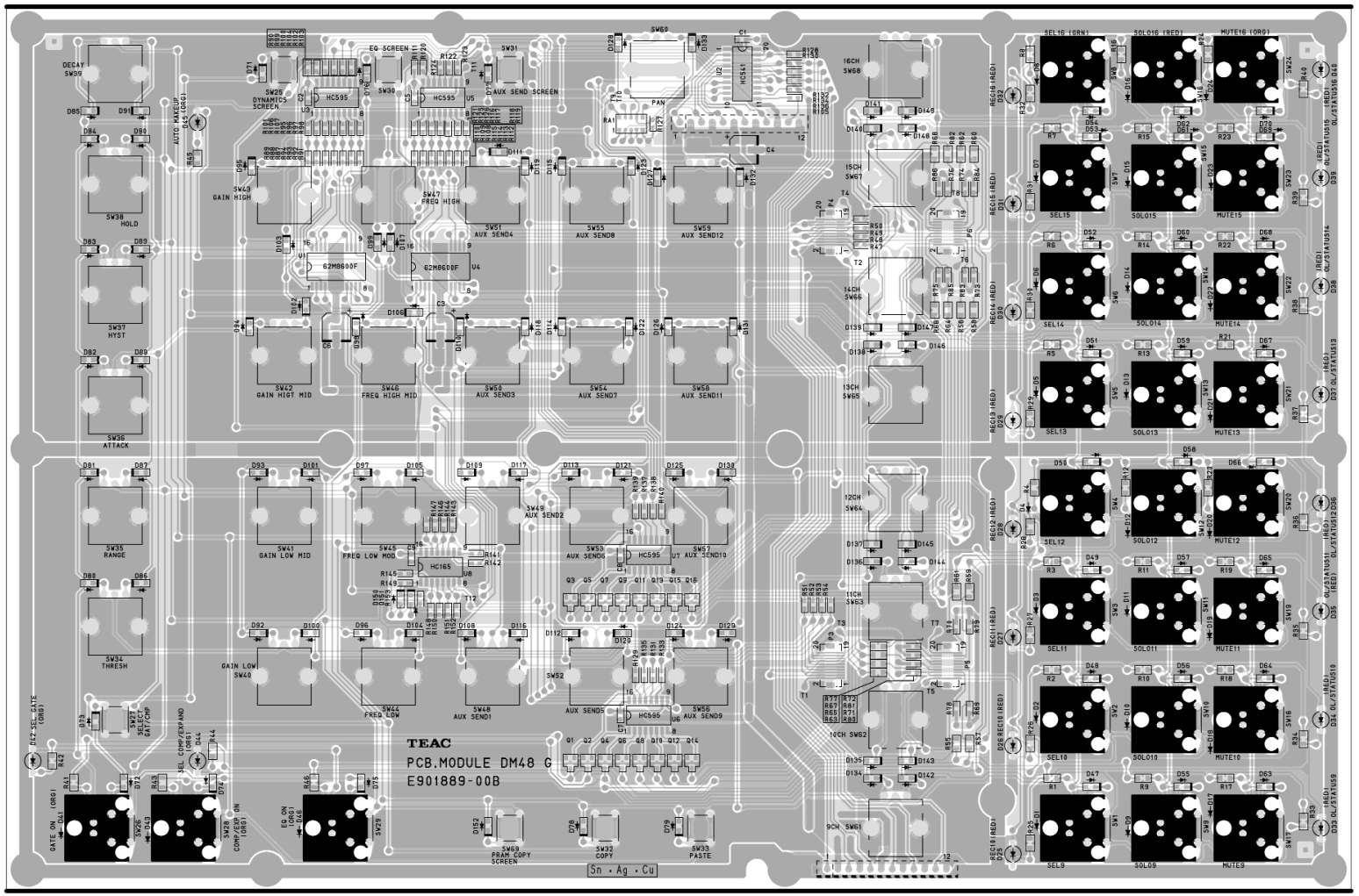
GATHER PCB ASSY, LAYER DM G (PCB LAYER/ PCB TRANSPORT)



PCB ASSY, ASSIGN DM48 G

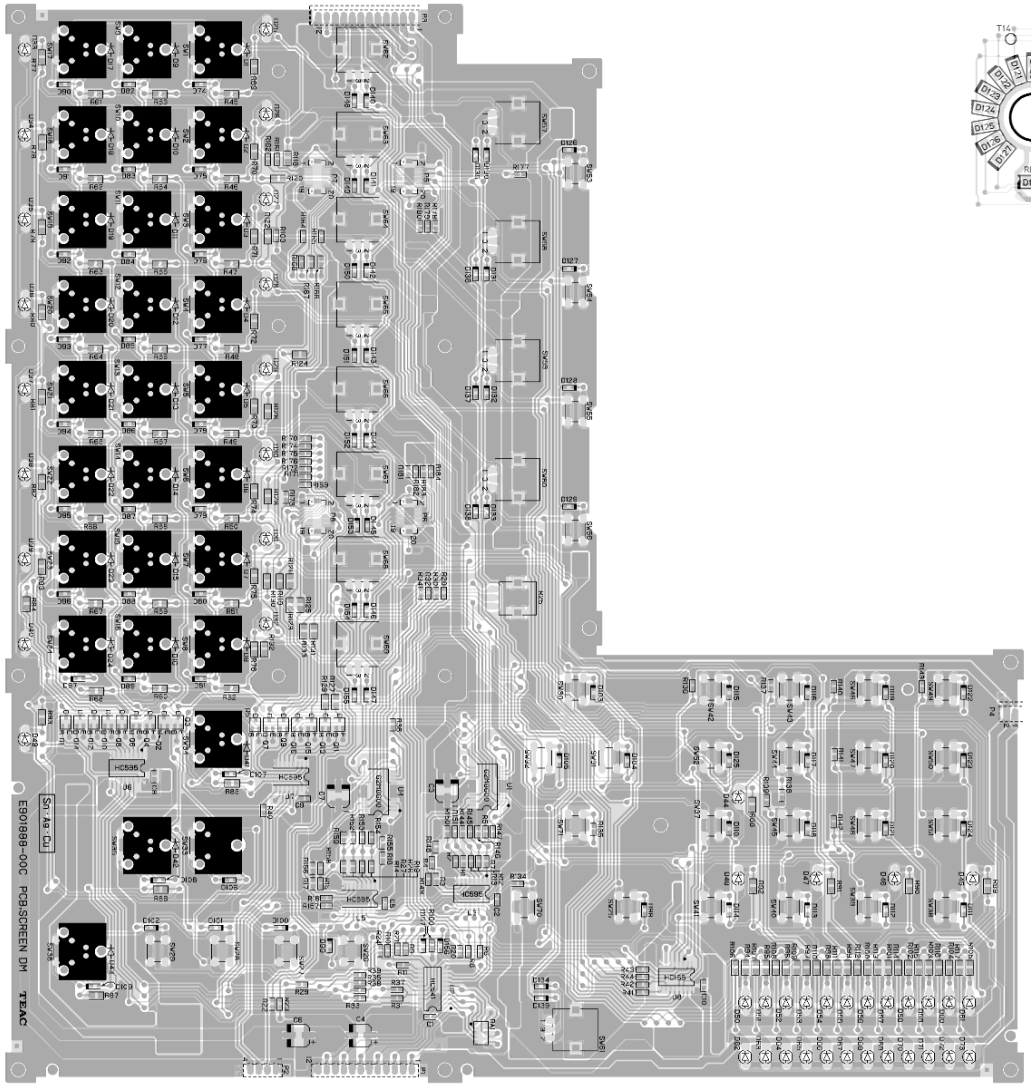


PCB ASSY, MODULE DM G

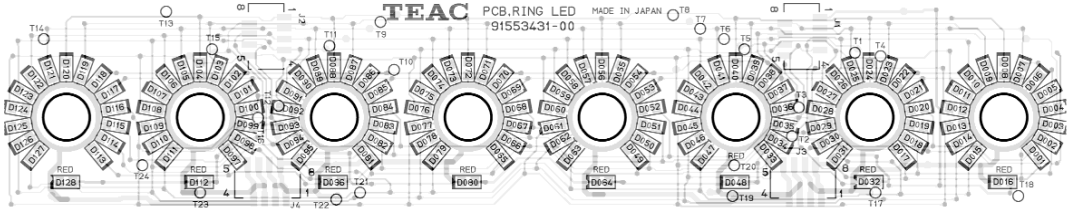


Aside Silk E901889-00B PCB.MODULE DM48 G

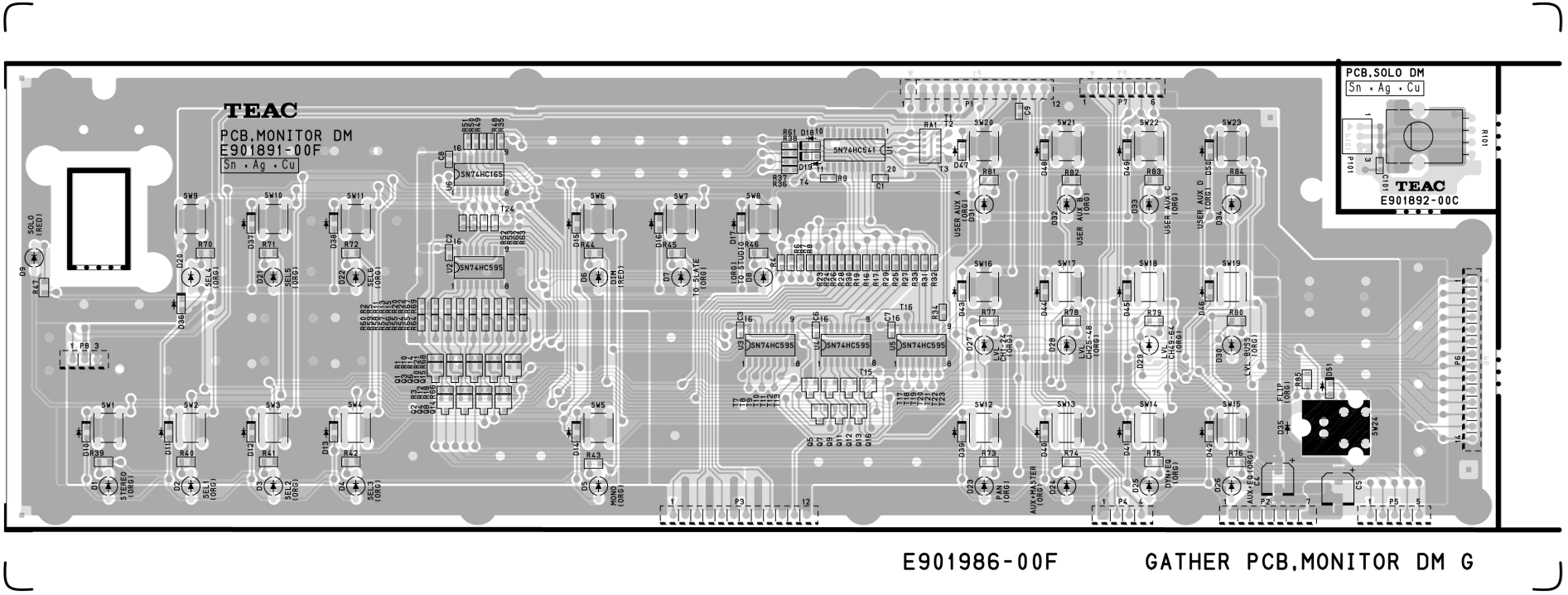
PCB ASSY, SCREEN DM G



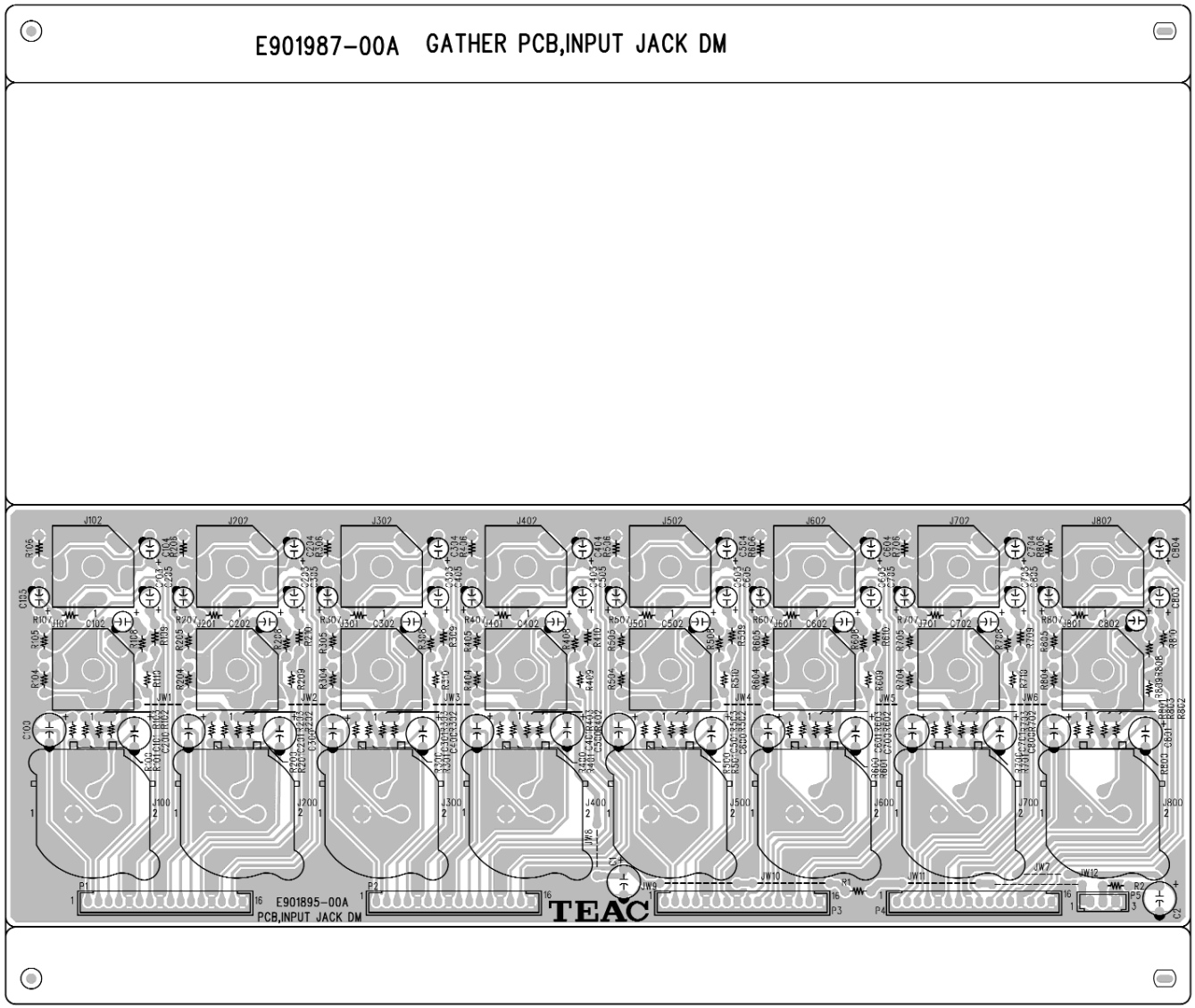
GATHER PCB ASSY, RING LED DM G



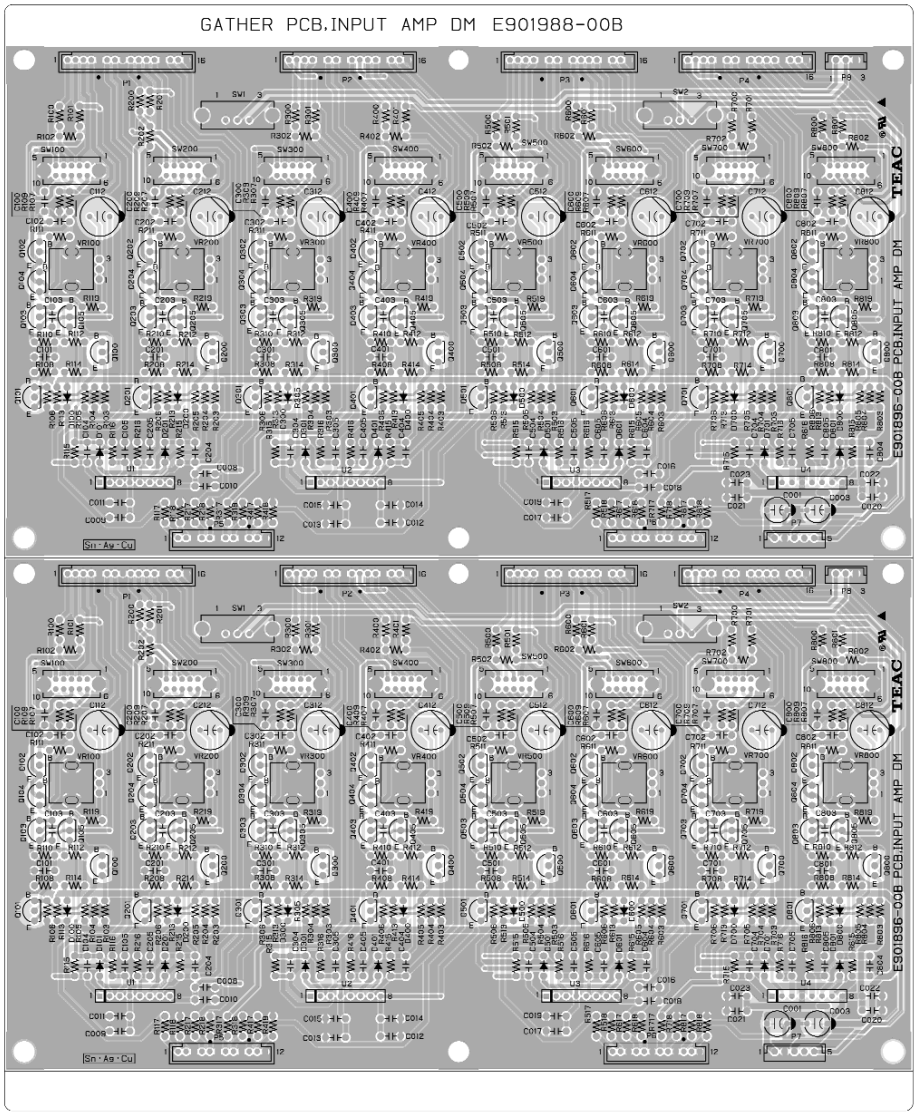
GATHER PCB ASSY, MONITOR DM48 G (PCB MONITOR DM G/ PCB SOLO DM)



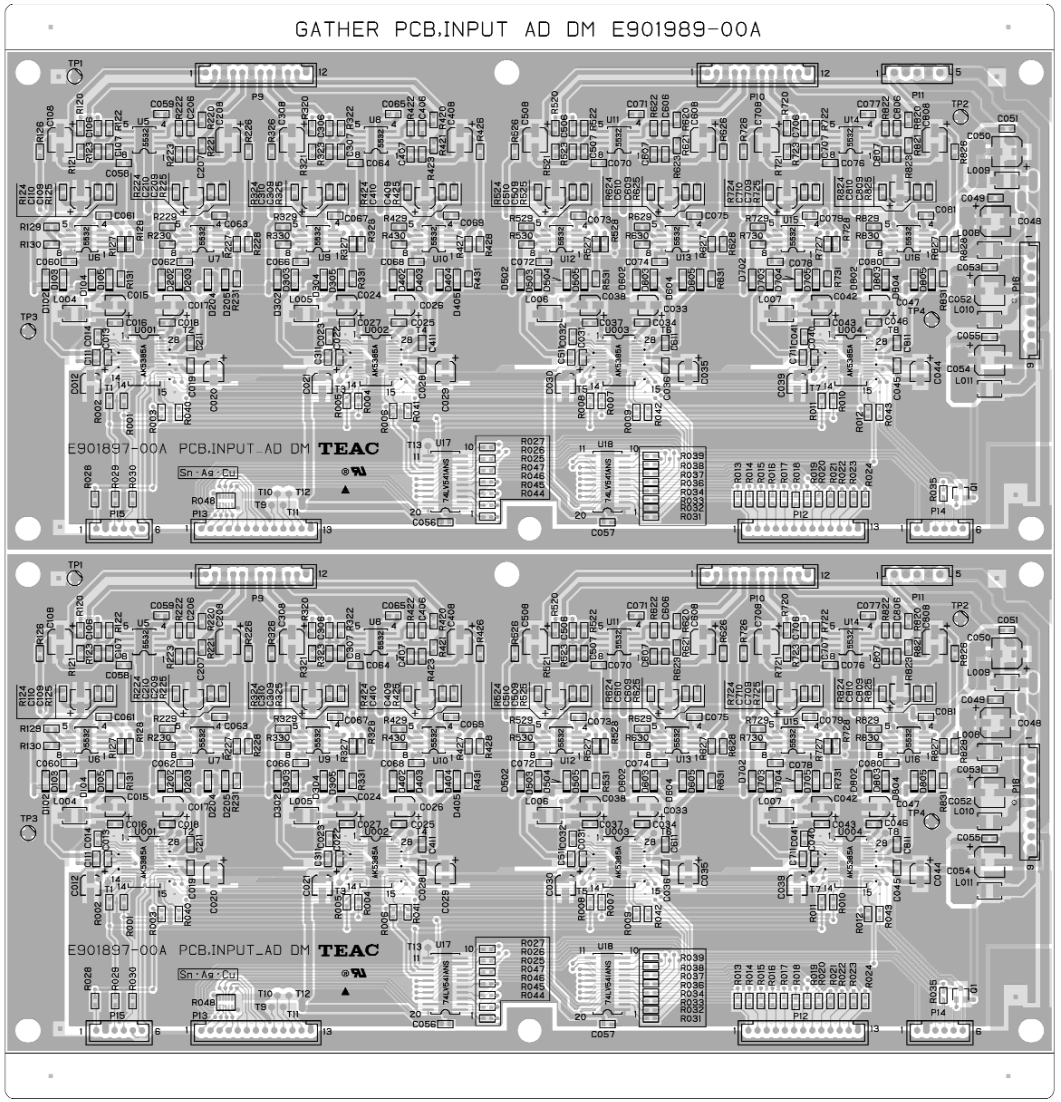
GATHER PCB ASSY, INPUT JACK DM G



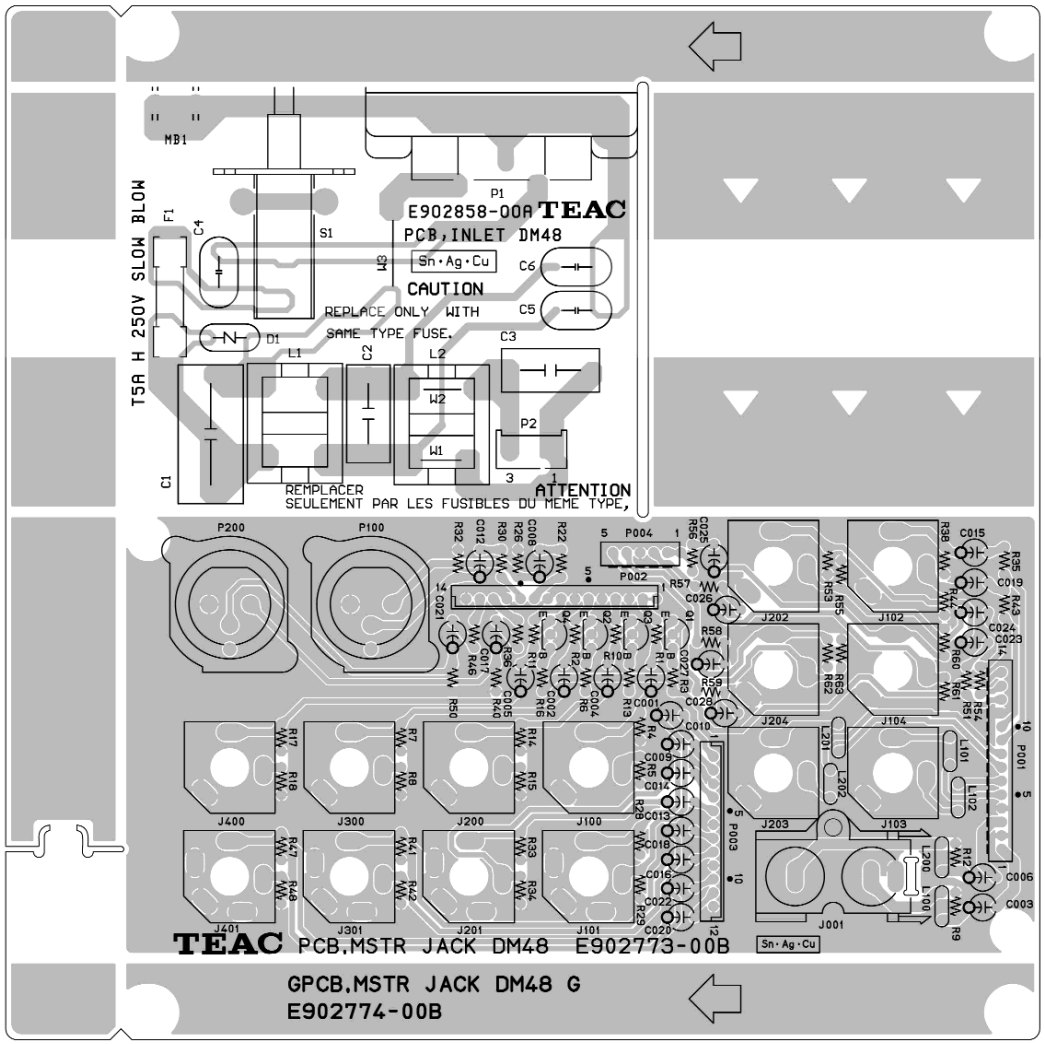
GATHER PCB ASSY, INPUT AMP DM G



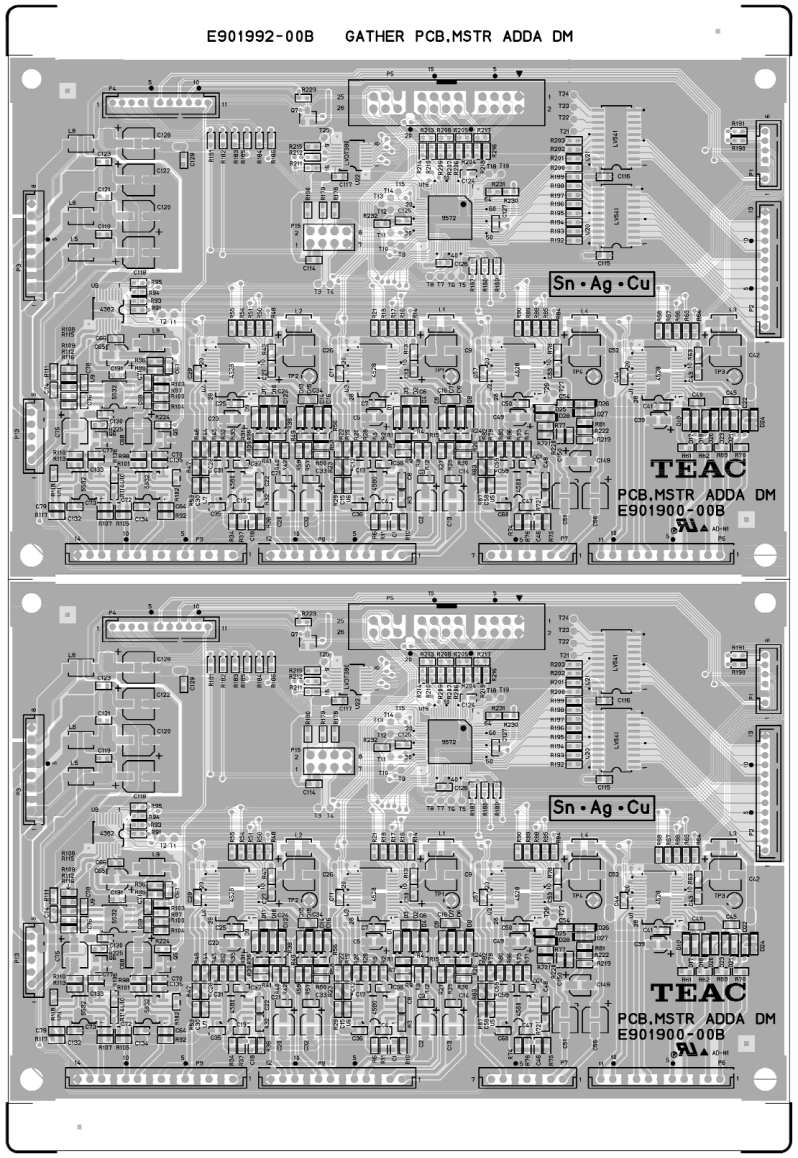
GATHER PCB ASSY, INPUT AD DM G



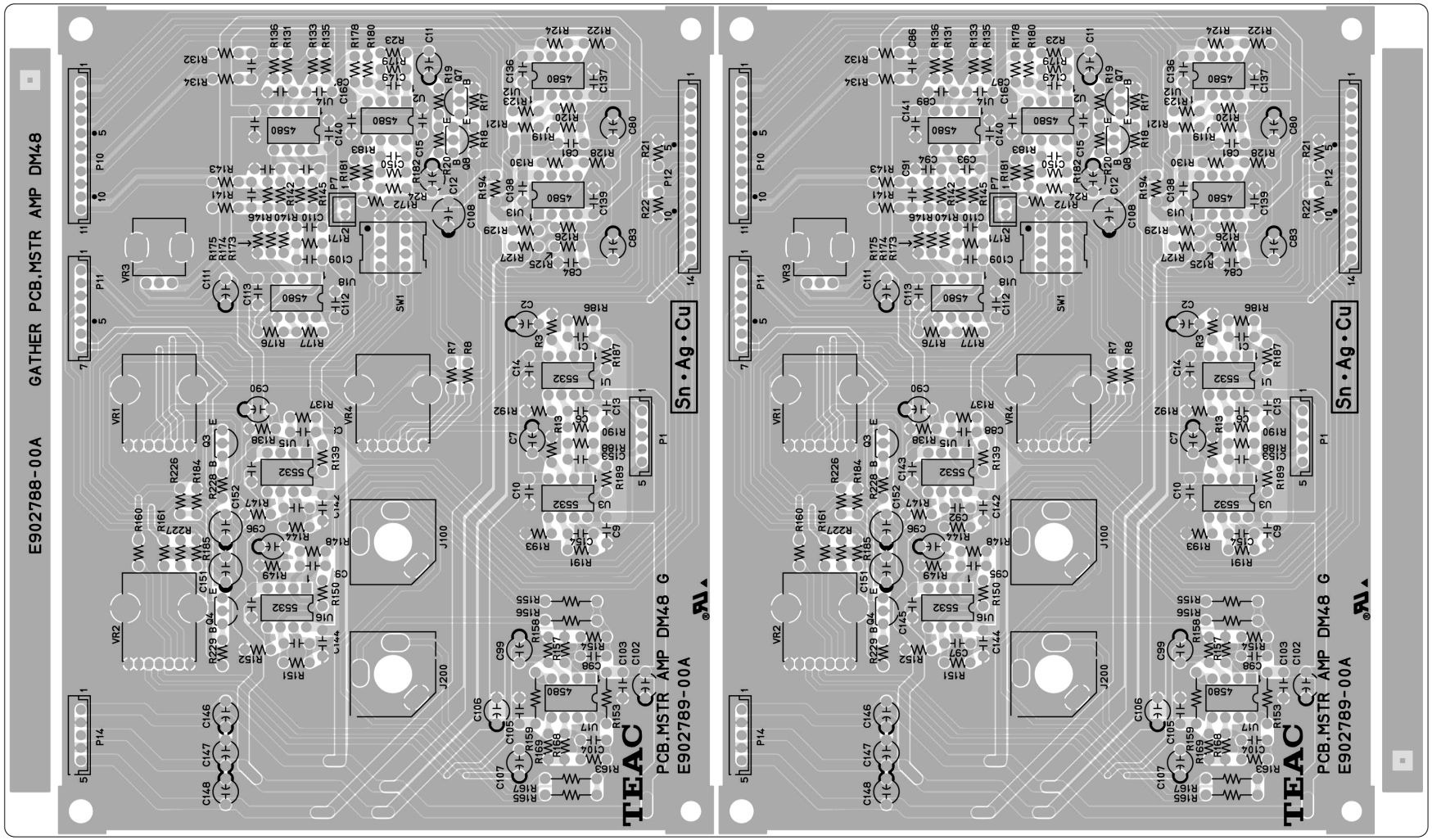
GATHER PCB ASSY, MSTR JACK DM48 G (PCB INLET DM48/ PCB MSTR JACK DM48)



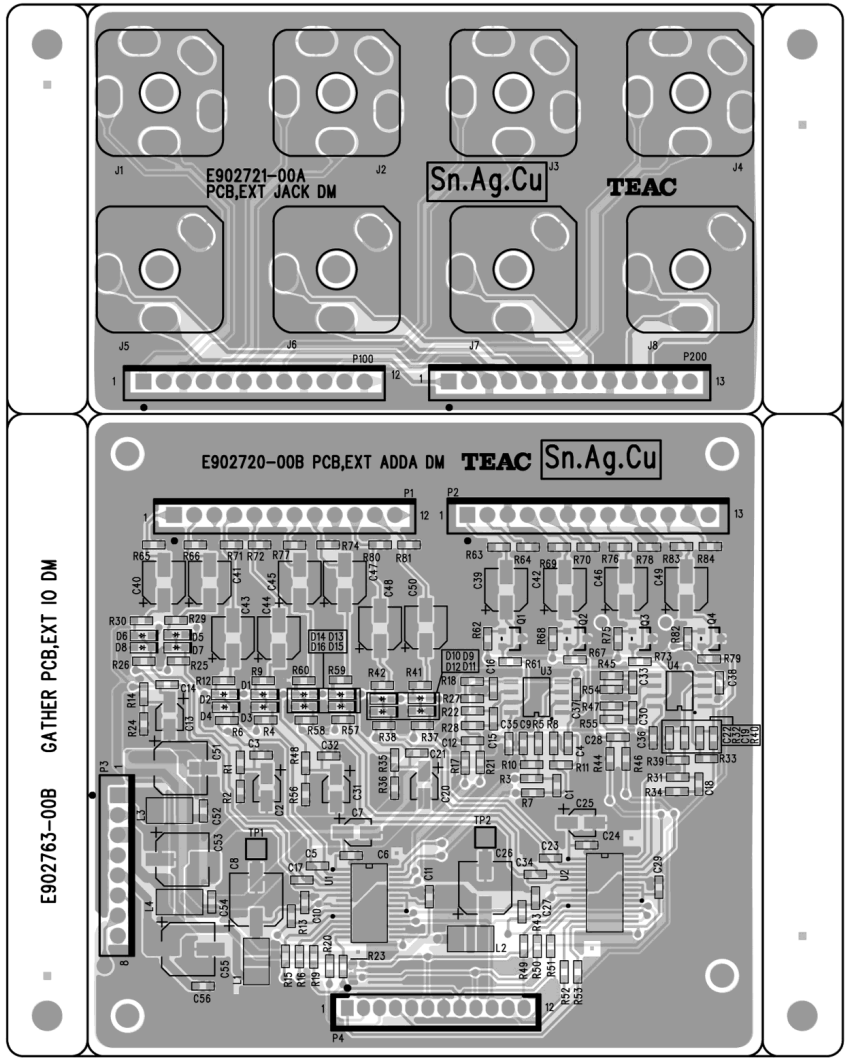
GATHER PCB ASSY, MST ADA DM48 G



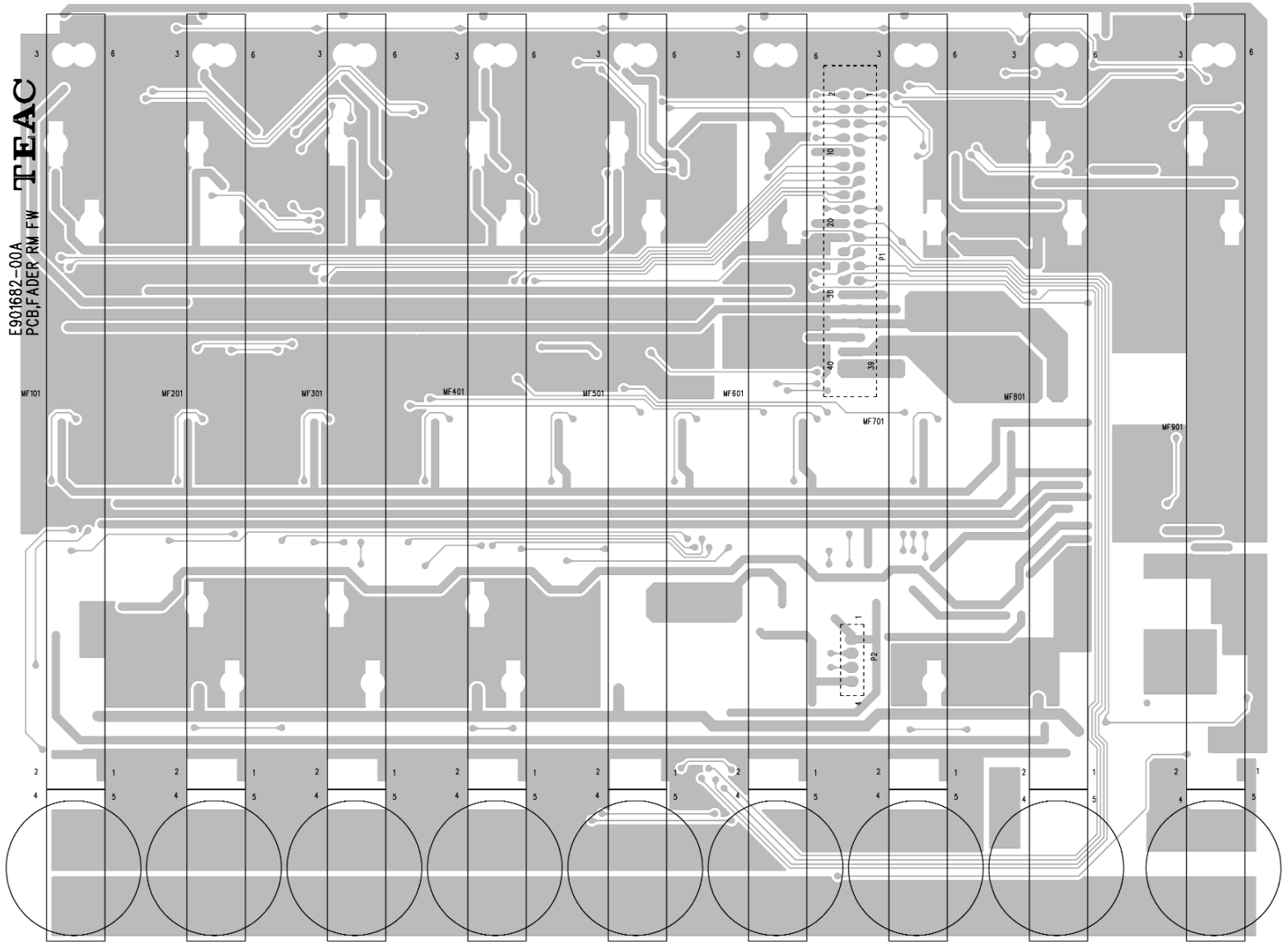
GATHER PCB ASSY, MST AMP DM48 G



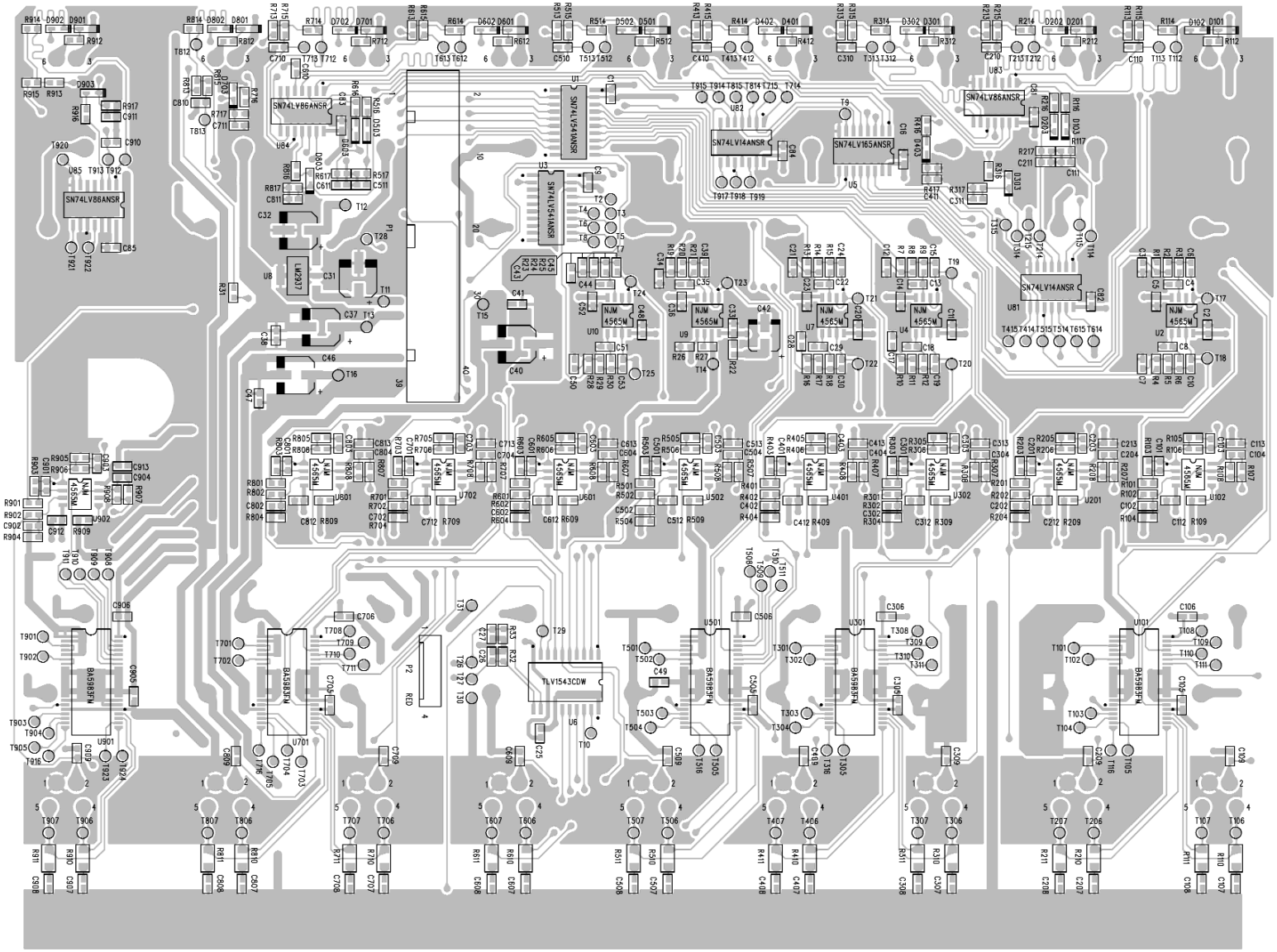
GATHER PCB ASSY, EXT IO DM48 G (PCB EXT JACK DM/ PCB EXT ADDA DM)



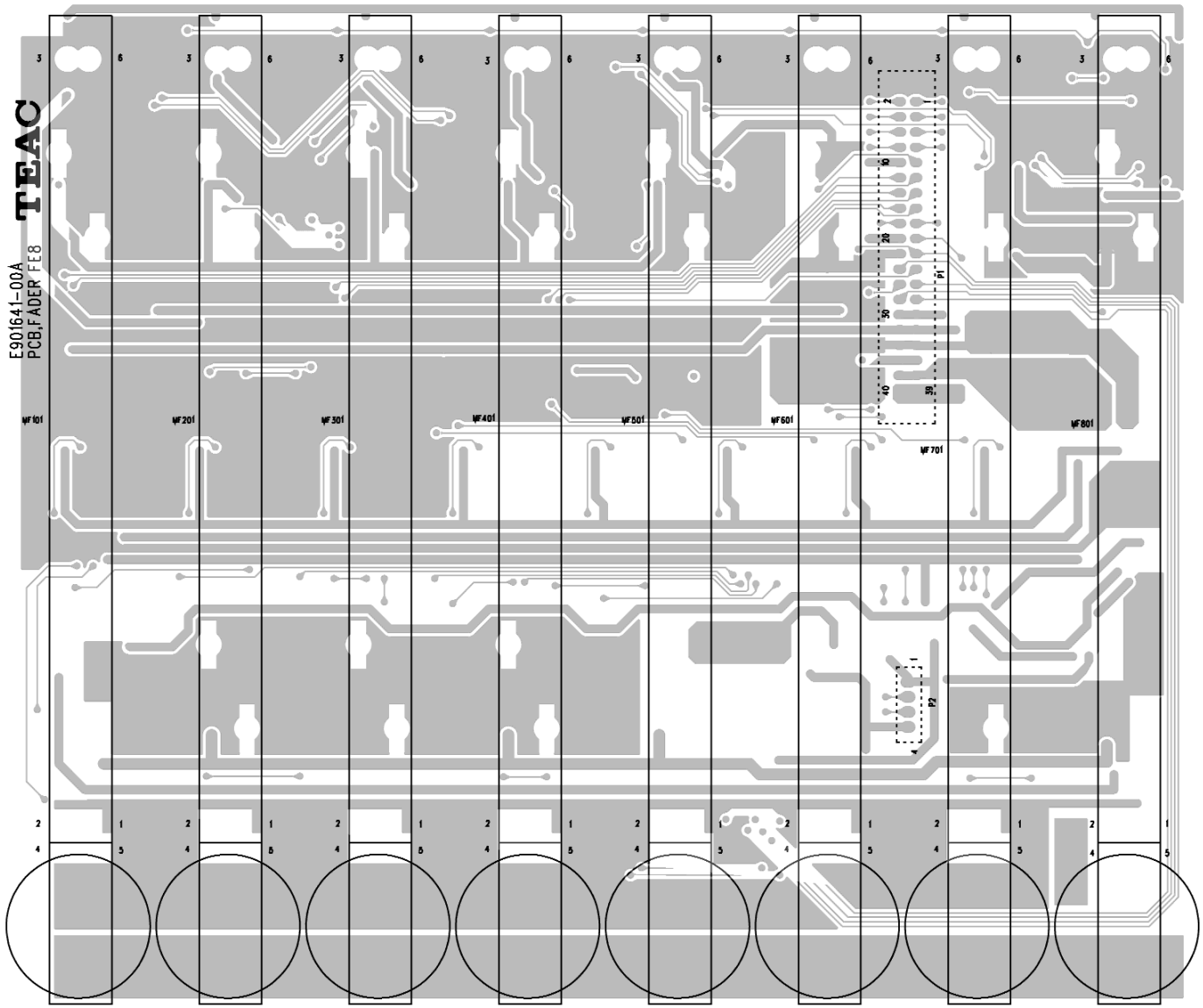
PCB ASSY, FADER RM FW G (SIDE A)



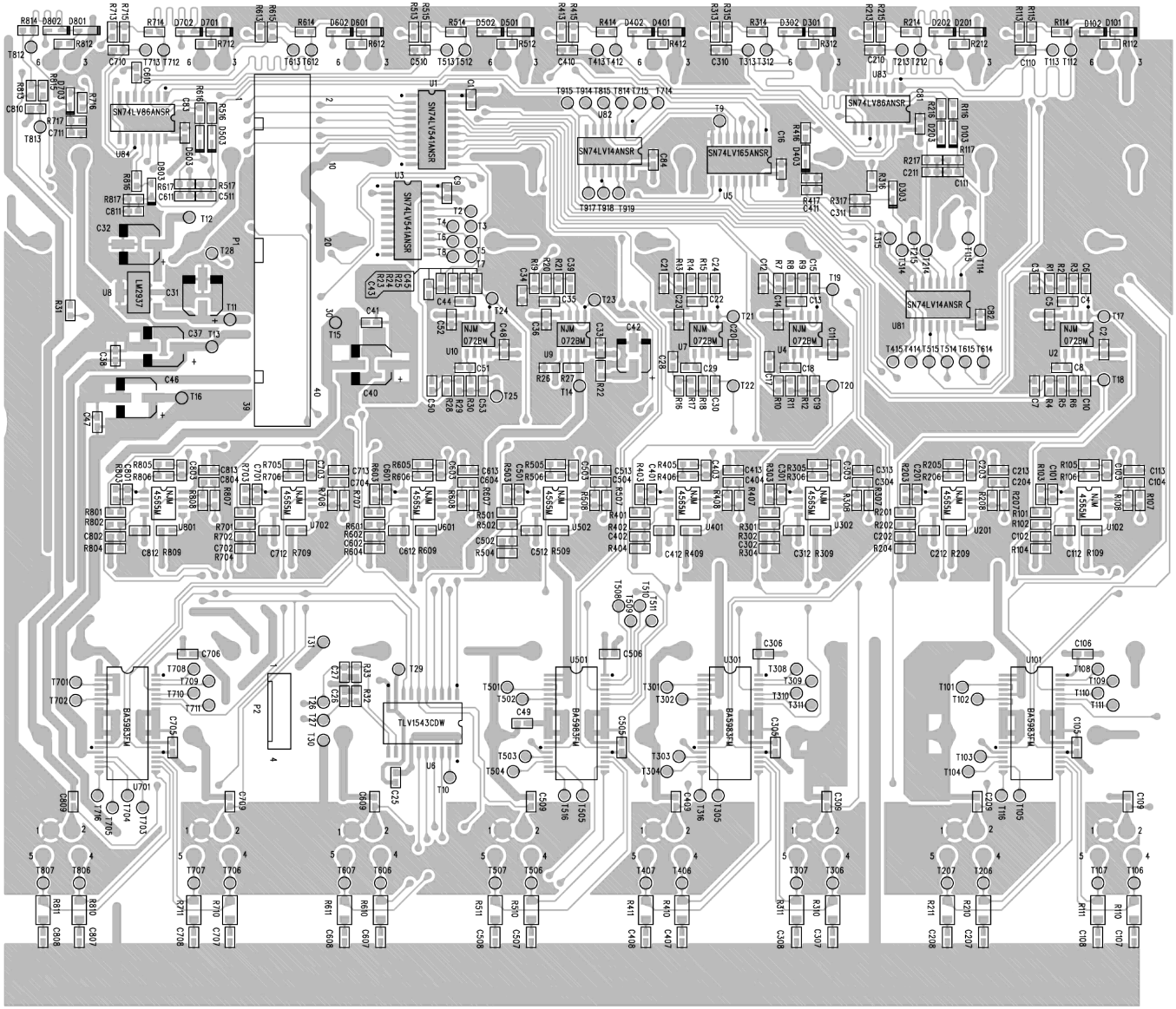
PCB ASSY, FADER RM FW G (SIDE B)



PCB ASSY, FADER FE8 G (SIDE A)



PCB ASSYFADER FE8 G (SIDE B)



PCB ASSY MAIN DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95285500B	PCB ASSY,MAIN DM48 G
		PCB,MAIN DM48 G
BT1	M0243260	HOLDE,BATTERY SN-2032-1 G
C263	C0061182	CE,RLB-10V101MG3#-T2 G
D1-D4	S0067174	LED,KP-1608IT G
D5.D6	S0035214	DIODE,HVC376B-TRF-E G
D7-D27	S0067294	DIODE,IMN10 T108 G
D28.D34	S0022094	DIODE,1SS355
D29-D33	S0067294	DIODE,IMN10 T108 G
D35-D39	S0067294	DIODE,IMN10 T108 G
D40.D46	S0022094	DIODE,1SS355
D41-D45	S0067294	DIODE,IMN10 T108 G
D47-D51	S0067294	DIODE,IMN10 T108 G
D52	S0022094	DIODE,1SS355
D53-D57	S0067294	DIODE,IMN10 T108 G
D58-D82	S0022094	DIODE,1SS355
D83-D87	S0042404	DIODE,RB161L-40 G
D88.D89	S0067314	DIODE,RB751V-40/TE17 G
D90-D93	S0067174	LED,KP-1608IT G
L1.L3	E0126184	COIL,MLF2012E100MT G
L2	E0127204	COIL,LQM18NNR68K000.68UHG
L4	E0126690	COIL,2.7UH K LK2125 G
L5	E0127214	COIL,BCMS201209A390 G
L6.L7	E0126184	COIL,MLF2012E100MT G
L8	E0126204	COIL,CDRH2D18/LD 10UH G
L9	E0126214	COIL,CDRH6D38-100 10UH G
L10.L11	E0102944	COIL,TCM2010-201-4P-T G
P1	E0023390	CONNECTOR,14FE-BT-VK-N
P2	E0126700	CONNECTOR,2211S-02T-F1 G
P3	E0124030	PIN,2211S-03G G
P4.P5	E0126700	CONNECTOR,2211S-02T-F1 G
P6	E0126710	CONNECTOR,2213S-14T-F1 G
P7.P8	E0126440	CONNECTOR,2316S-26G-F1 G
P9.P11	E0126450	D-SUB,5504F1-25S02-03-F1G
P10	E0115760	CONNECTOR,USB UBB4RD14C G
P12	E0126480	CONNECT,2316S-34G-F1 G
P13	E0126224	CONNECTOR,FX6-100S0.8SV G
P14	E0126234	CONNECTOR,FX6-80S-0.8SV G
P15.P34	E0126700	CONNECTOR,2211S-02T-F1 G
P16-P18	E0126490	CONNECT,2316S-40G-F1 G
P19.P20	E0035600	JACK,NC3FAH1-0(XLR)
P21.P22	E0126720	PLUG,NC3MBH(XLR) G
P23.P24	E0124171	JACK,HSP-242V2-23-G G
P25	E0126850	CONNECTOR,7P A3963WV W G
P26	E0125970	CONNECTOR,9P A3963WV W G
P27	E0126830	CONNECTOR,12P A2502WV W G
P28	E0126440	CONNECTOR,2316S-26G-F1 G
P29.P31	E0126490	CONNECT,2316S-40G-F1 G
P30	E0126480	CONNECT,2316S-34G-F1 G
P32	E0126480	CONNECT,2316S-34G-F1 G
P33	E0126980	CONNECTOR,2316S-50G-F1 G
P35	E0125860	CONNECTOR,7P A2001WV W G
P37	E0126740	CONNECTOR,12P A2001WV W G

PCB ASSY MAIN DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
P38	E0125840	CONNECTOR,4P A2001WV W G
P39	E0124030	PIN,2211S-03G G
P39.P5	E0126550	SHORT PLUG,2.54MM6.00PENG
P40	E0124030	PIN,2211S-03G G
P40	E0126550	SHORT PLUG,2.54MM6.00PENG
Q1	S0065074	TRANSISTOR,DTC124EUA TP G
Q2	S0041574	TRANSISTER,DTA124EUA G
Q3	S0018524	TRANSISTOR,2SC3661
Q8	S0068154	TRANSISTOR,2SK2980ZZ-TL G
RA1-RA6	R0133514	RES ARRAY,MNR15E0RPJ103
RA9-RA11	R0133514	RES ARRAY,MNR15E0RPJ103
RA14.RA15	R0133514	RES ARRAY,MNR15E0RPJ103
RA16,RA18	R0174864	RES ARRAY,MNR15E0RPJ222 G
RA17.RA19	R0174874	RES ARRAY,MNR15E0RPJ472 G
RA20	R0174864	RES ARRAY,MNR15E0RPJ222 G
RA21	R0174874	RES ARRAY,MNR15E0RPJ472 G
RA22	R0133514	RES ARRAY,MNR15E0RPJ103
RA23-RA38	R0174834	RES ARRAY,MNR14E0APJ220 G
RA39-RA44	R0174854	RES ARRAY,MNR14E0APJ820 G
RA45.RA46	R0133514	RES ARRAY,MNR15E0RPJ103
SW2	E0126500	SW,EVQ11L05R G
T362.T369	E00595800B	TRANS,PULSE400UH GZ0
T376.T380	E00595800B	TRANS,PULSE400UH GZ0
U1	S0068064	IC,SN74HCT541PW G
U2.U57	S0037894	IC,SN74LV04APWR G
U3	S0068094	IC,CY2305SXC-1T G
U4	S0064413	ICÅCHD6417727F160CV G
U5	S0051154	IC,SN74LV138APW G
U6.U8	S0046854	IC,SN74LV541APWR G
U7	S0067194	IC,SN74LV139APWR G
U10.U11	S0046854	IC,SN74LV541APWR G
U12.U14	S0067404	IC,SN75LVDS391PW G
U13.U21	S0068184	IC,74LVC4066PW G
U15.U23	S0057634	IC,EPIC6Q240C8N
U16-U20	S0067404	IC,SN75LVDS391PW G
U22	S0067404	IC,SN75LVDS391PW G
U24.U95	S0046854	IC,SN74LV541APWR G
U25.U26	S0055053	IC,M12L64164A-7T-G
U27	S00616010D	IC,ROM MAIN ASSY DM4800
U27	S0061510	IC,MBM29LV651UE90TN-KE1
U27	M02463100A	LABEL,IC DM4800 G
U27	D00934900D	SOFTWARE SPEC,DM4800 V151
U28	S0067184	IC,BS62LV256TC-70 G
U29.U37	S0066353	ICÅCADSP-21065LKSZ-240 G
U30.U117	S0059533	IC,XC9572XL-10TQG100C
U31.U38	S0068194	IC,SN74ALVCH16543-DGGR G
U32-U35	S0068084	IC,63LV1024-12J G
U36.U43	S0028204	IC,SN74LV574APW
U39-U42	S0068084	IC,63LV1024-12J G
U44.U49	S0056844	IC,TC74VHCU04FT GSO
U45.U50	S0060084	IC,NJM78L05UA(TE1) GA0
U46.U119	S0066590	IC,TC74VHCT00AFT(ELÅCF) G
U47.U51	S0068071	IC,MC74HC4046ADE2G G
U48.U52	S0046854	IC,SN74LV541APWR G

PCB ASSY MAIN DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
U53.U54	S0020444	IC,SN74LV00APWR G
U55	S0067254	IC,SN74LV07APWR G
U56	S0044614	IC,HD29051FP
U58.U59	S0067264	IC,SN65LVDS050PWR G
U60	S0021254	IC,SN74LV08APWR
U61	S0067414	IC,SN75240PWR G
U62	S0067244	IC,SN74LV540APWR G
U63.U67	S0068064	IC,SN74HCT541PW G
U64.U71	S0067424	IC,HD74HC541TVELL-E G
U65.U66	S0067244	IC,SN74LV540APWR G
U68	S0067424	IC,HD74HC541TVELL-E G
U69.U70	S0067244	IC,SN74LV540APWR G
U72	S0067244	IC,SN74LV540APWR G
U73.U81	S0060084	IC,NJM78L05UA(TE1) GA0
U74.U76	E0124074	FILTER,EXCCET101U G
U75.U83	S0058433	IC,CS8420-CSZ/D1
U77.U84	S0067434	IC,TC74HCT4053A G
U78.U116	S0046854	IC,SN74LV541APWR G
U79.U82	E0124074	FILTER,EXCCET101U G
U80.U114	S0048634	IC,SN74LV244APWR
U85-U88	E0124074	FILTER,EXCCET101U G
U89	S0037894	IC,SN74LV04APWR G
U90	S0056844	IC,TC74VHCU04FT GSO
U91-U94	E0124074	FILTER,EXCCET101U G
U96	S0067454	IC,LM2937IMPX-3.3 NOPB G
U97.U98	S0064304	IC,PQ015EZ01ZPH G
U99	S0067444	IC,M62016FP#CF0J G
U100	S0020444	IC,SN74LV00APWR G
U101	S0062144	IC,PQ018EZ01ZPH G
U102	S0064174	IC,PQ1X251M2ZPH G
U103	E0126654	CRYSTAL OSC,66.666MHZ G
U104	E0126664	CRYSTAL OSC,30.0MHZ G
U105	S0067274	IC,BD4823G G
U106	E0126674	CRYSTAL OSC,48.0MHZ G
U107	E0126684	CRYSTAL OSC,28.22MHZ G
U108	S0068104	IC,RS5C316A-E2-FB G
U109	E0124762	XTAL,32.768K NC38(6.3PF)G
U110	S0068114	IC,24LC00T-1/SNG G
U111	S0046814	IC,SN74LV245APWR G
U112.U113	S0046854	IC,SN74LV541APWR G
U115	S0067284	IC,SN74LV273APWR G
U118	S0046854	IC,SN74LV541APWR G
U120-U123	S0046814	IC,SN74LV245APWR G
U124.U125	S0046854	IC,SN74LV541APWR G
U126.U128	S0046814	IC,SN74LV245APWR G
U127.U131	S0046854	IC,SN74LV541APWR G
U129,U130	S0046814	IC,SN74LV245APWR G
U132	S0067194	IC,SN74LV139APWR G
U133	S0046854	IC,SN74LV541APWR G
U134,U135	S0046814	IC,SN74LV245APWR G
U136	S0067114	ICÅCSN74LVC1G08DBVR G

GATHER PCB ASSY, SYNC DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95198100B	GATHER PCBA,SYNC DM G
		PCB,SYNC DM
		PCB,MIDI DM
		PCB,LCD SUB DM
		PCB ASSY,SYNC DM G
D101.D102	S0067021	DIODE,1SS133 T-77 G
F101	E0127262	CKT PTCT,30R0185U G
J101.J102	E0127250	CONNECTOR,BNC 1P COH2201G
J103	E0127840	JACK,PIN 1P HSP-241V1B G
MB101.MB10	M01510100A	BRACKET,PCB-A G
P101	E0126450	D-SUB,5504F1-25S02-03-F1G
P102	E00946200B	HA,MAINP12 SYNCP2 G
P103.P104	E0126450	D-SUB,5504F1-25S02-03-F1G
P105	E00946100B	HA,MAINP8 SYNCP5 G
SW101	E0127850	SW,SLIDE SSSF123NA1-TK G
U101	S0068360	IC,TC4069UBP(F) G
U102	E0126520	FILTER,DSS6NB32A101Q91A G
U103	S0068370	IC,SN74S140N G
U104	E0126510	FILTER,DSS6NB32A102Q91A G
		PCB ASSY,MIDI DM G
D201-D205	S0067021	DIODE,1SS133 T-77 G
J201-J203	E0126560	CONNECTOR,HDC-052A-13-G G
J204	E0073670	JACK,JY-6313-01-030 G
MB201.MB20	M01510100A	BRACKET,PCB-A G
P201	E00946000A	HA,MAINP7 MIDIP1 G
P202.P203	E0123230	D-SUB,5504F1-09S-02-03 G
Q201.Q202	S0068162	TRANSISTOR,DTC123ESA TP G
U201	E0134440	OPT CONN,GP1FAV51RK0F G
U202	E0130730	OPT CONN,GP1FAV51TK0F GZ0
U203	S0065230	PHOTO COUPLER,PC900V0NS G
U204-U210	E0126510	FILTER,DSS6NB32A102Q91A G
U211	S0067514	IC,TC74ACT04P(F) G
U212	E0126510	FILTER,DSS6NB32A102Q91A G
U213-U221	E0126530	FILTER,DSS6NZ82A103Q91A G
		PCB ASSY,LCD SUB DM G
L1	E0126570	COIL,RCH875-151K G
P1	E00947300A	HA,SCRNP4 LCDSP1 G
P2	E0125940	CONNECTOR,4P A2502WV W G
Q1.Q2	S0067342	TRANSISTOR,2SC2236-0 G
TR1	E0127420	TRANS,EW-12H/TW G

GATHER PCB ASSY, MOTHER DM

REF.NO.	PARTS NO.	DESCRIPTION
	E95198200A	GATHER PCBA,MOTHER DM
		PCB ASSY,MOTHER DM G
J1.J2	3E026250G	CONNECT,CARD 2525-120-F1G
P1	3E026260G	CONNECT,2316S-34G-F1 G
P2	3E029450G	PIN,HEADER 2.54MM 2*4P-G
P3	3E023260	CONNECT,10P A2502WV WHT G
P4	3E026230G	CONNECT,2316S-40G-F1 G
P5	3E023250	CONNECT,9P A2502WV WHT G
U1	S0057624	IC,CX9572XL-10VQ64
U2	3S033444G	IC,SN75LVDT390PW G

GATHER PCB ASSY, MOTHER DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95316300A	GATHER PCBA,MOTHER DM48 G
		PCB ASSY,MOTHER DM48 G
D1	S0042404	DIODE,RB161L-40 G
J1,J2	E0127410	CONNECTOR,2525-120-F1 G
P1	E0126480	CONNECTOR,2316S-34G-F1 G
P2	E0127000	PIN,HEADER 2.54MM 2*4P G
P3	E0126810	CONNECTOR,10P A2502WV W G
P4	E0126490	CONNECTOR,2316S-40G-F1 G
P5	E0126800	CONNECTOR,9P A2502WV W G
U1	S0075323	IC,LCMXO1200C-3TN144C G
U2	S0064174	IC,PQ1X251M2ZPH G
U3	S0068184	IC,74LVC4066PW G

GATHER PCB ASSY PWR SUB DM48G

REF.NO.	PARTS NO.	DESCRIPTION
	E95198310B	GATHER PCBA,PWR SUB DM48 G
		PCB,PWR SUB DM
		PCB,CF CARD DM
		PCB ASSY,PWR SUB DM48 G
D1	S0067714	DIODE,MBRD360T4G G
D2	S0042404	DIODE,RB161L-40 G
D3	S0022094	DIODE,1SS355
L2	E0127014	COIL,CDRH127-220 G
L8	E0127024	COIL,CDRH74-102 G
P1	E0126870	CONNECTOR,10P A3963WV W G
P2	E0126860	CONNECTOR,8P A3963WV W G
P3.P4	E0126800	CONNECTOR,9P A2502WV W G
P5	E0126800	CONNECTOR,9P A2502WV W G
P6	E0126890	CONNECTOR,8P A2502WV R G
P7	E0126900	CONNECTOR,9P A2502WV R G
P8	E0126900	CONNECTOR,9P A2502WV R G
P9	E0126810	CONNECTOR,10P A2502WV W G
P10	E0126810	CONNECTOR,10P A2502WV W G
P11	E0126850	CONNECTOR,7P A3963WV W G
P12	E0125970	CONNECTOR,9P A3963WV W G
P13	E0126890	CONNECTOR,8P A2502WV R G

GATHER PCB ASSY PWR SUB DM48G

REF.NO.	PARTS NO.	DESCRIPTION
P14	E0126790	CONNECTOR,7P A2502WV W G
P15	E0126760	CONNECTOR,3P A2502WV W G
U1	S0067534	IC,LM2673SX-5.0 NOPB G
U2	S0058774	IC,NJM2374AE G
U3	S0068270	IC,NJM78M09FA(3P) G
		PCB ASSY,CF CARD DM G
MB1.MB2	M01510100A	BRACKET,PCB-A G
P001	E0127893	CF SLOT,752DE50AC20011
P002	E0126980	CONNECTOR,2316S-50G-F1 G
U001	S0046704	IC,TPS2212IDB
U002.U004	S0046814	IC,SN74LV245APWR G
U003	S0046854	IC,SN74LV541APWR G
U005-U007	S0046854	IC,SN74LV541APWR G

PCB ASSY DDMP4 DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95188400B	PCB ASSY,DDMP4 DM G
		PCB,DDMP4 DM
D101	S0061654	DIODE,20V 5A RSX501L-20 G
D102	S0067734	DIODE,MMSZ4678T1G G
D301-D601	S0067814	LED,KP-1608YT G
J101	E0127064	CONNECTOR,FX6-100P0.8SV2G
J201	E0127074	CONNECTOR,FX6-80P0.8SV2 G
L101	E0126364	COILÅCCEP125NP-1R8MC-H G
L301.L302	E0127034	BEAD COIL,BK1608 HM121 G
L401.L402	E0127034	BEAD COIL,BK1608 HM121 G
L501.L502	E0127034	BEAD COIL,BK1608 HM121 G
Q101.Q102	S0067224	FETÅCNTF6P02T3G G
U101	S0067614	IC,NCP1550SN19T1G G
U102	S0067554	IC,SN74LVC139APWR G
U201.U205	S0067524	IC,SN75LVDT390PW G
U202.U206	S0067544	IC,SN74LVC374APWR G
U203.U204	S0051224	IC,SN74LVC04APWR TSSOP G
U207.U209	S0067524	IC,SN75LVDT390PW G
U208.U216	S0051224	IC,SN74LVC04APWR TSSOP G
U210.U229	S0067544	IC,SN74LVC374APWR G
U212	S0064324	IC,SN65LVDS1DBVR G
U301-U601	S0065993	IC,DDMP-AUDIO(L7A1984) G
U701-U708	S0070444	IC,K4S641632K-UC60 G
U709	E0126654	CRYSTAL OSC,66.666MHZ G
U710	S0046854	IC,SN74LV541APWR G

GATHER PCB ASSY, LAYER DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95198400B	GATHER PCBA,LAYER DM G
		PCB,LAYER DM
		PCB,TRANSPORT DM
		PCB ASSY,LAYER DM G
D1-D3	S0067780	LED,SLR-332DU T32(ORG) G
D4.D5	S0067822	LED,SLR-332MG T32(GRN) G
D6	S0066850	LED,SLR-332VR T32(RED) G
D7	S0067850	LED,SLR-342DU TE7 G
D8	S0067840	LED,SLR-342VR TE7 G
D9-D10	S0067850	LED,SLR-342DU TE7 G
D11	S0067860	LED,SLR-342MG TE7 G
D12	S0067850	LED,SLR-342DU TE7 G
D13-D23	S0067850	LED,SLR-342DU TE7 G
D24	S0067860	LED,SLR-342MG TE7 G
D25	S0067840	LED,SLR-342VR TE7 G
D26-D46	S0022094	DIODE,1SS355
D47.D48	S0022094	DIODE,1SS355
P1	E00947500A	HA,MONP5 LAYP1 G
P2	E00947400A	HA,MONP6 LAYP2 G
SW1-SW6	E0127100	SW,TACT SKHHAM2520 G
SW22.SW23	E0125781	SW,TACT SKHHDAA010 G
SW7-SW21	E0125781	SW,TACT SKHHDAA010 G
		PCB ASSY,TRANSPORT DM G
	M01842300A	BRACKET,TRANSPORT DM
BRKT-PCB	B00174006A	SCREW,BPA 3*6 FZC G
D101-D105	S0022094	DIODE,1SS355
P101	E00947600A	HA,MONP7 TRAP1 G
SW101-SW10	E0126040	SW,SKBMFA000A-TK G

PCB ASSY, ASSIGN DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95188710B	PCB ASSY,ASSIGN DM48 G
		PCB,ASSIGN DM G
D1-D8	S0067822	LED,SLR-332MG T32(GRN) G
D9-D16	S0067832	LED,SLR-332VR T32(RED) TP G
D17-D24	S0067780	LED,SLR-332DU T32(ORG) G
D25-D40	S0067742	LED,SLR-342VR TC7 G
D43	S0067752	LED,SLR-342DU TC7 G
D44	S0067742	LED,SLR-342VR TC7 G
D45-D73	S0067752	LED,SLR-342DU TC7 G
D74-D130	S0022094	DIODE,1SS355
D131-D146	S0022094	DIODE,1SS355
D147.D148	S0022094	DIODE,1SS355
D149-D151	S0067752	LED,SLR-342DU TC7 G
D152	S0022094	DIODE,1SS355
P1	E00947000A	HA,ASSP1 SCRNP3 G
P3-P6	E0127084	CONNECTOR,DF15-42-2-20DPG
Q1-Q16	S0067904	TRANSISTOR,DTC143EKA G
RA1	R0174824	RES ARRAY,MNR35J5RJ103 G
SW147	E0125781	SW,TACT SKHHDAA010 G
SW1-SW24	E0127100	SW,TACT SKHHAM2520 G
SW25-SW28	E0125781	SW,TACT SKHHDAA010 G
SW29-SW31	E0127100	SW,TACT SKHHAM2520 G
SW32-SW57	E0125781	SW,TACT SKHHDAA010 G
SW58-SW65	E0127140	ENCODER,EC12E24104A6 G
U1	S0067601	IC,TD62M8600FG(EL) G
U2	S0067574	IC,SN74HC541ANSR G
U3	S0067584	IC,SN74HC595ANSR G
U4	S0067601	IC,TD62M8600FG(EL) G
U5-U7	S0067584	IC,SN74HC595ANSR G
U8	S0067594	IC,SN74HC165ANSR G

PCB ASSY MODULE DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95188900B	PCB ASSY,MODULE DM G PCB,MODULE DM G
D1-D8	S0067822	LED,SLR-332MG T32(GRN) G
D9-D16	S0067832	LED,SLR-332VR T32(RED) TP G
D17-D24	S0067780	LED,SLR-332DU T32(ORG) G
D25-D40	S0067742	LED,SLR-342VR TC7 G
D41.D43	S0067780	LED,SLR-332DU T32(ORG) G
D42	S0067752	LED,SLR-342DU TC7 G
D44.D45	S0067752	LED,SLR-342DU TC7 G
D46	S0067780	LED,SLR-332DU T32(ORG) G
D47-D152	S0022094	DIODE,1SS355
P1	E00947000A	HA,ASSP1 SCRNP3 G
P2	E0126830	CONNECTOR,12P A2502WV W G
P3-P6	E0127084	CONNECTOR,DF15-42-2-20DPG
Q1-Q16	S0067904	TRANSISTOR,DTC143EKA G
RA1	R0174824	RES ARRAY,MNR35J5RJ103 G
SW1-SW24	E0127100	SW,TACT SKHHAM2520 G
SW25.SW27	E0125781	SW,TACT SKHHDAA010 G
SW26	E0127100	SW,TACT SKHHAM2520 G
SW28.SW29	E0127100	SW,TACT SKHHAM2520 G
SW30-SW33	E0125781	SW,TACT SKHHDAA010 G
SW34-SW68	E0127140	ENCODER,EC12E24104A6 G
SW69	E0125781	SW,TACT SKHHDAA010 G
U2	S0067574	IC,SN74HC541ANSR G
U3	S0067584	IC,SN74HC595ANSR G
U4,U1	S0067601	IC,TD62M8600FG(EL) G
U5-U7	S0067584	IC,SN74HC595ANSR G
U8	S0067594	IC,SN74HC165ANSR G

GATHER PCB ASSY, RING LED DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95198500B	GATHER PCBA,RING LED DM G PCB,RING LED DM G PCB ASSY,RING LED DM G
D001-D015	S0067794	LED,APK3020 SECK G
D016.D032	S0067804	LED,APK3020 SURCK G
D017-D031	S0067794	LED,APK3020 SECK G
D033-D047	S0067794	LED,APK3020 SECK G
D048.D064	S0067804	LED,APK3020 SURCK G
D049-D063	S0067794	LED,APK3020 SECK G
D065-D079	S0067794	LED,APK3020 SECK G
D080.D096	S0067804	LED,APK3020 SURCK G
D081-D095	S0067794	LED,APK3020 SECK G
D097-D111	S0067794	LED,APK3020 SECK G
D112.D128	S0067804	LED,APK3020 SURCK G
D113-D127	S0067794	LED,APK3020 SECK G
J1-J4	E0127114	CONNECTOR,DF15-1.8-20DS G

PCB ASSY, SCREEN DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95188800B	PCB ASSY,SCREEN DM G PCB,SCREEN DM G
D1-D8	S0067822	LED,SLR-332MG T32(GRN) G
D9-D16	S0066850	LED,SLR-332VR T32(RED) G
D156.D157	S0022094	DIODE,1SS355
D17-D24	S0067780	LED,SLR-332DU T32(ORG) G
D25-D40	S0067742	LED,SLR-342VR TC7 G
D41.D42	S0067822	LED,SLR-332MG T32(GRN) G
D43	S0067780	LED,SLR-332DU T32(ORG) G
D44-D48	S0067762	LED,LA12540/TBF-4(ORG) G
D44-D48	M0244040	SPACER,LEDH-12 G
D49	S0067742	LED,SLR-342VR TC7 G
D50-D60	S0067762	LED,LA12540/TBF-4(ORG) G
D50-D73	M0244040	SPACER,LEDH-12 G
D61.D73	S0067772	LED,LI12540/TBF-4(RED) G
D62-D72	S0067762	LED,LA12540/TBF-4(ORG) G
D74-D155	S0022094	DIODE,1SS355
P1	E00947100A	HA,SCRNP1 MONP3 G
P2	E00947200A	HA,SCRNP2 MONP4 G
P3	E0125950	CONNECTOR,12P A2502WV W G
P4	E0126750	CONNECTOR,2P A2502WV W G
P5-P8	E0127084	CONNECTOR,DF15-42-2-20DPG
Q1-Q16	S0067904	TRANSISTOR,DTC143EKA G
R25	R0174890	VAR RES,RK09K113Z401-10KG
RA1	R0174824	RES ARRAY,MNR35J5RJ103 G
SW1-SW24	E0127100	SW,TACT SKHHAM2520 G
SW25-SW32	E0125781	SW,TACT SKHHDAA010 G
SW33	E0127100	SW,TACT SKHHAM2520 G
SW34-SW36	E0127100	SW,TACT SKHHAM2520 G
SW37-SW56	E0125781	SW,TACT SKHHDAA010 G
SW57-SW60	E0127120	ENCODER,EC12E24404A5 G
SW61	E0127130	ENCODER,EC12E2420802 G
SW62-SW69	E0127140	ENCODER,EC12E24104A6 G
SW70.SW71	E0125781	SW,TACT SKHHDAA010 G
U1.U4	S0067601	IC,TD62M8600FG(EL) G
U2	S0067574	IC,SN74HC541ANSR G
U3	S0067584	IC,SN74HC595ANSR G
U5-U7	S0067584	IC,SN74HC595ANSR G
U8	S0067594	IC,SN74HC165ANSR G

GATHER PCB ASSY, MONITOR DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95198610B	GATHER PCBA,MONITR DM48 G PCB,MONITOR DM G PCB,SOLO DM
		PCB ASSY,MONITOR DM48 G
D1-D5	S0067850	LED,SLR-342DU TE7 G
D6.D9	S0067840	LED,SLR-342VR TE7 G
D7.D8	S0067850	LED,SLR-342DU TE7 G
D10-D19	S0022094	DIODE,1SS355
D20-D22	S0067850	LED,SLR-342DU TE7 G
D23-D34	S0067752	LED,SLR-342DU TC7 G
D35	S0067780	LED,SLR-332DU T32(ORG) G
D36-D51	S0022094	DIODE,1SS355
P1	E00945900B	HA,MAINP27 MONP1 G
P2	E0126790	CONNECTOR,7P A2502WV W G
P3	E0126830	CONNECTOR,12P A2502WV W G
P4	E0125940	CONNECTOR,4P A2502WV W G
P5	E0126770	CONNECTOR,5P A2502WV W G
P6	E0126840	CONNECTOR,14P A2502WV W G
P7	E0126780	CONNECTOR,6P A2502WV W G
P8	E0126760	CONNECTOR,3P A2502WV W G
Q1-Q4	S0067914	TRANSISTOR,2SB0710CQ G
Q5.Q7	S0067904	TRANSISTOR,DTC143EKA G
Q6.Q8	S0067914	TRANSISTOR,2SB0710CQ G
Q9	S0067904	TRANSISTOR,DTC143EKA G
Q10	S0067914	TRANSISTOR,2SB0710CQ G
Q11-Q13	S0067904	TRANSISTOR,DTC143EKA G
Q14.Q15	S0067914	TRANSISTOR,2SB0710CQ G
Q16	S0067904	TRANSISTOR,DTC143EKA G
RA1	R0174824	RES ARRAY,MNR35J5RJ103 G
SW1-SW23	E0125781	SW,TACT SKHHDAA010 G
SW24	E0127100	SW,TACT SKHHAM2520 G
U1	S0067574	IC,SN74HC541ANSR G
U2-U5	S0067584	IC,SN74HC595ANSR G
U6	S0067594	IC,SN74HC165ANSR G

GATHER PCB ASSY, INPUT JACK DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95198700B	GATHER PCBA,INPUTJACK DM G PCB,INPUT JACK DM G
		PCB ASSY,INPUT JACK DM G
J100	E0127290	JACK,MIC NC3FAV1-0 G
J101.J201	E0127310	JACK,PHON JY-6353-02030 G
J102.J202	E0127320	JACK,PHON JY-6353-02040 G
J200	E0127300	JACK,MIC NC3FAV-0 G
J300.J400	E0127300	JACK,MIC NC3FAV-0 G
J301.J401	E0127310	JACK,PHON JY-6353-02030 G
J302.J402	E0127320	JACK,PHON JY-6353-02040 G
J500.J600	E0127300	JACK,MIC NC3FAV-0 G
J501.J601	E0127310	JACK,PHON JY-6353-02030 G
J502.J602	E0127320	JACK,PHON JY-6353-02040 G
J700	E0127300	JACK,MIC NC3FAV-0 G
J701.J801	E0127310	JACK,PHON JY-6353-02030 G
J702.J802	E0127320	JACK,PHON JY-6353-02040 G
J800	E0127290	JACK,MIC NC3FAV1-0 G
P1-P4	E0125890	CONNECTOR,16P A2001WV W G
P5	E0126760	CONNECTOR,3P A2502WV W G

GATHER PCB ASSY, INPUT AMP DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95198800B	GATHER PCBA,INPUT AMP DM G
		PCB,INPUT AMP DM G
		PCB ASSY,INPUT AMP DM G
D100.D101	S0067021	DIODE,1SS133 T-77 G
D200.D201	S0067021	DIODE,1SS133 T-77 G
D300.D301	S0067021	DIODE,1SS133 T-77 G
D400.D401	S0067021	DIODE,1SS133 T-77 G
D500.D501	S0067021	DIODE,1SS133 T-77 G
D600.D601	S0067021	DIODE,1SS133 T-77 G
D700.D701	S0067021	DIODE,1SS133 T-77 G
D800.D801	S0067021	DIODE,1SS133 T-77 G
P1-P4	E0125890	CONNECTOR,16P A2001WV W G
P5-P6	E0126740	CONNECTOR,12P A2001WV W G
P7	E0126770	CONNECTOR,5P A2502WV W G
P8	E0126760	CONNECTOR,3P A2502WV W G
Q100.Q101	S0068201	TRANSISTOR,2SA1048GR(FT)G
Q102.Q103	S0068922	TRANSISTOR,2SA1084ETZ-E G
Q104.Q105	S0068211	TRANSISTOR,2SC5395-T112FG
Q200.Q201	S0068201	TRANSISTOR,2SA1048GR(FT)G
Q202.Q203	S0068922	TRANSISTOR,2SA1084ETZ-E G
Q204.Q25	S0068211	TRANSISTOR,2SC5395-T112FG
Q300.Q301	S0068201	TRANSISTOR,2SA1048GR(FT)G
Q302.Q303	S0068922	TRANSISTOR,2SA1084ETZ-E G
Q304.Q305	S0068211	TRANSISTOR,2SC5395-T112FG
Q400.Q401	S0068201	TRANSISTOR,2SA1048GR(FT)G
Q402.Q403	S0068922	TRANSISTOR,2SA1084ETZ-E G
Q404.Q405	S0068211	TRANSISTOR,2SC5395-T112FG
Q500.Q501	S0068201	TRANSISTOR,2SA1048GR(FT)G
Q502.Q503	S0068922	TRANSISTOR,2SA1084ETZ-E G
Q504.Q505	S0068211	TRANSISTOR,2SC5395-T112FG
Q600.Q601	S0068201	TRANSISTOR,2SA1048GR(FT)G
Q602.Q603	S0068922	TRANSISTOR,2SA1084ETZ-E G
Q604.Q605	S0068211	TRANSISTOR,2SC5395-T112FG
Q700.Q701	S0068201	TRANSISTOR,2SA1048GR(FT)G
Q702.Q703	S0068922	TRANSISTOR,2SA1084ETZ-E G
Q704.Q705	S0068211	TRANSISTOR,2SC5395-T112FG
Q800.Q801	S0068201	TRANSISTOR,2SA1048GR(FT)G
Q802.Q803	S0068922	TRANSISTOR,2SA1084ETZ-E G
Q804.Q805	S0068211	TRANSISTOR,2SC5395-T112FG
SW1.SW2	E0127330	SW,SSSU012200 G
SW100.SW200	E0127340	SW,SSSF025100 G
SW300.SW400	E0127340	SW,SSSF025100 G
SW500.SW600	E0127340	SW,SSSF025100 G
SW700.SW800	E0127340	SW,SSSF025100 G
U1-U4	S0067620	IC,BA15532N G
VR100.VR200	R0175054	VAR RES,RK09D1130C4A-20K G
VR300.VR400	R0175054	VAR RES,RK09D1130C4A-20K G
VR500.VR600	R0175054	VAR RES,RK09D1130C4A-20K G
VR700.VR800	R0175054	VAR RES,RK09D1130C4A-20K G

GATHER PCB ASSY, INPUT AD DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95198900B	GATHER PCBA,INPUT AD DM G
		PCB,INPUT AD DM G
		PCB ASSY,INPUT AD DM G
D102-D105	S0022094	DIODE,1SS355
D202-D205	S0022094	DIODE,1SS355
D302-D305	S0022094	DIODE,1SS355
D402-D405	S0022094	DIODE,1SS355
D502-D505	S0022094	DIODE,1SS355
D602-D605	S0022094	DIODE,1SS355
D702-D705	S0022094	DIODE,1SS355
D802-D805	S0022094	DIODE,1SS355
L004-L011	E0101174	COIL,LQH43CN100K03L G
P11	E0126770	CONNECTOR,5P A2502WV W G
P12	E0125880	CONNECTOR,13P A2001WV W G
P13	E0125880	CONNECTOR,13P A2001WV W G
P14.P15	E0125850	CONNECTOR,6P A2001WV W G
P16	E0126800	CONNECTOR,9P A2502WV W G
P9.P10	E0126740	CONNECTOR,12P A2001WV W G
Q1	S0067924	TRANSISTOR,DTA124EKA G
R048	R0133514	RES ARRAY,MNR15E0RPJ103
U001-U004	S0059604	IC,AK5385AVF G
U5-U6	S0067634	IC,LIN NJM5532M G
U17.U18	S0067644	IC,SN74LV541ANS G

GATHER PCB ASSY, MSTR JACK DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95277400B	GPCBA,MSTR JACK DM48 G PCB,MSTR JACK DM48 PCB,INLET DM48
		PCB ASSY,MSTR JACK DM48 G
J001	E0123910	JACKÅCRCA2P B217L R/W G
J100	E0127310	JACK,PHON JY-6353-02030 G
J101.J201	E0127360	JACK,PHON JY-6353-02250 G
J102-J104	E0127310	JACK,PHON JY-6353-02030 G
J200	E0127310	JACK,PHON JY-6353-02030 G
J202-J204	E0127310	JACK,PHON JY-6353-02030 G
J300.J400	E0127310	JACK,PHON JY-6353-02030 G
J301.J401	E0127360	JACK,PHON JY-6353-02250 G
L100-L102	E0127040	BEAD COIL,FBR07HA850SB00G
L200-L202	E0127040	BEAD COIL,FBR07HA850SB00G
P001	E01244600A	HA,MAAMPP12 MAJAP48 G
P002	E0126840	CONNECTOR,14P A2502WV W G
P003	E0126830	CONNECTOR,12P A2502WV W G
P004	E01244500A	HA,MAAMPP1 MAJAP004 G
P100.P200	E0127370	JACK,MIC NC3MAV G
Q1-Q4	S0067872	TRANSISTOR,2SC2878-B G
SET B217L	M0252020	SPACER,LEDH-11 G
		PCB ASSY,INLET DM48 G
	E90285800A	PCB,INLET DM48
C1	C0066350	CQ,1.0UFAC250V G
C2-C3	C0059830	CQ,0.1UFAC 250V-G
C4	E0127151	SPK KILLER,0.0047M250V G
C5.C6	C0032860	CC, 250V 2200PF M
D1	R0175270	VARISTOR,DC470V ERZ G
F1	E0127640	T-LAG FUSE,SB AC250V 5A G
F1	E0126350	HOLDER,FUSE HOLDER 5.0 G
L1.L2	E0127050	COIL,2.2MH 1.3A LF2020G
MB1	DM01510100A	BRACKET,PCB-A G
P1	DE0076040	AC,INLET M1908A
P2	DE00948700A	HA,INLETP2 SWPCN1 G
S1	DE0125690	SW,SFDLB11M7U G

GATHER PCB ASSY, MST AMP DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95278800B	GATHER PCBA,MST AMP DM48 G PCB,MSTR AMP DM48 G
		PCB ASSY,MST AMP DM48 G
J100.J200	E0127310	JACK,PHON JY-6353-02030 G
P1.P14	E0126770	CONNECTOR,5P A2502WV W G
P10	E0126820	CONNECTOR,11P A2502WV W G
P11	E0126790	CONNECTOR,7P A2502WV W G
P12	E0126840	CONNECTOR,14P A2502WV W G
P7	E0126730	CONNECTOR,2P A2001WV W G
Q3.Q4	S0067872	TRANSISTOR,2SC2878-B G
Q7.Q8	S0067872	TRANSISTOR,2SC2878-B G
R153.R159	R0174330	RN,METAL OXID 1/2W 10 OHMG
R155.R156	R0174450	RN,METAL OXID 1/2W 100 OHMG
R165.R167	R0174450	RN,METAL OXID 1/2W 100 OHMG
SW1	HE0123900	SWÅCPUSH SPEA123000 G
U1.U3	S0067660	IC,NJM5532D G
U2	S0067650	IC,NJM4580D G
U12-U14	S0067650	IC,NJM4580D G
U15.U16	S0067660	IC,NJM5532D G
U17.U18	S0067650	IC,NJM4580D G
VR1.VR2	R0175034	VAR RES,RK14K12DF30-10KAG
VR3	R0175054	VAR RES,RK09D1130C4A-20K G
VR4	R0175034	VAR RES,RK14K12DF30-10KAG

GATHER PCB ASSY, MST ADA DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95199210B	GATHER PCBA,MST ADA DM48 G
		PCB,MSTR ADDA DM G
		PCB ASSY,MST ADDA DM48 G
D1-D28	S0022094	DIODE,1SS355
L1-L6	E0101174	COIL,LQH43CN100K03L G
L8.L9	E0101174	COIL,LQH43CN100K03L G
P1	E0125850	CONNECTOR,6P A2001WV W G
P2	E0125880	CONNECTOR,13P A2001WV W G
P3	E0126890	CONNECTOR,8P A2502WV R G
P4	E0126740	CONNECTOR,12P A2001WV W G
P5	E0126440	CONNECTOR,2316S-26G-F1 G
P6	E0126820	CONNECTOR,11P A2502WV W G
P7	E0126790	CONNECTOR,7P A2502WV W G
P8	E0125950	CONNECTOR,12P A2502WV W G
P9	E0126840	CONNECTOR,14P A2502WV W G
P13	E0126770	CONNECTOR,5P A2502WV W G
P15	E0127000	PIN,HEADER 2.54MM 2*4P G
Q5.Q6	S0018524	TRANSISTOR,2SC3661
Q7	S0067924	TRANSISTOR,DTA124EKA G
U1-U4	S0063994	IC,AK4528VF G
U5-U7	S0064544	IC,NJM4580M G
U8	S0064224	IC,AK4382AVT G
U9-U11	S0067634	IC,LIN NJM5532M G
U19	S0058443	IC,XC9572XL-10VQG64C
U20.U21	S0067644	IC,SN74LV541ANS G
U22	S0067524	IC,SN75LVDT390PW G

GATHER PCB ASSY, EXT IO DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95276300B	GATHER PCBA,EXT IO DM48 G
		PCB,EXT ADDA DM48
		PCB,EXT JACK DM48
		PCB ASSY,EXT ADDA DM48
D1-D16	S0022094	DIODE,1SS355
L1-L4	E0101174	COIL,LQH43CN100K03L G
P1	E0125950	CONNECTOR,12P A2502WV W G
P2	E0127610	CONNECTOR,13P A2502WV W G
P3	E0126890	CONNECTOR,8P A2502WV R G
P4	E0126740	CONNECTOR,12P A2001WV W G
Q1-Q4	S0018524	TRANSISTOR,2SC3661
U1,U2	S0063994	IC,AK4528VF G
U3,U4	S0064544	IC,NJM4580M G
		PCB ASSY,EXT JACK DM48
	E90272100A	PCB,EXT JACK DM48
	EZ5272102A	PCB ASSY,T-EXT JACK DM48
J1-J4	E0127360	JACK,PHON JY-6353-02250 G
J5-J8	E0127310	JACK,PHON JY-6353-02030 G
P100	E0125950	CONNECTOR,12P A2502WV W G
P200	E0127610	CONNECTOR,13P A2502WV W G

GATHER PCB ASSY, FADER RM FW G

REF.NO.	PARTS NO.	DESCRIPTION
	E95168200C	PCB ASSY,FADER RM FW G
C501-C503	S0022094	DIODE,1SS355
D101-D103	S0022094	DIODE,1SS355
D201-D203	S0022094	DIODE,1SS355
D301-D303	S0022094	DIODE,1SS355
D401-D403	S0022094	DIODE,1SS355
D601-D603	S0022094	DIODE,1SS355
D701-D703	S0022094	DIODE,1SS355
D801-D803	S0022094	DIODE,1SS355
D901-D903	S0022094	DIODE,1SS355
MF101.201	R0175024	VAR RES,RSA0N11M9A0C G
MF301.401	R0175024	VAR RES,RSA0N11M9A0C G
MF501.601	R0175024	VAR RES,RSA0N11M9A0C G
MF701.801	R0175024	VAR RES,RSA0N11M9A0C G
MF901	R0175024	VAR RES,RSA0N11M9A0C G
P1	E0126490	CONNECT,2316S-40G-F1 G
P2	E0126880	CONNECTOR,4P A2502WV R G
U1.U3	S0067644	IC,SN74LV541ANS G
U2.U4	S0064664	IC,NJM072BM G
U5	S0067674	IC,SN74LV165ANSR G
U6	S0067684	IC,TLV1543CDW G
U7.U9	S0064664	IC,NJM072BM G
U8	S0067454	IC,LM2937IMPX-3.3 NOPB G
U10	S0064664	IC,NJM072BM G
U81.U82	S0067694	IC,SN74LV14ANSR G
U83-U85	S0067701	IC,HD74LV86AFPEL-E G
U101.U301	S0035334	IC,BA5983FM G
U102.U302	S0070814	IC,NJM4565M-T1 G
U201.U401	S0070814	IC,NJM4565M-T1 G
U501.U701	S0035334	IC,BA5983FM G
U502.U702	S0070814	IC,NJM4565M-T1 G
U601.U801	S0070814	IC,NJM4565M-T1 G
U901	S0035334	IC,BA5983FM G
U902	S0070814	IC,NJM4565M-T1 G

PCB ASSY, FADER FE8 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95164100C	PCB ASSY,FADER FE8 G
C112.C113	C0057124	CC,X7R16V0.1UFKAT0603G
D101-D103	S0022094	DIODE,1SS355
D201-D203	S0022094	DIODE,1SS355
D301-D303	S0022094	DIODE,1SS355
D401-D403	S0022094	DIODE,1SS355
D501-D503	S0022094	DIODE,1SS355
D601-D603	S0022094	DIODE,1SS355
D701-D703	S0022094	DIODE,1SS355
D801-D803	S0022094	DIODE,1SS355
MF101.201	R0175024	VAR RES,RSA0N11M9A0C G
MF301.401	R0175024	VAR RES,RSA0N11M9A0C G
MF501.601	R0175024	VAR RES,RSA0N11M9A0C G
MF701.801	R0175024	VAR RES,RSA0N11M9A0C G
P1	E0126490	CONNECT,2316S-40G-F1 G
U1.U3	S0067644	IC,SN74LV541ANS G
U2.U4	S0064664	IC,NJM072BM G
U5	S0067674	IC,SN74LV165ANSR G
U6	S0067684	IC,TLV1543CDW G
U7.U9	S0064664	IC,NJM072BM G
U8	S0067454	IC,LM2937IMPX-3.3 NOPB G
U10	S0064664	IC,NJM072BM G
U81.U82	S0067694	IC,SN74LV14ANSR G
U83.U84	S0067701	IC,HD74LV86AFPEL-E G
U101.U301	S0035334	IC,BA5983FM G
U102.U302	S0070814	IC,NJM4565M-T1 G
U201.U401	S0070814	IC,NJM4565M-T1 G
U501.U701	S0035334	IC,BA5983FM G
U502.U702	S0070814	IC,NJM4565M-T1 G
U601.U801	S0070814	IC,NJM4565M-T1 G

WIRE SECT,DM4800

REF.NO.	PARTS NO.	DESCRIPTION
	E00948600A	HA,SWPCN201202 PSUBP1P2 G
	E00948300A	HA,MAINP25 PSUBP11 G
	E00948500A	HA,MAINP26 PSUBP12 G
	E00948100A	HA,MONP2 PSUBP14 G
	E00948200A	HA,MOTHERP3 PSUBP9 G
	E00948400A	HA,MOTHERP5 PSUBP7 G
	E01244000A	HA,MOTHERP3 PSUBP10 48G
	E01244100A	HA,MOTHERP5 PSUBP8 48G
	E01243800A	HA,MAINP31 MOTHERP4 48G
	E01243900B	HA,MAINP32 MOTHERP1 48G
	E00946600A	HA,MAINP29 MOTHERP4 G
	E00946700B	HA,MAINP30 MOTHERP1 G
	E00946300B	HA,MAINP16 FDRFWP1 G
	E00946400B	HA,MAINP16 FDRFWP1 G
	E01243700A	HA,MAINP17 FDRFEP1 48G
	E00946800A	HA,MAINP33 CFP2 G
	E00947800A	HA,INAD1P16 PSUBP3 G
	E00947900A	HA,INAD9P16 PSUBP4 G
	E00948000A	HA,MAADP3 PSUBP6 G
	E00946900A	HA,MAINP1 LCDUNIT G
	E00944000B	HA,INAD19 INAMP19 SIG
	E00944200A	HA,INAD19P11 INAMP19P7 G
	E00944300A	HA,INAD1P12 INAD9P13 G
	E00944400A	HA,INAD1P14 INAD9P15 G
	E00944500A	HA,INAD9P12 MAADP2 G
	E00944600A	HA,INAD9P14 MAADP1 G
	E00944700B	HA,INAMP19 INJA19 SIG G
	E00945100B	HA,INAMP19P8 INJA19P5 G
	E00945200B	HA,MAADP6 MAAMPP10 G
	E00945300B	HA,MAADP7 MAAMPP11 G
	E00945400A	HA,MAADP8 MAJAP3 G
	E00945500A	HA,MAADP9 MAJAP2 G
	E00945600A	HA,MAADP13 MAAMPP14 G
	E00945800A	HA,TB MIC G
	E00946500B	HA,MAINP28 MAADP5 G
	E01244200A	HA,EXTADP4 MSTRADP4 G
	E01244300A	HA,EXTADP1 EXTJAP100 G
	E01244400A	HA,EXTADP2 EXTJAP200 G

11. INCLUDED ACCESSORIES
付属品

INCLUDED ACCESSORIES

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
	E01469600A	POWER CORD,PSE TEAC 7A G [J]	
	3E014150	POWER CORD,UL-G [US/C]	
	3E014160	POWER CORD,EUR-G [K,E,]	
	3E014170	POWER CORD,UK [UK]	
	3E014180	POWER CORD,AUS [A]	
	3E039940	POWER CORD,TM G [T]	
	3E015120	CABLE,USB CABLE 1.5M G	
	T0013630	CF CARD,CF128-231 G	
	T00124000A	DISC,CD-ROM DMS	
	D00936900A	OWNERS MNL,(J)4800 G	
	D00936910A	OWNERS MNL,(E)4800 G	
	D00936920A	OWNERS MNL,(F)4800 G	
	D00937000A	OWNERS MNL,QR(E)4800 G	
	D00937010A	OWNERS MNL,QR(F)4800 G	
	D00937020A	OWNERS MNL,QR(G)4800 G	
	D00937040A	OWNERS MNL,QR(S)4800 G	
	D00889200B	AUTOMATION GUIDE,J DM	
	D00889210B	AUTOMATION GUIDE,E DM	
	D00889220B	AUTOMATION GUIDE,F DM	
	D00889300B	TMC SOFTWARE GUIDE,J DM	
	D00889310B	TMC SOFTWARE GUIDE,E DM	
	D00889320B	TMC SOFTWARE GUIDE,F DM	

NOTES

- PC boards shown are viewed from parts side.
- Parts marked with * require longer delivery time.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
- Parts of [ ] mark can be used only with the version designated.
  [J] : JAPAN [US/C] : U.S.A./CANADA [K] : KOREA [E] : EUROPE
  [UK] : U.K. [A] : AUSTRALIA [T] : Tiwan

注 意

- プリント基板図は部品面を示しています。
- *印の部品は納期が若干かかります。
  あらかじめご了承ください。
- 分解図に部番のない部品および品番のない部品は供給できません。
- 標準の抵抗、コンデンサーは省略してあります。
  回路図を参照してください。
- ⚠印は安全重要部品です。
  交換する時は必ず指定の部品を使用してください。
- 仕向先
  [J] : JAPAN [US/C] : U.S.A./CANADA [K] : KOREA
  [E] : EUROPE
  [UK] : U.K. [A] : AUSTRALIA [T] : Tiwan

DM-3200 ⇔ DM-4800, Main PCBA Firmware Swapping

0. Contents

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2. Required equipments 1
3. Setting 2
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5. Firmware version confirming 5
6. TMCompanion-Debug version confirming 5

1. Summary

- This DM-3200 to/from DM-4800 Firmware Swapping is done to the update of the part Updater not done in a usual Firmware update. When it fails while updating it by some reason, rebooting becomes impossible, and the mixer cannot return unless the binary file is written by using JTAG tool. Pay atmost case so that the power supply might not cut and the USB cable might not come off while updating it therefore.
  And it is prohibited to transfer this TMCompanion for the service (**hereinafter called** TMCompanion-Debug) used by this update to the user.

2. Required equipments

- The body of DM-3200 or 4800 or minimum PCBA (MONITOR PCBA, POWER SUB PCBA), SW PSU, LCD unit and wires to connect all.
- Win XP SP2 OS Computer
- USB cable
- TMCompanion-Debug data file
- DM-3200 or DM0-4800 firmware
- Main PCBA (PCB ASSY, MAIN DM32 G or PCB ASSY, MAIN DM48 G)
  The difference of the Main PCBA DM32 G and Main PCBA DM48 is only whether there is DM-3200 firmware in mounted Flash memory or is DM-4800 firmware.

E95187700B PCBA, MAIN DM3200 G has been changed to E95310600B PCBA, MAIN DM3200G, This PCBA and E95285500B PCB ASSY, MAIN DM4800G are compatible with DM-3200 & DM-4800 by Firmware Swapping.

3. Setting

- Connect the Main PCBA with the wire connector to each PCBA as follows..

  Main PCBA, P25 ---- Power Sub PCBA, P11

  Main PCBA, P26 ---- Power Sub PCBA, P12

  Main PCBA, J4 ---- LCD module

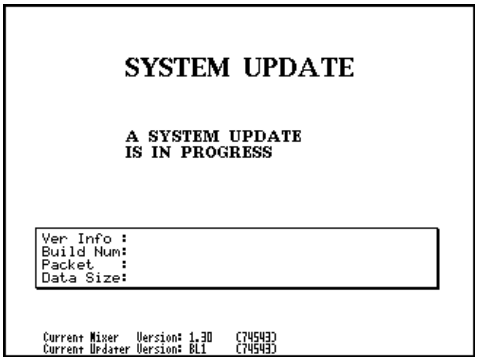
  Main PCBA, P27 ---- Monitor PCBA, P1

- Connect the body of DM-3200 or DM-4800 with the computer by the USB cable.

4. Update

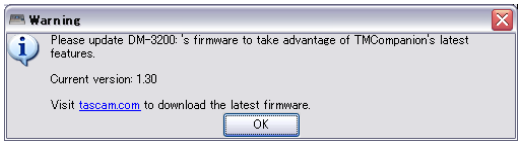
Turn on DM-3200 or DM-4800 while pushing a right cursor key and ENTER keys.

Then DM-3200 or DM-4800 boots up in System update mode.



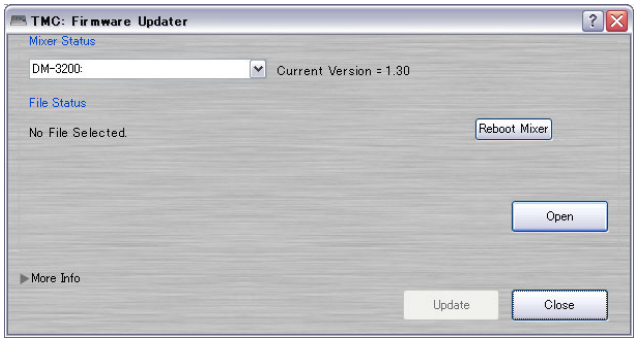
- Boot TMCompanion-Debug on the computer.

  Following warning window might be displayed according to version of firmware being mounted on the target Main PCBA.

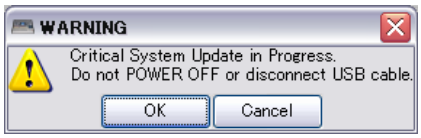


Click the OK button when this is displayed.

- **Select Window>Firmware Updater** ... (or, CTRL+F) so that Firmware Update window is opened.

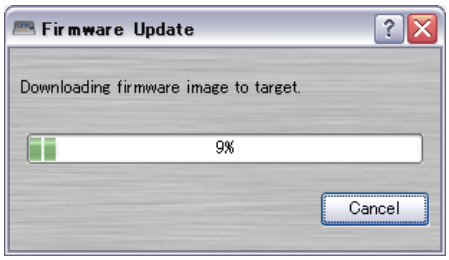


- Select the file to click the Open button.
- When the Update button is clicked, following Warning window is displayed.

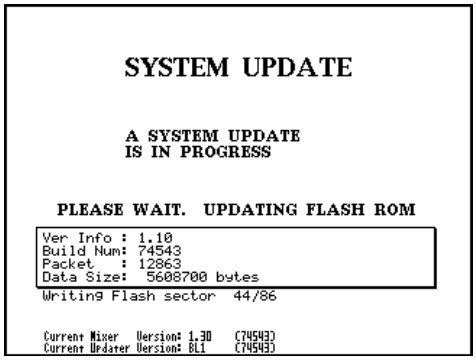


- The update starts when the OK button is clicked, and the status is displayed on on the computer and the DM-3200 or DM-4800 LCD screen.

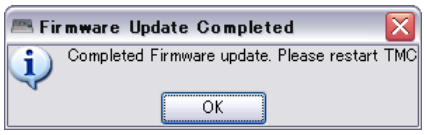
Computer



DM-3200 or DM-4800



- DM-3200 or DM-4800 reactivates automatically when the update is completed.
- The following window is displayed on the computer.



- Turned off DM-3200 or DM-4800. And turn on again f while "CTRL Key" + "OUTPUT ASSIGN 1 Key" + "OUTPUT ASSIGN 2 Key" are pressed, the following message is displayed on the LCD screen.

Initialize Sram Data? Press ENTER to confirm, or a cursor key to cancel.

Or, the following pop up messages appear and to do SRAM Init. is requested.

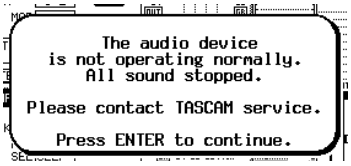
Out of Sram Range ! Initialize Sram Data ? Ch1(17) EFFECT TYPE Press ENTER to confirm, or a cursor key to cancel.

- Do SRAM Init. by pushing ENTER Key.

!! Attention !!

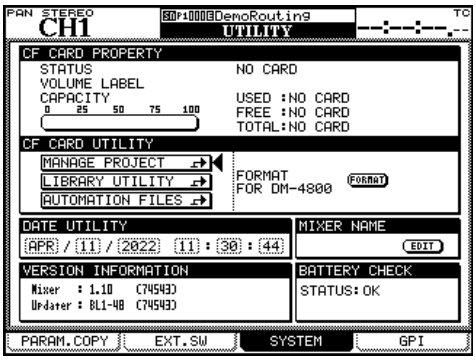
Do SRAM Init. since there is a change an operation might become instable because of the relation between firmware version of Main PCBA and one of renewed firmware.

The following message is displayed when neither PCBA nor DDMP-2/DDMP-4 are installed. It can be ignored in this update procedure.



5. Firmware version confirming

Firmware version is confirmed in "Version Information" part of the DM-3200/4800 UTILITY>SYSTEM screen.



Confirm the thing that displays the Updater part in Version information the following:

In case of DM-3200: Updater : BL1

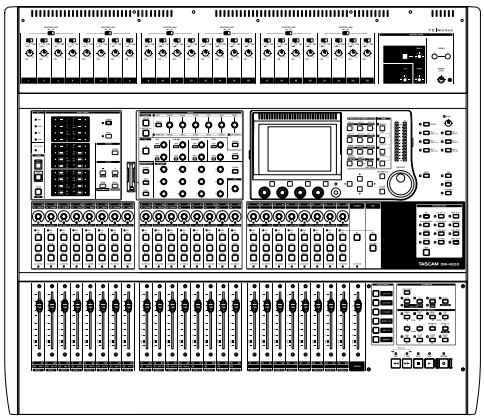
In case of DM-4800: Updater : BL1-48

6. TMCompanion-Debug version confirming

When Files>About is selected while in the TMCompanion-Debug mode, version of TMCompanion-Debug is displayed as follows.。

“Version: 1.50-DEBUG” are shown there, the back of the “1.50”, “-DBUG” mentioned means TMCompanion-Debug.

Firmware update that steps over the model cannot be done with usual TMCompanion that is other than TMCompanion-Debug.



TASCAM
TEAC Professional Division

SERVICE MANUAL

DM-4800

Digital Mixing Console

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INSTRUCTIONS FOR SERVICE PERSONNEL

BEFORE RETURNING APPLIANCE TO THE CUSTOMER, MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT.

Effective : September, 2009

S-0169B

1. SPECIFICATIONS
仕様

Analog audio I/O

All specifications are given with the factory reference level of –16 dBFS.

MIC inputs (channels 1 through 24)
Balanced XLR-type female connectors[a]
Adjustable input level: (–60 dBu (TRIM max) to –4 dBu (0 dB pad)) (–40 dBu (TRIM max) to +16 dBu (–20 dB pad))
Input impedance 2.2kΩ

PHANTOM (+48V) +48 V phantom power. Switchable in blocks of 4 channels (1–4, 5–8, 9–12, 13–16)

LINE IN (BAL) inputs (channels 1 through 24)
Balanced 1/4" jacks
Adjustable input level (–44 dBu (TRIM max) to +12 dBu (TRIM min))
Input impedance 10kΩ

INSERT connections (channels 1 through 24)
1/4" TRS jacks
Send: nominal output level –2dBu, maximum output level +14 dBu, impedance 100Ω
Return: nominal input level –2dBu, headroom 16 dB, impedance 10 kΩ

ASSIGNABLE RETURNS (BAL) (1 through 8)
Balanced 1/4" jacks
Nominal input level: +4 dBu
Headroom: 16 dB
Input impedance: 5 kΩ

ASSIGNABLE SENDS (1 through 8)
Pseudo-balanced 1/4" jacks
Nominal output level: –2 dBu
Maximum output level: +14 dBu
Output impedance: 100 Ω

2 TR IN (L/R) 2 x RCA pin jacks
Nominal input level –10 dBV
Headroom: 16 dB
Input impedance: 10 kΩ

STEREO OUTPUT(L/R) Balanced XLR-type male connectors
Nominal output level: +4 dBu
Maximum output level: +20 dBu
Output impedance: 100 Ω

アナログオーディオ入出力

＊アナログオーディオ出力仕様は基準レベル＝－16dBFS（Full Scale）のとき（標準設定）の仕様を表示しています。

MIC 入力（CH1～24）
コネクター：XLR-3-31タイプ、バランス
（1：GND、2：HOT、3：COLD）
入力インピーダンス： 2.2 kΩ
入力レベル：
パッドオフ時： －60dBu（TRIM最大）～ －4dBu（TRIM最小）
パッドオン時： －40dBu（TRIM最大）～ ＋16dBu（TRIM最小）

PHANTOM（＋ 48V）
＋48Vのファントム電源を4チャンネル単位（1-4、5-8、9-12、13-16）でオン／オフ可能

LINE IN（BAL）入力（CH1～24）
コネクター：6φステレオホンジャック、バランス
（チップ：HOT、リング：COLD、スリーブ： GND）
入力インピーダンス： 10kΩ
入力レベル： －44dBu～＋12dBu

INSERT（CH1～24）
コネクター：
6φ3極（TRS）ホンジャック、アンバランス（チップ：センド、リング：リターン、スリーブ：GND）
センド（チップ）
出力インピーダンス：100Ω
規定出力レベル： －2dBu
最大出力レベル： ＋14dBu
リターン（リング）
入力インピーダンス：10kΩ
規定入力レベル： －2dBu
最大入力レベル： ＋14dBu

ASSIGNABLE RETURNS（BAL）（1～8）
コネクター：6φステレオホンジャック、バランス
規定入力レベル： ＋4dBu
ヘッドルーム： 16dB
入力インピーダンス： 5kΩ

ASSIGNABLE SENDS（1～8）
コネクター：6φステレオホンジャック、疑似バランス
規定出力レベル： －2dBu
最大出力レベル： ＋14dBu
出力インピーダンス： 100Ω

2TR IN（L, R）
コネクター：RCAピンジャック、アンバランス
規定入力レベル： －10dBV
ヘッドルーム： 16dB
入力インピーダンス： 10kΩ

STEREO OUTPUT（L, R）
コネクター：XLR-3-32 タイプ、バランス
（1：GND、2：HOT、3：COLD）
規定出力レベル： ＋4dBu
最大出力レベル： ＋20dBu
出力インピーダンス： 100Ω

MONITOR OUTPUTS (LARGE (BAL))
Balanced 1/4" jacks
Nominal output level: +4 dBu
Maximum output level: +20 dBu
Output impedance: 100 Ω

MONITOR OUTPUTS (SMALL (BAL))
Balanced 1/4" jacks
Nominal output level: +4 dBu
Maximum output level: +20 dBu
Output impedance: 100 Ω

MONITOR OUTPUTS (STUDIO)
RCA pin jacks
Nominal output level –2 dBu
Maximum output level: +14 dBu
Output impedance: 100 Ω

PHONES 2 x 1/4" stereo jacks
50 mW + 50 mW totald
32 Ω

a. all XLR-type connectors are wired 1=ground, 2="hot", 3="cold"
b. all balanced 1/4" jacks are wired sleeve=ground, ring=cold, tip=hot
c. all TRS 1/4" jacks are wired sleeve=ground, ring=return, tip=send
d. Maximum with both PHONES jacks driven at maximum

MONITOR OUTPUTS - LARGE（BAL）
コネクター：6φホンジャック、バランス
（チップ：HOT、リング：COLD、スリーブ： GND）
規定出力レベル： ＋4dBu
最大出力レベル： ＋20dBu
出力インピーダンス： 100Ω

MONITOR OUTPUTS - SMALL（BAL）
コネクター：6φホンジャック、バランス
（チップ：HOT、リング：COLD、スリーブ： GND）
規定出力レベル： ＋4dBu
最大出力レベル： ＋20dBu
出力インピーダンス： 100Ω

MONITOR OUTPUTS - STUDIO
コネクター：RCAピンジャック、アンバランス
規定出力レベル： －2dBu
最大出力レベル： ＋14dBu
出力インピーダンス： 100Ω

PHONES（1、2）出力
コネクター：6φステレオホンジャック
最大出力レベル： 50mW＋50mW
（32Ω負荷、両ジャックに接続時）

Digital audio I/O

DIGITAL INPUTS(1, 2) 2 x XLR-type female connectors (input impedance 110 Ω) or
2 x RCA pin jacks (input impedance 75 Ω) (selectable)
AES3-1992 or IEC60958 data format (automatically detected)
24-bit word length
Switchable sampling frequency conversion available

DIGITAL OUTPUTS(1, 2)
2 x XLR-type male connectors (output impedance 110 Ω)
2 x RCA pin jacks (output impedance 75 Ω)
AES3-1992 or IEC60958 data format (software selectable)
24-bit word length

TDIF-1(1, 2, 3) 3 x 25-pin (female) D-sub connectors (metric lock screws)
Conform to TDIF-1 standard
24-bit word length

デジタルオーディオ入出力

DIGITAL INPUTS（1、2）
コネクター： XLR-3-31またはRCAピンジャック(選択可)
データフォーマット： AES3-1992（AES/EBU）またはIEC60958（S/PDIF）規格準拠（自動検出）
ワード長： 24ビット
サンプリング周波数変換機能内蔵（オン／オフ可）

DIGITAL OUTPUT（1、2）
コネクター： XLR-3-32またはRCAピンジャック（パラ出力）
データフォーマット： AES3-1992（AES/EBU）またはIEC60958（S/PDIF）規格準拠（選択可）
ワード長： 24ビット

TDIF -1（1、2、3）
コネクター： 25ピンDサブ(メス)コネクター
データフォーマット： TDIF-1規格準拠
ワード長： 24ビット

ADAT IN/OUT 2 x "Lightpipe" optical connectors
Conform to ADAT OPTICAL specifications
24-bit word length

Sampling frequencies Internal 44.1 kHz/48 kHz, 88.2 kHz/96 kHz (high sampling frequencies)
External ±6.0%

Signal delay < 1.8 ms -- Fs = 48 kHz, LINE IN to STEREO OUTPUT
< 0.9 ms -- Fs = 96 kHz, LINE IN to STEREO OUTPUT

Miscellaneous I/O connections

WORD SYNC IN BNC connector
Switchable 75 Ω termination
TTL level

WORD SYNC OUT/THRU BNC connector
Switchable between through and output
TTL level

MIDI IN, OUT, THRU/MTC OUT
3 x 5-pin DIN connectorsÅ\conform to MIDI specifications

USB USB 1.1 "B" type connector (12 Mbps)

TIME CODE IN RCA pin jack
Conforms to SMPTE specifications

FOOT SW 1/4" mono jack

TO METER 25-pin female D-sub connector (non-metric lock screws)
For use with the optional MU-1000

RS-422 (for Sony 9-pin) 9-pin female D-sub connector (non-metric lock screws) wired to RS-422 standards

GPI (for Machine start) 9-pin female D-sub connector (non-metric lock screws) wired for GPI control
Pin 1=GP11, Pin 2=GPI2, Pin 3=GPI3, Pin 4=GPI4, Pin 5=GND, Pin 6=GPI5, Pin 7=GPI6, Pin 8=GPI7, Pin 9=GP18

ADAT IN/OUT
コネクター： TOSLINK「ライトパイプ」オプティカルタイプ
データフォーマット： ADAT規格準拠
ワード長： 24ビット

サンプリング周波数：
44.1kHz、48kHz、88.2kHz、96kHz
（外部同期時の許容周波数偏差：±6%）

信号遅延：
1.8ms以内
（Fs＝48kHz、LINE IN→STEREO OUTPUT）
0.9ms以内
（Fs＝96kHz、LINE IN→STEREO OUTPUT）

その他の入出力

WORD SYNC IN入力：
コネクター： BNC（アンバランス）
TTLレベル、75Ω終端ON/OFF切替

WORD SYNC THRU/OUT出力：
コネクター： BNC（アンバランス）
THRUとOUTを選択可
TTLレベル、75Ω

MIDI IN、OUT、THRU/MTC：
コネクター： 5ピンDIN コネクター
MIDI 規格準拠

USB：
コネクター： USB1.1 Bタイプコネクター（12Mbps）

TIME CODE IN入力：
コネクター： RCAピン（アンバランス）
SMPTE規格準拠

FOOT SW：
コネクター： 6φ、2極ホンジャック

TO METER：
コネクター： 25ピンDサブ（メス）
オプションのメーターユニット（MU-1000）接続用

RS-422：
コネクター： 9ピンDサブ（メス）
RS-422 準拠、ソニー9 ピンシリアルプロトコル（P2）によるマシンコントロール用

GPI：
コネクター： 9ピンDサブ（メス）、GPIコントロール用に配線
（#1＝GPI 1, #2＝GPI 2, #3＝GPI 3, #4＝GPI 4, #5＝GND, #6＝GPI 5, #7＝GPI 6, #8＝GPI 7, #9＝GPI 8）マシンスタート用

Equalization

EQ switch	On/Off	
HIGH filter	Gain:	±18 dB, 0.5 dB resolution
	Frequency:	31 Hz to 19 kHz
	Q:	0.27 to 8.65
	Type:	Hi-shelving, Peak, LPF
HI MID filter	Gain:	±18 dB, 0.5 dB resolution
	Frequency:	31 Hz to 19 kHz
	Q:	0.27 to 8.65
	Type:	Peak, Notch
LO MID filter	Gain:	±18 dB, 0.5 dB resolution
	Frequency:	31 Hz to 19 kHz
	Q:	0.27 to 8.65
	Type:	Peak, Notch
LOW filter	Gain:	±18 dB, 0.5 dB resolution
	Frequency:	31 Hz to 19 kHz
	Q:	0.27 to 8.65
	Type	Low-shelving, Peak, HPF

All filters are fitted with "gain flat" switches

System performance

THD (maximum level,1 kHz, TRIM: minimum)

20 Hz – 22 kHz LINE IN to INSERT SEND	< 0.005%
LINE IN to STEREO OUTPUT	< 0.008%

Frequency response (nominal level, 1 kHz, TRIM: minimum)

0.5dB/-1.0dB MIC/LINE to INSERT SEND	20 Hz – 20 kHz (44.1/48 kHz)
0.5dB/-1.5dB MIC/LINE to INSERT SEND	20 Hz – 40 kHz (88.2/96 kHz)
0.5dB/-1.0dB MIC/LINE to STEREO OUTPUT[a]	20 Hz – 20 kHz (44.1/48 kHz)
0.5dB/-1.5dB MIC/LINE to STEREO OUTPUT[a]	20 Hz – 40 kHz (88.2/96 kHz)

Noise level (20 Hz –22 kHz, TRIM: max, 150 Ω)

MIC in (PAD off) to INSERT SEND (A weight)	< –128 dBu (EIN)
STEREO OUT (Input no assign)	< –83 dBu
ASSIGNABLE RETURN to ASSIGNABLE SEND	< –85 dBu
2TR IN to CR OUTPUT (CR: max, 0dB)	< –78 dBu
2TR IN to STUDIO OUT (STUDIO OUT 0dB)	< –88 dBu

Crosstalk @ 1 kHz

STEREO/BUSS/AUX OUTPUTS	> 90 dB
MONITOR OUTPUTS	> 90 dB

a. MIC/LINE to channel module to STEREO OUTPUT, channel and stereo faders at 0 dB, pan hard left or hard right

イコライザー

EQスイッチ： オン／オフ

HIGH：	ゲイン：	±18dB, 0.5dBステップ
	周波数：	31Hz～19kHz
	Q：	0.27～8.65
	タイプ：	ハイシェルビング、ピーク、LPF
HIGH MID：	ゲイン：	±18dB, 0.5dBステップ
	周波数：	31Hz～19kHz
	Q：	0.27～8.65
	タイプ：	ピーク、ノッチ
LO MID：	ゲイン：	±18dB, 0.5dBステップ
	周波数：	31Hz～19kHz
	Q：	0.27～8.65
	タイプ：	ピーク、ノッチ
HIGH：	ゲイン：	±18dB, 0.5dBステップ
	周波数：	31Hz～19kHz
	Q：	0.27～8.65
	タイプ：	ローシェルビング、ピーク、LPF

すべてのバンドごとにゲインフラットスイッチを装備。

アナログオーディオ特性

歪率（THD）（最大レベル、1kHz、TRIM最小）：
0.005%以下
（20Hz～22kHz 、LINE IN→INSERT SEND）
0.008%以下
（LINE IN→STEREO OUTPUT）

周波数特性（規定レベル、1kHz、TRIM最小）：
20Hz～20kHz（44.1/48kHz）、+0.5dB/－1.0dB
（MIC/LINE IN → INSERT SEND）
20Hz～40kHz（88.2/96kHz）、+0.5dB/－1.5dB
（MIC/LINE IN → INSERT）
20Hz～20kHz（44.1/48kHz）、+0.5dB/－1.0dB
（MIC/LINE IN → STEREO OUTPUT＊）
20Hz～40kHz（88.2/96kHz）、+0.5dB/－1.5dB
（MIC/LINE IN → STEREO OUTPUT＊）

ノイズレベル（150 Ω、20Hz～22kHz、TRIM最大）：
－128dBu 以下（EIN）、MIC IN（パッドオフ）→ INSERT SEND、A-weighted
－83dBu 以下、STEREO OUTPUT（入力アサインなし）
－85dBu 以下、ASSIGNABLE RETURN→ ASSIGNABLE SEND
－78dBu 以下、2TR IN→CR OUTPUT
（CR ：最大、0dB）
－88dBu 以下、2TR IN→STUDIO OUTPUT
（STUDIO OUT 0dB）

クロストーク（@1kHz）：
90dB 以上（STEREO/BUSS/AUX OUTPUTS）
90dB 以上（MONITOR OUTPUTS）

＊「MIC/LINE IN →チャンネルモジュール→ STEREO OUTPUT」時。チャンネルフェーダーおよびステレオフェーダーは0dB位置。パンは右一杯または左一杯。

Physical characteristics

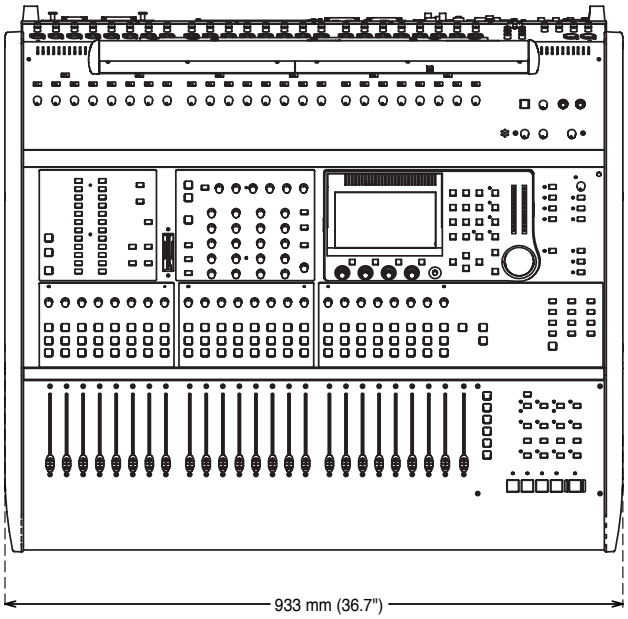
Displays	Backlit 320 x 240 LCD with contrast control 2 x 12-segment LED meters
Faders	17 x 100 mm stroke, motor-driven touch-sensitive faders
Maximum overall dimensions (w x d x h) including rest	933 x 824 x 230 (mm) 36.75 x 32.4 x 9.1 (in)
Weight	35 kg (71 lbs)
Voltage requirements	120 VAC, 60 Hz 230 VAC, 50 Hz 240 VAC, 50 Hz
Power consumption	90 W
Supplied accessories	Power cord, Quick Reference guide, CF memory card, USB cable, CD-ROM, warranty card

一般仕様

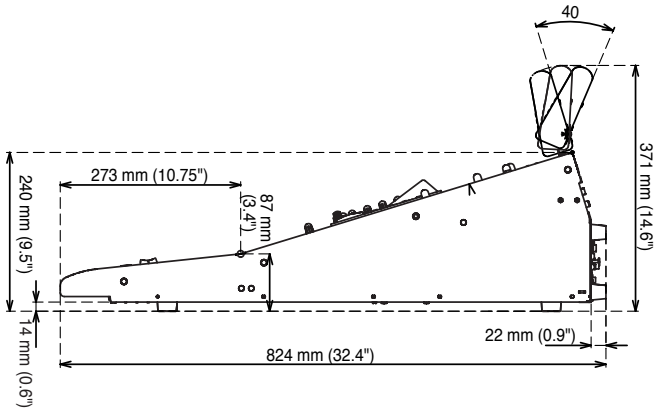
ディスプレイ：	バックライト式320 x 240 LCD（コントラストコントロール可能） 12セグメントLEDメーター（×2）
フェーダー：	100mmストローク、モータードライブ、タッチセンス付き
外形寸法：	933(W)×824(D)×240(H) mm （寸法図参照）
質量：	35kg
電源：	100V、50/60Hz AC
消費電力：	90W
付属品：	電源コード、CFメモリーカード、USBケーブル、CD-ROM、保証書

● 仕様・外観などは、改善のため予告なく変更することがあります。

Dimensional drawing



寸法図

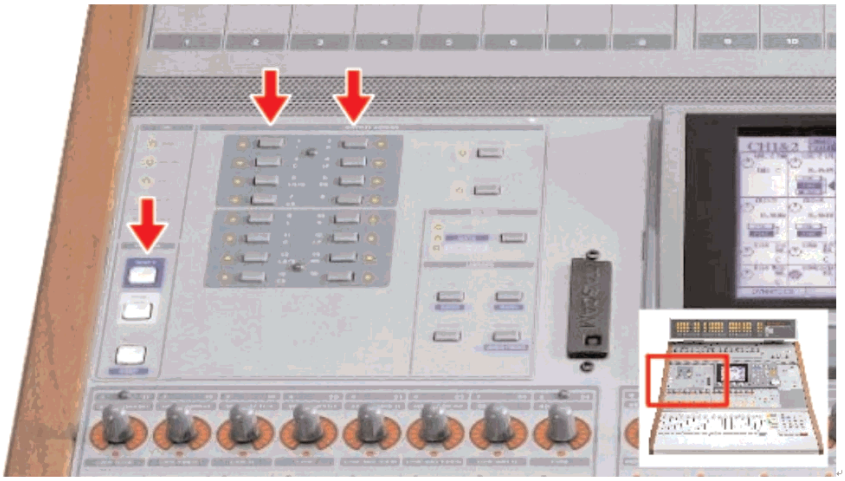


CAUTION
Danger of explosion if the battery is incorrectly replaced.
Replace the battery only with the same or equivalent type.

2. SELF DIAGNOSTIC FUNCTION
自己診断機能

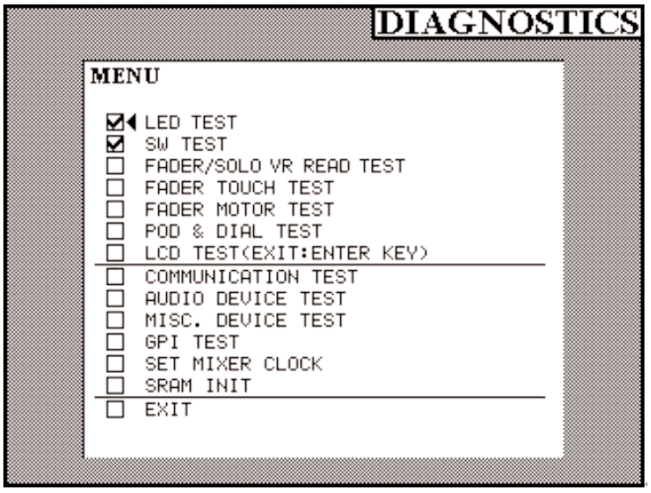
Apply power to the DM-4800 while holding down the SHIFT + Output Assign 1 + Output Assign 2 keys. (You need to hold down these keys until "TASCAM" starts scrolling across the start-up screen).

SHIFTキー+Output Assign 1キー+Output Assign 2キーを押しながら電源投入する。(起動画面の“TASCAM”の文字のスクロールが始まるまで押したままにしておく。)

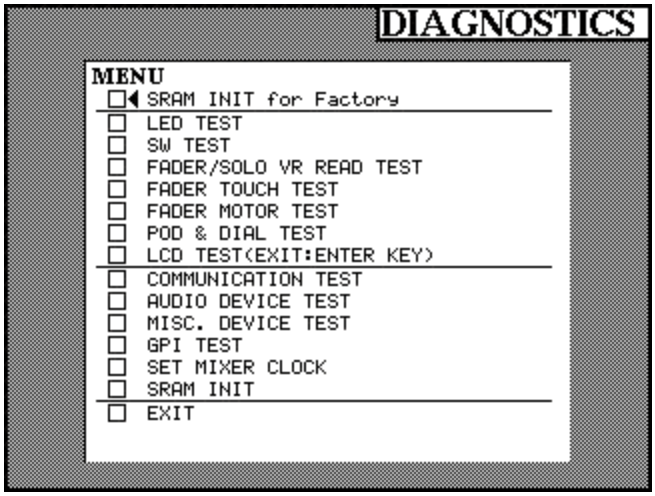


A diagnostics menu such as shown below appears.
Use the cursor keys or the Jog/Dial to select options and press the ENTER key and the corresponding test modes are enabled.

次のようなDIAGメニューが表示されます。
カーソルキーまたは、JOG/DIALで各テスト項目にカーソルを合わせ、ENTERキーを押すと、それぞれのテストモードに移ります。



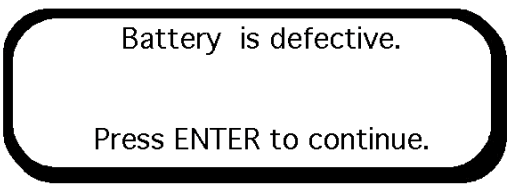
～Ver 1.30 (Ver1.30以前)



Ver 1.30～ (Ver1.30以降)

When staring up the self-diagnostic function, the battery for SPRAM/RTC is checked and if its voltage is less than 2.3 V a pop-up warning message will appear.

また、DIAG起動時、SRAM/RTC用の電池の電圧チェックを行い、2.3V未満であれば、pop-upで警告します。



■ **SRAM INIT for Factory(After Ver1.30)**

This mode allows you to set the SRAM to factory test settings.

NOTES: Store current status to the project on a CF card beforehand since data stored in the console will be lost as a result ofinitializing the SRAM.

1. When SRAM INIT mode is engaged, the following pop-up message will appear.

■ SRAM INIT for Factory(Ver1.30以降)

SRAMを工場テストの値に初期化する。

注意

SRAMを初期化すると、内蔵の各種データは初期化されるため、CFカードにProject保存しておくこと。

1. SRAM INITモードに入ると、次のpop-upが表示されます。

2. Press the ENTER key to get the SRAM initialized. Upon completion of the initialization, the pop-up window goes out,bringing you back to the diagnostics menu in which the corresponding box is checked.
3. Pressing a cursor key aborts the initialization.

2. ＥＮＴＥＲキーを押すとSRAMの初期化が行なわれる。

初期化が完了したらpop-upが消え、DIAGメニュー画面に戻り、チェックボックスにチェックが付きます。

3.カーソルキーでキャンセルとなります。

■ **LED TEST**

This mode checks for proper lighting of all LEDs by turning all LEDs on.

1. When LED test mode is engaged, a pop-up message such as shown below appear and at the same time all LEDs are lit up.

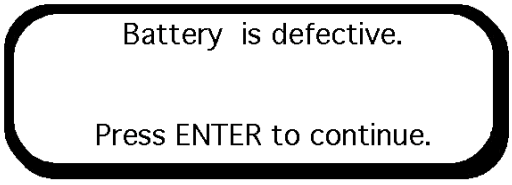
＊ If the meter bridge (MU-1000) is connected, their LEDs also are lit up.

■ LED TEST

各LEDの点灯チェックを行う。

1.LED TESTモードに入ると次のpop-upメッセージが表示され、LEDが全点灯します。

＊メーターブリッジ(MU-1000)が接続されていれば、同時に点灯します。



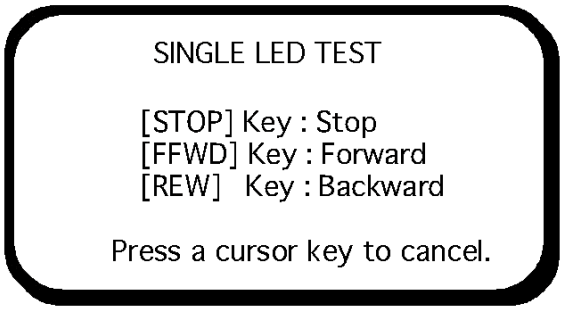
2. Pressing a cursor key brings you back to the diagnostic menu screen and a check mark is put by the menu item LED TEST.
3. When ALL LED TEST is running, pressing the SHITF + ENTER keys causes a pop-up message such as shown below to appear and the LEDs turn on one by one in sequence. (The LEDs on the meter bridge is out of scope of this check.)
   Pressing the transport STOP key stops the SINGLE LED TEST process. By pressing the FFWD/REW keys, you can control the LEDs to check for lighting.
   Pressing a cursor key brings you back to the diagnostic menu screen.

2.カーソルキーを押すとDIAGメニューに戻る。LED TESTの項目にチェックマークが付きます。

3.ALL LED TEST中に、SHIFTキー+ENTER キーを押すと、次のpop-upメッセージが表示され、各LEDが順番に点灯します。(メーターブリッジは、このテストは行なわない。)

この時、トランスポートキーのStopキーを押すことで、点灯LEDの自動移動が停止する。FFWDキー/REWキーを押す事で点灯LEDの位置を移動できます。

カーソルキーを押すとDIAGメニューに戻ります。



■ SW TEST

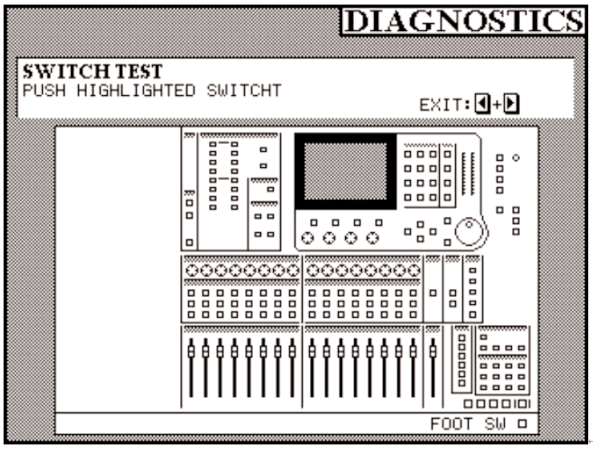
Switch test mode allows you to check each button on the control surface for proper ON/OFF functioning.
The layer status is automatically set for CH1-16.

1. When Switch test mode is engaged, the following screen will appear:

■ SW TEST

各スイッチのON/OFFチェックを行う。
この時、LAYER STATUSは自動的にCH1-16にセットされます。

1. SW TESTモードに入ると、次の画面が表示されます。

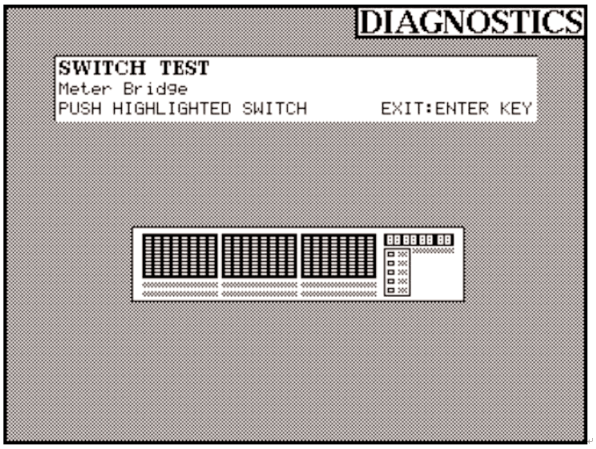


2. Press the blinking switch and it goes out of the screen and the next switch to be pressed starts blinking.
   This repeats as you press the next switch. When pressing a switch associated with an LED, this turns on and off as the switch is engaged and disengaged.
3. Once all switches are checked, the screen is switched back to show the diagnostic menu and a check mark is put by the menu item SW TEST.

* To abort the switch test process, press both the left and right arrow cursor keys at the same time.
* To run the switch test on the meter bridge (MU-1000), press the SHIFT and ENTER keys at the same time when the console is in switch test mode. The way of performing the test is the same as with the console.

2. 画面上で点滅しているスイッチを順に押していくと、押されたスイッチの表示が消える。この時、押されたスイッチに連動するLEDがあれば、スイッチがONの時点灯し、OFFの時消灯します。
3. 全てのスイッチのチェックが終了すると、DIAGメニュー画面に戻り、SW TEST項目にチェックマークが付きます。

* 途中で強制終了する場合は、カーソルキーの左右を同時に押します。
* 本体のSW TEST中にSHIFTキーとENTER キーを同時に押すと、メーターブリッジ(MU-1000)のSW TESTに入る。ENTERキーを押すとDIAGメニューに戻ります。テスト方法は本体と同様です。



■ FADER/SOLO VR READ TEST

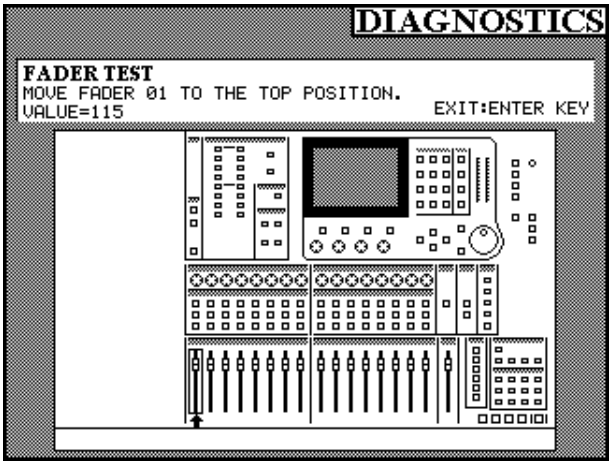
This test allows you to check each fader for proper reading. The layer status is automatically set for CH-1-16.

1. When Fader/Solo VR read test mode is engaged, the following screen will appear.

■ FADER/SOLO VR READ TEST

各フェーダーの読み取り値が正常かどうかをチェックする。この時、LAYER STATUSは自動的にCH1-16にセットされます。

1. FADER/SOLO VR READTESTモードに入ると、次の画面を表示します。



2. An arrow mark is displayed below the fader to be moved. Move that fader. The fader you are moving is framed on the screen. The corresponding channel number and the read-in value are indicated in the upper portion of the screen.
3. When the maximum and minimum values are successfully read in, the test moves on to the next fader. The fader image goes out as it is finished checking.
4. Once all fader are checked, An arrow mark is displayed below the SOLO knob.
5. Once the maximum and minimum values for the SOLO knob are successfully read in, the screen is switched back to show the diagnostic menu and a check mark is put by the menu item FADER/SOLO VR TEST.

* Even if a maximum or minimum value is read in when the fader or solo knob is not at the maximum or minimum position, the test result is judged ok and a check mark is put, but remember, if this is the case, it is possible that the FADER/SOLO VR is defective.
* To abort the test process, press the ENTER key.

2. 動かすべきフェーダーの下に矢印が表示されるので、そのフェーダーを動かす。動かしているフェーダーには枠が表示されます。また画面の上部に読み取り値とCHが表示されます。
3. 最大値と最小値が読めたら次のフェーダーへ移動する。この時、チェック済みとなったフェーダーの絵は消えます。
4. 全てのフェーダーが終了すると、SOLOつまみに矢印が表示されます。
5. SOLOつまみの最大値と最小値が読めたら、DIAGメニュー画面に戻り、FADER/SOLO VR TEST項目にチェックマークが付きます。

* 最大値/最小値が、一番上/一番下以外の位置で読み取られる場合は、FADER/SOLO VRの異常が考えられます。ただしこの場合も、テストは正常とみなされチェックマークは付いてしまうので注意が必要です。
* 途中で強制終了する場合は、ENTERキーを押します。

■ FADER TOUCH TEST

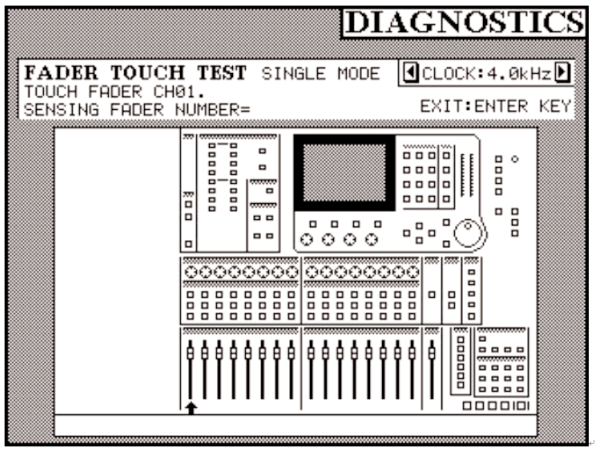
This test mode allows you to check the faders for proper touch sensing, namely, whether the console recognizes only the fader you touch and whether, when touching multiple faders, the console properly identifies them.

1. When Fader touch test mode is engaged, the following screen appears.

■ FADER TOUCH TEST

ＦADERのタッチセンス機能をチェックを行う。触れているフェーダーのみタッチを認識するかどうかや、複数のフェーダーを同時にふれた時に正しく認識するかをチェックする。

1. FADER TOUCH TESTモードに入ると、以下の画面を表示します。



2. An arrow mark is displayed below the fader to be touched. Touch that fader.
   The number assigned to the fader to be touched and the number assigned to the fader you are touching are indicated in the upper portion of the screen. In addition, the knob of the fader you are touching is indicated black.
3. Once the touching fader is properly recognized, the test moves on to the next fader. The fader image you've done with goes out of the screen.
4. Once all faders are checked, the screen is switched back to show the diagnostics menu and a check mark is put by the menu item FADER TOUCHE TEST.

＊ If there is a fader that is not properly recognized, try changing the clock frequency setting for fader sensitivity using the left and right arrow cursor keys.
IMPORTANT: Changing the fader sensitivity at this stage affects the normal operation of the console.
With version 1.22 and earlier models, the SRAM INT is not capable of restoring the defaults.

＊ To abort the test process, press the ENTER key.

2. 触れるべきフェーダーの下に矢印が表示されるので、そのフェーダーに触れる。
   この時、画面の上部に触れるべきフェーダーナンバーと触れているフェーダーナンバーが表示される。また、触れているフェーダーのノブは黒く表示されます。
3. 触れたフェーダーがただしく認識されたなら、次のフェーダーに移動する。この時、チェック済みとなったフェーダーの絵は消えます。
4. 全てのフェーダーチェックが終了すると、DIAGメニュー画面に戻り、FADER TOUCH TEST項目にチェックマークが付きます。

＊ 正しく認識されない場合は、カーソルキーの左右で、FADER SENSITIVITYのCLOCK周波数の設定を変えてみる。

注意

- ここでのFader sensitivity設定は通常のMixer動作時の設定にも反映される。また、V1.22以前の場合はSRAM INTを行っても初期値には戻らない。

＊ 途中で強制終了する場合は、ENTERキーを押します。

■ FADER MOTOR TEST

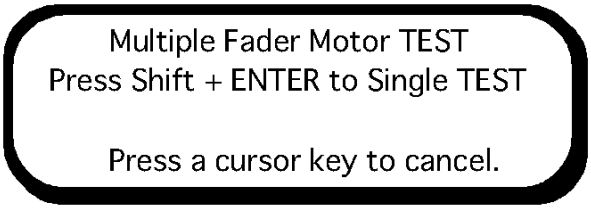
This test mode allows you to check a single fader motor or multiple fader motors for proper operation.

1. When Fader motor test mode is engaged, the following pop-up message will appear and the multiple fader motor test starts.
   All faders will move from the MIN value position to the MAX value position and back to the MIN position before moving to the 15 dB position (or 25 dB with the STERERO fader).

■ FADER MOTOR TEST

一つまたは複数のフェーダーのモーターが正常に動作するかをチェックする。

1. FADER MOTOR TESTモードに入ると、次のPop-upメッセージが表示され、Multiple Fader Motor TESTが開始されます。
   この時全フェーダーがMIN値→MAX値→MIN値→15dB(STERE Oフェーダーは、25dB)と移動します。

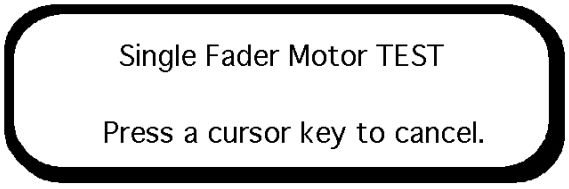


2. Even upon completion of the multiple fader motor test, the pop-up window does not go out unless you press the ENTER key.
   When you press the ENTER key, the screen is switched back to show the diagnostics menu and a check mark is put by the menu item FADER MOTOR TEST.

＊ Pressing the SHIFT and ENTER keys when the multiple fader motor test is running, the following pop-up message will appear and the single fader motor test will start.
   The faders will move in sequence, starting with the CH1 fader, from the MIN position to the MAX position and back to the MIN position. To abort the test process, press a cursor key.

2. Multiple Fader Motor TESTが終わってもENTERキーを押すまでpop-upは消えません。終了した場合、DIAGメニューに戻りFADER MOTOR TESTにチェックが表示されます。

＊ Multiple Fader Motor TEST中にSHIFTキー+ENTERキーを押すと、次のpop-upメッセージが表示され、Single Fader Motor TESTが開始されます。
   この時、フェーダーはCH1から順番にMIN値→MAX値→MIN値と移動します。途中で強制終了する場合は、カーソルキーを押して下さい。



■ POD&DIAL TEST

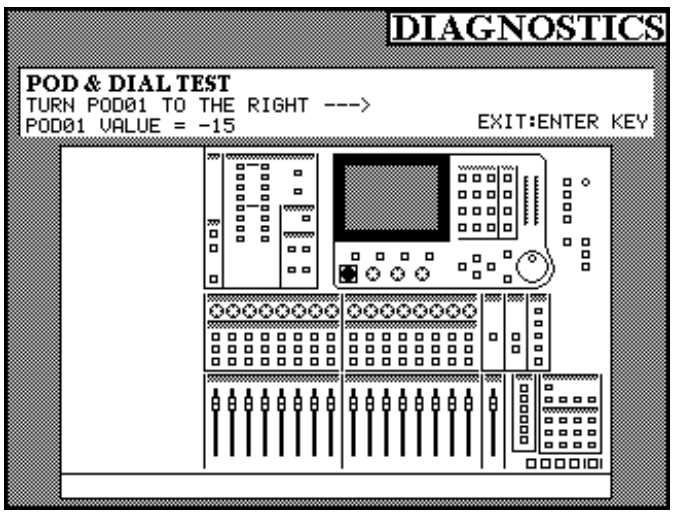
This test mode allows you to check whether the console recognizes the direction in which the individual PODs are rotated.

1. When POD & Dial test mode is engaged, the following screen will appear.

■ POD&DIAL TEST

各PODを回した時に左右の方向の認識が正しいかをチェックする。

1.POD&DIAL TESTモードに入ると、以下の画面を表示します。



2. A blinking frame is displayed around the check target POD.
3. Turn the POD by 20 clicks in the negative direction (i.e., leftwards) and then similarly turn the POD by 20 clicks in the positive direction (i.e., rightwards). The next POD will be enclosed in a blinking frame.
4. Once all PODs are checked, the screen is switched back to show the diagnostics menu and a check mark is put by the menu item POD & DIAL TEST.

＊ To abort the test process, press the ENTER key.

■ LCD TEST

This test mode allows you to check the LCD screen for irregularities.

1. When the LCD test mode is engaged, the screen cycles through "All off" (about 1 seconds) > "All on" (about 1 seconds) > Diagnostics menu (about 1 seconds).
2. Pressing the ENTER key brings you back to the diagnostics menu and a check mark is put by the menu item LCD TEST.

■ COMMUNICATION TEST

This test mode allows you to check the MIDI I/O, RS-422, USB, and CASCADE terminals for problems.

1. When Communication test mode is engaged, the following screen will appear.

2. チェック対象のPODに点滅枠が表示されます。
3. −方向(左)に20クリック操作した後、+方向(右)に20クリック操作すると、次のPODに移動します。
4. 全てのPODのチェックが終了すると、DIAGメニューに戻り、POD&DIAL TEST項目にチェックマークが付きます。

＊ 途中で強制終了する場合は、ENTERキーを押してください。

■ LCD TEST

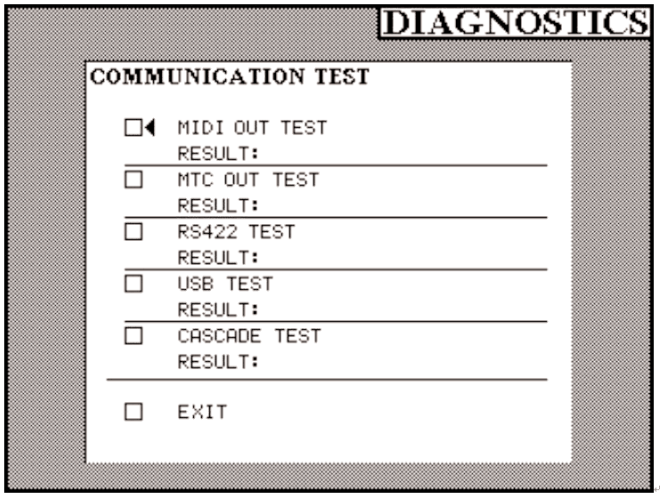
液晶画面に不具合がないかをチェックする。

1. LCD TESTモードに入ると、画面は全消灯（約一秒）→全点灯（約一秒）→DIAG メニュー（約一秒）を繰り返します。
2. ENTERキーを押すと、DIAGメニュー画面に戻り、LCD TEST項目にチェックマークが付きます。

■ COMMUNICATION TEST

MIDI I/OとRS-422とUSBとカスケードの不良をチェックする。

1. COMMUNICATION TESTに入ると、以下の画面が表示されます。



2. To perform each of the tests provided, make the following connections:
   For MIDI OUT TEST:
   - Connect MIDI OUT to MIDI IN using a MIDI cable.

   For MTC OUT TEST:
   - Connect THRU/MTC OUT to MIDI IN using a MIDI cable.

   For RS-422 TEST:
   - You need a male 9-pin D-SUB connector. Create a short-circuit between pins 2 and 8, and 3 and 7, and plug this connector into the RS-422 connector.

   For USB TEST:
   - Using a USB cable, connect the console to a PC within which the TM Companion is installed. Get the console started up, followed by the TM Companion, in advance.

   For CASCADE TEST:
   - Fabricate a looped Cascade connector and plug this into the CASCADE connector.
3. Move the cursor to a test item and press the ENTER key to get the test started.
4. When the test is successfully completed, the following pop-up message will appear. This pop-up window automatically goes out and a check mark is put by the item just tested.

2. 各テストを行う為に、接続を行なう。

MIDI OUT TEST:
- MIDI OUTとMIDI INをMIDIケーブルで接続する。

MTC OUT TEST:
- THRU/MTC OUTとMIDI INをMIDIケーブルで接続する。

RS-422 TEST:
- 9-Pin D-subオスコネクタを用意し、2-8,3-7を短絡したコネクタを作成し、RS-422端子に接続する。

USB TEST:
- TM CompanionのインストールされたPCとUSBケーブルで接続する。ミキサー起動後にTM Companionを起動しておく。

CASCADE TEST:
- ループされたカスケードコネクタを作成し、カスケードコネクタに接続する。

3. カーソルを各テスト項目に移動させENTERキーを押すとテストが開始されます。
4. テスト結果が正常な場合、以下のpop-upが表示される。このpop-upは自動的に消え、チェックを行った項目にチェックが付きます。

5. If a time-out occurs, the following pop-up message will appear.
   Pressing a cursor key gets this message gone out. No check mark is put by the test item got time-outed and "NG" is displayed in the RESULT field.

5. タイムアウトが発生した場合は、次のpop-upが表示されます。カーソルキーで、このpop-upメッセージは消え、チェックボックスには、チェックマークは付きません。また、RESULTにNGが表示されます。

6. Move the cursor to EXIT on the COMMUNICATION TEST screen and press the ENTER key to go back to the diagnostics menu. If you do this when a check mark is put by every COMMUNICATION TEST item, a check mark is put by the menu item COMMUNICATION TEST.

6. COMMUNICATION TEST画面のEXITにカーソルを移動しENTERキーを押すと、DIAGメニュー画面に移動します。この時、COMMUNICATION TESTの項目全てにチェックがついている場合は、DIAGメニューのCOMMUNICATION TEST項目にチェックマークが付きます。

■ AUDIO DEVICE TEST

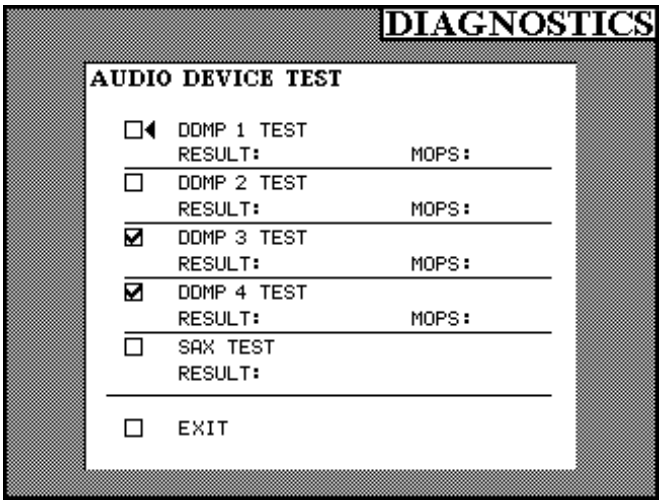
This test mode allows you to check the DDMP (Audio Device) and SAX FPGA (internal routing) for problems.

1. When Audio device test mode is engaged, the following screen will appear.

■ AUDIO DEVICE TEST

DDMP （Audio Device） とSAX FPGA (内部ルーティング) の不良をチェックする。

1. AUDIO DEVICE TESTに入ると、以下の画面が表示されます。



2. Moving the cursor to a DDMP TEST (or SAX TEST) and pressing the ENTER key get the corresponding test started. Each DDMP TEST takes several seconds. (There is no need to run DDMP 3 TEST and DDMP 4 TEST because those devices are not mounted to the DM-4800.)
3. When a test is successfully finished, "OK" is displayed in the RESULT field and a check mark is put by the corresponding test item.
4. When a DDMP test is not successfully finished, the RESULT display will read as follows:

   RESULT: MOPS ERR
   - If no new MOPS value is displayed, there was a failure in downloading/launching the MOPS measuring program.
   - If a new MOPS value is displayed, the measured value is out of the specs.

   ∗ MOPS refers to a value obtained as a result of measuring the internal processing speed of DDMP.

   RESULT: BOOT ERR
   - There was a failure in downloading/launching the DDMP program.

   RESULT: SDRAM ERR
   - There was a failure in the read/write check of the SDRAM connected to the DDMP.
5. When the SAX test is not successfully finished, "NG" is displayed in the RESULT field. If this is the case, there was a failure in launching the SAX FPGA or in the read/write.
6. Move the cursor to EXIT on the AUDIO DEVICE TEST screen and press the ENTER key to go back to the diagnostics menu. If you do this with a check mark put by the items DDMP 1 TEST, DDMP 2 TEST and SAX TEST, a check mark will be put by the menu item AUDIO DEVICE TEST.

2. DDMP TESTかSAX TESTにカーソルを移動し、ENTERキーを押すとテストが開始されます。それぞれのDDMP TESTには数秒かかります。（DDMP 3 TESTとDDMP 4 TESTはDM-4800ではデバイスが実装されていない為、テストは行なわなくてよい。）
3. テストが正常に終了すると、RESULTにOKと表示され、テスト対象にチェックが付きます。
4. DDMPのテストが正常に終了しない場合は以下のようにRESULTが表示されます。

RESULT: MOPS ERR

- ・ＭＯＰＳ値の表示が更新されない場合、MOPS計測用プログラムダウンロード/起動に失敗している。
- ・MOPS値の表示が更新されている場合、MOPS計測値が規定値外。

＊MOPSとはDDMPの内部処理速度を計測した結果。

RESULT: BOOT ERR

- ・ DDMPのプログラムダウンロード/起動に失敗。

RESULT: SDRAM ERR

- ・ DDMPに接続されているSDRAMのR/Wチェックにエラーが発生。

5. SAXのテストが正常に終了しない場合はRESULTにNGと表示されます。この場合、SAX FPGAの起動もしくはR/Wが失敗しています。
6. AUDIO DEVICE TESTのEXITにカーソルを移動し、ENTERキーを押すと、DIAGメニューに移動します。この時、DDMP 1 TESTとDDMP 2 TESTとSAX TESTにチェックが付いている場合、DIAGメニューのAUDIO DEVICE TESTにチェックが付きます。

■ **MISC. DEVICE TEST**

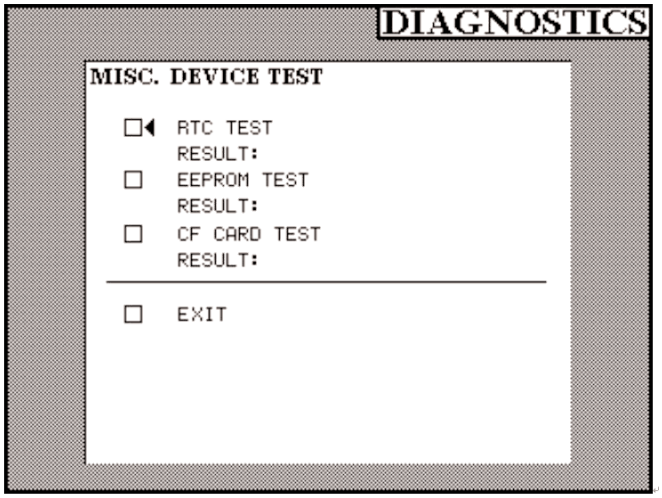
This test mode allows you to check the RTC, EEPROM and CF card for irregularities.

1. When Misc. device test mode is engaged, the following screen will appear.

■ MISC. DEVICE TEST

RTCとEEPROMとCFカード部の不良チェックを行う。

1. MISC. DEVICE TESTに入ると、以下の画面が表示されます。



2. Move the cursor to the desired item and press the ENTER key to get the test started.
   (To run the CF CARD TEST, you need to have plugged in a CF card.)
3. When the test is successfully finished, "OK" is displayed in the RESULT field and a check mark is put by the corresponding test item.
   These tests are carried out by writing a given data and checking whether or not it is correctly read out.
4. When the test is not successfully finished, "NG" is displayed in the RESULT field.
5. Move the cursor to EXIT on the MISC. DEVICE TEST screen and press the ENTER key to go back to the diagnostics menu. If a check mark is put by every test item on the MISC. DEVICE TEST screen, a check mark is put by the menu item MISC. DEVICE TEST.
   NOTE: As a result of running the RTC TEST, the clock IC in the console is reset to "2004/1/2". So you need to correct the clock setting on the console. For details, refer to "Setting Clock (TMC)".

2. テストを行ないたい項目にカーソル移動しENTERキーを押すとテストが開始されます。
   (CF CARD TESTの場合CFカードを挿入しておく必要がある。)
3. テストが正常に終了すると、RESULTにOKと表示され、各項目にチェックが付きます。
   これらのテストは任意のデータを書き、正しく読めるかで正否を判断しています。
4. テストが正常に終了しない場合、RESULTにNGと表示されます。
5. MISC.DEVICE TEST画面のEXITにカーソルを移動しENTERキーを押すと、DIAGメニューに移動します。MISC. DEVICE TEST画面の全ての項目にチェックがついている場合、DIAGメニューのMISC. DEVICE TESTにチェックが付きます。

注意

RTC TESTを行うとMixerの時計ICが"2004年1月2日"にリセットされるので、RTC TEST実行後には必ずMixerの時刻設定を行う必要がある。詳細はClock設定方法 (TMC)を参照。

■ **GPI TEST**

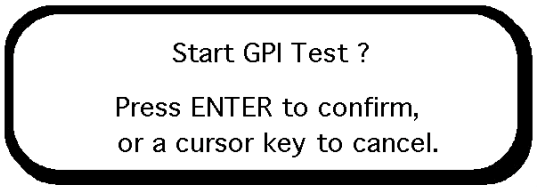
This test mode allows to check the GPI for irregularities.

1. Move the cursor to GPI TEST and press the ENTER key and the following pop-up message will appear.
   You need to have plugged an appropriate device into the GPI connector to ascertain that there is a voltage of 0-5 volts.

■ GPI TEST

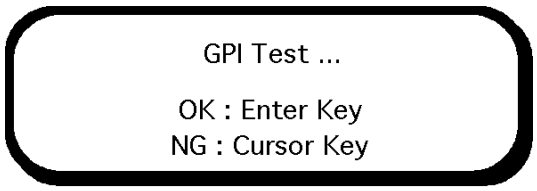
GPIの不良チェックを行う。

1. GPI TESTにカーソルを移動しENTERキーを押すと以下のpop-upが表示されます。
   GPI端子にテスト用に0-5Vの電圧が確認できる、専用ジグを接続しておく。



2. Press the ENTER key to get the GPI TEST started.
When the test is running, the following pop-up message is seen.

2. ENTERキーを押すとGPI TESTが開始されます。
   GPI TEST中は以下のpop-upが表示されます。



3. When the test is successfully finished and you press the ENTER key, the pop-up message goes out and a check mark is put by the item GPI TEST in the diagnostics menu.
4. If the test is not successfully finished, the pop-up message goes out when you press a cursor key.

3. 正常に終了した場合、ENTERキーを押す。pop-upが消えDIAGメニューのGPI TESTにチェックが付きます。
4. 正常に終了しなかった場合、カーソルキーを押す。同時にpop-upが消えます。

■ **SET MIXER CLOCK**

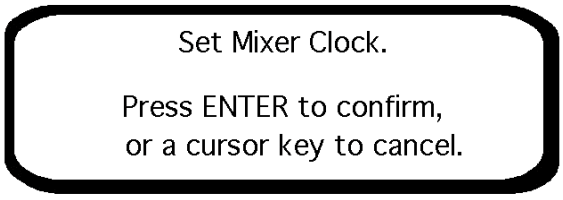
This option allows you to write the time on the connected PC into the real-time clock IC on the mixer. To do this, you need to make a USB connection to the PC in which the TMC is installed.

1. Selecting this option gets the following pop-up message displayed.

■ SET MIXER CLOCK

MIXER上のリアルタイムクロックICに接続されたPCの時刻を書き込む。TMCのインストールされたPCとUSBケーブルで接続し、TMCを起動する必要があります。

1. SET MIXER CLOCKを実行すると以下のpop-upが表示されます。

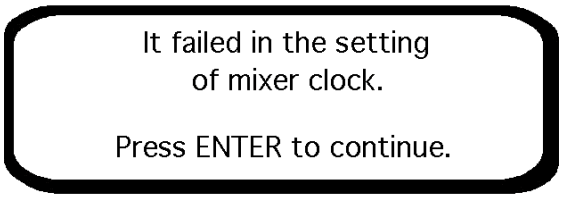


2. Press the ENTER key to get the write process started. Pressing a cursor key will abort the process and the pop-up message will goes out.
3. When the write process is successfully finished, the following pop-up message is displayed. This message automatically goes out in several seconds and a check mark is put by the menu item SET MIXER TIME.

2. ENTERキーを押すと時間書き込みを開始する。Cursor Keyを押すとキャンセルとなり、pop-upが消えます。
3. 正常に終了した場合、以下のPop-upは表示される。このpop-upは数秒で自動的に消え、SET MIXER CLOCKにチェックが付きます。

4. If the write process is not successfully finished, the following pop-up message will appear. Pressing the ENTER key gets the message gone out.

4. 正常に終了しなかった場合、以下のpop-upが表示される。ENTER Keyでpop-upは消えます。



■ SRAM INIT

This mode allows you to reset the SRAM to factory default.

NOTE: Store current status to the project on a CF card beforehand since data stored in the console will be lost as a result of initializing the SRAM.

1. When SRAM INIT mode is engaged, the following pop-up message will appear.

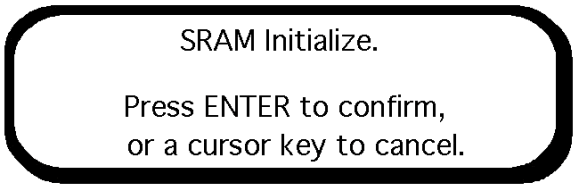
■ SRAM INIT

SRAMを工場出荷時の値に初期化する。

注意

SRAMを初期化すると、内蔵の各種データは初期化されるため、CFカードにProject保存しておくこと。

1. SRAM INITモードに入ると、次のpop-upが表示されます。



2. Press the ENTER key to get the SRAM initialized. Upon completion of the initialization, the pop-up window goes out, bringing you back to the diagnostics menu in which the corresponding box is checked.
3. Pressing a cursor key aborts the initialization.

2. ＥＮＴＥＲキーを押すとSRAMの初期化が行なわれる。初期化が完了したらpop-upが消え、DIAGメニュー画面に戻り、チェックボックスにチェックが付きます。
3. カーソルキーでキャンセルとなります。

■ REBOOT

1. Move the cursor to EXIT on the diagnostics screen and press the ENTER key to get the console rebooted.

■ REBOOT

1. DIAGメニュー画面のEXITにカーソルを移動しENTERキーを押すと再起動します。

3. Setting Main Shorting Pins on PCB

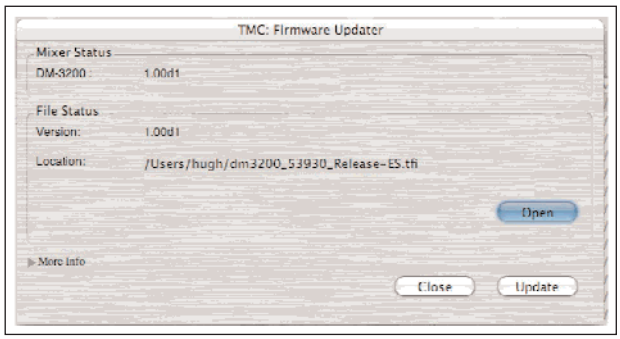
PCB,MAIN SHORT PIN設定

P/N 部番	Purpose 項目	Pin Setting (●:Default) ピン設定（●：初期）		Description 内容
P2	Setting FPGA Configuration FPGA Configuration設定	●	OPEN	For when selecting Normal mode NORMALモード時選択
			1-2 shorted	For when setting FPGA Config. through JTAG FPGAのConfigをJTAG経由で行うときに選択
P3	Setting NMI connector inputs NMI端子入力設定	●	OPEN/1-2 shorted	For when selecting Normal mode (inputting reset signal: PW RESET) NORMALモード時選択（ﾘｾｯﾄ信号(PW_RESET)を入力）
			2-3 shorted	Setting for in Debug mode (inputting NMIOUT of ICE) DEBUGモードﾞ時設定（ICEのNMIOUT信号を入力）
P4	Setting CPU modes CPUモード設定	●	OPEN	Setting to Normal mode NORMALモードに設定
			1-2 shorted	Setting to Debug mode (CPU enters ASE mode and H-UDI and Emulate functions become ready for use) DEBUGモードに設定(CPUがASEモードになりH-UDI、ｴﾐｭﾚｰﾄ機能が有効)
P5	Setting CPU/RXD0 functions CPU/RXD0機能設定		OPEN	For use as RS-232C (serial cable connected to P38) RS-232Cとして使用する（P38にSerialケーブルを接続）
		●	1-2 shorted	For use as Cascade functionality (nothing connedted to P38) CASCADE機能として使用（P38には何も接続しないこと）
P15	Setting Boundary Scan ROUT Boundary Scan ROUT設定	●	OPEN	For scanning through boundaries including DDMP CoPCB DDMP CoPCBを含めたBoundary Scanを行う
			1-2 shorted	For performing Boundary Scan within single MAIN PCB MAIN PCB単体でBoundary Scanを行う
P34	Clock Settings クロック設定	●	OPEN	For in Normal mode (clock oscillation) NORMALモード時に設定（クロック発振）
			1-2 shorted	For in Boundary Scan mode (clock stopped) BoundaryScanモード時に設定（クロック停止）
P39	TCK supply settings TCK供給設定		1-2 shorted	For in Boundary Scan/JTAG modes (TCK/TMS signals suuplied to all JTAG-ready devices) BoundaryScan/JTAGモード時に設定 （全JTAG対応ﾃﾞﾊﾞｲｽにTCK/TMS信号を供給）
		●	2-3 shorted	For in Normal/Debug modes (TCK/TMS signals supplied to CPU only) NORMAL／DEBUGモード時に設定 （CPUのみにTCK/TMS信号を供給）
P40	TRST settings TRST設定		1-2 shorted	For when using JTAG downloading cable (TRST pulled up) JTAG ダウンロードケーブル使用時に設定(TRSTをPullUp)
		●	2-3 shorted	For in Normal mode (TRST pulled down) NORMALモード時に設定（TRSTをPullDown）

4. Firmware Update
ファームウェアーアップデート

1. Firmware Upadate

From time to time, TASCAM will make updates available from the Web site or through your TASCAM distributor. To install these updates, use the Firmware Update window (accessed from the Windows menu) in the TMC software:



Press the on-screen Open button to open a file browser, where you can select the firmware update (these always have a .tfi extension).

The version of the mixer firmware and the version of the new firmware are shown in the Mixer Status and File Status fields, respectively.

More information, including whether the file actually performs a recommended upgrade or not, is available by using the More Info foldout (not shown in Figure 2.4, Firmware update).

To update the DM-4800

Press the Update button in the TMC Firmware updater window. A status bar in the window graphically shows the update progress. This is also shown in the DM-4800 screen. The process takes about 5 minutes, including the time necessary for the DM-4800 to reboot.

NOTE

The DM-4800 should not be turned off during the update process or subsequent reboot, although it has a "safety-net" built in which allows the unit to be started without a full operating system.

Use the Close button to close the window without updating the unit.

2. Forced System Update Mode

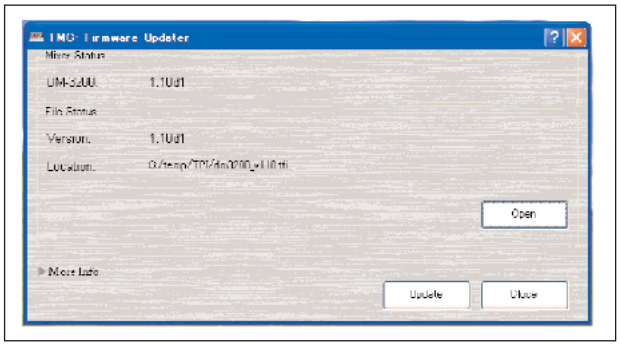
If the DM-4800 unexpectedly stops at the startup screen or does not normally start up for any reason, you may correct the problem by getting the mixer forcibly restarted in System Update Mode and updating the firmware.

Procedure

1. Switch off the DM-4800.
2. Hold down the right-arrow cursor and ENTER keys and switch on the DM-4800 and "SYSTEM UPDATE MODE" is displayed in the upper center in addition to the normal startup screen.
3. When the TASCAM Logo scrolls to the end, the screen is switched to show a screen in the center of which "SYSTEM UPDATE" is displayed wide.
4. Now update the firmware from the TMC by following the steps discussed under "1. Firmware Upadate".

1. ファームウェアのアップデート

TASCAM のウェブサイトおよびTASCAM 販売店ではファームウェアのアップデートを提供しています。このアップデートをインストールするには、TMC ソフトウェアのWindows メニューからFirmware Update を選択します。



画面上のOpen ボタンをクリックしてファイルブラウザを開き、ファームウェアのアップデート（.tfi という拡張子が付いたファイル）を選択します。
ミキサーの現在のファームウェアと新規ファームウェアのバージョンがそれぞれMixer Status 欄とFile Status 欄に表示されます。
そのファイルによって実際に推奨アップグレードされるかどうかなどのファイルについての詳細は、More Info 欄を拡張表示させてください（図2.4、ファームウェアのアップデート画面では拡張表示されていません）。

DM-4800 のアップデート方法

TMC Firmware updaterのウインドウ上のUpdate ボタンをクリックします。
アップデートの進行状況がグラフ表示され、DM-4800 の画面でも進行状況が表示されます。DM-4800 の再起動も含めてアップデートにはおよそ5 分ほどかかります。

メモ

アップデート中およびアップデート後の再起動中はDM-4800 の電源を絶対に切らないでください。ただし、万一電源が切れてしまった場合は、システムソフトウェアが不完全のまま再起動します。

アップデートせずに画面を閉じるには、Close ボタンをクリックします。

2. 強制 System Update Modeについて

DM-4800が何らかの原因で起動画面から先に進まなくなるなど正常に起動できなくなった場合は、Mixerを強制的にSystem Update Modeで再起動してFirmware Updateを行う事で、正常起動できる可能性があります。

手順

1. DM-4800の電源を切ります。
2. 右カーソルキーとENTERキーを押したままDM-4800の電源を投入すると　通常期動画面に加え画面中央上部に"SYSTEM UPDATE MODE"と表示されます。
3. TASCAM Logoのスクロールが終わると中央に大きく"SYSTEM UPDATE"と表示された画面に切り替わります。
4. 以後は、1. ファームウェアのアップデートの手順でTMCからFirmwareをUpdateします。

5. Setting Clock (TMC)

Clock 設定方法 (TMC)

You can get the time on the PC or Mac reflected on the DM-4800.

After starting up the TMC, select the Preference menu, and press the "Set Mixer Clock" button in the lower part of the resulting screen, so that the time on the PC or Mac (i.e., the time indicated in the upper line of the button) is sent to and set on the DM-4800.

PC/Macの現在設定されてい時計の時間をDM-4800に設定することができます。

TMC起動後Preferenceメニューを選び現れる画面の下部にある"Set Mixer Clock"ボタンを押すことでPC/Macの時間情報（ボタンの上の行に表示されているものと同じ）がDM-4800に送られ、その時間が設定されます。

6. Version Display
バージョン表示の方法

DM-4800: Checking different Firmware Versions

Method 1: at Utility System screen

What you can check:
CPU Firmware Version
Mother PCB Version (after V1.60)

Method 2: at Debug screen

What you can check:
CPU Firmware Version
DSP-PLD(U30) Firmware Version
PTA-FPGA Firmware Version
SAX-FPGA Firmware Version
Mother PCB Version & Mother PLD Firmware (after V1.60)

How to check these:

1. Hold down the ALT key and press twice the Automation TRIM and Automation REVERT keys.
   The Debug window with letters only is displayed in the LCD screen.
2. Hold down the ALT key and press the POD1 and POD4 keys.
   The version information is displayed in the LCD screen.
3. Hold down the ALT key and press once the Automation TRIM and Automation REVERT keys to go back to the normal screen.

＊ You cannot check the OutputPort-PLD (U117) Firmware Version.

DM-4800：各種Firmware Versionの確認方法

方法1）Utility.System画面での確認

＜確認できる内容＞
CPU Firmware Version
Mother PCB Version　(V1.60以降)

方法2）Debug画面での確認

＜確認できる内容＞
CPU Firmware Version
DSP-PLD(U30) Firmware Version
PTA-FPGA Firmware Version
SAX-FPGA Firmware Version
Mother PCB Version & Mother PLD Firmware　(V1.60以降)

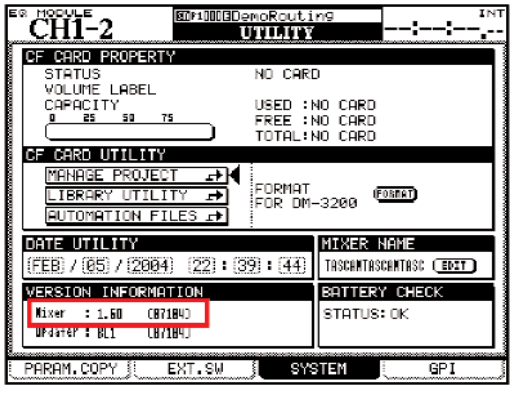
＜確認手順＞

1. ALT + AutomationTRIM + AutomationREVERTの組合せでKeyを二回押します。
   (LCD画面に文字表示のみのDebug画面が表示される)
2. ALT + POD1-Key + POD4-Keyを押します。
   ⇒LCD画面にVersion情報が表示されます。
3. ALT + AutomationTRIM + AutomationREVERTの組合せでKeyを一回押すと通常画面に戻ります。

※ OutputPort-PLD(U117) Firmware Versionは確認出来ません。

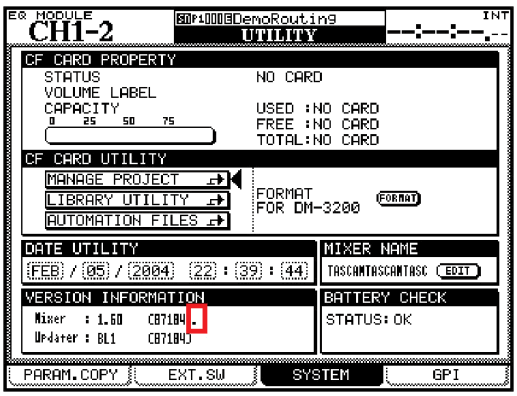
Checking whether or not the mother DM48 PCB is mounted in the DM-3200/DM-4800

No dot displayed at the end of the build number in the Mixer Version column in the Utility System screen:
This indicates that the mother DM PCB is mounted.



Utility System 画面の Mixer Version 表記においてビルド番号末尾に「.」なし：PCB, MOTHER DM が装着されている。

A dot displayed at the end of the build number: This indicates that the mother DM48 PCB is mounted.

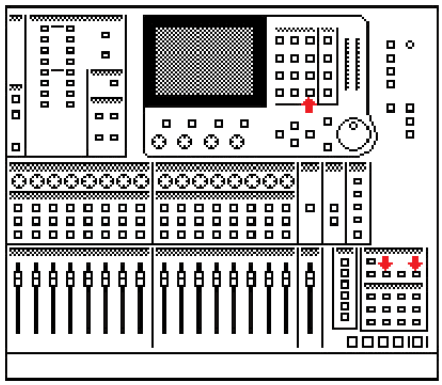


ビルド番号末尾に「.」あり：PCB, MOTHER DM48 が装着されている。

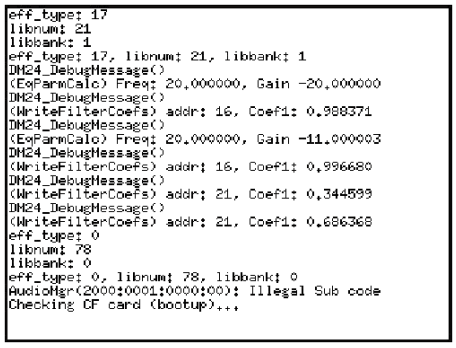
DM-3200/DM-4800 にPCB, Mother DM48 が装着されているかどうかの確認方法

Checking PLD Firmware Version of Mother DM48 PCB

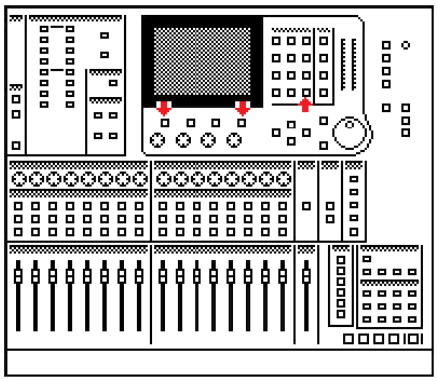
1. Hold down the ALT key and press twice the Automation TRIM and Automation REVERT keys.



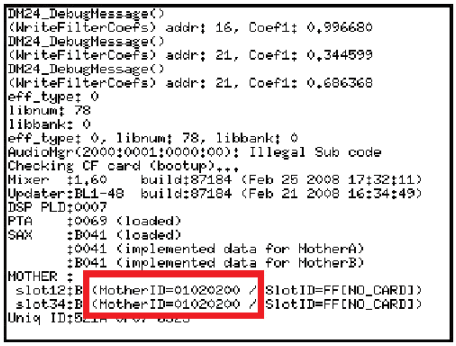
The LCD screen is switched to show the Debug window, as shown at right.



2. Hold down the ALT key and press the LCD FUNCTION 1 and 4 keys.



The screen now looks like as shown at right.



Here is the breakdown of the 8-digit Mother ID number shown:
The left 4 digits represent a hardware ID;
The next 4 digits plus 00 represent a firmware ID.
This Mother ID number is shown when the MOTHER DM (mother A) PCB is mounted.
The number varies depending on the mounted slot card.
When the MOTHER DM48 (mother B) PCB is mounted, the mother ID number is shows as 01020200 as of 2008-02-27.

PCB, Mother DM48 のPLD Firmware Versionの確認方法

1.ALT+AUTOMATION TRIM+AUTOMATION REVERTの組み合わせのキーを2回押す。

LCD画面が左図のようなDebug画面に切り替わる。

2.ALT+LCD FUNCTION1+LCD FUNCTION4の組み合わせキーを押す。

左図のようにLCD画面に表示される。

[MotherIDと表示される8桁の数字の内訳]

上位4 桁：HardwareID

下位4 桁：FirmwareID+00

PCB, MOTHER DM(MotherA)が装着されている場合のMotherID 値

装着しているSlot Card によって値が変わる。

PCB, MOHTER DM48(MotherB)が装着されている場合のMotherID 値

2008.02.27現在では"01020200"と表示される。

Message shown when the new and old mother PCBs are mounted mixed

The mother DM PCB and the mother DM48 PCB cannot be used mixed.

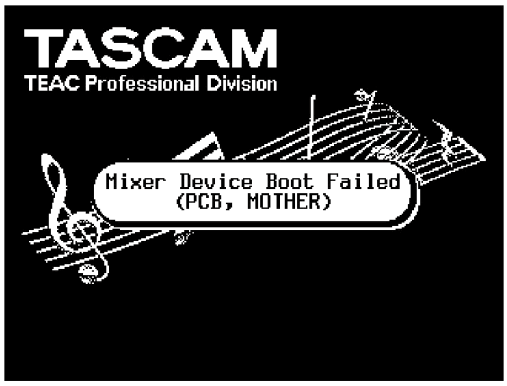
If they are both mounted, the message shown below appears when you try to start the mixer and the start-up process does not go on. If you sure that two mother DM48 PCBs are mounted and this message appears, the cause may be poor connections or a fault in the wiring (power supply or control) on either PCB.

新旧Motherが混在してしまった場合のメッセージ画面

PCB, MOTHER DM とPCB, MOTHER DM48は混在して使用できない。

そのため、混在した状態でMixerを起動すると画面に下記メッセージを表示した状態で停止し、通常起動できない。

PCB, MOTHER DM48を二枚装着したはずなのに下記メッセージが表示される場合はどちらか一方のPCB配線(電源/制御線)の接続不良/接続ミスが考えられる。



TMCompanion: Checking Version

Method 1: DM-4800 not USB-connected

Checking procedure:

1. Start up the TMCompanion.
2. After a minute, a window with a message "No compatible mixer was found" appears on the display.

   This window also shows the version of the TMCompanion.

\Method 2: DM-4800 connected through USB

Checking procedure:

1. Connect the DM-4800 to the PC/Mac through USB and switch on the system.
2. Get the TMCompanion started.
3. With Windows XP
   Click File ⇒ About in the menu.
   A window containing the TMCompanion version information is seen.

With Mac OSX

Click TMCompanion ⇒ About TMCompanion in the menu.
A window containing the TMCompanion version information is seen.

Method 3: See version information of TMCompanion

With Mac OSX

1. Use the Finder to open the application folder.
2. Select the TMCompanion.exe file.
3. Click File ⇒ See Info.
   A window containing the TMCompanion version information is seen.

TMCompanion：Versionの確認方法

方法1）DM-4800をUSB接続しない状態

＜確認手順＞「

1. TMCompanionを起動する。
2. しばらくすると"No compatible mixer was found"と書かれたウィンドウが表示されます。

   このウィンドウにTMCompanionのVersion情報が表示されます。

方法2）DM-4800をUSB接続した状態

＜確認手順＞

1. DM-4800をPC/MacとUSB接続して電源を入れます。
2. TMCompanionを起動する。(WinXPの場合)

(WindowsXPの場合)

3. メニュー：File⇒Aboutをクリックすると、TMCompanionのVersion情報が書かれたウィンドウが表示されます。

(MacOSXの場合)

3. メニュー：TMCompanion⇒About TMCompanionをクリックするとTMCompanionのVersion情報が書かれたウィンドウが表示されます。

方法3）TMCompanionのファイル情報を見る。

＜MacOSX確認手順＞

1.Finderでアプリケーションフォルダを開きます。

2.TMCompanion.exeのファイルを選択します。

3.メニュー：ファイル⇒情報を見る をクリックするとTMCompanionのVersion情報が書かれたウィンドウが表示されます。

With Windows XP

1. Use the Explorer to open the directory in which the TMCompanion.exe file is stored.
   (By default, C:¥Program Files¥TASCAM¥TMCompanion)
2. Right-click the TMCompanion.exe file (or the TMCompanion file if the extension is not shown), and then click the Properties.
3. Hit the version information tab, select More Info ⇒ Items: File Version or Product Version and the TMCompanion version information is seen in the "Values" field.

＜WinXP確認手順＞

1. ExplorerでTMCompanion.exeのインストールディレクトリを開きます。(Default "C:¥ Program Files ¥TASCAM ¥TMCompanion"
2. TMCompanion.exe(拡張子が表示されない設定の場合は、TMCompanion)のファイルを右クリック＞プロパティ をクリックする。
3. バージョン情報タブを選択し、詳細⇒項目：ファイルバージョン もしくは 製品バージョンをクリックすると「値」欄にTMCompanionのVersion情報が表示されます。

7. Error Message
エラーメッセージ

System Error:
tt-eeeeeeee-iiii
aaaaaaaa
bbbbbbbb
cccccccc

Please note for reference

	tt [decimal number]	eeeeeeee [hexadecimal number]	iiii [decimal number]	aaaaaaaa [hexadecimal number]	bbbbbbbb [hexadecimal number]	cccccccc [hexadecimal number]
CPU Exception	99	Exception Code	01	CPU Program Counter when exception is generated	CPU Status Register when exception is generated	Address of exception generation origin
CPU Address Error (READ)	99	0000 00E0	01			
CPU Address Error (WRITE)	99	0000 0100	01			
General Illegal Instruction	99	0000 0180	01			
RTOS Error	0 :non-Task 1..: TaskID	Upper4:OS resource ID Lower4: RTOS error code	line number of source code	Charactercode of the 1-4th character of error generation former file name.	Charactercode of the 5-8th character of error generation former file name.	Charactercode of the 9-12th character of error generation former file name.

NOTES:

1) If firmware version is before V1.52,"Fatal Error" is displayed instead of "System Error"
ファームウェアバージョンがV1.52以前の場合は、「System Error」の代わりに「Fatal Error」を表示します。
2) The additional information might be obtained by the switching to the Debag screen by pushing ALT+TRIM+REVERT twice.
ALTL+TRIM+REVERTキーを二回押してDebug画面に切り替えることで追加情報が得られるかもしれません。

DM-4800 Special Error Message pop-up

1. Main CPU Fatal Error

This indication means that Main CPU Errors.
(see 7. Error Message)

DM-4800 Special Error Message pop-up

1.Main CPU System Error

この表示はMain CPUエラーが発生したことを示します。
(7. Error Message参照)

System Error:
tt-eeeeeeee-iiii
aaaaaaaa
bbbbbbbb
cccccccc

Please note for reference

2. Hardware initialize error

This indication means that Hardware initialization error.

2.Hardware initialization error

この表示は<Device Name>で示されるハードウェアの初期化エラーが発生したことを示します。

Mixer Device Boot Failed
(Device Name)

<Device Name>	[notes]
DSP-A/B	(U29, U37)
FPGA	(U15, U23)
PLL	(U51, circuit around U51)
RTC	(U108)
PCB, MOTHER	(Only after V1.60)
Slot* : IF-AE/DM	(optional slot card)
Slot* : IF-SM/DM	(optional slot card)

<Presumed cause>

when <Device Name> is not "PCB, MOTHER"
- Defective soldering of each device
- Defect of each device
- Other causes of not forecasting

when <Device Name> is "PCB, MOTHER"
- The kind of two "PCB, MOTHER" is different.
- Loose connection of cables to "PCB, MOTHER"

<Device Name>	[notes]
DSP-A/B	(U29, U37)
FPGA	(U15, U23)
PLL	(U51, U51周辺回路)
RTC	(U108)
PCB, MOTHER	(V1.60以降のみ)
Slot* : IF-AE/DM	(optional slot card)
Slot* : IF-SM/DM	(optional slot card)

<考えられる要因>

<Device Name>が"PCB, MOTHER"以外の場合
- 各デバイスの半田不良
- 各デバイス自体の不良
- その他予測しない原因

<Device Name>が"PCB, MOTHER"の場合
- 2枚の"PCB, MOTHER"のVersionが異なる
- "PCB, MOTHER"へのケーブル接続不良

3. Audio Device Error

This indication means that Mixer Audio Device (DDMP) cannot execute normal operation.

3.Audio Device Error

この表示はMixerのAudio Device(DDMP)が正常動作出来ない状態になったことを示します。

The audio device
is not operating normally.
All sound stopped.
Please contact TASCAM service.

Press ENTER to continue.

<Presumed cause>
- Loose connection between DDMP PCB and Main PCB
- Defect of DDMP PCB
- Firmware Bug
- Other causes of not forecasting

<考えられる要因>
- DDMP PCBとMain PCBの接触不良
- DDMP PCB不良
- Firmware不具合
- その他予測しない原因

4. Under 3.3 volts

This indication means that Power Supply Voltage became to under 3.3 volts

4.Under 3.3 volt

この表示は電源電圧が3.3V以下になったことを示します。

Power Supply Voltage (+3.3V) is too Low
for stable operation.

Please Restart DM-* * * * .

<Presumed cause>
- Occurrence of momentary power failure.
- Defect of Power Supply Unit.
- Other causes of not forecasting

<考えられる要因>
- 瞬停が発生した
- 電源ユニット不良
- その他予測しない原因

5. Sram Range Over

This indication means that Mixer setting data backed up with battery became illegal value.
If pushing ENTER Key then Mixer setting data is initialized to right value.

5.Sram Range Over

この表示は電池バックアップされているMixer設定データが不正値になったことを示します。

ここでENTERキーを押せばMixer設定データが正当な値に初期化されます。

Out of Sram Range !
Initialize Sram Data?
chnn(aaa) dataname

Press ENTER to confirm,
or a cursor key to cancel.

<Presumed cause>
- The first boot-up (after MainPCB is assembled)
- Shortage of battery voltage
- Defective soldering of SRAM device (U28) or backup battery for data backup
- Defect of SRAM device (U28) for data backup
- Firmware Bug
- Other causes of not forecasting

<Corresponding method>
[1] Pushing ENTER Key to initialize Mixer setting data to right value.
[2] In case of shortage of battery voltage.
1.Change a battery
2.Restart Mixer
3.If this message is displayed again, execute [1] method.

<Confirm method in battery state>
The battery state can be confirmed at "BATTERY CHECK" display in the right bottom area of the UtilitySystem screen

<考えられる要因>
- MainPCB組立後、最初の起動
- Backup Batteryの電圧低下
- SRAM Device(U28) か バックアップ電池の半田不良
- SRAM Device(U28)の不良
- Firmware Bug
- その他予測しない原因

<対策方法>
[1] Mixer設定データを正当な値に初期化するためにENTERキーを押す。
[2] 電池電圧不足の場合
1.電池を交換
2.Mixerを再起動
3.再度、本メッセージが表示されたら[1]を実施

<電池状態の確認方法>
電池の状態はUtility.System画面右下の"BATTERY CHECK"欄で確認が出来る。

6. Initialize Sram Data

This indication is execution confirmation message of Sram Data initialization.

6. Initialize Sram Data

この表示はSram Data初期化処理の実施確認メッセージです。

Initialize Sram Data? !

Press ENTER to confirm,
or a cursor key to cancel.

<Presumed cause>
- Mixer was started while pushing CTRL+BUSS1+BUSS2.
- "PCB, ASSIGN" is not connected.
- Loose connection of cable connected with "PCB, ASSIGN"
- Cable loose connection of PCB related to Panel (see following reference)

<DM-4800 : Outline of cable connection chart of PCB related to Panel>

[PCB,Main:P27] → [P1:PCB,MONITOR:P3] → [P1:PCB,SCREEN:P3] → [P1:PCB,MODULE:P2] → [P1:PCB,ASSIGN]
[:PCB,MONITOR:P4] → [P2:PCB,SCREEN]

<考えられる要因>
- CTRL+BUSS1+BUSS2を押しながら起動した。
- "PCB,ASSIGN" が接続されていない
- "PCB,ASSIGN" に接続されているケーブルの接触不良
- Panel関連PCBのケーブル接触不良(下記参照)

<DM-4800 : Panel関連PCBのケーブル接続図 概略>

7. DIAGNOSTIC MODE

This indication means that Mixer started with Diagnostics mode

7.DIAGNOSTIC MODE

この表示はMixerがDiagnostics modeで起動したことを示します。

DIAGNOSTIC MODE

<Presumed cause>
- Mixer was started while pushing SHIFT+BUSS1+BUSS2.
- "PCB, ASSIGN" is not connected.
- Loose connection of cable connected with "PCB, ASSIGN"
- Cable loose connection of PCB related to Panel (see following reference)

<DM-4800 : Outline of cable connection chart of PCB related to Panel>

[PCB,Main:P27] → [P1:PCB,MONITOR:P3] → [P1:PCB,SCREEN:P3] → [P1:PCB,MODULE:P2] → [P1:PCB,ASSIGN]
[:PCB,MONITOR:P4] → [P2:PCB,SCREEN]

<考えられる要因>
- SHIFT+BUSS1+BUSS2を押しながら起動した。
- "PCB,ASSIGN" が接続されていない
- "PCB,ASSIGN" に接続されているケーブルの接触不良
- Panel関連PCBのケーブル接触不良(下記参照)

<DM-4800 : Panel関連PCBのケーブル接続図 概略>

Secret Key Combination（Secret Keyの組み合わせ）				Action（動作）
When turning on power, 電源投入時に	CTRL	BUSS1	BUSS2	Starting Mixer with Diagnostics mode. Diagnostic modeでMixerを起動させる
When turning on power, 電源投入時に	ENTER	[→]		Starting Mixer with System Update mode. System Update modeでMixerを起動させる
When turning on power, 電源投入時に	SHIFT	BUSS1	BUSS2	Starting the SRAM initialization processing. SRAM初期化処理を起動する
	ALT	TRIM	REVERT	Switching the normal screen/white screen/debug screen. 通常画面/白画面/Debug画面を切り替える
	ALT	LCD FUNC1	LCD FUNC4	Displaying various version information on the Debug screen. Debug画面に各種Version情報を表示する
	ALT	[←]	[→]	Clearing the Debug screen. Debug画面をクリアする

Main PCB Chip LED Pattern

	LED Patterns at Unexpected Stop 停止時のLED Pattern				Stopped at: 停止ステップ	OS OS	Probable Hardware Problem Resulting in Stop 停止要因となりうるHardware不良				
	D93	D92	D91	D90							
	0	0	0	0	PowerOn	Updater	Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良		
0	-	-	-	-	InitFrqc		Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in LED D39-90 device/soldering CPU用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in PLD2 device/soldering/ faulty write PLD2ﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ/書込不良
1	-	-	-	0	InitBsc		Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering CPU用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
2	-	-	0	-	InitBootScr		Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering CPU用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
3	-	-	0	0	StartUpdaterMain		Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering CPU用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
4	-	0	-	-	StartUpdaterOs		Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering CPU用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
5	-	0	-	0	JumpToMixerOs		Faulty write to Flash ROM (Mixer OS) FlashROM書込不良 (MixerOS)	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering CPU用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
6	-	0	0	-	StartMixerOsBoot	Mixer	Faulty write to Flash ROM (Mixer OS) FlashROM書込不良 (MixerOS)	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering DSP用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
7	-	0	0	0	StartMixerMain		Faulty write to Flash ROM (Mixer OS) FlashROM書込不良 (MixerOS)	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering DSP用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
8	0	-	-	-	StartMixerInitCpu		Faulty write to Flash ROM (Mixer OS) FlashROM書込不良 (MixerOS)	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering DSP用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
9	0	-	-	0	StartMixerSetAudio Mute		Faulty write to Flash ROM (Mixer OS) FlashROM書込不良 (MixerOS)	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering DSP用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
A	0	-	0	-	StartMixerDisable Codec		Faulty write to Flash ROM (Mixer OS) FlashROM書込不良 (MixerOS)	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering DSP用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
B	0	-	0	0	StartMixerBootFpga		Defect in FPGA decide/soldering FPGAﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良		Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良		
C	0	0	-	-	StartMixerBootDsp		Defect in DSP device/soldering DSPﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in PLD1 device/ soldering/faulty write PLD1ﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ/書込不良		Defect in SDRAM for DSP, device/soldering DSP用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
D	0	0	-	0	StartMixerInitRtc		Defect in DSP device/soldering RTCﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良				
E	0	0	0	-	StartMixerSramCheck		No problem if stopped at this stage when starting up for the first time after completion of mounting Main PCB MainPCB組立後最初の起動時はここで停止しても問題なし	Fault in Backup battery voltage/defect in soldering Backup電池電圧/ﾊﾝﾀﾞ不良			

0 : ON
- : OFF

(*1) May be produced when for example the system recognizes that SecretKey (ALT + SOLO15 + STOP) is pressed.
(*1) SecretKey[ALT+SOLO15+STOP]が押されたように認識されてしまう時に発生しうる

※Trouble on Firmware may produce any error conditions above, resulting in unexpected stop.
※停止ステップ全般に渡ってFirmware不具合も停止要因になりうる

	LED Patterns at Unexpected Stop 停止時のLED Pattern				Stopped at: 停止ステップ	OS OS	Probable Hardware Problem Resulting in Stop 停止要因となりうるHardware不良				
	D93	D92	D91	D90							
F	o	o	o	o	StartMixerOs	Mixer	Faulty write to Flash ROM (Mixer OS) FlashROM書込不良 (MixerOS)	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for CPU, device/soldering CPU用SDRAMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	
	"o" scrolls left/right oが左右ｽｸﾛｰﾙ				(Running MixerOS or UpdaterOS)	both					
Blinking A 点滅A	O	-	O	-	Fatal Error in debugging Debug用のFatal Error	both	Defect in FPGA device/ soldering (*1) FPGAﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良(*1)	Defect in Panel PCB device/soldering (*1) PanelPCBﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良(*1)			Trouble on Firmware (Firmware不具合)
Blinking B 点滅B	O	-	O	O	Fatal Error due to trouble on firmware Firmware不具合による Fatal Error	both					Trouble on Firmware (Firmware不具合)
Blinking C 点滅C	O	O	-	-	Fatal Error due to drop in supply voltage 電源電圧低下による Fatal Error	both	Fault in power supply 電源不良		Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良		
Blinking D 点滅D	O	O	-	O	OS Error OS Error	both	Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for Trouble on Firmware CPU用SDRAM ﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Trouble on Firmware (Firmware不具合)
Blinking E 点滅E	O	O	O	-	Exception error in CPU after OS started up OS起動後のCPU例外 エラー	both	Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for Trouble on Firmware CPU用SDRAM ﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Trouble on Firmware (Firmware不具合)
Blinking F 点滅F	O	O	O	O	Exception error in CPU after OS started up OS起動後のCPU例外 エラー	-	Faulty write to Flash ROM FlashROM書込不良	Defect in Flash ROM device/soldering FlashROMﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in CPU device/ soldering CPUﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Defect in SDRAM for Trouble on Firmware (Firmware不具合) ﾃﾞﾊﾞｲｽ/ﾊﾝﾀﾞ不良	Trouble on Firmware (Firmware不具合)

O : ON

- : OFF

(*1) May be produced when for example the system recognizes that SecretKey (ALT + SOLO15 + STOP) is pressed.

(*1) SecretKey[ALT+SOLO15+STOP]が押されたように認識されてしまう時に発生しうる

※Trouble on Firmware may produce any error conditions above, resulting in unexpected stop.

※停止ステップ全般に渡ってFirmware不具合も停止要因になりうる

Messages and troubleshooting

This provides an alphabetical list of the messages that you may see on the DM-4800, which provide information on the operation that you are performing.

Not all of these messages are error messages.

"Information" messages, i.e. those which pop up briefly and provide information about a change in status, etc., are marked with a ●.

"Confirm" messages, where a response may be necessary (usually confirm with the **ENTER** key or cancel with the cursor keys) are marked with a ✔.

Messages demanding action other than a simple confirmation are shown with a (✖), but even these do not necessarily indicate an error.

メッセージとトラブルシューティング

以下に、本機のLCD 画面上に表示されるポップアップメッセージをアルファベット順に紹介します。メッセージには以下のタイプがあります。すべてがエラーメッセージというわけではありません。

情報メッセージ：
状態などの変化に関する情報を表示するメッセージです。
以下の表では、「種類」欄に●印が付いている項目が情報メッセージです。

確認メッセージ：
操作の確認を行なうメッセージです。通常、操作を続ける場合はENTER キーを押し、操作を取り消す場合はカーソルキーを押します。以下の表では、「種類」欄に✔印が付いている項目が確認メッセージです。

エラーメッセージなど：
操作を受け付けないことを表示したり、別の操作を促すメッセージです。以下の表では、「種類」欄に✖印が付いているメッセージです。

Action(種類)	Message（メッセージ）	Meaning（内容）
●	Already assigned.	The RECORD key has already been assigned to a remote unit. RECORDキーがすでにリモート機器にアサインされています。
✔	Are you sure to delete this project ? project name Press ENTER to confirm, or a cursor to cancel.	Confirmation when deleting a project. プロジェクトを削除するときの確認（二回目）。
✖	Automation Bank Memory is full. Check the Bank memory. Press ENTER to continue.	An attempt is being made to store automation data to memory bank that is already full. オートメーションバンクメモリーがいっぱいです。
✖	Automation data and Current Status have different timecode types. Press ENTER to continue.	The automation data uses a timecode of a different frame type from the current timecode. オートメーションデータのタイムコードフレームタイプと本機の現在のタイムコードフレームタイプが異なります。
✖	Automation data and Current Status use different Fs. Press ENTER to continue.	The automation data uses a sampling frequency of a different value from the current sampling frequency. オートメーションデータのサンプリング周波数と本機の現在のサンプリング周波数が異なります。
✖	Automation Data is not modified, execute the KEEP? Press ENTER to confirm, or a cursor key to cancel.	Confirmation that you want to store (keep) unmodified automation data. データが変更されていない状態でKEEP操作をした場合の確認メッセージ。
●	Automation data was recalled.	The selected automation data has been recalled into memory. 選択されたオートメーションデータがメモリーに呼び出されました。
●	Automation data was stored.	The current automation data has been stored to card. 現在のオートメーションデータがカードに保存されました。
✖	Automation Memory is consumed 95% Please Stop TC and Store Current Automation data, Right Now Press ENTER to continue.	The automation memory is getting full. Stop the timecode source, and store the automation data. オートメーションメモリの95%を消費しています。 タイムコードを止めて現在のオートメーションデータを保存してください。

Action(種類)	Message（メッセージ）	Meaning（内容）
✖	Automation memory is consumed 100% You cannot go on writing any more! without slicing or erasing these data Press ENTER to continue.	The automation memory is completely full. Some automation data will have to be erased. Automationメモリをすべて消費しました。これ以上イベントを記録できません。
●	Automation Redo executed.	An undo/redo operation has been successfully performed. オートメーションリドゥ時のメッセージ
●	Automation Undo executed.	An undo/redo operation has been successfully performed. オートメーションアンドゥ時のメッセージ
✔	AUX1-2 Level Copy Aux1-2Level -> Ch Fader Level? Press ENTER to confirm, or a cursor key to cancel.	Copying the AUX 1-2 pan and balance settings to the channels. AUX 1-2のレベル設定を、チャンネルのレベル設定にコピーします。
✔	AUX1-2 Level Copy Ch Fader Levels -> Aux1-2 Level? Press ENTER to confirm, or a cursor key to cancel.	Copying the channel fader levels to the Aux 1-2 levels. チャンネルのフェーダーレベル設定をAUX 1-2のレベル設定にコピーします。
✔	AUX 1-2 Level Set up Ch parameters? Press ENTER to confirm, or a cursor key to cancel	Used when batch copying parameters from channel to Aux 1-2 settings. AUX 1-2レベルを一括設定します。
✔	AUX1-2 Pan/Bal Copy Aux 1-2Pan/Bal -> Ch Fader Pan/Bal? Press ENTER to confirm, or a cursor key to cancel	Copying the AUX 1-2 pan and balance settings to the channels. AUX 1-2のパン／バランス設定を、チャンネルのパン／バランス設定にコピーします。
✔	AUX1 Pan/Bal Copy Ch Pan/Bal -> Aux1-2 Pan/Bal? Press ENTER to confirm, or a cursor key to cancel	Copying the channel pan and balance levels to the Aux 1-2 pan and balance. チャンネルのパン／バランス設定をAUX 1-2のパン／バランス設定にコピーします。
✔	AUX1-2 to STEREO is assigned Press ENTER to continue.	In the master buss assignment, this message appears if an attempt is made to override an existing assignment (“Routing & assignment” on page 58). BUSSアサイン中、現在のアサインを変更しようとするときに表示されます。（→XXページ「第4章　ルーティングとアサイン」）
✖	Battery is defective Can’t save system data. Please contact TASCAM service. Press ENTER to continue	The internal battery is defective, or has lost charge, so data can't be stored. Contact TASCAM service or your distributor for a replacement battery. 内蔵バッテリーが機能していないため、システムデータを保存できません。バッテリーを交換する必要がありますので、タスカム修理センターにご連絡ください。
●	Cannot assign fader grouping layer.	An attempt has been made to make an invalid fader group フェーダーグループを作成できません。
✖	Cannot Copy parameters within Module. Press ENTER to continue.	A message produced when an unsuccessful attempt has been made to copy parameters inside the same module. 同じモジュール内でコピーを試みたが、成功しなかった事を示すメッセージ。

Action(種類)	Message（メッセージ）	Meaning（内容）
✖	Cannot create more than 128 projects.	There is a limit of 128 projects that can be created on one CF card. Delete an unwanted CFカードに128個のプロジェクトがすでに作成されていて、これ以上のプロジェクトを作成できません。不要なプロジェクトを削除してください。
✖	Cannot switch the cascade ID when cascade is on. Press ENTER to continue.	Can't change between master and slave modes when a cascade is active. カスケードがオンのときは、カスケードIDの設定を変更できません。
✖	Can't Change Mode during TRIM ALL.	Can't change the automation mode while TRIM ALL mode is active. TRIM ALLのとき、タイムコード走行中にモードを切り換えることができません。
✖	Can't copy library data. The CF Card is full.	An attempt has been made to copy library data to a full CF card. CFカードに空きがないため、ライブラリーデータのコピーができません。
✖	Press ENTER to continue. Can't copy project. The CF Card is full.	An attempt has been made to copy a project on a full CF card. CFカードの空き容量がないため、プロジェクトをコピーできません。
✖	Press ENTER to continue. Can't create project. The CF Card is full.	An attempt has been made to create a project on a full CF card. CFカードの空き容量がないため、プロジェクトを作成できません。
✖	Press ENTER to continue. Can't DELETE Automation data	An attempt has been made to delete protected automation data. プロテクトしてあるオートメーションデータを削除することはできません。
✖	Cannot do this	Some operations cannot be performed while automation is on. オートメーション走行中、この操作はできません。
✖	while automation is running. Can't Enter Initial Edit Mode during Chase Process.	It's not possible to enable the automation initial edit mode while chasing. オートメーションイベント追跡中はイニシャルエディットを実行できません。
✖	Can't Enter Initial Edit Mode	It's not possible to enable the automation initial edit mode while stopped. オートメーション停止処理中はイニシャルエディットを実行できません。
✖	during Stop Process. Can't Enter Initial Edit Mode during Writing.	It's not possible to enable the automation initial edit mode while writing. オートメーションイベントの書き込み中はイニシャルエディットを実行できません。
✖	Can't delete xxxx Bank N-n. Press ENTER to continue.	An attempt to delete a library entry has failed. ライブラリーデータを削除できません。
✖	Can't load project. Press ENTER to continue.	Couldn't load the last stored project when boot. 本機の電源を入れたとき、最後に保存したプロジェクトを自動的に呼び出すことができません。
✖	Can't recall COMP/EXP Library Bank a-bbb	The named compressor/expander library item cannot be recalled. The data may be missing or corrupt. 指定されたコンプレッサー／エキスパンダーライブラリーデータを呼び出すことができません。データが破損しているか失われている可能性があります。
✖	Can't recall COMP/EXP Library Preset 1-bbb	The named compressor/expander library preset cannot be recalled. The data may not exist or may be corrupt. 指定されたコンプレッサー／エキスパンダーライブラリープリセットを呼び出すことができません。データが破損しているか失われている可能性があります。

Action(種類)	Message（メッセージ）	Meaning（内容）
✖	Can't recall Effect Bank a-bbb	The named effect library item cannot be recalled. The data may be missing or corrupt. 指定されたエフェクトライブラリーデータを呼び出すことができません。データが破損しているか失われている可能性があります。
✖	Can't recall Effect Preset 1-bbb	The named effect library preset cannot be recalled. The data may not exist or may be corrupt. 指定されたエフェクターライブラリープリセットを呼び出すことができません。データが破損しているか失われている可能性があります。
✖	Can't recall EQ Library Bank a-bbb	The named EQ library item cannot be recalled. The data may be missing or may becorrupt. 指定されたEQライブラリーデータを呼び出すことができません。データが破損しているか失われている可能性があります。
✖	Can't recall EQ Library Preset 1-bbb	The named EQ library preset cannot be recalled. The data may not exist or may be corrupt. 指定されたEQライブラリープリセットを呼び出すことができません。データが破損しているか失われている可能性があります。
✖	Can't recall GATE Library Bank a-bbb	The named gate library item cannot be recalled. The data may be missing or corrupt. 指定されたゲートライブラリーデータを呼び出すことができません。データが破損しているか失われている可能性があります。
✖	Can't recall GATE Library Preset a-bbb	The named gate library preset cannot be recalled. The data may not exist or may be corrupt. 指定されたゲートライブラリープリセットを呼び出すことができません。データが破損しているか失われている可能性があります。
✖	Can't recall snapshot Bank a-bbb	The named snaphot cannot be recalled. The data may be missing or corrupt. 指定されたスナップショットデータを呼び出すことができません。データが破損しているか失われている可能性があります。
✖	Can't recall snapshot Preset 1-bbb	The named snaphot preset cannot be recalled. The data may not exist or may be corrupt. 指定されたスナップショットプリセットを呼び出すことができません。データが破損しているか失われている可能性があります。
●	Can't recall to this Module.	An attempt has been made to recall the wrong sort of data to the selected module (e.g.an effect to an Aux module). このモジュールにはデータを呼び出すことができません。
✖	Can't select this port. Item is not TIME EVENT. Press ENTER to continue.	An attempt has been made to assign a timecode value to a GPI even that is not classified as timecode. GPIのタイムイベントに設定していないポートをタイムイベントリストで選択したことを警告。
✖	Can't Store Automation data. This file is protected.	An attempt has been made to store automation data to a file which has had protection applied. Select another file as a destination or un-protect this file. プロテクトされているファイルにオートメーションデータを保存しようとしています。別のファイルに保存するか、あるいはこのファイルのプロテクトを解除してください。
✖	Can't store library data. The CF Card is full. Press ENTER to continue.	An attempt has been made to store library data to a full CF card. CFカードが一杯で、ライブラリーデータを保存できません。
✖	Can't store project. The CF Card is full. Press ENTER to continue.	An attempt has been made to store a project to a full CF card. CFカードの空き容量がないため、プロジェクトを保存できません。

Action(種類)	Message（メッセージ）	Meaning（内容）
✔	Can’t turn Fs convert On Digital In1 is chosen as Master Clock Press ENTER to continue.	Frequency sampling conversion cannot be used when one of the DIGITAL INs is being used as a word sync source. いずれかのDIGITAL INがワードシンクソースとして使われている場合、サンプリング周波数変換ができません。
✖	Can't undo COMP/EXP Library-Recall. Press ENTER to continue.	The library recall can’ t be undone. COMP/EXPライブラリーのリコールをUndoできません。
✖	Can't undo EffectN-Recall. Press ENTER to continue.	The library recall can't be undone. エフェクトNのリコールをUndoできません。
✖	Can't undo EQ Library-Recall. Press ENTER to continue.	The library recall can't be undone. EQライブラリーのリコールをUndoできません。
✖	Can't undo GATE Library-Recall. Press ENTER to continue.	The library recall can't be undone. GATEライブラリーのリコールをUndoできません。
✖	Can't undo Snapshot-Recall. Press ENTER to continue.	The library recall can't be undone. スナップショットのリコールをUndoできません。
✖	Cascade communication stopped. Please check cascade cable. Press ENTER to continue.	The cascade connection has unexpectedly ended - it is possible the cable is unplugged. カスケード接続が切断されました。ケーブルの接続状況を確認してください。
✔	CASCADE Connection ended. Please choose new clock master. Set Internal Clock ? Press ENTER to confirm, or a cursor to cancel.	The cascade connection to a slave has been broken and the message invites resetting with the unit’ s internal clock. カスケード接続が終了しました。クロックマスターをInternalに切り替えますか？
●	Cascade connection established. Press ENTER to continue.	Successful cascade connection. カスケード接続が確立されました。
✖	Cascade Slave not found. Cascade connection not established. Press ENTER to continue.	An attempt has been made to make a cascade, but no slave is available. カスケードスレーブ機が見つからないため、カスケード接続ができません。
✔	CF card is not available. Can’t delete automation data on CF card. Press ENTER to continue.	Automation data stored on CF card cannot be deleted. Reinsert the card or retry with another card. CFカードが正常でないため、CFカード上のオートメーションデータを削除できません。
✖	CF card is not available. Can’t store automation data on CF card. Press ENTER to continue.	Automation data can't be stored. Reinsert the card or retry with another card. CFカードにオートメーションデータを保存できません。カードを入れ直すか、別のカードを入れてください。
✔	CF card is not available. Can’t store current project. Turn off power? Press ENTER to confirm, or a cursor key to cancel.	An attempt to shut down the DM-4800 has failed, because a CF card is not available.Reinsert the card or retry with another card. CFカードがセットされていない（あるいは本機がカードを認識できない）ため、本機を終了できません。カードを入れ直すか、別のカードを入れてください。
✖	CF card is not available Press ENTER to continue.	An attempt has been made to read or write to a CF card that is not inserted, etc. Reinsert the card or retry with another card. CFカードをセットしていないとき（あるいは本機がCFカードを認識できないときなど）に、CFカードからの読み込みやCFカードへの書き出しを実行しようとすると表示されます。カードを入れ直すか、別のカードを入れてください。

Action(種類)	Message（メッセージ）	Meaning（内容）
✔	CH DELAY Time Update setup? Press ENTER to confirm, or a cursor key to cancel	Shown when performing bulk setup of the channel delay time. チャンネルディレイタイムの一括設定を行なうときに表示されます。
✔	CH Module LFE LEVEL Ch parameters setup? Press ENTER to confirm, or a cursor key to cancel	Shown when performing bulk setup of the channel LFE level. チャンネルLFEレベルの一括設定を行なうときに表示されます。
✔	CH Module PAN/BAL Ch parameters setup? Press ENTER to confirm, or a cursor key to cancel	Shown when performing bulk setup of the channel pan and balance parameters. チャンネルパン／バランスの一括設定を行なうときに表示されます。
●	CH xx EQ Library undo completed.	Shown when undoing or redoing library operations. ライブラリー操作のアンドゥやリドゥが正常終了したときに表示されます。
●	CH xx COMP/EXP Library undo completed	
●	CH xx COMP/EXP Library redo completed	
●	CH xx EQ Library redo completed	
●	CH xx GATE Library redo completed	
●	CH xx GATE Library undo completed	
✔	Clear all fader grouping layers? Press ENTER to confirm, or a cursor key to cancel.	Shown when all grouping layers are to be cleared. フェーダーグループレイヤーをすべてクリアーするときに表示されます。
✔	Clear Current Automation ALL data? Press ENTER to confirm, or a cursor key to cancel.	Confirmation when starting a new automation project - all current automation data will be cleared. 全オートメーションデータの削除を確認。 （Auto Files画面でのNEW実行時のメッセージ）
✔	Clear Current Automation Event Data? Press ENTER to confirm, or a cursor key to cancel.	When setting up automation, this message appears to confirm the clearing of all current data. オートメーションのイベントデータの削除を確認。 （CLEAR DATA実行時のメッセージ）
✔	Clear this fader grouping? Press ENTER to confirm, or a cursor key to cancel.	Shown when the currently selected fader grouping is to be cleared. 現在のフェーダーグループをクリアーするときに表示されます。

Action(種類)	Message（メッセージ）	Meaning（内容）
✔	Clock Check Results Current Fs: 48kHz Sources Word : 44.1kHz0.0% Digi IN 1 : Out of Range Digi IN 2 : Fs convert On TDIF 1 : 44.1kHz0.0% TDIF 2 : 44.1kHz0.0% TDIF 3 : Unusable ADAT : 44.1kHz+1.0% SLOT 1 : 48kHz+0.2% SLOT 2 : Unusable Press ENTER to continue.	Results of performing a word sync check. ワードクロックのチェックを行なったときに表示されます。
●	ClockInfo: CASCADE Fs: fff kHz Press ENTER to confirm, or a cursor key to cancel.	Informational message on slave about new cascade clock setting. カスケード確立後、クロック状況が所定の周波数であることを示しています。
✖	ClockInfo: CASCADE No signal Press ENTER to continue.	If the clock is meant to be the cascade clock, but no valid clock signal is found, this message appears. カスケードのクロックが供給されていないときに表示されます。
✖	Clock Info: Digital In1 C-bit : Illegal data. Press ENTER to continue.	Shown when badly-formed digital audio is received at one of the DIGITAL INs. DIGITAL IN端子から入力されるデジタル信号のクロックが不正であるときに表示されます。
✖	Clock Info: Digital In1 Fs mode : Not indicated Check D-IN MANUAL SETUP Press ENTER to continue.	An attempt is made to use a clock source, but the sampling frequency cannot be determined. DIGITAL IN 1をクロックソースに選択しようとしたとき、入力信号のFs mode情報に不備があった場合に表示されます。
✔	Clock Info: INTERNAL Fs: 44.1kHz Press ENTER to confirm, or a cursor key to cancel.	A valid clock source has been selected. 正常なクロックソースが選択されています。
✖	Clock Info: WORD New clock source is out of range. Master clock is unchaged. Press ENTER to continue.	A clock source has been changed, but the new clock is out of the permissible range. クロックソースを変更したとき、新しいソースのサンプリング周波数が本機の許容範囲外です。
✖	Clock Info: WORD No signal Press ENTER to continue.	A clock source has been selected, but no signal is present. ワードクロックソースにWORDが選択されているのに、ワード信号が入力されていないときに表示されます。
●	COMP/EXP Library Bank a-bbb recalled.	A library entry has been recalled (compressor/expander). ライブラリーデータが呼び出されました（コンプレッサー／エキスパンダー）。
✖	COMP/EXP Library Preset 1-bbb is Read-only!	An attempt has been made to store to a protected library entry (compressor/expander). プロテクトされているライブラリーデータに保存しようとしたときに表示されます（コンプレッサー／エキスパンダー）。

Action(種類)	Message（メッセージ）	Meaning（内容）
●	COMP/EXP Library Preset 1-bbb recalled.	A library preset entry has been recalled (compressor/expander). ライブラリープリセットデータが呼び出されました（コンプレッサー／エキスパンダー）。
✔	COMP/EXP Library BANK a-bbb Name : TASCAM DATA Create data: DEC/15/2004 20: 35: 45 Project Name: PROJECT ORCA Project FS: 44.1kHz Press ENTER to continue.	Information about a library entry (compressor/expander). ライブラリーデータ情報表示（コンプレッサー／エキスパンダー）。
✔	COMP/EXP Library Preset a-bbb Name : TASCAM DATA Press ENTER to continue.	Information about a library preset entry (compressor/expander). ライブラリープリセットデータ情報表示（コンプレッサー／エキスパンダー）。
●	Completed.	The selected operation (e.g. format or creation of project) has been completed successfully. An automation operation has been successfully completed. オートメーションやプロジェクトの操作が無事に完了しました。
✔	Confirm LIST Auto Detect? Press ENTER to confirm, or a cursor key to cancel.	Confirming the auto-detection of machine control list. マシンコントロールリストの自動検出の確認。
✔	Confirm TRA Auto Detect? Press ENTER to confirm, or a cursor key to cancel.	Confirming the auto-detection of transport control mapping. トランスポートコントロールマッピングの自動検出の確認。
✔	Copy from Ch2 Automation configuration	Confirmation when copying automation configuration. オートメーションコンフィギュレーションをコピーするときの確認。
●	Copy Module parameters to CHn.	Notification that a parameter copy operation between modules has been carried out correctly. パラメーターコピーがモジュール間で正常に行えたときに知らせるメッセージ。
✔	Copy Module parameters to CHn? Press ENTER to confirm, or a cursor key to cancel.	Confirmation that parameters are to be copied to another module. 他のチャンネル・モジュールへコピー処理を行う場合の確認メッセージ。
✔	Copy parameters within Module? Press ENTER to confirm or a cursor key to cancel.	Confirmation when performing a parameter copy operation within the same module. 同一モジュール内でのコピーを行う場合の確認
✔	Copy to xxxx fader level Press ENTER to confirm, or a cursor key to cancel	Confirmation when copying fader levels. xxxx may be ALL, ALL MASTER, Aux 1-8, groups of 8 busses, or groups of 8 channels. フェーダーレベルを一括コピーするときの確認。
●	Copy was completed.	Popup message on completion of copy operation. コピー操作が無事に完了しました。
●	Copying project. Do not remove the CF card.	Shown while a project is being copied on the CF card. プロジェクトのコピー中。CFカードを取り出さないでください。

Action(種類)	Message（メッセージ）	Meaning（内容）
●	Creating project. Do not remove the CF card.	Warning not to remove CF card during project completion. プロジェクト作成中。CFカードを取り出さないでください。
✔	Create project? Press ENTER to confirm, or a cursor key to cancel.	Confirming creation of a project. プロジェクト作成の確認。
✖	Current Data initialized. Fs has changed. Mixer will reboot. Press ENTER to confirm or a cursor key to cancel.	Notice to restart the DM-4800 following a change of reinitialization and sampling frequency. 現在のデータを再イニシャライズし、サンプリング周波数を変更しました。 DM-4800を再起動するにはENTERキーを押します。（PROJECT＞CLOCK画面のMixer configration項目をオフに設定したとき）
✔	Current project is protected. Can't STORE current project. ENTER key : Shut down CURSOR key : Cancel	An attempt has been made to shut down the DM-4800 while the current project's version on card is protected (meaning that it cannot be saved). シャットダウン時にカレントのプロジェクトがプロテクトされている場合に表示。
●	Data change was applied.	Date and time have been changed. 日時が変更されました。
●	Data has not been changed.	Date and time have not been changed. 日時が変更されませんでした。
●	Deleting project. Do not remove the CF card.	Shown while a project is being deleted from the CF card. プロジェクト削除中。CFカードを取り出さないでください。
✖	Device is not active.	A device selected for transport control is not active. トランスポートコントロール対象として選択した機器がアクティブでありません。
✖	Digital In1: Error Not audio signal Press ENTER to continue.	The DIGITAL IN audio source is not providing digital audio data. DIGITAL INからデジタルオーディオデータが供給されません。
✖	Digital In1: Error Not audio signal Source Fs unlocked Press ENTER to continue.	The DIGITAL IN clock source is not providing digital audio data, and the sync clock is now unlocked. DIGITAL INからデジタルオーディオデータが供給されず、同期クロックがロックしません。
✖	Digital In1: Error Source Fs unlocked Press ENTER to continue.	The DIGITAL IN clock source has experienced an error, and the sync clock is now unlocked. DIGITAL INクロックソースにエラーが発生し、同期クロックがロックしません。
✖	Digital INPUT1 : Fs convert On Can’t select master clock. Press ENTER to continue.	It is not possible to use a source as a word clock when sampling frequency conversion is turned on. サンプリング周波数コンバーターをオンにしているときは、ソース信号をワードクロックマスターにすることができません。
✔	DIGITAL TRIM Update setup? Press ENTER to confirm, or a cursor key to cancel	Confirmation that the digital trim values are to be updated. デジタルトリム値をアップデートするときの確認。
✖	DSP DMA didn't done yet!	An internal error has occurred. Contact your TASCAM service center. DSPとのDMAが正常終了しません。
✖	DSP DMA didn't done yet x100 times!	上記のメッセージ（DSP DMA didn't done yet!）が100回表示された次に表示。 ［考えられる原因］ DSPデバイス不良、DSP-CPU間のハードウェア不良、DSP PLD不具合、DSPファーム不具合、CPUファーム不具合

Action(種類)	Message（メッセージ）	Meaning（内容）
✖	Effect Preset a-bbb is Read-only!	An attempt has been made to store to a protected library entry (effect). プロテクトされているエフェクトライブラリーデータに保存しようとしたときに表示。
●	Effect 1 redo completed.	The redo operation is now complete. EFFECT 1のリドゥ操作が完了しました。
●	Effect 1 undo completed.	The undo operation is now complete. EFFECT 1のアンドゥ操作が完了しました。
✔	Effect BANK a-bbb Name : TASCAM DATA Effect Type: TASCAM Delay Create data: DEC/15/2004 20:35:45 Project Name: PROJECT ORCA Project FS: 44.1kHz Press ENTER to continue.	Information about a library entry (compressor/expander). ライブラリーデータ情報表示（エフェクト）。
●	Effect Bank a-bbb recalled To Effect x	A library entry has been recalled (effect). エフェクトライブラリーデータが呼び出されました。
●	Effect Preset 1-bbb recalled To Effect x	A library preset entry has been recalled (effect). ライブラリープリセットデータが呼び出されました（エフェクト）。
●	Effect x redo completed.	Shown when undoing or redoing effect library operations. エフェクトライブラリー操作のアンドゥ、リドゥを実行したときに表示。
●	Effect x undo completed.	
●	EQ Library Bank a-bbb recalled.	A library entry has been recalled (EQ). EQライブラリーデータが呼び出されました。
✖	EQ Library Preset 1-bbb is Read-only!	An attempt has been made to store to a protected library entry (EQ). プロテクトされているEQライブラリーデータを呼び出そうとしたときに表示。
●	EQ Library Preset 1-bbb recalled.	A library entry has been recalled (EQ). EQプリセットライブラリーデータが呼び出されました。
✔	EQ Library BANK a-bbb Name : TASCAM DATA Create data : DEC/15/2004 20: 35: 45 Project Name: PROJECT ORCA Project FS: 44.1kHz Press ENTER to continue.	Information about a library entry (EQ). EQライブラリーデータに関する情報。
✔	EQ Library Preset a-bbb Name : TASCAM DATA Press ENTER to continue.	Information about a library preset entry (EQ). EQプリセットライブラリーデータに関する情報。

Action(種類)	Message（メッセージ）	Meaning（内容）
✖	External Control List Full Press ENTER to continue.	An attempt has been made to create more than eight devices in the external control list. 8つを越えるエクスターナル・コントロールをリストに追加しようとしたときに発生するエラーメッセージ。
✔	Firewire connection is active, are you sure? Press ENTER to confirm, or a cursor to cancel.	The DM-4800 is still connected via FireWire to a computer, and an attempt has been made to change the clock source. FWカードがPCと1394ケーブルで接続されている場合に、クロックを切り替えようとしたときの確認。
✔	Format CF Card? All data on the card will be deleted. Press ENTER to confirm, or a cursor key to cancel.	Confirmation before formatting a CF card. CFカードをフォーマットする前の確認。
✔	Format CF Card? Press ENTER to confirm, or a cursor key to cancel.	
✔	Format failed. Retry? Press ENTER to confirm, or a cursor key to cancel.	A CF card format operation has failed. CFカードのフォーマットに失敗しました。もう一度行いますか？
●	Formatting now. Please do not turn off power while formatting.	Warning not to remove power while card is being formatted. フォーマット中ですので、電源を切らないでください。
✖	Fs has changed. Mixer will reboot. Press ENTER to confirm or a cursor key to cancel.	Notice to restart the DM-4800 following a change of sampling frequency. サンプリング周波数を変更しましたので、DM-4800を再起動するにはENTERキーを押してください。
✔	FS mode after loading and FS mode before loading is different. Fs is switched and Reboot. Press ALT+STOP+PLAY to reboot.	A project has been loaded which has changed the sampling frequency. 現在のFSモードと異なるFSモードがロードされているときに再起動を促す表示。
✖	FS modes do not match. Cascade connection not established. Press ENTER to continue.	Cascade master and slave must use the same sampling frequency. Fsモードが一致していないのでカスケード接続できません。
●	GATE Library Bank a-bbb recalled.	A library entry has been recalled (gate). ゲートライブラリーデータを呼び出しました。
✖	GATE Library Preset 1-bbb is Read-only!	An attempt has been made to store to a protected library entry (EQ). ゲートのライブラリープリセットデータに保存しようとしたときに表示。
●	GATE Library Preset a-bbb recalled.	A library preset entry has been recalled (gate). ゲートライブラリープリセットデータを呼び出しました。

Action(種類)	Message（メッセージ）	Meaning（内容）
✔	GATE Library BANK a-bbb Name : TASCAM DATA Create data: DEC/15/2004 20: 35: 45 Project Name: PROJECT ORCA Project FS: 44.1kHz Press ENTER to continue.	Information about a library entry (gate). ゲートライブラリーデータに関する情報
✔	GATE Library Preset a-bbb Name : TASCAM DATA Press ENTER to continue.	Information about a library preset entry (gate). ゲートライブラリープリセットデータに関する情報表示。
●	Group x is not grouped.	A group does not exist to be used as a grouping layer. グループが存在しないため、グループレイヤーとして使用できません。
✔	Grouping Link (Fader→Mute) Press ENTER to confirm, or a cursor key to cancel.	Confirmation that fader groups should be linked to mute groups. フェーダーグループをミュートグループにリンクするときの確認。
✔	Grouping Link (Mute→Fader) Press ENTER to confirm, or a cursor key to cancel.	Confirmation that mute groups should be linked to fader groups. ミュートグループをフェーダーグループにリンクするときの確認。
●	HUI DAW Control Emulator optimized for ProTools Press ENTER to continue.	Information on external control. エクスターナルコントロールの情報表示。
✔	Invert source ? Press ENTER to confirm, or a cursor key to cancel.	Confirmation when changing between Input and Return sources. インプットとリターンを入れ替えるときの確認。
✔	Invert source CHxx-CHxx? Press ENTER to confirm, or a cursor key to cancel.	Confirmation when making a batch change between Input and Return sources. インプットとリターンを一括して入れ替えるときの確認。
●	Loading project. Do not remove the CF card.	Warning not to remove the card while a project is loading. プロジェクト呼び出し中のため、CFカードを取り出さないよう警告。
●	Mackie Control Emulator optimized for Apple Logic Press ENTER to continue.	Information on external control. エクスターナルコントロールの情報表示。
●	Mackie Control Emulator optimized for Cakewalk Sonar Press ENTER to continue.	Information on external control. エクスターナルコントロールの情報表示。
●	Mackie Control Emulator optimized for MOTU Digital Performer Press ENTER to continue.	Information on external control. エクスターナルコントロールの情報表示。

Action(種類)	Message（メッセージ）	Meaning（内容）
●	Mackie Control Emulator optimized for Steinberg Cubase 2.2 + Nuendo 2.2 and later versions Press ENTER to continue.	Information on external control. エクスターナルコントロールの情報表示。
●	Maps a MIDI Controller onto the first 16 faders	Information on external control. 最初の16フェーダーに割り当てられたMIDIコントローラーの情報表示。
✔	Master DELAY Time Update setup? Press ENTER to confirm, or a cursor key to cancel	Confirmation that the delay values are to be updated. ディレイ値をアップデートするときの確認。
✔	MC Transport Maps 0 : MMC open ID=120 1 : MTC Generate 2 : None 3 : None 4 : None 5 : None 6 : None 7 : None 8 : None 9 : None Press ENTER.	Current MMC transport maps. 現在のマシンコントロールトランスポートマップ。
✖	MIDI Ch1 is already assigned. Press ENTER to continue.	Warning that a MIDI channel has already been used for Program Change recall of library entries. 使おうとしたMIDIチャンネルが、プログラムチェンジによるライブラリーデータの呼び出し用にすでに使われていることを表示。
✖	MIDICh1{Control No.1} is already assigned. Press ENTER to continue.	Warning that a MIDI control number and/or channel has already been used when setting up Control Change messages. MIDIコントロールチェンジメッセージを設定するときに、MIDIコントロールナンバーとチャンネル、又はどちらかがすでに使われていた場合の警告メッセージ。
✖	Mixer Device Boot Failed (device-name)	A major component of the DM-4800has failed. Make a note of the device name, which will be one of the following, and contact your TASCAM service center: DSP-A/B, DSP-A, DSP-B, DSP-A/B SRAM, DSP-A SRAM, DSP-B SRAM, FPGA, PLL, DDMP,RTC, Slot (slot card). ミキサーデバイスの起動不良。
✔	Mixer will mute while checking. OK to continue? Press ENTER to confirm or a cursor key to cancel.	Confirmation that a named digital input source check may change the clock rate, and therefore the audio output is muted during the check. デジタル入力ソースチェックによりクロックレートが変わる可能性があるため、オーディオ出力をミュートすることを確認。
✔	Name/Memo is 17 or more characters. If name is changed on mixer, it will be shortened to 16 or fewer characters. Press ENTER to confirm, or a cursor key to cancel.	Reminder that stored names and memos must be 16 characters or less in length. 保存する名前やメモは16文字以下でなければなりません。
✖	No Automation Undo data. (/ No Automation Redo data.)	There is no automation data in the undo buffer. アンドゥ／リドゥするデータがありません。

Action(種類)	Message（メッセージ）	Meaning（内容）
✖	No copy parameter is selected. Press ENTER to continue.	An attempt has been made to copy data, without a parameter's checkbox being selected. パラメータチェックボックスが選択されていない状態でデータをコピーしようとしています。
●	Now copying... Do not disconnect CF card.	A copy is being carried out. コピー中のため、CFカードを取り出さないでください。
✔	OK to Copy? From Project: TASCAM Project 2 Snapshot Bank a-bbb To Project: TASCAM Project Snapshot Bank c-ddd Press ENTER to confirm, or a cursor key to cancel.	Conformation that a library entry (EQ, snapshot, etc. can be copied from one project to another. ライブラリーデータ（EQ、スナップショットなど）をプロジェクト間でコピーするときの確認。
✔	OK to Copy? From Project: TASCAM Project 2 Snapshot Preset 1 To Project: TASCAM Project Snapshot Bank c Press ENTER to confirm, or a cursor key to cancel.	Conformation that a library bank can be copied from the preset bank to a project bank. プリセットバンクをユーザーバンクにコピーするときの確認。
✔	OK to Copy? From Project: TASCAM Project 2 xxxxxxxx BANK 1 To Project: TASCAM Project xxxxxxxxx BANK1 Press ENTER to confirm, or a cursor key to cancel.	Conformation that a library bank (EQ, snapshot, etc.) can be copied from one project to another. ライブラリーバンク（EQ、スナップショットなど）をプロジェクト間でコピーするときの確認。
✔	OK to delete automation file [File Name] Press ENTER to confirm, or a cursor key to cancel.	Confirmation about the deletion of an automation file. オートメーションファイルを削除するときの確認。
✔	OK to delete project. projectname Press ENTER to confirm, or a cursor to cancel.	Confirmation when deleting a project. プロジェクトを削除するときの確認（一回目）。
✔	OK to Delete xxxxxx Bank a-bbb Press ENTER to confirm, or a cursor key to cancel.	Confirmation before deleting data. データを削除するときの確認。

Action(種類)	Message（メッセージ）	Meaning（内容）
✔	OK to Overwrite Automation data Overwrite file [xxxx] Keep file[yyyy] Press ENTER to confirm, or a cursor key to cancel.	An attempt is being made to overwrite existing automation data. オートメーションデータのファイル"xxxx"をファイル"yyyy"で上書きします。
✔	OK to Overwrite Automation File [File name] Press ENTER to confirm, or a cursor key to cancel.	Confirmation before overwriting automation data. オートメーションデータを上書きするときの確認。
✔	OK to Overwrite Automation data [PROJECT DM4800#] Press ENTER to confirm, or a cursor key to cancel	Confirmation before overwriting automation data (keep confirmation). オートメーションデータを上書きするときの確認（KEEP CONFIRMATION機能オン時に表示）。
✔	OK to Overwrite Effect Bank a-bbb from Effect x Press ENTER to confirm, or a cursor key to cancel.	Confirmation before overwriting effect library item from x (either effect 1 or effect 2). エフェクトライブラリーデータを上書きするときの確認。
✔	OK to Overwrite Snapshot Bank a-bbb Press ENTER to confirm, or a cursor key to cancel.	Confirmation before overwriting a snapshot library entry. スナップショットライブラリーデータを上書きするときの確認。
✔	OK to Overwrite Transport Map? Press ENTER to confirm, or a cursor key to cancel.	Confirmation shown when replacing the current transport control map. 現在のトランスポートコントロールマップを上書きするときの確認
✔	OK to Overwrite xxx Library BANK a-bbb from Chy? Press ENTER to confirm, or a cursor key to cancel.	Confirmation before overwriting a gate or compressor/expander or EQ library item (xxx) from the selected channel (y). 選択チャンネルからゲート、コンプレッサー／エキスパンダーまたはEQのライブラリーデータを上書きするときの確認。
✖	Operation failure. Press ENTER to continue.	Something has gone wrong with an operation involving the CF card. Try again with another card. 操作に失敗しました。
✔	Paste Buffer data to Chx? Press ENTER to confirm, or a cursor key to cancel.	Confirmation shown before pasting copied configuration data to a channel. コピーしたコンフィギュレーションデータをチャンネルにペーストする前の確認。
✔	Paste Ch2 Automation configuration.	Confirmation shown before pasting copied automation configuration data to a channel. コピーしたオートメーションコンフィギュレーションデータをチャンネルにペーストする前の確認。
●	Performing delete...	Automation File Delete. オートメーションファイル削除中のメッセージ。
●	Performing Keep...	An automation keep operation is in progress. KEEPによるオートメーションファイル保存中のメッセージ。

Action(種類)	Message（メッセージ）	Meaning（内容）
✔	Please set cascade on/off from the cascade master machine. Press ENTER to continue.	An attempt has been made to break the cascade connection from the slave. カスケードマスター機でカスケードのオン／オフを設定してください。
✔	Program Change Table OK to perform Batch Setup? Press ENTER to confirm, or a cursor key to cancel.	Confirmation shown before making a batch change to the Program Change table. プログラムチェンジテーブルを一括設定するときの確認。
✔	Project data and resume data are different. The project data is loaded ENTER key : from internal memory. CURSOR key : from CF card.	Shown on power-up. Data has been changed since the project was saved; should this changed data be loaded? 起動時にミキサーの内部メモリに格納されているミキサーデータと、CF上の自動ロードされるプロジェクトのミキサーデータが、何かしらの原因で異なっている場合に表示されます。 ENTERキーを押すと、プロジェクトをロードしますが、ミキサーデータは内部メモリの物となります。 CURSORキーを押すと、CF上のプロジェクトをロードし、ミキサーデータはそのプロジェクトのデータとなります。
✖	Project is not on CF card.	Shown if a referenced project is not actually on the CF card. プロジェクトがCFカード上に存在しません。
✖	Real time control of common MIDI Control Change parameters Press ENTER to continue.	Information on external control. エクスターナルコントロールの情報表示。
✔	Re-assign fader grouping layer? Press ENTER to confirm, or a cursor key to cancel.	Confirmation when re-assigning a grouping layer master. フェーダーグループのレイヤーマスターを再アサインするときの確認。
✔	Re-assign fader (mute) group? Press ENTER to confirm, or a cursor key to cancel.	Confirmation when changing a setting. グループの設定を変更するときの確認。
●	Re-building current Automation Data +----------+ :#### 20% +----------+	pop-up message shown when timecode is stopped, and timecode data is being written. オートメーションデータを再構成中（タイムコード停止処理中のポップアップメッセージ）
✔	Recall Automation data? Current data will be erased. Press ENTER to confirm, or a cursor key to cancel.	The recall of stored automation data will overwrite the data currently in memory. オートメーションデータをリコールするときの確認。 （現在のデータが消去されます。）
●	Renaming project. Do not remove the CF card.	Shown while a project is being renamed on the CF card. プロジェクト名変更中。CFカードを取り出さないでください。
✔	Scanning for cascade slave... Press a cursor key to cancel.	The master machine of a cascade is looking for a slave unit. カスケードスレーブを探索しています。
✔	SELECT xxxx MODE Press ENTER to confirm, or a cursor key to cancel	Confirmation that the surround mode will change (to STEREO, 5.1, 6.1 or LRCS). サラウンドモードを変更するときの確認。

Action(種類)	Message（メッセージ）	Meaning（内容）
✔	Shutdown was not performed correctly last time. The project data is loaded: ENTER key : from internal memory Cursor key : from CF card.	On power-up - a shutdown was not performed properly. Should data changed after the project was last stored be loaded? 前回、正しく終了しなかった場合、起動時に表示。 ENTERキーを押すと、前回終了時のデータがDM-4800の内部メモリーから呼び出され、カーソルキーを押すと、CFカードに最後に保存したデータが呼び出されます。
✔	Shut down? Press ENTER to confirm, or a cursor key to cancel.	Confirmation of shutdown (after pressing SHIFT+CTRL+ALT). SHIFT＋CTRL＋ALTの同時押した後、シャットダウン（終了）の確認。
✖	Signal info : Digital In1 No signal Press ENTER to continue.	No signal received at a digital input when detail is requested. デジタル入力の詳細表示。信号が入力されていません。
✔	Signal info : Digital out1 Format : AES/EBU Contents : Audio Emphasis : On Channel Mode : Stereo FS : 44.1kHz Word Length : 24bit Press ENTER to continue.	Detail information pop-up for digital audio output. デジタルオーディオ出力の詳細情報。
✔	Signal info : Slot1 AES3 Card INPUT LINE1 Format : AES/EBU Contents : Audio Emphasis : None Channel Mode : Stereo FS : 44.1kHz Word Length : 24bit Press ENTER to continue.	Detail information pop-up for digital audio I/O (AES card). AESカード上のデジタルオーディオ出力の詳細情報。
✔	Signal info : TDIF1 Input Rx mode : Double-line Fs : 192kHz Word Length : 24bit Emphasis : None Output Tx mode : Normal FS : 44.1kHz Word Length : 24bit Emphasis : No Press ENTER to continue.	Detail information pop-up for digital audio I/O (TDIF). TDIFデジタルオーディオI/Oの詳細情報表示。
✖	Slot AES3 Card INPUT LINE1 Error Not audio signal Press ENTER to continue.	Digital audio data error from AES card (non-audio data). AESカードの入力のエラー（デジタルオーディオ信号が入力されていません）。

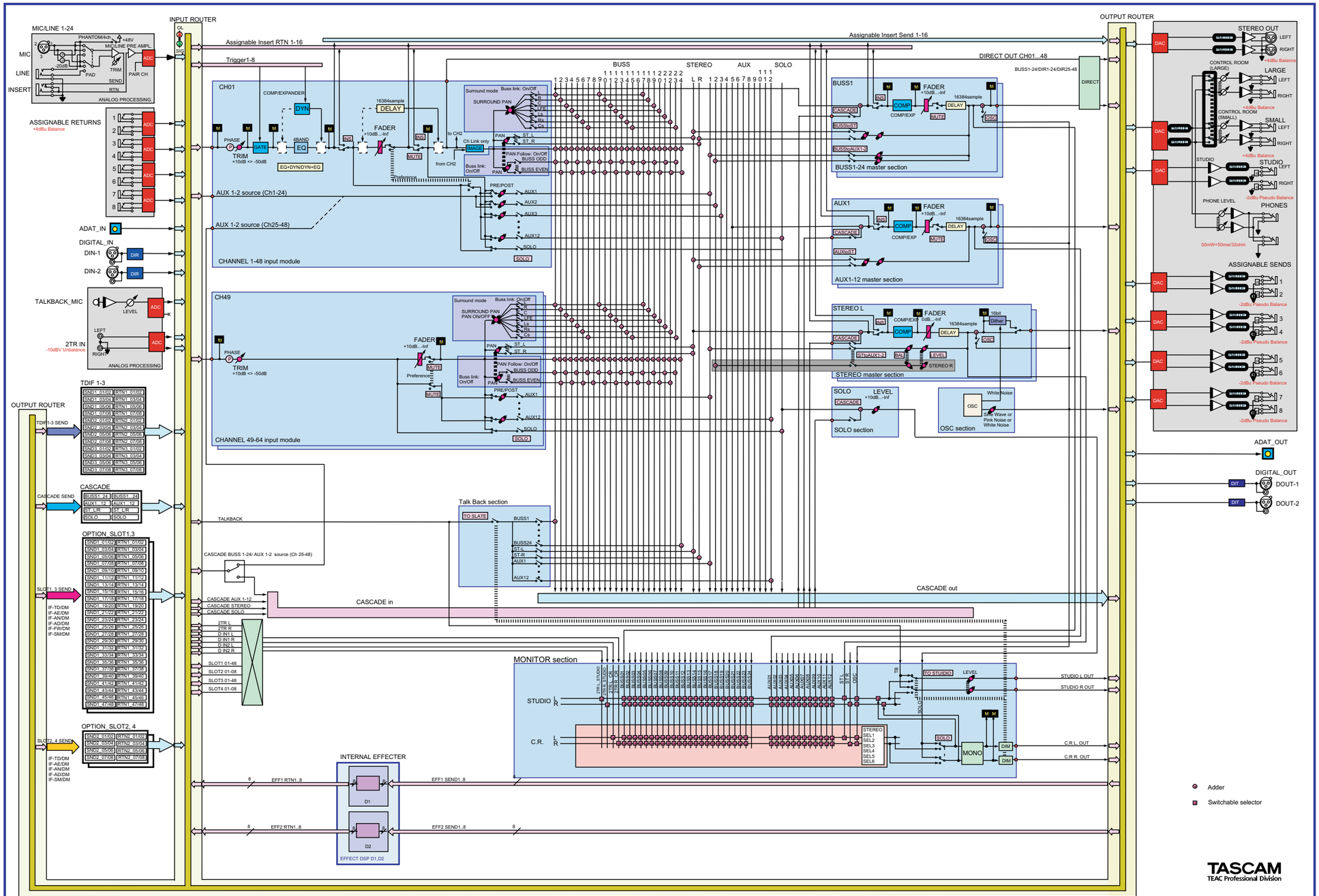
Action(種類)	Message（メッセージ）	Meaning（内容）
✖	Slot AES3 Card INPUT LINE1 Error Source Fs unlocked Not audio signal Press ENTER to continue.	Digital audio data error from AES card (non-audio data has caused loss of word sync). AESカードの入力のエラー（オーディオ信号が入力されていないため、ワードシンクがロックしていません）。
✖	Slot AES3 Card INPUT LINE1 Error Source Fs unlocked Press ENTER to continue.	Digital audio data error from AES card (loss of word sync). AESカードの入力のエラー（ワードシンクがロックしていません）。
●	Snapshot Bank a-bbb recalled.	A snapshot has been recalled. スナップショットが呼び出されました。
✖	Snapshot Preset 1-bbb is Read-only!	An attempt has been made to overwrite or delete a preset snapshot. プリセットスナップショットを上書きあるいは消去しようとしたときに表示。
●	Snapshot Preset 1-bbb recalled	A snapshot preset has been recalled. スナップショットプリセットが呼び出されました。
✔	Snapshot BANK a-bbb Name : TASCAM DATA Xtion Time : 9.9ms Create data : DEC/15/2004 20: 35: 45 Project Name : PROJECT ORCA Project FS : 44.1kHz Press ENTER to continue.	Information on a snapshot. スナップショットバンクの詳細情報。
✔	Snapshot Preset 1-bbb NAME : TASCAM DATA Press ENTER to continue.	Information on a preset snapshot. プリセットスナップショットの詳細情報。
●	Snapshot redo completed.	A snapshot redo operation is complete. スナップショットのリドゥ操作が完了しました。
●	Snapshot undo completed.	A snapshot undo operation is complete. スナップショットのアンドゥ操作が完了しました。
✔	Source Invert Ch1-Ch8 Press ENTER to confirm, or a cursor key to cancel.	Confirmation of bulk change of input from input to return (or vice versa). チャンネルのインプットとリターンの一括切り換え。
✖	STEREO to AUX1-2 is assigned Press ENTER to continue.	Stereo buss is assigned to Aux 1-2. ステレオバスをAUX 1-2にアサインします。
●	Stored to EFFECT Library BANK a-bbb	Stored an effect library entry. エフェクトライブラリーデータを保存しました。
●	Stored to Snapshot Bank a-bbb	Stored a snapshot. スナップショットを保存しました。

Action(種類)	Message（メッセージ）	Meaning（内容）
●	Stored to xxxx Library BANK a-bbb from CHx.	Stored a library entry where xxxx is EQ, gate or compressor/expander from the selected channel. ゲート、コンプレッサー／エキスパンダー、EQライブラリーにチャンネルデータを保存しました（xxxxはGate, Comp/ExpまたはEQ）。
●	Storing project. Do not remove the CF card.	Shown while a project is being written to the CF card. プロジェクト保存中の表示です。ＣＦカードを抜かないでください。
✖	Target machine has same ID. Cascade connection not established. Press ENTER to continue.	In a cascade, there can be only one each of the master and slave. カスケードIDが同じため、カスケード接続ができません。
✖	Target machine is not supported. Cascade connection not established. Press ENTER to continue.	The target machine of the cascade pair is not suitable for the cascade (wrong type,firmware revision, etc.). 接続対象機器がカスケード機能をサポートしていないため、カスケード接続ができません。
✖	TC Running!	Some automation operations cannot be carried out with timecode running. タイムコード同期中に受け付けない操作を行なったときに表示。
✖	Template project is not selected. Press ENTER to continue.	An attempt has been made to create a new project from an unselected template. 新しくプロジェクトを作成するときに、プロジェクトが存在しない状態でテンプレートが選択されている場合に表示。
✖	The audio device is not operating normally. All sound stopped. Please contact TASCAM service. Press ENTER to continue.	A serious hardware error has occurred within the audio portion of the DM-4800. Contact your TASCAM service agent or dealer for repair. DDMPが不正な状態にある場合に表示。
●	The automation data has been built +--------------------+ I###100%### +--------------------+ Done!	Shown when the automation data has been successfully built, following the stopping of the timecode. オートメーションデータの再構成完了（タイムコード停止処理完了時のポップアップメッセージ）
✔	The current project is changed. Store current project? ENTER key : Store and Create CURSOR key : Create	Changes have been made to the current project before a project creation. プロジェクト作成時、現在のプロジェクトが変更されている場合に表示。 ENTERキーを押すと現在のプロジェクトが保存されてから新規プロジェクトが作成されます。
✔	The current project is not on the CF card. Store the current project? Cannot copy automation data and library data. ENTER key : Store and Shut down CURSOR key : Shut down	An attempts has been made to shut down the DM-4800 with no project stored on the card. シャットダウン時にカレントプロジェクトがCFカード上にない場合に表示。
✖	The current project is protected. Press ENTER to continue.	Trying to overwrite a protected project. 変更を加えたプロジェクトを保存しようとした場合に、プロジェクトがプロテクトされていた場合に表示。

Action(種類)	Message（メッセージ）	Meaning（内容）
✔	The format of this CF card is unsupported. Format CF card ? Press ENTER to confirm, or a cursor to cancel.	An unrecognized CF card has been inserted - this message suggests reformatting the card in DM-4800 format. CFカードのフォーマットが未対応である場合、カードのフォーマットを促す表示。
✔	The last stored project cannot be found. Create project? Press ENTER to confirm, or a cursor key to cancel.	At power-on, the last stored project cannot be found (maybe the card has been changed). 起動時、前回最後に保存したプロジェクトが見つからないとき（カードを交換した場合など）に表示。 プロジェクトを作成する場合はENTERキーを押してください。
●	The project reload was completed.	A project has been successfully reloaded. 起動時に前回のプロジェクトが正常にロードされたことを告げるメッセージ。
✖	The project name is not inputted. Press ENTER to continue.	An attempt has been made to create a project without giving it a name. プロジェクト名が入力されていません。
✖	There is no project loaded.	When storing, no project is currently loaded, so the data can't be stored. プロジェクトが呼び出されていないために保存ができません。
✖	This name is already assigned.	The name of the newly-created project already exists on the card as a project name. 新規作成したプロジェクトの名前がすでに存在しているときに表示。
✖	This project is protected.	The project to be renamed is protected. このプロジェクトはプロテクトされています。
✖	This project is the current project Can't change.	The current project cannot be renamed. 現在のプロジェクトですので、変更できません。
✖	Timecode running!	An attempt has been made to create a project, etc. while timecode is still running. Stop the timecode and try again. タイムコード走行中にプロジェクトを作成しようとしたときなどに表示。 タイムコードを停止してやり直してください。
✔	Turn cascade off ? Press ENTER to confirm, or a cursor key to cancel.	Confirmation that the cascade is to be turned off. カスケードをオフにすることを確認。
✔	Turn cascade on ? Press ENTER to confirm, or a cursor key to cancel.	Confirmation that the cascade is to be turned on. カスケードをオンにすることを確認。
●	Turn off power now. Press ALT + STOP + PLAY to reboot.	The shutdown process is now complete, and the power can be turned off, or the DM-4800 can be rebooted. 終了の準備が完了したので、電源をオフにしてください。

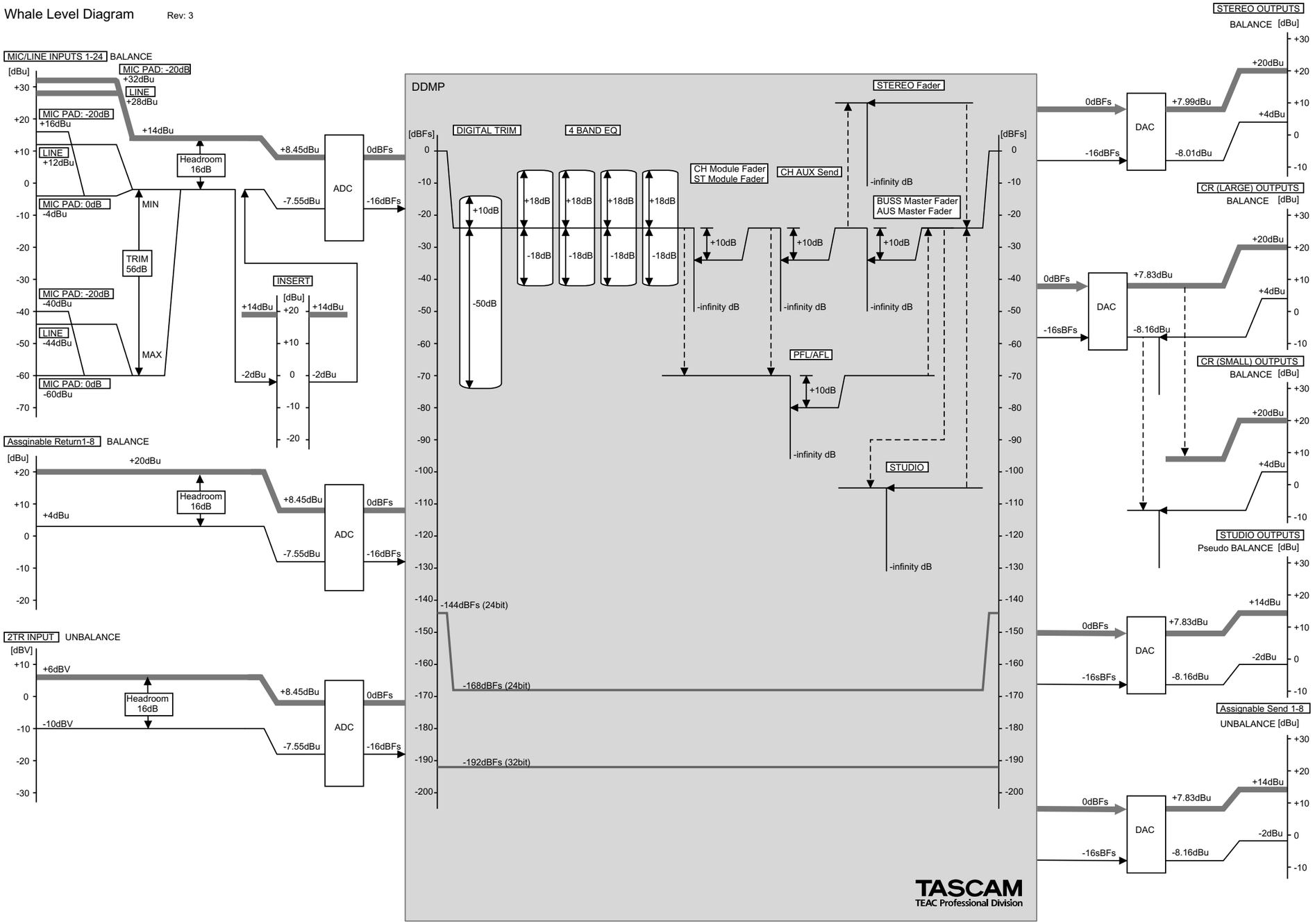
8. BLOCK DIAGRAMS
ブロックダイアブラム

1. AUDIO BLOCKDIAGRAM

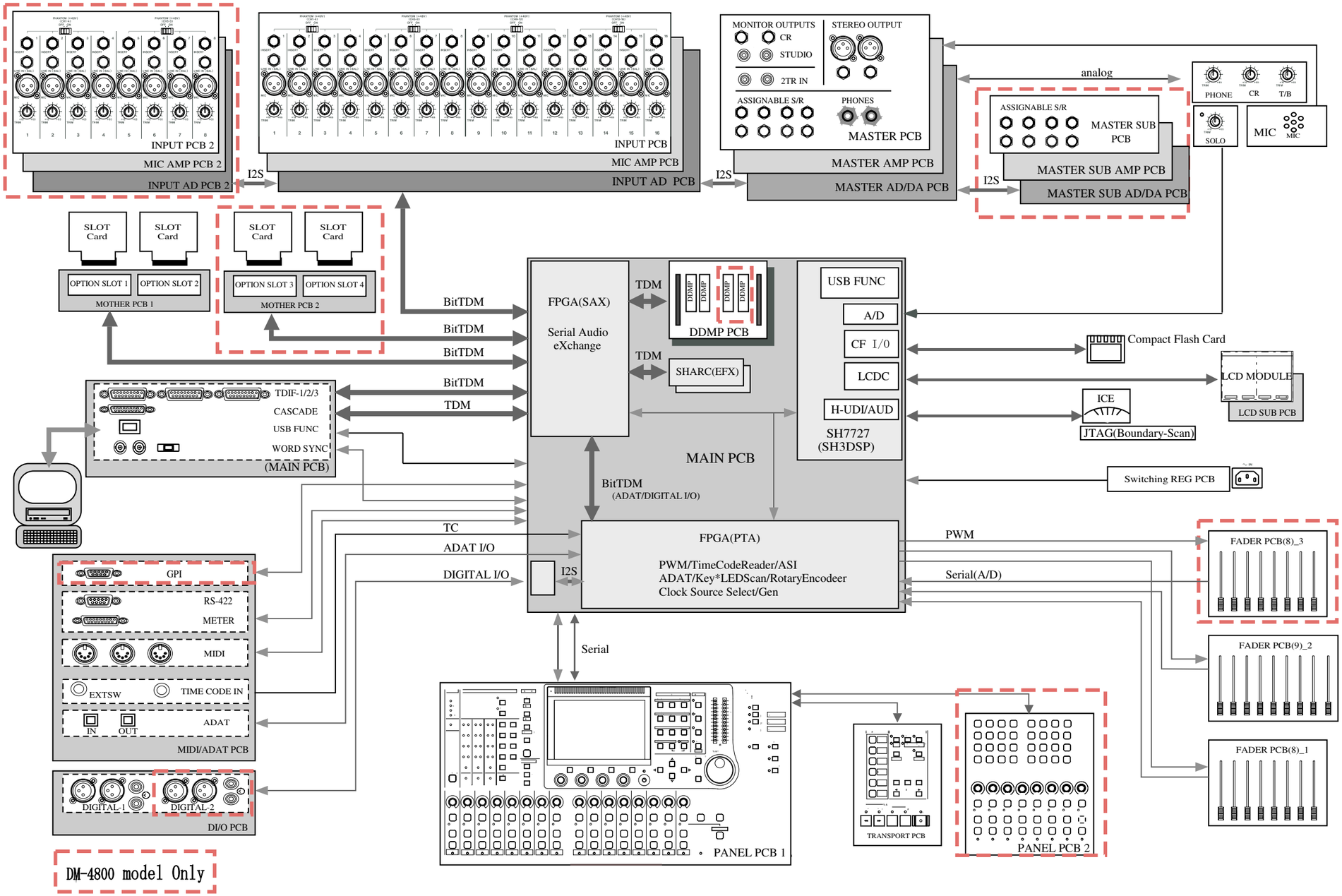


Whale Mixer Audio Block Diagram rev: 9

2. AUDIO LEVELDIAGRAM



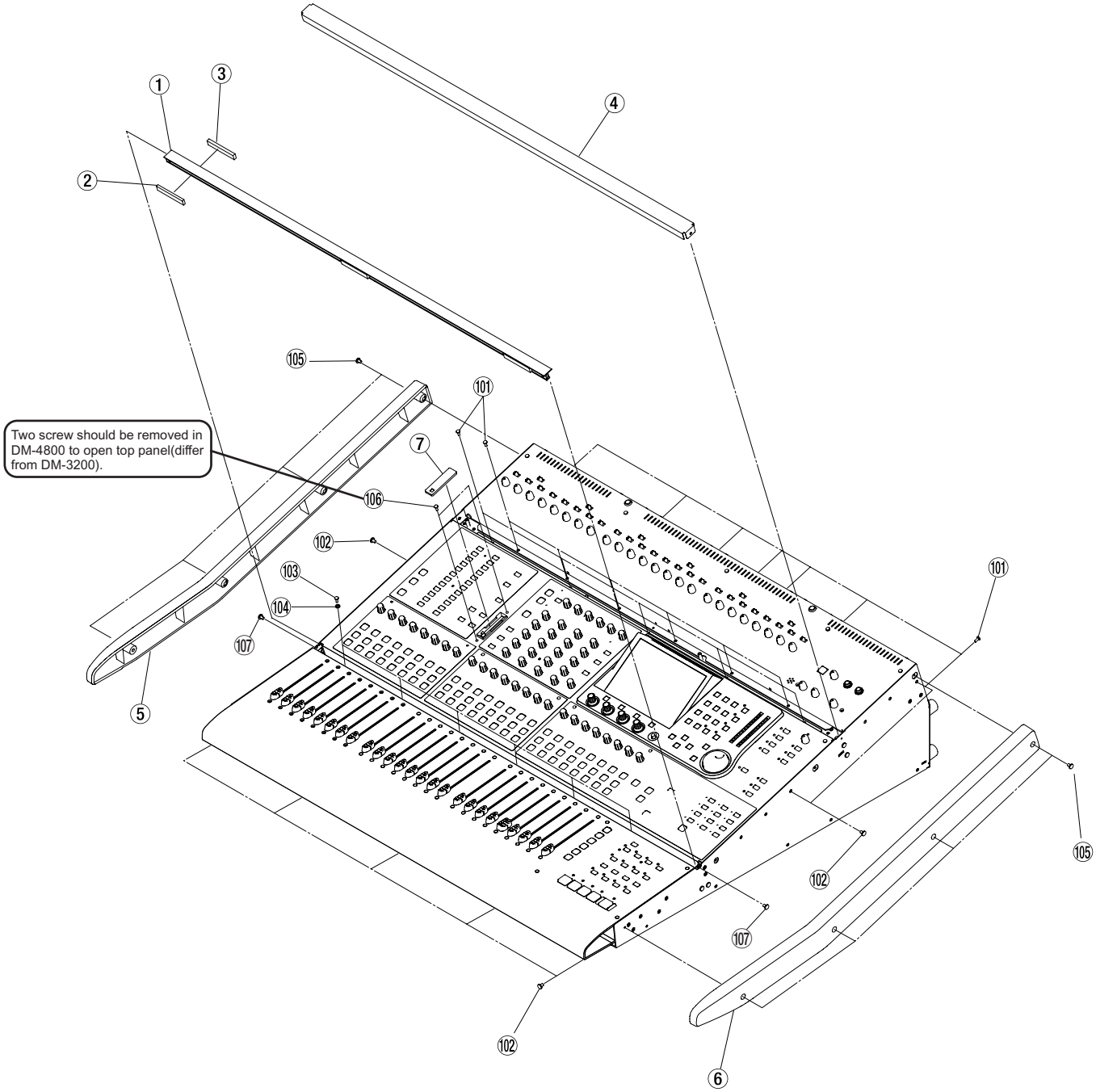
3. HARDWARE BROCKDIAGRAM



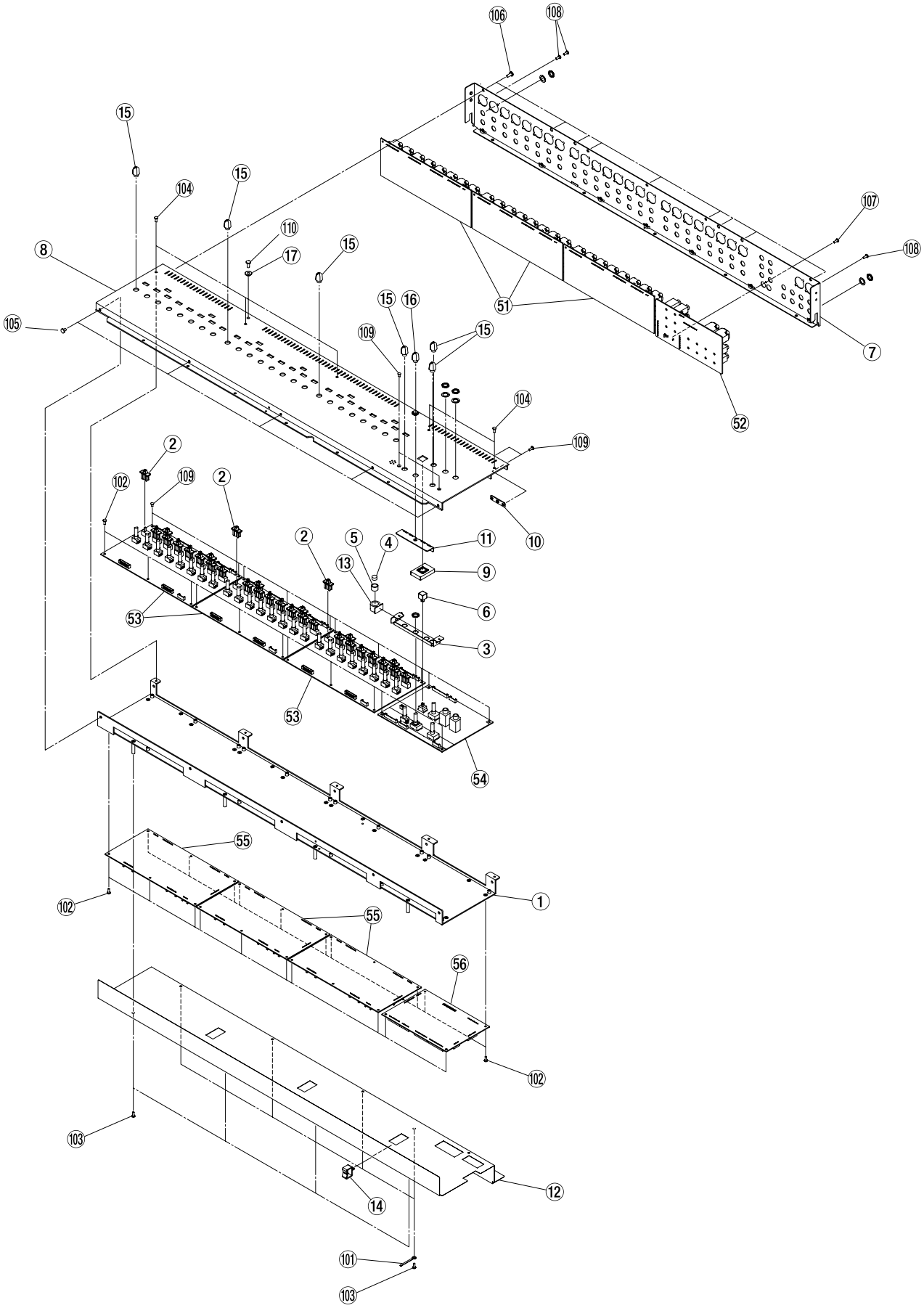
9. EXPLODED VIEWS AND PARTS LIST

分解図とパーツリスト

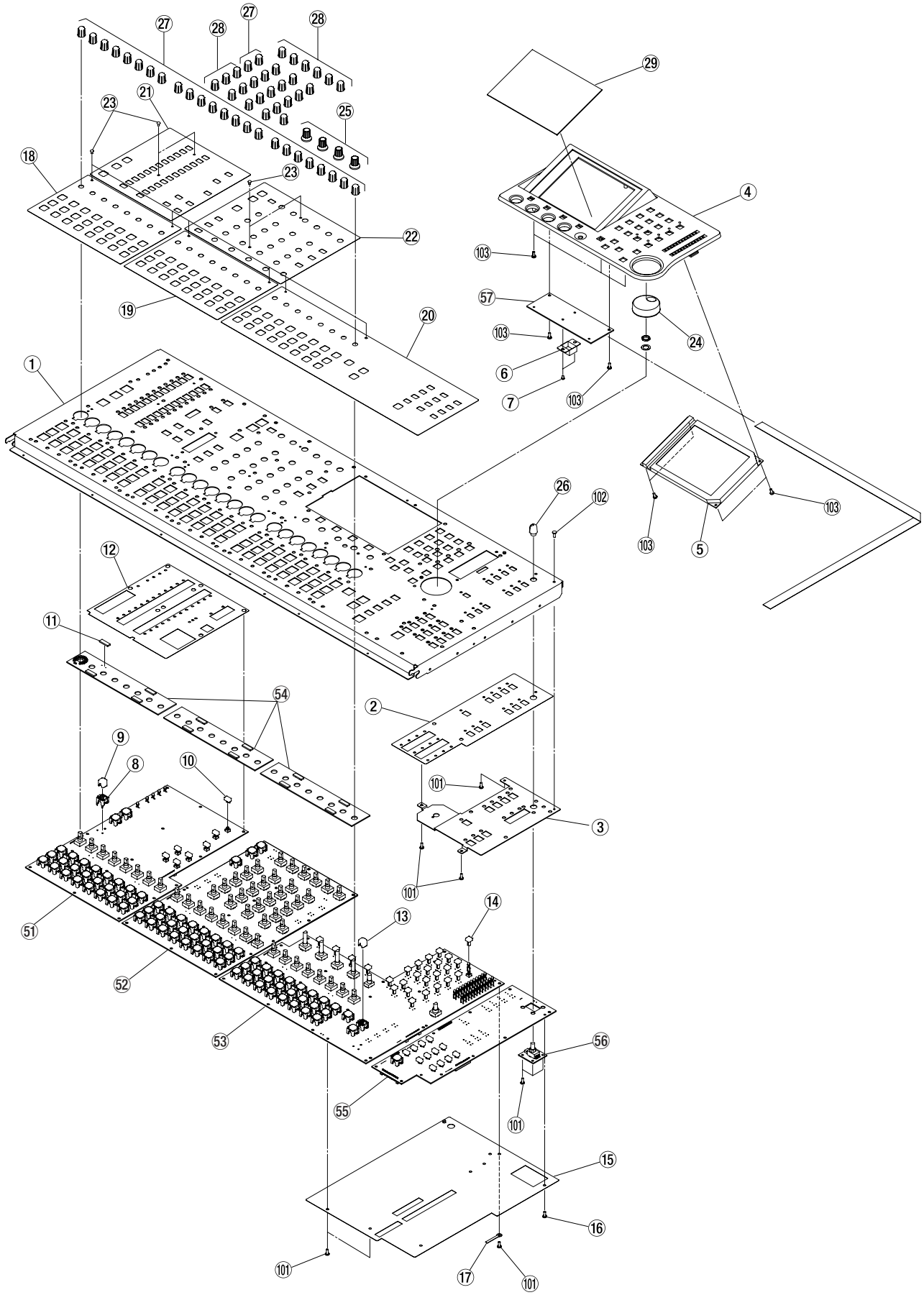
EXPLODED VIEW-1 (Exterior section)



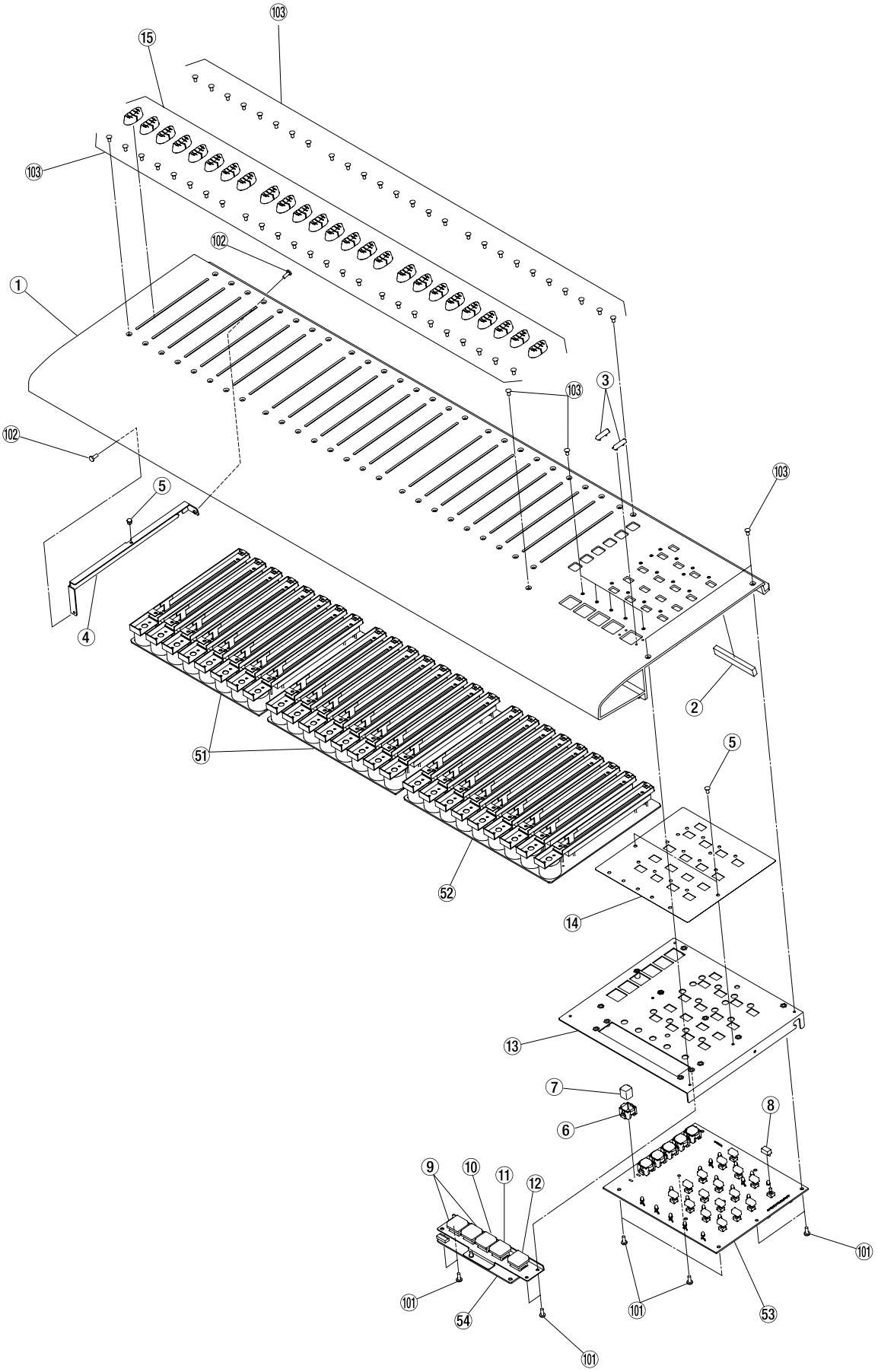
EXPLODED VIEW-2 (Analog Section)



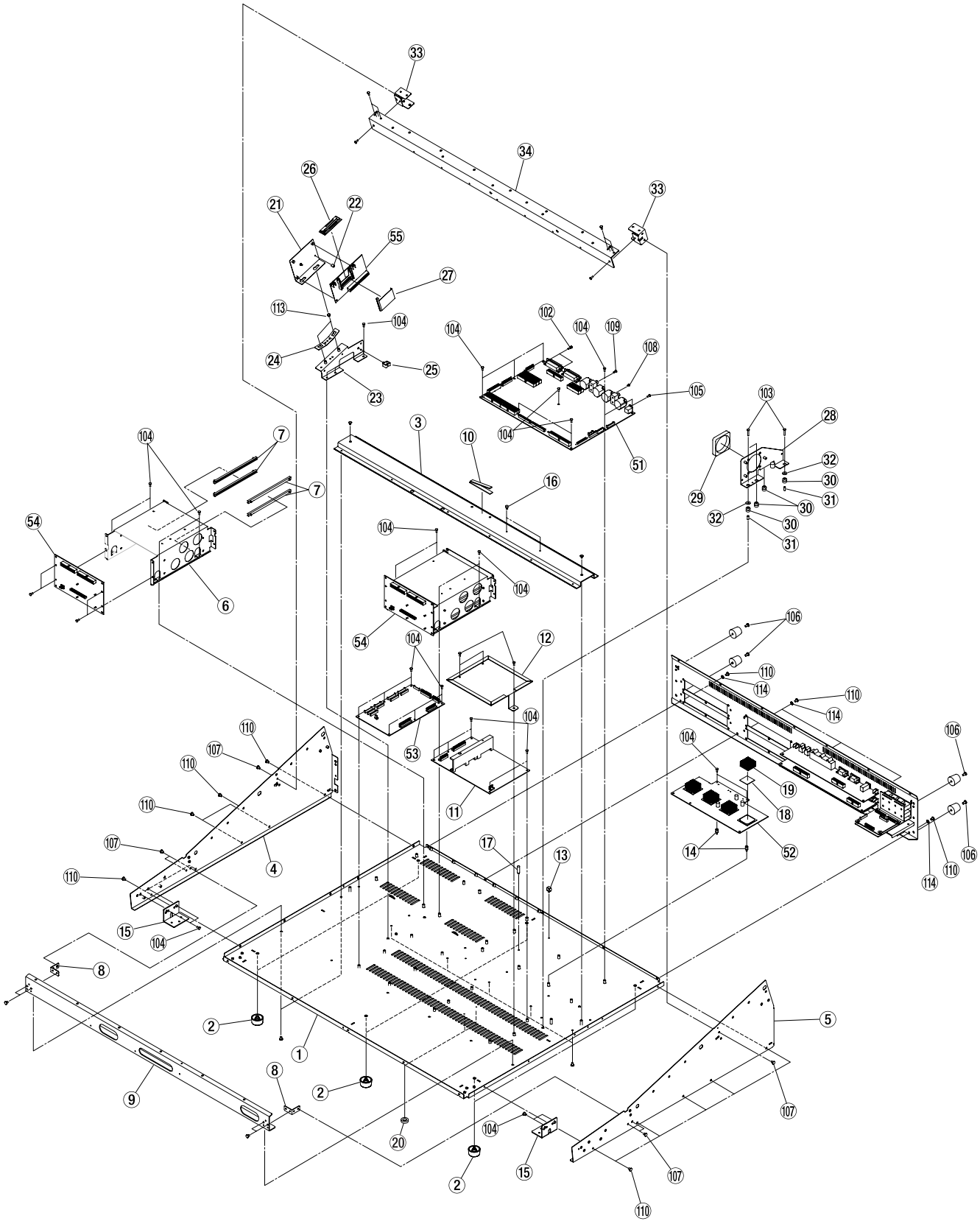
EXPLODED VIEW-3 (Panel section)



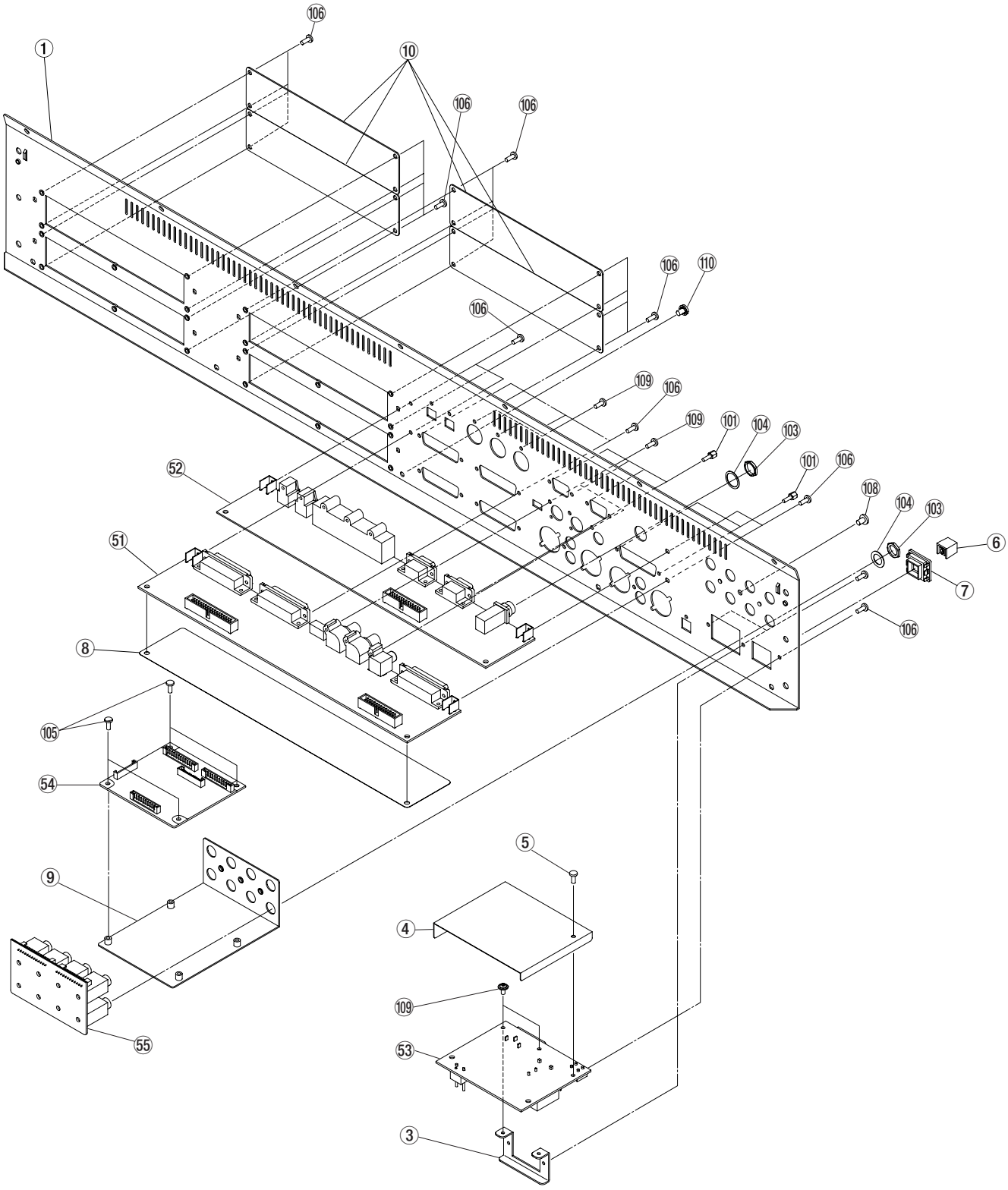
EXPLODED VIEW-4 (Fader section)



EXPLODED VIEW-5 (Bottom section)



EXPLODED VIEW-6 (Rear section)



EXPLODED VIEW-1 (Exterior Section)

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
1-1	M02270600A	PLATE,TOP 4800 G	
1-2	M01912400B	CUSHION,PLATE TOP G	
1-3	M02190400A	CUSHION,PLATE TOP UPPER	
1-4	M02392300B	COVER,TOP 4800 G	
1-5	M01911500A	SIDE PAD,L G	
1-6	M01911600A	SIDE PAD,R G	
1-7	M01469200A	COVER,DUST X-17 G	
	T0013630	CF CARD,CF128-231 G	ALL
	T0009050	CF CARD,HB26D032C8C	(old type>JPN,JEX,T/C,KOR,TM)
1-101	B00171406A	SCREW,BPA 3*6 FZB G	
1-102	B00171506A	SCREW,BPA 4*6FZB G	
1-103	B00197612A	SCREW,PPSU 3*12 FZB G	
1-104	M02457500A	WASHER,LOCK D3 FNI G	
1-105	B00171510A	SCREW BPA 4*10FZB G	
1-106	B00237406A	SCREW,BPA 3*6 FNI	
1-107	B00199712A	SCREW,BPB 3*12 FZB G	

EXPLODED VIEW-2 (Analog Section)

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
2-1	M02270400B	CHASSIS,ANALOG 4800 G	
2-2	M01912800A	KNOB,SLIDE N62 G	
2-3	M01911000B	BRACKET,MIC G	
2-4	3E038410	MIC CONDENSER,EM-100 G	
2-5	M02144100A	TAPE,MIC G	
2-6	M02393200A	BUTTON,11*11 H17.0 N66	
2-7	M02270200C	PANEL,ANALOG JACK 4800 G	
2-8	M02270300B	PANEL,ANALOG TOP 4800 G	
2-9	M02470600A	ESCUTCHEON,BTN G	
2-10	M01992000A	PLATE NUT,M4	
2-11	M02125000A	BRACKET,METER G	
2-12	M02270500B	SHIELD,ANALOG 4800 G	
2-13	3M024900	WIRE MOUNT,WL-1 G	
2-14	M0249750	WIRE HOLDER,CHR-11 G	
2-15	M01898802A	KNOB,TRIM N61/N64 G	
2-16	M01898805B	KNOB,TRIM BLK/N62 G	
2-17	M02113200B	SPACER,MU1000	
2-51		PCB Assy,INPUT JACK DM G	GATHER PCBA,INPUT JACK DM G (Refer tp page77)
2-52		PCB Assy,MSTR JACK DM48 G	GATHER PCBA,MSTR JACK DM48 G (Refer tp page79)
2-53		PCB Assy,INPUT AMP DM G	GATHER PCBA,INPUT AMP DM G (Refer tp page78)
2-54		PCB Assy,MST AMP DM48 G	GATHER PCBA,MST AMP DM48 G (Refer tp page80
2-55		PCB Assy,INPUT AD DM G	GATHER PCBA,INPUT AD DM G (Refer tp page78)
2-56		PCB Assy,MST ADDA DM48G	GATHER PCBA,MST ADA DM48 G (Refer tp page79)
2-101	3M0182200A	HAR NESS CLIP 4.2*7.5*70G	
2-102	B00174006A	SCREW,BPA 3*6 FZC G	
2-103	B00171406A	SCREW,BPA 3*6 FZB G	
2-104	B00237406A	SCREW,BPA 3*6 FNI	
2-105	B00171506A	SCREW,BPA 4*6FZB G	
2-106	B00171508A	SCREW,BPA 4*8FZB G	
2-107	B00199712A	SCREW,BPB 3*12 FZB G	
2-108	B00192708A	SCREW,BPP 3*8 FZB G	
2-109	B0025240	SCREW,FPA 3*6 FNI	
2-110	B00171510A	SCREW BPA 4*10FZB G	

EXPLODED VIEW-3 (Panel Section)

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
3-1	M02270100B	PANEL,TOP 4800 G	
3-2	M02147400B	SHEET,MONITOR LED GUIDE G	
3-3	M01910900B	BRACKET,MONITOR G	
3-4	M02520100A	ESCUTCHEON,LCD 4800 G	
3-5	E0134290	LCD,MG3224C3-SBF G	
3-6	M01911200A	SHIELD COVER,LCD G	
3-7	3M0155300A	PUSH RIVET SR345 G	
3-8	M01531610A	BUTTON,BASE(BLK) G	
3-9	M01531700C	BUTTON,CLEAR	
3-10	M01531800A	BUTTON,6010 N63 G	
3-11	M01912300A	CUSHION,RING LED G	
3-12	M02225700A	SHEET,ASSIGN LED GUIDE G	
3-13	M01531701C	BUTTON,RED	
3-14	M01912700C	BUTTON,8*8 N62 G	
3-15	M01922400D	PROTECTION SHEET,FFC G	
3-16	3M0155300A	PUSH RIVET SR345 G	
3-17	3M0182200A	HAR NESS CLIP 4.2*7.5*70G	
3-18	M02392400A	SHEET,TOP 1-8 4800 G	
3-19	M02392500A	SHEET,TOP 9-16 4800 G	
3-20	M02392600A	SHEET,TOP 17-ST 4800 G	
3-21	M02392700A	SHEET,ASSIGN 4800 G	
3-22	M02393300B	SHEET,MODULE 4800 G	
3-23	3M0213401A	RIVET,SR2.6-3.2 N65 G	
3-24	M01352900C	KNOB,JOG US-224	
3-25	M00630600C	KNOB,POD(N61) US-428	
3-26	M01898802A	KNOB,TRIM N61/N64 G	
3-27	M01534700A	KNOB,ENCORDER N64 G	
3-28	M01534720A	KNOB,ENCORDER N62 G	
3-29	M01912200A	WINDOW,LCD G	
3-51		PCB Assy,ASSIGN DM48 G	Refer tp page73
3-52		PCB Assy,MODULE DM G	Refer tp page74
3-53		PCB Assy,SCREEN DM G	Refer tp page75
3-54		PCB Assy,RING LED G	GATHER PCBA,RING LED DM G (Refer tp page75)
3-55		PCB Assy,MONITOR DM48 G	GATHER PCBA,MONITOR DM48 G (Refer tp page76)
3-56		PCB Assy,SOLO G	GATHER PCBA,MONITOR DM48 G (Refer tp page76)
3-57		PCB Assy,LCD SUB DM G	GATHER PCBA,SYNC DM G (Refer tp page69)
3-101	B00174006A	SCREW,BPA 3*6 FZC G	
3-102	B00237406A	SCREW,BPA 3*6 FNI	
3-103	B00198906A	SCREW,BPP 2.6*6 FZC G	

EXPLODED VIEW-4 (Fader Section)

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
4-1	M02270000C	PANEL,FADER 4800 G	
4-2	M01912400B	CUSHION,PLATE TOP G	
4-3	M00207800A	ESCUTCHEON GUARD	
4-4	M01910700C	BRACKET,PANEL FDR G	
4-5	3M0213401A	RIVET,SR2.6-3.2 N65 G	
4-6	M01531610A	BUTTON,BASE(BLK) G	
4-7	M01531700C	BUTTON,CLEAR	
4-8	M01531800A	BUTTON,6010 N63 G	
4-9	3M0217700A	BUTTON REW G	
4-10	3M0217800A	BUTTON STOP G	
4-11	3M0217900A	BUTTON PLAY G	
4-12	3M0218000A	BUTTON REC G	
4-13	M02521200A	BRACKET,LAYER 4800 G	
4-14	M02147500A	SHEET,LAYED LED GUIDE G	
4-15	M01832300C	KNOB,FADER PATING G	
4-51		PCB Assy,FADER FE8 G	(Refer tp page84/85)
4-52		PCB Assy,FADER RM FW G	(Refer tp page81/82)
4-53		PCB Assy,LAYER DM G	GATHER PCBA,LAYER DM G (Refer tp page73)
4-54		PCB Assy,TRANSPORT DM G	GATHER PCBA,LAYER DM G (Refer tp page73)
4-101	B00171406A	SCREW,BPA 3*6 FZB G	
4-102	B00198606A	SCREW,BPS 3*6 FZB G	
4-103	B0025240	SCREW,FPA 3*6 FNI	

EXPLODED VIEW-5 (Bottom Section)

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
5-1	M02269500B	CHASSIS,BOTTOM 4800 G	
5-2	3M0187400A	FOOT FF015 G	
5-3	M02269600A	FRAME,A 4800 G	
5-4	M01909500E	CHASSIS,SIDE L 3200 G	
5-5	M01909600E	CHASSIS,SIDE R 3200 G	
5-6	M01910400A	BRACKET,SLOT G	
5-7	3M024880	CARD GUIDE,CG-600 G	
5-8	M01910500A	BRACKET,FRAME B G	
5-9	M02269700B	FRAME,B 4800 G	
5-10	3M0250200A	CABLE MOUNT,FCT-1 G	
5-11	E00918800C	SW POWER UNIT,TA-01	
5-12	M01912600A	COVER,SWPWR G	
5-13	M0249740	SPACER,LIO-10.5 G	
5-14	M01922700A	SPACER,DDMP G	
5-15	M02155600A	BRACKET,SIDE G	
5-16	3M024890	SPACER SUPPORT,DCB-5 G	
5-17	3M0250100A	SPACER SUPPORT,LBS-19 G	
5-18	M02214800A	SHEET,8530AD 27*27 G	
5-19	M01922600B	HEATSINK,DDMP G	
5-20	3M0209100A	SCREW COVER G	

EXPLODED VIEW-5 (Bottom Section)

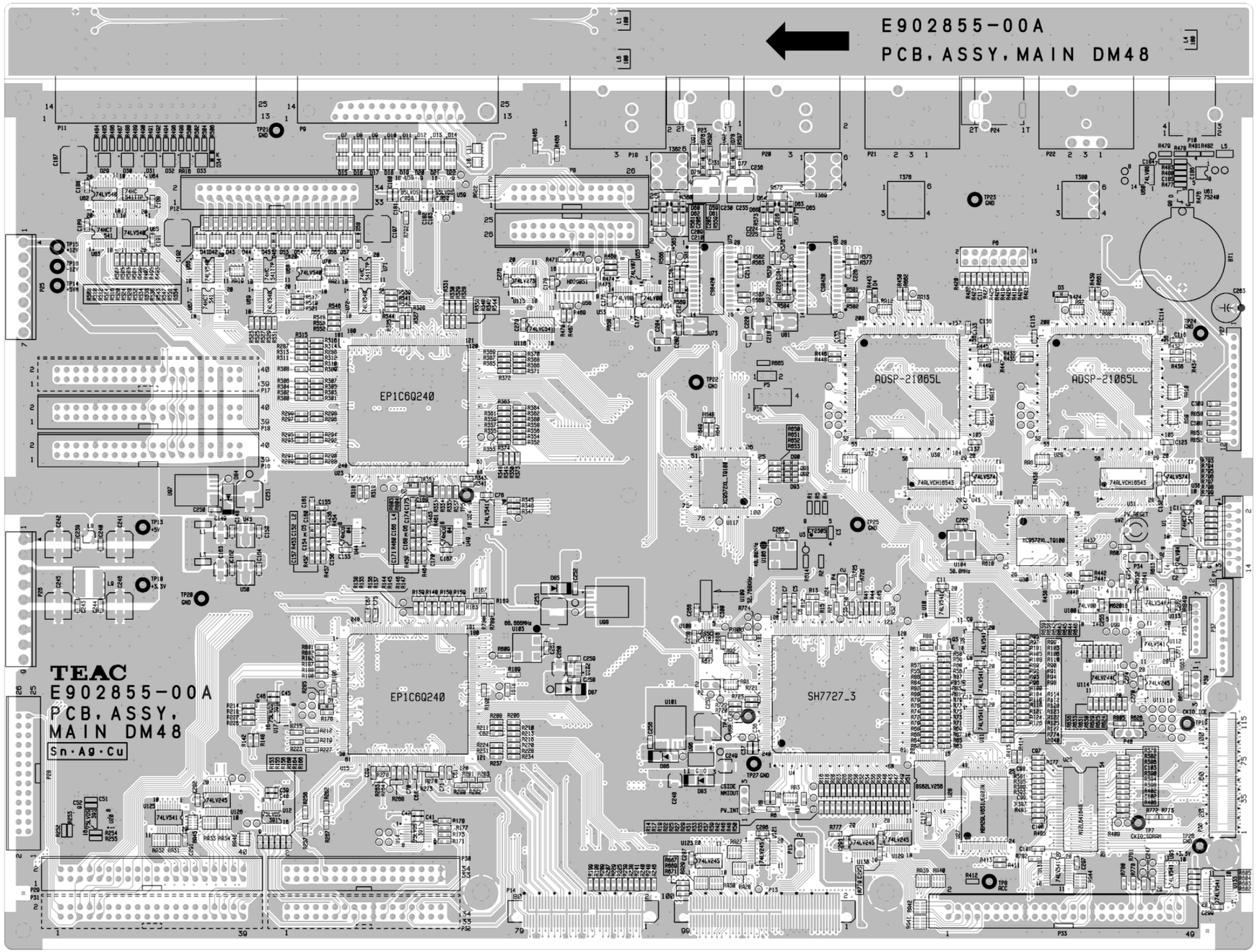
REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
5-21	M02392800A	HOLDER,CF 4800 G	
5-22	3M024890	SPACER SUPPORT,DCB-5 G	
5-23	M02392900A	BASE,CF 4800 G	
5-24	M02437800A	SPRING,BASE CF G	
5-25	M0249750	WIRE HOLDER,CHR-11 G	
5-26	M01443300A	ESCUTCHEON,CF CARD G	
5-27	3M0130300B	CF,SLOT 752D-ESC00003 G	
5-28	M02393100A	BRACKET,FAN 4800 G	
5-29	M02440300A	FAN MOT ASSY,MF52A12L007 G	
5-30	M0192800	BUSHING,DANPER HED1111	
5-31	M01967600A	COLLAR,BUSH D4(D3)*L10 G	
5-32	3M0060100A	PLAIN WASHER,M3 D11.5	
5-33	M01910600A	BRACKET,FRAME C G	
5-34	M02269800B	FRAME,C 4800 G	
5-51		PCB Assy,MAIN DM48 G	Refer to page 66/67
5-52		PCB Assy,DDMP4 DM48 G	Refer to page 71/72
5-53		PCB Assy,POWER SUB DM48 G	GATHER PCBA,PWR SUB DM48 G (Refer tp page 70)
5-54		PCB Assy,MOTHER DM G	GATHER PCBA,MOTHER DM G (Refer tp page 68)
		PCB Assy,MOTHER DM48 G	GATHER PCBA,MOTHER DM48 G (Refer tp page 68)
5-55		PCB Assy,CF CARD DM G	GATHER PCBA,PWR SUB DM48 G (Refer tp page 70)
5-57	3E026350G	BATTERY,CR2032 BULK G	
5-101	3B0013000A	D-SUB SCREW 003-HEX G	
5-102	3B0013300A	D-SUB SCREW,HEX-26/440 G	
5-103	3M0131000A	NUT, M12X2.3 G	
5-104	3M0131100B	PLAIN WASHER M12 BLK G	
5-105	B00198316A	SCREW BPS M*16 FZC	
5-106	B00174006A	SCREW,BPA 3*6 FZC G	
5-107	B00171406A	SCREW,BPA 3*6 FZB G	
5-108	B00171512A	SCREW,BPA 4*12FZB G	
5-109	B00171506A	SCREW,BPA 4*6FZB G	
5-110	B00199606A	SCREW,BPB 2.6*6 FZB G	
5-111	B00199708A	SCREW,BPB 3*8 FZB G	
5-112	B00199808A	SCREW,BPB 4*8 FZB G	
5-113	B00198606A	SCREW,BPS 3*6 FZB G	
5-114	B00174812A	SCREW,PPA 4*12 FZC G	
5-115	B00171006A	SCREW,PPAU 3*6 FZB G	
5-116	3M0209300A	WASHER,LOCK4	

EXPLODED VIEW-6 (Rear Section)

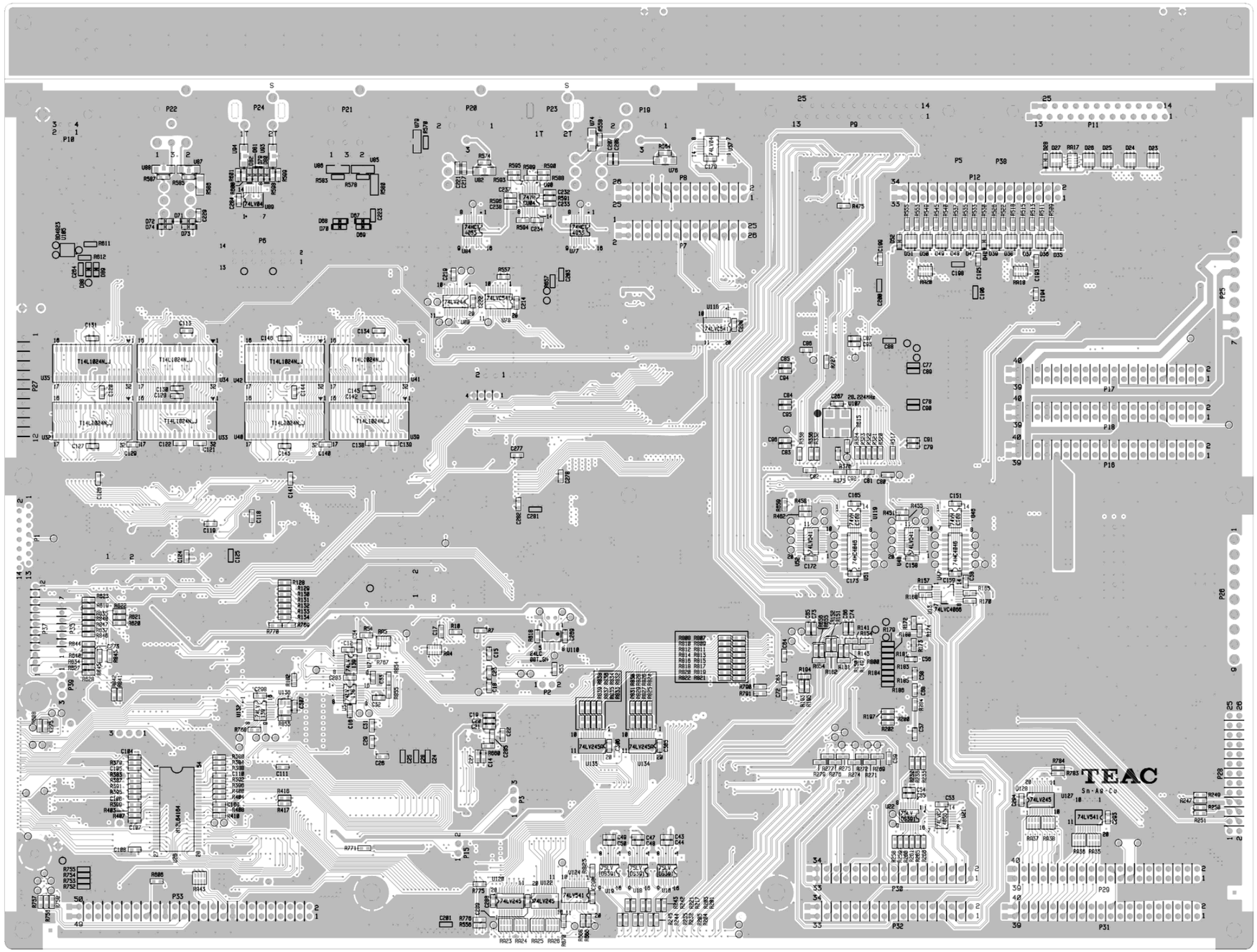
REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
6-1	M02269900C	PANEL,REAR 4800 G	
6-2	3M024870	FOOT,FFT-4 G	
6-3	3M0203300B	BRACKET,PWRSW DAX1000 G	
6-4	M01912500A	INSUL SHEET,INLET G	
6-5	3M0155300A	PUSH RIVET SR345 G	
6-6	5801503800	BUTTON EJECT(P-N15-A)	
6-7	M01510000A	ESCUTCHEON,POWER G	
6-8	M02536100A	SHEET,PROTECTION SYNC G	
6-9	M02393000A	BRACKET,EXT IO 4800 G	
6-10	M02101500B	BLANK PANEL,SLOT G	
6-51		PCB Assy,SYNC DM G	GATHER PCBA,SYNC DM G (Refer tp page 69)
6-52		PCB Assy,MIDI DM G	GATHER PCBA,SYNC DM G (Refer tp page 69)
6-53		PCB Assy,INLET DM48 G	GPCBA,MSTR JACK DM48 G (Refer tp page 79)
6-54		PCB ASSY, EXT ADDA DM48	GATHER PCBA,EXT IO DM48 G (Refer tp page 81)
6-55		PCB ASSY,EXT JACK DM48	GATHER PCBA,EXT IO DM48 G (Refer tp page 81)
6-101	3B0013000A	D-SUB SCREW 003-HEX G	CASCADE,,RS-422,GPI,METER
6-102	3B0013300A	D-SUB SCREW,HEX-26/440 G	TDIF-1
6-103	3M0131000A	NUT, M12X2.3 G	
6-104	3M0131100B	PLAIN WASHER M12 BLK G	
6-105	B00174006A	SCREW,BPA 3*6 FZC G	
6-106	B00171406A	SCREW,BPA 3*6 FZB G	
6-107	B00171512A	SCREW,BPA 4*12FZB G	
6-108	B00171506A	SCREW,BPA 4*6FZB G	
6-109	B00199708A	SCREW,BPB 3*8 FZB G	
6-110	B00199808A	SCREW,BPB 4*8 FZB G	

10. PC BOARDS AND PARTS LIST
基板図とパーツリスト

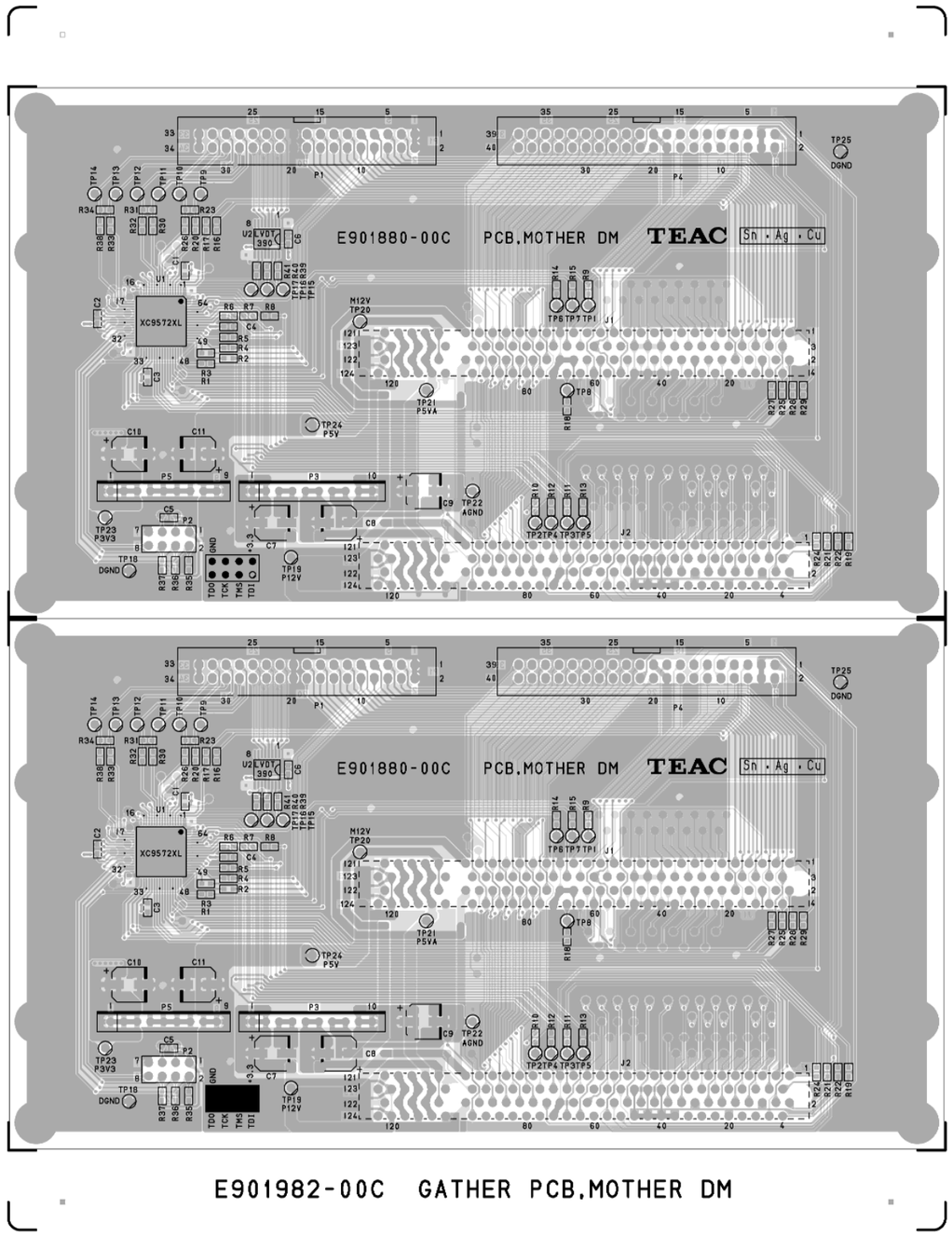
PCB ASSY, MAIN DM48 G (SIDE A)



PCB ASSY, MAIN DM48 G (SIDE B)

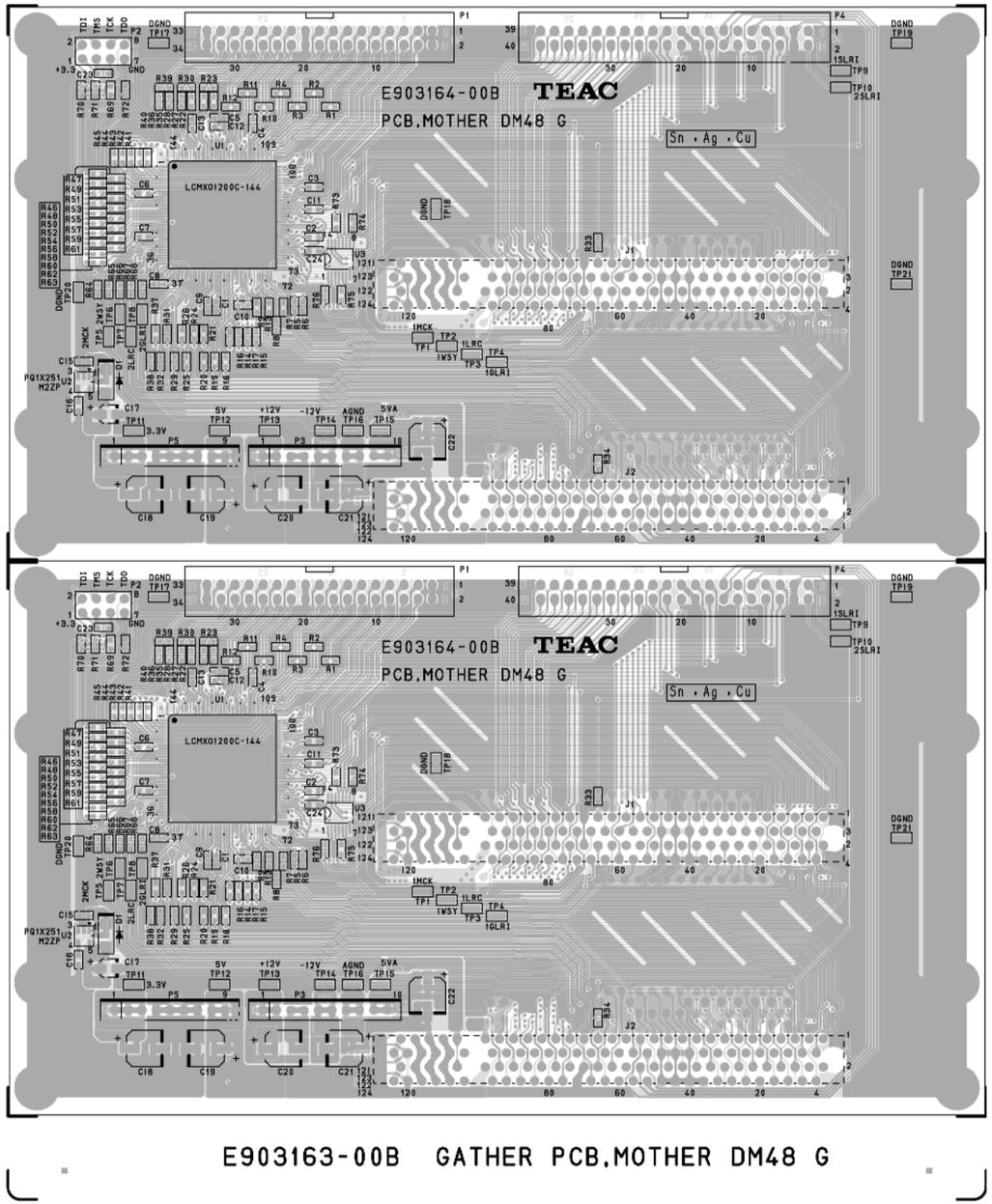


GATHER PCB ASSY, MOTHER DM G



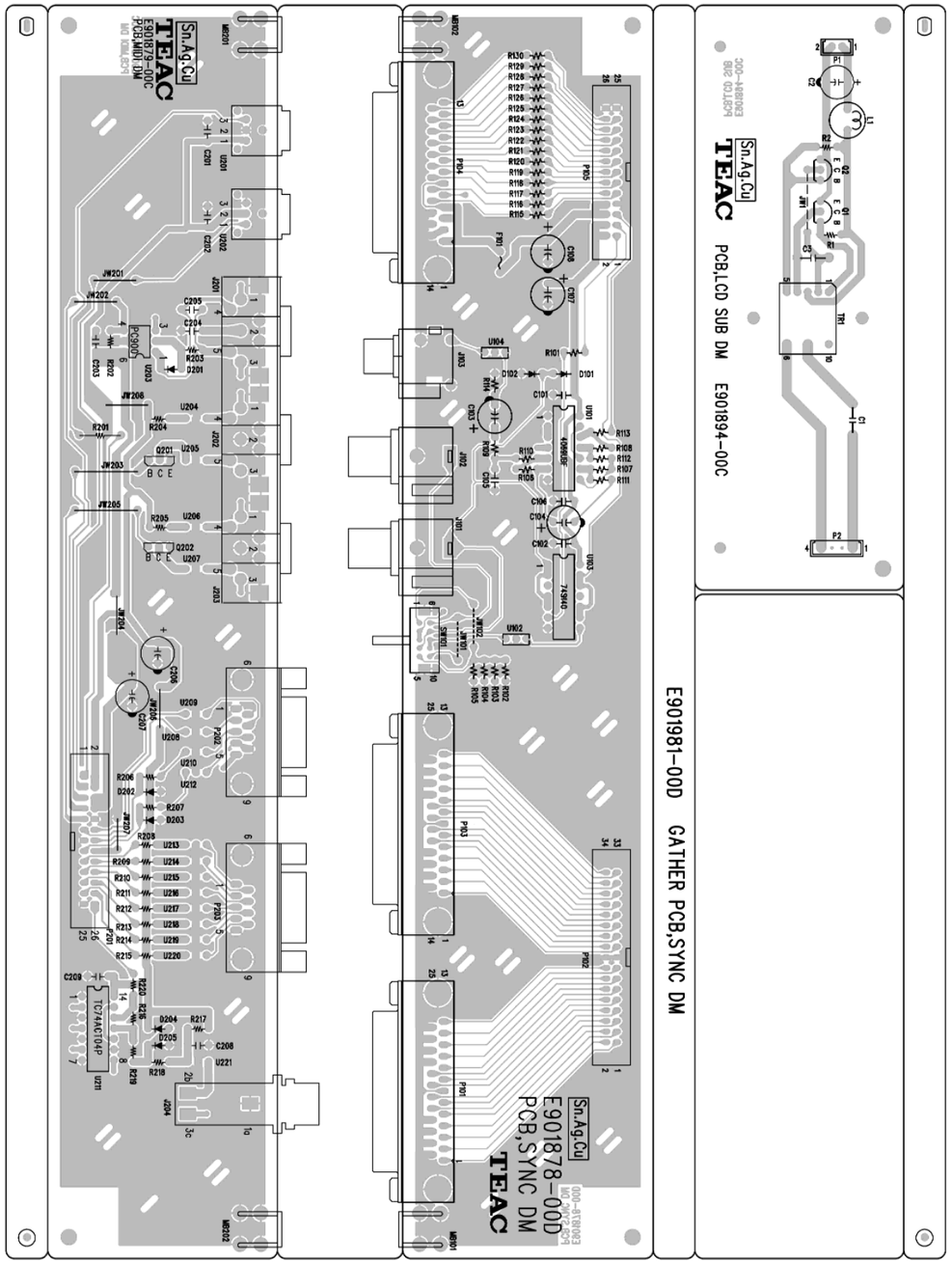
E901982-00C GATHER PCB,MOTHER DM

GATHER PCB ASSY, MOTHER DM48 G

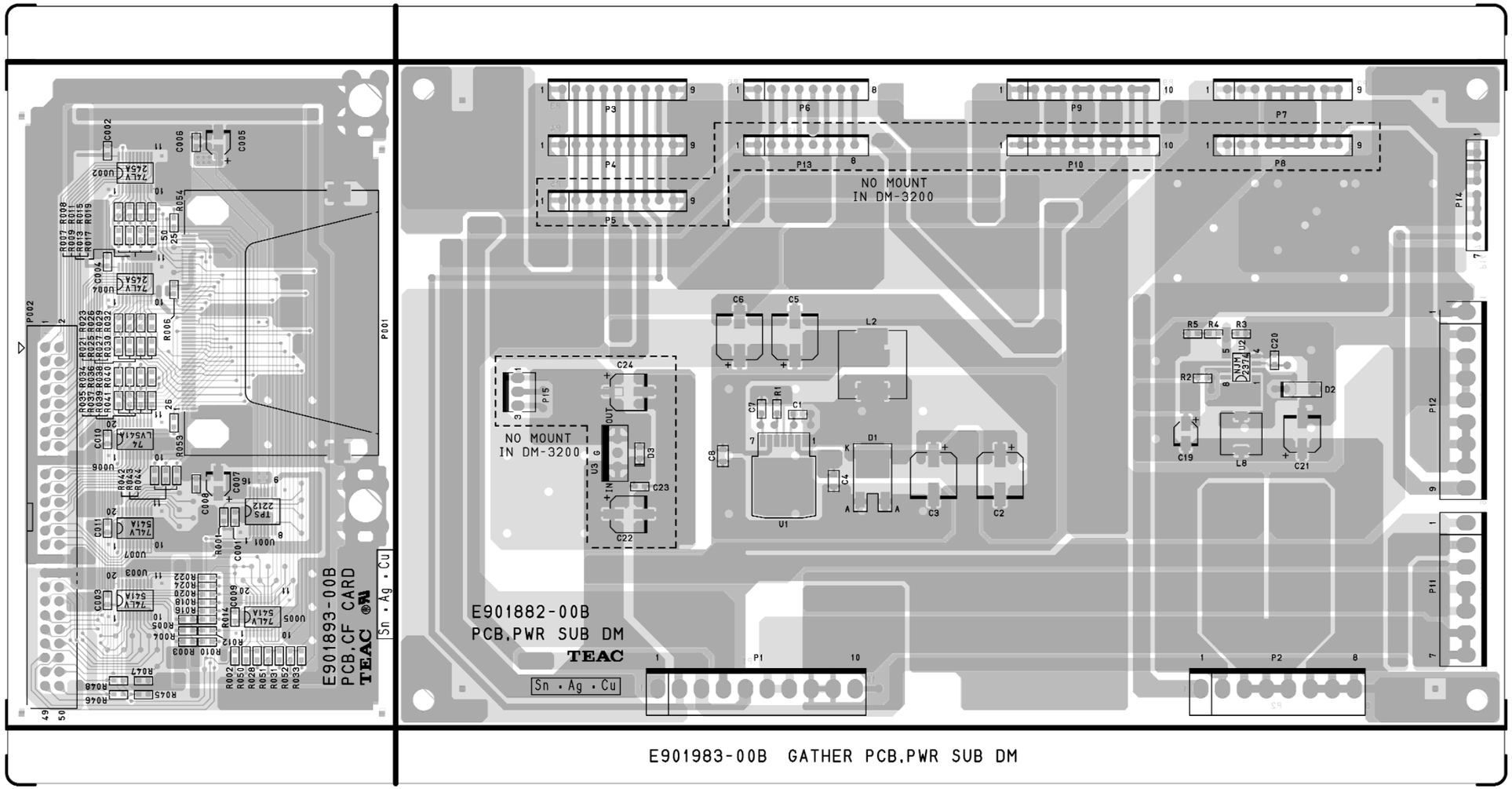


E903163-00B GATHER PCB,MOTHER DM48 G

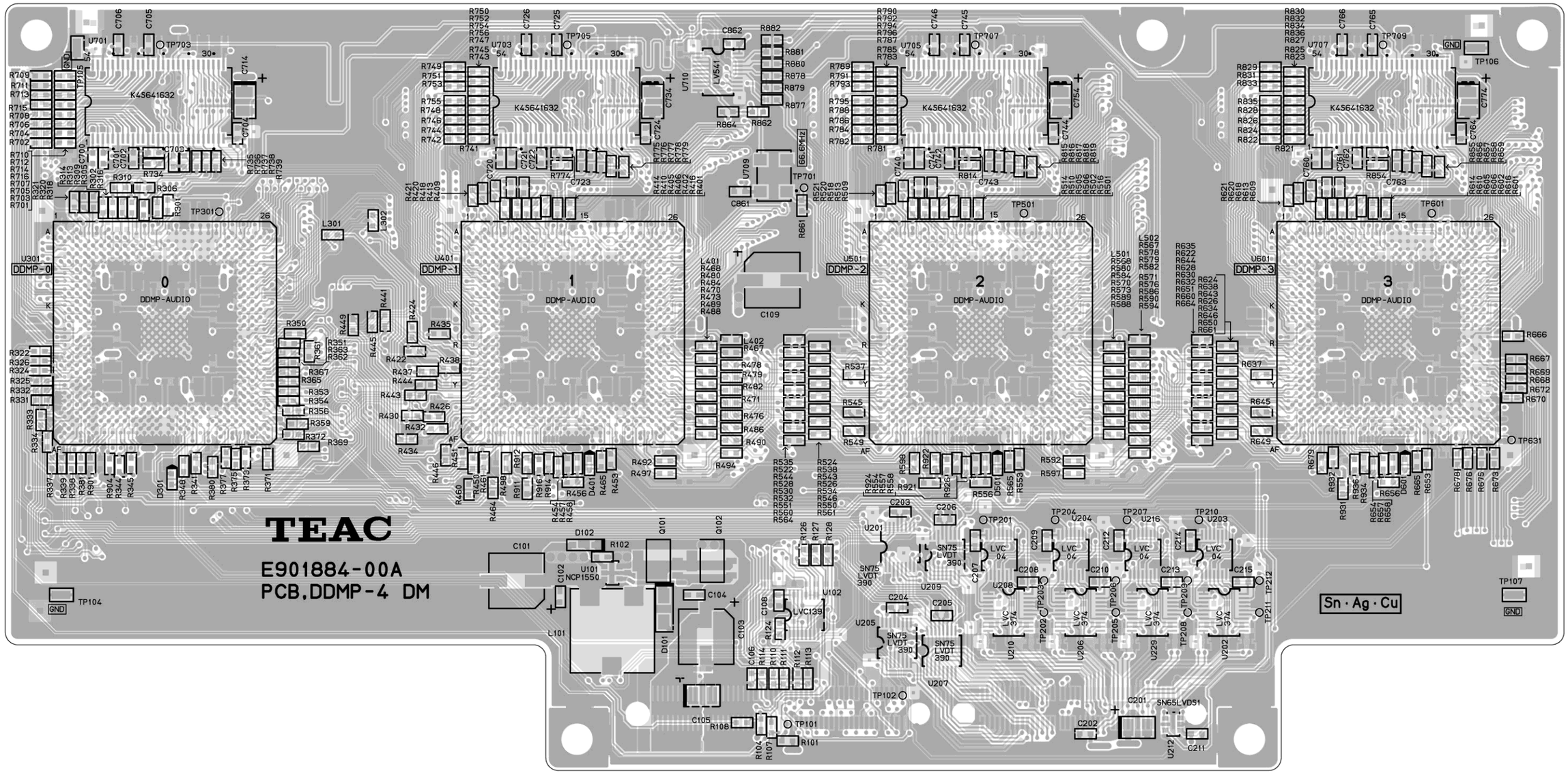
GATHER PCB ASSY, SYNC DM G (PCB SYNC DM/ PCB MIDI DM/ PCB LCD SUB DM)



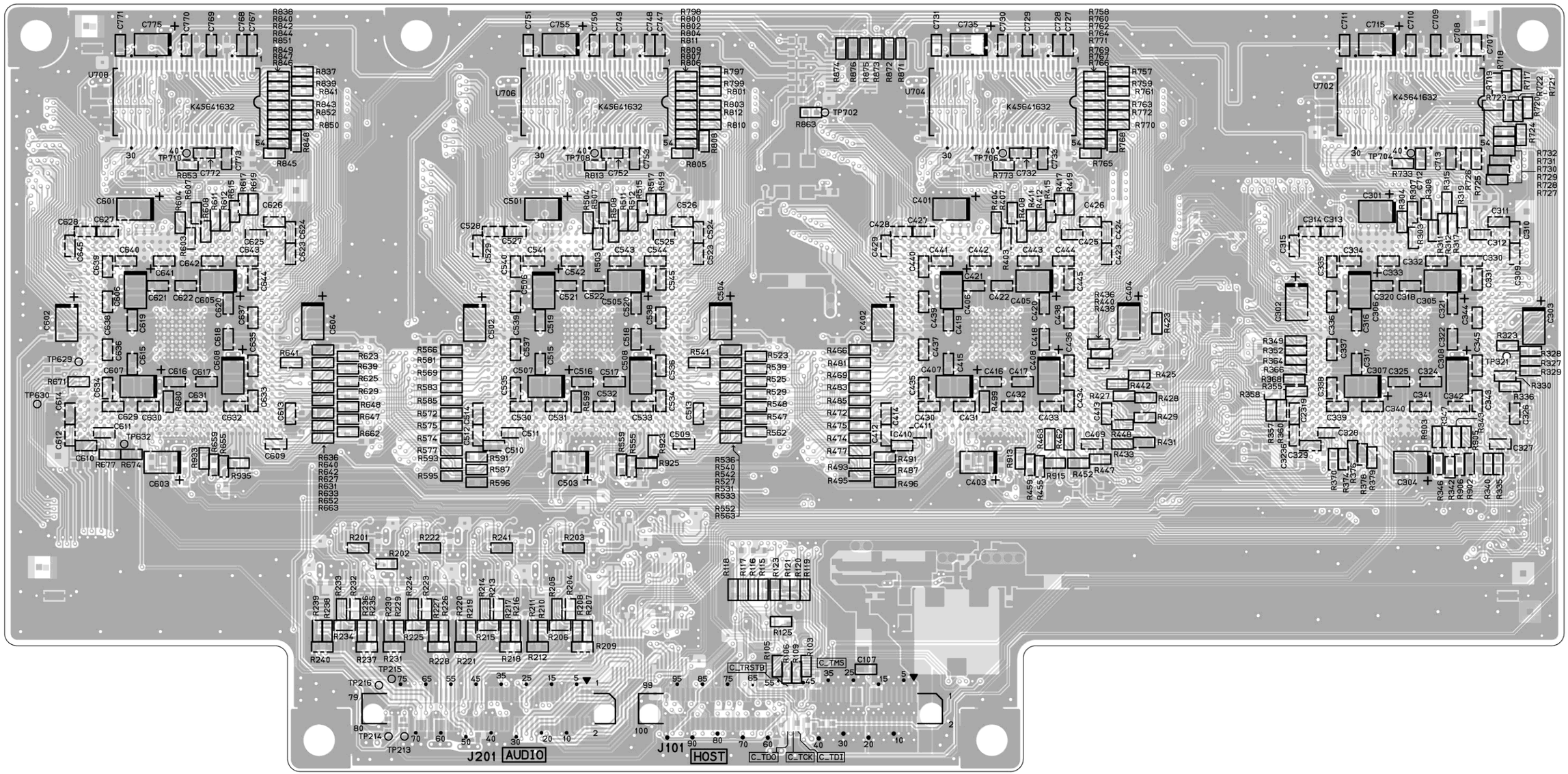
GATHER PCB ASSY, PWR SUB DM48 G (PCB PWR SUB/ PCB CF CARD)



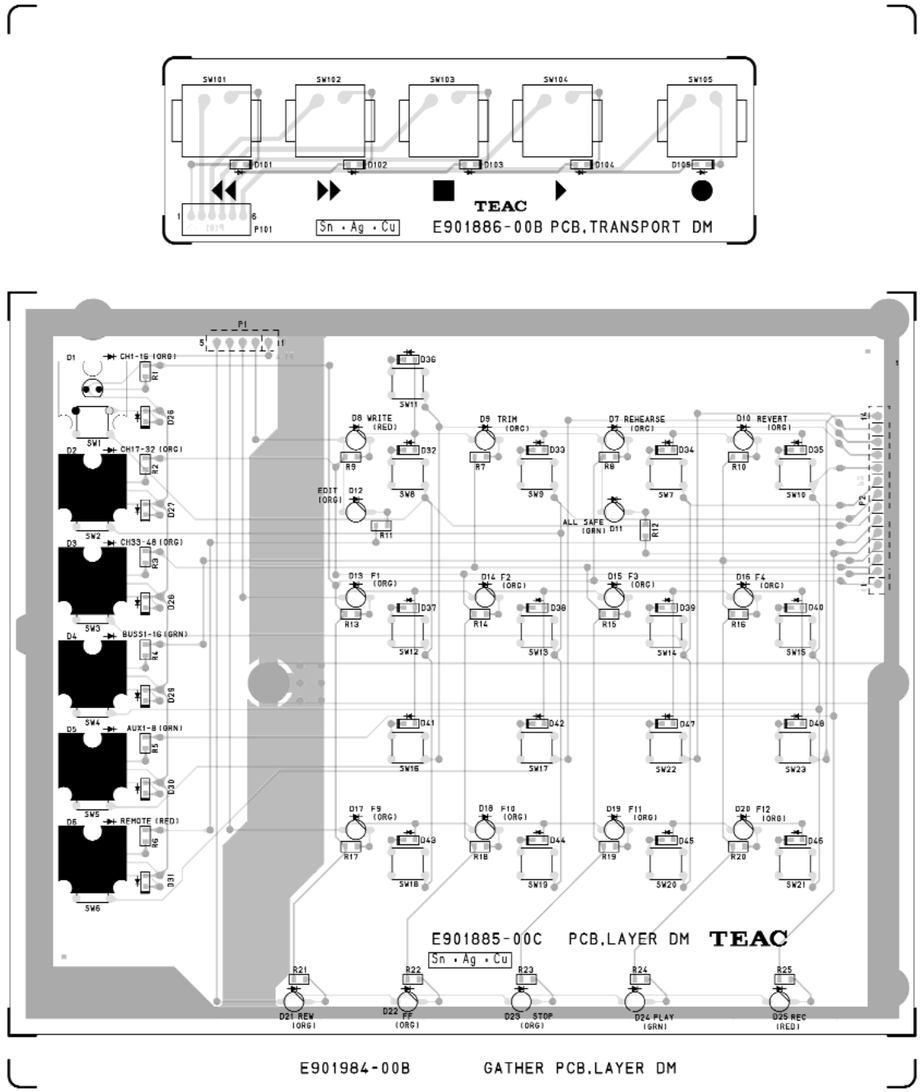
PCB ASSY, DDMP4 DM G (SIDE A)



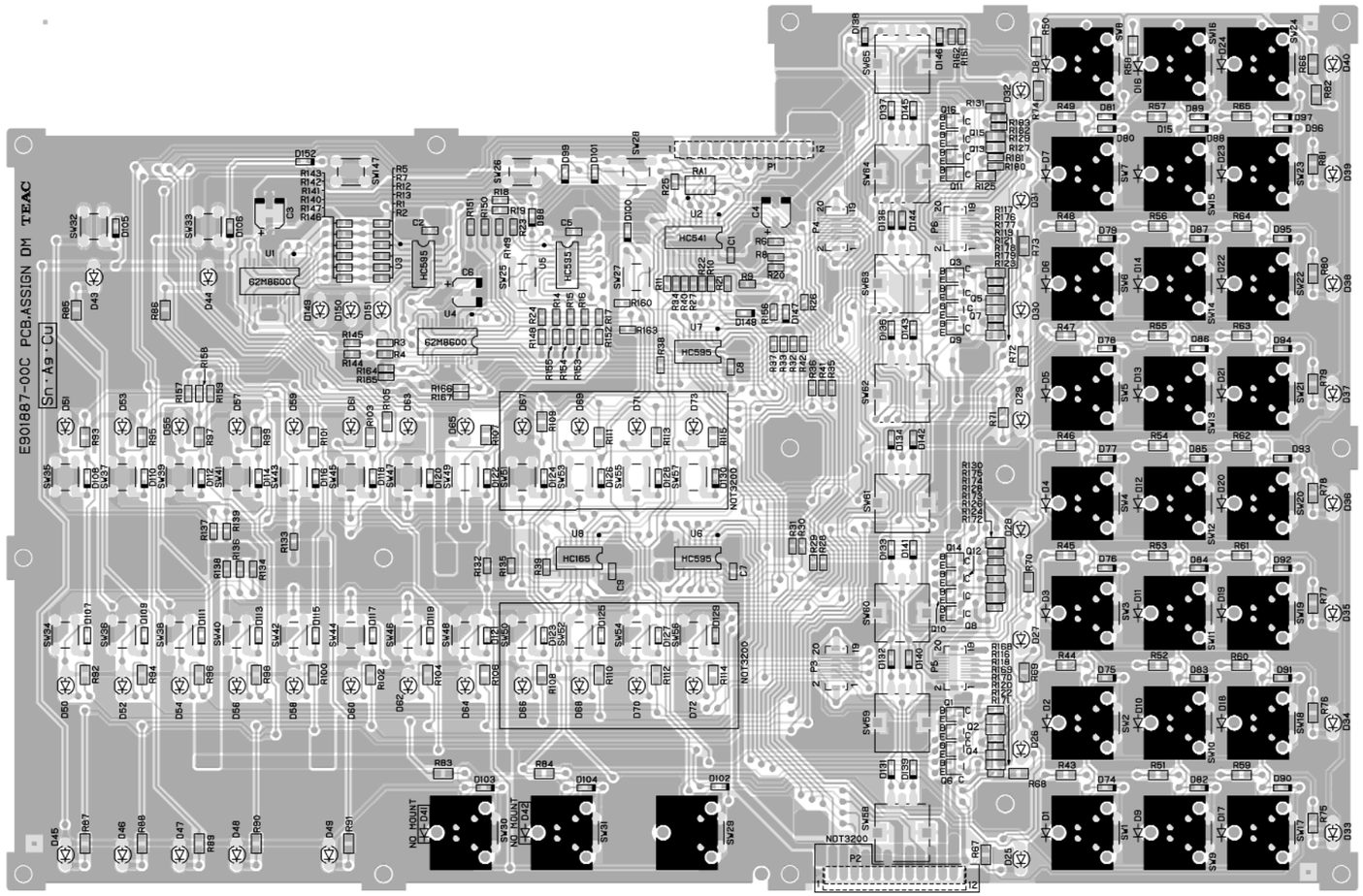
PCB ASSY, DDMP4 DM G (SIDE B)



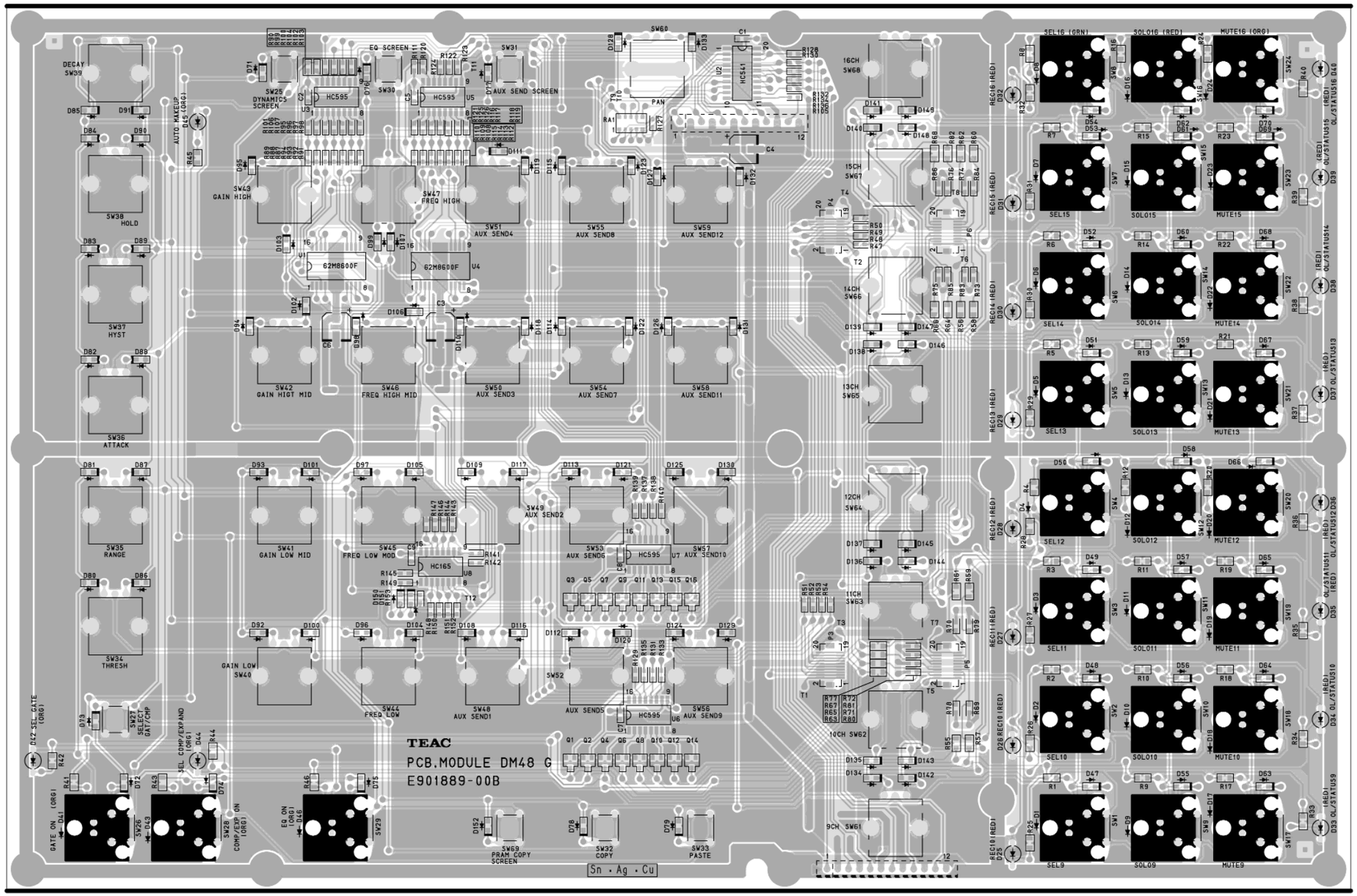
GATHER PCB ASSY, LAYER DM G (PCB LAYER/ PCB TRANSPORT)



PCB ASSY, ASSIGN DM48 G

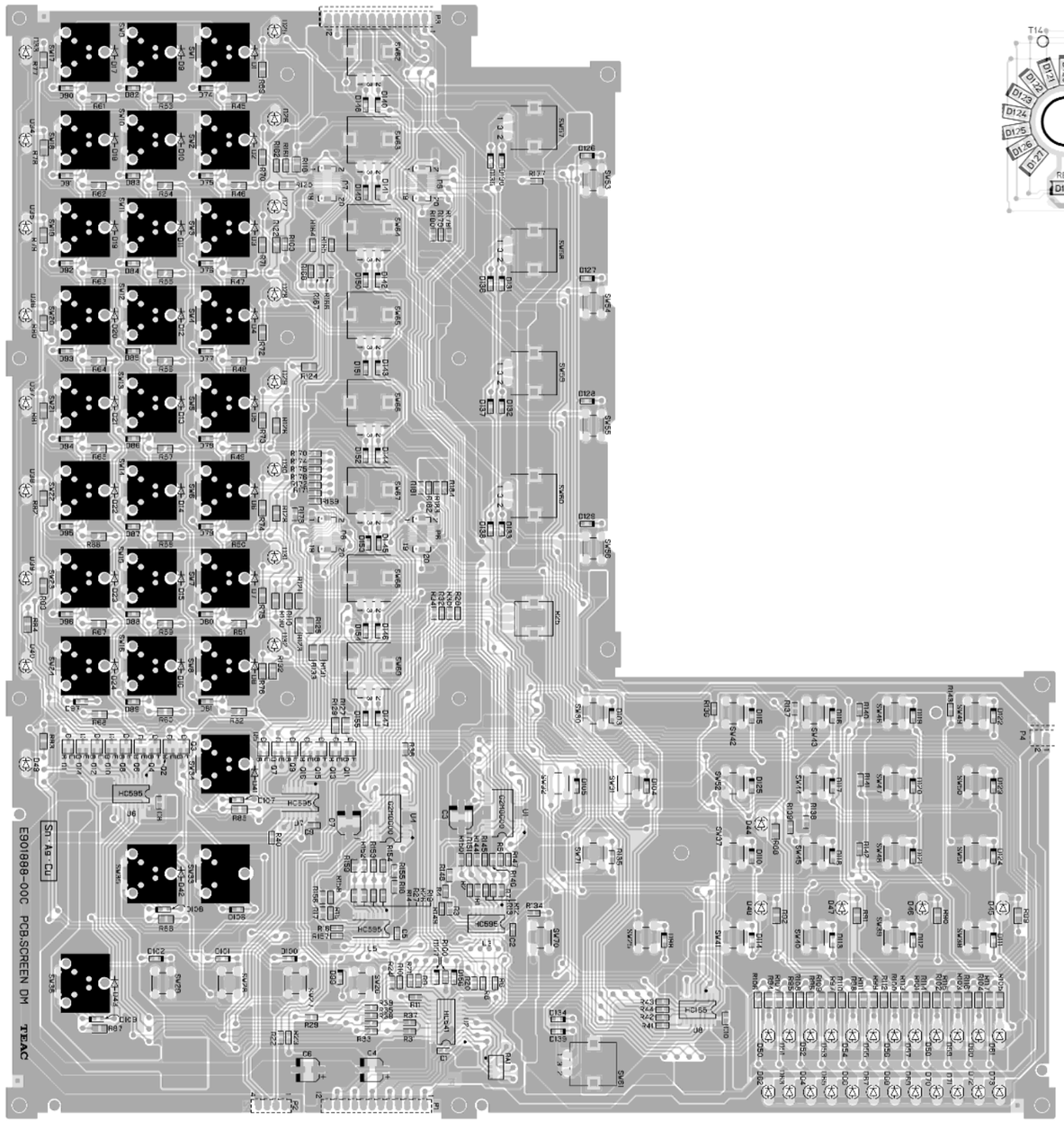


PCB ASSY, MODULE DM G

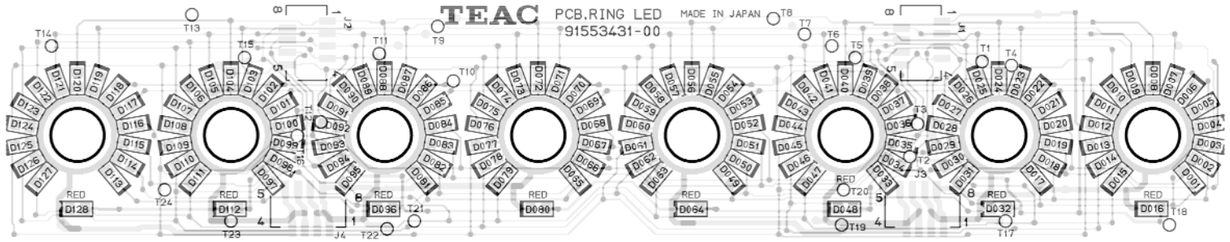


Aside Silk E901889-00B PCB,MODULE DM48 G

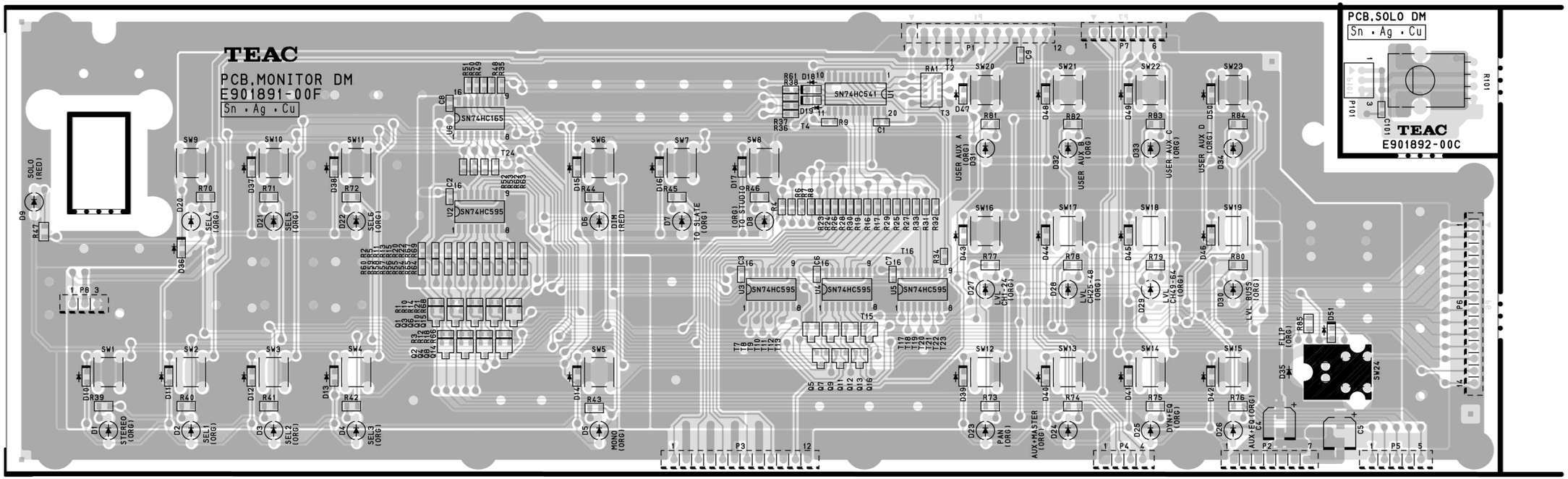
PCB ASSY, SCREEN DM G



GATHER PCB ASSY, RING LED DM G

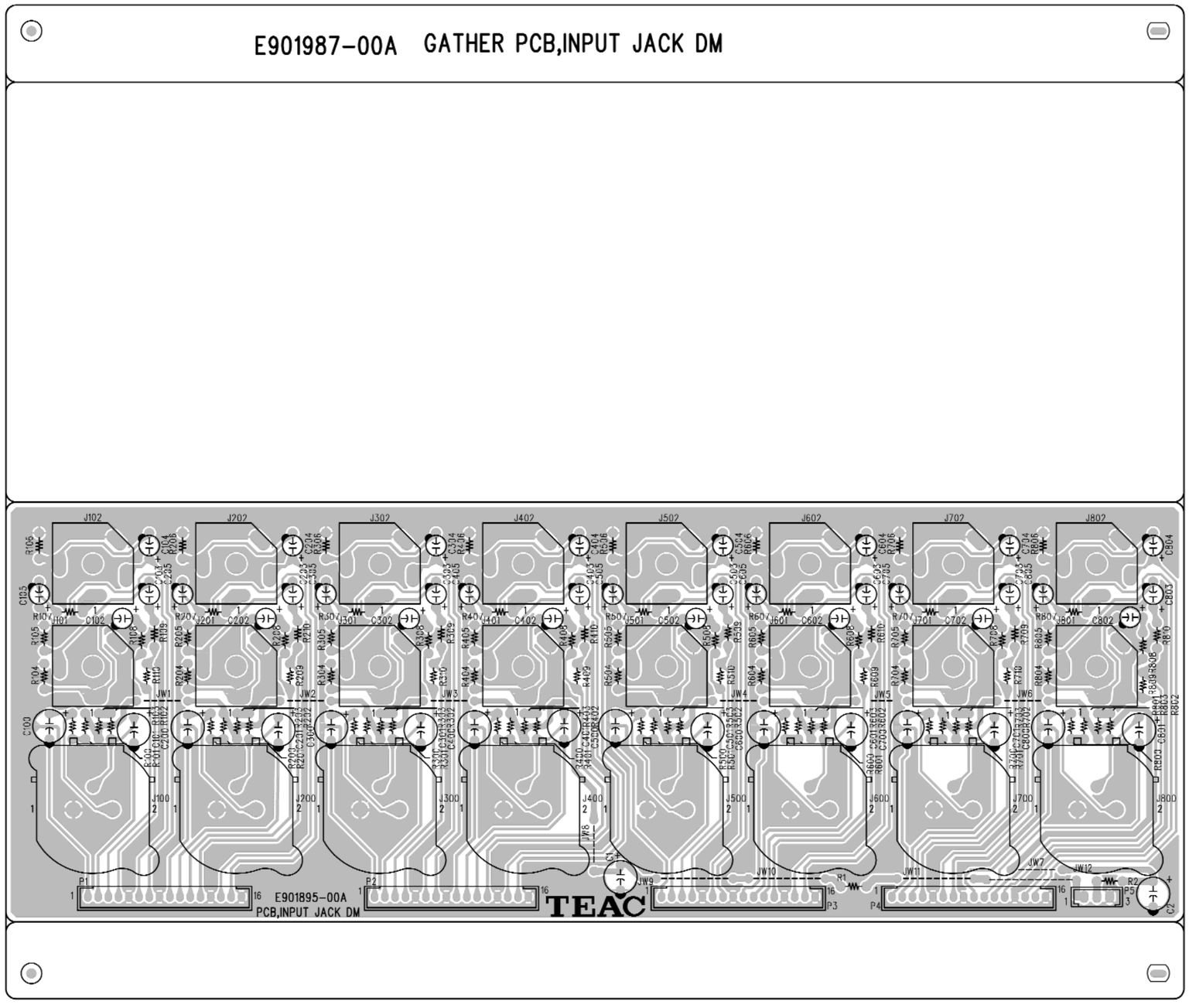


GATHER PCB ASSY, MONITOR DM48 G (PCB MONITOR DM G/ PCB SOLO DM)

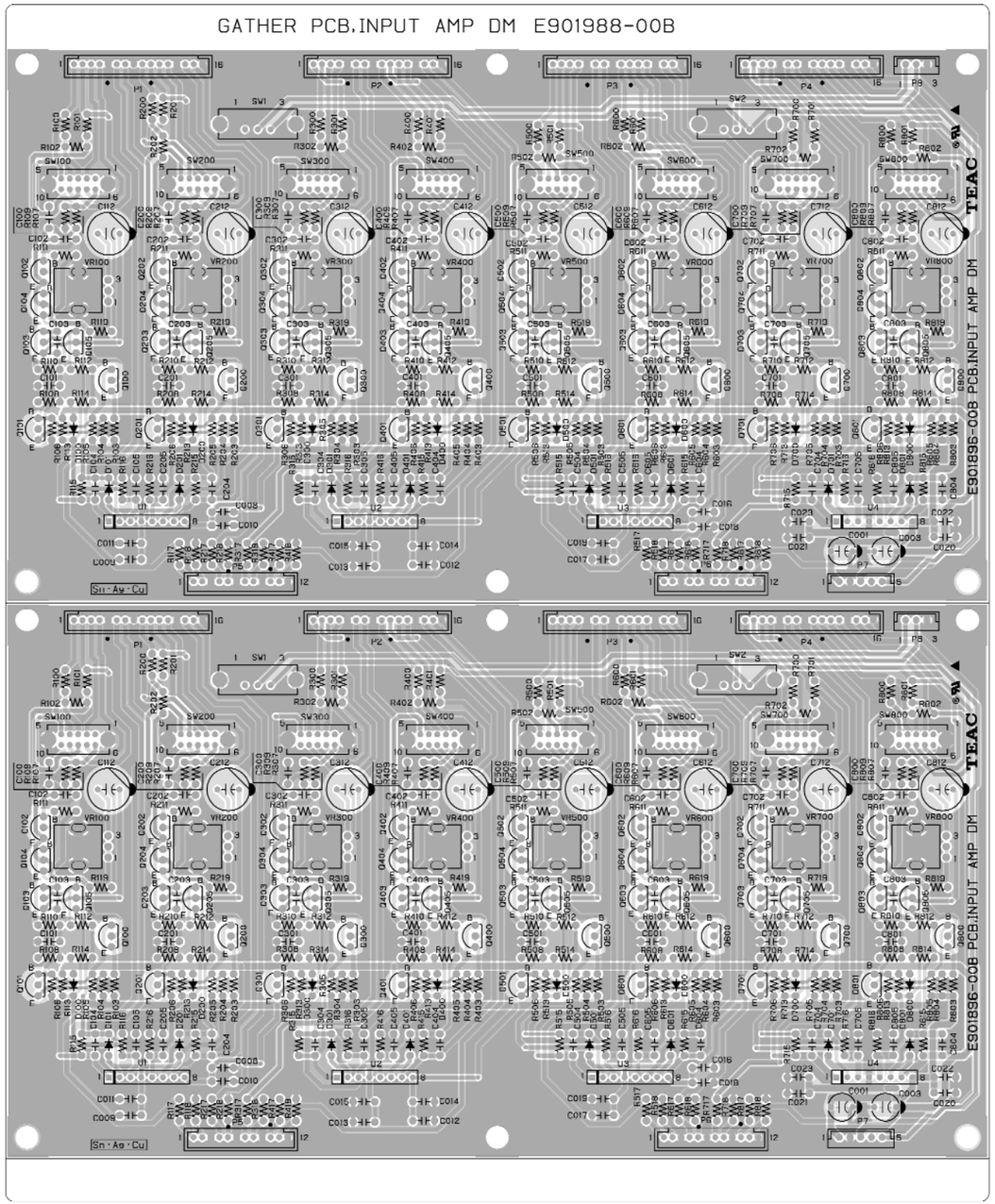


E901986-00F GATHER PCB,MONITOR DM G

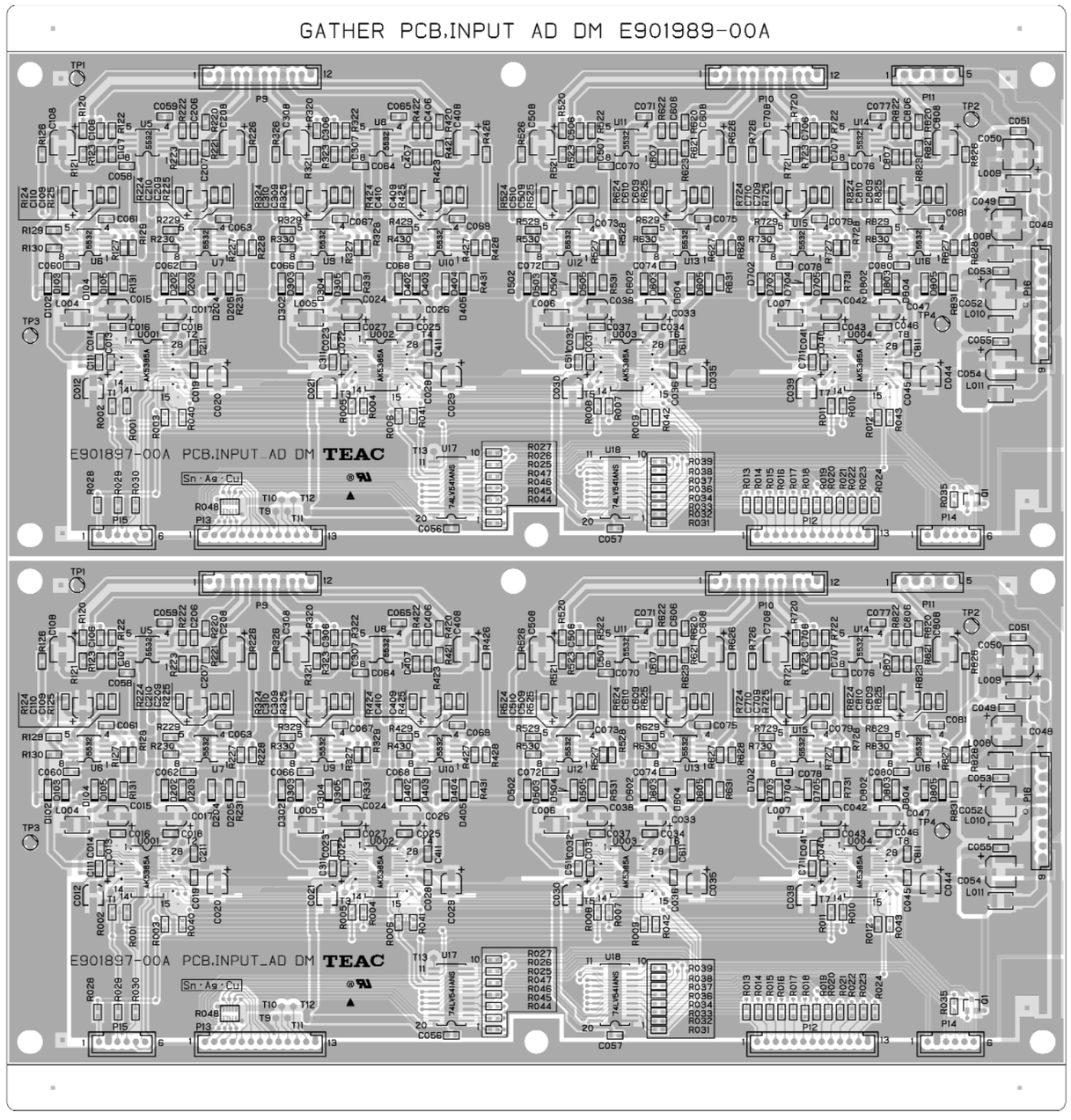
GATHER PCB ASSY, INPUT JACK DM G



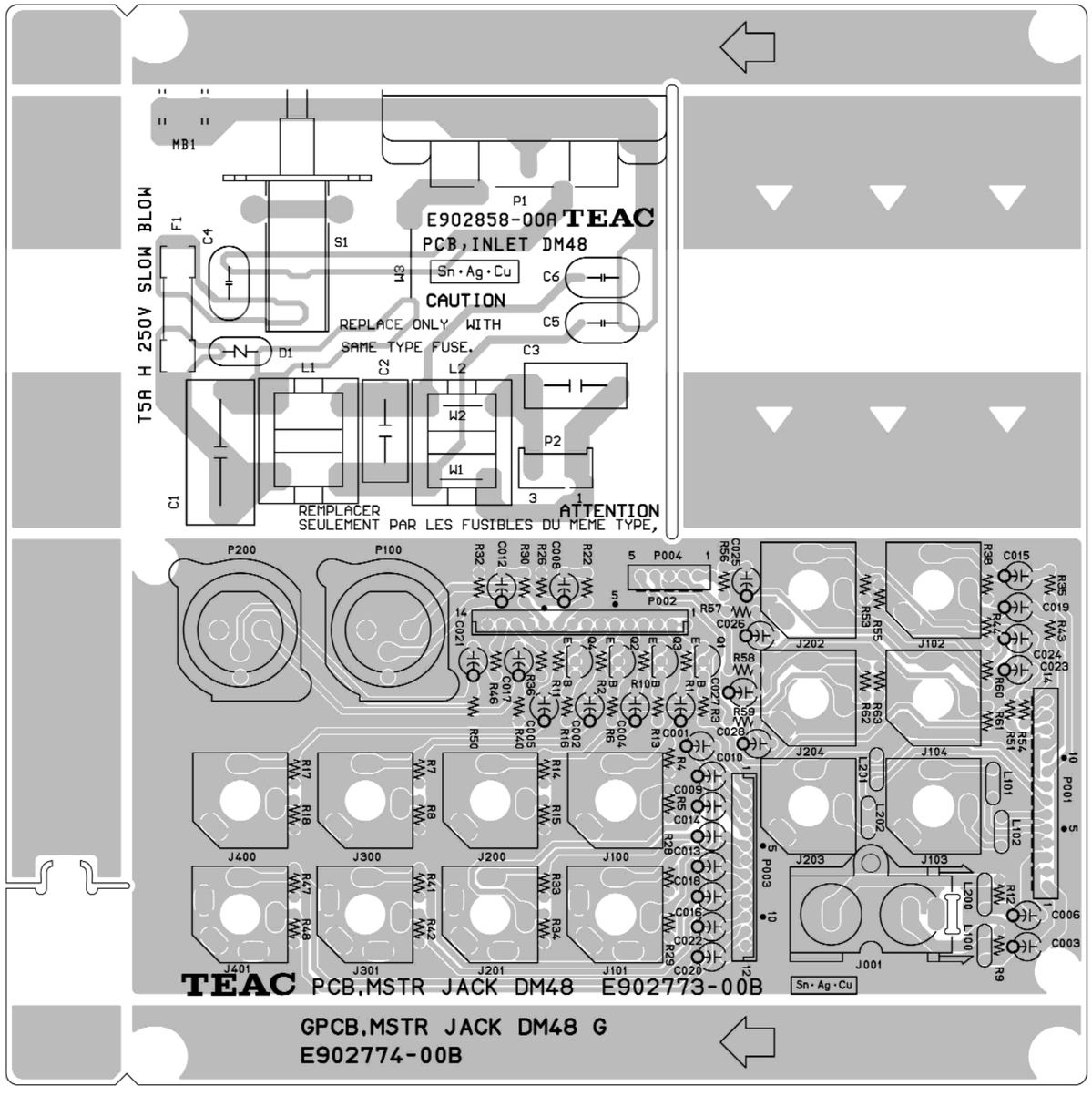
GATHER PCB ASSY, INPUT AMP DM G



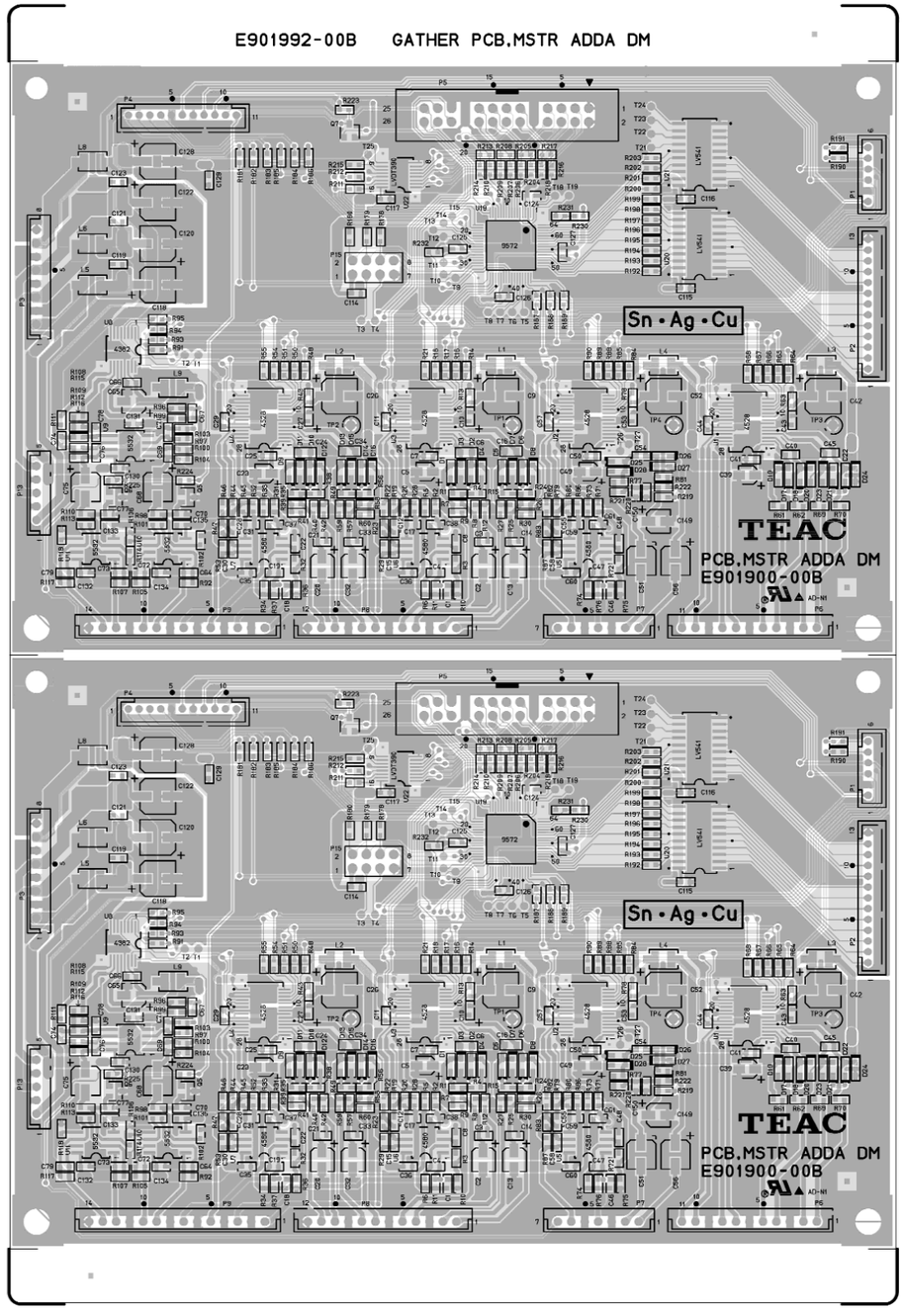
GATHER PCB ASSY, INPUT AD DM G



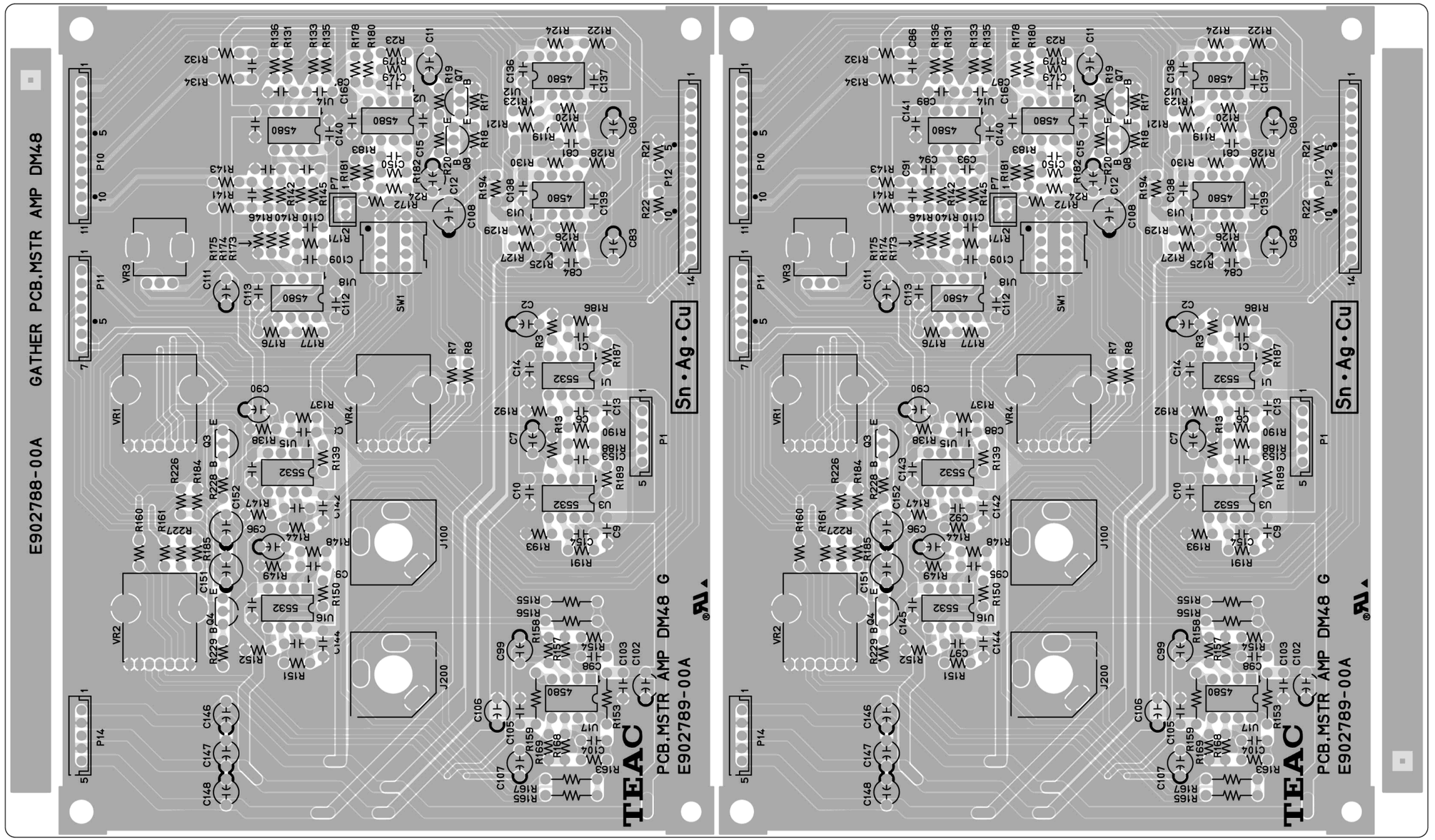
GATHER PCB ASSY, MSTR JACK DM48 G (PCB INLET DM48/ PCB MSTR JACK DM48)



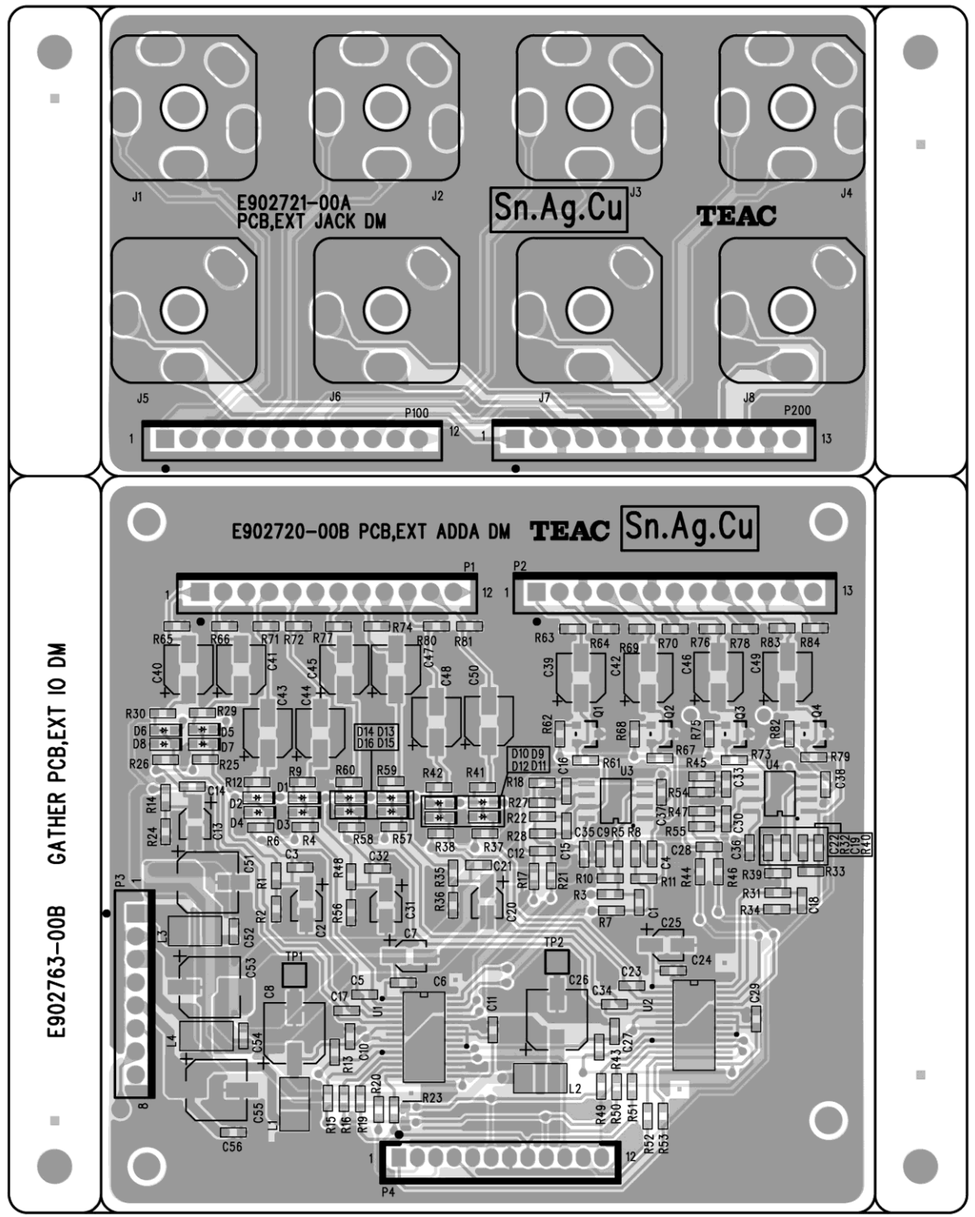
GATHER PCB ASSY, MST ADA DM48 G



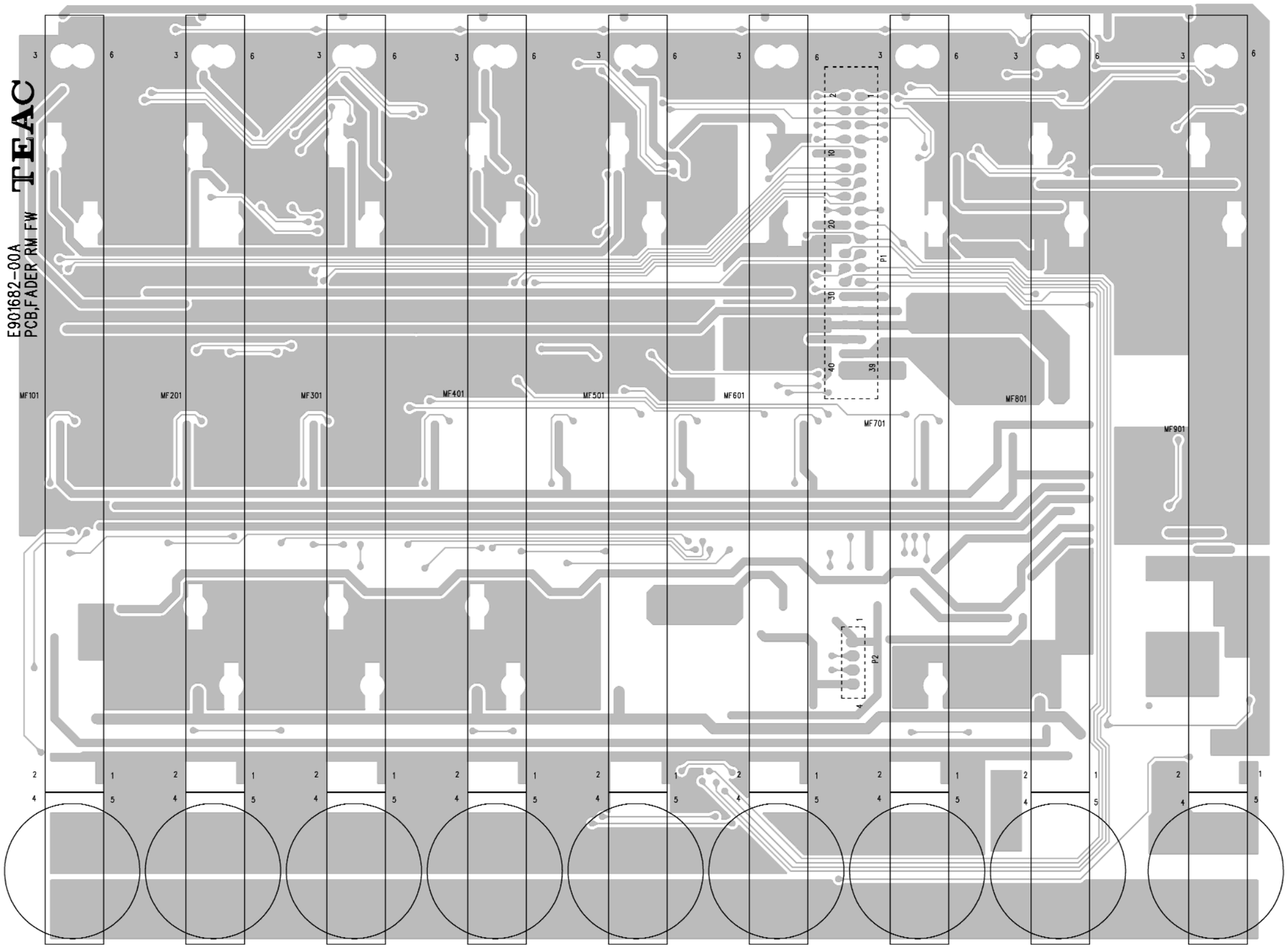
GATHER PCB ASSY, MST AMP DM48 G



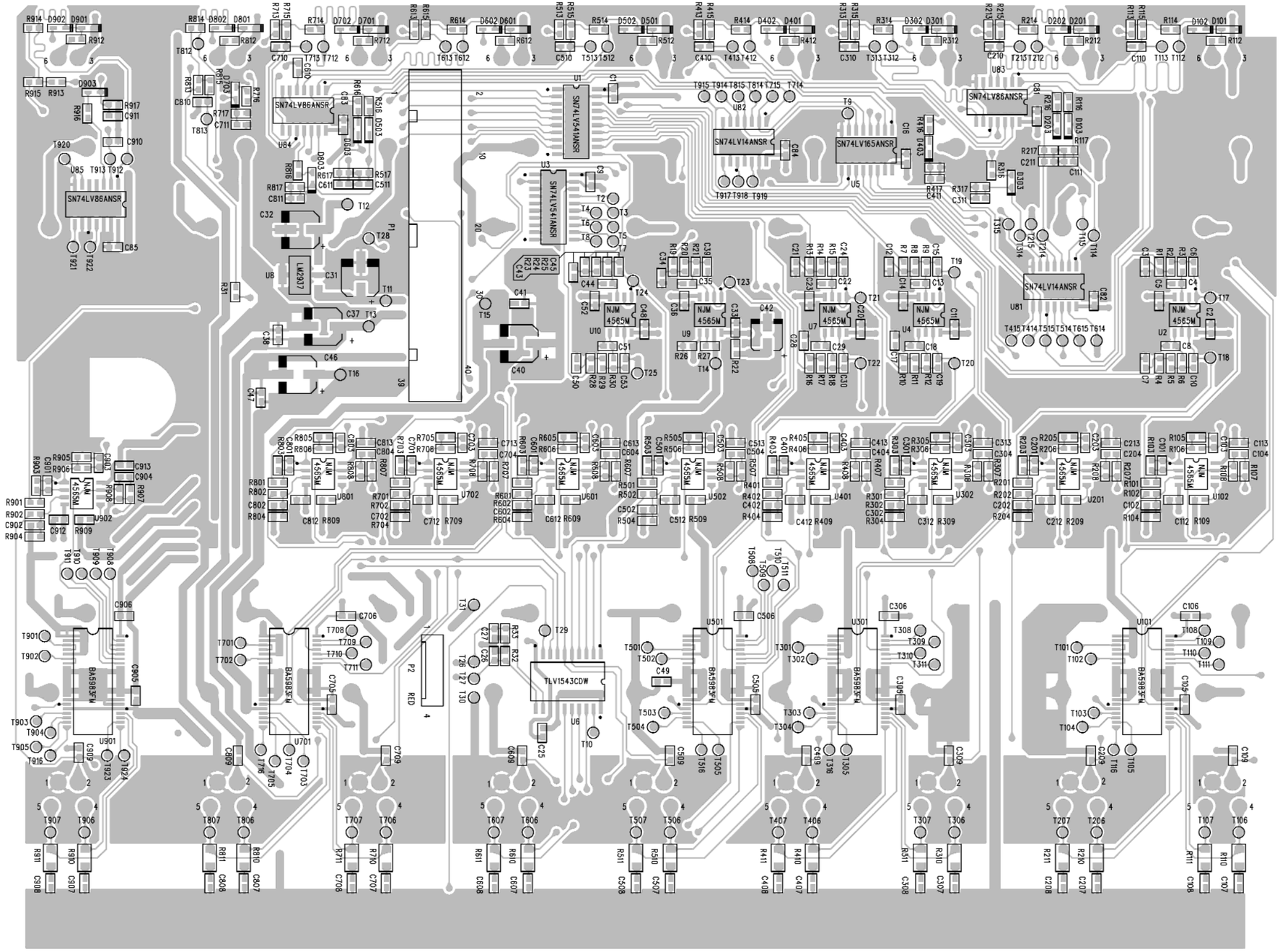
GATHER PCB ASSY, EXT IO DM48 G (PCB EXT JACK DM/ PCB EXT ADDA DM)



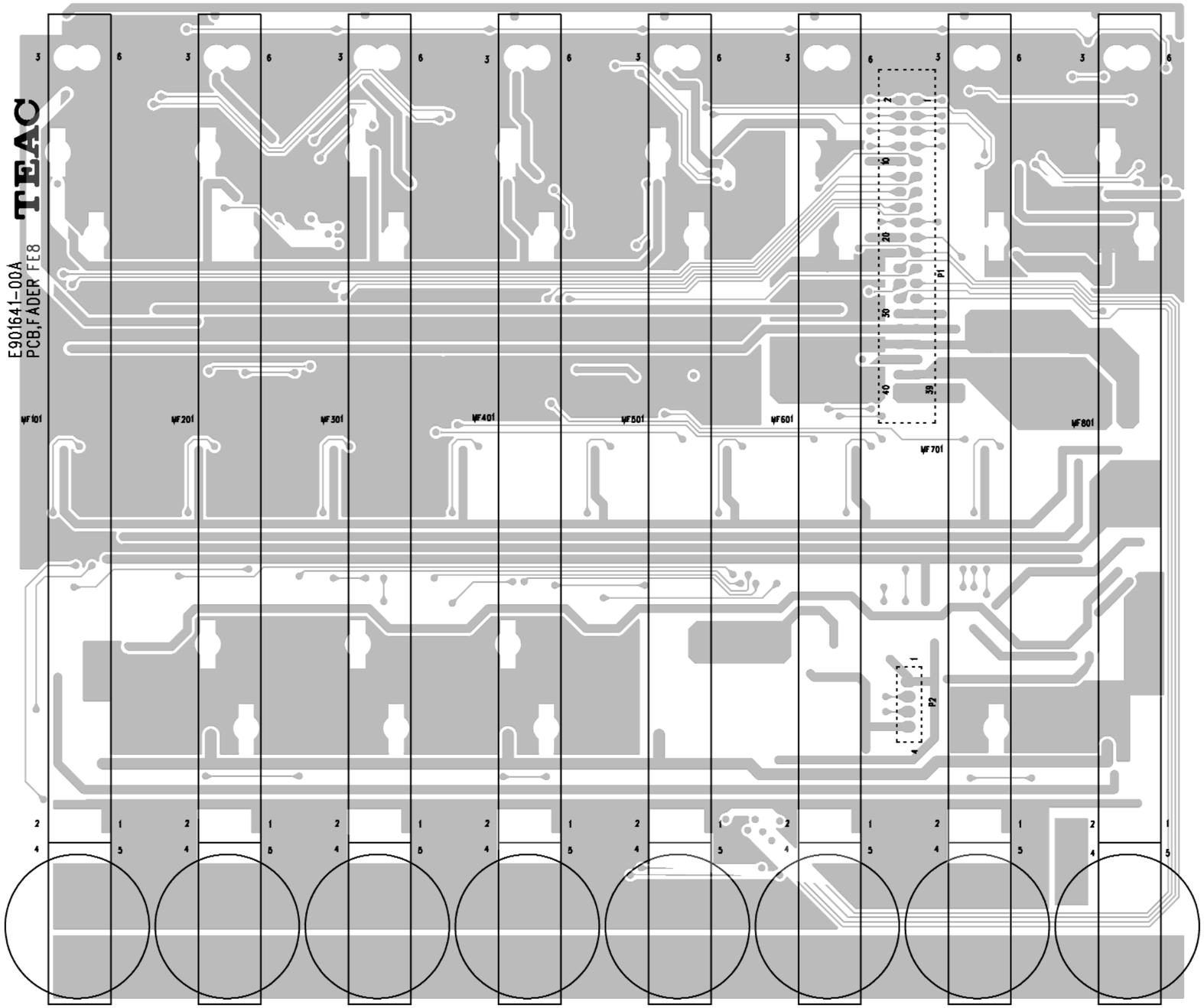
PCB ASSY, FADER RM FW G (SIDE A)



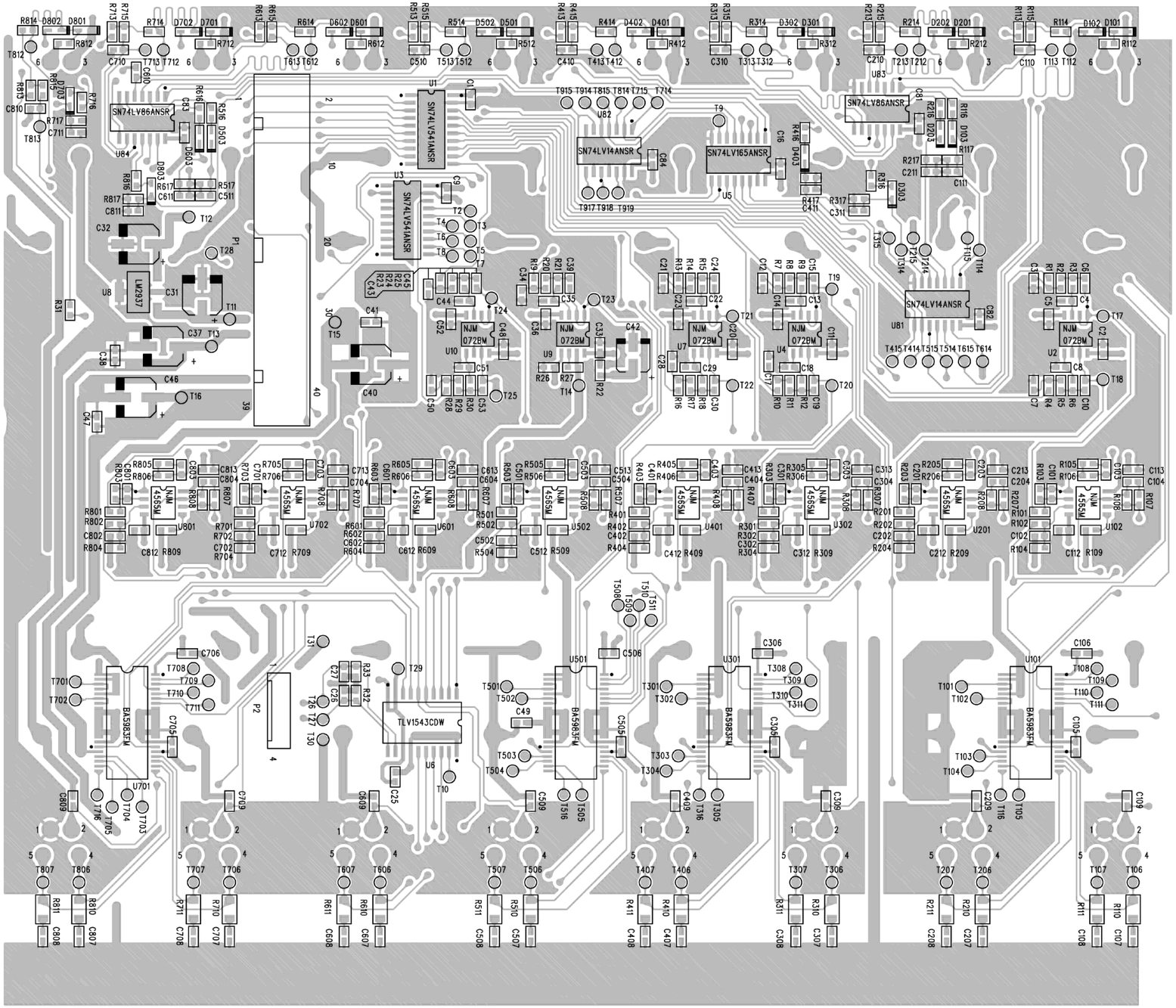
PCB ASSY, FADER RM FW G (SIDE B)



PCB ASSY, FADER FE8 G (SIDE A)



PCB ASSYFADER FE8 G (SIDE B)



PCB ASSY MAIN DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95285500B	PCB ASSY,MAIN DM48 G
		PCB,MAIN DM48 G
BT1	M0243260	HOLDE,BATTERY SN-2032-1 G
C263	C0061182	CE,RLB-10V101MG3#-T2 G
D1-D4	S0067174	LED,KP-1608IT G
D5.D6	S0035214	DIODE,HVC376B-TRF-E G
D7-D27	S0067294	DIODE,IMN10 T108 G
D28.D34	S0022094	DIODE,1SS355
D29-D33	S0067294	DIODE,IMN10 T108 G
D35-D39	S0067294	DIODE,IMN10 T108 G
D40.D46	S0022094	DIODE,1SS355
D41-D45	S0067294	DIODE,IMN10 T108 G
D47-D51	S0067294	DIODE,IMN10 T108 G
D52	S0022094	DIODE,1SS355
D53-D57	S0067294	DIODE,IMN10 T108 G
D58-D82	S0022094	DIODE,1SS355
D83-D87	S0042404	DIODE,RB161L-40 G
D88.D89	S0067314	DIODE,RB751V-40/TE17 G
D90-D93	S0067174	LED,KP-1608IT G
L1.L3	E0126184	COIL,MLF2012E100MT G
L2	E0127204	COIL,LQM18NNR68K000.68UHG
L4	E0126690	COIL,2.7UH K LK2125 G
L5	E0127214	COIL,BCMS201209A390 G
L6.L7	E0126184	COIL,MLF2012E100MT G
L8	E0126204	COIL,CDRH2D18/LD 10UH G
L9	E0126214	COIL,CDRH6D38-100 10UH G
L10.L11	E0102944	COIL,TCM2010-201-4P-T G
P1	E0023390	CONNECTOR,14FE-BT-VK-N
P2	E0126700	CONNECTOR,2211S-02T-F1 G
P3	E0124030	PIN,2211S-03G G
P4.P5	E0126700	CONNECTOR,2211S-02T-F1 G
P6	E0126710	CONNECTOR,2213S-14T-F1 G
P7.P8	E0126440	CONNECTOR,2316S-26G-F1 G
P9.P11	E0126450	D-SUB,5504F1-25S02-03-F1G
P10	E0115760	CONNECTOR,USB UBB4RD14C G
P12	E0126480	CONNECT,2316S-34G-F1 G
P13	E0126224	CONNECTOR,FX6-100S0.8SV G
P14	E0126234	CONNECTOR,FX6-80S-0.8SV G
P15.P34	E0126700	CONNECTOR,2211S-02T-F1 G
P16-P18	E0126490	CONNECT,2316S-40G-F1 G
P19.P20	E0035600	JACK,NC3FAH1-0(XLR)
P21.P22	E0126720	PLUG,NC3MBH(XLR) G
P23.P24	E0124171	JACK,HSP-242V2-23-G G
P25	E0126850	CONNECTOR,7P A3963WV W G
P26	E0125970	CONNECTOR,9P A3963WV W G
P27	E0126830	CONNECTOR,12P A2502WV W G
P28	E0126440	CONNECTOR,2316S-26G-F1 G
P29.P31	E0126490	CONNECT,2316S-40G-F1 G
P30	E0126480	CONNECT,2316S-34G-F1 G
P32	E0126480	CONNECT,2316S-34G-F1 G
P33	E0126980	CONNECTOR,2316S-50G-F1 G
P35	E0125860	CONNECTOR,7P A2001WV W G
P37	E0126740	CONNECTOR,12P A2001WV W G

PCB ASSY MAIN DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
P38	E0125840	CONNECTOR,4P A2001WV W G
P39	E0124030	PIN,2211S-03G G
P39.P5	E0126550	SHORT PLUG,2.54MM6.00PENG
P40	E0124030	PIN,2211S-03G G
P40	E0126550	SHORT PLUG,2.54MM6.00PENG
Q1	S0065074	TRANSISTOR,DTC124EUA TP G
Q2	S0041574	TRANSISTER,DTA124EUA G
Q3	S0018524	TRANSISTOR,2SC3661
Q8	S0068154	TRANSISTOR,2SK2980ZZ-TL G
RA1-RA6	R0133514	RES ARRAY,MNR15E0RPJ103
RA9-RA11	R0133514	RES ARRAY,MNR15E0RPJ103
RA14.RA15	R0133514	RES ARRAY,MNR15E0RPJ103
RA16,RA18	R0174864	RES ARRAY,MNR15E0RPJ222 G
RA17.RA19	R0174874	RES ARRAY,MNR15E0RPJ472 G
RA20	R0174864	RES ARRAY,MNR15E0RPJ222 G
RA21	R0174874	RES ARRAY,MNR15E0RPJ472 G
RA22	R0133514	RES ARRAY,MNR15E0RPJ103
RA23-RA38	R0174834	RES ARRAY,MNR14E0APJ220 G
RA39-RA44	R0174854	RES ARRAY,MNR14E0APJ820 G
RA45.RA46	R0133514	RES ARRAY,MNR15E0RPJ103
SW2	E0126500	SW,EVQ11L05R G
T362.T369	E00595800B	TRANS,PULSE400UH GZ0
T376.T380	E00595800B	TRANS,PULSE400UH GZ0
U1	S0068064	IC,SN74HCT541PW G
U2.U57	S0037894	IC,SN74LV04APWR G
U3	S0068094	IC,CY2305SXC-1T G
U4	S0064413	ICÅCHD6417727F160CV G
U5	S0051154	IC,SN74LV138APW G
U6.U8	S0046854	IC,SN74LV541APWR G
U7	S0067194	IC,SN74LV139APWR G
U10.U11	S0046854	IC,SN74LV541APWR G
U12.U14	S0067404	IC,SN75LVDS391PW G
U13.U21	S0068184	IC,74LVC4066PW G
U15.U23	S0057634	IC,EPIC6Q240C8N
U16-U20	S0067404	IC,SN75LVDS391PW G
U22	S0067404	IC,SN75LVDS391PW G
U24.U95	S0046854	IC,SN74LV541APWR G
U25.U26	S0055053	IC,M12L64164A-7T-G
U27	S00616010D	IC,ROM MAIN ASSY DM4800
U27	S0061510	IC,MBM29LV651UE90TN-KE1
U27	M02463100A	LABEL,IC DM4800 G
U27	D00934900D	SOFTWARE SPEC,DM4800 V151
U28	S0067184	IC,BS62LV256TC-70 G
U29.U37	S0066353	ICÅCADSP-21065LKSZ-240 G
U30.U117	S0059533	IC,XC9572XL-10TQG100C
U31.U38	S0068194	IC,SN74ALVCH16543-DGGR G
U32-U35	S0068084	IC,63LV1024-12J G
U36.U43	S0028204	IC,SN74LV574APW
U39-U42	S0068084	IC,63LV1024-12J G
U44.U49	S0056844	IC,TC74VHCU04FT GSO
U45.U50	S0060084	IC,NJM78L05UA(TE1) GA0
U46.U119	S0066590	IC,TC74VHCT00AFT(ELÅCF) G
U47.U51	S0068071	IC,MC74HC4046ADE2G G
U48.U52	S0046854	IC,SN74LV541APWR G

PCB ASSY MAIN DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
U53.U54	S0020444	IC,SN74LV00APWR G
U55	S0067254	IC,SN74LV07APWR G
U56	S0044614	IC,HD29051FP
U58.U59	S0067264	IC,SN65LVDS050PWR G
U60	S0021254	IC,SN74LV08APWR
U61	S0067414	IC,SN75240PWR G
U62	S0067244	IC,SN74LV540APWR G
U63.U67	S0068064	IC,SN74HCT541PW G
U64.U71	S0067424	IC,HD74HC541TVELL-E G
U65.U66	S0067244	IC,SN74LV540APWR G
U68	S0067424	IC,HD74HC541TVELL-E G
U69.U70	S0067244	IC,SN74LV540APWR G
U72	S0067244	IC,SN74LV540APWR G
U73.U81	S0060084	IC,NJM78L05UA(TE1) GA0
U74.U76	E0124074	FILTER,EXCCET101U G
U75.U83	S0058433	IC,CS8420-CSZ/D1
U77.U84	S0067434	IC,TC74HCT4053A G
U78.U116	S0046854	IC,SN74LV541APWR G
U79.U82	E0124074	FILTER,EXCCET101U G
U80.U114	S0048634	IC,SN74LV244APWR
U85-U88	E0124074	FILTER,EXCCET101U G
U89	S0037894	IC,SN74LV04APWR G
U90	S0056844	IC,TC74VHCU04FT GSO
U91-U94	E0124074	FILTER,EXCCET101U G
U96	S0067454	IC,LM2937IMPX-3.3 NOPB G
U97.U98	S0064304	IC,PQ015EZ01ZPH G
U99	S0067444	IC,M62016FP#CF0J G
U100	S0020444	IC,SN74LV00APWR G
U101	S0062144	IC,PQ018EZ01ZPH G
U102	S0064174	IC,PQ1X251M2ZPH G
U103	E0126654	CRYSTAL OSC,66.666MHZ G
U104	E0126664	CRYSTAL OSC,30.0MHZ G
U105	S0067274	IC,BD4823G G
U106	E0126674	CRYSTAL OSC,48.0MHZ G
U107	E0126684	CRYSTAL OSC,28.22MHZ G
U108	S0068104	IC,RS5C316A-E2-FB G
U109	E0124762	XTAL,32.768K NC38(6.3PF)G
U110	S0068114	IC,24LC00T-1/SNG G
U111	S0046814	IC,SN74LV245APWR G
U112.U113	S0046854	IC,SN74LV541APWR G
U115	S0067284	IC,SN74LV273APWR G
U118	S0046854	IC,SN74LV541APWR G
U120-U123	S0046814	IC,SN74LV245APWR G
U124.U125	S0046854	IC,SN74LV541APWR G
U126.U128	S0046814	IC,SN74LV245APWR G
U127.U131	S0046854	IC,SN74LV541APWR G
U129,U130	S0046814	IC,SN74LV245APWR G
U132	S0067194	IC,SN74LV139APWR G
U133	S0046854	IC,SN74LV541APWR G
U134,U135	S0046814	IC,SN74LV245APWR G
U136	S0067114	ICÅCSN74LVC1G08DBVR G

GATHER PCB ASSY, SYNC DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95198100B	GATHER PCBA,SYNC DM G
		PCB,SYNC DM
		PCB,MIDI DM
		PCB,LCD SUB DM
		PCB ASSY,SYNC DM G
D101.D102	S0067021	DIODE,1SS133 T-77 G
F101	E0127262	CKT PTCT,30R0185U G
J101.J102	E0127250	CONNECTOR,BNC 1P COH2201G
J103	E0127840	JACK,PIN 1P HSP-241V1B G
MB101.MB10	M01510100A	BRACKET,PCB-A G
P101	E0126450	D-SUB,5504F1-25S02-03-F1G
P102	E00946200B	HA,MAINP12 SYNCP2 G
P103.P104	E0126450	D-SUB,5504F1-25S02-03-F1G
P105	E00946100B	HA,MAINP8 SYNCP5 G
SW101	E0127850	SW,SLIDE SSSF123NA1-TK G
U101	S0068360	IC,TC4069UBP(F) G
U102	E0126520	FILTER,DSS6NB32A101Q91A G
U103	S0068370	IC,SN74S140N G
U104	E0126510	FILTER,DSS6NB32A102Q91A G
		PCB ASSY,MIDI DM G
D201-D205	S0067021	DIODE,1SS133 T-77 G
J201-J203	E0126560	CONNECTOR,HDC-052A-13-G G
J204	E0073670	JACK,JY-6313-01-030 G
MB201.MB20	M01510100A	BRACKET,PCB-A G
P201	E00946000A	HA,MAINP7 MIDIP1 G
P202.P203	E0123230	D-SUB,5504F1-09S-02-03 G
Q201.Q202	S0068162	TRANSISTOR,DTC123ESA TP G
U201	E0134440	OPT CONN,GP1FAV51RK0F G
U202	E0130730	OPT CONN,GP1FAV51TK0F GZ0
U203	S0065230	PHOTO COUPLER,PC900V0NS G
U204-U210	E0126510	FILTER,DSS6NB32A102Q91A G
U211	S0067514	IC,TC74ACT04P(F) G
U212	E0126510	FILTER,DSS6NB32A102Q91A G
U213-U221	E0126530	FILTER,DSS6NZ82A103Q91A G
		PCB ASSY,LCD SUB DM G
L1	E0126570	COIL,RCH875-151K G
P1	E00947300A	HA,SCRNP4 LCDSP1 G
P2	E0125940	CONNECTOR,4P A2502WV W G
Q1.Q2	S0067342	TRANSISTOR,2SC2236-0 G
TR1	E0127420	TRANS,EW-12H/TW G

GATHER PCB ASSY, MOTHER DM

REF.NO.	PARTS NO.	DESCRIPTION
	E95198200A	GATHER PCBA,MOTHER DM
		PCB ASSY,MOTHER DM G
J1.J2	3E026250G	CONNECT,CARD 2525-120-F1G
P1	3E026260G	CONNECT,2316S-34G-F1 G
P2	3E029450G	PIN,HEADER 2.54MM 2*4P-G
P3	3E023260	CONNECT,10P A2502WV WHT G
P4	3E026230G	CONNECT,2316S-40G-F1 G
P5	3E023250	CONNECT,9P A2502WV WHT G
U1	S0057624	IC,CX9572XL-10VQ64
U2	3S033444G	IC,SN75LVDT390PW G

GATHER PCB ASSY, MOTHER DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95316300A	GATHER PCBA,MOTHER DM48 G
		PCB ASSY,MOTHER DM48 G
D1	S0042404	DIODE,RB161L-40 G
J1,J2	E0127410	CONNECTOR,2525-120-F1 G
P1	E0126480	CONNECTOR,2316S-34G-F1 G
P2	E0127000	PIN,HEADER 2.54MM 2*4P G
P3	E0126810	CONNECTOR,10P A2502WV W G
P4	E0126490	CONNECTOR,2316S-40G-F1 G
P5	E0126800	CONNECTOR,9P A2502WV W G
U1	S0075323	IC,LCMXO1200C-3TN144C G
U2	S0064174	IC,PQ1X251M2ZPH G
U3	S0068184	IC,74LVC4066PW G

GATHER PCB ASSY PWR SUB DM48G

REF.NO.	PARTS NO.	DESCRIPTION
	E95198310B	GATHER PCBA,PWR SUB DM48 G PCB,PWR SUB DM PCB,CF CARD DM
		PCB ASSY,PWR SUB DM48 G
D1	S0067714	DIODE,MBRD360T4G G
D2	S0042404	DIODE,RB161L-40 G
D3	S0022094	DIODE,1SS355
L2	E0127014	COIL,CDRH127-220 G
L8	E0127024	COIL,CDRH74-102 G
P1	E0126870	CONNECTOR,10P A3963WV W G
P2	E0126860	CONNECTOR,8P A3963WV W G
P3.P4	E0126800	CONNECTOR,9P A2502WV W G
P5	E0126800	CONNECTOR,9P A2502WV W G
P6	E0126890	CONNECTOR,8P A2502WV R G
P7	E0126900	CONNECTOR,9P A2502WV R G
P8	E0126900	CONNECTOR,9P A2502WV R G
P9	E0126810	CONNECTOR,10P A2502WV W G
P10	E0126810	CONNECTOR,10P A2502WV W G
P11	E0126850	CONNECTOR,7P A3963WV W G
P12	E0125970	CONNECTOR,9P A3963WV W G
P13	E0126890	CONNECTOR,8P A2502WV R G

GATHER PCB ASSY PWR SUB DM48G

REF.NO.	PARTS NO.	DESCRIPTION
P14	E0126790	CONNECTOR,7P A2502WV W G
P15	E0126760	CONNECTOR,3P A2502WV W G
U1	S0067534	IC,LM2673SX-5.0 NOPB G
U2	S0058774	IC,NJM2374AE G
U3	S0068270	IC,NJM78M09FA(3P) G
		PCB ASSY,CF CARD DM G
MB1.MB2	M01510100A	BRACKET,PCB-A G
P001	E0127893	CF SLOT,752DE50AC20011
P002	E0126980	CONNECTOR,2316S-50G-F1 G
U001	S0046704	IC,TPS2212IDB
U002.U004	S0046814	IC,SN74LV245APWR G
U003	S0046854	IC,SN74LV541APWR G
U005-U007	S0046854	IC,SN74LV541APWR G

PCB ASSY DDMP4 DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95188400B	PCB ASSY,DDMP4 DM G PCB,DDMP4 DM
D101	S0061654	DIODE,20V 5A RSX501L-20 G
D102	S0067734	DIODE,MMSZ4678T1G G
D301-D601	S0067814	LED,KP-1608YT G
J101	E0127064	CONNECTOR,FX6-100P0.8SV2G
J201	E0127074	CONNECTOR,FX6-80P0.8SV2 G
L101	E0126364	COILÅCCEP125NP-1R8MC-H G
L301.L302	E0127034	BEAD COIL,BK1608 HM121 G
L401.L402	E0127034	BEAD COIL,BK1608 HM121 G
L501.L502	E0127034	BEAD COIL,BK1608 HM121 G
Q101.Q102	S0067224	FETÅCNTF6P02T3G G
U101	S0067614	IC,NCP1550SN19T1G G
U102	S0067554	IC,SN74LVC139APWR G
U201.U205	S0067524	IC,SN75LVDT390PW G
U202.U206	S0067544	IC,SN74LVC374APWR G
U203.U204	S0051224	IC,SN74LVC04APWR TSSOP G
U207.U209	S0067524	IC,SN75LVDT390PW G
U208.U216	S0051224	IC,SN74LVC04APWR TSSOP G
U210.U229	S0067544	IC,SN74LVC374APWR G
U212	S0064324	IC,SN65LVDS1DBVR G
U301-U601	S0065993	IC,DDMP-AUDIO(L7A1984) G
U701-U708	S0070444	IC,K4S641632K-UC60 G
U709	E0126654	CRYSTAL OSC,66.666MHZ G
U710	S0046854	IC,SN74LV541APWR G

GATHER PCB ASSY, LAYER DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95198400B	GATHER PCBA,LAYER DM G
		PCB,LAYER DM
		PCB,TRANSPORT DM
		PCB ASSY,LAYER DM G
D1-D3	S0067780	LED,SLR-332DU T32(ORG) G
D4.D5	S0067822	LED,SLR-332MG T32(GRN) G
D6	S0066850	LED,SLR-332VR T32(RED) G
D7	S0067850	LED,SLR-342DU TE7 G
D8	S0067840	LED,SLR-342VR TE7 G
D9-D10	S0067850	LED,SLR-342DU TE7 G
D11	S0067860	LED,SLR-342MG TE7 G
D12	S0067850	LED,SLR-342DU TE7 G
D13-D23	S0067850	LED,SLR-342DU TE7 G
D24	S0067860	LED,SLR-342MG TE7 G
D25	S0067840	LED,SLR-342VR TE7 G
D26-D46	S0022094	DIODE,1SS355
D47.D48	S0022094	DIODE,1SS355
P1	E00947500A	HA,MONP5 LAYP1 G
P2	E00947400A	HA,MONP6 LAYP2 G
SW1-SW6	E0127100	SW,TACT SKHHAM2520 G
SW22.SW23	E0125781	SW,TACT SKHHDAA010 G
SW7-SW21	E0125781	SW,TACT SKHHDAA010 G
		PCB ASSY,TRANSPORT DM G
	M01842300A	BRACKET,TRANSPORT DM
BRKT-PCB	B00174006A	SCREW,BPA 3*6 FZC G
D101-D105	S0022094	DIODE,1SS355
P101	E00947600A	HA,MONP7 TRAP1 G
SW101-SW10	E0126040	SW,SKBMFA000A-TK G

PCB ASSY, ASSIGN DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95188710B	PCB ASSY,ASSIGN DM48 G
		PCB,ASSIGN DM G
D1-D8	S0067822	LED,SLR-332MG T32(GRN) G
D9-D16	S0067832	LED,SLR-332VR T32(RED) TP G
D17-D24	S0067780	LED,SLR-332DU T32(ORG) G
D25-D40	S0067742	LED,SLR-342VR TC7 G
D43	S0067752	LED,SLR-342DU TC7 G
D44	S0067742	LED,SLR-342VR TC7 G
D45-D73	S0067752	LED,SLR-342DU TC7 G
D74-D130	S0022094	DIODE,1SS355
D131-D146	S0022094	DIODE,1SS355
D147.D148	S0022094	DIODE,1SS355
D149-D151	S0067752	LED,SLR-342DU TC7 G
D152	S0022094	DIODE,1SS355
P1	E00947000A	HA,ASSP1 SCRNP3 G
P3-P6	E0127084	CONNECTOR,DF15-42-2-20DPG
Q1-Q16	S0067904	TRANSISTOR,DTC143EKA G
RA1	R0174824	RES ARRAY,MNR35J5RJ103 G
SW147	E0125781	SW,TACT SKHHDAA010 G
SW1-SW24	E0127100	SW,TACT SKHHAM2520 G
SW25-SW28	E0125781	SW,TACT SKHHDAA010 G
SW29-SW31	E0127100	SW,TACT SKHHAM2520 G
SW32-SW57	E0125781	SW,TACT SKHHDAA010 G
SW58-SW65	E0127140	ENCODER,EC12E24104A6 G
U1	S0067601	IC,TD62M8600FG(EL) G
U2	S0067574	IC,SN74HC541ANSR G
U3	S0067584	IC,SN74HC595ANSR G
U4	S0067601	IC,TD62M8600FG(EL) G
U5-U7	S0067584	IC,SN74HC595ANSR G
U8	S0067594	IC,SN74HC165ANSR G

PCB ASSY MODULE DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95188900B	PCB ASSY,MODULE DM G
		PCB,MODULE DM G
D1-D8	S0067822	LED,SLR-332MG T32(GRN) G
D9-D16	S0067832	LED,SLR-332VR T32(RED) TP G
D17-D24	S0067780	LED,SLR-332DU T32(ORG) G
D25-D40	S0067742	LED,SLR-342VR TC7 G
D41.D43	S0067780	LED,SLR-332DU T32(ORG) G
D42	S0067752	LED,SLR-342DU TC7 G
D44.D45	S0067752	LED,SLR-342DU TC7 G
D46	S0067780	LED,SLR-332DU T32(ORG) G
D47-D152	S0022094	DIODE,1SS355
P1	E00947000A	HA,ASSP1 SCRNP3 G
P2	E0126830	CONNECTOR,12P A2502WV W G
P3-P6	E0127084	CONNECTOR,DF15-42-2-20DPG
Q1-Q16	S0067904	TRANSISTOR,DTC143EKA G
RA1	R0174824	RES ARRAY,MNR35J5RJ103 G
SW1-SW24	E0127100	SW,TACT SKHHAM2520 G
SW25.SW27	E0125781	SW,TACT SKHHDAA010 G
SW26	E0127100	SW,TACT SKHHAM2520 G
SW28.SW29	E0127100	SW,TACT SKHHAM2520 G
SW30-SW33	E0125781	SW,TACT SKHHDAA010 G
SW34-SW68	E0127140	ENCODER,EC12E24104A6 G
SW69	E0125781	SW,TACT SKHHDAA010 G
U2	S0067574	IC,SN74HC541ANSR G
U3	S0067584	IC,SN74HC595ANSR G
U4,U1	S0067601	IC,TD62M8600FG(EL) G
U5-U7	S0067584	IC,SN74HC595ANSR G
U8	S0067594	IC,SN74HC165ANSR G

GATHER PCB ASSY, RING LED DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95198500B	GATHER PCBA,RING LED DM G
		PCB,RING LED DM G
		PCB ASSY,RING LED DM G
D001-D015	S0067794	LED,APK3020 SECK G
D016.D032	S0067804	LED,APK3020 SURCK G
D017-D031	S0067794	LED,APK3020 SECK G
D033-D047	S0067794	LED,APK3020 SECK G
D048.D064	S0067804	LED,APK3020 SURCK G
D049-D063	S0067794	LED,APK3020 SECK G
D065-D079	S0067794	LED,APK3020 SECK G
D080.D096	S0067804	LED,APK3020 SURCK G
D081-D095	S0067794	LED,APK3020 SECK G
D097-D111	S0067794	LED,APK3020 SECK G
D112.D128	S0067804	LED,APK3020 SURCK G
D113-D127	S0067794	LED,APK3020 SECK G
J1-J4	E0127114	CONNECTOR,DF15-1.8-20DS G

PCB ASSY, SCREEN DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95188800B	PCB ASSY,SCREEN DM G
		PCB,SCREEN DM G
D1-D8	S0067822	LED,SLR-332MG T32(GRN) G
D9-D16	S0066850	LED,SLR-332VR T32(RED) G
D156.D157	S0022094	DIODE,1SS355
D17-D24	S0067780	LED,SLR-332DU T32(ORG) G
D25-D40	S0067742	LED,SLR-342VR TC7 G
D41.D42	S0067822	LED,SLR-332MG T32(GRN) G
D43	S0067780	LED,SLR-332DU T32(ORG) G
D44-D48	S0067762	LED,LA12540/TBF-4(ORG) G
D44-D48	M0244040	SPACER,LEDH-12 G
D49	S0067742	LED,SLR-342VR TC7 G
D50-D60	S0067762	LED,LA12540/TBF-4(ORG) G
D50-D73	M0244040	SPACER,LEDH-12 G
D61.D73	S0067772	LED,LI12540/TBF-4(RED) G
D62-D72	S0067762	LED,LA12540/TBF-4(ORG) G
D74-D155	S0022094	DIODE,1SS355
P1	E00947100A	HA,SCRNP1 MONP3 G
P2	E00947200A	HA,SCRNP2 MONP4 G
P3	E0125950	CONNECTOR,12P A2502WV W G
P4	E0126750	CONNECTOR,2P A2502WV W G
P5-P8	E0127084	CONNECTOR,DF15-42-2-20DPG
Q1-Q16	S0067904	TRANSISTOR,DTC143EKA G
R25	R0174890	VAR RES,RK09K113Z401-10KG
RA1	R0174824	RES ARRAY,MNR35J5RJ103 G
SW1-SW24	E0127100	SW,TACT SKHHAM2520 G
SW25-SW32	E0125781	SW,TACT SKHHDAA010 G
SW33	E0127100	SW,TACT SKHHAM2520 G
SW34-SW36	E0127100	SW,TACT SKHHAM2520 G
SW37-SW56	E0125781	SW,TACT SKHHDAA010 G
SW57-SW60	E0127120	ENCODER,EC12E24404A5 G
SW61	E0127130	ENCODER,EC12E2420802 G
SW62-SW69	E0127140	ENCODER,EC12E24104A6 G
SW70.SW71	E0125781	SW,TACT SKHHDAA010 G
U1.U4	S0067601	IC,TD62M8600FG(EL) G
U2	S0067574	IC,SN74HC541ANSR G
U3	S0067584	IC,SN74HC595ANSR G
U5-U7	S0067584	IC,SN74HC595ANSR G
U8	S0067594	IC,SN74HC165ANSR G

GATHER PCB ASSY, MONITOR DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95198610B	GATHER PCBA,MONITR DM48 G PCB,MONITOR DM G PCB,SOLO DM
		PCB ASSY,MONITOR DM48 G
D1-D5	S0067850	LED,SLR-342DU TE7 G
D6.D9	S0067840	LED,SLR-342VR TE7 G
D7.D8	S0067850	LED,SLR-342DU TE7 G
D10-D19	S0022094	DIODE,1SS355
D20-D22	S0067850	LED,SLR-342DU TE7 G
D23-D34	S0067752	LED,SLR-342DU TC7 G
D35	S0067780	LED,SLR-332DU T32(ORG) G
D36-D51	S0022094	DIODE,1SS355
P1	E00945900B	HA,MAINP27 MONP1 G
P2	E0126790	CONNECTOR,7P A2502WV W G
P3	E0126830	CONNECTOR,12P A2502WV W G
P4	E0125940	CONNECTOR,4P A2502WV W G
P5	E0126770	CONNECTOR,5P A2502WV W G
P6	E0126840	CONNECTOR,14P A2502WV W G
P7	E0126780	CONNECTOR,6P A2502WV W G
P8	E0126760	CONNECTOR,3P A2502WV W G
Q1-Q4	S0067914	TRANSISTOR,2SB0710CQ G
Q5.Q7	S0067904	TRANSISTOR,DTC143EKA G
Q6.Q8	S0067914	TRANSISTOR,2SB0710CQ G
Q9	S0067904	TRANSISTOR,DTC143EKA G
Q10	S0067914	TRANSISTOR,2SB0710CQ G
Q11-Q13	S0067904	TRANSISTOR,DTC143EKA G
Q14.Q15	S0067914	TRANSISTOR,2SB0710CQ G
Q16	S0067904	TRANSISTOR,DTC143EKA G
RA1	R0174824	RES ARRAY,MNR35J5RJ103 G
SW1-SW23	E0125781	SW,TACT SKHHDAA010 G
SW24	E0127100	SW,TACT SKHHAM2520 G
U1	S0067574	IC,SN74HC541ANSR G
U2-U5	S0067584	IC,SN74HC595ANSR G
U6	S0067594	IC,SN74HC165ANSR G

GATHER PCB ASSY, INPUT JACK DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95198700B	GATHER PCBA,INPUTJACK DM G PCB,INPUT JACK DM G
		PCB ASSY,INPUT JACK DM G
J100	E0127290	JACK,MIC NC3FAV1-0 G
J101.J201	E0127310	JACK,PHON JY-6353-02030 G
J102.J202	E0127320	JACK,PHON JY-6353-02040 G
J200	E0127300	JACK,MIC NC3FAV-0 G
J300.J400	E0127300	JACK,MIC NC3FAV-0 G
J301.J401	E0127310	JACK,PHON JY-6353-02030 G
J302.J402	E0127320	JACK,PHON JY-6353-02040 G
J500.J600	E0127300	JACK,MIC NC3FAV-0 G
J501.J601	E0127310	JACK,PHON JY-6353-02030 G
J502.J602	E0127320	JACK,PHON JY-6353-02040 G
J700	E0127300	JACK,MIC NC3FAV-0 G
J701.J801	E0127310	JACK,PHON JY-6353-02030 G
J702.J802	E0127320	JACK,PHON JY-6353-02040 G
J800	E0127290	JACK,MIC NC3FAV1-0 G
P1-P4	E0125890	CONNECTOR,16P A2001WV W G
P5	E0126760	CONNECTOR,3P A2502WV W G

GATHER PCB ASSY, INPUT AMP DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95198800B	GATHER PCBA,INPUT AMP DM G
		PCB,INPUT AMP DM G
		PCB ASSY,INPUT AMP DM G
D100.D101	S0067021	DIODE,1SS133 T-77 G
D200.D201	S0067021	DIODE,1SS133 T-77 G
D300.D301	S0067021	DIODE,1SS133 T-77 G
D400.D401	S0067021	DIODE,1SS133 T-77 G
D500.D501	S0067021	DIODE,1SS133 T-77 G
D600.D601	S0067021	DIODE,1SS133 T-77 G
D700.D701	S0067021	DIODE,1SS133 T-77 G
D800.D801	S0067021	DIODE,1SS133 T-77 G
P1-P4	E0125890	CONNECTOR,16P A2001WV W G
P5-P6	E0126740	CONNECTOR,12P A2001WV W G
P7	E0126770	CONNECTOR,5P A2502WV W G
P8	E0126760	CONNECTOR,3P A2502WV W G
Q100.Q101	S0068201	TRANSISTOR,2SA1048GR(FT)G
Q102.Q103	S0068922	TRANSISTOR,2SA1084ETZ-E G
Q104.Q105	S0068211	TRANSISTOR,2SC5395-T112FG
Q200.Q201	S0068201	TRANSISTOR,2SA1048GR(FT)G
Q202.Q203	S0068922	TRANSISTOR,2SA1084ETZ-E G
Q204.Q25	S0068211	TRANSISTOR,2SC5395-T112FG
Q300.Q301	S0068201	TRANSISTOR,2SA1048GR(FT)G
Q302.Q303	S0068922	TRANSISTOR,2SA1084ETZ-E G
Q304.Q305	S0068211	TRANSISTOR,2SC5395-T112FG
Q400.Q401	S0068201	TRANSISTOR,2SA1048GR(FT)G
Q402.Q403	S0068922	TRANSISTOR,2SA1084ETZ-E G
Q404.Q405	S0068211	TRANSISTOR,2SC5395-T112FG
Q500.Q501	S0068201	TRANSISTOR,2SA1048GR(FT)G
Q502.Q503	S0068922	TRANSISTOR,2SA1084ETZ-E G
Q504.Q505	S0068211	TRANSISTOR,2SC5395-T112FG
Q600.Q601	S0068201	TRANSISTOR,2SA1048GR(FT)G
Q602.Q603	S0068922	TRANSISTOR,2SA1084ETZ-E G
Q604.Q605	S0068211	TRANSISTOR,2SC5395-T112FG
Q700.Q701	S0068201	TRANSISTOR,2SA1048GR(FT)G
Q702.Q703	S0068922	TRANSISTOR,2SA1084ETZ-E G
Q704.Q705	S0068211	TRANSISTOR,2SC5395-T112FG
Q800.Q801	S0068201	TRANSISTOR,2SA1048GR(FT)G
Q802.Q803	S0068922	TRANSISTOR,2SA1084ETZ-E G
Q804.Q805	S0068211	TRANSISTOR,2SC5395-T112FG
SW1.SW2	E0127330	SW,SSSU012200 G
SW100.SW200	E0127340	SW,SSSF025100 G
SW300.SW400	E0127340	SW,SSSF025100 G
SW500.SW600	E0127340	SW,SSSF025100 G
SW700.SW800	E0127340	SW,SSSF025100 G
U1-U4	S0067620	IC,BA15532N G
VR100.VR200	R0175054	VAR RES,RK09D1130C4A-20K G
VR300.VR400	R0175054	VAR RES,RK09D1130C4A-20K G
VR500.VR600	R0175054	VAR RES,RK09D1130C4A-20K G
VR700.VR800	R0175054	VAR RES,RK09D1130C4A-20K G

GATHER PCB ASSY, INPUT AD DM G

REF.NO.	PARTS NO.	DESCRIPTION
	E95198900B	GATHER PCBA,INPUT AD DM G
		PCB,INPUT AD DM G
		PCB ASSY,INPUT AD DM G
D102-D105	S0022094	DIODE,1SS355
D202-D205	S0022094	DIODE,1SS355
D302-D305	S0022094	DIODE,1SS355
D402-D405	S0022094	DIODE,1SS355
D502-D505	S0022094	DIODE,1SS355
D602-D605	S0022094	DIODE,1SS355
D702-D705	S0022094	DIODE,1SS355
D802-D805	S0022094	DIODE,1SS355
L004-L011	E0101174	COIL,LQH43CN100K03L G
P11	E0126770	CONNECTOR,5P A2502WV W G
P12	E0125880	CONNECTOR,13P A2001WV W G
P13	E0125880	CONNECTOR,13P A2001WV W G
P14.P15	E0125850	CONNECTOR,6P A2001WV W G
P16	E0126800	CONNECTOR,9P A2502WV W G
P9.P10	E0126740	CONNECTOR,12P A2001WV W G
Q1	S0067924	TRANSISTOR,DTA124EKA G
R048	R0133514	RES ARRAY,MNR15E0RPJ103
U001-U004	S0059604	IC,AK5385AVF G
U5-U6	S0067634	IC,LIN NJM5532M G
U17.U18	S0067644	IC,SN74LV541ANS G

GATHER PCB ASSY, MSTR JACK DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95277400B	GPCBA,MSTR JACK DM48 G
		PCB,MSTR JACK DM48
		PCB,INLET DM48
		PCB ASSY,MSTR JACK DM48 G
J001	E0123910	JACKÅCRCA2P B217L R/W G
J100	E0127310	JACK,PHON JY-6353-02030 G
J101.J201	E0127360	JACK,PHON JY-6353-02250 G
J102-J104	E0127310	JACK,PHON JY-6353-02030 G
J200	E0127310	JACK,PHON JY-6353-02030 G
J202-J204	E0127310	JACK,PHON JY-6353-02030 G
J300.J400	E0127310	JACK,PHON JY-6353-02030 G
J301.J401	E0127360	JACK,PHON JY-6353-02250 G
L100-L102	E0127040	BEAD COIL,FBR07HA850SB00G
L200-L202	E0127040	BEAD COIL,FBR07HA850SB00G
P001	E01244600A	HA,MAAMPP12 MAJAP48 G
P002	E0126840	CONNECTOR,14P A2502WV W G
P003	E0126830	CONNECTOR,12P A2502WV W G
P004	E01244500A	HA,MAAMPP1 MAJAP004 G
P100.P200	E0127370	JACK,MIC NC3MAV G
Q1-Q4	S0067872	TRANSISTOR,2SC2878-B G
SET B217L	M0252020	SPACER,LEDH-11 G
		PCB ASSY,INLET DM48 G
	E90285800A	PCB,INLET DM48
C1	C0066350	CQ,1.0UFAC250V G
C2-C3	C0059830	CQ,0.1UFAC 250V-G
C4	E0127151	SPK KILLER,0.0047M250V G
C5.C6	C0032860	CC, 250V 2200PF M
D1	R0175270	VARISTOR,DC470V ERZ G
F1	E0127640	T-LAG FUSE,SB AC250V 5A G
F1	E0126350	HOLDER,FUSE HOLDER 5.0 G
L1.L2	E0127050	COIL,2.2MH 1.3A LF2020G
MB1	DM01510100A	BRACKET,PCB-A G
P1	DE0076040	AC,INLET M1908A
P2	DE00948700A	HA,INLETP2 SWPCN1 G
S1	DE0125690	SW,SFDLB11M7U G

GATHER PCB ASSY, MST AMP DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95278800B	GATHER PCBA,MST AMP DM48 G
		PCB,MSTR AMP DM48 G
		PCB ASSY,MST AMP DM48 G
J100.J200	E0127310	JACK,PHON JY-6353-02030 G
P1.P14	E0126770	CONNECTOR,5P A2502WV W G
P10	E0126820	CONNECTOR,11P A2502WV W G
P11	E0126790	CONNECTOR,7P A2502WV W G
P12	E0126840	CONNECTOR,14P A2502WV W G
P7	E0126730	CONNECTOR,2P A2001WV W G
Q3.Q4	S0067872	TRANSISTOR,2SC2878-B G
Q7.Q8	S0067872	TRANSISTOR,2SC2878-B G
R153.R159	R0174330	RN,METAL OXID 1/2W 10 OHMG
R155.R156	R0174450	RN,METAL OXID 1/2W 100 OHMG
R165.R167	R0174450	RN,METAL OXID 1/2W 100 OHMG
SW1	HE0123900	SWÅCPUSH SPEA123000 G
U1.U3	S0067660	IC,NJM5532D G
U2	S0067650	IC,NJM4580D G
U12-U14	S0067650	IC,NJM4580D G
U15.U16	S0067660	IC,NJM5532D G
U17.U18	S0067650	IC,NJM4580D G
VR1.VR2	R0175034	VAR RES,RK14K12DF30-10KAG
VR3	R0175054	VAR RES,RK09D1130C4A-20K G
VR4	R0175034	VAR RES,RK14K12DF30-10KAG

GATHER PCB ASSY, MST ADA DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95199210B	GATHER PCBA,MST ADA DM48 G
		PCB,MSTR ADDA DM G
		PCB ASSY,MST ADDA DM48 G
D1-D28	S0022094	DIODE,1SS355
L1-L6	E0101174	COIL,LQH43CN100K03L G
L8.L9	E0101174	COIL,LQH43CN100K03L G
P1	E0125850	CONNECTOR,6P A2001WV W G
P2	E0125880	CONNECTOR,13P A2001WV W G
P3	E0126890	CONNECTOR,8P A2502WV R G
P4	E0126740	CONNECTOR,12P A2001WV W G
P5	E0126440	CONNECTOR,2316S-26G-F1 G
P6	E0126820	CONNECTOR,11P A2502WV W G
P7	E0126790	CONNECTOR,7P A2502WV W G
P8	E0125950	CONNECTOR,12P A2502WV W G
P9	E0126840	CONNECTOR,14P A2502WV W G
P13	E0126770	CONNECTOR,5P A2502WV W G
P15	E0127000	PIN,HEADER 2.54MM 2*4P G
Q5.Q6	S0018524	TRANSISTOR,2SC3661
Q7	S0067924	TRANSISTOR,DTA124EKA G
U1-U4	S0063994	IC,AK4528VF G
U5-U7	S0064544	IC,NJM4580M G
U8	S0064224	IC,AK4382AVT G
U9-U11	S0067634	IC,LIN NJM5532M G
U19	S0058443	IC,XC9572XL-10VQG64C
U20.U21	S0067644	IC,SN74LV541ANS G
U22	S0067524	IC,SN75LVDT390PW G

GATHER PCB ASSY, EXT IO DM48 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95276300B	GATHER PCBA,EXT IO DM48 G
		PCB,EXT ADDA DM48
		PCB,EXT JACK DM48
		PCB ASSY,EXT ADDA DM48
D1-D16	S0022094	DIODE,1SS355
L1-L4	E0101174	COIL,LQH43CN100K03L G
P1	E0125950	CONNECTOR,12P A2502WV W G
P2	E0127610	CONNECTOR,13P A2502WV W G
P3	E0126890	CONNECTOR,8P A2502WV R G
P4	E0126740	CONNECTOR,12P A2001WV W G
Q1-Q4	S0018524	TRANSISTOR,2SC3661
U1,U2	S0063994	IC,AK4528VF G
U3,U4	S0064544	IC,NJM4580M G
		PCB ASSY,EXT JACK DM48
	E90272100A	PCB,EXT JACK DM48
	EZ5272102A	PCB ASSY,T-EXT JACK DM48
J1-J4	E0127360	JACK,PHON JY-6353-02250 G
J5-J8	E0127310	JACK,PHON JY-6353-02030 G
P100	E0125950	CONNECTOR,12P A2502WV W G
P200	E0127610	CONNECTOR,13P A2502WV W G

GATHER PCB ASSY, FADER RM FW G

REF.NO.	PARTS NO.	DESCRIPTION
	E95168200C	PCB ASSY,FADER RM FW G
C501-C503	S0022094	DIODE,1SS355
D101-D103	S0022094	DIODE,1SS355
D201-D203	S0022094	DIODE,1SS355
D301-D303	S0022094	DIODE,1SS355
D401-D403	S0022094	DIODE,1SS355
D601-D603	S0022094	DIODE,1SS355
D701-D703	S0022094	DIODE,1SS355
D801-D803	S0022094	DIODE,1SS355
D901-D903	S0022094	DIODE,1SS355
MF101.201	R0175024	VAR RES,RSA0N11M9A0C G
MF301.401	R0175024	VAR RES,RSA0N11M9A0C G
MF501.601	R0175024	VAR RES,RSA0N11M9A0C G
MF701.801	R0175024	VAR RES,RSA0N11M9A0C G
MF901	R0175024	VAR RES,RSA0N11M9A0C G
P1	E0126490	CONNECT,2316S-40G-F1 G
P2	E0126880	CONNECTOR,4P A2502WV R G
U1.U3	S0067644	IC,SN74LV541ANS G
U2.U4	S0064664	IC,NJM072BM G
U5	S0067674	IC,SN74LV165ANSR G
U6	S0067684	IC,TLV1543CDW G
U7.U9	S0064664	IC,NJM072BM G
U8	S0067454	IC,LM2937IMPX-3.3 NOPB G
U10	S0064664	IC,NJM072BM G
U81.U82	S0067694	IC,SN74LV14ANSR G
U83-U85	S0067701	IC,HD74LV86AFPEL-E G
U101.U301	S0035334	IC,BA5983FM G
U102.U302	S0070814	IC,NJM4565M-T1 G
U201.U401	S0070814	IC,NJM4565M-T1 G
U501.U701	S0035334	IC,BA5983FM G
U502.U702	S0070814	IC,NJM4565M-T1 G
U601.U801	S0070814	IC,NJM4565M-T1 G
U901	S0035334	IC,BA5983FM G
U902	S0070814	IC,NJM4565M-T1 G

PCB ASSY, FADER FE8 G

REF.NO.	PARTS NO.	DESCRIPTION
	E95164100C	PCB ASSY,FADER FE8 G
C112.C113	C0057124	CC,X7R16V0.1UFKAT0603G
D101-D103	S0022094	DIODE,1SS355
D201-D203	S0022094	DIODE,1SS355
D301-D303	S0022094	DIODE,1SS355
D401-D403	S0022094	DIODE,1SS355
D501-D503	S0022094	DIODE,1SS355
D601-D603	S0022094	DIODE,1SS355
D701-D703	S0022094	DIODE,1SS355
D801-D803	S0022094	DIODE,1SS355
MF101.201	R0175024	VAR RES,RSA0N11M9A0C G
MF301.401	R0175024	VAR RES,RSA0N11M9A0C G
MF501.601	R0175024	VAR RES,RSA0N11M9A0C G
MF701.801	R0175024	VAR RES,RSA0N11M9A0C G
P1	E0126490	CONNECT,2316S-40G-F1 G
U1.U3	S0067644	IC,SN74LV541ANS G
U2.U4	S0064664	IC,NJM072BM G
U5	S0067674	IC,SN74LV165ANSR G
U6	S0067684	IC,TLV1543CDW G
U7.U9	S0064664	IC,NJM072BM G
U8	S0067454	IC,LM2937IMPX-3.3 NOPB G
U10	S0064664	IC,NJM072BM G
U81.U82	S0067694	IC,SN74LV14ANSR G
U83.U84	S0067701	IC,HD74LV86AFPEL-E G
U101.U301	S0035334	IC,BA5983FM G
U102.U302	S0070814	IC,NJM4565M-T1 G
U201.U401	S0070814	IC,NJM4565M-T1 G
U501.U701	S0035334	IC,BA5983FM G
U502.U702	S0070814	IC,NJM4565M-T1 G
U601.U801	S0070814	IC,NJM4565M-T1 G

WIRE SECT,DM4800

REF.NO.	PARTS NO.	DESCRIPTION
	E00948600A	HA,SWPCN201202 PSUBP1P2 G
	E00948300A	HA,MAINP25 PSUBP11 G
	E00948500A	HA,MAINP26 PSUBP12 G
	E00948100A	HA,MONP2 PSUBP14 G
	E00948200A	HA,MOTHERP3 PSUBP9 G
	E00948400A	HA,MOTHERP5 PSUBP7 G
	E01244000A	HA,MOTHERP3 PSUBP10 48G
	E01244100A	HA,MOTHERP5 PSUBP8 48G
	E01243800A	HA,MAINP31 MOTHERP4 48G
	E01243900B	HA,MAINP32 MOTHERP1 48G
	E00946600A	HA,MAINP29 MOTHERP4 G
	E00946700B	HA,MAINP30 MOTHERP1 G
	E00946300B	HA,MAINP16 FDRFWP1 G
	E00946400B	HA,MAINP16 FDRFWP1 G
	E01243700A	HA,MAINP17 FDRFEP1 48G
	E00946800A	HA,MAINP33 CFP2 G
	E00947800A	HA,INAD1P16 PSUBP3 G
	E00947900A	HA,INAD9P16 PSUBP4 G
	E00948000A	HA,MAADP3 PSUBP6 G
	E00946900A	HA,MAINP1 LCDUNIT G
	E00944000B	HA,INAD19 INAMP19 SIG
	E00944200A	HA,INAD19P11 INAMP19P7 G
	E00944300A	HA,INAD1P12 INAD9P13 G
	E00944400A	HA,INAD1P14 INAD9P15 G
	E00944500A	HA,INAD9P12 MAADP2 G
	E00944600A	HA,INAD9P14 MAADP1 G
	E00944700B	HA,INAMP19 INJA19 SIG G
	E00945100B	HA,INAMP19P8 INJA19P5 G
	E00945200B	HA,MAADP6 MAAMPP10 G
	E00945300B	HA,MAADP7 MAAMPP11 G
	E00945400A	HA,MAADP8 MAJAP3 G
	E00945500A	HA,MAADP9 MAJAP2 G
	E00945600A	HA,MAADP13 MAAMPP14 G
	E00945800A	HA,TB MIC G
	E00946500B	HA,MAINP28 MAADP5 G
	E01244200A	HA,EXTADP4 MSTRADP4 G
	E01244300A	HA,EXTADP1 EXTJAP100 G
	E01244400A	HA,EXTADP2 EXTJAP200 G

11. INCLUDED ACCESSORIES
付属品

INCLUDED ACCESSORIES

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
	E01469600A	POWER CORD,PSE TEAC 7A G [J]	
	3E014150	POWER CORD,UL-G [US/C]	
	3E014160	POWER CORD,EUR-G [K,E,]	
	3E014170	POWER CORD,UK [UK]	
	3E014180	POWER CORD,AUS [A]	
	3E039940	POWER CORD,TM G [T]	
	3E015120	CABLE,USB CABLE 1.5M G	
	T0013630	CF CARD,CF128-231 G	
	T00124000A	DISC,CD-ROM DMS	
	D00936900A	OWNERS MNL,(J)4800 G	
	D00936910A	OWNERS MNL,(E)4800 G	
	D00936920A	OWNERS MNL,(F)4800 G	
	D00937000A	OWNERS MNL,QR(E)4800 G	
	D00937010A	OWNERS MNL,QR(F)4800 G	
	D00937020A	OWNERS MNL,QR(G)4800 G	
	D00937040A	OWNERS MNL,QR(S)4800 G	
	D00889200B	AUTOMATION GUIDE,J DM	
	D00889210B	AUTOMATION GUIDE,E DM	
	D00889220B	AUTOMATION GUIDE,F DM	
	D00889300B	TMC SOFTWARE GUIDE,J DM	
	D00889310B	TMC SOFTWARE GUIDE,E DM	
	D00889320B	TMC SOFTWARE GUIDE,F DM	

NOTES

- PC boards shown are viewed from parts side.
- Parts marked with * require longer delivery time.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
- Parts of [ ] mark can be used only with the version designated.
  [J] : JAPAN [US/C] : U.S.A./CANADA [K] : KOREA [E] : EUROPE
  [UK] : U.K. [A] : AUSTRALIA [T]: Tiwan

注 意

- プリント基板図は部品面を示しています。
- *印の部品は納期が若干かかります。
  あらかじめご了承ください。
- 分解図に部番のない部品および品番のない部品は供給できません。
- 標準の抵抗、コンデンサーは省略してあります。
  回路図を参照してください。
- ⚠印は安全重要部品です。
  交換する時は必ず指定の部品を使用してください。
- 仕向先
  [J] : JAPAN [US/C] : U.S.A./CANADA [K] : KOREA
  [E] : EUROPE
  [UK] : U.K. [A] : AUSTRALIA [T] : Tiwan

TASCAM
TEAC Professional Division

SCHEMATIC DIAGRAM
回路図

DM-4800

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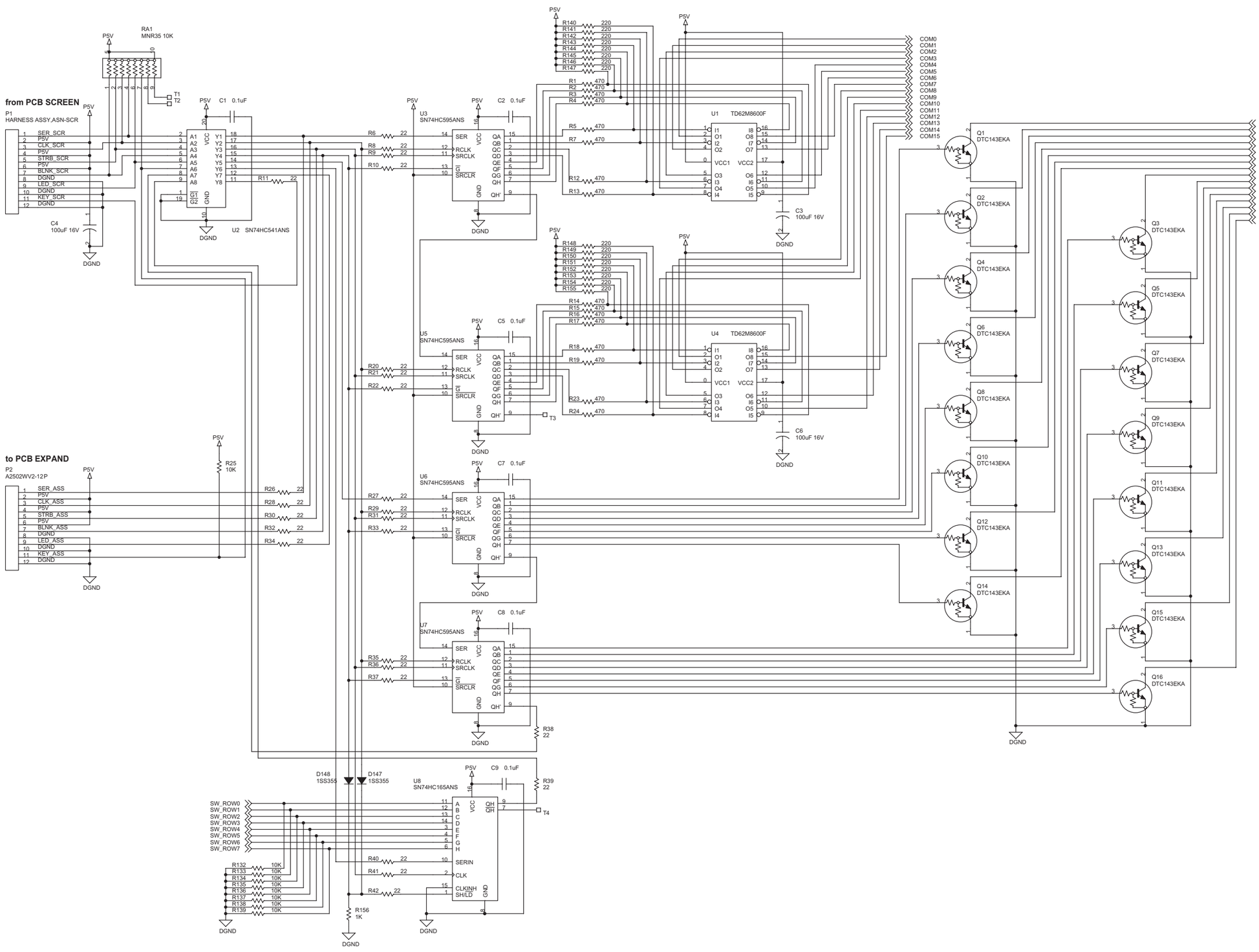
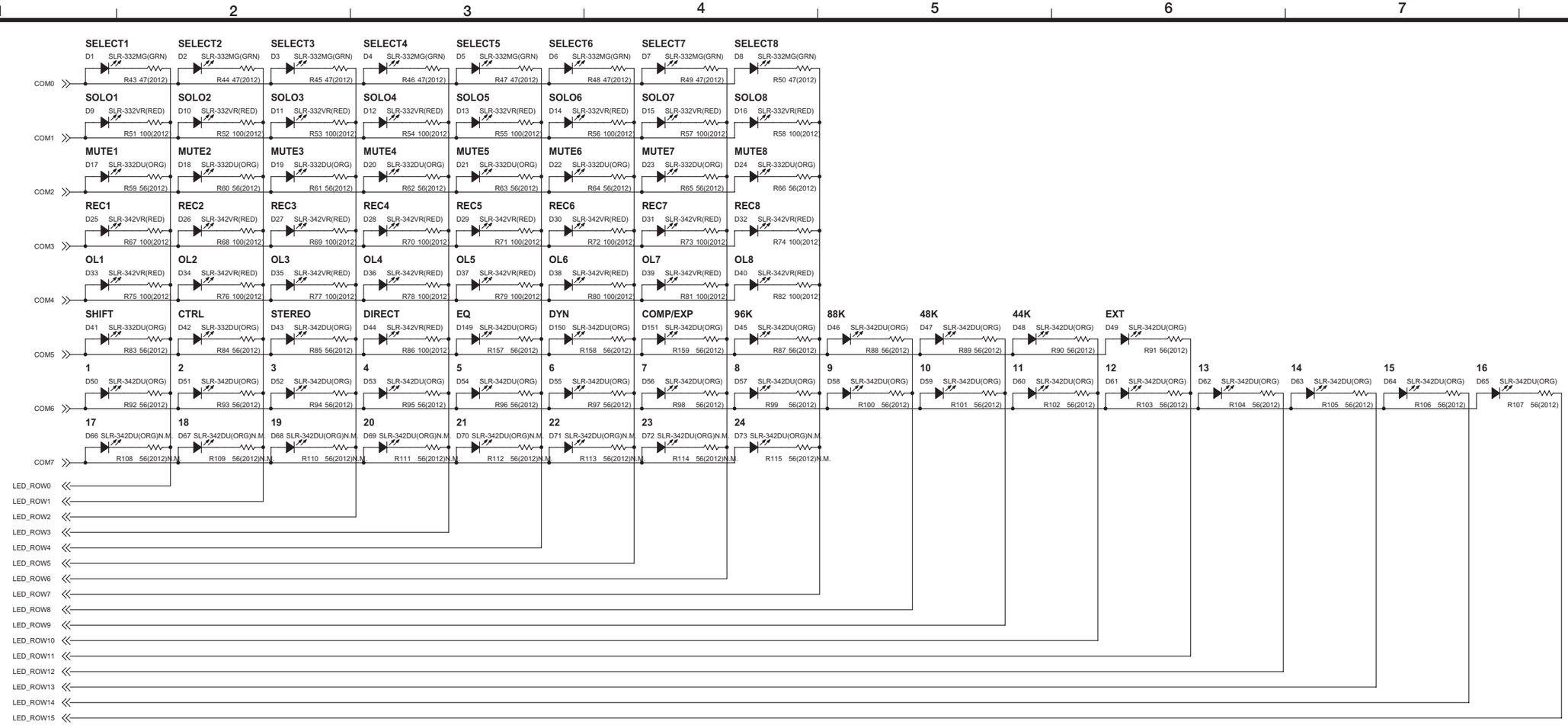


Digital Mixing Console DM-4800
1 st Issue; May 2007


1
2
3
4
5
6
7
A
B
C
D
E
SELECT1 SELECT2 SELECT3 SELECT4 SELECT5 SELECT6 SELECT7 SELECT8
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COM0
SOLO1 SOLO2 SOLO3 SOLO4 SOLO5 SOLO6 SOLO7 SOLO8
SLR-332VR(RED)
COM1
MUTE1 MUTE2 MUTE3 MUTE4 MUTE5 MUTE6 MUTE7 MUTE8
SLR-332DU(ORG)
COM2
REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8
SLR-342VR(RED)
COM3
OL1 OL2 OL3 OL4 OL5 OL6 OL7 OL8
SLR-342VR(RED)
COM4
SHIFT CTRL STEREO DIRECT EQ DYN COMP/EXP 96K 88K 48K 44K EXT
SLR-342DU(ORG)
COM5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
SLR-342DU(ORG)
COM6
17 18 19 20 21 22 23 24
SLR-342DU(ORG)N.M.
COM7
LED_ROW0
LED_ROW1
LED_ROW2
LED_ROW3
LED_ROW4
LED_ROW5
LED_ROW6
LED_ROW7
LED_ROW8
LED_ROW9
LED_ROW10
LED_ROW11
LED_ROW12
LED_ROW13
LED_ROW14
LED_ROW15
T5
P3 DF15(4.2)-20DP
COM8
COM9
COM10
COM11
T7
to PCB RING
R160 1K
R161 1K
R162 1K
R163 1K
DGND
T6
P4 DF15(4.2)-20DP
COM12
COM13
COM14
COM15
T8
to PCB RING
R164 1K
R165 1K
R166 1K
R167 1K
DGND
T9
P5 DF15(4.2)-20DP
RING_ROW0
RING_ROW1
RING_ROW2
RING_ROW3
RING_ROW4
RING_ROW5
RING_ROW6
RING_ROW7
T11
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R116 220(2012)
R118 220(2012)
R120 220(2012)
R122 220(2012)
R124 220(2012)
R126 220(2012)
R128 220(2012)
R130 220(2012)
R168 1K
R169 1K
R170 1K
R171 1K
R172 1K
R173 1K
R174 1K
R175 1K
P5V
T10
P6 DF15(4.2)-20DP
RING_ROW8
RING_ROW9
RING_ROW10
RING_ROW11
RING_ROW12
RING_ROW13
RING_ROW14
RING_ROW15
T12
from PCB RING
R117 220(2012)
R119 220(2012)
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R123 220(2012)
R125 220(2012)
R127 220(2012)
R129 220(2012)
R131 430(2012)
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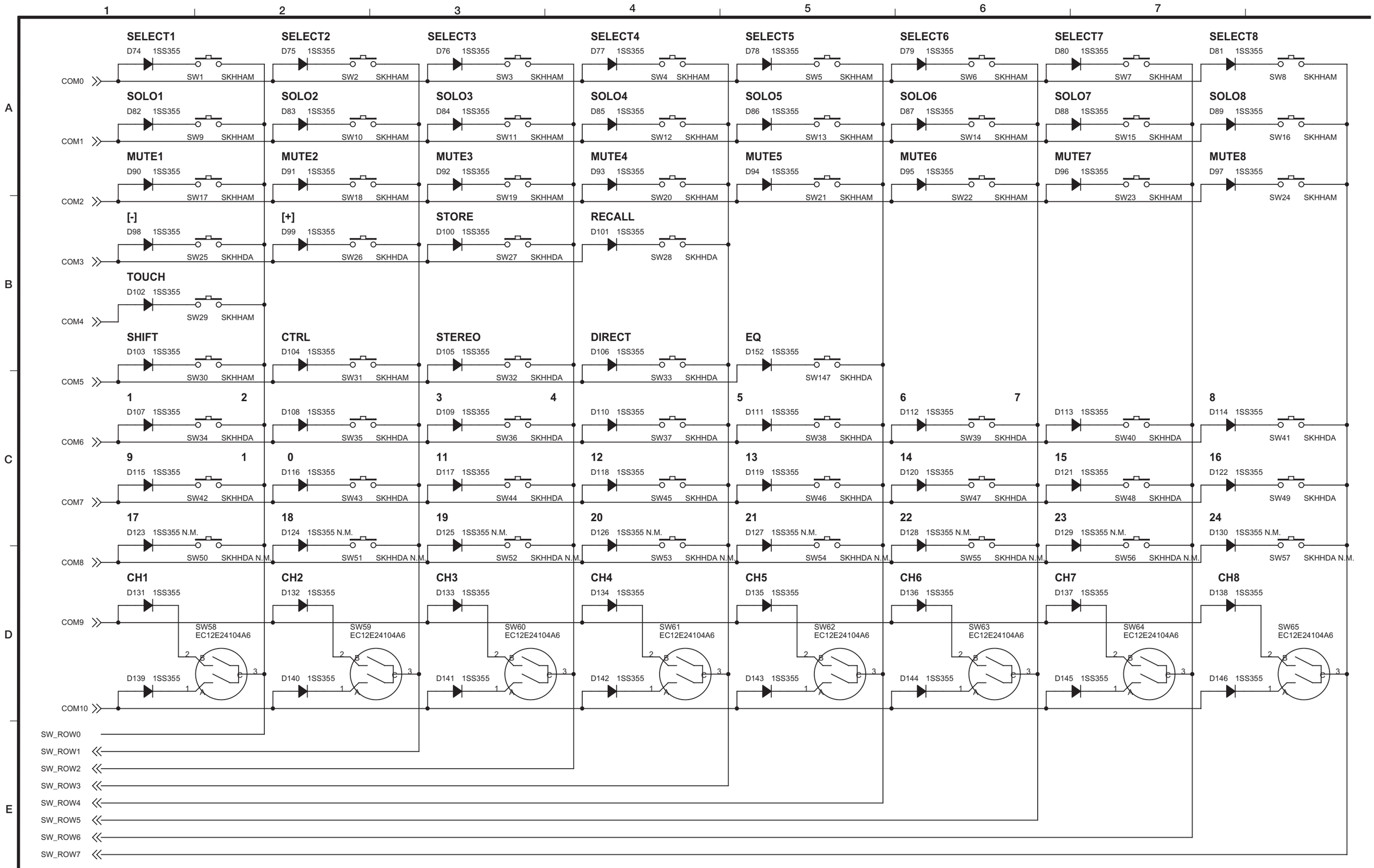
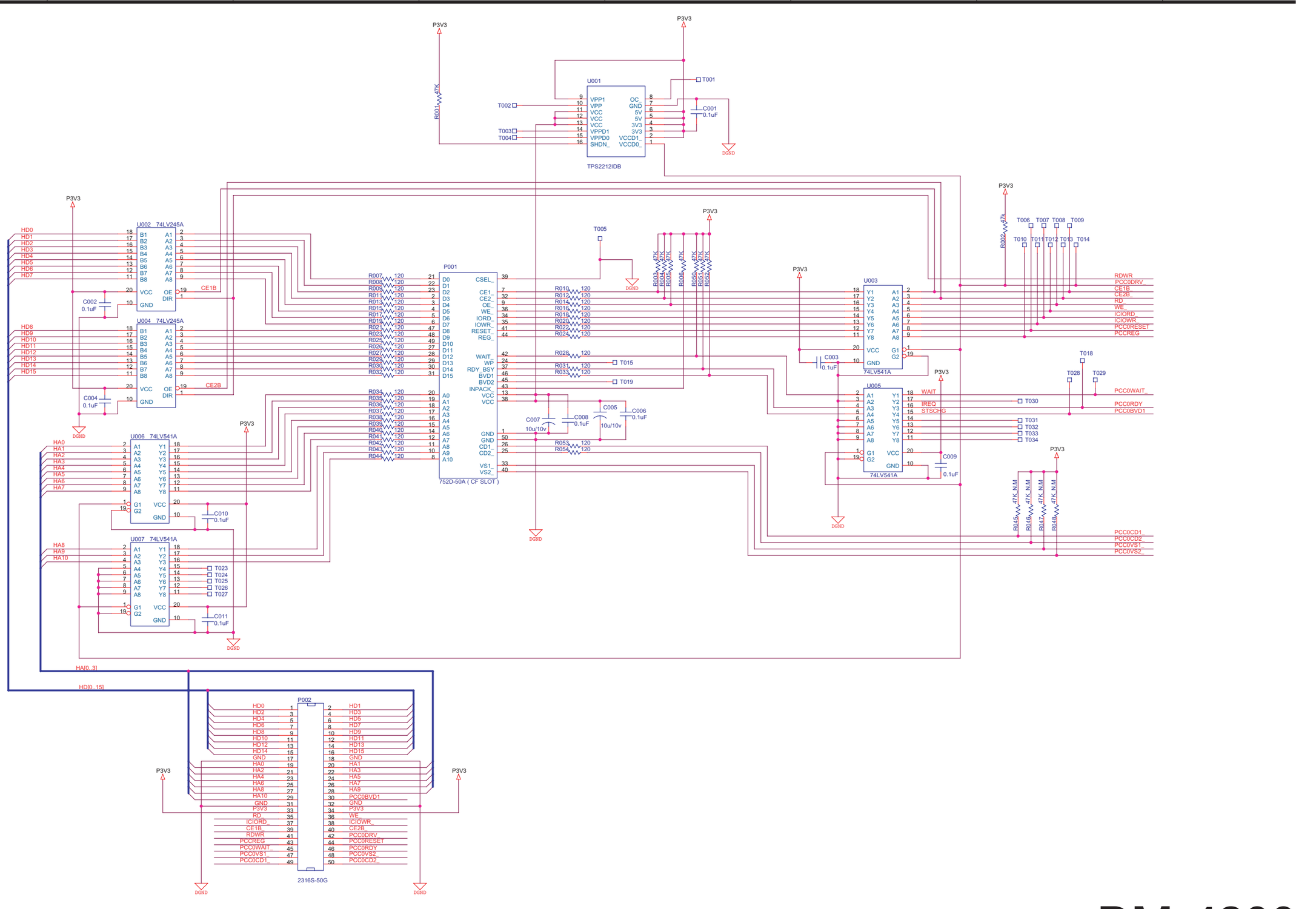


Digital Mixing Console **DM-4800**

1 st Issue; May 2007



Digital Mixing Console **DM-4800**

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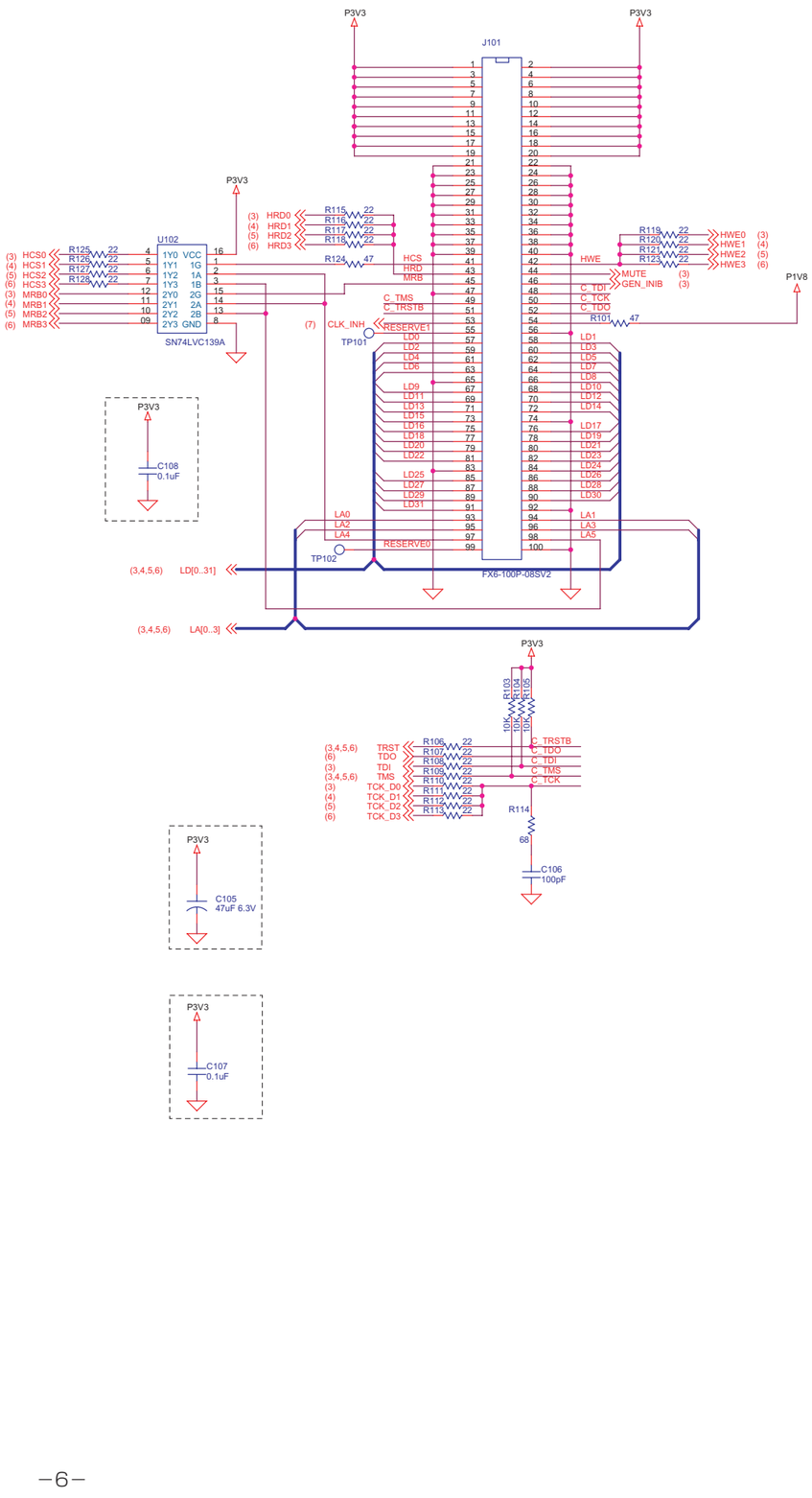
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FX6-100P-08SV2
U102
SN74LVC139A
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HCS2
HCS3
MRB0
MRB1
MRB2
MRB3
HRD0
HRD1
HRD2
HRD3
HCS
HRD
MRB
HWE
HWE0
HWE1
HWE2
HWE3
MUTE
GEN_INIB
C_TMS
C_TRSTB
CLK_INH
TP101
TP102
RESERVE1
RESERVE0
C_TDI
C_TCK
C_TDO
R101
LD[0..31]
LA[0..3]
C108
0.1uF
C105
47uF 6.3V
C107
0.1uF
R103
R104
R105
10K
R106
R107
R108
R109
R110
R111
R112
R113
R114
68
C106
100pF
TRST
TDO
TDI
TMS
TCK_D0
TCK_D1
TCK_D2
TCK_D3
C_TRSTB
C_TDO
C_TDI
C_TMS
C_TCK
D102
MMSZ4678T1
Q101
NTF6P02T3G
Q102
NTF6P02T3G
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1.8uH (CEP125NP-1R8NC-H)
D101
RSX501L-20
R102
10K
U101
NCP1550SN19T1G
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VOUT
GND
VIN
CE
C103
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C104
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C102
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C101
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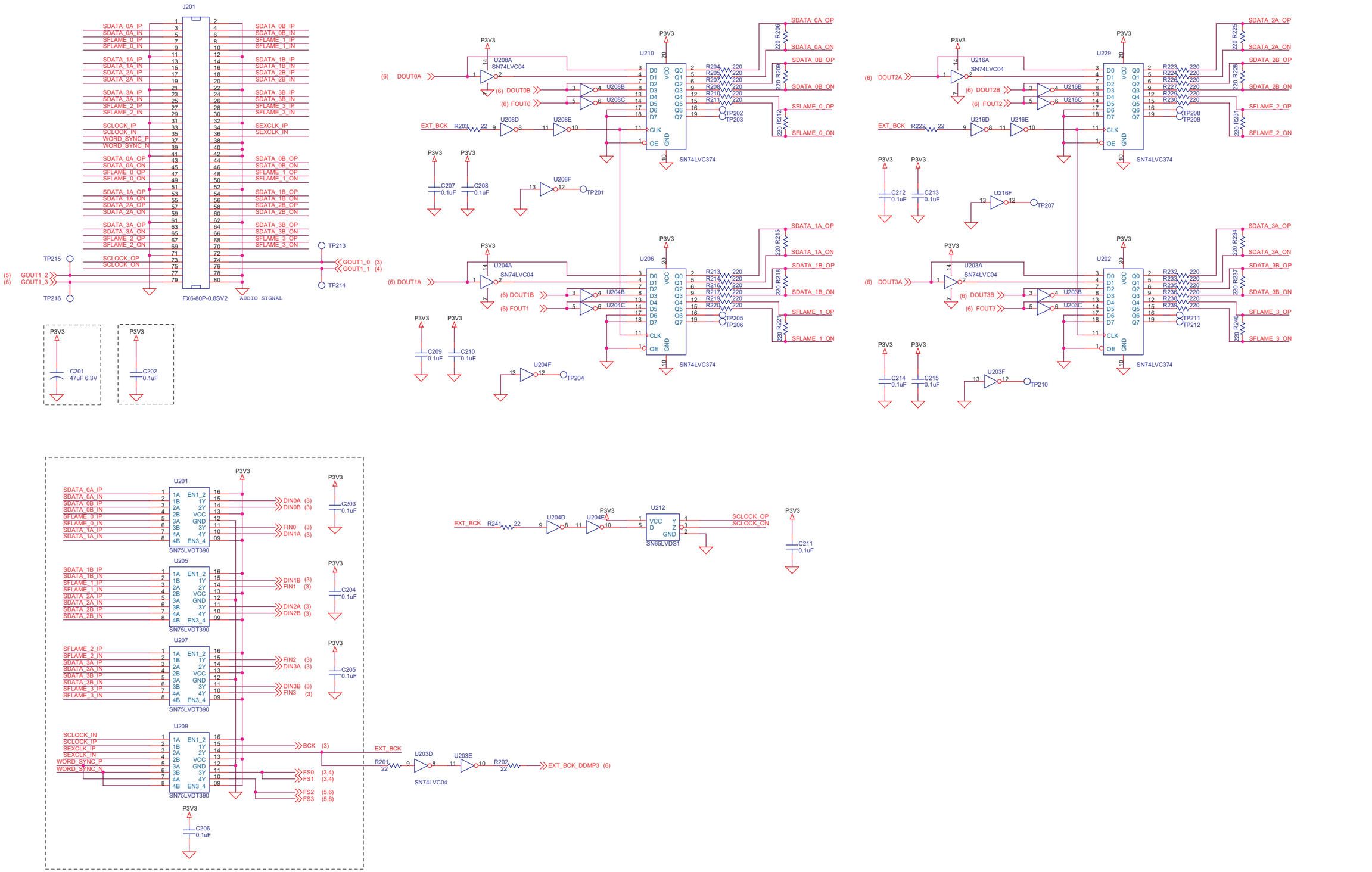
C109
470uF 6.3V
TP104
TP105
TP106
TP107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SDATA_1A_IP
SDATA_1A_IN
SDATA_2A_IP
SDATA_2A_IN
SDATA_3A_IP
SDATA_3A_IN
SFLAME_2_IP
SFLAME_2_IN
SCLOCK_IP
SCLOCK_IN
WORD_SYNC_P
WORD_SYNC_N
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SDATA_1A_OP
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SCLOCK_ON
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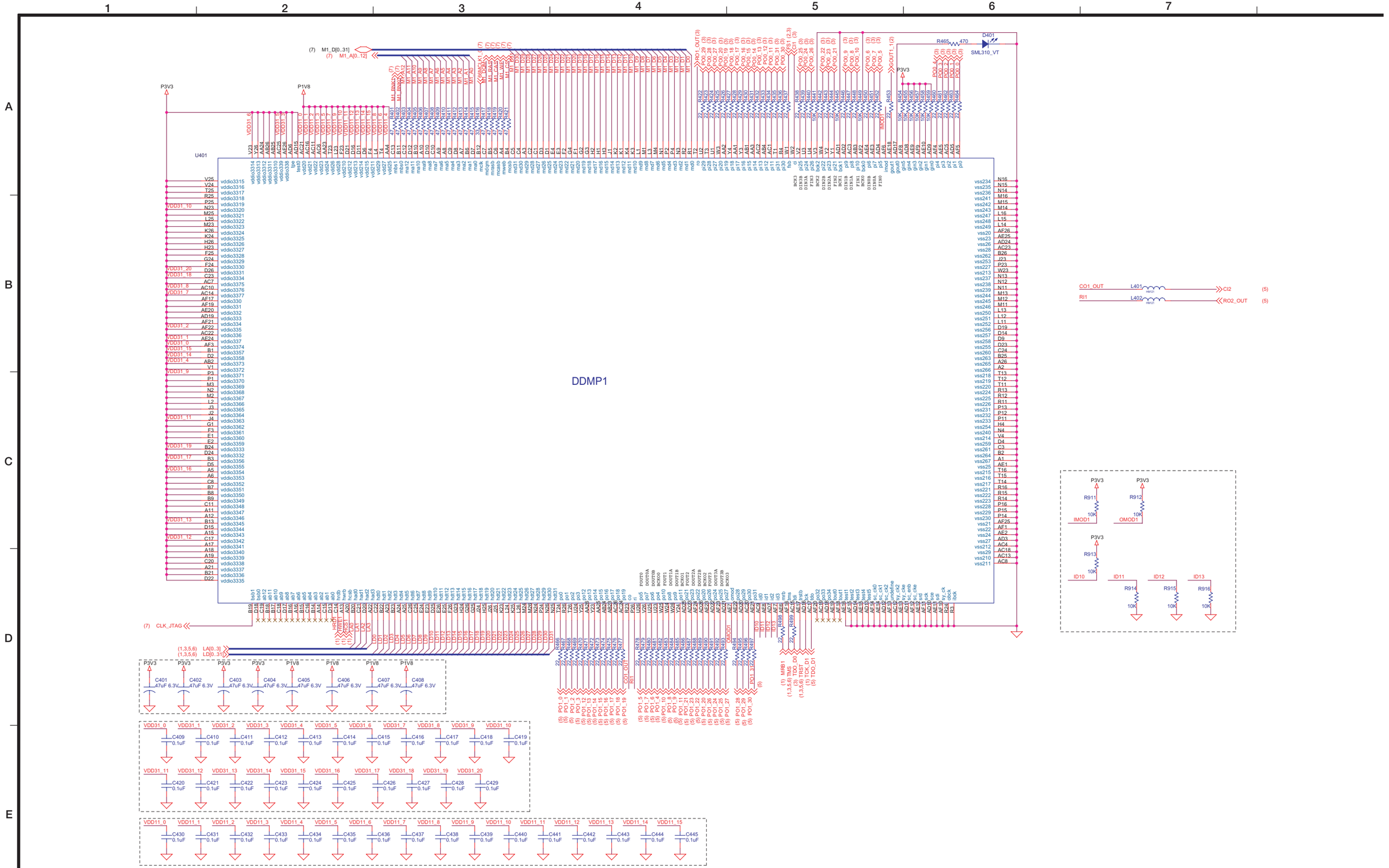
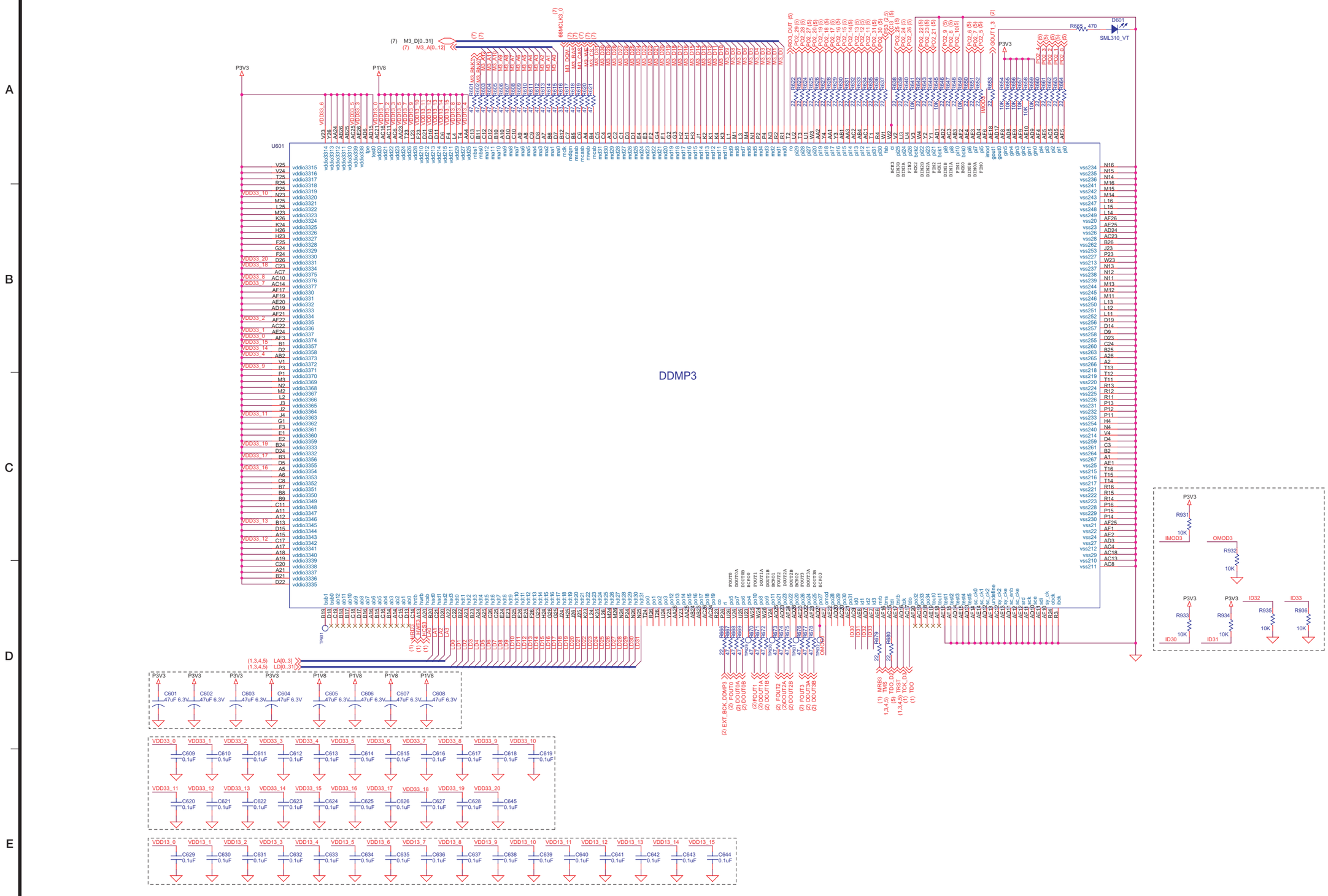
SDATA_1B_IN
SDATA_2B_IP
SDATA_2B_IN
SDATA_3B_IP
SDATA_3B_IN
SFLAME_3_IP
SFLAME_3_IN
SEXCLK_IP
SEXCLK_IN
SDATA_0B_OP
SDATA_0B_ON
SFLAME_1_OP
SFLAME_1_ON
SDATA_1B_OP
SDATA_1B_ON
SDATA_2B_OP
SDATA_2B_ON
SDATA_3B_OP
SDATA_3B_ON
SFLAME_3_OP
SFLAME_3_ON
TP213
TP214
TP215
TP216
GOUT1_0 (3)
GOUT1_1 (4)
(5) GOUT1_2
(6) GOUT1_3
C201 47uF 6.3V
C202 0.1uF
P3V3
U210
U229
U206
U202
U208A
U208B
U208C
U208D
U208E
U208F
U216A
U216B
U216C
U216D
U216E
U216F
U204A
U204B
U204C
U204F
U203A
U203B
U203C
U203F
SN74LVC04
SN74LVC374
(6) DOUT0A
(6) DOUT0B
(6) FOUT0
(6) DOUT2A
(6) DOUT2B
(6) FOUT2
(6) DOUT1A
(6) DOUT1B
(6) FOUT1
(6) DOUT3A
(6) DOUT3B
(6) FOUT3
EXT_BCK
R203 22
R222 22
C207 0.1uF
C208 0.1uF
C212 0.1uF
C213 0.1uF
C209 0.1uF
C210 0.1uF
C214 0.1uF
C215 0.1uF
TP201
TP202
TP203
TP204
TP205
TP206
TP207
TP208
TP209
TP210
TP211
TP212
R204 220
R205 220
R206 220
R207 220
R208 220
R209 220
R210 220
R211 220
R212 220
R213 220
R214 220
R215 220
R216 220
R217 220
R218 220
R219 220
R220 220
R221 220
R223 220
R224 220
R225 220
R226 220
R227 220
R228 220
R229 220
R230 220
R231 220
R232 220
R233 220
R234 220
R235 220
R236 220
R237 220
R238 220
R239 220
R240 220
SDATA_0A_OP
SDATA_0A_ON
SDATA_0B_OP
SDATA_0B_ON
SFLAME_0_OP
SFLAME_0_ON
SDATA_1A_OP
SDATA_1A_ON
SDATA_1B_OP
SDATA_1B_ON
SFLAME_1_OP
SFLAME_1_ON
SDATA_2A_OP
SDATA_2A_ON
SDATA_2B_OP
SDATA_2B_ON
SFLAME_2_OP
SFLAME_2_ON
SDATA_3A_OP
SDATA_3A_ON
SDATA_3B_OP
SDATA_3B_ON
SFLAME_3_OP
SFLAME_3_ON

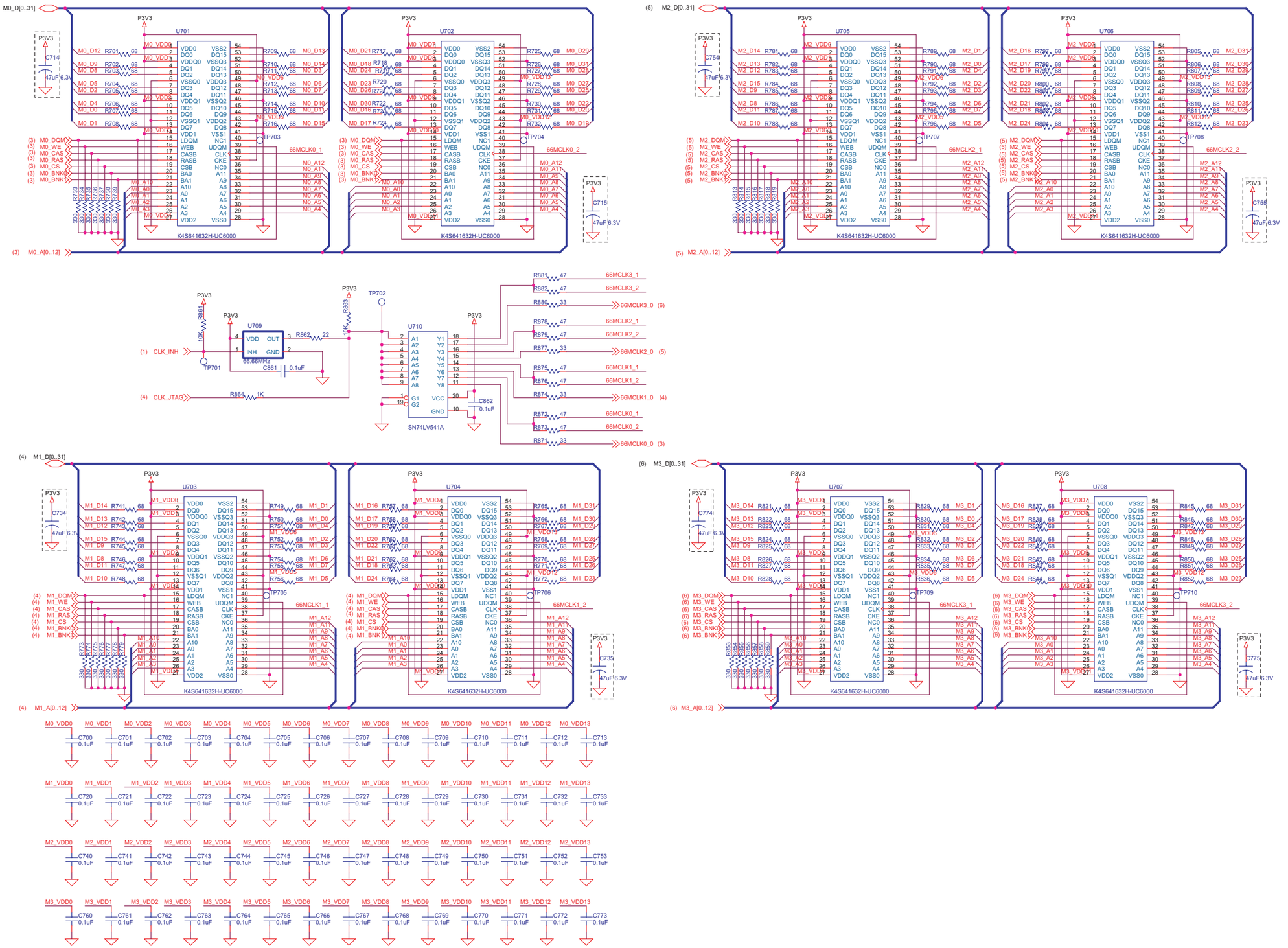
U201
U205
U207
U209
SN75LVDT390
SDATA_0A_IP
SDATA_0A_IN
SDATA_0B_IP
SDATA_0B_IN
SFLAME_0_IP
SFLAME_0_IN
SDATA_1A_IP
SDATA_1A_IN
SDATA_1B_IP
SDATA_1B_IN
SFLAME_1_IP
SFLAME_1_IN
SDATA_2A_IP
SDATA_2A_IN
SDATA_2B_IP
SDATA_2B_IN
SFLAME_2_IP
SFLAME_2_IN
SDATA_3A_IP
SDATA_3A_IN
SDATA_3B_IP
SDATA_3B_IN
SFLAME_3_IP
SFLAME_3_IN
SCLOCK_IP
SCLOCK_IN
SEXCLK_IP
SEXCLK_IN
WORD_SYNC_P
WORD_SYNC_N
DIN0A (3)
DIN0B (3)
FIN0 (3)
DIN1A (3)
DIN1B (3)
FIN1 (3)
DIN2A (3)
DIN2B (3)
FIN2 (3)
DIN3A (3)
DIN3B (3)
FIN3 (3)
BCK (3)
FS0 (3,4)
FS1 (3,4)
FS2 (5,6)
FS3 (5,6)
C203 0.1uF
C204 0.1uF
C205 0.1uF
C206 0.1uF
U212
SN65LVDS1
U204D
U204E
U203D
U203E
SN74LVC04
EXT_BCK
R241 22
R201 22
R202 22
EXT_BCK_DDMP3 (6)
SCLOCK_OP
SCLOCK_ON
C211 0.1uF


DDMP1
U401
P3V3
P1V8
M1_D[0..31]
M1_A[0..12]
CLK_JTAG
LA[0..3]
LD[0..31]
CO1_OUT
RI1
L401
L402
CI2
RO2_OUT
D401
SML310_VT
R465
470
IMOD1
OMOD1
ID10
ID11
ID12
ID13
R911
R912
R913
R914
R915
R916
10K
C401 47uF 6.3V
C402 47uF 6.3V
C403 47uF 6.3V
C404 47uF 6.3V
C405 47uF 6.3V
C406 47uF 6.3V
C407 47uF 6.3V
C408 47uF 6.3V
C409 0.1uF
C410 0.1uF
C411 0.1uF
C412 0.1uF
C413 0.1uF
C414 0.1uF
C415 0.1uF
C416 0.1uF
C417 0.1uF
C418 0.1uF
C419 0.1uF
C420 0.1uF
C421 0.1uF
C422 0.1uF
C423 0.1uF
C424 0.1uF
C425 0.1uF
C426 0.1uF
C427 0.1uF
C428 0.1uF
C429 0.1uF
C430 0.1uF
C431 0.1uF
C432 0.1uF
C433 0.1uF
C434 0.1uF
C435 0.1uF
C436 0.1uF
C437 0.1uF
C438 0.1uF
C439 0.1uF
C440 0.1uF
C441 0.1uF
C442 0.1uF
C443 0.1uF
C444 0.1uF
C445 0.1uF

DDMP1

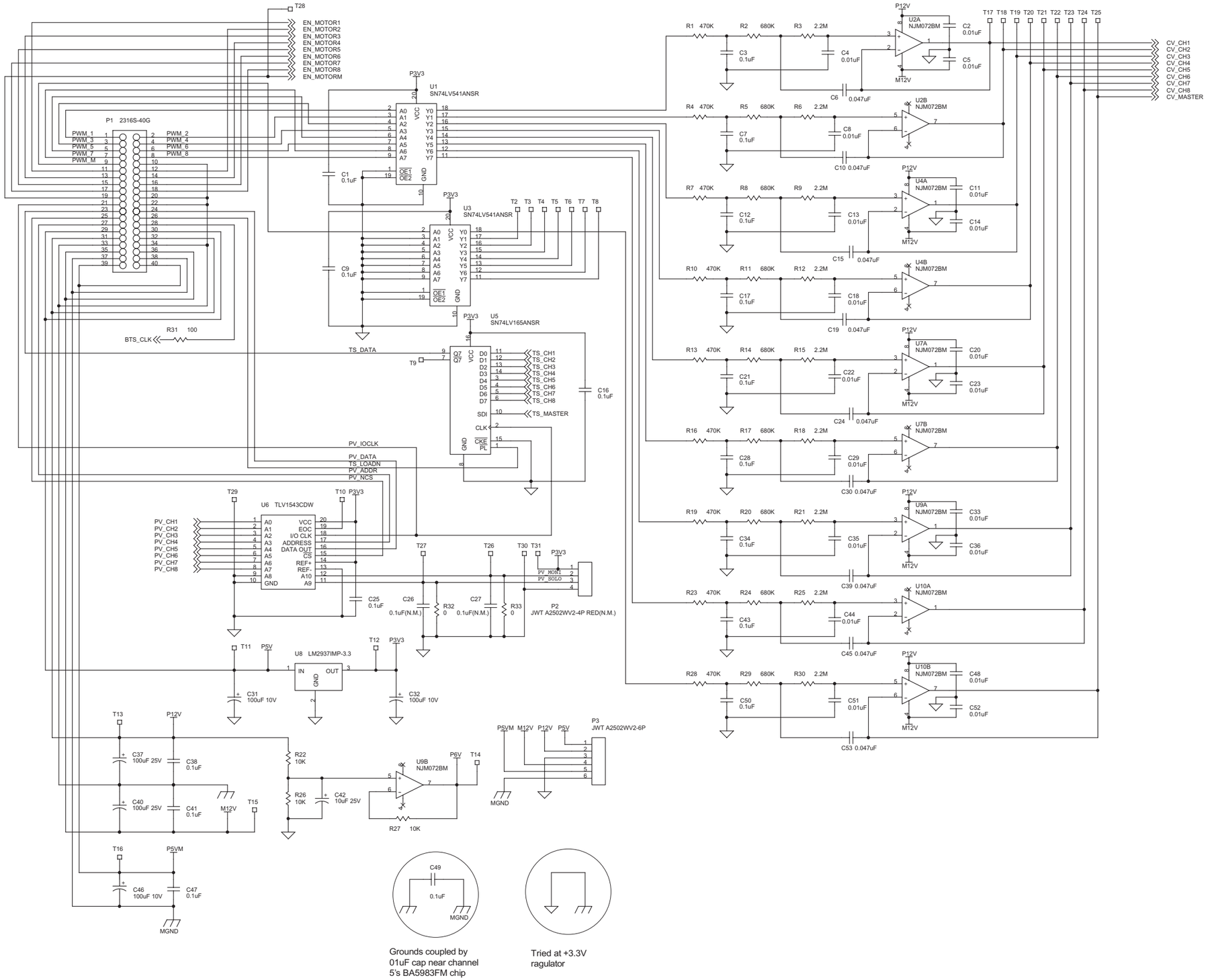
DDMP2


DDMP3
U601
P3V3
P1V8
D601
SML310_VT
R665 470
(7) M3_D[0..31]
(7) M3_A[0..12]
(1,3,4,5) LA[0..3]
(1,3,4,5) LD[0..31]
C601 47uF 6.3V
C602 47uF 6.3V
C603 47uF 6.3V
C604 47uF 6.3V
C605 47uF 6.3V
C606 47uF 6.3V
C607 47uF 6.3V
C608 47uF 6.3V
C609 0.1uF
C610 0.1uF
C611 0.1uF
C612 0.1uF
C613 0.1uF
C614 0.1uF
C615 0.1uF
C616 0.1uF
C617 0.1uF
C618 0.1uF
C619 0.1uF
C620 0.1uF
C621 0.1uF
C622 0.1uF
C623 0.1uF
C624 0.1uF
C625 0.1uF
C626 0.1uF
C627 0.1uF
C628 0.1uF
C645 0.1uF
C629 0.1uF
C630 0.1uF
C631 0.1uF
C632 0.1uF
C633 0.1uF
C634 0.1uF
C635 0.1uF
C636 0.1uF
C637 0.1uF
C638 0.1uF
C639 0.1uF
C640 0.1uF
C641 0.1uF
C642 0.1uF
C643 0.1uF
C644 0.1uF
R931 10K
R932 10K
R933 10K
R934 10K
R935 10K
R936 10K
IMOD3
OMOD3
ID30
ID31
ID32
ID33



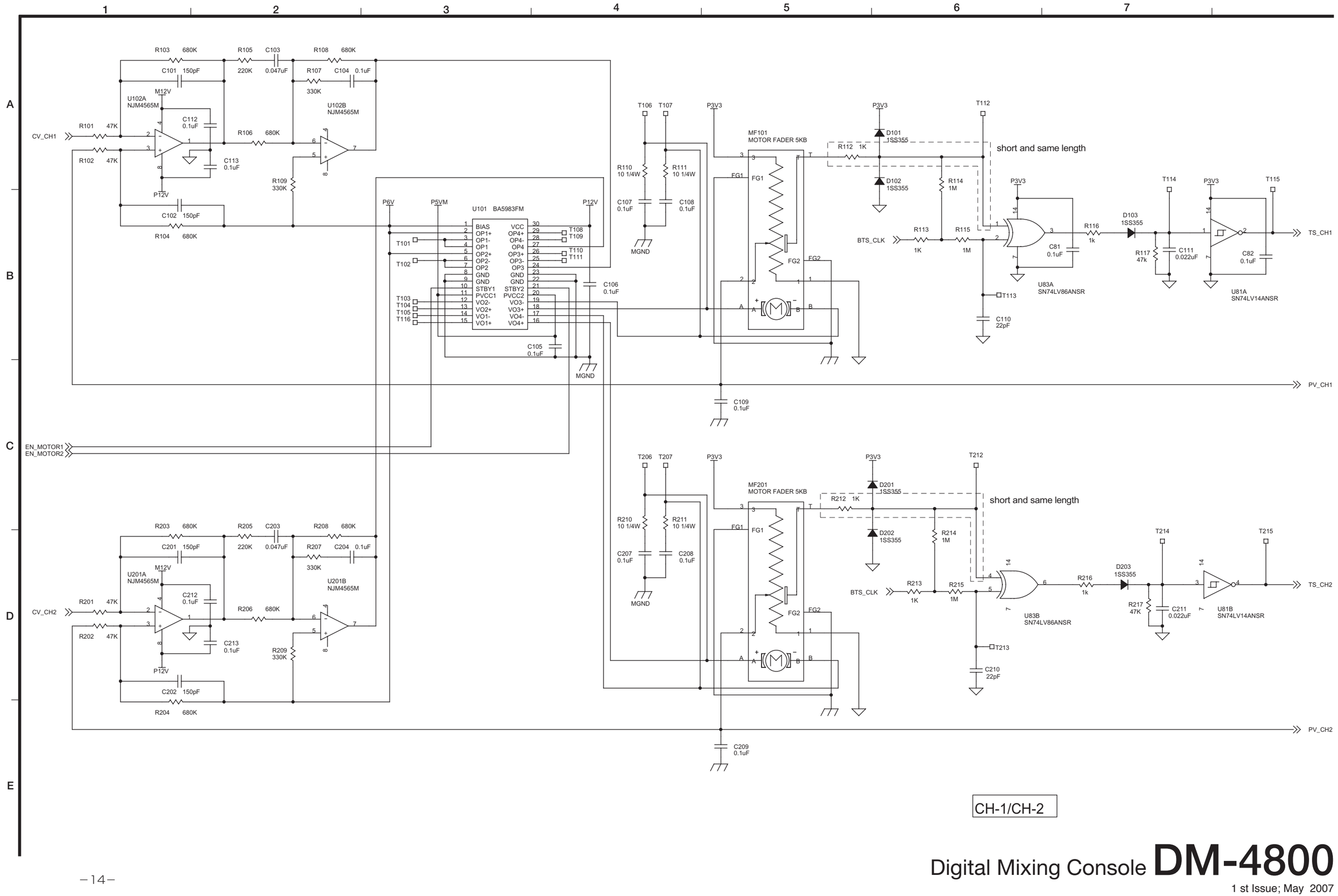
Digital Mixing Console **DM-4800**

1 st Issue; May 2007

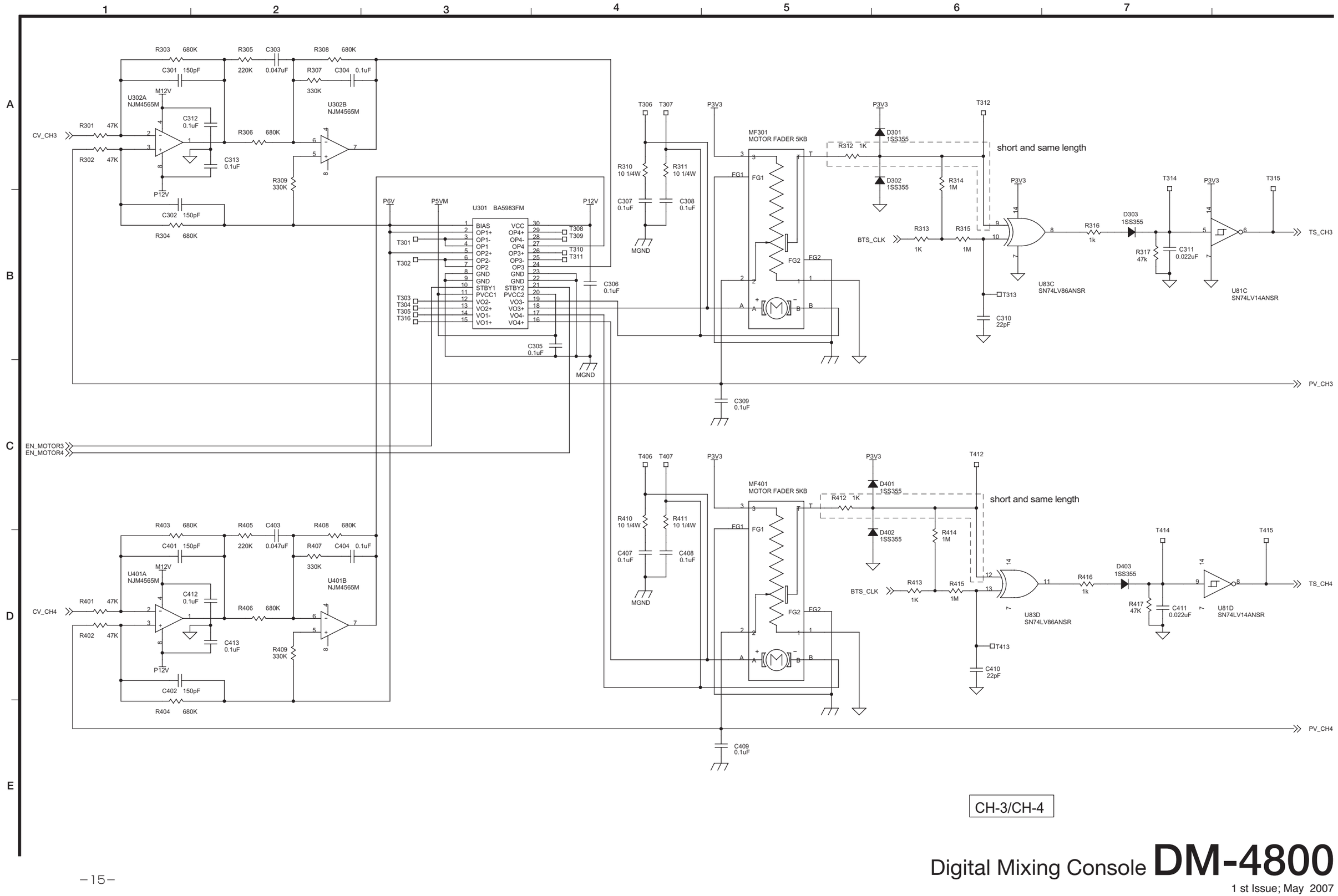


Digital Mixing Console **DM-4800**

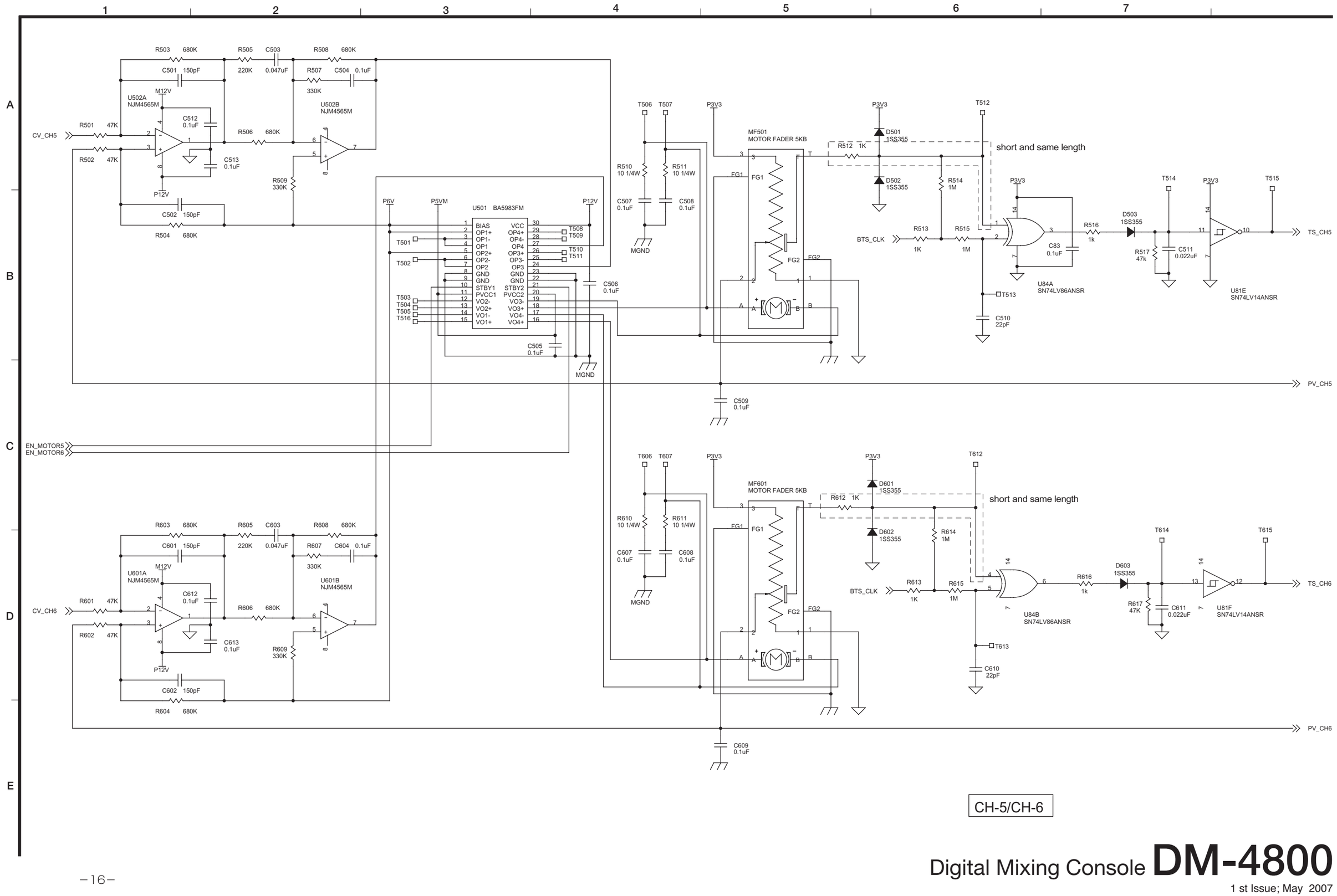
1 st Issue; May 2007


1
2
3
4
5
6
7
A
B
C
D
E
R103 680K
R105 C103
R108 680K
C101 150pF
220K 0.047uF
R107 C104 0.1uF
330K
M12V
U102A
NJM4565M
U102B
NJM4565M
C112
0.1uF
R101 47K
CV_CH1
R106 680K
R102 47K
C113
0.1uF
R109
330K
P12V
C102 150pF
R104 680K
P6V
P5VM
U101 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T101
T102
T103
T104
T105
T116
T108
T109
T110
T111
C106
0.1uF
C105
0.1uF
MGND
T106 T107
P3V3
R110
10 1/4W
R111
10 1/4W
C107
0.1uF
C108
0.1uF
MF101
MOTOR FADER 5KB
FG1
FG2
T
A
B
P3V3
D101
1SS355
R112 1K
D102
1SS355
short and same length
T112
R114
1M
R113
1K
R115
1M
BTS_CLK
T113
C110
22pF
U83A
SN74LV86ANSR
R116
1k
D103
1SS355
T114
T115
R117
47k
C111
0.022uF
C81
0.1uF
C82
0.1uF
U81A
SN74LV14ANSR
TS_CH1
PV_CH1
C109
0.1uF
EN_MOTOR1
EN_MOTOR2
R203 680K
R205 C203
R208 680K
C201 150pF
220K 0.047uF
R207 C204 0.1uF
330K
M12V
U201A
NJM4565M
U201B
NJM4565M
C212
0.1uF
R201 47K
CV_CH2
R206 680K
R202 47K
C213
0.1uF
R209
330K
P12V
C202 150pF
R204 680K
T206 T207
P3V3
R210
10 1/4W
R211
10 1/4W
C207
0.1uF
C208
0.1uF
MF201
MOTOR FADER 5KB
FG1
FG2
T
A
B
P3V3
D201
1SS355
R212 1K
D202
1SS355
short and same length
T212
R214
1M
R213
1K
R215
1M
BTS_CLK
T213
C210
22pF
U83B
SN74LV86ANSR
R216
1k
D203
1SS355
T214
T215
R217
47k
C211
0.022uF
U81B
SN74LV14ANSR
TS_CH2
PV_CH2
C209
0.1uF

CH-1/CH-2

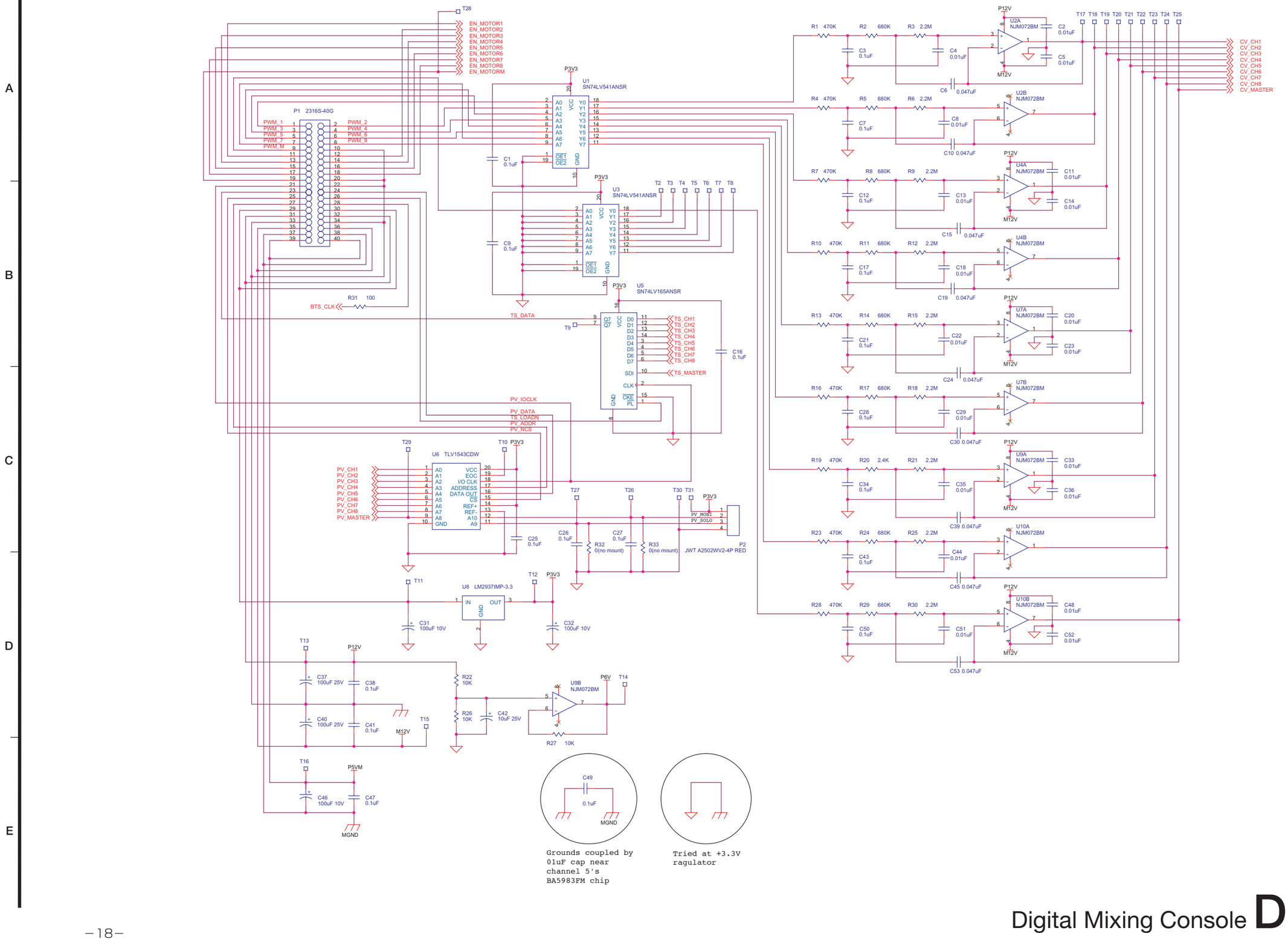

1
2
3
4
5
6
7
A
B
C
D
E
R303 680K
R305 C303
R308 680K
C301 150pF
220K 0.047uF
R307 C304 0.1uF
330K
M12V
U302A
NJM4565M
U302B
NJM4565M
C312
0.1uF
R301 47K
CV_CH3
R306 680K
R302 47K
C313
0.1uF
R309
330K
P12V
C302 150pF
R304 680K
P6V
P5VM
U301 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T301
T302
T303
T304
T305
T316
T308
T309
T310
T311
C306
0.1uF
C305
0.1uF
MGND
T306
T307
P3V3
R310
10 1/4W
R311
10 1/4W
C307
0.1uF
C308
0.1uF
MGND
MF301
MOTOR FADER 5KB
FG1
FG2
T
A
B
P3V3
D301
1SS355
R312 1K
D302
1SS355
short and same length
T312
R314
1M
BTS_CLK
R313
1K
R315
1M
T313
C310
22pF
P3V3
U83C
SN74LV86ANSR
R316
1k
D303
1SS355
T314
R317
47k
C311
0.022uF
P3V3
U81C
SN74LV14ANSR
T315
TS_CH3
PV_CH3
C309
0.1uF
EN_MOTOR3
EN_MOTOR4
R403 680K
R405 C403
R408 680K
C401 150pF
220K 0.047uF
R407 C404 0.1uF
330K
M12V
U401A
NJM4565M
U401B
NJM4565M
C412
0.1uF
R401 47K
CV_CH4
R406 680K
R402 47K
C413
0.1uF
R409
330K
P12V
C402 150pF
R404 680K
T406
T407
P3V3
R410
10 1/4W
R411
10 1/4W
C407
0.1uF
C408
0.1uF
MGND
MF401
MOTOR FADER 5KB
FG1
FG2
T
A
B
P3V3
D401
1SS355
R412 1K
D402
1SS355
short and same length
T412
R414
1M
BTS_CLK
R413
1K
R415
1M
T413
C410
22pF
P3V3
U83D
SN74LV86ANSR
R416
1k
D403
1SS355
T414
R417
47K
C411
0.022uF
P3V3
U81D
SN74LV14ANSR
T415
TS_CH4
PV_CH4
C409
0.1uF

CH-3/CH-4


1
2
3
4
5
6
7
A
B
C
D
E
R503 680K
R505 C503
R508 680K
C501 150pF
220K 0.047uF
R507 C504 0.1uF
330K
M12V
U502A
NJM4565M
U502B
NJM4565M
C512
0.1uF
R501 47K
CV_CH5
R502 47K
R506 680K
C513
0.1uF
R509
330K
P12V
C502 150pF
R504 680K
P6V
P5VM
U501 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T501
T502
T503
T504
T505
T516
T508
T509
T510
T511
C506
0.1uF
C505
0.1uF
MGND
T506 T507
P3V3
R510
10 1/4W
R511
10 1/4W
C507
0.1uF
C508
0.1uF
MGND
MF501
MOTOR FADER 5KB
FG1
FG2
P3V3
D501
1SS355
R512 1K
D502
1SS355
T512
short and same length
R514
1M
BTS_CLK
R513
1K
R515
1M
T513
C510
22pF
P3V3
U84A
SN74LV86ANSR
C83
0.1uF
R516
1k
D503
1SS355
T514
R517
47k
C511
0.022uF
P3V3
T515
U81E
SN74LV14ANSR
TS_CH5
PV_CH5
C509
0.1uF
EN_MOTOR5
EN_MOTOR6
R603 680K
R605 C603
R608 680K
C601 150pF
220K 0.047uF
R607 C604 0.1uF
330K
M12V
U601A
NJM4565M
U601B
NJM4565M
C612
0.1uF
R601 47K
CV_CH6
R602 47K
R606 680K
C613
0.1uF
R609
330K
P12V
C602 150pF
R604 680K
T606 T607
P3V3
R610
10 1/4W
R611
10 1/4W
C607
0.1uF
C608
0.1uF
MGND
MF601
MOTOR FADER 5KB
FG1
FG2
P3V3
D601
1SS355
R612 1K
D602
1SS355
T612
short and same length
R614
1M
BTS_CLK
R613
1K
R615
1M
T613
C610
22pF
P3V3
U84B
SN74LV86ANSR
C83
0.1uF
R616
1k
D603
1SS355
T614
R617
47k
C611
0.022uF
P3V3
T615
U81F
SN74LV14ANSR
TS_CH6
PV_CH6
C609
0.1uF

CH-5/CH-6

1
2
3
4
5
6
7
A
B
C
D
E
R703 680K
R705 C703
R708 680K
C701 150pF
220K 0.047uF
R707 C704 0.1uF
330K
M12V
U702A
NJM4565M
U702B
NJM4565M
C712
0.1uF
R701 47K
CV_CH7
R706 680K
R702 47K
C713
0.1uF
R709
330K
P12V
C702 150pF
R704 680K
P6V
P5VM
U701 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T701
T702
T703
T704
T705
T716
T708
T709
T710
T711
C706
0.1uF
C705
0.1uF
MGND
T706 T707
P3V3
R710
10 1/4W
R711
10 1/4W
C707
0.1uF
C708
0.1uF
MGND
MF701
MOTOR FADER 5KB
FG1
FG2
T
P3V3
D701
1SS355
R712 1K
D702
1SS355
T712
short and same length
R714
1M
R713
1K
R715
1M
BTS_CLK
T713
C710
22pF
P3V3
U84C
SN74LV86ANSR
R716
1k
D703
1SS355
T714
P3V3
T715
R717
47k
C711
0.022uF
C84
0.1uF
U82A
SN74LV14ANSR
TS_CH7
PV_CH7
C709
0.1uF
EN_MOTOR7
EN_MOTOR8
R803 680K
R805 C803
R808 680K
C801 150pF
220K 0.047uF
R807 C804 0.1uF
330K
M12V
U801A
NJM4565M
U801B
NJM4565M
C812
0.1uF
R801 47K
CV_CH8
R806 680K
R802 47K
C813
0.1uF
R809
330K
P12V
C802 150pF
R804 680K
T806 T807
P3V3
R810
10 1/4W
R811
10 1/4W
C807
0.1uF
C808
0.1uF
MGND
MF801
MOTOR FADER 5KB
FG1
FG2
T
P3V3
D801
1SS355
R812 1K
D802
1SS355
T812
short and same length
R814
1M
R813
1K
R815
1M
BTS_CLK
T813
C810
22pF
P3V3
U84D
SN74LV86ANSR
R816
1k
D803
1SS355
T814
P3V3
T815
R817
47K
C811
0.022uF
C84
0.1uF
U82B
SN74LV14ANSR
TS_CH8
PV_CH8
C809
0.1uF
T914
U82C
SN74LV14ANSR
T915
TS_MASTER
U82D
SN74LV14ANSR
T917
U82E
SN74LV14ANSR
T918
U82F
SN74LV14ANSR
T919
CH-7/CH-8


1
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3
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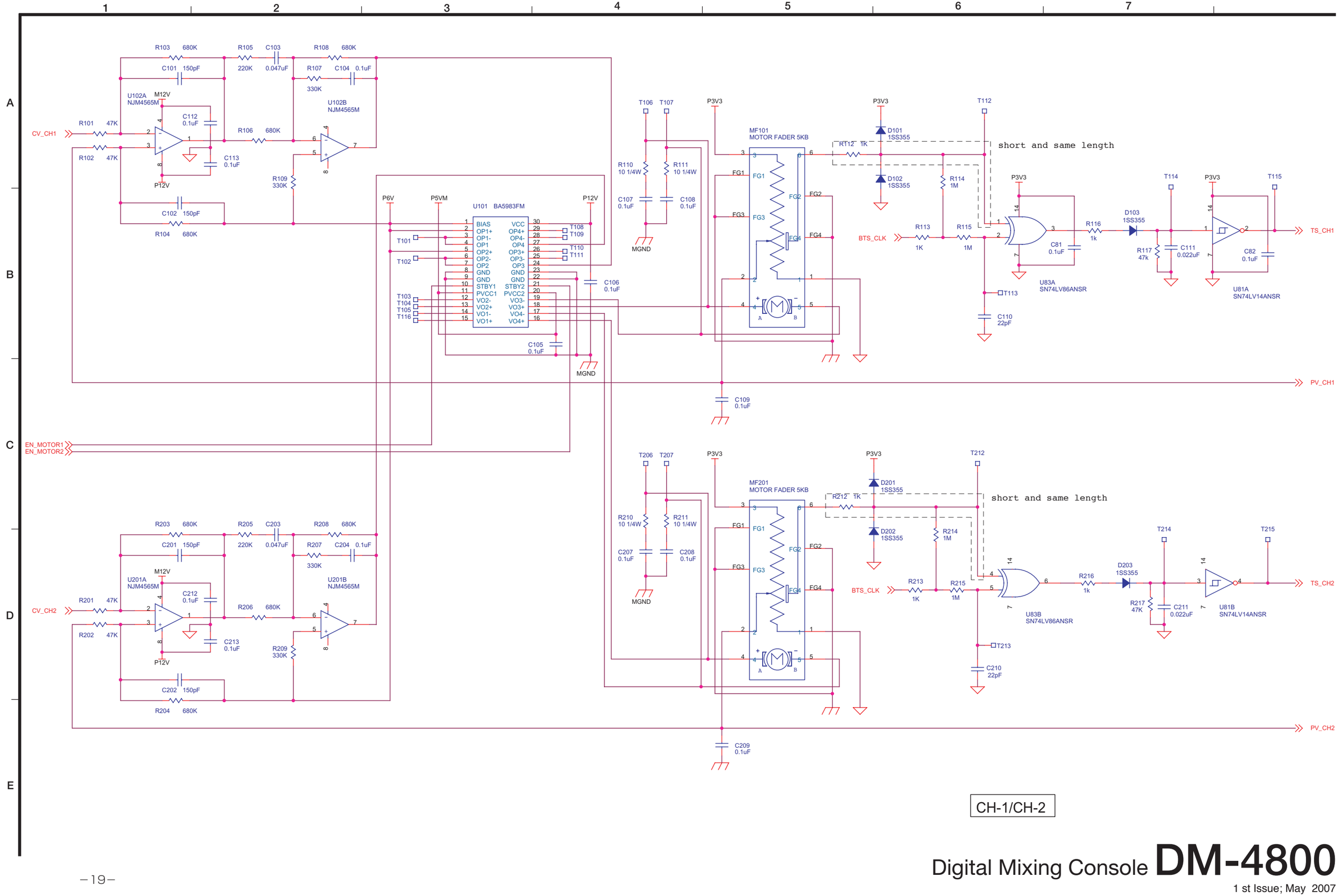
7
A
B
C
D
E
T28
EN_MOTOR1
EN_MOTOR2
EN_MOTOR3
EN_MOTOR4
EN_MOTOR5
EN_MOTOR6
EN_MOTOR7
EN_MOTOR8
EN_MOTORM
P1 2316S-40G
PWM_1
PWM_2
PWM_3
PWM_4
PWM_5
PWM_6
PWM_7
PWM_8
PWM_M
P3V3
U1
SN74LV541ANSR
C1 0.1uF
C9 0.1uF
U3
SN74LV541ANSR
T2 T3 T4 T5 T6 T7 T8
R31 100
BTS_CLK
TS_DATA
T9
U5
SN74LV165ANSR
TS_CH1
TS_CH2
TS_CH3
TS_CH4
TS_CH5
TS_CH6
TS_CH7
TS_CH8
TS_MASTER
C16 0.1uF
PV_IOCLK
PV_DATA
TS_LOADN
PV_ADDR
PV_NCS
T29
T10
U6 TLV1543CDW
PV_CH1
PV_CH2
PV_CH3
PV_CH4
PV_CH5
PV_CH6
PV_CH7
PV_CH8
PV_MASTER
C25 0.1uF
T27
T26
T30
T31
C26 0.1uF
C27 0.1uF
R32 0(no mount)
R33 0(no mount)
PV_MONI
PV_SOLO
P2
JWT A2502WV2-4P RED
T11
U8 LM2937IMP-3.3
IN
OUT
GND
C31 100uF 10V
T12
C32 100uF 10V
T13
P12V
C37 100uF 25V
C38 0.1uF
C40 100uF 25V
C41 0.1uF
M12V
T15
R22 10K
R26 10K
C42 10uF 25V
U9B
NJM072BM
P6V
T14
R27 10K
T16
P5VM
C46 100uF 10V
C47 0.1uF
MGND
C49
0.1uF
MGND
Grounds coupled by
01uF cap near
channel 5's
BA5983FM chip
Tried at +3.3V
ragulator
R1 470K
R2 680K
R3 2.2M
C3 0.1uF
C4 0.01uF
C6 0.047uF
U2A
NJM072BM
C2 0.01uF
C5 0.01uF
M12V
T17 T18 T19 T20 T21 T22 T23 T24 T25
CV_CH1
CV_CH2
CV_CH3
CV_CH4
CV_CH5
CV_CH6
CV_CH7
CV_CH8
CV_MASTER
R4 470K
R5 680K
R6 2.2M
C7 0.1uF
C8 0.01uF
C10 0.047uF
U2B
NJM072BM
R7 470K
R8 680K
R9 2.2M
C12 0.1uF
C13 0.01uF
C15 0.047uF
U4A
NJM072BM
C11 0.01uF
C14 0.01uF
R10 470K
R11 680K
R12 2.2M
C17 0.1uF
C18 0.01uF
C19 0.047uF
U4B
NJM072BM
R13 470K
R14 680K
R15 2.2M
C21 0.1uF
C22 0.01uF
C24 0.047uF
U7A
NJM072BM
C20 0.01uF
C23 0.01uF
R16 470K
R17 680K
R18 2.2M
C28 0.1uF
C29 0.01uF
C30 0.047uF
U7B
NJM072BM
R19 470K
R20 2.4K
R21 2.2M
C34 0.1uF
C35 0.01uF
C39 0.047uF
U9A
NJM072BM
C33 0.01uF
C36 0.01uF
R23 470K
R24 680K
R25 2.2M
C43 0.1uF
C44 0.01uF
C45 0.047uF
U10A
NJM072BM
R28 470K
R29 680K
R30 2.2M
C50 0.1uF
C51 0.01uF
C53 0.047uF
U10B
NJM072BM
C48 0.01uF
C52 0.01uF


1
2
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4
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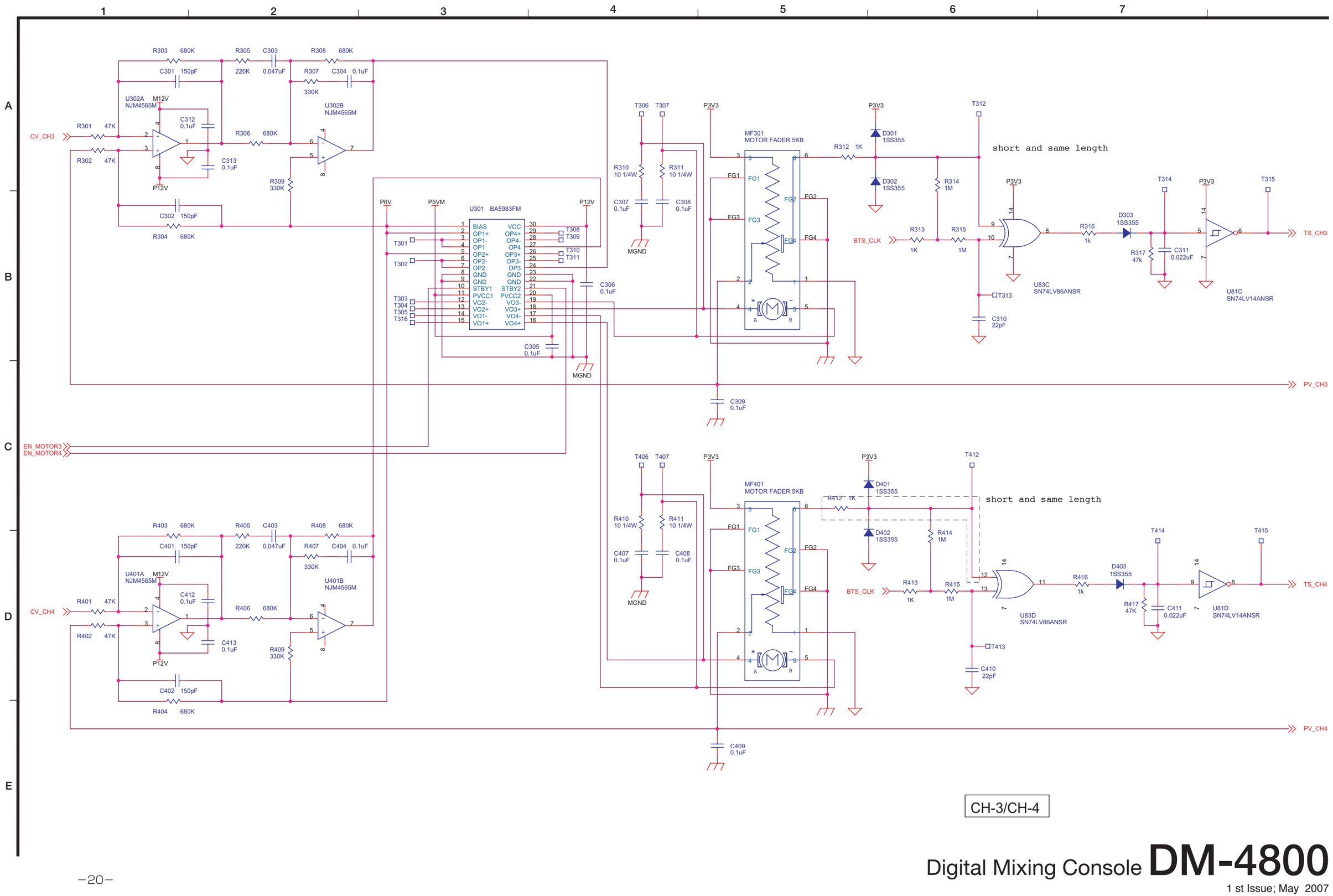
6
7
A
B
C
D
E
R103 680K
R105 C103
R108 680K
C101 150pF
220K 0.047uF
R107 C104 0.1uF
330K
U102A NJM4565M
M12V
U102B NJM4565M
C112 0.1uF
R101 47K
CV_CH1
R106 680K
R102 47K
C113 0.1uF
R109 330K
P12V
C102 150pF
R104 680K
P6V
P5VM
U101 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T101
T102
T103
T104
T105
T116
T108
T109
T110
T111
C106 0.1uF
C105 0.1uF
MGND
T106
T107
R110 10 1/4W
R111 10 1/4W
C107 0.1uF
C108 0.1uF
MGND
P3V3
MF101
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
C109 0.1uF
P3V3
D101 1SS355
R112 1K
D102 1SS355
short and same length
T112
R114 1M
R113 1K
R115 1M
BTS_CLK
T113
C110 22pF
P3V3
U83A SN74LV86ANSR
R116 1k
C81 0.1uF
D103 1SS355
T114
T115
R117 47k
C111 0.022uF
U81A SN74LV14ANSR
C82 0.1uF
TS_CH1
PV_CH1
EN_MOTOR1
EN_MOTOR2
R203 680K
R205 C203
R208 680K
C201 150pF
220K 0.047uF
R207 C204 0.1uF
330K
U201A NJM4565M
M12V
U201B NJM4565M
C212 0.1uF
R201 47K
CV_CH2
R206 680K
R202 47K
C213 0.1uF
R209 330K
P12V
C202 150pF
R204 680K
T206
T207
R210 10 1/4W
R211 10 1/4W
C207 0.1uF
C208 0.1uF
MGND
P3V3
MF201
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
C209 0.1uF
P3V3
D201 1SS355
R212 1K
D202 1SS355
short and same length
T212
R214 1M
R213 1K
R215 1M
BTS_CLK
T213
C210 22pF
P3V3
U83B SN74LV86ANSR
R216 1k
D203 1SS355
T214
T215
R217 47k
C211 0.022uF
U81B SN74LV14ANSR
TS_CH2
PV_CH2

CH-1/CH-2


1
2
3
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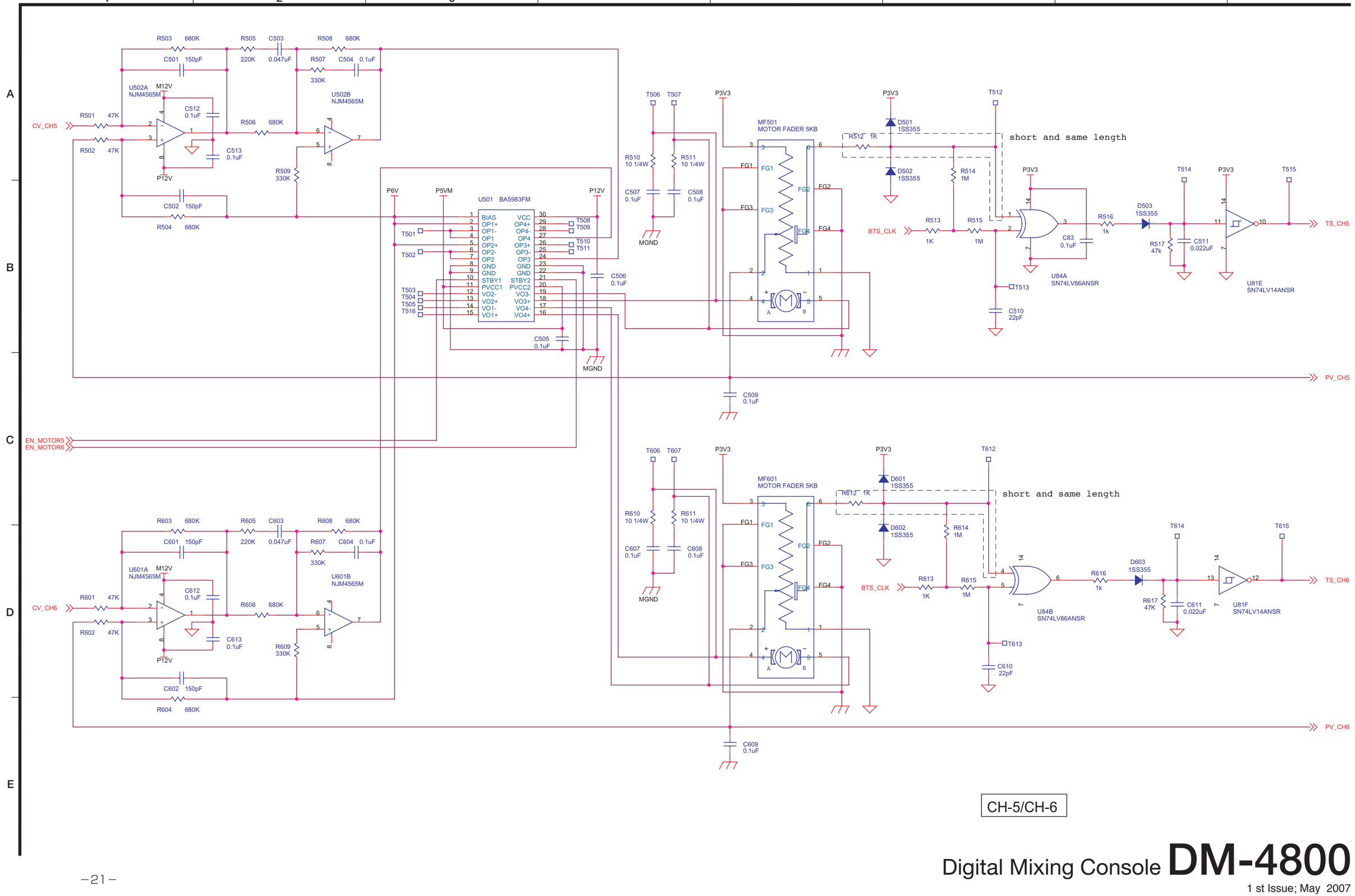
6
7
A
B
C
D
E
R303 680K
R305 C303
R308 680K
C301 150pF
220K 0.047uF
R307 C304 0.1uF
330K
U302A M12V
NJM4565M
U302B
NJM4565M
C312 0.1uF
R301 47K
CV_CH3
R306 680K
R302 47K
C313 0.1uF
R309 330K
P12V
C302 150pF
R304 680K
P6V
P5VM
U301 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T301
T302
T303
T304
T305
T316
T308
T309
T310
T311
C306 0.1uF
C305 0.1uF
MGND
T306
T307
P3V3
R310 10 1/4W
R311 10 1/4W
C307 0.1uF
C308 0.1uF
MGND
MF301
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
R312 1K
D301 1SS355
D302 1SS355
P3V3
T312
short and same length
R314 1M
R313 1K
R315 1M
BTS_CLK
P3V3
U83C
SN74LV86ANSR
T313
C310 22pF
R316 1k
D303 1SS355
T314
P3V3
T315
R317 47k
C311 0.022uF
U81C
SN74LV14ANSR
TS_CH3
PV_CH3
EN_MOTOR3
EN_MOTOR4
R403 680K
R405 C403
R408 680K
C401 150pF
220K 0.047uF
R407 C404 0.1uF
330K
U401A M12V
NJM4565M
U401B
NJM4565M
C412 0.1uF
R401 47K
CV_CH4
R406 680K
R402 47K
C413 0.1uF
R409 330K
P12V
C402 150pF
R404 680K
T406
T407
P3V3
R410 10 1/4W
R411 10 1/4W
C407 0.1uF
C408 0.1uF
MGND
MF401
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
R412 1K
D401 1SS355
D402 1SS355
P3V3
T412
short and same length
R414 1M
R413 1K
R415 1M
BTS_CLK
P3V3
U83D
SN74LV86ANSR
T413
C410 22pF
R416 1k
D403 1SS355
T414
P3V3
T415
R417 47k
C411 0.022uF
U81D
SN74LV14ANSR
TS_CH4
PV_CH4
C309 0.1uF
C409 0.1uF

CH-3/CH-4


1
2
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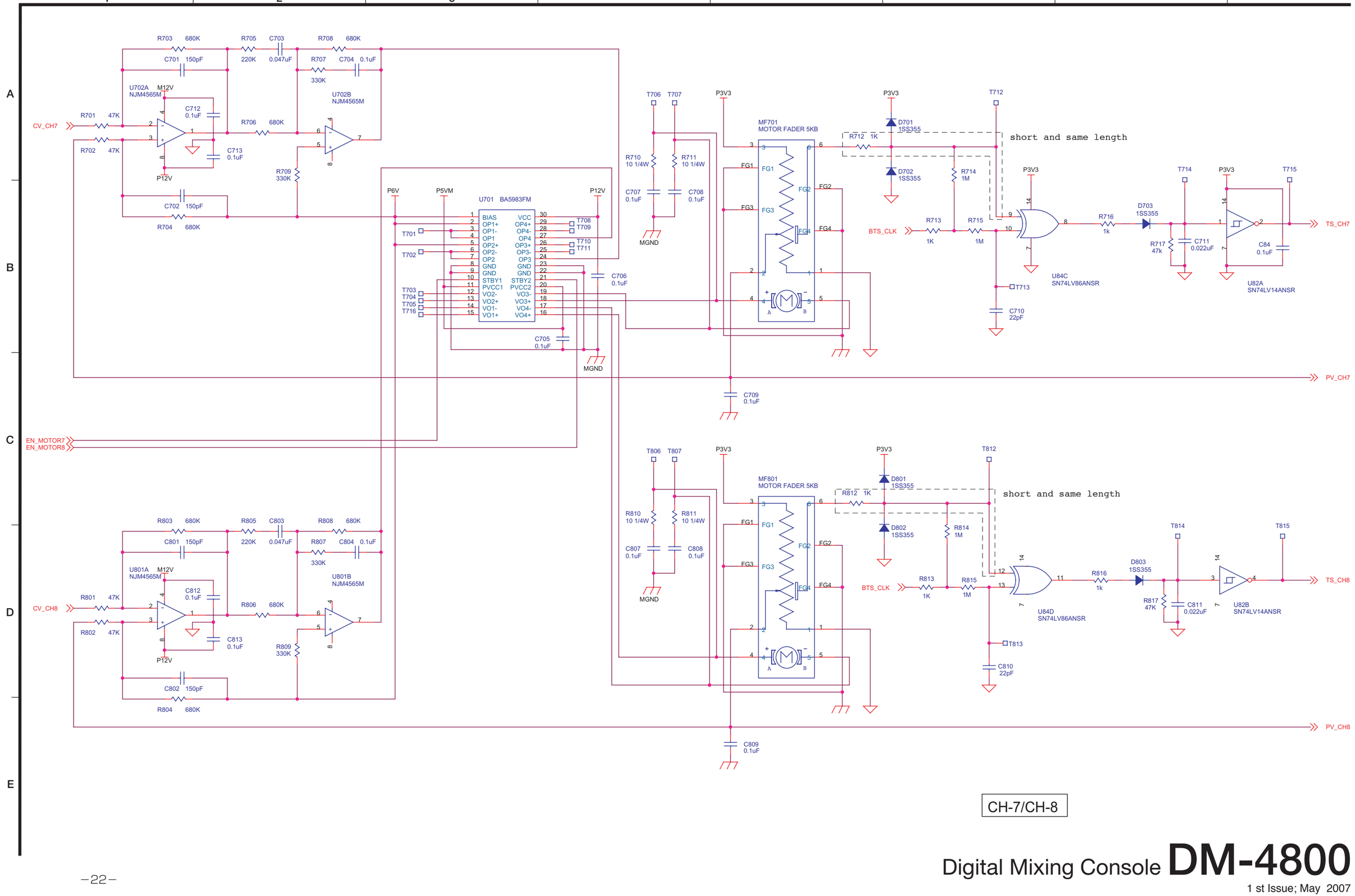
6
7
A
B
C
D
E
R503 680K
C501 150pF
R505 220K
C503 0.047uF
R508 680K
R507 330K
C504 0.1uF
U502A NJM4565M
M12V
C512 0.1uF
U502B NJM4565M
CV_CH5
R501 47K
R502 47K
R506 680K
C513 0.1uF
R509 330K
P12V
C502 150pF
R504 680K
P6V
P5VM
U501 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T501
T502
T503
T504
T505
T516
T508
T509
T510
T511
C506 0.1uF
C505 0.1uF
MGND
T506
T507
R510 10 1/4W
R511 10 1/4W
C507 0.1uF
C508 0.1uF
MGND
P3V3
MF501
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
C509 0.1uF
P3V3
D501 1SS355
R512 1K
D502 1SS355
short and same length
T512
R514 1M
BTS_CLK
R513 1K
R515 1M
T513
C510 22pF
P3V3
U84A SN74LV86ANSR
C83 0.1uF
R516 1k
D503 1SS355
T514
R517 47k
C511 0.022uF
P3V3
U81E SN74LV14ANSR
T515
TS_CH5
PV_CH5
EN_MOTOR5
EN_MOTOR6
R603 680K
C601 150pF
R605 220K
C603 0.047uF
R608 680K
R607 330K
C604 0.1uF
U601A NJM4565M
M12V
C612 0.1uF
U601B NJM4565M
CV_CH6
R601 47K
R602 47K
R606 680K
C613 0.1uF
R609 330K
P12V
C602 150pF
R604 680K
T606
T607
R610 10 1/4W
R611 10 1/4W
C607 0.1uF
C608 0.1uF
MGND
P3V3
MF601
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
C609 0.1uF
P3V3
D601 1SS355
R612 1K
D602 1SS355
short and same length
T612
R614 1M
BTS_CLK
R613 1K
R615 1M
T613
C610 22pF
P3V3
U84B SN74LV86ANSR
R616 1k
D603 1SS355
T614
R617 47K
C611 0.022uF
P3V3
U81F SN74LV14ANSR
T615
TS_CH6
PV_CH6

CH-5/CH-6


1
2
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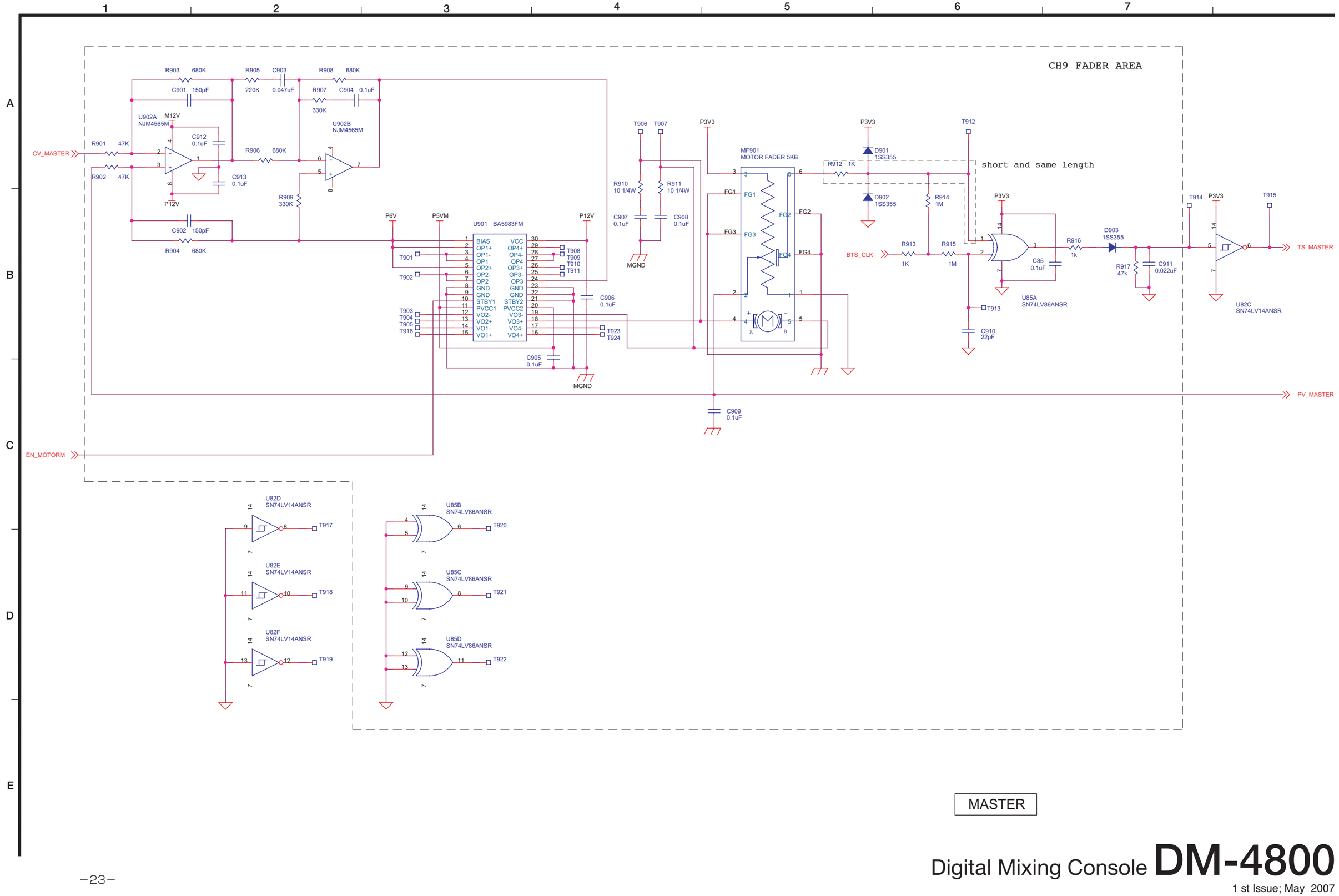
5
6
7
A
B
C
D
E
R703 680K
C701 150pF
R705 220K
C703 0.047uF
R708 680K
R707 330K
C704 0.1uF
U702A NJM4565M
M12V
U702B NJM4565M
C712 0.1uF
R706 680K
R701 47K
CV_CH7
R702 47K
C713 0.1uF
P12V
R709 330K
C702 150pF
R704 680K
P6V
P5VM
U701 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T701
T702
T703
T704
T705
T716
T708
T709
T710
T711
C706 0.1uF
C705 0.1uF
MGND
T706
T707
R710 10 1/4W
R711 10 1/4W
C707 0.1uF
C708 0.1uF
MGND
P3V3
MF701
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
C709 0.1uF
P3V3
D701 1SS355
R712 1K
D702 1SS355
short and same length
T712
R714 1M
R713 1K
R715 1M
BTS_CLK
P3V3
U84C SN74LV86ANSR
T713
C710 22pF
R716 1k
D703 1SS355
T714
R717 47k
C711 0.022uF
P3V3
U82A SN74LV14ANSR
T715
C84 0.1uF
TS_CH7
PV_CH7
EN_MOTOR7
EN_MOTOR8
R803 680K
C801 150pF
R805 220K
C803 0.047uF
R808 680K
R807 330K
C804 0.1uF
U801A NJM4565M
M12V
U801B NJM4565M
C812 0.1uF
R806 680K
R801 47K
CV_CH8
R802 47K
C813 0.1uF
P12V
R809 330K
C802 150pF
R804 680K
T806
T807
R810 10 1/4W
R811 10 1/4W
C807 0.1uF
C808 0.1uF
MGND
P3V3
MF801
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
C809 0.1uF
P3V3
D801 1SS355
R812 1K
D802 1SS355
short and same length
T812
R814 1M
R813 1K
R815 1M
BTS_CLK
P3V3
U84D SN74LV86ANSR
T813
C810 22pF
R816 1k
D803 1SS355
T814
R817 47k
C811 0.022uF
P3V3
U82B SN74LV14ANSR
T815
TS_CH8
PV_CH8

CH-7/CH-8


CH9 FADER AREA
CV_MASTER
EN_MOTORM
PV_MASTER
TS_MASTER
BTS_CLK
R901 47K
R902 47K
R903 680K
R904 680K
R905 220K
R906 680K
R907 330K
R908 680K
R909 330K
C901 150pF
C902 150pF
C903 0.047uF
C904 0.1uF
C912 0.1uF
C913 0.1uF
U902A NJM4565M
U902B NJM4565M
M12V
P12V
P6V
P5VM
P3V3
U901 BA5983FM
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T901
T902
T903
T904
T905
T916
T908
T909
T910
T911
T923
T924
C905 0.1uF
C906 0.1uF
C907 0.1uF
C908 0.1uF
C909 0.1uF
R910 10 1/4W
R911 10 1/4W
T906
T907
MGND
MF901
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
R912 1K
D901 1SS355
D902 1SS355
short and same length
R913 1K
R914 1M
R915 1M
R916 1k
C85 0.1uF
C910 22pF
T912
T913
U85A
SN74LV86ANSR
D903 1SS355
R917 47k
C911 0.022uF
T914
T915
U82C
SN74LV14ANSR
U82D
SN74LV14ANSR
T917
U82E
SN74LV14ANSR
T918
U82F
SN74LV14ANSR
T919
U85B
SN74LV86ANSR
T920
U85C
SN74LV86ANSR
T921
U85D
SN74LV86ANSR
T922

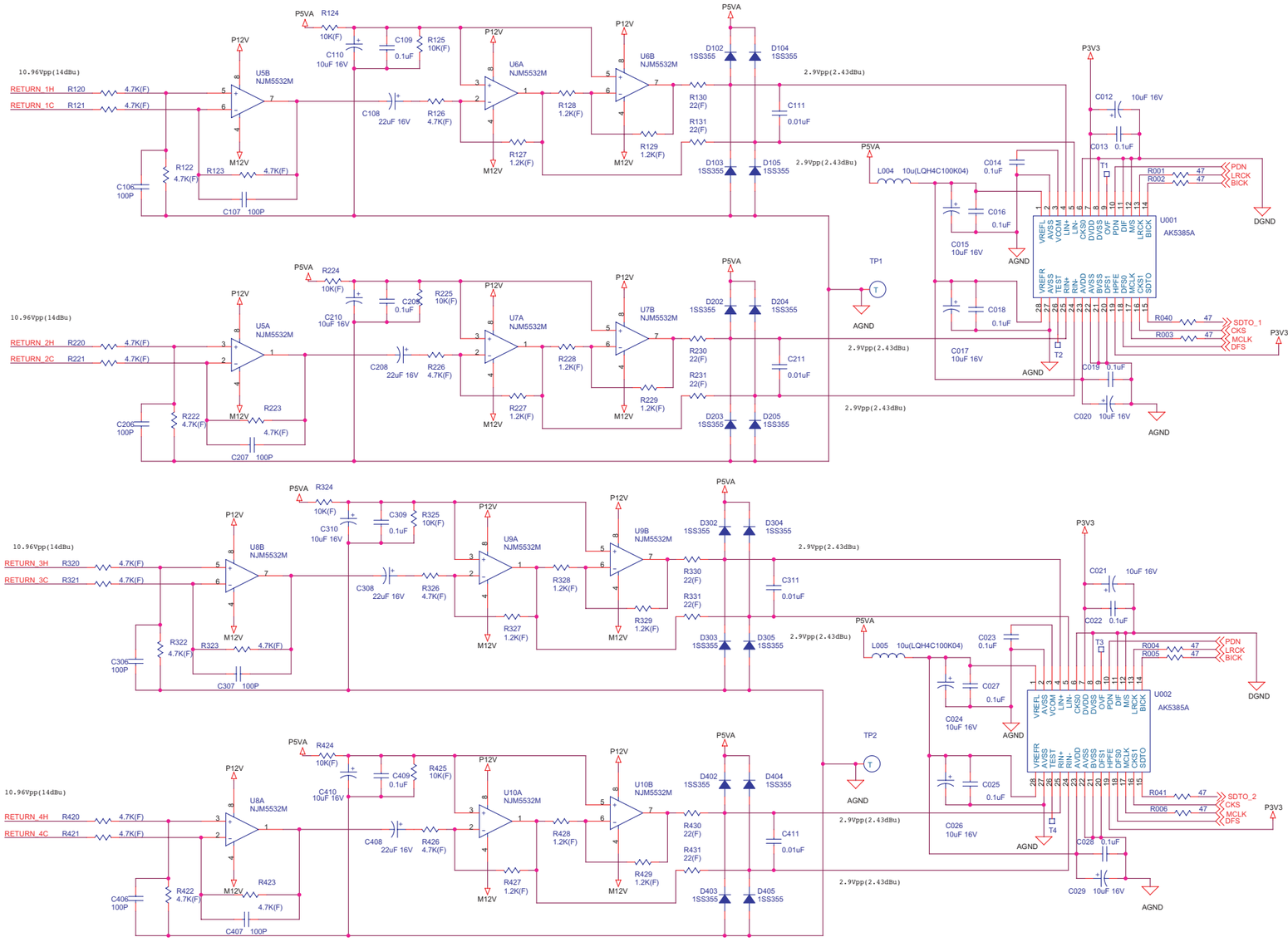
MASTER

INPUT
1ch(9ch)

INPUT
2ch(10ch)

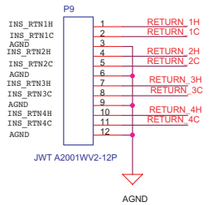
INPUT
3ch(11ch)

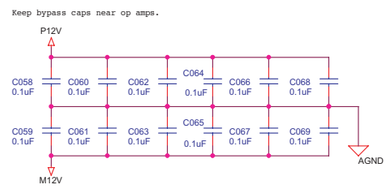
INPUT
4ch(12ch)

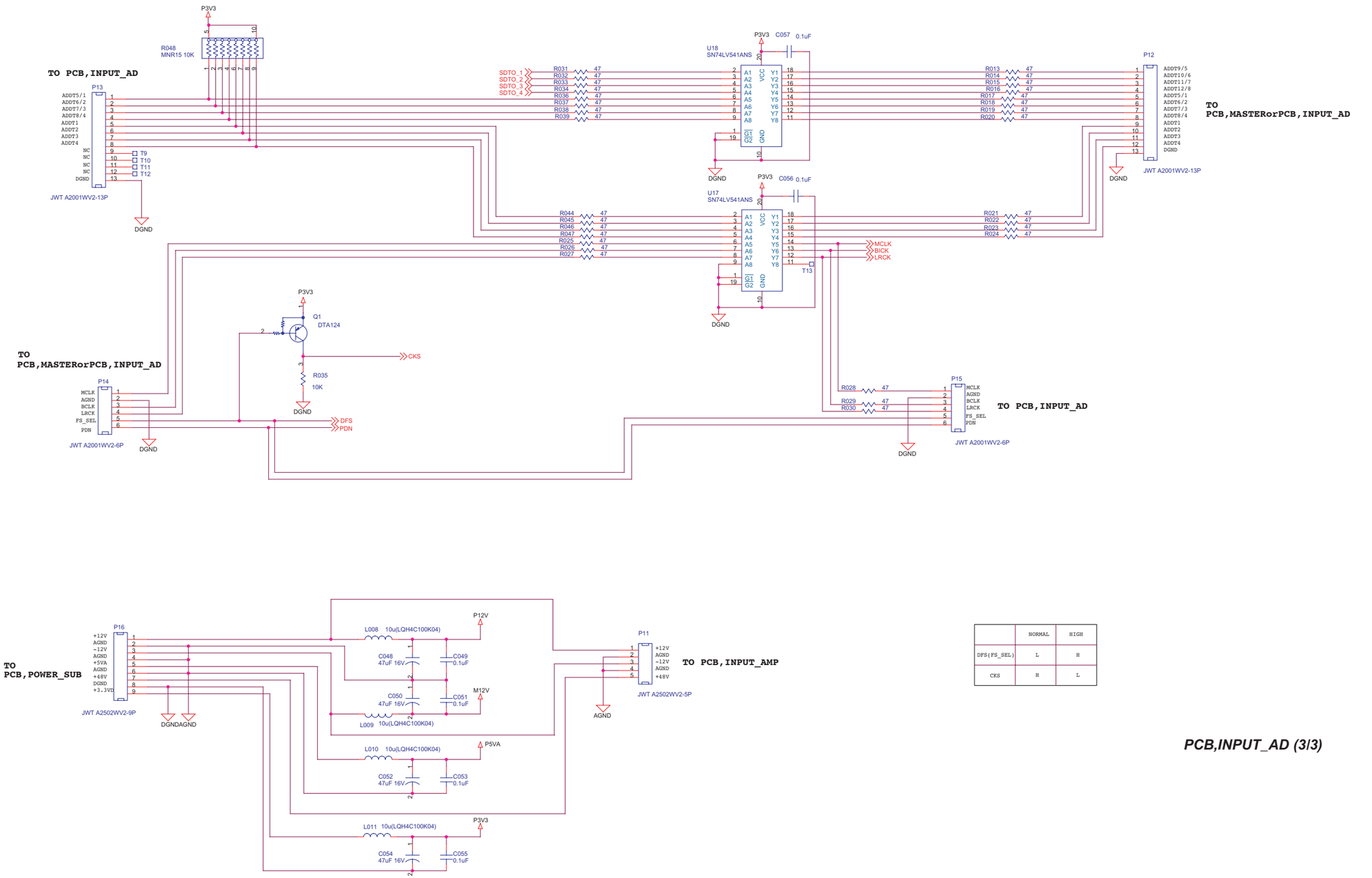


PCB,INPUT_AD (1/3)

TO PCB,INPUT_AMP

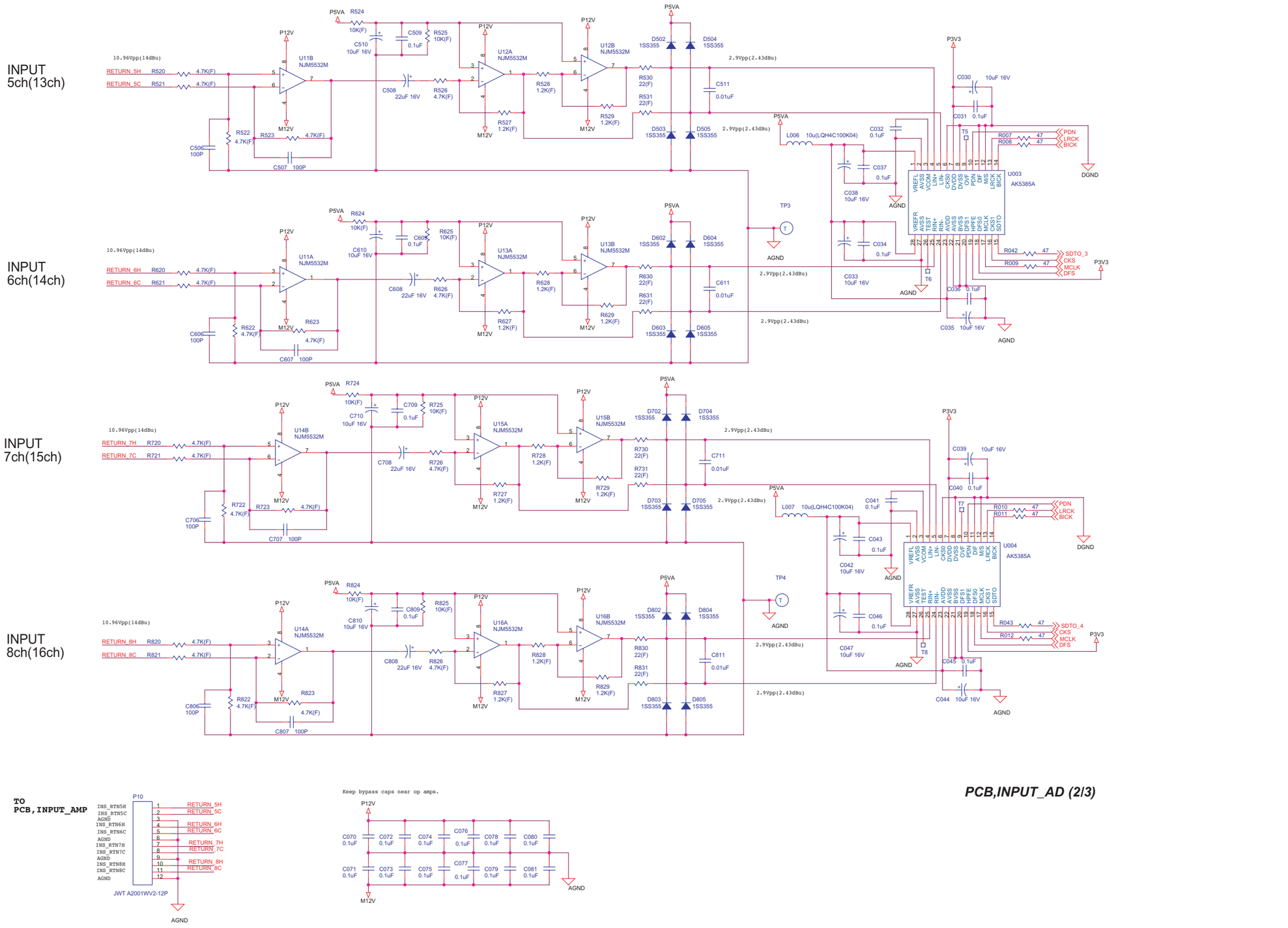




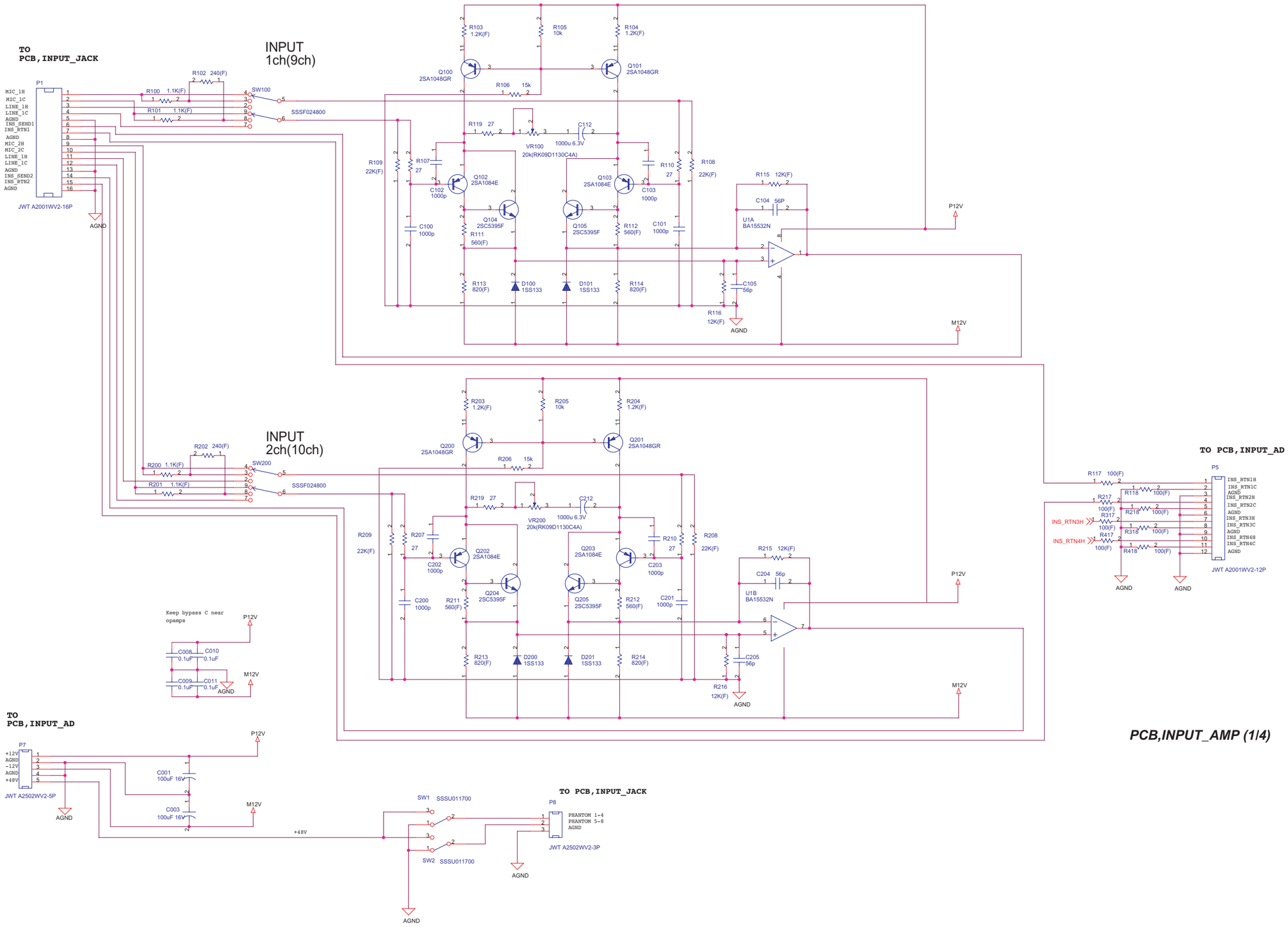


	NORMAL	HIGH
DFS(FS_SEL)	L	H
CKS	H	L

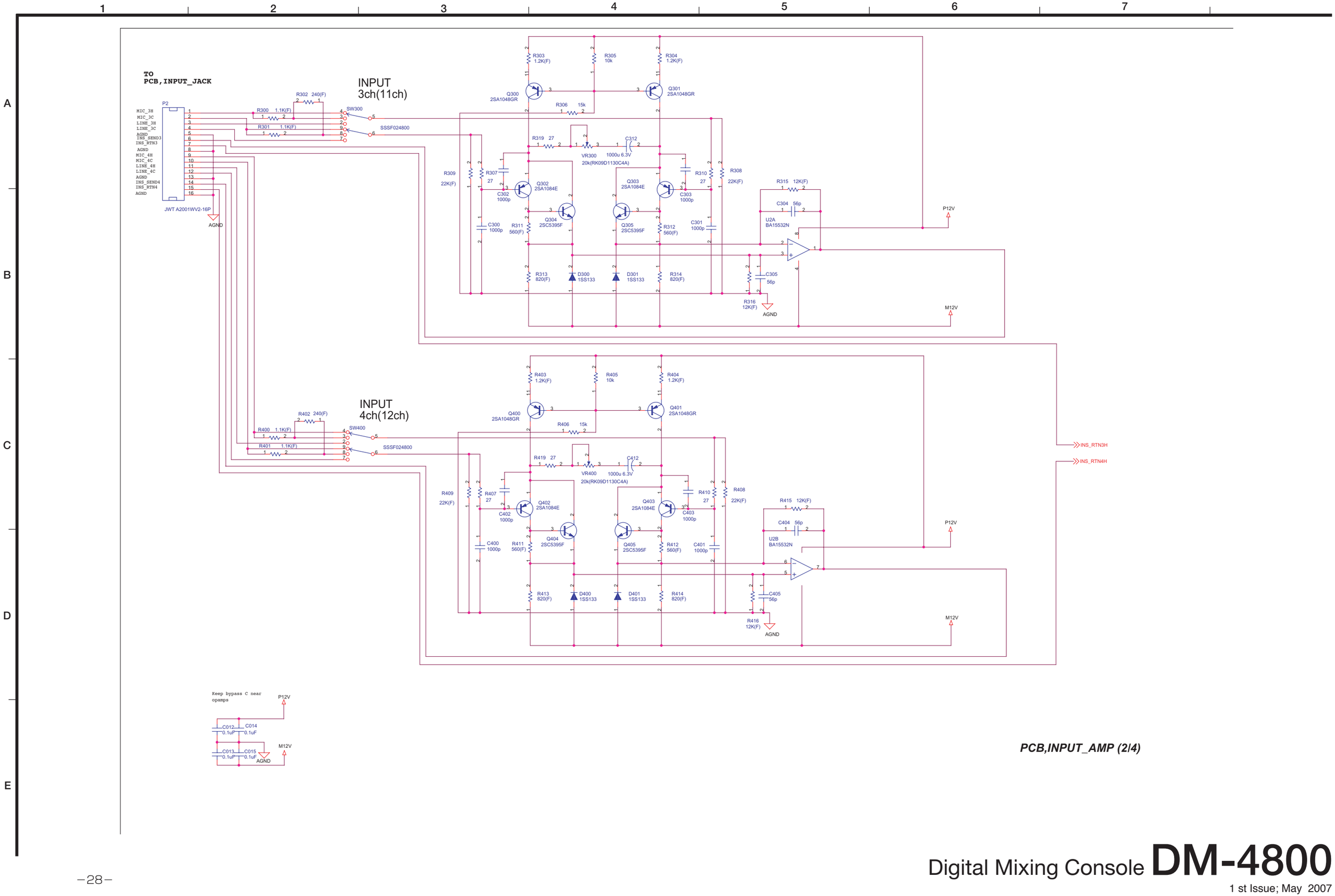
PCB,INPUT_AD (3/3)



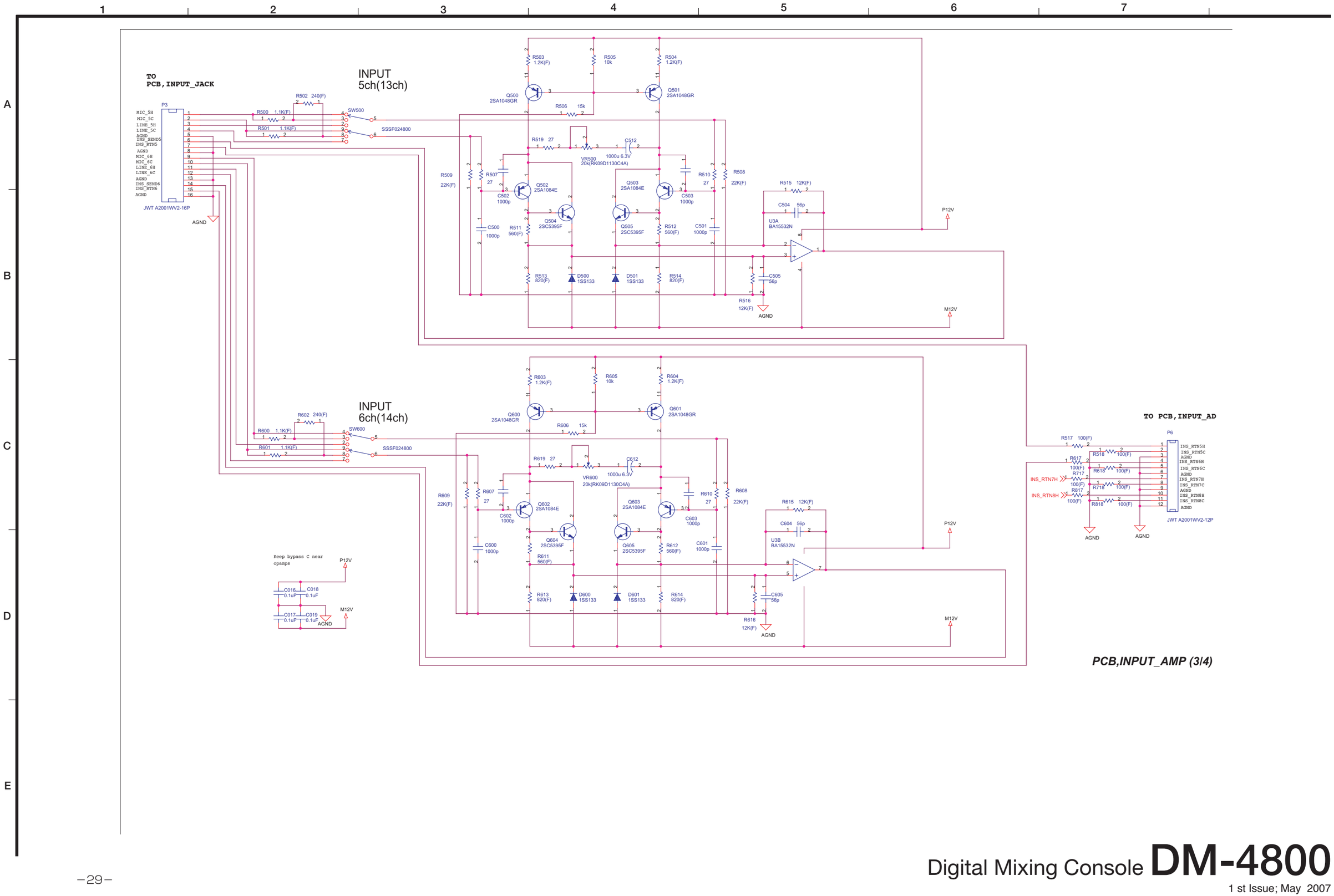
PCB,INPUT_AD (2/3)



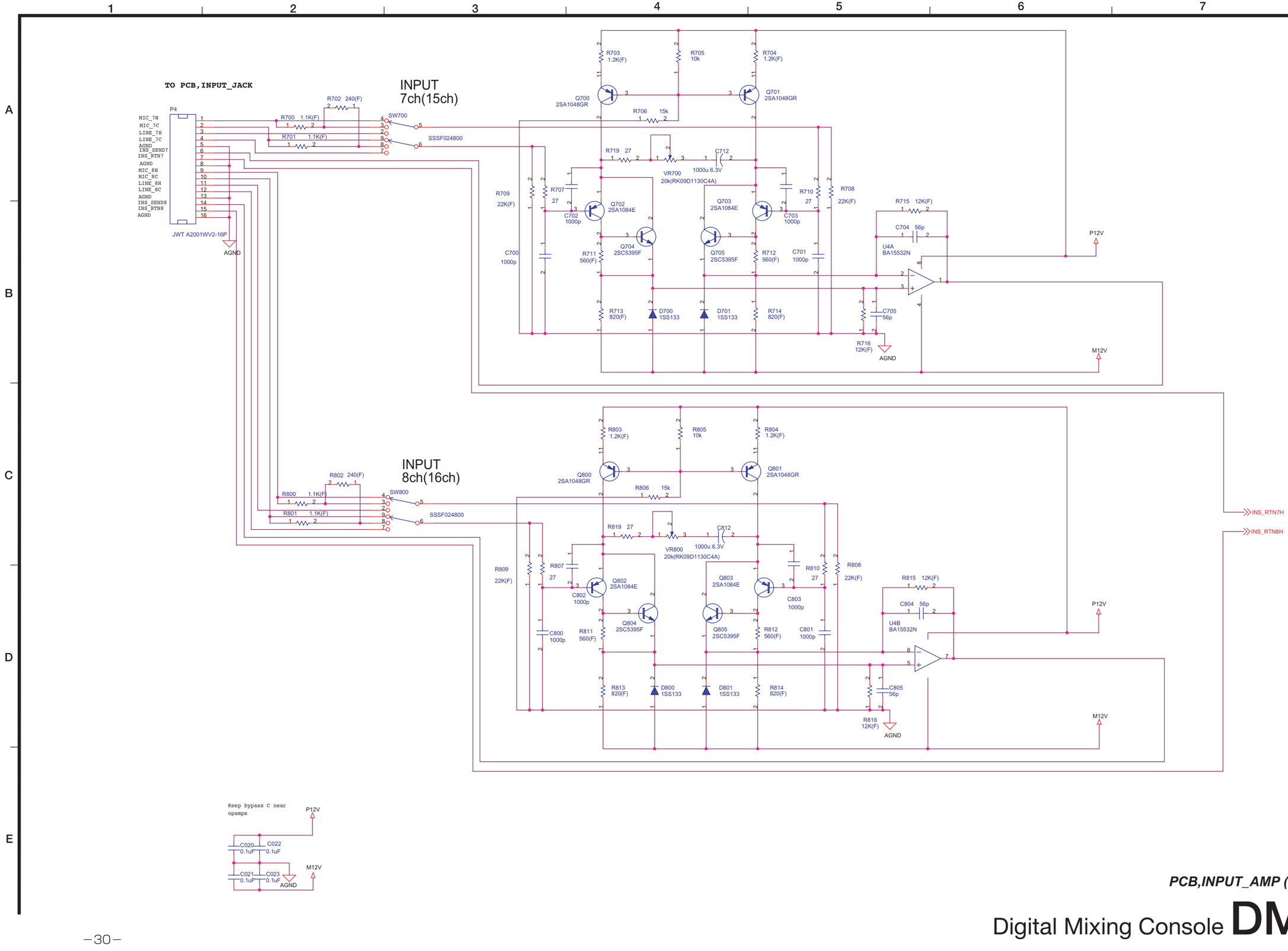
PCB,INPUT_AMP (1/4)



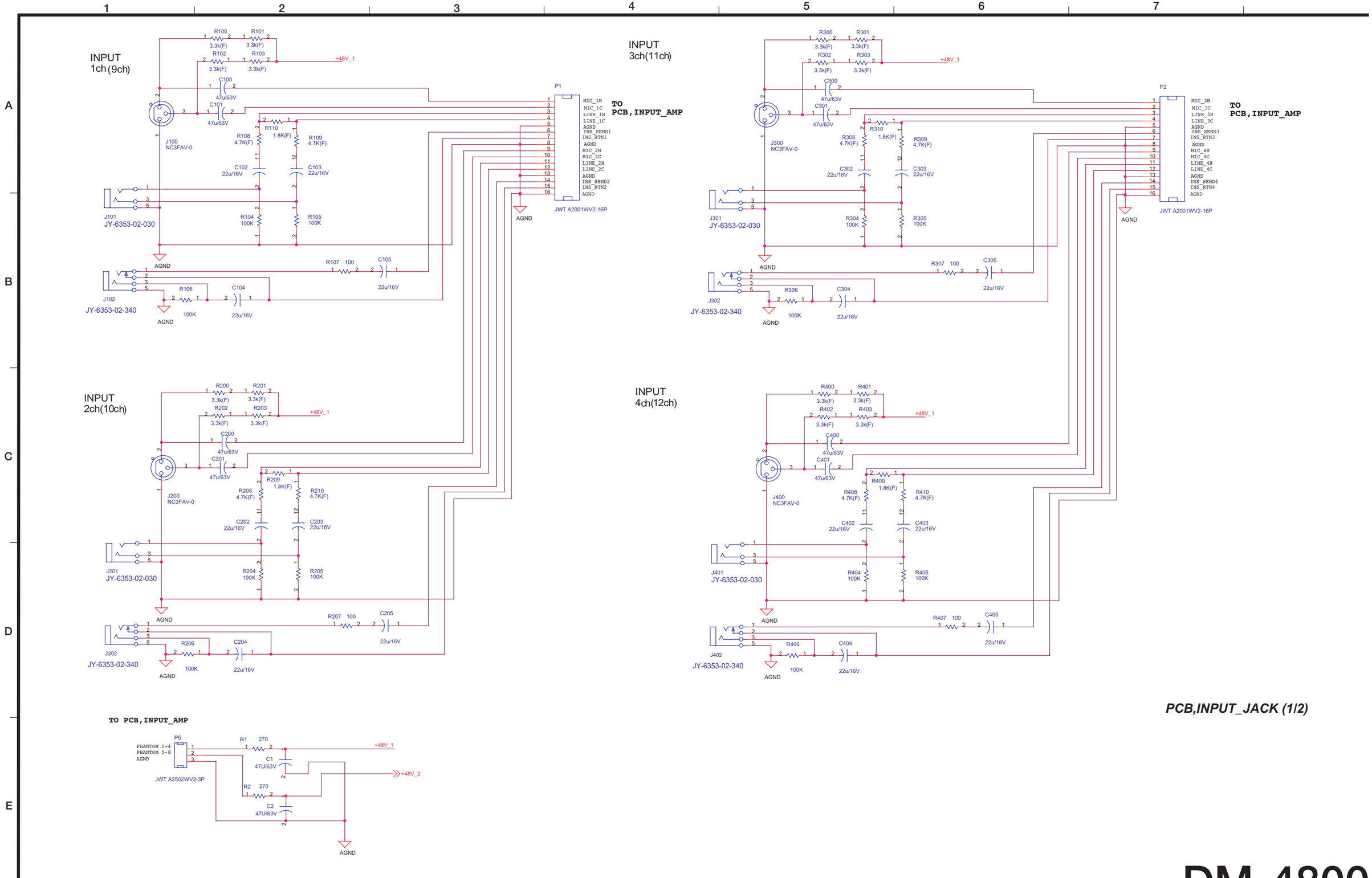
PCB,INPUT_AMP (2/4)



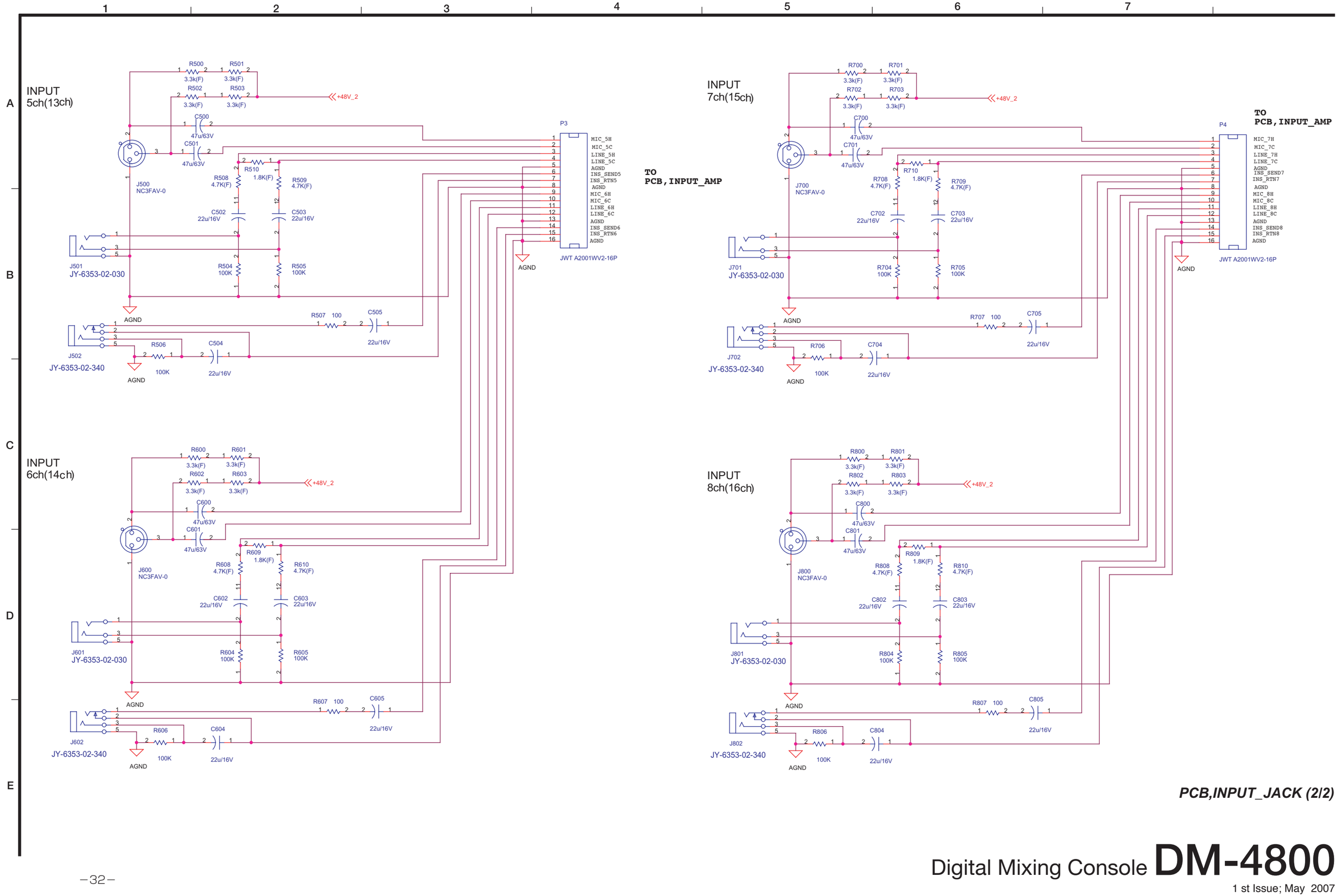
PCB,INPUT_AMP (3/4)



PCB,INPUT_AMP (4/4)



PCB,INPUT_JACK (1/2)



PCB,INPUT_JACK (2/2)

Digital Mixing Console **DM-4800**

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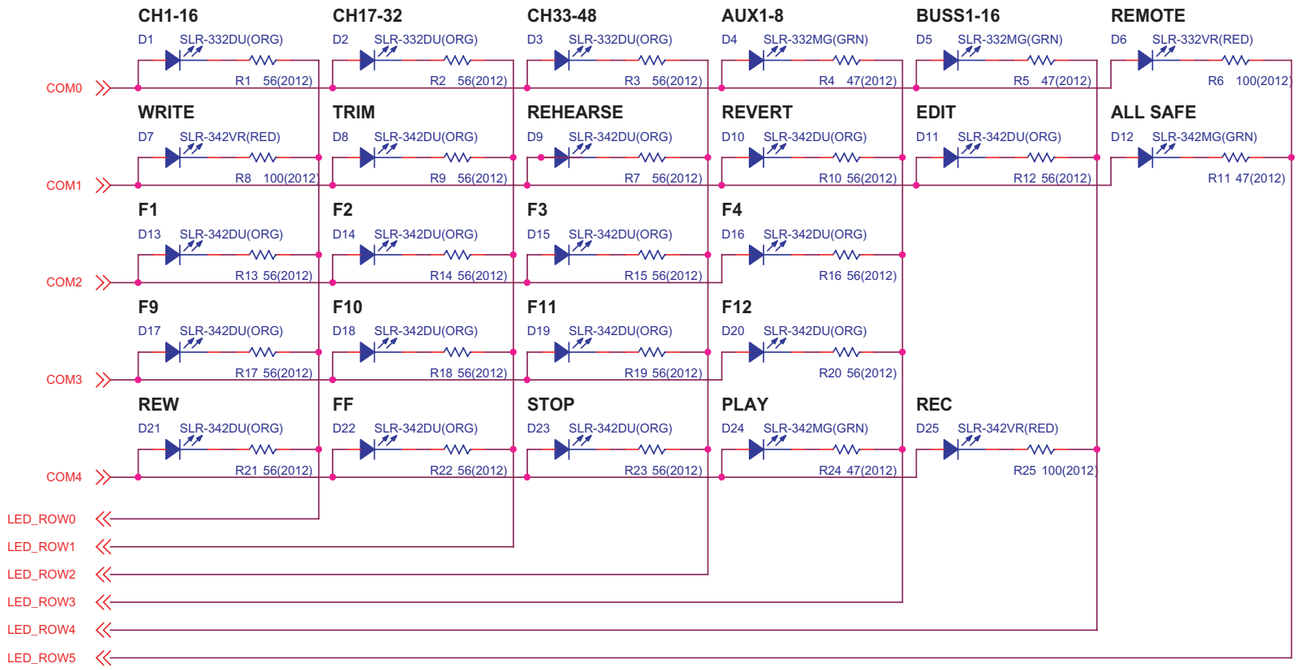


from PCB MONITOR

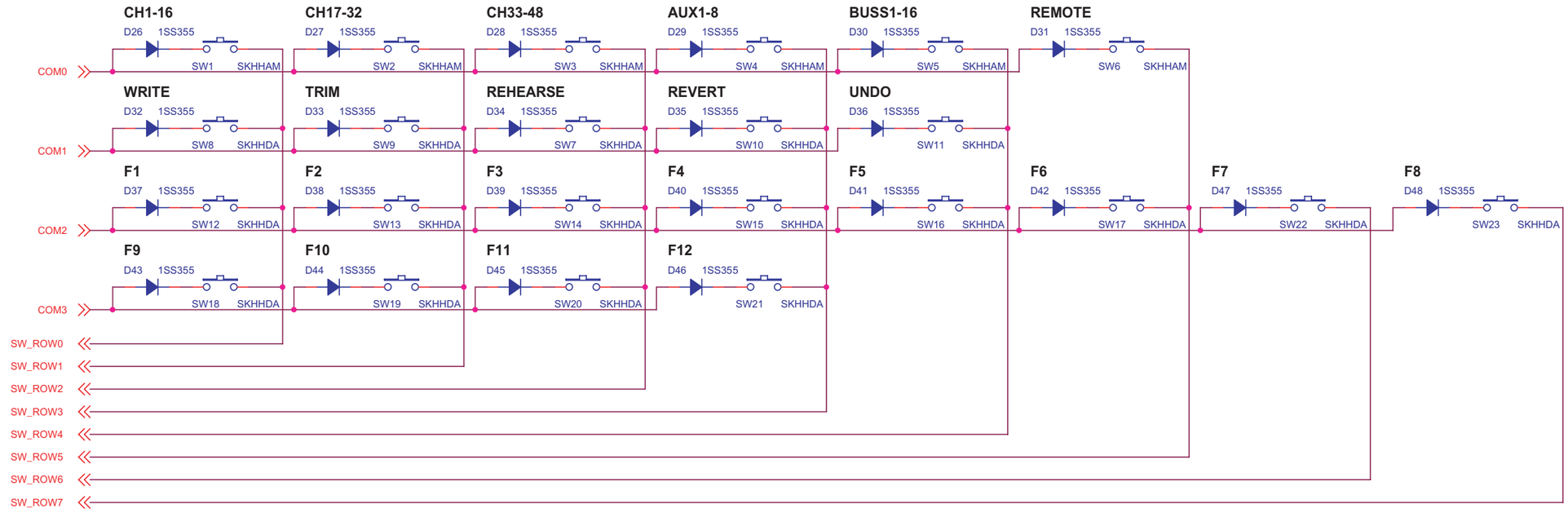
P1
HARNESS ASSY,LAY-MON1

1	COM0	COM0
2	COM1	COM1
3	COM2	COM2
4	COM3	COM3
5	COM4	COM4

to PCB MONITOR

P2
HARNESS ASSY,LAY-MON2

1	LED_ROW0	LED_ROW0
2	LED_ROW1	LED_ROW1
3	LED_ROW2	LED_ROW2
4	LED_ROW3	LED_ROW3
5	LED_ROW4	LED_ROW4
6	LED_ROW5	LED_ROW5
7	SW_ROW0	SW_ROW0
8	SW_ROW1	SW_ROW1
9	SW_ROW2	SW_ROW2
10	SW_ROW3	SW_ROW3
11	SW_ROW4	SW_ROW4
12	SW_ROW5	SW_ROW5
13	SW_ROW6	SW_ROW6
14	SW_ROW7	SW_ROW7



Digital Mixing Console **DM-4800**

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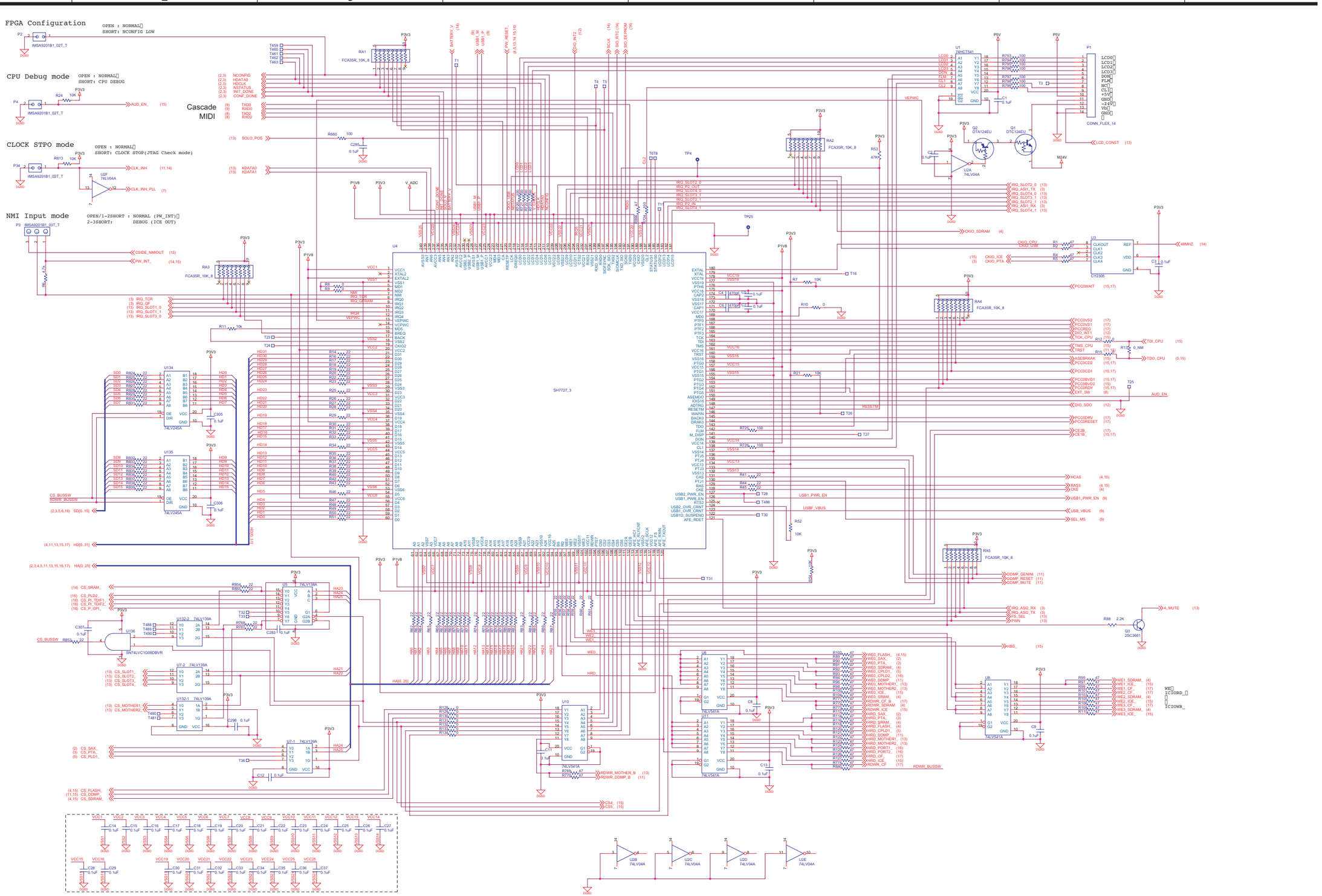
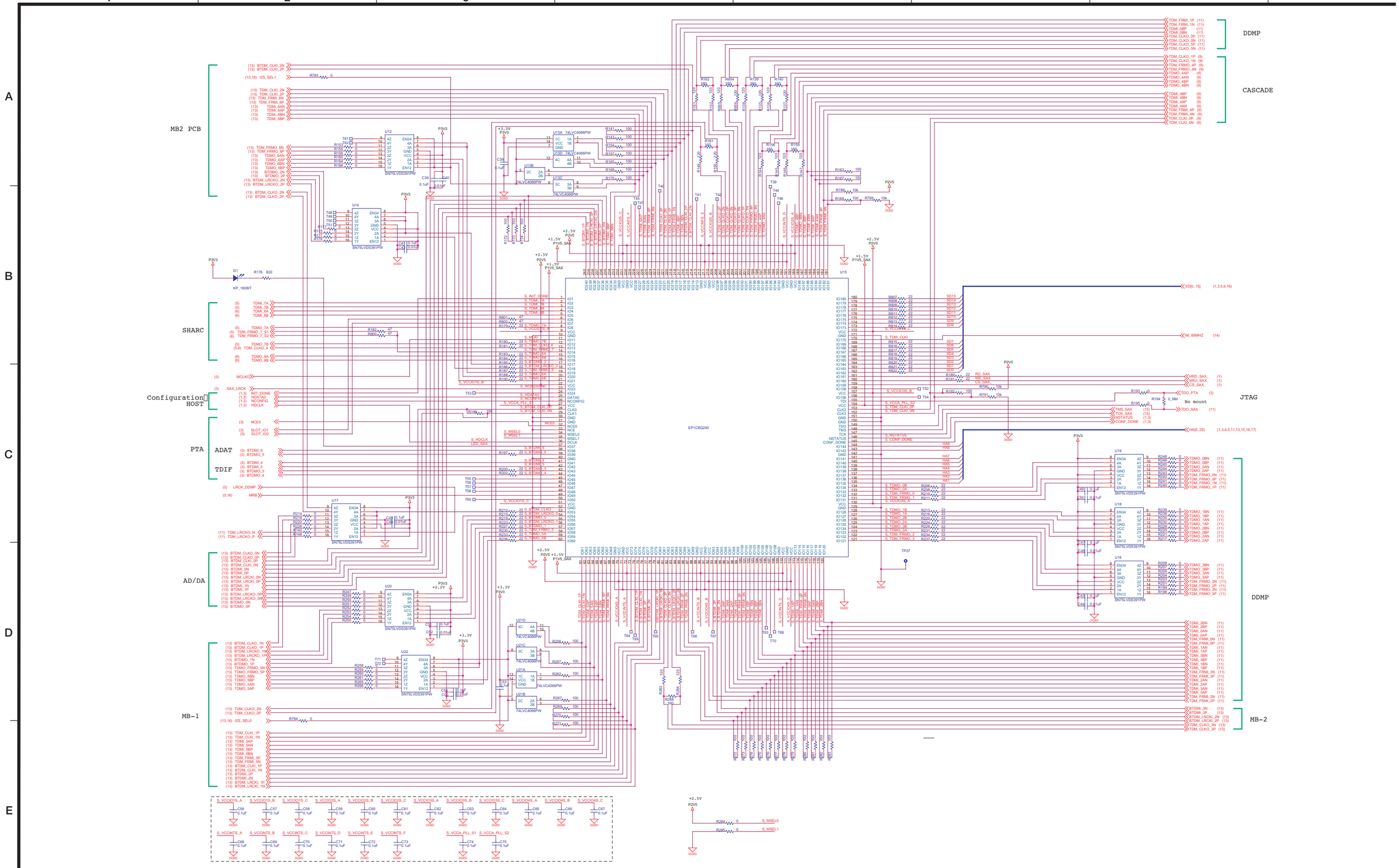
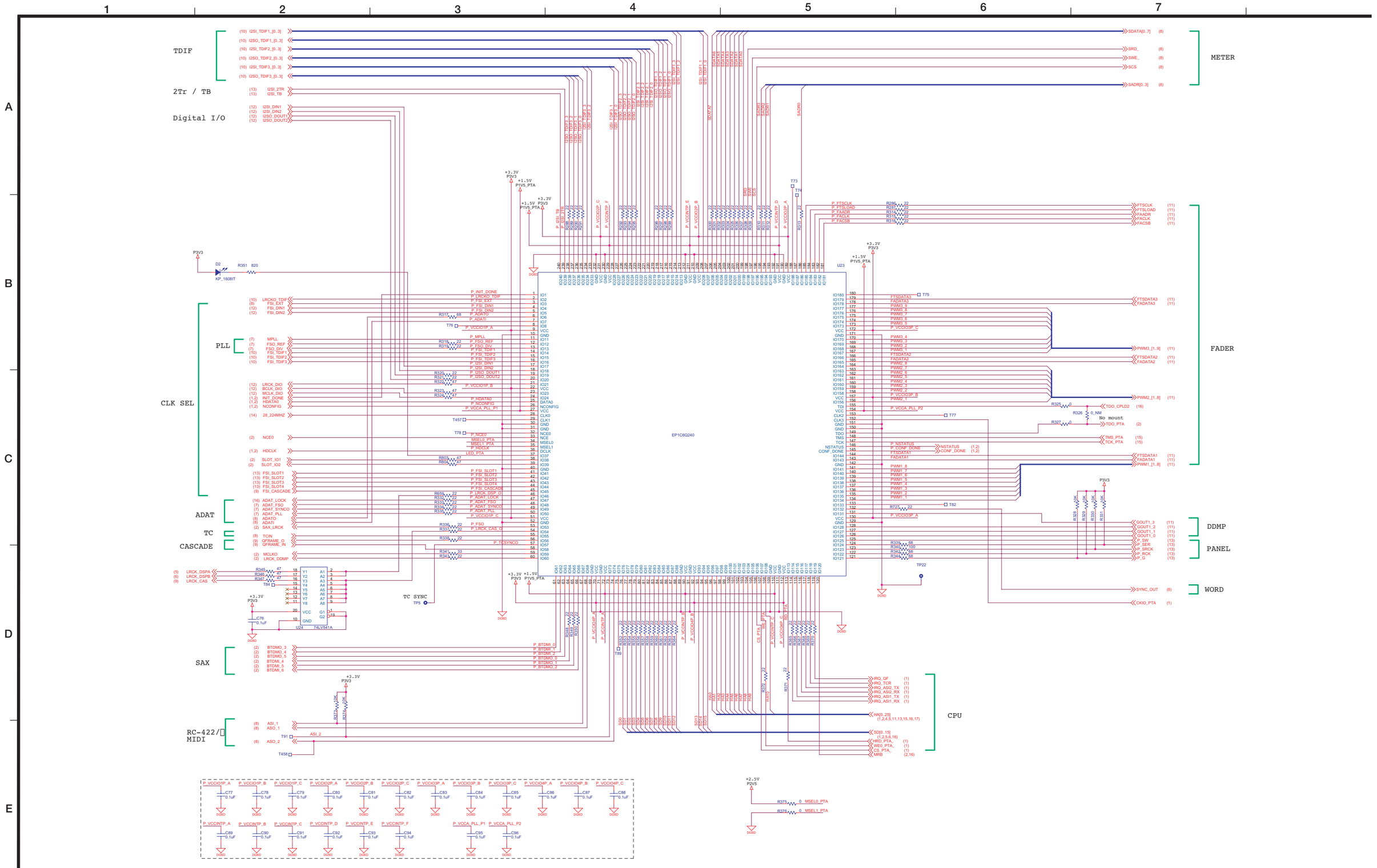
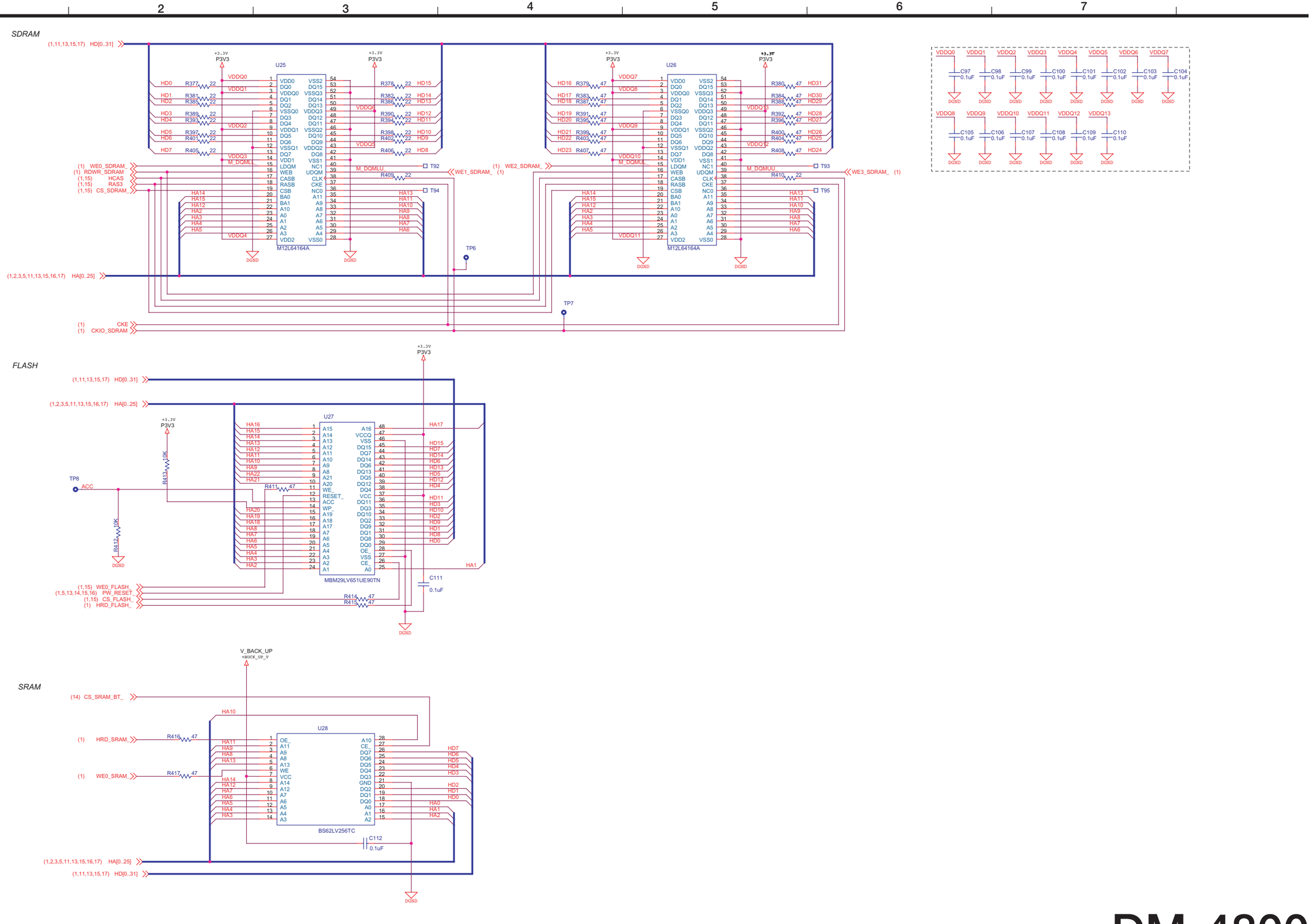

FPGA Configuration
OPEN : NORMAL
SHORT: NCONFIG LOW
CPU Debug mode
OPEN : NORMAL
SHORT: CPU DEBUG
CLOCK STPO mode
OPEN : NORMAL
SHORT: CLOCK STOP(JTAG Check mode)
NMI Input mode
OPEN/1-2SHORT : NORMAL (PW_INT)
2-3SHORT: DEBUG (ICE OUT)
Cascade
MIDI
SH7727_3
1
2
3
4
5
6
7
A
B
C
D
E

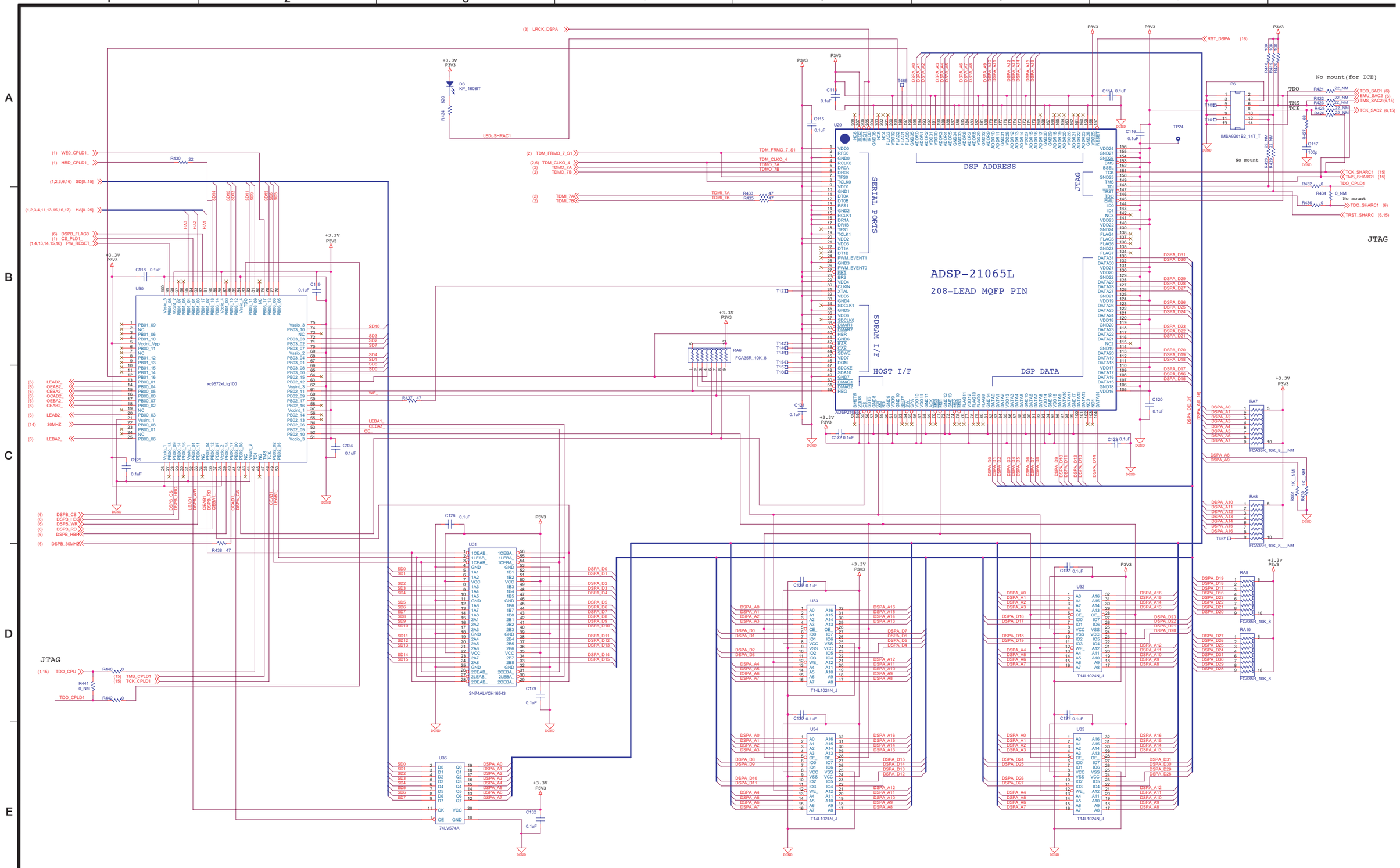


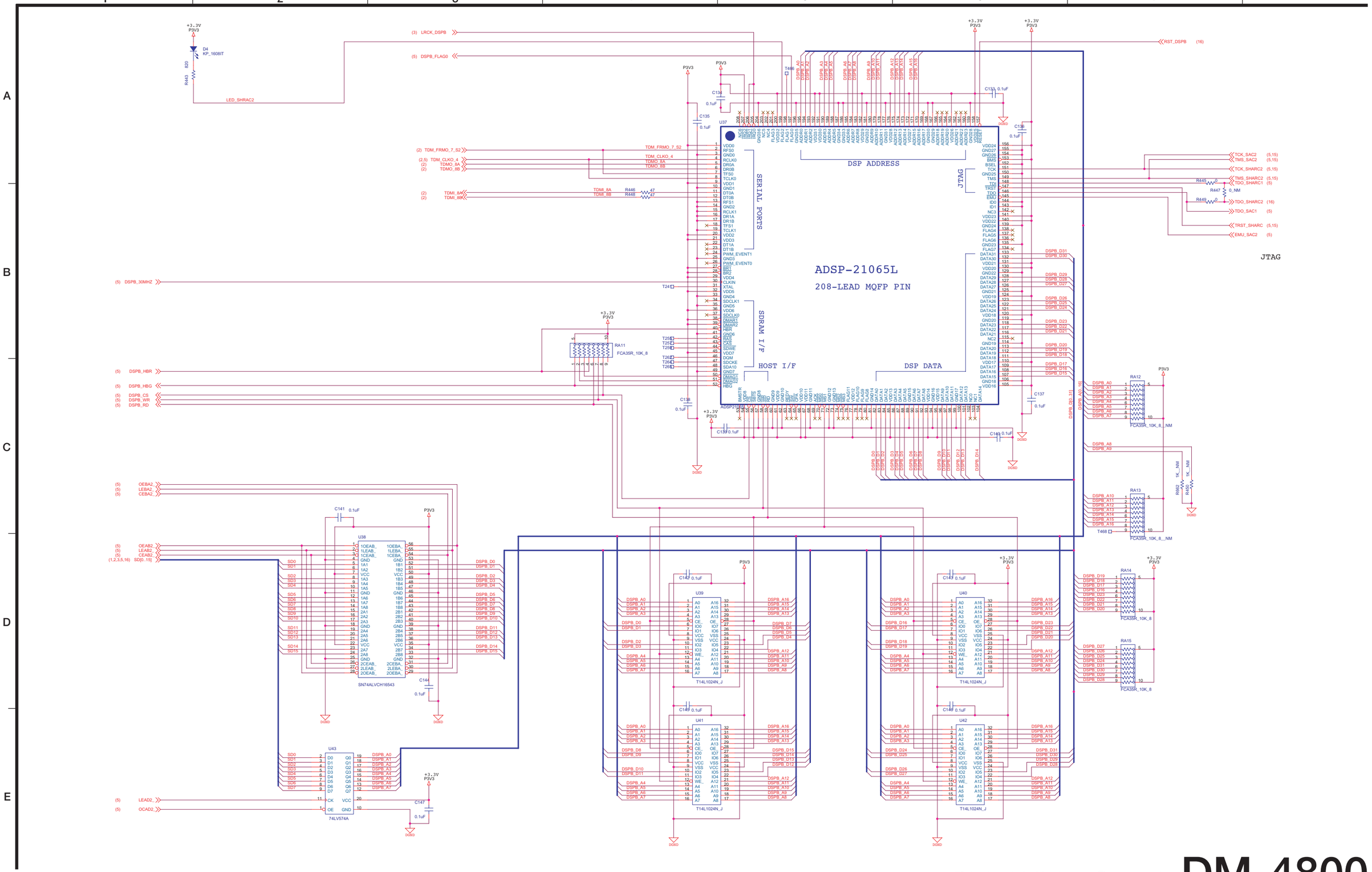
Digital Mixing Console DM-4800

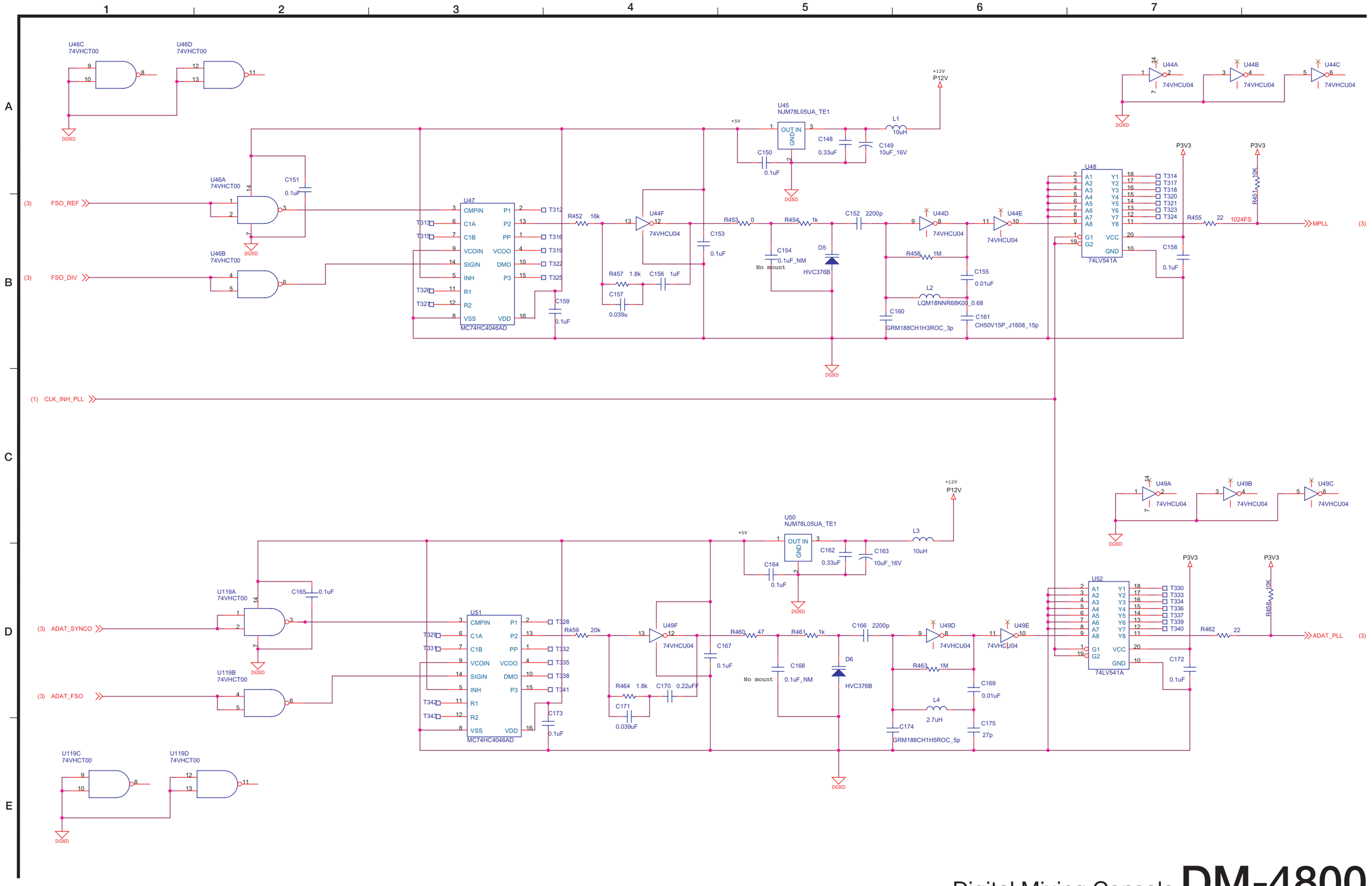
1 st Issue; May 2007


1
2
3
4
5
6
7
A
B
C
D
E
TDIF
2Tr / TB
Digital I/O
METER
PLL
CLK SEL
ADAT
TC
CASCADE
SAX
RC-422/MIDI
FADER
DDMP
PANEL
WORD
CPU
TC SYNC
EP1C6Q240
U24 74LV541A
U23


SDRAM
(1,11,13,15,17) HD[0..31]
U25
U26
M12L64164A
(1) WE0_SDRAM_
(1) RDWR_SDRAM
(1,15) HCAS
(1,15) RAS3
(1,15) CS_SDRAM_
(1) WE1_SDRAM_
(1) WE2_SDRAM_
(1) WE3_SDRAM_
M_DQMLU
M_DQMLL
M_DQMUU
M_DQMUL
(1,2,3,5,11,13,15,16,17) HA[0..25]
(1) CKE
(1) CKIO_SDRAM
TP6
TP7
FLASH
U27
MBM29LV651UE90TN
TP8
ACC
(1,15) WE0_FLASH_
(1,5,13,14,15,16) PW_RESET_
(1,15) CS_FLASH_
(1) HRD_FLASH_
C111
SRAM
V_BACK_UP
(14) CS_SRAM_BT_
U28
BS62LV256TC
(1) HRD_SRAM_
(1) WE0_SRAM_
C112
VDDQ0 VDDQ1 VDDQ2 VDDQ3 VDDQ4 VDDQ5 VDDQ6 VDDQ7
VDDQ8 VDDQ9 VDDQ10 VDDQ11 VDDQ12 VDDQ13
C97 C98 C99 C100 C101 C102 C103 C104
C105 C106 C107 C108 C109 C110
0.1uF
DGND


ADSP-21065L
208-LEAD MQFP PIN
DSP ADDRESS
DSP DATA
SERIAL PORTS
SDRAM I/F
HOST I/F
JTAG
No mount(for ICE)
No mount
LED_SHRAC1
xc9572xl_tq100
SN74ALVCH16543
74LV574A
T14L1024N_J
IMS49201B2_14T_T
FCA35R_10K_8___NM
FCA35R_10K_8
FCA35R_1K_8___NM
FCA35R_1K_8


ADSP-21065L
208-LEAD MQFP PIN
DSP ADDRESS
DSP DATA
SERIAL PORTS
SDRAM I/F
HOST I/F
JTAG
U37
U38
U39
U40
U41
U42
U43
SN74ALVCH16543
74LV574A
T14L1024N_J
RA11
RA12
RA13
RA14
RA15
FCA35R_10K_8
FCA35R_10K_8__NM
+3.3V
P3V3
DGND
LED_SHRAC2
LRCK_DSPB
DSPB_FLAG0
RST_DSPB
DSPB_30MHZ
DSPB_HBR
DSPB_HBG
DSPB_CS
DSPB_WR
DSPB_RD
OEBA2
LEBA2
CEBA2
OEAB2
LEAB2
CEAB2
SD[0..15]
LEAD2
OCAD2
TCK_SAC2
TMS_SAC2
TCK_SHARC2
TMS_SHARC2
TDO_SHARC1
TDO_SHARC2
TDO_SAC1
TRST_SHARC
EMU_SAC2
JTAG



Digital Mixing Console DM-4800

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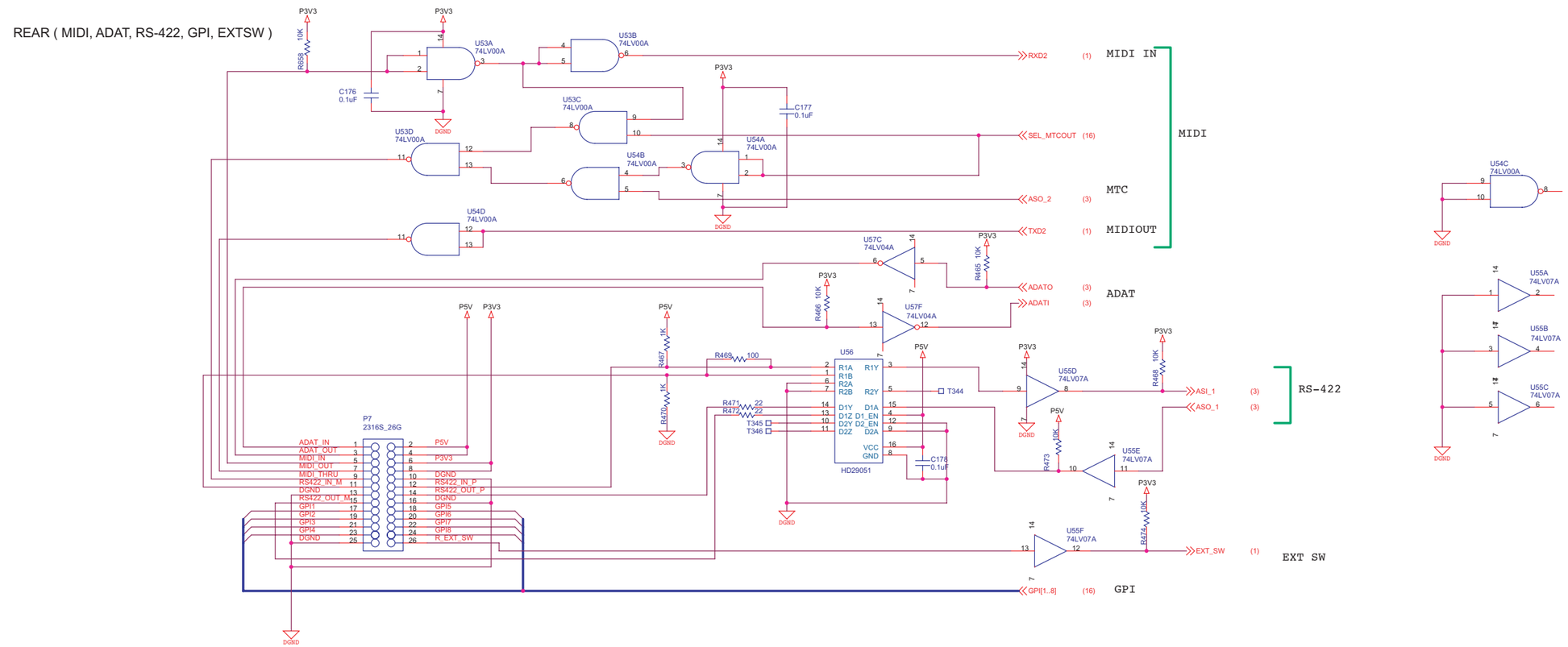
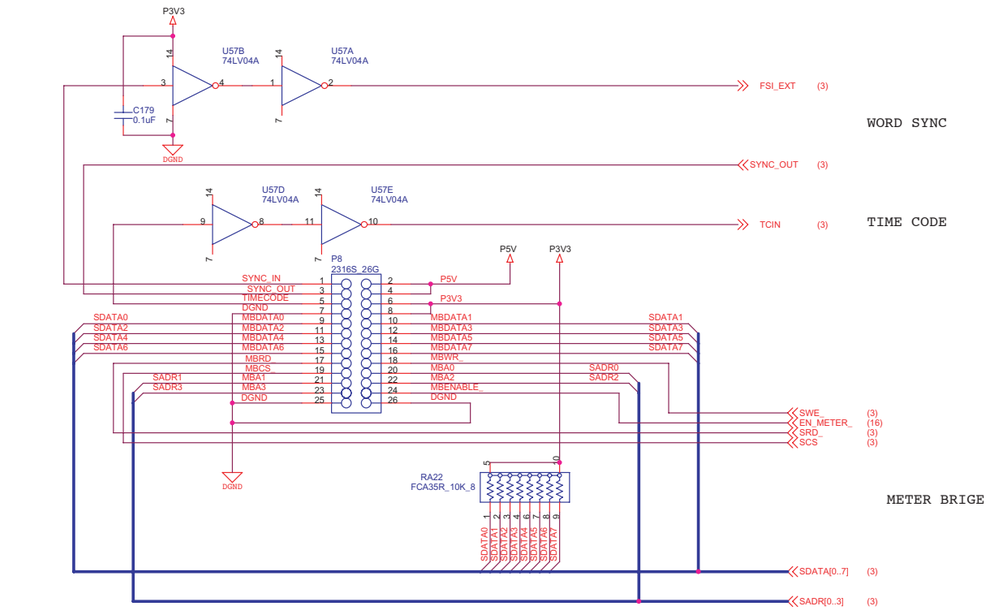
REAR (MIDI, ADAT, RS-422, GPI, EXTSW)



REAR (WORDSYNC, TC, METER)



CASCADE

P9 205A_25FSTBBB3

C_TDM_CLKI_0P
C_TDM_CLKI_0N
C_TDM_FRMI_4P
C_TDM_FRMI_4N
C_TDMI_4AP
C_TDMI_4AN
C_TDMI_4BP
C_TDMI_4BN
C_LRCK_P
C_LRCK_N
C_QFRM_P
C_QFRM_N
C_RX_P
C_RX_N
C_TX_P
C_TX_N
C_GND
C_TDMO_4BN
C_TDMO_4BP
C_TDMO_4AN
C_TDMO_4AP
C_TDM_FRMO_4N
C_TDM_FRMO_4P
C_TDM_CLKO_1N
C_TDM_CLKO_1P

Frame GND DGND TP21 GND DGND

L10 TCM2010-201-4P
L11 TCM2010-201-4P

+3.3V P3V3

D7 IMN10 D8 IMN10 D9 IMN10 D10 IMN10 D11 IMN10 D12 IMN10 D13 IMN10 D14 IMN10

D15 IMN10 D16 IMN10 D17 IMN10 D18 IMN10 D19 IMN10 D20 IMN10 D21 IMN10 D22 IMN10

DGND

TDM_CLKI_0P (2)
TDM_CLKI_0N (2)
TDM_FRMI_4P (2)
TDM_FRMI_4N (2)
TDMI_4AP (2)
TDMI_4AN (2)
TDMI_4BP (2)
TDMI_4BN (2)

TDMO_4BN (2)
TDMO_4BP (2)
TDMO_4AN (2)
TDMO_4AP (2)
TDM_FRMO_4N (2)
TDM_FRMO_4P (2)
TDM_CLKO_1N (2)
TDM_CLKO_1P (2)

U58 SN65LVDS050PW
U59 SN65LVDS050PW

T348 T349

P3V3 +3.3V

R475 10K DGND

SEL_MS (1)
SEL_MS
L : SLAVE
H : MASTER

LRCK_CAS (3)
QFRAME_O (3)
R792 68
FSI_CASCADE (3)
QFRAME_IN (3)

C180 0.1uF
C181 0.01uF
C182 0.1uF
C183 0.01uF

RS-232C
P38 A2001WV2_4P

R665 0_NM
P5 IMSA9201B1_02T_T

TXD0 (1)
RXD0 (1)

SERIAL mode
OPEN : RS-232C USE
SHORT: CASCADE (NORMAL)

USB

(1) USB1_PWR_EN
(1) USB_VBUS
(1) USB1_P
(1) USB1_M

P3V3

Q8 2SK2980
R476 10K
R477 1.5K

U60A 74LV08A
R478 51
C184 0.1uF
R479 10K

R480 27
R483 27
C185 22p
C186 22p

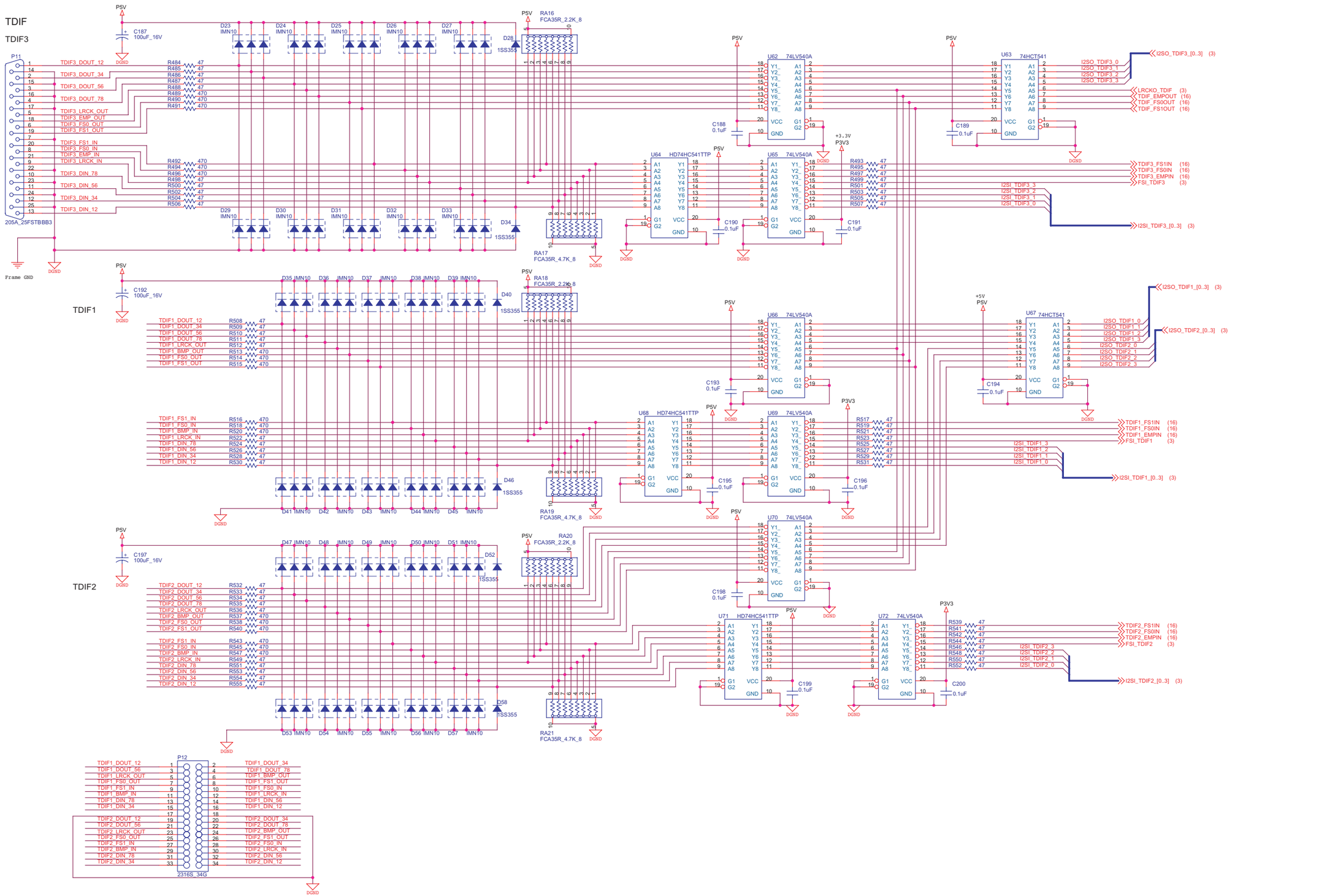
U61 SN75240PWR
T353
T354

R481 470K_NM No mount
R482 470K_NM No mount

L5 BCM201209A390

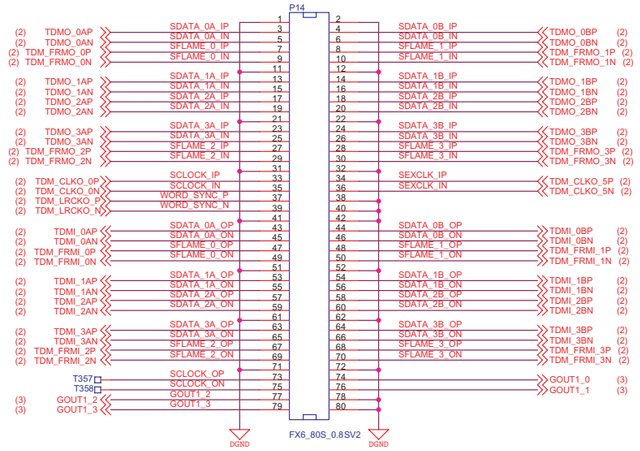
USB FUNCTION
P10 UBB_4R_D14C
U_VBUS
U_USB1_M
U_USB1_P
U_GND
+5V
Frame GND

U60B 74LV08A T350
U60C 74LV08A T351
U60D 74LV08A T352

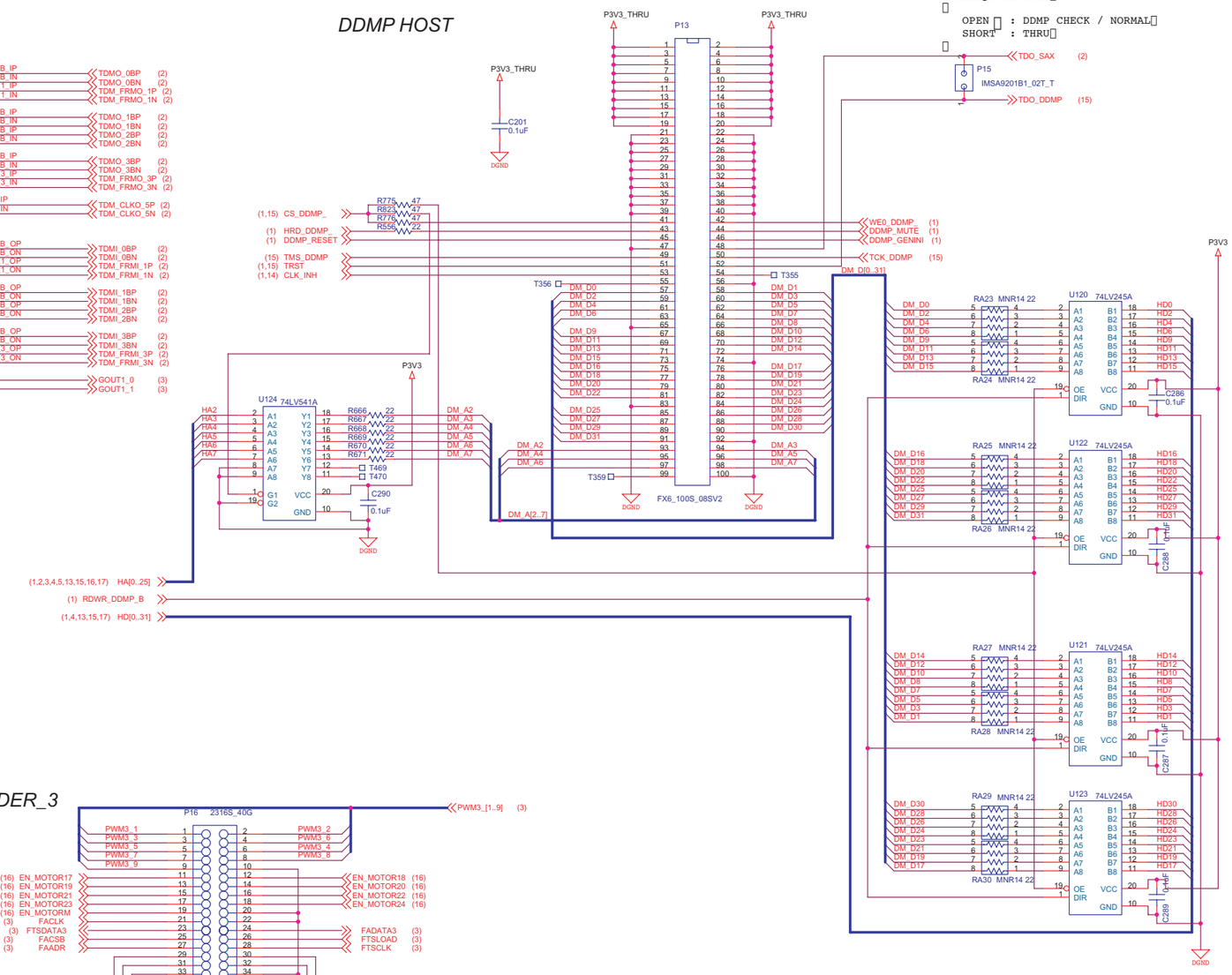

TDIF
TDIF3
TDIF1
TDIF2
P5V
DGND
+3.3V
P3V3
+5V
Frame GND
205A_25FSTBBB3
2316S_34G
74LV540A
74HCT541
HD74HC541TTP
1SS355
FCA35R_2.2K_8
FCA35R_4.7K_8
I2SO_TDIF3_[0..3] (3)
I2SO_TDIF1_[0..3] (3)
I2SO_TDIF2_[0..3] (3)
I2SI_TDIF3_[0..3] (3)
I2SI_TDIF1_[0..3] (3)
I2SI_TDIF2_[0..3] (3)
TDIF3_FS1IN (16)
TDIF3_FS0IN (16)
TDIF3_EMPIN (16)
FSI_TDIF3 (3)
TDIF1_FS1IN (16)
TDIF1_FS0IN (16)
TDIF1_EMPIN (16)
FSI_TDIF1 (3)
TDIF2_FS1IN (16)
TDIF2_FS0IN (16)
TDIF2_EMPIN (16)
FSI_TDIF2 (3)
LRCKO_TDIF (3)
TDIF_EMPOUT (16)
TDIF_FS0OUT (16)
TDIF_FS1OUT (16)

DDMP AUDIO

To DDMP CoPCB

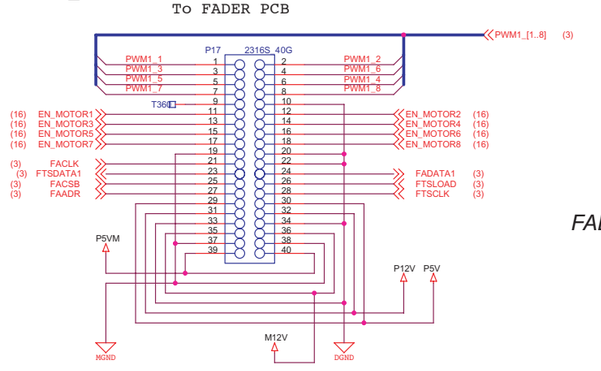


DDMP HOST

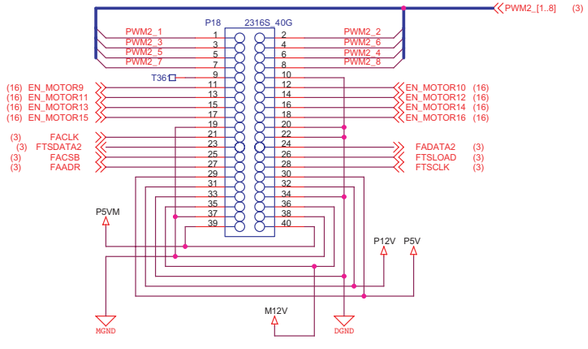


FADER_1

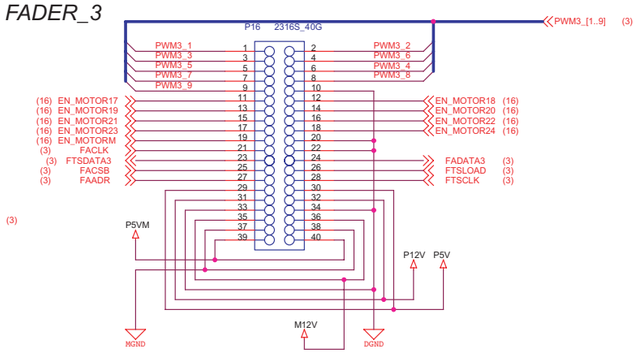
To FADER PCB

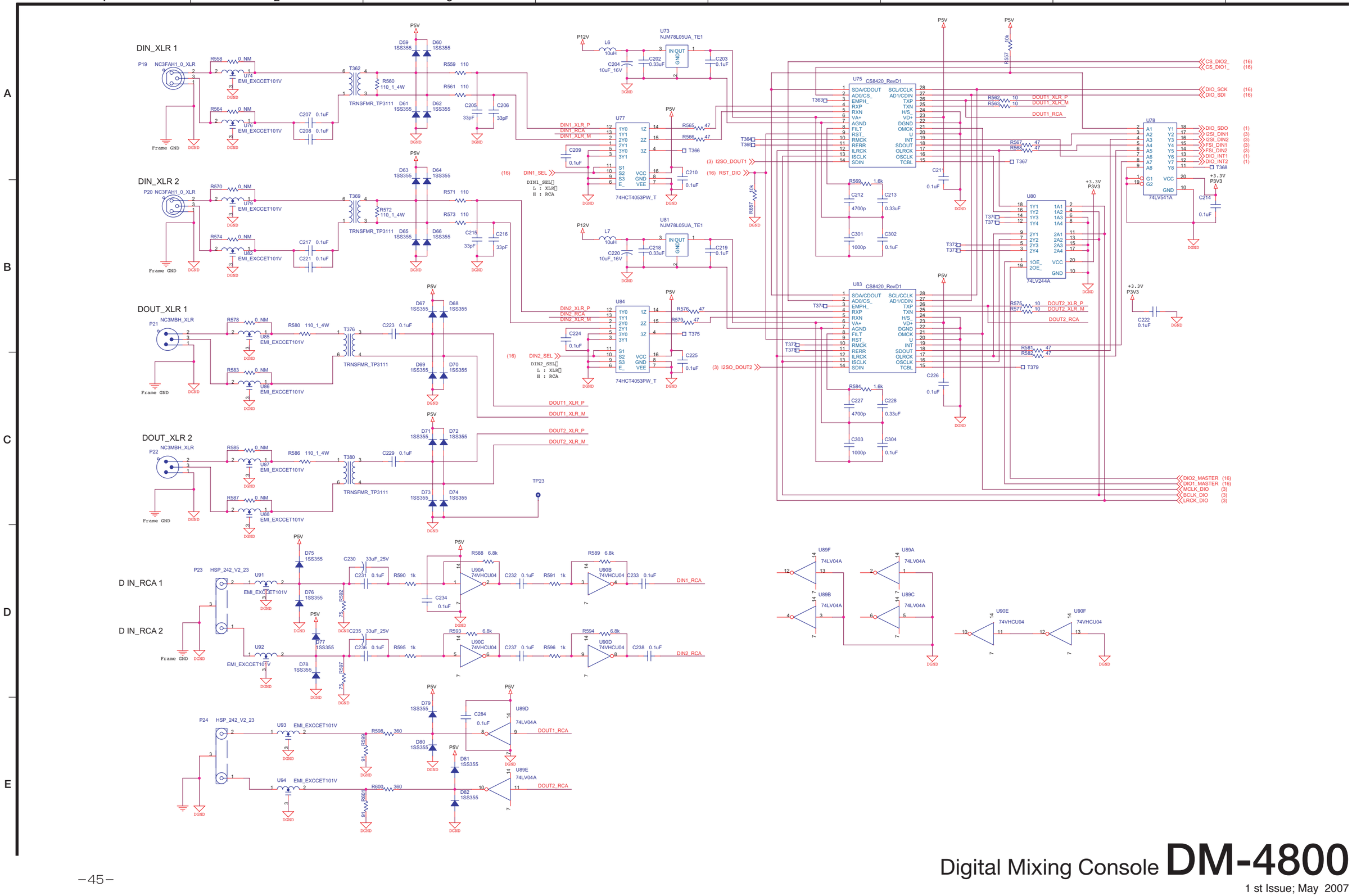


FADER_2

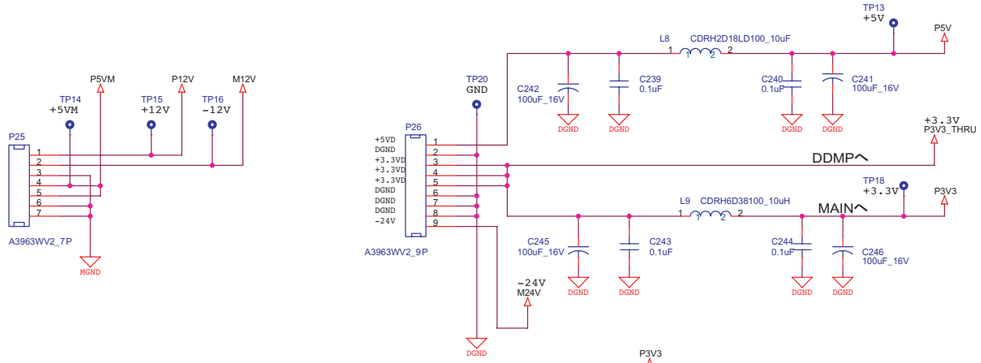


FADER_3

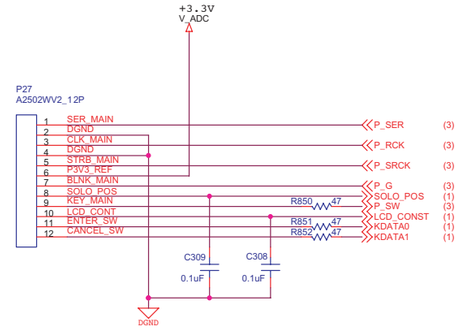



1
2
3
4
5
6
7
A
B
C
D
E
DIN_XLR 1
DIN_XLR 2
DOUT_XLR 1
DOUT_XLR 2
D IN_RCA 1
D IN_RCA 2
P5V
P12V
DGND
Frame GND
U73 NJM78L05UA_TE1
U81 NJM78L05UA_TE1
U75 CS8420_RevD1
U83 CS8420_RevD1
U77
U84
74HCT4053PW_T
U78
74LV541A
U80
74LV244A
U89A 74LV04A
U89B 74LV04A
U89C 74LV04A
U89D 74LV04A
U89E 74LV04A
U89F 74LV04A
U90A 74VHCU04
U90B 74VHCU04
U90C 74VHCU04
U90D 74VHCU04
U90E 74VHCU04
U90F 74VHCU04
TRNSFMR_TP3111
EMI_EXCCET101V
HSP_242_V2_23
DIN1_SEL
DIN2_SEL
DIN1_RCA
DIN2_RCA
DOUT1_RCA
DOUT2_RCA
DOUT1_XLR_P
DOUT1_XLR_M
DOUT2_XLR_P
DOUT2_XLR_M
DOUT1_XLR_P
DOUT1_XLR_M
DOUT2_XLR_P
DOUT2_XLR_M
CS_DIO2_
CS_DIO1_
DIO_SCK
DIO_SDI
DIO_SDO
I2SI_DIN1
I2SI_DIN2
FSI_DIN1
FSI_DIN2
DIO_INT1
DIO_INT2
RST_DIO
I2SO_DOUT1
I2SO_DOUT2
DIO2_MASTER
DIO1_MASTER
MCLK_DIO
BCLK_DIO
LRCK_DIO
+3.3V
P3V3
TP23

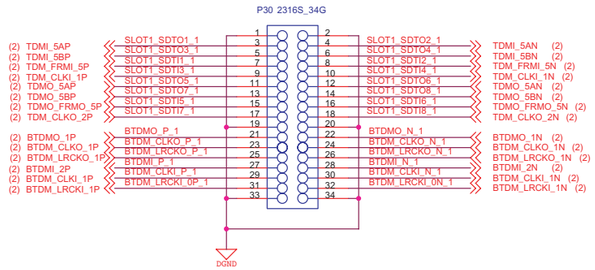
POWER

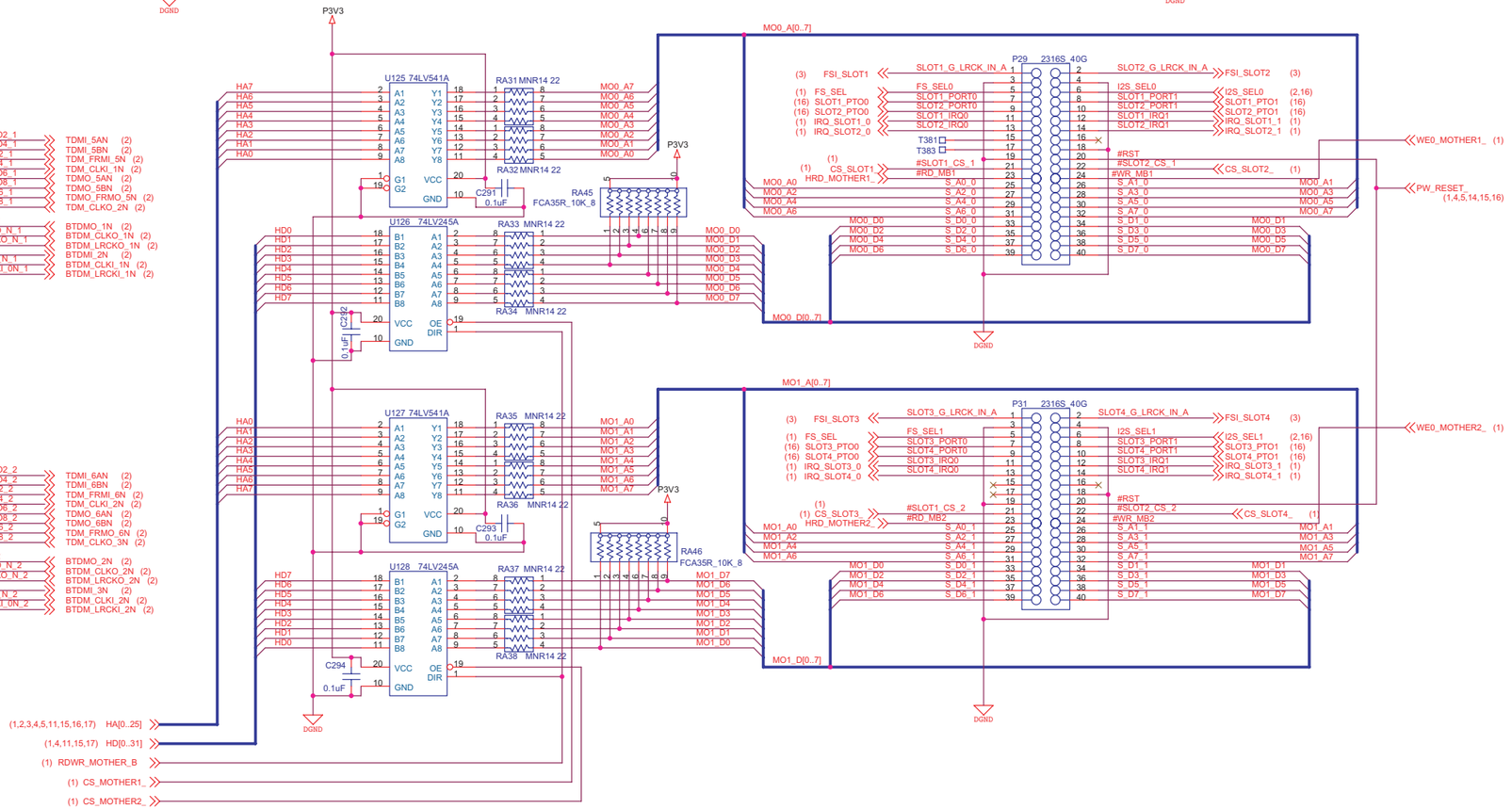


PANEL (MONITOR)

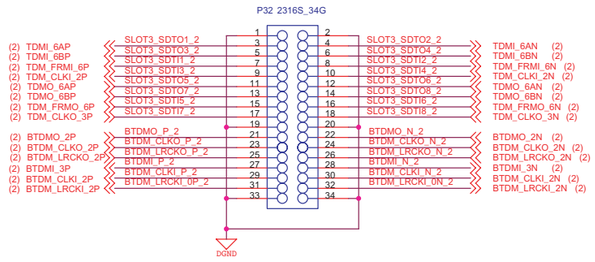


MOTHER_1

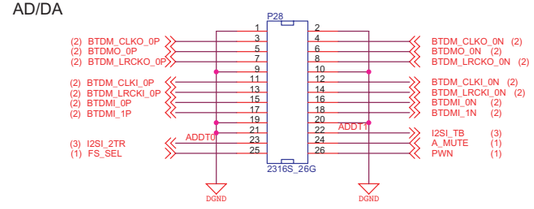




MOTHER_2



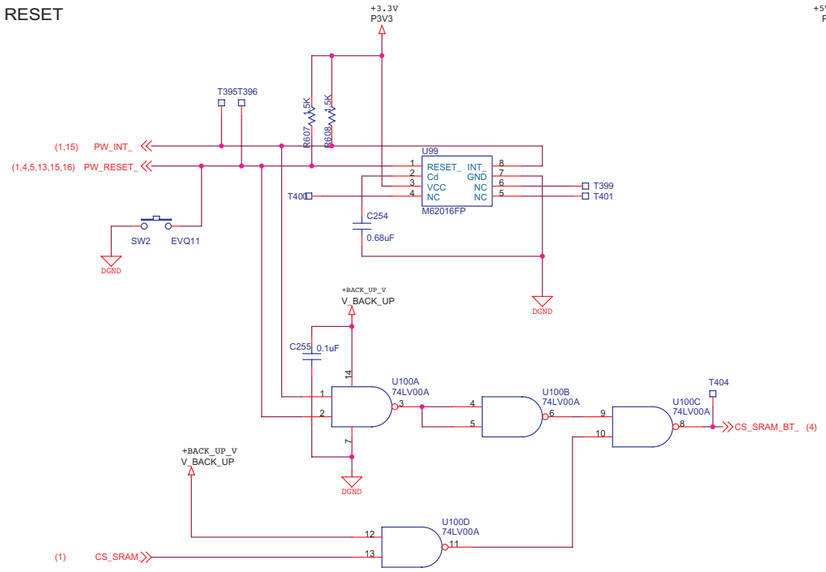
AD/DA



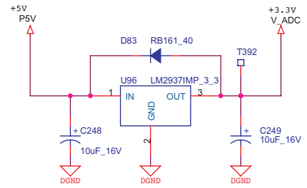
1 2 3 4 5 6 7

A B C D E

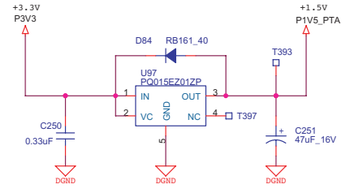
RESET



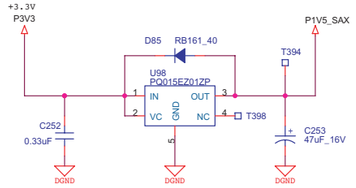
ADリファレンス電圧



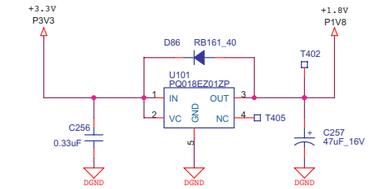
PTA用コア電圧



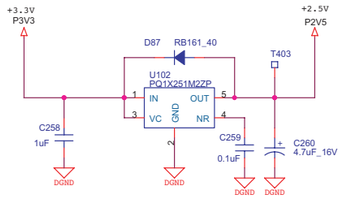
SAX用コア電圧



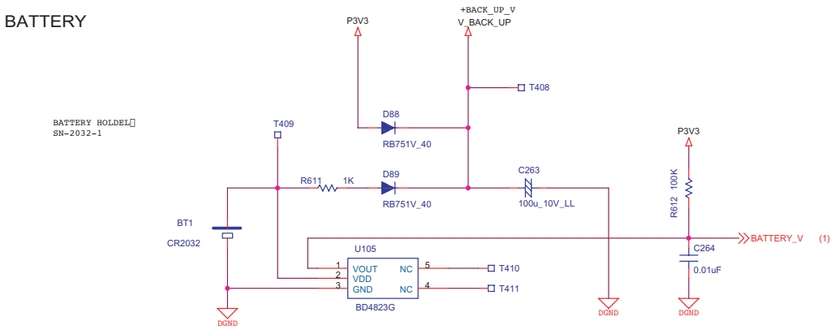
CPU用コア電圧



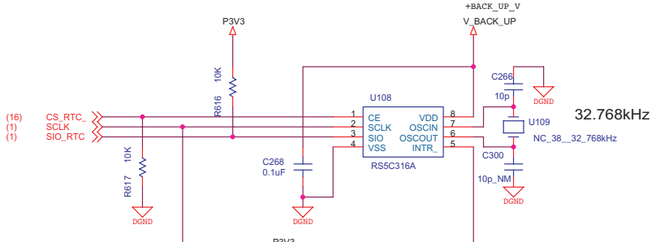
SAX用LVDS電圧



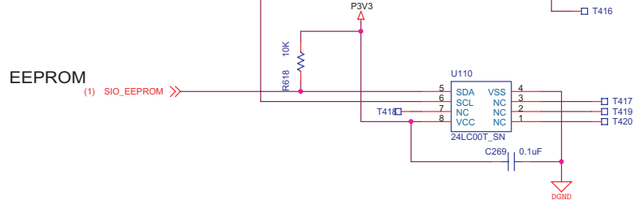
BATTERY



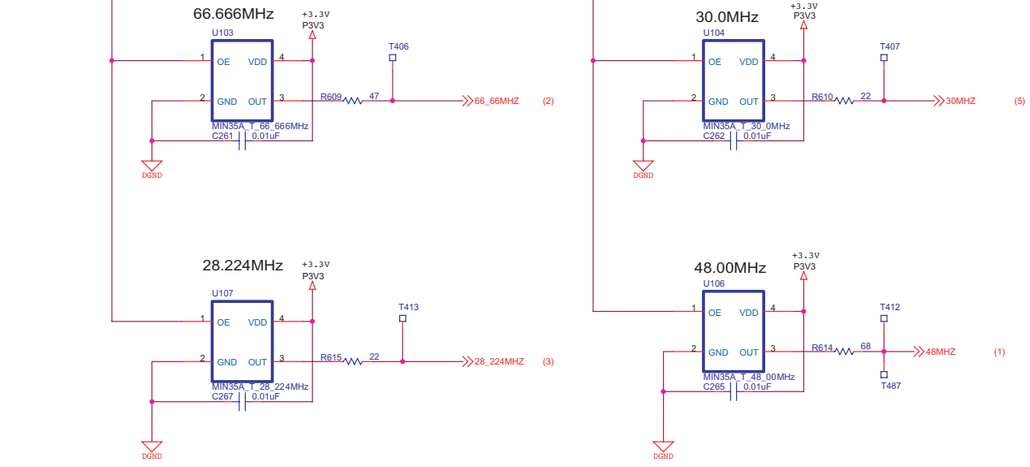
RTC



EEPROM



OSC



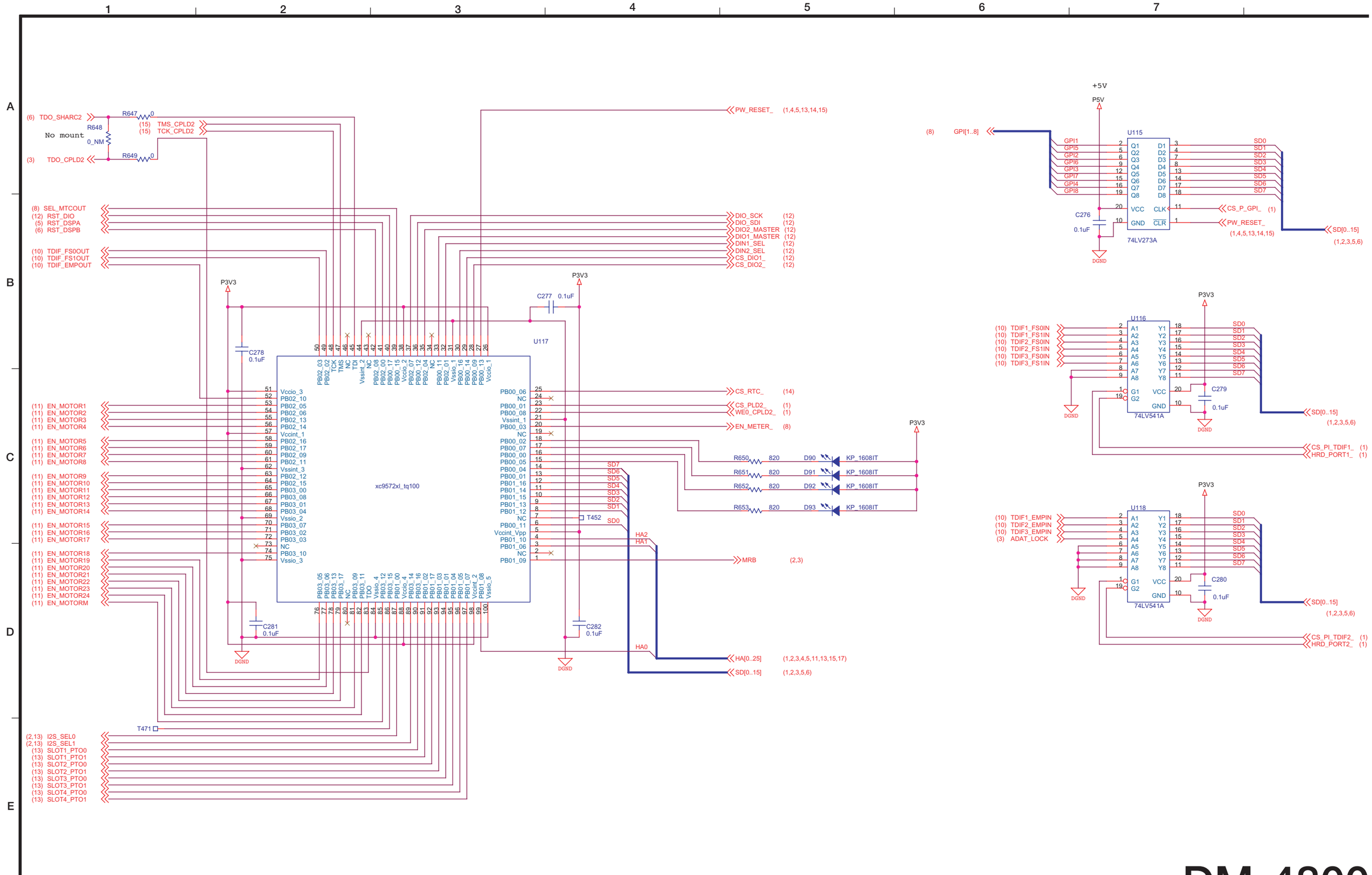
AUD

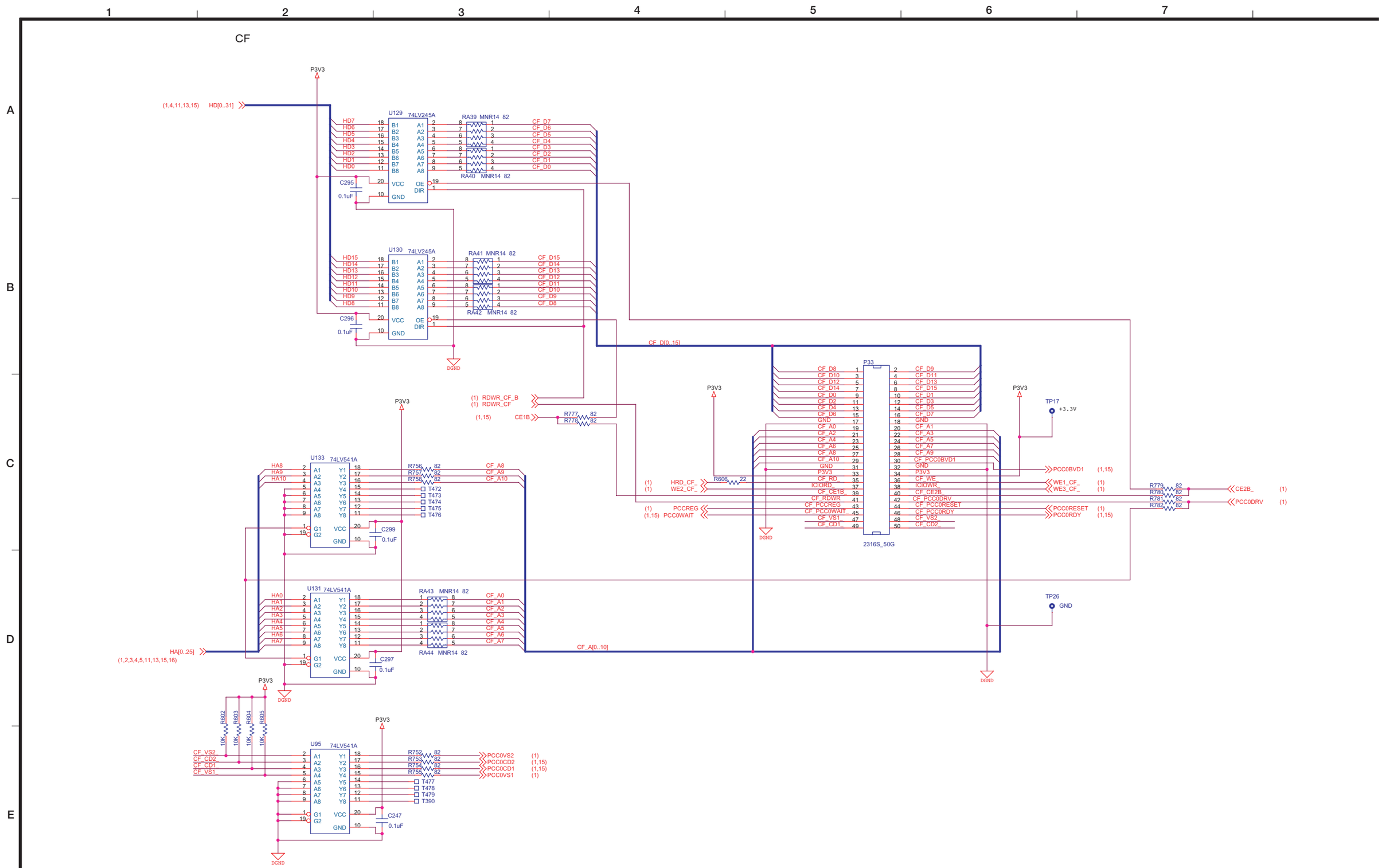
JTAG & H-UDI

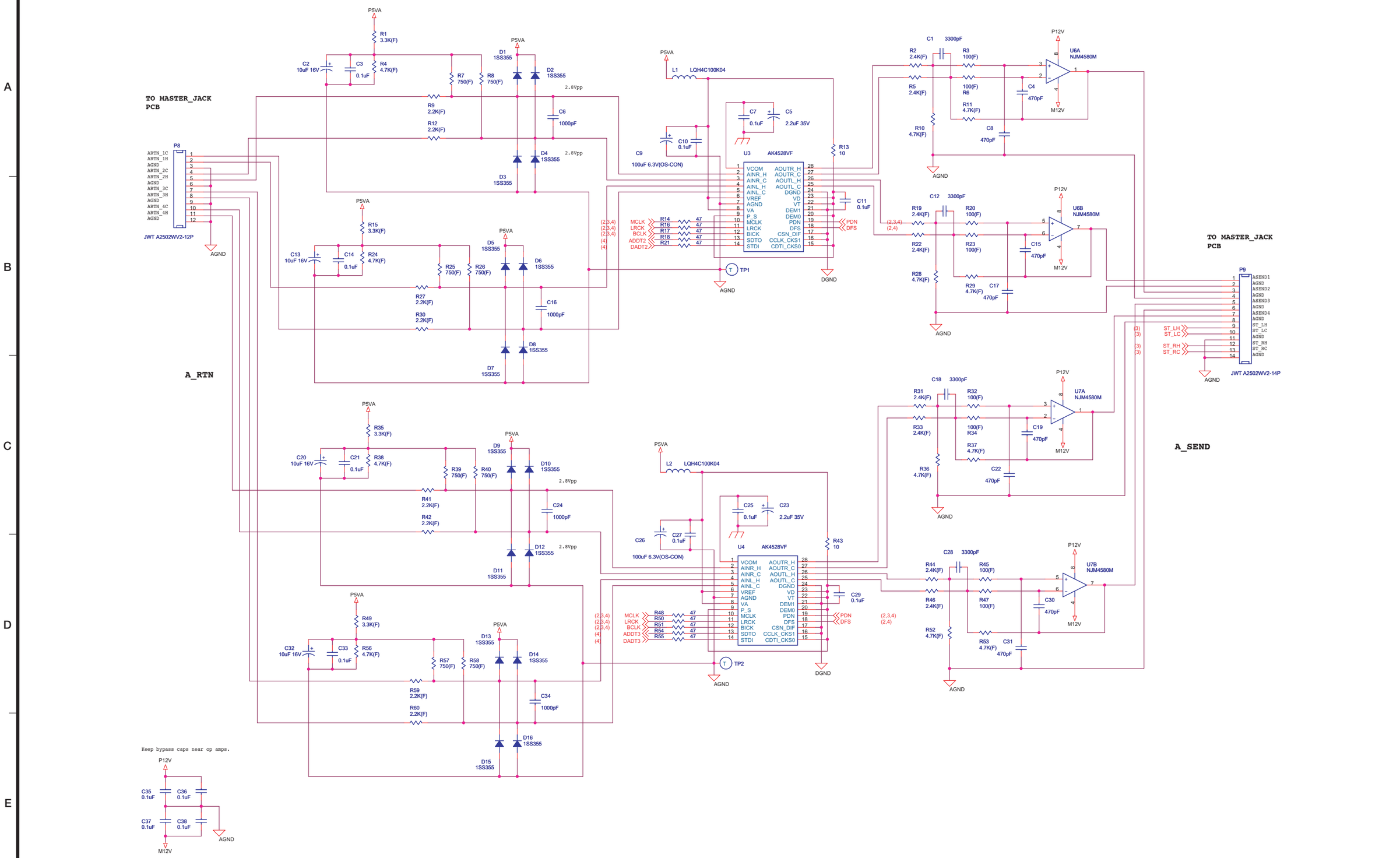
NEXTiCE TCN

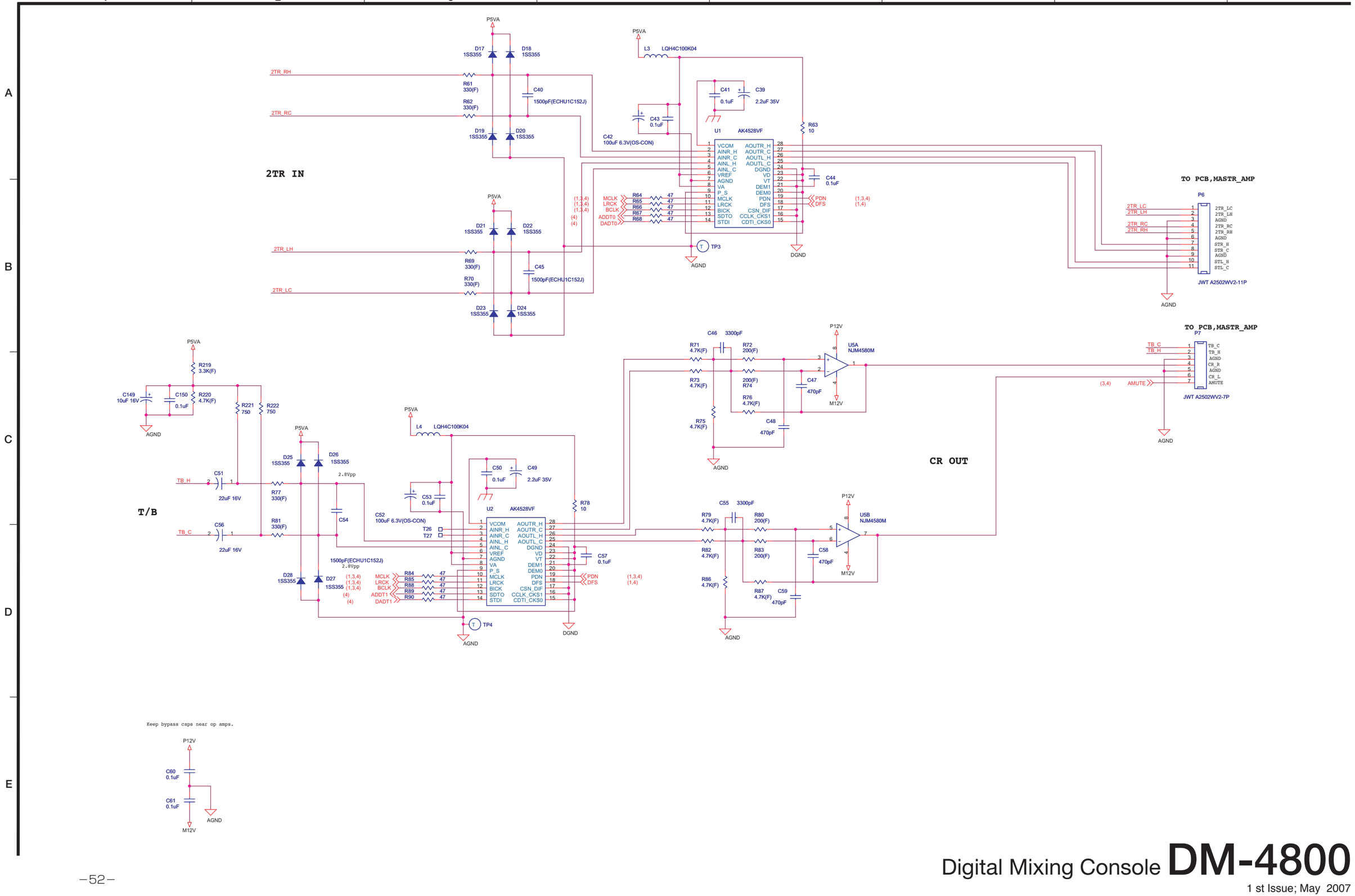
TCK STOP mode
1-2 SHORT: TCK Supply (JTAG)
2-3 SHORT: TCK STOP (NORMAL & CPU Debug)

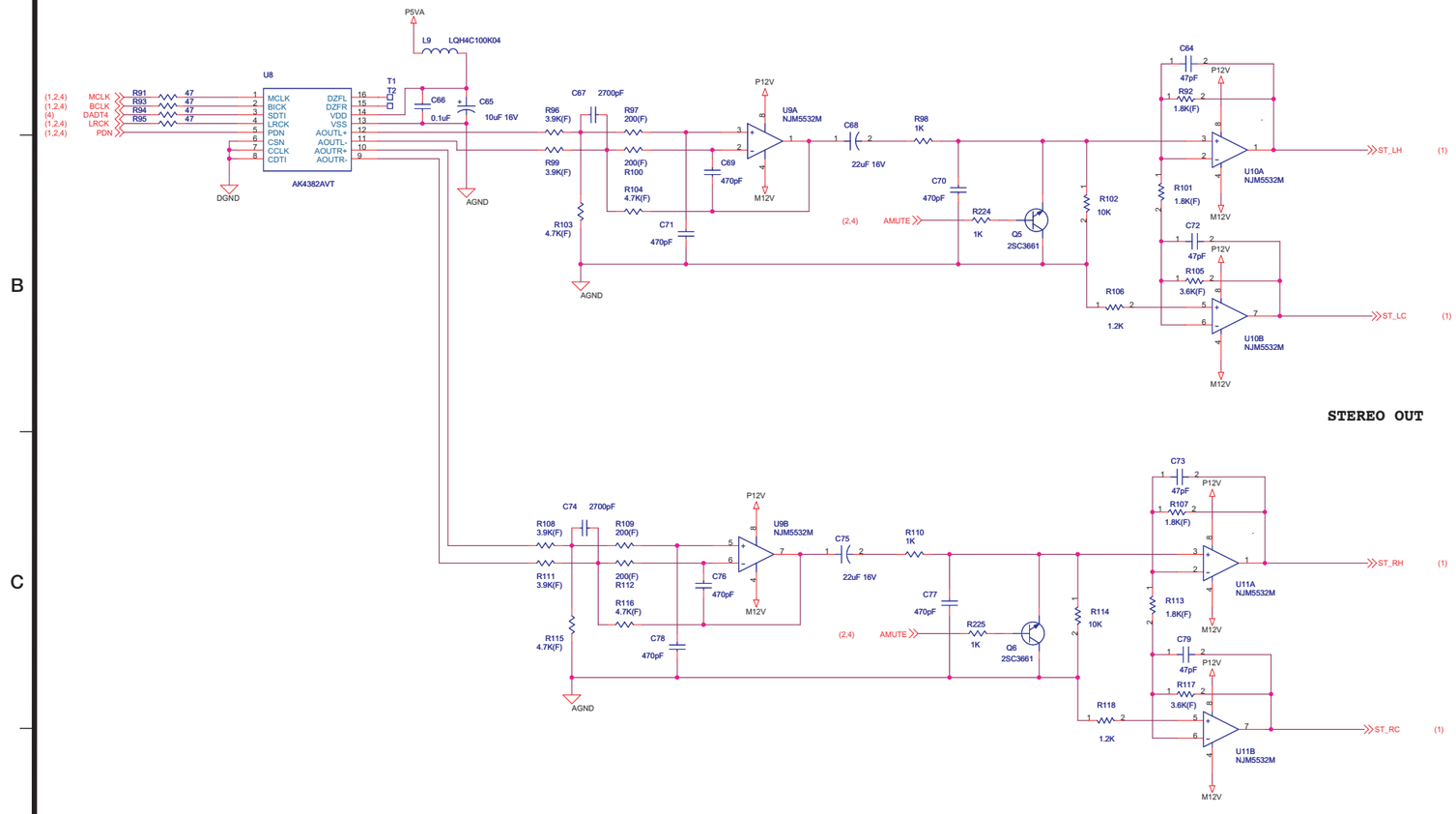
TRST mode
1-2 SHORT: PLL UP (JTAG)
2-3 SHORT: PULL DOWN (NORMAL)


1
2
3
4
5
6
7
A
B
C
D
E
(6) TDO_SHARC2
R647 0
R648 No mount 0_NM
R649 0
(15) TMS_CPLD2
(15) TCK_CPLD2
(3) TDO_CPLD2
PW_RESET_ (1,4,5,13,14,15)
(8) SEL_MTCOUT
(12) RST_DIO
(5) RST_DSPA
(6) RST_DSPB
(10) TDIF_FS0OUT
(10) TDIF_FS1OUT
(10) TDIF_EMPOUT
DIO_SCK (12)
DIO_SDI (12)
DIO2_MASTER (12)
DIO1_MASTER (12)
DIN1_SEL (12)
DIN2_SEL (12)
CS_DIO1_ (12)
CS_DIO2_ (12)
P3V3
C277 0.1uF
C278 0.1uF
U117
xc9572xl_tq100
(11) EN_MOTOR1
(11) EN_MOTOR2
(11) EN_MOTOR3
(11) EN_MOTOR4
(11) EN_MOTOR5
(11) EN_MOTOR6
(11) EN_MOTOR7
(11) EN_MOTOR8
(11) EN_MOTOR9
(11) EN_MOTOR10
(11) EN_MOTOR11
(11) EN_MOTOR12
(11) EN_MOTOR13
(11) EN_MOTOR14
(11) EN_MOTOR15
(11) EN_MOTOR16
(11) EN_MOTOR17
(11) EN_MOTOR18
(11) EN_MOTOR19
(11) EN_MOTOR20
(11) EN_MOTOR21
(11) EN_MOTOR22
(11) EN_MOTOR23
(11) EN_MOTOR24
(11) EN_MOTORM
CS_RTC_ (14)
CS_PLD2_ (1)
WE0_CPLD2_ (1)
EN_METER_ (8)
MRB (2,3)
HA[0..25] (1,2,3,4,5,11,13,15,17)
SD[0..15] (1,2,3,5,6)
R650 820 D90 KP_1608IT
R651 820 D91 KP_1608IT
R652 820 D92 KP_1608IT
R653 820 D93 KP_1608IT
T452
T471
C281 0.1uF
C282 0.1uF
DGND
HA2
HA1
HA0
SD7
SD6
SD5
SD4
SD3
SD2
SD1
SD0
(2,13) I2S_SEL0
(2,13) I2S_SEL1
(13) SLOT1_PTO0
(13) SLOT1_PTO1
(13) SLOT2_PTO0
(13) SLOT2_PTO1
(13) SLOT3_PTO0
(13) SLOT3_PTO1
(13) SLOT4_PTO0
(13) SLOT4_PTO1
+5V
P5V
U115
(8) GPI[1..8]
GPI1
GPI5
GPI2
GPI6
GPI3
GPI7
GPI4
GPI8
C276 0.1uF
74LV273A
CS_P_GPI_ (1)
PW_RESET_
(1,4,5,13,14,15)
SD[0..15]
(1,2,3,5,6)
U116
(10) TDIF1_FS0IN
(10) TDIF1_FS1IN
(10) TDIF2_FS0IN
(10) TDIF2_FS1IN
(10) TDIF3_FS0IN
(10) TDIF3_FS1IN
C279 0.1uF
74LV541A
CS_PI_TDIF1_ (1)
HRD_PORT1_ (1)
U118
(10) TDIF1_EMPIN
(10) TDIF2_EMPIN
(10) TDIF3_EMPIN
(3) ADAT_LOCK
C280 0.1uF
CS_PI_TDIF2_ (1)
HRD_PORT2_ (1)

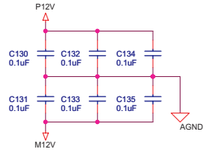

CF
P3V3
(1,4,11,13,15) HD[0..31]
U129 74LV245A
U130 74LV245A
RA39 MNR14 82
RA40 MNR14 82
RA41 MNR14 82
RA42 MNR14 82
C295 0.1uF
C296 0.1uF
DGND
CF_D[0..15]
(1) RDWR_CF_B
(1) RDWR_CF_
(1,15) CE1B
R777 82
R778 82
P33
2316S_50G
TP17 +3.3V
TP26 GND
R606 22
(1) HRD_CF_
(1) WE2_CF_
(1) PCCREG
(1,15) PCC0WAIT
PCC0BVD1 (1,15)
WE1_CF_ (1)
WE3_CF_ (1)
PCC0RESET (1)
PCC0RDY (1,15)
R779 82
R780 82
R781 82
R782 82
CE2B_ (1)
PCC0DRV (1)
U133 74LV541A
U131 74LV541A
U95 74LV541A
RA43 MNR14 82
RA44 MNR14 82
R756 82
R757 82
R758 82
T472
T473
T474
T475
T476
C299 0.1uF
C297 0.1uF
C247 0.1uF
HA[0..25]
(1,2,3,4,5,11,13,15,16)
CF_A[0..10]
R602 10K
R603 10K
R604 10K
R605 10K
R752 82
R753 82
R754 82
R755 82
T477
T478
T479
T390
PCC0VS2 (1)
PCC0CD2 (1,15)
PCC0CD1 (1,15)
PCC0VS1 (1)


TO MASTER_JACK PCB
P8
JWT A2502WV2-12P
A_RTN
A_SEND
TO MASTER_JACK PCB
P9
JWT A2502WV2-14P
U3 AK4528VF
U4 AK4528VF
L1 LQH4C100K04
L2 LQH4C100K04
U6A NJM4580M
U6B NJM4580M
U7A NJM4580M
U7B NJM4580M
P5VA
P12V
M12V
AGND
DGND
2.8Vpp
100uF 6.3V(OS-CON)
Keep bypass caps near op amps.


1
2
3
4
5
6
7
A
B
C
D
E
2TR IN
T/B
CR OUT
TO PCB,MASTR_AMP
TO PCB,MASTR_AMP
P5VA
P12V
M12V
AGND
DGND
2TR_RH
2TR_RC
2TR_LH
2TR_LC
TB_H
TB_C
D17 1SS355
D18 1SS355
D19 1SS355
D20 1SS355
D21 1SS355
D22 1SS355
D23 1SS355
D24 1SS355
D25 1SS355
D26 1SS355
D27 1SS355
D28 1SS355
R61 330(F)
R62 330(F)
R69 330(F)
R70 330(F)
R77 330(F)
R81 330(F)
C40 1500pF(ECHU1C152J)
C45 1500pF(ECHU1C152J)
C54 1500pF(ECHU1C152J)
2.8Vpp
L3 LQH4C100K04
L4 LQH4C100K04
C41 0.1uF
C39 2.2uF 35V
C43 0.1uF
C42 100uF 6.3V(OS-CON)
C50 0.1uF
C49 2.2uF 35V
C53 0.1uF
C52 100uF 6.3V(OS-CON)
U1 AK4528VF
U2 AK4528VF
VCOM AINR_H AINR_C AINL_H AINL_C VREF AGND VA P_S MCLK LRCK BICK SDTO STDI
AOUTR_H AOUTR_C AOUTL_H AOUTL_C DGND VD VT DEM1 DEM0 PDN DFS CSN_DIF CCLK_CKS1 CDTI_CKS0
R63 10
R78 10
C44 0.1uF
C57 0.1uF
MCLK LRCK BCLK SDTO STDI
ADDT0 DADT0
ADDT1 DADT1
R64 R65 R66 R67 R68
R84 R85 R88 R89 R90
47
(1,3,4)
(4)
PDN DFS
T26 T27
TP3 TP4
P6
P7
JWT A2502WV2-11P
JWT A2502WV2-7P
2TR_LC 2TR_LH AGND 2TR_RC 2TR_RH AGND STR_H STR_C AGND STL_H STL_C
TB_C TB_H AGND CR_R AGND CR_L AMUTE
(3,4) AMUTE
R219 3.3K(F)
C149 10uF 16V
C150 0.1uF
R220 4.7K(F)
R221 750
R222 750
C51 22uF 16V
C56 22uF 16V
C46 3300pF
C55 3300pF
R71 4.7K(F)
R72 200(F)
R73 4.7K(F)
200(F) R74
R75 4.7K(F)
R76 4.7K(F)
C47 470pF
C48 470pF
U5A NJM4580M
R79 4.7K(F)
R80 200(F)
R82 4.7K(F)
R83 200(F)
R86 4.7K(F)
R87 4.7K(F)
C58 470pF
C59 470pF
U5B NJM4580M
Keep bypass caps near op amps.
C60 0.1uF
C61 0.1uF



Keep bypass caps near op amps.



TO PCB, INPUT_AD

TO PCB, INPUT_AD

TO PCB,POWER_SUB

TO PCB,INPUT_AD

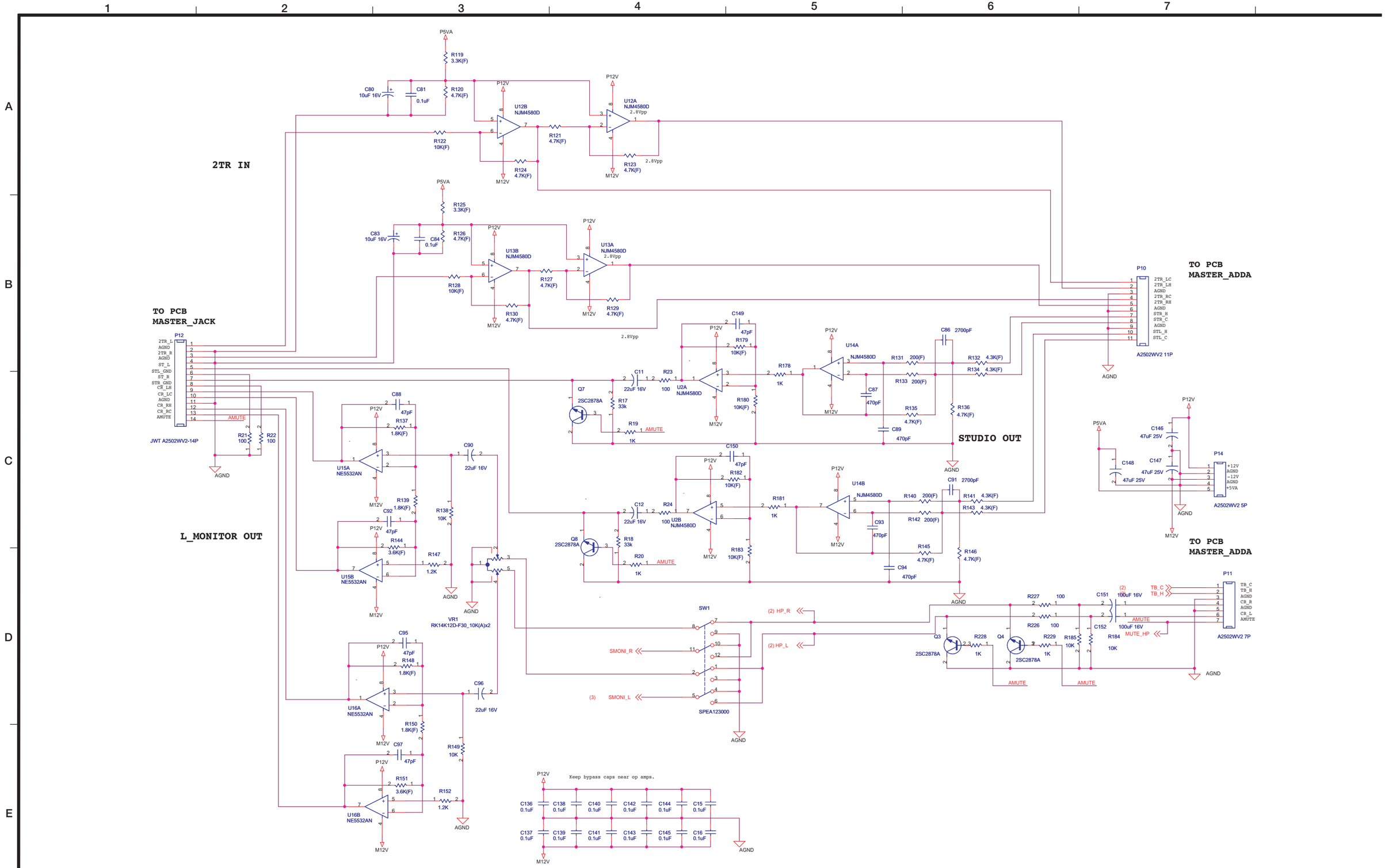
DM-4800 ONLY

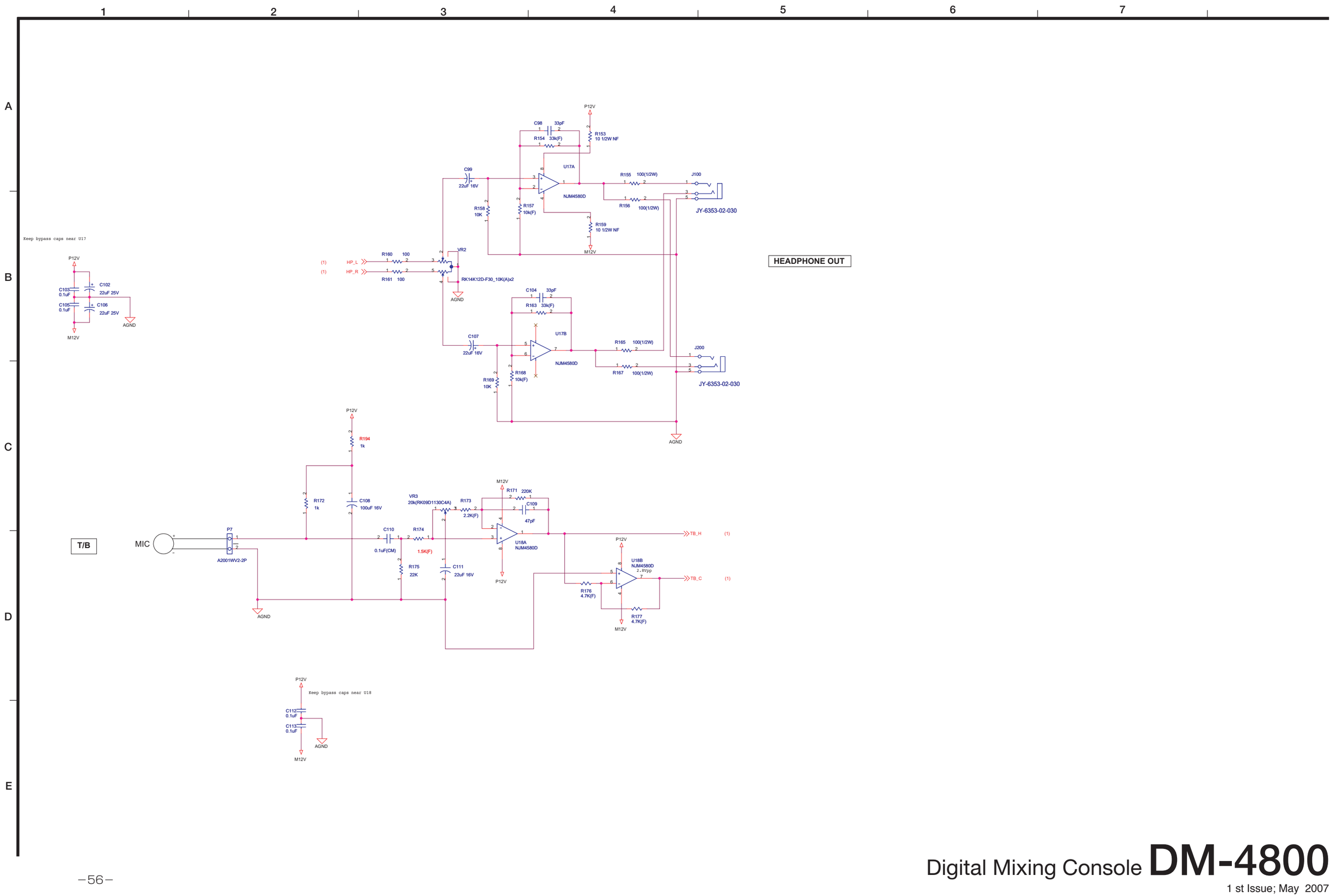
TO PCB,EXT ADDA

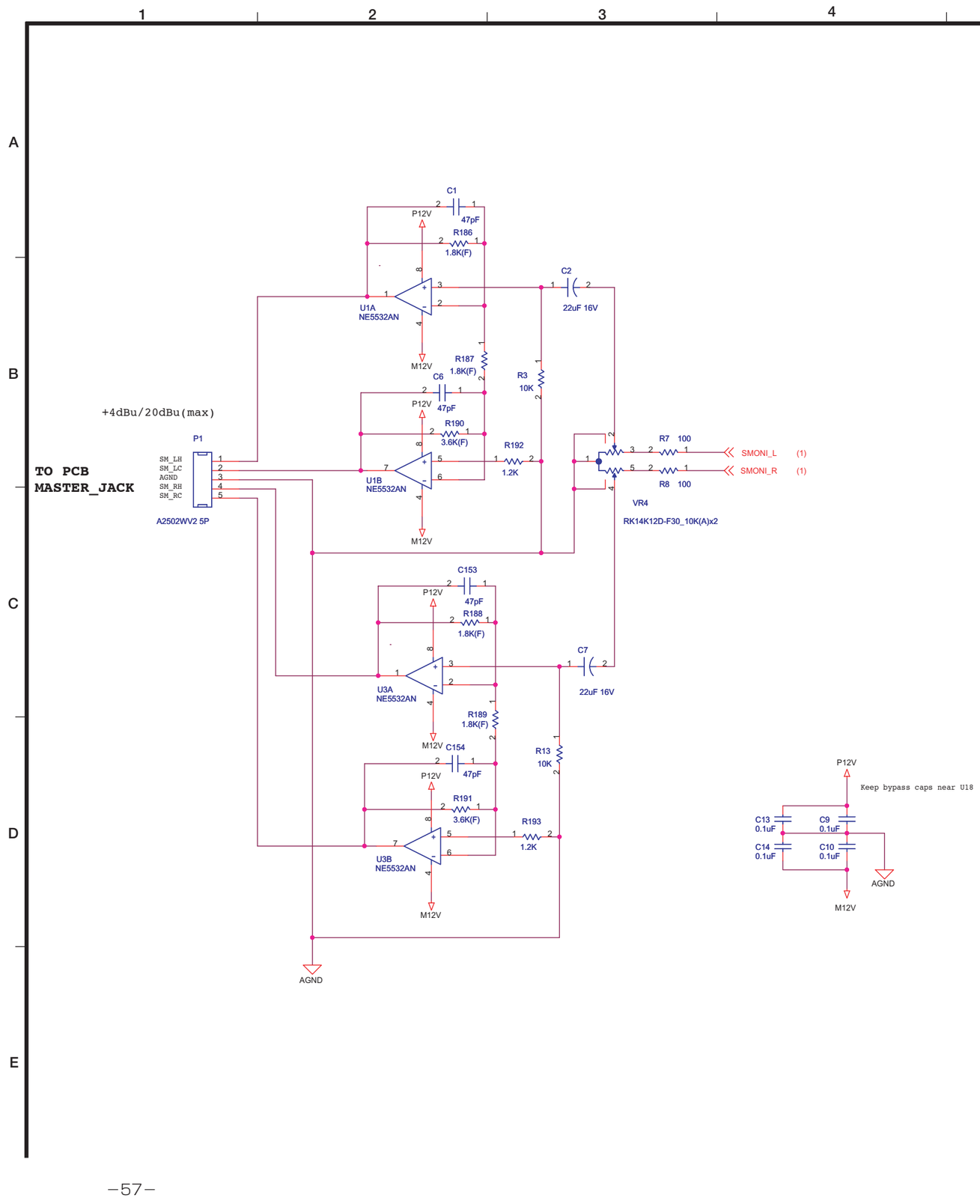
TO PCB, MAIN

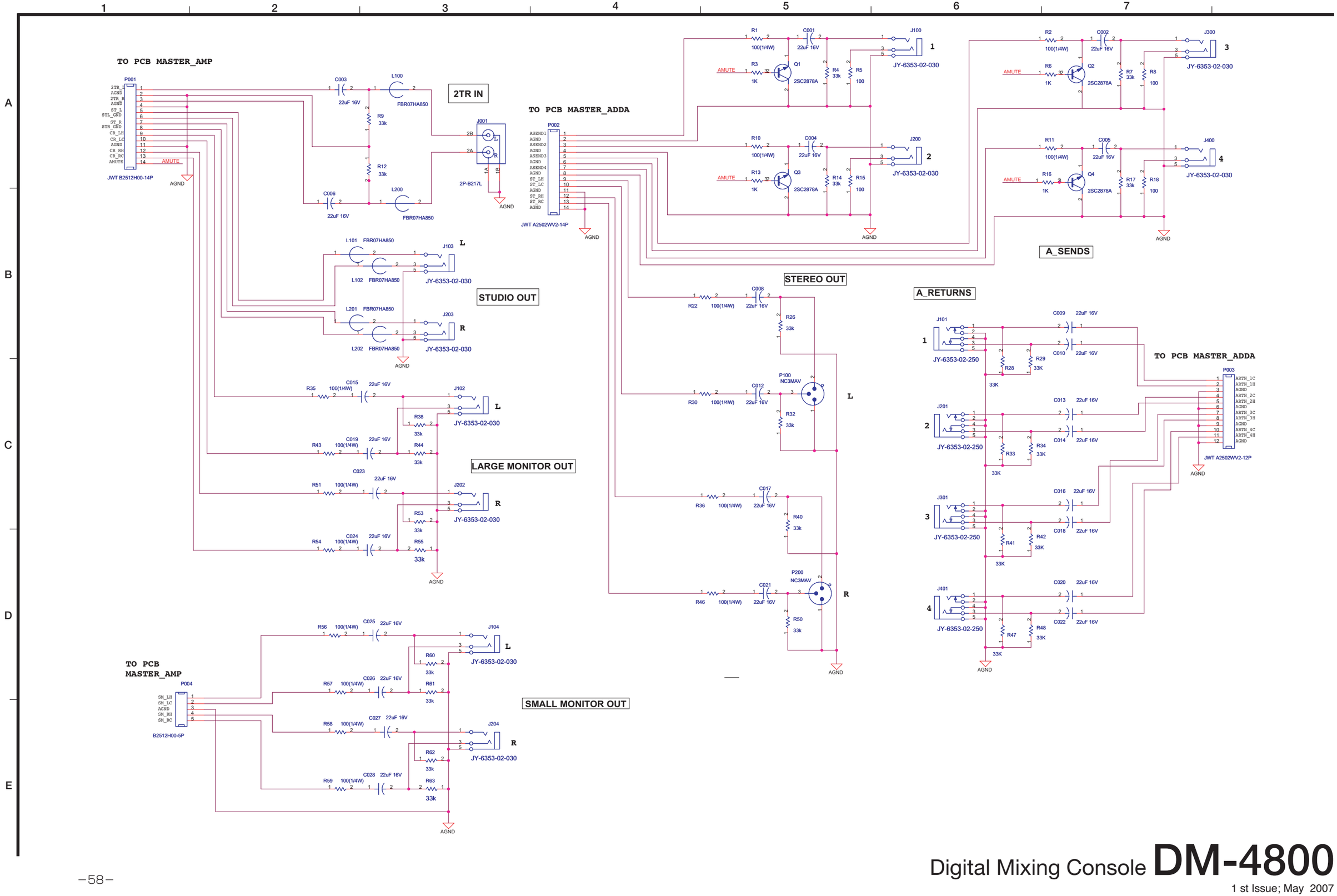
R231 DM-3200 : NO MOUNT
DM-4800 : MOUNT

Keep near XC9536XL power pin


2TR IN
TO PCB MASTER_JACK
JWT A2502WV2-14P
L_MONITOR OUT
TO PCB MASTER_ADDA
A2502WV2 11P
STUDIO OUT
A2502WV2 5P
A2502WV2 7P
SPEA123000
VR1 RK14K12D-F30_10K(A)x2
Keep bypass caps near op amps.
P5VA
P12V
M12V
AGND
2.8Vpp
AMUTE
MUTE_HP
SMONI_R
SMONI_L
(2) HP_R
(2) HP_L
TB_C
TB_H
U12A NJM4580D
U12B NJM4580D
U13A NJM4580D
U13B NJM4580D
U2A NJM4580D
U2B NJM4580D
U14A NJM4580D
U14B NJM4580D
U15A NE5532AN
U15B NE5532AN
U16A NE5532AN
U16B NE5532AN
Q7 2SC2878A
Q8 2SC2878A
Q3 2SC2878A
Q4 2SC2878A

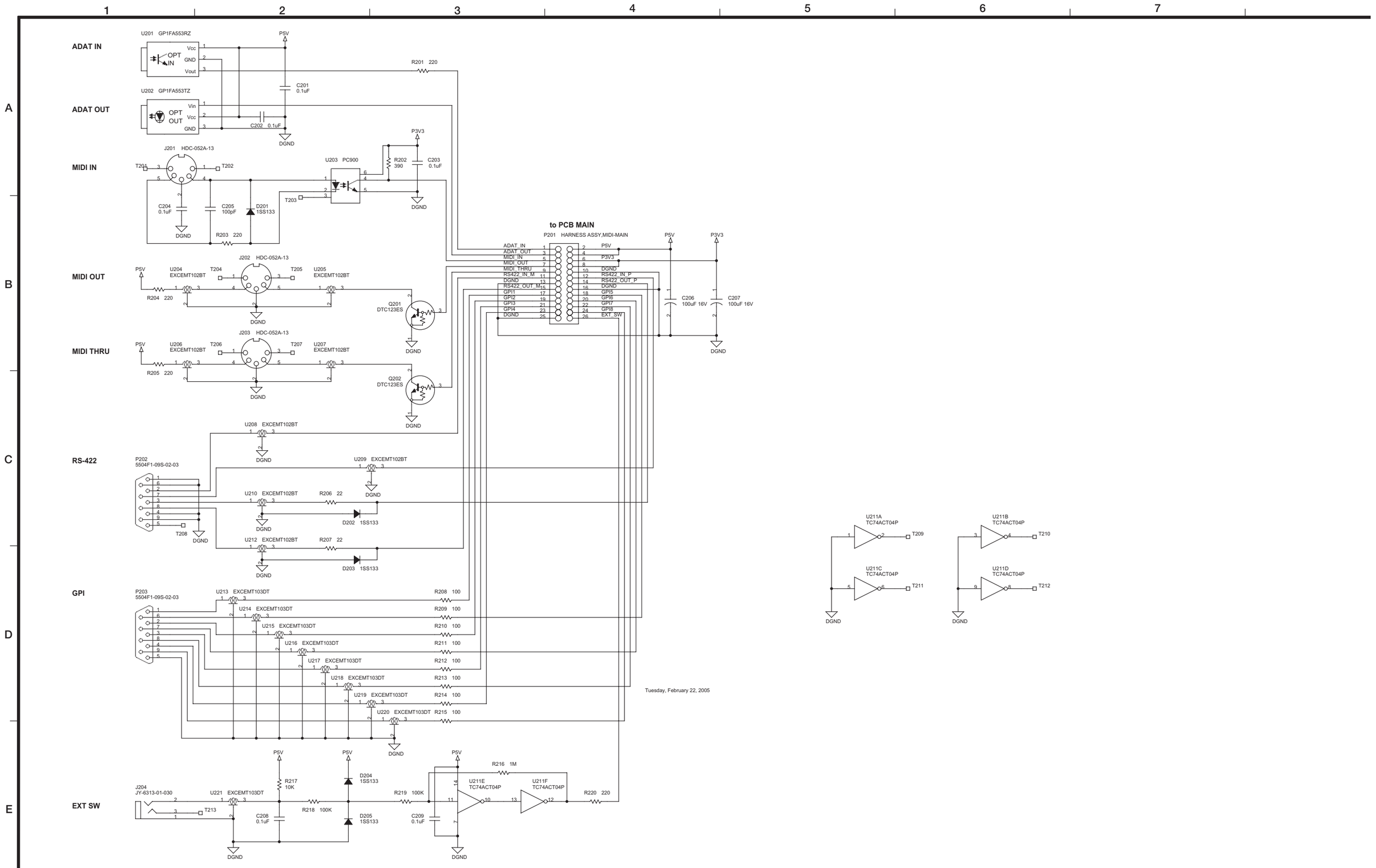

1
2
3
4
5
6
7
A
B
C
D
E
Keep bypass caps near U17
P12V
C103
0.1uF
C102
22uF 25V
C105
0.1uF
C106
22uF 25V
AGND
M12V
C98
33pF
R154
33k(F)
R153
10 1/2W NF
U17A
C99
22uF 16V
R155
100(1/2W)
J100
NJM4580D
R158
10K
R157
10k(F)
R156
100(1/2W)
JY-6353-02-030
R159
10 1/2W NF
M12V
R160
100
VR2
(1)
HP_L
(1)
HP_R
R161
100
RK14K12D-F30_10K(A)x2
AGND
HEADPHONE OUT
C104
33pF
R163
33k(F)
U17B
C107
22uF 16V
R165
100(1/2W)
J200
NJM4580D
R168
10k(F)
R167
100(1/2W)
JY-6353-02-030
R169
10K
AGND
P12V
R194
1k
R172
1k
C108
100uF 16V
VR3
20k(RK09D1130C4A)
R173
2.2K(F)
M12V
R171
220K
C109
47pF
T/B
MIC
P7
A2001WV2-2P
C110
0.1uF(CM)
R174
1.5K(F)
U18A
NJM4580D
P12V
TB_H
(1)
R175
22K
C111
22uF 16V
U18B
NJM4580D
2.8Vpp
TB_C
(1)
R176
4.7K(F)
R177
4.7K(F)
M12V
AGND
P12V
Keep bypass caps near U18
C112
0.1uF
C113
0.1uF
AGND
M12V

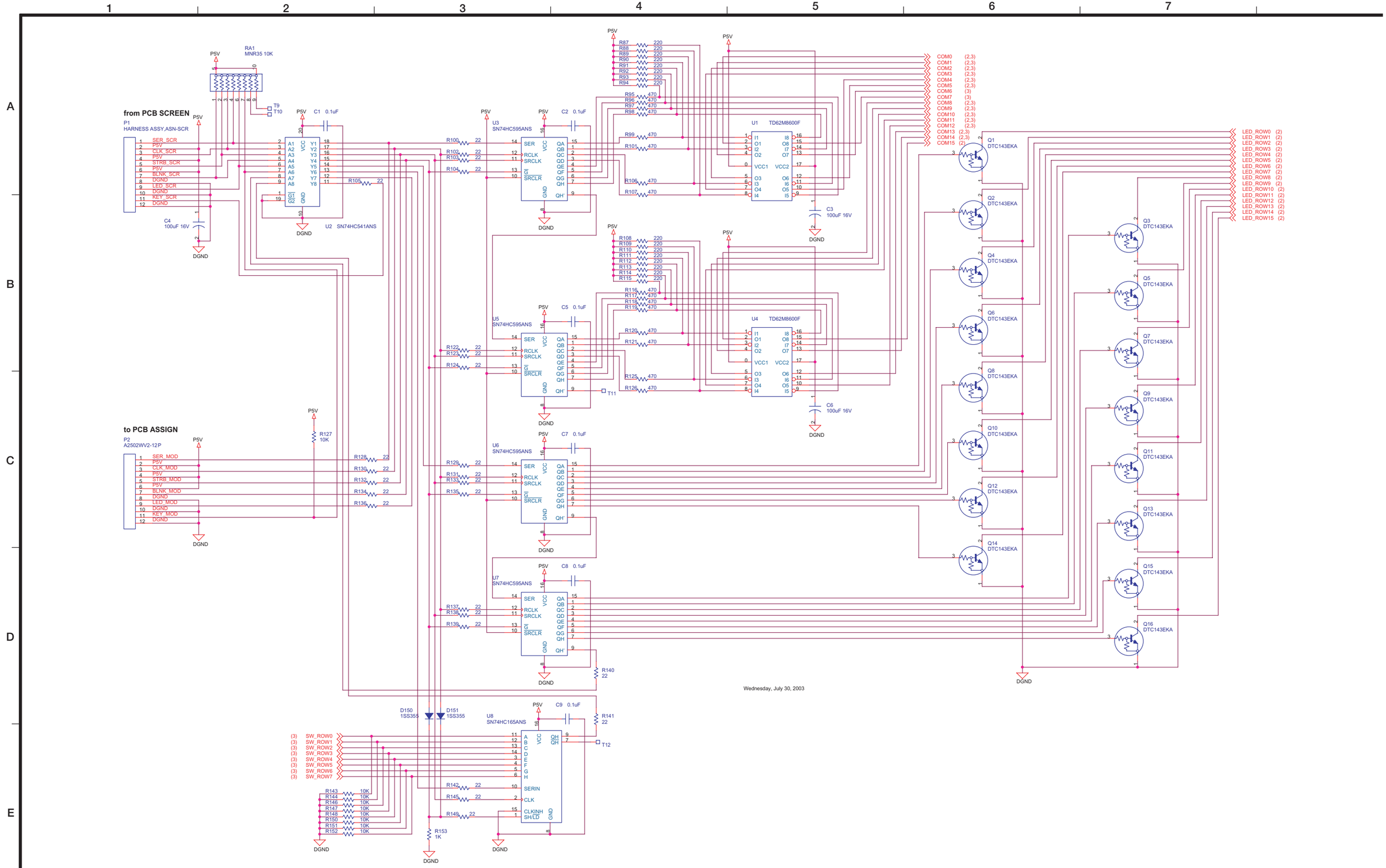

1
2
3
4
5
6
7
A
B
C
D
E
+4dBu/20dBu(max)
TO PCB
MASTER_JACK
P1
SM_LH
SM_LC
AGND
SM_RH
SM_RC
A2502WV2 5P
C1
47pF
P12V
R186
1.8K(F)
U1A
NE5532AN
M12V
C2
22uF 16V
R187
1.8K(F)
C6
47pF
R3
10K
R190
3.6K(F)
R192
1.2K
U1B
NE5532AN
R7 100
R8 100
SMONI_L (1)
SMONI_R (1)
VR4
RK14K12D-F30_10K(A)x2
C153
47pF
R188
1.8K(F)
U3A
NE5532AN
C7
22uF 16V
R189
1.8K(F)
C154
47pF
R13
10K
R191
3.6K(F)
R193
1.2K
U3B
NE5532AN
AGND
Keep bypass caps near U18
C13
0.1uF
C14
0.1uF
C9
0.1uF
C10
0.1uF

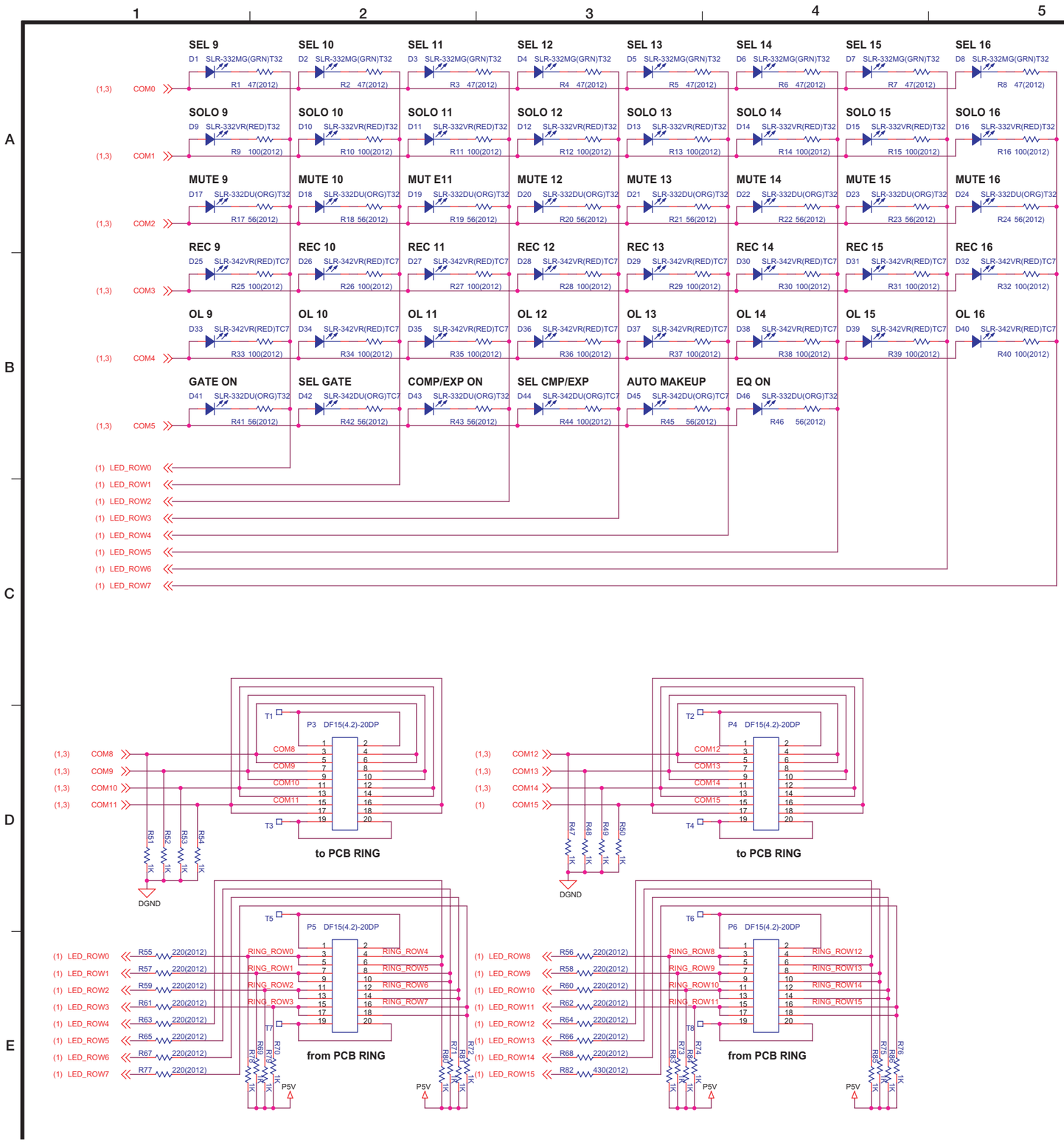


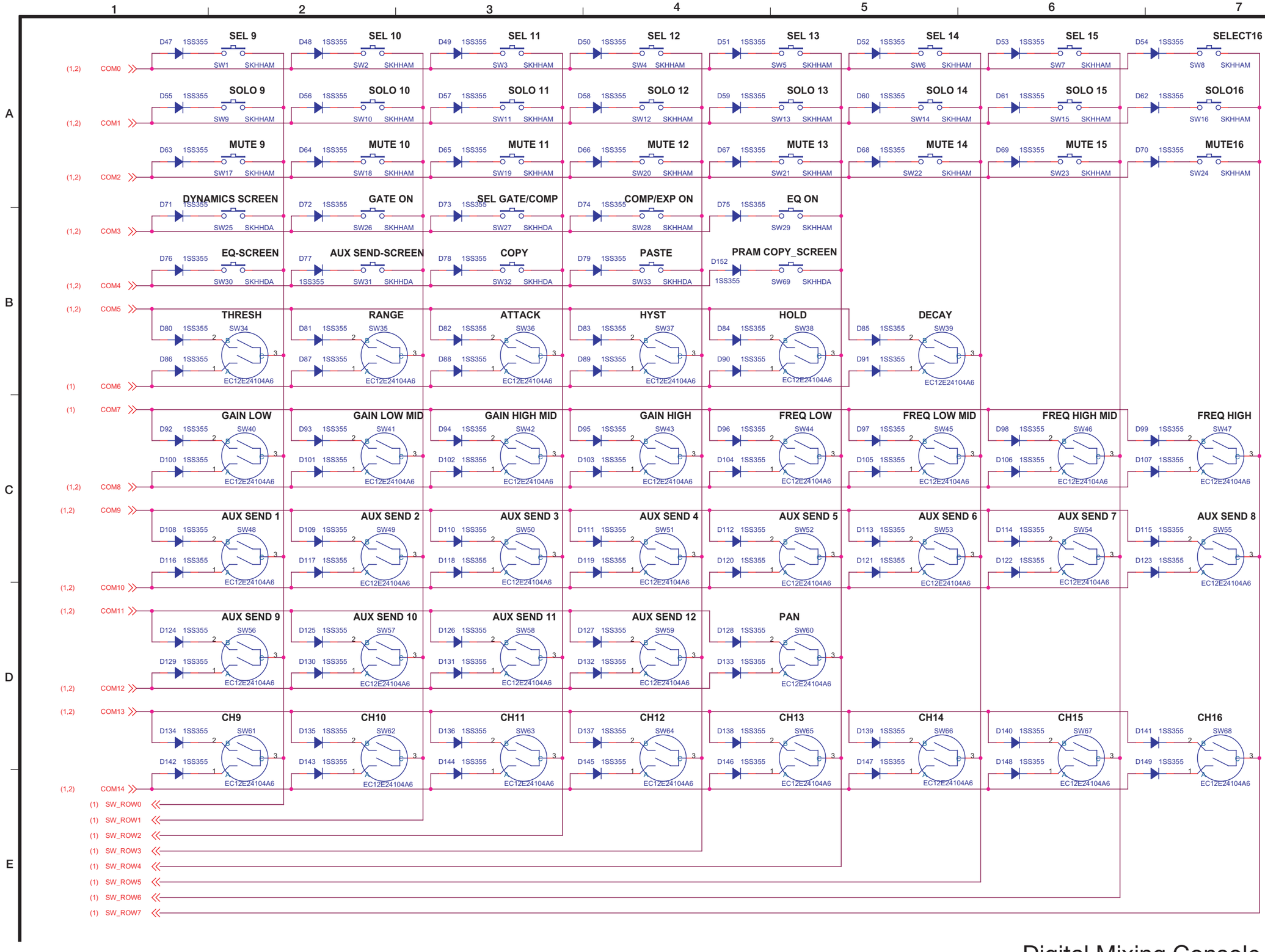
Digital Mixing Console **DM-4800**

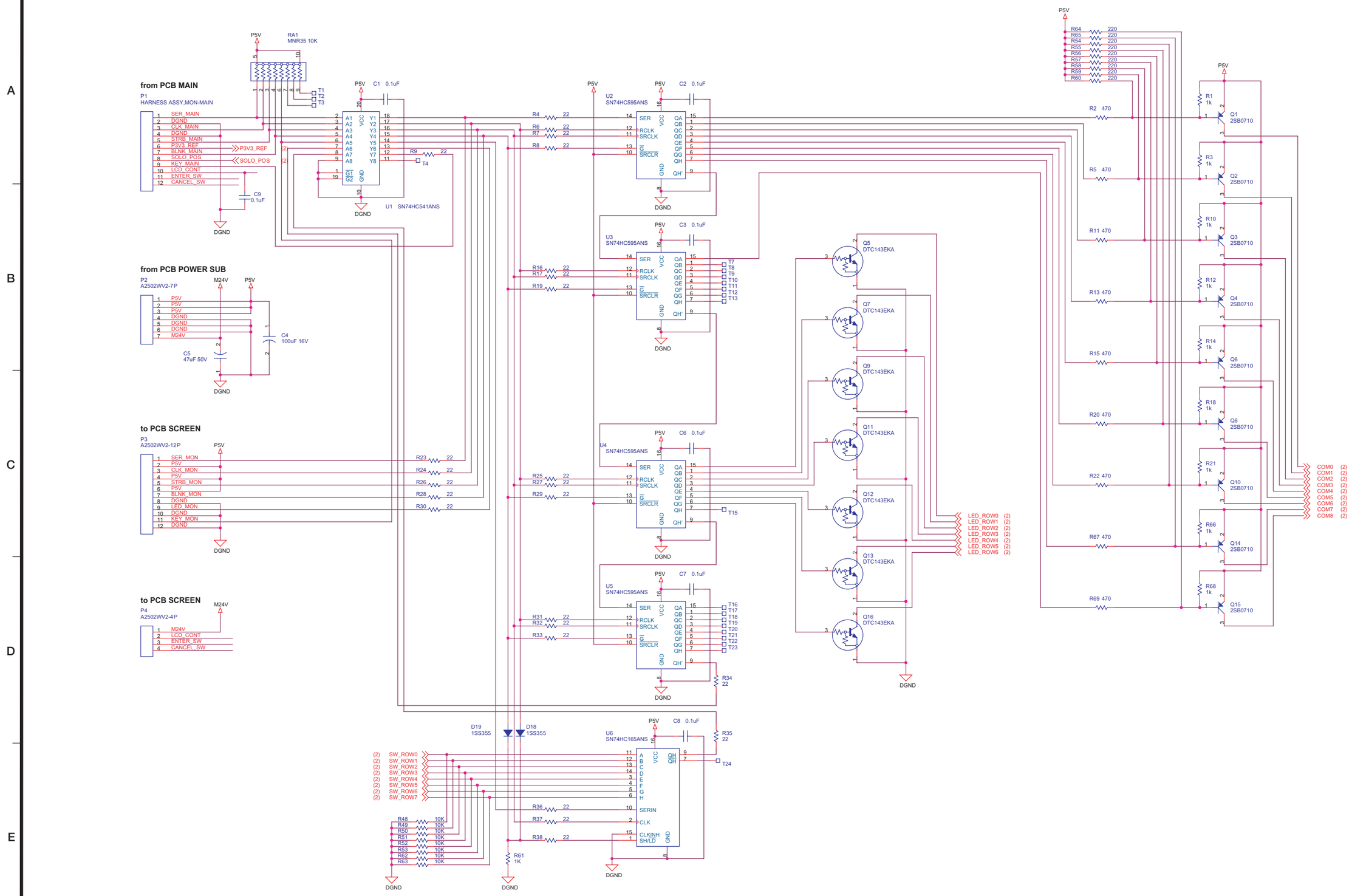
1 st Issue; May 2007

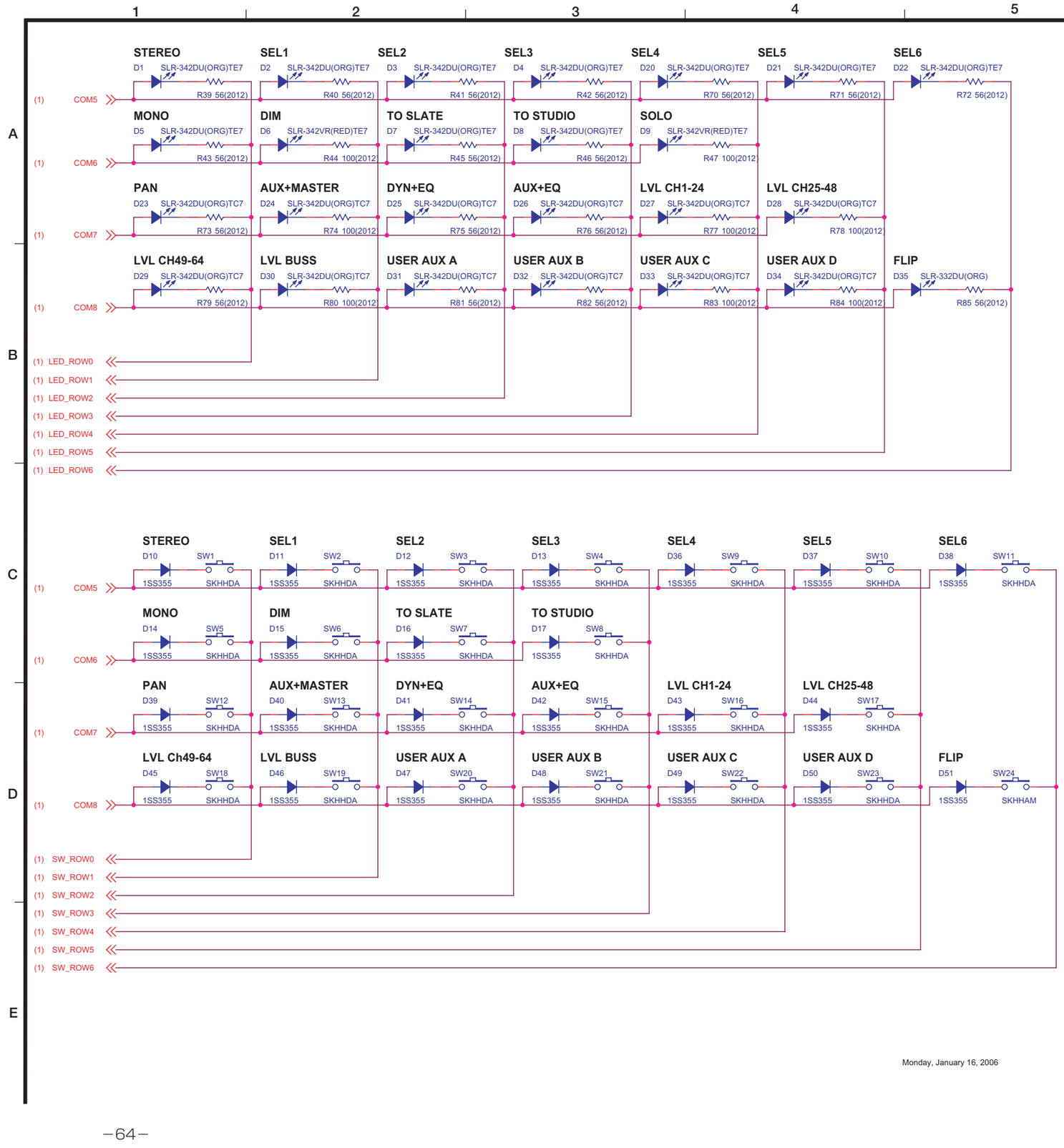

1
2
3
4
5
6
7
A
B
C
D
E
ADAT IN
ADAT OUT
MIDI IN
MIDI OUT
MIDI THRU
RS-422
GPI
EXT SW
U201 GP1FA553RZ
OPT IN
Vcc
GND
Vout
P5V
R201 220
C201 0.1uF
U202 GP1FA553TZ
OPT OUT
Vin
Vcc
GND
C202 0.1uF
DGND
P3V3
J201 HDC-052A-13
T201
T202
T203
U203 PC900
R202 390
C203 0.1uF
C204 0.1uF
C205 100pF
D201 1SS133
R203 220
J202 HDC-052A-13
T204
T205
U204 EXCEMT102BT
U205 EXCEMT102BT
R204 220
Q201 DTC123ES
J203 HDC-052A-13
T206
T207
U206 EXCEMT102BT
U207 EXCEMT102BT
R205 220
Q202 DTC123ES
U208 EXCEMT102BT
U209 EXCEMT102BT
U210 EXCEMT102BT
U212 EXCEMT102BT
R206 22
R207 22
D202 1SS133
D203 1SS133
P202
5504F1-09S-02-03
T208
P203
5504F1-09S-02-03
U213 EXCEMT103DT
U214 EXCEMT103DT
U215 EXCEMT103DT
U216 EXCEMT103DT
U217 EXCEMT103DT
U218 EXCEMT103DT
U219 EXCEMT103DT
U220 EXCEMT103DT
R208 100
R209 100
R210 100
R211 100
R212 100
R213 100
R214 100
R215 100
J204
JY-6313-01-030
T213
U221 EXCEMT103DT
R217 10K
R218 100K
R219 100K
R216 1M
R220 220
C208 0.1uF
C209 0.1uF
D204 1SS133
D205 1SS133
U211E TC74ACT04P
U211F TC74ACT04P
to PCB MAIN
P201 HARNESS ASSY,MIDI-MAIN
ADAT_IN
ADAT_OUT
MIDI_IN
MIDI_OUT
MIDI_THRU
RS422_IN_M
DGND
RS422_OUT_M
GPI1
GPI2
GPI3
GPI4
DGND
P5V
P3V3
DGND
RS422_IN_P
RS422_OUT_P
DGND
GPI5
GPI6
GPI7
GPI8
EXT_SW
C206 100uF 16V
C207 100uF 16V
U211A TC74ACT04P
U211B TC74ACT04P
U211C TC74ACT04P
U211D TC74ACT04P
T209
T210
T211
T212
Tuesday, February 22, 2005


1
2
3
4
5
6
7
A
B
C
D
E
from PCB SCREEN
P1
HARNESS ASSY,ASN-SCR
SER_SCR
CLK_SCR
STRB_SCR
BLNK_SCR
LED_SCR
KEY_SCR
P5V
DGND
RA1
MNR35 10K
T9
T10
C1 0.1uF
C4
100uF 16V
U2 SN74HC541ANS
to PCB ASSIGN
P2
A2502WV2-12P
SER_MOD
CLK_MOD
STRB_MOD
BLNK_MOD
LED_MOD
KEY_MOD
R127
10K
U3
SN74HC595ANS
C2 0.1uF
U5
SN74HC595ANS
C5 0.1uF
U6
SN74HC595ANS
C7 0.1uF
U7
SN74HC595ANS
C8 0.1uF
U8
SN74HC165ANS
C9 0.1uF
T11
T12
R140
22
R141
22
D150
1SS355
D151
1SS355
R153
1K
U1 TD62M8600F
U4 TD62M8600F
C3
100uF 16V
C6
100uF 16V
COM0 (2,3)
COM1 (2,3)
COM2 (2,3)
COM3 (2,3)
COM4 (2,3)
COM5 (2,3)
COM6 (3)
COM7 (3)
COM8 (2,3)
COM9 (2,3)
COM10 (2,3)
COM11 (2,3)
COM12 (2,3)
COM13 (2,3)
COM14 (2,3)
COM15 (2)
LED_ROW0 (2)
LED_ROW1 (2)
LED_ROW2 (2)
LED_ROW3 (2)
LED_ROW4 (2)
LED_ROW5 (2)
LED_ROW6 (2)
LED_ROW7 (2)
LED_ROW8 (2)
LED_ROW9 (2)
LED_ROW10 (2)
LED_ROW11 (2)
LED_ROW12 (2)
LED_ROW13 (2)
LED_ROW14 (2)
LED_ROW15 (2)
Q1 DTC143EKA
Q2 DTC143EKA
Q3 DTC143EKA
Q4 DTC143EKA
Q5 DTC143EKA
Q6 DTC143EKA
Q7 DTC143EKA
Q8 DTC143EKA
Q9 DTC143EKA
Q10 DTC143EKA
Q11 DTC143EKA
Q12 DTC143EKA
Q13 DTC143EKA
Q14 DTC143EKA
Q15 DTC143EKA
Q16 DTC143EKA
SW_ROW0
SW_ROW1
SW_ROW2
SW_ROW3
SW_ROW4
SW_ROW5
SW_ROW6
SW_ROW7
Wednesday, July 30, 2003


SEL 9 D1 SLR-332MG(GRN)T32 R1 47(2012)
SEL 10 D2 SLR-332MG(GRN)T32 R2 47(2012)
SEL 11 D3 SLR-332MG(GRN)T32 R3 47(2012)
SEL 12 D4 SLR-332MG(GRN)T32 R4 47(2012)
SEL 13 D5 SLR-332MG(GRN)T32 R5 47(2012)
SEL 14 D6 SLR-332MG(GRN)T32 R6 47(2012)
SEL 15 D7 SLR-332MG(GRN)T32 R7 47(2012)
SEL 16 D8 SLR-332MG(GRN)T32 R8 47(2012)
(1,3) COM0
SOLO 9 D9 SLR-332VR(RED)T32 R9 100(2012)
SOLO 10 D10 SLR-332VR(RED)T32 R10 100(2012)
SOLO 11 D11 SLR-332VR(RED)T32 R11 100(2012)
SOLO 12 D12 SLR-332VR(RED)T32 R12 100(2012)
SOLO 13 D13 SLR-332VR(RED)T32 R13 100(2012)
SOLO 14 D14 SLR-332VR(RED)T32 R14 100(2012)
SOLO 15 D15 SLR-332VR(RED)T32 R15 100(2012)
SOLO 16 D16 SLR-332VR(RED)T32 R16 100(2012)
(1,3) COM1
MUTE 9 D17 SLR-332DU(ORG)T32 R17 56(2012)
MUTE 10 D18 SLR-332DU(ORG)T32 R18 56(2012)
MUT E11 D19 SLR-332DU(ORG)T32 R19 56(2012)
MUTE 12 D20 SLR-332DU(ORG)T32 R20 56(2012)
MUTE 13 D21 SLR-332DU(ORG)T32 R21 56(2012)
MUTE 14 D22 SLR-332DU(ORG)T32 R22 56(2012)
MUTE 15 D23 SLR-332DU(ORG)T32 R23 56(2012)
MUTE 16 D24 SLR-332DU(ORG)T32 R24 56(2012)
(1,3) COM2
REC 9 D25 SLR-342VR(RED)TC7 R25 100(2012)
REC 10 D26 SLR-342VR(RED)TC7 R26 100(2012)
REC 11 D27 SLR-342VR(RED)TC7 R27 100(2012)
REC 12 D28 SLR-342VR(RED)TC7 R28 100(2012)
REC 13 D29 SLR-342VR(RED)TC7 R29 100(2012)
REC 14 D30 SLR-342VR(RED)TC7 R30 100(2012)
REC 15 D31 SLR-342VR(RED)TC7 R31 100(2012)
REC 16 D32 SLR-342VR(RED)TC7 R32 100(2012)
(1,3) COM3
OL 9 D33 SLR-342VR(RED)TC7 R33 100(2012)
OL 10 D34 SLR-342VR(RED)TC7 R34 100(2012)
OL 11 D35 SLR-342VR(RED)TC7 R35 100(2012)
OL 12 D36 SLR-342VR(RED)TC7 R36 100(2012)
OL 13 D37 SLR-342VR(RED)TC7 R37 100(2012)
OL 14 D38 SLR-342VR(RED)TC7 R38 100(2012)
OL 15 D39 SLR-342VR(RED)TC7 R39 100(2012)
OL 16 D40 SLR-342VR(RED)TC7 R40 100(2012)
(1,3) COM4
GATE ON D41 SLR-332DU(ORG)T32 R41 56(2012)
SEL GATE D42 SLR-342DU(ORG)TC7 R42 56(2012)
COMP/EXP ON D43 SLR-332DU(ORG)T32 R43 56(2012)
SEL CMP/EXP D44 SLR-342DU(ORG)TC7 R44 100(2012)
AUTO MAKEUP D45 SLR-342DU(ORG)TC7 R45 56(2012)
EQ ON D46 SLR-332DU(ORG)T32 R46 56(2012)
(1,3) COM5
(1) LED_ROW0
(1) LED_ROW1
(1) LED_ROW2
(1) LED_ROW3
(1) LED_ROW4
(1) LED_ROW5
(1) LED_ROW6
(1) LED_ROW7
T1 P3 DF15(4.2)-20DP
(1,3) COM8
(1,3) COM9
(1,3) COM10
(1,3) COM11
T3
to PCB RING
R51 1K
R52 1K
R53 1K
R54 1K
DGND
T2 P4 DF15(4.2)-20DP
(1,3) COM12
(1,3) COM13
(1,3) COM14
(1) COM15
T4
to PCB RING
R47 1K
R48 1K
R49 1K
R50 1K
DGND
T5 P5 DF15(4.2)-20DP
(1) LED_ROW0 R55 220(2012) RING_ROW0
(1) LED_ROW1 R57 220(2012) RING_ROW1
(1) LED_ROW2 R59 220(2012) RING_ROW2
(1) LED_ROW3 R61 220(2012) RING_ROW3
(1) LED_ROW4 R63 220(2012)
(1) LED_ROW5 R65 220(2012)
(1) LED_ROW6 R67 220(2012)
(1) LED_ROW7 R77 220(2012)
RING_ROW4
RING_ROW5
RING_ROW6
RING_ROW7
T7
from PCB RING
R69 1K
R70 1K
R71 1K
R72 1K
R78 1K
P5V
R79 1K
P5V
T6 P6 DF15(4.2)-20DP
(1) LED_ROW8 R56 220(2012) RING_ROW8
(1) LED_ROW9 R58 220(2012) RING_ROW9
(1) LED_ROW10 R60 220(2012) RING_ROW10
(1) LED_ROW11 R62 220(2012) RING_ROW11
(1) LED_ROW12 R64 220(2012)
(1) LED_ROW13 R66 220(2012)
(1) LED_ROW14 R68 220(2012)
(1) LED_ROW15 R82 430(2012)
RING_ROW12
RING_ROW13
RING_ROW14
RING_ROW15
T8
from PCB RING
R73 1K
R74 1K
R75 1K
R76 1K
R80 1K
P5V
R81 1K
P5V


1
2
3
4
5
6
7
A
B
C
D
E
SEL 9
SEL 10
SEL 11
SEL 12
SEL 13
SEL 14
SEL 15
SELECT16
SOLO 9
SOLO 10
SOLO 11
SOLO 12
SOLO 13
SOLO 14
SOLO 15
SOLO16
MUTE 9
MUTE 10
MUTE 11
MUTE 12
MUTE 13
MUTE 14
MUTE 15
MUTE16
DYNAMICS SCREEN
GATE ON
SEL GATE/COMP
COMP/EXP ON
EQ ON
EQ-SCREEN
AUX SEND-SCREEN
COPY
PASTE
PRAM COPY_SCREEN
THRESH
RANGE
ATTACK
HYST
HOLD
DECAY
GAIN LOW
GAIN LOW MID
GAIN HIGH MID
GAIN HIGH
FREQ LOW
FREQ LOW MID
FREQ HIGH MID
FREQ HIGH
AUX SEND 1
AUX SEND 2
AUX SEND 3
AUX SEND 4
AUX SEND 5
AUX SEND 6
AUX SEND 7
AUX SEND 8
AUX SEND 9
AUX SEND 10
AUX SEND 11
AUX SEND 12
PAN
CH9
CH10
CH11
CH12
CH13
CH14
CH15
CH16
1SS355
EC12E24104A6
SKHHAM
SKHHDA
COM0
COM1
COM2
COM3
COM4
COM5
COM6
COM7
COM8
COM9
COM10
COM11
COM12
COM13
COM14
SW_ROW0
SW_ROW1
SW_ROW2
SW_ROW3
SW_ROW4
SW_ROW5
SW_ROW6
SW_ROW7


from PCB MAIN
P1
HARNESS ASSY,MON-MAIN
SER_MAIN
DGND
CLK_MAIN
DGND
STRB_MAIN
P3V3_REF
BLNK_MAIN
SOLO_POS
KEY_MAIN
LCD_CONT
ENTER_SW
CANCEL_SW
P3V3_REF
SOLO_POS
C9 0.1uF
DGND
RA1
MNR35 10K
T1
T2
T3
U1 SN74HC541ANS
C1 0.1uF
R9 22
T4
U2
SN74HC595ANS
C2 0.1uF
R4 22
R6 22
R7 22
R8 22
U3
SN74HC595ANS
C3 0.1uF
R16 22
R17 22
R19 22
T7
T8
T9
T10
T11
T12
T13
U4
SN74HC595ANS
C6 0.1uF
R25 22
R27 22
R29 22
T15
U5
SN74HC595ANS
C7 0.1uF
R31 22
R32 22
R33 22
T16
T17
T18
T19
T20
T21
T22
T23
R34 22
from PCB POWER SUB
P2
A2502WV2-7P
P5V
M24V
C4 100uF 16V
C5 47uF 50V
to PCB SCREEN
P3
A2502WV2-12P
SER_MON
CLK_MON
STRB_MON
BLNK_MON
LED_MON
KEY_MON
R23 22
R24 22
R26 22
R28 22
R30 22
to PCB SCREEN
P4
A2502WV2-4P
M24V
LCD_CONT
ENTER_SW
CANCEL_SW
D19
1SS355
D18
1SS355
U6
SN74HC165ANS
C8 0.1uF
R35 22
T24
SW_ROW0
SW_ROW1
SW_ROW2
SW_ROW3
SW_ROW4
SW_ROW5
SW_ROW6
SW_ROW7
R48 10K
R49 10K
R50 10K
R51 10K
R52 10K
R53 10K
R62 10K
R63 10K
R36 22
R37 22
R38 22
R61 1K
Q5
DTC143EKA
Q7
DTC143EKA
Q9
DTC143EKA
Q11
DTC143EKA
Q12
DTC143EKA
Q13
DTC143EKA
Q16
DTC143EKA
LED_ROW0 (2)
LED_ROW1 (2)
LED_ROW2 (2)
LED_ROW3 (2)
LED_ROW4 (2)
LED_ROW5 (2)
LED_ROW6 (2)
R64 220
R65 220
R54 220
R55 220
R56 220
R57 220
R58 220
R59 220
R60 220
R2 470
R5 470
R11 470
R13 470
R15 470
R20 470
R22 470
R67 470
R69 470
R1 1k
R3 1k
R10 1k
R12 1k
R14 1k
R18 1k
R21 1k
R66 1k
R68 1k
Q1 2SB0710
Q2 2SB0710
Q3 2SB0710
Q4 2SB0710
Q6 2SB0710
Q8 2SB0710
Q10 2SB0710
Q14 2SB0710
Q15 2SB0710
COM0 (2)
COM1 (2)
COM2 (2)
COM3 (2)
COM4 (2)
COM5 (2)
COM6 (2)
COM7 (2)
COM8 (2)



to PCB LAYER
P5
A2502WV2-5P

(1) COM0 — COM0 1
(1) COM1 — COM1 2
(1) COM2 — COM2 3
(1) COM3 — COM3 4
(1) COM4 — COM4 5

from PCB LAYER
P6 A2502WV2-14P

(1) LED_ROW0 — LED_ROW0 1
(1) LED_ROW1 — LED_ROW1 2
(1) LED_ROW2 — LED_ROW2 3
(1) LED_ROW3 — LED_ROW3 4
(1) LED_ROW4 — LED_ROW4 5
(1) LED_ROW5 — LED_ROW5 6
(1) SW_ROW0 — SW_ROW0 7
(1) SW_ROW1 — SW_ROW1 8
(1) SW_ROW2 — SW_ROW2 9
(1) SW_ROW3 — SW_ROW3 10
(1) SW_ROW4 — SW_ROW4 11
(1) SW_ROW5 — SW_ROW5 12
(1) SW_ROW6 — SW_ROW6 13
(1) SW_ROW7 — SW_ROW7 14

to PCB TRANSPORT
P7
A2502WV2-6P

(1) COM4 — COM4 1
(1) SW_ROW0 — SW_ROW0 2
(1) SW_ROW1 — SW_ROW1 3
(1) SW_ROW2 — SW_ROW2 4
(1) SW_ROW3 — SW_ROW3 5
(1) SW_ROW4 — SW_ROW4 6

to PCB SOLO
P8
A2502WV2-3P

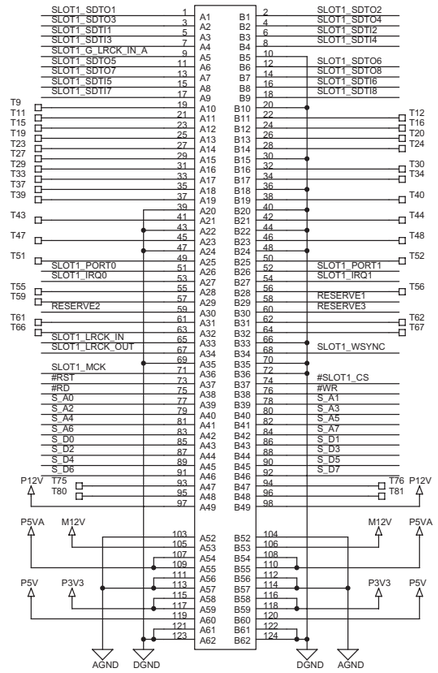
(1) SOLO_POS — SOLO_POS 1
(1) P3V3_REF — P3V3_REF 2
DGND 3
DGND

1 2 3 4 5 6 7

A B C D E

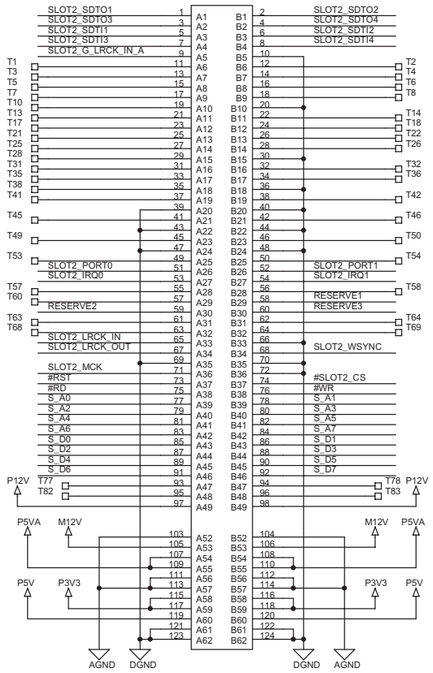
to SLOT1

J1 2525-120-PCI

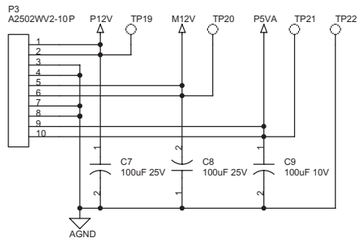


to SLOT2

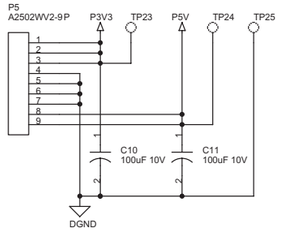
J2 2525-120-PCI



to PCB POWER SUB

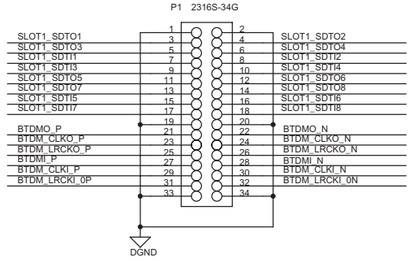


to PCB POWER SUB



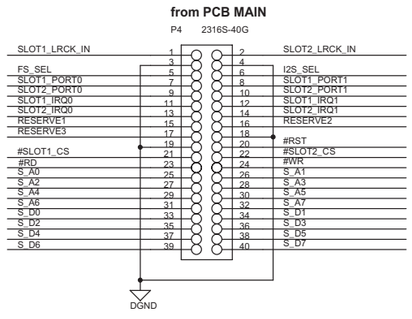
from PCB MAIN

P1 2316S-34G

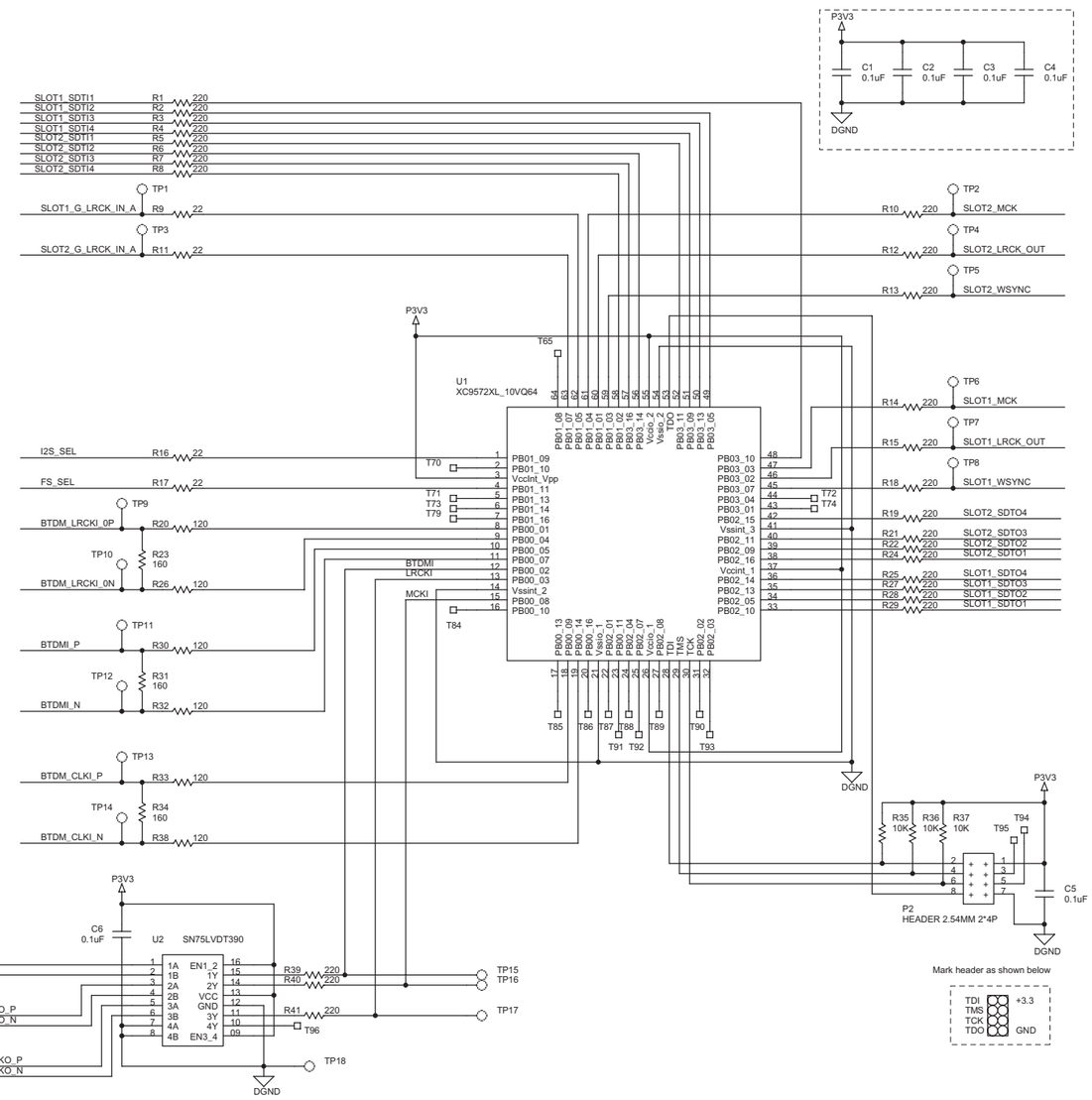


from PCB MAIN

P4 2316S-40G



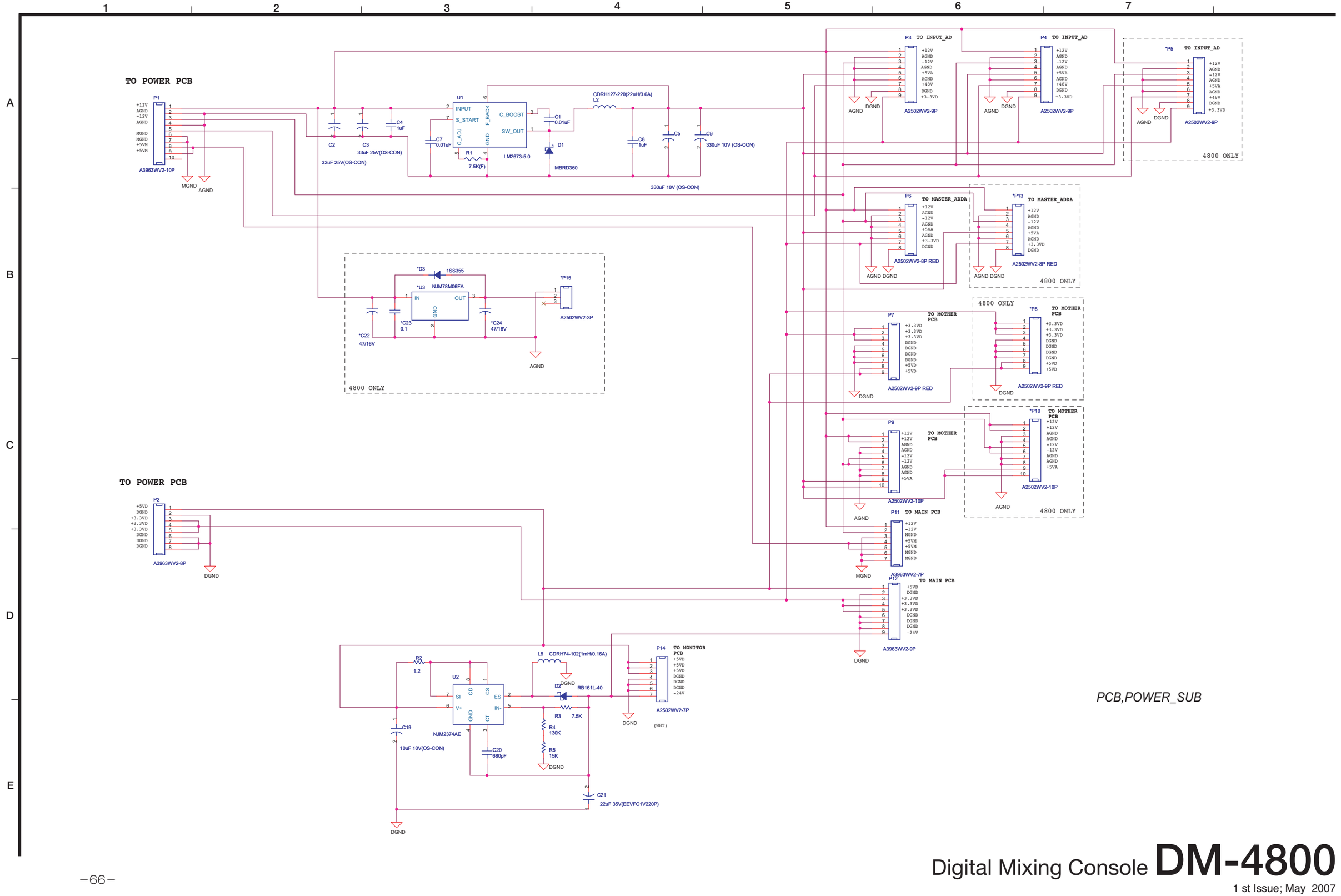
Keep near XC9536XL power pin



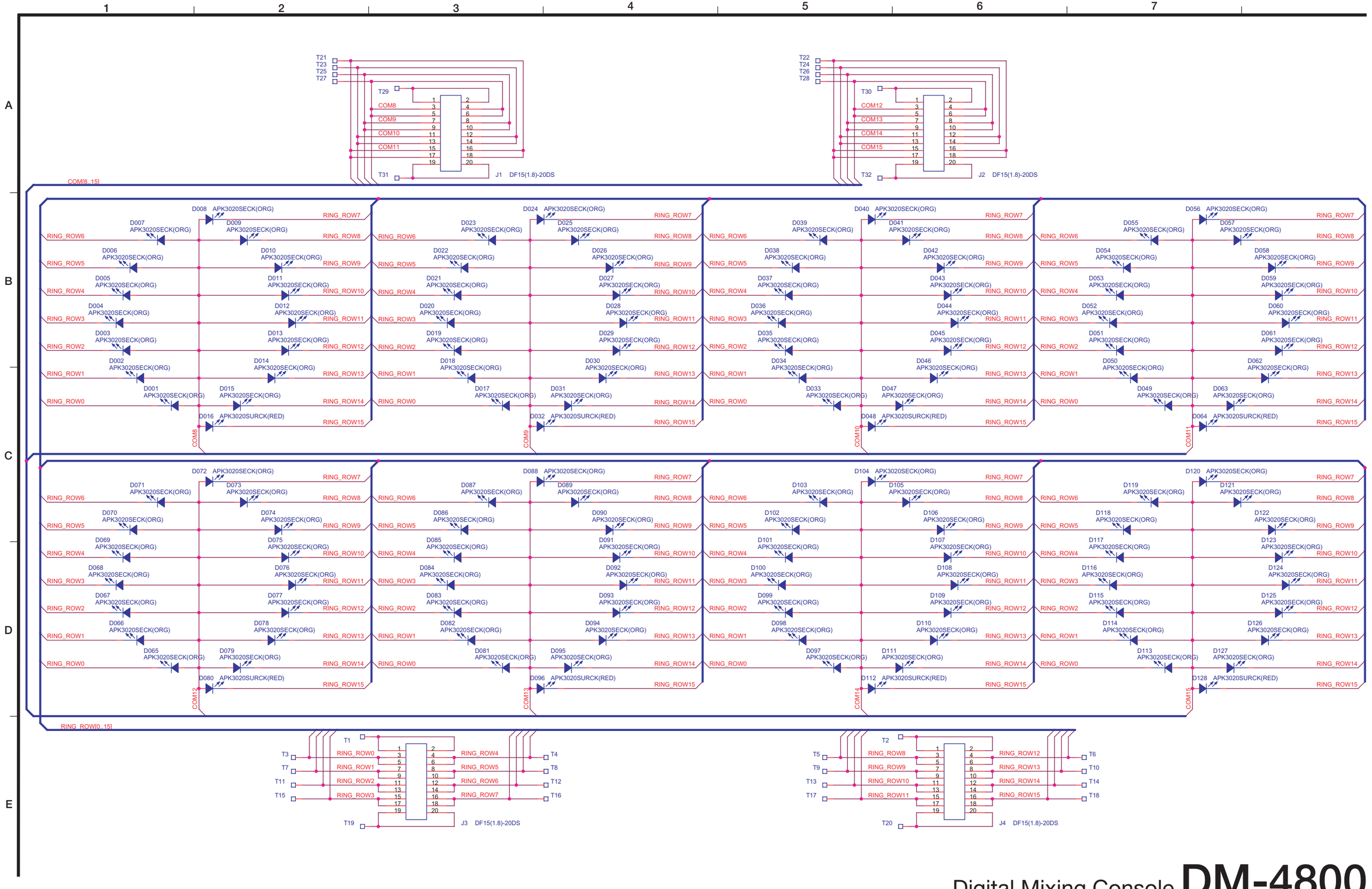
Friday, March 11, 2005

Digital Mixing Console **DM-4800**

1 st Issue; May 2007



PCB,POWER_SUB


1
2
3
4
5
6
7
A
B
C
D
E
T21
T23
T25
T27
T29
COM8
COM9
COM10
COM11
T31
J1 DF15(1.8)-20DS
T22
T24
T26
T28
T30
COM12
COM13
COM14
COM15
T32
J2 DF15(1.8)-20DS
COM[8..15]
RING_ROW[0..15]
RING_ROW0
RING_ROW1
RING_ROW2
RING_ROW3
RING_ROW4
RING_ROW5
RING_ROW6
RING_ROW7
RING_ROW8
RING_ROW9
RING_ROW10
RING_ROW11
RING_ROW12
RING_ROW13
RING_ROW14
RING_ROW15
D001 APK3020SECK(ORG)
D002 APK3020SECK(ORG)
D003 APK3020SECK(ORG)
D004 APK3020SECK(ORG)
D005 APK3020SECK(ORG)
D006 APK3020SECK(ORG)
D007 APK3020SECK(ORG)
D008 APK3020SECK(ORG)
D009 APK3020SECK(ORG)
D010 APK3020SECK(ORG)
D011 APK3020SECK(ORG)
D012 APK3020SECK(ORG)
D013 APK3020SECK(ORG)
D014 APK3020SECK(ORG)
D015 APK3020SECK(ORG)
D016 APK3020SURCK(RED)
D017 APK3020SECK(ORG)
D018 APK3020SECK(ORG)
D019 APK3020SECK(ORG)
D020 APK3020SECK(ORG)
D021 APK3020SECK(ORG)
D022 APK3020SECK(ORG)
D023 APK3020SECK(ORG)
D024 APK3020SECK(ORG)
D025 APK3020SECK(ORG)
D026 APK3020SECK(ORG)
D027 APK3020SECK(ORG)
D028 APK3020SECK(ORG)
D029 APK3020SECK(ORG)
D030 APK3020SECK(ORG)
D031 APK3020SECK(ORG)
D032 APK3020SURCK(RED)
D033 APK3020SECK(ORG)
D034 APK3020SECK(ORG)
D035 APK3020SECK(ORG)
D036 APK3020SECK(ORG)
D037 APK3020SECK(ORG)
D038 APK3020SECK(ORG)
D039 APK3020SECK(ORG)
D040 APK3020SECK(ORG)
D041 APK3020SECK(ORG)
D042 APK3020SECK(ORG)
D043 APK3020SECK(ORG)
D044 APK3020SECK(ORG)
D045 APK3020SECK(ORG)
D046 APK3020SECK(ORG)
D047 APK3020SECK(ORG)
D048 APK3020SURCK(RED)
D049 APK3020SECK(ORG)
D050 APK3020SECK(ORG)
D051 APK3020SECK(ORG)
D052 APK3020SECK(ORG)
D053 APK3020SECK(ORG)
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D061 APK3020SECK(ORG)
D062 APK3020SECK(ORG)
D063 APK3020SECK(ORG)
D064 APK3020SURCK(RED)
D065 APK3020SECK(ORG)
D066 APK3020SECK(ORG)
D067 APK3020SECK(ORG)
D068 APK3020SECK(ORG)
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D080 APK3020SURCK(RED)
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D117 APK3020SECK(ORG)
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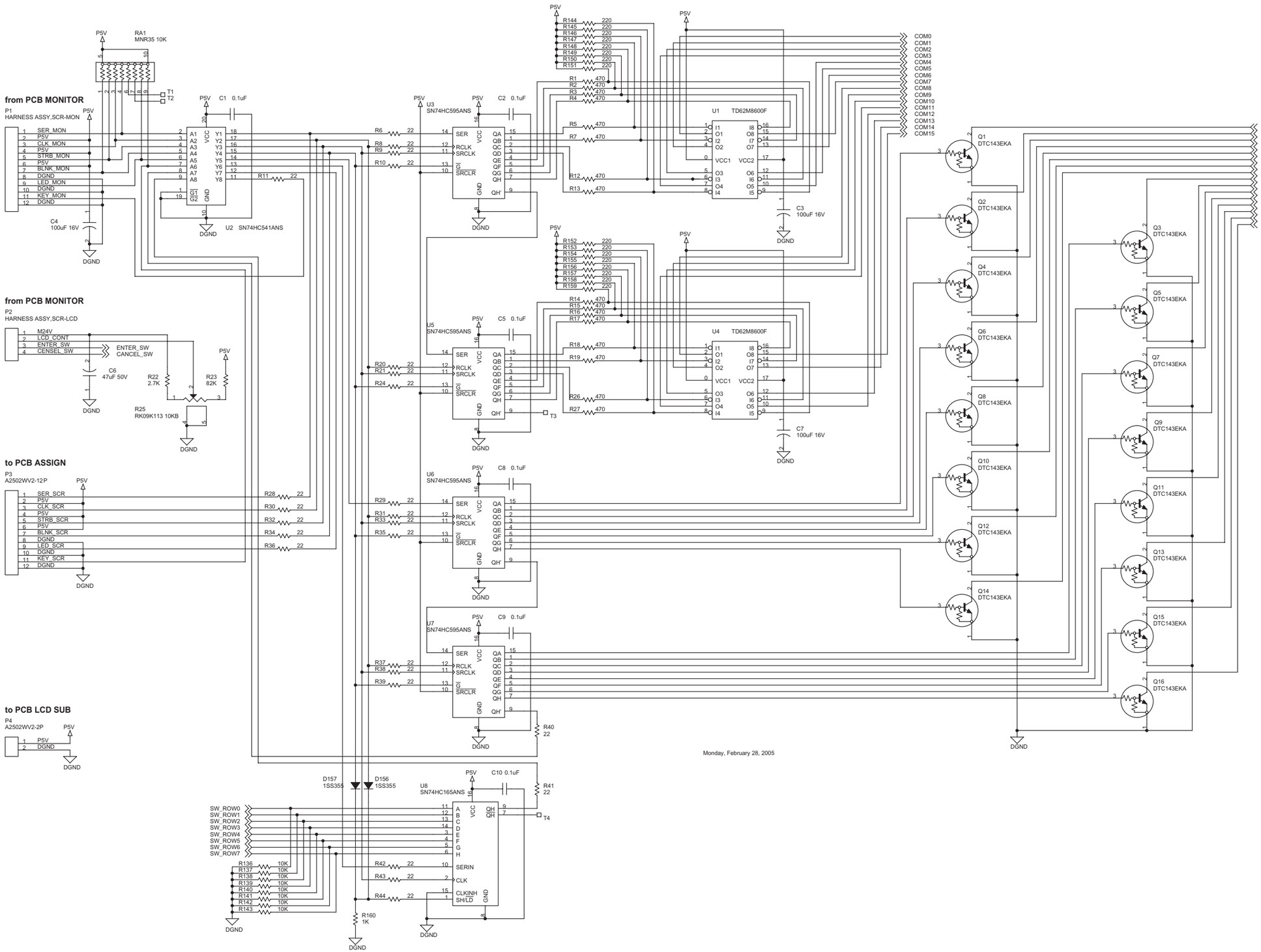
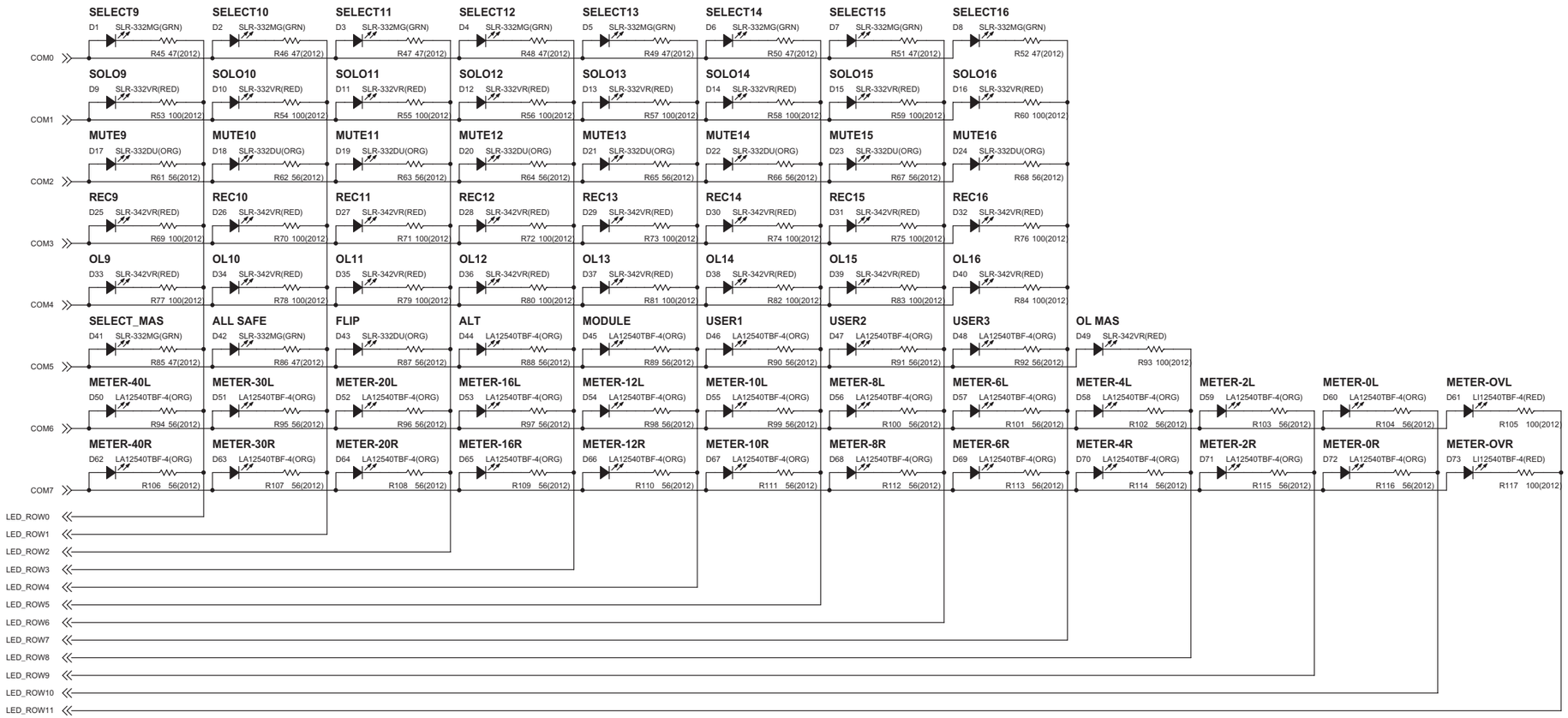
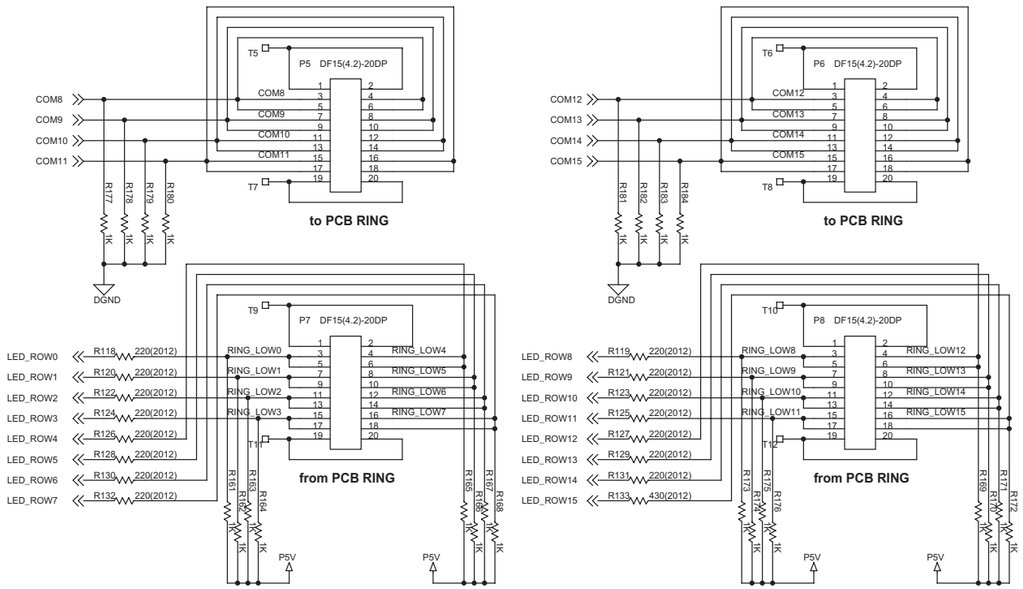
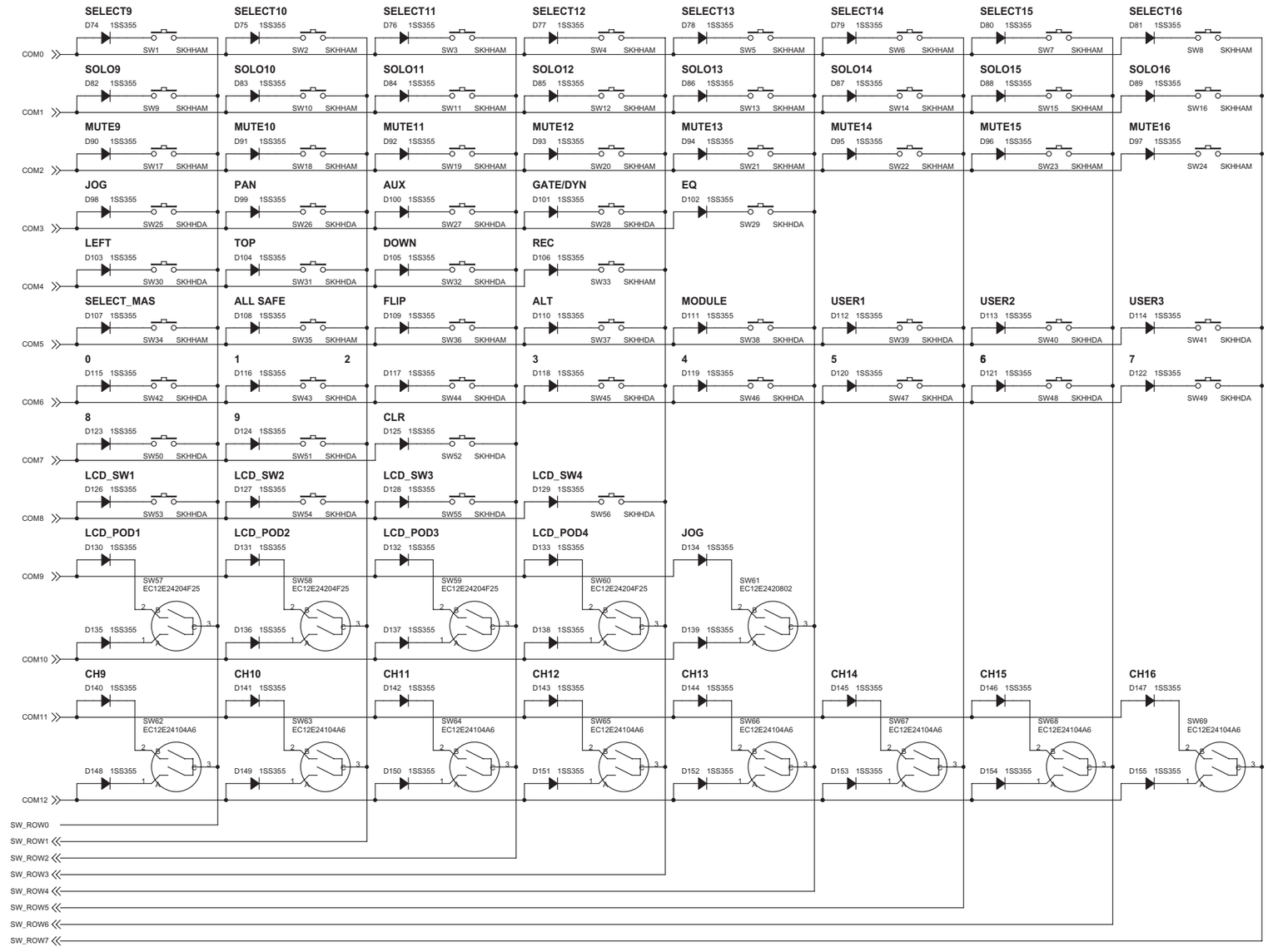
D122 APK3020SECK(ORG)
D123 APK3020SECK(ORG)
D124 APK3020SECK(ORG)
D125 APK3020SECK(ORG)
D126 APK3020SECK(ORG)
D127 APK3020SECK(ORG)
D128 APK3020SURCK(RED)
T1
T3
T7
T11
T15
T19
RING_ROW0
RING_ROW1
RING_ROW2
RING_ROW3
RING_ROW4
RING_ROW5
RING_ROW6
RING_ROW7
T4
T8
T12
T16
J3 DF15(1.8)-20DS
T2
T5
T9
T13
T17
T20
RING_ROW8
RING_ROW9
RING_ROW10
RING_ROW11
RING_ROW12
RING_ROW13
RING_ROW14
RING_ROW15
T6
T10
T14
T18
J4 DF15(1.8)-20DS


1
2
3
4
5
6
7
A
B
C
D
E
from PCB MONITOR
P1
HARNESS ASSY,SCR-MON
SER_MON
CLK_MON
STRB_MON
BLNK_MON
LED_MON
KEY_MON
DGND
P5V
RA1
MNR35 10K
T1
T2
C1 0.1uF
U2 SN74HC541ANS
C4
100uF 16V
from PCB MONITOR
P2
HARNESS ASSY,SCR-LCD
M24V
LCD_CONT
ENTER_SW
CENSEL_SW
ENTER_SW
CANCEL_SW
C6
47uF 50V
R22
2.7K
R23
82K
R25
RK09K113 10KB
to PCB ASSIGN
P3
A2502WV2-12P
SER_SCR
CLK_SCR
STRB_SCR
BLNK_SCR
LED_SCR
KEY_SCR
to PCB LCD SUB
P4
A2502WV2-2P
U3
SN74HC595ANS
C2 0.1uF
U5
SN74HC595ANS
C5 0.1uF
U6
SN74HC595ANS
C8 0.1uF
U7
SN74HC595ANS
C9 0.1uF
U1 TD62M8600F
U4 TD62M8600F
C3
100uF 16V
C7
100uF 16V
COM0
COM1
COM2
COM3
COM4
COM5
COM6
COM7
COM8
COM9
COM10
COM11
COM12
COM13
COM14
COM15
LED_ROW0
LED_ROW1
LED_ROW2
LED_ROW3
LED_ROW4
LED_ROW5
LED_ROW6
LED_ROW7
LED_ROW8
LED_ROW9
LED_ROW10
LED_ROW11
LED_ROW12
LED_ROW13
LED_ROW14
LED_ROW15
Q1 DTC143EKA
Q2 DTC143EKA
Q3 DTC143EKA
Q4 DTC143EKA
Q5 DTC143EKA
Q6 DTC143EKA
Q7 DTC143EKA
Q8 DTC143EKA
Q9 DTC143EKA
Q10 DTC143EKA
Q11 DTC143EKA
Q12 DTC143EKA
Q13 DTC143EKA
Q14 DTC143EKA
Q15 DTC143EKA
Q16 DTC143EKA
D157 1SS355
D156 1SS355
U8
SN74HC165ANS
C10 0.1uF
R41
22
R40
22
R160
1K
SW_ROW0
SW_ROW1
SW_ROW2
SW_ROW3
SW_ROW4
SW_ROW5
SW_ROW6
SW_ROW7
T3
T4
DGND
Monday, February 28, 2005


SELECT9 D1 SLR-332MG(GRN) R45 47(2012)
SELECT10 D2 SLR-332MG(GRN) R46 47(2012)
SELECT11 D3 SLR-332MG(GRN) R47 47(2012)
SELECT12 D4 SLR-332MG(GRN) R48 47(2012)
SELECT13 D5 SLR-332MG(GRN) R49 47(2012)
SELECT14 D6 SLR-332MG(GRN) R50 47(2012)
SELECT15 D7 SLR-332MG(GRN) R51 47(2012)
SELECT16 D8 SLR-332MG(GRN) R52 47(2012)
COM0
SOLO9 D9 SLR-332VR(RED) R53 100(2012)
SOLO10 D10 SLR-332VR(RED) R54 100(2012)
SOLO11 D11 SLR-332VR(RED) R55 100(2012)
SOLO12 D12 SLR-332VR(RED) R56 100(2012)
SOLO13 D13 SLR-332VR(RED) R57 100(2012)
SOLO14 D14 SLR-332VR(RED) R58 100(2012)
SOLO15 D15 SLR-332VR(RED) R59 100(2012)
SOLO16 D16 SLR-332VR(RED) R60 100(2012)
COM1
MUTE9 D17 SLR-332DU(ORG) R61 56(2012)
MUTE10 D18 SLR-332DU(ORG) R62 56(2012)
MUTE11 D19 SLR-332DU(ORG) R63 56(2012)
MUTE12 D20 SLR-332DU(ORG) R64 56(2012)
MUTE13 D21 SLR-332DU(ORG) R65 56(2012)
MUTE14 D22 SLR-332DU(ORG) R66 56(2012)
MUTE15 D23 SLR-332DU(ORG) R67 56(2012)
MUTE16 D24 SLR-332DU(ORG) R68 56(2012)
COM2
REC9 D25 SLR-342VR(RED) R69 100(2012)
REC10 D26 SLR-342VR(RED) R70 100(2012)
REC11 D27 SLR-342VR(RED) R71 100(2012)
REC12 D28 SLR-342VR(RED) R72 100(2012)
REC13 D29 SLR-342VR(RED) R73 100(2012)
REC14 D30 SLR-342VR(RED) R74 100(2012)
REC15 D31 SLR-342VR(RED) R75 100(2012)
REC16 D32 SLR-342VR(RED) R76 100(2012)
COM3
OL9 D33 SLR-342VR(RED) R77 100(2012)
OL10 D34 SLR-342VR(RED) R78 100(2012)
OL11 D35 SLR-342VR(RED) R79 100(2012)
OL12 D36 SLR-342VR(RED) R80 100(2012)
OL13 D37 SLR-342VR(RED) R81 100(2012)
OL14 D38 SLR-342VR(RED) R82 100(2012)
OL15 D39 SLR-342VR(RED) R83 100(2012)
OL16 D40 SLR-342VR(RED) R84 100(2012)
COM4
SELECT_MAS D41 SLR-332MG(GRN) R85 47(2012)
ALL SAFE D42 SLR-332MG(GRN) R86 47(2012)
FLIP D43 SLR-332DU(ORG) R87 56(2012)
ALT D44 LA12540TBF-4(ORG) R88 56(2012)
MODULE D45 LA12540TBF-4(ORG) R89 56(2012)
USER1 D46 LA12540TBF-4(ORG) R90 56(2012)
USER2 D47 LA12540TBF-4(ORG) R91 56(2012)
USER3 D48 LA12540TBF-4(ORG) R92 56(2012)
OL MAS D49 SLR-342VR(RED) R93 100(2012)
COM5
METER-40L D50 LA12540TBF-4(ORG) R94 56(2012)
METER-30L D51 LA12540TBF-4(ORG) R95 56(2012)
METER-20L D52 LA12540TBF-4(ORG) R96 56(2012)
METER-16L D53 LA12540TBF-4(ORG) R97 56(2012)
METER-12L D54 LA12540TBF-4(ORG) R98 56(2012)
METER-10L D55 LA12540TBF-4(ORG) R99 56(2012)
METER-8L D56 LA12540TBF-4(ORG) R100 56(2012)
METER-6L D57 LA12540TBF-4(ORG) R101 56(2012)
METER-4L D58 LA12540TBF-4(ORG) R102 56(2012)
METER-2L D59 LA12540TBF-4(ORG) R103 56(2012)
METER-0L D60 LA12540TBF-4(ORG) R104 56(2012)
METER-OVL D61 LI12540TBF-4(RED) R105 100(2012)
COM6
METER-40R D62 LA12540TBF-4(ORG) R106 56(2012)
METER-30R D63 LA12540TBF-4(ORG) R107 56(2012)
METER-20R D64 LA12540TBF-4(ORG) R108 56(2012)
METER-16R D65 LA12540TBF-4(ORG) R109 56(2012)
METER-12R D66 LA12540TBF-4(ORG) R110 56(2012)
METER-10R D67 LA12540TBF-4(ORG) R111 56(2012)
METER-8R D68 LA12540TBF-4(ORG) R112 56(2012)
METER-6R D69 LA12540TBF-4(ORG) R113 56(2012)
METER-4R D70 LA12540TBF-4(ORG) R114 56(2012)
METER-2R D71 LA12540TBF-4(ORG) R115 56(2012)
METER-0R D72 LA12540TBF-4(ORG) R116 56(2012)
METER-OVR D73 LI12540TBF-4(RED) R117 100(2012)
COM7
LED_ROW0
LED_ROW1
LED_ROW2
LED_ROW3
LED_ROW4
LED_ROW5
LED_ROW6
LED_ROW7
LED_ROW8
LED_ROW9
LED_ROW10
LED_ROW11


T5
P5 DF15(4.2)-20DP
COM8
COM9
COM10
COM11
T7
to PCB RING
R177 1K
R178 1K
R179 1K
R180 1K
DGND
T9
P7 DF15(4.2)-20DP
RING_LOW0
RING_LOW1
RING_LOW2
RING_LOW3
RING_LOW4
RING_LOW5
RING_LOW6
RING_LOW7
T11
from PCB RING
LED_ROW0 R118 220(2012)
LED_ROW1 R120 220(2012)
LED_ROW2 R122 220(2012)
LED_ROW3 R124 220(2012)
LED_ROW4 R126 220(2012)
LED_ROW5 R128 220(2012)
LED_ROW6 R130 220(2012)
LED_ROW7 R132 220(2012)
R161 1K
R162 1K
R163 1K
R164 1K
R165 1K
R166 1K
R167 1K
R168 1K
P5V

T6
P6 DF15(4.2)-20DP
COM12
COM13
COM14
COM15
T8
to PCB RING
R181 1K
R182 1K
R183 1K
R184 1K
DGND
T10
P8 DF15(4.2)-20DP
RING_LOW8
RING_LOW9
RING_LOW10
RING_LOW11
RING_LOW12
RING_LOW13
RING_LOW14
RING_LOW15
T12
from PCB RING
LED_ROW8 R119 220(2012)
LED_ROW9 R121 220(2012)
LED_ROW10 R123 220(2012)
LED_ROW11 R125 220(2012)
LED_ROW12 R127 220(2012)
LED_ROW13 R129 220(2012)
LED_ROW14 R131 220(2012)
LED_ROW15 R133 430(2012)
R172 1K
R173 1K
R174 1K
R175 1K
R176 1K
R169 1K
R170 1K
R171 1K
R172 1K
P5V


SELECT9 D74 1SS355 SW1 SKHHAM
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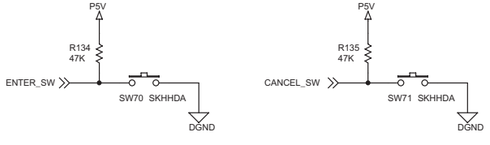
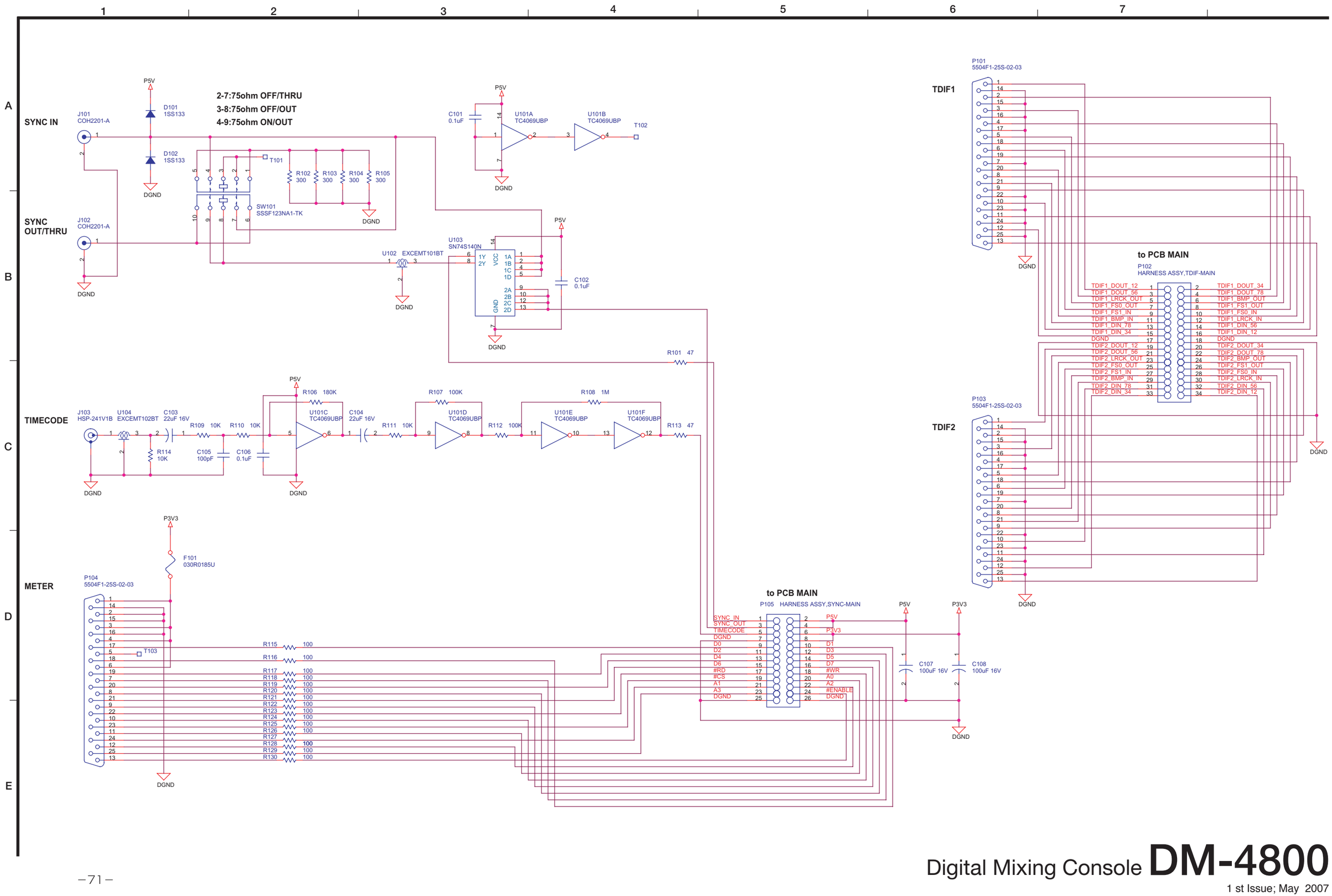
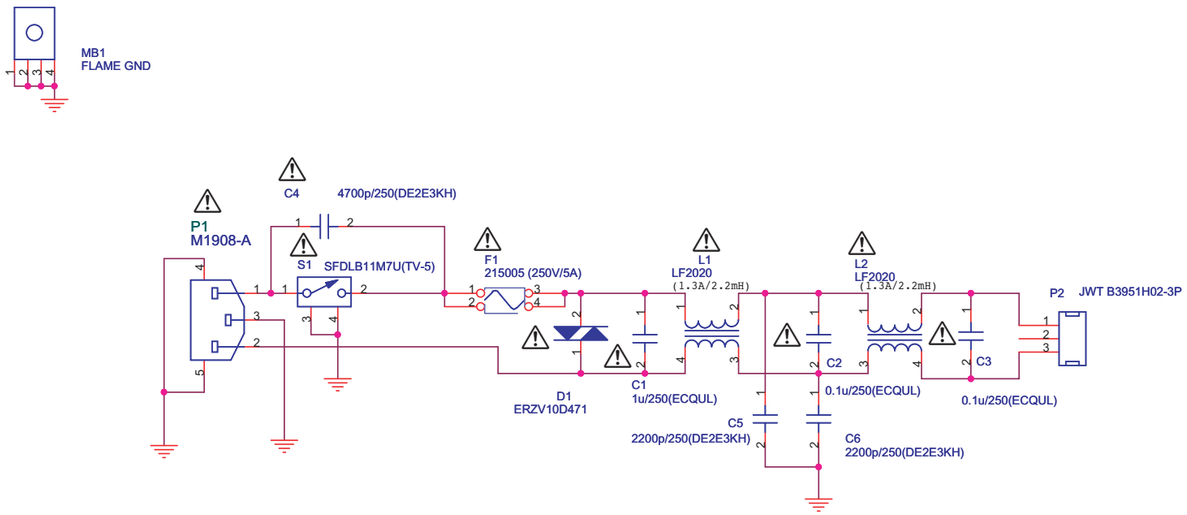
SELECT11 D76 1SS355 SW3 SKHHAM
SELECT12 D77 1SS355 SW4 SKHHAM
SELECT13 D78 1SS355 SW5 SKHHAM
SELECT14 D79 1SS355 SW6 SKHHAM
SELECT15 D80 1SS355 SW7 SKHHAM
SELECT16 D81 1SS355 SW8 SKHHAM
COM0
SOLO9 D82 1SS355 SW9 SKHHAM
SOLO10 D83 1SS355 SW10 SKHHAM
SOLO11 D84 1SS355 SW11 SKHHAM
SOLO12 D85 1SS355 SW12 SKHHAM
SOLO13 D86 1SS355 SW13 SKHHAM
SOLO14 D87 1SS355 SW14 SKHHAM
SOLO15 D88 1SS355 SW15 SKHHAM
SOLO16 D89 1SS355 SW16 SKHHAM
COM1
MUTE9 D90 1SS355 SW17 SKHHAM
MUTE10 D91 1SS355 SW18 SKHHAM
MUTE11 D92 1SS355 SW19 SKHHAM
MUTE12 D93 1SS355 SW20 SKHHAM
MUTE13 D94 1SS355 SW21 SKHHAM
MUTE14 D95 1SS355 SW22 SKHHAM
MUTE15 D96 1SS355 SW23 SKHHAM
MUTE16 D97 1SS355 SW24 SKHHAM
COM2
JOG D98 1SS355 SW25 SKHHDA
PAN D99 1SS355 SW26 SKHHDA
AUX D100 1SS355 SW27 SKHHDA
GATE/DYN D101 1SS355 SW28 SKHHDA
EQ D102 1SS355 SW29 SKHHDA
COM3
LEFT D103 1SS355 SW30 SKHHDA
TOP D104 1SS355 SW31 SKHHDA
DOWN D105 1SS355 SW32 SKHHDA
REC D106 1SS355 SW33 SKHHAM
COM4
SELECT_MAS D107 1SS355 SW34 SKHHAM
ALL SAFE D108 1SS355 SW35 SKHHAM
FLIP D109 1SS355 SW36 SKHHAM
ALT D110 1SS355 SW37 SKHHDA
MODULE D111 1SS355 SW38 SKHHDA
USER1 D112 1SS355 SW39 SKHHDA
USER2 D113 1SS355 SW40 SKHHDA
USER3 D114 1SS355 SW41 SKHHDA
COM5
0 D115 1SS355 SW42 SKHHDA
1 2 D116 1SS355 SW43 SKHHDA
D117 1SS355 SW44 SKHHDA
3 D118 1SS355 SW45 SKHHDA
4 D119 1SS355 SW46 SKHHDA
5 D120 1SS355 SW47 SKHHDA
6 D121 1SS355 SW48 SKHHDA
7 D122 1SS355 SW49 SKHHDA
COM6
8 D123 1SS355 SW50 SKHHDA
9 D124 1SS355 SW51 SKHHDA
CLR D125 1SS355 SW52 SKHHDA
COM7
LCD_SW1 D126 1SS355 SW53 SKHHDA
LCD_SW2 D127 1SS355 SW54 SKHHDA
LCD_SW3 D128 1SS355 SW55 SKHHDA
LCD_SW4 D129 1SS355 SW56 SKHHDA
COM8
LCD_POD1 D130 1SS355 SW57 EC12E24204F25 D135 1SS355
LCD_POD2 D131 1SS355 SW58 EC12E24204F25 D136 1SS355
LCD_POD3 D132 1SS355 SW59 EC12E24204F25 D137 1SS355
LCD_POD4 D133 1SS355 SW60 EC12E24204F25 D138 1SS355
JOG D134 1SS355 SW61 EC12E2420802 D139 1SS355
COM9
COM10
CH9 D140 1SS355 SW62 EC12E24104A6 D148 1SS355
CH10 D141 1SS355 SW63 EC12E24104A6 D149 1SS355
CH11 D142 1SS355 SW64 EC12E24104A6 D150 1SS355
CH12 D143 1SS355 SW65 EC12E24104A6 D151 1SS355
CH13 D144 1SS355 SW66 EC12E24104A6 D152 1SS355
CH14 D145 1SS355 SW67 EC12E24104A6 D153 1SS355
CH15 D146 1SS355 SW68 EC12E24104A6 D154 1SS355
CH16 D147 1SS355 SW69 EC12E24104A6 D155 1SS355
COM11
COM12
SW_ROW0
SW_ROW1
SW_ROW2
SW_ROW3
SW_ROW4
SW_ROW5
SW_ROW6
SW_ROW7

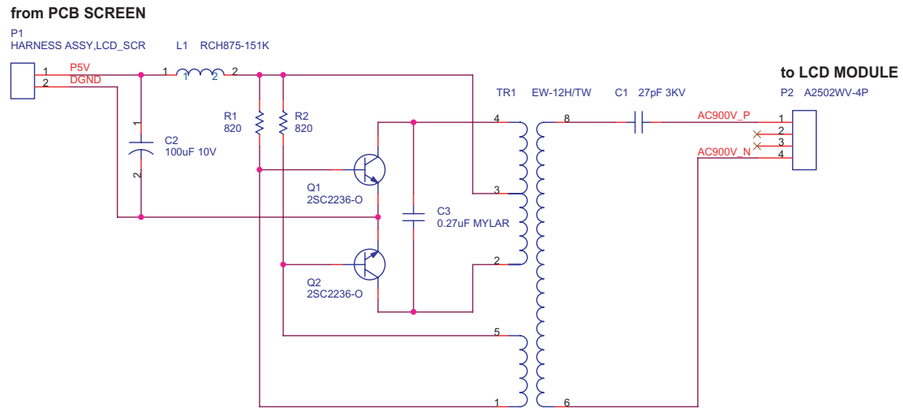

P5V
R134 47K
ENTER_SW
SW70 SKHHDA
DGND
P5V
R135 47K
CANCEL_SW
SW71 SKHHDA
DGND


SYNC IN
SYNC OUT/THRU
TIMECODE
METER
TDIF1
TDIF2
2-7:75ohm OFF/THRU
3-8:75ohm OFF/OUT
4-9:75ohm ON/OUT
J101 COH2201-A
J102 COH2201-A
J103 HSP-241V1B
P101 5504F1-25S-02-03
P102 HARNESS ASSY,TDIF-MAIN
P103 5504F1-25S-02-03
P104 5504F1-25S-02-03
P105 HARNESS ASSY,SYNC-MAIN
to PCB MAIN
D101 1SS133
D102 1SS133
SW101 SSSF123NA1-TK
U101A TC4069UBP
U101B TC4069UBP
U101C TC4069UBP
U101D TC4069UBP
U101E TC4069UBP
U101F TC4069UBP
U102 EXCEMT101BT
U103 SN74S140N
U104 EXCEMT102BT
C101 0.1uF
C102 0.1uF
C103 22uF 16V
C104 22uF 16V
C105 100pF
C106 0.1uF
C107 100uF 16V
C108 100uF 16V
R101 47
R102 300
R103 300
R104 300
R105 300
R106 180K
R107 100K
R108 1M
R109 10K
R110 10K
R111 10K
R112 100K
R113 47
R114 10K
R115 100
R116 100
R117 100
R118 100
R119 100
R120 100
R121 100
R122 100
R123 100
R124 100
R125 100
R126 100
R127
R128 100
R129 100
R130 100
F101 030R0185U
T101
T102
T103
P5V
P3V3
DGND

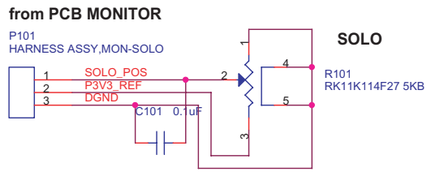
PCB, INLET FW



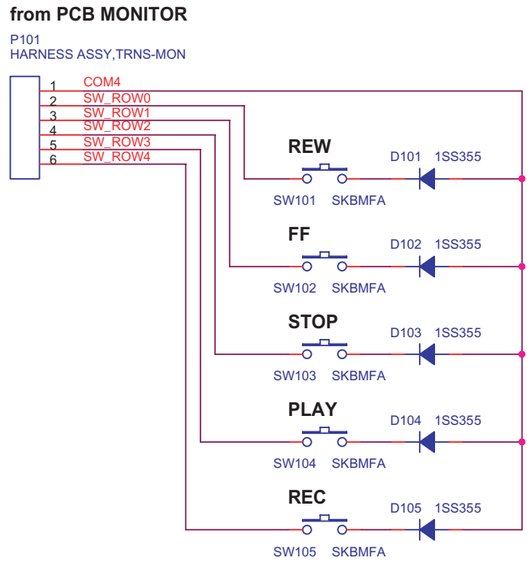
PCB, LCD SUB



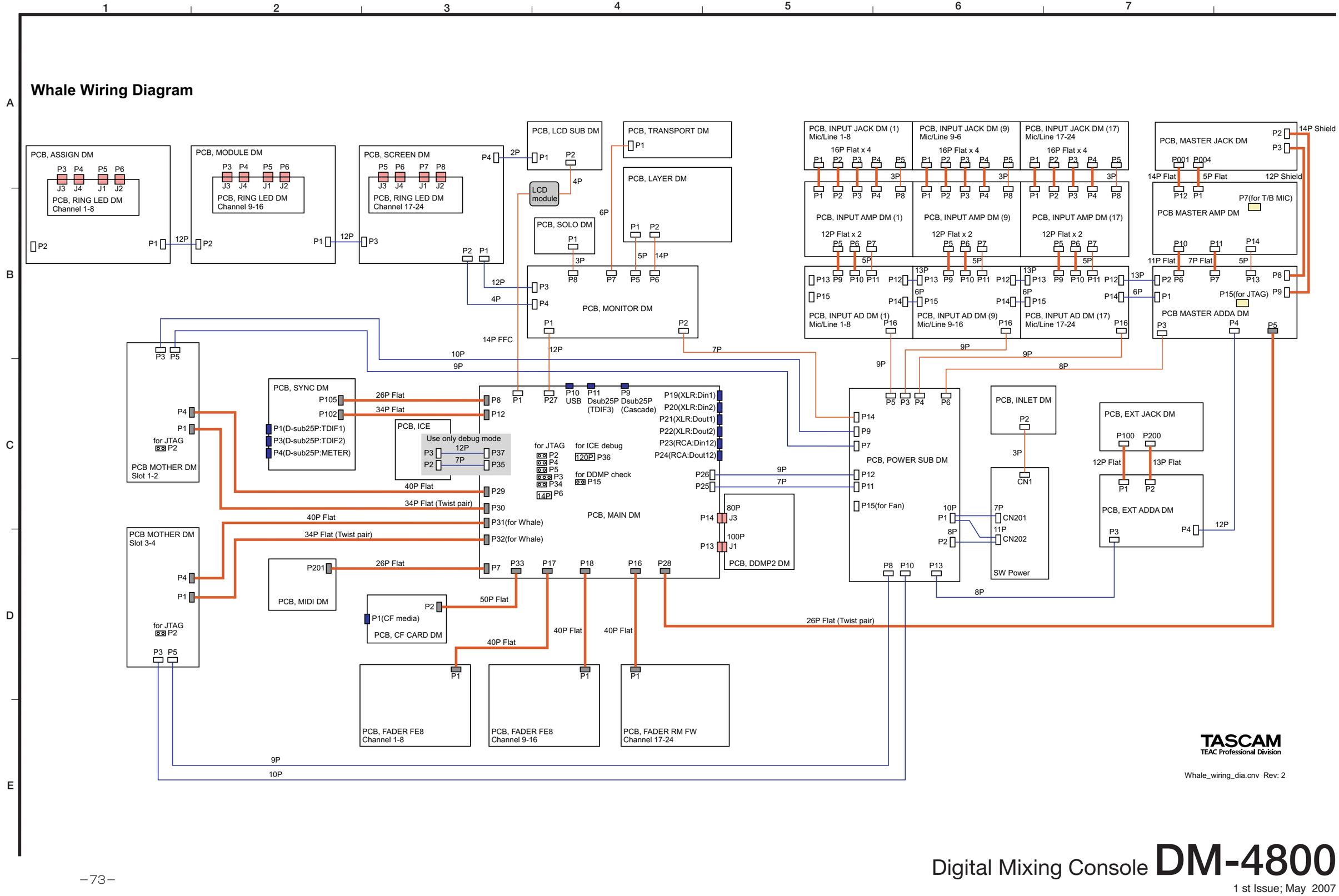
PCB, SOLO



PCB, TRANSPORT



Whale Wiring Diagram



TASCAM TEAC Professional Division

Whale_wiring_dia.cnv Rev: 2

TASCAM
TEAC Professional Division

SCHEMATIC DIAGRAM
回路図

DM-4800

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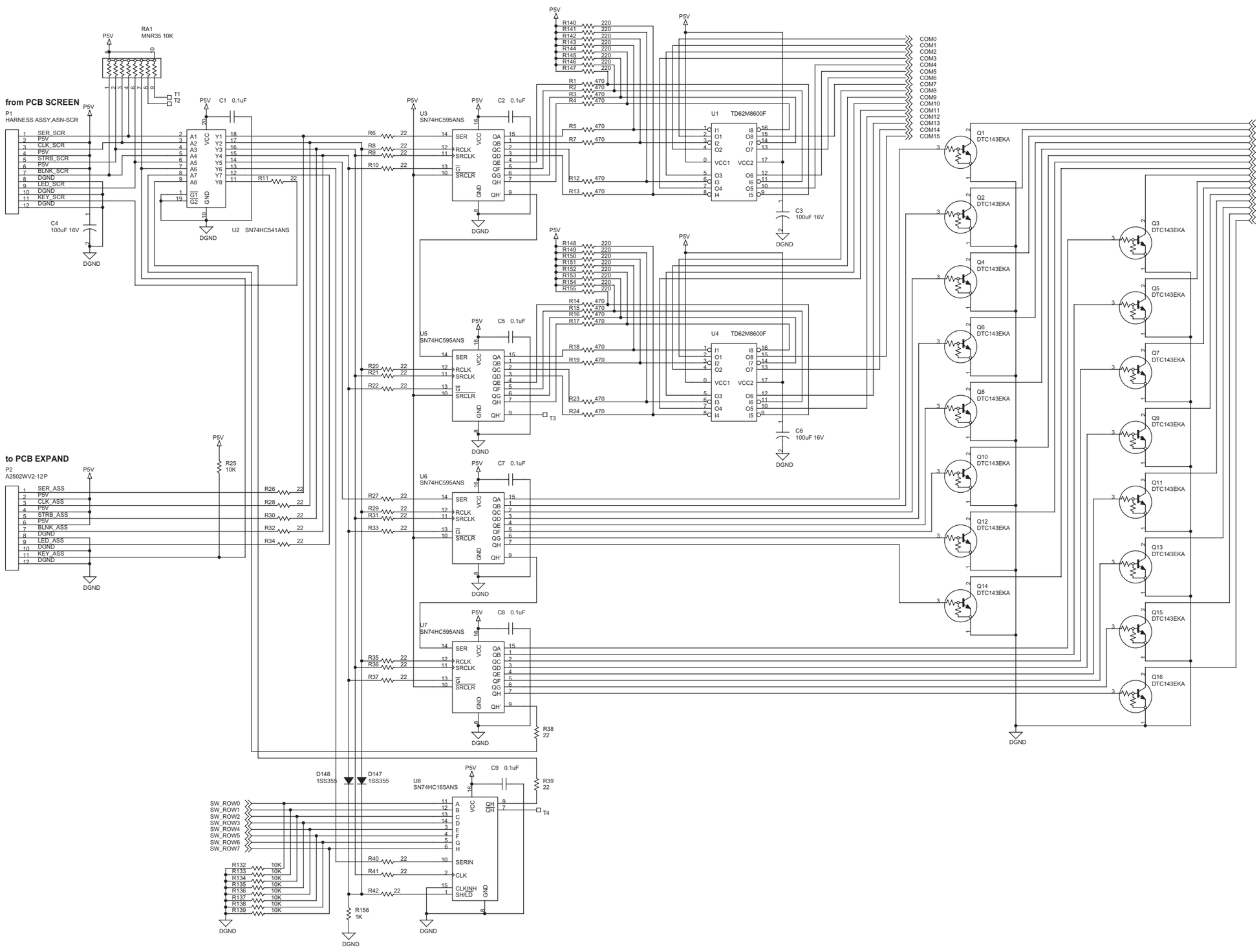

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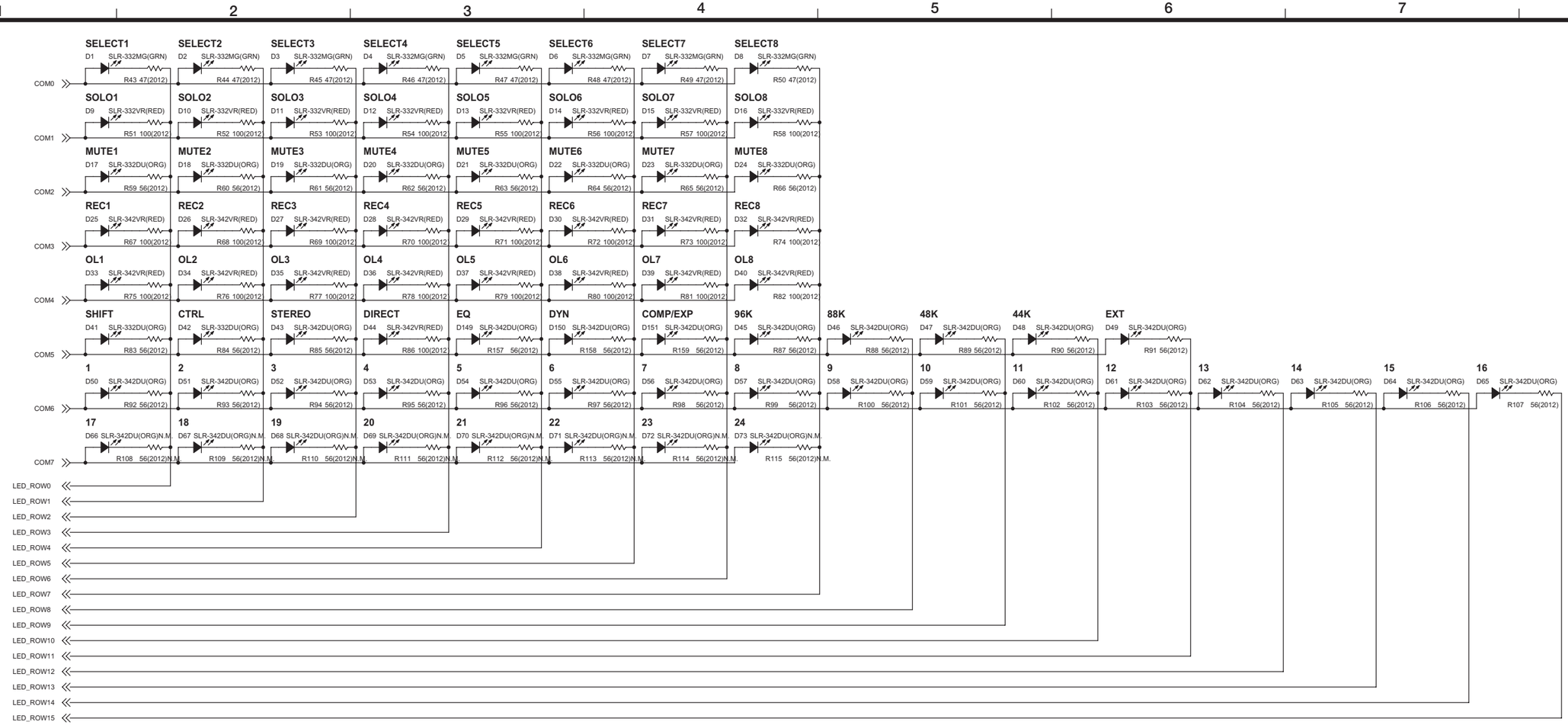
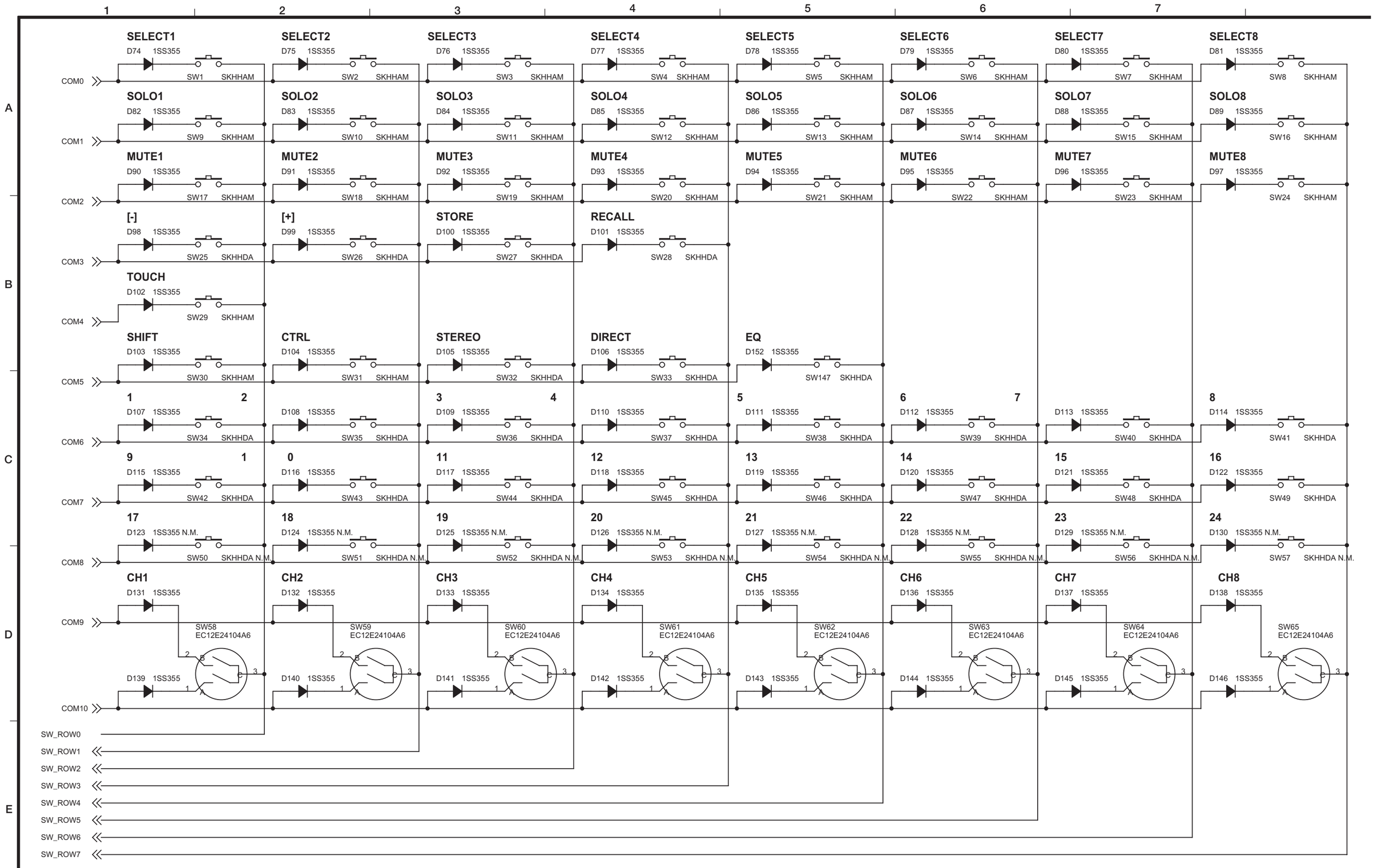

1
2
3
4
5
6
7
A
B
C
D
E
SELECT1 SELECT2 SELECT3 SELECT4 SELECT5 SELECT6 SELECT7 SELECT8
SLR-332MG(GRN)
COM0
SOLO1 SOLO2 SOLO3 SOLO4 SOLO5 SOLO6 SOLO7 SOLO8
SLR-332VR(RED)
COM1
MUTE1 MUTE2 MUTE3 MUTE4 MUTE5 MUTE6 MUTE7 MUTE8
SLR-332DU(ORG)
COM2
REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8
SLR-342VR(RED)
COM3
OL1 OL2 OL3 OL4 OL5 OL6 OL7 OL8
SLR-342VR(RED)
COM4
SHIFT CTRL STEREO DIRECT EQ DYN COMP/EXP 96K 88K 48K 44K EXT
SLR-342DU(ORG)
COM5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
SLR-342DU(ORG)
COM6
17 18 19 20 21 22 23 24
SLR-342DU(ORG)N.M.
COM7
LED_ROW0
LED_ROW1
LED_ROW2
LED_ROW3
LED_ROW4
LED_ROW5
LED_ROW6
LED_ROW7
LED_ROW8
LED_ROW9
LED_ROW10
LED_ROW11
LED_ROW12
LED_ROW13
LED_ROW14
LED_ROW15
T5
P3 DF15(4.2)-20DP
COM8
COM9
COM10
COM11
T7
to PCB RING
R160 1K
R161 1K
R162 1K
R163 1K
DGND
T6
P4 DF15(4.2)-20DP
COM12
COM13
COM14
COM15
T8
to PCB RING
R164 1K
R165 1K
R166 1K
R167 1K
DGND
T9
P5 DF15(4.2)-20DP
RING_ROW0
RING_ROW1
RING_ROW2
RING_ROW3
RING_ROW4
RING_ROW5
RING_ROW6
RING_ROW7
T11
from PCB RING
R116 220(2012)
R118 220(2012)
R120 220(2012)
R122 220(2012)
R124 220(2012)
R126 220(2012)
R128 220(2012)
R130 220(2012)
R168 1K
R169 1K
R170 1K
R171 1K
R172 1K
R173 1K
R174 1K
R175 1K
P5V
T10
P6 DF15(4.2)-20DP
RING_ROW8
RING_ROW9
RING_ROW10
RING_ROW11
RING_ROW12
RING_ROW13
RING_ROW14
RING_ROW15
T12
from PCB RING
R117 220(2012)
R119 220(2012)
R121 220(2012)
R123 220(2012)
R125 220(2012)
R127 220(2012)
R129 220(2012)
R131 430(2012)
R176 1K
R177 1K
R178 1K
R179 1K
R180 1K
R181 1K
R182 1K
R183 1K
P5V



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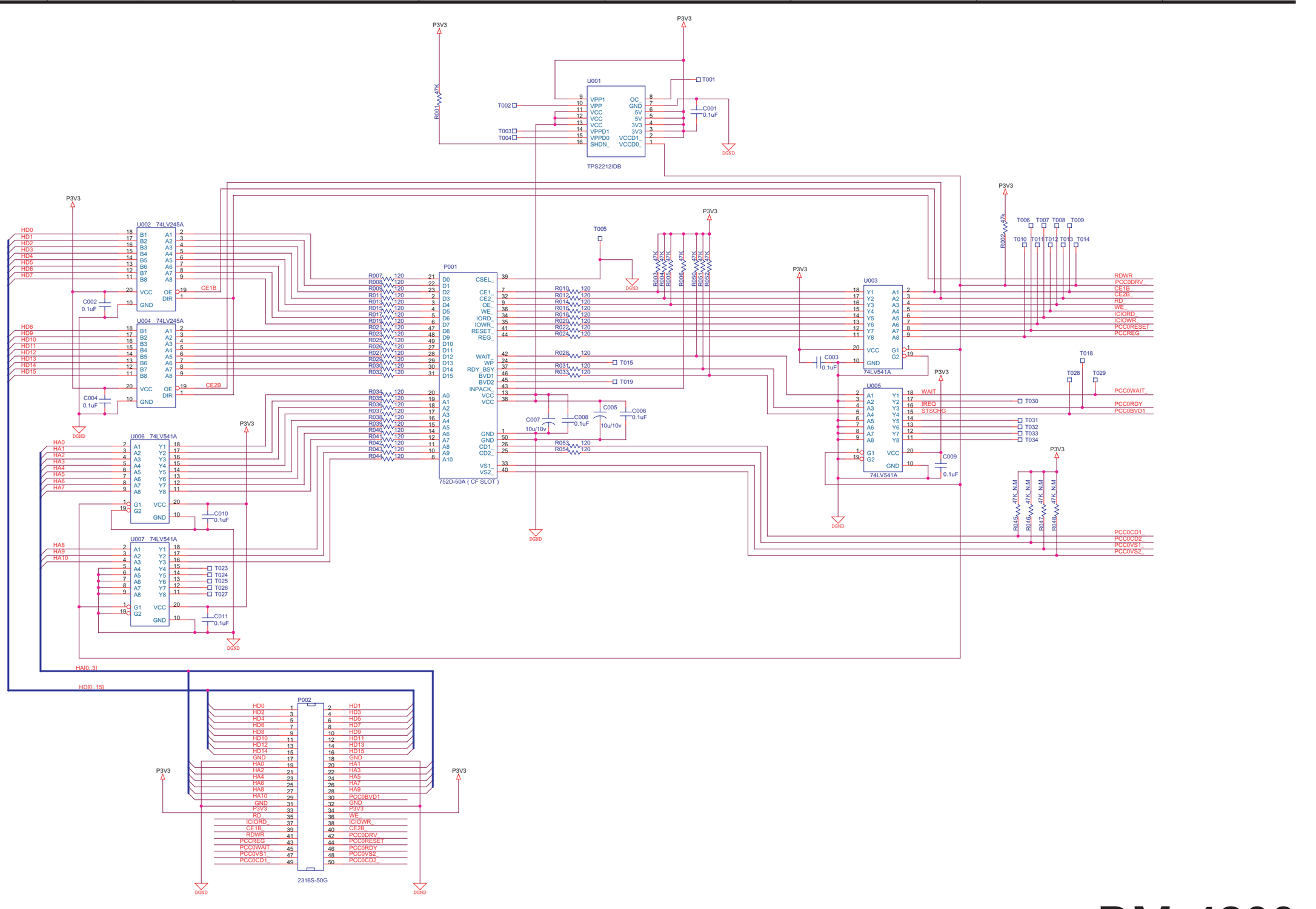

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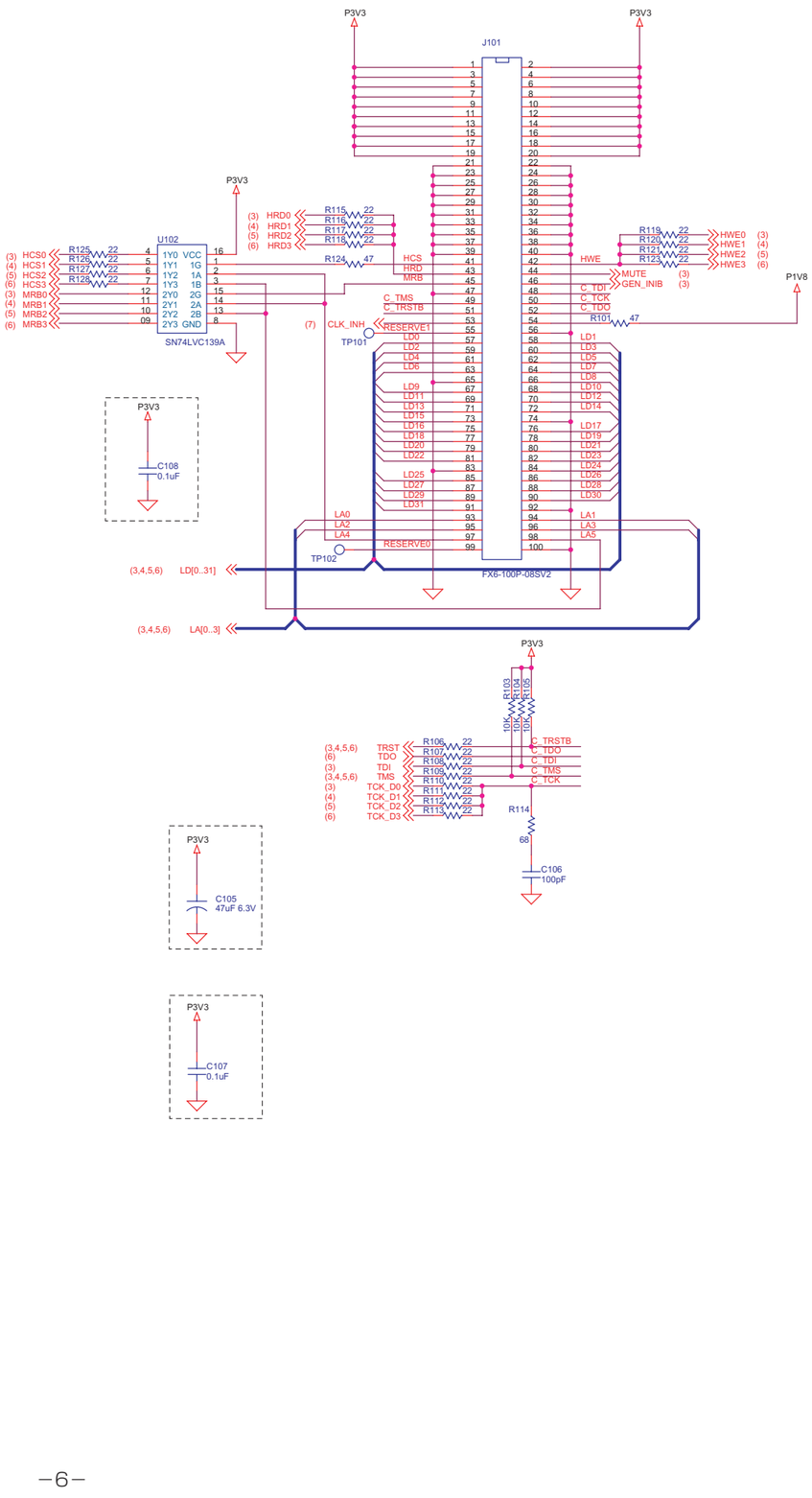
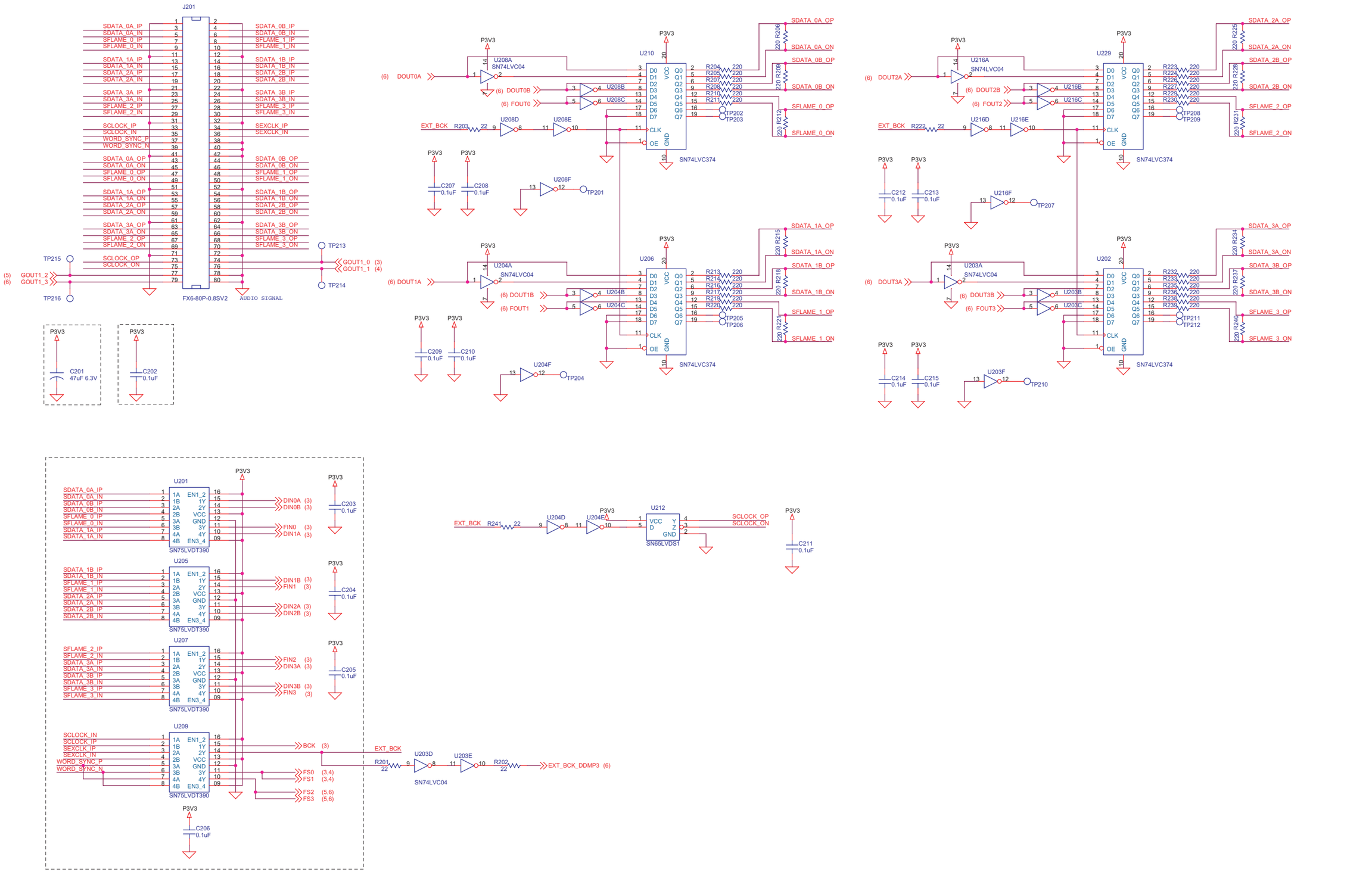
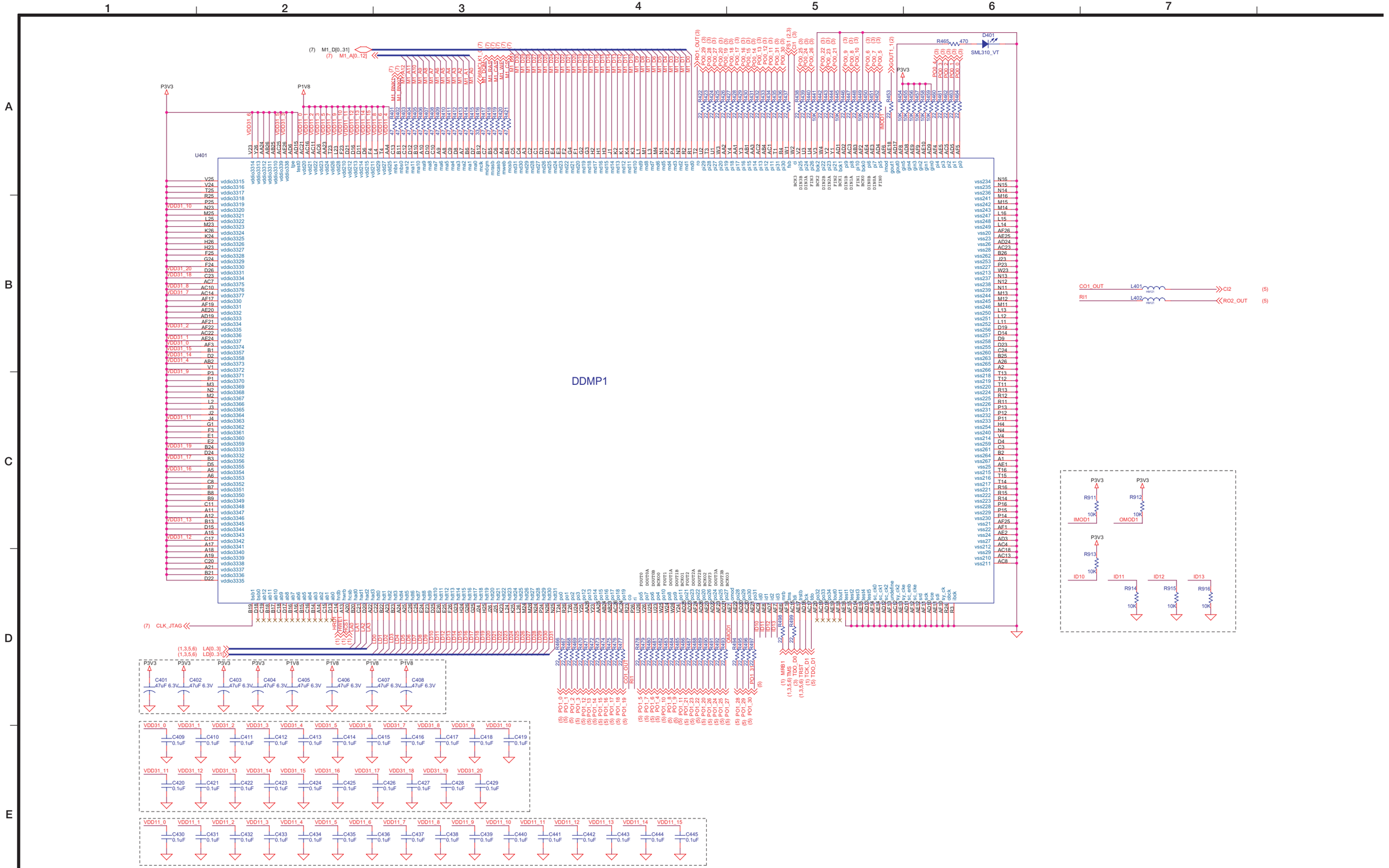

J101
FX6-100P-08SV2
U102
SN74LVC139A
P3V3
P1V8
HCS0
HCS1
HCS2
HCS3
MRB0
MRB1
MRB2
MRB3
HRD0
HRD1
HRD2
HRD3
HCS
HRD
MRB
HWE
HWE0
HWE1
HWE2
HWE3
MUTE
GEN_INIB
C_TMS
C_TRSTB
CLK_INH
TP101
TP102
RESERVE1
RESERVE0
C_TDI
C_TCK
C_TDO
R101
LD[0..31]
LA[0..3]
C108
0.1uF
C105
47uF 6.3V
C107
0.1uF
R103
R104
R105
10K
R106
R107
R108
R109
R110
R111
R112
R113
R114
68
C106
100pF
TRST
TDO
TDI
TMS
TCK_D0
TCK_D1
TCK_D2
TCK_D3
C_TRSTB
C_TDO
C_TDI
C_TMS
C_TCK
D102
MMSZ4678T1
Q101
NTF6P02T3G
Q102
NTF6P02T3G
L101
1.8uH (CEP125NP-1R8NC-H)
D101
RSX501L-20
R102
10K
U101
NCP1550SN19T1G
EXT
VOUT
GND
VIN
CE
C103
330uF 10V
C104
0.1uF
C102
0.1uF
C101
470uF 6.3V
C109
470uF 6.3V
TP104
TP105
TP106
TP107

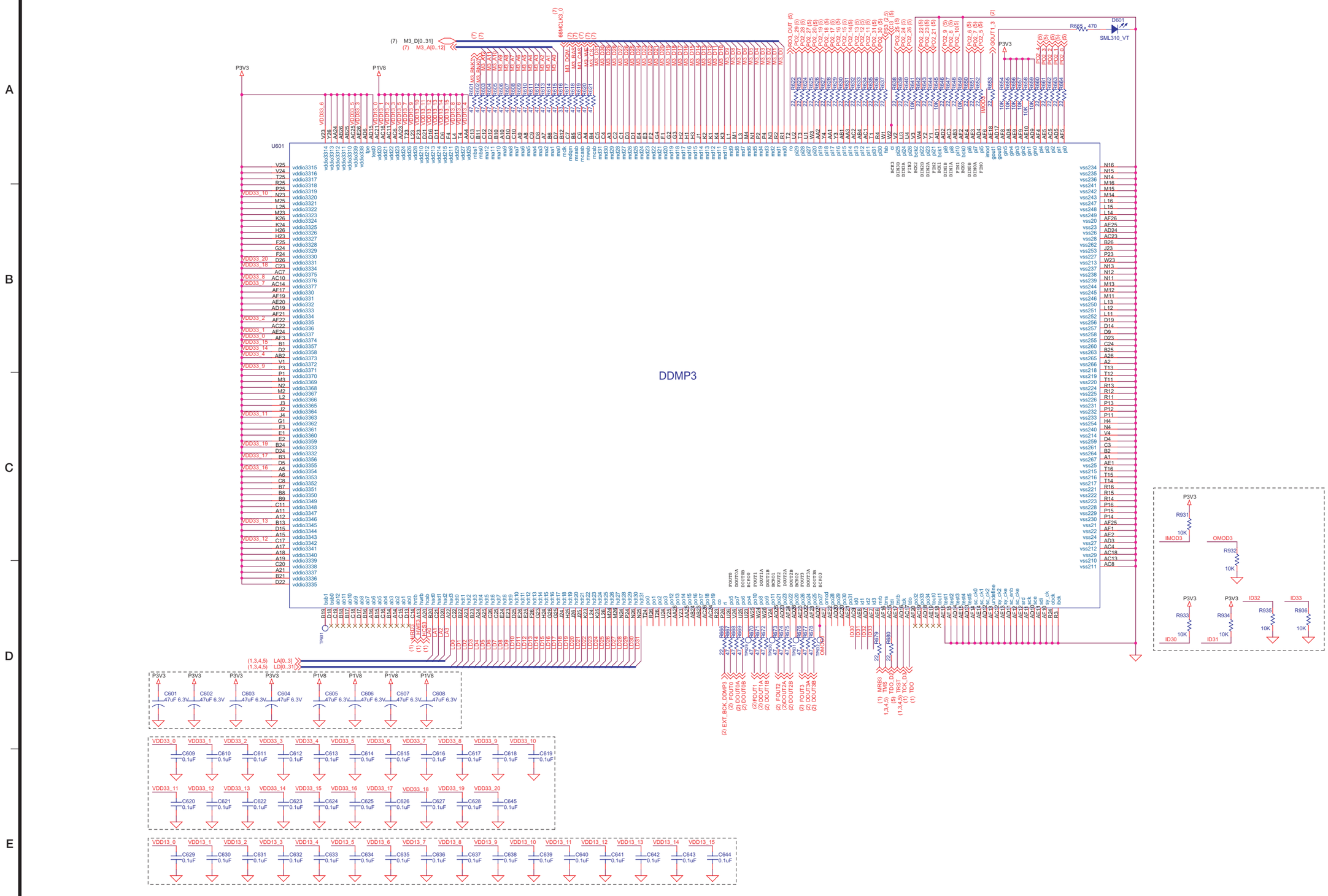

J201
FX6-80P-0.8SV2
AUDIO SIGNAL
SDATA_0A_IP
SDATA_0A_IN
SFLAME_0_IP
SFLAME_0_IN
SDATA_1A_IP
SDATA_1A_IN
SDATA_2A_IP
SDATA_2A_IN
SDATA_3A_IP
SDATA_3A_IN
SFLAME_2_IP
SFLAME_2_IN
SCLOCK_IP
SCLOCK_IN
WORD_SYNC_P
WORD_SYNC_N
SDATA_0A_OP
SDATA_0A_ON
SFLAME_0_OP
SFLAME_0_ON
SDATA_1A_OP
SDATA_1A_ON
SDATA_2A_OP
SDATA_2A_ON
SDATA_3A_OP
SDATA_3A_ON
SFLAME_2_OP
SFLAME_2_ON
SCLOCK_OP
SCLOCK_ON
SDATA_0B_IP
SDATA_0B_IN
SFLAME_1_IP
SFLAME_1_IN
SDATA_1B_IP
SDATA_1B_IN
SDATA_2B_IP
SDATA_2B_IN
SDATA_3B_IP
SDATA_3B_IN
SFLAME_3_IP
SFLAME_3_IN
SEXCLK_IP
SEXCLK_IN
SDATA_0B_OP
SDATA_0B_ON
SFLAME_1_OP
SFLAME_1_ON
SDATA_1B_OP
SDATA_1B_ON
SDATA_2B_OP
SDATA_2B_ON
SDATA_3B_OP
SDATA_3B_ON
SFLAME_3_OP
SFLAME_3_ON
TP213
TP214
TP215
TP216
GOUT1_0 (3)
GOUT1_1 (4)
(5) GOUT1_2
(6) GOUT1_3
C201 47uF 6.3V
C202 0.1uF
P3V3
U210
U229
U206
U202
U208A
U208B
U208C
U208D
U208E
U208F
U216A
U216B
U216C
U216D
U216E
U216F
U204A
U204B
U204C
U204F
U203A
U203B
U203C
U203F
SN74LVC04
SN74LVC374
(6) DOUT0A
(6) DOUT0B
(6) FOUT0
(6) DOUT2A
(6) DOUT2B
(6) FOUT2
(6) DOUT1A
(6) DOUT1B
(6) FOUT1
(6) DOUT3A
(6) DOUT3B
(6) FOUT3
EXT_BCK
R203 22
R222 22
C207 0.1uF
C208 0.1uF
C212 0.1uF
C213 0.1uF
C209 0.1uF
C210 0.1uF
C214 0.1uF
C215 0.1uF
TP201
TP202
TP203
TP204
TP205
TP206
TP207
TP208
TP209
TP210
TP211
TP212
R204 220
R205 220
R206 220
R207 220
R208 220
R209 220
R210 220
R211 220
R212 220
R213 220
R214 220
R215 220
R216 220
R217 220
R218 220
R219 220
R220 220
R221 220
R223 220
R224 220
R225 220
R226 220
R227 220
R228 220
R229 220
R230 220
R231 220
R232 220
R233 220
R234 220
R235 220
R236 220
R237 220
R238 220
R239 220
R240 220
SDATA_0A_OP
SDATA_0A_ON
SDATA_0B_OP
SDATA_0B_ON
SFLAME_0_OP
SFLAME_0_ON
SDATA_1A_OP
SDATA_1A_ON
SDATA_1B_OP
SDATA_1B_ON
SFLAME_1_OP
SFLAME_1_ON
SDATA_2A_OP
SDATA_2A_ON
SDATA_2B_OP
SDATA_2B_ON
SFLAME_2_OP
SFLAME_2_ON
SDATA_3A_OP
SDATA_3A_ON
SDATA_3B_OP
SDATA_3B_ON
SFLAME_3_OP
SFLAME_3_ON

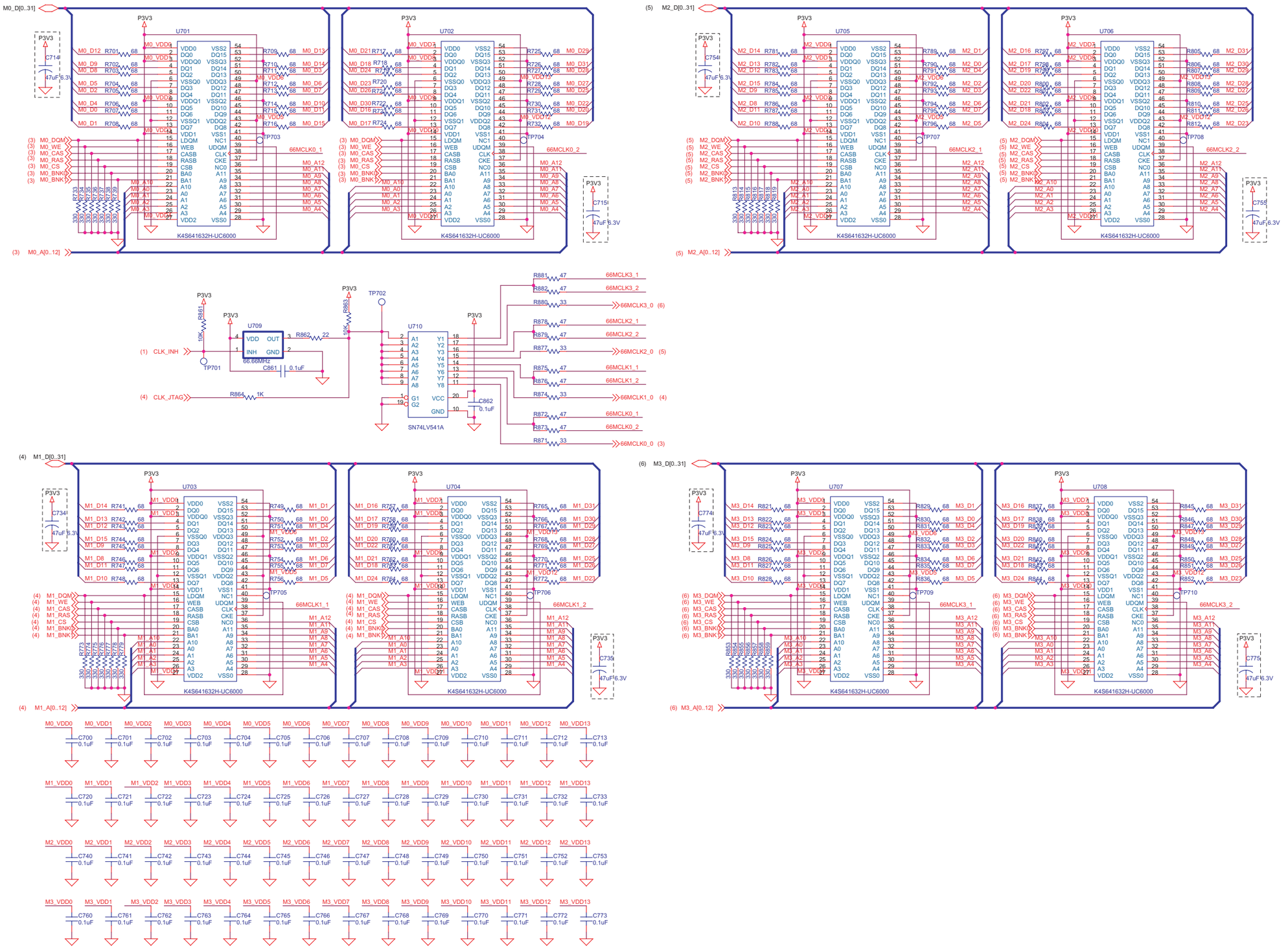
U201
U205
U207
U209
SN75LVDT390
SDATA_0A_IP
SDATA_0A_IN
SDATA_0B_IP
SDATA_0B_IN
SFLAME_0_IP
SFLAME_0_IN
SDATA_1A_IP
SDATA_1A_IN
SDATA_1B_IP
SDATA_1B_IN
SFLAME_1_IP
SFLAME_1_IN
SDATA_2A_IP
SDATA_2A_IN
SDATA_2B_IP
SDATA_2B_IN
SFLAME_2_IP
SFLAME_2_IN
SDATA_3A_IP
SDATA_3A_IN
SDATA_3B_IP
SDATA_3B_IN
SFLAME_3_IP
SFLAME_3_IN
SCLOCK_IP
SCLOCK_IN
SEXCLK_IP
SEXCLK_IN
WORD_SYNC_P
WORD_SYNC_N
DIN0A (3)
DIN0B (3)
FIN0 (3)
DIN1A (3)
DIN1B (3)
FIN1 (3)
DIN2A (3)
DIN2B (3)
FIN2 (3)
DIN3A (3)
DIN3B (3)
FIN3 (3)
BCK (3)
FS0 (3,4)
FS1 (3,4)
FS2 (5,6)
FS3 (5,6)
C203 0.1uF
C204 0.1uF
C205 0.1uF
C206 0.1uF
U212
SN65LVDS1
U204D
U204E
U203D
U203E
SN74LVC04
EXT_BCK
R241 22
R201 22
R202 22
EXT_BCK_DDMP3 (6)
SCLOCK_OP
SCLOCK_ON
C211 0.1uF


DDMP1
U401
P3V3
P1V8
M1_D[0..31]
M1_A[0..12]
CLK_JTAG
LA[0..3]
LD[0..31]
CO1_OUT
RI1
L401
L402
CI2
RO2_OUT
D401
SML310_VT
R465
470
IMOD1
OMOD1
ID10
ID11
ID12
ID13
R911
R912
R913
R914
R915
R916
10K
C401 47uF 6.3V
C402 47uF 6.3V
C403 47uF 6.3V
C404 47uF 6.3V
C405 47uF 6.3V
C406 47uF 6.3V
C407 47uF 6.3V
C408 47uF 6.3V
C409 0.1uF
C410 0.1uF
C411 0.1uF
C412 0.1uF
C413 0.1uF
C414 0.1uF
C415 0.1uF
C416 0.1uF
C417 0.1uF
C418 0.1uF
C419 0.1uF
C420 0.1uF
C421 0.1uF
C422 0.1uF
C423 0.1uF
C424 0.1uF
C425 0.1uF
C426 0.1uF
C427 0.1uF
C428 0.1uF
C429 0.1uF
C430 0.1uF
C431 0.1uF
C432 0.1uF
C433 0.1uF
C434 0.1uF
C435 0.1uF
C436 0.1uF
C437 0.1uF
C438 0.1uF
C439 0.1uF
C440 0.1uF
C441 0.1uF
C442 0.1uF
C443 0.1uF
C444 0.1uF
C445 0.1uF

DDMP1

DDMP2


DDMP3
U601
P3V3
P1V8
D601
SML310_VT
R665 470
(7) M3_D[0..31]
(7) M3_A[0..12]
(1,3,4,5) LA[0..3]
(1,3,4,5) LD[0..31]
C601 47uF 6.3V
C602 47uF 6.3V
C603 47uF 6.3V
C604 47uF 6.3V
C605 47uF 6.3V
C606 47uF 6.3V
C607 47uF 6.3V
C608 47uF 6.3V
C609 0.1uF
C610 0.1uF
C611 0.1uF
C612 0.1uF
C613 0.1uF
C614 0.1uF
C615 0.1uF
C616 0.1uF
C617 0.1uF
C618 0.1uF
C619 0.1uF
C620 0.1uF
C621 0.1uF
C622 0.1uF
C623 0.1uF
C624 0.1uF
C625 0.1uF
C626 0.1uF
C627 0.1uF
C628 0.1uF
C645 0.1uF
C629 0.1uF
C630 0.1uF
C631 0.1uF
C632 0.1uF
C633 0.1uF
C634 0.1uF
C635 0.1uF
C636 0.1uF
C637 0.1uF
C638 0.1uF
C639 0.1uF
C640 0.1uF
C641 0.1uF
C642 0.1uF
C643 0.1uF
C644 0.1uF
R931 10K
R932 10K
R933 10K
R934 10K
R935 10K
R936 10K
IMOD3
OMOD3
ID30
ID31
ID32
ID33



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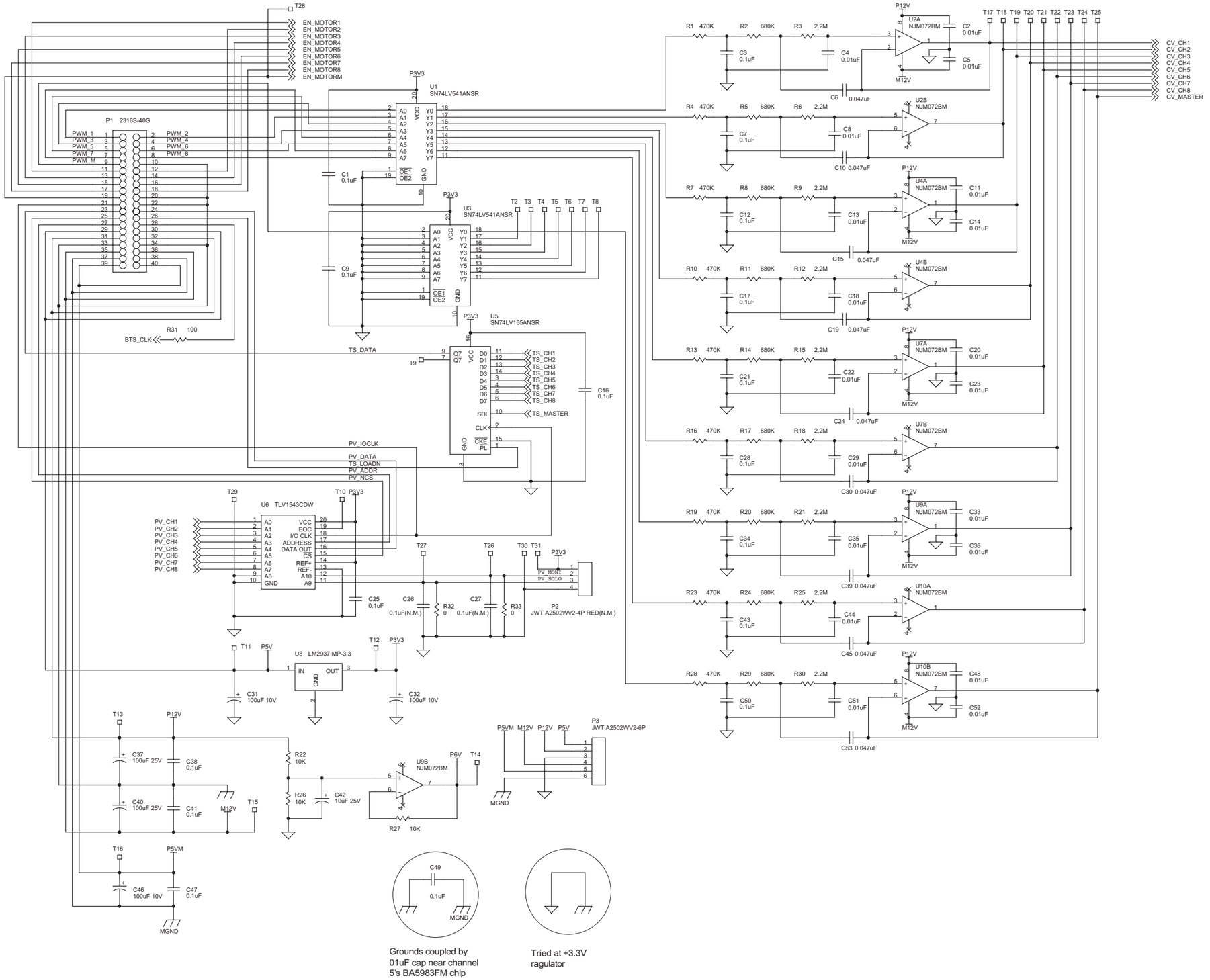

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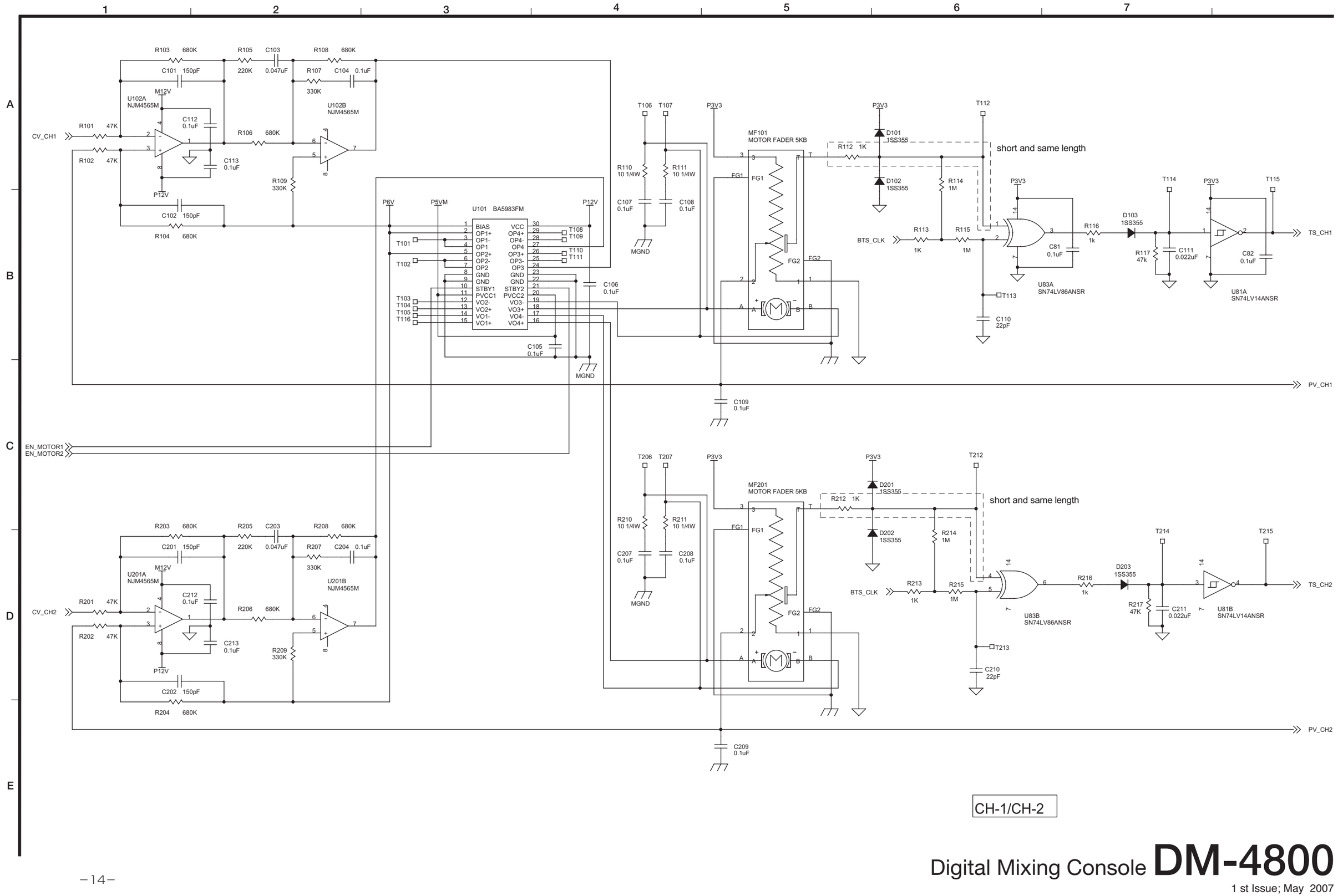
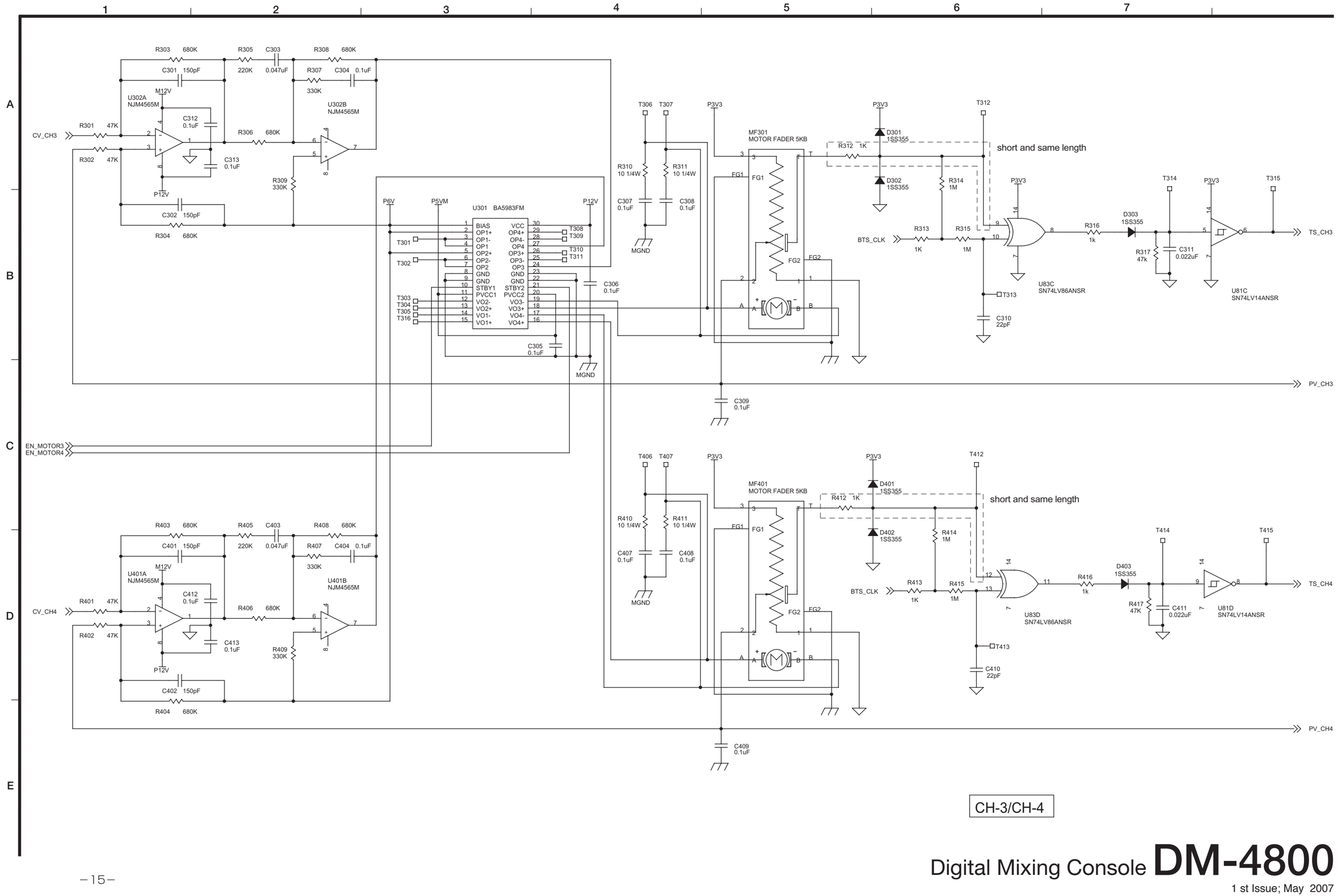

1
2
3
4
5
6
7
A
B
C
D
E
R103 680K
R105 C103
R108 680K
C101 150pF
220K 0.047uF
R107 C104 0.1uF
330K
M12V
U102A
NJM4565M
U102B
NJM4565M
C112
0.1uF
R101 47K
CV_CH1
R106 680K
R102 47K
C113
0.1uF
R109
330K
P12V
C102 150pF
R104 680K
P6V
P5VM
U101 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T101
T102
T103
T104
T105
T116
T108
T109
T110
T111
C106
0.1uF
C105
0.1uF
MGND
T106 T107
P3V3
R110
10 1/4W
R111
10 1/4W
C107
0.1uF
C108
0.1uF
MF101
MOTOR FADER 5KB
FG1
FG2
T
A
B
P3V3
D101
1SS355
R112 1K
D102
1SS355
short and same length
T112
R114
1M
R113
1K
R115
1M
BTS_CLK
T113
C110
22pF
U83A
SN74LV86ANSR
R116
1k
D103
1SS355
T114
T115
R117
47k
C111
0.022uF
C81
0.1uF
C82
0.1uF
U81A
SN74LV14ANSR
TS_CH1
PV_CH1
C109
0.1uF
EN_MOTOR1
EN_MOTOR2
R203 680K
R205 C203
R208 680K
C201 150pF
220K 0.047uF
R207 C204 0.1uF
330K
M12V
U201A
NJM4565M
U201B
NJM4565M
C212
0.1uF
R201 47K
CV_CH2
R206 680K
R202 47K
C213
0.1uF
R209
330K
P12V
C202 150pF
R204 680K
T206 T207
P3V3
R210
10 1/4W
R211
10 1/4W
C207
0.1uF
C208
0.1uF
MF201
MOTOR FADER 5KB
FG1
FG2
T
A
B
P3V3
D201
1SS355
R212 1K
D202
1SS355
short and same length
T212
R214
1M
R213
1K
R215
1M
BTS_CLK
T213
C210
22pF
U83B
SN74LV86ANSR
R216
1k
D203
1SS355
T214
T215
R217
47k
C211
0.022uF
U81B
SN74LV14ANSR
TS_CH2
PV_CH2
C209
0.1uF

CH-1/CH-2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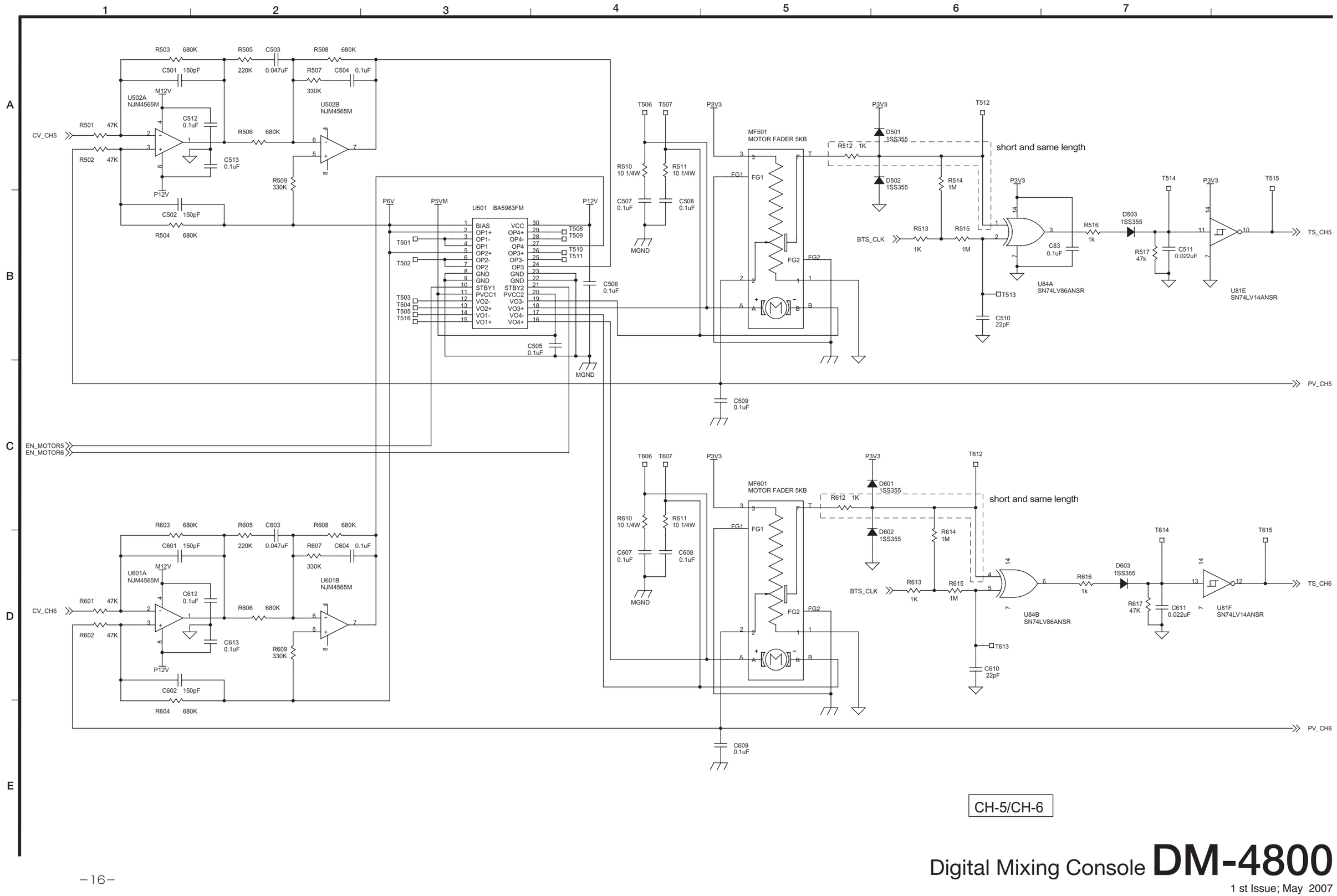
6
7
A
B
C
D
E
R303 680K
R305 C303
R308 680K
C301 150pF
220K 0.047uF
R307 C304 0.1uF
330K
M12V
U302A
NJM4565M
U302B
NJM4565M
C312
0.1uF
R301 47K
CV_CH3
R306 680K
R302 47K
C313
0.1uF
R309
330K
P12V
C302 150pF
R304 680K
P6V
P5VM
U301 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T301
T302
T303
T304
T305
T316
T308
T309
T310
T311
C306
0.1uF
C305
0.1uF
MGND
T306
T307
P3V3
R310
10 1/4W
R311
10 1/4W
C307
0.1uF
C308
0.1uF
MGND
MF301
MOTOR FADER 5KB
FG1
FG2
T
A
B
P3V3
D301
1SS355
R312 1K
D302
1SS355
short and same length
T312
R314
1M
BTS_CLK
R313
1K
R315
1M
T313
C310
22pF
P3V3
U83C
SN74LV86ANSR
R316
1k
D303
1SS355
T314
R317
47k
C311
0.022uF
P3V3
U81C
SN74LV14ANSR
T315
TS_CH3
PV_CH3
C309
0.1uF
EN_MOTOR3
EN_MOTOR4
R403 680K
R405 C403
R408 680K
C401 150pF
220K 0.047uF
R407 C404 0.1uF
330K
M12V
U401A
NJM4565M
U401B
NJM4565M
C412
0.1uF
R401 47K
CV_CH4
R406 680K
R402 47K
C413
0.1uF
R409
330K
P12V
C402 150pF
R404 680K
T406
T407
P3V3
R410
10 1/4W
R411
10 1/4W
C407
0.1uF
C408
0.1uF
MGND
MF401
MOTOR FADER 5KB
FG1
FG2
T
A
B
P3V3
D401
1SS355
R412 1K
D402
1SS355
short and same length
T412
R414
1M
BTS_CLK
R413
1K
R415
1M
T413
C410
22pF
P3V3
U83D
SN74LV86ANSR
R416
1k
D403
1SS355
T414
R417
47K
C411
0.022uF
P3V3
U81D
SN74LV14ANSR
T415
TS_CH4
PV_CH4
C409
0.1uF

CH-3/CH-4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4
5
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7
A
B
C
D
E
R503 680K
R505 C503
R508 680K
C501 150pF
220K 0.047uF
R507 C504 0.1uF
330K
M12V
U502A
NJM4565M
U502B
NJM4565M
C512
0.1uF
R501 47K
CV_CH5
R502 47K
R506 680K
C513
0.1uF
R509
330K
P12V
C502 150pF
R504 680K
P6V
P5VM
U501 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T501
T502
T503
T504
T505
T516
T508
T509
T510
T511
C506
0.1uF
C505
0.1uF
MGND
T506 T507
P3V3
R510
10 1/4W
R511
10 1/4W
C507
0.1uF
C508
0.1uF
MGND
MF501
MOTOR FADER 5KB
FG1
FG2
P3V3
D501
1SS355
R512 1K
D502
1SS355
T512
short and same length
R514
1M
BTS_CLK
R513
1K
R515
1M
T513
C510
22pF
P3V3
U84A
SN74LV86ANSR
C83
0.1uF
R516
1k
D503
1SS355
T514
R517
47k
C511
0.022uF
P3V3
T515
U81E
SN74LV14ANSR
TS_CH5
PV_CH5
C509
0.1uF
EN_MOTOR5
EN_MOTOR6
R603 680K
R605 C603
R608 680K
C601 150pF
220K 0.047uF
R607 C604 0.1uF
330K
M12V
U601A
NJM4565M
U601B
NJM4565M
C612
0.1uF
R601 47K
CV_CH6
R602 47K
R606 680K
C613
0.1uF
R609
330K
P12V
C602 150pF
R604 680K
T606 T607
P3V3
R610
10 1/4W
R611
10 1/4W
C607
0.1uF
C608
0.1uF
MGND
MF601
MOTOR FADER 5KB
FG1
FG2
P3V3
D601
1SS355
R612 1K
D602
1SS355
T612
short and same length
R614
1M
BTS_CLK
R613
1K
R615
1M
T613
C610
22pF
P3V3
U84B
SN74LV86ANSR
C83
0.1uF
R616
1k
D603
1SS355
T614
R617
47k
C611
0.022uF
P3V3
T615
U81F
SN74LV14ANSR
TS_CH6
PV_CH6
C609
0.1uF

CH-5/CH-6

1
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4
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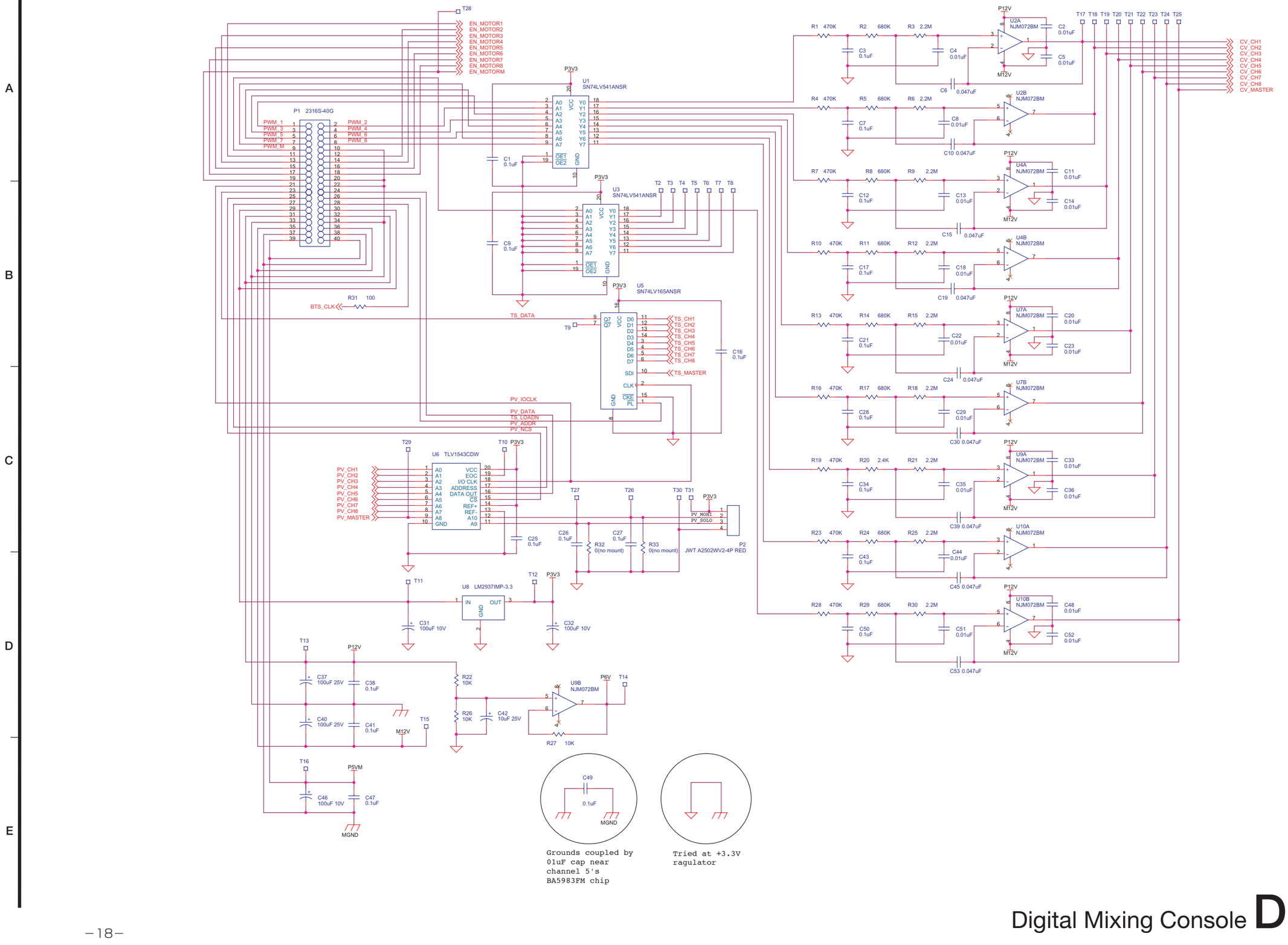
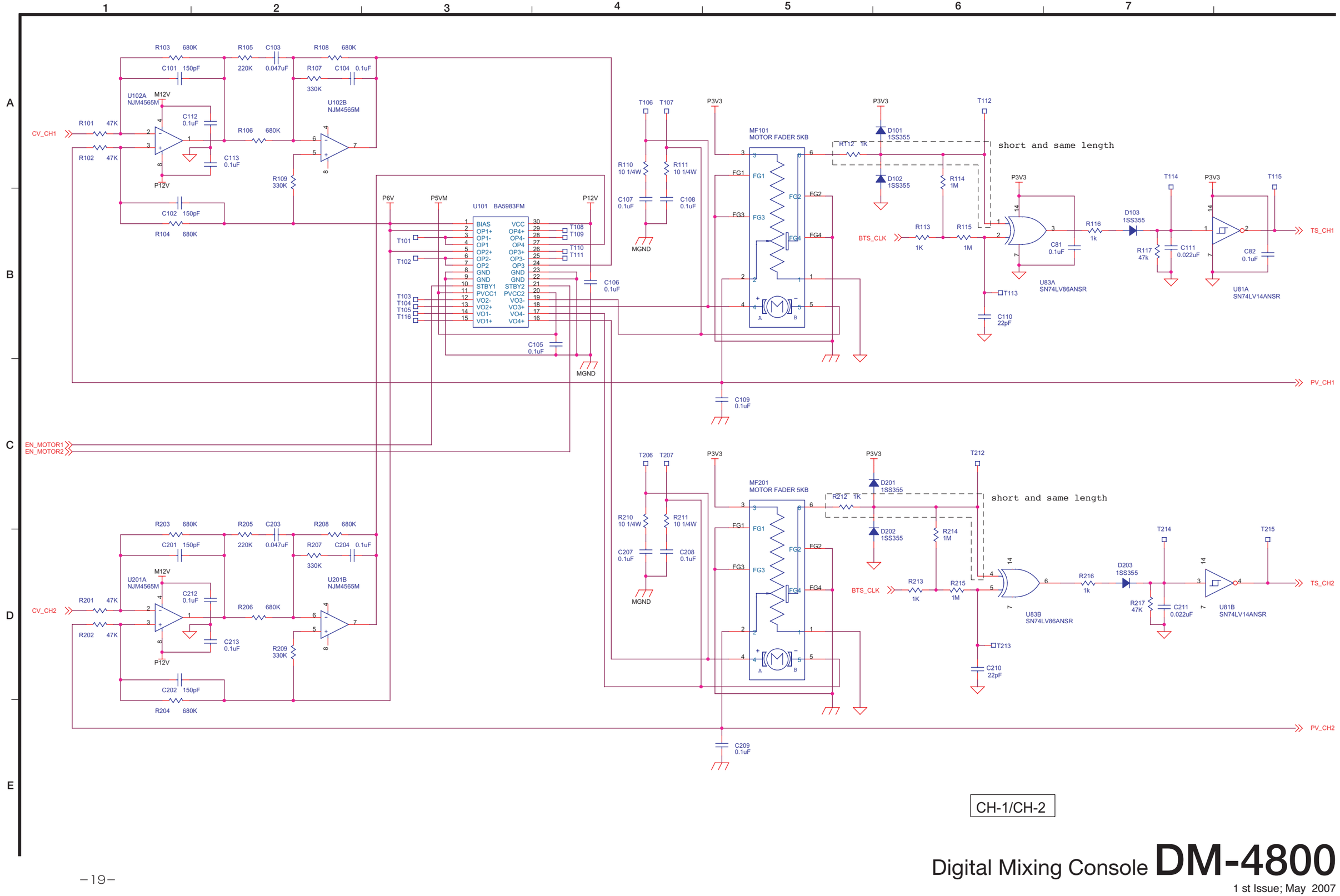
6
7
A
B
C
D
E
R703 680K
R705 C703
R708 680K
C701 150pF
220K 0.047uF
R707 C704 0.1uF
330K
M12V
U702A
NJM4565M
U702B
NJM4565M
C712
0.1uF
R701 47K
CV_CH7
R706 680K
R702 47K
C713
0.1uF
R709
330K
P12V
C702 150pF
R704 680K
P6V
P5VM
U701 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T701
T702
T703
T704
T705
T716
T708
T709
T710
T711
C706
0.1uF
C705
0.1uF
MGND
T706 T707
P3V3
R710
10 1/4W
R711
10 1/4W
C707
0.1uF
C708
0.1uF
MGND
MF701
MOTOR FADER 5KB
FG1
FG2
T
P3V3
D701
1SS355
R712 1K
D702
1SS355
T712
short and same length
R714
1M
R713
1K
R715
1M
BTS_CLK
T713
C710
22pF
P3V3
U84C
SN74LV86ANSR
R716
1k
D703
1SS355
T714
P3V3
T715
R717
47k
C711
0.022uF
C84
0.1uF
U82A
SN74LV14ANSR
TS_CH7
PV_CH7
C709
0.1uF
EN_MOTOR7
EN_MOTOR8
R803 680K
R805 C803
R808 680K
C801 150pF
220K 0.047uF
R807 C804 0.1uF
330K
M12V
U801A
NJM4565M
U801B
NJM4565M
C812
0.1uF
R801 47K
CV_CH8
R806 680K
R802 47K
C813
0.1uF
R809
330K
P12V
C802 150pF
R804 680K
T806 T807
P3V3
R810
10 1/4W
R811
10 1/4W
C807
0.1uF
C808
0.1uF
MGND
MF801
MOTOR FADER 5KB
FG1
FG2
T
P3V3
D801
1SS355
R812 1K
D802
1SS355
T812
short and same length
R814
1M
R813
1K
R815
1M
BTS_CLK
T813
C810
22pF
P3V3
U84D
SN74LV86ANSR
R816
1k
D803
1SS355
T814
P3V3
T815
R817
47K
C811
0.022uF
C84
0.1uF
U82B
SN74LV14ANSR
TS_CH8
PV_CH8
C809
0.1uF
T914
U82C
SN74LV14ANSR
T915
TS_MASTER
U82D
SN74LV14ANSR
T917
U82E
SN74LV14ANSR
T918
U82F
SN74LV14ANSR
T919
CH-7/CH-8


1
2
3
4
5
6
7
A
B
C
D
E
T28
EN_MOTOR1
EN_MOTOR2
EN_MOTOR3
EN_MOTOR4
EN_MOTOR5
EN_MOTOR6
EN_MOTOR7
EN_MOTOR8
EN_MOTORM
P1 2316S-40G
PWM_1
PWM_2
PWM_3
PWM_4
PWM_5
PWM_6
PWM_7
PWM_8
PWM_M
P3V3
U1
SN74LV541ANSR
C1 0.1uF
C9 0.1uF
U3
SN74LV541ANSR
T2 T3 T4 T5 T6 T7 T8
R31 100
BTS_CLK
TS_DATA
T9
U5
SN74LV165ANSR
TS_CH1
TS_CH2
TS_CH3
TS_CH4
TS_CH5
TS_CH6
TS_CH7
TS_CH8
TS_MASTER
C16 0.1uF
PV_IOCLK
PV_DATA
TS_LOADN
PV_ADDR
PV_NCS
T29
T10
U6 TLV1543CDW
PV_CH1
PV_CH2
PV_CH3
PV_CH4
PV_CH5
PV_CH6
PV_CH7
PV_CH8
PV_MASTER
C25 0.1uF
T27
T26
T30
T31
C26 0.1uF
C27 0.1uF
R32 0(no mount)
R33 0(no mount)
PV_MONI
PV_SOLO
P2
JWT A2502WV2-4P RED
T11
U8 LM2937IMP-3.3
IN
OUT
GND
C31 100uF 10V
T12
C32 100uF 10V
T13
P12V
C37 100uF 25V
C38 0.1uF
C40 100uF 25V
C41 0.1uF
M12V
T15
R22 10K
R26 10K
C42 10uF 25V
U9B
NJM072BM
P6V
T14
R27 10K
T16
P5VM
C46 100uF 10V
C47 0.1uF
MGND
C49
0.1uF
MGND
Grounds coupled by
01uF cap near
channel 5's
BA5983FM chip
Tried at +3.3V
ragulator
R1 470K
R2 680K
R3 2.2M
C3 0.1uF
C4 0.01uF
C6 0.047uF
U2A
NJM072BM
C2 0.01uF
C5 0.01uF
M12V
T17 T18 T19 T20 T21 T22 T23 T24 T25
CV_CH1
CV_CH2
CV_CH3
CV_CH4
CV_CH5
CV_CH6
CV_CH7
CV_CH8
CV_MASTER
R4 470K
R5 680K
R6 2.2M
C7 0.1uF
C8 0.01uF
C10 0.047uF
U2B
NJM072BM
R7 470K
R8 680K
R9 2.2M
C12 0.1uF
C13 0.01uF
C15 0.047uF
U4A
NJM072BM
C11 0.01uF
C14 0.01uF
R10 470K
R11 680K
R12 2.2M
C17 0.1uF
C18 0.01uF
C19 0.047uF
U4B
NJM072BM
R13 470K
R14 680K
R15 2.2M
C21 0.1uF
C22 0.01uF
C24 0.047uF
U7A
NJM072BM
C20 0.01uF
C23 0.01uF
R16 470K
R17 680K
R18 2.2M
C28 0.1uF
C29 0.01uF
C30 0.047uF
U7B
NJM072BM
R19 470K
R20 2.4K
R21 2.2M
C34 0.1uF
C35 0.01uF
C39 0.047uF
U9A
NJM072BM
C33 0.01uF
C36 0.01uF
R23 470K
R24 680K
R25 2.2M
C43 0.1uF
C44 0.01uF
C45 0.047uF
U10A
NJM072BM
R28 470K
R29 680K
R30 2.2M
C50 0.1uF
C51 0.01uF
C53 0.047uF
U10B
NJM072BM
C48 0.01uF
C52 0.01uF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2
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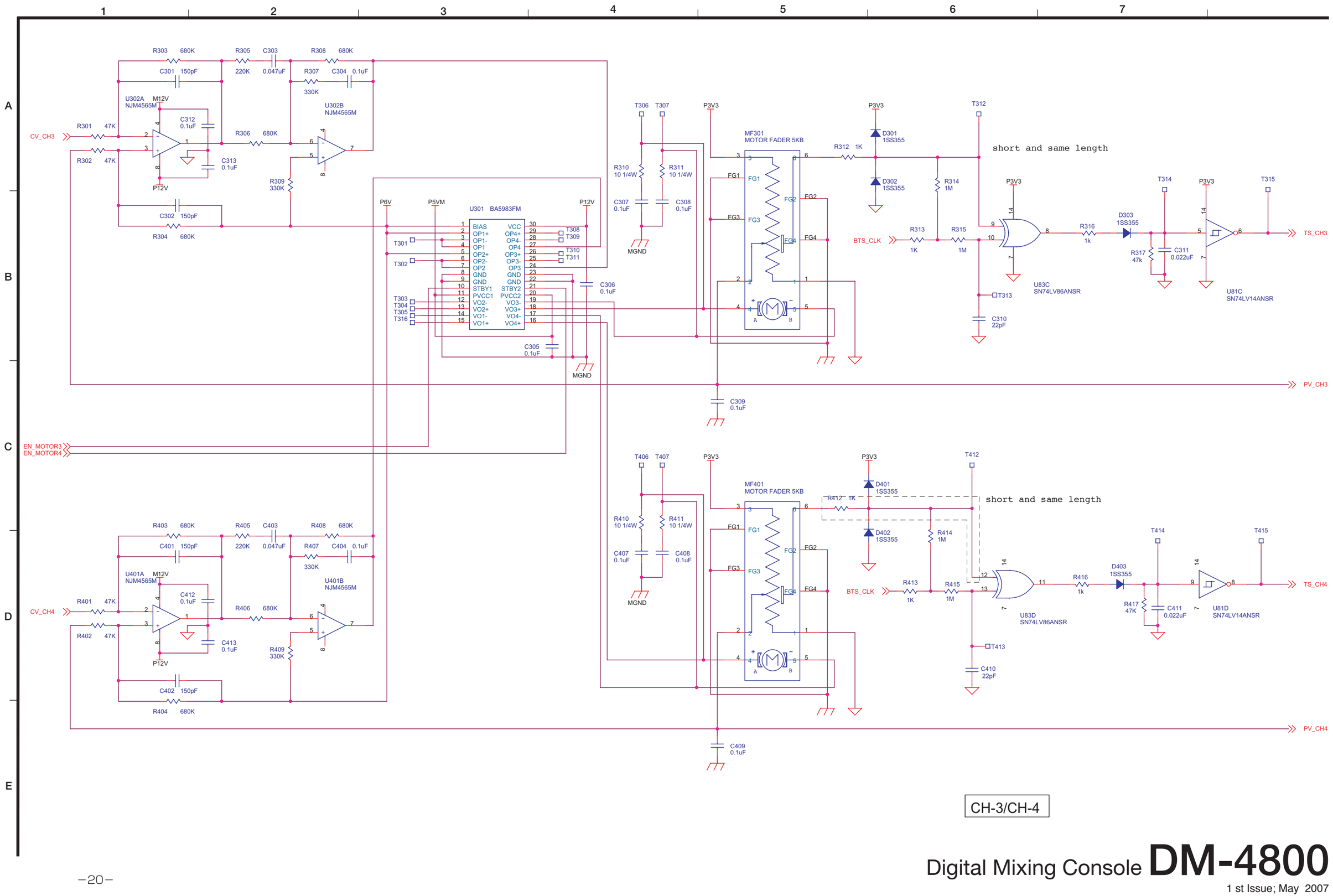
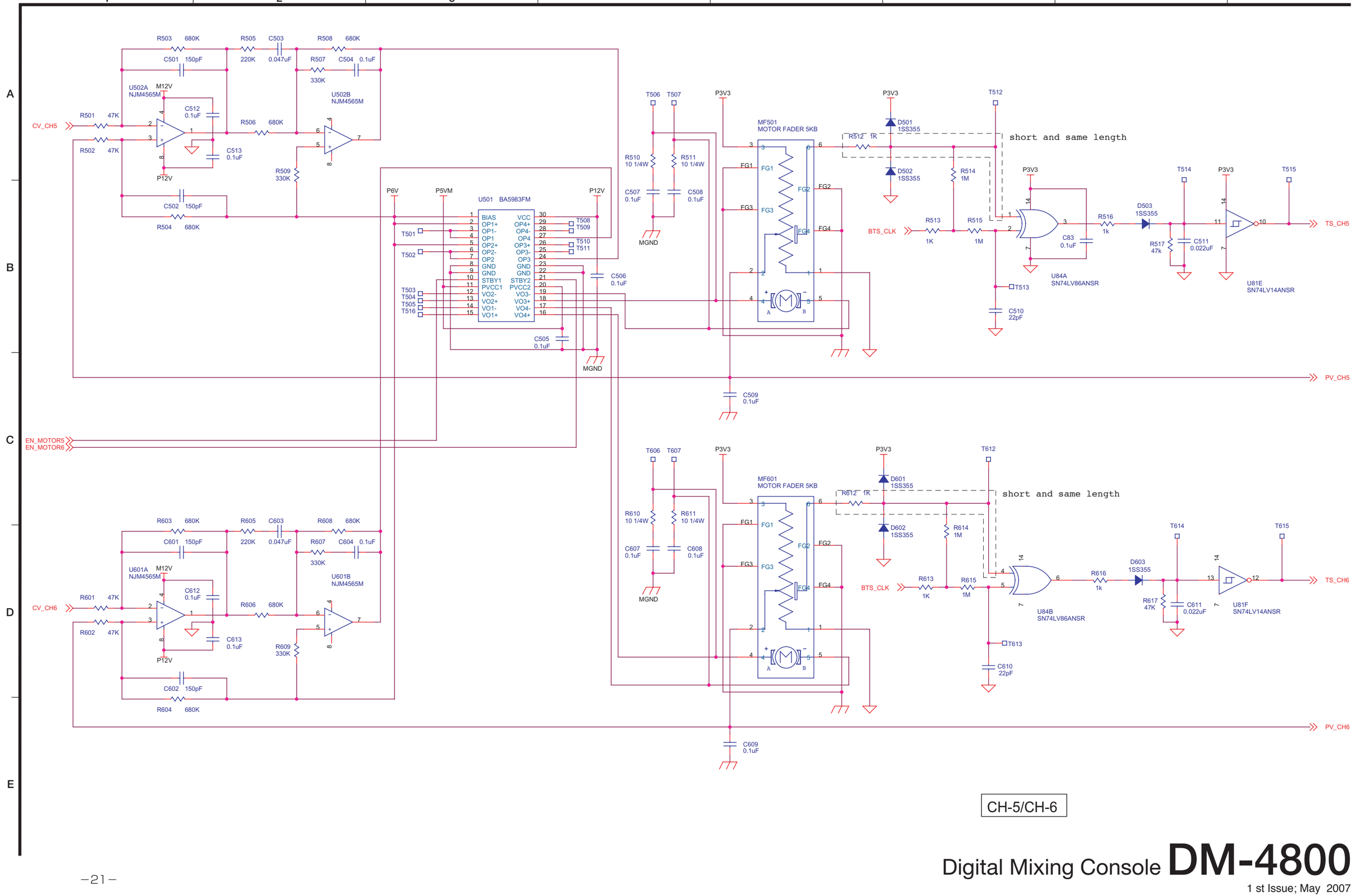
5
6
7
A
B
C
D
E
R103 680K
R105 C103
R108 680K
C101 150pF
220K 0.047uF
R107 C104 0.1uF
330K
U102A NJM4565M
M12V
U102B NJM4565M
C112 0.1uF
R101 47K
CV_CH1
R106 680K
R102 47K
C113 0.1uF
R109 330K
P12V
C102 150pF
R104 680K
P6V
P5VM
U101 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T101
T102
T103
T104
T105
T116
T108
T109
T110
T111
C106 0.1uF
C105 0.1uF
MGND
T106
T107
R110 10 1/4W
R111 10 1/4W
C107 0.1uF
C108 0.1uF
MGND
P3V3
MF101
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
C109 0.1uF
P3V3
D101 1SS355
R112 1K
D102 1SS355
short and same length
T112
R114 1M
R113 1K
R115 1M
BTS_CLK
T113
C110 22pF
P3V3
U83A SN74LV86ANSR
R116 1k
C81 0.1uF
D103 1SS355
T114
T115
R117 47k
C111 0.022uF
U81A SN74LV14ANSR
C82 0.1uF
TS_CH1
PV_CH1
EN_MOTOR1
EN_MOTOR2
R203 680K
R205 C203
R208 680K
C201 150pF
220K 0.047uF
R207 C204 0.1uF
330K
U201A NJM4565M
M12V
U201B NJM4565M
C212 0.1uF
R201 47K
CV_CH2
R206 680K
R202 47K
C213 0.1uF
R209 330K
P12V
C202 150pF
R204 680K
T206
T207
R210 10 1/4W
R211 10 1/4W
C207 0.1uF
C208 0.1uF
MGND
P3V3
MF201
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
C209 0.1uF
P3V3
D201 1SS355
R212 1K
D202 1SS355
short and same length
T212
R214 1M
R213 1K
R215 1M
BTS_CLK
T213
C210 22pF
P3V3
U83B SN74LV86ANSR
R216 1k
D203 1SS355
T214
T215
R217 47k
C211 0.022uF
U81B SN74LV14ANSR
TS_CH2
PV_CH2

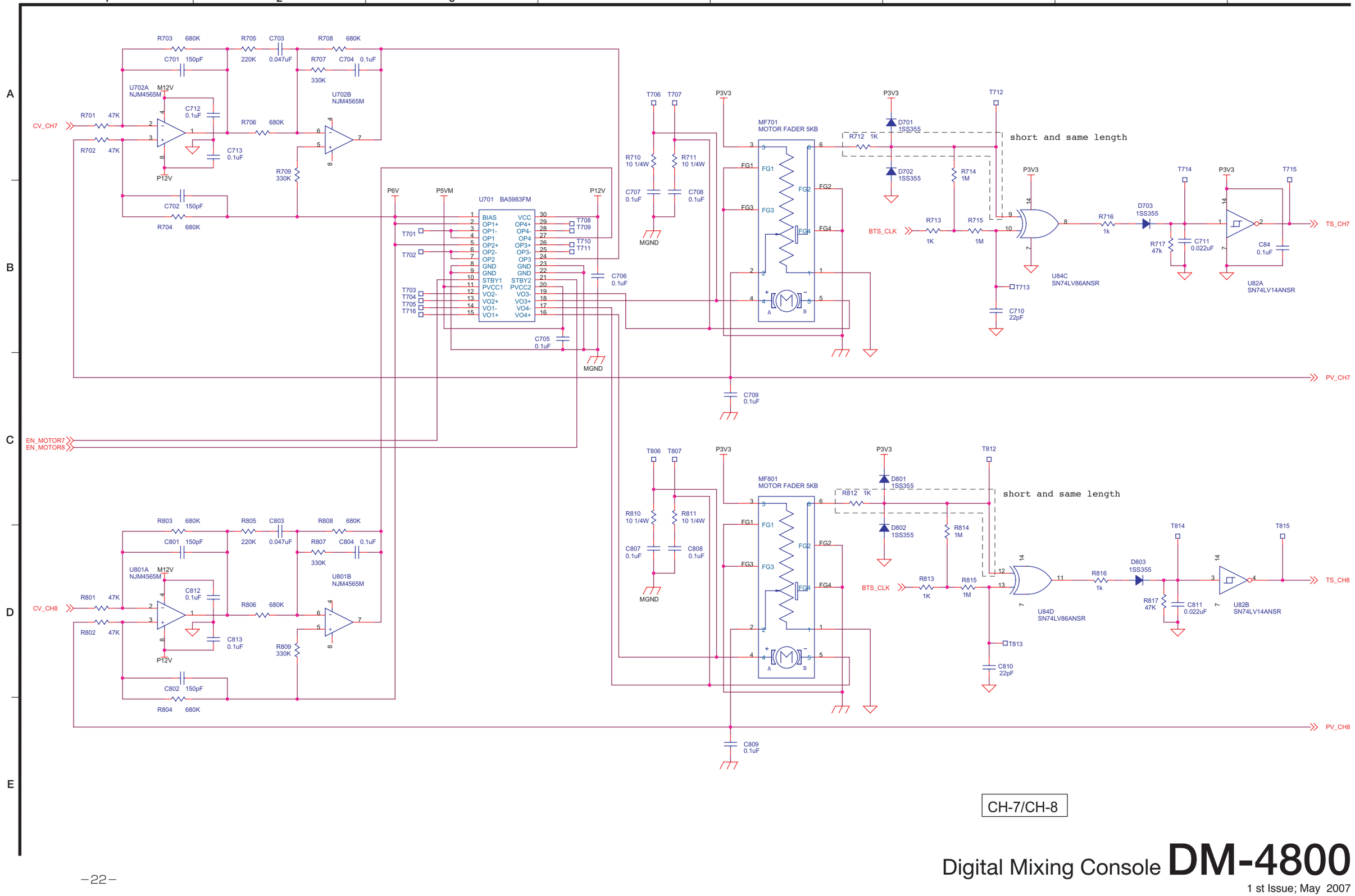
CH-1/CH-2


1
2
3
4
5
6
7
A
B
C
D
E
R303 680K
R305 C303
R308 680K
C301 150pF
220K 0.047uF
R307 C304 0.1uF
330K
U302A M12V
NJM4565M
U302B
NJM4565M
C312 0.1uF
R301 47K
CV_CH3
R306 680K
R302 47K
C313 0.1uF
R309 330K
P12V
C302 150pF
R304 680K
P6V
P5VM
U301 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T301
T302
T303
T304
T305
T316
T308
T309
T310
T311
C306 0.1uF
C305 0.1uF
MGND
T306
T307
P3V3
R310 10 1/4W
R311 10 1/4W
C307 0.1uF
C308 0.1uF
MGND
MF301
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
R312 1K
D301 1SS355
D302 1SS355
P3V3
T312
short and same length
R314 1M
R313 1K
R315 1M
BTS_CLK
P3V3
U83C
SN74LV86ANSR
T313
C310 22pF
R316 1k
D303 1SS355
T314
P3V3
T315
R317 47k
C311 0.022uF
U81C
SN74LV14ANSR
TS_CH3
PV_CH3
EN_MOTOR3
EN_MOTOR4
R403 680K
R405 C403
R408 680K
C401 150pF
220K 0.047uF
R407 C404 0.1uF
330K
U401A M12V
NJM4565M
U401B
NJM4565M
C412 0.1uF
R401 47K
CV_CH4
R406 680K
R402 47K
C413 0.1uF
R409 330K
P12V
C402 150pF
R404 680K
T406
T407
P3V3
R410 10 1/4W
R411 10 1/4W
C407 0.1uF
C408 0.1uF
MGND
MF401
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
R412 1K
D401 1SS355
D402 1SS355
P3V3
T412
short and same length
R414 1M
R413 1K
R415 1M
BTS_CLK
P3V3
U83D
SN74LV86ANSR
T413
C410 22pF
R416 1k
D403 1SS355
T414
P3V3
T415
R417 47k
C411 0.022uF
U81D
SN74LV14ANSR
TS_CH4
PV_CH4
C309 0.1uF
C409 0.1uF

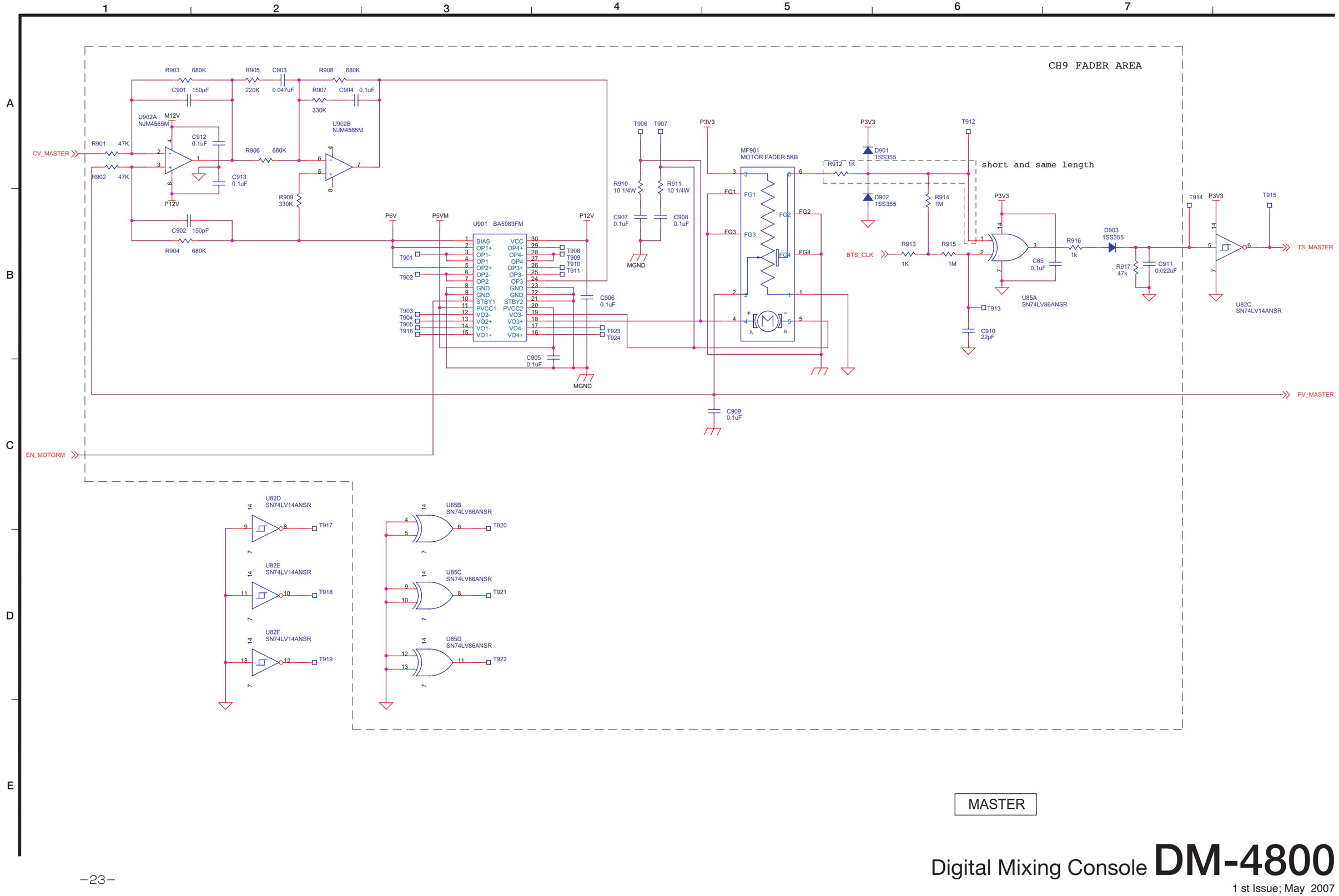
CH-3/CH-4


1
2
3
4
5
6
7
A
B
C
D
E
R503 680K
C501 150pF
R505 220K
C503 0.047uF
R508 680K
R507 330K
C504 0.1uF
U502A NJM4565M
M12V
C512 0.1uF
U502B NJM4565M
CV_CH5
R501 47K
R502 47K
R506 680K
C513 0.1uF
R509 330K
P12V
C502 150pF
R504 680K
P6V
P5VM
U501 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T501
T502
T503
T504
T505
T516
T508
T509
T510
T511
C506 0.1uF
C505 0.1uF
MGND
T506
T507
R510 10 1/4W
R511 10 1/4W
C507 0.1uF
C508 0.1uF
MGND
P3V3
MF501
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
C509 0.1uF
P3V3
D501 1SS355
R512 1K
D502 1SS355
short and same length
T512
R514 1M
BTS_CLK
R513 1K
R515 1M
T513
C510 22pF
P3V3
U84A SN74LV86ANSR
C83 0.1uF
R516 1k
D503 1SS355
T514
R517 47k
C511 0.022uF
P3V3
U81E SN74LV14ANSR
T515
TS_CH5
PV_CH5
EN_MOTOR5
EN_MOTOR6
R603 680K
C601 150pF
R605 220K
C603 0.047uF
R608 680K
R607 330K
C604 0.1uF
U601A NJM4565M
M12V
C612 0.1uF
U601B NJM4565M
CV_CH6
R601 47K
R602 47K
R606 680K
C613 0.1uF
R609 330K
P12V
C602 150pF
R604 680K
T606
T607
R610 10 1/4W
R611 10 1/4W
C607 0.1uF
C608 0.1uF
MGND
P3V3
MF601
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
C609 0.1uF
P3V3
D601 1SS355
R612 1K
D602 1SS355
short and same length
T612
R614 1M
BTS_CLK
R613 1K
R615 1M
T613
C610 22pF
P3V3
U84B SN74LV86ANSR
R616 1k
D603 1SS355
T614
R617 47K
C611 0.022uF
P3V3
U81F SN74LV14ANSR
T615
TS_CH6
PV_CH6

CH-5/CH-6


1
2
3
4
5
6
7
A
B
C
D
E
R703 680K
C701 150pF
R705 220K
C703 0.047uF
R708 680K
R707 330K
C704 0.1uF
U702A NJM4565M
M12V
U702B NJM4565M
C712 0.1uF
R706 680K
R701 47K
CV_CH7
R702 47K
C713 0.1uF
P12V
R709 330K
C702 150pF
R704 680K
P6V
P5VM
U701 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T701
T702
T703
T704
T705
T716
T708
T709
T710
T711
C706 0.1uF
C705 0.1uF
MGND
T706
T707
R710 10 1/4W
R711 10 1/4W
C707 0.1uF
C708 0.1uF
MGND
P3V3
MF701
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
C709 0.1uF
P3V3
D701 1SS355
R712 1K
D702 1SS355
short and same length
T712
R714 1M
R713 1K
R715 1M
BTS_CLK
P3V3
U84C SN74LV86ANSR
T713
C710 22pF
R716 1k
D703 1SS355
T714
R717 47k
C711 0.022uF
P3V3
U82A SN74LV14ANSR
T715
C84 0.1uF
TS_CH7
PV_CH7
EN_MOTOR7
EN_MOTOR8
R803 680K
C801 150pF
R805 220K
C803 0.047uF
R808 680K
R807 330K
C804 0.1uF
U801A NJM4565M
M12V
U801B NJM4565M
C812 0.1uF
R806 680K
R801 47K
CV_CH8
R802 47K
C813 0.1uF
P12V
R809 330K
C802 150pF
R804 680K
T806
T807
R810 10 1/4W
R811 10 1/4W
C807 0.1uF
C808 0.1uF
MGND
P3V3
MF801
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
C809 0.1uF
P3V3
D801 1SS355
R812 1K
D802 1SS355
short and same length
T812
R814 1M
R813 1K
R815 1M
BTS_CLK
P3V3
U84D SN74LV86ANSR
T813
C810 22pF
R816 1k
D803 1SS355
T814
R817 47k
C811 0.022uF
P3V3
U82B SN74LV14ANSR
T815
TS_CH8
PV_CH8

CH-7/CH-8


CH9 FADER AREA
CV_MASTER
EN_MOTORM
PV_MASTER
TS_MASTER
BTS_CLK
R901 47K
R902 47K
R903 680K
R904 680K
R905 220K
R906 680K
R907 330K
R908 680K
R909 330K
C901 150pF
C902 150pF
C903 0.047uF
C904 0.1uF
C912 0.1uF
C913 0.1uF
U902A NJM4565M
U902B NJM4565M
M12V
P12V
P6V
P5VM
P3V3
U901 BA5983FM
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T901
T902
T903
T904
T905
T916
T908
T909
T910
T911
T923
T924
C905 0.1uF
C906 0.1uF
C907 0.1uF
C908 0.1uF
C909 0.1uF
R910 10 1/4W
R911 10 1/4W
T906
T907
MGND
MF901
MOTOR FADER 5KB
FG1
FG2
FG3
FG4
R912 1K
D901 1SS355
D902 1SS355
short and same length
R913 1K
R914 1M
R915 1M
R916 1k
C85 0.1uF
C910 22pF
T912
T913
U85A
SN74LV86ANSR
D903 1SS355
R917 47k
C911 0.022uF
T914
T915
U82C
SN74LV14ANSR
U82D
SN74LV14ANSR
T917
U82E
SN74LV14ANSR
T918
U82F
SN74LV14ANSR
T919
U85B
SN74LV86ANSR
T920
U85C
SN74LV86ANSR
T921
U85D
SN74LV86ANSR
T922

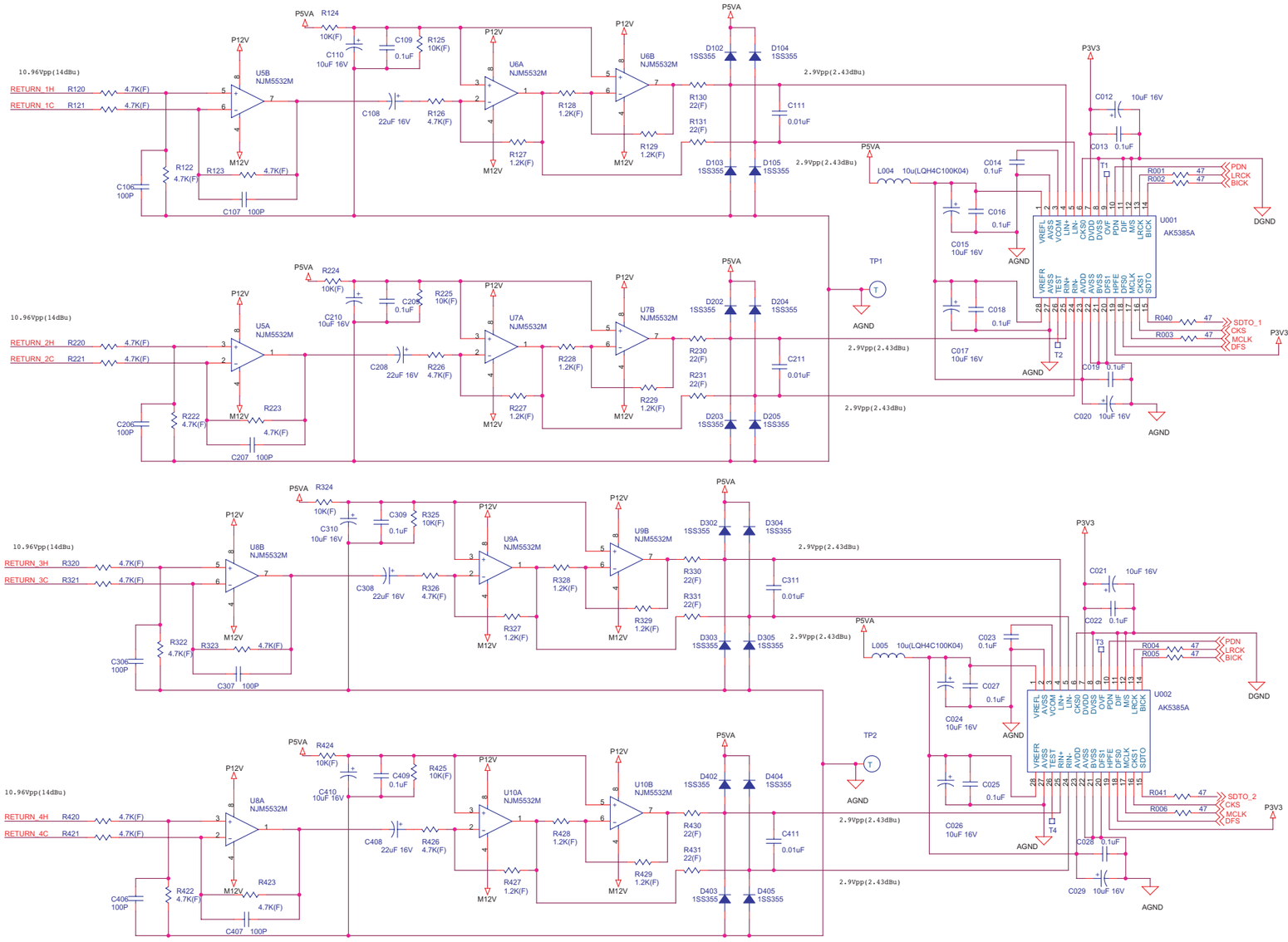
MASTER

INPUT
1ch(9ch)

INPUT
2ch(10ch)

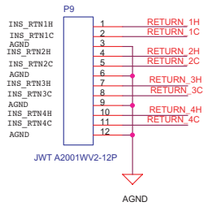
INPUT
3ch(11ch)

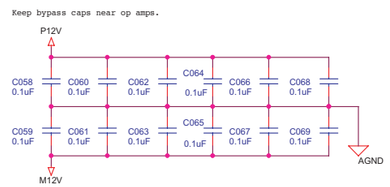
INPUT
4ch(12ch)

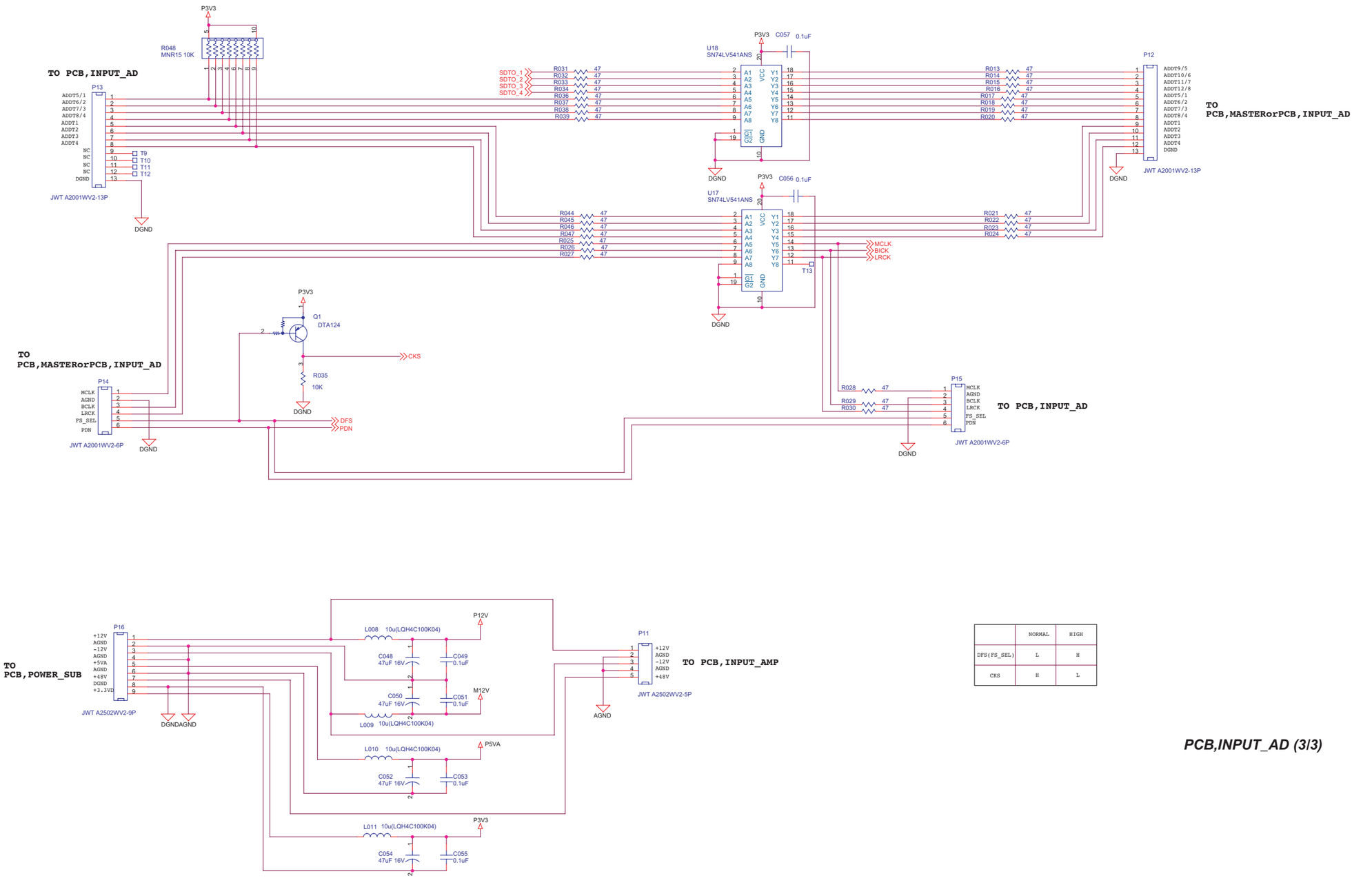


PCB,INPUT_AD (1/3)

TO PCB,INPUT_AMP

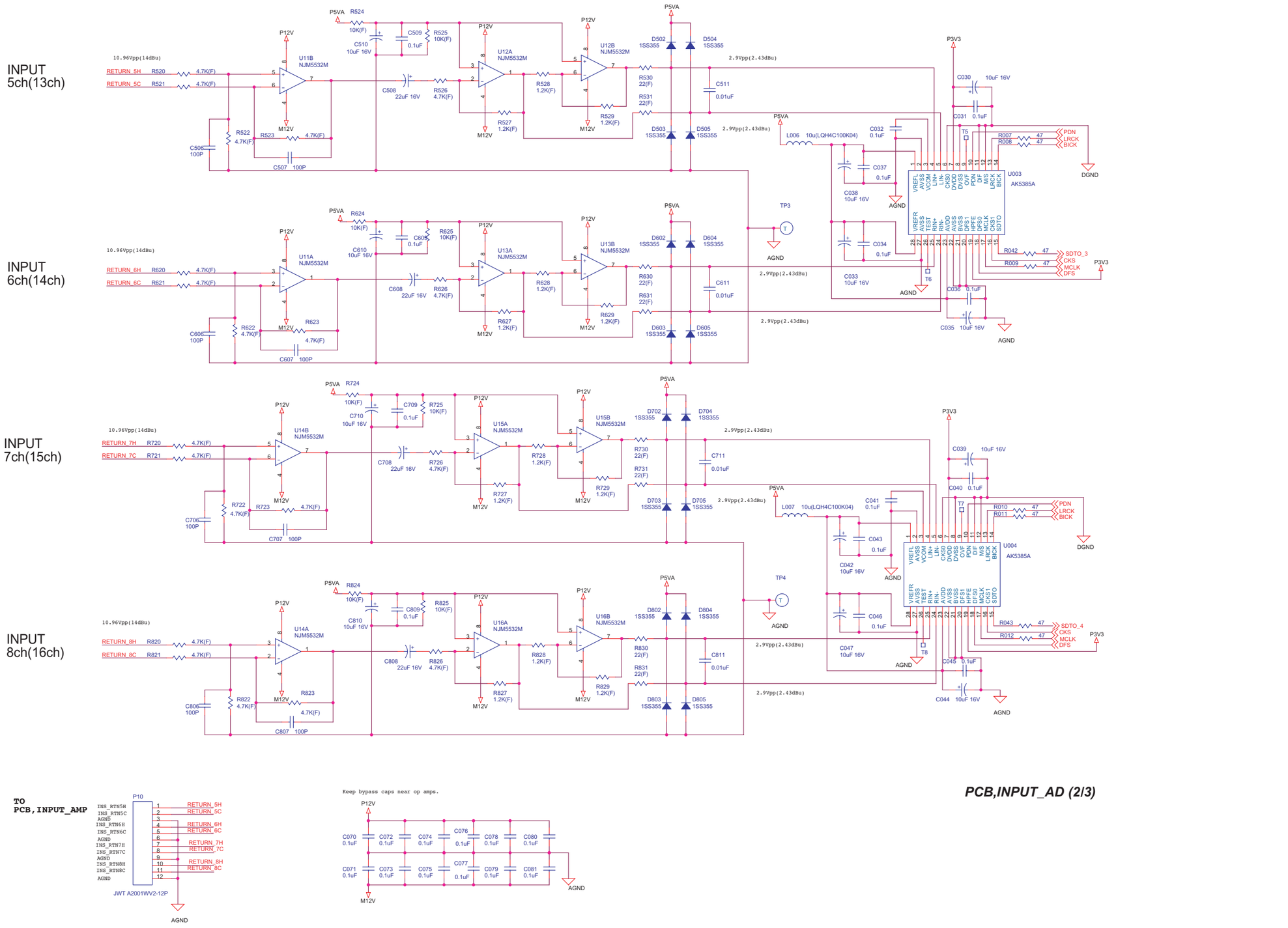




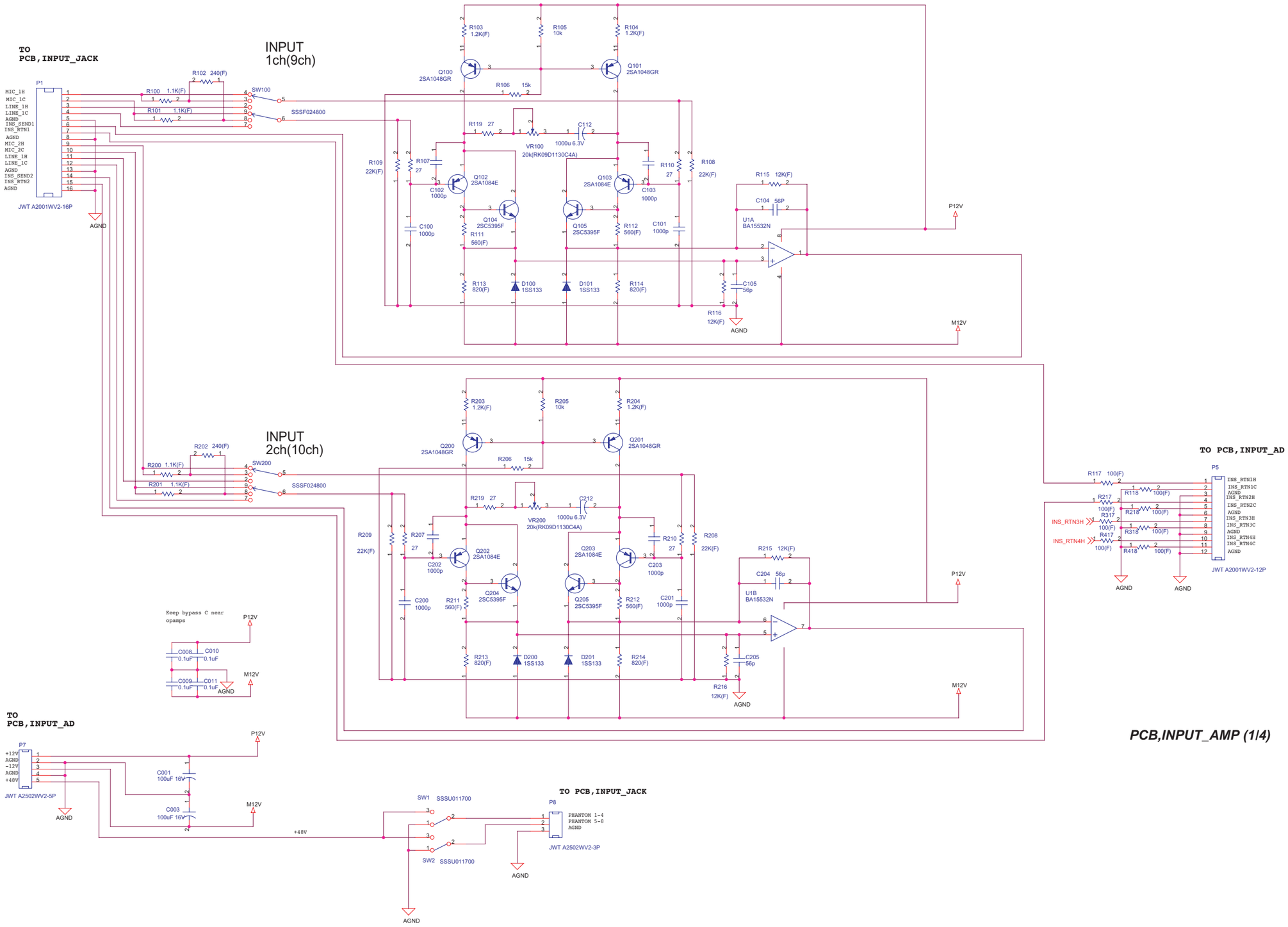


	NORMAL	HIGH
DFS(FS_SEL)	L	H
CKS	H	L

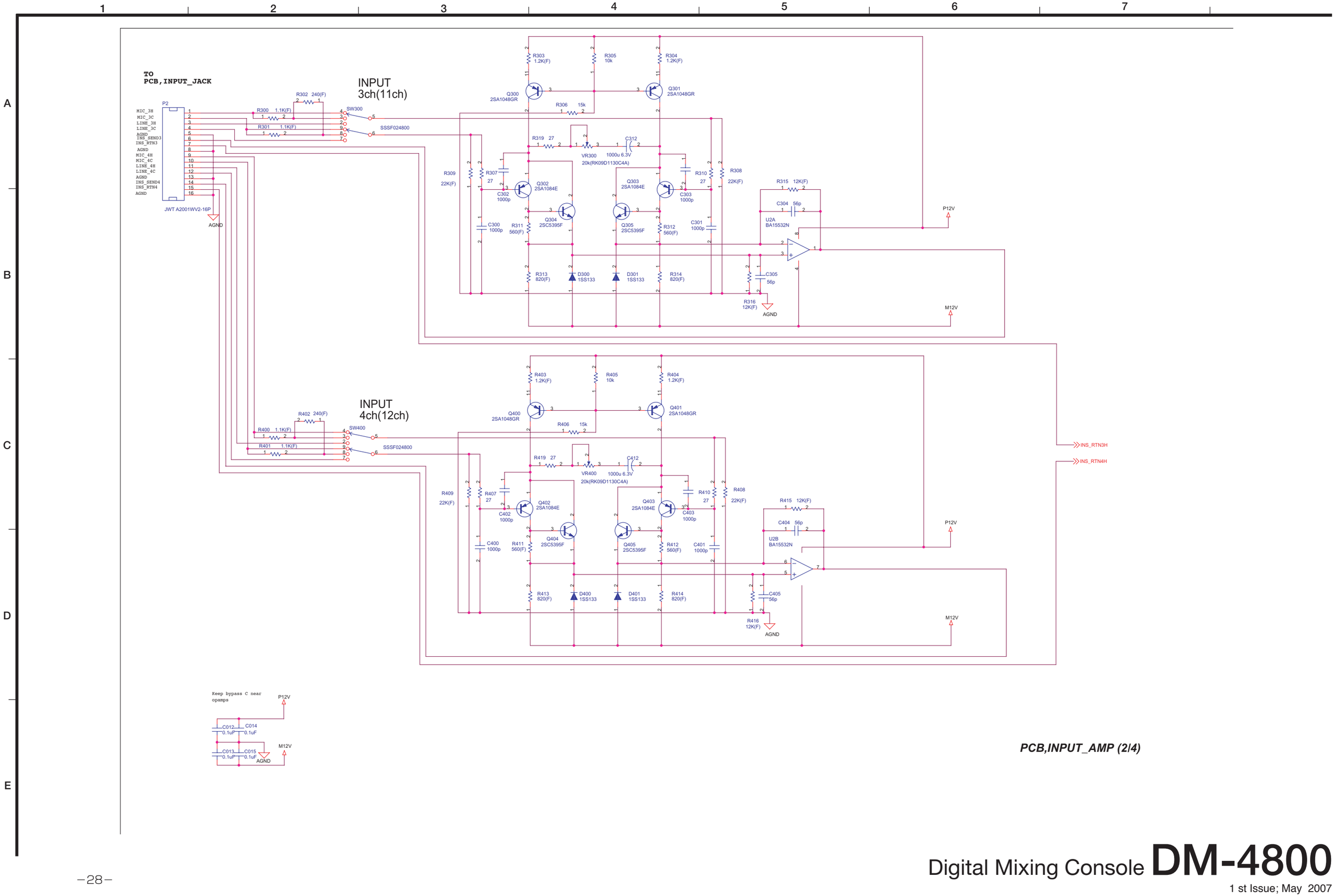
PCB,INPUT_AD (3/3)



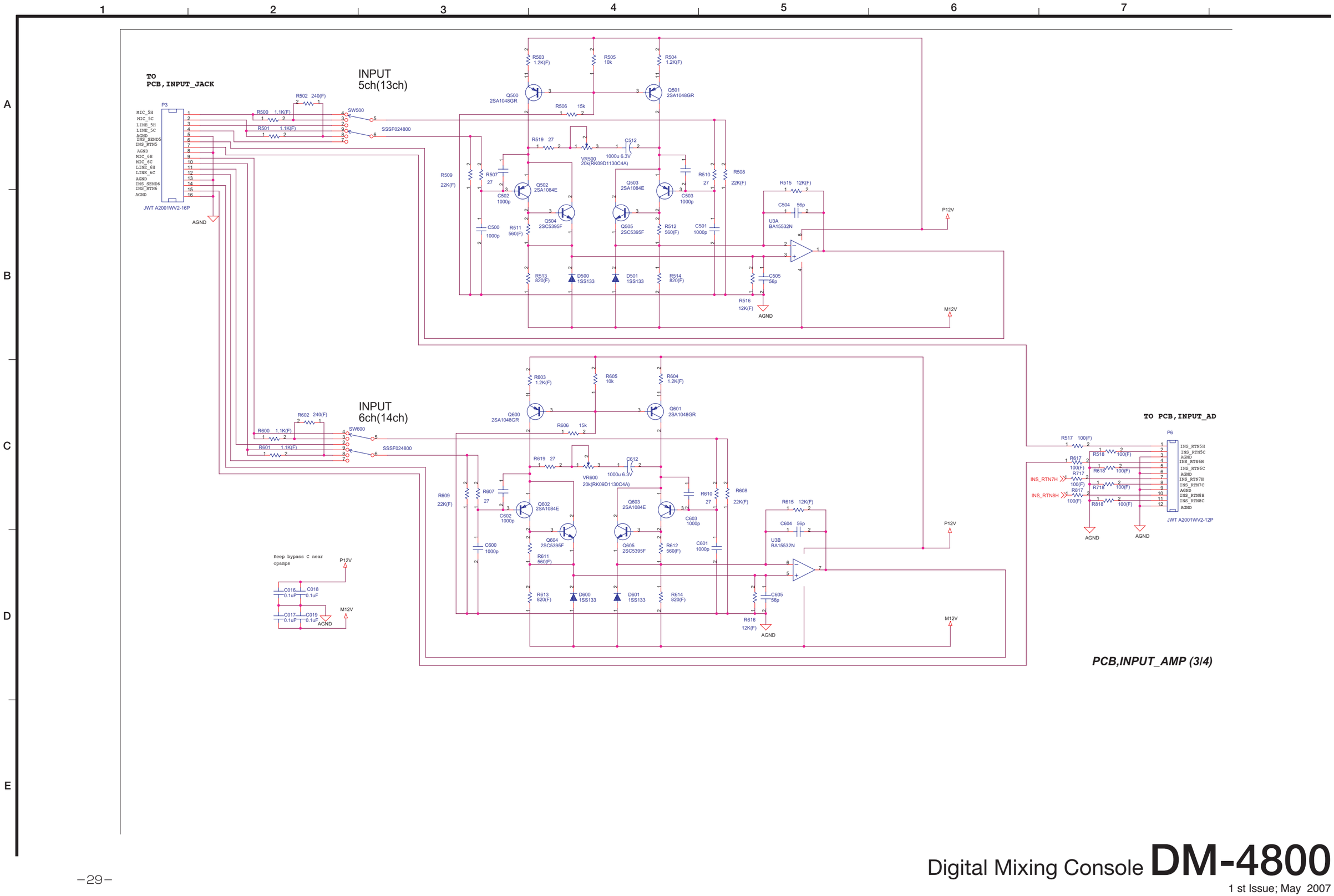
PCB,INPUT_AD (2/3)



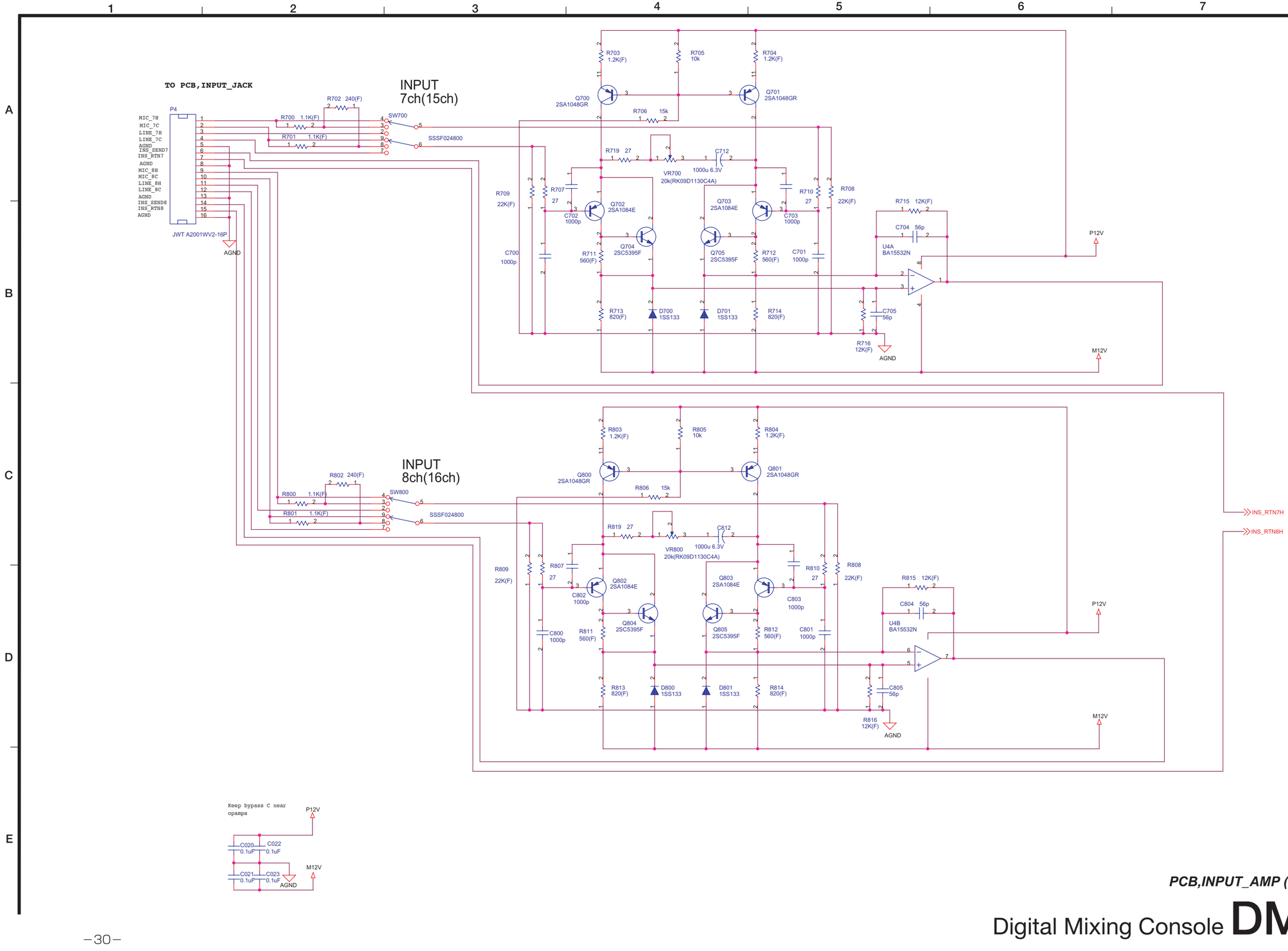
PCB,INPUT_AMP (1/4)



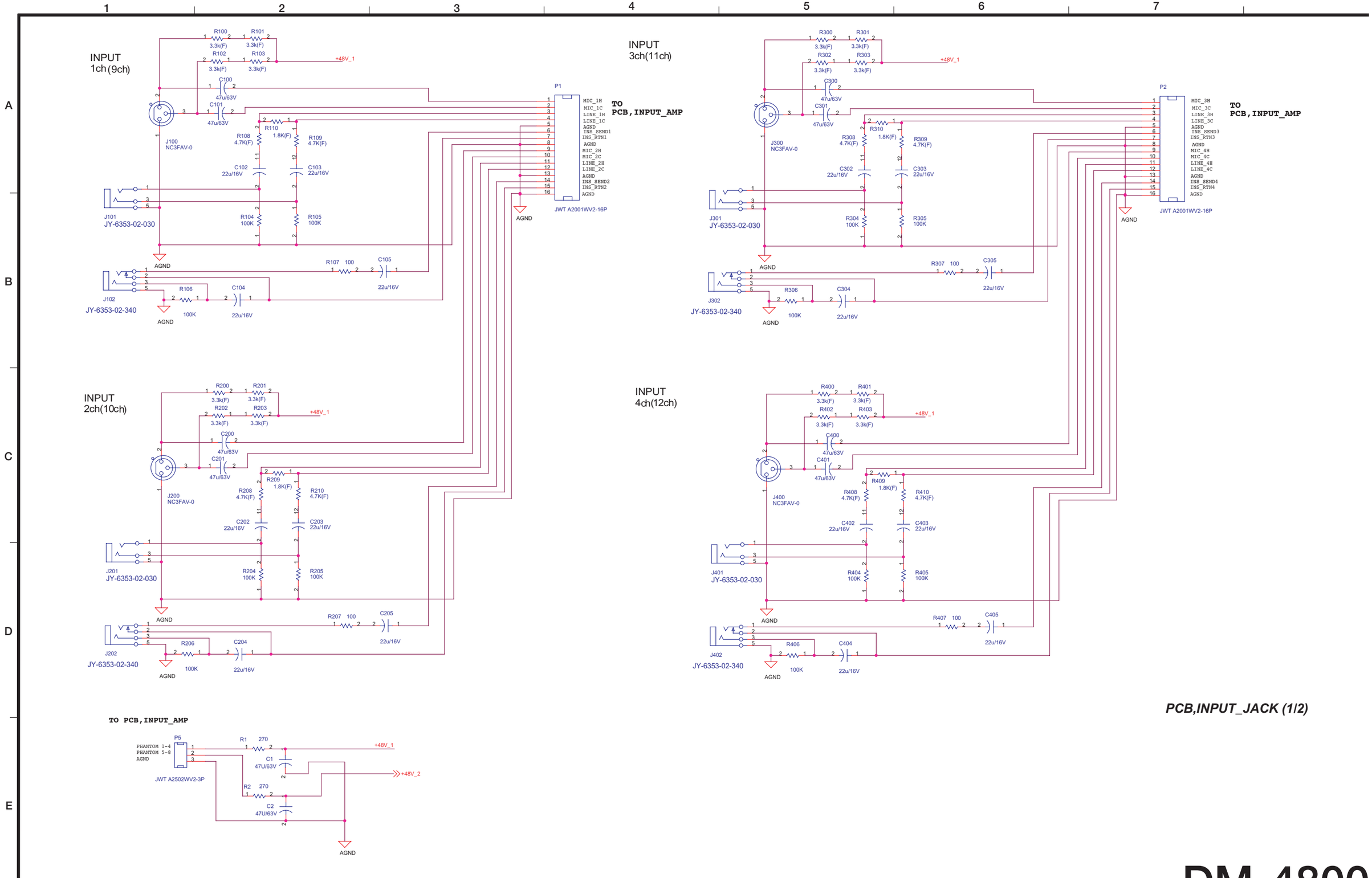
PCB,INPUT_AMP (2/4)



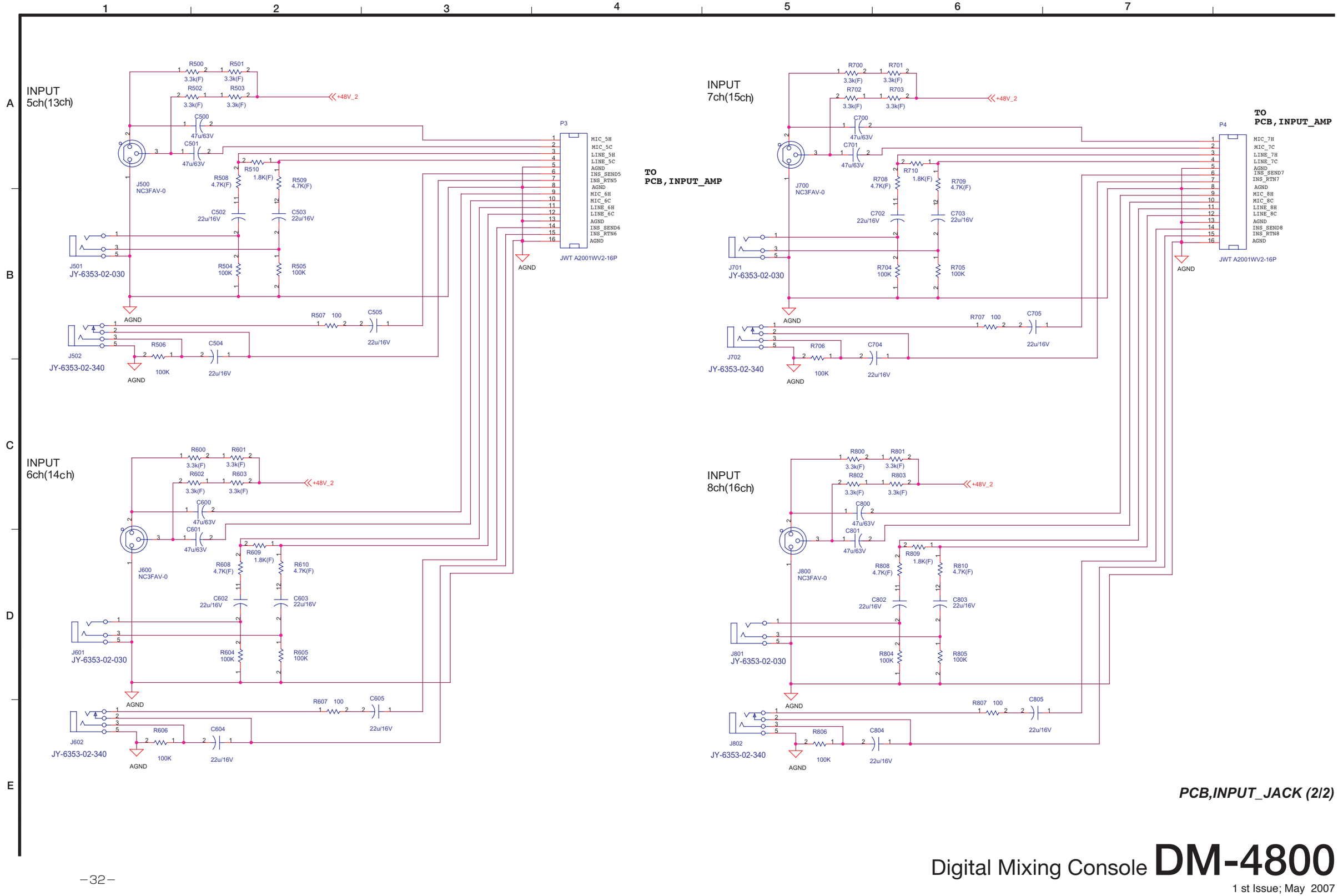
PCB,INPUT_AMP (3/4)



PCB,INPUT_AMP (4/4)



PCB,INPUT_JACK (1/2)



PCB,INPUT_JACK (2/2)

Digital Mixing Console **DM-4800**

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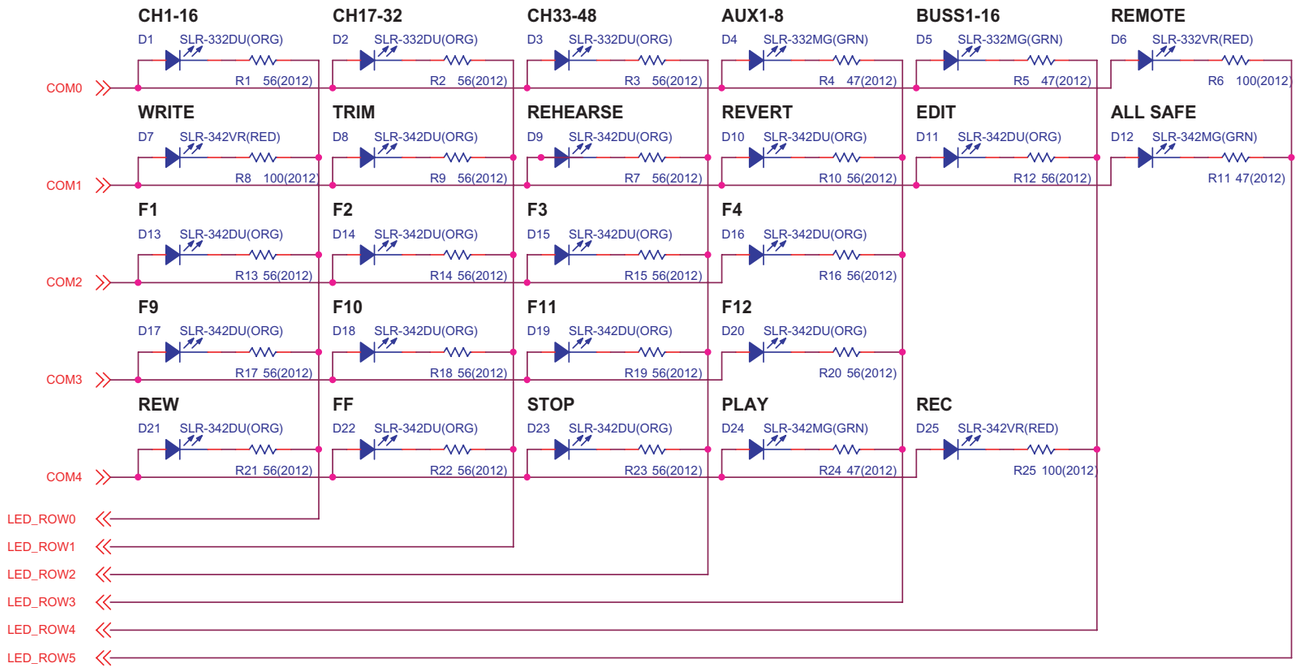


from PCB MONITOR

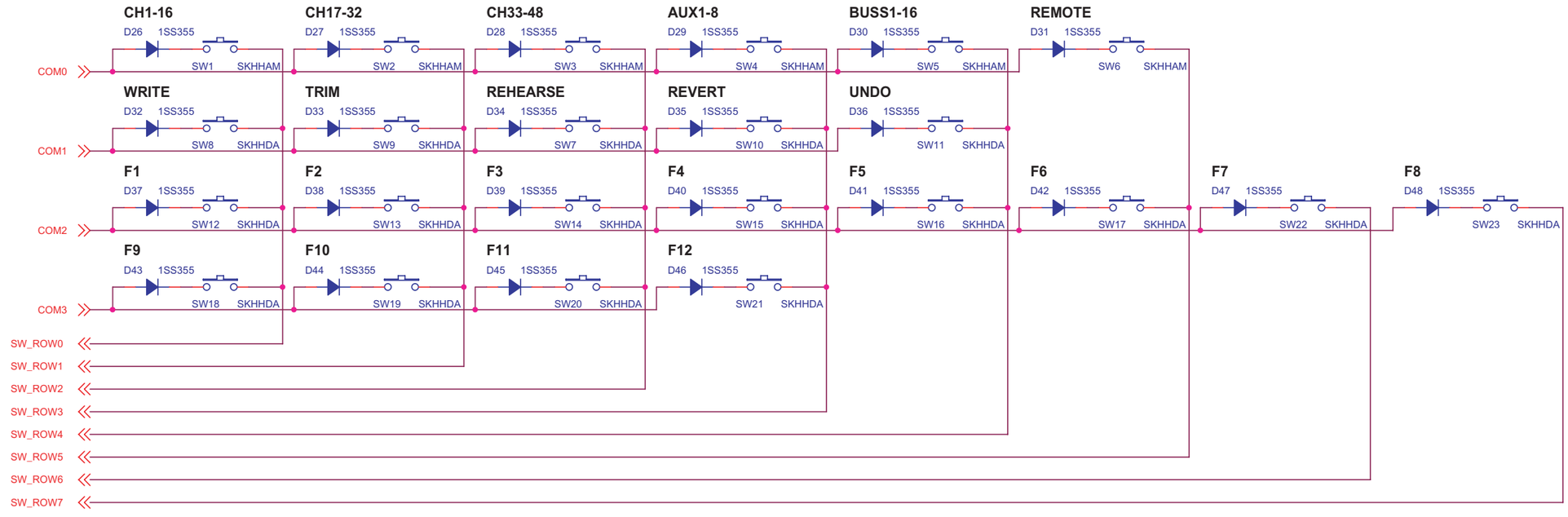
P1
HARNESS ASSY,LAY-MON1

1	COM0	COM0
2	COM1	COM1
3	COM2	COM2
4	COM3	COM3
5	COM4	COM4

to PCB MONITOR

P2
HARNESS ASSY,LAY-MON2

1	LED_ROW0	LED_ROW0
2	LED_ROW1	LED_ROW1
3	LED_ROW2	LED_ROW2
4	LED_ROW3	LED_ROW3
5	LED_ROW4	LED_ROW4
6	LED_ROW5	LED_ROW5
7	SW_ROW0	SW_ROW0
8	SW_ROW1	SW_ROW1
9	SW_ROW2	SW_ROW2
10	SW_ROW3	SW_ROW3
11	SW_ROW4	SW_ROW4
12	SW_ROW5	SW_ROW5
13	SW_ROW6	SW_ROW6
14	SW_ROW7	SW_ROW7



Digital Mixing Console **DM-4800**

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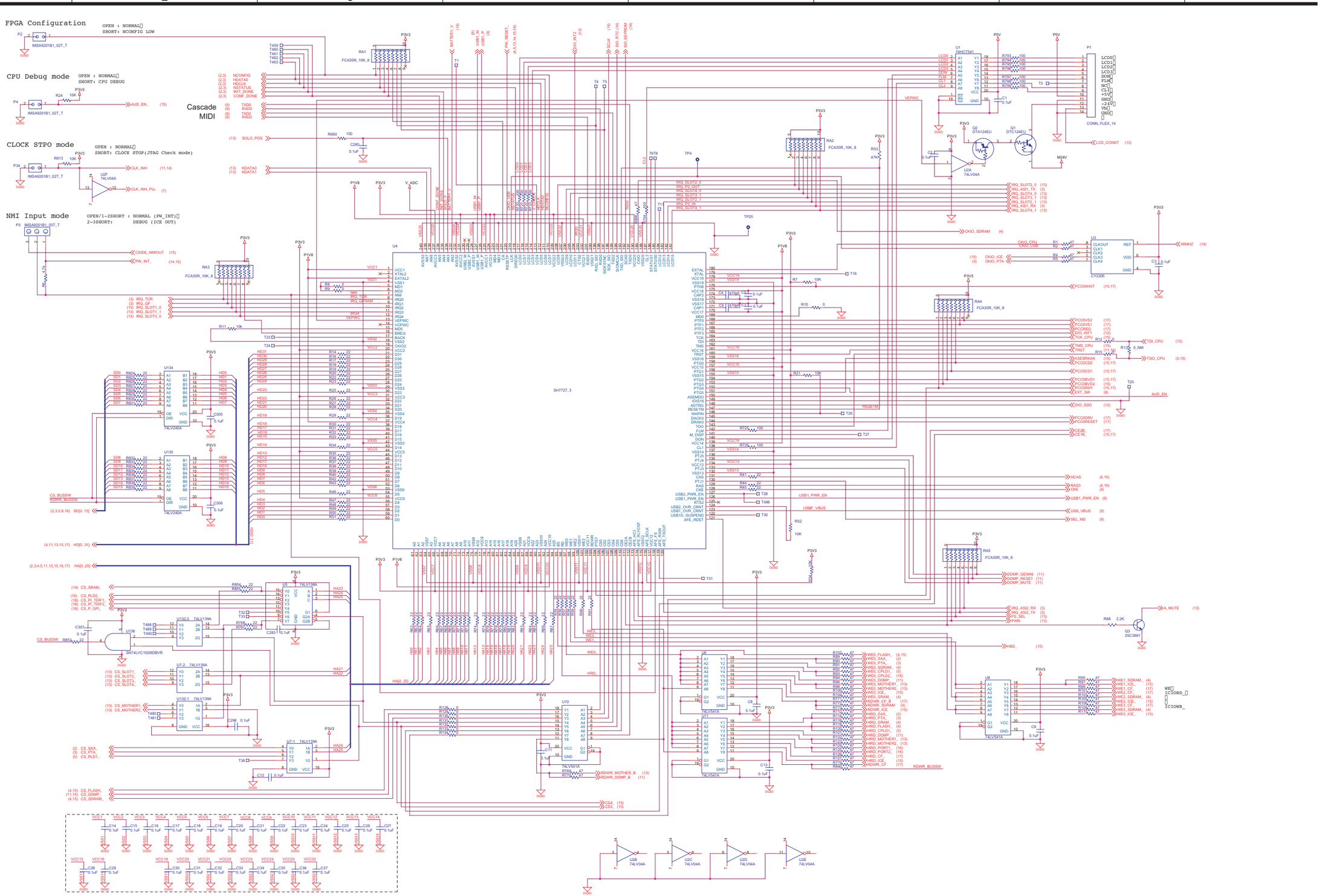
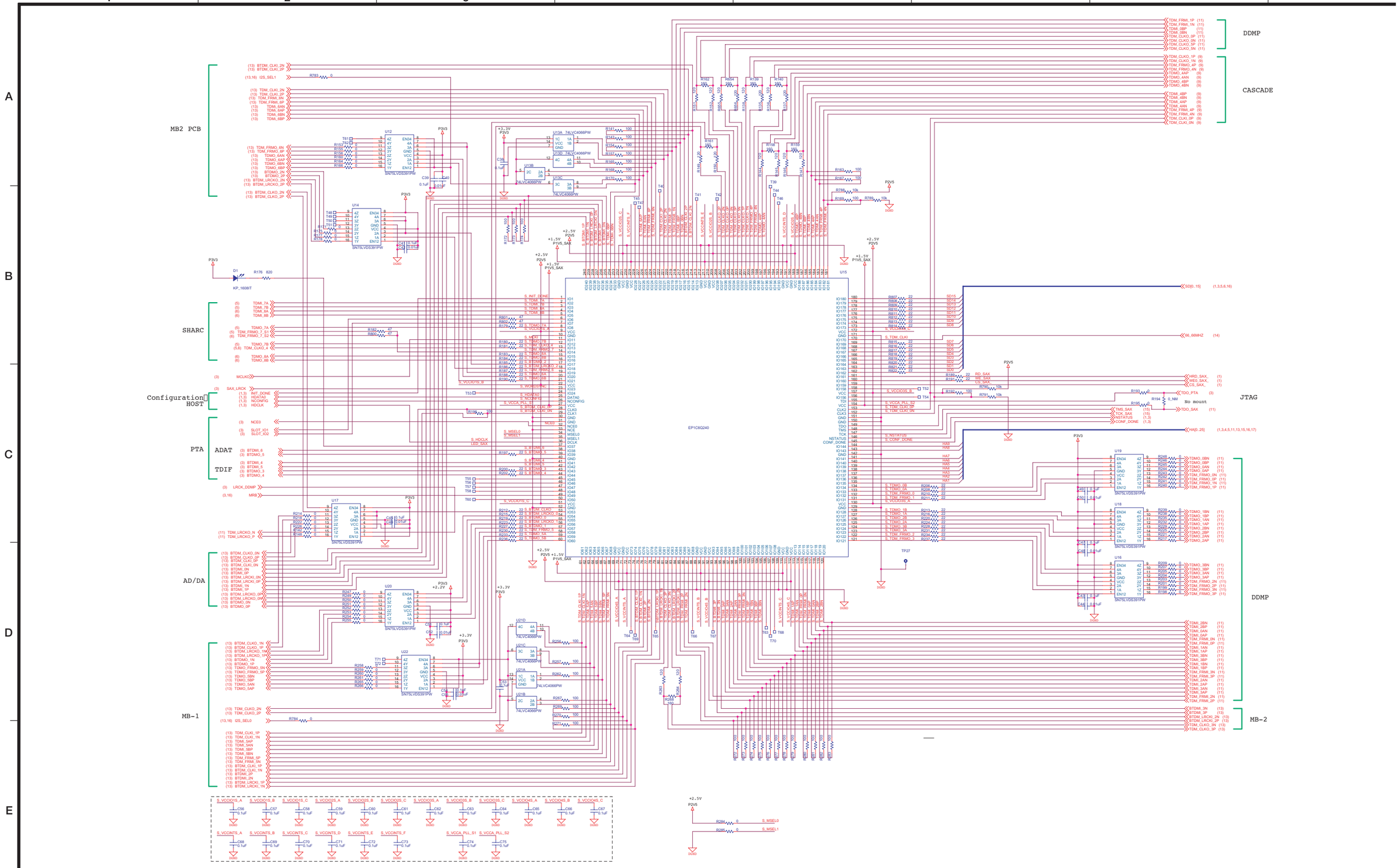

FPGA Configuration
OPEN : NORMAL
SHORT: NCONFIG LOW
CPU Debug mode
OPEN : NORMAL
SHORT: CPU DEBUG
CLOCK STPO mode
OPEN : NORMAL
SHORT: CLOCK STOP(JTAG Check mode)
NMI Input mode
OPEN/1-2SHORT : NORMAL (PW_INT)
2-3SHORT: DEBUG (ICE OUT)
Cascade
MIDI
SH7727_3
1
2
3
4
5
6
7
A
B
C
D
E



Digital Mixing Console DM-4800

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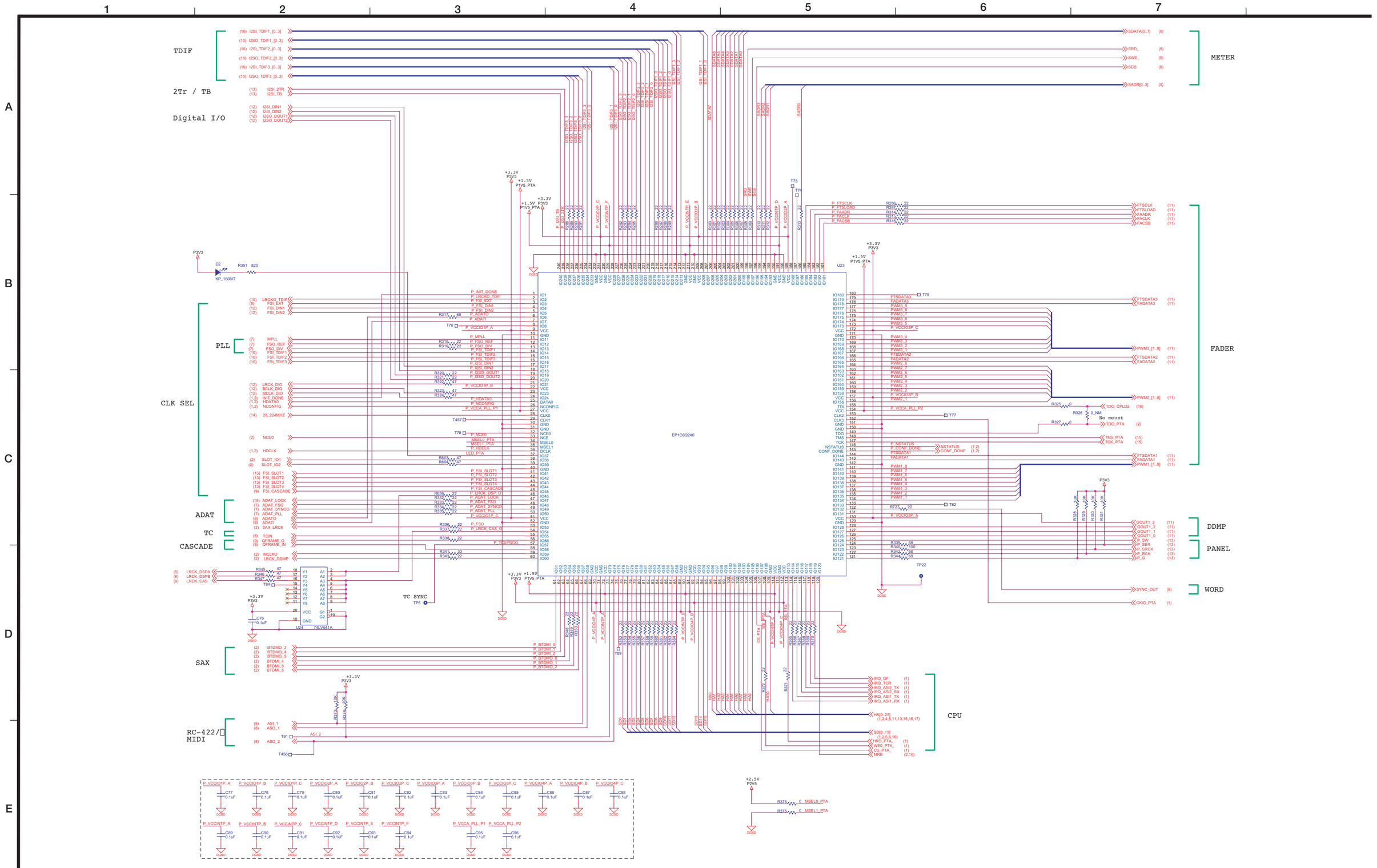
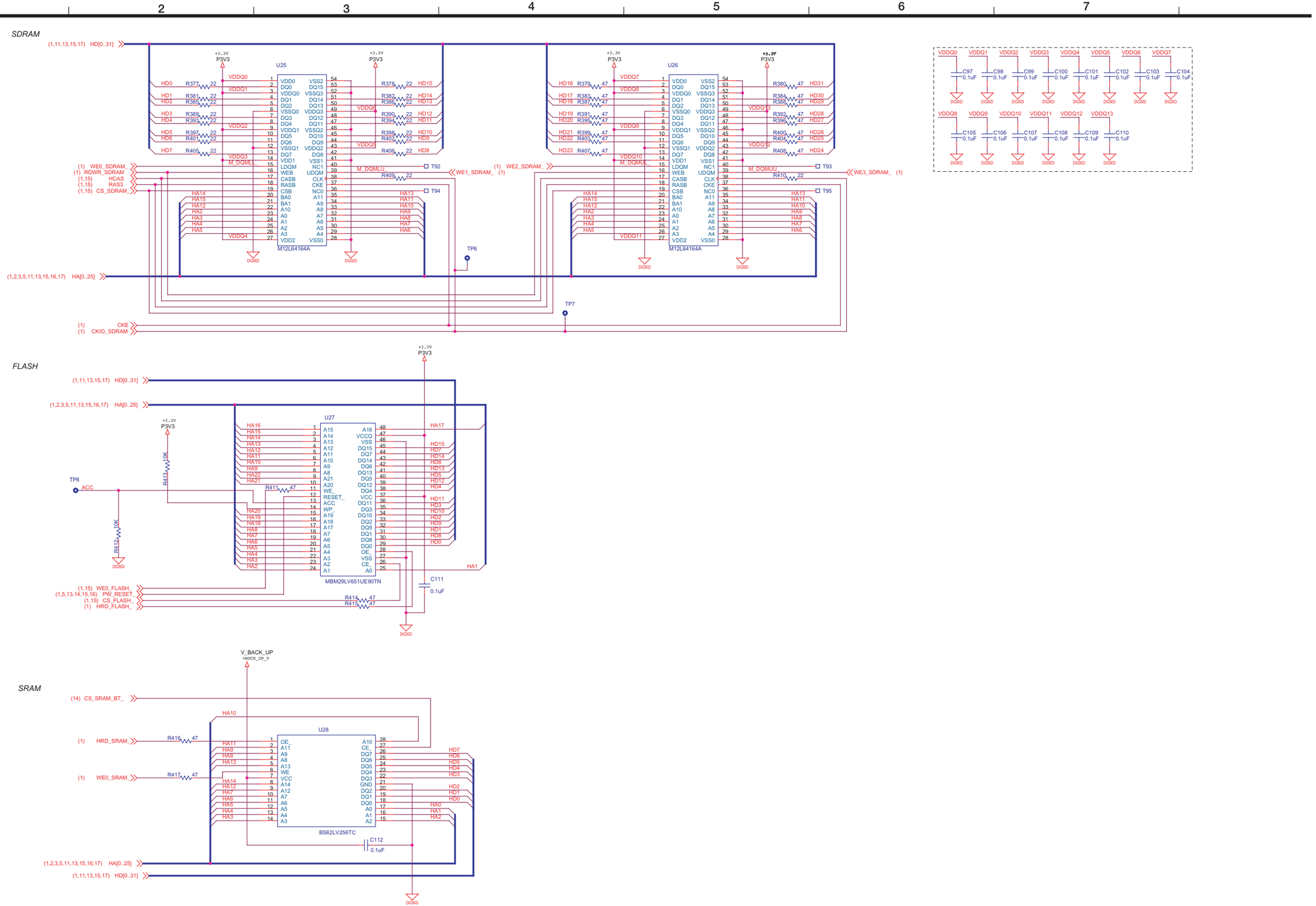
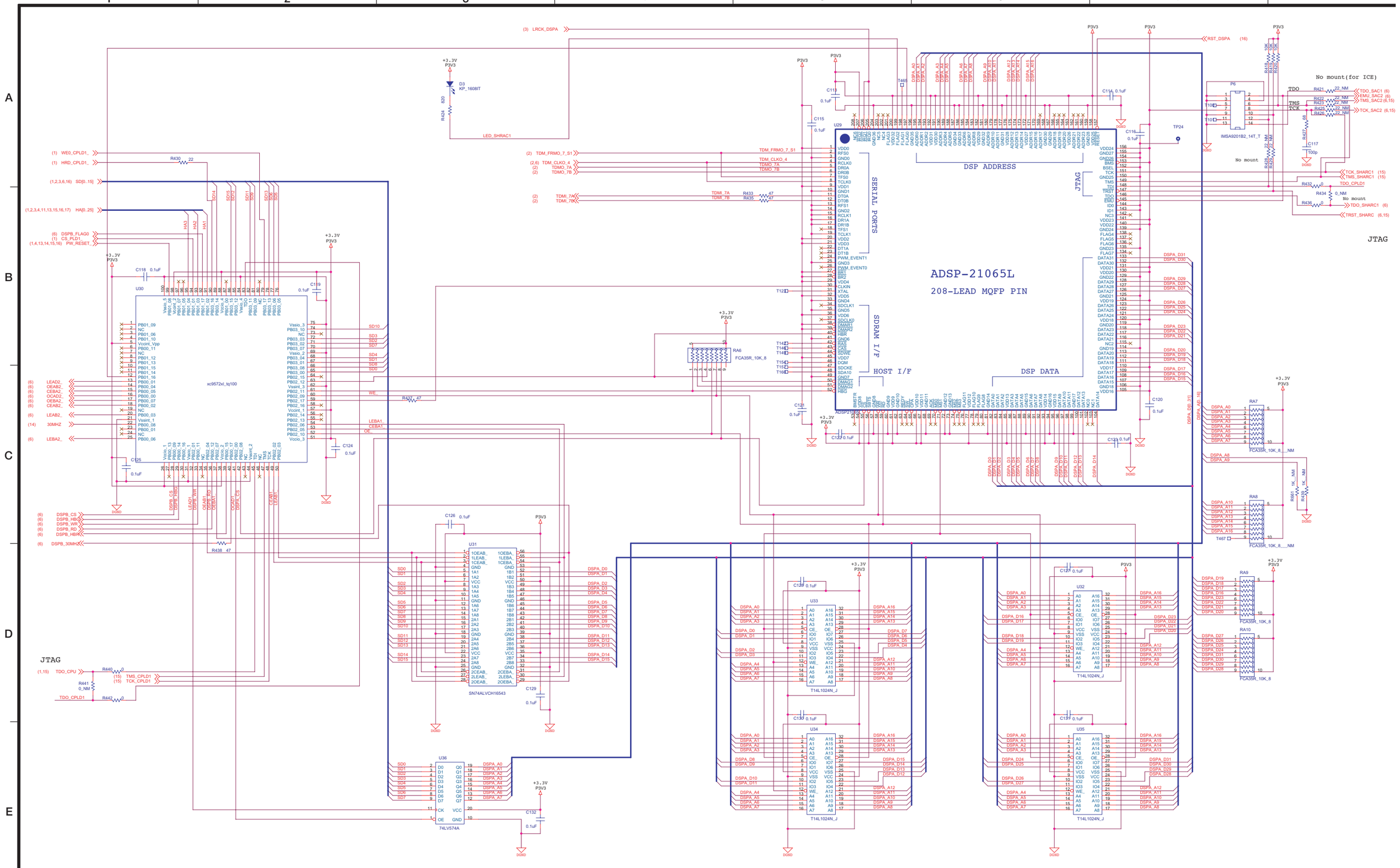
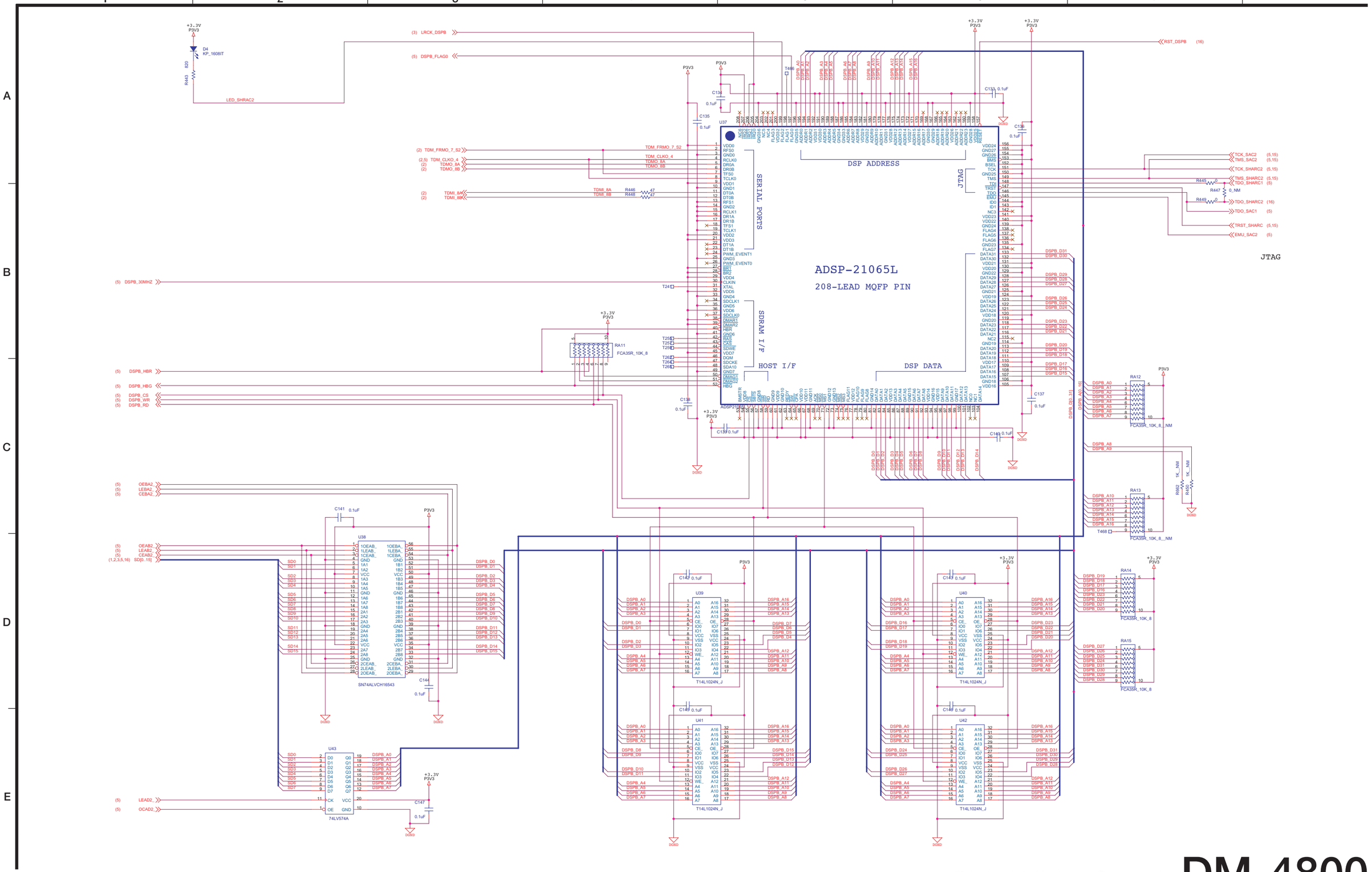
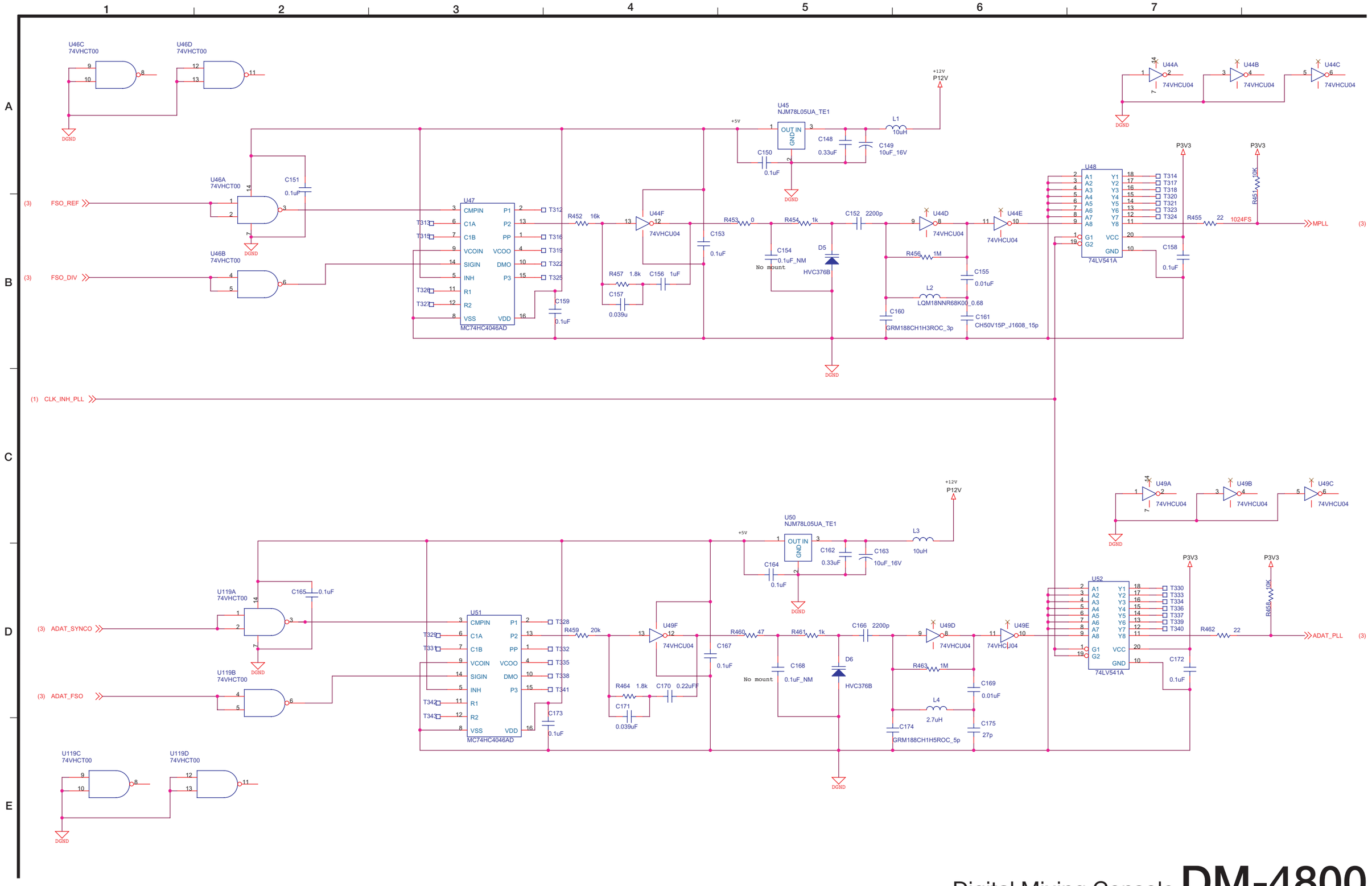

1
2
3
4
5
6
7
A
B
C
D
E
TDIF
2Tr / TB
Digital I/O
METER
PLL
CLK SEL
ADAT
TC
CASCADE
SAX
RC-422/MIDI
FADER
DDMP
PANEL
WORD
CPU
TC SYNC
EP1C6Q240
U24 74LV541A
U23


SDRAM
(1,11,13,15,17) HD[0..31]
U25
U26
M12L64164A
(1) WE0_SDRAM_
(1) RDWR_SDRAM
(1,15) HCAS
(1,15) RAS3
(1,15) CS_SDRAM_
(1) WE1_SDRAM_
(1) WE2_SDRAM_
(1) WE3_SDRAM_
M_DQMLU
M_DQMLL
M_DQMUU
M_DQMUL
(1,2,3,5,11,13,15,16,17) HA[0..25]
(1) CKE
(1) CKIO_SDRAM
TP6
TP7
FLASH
U27
MBM29LV651UE90TN
TP8
ACC
(1,15) WE0_FLASH_
(1,5,13,14,15,16) PW_RESET_
(1,15) CS_FLASH_
(1) HRD_FLASH_
C111
SRAM
V_BACK_UP
(14) CS_SRAM_BT_
U28
BS62LV256TC
(1) HRD_SRAM_
(1) WE0_SRAM_
C112
DGND
P3V3


ADSP-21065L
208-LEAD MQFP PIN
DSP ADDRESS
DSP DATA
SERIAL PORTS
SDRAM I/F
HOST I/F
JTAG
No mount(for ICE)
No mount
LED_SHRAC1
xc9572xl_tq100
SN74ALVCH16543
74LV574A
T14L1024N_J
IMS49201B2_14T_T
FCA35R_10K_8___NM
FCA35R_10K_8
FCA35R_1K_8___NM
FCA35R_1K_8


ADSP-21065L
208-LEAD MQFP PIN
DSP ADDRESS
DSP DATA
SERIAL PORTS
SDRAM I/F
HOST I/F
JTAG
U37
U38
U39
U40
U41
U42
U43
SN74ALVCH16543
74LV574A
T14L1024N_J
RA11
RA12
RA13
RA14
RA15
FCA35R_10K_8
FCA35R_10K_8__NM
+3.3V
P3V3
DGND
LED_SHRAC2
LRCK_DSPB
DSPB_FLAG0
RST_DSPB
DSPB_30MHZ
DSPB_HBR
DSPB_HBG
DSPB_CS
DSPB_WR
DSPB_RD
OEBA2
LEBA2
CEBA2
OEAB2
LEAB2
CEAB2
SD[0..15]
LEAD2
OCAD2
TCK_SAC2
TMS_SAC2
TCK_SHARC2
TMS_SHARC2
TDO_SHARC1
TDO_SHARC2
TDO_SAC1
TRST_SHARC
EMU_SAC2
JTAG



Digital Mixing Console DM-4800

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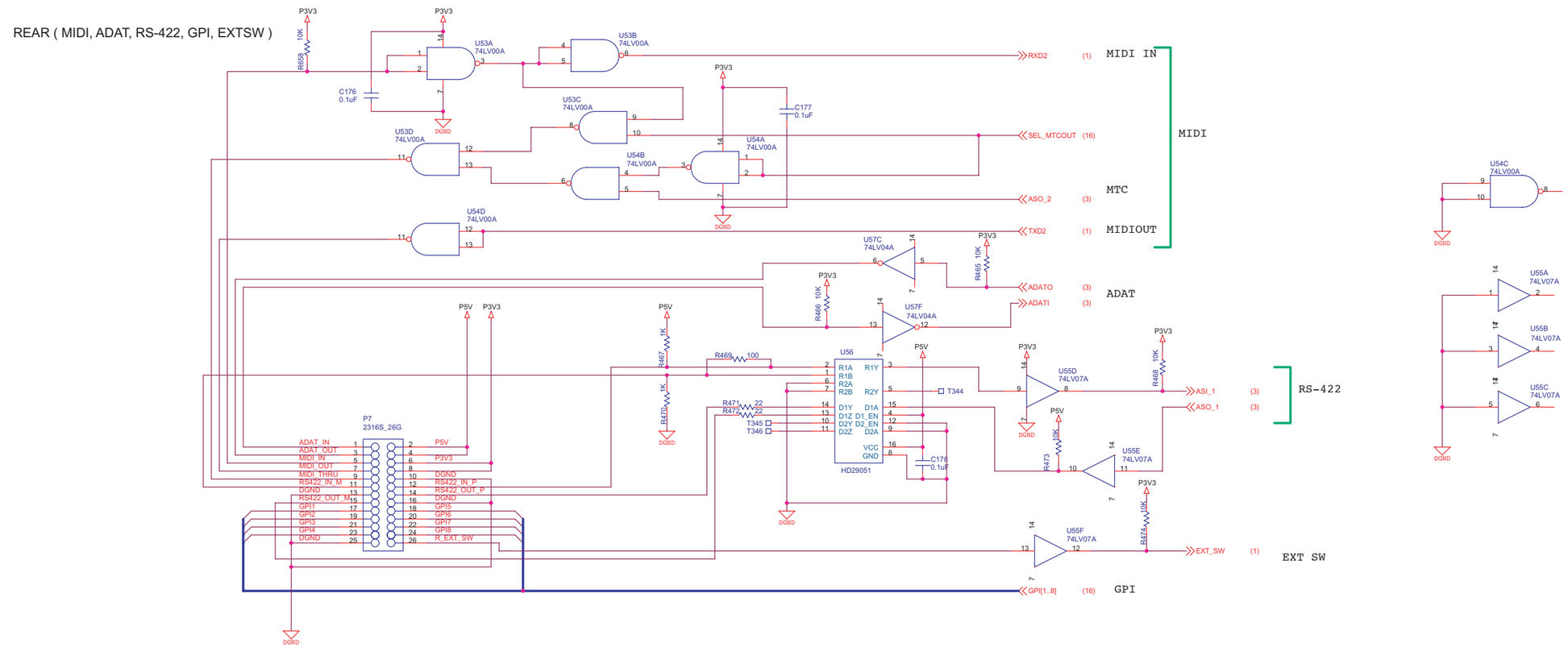
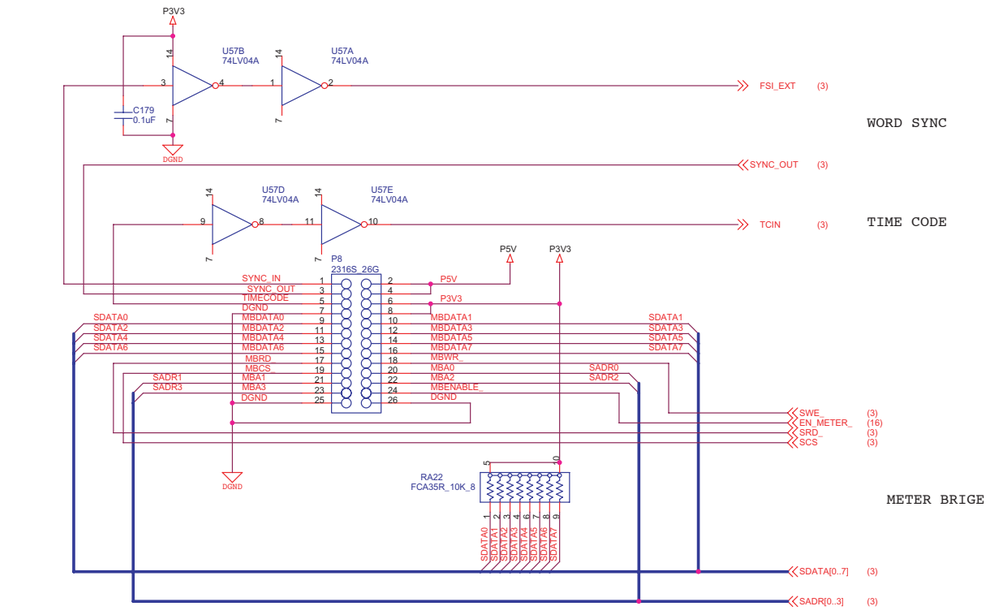
REAR (MIDI, ADAT, RS-422, GPI, EXTSW)



REAR (WORDSYNC, TC, METER)



CASCADE

P9 205A_25FSTBBB3

C_TDM_CLKI_0P
C_TDM_CLKI_0N
C_TDM_FRMI_4P
C_TDM_FRMI_4N
C_TDMI_4AP
C_TDMI_4AN
C_TDMI_4BP
C_TDMI_4BN
C_LRCK_P
C_LRCK_N
C_QFRM_P
C_QFRM_N
C_RX_P
C_RX_N
C_TX_P
C_TX_N
C_GND
C_TDMO_4BN
C_TDMO_4BP
C_TDMO_4AN
C_TDMO_4AP
C_TDM_FRMO_4N
C_TDM_FRMO_4P
C_TDM_CLKO_1N
C_TDM_CLKO_1P

Frame GND DGND TP21 GND DGND

L10 TCM2010-201-4P
L11 TCM2010-201-4P

+3.3V P3V3

D7 IMN10 D8 IMN10 D9 IMN10 D10 IMN10 D11 IMN10 D12 IMN10 D13 IMN10 D14 IMN10

D15 IMN10 D16 IMN10 D17 IMN10 D18 IMN10 D19 IMN10 D20 IMN10 D21 IMN10 D22 IMN10

DGND

TDM_CLKI_0P (2)
TDM_CLKI_0N (2)
TDM_FRMI_4P (2)
TDM_FRMI_4N (2)
TDMI_4AP (2)
TDMI_4AN (2)
TDMI_4BP (2)
TDMI_4BN (2)

TDMO_4BN (2)
TDMO_4BP (2)
TDMO_4AN (2)
TDMO_4AP (2)
TDM_FRMO_4N (2)
TDM_FRMO_4P (2)
TDM_CLKO_1N (2)
TDM_CLKO_1P (2)

U58 SN65LVDS050PW
U59 SN65LVDS050PW

T348 T349

P3V3 +3.3V

R475 10K DGND

SEL_MS (1)
SEL_MS
L : SLAVE
H : MASTER

LRCK_CAS (3)
QFRAME_O (3)
R792 68
FSI_CASCADE (3)
QFRAME_IN (3)

C180 0.1uF
C181 0.01uF
C182 0.1uF
C183 0.01uF

RS-232C
P38 A2001WV2_4P

R665 0_NM
P5 IMSA9201B1_02T_T

TXD0 (1)
RXD0 (1)

SERIAL mode
OPEN : RS-232C USE
SHORT: CASCADE (NORMAL)

USB

(1) USB1_PWR_EN
(1) USB_VBUS
(1) USB1_P
(1) USB1_M

P3V3

Q8 2SK2980
R476 10K
R477 1.5K

U60A 74LV08A
R478 51
C184 0.1uF
R479 10K

R480 27
R483 27
C185 22p
C186 22p

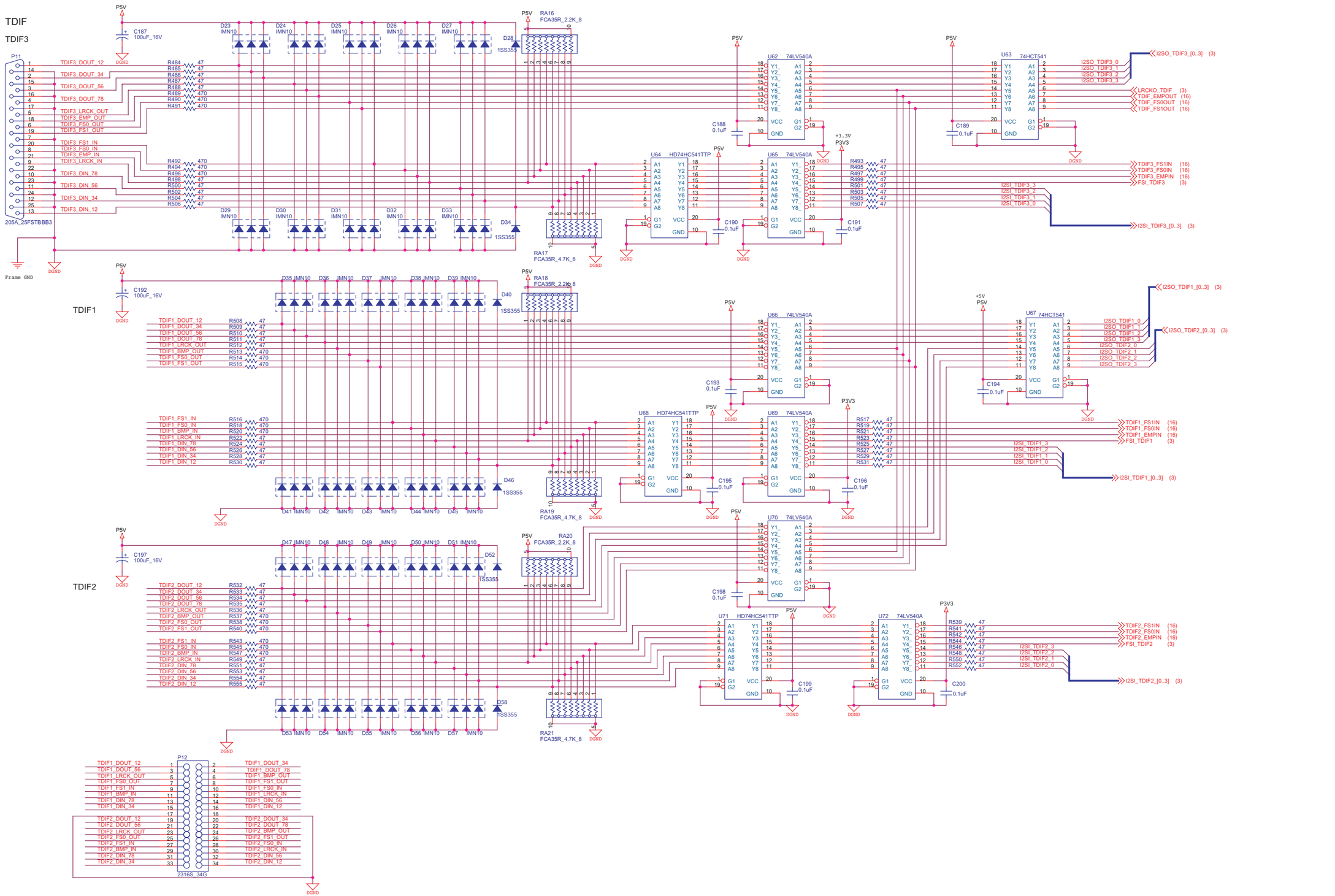
U61 SN75240PWR
T353
T354

R481 470K_NM No mount
R482 470K_NM No mount

L5 BCM201209A390

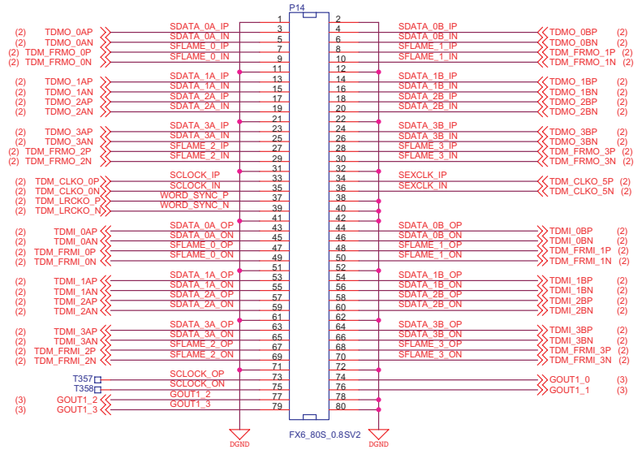
USB FUNCTION
P10 UBB_4R_D14C
U_VBUS
U_USB1_M
U_USB1_P
U_GND
+5V
Frame GND

U60B 74LV08A T350
U60C 74LV08A T351
U60D 74LV08A T352

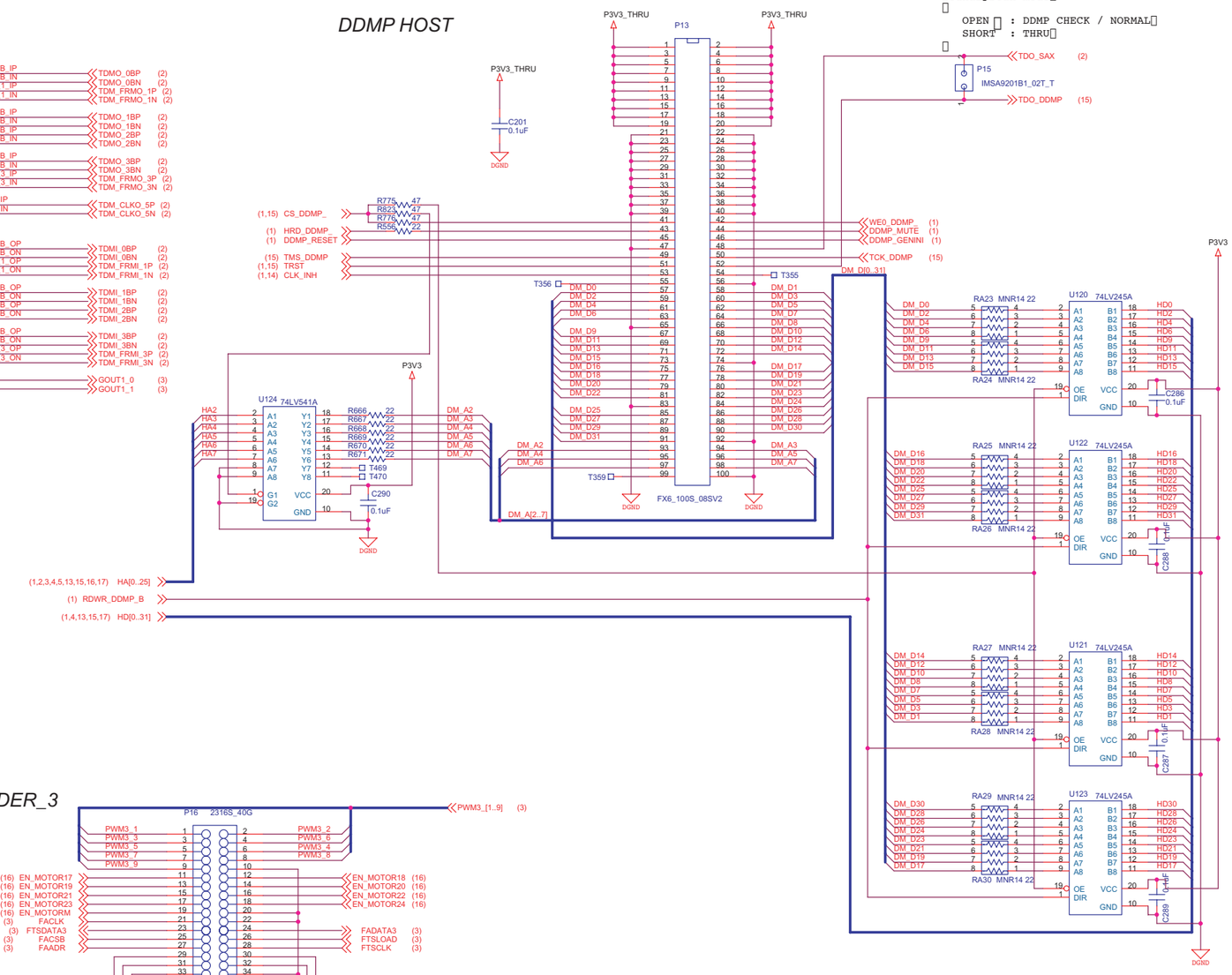

TDIF
TDIF3
TDIF1
TDIF2
P5V
DGND
+3.3V
P3V3
+5V
Frame GND
205A_25FSTBBB3
2316S_34G
74LV540A
74HCT541
HD74HC541TTP
1SS355
FCA35R_2.2K_8
FCA35R_4.7K_8
I2SO_TDIF3_[0..3] (3)
I2SO_TDIF1_[0..3] (3)
I2SO_TDIF2_[0..3] (3)
I2SI_TDIF3_[0..3] (3)
I2SI_TDIF1_[0..3] (3)
I2SI_TDIF2_[0..3] (3)
TDIF3_FS1IN (16)
TDIF3_FS0IN (16)
TDIF3_EMPIN (16)
FSI_TDIF3 (3)
TDIF1_FS1IN (16)
TDIF1_FS0IN (16)
TDIF1_EMPIN (16)
FSI_TDIF1 (3)
TDIF2_FS1IN (16)
TDIF2_FS0IN (16)
TDIF2_EMPIN (16)
FSI_TDIF2 (3)
LRCKO_TDIF (3)
TDIF_EMPOUT (16)
TDIF_FS0OUT (16)
TDIF_FS1OUT (16)

DDMP AUDIO

To DDMP CoPCB

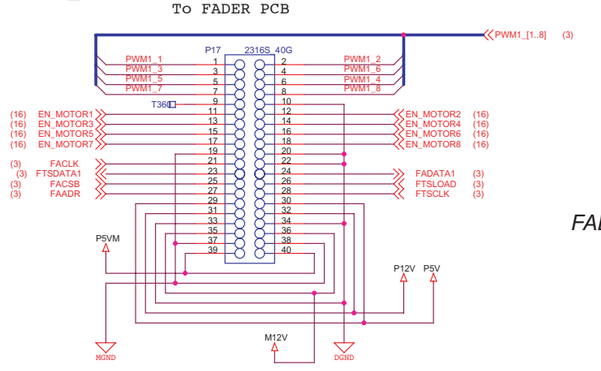


DDMP HOST

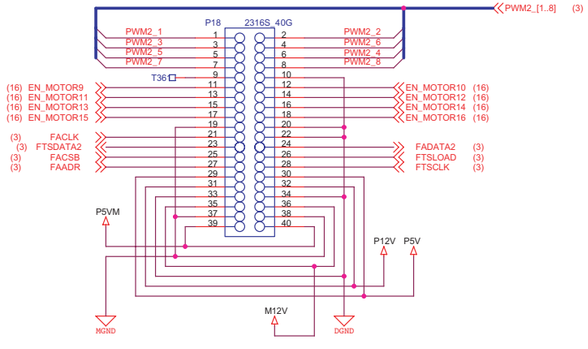


FADER_1

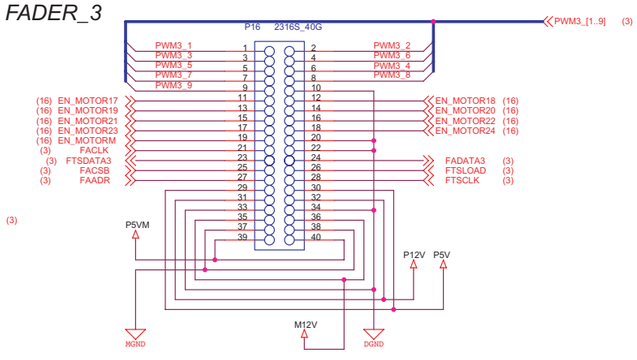
To FADER PCB

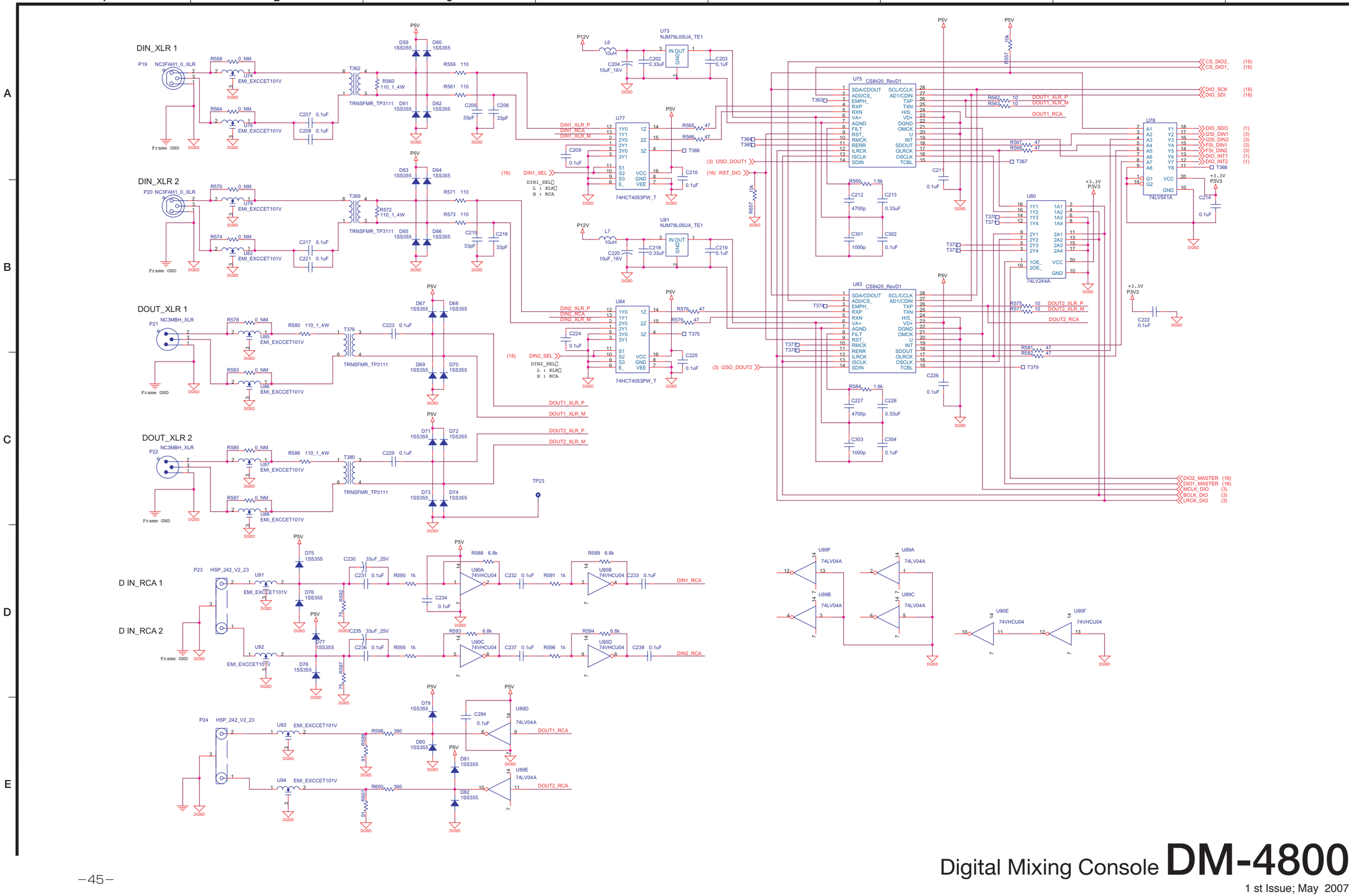


FADER_2

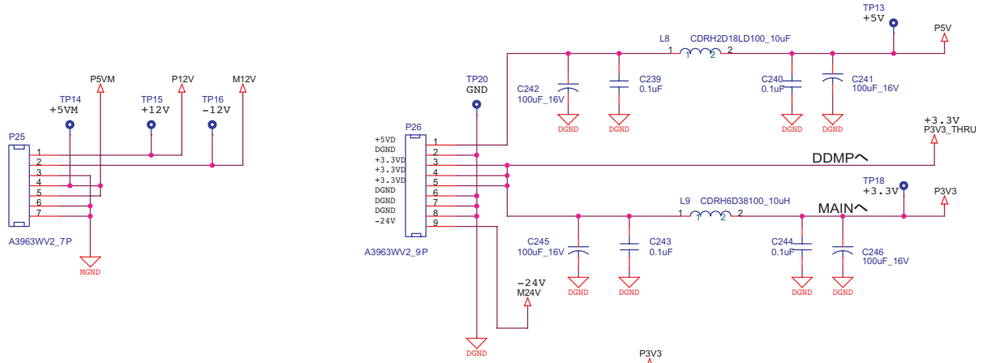


FADER_3

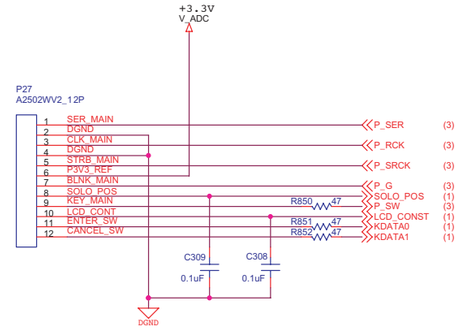



1
2
3
4
5
6
7
A
B
C
D
E
DIN_XLR 1
DIN_XLR 2
DOUT_XLR 1
DOUT_XLR 2
D IN_RCA 1
D IN_RCA 2
P5V
P12V
DGND
Frame GND
U73 NJM78L05UA_TE1
U81 NJM78L05UA_TE1
U75 CS8420_RevD1
U83 CS8420_RevD1
U77
U84
74HCT4053PW_T
U78
74LV541A
U80
74LV244A
U89A 74LV04A
U89B 74LV04A
U89C 74LV04A
U89D 74LV04A
U89E 74LV04A
U89F 74LV04A
U90A 74VHCU04
U90B 74VHCU04
U90C 74VHCU04
U90D 74VHCU04
U90E 74VHCU04
U90F 74VHCU04
TRNSFMR_TP3111
EMI_EXCCET101V
HSP_242_V2_23
DIN1_SEL
DIN2_SEL
DIN1_RCA
DIN2_RCA
DOUT1_RCA
DOUT2_RCA
DOUT1_XLR_P
DOUT1_XLR_M
DOUT2_XLR_P
DOUT2_XLR_M
DOUT1_XLR_P
DOUT1_XLR_M
DOUT2_XLR_P
DOUT2_XLR_M
CS_DIO2_
CS_DIO1_
DIO_SCK
DIO_SDI
DIO_SDO
I2SI_DIN1
I2SI_DIN2
FSI_DIN1
FSI_DIN2
DIO_INT1
DIO_INT2
RST_DIO
I2SO_DOUT1
I2SO_DOUT2
DIO2_MASTER
DIO1_MASTER
MCLK_DIO
BCLK_DIO
LRCK_DIO
+3.3V
P3V3
TP23

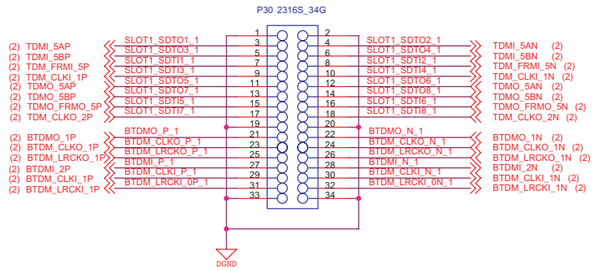
POWER

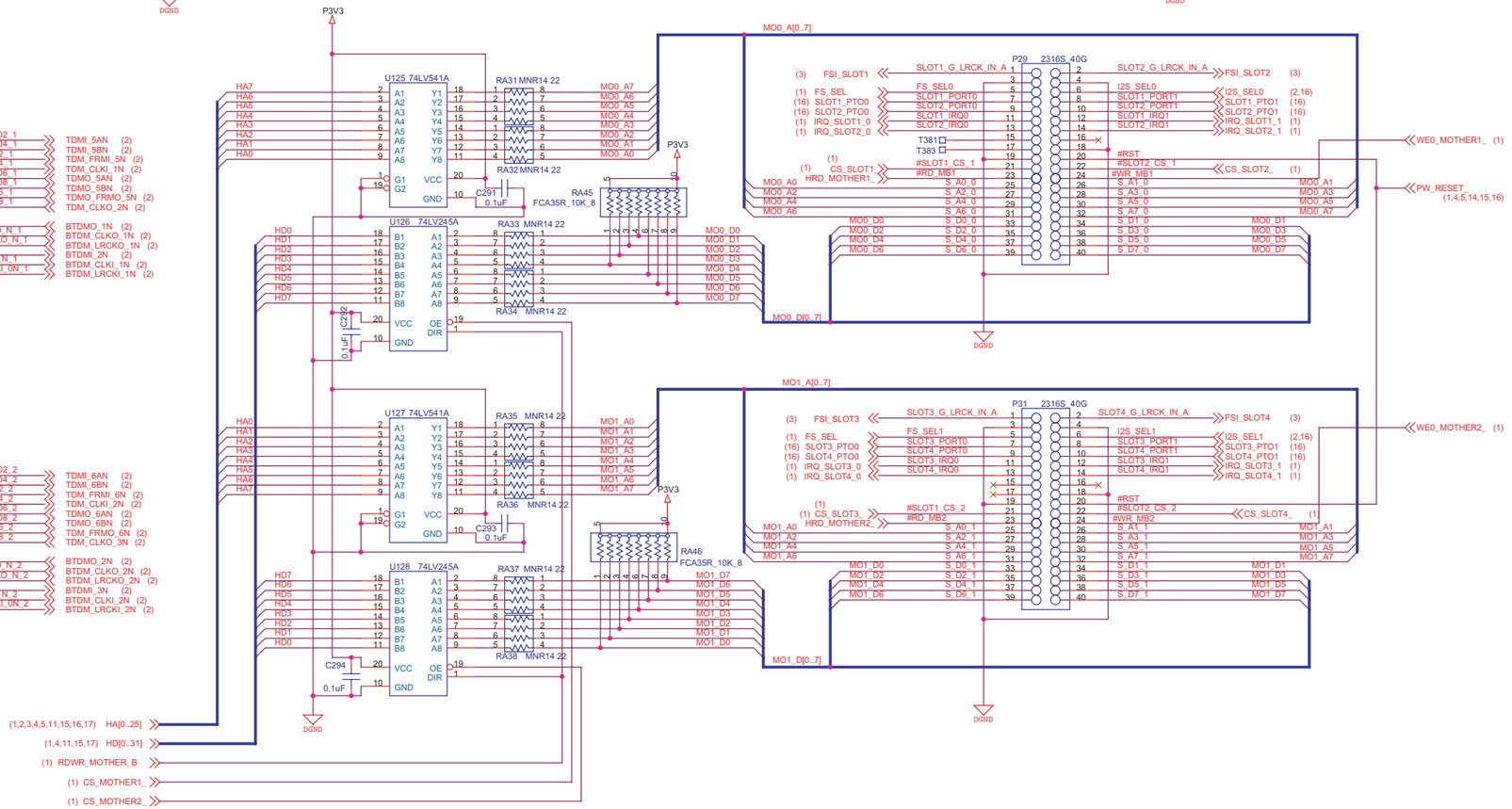


PANEL (MONITOR)

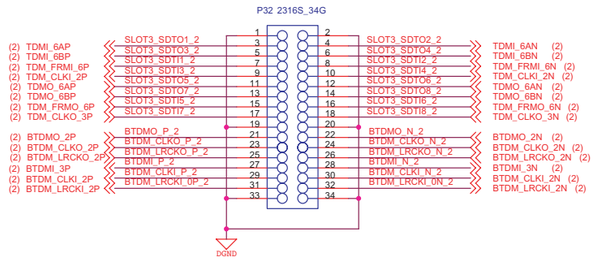


MOTHER_1

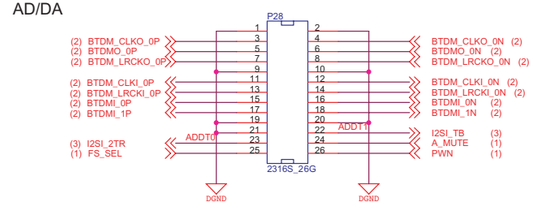




MOTHER_2



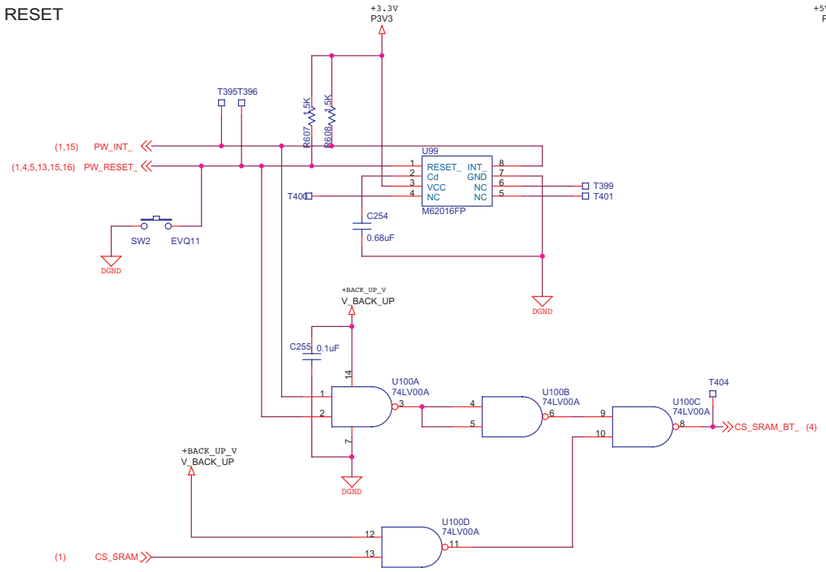
AD/DA



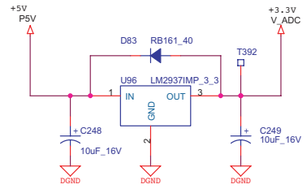
1 2 3 4 5 6 7

A B C D E

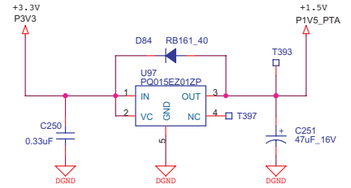
RESET



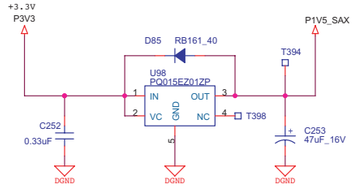
ADリファレンス電圧



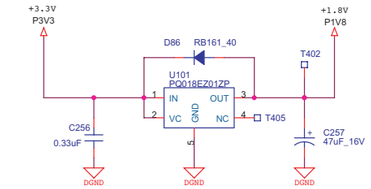
PTA用コア電圧



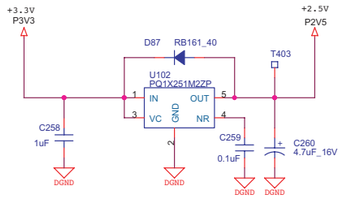
SAX用コア電圧



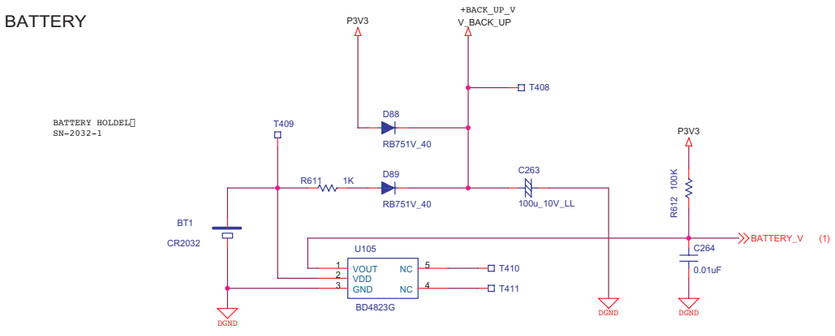
CPU用コア電圧



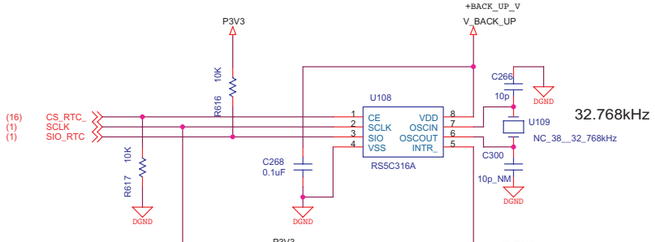
SAX用LVDS電圧



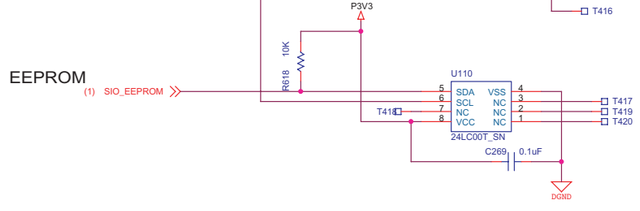
BATTERY



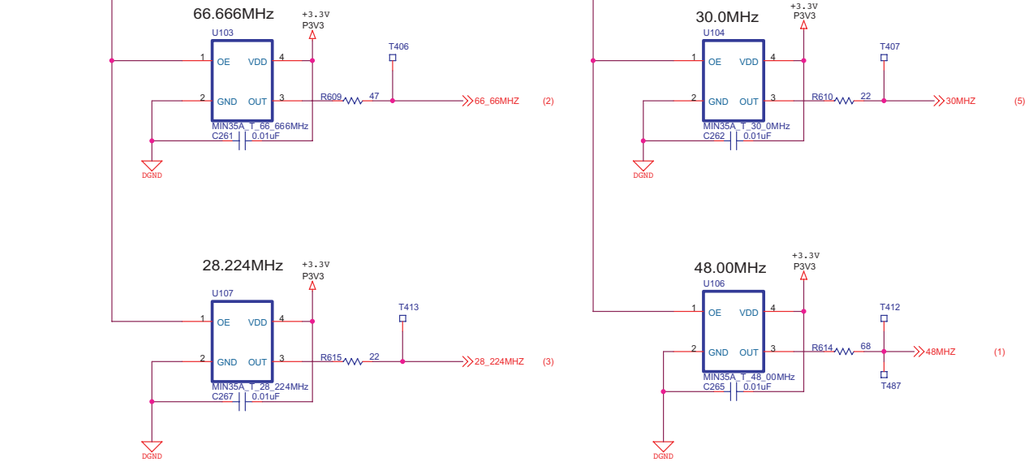
RTC



EEPROM



OSC



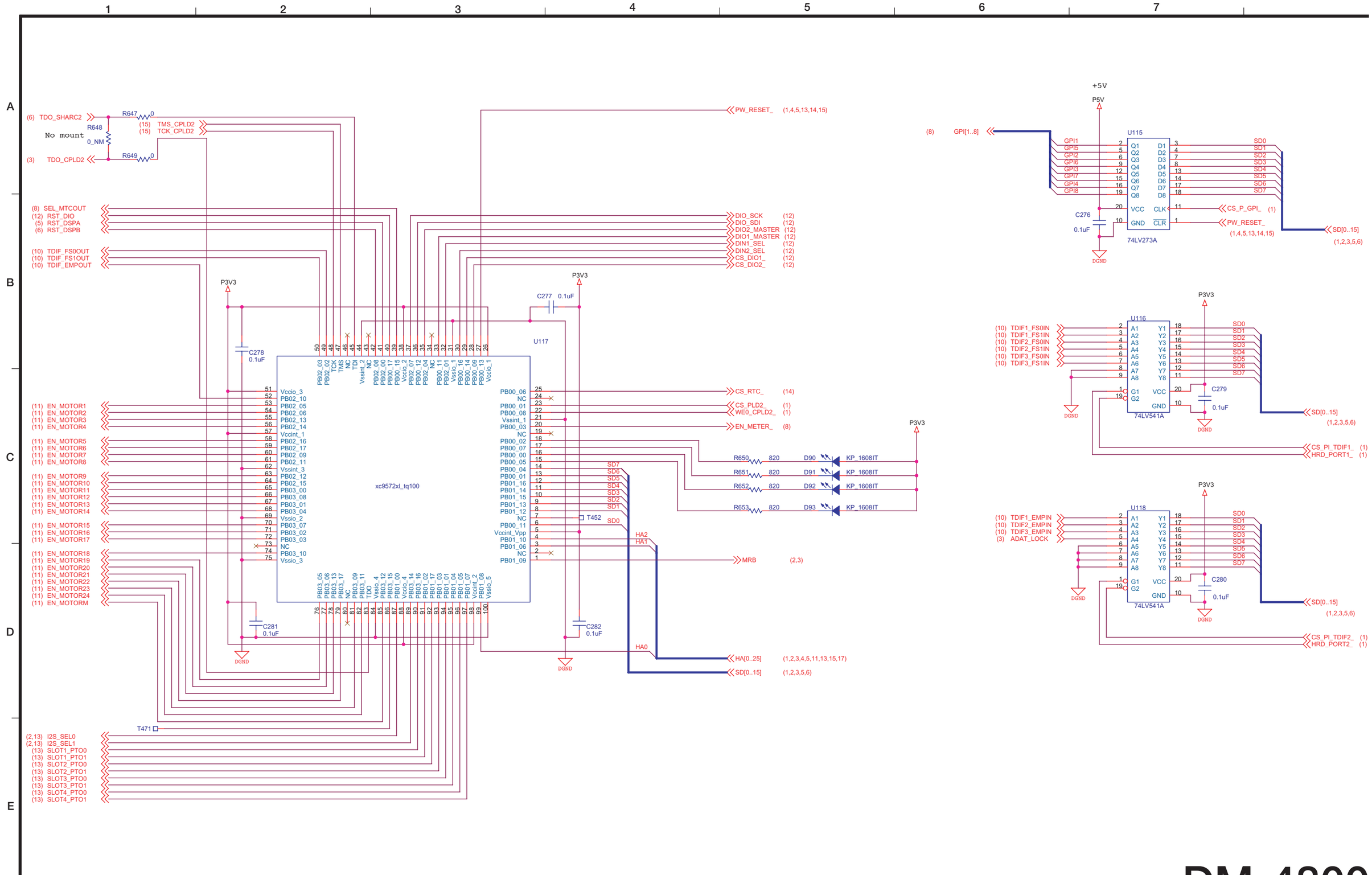
AUD

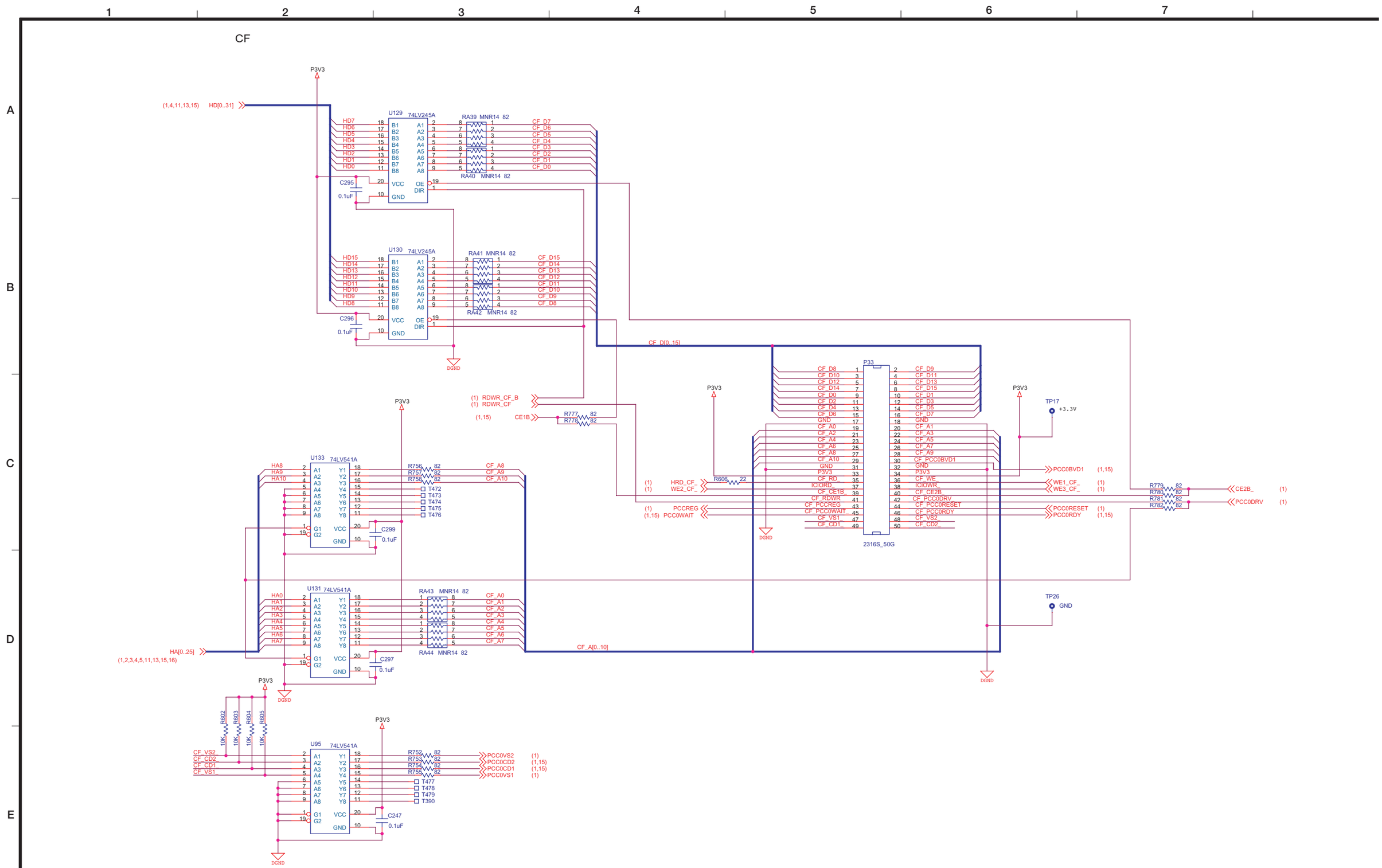
JTAG & H-UDI

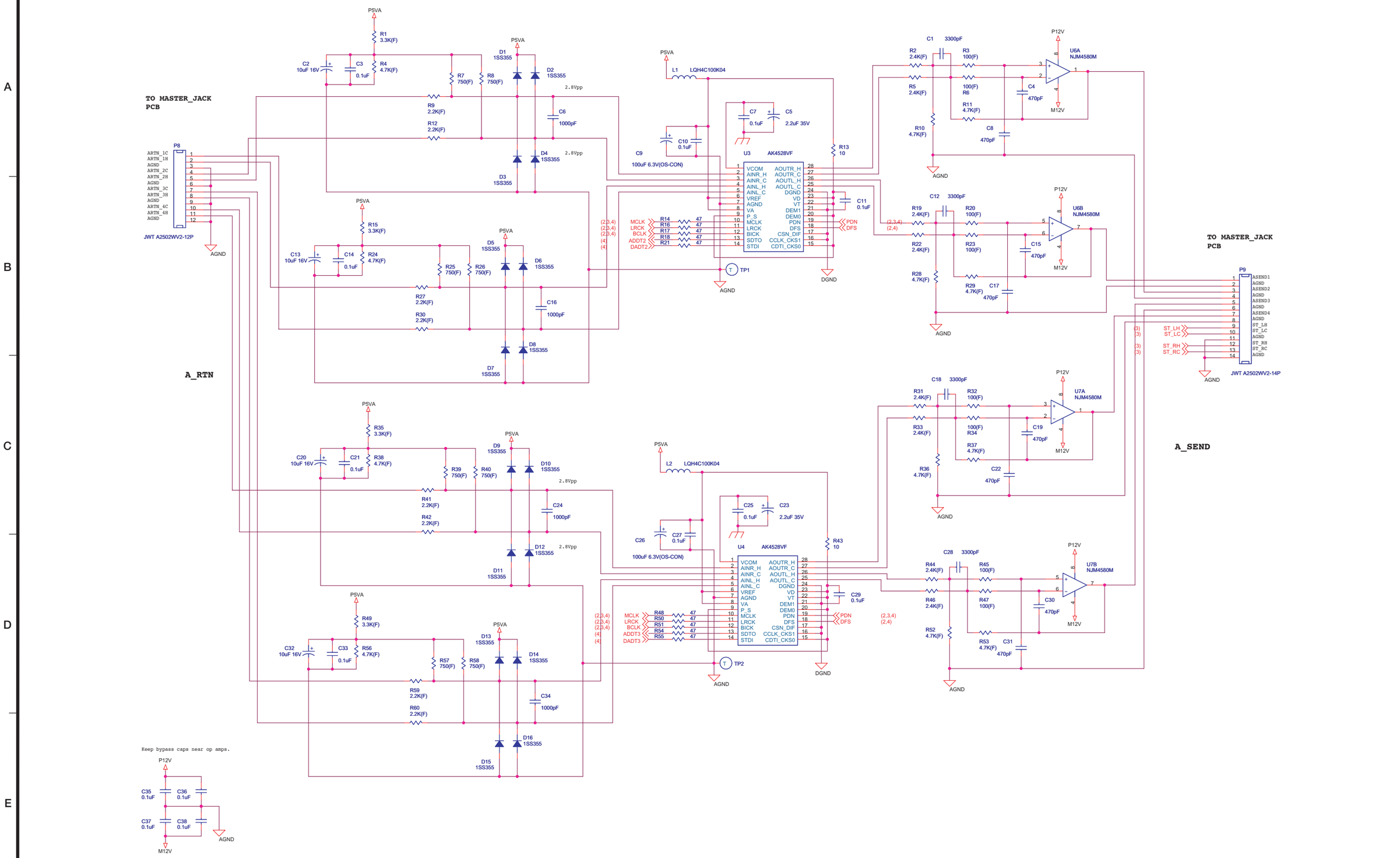
NEXTiCE TCN

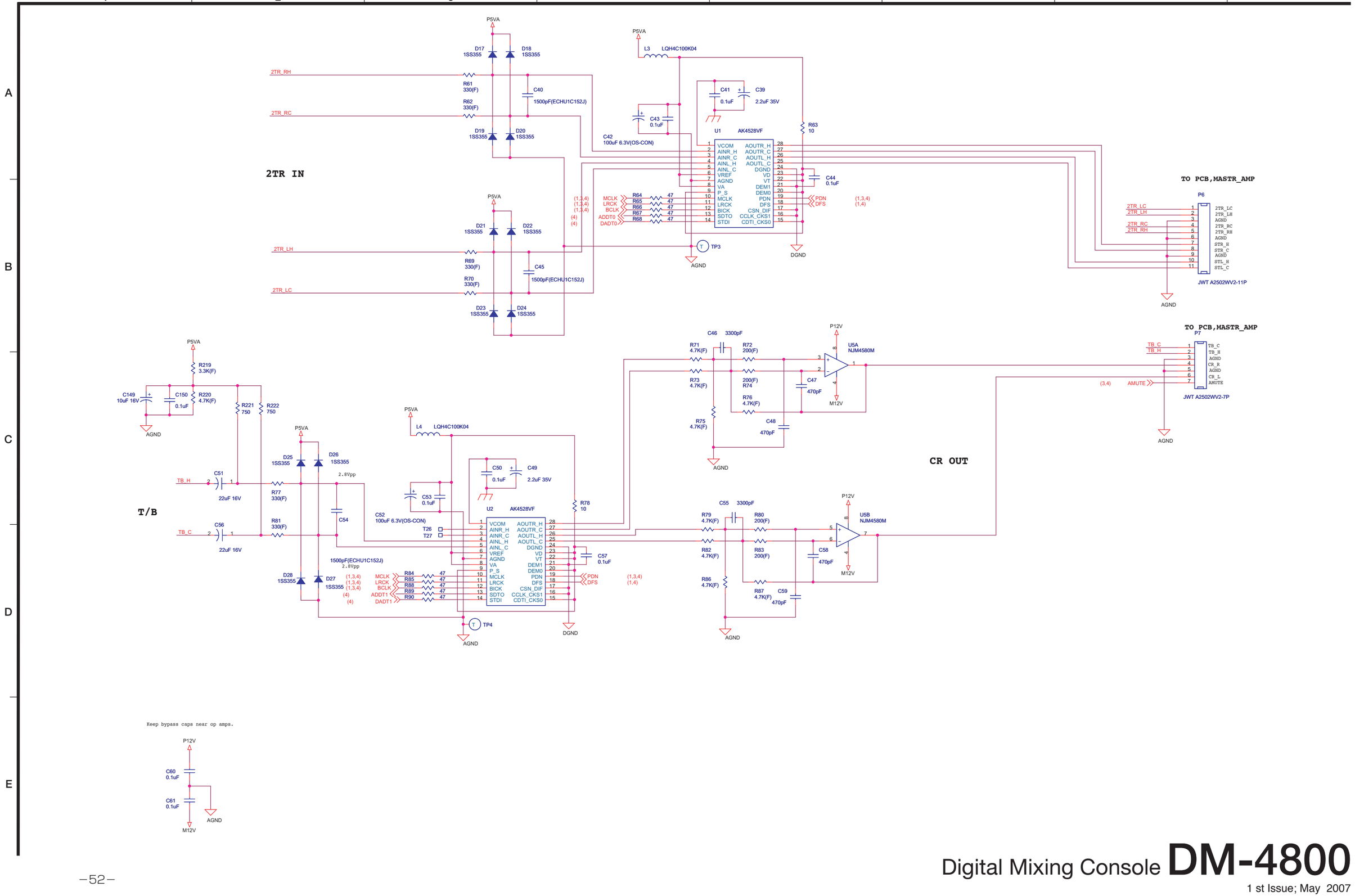
TCK STOP mode
1-2 SHORT: TCK Supply (JTAG)
2-3 SHORT: TCK STOP (NORMAL & CPU Debug)

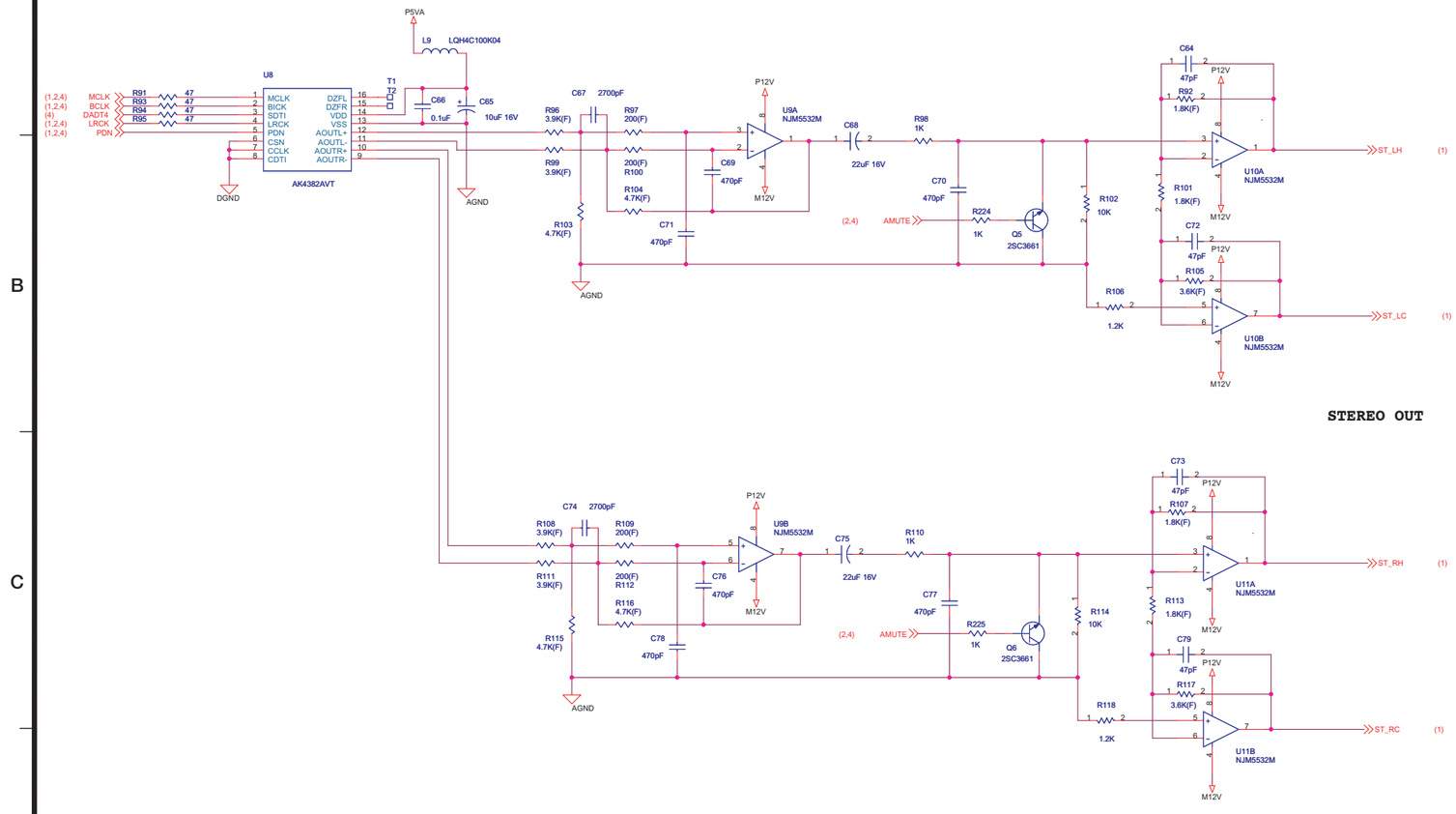
TRST mode
1-2 SHORT: PLL UP (JTAG)
2-3 SHORT: PULL DOWN (NORMAL)


1
2
3
4
5
6
7
A
B
C
D
E
(6) TDO_SHARC2
R647 0
R648 No mount 0_NM
R649 0
(15) TMS_CPLD2
(15) TCK_CPLD2
(3) TDO_CPLD2
PW_RESET_ (1,4,5,13,14,15)
(8) SEL_MTCOUT
(12) RST_DIO
(5) RST_DSPA
(6) RST_DSPB
(10) TDIF_FS0OUT
(10) TDIF_FS1OUT
(10) TDIF_EMPOUT
DIO_SCK (12)
DIO_SDI (12)
DIO2_MASTER (12)
DIO1_MASTER (12)
DIN1_SEL (12)
DIN2_SEL (12)
CS_DIO1_ (12)
CS_DIO2_ (12)
P3V3
C277 0.1uF
C278 0.1uF
U117
xc9572xl_tq100
(11) EN_MOTOR1
(11) EN_MOTOR2
(11) EN_MOTOR3
(11) EN_MOTOR4
(11) EN_MOTOR5
(11) EN_MOTOR6
(11) EN_MOTOR7
(11) EN_MOTOR8
(11) EN_MOTOR9
(11) EN_MOTOR10
(11) EN_MOTOR11
(11) EN_MOTOR12
(11) EN_MOTOR13
(11) EN_MOTOR14
(11) EN_MOTOR15
(11) EN_MOTOR16
(11) EN_MOTOR17
(11) EN_MOTOR18
(11) EN_MOTOR19
(11) EN_MOTOR20
(11) EN_MOTOR21
(11) EN_MOTOR22
(11) EN_MOTOR23
(11) EN_MOTOR24
(11) EN_MOTORM
CS_RTC_ (14)
CS_PLD2_ (1)
WE0_CPLD2_ (1)
EN_METER_ (8)
MRB (2,3)
HA[0..25] (1,2,3,4,5,11,13,15,17)
SD[0..15] (1,2,3,5,6)
R650 820 D90 KP_1608IT
R651 820 D91 KP_1608IT
R652 820 D92 KP_1608IT
R653 820 D93 KP_1608IT
T452
T471
C281 0.1uF
C282 0.1uF
DGND
HA2
HA1
HA0
SD7
SD6
SD5
SD4
SD3
SD2
SD1
SD0
(2,13) I2S_SEL0
(2,13) I2S_SEL1
(13) SLOT1_PTO0
(13) SLOT1_PTO1
(13) SLOT2_PTO0
(13) SLOT2_PTO1
(13) SLOT3_PTO0
(13) SLOT3_PTO1
(13) SLOT4_PTO0
(13) SLOT4_PTO1
+5V
P5V
U115
(8) GPI[1..8]
GPI1
GPI5
GPI2
GPI6
GPI3
GPI7
GPI4
GPI8
C276 0.1uF
74LV273A
CS_P_GPI_ (1)
PW_RESET_
(1,4,5,13,14,15)
SD[0..15]
(1,2,3,5,6)
U116
(10) TDIF1_FS0IN
(10) TDIF1_FS1IN
(10) TDIF2_FS0IN
(10) TDIF2_FS1IN
(10) TDIF3_FS0IN
(10) TDIF3_FS1IN
C279 0.1uF
74LV541A
CS_PI_TDIF1_ (1)
HRD_PORT1_ (1)
U118
(10) TDIF1_EMPIN
(10) TDIF2_EMPIN
(10) TDIF3_EMPIN
(3) ADAT_LOCK
C280 0.1uF
CS_PI_TDIF2_ (1)
HRD_PORT2_ (1)

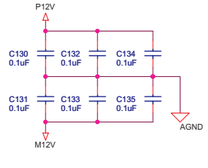

CF
P3V3
(1,4,11,13,15) HD[0..31]
U129 74LV245A
U130 74LV245A
RA39 MNR14 82
RA40 MNR14 82
RA41 MNR14 82
RA42 MNR14 82
C295 0.1uF
C296 0.1uF
DGND
CF_D[0..15]
(1) RDWR_CF_B
(1) RDWR_CF_
(1,15) CE1B
R777 82
R778 82
P33
2316S_50G
TP17 +3.3V
TP26 GND
R606 22
(1) HRD_CF_
(1) WE2_CF_
(1) PCCREG
(1,15) PCC0WAIT
PCC0BVD1 (1,15)
WE1_CF_ (1)
WE3_CF_ (1)
PCC0RESET (1)
PCC0RDY (1,15)
R779 82
R780 82
R781 82
R782 82
CE2B_ (1)
PCC0DRV (1)
U133 74LV541A
U131 74LV541A
U95 74LV541A
RA43 MNR14 82
RA44 MNR14 82
R756 82
R757 82
R758 82
T472
T473
T474
T475
T476
C299 0.1uF
C297 0.1uF
C247 0.1uF
HA[0..25]
(1,2,3,4,5,11,13,15,16)
CF_A[0..10]
R602 10K
R603 10K
R604 10K
R605 10K
R752 82
R753 82
R754 82
R755 82
T477
T478
T479
T390
PCC0VS2 (1)
PCC0CD2 (1,15)
PCC0CD1 (1,15)
PCC0VS1 (1)


TO MASTER_JACK PCB
P8
JWT A2502WV2-12P
A_RTN
A_SEND
TO MASTER_JACK PCB
P9
JWT A2502WV2-14P
U3 AK4528VF
U4 AK4528VF
L1 LQH4C100K04
L2 LQH4C100K04
U6A NJM4580M
U6B NJM4580M
U7A NJM4580M
U7B NJM4580M
P5VA
P12V
M12V
AGND
DGND
2.8Vpp
100uF 6.3V(OS-CON)
Keep bypass caps near op amps.


1
2
3
4
5
6
7
A
B
C
D
E
2TR IN
T/B
CR OUT
TO PCB,MASTR_AMP
TO PCB,MASTR_AMP
P5VA
P12V
M12V
AGND
DGND
2TR_RH
2TR_RC
2TR_LH
2TR_LC
TB_H
TB_C
D17 1SS355
D18 1SS355
D19 1SS355
D20 1SS355
D21 1SS355
D22 1SS355
D23 1SS355
D24 1SS355
D25 1SS355
D26 1SS355
D27 1SS355
D28 1SS355
R61 330(F)
R62 330(F)
R69 330(F)
R70 330(F)
R77 330(F)
R81 330(F)
C40 1500pF(ECHU1C152J)
C45 1500pF(ECHU1C152J)
C54 1500pF(ECHU1C152J)
2.8Vpp
L3 LQH4C100K04
L4 LQH4C100K04
C41 0.1uF
C39 2.2uF 35V
C43 0.1uF
C42 100uF 6.3V(OS-CON)
C50 0.1uF
C49 2.2uF 35V
C53 0.1uF
C52 100uF 6.3V(OS-CON)
U1 AK4528VF
U2 AK4528VF
VCOM AINR_H AINR_C AINL_H AINL_C VREF AGND VA P_S MCLK LRCK BICK SDTO STDI
AOUTR_H AOUTR_C AOUTL_H AOUTL_C DGND VD VT DEM1 DEM0 PDN DFS CSN_DIF CCLK_CKS1 CDTI_CKS0
R63 10
R78 10
C44 0.1uF
C57 0.1uF
MCLK LRCK BCLK SDTO STDI
ADDT0 DADT0
ADDT1 DADT1
R64 R65 R66 R67 R68
R84 R85 R88 R89 R90
47
(1,3,4)
(4)
PDN DFS
T26 T27
TP3 TP4
P6
P7
JWT A2502WV2-11P
JWT A2502WV2-7P
2TR_LC 2TR_LH AGND 2TR_RC 2TR_RH AGND STR_H STR_C AGND STL_H STL_C
TB_C TB_H AGND CR_R AGND CR_L AMUTE
(3,4) AMUTE
R219 3.3K(F)
C149 10uF 16V
C150 0.1uF
R220 4.7K(F)
R221 750
R222 750
C51 22uF 16V
C56 22uF 16V
C46 3300pF
C55 3300pF
R71 4.7K(F)
R72 200(F)
R73 4.7K(F)
200(F) R74
R75 4.7K(F)
R76 4.7K(F)
C47 470pF
C48 470pF
U5A NJM4580M
R79 4.7K(F)
R80 200(F)
R82 4.7K(F)
R83 200(F)
R86 4.7K(F)
R87 4.7K(F)
C58 470pF
C59 470pF
U5B NJM4580M
Keep bypass caps near op amps.
C60 0.1uF
C61 0.1uF



Keep bypass caps near op amps.



TO PCB, INPUT_AD

TO PCB, INPUT_AD

TO PCB,POWER_SUB

TO PCB,INPUT_AD

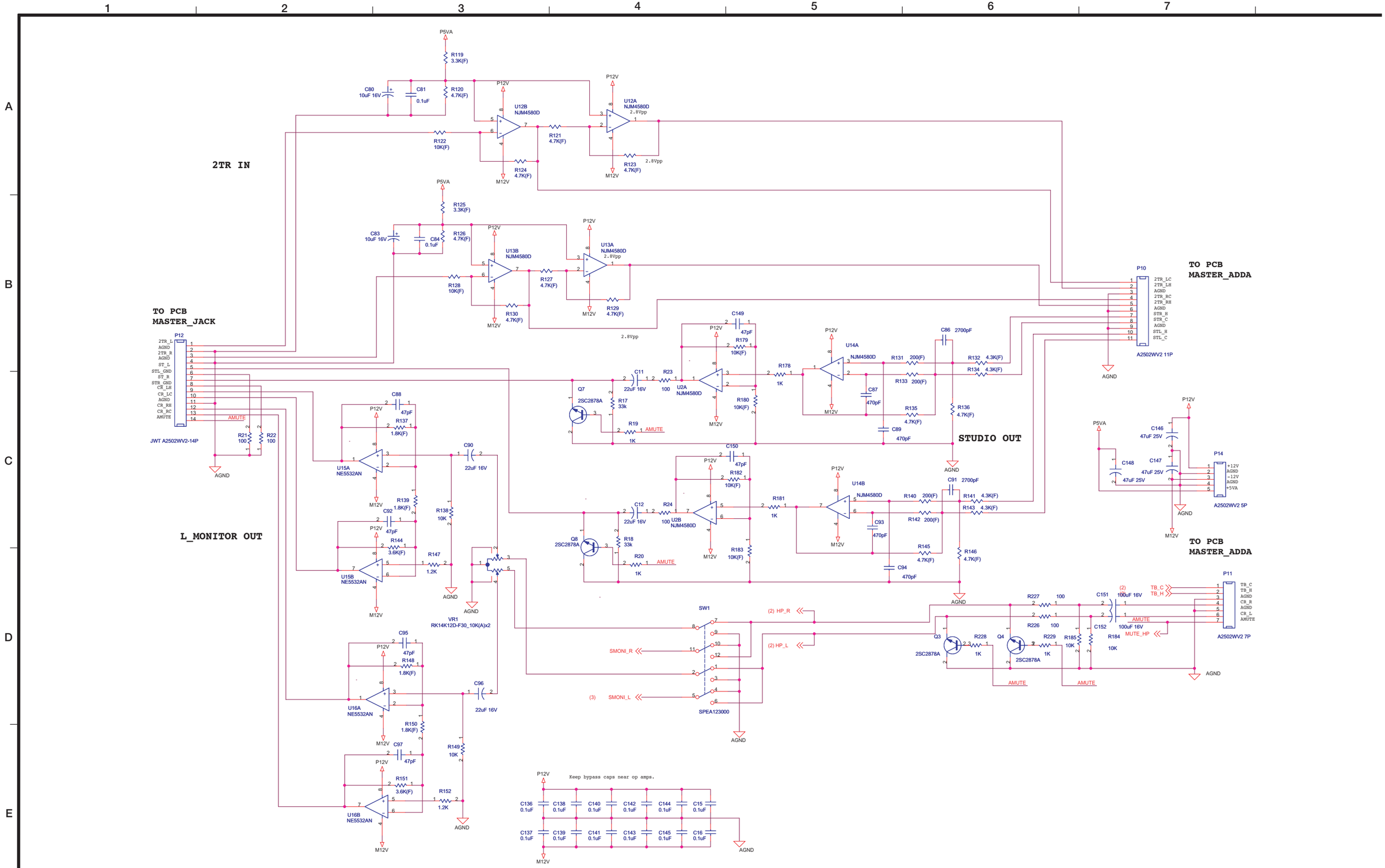
DM-4800 ONLY

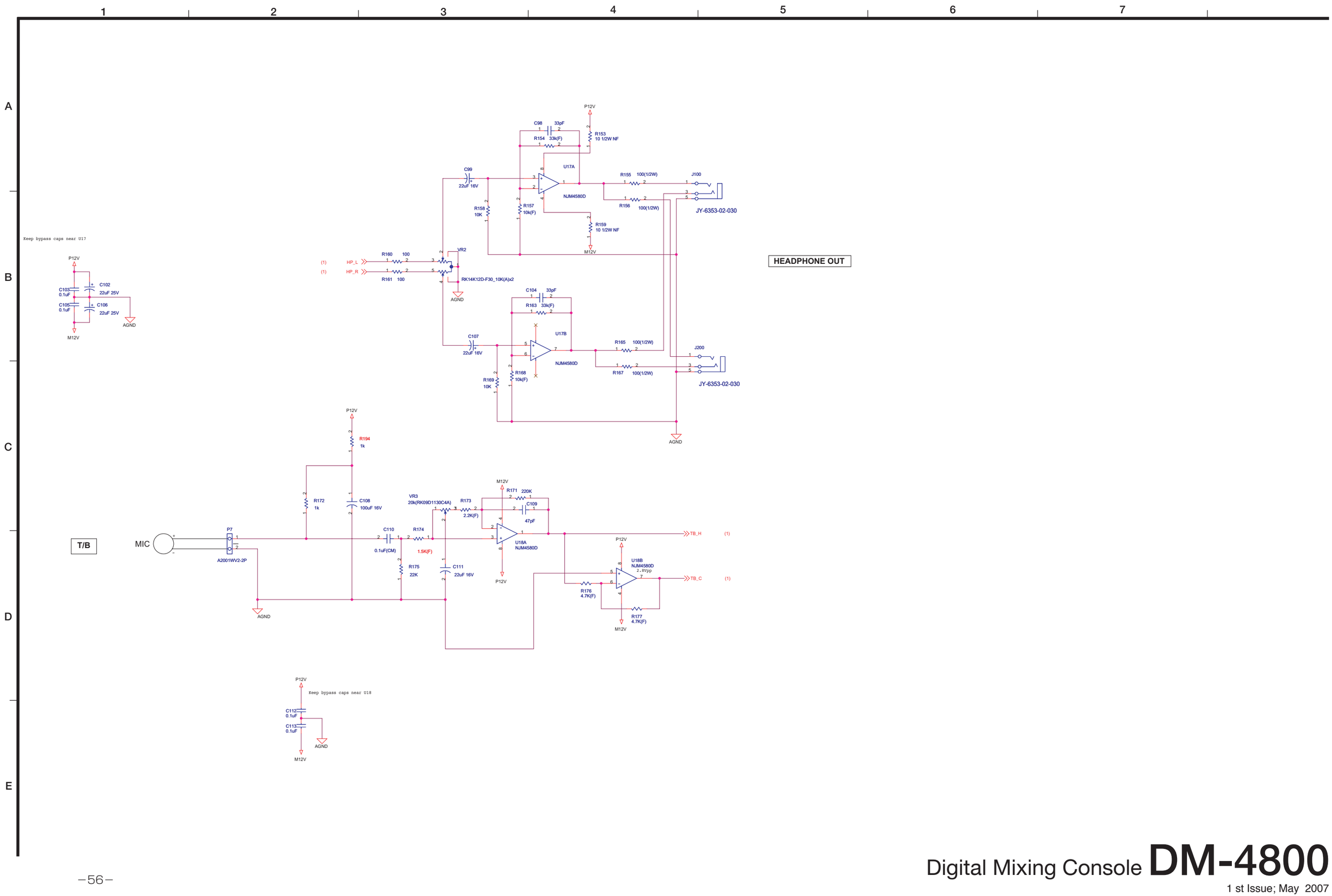
TO PCB,EXT ADDA

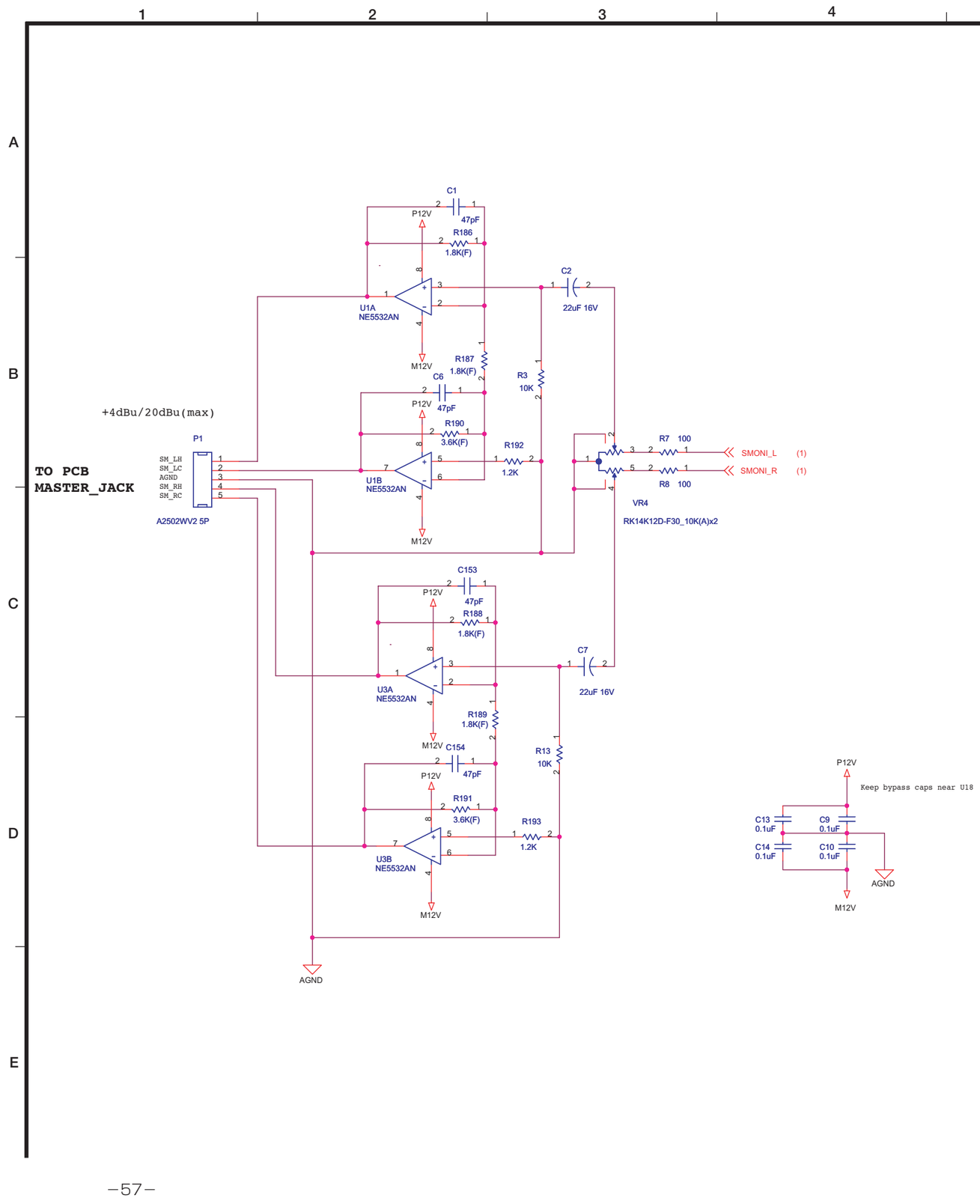
TO PCB, MAIN

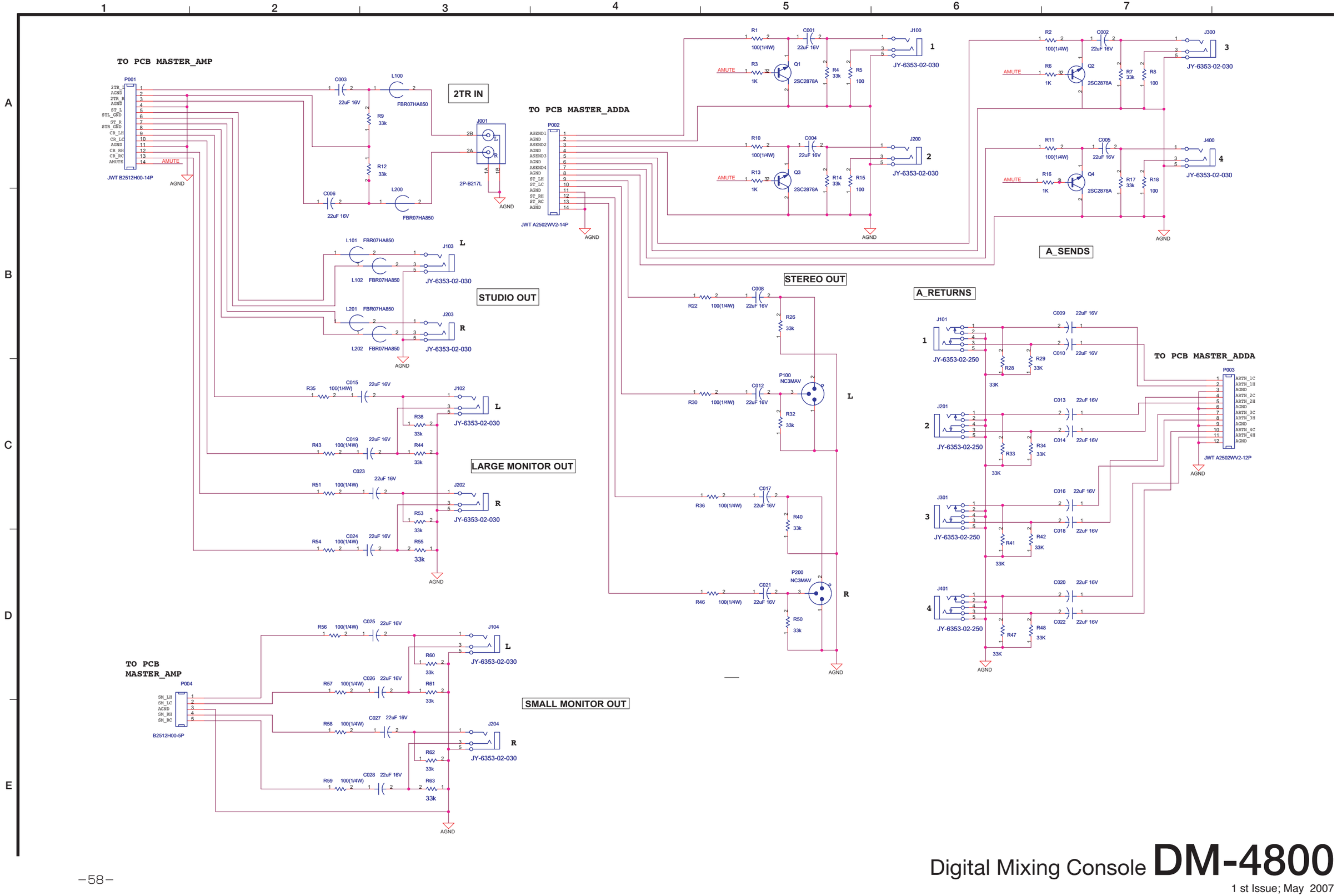
R231 DM-3200 : NO MOUNT
DM-4800 : MOUNT

Keep near XC9536XL power pin


2TR IN
TO PCB MASTER_JACK
JWT A2502WV2-14P
L_MONITOR OUT
TO PCB MASTER_ADDA
A2502WV2 11P
STUDIO OUT
A2502WV2 5P
A2502WV2 7P
SPEA123000
VR1 RK14K12D-F30_10K(A)x2
Keep bypass caps near op amps.
P5VA
P12V
M12V
AGND
2.8Vpp
AMUTE
MUTE_HP
SMONI_R
SMONI_L
(2) HP_R
(2) HP_L
TB_C
TB_H
U12A NJM4580D
U12B NJM4580D
U13A NJM4580D
U13B NJM4580D
U2A NJM4580D
U2B NJM4580D
U14A NJM4580D
U14B NJM4580D
U15A NE5532AN
U15B NE5532AN
U16A NE5532AN
U16B NE5532AN
Q7 2SC2878A
Q8 2SC2878A
Q3 2SC2878A
Q4 2SC2878A

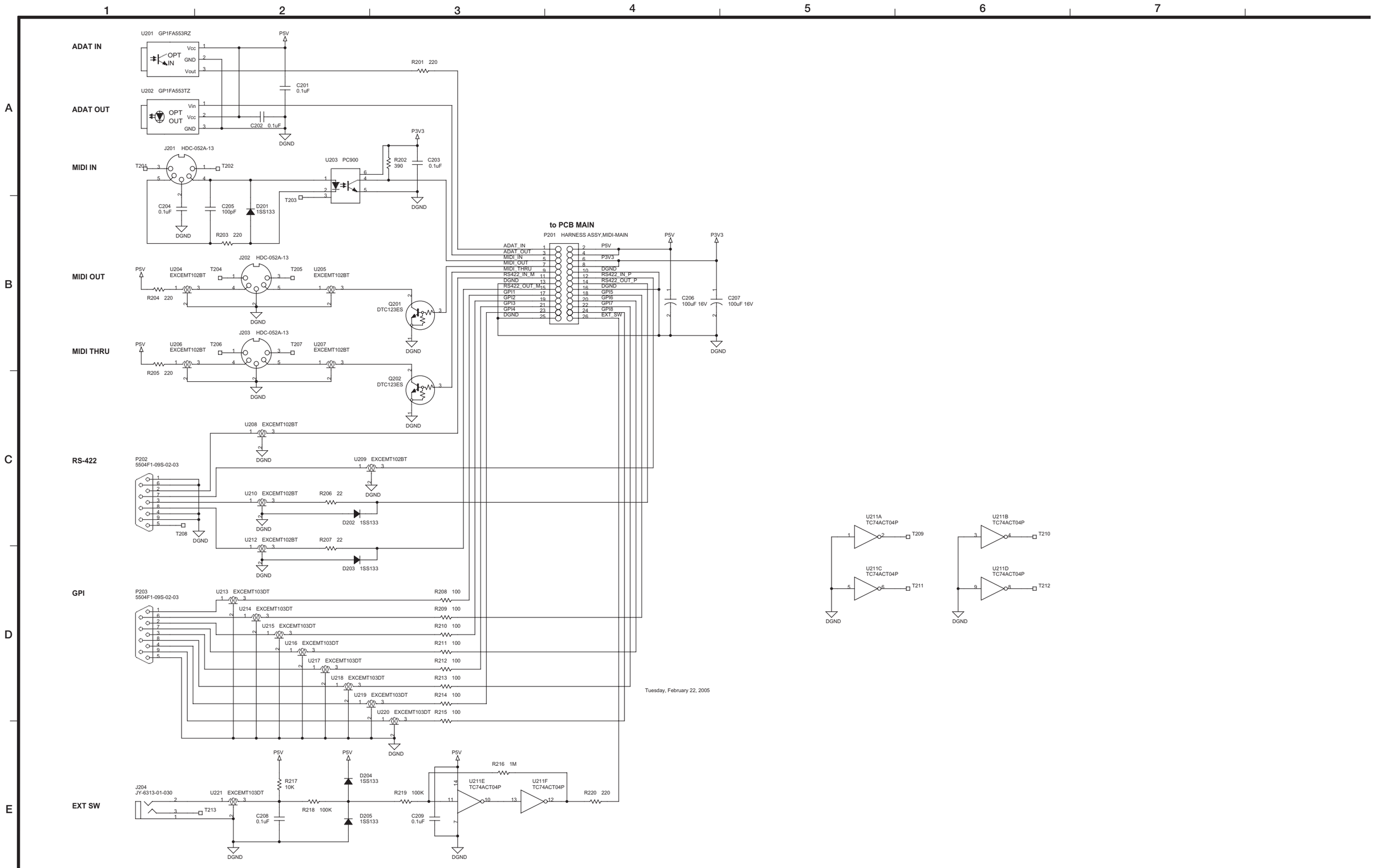

1
2
3
4
5
6
7
A
B
C
D
E
Keep bypass caps near U17
P12V
C103
0.1uF
C102
22uF 25V
C105
0.1uF
C106
22uF 25V
AGND
M12V
C98
33pF
R154
33k(F)
R153
10 1/2W NF
U17A
C99
22uF 16V
R155
100(1/2W)
J100
NJM4580D
R158
10K
R157
10k(F)
R156
100(1/2W)
JY-6353-02-030
R159
10 1/2W NF
M12V
R160
100
VR2
(1)
HP_L
(1)
HP_R
R161
100
RK14K12D-F30_10K(A)x2
AGND
HEADPHONE OUT
C104
33pF
R163
33k(F)
U17B
C107
22uF 16V
R165
100(1/2W)
J200
NJM4580D
R168
10k(F)
R167
100(1/2W)
JY-6353-02-030
R169
10K
AGND
P12V
R194
1k
R172
1k
C108
100uF 16V
VR3
20k(RK09D1130C4A)
R173
2.2K(F)
M12V
R171
220K
C109
47pF
T/B
MIC
P7
A2001WV2-2P
C110
0.1uF(CM)
R174
1.5K(F)
U18A
NJM4580D
P12V
TB_H
(1)
R175
22K
C111
22uF 16V
U18B
NJM4580D
2.8Vpp
TB_C
(1)
R176
4.7K(F)
R177
4.7K(F)
M12V
AGND
P12V
Keep bypass caps near U18
C112
0.1uF
C113
0.1uF
AGND
M12V

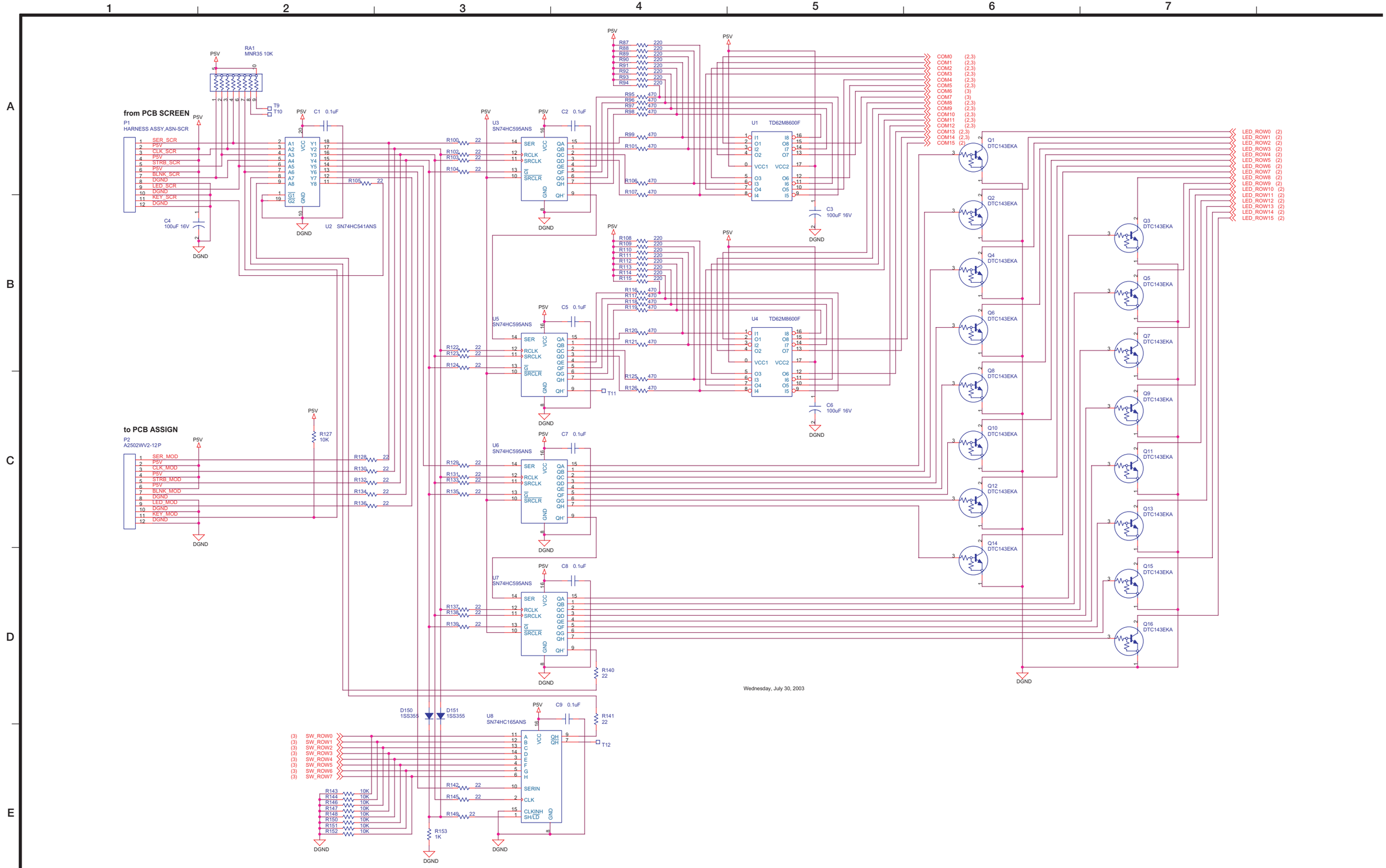

1
2
3
4
5
6
7
A
B
C
D
E
+4dBu/20dBu(max)
TO PCB
MASTER_JACK
P1
SM_LH
SM_LC
AGND
SM_RH
SM_RC
A2502WV2 5P
C1
47pF
P12V
R186
1.8K(F)
U1A
NE5532AN
M12V
C2
22uF 16V
R187
1.8K(F)
C6
47pF
R3
10K
R190
3.6K(F)
R192
1.2K
U1B
NE5532AN
R7 100
R8 100
SMONI_L (1)
SMONI_R (1)
VR4
RK14K12D-F30_10K(A)x2
C153
47pF
R188
1.8K(F)
U3A
NE5532AN
C7
22uF 16V
R189
1.8K(F)
C154
47pF
R13
10K
R191
3.6K(F)
R193
1.2K
U3B
NE5532AN
AGND
Keep bypass caps near U18
C13
0.1uF
C14
0.1uF
C9
0.1uF
C10
0.1uF

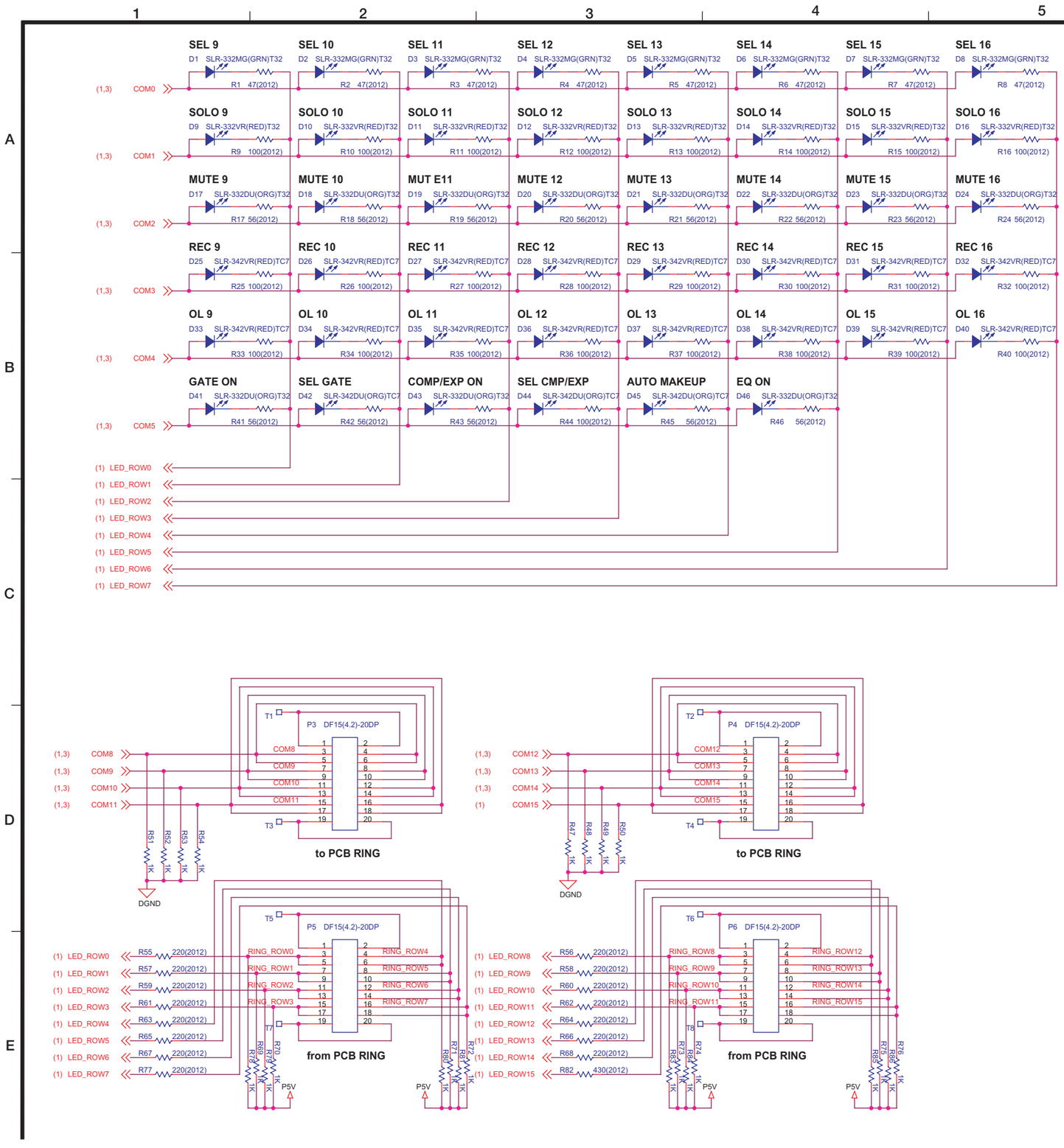


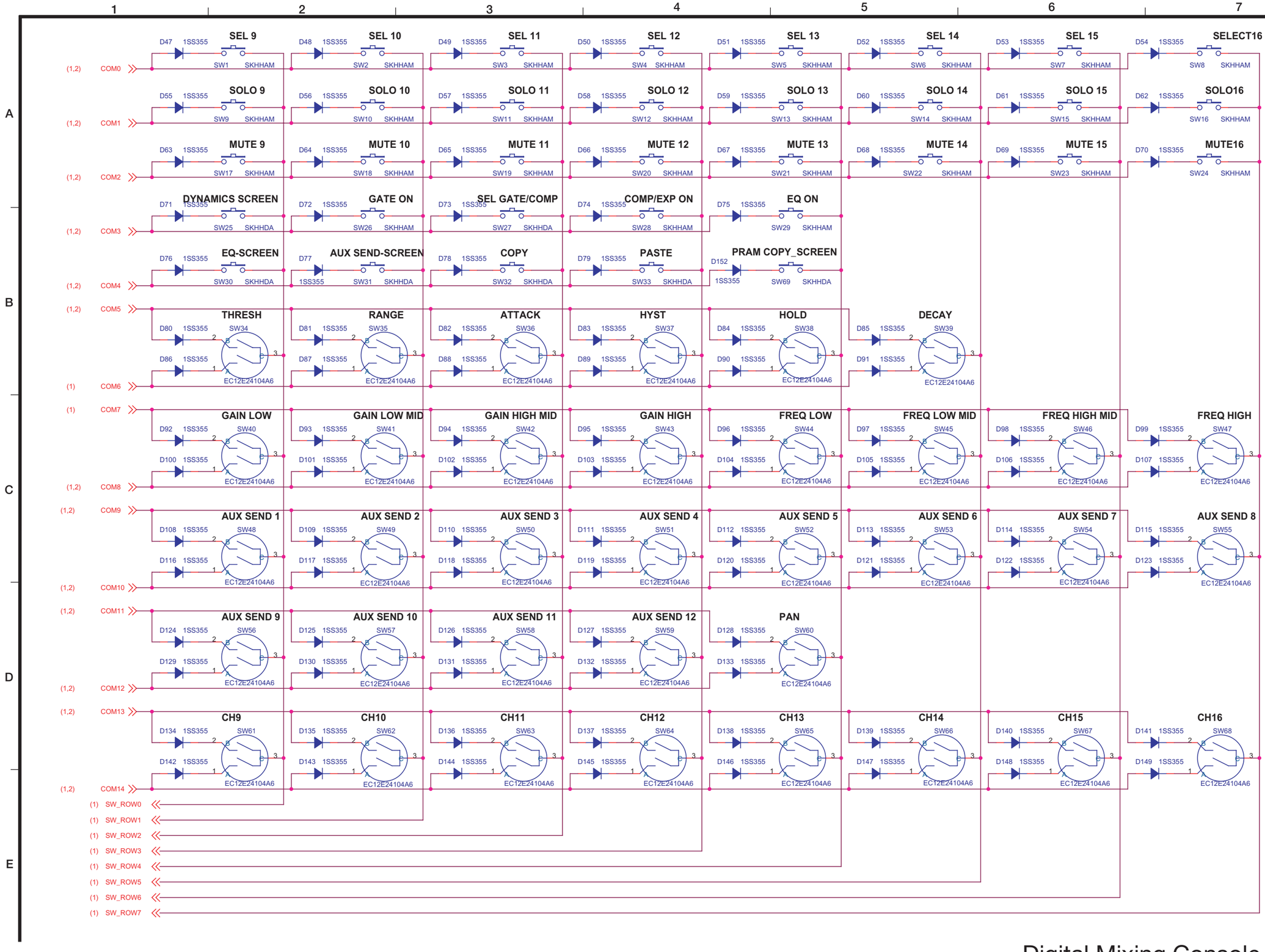
Digital Mixing Console **DM-4800**

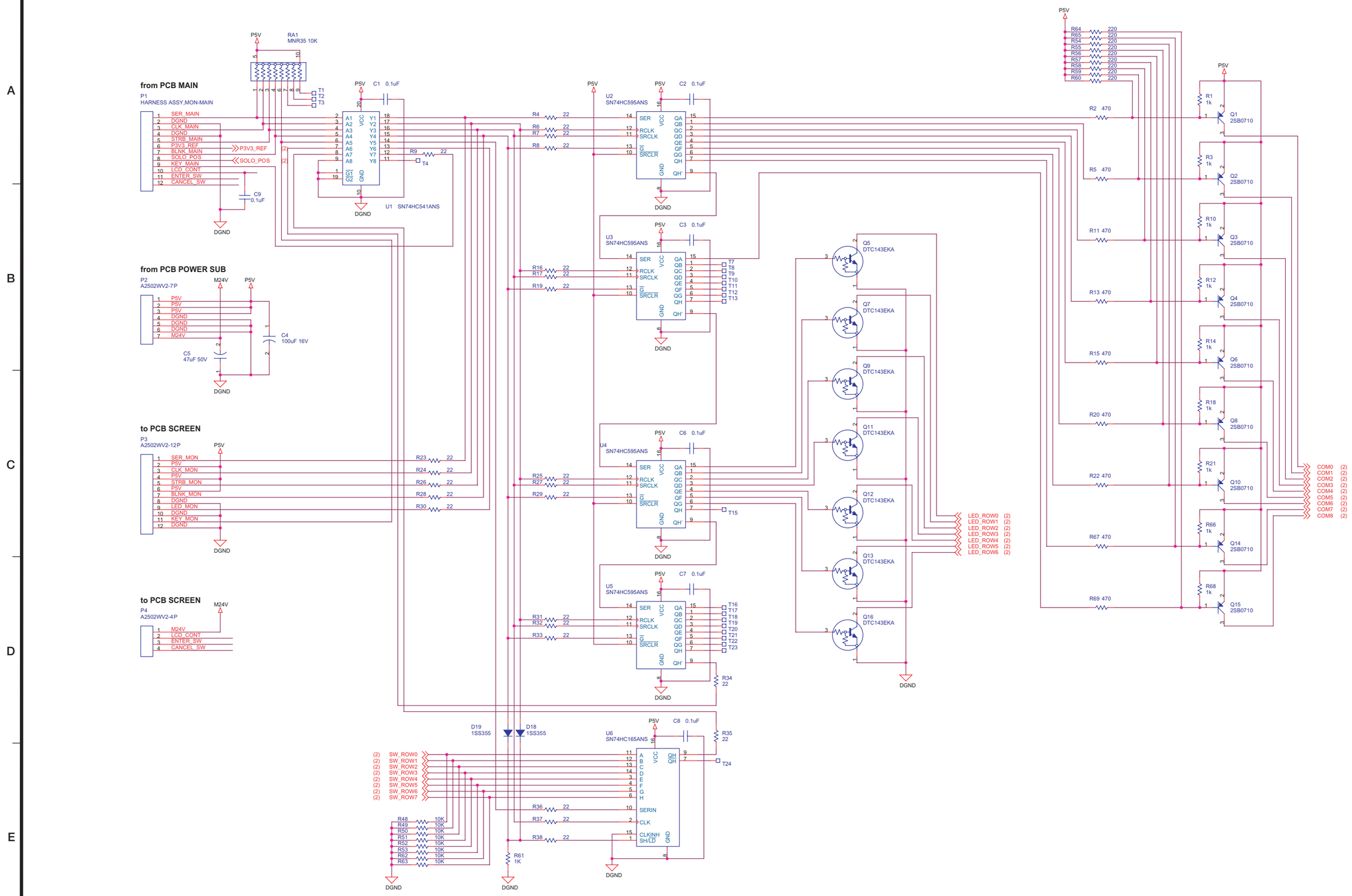
1 st Issue; May 2007

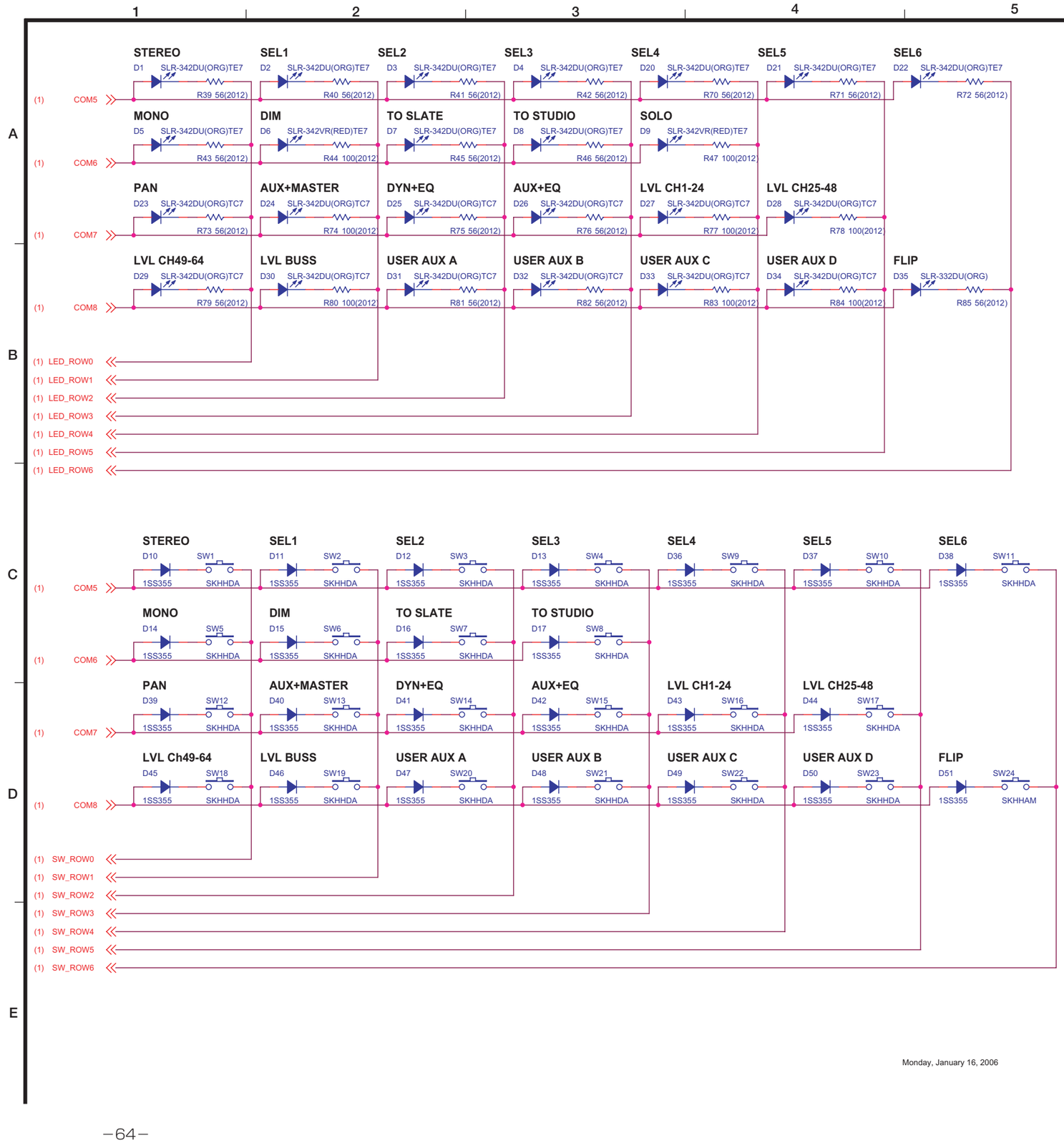

1
2
3
4
5
6
7
A
B
C
D
E
ADAT IN
ADAT OUT
MIDI IN
MIDI OUT
MIDI THRU
RS-422
GPI
EXT SW
U201 GP1FA553RZ
OPT IN
Vcc
GND
Vout
P5V
R201 220
C201 0.1uF
U202 GP1FA553TZ
OPT OUT
Vin
Vcc
GND
C202 0.1uF
DGND
P3V3
J201 HDC-052A-13
T201
T202
T203
U203 PC900
R202 390
C203 0.1uF
C204 0.1uF
C205 100pF
D201 1SS133
R203 220
J202 HDC-052A-13
T204
T205
U204 EXCEMT102BT
U205 EXCEMT102BT
R204 220
Q201 DTC123ES
J203 HDC-052A-13
T206
T207
U206 EXCEMT102BT
U207 EXCEMT102BT
R205 220
Q202 DTC123ES
U208 EXCEMT102BT
U209 EXCEMT102BT
U210 EXCEMT102BT
U212 EXCEMT102BT
R206 22
R207 22
D202 1SS133
D203 1SS133
P202
5504F1-09S-02-03
T208
P203
5504F1-09S-02-03
U213 EXCEMT103DT
U214 EXCEMT103DT
U215 EXCEMT103DT
U216 EXCEMT103DT
U217 EXCEMT103DT
U218 EXCEMT103DT
U219 EXCEMT103DT
U220 EXCEMT103DT
R208 100
R209 100
R210 100
R211 100
R212 100
R213 100
R214 100
R215 100
J204
JY-6313-01-030
T213
U221 EXCEMT103DT
R217 10K
R218 100K
R219 100K
R216 1M
R220 220
C208 0.1uF
C209 0.1uF
D204 1SS133
D205 1SS133
U211E TC74ACT04P
U211F TC74ACT04P
to PCB MAIN
P201 HARNESS ASSY,MIDI-MAIN
ADAT_IN
ADAT_OUT
MIDI_IN
MIDI_OUT
MIDI_THRU
RS422_IN_M
DGND
RS422_OUT_M
GPI1
GPI2
GPI3
GPI4
DGND
P5V
P3V3
DGND
RS422_IN_P
RS422_OUT_P
DGND
GPI5
GPI6
GPI7
GPI8
EXT_SW
C206 100uF 16V
C207 100uF 16V
U211A TC74ACT04P
U211B TC74ACT04P
U211C TC74ACT04P
U211D TC74ACT04P
T209
T210
T211
T212
Tuesday, February 22, 2005


1
2
3
4
5
6
7
A
B
C
D
E
from PCB SCREEN
P1
HARNESS ASSY,ASN-SCR
SER_SCR
CLK_SCR
STRB_SCR
BLNK_SCR
LED_SCR
KEY_SCR
P5V
DGND
RA1
MNR35 10K
T9
T10
C1 0.1uF
C4
100uF 16V
U2 SN74HC541ANS
to PCB ASSIGN
P2
A2502WV2-12P
SER_MOD
CLK_MOD
STRB_MOD
BLNK_MOD
LED_MOD
KEY_MOD
R127
10K
U3
SN74HC595ANS
C2 0.1uF
U5
SN74HC595ANS
C5 0.1uF
U6
SN74HC595ANS
C7 0.1uF
U7
SN74HC595ANS
C8 0.1uF
U8
SN74HC165ANS
C9 0.1uF
T11
T12
R140
22
R141
22
D150
1SS355
D151
1SS355
R153
1K
U1 TD62M8600F
U4 TD62M8600F
C3
100uF 16V
C6
100uF 16V
COM0 (2,3)
COM1 (2,3)
COM2 (2,3)
COM3 (2,3)
COM4 (2,3)
COM5 (2,3)
COM6 (3)
COM7 (3)
COM8 (2,3)
COM9 (2,3)
COM10 (2,3)
COM11 (2,3)
COM12 (2,3)
COM13 (2,3)
COM14 (2,3)
COM15 (2)
LED_ROW0 (2)
LED_ROW1 (2)
LED_ROW2 (2)
LED_ROW3 (2)
LED_ROW4 (2)
LED_ROW5 (2)
LED_ROW6 (2)
LED_ROW7 (2)
LED_ROW8 (2)
LED_ROW9 (2)
LED_ROW10 (2)
LED_ROW11 (2)
LED_ROW12 (2)
LED_ROW13 (2)
LED_ROW14 (2)
LED_ROW15 (2)
Q1 DTC143EKA
Q2 DTC143EKA
Q3 DTC143EKA
Q4 DTC143EKA
Q5 DTC143EKA
Q6 DTC143EKA
Q7 DTC143EKA
Q8 DTC143EKA
Q9 DTC143EKA
Q10 DTC143EKA
Q11 DTC143EKA
Q12 DTC143EKA
Q13 DTC143EKA
Q14 DTC143EKA
Q15 DTC143EKA
Q16 DTC143EKA
SW_ROW0
SW_ROW1
SW_ROW2
SW_ROW3
SW_ROW4
SW_ROW5
SW_ROW6
SW_ROW7
Wednesday, July 30, 2003


SEL 9 D1 SLR-332MG(GRN)T32 R1 47(2012)
SEL 10 D2 SLR-332MG(GRN)T32 R2 47(2012)
SEL 11 D3 SLR-332MG(GRN)T32 R3 47(2012)
SEL 12 D4 SLR-332MG(GRN)T32 R4 47(2012)
SEL 13 D5 SLR-332MG(GRN)T32 R5 47(2012)
SEL 14 D6 SLR-332MG(GRN)T32 R6 47(2012)
SEL 15 D7 SLR-332MG(GRN)T32 R7 47(2012)
SEL 16 D8 SLR-332MG(GRN)T32 R8 47(2012)
(1,3) COM0
SOLO 9 D9 SLR-332VR(RED)T32 R9 100(2012)
SOLO 10 D10 SLR-332VR(RED)T32 R10 100(2012)
SOLO 11 D11 SLR-332VR(RED)T32 R11 100(2012)
SOLO 12 D12 SLR-332VR(RED)T32 R12 100(2012)
SOLO 13 D13 SLR-332VR(RED)T32 R13 100(2012)
SOLO 14 D14 SLR-332VR(RED)T32 R14 100(2012)
SOLO 15 D15 SLR-332VR(RED)T32 R15 100(2012)
SOLO 16 D16 SLR-332VR(RED)T32 R16 100(2012)
(1,3) COM1
MUTE 9 D17 SLR-332DU(ORG)T32 R17 56(2012)
MUTE 10 D18 SLR-332DU(ORG)T32 R18 56(2012)
MUT E11 D19 SLR-332DU(ORG)T32 R19 56(2012)
MUTE 12 D20 SLR-332DU(ORG)T32 R20 56(2012)
MUTE 13 D21 SLR-332DU(ORG)T32 R21 56(2012)
MUTE 14 D22 SLR-332DU(ORG)T32 R22 56(2012)
MUTE 15 D23 SLR-332DU(ORG)T32 R23 56(2012)
MUTE 16 D24 SLR-332DU(ORG)T32 R24 56(2012)
(1,3) COM2
REC 9 D25 SLR-342VR(RED)TC7 R25 100(2012)
REC 10 D26 SLR-342VR(RED)TC7 R26 100(2012)
REC 11 D27 SLR-342VR(RED)TC7 R27 100(2012)
REC 12 D28 SLR-342VR(RED)TC7 R28 100(2012)
REC 13 D29 SLR-342VR(RED)TC7 R29 100(2012)
REC 14 D30 SLR-342VR(RED)TC7 R30 100(2012)
REC 15 D31 SLR-342VR(RED)TC7 R31 100(2012)
REC 16 D32 SLR-342VR(RED)TC7 R32 100(2012)
(1,3) COM3
OL 9 D33 SLR-342VR(RED)TC7 R33 100(2012)
OL 10 D34 SLR-342VR(RED)TC7 R34 100(2012)
OL 11 D35 SLR-342VR(RED)TC7 R35 100(2012)
OL 12 D36 SLR-342VR(RED)TC7 R36 100(2012)
OL 13 D37 SLR-342VR(RED)TC7 R37 100(2012)
OL 14 D38 SLR-342VR(RED)TC7 R38 100(2012)
OL 15 D39 SLR-342VR(RED)TC7 R39 100(2012)
OL 16 D40 SLR-342VR(RED)TC7 R40 100(2012)
(1,3) COM4
GATE ON D41 SLR-332DU(ORG)T32 R41 56(2012)
SEL GATE D42 SLR-342DU(ORG)TC7 R42 56(2012)
COMP/EXP ON D43 SLR-332DU(ORG)T32 R43 56(2012)
SEL CMP/EXP D44 SLR-342DU(ORG)TC7 R44 100(2012)
AUTO MAKEUP D45 SLR-342DU(ORG)TC7 R45 56(2012)
EQ ON D46 SLR-332DU(ORG)T32 R46 56(2012)
(1,3) COM5
(1) LED_ROW0
(1) LED_ROW1
(1) LED_ROW2
(1) LED_ROW3
(1) LED_ROW4
(1) LED_ROW5
(1) LED_ROW6
(1) LED_ROW7
T1 P3 DF15(4.2)-20DP
(1,3) COM8
(1,3) COM9
(1,3) COM10
(1,3) COM11
T3
to PCB RING
R51 1K
R52 1K
R53 1K
R54 1K
DGND
T2 P4 DF15(4.2)-20DP
(1,3) COM12
(1,3) COM13
(1,3) COM14
(1) COM15
T4
to PCB RING
R47 1K
R48 1K
R49 1K
R50 1K
DGND
T5 P5 DF15(4.2)-20DP
(1) LED_ROW0 R55 220(2012) RING_ROW0
(1) LED_ROW1 R57 220(2012) RING_ROW1
(1) LED_ROW2 R59 220(2012) RING_ROW2
(1) LED_ROW3 R61 220(2012) RING_ROW3
(1) LED_ROW4 R63 220(2012)
(1) LED_ROW5 R65 220(2012)
(1) LED_ROW6 R67 220(2012)
(1) LED_ROW7 R77 220(2012)
RING_ROW4
RING_ROW5
RING_ROW6
RING_ROW7
T7
from PCB RING
R69 1K
R70 1K
R71 1K
R72 1K
R78 1K
P5V
R79 1K
P5V
T6 P6 DF15(4.2)-20DP
(1) LED_ROW8 R56 220(2012) RING_ROW8
(1) LED_ROW9 R58 220(2012) RING_ROW9
(1) LED_ROW10 R60 220(2012) RING_ROW10
(1) LED_ROW11 R62 220(2012) RING_ROW11
(1) LED_ROW12 R64 220(2012)
(1) LED_ROW13 R66 220(2012)
(1) LED_ROW14 R68 220(2012)
(1) LED_ROW15 R82 430(2012)
RING_ROW12
RING_ROW13
RING_ROW14
RING_ROW15
T8
from PCB RING
R73 1K
R74 1K
R75 1K
R76 1K
R80 1K
P5V
R81 1K
P5V


1
2
3
4
5
6
7
A
B
C
D
E
SEL 9
SEL 10
SEL 11
SEL 12
SEL 13
SEL 14
SEL 15
SELECT16
SOLO 9
SOLO 10
SOLO 11
SOLO 12
SOLO 13
SOLO 14
SOLO 15
SOLO16
MUTE 9
MUTE 10
MUTE 11
MUTE 12
MUTE 13
MUTE 14
MUTE 15
MUTE16
DYNAMICS SCREEN
GATE ON
SEL GATE/COMP
COMP/EXP ON
EQ ON
EQ-SCREEN
AUX SEND-SCREEN
COPY
PASTE
PRAM COPY_SCREEN
THRESH
RANGE
ATTACK
HYST
HOLD
DECAY
GAIN LOW
GAIN LOW MID
GAIN HIGH MID
GAIN HIGH
FREQ LOW
FREQ LOW MID
FREQ HIGH MID
FREQ HIGH
AUX SEND 1
AUX SEND 2
AUX SEND 3
AUX SEND 4
AUX SEND 5
AUX SEND 6
AUX SEND 7
AUX SEND 8
AUX SEND 9
AUX SEND 10
AUX SEND 11
AUX SEND 12
PAN
CH9
CH10
CH11
CH12
CH13
CH14
CH15
CH16
1SS355
EC12E24104A6
SKHHAM
SKHHDA
COM0
COM1
COM2
COM3
COM4
COM5
COM6
COM7
COM8
COM9
COM10
COM11
COM12
COM13
COM14
SW_ROW0
SW_ROW1
SW_ROW2
SW_ROW3
SW_ROW4
SW_ROW5
SW_ROW6
SW_ROW7


from PCB MAIN
P1
HARNESS ASSY,MON-MAIN
SER_MAIN
DGND
CLK_MAIN
DGND
STRB_MAIN
P3V3_REF
BLNK_MAIN
SOLO_POS
KEY_MAIN
LCD_CONT
ENTER_SW
CANCEL_SW
P3V3_REF
SOLO_POS
C9 0.1uF
DGND
RA1
MNR35 10K
T1
T2
T3
U1 SN74HC541ANS
C1 0.1uF
R9 22
T4
U2
SN74HC595ANS
C2 0.1uF
R4 22
R6 22
R7 22
R8 22
U3
SN74HC595ANS
C3 0.1uF
R16 22
R17 22
R19 22
T7
T8
T9
T10
T11
T12
T13
U4
SN74HC595ANS
C6 0.1uF
R25 22
R27 22
R29 22
T15
U5
SN74HC595ANS
C7 0.1uF
R31 22
R32 22
R33 22
T16
T17
T18
T19
T20
T21
T22
T23
R34 22
from PCB POWER SUB
P2
A2502WV2-7P
P5V
M24V
C4 100uF 16V
C5 47uF 50V
to PCB SCREEN
P3
A2502WV2-12P
SER_MON
CLK_MON
STRB_MON
BLNK_MON
LED_MON
KEY_MON
R23 22
R24 22
R26 22
R28 22
R30 22
to PCB SCREEN
P4
A2502WV2-4P
M24V
LCD_CONT
ENTER_SW
CANCEL_SW
D19
1SS355
D18
1SS355
U6
SN74HC165ANS
C8 0.1uF
R35 22
T24
SW_ROW0
SW_ROW1
SW_ROW2
SW_ROW3
SW_ROW4
SW_ROW5
SW_ROW6
SW_ROW7
R48 10K
R49 10K
R50 10K
R51 10K
R52 10K
R53 10K
R62 10K
R63 10K
R36 22
R37 22
R38 22
R61 1K
Q5
DTC143EKA
Q7
DTC143EKA
Q9
DTC143EKA
Q11
DTC143EKA
Q12
DTC143EKA
Q13
DTC143EKA
Q16
DTC143EKA
LED_ROW0 (2)
LED_ROW1 (2)
LED_ROW2 (2)
LED_ROW3 (2)
LED_ROW4 (2)
LED_ROW5 (2)
LED_ROW6 (2)
R64 220
R65 220
R54 220
R55 220
R56 220
R57 220
R58 220
R59 220
R60 220
R2 470
R5 470
R11 470
R13 470
R15 470
R20 470
R22 470
R67 470
R69 470
R1 1k
R3 1k
R10 1k
R12 1k
R14 1k
R18 1k
R21 1k
R66 1k
R68 1k
Q1 2SB0710
Q2 2SB0710
Q3 2SB0710
Q4 2SB0710
Q6 2SB0710
Q8 2SB0710
Q10 2SB0710
Q14 2SB0710
Q15 2SB0710
COM0 (2)
COM1 (2)
COM2 (2)
COM3 (2)
COM4 (2)
COM5 (2)
COM6 (2)
COM7 (2)
COM8 (2)



to PCB LAYER
P5
A2502WV2-5P

(1) COM0 — COM0 1
(1) COM1 — COM1 2
(1) COM2 — COM2 3
(1) COM3 — COM3 4
(1) COM4 — COM4 5

from PCB LAYER
P6 A2502WV2-14P

(1) LED_ROW0 — LED_ROW0 1
(1) LED_ROW1 — LED_ROW1 2
(1) LED_ROW2 — LED_ROW2 3
(1) LED_ROW3 — LED_ROW3 4
(1) LED_ROW4 — LED_ROW4 5
(1) LED_ROW5 — LED_ROW5 6
(1) SW_ROW0 — SW_ROW0 7
(1) SW_ROW1 — SW_ROW1 8
(1) SW_ROW2 — SW_ROW2 9
(1) SW_ROW3 — SW_ROW3 10
(1) SW_ROW4 — SW_ROW4 11
(1) SW_ROW5 — SW_ROW5 12
(1) SW_ROW6 — SW_ROW6 13
(1) SW_ROW7 — SW_ROW7 14

to PCB TRANSPORT
P7
A2502WV2-6P

(1) COM4 — COM4 1
(1) SW_ROW0 — SW_ROW0 2
(1) SW_ROW1 — SW_ROW1 3
(1) SW_ROW2 — SW_ROW2 4
(1) SW_ROW3 — SW_ROW3 5
(1) SW_ROW4 — SW_ROW4 6

to PCB SOLO
P8
A2502WV2-3P

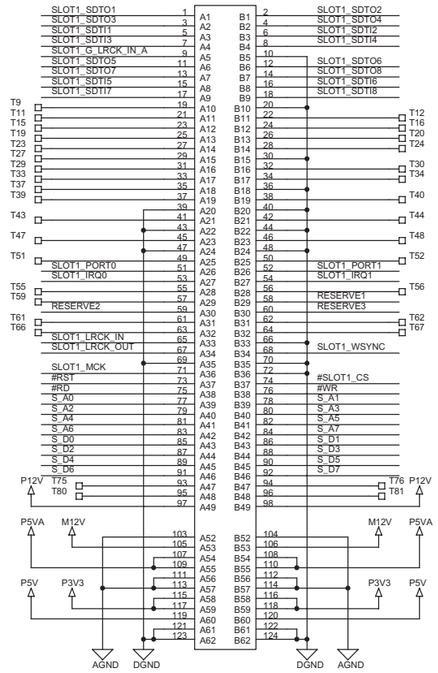
(1) SOLO_POS — SOLO_POS 1
(1) P3V3_REF — P3V3_REF 2
DGND 3
DGND

1 2 3 4 5 6 7

A B C D E

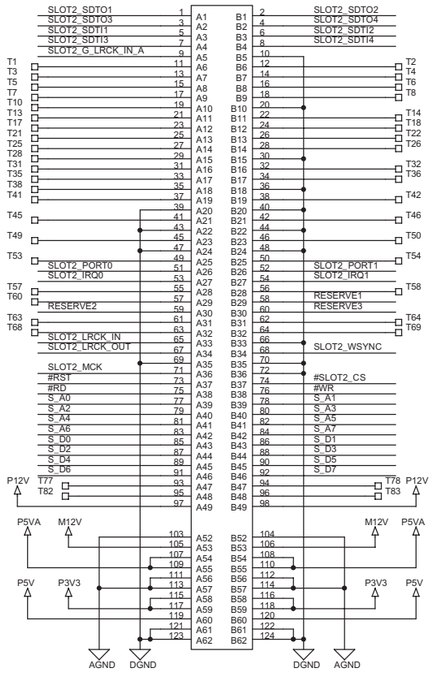
to SLOT1

J1 2525-120-PCI

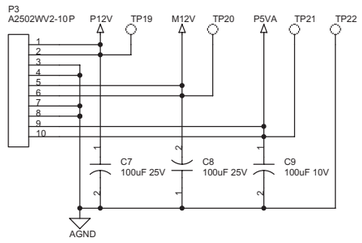


to SLOT2

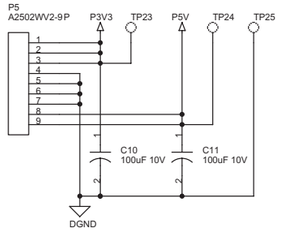
J2 2525-120-PCI



to PCB POWER SUB

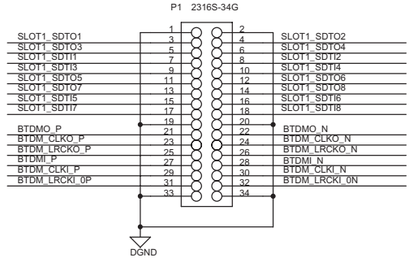


to PCB POWER SUB



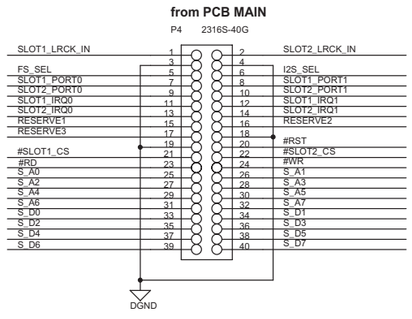
from PCB MAIN

P1 2316S-34G

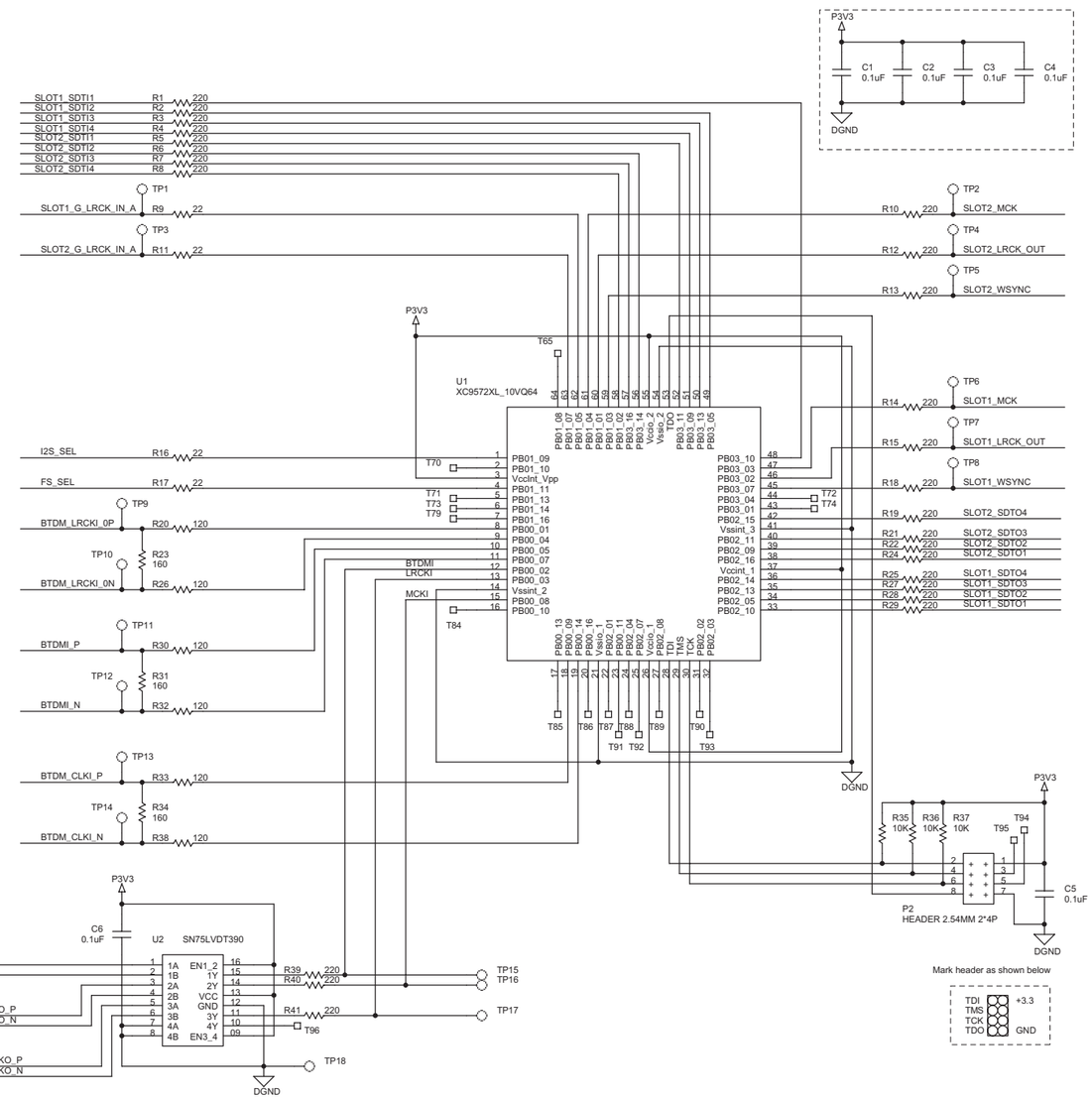


from PCB MAIN

P4 2316S-40G



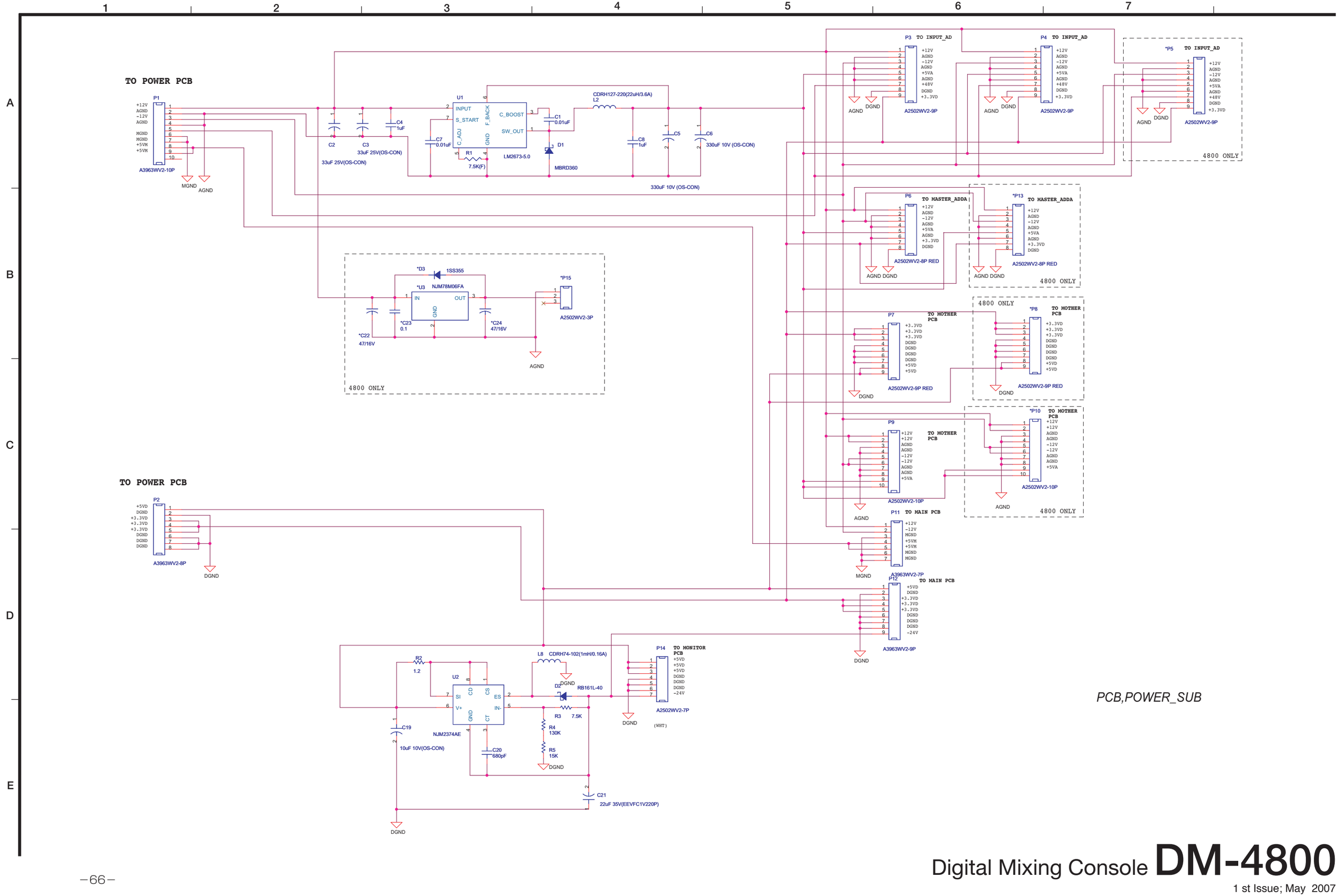
Keep near XC9536XL power pin



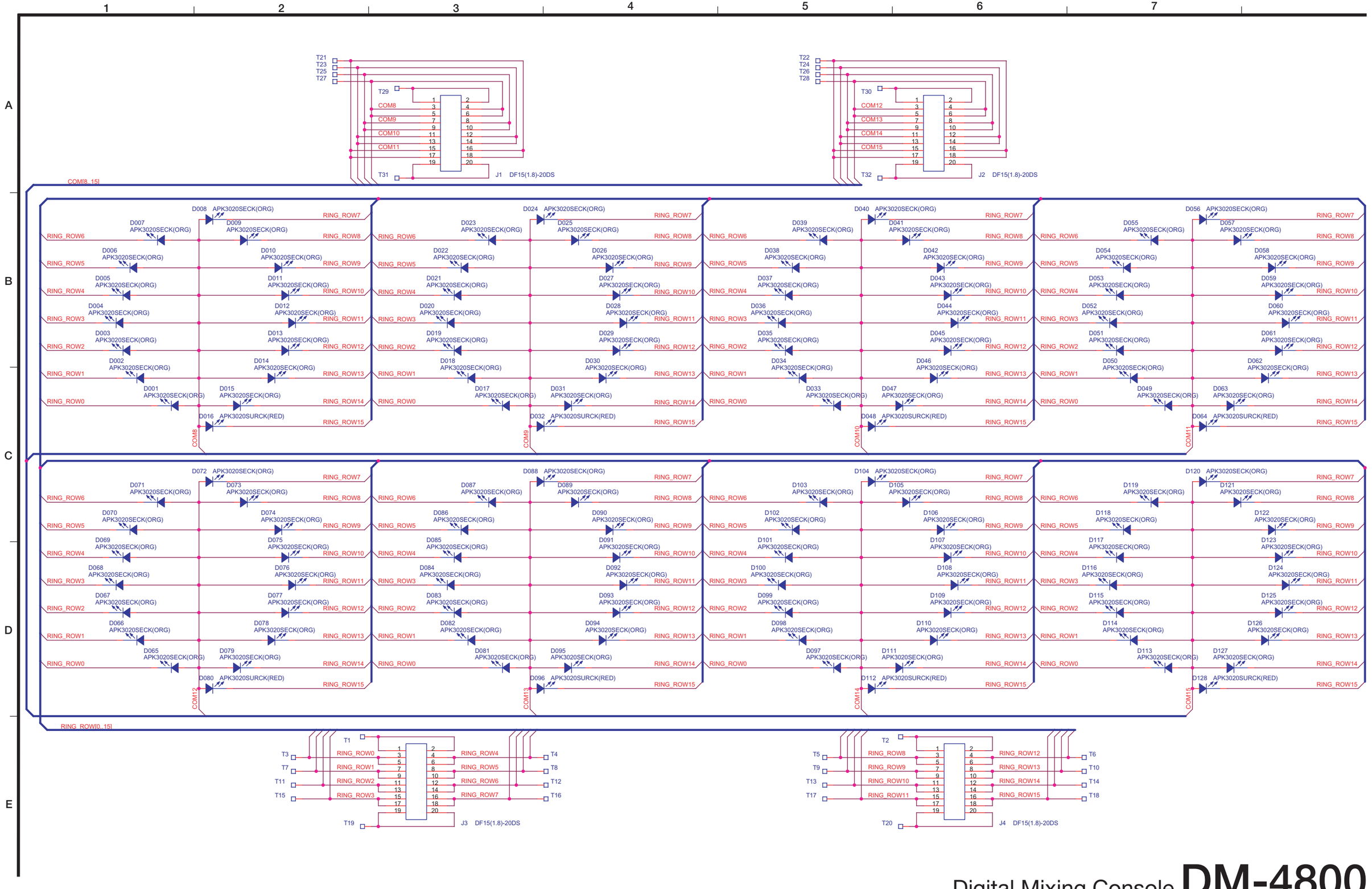
Friday, March 11, 2005

Digital Mixing Console **DM-4800**

1 st Issue; May 2007



PCB,POWER_SUB


1
2
3
4
5
6
7
A
B
C
D
E
T21
T23
T25
T27
T29
COM8
COM9
COM10
COM11
T31
J1 DF15(1.8)-20DS
T22
T24
T26
T28
T30
COM12
COM13
COM14
COM15
T32
J2 DF15(1.8)-20DS
COM[8..15]
RING_ROW[0..15]
RING_ROW0
RING_ROW1
RING_ROW2
RING_ROW3
RING_ROW4
RING_ROW5
RING_ROW6
RING_ROW7
RING_ROW8
RING_ROW9
RING_ROW10
RING_ROW11
RING_ROW12
RING_ROW13
RING_ROW14
RING_ROW15
D001 APK3020SECK(ORG)
D002 APK3020SECK(ORG)
D003 APK3020SECK(ORG)
D004 APK3020SECK(ORG)
D005 APK3020SECK(ORG)
D006 APK3020SECK(ORG)
D007 APK3020SECK(ORG)
D008 APK3020SECK(ORG)
D009 APK3020SECK(ORG)
D010 APK3020SECK(ORG)
D011 APK3020SECK(ORG)
D012 APK3020SECK(ORG)
D013 APK3020SECK(ORG)
D014 APK3020SECK(ORG)
D015 APK3020SECK(ORG)
D016 APK3020SURCK(RED)
D017 APK3020SECK(ORG)
D018 APK3020SECK(ORG)
D019 APK3020SECK(ORG)
D020 APK3020SECK(ORG)
D021 APK3020SECK(ORG)
D022 APK3020SECK(ORG)
D023 APK3020SECK(ORG)
D024 APK3020SECK(ORG)
D025 APK3020SECK(ORG)
D026 APK3020SECK(ORG)
D027 APK3020SECK(ORG)
D028 APK3020SECK(ORG)
D029 APK3020SECK(ORG)
D030 APK3020SECK(ORG)
D031 APK3020SECK(ORG)
D032 APK3020SURCK(RED)
D033 APK3020SECK(ORG)
D034 APK3020SECK(ORG)
D035 APK3020SECK(ORG)
D036 APK3020SECK(ORG)
D037 APK3020SECK(ORG)
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D042 APK3020SECK(ORG)
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D045 APK3020SECK(ORG)
D046 APK3020SECK(ORG)
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D098 APK3020SECK(ORG)
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D100 APK3020SECK(ORG)
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D112 APK3020SURCK(RED)
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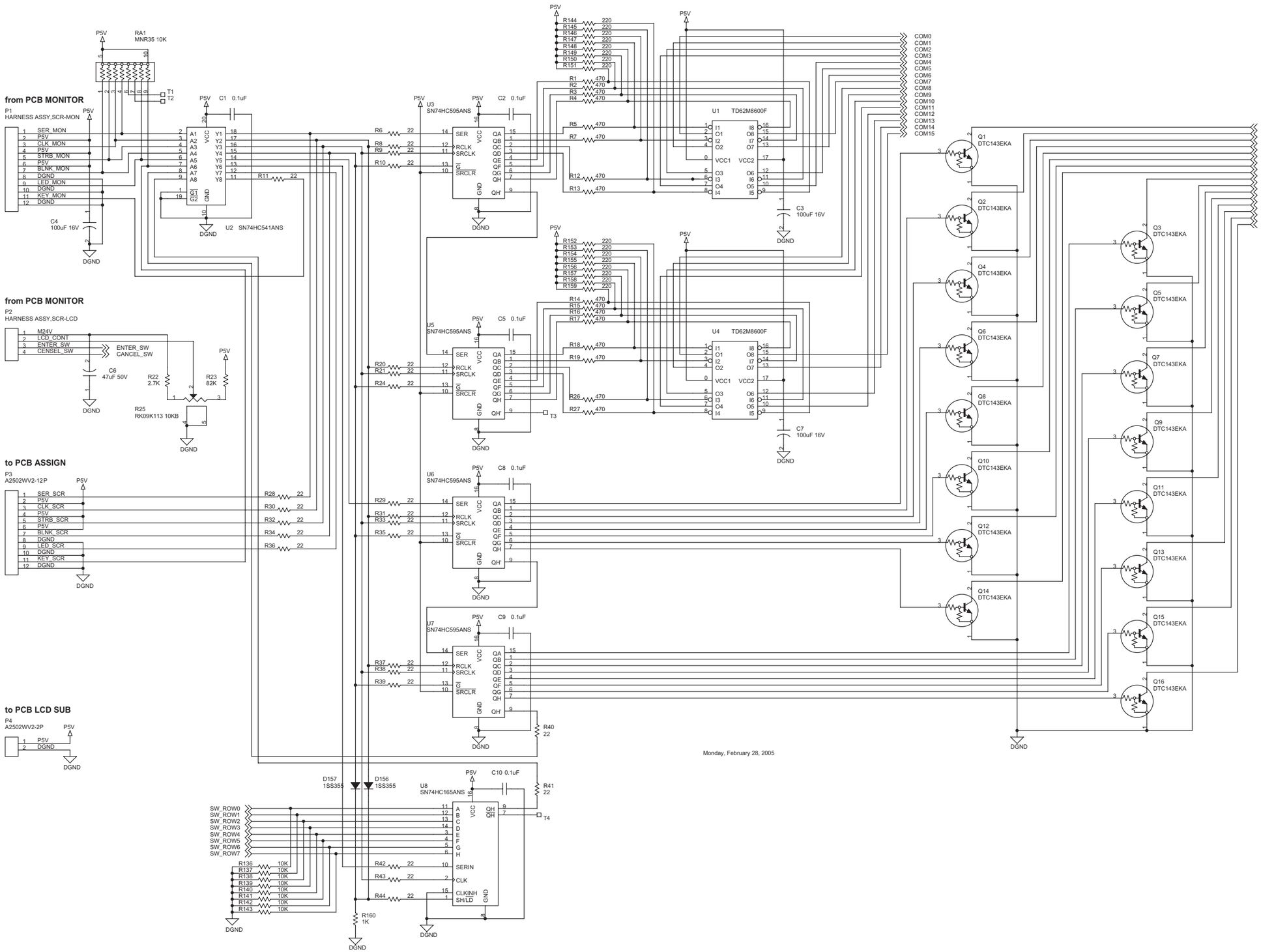
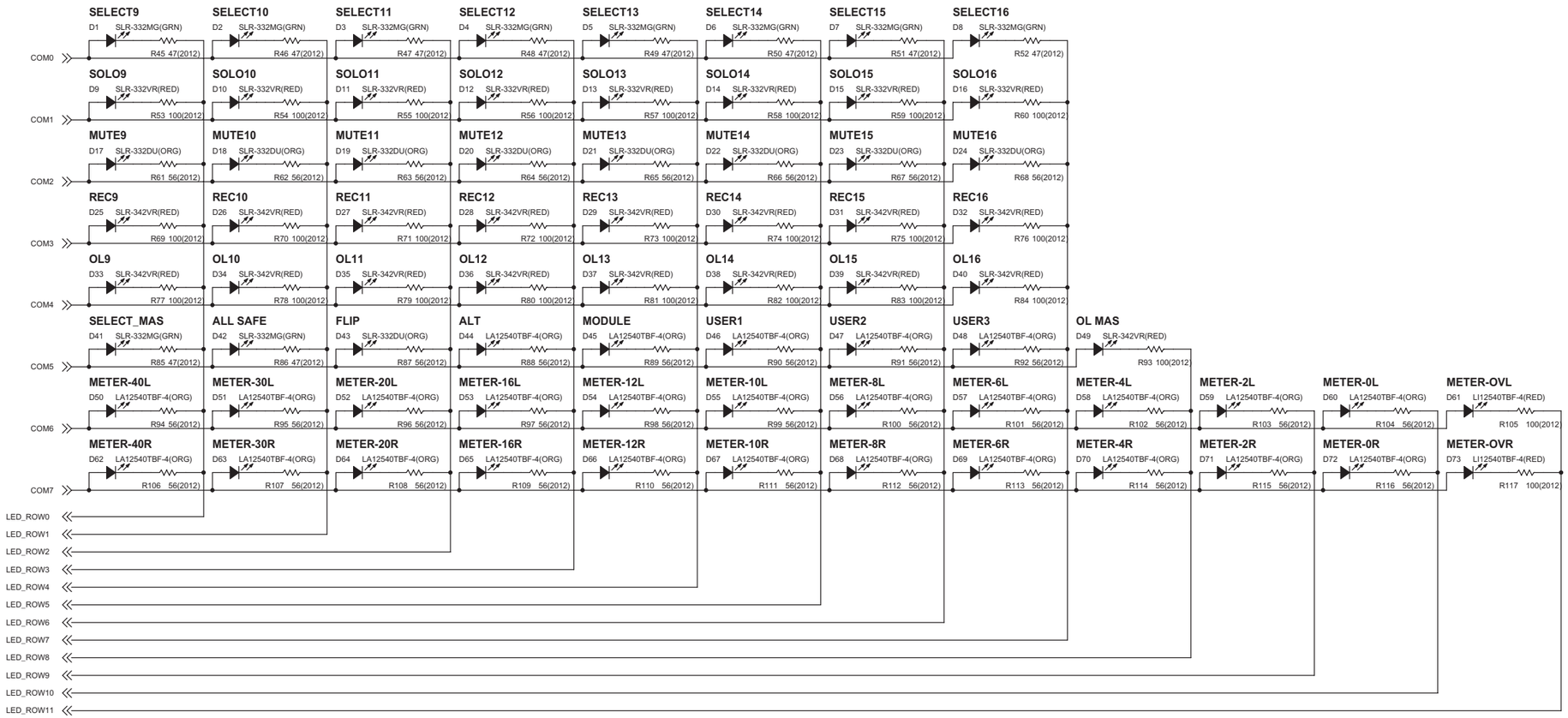
D122 APK3020SECK(ORG)
D123 APK3020SECK(ORG)
D124 APK3020SECK(ORG)
D125 APK3020SECK(ORG)
D126 APK3020SECK(ORG)
D127 APK3020SECK(ORG)
D128 APK3020SURCK(RED)
T1
T3
T7
T11
T15
T19
RING_ROW0
RING_ROW1
RING_ROW2
RING_ROW3
RING_ROW4
RING_ROW5
RING_ROW6
RING_ROW7
T4
T8
T12
T16
J3 DF15(1.8)-20DS
T2
T5
T9
T13
T17
T20
RING_ROW8
RING_ROW9
RING_ROW10
RING_ROW11
RING_ROW12
RING_ROW13
RING_ROW14
RING_ROW15
T6
T10
T14
T18
J4 DF15(1.8)-20DS


1
2
3
4
5
6
7
A
B
C
D
E
from PCB MONITOR
P1
HARNESS ASSY,SCR-MON
SER_MON
CLK_MON
STRB_MON
BLNK_MON
LED_MON
KEY_MON
DGND
P5V
RA1
MNR35 10K
T1
T2
C1 0.1uF
U2 SN74HC541ANS
C4
100uF 16V
from PCB MONITOR
P2
HARNESS ASSY,SCR-LCD
M24V
LCD_CONT
ENTER_SW
CENSEL_SW
ENTER_SW
CANCEL_SW
C6
47uF 50V
R22
2.7K
R23
82K
R25
RK09K113 10KB
to PCB ASSIGN
P3
A2502WV2-12P
SER_SCR
CLK_SCR
STRB_SCR
BLNK_SCR
LED_SCR
KEY_SCR
to PCB LCD SUB
P4
A2502WV2-2P
U3
SN74HC595ANS
C2 0.1uF
U5
SN74HC595ANS
C5 0.1uF
U6
SN74HC595ANS
C8 0.1uF
U7
SN74HC595ANS
C9 0.1uF
U1 TD62M8600F
U4 TD62M8600F
C3
100uF 16V
C7
100uF 16V
COM0
COM1
COM2
COM3
COM4
COM5
COM6
COM7
COM8
COM9
COM10
COM11
COM12
COM13
COM14
COM15
LED_ROW0
LED_ROW1
LED_ROW2
LED_ROW3
LED_ROW4
LED_ROW5
LED_ROW6
LED_ROW7
LED_ROW8
LED_ROW9
LED_ROW10
LED_ROW11
LED_ROW12
LED_ROW13
LED_ROW14
LED_ROW15
Q1 DTC143EKA
Q2 DTC143EKA
Q3 DTC143EKA
Q4 DTC143EKA
Q5 DTC143EKA
Q6 DTC143EKA
Q7 DTC143EKA
Q8 DTC143EKA
Q9 DTC143EKA
Q10 DTC143EKA
Q11 DTC143EKA
Q12 DTC143EKA
Q13 DTC143EKA
Q14 DTC143EKA
Q15 DTC143EKA
Q16 DTC143EKA
D157 1SS355
D156 1SS355
U8
SN74HC165ANS
C10 0.1uF
R41
22
R40
22
R160
1K
SW_ROW0
SW_ROW1
SW_ROW2
SW_ROW3
SW_ROW4
SW_ROW5
SW_ROW6
SW_ROW7
T3
T4
DGND
Monday, February 28, 2005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SELECT10 D2 SLR-332MG(GRN) R46 47(2012)
SELECT11 D3 SLR-332MG(GRN) R47 47(2012)
SELECT12 D4 SLR-332MG(GRN) R48 47(2012)
SELECT13 D5 SLR-332MG(GRN) R49 47(2012)
SELECT14 D6 SLR-332MG(GRN) R50 47(2012)
SELECT15 D7 SLR-332MG(GRN) R51 47(2012)
SELECT16 D8 SLR-332MG(GRN) R52 47(2012)
COM0
SOLO9 D9 SLR-332VR(RED) R53 100(2012)
SOLO10 D10 SLR-332VR(RED) R54 100(2012)
SOLO11 D11 SLR-332VR(RED) R55 100(2012)
SOLO12 D12 SLR-332VR(RED) R56 100(2012)
SOLO13 D13 SLR-332VR(RED) R57 100(2012)
SOLO14 D14 SLR-332VR(RED) R58 100(2012)
SOLO15 D15 SLR-332VR(RED) R59 100(2012)
SOLO16 D16 SLR-332VR(RED) R60 100(2012)
COM1
MUTE9 D17 SLR-332DU(ORG) R61 56(2012)
MUTE10 D18 SLR-332DU(ORG) R62 56(2012)
MUTE11 D19 SLR-332DU(ORG) R63 56(2012)
MUTE12 D20 SLR-332DU(ORG) R64 56(2012)
MUTE13 D21 SLR-332DU(ORG) R65 56(2012)
MUTE14 D22 SLR-332DU(ORG) R66 56(2012)
MUTE15 D23 SLR-332DU(ORG) R67 56(2012)
MUTE16 D24 SLR-332DU(ORG) R68 56(2012)
COM2
REC9 D25 SLR-342VR(RED) R69 100(2012)
REC10 D26 SLR-342VR(RED) R70 100(2012)
REC11 D27 SLR-342VR(RED) R71 100(2012)
REC12 D28 SLR-342VR(RED) R72 100(2012)
REC13 D29 SLR-342VR(RED) R73 100(2012)
REC14 D30 SLR-342VR(RED) R74 100(2012)
REC15 D31 SLR-342VR(RED) R75 100(2012)
REC16 D32 SLR-342VR(RED) R76 100(2012)
COM3
OL9 D33 SLR-342VR(RED) R77 100(2012)
OL10 D34 SLR-342VR(RED) R78 100(2012)
OL11 D35 SLR-342VR(RED) R79 100(2012)
OL12 D36 SLR-342VR(RED) R80 100(2012)
OL13 D37 SLR-342VR(RED) R81 100(2012)
OL14 D38 SLR-342VR(RED) R82 100(2012)
OL15 D39 SLR-342VR(RED) R83 100(2012)
OL16 D40 SLR-342VR(RED) R84 100(2012)
COM4
SELECT_MAS D41 SLR-332MG(GRN) R85 47(2012)
ALL SAFE D42 SLR-332MG(GRN) R86 47(2012)
FLIP D43 SLR-332DU(ORG) R87 56(2012)
ALT D44 LA12540TBF-4(ORG) R88 56(2012)
MODULE D45 LA12540TBF-4(ORG) R89 56(2012)
USER1 D46 LA12540TBF-4(ORG) R90 56(2012)
USER2 D47 LA12540TBF-4(ORG) R91 56(2012)
USER3 D48 LA12540TBF-4(ORG) R92 56(2012)
OL MAS D49 SLR-342VR(RED) R93 100(2012)
COM5
METER-40L D50 LA12540TBF-4(ORG) R94 56(2012)
METER-30L D51 LA12540TBF-4(ORG) R95 56(2012)
METER-20L D52 LA12540TBF-4(ORG) R96 56(2012)
METER-16L D53 LA12540TBF-4(ORG) R97 56(2012)
METER-12L D54 LA12540TBF-4(ORG) R98 56(2012)
METER-10L D55 LA12540TBF-4(ORG) R99 56(2012)
METER-8L D56 LA12540TBF-4(ORG) R100 56(2012)
METER-6L D57 LA12540TBF-4(ORG) R101 56(2012)
METER-4L D58 LA12540TBF-4(ORG) R102 56(2012)
METER-2L D59 LA12540TBF-4(ORG) R103 56(2012)
METER-0L D60 LA12540TBF-4(ORG) R104 56(2012)
METER-OVL D61 LI12540TBF-4(RED) R105 100(2012)
COM6
METER-40R D62 LA12540TBF-4(ORG) R106 56(2012)
METER-30R D63 LA12540TBF-4(ORG) R107 56(2012)
METER-20R D64 LA12540TBF-4(ORG) R108 56(2012)
METER-16R D65 LA12540TBF-4(ORG) R109 56(2012)
METER-12R D66 LA12540TBF-4(ORG) R110 56(2012)
METER-10R D67 LA12540TBF-4(ORG) R111 56(2012)
METER-8R D68 LA12540TBF-4(ORG) R112 56(2012)
METER-6R D69 LA12540TBF-4(ORG) R113 56(2012)
METER-4R D70 LA12540TBF-4(ORG) R114 56(2012)
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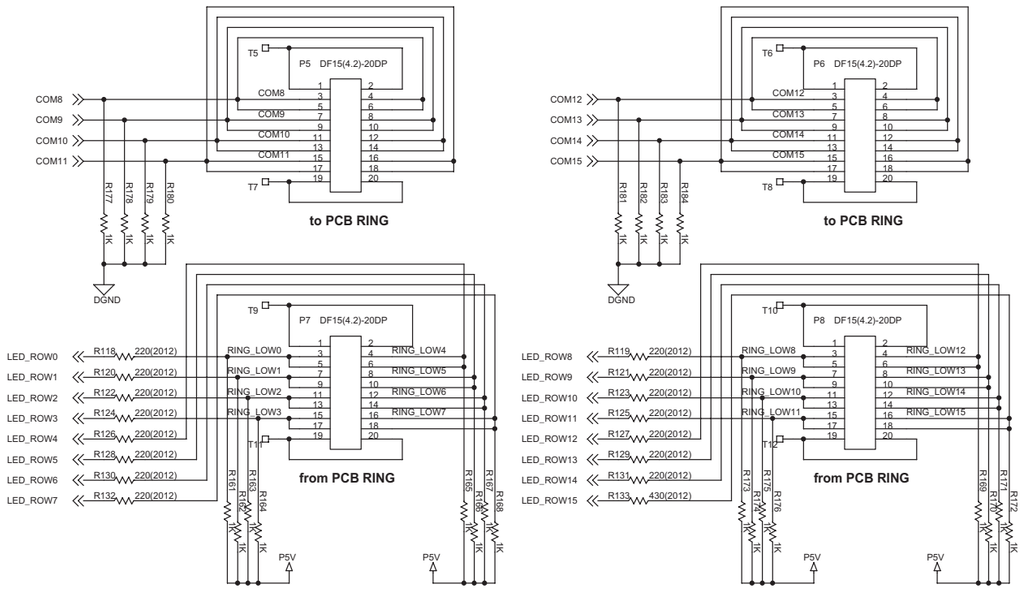
METER-OVR D73 LI12540TBF-4(RED) R117 100(2012)
COM7
LED_ROW0
LED_ROW1
LED_ROW2
LED_ROW3
LED_ROW4
LED_ROW5
LED_ROW6
LED_ROW7
LED_ROW8
LED_ROW9
LED_ROW10
LED_ROW11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P5 DF15(4.2)-20DP
COM8
COM9
COM10
COM11
T7
to PCB RING
R177 1K
R178 1K
R179 1K
R180 1K
DGND
T9
P7 DF15(4.2)-20DP
RING_LOW0
RING_LOW1
RING_LOW2
RING_LOW3
RING_LOW4
RING_LOW5
RING_LOW6
RING_LOW7
T11
from PCB RING
LED_ROW0 R118 220(2012)
LED_ROW1 R120 220(2012)
LED_ROW2 R122 220(2012)
LED_ROW3 R124 220(2012)
LED_ROW4 R126 220(2012)
LED_ROW5 R128 220(2012)
LED_ROW6 R130 220(2012)
LED_ROW7 R132 220(2012)
R161 1K
R162 1K
R163 1K
R164 1K
R165 1K
R166 1K
R167 1K
R168 1K
P5V

T6
P6 DF15(4.2)-20DP
COM12
COM13
COM14
COM15
T8
to PCB RING
R181 1K
R182 1K
R183 1K
R184 1K
DGND
T10
P8 DF15(4.2)-20DP
RING_LOW8
RING_LOW9
RING_LOW10
RING_LOW11
RING_LOW12
RING_LOW13
RING_LOW14
RING_LOW15
T12
from PCB RING
LED_ROW8 R119 220(2012)
LED_ROW9 R121 220(2012)
LED_ROW10 R123 220(2012)
LED_ROW11 R125 220(2012)
LED_ROW12 R127 220(2012)
LED_ROW13 R129 220(2012)
LED_ROW14 R131 220(2012)
LED_ROW15 R133 430(2012)
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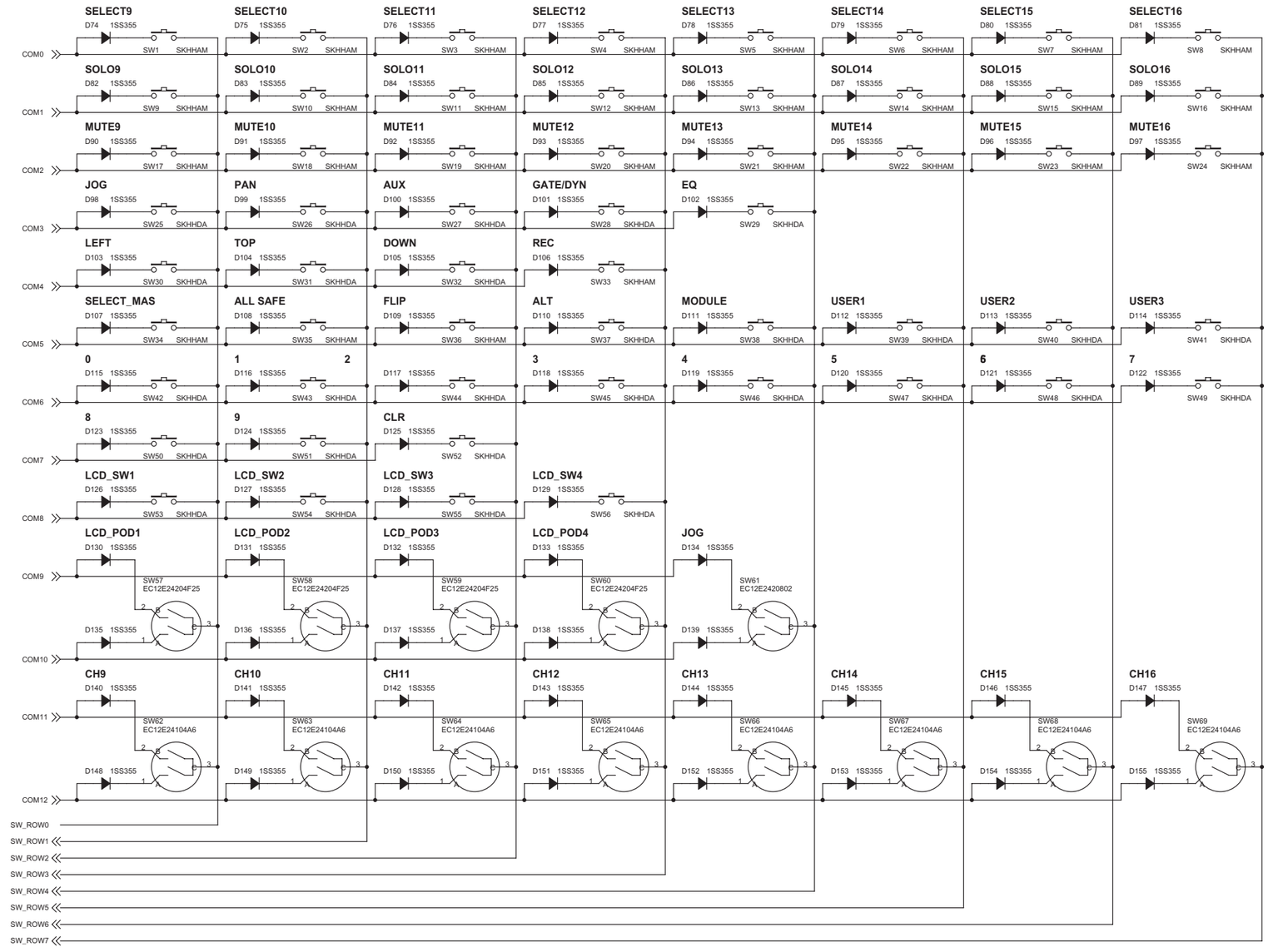
R170 1K
R171 1K
R172 1K
P5V


SELECT9 D74 1SS355 SW1 SKHHAM
SELECT10 D75 1SS355 SW2 SKHHAM
SELECT11 D76 1SS355 SW3 SKHHAM
SELECT12 D77 1SS355 SW4 SKHHAM
SELECT13 D78 1SS355 SW5 SKHHAM
SELECT14 D79 1SS355 SW6 SKHHAM
SELECT15 D80 1SS355 SW7 SKHHAM
SELECT16 D81 1SS355 SW8 SKHHAM
COM0
SOLO9 D82 1SS355 SW9 SKHHAM
SOLO10 D83 1SS355 SW10 SKHHAM
SOLO11 D84 1SS355 SW11 SKHHAM
SOLO12 D85 1SS355 SW12 SKHHAM
SOLO13 D86 1SS355 SW13 SKHHAM
SOLO14 D87 1SS355 SW14 SKHHAM
SOLO15 D88 1SS355 SW15 SKHHAM
SOLO16 D89 1SS355 SW16 SKHHAM
COM1
MUTE9 D90 1SS355 SW17 SKHHAM
MUTE10 D91 1SS355 SW18 SKHHAM
MUTE11 D92 1SS355 SW19 SKHHAM
MUTE12 D93 1SS355 SW20 SKHHAM
MUTE13 D94 1SS355 SW21 SKHHAM
MUTE14 D95 1SS355 SW22 SKHHAM
MUTE15 D96 1SS355 SW23 SKHHAM
MUTE16 D97 1SS355 SW24 SKHHAM
COM2
JOG D98 1SS355 SW25 SKHHDA
PAN D99 1SS355 SW26 SKHHDA
AUX D100 1SS355 SW27 SKHHDA
GATE/DYN D101 1SS355 SW28 SKHHDA
EQ D102 1SS355 SW29 SKHHDA
COM3
LEFT D103 1SS355 SW30 SKHHDA
TOP D104 1SS355 SW31 SKHHDA
DOWN D105 1SS355 SW32 SKHHDA
REC D106 1SS355 SW33 SKHHAM
COM4
SELECT_MAS D107 1SS355 SW34 SKHHAM
ALL SAFE D108 1SS355 SW35 SKHHAM
FLIP D109 1SS355 SW36 SKHHAM
ALT D110 1SS355 SW37 SKHHDA
MODULE D111 1SS355 SW38 SKHHDA
USER1 D112 1SS355 SW39 SKHHDA
USER2 D113 1SS355 SW40 SKHHDA
USER3 D114 1SS355 SW41 SKHHDA
COM5
0 D115 1SS355 SW42 SKHHDA
1 2 D116 1SS355 SW43 SKHHDA
D117 1SS355 SW44 SKHHDA
3 D118 1SS355 SW45 SKHHDA
4 D119 1SS355 SW46 SKHHDA
5 D120 1SS355 SW47 SKHHDA
6 D121 1SS355 SW48 SKHHDA
7 D122 1SS355 SW49 SKHHDA
COM6
8 D123 1SS355 SW50 SKHHDA
9 D124 1SS355 SW51 SKHHDA
CLR D125 1SS355 SW52 SKHHDA
COM7
LCD_SW1 D126 1SS355 SW53 SKHHDA
LCD_SW2 D127 1SS355 SW54 SKHHDA
LCD_SW3 D128 1SS355 SW55 SKHHDA
LCD_SW4 D129 1SS355 SW56 SKHHDA
COM8
LCD_POD1 D130 1SS355 SW57 EC12E24204F25 D135 1SS355
LCD_POD2 D131 1SS355 SW58 EC12E24204F25 D136 1SS355
LCD_POD3 D132 1SS355 SW59 EC12E24204F25 D137 1SS355
LCD_POD4 D133 1SS355 SW60 EC12E24204F25 D138 1SS355
JOG D134 1SS355 SW61 EC12E2420802 D139 1SS355
COM9
COM10
CH9 D140 1SS355 SW62 EC12E24104A6 D148 1SS355
CH10 D141 1SS355 SW63 EC12E24104A6 D149 1SS355
CH11 D142 1SS355 SW64 EC12E24104A6 D150 1SS355
CH12 D143 1SS355 SW65 EC12E24104A6 D151 1SS355
CH13 D144 1SS355 SW66 EC12E24104A6 D152 1SS355
CH14 D145 1SS355 SW67 EC12E24104A6 D153 1SS355
CH15 D146 1SS355 SW68 EC12E24104A6 D154 1SS355
CH16 D147 1SS355 SW69 EC12E24104A6 D155 1SS355
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COM12
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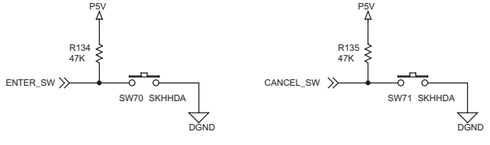
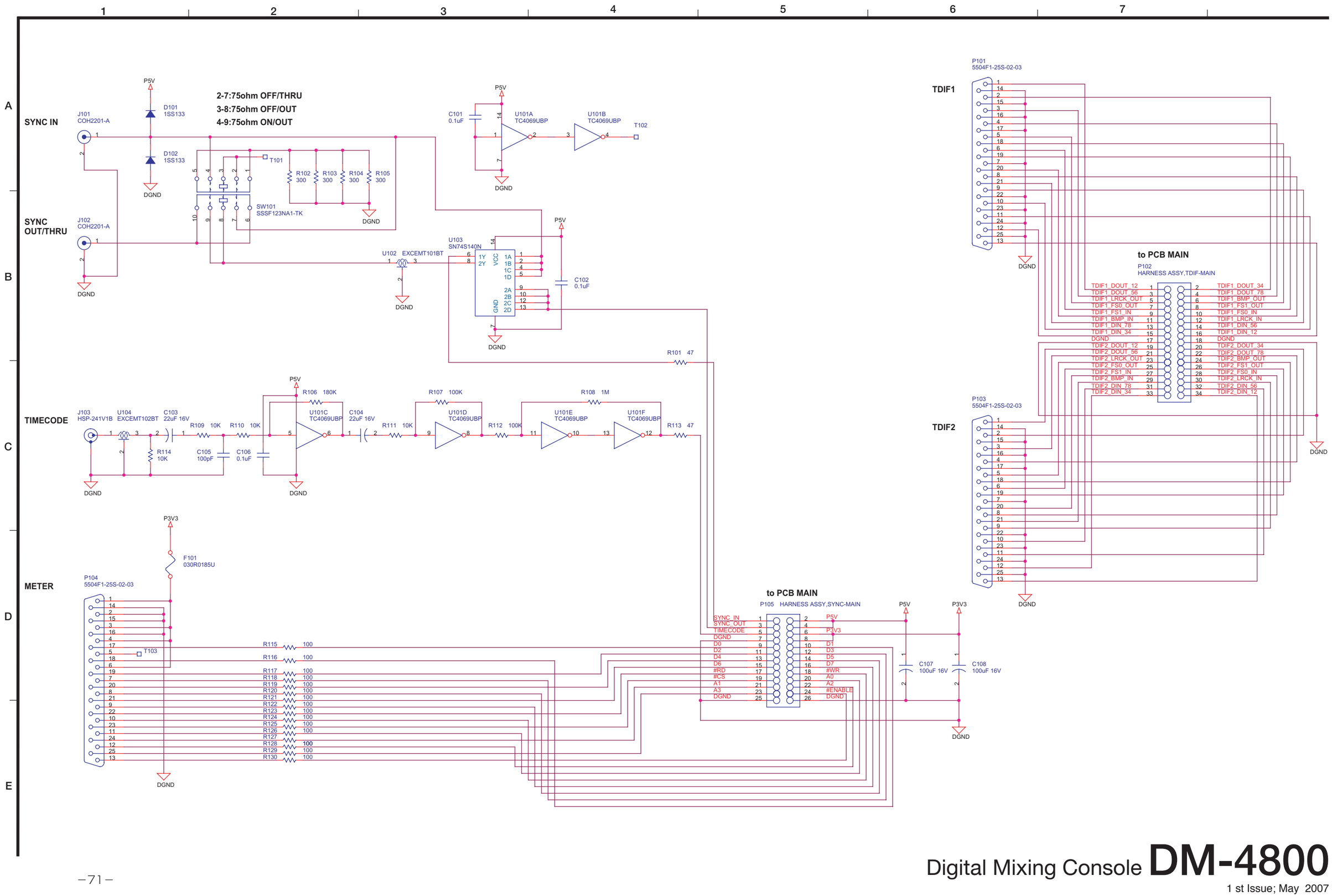
SW_ROW1
SW_ROW2
SW_ROW3
SW_ROW4
SW_ROW5
SW_ROW6
SW_ROW7


P5V
R134 47K
ENTER_SW
SW70 SKHHDA
DGND
P5V
R135 47K
CANCEL_SW
SW71 SKHHDA
DGND


SYNC IN
SYNC OUT/THRU
TIMECODE
METER
TDIF1
TDIF2
2-7:75ohm OFF/THRU
3-8:75ohm OFF/OUT
4-9:75ohm ON/OUT
J101 COH2201-A
J102 COH2201-A
J103 HSP-241V1B
P101 5504F1-25S-02-03
P102 HARNESS ASSY,TDIF-MAIN
P103 5504F1-25S-02-03
P104 5504F1-25S-02-03
P105 HARNESS ASSY,SYNC-MAIN
to PCB MAIN
D101 1SS133
D102 1SS133
SW101 SSSF123NA1-TK
U101A TC4069UBP
U101B TC4069UBP
U101C TC4069UBP
U101D TC4069UBP
U101E TC4069UBP
U101F TC4069UBP
U102 EXCEMT101BT
U103 SN74S140N
U104 EXCEMT102BT
C101 0.1uF
C102 0.1uF
C103 22uF 16V
C104 22uF 16V
C105 100pF
C106 0.1uF
C107 100uF 16V
C108 100uF 16V
R101 47
R102 300
R103 300
R104 300
R105 300
R106 180K
R107 100K
R108 1M
R109 10K
R110 10K
R111 10K
R112 100K
R113 47
R114 10K
R115 100
R116 100
R117 100
R118 100
R119 100
R120 100
R121 100
R122 100
R123 100
R124 100
R125 100
R126 100
R127
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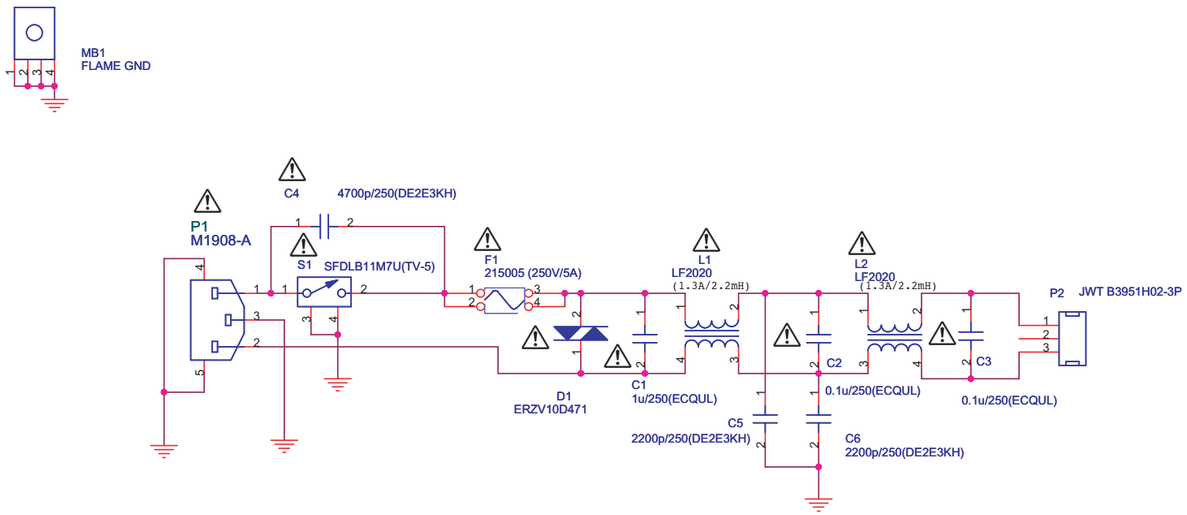
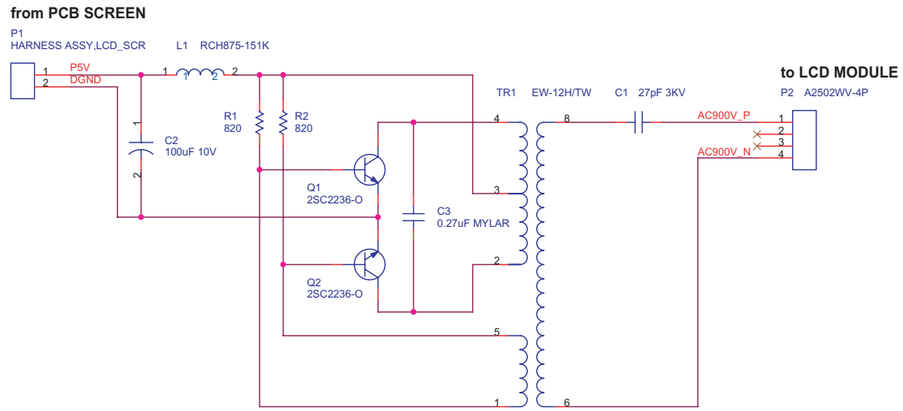
T101
T102
T103
P5V
P3V3
DGND

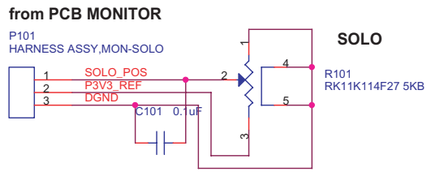
PCB, INLET FW



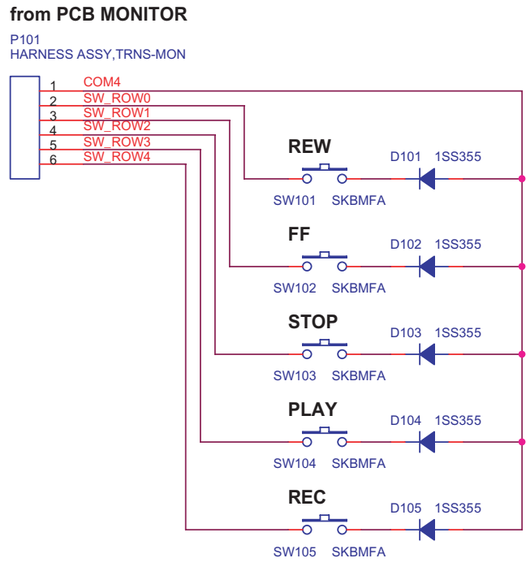
PCB, LCD SUB



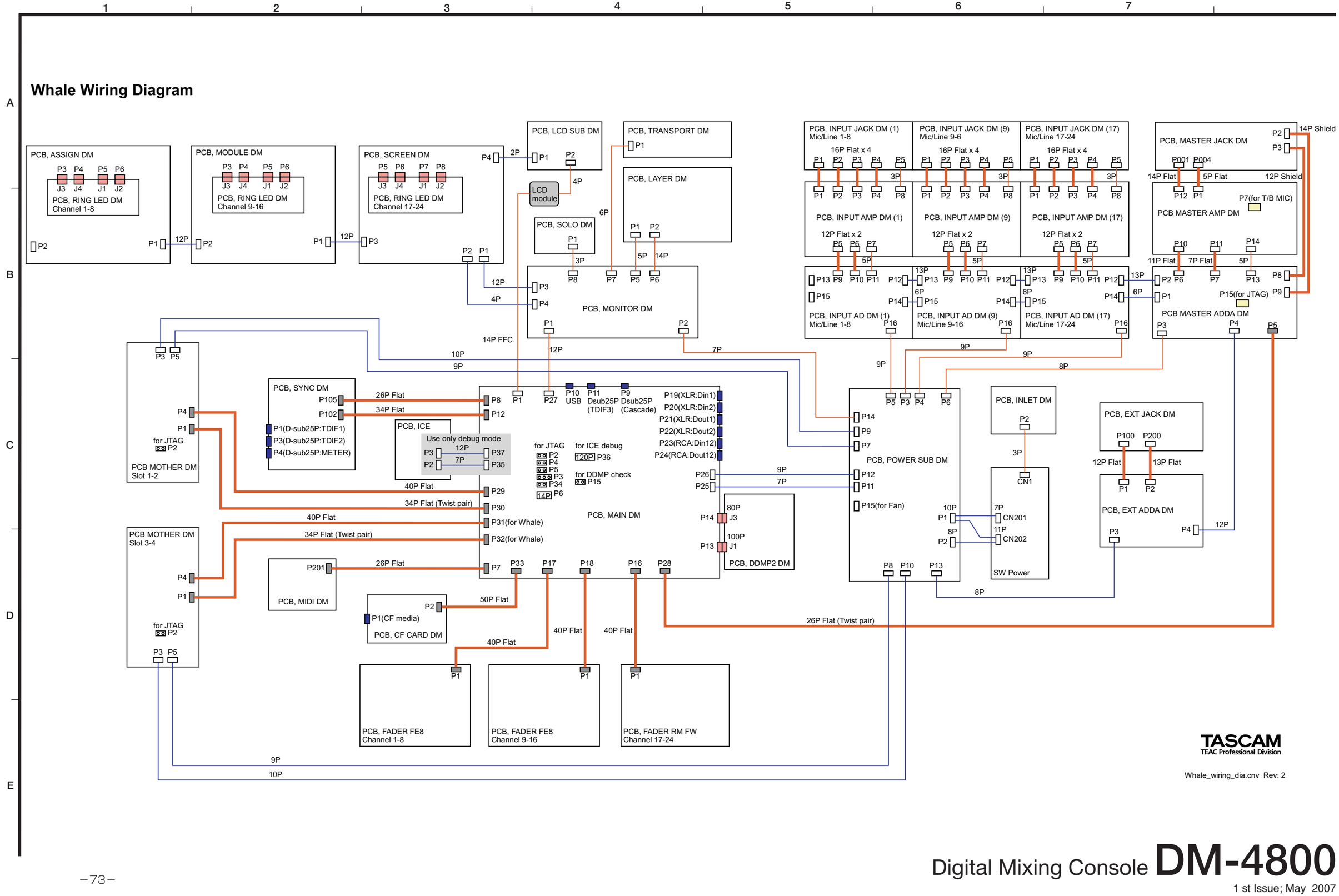
PCB, SOLO



PCB, TRANSPORT



Whale Wiring Diagram



TASCAM TEAC Professional Division

Whale_wiring_dia.cnv Rev: 2

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TEAC Professional Division

SCHEMATIC DIAGRAM
回路図

DM-4800

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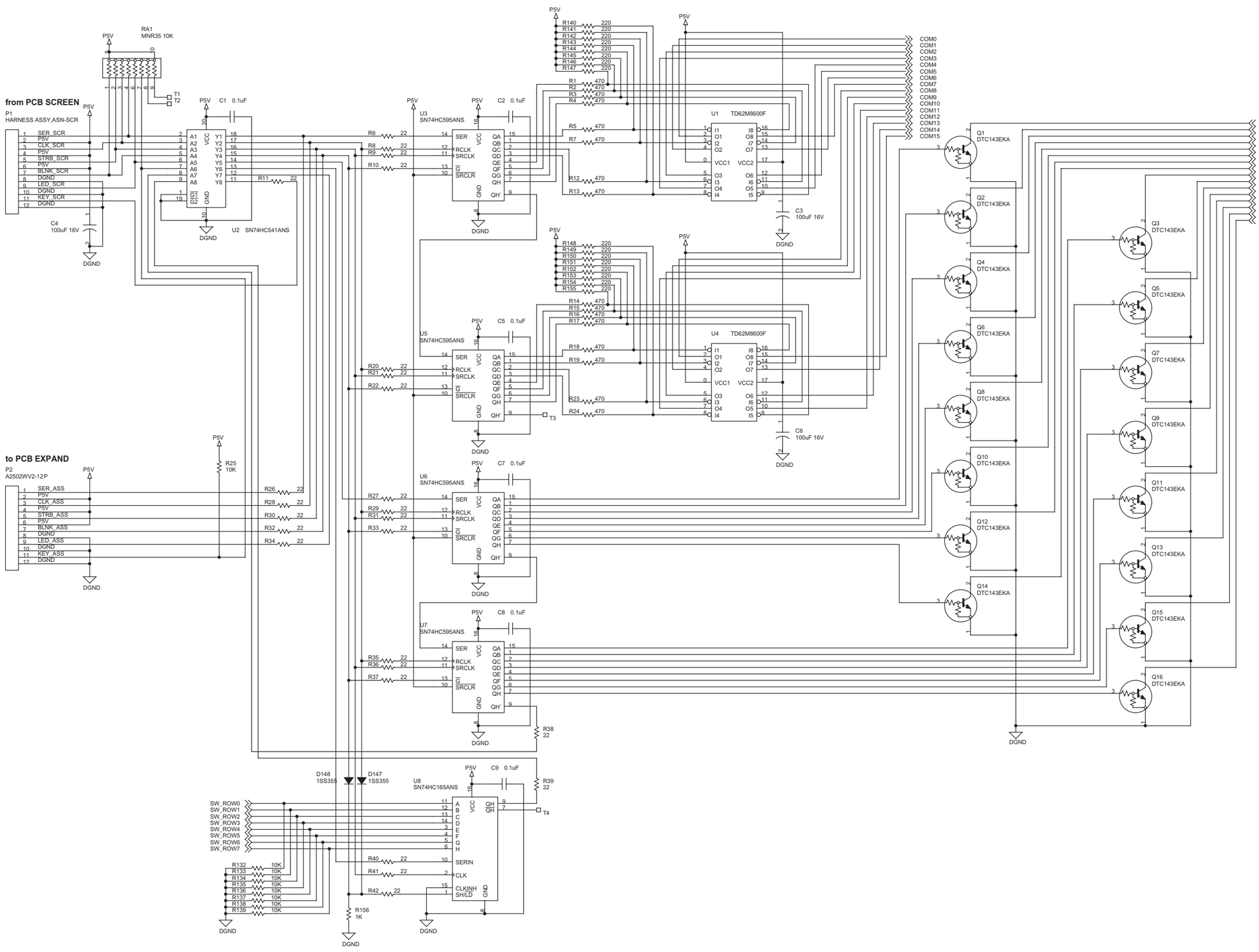

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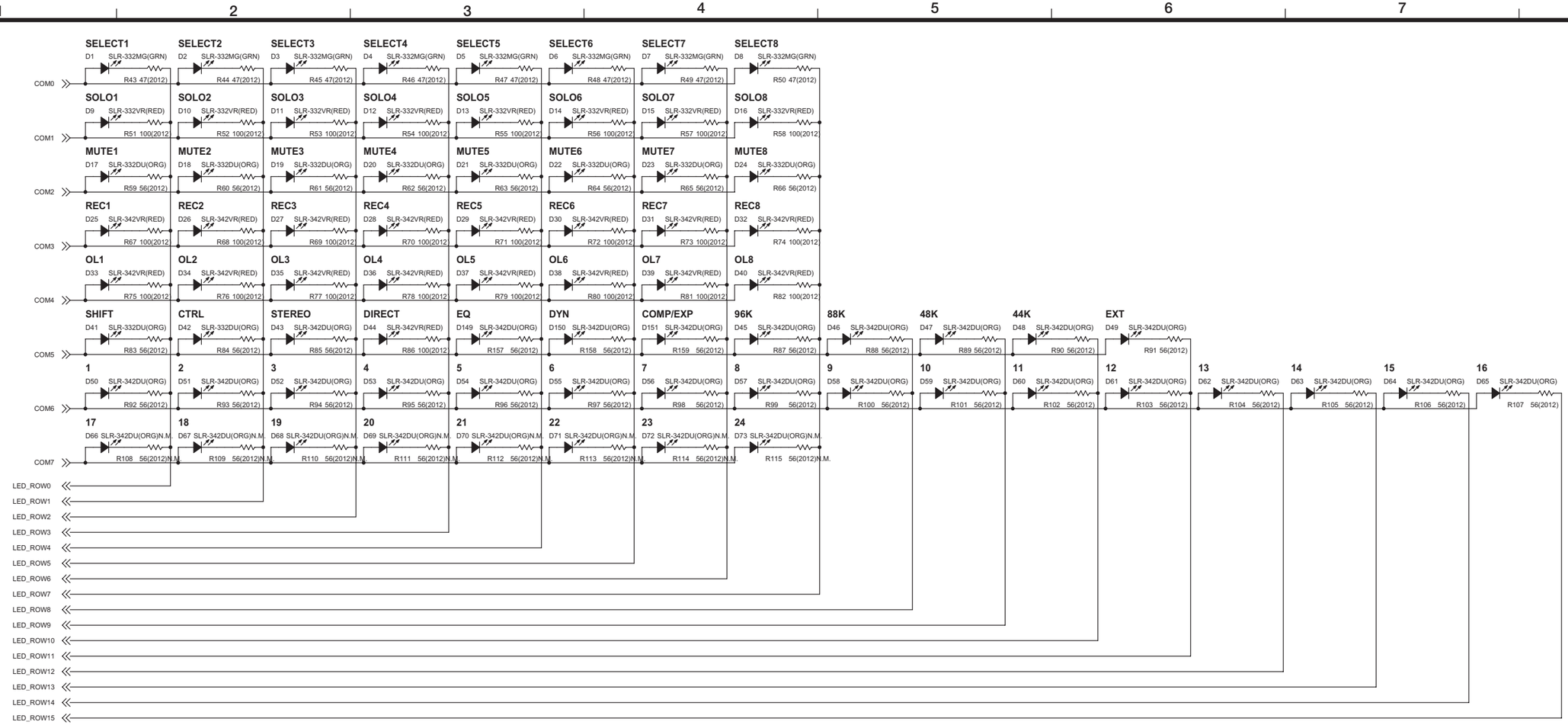
1 st Issue; May 2007


1
2
3
4
5
6
7
A
B
C
D
E
SELECT1 SELECT2 SELECT3 SELECT4 SELECT5 SELECT6 SELECT7 SELECT8
SLR-332MG(GRN)
COM0
SOLO1 SOLO2 SOLO3 SOLO4 SOLO5 SOLO6 SOLO7 SOLO8
SLR-332VR(RED)
COM1
MUTE1 MUTE2 MUTE3 MUTE4 MUTE5 MUTE6 MUTE7 MUTE8
SLR-332DU(ORG)
COM2
REC1 REC2 REC3 REC4 REC5 REC6 REC7 REC8
SLR-342VR(RED)
COM3
OL1 OL2 OL3 OL4 OL5 OL6 OL7 OL8
SLR-342VR(RED)
COM4
SHIFT CTRL STEREO DIRECT EQ DYN COMP/EXP 96K 88K 48K 44K EXT
SLR-342DU(ORG)
COM5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
SLR-342DU(ORG)
COM6
17 18 19 20 21 22 23 24
SLR-342DU(ORG)N.M.
COM7
LED_ROW0
LED_ROW1
LED_ROW2
LED_ROW3
LED_ROW4
LED_ROW5
LED_ROW6
LED_ROW7
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LED_ROW13
LED_ROW14
LED_ROW15
T5
P3 DF15(4.2)-20DP
COM8
COM9
COM10
COM11
T7
to PCB RING
R160 1K
R161 1K
R162 1K
R163 1K
DGND
T6
P4 DF15(4.2)-20DP
COM12
COM13
COM14
COM15
T8
to PCB RING
R164 1K
R165 1K
R166 1K
R167 1K
DGND
T9
P5 DF15(4.2)-20DP
RING_ROW0
RING_ROW1
RING_ROW2
RING_ROW3
RING_ROW4
RING_ROW5
RING_ROW6
RING_ROW7
T11
from PCB RING
R116 220(2012)
R118 220(2012)
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R124 220(2012)
R126 220(2012)
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R130 220(2012)
R168 1K
R169 1K
R170 1K
R171 1K
R172 1K
R173 1K
R174 1K
R175 1K
P5V
T10
P6 DF15(4.2)-20DP
RING_ROW8
RING_ROW9
RING_ROW10
RING_ROW11
RING_ROW12
RING_ROW13
RING_ROW14
RING_ROW15
T12
from PCB RING
R117 220(2012)
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R127 220(2012)
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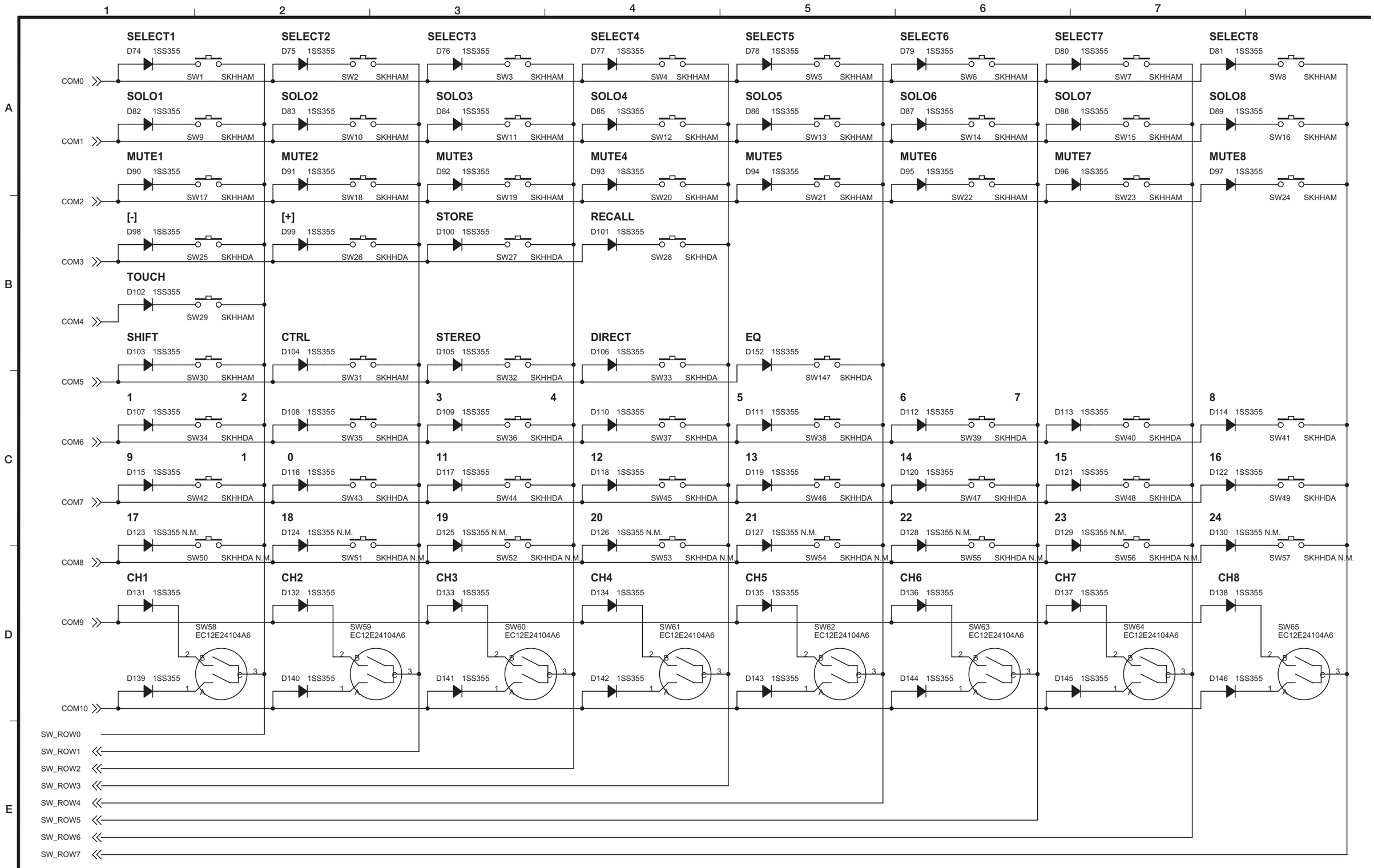
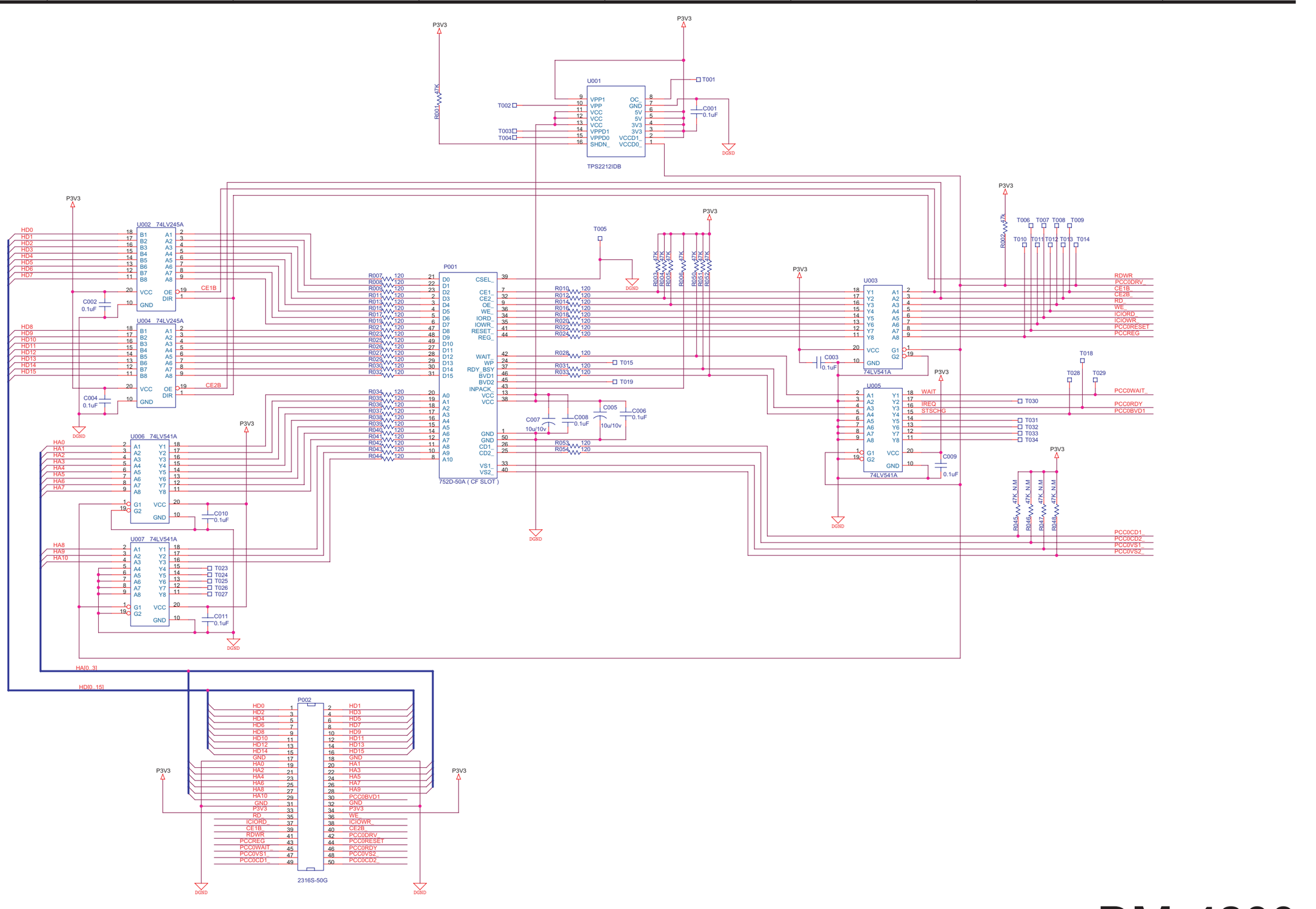
R176 1K
R177 1K
R178 1K
R179 1K
R180 1K
R181 1K
R182 1K
R183 1K
P5V



Digital Mixing Console **DM-4800**

1 st Issue; May 2007



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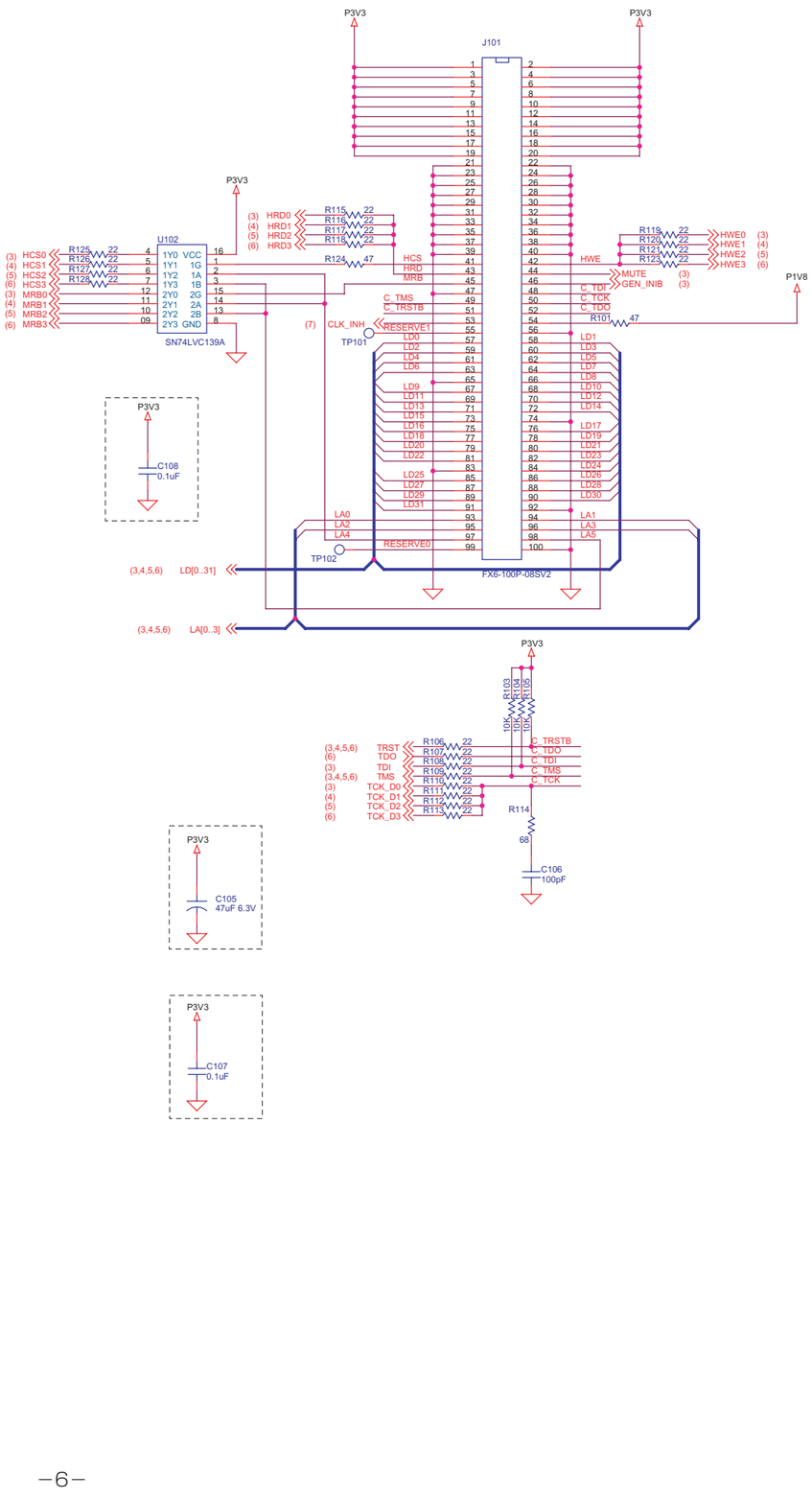
J101
FX6-100P-08SV2
U102
SN74LVC139A
P3V3
P1V8
HCS0
HCS1
HCS2
HCS3
MRB0
MRB1
MRB2
MRB3
HRD0
HRD1
HRD2
HRD3
HCS
HRD
MRB
HWE
HWE0
HWE1
HWE2
HWE3
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C_TMS
C_TRSTB
CLK_INH
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TP102
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C_TCK
C_TDO
R101
LD[0..31]
LA[0..3]
C108
0.1uF
C105
47uF 6.3V
C107
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R105
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R107
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R109
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R114
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TDO
TDI
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TCK_D1
TCK_D2
TCK_D3
C_TRSTB
C_TDO
C_TDI
C_TMS
C_TCK
D102
MMSZ4678T1
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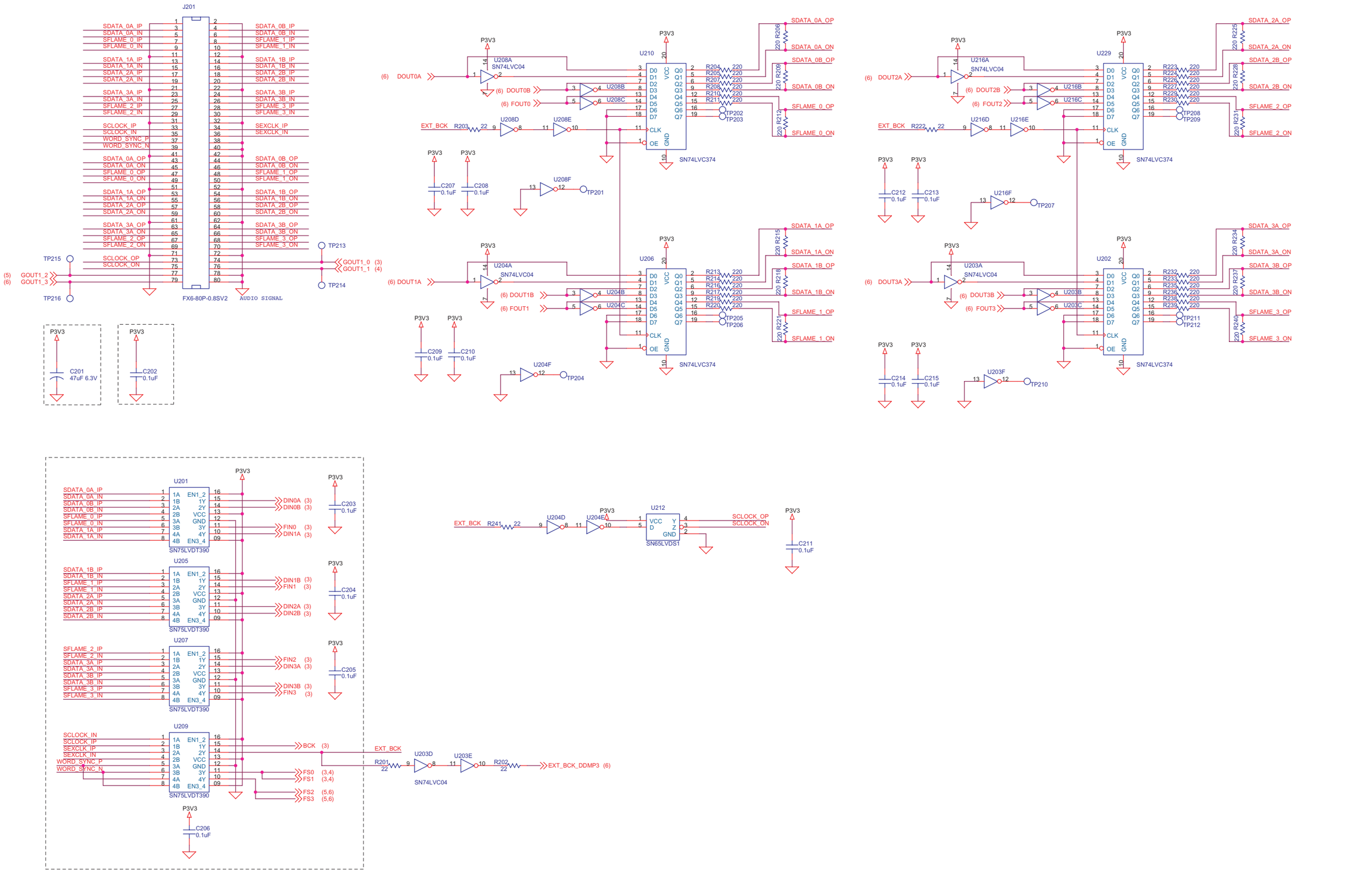
NTF6P02T3G
Q102
NTF6P02T3G
L101
1.8uH (CEP125NP-1R8NC-H)
D101
RSX501L-20
R102
10K
U101
NCP1550SN19T1G
EXT
VOUT
GND
VIN
CE
C103
330uF 10V
C104
0.1uF
C102
0.1uF
C101
470uF 6.3V
C109
470uF 6.3V
TP104
TP105
TP106
TP107


J201
FX6-80P-0.8SV2
AUDIO SIGNAL
SDATA_0A_IP
SDATA_0A_IN
SFLAME_0_IP
SFLAME_0_IN
SDATA_1A_IP
SDATA_1A_IN
SDATA_2A_IP
SDATA_2A_IN
SDATA_3A_IP
SDATA_3A_IN
SFLAME_2_IP
SFLAME_2_IN
SCLOCK_IP
SCLOCK_IN
WORD_SYNC_P
WORD_SYNC_N
SDATA_0A_OP
SDATA_0A_ON
SFLAME_0_OP
SFLAME_0_ON
SDATA_1A_OP
SDATA_1A_ON
SDATA_2A_OP
SDATA_2A_ON
SDATA_3A_OP
SDATA_3A_ON
SFLAME_2_OP
SFLAME_2_ON
SCLOCK_OP
SCLOCK_ON
SDATA_0B_IP
SDATA_0B_IN
SFLAME_1_IP
SFLAME_1_IN
SDATA_1B_IP
SDATA_1B_IN
SDATA_2B_IP
SDATA_2B_IN
SDATA_3B_IP
SDATA_3B_IN
SFLAME_3_IP
SFLAME_3_IN
SEXCLK_IP
SEXCLK_IN
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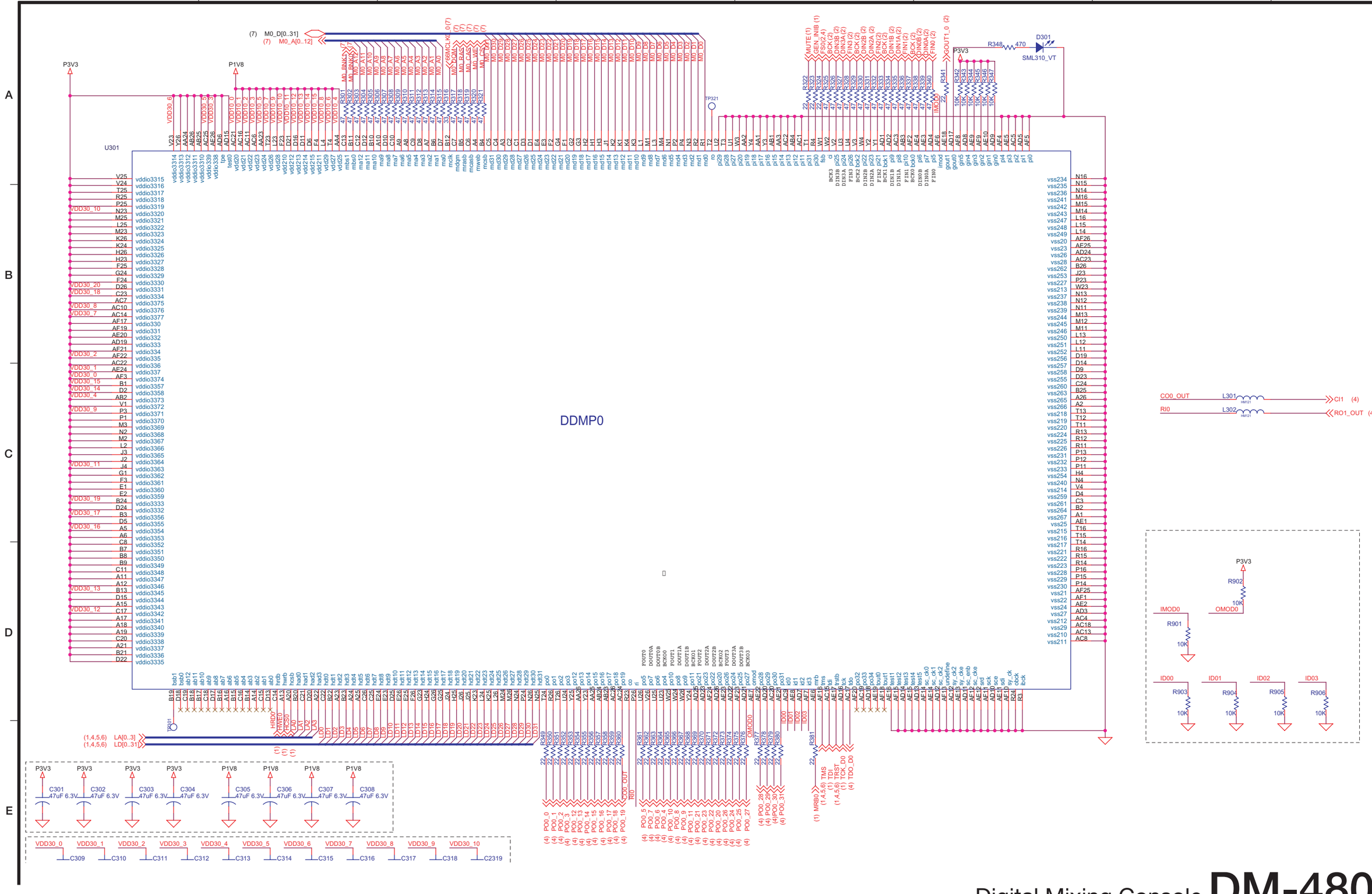
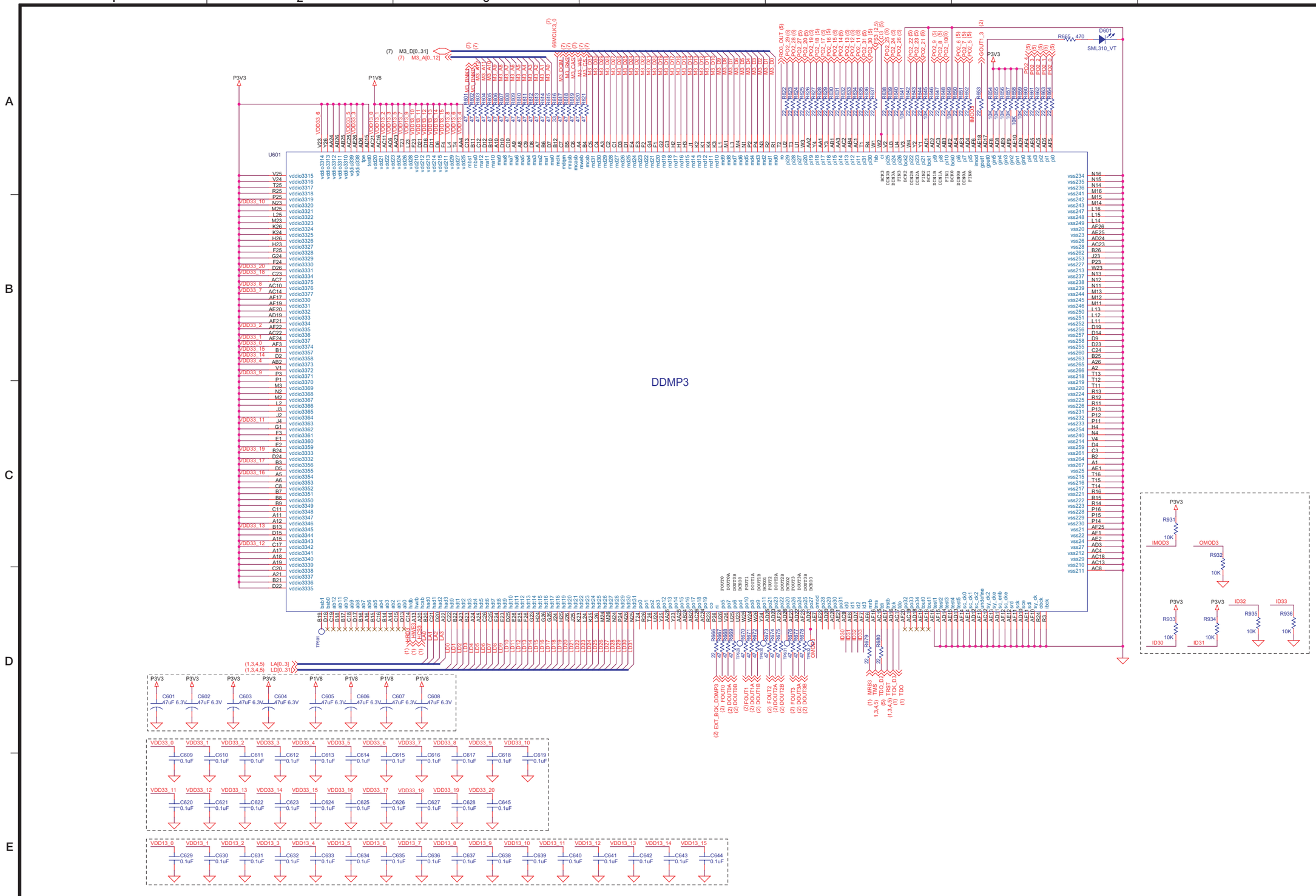
SDATA_0B_ON
SFLAME_1_OP
SFLAME_1_ON
SDATA_1B_OP
SDATA_1B_ON
SDATA_2B_OP
SDATA_2B_ON
SDATA_3B_OP
SDATA_3B_ON
SFLAME_3_OP
SFLAME_3_ON
TP213
TP214
TP215
TP216
GOUT1_0 (3)
GOUT1_1 (4)
(5) GOUT1_2
(6) GOUT1_3
C201 47uF 6.3V
C202 0.1uF
P3V3
U210
U229
U206
U202
U208A
U208B
U208C
U208D
U208E
U208F
U216A
U216B
U216C
U216D
U216E
U216F
U204A
U204B
U204C
U204F
U203A
U203B
U203C
U203F
SN74LVC04
SN74LVC374
(6) DOUT0A
(6) DOUT0B
(6) FOUT0
(6) DOUT2A
(6) DOUT2B
(6) FOUT2
(6) DOUT1A
(6) DOUT1B
(6) FOUT1
(6) DOUT3A
(6) DOUT3B
(6) FOUT3
EXT_BCK
R203 22
R222 22
C207 0.1uF
C208 0.1uF
C212 0.1uF
C213 0.1uF
C209 0.1uF
C210 0.1uF
C214 0.1uF
C215 0.1uF
TP201
TP202
TP203
TP204
TP205
TP206
TP207
TP208
TP209
TP210
TP211
TP212
R204 220
R205 220
R206 220
R207 220
R208 220
R209 220
R210 220
R211 220
R212 220
R213 220
R214 220
R215 220
R216 220
R217 220
R218 220
R219 220
R220 220
R221 220
R223 220
R224 220
R225 220
R226 220
R227 220
R228 220
R229 220
R230 220
R231 220
R232 220
R233 220
R234 220
R235 220
R236 220
R237 220
R238 220
R239 220
R240 220
SDATA_0A_OP
SDATA_0A_ON
SDATA_0B_OP
SDATA_0B_ON
SFLAME_0_OP
SFLAME_0_ON
SDATA_1A_OP
SDATA_1A_ON
SDATA_1B_OP
SDATA_1B_ON
SFLAME_1_OP
SFLAME_1_ON
SDATA_2A_OP
SDATA_2A_ON
SDATA_2B_OP
SDATA_2B_ON
SFLAME_2_OP
SFLAME_2_ON
SDATA_3A_OP
SDATA_3A_ON
SDATA_3B_OP
SDATA_3B_ON
SFLAME_3_OP
SFLAME_3_ON

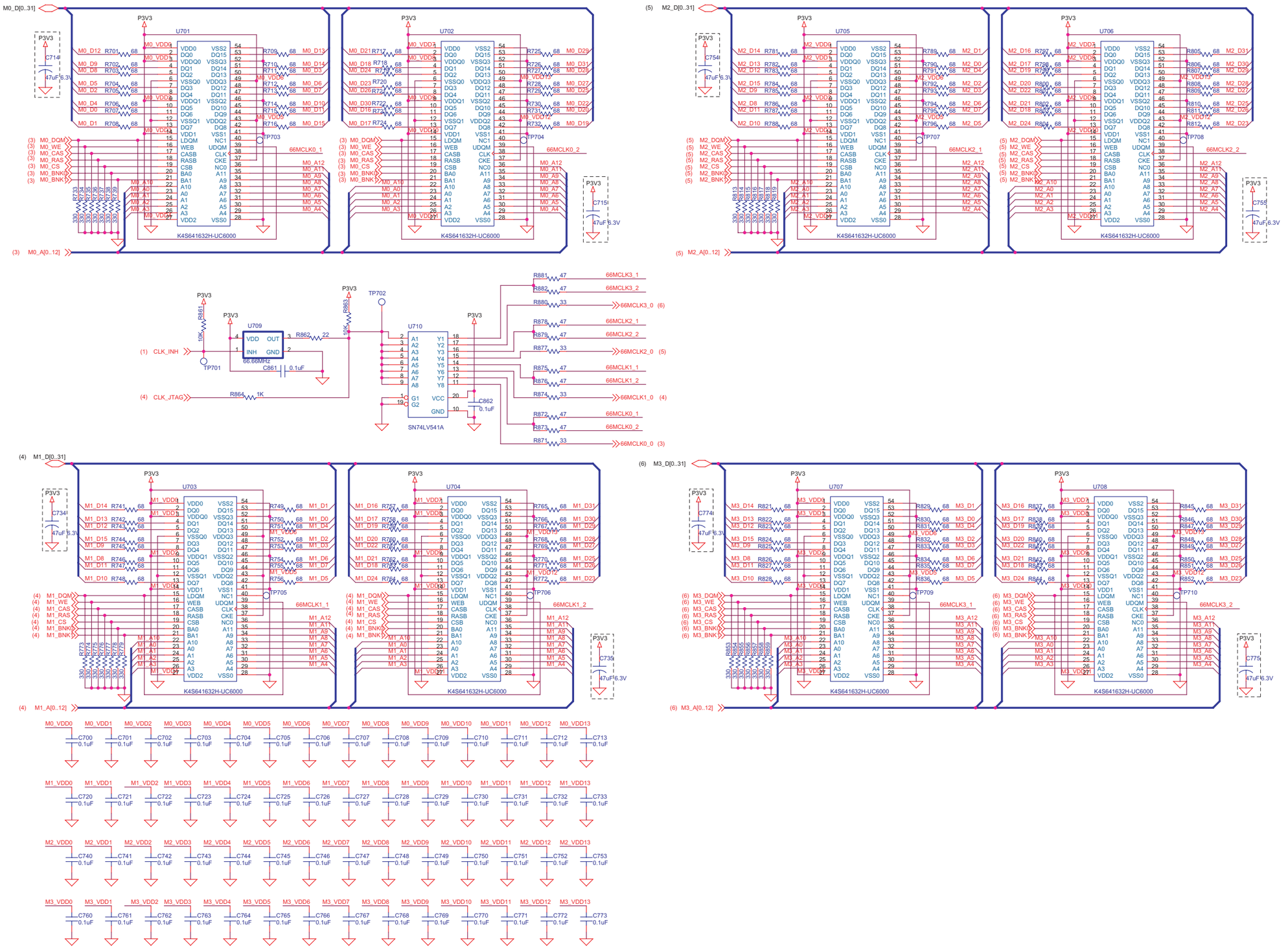
U201
U205
U207
U209
SN75LVDT390
SDATA_0A_IP
SDATA_0A_IN
SDATA_0B_IP
SDATA_0B_IN
SFLAME_0_IP
SFLAME_0_IN
SDATA_1A_IP
SDATA_1A_IN
SDATA_1B_IP
SDATA_1B_IN
SFLAME_1_IP
SFLAME_1_IN
SDATA_2A_IP
SDATA_2A_IN
SDATA_2B_IP
SDATA_2B_IN
SFLAME_2_IP
SFLAME_2_IN
SDATA_3A_IP
SDATA_3A_IN
SDATA_3B_IP
SDATA_3B_IN
SFLAME_3_IP
SFLAME_3_IN
SCLOCK_IP
SCLOCK_IN
SEXCLK_IP
SEXCLK_IN
WORD_SYNC_P
WORD_SYNC_N
DIN0A (3)
DIN0B (3)
FIN0 (3)
DIN1A (3)
DIN1B (3)
FIN1 (3)
DIN2A (3)
DIN2B (3)
FIN2 (3)
DIN3A (3)
DIN3B (3)
FIN3 (3)
BCK (3)
FS0 (3,4)
FS1 (3,4)
FS2 (5,6)
FS3 (5,6)
C203 0.1uF
C204 0.1uF
C205 0.1uF
C206 0.1uF
U212
SN65LVDS1
U204D
U204E
U203D
U203E
SN74LVC04
EXT_BCK
R241 22
R201 22
R202 22
EXT_BCK_DDMP3 (6)
SCLOCK_OP
SCLOCK_ON
C211 0.1uF


DDMP0
U301
P3V3
P1V8
TP321
D301
SML310_VT
R348
470
CO0_OUT
RI0
L301
L302
CI1 (4)
RO1_OUT (4)
IMOD0
OMOD0
ID00
ID01
ID02
ID03
R901
R902
R903
R904
R905
R906
10K
C301 47uF 6.3V
C302 47uF 6.3V
C303 47uF 6.3V
C304 47uF 6.3V
C305 47uF 6.3V
C306 47uF 6.3V
C307 47uF 6.3V
C308 47uF 6.3V
C309
C310
C311
C312
C313
C314
C315
C316
C317
C318
C2319

DDMP1

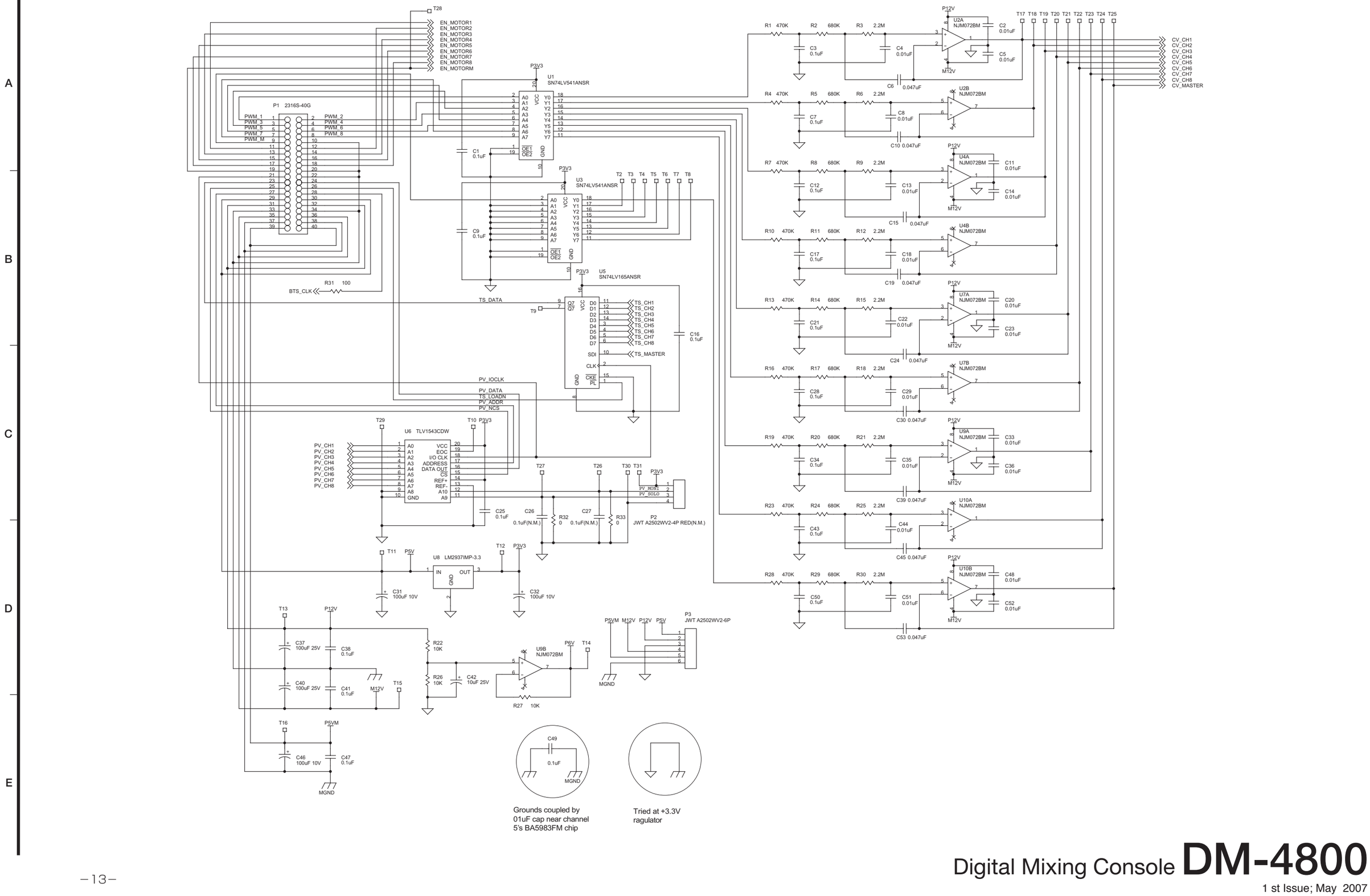
DDMP2

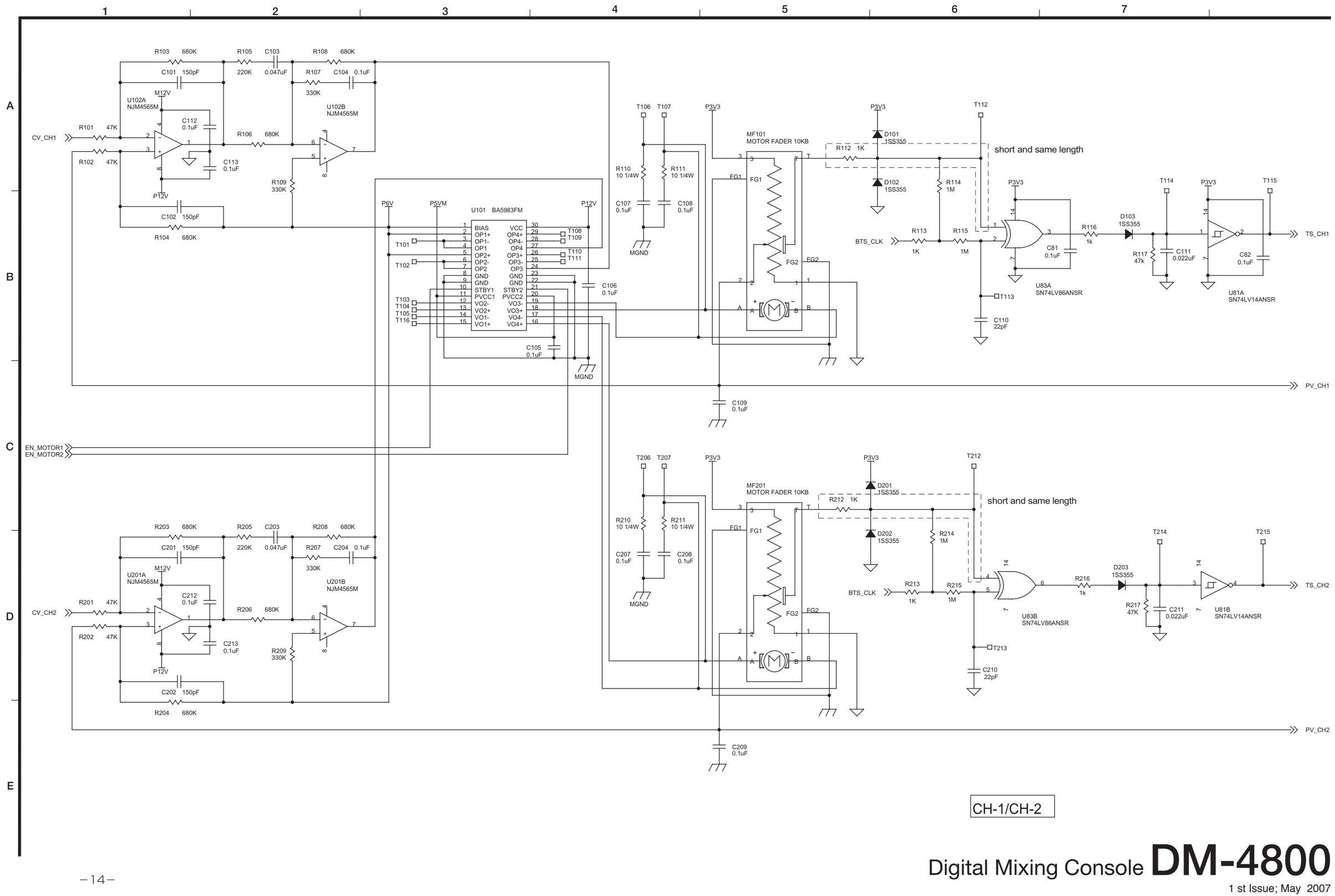

DDMP3
U601
P3V3
P1V8
(7) M3_D[0..31]
(7) M3_A[0..12]
66MCLK3_0
LA[0..3]
LD[0..31]
R665 470
D601
SML310_VT
IMOD3
OMOD3
ID30
ID31
ID32
ID33
C601 47uF 6.3V
C602 47uF 6.3V
C603 47uF 6.3V
C604 47uF 6.3V
C605 47uF 6.3V
C606 47uF 6.3V
C607 47uF 6.3V
C608 47uF 6.3V
C609 0.1uF
C610 0.1uF
C611 0.1uF
C612 0.1uF
C613 0.1uF
C614 0.1uF
C615 0.1uF
C616 0.1uF
C617 0.1uF
C618 0.1uF
C619 0.1uF
C620 0.1uF
C621 0.1uF
C622 0.1uF
C623 0.1uF
C624 0.1uF
C625 0.1uF
C626 0.1uF
C627 0.1uF
C628 0.1uF
C645 0.1uF
C629 0.1uF
C630 0.1uF
C631 0.1uF
C632 0.1uF
C633 0.1uF
C634 0.1uF
C635 0.1uF
C636 0.1uF
C637 0.1uF
C638 0.1uF
C639 0.1uF
C640 0.1uF
C641 0.1uF
C642 0.1uF
C643 0.1uF
C644 0.1uF

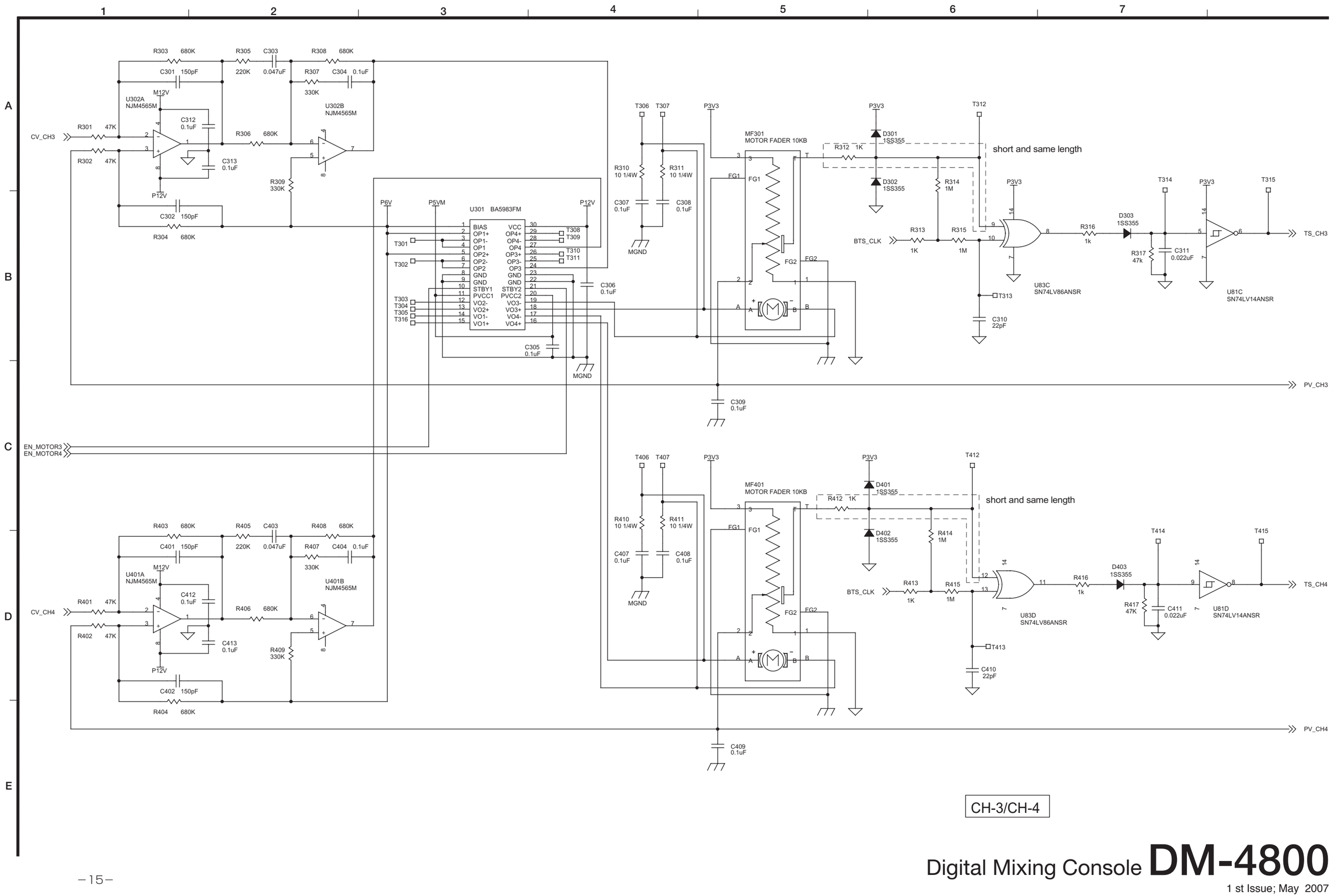


Digital Mixing Console **DM-4800**

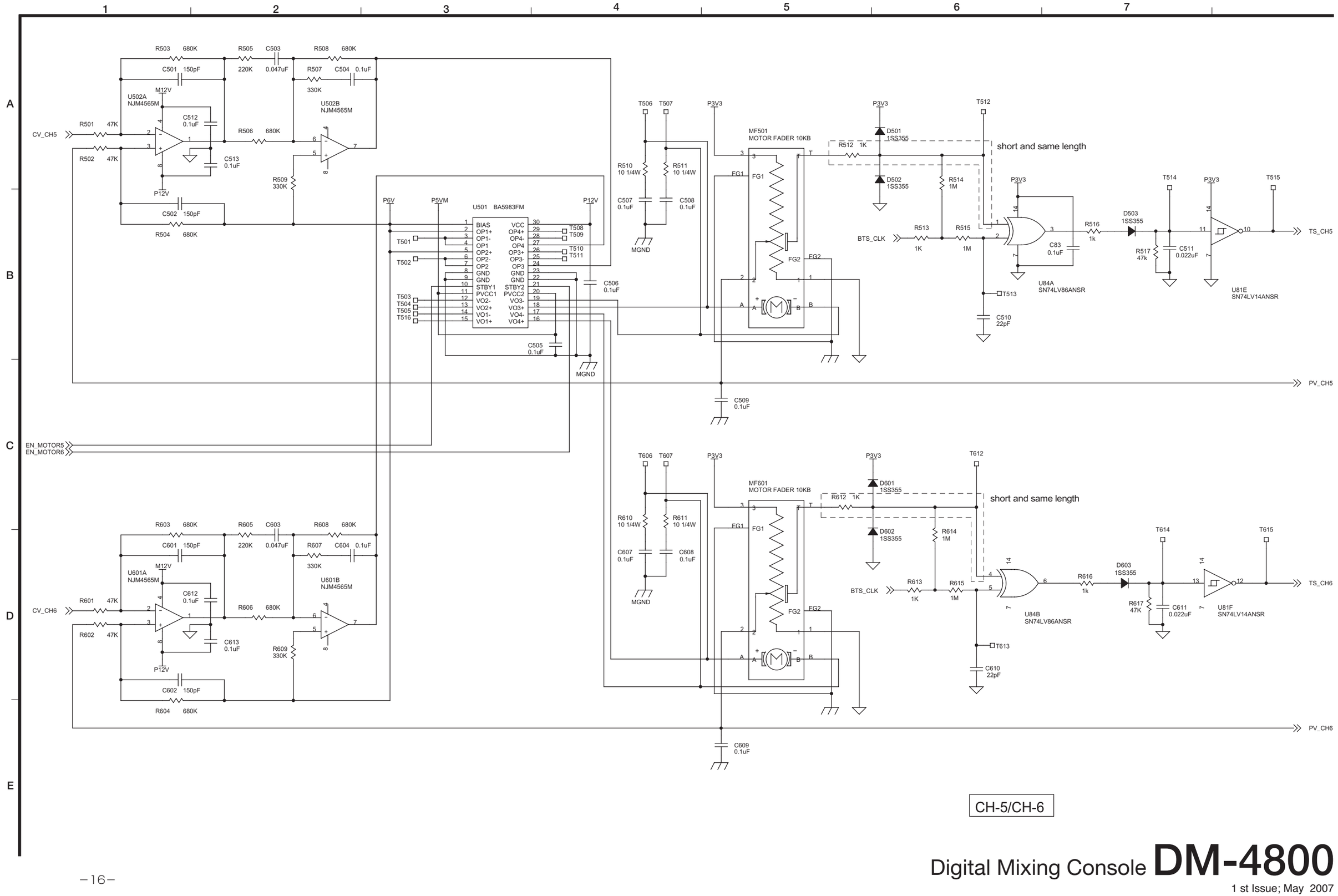
1 st Issue; May 2007


1
2
3
4
5
6
7
A
B
C
D
E
T28
EN_MOTOR1
EN_MOTOR2
EN_MOTOR3
EN_MOTOR4
EN_MOTOR5
EN_MOTOR6
EN_MOTOR7
EN_MOTOR8
EN_MOTORM
P1 2316S-40G
PWM_1
PWM_2
PWM_3
PWM_4
PWM_5
PWM_6
PWM_7
PWM_8
PWM_M
P3V3
U1
SN74LV541ANSR
C1
0.1uF
U3
SN74LV541ANSR
C9
0.1uF
T2 T3 T4 T5 T6 T7 T8
R31 100
BTS_CLK
TS_DATA
T9
U5
SN74LV165ANSR
C16
0.1uF
TS_CH1
TS_CH2
TS_CH3
TS_CH4
TS_CH5
TS_CH6
TS_CH7
TS_CH8
SDI
TS_MASTER
CLK
PV_IOCLK
PV_DATA
TS_LOADN
PV_ADDR
PV_NCS
T29
T10
U6 TLV1543CDW
PV_CH1
PV_CH2
PV_CH3
PV_CH4
PV_CH5
PV_CH6
PV_CH7
PV_CH8
C25
0.1uF
T27
T26
T30 T31
C26
0.1uF(N.M.)
R32
0
C27
0.1uF(N.M.)
R33
0
PV_MON1
PV_SOLO
P2
JWT A2502WV2-4P RED(N.M.)
T11
P5V
U8 LM2937IMP-3.3
IN
OUT
GND
C31
100uF 10V
T12
C32
100uF 10V
T13
P12V
C37
100uF 25V
C38
0.1uF
C40
100uF 25V
C41
0.1uF
M12V
T15
R22
10K
R26
10K
C42
10uF 25V
U9B
NJM072BM
P6V
T14
R27 10K
P5VM M12V P12V P5V
P3
JWT A2502WV2-6P
MGND
T16
P5VM
C46
100uF 10V
C47
0.1uF
MGND
C49
0.1uF
MGND
Grounds coupled by
01uF cap near channel
5's BA5983FM chip
Tried at +3.3V
ragulator
P12V
R1 470K
R2 680K
R3 2.2M
U2A
NJM072BM
C2
0.01uF
C3
0.1uF
C4
0.01uF
C5
0.01uF
C6 0.047uF
M12V
T17 T18 T19 T20 T21 T22 T23 T24 T25
CV_CH1
CV_CH2
CV_CH3
CV_CH4
CV_CH5
CV_CH6
CV_CH7
CV_CH8
CV_MASTER
R4 470K
R5 680K
R6 2.2M
U2B
NJM072BM
C7
0.1uF
C8
0.01uF
C10 0.047uF
R7 470K
R8 680K
R9 2.2M
U4A
NJM072BM
C11
0.01uF
C12
0.1uF
C13
0.01uF
C14
0.01uF
C15 0.047uF
R10 470K
R11 680K
R12 2.2M
U4B
NJM072BM
C17
0.1uF
C18
0.01uF
C19 0.047uF
R13 470K
R14 680K
R15 2.2M
U7A
NJM072BM
C20
0.01uF
C21
0.1uF
C22
0.01uF
C23
0.01uF
C24 0.047uF
R16 470K
R17 680K
R18 2.2M
U7B
NJM072BM
C28
0.1uF
C29
0.01uF
C30 0.047uF
R19 470K
R20 680K
R21 2.2M
U9A
NJM072BM
C33
0.01uF
C34
0.1uF
C35
0.01uF
C36
0.01uF
C39 0.047uF
R23 470K
R24 680K
R25 2.2M
U10A
NJM072BM
C43
0.1uF
C44
0.01uF
C45 0.047uF
R28 470K
R29 680K
R30 2.2M
U10B
NJM072BM
C48
0.01uF
C50
0.1uF
C51
0.01uF
C52
0.01uF
C53 0.047uF


1
2
3
4
5
6
7
A
B
C
D
E
R103 680K
C101 150pF
R105 220K
C103 0.047uF
R108 680K
R107 330K
C104 0.1uF
M12V
U102A NJM4565M
U102B NJM4565M
C112 0.1uF
C113 0.1uF
R101 47K
R102 47K
CV_CH1
R106 680K
R109 330K
P12V
C102 150pF
R104 680K
P6V
P5VM
U101 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T101
T102
T103
T104
T105
T116
T108
T109
T110
T111
C106 0.1uF
C105 0.1uF
MGND
T106
T107
P3V3
R110 10 1/4W
R111 10 1/4W
C107 0.1uF
C108 0.1uF
MF101
MOTOR FADER 10KB
FG1
FG2
A
B
C109 0.1uF
PV_CH1
EN_MOTOR1
EN_MOTOR2
R112 1K
D101 1SS355
D102 1SS355
short and same length
R114 1M
T112
BTS_CLK
R113 1K
R115 1M
T113
C110 22pF
U83A SN74LV86ANSR
R116 1k
D103 1SS355
T114
T115
R117 47k
C111 0.022uF
C81 0.1uF
C82 0.1uF
U81A SN74LV14ANSR
TS_CH1
R203 680K
C201 150pF
R205 220K
C203 0.047uF
R208 680K
R207 330K
C204 0.1uF
U201A NJM4565M
U201B NJM4565M
C212 0.1uF
C213 0.1uF
R201 47K
R202 47K
CV_CH2
R206 680K
R209 330K
C202 150pF
R204 680K
T206
T207
R210 10 1/4W
R211 10 1/4W
C207 0.1uF
C208 0.1uF
MF201
MOTOR FADER 10KB
C209 0.1uF
D201 1SS355
D202 1SS355
short and same length
R214 1M
T212
BTS_CLK
R213 1K
R215 1M
T213
C210 22pF
U83B SN74LV86ANSR
R216 1k
D203 1SS355
T214
T215
R217 47K
C211 0.022uF
U81B SN74LV14ANSR
TS_CH2
PV_CH2
CH-1/CH-2


1
2
3
4
5
6
7
A
B
C
D
E
R303 680K
R305 C303
R308 680K
C301 150pF
220K 0.047uF
R307 C304 0.1uF
330K
M12V
U302A
NJM4565M
U302B
NJM4565M
C312
0.1uF
R301 47K
CV_CH3
R306 680K
R302 47K
C313
0.1uF
R309
330K
P12V
C302 150pF
R304 680K
P6V
P5VM
U301 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T301
T302
T303
T304
T305
T316
T308
T309
T310
T311
C306
0.1uF
C305
0.1uF
MGND
T306
T307
P3V3
R310
10 1/4W
R311
10 1/4W
C307
0.1uF
C308
0.1uF
MGND
MF301
MOTOR FADER 10KB
FG1
FG2
A
B
T
P3V3
D301
1SS355
R312 1K
D302
1SS355
short and same length
T312
R314
1M
R313
1K
R315
1M
BTS_CLK
T313
C310
22pF
U83C
SN74LV86ANSR
R316
1k
D303
1SS355
T314
R317
47k
C311
0.022uF
P3V3
T315
U81C
SN74LV14ANSR
TS_CH3
PV_CH3
C309
0.1uF
EN_MOTOR3
EN_MOTOR4
R403 680K
R405 C403
R408 680K
C401 150pF
220K 0.047uF
R407 C404 0.1uF
330K
M12V
U401A
NJM4565M
U401B
NJM4565M
C412
0.1uF
R401 47K
CV_CH4
R406 680K
R402 47K
C413
0.1uF
R409
330K
P12V
C402 150pF
R404 680K
T406
T407
P3V3
R410
10 1/4W
R411
10 1/4W
C407
0.1uF
C408
0.1uF
MGND
MF401
MOTOR FADER 10KB
FG1
FG2
A
B
T
P3V3
D401
1SS355
R412 1K
D402
1SS355
short and same length
T412
R414
1M
R413
1K
R415
1M
BTS_CLK
T413
C410
22pF
U83D
SN74LV86ANSR
R416
1k
D403
1SS355
T414
R417
47K
C411
0.022uF
P3V3
T415
U81D
SN74LV14ANSR
TS_CH4
PV_CH4
C409
0.1uF

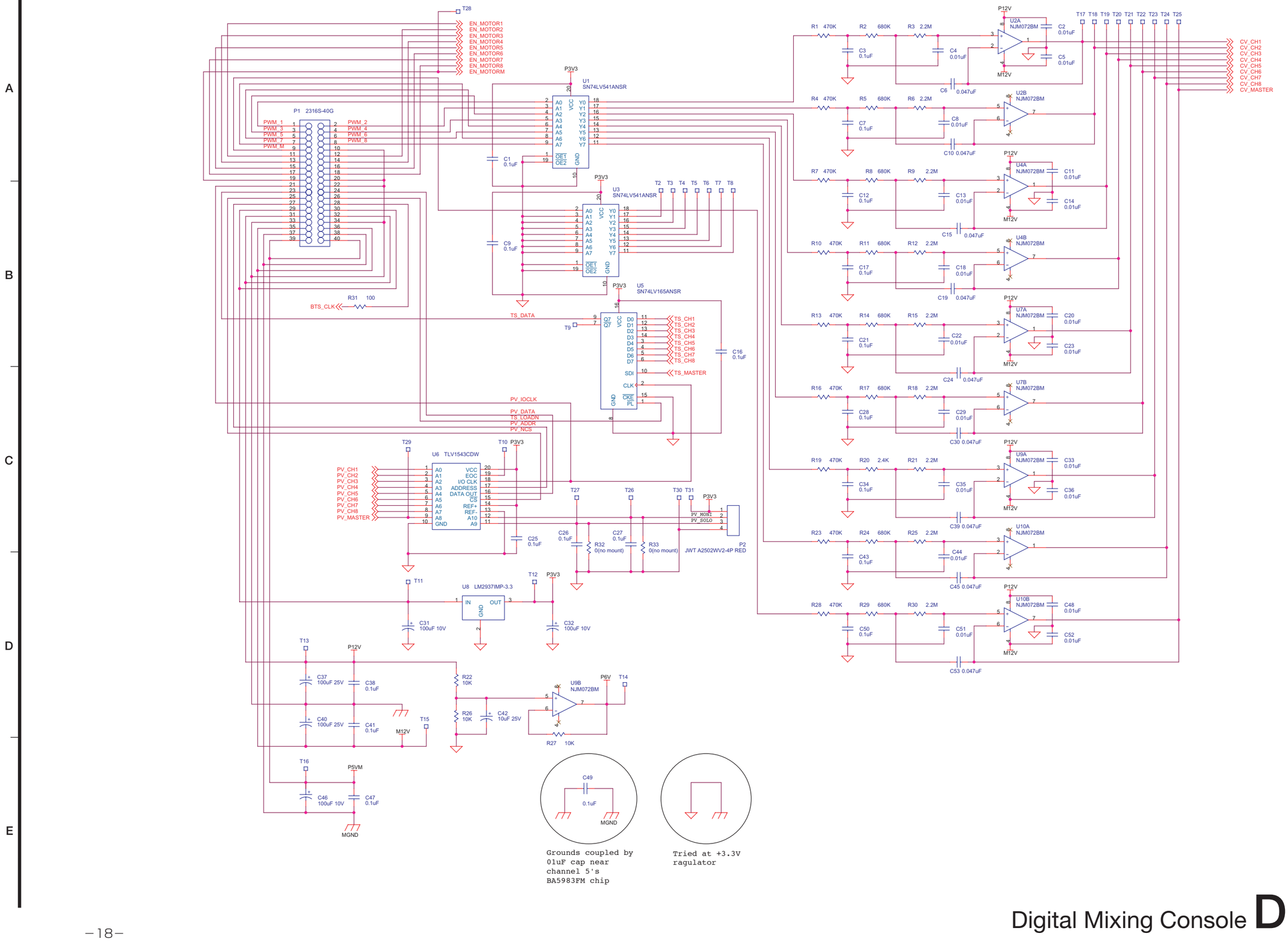
CH-3/CH-4

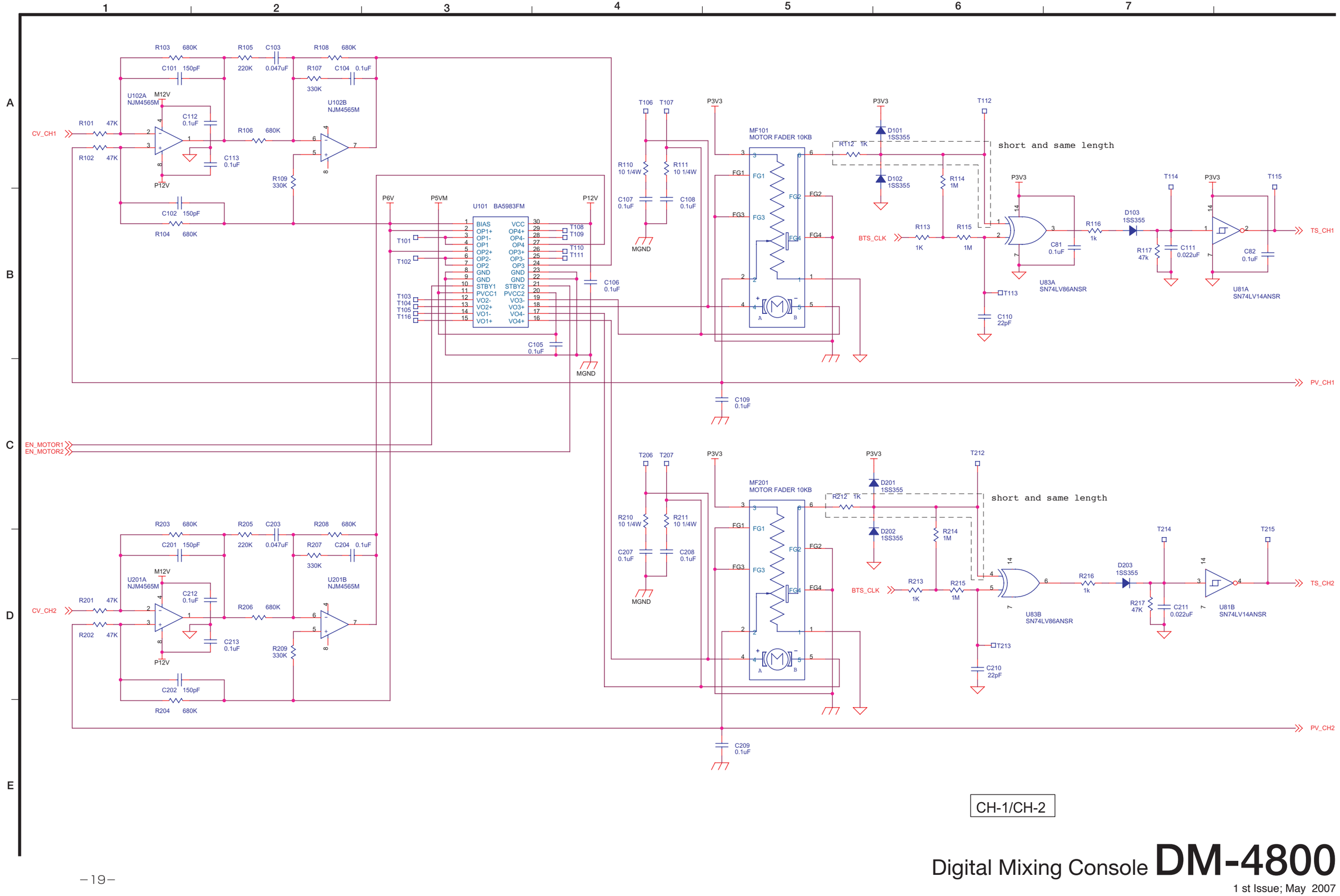

1
2
3
4
5
6
7
A
B
C
D
E
R503 680K
R505 C503
R508 680K
C501 150pF
220K 0.047uF
R507 C504 0.1uF
330K
M12V
U502A
NJM4565M
U502B
NJM4565M
C512
0.1uF
R501 47K
CV_CH5
R502 47K
R506 680K
C513
0.1uF
R509
330K
P12V
C502 150pF
R504 680K
P6V
P5VM
U501 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T501
T502
T503
T504
T505
T516
T508
T509
T510
T511
C506
0.1uF
C505
0.1uF
MGND
T506 T507
P3V3
R510
10 1/4W
R511
10 1/4W
C507
0.1uF
C508
0.1uF
MGND
MF501
MOTOR FADER 10KB
FG1
FG2
T
P3V3
D501
1SS355
R512 1K
D502
1SS355
T512
short and same length
R514
1M
BTS_CLK
R513
1K
R515
1M
T513
C510
22pF
P3V3
U84A
SN74LV86ANSR
R516
1k
D503
1SS355
T514
R517
47k
C511
0.022uF
P3V3
T515
U81E
SN74LV14ANSR
TS_CH5
PV_CH5
C509
0.1uF
EN_MOTOR5
EN_MOTOR6
R603 680K
R605 C603
R608 680K
C601 150pF
220K 0.047uF
R607 C604 0.1uF
330K
M12V
U601A
NJM4565M
U601B
NJM4565M
C612
0.1uF
R601 47K
CV_CH6
R602 47K
R606 680K
C613
0.1uF
R609
330K
P12V
C602 150pF
R604 680K
T606 T607
P3V3
R610
10 1/4W
R611
10 1/4W
C607
0.1uF
C608
0.1uF
MGND
MF601
MOTOR FADER 10KB
FG1
FG2
T
P3V3
D601
1SS355
R612 1K
D602
1SS355
T612
short and same length
R614
1M
BTS_CLK
R613
1K
R615
1M
T613
C610
22pF
P3V3
U84B
SN74LV86ANSR
R616
1k
D603
1SS355
T614
R617
47k
C611
0.022uF
P3V3
T615
U81F
SN74LV14ANSR
TS_CH6
PV_CH6
C609
0.1uF

CH-5/CH-6

1
2
3
4
5
6
7
A
B
C
D
E
R703 680K
R705 C703
R708 680K
C701 150pF
220K 0.047uF
R707 C704 0.1uF
330K
M12V
U702A
NJM4565M
U702B
NJM4565M
C712
0.1uF
CV_CH7
R701 47K
R706 680K
R702 47K
C713
0.1uF
R709
330K
P12V
C702 150pF
R704 680K
P6V
P5VM
U701 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T701
T702
T703
T704
T705
T716
T708
T709
T710
T711
C706
0.1uF
C705
0.1uF
MGND
T706 T707
P3V3
R710
10 1/4W
R711
10 1/4W
C707
0.1uF
C708
0.1uF
MGND
MF701
MOTOR FADER 10KB
FG1
FG2
T
P3V3
D701
1SS355
R712 1K
D702
1SS355
T712
short and same length
R714
1M
R713
1K
R715
1M
BTS_CLK
T713
C710
22pF
U84C
SN74LV86ANSR
P3V3
R716
1k
D703
1SS355
T714
T715
R717
47k
C711
0.022uF
C84
0.1uF
U82A
SN74LV14ANSR
TS_CH7
PV_CH7
C709
0.1uF
EN_MOTOR7
EN_MOTOR8
R803 680K
R805 C803
R808 680K
C801 150pF
220K 0.047uF
R807 C804 0.1uF
330K
M12V
U801A
NJM4565M
U801B
NJM4565M
C812
0.1uF
CV_CH8
R801 47K
R806 680K
R802 47K
C813
0.1uF
R809
330K
P12V
C802 150pF
R804 680K
T806 T807
P3V3
R810
10 1/4W
R811
10 1/4W
C807
0.1uF
C808
0.1uF
MGND
MF801
MOTOR FADER 10KB
FG1
FG2
T
P3V3
D801
1SS355
R812 1K
D802
1SS355
T812
short and same length
R814
1M
R813
1K
R815
1M
BTS_CLK
T813
C810
22pF
U84D
SN74LV86ANSR
P3V3
R816
1k
D803
1SS355
T814
T815
R817
47K
C811
0.022uF
U82B
SN74LV14ANSR
TS_CH8
PV_CH8
C809
0.1uF
T914
U82C
SN74LV14ANSR
T915
TS_MASTER
U82D
SN74LV14ANSR
T917
U82E
SN74LV14ANSR
T918
U82F
SN74LV14ANSR
T919

CH-7/CH-8


1
2
3
4
5
6
7
A
B
C
D
E
T28
EN_MOTOR1
EN_MOTOR2
EN_MOTOR3
EN_MOTOR4
EN_MOTOR5
EN_MOTOR6
EN_MOTOR7
EN_MOTOR8
EN_MOTORM
P1 2316S-40G
PWM_1
PWM_2
PWM_3
PWM_4
PWM_5
PWM_6
PWM_7
PWM_8
PWM_M
P3V3
U1
SN74LV541ANSR
C1 0.1uF
C9 0.1uF
U3
SN74LV541ANSR
T2 T3 T4 T5 T6 T7 T8
R31 100
BTS_CLK
TS_DATA
T9
U5
SN74LV165ANSR
TS_CH1
TS_CH2
TS_CH3
TS_CH4
TS_CH5
TS_CH6
TS_CH7
TS_CH8
TS_MASTER
C16 0.1uF
PV_IOCLK
PV_DATA
TS_LOADN
PV_ADDR
PV_NCS
T29
T10
U6 TLV1543CDW
PV_CH1
PV_CH2
PV_CH3
PV_CH4
PV_CH5
PV_CH6
PV_CH7
PV_CH8
PV_MASTER
C25 0.1uF
T27
T26
T30
T31
C26 0.1uF
C27 0.1uF
R32 0(no mount)
R33 0(no mount)
PV_MONI
PV_SOLO
P2
JWT A2502WV2-4P RED
T11
U8 LM2937IMP-3.3
IN
OUT
GND
C31 100uF 10V
T12
C32 100uF 10V
T13
P12V
C37 100uF 25V
C38 0.1uF
C40 100uF 25V
C41 0.1uF
M12V
T15
R22 10K
R26 10K
C42 10uF 25V
U9B
NJM072BM
P6V
T14
R27 10K
T16
P5VM
C46 100uF 10V
C47 0.1uF
MGND
C49
0.1uF
MGND
Grounds coupled by
01uF cap near
channel 5's
BA5983FM chip
Tried at +3.3V
ragulator
R1 470K
R2 680K
R3 2.2M
C3 0.1uF
C4 0.01uF
C6 0.047uF
U2A
NJM072BM
C2 0.01uF
C5 0.01uF
M12V
T17 T18 T19 T20 T21 T22 T23 T24 T25
CV_CH1
CV_CH2
CV_CH3
CV_CH4
CV_CH5
CV_CH6
CV_CH7
CV_CH8
CV_MASTER
R4 470K
R5 680K
R6 2.2M
C7 0.1uF
C8 0.01uF
C10 0.047uF
U2B
NJM072BM
R7 470K
R8 680K
R9 2.2M
C12 0.1uF
C13 0.01uF
C15 0.047uF
U4A
NJM072BM
C11 0.01uF
C14 0.01uF
R10 470K
R11 680K
R12 2.2M
C17 0.1uF
C18 0.01uF
C19 0.047uF
U4B
NJM072BM
R13 470K
R14 680K
R15 2.2M
C21 0.1uF
C22 0.01uF
C24 0.047uF
U7A
NJM072BM
C20 0.01uF
C23 0.01uF
R16 470K
R17 680K
R18 2.2M
C28 0.1uF
C29 0.01uF
C30 0.047uF
U7B
NJM072BM
R19 470K
R20 2.4K
R21 2.2M
C34 0.1uF
C35 0.01uF
C39 0.047uF
U9A
NJM072BM
C33 0.01uF
C36 0.01uF
R23 470K
R24 680K
R25 2.2M
C43 0.1uF
C44 0.01uF
C45 0.047uF
U10A
NJM072BM
R28 470K
R29 680K
R30 2.2M
C50 0.1uF
C51 0.01uF
C53 0.047uF
U10B
NJM072BM
C48 0.01uF
C52 0.01uF


1
2
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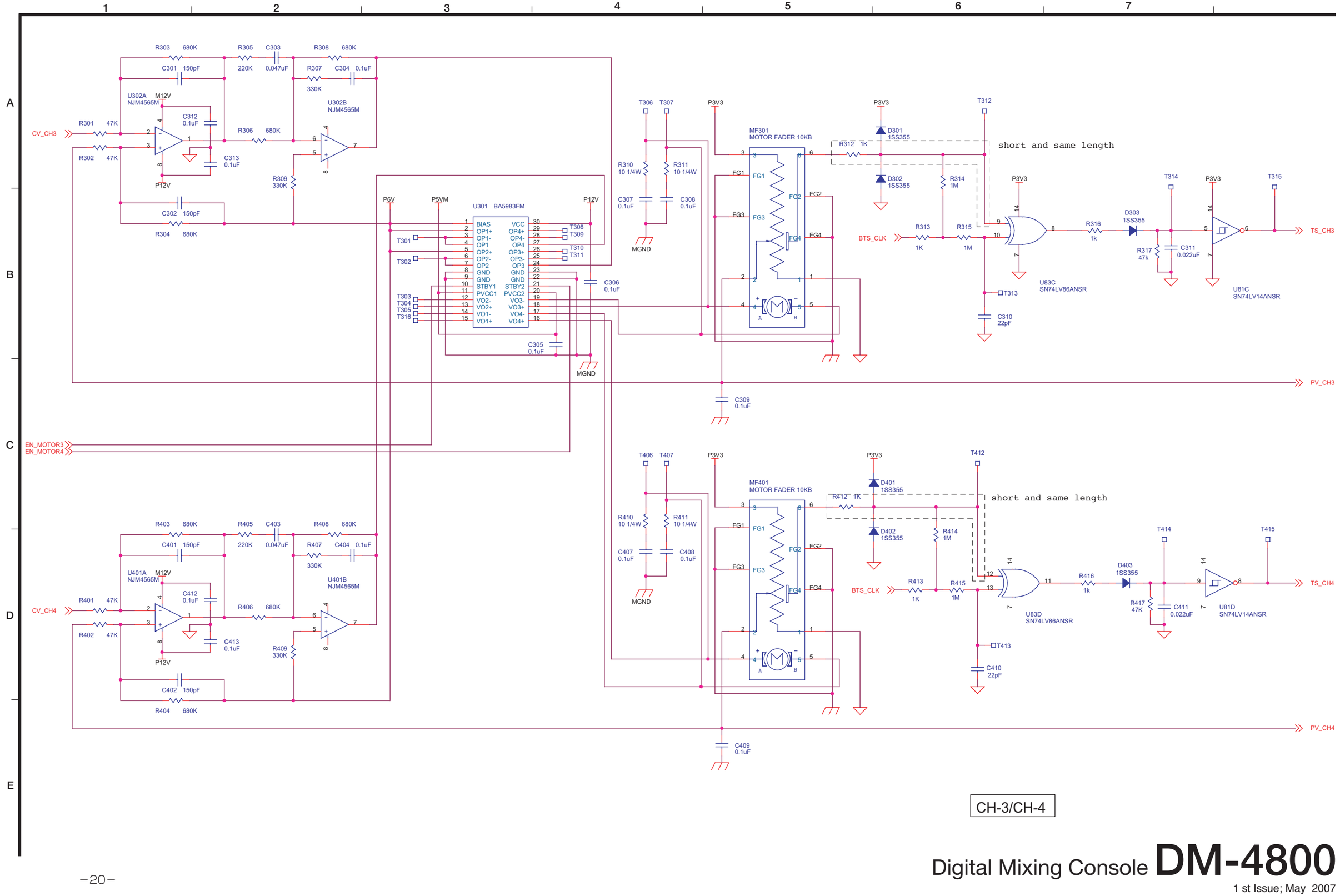
6
7
A
B
C
D
E
R103 680K
R105 C103
R108 680K
C101 150pF
220K 0.047uF
R107 C104 0.1uF
330K
U102A NJM4565M
M12V
U102B NJM4565M
C112 0.1uF
R101 47K
CV_CH1
R102 47K
R106 680K
C113 0.1uF
R109 330K
P12V
C102 150pF
R104 680K
P6V
P5VM
U101 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T101
T102
T103
T104
T105
T116
T108
T109
T110
T111
C106 0.1uF
C105 0.1uF
MGND
T106
T107
R110 10 1/4W
R111 10 1/4W
C107 0.1uF
C108 0.1uF
MGND
P3V3
MF101
MOTOR FADER 10KB
FG1
FG2
FG3
FG4
C109 0.1uF
P3V3
D101 1SS355
R112 1K
D102 1SS355
short and same length
T112
R114 1M
R113 1K
R115 1M
BTS_CLK
T113
C110 22pF
P3V3
U83A SN74LV86ANSR
R116 1k
C81 0.1uF
D103 1SS355
T114
T115
R117 47k
C111 0.022uF
U81A SN74LV14ANSR
C82 0.1uF
TS_CH1
PV_CH1
EN_MOTOR1
EN_MOTOR2
R203 680K
R205 C203
R208 680K
C201 150pF
220K 0.047uF
R207 C204 0.1uF
330K
U201A NJM4565M
M12V
U201B NJM4565M
C212 0.1uF
R201 47K
CV_CH2
R202 47K
R206 680K
C213 0.1uF
R209 330K
P12V
C202 150pF
R204 680K
T206
T207
R210 10 1/4W
R211 10 1/4W
C207 0.1uF
C208 0.1uF
MGND
P3V3
MF201
MOTOR FADER 10KB
FG1
FG2
FG3
FG4
C209 0.1uF
P3V3
D201 1SS355
R212 1K
D202 1SS355
short and same length
T212
R214 1M
R213 1K
R215 1M
BTS_CLK
T213
C210 22pF
P3V3
U83B SN74LV86ANSR
R216 1k
C82 0.1uF
D203 1SS355
T214
T215
R217 47k
C211 0.022uF
U81B SN74LV14ANSR
TS_CH2
PV_CH2

CH-1/CH-2


1
2
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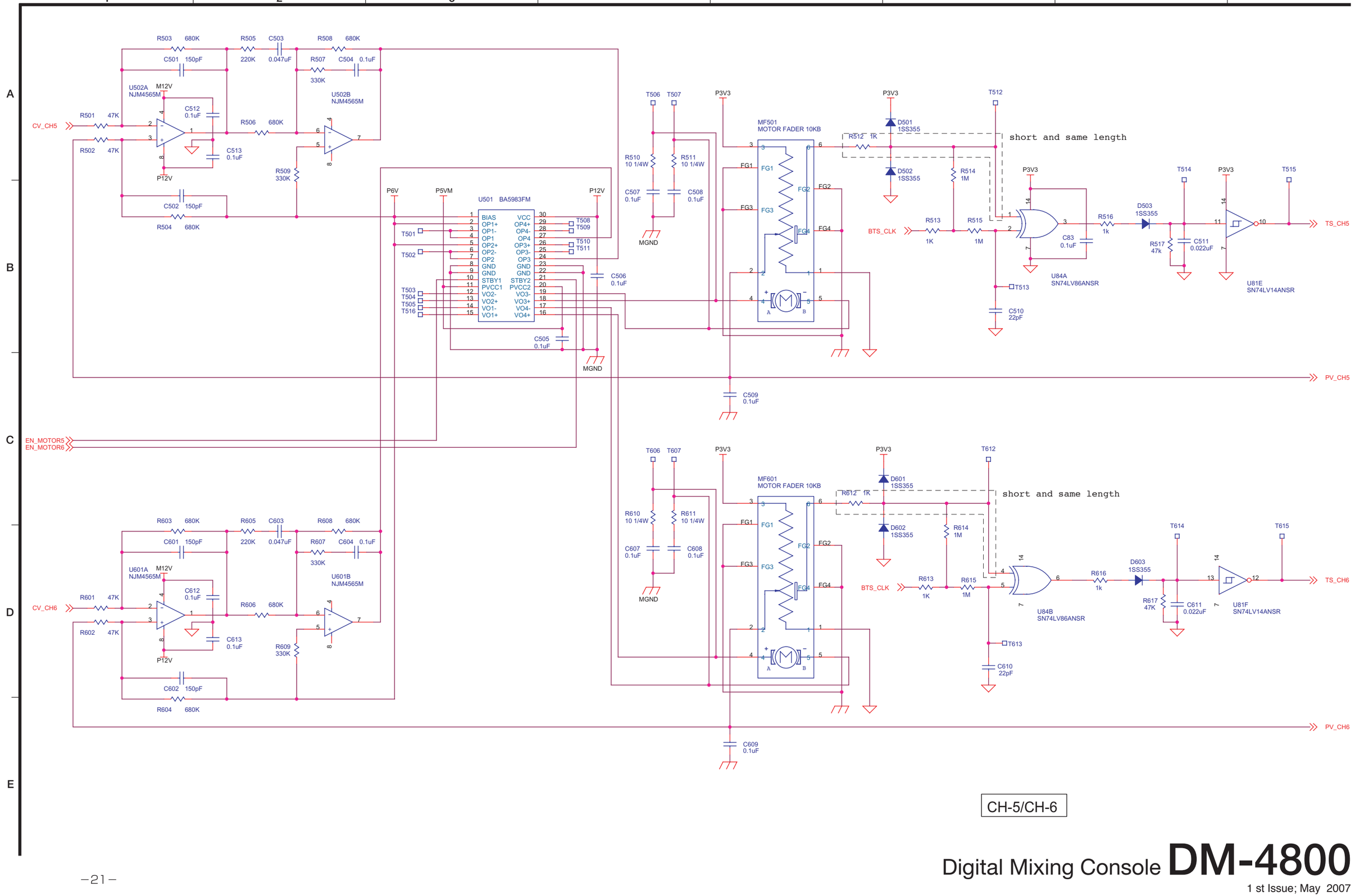
7
A
B
C
D
E
R303 680K
C301 150pF
R305 220K
C303 0.047uF
R308 680K
R307 330K
C304 0.1uF
U302A NJM4565M
M12V
U302B NJM4565M
R301 47K
CV_CH3
R302 47K
C312 0.1uF
R306 680K
C313 0.1uF
R309 330K
P12V
C302 150pF
R304 680K
P6V
P5VM
U301 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T301
T302
T303
T304
T305
T316
T308
T309
T310
T311
C306 0.1uF
C305 0.1uF
MGND
T306
T307
R310 10 1/4W
R311 10 1/4W
C307 0.1uF
C308 0.1uF
MGND
P3V3
MF301
MOTOR FADER 10KB
FG1
FG2
FG3
FG4
C309 0.1uF
P3V3
D301 1SS355
R312 1K
D302 1SS355
short and same length
T312
R314 1M
R313 1K
R315 1M
BTS_CLK
T313
C310 22pF
U83C SN74LV86ANSR
R316 1k
D303 1SS355
T314
R317 47k
C311 0.022uF
P3V3
T315
U81C SN74LV14ANSR
TS_CH3
PV_CH3
EN_MOTOR3
EN_MOTOR4
R403 680K
C401 150pF
R405 220K
C403 0.047uF
R408 680K
R407 330K
C404 0.1uF
U401A NJM4565M
M12V
U401B NJM4565M
R401 47K
CV_CH4
R402 47K
C412 0.1uF
R406 680K
C413 0.1uF
R409 330K
P12V
C402 150pF
R404 680K
T406
T407
R410 10 1/4W
R411 10 1/4W
C407 0.1uF
C408 0.1uF
MGND
P3V3
MF401
MOTOR FADER 10KB
FG1
FG2
FG3
FG4
C409 0.1uF
P3V3
D401 1SS355
R412 1K
D402 1SS355
short and same length
T412
R414 1M
R413 1K
R415 1M
BTS_CLK
T413
C410 22pF
U83D SN74LV86ANSR
R416 1k
D403 1SS355
T414
R417 47k
C411 0.022uF
P3V3
T415
U81D SN74LV14ANSR
TS_CH4
PV_CH4

CH-3/CH-4


1
2
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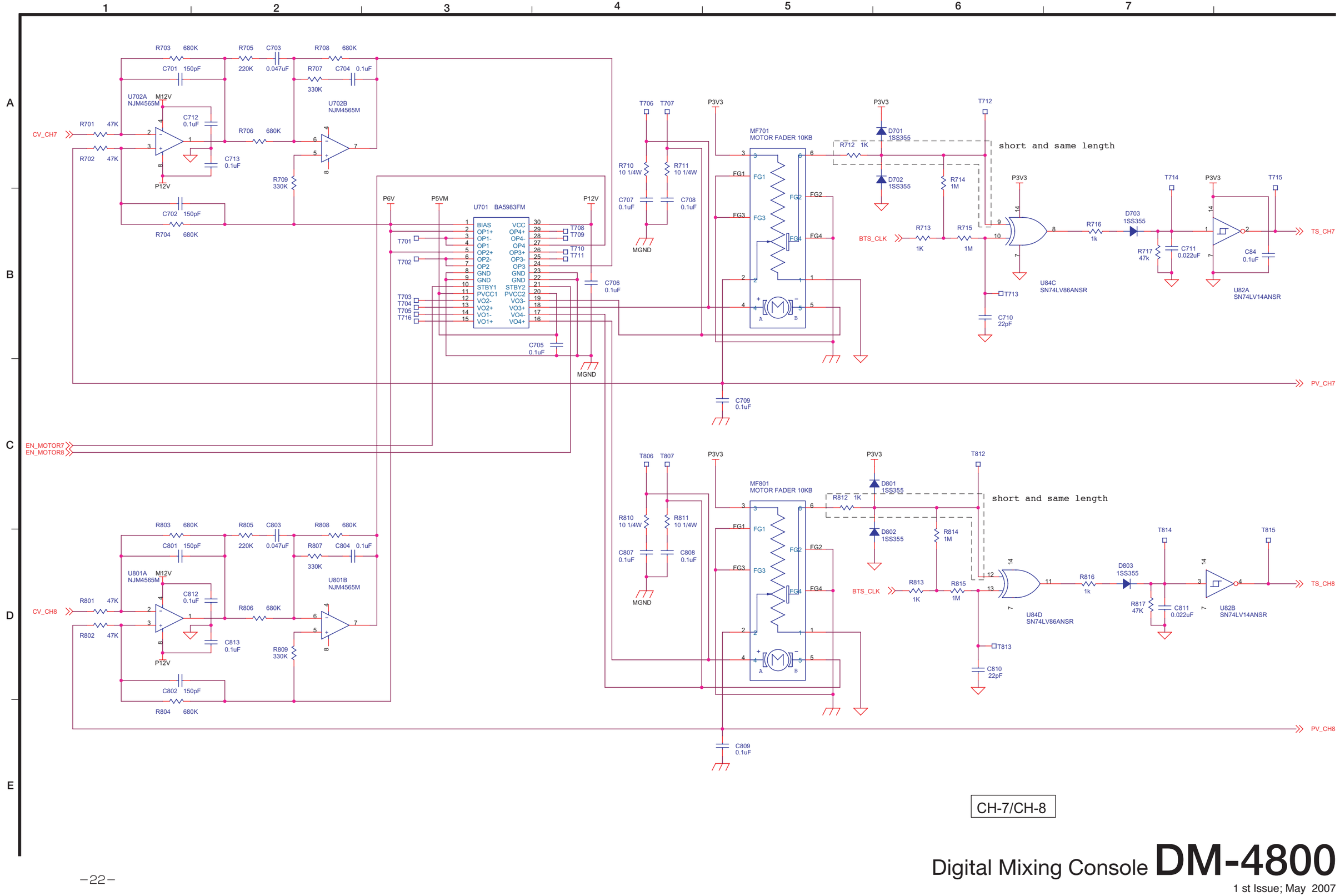
5
6
7
A
B
C
D
E
R503 680K
C501 150pF
R505 220K
C503 0.047uF
R508 680K
R507 330K
C504 0.1uF
U502A NJM4565M
M12V
C512 0.1uF
U502B NJM4565M
CV_CH5
R501 47K
R502 47K
R506 680K
C513 0.1uF
R509 330K
P12V
C502 150pF
R504 680K
P6V
P5VM
U501 BA5983FM
P12V
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T501
T502
T503
T504
T505
T516
T508
T509
T510
T511
C506 0.1uF
C505 0.1uF
MGND
T506
T507
R510 10 1/4W
R511 10 1/4W
C507 0.1uF
C508 0.1uF
MGND
P3V3
MF501
MOTOR FADER 10KB
FG1
FG2
FG3
FG4
C509 0.1uF
P3V3
D501 1SS355
R512 1K
D502 1SS355
short and same length
T512
R514 1M
R513 1K
R515 1M
BTS_CLK
T513
C510 22pF
P3V3
U84A SN74LV86ANSR
C83 0.1uF
R516 1k
D503 1SS355
T514
R517 47k
C511 0.022uF
P3V3
U81E SN74LV14ANSR
T515
TS_CH5
PV_CH5
EN_MOTOR5
EN_MOTOR6
R603 680K
C601 150pF
R605 220K
C603 0.047uF
R608 680K
R607 330K
C604 0.1uF
U601A NJM4565M
M12V
C612 0.1uF
U601B NJM4565M
CV_CH6
R601 47K
R602 47K
R606 680K
C613 0.1uF
R609 330K
P12V
C602 150pF
R604 680K
T606
T607
R610 10 1/4W
R611 10 1/4W
C607 0.1uF
C608 0.1uF
MGND
P3V3
MF601
MOTOR FADER 10KB
FG1
FG2
FG3
FG4
C609 0.1uF
P3V3
D601 1SS355
R612 1K
D602 1SS355
short and same length
T612
R614 1M
R613 1K
R615 1M
BTS_CLK
T613
C610 22pF
P3V3
U84B SN74LV86ANSR
R616 1k
D603 1SS355
T614
R617 47K
C611 0.022uF
P3V3
U81F SN74LV14ANSR
T615
TS_CH6
PV_CH6

CH-5/CH-6


1
2
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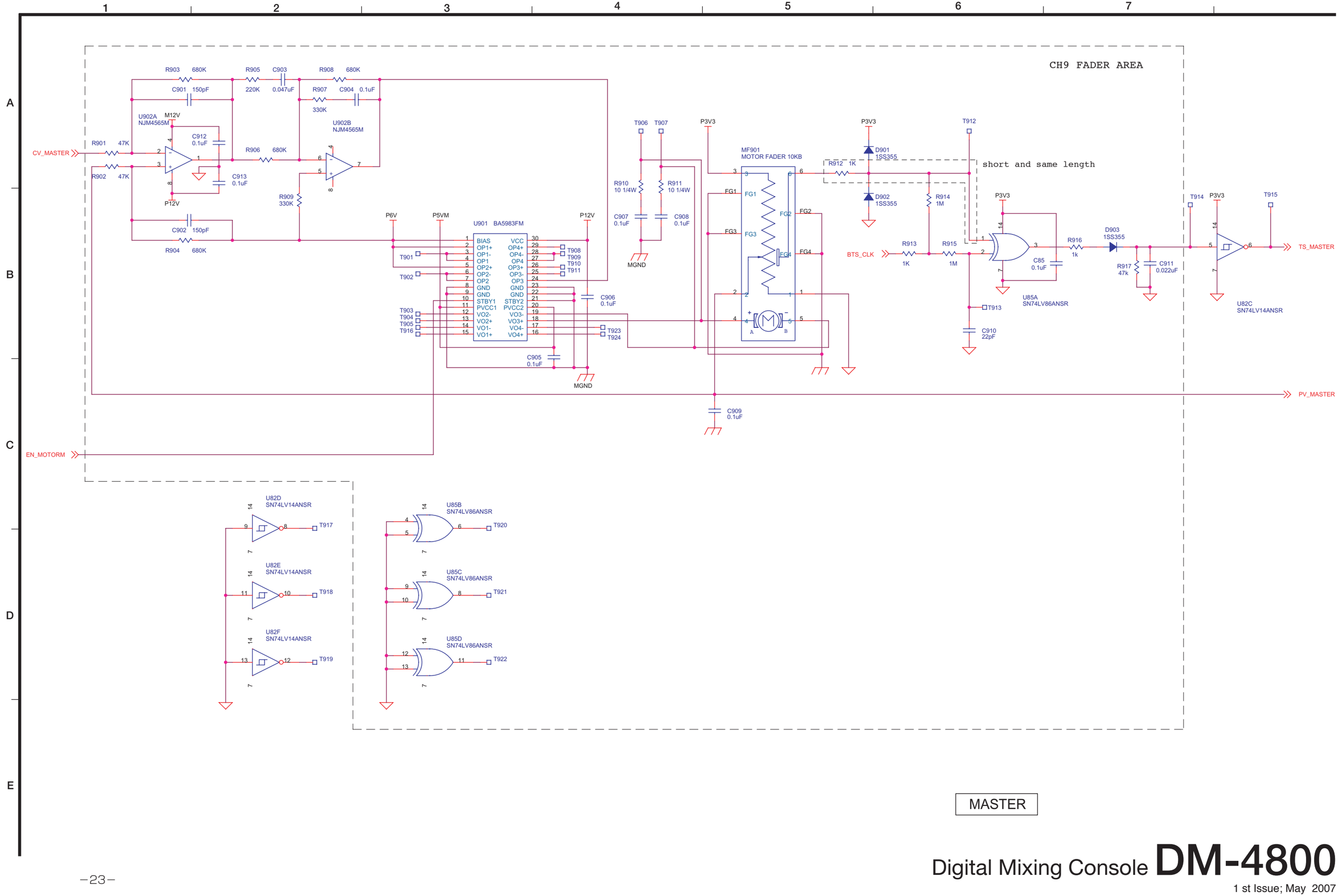
5
6
7
A
B
C
D
E
CV_CH7
R701 47K
R702 47K
U702A M12V
NJM4565M
C712 0.1uF
C713 0.1uF
P12V
R703 680K
C701 150pF
R704 680K
C702 150pF
R705 220K
C703 0.047uF
R706 680K
R707 330K
C704 0.1uF
R708 680K
U702B
NJM4565M
R709 330K
P6V
P5VM
P12V
U701 BA5983FM
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
GND
GND
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T701
T702
T703
T704
T705
T716
T708
T709
T710
T711
C705 0.1uF
C706 0.1uF
MGND
T706
T707
R710 10 1/4W
R711 10 1/4W
C707 0.1uF
C708 0.1uF
MGND
P3V3
MF701
MOTOR FADER 10KB
FG1
FG2
FG3
FG4
C709 0.1uF
P3V3
D701 1SS355
D702 1SS355
R712 1K
short and same length
R714 1M
R713 1K
R715 1M
BTS_CLK
T712
T713
C710 22pF
U84C
SN74LV86ANSR
R716 1k
D703 1SS355
T714
R717 47k
C711 0.022uF
P3V3
U82A
SN74LV14ANSR
T715
C84 0.1uF
TS_CH7
PV_CH7
EN_MOTOR7
EN_MOTOR8
CV_CH8
R801 47K
R802 47K
U801A M12V
NJM4565M
C812 0.1uF
C813 0.1uF
P12V
R803 680K
C801 150pF
R804 680K
C802 150pF
R805 220K
C803 0.047uF
R806 680K
R807 330K
C804 0.1uF
R808 680K
U801B
NJM4565M
R809 330K
T806
T807
R810 10 1/4W
R811 10 1/4W
C807 0.1uF
C808 0.1uF
MGND
P3V3
MF801
MOTOR FADER 10KB
FG1
FG2
FG3
FG4
C809 0.1uF
P3V3
D801 1SS355
D802 1SS355
R812 1K
short and same length
R814 1M
R813 1K
R815 1M
BTS_CLK
T812
T813
C810 22pF
U84D
SN74LV86ANSR
R816 1k
D803 1SS355
T814
R817 47k
C811 0.022uF
P3V3
U82B
SN74LV14ANSR
T815
C84 0.1uF
TS_CH8
PV_CH8

CH-7/CH-8


CH9 FADER AREA
CV_MASTER
EN_MOTORM
PV_MASTER
TS_MASTER
BTS_CLK
R901 47K
R902 47K
R903 680K
R904 680K
R905 220K
R906 680K
R907 330K
R908 680K
R909 330K
C901 150pF
C902 150pF
C903 0.047uF
C904 0.1uF
C912 0.1uF
C913 0.1uF
U902A NJM4565M
U902B NJM4565M
M12V
P12V
P6V
P5VM
P3V3
U901 BA5983FM
BIAS
OP1+
OP1-
OP1
OP2+
OP2-
OP2
GND
STBY1
PVCC1
VO2-
VO2+
VO1-
VO1+
VCC
OP4+
OP4-
OP4
OP3+
OP3-
OP3
STBY2
PVCC2
VO3-
VO3+
VO4-
VO4+
T901
T902
T903
T904
T905
T916
T908
T909
T910
T911
T923
T924
C905 0.1uF
C906 0.1uF
C907 0.1uF
C908 0.1uF
C909 0.1uF
R910 10 1/4W
R911 10 1/4W
T906
T907
MGND
MF901
MOTOR FADER 10KB
FG1
FG2
FG3
FG4
R912 1K
D901 1SS355
D902 1SS355
short and same length
R913 1K
R914 1M
R915 1M
R916 1k
D903 1SS355
R917 47k
C85 0.1uF
C910 22pF
C911 0.022uF
T912
T913
T914
T915
U85A SN74LV86ANSR
U82C SN74LV14ANSR
U82D SN74LV14ANSR
U82E SN74LV14ANSR
U82F SN74LV14ANSR
U85B SN74LV86ANSR
U85C SN74LV86ANSR
U85D SN74LV86ANSR
T917
T918
T919
T920
T921
T922

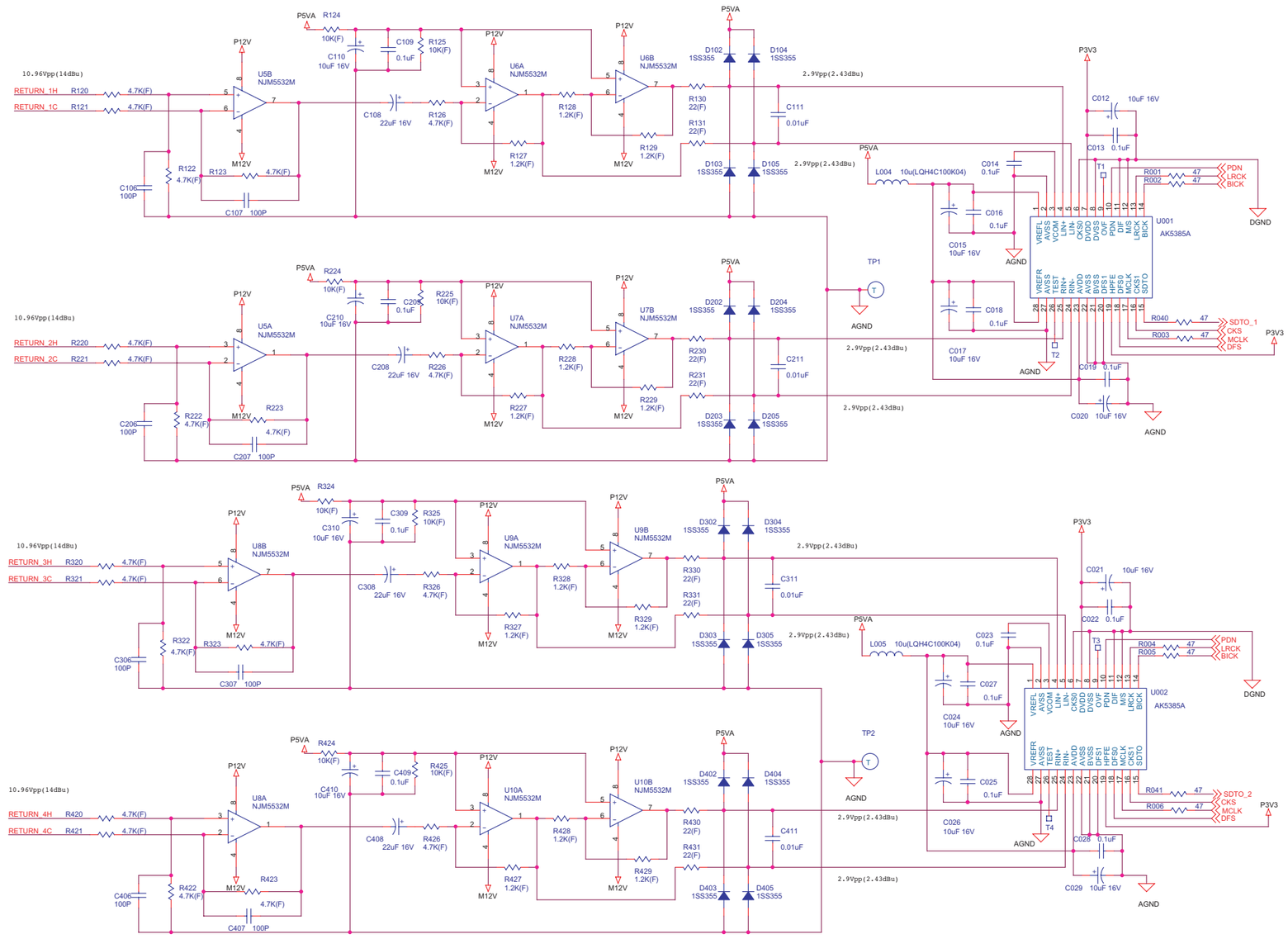
MASTER

INPUT
1ch(9ch)

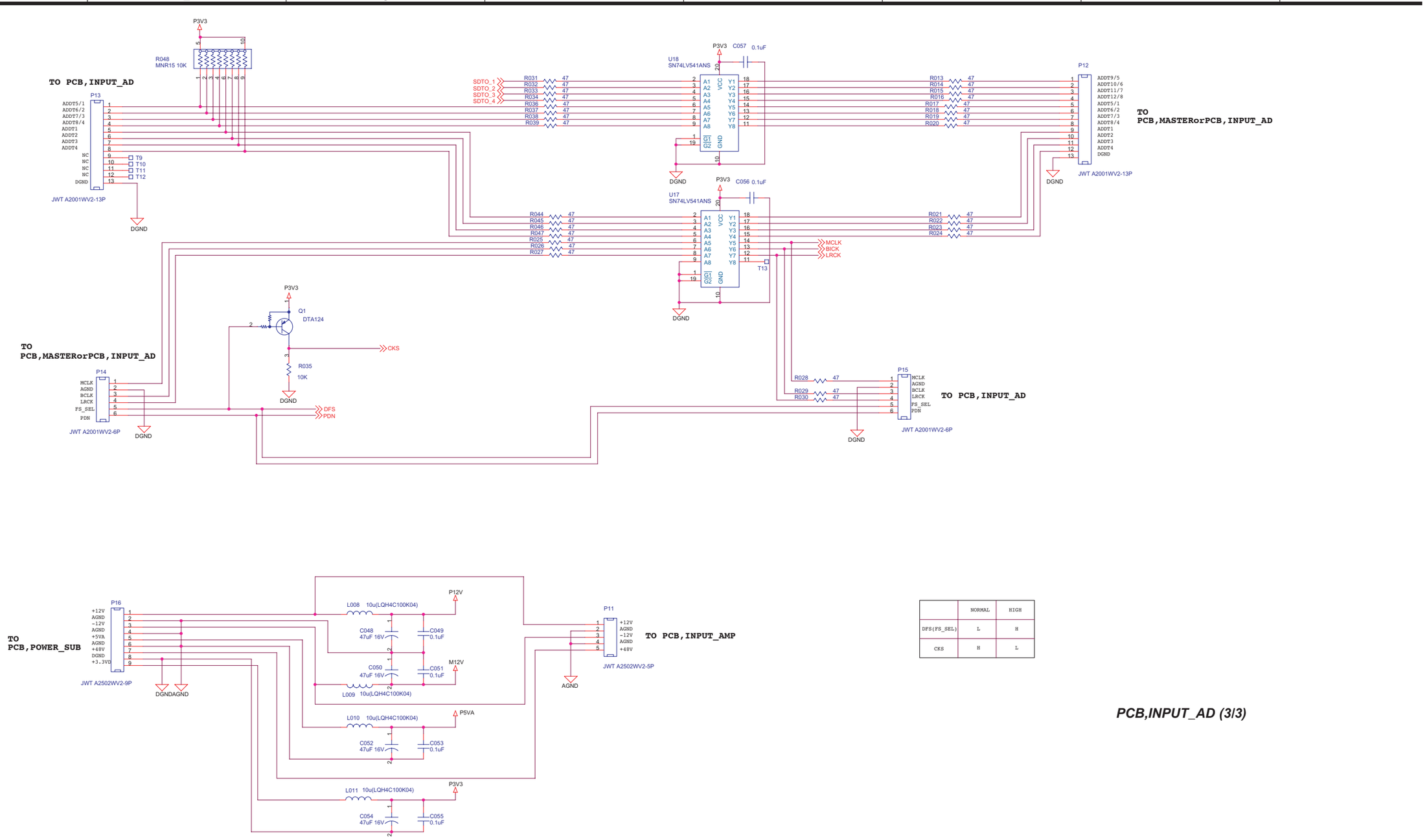
INPUT
2ch(10ch)

INPUT
3ch(11ch)

INPUT
4ch(12ch)

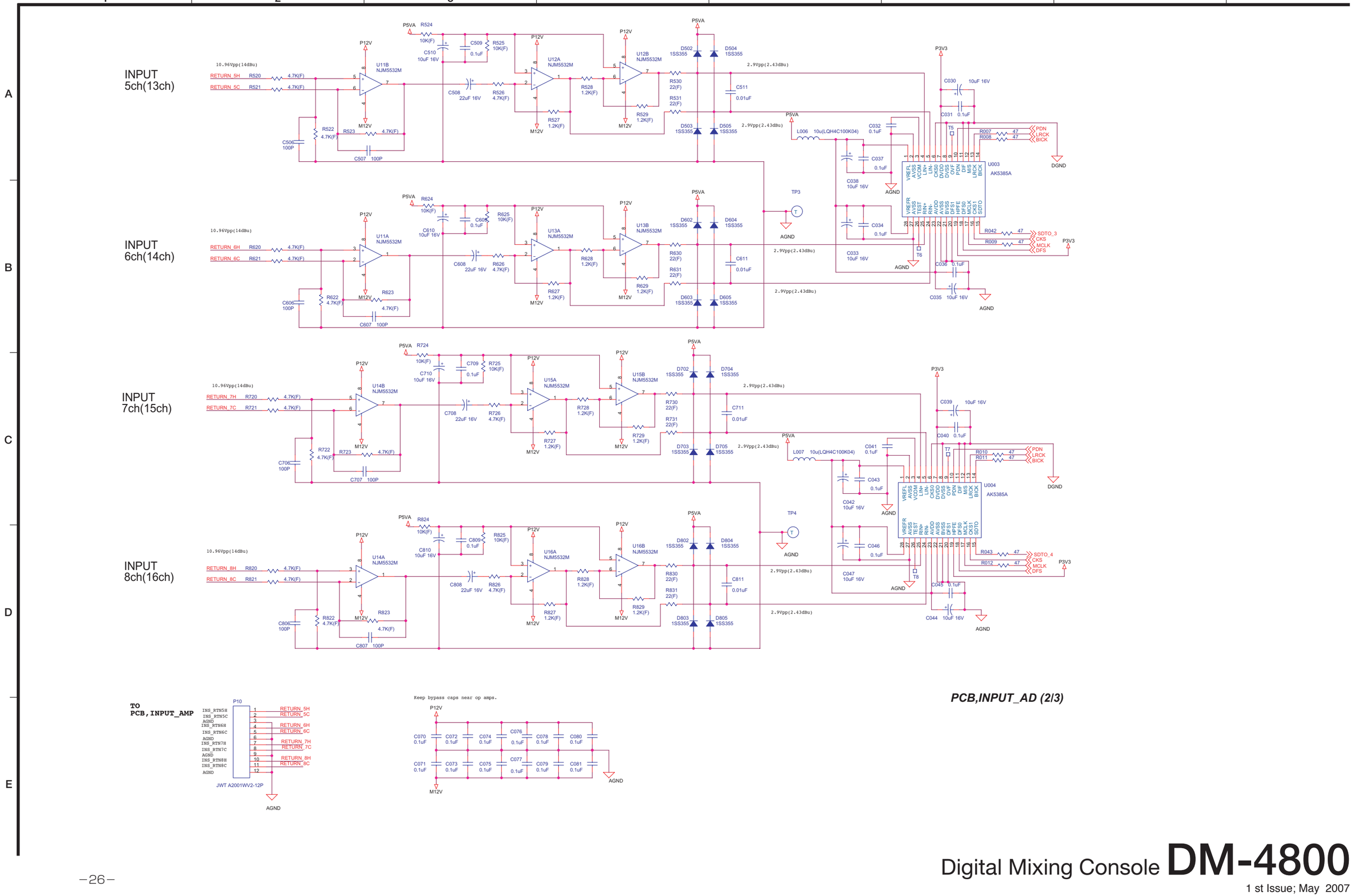


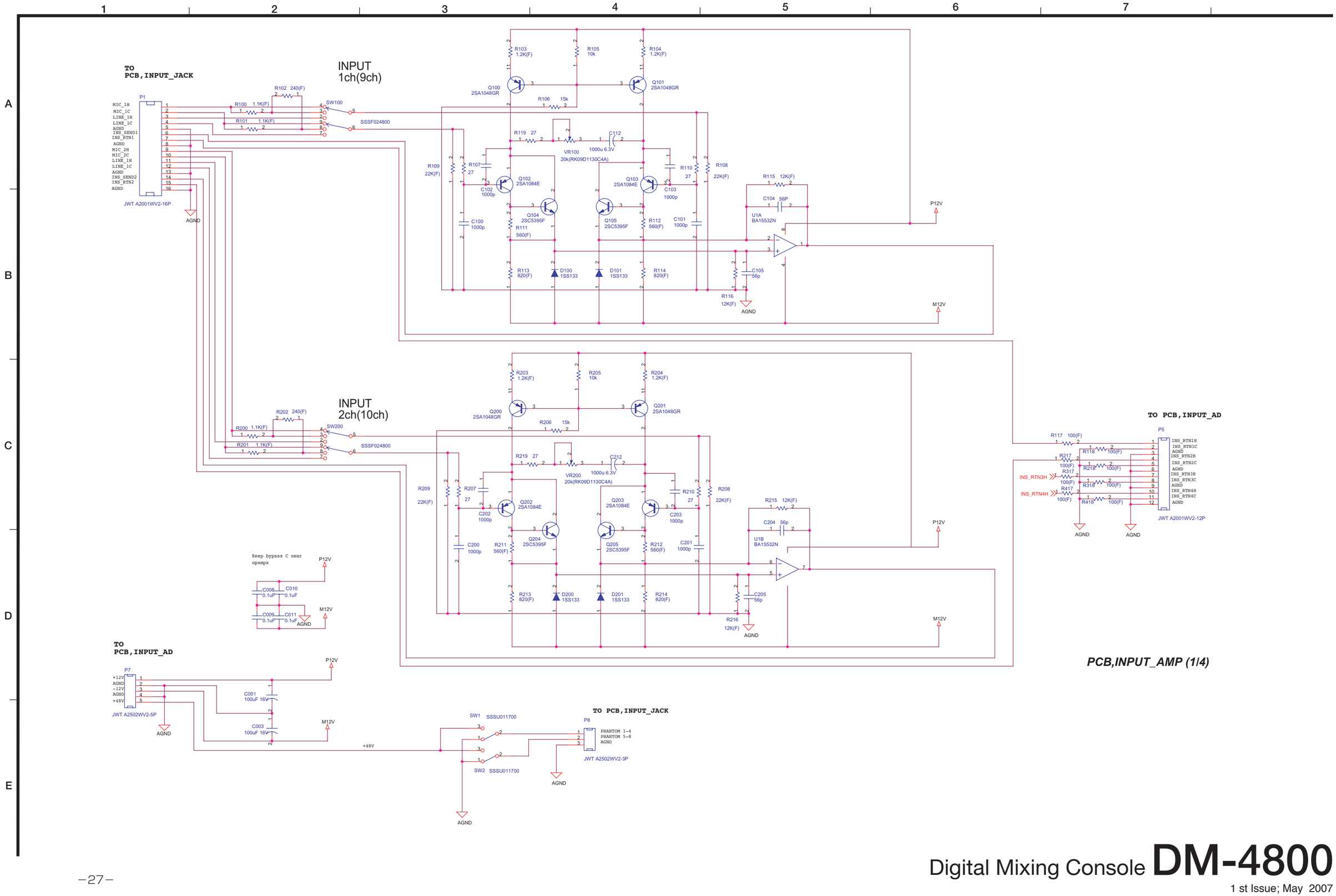
PCB,INPUT_AD (1/3)



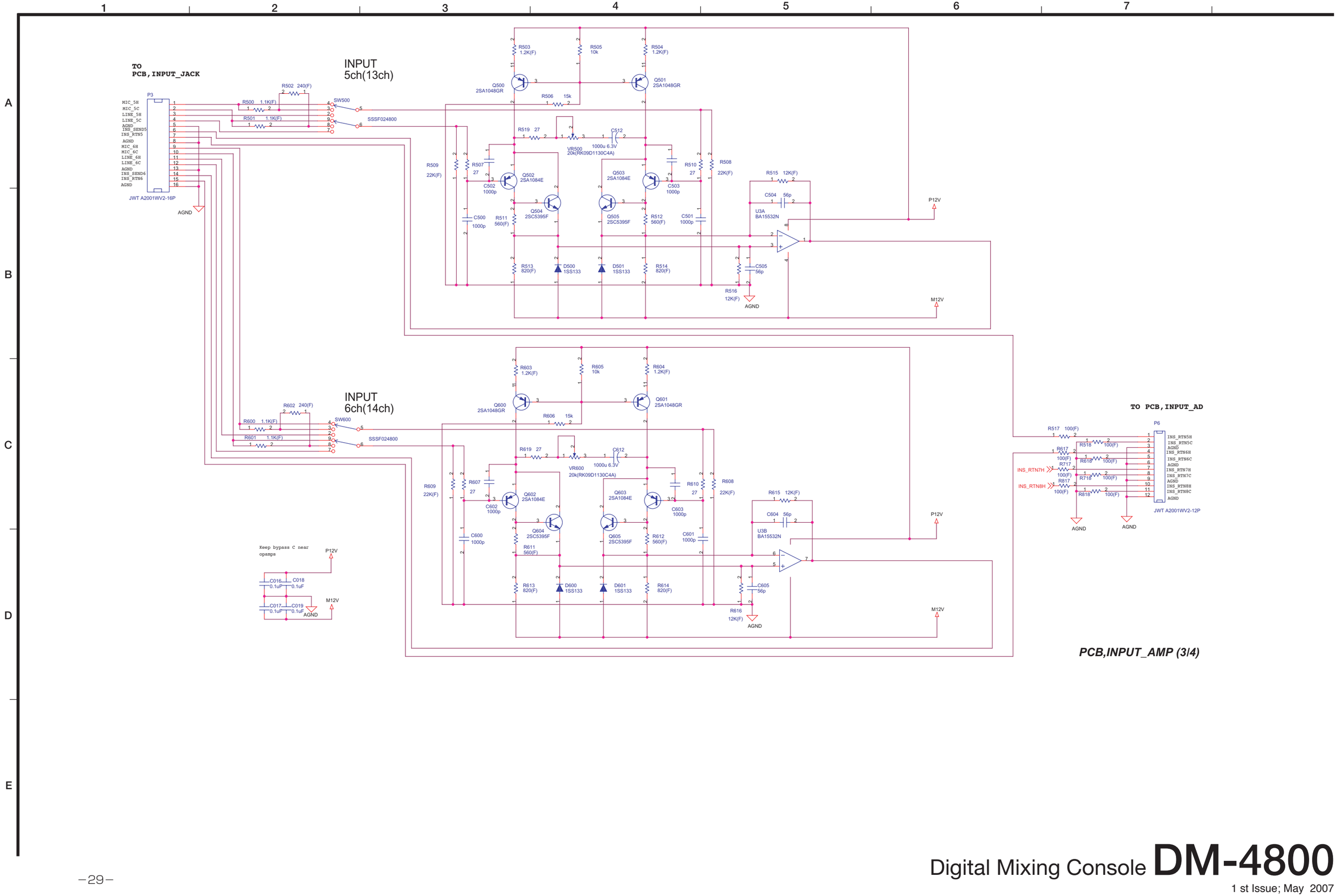
	NORMAL	HIGH
DFS(FS_SEL)	L	H
CKS	H	L

PCB,INPUT_AD (3/3)

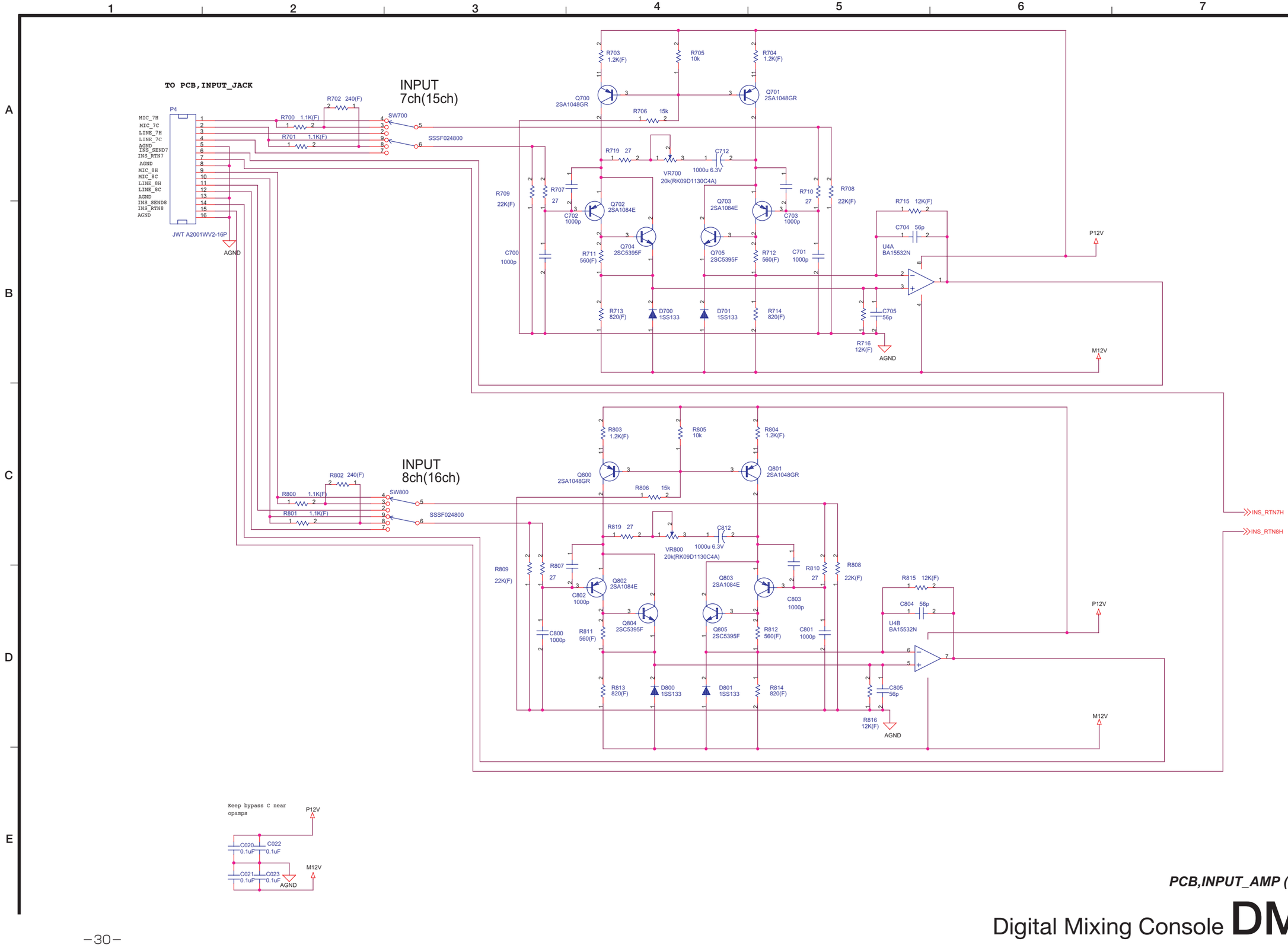

1
2
3
4
5
6
7
A
B
C
D
E
INPUT
5ch(13ch)
INPUT
6ch(14ch)
INPUT
7ch(15ch)
INPUT
8ch(16ch)
10.96Vpp(14dBu)
RETURN_5H
RETURN_5C
RETURN_6H
RETURN_6C
RETURN_7H
RETURN_7C
RETURN_8H
RETURN_8C
4.7K(F)
U11B NJM5532M
U12A NJM5532M
U12B NJM5532M
U11A NJM5532M
U13A NJM5532M
U13B NJM5532M
U14B NJM5532M
U15A NJM5532M
U15B NJM5532M
U14A NJM5532M
U16A NJM5532M
U16B NJM5532M
P5VA
P12V
M12V
P3V3
AGND
DGND
2.9Vpp(2.43dBu)
D502 1SS355
D504 1SS355
D503 1SS355
D505 1SS355
D602 1SS355
D604 1SS355
D603 1SS355
D605 1SS355
D702 1SS355
D704 1SS355
D703 1SS355
D705 1SS355
D802 1SS355
D804 1SS355
D803 1SS355
D805 1SS355
L006 10u(LQH4C100K04)
L007 10u(LQH4C100K04)
U003 AK5385A
U004 AK5385A
TP3
TP4
T5
T6
T7
T8
PDN
LRCK
BICK
SDTO_3
SDTO_4
CKS
MCLK
DFS
P10
JWT A2001WV2-12P
TO
PCB,INPUT_AMP
Keep bypass caps near op amps.
PCB,INPUT_AD (2/3)


TO
PCB,INPUT_JACK
P1
JWT A2001WV2-16P
MIC_1H
MIC_1C
LINE_1H
LINE_1C
AGND
INS_SEND1
INS_RTN1
AGND
MIC_2H
MIC_2C
LINE_1H
LINE_1C
AGND
INS_SEND2
INS_RTN2
AGND
R100 1.1K(F)
R101 1.1K(F)
R102 240(F)
SW100
SSSF024800
INPUT
1ch(9ch)
R103 1.2K(F)
R105 10k
R104 1.2K(F)
Q100 2SA1048GR
Q101 2SA1048GR
R106 15k
R119 27
VR100 20k(RK09D1130C4A)
C112 1000u 6.3V
R109 22K(F)
R107 27
C102 1000p
Q102 2SA1084E
Q103 2SA1084E
C103 1000p
R110 27
R108 22K(F)
Q104 2SC5395F
Q105 2SC5395F
C100 1000p
R111 560(F)
R112 560(F)
C101 1000p
R113 820(F)
D100 1SS133
D101 1SS133
R114 820(F)
R115 12K(F)
C104 56P
U1A BA15532N
C105 56p
R116 12K(F)
AGND
P12V
M12V
R200 1.1K(F)
R201 1.1K(F)
R202 240(F)
SW200
SSSF024800
INPUT
2ch(10ch)
R203 1.2K(F)
R205 10k
R204 1.2K(F)
Q200 2SA1048GR
Q201 2SA1048GR
R206 15k
R219 27
VR200 20k(RK09D1130C4A)
C212 1000u 6.3V
R209 22K(F)
R207 27
C202 1000p
Q202 2SA1084E
Q203 2SA1084E
C203 1000p
R210 27
R208 22K(F)
Q204 2SC5395F
Q205 2SC5395F
C200 1000p
R211 560(F)
R212 560(F)
C201 1000p
R213 820(F)
D200 1SS133
D201 1SS133
R214 820(F)
R215 12K(F)
C204 56p
U1B BA15532N
C205 56p
R216 12K(F)
AGND
P12V
M12V
TO PCB,INPUT_AD
P5
JWT A2001WV2-12P
R117 100(F)
R118 100(F)
R217 100(F)
R218 100(F)
R317 100(F)
R318 100(F)
R417 100(F)
R418 100(F)
INS_RTN3H
INS_RTN4H
INS_RTN1H
INS_RTN1C
AGND
INS_RTN2H
INS_RTN2C
AGND
INS_RTN3H
INS_RTN3C
AGND
INS_RTN4H
INS_RTN4C
AGND
Keep bypass C near opamps
C008 0.1uF
C010 0.1uF
C009 0.1uF
C011 0.1uF
P12V
M12V
AGND
TO
PCB,INPUT_AD
P7
JWT A2502WV2-5P
+12V
AGND
-12V
AGND
+48V
C001 100uF 16V
C003 100uF 16V
P12V
M12V
AGND
+48V
SW1 SSSU011700
SW2 SSSU011700
TO PCB,INPUT_JACK
P8
JWT A2502WV2-3P
PHANTOM 1-4
PHANTOM 5-8
AGND
AGND
PCB,INPUT_AMP (1/4)

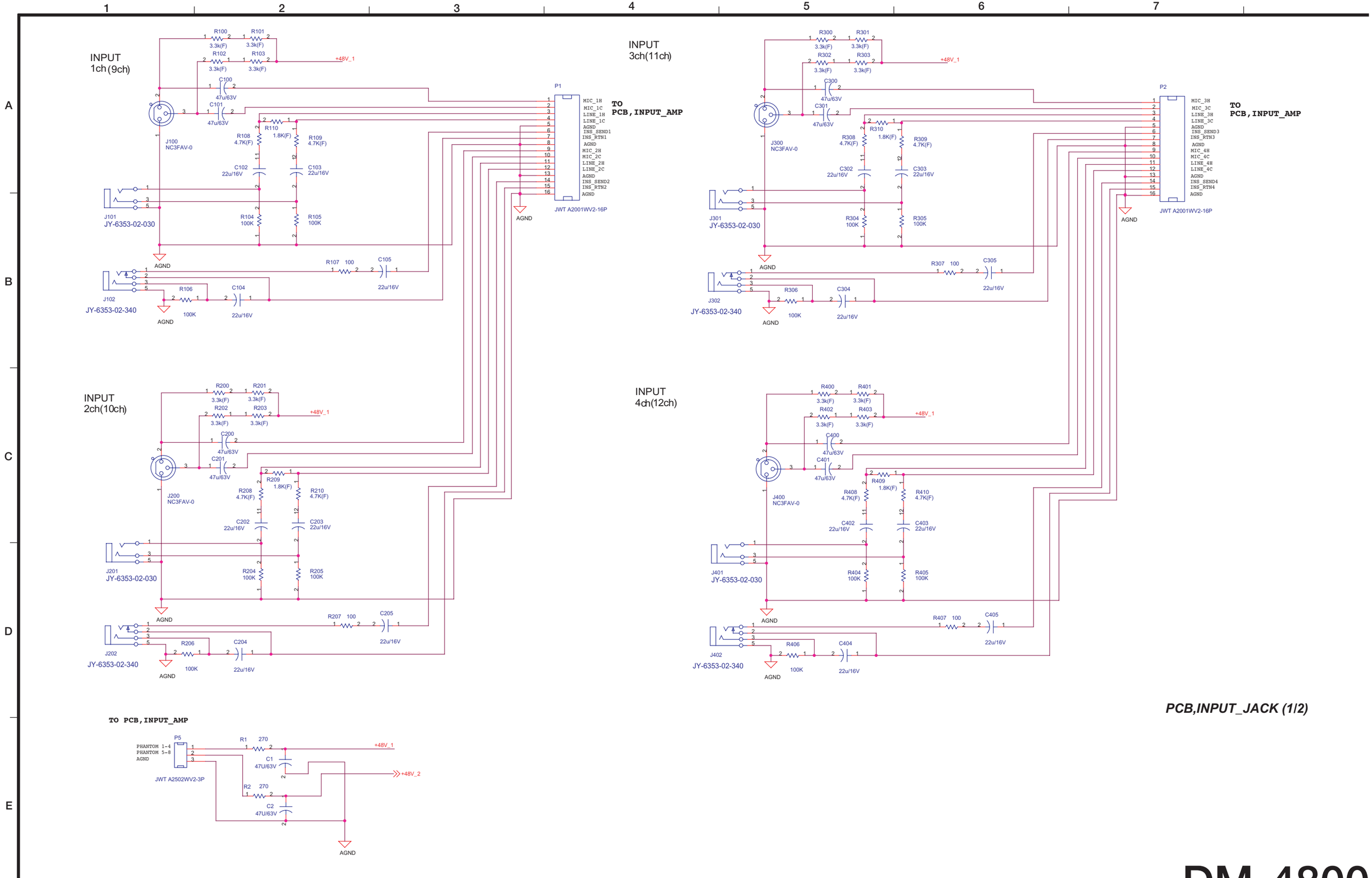
PCB,INPUT_AMP (2/4)



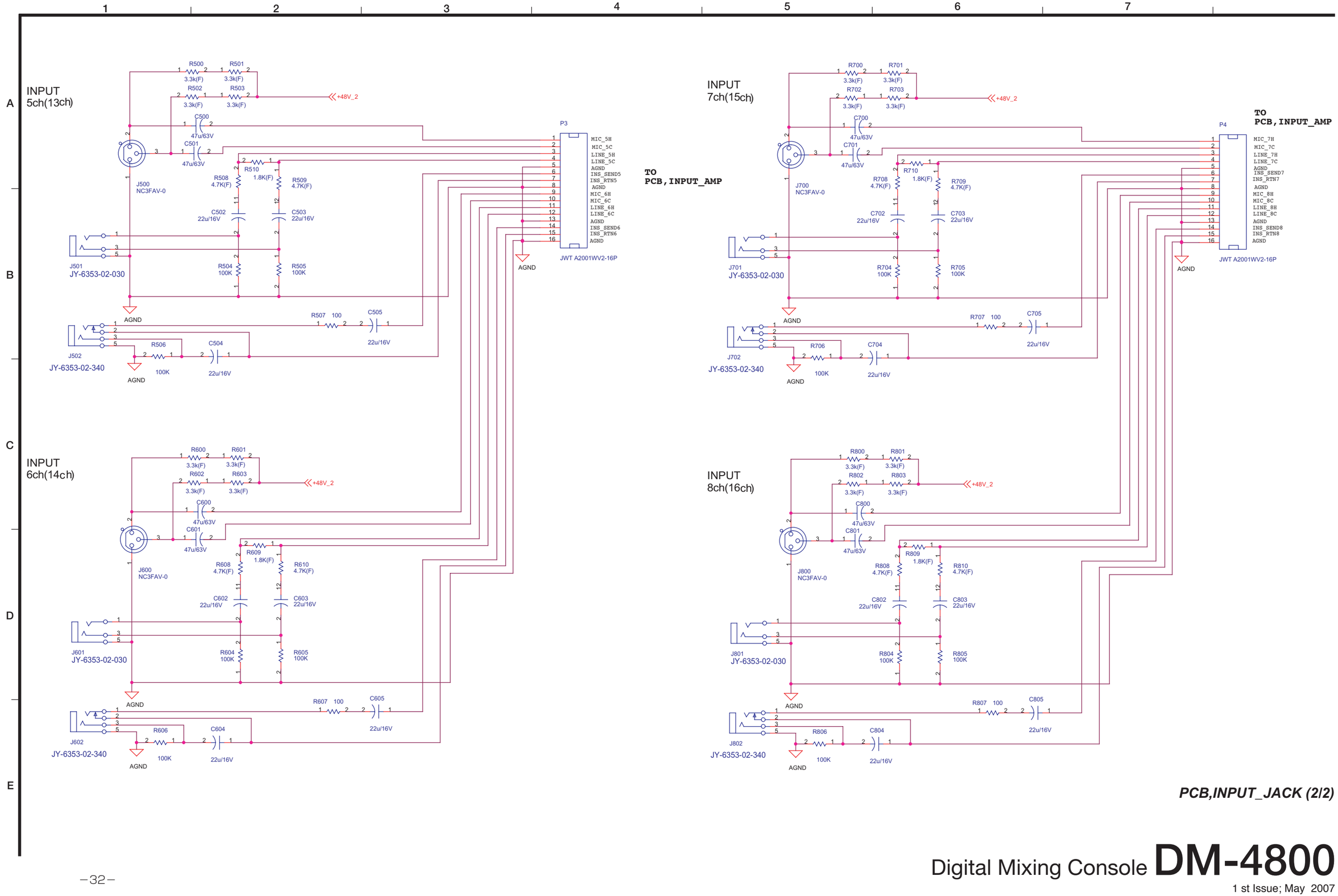
PCB,INPUT_AMP (3/4)



PCB,INPUT_AMP (4/4)



PCB,INPUT_JACK (1/2)



PCB,INPUT_JACK (2/2)

Digital Mixing Console **DM-4800**

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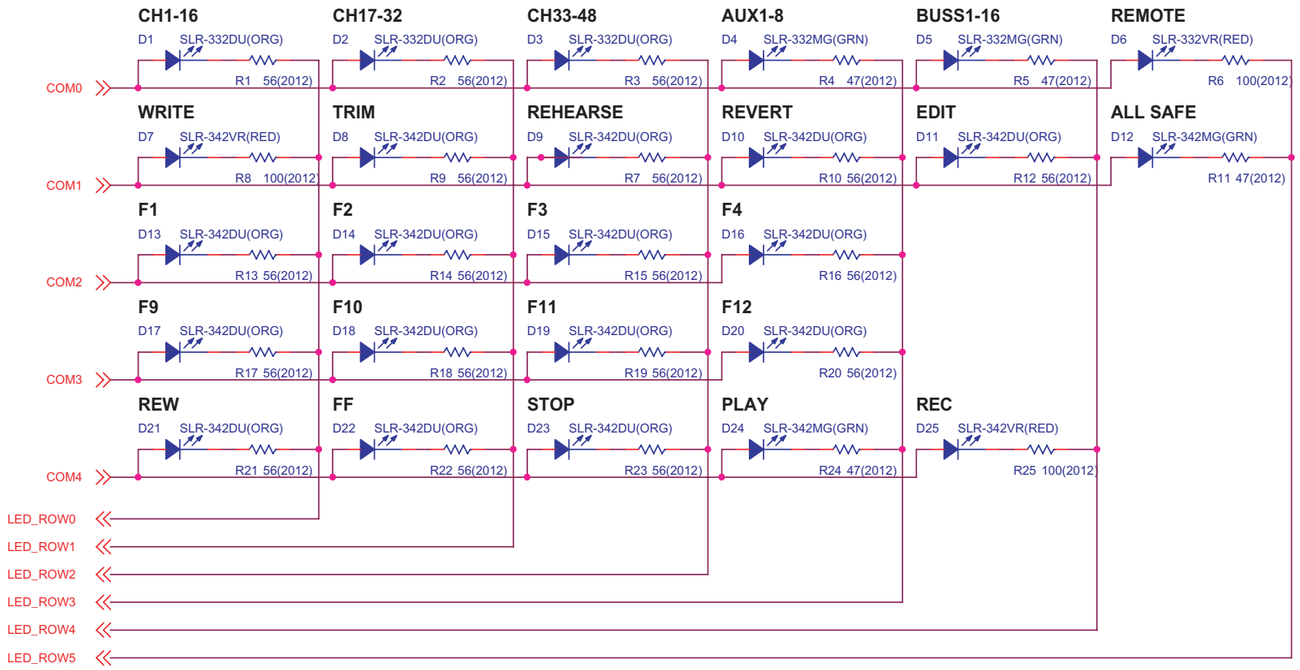


from PCB MONITOR

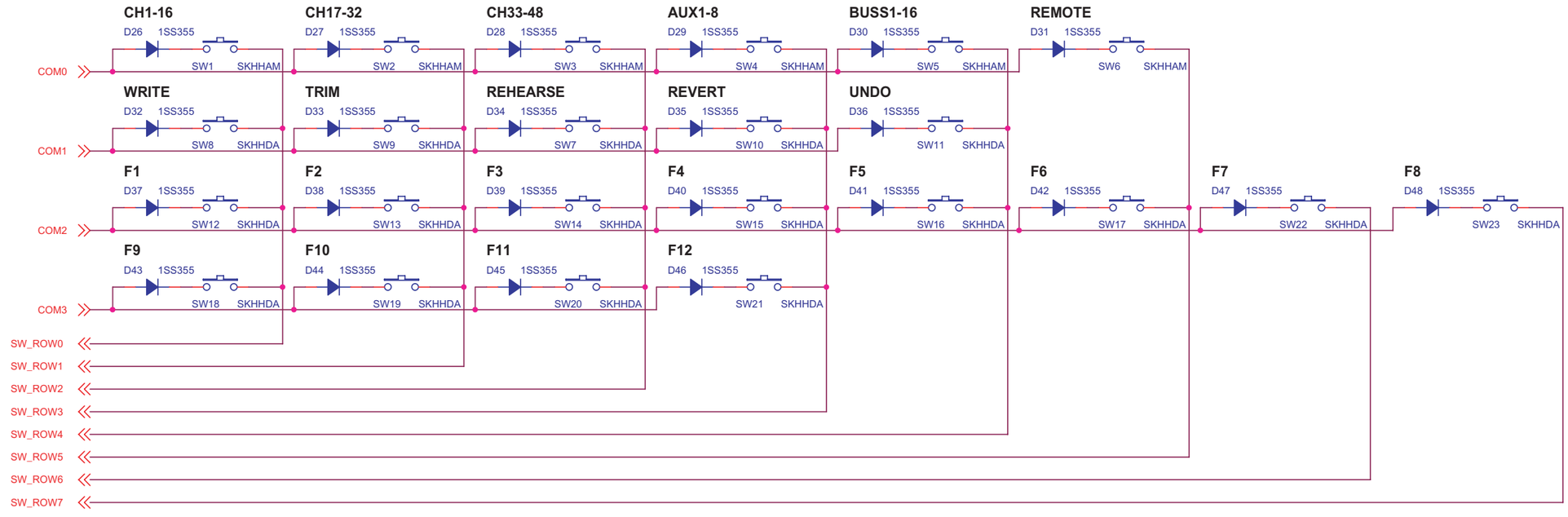
P1
HARNESS ASSY,LAY-MON1

1	COM0	COM0
2	COM1	COM1
3	COM2	COM2
4	COM3	COM3
5	COM4	COM4

to PCB MONITOR

P2
HARNESS ASSY,LAY-MON2

1	LED_ROW0	LED_ROW0
2	LED_ROW1	LED_ROW1
3	LED_ROW2	LED_ROW2
4	LED_ROW3	LED_ROW3
5	LED_ROW4	LED_ROW4
6	LED_ROW5	LED_ROW5
7	SW_ROW0	SW_ROW0
8	SW_ROW1	SW_ROW1
9	SW_ROW2	SW_ROW2
10	SW_ROW3	SW_ROW3
11	SW_ROW4	SW_ROW4
12	SW_ROW5	SW_ROW5
13	SW_ROW6	SW_ROW6
14	SW_ROW7	SW_ROW7



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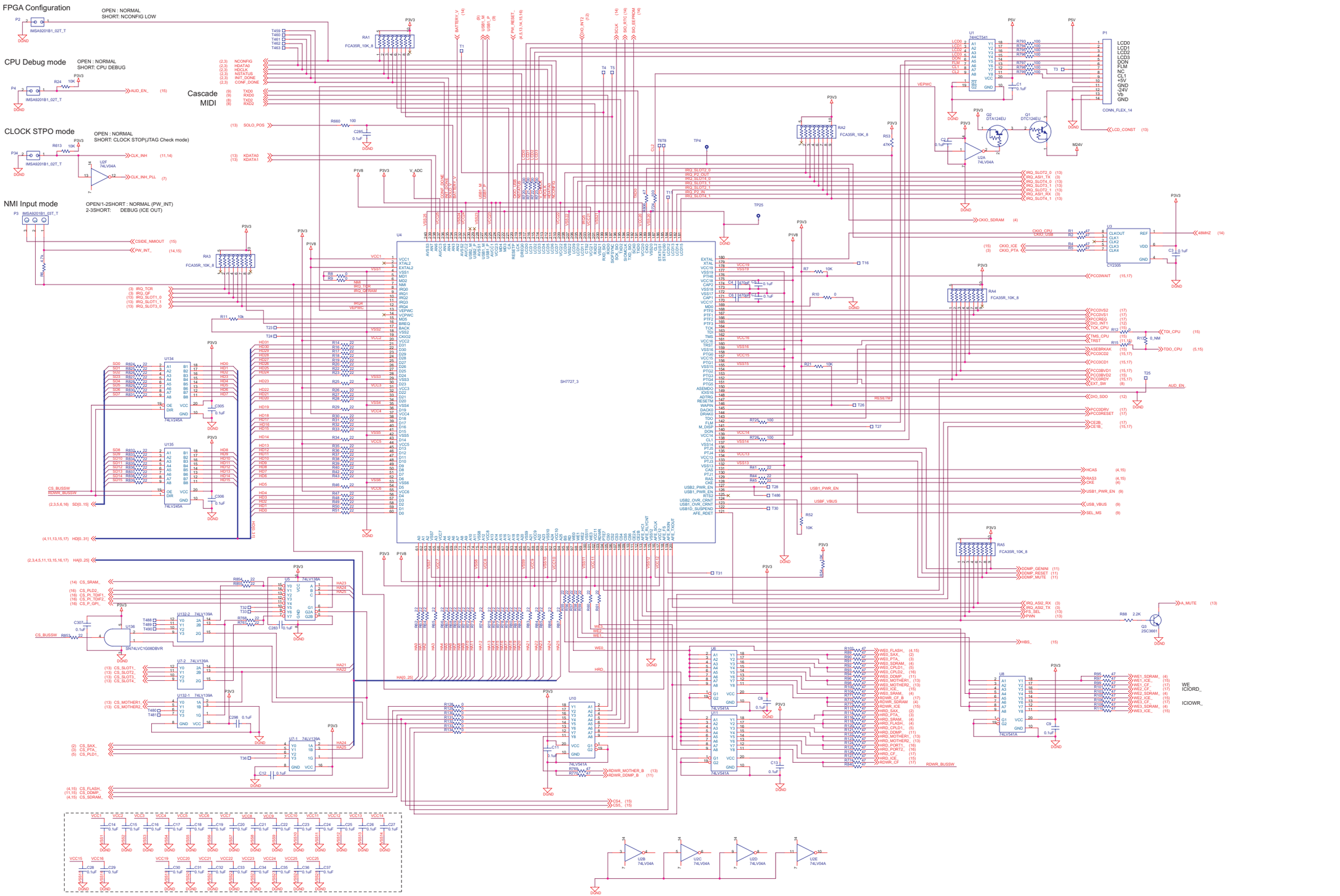
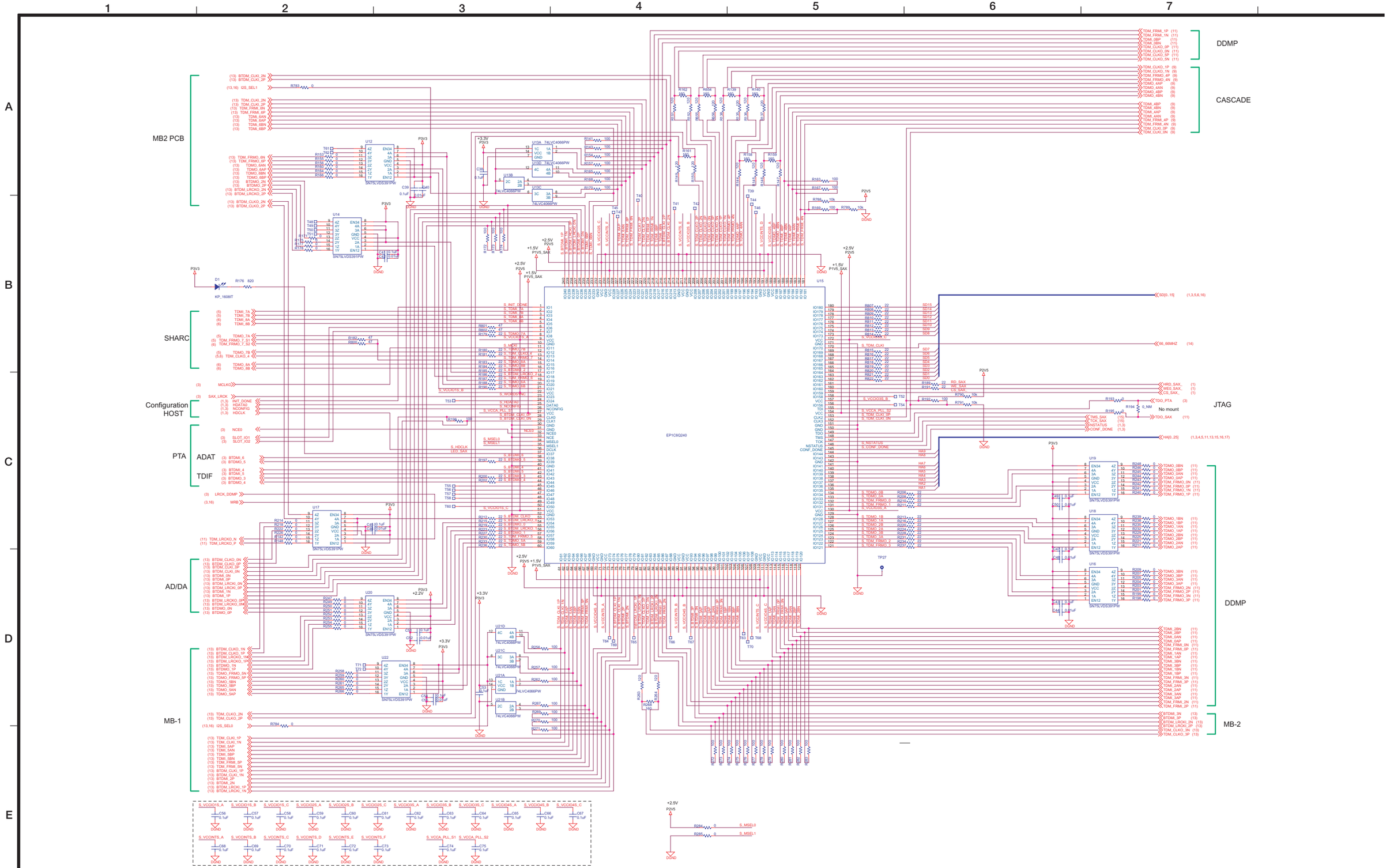
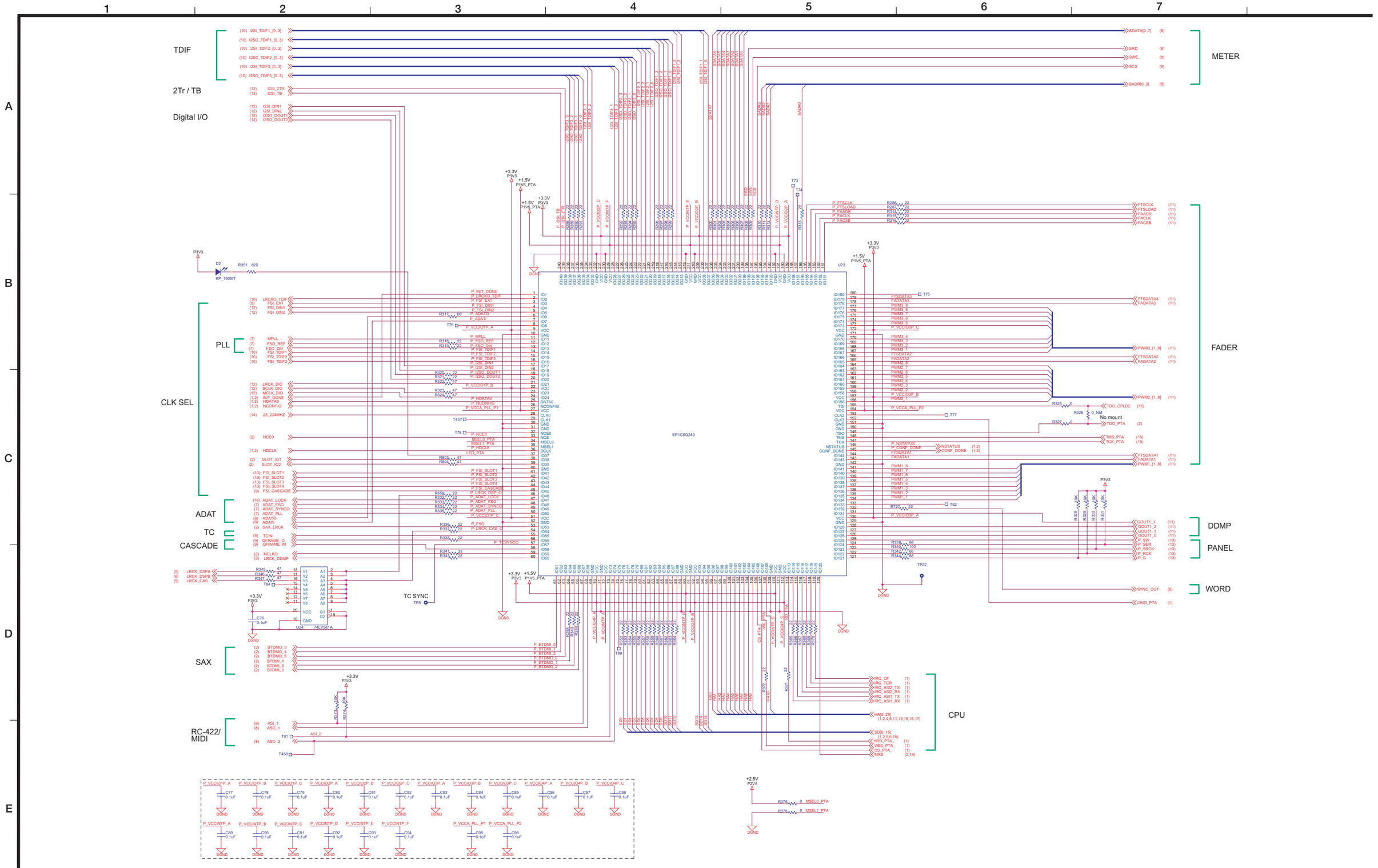
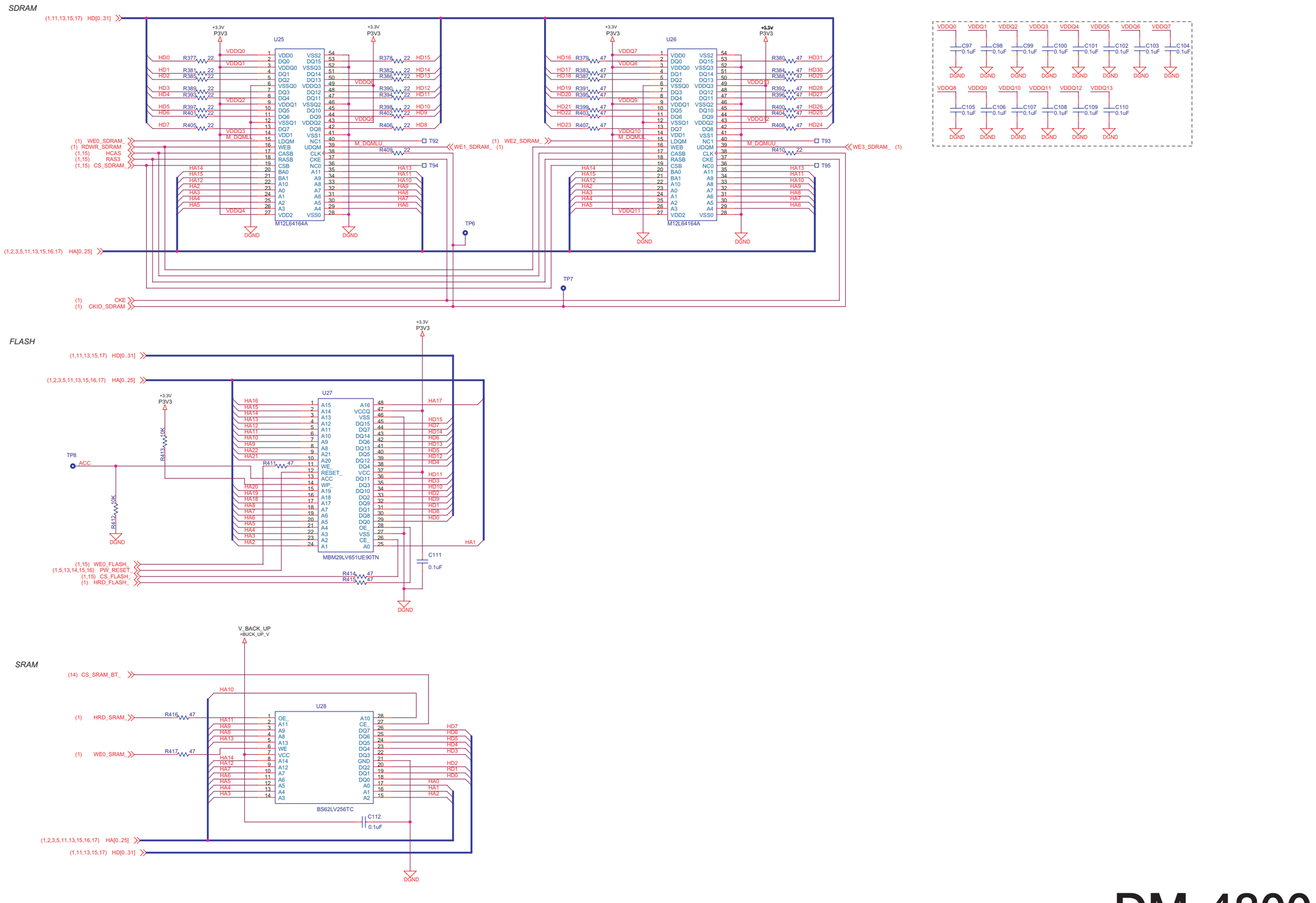
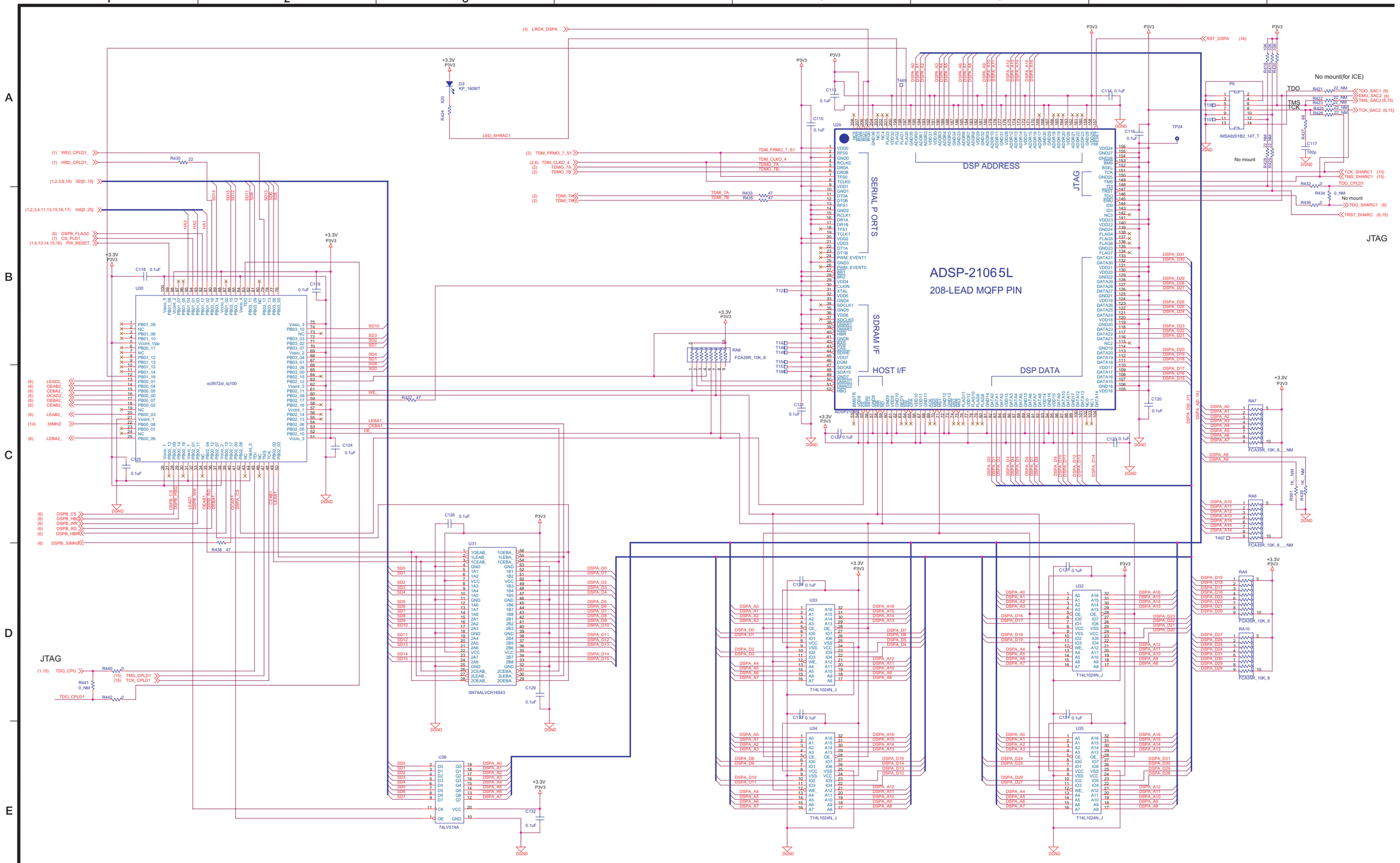

FPGA Configuration
OPEN : NORMAL
SHORT: NCONFIG LOW
CPU Debug mode
OPEN : NORMAL
SHORT: CPU DEBUG
CLOCK STPO mode
OPEN : NORMAL
SHORT: CLOCK STOP(JTAG Check mode)
NMI Input mode
OPEN/1-2SHORT : NORMAL (PW_INT)
2-3SHORT: DEBUG (ICE OUT)
Cascade
MIDI
SH7727_3
LCD0
LCD1
LCD2
LCD3
DON
FLM
NC
CL1
+5V
GND
-24V
Vb
GND
CONN_FLEX_14
LCD_CONST
M24V
CKIO_SDRAM
CKIO_CPU
CKIO_USB
CKIO_ICE
CKIO_PTA
48MHZ
PCD0WAIT
PCD2VS2
PCD2VS1
PCCREG
DIO_INT1
TCK_CPU
TMS_CPU
TRST
ASEBRKAK
PCD3CD2
PCD3CD1
PCD2BVD1
PCD2BVD2
PCD2RDY
EXT_SW
AUD_EN
DIO_SDO
PCD2DRV
PCD2RESET
CE2B_
CE1B_
TDI_CPU
TDO_CPU
0_NM
HCAS
RAS3
CKE
USB1_PWR_EN
USB_VBUS
SEL_MS
DDMP_GENINI
DDMP_RESET
DDMP_MUTE
A_MUTE
HBS_
WE
ICIORD_
ICIOWR_
RDWR_BUSSW
CS_BUSSW
RDWR_BUSSW
HD[0..31]
HA[0..25]
SD[0..15]


1
2
3
4
5
6
7
A
B
C
D
E
MB2 PCB
SHARC
Configuration HOST
PTA
ADAT
TDIF
AD/DA
MB-1
DDMP
CASCADE
JTAG
DDMP
MB-2
EP1C6Q240
SN75LVDS391PW
74LVC4066PW
74LVC4066PW
KP_1608IT


1
2
3
4
5
6
7
A
B
C
D
E
TDIF
2Tr / TB
Digital I/O
PLL
CLK SEL
ADAT
TC
CASCADE
SAX
RC-422/
MIDI
METER
FADER
DDMP
PANEL
WORD
CPU
TC SYNC
EP1C6Q240
U24 74LV541A
U23
KP_1608IT
No mount


SDRAM
(1,11,13,15,17) HD[0..31]
U25
U26
M12L64164A
(1) WE0_SDRAM_
(1) RDWR_SDRAM
(1,15) HCAS
(1,15) RAS3
(1,15) CS_SDRAM_
(1) WE1_SDRAM_
(1) WE2_SDRAM_
(1) WE3_SDRAM_
M_DQMLU
M_DQMLL
M_DQMUU
M_DQMUL
(1,2,3,5,11,13,15,16,17) HA[0..25]
(1) CKE
(1) CKIO_SDRAM
TP6
TP7
FLASH
U27
MBM29LV651UE90TN
TP8
ACC
(1,15) WE0_FLASH_
(1,5,13,14,15,16) PW_RESET_
(1,15) CS_FLASH_
(1) HRD_FLASH_
C111
SRAM
V_BACK_UP
+BUCK_UP_V
(14) CS_SRAM_BT_
U28
BS62LV256TC
(1) HRD_SRAM_
(1) WE0_SRAM_
C112
+3.3V
P3V3
DGND
0.1uF



Digital Mixing Console DM-4800

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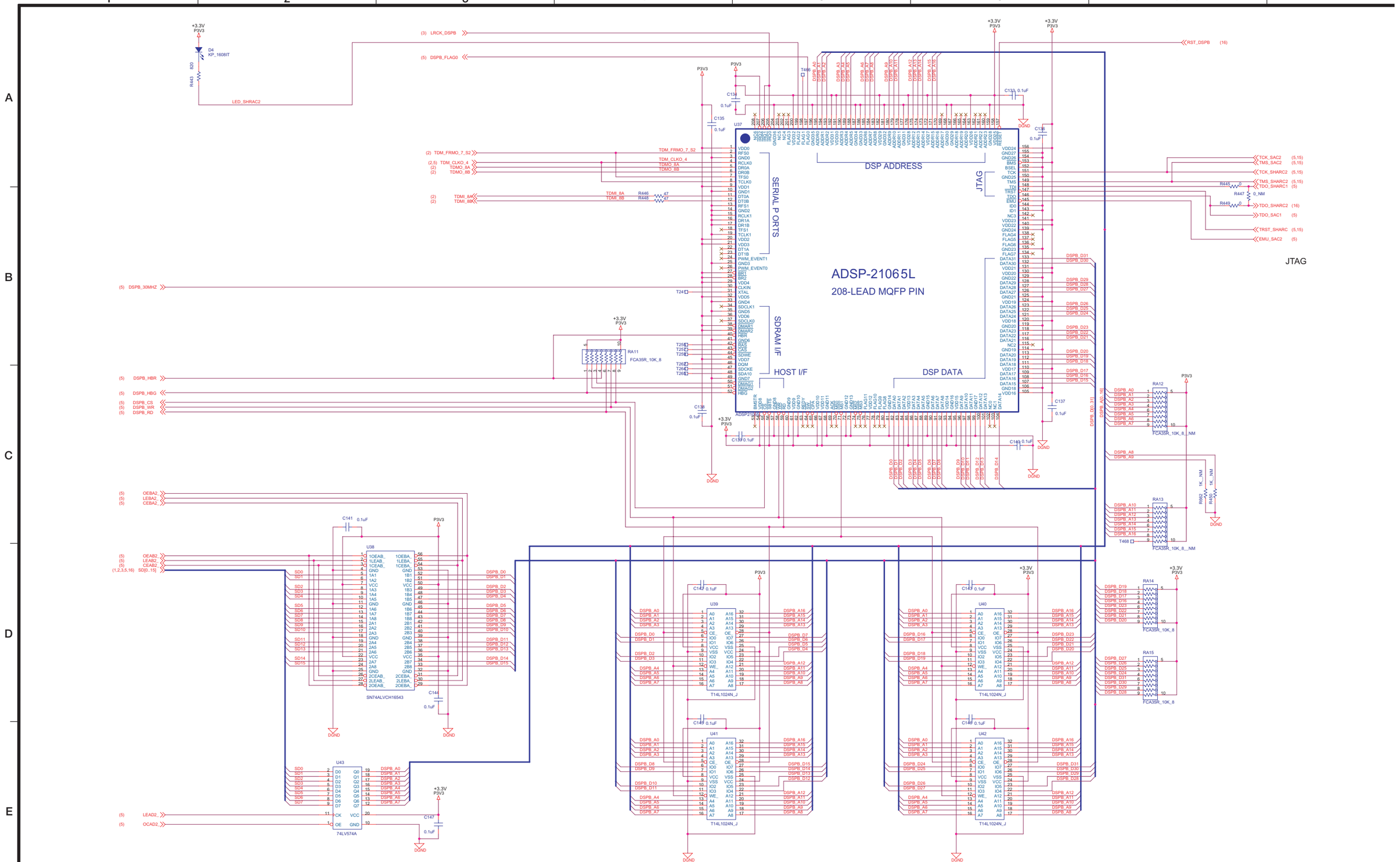

Digital Mixing Console DM-4800

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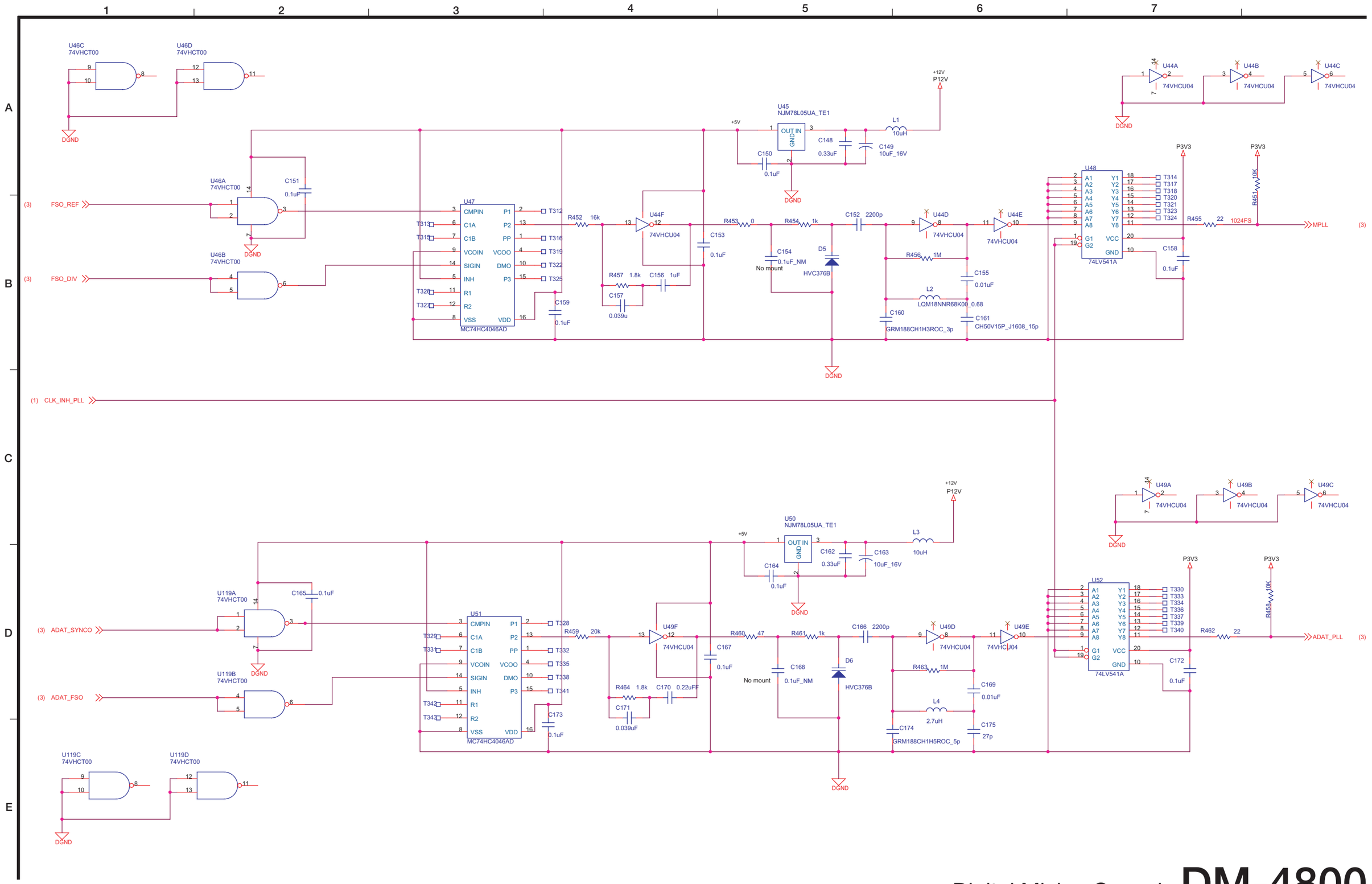

Digital Mixing Console DM-4800

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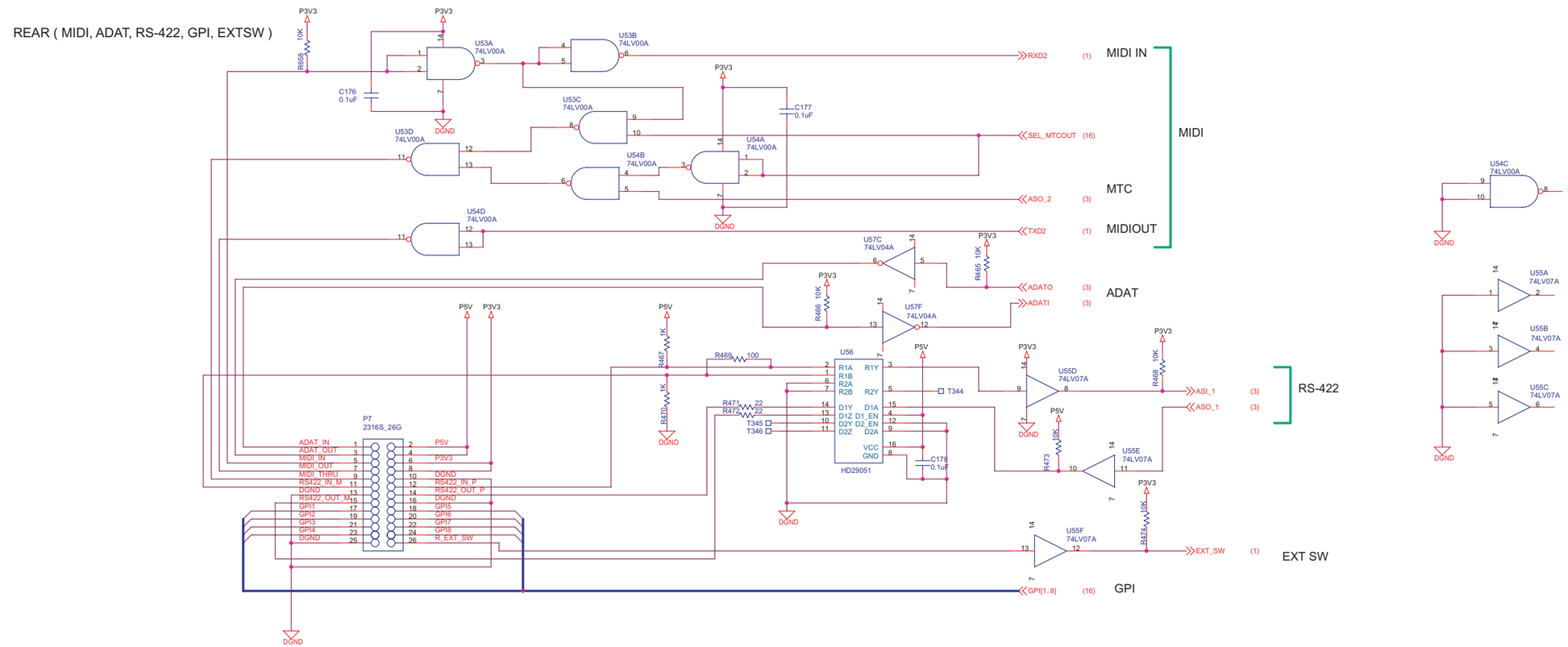
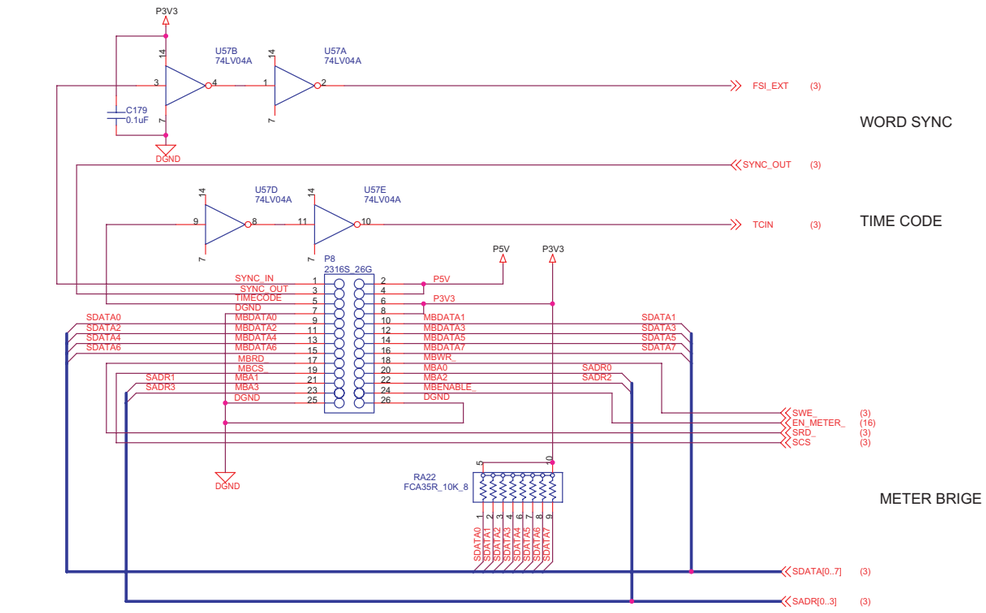
REAR (MIDI, ADAT, RS-422, GPI, EXTSW)



REAR (WORDSYNC, TC, METER)



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CASCADE

P9 205A_25FSTBBB3

C_TDM_CLKI_0P
C_TDM_CLKI_0N
C_TDM_FRMI_4P
C_TDM_FRMI_4N
C_TDMI_4AP
C_TDMI_4AN
C_TDMI_4BP
C_TDMI_4BN
C_LRCK_P
C_LRCK_N
C_QFRM_P
C_QFRM_N
C_RX_P
C_RX_N
C_TX_P
C_TX_N
C_GND
C_TDMO_4BN
C_TDMO_4BP
C_TDMO_4AN
C_TDMO_4AP
C_TDM_FRMO_4N
C_TDM_FRMO_4P
C_TDM_CLKO_1N
C_TDM_CLKO_1P

Frame GND DGND TP21 GND DGND

L10 TCM2010-201-4P
L11 TCM2010-201-4P

+3.3V P3V3

D7 IMN10 D8 IMN10 D9 IMN10 D10 IMN10 D11 IMN10 D12 IMN10 D13 IMN10 D14 IMN10
D15 IMN10 D16 IMN10 D17 IMN10 D18 IMN10 D19 IMN10 D20 IMN10 D21 IMN10 D22 IMN10

DGND

TDM_CLKI_0P (2)
TDM_CLKI_0N (2)
TDM_FRMI_4P (2)
TDM_FRMI_4N (2)
TDMI_4AP (2)
TDMI_4AN (2)
TDMI_4BP (2)
TDMI_4BN (2)

TDMO_4BN (2)
TDMO_4BP (2)
TDMO_4AN (2)
TDMO_4AP (2)
TDM_FRMO_4N (2)
TDM_FRMO_4P (2)
TDM_CLKO_1N (2)
TDM_CLKO_1P (2)

U58 SN65LVDS050PW
U59 SN65LVDS050PW

P3V3 +3.3V P3V3

R475 10K DGND

SEL_MS (1)
SEL_MS
L : SLAVE
H : MASTER

LRCK_CAS (3)
QFRAME_O (3)
FSI_CASCADE (3)
QFRAME_IN (3)

R792 68

C180 0.1uF
C181 0.01uF
C182 0.1uF
C183 0.01uF

T349
T347
T348

RS-232C

P38 A2001WV2_4P

TXD0 (1)
RXD0 (1)

R665 0_NM

P5 IMSA9201B1_02T_T

SERIAL mode
OPEN : RS-232C USE
SHORT: CASCADE (NORMAL)

USB

(1) USB1_PWR_EN
(1) USB_VBUS
(1) USB1_P
(1) USB1_M

P3V3

Q8 2SK2980
R476 10K
R477 1.5K

U60A 74LV08A

R478 51
C184 0.1uF
R479 10K

R480 27
R483 27
C185 22p
C186 22p

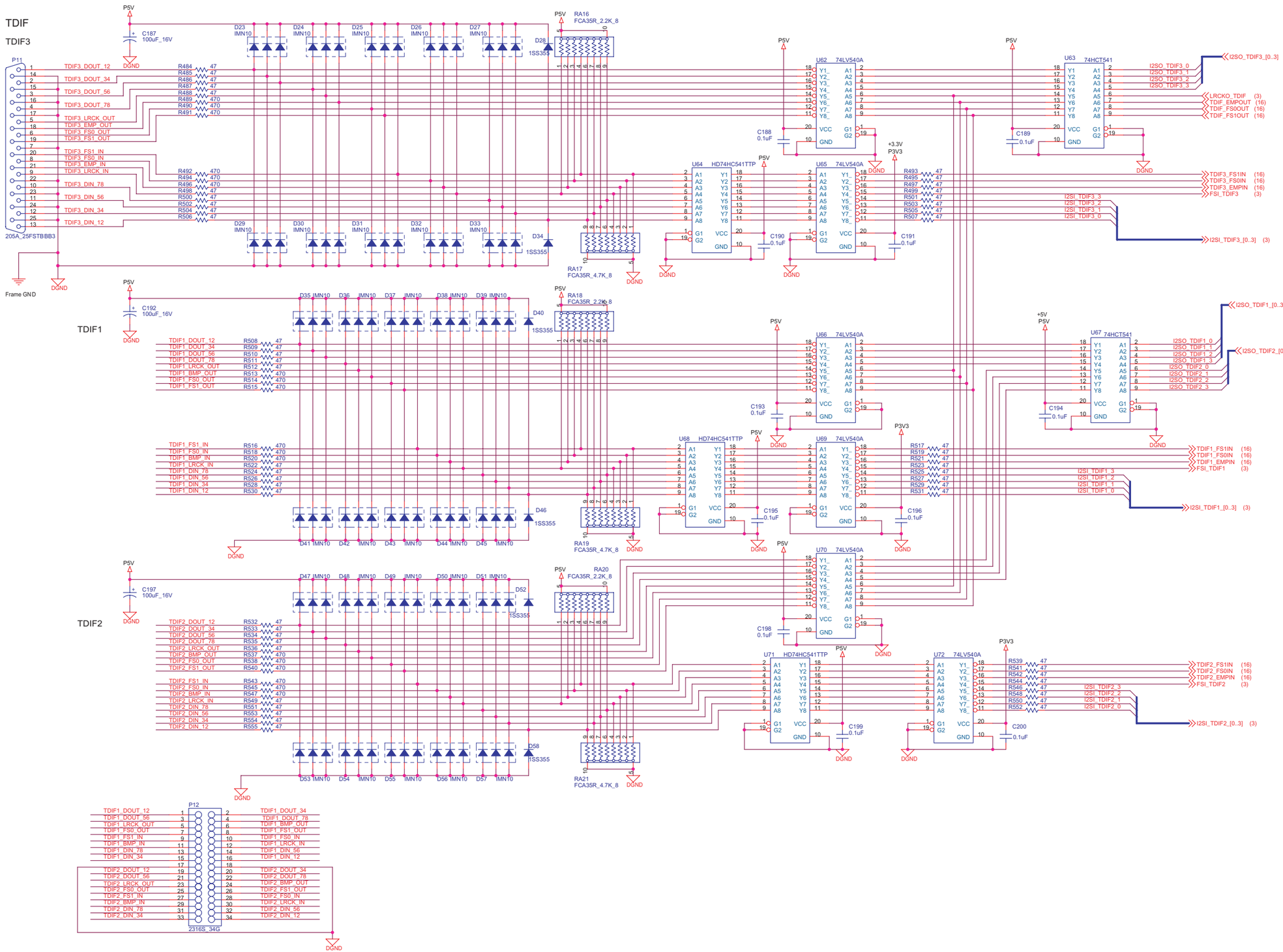
U61 SN75240PWR
T353
T354

R481 470K_NM No mount
R482 470K_NM No mount

L5 BCM201209A390

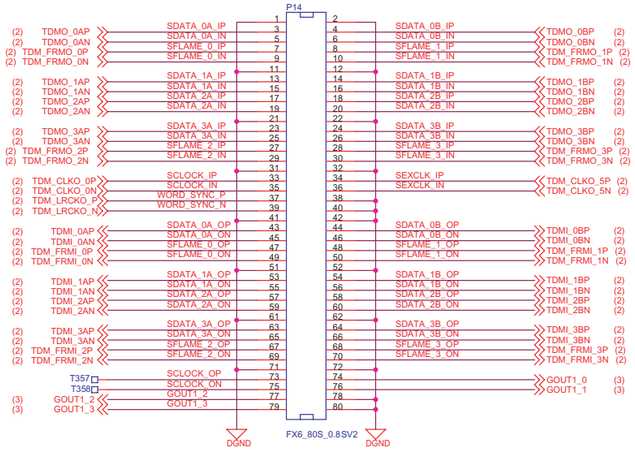
USB FUNCTION
P10 UBB_4R_D14C
U_VBUS
U_USB1_M
U_USB1_P
U_GND
+5V
Frame GND

U60B 74LV08A T350
U60C 74LV08A T351
U60D 74LV08A T352

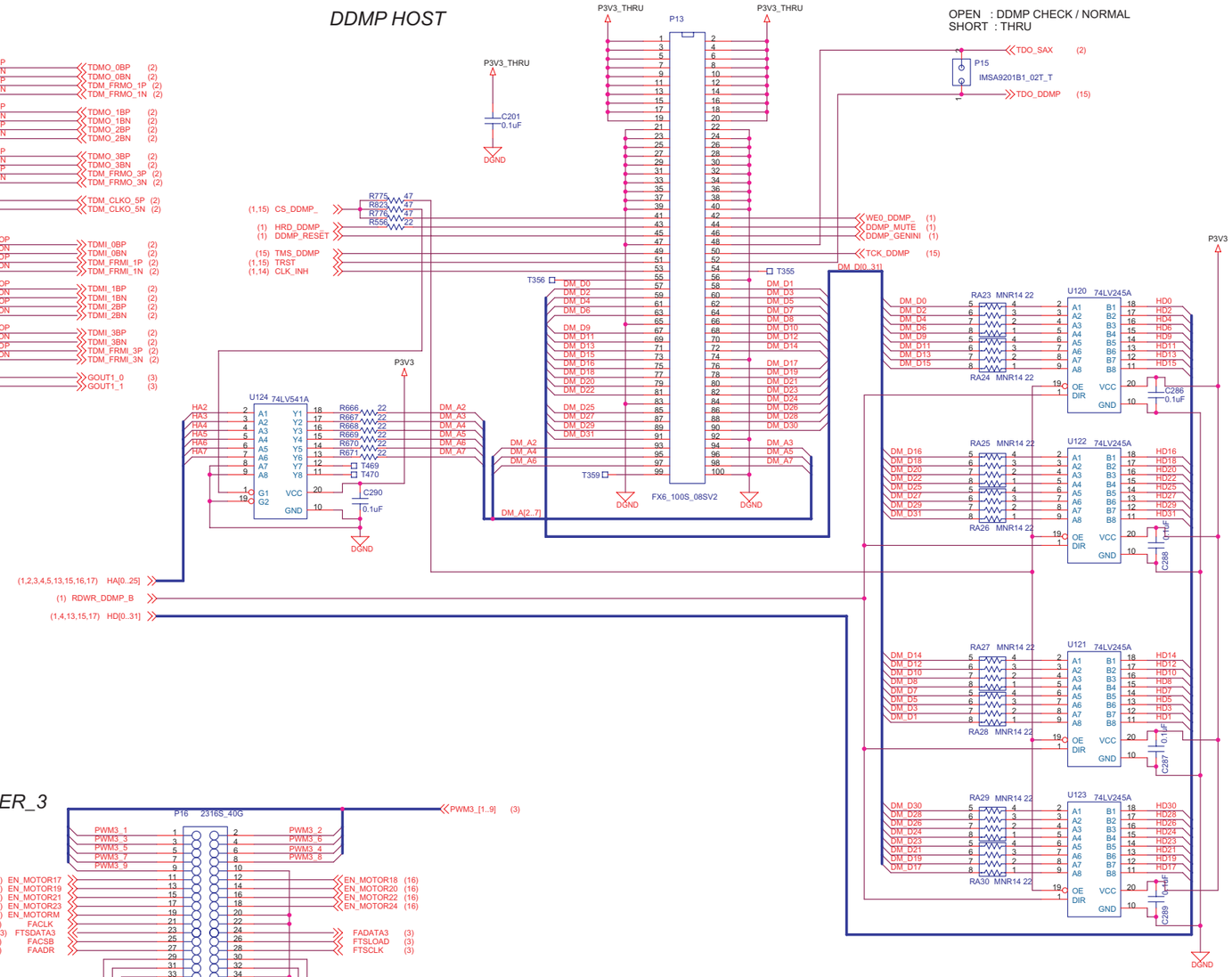

TDIF
TDIF3
TDIF1
TDIF2
P5V
DGND
+3.3V
P3V3
+5V
Frame GND
205A_25FSTBBB3
2316S_34G
74LV540A
74HCT541
HD74HC541TTP
1SS355
IMN10
I2SO_TDIF3_[0..3] (3)
I2SO_TDIF1_[0..3] (3)
I2SO_TDIF2_[0..3] (3)
I2SI_TDIF3_[0..3] (3)
I2SI_TDIF1_[0..3] (3)
I2SI_TDIF2_[0..3] (3)
TDIF3_FS1IN (16)
TDIF3_FS0IN (16)
TDIF3_EMPIN (16)
FSI_TDIF3 (3)
TDIF1_FS1IN (16)
TDIF1_FS0IN (16)
TDIF1_EMPIN (16)
FSI_TDIF1 (3)
TDIF2_FS1IN (16)
TDIF2_FS0IN (16)
TDIF2_EMPIN (16)
FSI_TDIF2 (3)
LRCKO_TDIF (3)
TDIF_EMPOUT (16)
TDIF_FS0OUT (16)
TDIF_FS1OUT (16)

DDMP AUDIO

To DDMP CoPCB

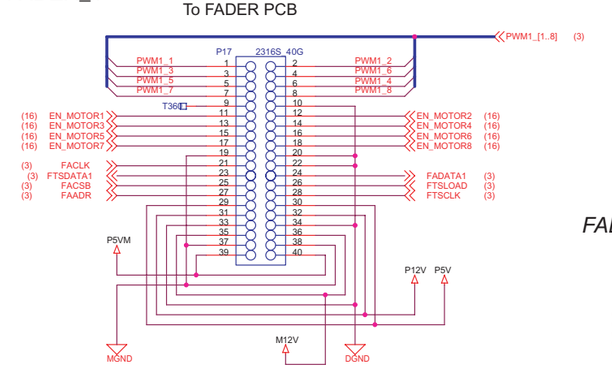


DDMP HOST

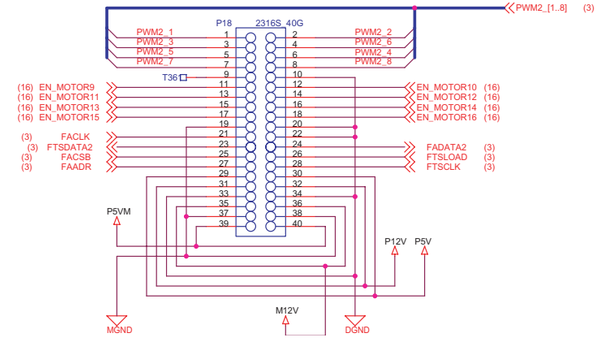


FADER_1

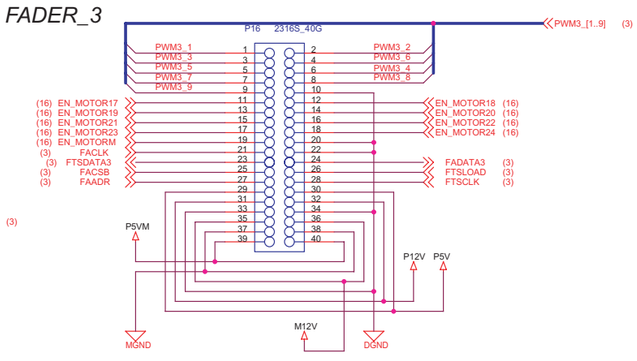
To FADER PCB

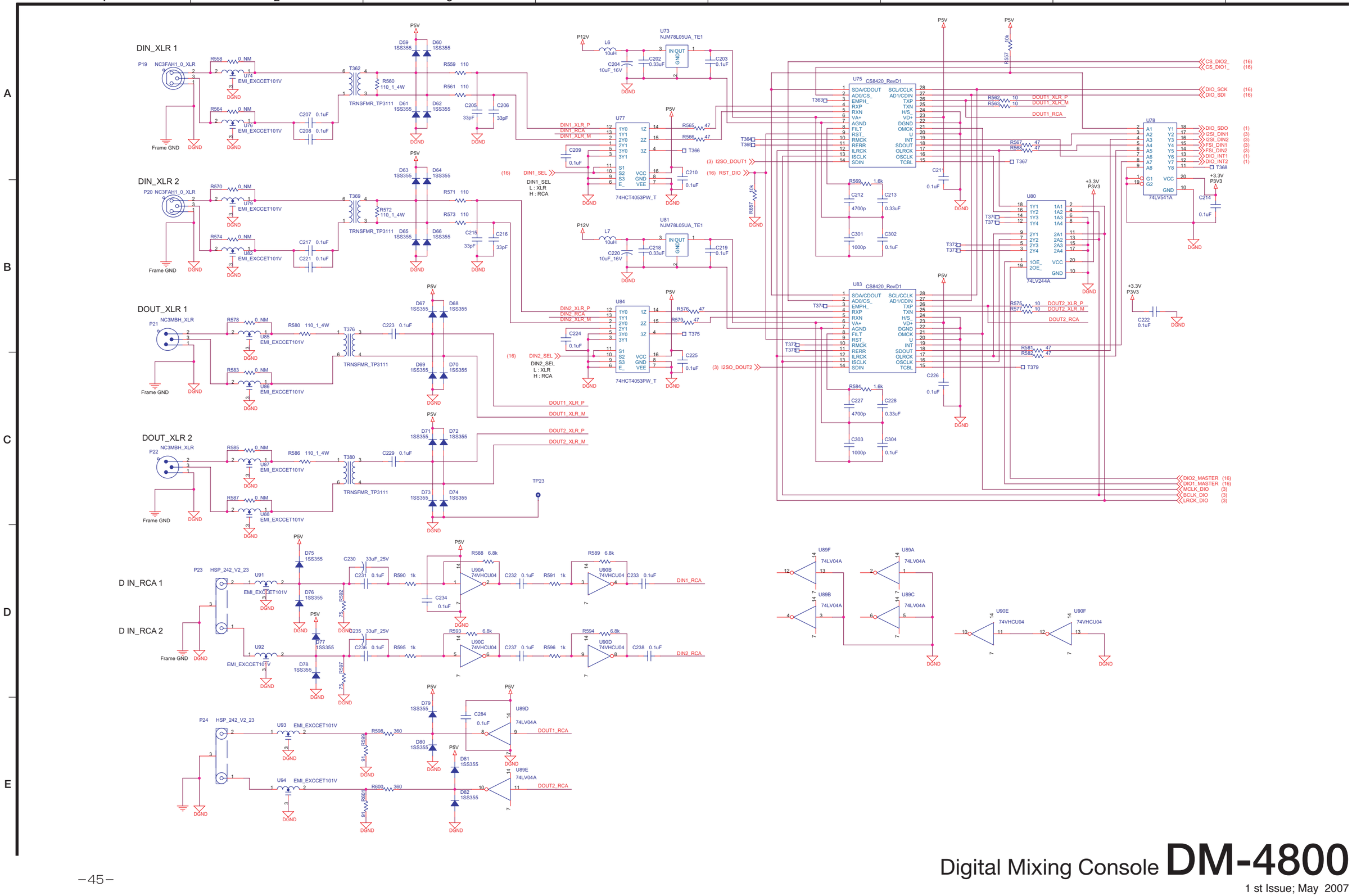


FADER_2

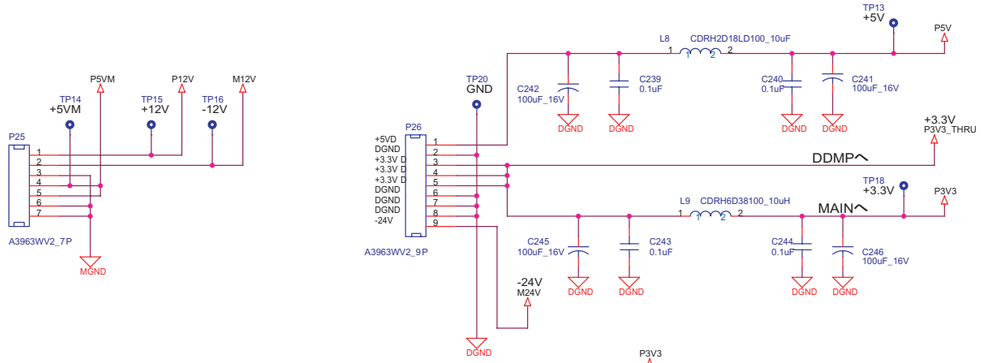


FADER_3

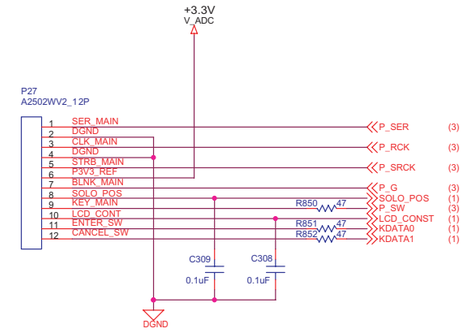



1
2
3
4
5
6
7
A
B
C
D
E
DIN_XLR 1
DIN_XLR 2
DOUT_XLR 1
DOUT_XLR 2
D IN_RCA 1
D IN_RCA 2
P5V
P12V
DGND
Frame GND
U73 NJM78L05UA_TE1
U81 NJM78L05UA_TE1
U75 CS8420_RevD1
U83 CS8420_RevD1
U77
U84
74HCT4053PW_T
U78
74LV541A
U80
74LV244A
DIN1_SEL
L : XLR
H : RCA
DIN2_SEL
L : XLR
H : RCA
DIN1_XLR_P
DIN1_XLR_M
DIN1_RCA
DIN2_XLR_P
DIN2_XLR_M
DIN2_RCA
DOUT1_XLR_P
DOUT1_XLR_M
DOUT1_RCA
DOUT2_XLR_P
DOUT2_XLR_M
DOUT2_RCA
CS_DIO2_
CS_DIO1_
DIO_SCK
DIO_SDI
DIO_SDO
I2SI_DIN1
I2SI_DIN2
FSI_DIN1
FSI_DIN2
DIO_INT1
DIO_INT2
RST_DIO
I2SO_DOUT1
I2SO_DOUT2
DIO2_MASTER
DIO1_MASTER
MCLK_DIO
BCLK_DIO
LRCK_DIO
+3.3V
P3V3
U89A
U89B
U89C
U89D
U89E
U89F
74LV04A
U90A
U90B
U90C
U90D
U90E
U90F
74VHCU04
TRNSFMR_TP3111
TRNSFMR_TP3111
TRNSFMR_TP3111
HSP_242_V2_23
EMI_EXCCET101V
NC3FAH1_0_XLR
NC3MBH_XLR
TP23

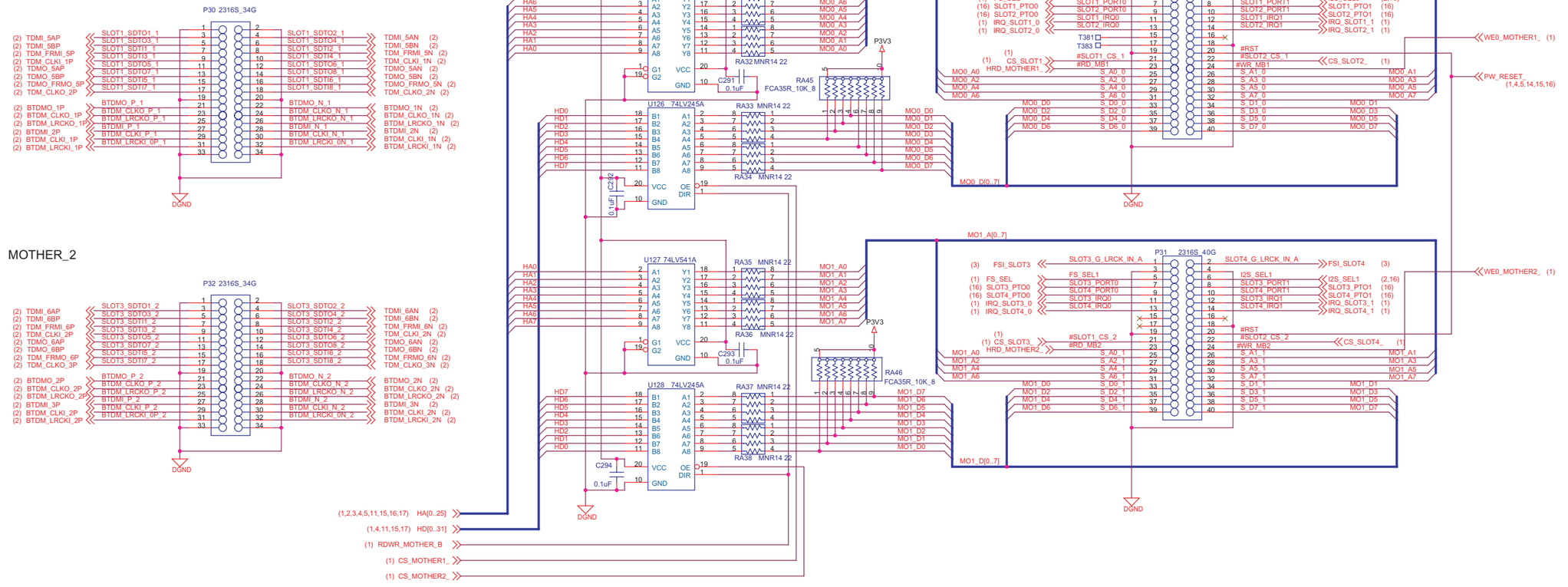
POWER



PANEL (MONITOR)

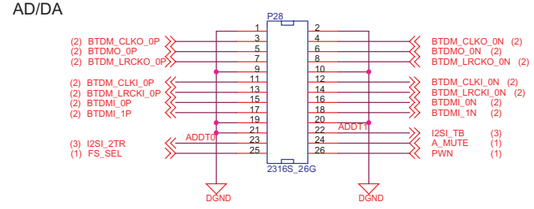


MOTHER_1



MOTHER_2

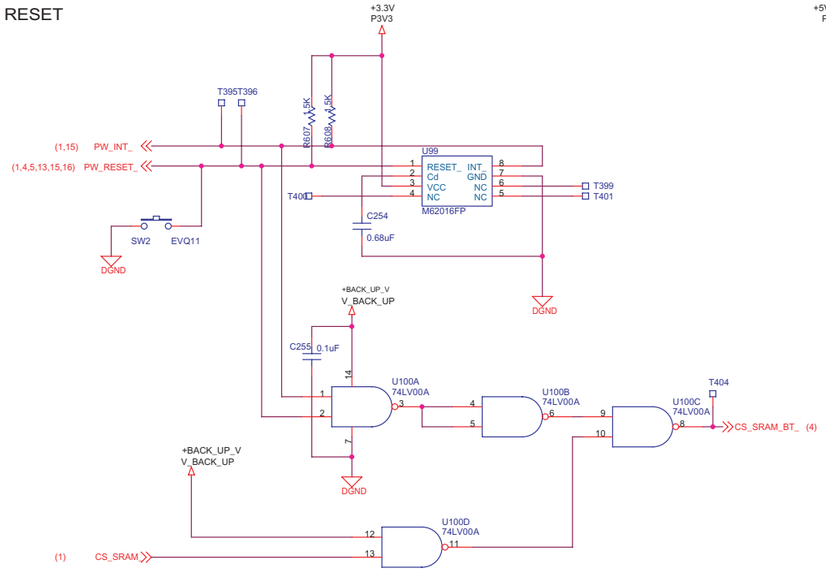
AD/DA



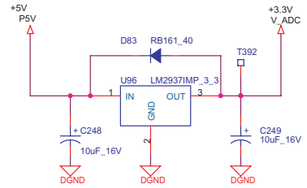
1 2 3 4 5 6 7

A B C D E

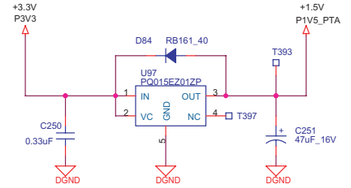
RESET



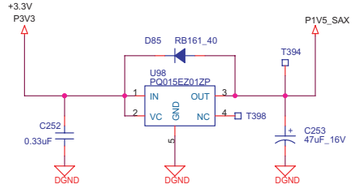
ADリファレンス電圧



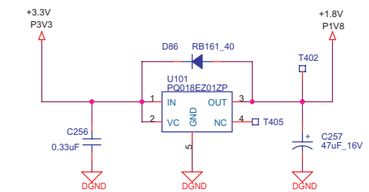
PTA用コア電圧



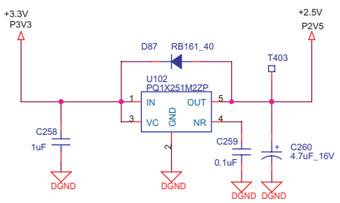
SAX用コア電圧



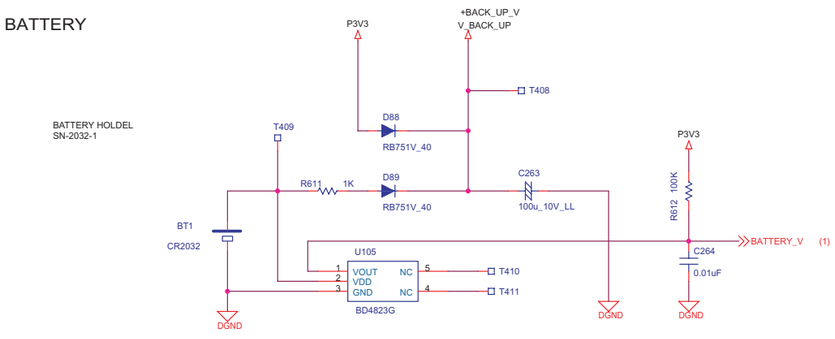
CPU用コア電圧



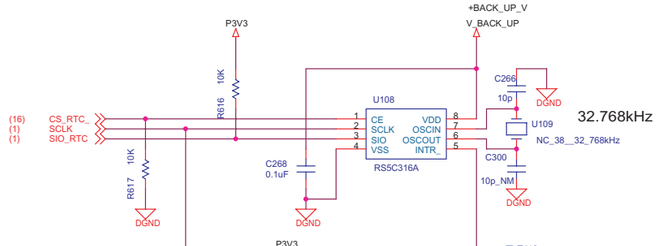
SAX用LVDS電圧



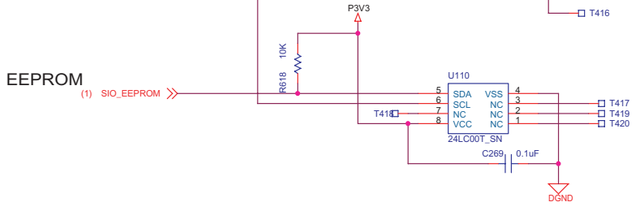
BATTERY



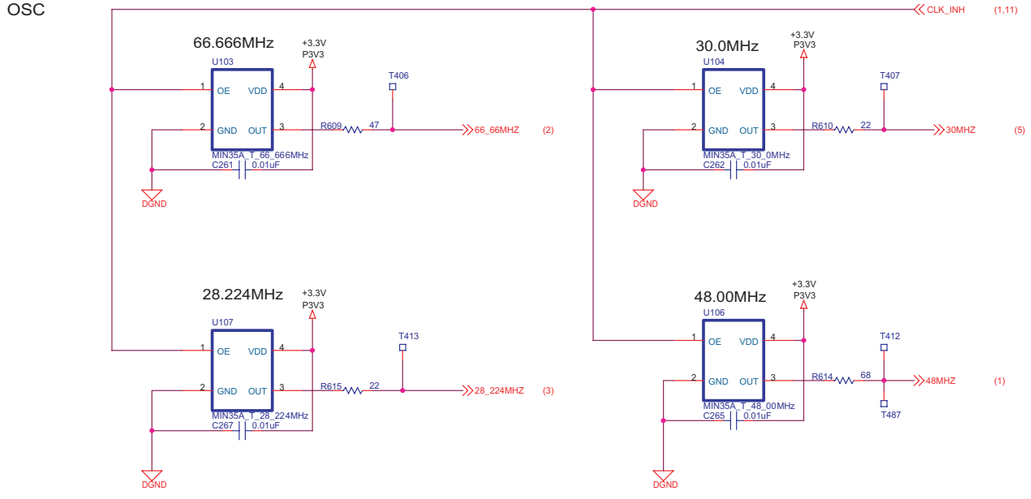
RTC



EEPROM



OSC



Digital Mixing Console DM-4800

1 st Issue; May 2007

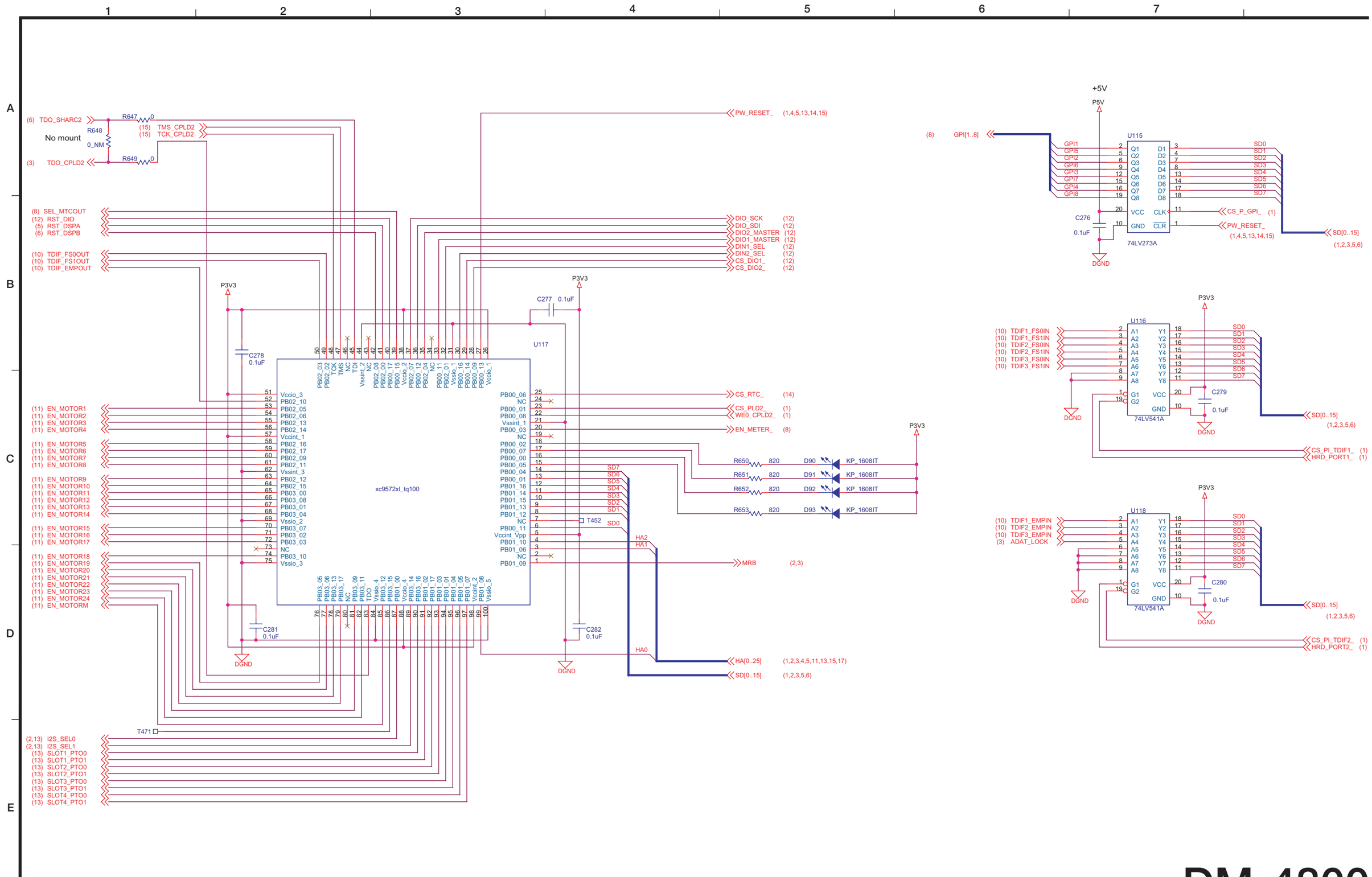
AUD

JTAG & H-UDI

NEXTiCE TCN

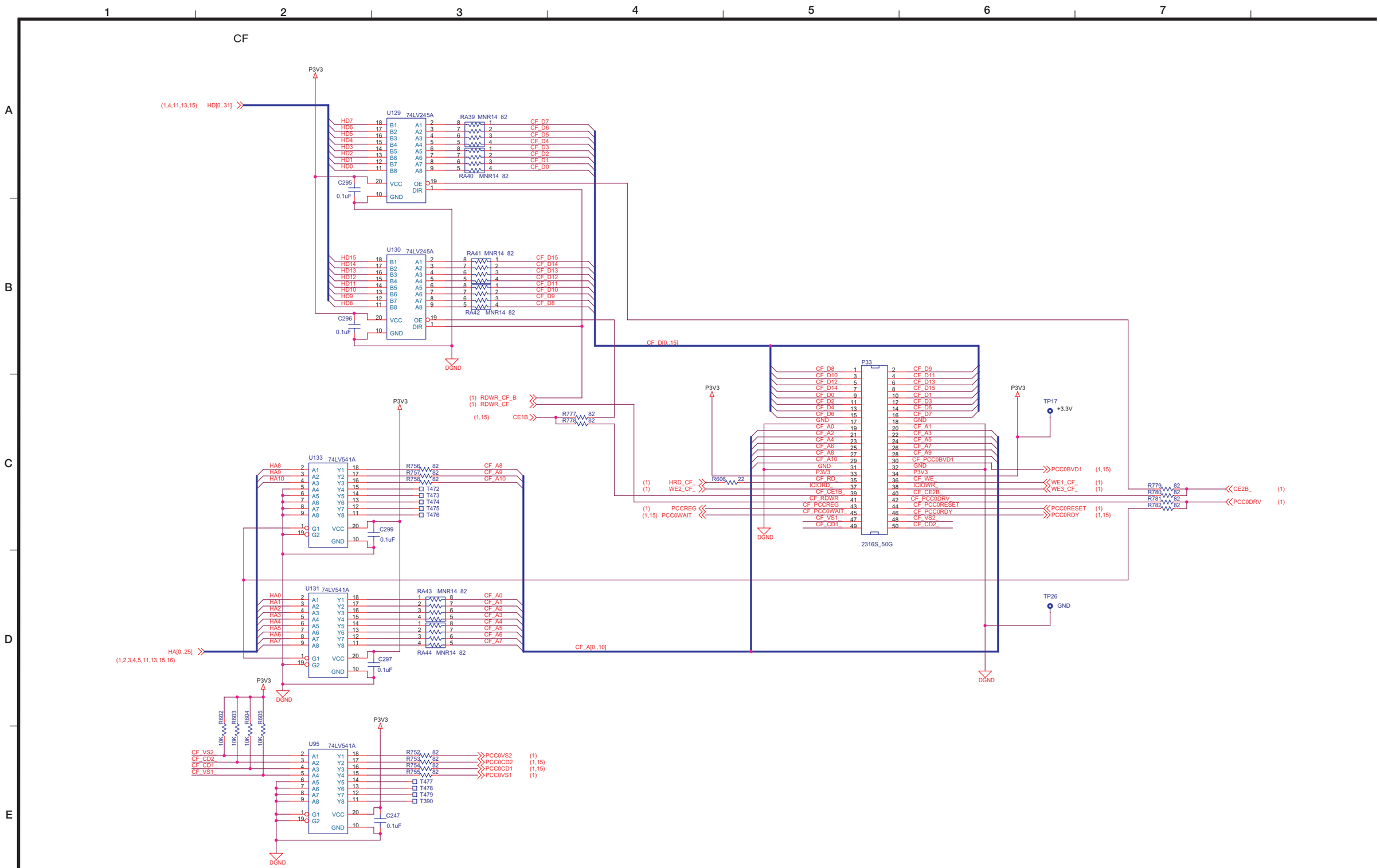
TCK STOP mode
1-2 SHORT: TCK Supply (JTAG)
2-3 SHORT: TCK STOP (NORMAL & CPU Debug)

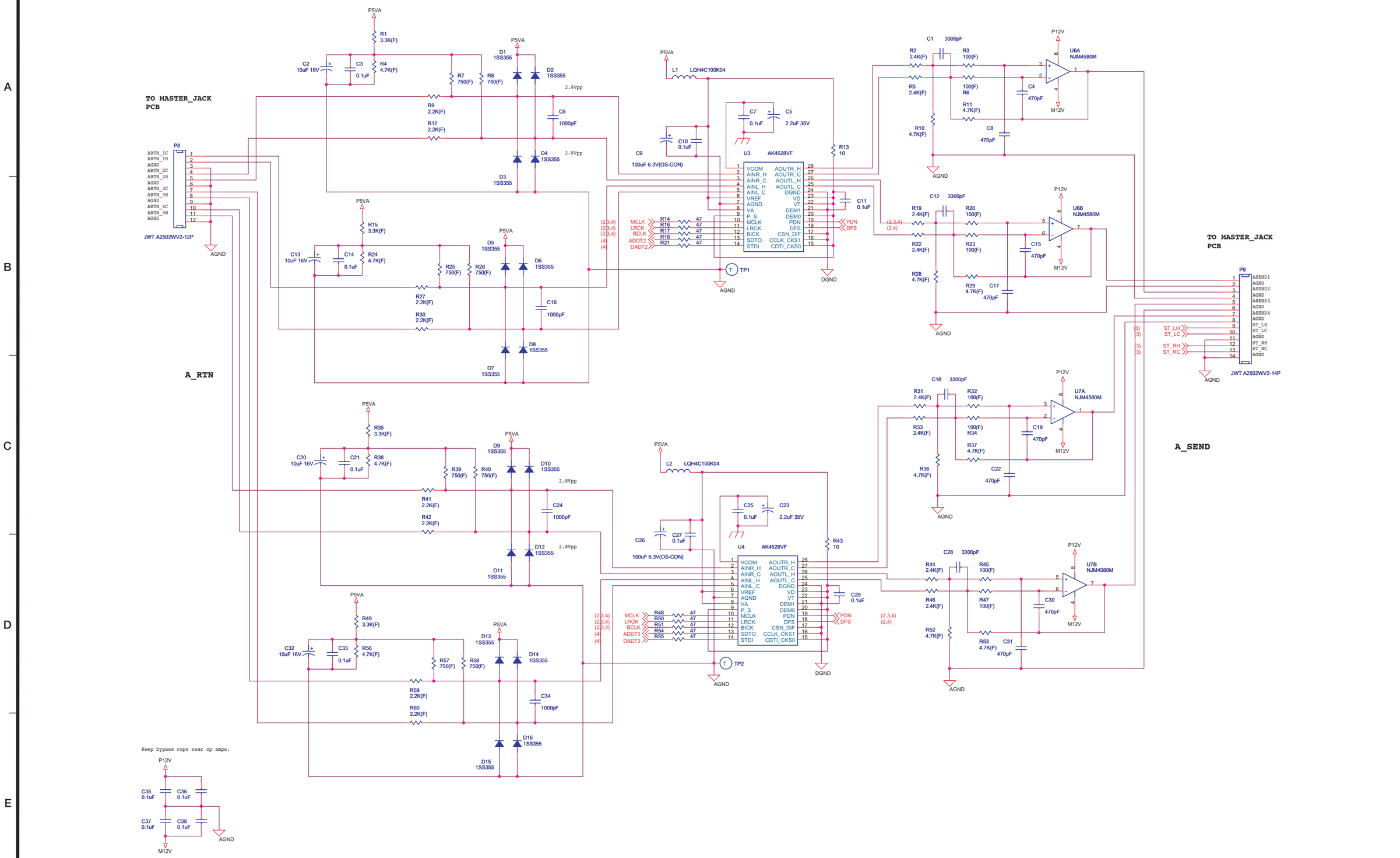
TRST mode
1-2 SHORT: PLL UP (JTAG)
2-3 SHORT: PULL DOWN (NORMAL)

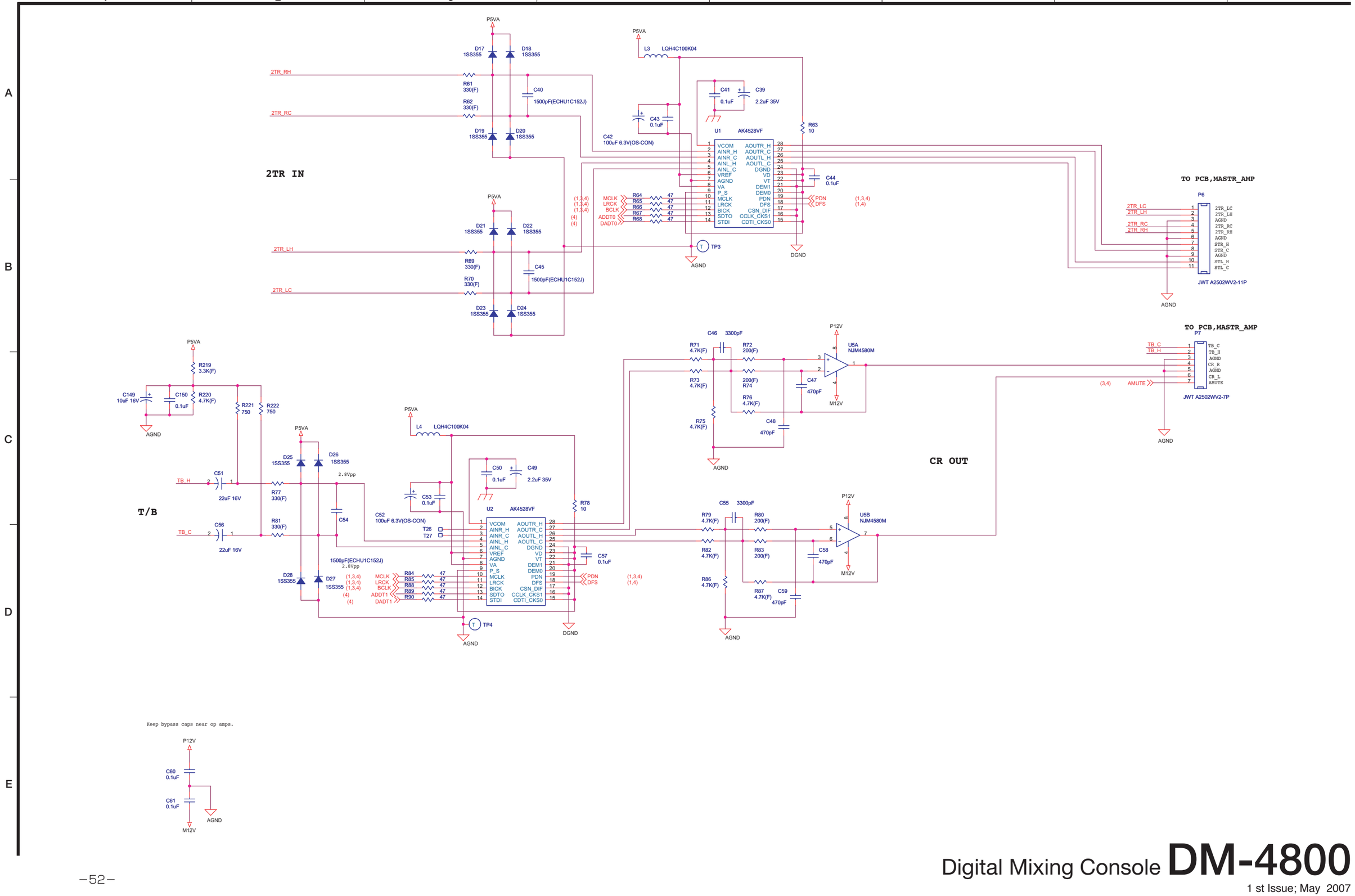


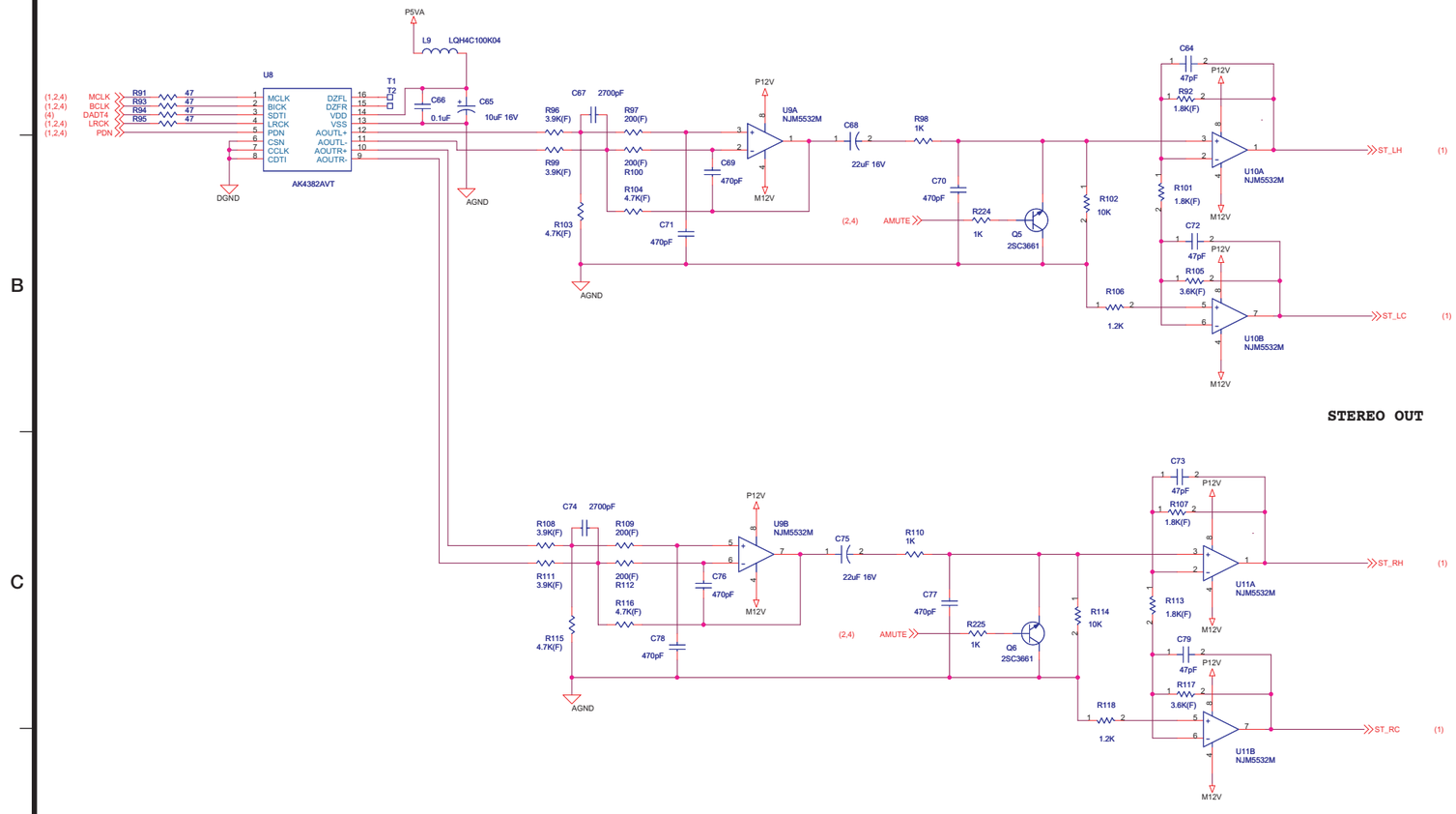
Digital Mixing Console DM-4800

1 st Issue; May 2007

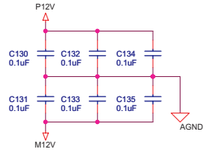

CF
P3V3
(1,4,11,13,15) HD[0..31]
U129 74LV245A
U130 74LV245A
RA39 MNR14 82
RA40 MNR14 82
RA41 MNR14 82
RA42 MNR14 82
C295 0.1uF
C296 0.1uF
DGND
CF_D[0..15]
(1) RDWR_CF_B
(1) RDWR_CF_
(1,15) CE1B_
R777 82
R778 82
P33
2316S_50G
TP17 +3.3V
TP26 GND
(1) HRD_CF_
(1) WE2_CF_
(1) PCCREG
(1,15) PCC0WAIT
R606 22
PCC0BVD1 (1,15)
WE1_CF_ (1)
WE3_CF_ (1)
PCC0RESET (1)
PCC0RDY (1,15)
R779 82
R780 82
R781 82
R782 82
CE2B_ (1)
PCC0DRV (1)
U133 74LV541A
U131 74LV541A
U95 74LV541A
R756 82
R757 82
R758 82
RA43 MNR14 82
RA44 MNR14 82
C299 0.1uF
C297 0.1uF
C247 0.1uF
T472
T473
T474
T475
T476
T477
T478
T479
T390
HA[0..25]
(1,2,3,4,5,11,13,15,16)
CF_A[0..10]
R602 10K
R603 10K
R604 10K
R605 10K
R752 82
R753 82
R754 82
R755 82
PCC0VS2 (1)
PCC0CD2 (1,15)
PCC0CD1 (1,15)
PCC0VS1 (1)


TO MASTER_JACK PCB
P8
JWT A2502WV2-12P
A_RTN
A_SEND
TO MASTER_JACK PCB
P9
JWT A2502WV2-14P
U3 AK4528VF
U4 AK4528VF
L1 LQH4C100K04
L2 LQH4C100K04
U6A NJM4580M
U6B NJM4580M
U7A NJM4580M
U7B NJM4580M
P5VA
P12V
M12V
AGND
DGND
2.8Vpp
100uF 6.3V(OS-CON)
Keep bypass caps near op amps.


1
2
3
4
5
6
7
A
B
C
D
E
2TR IN
T/B
CR OUT
TO PCB,MASTR_AMP
TO PCB,MASTR_AMP
P5VA
P12V
M12V
AGND
DGND
2TR_RH
2TR_RC
2TR_LH
2TR_LC
TB_H
TB_C
D17 1SS355
D18 1SS355
D19 1SS355
D20 1SS355
D21 1SS355
D22 1SS355
D23 1SS355
D24 1SS355
D25 1SS355
D26 1SS355
D27 1SS355
D28 1SS355
R61 330(F)
R62 330(F)
R69 330(F)
R70 330(F)
R77 330(F)
R81 330(F)
C40 1500pF(ECHU1C152J)
C45 1500pF(ECHU1C152J)
C54 1500pF(ECHU1C152J)
2.8Vpp
L3 LQH4C100K04
L4 LQH4C100K04
C41 0.1uF
C39 2.2uF 35V
C43 0.1uF
C42 100uF 6.3V(OS-CON)
C50 0.1uF
C49 2.2uF 35V
C53 0.1uF
C52 100uF 6.3V(OS-CON)
U1 AK4528VF
U2 AK4528VF
VCOM AINR_H AINR_C AINL_H AINL_C VREF AGND VA P_S MCLK LRCK BICK SDTO STDI
AOUTR_H AOUTR_C AOUTL_H AOUTL_C DGND VD VT DEM1 DEM0 PDN DFS CSN_DIF CCLK_CKS1 CDTI_CKS0
R63 10
R78 10
C44 0.1uF
C57 0.1uF
MCLK LRCK BCLK SDTO STDI
ADDT0 DADT0
ADDT1 DADT1
R64 R65 R66 R67 R68
R84 R85 R88 R89 R90
47
(1,3,4)
(4)
PDN DFS
T26 T27
TP3 TP4
P6
P7
JWT A2502WV2-11P
JWT A2502WV2-7P
2TR_LC 2TR_LH AGND 2TR_RC 2TR_RH AGND STR_H STR_C AGND STL_H STL_C
TB_C TB_H AGND CR_R AGND CR_L AMUTE
(3,4) AMUTE
R219 3.3K(F)
C149 10uF 16V
C150 0.1uF
R220 4.7K(F)
R221 750
R222 750
C51 22uF 16V
C56 22uF 16V
C46 3300pF
C55 3300pF
R71 4.7K(F)
R72 200(F)
R73 4.7K(F)
200(F) R74
R75 4.7K(F)
R76 4.7K(F)
C47 470pF
C48 470pF
U5A NJM4580M
R79 4.7K(F)
R80 200(F)
R82 4.7K(F)
R83 200(F)
R86 4.7K(F)
R87 4.7K(F)
C58 470pF
C59 470pF
U5B NJM4580M
Keep bypass caps near op amps.
C60 0.1uF
C61 0.1uF



Keep bypass caps near op amps.



TO PCB, INPUT_AD

TO PCB, INPUT_AD

TO PCB,POWER_SUB

TO PCB,INPUT_AD

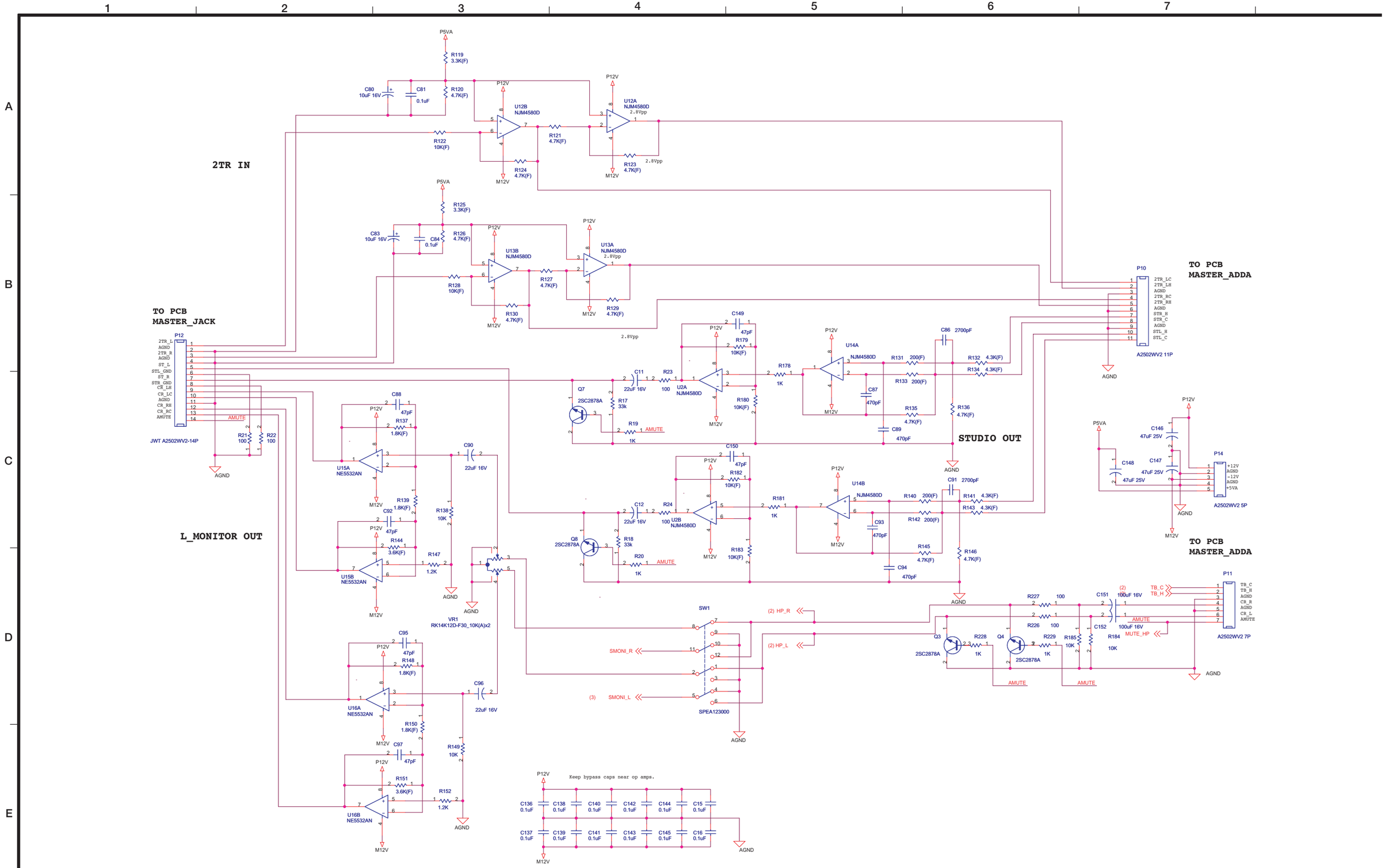
DM-4800 ONLY

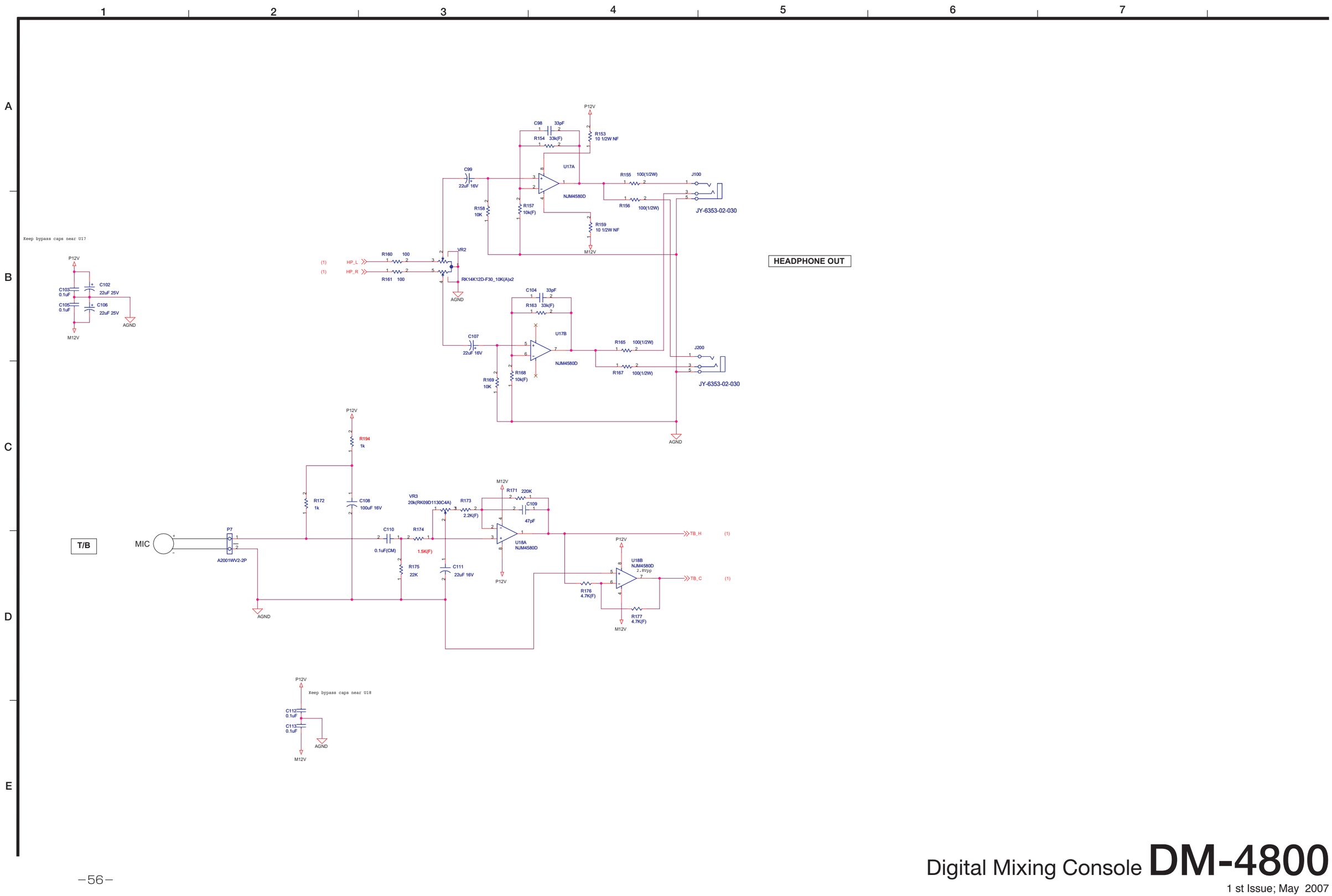
TO PCB,EXT ADDA

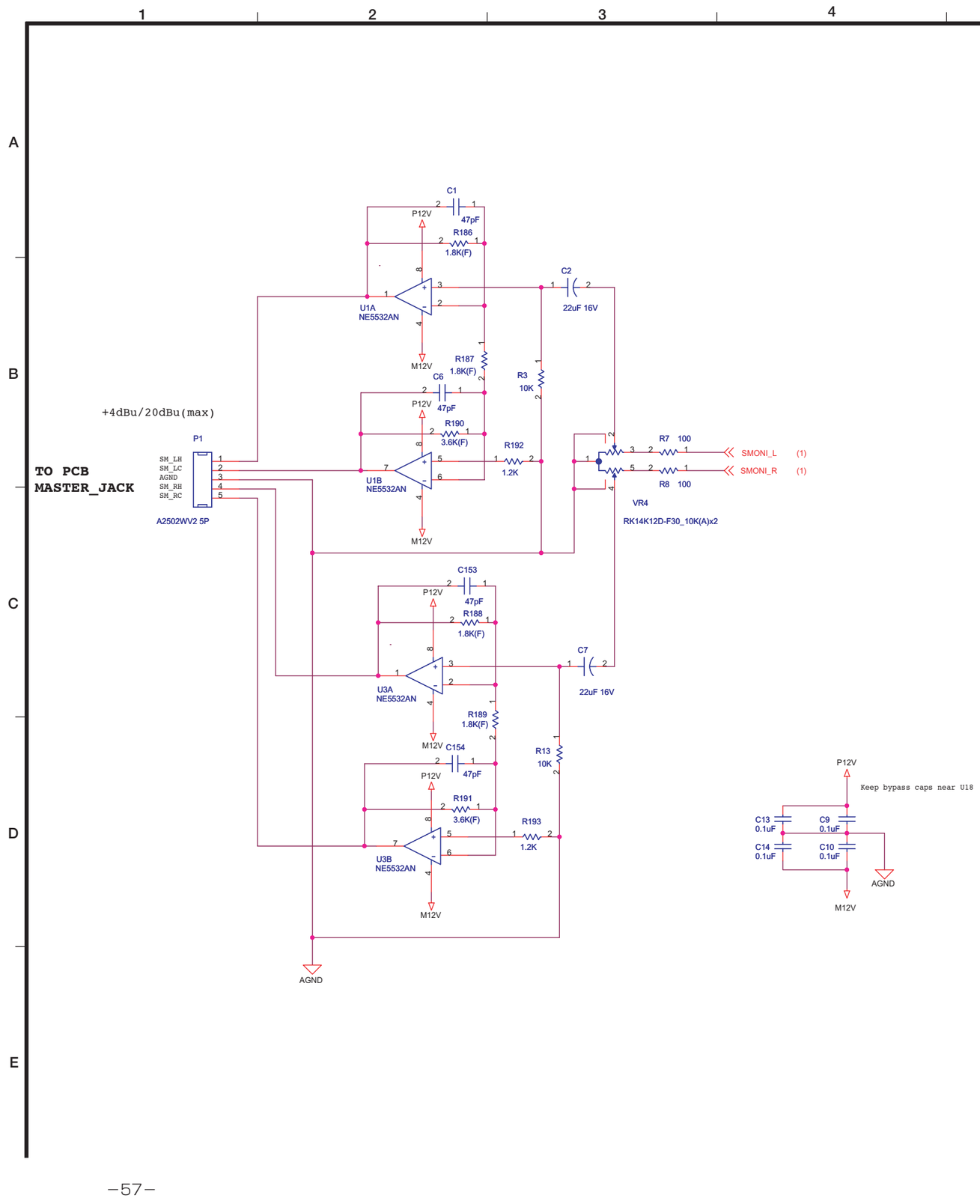
TO PCB, MAIN

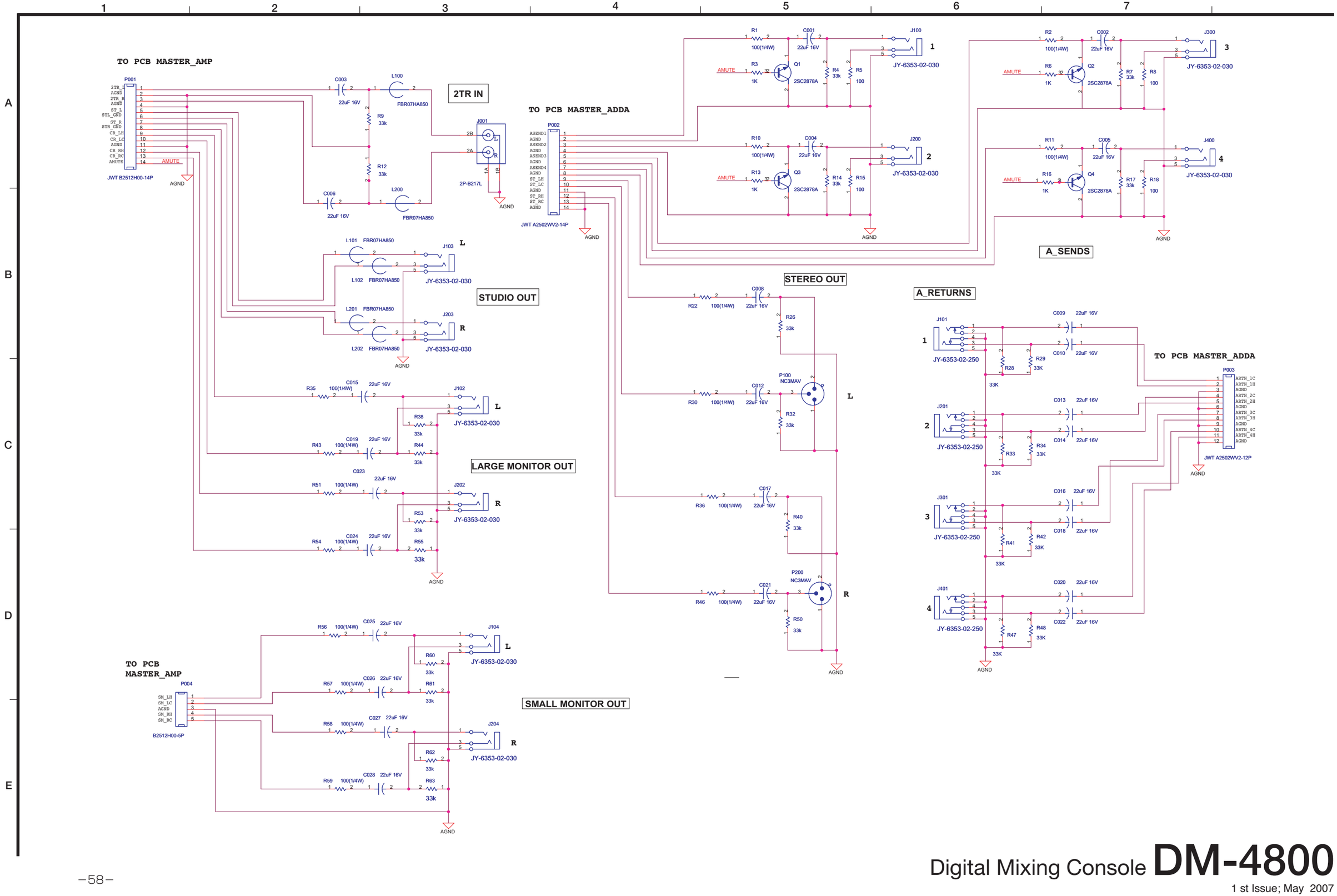
R231 DM-3200 : NO MOUNT
DM-4800 : MOUNT

Keep near XC9536XL power pin


2TR IN
TO PCB MASTER_JACK
JWT A2502WV2-14P
L_MONITOR OUT
TO PCB MASTER_ADDA
A2502WV2 11P
STUDIO OUT
A2502WV2 5P
A2502WV2 7P
SPEA123000
VR1 RK14K12D-F30_10K(A)x2
Keep bypass caps near op amps.
P5VA
P12V
M12V
AGND
2.8Vpp
AMUTE
MUTE_HP
SMONI_R
SMONI_L
(2) HP_R
(2) HP_L
TB_C
TB_H
U12A NJM4580D
U12B NJM4580D
U13A NJM4580D
U13B NJM4580D
U2A NJM4580D
U2B NJM4580D
U14A NJM4580D
U14B NJM4580D
U15A NE5532AN
U15B NE5532AN
U16A NE5532AN
U16B NE5532AN
Q7 2SC2878A
Q8 2SC2878A
Q3 2SC2878A
Q4 2SC2878A

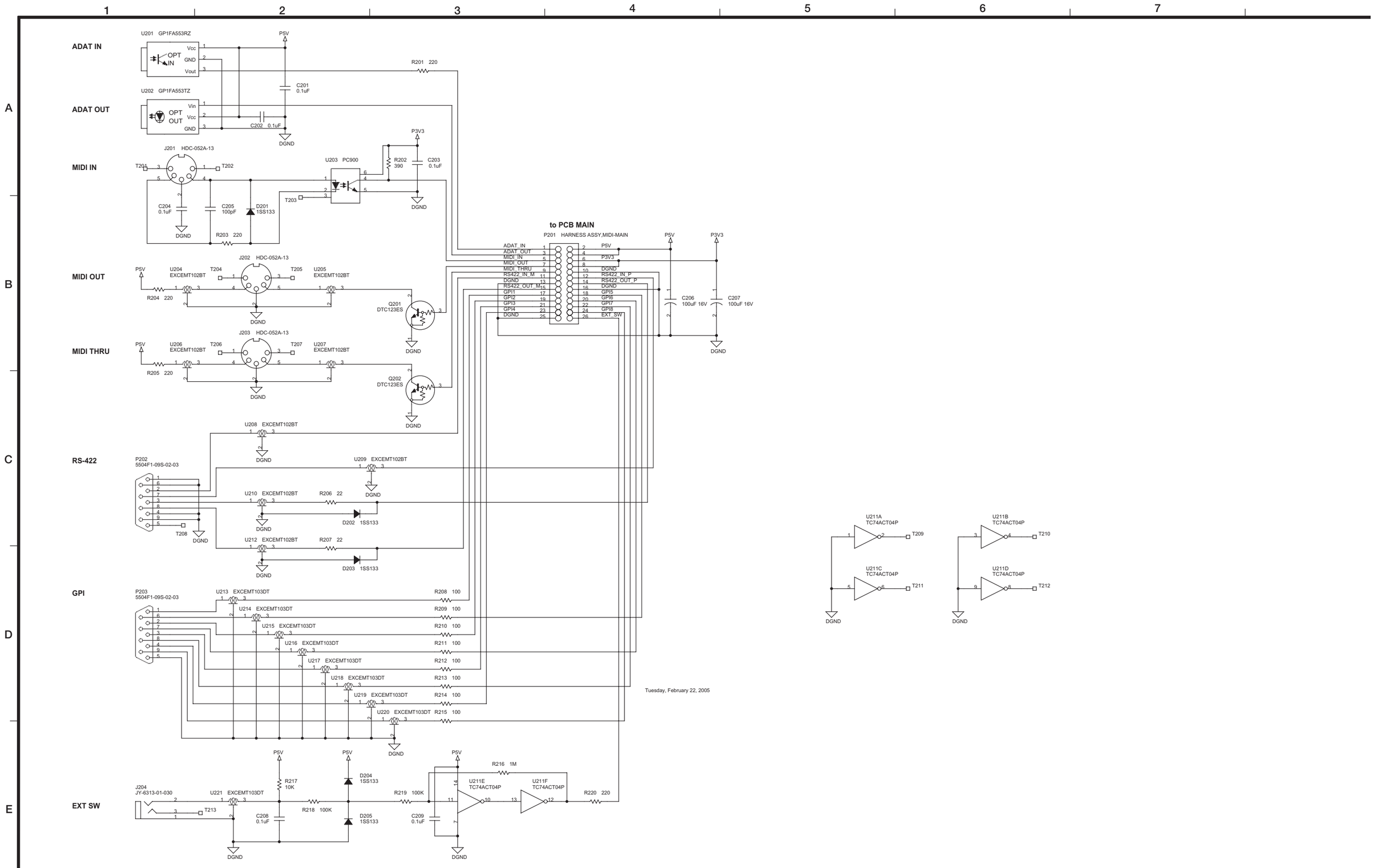

1
2
3
4
5
6
7
A
B
C
D
E
Keep bypass caps near U17
P12V
C103
0.1uF
C102
22uF 25V
C105
0.1uF
C106
22uF 25V
AGND
M12V
C98
33pF
R154
33k(F)
R153
10 1/2W NF
U17A
C99
22uF 16V
R155
100(1/2W)
J100
NJM4580D
R158
10K
R157
10k(F)
R156
100(1/2W)
JY-6353-02-030
R159
10 1/2W NF
M12V
R160
100
VR2
(1)
HP_L
(1)
HP_R
R161
100
RK14K12D-F30_10K(A)x2
AGND
HEADPHONE OUT
C104
33pF
R163
33k(F)
U17B
C107
22uF 16V
R165
100(1/2W)
J200
NJM4580D
R168
10k(F)
R167
100(1/2W)
JY-6353-02-030
R169
10K
AGND
P12V
R194
1k
R172
1k
C108
100uF 16V
VR3
20k(RK09D1130C4A)
R173
2.2K(F)
M12V
R171
220K
C109
47pF
T/B
MIC
P7
A2001WV2-2P
C110
0.1uF(CM)
R174
1.5K(F)
U18A
NJM4580D
P12V
TB_H
(1)
R175
22K
C111
22uF 16V
U18B
NJM4580D
2.8Vpp
TB_C
(1)
R176
4.7K(F)
R177
4.7K(F)
M12V
AGND
P12V
Keep bypass caps near U18
C112
0.1uF
C113
0.1uF
AGND
M12V

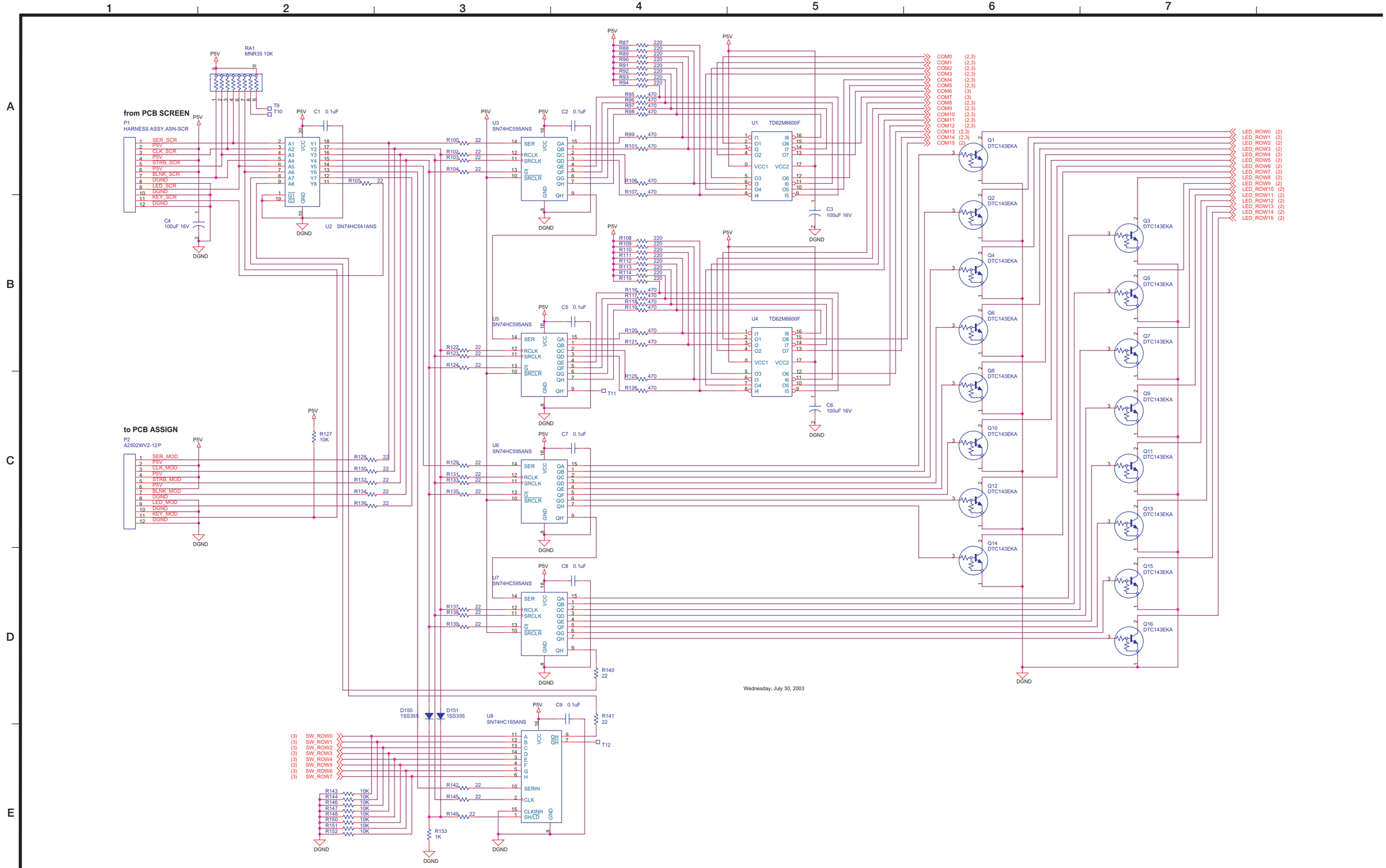

1
2
3
4
5
6
7
A
B
C
D
E
+4dBu/20dBu(max)
TO PCB
MASTER_JACK
P1
SM_LH
SM_LC
AGND
SM_RH
SM_RC
A2502WV2 5P
C1
47pF
P12V
R186
1.8K(F)
U1A
NE5532AN
M12V
C2
22uF 16V
R187
1.8K(F)
C6
47pF
R3
10K
R190
3.6K(F)
R192
1.2K
U1B
NE5532AN
R7 100
R8 100
SMONI_L (1)
SMONI_R (1)
VR4
RK14K12D-F30_10K(A)x2
C153
47pF
R188
1.8K(F)
U3A
NE5532AN
C7
22uF 16V
R189
1.8K(F)
C154
47pF
R13
10K
R191
3.6K(F)
R193
1.2K
U3B
NE5532AN
AGND
Keep bypass caps near U18
C13
0.1uF
C14
0.1uF
C9
0.1uF
C10
0.1uF

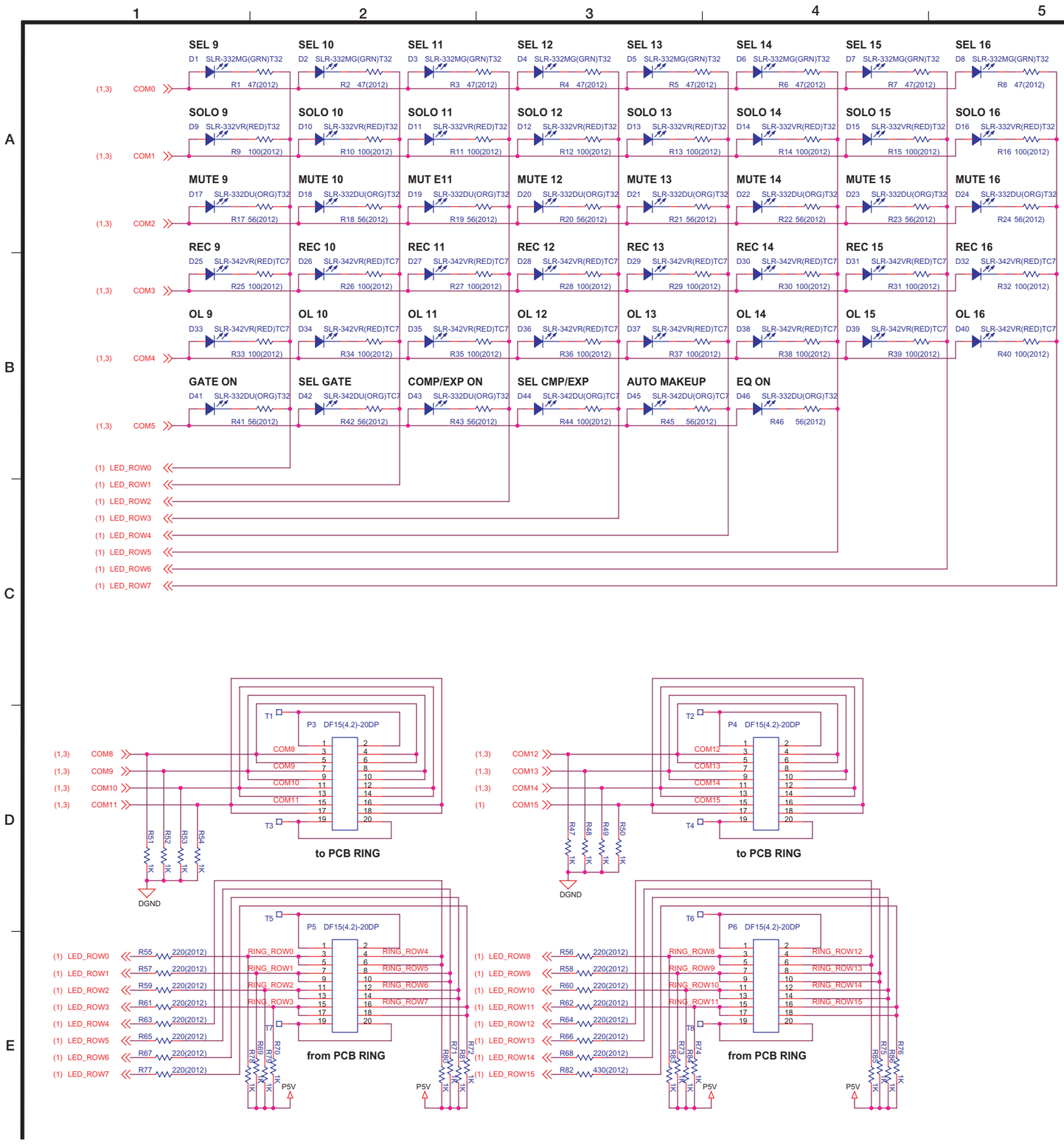


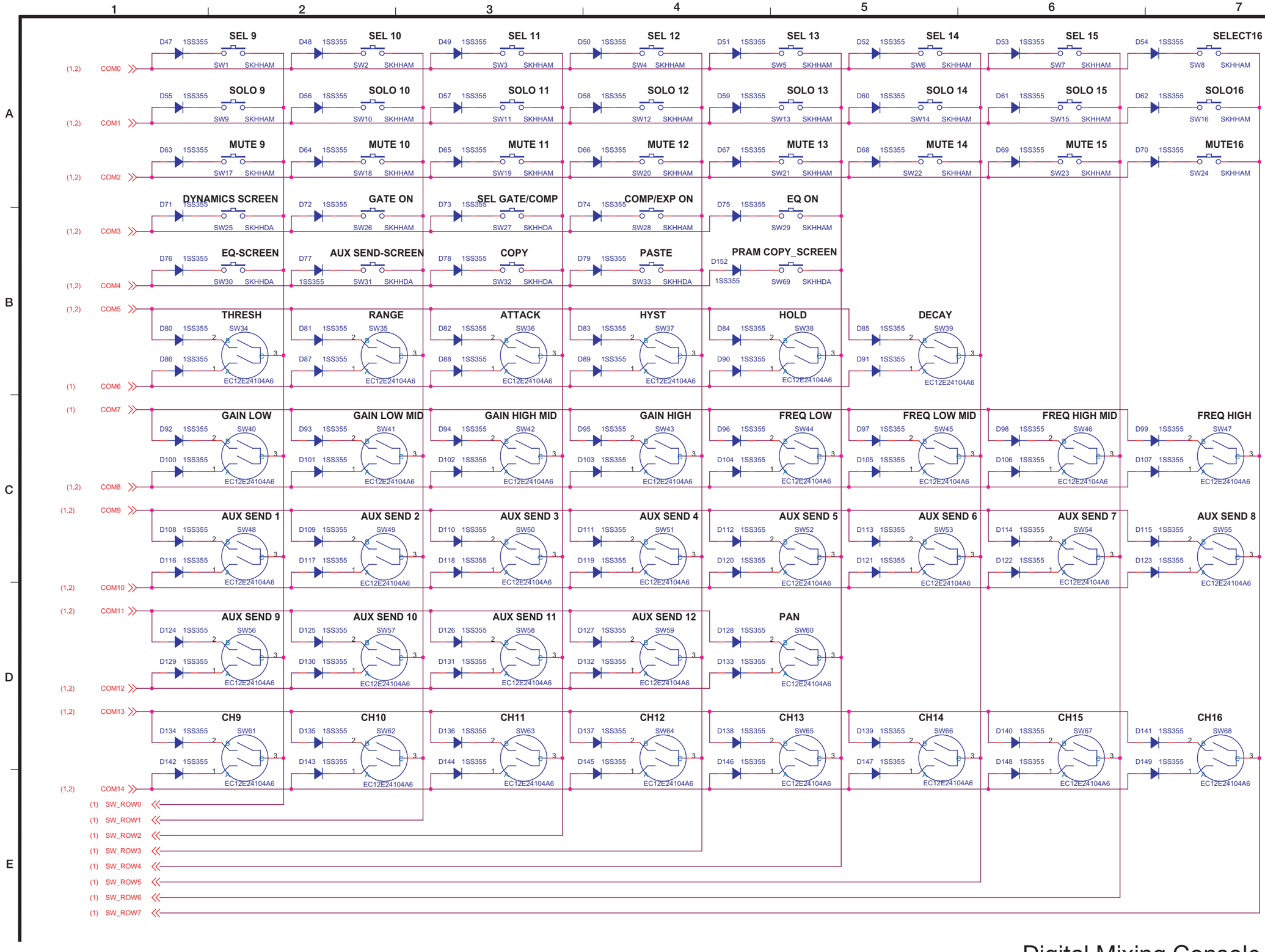
Digital Mixing Console **DM-4800**

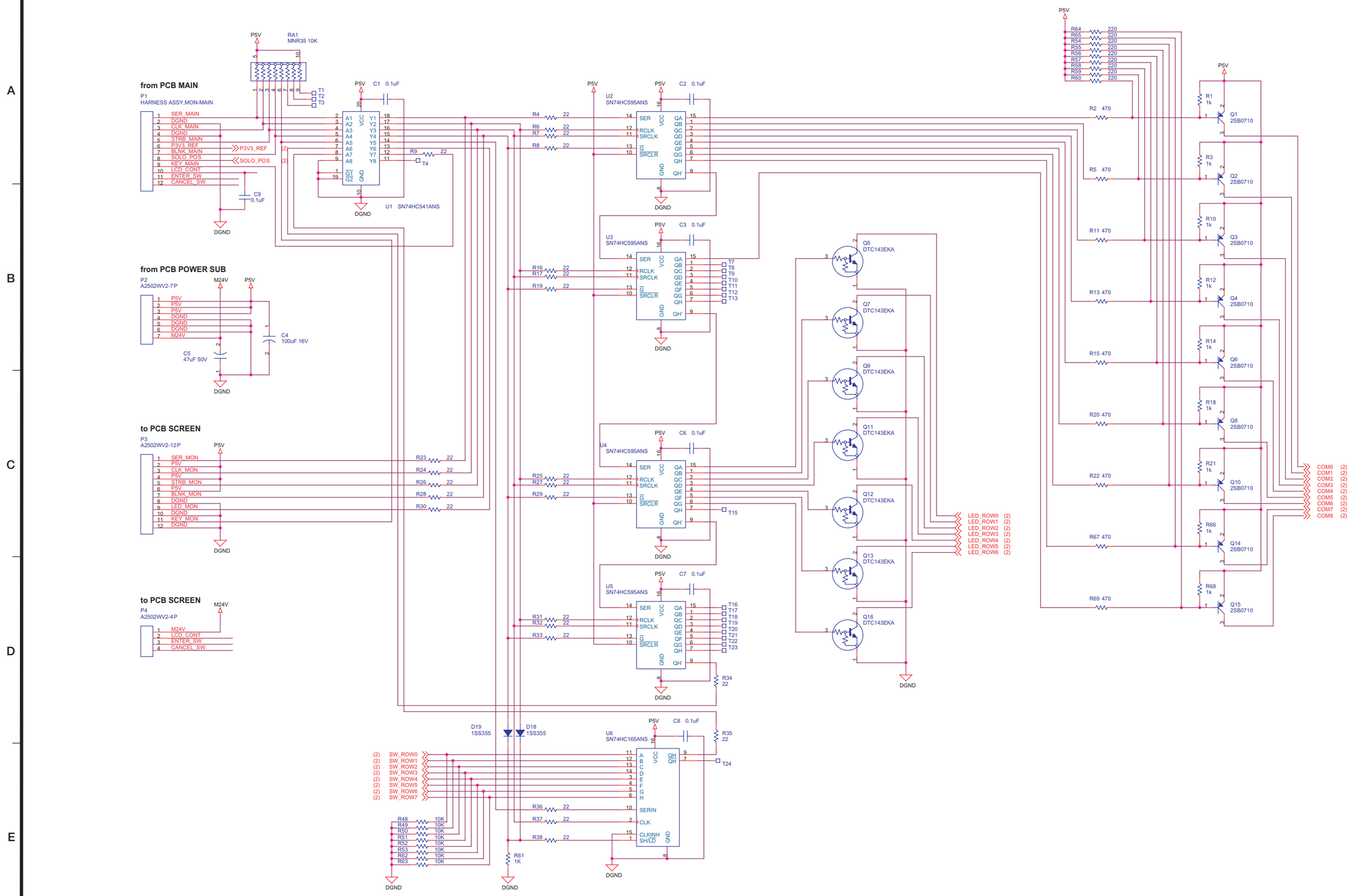
1 st Issue; May 2007

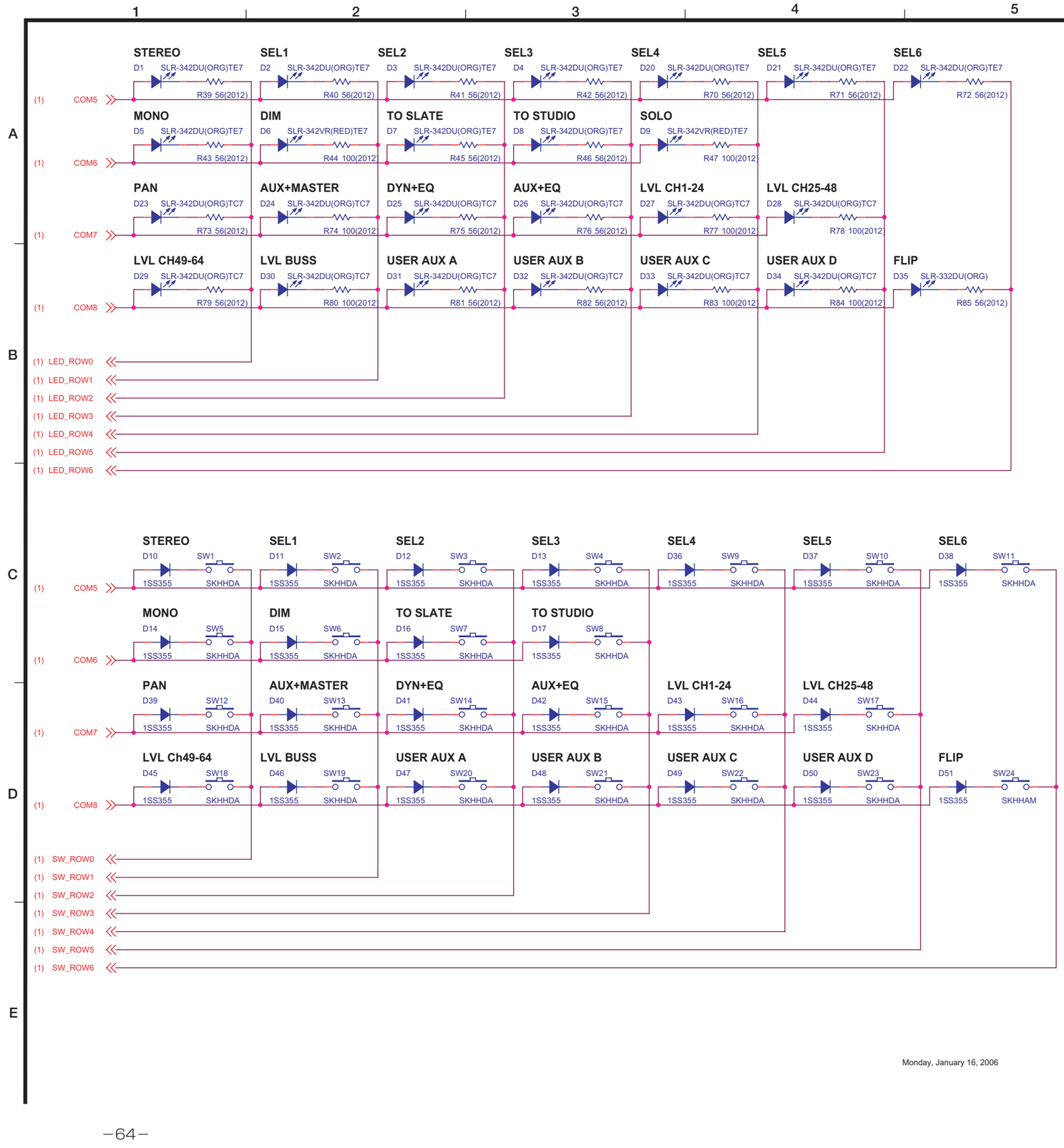

1
2
3
4
5
6
7
A
B
C
D
E
ADAT IN
ADAT OUT
MIDI IN
MIDI OUT
MIDI THRU
RS-422
GPI
EXT SW
U201 GP1FA553RZ
OPT IN
Vcc
GND
Vout
P5V
R201 220
C201 0.1uF
U202 GP1FA553TZ
OPT OUT
Vin
Vcc
GND
C202 0.1uF
DGND
P3V3
J201 HDC-052A-13
T201
T202
T203
U203 PC900
R202 390
C203 0.1uF
C204 0.1uF
C205 100pF
D201 1SS133
R203 220
J202 HDC-052A-13
T204
T205
U204 EXCEMT102BT
U205 EXCEMT102BT
R204 220
Q201 DTC123ES
J203 HDC-052A-13
T206
T207
U206 EXCEMT102BT
U207 EXCEMT102BT
R205 220
Q202 DTC123ES
U208 EXCEMT102BT
U209 EXCEMT102BT
U210 EXCEMT102BT
U212 EXCEMT102BT
R206 22
R207 22
D202 1SS133
D203 1SS133
P202
5504F1-09S-02-03
T208
P203
5504F1-09S-02-03
U213 EXCEMT103DT
U214 EXCEMT103DT
U215 EXCEMT103DT
U216 EXCEMT103DT
U217 EXCEMT103DT
U218 EXCEMT103DT
U219 EXCEMT103DT
U220 EXCEMT103DT
R208 100
R209 100
R210 100
R211 100
R212 100
R213 100
R214 100
R215 100
J204
JY-6313-01-030
T213
U221 EXCEMT103DT
R217 10K
R218 100K
R219 100K
R216 1M
R220 220
C208 0.1uF
C209 0.1uF
D204 1SS133
D205 1SS133
U211E TC74ACT04P
U211F TC74ACT04P
to PCB MAIN
P201 HARNESS ASSY,MIDI-MAIN
ADAT_IN
ADAT_OUT
MIDI_IN
MIDI_OUT
MIDI_THRU
RS422_IN_M
DGND
RS422_OUT_M
GPI1
GPI2
GPI3
GPI4
DGND
P5V
P3V3
DGND
RS422_IN_P
RS422_OUT_P
DGND
GPI5
GPI6
GPI7
GPI8
EXT_SW
C206 100uF 16V
C207 100uF 16V
U211A TC74ACT04P
U211B TC74ACT04P
U211C TC74ACT04P
U211D TC74ACT04P
T209
T210
T211
T212
Tuesday, February 22, 2005


1
2
3
4
5
6
7
A
B
C
D
E
from PCB SCREEN
P1
HARNESS ASSY,ASN-SCR
SER_SCR
CLK_SCR
STRB_SCR
BLNK_SCR
LED_SCR
KEY_SCR
P5V
DGND
RA1
MNR35 10K
T9
T10
C1 0.1uF
C4
100uF 16V
U2 SN74HC541ANS
to PCB ASSIGN
P2
A2502WV2-12P
SER_MOD
CLK_MOD
STRB_MOD
BLNK_MOD
LED_MOD
KEY_MOD
R127
10K
U3
SN74HC595ANS
C2 0.1uF
U5
SN74HC595ANS
C5 0.1uF
U6
SN74HC595ANS
C7 0.1uF
U7
SN74HC595ANS
C8 0.1uF
U8
SN74HC165ANS
C9 0.1uF
T11
T12
R140
22
R141
22
D150
1SS355
D151
1SS355
R153
1K
U1 TD62M8600F
U4 TD62M8600F
C3
100uF 16V
C6
100uF 16V
COM0 (2,3)
COM1 (2,3)
COM2 (2,3)
COM3 (2,3)
COM4 (2,3)
COM5 (2,3)
COM6 (3)
COM7 (3)
COM8 (2,3)
COM9 (2,3)
COM10 (2,3)
COM11 (2,3)
COM12 (2,3)
COM13 (2,3)
COM14 (2,3)
COM15 (2)
LED_ROW0 (2)
LED_ROW1 (2)
LED_ROW2 (2)
LED_ROW3 (2)
LED_ROW4 (2)
LED_ROW5 (2)
LED_ROW6 (2)
LED_ROW7 (2)
LED_ROW8 (2)
LED_ROW9 (2)
LED_ROW10 (2)
LED_ROW11 (2)
LED_ROW12 (2)
LED_ROW13 (2)
LED_ROW14 (2)
LED_ROW15 (2)
Q1 DTC143EKA
Q2 DTC143EKA
Q3 DTC143EKA
Q4 DTC143EKA
Q5 DTC143EKA
Q6 DTC143EKA
Q7 DTC143EKA
Q8 DTC143EKA
Q9 DTC143EKA
Q10 DTC143EKA
Q11 DTC143EKA
Q12 DTC143EKA
Q13 DTC143EKA
Q14 DTC143EKA
Q15 DTC143EKA
Q16 DTC143EKA
SW_ROW0
SW_ROW1
SW_ROW2
SW_ROW3
SW_ROW4
SW_ROW5
SW_ROW6
SW_ROW7
Wednesday, July 30, 2003


SEL 9 D1 SLR-332MG(GRN)T32 R1 47(2012)
SEL 10 D2 SLR-332MG(GRN)T32 R2 47(2012)
SEL 11 D3 SLR-332MG(GRN)T32 R3 47(2012)
SEL 12 D4 SLR-332MG(GRN)T32 R4 47(2012)
SEL 13 D5 SLR-332MG(GRN)T32 R5 47(2012)
SEL 14 D6 SLR-332MG(GRN)T32 R6 47(2012)
SEL 15 D7 SLR-332MG(GRN)T32 R7 47(2012)
SEL 16 D8 SLR-332MG(GRN)T32 R8 47(2012)
(1,3) COM0
SOLO 9 D9 SLR-332VR(RED)T32 R9 100(2012)
SOLO 10 D10 SLR-332VR(RED)T32 R10 100(2012)
SOLO 11 D11 SLR-332VR(RED)T32 R11 100(2012)
SOLO 12 D12 SLR-332VR(RED)T32 R12 100(2012)
SOLO 13 D13 SLR-332VR(RED)T32 R13 100(2012)
SOLO 14 D14 SLR-332VR(RED)T32 R14 100(2012)
SOLO 15 D15 SLR-332VR(RED)T32 R15 100(2012)
SOLO 16 D16 SLR-332VR(RED)T32 R16 100(2012)
(1,3) COM1
MUTE 9 D17 SLR-332DU(ORG)T32 R17 56(2012)
MUTE 10 D18 SLR-332DU(ORG)T32 R18 56(2012)
MUT E11 D19 SLR-332DU(ORG)T32 R19 56(2012)
MUTE 12 D20 SLR-332DU(ORG)T32 R20 56(2012)
MUTE 13 D21 SLR-332DU(ORG)T32 R21 56(2012)
MUTE 14 D22 SLR-332DU(ORG)T32 R22 56(2012)
MUTE 15 D23 SLR-332DU(ORG)T32 R23 56(2012)
MUTE 16 D24 SLR-332DU(ORG)T32 R24 56(2012)
(1,3) COM2
REC 9 D25 SLR-342VR(RED)TC7 R25 100(2012)
REC 10 D26 SLR-342VR(RED)TC7 R26 100(2012)
REC 11 D27 SLR-342VR(RED)TC7 R27 100(2012)
REC 12 D28 SLR-342VR(RED)TC7 R28 100(2012)
REC 13 D29 SLR-342VR(RED)TC7 R29 100(2012)
REC 14 D30 SLR-342VR(RED)TC7 R30 100(2012)
REC 15 D31 SLR-342VR(RED)TC7 R31 100(2012)
REC 16 D32 SLR-342VR(RED)TC7 R32 100(2012)
(1,3) COM3
OL 9 D33 SLR-342VR(RED)TC7 R33 100(2012)
OL 10 D34 SLR-342VR(RED)TC7 R34 100(2012)
OL 11 D35 SLR-342VR(RED)TC7 R35 100(2012)
OL 12 D36 SLR-342VR(RED)TC7 R36 100(2012)
OL 13 D37 SLR-342VR(RED)TC7 R37 100(2012)
OL 14 D38 SLR-342VR(RED)TC7 R38 100(2012)
OL 15 D39 SLR-342VR(RED)TC7 R39 100(2012)
OL 16 D40 SLR-342VR(RED)TC7 R40 100(2012)
(1,3) COM4
GATE ON D41 SLR-332DU(ORG)T32 R41 56(2012)
SEL GATE D42 SLR-342DU(ORG)TC7 R42 56(2012)
COMP/EXP ON D43 SLR-332DU(ORG)T32 R43 56(2012)
SEL CMP/EXP D44 SLR-342DU(ORG)TC7 R44 100(2012)
AUTO MAKEUP D45 SLR-342DU(ORG)TC7 R45 56(2012)
EQ ON D46 SLR-332DU(ORG)T32 R46 56(2012)
(1,3) COM5
(1) LED_ROW0
(1) LED_ROW1
(1) LED_ROW2
(1) LED_ROW3
(1) LED_ROW4
(1) LED_ROW5
(1) LED_ROW6
(1) LED_ROW7
T1 P3 DF15(4.2)-20DP
(1,3) COM8
(1,3) COM9
(1,3) COM10
(1,3) COM11
T3
to PCB RING
R51 1K
R52 1K
R53 1K
R54 1K
DGND
T2 P4 DF15(4.2)-20DP
(1,3) COM12
(1,3) COM13
(1,3) COM14
(1) COM15
T4
to PCB RING
R47 1K
R48 1K
R49 1K
R50 1K
DGND
T5 P5 DF15(4.2)-20DP
(1) LED_ROW0 R55 220(2012) RING_ROW0
(1) LED_ROW1 R57 220(2012) RING_ROW1
(1) LED_ROW2 R59 220(2012) RING_ROW2
(1) LED_ROW3 R61 220(2012) RING_ROW3
(1) LED_ROW4 R63 220(2012)
(1) LED_ROW5 R65 220(2012)
(1) LED_ROW6 R67 220(2012)
(1) LED_ROW7 R77 220(2012)
RING_ROW4
RING_ROW5
RING_ROW6
RING_ROW7
T7
from PCB RING
R69 1K
R70 1K
R71 1K
R72 1K
R78 1K
P5V
R79 1K
P5V
T6 P6 DF15(4.2)-20DP
(1) LED_ROW8 R56 220(2012) RING_ROW8
(1) LED_ROW9 R58 220(2012) RING_ROW9
(1) LED_ROW10 R60 220(2012) RING_ROW10
(1) LED_ROW11 R62 220(2012) RING_ROW11
(1) LED_ROW12 R64 220(2012)
(1) LED_ROW13 R66 220(2012)
(1) LED_ROW14 R68 220(2012)
(1) LED_ROW15 R82 430(2012)
RING_ROW12
RING_ROW13
RING_ROW14
RING_ROW15
T8
from PCB RING
R73 1K
R74 1K
R75 1K
R76 1K
R80 1K
P5V
R81 1K
P5V


1
2
3
4
5
6
7
A
B
C
D
E
SEL 9
SEL 10
SEL 11
SEL 12
SEL 13
SEL 14
SEL 15
SELECT16
SOLO 9
SOLO 10
SOLO 11
SOLO 12
SOLO 13
SOLO 14
SOLO 15
SOLO16
MUTE 9
MUTE 10
MUTE 11
MUTE 12
MUTE 13
MUTE 14
MUTE 15
MUTE16
DYNAMICS SCREEN
GATE ON
SEL GATE/COMP
COMP/EXP ON
EQ ON
EQ-SCREEN
AUX SEND-SCREEN
COPY
PASTE
PRAM COPY_SCREEN
THRESH
RANGE
ATTACK
HYST
HOLD
DECAY
GAIN LOW
GAIN LOW MID
GAIN HIGH MID
GAIN HIGH
FREQ LOW
FREQ LOW MID
FREQ HIGH MID
FREQ HIGH
AUX SEND 1
AUX SEND 2
AUX SEND 3
AUX SEND 4
AUX SEND 5
AUX SEND 6
AUX SEND 7
AUX SEND 8
AUX SEND 9
AUX SEND 10
AUX SEND 11
AUX SEND 12
PAN
CH9
CH10
CH11
CH12
CH13
CH14
CH15
CH16
1SS355
EC12E24104A6
SKHHAM
SKHHDA
COM0
COM1
COM2
COM3
COM4
COM5
COM6
COM7
COM8
COM9
COM10
COM11
COM12
COM13
COM14
SW_ROW0
SW_ROW1
SW_ROW2
SW_ROW3
SW_ROW4
SW_ROW5
SW_ROW6
SW_ROW7


from PCB MAIN
P1
HARNESS ASSY,MON-MAIN
SER_MAIN
DGND
CLK_MAIN
DGND
STRB_MAIN
P3V3_REF
BLNK_MAIN
SOLO_POS
KEY_MAIN
LCD_CONT
ENTER_SW
CANCEL_SW
P3V3_REF
SOLO_POS
C9 0.1uF
DGND
RA1
MNR35 10K
T1
T2
T3
U1 SN74HC541ANS
C1 0.1uF
R9 22
T4
U2
SN74HC595ANS
C2 0.1uF
R4 22
R6 22
R7 22
R8 22
U3
SN74HC595ANS
C3 0.1uF
R16 22
R17 22
R19 22
T7
T8
T9
T10
T11
T12
T13
U4
SN74HC595ANS
C6 0.1uF
R25 22
R27 22
R29 22
T15
U5
SN74HC595ANS
C7 0.1uF
R31 22
R32 22
R33 22
T16
T17
T18
T19
T20
T21
T22
T23
R34 22
from PCB POWER SUB
P2
A2502WV2-7P
P5V
M24V
C4 100uF 16V
C5 47uF 50V
to PCB SCREEN
P3
A2502WV2-12P
SER_MON
CLK_MON
STRB_MON
BLNK_MON
LED_MON
KEY_MON
R23 22
R24 22
R26 22
R28 22
R30 22
to PCB SCREEN
P4
A2502WV2-4P
M24V
LCD_CONT
ENTER_SW
CANCEL_SW
D19
1SS355
D18
1SS355
U6
SN74HC165ANS
C8 0.1uF
R35 22
T24
SW_ROW0
SW_ROW1
SW_ROW2
SW_ROW3
SW_ROW4
SW_ROW5
SW_ROW6
SW_ROW7
R48 10K
R49 10K
R50 10K
R51 10K
R52 10K
R53 10K
R62 10K
R63 10K
R36 22
R37 22
R38 22
R61 1K
Q5
DTC143EKA
Q7
DTC143EKA
Q9
DTC143EKA
Q11
DTC143EKA
Q12
DTC143EKA
Q13
DTC143EKA
Q16
DTC143EKA
LED_ROW0 (2)
LED_ROW1 (2)
LED_ROW2 (2)
LED_ROW3 (2)
LED_ROW4 (2)
LED_ROW5 (2)
LED_ROW6 (2)
R64 220
R65 220
R54 220
R55 220
R56 220
R57 220
R58 220
R59 220
R60 220
R2 470
R5 470
R11 470
R13 470
R15 470
R20 470
R22 470
R67 470
R69 470
R1 1k
R3 1k
R10 1k
R12 1k
R14 1k
R18 1k
R21 1k
R66 1k
R68 1k
Q1 2SB0710
Q2 2SB0710
Q3 2SB0710
Q4 2SB0710
Q6 2SB0710
Q8 2SB0710
Q10 2SB0710
Q14 2SB0710
Q15 2SB0710
COM0 (2)
COM1 (2)
COM2 (2)
COM3 (2)
COM4 (2)
COM5 (2)
COM6 (2)
COM7 (2)
COM8 (2)



to PCB LAYER
P5
A2502WV2-5P

(1) COM0 — COM0 1
(1) COM1 — COM1 2
(1) COM2 — COM2 3
(1) COM3 — COM3 4
(1) COM4 — COM4 5

from PCB LAYER
P6 A2502WV2-14P

(1) LED_ROW0 — LED_ROW0 1
(1) LED_ROW1 — LED_ROW1 2
(1) LED_ROW2 — LED_ROW2 3
(1) LED_ROW3 — LED_ROW3 4
(1) LED_ROW4 — LED_ROW4 5
(1) LED_ROW5 — LED_ROW5 6
(1) SW_ROW0 — SW_ROW0 7
(1) SW_ROW1 — SW_ROW1 8
(1) SW_ROW2 — SW_ROW2 9
(1) SW_ROW3 — SW_ROW3 10
(1) SW_ROW4 — SW_ROW4 11
(1) SW_ROW5 — SW_ROW5 12
(1) SW_ROW6 — SW_ROW6 13
(1) SW_ROW7 — SW_ROW7 14

to PCB TRANSPORT
P7
A2502WV2-6P

(1) COM4 — COM4 1
(1) SW_ROW0 — SW_ROW0 2
(1) SW_ROW1 — SW_ROW1 3
(1) SW_ROW2 — SW_ROW2 4
(1) SW_ROW3 — SW_ROW3 5
(1) SW_ROW4 — SW_ROW4 6

to PCB SOLO
P8
A2502WV2-3P

(1) SOLO_POS — SOLO_POS 1
(1) P3V3_REF — P3V3_REF 2
DGND 3
DGND

1 2 3 4 5 6 7

A B C D E

to SLOT1

J1 2525-120-PCI

SLOT1_SDTO1 SLOT1_SDTO3 SLOT1_SDTI1 SLOT1_SDTI3 SLOT1_G_LRCK_IN_A SLOT1_SDTO5 SLOT1_SDTO7 SLOT1_SDTI5 SLOT1_SDTI7 SLOT1_PORT0 SLOT1_IRQ0 RESERVE2 SLOT1_LRCK_IN SLOT1_LRCK_OUT SLOT1_MCK #RST #RD S_A0 S_A2 S_A4 S_A6 S_D0 S_D2 S_D4 S_D6

SLOT1_SDTO2 SLOT1_SDTO4 SLOT1_SDTI2 SLOT1_SDTI4 SLOT1_SDTO6 SLOT1_SDTO8 SLOT1_SDTI6 SLOT1_SDTI8 SLOT1_PORT1 SLOT1_IRQ1 RESERVE1 RESERVE3 SLOT1_WSYNC #SLOT1_CS #WR S_A1 S_A3 S_A5 S_A7 S_D1 S_D3 S_D5 S_D7

P12V T75 T80 T76 T81 P12V

P5VA M12V M12V P5VA

P5V P3V3 P3V3 P5V

AGND DGND DGND AGND

to SLOT2

J2 2525-120-PCI

SLOT2_SDTO1 SLOT2_SDTO3 SLOT2_SDTI1 SLOT2_SDTI3 SLOT2_G_LRCK_IN_A SLOT2_PORT0 SLOT2_IRQ0 RESERVE2 SLOT2_LRCK_IN SLOT2_LRCK_OUT SLOT2_MCK #RST #RD S_A0 S_A2 S_A4 S_A6 S_D0 S_D2 S_D4 S_D6

SLOT2_SDTO2 SLOT2_SDTO4 SLOT2_SDTI2 SLOT2_SDTI4 SLOT2_PORT1 SLOT2_IRQ1 RESERVE1 RESERVE3 SLOT2_WSYNC #SLOT2_CS #WR S_A1 S_A3 S_A5 S_A7 S_D1 S_D3 S_D5 S_D7

P12V T77 T82 T78 T83 P12V

P5VA M12V M12V P5VA

P5V P3V3 P3V3 P5V

AGND DGND DGND AGND

to PCB POWER SUB

P3 A2502WV2-10P

P12V TP19 M12V TP20 P5VA TP21 TP22

C7 100uF 25V C8 100uF 25V C9 100uF 10V

AGND

to PCB POWER SUB

P5 A2502WV2-9P

P3V3 TP23 P5V TP24 TP25

C10 100uF 10V C11 100uF 10V

DGND

from PCB MAIN

P1 2316S-34G

SLOT1_SDTO1 SLOT1_SDTO3 SLOT1_SDTI1 SLOT1_SDTI3 SLOT1_SDTO5 SLOT1_SDTO7 SLOT1_SDTI5 SLOT1_SDTI7 BTDMO_P BTDM_CLKO_P BTDM_LRCKO_P BTDMI_P BTDM_CLKI_P BTDM_LRCKI_0P

SLOT1_SDTO2 SLOT1_SDTO4 SLOT1_SDTI2 SLOT1_SDTI4 SLOT1_SDTO6 SLOT1_SDTO8 SLOT1_SDTI6 SLOT1_SDTI8 BTDMO_N BTDM_CLKO_N BTDM_LRCKO_N BTDMI_N BTDM_CLKI_N BTDM_LRCKI_0N

DGND

from PCB MAIN

P4 2316S-40G

SLOT1_LRCK_IN FS_SEL SLOT1_PORT0 SLOT2_PORT0 SLOT1_IRQ0 SLOT2_IRQ0 RESERVE1 RESERVE3 #SLOT1_CS #RD S_A0 S_A2 S_A4 S_A6 S_D0 S_D2 S_D4 S_D6

SLOT2_LRCK_IN I2S_SEL SLOT1_PORT1 SLOT2_PORT1 SLOT1_IRQ1 SLOT2_IRQ1 RESERVE2 #RST #SLOT2_CS #WR S_A1 S_A3 S_A5 S_A7 S_D1 S_D3 S_D5 S_D7

DGND

Keep near XC9536XL power pin

P3V3

C1 0.1uF C2 0.1uF C3 0.1uF C4 0.1uF

DGND

SLOT1_SDTI1 SLOT1_SDTI2 SLOT1_SDTI3 SLOT1_SDTI4 SLOT2_SDTI1 SLOT2_SDTI2 SLOT2_SDTI3 SLOT2_SDTI4 — R1–R8 220

SLOT1_G_LRCK_IN_A — TP1 R9 22 TP3 — SLOT2_G_LRCK_IN_A R11 22

R10 220 TP2 SLOT2_MCK

R12 220 TP4 SLOT2_LRCK_OUT

R13 220 TP5 SLOT2_WSYNC

P3V3

U1 XC9572XL_10VQ64

TDO TMS TCK Vaux_2 PB03_11 PB03_12 PB03_13 PB03_05

PB01_09 PB01_10 Vcclnt_Vpp PB01_11 PB01_13 PB01_14 PB01_16 PB00_01 PB00_04 PB00_05 PB00_07 PB00_02 PB00_03 Vsaint_2 PB00_08 PB00_10

PB03_10 PB03_03 PB03_02 PB03_07 PB03_04 PB03_01 PB02_15 Vsaint_3 PB02_11 PB02_09 PB02_16 Vccint_1 PB02_14 PB02_13 PB02_05 PB02_10

PB00_13 PB00_09 PB00_14 PB00_16 Vaux_1 PB00_11 PB00_04 PB02_07 Vaux_3 PB02_08 TDI TMS TCK PB02_02 PB02_03

T65 T70 T71 T73 T79 T72 T74 T84 T85 T86 T87 T88 T89 T90 T91 T92 T93

I2S_SEL R16 22 — FS_SEL R17 22

TP9 BTDM_LRCKI_0P R20 120

TP10 R23 160 BTDM_LRCKI_0N R26 120

BTDMI LRCKI MCKI

TP11 BTDMI_P R30 120

TP12 R31 160 BTDMI_N R32 120

TP13 BTDM_CLKI_P R33 120

TP14 R34 160 BTDM_CLKI_N R38 120

DGND

R14 220 TP6 SLOT1_MCK

R15 220 TP7 SLOT1_LRCK_OUT

R18 220 TP8 SLOT1_WSYNC

R19 220 SLOT2_SDTO4

R21 220 SLOT2_SDTO3

R22 220 SLOT2_SDTO2

R24 220 SLOT2_SDTO1

R25 220 SLOT1_SDTO4

R27 220 SLOT1_SDTO3

R28 220 SLOT1_SDTO2

R29 220 SLOT1_SDTO1

P3V3

C6 0.1uF U2 SN75LVDT390

BTDMO_P BTDMO_N — BTDM_CLKO_P BTDM_CLKO_N — BTDM_LRCKO_P BTDM_LRCKO_N

1A 1B 2A 2B 3A 3B 4A 4B EN1_2 1Y 2Y VCC GND 3Y 4Y EN3_4

R39 220 R40 220 TP15 TP16

R41 220 T96 TP17

TP18

DGND

R35 10K R36 10K R37 10K T94 T95

P2 HEADER 2.54MM 2*4P

C5 0.1uF

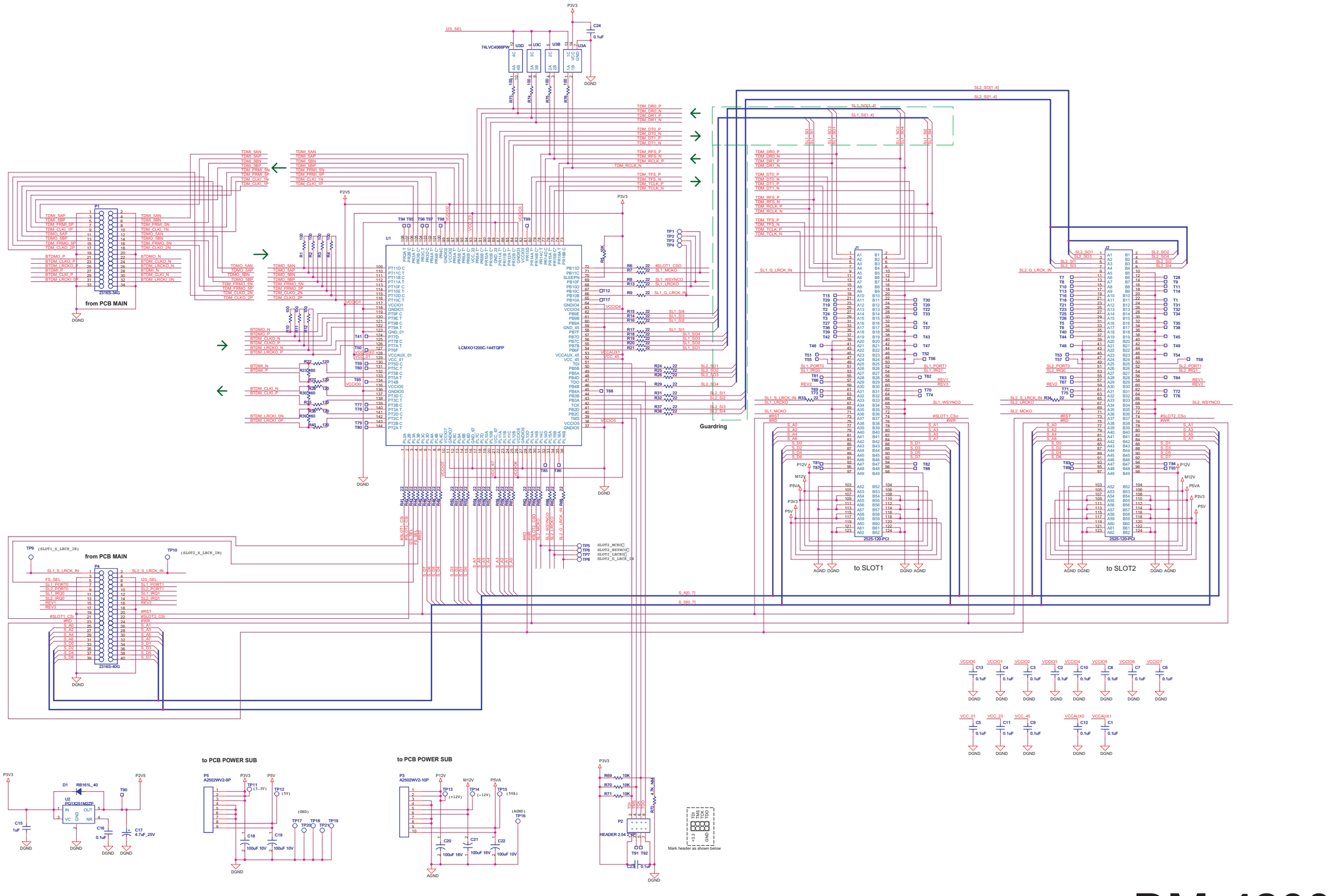
DGND

Mark header as shown below

TDI TMS TCK TDO +3.3 GND

Digital Mixing Console **DM-4800**

1 st Issue; May 2007


P3V3
C24
0.1uF
I2S_SEL
74LVC4066PW
U3D
U3C
U3B
U3A
DGND
R73 100
R74 100
R75 100
R76 100
TDM_DR0_P
TDM_DR0_N
TDM_DR1_P
TDM_DR1_N
TDM_DT0_P
TDM_DT0_N
TDM_DT1_P
TDM_DT1_N
TDM_RFS_P
TDM_RFS_N
TDM_RCLK_P
TDM_RCLK_N
TDM_TFS_P
TDM_TFS_N
TDM_TCLK_P
TDM_TCLK_N
TDMI_5AN
TDMI_5AP
TDMI_5BN
TDMI_5BP
TDMI_FRMI_5P
TDMI_FRMI_5N
TDMI_CLKI_1N
TDMI_CLKI_1P
TDMO_5AN
TDMO_5AP
TDMO_5BN
TDMO_5BP
TDMO_FRMO_5P
TDMO_FRMO_5N
TDMO_CLKO_2N
TDMO_CLKO_2P
BTDMO_P
BTDM_LRCKO_P
BTDMI_P
BTDM_CLKI_P
BTDM_LRCKI_5P
BTDMO_N
BTDM_LRCKO_N
BTDMI_N
BTDM_CLKI_N
BTDM_LRCKI_0N
P1
2318S-34G
from PCB MAIN
P2V5
U1
LCMXO1200C-144TQFP
R1 100
R2 100
R43 100
R10 100
R11 100
R12 100
R22 120
R23 120
R24 120
R30 120
R31 120
R32 120
R39 120
R40 120
R41 120
R42 120
R4 22
R5 22
R6 22
R7 22
R8 22
R13 22
R9 22
R14 22
R15 22
R16 22
R17 22
R18 22
R19 22
R20 22
R21 22
R24 22
R25 22
R26 22
R29 22
R31 22
R32 22
R37 22
R38 22
R54 22
R55 22
R56 22
R57 22
R58 22
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R35 22
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R39 22
R40 22
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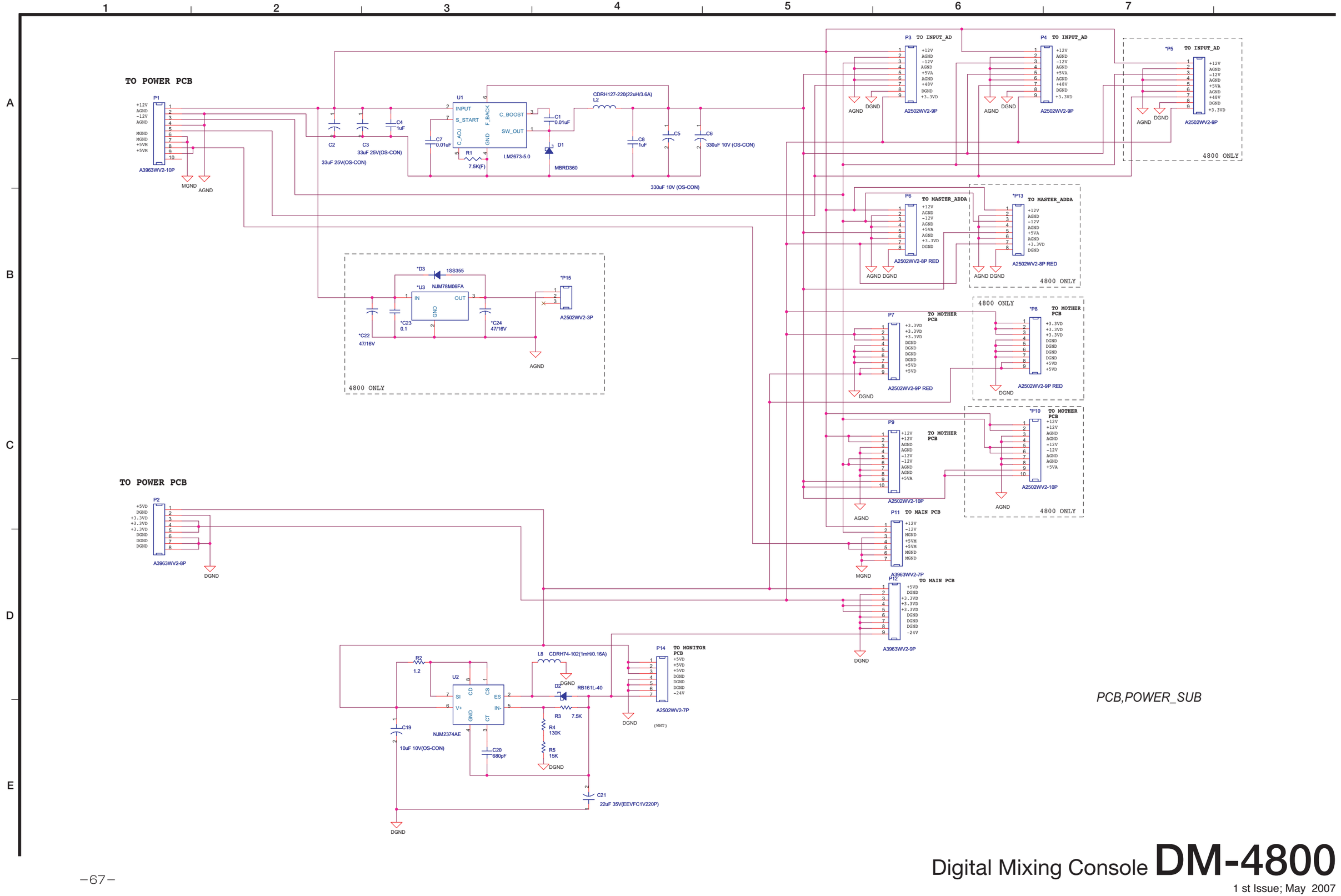
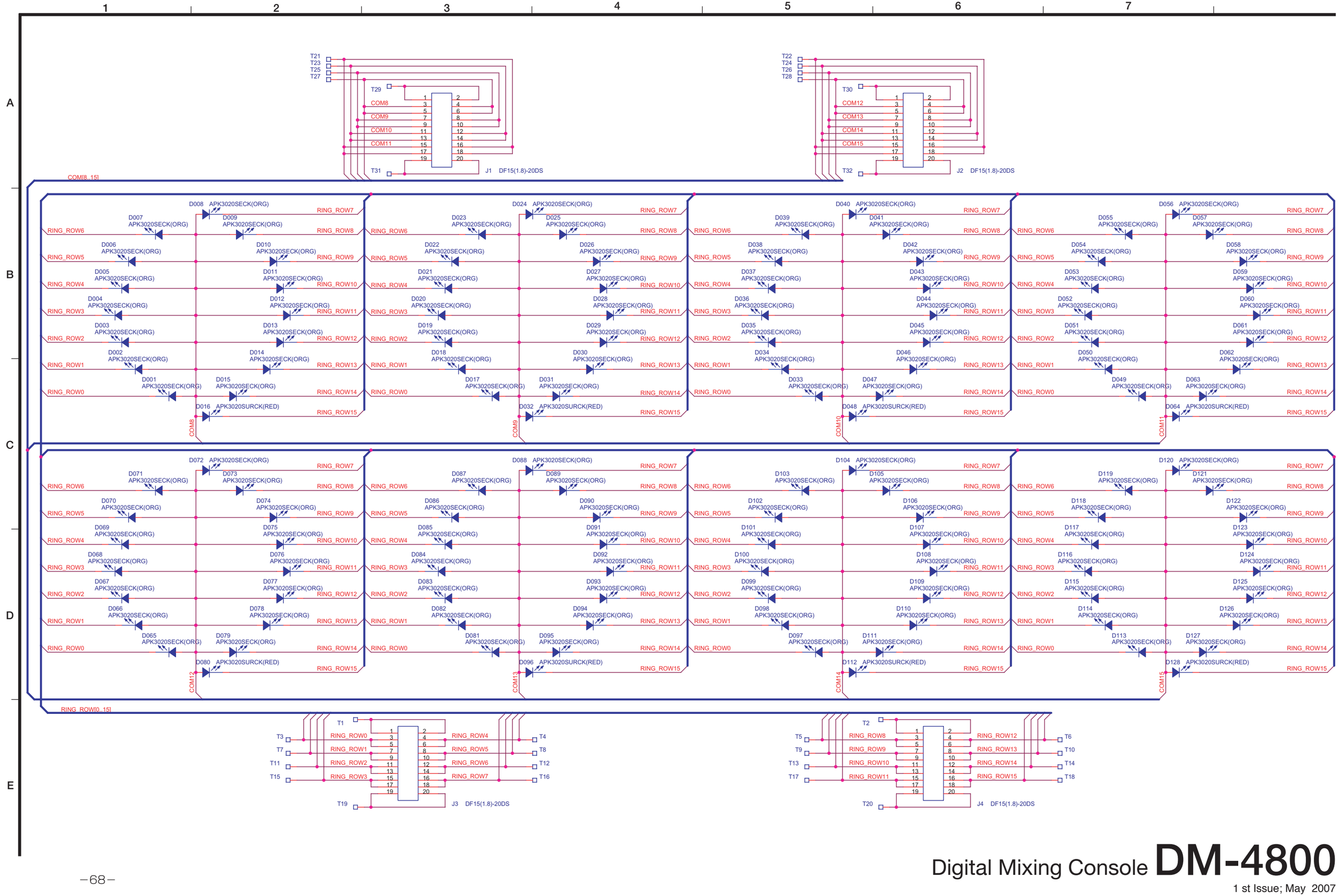
R51 22
R52 22
R53



PCB,POWER_SUB


1
2
3
4
5
6
7
A
B
C
D
E
T21
T23
T25
T27
T29
COM8
COM9
COM10
COM11
T31
J1 DF15(1.8)-20DS
T22
T24
T26
T28
T30
COM12
COM13
COM14
COM15
T32
J2 DF15(1.8)-20DS
COM[8..15]
RING_ROW[0..15]
RING_ROW0
RING_ROW1
RING_ROW2
RING_ROW3
RING_ROW4
RING_ROW5
RING_ROW6
RING_ROW7
RING_ROW8
RING_ROW9
RING_ROW10
RING_ROW11
RING_ROW12
RING_ROW13
RING_ROW14
RING_ROW15
D001 APK3020SECK(ORG)
D002 APK3020SECK(ORG)
D003 APK3020SECK(ORG)
D004 APK3020SECK(ORG)
D005 APK3020SECK(ORG)
D006 APK3020SECK(ORG)
D007 APK3020SECK(ORG)
D008 APK3020SECK(ORG)
D009 APK3020SECK(ORG)
D010 APK3020SECK(ORG)
D011 APK3020SECK(ORG)
D012 APK3020SECK(ORG)
D013 APK3020SECK(ORG)
D014 APK3020SECK(ORG)
D015 APK3020SECK(ORG)
D016 APK3020SURCK(RED)
D017 APK3020SECK(ORG)
D018 APK3020SECK(ORG)
D019 APK3020SECK(ORG)
D020 APK3020SECK(ORG)
D021 APK3020SECK(ORG)
D022 APK3020SECK(ORG)
D023 APK3020SECK(ORG)
D024 APK3020SECK(ORG)
D025 APK3020SECK(ORG)
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D028 APK3020SECK(ORG)
D029 APK3020SECK(ORG)
D030 APK3020SECK(ORG)
D031 APK3020SECK(ORG)
D032 APK3020SURCK(RED)
D033 APK3020SECK(ORG)
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D045 APK3020SECK(ORG)
D046 APK3020SECK(ORG)
D047 APK3020SECK(ORG)
D048 APK3020SURCK(RED)
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D050 APK3020SECK(ORG)
D051 APK3020SECK(ORG)
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D068 APK3020SECK(ORG)
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D071 APK3020SECK(ORG)
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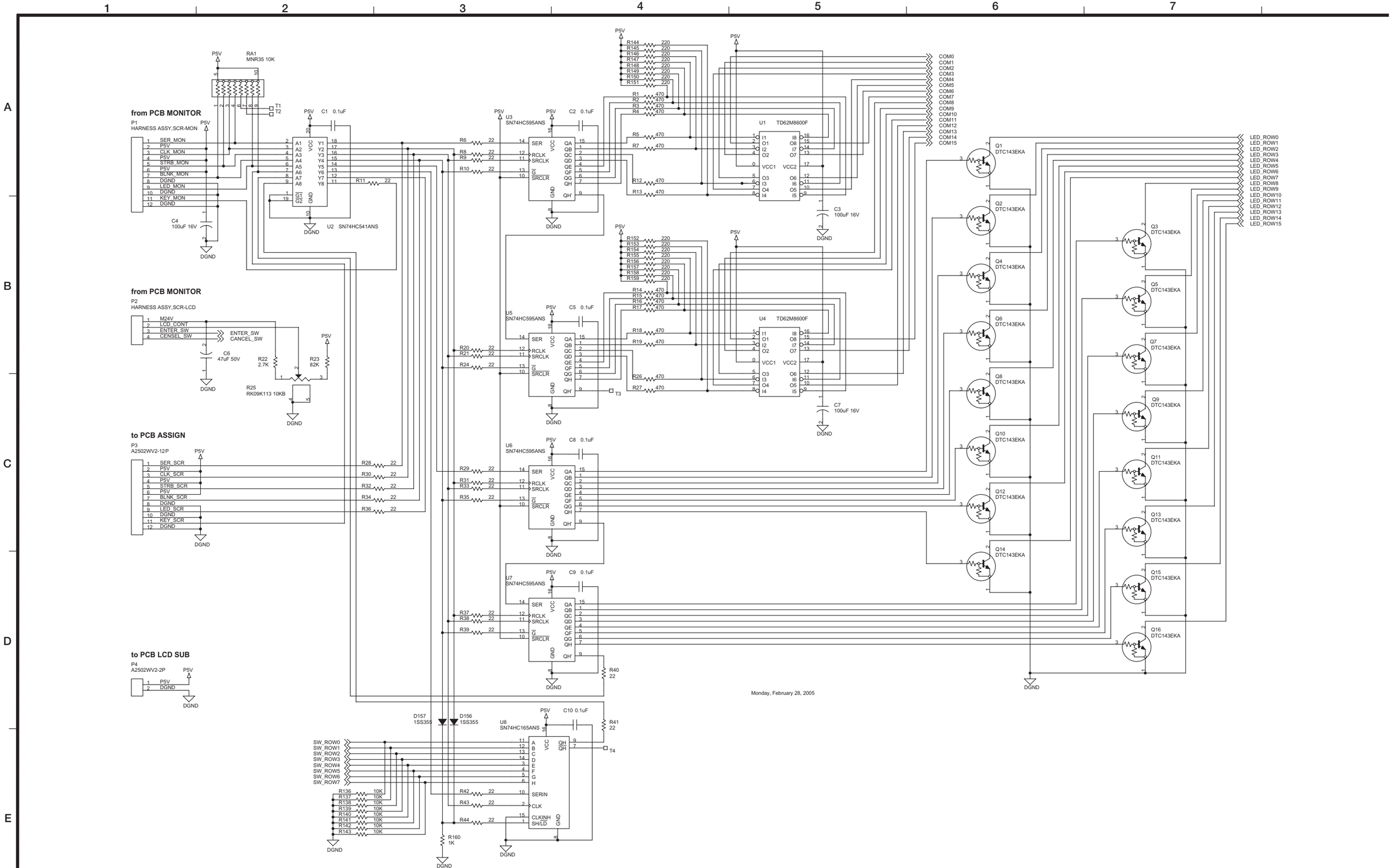
D125 APK3020SECK(ORG)
D126 APK3020SECK(ORG)
D127 APK3020SECK(ORG)
D128 APK3020SURCK(RED)
T1
T3
T7
T11
T15
T19
J3 DF15(1.8)-20DS
T2
T5
T9
T13
T17
T20
J4 DF15(1.8)-20DS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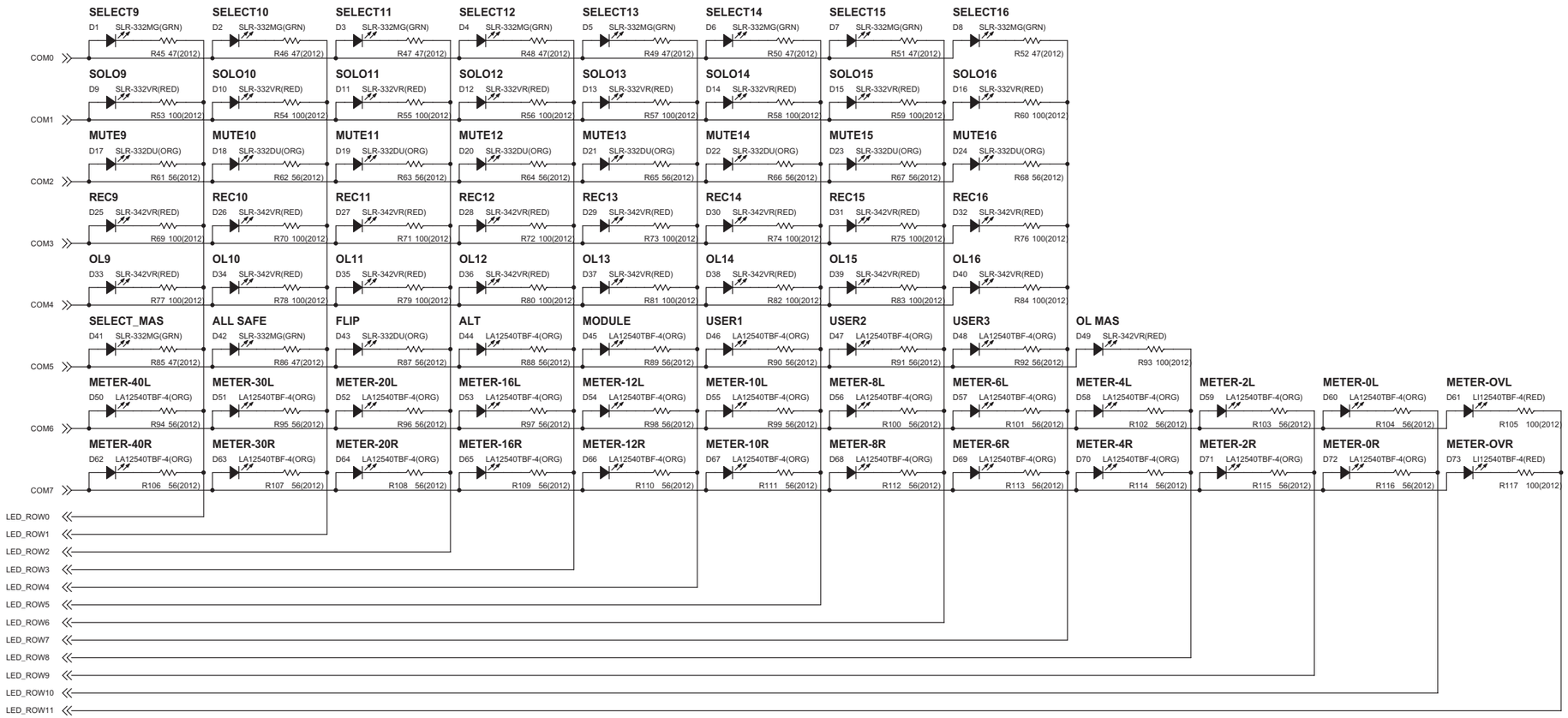
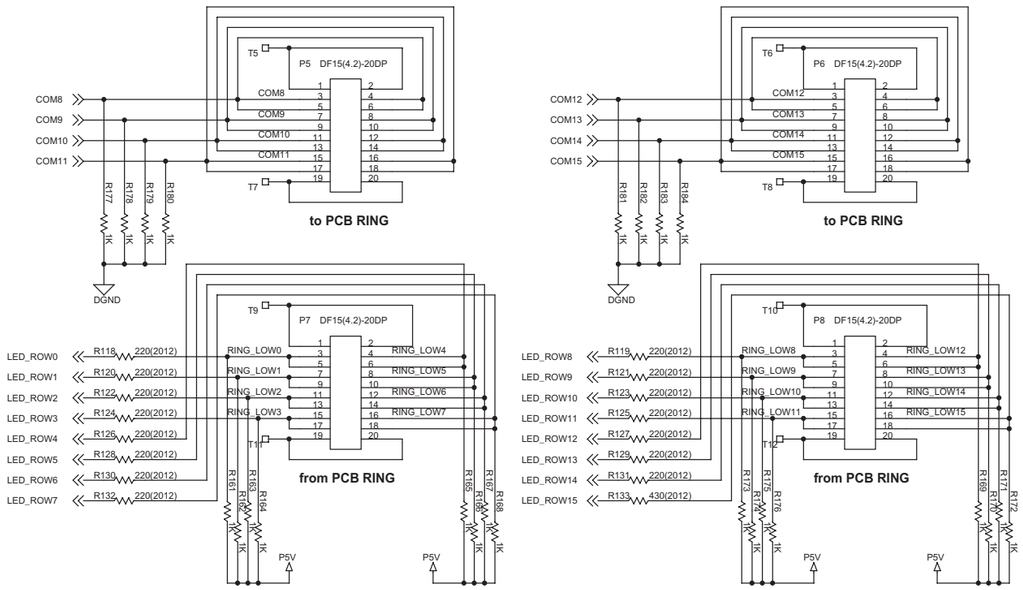
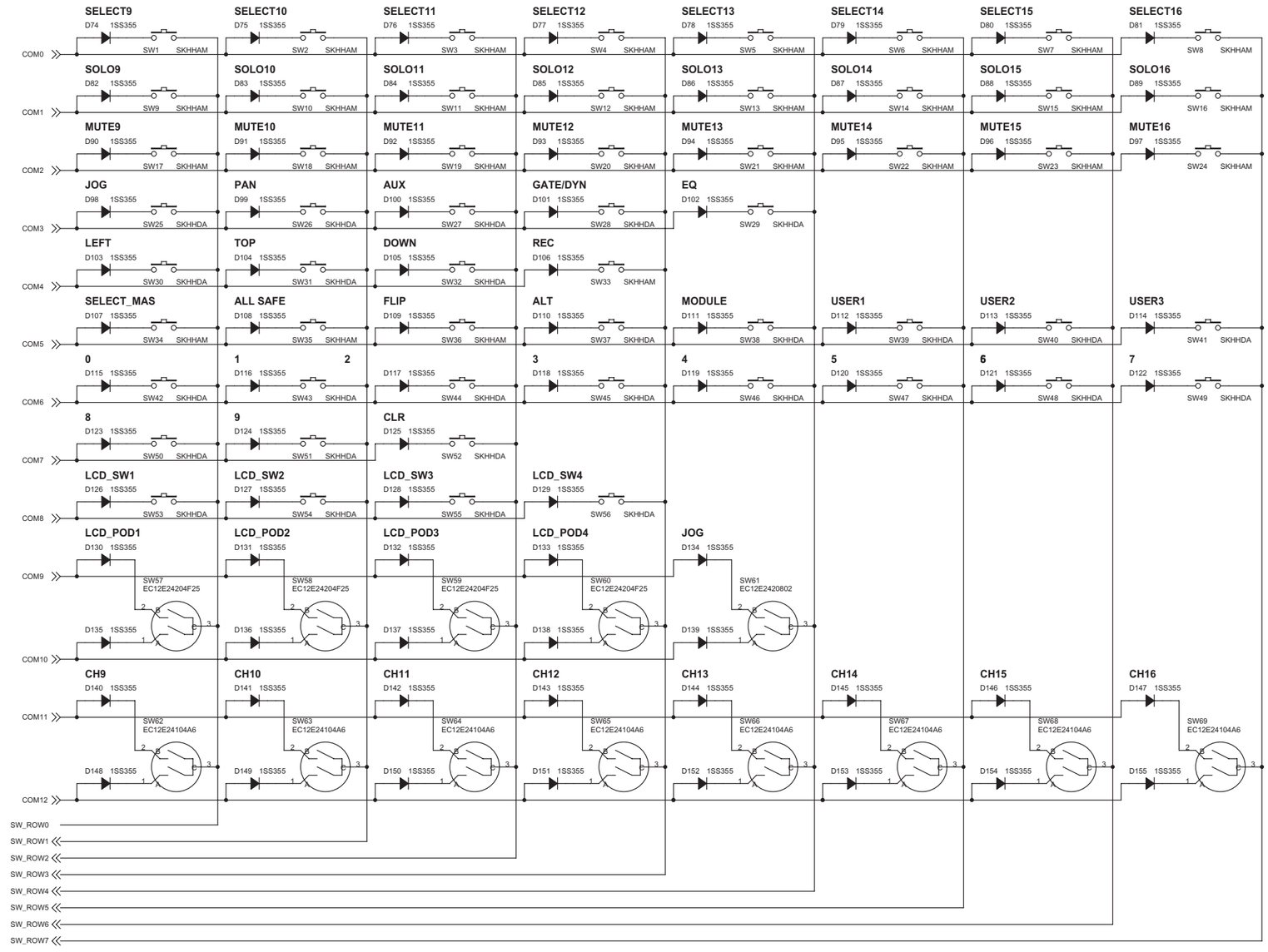
7
A
B
C
D
E
from PCB MONITOR
P1
HARNESS ASSY,SCR-MON
SER_MON
CLK_MON
STRB_MON
BLNK_MON
LED_MON
KEY_MON
DGND
from PCB MONITOR
P2
HARNESS ASSY,SCR-LCD
M24V
LCD_CONT
ENTER_SW
CENSEL_SW
to PCB ASSIGN
P3
A2502WV2-12P
SER_SCR
CLK_SCR
STRB_SCR
BLNK_SCR
LED_SCR
KEY_SCR
to PCB LCD SUB
P4
A2502WV2-2P
P5V
DGND
RA1
MNR35 10K
T1
T2
C1 0.1uF
U2 SN74HC541ANS
C4
100uF 16V
R11 22
U3
SN74HC595ANS
C2 0.1uF
R6 22
R8 22
R9 22
R10 22
U5
SN74HC595ANS
C5 0.1uF
R20 22
R21 22
R24 22
U6
SN74HC595ANS
C8 0.1uF
R28 22
R29 22
R30 22
R31 22
R32 22
R33 22
R34 22
R35 22
R36 22
U7
SN74HC595ANS
C9 0.1uF
R37 22
R38 22
R39 22
R40
22
SER
RCLK
SRCLK
SRCLR
QA
QB
QC
QD
QE
QF
QG
QH
QH'
U1 TD62M8600F
U4 TD62M8600F
R1 470
R2 470
R3 470
R4 470
R5 470
R7 470
R12 470
R13 470
R14 470
R15 470
R16 470
R17 470
R18 470
R19 470
R26 470
R27 470
C3
100uF 16V
C7
100uF 16V
T3
R144 220
R145 220
R146 220
R147 220
R148 220
R149 220
R150 220
R151 220
R152 220
R153 220
R154 220
R155 220
R156 220
R157 220
R158 220
R159 220
COM0
COM1
COM2
COM3
COM4
COM5
COM6
COM7
COM8
COM9
COM10
COM11
COM12
COM13
COM14
COM15
Q1 DTC143EKA
Q2 DTC143EKA
Q3 DTC143EKA
Q4 DTC143EKA
Q5 DTC143EKA
Q6 DTC143EKA
Q7 DTC143EKA
Q8 DTC143EKA
Q9 DTC143EKA
Q10 DTC143EKA
Q11 DTC143EKA
Q12 DTC143EKA
Q13 DTC143EKA
Q14 DTC143EKA
Q15 DTC143EKA
Q16 DTC143EKA
LED_ROW0
LED_ROW1
LED_ROW2
LED_ROW3
LED_ROW4
LED_ROW5
LED_ROW6
LED_ROW7
LED_ROW8
LED_ROW9
LED_ROW10
LED_ROW11
LED_ROW12
LED_ROW13
LED_ROW14
LED_ROW15
D157 1SS355
D156 1SS355
U8
SN74HC165ANS
C10 0.1uF
R41
22
T4
SW_ROW0
SW_ROW1
SW_ROW2
SW_ROW3
SW_ROW4
SW_ROW5
SW_ROW6
SW_ROW7
R136 10K
R137 10K
R138 10K
R139 10K
R140 10K
R141 10K
R142 10K
R143 10K
R42 22
R43 22
R44 22
R160
1K
A
B
C
D
E
F
G
H
SERIN
CLK
CLKINH
SH/LD
C6
47uF 50V
ENTER_SW
CANCEL_SW
R22
2.7K
R23
82K
R25
RK09K113 10KB
Monday, February 28, 2005

1 2 3 4 5 6 7

A B C D E



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SELECT14 D79 1SS355 SW6 SKHHAM
SELECT15 D80 1SS355 SW7 SKHHAM
SELECT16 D81 1SS355 SW8 SKHHAM
COM0
SOLO9 D82 1SS355 SW9 SKHHAM
SOLO10 D83 1SS355 SW10 SKHHAM
SOLO11 D84 1SS355 SW11 SKHHAM
SOLO12 D85 1SS355 SW12 SKHHAM
SOLO13 D86 1SS355 SW13 SKHHAM
SOLO14 D87 1SS355 SW14 SKHHAM
SOLO15 D88 1SS355 SW15 SKHHAM
SOLO16 D89 1SS355 SW16 SKHHAM
COM1
MUTE9 D90 1SS355 SW17 SKHHAM
MUTE10 D91 1SS355 SW18 SKHHAM
MUTE11 D92 1SS355 SW19 SKHHAM
MUTE12 D93 1SS355 SW20 SKHHAM
MUTE13 D94 1SS355 SW21 SKHHAM
MUTE14 D95 1SS355 SW22 SKHHAM
MUTE15 D96 1SS355 SW23 SKHHAM
MUTE16 D97 1SS355 SW24 SKHHAM
COM2
JOG D98 1SS355 SW25 SKHHDA
PAN D99 1SS355 SW26 SKHHDA
AUX D100 1SS355 SW27 SKHHDA
GATE/DYN D101 1SS355 SW28 SKHHDA
EQ D102 1SS355 SW29 SKHHDA
COM3
LEFT D103 1SS355 SW30 SKHHDA
TOP D104 1SS355 SW31 SKHHDA
DOWN D105 1SS355 SW32 SKHHDA
REC D106 1SS355 SW33 SKHHAM
COM4
SELECT_MAS D107 1SS355 SW34 SKHHAM
ALL SAFE D108 1SS355 SW35 SKHHAM
FLIP D109 1SS355 SW36 SKHHAM
ALT D110 1SS355 SW37 SKHHDA
MODULE D111 1SS355 SW38 SKHHDA
USER1 D112 1SS355 SW39 SKHHDA
USER2 D113 1SS355 SW40 SKHHDA
USER3 D114 1SS355 SW41 SKHHDA
COM5
0 D115 1SS355 SW42 SKHHDA
1 2 D116 1SS355 SW43 SKHHDA
D117 1SS355 SW44 SKHHDA
3 D118 1SS355 SW45 SKHHDA
4 D119 1SS355 SW46 SKHHDA
5 D120 1SS355 SW47 SKHHDA
6 D121 1SS355 SW48 SKHHDA
7 D122 1SS355 SW49 SKHHDA
COM6
8 D123 1SS355 SW50 SKHHDA
9 D124 1SS355 SW51 SKHHDA
CLR D125 1SS355 SW52 SKHHDA
COM7
LCD_SW1 D126 1SS355 SW53 SKHHDA
LCD_SW2 D127 1SS355 SW54 SKHHDA
LCD_SW3 D128 1SS355 SW55 SKHHDA
LCD_SW4 D129 1SS355 SW56 SKHHDA
COM8
LCD_POD1 D130 1SS355 SW57 EC12E24204F25 D135 1SS355
LCD_POD2 D131 1SS355 SW58 EC12E24204F25 D136 1SS355
LCD_POD3 D132 1SS355 SW59 EC12E24204F25 D137 1SS355
LCD_POD4 D133 1SS355 SW60 EC12E24204F25 D138 1SS355
JOG D134 1SS355 SW61 EC12E2420802 D139 1SS355
COM9
COM10
CH9 D140 1SS355 SW62 EC12E24104A6 D148 1SS355
CH10 D141 1SS355 SW63 EC12E24104A6 D149 1SS355
CH11 D142 1SS355 SW64 EC12E24104A6 D150 1SS355
CH12 D143 1SS355 SW65 EC12E24104A6 D151 1SS355
CH13 D144 1SS355 SW66 EC12E24104A6 D152 1SS355
CH14 D145 1SS355 SW67 EC12E24104A6 D153 1SS355
CH15 D146 1SS355 SW68 EC12E24104A6 D154 1SS355
CH16 D147 1SS355 SW69 EC12E24104A6 D155 1SS355
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COM12
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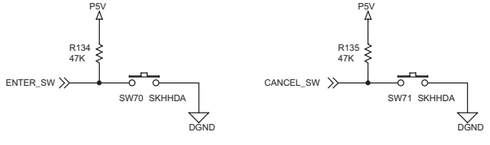
SW_ROW1
SW_ROW2
SW_ROW3
SW_ROW4
SW_ROW5
SW_ROW6
SW_ROW7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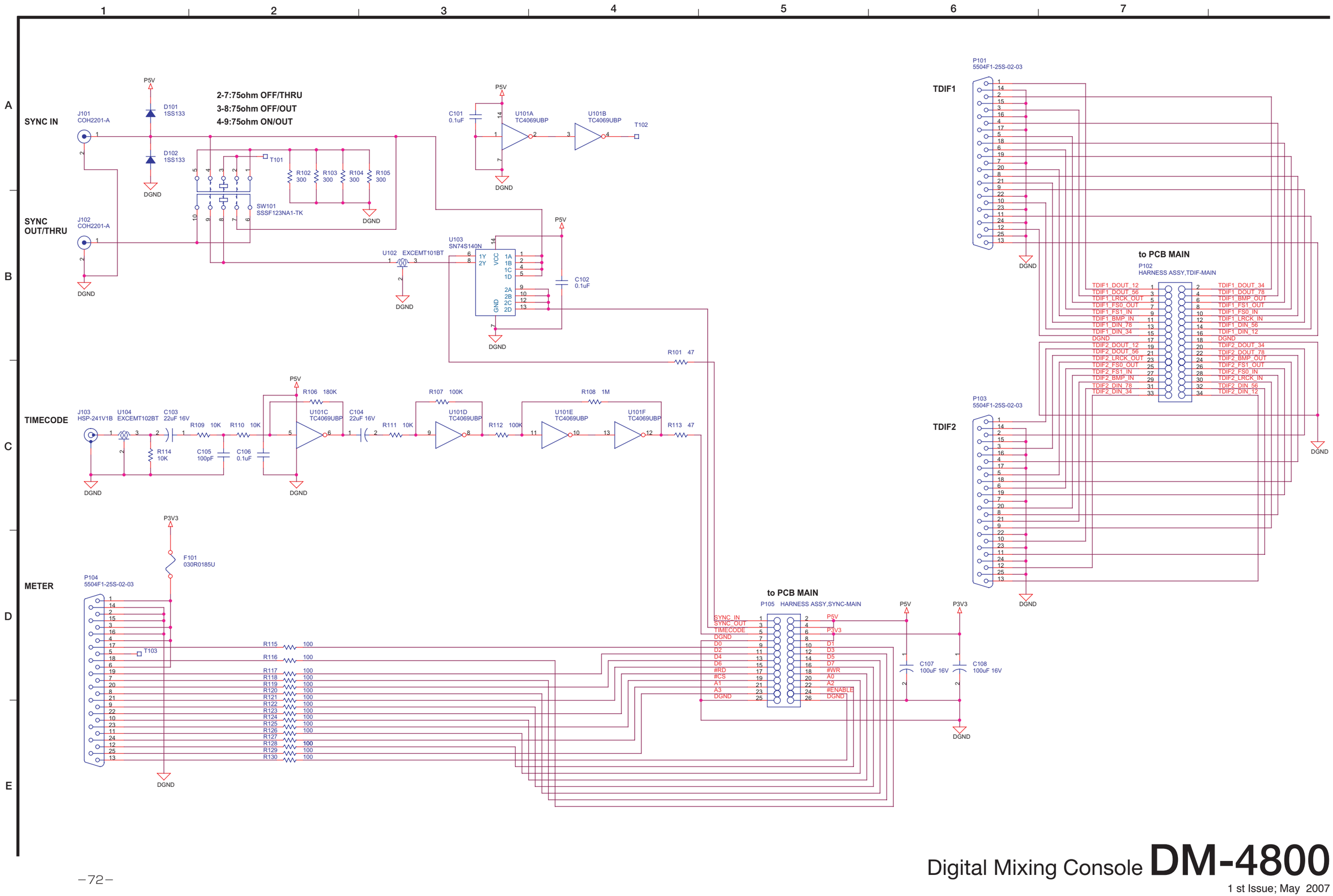
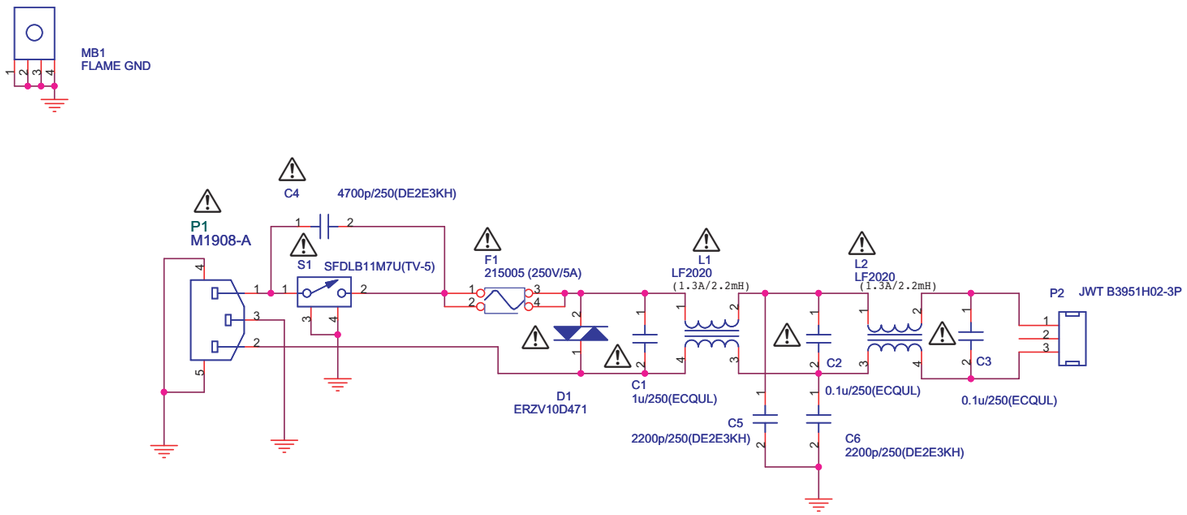
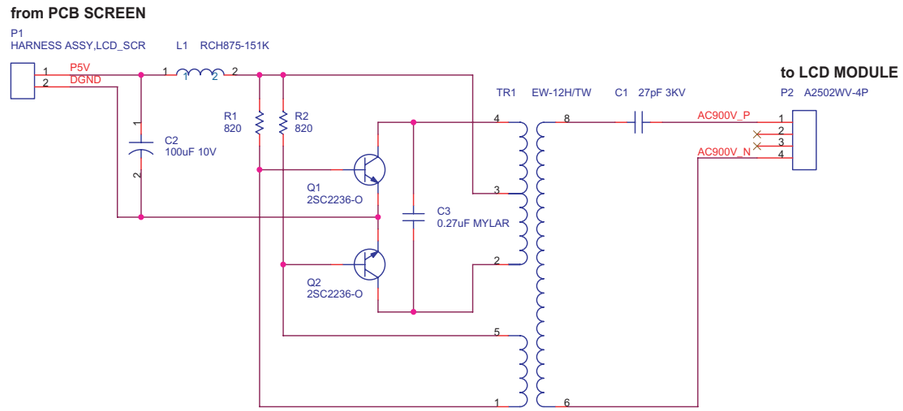
R134 47K
ENTER_SW
SW70 SKHHDA
DGND
P5V
R135 47K
CANCEL_SW
SW71 SKHHDA
DGND


SYNC IN
SYNC OUT/THRU
TIMECODE
METER
TDIF1
TDIF2
2-7:75ohm OFF/THRU
3-8:75ohm OFF/OUT
4-9:75ohm ON/OUT
J101 COH2201-A
J102 COH2201-A
J103 HSP-241V1B
U104 EXCEMT102BT
C103 22uF 16V
D101 1SS133
D102 1SS133
T101
SW101 SSSF123NA1-TK
R102 300
R103 300
R104 300
R105 300
C101 0.1uF
U101A TC4069UBP
U101B TC4069UBP
T102
U102 EXCEMT101BT
U103 SN74S140N
C102 0.1uF
R101 47
R106 180K
R107 100K
R108 1M
R109 10K
R110 10K
R111 10K
R112 100K
R113 47
R114 10K
C104 22uF 16V
C105 100pF
C106 0.1uF
U101C TC4069UBP
U101D TC4069UBP
U101E TC4069UBP
U101F TC4069UBP
P5V
P3V3
DGND
F101 030R0185U
P104 5504F1-25S-02-03
T103
R115 100
R116 100
R117 100
R118 100
R119 100
R120 100
R121 100
R122 100
R123 100
R124 100
R125 100
R126 100
R127 100
R128 100
R129 100
R130 100
P101 5504F1-25S-02-03
P103 5504F1-25S-02-03
to PCB MAIN
P102 HARNESS ASSY,TDIF-MAIN
P105 HARNESS ASSY,SYNC-MAIN
SYNC_IN
SYNC_OUT
TIMECODE
DGND
D0
D2
D4
D6
#RD
#CS
A1
A3
P5V
P3V3
D1
D3
D5
D7
#WR
A0
A2
#ENABLE
C107 100uF 16V
C108 100uF 16V
TDIF1_DOUT_12
TDIF1_DOUT_56
TDIF1_LRCK_OUT
TDIF1_FS0_OUT
TDIF1_FS1_IN
TDIF1_BMP_IN
TDIF1_DIN_78
TDIF1_DIN_34
TDIF1_DOUT_34
TDIF1_DOUT_78
TDIF1_BMP_OUT
TDIF1_FS1_OUT
TDIF1_FS0_IN
TDIF1_LRCK_IN
TDIF1_DIN_56
TDIF1_DIN_12
TDIF2_DOUT_12
TDIF2_DOUT_56
TDIF2_LRCK_OUT
TDIF2_FS0_OUT
TDIF2_FS1_IN
TDIF2_BMP_IN
TDIF2_DIN_78
TDIF2_DIN_34
TDIF2_DOUT_34
TDIF2_DOUT_78
TDIF2_BMP_OUT
TDIF2_FS1_OUT
TDIF2_FS0_IN
TDIF2_LRCK_IN
TDIF2_DIN_56
TDIF2_DIN_12

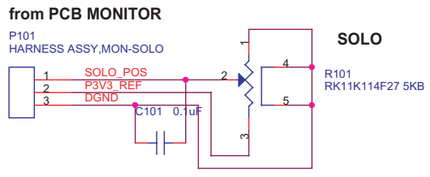
PCB, INLET FW



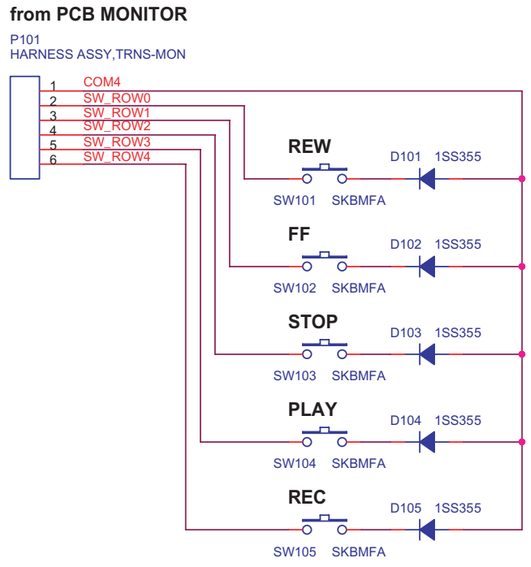
PCB, LCD SUB



PCB, SOLO



PCB, TRANSPORT



Whale Wiring Diagram

PCB, ASSIGN DM
P3 P4 P5 P6
J3 J4 J1 J2
PCB, RING LED DM Channel 1-8
P2
P1 12P P2

PCB, MODULE DM
P3 P4 P5 P6
J3 J4 J1 J2
PCB, RING LED DM Channel 9-16
P1 12P P3

PCB, SCREEN DM
P5 P6 P7 P8
J3 J4 J1 J2
PCB, RING LED DM Channel 17-24
P4 2P

PCB, LCD SUB DM
P1 P2
4P
LCD module

PCB, TRANSPORT DM
P1
6P

PCB, LAYER DM
P1 P2
5P 14P

PCB, SOLO DM
P1
3P
P8 P7 P5 P6

P2 P1
12P
4P

PCB, MONITOR DM
P3
P4
P1 P2
14P FFC
12P
7P

PCB, INPUT JACK DM (1) Mic/Line 1-8
16P Flat x 4
P1 P2 P3 P4 P5
3P
P1 P2 P3 P4 P8
PCB, INPUT AMP DM (1)
12P Flat x 2
P5 P6 P7
5P
P13 P9 P10 P11 P12
P15
P14 6P P15
PCB, INPUT AD DM (1) Mic/Line 1-8
P16

PCB, INPUT JACK DM (9) Mic/Line 9-6
16P Flat x 4
P1 P2 P3 P4 P5
3P
P1 P2 P3 P4 P8
PCB, INPUT AMP DM (9)
12P Flat x 2
P5 P6 P7
5P
13P P13 P9 P10 P11 P12
P15
6P P14 P15
PCB, INPUT AD DM (9) Mic/Line 9-16
P16

PCB, INPUT JACK DM (17) Mic/Line 17-24
16P Flat x 4
P1 P2 P3 P4 P5
3P
P1 P2 P3 P4 P8
PCB, INPUT AMP DM (17)
12P Flat x 2
P5 P6 P7
5P
13P P13 P9 P10 P11 P12
P15
6P P14 P15
PCB, INPUT AD DM (17) Mic/Line 17-24
P16

PCB, MASTER JACK DM
P001 P004
P2 14P Shield
P3
14P Flat 5P Flat 12P Shield
P12 P1
P7(for T/B MIC)
PCB MASTER AMP DM
P10 P11 P14
11P Flat 7P Flat 5P
13P P2 P6 P7 P13 P8
P1 P15(for JTAG) P9
PCB MASTER ADDA DM
P3 P4 P5

9P
9P
8P

P3 P5
10P
9P
P4
P1
for JTAG P2
PCB MOTHER DM Slot 1-2

PCB, SYNC DM
P105 26P Flat
P102 34P Flat
P1(D-sub25P:TDIF1)
P3(D-sub25P:TDIF2)
P4(D-sub25P:METER)

PCB, ICE
Use only debug mode
P3 12P P37
P2 7P P35
40P Flat
P29
34P Flat (Twist pair)
P30
40P Flat
P31(for Whale)
34P Flat (Twist pair)
P32(for Whale)

P8 P1 P27 P10 USB P11 Dsub25P (TDIF3) P9 Dsub25P (Cascade)
P19(XLR:Din1)
P20(XLR:Din2)
P21(XLR:Dout1)
P22(XLR:Dout2)
P23(RCA:Din12)
P24(RCA:Dout12)

for JTAG P2 P4 P5 P3 P34 14P P6
for ICE debug 120P P36
for DDMP check P15

PCB, MAIN DM

P26 9P
P25 7P
80P P14 J3
100P P13 J1
PCB, DDMP2 DM

P14
P9
P7
PCB, POWER SUB DM
P12
P11
P15(for Fan)
P8 P10 P13

PCB, INLET DM
P2
3P
CN1

10P P1 7P CN201
8P P2 11P CN202
SW Power

PCB, EXT JACK DM
P100 P200
12P Flat 13P Flat
P1 P2
PCB, EXT ADDA DM
P3 P4 12P

8P

PCB MOTHER DM Slot 3-4
P4
P1
for JTAG P2
P3 P5

P201 26P Flat
PCB, MIDI DM

P2 50P Flat
P1(CF media)
PCB, CF CARD DM

40P Flat
40P Flat
40P Flat
P1
P1
P1
PCB, FADER FE8 Channel 1-8
PCB, FADER FE8 Channel 9-16
PCB, FADER RM FW Channel 17-24

26P Flat (Twist pair)

9P
10P

TASCAM TEAC Professional Division

Whale_wiring_dia.cnv Rev: 2

TEAC

TECHNICAL INFORMATION

No. **0931**

DATE 23rd Oct 2009

TASCAM DM-4800 V1.62 Firmware Update

The firmware V1.62 for DM-4800 has been released with some bug fixes.
V1.62 on DM-4800 has been installed since SN 0420001.

Bug fixes:

1. Delay time in EFFECT was wrong when Fs (Sampling Frequency) is set to 44.1kHz or 88.1kHz. –fixed-

How to Firmware Update

Refer to Service Manual “4. Firmware Update” page 20.

Visit the ROM Data Library in the TASCAM Service HP website to download firmware.

TEAC

TECHNICAL INFORMATION

No. **1008**

DATE 19th March 2010

TASCAM DM-4800 V1.70 Firmware Update

The firmware V1.70 for DM-4800 has been released with some new features, improvements, and bug fixes from V1.62

New features:

1. It supports IF-AV/DM (Aviom Pro16 A-Net Interface).
2. It supports IF-CB/DM (Cobra Net Interface Card).

Improvements and Bug fixes:

1. Digital Signal was not come out from Digital Output if the Fs Converter was set to On and Digital Input signal was not come to Digital Input. – fixed-
2. Studio Out signal did mute momentarily when SOLO was changed. – fixed –
3. When the RS-422 command (Sony P2 control) was sent, unexpected function might happen on the target machine. – fixed -
   E.g. Pressing REC key during recording on target machine made Punch Out (Record off). It should keep Recording.
4. When IF-FW/DMmk2 was installed into Slot 3, Track9-32 in Slot 3 could not be selected as Output. – fixed -

How to Firmware Update:

Refer to DM-4800 Service Manual “4. Firmware Update” page 20.

Visit the ROM Data Library in the TASCAM Service HP website to download Firmware.

TEAC

TECHNICAL INFORMATION

No. **1015**

DATE 28th Apr. 2010

TASCAM DR-680 Countermeasure for LCD noise

The countermeasure for LCD noise on MIC Amp of DR-680 has been found.
The countermeasure for it has been applied since SN 0020001 on DR-680.

Symptom:

The LCD noise can be heard from Output and headphone out when the MIC gain of Ch3, 4, 5and 6 is increased.

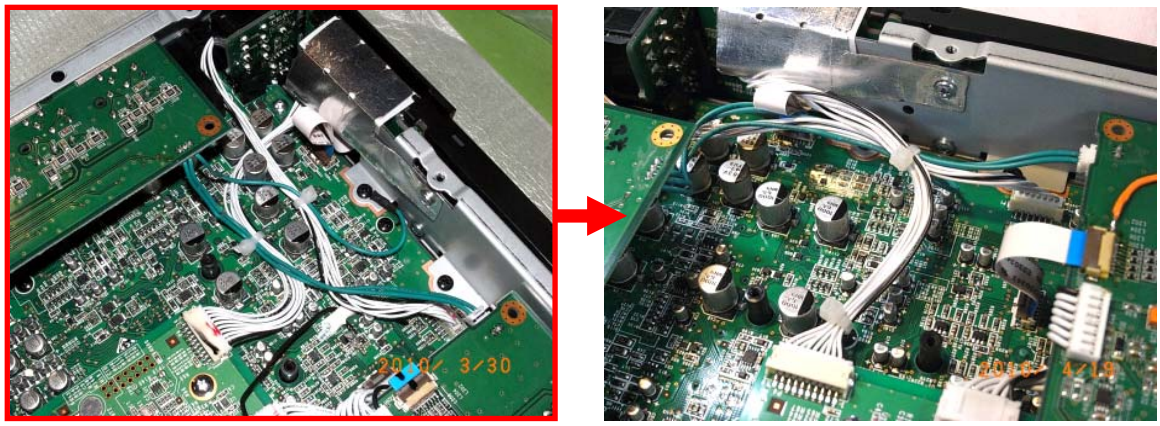
Cause:

If the inside LCD wire is close to the electrolytic capacitors of MIC amps, the LCD noise come to Output through the capacitor.

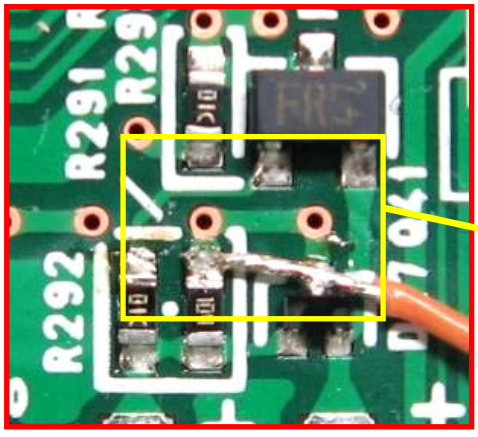
Remedy:

The wiring for LCD cable should be located far from the capacitors which are for MIC amp of Ch 3, 4, 5 and 6 (C49, C65, C88, C110, C84, C85, C106, C107).

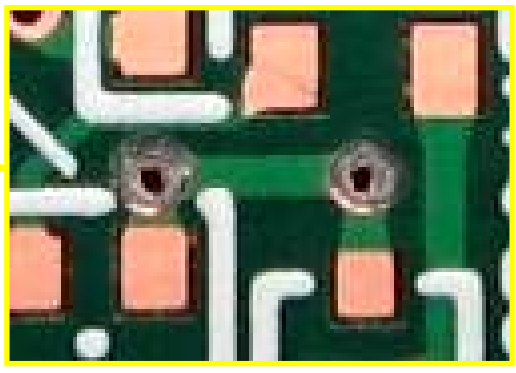
Bad wiring due to LCD wire contact to the Capacitors **Good Wiring**



Note: Some DR-680 of 1st Lot (SN 001xxxx) may have some other noise (very small) from Headphone with Max. Level when MIC Gain is set to Max. The cause is that the DC 7V line may not separate from DC 12V line. Please check if the Pin 3 of P1 and D12 on Power PCB are not shorted. If it is shorted, do the following modification. Remove the round mark of D27 and R291 (Pattern Cut). Refer to the below picture.



The example of removing the round mark.



TEAC

TECHNICAL INFORMATION

No. **1203**

DATE 10th Apr. 2012

TASCAM TMCompanion V1.50 for Windows 7

"TMCompanion for Windows Ver.1.50 " was confirmed operation on Windows7.
(for DM-4800 & DM-3200)

"TMCompanion for Windows Ver.1.50"
Operating System Requirements;

- Microsoft Windows Vista (32bit/64bit)
- Microsoft Windows XP (32bit/64bit)
- Microsoft Windows 7 (32bit/64bit)

TEAC

TECHNICAL INFORMATION

No. **0803**

TASCAM DM-4800 V1.60 Firmware Update

DATE 16th May 2008

The firmware V1.60 for DM-4800 has been released with the following maintenance from V1.50. V1.60 on the products with S/N 0240001 and higher:

Maintenance:

The following problems in V1.50 have been fixed or improved.

Option Slot Cards

1. At 88.2 kHz or 96 kHz sampling rates, some master clock settings would result in audio transferred from an IF-TD/DM option card to have reversed Odd and Even channels. - Fixed -
2. With an IF-FW/DM MKII card in slot 1 and an IF-SM/DM card in Slot 3, the mixer would not be able to boot correctly. - Fixed -
3. With an IF-SM/DM installed, pressing the MONITOR SEL Key produced a click noise in the output. - Fixed -
4. With the IF-SM/DM, and Bass Management set to ON, changing the LPF setting of the Bass Management Section would result in noise in the SubWoofer output channel. - Fixed -
5. Changing the Monitor level of the IF-SM/DM would result in noise. - Fixed -
6. With an IF-SM/DM installed, the front panel MONO key normally toggles the IF-SM/DM Downmix function On or Off. This function did not occur correctly. - Fixed -
7. When the output gain of the IF-SM/DM was set to a large value, activating a Buss Mute resulted in the Mute occurring as a fade over a noticeable amount of time. - Fixed -

Remote Control

8. If the Internal Timecode Generator (MTC Generate) was started and then deleted from the Control List, the MTC Timecode would not stop. - Fixed -
9. The mixer is now better able to lock to incoming MTC Timecode that has Jitter. - Improved -
10. At 30NDF frame rate, MTC output could occasionally produce incorrect Timecode values. - Fixed -.

11. The operation of the Shuttle and JOG controls using the MMC protocol has been improved.
12. Timecode Locations were incorrectly stored. - Fixed -

Maintenance Items for when connected to TMCompanion

13. With the TMCompanion Meter screen open, rebooting the computer would result in the DM-4800 becoming unresponsive. - Fixed -

Monitor Section

14. Feedback noise was created when the TO SLATE Key was pressed. - Fixed -
15. Click noise that occurred when the TO SLATE or MONITOR SEL Keys were pressed. – Fixed –

Project

16. When a project is loaded, the front panel Encoder Mode LED would not reflect the setting from the saved project. - Fixed -
17. When Shutting Down the mixer, even if the Current Project was not Protected, the following popup message would sometimes be displayed.
"Current Project is protected." "Can't STORE current project." This problem has been fixed.

Operation

18. When changing between an FS of 48kHz and 96kHz, the EQ settings were not correctly restored.
    - Fixed –

Factory Default Settings:

19. The Factory Default Setting for FADER SENSITIVITY has been changed from 3.3kHz to2.0kHz.

Known issues in V1.60:

Multiple IF-AE/DM cards and clock master.
If one of the IF-AE/DM cards is selected as the clock master, attempting to switch the master clock to another IF-AE/DM card will result in noise in the mixer.
To avoid this, do not change the clock source.

Visit the ROM Data Library in the TASCAM Service HP website to download firmware and refer to DM-4800 V1.60 Update Information for further details.

TEAC

TECHNICAL INFORMATION

No. **0914**

TASCAM DM-4800, V1.61 Firmware Update

DATE 23rd April 2009

The firmware V1.61 for DM-4800 has been released with some improvements from V1.60.
V1.61 on DM-4800 has been installed since SN 0350001.

Improvement and Bug fixes:

1. In case that the SEL 1-6 except STEREO is selected in Monitoring and the source for it is assigned to either “Digital IN1” or “Digital IN2” or “2TR (ANALOG)” or “Slot 1-4”, when the Automation is started or the Snapshot is recalled, Monitor OUTPUT (CR and STUDIO) was muted. –fixed-

2. In case that “From CONTROL ROOM” is selected on OUTPUT in STUDIO SETUP, When the source of CONTROL ROOM SELECT is changed to either “Digital IN1” or “Digital IN2” or “2TR (ANALOG)” or “Slot 1-4”, the Click noise might occur from STUDIO Output. –fixed-

3. When the Monitor select key is pressed, the Click noise might occur from STUDIO Output. –fixed-

How to Firmware Update

Refer to Service Manual “4. Firmware Update ” page 20.

Visit the ROM Data Library in the TASCAM Service HP website to download firmware.

TECHNICAL INFORMATION

No. **0928**

DATE 8th Oct 2009

TASCAM DM-3200/4800 Countermeasure for Effect Noise

The countermeasure for Effect Noise on DM-3200/4800 has been found.
The modification for it has been applied since SN 04560001 on DM-3200 and since SN 0410001 on DM-4800.

Symptom:

Pulse Noise with Effect sounds occur intermittently from Stereo Out with initialize setting.
(Effect2 sends out the pulse noise with reverb intermittently, even no signal is sent to Effect2)

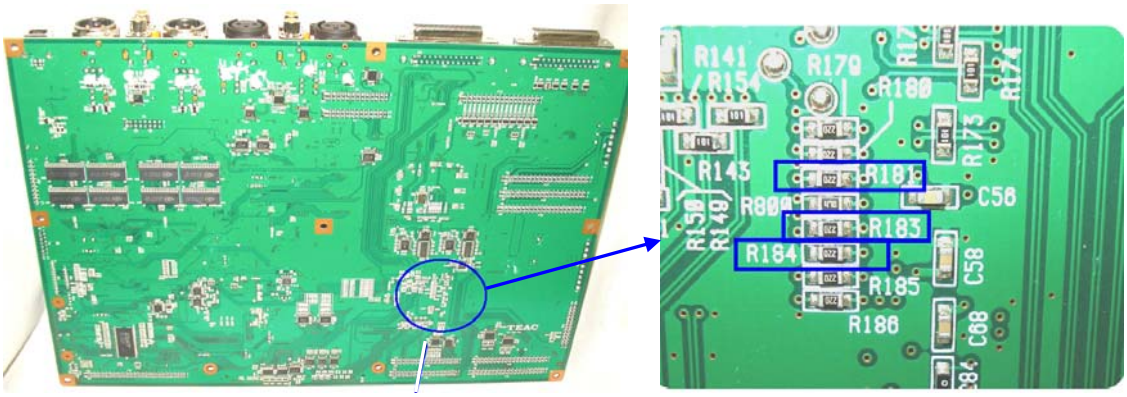
Cause:

The timing between U15 (FPGA) and U37 (DSP) may be shifted incorrectly on the new MAIN PCB (E902855-00C).

Remedy:

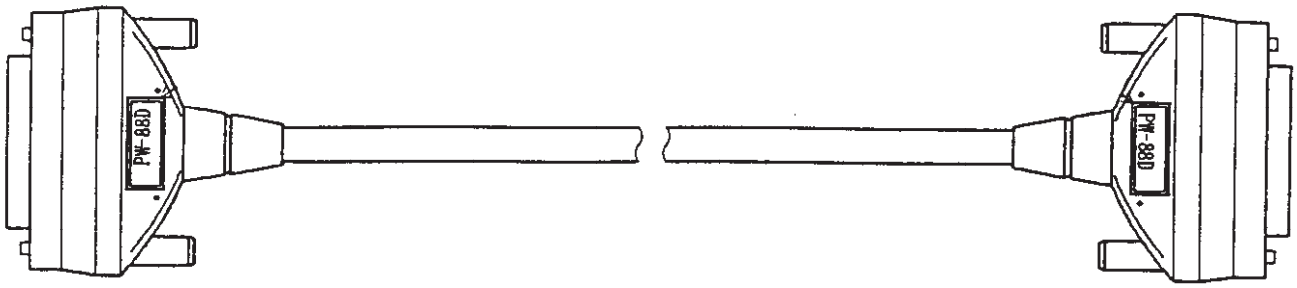
The following resister value of the Clock and Data line in the MAIN PCB should be changed as follows.

R181	22ohm > 47ohm	(R0156324	RD,1/10W 47 OHM J0603G)
R183	22ohm > 0 ohm	(R0169414	RD,1/10W 0.0 OHM F0603G)
R184	22ohm > 0 ohm	(R0169414	RD,1/10W 0.0 OHM F0603G)

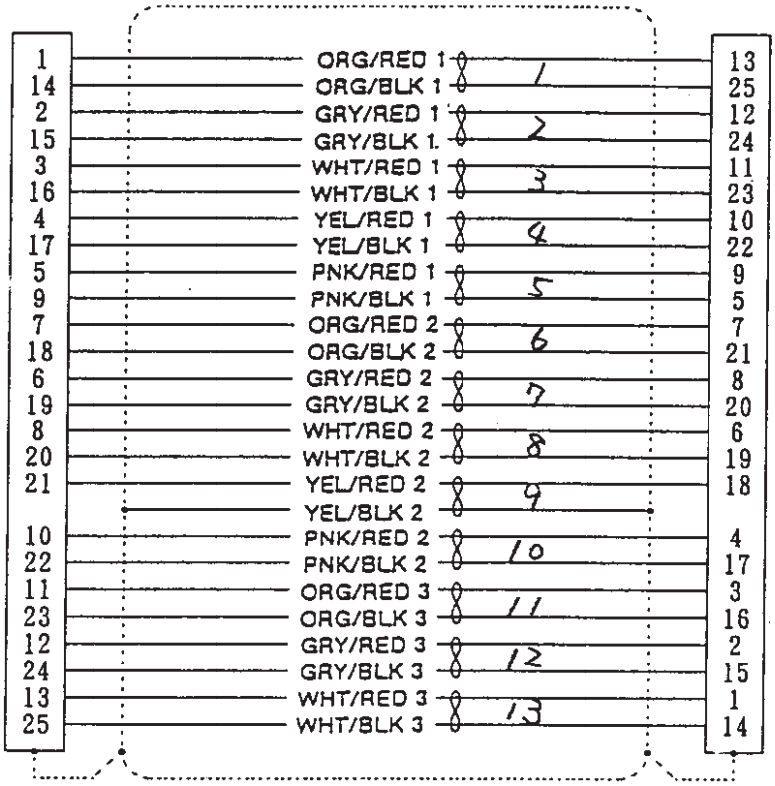


Note.
1.The DM-3200s of Lot 51, Lot 54, Lot 55, and Lot56 may have the above problem.
2.The DM-4800s of Lot 36, Lot 39, Lot 40, and Lot41 may have the above problem.

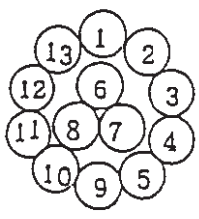
THE CABLES FOR TDIF



Male Male

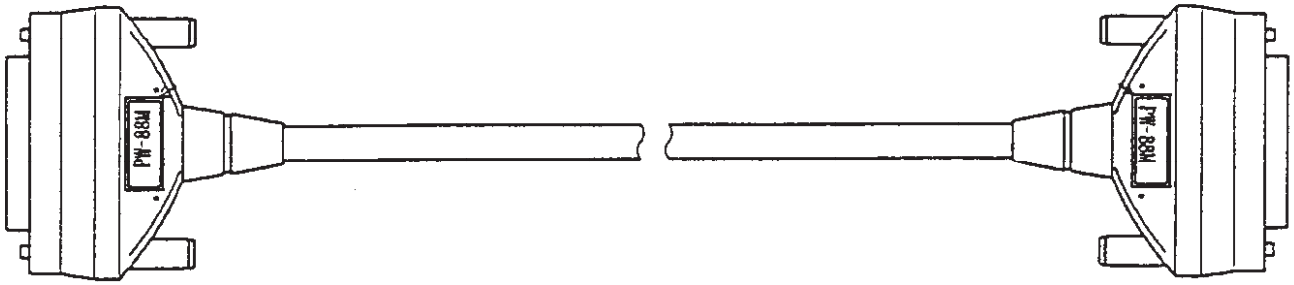


means Twisted wire

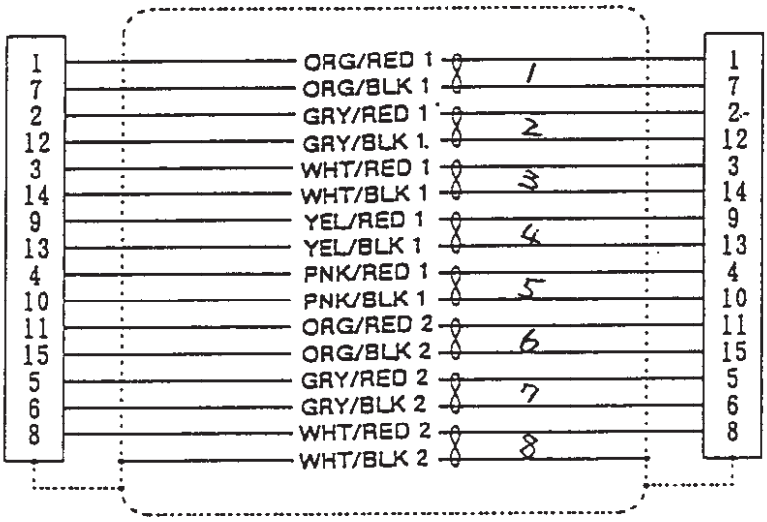


2 pcs.	1315 2908-	Connector Plug, 25 pin D-Sub (Male)
2 pcs.	5336 3581-00	Case Assy, 25 pin D-Sub

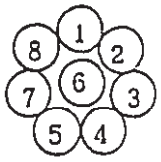
THE CABLES FOR METER



Female Male

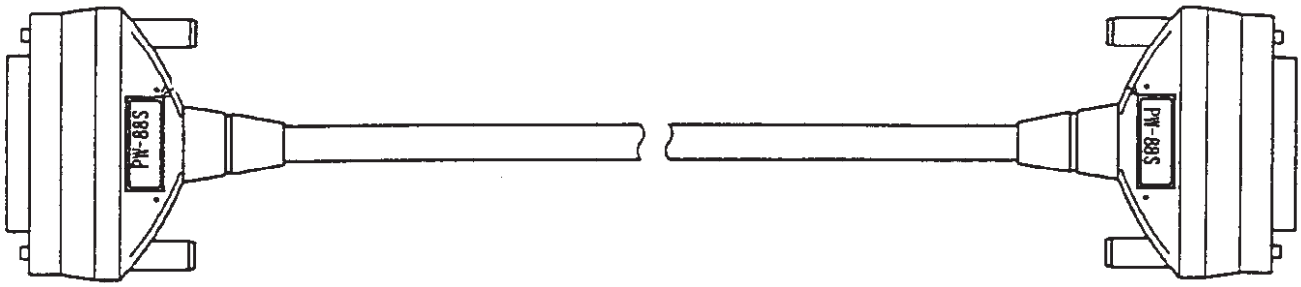


means Twisted wire

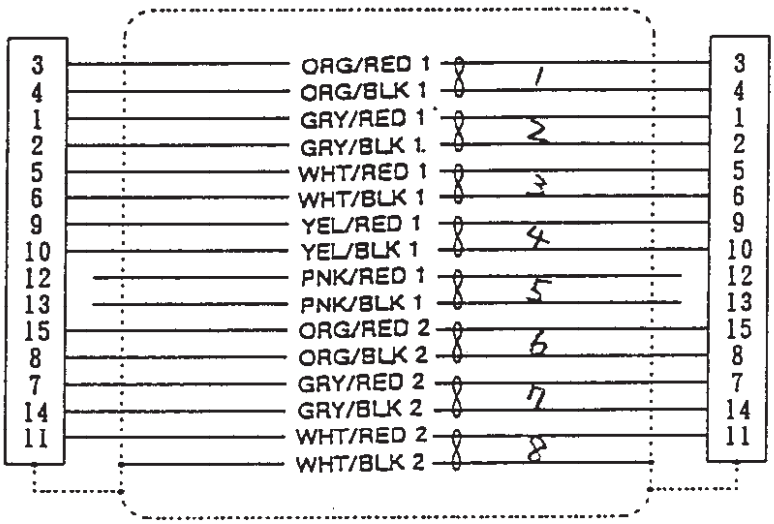


1 pce.	5336 3570-00	Connector Plug, 15 pin D-Sub (Male)
1 pce.	1315 2907-	Connector Socket, 15 pin D-Sub (Female)
2 pcs.	5336 3580-00	Case Assy, 15 pin D-Sub

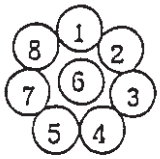
THE CABLES FOR SYNC



Male Male

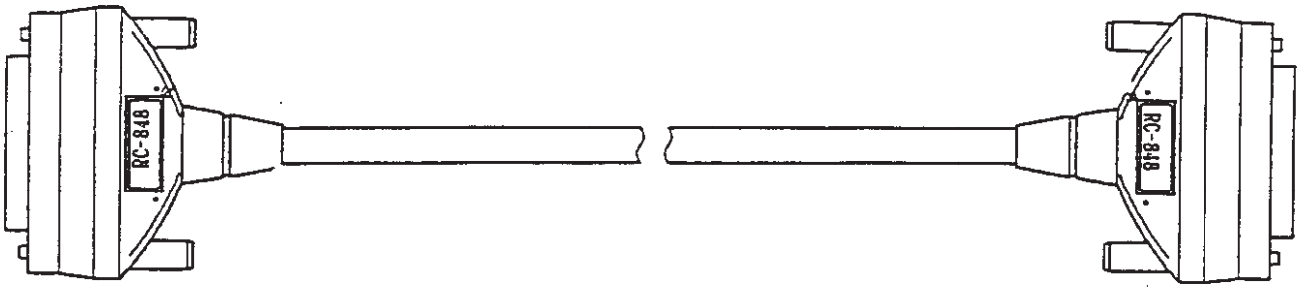


means Twisted wire



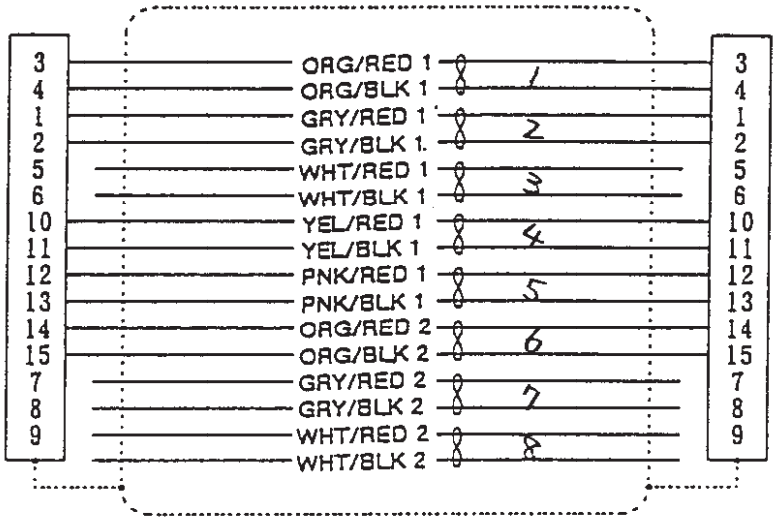
2 pcs.	5336 3570-00	Connector Plug, 15 pin D-Sub (Male)
2 pcs.	5336 3580-00	Case Assy, 15 pin D-Sub

THE CABLES FOR REMOTE

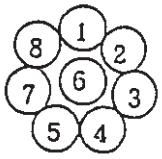


Female

Male



means Twisted wire



1 pce.	5336 3570-00	Connector Plug, 15 pin D-Sub (Male)
1 pce.	1315 2907-	Connector Socket, 15 pin D-Sub (Female)
2 pcs.	5336 3580-00	Case Assy, 15 pin D-Sub

AK4382A

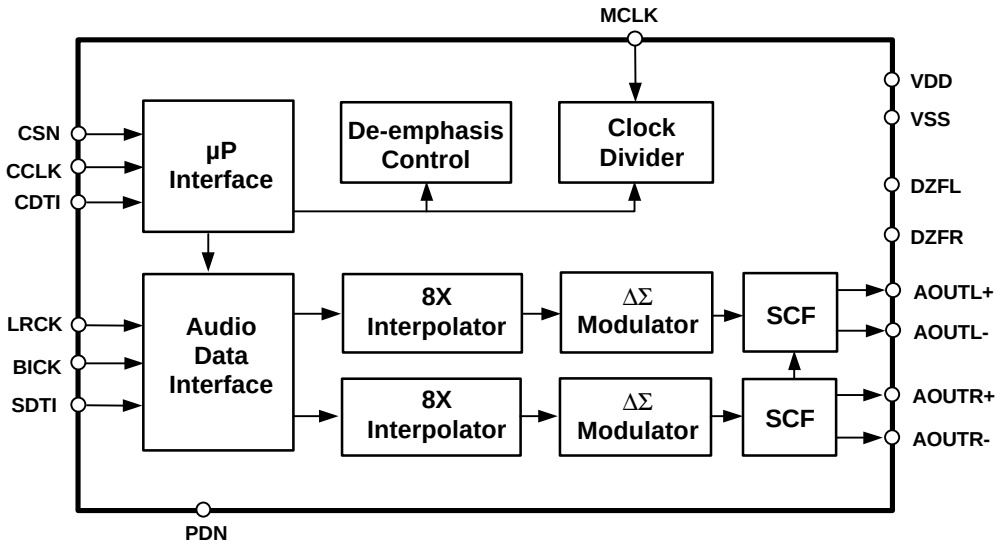
112dB 192kHz 24-Bit 2ch ΔΣ DAC

GENERAL DESCRIPTION

The AK4382A offers the perfect mix for cost and performance based audio systems. Using AKM's multi bit architecture for its modulator the AK4382A delivers a wide dynamic range while preserving linearity for improved THD+N performance. The AK4382A has full differential SCF outputs, removing the need for AC coupling capacitors and increasing performance for systems with excessive clock jitter. The 24 Bit word length and 192kHz sampling rate make this part ideal for a wide range of applications including DVD-Audio. The AK4382A is offered in a space saving 16pin TSSOP package.

FEATURES

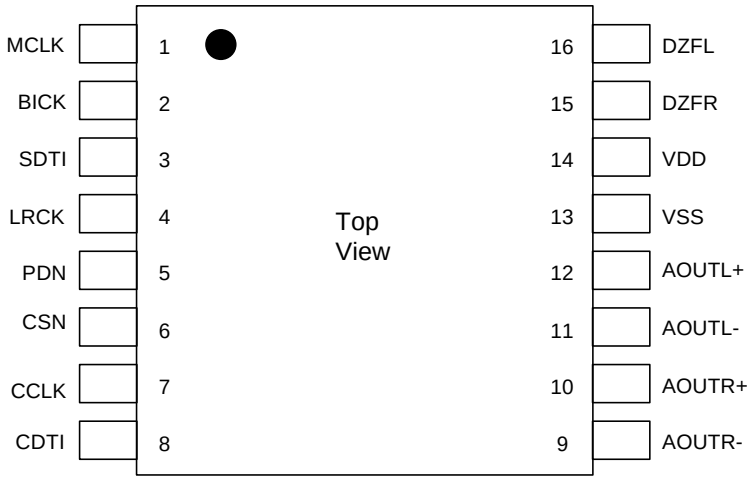
- **Sampling Rate Ranging from 8kHz to 192kHz**
- **128 times Oversampling (Normal Speed Mode)**
- **64 times Oversampling (Double Speed Mode)**
- **32 times Oversampling (Quad Speed Mode)**
- **24-Bit 8 times FIR Digital Filter**
- **On chip SCF**
- **Digital de-emphasis for 32k, 44.1k and 48kHz sampling**
- **Soft mute**
- **Digital Attenuator (256 steps)**
- **I/F format: 24-Bit MSB justified, 24/20/16-Bit LSB justified or I^2S**
- **Master clock: 256fs, 384fs, 512fs or 768fs (Normal Speed Mode)**
  128fs, 192fs, 256fs or 384fs (Double Speed Mode)
  128fs, 192fs (Quad Speed Mode)
- **THD+N: -94dB**
- **Dynamic Range: 112dB**
- **High Tolerance to Clock Jitter**
- **Power supply: 4.75 to 5.25V**
- **Very Small Package: 16pin TSSOP (6.4mm x 5.0mm)**



■ Ordering Guide

AK4382AVT	-40 ~ +85°C	16pin TSSOP (0.65mm pitch)
AKD4382	Evaluation Board for AK4382A	

■ Pin Layout



PIN/FUNCTION

No.	Pin Name	I/O	Function
1	MCLK	I	Master Clock Input Pin An external TTL clock should be input on this pin.
2	BICK	I	Audio Serial Data Clock Pin
3	SDTI	I	Audio Serial Data Input Pin
4	LRCK	I	L/R Clock Pin
5	PDN	I	Power-Down Mode Pin When at "L", the AK4382A is in the power-down mode and is held in reset. The AK4382A should always be reset upon power-up.
6	CSN	I	Chip Select Pin
7	CCLK	I	Control Data Input Pin
8	CDTI	I	Control Data Input Pin in serial mode
9	AOUTR-	O	Rch Negative Analog Output Pin
10	AOUTR+	O	Rch Positive Analog Output Pin
11	AOUTL-	O	Lch Negative Analog Output Pin
12	AOUTL+	O	Lch Positive Analog Output Pin
13	VSS	-	Ground Pin
14	VDD	-	Power Supply Pin
15	DZFR	O	Rch Data Zero Input Detect Pin
16	DZFL	O	Lch Data Zero Input Detect Pin

Note: All input pins should not be left floating.

ABSOLUTE MAXIMUM RATINGS

(VSS=0V; Note 1)

Parameter	Symbol	min	max	Units
Power Supply	VDD	-0.3	6.0	V
Input Current (any pins except for supplies)	IIN	-	±10	mA
Input Voltage	VIND	-0.3	VDD+0.3	V
Ambient Operating Temperature	Ta	-40	85	°C
Storage Temperature	Tstg	-65	150	°C

Note: 1. All voltages with respect to ground.

WARNING: Operation at or beyond these limits may results in permanent damage to the device.
Normal operation is not guaranteed at these extremes.

RECOMMENDED OPERATING CONDITIONS

(VSS=0V; Note 1)

Parameter	Symbol	min	typ	max	Units
Power Supply	VDD	4.75	5.0	5.25	V

*AKM assumes no responsibility for the usage beyond the conditions in this datasheet.

ANALOG CHARACTERISTICS

(Ta=25°C; VDD=5.0V; fs=44.1kHz; BICK=64fs; Signal Frequency=1kHz; 24bit Input Data;
Measurement frequency=20Hz ~ 20kHz; R_L ≥2kΩ; unless otherwise specified)

Parameter			min	typ	max	Units
Resolution					24	Bits
Dynamic Characteristics (Note 3)						
THD+N	fs=44.1kHz	0dBFS		-94	-86	dB
	BW=20kHz	-60dBFS		-48	-	dB
	fs=96kHz	0dBFS		-92	-84	dB
	BW=40kHz	-60dBFS		-45	-	dB
	fs=192kHz	0dBFS		-92	-	dB
	BW=40kHz	-60dBFS		-45	-	dB
Dynamic Range (-60dBFS with A-weighted) (Note 4)			102	112		dB
S/N (A-weighted) (Note 5)			102	112		dB
Interchannel Isolation (1kHz)			90	110		dB
Interchannel Gain Mismatch				0.2	0.5	dB
DC Accuracy						
Gain Drift				100	-	ppm/°C
Output Voltage (Note 6)			±2.55	±2.75	±2.95	Vpp
Load Resistance (Note 7)			2			kΩ
Power Supplies						
Power Supply Current (VDD)						
Normal Operation (PDN = "H", fs≤96kHz)				20	34	mA
Normal Operation (PDN = "H", fs=192kHz)				25	42	mA
Power-Down Mode (PDN = "L") (Note 8)				10	100	μA

Notes: 3. Measured by Audio Precision (System Two). Refer to the evaluation board manual.
4. 100dB at 16bit data.
5. S/N does not depend on input bit length.
6. Full-scale voltage (0dB). Output voltage scales with the voltage of VREF,
AOUT (typ.@0dB)=(AOUT+)-(AOUT-)=±2.75Vpp × VREF/5.
7. For AC-load. 4kΩ for DC-load.
8. All digital inputs including clock pins (MCLK, BICK and LRCK) are held VDD or VSS.

SHARP ROLL-OFF FILTER CHARACTERISTICS

(Ta = 25°C; VDD = 4.75 ~ 5.25V; fs = 44.1kHz; DEM = OFF; SLOW = "0")

Parameter			Symbol	min	typ	max	Units
Digital filter							
Passband	±0.05dB (Note 9)		PB	0		20.0	kHz
	-6.0dB			-	22.05	-	kHz
Stopband	(Note 9)		SB	24.1			kHz
Passband Ripple			PR			± 0.02	dB
Stopband Attenuation			SA	54			dB
Group Delay	(Note 10)		GD	-	19.3	-	1/fs
Digital Filter + SCF							
Frequency Response	20.0kHz	fs=44.1kHz	FR	-	± 0.2	-	dB
	40.0kHz	fs=96kHz	FR	-	± 0.3	-	dB
	80.0kHz	fs=192kHz	FR	-	+0/-0.6	-	dB

Notes: 9. The passband and stopband frequencies scale with fs(system sampling rate).
For example, PB=0.4535×fs (@±0.05dB), SB=0.546×fs.

10. The calculating delay time which occurred by digital filtering. This time is from setting the 16/24bit data of both channels to input register to the output of analog signal.

SLOW ROLL-OFF FILTER CHARACTERISTICS

(Ta = 25°C; AVDD, DVDD = 4.75~5.25V; fs = 44.1kHz; DEM = OFF; SLOW = "1")

Parameter			Symbol	min	typ	max	Units
Digital Filter							
Passband	±0.04dB (Note 11)		PB	0		8.1	kHz
	-3.0dB			-	18.2	-	kHz
Stopband	(Note 11)		SB	39.2			kHz
Passband Ripple			PR			± 0.005	dB
Stopband Attenuation			SA	72			dB
Group Delay	(Note 10)		GD	-	19.3	-	1/fs
Digital Filter + SCF							
Frequency Response	20.0kHz	fs=44.kHz	FR	-	+0/-5	-	dB
	40.0kHz	fs=96kHz	FR	-	+0/-4	-	dB
	80.0kHz	fs=192kHz	FR	-	+0/-5	-	dB

Note: 11. The passband and stopband frequencies scale with fs.
For example, PB = 0.185×fs (@±0.04dB), SB = 0.888×fs.

DC CHARACTERISTICS

(Ta=25°C; VDD=4.75 ~ 5.25V)

Parameter		Symbol	min	typ	max	Units
High-Level Input Voltage		VIH	2.2	-	-	V
Low-Level Input Voltage		VIL	-	-	0.8	V
High-Level Output Voltage	(Iout=-80μA)	VOH	VDD-0.4	-	-	V
Low-Level Output Voltage	(Iout=80μA)	VOL	-		0.4	V
Input Leakage Current		Iin	-	-	± 10	μA

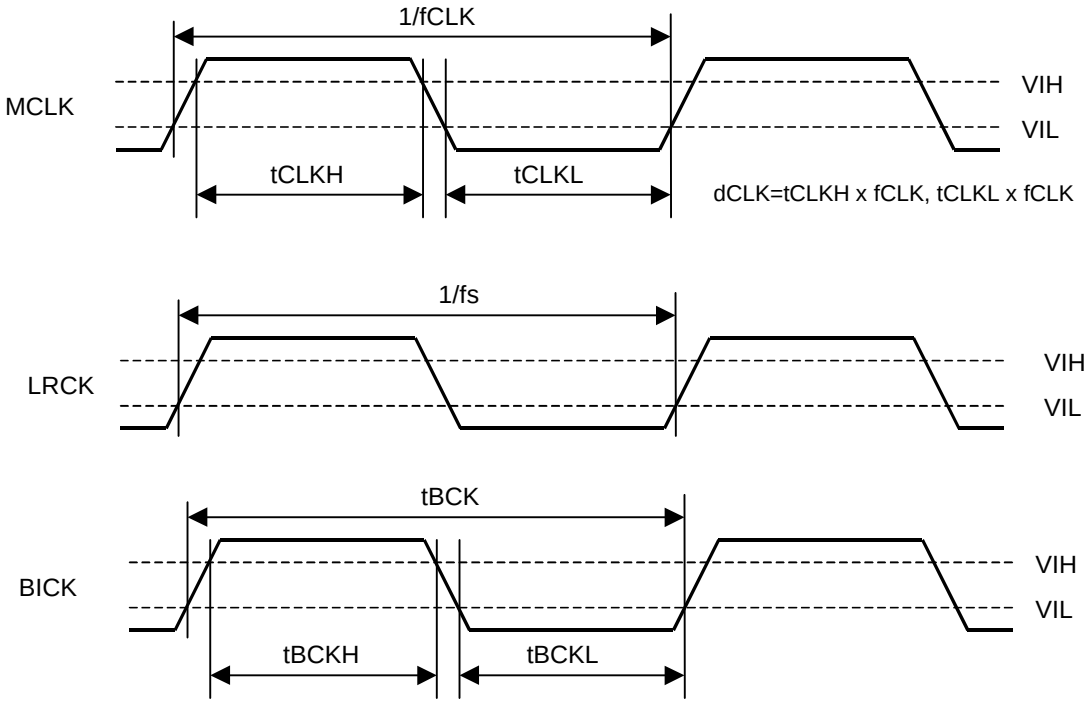
SWITCHING CHARACTERISTICS

(Ta=25°C; VDD=4.75 ~ 5.25V; C_L=20pF)

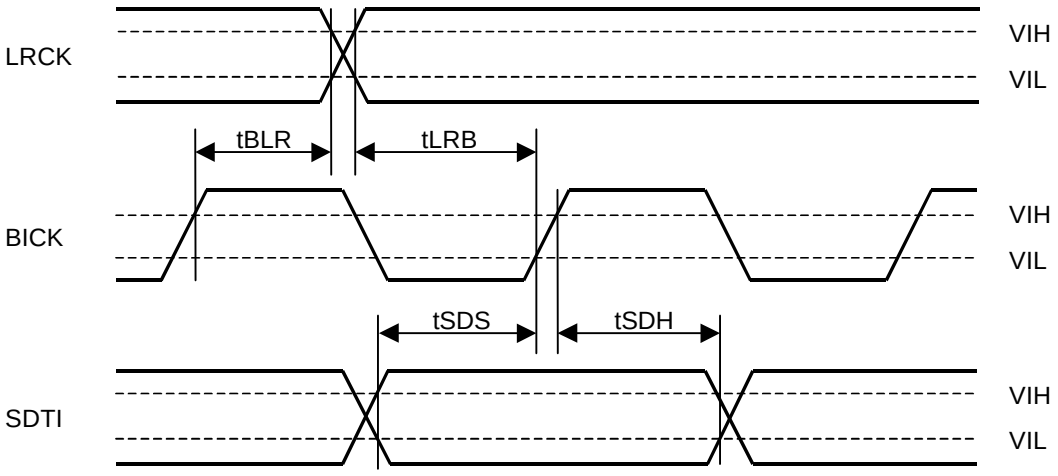
Parameter	Symbol	min	typ	max	Units
Master Clock Frequency	fCLK	2.048	11.2896	36.864	MHz
Duty Cycle	dCLK	40		60	%
LRCK Frequency					
Normal Speed Mode	fsn	8		48	kHz
Double Speed Mode	fsd	60		96	kHz
Quad Speed Mode	fsq	120		192	kHz
Duty Cycle	Duty	45		55	%
Audio Interface Timing					
BICK Period					
Normal Speed Mode	tBCK	1/128fs			ns
Double/Quad Speed Mode	tBCK	1/64fs			ns
BICK Pulse Width Low	tBCKL	30			ns
Pulse Width High	tBCKH	30			ns
BICK rising to LRCK Edge (Note 12)	tBLR	20			ns
LRCK Edge to BICK rising (Note 12)	tLRB	20			ns
SDTI Hold Time	tSDH	20			ns
SDTI Setup Time	tSDS	20			ns
Control Interface Timing					
CCLK Period	tCCK	200			ns
CCLK Pulse Width Low	tCCKL	80			ns
Pulse Width High	tCCKH	80			ns
CDTI Setup Time	tCDS	40			ns
CDTI Hold Time	tCDH	40			ns
CSN "H" Time	tCSW	150			ns
CSN "↓" to CCLK "↑"	tCSS	50			ns
CCLK "↑" to CSN "↑"	tCSH	50			ns
Reset Timing					
PDN Pulse Width (Note 13)	tPD	150			ns

Notes: 12. BICK rising edge must not occur at the same time as LRCK edge.
13. The AK4382A can be reset by bringing PDN= "L".

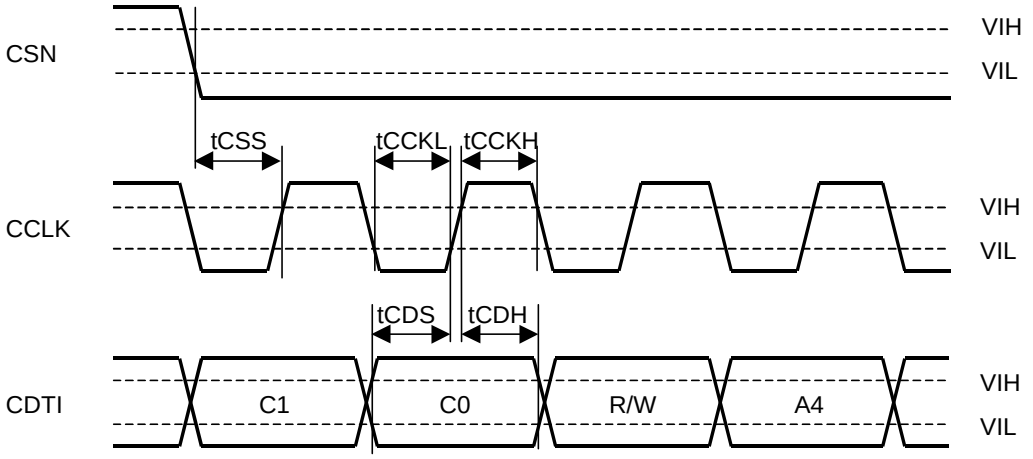
■ **Timing Diagram**



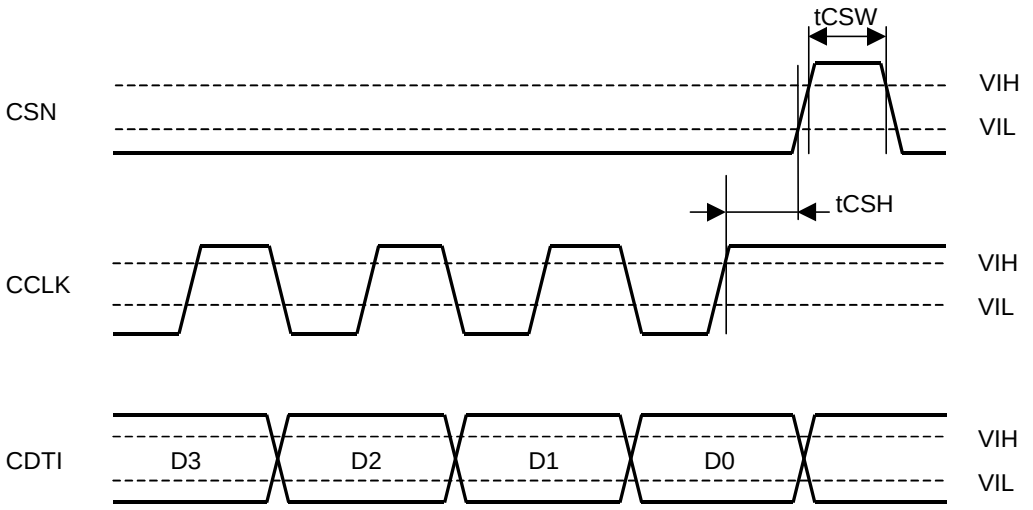
Clock Timing



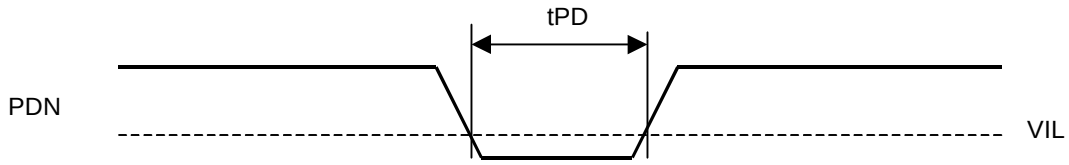
Serial Interface Timing



WRITE Command Input Timing



WRITE Data Input Timing



Power-down Timing

OPERATION OVERVIEW

■ System Clock

The external clocks, which are required to operate the AK4382A, are MCLK, LRCK and BICK. The master clock (MCLK) should be synchronized with LRCK but the phase is not critical. The MCLK is used to operate the digital interpolation filter and the delta-sigma modulator. There are two methods to set MCLK frequency. In Manual Setting Mode (ACKS = "0": Register 00H), the sampling speed is set by DFS0/1(Table 1). The frequency of MCLK at each sampling speed is set automatically. (Table 2~4).After exiting reset (PDN = "↑"), the AK4382A is in Auto Setting Mode. In Auto Setting Mode (ACKS = "1": Default), as MCLK frequency is detected automatically (Table 5), and the internal master clock becomes the appropriate frequency (Table 6), it is not necessary to set DFS0/1.

All external clocks (MCLK,BICK and LRCK) should always be present whenever the AK4382A is in the normal operation mode (PDN= "H"). If these clocks are not provided, the AK4382A may draw excess current because the device utilizes dynamic refreshed logic internally. The AK4382A should be reset by PDN= "L" after threse clocks are provided. If the external clocks are not present, the AK4382A should be in the power-down mode (PDN= "L"). After exiting reset at power-up etc., the AK4382A is in the power-down mode until MCLK and LRCK are input.

DFS1	DFS0	Sampling Rate (fs)		
0	0	Normal Speed Mode	8kHz~48kHz	Default
0	1	Double Speed Mode	60kHz~96kHz	
1	0	Quad Speed Mode	120kHz~192kHz	

Table 1. Sampling Speed (Manual Setting Mode)

LRCK	MCLK				BICK
fs	256fs	384fs	512fs	768fs	64fs
32.0kHz	8.1920MHz	12.2880MHz	16.3840MHz	24.5760MHz	2.0480MHz
44.1kHz	11.2896MHz	16.9344MHz	22.5792MHz	33.8688MHz	2.8224MHz
48.0kHz	12.2880MHz	18.4320MHz	24.5760MHz	36.8640MHz	3.0720MHz

Table 2. System Clock Example (Normal Speed Mode @Manual Setting Mode)

LRCK	MCLK				BICK
fs	128fs	192fs	256fs	384fs	64fs
88.2kHz	11.2896MHz	16.9344MHz	22.5792MHz	33.8688MHz	5.6448MHz
96.0kHz	12.2880MHz	18.4320MHz	24.5760MHz	36.8640MHz	6.1440MHz

Table 3. System Clock Example (Double Speed Mode @Manual Setting Mode)

LRCK	MCLK		BICK
fs	128fs	192fs	64fs
176.4kHz	22.5792MHz	33.8688MHz	11.2896MHz
192.0kHz	24.5760MHz	36.8640MHz	12.2880MHz

Table 4. System Clock Example (Quad Speed Mode @Manual Setting Mode)

MCLK		Sampling Speed
512fs	768fs	Normal
256fs	384fs	Double
128fs	192fs	Quad

Table 5. Sampling Speed (Auto Setting Mode: Default)

LRCK	MCLK (MHz)						Sampling Speed
fs	128fs	192fs	256fs	384fs	512fs	768fs	
32.0kHz	-	-	-	-	16.3840	24.5760	Normal
44.1kHz	-	-	-	-	22.5792	33.8688	
48.0kHz	-	-	-	-	24.5760	36.8640	
88.2kHz	-	-	22.5792	33.8688	-	-	Double
96.0kHz	-	-	24.5760	36.8640	-	-	
176.4kHz	22.5792	33.8688	-	-	-	-	Quad
192.0kHz	24.5760	36.8640	-	-	-	-	

Table 6. System Clock Example (Auto Setting Mode)

■ Audio Serial Interface Format

Data is shifted in via the SDTI pin using BICK and LRCK inputs. The DIF0-2 as shown in Table 7 can select five serial data modes. In all modes the serial data is MSB-first, 2's compliment format and is latched on the rising edge of BICK. Mode 2 can be used for 16/20 MSB justified formats by zeroing the unused LSBs.

Mode	DIF2	DIF1	DIF0	SDTI Format	BICK	Figure	
0	0	0	0	16bit LSB Justified	≥32fs	Figure 1	
1	0	0	1	20bit LSB Justified	≥40fs	Figure 2	
2	0	1	0	24bit MSB Justified	≥48fs	Figure 3	Default
3	0	1	1	24bit I^2S Compatible	≥48fs	Figure 4	
4	1	0	0	24bit LSB Justified	≥48fs	Figure 2	

Table 7. Audio Data Formats

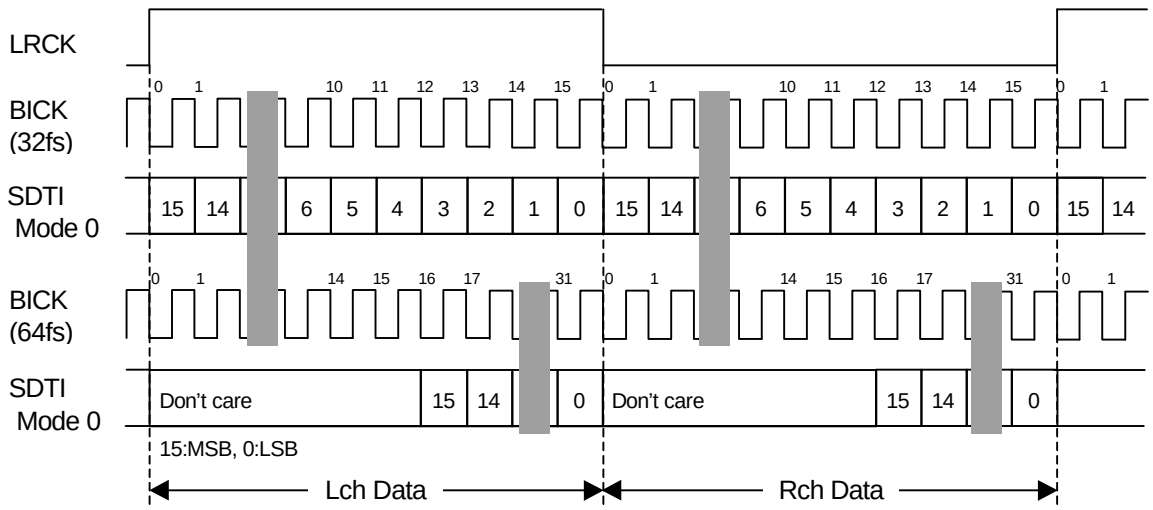


Figure 1. Mode 0 Timing

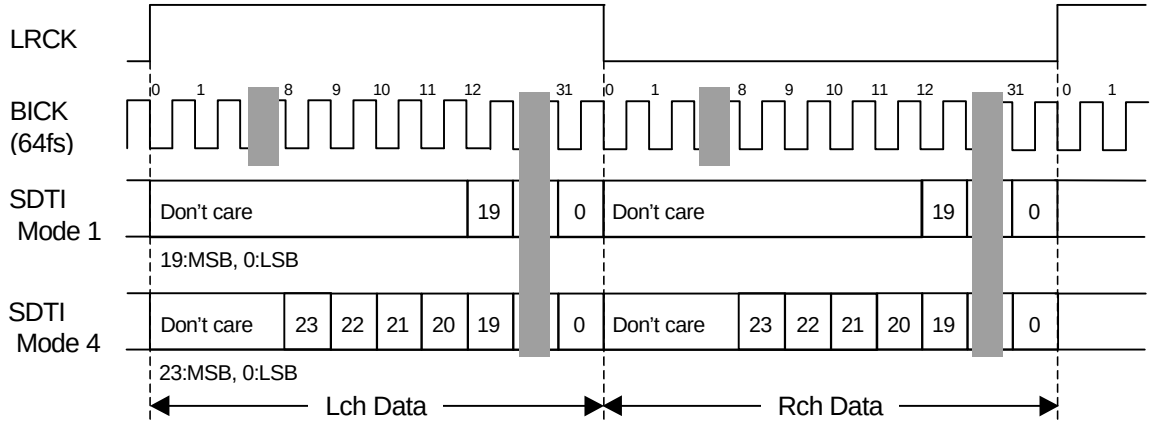


Figure 2. Mode 1,4 Timing

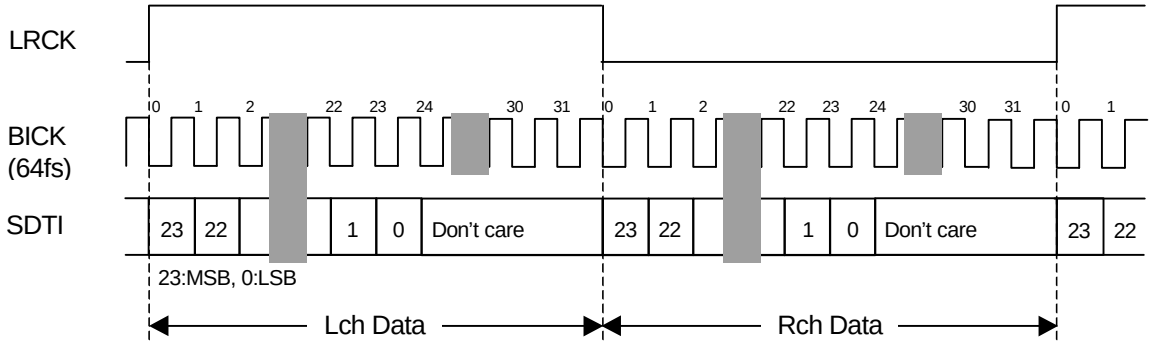


Figure 3. Mode 2 Timing

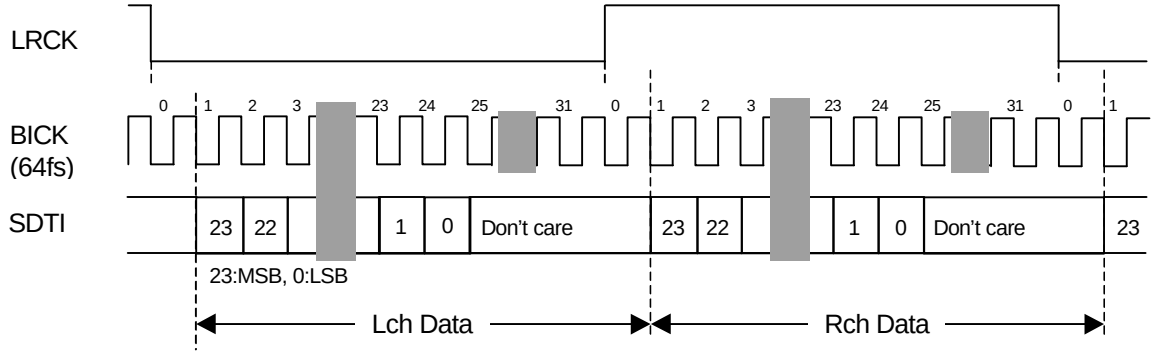


Figure 4. Mode 3 Timing

■ De-emphasis Filter

A digital de-emphasis filter is available for 32, 44.1 or 48kHz sampling rates (tc = 50/15μs) and is enabled or disabled with DEM0 and DEM1. In case of double speed and quad speed mode, the digital de-emphasis filter is always off.

DEM1	DEM0	Mode	
0	0	44.1kHz	
0	1	OFF	Default
1	0	48kHz	
1	1	32kHz	

Table 8. De-emphasis Filter Control (Normal Speed Mode)

■ Output Volume

The AK4382A includes channel independent digital output volumes (ATT) with 256 levels at linear step including MUTE. These volumes are in front of the DAC and can attenuate the input data from 0dB to –48dB and mute. When changing levels, transitions are executed via soft changes; thus no switching noise occurs during these transitions. The transition time of 1 level and all 256 levels is shown in Table 9.

Sampling Speed	Transition Time	
	1 Level	255 to 0
Normal Speed Mode	4LRCK	1020LRCK
Double Speed Mode	8LRCK	2040LRCK
Quad Speed Mode	16LRCK	4080LRCK

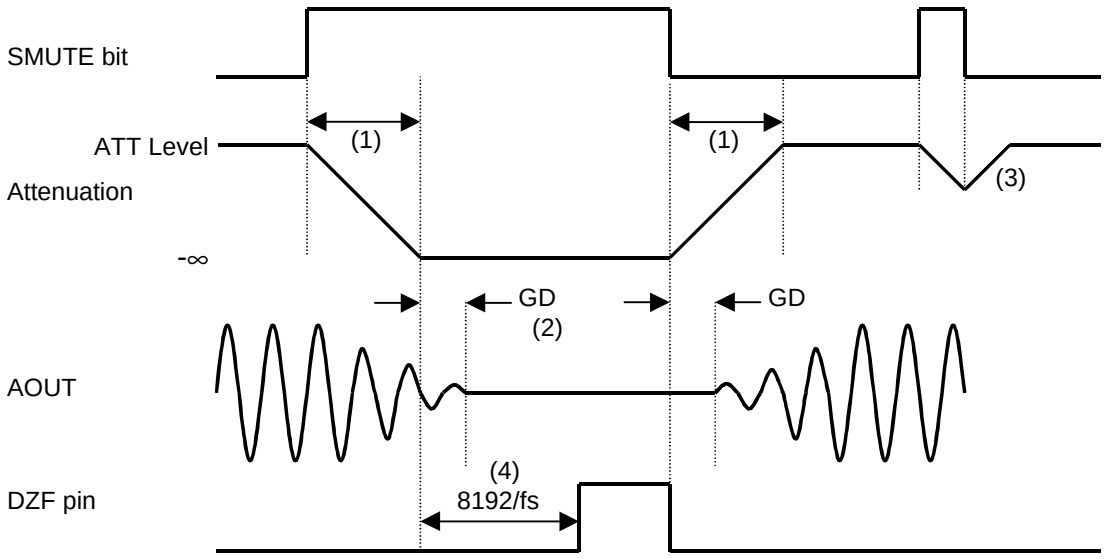
Table 9. ATT Transition Time

■ Zero Detection

The AK4382A has channel-independent zeros detect function. When the input data at each channel is continuously zeros for 8192 LRCK cycles, DZF pin of each channel goes to "H". DZF pin of each channel immediately goes to "L" if input data of each channel is not zero after going DZF "H". If RSTN bit is "0", DZF pins of both channels go to "H". DZF pin of both channels go to "L" at 2~3/fs after RSTN bit returns to "1". If DZFM bit is set to "1", DZF pins of both channels go to "H" only when the input data at both channels are continuously zeros for 8192 LRCK cycles. Zero detect function can be disabled by DZFE bit. In this case, DZF pins of both channels are always "L". DZFB bit can invert the polarity of DZF pin.

■ Soft Mute Operation

Soft mute operation is performed at digital domain. When the SMUTE bit goes to "1", the output signal is attenuated by -∞ during ATT_DATA×ATT transition time (Table 9) from the current ATT level. When the SMUTE bit is returned to "0", the mute is cancelled and the output attenuation gradually changes to the ATT level during ATT_DATA×ATT transition time. If the soft mute is cancelled before attenuating to -∞ after starting the operation, the attenuation is discontinued and returned to ATT level by the same cycle. The soft mute is effective for changing the signal source without stopping the signal transmission.



Notes:

(1) ATT_DATA×ATT transition time (Table 9). For example, in Normal Speed Mode, this time is 1020LRCK cycles (1020/fs) at ATT_DATA=255.

(2) The analog output corresponding to the digital input has a group delay, GD.

(3) If the soft mute is cancelled before attenuating to -∞ after starting the operation, the attenuation is discontinued and returned to ATT level by the same cycle.

(4) When the input data at each channel is continuously zeros for 8192 LRCK cycles, DZF pin of each channel goes to "H". DZF pin immediately goes to "L" if input data are not zero after going DZF "H".

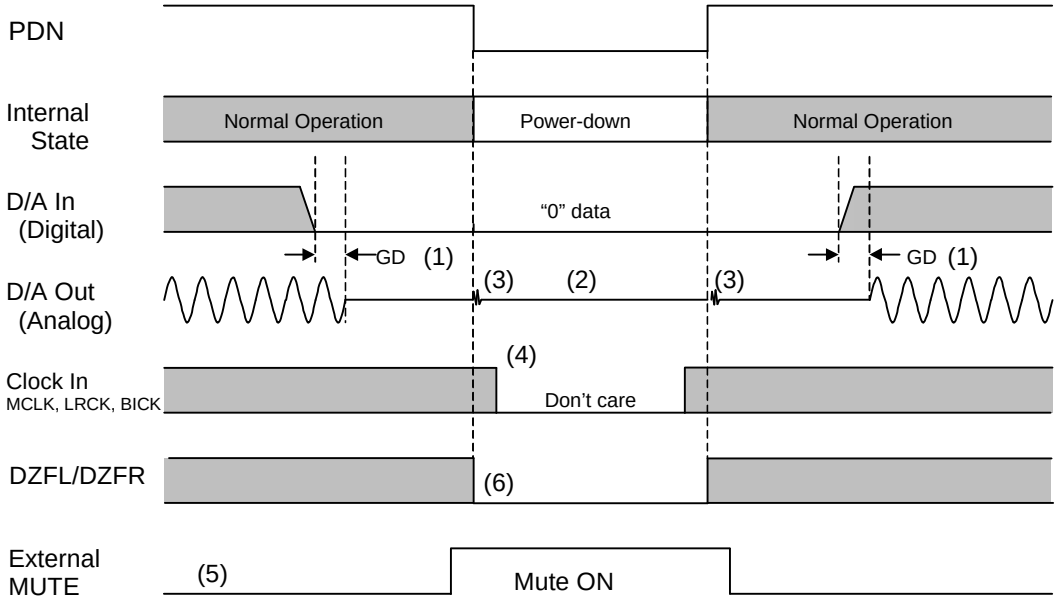
Figure 5. Soft Mute and Zero Detection

■ System Reset

The AK4382A should be reset once by bringing PDN= ”L” upon power-up. The AK4382A is powered up and the internal timing starts clocking by LRCK “↑” after exiting reset and power down state by MCLK. The AK4382A is in the power-down mode until MCLK and LRCK are input.

■ Power-down

The AK4382A is placed in the power-down mode by bringing PDN pin “L” and the anlog outputs are floating (Hi-Z). Figure 6 shows an example of the system timing at the power-down and power-up.



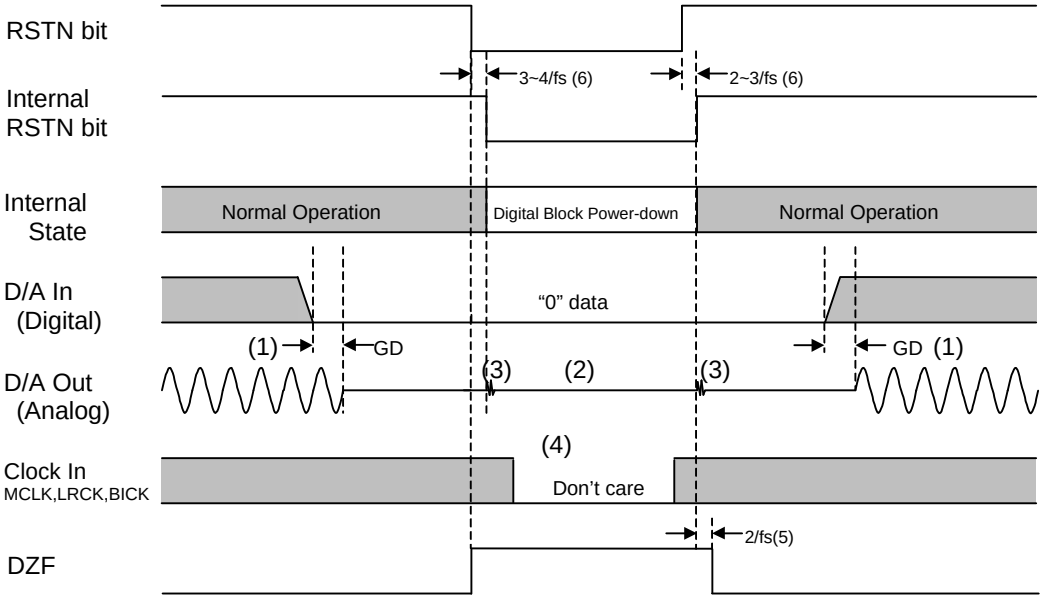
Notes:

(1) The analog output corresponding to digital input has the group delay (GD).
(2) Analog outputs are floating (Hi -Z) at the power-down mode.
(3) Click noise occurs at the edge of PDN signal. This noise is output even if “0” data is input.
(4) The external clocks (MCLK, BICK and LRCK) can be stopped in the power-down mode (PDN = “L”).
(5) Please mute the analog output externally if the click noise (3) influences system application.
The timing example is shown in this figure.
(6) DZF pins are “L” in the power-down mode (PDN = “L”).

Figure 6. Power-down/up Sequence Example

■ Reset Function

When RSTN=0, DAC is powered down but the internal register values are not initialized. The analog outputs go to VCOM voltage and DZF pin goes to "H". Figure 7 shows the example of reset by RSTN bit.



Notes:

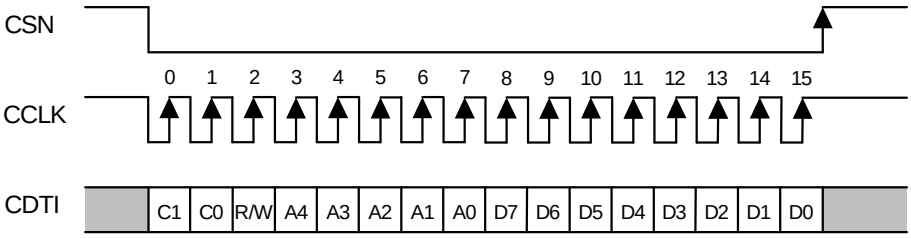
(1) The analog output corresponding to digital input has the group delay (GD).
(2) Analog outputs go to VCOM voltage (VDD/2).
(3) Click noise occurs at the edges("↑ ↓") of the internal timing of RSTN bit. This noise is output even if "0" data is input.
(4) The external clocks (MCLK, BICK and LRCK) can be stopped in the reset mode (RSTN = "L").
(5) DZF pins go to "H" when the RSTN bit becomes "0", and go to "L" at 2/fs after RSTN bit becomes "1".
(6) There is a delay, 3~4/fs from RSTN bit "0" to the internal RSTN bit "0", and 2~3/fs from RSTN bit "1" to the internal RSTN "1".

Figure 7. Reset Sequence Example

■ Mode Control Interface

Internal registers may be written by 3-wire µP interface pins, CSN, CCLK and CDTI. The data on this interface consists of Chip Address (2bits, C1/0; fixed to "01"), Read/Write (1bit; fixed to "1", Write only), Register Address (MSB first, 5bits) and Control Data (MSB first, 8bits). AK4382A latches the data on the rising edge of CCLK, so data should clocked in on the falling edge. The writing of data becomes valid by CSN "↑". The clock speed of CCLK is 5MHz (max). The CSN must be fixed to "H" when the register does not be accessed.

PDN = "L" resets the registers to their default values. The internal timing circuit is reset by RSTN bit, but the registers are not initialized.



C1-C0: Chip Address (Fixed to "01")
R/W: READ/WRITE (Fixed to "1", Write only)
A4-A0: Register Address
D7-D0: Control Data

Figure 8. Control I/F Timing

*The AK4382A does not support the read command and chip address. C1/0 and R/W are fixed to "011"
*When the AK4382A is in the power down mode (PDN = "L") or the MCLK is not provided, writing into the control register is inhibited.

■ Register Map

Addr	Register Name	D7	D6	D5	D4	D3	D2	D1	D0
00H	Control 1	ACKS	0	0	DIF2	DIF1	DIF0	PW	RSTN
01H	Control 2	DZFE	DZFM	SLOW	DFS1	DFS0	DEM1	DEM0	SMUTE
02H	Control 3	0	0	0	0	0	DZFB	0	0
03H	Lch ATT	ATT7	ATT6	ATT5	ATT4	ATT3	ATT2	ATT1	ATT0
04H	Rch ATT	ATT7	ATT6	ATT5	ATT4	ATT3	ATT2	ATT1	ATT0

Notes:

For addresses from 05H to 1FH, data must not be written.

When PDN pin goes "L", the registers are initialized to their default values.

When RSTN bit goes "0", the only internal timing is reset and the registers are not initialized to their default values.

All data can be written to the register even if PW or RSTN bit is "0".

■ Register Definitions

Addr	Register Name	D7	D6	D5	D4	D3	D2	D1	D0
00H	Control 1	ACKS	0	0	DIF2	DIF1	DIF0	PW	RSTN
default		1	0	0	0	1	0	1	1

RSTN: Internal timing reset control
0: Reset. All registers are not initialized.
1: Normal Operation
When MCLK frequency or DFS changes, the AK4382A should be reset by PDN pin or RSTN bit.

PW: Power down control
0: Power down. All registers are not initialized.
1: Normal Operation

DIF2-0: Audio data interface formats (see Table 7)
Initial: "010", Mode 2

ACKS: Master Clock Frequency Auto Setting Mode Enable
0: Disable, Manual Setting Mode
1: Enable, Auto Setting Mode
Master clock frequency is detected automatically at ACKS bit "1". In this case, the setting of DFS1-0 are ignored. When this bit is "0", DFS1-0 set the sampling speed mode.

Addr	Register Name	D7	D6	D5	D4	D3	D2	D1	D0
01H	Control 2	DZFE	DZFM	SLOW	DFS1	DFS0	DEM1	DEM0	SMUTE
default		0	0	0	0	0	0	1	0

SMUTE: Soft Mute Enable
0: Normal operation
1: DAC outputs soft-muted

DEM1-0: De-emphasis Response (see Table 8)
Initial: "01", OFF

DFS1-0: Sampling speed control
00: Normal speed
01: Double speed
10: Quad speed
When changing between Normal/Double Speed Mode and Quad Speed Mode, some click noise occurs.

SLOW: Slow Roll-off Filter Enable
0: Sharp Roll-off Filter
1: Slow Roll-off Filter

DZFE: Data Zero Detect Enable
0: Disable
1: Enable
Zero detect function can be disabled by DZFE bit "0". In this case, the DZF pins of both channels are always "L".

DZFM: Data Zero Detect Mode

0: Channel Separated Mode

1: Channel ANDed Mode

If the DZFM bit is set to "1", the DZF pins of both channels go to "H" only when the input data at both channels are continuously zeros for 8192 LRCK cycles.

Addr	Register Name	D7	D6	D5	D4	D3	D2	D1	D0
02H	Control 3	0	0	0	0	0	DZFB	0	0
default		0	0	0	0	0	0	0	0

DZFB: Inverting Enable of DZF

0: DZF goes "H" at Zero Detection

1: DZF goes "L" at Zero Detection

Addr	Register Name	D7	D6	D5	D4	D3	D2	D1	D0
03H	Lch ATT	ATT7	ATT6	ATT5	ATT4	ATT3	ATT2	ATT1	ATT0
04H	Rch ATT	ATT7	ATT6	ATT5	ATT4	ATT3	ATT2	ATT1	ATT0
default		1	1	1	1	1	1	1	1

ATT = 20 $\log_{10}$ (ATT_DATA / 255) [dB]

00H: Mute

SYSTEM DESIGN

Figure 9 shows the system connection diagram. An evaluation board (AKD4382) is available in order to allow an easy study on the layout of a surrounding circuit.

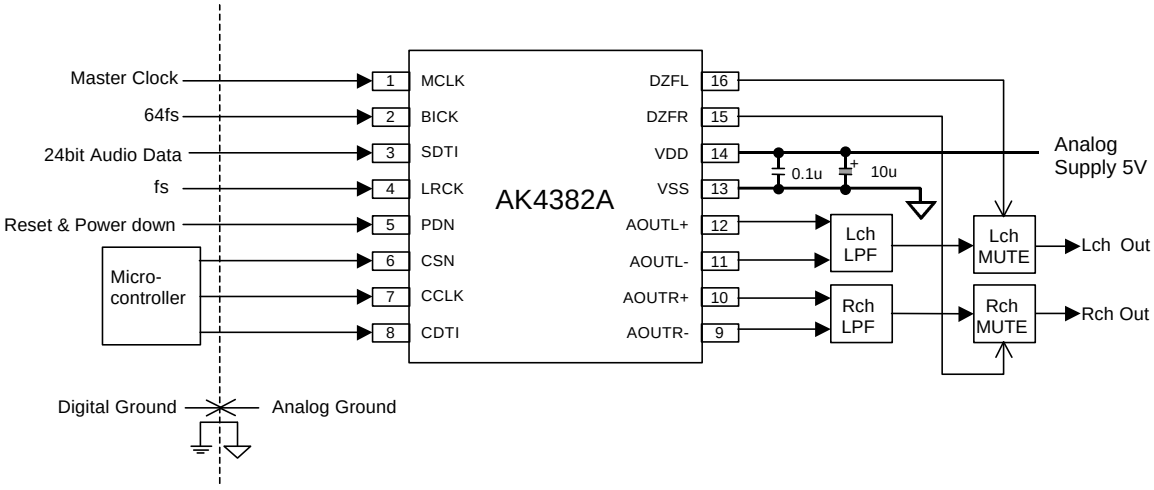


Figure 9. Typical Connection Diagram

Notes:

- LRCK = fs, BICK = 64fs.
- When AOUT drives some capacitive load, some resistor should be added in series between AOUT and capacitive load.
- All input pins except pull-down/pull-up pins should not be left floating.

1. Grounding and Power Supply Decoupling

VDD and VSS are supplied from analog supply and should be separated from system digital supply. Decoupling capacitor, especially 0.1μF ceramic capacitor for high frequency should be placed as near to VDD as possible. The differential Voltage between VDD and VSS pins set the analog output range.

3. Analog Outputs

The analog outputs are full-differential outputs and 0.55 x VDD Vpp (typ) centered around the internal common voltage (about AVDD/2). The differential outputs are summed externally, V_{AOUT}=(AOUT+)-(AOUT-) between AOUT+ and AOUT-. If the summing gain is 1, the output range is 5.5Vpp (typ @VREFH=5V). The bias voltage of the external summing circuit is supplied externally. The input data format is 2's complement. The output voltage (V_{AOUT}) is a positive full scale for 7FFFFF (@24bit) and a negative full scale for 800000H (@24bit). The ideal V_{AOUT} is 0V for 000000H (@24bit).

The internal switched-capacitor filter and external low pass filter attenuate the noise generated by the delta-sigma modulator beyond the audio passband. DC offset on AOUT+/- is eliminated without AC coupling since the analog outputs are differential. Figure 10 and 11 show the example of external op-amp circuit summing the differential outputs.

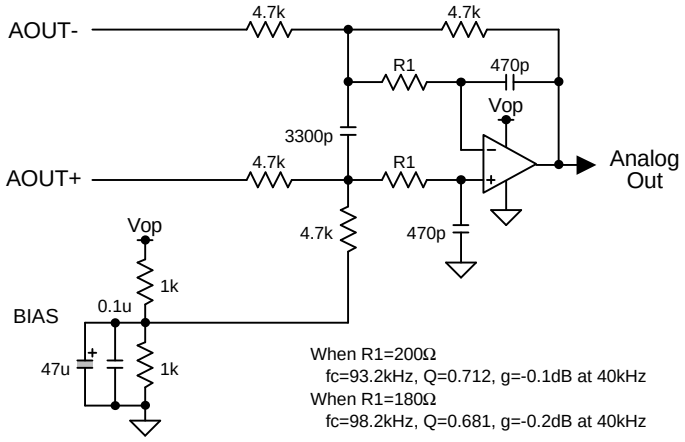


Figure 10. External 2nd order LPF Circuit Example (using op-amp with single power supply)

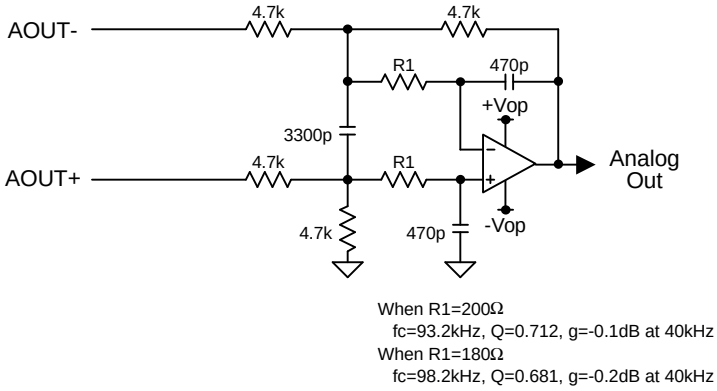
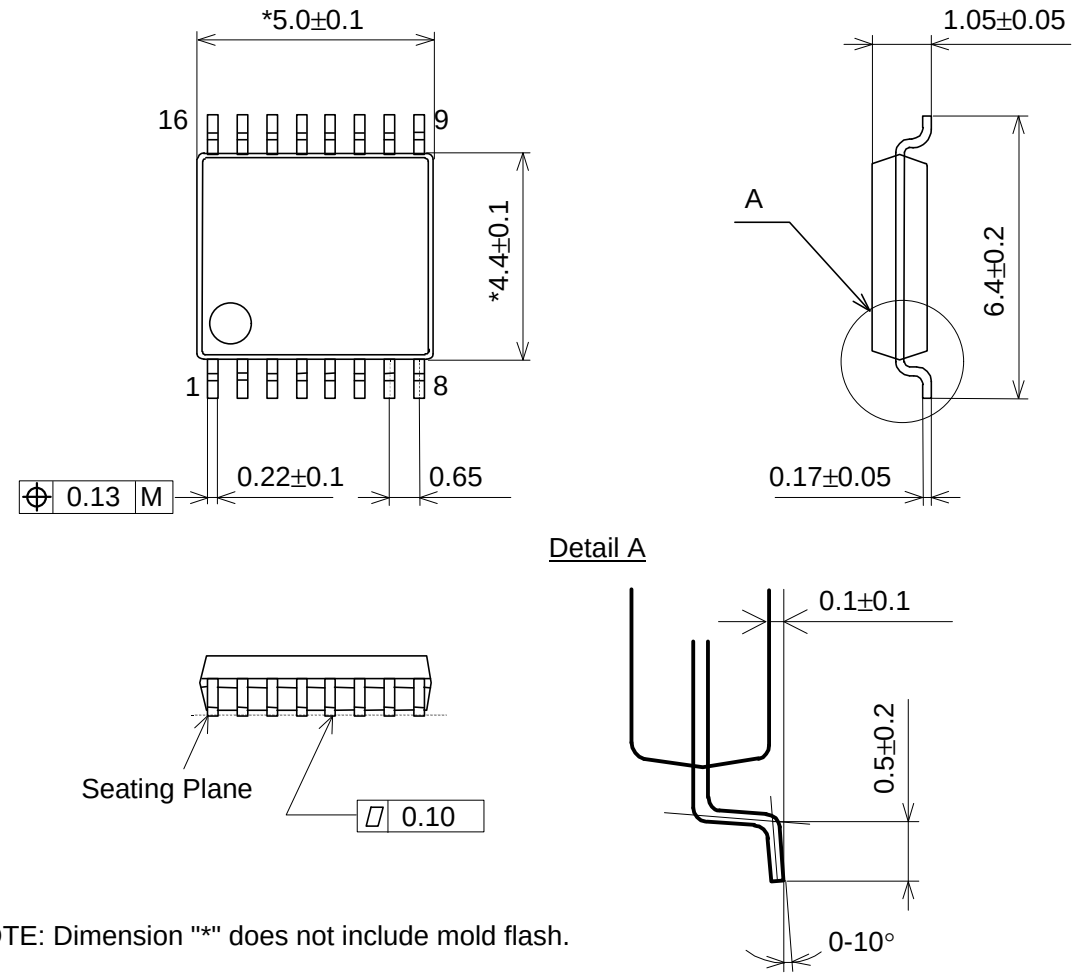


Figure 11. External 2nd order LPF Circuit Example (using op-amp with dual power supplies)

PACKAGE

16pin TSSOP (Unit: mm)

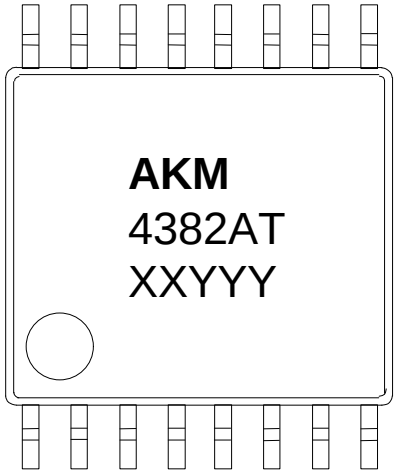


NOTE: Dimension "*" does not include mold flash.

■ **Package & Lead frame material**

Package molding compound:	Epoxy
Lead frame material:	Cu
Lead frame surface treatment:	Solder(Pb free) plate

MARKING



1) Pin #1 indication
2) Date Code : XXYYY (5 digits)
   XX: Lot#
   YYY: Date Code
3) Marketing Code : 4382AT
4) Asahi Kasei Logo

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AK4528
High Performance 24Bit 96kHz Audio CODEC

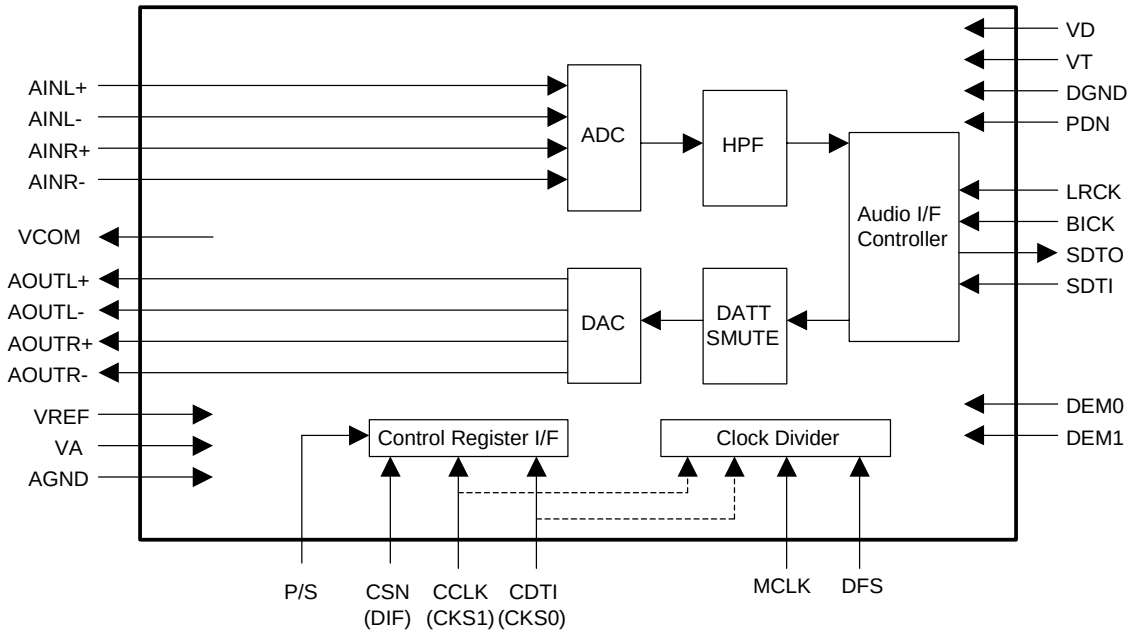
GENERAL DESCRIPTION

The AK4528 is a high performance 24bit CODEC for the 96kHz recording system. The ADC has an Enhanced Dual Bit architecture with wide dynamic range. The DAC uses the new developed Advanced Multi Bit architecture and achieves low outband noise and high jitter tolerance by use of SCF (switched capacitor filter) techniques.

FEATURES

- **24bit 2ch ADC**
  - **64x Oversampling**
  - **Full differential Inputs**
  - **S/(N+D): 94dB**
  - **Dynamic Range, S/N: 108dB**
  - **Digital HPF for offset cancellation**
  - **I/F format: MSB justified or I^2S**
- **24bit 2ch DAC**
  - **128x Oversampling**
  - **24bit 8 times Digital Filter**
    Ripple: ±0.005dB, Attenuation: 75dB
  - **SCF**
  - **Differential Outputs**
  - **S/(N+D): 94dB**
  - **Dynamic Range, S/N: 110dB**
  - **De-emphasis for 32kHz, 44.1kHz and 48kHz sampling**
  - **Output DATT with −72dB att**
  - **Soft Mute**
  - **I/F format: MSB justified, LSB justified or I^2S**
- **High Jitter Tolerance**
- **3-wire Serial Interface for Volume Control**
- **Master Clock**
  - **256fs/384fs/512fs/768fs/1024fs**
- **5V operation**
- **3V Power Supply Pin for 3V I/F**
- **Small 28pin VSOP package**

■ Block Diagram



Block Diagram

• Compatibility of AK4528 with AK4524

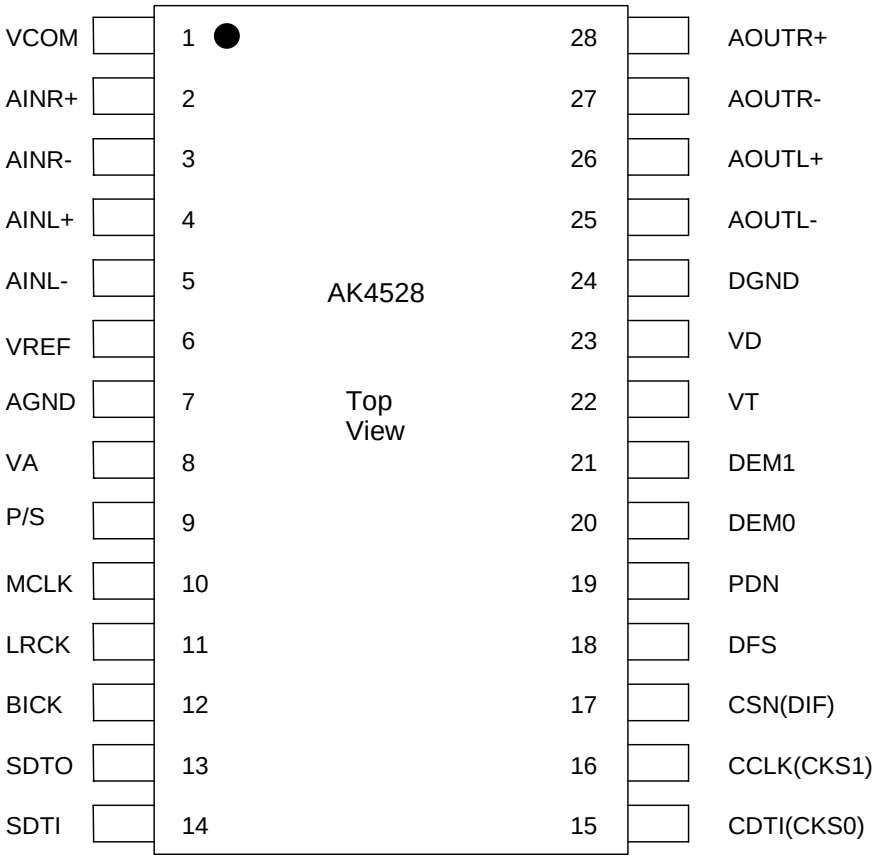
Function	AK4528	AK4524
ADC S/(N+D)	94dB	90dB
ADC DR, S/N	108dB	100dB
Input PGA & ATT	X	O
ADC Inputs	Differential Inputs	Single-end Inputs
Master Mode	X	O
X'tal Oscillating Circuit	X	O
Quad Speed Mode	X	O
Parallel Mode	O	X

O: Available, X: Not Available

■ Ordering Guide

AK4528VF	–40 ~ +85°C	28pin VSOP (0.65mm pitch)
AKD4528	Evaluation Board	

■ Pin Layout



PIN/FUNCTION

No.	Pin Name	I/O	Function
1	VCOM	O	Common Voltage Output Pin, VA/2 Bias voltage of ADC inputs and DAC outputs.
2	AINR+	I	Rch Positive Input Pin
3	AINR–	I	Rch Negative Input Pin
4	AINL+	I	Lch Positive Input Pin
5	AINL–	I	Lch Negative Input Pin
6	VREF	I	Voltage Reference Input Pin, VA Used as a voltage reference by ADC & DAC. VREF is connected externally to filtered VA.
7	AGND	-	Analog Ground Pin
8	VA	-	Analog Power Supply Pin, 4.75 ~ 5.25V
9	P/S	I	Parallel/Serial Mode Select Pin "L": Serial Mode, "H": Parallel Mode
10	MCLK	I	Master Clock Input Pin
11	LRCK	I	Input/Output Channel Clock Pin
12	BICK	I	Audio Serial Data Clock Pin
13	SDTO	O	Audio Serial Data Output Pin
14	SDTI	I	Audio Serial Data Input Pin
15	CDTI	I	Control Data Input Pin in Serial Mode
	CKS0	I	Master Clock Select Pin
16	CCLK	I	Control Data Clock Pin in Serial Mode
	CKS1	I	Master Clock Select Pin
17	CSN	I	Chip Select Pin in Serial Mode
	DIF	I	Digital Audio Interface Select Pin "L": 24bit MSB justified, "H": I^2S compatible
18	DFS	I	Double Speed Sampling Mode Pin
19	PDN	I	Power-Down Mode Pin "H": Power up, "L": Power down reset and initialize the control register.
20	DEM0	I	De-emphasis Control Pin
21	DEM1	I	De-emphasis Control Pin
22	VT	-	Output Buffer Power Supply Pin, 2.7 ~ 5.25V
23	VD	-	Digital Power Supply Pin, 4.75 ~ 5.25V
24	DGND	-	Digital Ground Pin
25	AOUTL–	O	Lch Negative Analog Output Pin
26	AOUTL+	O	Lch Positive Analog Output Pin
27	AOUTR–	O	Rch Negative Analog Output Pin
28	AOUTR+	O	Rch Positive Analog Output Pin

Note: All input pins should not be left floating.

ABSOLUTE MAXIMUM RATINGS

(AGND, DGND=0V; Note 1)

Parameter		Symbol	min	max	Units
Power Supplies:	Analog	VA	–0.3	6.0	V
	Digital	VD	–0.3	6.0	V
	Output Buffer	VT	–0.3	6.0	V
	VD–VA	VDA	-	0.3	V
Input Current, Any Pin Except Supplies		IIN	-	±10	mA
Analog Input Voltage		VINA	–0.3	VA+0.3	V
Digital Input Voltage		VIND	–0.3	VA+0.3	V
Ambient Temperature (powered applied)		Ta	–40	85	°C
Storage Temperature		Tstg	–65	150	°C

Note: 1. All voltages with respect to ground.

WARNING: Operation at or beyond these limits may result in permanent damage to the device.
Normal operation is not guaranteed at these extremes.

RECOMMENDED OPERATING CONDITIONS

(AGND, DGND=0V; Note 1)

Parameter		Symbol	min	typ	max	Units
Power Supplies	Analog	VA	4.75	5.0	5.25	V
	Digital	VD	4.75	5.0	VA	V
	Output Buffer	VT	2.7	3.0	VD	V
Voltage Reference		VREF	3.0	-	VA	V

Note:1. All voltages with respect to ground.
2. VA and VD should be powered at the same time or VA should be powered earlier than VD.
The power up sequence between VA and VT, or VD and VT is not critical.

*AKM assumes no responsibility for the usage beyond the conditions in this datasheet.

ANALOG CHARACTERISTICS

(Ta=25°C; VA, VD, VT=5.0V; AGND=DGND=0V; VREF=VA; fs=44.1kHz; Signal Frequency =1kHz; 24bit Data; Measurement frequency = 20Hz ~ 20kHz at fs=44.1kHz, 40Hz ~ 40kHz at fs=96kHz; unless otherwise specified)

Parameter		min	typ	max	Units
Input PGA Characteristics:					
ADC Analog Input Characteristics: Analog Source impedance = 330Ω					
Resolution				24	Bits
Input Voltage (Note 3)		±2.6	±2.8	±3.0	Vpp
Input Resistance	fs=44.1kHz	16	27		kΩ
	fs=96kHz	7	12		kΩ
S/(N+D) (–0.5dBFS)	fs=44.1kHz	88	94		dB
	fs=96kHz	84	92		dB
DR (–60dBFS)	fs=44.1kHz, A-weighted	100	108		dB
	fs=96kHz	95	103		dB
S/N	fs=44.1kHz, A-weighted	100	108		dB
	fs=96kHz	95	103		dB
Interchannel Isolation		90	110		dB
Interchannel Gain Mismatch			0.2	0.5	dB
Gain Drift			20	-	ppm/°C
Input Voltage (Note 3)		±2.6	±2.8	±3.0	Vpp
Input Resistance	fs=44.1kHz	16	27		kΩ
	fs=96kHz	7	12		kΩ
Input DC Bias Voltage (Note 4)		0.56VA	-	0.60VA	V
Power Supply Rejection (Note 5)		-	50	-	dB
DAC Analog Output Characteristics:					
Resolution				24	Bits
S/(N+D) (0dBFS)	fs=44.1kHz	88	94		dB
	fs=96kHz	85	93		dB
DR (–60dBFS)	fs=44.1kHz, A-weighted	104	110		dB
	fs=96kHz	96	104		dB
S/N	fs=44.1kHz, A-weighted	104	110		dB
	fs=96kHz	96	104		dB
Interchannel Isolation		90	110		dB
Interchannel Gain Mismatch			0.2	0.5	dB
Gain Drift			20	-	ppm/°C
Output Voltage (Note 6)		5.0	5.4	5.8	Vpp
Load Resistance (In case of AC load)		1			kΩ
Output Current				1.5	mA
Load Capacitance				25	pF
Power Supply Rejection (Note 5)			50	-	dB

Note: 3. This voltage is input to AIN+ and AIN– pin, and is proportional to VREF. Vin = 0.56 x VREF.
4. Measured by Figure 12. DC Bias Voltage, Vb = 4.7k / (3.3k + 4.7k) x VA = 0.5875VA.
5. PSR is applied to VA, VD, VT with 1kHz, 50mVpp. VREF pin is held a constant voltage.
6. Full scale (0dB) of the output voltage when summing the differential outputs, AOUT+/– by unity gain. This voltage is proportional to VREF. Vout=1.08 x VREF x Gain.

Parameter		min	typ	max	Units
Power Supplies					
Power Supply Current					
Normal Operation (PDN="H")					
VA			38	57	mA
VD+VT	(fs=44.1kHz)		10	20	mA
	(fs=96kHz)		18	36	mA
Power-down mode (PDN="L")	(Note 7)				
VA			10	100	μA
VD+VT			10	100	μA

Note: 7. All digital input pins are held VD or DGND.

FILTER CHARACTERISTICS

(Ta=25°C; VA, VD=4.75 ~ 5.25V; VT=2.7 ~ 5.25V; fs=44.1kHz; DEM=OFF)

Parameter		Symbol	min	typ	max	Units
ADC Digital Filter (Decimation LPF):						
Passband (Note 8)	–0.005dB	PB	0		19.76	kHz
	–0.02dB		-	20.02	-	kHz
	–0.06dB		-	20.20	-	kHz
	–6.0dB		-	22.05	-	kHz
Stopband		SB	24.34			kHz
Passband Ripple		PR			±0.005	dB
Stopband Attenuation		SA	80			dB
Group Delay (Note 9)		GD		31		1/fs
Group Delay Distortion		ΔGD		0		μs
ADC Digital Filter (HPF):						
Frequency Response (Note 8)	–3dB	FR		0.9		Hz
	–0.5dB			2.7		Hz
	–0.1dB			6.0		Hz
DAC Digital Filter:						
Passband (Note 8)	–0.01dB	PB	0		20.0	kHz
	–6.0dB		-	22.05	-	kHz
Stopband		SB	24.1			kHz
Passband Ripple		PR			±0.005	dB
Stopband Attenuation		SA	75			dB
Group Delay (Note 9)		GD		30		1/fs
DAC Digital Filter + SCF:						
Frequency Response:		FR				
0 ~ 20.0kHz				±0.2		dB
~ 40kHz (Note 10)				±0.3		dB

Note: 8. The passband and stopband frequencies scale with fs.
For example, 20.02kHz at -0.02dB is 0.454 x fs. The reference frequency of these responses is 1kHz.
9. The calculating delay time which occurred by digital filtering. This time is from the input of analog signal to setting the 24bit data of both channels to the output register for ADC.
For DAC, this time is from setting the 24bit data of both channels on input register to the output of analog signal.
10. fs=96kHz.

DC CHARACTERISTICS

(Ta=25°C; VA, VD=4.75 ~ 5.25V; VT=2.7 ~ 5.25V)

Parameter	Symbol	min	typ	max	Units
High-Level Input Voltage	VIH	2.2	-	-	V
Low-Level Input Voltage	VIL	-	-	0.8	V
High-Level Output Voltage (Iout=−100μA) (Note 11)	VOH	2.7 / VT−0.5	-	-	V
Low-Level Output Voltage (Iout=100μA)	VOL	-	-	0.5	V
Input Leakage Current	Iin	-	-	±10	μA

Note: 11. The min value is lower voltage of 2.7V or VT−0.5V.

SWITCHING CHARACTERISTICS

(Ta=25°C; VA, VD=4.75 ~ 5.25V, VT=2.7 ~ 5.25V; C_L=20pF)

Parameter	Symbol	min	typ	max	Units
Master Clock Timing					
Frequency	fCLK	7.68		55.296	MHz
Pulse Width Low	tCLKL	0.4/fCLK			ns
Pulse Width High	tCLKH	0.4/fCLK			ns
LRCK Frequency					
Normal Speed Mode (DFS = "0")	fsn	30	44.1	54	kHz
Double Speed Mode (DFS = "1")	fsd	60	88.2	108	kHz
Duty Cycle	Duty	45		55	%
Audio Interface Timing					
BICK Period	tBCK	81			ns
BICK Pulse Width Low	tBCKL	33			ns
Pulse Width High	tBCKH	33			ns
LRCK Edge to BICK "↑" (Note 12)	tLRB	20			ns
BICK "↑" to LRCK Edge (Note 12)	tBLR	20			ns
LRCK to SDTO (MSB) (Except I^2S mode)	tLRS			40	ns
BICK "↓" to SDTO	tBSD			40	ns
SDTI Hold Time	tSDH	20			ns
SDTI Setup Time	tSDS	20			ns

Note 12. BICK rising edge must not occur at the same time as LRCK edge.

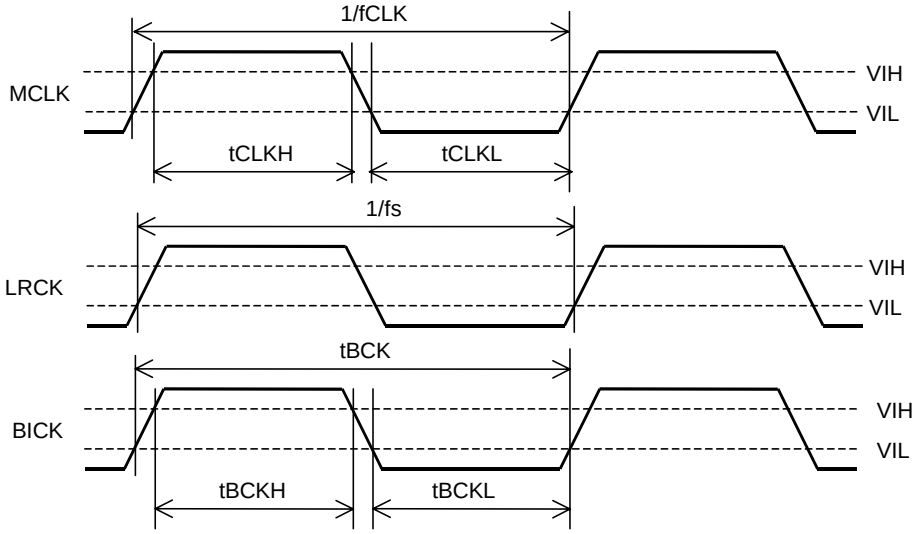
Parameter		Symbol	min	typ	max	Units
Control Interface Timing (P/S="L")						
CCLK Period		tCCK	200			ns
CCLK Pulse Width Low		tCCKL	80			ns
Pulse Width High		tCCKH	80			ns
CDTI Setup Time		tCDS	40			ns
CDTI Hold Time		tCDH	40			ns
CSN "H" Time		tCSW	150			ns
CSN "L" Time		tCSW	150			ns
CSN "↑" to CCLK "↑"		tCSS	150			ns
CCLK "↑" to CSN "↑"		tCSH	50			ns
Reset Timing						
PDN Pulse Width	(Note 13)	tPD	150			ns
RSTADN "↑" to SDTO valid	(Note 14)	tPDV		516		1/fs
PDN "↑" to SDTO valid	(Note 15)	tPDV		516		1/fs

Note:13. The AK4528 can be reset by bringing PDN "L".

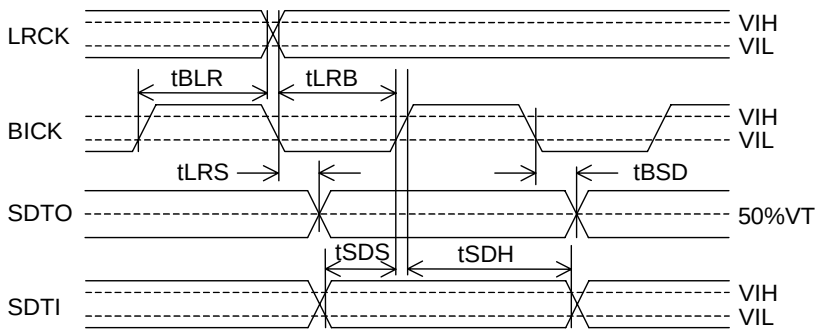
14. In serial mode, these cycles are the number of LRCK rising from RSTADN bit.

15. In parallel mode, these cycles are the number of LRCK rising from PDN pin.

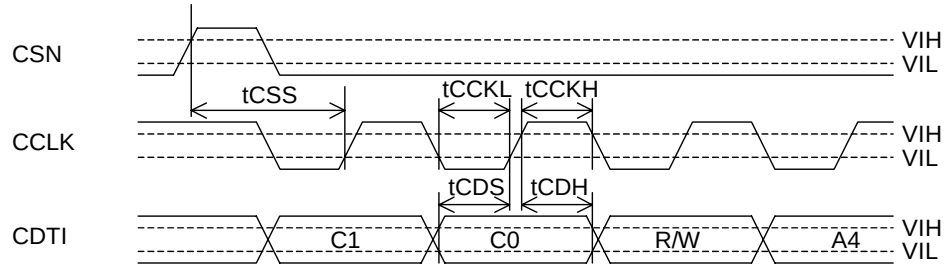
■ Timing Diagram



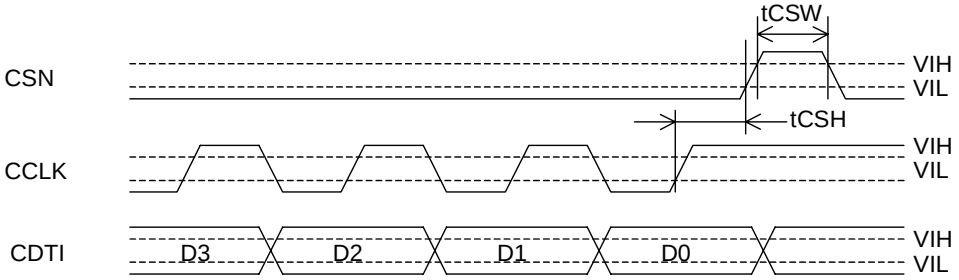
Clock Timing



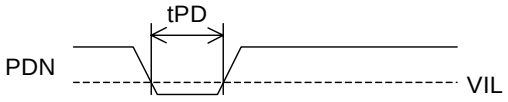
Audio Interface Timing



WRITE Command Input Timing



WRITE Data Input Timing



Power Down & Reset Timing

OPERATION OVERVIEW

■ System Clock Input

The external clocks, which are required to AK4528, are MCLK, BICK and LRCK. MCLK should be synchronized with LRCK but the phase is not critical. The frequency of MCLK is set by CMODE, CKS0-1 and DFS bits in serial mode, or by CKS0-1, DFS pins in parallel mode (see Table 2 and 3). The CKS0-1 and DFS pin should be changed during the PDN pin = "L". The CMODE, CKS0-1 and DFS bits are changed during RSTADN = RSTDAN = "0".

External clocks (MCLK, BICK and LRCK) should always be present whenever the AK4528 is in normal operation mode (PDN = "H" and at least one of ADC and DAC is in normal operation mode). If these clocks are not provided, the AK4528 may draw excess current because the device utilizes dynamic refreshed logic internally. If the external clocks are not present, the AK4528 should be in the power-down mode (PDN = "L" or set both ADC and DAC power down mode by the register).

CMODE bit	CKS1 bit	CKS0 bit	MCLK Normal Speed (DFS bit = "0")	MCLK Double Speed (DFS bit = "1")	
0	0	0	256fs	N/A	Default
0	0	1	512fs	256fs	
0	1	0	1024fs	512fs	
1	0	0	384fs	N/A	
1	0	1	768fs	384fs	

Table 1. Master Clock Frequency Select in Serial Mode

CKS1 pin	CKS0 pin	MCLK Normal Speed (DFS pin = "L")	MCLK Double Speed (DFS pin = "H")
L	L	256fs	N/A
L	H	512fs	256fs
H	L	384fs	N/A
H	H	1024fs	512fs

Table 2. Master Clock Frequency Select in Parallel Mode

MCLK Normal Speed (DFS = "0")	fs=44.1kHz	fs=48kHz	MCLK Double Speed (DFS = "1")	fs=88.2kHz	fs=96kHz
256fs	11.2896MHz	12.288MHz	N/A	N/A	N/A
512fs	22.5792MHz	24.576MHz	256fs	22.5792MHz	24.576MHz
1024fs	45.1584MHz	49.152MHz	512fs	45.1584MHz	49.152MHz
384fs	16.9344MHz	18.432MHz	N/A	N/A	N/A
768fs	33.8688MHz	36.864MHz	384fs	33.8688MHz	36.864MHz

Table 3. Master Clock Frequencies example

Note. Do not set any mode which is not described in Table1-3.

■ Audio Serial Interface Format

In case of serial mode, the DIF0-2 bits as shown in Table 4 support five serial formats. In case of parallel mode, two formats (Mode 2 and 3) are supported by DIF pin (Table 5). In all modes the serial data is MSB-first, 2's compliment format. The SDTO is clocked out on the falling edge of BICK and the SDTI is latched on the rising edge.

Mode	DIF2 bit	DIF1 bit	DIF0 bit	SDTO	SDTI	LRCK	BICK	
0	0	0	0	24bit, MSB justified	16bit, LSB justified	H/L	≥ 32fs	
1	0	0	1	24bit, MSB justified	20bit, LSB justified	H/L	≥ 40fs	
2	0	1	0	24bit, MSB justified	24bit, MSB justified	H/L	≥ 48fs	Default
3	0	1	1	24bit, I^2S	24bit, I^2S	L/H	≥ 48fs	
4	1	0	0	24bit, MSB justified	24bit, LSB justified	H/L	≥ 48fs	

Table 4. Audio data format in Serial Mode

Mode	DIF pin	SDTO	SDTI	LRCK	BICK
2	0	24bit, MSB justified	24bit, MSB justified	H/L	≥ 48fs
3	1	24bit, I^2S	24bit, I^2S	L/H	≥ 48fs

Table 5. Audio data format in Parallel Mode

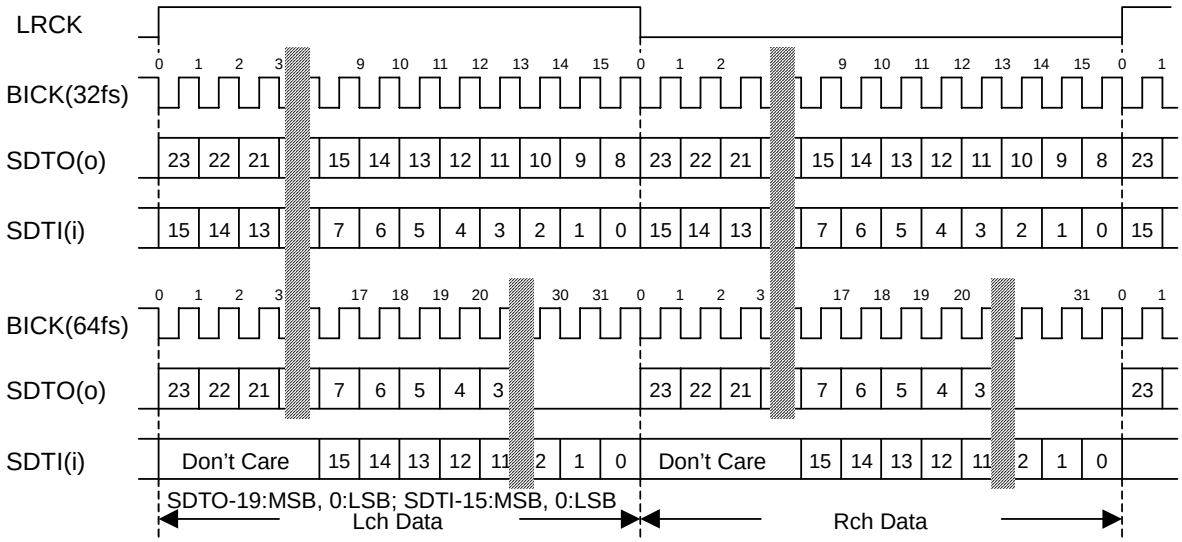


Figure 1. Mode 0 Timing

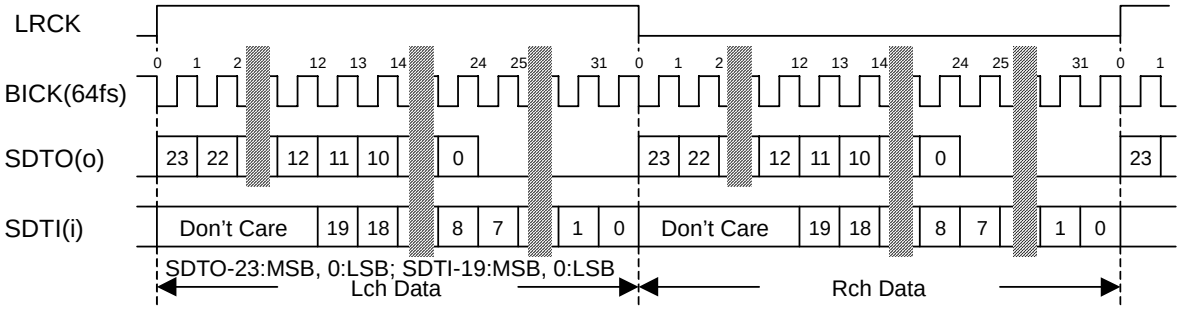


Figure 2. Mode 1 Timing

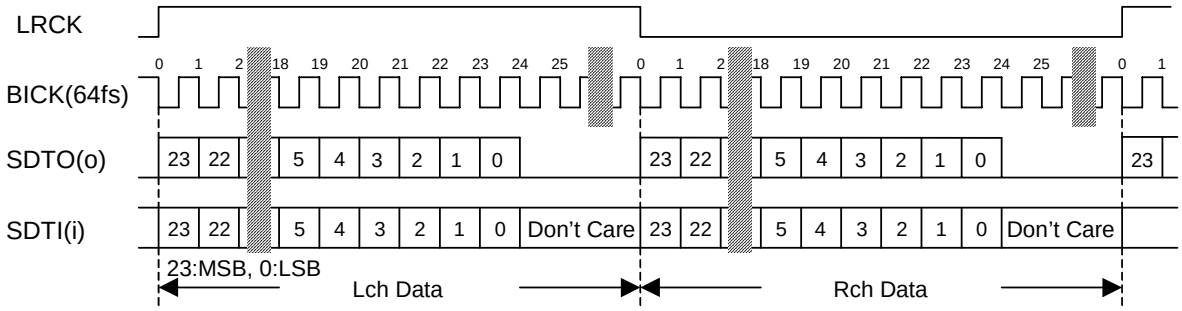


Figure 3. Mode 2 Timing

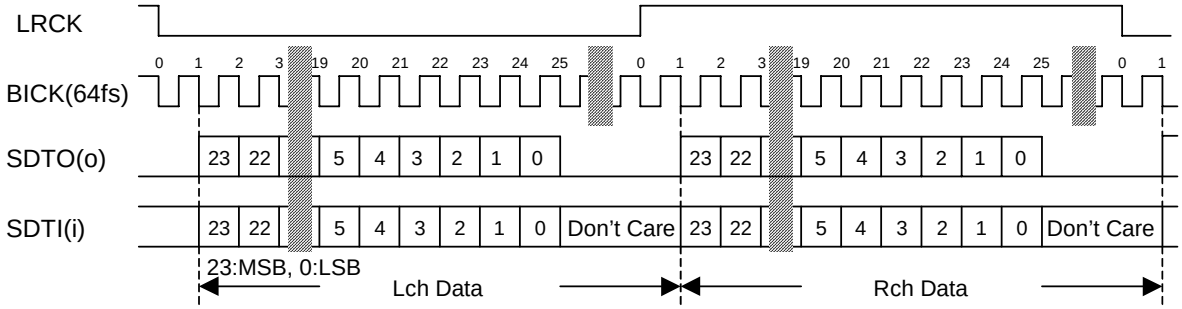


Figure 4. Mode 3 Timing

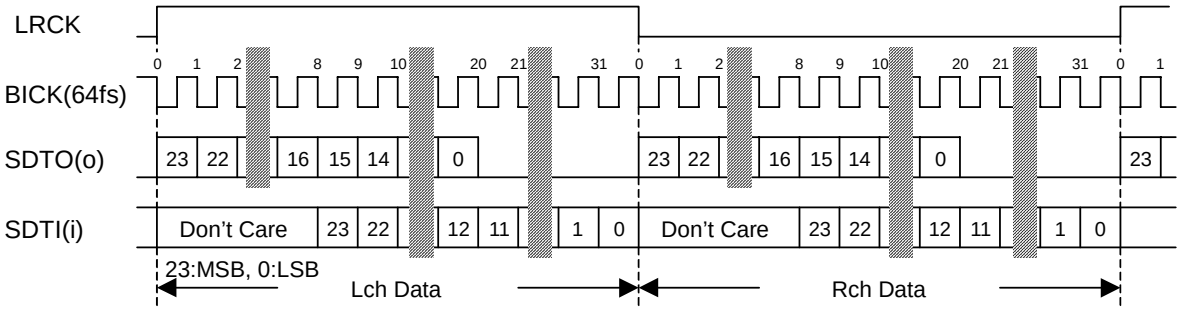


Figure 5. Mode 4 Timing

■ Parallel/Serial Mode Control

When P/S= “H”, AK4528 is in parallel mode. The audio interface format is selected by DIF pin, and DFS and CK0-1 pins select the frequency of MCLK.

When P/S= “L”, AK4528 is in serial mode. The CKS1, CKS0 and DIF pins are changed to CDTI, CCLK and CSN pins respectively. The DEM0-1 and DFS are ORed between pin and register respectively, so those are able to control by pins even in serial mode. To control all the functions by register, set DEM0-1 and DFS pins “L”.

■ Digital High Pass Filter

The ADC has a digital high pass filter (HPF) for DC offset cancel. The cut-off frequency of the HPF is 0.9Hz at fs=44.1kHz and also scales with sampling rate (fs). This HPF can be off for each channel by register.

■ Output Volume

The AK4528 includes digital volumes (OATT) with 128 levels (including MUTE) in front of DAC. The OATT is a pseudo-log volume linear-interpolated internally. When the level is changed, the transition to new value takes 8031 levels (max) and is done by soft transition. Therefore, there is not any switching noise.

■ De-emphasis Filter

The DAC includes the digital de-emphasis filter (tc=50/15μs) by IIR filter. This filter supports to three frequencies (32kHz, 44.1kHz and 48kHz). This setting is done by contorl register and always OFF at double speed mode.

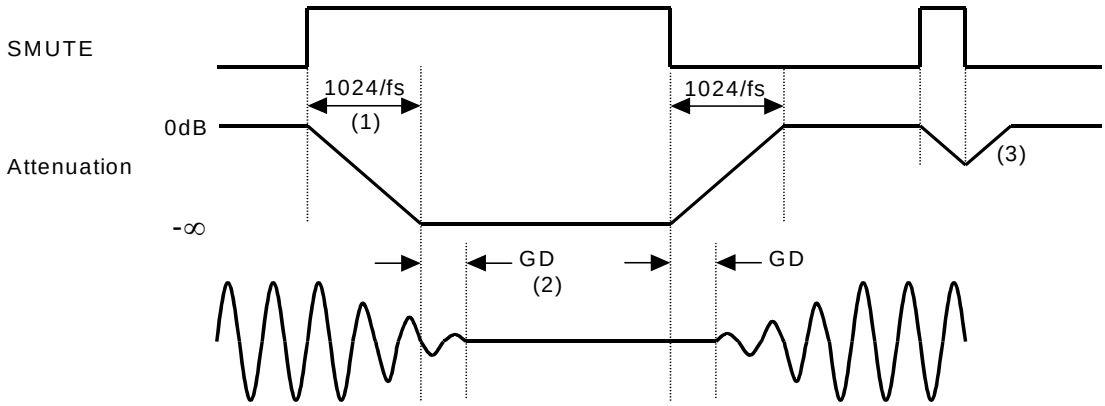
No	DEM1	DEM0	Mode	
0	0	0	44.1kHz	Default in serial mode
1	0	1	OFF	
2	1	0	48kHz	
3	1	1	32kHz	

Table 6. De-emphasis control (DFS=“0”)

■ Soft Mute Operation

Soft mute operation is performed at digital domain. When SMUTE goes "1", the output signal is attenuated by –∞ during 1024 LRCK cycles. When SMUTE is returned to "0", the mute is cancelled and the output attenuation gradually changes to 0dB during 1024 LRCK cycles. If the soft mute is cancelled within 1024 LRCK cycles after starting of the operation, the attenuation is discontinued and returned to 0dB.

Soft mute function is independent to output volume, and those two functions are cascade connected.



Notes:

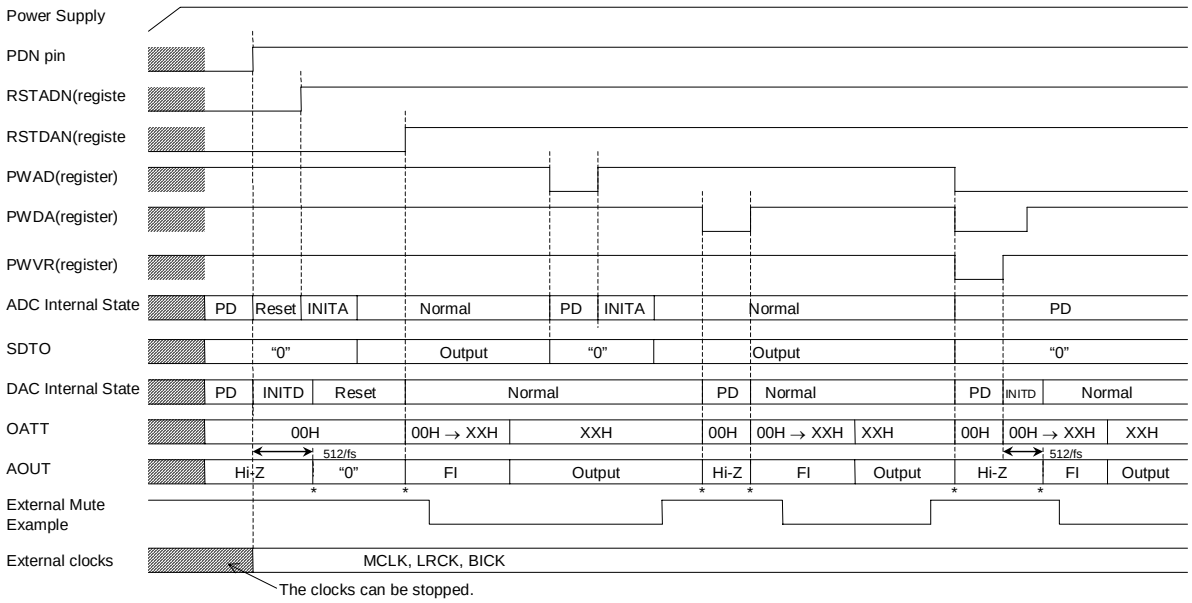
(1) The output signal is attenuated by –∞ during 1024 LRCK cycles (1024/fs).
(2) Analog output corresponding to digital input has the group delay (GD).
(3) If the soft mute is cancelled within 1024 LRCK cycles, the attenuation is discontinued and returned to 0dB.

Figure 6. Soft Mute

■ Power Down & Reset

The ADC and DAC of AK4528 are placed in the power-down mode by bringing a power down pin (PDN)="L" and each digital filter is also reset at the same time. The internal register values are initialized by PDN = "L". This reset should always be done after power-up.

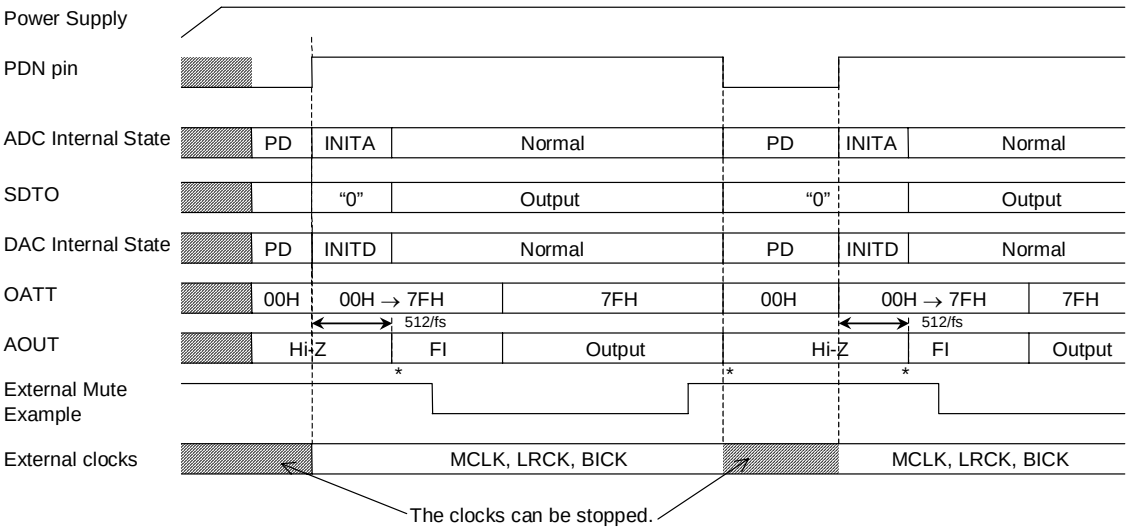
In case of serial mode, the default value of both control registers for ADC and DAC are in reset state (RSTADN = RSTDAN = "0"), each register sholud be cancelled after doing the needed setting. In case of the ADC, an analog initialization cycle starts after exiting the power-down or reset state. Therefore, the output data, SDTO becomes available after 516 cycles of LRCK. In case of DAC, the initialization cycle starts after PDN = "H" or PWVR bit = "1". The power down mode can be also controlled by the registers (PWAD, PWDA).



- INITA: Initializing period of ADC analog section (516/fs).
- INITD: Initializing period of DAC analog section (512/fs).
- PD: Power down state. In case of PDN = "L", the contents of all registers are initialized, otherwise hold.
- XXH: The current value in ATT register.
- FI: Fade in. After exiting power down and reset state, ATT value fades in by 8032/fs cycles (max).
- AOUT: Some pop noise may occur at "*".

Figure 7. Reset & Power down sequence in Serial Mode

In case of parallel mode, both ADC and DAC are powered up with releasing internal reset state when PDN is set to "H". Therefore each outputs start to output at once. However the initialization of ADC/DAC, and the fade-in cycle of OATT (8031/fs) are exist.



- INITA: Initializing period of ADC analog section (516/fs).
- INITD: Initializing period of DAC analog section (512/fs).
- PD: Power down state.
- FI: Fade in. After exiting power down state, ATT value fades in by 8032/fs cycles.
- AOUT: Some pop noise may occur at "*".

Figure 8. Reset & Power Down Sequence in Parallel Mode

■ Serial Control Interface

The serial control interface is enabled by the P/S pin = "L". The internal registers are written by the 3-wire μP interface pins: CSN, CCLK, CDTI. The data on this interface consists of Chip address (2bits, fixed to C0/1 = "01") Read/Write (1bit, fixed to "1"), Register address (MSB first, 5bits) and Control data (MSB first, 8bits). Address and data is clocked in on the rising edge of CCLK. Data is latched after a low-to-high transition of CSN. The maximum clock speed of the CCLK is 5MHz. The CSN should be "H" if no access. The chip address is fixed to "10". Writing is invalid for the access to the chip address except for "10". PDN = "L" resets the registers to their default values.

Function	Parallel mode	Serial mode
Double speed	O	O
De-emphasis	O	O
SMUTE	X	O
Output Digital ATT	X	O
HPF off	X	O
MCLK; 768fs@Normal Speed 384fs@Double Speed	X	O
16/20/24bit LSB justified format	X	O

Table 7. Function list (O: available, X: not available)

When PDN = "L", internal registers are initialized. In case of changing P/S pin, please set PDN = "L" to reset the device. In case of serial mode, the internal timings are initialized by RSTN = "0", but the contents of registers are hold.

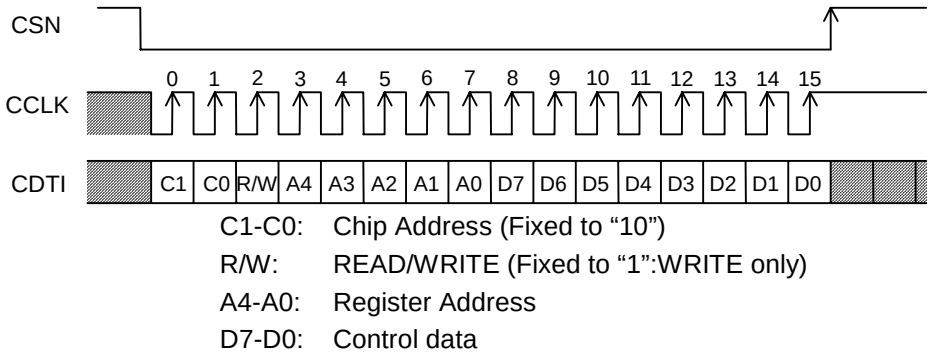


Figure 9. Control I/F Timing

*AK4528 does not support the READ. C1, C0 and R/W are fixed ("101").

■ Register Map

Addr	Register Name	D7	D6	D5	D4	D3	D2	D1	D0
00H	Power Down Control	0	0	0	0	0	PWVR	PWAD	PWDA
01H	Reset Control	TE7	TE6	TE5	TE4	0	0	RSTADN	RSTDAN
02H	Clock and Format Control	DIF2	DIF1	DIF0	CMODE	CKS1	CKS0	0	DFS
03H	Deem and Volume Control	SMUTE	0	0	0	HPFR	HPFL	DEM1	DEM0
04H	Lch ATT Control	0	ATTL6	ATTL5	ATTL4	ATTL3	ATTL2	ATTL1	ATTL0
05H	Rch ATT Control	0	ATTR6	ATTR5	ATTR4	ATTR3	ATTR2	ATTR1	ATTR0

Note: For address from 06H to 1FH, data should not be written.
In case of writing to 01H, write “0000” to D7-4.
PDN = “L” resets the registers to their default values.

■ Control Register Setup Sequence

The setting of clock mode or data format by control register should be done during RSTADN = RSTDAN = “0”, and outputs of ADC/DAC should be muted.

1. In case of using PDN pin
   (1) Set PDN= “H”.
   (2) Set registers for clock mode, data format, etc.
   (3) Cancel the reset state by setting RSTADN or RSTDAN to “1”. Refer to Reset Contorl Register (01H).

2. In case of not using PDN pin
   (1) Set RSTADN = RSTDAN = “0”.
   (2) Set registers for clock mode, data format, etc.
   (3) Cancel the reset state by setting RSTADN or RSTDAN to “1”. Refer to Reset Contorl Register (01H).

Note: Those settings may generate pop noise. Please mute the output of ADC and DAC externally.

■ Register Definitions

Addr	Register Name	D7	D6	D5	D4	D3	D2	D1	D0
00H	Power Down Control	0	0	0	0	0	PWVR	PWAD	PWDA
default		0	0	0	0	0	1	1	1

PWDA: DAC power down

0: Power down

1: Power up

Only DAC section is powered down by "0" and then the AOUTs go Hi-Z immediately. The OATTs also go "00H". But the contents of all register are not initialized and enabled to write to the registers.

After exiting the power down mode, the OATTs fade in the setting value of the control register (04H & 05H). The analog outputs should be muted externally as some pop noise may occur when entering to and exiting from this mode.

PWAD: ADC power down

0: Power down

1: Power up

Only ADC section is powered down by "0" and then the SDTO goes "L" immediately. The contents of all register are not initialized and enabled to write to the registers.

After exiting the power down mode, ADC outputs "0" during first 516 LRCK cycles.

PWVR: Vref power down

0: Power down

1: Power up

All sections are powered down by "0" and then both ADC and DAC do not operate. The contents of all register are not initialized and enabled to write to the registers. When PWAD and PWDA go "0" and PWVR goes "1", only VREF section can be powered up.

Addr	Register Name	D7	D6	D5	D4	D3	D2	D1	D0
01H	Reset Control	TE7	TE6	TE5	TE4	0	0	RSTADN	RSTDAN
default		0	0	0	0	0	0	0	0

TE7-4: Test Control Register Enable

Must be fixed to "0000".

RSTDAN: DAC reset

0: Reset

1: Normal Operation

The internal timing is reset by "0" and then the AOUTs go VCOM voltage immediately. The OATTs also go "00H". But the contents of all register are not initialized and enabled to write to the registers. After exiting the power down mode, the OATTs fade in the setting value of the control register (06H & 07H). The analog outputs should be muted externally as some pop noise may occur when entering to and exiting from this mode.

RSTDAN: ADC reset

0: Reset

1: Normal Operation

The internal timing is reset by "0" and then SDTO goes "L" immediately. But the contents of all register are not initialized and enabled to write to the register.

After exiting the power down mode, ADCs output "0" during first 516 LRCK cycles.

Addr	Register Name	D7	D6	D5	D4	D3	D2	D1	D0
02H	Clock and Format Control	DIF2	DIF1	DIF0	CMODE	CKS1	CKS0	0	DFS
default		0	1	0	0	0	0	0	0

DFS: Sampling Speed Control (see Table 1 and Table 3)
Default : normal speed mode.
Ored with DFS pin internally.

CMODE, CKS1-0: Master Clock Frequency Select (see Table 1)
Default: 256fs

DIF2-0: Audio data interface modes (see Table 4)
000: Mode 0
001: Mode 1
010: Mode 2
011: Mode 3
100: Mode 4
Default : 24bit MSB justified for both ADC and DAC

Addr	Register Name	D7	D6	D5	D4	D3	D2	D1	D0
03H	Deem and Volume Control	SMUTE	0	0	0	HPFR	HPFL	DEM1	DEM0
default		0	0	0	0	1	1	0	0

DEM1-0: De-emphasis response (see Table 6)
00: 44.1kHz
01: OFF
10: 48kHz
11: 32kHz
Default : 44.1kHz.
ORed with DEM1, DEM0 pins respectively.

HPFR: Right channel Digital High Pass Filter Control
0: Disable
1: Enable
Default : Enable

HPFL: Left channel Digital High Pass Filter Control
0: Disable
1: Enable
Default : Enable

SMUTE: DAC Input Soft Mute control
0: Normal operation
1: DAC outputs soft-muted
The soft mute is independent of the output ATT and performed digitally.

Addr	Register Name	D7	D6	D5	D4	D3	D2	D1	D0
04H	Lch OATT Control	0	ATTL6	ATTL5	ATTL4	ATTL3	ATTL2	ATTL1	ATTL0
05H	Rch OATT Control	0	ATTR6	ATTR5	ATTR4	ATTR3	ATTR2	ATTR1	ATTR0
default		0	1	1	1	1	1	1	1

ATTL/R6-0: DAC ATT Level (see Table 8)
Default : 7FH (0dB)

The OATTs are set to “00H” when PDN pin goes “L”. After returning to “H”, the OATTs fade in the initial value, “7FH” by 8031 cycles. The OATTs are set to “00H” when PWDA goes “0”. After returning to “1”, the OATTs fade in the current value. The OATTs are set to “00H” when RSTDAN goes “0”. Afer returning to “1”, the OATTs fade in the current value.

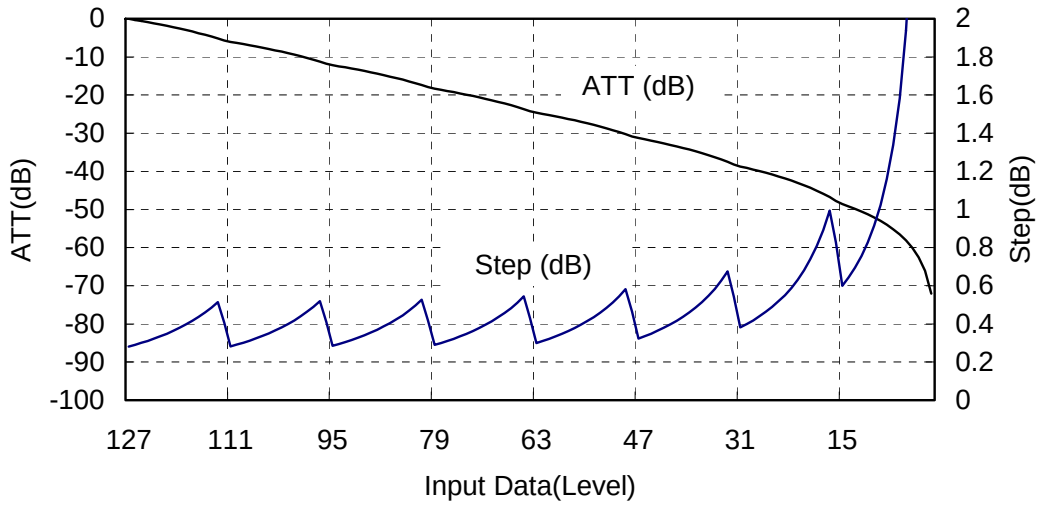


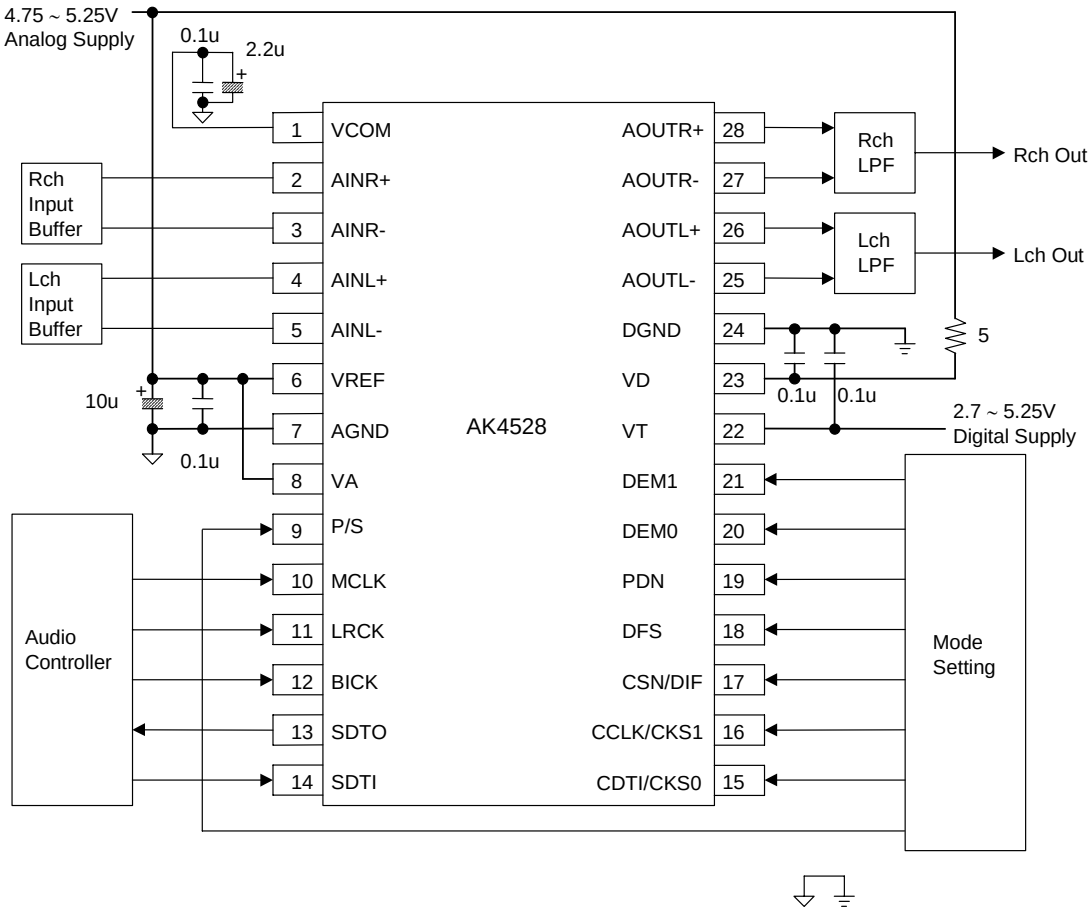
Figure 10. ATT characteristics

Data	Internal (DATT)	Gain (dB)	Step width (dB)	
127	8031	0	-	**OATT** External 128 levels are converted to internal 8032 linear levels of DATT. Internal DATT soft-changes between DATAs. DATT=2^m x (2 x l + 33) – 33 m: MSB 3-bits of data l: LSB 4-bits of data
126	7775	–0.28	0.28	
125	7519	–0.57	0.29	
:	:	:	:	
112	4191	–5.65	0.51	
111	3999	–6.06	0.41	
110	3871	–6.34	0.28	
:	:	:	:	
96	2079	–11.74	0.52	
95	1983	–12.15	0.41	
94	1919	–12.43	0.28	
:	:	:	:	
80	1023	–17.90	0.53	
79	975	–18.32	0.42	
78	943	–18.61	0.29	
:	:	:	:	
64	495	–24.20	0.54	
63	471	–24.64	0.43	
62	455	–24.94	0.30	
:	:	:	:	
48	231	–30.82	0.58	
47	219	–31.29	0.46	
46	211	–31.61	0.32	
:	:	:	:	
32	99	–38.18	0.67	
31	93	–38.73	0.54	
30	89	–39.11	0.38	
:	:	:	:	
16	33	–47.73	0.99	
15	30	–48.55	0.83	
14	28	–49.15	0.60	
:	:	:	:	
5	10	–58.10	1.58	
4	8	–60.03	1.94	
3	6	–62.53	2.50	
2	4	–66.05	3.52	
1	2	–72.07	6.02	
0	0	MUTE		

Table 8. OATT code table

SYSTEM DESIGN

Figure 11 shows the system connection diagram. An evaluation board (AKD4528) is available which demonstrates application circuits, the optimum layout, power supply arrangements and measurement results.



Notes:

- AGND and DGND of AK4528 should be distributed separately from the ground of external controller etc.
- When AOUT+/– drives some capacitive load, some resistor should be added in series between AOUT+/– and capacitive load.
- All input pins should not be left floating.

Figure 11. Typical Connection Diagram

1. Grounding and Power Supply Decoupling

The AK4528 requires careful attention to power supply and grounding arrangements. VA and VD are usually supplied from analog supply in system. Alternatively if VA and VD are supplied separately, the power up sequence is taken care. VT is a power supply pin to interface with the external ICs and is supplied from digital supply in system. AGND and DGND of the AK4528 should be connected to analog ground plane. System analog ground and digital ground should be connected together near to where the supplies are brought onto the printed circuit board. Decoupling capacitors should be as near to the AK4528 as possible, with the small value ceramic capacitor being the nearest.

2. Voltage Reference

The differential voltage between VREF and AGND sets the analog input/output range. VREF pin is normally connected to VA with a 0.1µF ceramic capacitor. VCOM is a signal ground of this chip. An electrolytic capacitor 2.2µF parallel with a 0.1µF ceramic capacitor attached to VCOM pin eliminates the effects of high frequency noise. No load current may be drawn from VCOM pin. All signals, especially clocks, should be kept away from the VREF and VCOM pins in order to avoid unwanted coupling into the AK4528.

3. Analog Inputs

The IPGA inputs are single-ended and the input resistance 27kΩ (typ. @fs=44.1kHz). The input signal range scales with the VREF voltage and nominally 0.56 x VREF Vpp. It is recommended that the input DC bias voltage is 0.56VA ~ 0.60VA as centered in the internal common voltage about VA/2). The AK4528 can accept input voltages from AGND to VA. The ADC output data format is 2's complement. The output code is 7FFFFFH(@24bit) for input above a positive full scale and 800000H(@24bit) for input below a negative fill scale. The ideal code is 000000H(@24bit) with no input signal. The DC offset including ADC own DC offset removed by the internal HPF (fc=0.9Hz@fs=44.1kHz).
The AK4528 samples the analog inputs at 64fs. The digital filter rejects noise above the stopband except for multiples of 64fs. A simple RC filter may be used to attenuate any noise around 64fs though most audio signals do not have significant energy at 64fs. Figure 12 is an example of differential input circuit.

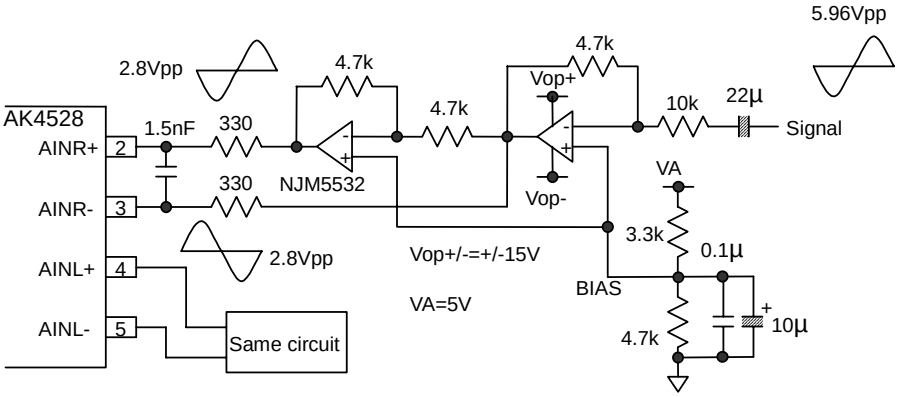


Figure 12. Differential Input Buffer Example

4. Analog Outputs

The analog outputs are full differential outputs and nominally 0.54 x VREF Vpp centered in the internal common voltage (about VA/2). The differential outputs are summed externally, Vout=(AOUT+) – (AOUT–) between AOUT+ and AOUT–. If the summing gain is 1, the output range is 5.4Vpp (typ@VREF=5V). The bias voltage of the external summing circuit is supplied externally. The input data format is 2's complement. The output voltage is a positive full scale for 7FFFFFH(@24bit) and a negative full scale for 800000H(@24bit). The ideal AOUT is 0V for 000000H(@24bit).

The internal switched-capacitor filter and the external LPF attenuate the noise generated by the delta-sigma modulator beyond the audio passband.

Differential outputs can eliminate any DC offset on analog outputs without using capacitors. Figure 13 to Figure 15 show the example of external op-amp circuit summing the differential outputs.

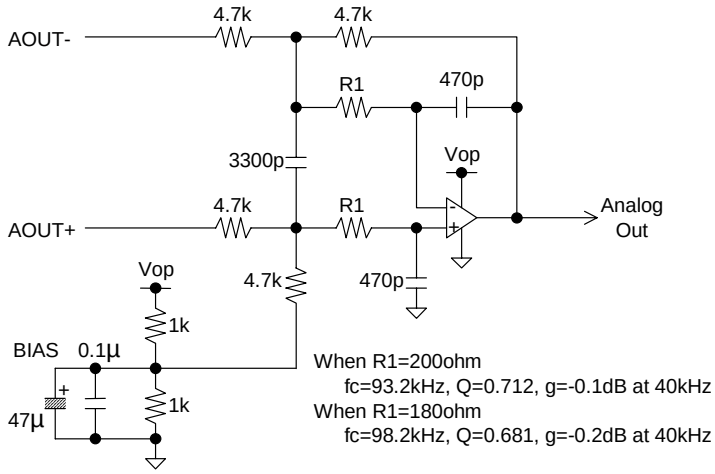


Figure 13. External 2nd order LPF Example (using single supply op-amp)

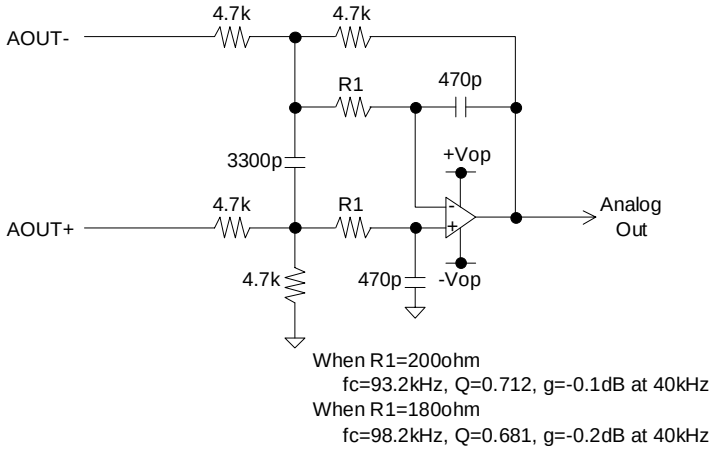


Figure 14. External 2nd order LPF Example (using dual supply op-amp)

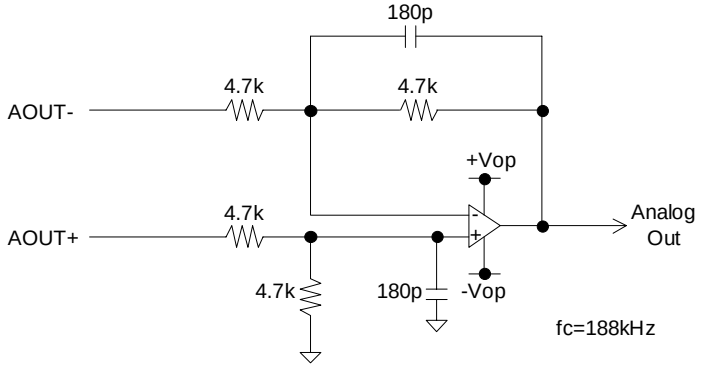


Figure 15. External low cost 1st order LPF Example (using dual supply op-amp)

■ Peripheral I/F Example

The digital inputs of the AK4528 are TTL inputs and can accept the signal of device with a nominal 3V supply. The digital output can interface with the peripheral device with a nominal 3V supply when the VT supply operates at a nominal 3V supply.

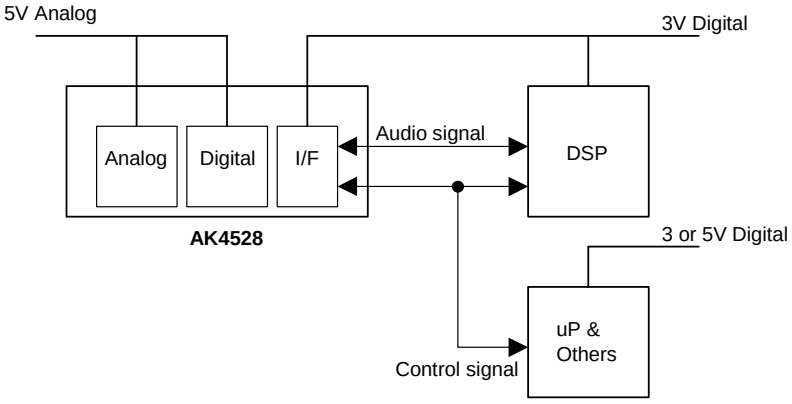
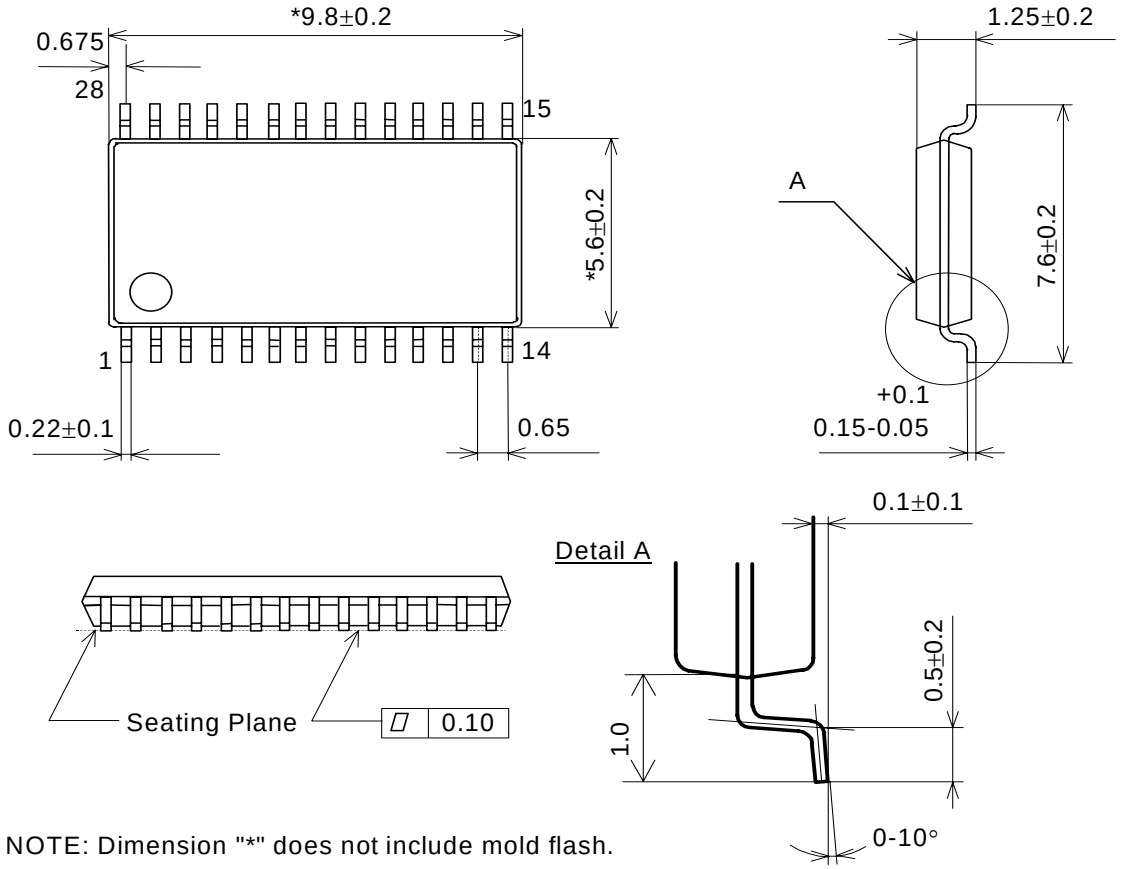


Figure 16. Power supply connection example

PACKAGE

28pin VSOP (Unit: mm)

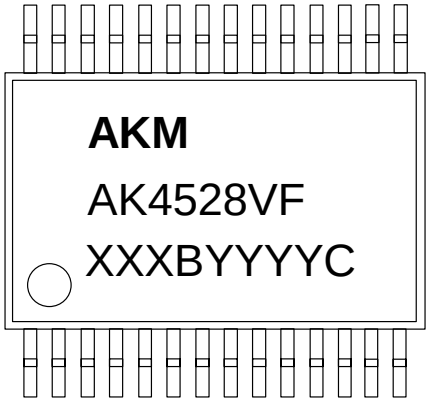


NOTE: Dimension "*" does not include mold flash.

■ Package & Lead frame material

Package molding compound:	Epoxy
Lead frame material:	Cu
Lead frame surface treatment:	Solder plate

MARKING



XXXBYYYYC: Date code identifier

XXXB: Lot number (X: Digit number, B: Alpha character)
YYYYC: Assembly date (Y: Digit number, C: Alpha character)

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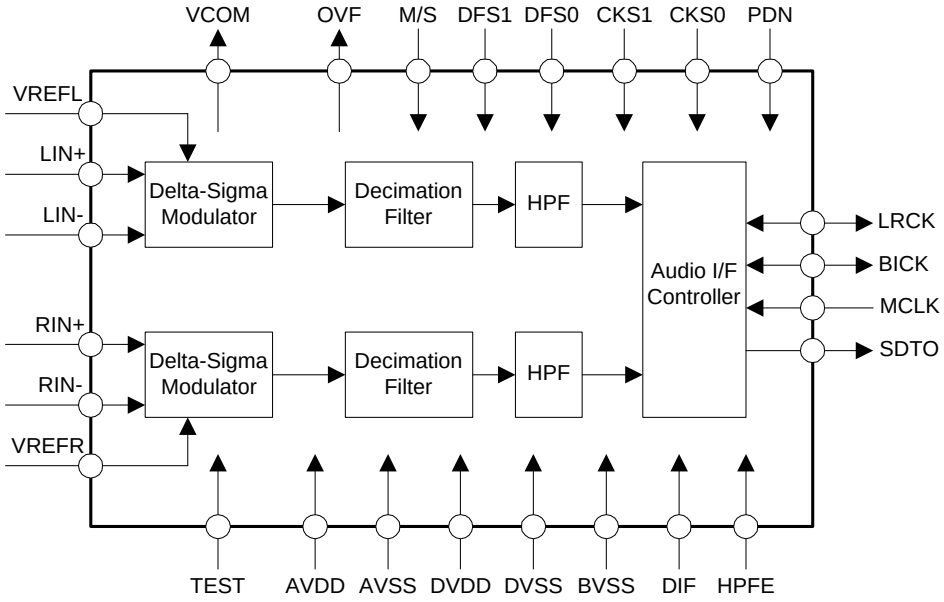
AK5385A
24Bit 192kHz ΔΣ ADC

GENERAL DESCRIPTION

The AK5385A is a 24bit, 192kHz sampling 2ch A/D converter for high-end audio system. The modulator in the AK5385A uses the Enhanced Dual Bit architecture and the AK5385A realizes high accuracy and low cost. The AK5385A performs 114dB dynamic range, so the device is suitable for AV-amp, AV recorder and musical instruments. The AK5385A is available in 28pin VSOP and SOP package, utilizing less board space.

FEATURES

- **Sampling Rate: 8kHz ~ 216kHz**
- **Full Differential Inputs**
- **S/(N+D): 103dB**
- **DR: 114dB**
- **S/N: 114dB**
- **High Performance Linear Phase Digital Anti-Alias filter**
  - **Passband: 0~21.768kHz (@fs=48kHz)**
  - **Ripple: 0.005dB**
  - **Stopband: 100dB**
- **Digital HPF**
- **Power Supply: 5V ± 5%(Analog), 3.0 ~ 5.25V(Digital)**
- **Power Dissipation: 183mW (@fs=48kHz)**
- **Package: 28pin SOP / 28pin VSOP**
- **AK5383/AK5393/AK5394A Semi-Pin compatible**

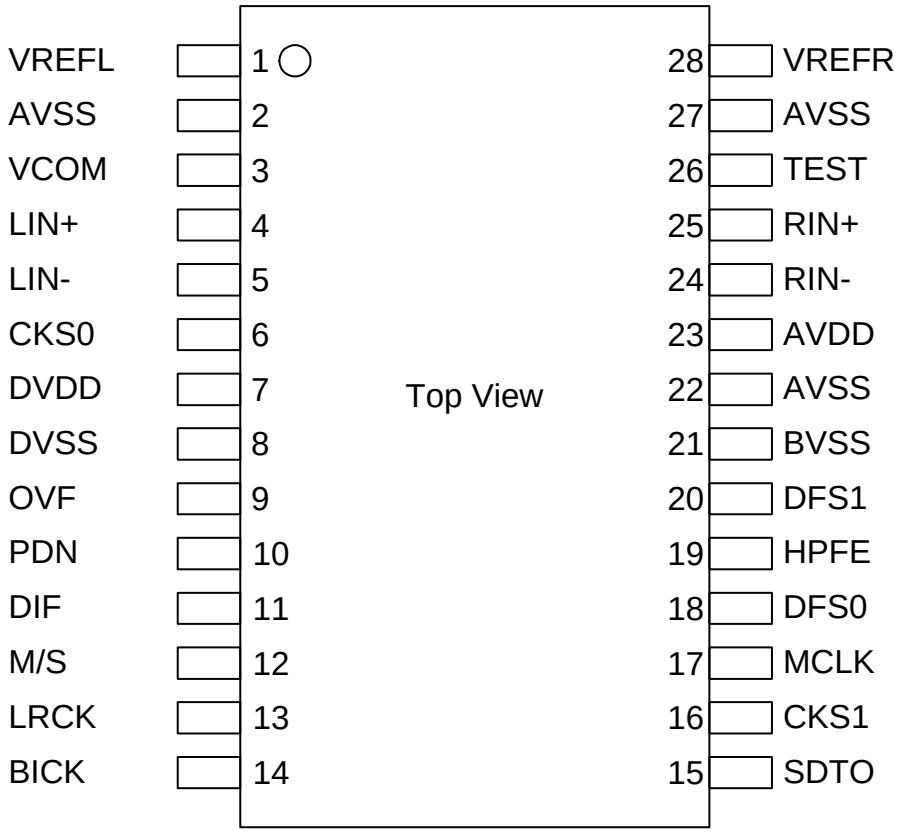


Block diagram

■ Ordering Guide

AK5385AVS	–10 ~ +70°C	28pin SOP (1.27mm pitch)
AK5385AVF	–40 ~ +85°C	28pin VSOP (0.65mm pitch)
AKD5385A	Evaluation Board for AK5385A	

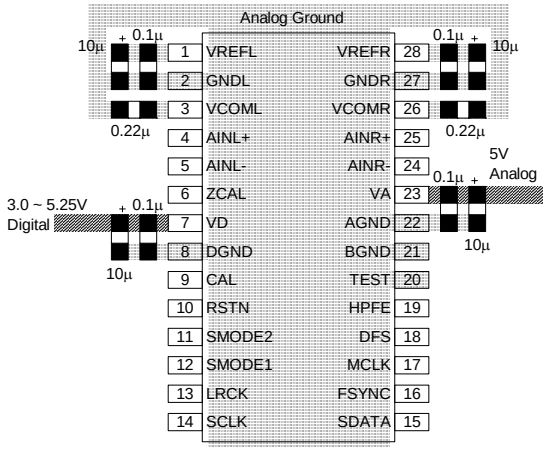
■ Pin Layout



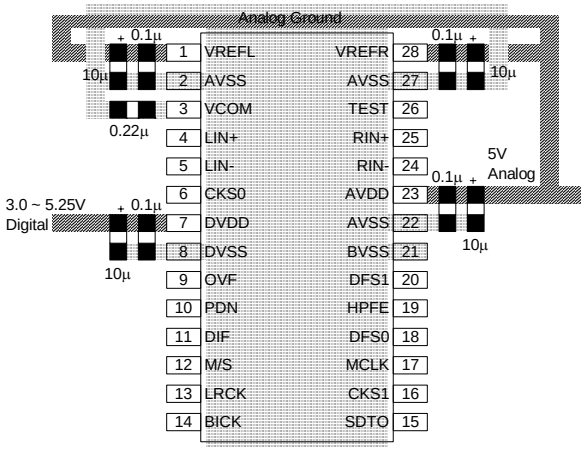
■ Compatibility with AK5383/AK5394A

	AK5385A	AK5383	AK5394A
Pin 1	VREFL	VREFL	VREFL+
Pin 2	AVSS	GNDL	VREFL−
Pin 3	VCOM	VCOML	VCOML
Pin 6	CKS0	ZCAL	ZCAL
Pin 9	OVF	CAL	CAL
Pin 11	DIF	SMODE2	SMODE2
Pin 12	M/S	SMODE1	SMODE1
Pin 16	CKS1	FSYNC	FSYNC
Pin 18	DFS0	DFS	DFS0
Pin 20	DFS1	TEST	DFS1
Pin 26	TEST	VCOMR	VCOMR
Pin 27	AVSS	GNDR	VREFR−
Pin 28	VREFR	VREFR	VREFR+
fs	8kHz ~ 216kHz	1kHz ~ 108kHz	1kHz ~ 216kHz
MCLK at 48kHz	256/384/512fs	256fs	256fs
MCLK at 96kHz	256fs	128fs	128fs
MCLK at 192kHz	128fs	Not Available	64fs
DR, S/N	114dB	110dB	123dB
Input Voltage	±2.9Vpp	±2.45Vpp	±2.4Vpp
Offset Calibration	Not Available	Available	Available

■ Compare PCB layout example between AK5385A and AK5383



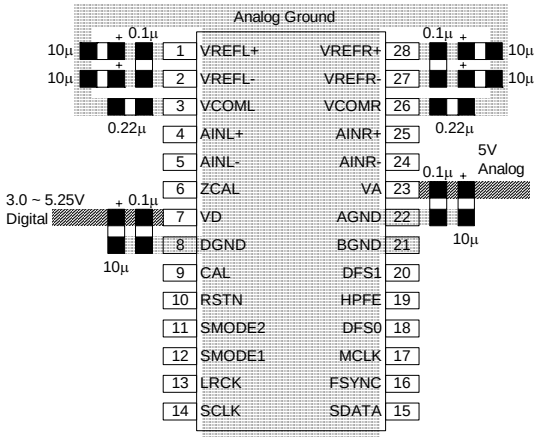
AK5383



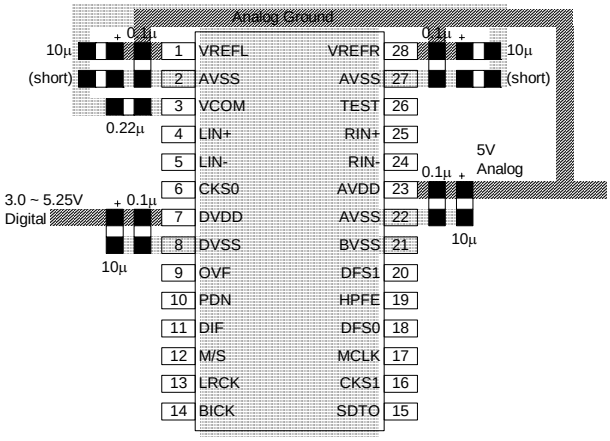
AK5385A

Pin #	AK5383	AK5385A
1	VREFL	VREFL
	Lch Voltage Reference **Output** Pin, 3.75V Normally, connected to GNDL with a 10µF electrolytic capacitor and a 0.1µF ceramic capacitor.	Lch Voltage Reference **Input** Pin, AVDD Normally, connected to AVSS with a 10µF electrolytic capacitor and a 0.1µF ceramic capacitor.
6	ZCAL	CKS0
	Zero Calibration Control Pin This pin controls the calibration reference signal.	Master Clock Select 0 Pin (Internal Pull-down Pin, typ. 100kΩ)
9	CAL	OVF
	Calibration Active Signal Pin	Analog Input Overflow Detect Pin
11	SMODE2	DIF
	Serial Interface Mode Select Pin	Audio Interface Format Pin
12	SMODE1	M/S
	Serial Interface Mode Select Pin	Master / Slave Mode Pin
16	FSYNC	CKS1
	Frame Synchronization Signal Pin	Master Clock Select 1 Pin (Internal Pull-down Pin, typ.100kΩ)
18	DFS	DFS0
	Double Speed Sampling Mode Pin	Sampling Speed Select 0 Pin
20	TEST	DFS1
	Test Pin (Internal Pull-down Pin)	Sampling Speed Select 1 Pin
26	VCOMR	TEST
	Rch Common Voltage Pin, 2.75V	Test Pin (Internal Pull-down Pin, typ. 100kΩ)
28	VREFR	VREFR
	Rch Voltage Reference **Output** Pin, 3.75V Normally, connected to GNDL with a 10µF electrolytic capacitor and a 0.1µF ceramic capacitor.	Rch Voltage Reference **Input** Pin, AVDD Normally, connected to AVSS with a 10µF electrolytic capacitor and a 0.1µF ceramic capacitor.

■ Compare PCB layout example between AK5385A and AK5394A



AK5394A



AK5385A

Pin #	AK5394A	AK5385A
1	VREFL+	VREFL
	Lch Positive Voltage Reference **Output** Pin, 3.75V Normally connected to AGND with a large electrolytic capacitor and connected to VREFL– with a 0.22µF ceramic capacitor.	Lch Voltage Reference **Input** Pin, AVDD Normally, connected to AVSS with a 10µF electrolytic capacitor and a 0.1µF ceramic capacitor.
2	VREFL–	AVSS
	Lch Negative Voltage Reference **Output** Pin, 1.25V Normally connected to AGND with a large electrolytic capacitor and connected to VREFL+ with a 0.22µF ceramic capacitor.	Analog Ground Pin
6	ZCAL	CKS0
	Zero Calibration Control Pin This pin controls the calibration reference signal.	Master Clock Select 0 Pin (Internal Pull-down Pin, typ. 100kΩ)
9	CAL	OVF
	Calibration Active Signal Pin	Analog Input Overflow Detect Pin
11	SMODE2	DIF
	Serial Interface Mode Select Pin	Audio Interface Format Pin
12	SMODE1	M/S
	Serial Interface Mode Select Pin	Master / Slave Mode Pin
16	FSYNC	CKS1
	Frame Synchronization Signal Pin	Master Clock Select 1 Pin (Internal Pull-down Pin, typ. 100kΩ)
27	VREFR–	AVSS
	Rch Negative Voltage Reference **Output** Pin, 1.25V Normally connected to AGND with a large electrolytic capacitor and connected to VREFR+ with a 0.22µF ceramic capacitor.	Analog Ground Pin
26	VCOMR	TEST
	Rch Common Voltage Pin, 2.75V	Test Pin (Internal Pull-down Pin, typ. 100kΩ)
28	VREFR+	VREFR
	Rch Positive Reference **Output** Voltage, 3.75V Normally connected to AGND with a large electrolytic capacitor and connected to VREFR– with a 0.22µF ceramic capacitor.	Rch Voltage Reference **Input** Pin, AVDD Normally, connected to AVSS with a 10µF electrolytic capacitor and a 0.1µF ceramic capacitor.

PIN / FUNCTION

No.	Pin Name	I/O	Function
1	VREFL	I	Lch Voltage Reference Input Pin, AVDD Normally, connected to AVSS with a 10μF electrolytic capacitor and a 0.1μF ceramic capacitor.
2	AVSS	-	Analog Ground Pin
3	VCOM	O	Common Voltage Output Pin, AVDD/2
4	LIN+	I	Lch Analog Positive Input Pin
5	LIN–	I	Lch Analog Negative Input Pin
6	CKS0	I	Master Clock Select 0 Pin (Internal Pull-down Pin, typ. 100kΩ)
7	DVDD	-	Digital Power Supply Pin, 3.0 ~ 5.25V
8	DVSS	-	Digital Ground Pin
9	OVF	O	Analog Input Overflow Detect Pin This pin goes to "H" if analog input overflows.
10	PDN	I	Power Down Mode Pin "H": Power up, "L": Power down
11	DIF	I	Audio Interface Format Pin "H" : 24bit I^2S Compatible, "L" : 24bit MSB justified
12	M/S	I	Master / Slave Mode Pin "H" : Master Mode, "L" : Slave Mode
13	LRCK	I/O	Output Channel Clock Pin "L" Output in Master Mode at Power-down mode.
14	BICK	I/O	Audio Serial Data Clock Pin "L" Output in Master Mode at Power-down mode.
15	SDTO	O	Audio Serial Data Output Pin "L" Output at Power-down mode.
16	CKS1	I	Master Clock Select 1 Pin (Internal Pull-down Pin, typ. 100kΩ)
17	MCLK	I	Master Clock Input Pin
18	DFS0	I	Sampling Speed Select 0 Pin
19	HPFE	I	High Pass Filter Enable Pin "H" : Enable, "L" : Disable
20	DFS1	I	Sampling Speed Select 1 Pin
21	BVSS	-	Substrate Ground Pin
22	AVSS	-	Analog Ground Pin
23	AVDD	-	Analog Power Supply Pin, 4.75 ~ 5.25V
24	RIN–	I	Rch Analog Negative Input Pin
25	RIN+	I	Rch Analog Positive Input Pin
26	TEST	I	Test Pin (Internal Pull-down Pin, typ. 100kΩ)
27	AVSS	-	Analog Ground Pin
28	VREFR	I	Rch Voltage Reference Input Pin, AVDD Normally, connected to AVSS with a 10μF electrolytic capacitor and a 0.1μF ceramic capacitor.

Note: All digital input pins except pull-down pins should not be left floating.

■ Handling of Unused Pin

The unused I/O pins should be processed appropriately as below.

Classification	Pin Name	Setting
Analog	LIN+, LIN–	These pins should be connected to AVSS.
	RIN+, RIN–	These pins should be connected to AVSS.
	VREFL, VREFR	These pins should be connected to AVDD.
Digital	OVF	This pin should be open.
	TEST	This pin should be connected to DVSS.

ABSOLUTE MAXIMUM RATINGS

(AVSS, BVSS, DVSS=0V; Note 1)

Parameter		Symbol	min	max	Units
Power Supplies:	Analog	AVDD	–0.3	6.0	V
	Digital	DVDD	–0.3	6.0	V
	|BVSS – DVSS| (Note 2)	ΔGND	-	0.3	V
Input Current, Any Pin Except Supplies		IIN	-	±10	mA
Analog Input Voltage (LIN+/–, RIN+/–, VREFL/R pins)		VINA	–0.3	AVDD+0.3	V
Digital Input Voltage (All digital input pins)		VIND	–0.3	DVDD+0.3	V
Ambient Temperature (Power applied)	28SOP Package	Ta	–10	70	°C
	28VSOP Package	Ta	–40	85	°C
Storage Temperature		Tstg	–65	150	°C

Note 1. All voltages with respect to ground.
Note 2. AVSS BVSS, and DVSS must be connected to the same analog ground plane.

WARNING: Operation at or beyond these limits may result in permanent damage to the device.
Normal operation is not guaranteed at these extremes.

RECOMMENDED OPERATING CONDITIONS

(AVSS, BVSS, DVSS=0V; Note 1)

Parameter		Symbol	min	typ	max	Units
Power Supplies	Analog	AVDD	4.75	5.0	5.25	V
(Note 3)	Digital	DVDD	3.0	3.3	AVDD	V
Voltage Reference (VREFL/R pins)		VREF	3.0	-	AVDD	V

Note 1. All voltages with respect to ground.
Note 3. The power up sequence between AVDD and DVDD is not critical.

WARNING: AKM assumes no responsibility for the usage beyond the conditions in this datasheet.

ANALOG CHARACTERISTICS

(Ta=25°C; AVDD=5.0V, DVDD=3.3V; AVSS=BVSS=DVSS=0V; VREFL=VREFR=AVDD; fs=48kHz, 96kHz, 192kHz; BICK=64fs; Signal Frequency=1kHz; 24bit Data; Measurement frequency=20Hz ~ 20kHz at fs=48kHz, 40Hz ~ 40kHz at fs=96kHz, 40Hz ~ 40kHz at fs=192kHz; unless otherwise specified)

Parameter			min	typ	max	Units
Analog Input Characteristics:						
Resolution					24	Bits
Input Voltage		(Note 4)	±2.7	±2.9	±3.1	Vpp
S/(N+D)		–1dBFS (Note 5)	-	103		dB
	fs=48kHz BW=20kHz	–1dBFS	92	100		dB
		–20dBFS	-	91		dB
		–60dBFS	-	51		dB
	fs=96kHz BW=40kHz	–1dBFS	90	98		dB
		–20dBFS	-	86		dB
		–60dBFS	-	46		dB
	fs=192kHz BW=40kHz	–1dBFS	-	98		dB
		–20dBFS	-	86		dB
		–60dBFS	-	46		dB
Dynamic Range		(–60dBFS with A-weighted)	107	114		dB
S/N		(A-weighted)	107	114		dB
Input Resistance			9	13		kΩ
Interchannel Isolation			100	120		dB
Interchannel Gain Mismatch				0.1	0.5	dB
Power Supply Rejection		(Note 6)		50	-	dB
Power Supplies						
Power Supply Current						
Normal Operation (PDN pin = "H")						
AVDD				30	45	mA
DVDD	(fs=48kHz)			10	15	mA
DVDD	(fs=96kHz)			17	25	mA
DVDD	(fs=192kHz)			20	30	mA
Power down mode (PDN pin = "L")		(Note 7)				
AVDD+DVDD				10	100	μA

Note 4. This value is (LIN+)–(LIN–) and (RIN+)–(RIN–). Input voltage is proportional to VREF voltage.
Vin = 0.58 x VREF (Vpp).
Note 5. 100μF capacitors are connected between the VREFL/R pins and AVSS.
Note 6. PSR is applied to AVDD and DVDD with 1kHz, 20mVpp. The VREFL and VREFR pins held a constant voltage.
Note 7. All digital input pins are held DVDD or DVSS.

FILTER CHARACTERISTICS (fs=48kHz)

(Ta=25°C; AVDD=4.75 ~ 5.25V; DVDD=3.0 ~ 5.25V; DFS1 = "L", DFS0 = "L")

Parameter		Symbol	min	typ	max	Units
ADC Digital Filter (Decimation LPF):						
Passband (Note 8)	–0.005dB	PB	0		21.5	kHz
	–0.02dB		-	22.038	-	kHz
	–0.06dB		-	22.2	-	kHz
	–6.0dB		-	24.0	-	kHz
Stopband		SB	26.5			kHz
Passband Ripple		PR			±0.005	dB
Stopband Attenuation		SA	100			dB
Group Delay (Note 9)		GD		43.2		1/fs
Group Delay Distortion		ΔGD		0		μs
ADC Digital Filter (HPF):						
Frequency Response (Note 8)	–3dB	FR		1.0		Hz
	–0.1dB			6.5		Hz

FILTER CHARACTERISTICS (fs=96kHz)

(Ta=25°C; AVDD=4.75 ~ 5.25V; DVDD=3.0 ~ 5.25V; DFS1 = "L", DFS0 = "H")

Parameter		Symbol	min	typ	max	Units
ADC Digital Filter (Decimation LPF):						
Passband (Note 8)	–0.005dB	PB	0		43.0	kHz
	–0.02dB		-	44.081	-	kHz
	–0.06dB		-	44.5	-	kHz
	–6.0dB		-	48.0	-	kHz
Stopband		SB	53.0			kHz
Passband Ripple		PR			±0.005	dB
Stopband Attenuation		SA	100			dB
Group Delay (Note 9)		GD		43.1		1/fs
Group Delay Distortion		ΔGD		0		μs
ADC Digital Filter (HPF):						
Frequency Response (Note 8)	–3dB	FR		2.0		Hz
	–0.1dB			13.0		Hz

Note 8. The passband and stopband frequencies scale with fs. The reference frequency of these responses is 1kHz.
Note 9. The calculated delay time induced by digital filtering. This time is from the input of an analog signal to the setting of 24bit data both channels to the ADC output register for ADC.

FILTER CHARACTERISTICS (fs=192kHz)

(Ta=25°C; AVDD=4.75 ~ 5.25V; DVDD=3.0 ~ 5.25V; DFS1 = "H", DFS0 = "L")

Parameter		Symbol	min	typ	max	Units
ADC Digital Filter (Decimation LPF):						
Passband (Note 8)	–0.005dB	PB	0		86.0	kHz
	–0.02dB		-	88.183	-	kHz
	–0.06dB		-	89.0	-	kHz
	–6.0dB		-	96.0	-	kHz
Stopband		SB	106.0			kHz
Passband Ripple		PR			±0.005	dB
Stopband Attenuation		SA	100			dB
Group Delay (Note 9)		GD		38.2		1/fs
Group Delay Distortion		ΔGD		0		μs
ADC Digital Filter (HPF):						
Frequency Response (Note 8)	–3dB	FR		4.0		Hz
	–0.1dB			26.0		Hz

Note 8. The passband and stopband frequencies scale with fs. The reference frequency of these responses is 1kHz.
Note 9. The calculated delay time induced by digital filtering. This time is from the input of an analog signal to the setting of 24bit data both channels to the ADC output register for ADC.

DC CHARACTERISTICS

(Ta=25°C; AVDD=4.75 ~ 5.25V; DVDD=3.0 ~ 5.25V)

Parameter		Symbol	min	typ	Max	Units
High-Level Input Voltage		VIH	70%DVDD	-	-	V
Low-Level Input Voltage		VIL	-	-	30%DVDD	V
High-Level Output Voltage	(Iout=–400μA)	VOH	DVDD–0.4	-	-	V
Low-Level Output Voltage	(Iout=400μA)	VOL	-	-	0.4	V
Input Leakage Current	(Note 10)	Iin	-	-	±10	μA

Note 10. CKS1, CKS0 and TEST pins are internally connected to a pull-down resistor. (typ. 100kΩ)

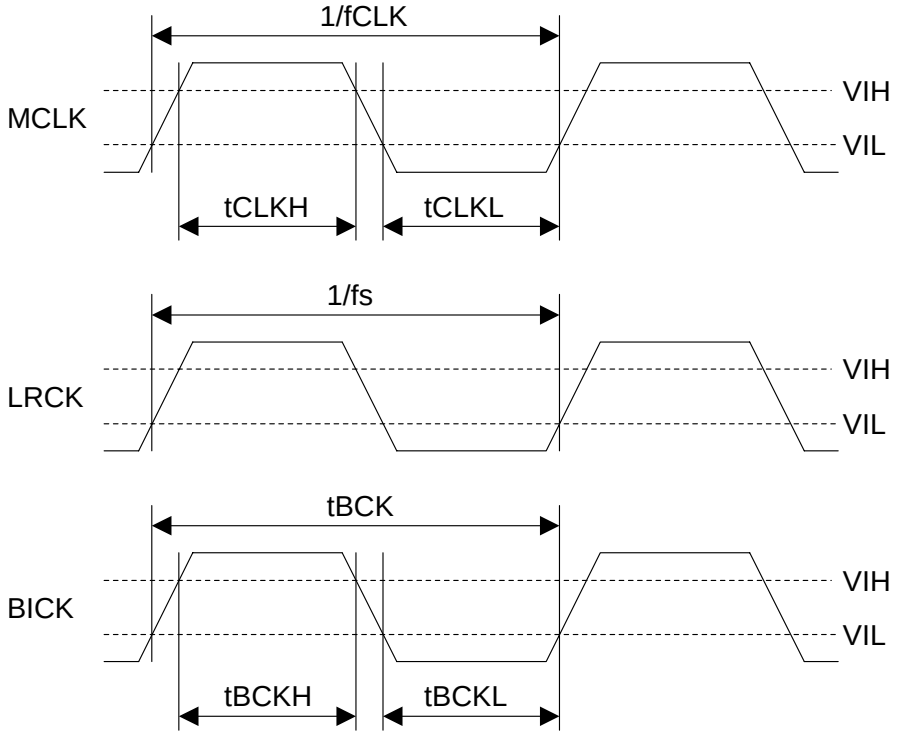
SWITCHING CHARACTERISTICS

(Ta=25°C; AVDD=4.75 ~ 5.25V; DVDD=3.0 ~ 5.25V; C_L=20pF)

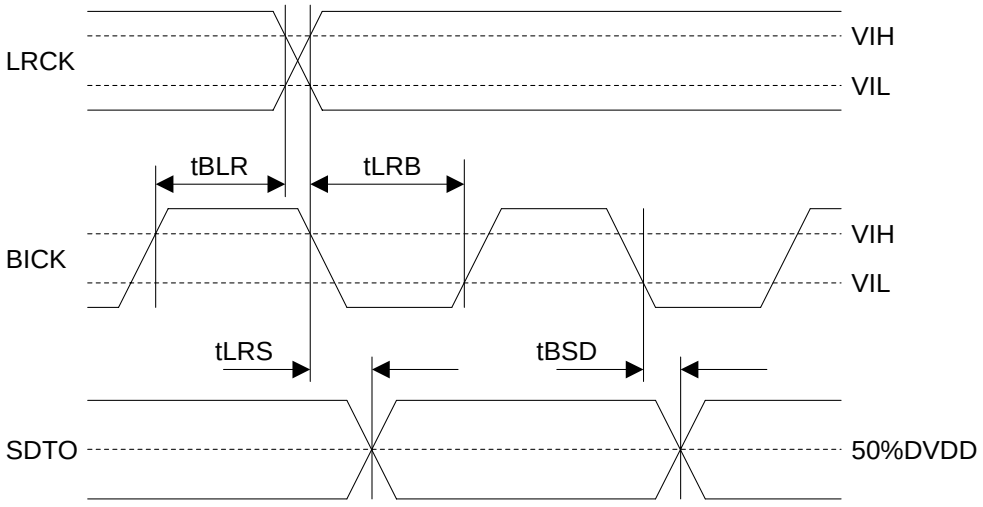
Parameter		Symbol	min	typ	max	Units
Master Clock Timing						
Frequency		fCLK	2.048		27.648	MHz
Pulse Width Low		tCLKL	14.5			ns
Pulse Width High		tCLKH	14.5			ns
LRCK Frequency						
Normal Speed Mode		fsn	8		54	kHz
Double Speed Mode		fsd	54		108	kHz
Quad Speed Mode		fsq	108		216	kHz
Duty Cycle	Slave mode		45		55	%
	Master mode			50		%
Audio Interface Timing						
Slave mode						
BICK Period						
Normal Speed Mode		tBCK	1/128fsn			ns
Double Speed Mode		tBCK	1/64fsd			ns
Quad Speed Mode		tBCK	1/64fsq			ns
BICK Pulse Width Low		tBCKL	33			ns
Pulse Width High		tBCKH	33			ns
LRCK Edge to BICK "↑"	(Note 11)	tLRB	20			ns
BICK "↑" to LRCK Edge	(Note 11)	tBLR	20			ns
LRCK to SDTO (MSB)	(Except I^2S mode)	tLRS			20	ns
BICK "↓" to SDTO		tBSD			20	ns
Master mode						
BICK Frequency		fBCK		64fs		Hz
BICK Duty		dBCK		50		%
BICK "↓" to LRCK		tMBLR	–20		20	ns
BICK "↓" to SDTO		tBSD	–20		20	ns
Reset Timing						
PDN Pulse Width	(Note 12)	tPD	150			ns
PDN "↑" to SDTO valid	(Note 13)	tPDV		516		1/fs

Note 11. BICK rising edge must not occur at the same time as LRCK edge.
Note 12. The AK5385A can be reset by bringing the PDN pin = "L".
Note 13. This cycle is the number of LRCK rising edges from the PDN pin = "H". This value is in master mode
This value is longer 1/fs in slave mode than master mode.

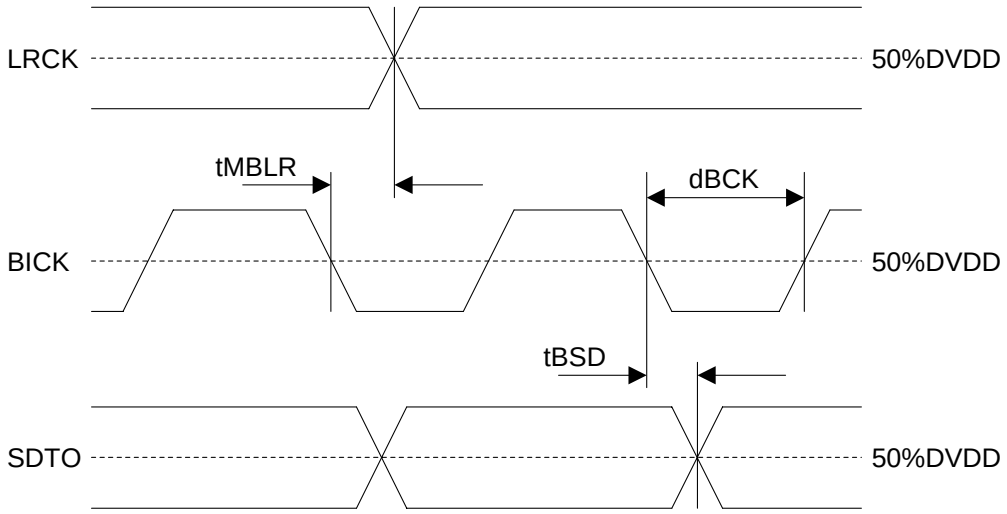
■ **Timing Diagram**



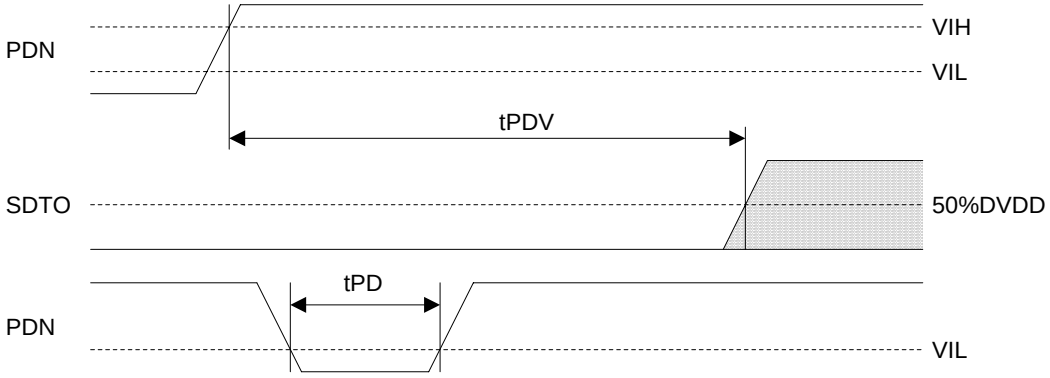
Clock Timing



Audio Interface Timing (Slave mode)



Audio Interface Timing (Master mode)



Power Down & Reset Timing

OPERATION OVERVIEW

■ System Clock

MCLK (256fs/384fs/512fs), BICK (48fs~) and LRCK (fs) clocks are required in slave mode. The LRCK clock input must be synchronized with MCLK, however the phase is not critical. Table 1 shows the relationship of typical sampling frequency and the system clock frequency. MCLK frequency is selected by CKS1-0 pins as shown in Table 2 and LRCK frequency is selected by DFS1-0 pins as shown in Table 3.

As the AK5385A includes the phase detect circuit for LRCK, the AK5385A is reset automatically when the synchronization is out of phase by changing the clock frequencies.

All external clocks (MCLK, BICK and LRCK) must be present unless PDN pin = "L". If these clocks are not provided, the AK5385A may draw excess current due to its use of internal dynamically refreshed logic. If the external clocks are not present, place the AK5385A in power-down mode (PDN pin = "L"). In master mode, the master clock (MCLK) must be provided unless PDN pin = "L".

fs	MCLK			
	128fs	256fs	384fs	512fs
32kHz	N/A	8.192MHz	12.288MHz	16.384MHz
44.1kHz	N/A	11.2896MHz	16.9344MHz	22.5792MHz
48kHz	N/A	12.288MHz	18.432MHz	24.576MHz
96kHz	N/A	24.576MHz	N/A	N/A
192kHz	24.576MHz	N/A	N/A	N/A

Table 1. System Clock Example

CKS1 pin	CKS0 pin	MCLK Frequency
L	L	256fs
L	H	128fs
H	L	512fs
H	H	384fs

Table 2. MCLK Frequency

DFS1 pin	DFS0 pin	LRCK Frequency
L	L	8kHz ≤ fs ≤ 54kHz
L	H	54kHz < fs ≤ 108kHz
H	L	108kHz < fs ≤ 216kHz
H	H	N/A

Table 3. Sampling Speed

When changing MCLK frequency in master/slave mode, the AK5385A should reset by PDN pin = "L". (ex. 12.288MHz(@fs=48kHz) to 24.576MHz(@fs=96kHz) at CKS1 pin = CKS0 pin = "L".

If the CKS1-0 and DFS1-0 pins are changed with same MCLK frequency in master/slave mode (ex. MCLK is fixed to 24.576MHz and fs is changed from 48kHz (CKS1 pin = "L", CKS0 pin = "L") to 96kHz (CKS1 pin = "L", CKS0 pin = "H")), no reset by PDN pin = "L" is required.

■ Audio Interface Format

Two kinds of data formats can be chosen with the DIF pin (Table 4). In both modes, the serial data is in MSB first, 2's compliment format. The SDTO is clocked out on the falling edge of BICK. The audio interface supports both master and slave modes. In master mode, BICK and LRCK are output with the BICK frequency fixed to 64fs and the LRCK frequency fixed to 1fs.

Mode	DIF pin	SDTO	LRCK	BICK	Figure
0	L	24bit, MSB justified	H/L	≥ 48fs	Figure 1
1	H	24bit, I^2S Compatible	L/H	≥ 48fs	Figure 2

Table 4. Audio Interface Format

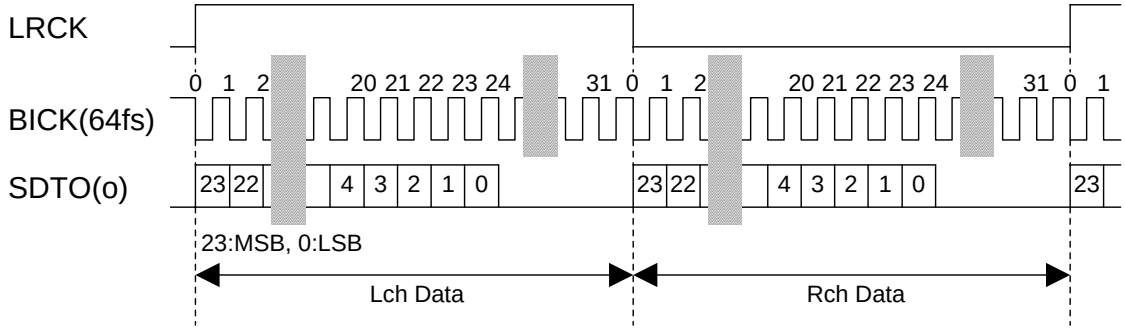


Figure 1. Mode 0 Timing

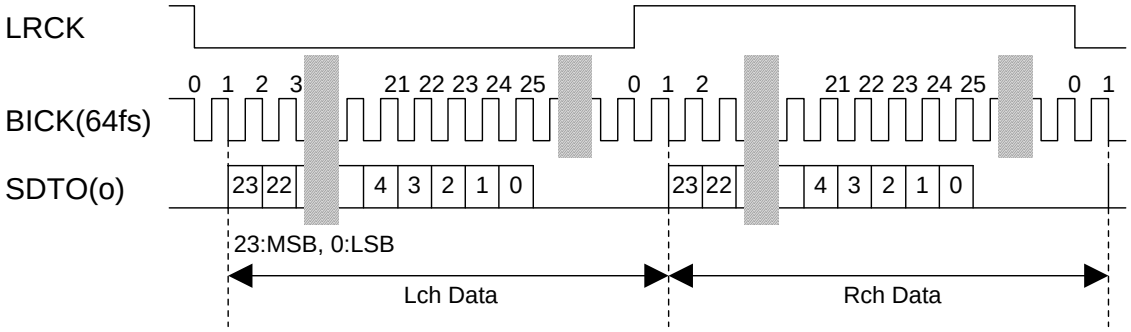


Figure 2. Mode 1 Timing

■ Master Mode and Slave Mode

The M/S pin selects either master or slave modes. M/S pin = "H" selects master mode and "L" selects slave mode. The AK5385A outputs BICK and LRCK in master mode. In slave mode, provide MCLK, BICK and LRCK.

M/S pin	Mode	BICK, LRCK
L	Slave Mode	BICK = Input LRCK = Input
H	Master Mode	BICK = Output LRCK = Output

Table 5. Master mode/Slave mode

■ Digital High Pass Filter

The ADC has a digital high pass filter for DC offset cancellation. The cut-off frequency of the HPF is 1.0Hz (@fs=48kHz) and scales with sampling rate (fs).

HPF is controlled by HPFE pin. If HPF setting (ON/OFF) is changed at operating, click noise occurs by changing DC offset. It is recommended that HPF setting is changed at PDN pin = "L".

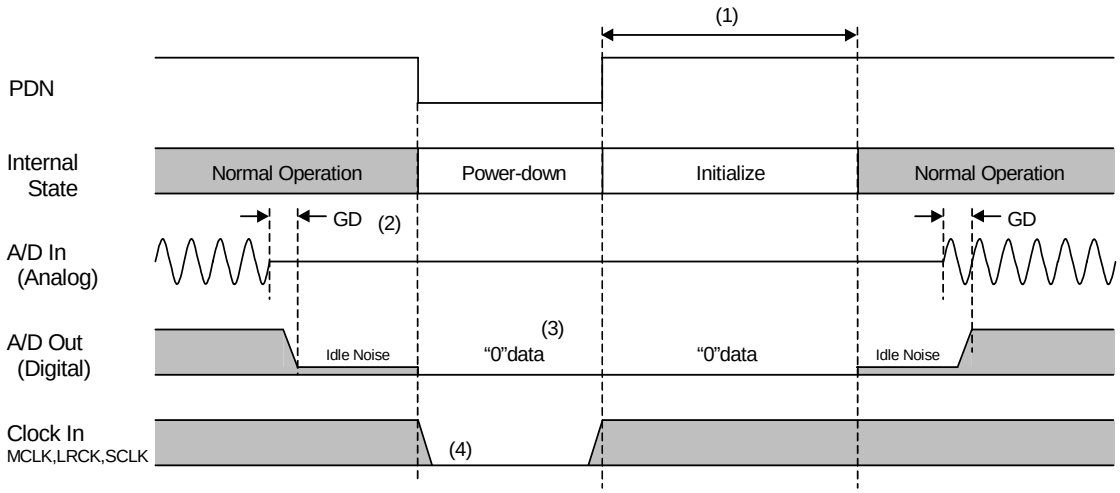
■ Overflow Detection

The AK5385A has overflow detect function for analog input. OVF pin goes to "H" if Lch or Rch overflows (more than −0.3dBFS). OVF output for overflowed analog input has the same group delay as ADC (GD=43.2/fs=0.9ms@fs=48kHz). OVF is "L" for 516/fs (=10.75ms@fs=48kHz) after PDN pin = "↑", and then overflow detection is enabled.

■ Power Down and Reset

The AK5385A is placed in the power-down mode by bringing PDN pin "L" and the digital filter is also reset at the same time. This reset should always be done after power-up. In the power-down mode, the VCOM is AGND level. An analog initialization cycle starts after exiting the power-down mode. Therefore, the output data SDTO becomes available after 516 cycles of LRCK clock in master mode (517 cycles in slave mode). During initialization, the ADC digital data outputs of both channels are forced to "0". The ADC outputs settle in the data corresponding to the input signals after the end of initialization (Settling approximately takes the group delay time).

The AK5385A should be reset once by bringing PDN pin "L" after power-up. The internal timing starts clocking by the rising edge (falling edge at Mode 1) of LRCK after exiting from reset and power down state by MCLK.

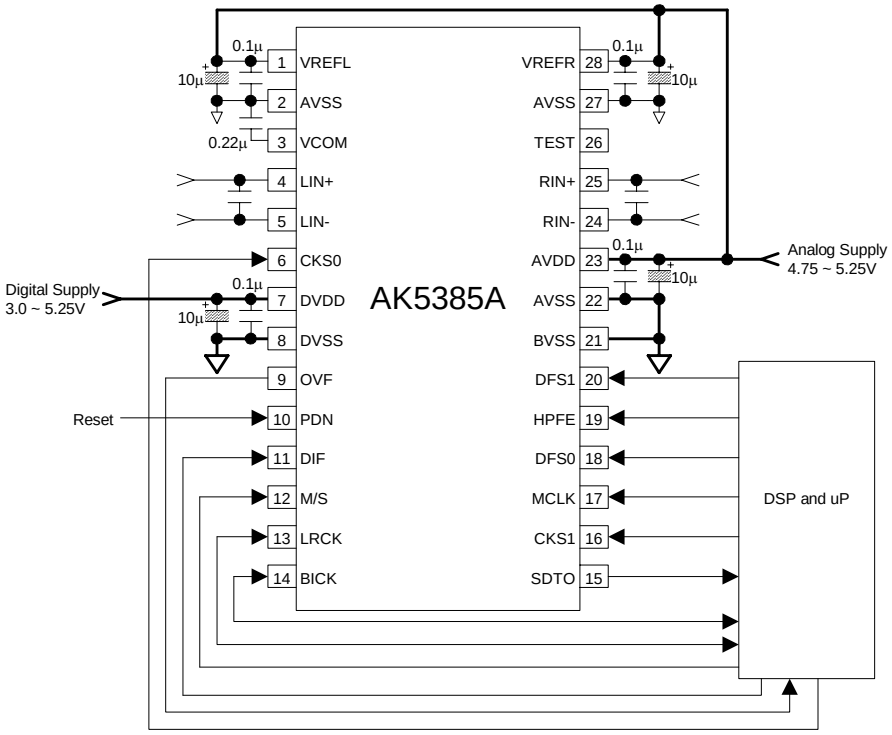


Notes:
(1) 517/fs in slave mode and 516/fs in master mode.
(2) Digital output corresponding to analog input has the group delay (GD).
(3) A/D output is "0" data at the power-down state.
(4) When the external clocks (MCLK, SCLK, LRCK) are stopped, the AK5385A should be in the power-down state.

Figure 3. Power-down/up sequence example

SYSTEM DESIGN

Figure 4 shows the system connection diagram. An evaluation board is available which demonstrates application circuits, the optimum layout, power supply arrangements and measurement results.



Note:
- AVSS, BVSS and DVSS of the AK5385A should be distributed separately from the ground of external digital devices (MPU, DSP etc.).
- All input pins except pull-down (CKS0, CKS1 and TEST pin) pin should not be left floating.

Figure 4. Typical Connection Diagram

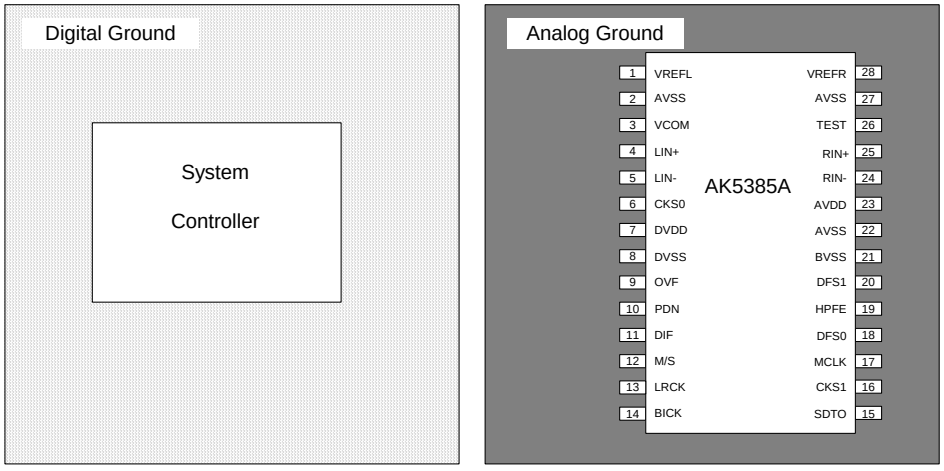


Figure 5. Ground Layout

Note:
- AVSS BVSS, and DVSS must be connected to the same analog ground plane.

1. Grounding and Power Supply Decoupling

The AK5385A requires careful attention to power supply and grounding arrangements. Alternatively if AVDD and DVDD are supplied separately, the power up sequence is not critical. **AVSS, BVSS and DVSS of the AK5385A must be connected to analog ground plane.** System analog ground and digital ground should be connected together near to where the supplies are brought onto the printed circuit board. Decoupling capacitors should be as near to the AK5385A as possible, with the small value ceramic capacitor being the nearest.

2. Voltage Reference Inputs

The reference voltage for A/D converter is supplied from VREFL/R pins at AVSS reference. AVSS pin is connected to analog ground and an electrolytic capacitor over 10μF parallel with a 0.1μF ceramic capacitor between the VREFL/R pins and the AVSS pin eliminate the effects of high frequency noise. Especially, a ceramic capacitor should be as near to the pins as possible. And all digital signals, especially clocks, should be kept away from the VREFL/R pins in order to avoid unwanted coupling into the AK5385A. No load current may be taken from the VREFL/R pins.

VCOM is a signal ground of this chip. An electrolytic capacitor 0.22μF attached to VCOM pin eliminates the effects of high frequency noise. No load current may be drawn from the VCOM pin. All signals, especially clocks, should be kept away from the VCOM pin in order to avoid unwanted coupling into the AK5385A.

3. Analog Inputs

Analog signal is differentially input into the modulator via the LIN+ (RIN+) and the LIN– (RIN–) pins. The input voltage is the difference between the LIN+ (RIN+) and LIN– (RIN–) pins. The full scale of each pin is nominally ±2.9Vpp(typ). The AK5385A can accept input voltages from AVSS to AVDD. The ADC output data format is 2's compliment. The internal HPF removes the DC offset.

The AK5385A samples the analog inputs at 128fs (6.144MHz@fs=48kHz, Normal Speed Mode). The digital filter rejects noise above the stop band except for multiples of 128fs. The AK5385A includes an anti-aliasing filter (RC filter) to attenuate a noise around 128fs.

The AK5385A accepts +5V supply voltage. Any voltage which exceeds the upper limit of AVDD+0.3V and lower limit of AVSS–0.3V and any current beyond 10mA for the analog input pins (LIN+/–, RIN+/–) should be avoided. Excessive currents to the input pins may damage the device. Hence input pins must be protected from signals at or beyond these limits. Use caution specially in case of using ±15V in other analog circuits.

4. External Analog Circuit Examples

Figure 6 shows an input buffer circuit example 1. This is a full-differential input buffer circuit with an inverted-amp (gain: –10dB). The capacitor of 10nF between LIN+/– (RIN+/–) decreases the clock feed through noise of modulator, and composes a 1st order LPF (fc=360kHz) with 22Ω resistor before the capacitor. This circuit also has a 1st order LPF (fc=370kHz) composed of op-amp. The evaluation board should be referred about the detail.

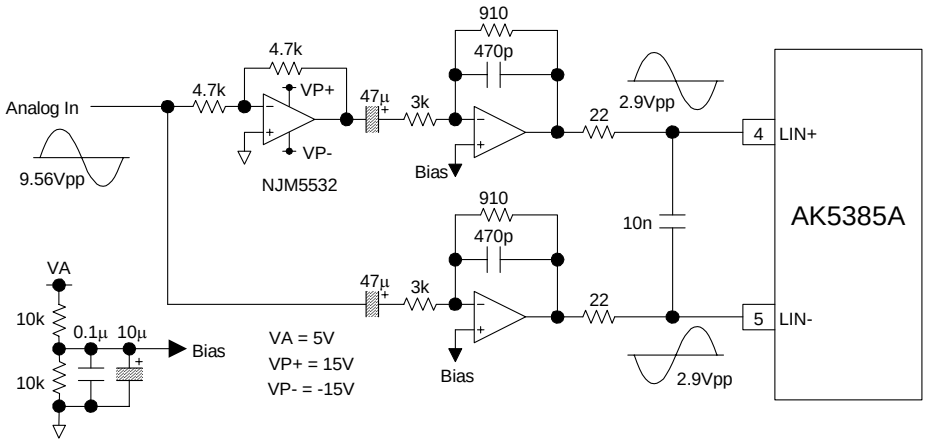


Figure 6.Input Buffer example

Figure 7 shows an input buffer circuit example 2. (1st order HPF: fc=0.66Hz, Table 6; 1st order LPF: fc=590kHz, gain=–14dB, Table 7). The analog signal is able to input through XLR or BNC connectors. (short JP1 and JP2 for BNC input, open JP1 and JP2 for XLR input). The input level of this circuit is +/–14.7Vpp.

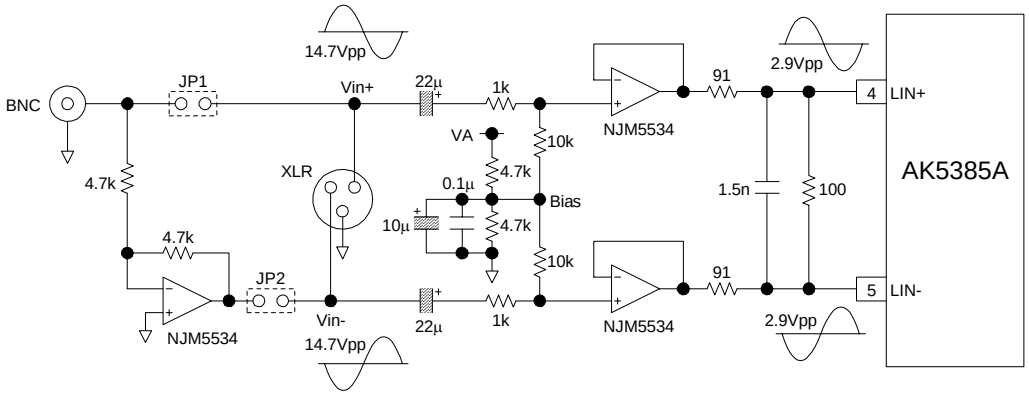


Figure 7.Input Buffer example

fin	1Hz	10Hz
Frequency Response	–1.56dB	–0.02dB

Table 6. Frequency Response of HPF

fin	20kHz	40kHz	6.144MHz
Frequency Response	–0.005dB	–0.02dB	–15.6dB

Table 7. Frequency Response of LPF

5. Measurement Example

Figure 8 shows the S/(N+D) vs. VREF capacitor that is connected between VREFL/R pins and AVSS pin with the 0.1μF capacitor in parallel. X-AXIS is the capacity for VREF; Y-AXIS is S/(N+D).

[Measurement Condition]

- AVDD = 5.0V, DVDD = 3.3V; AVSS = BVSS = DVSS = 0V
- fs = 48kHz
- Measurement Bandwidth = 10Hz ~ 20kHz
- Ta = 25°C
- Using Audio Precision System Two Cascade

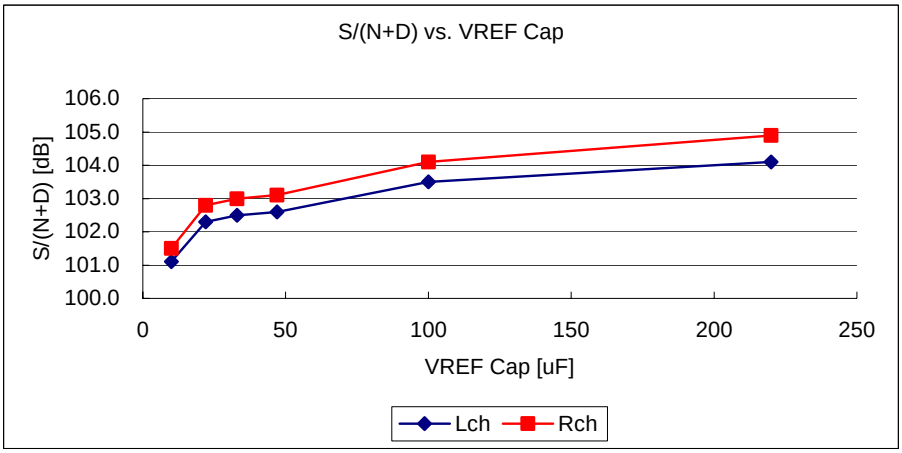


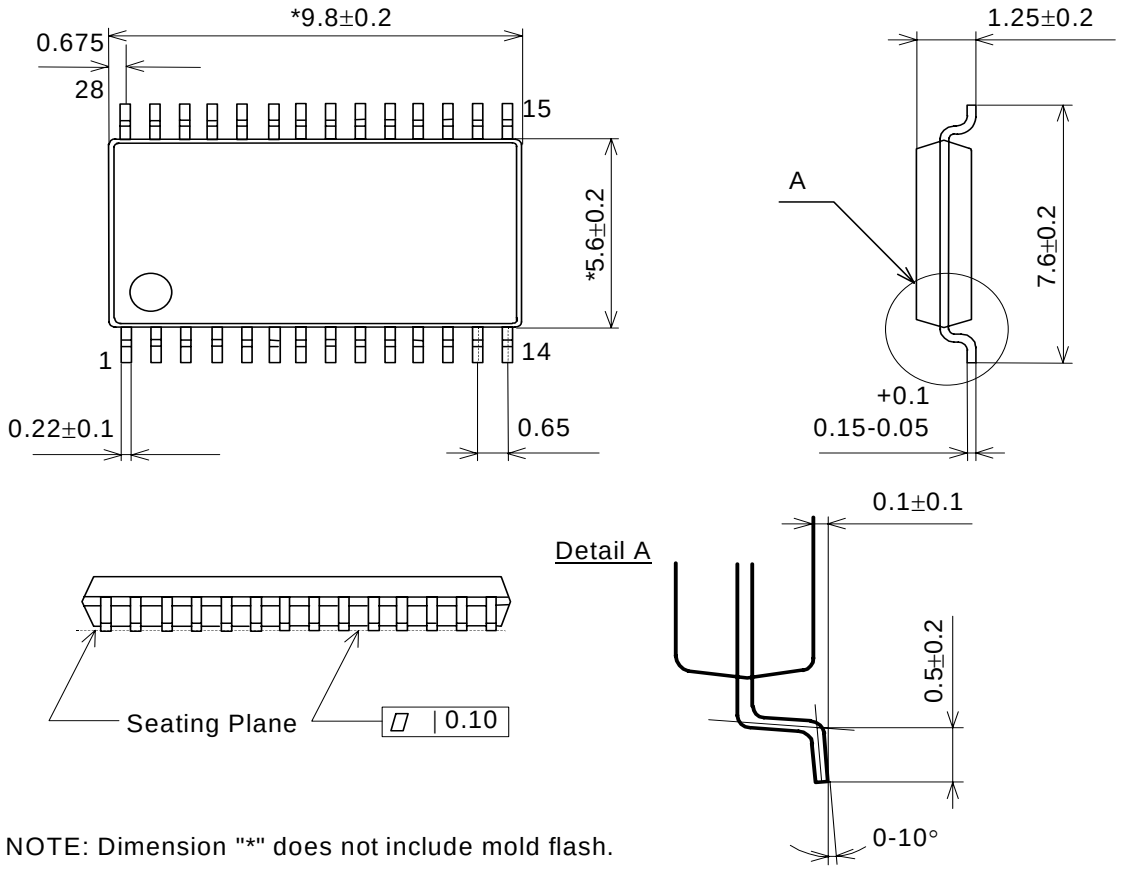
Figure 8. S/(N+D) vs. VREF Cap

6. Synchronization of Multiple Devices

In system where multiple ADCs are required, care must be taken to achieve simultaneous sampling. To ensure synchronous sampling, the MCLK and LRCK must be the same for all of the AK5385As in the system. The all AK5385As should be reset at the same timing with preventing the reset signal for AK5385A from overlapping on the edge of MCLK, so that all AK5385As begin sampling on the same clock edge.

PACKAGE (AK5385AVF)

28pin VSOP (Unit: mm)



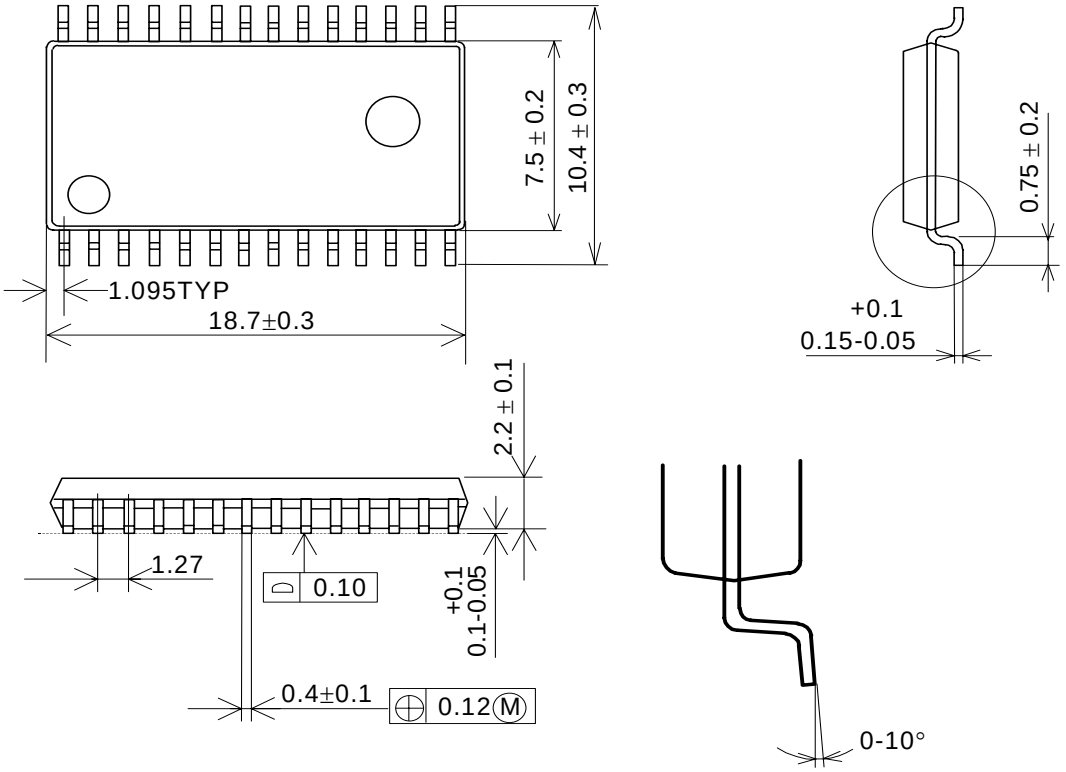
NOTE: Dimension "*" does not include mold flash.

■ Material & Lead finish

Package molding compound:	Epoxy
Lead frame material:	Cu
Lead frame surface treatment:	Solder (Pb free) plate

PACKAGE (AK5385AVS)

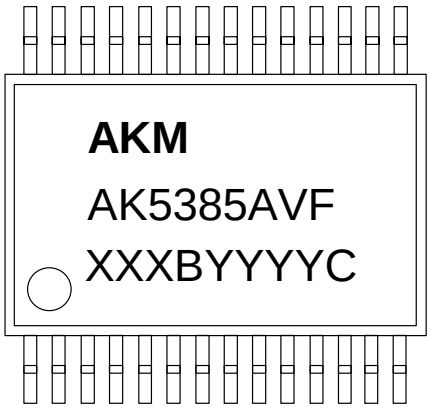
28pin SOP (Unit: mm)



■ Material & Lead finish

Package molding compound:	Epoxy
Lead frame material:	Cu
Lead frame surface treatment:	Solder (Pb free) plate

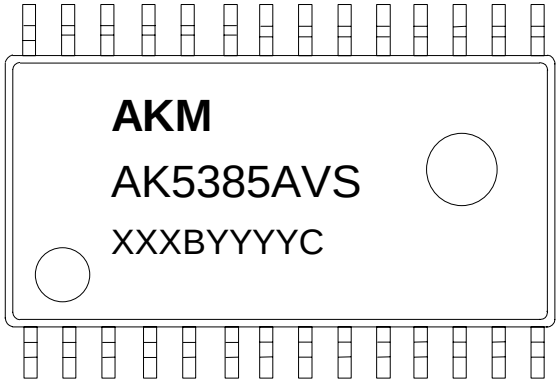
MARKING (AK5385AVF)



XXXBYYYYC Date code identifier

XXXB :Lot number (X : Digit number, B : Alpha character)
YYYYC : Assembly date (Y : Digit number, C : Alpha character)

MARKING (AK5385AVS)



XXXBYYYYC Date code identifier

XXXB :Lot number (X : Digit number, B : Alpha character)
YYYYC : Assembly date (Y : Digit number, C : Alpha character)

Revision History

Date (YY/MM/DD)	Revision	Reason	Page	Contents
03/09/25	00	First Edition		
03/11/18	01	Spec Change	11	SWITCHING CHARACTERISTICS Master Clock Timing Pulse Width Low/High: 0.4/fCLK → 14.5ns
05/03/30	02	Error Correct	4,5	PCB layout example AK5385A: 11 pin; M/S → DIF AK5385A: 12 pin; DIF → M/S

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  b. A critical component is one whose failure to function or perform may reasonably be expected to result, whether directly or indirectly, in the loss of the safety or effectiveness of the device or system containing it, and which must therefore meet very high standards of performance and reliability.
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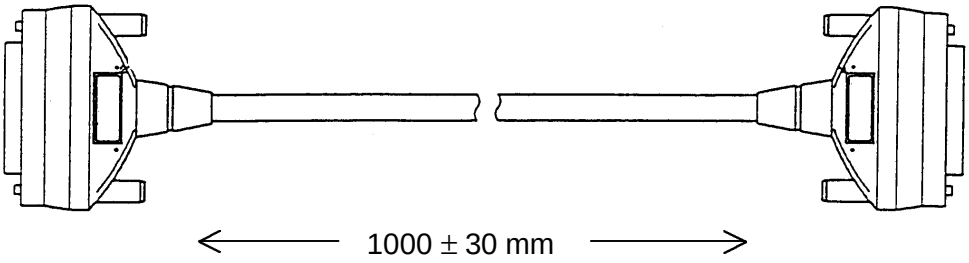
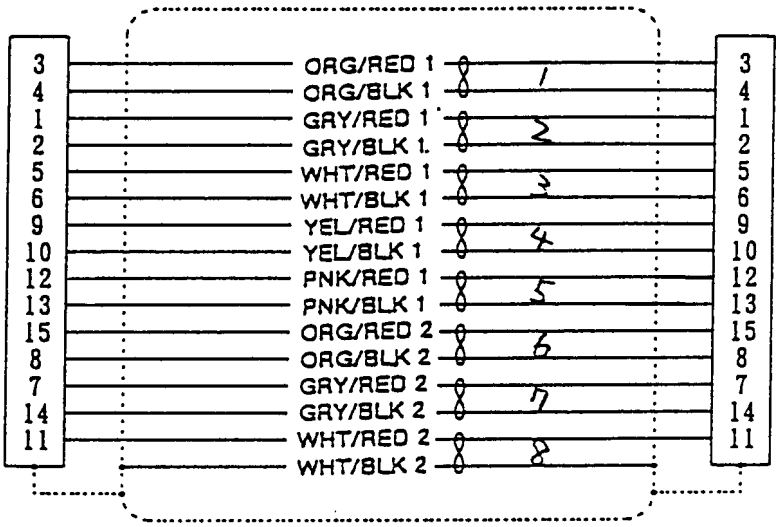
Cable Assy, MMC-38

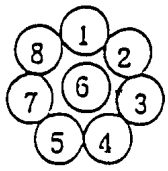
Male
DA-38 SYNC IN

Female
MMC-38 REMOTE OUT





means Twisted wire



1 pce	53363570-00	Connector Plug, 15 pin D-Sub(Male)
1 pce	13152907	Connector Socket, 15 pin D-Sub(Female)
2 pcs	53363580-00	Case Assy, 15 pin D-Sub

D00992300C

TASCAM

TEAC Professional Division

DM-4800

DIGITAL MIXER

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Firmware Update Notice

If you are updating the firmware in a DM-4800 that is cascaded, always disconnect the cascade cable before doing the firmware update procedure.

New Features

This section describes the new features for each revision of the DM-4800 software.

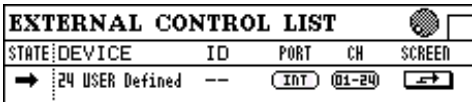
Version 1.50

■ User Defined Layer

It is now possible to create a user-defined layer that freely combines the DM-4800's modules. You can control some module parameters such as Fader, Mute, Solo and Ring Encoder levels when assigned to this layer.

Registering a User Defined Layer

A User Defined Layer can be registered in the REMOTE>EXT.CTRL screen.



There are no ID, PORT, or CH settings.

User Defined Layer screen

In the EXT.CTRL screen, move the cursor to the SCREEN button and press the **ENTER** key. Then use the **POD4** key to select User Defined Layer. The User Defined Layer screen will appear.

If the OPTION>PREFERENCE screen item SEL Key Follows Fader Layer Status has been checked, pressing the **REMOTE** key of the LAYER STATUS section will display the User Defined Layer.

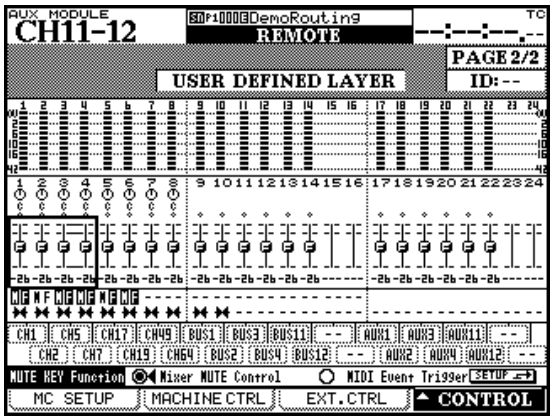
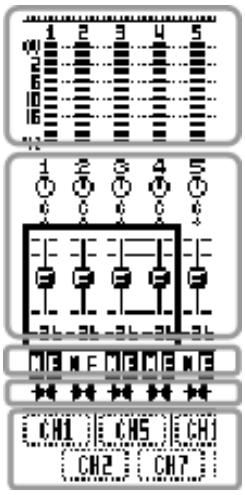


Figure 1: USER DEFINED LAYER screen

You can monitor the following functionality of the specified module.

- Meter
- Fader, pan, and mute
- Grouping settings
- Stereo link settings



The metering point selected in the METER/FADER>METER screen is displayed.

You can also move the cursor by using the cursor keys or pressing the **SEL** key of the desired channel, and use the **POD** knobs to operate the fader or pan.

The grouping settings have the following meaning.

- G: Mute group master, grouping on
- M: Mute group master, grouping off
- F: Fader group master, grouping on
- F: Fader group master, grouping off
- -: Other than group master

Only master channel is shown; slave is not shown.

The stereo link setting has the following meaning.

- ⋈ : Stereo link on
- - : Stereo link off

Move the cursor to the module assign section, use the **JOG/DATA** to select the module that you want to assign, and press the **ENTER** key to finalize.

You can assign channel 1-64, BUSS 1-24, and AUX1-12 modules. You cannot assign the STEREO module.

MUTE Key Function

You can select whether the **MUTE** keys will be used as controllers for the mixer parameter **MUTE** or as MIDI event trigger keys. If they are used as MIDI event triggers, MIDI control change messages will be transmitted.

If you want to use the **MUTE** keys as MIDI event trigger keys, move the cursor to the MUTE KEY Function section MIDI Event Trigger radio button, and press the **ENTER** key to make your selection.

- **MIDI control messages used as MIDI Event Triggers**

In the MIDI>CtrlChg EXT screen you can specify the control change messages that will be used when using the **MUTE** keys as MIDI event trigger keys.

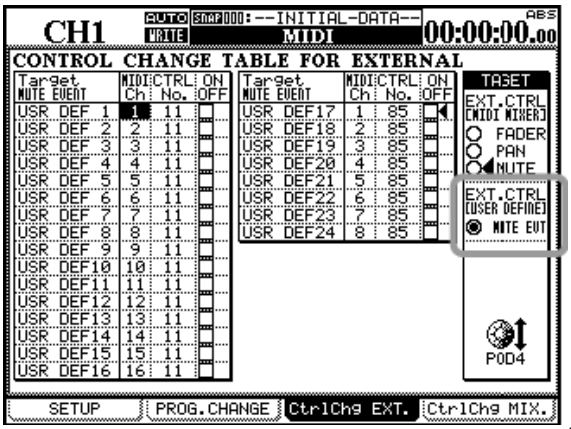


Figure 2: MIDI>CtrlChg EXT screen

You can also jump to this screen by moving the cursor to the SETUP button in the **MUTE** key Function section and pressing the **ENTER** key.

When the **MUTE** key is pressed, the control change message data byte 127 (7Fh) is output, and 0 (0h) when released.

- **MIDI>SETUP screen filtering**

In conjunction with support for MIDI event triggering, a C.Chg EXT filter has been added to the USB MIDI 4: PC/CC port.

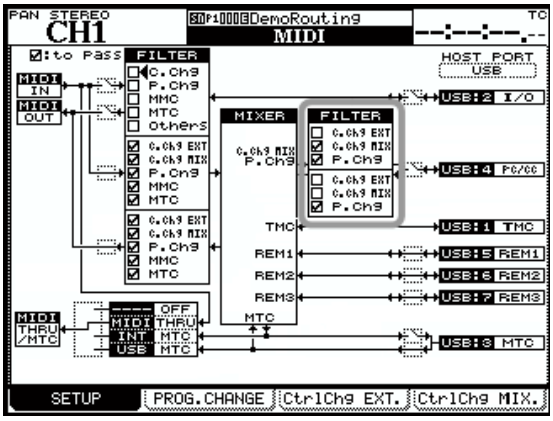


Figure 3 MIDI>SETUP screen

- **Meter display**

The meter display of the User Defined Layer is also shown in the User Defined Layer screen, but can be shown in the METER/FADER>METER screen as well.

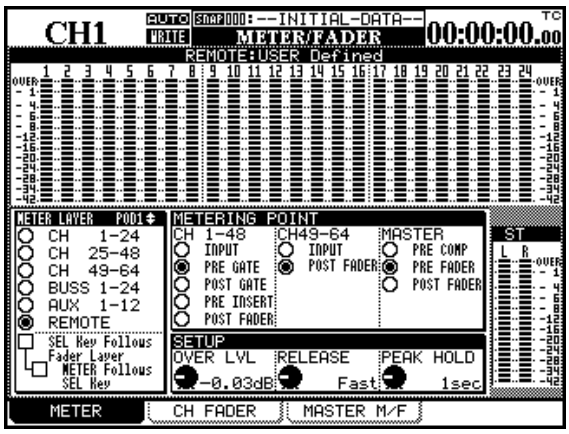


Figure 4METER/FADER>METER screen

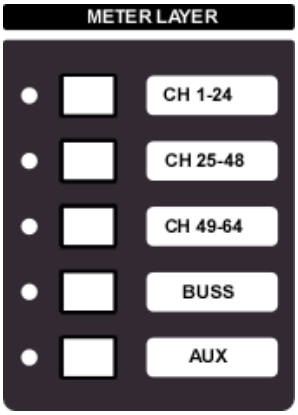
When you use **POD1** to move the cursor to the REMOTE button, and the User Defined Layer meters will appear.

- **Display in the meter bridge**

The User Defined Layer meter display can also be shown in the separately sold MU-1000 meter unit option.

The MU-1000's metering point section does not have a **REMOTE** point.

When all LEDs in the METER LAYER section are dark, the REMOTE layer meters are shown.



Please select the Remote Layer Meter in the METER/FADER -> METER screen. Also if you check the check box for "SEL key Follows Fader Layer Status" and "Meter Follows SEL key" on the OPTION -> PREFERENCE screen, the meter bridge will follow when you change to the REMOTE Fader Layer.

■ Windows Vista

This version of the DM-4800 is now fully supported by Windows Vista 32 bit and Vista 64 bit.

It is possible to do remote control of DAW Applications that run under Windows Vista and transfer MIDI messages between the DAW software and the mixer.

Version 1.10

■ IF-FW MKII support

When the separately sold IF-FW/DM MKII option card is installed, you can now transfer up to 32 channels of I/O (at 44.1kHz/48kHz/88.2kHz/96kHz) between your computer and the DM-4800.

For details on the IF-FW MKII, refer to the IF-FW MKII operating manual.

■ MIDI

MIDI control change message support for mixer parameters

MIDI control change messages are now supported, allowing mixer parameters (**FADER**, **PAN**, and **MUTE**) to be controlled.

This allows MIDI devices to be controlled in synchronization with operations on the DM-4800 mixer, or conversely for mixer parameters to be controlled from a MIDI device.

In the MIDI>CtrlChg MIX. screen, the CONTROL CHANGE TABLE FOR MIXER allows you to assign control change numbers.

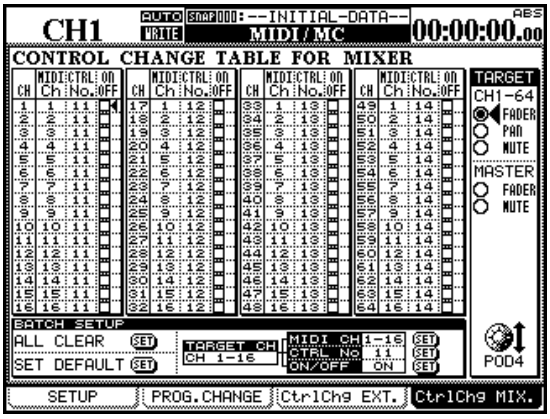


Figure 8 MIDI>CtrlChg MIX screen

By using BATCH SETUP you can make settings for all sixteen channels at once.

MIDI>SETUP screen filtering

In conjunction with MIDI control change support for mixer parameters, filtering has been added to the USB MIDI 4: PC/CC port.

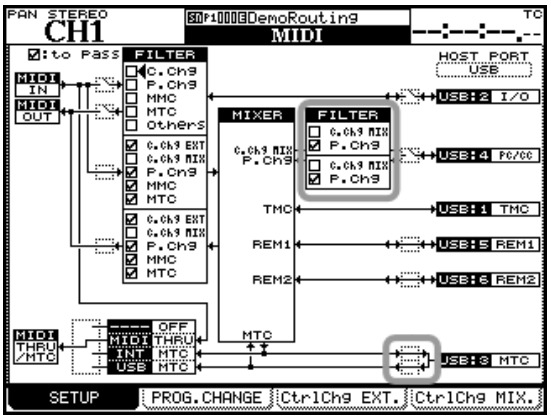


Figure 9 MIDI>SETUP screen

Until now, the input/output on/off setting for USB MIDI port 3 (used for MIDI time code) had been a single setting for input and out put, but these can now be set independently.

MIDI Device Inquiry message support

When an identity request is received from the following MIDI ports of external device, the following message identify reply is transmitted.

F0 7E 00 06 02 4E 07 01 00 06 v1 v2 pp 00 F7

v1: Major version number of firmware
v2: Minor version number of firmware
pp: MIDI port ID
00: The DM-4800's MIDI IN/OUT
04: USB MIDI 4: PC/CC port
05: USB MIDI 5: USB REMOTE 1 port
06: USB MIDI 6: USB REMOTE 2 port
07: USB MIDI 7: USB REMOTE 3 port

DM-4800 Release Notes

Maintenance Items

This section describes the Maintenance items for each revision of the DM-4800 software.

Version 1.60

■ Option Slot Cards

- At 88.2 kHz or 96 kHz sampling rates, some master clock settings would result in audio transferred from an IF-TD/DM option card to have reversed Odd and Even channels. This problem has been fixed.
- With an IF-FW/DM MKII card in slot 1 and an IF-SM/DM card in Slot 3, the mixer would not be able to boot correctly. This problem has been fixed.
- With an IF-SM/DM installed, pressing the **MONITOR SEL** key produced a click noise in the output. This has been fixed.
- With the IF-SM/DM, and Bass Management set to ON, changing the LPF setting of the Bass Management Section would result in noise in the SubWoofer output channel. This problem has been fixed.
- Noise resulting from changing the Monitor level of the IF-SM/DM has been removed.
- With an IF-SM/DM installed, the front panel **MONO** key normally toggles the IF-SM/DM Downmix function On or Off. A problem where this function did not occur correctly has been fixed.
- When the output gain of the IF-SM/DM was set to a large value, activating a Buss Mute resulted in the Mute occurring as a fade over a noticeable amount of time. This problem has been fixed.

■ Remote Control

- If the Internal Timecode Generator (MTC Generate) was started and then deleted from the Control List, the MTC Timecode would not stop. This problem has been fixed.
- The mixer is now better able to lock to incoming MTC Timecode that has Jitter.
- At the 30NDF frame rate, the MTC output could occasionally produce incorrect Timecode values. This has been fixed.
- The operation of the Shuttle and **JOG** controls using the MMC protocol has been improved.
- A problem where Timecode Locations were incorrectly stored has been fixed.

■ When connected to TMCompanion

- With the TMCompanion Meter screen open, rebooting the computer would result in the DM-4800 becoming unresponsive. This problem has been fixed.

■ Monitor Section

- Feedback noise that was created when the **TO SLATE** key was pressed has been fixed.
- Click noise that occurred when the **TO SLATE** or **MONITOR SEL** keys were pressed has been fixed.

■ Project

- When a project is loaded, the front panel Encoder Mode LED would not reflect the setting from the saved project. This problem has been fixed.
- When Shutting Down the mixer, even if the Current Project was not Protected, the following popup message would sometimes be displayed.

  "Current Project is protected."
  "Can't STORE current project."

  This problem has been fixed.

■ Operation

When changing between an FS of 48kHz and 96kHz, the EQ settings were not correctly restored. This problem has been fixed.

■ Factory Default Settings.

The Factory Default Setting for FADER SENSITIVITY has been changed from 3.3kHz to 2.0kHz.

Version 1.50

■ Remote control

Previously, the LCD would unexpectedly switch focus when both MIDI Faders and the DAW Control Surface feature was being used an d the master fader touched.

This has been fixed.

■ TASCAM FX / TASCAM FX 2.0

Previously, the Tap Tempo function was not working for the new TASCAM FX.

This has been corrected.

■ TASCAN FX 2.0

Previously, accessing dynamics libraries could occasionally crash the mixer.

This has been corrected.

Version 1.10

■ Project

A problem has been fixed in which the cascade connection status sometimes became invalid when loading a project that changed the cascade master/slave relationship.

Known Issues

This section describes the Known Issues for the latest DM-4800 software

Version 1.60

■ Multiple IF-AE/DM cards and clock master.

If one of the IF-AE/DM cards is selected as the clock master, attempting to switch the master clock to another IF-AE/DM card will result in noise in the mixer. To avoid this, do not change the clock source.

■ USB Connection notes

Mac OS X:

If TMC or your DAW software fails to find your mixer after putting your computer into Sleep mode, please remove the USB cable and re-connect it before re-launching TMC or your DAW software.

Windows XP:

If TMC or your DAW software fails to find your mixer after putting your computer into Standby mode or Hibernation mode, please re-launch TMC or your DAW software.

Windows Vista:

If TMC or your DAW software fails to find your mixer after putting your computer into Standby mode, Sleep mode or Hibernation mode, please re-launch TMC or your DAW software again.

To prevent this problem re-occuring, please set your computer to not automatically go into Standby or Hibernation modes.

■ DTRS REC FUNCTION setting when controlling via P2

When making REC function settings with multiple DTRS devices connected, and the REC function of track 9 or later is operated from the DTRS unit, that status is not reflected in the mixer.

■ Auto detection of MMC control target

When loading a project that includes MMC Full (closed-loop) control, be sure to connect and power on the MMC device first. Also, power on the MMC device before starting the mixer, otherwise the MMC device may not be correctly identified or controlled.

TASCAM
TEAC Professional Division

DM-4800

D00992330C

TASCAM
TEAC Professional Division

DM-4800

MESA DE MEZCLAS DIGITAL

NOTAS SOBRE ULTIMAS NOVEDADES

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DM-4800 Notas sobre últimas novedades

Nota acerca de la actualización de firmware

Si está realizando la actualización del firmware en un DM-4800 que esté conectado en cascada, desconecte siempre el cable de dicho tipo de conexión antes de ejecutar el proceso de actualización del firmware.

Nuevas funciones

Esta sección le describe las nuevas funciones de cada una de las revisiones del software del DM-4800.

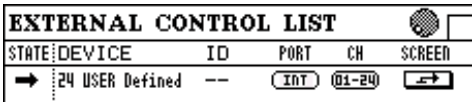
Versión 1.50

■ Estrato definido por el usuario

Ahora es posible crear un estrato definido por el usuario que combine libremente los módulos del DM-4800. Puede controlar algunos parámetros de módulo como el Fader, Mute, Solo y los niveles del codificador de anillo cuando los asigne a este estrato.

Registro de un estrato de usuario

Puede registrar un estrato definido por el usuario en la pantalla REMOTE>EXT.CTRL.



Aquí no hay ajustes ID, PORT o CH.

Pantalla de estrato de usuario

En la pantalla EXT.CTRL, lleve el cursor hasta el botón SCREEN y pulse **ENTER**. Use después la tecla **POD4** para elegir el estrato definido por el usuario y aparecerá la pantalla de abajo.

Si ha marcado el elemento SEL Key Follows Fader Layer Status en la pantalla OPTION>PREFERENCE, el pulsar la tecla **REMOTE** de la sección LAYER STATUS hará también que aparezca la pantalla de abajo.

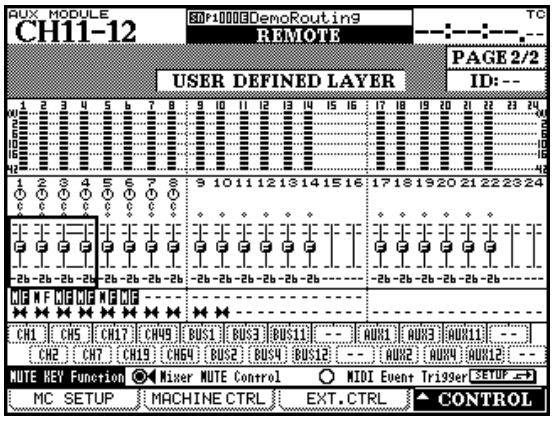
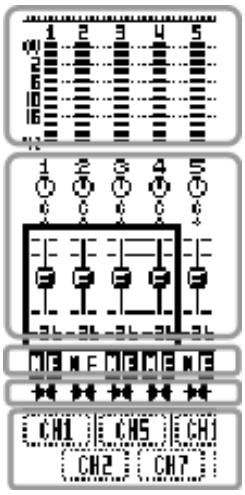


Figura 1: Pantalla USER DEFINED LAYER

Puede monitorizar las siguientes funciones del módulo especificado.

- Medidor
- Fader, pan y mute
- Ajustes de grupo
- Ajustes de enlace stereo



Aparecerá el punto de medición elegido en la pantalla METER/FADER>METER.

También puede desplazar el cursor usando las teclas de cursor o pulsando la tecla **SEL** del canal que quiera y usar después los mandos **POD** para usar el fader y el panorama.

Los ajustes de grupo tienen el significado siguiente.

- **G**: Anulación grupo master, grupos activos
- **M**: Anulación grupo master, grupos no activos
- **F**: Fader grupo master, grupos activos
- **F**: Fader grupo master, grupos no activos
- **-**: Otros distintos al grupo master

Solo es visualizado el canal master, no los esclavos.

El ajuste de enlace stereo tiene el siguiente significado.

- ⋈ : Enlace stereo activado
- **-** : Enlace stereo desactivado

Desplace el cursor a la sección de asignación de módulo, use la rueda **JOG/DATA** para elegir el módulo que quiera asignar y pulse la tecla **ENTER** para finalizar la asignación.

Puede asignar los módulos de canal 1-64, BUSS 1-24 y AUX1-12. No puede asignar el módulo STEREO.

Función de la tecla MUTE

Puede elegir entre si las teclas **MUTE** serán usadas como controladores para el parámetro **MUTE** del mezclador o como teclas de disparo de eventos MIDI. Si las usa como disparadores MIDI, producirán la transmisión de mensajes de cambio de control MIDI.

Si quiere usar las teclas **MUTE** como disparadores de eventos MIDI, desplace el cursor hasta el botón MIDI Event Trigger de la sección de función de la tecla MUTE y pulse la tecla **ENTER** para realizar su elección.

- **Mensajes de control MIDI usados como disparadores de eventos MIDI**

En la pantalla MIDI>CtrlChg EXT puede especificar los mensajes de cambio de control que serán usados cuando use las teclas **MUTE** como disparadores de eventos MIDI.

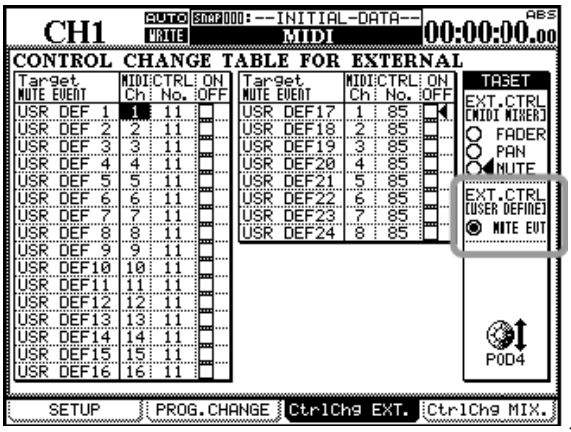


Figura 2: Pantalla MIDI>CtrlChg EXT

También puede pasar directamente a esta pantalla llevando el cursor hasta el botón SETUP de la sección de función de la tecla **MUTE** y pulsando la tecla **ENTER**.

Cuando pulse la tecla **MUTE** será emitido el mensaje de cambio de control con el byte de datos 127 (7Fh), y 0 (0h) cuando la deje de pulsar.

- **Filtro de pantalla MIDI>SETUP**

Además de soporte para el disparo de eventos MIDI, hemos añadido un filtro C.Chg EXT al puerto USB MIDI 4: PC/CC.

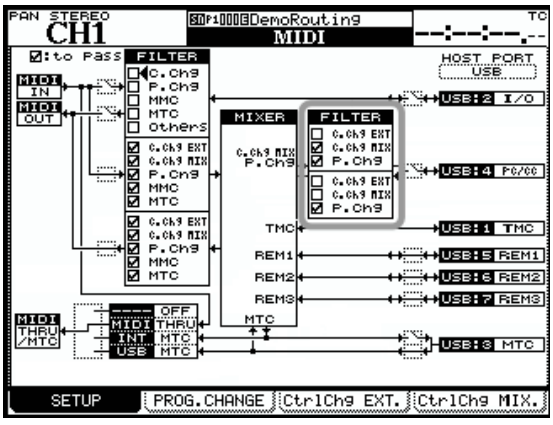


Figura 3 Pantalla MIDI>SETUP

- **Pantalla de medidor**

El medidor del estrato definido por el usuario aparece en la pantalla del estrato de usuario, pero también puede hacer que aparezca en la pantalla METER/FADER>METER.

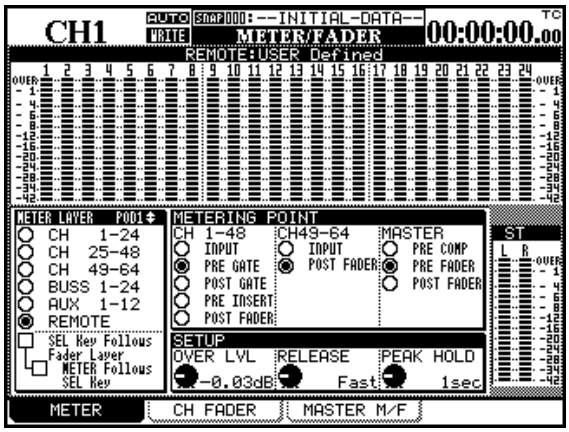


Figura 4: Pantalla METER/FADER>METER

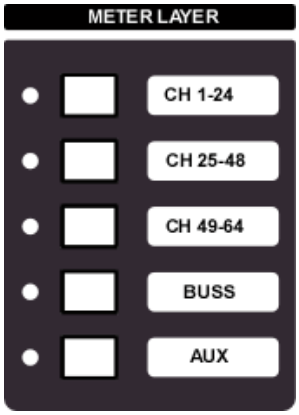
Use el **POD1** para desplazar el cursor hasta el botón REMOTE y aparecerán los medidores del estrato de usuario.

- **Visualización en el panel de medidores**

El medidor del estrato de usuario también puede ser visualizado en el panel de medidores opcional MU-1000 (se vende por separado).

La sección de punto de medición del MU-1000 no dispone de un punto **REMOTE**.

Cuando todos los pilotos de la sección METER LAYER estén apagados, aparecerán los medidores de estrato REMOTE.



Elija el medidor del estrato remoto en la pantalla METER/FADER -> METER. Igualmente, si marca la opción “SEL key Follows Fader Layer Status” y “Meter Follows SEL key” en la pantalla OPTION -> PREFERNCE, el panel de medidores seguirá los cambios que realice en el estrato de fader REMOTE.

■ Windows Vista

Esta versión del DM-4800 es ahora admitida por completo por las versiones de 32 y 64 bits del sistema operativo Windows Vista.Ahora es posible realizar un control remoto de aplicaciones DAW que funcionen bajo Windows Vista y transferir mensajes MIDI entre el programa DAW y la mesa de mezclas.

Versión 1.10

■ Soporte para el IF-FW MKII

Cuando tenga instalada la tarjeta opcional IF-FW/DM MKII (se vende por separado), ahora podrá transferir hasta 32 canales de E/S (a 44.1kHz/48kHz/88.2kHz/96kHz) entre su ordenador y el DM-4800.

Para saber acerca de la IF-FW MKII, consulte el manual de instrucciones de esa tarjeta.

■ MIDI

Soporte de mensajes de cambio de control MIDI para parámetros de mezclador

Ahora son admitidos mensajes de cambio de control MIDI que le permiten el control de parámetros del mezclador (**FADER**, **PAN** y **MUTE**).

Esto le permite el control de dispositivos MIDI de forma sincronizada con las operaciones del mezclador DM-4800, o a la inversa, el control de parámetros del mezclador desde otro dispositivo MIDI.

En la pantalla MIDI>CtrlChg MIX., la opción CONTROL CHANGE TABLE FOR MIXER le permite asignar números de cambio de control.

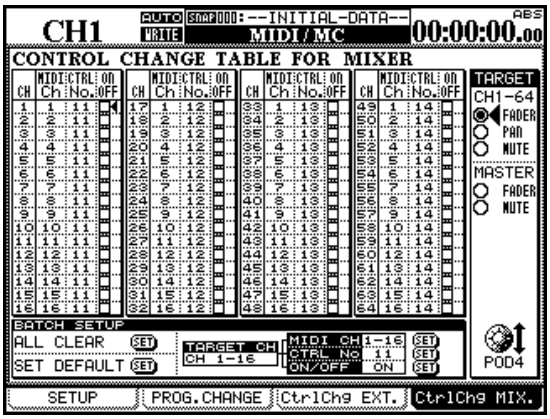


Figura 5: Pantalla MIDI>CtrlChg MIX

Usando la opción BATCH SETUP puede realizar ajustes para los dieciséis canales a la vez.

Filtro de pantalla MIDI>SETUP

Además de soporte de cambios de control MIDI para los parámetros del mezclador, ha sido añadido un filtro al puerto USB MIDI 4: PC/CC.

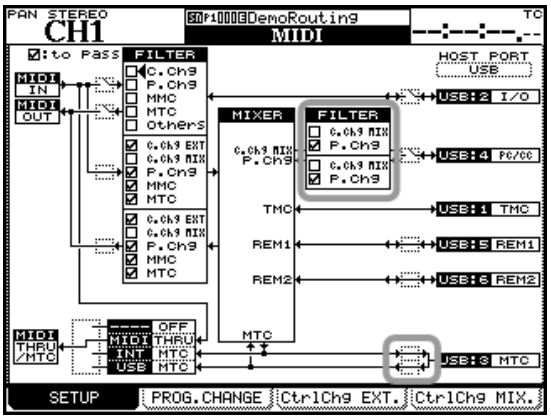


Figura 6: Pantalla MIDI>SETUP

Hasta ahora, el ajuste on/off de entrada/salida para el puerto USB MIDI 3 (usado para el código de tiempo MIDI) ha sido de un único ajuste para la entrada y la salida, pero ahora puede configurarlos de forma independiente.

Soporte para mensajes de solicitud de dispositivo MIDI

Cuando sea recibida una solicitud de identificación desde los siguientes puertos MIDI de una unidad exterior, será transmitido este mensaje de respuesta de identificación.

F0 7E 00 06 02 4E 07 01 00 06 v1 v2 pp 00 F7

v1: Número de versión superior del firmware
v2: Número de versión inferior del firmware
pp: ID de puerto MIDI
- 00: La entrada/salida MIDI del DM-4800
- 04: USB MIDI 4: Puerto PC/CC
- 05: USB MIDI 5: Puerto USB REMOTE 1
- 06: USB MIDI 6: Puerto USB REMOTE 2
- 07: USB MIDI 7: Puerto USB REMOTE 3

DM-4800 Notas sobre últimas novedades

Problemas solucionados

Esta sección describe los distintos problemas solucionados en cada versión de software del DM-4800.

Versión 1.60

■ Tarjetas opcionales

- A frecuencias de muestreo de 88.2 kHz o 96 kHz, algunos ajustes de reloj master podían hacer que el audio transferido desde una tarjeta opcional IF-TD/DM quede invertido en los canales par e impar. Este problema ha sido solucionado.
- Con una tarjeta IF-FW/DM MKII en la ranura 1 y una IF-SM/DM en la 3, el mezclador no era capaz de arrancar correctamente. Este problema ha sido solucionado.
- Con una IF-SM/DM instalada, la pulsación de la tecla **MONITOR SEL** producía un chasquido en la salida. Este problema ha sido solucionado.
- Con el IF-SM/DM y la gestión de bajo activada, el cambio del ajuste LPF de la sección de gestión de bajo daba lugar a ruidos en el canal de salida de subwoofer. Este problema ha sido solucionado.
- El ruido que se producía al cambiar el nivel de monitor de la IF-SM/DM ha sido eliminado.
- Con una IF-SM/DM instalada, la tecla MONO del panel frontal activa o desactiva la función Downmix de la IF-SM/DM. Hemos solucionado un problema que hacía que esta función no se ejecutase correctamente.
- Cuando la ganancia de salida IF-SM/DM era ajustada a un valor alto, la activación de una anulación o mute de bus daba lugar a una anulación en forma de fundido durante un periodo de tiempo bastante largo. Este problema ha sido solucionado.

■ Control remoto

- Si se ponía en marcha el generador interno de códigos de tiempo (MTC Generate) y después era eliminado de la lista de control, el código de tiempo MTC no se detenía. Este problema ha sido solucionado.
- El mezclador ahora puede sincronizarse mejor al código de tiempo MTC entrante con oscilaciones.
- A la velocidad de secuencias de 30NDF, la salida MTC podía producir en ocasiones valores incorrectos de código de tiempo. Este problema ha sido solucionado.
- El funcionamiento de los controles Shuttle y JOG al usar el protocolo MMC ha sido mejorado.
- Hemos solucionado un problema que daba lugar a que las posiciones de códigos de tiempo fuesen almacenadas de forma incorrecta.

■ Conexión del TMCompanion

- Con la pantalla del medidor del TMCompanion abierta, el reinicio del ordenador daba lugar a que el DM-4800 quedase bloqueado. Este problema ha sido solucionado.

■ Sección de monitorización

- Ha sido solucionado el problema del ruido de realimentación que se producía cuando era pulsada la tecla **TO SLATE**.
- Ha sido solucionado el chasquido que se producía al pulsar las teclas **TO SLATE** o **MONITOR SEL**.

■ Proyectos

- Cuando un proyecto era cargado, el piloto del modo de mandos giratorios del panel frontal no reflejaba el ajuste del proyecto grabado. Este problema ha sido solucionado.
- Al cerrar el mezclador, incluso si el proyecto activo no estaba protegido, aparecería a veces el siguiente mensaje desplegable.

  "Current Project is protected."
  "Can't STORE current project."

  Este problema ha sido solucionado.

■ Funcionamiento

Al cambiar entre una FS de 48kHz y 96kHz, los ajustes de EQ no eran correctamente restaurados. Este problema ha sido solucionado.

■ Ajustes de fábrica

Los ajustes de fábrica para la SENSIBILIDAD DEL FADER han sido modificados de 3.3kHz a 2.0kHz.

Versión 1.50

■ Mando a distancia

Hasta ahora, la LCD cambiaba inesperadamente el enfoque cuando se usaban los faders MIDI y la función de superficie de control DAW y se tocaba el fader master.

Este problema ha sido corregido.

■ TASCAM FX / TASCAM FX 2.0

Hasta el momento, la función de marcación de tempo no funcionaba para el nuevo TASCAM FX.

Este problema ha sido corregido.

■ TASCAM FX 2.0

Hasta ahora, cuando trataba de acceder a las bibliotecas de efectos de dinamismo había veces en que se podía producir un bloqueo del mezclador.

Este problema ha sido corregido.

DM-4800 Notas sobre últimas novedades

Versión 1.10

■ Proyecto

Hemos solucionado un problema que hacía que el estado de la conexión en cascada quedase como inválido al cargar un proyecto que modificase la relación master/esclavo de la conexión en cascada.

Problemas detectados

En esta sección le describimos los problemas detectados en la última versión del software del DM-4800

Versión 1.60

■ Tarjetas IF-AE/DM múltiples y master de reloj

Si elige una de las tarjetas IF-AE/DM como el master de reloj, el intentar cambiar el reloj master a otra tarjeta IF-AE/DM dará lugar a ruidos en el mezclador. Para evitar este problema, no cambie la fuente de reloj.

■ Notas acerca de la conexión USB

Mac OS X:

Si el TMC o su programa DAW no puede detectar su mezclador después de haber dejado su ordenador en el modo de reposo, quite el cable USB y vuelva a conectarlo antes de volver a poner en marcha el TMC o su programa DAW.

Windows XP:

Si el TMC o su programa DAW no puede detectar su mezclador después de haber dejado su ordenador en el modo de reposo, pausa o hibernación, reinicie el TMC o su programa DAW.

Windows Vista:

Si el TMC o su programa DAW no puede detectar su mezclador después de haber dejado su ordenador en el modo de reposo, pausa o hibernación, reinicie el TMC o su programa DAW.

Para evitar que se vuelva a producir este mismo problema, configure su ordenador para que no active de forma automática el modo de reposo o hibernación.

■ Ajuste de función REC DTRS durante el control vía P2

Al realizar ajustes de la función REC con varias unidades DTRS conectadas el estado no es reflejado en el mezclador cuando se usa la función REC de la pista 9 o posteriores desde la unidad DTRS.

■ Detección automática de destino de control MMC

Cuando cargue un proyecto que incluya control completo MMC (bucle cerrado), asegúrese de conectar y encender primero el dispositivo MMC. Además, encienda el dispositivo MMC siempre antes de poner en marcha el mezclador, ya que en caso contrario es posible que dicho dispositivo MMC no pueda ser identificado o controlado correctamente.

TASCAM
TEAC Professional Division

DM-4800

D00992300D

TASCAM

TEAC PROFESSIONAL

DM-4800

DIGITAL MIXER

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Firmware Update Notice

If you are updating the firmware in a DM-4800 that is cascaded, always disconnect the cascade cable before doing the firmware update procedure.

New Features

This section describes the new features for each revision of the DM-4800 software.

Version 1.70

Now compatible with IF-AV/DM (Aviom A-Net16 card) and IF-CB/DM (CobraNet card).

For the details on the IF-AV/DM and IF-CB/DM, refer to the IF-AV/DM and IF-CB/DM operation manuals.

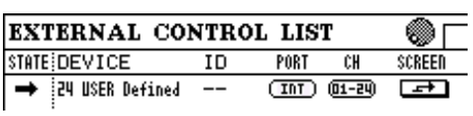
Version 1.50

■ User Defined Layer

It is now possible to create a user-defined layer that freely combines the DM-4800's modules. You can control some module parameters such as Fader, Mute, Solo and Ring Encoder levels when assigned to this layer.

Registering a User Defined Layer

A User Defined Layer can be registered in the REMOTE>EXT.CTRL screen.



There are no ID, PORT, or CH settings.

User Defined Layer screen

In the EXT.CTRL screen, move the cursor to the SCREEN button and press the **ENTER** key. Then use the **POD4** key to select User Defined Layer. The User Defined Layer screen will appear.

If the OPTION>PREFERENCE screen item SEL Key Follows Fader Layer Status has been checked, pressing the **REMOTE** key of the LAYER STATUS section will display the User Defined Layer.

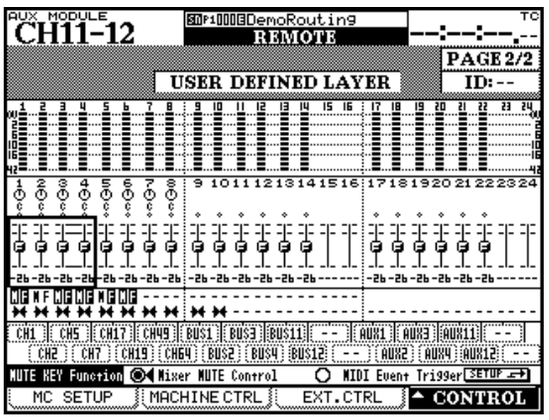
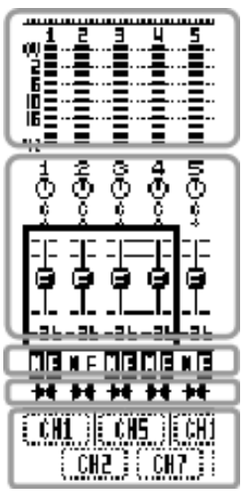


Figure 1: USER DEFINED LAYER screen

You can monitor the following functionality of the specified module.

- Meter
- Fader, pan, and mute
- Grouping settings
- Stereo link settings



The metering point selected in the METER/FADER>METER screen is displayed.

You can also move the cursor by using the cursor keys or pressing the **SEL** key of the desired channel, and use the **POD** knobs to operate the fader or pan.

The grouping settings have the following meaning.

- M: Mute group master, grouping on
- m: Mute group master, grouping off
- F: Fader group master, grouping on
- f: Fader group master, grouping off
- -: Other than group master

Only master channel is shown; slave is not shown.

The stereo link setting has the following meaning.

- ⋈ : Stereo link on
- - : Stereo link off

Move the cursor to the module assign section, use the **JOG/DATA** to select the module that you want to assign, and press the **ENTER** key to finalize.

You can assign channel 1-64, BUSS 1-24, and AUX1-12 modules. You cannot assign the STEREO module.

MUTE Key Function

You can select whether the **MUTE** keys will be used as controllers for the mixer parameter **MUTE** or as MIDI event trigger keys. If they are used as MIDI event triggers, MIDI control change messages will be transmitted.

If you want to use the **MUTE** keys as MIDI event trigger keys, move the cursor to the MUTE KEY Function section MIDI Event Trigger radio button, and press the **ENTER** key to make your selection.

- **MIDI control messages used as MIDI Event Triggers**

In the MIDI>CtrlChg EXT screen you can specify the control change messages that will be used when using the **MUTE** keys as MIDI event trigger keys.

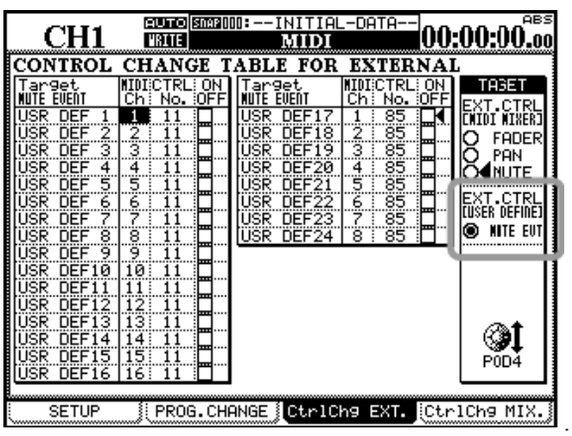


Figure 2: MIDI>CtrlChg EXT screen

You can also jump to this screen by moving the cursor to the SETUP button in the **MUTE** key Function section and pressing the **ENTER** key.

When the **MUTE** key is pressed, the control change message data byte 127 (7Fh) is output, and 0 (0h) when released.

- **MIDI>SETUP screen filtering**

In conjunction with support for MIDI event triggering, a C.Chg EXT filter has been added to the USB MIDI 4: PC/CC port.

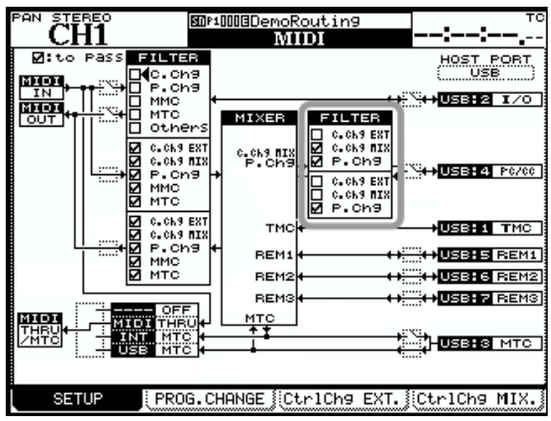


Figure 3 MIDI>SETUP screen

- **Meter display**

The meter display of the User Defined Layer is also shown in the User Defined Layer screen, but can be shown in the METER/FADER>METER screen as well.

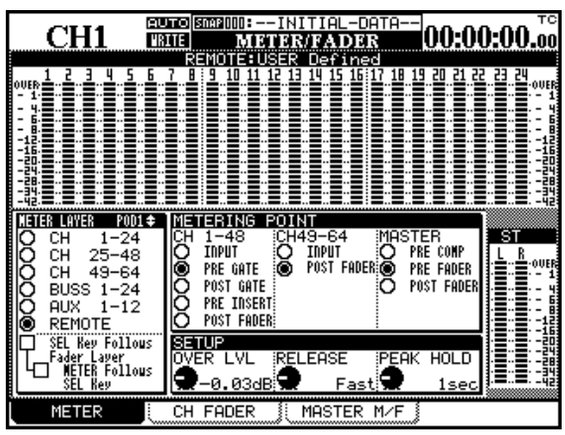


Figure 4 METER/FADER>METER screen

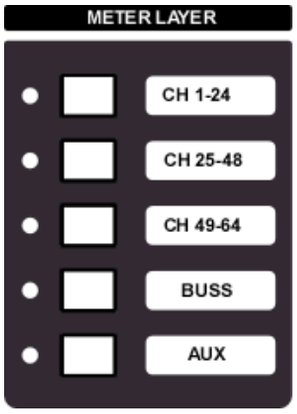
When you use **POD1** to move the cursor to the REMOTE button, and the User Defined Layer meters will appear.

- **Display in the meter bridge**

The User Defined Layer meter display can also be shown in the separately sold MU-1000 meter unit option.

The MU-1000's metering point section does not have a **REMOTE** point.

When all LEDs in the METER LAYER section are dark, the REMOTE layer meters are shown.



Please select the Remote Layer Meter in the METER/FADER -> METER screen. Also if you check the check box for "SEL key Follows Fader Layer Status" and "Meter Follows SEL key" on the OPTION -> PREFERENCE screen, the meter bridge will follow when you change to the REMOTE Fader Layer.

■ Windows Vista

This version of the DM-4800 is now fully supported by Windows Vista 32 bit and Vista 64 bit.

It is possible to do remote control of DAW Applications that run under Windows Vista and transfer MIDI messages between the DAW software and the mixer.

Version 1.10

■ IF-FW MKII support

When the separately sold IF-FW/DM MKII option card is installed, you can now transfer up to 32 channels of I/O (at 44.1kHz/48kHz/88.2kHz/96kHz) between your computer and the DM-4800.

For details on the IF-FW MKII, refer to the IF-FW MKII operating manual.

■ MIDI

MIDI control change message support for mixer parameters

MIDI control change messages are now supported, allowing mixer parameters (**FADER**, **PAN**, and **MUTE**) to be controlled.

This allows MIDI devices to be controlled in synchronization with operations on the DM-4800 mixer, or conversely for mixer parameters to be controlled from a MIDI device.

In the MIDI>CtrlChg MIX. screen, the CONTROL CHANGE TABLE FOR MIXER allows you to assign control change numbers.

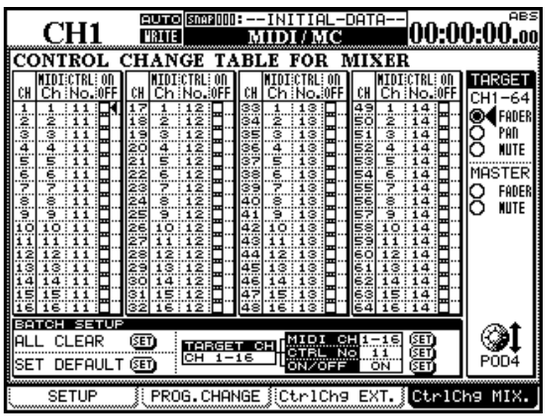


Figure 5 MIDI>CtrlChg MIX screen

By using BATCH SETUP you can make settings for all sixteen channels at once.

MIDI>SETUP screen filtering

In conjunction with MIDI control change support for mixer parameters, filtering has been added to the USB MIDI 4: PC/CC port.

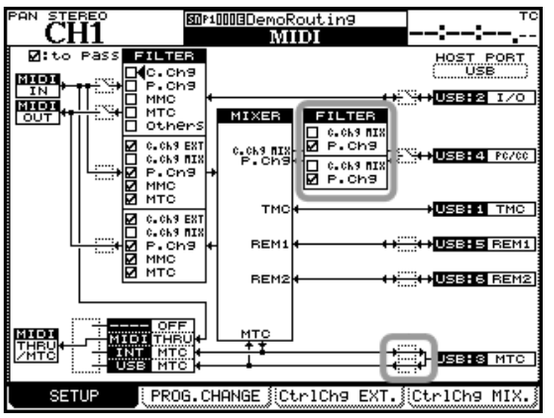


Figure 6 MIDI>SETUP screen

Until now, the input/output on/off setting for USB MIDI port 3 (used for MIDI time code) had been a single setting for input and out put, but these can now be set independently.

MIDI Device Inquiry message support

When an identity request is received from the following MIDI ports of external device, the following message identify reply is transmitted.

F0 7E 00 06 02 4E 07 01 00 06 v1 v2 pp 00 F7

v1: Major version number of firmware
v2: Minor version number of firmware
pp: MIDI port ID
00: The DM-4800's MIDI IN/OUT
04: USB MIDI 4: PC/CC port
05: USB MIDI 5: USB REMOTE 1 port
06: USB MIDI 6: USB REMOTE 2 port
07: USB MIDI 7: USB REMOTE 3 port

DM-4800 Release Notes

Maintenance Items

This section describes the Maintenance items for each revision of the DM-4800 software.

Version 1.70

- If the sample rate converter was activated when there was no digital input signal, nothing would be output from the digital output jacks in some cases. This problem has been fixed.
- When turning solo on/off, the sound output from the STUDIO OUTPUT jack was muted temporarily. This problem has been fixed.
- When sending an RS-422 command (SONY P2 protocol), the device receiving the command did not operate as expected. This problem has been fixed.
  - If you press the **REC** key when the device receiving the command is playing back, it will enter EDIT ON mode.
  - If you press the **PLAY** key when the device receiving the command is in EDIT ON mode, it will enter EDIT OFF mode.
  - If you press the **REC** key when the device receiving the command is in EDIT ON mode, it will stay in EDIT ON mode.
- If an IF-FW/DM MKII was installed in slot 3, slot 3 tracks 9-32 could not be selected as output signals. This problem has been fixed.
- When the sampling frequency was set to 44.1 or 88.2 kHz, the actual delay value of the delay effect might not have been the same as that set. This problem has been fixed.
- When setting CONTROL ROOM SELECT, if DIGITAL IN1, DIGITAL IN2, 2TR (ANALOG), SLOT1 x-x, or SLOT2 x-x was assigned to SEL1-6, and DIGITAL IN1, DIGITAL IN2, 2TR (ANALOG), SLOT1 x-x, or SLOT2 x-x was selected, if automation was played back or a snapshot was recalled, the control room output or the studio output was muted in some cases. This problem has been fixed. (This problem did not occur when “STEREO” was set for monitoring.)
- When the control room monitoring source was set to DIGITAL IN1, DIGITAL IN2, 2TR (ANALOG) or SLOT1 x-x and a snapshot was recalled or automation was played back, the control room monitoring source was switched to STEREO OUT in some cases. This problem has been fixed.
- If the STUDIO SETUP OUTPUT setting was set to From CONTROL ROOM, when the monitoring source was switched to DIGITAL IN1, DIGITAL IN2, 2TR (ANALOG), SLOT1 x-x, SLOT2 x-x, SLOT3 x-x, or SLOT4 x-x using CONTROL ROOM SELECT (SEL1-6), a clicking sound might have been heard through the studio outputs. This problem has been fixed.

Version 1.60

■ Option Slot Cards

- At 88.2 kHz or 96 kHz sampling rates, some master clock settings would result in audio transferred from an IF-TD/DM option card to have reversed Odd and Even channels. This problem has been fixed.
- With an IF-FW/DM MKII card in slot 1 and an IF-SM/DM card in Slot 3, the mixer would not be able to boot correctly. This problem has been fixed.
- With an IF-SM/DM installed, pressing the **MONITOR SEL** key produced a click noise in the output. This has been fixed.
- With the IF-SM/DM, and Bass Management set to ON, changing the LPF setting of the Bass Management Section would result in noise in the SubWoofer output channel. This problem has been fixed.
- Noise resulting from changing the Monitor level of the IF-SM/DM has been removed.
- With an IF-SM/DM installed, the front panel **MONO** key normally toggles the IF-SM/DM Downmix function On or Off. A problem where this function did not occur correctly has been fixed.
- When the output gain of the IF-SM/DM was set to a large value, activating a Buss Mute resulted in the Mute occurring as a fade over a noticeable amount of time. This problem has been fixed.

■ Remote Control

- If the Internal Timecode Generator (MTC Generate) was started and then deleted from the Control List, the MTC Timecode would not stop. This problem has been fixed.
- The mixer is now better able to lock to incoming MTC Timecode that has Jitter.
- At the 30NDF frame rate, the MTC output could occasionally produce incorrect Timecode values. This has been fixed.
- The operation of the Shuttle and **JOG** controls using the MMC protocol has been improved.
- A problem where Timecode Locations were incorrectly stored has been fixed.

■ When connected to TMCompanion

- With the TMCompanion Meter screen open, rebooting the computer would result in the DM-4800 becoming unresponsive. This problem has been fixed.

■ Monitor Section

- Feedback noise that was created when the **TO SLATE** key was pressed has been fixed.
- Click noise that occurred when the **TO SLATE** or **MONITOR SEL** keys were pressed has been fixed.

■ Project

- When a project is loaded, the front panel Encoder Mode LED would not reflect the setting from the saved project. This problem has been fixed.

- When Shutting Down the mixer, even if the Current Project was not Protected, the following popup message would sometimes be displayed.

  "Current Project is protected."

  "Can't STORE current project."

  This problem has been fixed.

■ Operation

When changing between an FS of 48kHz and 96kHz, the EQ settings were not correctly restored. This problem has been fixed.

■ Factory Default Settings

The Factory Default Setting for FADER SENSITIVITY has been changed from 3.3kHz to 2.0kHz.

Version 1.50

■ Remote control

Previously, the LCD would unexpectedly switch focus when both MIDI Faders and the DAW Control Surface feature was being used an d the master fader touched.

This has been fixed.

■ TASCAM FX / TASCAM FX 2.0

Previously, the Tap Tempo function was not working for the new TASCAM FX.

This has been corrected.

■ TASCAN FX 2.0

Previously, accessing dynamics libraries could occasionally crash the mixer.

This has been corrected.

Version 1.10

■ Project

A problem has been fixed in which the cascade connection status sometimes became invalid when loading a project that changed the cascade master/slave relationship.

Known Issues

This section describes the Known Issues for the latest DM-4800 software

Version 1.70

■ Multiple IF-AE/DM cards and clock master.

If one of the IF-AE/DM cards is selected as the clock master, attempting to switch the master clock to another IF-AE/DM card will result in noise in the mixer. To avoid this, do not change the clock source.

■ USB Connection notes

Mac OS X:

If TMC or your DAW software fails to find your mixer after putting your computer into Sleep mode, please remove the USB cable and re-connect it before re-launching TMC or your DAW software.

Windows XP:

If TMC or your DAW software fails to find your mixer after putting your computer into Standby mode or Hibernation mode, please re-launch TMC or your DAW software.

Windows Vista:

If TMC or your DAW software fails to find your mixer after putting your computer into Standby mode, Sleep mode or Hibernation mode, please re-launch TMC or your DAW software again.

To prevent this problem re-occuring, please set your computer to not automatically go into Standby or Hibernation modes.

■ DTRS REC FUNCTION setting when controlling via P2

When making REC function settings with multiple DTRS devices connected, and the REC function of track 9 or later is operated from the DTRS unit, that status is not reflected in the mixer.

■ Auto detection of MMC control target

When loading a project that includes MMC Full (closed-loop) control, be sure to connect and power on the MMC device first. Also, power on the MMC device before starting the mixer, otherwise the MMC device may not be correctly identified or controlled.

TASCAM
TEAC PROFESSIONAL

DM-4800

TASCAM Mixer Companion for DM-3200 and DM-4800

README file

This file contains last minute details about the TASCAM Mixer Companion (TMC) V1.60 application.

TMC V1.60 is an update for use with MAC OS X 10.5 (Leopard). If you are using Mac OS 10.5 (Leopard), please use V1.60, and for versions other than Mac OSX 10.5.1 (Leopard), please use TMC V1.50

Platform Independent Issues

- Canceling during a long sequence of project restores can leave the mixer unresponsive for a while with the "Data transfer in progress" dialog showing. Please wait for this dialog to disappear before attempting further project restores or backups.
- MTC In Port Preference: This port selector will not allow you to choose the USB-MIDI port which is already being used by TMC for data transfer. There is no MTC data on this port.
- It is possible for data transmission errors to occur during the Firmware Update process. Normally TMC will catch and correct these immediately, but sometimes the errors are not detected until the complete data has been transferred. If this happens, TMC will report a Checksum error at the 50% point of the firmware update, and will abort the update. It is safe to try the update again straight away. TMC will not allow the mixer to update its flash memory with incorrect data.

Windows Version

Minimum requirements: A computer that runs Windows XP Service Pack 2 with an unused USB port.

.NET:

This version does not require the .NET runtime to be installed on your Windows XP machine. If you previously installed it as part of a prior release of TMC, it may be safe to remove it (START->CONTROL PANEL-> ADD and REMOVE Programs) if no other applications on your computer require it.

Service Pack 2:

If you do not have Service Pack 2 for Windows XP, please visit www.windowsupdate.com to update your computer.

Windows Vista

TMC is fully compatible with Vista 32 bit and 64 bit versions. Note that TMC V1.60 does not detect cable removal correctly under Vista; this issue is in the Operating System and is addressed in Vista Service Pack 1.

WinXP64

This version of TMC has also been tested with the 64 bit version of Windows XP running on AMD processors.

HyperThreading:

Windows XP running on Hyperthreaded processors cannot perform project transfers correctly in TMC because of problems with Microsoft's built-in USB MIDI drivers. Please disable Hyperthreading in the BIOS settings of your computer.

Standby Mode:

If TMC fails to find your mixer after putting your computer into Standby mode, please remove the USB cable and re-connect it before re-launching TMC.

USB Cable Order:

The order of the USB connections between multiple mixers and the computer may affect the Transport Target Preference in TMC. If your preference is not maintained correctly, a different order for the USB connections may present the correct order.

Failure to find Mixer:

If you are having problems using TMC because it reports that it cannot find the mixer, please check the following:

1) Check the USB connection between the computer and the mixer (Cables, USB Hubs, Ports)
2) See if the mixer is turned on.
3) Try another USB Port
4) Try a better quality USB cable, or a shorter one.
5) Disconnect the USB cable and re-insert it if the computer was put into Standby or Sleep modes.
6) Some Logitech WebCam drivers are known to interfere with USB-MIDI operation, try uninstalling your Webcam software.

Close other applications and try launching TMC again. DAW applications may have already opened the USB MIDI port needed for TMC to communicate with the mixer; these ports cannot be shared. If TMC correctly detects the mixer when the DAW application is not running, this is most likely the problem. Exclude those ports from the DAW's MIDI settings and try again. Please report the problem to TASCAM support if you believe a specific application causes a problem.

Make sure that “USB Audio Device” is being recognized in the Device Manager.
1) Go to My Computer->Properties->Hardware Tab->Device Manager->Sound, Video & Game Controller -> USB Audio Device.
2) Double Clicking on this will open a dialog with the details of the device; it should show “TASCAM DM-3200” or "TASCAM DM-4800" in the Location text.
3) Check that the Device Status is “working properly”
4) The DM-3200 or DM-4800 should also appear under Device Manager-> USB Controller-> USB Composite Device. Double click this one and check that it shows “TASCAM DM-3200” or "TASCAM DM-4800" also.
5) The mixer needs to be recognized in both locations for TMC to launch.

Also check that the USB MIDI ports are not assigned to Windows' "MIDI music playback" under Control Panel->Sounds and Audio Devices->Audio

If you are still having problems, it is possible that your PC’s USB host controller is not 100% compatible with Windows XP. TASCAM cannot test all possible PC hardware combinations.

Mac Version

Minimum requirements: G4 Processor 400MHz, 128MB RAM, Mac OS X 10.3.9
Recommended: G4 Processor 800MHz or faster, 256MB or more, Mac OS X 10.3.9 or later

IAC Driver:

If an IAC bus is enabled, TMC may not behave correctly. If you are having problems, please disable the IAC driver by starting the “Audio MIDI Settings” application under /Application/Utilities and selecting “IAC driver” to be disabled.

Sleep Mode:

If TMC fails to find your mixer after putting your computer into Sleep mode, please remove the USB cable and re-connect it.

Universal Binary:

This version of TMC runs natively on Intel based Macs, and is fully compatible with dual processor machines.

OS X 10.5 (Leopard):

This version of TMC is fully compatible with Apple’s latest Operating System, 10.5 (Leopard).

TASCAM TMCompanion Release Notes

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Introduction

This document contains the Release Notes for the TASCAM Mixer Companion (TMCompanion) application, explaining features that are not covered in the Users Manual.

Features

TMCompanion is a Software Application for use on Microsoft Windows XP, Vista, 7, and Apple Mac OS X Operating Systems. The computer and the TASCAM DM-3200 or DM-4800 are connected via USB, providing the following functions.

- Copy Projects from the TASCAM DM to the Computer, Restore previously saved Projects to the TASCAM DM.
- Display level meters for Channel, Bus, Aux Sends and Main Stereo Bus.
- Display the Timecode and provide remote control of the TASCAM DM's Transport Control section.
- Update the TASCAM DM's firmware.
- Capture the TASCAM DM's local screen to a PNG (Portable Network Graphic) file on the computer.

Trademarks

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- Macintosh, Mac and Mac OS are trademarks of Apple Inc.
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About TMCompanion V1.51 / V1.61 / V1.70

TMCompanion V1.70 is an update for use with Mac OS X 10.6 (Snow Leopard), Mac OS X 10.7 (Lion) and Mac OS X 10.8 (Mountain Lion).
TMCompanion V1.61 is the version specifically for Mac OS X 10.5 (Leopard) Only.
If you are using a version of Mac OS X prior to 10.5 (Leopard), or Windows XP, Windows Vista or Windows 7*, please use TMCompanion V1.51.

*Both 32-Bit Edition and 64-Bit Edition of the Windows Operating Systems are supported.

Supported OS list

TMCompanion version	OS version
TMCompanion V1.70	Mac OS 10.8
	Mac OS 10.7
	Mac OS 10.6
TMCompanion V1.61	Mac OS 10.5
TMCompanion V1.51	Mac OS before 10.5
	Windows 7
	Windows Vista
	Windows XP

New Features

New Features in V1.70

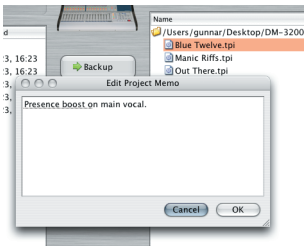
TMC is now compatible with Mac OS X 10.6 (Snow Leopard), Mac OS X 10.7 (Lion), Mac OS X 10.8 (Mountain Lion).

New Features in V1.61

TMC is now fully compatible with Mac OS X 10.5 (Leopard).

New Features in V1.51

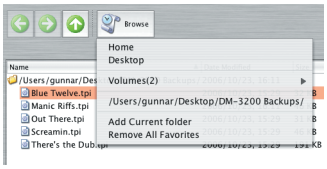
Project Memo Display and Editing



The Project Memo field for any project, either remotely on the mixer, through the CF browser (left side of TMCompanion main window), or local TPI files through the right side host browser can be edited.
The first 16 characters are automatically underlined to show how much of the memo will be visible in the DM mixer's Project Manage screen.
This feature is available through the right click context menu for the project or TPI file, or through the File menu, or brought up using the short cut "Ctrl-E"(CMD-E for Mac users).

Improved Local Browsing

A new UP button is now visible in the icon bar. This moves you one directory layer up from the currently displayed folder.
The default shortcuts are now "Home" and "Desktop".



Windows Vista / Windows 7 Support

Support for TMC running on Windows Vista 32-Bit Edition and 64-Bit Edition, and Windows 7 32-Bit Edition and 64-Bit Edition OSes has been added.

New Features in V1.30

DM-4800 Support

TMCompanion now recognizes any number of connected DM-3200 and DM-4800 mixers, and allows their meter bridges to be displayed. This allows all channels, all busses and all aux sends, along with the stereo buss, to be metered.
Select Meter Bridge from the Windows menu.
Note that this window comes in three "fold-out" sections, accessed by the triangular controls on the left of the window.
The top control section of the window allows the meter settings to be made:
TYPE: the type can be either Regular (peak) or Average (more similar to VU meter response).
Meter Decay Rate Slider: The Decay rate of the meters can be set.
Peak Hold Time Slider: The Peak hold time can be set here or set to infinity with the check box.
The Clear Peaks button resets peak hold displays.
The pickoff points for the meters can then be set.

For channels 1 through 48 (DM-4800) or 1 through 32 (DM-3200), the choices are: Input, Pre Gate, Post Gate, Pre Insert and Post Fader. Consult the block diagram in the Owner's Manual if you are unsure of where these belong. For channels 49 through 64 (DM-4800) or 33 through 49 (DM-3200), these choices are restricted to Input or Post Fader. For the busses (and aux sends) the choices are: Pre Comp (compressor), Pre Fader and Post Fader.

New Features in V1.20

Multiple Mixer Support

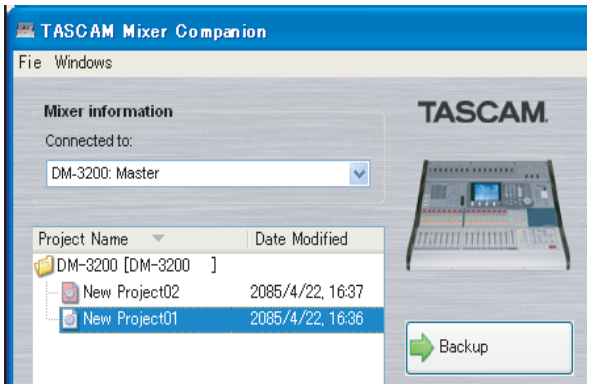
TMCompanion version 1.20 supports multiple mixers. It is capable of recognizing more than one DM-3200 unit and controlling existing functions on any connected DM-3200 unit.

How to connect

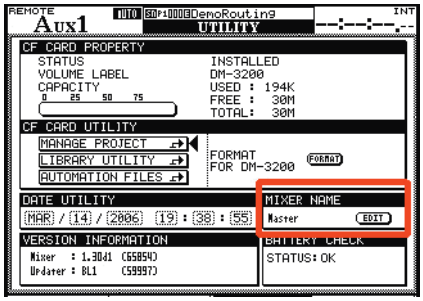
Multiple DM-3200 units can be connected to the USB ports (or a USB hub) of a PC or a Mac.

Identification of multiple DM-3200 units

TMCompanion identifies multiple DM-3200 units by displaying the mixer names. The DM-3200 unit that is currently selected is indicated in the Mixer information panel of the main window.
The figure to the right shows what the main window looks like when the selected mixer name is DM-3200 Master.



The name of a DM-3200 unit can be set and edited in the MIXER NAME section of the DM-3200 UTILITY>SYSTEM screen as shown below.



Before launching TMCompanion, all the connected DM-3200 units must be turned on.

Change of Installation Method for Mac OS X

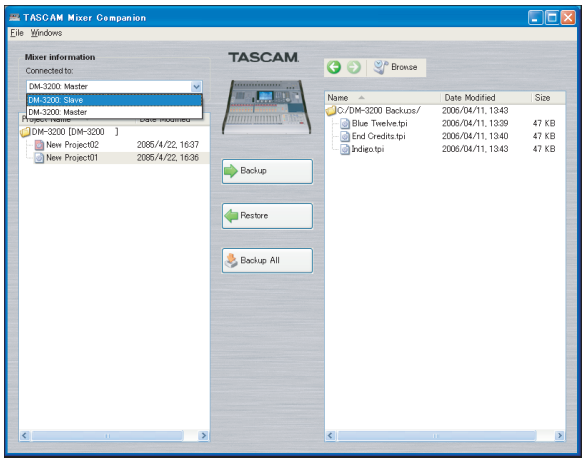
TMCompanion V1.20 uses a different installation method for Mac OS X.
Whereas the CD-ROM of previous versions included an installer, the CD-ROM of version 1.20 includes a disk image named TMCompanion.dmg. Double-clicking it will mount the volume and the TMCompanion application icon will appear.

Steps for Installation

1. Insert the CD-ROM of TMCompanion version 1.20 in a Mac. The CD-ROM is called DM-3200.
2. Double-click the disk image, TMCompanion.dmg, in its root folder.
3. Click Agree on the LICENSE AGREEMENT AND LIMITED WARRANTY screen if you agree with the terms (if you disagree with the terms, click Disagree and the installation process will halt).
4. Drag the TMCompanion application icon from the mounted disk image to the Applications folder on your Mac.

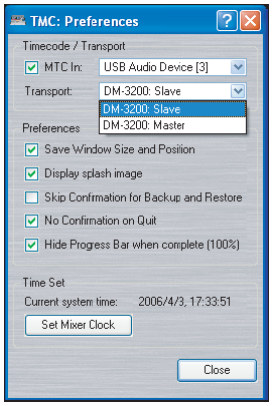
Backing up and Restoring

TMCompanion version 1.20 can back up and restore data from multiple DM-3200 units.
Select a DM-3200 unit in the Mixer information panel of the main window.

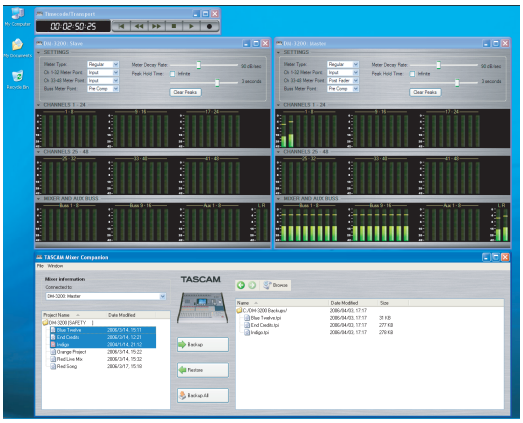


Timecode/Transport Screen

TMCompanion version 1.20 allows you to select among multiple connected DM-3200 units to display Timecode and operate transport control.
Only one Timecode/Transport window can be displayed at a time. Select the unit to be displayed in the TMCompanion: Preferences window.



Meter Bridge
Meters of multiple DM-3200 units can now be displayed. The menu Windows: Meter Bridge now has a sub-menu showing the connected DM-3200 units. Select a unit from this menu to display its Meter Bridge window. Multiple Meter Bridge windows can be shown simultaneously.



Screenshot
You can now save screenshots of the LCD screens of multiple DM-3200 units. Select the DM-3200 unit whose screenshots you want to save in the Mixer information panel of the main window.

Preferences
The layout of the Preferences window has been changed in TMCompanion V1.20.
There are now three panels: Timecode / Transport, Preferences, and Time Set. A popup menu has been added to the Timecode / Transport section to select a target mixer for the Transport window.

New Features in V1.10

Renaming Projects and Project Backup Files
The Main Window now allows projects and project backup files (TPI) to be renamed. Once the project is highlighted, a right click menu (Windows) or slow double click (Mac) will allow you to rename it. A Rename selection under the file menu (Windows and Mac) is also available to rename files.

Deleting Projects and Project Backup Files
The Main Window now allows projects and project backup files (TPI) to be deleted. Multiple selection is possible using the computer's Shift key for contiguous selection or the CTRL key (Windows) or the Command key (Mac) for discontiguous selection. Use the right click menu (Windows) or the file menu (Windows and Mac) and select "Delete"

Local Browser Refresh
The local list (right hand side of the TMCompanion main window) now has a right click menu with a Refresh option in Windows. This is accessed with a CTRL click in the right hand side on Mac.

Maintenance Items

Maintenance in V1.61

- Transfer would stop before completing when restoring files to a DM-3200 or DM-4800 using TMCompanion on a Mac OS. This has been fixed.
- When restoring multiple files at once, files would be shown overlapping in the list on the left side of TMCompanion. This has been fixed.

Maintenance in V1.51

Minimum Mac OS X requirements
TMCompanion V1.51 now requires OS X 10.3.9 or later for PowerPC Macs.

Mac Universal Binary
TMCompanion V1.51 is now a native application when running on Intel Mac computers.

Browse button speed up
The Browse button was previously slow to open on some machines. It now opens instantaneously.

Firmware Update problems
Some machines had problems running Firmware Updates. These have been addressed.

Other Maintenance items
- TMCompanion would sometimes freeze during backup or restore of projects with many user libraries.
- Transfer would stop before completing when restoring files to a DM-3200 or DM-4800 using TMCompanion on a Mac OS. This has been fixed.
- When restoring multiple files at once, files would be shown overlapping in the list on the left side of TMCompanion. This has been fixed.

Maintenance in V1.30

Windows XP Service Pack 2
TMCompanion V1.30 now requires Windows XP Service Pack 2. It will not install if your computer only has SP1. Visit http://www.windowsupdate.com to get SP2

Mac Intel support
This version of TMCompanion runs on Intel based Macs using the automatic emulation of PPC applications. You may notice a slow start up of the application as it translates the code before running it. TMCompanion has also been tested on dual processor Macs.

Windows XP 64-Bit Edition support
TMCompanion V1.30 has been tested with the Windows XP 64-Bit Edition running on AMD processors.

Multiple Project Restores
If multiple project backup files are selected and restored in one operation, previous versions of TMCompanion would delete all the duplicate target projects from the mixer first, and then restore all of the projects. If this process was interrupted or cancelled, the user would notice that then the projects that hadn't been reached were already missing from the target mixer. In TMCompanion V1.30, each project is deleted just before it is going to be restored.

Maintenance in V1.20

Windows .NET
This version does not require the .NET runtime to be installed on your Windows XP machine. If you previously installed it as part of a prior release of TMCompanion, it may be safe to remove it (START->CONTROL PANEL-> ADD and REMOVE Programs) if no other applications on your computer require it.

Backup of projects from Cascaded Mixers
Issues that occurred when backing up or subsequently restoring projects from cascaded mixers have been fixed.

Project List update after sleep
If TMCompanion is launched on a machine where the DM is connected while the computer was put to sleep and woken again, the project list might not have refreshed correctly. This has been fixed.

Illegal operations on CF card label
The top line of the project list on the left hand side of TMCompanion's main window is the CF card's volume label. Some TMCompanion operations were selectable on this item even though they should be not allowed.

Selecting MTC IN in Preferences dialog
Previously, if the MTC IN tick box was unselected, the MTC IN pull down menu was grayed out and thus unable to be changed. This has been changed so that the pull down selection can be changed at any time.

Restoring previous version Meter Window Positions
TMCompanion V1.20 will not restore meter window positions that were saved in a previous version (Preferences -> "Save Window Size and Position"), this is because those window positions are now saved uniquely for each mixer that is detected, and is required when multiple mixers are used together.

Maintenance in V1.10

Locally renamed TPI files
When a TPI file was renamed and restored to the mixer in V1.00 it would restore to the old name. In V1.10 it will restore to a project with the same name as the TPI file.

Known Issues

Known Issues in TMCompanion V1.51 / V1.61 / V1.70

MTC IN Port

[MTC In Port] Preference. (For Mac OS X before 10.5) :
This list shows only Port3 (MTC) for the attached Mixers. The other USB MIDI ports do not contain any MIDI Timecode data.

[MTC In Port] Preference (For Windows, and Mac OS X 10.5 and above):
Please select the MTC USB Midi port for the selected DM-3200 or DM-4800 in order to show its MIDI Timecode data.
On Windows XP, this may be shown in the list as "USB Audio Device[3]" or "USB Audio Device[3](2)".
On Windows Vista and Windows 7, this may be shown in the list as "MIDIIN3 (TASCAM DM-3200)" or "MIDIIN3 (TASCAM DM-4800)".
On a Mac, this will be shown in the list as "TASCAM DM-3200 DM-3200MTC PORT" or "TASCAM DM-4800 DM48000MTC PORT".

Hyperthreaded CPUs
Windows XP running on Hyperthreaded processors cannot perform project transfers correctly in TMCompanion because of problems with Microsoft's built-in USB MIDI drivers. Please disable Hyperthreading in the BIOS settings of your computer.

USB Connection with TASCAM DM
When the computer that is connected to the TASCAM DM via USB goes into Stand By mode (Windows XP / Windows Vista) or Hibernate mode (Windows XP / Windows Vista / Windows 7) or Sleep mode (Windows Vista / Windows 7 / Mac OS X), all USB-MIDI connections to the DM will be closed and not automatically re-opened.
In this case, follow the following steps to restart communications.

Mac OS X:
Remove the USB cable and re-insert it, then restart any application that was using the DM's USB-MIDI ports.

Windows XP, Windows Vista, Windows 7:
Restart any application that was using the DM's USB-MIDI ports.
To avoid this problem, change settings on the computer to not use Stand By or Sleep modes.

Stand By Mode
If TMCompanion fails to find your mixer after putting your computer into Stand By or Sleep mode, please remove the USB cable and re-connect it.

Mac IAC Driver
If an IAC bus is enabled, TMCompanion may not behave correctly. If you are having problems, please disable the IAC driver by starting the "Audio MIDI Settings" application under /Application/Utilities and selecting "IAC driver" to be disabled

Mixed DM-3200 and DM-4800 installations
TMCompanion does not prevent the user from restoring projects that were originally made on a DM-3200 to a DM-4800 or vice-versa; they occupy different directories on the CF card and so are always unique. There is no way to up-convert or down-convert a project using TMCompanion.

MTC IN checkbox
Under Mac OS X 10.4, the state of the "MTC IN" Checkbox in the preference page is not saved correctly, and will always be cleared when TMC is started, requiring manual setting each time (V1.51 only)

Notice regarding software that uses the LGPL

TMCompanion V1.70 uses the following software that is licensed by the LGPL.

- **Qt LGPL edition**
  http://qt.nokia.com/downloads

Any customer who wishes to receive the source code may do so by accessing the following URL and filling out the registration form.

http://www.teac.co.jp/support/opensource/index.html

Please understand that we are unable to respond to questions about the source code contents and similar matters.
The following is the original text of the **GNU Lesser General Public License**.

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Version 2.1, February 1999

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[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

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