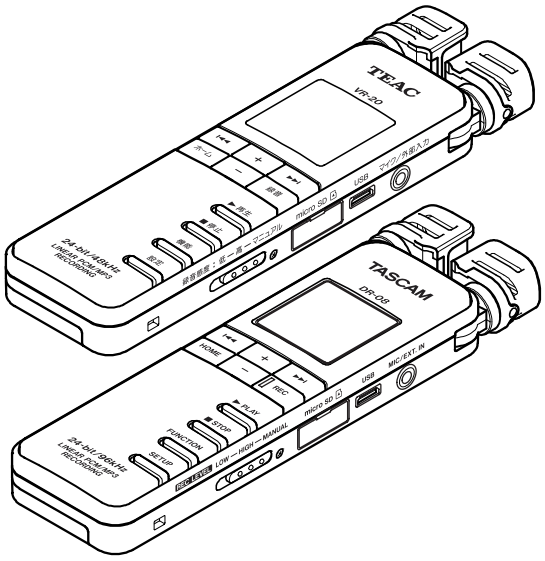

TASCAM®
TEAC PROFESSIONAL

SERVICE MANUAL

VR-20/DR-08

Digital Recorder & Linear PCM Recorder

CONTENTS

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Effective : June, 2010

S-0201

1. Specifications
仕様

Recording media and formats

Recording media

microSD card (64 MB -- 2 GB)

microSDHC card (4 GB -- 32 GB)

Recording and playback formats

WAV:	44.1/48 kHz and 96kHz (DR-08 only) 16/24-bit (stereo or monaural)
MP3:	44.1 kHz 32/64/96/160 kbps (monaural), 64/128/192/320 kbps (stereo)

Input and output

Audio input and output

MIC/EXT. IN jack

Connector: 1/8˝ (3.5-mm) stereo mini-jack

When set to MIC (For Plug-in power)

Input impedance: 200 kΩ

Nominal input level

LOW: –45 dBV

HIGH: –61 dBV

Maximum input level

LOW: –29 dBV

HIGH: –45 dBV

When set to EXT. IN

Input impedance: 200 kΩ

Nominal input level

LOW: –19 dBV

HIGH: –31 dBV

Maximum input level

LOW: –3 dBV

HIGH: –3 dBV

🎧/LINE OUT jack

Connector: 1/8˝ (3.5-mm) stereo mini-jack

Output impedance: 200Ω

Nominal output level: –18 dBV

Maximum output level: –2 dBV

Maximum output: 5 mW + 5 mW (into 16Ω)

Built-in speaker 100 mW (monaural)

USB connection

USB port connector: Micro-B type

Format: USB2.0 mass storage class

定格

記録メディア

microSDカード （64MB ～ 2GB）

microSDHCカード (4GB ～ 32GB）

録音再生フォーマット

WAV：	44.1k/48kHz及び96kHz(DR-08のみ) 16/24ビットステレオもしくはモノラル
MP3：	44.1kHz 32/64/96/160 kbps：モノラル 64/128/192/320 kbps：ステレオ

入出力定格

オーディオ入出力定格

マイク／外部入力端子

コネクター： 1/8”（3.5mm）ステレオミニ

MIC選択時（プラグインパワー対応）

入力インピーダンス：200kΩ

基準入力レベル

LOW： −45dBV

HIGH： −61dBV

最大入力レベル

LOW ： −29dBV

HIGH ： −45dBV

LINE選択時

入力インピーダンス：200kΩ

基準入力レベル

LOW ： −19dBV

HIGH ： −31dBV

最大入力レベル

LOW ： −3dBV

HIGH ： −3dBV

🎧／外部出力端子

コネクター： 1/8”（3.5mm）ステレオミニ

出力インピーダンス：200Ω

基準出力レベル： −18dBV

最大出力レベル： −2dBV

最大出力： 5mW + 5mW（16Ω負荷時）

内蔵スピーカー 100mW（モノラル）

コントロール入出力定格

USB端子

コネクター： Micro-Bタイプ

フォーマット： USB2.0マスストレージクラス

Audio performance

Frequency characteristics

20 Hz–20 kHz (44.1 kHz, External input ⇒ External output)

20 Hz–22 kHz (48 kHz, External input ⇒ External output)

20 Hz–40 kHz (96 kHz, External input ⇒ External output)

Requirements for connected computers

Windows computer

Pentium 300 MHz or faster

128 MB or more memory

USB port (USB2.0 recommended)

Macintosh computer

266 MHz Power PC, iMac, G3, G4 or faster

64 MB or more memory

USB port (USB2.0 recommended)

Intel USB host controller recommended

Supported Operating Systems

Windows XP, Windows Vista, Windows 7

Mac OS X 10.2 or newer

Other specifications

Power supply 2 AAA batteries (alkaline or NiMH)
USB bus power

Power consumption
1 W (at Max.)

Battery operation time (when used continuously)

Alkaline batteries
About 6 hours (MP3, recording, JEITA)
About 6 hours (MP3, playback, JEITA)

Dimensions (W x H x D)
37 x 139.5 x 15 mm/
1.457 x 5.492 x 0.591 in.

Weight 56 g/1.807 oz (without batteries)

Operating temperature range
0–40ºC/32–104ºF

オーディオ性能

周波数特性

20-20kHz（44.1kHz、外部入力⇒ 外部出力）

20-22kHz（48kHz、外部入力⇒ 外部出力）

20-40kHz（96kHz、外部入力⇒ 外部出力）

接続するパソコンの動作条件

Windowsマシン

Pentium 300MHz以上

128MB以上のMemory

USB ポート（推奨：USB2.0）

Macintoshマシン

Power PC、iMac、G3、G4　266MHz以上

64MB以上のMemory

USB ポート（推奨：USB2.0）

推奨USBホストコントローラー

Intel 製チップセット

サポートOS

Windows： Windows XP、Windows Vista、Windows 7

Macintosh： Mac OS X 10.2以上

一般

電源 単4形電池2本
（アルカリ乾電池またはニッケル水素電池）
USBバスパワーから供給

消費電力 1W（最大消費時）

電池持続時間（連続使用時）

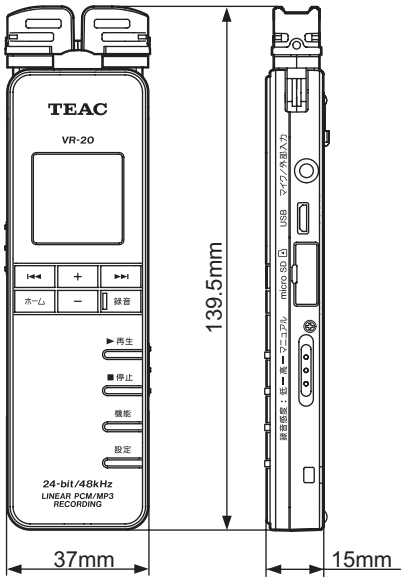
アルカリ乾電池使用時
約6時間（MP3、JEITA録音時間）
約6時間（MP3、JAITA音楽再生時間）

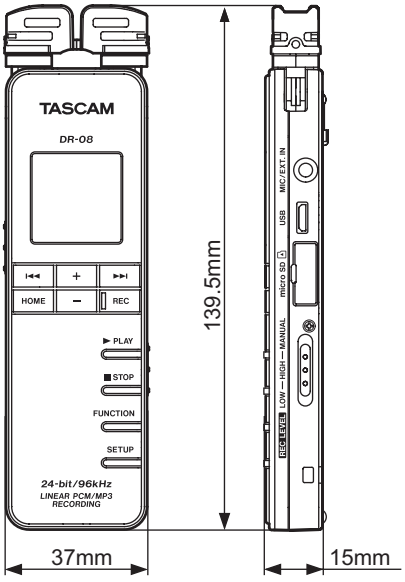
外形寸法
37x139.5x15mm（幅x 高さx 奥行き）

質量 56g（電池を含まず）

動作温度 0～40℃

Dimensional drawings（寸法図）





2. Test Mode
テストモード

1. How to enter test mode

While holding down the **HOME+STOP** keys, switch the power on.

1. テストモードの起動方法

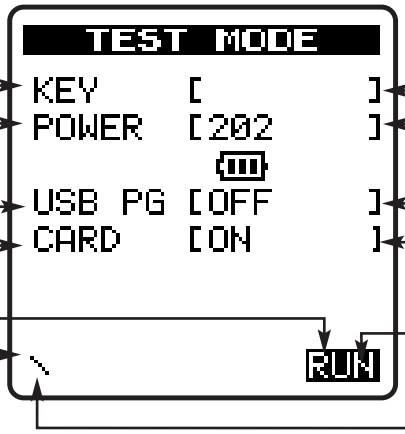
「**HOME**(**ホーム**)**+STOP**(**停止**)」キーを 2 個同時に押しながら電源を投入します。

2. Displays explained

When the test mode starts up, the following are displayed:

2. 画面の説明

起動画面後に下記のLCD表示となります。



- Shows the name of a key pressed. You can determine whether or not a switch pressed is in order.
- Power supply voltage (255 steps) " " shown when powered on battery; " " shown when connected to an USB bus power.
- USB connection
- Micro SD Card detection
- Operation indicator
- This is an event acceptance indicator Normally, this indicator is still and rotates when a key is operated for example.

- 押されたキーの名称を表示します。押されたKeyが正常に認識されているかを確認可能
- 電源供給電圧(255段階) 電池使用時： USBバスパワー使用時：
- USBコネクタ接続認識
- microSDカード検出
- 動作インジケータ
- イベント受付インジケータ。通常は停止、キーなど操作すると回転

3. Checking LEDs

REC LED: Turn on when the **REC** key is pressed.

REC key is starts blinking when holding down the key for a certain time.

CAUTION

*Use care when pressing the ⏻/| (**POWER**) key, for holding it down for a certain time switches off the power of the unit.*

3. LED確認

REC LED:REC(**録音**)キーを押すと点灯する。

REC(**録音**)キーを長押しすると点滅する。

注意

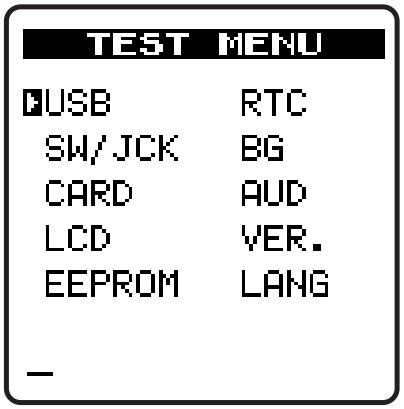
⏻/| (**POWER**)キーは押し続けると本体の電源が切れますので注意してください。

4. Menu

Pressing the **FUNCTION** key reveals the following menu.

4. MENU

FUNCTION(**機能**)キーを押すと下記メニューを表示します。



± KEY: cursor movement

►►| KEY: mode selection

|◄◄ or **HOME** KEY: back to the **TEST MODE** screen

±キー： 項目の移動。

►►|キー： 項目の選択。

|◄◄キーもしくは**HOME**(**ホーム**)キー：**TEST MODE**画面へ。

1) USB Check

Select "**USB**" and press ►►I key and the following are displayed:

Each time the **PLAY** key is pressed, the indication alternates between ON and OFF.

ON indicates that USB connected, and OFF indicates that USB is disconnected.

1) USB Check

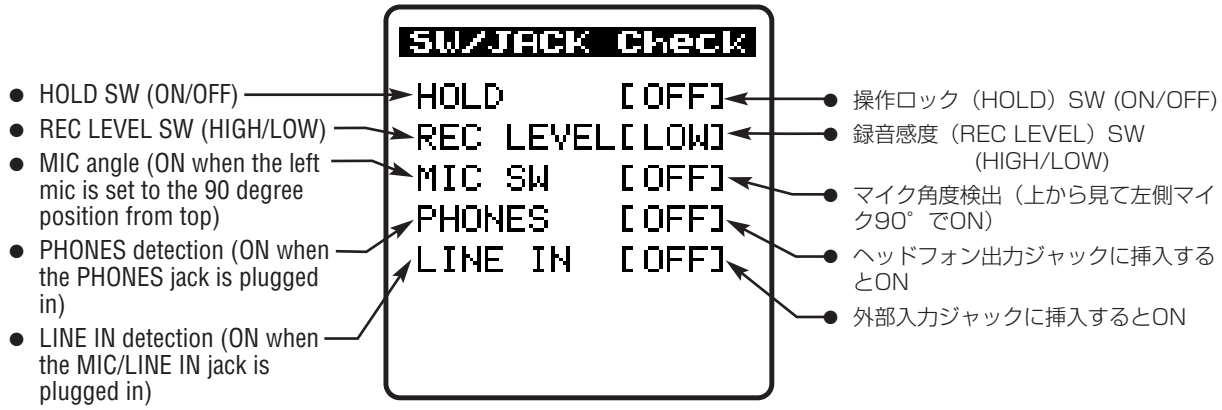
"**USB**"を選択して►►Iキーを押すと下記画面を表示します。

PLAY(**再生**)キーを押すたびにON/OFFを繰り返します。

ON表示でUSB接続、OFF表示でUSB切断となります。

2) SW/JACK Check

Selecting "**SW/JCK**" and pressing the ►►I key gets you to the following menu:



2) SW/JACK Check

"**SW/JCK**"を選択して►►Iキーを押すと下記画面を表示します。

3) CARD

Selecting "**CARD**" and pressing the ►►I key gets you to the following menu:

3) CARD

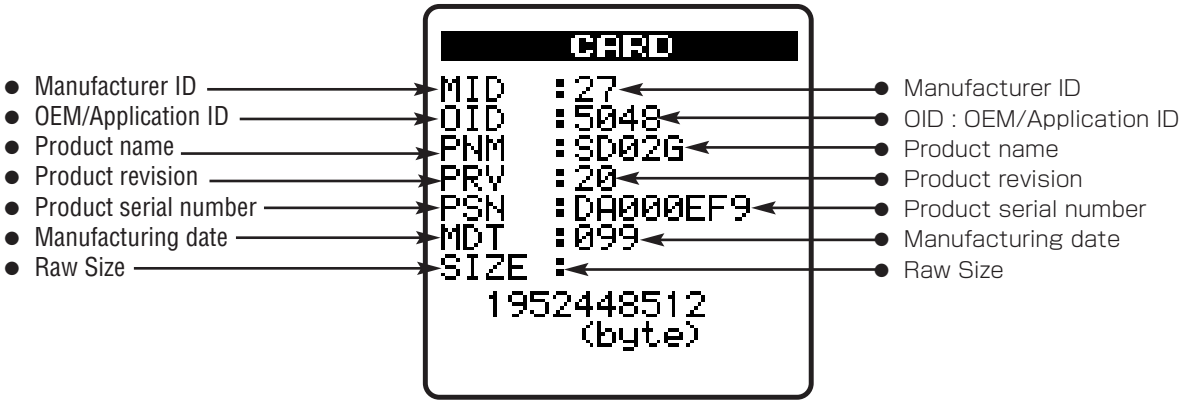
"**CARD**"を選択して►►Iキーを押すと下記画面を表示します。

Identify: Read in data from the card.

Pressing the **PLAY** key indicates the following information:

Identify：カードから情報の読み込み

PLAY(**再生**)キーを押すと下記の情報を表示します。



Pressing the ⏮ key returns the display to the previous screen.

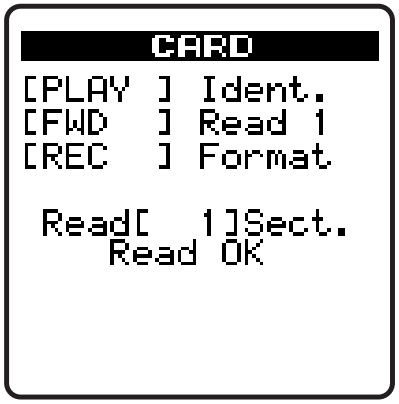
⏮キーを押すと元の画面に戻ります。

Read One: Read in data from the card per sector

At each press of the ⏭(**FWD**) key, data is read in from the card per sector.

Read 1：カードから1セクタ読み込み

⏭(**FWD**)キーを押すと、押すたびにカードから1セクタ毎のデータの読み込みを行ないます。



Format: Card formatting

At a press of the **REC** key, the following screen appears:

Format：カードフォーマット

REC(**録音**)キーを押すと、下記画面を表示します。

Press the ⏭ key to execute the Format.

ここで⏭キーを押すとフォーマットを実行します。

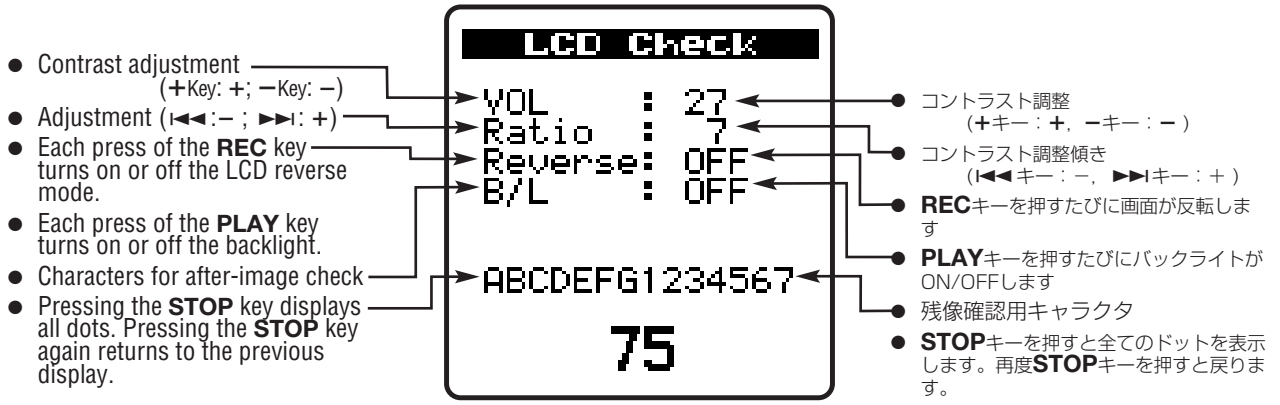
CAUTION

That executing the Format results in clearing the data on the SD card.

Pressing **HOME** key brings you back to the **TEST MENU** screen.

4) LCD Check

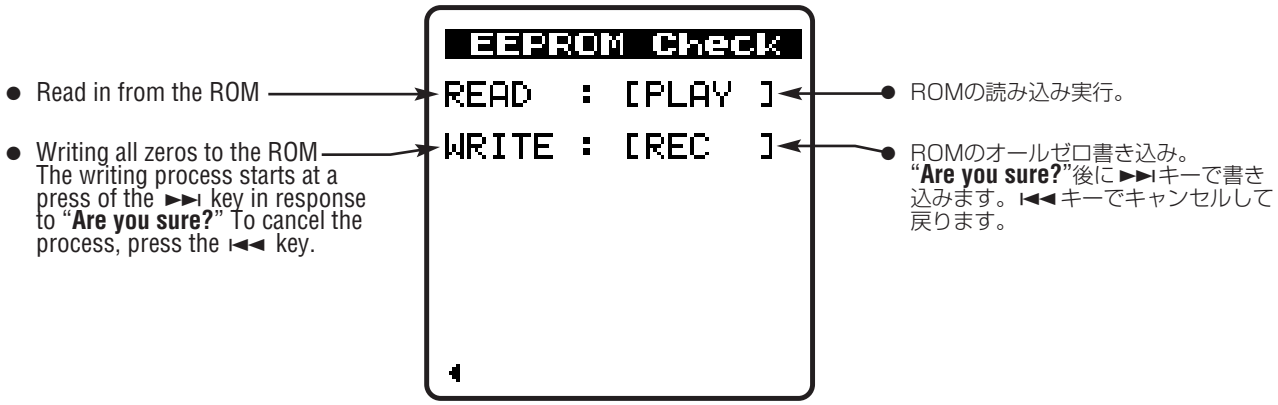
Select "**LCD**" and press ►►I key and the following are displayed:



Pressing **HOME** key brings you back to the **TEST MENU** screen.

5) EEPROM Check

Select "**EEPROM**" and press ►►I key and the following are displayed:



If errors occur during either the read or the write, the following are displayed:

Timeout Err : No response from the EEPROM

Error : Errors at data send/receive time

Verify Err : Errors in verification during the write process

注意

フォーマットを実行するとSD CARD上のデータは消去されますので注意してください。

HOME(**ホーム**)キーを押すと**TEST MENU**画面に戻ります。

4) LCD

"**LCD**"を選択して ►►I キーを押すと下記画面を表示します。

HOME(**ホーム**)キーを押すと**TEST MENU**画面に戻ります。

5) EEPROM Check

"**EEPROM**"を選択して ►►I キーを押すと下記画面を表示します。

READ/WRITE共に、エラーの場合には下記を表示する。

Timeout Err : EEPROMの応答なし

Error : データ送信/受信時のエラー

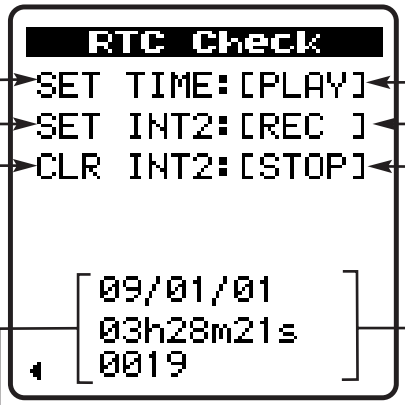
Verify Err : Write時のベリファイエラー

6) RTC Check

Select "**RTC**" and press ►►I key and the following are displayed:

(The following items are prepared for R & D internal check.)

- Pressing the **PLAY** key sets date (09/01/91) and time (00h57m00s) for the dummy.
- Pressing the **REC** key executes the SET INT2 alarm interrupt test. After the display shows "**Are you sure?**", press the ►►I key to start the test. When the test is completed, the unit automatically turns off and then on after a minute.
- Pressing the **STOP** key resets INT2 setting used for SET INT2 alarm interrupt.
- Showing the realtime clock data (date and time) at the bottom



6) RTC Check

"**RTC**"を選択して►►Iキーを押すと下記画面を表示します。

(以下は開発内チェック用です)

- ダミーの年月日(09/01/01)と時刻00h57m00sをRTCにセットします。
- SET INT2 アラーム割り込みテストを行います。[**Are you sure?**」後に►►Iキーで実行。
  実行すると本体の電源が切れ、1分後に再起動します。
- CLR INT2 アラーム割り込みに使用するINT2の設定をリセットします。
- リアルタイムクロック表示(年月日と時刻を画面下段に表示)

7) BG

Select "**BG**" and press ►►I key and the background sample screen is displayed.

The screen contains seven pictures.

►►I key: To move forward.

I◄◄ key: To move backward.

Pressing **HOME** key returns the display to the **TEST MENU** screen.

7) BG

"**BG**"を選択して►►Iキーを押すと背景サンプル画面を表示します。

7枚の絵があります。

►►Iキー： 進む

I◄◄キー： 戻る

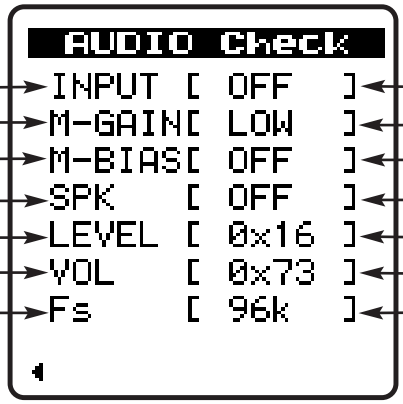
HOME(**ホーム**)キーで**TEST MENU**画面に戻ります。

8) Audio Check

Select "**AUD**" and press ►►I key and the following are displayed:

You can change the setting of each item by using the appropriate key for audio check.

- Input source selection
  Pressing the **REC** key selects the source (OFF, LINE, EXT M, INT M1 or INT M2).
- Mic gain setting
  Pressing the **PLAY** key selects the gain (LOW or HIGH).
- Mic bias setting
  Pressing the **STOP** key selects the setting (ON or OFF).
- Speaker setting
  Pressing the **SETUP** key selects the setting (ON or OFF).
- Input level
  Pressing the I◄◄ or ►►I key changes the level.
- Output level
  Pressing the − or + key changes the level.
- Sampling frequency selection
  Pressing the **HOME** key select the frequency (BYPASS, 44.1KHz, 48KHz or 96KHz).



Pressing **FUNCTION** key returns the display to the **TEST MENU** screen.

8) AUDIO Check

"**AUD**"を選択して►►Iキーを押すと下記画が表示されます。

それぞれの項目を指定のキーで切り替えることにより、AUDIOのチェックが可能です。

- インプットソース設定。
  RECキーで選択。OFF/LINE/EXT M/INT M1/INT M2
- マイクゲイン設定。
  PLAYキーで選択。LOW/HIGH
- マイクバイアス設定。
  STOPキーで選択。ON/OFF
- スピーカ設定。
  SETUPキーで選択。ON/OFF
- インプットレベル。
  I◄◄キー：−，►►Iキー：+
- アウトプットレベル。
  −キー：−，+キー：+
- サンプリング周波数選択。
  HOMEキーで選択。
  BYPASS/44.1KHz/48kHz /96kHz

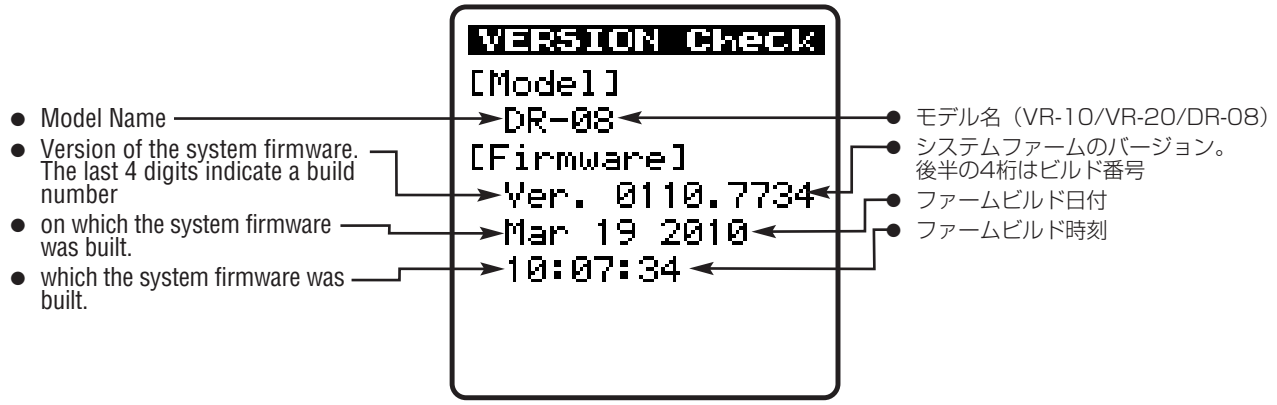
FUNCTION(**機能**)キーで**TEST MENU**画面に戻ります。

9) VERSION Check

Select "**VER**" and press ►►I key and the following are displayed:

9) VERSION Check

"**VER**"を選択して►►Iキーを押すと下記画面のようにファームウェアの詳細Version情報を表示します。

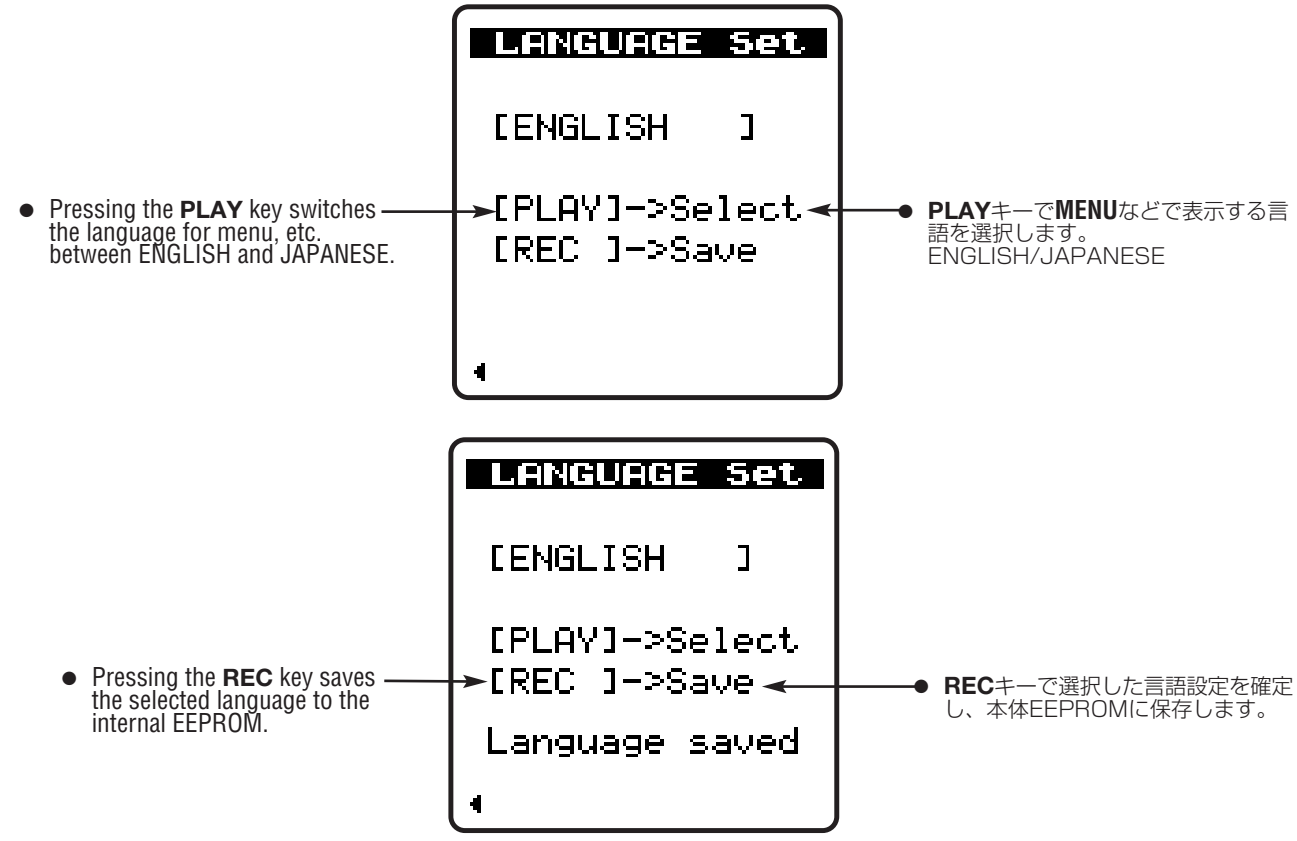


10) LANGUAGE Set

Select "**LANG**" and press the ►►I key to bring up the following screen.

10) LANGUAGE Set

"**LANG**"を選択して►►Iキーを押すと下記画面を表示します。



CAUTION

With the DR-08, turning on or off the unit returns the setting to ENGLISH regardless of the above selection.

注意

DR-08はどちらに設定しても一度通常起動もしくは電源OFFするとENGLISH設定になります。

3. Updating Firmware
ファームウェアのアップデート

1. Preparations

1) Make the connection between this unit and the PC using a USB cable.
2) Place the update file in the UTILITY folder in the unit.
3) Perform the USB device "**remove**" action on the PC, and then switch off the power to the unit.

NOTE

*You can also copy the update file to the "**UTILITY**" folder of the micro SD card by removing it from the unit and directly inserting it to the slot of your PC.*

2. START-UP

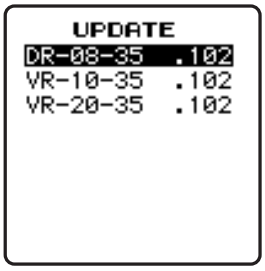
While holding down the **PLAY** and **FUNCTION** keys, switch the power on.

3. Displays explained

The following screen is displayed initially after start-up.

1) When only a single file is available:

2) When multiple files are available:



The maximum number of display lines is 8.

If a file contains a larger number of lines than the maximum number of displayable lines, the cursor can be moved using +/— keys or the dial.

3) When no update file is available:

Nothing can be done.

1. 準備

1) 本体とPCをUSBケーブルで接続します。
2) アップデートファイルを本体の「**UTILITY**」フォルダへコピーします。
3) PCでUSBデバイスの"**取り外し**"を行い、PCから切り離した後、本体の電源を落とします。

メモ

本体に挿入してあるmicroSDカードを直接PCから認識させて、アップデートファイルをカードの「**UTILITY**」フォルダへコピーしてから再び本体に挿入してもかまいません

2. 起動

PLAY(**再生**)+ **FUNCTION**(**機能**)キーを押しながら電源を投入します。

3. 画面の説明

起動後に下記の表示となります。

1) ファイルが一つの場合

2) ファイルが複数の場合

表示行は最大 8 行です。

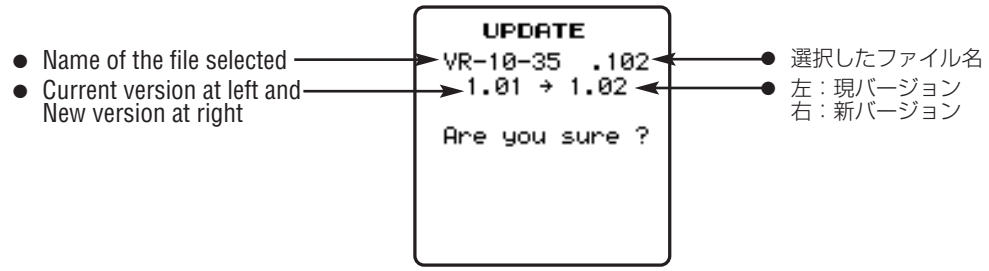
表示最大行を超えるファイルがある場合は+キーと—キーでカーソルが上下に移動します。

3) ファイルが無い場合

何も操作できません。

4. File confirmation

Press the **PLAY** key .

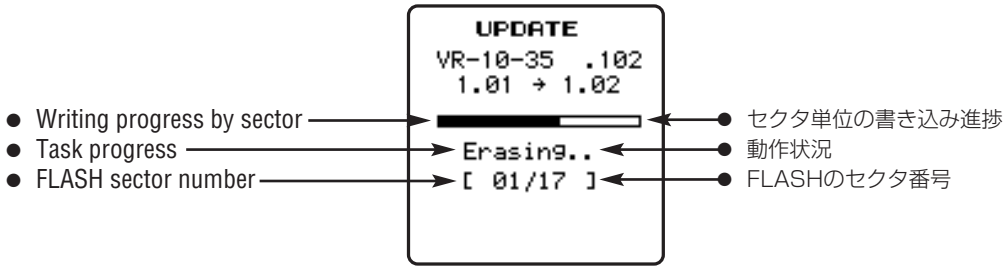


5. Getting update started

Press the **REC** or ⏮ key.

1) When REC key is pressed:

Updating is started.



2) When ⏮ key is pressed:

Update is not started and the display returns to the file selection screen shown above.

6. Completion

After "**Update Complete**" are displayed, the unit switches OFF automatically.

4. ファイルの確認

PLAY(**再生**)キーを押します。

5. アップデート実行

REC(**録音**)キーまたは⏮キーを押します。

1)録音キーの場合

アップデートを実行します。

2) ⏮キーの場合。

アップデートを実行せず、ファイル選択画面へ戻ります。

6. 完了

"**Update Complete**"と表示後、自動的に電源OFFとなります。

7. Error messages

1) If an error occurs when selecting a file, the following messages appear:

Messages(メッセージ)	Meaning (内容)
ERROR	The product ID of the file does not match (the file may be for other products).
	ファイルのプロダクトIDが一致しない（別製品のファイルの可能性がある）。
	The file version is older than the current one.
	現バージョンよりもファイルのバージョンが古い。
	The checksum does not match.
	ファイルのチェックサムが一致しない。
	Error in file reading.
	ファイル読み込みエラー。

2) If an error occurs in the data rewriting process, the following messages appear:

Messages(メッセージ)	Meaning (内容)
Flash Erase	Error in erasing
	消去エラー
Flash Blank	Blank error as a result of data erasure.
	消去後のブランクエラー
Flash Write	Error in writing.
	書き込みエラー
Flash Verify	Error in verification after data has been written.
	書き込み後のベリファイエラー

7. エラー

1）ファイル選択時にエラーが発生した場合のメッセージ

2）書き換え時にエラーが発生した場合のメッセージ

4. Assembling the microphone unit

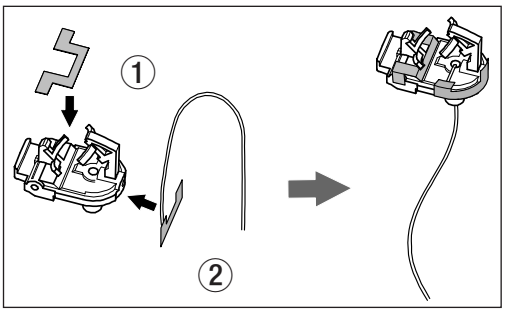
マイクユニットの組立

The following shows how to assemble the microphone unit.

本編はMIC UNIT Lの組立を載せてありますので、Rの組立の場合は使用する部品が( )の部品になります。

1. Attach the “SHIELD SHEET HUM” to the “HOLDER, MIC L” (“HOLDER, MIC R”).
2. Attach the “SHIELD SHEET MIC L” (“SHIELD SHEET MIC R”) to the “HOLDER, MIC L” (“HOLDER, MIC R”), and pass the FG wire through the hole of the “HOLDER, MIC” to the bottom.

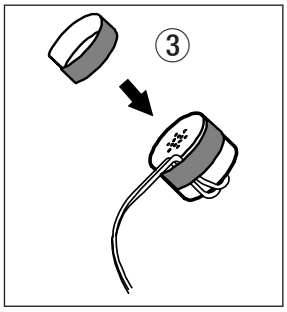
   You must solder the FG wire (blue) to the “SHIELD SHEET MIC L” (“SHIELD SHEET MIC R”) before you attach it to the “HOLDER, MIC L” (“HOLDER, MIC R”).



1. HOLDER, MIC L(HOLDER, MIC R)にSHIELD SHEET HUMを貼付する。
2. HOLDER, MIC L(HOLDER, MIC R)にSHIELD SHEET MIC L(SHIELD SHEET MIC R)を貼付し、HOLDER, MIC の穴にFG線材を通して底部より出す。

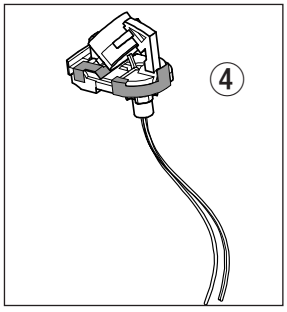
   SHIELD SHEET MIC L(SHIELD SHEET MIC R)には事前にFG線材（青色）を半田付けしておく。

3. Solder the MIC wire to the microphone and fit the wire to the side of the microphone using the “SHEET, PI”.



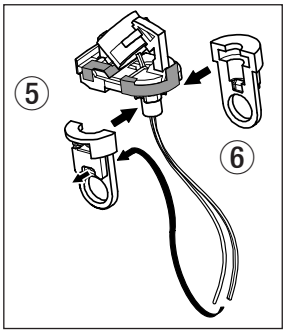
3. マイクにMIC線材を半田付けし、線材をマイクの側面にSHEET, PIで固定する。

4. Pass the MIC wire through the hole of the “HOLDER, MIC L” (“HOLDER, MIC R”) to the bottom, and fit the microphone to the holding section of the “HOLDER, MIC L” (“HOLDER, MIC R”).



4. HOLDER, MIC L(HOLDER, MIC R)の穴に線材を通して底部より出して、マイクをHOLDER, MIC L(HOLDER, MIC R)の保持部に装着する

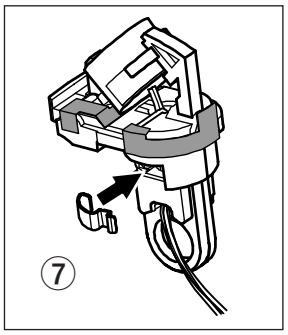
5. Pass the wires through the square hole on the "CASE, H MIC LOW" and fit it to the “HOLDER, MIC L” (“HOLDER, MIC R”).
6. Fit the “CASE, H MIC UP” to the “HOLDER, MIC L” (“HOLDER, MIC R”).



5. CASE, H MIC LOWの角穴に線材を通した後、HOLDER, MIC L(HOLDER, MIC R)に装着する。
6. CASE, H MIC UPをHOLDER, MIC L(HOLDER, MIC R)に装着する。

7. Fit the “LEAF SPR, VR20 G” to the “CASE, H MIC LOW”.

   Be sure to fit the “LEAF SPR, VR20 G” in the correct direction.

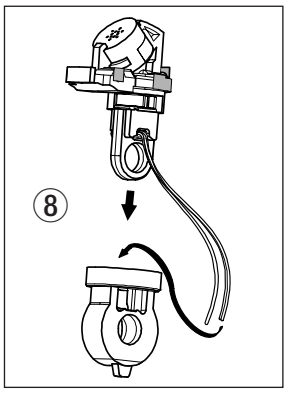


7. LEAF SPR, VR20 GをCASE, H MIC LOWに装着する。

   LEAF SPR, VR20 Gの向きに注意する。

8. Pass the MIC wire through the hole on the “COVER, CASE H MIC” to the cutout side and fit it to the “CASE, H MIC”.

   Be sure not to drop the “LEAF SPR, VR20” down.

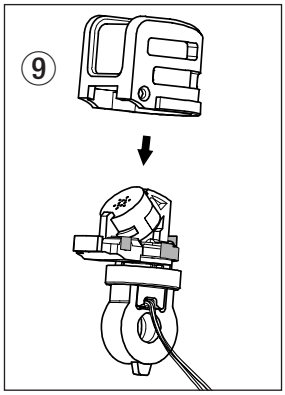


8. COVER, CASE H MICの穴にMIC線材を通し、切り欠きのある側から出して、CASE, H MICに装着する。

   LEAF SPR, VR20 Gの脱落に注意する。

9. Cover the “CASE, MIC L” (“CASE, MIC R”), to which the “PLATE, MESH TOP”, “SHEET, MESH SIDE” and “SHEET TOP SCREEN” are fitted, to the “HOLDER MIC L” (“HOLDER MIC R”).

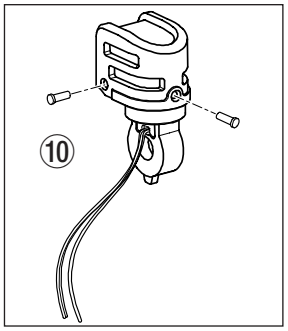
   Be sure not to make the “SHEET, TOP SCREEN” turn upward when covering the case.



9. PLATE, MESH TOP、およびSHEET, MESH SIDE、SHEET TOP SCREENが装着されたCASE, MIC L(CASE, MIC R)をHOLDER MIC L(HOLDER MIC R)に被せる。

   被せる時はSHEET, TOP SCREENのめくれ上がりに注意する。

10. Fix the case with two “SCREWs”.



10. SCREWで2箇所止める。

5. Messages Explained

メッセージ一覧

The following is a list of the pop-up messages that might appear on the VR-20/DR-08 under certain conditions.

Refer to this list if one of these pop-up messages appears and you want to check the meaning or determine a suitable response.

以下にポップアップメッセージの一覧表を示します。
VR-20/DR-08では、状況に応じてポップアップメッセージが表示されますが、それぞれのメッセージの内容を知りたいとき、および対処方法を知りたいときにこの表をご覧ください。

Messages(メッセージ)	Meaning and response(内容と対処方法)
FILE NAME ERR **ファイル名が不正です。**	The SPLIT FILE function would cause the file name to exceed 200 characters. The SPLIT FILE function adds **"_a"** or **"_b"** to the end of the file name. Before choosing the SPLIT FILE function, connect the unit to a computer and edit the file name to less than 198 characters.
	ファイル分割によりファイル名の文字数が200文字を超えました。ファイル分割を行うとファイル名の末尾に**"_a"**または**"_b"**が追加されます。ファイル分割を行う前にパソコンと接続し、198文字以下のファイル名に変更してください。
DUP FILE NAME **同名ファイルがすでにあります。**	The SPLIT FILE function would cause the file name to be the same as that of an existing file. The SPLIT FILE function adds **"_a"** or **"_b"** to the end of the file name. Before choosing the SPLIT FILE function, connect the unit to a computer and edit the file name.
	ファイル分割により作成されるファイルと同じファイル名のファイルが同じフォルダ内に既に存在します。ファイル分割を行うとファイル名の末尾に**"_a"**または**"_b"**が追加されます。ファイル分割を行う前にパソコンと接続し、ファイル名を変更してください。
FILE NOT FOUND **ファイルがありません。**	The file added to the playlist cannot be found or a file could be damaged. Please check the file in question.
	プレイリストに登録されているファイルが見つからないか、ファイルが壊れている可能性があります。対象のファイルを確認してください。
NON-SUPPORTED **非対応WAVファイル。**	The audio file is not a supported format.
	ファイル形式がサポート対象外です。
BATTERY EMPTY **電池残量がありません。**	The battery is almost out of power. Replace the AAA batteries.
	電池の残量がありません。電池を交換してください。
A-B TOO SHORT **A-B点の間隔が短すぎます。**	The A and B points are too close together. Reset the A and B points with at least 1 second between them.
	A点とB点の間隔が短すぎます。1秒以上空けて設定してください。
FILE NOT FOUND PLAYLIST **ファイルが見つかりません。**	The file in the Playlist cannot be found. Please confirm that the file is still in the SOUND Folder.
	プレイリストに登録されているファイルが見つかりません。SOUNDフォルダ内に対象のファイルがあるか確認してください。
NO PLAYLIST **プレイリストがありません。**	No files have been added to the Playlist. Add a file to the Playlist or change the play mode to something besides PLAYLIST.
	プレイリストにファイルが登録されていません。プレイリストにファイルを登録するか、プレイモードを「プレイリスト」以外に設定してください。
PLAYLIST FULL **プレイリストが一杯です。**	The playlist is full. You cannot add more than 99 tracks to the Playlist.
	プレイリストが一杯です。プレイリストには、最大99ファイルまで登録可能です。

Messages(メッセージ)	Meaning and response(内容と対処方法)
MBR ERROR INIT CARD **カードが異常です。 カードを初期化します。**	The card is not formatted properly or the formatting is broken. Change the card or press the ►►I key when this message appears to format the card in FAT format. CAUTION *Execution of FAT formatting erases all data currently on the card.* カードが正常にフォーマットされていないか、カードが壊れている可能性があります。 カードを交換するか、このメッセージが表示されている状態で►►I〔はい〕キーを押すと、FATフォーマットが実行されます。 **注 意** *FATフォーマットが実行されるとカード内のデータは、すべて消去されます。*
FORMAT ERROR FORMAT CARD **フォーマットが正しくありません。 初期化します。**	The FAT formatting of the card is abnormal or broken. This message also appears if you FAT formatted the card using a computer connected by USB and if a new card is inserted in the unit. Always use the VR-20(DR-08) to conduct FAT formatting of cards to be used with it. Change the card or press the ►►I key when this message appears to format the card in FAT format. CAUTION *Execution of FAT formatting erases all data currently on the card.* カードが正常にフォーマットされていないか、カードが壊れている可能性があります。このメッセージは、USB接続したパソコンでFATフォーマットした場合や未フォーマットのカードを挿入した場合にも表示されます。 フォーマットは、必ずVR-20(DR-08)本体で行ってください。カードを交換するか、このメッセージが表示されている状態で►►I〔はい〕キーを押すと、FATフォーマットが実行されます。 **注 意** *FATフォーマットが実行されるとカード内のデータは、すべて消去されます。*
FILE NOT FOUND MAKE SYS FILE **システムファイルがありません。 作成します。**	The system file is missing. This unit requires a system file for operation. When this message appears, press ►►I to automatically create a system file. 本機を使用するために必要なシステムファイルがありません。このメッセージが表示されている状態で►►I〔はい〕キーを押すと、システムファイルが作られます。
INVALID SYSFILE MAKE SYSFILE **システムファイルが異常です。 作成します。**	The system file required to operate this unit is invalid. When this message appears, press ►►I to automatically create a system file. 本機を使用するために必要なシステムファイルが正常でありません。このメッセージが表示されている状態で►►I〔はい〕キーを押すと、新しいシステムファイルが作られます。
INVALID CARD CHANGE CARD **カードが異常です。 交換してください。**	Something might be wrong with the card. Change the card. カードが正常でない可能性があります。カードを交換してください。
WRITE TIMEOUT **書き込みエラー**	Writing to the card timed out. Backup files on the card to your computer, and format the card. カードへの書き込みが間に合いませんでした。 ファイルをパソコンへバックアップの上、フォーマットを実行してください。
CARD FULL **カードの残容量がありません。**	The card has no remaining capacity. Erase unnecessary files or move them to your computer to make open space. カードの残容量がありません。不要なファイルを削除するかパソコンへ移動してください。

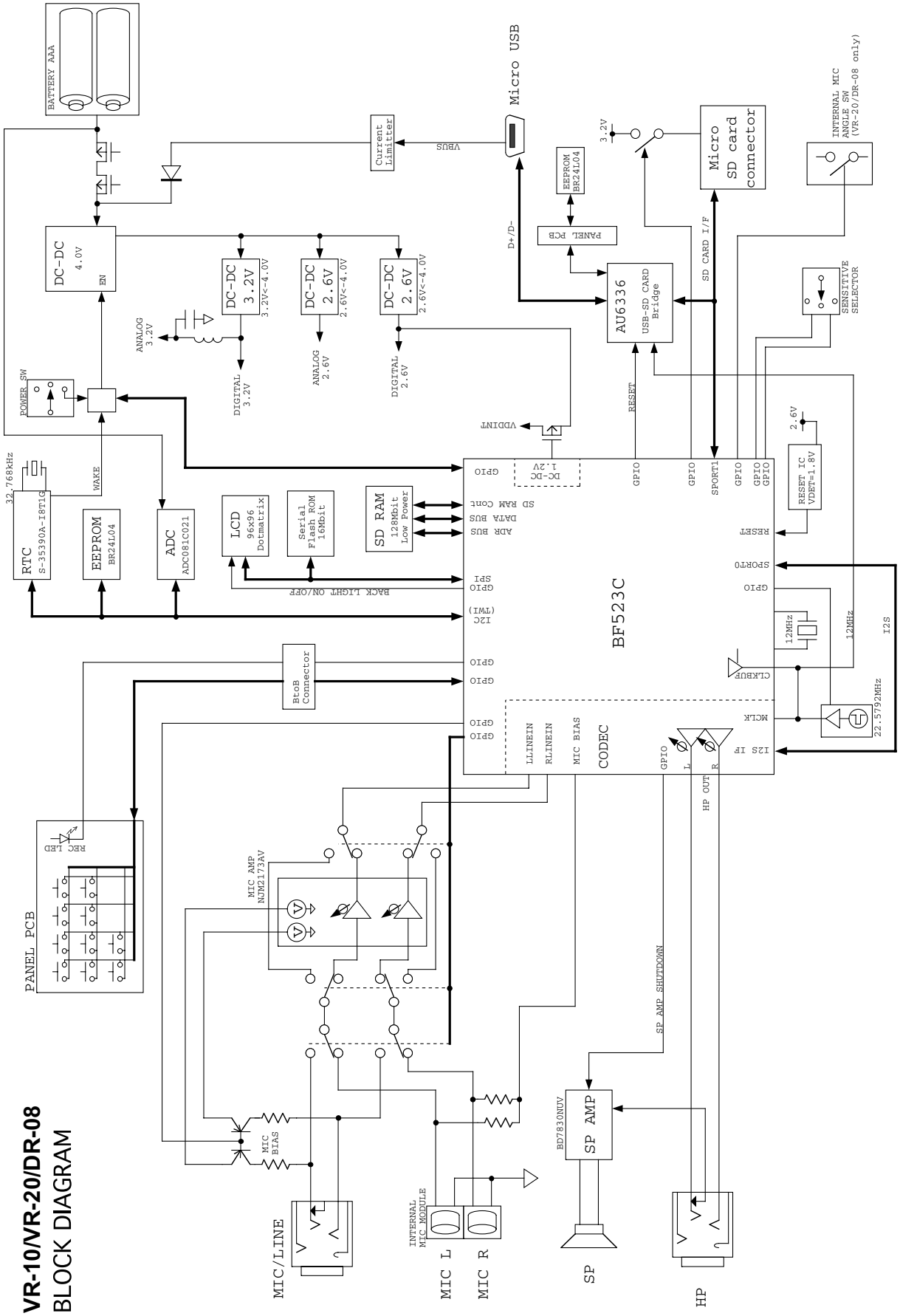
Messages(メッセージ)	Meaning and response(内容と対処方法)
LAYER TOO DEEP	Folders can be created down to two layers. You cannot create a new folder inside the current folder.
フォルダ階層が制限以上です。	フォルダは、2階層までです。このフォルダ内に新たなフォルダを作成することはできません。
CAN'T DIVIDE	The position selected for divide is not suitable (too close to the beginning or end of a track).
この位置では分割できません。	ファイル分割実行時に分割位置が適切でありません。（曲の先頭、曲の最後）
MAX FILE SIZE	The file is larger than the designated size or the recording time exceeded 24 hours.
ファイルサイズが大きすぎます。	ファイルのサイズが指定のサイズを超えました。あるいは録音時間が24時間を超えました。
FILE FULL	The total number of folders and files exceeds 999. Erase unnecessary files or move them to your computer.
ファイル総数が制限以上です。	フォルダとファイルの総数が制限値（999個）を超えました。不要なフォルダやファイルを削除するかパソコンへ移動してください。
CARD ERROR	The card could not be handled properly. Replace the card.
カードエラー	カードを正常に認識できません。カードを交換してください。
CURRENT FILE MP3	MP3 files cannot be divided.
MP3ファイルを選択中です。	MP3ファイルの分割はできません。
FILE PROTECTED	The file is read only and cannot be erased.
読み取り専用のファイルです。	リードオンリーファイルのため、削除できません。
NO CARD	No card is in the unit, so recording is not possible.
カードがありません。	カードが無いため、録音できません。
NO PB FILE	There is no file that can be played back. The file might be damaged.
再生ファイルがありません。	再生可能なファイルがありません。ファイルが壊れている可能性があります。
NO MUSIC FILE	There is no playback file, so SPLIT FILE cannot be executed.
再生ファイルがありません。	再生ファイルが無いため、ファイル分割は実行できません。

System Error Messages （システムエラーメッセージ）

Messages(メッセージ)	Meaning and response(内容と対処方法)	Remarks(備考)
NOT CONTINUED	Playback not stopped, or card unmounted error.	The card or firmware may be defective.
継続できません。	再生系の停止が未完了、あるいはカードのアンマウント時のエラー	カード不良もしくはF/Wの不具合の可能性有り。
FILE OPERATION FAILED	File system error or recording/playback circuitry error.	The card or firmware may be defective.
ファイル操作ができません。	ファイルシステム上でエラー、あるいは録再系でのエラー	カード不良もしくはF/Wの不具合の可能性有り。
CAN'T SAVE DATA	Write in the EEPROM or system file failed during shutdown or switching to USB (this error occurs for example when the card is not inserted).	Check that the card is inserted and it is not protected. The card may be defective. If the error occurs with the EEPROM, the PCB may be defective.
セーブエラー	シャットダウン時やUSB切り替え時にEEP-ROMあるいはシステムファイルへの書き込みが出来なかった。（カードが挿入されていないなどで。）	カードの挿入を確認。 カード不良の可能性有り。 EEPROMの場合はPCB不良の可能性有り。
PLAYER ERROR	Internal error in recording / playback.	The firmware may be defective.
再生エラー	記録再生の内部的エラー	F/Wの不具合の可能性有り。
DEVICE ERROR	Device Error 2: RTC initialization error. Device Error 3: EEPROM initialization error.	The PCB may be defective.
	Device Error 2：RTC初期化エラー Device Error 3：EEPROM初期化エラー	PCB不良の可能性有り。
WRITING FAILED	File creation error at the start of recording or file close error at the end of recording.	Confirm whether the error occurred during start or end of recording. The card may be defective.
書き込みに失敗しました。	記録開始時のファイル作成エラー、あるいは記録終了時のファイルクローズエラー	録音開始時か記録終了時かの確認。 カード不良の可能性有り。
SYS ROM ERR	EEPROM read error.	The PCB may be defective.
ロムエラー	EEPROMの読み込みエラー	PCB不良の可能性有り。
SYSTEM ERR 50	Other fatal error.	The firmware may be defective.
	その他の致命的エラー	F/Wの不具合の可能性有り。
SYSTEM ERROR 1	CPU access error.	The firmware may be defective.
	CPUのアクセスエラー	F/Wの不具合の可能性有り。
SYSTEM ERROR 2	CPU address error.	The firmware may be defective.
	CPUのアドレスエラー	F/Wの不具合の可能性有り。

Messages(メッセージ)	Meaning and response(内容と対処方法)	Remarks(備考)
SYSTEM ERROR 3	CPU instruction error.	The firmware may be defective.
	CPUのインストラクションエラー	F/Wの不具合の可能性有り。
SYSTEM ERROR 4	CPU zero division error.	The firmware may be defective.
	CPUのゼロ除算エラー	F/Wの不具合の可能性有り。
SYSTEM ERROR 5	CPU Privilege Violation error.	The firmware may be defective.
	CPUのPrivilege Violationエラー	F/Wの不具合の可能性有り。
SYSTEM ERROR 6	CPU Unimplemented line-a opcode error.	The firmware may be defective.
	CPUのUnimplemented line-a opecodeエラー	F/Wの不具合の可能性有り。
SYSTEM ERROR 7	CPU Unimplemented line-f opcode error.	The firmware may be defective.
	CPUのUnimplemented line-f opecodeエラー	F/Wの不具合の可能性有り。
SYSTEM ERROR 8	CPU format error.	The firmware may be defective.
	CPUのフォーマットエラー	F/Wの不具合の可能性有り。
SYSTEM ERROR 9	CPU Uninitialized Interrupt error.	The firmware may be defective.
	CPUのUninitialized Interruptエラー	F/Wの不具合の可能性有り。

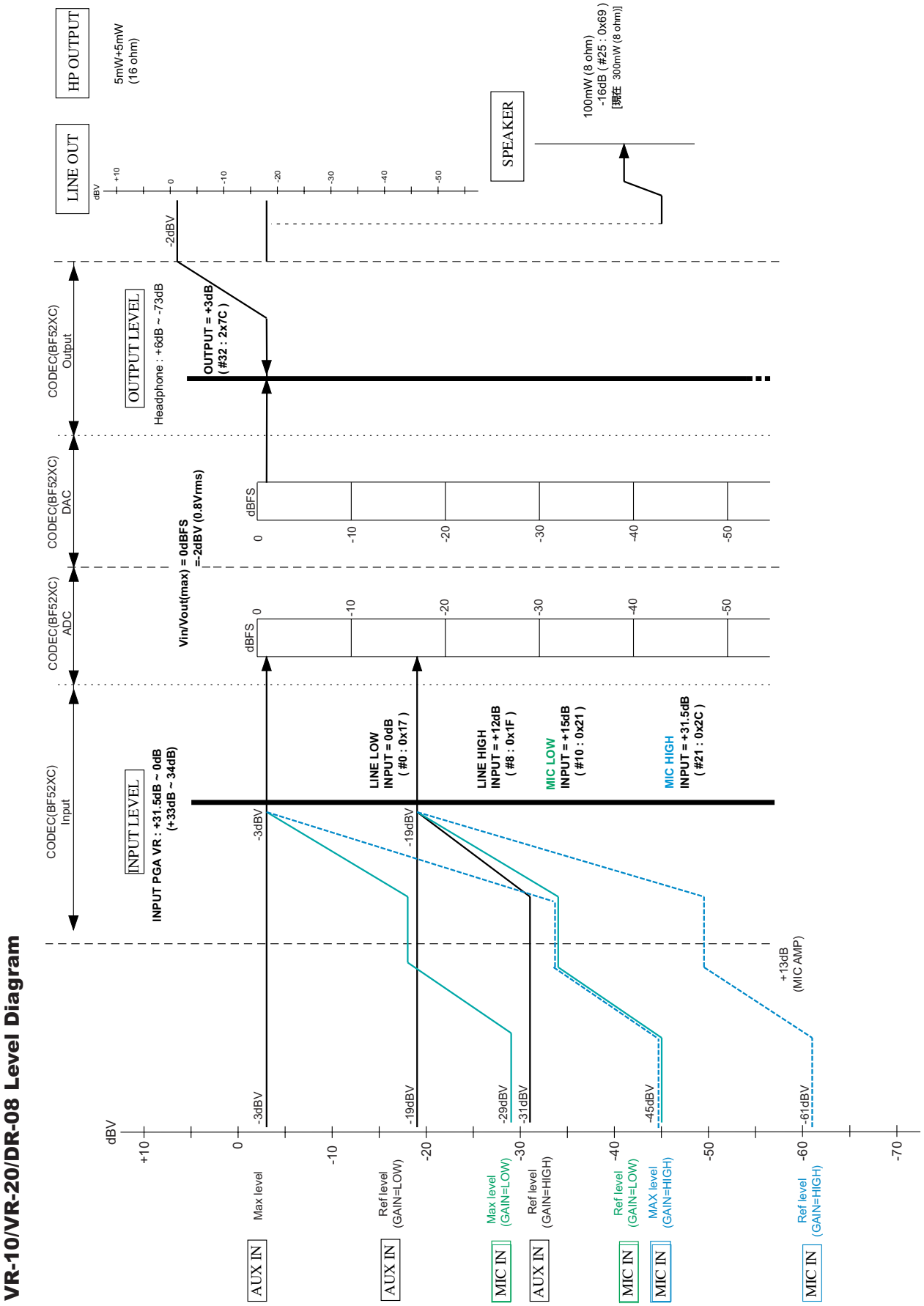
6. Block Diagram
ブロックダイアグラム



VR-10/VR-20/DR-08
BLOCK DIAGRAM

7. Level Diagram
レベルダイアグラム

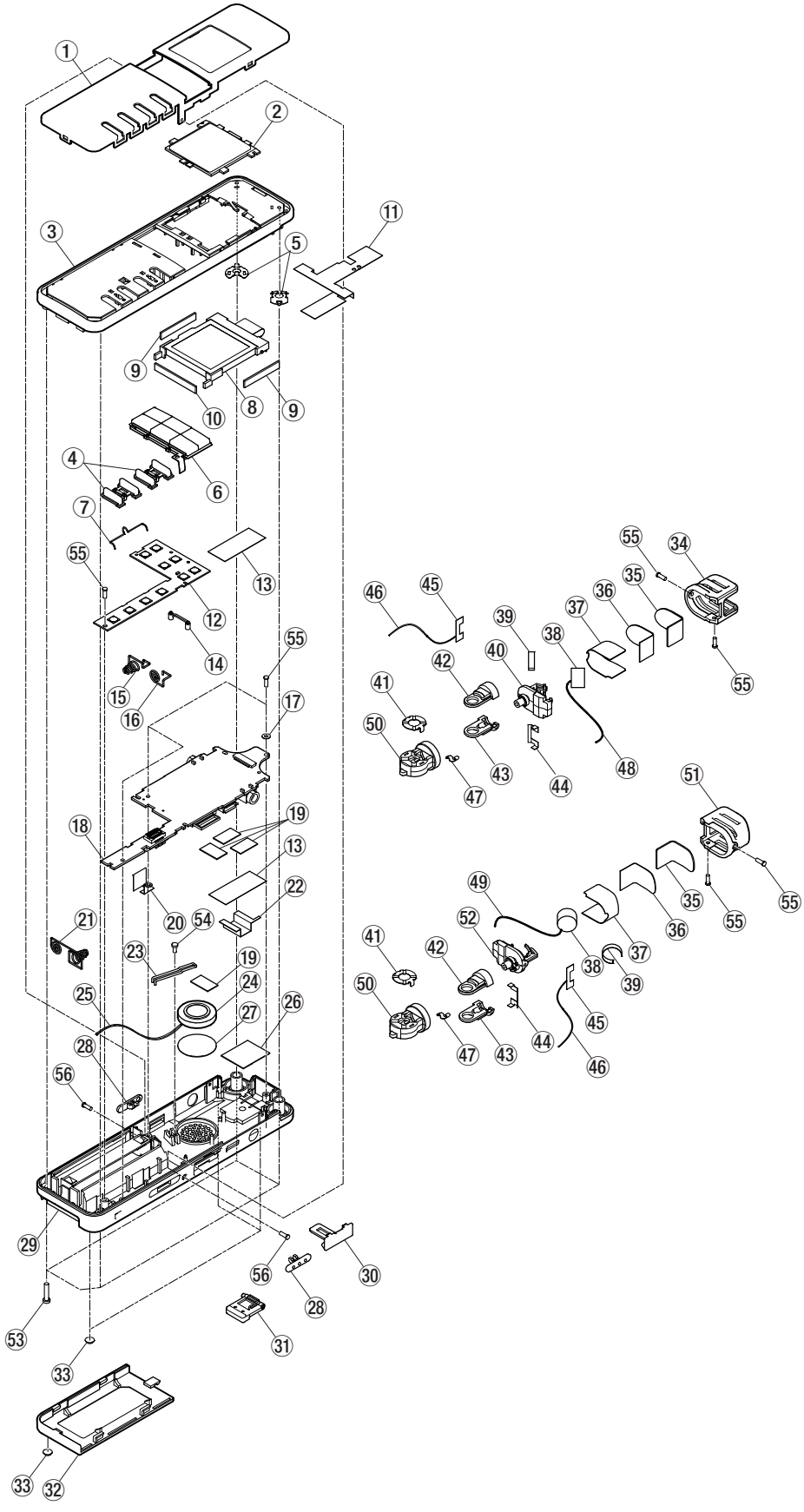
VR-10/VR-20/DR-08 Level Diagram



8. Exploded Views and Parts List

分解図とパーツリスト

Exploded View-1



Exploded View-1

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
1- 1	M03105500B	CASE,TOP VR20J BL G	VR-20[J]
1- 1	M03105505B	CASE,TOP VR20E BL G	VR-20[Except J]
1- 1	M03105510B	CASE,TOP VR20J WH G	VR-20W[J]
1- 1	M03105515B	CASE,TOP VR20E WH G	VR-20W[Except J]
1- 1	M03105520B	CASE,TOP DR08 BLTS G	DR-08
1- 1	M03105545B	CASE,TOP DR08 WHTS G	DR-08W
1- 2	M03105900A	WINDOW,VR G	
1- 3	M03105700B	CASE,CENTER VR20J SLV G	VR-20[J] & VR-20W[J]
1- 3	M03105705B	CASE,CENTER VR20E SLV G	VR-20[Except J] & VR-20W[Except J] & DR-08W
1- 3	M03105720B	CASE,CENTER DR08 OG G	DR-08
1- 4	M03113400B	BUTTON,TWIN VR G	
1- 5	M03113300A	LEAF SPR,HINGE VR20 G	
1- 6	M03106000B	BUTTON ASSY,VRJ SLV G	VR-20[J] & VR-20W[J]
1- 6	M03106005B	BUTTON ASSY,VRE SLV G	VR-20[Except J] & VR-20W[Except J] & DR-08W
1- 6	M03106025B	BUTTON ASSY,VRE BL G	DR-08
1- 7	M03159800A	TRSN SPR,GND BTN VR G	
1- 8	E01684500A	LCD,MGG0909CW-FWLA-3 G	
1- 9	M03184700A	SHEET,POR 20.3X3.3 G	
1-10	M03184600A	SHEET,POR 24X3.3 G	
1-11	M03159300B	SHIELD SHEET,LCD VR G	
1-12		PCBA,PANEL VR G	Refer to page 35 (GATHER PCBA,PANEL VR G)
1-13	M03160100A	INSUL SHEET,JACK VR G	
1-14	M03107700A	HOLDER,PCBA VR G	
1-15	M03107600A	CPRSN SPR,BTRY M VR G	
1-16	M03107500A	CPRSN SPR,BTRY P VR G	
1-17	M03162600A	WASHER,MYL 1.5X3.5X0.25 G	
1-18		PCBA,MAIN VR20 G	Refer to page 32 (GATHER PCBA,MAIN VR20 G)
1-18		PCBA,MAIN DR08 G	Refer to page 33 (GATHER PCBA,MAIN DR08 G)
1-19	M03142400A	SHEET,HM 6*10 G	
1-20	M03159200A	SHIELD SHEET,T/M VR G	
1-21	M03106700A	CPRSN SPR,BTRY AAA	
1-22	M03160000A	SHIELD SHEET,JACK VR G	
1-23	M03106600A	HOLDER,SP VR G	
1-24	E0166440	SPEAKER,HF-16008G-22 G	
1-25	E01672400A	HARNESS ASSY,SPEAKER VR G	
1-26	M03162300A	SHEET,HM STAND VR G	
1-27	M03106200A	SHEET,SP 16	
1-28	M03106100B	KNOB,SLIDE VR G	
1-29	M03105600B	CASE,BOTTOM VR20 BL G	VR-20 & DR-08
1-29	M03105610B	CASE,BOTTOM VR20 WH G	VR-20W & DR-08
1-30	M03106800B	COVER,SD VR G	
1-31	M03106300A	STAND ASSY,VR BL G	
1-32	M03105800B	COVER,BATTERY VR BL G	VR-20 & DR-08
1-32	M03105810B	COVER,BATTERY VR WH G	VR-20W & DR-08W
1-33	M02757710A	FOOT, D40*H15 PT7 G	VR-20 & DR-08
1-33	M02757700A	FOOT, D40*H15 DR1 G	VR-20W & DR-08
1-34	M03168200A	CASE,MIC 8L VR20 G	
1-35	M03168400A	PLATE,MESH TOP 8 VR20 G	
1-36	M03168600A	SHEET,TOP SCREEN 8 VR20 G	
1-37	M03168500A	SHEET,MESH SIDE 8 VR20 G	
1-38	E0168820	MICROPHONE,EM121-M3 G	
1-39	M03183400A	SHEET,PI 20X2.5X0.075 G	
1-40	M03168000A	HOLDER,MIC 8L VR20 G	

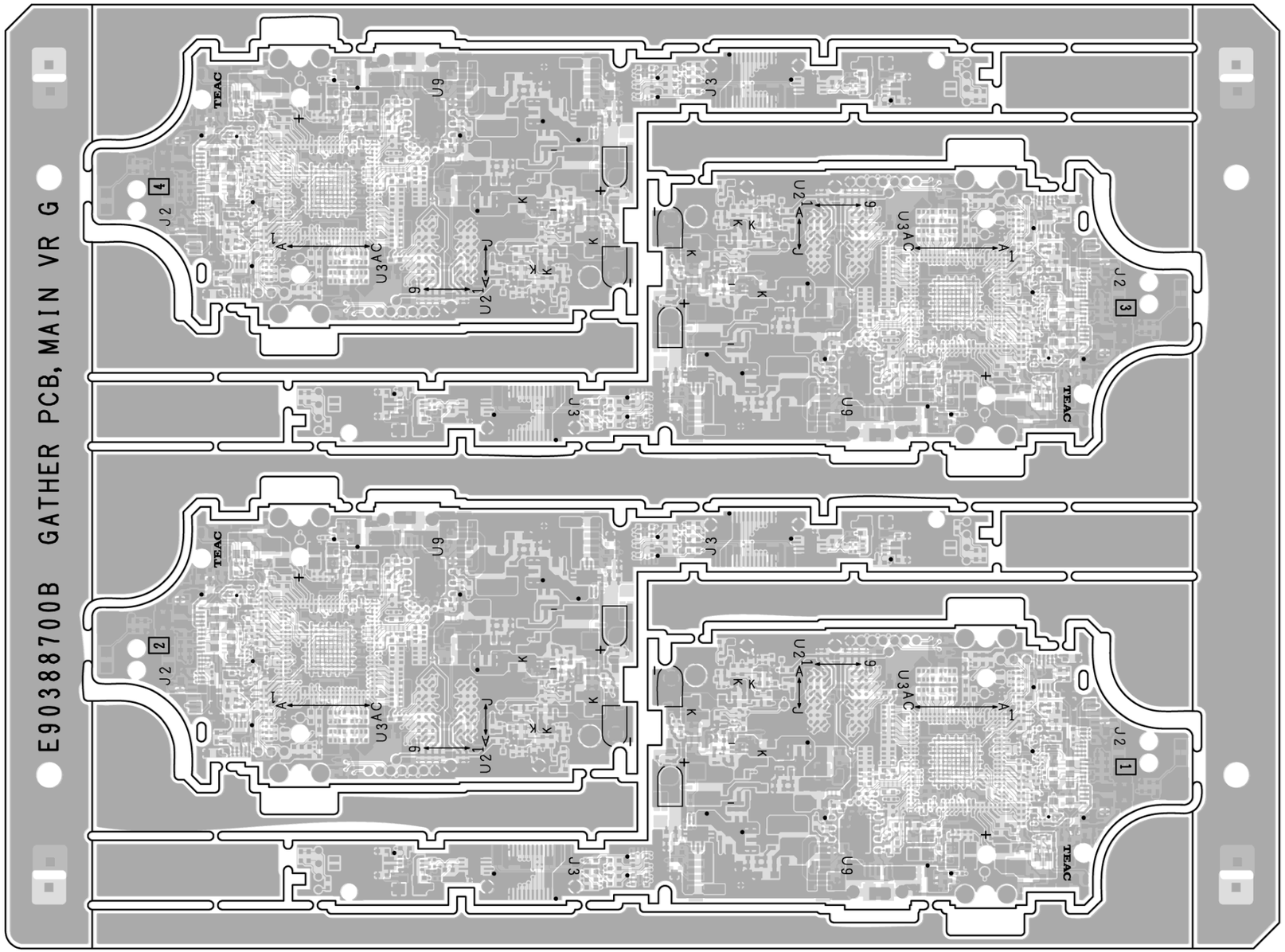
Exploded View-1

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
1-41	M03108700A	PLATE,HINGE VR20 G	
1-42	M03107900B	CASE,H MIC UP VR20 G	
1-43	M03108000B	CASE,H MIC LOW VR20 G	
1-44	M03171100B	SHIELD SHEET,HUM VR20 G	
1-45	M03159600A	SHIELD SHEET,MIC VR G	
1-46	E01672000B	HARNESS ASSY,MIC GND VR20 G	
1-47	M03108500A	LEAF SPR,VR20 G	
1-48	E01672000B	HARNESS ASSY,MIC L VR20 G	
1-49	E01672100B	HARNESS ASSY,MIC R VR20 G	
1-50	M03108600B	COVER,CASE H MIC VR20 G	
1-51	M03168300A	CASE,MIC 8R VR20 G	
1-52	M03168100A	HOLDER,MIC 8R VR20 G	
1-53	B00312550A/	SCREW,MPPR 1.7*8 FZB G	VR-20 & DR-08
1-53	B00326200A	SCREW,MPPR 1.7*8FCM G	VR-20W & DR-08W
1-54	B00325900A	SCREW,MPBR 1.4*3FZB G	
1-55	B00326100A	SCREW,MPBR 1.4*4FCM G	
1-56	B00326000A	SCREW,MPBR 1.4*4FZB G	VR-20 & DR-08
1-56	B00326100A	SCREW,MPBR 1.4*4FCM G	VR-20W & DR-08W

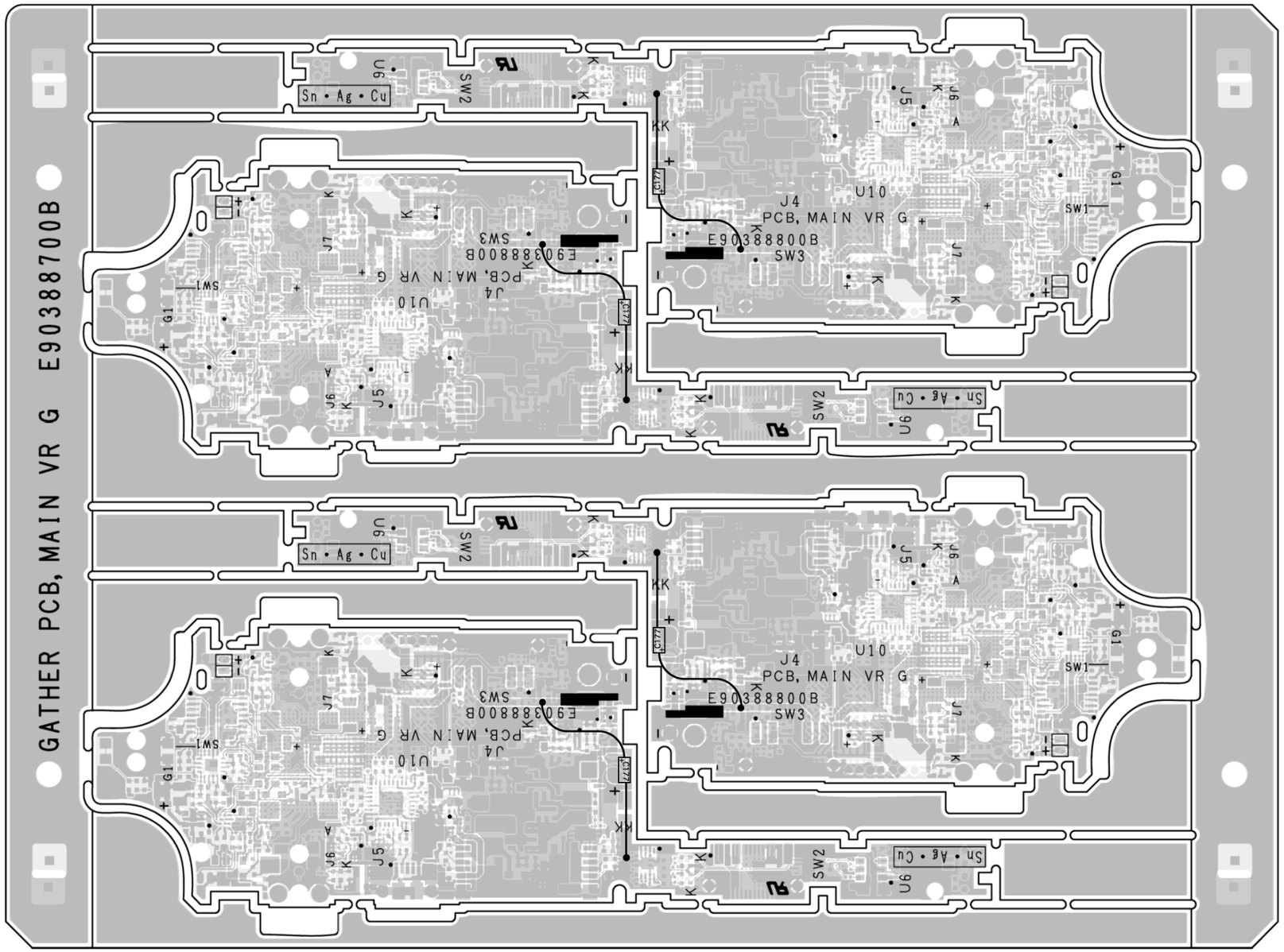
9. PC Boards and Parts List

基板図とパーツリスト

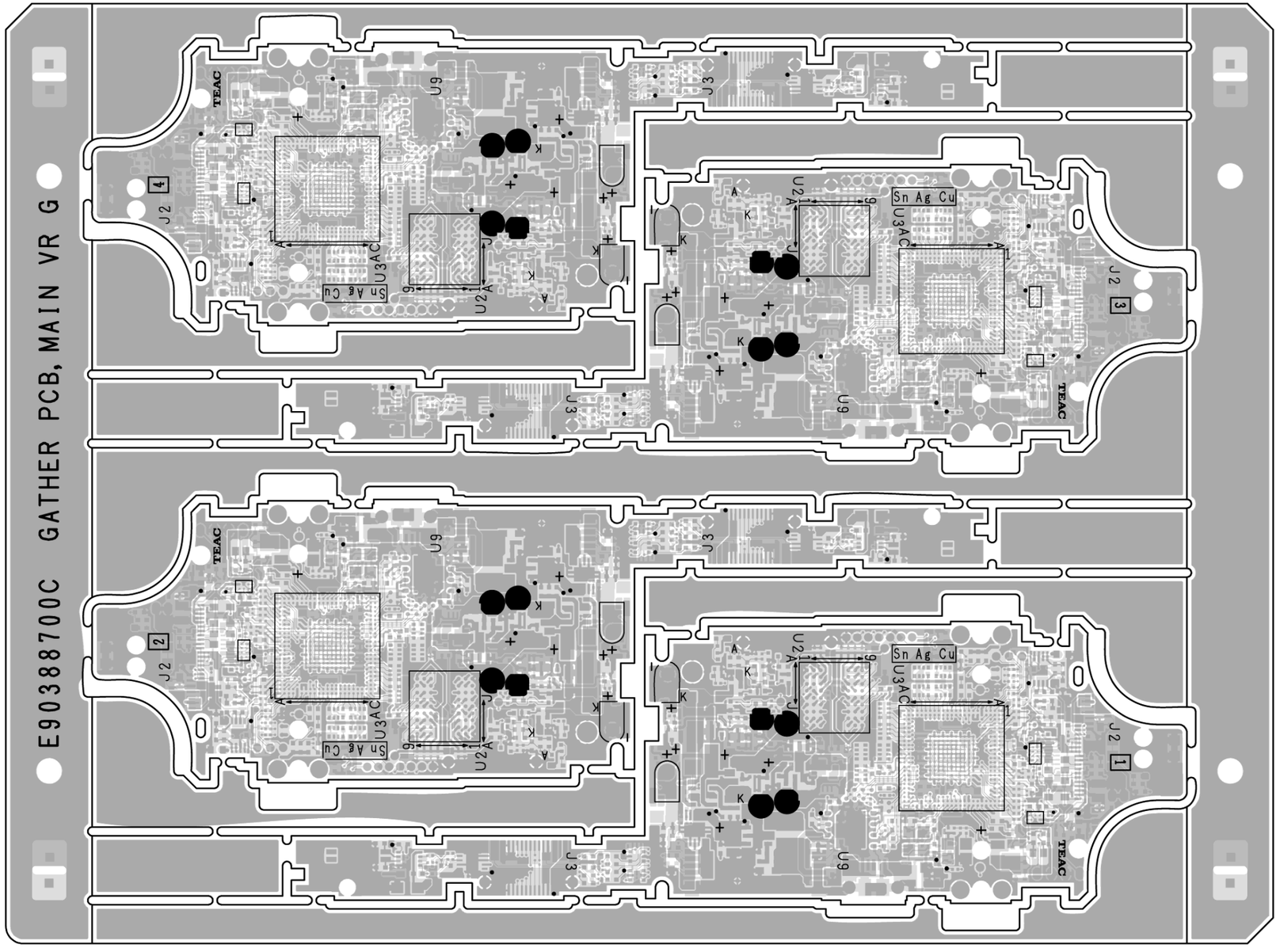
GATHER PCB,MAIN VR Rev:B (Side A)



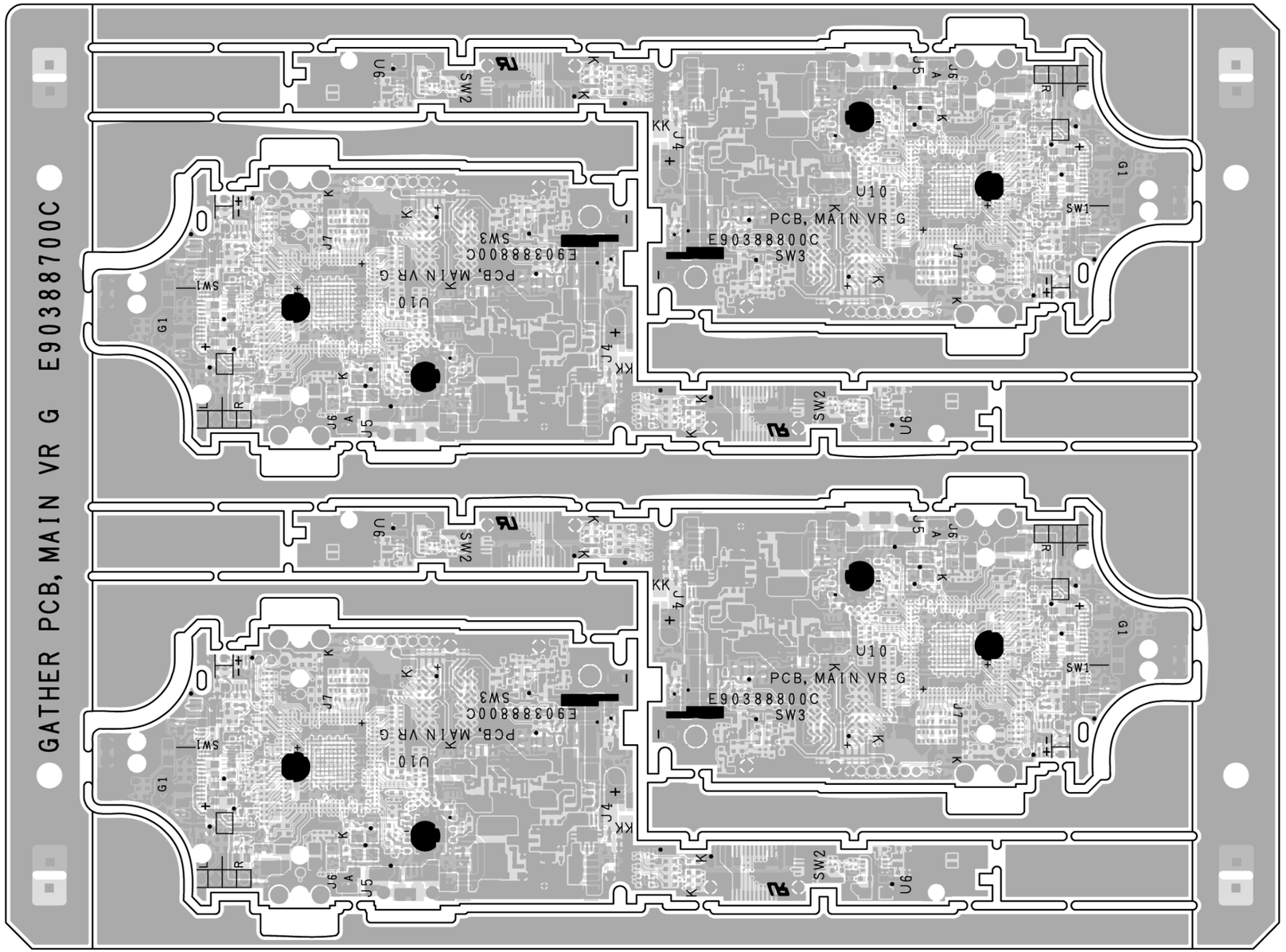
GATHER PCB,MAIN VR Rev:B (Side B)



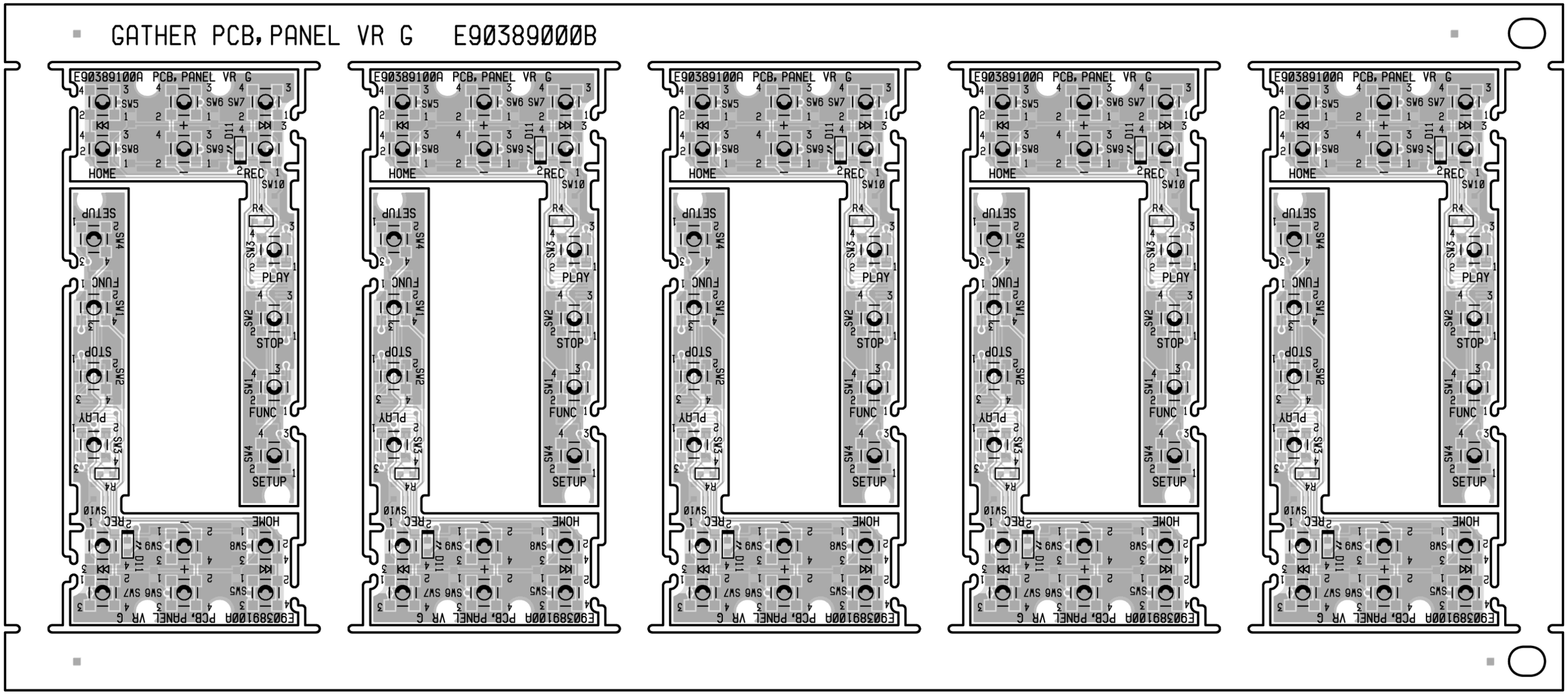
GATHER PCB,MAIN VR Rev:C (Side A)



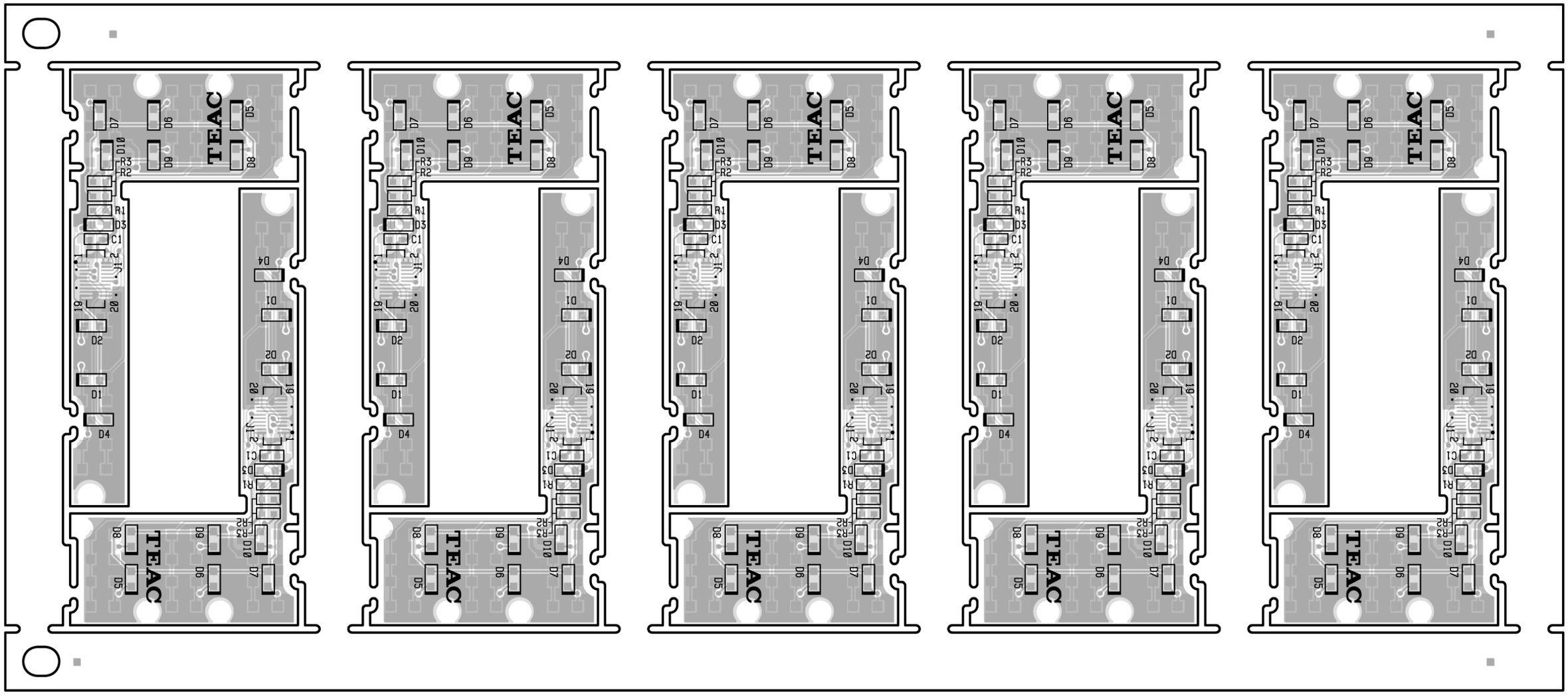
GATHER PCB,MAIN VR Rev:C (Side B)



GATHER PCB, PANEL VR (Side A)



GATHER PCB, PANEL VR (Side B)



GATHER PCBA,MAIN VR20 (VR-20's)

REF.NO.	PARTS NO.	DESCRIPTION
	E95388710A	GATHER PCBA,MAIN VR20 G
		#PCB,MAIN VR G
		PCBA,MAIN VR20 G
BT-	M03107600B	CPRSN SPR,BTRY M VR G
BT+	M03107500B	CPRSN SPR,BTRY P VR G
BZD1	S0086054	ZENER DIO,RSB6.8CS T2R G
BZD2	S0086054	ZENER DIO,RSB6.8CS T2R G
BZD3	S0086054	ZENER DIO,RSB6.8CS T2R G
BZD4	S0086054	ZENER DIO,RSB6.8CS T2R G
D1	S0085904	DIODE,RB520CS-30 T2R G
D3	S0086044	ZENER DIO,CDZCT2R6.8B G
D4	S0086044	ZENER DIO,CDZCT2R6.8B G
D5	S0086044	ZENER DIO,CDZCT2R6.8B G
D6	S0086044	ZENER DIO,CDZCT2R6.8B G
D7	S0085904	DIODE,RB520CS-30 T2R G
D8	S0085904	DIODE,RB520CS-30 T2R G
D9	S0085904	DIODE,RB520CS-30 T2R G
D10	S0071644	DIODE,RB161M-20 G
D11	S0086044	ZENER DIO,CDZCT2R6.8B G
D12	S0086044	ZENER DIO,CDZCT2R6.8B G
D13	S0085914	DIODE,RB161VA-20 TUMD2 G
D14	S0085904	DIODE,RB520CS-30 T2R G
D15	S0085904	DIODE,RB520CS-30 T2R G
D16	S0071644	DIODE,RB161M-20 G
D18	S0086044	ZENER DIO,CDZCT2R6.8B G
F1	E0165754	FUSE,ERBSE2R00U HF
J2	E0166164	CONN,196149-18041-3 G
J3	E0166184	CONNECTOR,AXK5F20547YG G
J4	E0166174	CONN,SCHA2B0300 G
J5	E0166194	CONNECTOR,USB MICRO-5B G
J6	E0166204	JACK,LGY2109-1001F G
J7	E0166204	JACK,LGY2109-1001F G
L1	E0166214	COIL,MLP2520S4R7ST G
L2	E0126164	BEAD COIL,BLM18PG471SN1D G
L3	E0168574	COIL,LQM21DN470N00 G
L4	E0126164	BEAD COIL,BLM18PG471SN1D G
L5	E0126164	BEAD COIL,BLM18PG471SN1D G
L7	E0166224	COIL,CDH43D11DHPNP-2R2MC
L8	E0166234	COIL,CDRH30D14RNP-4R7MC G
L10	E0166244	COIL.CDRH30D14RNP-3R3MC G
L11	E0126164	BEAD COIL,BLM18PG471SN1D G
L13	E0166254	COIL,CDRH30D14RNP-2R2NC G
L15	E0166264	COIL,CDRH3D18NP-100NC
Q1	S0085924	FET,RUM002N02 T2L G
Q2	S0086224	TRANSISTOR,DTA144TM G
Q3	S0086224	TRANSISTOR,DTA144TM G
Q4	S0085934	FET,RZM002P02 T2L G
Q5	S0085934	FET,RZM002P02 T2L G
Q6	S0085694	FET,RW1A020ZP T2R G
Q7	S0085694	FET,RW1A020ZP T2R G
Q8	S0085924	FET,RUM002N02 T2L G
Q9	S0085954	TRANSISTOR,DTA114EM T2L G

GATHER PCBA,MAIN VR20 (VR-20's)

REF.NO.	PARTS NO.	DESCRIPTION
Q10	S0085694	FET,RW1A020ZP T2R G
Q11	S0085694	FET,RW1A020ZP T2R G
Q12	S0085934	FET,RZM002P02 T2L G
Q17	S0085924	FET,RUM002N02 T2L G
Q18	S0085924	FET,RUM002N02 T2L G
Q19	S0085924	FET,RUM002N02 T2L G
Q20	S0085924	FET,RUM002N02 T2L G
Q22	S0085944	TRANSISTOR,DTC144EM T2L G
Q23	S0086614	TRANSISTOR,EMX26T2R G
Q24	S0086834	TRANSISTOR,DTC144TMT2L G
Q25	S0085694	FET,RW1A020ZP T2R G
RA1	R0180554	RES ARRAY,1/32W 4*68 J G
RA2	R0180554	RES ARRAY,1/32W 4*68 J G
RA3	R0180554	RES ARRAY,1/32W 4*68 J G
RA4	R0180554	RES ARRAY,1/32W 4*68 J G
RA5	R0180554	RES ARRAY,1/32W 4*68 J G
RA6	R0180554	RES ARRAY,1/32W 4*68 J G
RA7	R0180554	RES ARRAY,1/32W 4*68 J G
RA8	R0180554	RES ARRAY,1/32W 4*68 J G
RA9	R0180554	RES ARRAY,1/32W 4*68 J G
SW1	E0166274	SW,MPU12580MLB1 G
SW2	E0166284	SW,SSSS711403 G
SW3	E0166294	SW,SSSS7A0101 G
T1	E0166304	FILTER,NT2012 985BH1007 G
U1	S0085964	IC,BU4218FVE-TR G
U2	S0085973	IC,FMS4A16LCH-60AE G
U3	S0083083	IC,BF-523C-5C2 G
U4	S0085614	IC,BR24L04NUX-WTR G
U5	S0075164	IC,S-35390A-I8T1G G
U6	S0085554	IC,ADC081C021CIMK NOPB G
U7	S0085874	IC,SN74AUC2G240YZPR G
U8	S0085884	IC,SN74AUC1G00YZPR G
U9	S00860000A	IC,ROM ASSY MAIN VR20 G
U9	S0085513	IC,MX25L1605DZNI-12G G
U9	D01103900A	SOFTWARE SPEC,VR20 G
U10	S0079744	IC,AU6336-MOF G
U11	S00869900A	IC,ROM ASSY USB VR10 G
U11	S0085614	IC,BR24L04NUX-WTR G
U11	D01108800A	SOFTWARE SPEC,USB VR10 G
U12	S0086484	IC,NLAS3699MN1R2G G
U13	S0086474	IC,NLAS4684FCTCG G
U14	S0085984	IC,NJM2173AV G
U16	S0085994	IC,BD7830NUV G
U19	S0086494	IC,AAT1217ICA-1.2-T1 G
U21	S0086154	IC,AAT1141IGV-0.6-T1 G
U23	S0086154	IC,AAT1141IGV-0.6-T1 G
U26	S0085864	IC,TPS62320DRCR G
U27	C0083154	CC,MCF183CN104M104A G
U28	C0083154	CC,MCF183CN104M104A G
U29	S0086814	IC,R1180Q221B-TR-F G
U30	S0085964	IC,BU4218FVE-TR G
U31	S0086824	IC,RP102K321B-TR G

GATHER PCBA,MAIN VR20 (VR-20's)

REF.NO.	PARTS NO.	DESCRIPTION
Y1	E0149904	CRYSTAL OSC,SEG55 12MHZ
Y2	E0166324	XTAL,MEG25AT5Y 22.5792M G
Y3	E0143374	XTAL,SSP-T7-F 32.768K 7P G
ZD1	S0083964	DIODE,RSA6.1J4T2R(5P) G
ZD2	S0083964	DIODE,RSA6.1J4T2R(5P) G

GATHER PCBA,MAIN DR08 (DR-08's)

REF.NO.	PARTS NO.	DESCRIPTION
	E95388730A	GATHER PCBA,MAIN DR08 G
		#PCB,MAIN VR G
		PCBA,MAIN DR08 G
BT-	M03107600B	CPRSN SPR,BTRY M VR G
BT+	M03107500B	CPRSN SPR,BTRY P VR G
BZD1	S0086054	ZENER DIO,RSB6.8CS T2R G
BZD2	S0086054	ZENER DIO,RSB6.8CS T2R G
BZD3	S0086054	ZENER DIO,RSB6.8CS T2R G
BZD4	S0086054	ZENER DIO,RSB6.8CS T2R G
D1	S0085904	DIODE,RB520CS-30 T2R G
D3	S0086044	ZENER DIO,CDZCT2R6.8B G
D4	S0086044	ZENER DIO,CDZCT2R6.8B G
D5	S0086044	ZENER DIO,CDZCT2R6.8B G
D6	S0086044	ZENER DIO,CDZCT2R6.8B G
D7	S0085904	DIODE,RB520CS-30 T2R G
D8	S0085904	DIODE,RB520CS-30 T2R G
D9	S0085904	DIODE,RB520CS-30 T2R G
D10	S0071644	DIODE,RB161M-20 G
D11	S0086044	ZENER DIO,CDZCT2R6.8B G
D12	S0086044	ZENER DIO,CDZCT2R6.8B G
D13	S0085914	DIODE,RB161VA-20 TUMD2 G
D14	S0085904	DIODE,RB520CS-30 T2R G
D15	S0085904	DIODE,RB520CS-30 T2R G
D16	S0071644	DIODE,RB161M-20 G
D18	S0086044	ZENER DIO,CDZCT2R6.8B G
F1	E0165754	FUSE,ERBSE2R00U HF
J2	E0166164	CONN,196149-18041-3 G
J3	E0166184	CONNECTOR,AXK5F20547YG G
J4	E0166174	CONN,SCHA2B0300 G
J5	E0166194	CONNECTOR,USB MICRO-5B G
J6	E0166204	JACK,LGY2109-1001F G
J7	E0166204	JACK,LGY2109-1001F G
L1	E0166214	COIL,MLP2520S4R7ST G
L2	E0126164	BEAD COIL,BLM18PG471SN1D G
L3	E0168574	COIL,LQM21DN470N00 G
L4	E0126164	BEAD COIL,BLM18PG471SN1D G
L5	E0126164	BEAD COIL,BLM18PG471SN1D G
L7	E0166224	COIL,CDH43D11DHPNP-2R2MC
L8	E0166234	COIL,CDRH30D14RNP-4R7MC G
L10	E0166244	COIL.CDRH30D14RNP-3R3MC G
L11	E0126164	BEAD COIL,BLM18PG471SN1D G
L13	E0166254	COIL,CDRH30D14RNP-2R2NC G
L15	E0166264	COIL,CDRH3D18NP-100NC
Q1	S0085924	FET,RUM002N02 T2L G
Q2	S0086224	TRANSISTOR,DTA144TM G
Q3	S0086224	TRANSISTOR,DTA144TM G
Q4	S0085934	FET,RZM002P02 T2L G
Q5	S0085934	FET,RZM002P02 T2L G
Q6	S0085694	FET,RW1A020ZP T2R G
Q7	S0085694	FET,RW1A020ZP T2R G
Q8	S0085924	FET,RUM002N02 T2L G
Q9	S0085954	TRANSISTOR,DTA114EM T2L G
Q10	S0085694	FET,RW1A020ZP T2R G

GATHER PCBA,MAIN DR08 (DR-08's)

REF.NO.	PARTS NO.	DESCRIPTION
Q11	S0085694	FET,RW1A020ZP T2R G
Q12	S0085934	FET,RZM002P02 T2L G
Q17	S0085924	FET,RUM002N02 T2L G
Q18	S0085924	FET,RUM002N02 T2L G
Q19	S0085924	FET,RUM002N02 T2L G
Q20	S0085924	FET,RUM002N02 T2L G
Q22	S0085944	TRANSISTOR,DTC144EM T2L G
Q23	S0086614	TRANSISTOR,EMX26T2R G
Q24	S0086834	TRANSISTOR,DTC144TMT2L G
Q25	S0085694	FET,RW1A020ZP T2R G
RA1	R0180554	RES ARRAY,1/32W 4*68 J G
RA2	R0180554	RES ARRAY,1/32W 4*68 J G
RA3	R0180554	RES ARRAY,1/32W 4*68 J G
RA4	R0180554	RES ARRAY,1/32W 4*68 J G
RA5	R0180554	RES ARRAY,1/32W 4*68 J G
RA6	R0180554	RES ARRAY,1/32W 4*68 J G
RA7	R0180554	RES ARRAY,1/32W 4*68 J G
RA8	R0180554	RES ARRAY,1/32W 4*68 J G
RA9	R0180554	RES ARRAY,1/32W 4*68 J G
SW1	E0166274	SW,MPU12580MLB1 G
SW2	E0166284	SW,SSSS711403 G
SW3	E0166294	SW,SSSS7A0101 G
T1	E0166304	FILTER,NT2012 985BH1007 G
U1	S0085964	IC,BU4218FVE-TR G
U2	S0085973	IC,FMS4A16LCH-60AE G
U3	S0083083	IC,BF-523C-5C2 G
U4	S0085614	IC,BR24L04NUX-WTR G
U5	S0075164	IC,S-35390A-I8T1G G
U6	S0085554	IC,ADC081C021CIMK NOPB G
U7	S0085874	IC,SN74AUC2G240YZPR G
U8	S0085884	IC,SN74AUC1G00YZPR G
U9	S00860200A	IC,ROM ASSY MAIN DR08 G
U9	S0085513	IC,MX25L1605DZNI-12G G
U9	D01104100A	SOFTWARE SPEC,DR08 G
U10	S0079744	IC,AU6336-MOF G
U11	S00870100A	IC,ROM ASSY USB DR08 G
U11	S0085614	IC,BR24L04NUX-WTR G
U11	D01109000A	SOFTWARE SPEC,USB DR08 G
U12	S0086484	IC,NLAS3699MN1R2G G
U13	S0086474	IC,NLAS4684FCTCG G
U14	S0085984	IC,NJM2173AV G
U16	S0085994	IC,BD7830NUV G
U19	S0086494	IC,AAT1217ICA-1.2-T1 G
U21	S0086154	IC,AAT1141IGV-0.6-T1 G
U23	S0086154	IC,AAT1141IGV-0.6-T1 G
U26	S0085864	IC,TPS62320DRCR G
U27	C0083154	CC,MCF183CN104M104A G
U28	C0083154	CC,MCF183CN104M104A G
U29	S0086814	IC,R1180Q221B-TR-F G
U30	S0085964	IC,BU4218FVE-TR G
U31	S0086824	IC,RP102K321B-TR G
Y1	E0149904	CRYSTAL OSC,SEG55 12MHZ

GATHER PCBA,MAIN DR08 (DR-08's)

REF.NO.	PARTS NO.	DESCRIPTION
Y2	E0166324	XTAL,MEG25AT5Y 22.5792M G
Y3	E0143374	XTAL,SSP-T7-F 32.768K 7P G
ZD1	S0083964	DIODE,RSA6.1J4T2R(5P) G
ZD2	S0083964	DIODE,RSA6.1J4T2R(5P) G

GATHER PCBA,PANEL VR (Common)

REF.NO.	PARTS NO.	DESCRIPTION
	E95389000A	GATHER PCBA,PANEL VR G
		PCB,PANEL VR G
		PCBA,PANEL VR G
D1	S0022094	DIODE,1SS355
D2	S0022094	DIODE,1SS355
D3	S0022094	DIODE,1SS355
D4	S0022094	DIODE,1SS355
D5	S0022094	DIODE,1SS355
D6	S0022094	DIODE,1SS355
D7	S0022094	DIODE,1SS355
D8	S0022094	DIODE,1SS355
D9	S0022094	DIODE,1SS355
D10	S0022094	DIODE,1SS355
D11	S0075754	LED,SML-512UW(RED) G
J1	E0166354	CONNECTOR,AXK6F20547YG G
SW1	E0166624	SW,TACT RS-192NB1 RT G
SW2	E0166624	SW,TACT RS-192NB1 RT G
SW3	E0166624	SW,TACT RS-192NB1 RT G
SW4	E0166624	SW,TACT RS-192NB1 RT G
SW5	E0166624	SW,TACT RS-192NB1 RT G
SW6	E0166624	SW,TACT RS-192NB1 RT G
SW7	E0166624	SW,TACT RS-192NB1 RT G
SW8	E0166624	SW,TACT RS-192NB1 RT G
SW9	E0166624	SW,TACT RS-192NB1 RT G
SW10	E0166624	SW,TACT RS-192NB1 RT G

REF.NO.	PARTS NO.	DESCRIPTION

10. Included Accessories

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Included Accessories (VR-20 & VR-20W)

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
	D01104401A	OWNERS MNL,(J) VR20 G [J]	
	D01104420A	OWNERS MNL,(E) VR20 G [Except J]	
	D01104481A	OWNERS MNL,(F) VR20 G [E]	
	D01104480A	OWNERS MNL,(G) VR20 G [E]	
	D01104482A	OWNERS MNL,(I) VR20 G [E]	
	D01104483A	OWNERS MNL,(S) VR20 G [E]	
	D01104484A	OWNERS MNL,(N) VR20 G [E]	
	T0017470	MICROSD,SP002GST000-UMP G	
	E0168610	CABLE ASSY,MICROUSB 0.8 G	
	M0315290	EARPHONE ASSY,CD-072W/P G	
	E0166450	BAT,LR03(GD)2P(E)O NF D G	

Included Accessories (DR-08 & DR-08W)

REF.NO.	PARTS NO.	DESCRIPTION	REMARKS
	D01104601A	OWNERS MNL,(J) DR08 G [JEX]	
	D01104620A	OWNERS MNL,(E) DR08 G	
	D01104681A	OWNERS MNL,(F) DR08 G [E]	
	D01104680A	OWNERS MNL,(G) DR08 G [E]	
	D01104682A	OWNERS MNL,(I) DR08 G [E]	
	D01104683A	OWNERS MNL,(S) DR08 G [E]	
	T0017470	MICROSD,SP002GST000-UMP G	
	E0168610	CABLE ASSY,MICROUSB 0.8 G	
	E0166450	BAT,LR03(GD)2P(E)O NF D G	

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. [JEX] : JAPAN & ASIA [A] : AUSTRALIA [T] :TAIWAN
  [CH] : CHINA [ETC] : U.S.A./CANADA/South America

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。

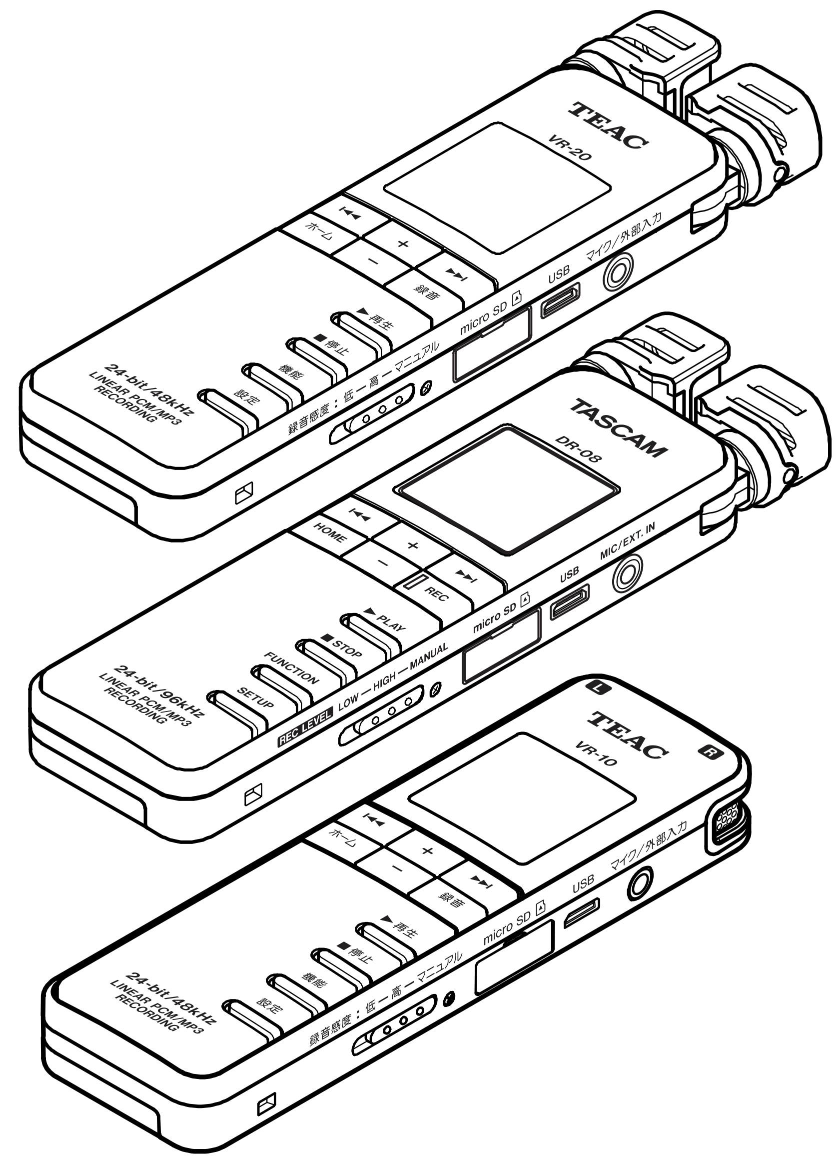
- 仕向先
  [J]: JAPAN [US/C] : U.S.A./CANADA [K] : KOREA [E] : EUROPE
  [UK] : U.K. [JEX] : JAPAN & ASIA [A] : AUSTRALIA [T] :TAIWAN
  [CH] : CHINA [ETC] : U.S.A./CANADA/South America

TASCAM
TEAC PROFESSIONAL

SCHEMATIC DIAGRAM
回路図

Digital Recorder & Linear PCM Recorder VR-20/DR-08/VR-10/VR-10e/PR-10

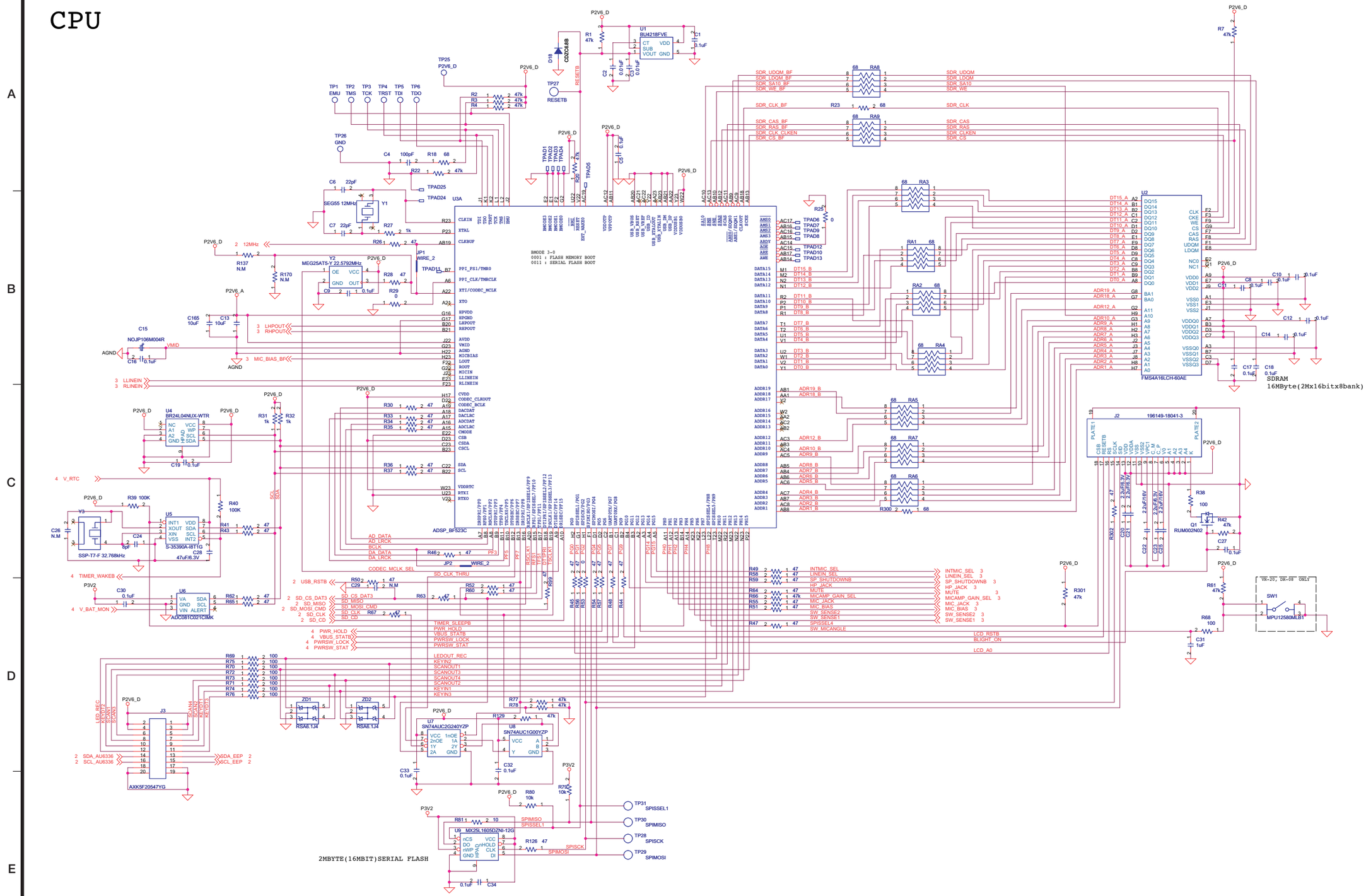
CONTENTS（目次）



1 st Issue; June, 2010

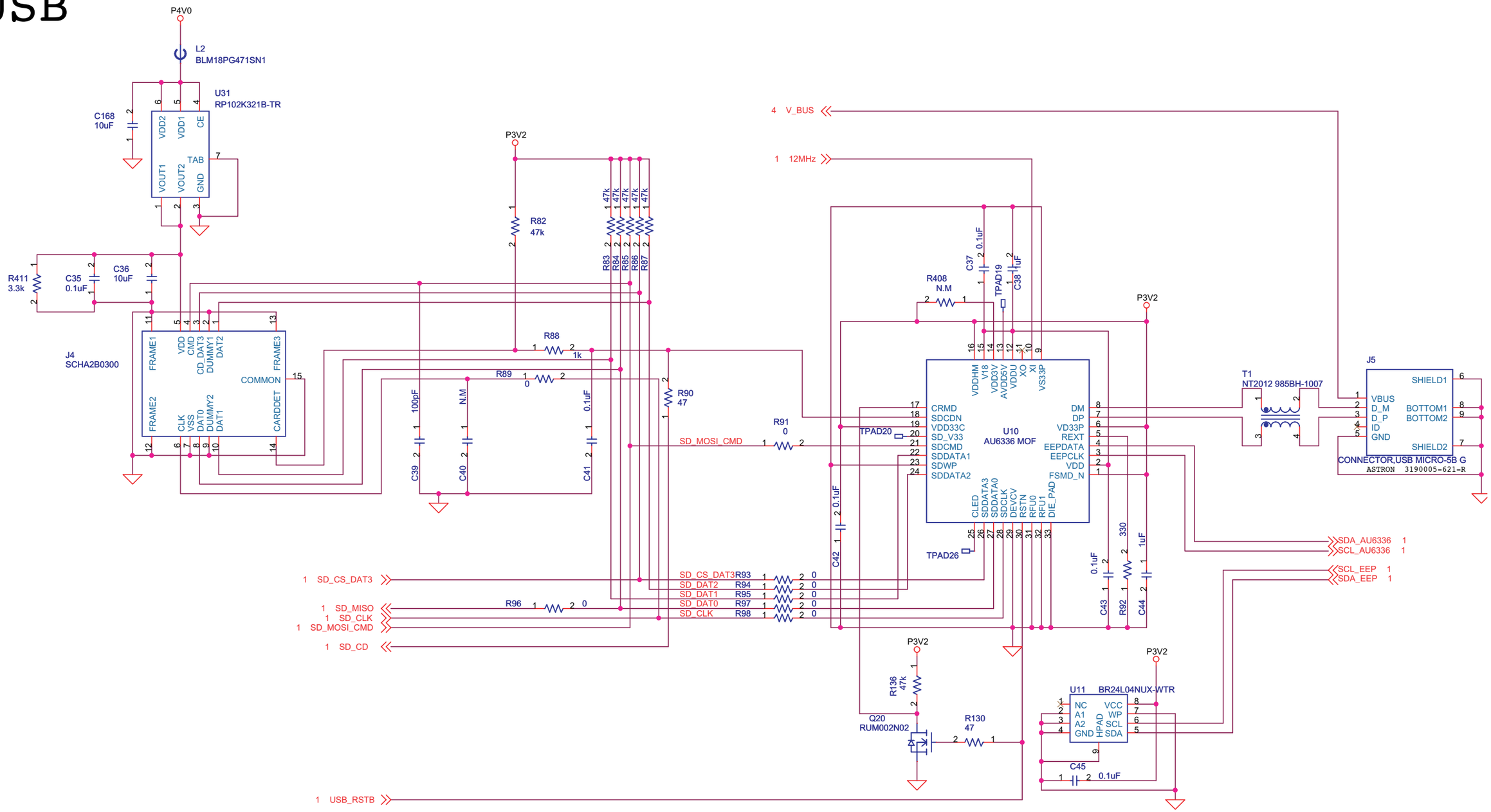
S-0201

CPU



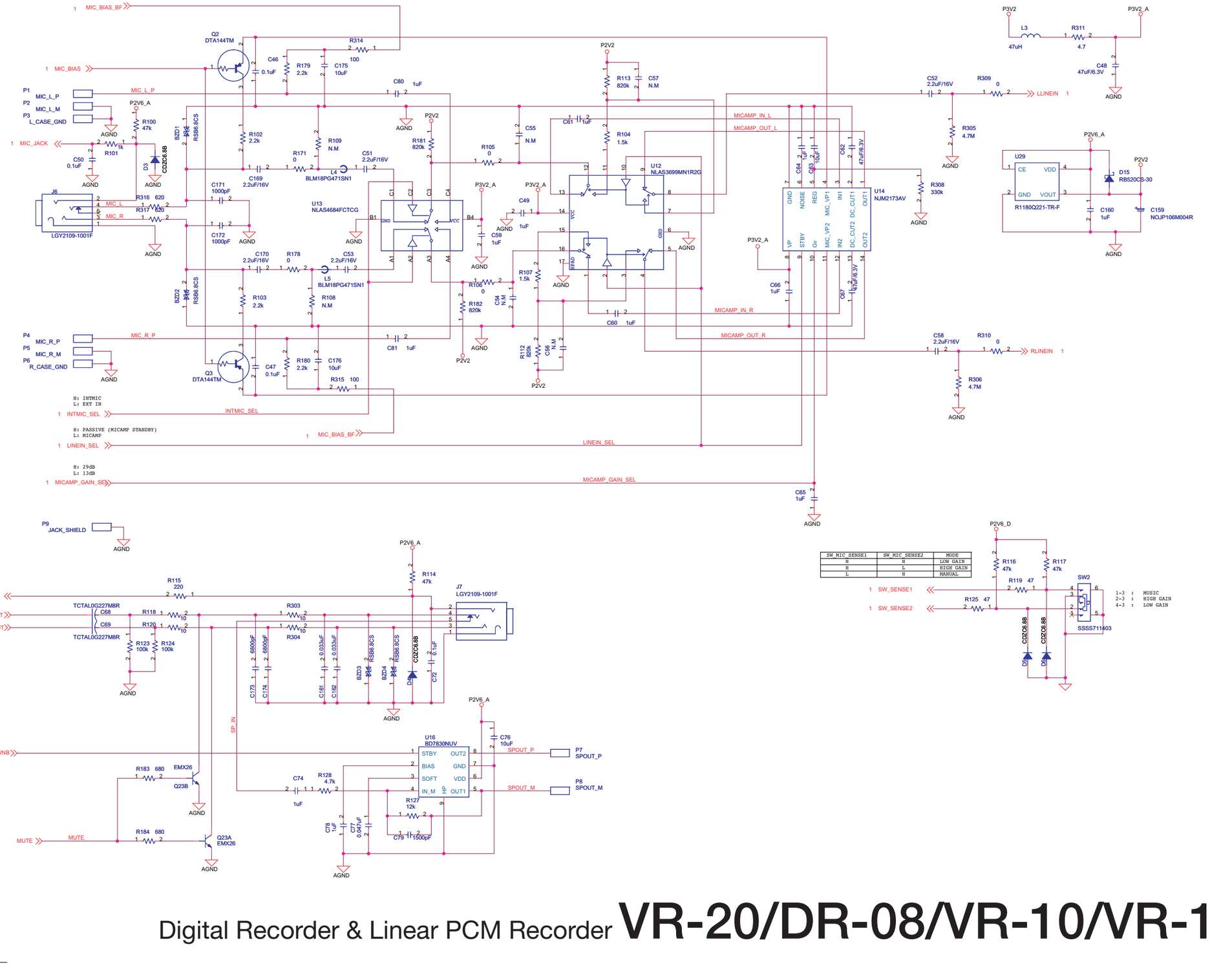
Digital Recorder & Linear PCM Recorder **VR-20/DR-08/VR-10/VR-10e/PR-10**

USB



Digital Recorder & Linear PCM Recorder **VR-20/DR-08/VR-10/VR-10e/PR-10**

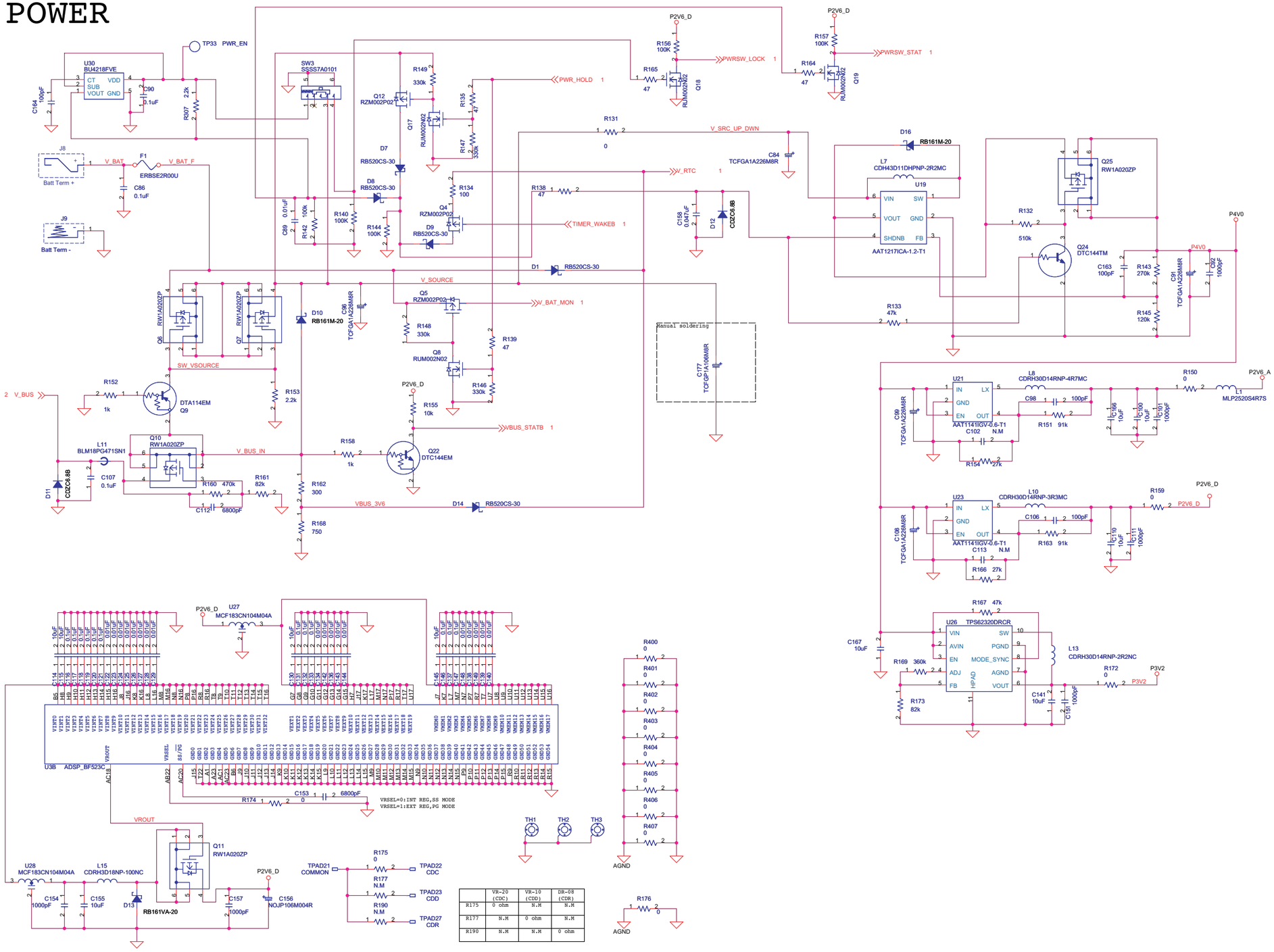
AUDIO


MIC_BIAS_BF
MIC_BIAS
MIC_JACK
P1 MIC_L_P
P2 MIC_L_M
P3 L_CASE_GND
MIC_L_P
MIC_L
MIC_R
J6
LGY2109-1001F
Q2 DTA144TM
Q3 DTA144TM
P4 MIC_R_P
P5 MIC_R_M
P6 R_CASE_GND
MIC_R_P
H: INTMIC
L: EXT IN
INTMIC_SEL
H: PASSIVE (MICAMP STANDBY)
L: MICAMP
LINEIN_SEL
H: 29dB
L: 13dB
MICAMP_GAIN_SEL
U13 NLAS4684FCTCG
U12 NLAS3699MN1R2G
U14 NJM2173AV
U29 R1180Q221-TR-F
D15 RB520CS-30
C160 1uF
C159 NOJP106M004R
MICAMP_IN_L
MICAMP_OUT_L
MICAMP_IN_R
MICAMP_OUT_R
LINEIN_SEL
L3 47uH
R311 4.7
C48 47uF/6.3V
C52 2.2uF/16V
R309 0
LLINEIN 1
R305 4.7M
R308 330k
C58 2.2uF/16V
R310 0
RLINEIN 1
R306 4.7M
P3V2
P3V2_A
P2V2
P2V6_A
AGND

P9 JACK_SHIELD
HP_JACK
LHPOUT
RHPOUT
J7 LGY2109-1001F
TCTAL0G227M8R
SP_SHUTDOWNB
H: Active
L: Standby
MUTE
Q23B EMX26
Q23A EMX26
U16 BD7830NUV
STBY
BIAS
SOFT
IN_M
OUT2
GND
VDD
OUT1
HP
SPOUT_P
SPOUT_M
P7 SPOUT_P
P8 SPOUT_M
SP_IN
P2V6_A
AGND

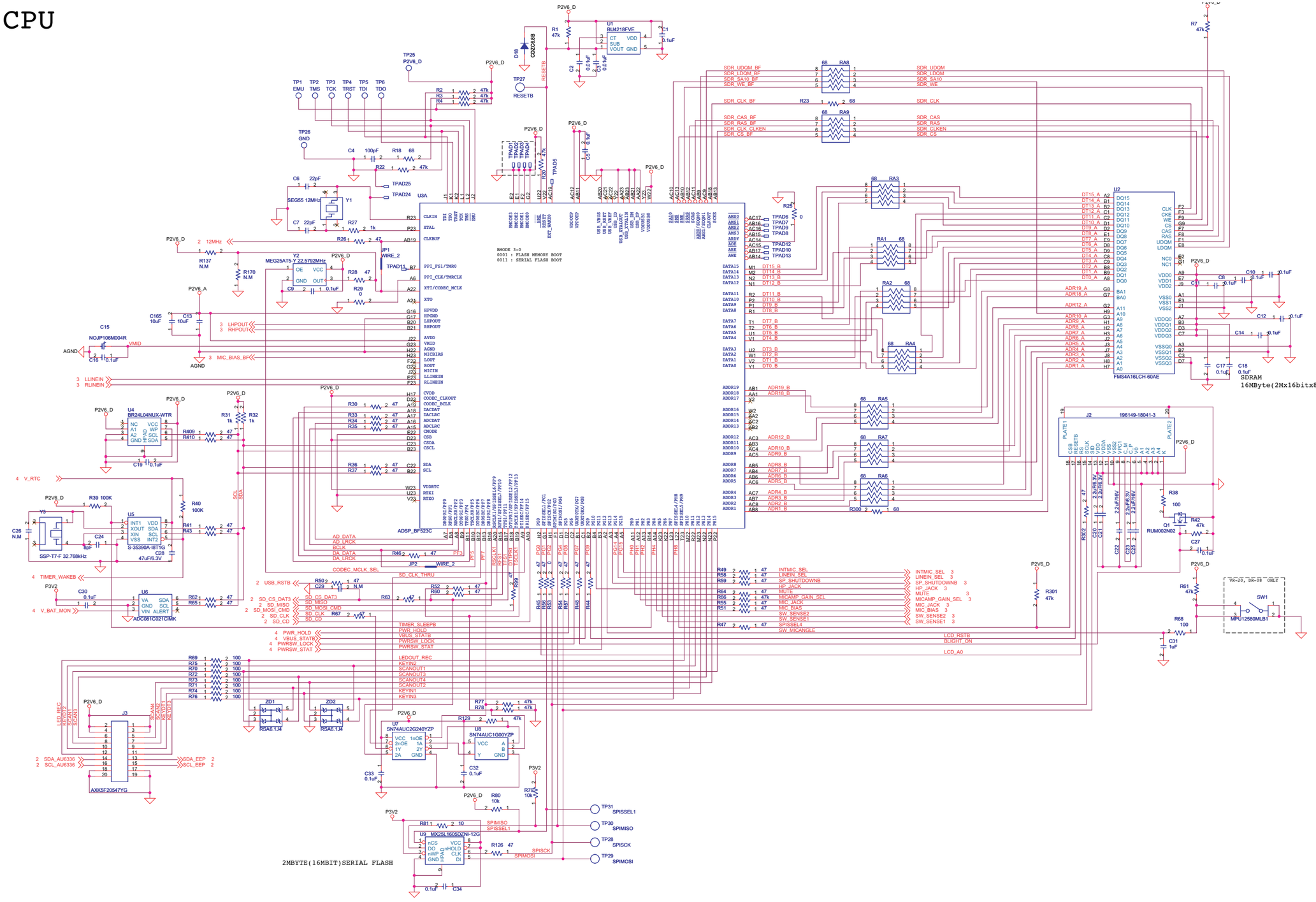
SW_MIC_SENSE1 | SW_MIC_SENSE2 | MODE
H | H | LOW GAIN
H | L | HIGH GAIN
L | H | MANUAL
SW_SENSE1
SW_SENSE2
SW2 SSSS711403
1-3 : MUSIC
2-3 : HIGH GAIN
4-3 : LOW GAIN
P2V6_D

POWER



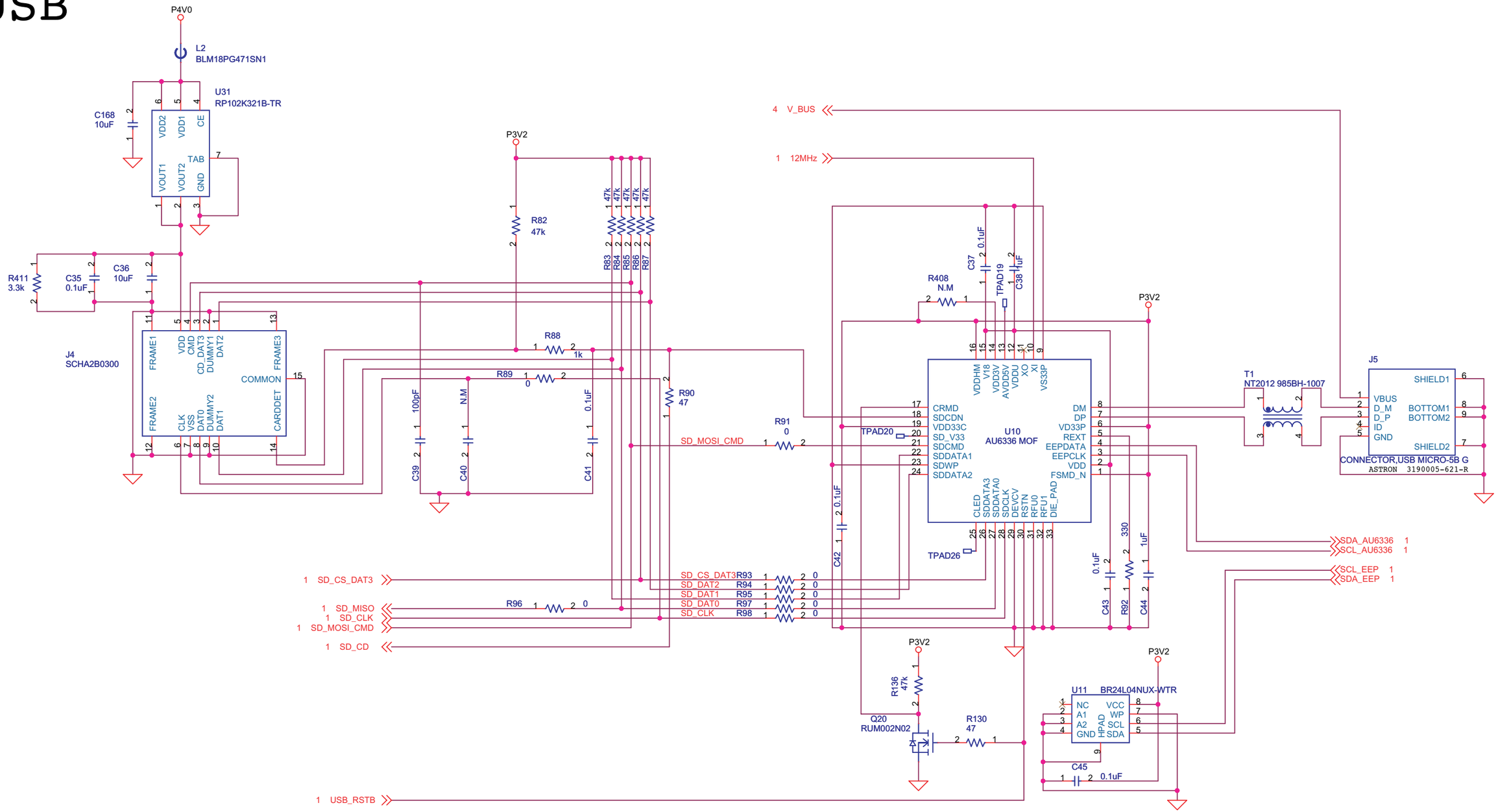
	VR-20 (CDC)	VR-10 (CDD)	DR-08 (CDR)
R175	0 ohm	N.M	N.M
R177	N.M	0 ohm	N.M
R190	N.M	N.M	0 ohm

CPU



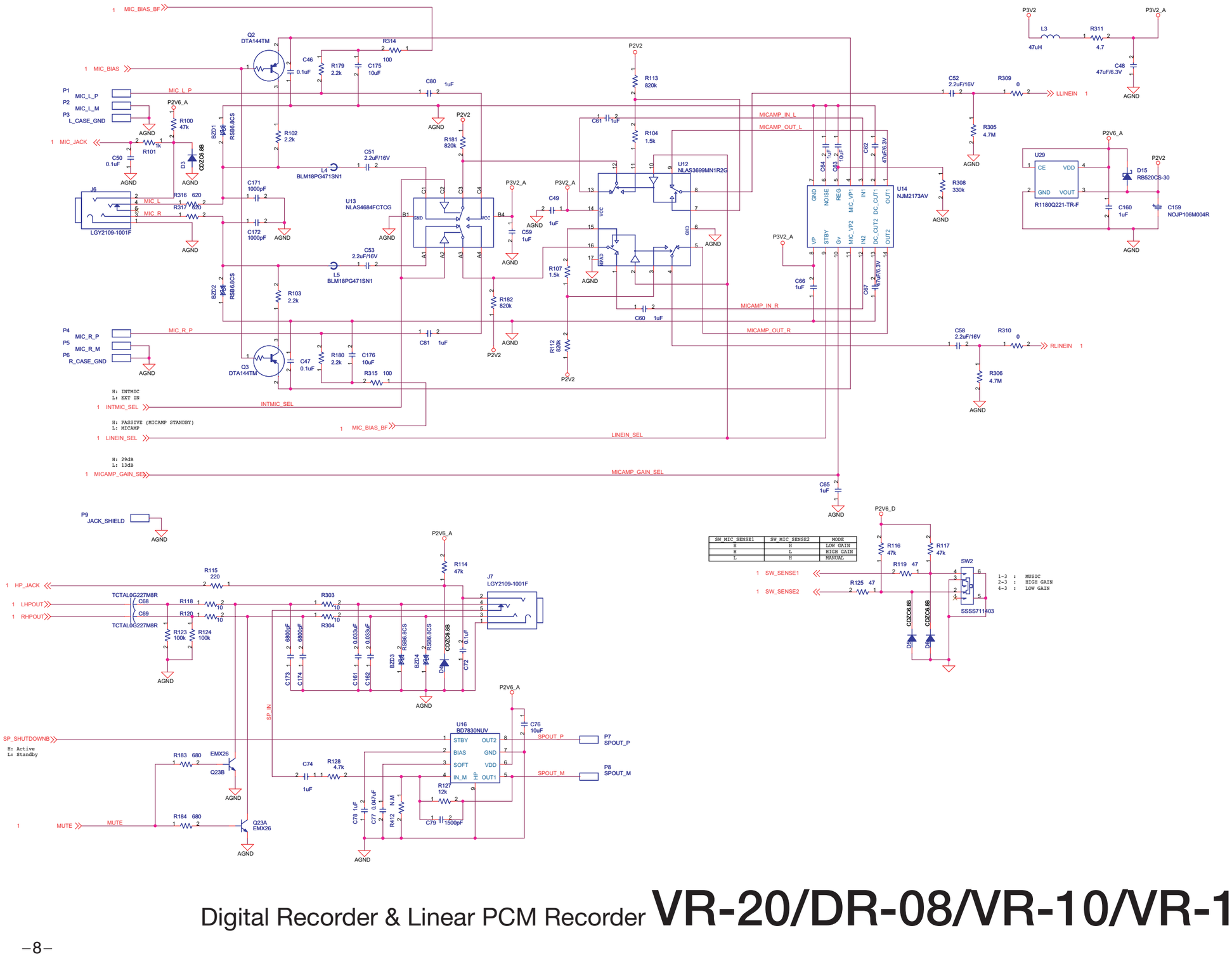
Digital Recorder & Linear PCM Recorder **VR-20/DR-08/VR-10/VR-10e/PR-10**

USB

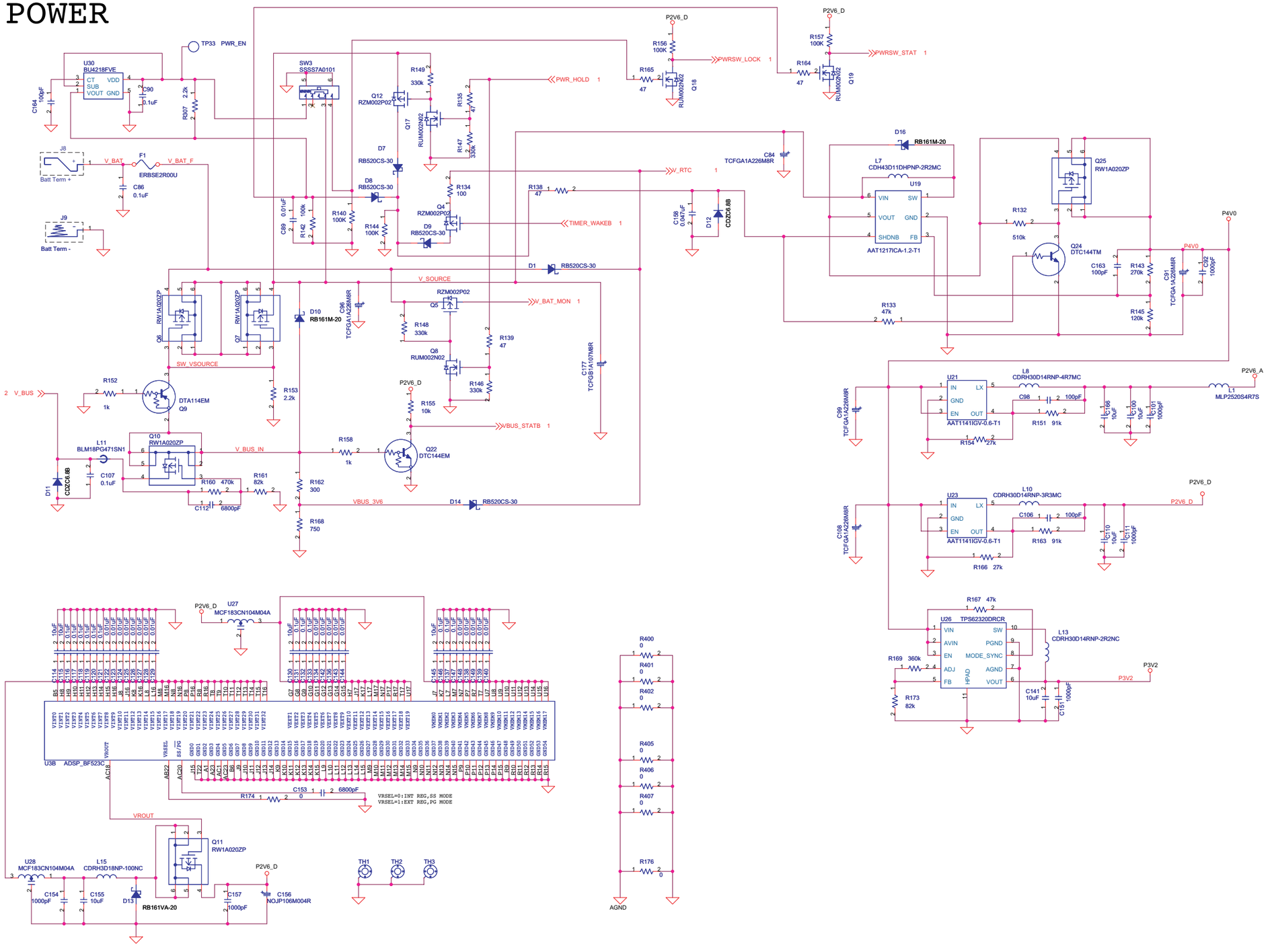


Digital Recorder & Linear PCM Recorder **VR-20/DR-08/VR-10/VR-10e/PR-10**

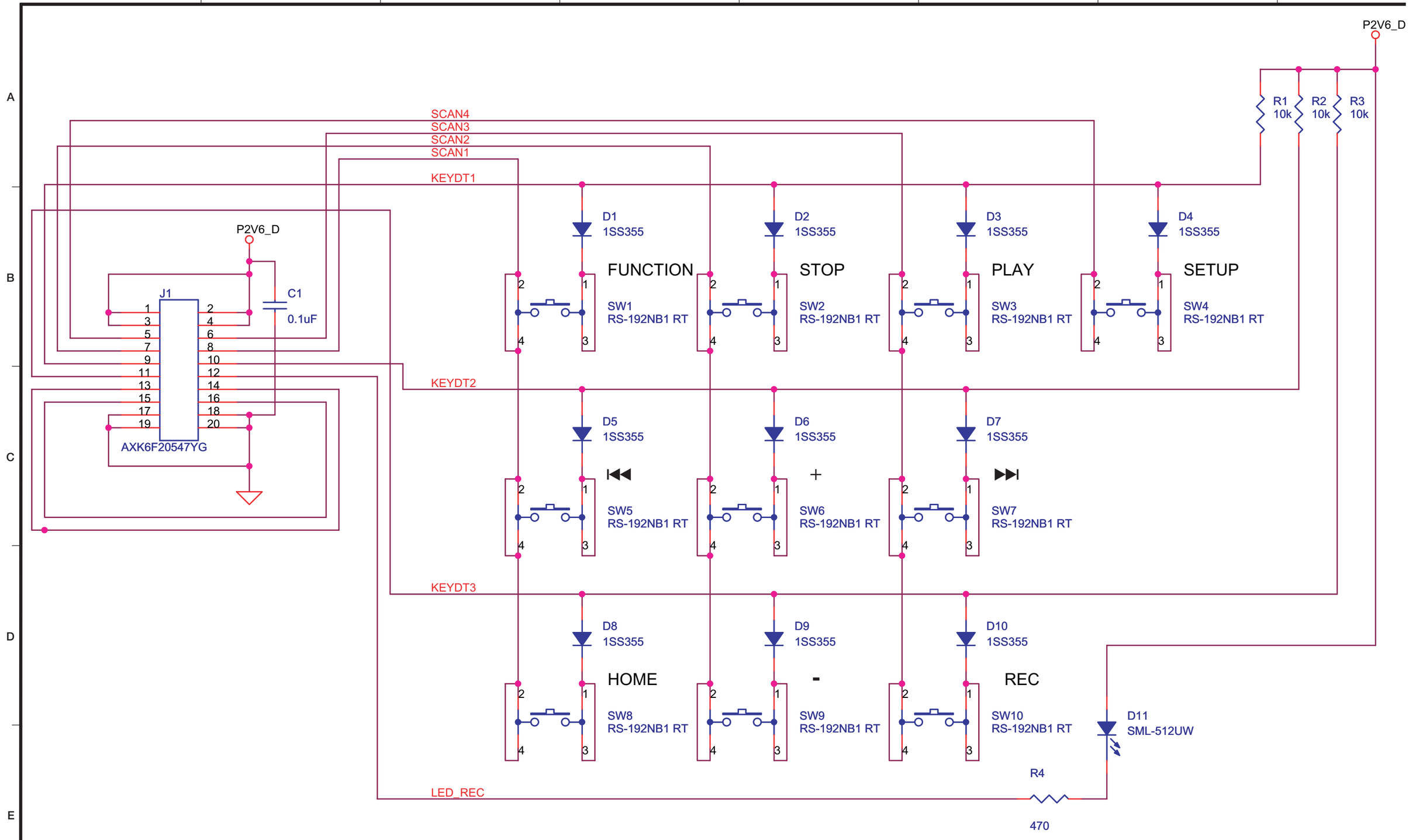
AUDIO


MIC_BIAS_BF
Q2 DTA144TM
MIC_BIAS
P1 MIC_L_P
P2 MIC_L_M
P3 L_CASE_GND
MIC_JACK
MIC_L_P
P2V6_A
R100 47k
R101 1k
C50 0.1uF
D3 CDZ6.8B
BZD1 RSB6.8CS
R102 2.2k
C46 0.1uF
R179 2.2k
C175 10uF
R314 100
C80 1uF
C51 2.2uF/16V
L4 BLM18PG471SN1
J6 LGY2109-1001F
MIC_L
MIC_R
R316 620
R317 620
C171 1000pF
C172 1000pF
U13 NLAS4684FCTCG
C53 2.2uF/16V
L5 BLM18PG471SN1
BZD2 RSB6.8CS
R103 2.2k
P4 MIC_R_P
P5 MIC_R_M
P6 R_CASE_GND
MIC_R_P
Q3 DTA144TM
C47 0.1uF
R180 2.2k
C176 10uF
R315 100
C81 1uF
H: INTMIC
L: EXT IN
INTMIC_SEL
H: PASSIVE (MICAMP STANDBY)
L: MICAMP
LINEIN_SEL
H: 29dB
L: 13dB
MICAMP_GAIN_SEL
P2V2
R113 820k
R104 1.5k
C61 1uF
R181 820k
R182 820k
R107 1.5k
R112 820k
C49 1uF
C59 1uF
P3V2_A
U12 NLAS3699MN1R2G
C60 1uF
MICAMP_IN_L
MICAMP_OUT_L
MICAMP_IN_R
MICAMP_OUT_R
U14 NJM2173AV
C62 47uF/6.3V
C63 10uF
C64 1uF
C66 1uF
C67 47uF/6.3V
R308 330k
C52 2.2uF/16V
R309 0
LLINEIN 1
R305 4.7M
C58 2.2uF/16V
R310 0
RLINEIN 1
R306 4.7M
L3 47uH
R311 4.7
C48 47uF/6.3V
U29 R1180Q221-TR-F
D15 RB520CS-30
C160 1uF
C159 NOJP106M004R
P9 JACK_SHIELD
R115 220
R114 47k
J7 LGY2109-1001F
HP_JACK
LHPOUT
RHPOUT
TCTAL0G227M8R
C68
C69
R118 10
R120 10
R123 100k
R124 100k
R303 10
R304 10
C173 6800pF
C174 6800pF
C161 0.033uF
C162 0.033uF
BZD3 RSB6.8CS
BZD4 RSB6.8CS
D4 CDZC6.8B
C72 0.1uF
SP_IN
SP_SHUTDOWNB
H: Active
L: Standby
U16 BD7830NUV
STBY
BIAS
SOFT
IN_M
OUT2
GND
VDD
OUT1
HP
C76 10uF
SPOUT_P
SPOUT_M
P7 SPOUT_P
P8 SPOUT_M
R183 680
EMX26
Q23B
C74 1uF
R128 4.7k
R127 12k
C78 1uF
C77 0.047uF
R412 N.M
C79 1500pF
MUTE
R184 680
Q23A EMX26
SW_MIC_SENSE1
SW_MIC_SENSE2
MODE
H H LOW GAIN
H L HIGH GAIN
L H MANUAL
SW_SENSE1
SW_SENSE2
R116 47k
R117 47k
R119 47
R125 47
SW2 SSSS711403
1-3 : MUSIC
2-3 : HIGH GAIN
4-3 : LOW GAIN
D5 CDZC6.8B
D6 CDZC6.8B
AGND

POWER



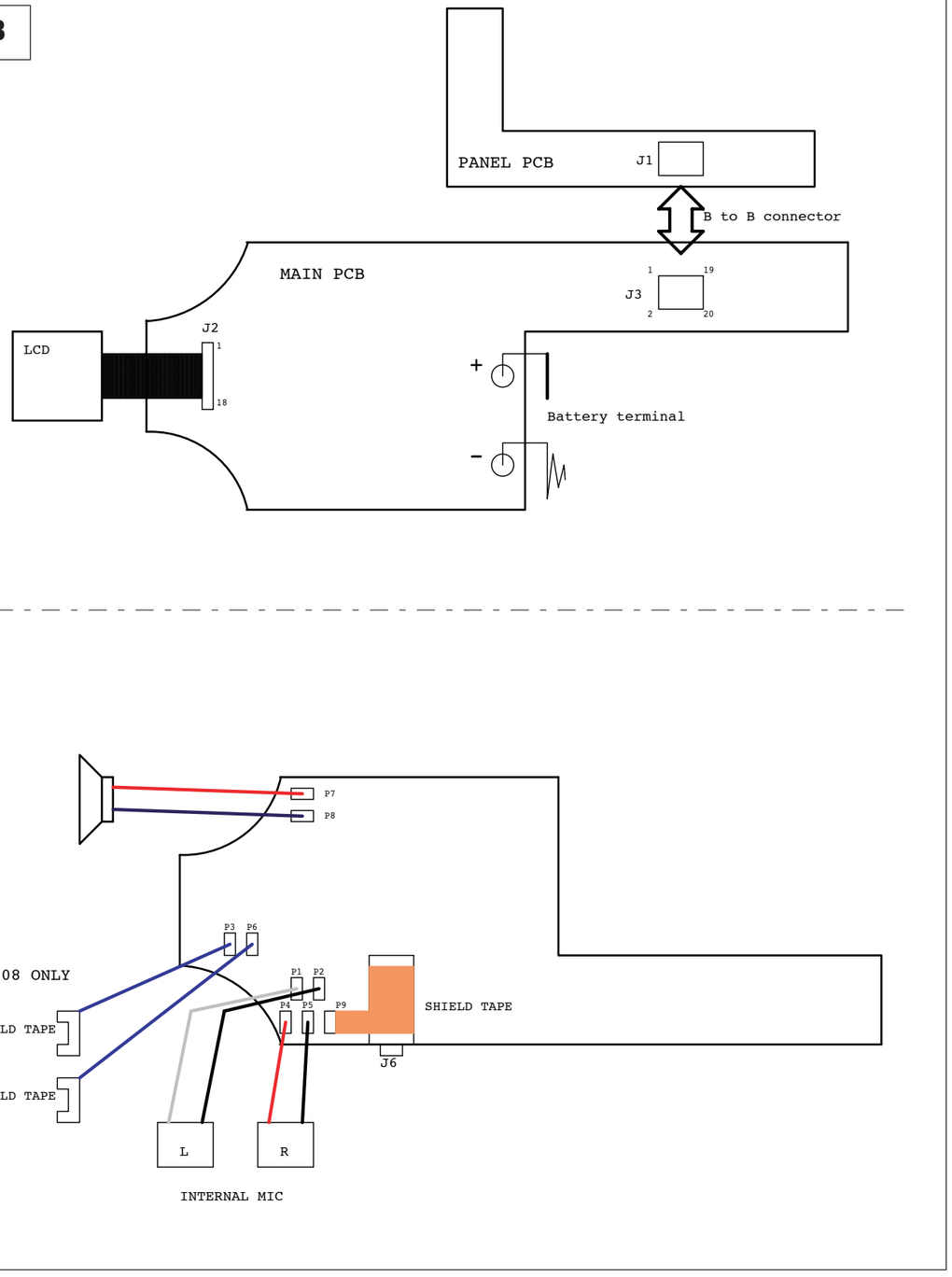
Digital Recorder & Linear PCM Recorder **VR-20/DR-08/VR-10/VR-10e/PR-10**


P2V6_D
R1 10k
R2 10k
R3 10k
SCAN4
SCAN3
SCAN2
SCAN1
KEYDT1
KEYDT2
KEYDT3
LED_REC
J1
AXK6F20547YG
C1
0.1uF
D1 1SS355
D2 1SS355
D3 1SS355
D4 1SS355
FUNCTION
STOP
PLAY
SETUP
SW1 RS-192NB1 RT
SW2 RS-192NB1 RT
SW3 RS-192NB1 RT
SW4 RS-192NB1 RT
D5 1SS355
D6 1SS355
D7 1SS355
SW5 RS-192NB1 RT
SW6 RS-192NB1 RT
SW7 RS-192NB1 RT
D8 1SS355
D9 1SS355
D10 1SS355
HOME
-
REC
SW8 RS-192NB1 RT
SW9 RS-192NB1 RT
SW10 RS-192NB1 RT
D11 SML-512UW
R4
470

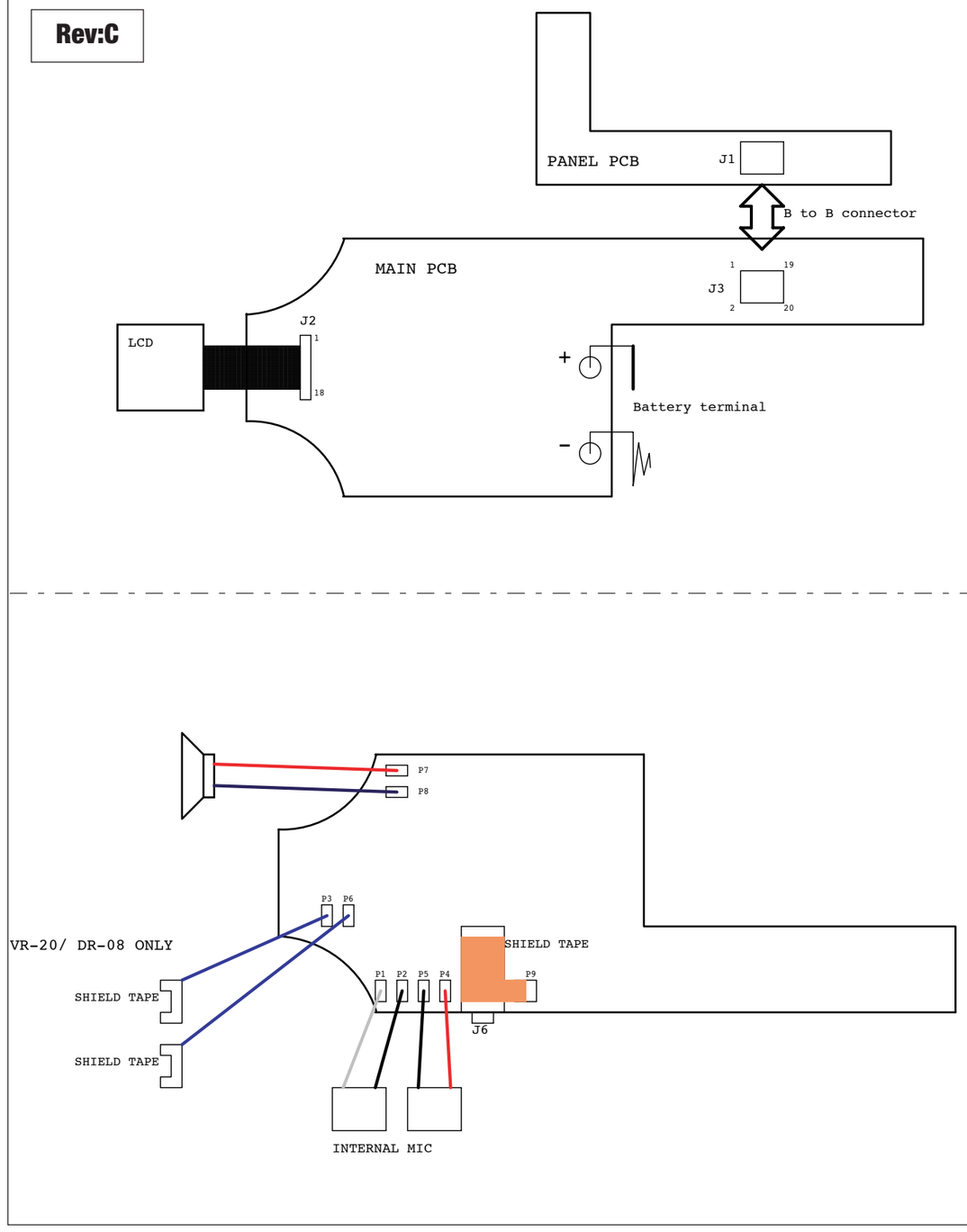
1 2 3 4 5 6 7

A B C D E

Rev:B



Rev:C



DR-08 Release Notes

Updates

Always use the most recent firmware for this device. Please visit the TASCAM web site at http://www.tascam.com to check for the latest firmware.

Maintenance items

V1.03 changes

- Measures have been taken to reduce noise that can occur when recording an MP3 at a low input level.
- Corrections have been made to allow the recognition of certain microSD cards that were not been recognized before.
- In rare cases playback of MP3 files did not start from the correct position. This has been corrected.
- The "FILE INFO." "SIZE" indication was not correctly displayed in some cases. This has been corrected.
- When using the timer, recording did not start correctly in some cases depending on the time set. This has been corrected.
- If the microSD card was removed when the playback area was set to PLAYLIST, in some cases NO CARD was not displayed on the Home Screen. This has been corrected.
- It was possible to create files that were too short to play back. This has been corrected.
- With small files, A and B point icons for the A-B repeat interval was not shown correctly in some cases. This has been corrected.
- After turning the power OFF when using only USB bus power, if the USB cable was removed soon after the screen became blank, setting changes were not saved in some cases. This has been corrected.
- A rare problem in which the menu screen display became erratic has been corrected.
- A rare problem in which the keys stopped functioning has been corrected.

Confirmation of firmware version

Confirm the firmware version of your DR-08 before conducting a firmware update.

1. **Turn the unit's power ON.**
2. **Press the SETUP key to open the SETUP menu screen.**
3. **Use the + and – keys to select the SYSTEM item, and press the ►►I (Enter) key to open the SYSTEM menu.**
4. **Use the + and – keys to select INFORMATION item, and press the ►►I (Enter) key to open the INFO selection screen.**
5. **Use the + and – keys to select O.S. item, and press the ►►I (Enter) key to open the O.S. INFO screen.**

   Check the Version (firmware version) shown here. If this version is the same as or newer than the firmware that you plan to use to upgrade the unit, then there is no need to update the firmware version.

Firmware update procedures

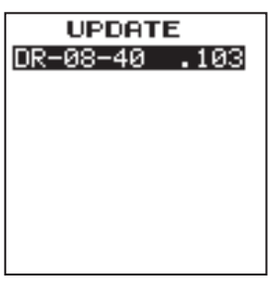
CAUTION

When you update the firmware, make certain that there is sufficient remaining battery power or power the unit by USB. The program has been set so that the update will not be conducted if battery power is insufficient.

1. **Download the most recent firmware from the TASCAM web site (http://www.tascam.com).**
2. **Use the included USB cable to connect the unit with a computer and turn the unit's power ON.**

   This unit will be recognized as an external drive (external storage device) by the computer.
3. **Copy the downloaded firmware to the UTILITY folder on the DR-08.**
4. **After copying has completed, disconnect the unit from the computer following the correct procedures. Then, turn its power OFF.**
5. **While pressing and holding both the PLAY and FUNCTION keys, turn the unit power ON.**

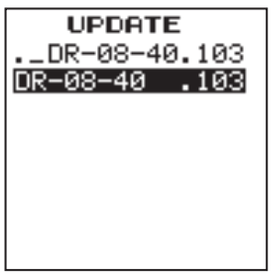
   The unit starts up in update mode, and the update file appears on the screen.



CAUTION

- *If this screen does not appear, turn the power OFF. Then while pressing and holding both the PLAY and FUNCTION keys, turn the unit's power ON again. Continue to press and hold the PLAY and FUNCTION keys firmly until this screen appears.*
- *When firmware has been copied to this unit's UTILITY folder from a Mac, in addition to the firmware file itself, another file with "._" added to the beginning of*

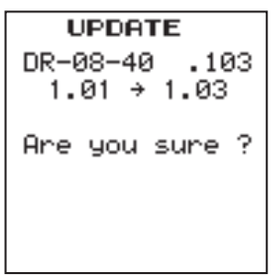
the firmware name is also shown. Use the file without the "._" at the beginning of the name.



NOTE

- *This screen shows a list of the firmware update files inside the UTILITY folder of the unit. Also, the screen shows the firmware copied at Step 3 above. "No Update File" appears if there is no update file in the UTILITY folder.*
- *The screen shown is an example. The actual display differs.*

6 Select the firmware (highlight the item) then press PLAY. The following screen appears.



The current version appears on the left and the updated version appears on the right.

NOTE

The screen shown is an example. The actual display differs.

7 Press the REC key to start the update.

8 When the update is complete, the power turns OFF automatically. Turn the power ON again.

9 Follow the "Confirmation of firmware version" instructions above to check that the `Version` is now the most recent version of the firmware.

This completes the procedure for updating this unit.

10 Connect to a computer with USB and delete the firmware update from the unit's `UTILITY` folder.

Updates

Always use the most recent firmware for this device. Please visit the TASCAM web site at http://tascam.com/ to check for the latest firmware.

Maintenance items

V1.04 changes

If the PLAY SPEED was set to 90% or less, the first time playback was started after turning the power ON sometimes caused noise to be heard momentarily. This has been fixed.

V1.03 changes

- Measures have been taken to reduce noise that can occur when recording an MP3 at a low input level.
- Corrections have been made to allow the recognition of certain microSD cards that were not been recognized before.
- In rare cases playback of MP3 files did not start from the correct position. This has been corrected.
- The FILE INFO. SIZE indication was not correctly displayed in some cases. This has been corrected.
- When using the timer, recording did not start correctly in some cases depending on the time set. This has been corrected.
- If the microSD card was removed when the playback area was set to PLAYLIST, in some cases NO CARD was not displayed on the Home Screen. This has been corrected.
- It was possible to create files that were too short to play back. This has been corrected.
- With small files, A and B point icons for the A-B repeat interval was not shown correctly in some cases. This has been corrected.
- After turning the power OFF when using only USB bus power, if the USB cable was removed soon after the screen became blank, setting changes were not saved in some cases. This has been corrected.
- A rare problem in which the menu screen display became erratic has been corrected.
- A rare problem in which the keys stopped functioning has been corrected.

Confirmation of firmware version

Confirm the firmware version of your DR-08 before conducting a firmware update.

1. **Turn the unit's power ON.**
2. **Press the SETUP key to open the SETUP menu screen.**
3. **Use the + and – keys to select the SYSTEM item, and press the ►►I (Enter) key to open the SYSTEM menu.**
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   Check the Version (firmware version) shown here. If this version is the same as or newer than the firmware that you plan to use to upgrade the unit, then there is no need to update the firmware version.

Firmware update procedures

CAUTION

When you update the firmware, make certain that there is sufficient remaining battery power or power the unit by USB. The program has been set so that the update will not be conducted if battery power is insufficient.

1 **Download the most recent firmware from the TASCAM web site (http://tascam.com/).**

2 **Use the included USB cable to connect the unit with a computer and turn the unit's power ON.**

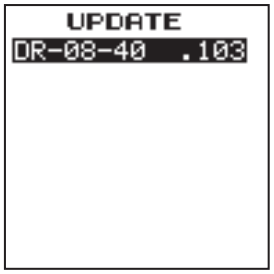
This unit will be recognized as an external drive (external storage device) by the computer.

3 **Copy the downloaded firmware to the UTILITY folder on the DR-08.**

4 **After copying has completed, disconnect the unit from the computer following the correct procedures. Then, turn its power OFF.**

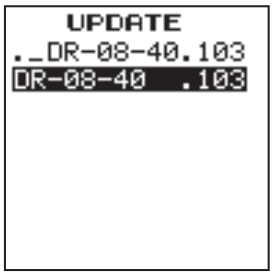
5 **While pressing and holding both the PLAY and FUNCTION keys, turn the unit power ON.**

The unit starts up in update mode, and the update file appears on the screen.



CAUTION

- *If this screen does not appear, turn the power OFF. Then while pressing and holding both the PLAY and FUNCTION keys, turn the unit's power ON again. Continue to press and hold the PLAY and FUNCTION keys firmly until this screen appears.*
- *When firmware has been copied to this unit's UTILITY folder from a Mac, in addition to the firmware file itself, another file with "._" added to the beginning of the firmware name is also shown. Use the file without the "._" at the beginning of the name.*



NOTE

- *This screen shows a list of the firmware update files inside the UTILITY folder of the unit. Also, the screen shows the firmware copied at Step 3 above. "No Update File" appears if there is no update file in the UTILITY folder.*
- *The screen shown is an example. The actual display differs.*

6 **Select the firmware (highlight the item) then press PLAY. The following screen appears.**

The current version appears on the left and the updated version appears on the right.

NOTE

The screen shown is an example. The actual display differs.

7 **Press the REC key to start the update.**

8 **When the update is complete, the power turns OFF automatically. Turn the power ON again.**

9 **Follow the "Confirmation of firmware version" instructions above to check that the Version is now the most recent version of the firmware.**

This completes the procedure for updating this unit.

10 **Connect to a computer with USB and delete the firmware update from the unit's UTILITY folder.**

TEAC

TECHNICAL INFORMATION

No. **1017**

DATE 21th May 2010

TASCAM DR-08 V1.03 Firmware Update

The firmware V1.03 for DR-08 has been released with some improvement and bug fixes from V1.00.

Improvements and Bug fixes:

1. Measures have been taken to reduce noise that can occur when recording MP3 file at a low input level.
2. Corrections has been made to allow the recognition of certain micro SD cards that were not been recognized before.
3. In rare cases playback of MP3 files did not start from the correct position. – fixed-
4. The “FILE INFO.” “SIZE” indication was not correctly displayed in some cases. – fixed -
5. When using the timer, recording did not start correctly in some cases depending on the time set. –fixed –
6. If the micro SD card was removed when the playback area is set to PLAYLIST, in some cases “NO CARD” was not displayed on the Home Screen. – fixed -
7. It was possible to create files that were too short to play back. – fixed –
8. With small files, A and B point icons for the A-B repeat interval was not shown correctly in some cases. – fixed –
9. After turning the power OFF when using only USB bus power, if the USB cable was removed soon after the screen became blank, setting changes were not saved in some cases. – fixed
10. In rare cases the menu screen display became erratic. – fixed –
11. In rare cases the keys stopped functioning. – fixed-

How to Firmware Update:

Refer to DR-08 Release Note for details of it.

Visit the ROM Data Library in the TASCAM Service HP website to download firmware and refer to DR-08 Release Notes for further details.

TEAC

TECHNICAL INFORMATION

No. **1121**

DATE 14h Jul. 2011

TASCAM DR-08 V1.04 Firmware Update

The firmware V1.04 for DR-08 has been released with some bug fix from V1.03.

Bug fixes:

1. If the PLAY SPEED was set to 90% or less, the first time playback was started after turning the power ON sometimes caused noise to be heard momentarily. – fixed-

How to Firmware Update:

Refer to DR-08 Release Notes “Firmware update procedures” for details of it.
The firmware file for V1.04 is “DR-08-43.104” (1085KB).

Visit the ROM Data Library in the TASCAM Service HP website to download firmware.

TEAC

TECHNICAL INFORMATION

No. **1305**

DATE 17th April. 2013

TASCAM DR Series, OS Operation check

OS operation check result

■Operation check had been done. The result is shown below.

OS operation check: Mac Mountain Lion/Windows8

April 15th, 2013

	Model name	Mac Mountain Lion	Windows8	Note
1	DP-03	ok	ok	
2	DR-05	ok	ok	
3	DR-07MK2	ok	ok	
4	DR-2d	ok	ok	
5	DR-100MK2	ok	ok	
6	DR-40	ok	ok	
7	DR-08	ok	ok	
8	DR-60D	ok	ok	
9	DR-680	ok	ok	
10	DR-V1HD	ok	ok	Playback sound isn't output because WindowsMediaPlayer doesn't support 24bit sound on movie playback. OK on QuickTime.
11	DP-24	ok	ok	
12	DP-32	ok	ok	
13	DP-004	ok	ok	
14	DP-008	ok	ok	
15	DP-006	ok	ok	
16	DP-008EX	ok	ok	