



SERVICE MANUAL

MODEL	JP	E3	E2	EK	E2A	E1C	EUT
AVR-2308CI		✓					
AVR-888		✓					
AVR-2308 			✓		✓		
AVC-2308 	✓						

AV SURROUND RECEIVER AV SURROUND AMPLIFIER

注意

サービスをおこなう前に、このサービスマニュアルを必ずお読みください。本機は、火災、感電、けがなどに対する安全性を確保するために、さまざまな配慮をおこなっており、また法的には「電気用品安全法」にもとづき、所定の許可を得て製造されております。従ってサービスをおこなう際は、これらの安全性が維持されるよう、このサービスマニュアルに記載されている注意事項を必ずお守りください。

• For purposes of improvement, specifications and design are subject to change without notice.

- 本機の仕様は性能改良のため、予告なく変更することがあります。
- 補修用性能部品の保有期間は、製造打切後 8 年です。

• Please use this service manual with referring to the operating instructions without fail.

- 修理の際は、必ず取扱説明書を参照の上、作業を行ってください。

• Some illustrations using in this service manual are slightly different from the actual set.

- 本文中に使用しているイラストは、説明の都合上現物と多少異なる場合があります。

DENON

TOKYO, JAPAN
Denon Brand Company, D&M Holdings Inc.

the customer, make sure you make either (1) a leakage current check or (2) a line to chassis leakage current check. If the leakage current exceeds 0.5 mA, the unit is defective.

Check the points listed below during servicing and inspection.

Inspect for safety after servicing!

Check that all screws, parts and wires removed or disconnected for servicing have been put back in their original positions, inspect that no parts around the area that has been serviced have been negatively affected, conduct an insulation check on the external metal connectors and between the leads of the power plug, and otherwise check that safety is ensured.

(Insulation check procedure)

Unplug the power cord from the power outlet, disconnect the antenna, plugs, etc., and turn the power switch on. Using a 500V insulation tester, check that the insulation on resistance between the terminals of the power plug and the external exposed metal parts (antenna terminal, headphones terminal, microphone terminal, input terminal, etc.) is 1MΩ or greater. If necessary, the set must be inspected and repaired.

CAUTION

Concerning important safety parts

Many of the electrical and structural parts used in the set have special safety properties. In most cases these properties are difficult to distinguish by sight, and using replacement parts with higher ratings (rated power and withstand voltage) does not necessarily guarantee that safety performance will be preserved. Parts with safety properties are indicated as shown below on the wiring diagrams and parts lists in the service manual. Be sure to replace them with parts with the designated part number.

- (1) Schematic diagrams ... Indicated by the \triangle mark.
- (2) Parts lists ... Indicated by the \triangle mark.

Using parts other than the designated parts could result in electric shock, fires or other dangerous situations.

注意事項をお守りください！

サービスのごとき特に注意を必要とする箇所についてはキャビネット、部品、シャーシなどにラベルや捺印で注意事項を表示しています。これらの注意書きおよび取扱説明書などの注意事項を必ずお守りください。

感電に注意！

- (1) このセットは、交流電圧が印加されていますので通電時に内部金属部に触れると感電することがあります。従って通電サービス時には、絶縁トランスの使用や手袋の着用、部品交換には、電源プラグを抜くなどして感電にご注意ください。
- (2) 内部には高電圧の部分がありますので、通電時の取扱いは十分ご注意ください。

分解、組み立て作業時のご注意！

板金部品の端部の『バリ』は、部品製造時に充分管理をしておりませんが、板金端面は鋭利となっている箇所がありますので、部品端面に触れたまま指を動かすとまれに怪我をする場合がございますので十分注意して作業して下さい。手の保護のために手袋を着用して下さい。

指定部品の使用！

セットの部品は難燃性や耐電圧など安全上の特性を持ったものとなっております。従って交換部品は、使用されていたものと同じ特性の部品を使用してください。特に配線図、部品表に \triangle 印で指定されている安全上重要な部品は必ず指定のものをご使用ください。

部品の取付けや配線の引きまわしは、元どおりに！

安全上、テープやチューブなどの絶縁材料を使用したり、プリント基板から浮かして取付けた部品があります。また内部配線は引きまわしやクランプバーによって発熱部品や高圧部品に接近しないように配慮されていますので、これらは必ず元どおりにして下さい。

注意 サービス、点検時にはつきのご注意願います。

サービス後は安全

サービスのために取り除いた状態になっているか、また残ってしまったりしたところがないかと、電源プラグの刃の間隔と全性が確保されていることを

(絶縁チェックの方法) 電源コンセントから電源プラグなどを外し、電源スイッチを閉じて、電源プラグの刃の間隔とテナ端子、ヘッドホン端子の間隔、絶縁抵抗値が正しいかどうかを確認してください。この値以下の場合は

注意

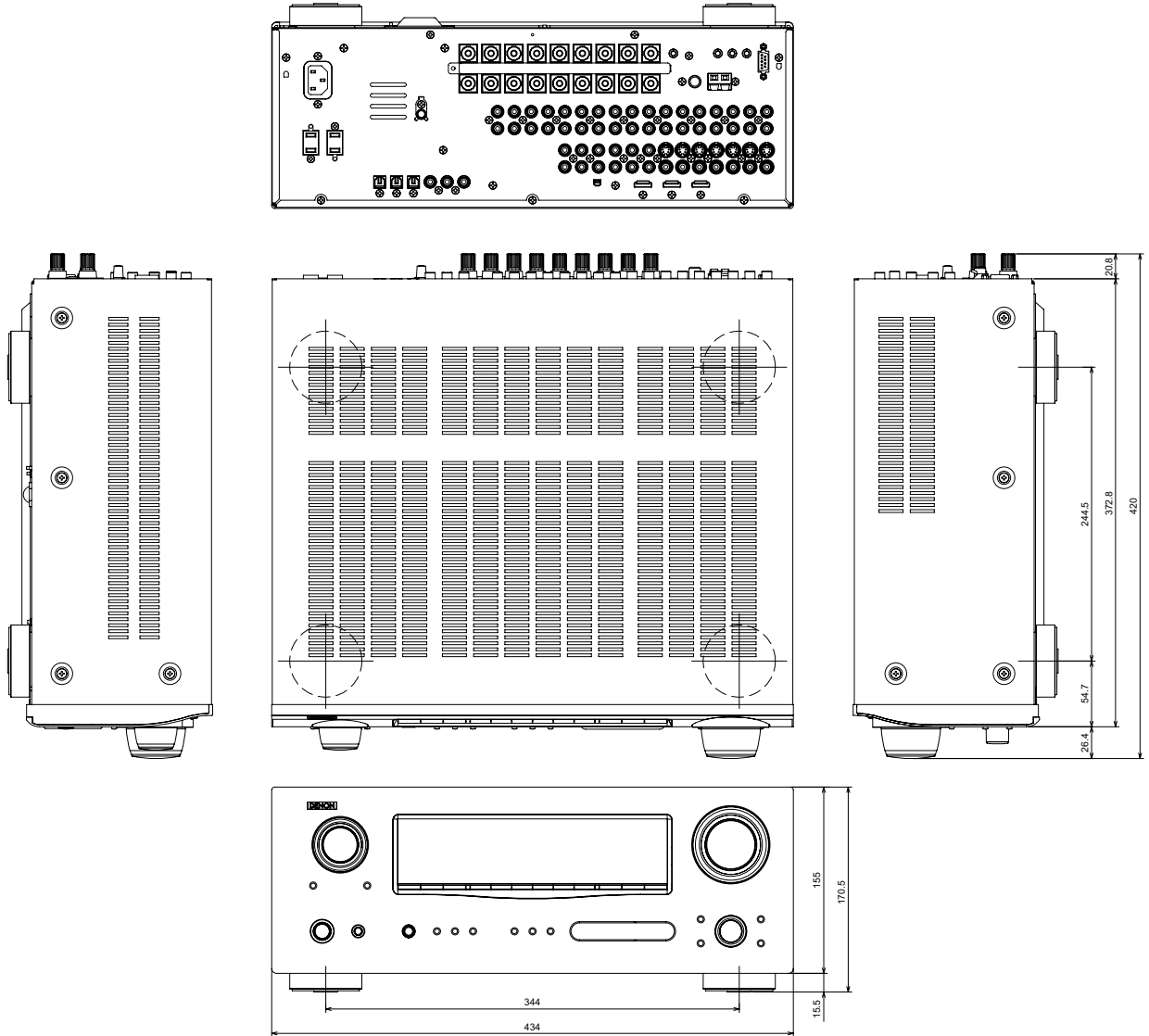
安全上

本機に使用している多くの上、特別な特性を持っていない外観では判別つきにくく、規格電力、耐圧)を持っていないと、限りません。また、サービスマニュアルの通りです。

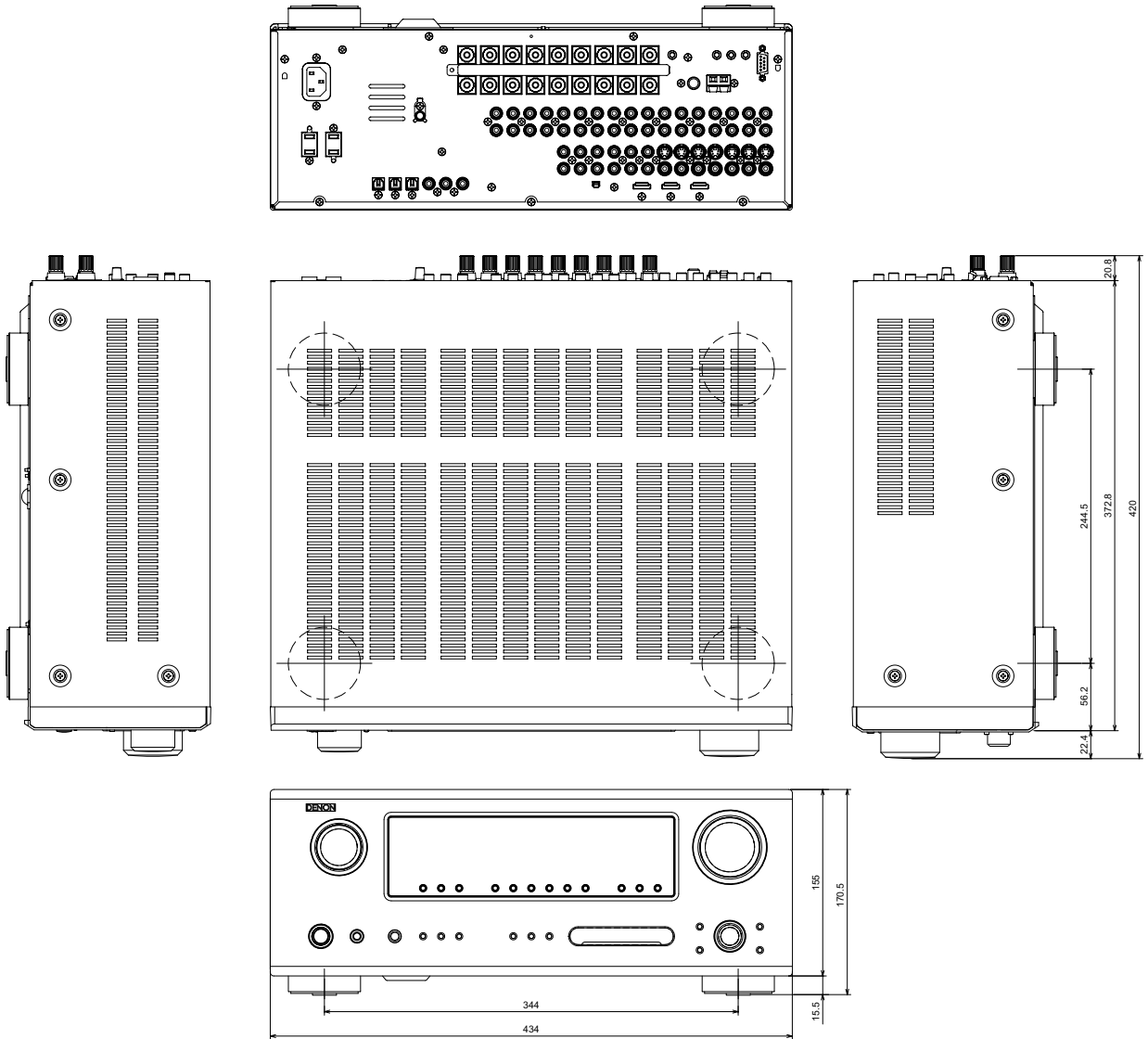
- (1) 配線図... \triangle マークで
- (2) 部品表... \triangle マークで指定された部品は、感電、

DIMENSION

AVR-2308CI / AVR-2308 / AVC-2308 model



AVR-888 model



WIRE ARRANGEMENT

If wire bundles are untied or moved to perform adjustment or parts replacement etc., be sure to rearrange them neatly as they were originally bundled or placed afterward. Otherwise, incorrect arrangement can be a cause of noise generation.

Wire arrangement viewed from the top

ワイヤー整形図

調整や部品の交換等により、ワイヤー類の結束をはずしたり移動させた場合には、それらの作業が完了した時点でワイヤーの整形をおこなってください。正しく整形されてないとノイズ発生の原因となることがあります。

上面からみたワイヤー整形

Back Panel side



Front Panel side

CAUTION IN SERVICING

Initializing AV SURROUND RECEIVER/AMPLIFIER

AV SURROUND RECEIVER/AMPLIFIER initialization should be performed when the μ com, peripheral parts of μ com, and Digital P.W.B. are replaced.

1. Switch off the unit.
2. Hold the following SPEAKERS-A button and SPEAKERS-B button, and switch on the unit.
3. Check that the entire display is flashing with an interval of about 1 second, and release your fingers from the 2 buttons and the microprocessor will be initialized.

Note: • If step 3 does not work, start over from step 1.

- All user settings will be lost and this factory setting will be recovered when this initialization mode. So make sure to memorize your setting for restoring after the initialization.

サービス時の注意事項

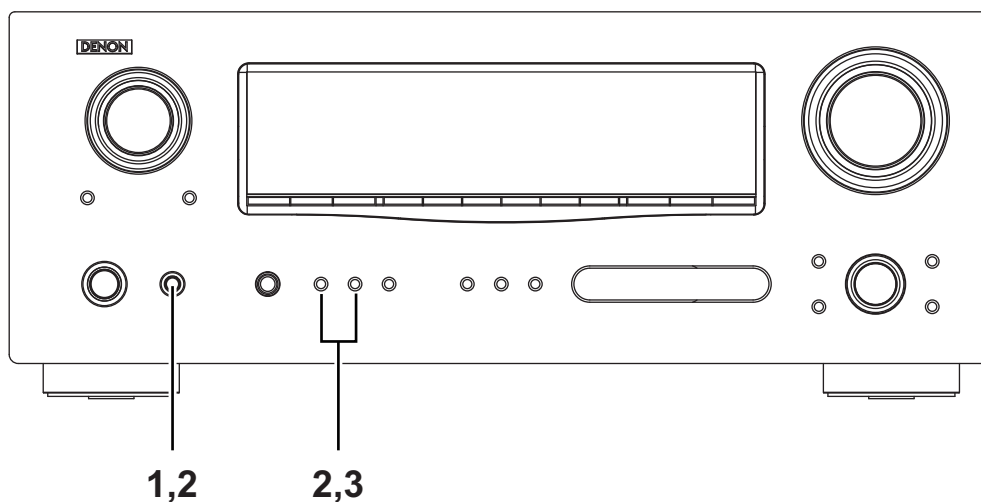
AV サラウンドレシーバー / アンプの初期化について

マイコンやマイコン周辺部品、Digital 基板等を交換した場合は、AV サラウンドレシーバー / アンプの初期化を行って下さい。

1. on/off ボタンを OFF にします。
2. SPEAKERS-A ボタンと SPEAKERS-B ボタンを同時に押しながら、on/off ボタンを押して ON にします。
3. ディスプレイ表示が約 1 秒間隔で点滅するのを確認後、2 つのボタンから指を離します。
*マイコンが初期化されます。

注意: • 上記 3 の状態にならない場合は、もう一度操作 1 からやり直してください。

- 初期化を行うとお客様が設定した内容が工場出荷状態に戻りますので、あらかじめ設定内容を控えておき初期化後再設定してください。



JIG to use for servicing

When you repair the printing board, you can use the following JIG (Extention cable kit). Please order to Denon Official Service Distributor in your region if necessary.

00D SPK- 561 EXTENSION UNIT KIT : 1 Set
00D SPK- 562 TUCP CONN. JOINT KIT : 1 Set

サービス時に使用する治具について

基板を修理する際、使用する治具（延長ケーブルキット）は下記のとおりです。
必要に応じて販社サービスへ注文下さい。

00D SPK- 561 EXTENSION UNIT KIT : 1 式
00D SPK- 562 TUCP CONN. JOINT KIT : 1 式

Units are satisfied at its starting state, error information on sub-μcom version information.

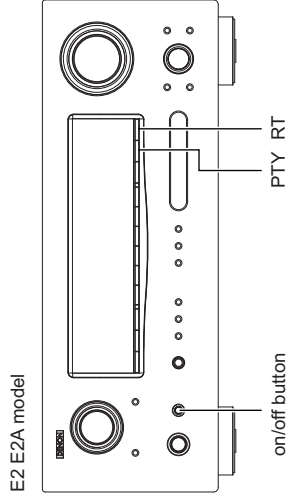
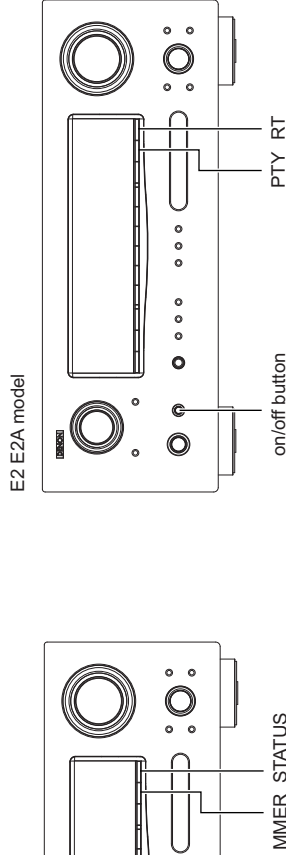
μcom version display):

"STATUS" and "DIMMER", turn on/on/off button.

on to display the following information on the FL Display.

"RT" and "PTY", turn on/on/off button.

to display the following information on the FL Display.



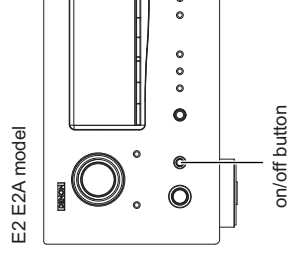
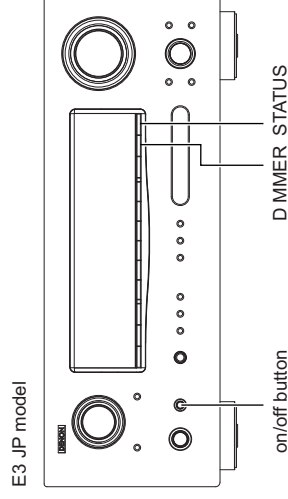
起動方法 (マイコンバージョン表示と同様):

● E3,JP モデル

"STATUS", "DIMMER" の 2 つのボタンを押した状態で、on/off ボタンを押して電源を入れその後、"STATUS" ボタンを押すと下表の内容が FL Display に表示されます。

● E2,E2A モデル

"RT", "PTY" の 2 つのボタンを押した状態で、on/off ボタンを押して電源を入れその後、"PTY" ボタンを押すと下表の内容が FL Display に表示されます。



information → Main-μcom version information → Sub-μcom version information

2. 表示順序

エラー情報 → 仕向地表示 → メインマイコンバージョン情報 → サブマイコンバージョン

3. 表示条件

下表のいずれかを表示します。表示の優先順は、①②③④。

State	Display
Power on from Sub-μcom	" SUB □ □ ERROR □ 0 1 □ "
Power on from DIR	" DIR □ □ ERROR □ 0 1 □ "
Power boot, executing DSP reset makes no change to BUSY port "L".	" DSP 1 □ ERROR □ 0 1 □ "
Power boot, executing DSP reset makes no change to BUSY port "L".	" DSP 1 □ ERROR □ 0 2 □ "
Power data read, executing WRITE="L" makes no change to ACK="H".	" DSP 1 □ ERROR □ 0 3 □ "
Power data read, executing REQ="L" makes no change to ACK="L".	" DSP 1 □ ERROR □ 0 4 □ "
Power data write, executing WRITE="H" makes no change to ACK="H".	" DSP 1 □ ERROR □ 0 5 □ "
Power data write, executing REQ="L" makes no change to ACK="L".	" DSP 1 □ ERROR □ 0 6 □ "
Power special code boot, executing DSP reset makes no change to BUSY port "L".	" DSP 1 □ ERROR □ 1 1 □ "
Power special code boot, executing DSP reset makes no change to BUSY port "L" before issuing DSP special read command.	" DSP 1 □ ERROR □ 1 2 □ "
Power special code boot, executing DSP reset makes no change to BUSY port "L" before issuing DSP version read.	" DSP 1 □ ERROR □ 1 3 □ "

条件	状態
① SUBマイコンがNG	SUBマイコンからの応答がない
② DIRがNG	DIRからの応答がない
③ DSP 1がNG	DSP コードブート時、DSP リセットを実行しても BUSY ポートが "L" にならない DSP コマンド発行前に、BUSY ポートが "L" にならない DSP データリード時、WRITE="L" としても ACK="H" とならない DSP データリード時、REQ="L" としても ACK="L" とならない DSP データライト時、WRITE="H" としても ACK="H" とならない DSP データライト時、REQ="L" としても ACK="L" とならない DSP スペシャルコードブート時、DSP リセットを実行しても BUSY ポートが "L" にならない DSP スペシャルリードコマンド発行前に、BUSY ポートが "L" にならない

ADJUSTMENT

Audio Section

Idling Current (1U-3854-1)

Required measurement equipment: DC Voltmeter

Preparation

- (1) Avoid direct blow from an air conditioner or an electric fan, and adjust the unit at normal room temperature 15°C ~ 30°C (59°F ~ 86°F).
- (2) Presetting

POWER (Power source switch)	OFF
SPEAKER (Speaker terminal)	No load

 (Do not connect speaker, dummy resistor, etc.)

Adjustment

- (1) Remove top cover and set VR401, VR402, VR403, VR404, VR405, VR406, VR407, on 1U-3854-1 (Power Amp Unit) at fully counterclockwise (⊖).
- (2) Connect DC Voltmeter to test points (FRONT-Lch: CX063 ③ ④ pin, FRONT-Rch: CX063 ① ② pin, CENTER ch: CX063 ⑤ ⑥ pin, SURROUND-Lch: TP102 ③ ④ pin, SURROUND-Rch: CX082 ① ② pin, SURROUND BACK-Lch: CX082 ⑦ ⑧ pin, SURROUND BACK-Rch: CX082 ⑤ ⑥ pin).
- (3) Connect power cord to AC Line, and turn power switch "ON".
- (4) Presetting.

MASTER VOLUME	: "----" counterclockwise (⊖ min.)
MODE	: 7CH STEREO
FUNCTION	: CD
- (5) Allow 2 minutes, and turn VR401 clockwise (⊕) to adjust the TEST POINT voltage to 6.5 mV ± 0.5 mV DC.
- (6) After 10 minutes from preset, turn VR401 to set the voltage to 8 mV ± 0.5 mV DC.
- (7) Adjust the Variable Resistors of other channels in the same way.
- (8) After 5 minutes from (6), turn VR401 to set the voltage to 8 mV ± 0.5 mV DC.
- (9) Adjust the Variable Resistors of other channels in the same way.

調整

オーディオセクション

アイドリング電流の調整 (1U-3854-1)

調整に必要な測定器：DC Voltmeter

準備

- (1) セットをクーラ、扇風機のそばなど風通しの良い場所を避け、通常の使用状態に置きます。セットの周囲温度は 15 ~ 30 °C、湿度は常湿とします。
- (2) プリセット

電源スイッチ	OFF
スピーカ端子	無負荷

 (スピーカ・ダミー抵抗器などを接続しない。)

調整

- (1) 上カバーをはずし、1U-3854-1 (パワーアンプユニット) の VR401、VR402、VR403、VR404、VR405、VR406、VR407 を反時計方向 (⊖) に回し切った状態にセットします。
- (2) テストポイント (FRONT-Lch: CX063 ③ ④ pin、FRONT-Rch: CX063 ① ② pin、CENTER ch: CX063 ⑤ ⑥ pin、SURROUND-Lch: CX082 ③ ④ pin、SURROUND-Rch: CX082 ① ② pin、SURROUND BACK-Lch: CX082 ⑦ ⑧ pin、SURROUND BACK-Rch: CX082 ⑤ ⑥ pin) に DC Voltmeter を接続します。
- (3) 電源コードを AC 電源に接続し、電源スイッチを "ON" にします。
- (4) ON 後、次のようにセットします。

MASTER VOLUME (音量調節つまみ)	→反時計方向 (⊖) に回す、最小の状態にします。
SPEAKER (スピーカ端子)	→無負荷 (スピーカ、ダミー抵抗器などを接続しない。)
MODE	: 7CH STEREO
FUNCTION	: CD
- (5) 2 分以内に VR401 を時計方向 (⊕) に回しテストポイントの電圧を次のように調整します。

6.5 mV ± 0.5 mV DC

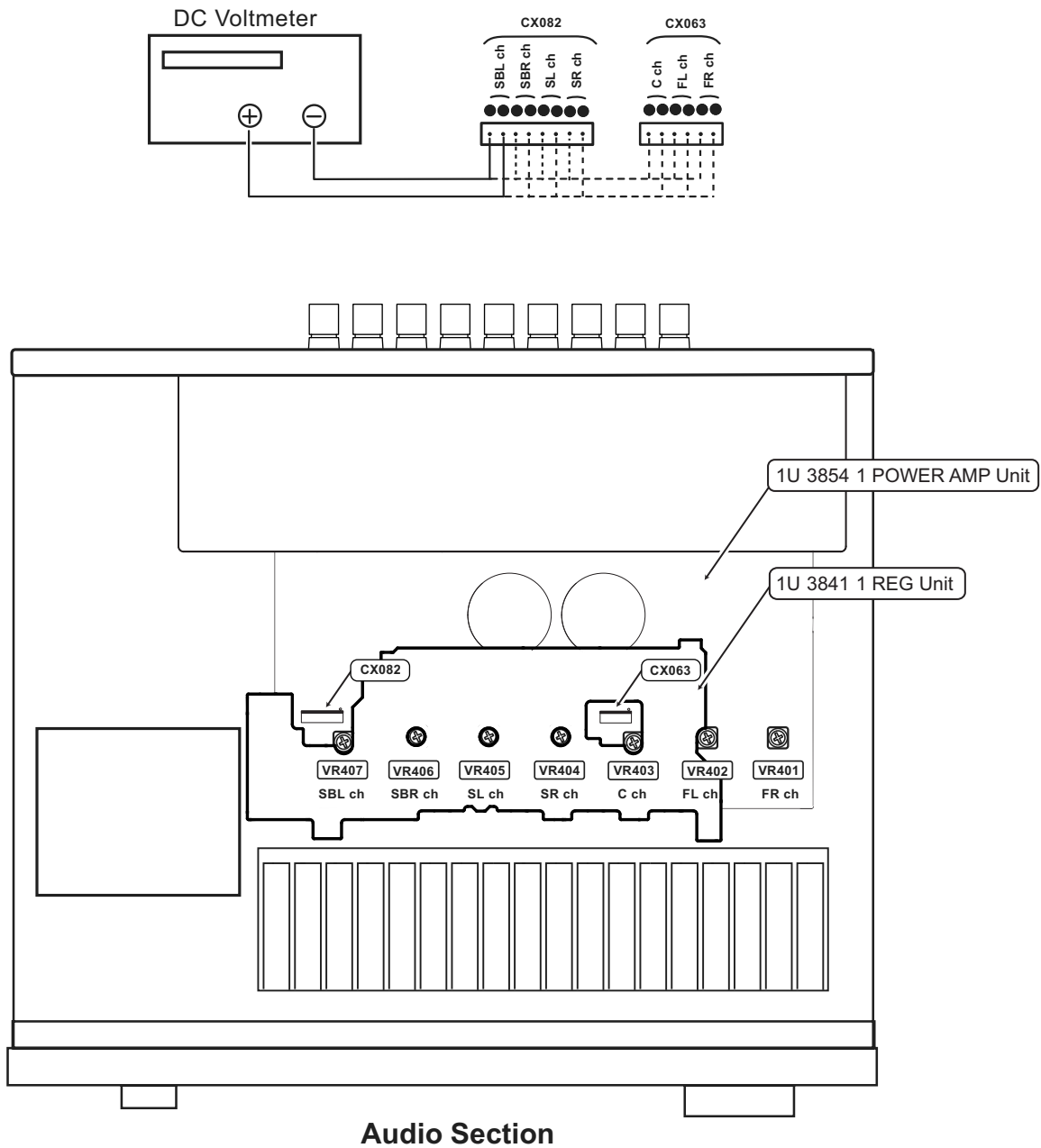
- (6) 予備調整から 10 分後に VR401 を回し、次のように電圧を設定します。

8 mV ± 0.5 mV DC

- (7) 同じ方法で各チャンネルの可変抵抗を調整します。
- (8) (6) 項設定から 5 分後 VR401 を回し、次のように電圧を設定します。

8 mV ± 0.5 mV DC

- (9) 同じ方法で各チャンネルの可変抵抗を調整します。



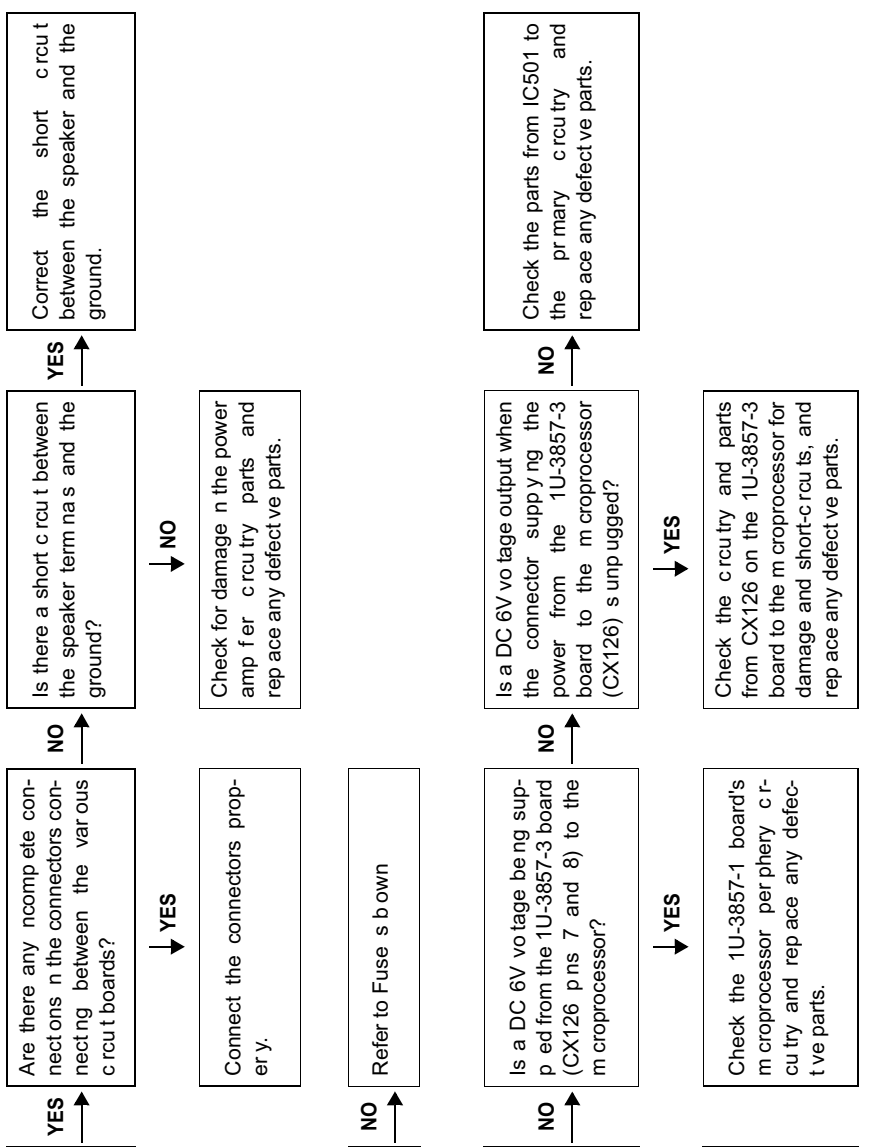
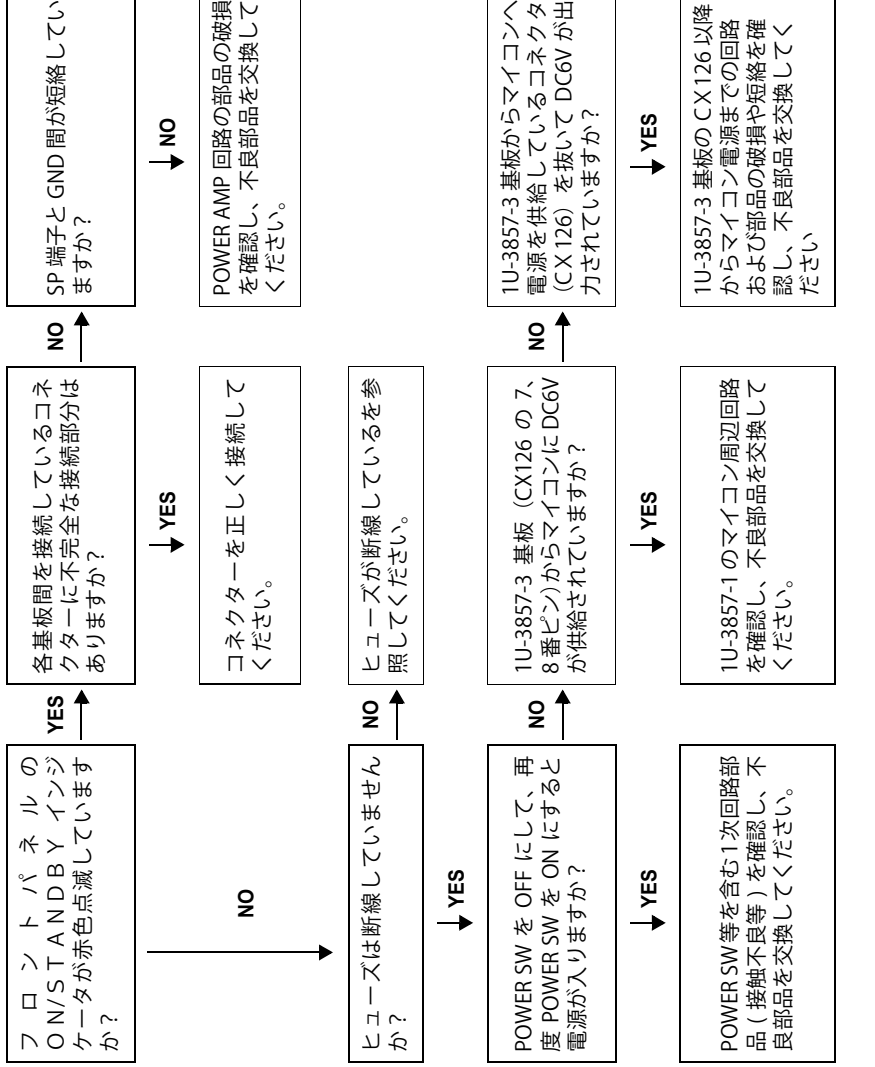
Audio Section

The adjustment volume and connection terminal of 1U-3854-1 (POWER AMP Unit)P.W.B. under 1U-3841-1 (REG Unit)P.W.B..

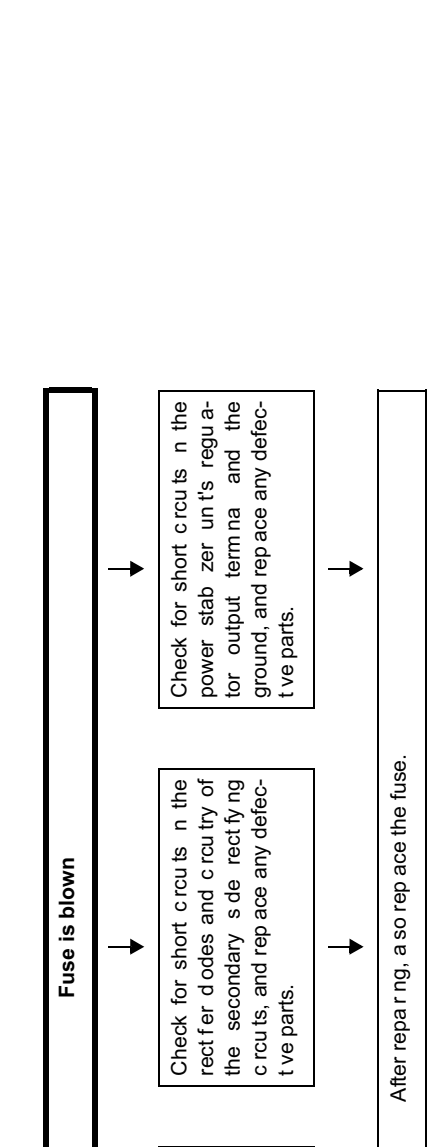
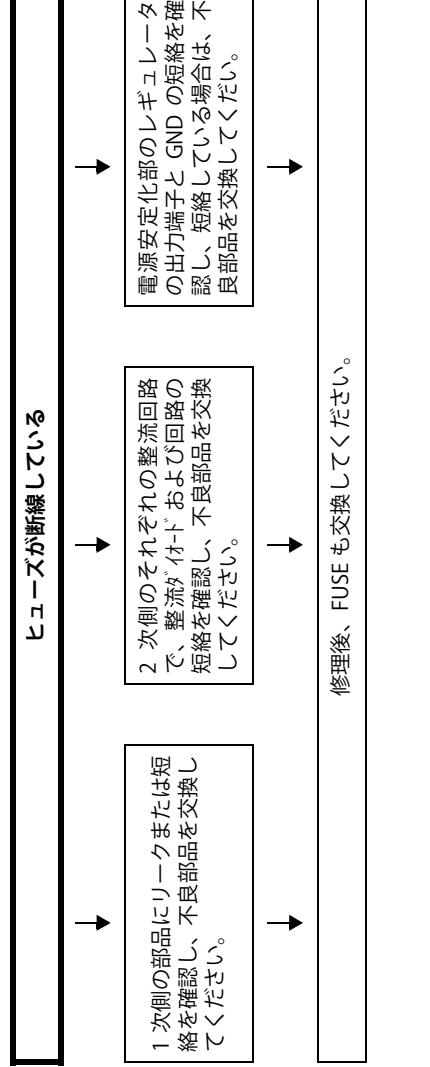
1U-3854-1(POWER AMP Unit) 基板の調整ボリュームと接続端子は 1U-3841-1(REG Unit) 基板の下に有ります。

Insert an adjustment driver / connection terminal from an adjustment aperture of 1U-3841-1 (REG Unit)P.W.B..

1U-3841-1(REG Unit) 基板の調整孔から調整ドライバー / 接続端子を挿入してください。



1.2. ヒューズが断線している



(COMPONENT input)

Check ng the v deo convert ON/OFF sett ngs

Video convert ON

Video convert OFF

Input S

Input COMPONENT

B ^

Inter ace
or
Progress ve

Inter ace
C ^

Progress ve
no output

Input CVBS

D

Input S

Input COMPONENT

No output

No output

ビデオコンバートON/OFFの設定確認

ビデオコンバートON

ビデオ

入力 CVBS

A ^

入力 S

B ^

入力 COMPONENT

インターレース
or
プログレッシブ

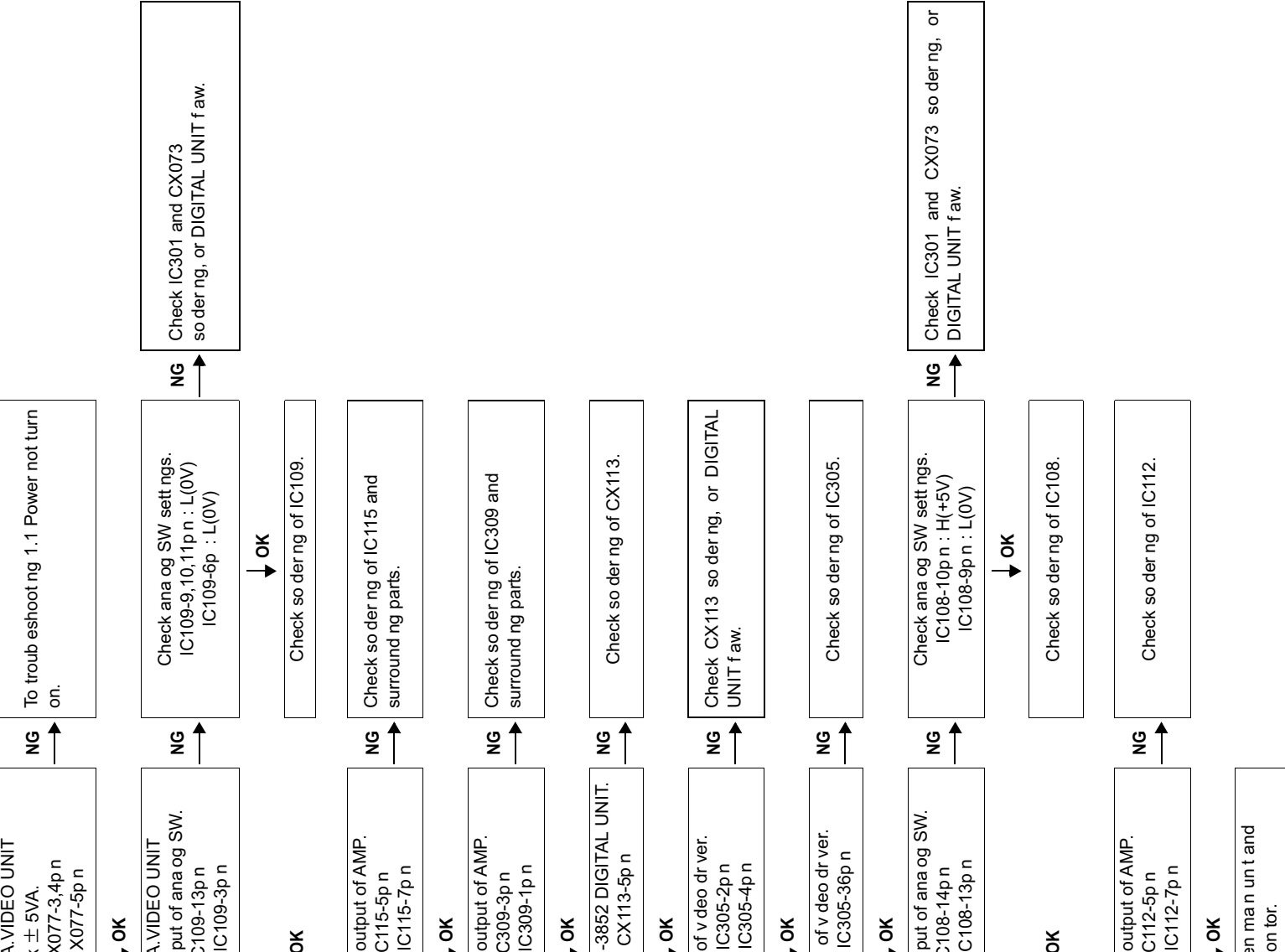
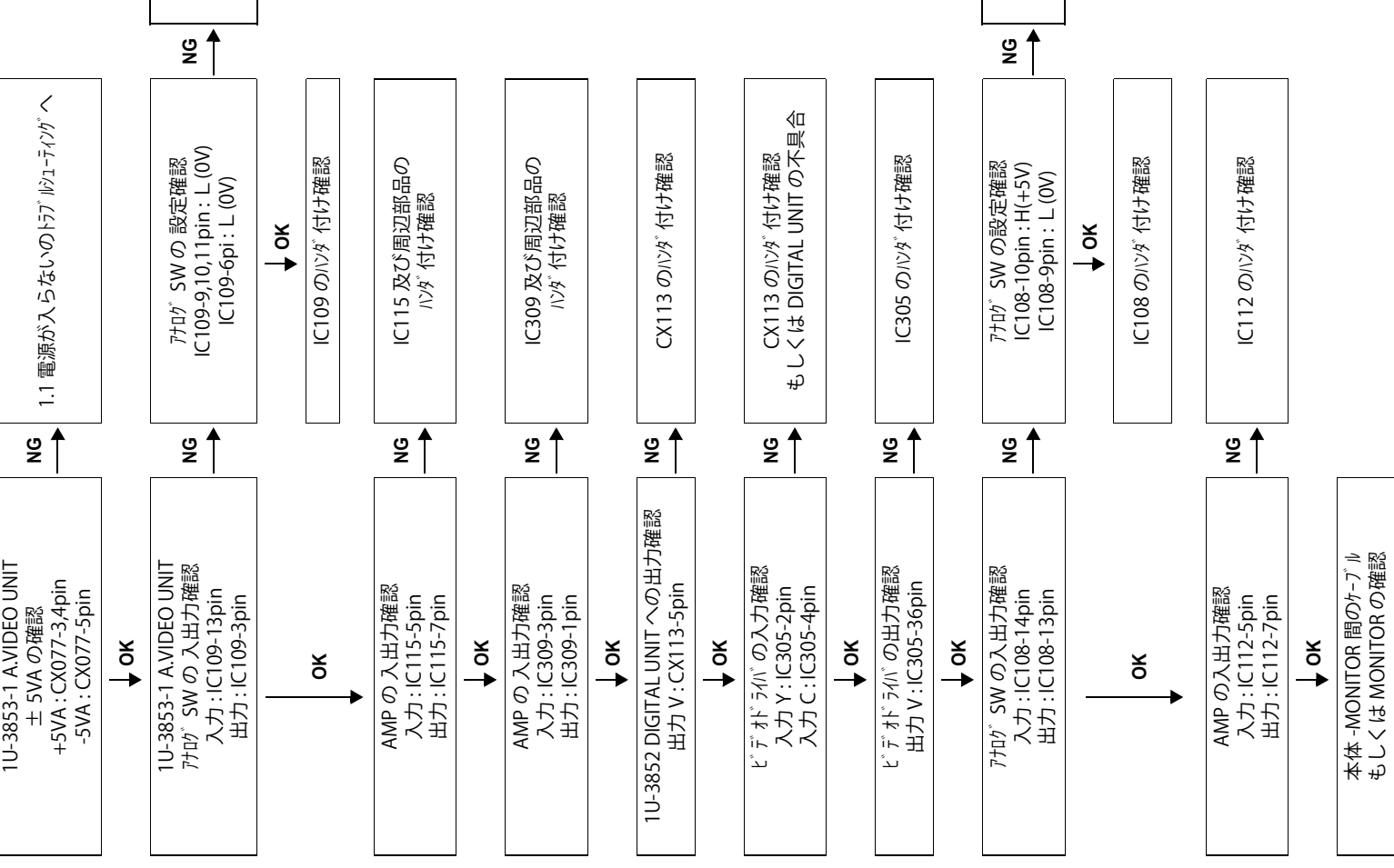
インターレース
C ^

プログレッシブ
出力されません

入力 CVBS

D ^

出



※ 特に記載がない場合は 1U-3853-1 A VIDEO UNIT の新品です

1U-3853-1 A VIDEO UNIT part

1U-3853-1 A.VIDEO UNIT
± 5VA.
+X077-3,4p n
-X077-5p n

NG

To troubleshoot ng 1.1 Power not turn on.

NG

1U-3853-1 A.VIDEO UNIT
± 5VA の確認
+5VA : CX077-3,4pin
-5VA : CX077-5pin

1.1 電源が入らないのトラブルシューティングへ

OK

1U-3853-1 A.VIDEO UNIT
アナログ SW の入出力確認
入力 Y : IC102-13pin
入力 C : IC106-13pin
出力 Y : IC102-3pin
出力 C : IC106-3pin

NG

Check ana og SW sett ngs.
IC102-9,10,11pin : L(0V)
IC102-6pin : L(0V)
IC106-9,10,11pin : L(0V)
IC106-6pin : L(0V)

NG

Check IC301 and CX073
so der ng, or DIGITAL UNIT f aw.

NG

アナログ SW の設定確認
IC102-9,10,11pin : L (0V)
IC102-6pin : L (0V)
IC106-9,10,11pin : L (0V)
IC106-6pin : L (0V)

↓ OK

Check solder ng of C102 and C106

OK

IC102, IC106 のハンダ付け確認

output of AMP.
IC113-5p n
IC114-5p n
出力 Y : IC113-7p n
出力 C : IC114-7p n

NG

Check so der ng of IC113, IC114 and surround ng parts.

NG

AMP の入出力確認
入力 Y : IC113-5pin
入力 C : IC114-5pin
出力 Y : IC113-7pin
出力 C : IC114-7pin

IC113, IC114 及び周辺部品のハンダ付け確認

OK

output of AMP.
IC308-3p n
IC308-5p n
出力 Y : IC308-1p n
出力 C : IC308-7p n

NG

Check so der ng of IC308 and surround ng parts.

NG

AMP の入出力確認
入力 Y : IC308-3pin
入力 C : IC308-5pin
出力 Y : IC308-1pin
出力 C : IC308-7pin

IC308 及び周辺部品のハンダ付け確認

OK

1U-3852 DIGITAL UNIT.
CX113-3p n
CX113-1p n

NG

Check so der ng of CX113.

NG

1U-3852 DIGITAL UNIT への出力確認
出力 Y : CX113-3pin
出力 C : CX113-1pin

CX113 のハンダ付け確認

OK

output of video driver.
IC305-2p n
IC305-4p n

NG

Check CX113 so der ng, or DIGITAL UNIT f aw.

NG

ビデオドライバの入力確認
入力 Y : IC305-2pin
入力 C : IC305-4pin

CX113 のハンダ付け確認
もしくは DIGITAL UNIT の不具合

OK

output of video driver.
IC305-36p n

NG

Check so der ng of IC305.

NG

ビデオドライバの出力確認
出力 V : IC305-36pin

IC305 のハンダ付け確認

OK

output of ana og SW.
IC108-14p n
C108-13p n

NG

Check ana og SW sett ngs.
IC108-10p n : H(+5V)
IC108-9p n : L(0V)

NG

Check IC301 and CX073 so der ng, or DIGITAL UNIT f aw.

NG

アナログ SW の入出力確認
入力 : IC108-14pin
出力 : IC108-13pin

アナログ SW の設定確認
IC108-10pin : H(+5V)
IC108-9pin : L (0V)

↓ OK

Check so der ng of IC108.

OK

IC108 のハンダ付け確認

output of AMP.
IC112-5p n
IC112-7p n

NG

Check so der ng of IC112.

NG

AMP の入出力確認
入力 : IC112-5pin
出力 : IC112-7pin

IC112 のハンダ付け確認

A.VIDEO UNIT

± 5VA.

X077-3,4p n

X077-5p n

OK

Component

C501-48p n

IC501-2p n

IC501-4p n

IC501-34p n

IC501-32p n

IC501-30p n

OK

output of AMP.

IC503-1p n

IC503-3p n

IC503-5p n

IC503-13p n

IC503-11p n

IC503-9p n

OK

1U-3852 DIGITAL UNIT.

CX112-3p n

CX112-1p n

CX112-5p n

output of video driver.

IC305-2p n

IC305-4p n

OK

output of video driver.

IC305-36p n

OK

output of analog SW.

IC108-14p n

IC108-13p n

OK

output of AMP.

IC112-5p n

IC112-7p n

OK

To troubleshoot ng 1.1 Power not turn on.

NG

Check IC501, CX112 and CX155 so der ng, or DIGITAL UNIT faw.

NG

Check AMP sett ngs. IC503-7p n : H(+5V)

NG

Check so der ng of IC503 and surround ng parts.

OK

Check so der ng of CX112.

NG

Check CX112 so der ng, or DIGITAL UNIT faw.

NG

Check so der ng of IC305.

NG

Check analog SW sett ngs. IC108-10p n : H(+5V) IC108-9p n : L(0V)

NG

Check so der ng of IC108.

OK

Check so der ng of IC112.

NG

1U-3853-1 A.VIDEO UNIT

± 5VA の確認

+5VA : CX077-3,4pin

-5VA : CX077-5pin

OK

COMPONENT チェックの入出力確認

入力 Y : IC501-48pin

入力 Cb : IC501-2pin

入力 Cr : IC501-4pin

出力 Y : IC501-34pin

出力 Cb : IC501-32pin

出力 Cr : IC501-30pin

OK

AMP の入出力確認

入力 Y : IC503-1pin

入力 Cb : IC503-3pin

入力 Cr : IC503-5pin

出力 Y : IC503-13pin

出力 Cb : IC503-11pin

出力 Cr : IC503-9pin

OK

1U-3852 DIGITAL UNIT への出力確認

出力 Y : CX112-3pin

出力 Cb : CX112-1pin

出力 Cr : CX112-5pin

NG

ビデオドライバの入力確認

入力 Y : IC305-2pin

入力 C : IC305-4pin

NG

ビデオドライバの出力確認

出力 V : IC305-36pin

NG

アナログ SW の入出力確認

入力 : IC108-14pin

出力 : IC108-13pin

NG

AMP の入出力確認

入力 : IC112-5pin

出力 : IC112-7pin

NG

本体-MONITOR 間のケーブル

1.1 電源が入らないのトラブルシューティングへ

NG

IC501, CX112, CX155 のハンダ付け確認
もしくは、DIGITAL UNIT の不具合

NG

NG

AMP の設定確認
IC503-7pin : H(+5V)

NG

OK

IC503 及び周辺部品のハンダ付け確認

OK

CX112 のハンダ付け確認

NG

CX112 のハンダ付け確認
もしくは DIGITAL UNIT の不具合

NG

IC305 のハンダ付け確認

NG

アナログ SW の設定確認
IC108-10pin : H(+5V)
IC108-9pin : L(0V)

NG

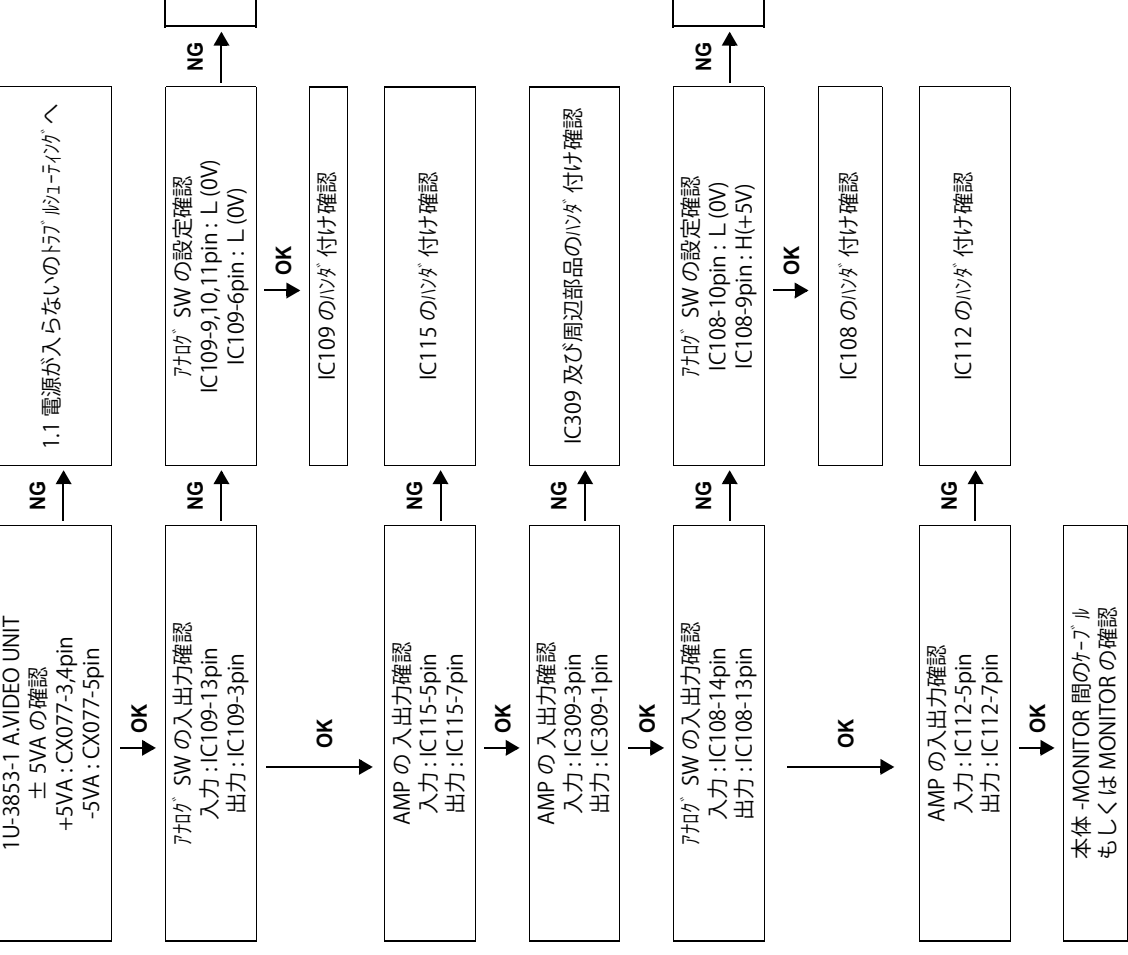
OK

IC108 のハンダ付け確認

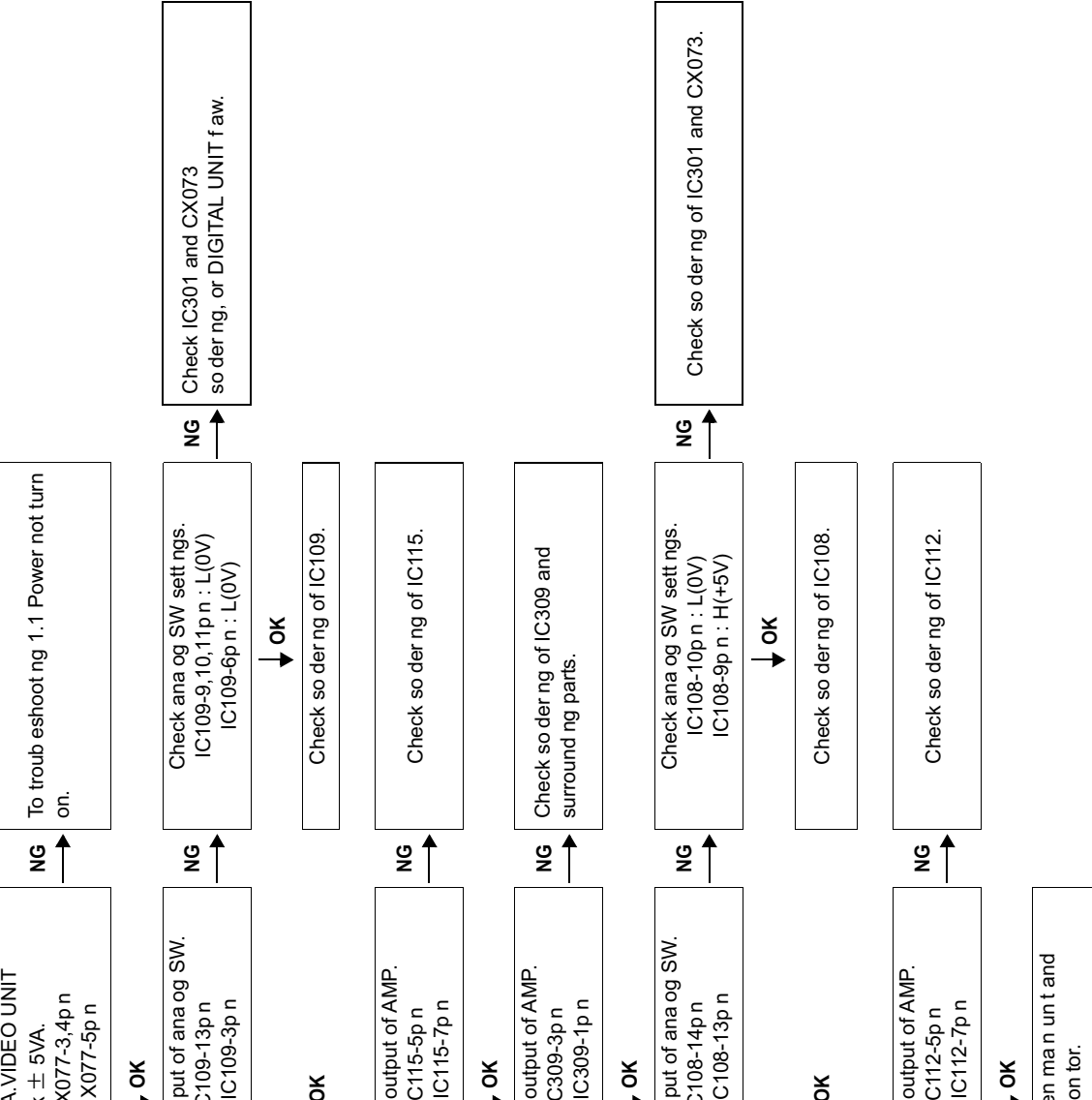
OK

IC112 のハンダ付け確認

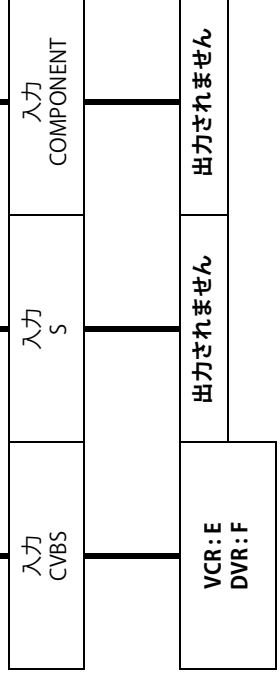
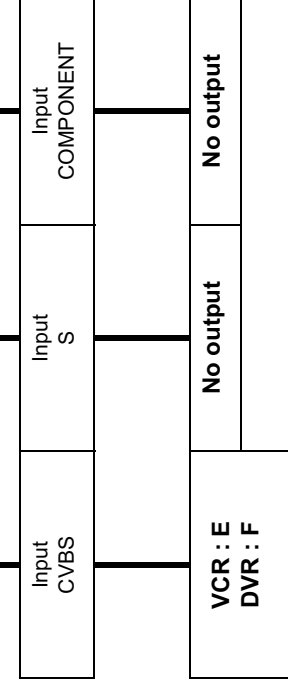
NG

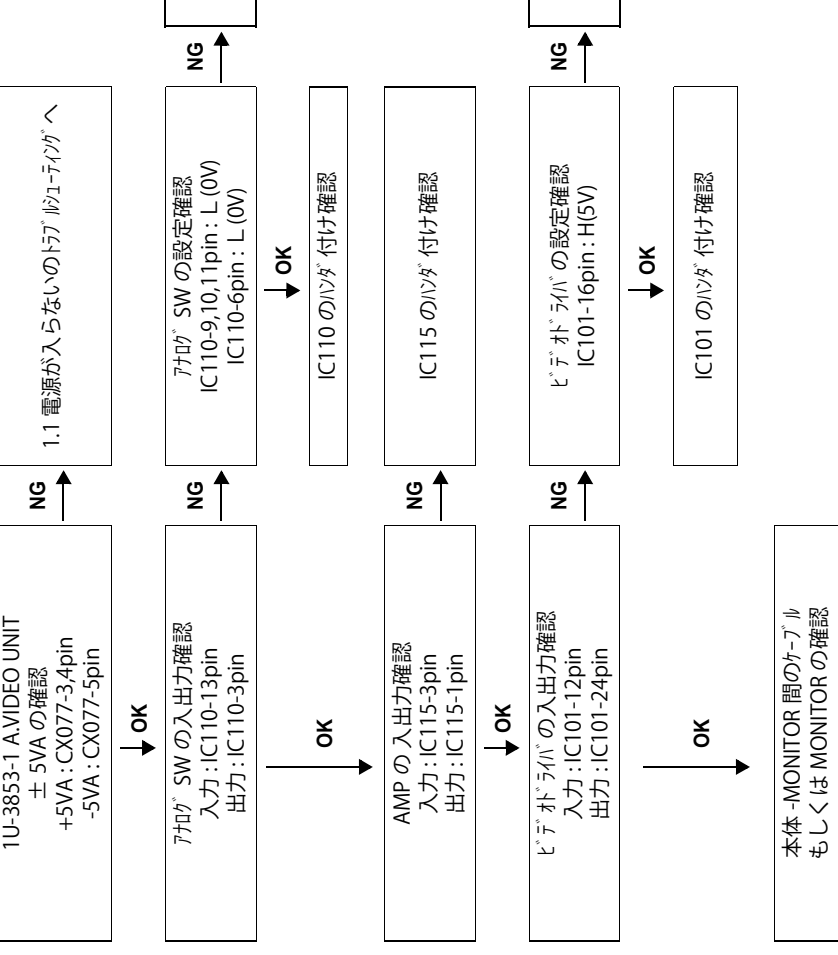


※ 特に記載がない場合は 1U-3853-1 A.VIDEO UNIT の部品です。

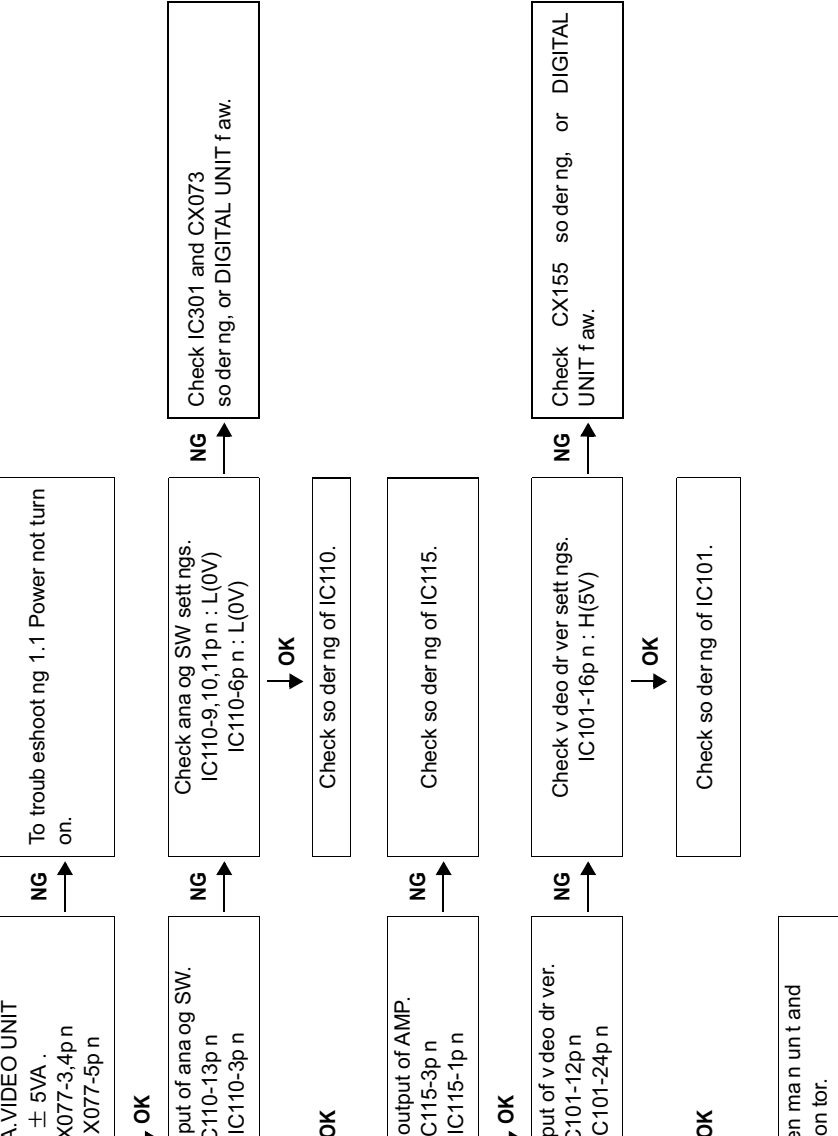


※ 特に記載がない場合は 1U-3853-1 A.VIDEO UNIT part.

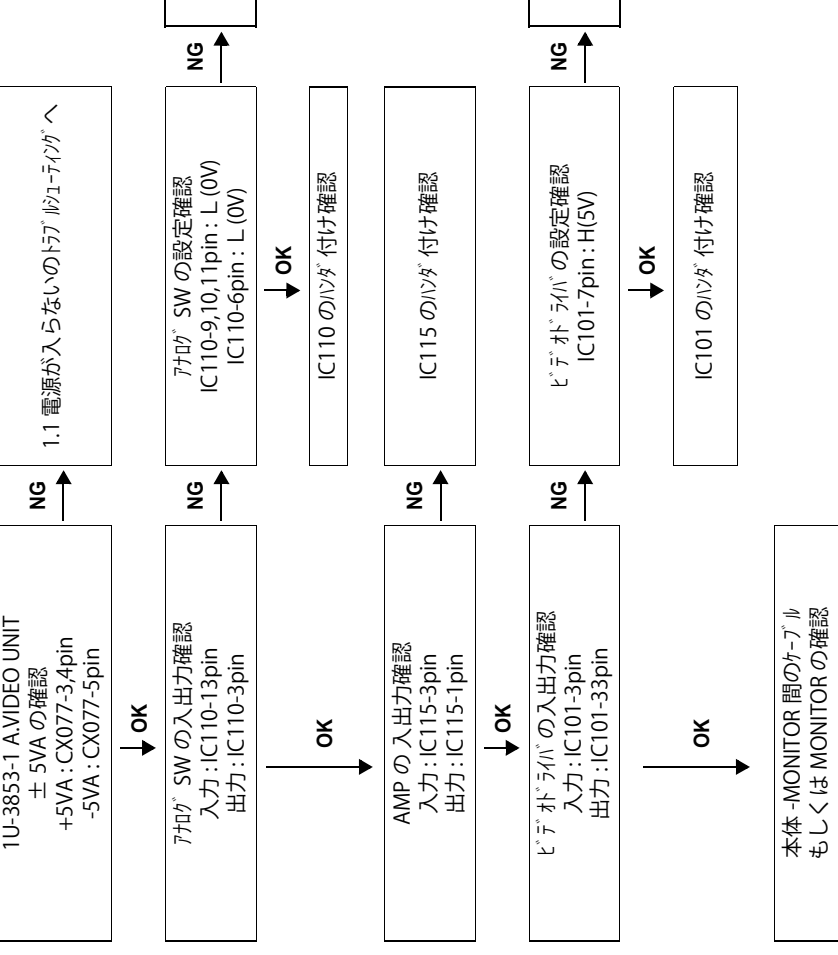




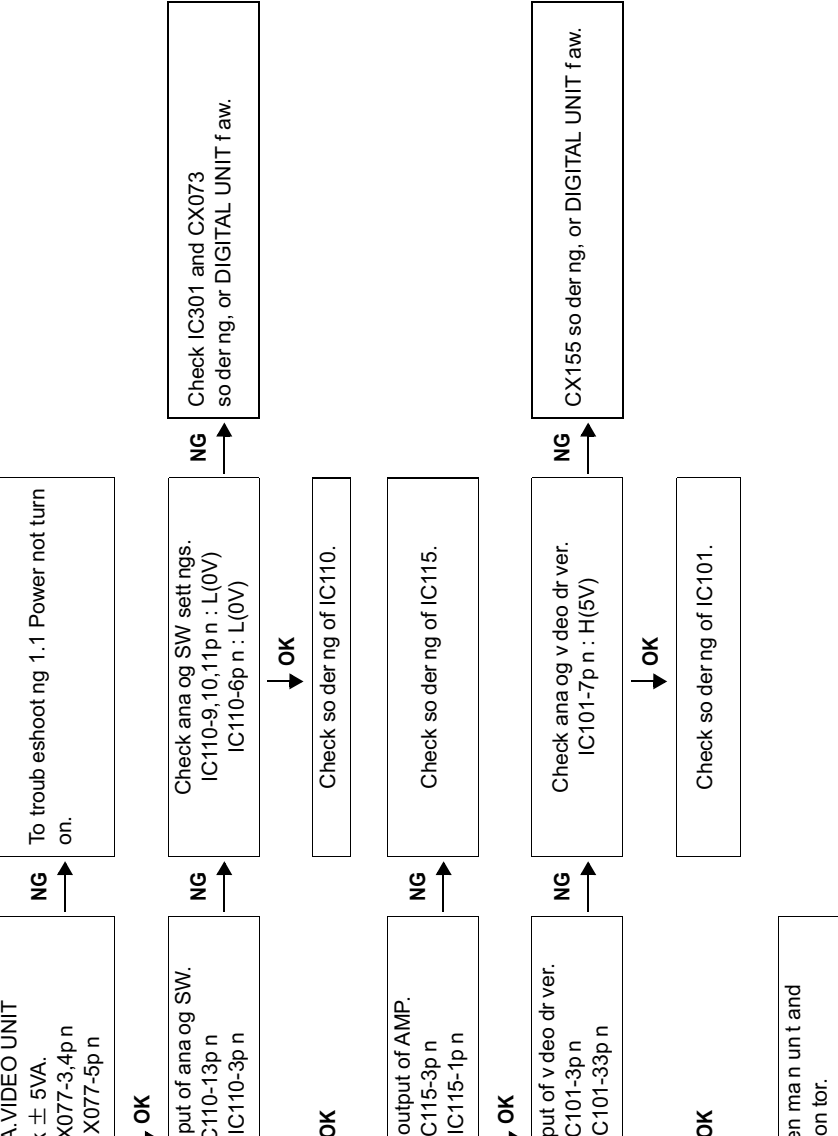
※ 特に記載がない場合は 1U-3853-1 A.VIDEO UNIT の部品です。



※ 特に記載がない場合は 1U-3853-1 A.VIDEO UNIT part.



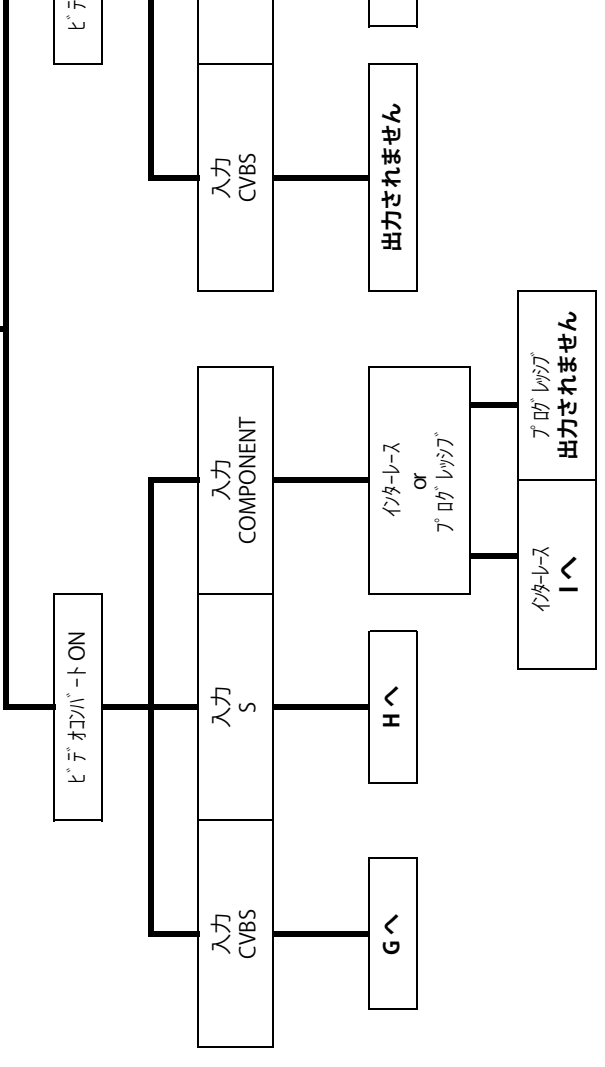
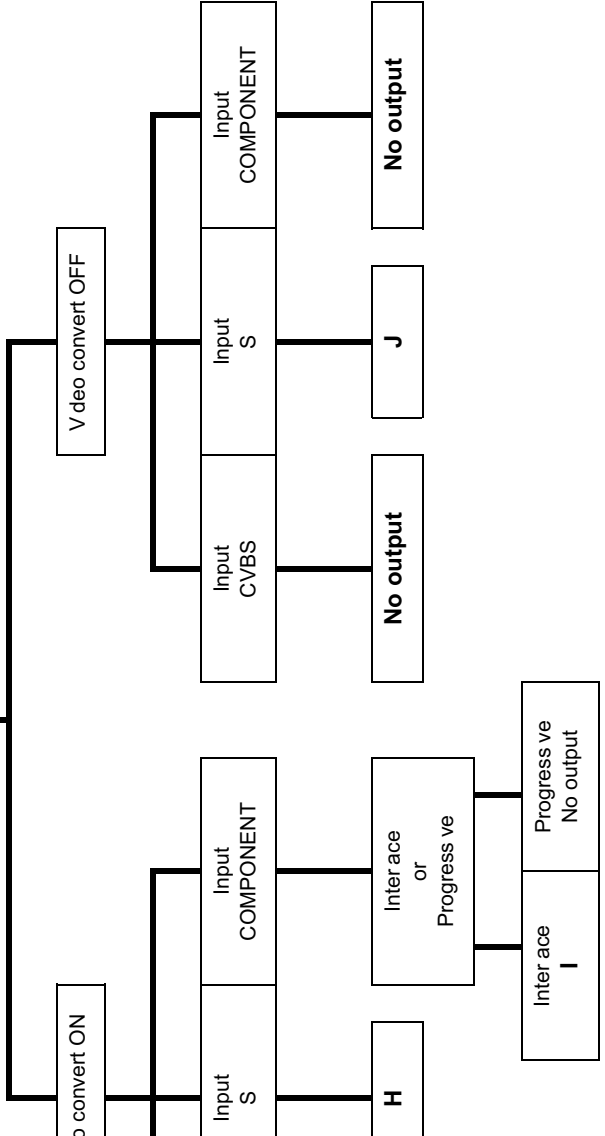
※ 特に記載がない場合は 1U-3853-1 A.VIDEO UNIT の部品です。



※ 特に記載がない場合は 1U-3853-1 A.VIDEO UNIT part.

Check the video convert ON/OFF settings

ビデオコンバートON/OFFの設定を確認



ビデオコンバートON

Video convert OFF

Input COMPONENT

Inter ace
or
Progress ve

Inter ace
I

Progress ve
No output

Input S

H

Input CVBS

No output

ビデオコンバートON

Input COMPONENT

Inter-レース
or
プログレッシング

Inter-レース
I ^

プログレッシング
出力されません

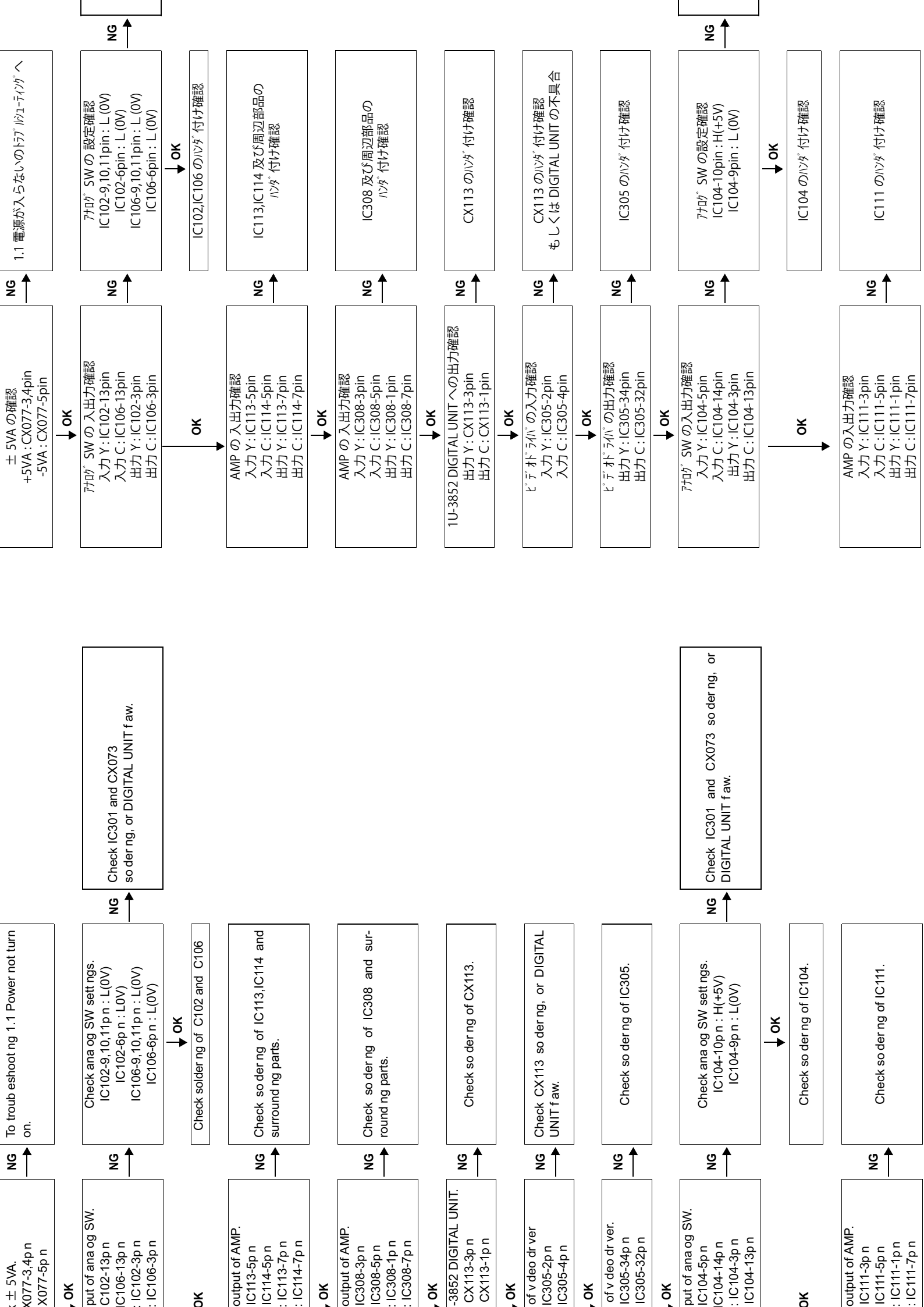
Input S

H ^

Input CVBS

G ^

No output



± 5VA.
CX077-3,4p n
CX077-5p n

OK
put of ana og SW.
C102-13p n
IC106-13p n
IC102-3p n
IC106-3p n

OK
Check solder ng of C102 and C106

NG
output of AMP.
IC113-5p n
IC114-5p n
IC113-7p n
IC114-7p n

OK
output of AMP.
IC308-3p n
IC308-5p n
IC308-1p n
IC308-7p n

OK
-3852 DIGITAL UNIT.
CX113-3p n
CX113-1p n

OK
of v deo dr ver.
IC305-2p n
IC305-4p n

OK
of v deo dr ver.
IC305-34p n
IC305-32p n

OK
put of ana og SW.
IC104-5p n
IC104-14p n
IC104-3p n
IC104-13p n

OK
Check so der ng of IC104.

OK
output of AMP.
IC111-3p n
IC111-5p n
IC111-1p n
IC111-7p n

NG
± 5VA の確認
+5VA: CX077-3,4pin
-5VA: CX077-5pin

OK
アンプ SW の 入出力確認
入力 Y: IC102-13pin
入力 C: IC106-13pin
出力 Y: IC102-3pin
出力 C: IC106-3pin

OK
IC102,IC106 のハンダ 付け確認

NG
AMP の 入出力確認
入力 Y: IC113-5pin
入力 C: IC114-5pin
出力 Y: IC113-7pin
出力 C: IC114-7pin

OK
AMP の 入出力確認
入力 Y: IC308-3pin
入力 C: IC308-5pin
出力 Y: IC308-1pin
出力 C: IC308-7pin

OK
1U-3852 DIGITAL UNIT への出力確認
出力 Y: CX113-3pin
出力 C: CX113-1pin

OK
ビデオドライブの入力確認
入力 Y: IC305-2pin
入力 C: IC305-4pin

OK
ビデオドライブの出力確認
出力 Y: IC305-34pin
出力 C: IC305-32pin

OK
アンプ SW の入出力確認
入力 Y: IC104-5pin
入力 C: IC104-14pin
出力 Y: IC104-3pin
出力 C: IC104-13pin

OK
IC104 のハンダ 付け確認

OK
AMP の入出力確認
入力 Y: IC111-3pin
入力 C: IC111-5pin
出力 Y: IC111-1pin
出力 C: IC111-7pin

NG
1.1 電源が入らないのトラブルシューティングへ

OK
アンプ SW の 設定確認
IC102-9,10,11pin: L (0V)
IC102-6pin: L (0V)
IC106-9,10,11pin: L (0V)
IC106-6pin: L (0V)

OK
IC102,IC106 のハンダ 付け確認

OK
IC113,IC114 及び周辺部品のハンダ 付け確認

OK
IC308 及び周辺部品のハンダ 付け確認

OK
CX113 のハンダ 付け確認

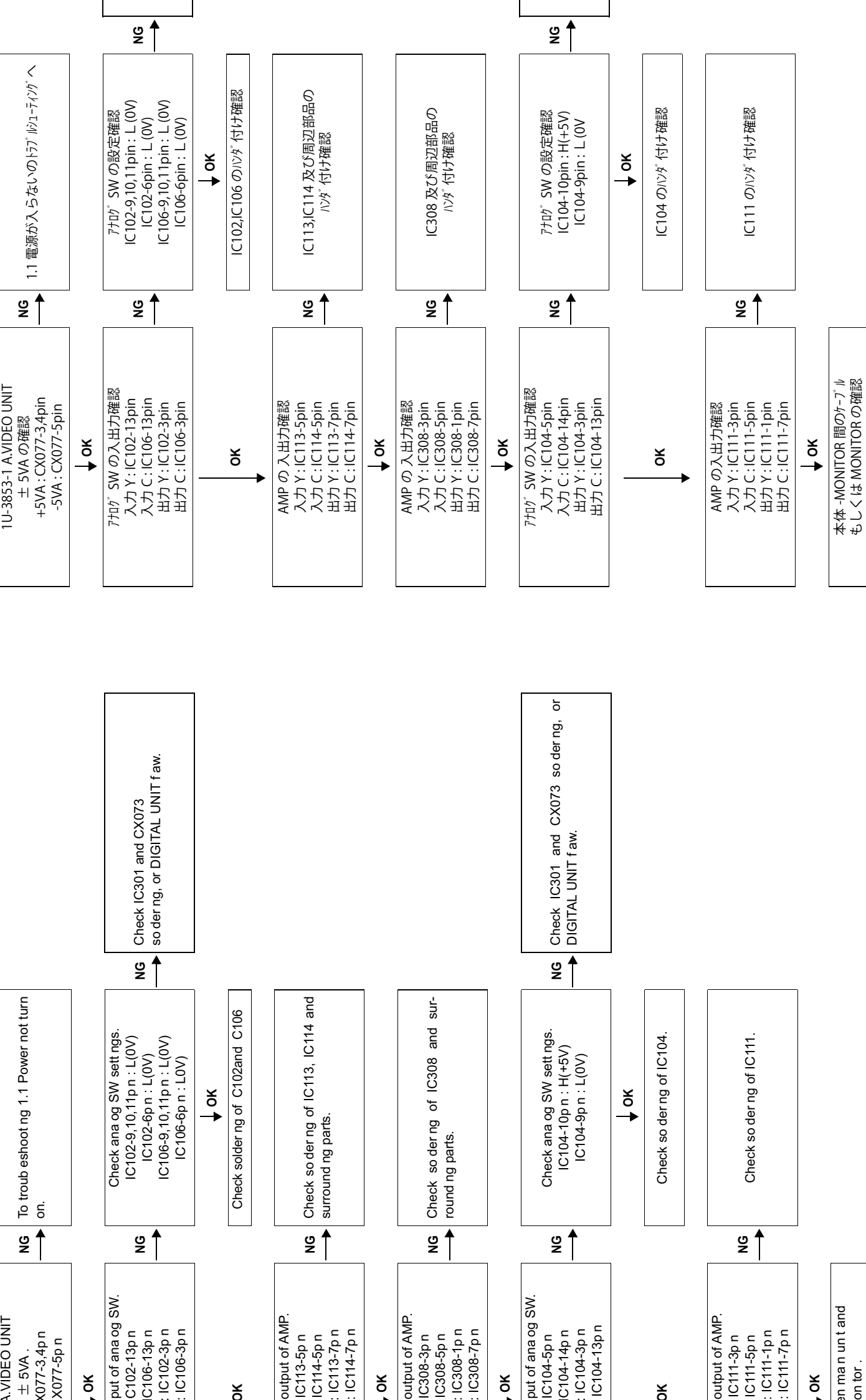
OK
CX113 のハンダ 付け確認
もしくは DIGITAL UNIT の不具合

OK
IC305 のハンダ 付け確認

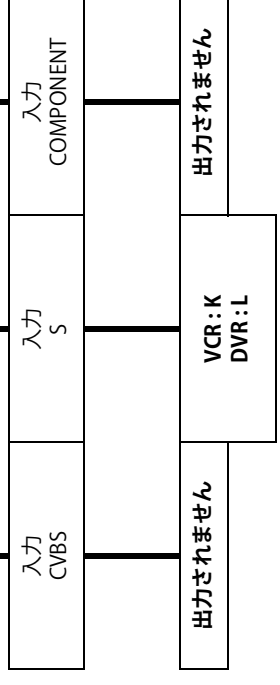
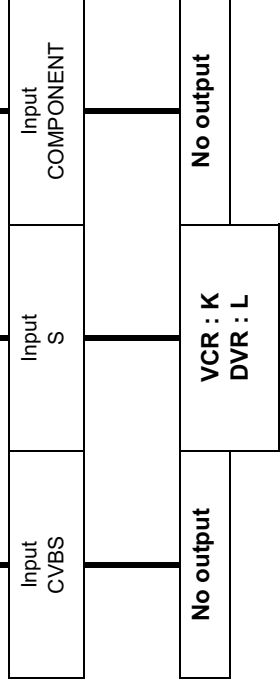
OK
アンプ SW の設定確認
IC104-10pin: H(+5V)
IC104-9pin: L (0V)

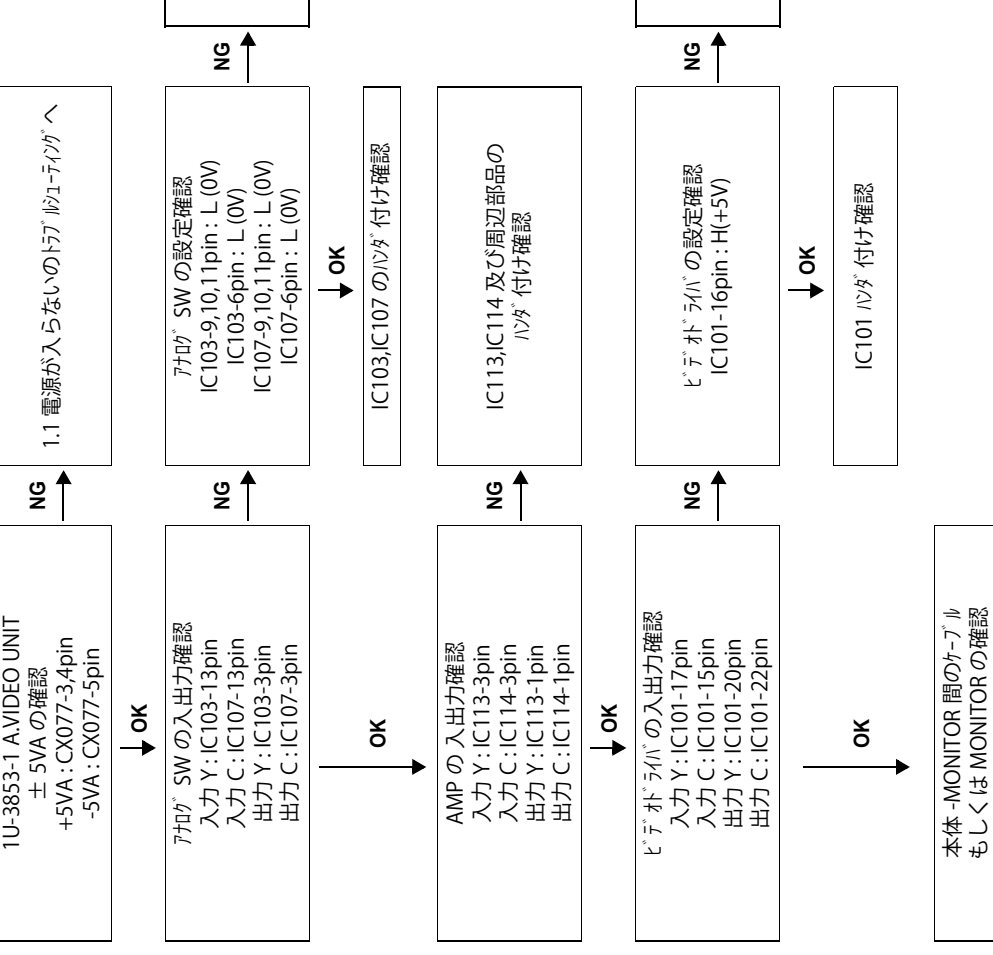
OK
IC104 のハンダ 付け確認

OK
IC111 のハンダ 付け確認

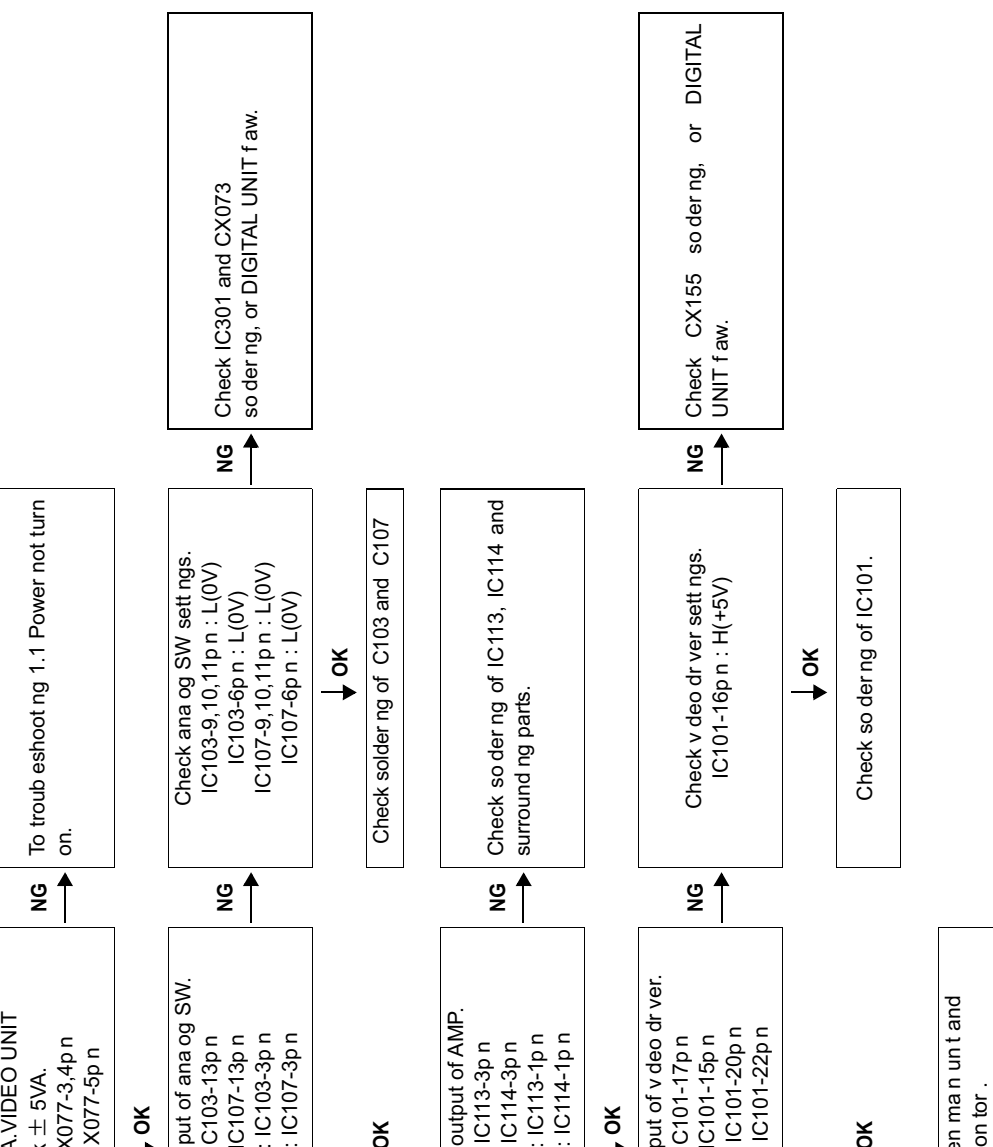


※ 特に記載がない場合は 1U-3853-1 A.VIDEO UNIT の部品です。

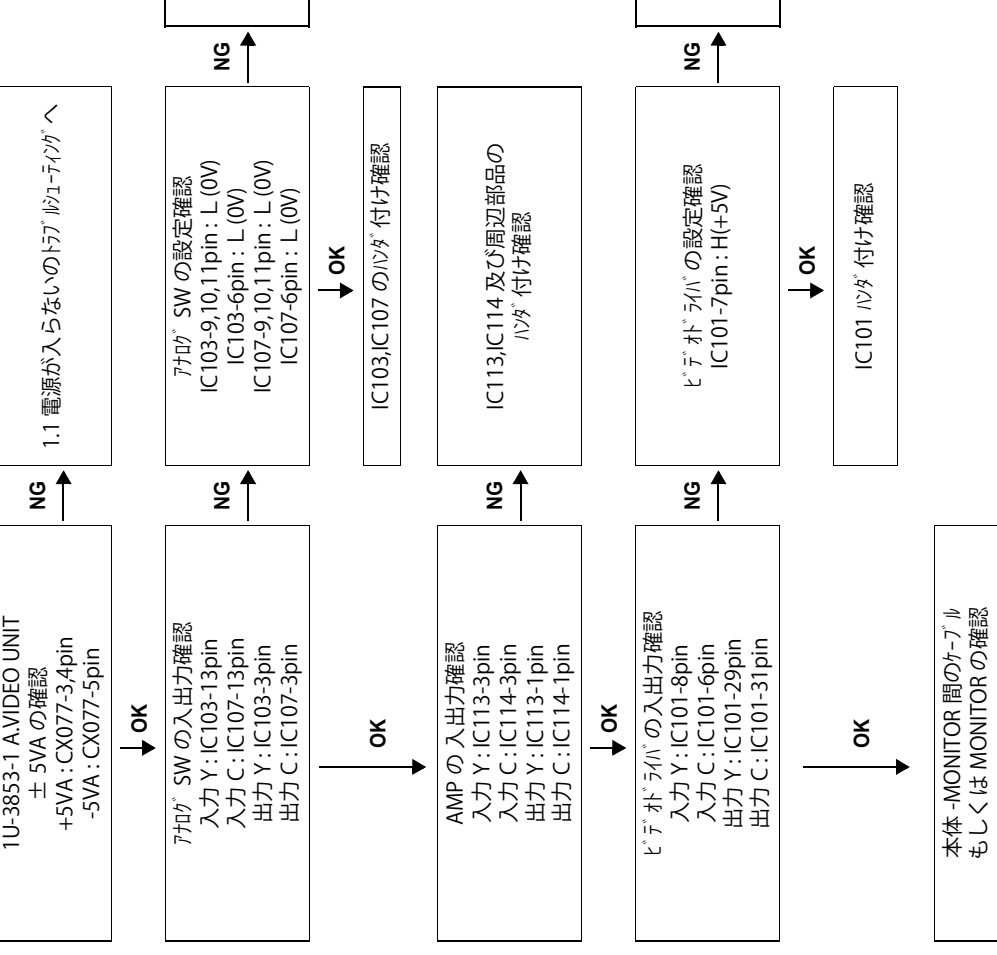




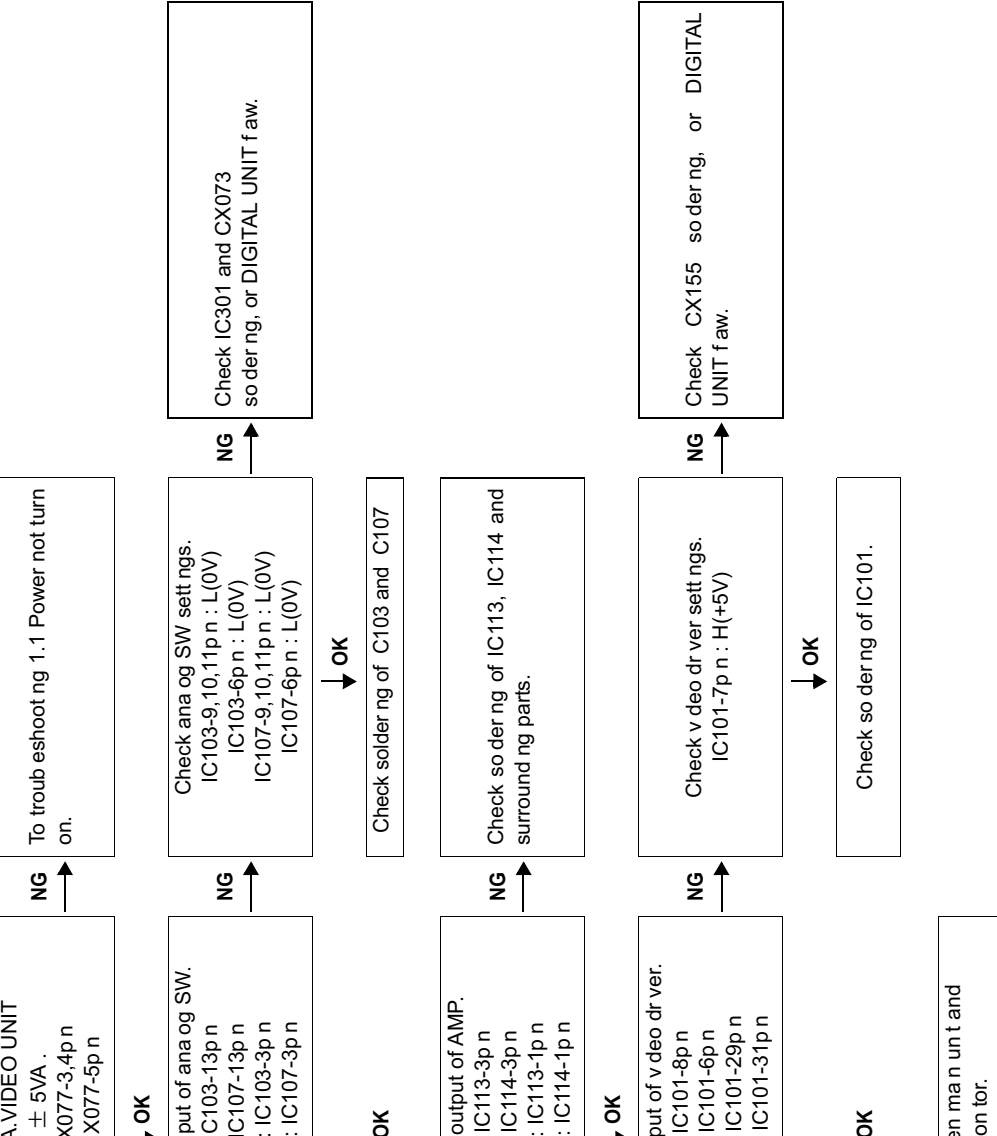
※ 特に記載がない場合は 1U-3853-1 A.VIDEO UNIT の部品です。



※ 特に記載がない場合は 1U-3853-1 A.VIDEO UNIT part.



※ 特に記載がない場合は 1U-3853-1 A.VIDEO UNIT の部品です。



※ 特に記載がない場合は 1U-3853-1 A.VIDEO UNIT part.

Checking the v deo convert ON/OFF sett ngs.

Video convert ON

Input S

Input CVBS

Input COMPONENT

N

No output

No output

No output

O

V deo convert OFF

Input S

Input CVBS

Input COMPONENT

No output

O

ビデオポート ON/OFF の設定確認

ビデオポート ON

入力 CVBS

入力 S

入力 COMPONENT

Mへ

Nへ

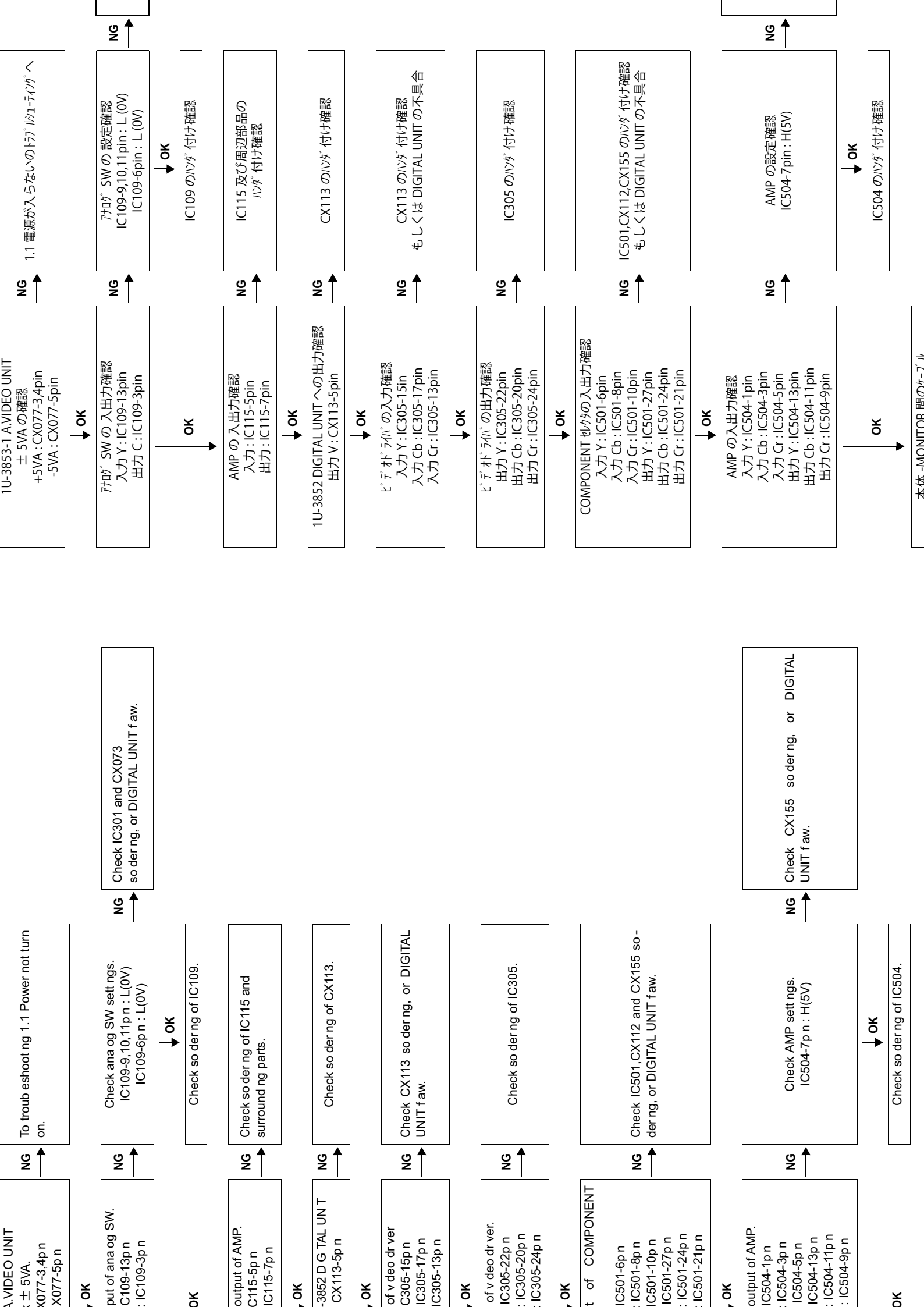
出力されません

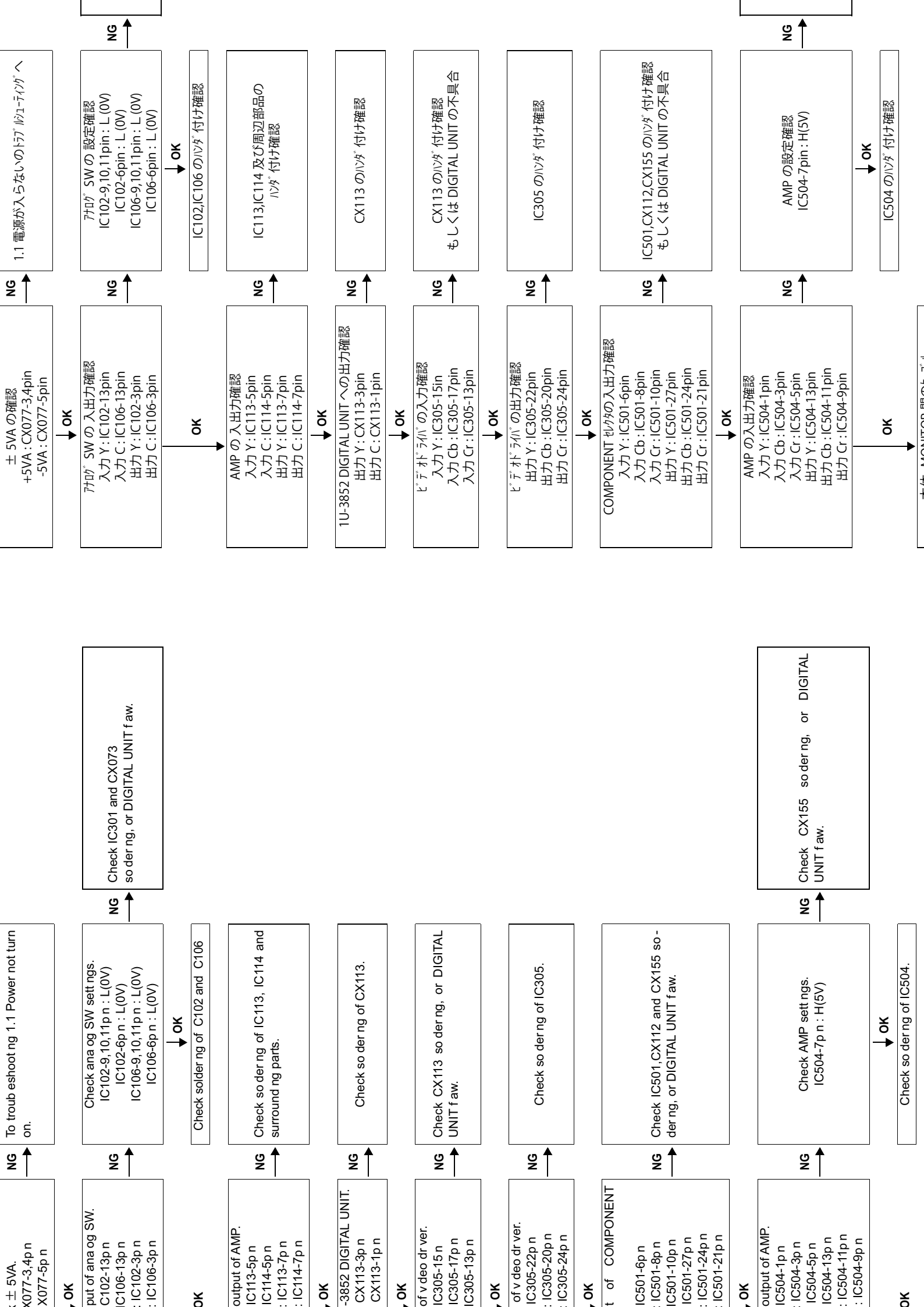
出力されません

ビデオ

入力 CVBS

出力





1U-3853-1 A.VIDEO UNIT
± 5VA の確認
+5VA : CX077-3,4pin
-5VA : CX077-5pin

NG

To troubleshoot 1.1 Power not turn on.

OK

COMPONENT
入力 Y : IC501-48pin
入力 Cb : IC501-2pin
入力 Cr : IC501-4pin
出力 Y : IC501-27pin
出力 Cb : IC501-24pin
出力 Cr : IC501-21pin

NG

Check IC501, CX112 and CX155 soldering, or DIGITAL UNIT faw.

OK

AMP の入出力確認
入力 Y : IC504-1pin
入力 Cb : IC504-3pin
入力 Cr : IC504-5pin
出力 Y : IC504-13pin
出力 Cb : IC504-11pin
出力 Cr : IC504-9pin

NG

Check AMP settings.
IC504-7pin : H(5V)

OK

Check soldering of IC504 and surrounding parts.

本体-MONITOR 間のケーブル
もしくは MONITOR の確認

1U-3853-1 A.VIDEO UNIT
± 5VA の確認
+5VA : CX077-3,4pin
-5VA : CX077-5pin

NG

1.1 電源が入らないのトラブルシューティングへ

OK

COMPONENT 仕様の入出力確認
入力 Y : IC501-48pin
入力 Cb : IC501-2pin
入力 Cr : IC501-4pin
出力 Y : IC501-27pin
出力 Cb : IC501-24pin
出力 Cr : IC501-21pin

NG

IC501, CX112, CX155 のハンダ付け確認
もしくは、DIGITAL UNIT の不具合

OK

AMP の入出力確認
入力 Y : IC504-1pin
入力 Cb : IC504-3pin
入力 Cr : IC504-5pin
出力 Y : IC504-13pin
出力 Cb : IC504-11pin
出力 Cr : IC504-9pin

NG

AMP の設定確認
IC504-7pin : H(5V)

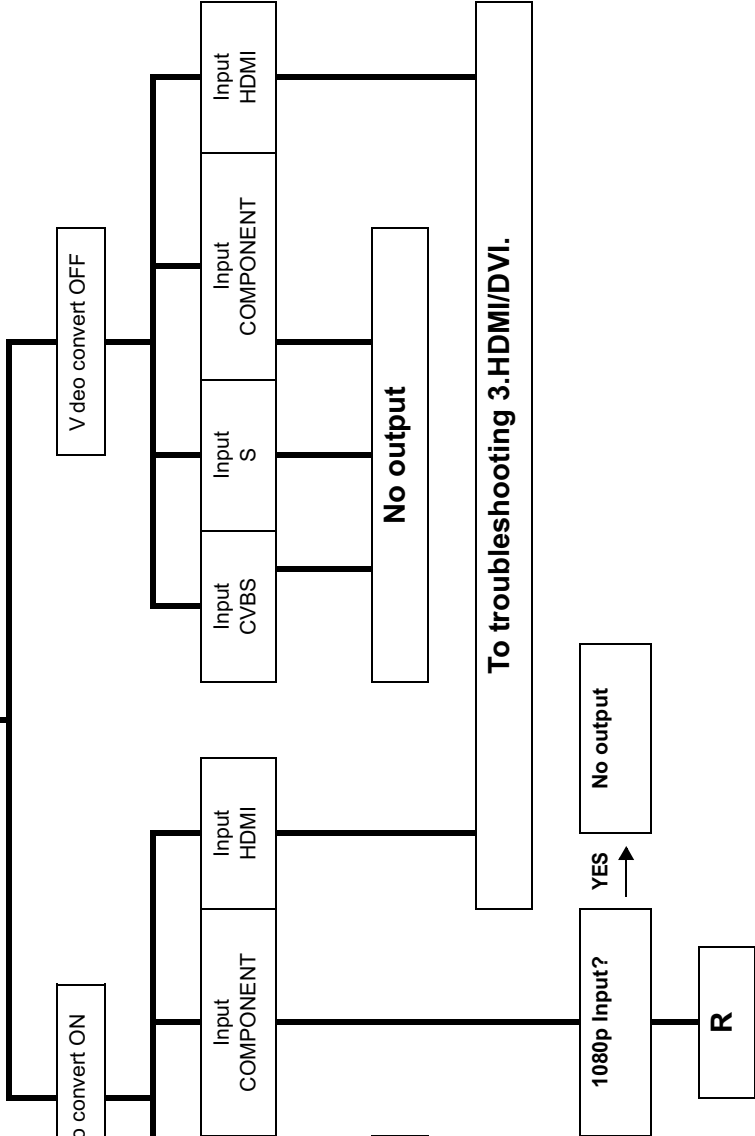
OK

IC504 及び周辺部品のハンダ付け確認

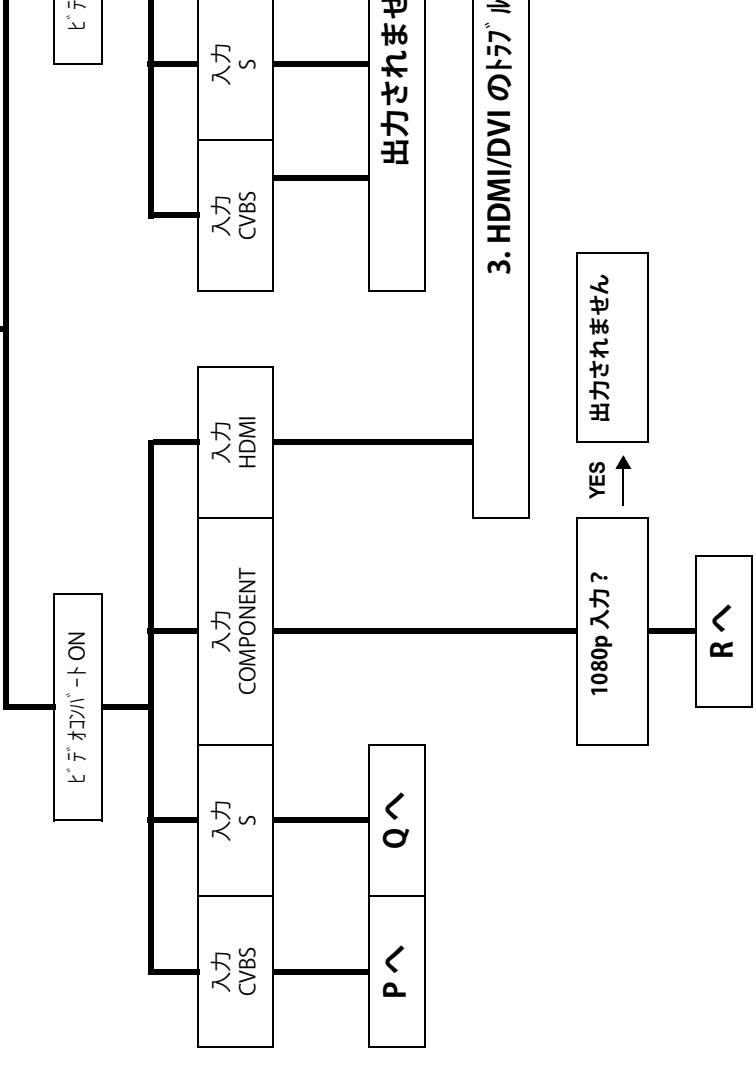
NG

※ 特に記載がない場合は、1U-3853-1 A.VIDEO UNIT の部品です。

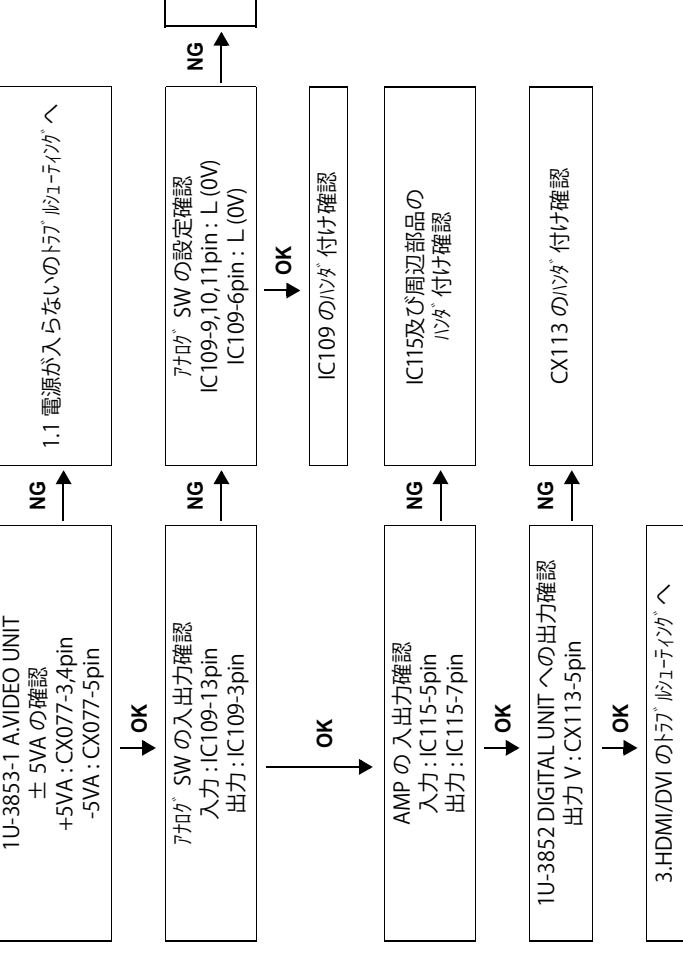
Check the video convert ON/OFF settings.



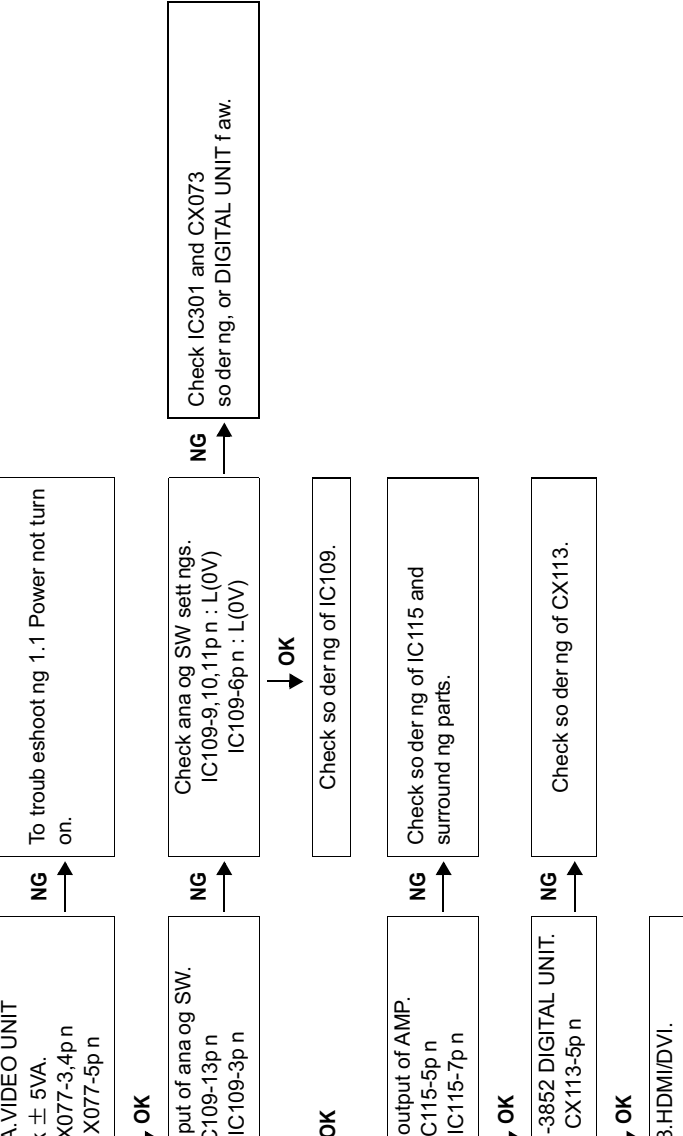
Check the video convert ON/OFF settings.



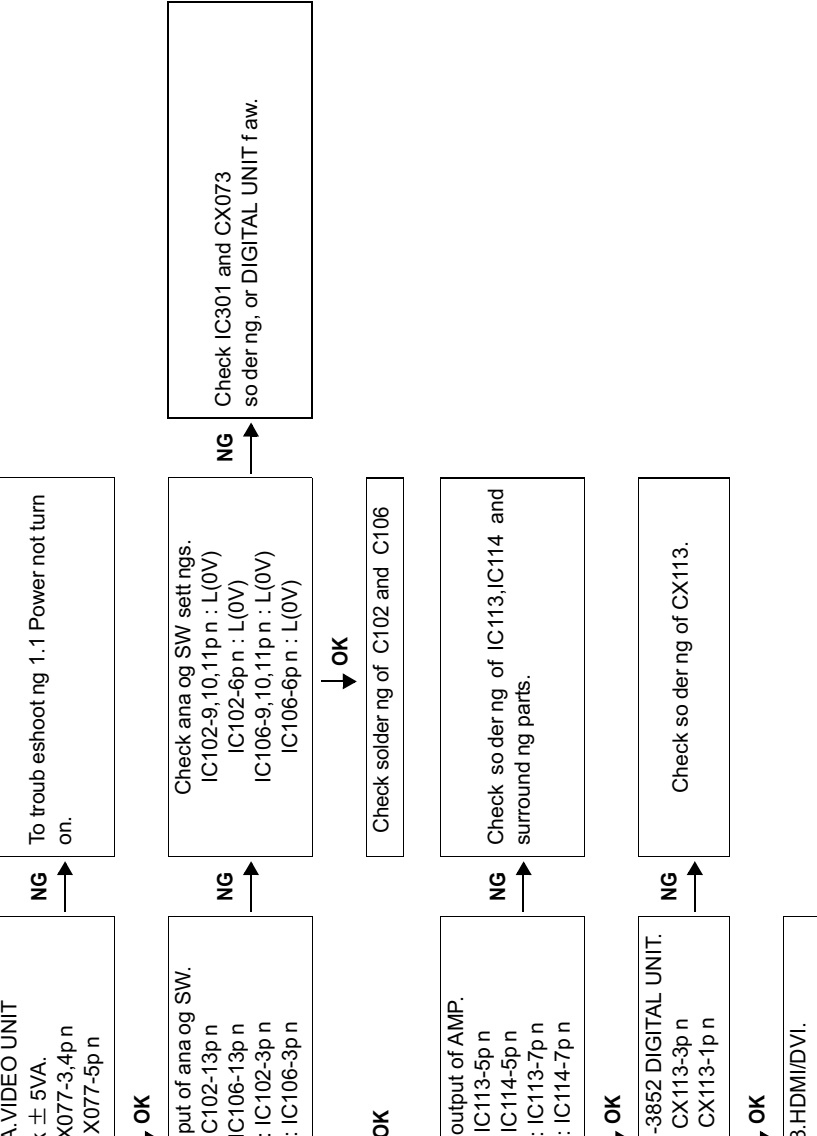
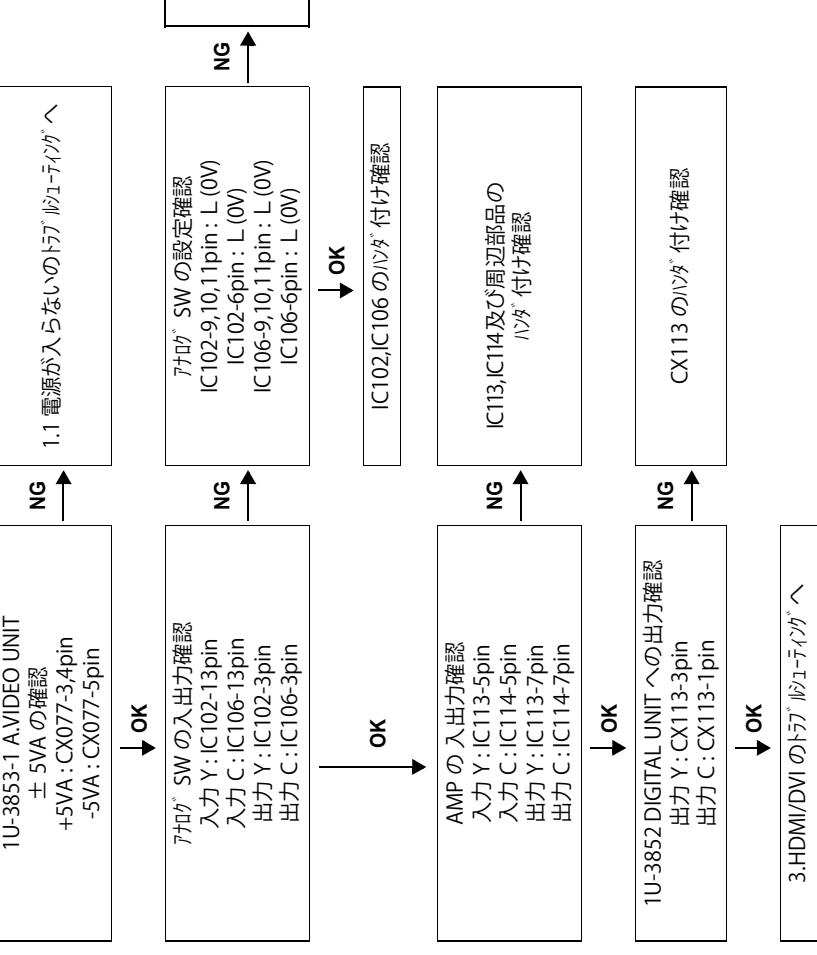
3. HDMI/DVI のトラブルシューティング



※ 特に記載がない場合は 1U-3853-1 A.VIDEO UNIT の部品です。

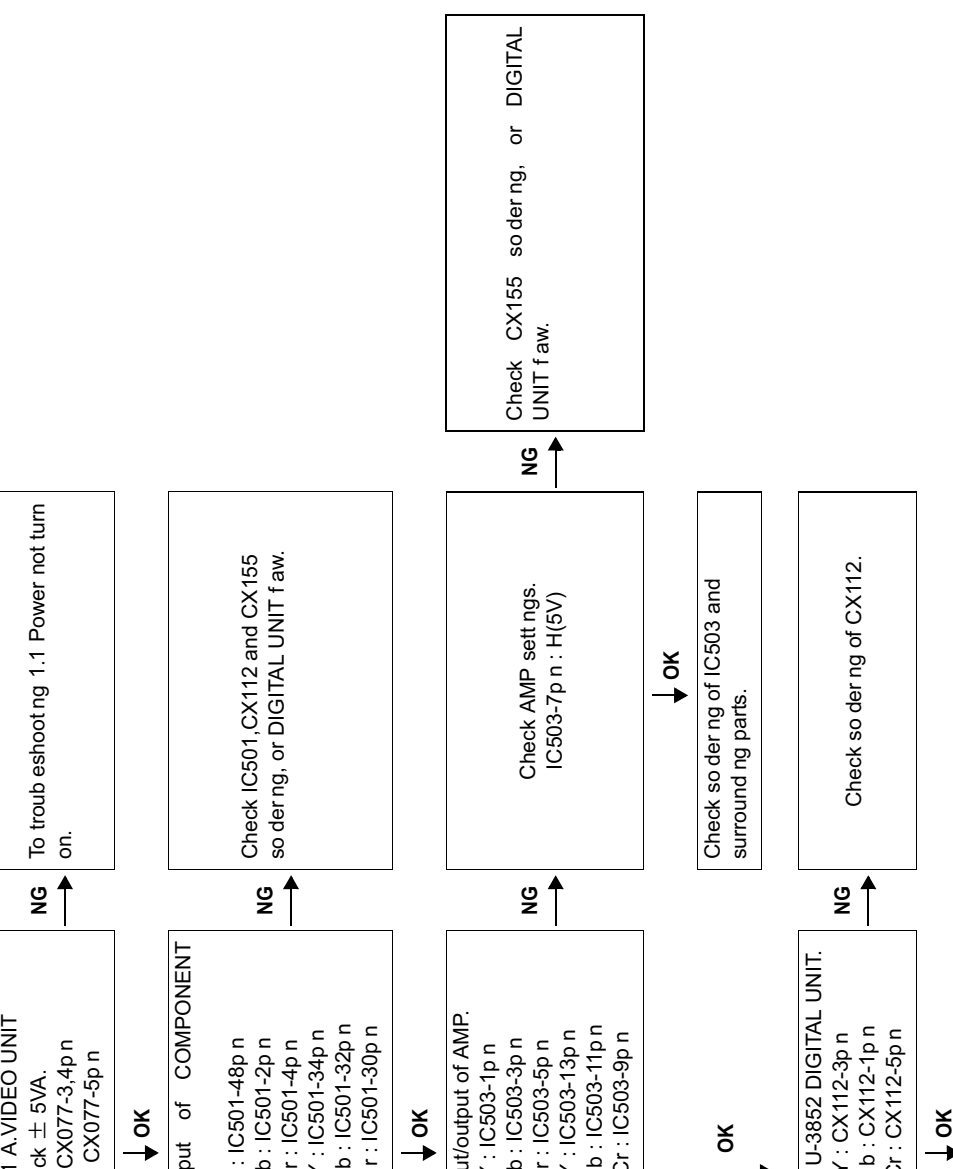
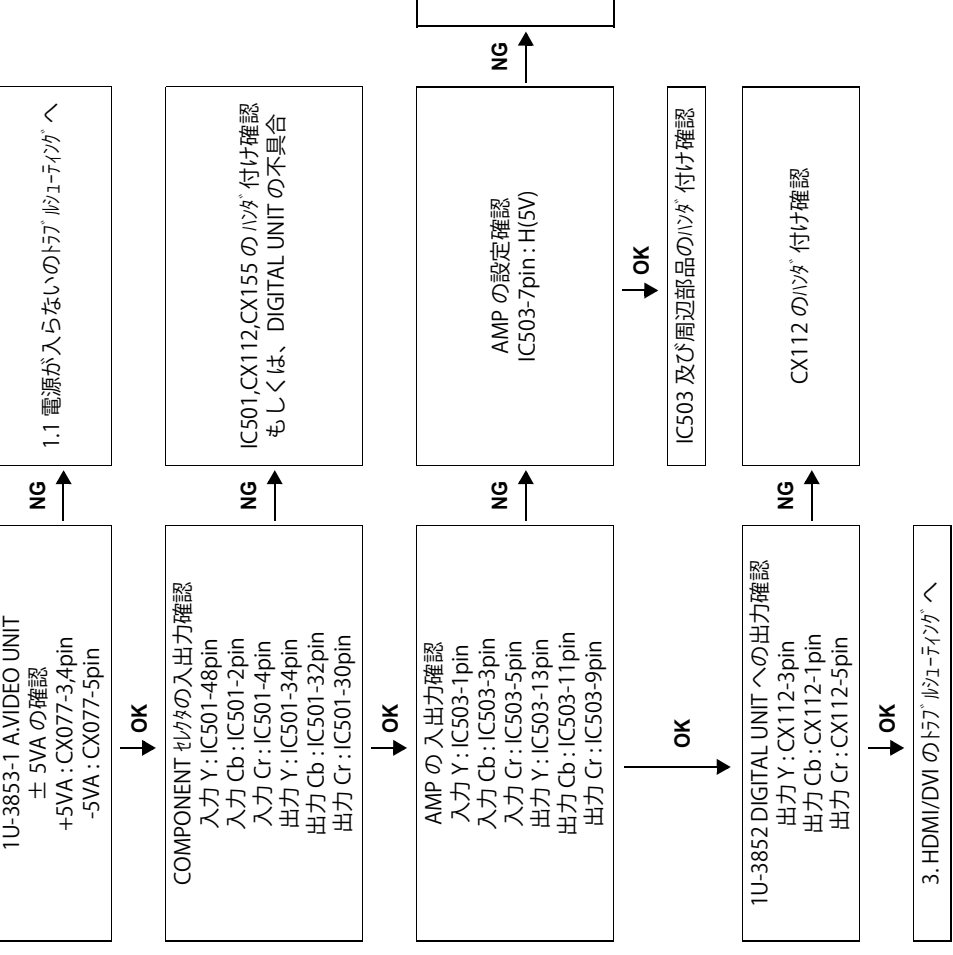


※ 特に記載がない場合は 1U-3853-1 A.VIDEO UNIT part.



※ 特に記載がない場合は、1U-3853-1 A.VIDEO UNIT の部品です。

※ 特に記載がない場合は、1U-3853-1 A.VIDEO UNIT part.



※ 特に記載がない場合は 1U-3853-1 A.VIDEO UNIT の部品です。

1U-3853-1 A.VIDEO UNIT part.

If the TV is not compatible with resolutions of 1080P, no picture will be output, even if the DVD player's resolution is set to 1080P.

Is the TV compatible with 1080P?

TVは1080Pに対応していますか？

NO

TVが1080Pに対応していないDVDプレーヤーを1080Pにも、画像は出力されません。

Check the TV's input setting, referring to the TV's operating instructions.

TVの入力設定がHDMI入力になっていますか？

NO

TVの取扱説明書を見て入力設定を確認してください。

Does a different TV is used?

The TV is defective.

NO

TVが不良です。

Check the set's input setting, referring to the set's operating instructions.

↓ YES

Does the set does not recognize the TV. (IC702 pin 51 "H" (3V-5V)? With the TV connected, check the voltage of the IC on the side on which the TV is connected.

↓ YES

本機の入力設定がHDMI入力になっていますか？

NO

本機の取扱説明書を見て入力設定を確認してください。

本機がTVを認識していません
IC702の51pinが"H"(3V-5V)となっていますか？
TVを接続している状態で、TVを接続している側のICの電圧を確認してください。

NO

HDMIコネクター(JK701)が不良です。

↓ YES

Do picture and sound appear on the TV when the HDMI/DVI cable is connected and the set is disconnected?

The HDMI output circuitry is defective. (IC702/IC601 and surrounding circuitry)

Are the picture and sound output from other Monitor terminals (VIDEO out, S-VIDEO out or Component out)?

NO

他のMonitor Out(VIDEO out/Component out)から画像は出力されますか？

↓ YES

Does the DVD player does not recognize the connection with the set. (HDMI connector (JK503/JK551) pin 19 "H" (5V)? With the DVD player connected, check the voltage of the HDMI connector for the input on the side on which the DVD player is connected.

DENONのDVDプレーヤーを使用している場合、FL管の"HDMI"インジケータが点灯していますか？
他社のDVDプレーヤーを使用している場合は"NO"に進んでください。

NO

HDMIコネクター(JK503/JK551)が不良です。

↓ YES

Defective circuitry

HDMI入力系の回路が不良です。(IC554/IC601周辺回路)

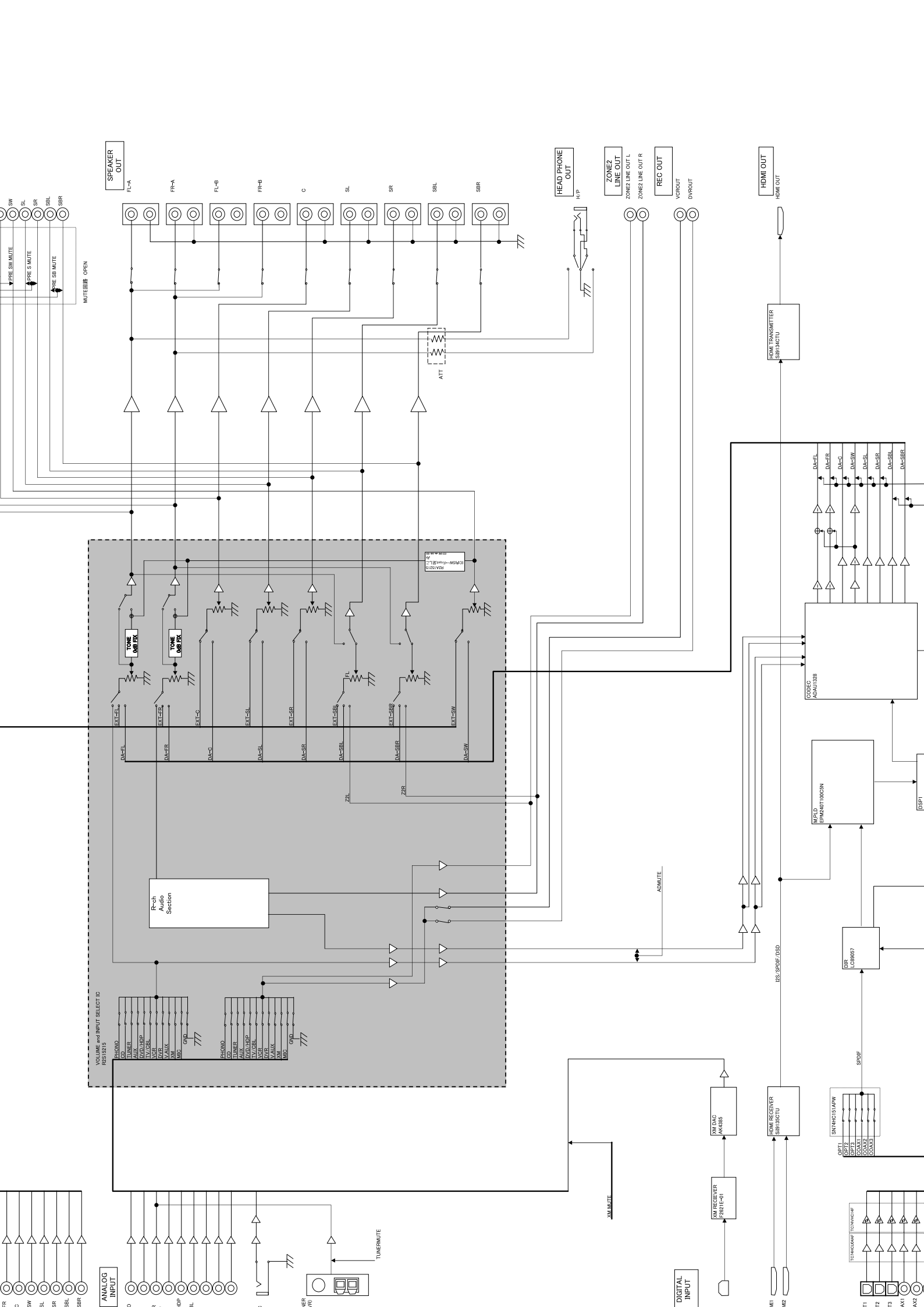
↓ YES

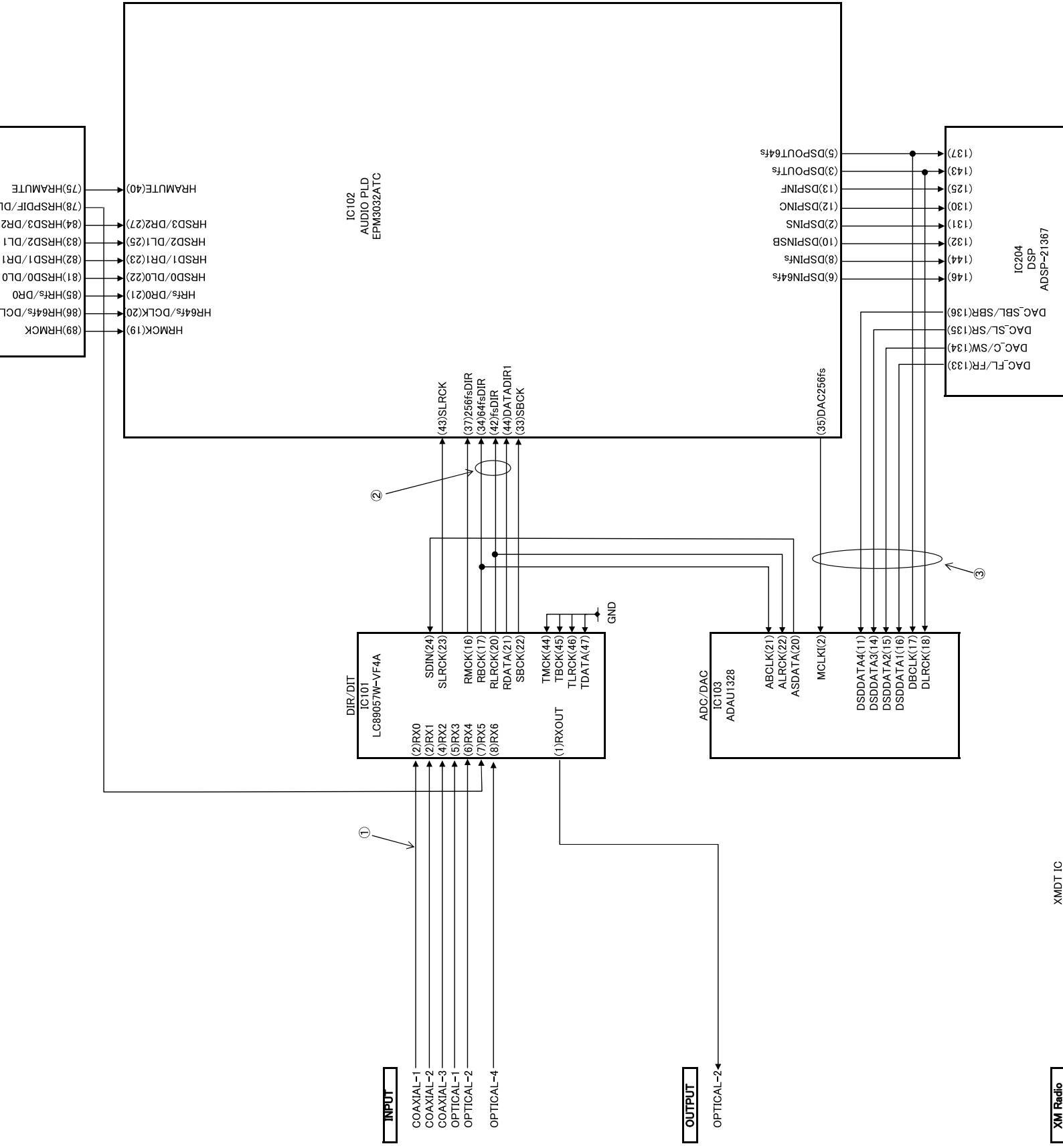
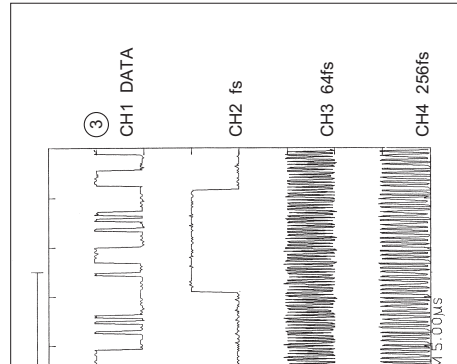
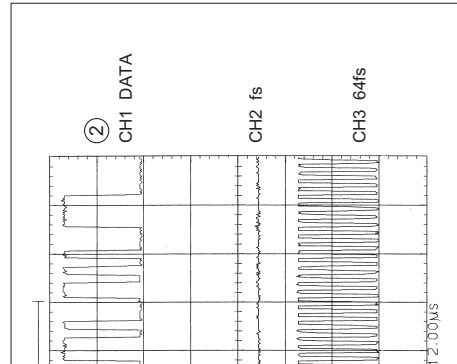
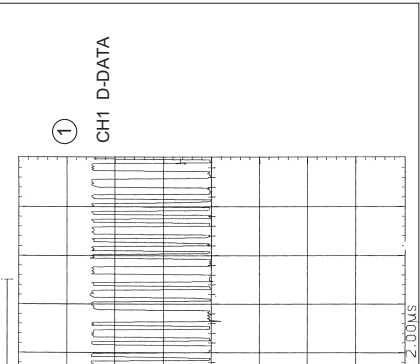
↓ YES

DVDプレーヤーが本機との接続を認識していません
HDMIコネクター(JK503/JK551)の19pinが"H"(5V)となっていますか？
DVDプレーヤーを接続している状態で、DVDプレーヤーを接続している入力側のHDMIコネクターの電圧を確認してください。

NO

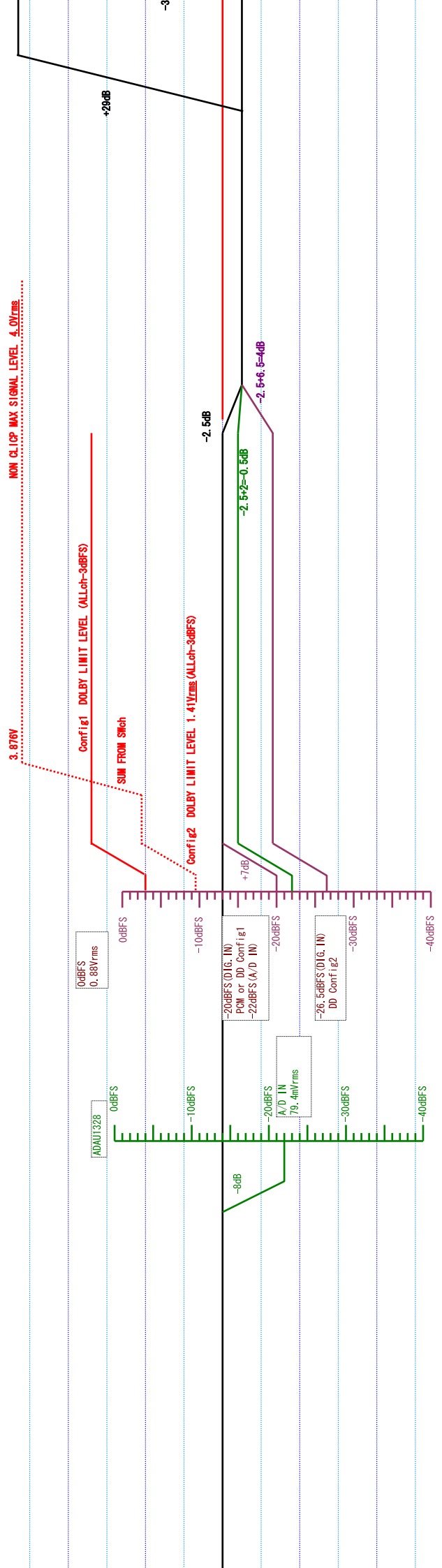
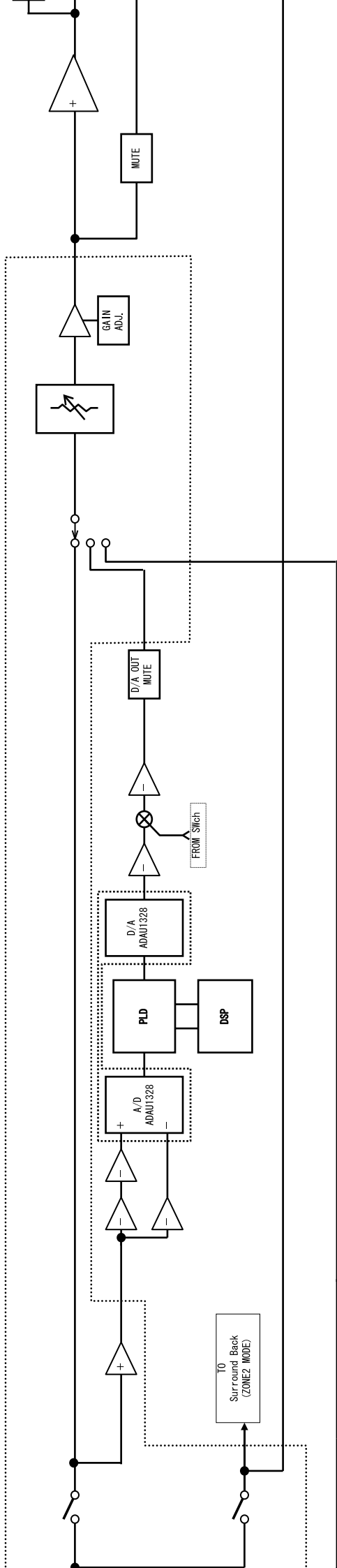
HDMIコネクター(JK503/JK551)が不良です。



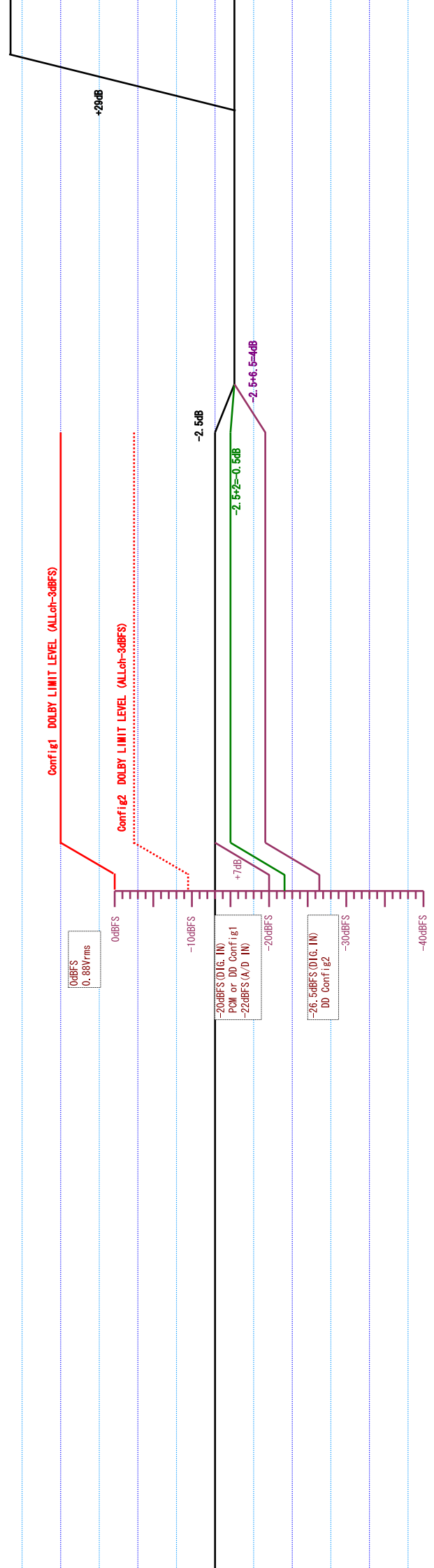
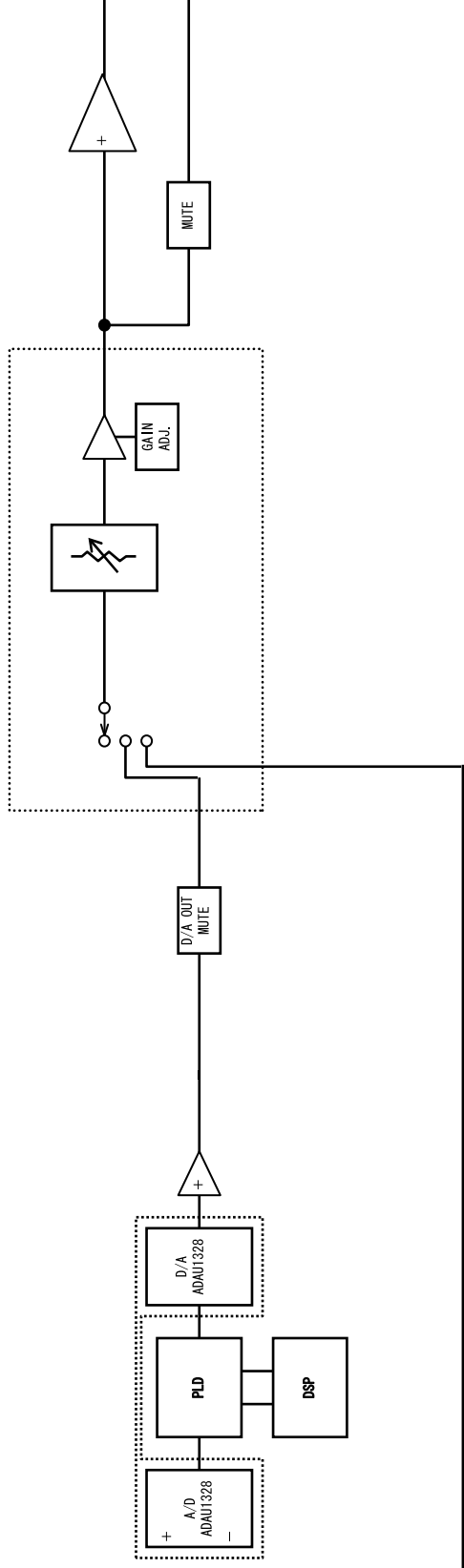


AVR-Z200
LEVEL DIAGRAM
FRONT ch

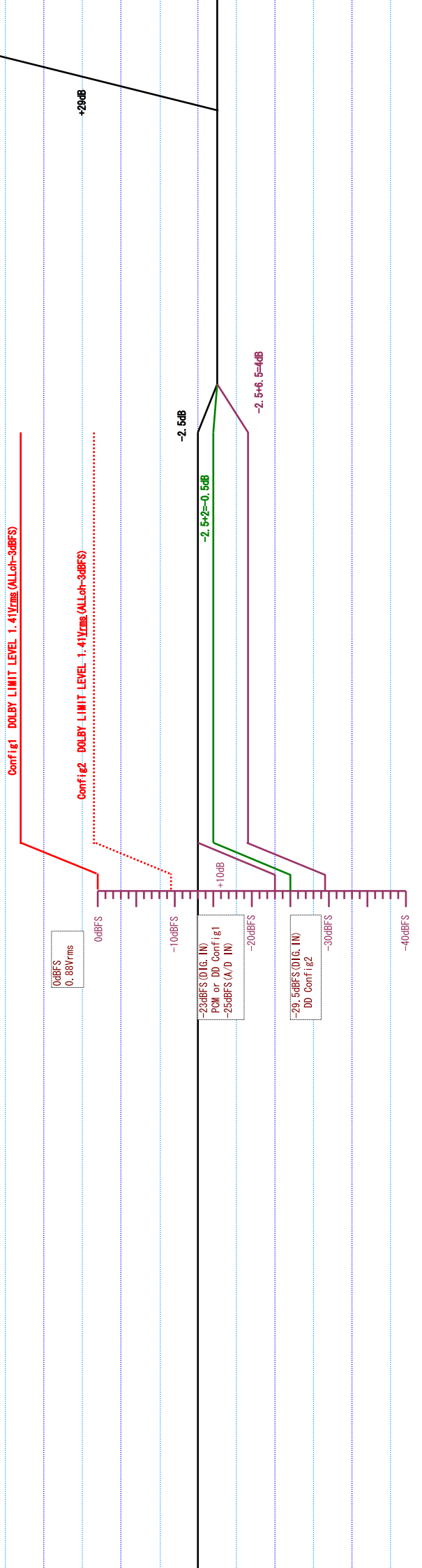
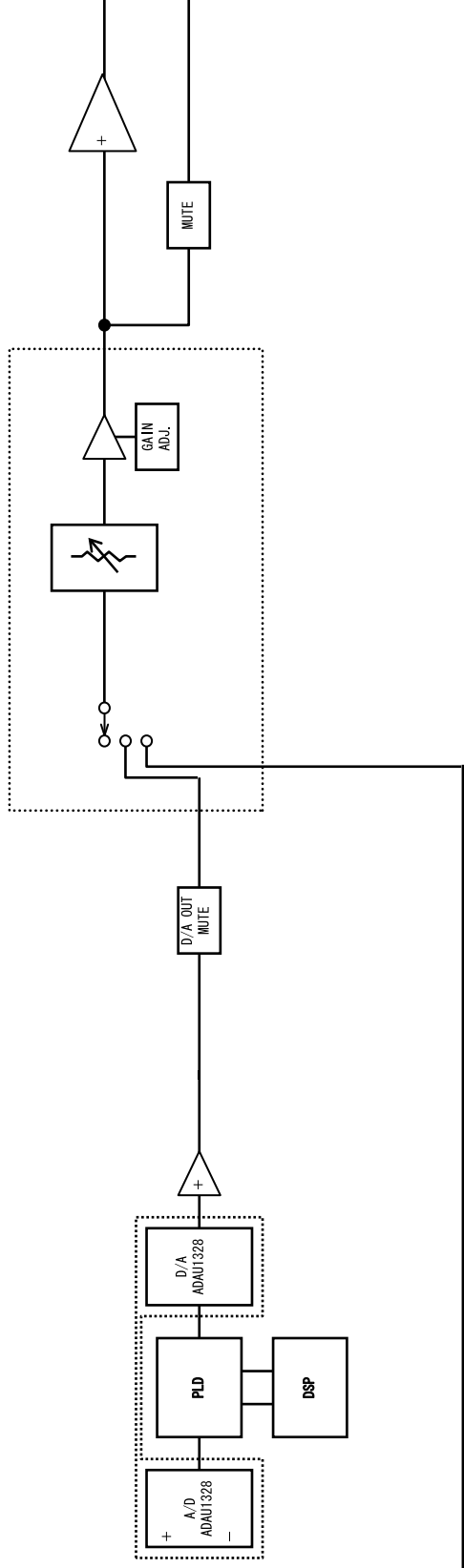
A15215FP



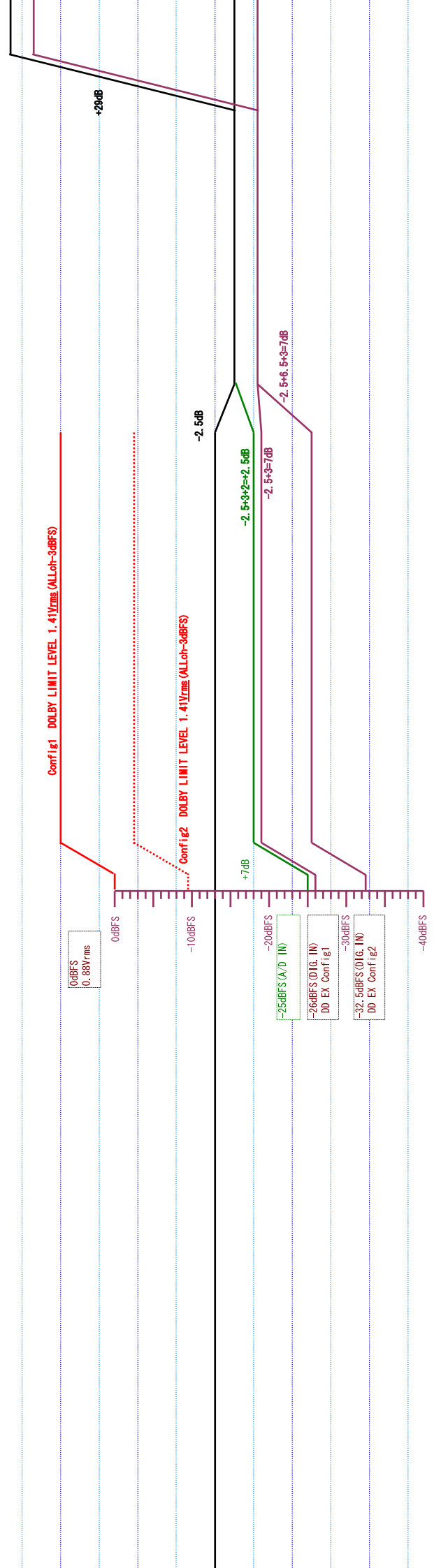
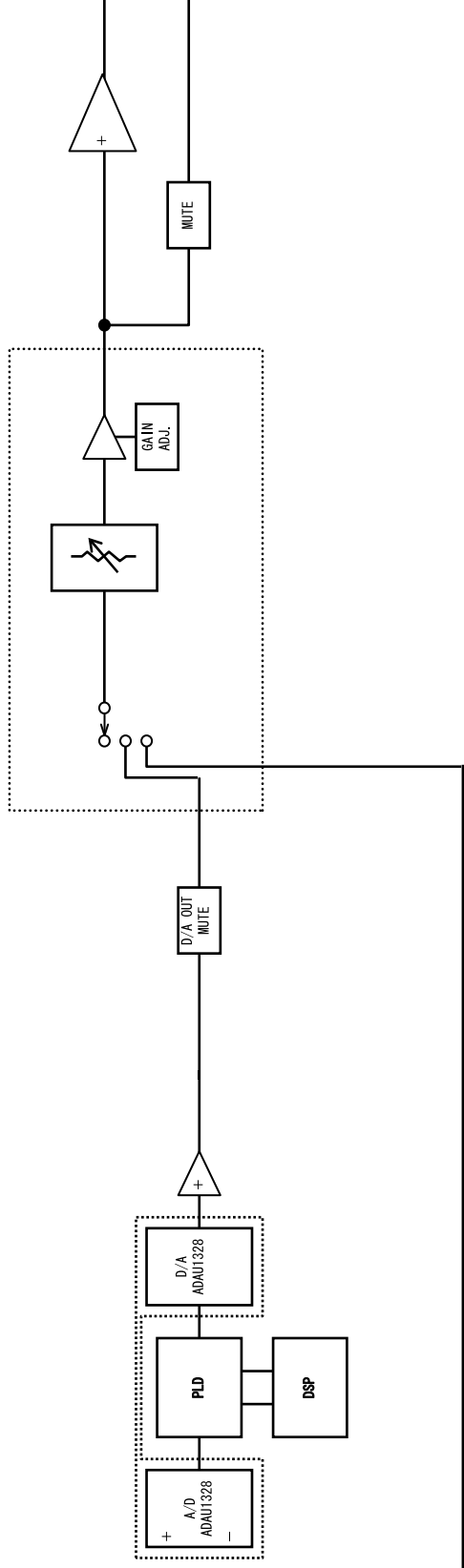
AVR-2508
LEVEL DIAGRAM
CENTER ch



AVR-2508 LEVEL DIAGRAM SURROUND ch



AVR-2508
LEVEL DIAGRAM
SURR.BACK ch



SEMICONDUCTORS

Only major semiconductors are shown, general semiconductors etc. are omitted to list.
 The semiconductor which described a detailed drawing in a schematic diagram are omitted to list.
 主な半導体を記載しています。汎用の半導体は記載を省略しています。
 回路図の中に詳細図がある半導体は記載を省略しています。

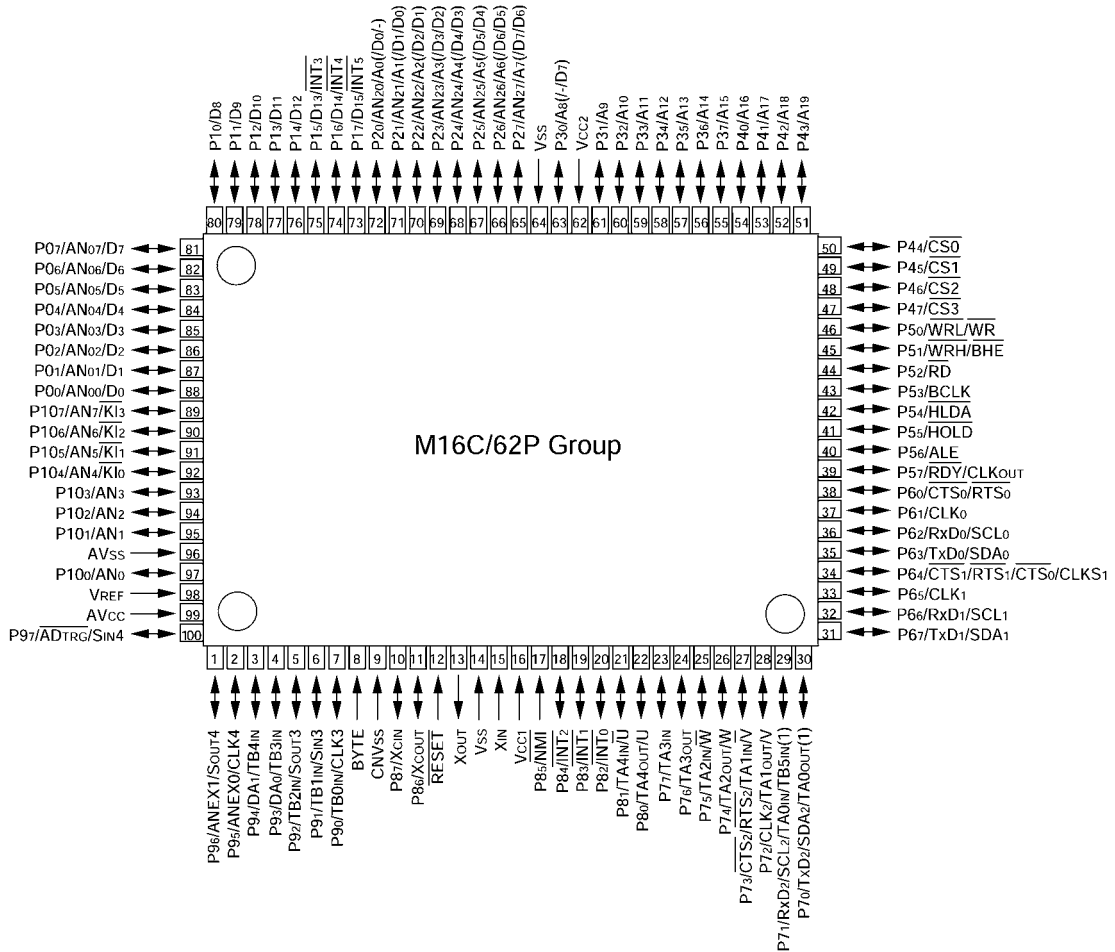
1. IC's

Note : Abbreviation ahead of IC No. indicates the name of P.W.B., etc.

注) : IC No. の前の記号は、基板の名称を表します。

- DI : DIGITAL P.W.B.
- AV : AUDIO VIDEO P.W.B.
- PA : POWER AMP P.W.B.
- FR : FRONT P.W.B.
- MC : MAIN CPU P.W.B.
- PR : POWER REG. P.W.B.

M30879FLBFP (MC: IC105)



Note1) N channel open-drain output pins.

M30879FLBFP Terminal Function

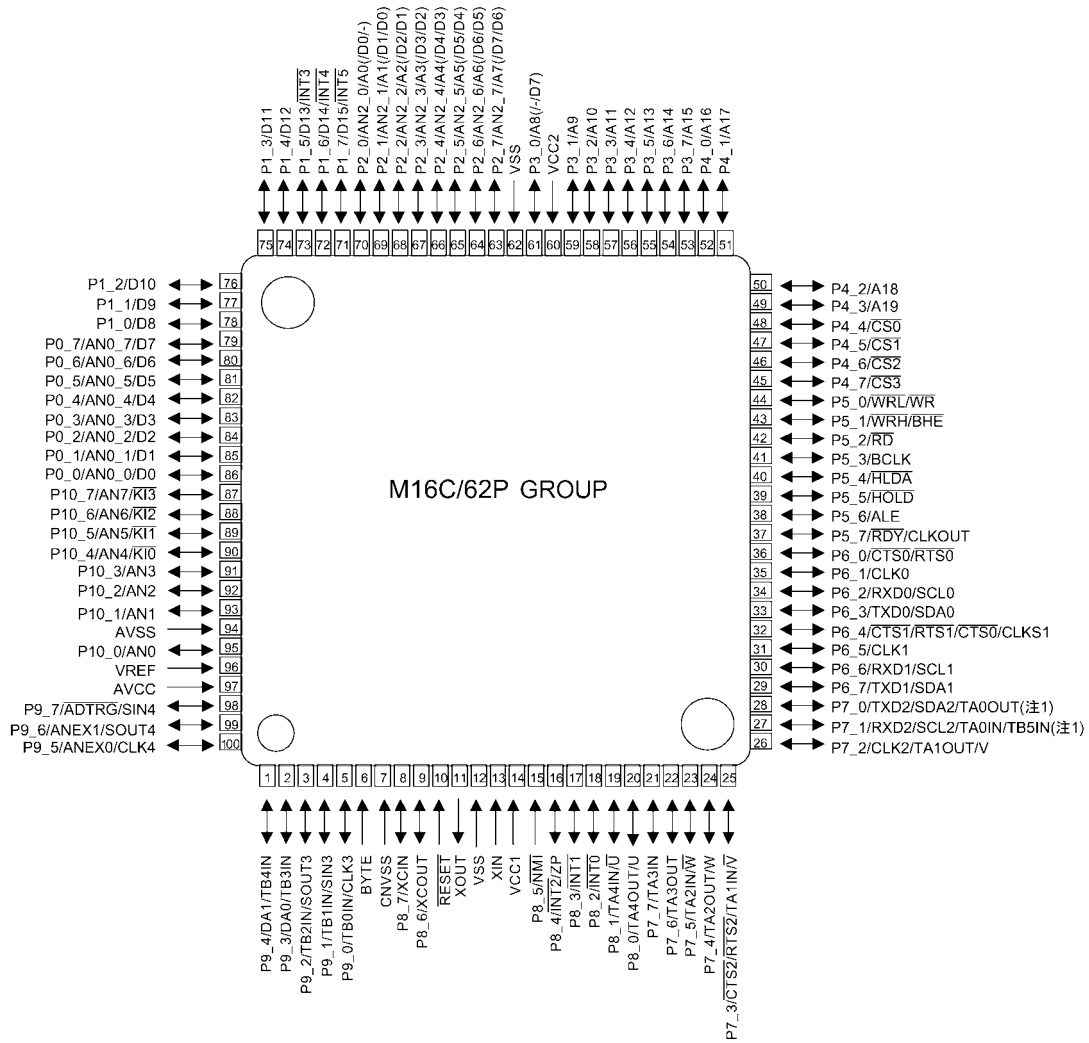
Pin	Pin Name	Symbol	I/O	Type	Det	Op (Int.)	Op (Ext.)	Res	Stby	Stop	Function
1	P96/SOUT4	RSTSUB	O	C	-	-	Ed	Z	O/L	O/L	Sub μ com Reset control pin
2	P95/CLK4	MICDET	I	-	Lv	-	Eu	Z	O/L	O/L	Microphone detect input (Detected : H)
3	P94/TB4	H/PDET	I	-	Lv	-	Eu	Z	O/L	O/L	HEADPHONE detect input (Detected : H)
4	P93/TB3	FL_DATA	O	C	-	-	-	Z	O/L	O/L	FLD DRIVER control pin
5	P92/SOUT3	MOSI	O	C	-	-	Ed	Z	O/L	O/L	MAIN-SUB μ com comm. control pin
6	P91/SIN3	SOMIm	I	-	Lv	-	-	Z	I	O/L	MAIN-SUB μ com comm. control pin
7	P90/CLK3	CLKMO	O	C	-	-	Ed	Z	O/L	O/L	MAIN-SUB μ com comm. control pin
8	BYTE	BYTE	I	-	-	-	-	-	-	-	MAIN-SUB μ com comm. control pin
9	CNVCS	CNVSS	I	-	-	-	Ed	Z	I	I	UP GRADE PIN
10	P87	FL_RST	O	C	-	-	-	Z	O/L	O/L	FLD DRIVER Reset control pin
11	P86	GRNLED	O	C	-	-	-	Z	O/L	O/L	STBYLED GREEN control pin
12	RESET	RESET	I	-	Lv	-	Eu	L	I	I	u-COM RESET SIGNAL INPUT
13	XOUT	XOUT	O	-	-	-	-	-	O/L	O/L	OSILATOR CONNECTION
14	VSS	VSS	-	-	-	-	-	-	-	-	GND
15	XIN	XIN	I	-	-	-	-	-	I	I	OSILATOR CONNECTION

Pin	Pin Name	Symbol	I/O	Type	Det	Op (Int.)	Op (Ext.)	Res	Stby	Stop	Function
16	VCC	VCC	-	-	-	-	-	-	-	-	POWER 5V
17	P85/NMI	NMI	I	-	-	-	-	-	-	-	5V
18	P84/INT2	PROTECTION	I	-	E ↓ & L	-	Eu	Z	I	I	PROTECTION SIGNAL INPUT
19	P83/INT1	POWERKEY	I	-	Lv	-	Eu	Z	I	I	MAIN POWER relay control output
20	P82/INT0	REMOTEDET	I	-	Lv	-	Ed	-	O/L	O/L	ROOM TO ROOM Signal detect pin (Detected : H)
21	P81	ISELB	I	-	-	-	Eu	Z	O/L	O/L	Input selector rotation detect input (Rotary encoder)
22	P80	VSELA	I	-	-	-	Eu	Z	O/L	O/L	Master Volume rotation detect input (Rotary encoder)
23	P77	SSELA	I	-	-	-	-	Z	O/L	O/L	Selector rotation detect input (Rotary encoder)
24	P76	-	O	C	-	-	-	Z	O/L	O/L	Not used
25	P75	-	O	C	-	-	-	Z	O/L	O/L	Not used
26	P74	SSELB	I	-	-	-	-	Z	O/L	O/L	Selector rotation detect input (Rotary encoder)
27	P73/CTS2	VOLDATA	O	C	-	-	-	Z	O/L	O/L	Volume control pin
28	P72/CLK2	VOLCLK	O	C	-	-	-	Z	O/L	O/L	Volume control pin
29	P71/RXD2	RXDMIXO	I	-	-	-	Ed	Z	I	O/L	XM RADIO control pin
30	P70/TXD2	TXDMOXMI	O	N	-	-	Eu	Z	O/L	O/L	XM RADIO control pin
31	P67/TXD1	MO232CI	O	C	-	-	-	Z	O/L	O/L	RS232C SIGNAL OUTPUT
32	P66/RXD1	MI232CO	I	-	-	-	Ed	Z	I	O/L	RS232C SIGNAL INPUT
33	P65/CLK1	EXPCLK	O	C	-	-	-	Z	O/L	O/L	Extended IC control pin
34	P64/CTS1	EXPDATA	O	C	-	-	-	Z	O/L	O/L	Extended IC control pin
35	P63/TXD0	MOIPI	O	C	-	-	-	Z	O/L	O/L	iPod control pin
36	P62/RXD0	MIIPO	I	-	-	-	Ed	Z	I	O/L	iPod control pin
37	P61/CLK0	VSELB	I	-	-	-	Eu	Z	O/L	O/L	Master Volume rotation detect input (Rotary encoder)
38	P60/CTS0	ISELA	I	-	-	-	Eu	Z	O/L	O/L	Input selector rotation detect input (Rotary encoder)
39	P57	REDLED	O	C	-	-	-	Z	O/H	O/L	STBY LED RED CONTROL
40	P56	FL_CE1	O	C	-	-	-	Z	O/L	O/L	FLD DRIVER control pin
41	P55/EPM	FRASH CE/FL_CLK	O	C	-	-	-	Z	O/L	O/L	Rewrite boot program start : L input set /FLD DRIVER control pin
42	P54	M232CPower	O	C	-	-	Ed	Z	O/L	O/L	RS232C POWER control pin (STANDBY:H)
43	P53	-	O	-	-	-	-	Z	O/L	O/L	-
44	P52	-	O	-	-	-	-	Z	O/L	O/L	-
45	P51	TRIGGER1	O	C	-	-	-	-	O/L	O/L	TRIGGER OUT 1 control pin
46	P50/CE	FRASH CE/TRIGGER2	O	C	-	-	-	Z	O/L	O/L	Rewrite boot program start : H input set/TRIGGER OUT 2 control pin
47	P47	RDSOUT	I	-	-	-	Eu	Z	O/L	O/L	RDS DETECT IN control pin
48	P46	TURDCLK(CKTU)	O	C	-	-	-	Z	O/L	O/L	TUNER/RDS CLOCK OUT
49	P45	TURSDATA (DATATU)	O	C	-	-	-	Z	O/L	O/L	RDS DATA OUT control pin
50	P44	RDSCE	O	C	-	-	-	Z	O/L	O/L	TUNER MUTE control (MUTE : L)
51	P43	RDSRST	O	C	-	-	-	Z	O/L	O/L	RDS reset output
52	P42	THERMAL	I	-	-	-	Ed	Z	O/L	O/L	Temperature detect
53	P41	EXPOE	O	C	-	-	-	Z	O/L	O/L	Extended IC control pin
54	P40	EXPSTB	O	C	-	-	-	-	O/L	O/L	Extended IC control pin
55	P37	TUDOUT(DATAOUT)	I	-	Lv	-	Ed	-	O/L	O/L	TUNING DATA INPUT control pin
56	P36	TUSTB	O	C	-	-	-	Z	O/L	O/L	MUTE CONTROL
57	P35	STEREO	I	-	Lv	-	Eu	-	O/L	O/L	When TUNER FM stereo receive : L
58	P34	TUNED	I	-	Lv	-	Eu	-	O/L	O/L	TUNER turned detect (Detected : L)
59	P33	IPDET	I	-	Lv	-	Eu	Z	O/L	O/L	MINI JACK connected detection pin for DOCK connection (H:DETECTIVE)
60	P32	REMOTEPOWER	O	-	-	-	-	-	O/L	O/L	REMOTE POWER control pin (ON : H)
61	P31	TRIGPROTECT	O/L	-	-	-	Eu	Z	O/L	O/L	TRIGGER PROTECTION detect port (Not used)
62	VCC	VCC	-	-	-	-	-	-	-	-	+5V
63	P30	VOLPROTECT	I	-	E ↑ & H	-	Eu	Z	O/L	O/L	Voltage detection control pin
64	VSS	VSS	-	-	-	-	-	-	-	-	GND
65	P27	B.D.CONTORL	O	C	-	-	-	Z	O/L	O/L	B.DOWN detect value change control pin (from CPU/E POWER ON after 15ms ON)
66	P26	SCPUPOWER	O	C	-	-	-	Z	O/L	O/L	SUB CPU POWER ON/OFF switcing (H : ON)
67	P25	XMPOWER	O	C	-	-	-	Z	O/L	O/L	XM RADIO POWER control pin
68	P24	POWER	O	C	-	-	Ed	Z	O/L	O/L	MAIN POWER relay control output (ON : H)
69	P23	CPU/EPower	O	C	-	-	Ed	Z	O/L	O/L	MAIN CPU POWER control pin (POWER ON : H)
70	P22	LIMIT	O	C	-	-	-	Z	O/L	O/L	LIMIT control
71	P21	-	O	C	-	-	-	Z	O/L	O/L	Not used
72	P20	7CHLIMIT	O	C	-	-	-	Z	I	I	Not used
73	P17/INT5	REMOCOM	I	-	E ↑ & H	-	Ed	Z	I	I	Remote control signal input
74	P16/INT4	REQSOMIm	I	-	E ↓ & L	-	Ed	Z	I	O/L	MAIN-SUB μ com comm. control pin
75	P15/INT3	B.DOWN	I	-	E ↓ & L	-	Eu	Z	I	I	Power down detect (Power down : L)
76	P14/D12	-	O	-	-	-	-	Z	O/L	O/L	Not used
77	P13/D11	LIMITDET	I	-	Lv	-	Eu	Z	O/L	O/L	Signal detect input (Detected : H)

Pin	Pin Name	Symbol	I/O	Type	Det	Op (Int.)	Op (Ext.)	Res	Stby	Stop	Function
78	P12/D10	-	O	C	-	-	Ed		I	I	Not used
79	P11/D9	-	O	C	-	-	-	-	I	I	Not used
80	P10/D8	VOLMUTE	O	C	-	-	-	Z	I	O/L	VOLUME MUTE control pin
81	P07/D7	MUTEPOWER	O	C	-	-	-	Z	O/L	O/L	For MUTE +B control pin
82	P06/D6	SYNCDDET	I	-	Lv	-	Ed	Z	O/L	O/L	Sync. detect input for MAIN(H: Ext. synchronized)
83	P05/D5	OSDMUTE	O	C	-	-	-	Z	O/L	O/L	OSD control pin
84	P04/D4	-	O	C	-	-	-	Z	O/L	O/L	Not used
85	P03/D3	OSDRST	O	C	-	-	-	Z	O/L	O/L	OSD control pin
86	P02/D2	OSDSTR	O	C	-	-	-	Z	O/L	O/L	OSD control pin
87	P01/D1	OSDCLK	O	C	-	-	-	Z	O/L	O/L	OSD control pin
88	P00/D0	OSDDATA	O	C	-	-	-	Z	O/L	O/L	OSD control pin
89	P107/AN7	XMOLINKACTIVE	I	-	-	-	Ed	Z	O/L	O/L	XM RADIO control pin
90	P106/AN6	XMOANTREV	I	-	E ↓ &L	-	Ed	Z	O/L	O/L	XM RADIO control pin
91	P105/AN5	XMIRESET	O	C	-	-	-	Z	O/L	O/L	XM RADIO RESET control pin
92	P104/AN4	ACKSUB	O	C	-	-	Ed	Z	O/L	O/L	MAIN-SUB μ com comm. control pin
93	P103/AN3	KEY1	I	-	Lv	-	Eu	Z	O/L	O/L	KEY1 SIGNAL INPUT
94	P102/AN2	KEY2	I	-	Lv	-	Eu	Z	O/L	O/L	KEY2 SIGNAL INPUT
95	P101/AN1	KEY3	I	-	Lv	-	Eu	Z	O/L	O/L	KEY3 SIGNAL INPUT
96	AVSS	AVSS	-	-	-	-	-	-	-	-	GND
97	P100/AN0	SET_OPTION	I	-	Lv	-	-	Z	O/L	O/L	SET OPTION SELECT
98	VREF	VREF	-	-	-	-	-	-	-	-	VREF
99	AVCC	AVCC	-	-	-	-	-	-	-	-	POWER 5V
100	P97/SIN4	-	O	-	-	-	Ed	Z	O/L	O/L	Not used

Note: Pin No. : Terminal number of microcomputer.
 Port Name : The name entered in the data sheet of microcomputer.
 Symbol : Symbolized interface function.
 I/O : Input or out of part.
 “I” = Input port
 “O” = Output port
 Type : Composition of port in case of output port.
 “C” = CMOS output
 “N” = NMOS open drain output
 “P” = PMOS open drain output
 Op : Pull up/Pull down selection information.
 “Iu” = Inner microcomputer pull up
 “Id” = Inner microcomputer pull down
 “Eu” = External microcomputer pull up
 “Ed” = External microcomputer pull down
 Det : Indicates judging state of input port. Level detection is “LV”; Edge detection is “Ed”; Detection by both shifting is “E&L”;
 Serial data detection is “S” (Serial data output is also “S”).
 Res : State at reset.
 “H” = Outputs High Level at reset
 “L” = Outputs Low Level at reset
 “Z” = Becomes High impedance mode at reset
 STBY : State of port when STANDBY mode.
 “O/L” = Output port and “L”
 “I” = Input port
 Stop : State of port when Stop mode.
 “O/L” = Output port and “L”
 “I” = Input port

M3062LFGPGP (DI: IC951)



M3062LFGPGP Terminal Function

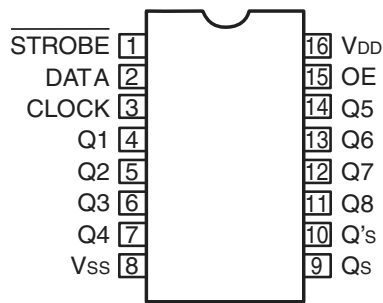
Pin	Pin Name	Symbol	I/O	Type	Det	Op (Int.)	Op (Ext.)	Res	Function
1	P94/TB4	VPLD DATA	O	C	-	-	-	Z	Video PLD control pin
2	P93/TB3	DIR CE	O	C	-	-	-	Z	DIR control pin (LC89057W-VF4A)
3	P92/SOUT3	DIR DIN	O	C	-	-	-	Z	DIR control pin (LC89057W-VF4A)
4	P91/SIN3	DIR DOUT	I	-	Lv	-	Eu	Z	DIR control pin (LC89057W-VF4A)
5	P90/CLK3	DIR CLK	O	C	-	-	-	Z	DIR control pin (LC89057W-VF4A)
6	BYTE	BYTE	-	-	-	-	-	-	GND (Ext. data bus bit width switching, 16bit: L)
7	CNVCS	CNVSS	-	-	-	-	-	-	Single-chip/Micro-processor mode switching (Normal single-chip: L, Rewrite boot program start:H input set)
8	P87	VERST	O	C	-	-	Eu	Z	Video encoder reset (ADV7172)
9	P86	VDRST	O	C	-	-	Eu	Z	Video decoder reset (ADV7401)
10	RESET	SUBRESET	I	-	Lv	-	Eu	L	Reset input
11	XOUT	X1	O	-	-	-	-	-	Oscillator connection
12	VSS	VSS	-	-	-	-	-	-	GND
13	XIN	X2	I	-	-	-	-	-	Oscillator connection
14	VCC	VCC	-	-	-	-	-	-	+3.3V
15	P85/NMI	NMI	I	-	-	-	-	-	Not used (Fixed to H)
16	P84/INT2	CEC-I	I	-	-	-	-	Z	CEC-D signal input pin (reserve)
17	P83/INT1	ACKSIMO	I	-	E ↓ &L	-	Ed	Z	MAIN-SUB μ com comm. Control input pin
18	P82/INT0	SUB BDOWN	I	-	E ↓ &L	-	Eu	Z	Power down detect (Power down : L)
19	P81	IP RST	O	C	-	-	-	Z	IP CONV (FLI2310) reset
20	P80	NC	I	-	-	-	Ed	Z	Not used
21	P77	SICODECO	I	-	-	-	-	Z	CODEC control pin (ADAU1328)
22	P76	CPU_MUTE/TMS	O	C	-	-	-	Z	MAIN PLD DAC MUTE control pin/PLD rewrite control (JTAG)
23	P75	APLSEL/TDI	O	C	-	-	-	Z	MAIN FPGA (PLD) control pin/PLD rewrite control (JTAG)
24	P74	MTCK	O	C	-	-	-	Z	PLD rewrite control (JTAG)
25	P73/CTS2	VIDEO_POWER	O	C	-	-	-	Z	VIDEO POWER control output (H : ON)

Pin	Pin Name	Symbol	I/O	Type	Det	Op (Int.)	Op (Ext.)	Res	Function
26	P72/CLK2	DAC_POWER	O	C	-	-	Ed	Z	DIGITAL POWER control output (H : ON)
27	P71/RXD2	VSCL	I/O	N	-	-	Eu	Z	VIDEO I2C- IP CONV(FLI2310)/V_ENCODER(ADV7172)/V_DECODER(ADV7401)/COMPONENT SELECT IC(NJW1321FP1)control pin
28	P70/TXD2	VSDA	I/O	N	-	-	Eu	Z	VIDEO I2C- IP CONV(FLI2310)/V_ENCODER(ADV7172)/V_DECODER(ADV7401)/COMPONENT SELECT IC(NJW1321FP1)control pin
29	P67/TXD1	TXD	O	C	-	-	Eu	Z	Data transmission output to outside
30	P66/RXD1	RXD	I	-	Lv	-	Eu	Z	Data transmission output to outside
31	P65/CLK1	SW SUM	O	C	-	-	-	Z	Additional instructions to FRONT of an SW signal.(H:ON)
32	P64/CTS1	HDMIPOWER	O	C	-	-	-	Z	HDMI POWER control pin (H : ON)
33	P63/TXD0	SOMI	O	C	-	-	-	Z	MAIN-SUB μ com comm. control pin
34	P62/RXD0	SIMO	I	-	-	-	Ed	Z	MAIN-SUB μ com comm. control pin
35	P61/CLK0	CLKSIMO	I	-	-	-	Ed	Z	MAIN-SUB μ com comm. control pin
36	P60/CTS0	REQSOMI	O	C	-	-	Ed	Z	MAIN-SUB μ com comm. control pin
37	P57	NC	O	C	-	-	-	Z	Not used
38	P56	HDP2	O	C	-	-	-	Z	HD DET control pin
39	P55/EPM	ADPDOWN/AUTH	O	C	-	-	Ed	Z	Rewrite boot program start : L input set
40	P54	-	O	C	-	-	-	Z	Not used
41	P53	MONDIS	O	C	-	-	-	Z	COMPONENT MONITOR OUT output control pin
42	P52	VCR2INH	O	C	-	-	-	Z	VCR2OUT output INH control (L:MUTE)
43	P51	VCR1INH	O	C	-	-	-	Z	VCR1OUT output INH control (L:MUTE)
44	P50/CE	WP2/(AVMUTE)	O/I	-	-	-	Eu	Z	Write Protect control / Rewrite boot program start:H input set
45	P47	WP1	O	C	-	-	Ed	Z	WRITE PROTECT control pin
46	P46	DSPPWR	O	C	-	-	Ed	Z	H:DSP Power ON(Not used)
47	P45	HDP1	O	C	-	-	Ed	Z	HP DET1 control pin
48	P44	P.SAVE	O	C	-	-	Ed	Z	COMPONENT CONVERT output control pin
49	P43	HRINT	I	-	E \downarrow & L	-	-	Z	HDMI RECEIVER (Si9031) INT output
50	P42	HSCL/EDID SCL	I/O	C	-	-	Eu	Z	VIDEO I2C / HDMI EDIT (E2PROM) control pin
51	P41	HSDA/EDID SDA	I/O	C	-	-	Eu	Z	VIDEO I2C / HDMI EDIT (E2PROM) control pin
52	P40	Z1SMONIA	O	C	-	-	-	Z	Z1 SMONITOR Select
53	P37	HDMIR_RST	O	C	-	-	Eu	Z	HDMI RECEIVER (Si9135) reset
54	P36	1HTRST	O	C	-	-	Eu	Z	HDMI TRANSMITTER1 (Si9134) reset
55	P35	Z1SMONIB	O	C	-	-	-	Z	Z1 SMONITOR Select
56	P34	1HTINT	I	-	Lv	-	-	Z	HDMI OUT signal detect input (HDMI TRANS1 Si9134)
57	P33	PAL/NTSC	O	-	-	-	Ed	Z	PAL/NTSC control pin (ADV7172)
58	P32	SOCODECI	O	C	-	-	-	Z	CODEC control pin (ADAU1328)
59	P31	CLKCODEC	O	C	-	-	-	Z	CODEC control pin (ADAU1328)
60	VCC	VCC	-	-	-	-	-	-	+3.3V
61	P30	CECODEC	O	C	-	-	-	Z	CODEC control pin (ADAU1328)
62	VSS	VSS	-	-	-	-	-	-	GND
63	P27	CODECRST	O	C	-	-	-	Z	CODEC control pin (ADAU1328)
64	P26	XMDACRST	O	C	-	-	-	Z	XMDAC control pin (AK4385)
65	P25	XMDACCS	O	C	-	-	-	Z	XMDAC control pin (AK4385)
66	P24	XMDACMC	O	C	-	-	-	Z	XMDAC control pin (AK4385)
67	P23	XMDACMDI	O	C	-	-	-	Z	XMDAC control pin (AK4385)
68	P22	VEXPSTB	O	C	-	-	-	Z	STB output for video expander control (BU4094BCFV)
69	P21	VEXPOE	O	C	-	-	Ed	Z	OE output for video expander control (BU4094BCFV)
70	P20	VEXPCLK	O	C	-	-	-	Z	CLK output for video expander control (BU4094BCFV)
71	P17/INT5	VEXPDIN	O	C	-	-	-	Z	DATA output for video expander control (BU4094BCFV)
72	P16/INT4	COMPSET	I	-	Lv	-	Eu	Z	MAIN ZONE's COMPONENT signal detect input
73	P15/INT3	Z1VSG.DET	I	-	Lv	-	Eu	Z	MAIN ZONE's VIDEO signal detect input (Detected : H)
74	P14/D12	Z1SMONIDET	I	-	-	-	Eu	Z	MAIN ZONE's S-monitor connection detect input (Connected : L)
75	P13/D11	Z1SSIGDET	I	-	-	-	Eu	Z	MAIN ZONE's S-signal detect input (H : S-signal inputted)
76	P12/D10	SYNCDet	I	-	Lv	-	-	Z	SyncDet pin
77	P11/D9	CPUCONT	O	C	-	-	-	-	A.PLD Control Bit
78	P10/D8	D.POWER	O	C	-	-	Ed	Z	DIGITAL POWER control output (H : ON)
79	P07/D7	PLDWRITE	O	C	-	-	-	Z	PLD JTAGLINE ON/OFF control
80	P06/D6	VPLDCE/TDO	O/I	-	-	-	Ed	Z	VIDEO PLD control pin/ PLD rewrite control (JTAG)
81	P05/D5	NC	O	C	-	-	-	Z	Not used
82	P04/D4	NC	O	C	-	-	-	Z	Not used
83	P03/D3	INT1	I	-	Lv	-	Eu	Z	DIR1 control pin
84	P02/D2	INT2	O	C	-	-	-	Z	Not used
85	P01/D1	DIRRST2	O	C	-	-	-	Z	Not used
86	P00/D0	DIRRST1	O	C	-	-	-	Z	DIR1 control pin
87	P107/AN7	DSRST	O	C	-	-	-	Z	DSP (ADSP-21367) reset output pin (reset : L)
88	P106/AN6	NC	O	C	-	-	Ed	Z	Not used

Pin	Pin Name	Symbol	I/O	Type	Det	Op (Int.)	Op (Ext.)	Res	Function
89	P105/AN5	DSPROMRST	O	C	-	-	Ed	Z	DSP memory reset (reset : L)
90	P104/AN4	NC	O	C	-	-	-	Z	Not used
91	P103/AN3	DSPFLAG0	I	-	Lv	-	Ed	Z	DSP control pin (ADSP-21367)
92	P102/AN2	DSPICS	O	C	-	-	Eu	Z	DSP control pin (ADSP-21367)
93	P101/AN1	NC	O	C	-	-	-	Z	Not used
94	AVSS	AVSS	-	-	-	-	-	-	AD GND
95	P100/AN0	VPLDCLK	O	-	-	-	-	Z	VIDEO PLD control pin
96	VREF	VREF	-	-	-	-	-	-	AD ref. +3.3V
97	AVCC	AVCC	-	-	-	-	-	-	AD +3.3V
98	P97/SIN4	DSPMISO	I	-	Lv	-	Eu	Z	DSP control pin (ADSP-21367)
99	P96/SOUT4	DSPMOSI	O	C	-	-	Eu	Z	DSP control pin (ADSP-21367)
100	P95/CLK4	DSPICLK	O	C	-	-	Eu	Z	DSP control pin (ADSP-21367)

Note: Pin No. : Terminal number of microcomputer.
Port Name : The name entered in the data sheet of microcomputer.
Symbol : Symbolized interface function.
I/O : Input or out of part.
 “I” = Input port
 “O” = Output port
Type : Composition of port in case of output port.
 “C” = CMOS output
 “N” = NMOS open drain output
 “P” = PMOS open drain output
Op : Pull up/Pull down selection information.
 “Iu” = Inner microcomputer pull up
 “Id” = Inner microcomputer pull down
 “Eu” = External microcomputer pull up
 “Ed” = External microcomputer pull down
Det : Indicates judging state of input port. Level detection is “LV”; Edge detection is “Ed”; Detection by both shifting is “E&L”;
Serial data detection is “S” (Serial data output is also “S”).
Res : State at reset.
 “H” = Outputs High Level at reset
 “L” = Outputs Low Level at reset
 “Z” = Becomes High impedance mode at reset
STBY : State of port when STANDBY mode.
 “O/L” = Output port and “L”
 “I” = Input port
Stop : State of port when Stop mode.
 “O/L” = Output port and “L”
 “I” = Input port

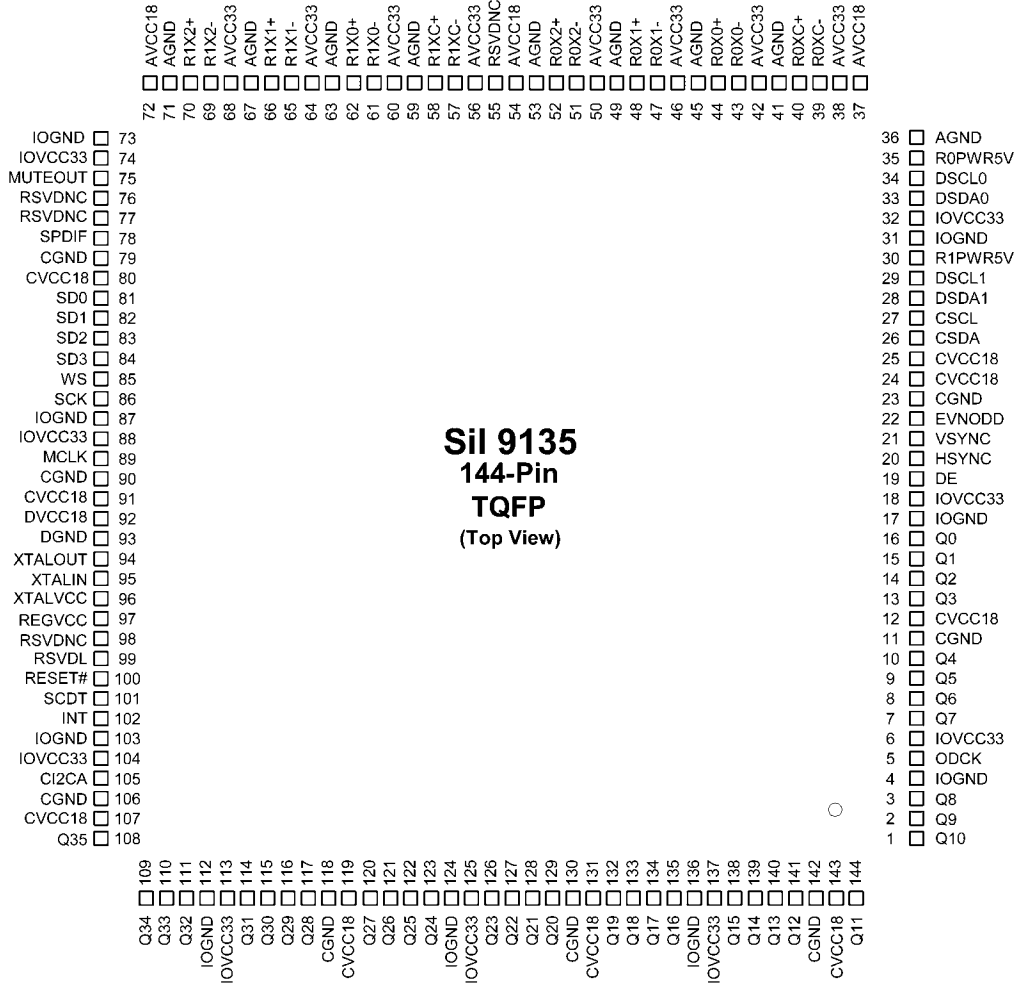
**BU4094BCFV-E2 (AV: IC301)
TC4094BF (MC: IC106,107)**



BU4094BCFV-E2 Terminal Function

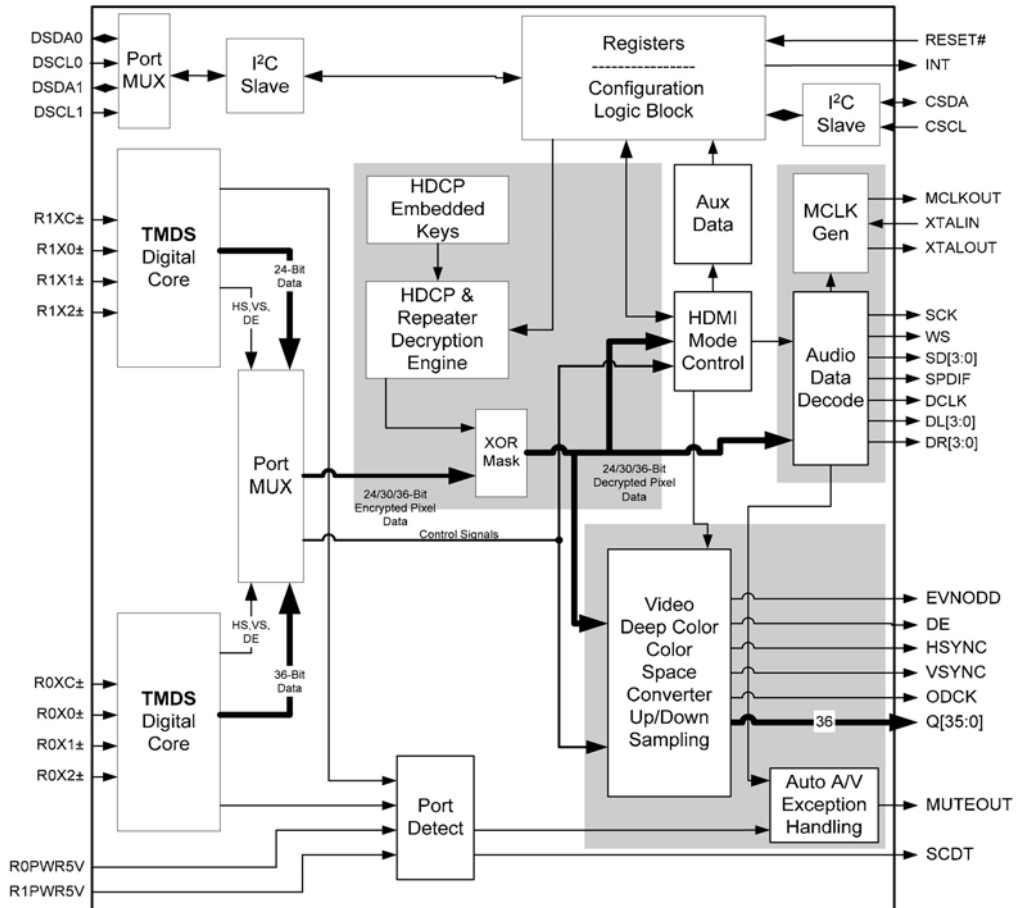
Device	Pin Name	Symbol	Function
DI : IC107	EXP1	DINA	MAIN ZONE Digital input switching
	EXP2	DINB	MAIN ZONE Digital input switching
	EXP3	DINC	MAIN ZONE Digital input switching
	EXP4	DZ2A	ZONE2 Digital input switching
	EXP5	DZ2B	ZONE2 Digital input switching
	EXP6	DZ2C	ZONE2 Digital input switching
	EXP7	NC	
	EXP8	NC	
AV : IC301	EXP9	INA	MAIN ZONE VIDEO(V/S) input switching
	EXP10	INB	MAIN ZONE VIDEO(V/S) input switching
	EXP11	INC	MAIN ZONE VIDEO(V/S) input switching
	EXP12	Z2A	ZONE2 VIDEO(V/S) input switching
	EXP13	Z2B	MAIN ZONE VIDEO(V/S) input switching
	EXP14	Z2C	MAIN ZONE VIDEO(V/S) input switching
	EXP15	Z1MONIA	MAIN ZONE VMONITOR output switching
	EXP16	Z1MONIB	MAIN ZONE VMONITOR output switching
AV : IC302	EXP17	Z2MONIA	ZONE2 MONITOR output switching
	EXP18	Z2MONIB	ZONE2 MONITOR output switching
	EXP19	NC	
	EXP20	NC	
	EXP21	NC	
	EXP22	NC	
	EXP23	NC	
	EXP24	NC	
AV : IC304	EXP25	ASPECT_H	ASPECT ratio level control (JP model only)
	EXP26	ASPECT_L	ASPECT ratio level control (JP model only)
	EXP27	LINE A	D pin LINE A control pin (JP model only)
	EXP28	LINE B	D pin LINE B control pin (JP model only)
	EXP29	INH LINE	D pin LINE control pin (JP model only)
	EXP30		
	EXP31		
	EXP32		

Sil9135CTU (DI : IC554)

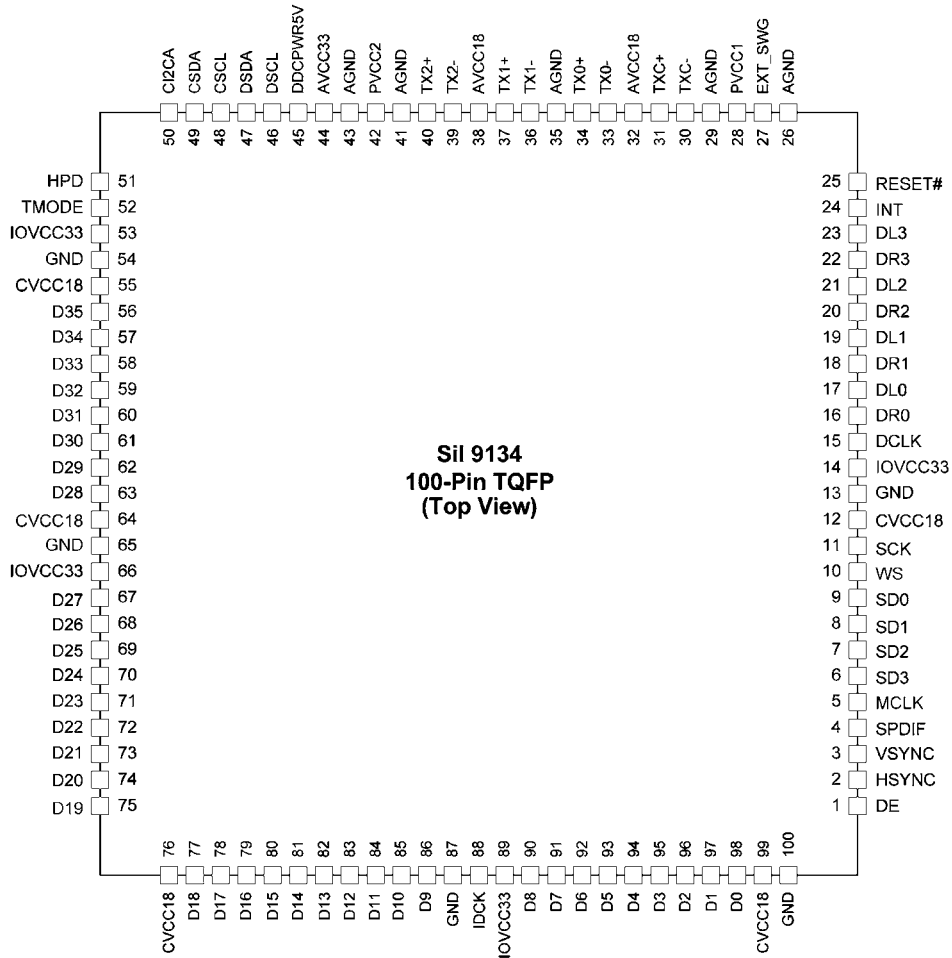


**Sil 9135
144-Pin
TQFP
(Top View)**

Functional Block Diagram

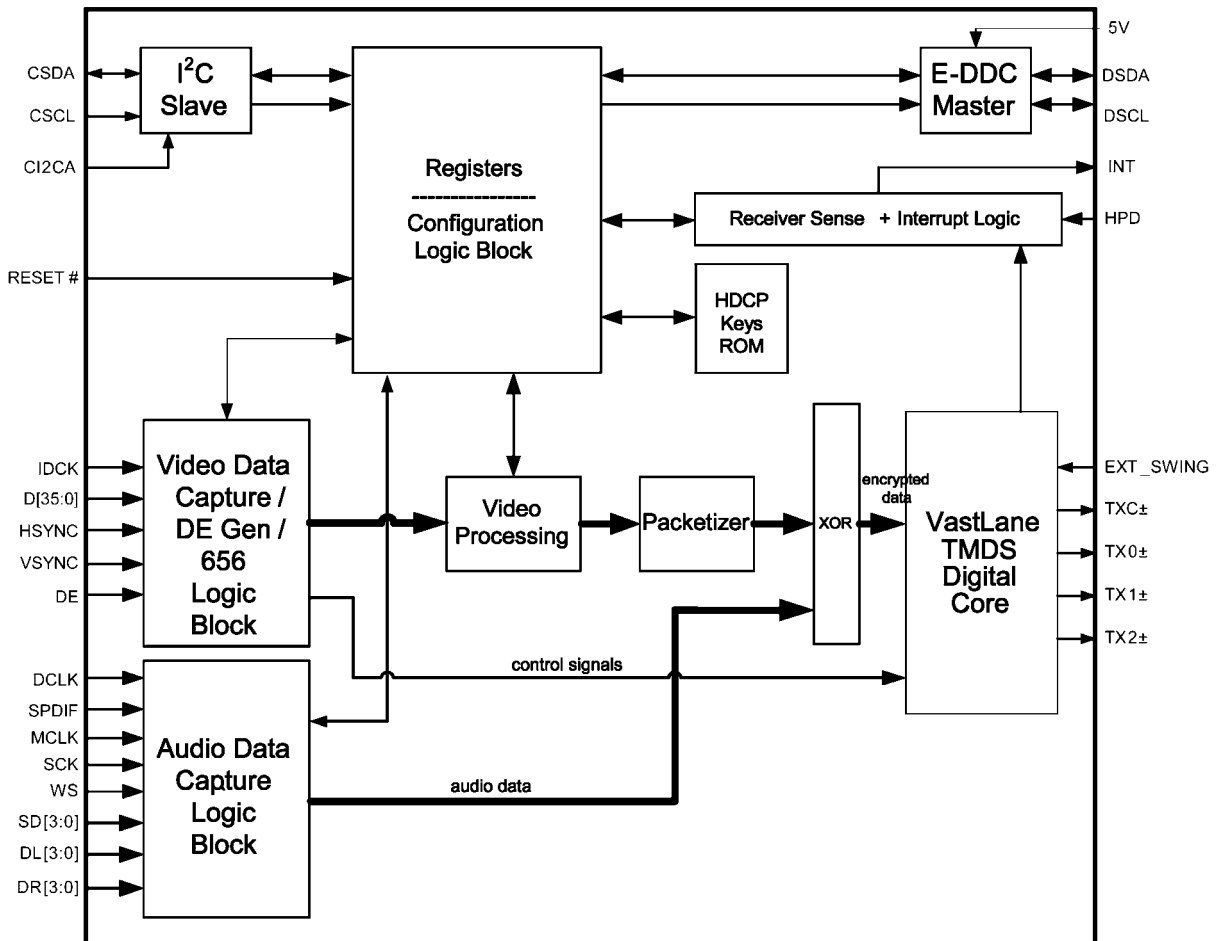


Sil9134CTU (DI : IC702)

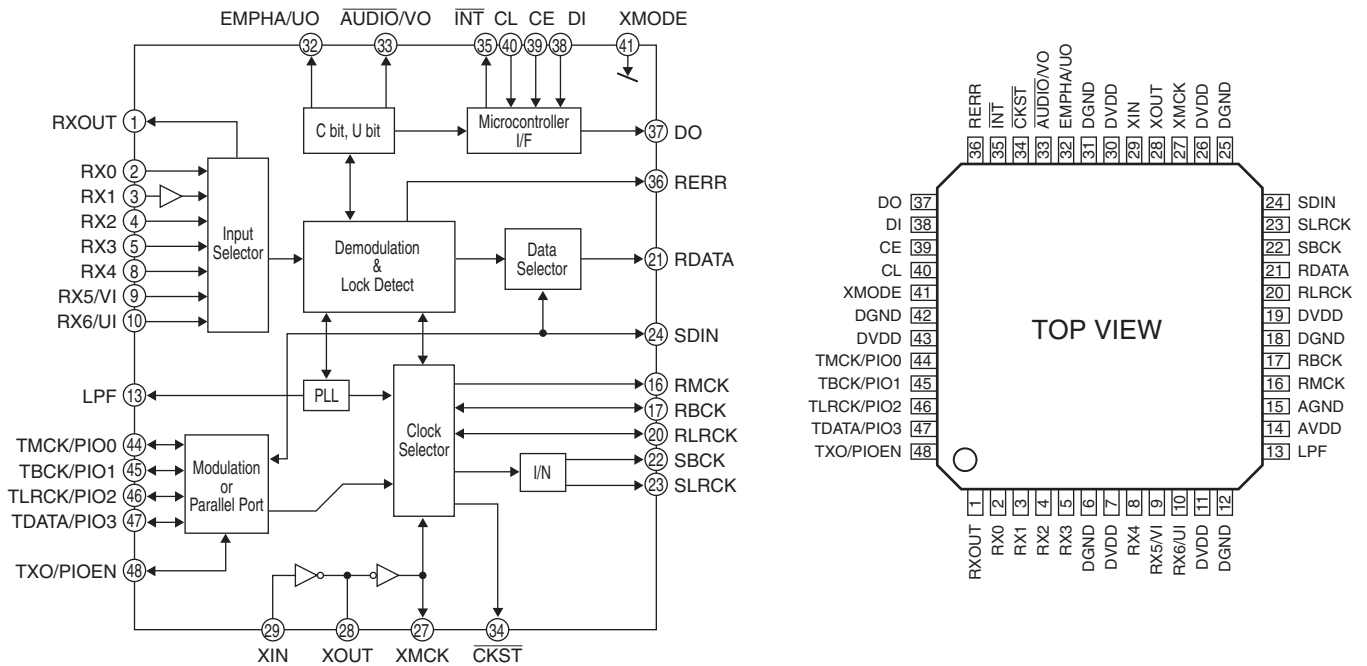


Sil 9134
100-Pin TQFP
(Top View)

Functional Block Diagram



LC89057W-VF4A (DI: IC101)



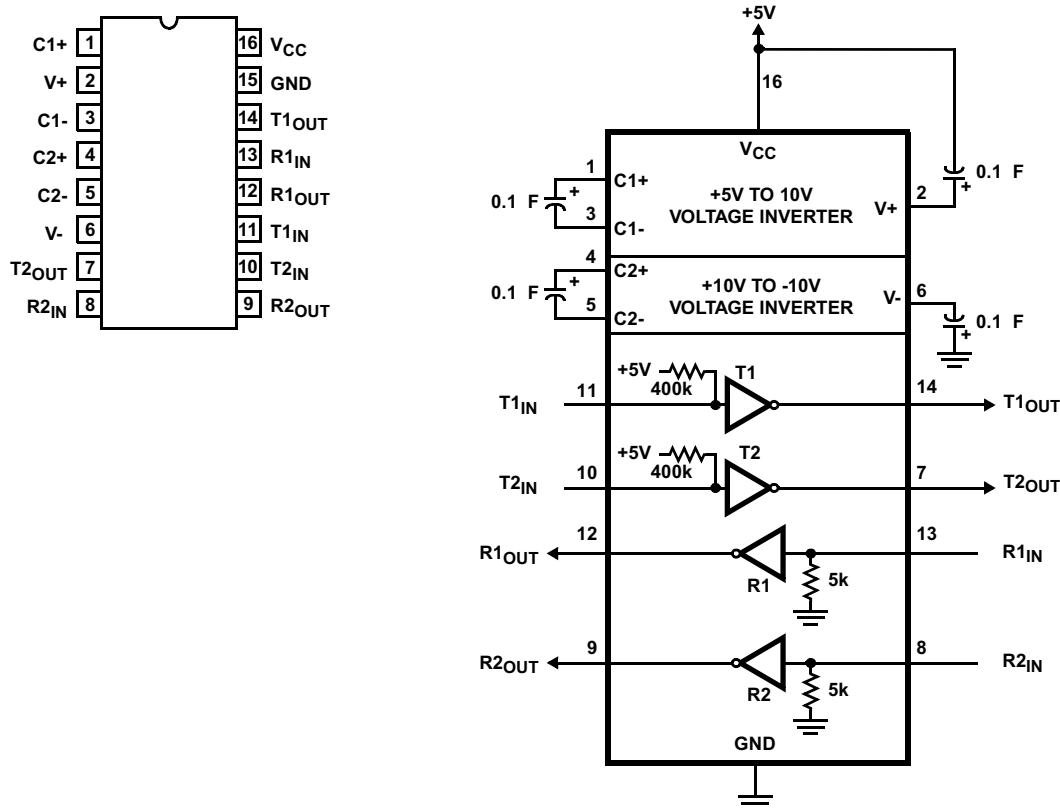
LC89057W Terminal Function

Pin No.	Pin Name	I/O	Function
1	RXOUT	O	Input bi-phase select data output terminal
2	RX0	I	TTL compatible digital data input terminal
3	RX1	I	Coaxial compatible amp built-in digital data input terminal
4	RX2	I	TTL compatible digital data input terminal
5	RX3	I	TTL compatible digital data input terminal
6	DGND	„	Digital GND
7	DVDD	„	Digital power
8	RX4	I	TTL compatible digital data input terminal
9	RX5/VI	I	TTL compatible digital data/Validity flag input terminal for modulation
10	RX6/UI	I	TTL compatible digital data/User data input terminal for modulation
11	DVDD	„	Digital power for PLL
12	DGND	„	Digital GND for PLL
13	LPF	O	PLL loop filter connecting terminal
14	AVDD	„	Analog power for PLL
15	AGND	„	Analog GND for PLL
16	RMCK	O	RMCK clock output terminal (256fs, 512fs, XIN, VCO)
17	RBCK	O/I	RBCK clock in/output terminal (64fs)
18	DGND	„	Digital GND
19	DVDD	„	Digital power
20	RLRCK	O/I	RLRCK clock in/output terminal (fs)
21	RDATA	O	Serial audio data output terminal
22	SBCK	O	SBCK clock output terminal (32fs, 64fs, 128fs)
23	SLRCK	O	SLRCK clock output terminal (fs/2, fs, 2fs)
24	SDIN	I	Serial audio data input terminal
25	DGND	„	Digital GND
26	DVDD	„	Digital power
27	XMCK	O	Osc. amp output terminal

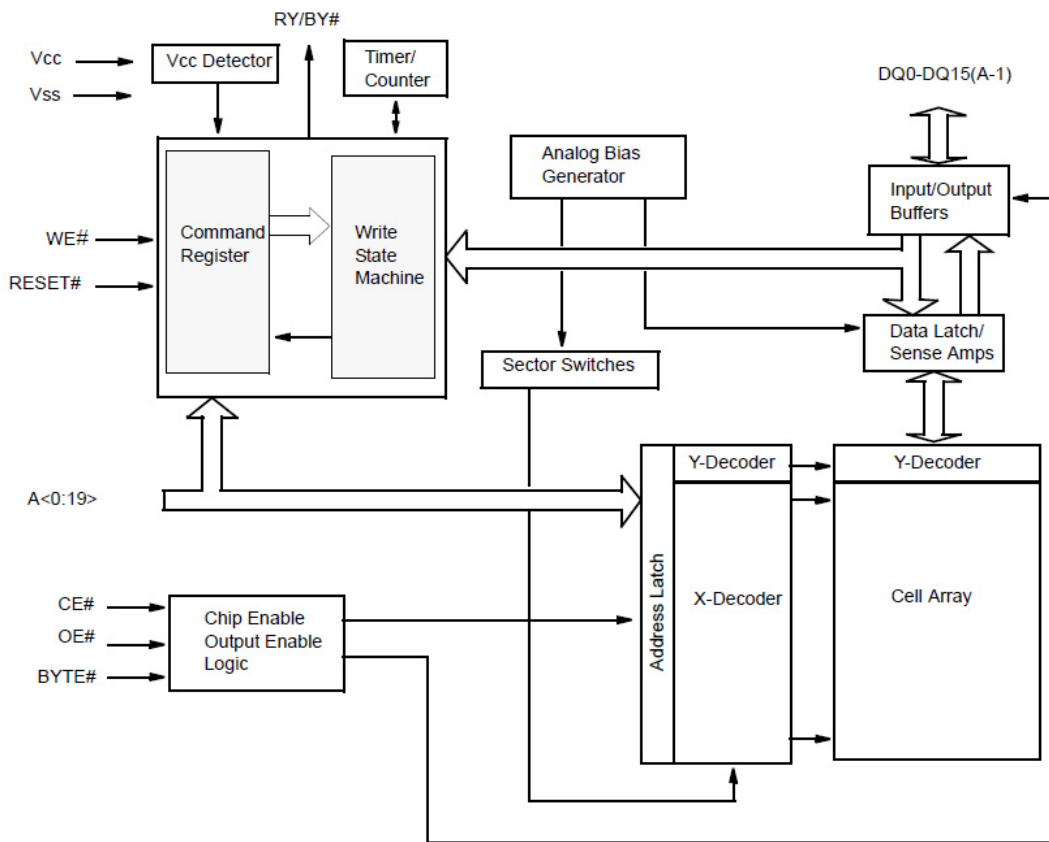
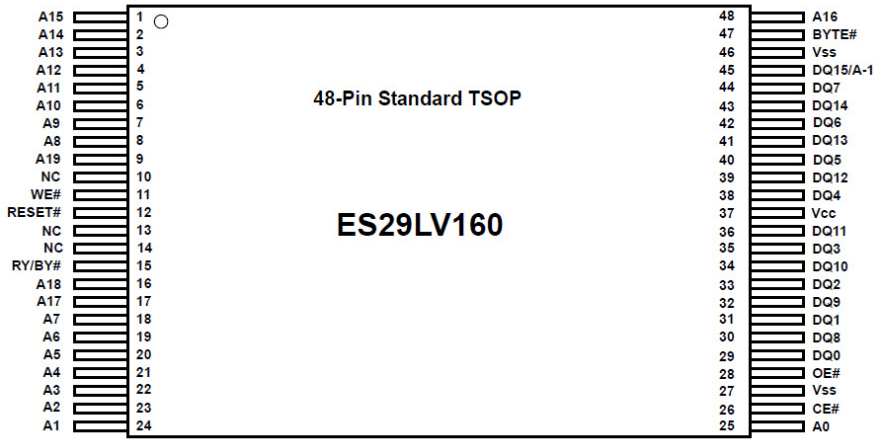
Pin No.	Pin Name	I/O	Function
28	XOUT	O	X tal osc. connecting output terminal
29	XIN	I	X tal osc. connection, external clock input terminal (24.576MHz or 12.288MHz)
30	DVDD	„	Digital power
31	DGND	„	Digital GND
32	EMPHA/UO	I/O	Emphasis information/U-data output/Chip address setting terminal
33	AUDIO/VO	I/O	Non-PCM detect/V-flag output/ Chip address setting terminal
34	CKST	I/O	Clock switch transition period output/Demodulation master or slave function switching terminal
35	INT	I/O	Interrupt output for ∞ com (Interrupt factor selectable)/Modulation or general I/O switching terminal
36	RERR	O	PLL lock error, data error flag output
37	DO	O	∞ com I/F, read out data output terminal (3-state)
38	DI	I	∞ com I/F, write data input terminal
39	CE	I	∞ com I/F, chip enable input terminal
40	CL	I	∞ com I/F, clock input terminal
41	XMODE	I	System reset input terminal
42	DGND	„	Digital GND
43	DVDD	„	Digital power
44	TMCK/PIO0	I/O	256fs system clock input for modulation/General I/O in/output terminal
45	TBCK/PIO1	I/O	64fs bit clock input for modulation/General I/O in/output terminal
46	TLRCK/PIO2	I/O	fs clock input for modulation/General I/O in/output terminal
47	TDATA/PIO3	I/O	Serial audio data input for modulation/General I/O in/output terminal
48	TXO/PIOEN	O/I	Modulation data output/ General I/O enable input terminal

* For latch-up countermeasure, perform each power supply ON/OFF in the same timing.

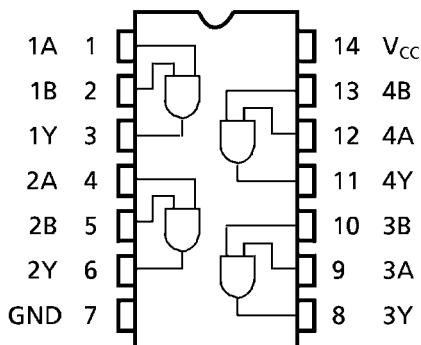
HIN202EIBNZ-T (MC:IC104)



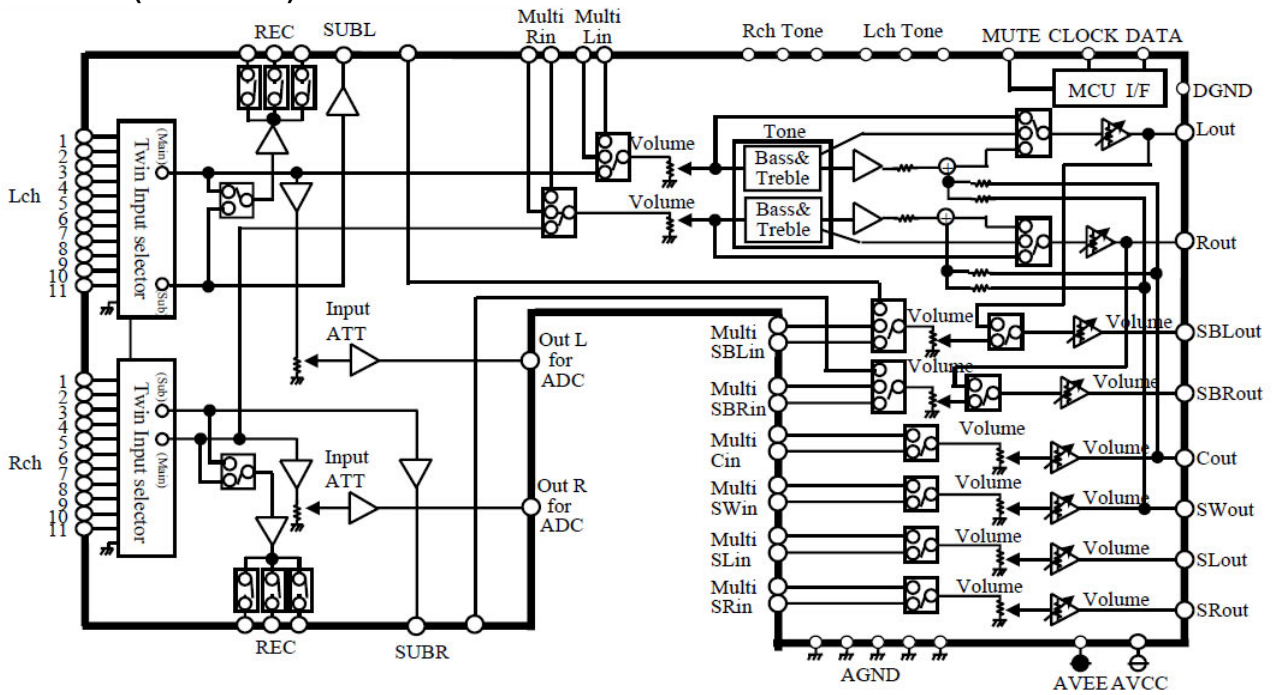
ES29LV160EB-70TGI-M (DI : IC205)



TC74VHCT08AFT (DI: IC305,956,957)



R2A15215 (AV : IC612)

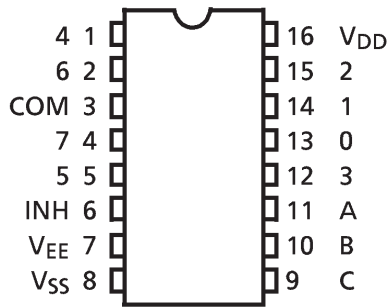


PIN No.	Name	Function
23,21, 17,15, 11,9, 5,3	FROUT,FLOUT, COUT,SWOUT, SROUT, SLOUT, SBROUT,SBLOUT	Output pin of FL/FR/C/SW/SL/SR/SBL/SBR channel
24,20, 18,14, 12,8, 6,2	FRC,FLC, CC,SWC, SRC,SLC, SBRC,SBLC	Connects capacitor for reducing click noise of L/R/C/SW/SL/SR/SBL/SBR channel volume
4,7,10,16, 19,22,56	AGND	Analog ground of internal circuit
28,34	TREL, TRER	Frequency characteristic setting pin of L/R channel tone control (Treble)
26,27, 32,33	BASSL1,BASSL2 BASSR1,BASSR2	Frequency characteristic setting pin of L/R channel tone control (Bass)
30	AVCC	Positive power supply to internal circuit
43,42, 41,40, 39,38, 37,36 93,94, 95,96, 97,98, 99,100	FRIN2, FLIN2, SRN2,SLIN2, SWIN2,CIN2, SBRIN2,SBLIN2 FLIN1, FRIN1, CIN1,SWIN1, SLIN1,SRIN1, SBLIN1,SBRIN1	Input pin of L/R/C/SW/SL/SR/SBL/SBR channel (Multi IN 1/2)
48	DGND	Digital ground of internal circuit
49	DATA	Input pin of control data
50	CLOCK	Input pin of control clock
52	AVEE	Negative power supply to internal circuit
59,61,63, 65,67,69, 71,73,79	INL1,INL2, INL3, INL4,INL5,INL6, INL7,INL8,INL9	Input pin of L/R channel (Input Selector)
58,60,62, 64,66,68, 70,72,78	INR1,INR2, INR3, INR4,INR5,INR6, INR7,INR8,INR9	
51	MUTE	Outside Mute Control PIN
44,45	SBRCIN,SBLCIN	Input pin for SBL/SBR channel Volume
46,47	SUBL,SUBR	Output pin for L/R channel SUB Output
54,55	ADCL, ADCR	Output pin for L/R channel ADC
90,91	RECR3,RECL3	Output pin for L/R channel REC Output
75,76, 81,82, 83,84, 85,86	INRA/RECR1,INLA/RECL1, INRB/RECR2,INLB/RECL2, INR10/RECR4,INL10/RECL4, INR11/RECR5,INL11/RECL5	Input pin of L/R channel (Input Selector)/ Output pin for L/R channel REC Output
1,13,25,29,31, 35,53, 57,74,77,80, 87,88,89,92	N.C.	No Connected PIN

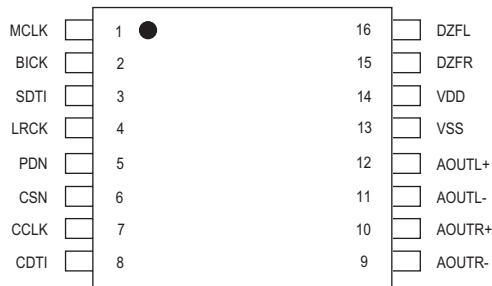
TC4051BFT (AV: IC102,103,106,107,109,110)

TC4052BFT (AV: IC104,108)

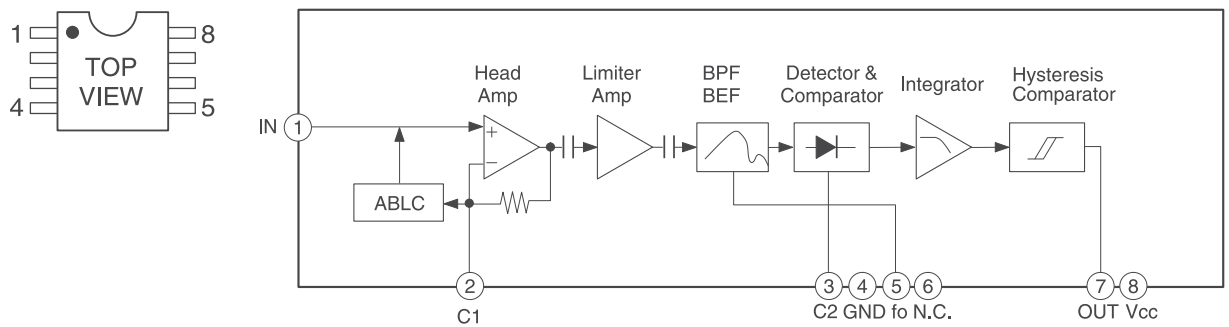
TC4053BFT (AV: IC303)



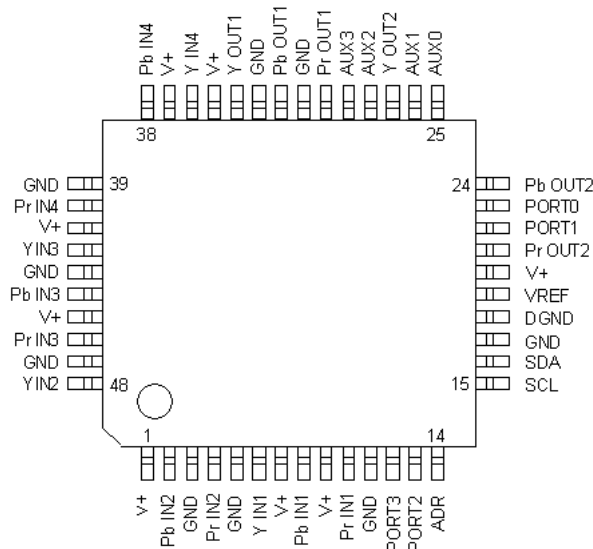
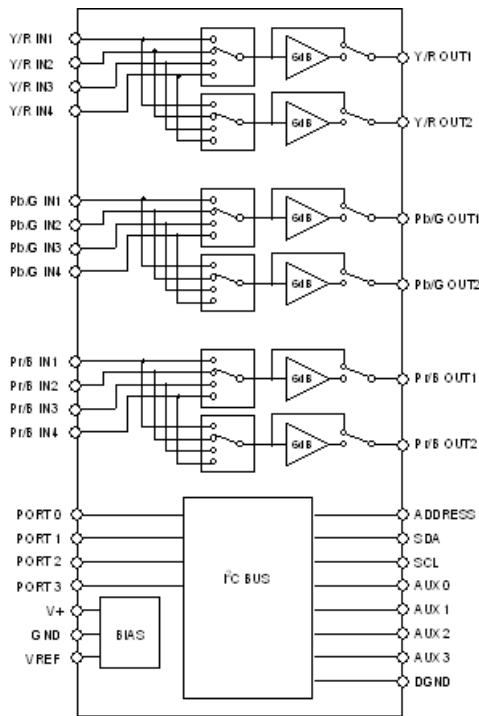
AK4385ET (DI: IC302)



CXA1511M (FR: IC602)



NJW1321FP1 (AV: IC501)

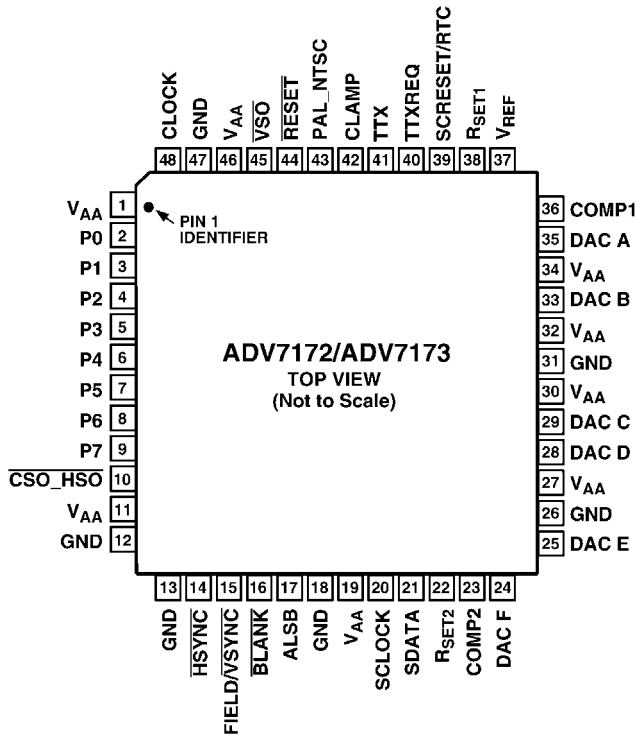


- | | | | |
|------------|-------------|-------------|------------|
| 1. V+ | 13. PORT2 | 25. AUX0 | 37. V+ |
| 2. Pb IN2 | 14. ADR | 26. AUX1 | 38. Pb IN4 |
| 3. GND | 15. SCL | 27. Y OUT2 | 39. GND |
| 4. Pr IN2 | 16. SDA | 28. AUX2 | 40. Pr IN4 |
| 5. GND | 17. GND | 29. AUX3 | 41. V+ |
| 6. Y IN1 | 18. DGND | 30. Pr OUT1 | 42. Y IN3 |
| 7. V+ | 19. VREG | 31. GND | 43. GND |
| 8. Pb IN1 | 20. V+ | 32. Pb OUT1 | 44. Pb IN3 |
| 9. V+ | 21. Pr OUT2 | 33. GND | 45. V+ |
| 10. Pr IN1 | 22. PORT1 | 34. Y OUT1 | 46. Pr IN3 |
| 11. GND | 23. PORT0 | 35. V+ | 47. GND |
| 12. PORT3 | 24. Pb OUT2 | 36. Y IN4 | 48. Y IN2 |

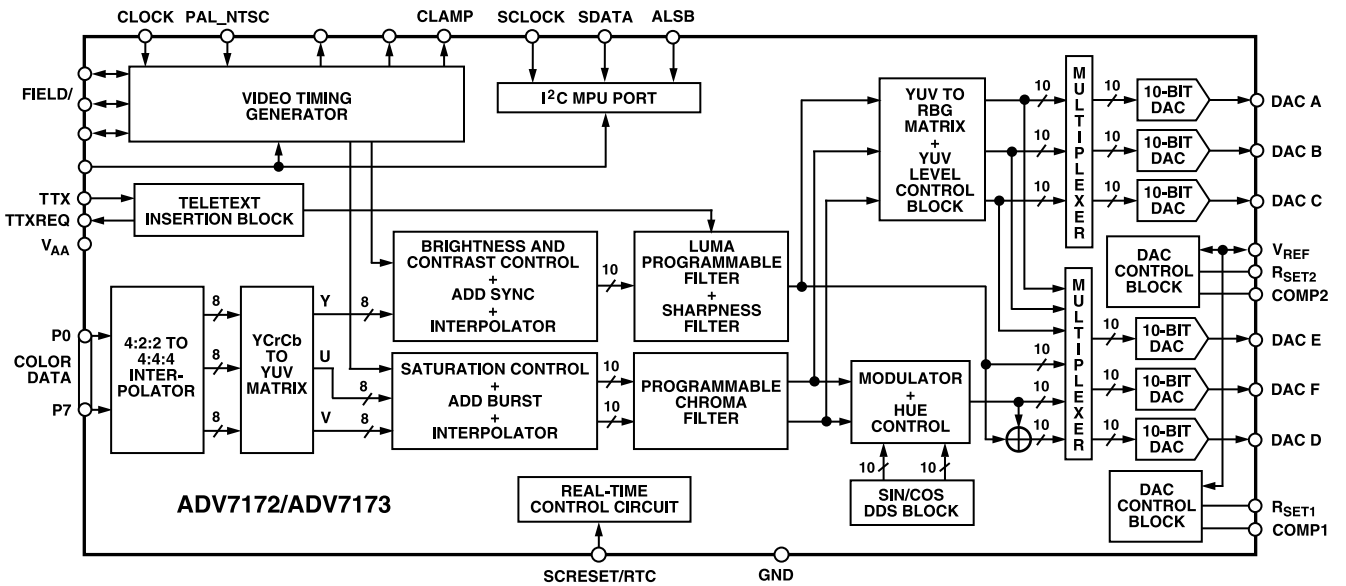
Control Pin Sub VSCL (27pin) VSDA (28pin)

Pin Name		AUX0		AUX1		AUX2		AUX3	
Signal Name		OSD V/Y		Z1OSDV		Z1OSDY			
	Output	D7	D6	D5	D4	D3	D2	D1	D0
DATA2	L setup	0	0	0	0	0	0	0	0
	H setup	1	1	1	1	1	1	1	1
Function		Superimpose Signal select L : S H : CVBS		MAIN ZONE CVBS signal channel select L : Through channel select H : OSD channel select		MAIN ZONE S signal channel select L : Through channel select H : OSD channel select		Not used	

ADV7172 (DI : IC805)
PIN CONFIGURATION



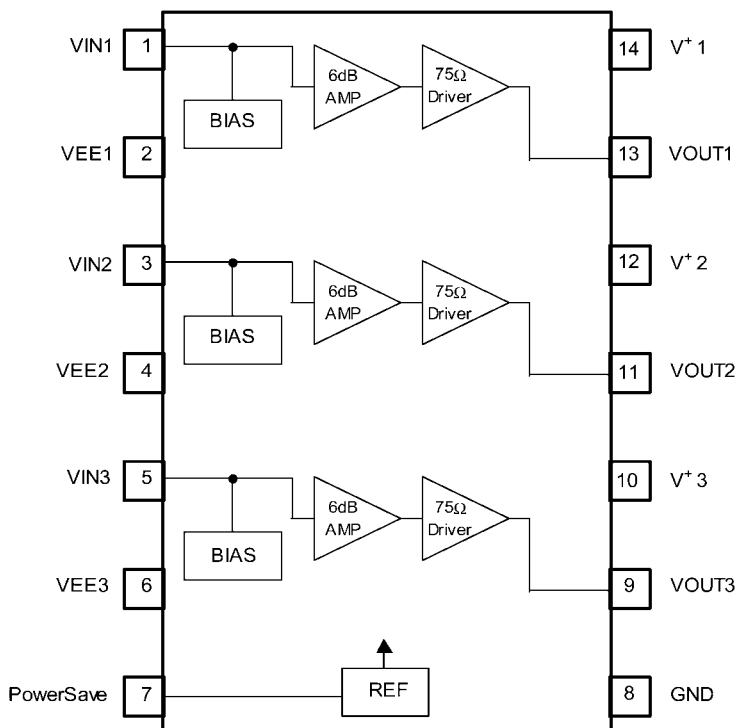
BLOCK DIAGRAM



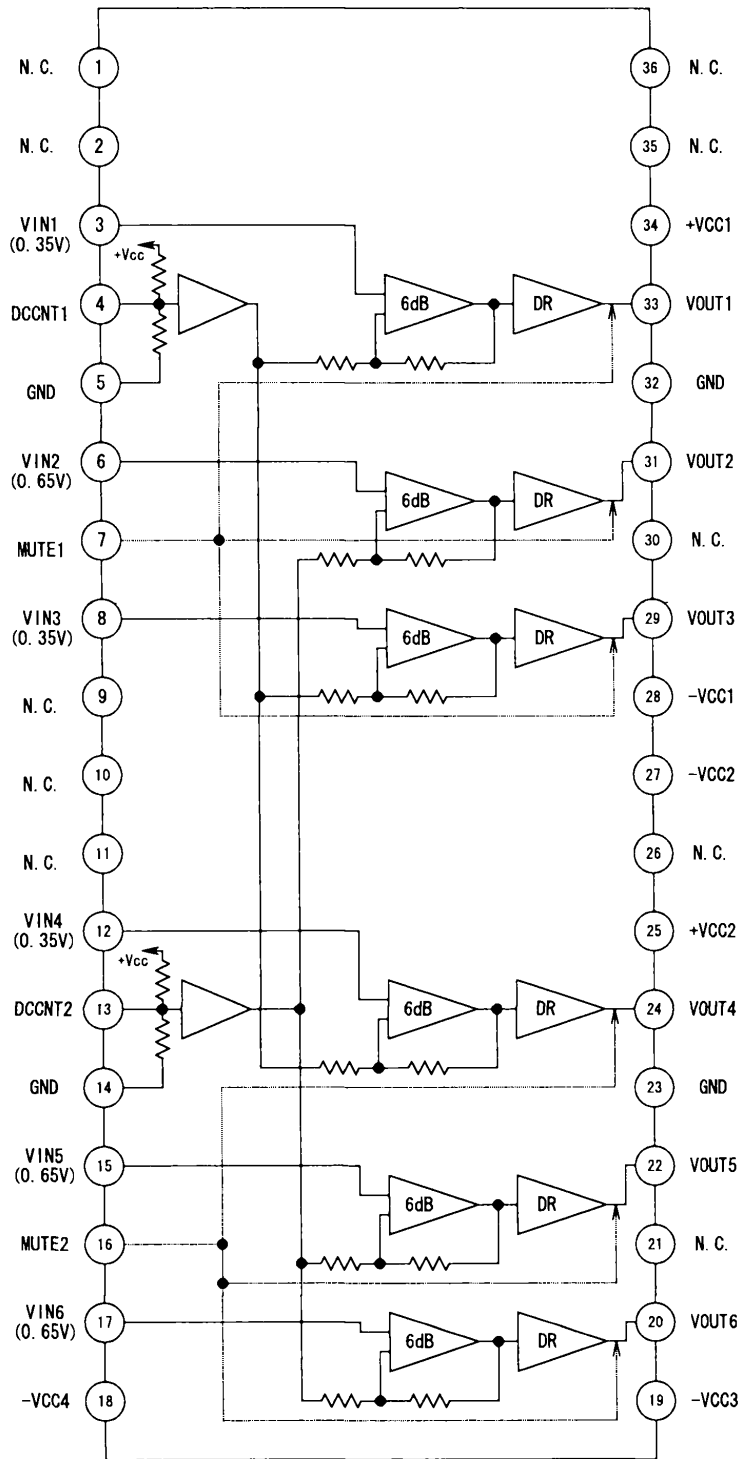
PIN FUNCTION DESCRIPTION

Mnemonic	Input/Output	Function
P7-P0	I	8-Bit 4:2:2 Multiplexed YCrCb Pixel Port (P7-P0) P0 represents the LSB.
CLOCK	I	TTL Clock Input. Requires a stable 27 MHz reference clock for standard operation. Alternatively, a 24.5454 MHz (NTSC) or 29.5 MHz (PAL) can be used for square pixel operation.
$\overline{\text{HSYNC}}$	I/O	$\overline{\text{HSYNC}}$ (Modes 1 and 2) Control Signal. This pin may be configured to output (Master Mode) or as an input and accept (Slave Mode) Sync signals.
$\overline{\text{FIELD/VSYNC}}$	I/O	Dual Function $\overline{\text{FIELD}}$ (Mode 1) and $\overline{\text{VSYNC}}$ (Mode 2) Control Signal. This pin may be configured to output (Master Mode) or as an input (Slave Mode) and accept these control signals.
$\overline{\text{BLANK}}$	I/O	Video Blanking Control Signal. The pixel inputs are ignored when this is Logic Level "0." This signal is optional.
SCRESET/RTC	I	This pin can be configured as an input by setting MR42 and MR41 of Mode Register 4. It can be configured as a subcarrier reset pin, in which case a low-to-high transition on this pin will reset the subcarrier phase to Field 0. Alternatively it may be configured as a Real-Time Control (RTC) Input.
V_{REF}	I/O	Voltage Reference Input for DACs or Voltage Reference Output (1.235 V).
R_{SET1}	I	A 150 Ω resistor connected from this pin to GND is used to control full-scale amplitudes of the Video Signals from DACs A, B, and C (the "large" DACs).
R_{SET2}	I	A 600 Ω resistor connected from this pin to GND is used to control full-scale amplitudes of the Video Signals from DACs D, E, and F (the "small" DACs).
COMP1	O	Compensation Pin for DACs A, B, and C. Connect a 0.1 μF Capacitor from COMP to V_{AA} . For Optimum Dynamic Performance in Low Power Mode, the value of the COMP1 capacitor can be lowered to as low as 2.2 nF.
COMP2	O	Compensation Pin for DACs D, E, and F. Connect a 0.1 μF Capacitor from COMP to V_{AA} .
DAC A	O	GREEN/Composite/Y Analog Output. This DAC is capable of providing 34.66 mA output.
DAC B	O	BLUE/S-Video Y/U Analog Output. This DAC is capable of providing 34.66 mA output.
DAC C	O	RED/S-Video C/V Analog Output. This DAC is capable of providing 34.66 mA output.
DAC D	O	GREEN/Composite/Y Analog Output. This DAC is capable of providing 8.66 mA output.
DAC E	O	BLUE/S-Video Y/U Analog Output. This DAC is capable of providing 8.66 mA output.
DAC F	O	RED/S-Video C/V Analog Output. This DAC is capable of providing 8.66 mA output.
SCLOCK	I	MPU Port Serial Interface Clock Input.
SDATA	I/O	MPU Port Serial Data Input/Output.
CLAMP	O	TTL Output Signal to external circuitry to enable clamping of all video signals.
PAL_NTSC	I	Input signal to select PAL or NTSC mode of operation, pin set to Logic "1" selects PAL.
$\overline{\text{VSO}}$	O	$\overline{\text{VSO}}$ TTL Output Sync Signal.
$\overline{\text{CSO_HSO}}$	O	Dual Function $\overline{\text{CSO}}$ or $\overline{\text{HSO}}$ TTL Output Sync Signal.
ALSB	I	TTL Address Input. This signal sets up the LSB of the MPU address.
RESET	I	The input resets the on-chip timing generator and sets the ADV7172/ADV7173 into default mode. This is NTSC operation, Timing Slave Mode 0, DACs A, B, and C powered OFF, DACs D, E, and F powered ON, Composite and S-Video out.
TTX	I	Teletext Data Input Pin.
TTXREQ	O	Teletext Data Request output signal used to control teletext data transfer.
V_{AA}	P	Power Supply (3 V to 5 V).
GND	G	Ground Pin.

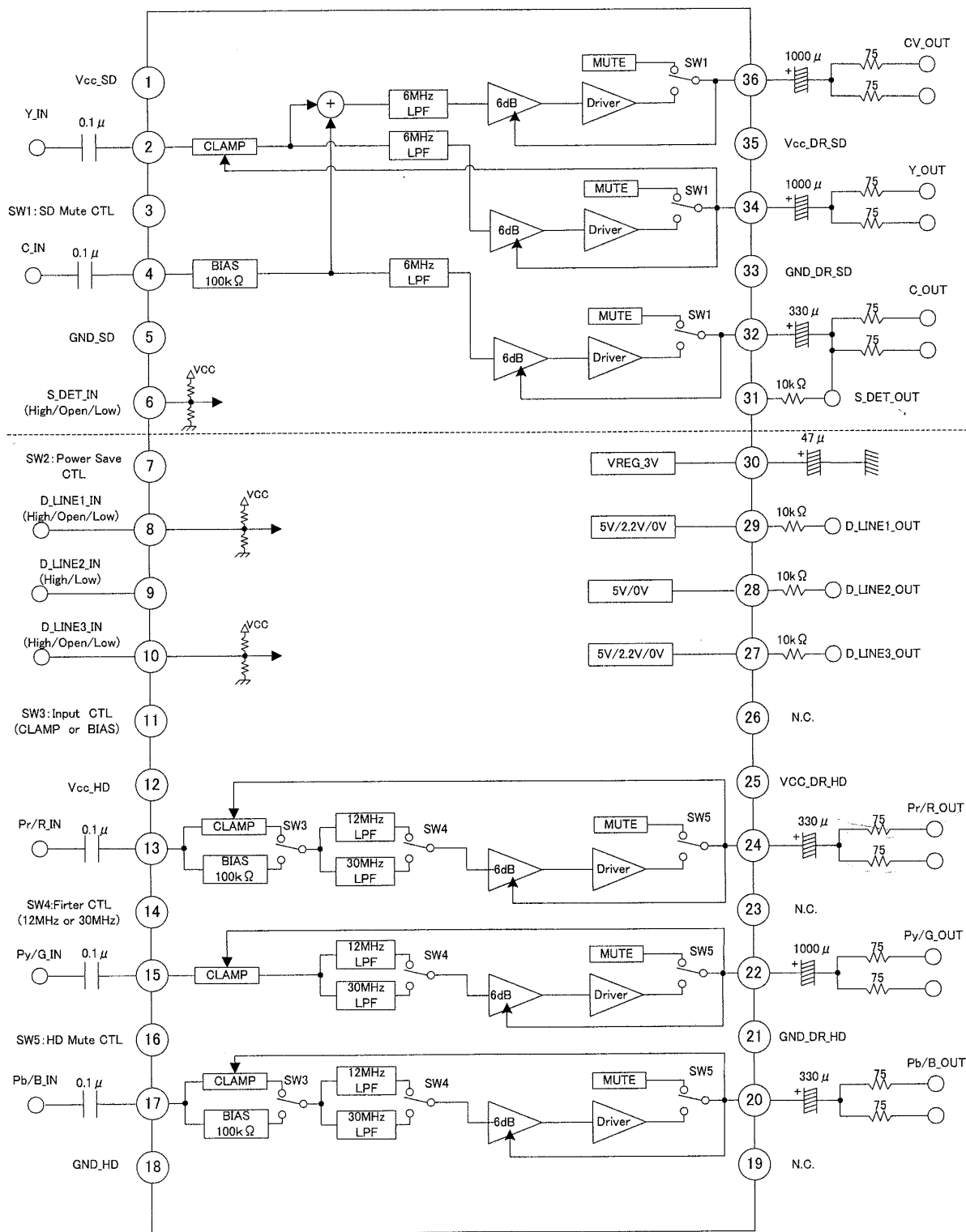
NJM2581M-TE1 (AV : IC503,504)



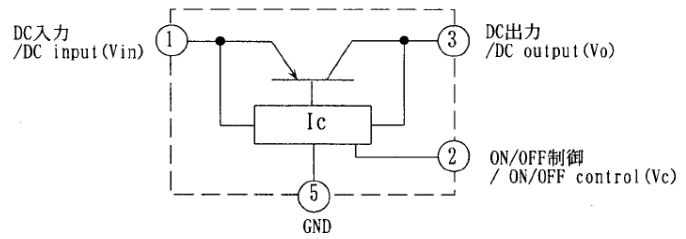
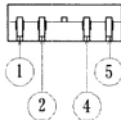
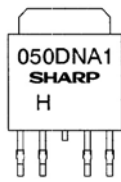
LA73053 (AV : IC101)



LA73062V (AV : IC305)

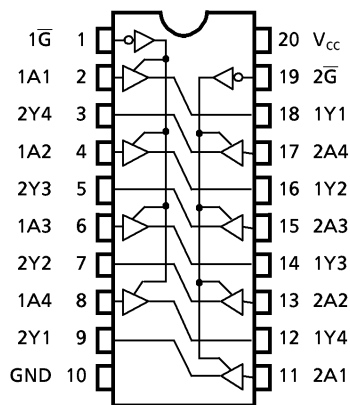


PQ050DNA1ZPH (DI: IC312) (MC: IC505,IC506)
 PQ090DNA1ZPH (AV: IC502)
 PQ120DNA1ZPH (MC: IC101,IC102,IC103)



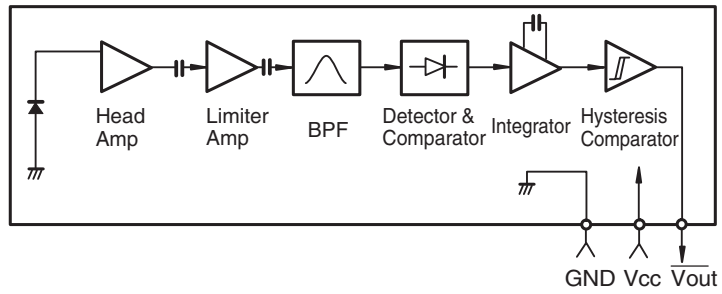
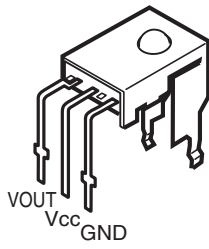
- ① DC 入力: DC input (Vin)
- ② ON/OFF 制御/ ON/OFF control (Vc)
- ③ DC 出力/ DC output (Vo)
- ④ NC
- ⑤ GND

TC74VHC244FT (DI: IC112)



2. OTHERS

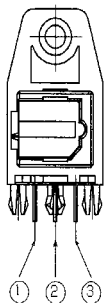
GP1UM271XK (Remote Control Sensor) (FR: IC103)



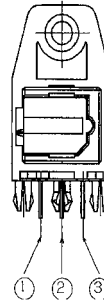
3. OPTICAL

GP1FAV31RK0F (FR: IC201,202,701)

GP1FAV31TK0F (FR: IC204)



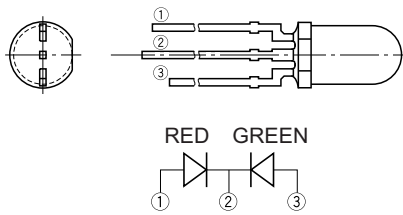
Pin arrangement
 ① VCC ② GND ③ Vout



Pin arrangement
 ① V in ② VCC ③ GND

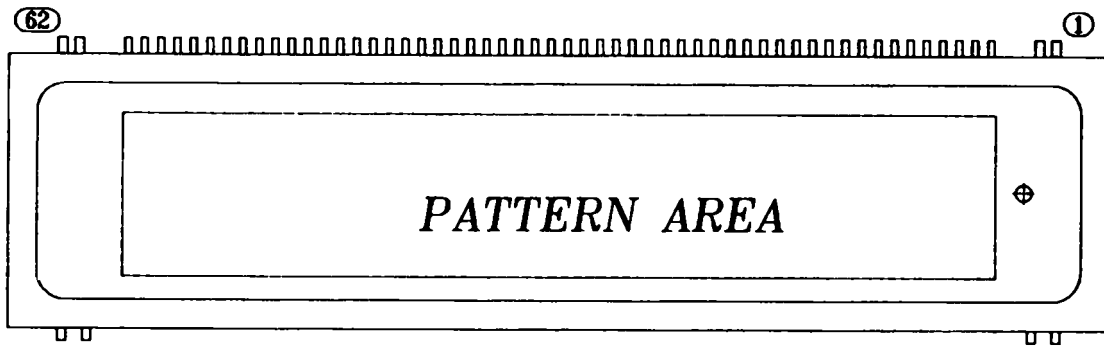
4. LED

SMLU12416W-S (LED) (FR: LD101)



5. FL DISPLAY

FLD (HCA-19MM02T) (FR: FL101)



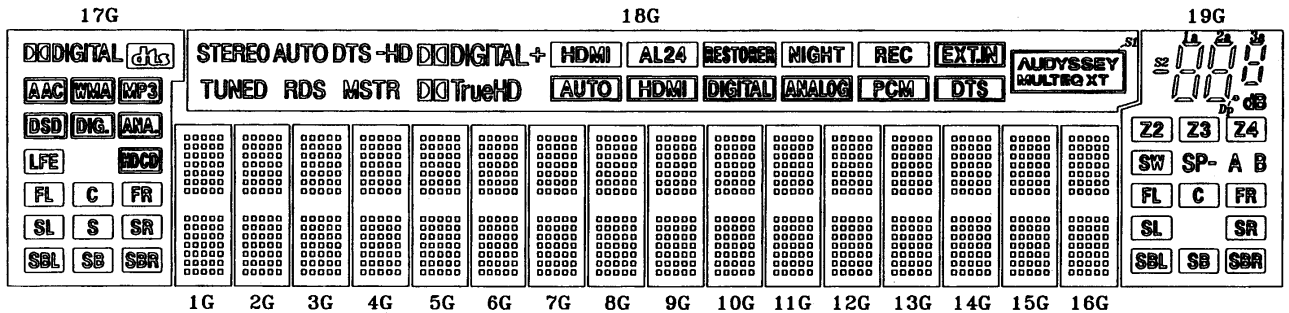
PIN CONNECTION

PIN NO.	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41~5	4	3	2	1
CONNECTION	F2	F2	NP	NP	VDISP	L-GND	D-GND	VDD	OSCO	RESET	CS	CP	DA	DO	TEST	Q _{19G}	Q _{18G}	Q _{17G}	17G	18G	19G	NX	NP	NP	F1	F1

● Notes ●

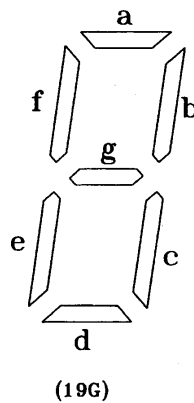
- 1) Fn : Filament pin
- 2) nG : Grid pin
- 3) NX : No Extended pin
- 4) NP : No pin

GRID ASSIGNMENT



1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30
31	32	33	34	35
36	37	38	39	40
41	42	43	44	45
46	47	48	49	50
51	52	53	54	55
56	57	58	59	60
61	62	63	64	65
66	67	68	69	70

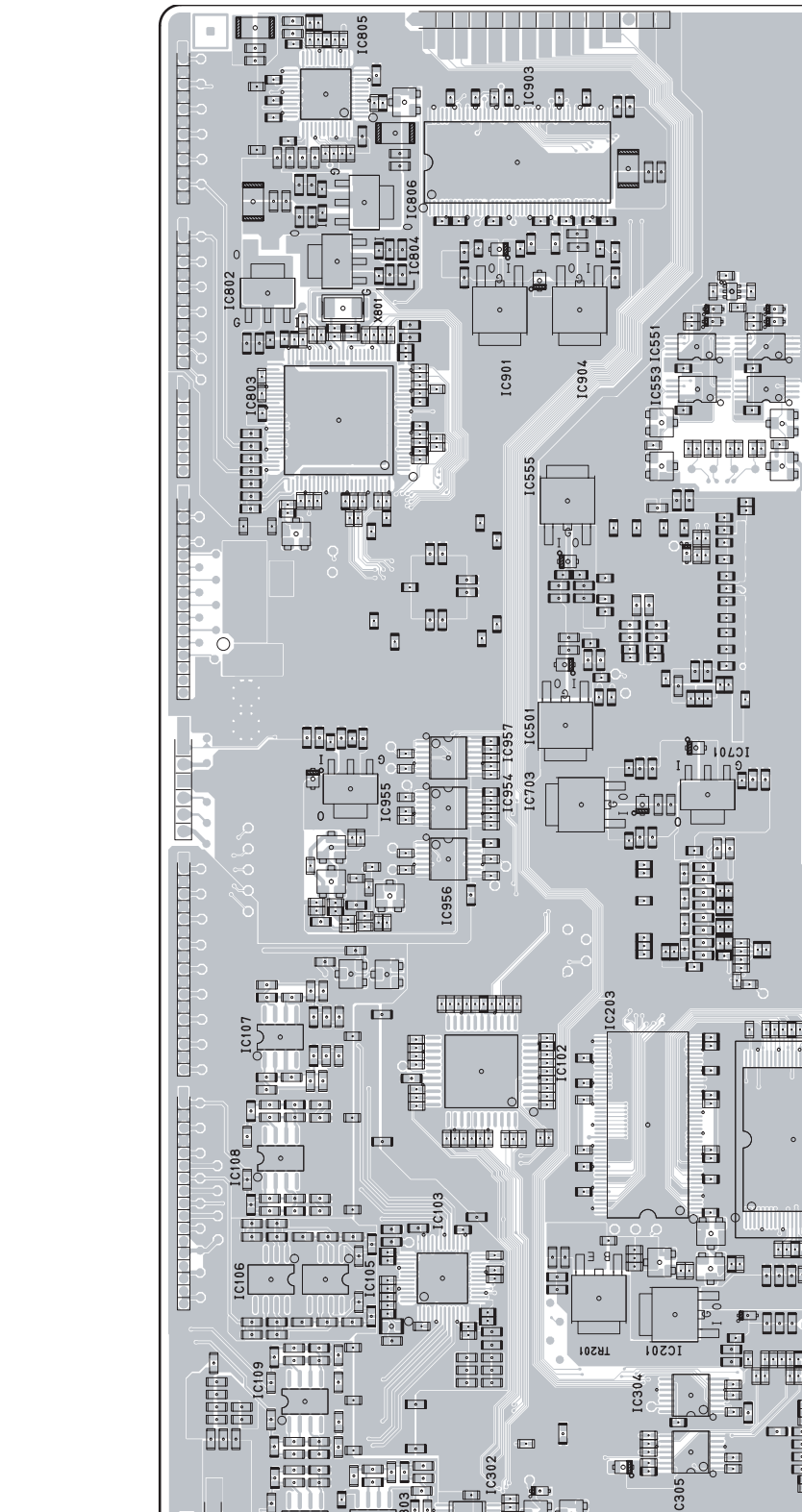
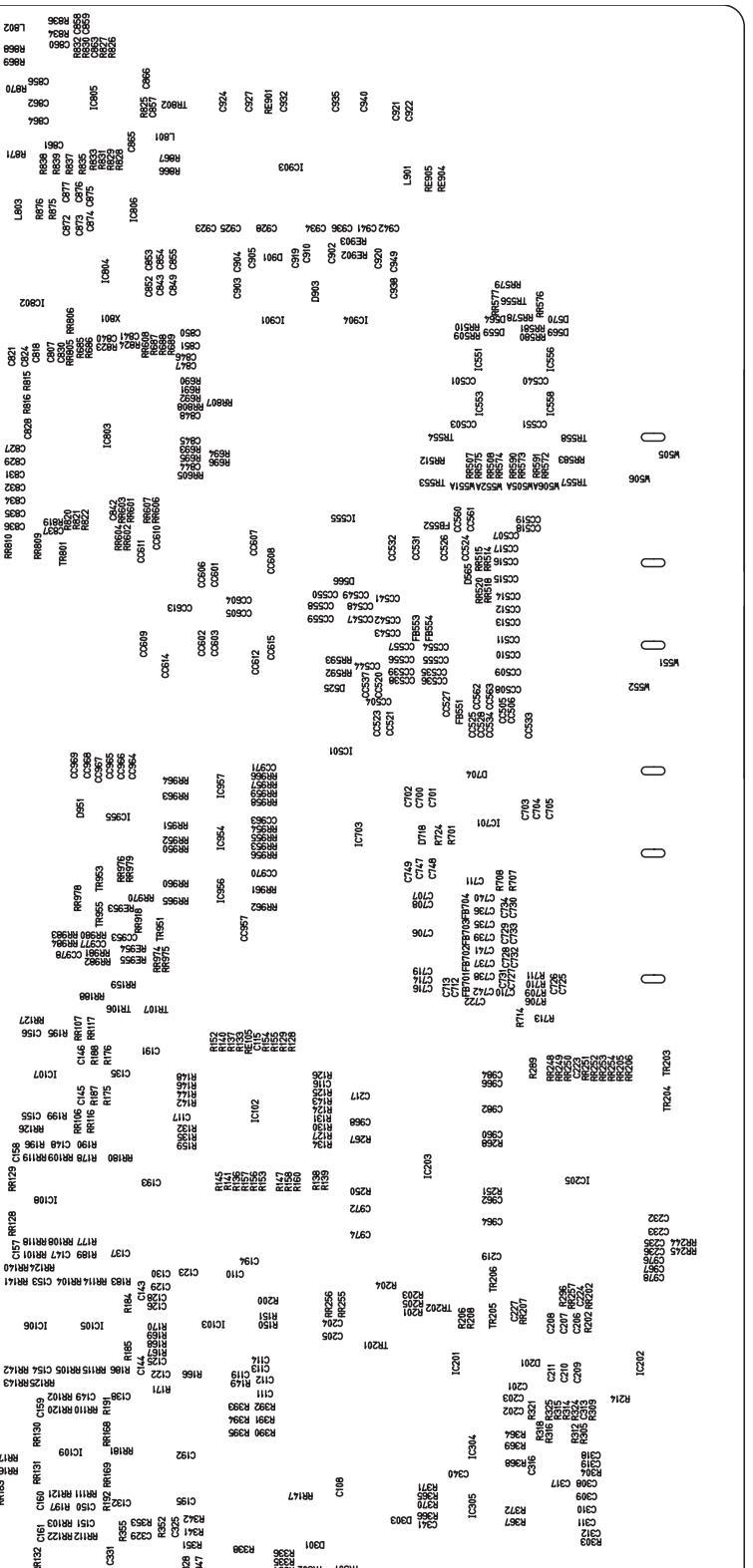
(1G~16G)

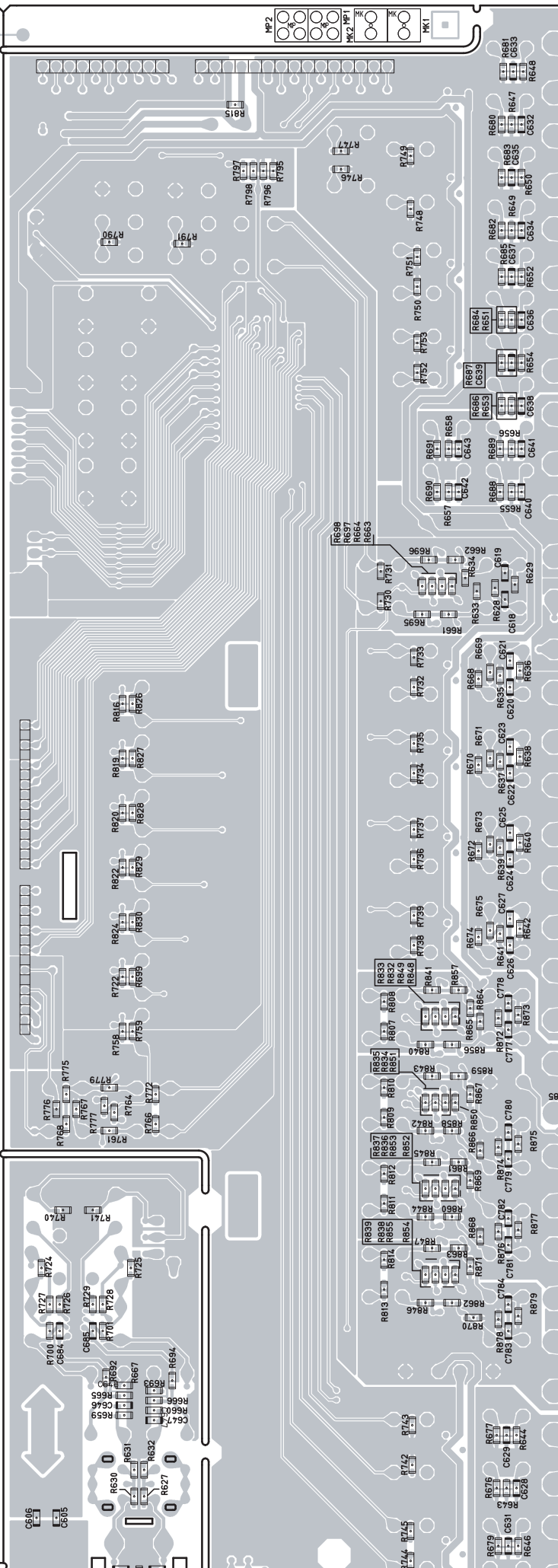
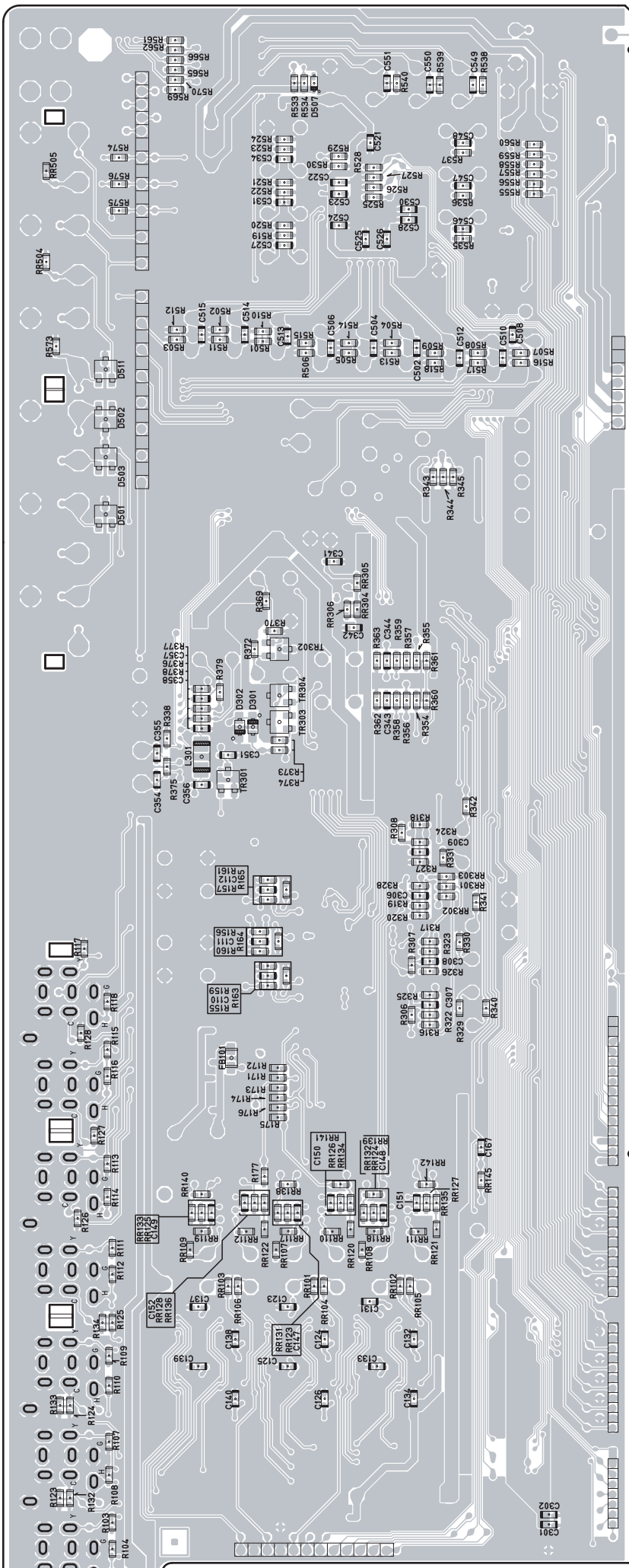


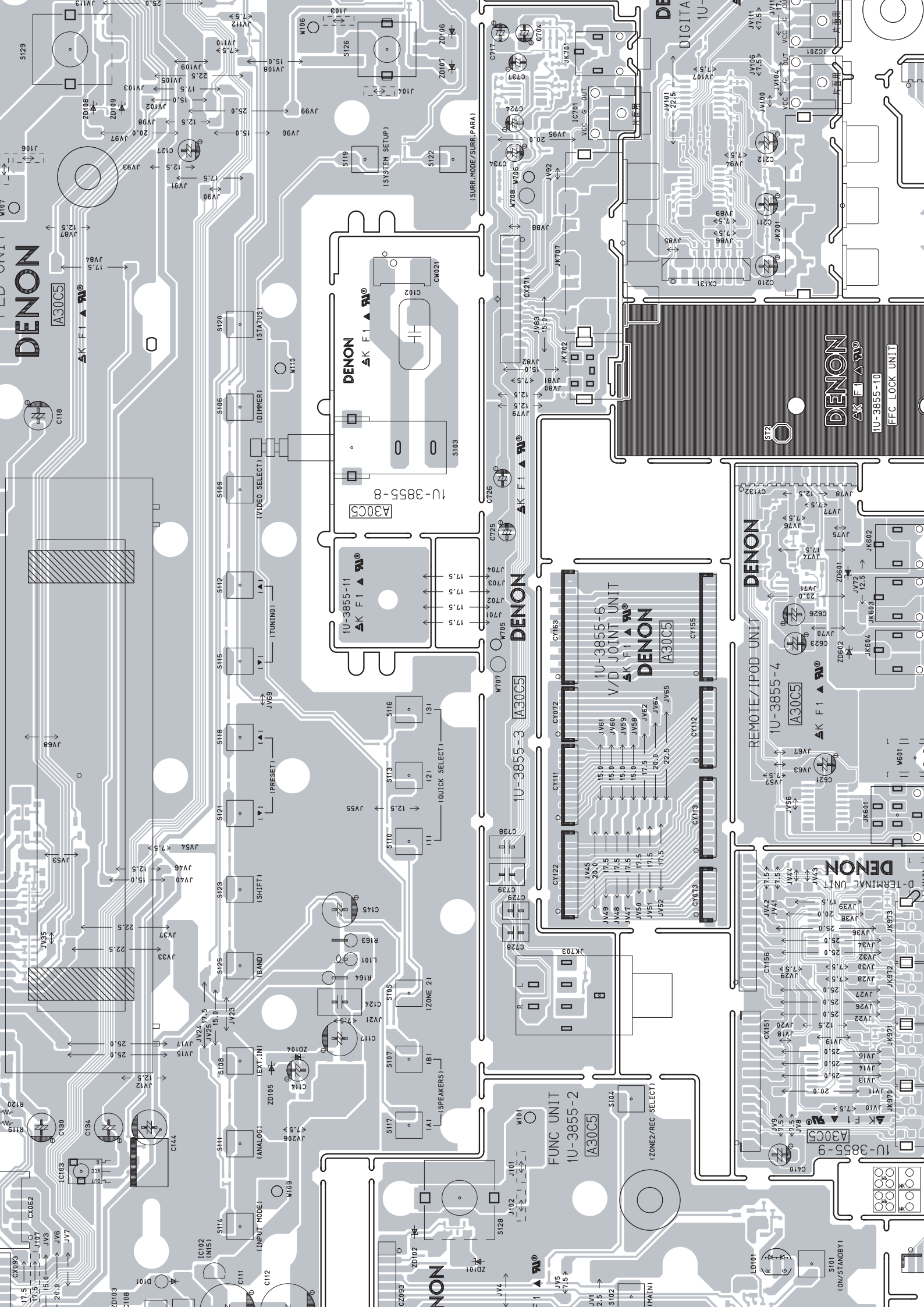
ANODE CONNECTION

	COM1~COM16	COM17	COM18	COM19
	1G~16G	17G	18G	19G
SEGB 1	1		XT	S2
SEGB 2	2		MULTIB	1a
SEGB 3	3		AUDYSSEY	1b
SEGB 4	4		S1	1f
SEGB 5	5		DTS	1g
SEGB 6	6		TEXT	1c
SEGB 7	7		PCM	1e
SEGB 8	8		REC	1d
SEGB 9	9	DTS	ANALOG	2a
SEGB 10	10	DIGITAL	NIGHT	2b
SEGB 11	11		DIGITAL	2f
SEGB 12	12		RESTORE	2g
SEGB 13	13		HDMI	2c
SEGB 14	14		AL24	2e
SEGB 15	15		AUTO	2d
SEGB 16	16		HDMI	3a
SEGB 17	17	MP3	+	3b
SEGB 18	18	DMA	DIGITAL	3f
SEGB 19	19	AAC	DIGITAL	3g
SEGB 20	20		MSTR	3c
SEGB 21	21		+HD	3e
SEGB 22	22		DTS	3d
SEGB 23	23		RDS	Dp
SEGB 24	24	ARA	AUTO	dB
SEGB 25	25	DIG	TUNED	Z2
SEGB 26	26	DSD	STEREO	Z3
SEGB 27	27			Z4
SEGB 28	28			
SEGB 29	29			
SEGB 30	30			
SEGB 31	31			
SEGB 32	32			
SEGB 33	33	DCB		
SEGB 34	34	LFE		
SEGB 35	35			

	COM1~COM16	COM17	COM18	COM19
	1G~16G	17G	18G	19G
SEGA 1	36			
SEGA 2	37			
SEGA 3	38			SW
SEGA 4	39			SP-
SEGA 5	40			A
SEGA 6	41			B
SEGA 7	42			FL
SEGA 8	43	FR		C
SEGA 9	44	C		FR
SEGA 10	45	FL		SL
SEGA 11	46			SR
SEGA 12	47			SBL
SEGA 13	48			SB
SEGA 14	49			SBR
SEGA 15	50			
SEGA 16	51	SR		
SEGA 17	52	S		
SEGA 18	53	SL		
SEGA 19	54			
SEGA 20	55			
SEGA 21	56			
SEGA 22	57			
SEGA 23	58			
SEGA 24	59	SBR		
SEGA 25	60	SB		
SEGA 26	61	SBL		
SEGA 27	62			
SEGA 28	63			
SEGA 29	64			
SEGA 30	65			
SEGA 31	66			
SEGA 32	67			
SEGA 33	68			
SEGA 34	69			
SEGA 35	70			







DENON

A30C5

AKFI

DENON

A30C5

AKFI

1U-3855-11

A30C5

1U-3855-8

DENON

A30C5

AKFI

1U-3855-6

V/D JOINT UNIT

A30C5

1U-3855-3

REMOTE/IPOD UNIT

A30C5

1U-3855-2

FUNC UNIT

A30C5

1U-3855-9

TERMINAL UNIT

A30C5

1U-3855-10

FFC LOCK UNIT

A30C5

DENON

A30C5

AKFI

1U-3855-10

FFC LOCK UNIT

A30C5

1U-3855-4

REMOTE/IPOD UNIT

A30C5

1U-3855-9

TERMINAL UNIT

A30C5

1U-3855-10

FFC LOCK UNIT

A30C5