

AV RECEIVER/AV AMPLIFIER

RX-V757/DSP-AX757/DSP-AX757SE

RX-V657/HTR-5860

SERVICE MANUAL

IMPORTANT NOTICE

This manual has been provided for the use of authorized YAMAHA Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically YAMAHA Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components, and failure of the product to perform as specified. For these reasons, we advise all YAMAHA product owners that any service required should be performed by an authorized YAMAHA Retailer or the appointed service representative.

IMPORTANT: The presentation or sale of this manual to any individual or firm does not constitute authorization, certification or recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of YAMAHA are continually striving to improve YAMAHA products. Modifications are, therefore, inevitable and specifications are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

IMPORTANT: Turn the unit OFF during disassembly and part replacement. Recheck all work before you apply power to the unit.

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YAMAHA

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0000 '05.03

RX-V757/DSP-AX757/DSP-AX757SE
RX-V657/HTR-5860

■ SELF DIAGNOSIS FUNCTION (DIAG) / 自己診断機能(ダイアグ)

This product has a built-in self diagnosis function (DIAG) to facilitate inspection, measurement and determination of a faulty item, if any. There are 20 DIAG menu items, each having sub-menu items.

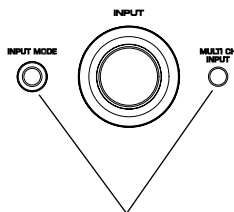
本機には、検査、測定、不良個所の発見を目的にした自己診断機能(ダイアグ)があります。
ダイアグメニューは20種類あり、そのそれぞれにサブメニューがあります。

No.	DIAG menu	Sub-menu
1	BYPASS	1. ANALOG BYPASS 2. DSP BYPASS
2	RAM THROUGH	1. RAM MARGIN 2. RAM FULL BIT
3	PRO LOGIC	1. PRO LOGIC
4	SPEAKERS SET	1. FRNT : SML 0dB 2. CENTER : NONE 3. LFE/B : FRNT 4. Pres Mix : 5ch 5. Front GAIN 1 6. Front GAIN 2 7. Zone 2 Amp ON
5	XCH INPUT	1. XCH INPUT_6 2. XCH INPUT_8
6	MIC CHECK	1. MIC CHK
7	VFD CHECK	1. VFD CHECK (Initial display / 初期表示) 2. VFD OFF/OSD OFF 3. VFD ALL/OSD 128 character pattern 4. VFD DIMMER/OSD OFF 5. VFD PATTERN/OSD OFF
8	MANUAL TEST	1. TEST ALL 2. TEST FRNT L 3. TEST CENTER 4. TEST FRNT R 5. TEST SURR R 6. TEST SB R 7. TEST SB L 8. TEST SURR L 9. TEST PRES L 10. TEST PRES R 11. TEST LFE
9	FACTORY PRESET	1. PRESET INHI (memory initialization inhibited / メモリーの初期化禁止) 2. PRESET RSRV (memory initialized / メモリーの初期化)
10	AD DATA CHECK	1. DC/PS (protection) 2. THM 3. IMP SW/POWER LIMIT 4. PANEL KEY
11	V CONV STATUS	1. LOW BYTE 2. HIGH BYTE
12	XM STATUS	1. XMS1 (No applied to these models / このモデルには適用されません) 2. XMS2 (No applied to these models / このモデルには適用されません)
13	IF STATUS	1. DST : 2. DMD : 3. DIF : 4. PC : 5. CS1 : 6. CS2 : 7. DEI :

No.	DIAG menu	Sub-menu
		8. BS1 :
		9. BS2 :
		10. BS3 :
		11. BS4 :
		12. BS5 :
		13. BS6 :
		14. BS7 :
		15. BS8 :
		16. MTT :
		17. DGI :
14	DSP BUS CHECK	1. TI BUS :
15	SWFR CUT OFF	1. LFE LPF
		2. LFE HPF
16	PROTECTION SETTING (Not applied to these models / このモデルには適用されません)	1. PS_Lo :
		2. PS_Hi :
		3. DC_Lo :
		4. DC_Hi :
		5. TEMP :
		6. PL_8_M_L
		7. PL_8_M_H
		8. PL_8_N_L
		9. PL_8_N_H
		10. PL_6_M_L
		11. PL_6_M_H
		12. PL_6_N_L
		13. PL_6_N_H
17	PROTECTION HISTORY	1. history 1
		2. history 2
		3. history 3
		4. history 4
18	SOFT SWITCH	1. SW MODE
		2. MODEL SETTING
		3. DESTINATION
		4. TUNER DESTINATION
		5. TUNER TYPE
		6. VIDEO FORMAT
		7. ZONE2
		8. AAC
		9. TUNER
		10. Z2Amp
		11. OSD
		12. YPAO
19	SOFTWARE VERSION	1. uCOM Ver. :
		2. uCOM SUM :
		3. OPE/DSP/XM
		4. PORT
		5. DSP Ver.
		6. DSP SUM
		7. EEPROM SUM
20	DSP SOFTWARE REWRITE	1. TI BOOT

● Starting DIAG

Press the "STANDBY/ON" key of the main unit while simultaneously pressing the "INPUT MODE" key and the "MULTI CH INPUT" key to activate the DIAG function.



Turn on the power while pressing these keys.
これらのキーを同時に押しながら、パワーオンする。

● ダイアグの起動

本体の "INPUT MODE" キーと "MULTI CH INPUT" キーを同時に押しながら、"STANDBY/ON" キーを押すとダイアグが起動します。

● Starting DIAG in the protection cancel mode

If the protection function works and causing hindrance to trouble diagnosis, cancel the protection function as described below and it will be possible to enter the DIAG mode. (The protection functions other than the excess current detect function will be disabled.)

Press the "STANDBY/ON" key while simultaneously pressing those two keys indicated in the figure above. At this time, keep pressing those two keys for 3 seconds or longer.

In this mode, the "SLEEP" segment of the FL display of the main unit flashes to indicate that the mode is DIAG mode with the protection functions disabled.

CAUTION!

Using this product with the protection function disabled may cause damage to itself. Use special care for this point when using this mode.

● プロテクション解除モードでの起動

プロテクションが動作することにより、故障箇所の診断に支障をきたすような場合は、次の方法によりプロテクションを解除した状態でダイアグモードに入ることができます。(過電流検出以外のプロテクション動作を解除する)

上図のキーを同時に押しながら "STANDBY/ON" キーを押します。このとき、上図のキーを3秒以上押し続けてください。

このモードでは本体FLの "SLEEP" セグメントが点滅し、プロテクションを解除した状態でのダイアグモードであることを知らせます。

注意!

プロテクションを解除した状態でのダイアグモードは、危険な状態でもプロテクションが作動しないため、動作させると、機器を破壊することがあります。このモードを使用する場合は十分注意してください。

● Canceling DIAG

- 1 Before canceling DIAG, execute setting for PRESET of DIAG menu No.9 (Memory initialization inhibited or Memory initialized).
- * *In order to keep the user memory stored, be sure to select PRESET INHIBITED (Memory initialization inhibited). Protection history will remain in memory.*
- 2 Turn off the power by pressing the "STANDBY/ON" key of the main unit.

● ダイアグの解除

- 1 ダイアグを解除する前に、ダイアグメニュー No.9 の PRESET (メモリーの初期化禁止 / またはメモリーの初期化) の設定をします。
- * **ユーザーメモリーを保持したい場合は、必ず PRESET INHIBITED (メモリー初期化禁止) を選択してください。**
- 2 本体の "STANDBY/ON" キーを押し、パワーオフにします。

● Display provided when DIAG started

When the monitor is connected, DIAGNOSTIC MENU appears on its screen as shown in the figure.

On the FL display of the main unit, an opening message (including the version and the protection history) appears for a few seconds followed by the diagnostic menu display (1. ANALOG BYPASS).

● ダイアグ起動時の表示

モニターを接続してある場合は、モニターの画面に図のようにダイアグメニューが表示されます。

本体FLディスプレイには、オープニング(プロテクション履歴/バージョン)が表示され、数秒後にダイアグメニュー表示(1. ANALOG BYPASS)となります。

1.BYPASS	11.VC STATUS
2.RAM THR	12.XM STATUS
3.PRO LOGIC	13.IF STATUS
4.SP SET	14.DSP BUS
5.XCH INPUT	15.SWFR C.OFF
6.MIC CHECK	16.PRT SET
7.VFD CHECK	17.PRT HIST.
8.MAN'L TEST	18.SOFT SW
9.PRESET	19.VER/SUM/P
10.AD CHECK	20.TI BOOT

When there is no history of protection function:

プロテクション履歴が無い場合:

Opening message / オープニング表示

DIAG menu display / ダイアグメニュー表示

When there is no protection history
プロテクション履歴が無い場合

After a few seconds
数秒後

NO PROTECT Z

Version (1 alphabet)
バージョン (英1文字)



1. ANALOG BYPASS

When there is a history of protection function:

プロテクション履歴がある場合:

The FL display appears as shown below depending on the type of the protection function.

プロテクションの種類によって下記の表示が現れます。

The protection function worked due to excessive current through the amplifier. Causes could be a short at the speaker terminal or a defect in the amplifier. The protection function activates immediately to turn off the power, with no history display at turn-on, if the amplifier is defective.

I PROTECT Z

スピーカーをショートさせた時などが原因で、プロテクションが働いたことを示します。

The protection function worked due to a defect or overload in the power supply. If the power is turned on with the abnormality unsolved, the protection function works in about 1 second to turn off the power.

PS PRT :000 Z

電源電圧による原因で、プロテクションが働いたことを示します。異常状態のままパワーオンすると、約1秒後にプロテクションが掛かり、電源が切れます。

The protection function worked due to a DC voltage appearing at the speaker terminal. A cause could be a defect in the amplifier. If the power is turned on with the abnormality unsolved, the protection function works in about 3 seconds to turn off the power.

DC PRT :000 Z

アンプの故障でスピーカーに直流電圧が掛かるなどが原因で、プロテクションが働いたことを示します。異常状態のままパワーオンすると、約3秒後にプロテクションが掛かり、電源が切れます。

The protection function worked due to the temperature limit being exceeded. Causes could be poor ventilation or a defect related to the thermal sensor. If the power is turned on with the abnormality unsolved, the protection function works in about 1 second to turn off the power.

TMP PRT:000 Z

温度制限を越えた原因で、プロテクションが働いたことを示します。異常状態のままパワーオンすると、約1秒後にプロテクションが掛かり、電源が切れます。

For detection of each protection function (except I-PROTECT), refer to DIAG MENU No.10 AD DATA (p.42).

各プロテクションの検出に関しては、後述のダイアグメニューNo. 10 AD DATA(42ページ)を参照してください。

● History of protection function

When the protection function has worked, its history is stored in memory with a backup. Even if no abnormality is noted while servicing the unit, an abnormality which has occurred previously can be defined as long as the backup data has been stored.

The history of the protection function is cleared when DIAG is cancelled by selecting PRESET RESERVED (Memory initialized) of DIAG menu No.9 or when the backup data is erased.

● プロテクションの履歴

プロテクションが働いた場合、履歴をバックアップして記憶しています。サービスのときに異常が認められなくても、バックアップが残っていれば、お客様のところで起きた異常を区別できます。ダイアグメニュー No.9 で PRESET RESERVED (メモリーの初期化)を選んでダイアグを解除した場合、またはバックアップが消えた場合に、プロテクションの履歴はクリアされます。

● Display during menu operation

During the DIAG operation, the menu list described in the section of the startup screen appears on the monitor screen and the function at work is indicated on the FL indicator. The contents displayed during the function operation are described later in the "Details of DIAG menu" section.

● メニュー動作中の表示

ダイアグ中、モニター画面には起動画面の項で説明したメニュー一覧が表示されます。本体の FL ディスプレイには動作中の機能が表示されます。機能動作中の表示内容については、後述の機能詳細で記述します。

● Operation procedure of DIAG MENU and SUB-MENU

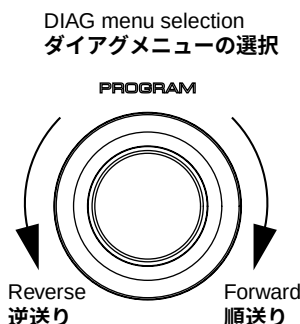
There are 20 MENU items, each of which has some SUB-MENU items.

DIAG menu selection

Select the menu using PROGRAM knob.

SUB-MENU selection

Select the sub-menu using > (Forward) and < (Reverse) keys of PRESET/TUNING (LEVEL).



● ダイアグメニューとサブメニューの操作

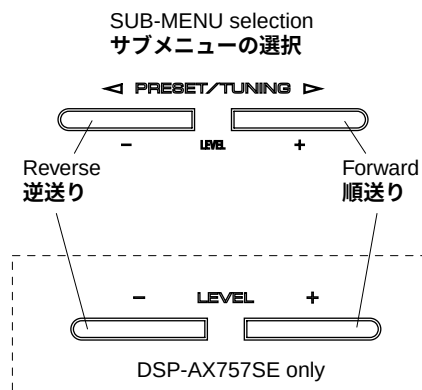
ダイアグにはNo.1～20のメニューがあり、さらにいくつかのサブメニューがあります。

ダイアグメニューの選択

PROGRAMツマミで選択します。

サブメニューの選択

PRESET/TUNING > (順送り)、< (逆送り)キーで選択します。



● Functions in DIAG mode

In addition to the DIAG menu items, functions as listed below are available.

- Input selection, Multi channel input
- Center/Surround/Surround Back/Sub-woofer level adjustment
- Muting
- Speaker relay A/B
- Power on/off
- Master volume

* Functions related to the tuner and the set menu are not available.

* It is possible to confirm Menu No.13 IF STATUS while keeping the signal process (operation status) of each DIAG menu by using the input mode key of the main unit.

● Initial settings used to start DIAG

The following initial settings are used when starting DIAG. When DIAG is canceled, these settings are restored to those before starting DIAG.

- Master volume: -20dB
- Input: DVD (MULTI CHANNEL INPUT OFF)
- Effect level: 0dB
- Audio mute: OFF
- Speaker relay A/B: ON
- Speaker setting: LARGE / BASS OUT = SWFR
- DIAG menu: BYPASS (1. ANALOG BYPASS)

● ダイアグ中の機能

ダイアグメニューの他に、以下の機能が動作します。

- インプット切り換え、マルチチャンネルインプット
- センター、サラウンド、サラウンドバック、サブウーファーレベル調整
- ミューティング
- スピーカーリレーA/B
- パワーオン/オフ
- マスターボリューム

※チューナー関連、セットメニュー関連は機能しません。

※本体のINPUT MODE キーにより、各ダイアグメニューの信号処理（動作状態）を維持したままメニューNo.13 “IF STATUS”の確認ができます。

● ダイアグ開始時の初期設定

ダイアグ開始時に以下のような設定になります。ダイアグ解除時にはダイアグ開始前の状態に戻ります。

- マスターボリューム: -20dB
- インプット: DVD (マルチチャンネルINPUTオフ)
- エフェクトレベル: 0 dB
- オーディオミュート: オフ
- スピーカーリレーA/B: オン
- スピーカー設定: LARGE / BASS OUT=SWFR
- ダイアグメニュー: BYPASS (1.ANALOG BYPASS)

Details of DIAG menu

1. BYPASS

Using the sub-menu, it is possible to select analog bypass output or DSP bypass output.

ANALOG BYPASS



INPUT: DVD ANALOG

Input level	Volume	SPEAKERS OUT (1KHz)				SUBWOOFER (50 Hz)
		FRONT L/R	CENTER	SURROUND L/R	SURROUND BACK L/R	
Both ch, -20 dBm	+6.5 dB	+13.0 dBm	- ∞	- ∞	- ∞	- ∞

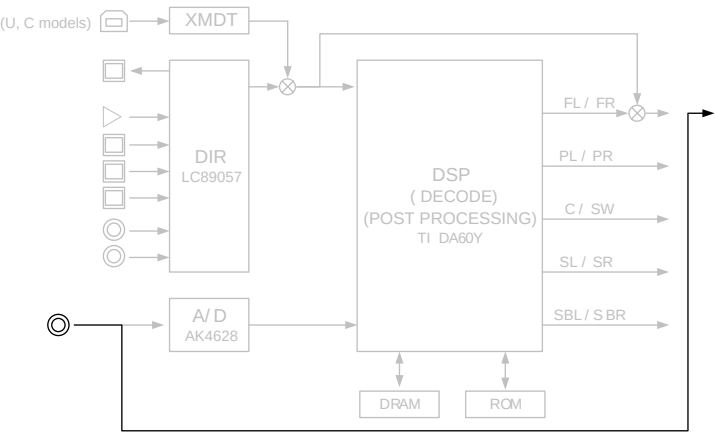
DSP BYPASS



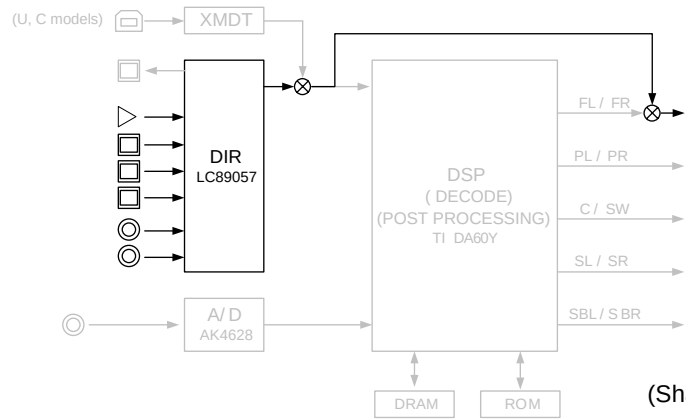
INPUT: DVD ANALOG

Input level	Volume	SPEAKERS OUT (1KHz)				SUBWOOFER (50 Hz)
		FRONT L/R	CENTER	SURROUND L/R	SURROUND BACK L/R	
Both ch, -20 dBm	+6.5 dB	+13.0 dBm	- ∞	- ∞	- ∞	- ∞

ANALOG BYPASS



DSP BYPASS



(Shaded items not used in this example)

2. RAM THROUGH

Using the sub-menu, it is possible to select margin output or full-bit output.

RAM MARGIN

Following head margin is reserved.

FRONT	CENTER	SURROUND	SURROUND BACK	SUBWOOFER	PRESENCE
+15.0 dB	+13.5 dB	+9.0 dB	+7.5 dB	+21 dB	+15.0 dB

2. RAM MARGIN

INPUT: DVD ANALOG

Input level	Volume	SPEAKERS OUT (1KHz)				SUBWOOFER (50 Hz)
		FRONT L/R	CENTER	SURROUND L/R	SURROUND BACK L/R	
Both ch, -20 dBm	+6.5 dB	+13.0 dBm	+13.0 dBm	+13.0 dBm	+13.0 dBm	+ 0.5 dBm

RAM FULL BIT

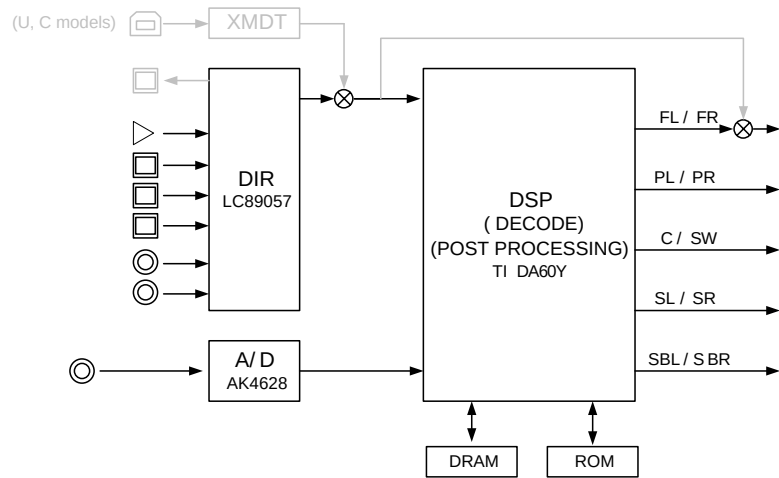
No head margin is reserved except SW.

FRONT	CENTER	SURROUND	SURROUND BACK	SUBWOOFER	PRESENCE
0 dB	0 dB	0 dB	0 dB	+21 dB	0 dB

2. RAM FULL BIT

INPUT: DVD ANALOG

Input level	Volume	SPEAKERS OUT (1KHz)				SUBWOOFER (50 Hz)
		FRONT L/R	CENTER	SURROUND L/R	SURROUND BACK L/R	
Both ch, -20 dBm	+6.5 dB	+13.0 dBm	+13.0 dBm	+13.0 dBm	+13.0 dBm	+ 0.5 dBm



(Shaded items not used in this example)

When input source is stereo, signal is assigned as below.
2 ch 信号入力時、以下のように信号を振り分けて出力します。

- Front L → Center / Surround L / Surround Back L, R / Presence L
- Front R → Surround R / Presence R
- Front L + 10 dB → SWFR

3. PRO LOGIC

- Dolby PRO LOGIC is applied to input stereo source.

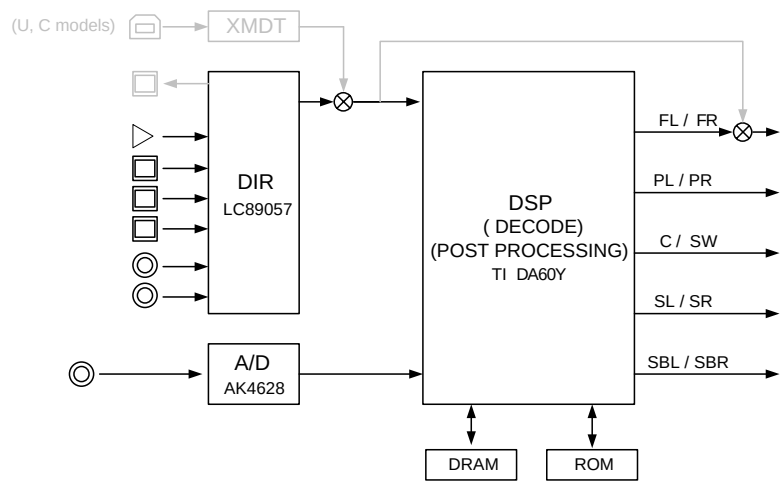
3. PRO LOGIC

- 入力 2ch 信号に Dolby PRO LOGIC 処理を行います。

3. PRO LOGIC

INPUT: DVD ANALOG

Input level	Volume	SPEAKERS OUT (1KHz)				SUBWOOFER (50 Hz)
		FRONT L/R	CENTER	SURROUND L/R	SURROUND BACK L/R	
Each ch, -20 dBm	+6.5 dB	+13.0 dBm	- ∞	- ∞	- ∞	- ∞
Both ch, -20 dBm	+6.5 dB	- ∞	+13.0 dBm	- ∞	- ∞	- ∞



(Shaded items not used in this example)

RX-V757/DSP-AX757/DSP-AX757SE
RX-V657/HTR-5860

4. SPEAKERS SET

The analog switch settings for each sub-menu are as shown in the table below.

- “F mix” is Mixing Presence to Front.

	Sub-menu	FRONT	CENTER	SUR.	SUR.B	LFE	F mix
1	FRNT: SML 0 dB	SMALL	LARGE	LARGE	LARGE	SWFR	No
2	CENTER: NONE	LARGE	NONE	LARGE	LARGE	SWFR	No
3	LFE/B: FRNT	LARGE	SMALL	SMALL	SMALL	FRONT	No
4	Pre Mix: 5ch	LARGE	LARGE	LARGE	LARGE	SWFR	Yes
5	Front GAIN 1	LARGE	LARGE	LARGE	LARGE	SWFR	Yes
6	Front GAIN 2	LARGE	LARGE	LARGE	LARGE	SWFR	Yes
7	Znone 2 Amp ON	LARGE	LARGE	LARGE	ZONE 2	SWFR	No

LARGE: This mode is used with a speaker with high bass reproduction performance (a large unit). Full bandwidth signals are output.

SMALL: This mode is used with a speaker with low bass reproduction performance (a small unit). The signals of 80Hz or less are mixed into the channel specified by LFE/BASS.

NONE: This mode is used with no center speaker. The center content is reduced by 3dB and distributed to FRONT L/R.

4. SPEAKERS SET

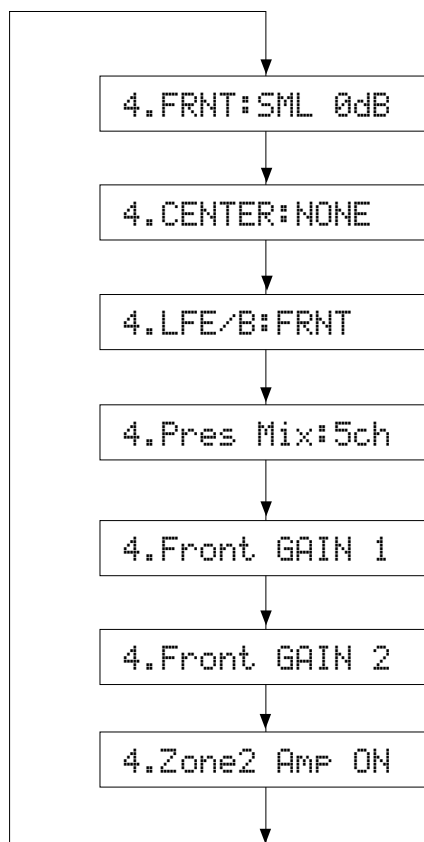
各サブメニューにおけるアナログスイッチの設定は以下の通りです。

- F mixはPresenceをFront mixするかどうかです。

LARGE: 低音再生能力の高い(ユニットの大きい)スピーカーを使用するモードです。全帯域が出力されます。

SMALL: 低音再生能力の低い(ユニットの小さい)スピーカーを使用するモードです。80Hz以下がLFE/BASSで指定したチャンネルにミックスされます。

NONE: スピーカーを使用しないモードです。センター成分は-3dBされて、FRONT L/R に振り分けられます。



INPUT: DVD ANALOG

Sub-menu		Input level	Volume	SPEAKERS OUT (1KHz)				SUBWOOFER (50 Hz)
				FRONT L/R	CENTER	SUR L/R	SUR.B L/R	
1	FRONT: SML 0dB	Both ch, -20 dBm	+6.5 dB	+13.0 dBm	+ 13.0 dBm	+13.0 dBm	+13.0 dBm	+3.5 dBm
2	CENTER: NONE	Both ch, -20 dBm	+6.5 dB	+9.5 dBm	- ∞	+13.0 dBm	+13.0 dBm	- 0.5 dBm
3	LFE/B: FRNT (1kHz)	Both ch, -20 dBm	+6.5 dB	- ∞	+13.0 dBm	+13.0 dBm	+13.0 dBm	- ∞
4	LFE/B: FRNT (50Hz)	Both ch, -20 dBm	+6.5 dB	+13.0 dBm	- ∞	- ∞	- ∞	- 0.5 dBm
5	Pres Mix 5ch	Both ch, -20 dBm	+6.5 dB	+18.5 dBm	+13.0 dBm	+18.5 dBm	+13.0 dBm	- 0.5 dBm
6	Front GAIN 1	Both ch, -20 dBm	+6.5 dB	+13.0 dBm	+13.0 dBm	+13.0 dBm	+13.0 dBm	- 0.5 dBm
7	Front GAIN 2	Both ch, -20 dBm	+6.5 dB	+18.5 dBm	+13.0 dBm	+13.0 dBm	+13.0 dBm	- 0.5 dBm
8	Zone 2 Amp ON	Both ch, -20 dBm	+6.5 dB	+13.0 dBm	+13.0 dBm	+13.0 dBm	- ∞	- 0.5 dBm

5. XCH INPUT

The signal input through the multi ch input is output.
The speaker impedance can be selected.

XCH INPUT_6 (ohms)

5. XCH INPUT

マルチ CH 入力された信号が出力されます。
6 オーム , 8 オームが選択されます。

XCH INPUT_6 (ohms)

5.XCH INPUT_6

INPUT: MULTI CH INPUT

Input level	Volume	SPEAKERS OUT (1KHz)				SUBWOOFER (50 Hz)
		FRONT L/R	CENTER	SURROUND L/R	SURROUND BACK L/R	
Both ch, -20 dBm	+6.5 dB	+13.0 dBm	+13.0 dBm	+13.0 dBm	+13.0 dBm	- 8.5 dBm

XCH INPUT_8 (ohms)

XCH INPUT_8 (ohms)

5.XCH INPUT_8

INPUT: MULTI CH INPUT

Input level	Volume	SPEAKERS OUT (1KHz)				SUBWOOFER (50 Hz)
		FRONT L/R	CENTER	SURROUND L/R	SURROUND BACK L/R	
Both ch, -20 dBm	+6.5 dB	+13.0 dBm	+13.0 dBm	+13.0 dBm	+13.0 dBm	- 8.5 dBm

6. MIC CHECK

The signal input through the microphone is output via A/D-D/A.
“dB” display function is not mounted.

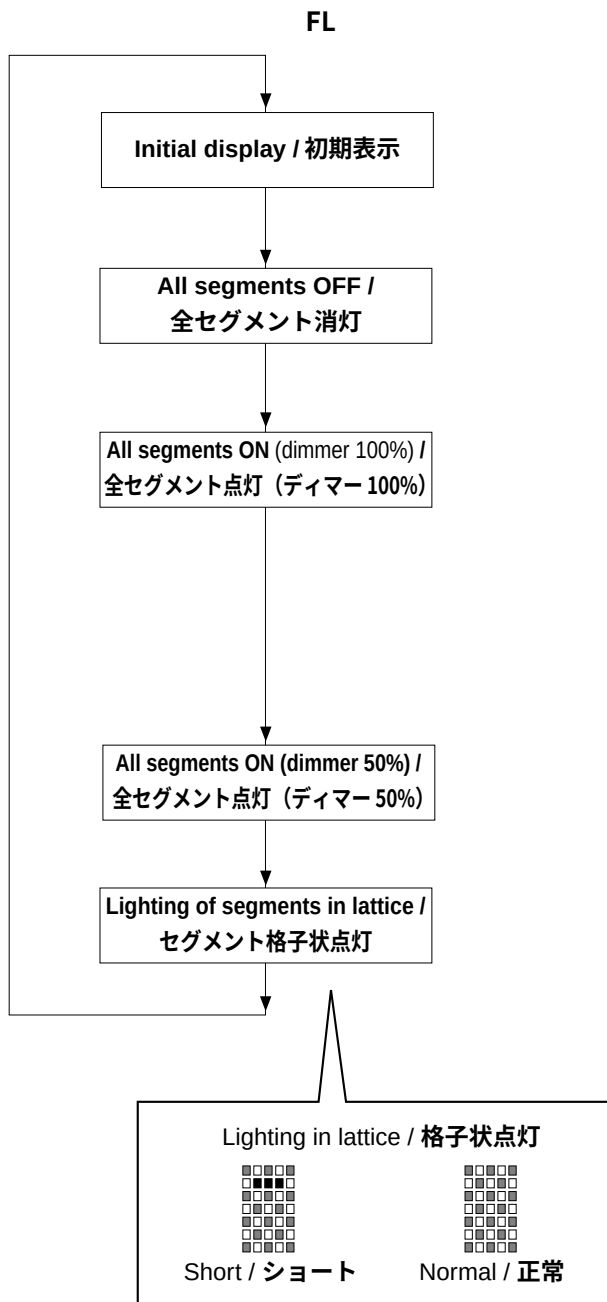
6. MIC CHECK

マイク入力された信号をA/D-D/A 経由で出力します。
dB表示は機能しません。

6.MIC CHK ---dB

7. VFD CHECK

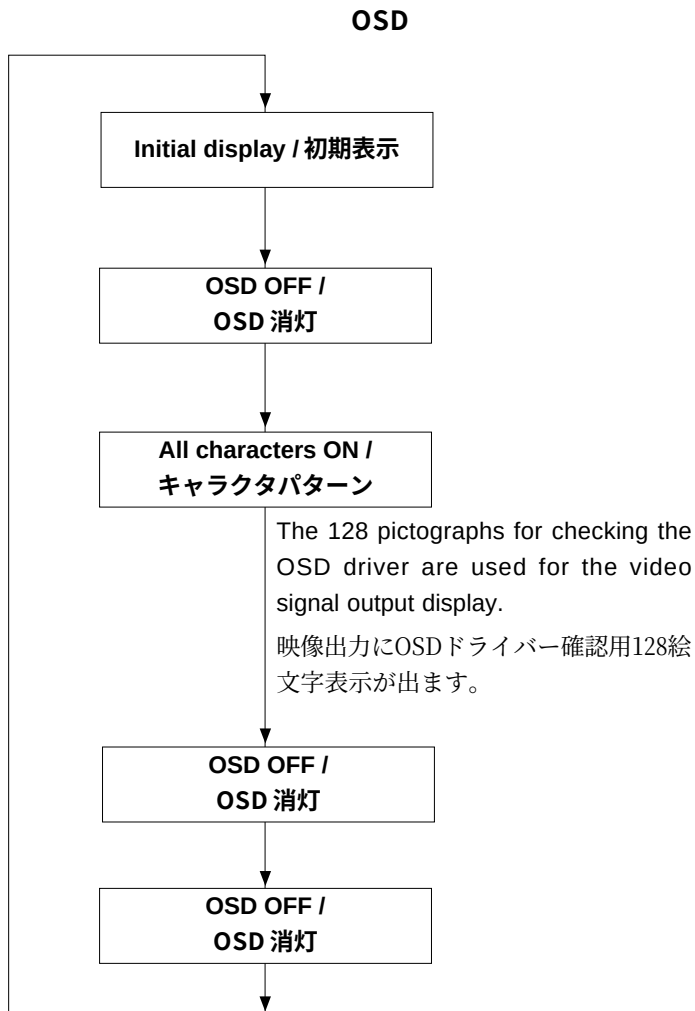
- This program is used to check the FL display section and video control section. The display condition varies as shown below according to the sub-menu operation.
- The signal route is STRAIGHT.



Segment conditions of the FL driver and the FL tube are checked by turning ON and OFF all segments. Next, the operation of the FL driver is checked by using the dimmer control. Then a short between segments next to each other is checked by turning ON and OFF all segments alternately (in lattice). (In the above example, the segments in the second row from the top are shorted.)

7. VFD CHECK

- FL 表示部と映像制御部のチェックプログラムです。サブメニュー操作により、表示状態が以下のように変わります。
- 信号処理はSTRAIGHTです。



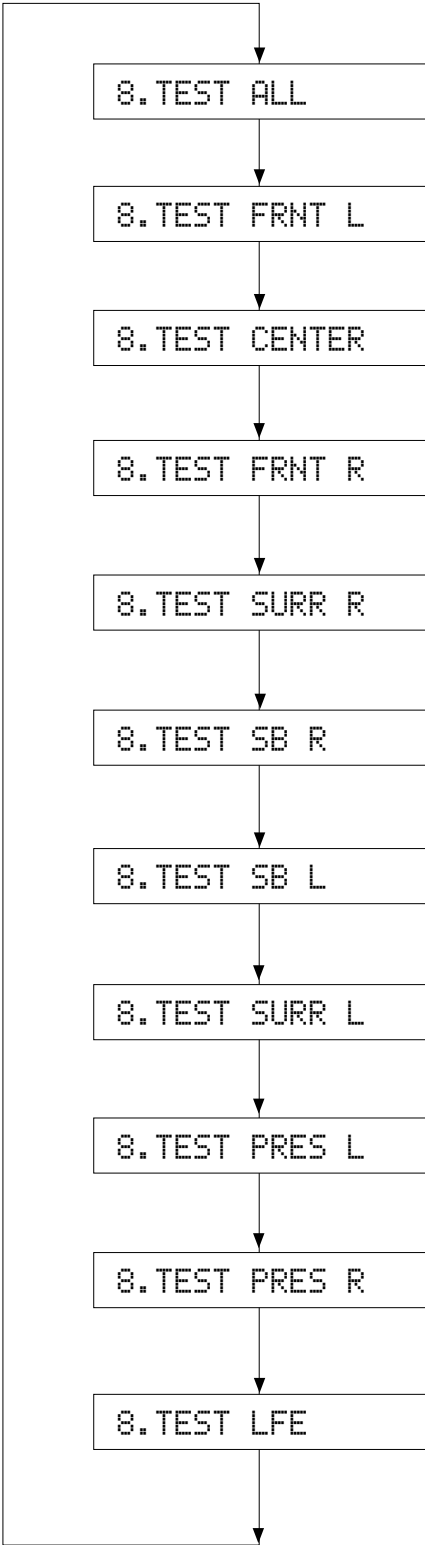
全セグメント消灯・全セグメント点灯によりFLドライバー、FL管のセグメントの不良を確認します。次に、ディマーコントロールによってFLドライバーの動作チェックを行います。さらに全セグメントを交互(格子状)に点灯/消灯することで、隣り合うセグメントのショートをチェックします。

8. MANUAL TEST

The test noise based THX is output to the channel specified by the sub-menu from the DSP.

8. MANUAL TEST

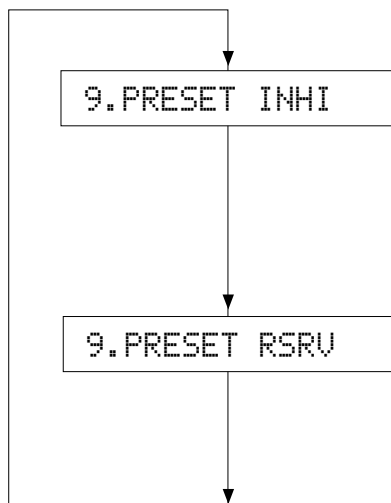
DSP からサブメニューで指定したチャンネルへ THX 準拠のテストノイズを出力します。



RX-V757/DSP-AX757/DSP-AX757SE
RX-V657/HTR-5860

9. FACTORY PRESET

This menu is used to reserve/inhibit initialization of the back-up RAM (Parameters and set menu contents, etc. of the sound field program).



PRESET INHIBIT (Initialization inhibited) / PRESET INHIBIT(初期化禁止)

RAM initialization is not executed. Select this sub-menu to protect the values set by the user.

Note: The protection history will not be erased using PRESET INHIBIT.

RAM の初期化は行われません。ユーザーの設定値を保護するときは、こちらを選択してください。

PRESET RESERVED (Initialization reserved) / PRESET RESERVED(初期化予約)

Initialization of the back-up RAM is reserved. (Actually, initialization is executed the next time that the power is turned on.) Select this sub-menu to reset to the original factory settings or to reset the RAM. Use PRESET RESERVED to erase the protection history.

バックアップ RAM の初期化が予約されます。(実際に初期化されるのは、次回の電源投入時です。) 工場出荷時やRAMをリセットしたいときは、こちらを選択してください。

CAUTION: Before setting to the PRESET RESERVED, write down the existing preset memory content of the Tuner in a table as shown below. (This is because setting to the PRESET RESERVED will cause ALL user memory contents to be erased.)

注意：PRESET RESERVED を選んで初期化をする前に、チューナーのユーザーメモリー内容を下表に書き写してください。(初期化をすると、ユーザーメモリーの内容は消えてしまいます。)

Preset group	P1	P2	P3	P4	P5	P6	P7	P8
A								
B								
C								
D								
E								

● PRESET STATIONS / プリセット局

STATION		FM FACTORY PRESET DATA (MHz)			STATION		AM FACTORY PRESET DATA (kHz)	
PAGE	NO.	U, C	R, T, K, A, B, G, L	J	PAGE	NO.	U, C, R, T, K	A, B, G, L, J
A/C/E	1	87.5	87.50	76.0	B/D	1	630	630
	2	90.1	90.10	83.0		2	1080	1080
	3	95.1	95.10	84.0		3	1440	1440
	4	98.1	98.10	86.0		4	530	531
	5	107.9	108.00	90.0		5	1710	1611
	6	88.1	88.10	78.0		6	900	900
	7	106.1	106.10	88.0		7	1350	1350
	8	107.9	108.00	82.1		8	1400	1404

10. AD DATA CHECK

With this sub-menu used, the key scanning, A/D value of the voltage at the abnormality detect (protection) port, etc. are displayed. The A/D conversion value is displayed in %.

The state before audio signal processing is kept.

When K0/K1 menu is selected, keys become nonoperable due to detection of the values of all keys.

However, it is possible to advance to the next sub-menu by turning the VOLUME of the main unit. When using this function, note that turning the VOLUME more than 2 clicks will cause the volume value to change.

**The numeric value in the diagram is for reference.*

DC/PS (protection detection)

DC: DC detect protection value
Normal value: 1 to 13 (Reference: 5V = 100%)

PS: Power supply voltageprotection value
Normal value: 36 to 49 (Reference: 5V = 100%)

When the value is outside of the normal range, the protection function works to turn off the power.

DC:007 PS:043

THM (temperature detection)

When the value is outside of the normal range, the protection function works to turn off the power.

500% display of the voltage based on the temperature detected value. Reference voltage: 5V

For the correct value, refer to the table below.

Destination	U, C, T, K, B, G, E, J	R, L
Normal Value	9 to 177	9 to 167

THM: 107

IMP SW/POWER LIMIT (impedance/power limiter detection)

IMP: Not applied to these models.

PL: Power limiter detection value

The voltage value of pin No. 92 of IC451 is displayed, using 5V/256 as standard.

The port (No. 3) output is controlled by using the input voltage value of pin No. 92 of IC451.

IMP:8 PL:255

10. AD DATA CHECK

キースキャン、異常検出(プロテクション)ポート電圧のA/D値などを表示します。

A/D変換値をサブメニューで%表示します。

オーディオ信号処理は実行前の状態を維持します。

K0/K1 のメニューにすると、全キーの値を検出するためキー操作はできなくなりますが、本体のVOLUMEを回すことにより、次のサブメニューに進めることができます。このとき2クリック以上回すと、ボリューム値が変化するの
で注意してください。

※図中の数値は参考例です。

DC/PS(プロテクションの検出)

DC: DC検出プロテクションの値
正常値 1～13(基準電圧 5V = 100%)

PS: 電源電圧プロテクションの値
正常値 36～49(基準電圧 5V = 100%)

正常値を外れるとプロテクションが働き、電源オフされます。

THM(温度検出)

正常値を外れるとプロテクションが働き、電源オフされます。

温度検出値で電圧の500%表示、基準電圧は5V

正常値は下表参照。

仕向け	U, C, T, K, A, B, G, E, J	R, L
正常値	9～177	9～167

IMP SW/POWER LIMIT (インピーダンス/パワーリミッターの検出)

IMP: このモデルには適用されません。

PL: パワーリミッター検出の値

IC451 92ピンの入力電圧値を5V/256を基準にして表示します。IC451 92ピンの入力電圧値により、ポート(3ピン)を制御します。

K0/K1

This is the A/D value of the panel key input ports KEY0 and KEY1 (microprocessor). The table below shows the A/D value obtained when each key is pressed. When the value is not within the standard value range, no correct operation is provided. Referring to the table below, check the value of each voltage dividing resistor of each key, solder condition, etc.

K0:100 K1:099

[Table 1]

RX-V757 (U, C, A, G models) / RX-V657 (U, C, A, B, G, E models)

Display (%)	K0	K1
0 - 6	MAIN POWER	Z2 POWER
7 - 13	—	—
14 - 21	—	—
22 - 31	—	—
32 - 41	INPUT MODE	MULTI CH INPUT
42 - 53	STRAIGHT	FM/AM
54 - 63	TONE CONTROL	A/B/C/D/E
64 - 72	PRESET/TUNING	PRESET/TUNING ◁
73 - 80	SPEAKERS B	PRESET/TUNING ▷
81 - 88	SPEAKERS A	MEMORY
89 - 95	PURE DIRECT	TUNING MODE
96 - 100	KEY OFF	KEY OFF

[Table 1]

DSP-AX757SE (B model)

Display (%)	K0	K1
0 - 6	—	—
7 - 13	—	—
14 - 21	—	—
22 - 31	—	—
32 - 41	INPUT MODE	MULTI CH INPUT
42 - 53	STRAIGHT	—
54 - 63	TONE CONTROL	NEXT
64 - 72	—	LEVEL -
73 - 80	SPEAKERS B	LEVEL +
81 - 88	SPEAKERS A	—
89 - 95	PURE DIRECT	—
96 - 100	KEY OFF	KEY OFF

K0/K1

本体パネルキー入力ポートKEY0、KEY1(マイコン)のA/D値です。それぞれのキーが押された場合のA/D値は下表の通りです。

基準値から外れると、正常な動きをしません。下表 をご覧になり、各キーの分圧抵抗の定数、ハンダ不良等の確認をしてください。

[Table 1]

RX-V757 (R, T, K models) / DSP-AX757 (J model) / RX-V657 (R, T, K, L models)

Display (%)	K0	K1
0 - 6	—	—
7 - 13	—	—
14 - 21	—	—
22 - 31	—	—
32 - 41	INPUT MODE	MULTI CH INPUT
42 - 53	STRAIGHT	FM/AM
54 - 63	TONE CONTROL	A/B/C/D/E
64 - 72	PRESET/TUNING	PRESET/TUNING ◁
73 - 80	SPEAKERS B	PRESET/TUNING ▷
81 - 88	SPEAKERS A	MEMORY
89 - 95	PURE DIRECT	TUNING MODE
96 - 100	KEY OFF	KEY OFF

[Table 1]

HTR-5860 (U, C, A models)

Display (%)	K0	K1
0 - 6	—	—
7 - 13	—	—
14 - 21	—	—
22 - 31	—	—
32 - 41	INPUT MODE	MULTI CH INPUT
42 - 53	STRAIGHT	FM/AM
54 - 63	TONE CONTROL	A/B/C/D/E
64 - 72	PRESET/TUNING	PRESET/TUNING ◁
73 - 80	SPEAKERS B	PRESET/TUNING ▷
81 - 88	SPEAKERS A	MEMORY
89 - 95	PURE DIRECT	TUNING MODE
96 - 100	KEY OFF	KEY OFF

11. V CONV STATUS

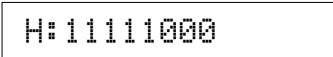
The data received from the video conversion IC (TA1270) is displayed.

**The numeric value in the diagram is for reference.*

LOW BYTE DATA



HIGH BYTE DATA



11. V CONV STATUS

ビデオコンバージョンIC (TA1270)からの受信データを表示します。

※図中の数値は参考例です。

LOW BYTE DATA

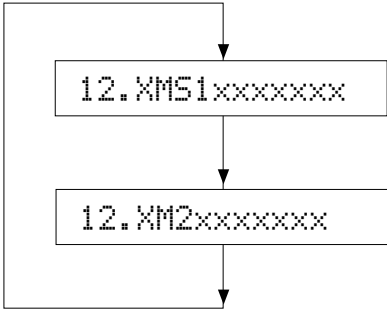
HIGH BYTE DATA

12. XM STATUS

Not applied to these models.

12. XM STATUS

このモデルには適用されません。



13. IF STATUS

Using the sub-menu, the status data is displayed one after another in the hexadecimal notation.

During signal processing, the status before execution of this menu is maintained.

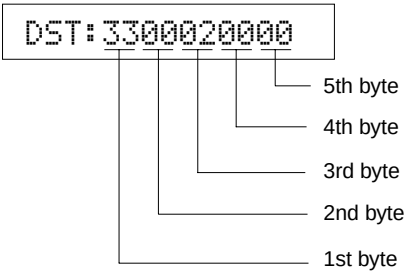
** Numeric values in the figure example are for reference.*

13. IF STATUS

サブメニュー操作により、以下のステータス情報を順次16進数で表示します。信号処理は、本メニュー実行前の状態を維持します。

※図中の数値は参考例です。

DST (DSP status)



DST (DSP ステータス)

<1st byte> Digital input/output setting value

Upper 4 bits: REC OUT selected /

lower 4 bits: INPUT selected

<第1 バイト> デジタル入出力設定値

上位4bit REC OUT 選択 /

下位4bit INPUT 選択

Value	Choice	Preset name
0	NONE	
1	OPT FRONT	V-AUX
2	OPT 1	MD/CD-R
3	OPT 2	DVD
4	OPT 3	DTV/CBL
8	COAX 1	CD
9	COAX 2	DVD

<2nd byte> / <第2 バイト>

Fs information of reproduction signal /

再生信号のFs 情報

Display	Fs (kHz)
00	Analog
01	32kHz
02	44.1kHz
03	48kHz
04	64kHz
05	88.2kHz
06	96kHz
07	128kHz
08	176.4kHz
09	192kHz
0A	Unknown NRM
0B	Unknown DBL
0C	Unknown QUAD
0D	Unknown
0E	Undefined

<3rd byte> / <第3 バイト>

Audio code mode information of reproduc-

tion signal /

再生信号のオーディオコードモード情報

Display	Audio code
00	1+1
01	1/0
02	2/0
03	3/0
04	2/1
05	3/1
06	2/2
07	3/2
08	2/3
09	3/3
0A	3/4
0B	over 6.1
0C	Milti-Mono
0D	Milti-PCE
0E	Unknown
0F	Undefined

<4rd byte> / <第4 バイト>

Format information of reproduction signal /

再生信号のフォーマット情報

Display	Signal format
00	Analog
01	Err
10	PCM Audio
20	Digital Data
21	IEC1937
22	None PCM
23	Unknown
50	dts
51	dts-CD
52	dts 96/24
54	dts-ES (Matrix)
58	dts-ES (Discrete)
5C	dts-ES (Both)
60	AAC
C0	Dolby Digital
C1	Dolby Digital Karaoke
C4	Dolby Digital EX
FF	Undefined

<5th byte> / <第5 バイト>

Signal processing status information /

信号処理ステータス情報

bit	Information
bit 7	Digital mute
bit 6	—
bit 5	6.1(7.1) processing
bit 4	Analog mute
bit 3	—
bit 2	PCM through
bit 1	—
bit 0	dts analog mute

DMD: Decoder mode information

Not applied to these models.

DMD: デコーダー情報

このモデルには適用されません。

DMD: 03C00000

DIF: DIR information
Not applied to these models.

DIF:1401000600

DIF : DIR情報
このモデルには適用されません。

PC: Preamble C information
Not applied to these models.

PC:0000

PC : Preamble C情報
このモデルには適用されません。

CS1, 2: Channel status information
Not applied to these models.

CS1:0000000000 — — — — — CS2:00

CS1, 2 : チャンネルステータス情報
このモデルには適用されません。

DEI: Decoder information
Not applied to these models.

DEI:0808000600

DEI : デコーダー情報
このモデルには適用されません。

BS1-8: Bit stream information
Not applied to these models.

BS1:0000000000 — — — — — BS8:00

BS1- 8 : ビットストリーム情報
このモデルには適用されません。

MTT: Mute Trigger
Not applied to these models.

MTT:0018001820

MTT: Mute Trigger
このモデルには適用されません。

DGI: Digital information
Not applied to these models.

DGI:FFFFFFFF

DGI : DIGITAL系情報
このモデルには適用されません。

14. DSP BUS CHECK

This menu is used to self-diagnose whether or not the bus connection for the TI (DA60Y) and the external ROM/RAM is made properly.
When no error is detected, "NoEr" appears on display.

TI BUS:NoEr

or

TI BUS:Boot

14. DSP BUS CHECK

TI (DA60Y)と外付けROM/RAMとのバス接続の正否を自己診断します。
エラーが検出されなかった場合は、“ NoEr ”と表示されます。

No error detected.
不良検出なし

When this indication is displayed within seconds or displayed alternately “NoEr” and “Boot”, it is highly possible that there are errors.
数秒間この状態、またはNoErと交互に表示される場合、異常が発生している可能性があります。

15. SWFR CUT OFF

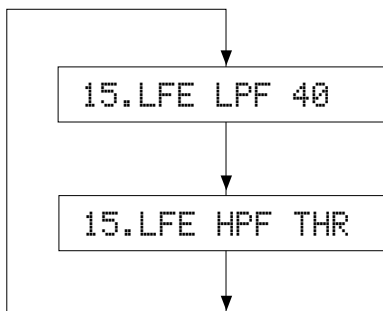
The cut off frequency setting of LFE.

Low-pass filter setting.

It can be selected 40Hz to 200Hz every 10Hz by the STRAIGHT key.

High-pass filter setting.

It can be selected 40Hz to 200Hz every 10Hz and through by the STRAIGHT key.



ローパスフィルタの設定です。

STRAIGHT キーにより、40Hz ～ 200Hz まで 10Hz 単位で変更できます。

ハイパスフィルタの設定です。

STRAIGHT キーにより、40Hz ～ 200Hz まで 10Hz 単位とスルーに変更できます。

16. PROTECTION SETTING

Not applied to these models.

16. PROTECTION SETTING

このモデルには適用されません。

17. PROTECTION HISTORY

Four protection histories are display.

17. PROTECTION HISTORY

過去のプロテクション履歴を4つまで表示します。

18. SOFT SWITCH

Note) Changing the function setting may hinder the proper operation.

This menu is used to switch the function settings on P.C.B. through the software so as to activate the product. The operation mode can be changed by selecting the sub-menu and then using the STRAIGHT key.

The protection function follows the P.C.B. settings.

When connected to AC, the unit is initialized to the P.C.B. setting. Display of each function after initialization varies depending on settings on P.C.B.

18. SOFT SWITCH

注) 機能設定を変更した場合、正常に動作しないことがあります。

P.C.B.上の機能設定をソフト的に切り替えて、製品を動作させる機能です。

操作は、サブメニューを選んだ後、STRAIGHT キーで切り替えます。

プロテクション機能は、P.C.B.の設定に従います。

AC接続で、P.C.B.の設定に初期化されます。初期化後の各機能の表示は、P.C.B.上の設定によります。

SW MODE: PCB, MODEL or FNC can be selected.

SW MODE : PCB、MODELまたはFNCを選択できます。

18.SW :PCB

MODEL SETTING: V757, V657, H5860, V557, V457, H5850 or V357 can be selected. (SW MODE: Selectable when MODEL has been selected.)

MODEL SETTING : V757、V657、H5860、V557、V457、H5850、V357のいずれかを選択できます。(SW MODE : MODEL時選択できます。)

18.MODEL:V757

DESTINATION: J, U, C, R, T, K, A, B, G (E) or L can be selected. (SW MODE: Selectable when MODEL has been selected.)

DESTINATION : J、U、C、R、T、K、A、B、G(E)、Lのいずれかを選択できます。(SW MODE : MODEL時選択できます。)

18.DEST :U

TUNER DEST INATION: J, UC, R, ABG or RL can be selected. (SW MODE: Selectable when FNC has been selected.)

TUNER DEST INATION : J、UC、R、ABG、RLのいずれかを選択できます。(SW MODE : FNC時選択できます。)

18.TuDest:UC

TUNER TYPE: NRM, RDS or XM can be selected. (SW MODE: Selectable when FNC has been selected.)

TUNER TYPE : NRM、RDS、XMのいずれかを選択できます。(SW MODE : FNC時選択できます。)

18.TuType:XM

VIDEO FORMAT: NTSC or PAL can be selected. (SW MODE: Selectable when FNC has been selected.)

VIDEO FORMAT : NTSCまたはPALを選択できます。(SW MODE : FNC時選択できます。)

18.VIDEO:NTSC

ZONE2: NOT or EXIST can be selected. (SW MODE: Selectable when FNC has been selected.)

ZONE2 : NOTまたはEXISTを選択できます。(SW MODE : FNC時選択できます。)

18.ZONE2:NOT

AAC: NOT or EXIST can be selected. (SW MODE: Selectable when FNC has been selected.)

AAC : NOTまたはEXISTを選択できます。(SW MODE : FNC時選択できます。)

18.AAC :NOT

TUNER: NOT or EXIST can be selected. (SW MODE: Selectable when FNC has been selected.)

TUNER : NOTまたはEXISTを選択できます。(SW MODE : FNC時選択できます。)

18.TUNER:EXIST

ZONE2 AMP: NOT or EXIST can be selected. (SW MODE: Selectable when FNC has been selected.)

ZONE2 AMP : NOTまたはEXISTを選択できます。(SW MODE : FNC時選択できます。)

18.Z2Amp:NOT

OSD: NOT or EXIST can be selected. (SW MODE: Select-able when FNC has been selected.)

OSD : NOTまたはEXISTを選択できます。(SW MODE : FNC時選択できます。)

18.OSD :NOT

YPAO: NOT or EXIST can be selected. (SW MODE: Select-able when FNC has been selected.)

YPAO : NOTまたはEXISTを選択できます。(SW MODE : FNC時選択できます。)

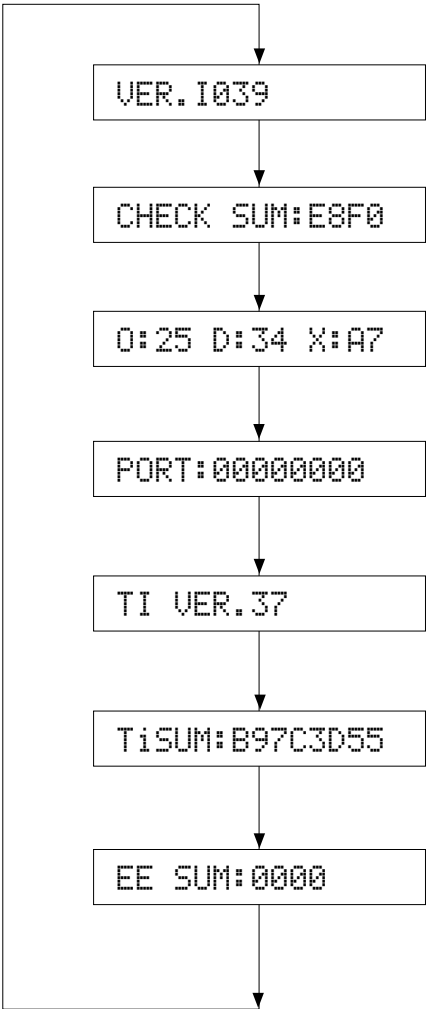
18.YPAO :NOT

19. SOFTWARE VERSION

The version and checksum of software are displayed.
**The numeric value in the diagram is for reference.*

19. SOFTWARE VERSION

ソフトウェアのバージョンおよびチェックサムを表示します。
※図中数値は参考例です。



Software version of microprocessor / マイコンのソフトウェアバージョン

Checksum value of microprocessor / マイコンのチェックサム

Software modules version of microprocessor /
マイコンのモジュール別ソフトバージョン
O: Operation D: DSP X: XM

The condition of ports for model detection
モデル判別ポートの状態
(Not applied to these models. / このモデルには適用されません。)

Software version of DSP / DSP のソフトウェアバージョン

Checksum value of DSP / DSP のチェックサム

Checksum value of EEPROM / EEPROM のチェックサム
(Not applied to these models. / このモデルには適用されません。)

20. DSP SOFTWARE REWRITE

The rewriting mode of DSP software.
Not applied to these models.

20. DSP SOFTWARE REWRITE

DSP のソフトウェア書き換えモードです。
このモデルには適用されません。

■ AMP ADJUSTMENT / アンプ部調整

● CONFIRMATION OF IDLING CURRENT

1. Immediately after the power is turned on, measure the voltage across resistor terminals in the column "A" in the table below and confirm that the measured value is between 0.1mV and 10.0mV.
2. If the measured voltage exceeds 10.0mV, open (cutoff) the resistor in the column "B" in the table below and re-confirm the voltage.

Attention:

If the idling current exceeds 10.0mV after a power amplifier repair, check for a defective component before cutting the resistor.

3. Confirm that the voltage is between 0.2mV and 15.0mV after 60 minutes.

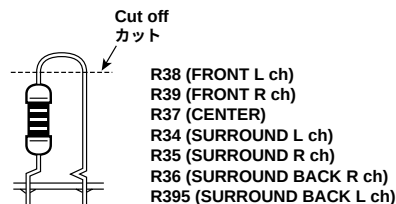
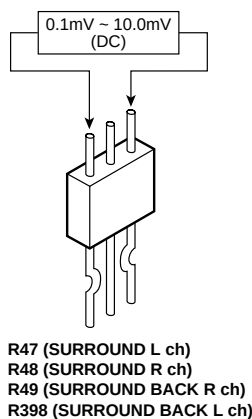
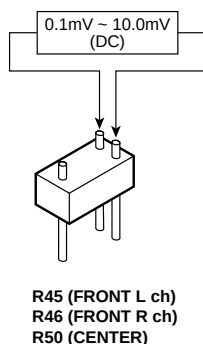
● アイドリング電流確認

1. 電源投入直後、下表のA欄の抵抗の端子間電圧を測定し、0.1mV～10.0mVであることを確認してください。
2. 電圧が10mVを越えている場合は、下表のB欄の抵抗をカットし、電圧を再確認してください。

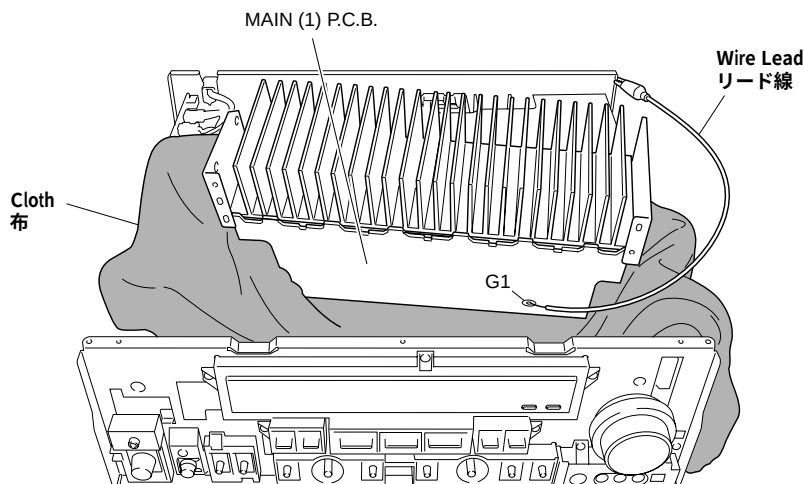
注意：パワーアンプ修理後に10.0mVを超えている場合は、抵抗をカットする前に故障箇所を調べてください。

3. 60分後、電圧が0.2mV～15.0mVであることを確認してください。

P.C.B.	A	CHANNEL	B
MAIN (1) P.C.B.	R45	FRONT L ch	R38
	R46	FRONT R ch	R39
	R50	CENTER	R37
	R47	SURROUND L ch	R34
	R48	SURROUND R ch	R35
	R49	SURROUND BACK R ch	R36
POWER (1) P.C.B.	R398	SURROUND BACK L ch	R395



<Position for Adjusting MAIN (1) P.C.B.>



V801 : 17-BT-24GNK (WE289300)



PIN NO.	6	6	6	6	6	6	6	5	5	5	5	5	5	5
	9	8	7	6	5	4	3	2	1	0	9	8	7	6
CONNECTION	F	N	N	N	P	P	P	P	P	P	P	P	P	P
	2	X	P	P	1	2	3	4	5	6	7	8	9	0

Note

- 1) F1, F2 Filament
- 2) NP No Pin
- 3) NX No Extend Pin
- 4) P1~P37 Datum Line
- 5) 1G~17G Grid

17G 16G 15G

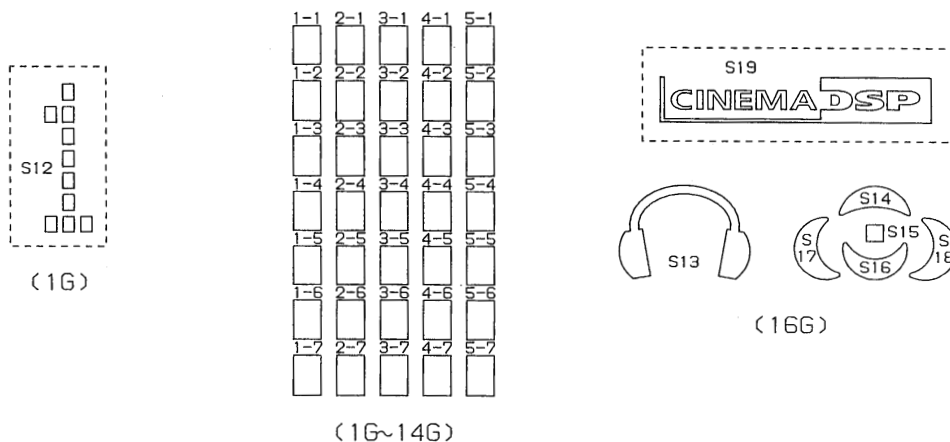
Source Selection: DVR/VCR2, VCR1, V-AUX, DTV/CBL, DVD, MD/CD-R, TUNER, CD, PHONO

Playback Controls: MATRIX DISCRETE, DIGITAL, CSI, STANDARD, EX, PL, PLII, PLIIX, PCM, AAC

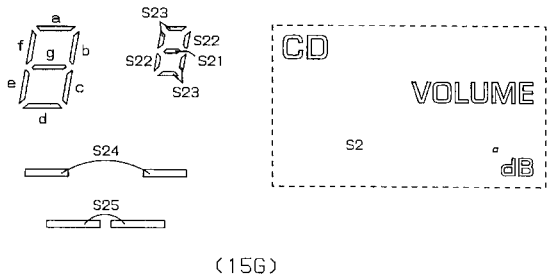
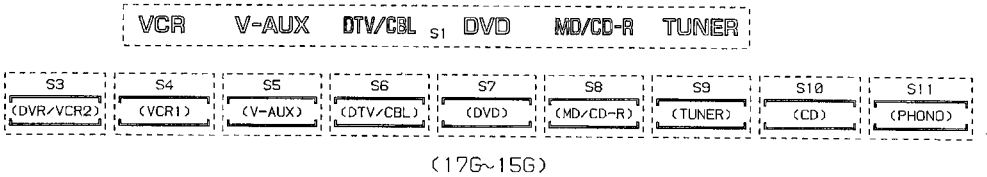
Central Display: CINEMA DSP, HIFI DSP, YPAO HD AUTO TUNED STEREO, XMPTY HOLD PS PTY RT CT EON

Right Side Controls: MEMORY, MUTE, VOLUME, SLEEP, S20, 98/24, 00.00, dB, LFE, SL, SB, SA

Labels: 1G, 2G, 3G, 4G, 5G, 6G, 7G, 8G, 9G, 10G, 11G, 12G, 13G, 14G



● SEGMENT DESIGNATION

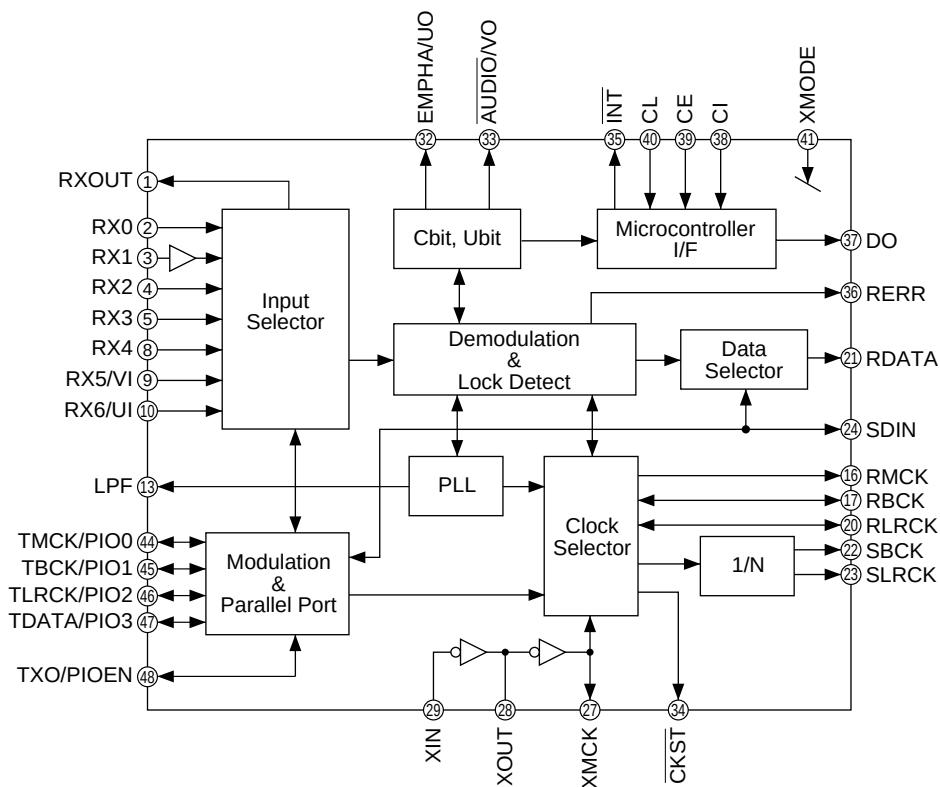
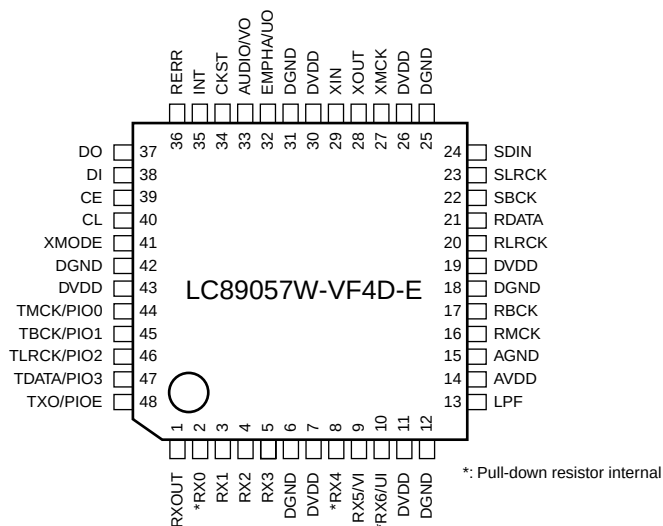


● ANODE CONNECTION

	1G	2G~13G	14G	15G	16G	17G
P1	1-1	1-1	1-1	SLEEP	EON	
P2	2-1	2-1	2-1	MEMORY	CT	
P3	3-1	3-1	3-1	MUTE	RT	MATRIX
P4	4-1	4-1	4-1	S20	PTY	DISCRETE
P5	5-1	5-1	5-1	1a	PS	
P6	1-2	1-2	1-2	1b	PTYHOLD	
P7	2-2	2-2	2-2	1c	XM	
P8	3-2	3-2	3-2	1d	S14	
P9	4-2	4-2	4-2	1e	S15	
P10	5-2	5-2	5-2	1f	S16	
P11	1-3	1-3	1-3	1g	S17	
P12	2-3	2-3	2-3	2a	S18	
P13	3-3	3-3	3-3	2b	SILENT CINEMA	STANDARD
P14	4-3	4-3	4-3	2c	S13	
P15	5-3	5-3	5-3	2d	SP	VIRTUAL
P16	1-4	1-4	1-4	2e	A	DVR/VCR2
P17	2-4	2-4	2-4	2f	B	S3
P18	3-4	3-4	3-4	2g	ZONE2	-
P19	4-4	4-4	4-4	S2	NIGHT	-
P20	5-4	5-4	5-4	S10	HIFI DSP	-
P21	1-5	1-5	1-5	S11	S19	-
P22	2-5	2-5	2-5	PHONO	YPAO	-
P23	3-5	3-5	3-5	S21	HD	-
P24	4-5	4-5	4-5	S22	AUTO	-
P25	5-5	5-5	5-5	S23	TUNED	-
P26	1-6	1-6	1-6	ft	STEREO	-
P27	2-6	2-6	2-6	S24	S4	-
P28	3-6	3-6	3-6	96/24	S5	-
P29	4-6	4-6	4-6	DUAL	S6	-
P30	5-6	5-6	5-6	LFE	S7	-
P31	1-7	1-7	1-7	L	S8	-
P32	2-7	2-7	2-7	C	S9	-
P33	3-7	3-7	3-7	R	1	-
P34	4-7	4-7	4-7	SL	S1	-
P35	5-7	5-7	5-7	SB	-	-
P36	S12	-	ms	SR	-	-
P37	-	-	dB	S25	-	-

■ IC DATA

IC2 : LC89057W-VF4D-E (DSP P.C.B.) Digital Audio Interface Transceiver



IC2 : LC89057W-VF4D-E (DSP P.C.B.)

Digital Audio Interface Transceiver

No.	Name	I/O	Function
1	RXOUT	O	Input bi-phase selection data output pin
2	RX0	I ₅	TTL-compatible digital data input pin
3	RX1	I	Coaxial-compatible digital data input pin with built-in amplifier
4	RX2	I ₅	TTL-compatible digital data input pin
5	RX3	I ₅	TTL-compatible digital data input pin
6	DGND		Digital GND
7	DVDD		Digital power supply
8	RX4	I ₅	TTL-compatible digital data input pin
9	RX5/VI	I ₅	TTL-compatible digital data / Validity flag input pin for modulation
10	RX6/UI	I ₅	TTL-compatible digital data / User data input pin for modulation
11	DVDD		PLL digital power supply
12	DGND		PLL digital GND
13	LPF	O	PLL loop filter connection pin
14	ACDD		PLL analog power supply
15	AGND		PLL analog GND
16	RMCK	O	R system clock output pin (256fs, 512fs, XIN, VCO)
17	RBCK	O/I	R bit clock input/output pin
18	DGND		Digital GND
19	DVDD		Digital power supply
20	RLRCK	O/I	R LR clock input/output pin (fs)
21	RDATA	O	Serial audio data input pin
22	SBCK	O	S bit clock output pin (32fs, 64fs, 128fs)
23	SLRCK	O	S LR clock output pin (fs/s, fs, 2fs)
24	SDIN	I ₅	Serial audio data input pin
25	DGND		Digital GND
26	DVDD		Digital power supply
27	XMCK	O	Oscillation amplifier output pin
28	XOUT	O	Crystal resonator connection output pin
29	XIN	I	Crystal resonator connection, external supply clock input pin (24.576 MHz or 12.288 MHz)
30	DVDD		Digital power supply
31	DGND		Digital GND
32	EMPHA/UO	I/O	Emphasis information / U data output / Chip address setting pin
33	AUDIO/VO	I/O	Non-PCM output / V flag output / Chip address setting pin
34	CKST	I/O	Clock switch transition period signal / Demodulation master or slave function switch pin
35	INT	I/O	Microcontroller interrupt output / Modulation or general-purpose I/O switch pin
36	RERR	O	PLL clock error, data error flag output
37	DO	O	Microcontroller I/F read data output pin (3-state)
38	DI	I ₅	Microcontroller I/F write data input pin
39	CE	I ₅	Microcontroller I/F chip enable input pin
40	CL	I ₅	Microcontroller I/F clock input pin
41	XMODE	I ₅	System reset input pin
42	DGND		Digital GND
43	DVDD		Digital power supply
44	TMCK/PIO0	I/O	Modulation 256fs system clock input / General-purpose I/O input/output pin
45	TMCK/PIO1	I/O	Modulation 64fs bit clock input / General-purpose I/O input/output pin
46	TLRCK/PIO2	I/O	Modulation fs clock input / General-purpose I/O input/output pin
47	TLRCK/PIO3	I/O	Modulation serial audio data input / General-purpose I/O input/output pin
48	TXO/PIOEN	O/I	Modulation data output / General-purpose I/O enable input pin

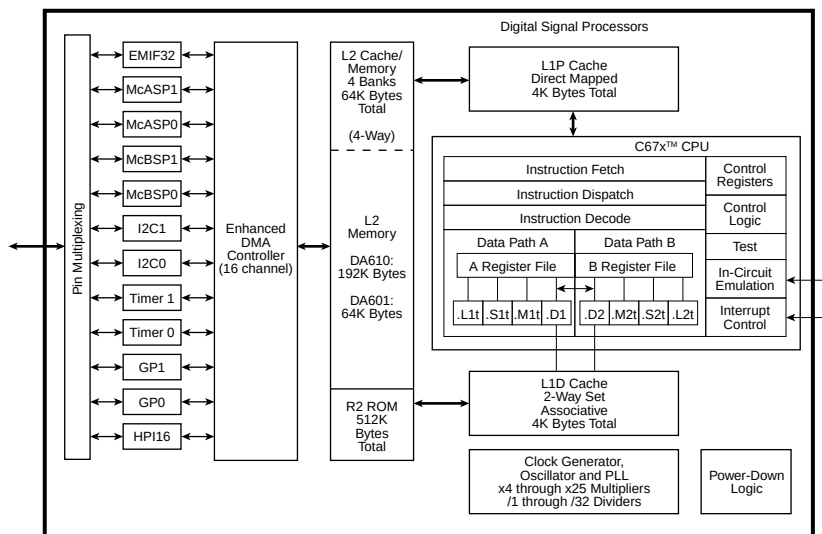
1) Input/output I or O = -0.3 to 3.6V, I₅ = -0.3 to 5.5V

2) Pins 32 and 33 are latch address setting input pins when pin 41 = "L".

3) Pin 34 is a demodulation function master or slave setting input pin when pin 41 = "L".

4) Pin 35 is a modulation function or general-purpose I/O function switch setting input pin when pin 41 = "L".

5) Perform ON/OFF for all power supplies with the same timing as a latch-up countermeasure.

IC5 : D60YA003BPYP225 (DSP P.C.B.)**Decoder**

No.	Name [Default]	I/O	Function
1	GP0[4] / (EXT_INT4)	IOZ	General purpose I/O port 4 / Interrupt input (polarity selectable individually by using register)
2	GP0[6] / (EXT_INT6)	IOZ	General purpose I/O port 6 / Interrupt input (polarity selectable individually by using register)
3	CVDD	S	1.2V power supply
4	VSS	GND	Ground
5	DVDD	S	3.3V power supply
6	GP0[5] / (EXT_INT5)	IOZ	General purpose I/O port 5 / Interrupt input (polarity selectable individually by using register) (Unconnected)
7	GP0[7] / (EXT_INT7)	IOZ	General purpose I/O port 7 / Interrupt input (polarity selectable individually by using register) (Unconnected)
8	CLKS1	I	McBSP1 external clock source
9	DVDD	S	3.3V power supply
10	VSS	GND	Ground
11	CVDD	S	1.2V power supply
12	TINP1 / AHCLKX0	I / IOZ	Timer 1 Input / McASP0 Transmission MCLK
13	AXR1[11]	IOZ	McASP1 Transmission/reception data 11
14	CVDD	S	1.2V power supply
15	VSS	GND	Ground
16	CLKX0 / ACLKX0	IOZ	McBSP0 Transmission clock / McASP0 Transmission BCLK
17	AXR1[12]	IOZ	McASP1 Transmission/reception data 12
18	AXR1[13]	IOZ	McASP1 Transmission/reception data 13
19	ACLKR0	IOZ	McASP0 Reception BCLK
20	DX0	O/Z	McBSP0 Transmission data
21	FSX0	IOZ	McBSP0 Transmission Frame Sync
22	CVDD	S	1.2V power supply
23	VSS	GND	Ground
24	AFSR0	IOZ	McASP0 Reception LRCLK
25	DVDD	S	3.3V power supply
26	VSS	GND	Ground
27	DR0	I	McBSP0 Reception data
28	AHCLKR0	IOZ	McASP0 Reception MCLK
29	CVDD	S	1.2V power supply
30	VSS	GND	Ground
31	FSX1	IOZ	McBSP1 Transmission Frame Sync (Input in SPI slave state) (Unconnected)
32	AXR1[10]	IOZ	McASP1 Transmission/reception data 10
33	CLKX1 / AMUTE0	IOZ	McBSP1 Transmission clock (Input in SPI slave state) / McASP0 MUTE output (Unconnected)
34	VSS	GND	Ground
35	CVDD	S	1.2V power supply
36	AXR1[9]	IOZ	McASP1 Transmission/reception data 9
37	DR1 / SDA1	I / IOZ	McBSP1 Reception data / I2C1 data (Unconnected)
38	AXR1[8]	IOZ	McASP1 Transmission/reception data 8
39	VSS	GND	Ground
40	CVDD	S	1.2V power supply

IC5 : D60YA003BPYP225 (DSP P.C.B.)

Decoder

No.	Name	I/O	Function
41	SCL0	IOZ	I2C0 clock
42	SDA0	IOZ	I2C0 data
43	CVDD	S	1.2V power supply
44	DVDD	S	3.3V power supply
45	VSS	GND	Ground
46	CVDD	S	1.2V power supply
47	DVDD	S	3.3V power supply
48	VSS	GND	Ground
49	VSS	GND	Ground
50	CVDD	S	1.2V power supply
51	CVDD	S	1.2V power supply
52	VSS	GND	Ground
53	CVDD	S	1.2V power supply
54	VSS	GND	Ground
55	DVDD	S	3.3v power supply
56	ARDY	I	Asynchronous RAM Ready input
57	/CE3	O/Z	For external memory area, Enable 3 (Unconnected)
58	DVDD	S	3.3V power supply
59	VSS	GND	Ground
60	CVDD	S	1.2V power supply
61	/CE2	O/Z	For external memory area, Enable 2 (Unconnected)
62	EA2	O/Z	For external memory, Address 2
63	EA3	O/Z	For external memory, Address 3
64	EA4	O/Z	For external memory, Address 4
65	DVDD	S	3.3V power supply
66	VSS	GND	Ground
67	CVDD	S	1.2v power supply
68	EA5	O/Z	For external memory, Address 5
69	EA6	O/Z	For external memory, Address 6
70	EA7	O/Z	For external memory, Address 7
71	EA8	O/Z	For external memory, Address 8
72	DVDD	S	3.3V power supply
73	VSS	GND	Ground
74	EA9	O/Z	For external memory, Address 9
75	/SDRAS	O/Z	SDRAM RAS
76	EA10	O/Z	For external memory, Address 10
77	ECLKOUT	O/Z	Clock output for EMIF
78	ECLKIN	I	Clock input for EMIF (Unconnected)
79	/SDCAS	O/Z	SDRAM CAS
80	CVDD	S	1.2V power supply
81	VSS	GND	Ground
82	CLKOUT2 / GP0[2]	O/Z / IOZ	Half clock output of device Speed / General purpose I/O0 port 2 (Unconnected)
83	/SDWE	O/Z	SDRAM WE
84	DVDD	S	3.3V power supply
85	VSS	GND	Ground
86	EA11	O/Z	For external memory, Address 11
87	DVDD	S	3.3V power supply
88	VSS	GND	Ground
89	CVDD	S	1.2V power supply
90	EA14	O/Z	For external memory, Address 14 (Unconnected)
91	EA13	O/Z	For external memory, Address 13
92	EA16	O/Z	For external memory, Address 16 (Unconnected)
93	EA12	O/Z	For external memory, Address 12
94	EA15	O/Z	For external memory, Address 15 (Unconnected)
95	EA18	O/Z	For external memory, Address 18 (Unconnected)
96	CVDD	S	1.2V power supply
97	VSS	GND	Ground
98	DVDD	S	3.3V power supply

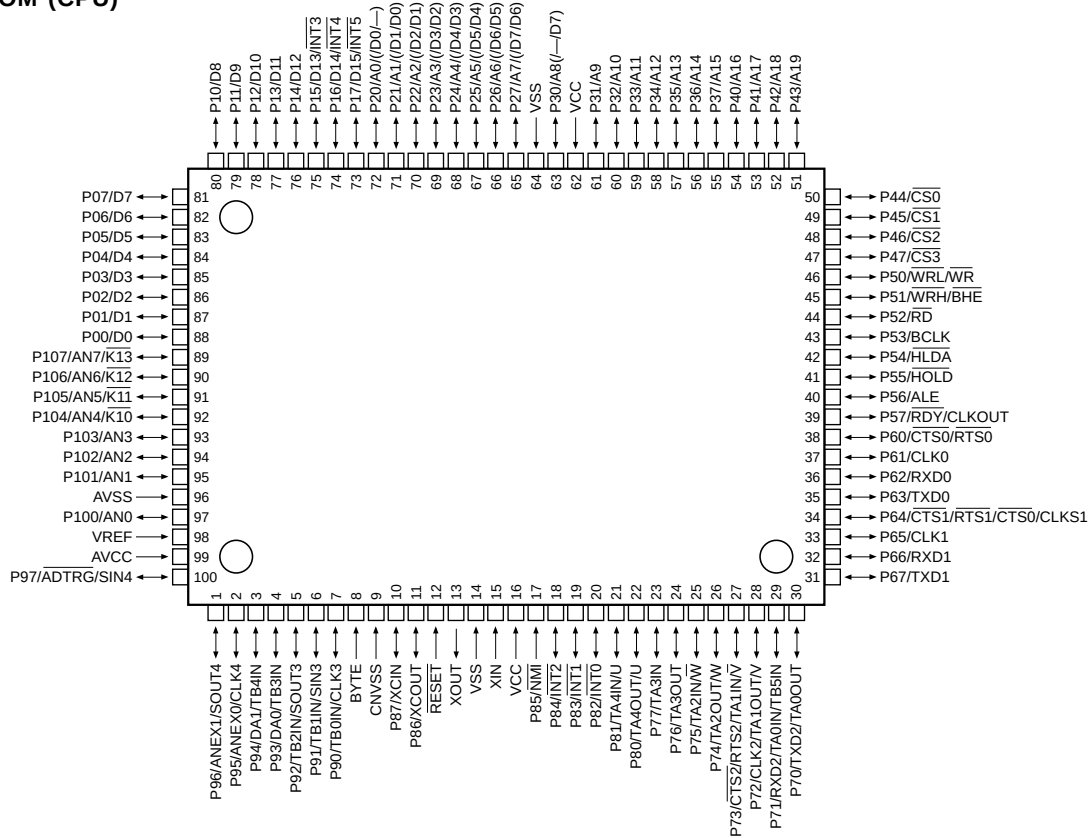
IC5 : D60YA003BPYP225 (DSP P.C.B.)
Decoder

No.	Name	I/O	Function
99	EA17	O/Z	For external memory, Address 17 (Unconnected)
100	EA19	O/Z	For external memory, Address 19 (Unconnected)
101	EA20	O/Z	For external memory, Address 20 (Unconnected)
102	/CE0	O/Z	For external memory area, Enable 0
103	/CE1	O/Z	For external memory area, Enable 1 (Unconnected)
104	CVDD	S	1.2V power supply
105	CVDD	S	1.2V power supply
106	VSS	GND	Ground
107	DVDD	S	3.3V power supply
108	/BE1	O/Z	For external memory, Byte Enable Control 1
109	EA21	O/Z	For external memory, Address 21 (Unconnected)
110	/BE0	O/Z	For external memory, Byte Enable Control 0
111	ED13	IOZ	For external memory, Data 13
112	ED15	IOZ	For external memory, Data 15
113	ED14	IOZ	For external memory, Data 14
114	DVDD	S	3.3V power supply
115	VSS	GND	Ground
116	CVDD	S	1.2V power supply
117	ED11	IOZ	For external memory, Data 11
118	ED12	IOZ	For external memory, Data 12
119	ED9	IOZ	For external memory, Data 9
120	ED10	IOZ	For external memory, Data 10
121	ED6	IOZ	For external memory, Data 6
122	ED7	IOZ	For external memory, Data 7
123	ED8	IOZ	For external memory, Data 8
124	CVDD	S	1.2V power supply
125	VSS	GND	Ground
126	DVDD	S	3.3V power supply
127	ED4	IOZ	For external memory, Data 4
128	ED5	IOZ	For external memory, Data 5
129	ED3	IOZ	For external memory, Data 3
130	ED2	IOZ	For external memory, Data 2
131	ED1	IOZ	For external memory, Data 1
132	ED0	IOZ	For external memory, Data 0
133	CVDD	S	1.2V power supply
134	VSS	GND	Ground
135	GP0[1]	IOZ	General purpose I/O0 port 1 (Unconnected)
136	BUSREQ	O/Z	For external memory, Bus request output (Unconnected)
137	/HOLDA	O/Z	For external memory, Hold request approval to host (Unconnected)
138	/HOLD	I	For external memory, Hold request from host
139	AFSR1	IOZ	McASP1 reception LRCLK
140	ACLKR1	IOZ	McASP1 reception BCLK
141	DVDD	S	3.3V power supply
142	VSS	GND	Ground
143	AXR[0]	IOZ	McASP1 transmission/reception data 0
144	AXR[1]	IOZ	McASP1 transmission/reception data 1
145	AXR1[2]	IOZ	McASP1 transmission/reception data 2
146	AXR18[3]	IOZ	McASP1 transmission/reception data 3
147	AXR1[4]	IOZ	McASP1 transmission/reception data 4
148	VSS	GND	Ground
149	CVDD	S	1.2V power supply
150	AXR1[5]	IOZ	McASP1 transmission/reception data 5
151	AXR1[6]	IOZ	McASP1 transmission/reception data 6
152	AXR1[7]	IOZ	McASP1 transmission/reception data 7
153	ACLKX1	IOZ	McASP1 transmission BCLK
154	AMUTE1	OZ	McASP1 MUTE output
155	AFSX1	IOZ	McASP1 transmission LRCLK
156	GP0[0]	IOZ	General purpose I/O0 port 0 (SPI ready signal output Active: H)

IC5 : D60YA003BPYP225 (DSP P.C.B.)

Decoder

No.	Name	I/O	Function
157	CVDD	S	1.2V power supply
158	VSS	GND	Ground
159	AHCLKX1	IOZ	McASP1 transmission MCLK
160	GP0[8]	IOZ	General purpose I/O0 port 8
161	AHCLKR1	IOZ	McASP1 reception MCLK
162	DVDD	S	3.3V power supply
163	VSS	GND	Ground
164	GP0[3]	IOZ	General purpose I/O0 port 3 (Unconnected)
165	GP0[9]	IOZ	General purpose I/O0 port 9
166	GP0[10]	IOZ	General purpose I/O0 port 10
167	GP0[11]	IOZ	General purpose I/O0 port 11
168	GP0[12]	IOZ	General purpose I/O0 port 12
169	CVDD	S	1.2V power supply
170	VSS	GND	Ground
171	CVDD	S	1.2V power supply
172	GP0[13]	IOZ	General purpose I/O0 port 13
173	GP0[14]	IOZ	General purpose I/O0 port 14
174	GP0[15]	IOZ	General purpose I/O0 port 15
175	NMI	I	Nonmaskable Interrupt edge
176	/RESET	I	Device reset
177	CVDD	S	1.2V power supply
178	OSCIN	I	X'tal input, Oscillation: 12 to 25MHz
179	OSCOUT	O	X'tal output (Unconnected)
180	OSCVSS	GND	X'tal GND internal connection (Unconnected)
181	OSCVDD	S	X'tal 1.2V power supply internal connection (Unconnected)
182	VSS	GND	Ground
183	DVDD	S	3.3V power supply
184	CLKOUT3	O	Programmable clock output up to 32 division of PLL (Unconnected)
185	EMU1	IOZ	JTAG emulation pin 1 (1 k-ohms PD when boundary scanning)
186	EMU0	IOZ	JTAG emulation pin 0 (1 k-ohms PD when boundary scanning)
187	TDO	O/Z	JTAG Data Out
188	DVDD	S	3.3V power supply
189	VSS	GND	Ground
190	CVDD	S	1.2V power supply
191	TDI	I	JTAG Data In
192	TMS	I	JTAG Mode Select
193	TCK	I	JTAG Clock
194	VSS	GND	Ground
195	CVDD	S	1.2V power supply
196	CVDD	S	1.2V power supply
197	/TRST	I	JTAG Reset
198	RSV2	O/Z	Reserved (Unconnected)
199	PLL _G	A	Analog GND for PLL
200	RSV0	A	Reserved (Unconnected)
201	PLL _V	A	Analog 1.2V power supply for PLL
202	PLL _{HV}	A	Analog 3.3V power supply for PLL
203	RSV1	I	Reserved (GND)
204	CLKIN	I	Clock input
205	CLKMODE0	I	PLL input clock selection: Clkin or X'tal
206	DVDD	S	3.3V power supply
207	VSS	GND	Ground
208	CVDD	S	1.2V power supply

IC451 : M30622MWP-xxxFP (SUBTRANS P.C.B.)
16 bit μ -COM (CPU)

No.	Port	Name	I/O	Function
1	SOUT4	DTFD	SO	FL Driver TxD
2	CLK4	CKFD	SO	FL Driver CLOCK
3	DA1	LMIT	DA	Power limiter control
4	DA0	TRIG	O	DC Trigger control
5	SOUT3	SDM	SO	DIR, TI (DA601), DAC TxD
6	SIN3	SDD	SI	DIR, TI (DA601) RxD
7	CLK3	SCK	SO	DIR, TI (DA601), DAC CLOCK
8	BYTE	BYTE	Vss	Vss: when single chip mode is used
9	CNVss	CNVss	Vss/Vcc	Vss: when single chip mode is used, Vcc: when flash writing is used
10	P87	MUTETI	O	TI (DA601) MUTE
11	P86	TIBUSY	I	TI BUSY detect, /CDDA Writing DATA In
12	RESET	/RESET	I	Reset
13	Xout	Xout		Oscillator Out
14	Vss	Vss	Vss	u-COM Ground
15	Xin	Xin	16MHz	Oscillator In
16	Vcc	Vcc	Vcc(BU)	u-COM Power Supply, +5V
17	NMI	NMI	Vcc(BU)	Connect to Vcc because it is unused.
18	INT2	/INTTI	IRQ	TI (DA601) INT
19	INT1	/INTDIR	IRQ	DIR INT
20	INT0	VSX	IRQ	Vertical Synchronize Detect
21	P81	/CSDIR	O	DIR CS
22	P80	/CSTI	O	IT (DA601) CS
23	P77	/CSDAC	O	DAC CS
24	P76	/ICDIR	O	DIR RESET
25	P75	/ICTI	O	TI (DA601) RESET
26	P74	SPIRDY	I	TI (DA601) Serial Ready, /CDDA Writing WCK In
27	P73	/CEEEP	O	EEPROM CE
28	CLK2	CKZ2	O	Zone2 Selector (BD3841) Clock
29	P71	DRXM	SI	DABIC IC RxD
30	TXD2	DTXM	SO	DABIC IC TxD
31	TXD1	DTEV/TXDF	O/SO	Electronic Volume IC DATA / AF220 DATA TxD
32	RXD1	XMPWR/RXDF	O/SO	XM/DT BUS POWER CONTROL / Flash ROM RxD
33	CLK1	CKEV/CLKF	SO	Electronic Volume IC Clock / AF220 CLOCK TxD
34	P64	BSY	O	AF220 BUSY Signal Output

IC451 : M30622MWP-xxxFP (SUBTRANS P.C.B.)
16 bit μ -COM (CPU)

No.	Port	Name	I/O	Function
35	SDA0	DTCV	SO	VIDEO Conversion DATA
36	SCL0	CKCV	SO	VIDEO Conversion Clock
37	P61	/HP	I	HEAD PHONE Detect
38	P60	/MTHP	O	HEAD PHONE Mute Output
39	P57	/MTCT	O	MUTE Center
40	P56	/MTSW	O	MUTE SW
41	P55	/EMP	I	For Flash Writing (LO)
42	P54	/MTZ2	O	Zone 2 MUTE
43	P53	/MTFS	O	MUTE Front/Surround , Pre OUT
44	P52	CEEV	O	Electronic Volumn IC Enable
45	P51	ICEV	O	Electronic Volume Reset
46	P50	/CE	I	For Flash Writing (HI)
47	P47	CESEL	O	Selector IC Enable
48	P46	CKSEL	SO	Selector IC Clock
49	P45	DTSEL	O	Selector IC DATA
50	P44	CKBD/MOD3	O/I	INPUT Selector (BD3841) Clock / Model Discriminate 3
51	P43	DTBD	O	BD3841 DATA
52	P42	CPNTD	I	Component Signal Detector (DVD)
53	P41	CPNTT	I	Component Signal Detector (D-TV)
54	P40	SVIDD	I	S-Video Signal Detector
55	P37	CEB/MOD2	O/I	S/P Conversion Enable / Model Distinction 2
56	P36	CES/MOD1	O/I	OSD Enable / Model Distinction 1
57	P35	SDTN	O	RDS, OSD, S/P Conversion IC TxD
58	P34	SDRN	I	RDS RxD
59	P33	SCKN	O	RDS, OSD, S/P Conversion IC Clock
60	P32	RDSE/ICXM	O	RDS Enable / DABIC IC Reset
61	P31	CEP	O	PLL IC Enable
62	Vcc	Vcc	Vcc	u-COM power supply, +5V
63	P30	SDTP	O	PLL IC TxD
64	Vss	Vss	Vss	u-COM Ground
65	P27	SCKP	O	PLL IC Clock
66	P26	SDRP	I+	PLL IC RxD
67	P25	TUNED	I+	TUNED
68	P24	/ST	I+	TUNER /ST
69	P23	/TMUTE	O	TUNER MUTE
70	P22	PRY	O	Power Relay Output
71	P21	SBRY	O	Surround Back SP Relay Output
72	P20	ERY	O	Surround SP Relay Output
73	INT5	PDET	IRQ	Power Down DETECT INT
74	INT4	/PSW	IRQ	Standby SW INPUT
75	INT3	REM	IRQ	Remote Control Input
76	P14	MBRY	O	Front B SP Relay Output
77	P13	MARY	O	Front A SP Relay Output
78	P12	Z2RY	O	Zone 2 Relay Output
79	P11	4ohm	O	IMPEDANCE Control
80	P10	PRI	I	Protection Excess-current Detect
81	P07	PSV	O	Power Save
82	P06	/PURD	O	Pure Direct LED/VIDEO Power OFF
83	P05	/BLK	O	FL Driver Light Off
84	P04	ISA	I	INPUT SEL. Rotaly A
85	P03	ISB	I	INPUT SEL. Rotaly B
86	P02	TONEA	O	Tone Con. Rotaly A
87	P01	TONEB	I	Tone Con. Rotaly B
88	P00	VRA	I	Volume Rotaly A
89	P107	VRB	I	Volume Rotaly B
90	AN6	PRV	AD	Protection Power Supply Voltage Detect
91	AN5	PRD	AD	Protection DC Detect
92	AN4	PLDET	AD	POWER LIMITTER DETECT
93	AN3	THM	AD	Temperature Detect
94	AN2	ADKEY0	AD	Key AD Input 0
95	AN1	ADKEY1	AD	Key AD Input 1
96	Avss	Avss	Vss	AD Ground
97	AN0	DEST	AD	Destination Distinction
98	Vref	Vref	(+5v)	AD Reference
99	Avcc	Avcc	Vcc(BU)	AD Power Supply
100	P97	CEFD/MOD0	O	FL Driver CE / Model Distinction 0

RX-V757 (U, C, A, G models), RX-V657 (U, C, A, B, G, E models)
Key Input(A-D) Pull-Up Resistance 10 k-Ohms

Ohm	+ 0.0 k	+ 1.0 k	+ 1.0 k	+ 1.5 k	+ 2.2 k	+ 3.3 k	+ 4.7 k	+ 4.7 k	+ 6.8 k	+ 10.0 k	+ 22.0 k
V	~ 0.3	~ 0.7	~ 1.0	1.5	~ 2.0	~ 2.6	~ 3.1	~ 3.4	~ 3.7	~ 4.0	~ 4.4
ADKEY0 94pin/AN2	MAIN POWER	—	—	—	INPUT MODE	STRAIGHT	tone control	PRESET/TUNING	SPEAKER B	SPEAKER A	PURE DIRECT
ADKEY1 95pin/AN1	Z2 POWER	—	—	—	MULTI CH INPUT	FM/AM	A/B/C/D/E	PRESET/TUNING <	PRESET/TUNING >	MEMORY	TUNING MODE

RX-V757 (R, T, K models), DSP-AX757 (J model), RX-V657 (R, T, K, L models)
Key Input(A-D) Pull-Up Resistance 10 k-Ohms

Ohm	+ 0.0 k	+ 1.0 k	+ 1.0 k	+ 1.5 k	+ 2.2 k	+ 3.3 k	+ 4.7 k	+ 4.7 k	+ 6.8 k	+ 10.0 k	+ 22.0 k
V	~ 0.3	~ 0.7	~ 1.0	1.5	~ 2.0	~ 2.6	~ 3.1	~ 3.4	~ 3.7	~ 4.0	~ 4.4
ADKEY0 94pin/AN2	—	—	—	—	INPUT MODE	STRAIGHT	tone control	PRESET/TUNING	SPEAKER B	SPEAKER A	PURE DIRECT
ADKEY1 95pin/AN1	—	—	—	—	MULTI CH INPUT	FM/AM	A/B/C/D/E	PRESET/TUNING <	PRESET/TUNING >	MEMORY	TUNING MODE

DSP-AX757SE (B model)
Key Input(A-D) Pull-Up Resistance 10 k-Ohms

Ohm	+ 0.0 k	+ 1.0 k	+ 1.0 k	+ 1.5 k	+ 2.2 k	+ 3.3 k	+ 4.7 k	+ 4.7 k	+ 6.8 k	+ 10.0 k	+ 22.0 k
V	~ 0.3	~ 0.7	~ 1.0	1.5	~ 2.0	~ 2.6	~ 3.1	~ 3.4	~ 3.7	~ 4.0	~ 4.4
ADKEY0 94pin/AN2	—	—	—	—	INPUT MODE	STRAIGHT	tone control	—	SPEAKER B	SPEAKER A	PURE DIRECT
ADKEY1 95pin/AN1	—	—	—	—	MULTI CH INPUT	—	NEXT	LEVEL -	LEVEL +	—	—

HTR-5860 (U, C, A models)
Key Input(A-D) Pull-Up Resistance 10 k-Ohms

Ohm	+ 0.0 k	+ 1.0 k	+ 1.0 k	+ 1.5 k	+ 2.2 k	+ 3.3 k	+ 4.7 k	+ 4.7 k	+ 6.8 k	+ 10.0 k	+ 22.0 k
V	~ 0.3	~ 0.7	~ 1.0	1.5	~ 2.0	~ 2.6	~ 3.1	~ 3.4	~ 3.7	~ 4.0	~ 4.4
ADKEY0 94pin/AN2	—	—	—	—	INPUT MODE	STRAIGHT	tone control	PRESET/TUNING	SPEAKER B	SPEAKER A	PURE DIRECT
ADKEY1 95pin/AN1	—	—	—	—	MULTI CH INPUT	FM/AM	A/B/C/D/E	PRESET/TUNING <	PRESET/TUNING >	MEMORY	TUNING MODE

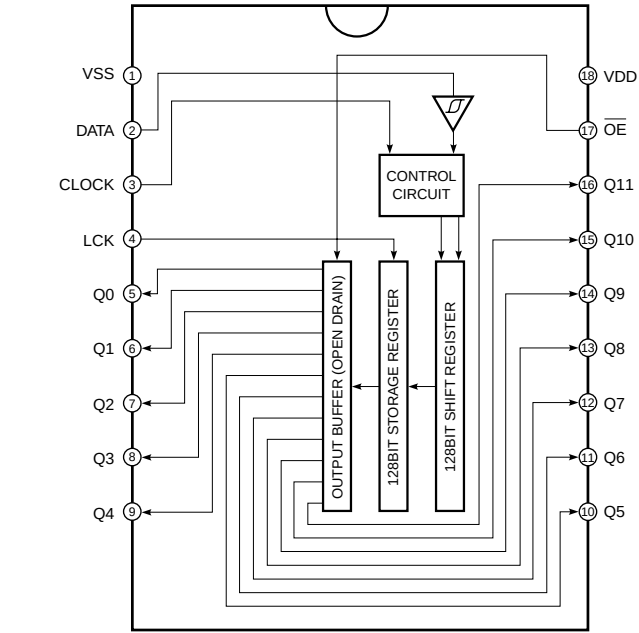
MODEL Distinction Port / モデル判別ポート

Pin	Function	Name	RX-V757/DSP-AX757/DSP-AX757SE	RX-V657	HTR-5860
100	P97	MOD0	—	0	1
56	P36	MOD1	—	—	—
55	P37	MOD2	0	0	0
50	P44	MOD3	0	1	1

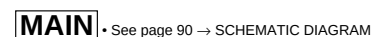
Distinction for AD Port / 仕向け先判別ポート
Pull-Up Resistance 10 k-Ohms

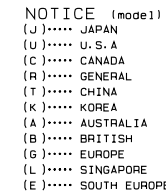
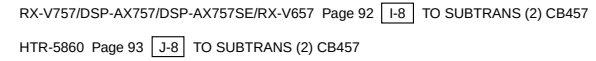
Ohm	0.0 k	1.2 k	2.7 k	4.7 k	6.8 k	10.0 k	15.0 k	27.0 k	47.0 k	100.0 k	∞
V	0-0.2	0.3-0.8	0.9-1.3	1.4-1.8	1.8-2.2	2.3-2.7	2.8-3.3	3.4-3.8	3.9-4.3	4.4-4.7	4.8-5.0
A-D (5V=256)	0-13	14-40	41-68	69-92	93-115	116-140	141-170	171-198	199-221	222-244	245-255
DEST 97pin	J	U	C	R	T	K	A	B	GE	L	—

IC903 : BU2092F-E2 (FUNCTION P.C.B.)
Serial In/Parallel Out Driver

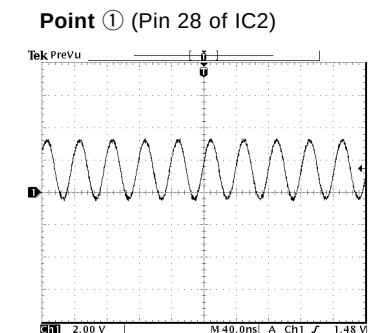
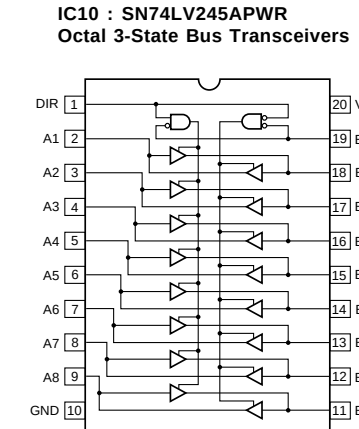
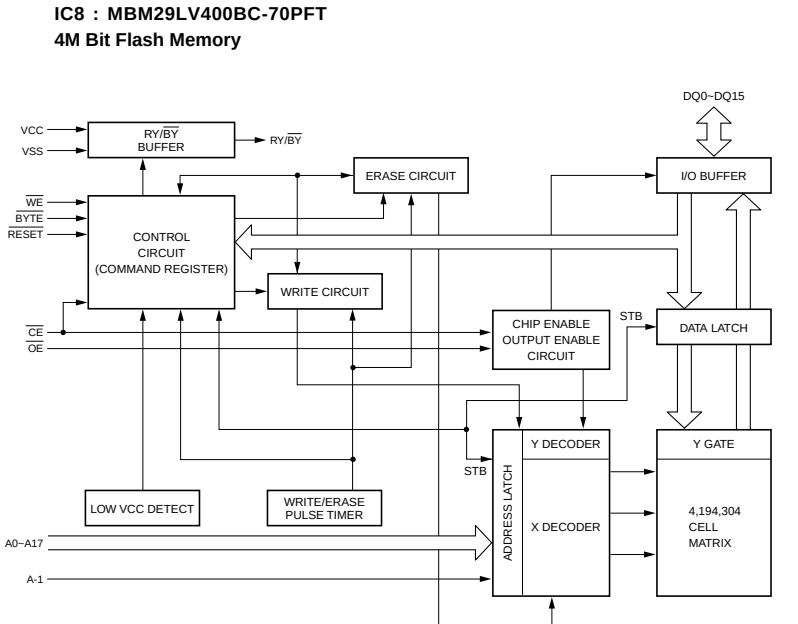
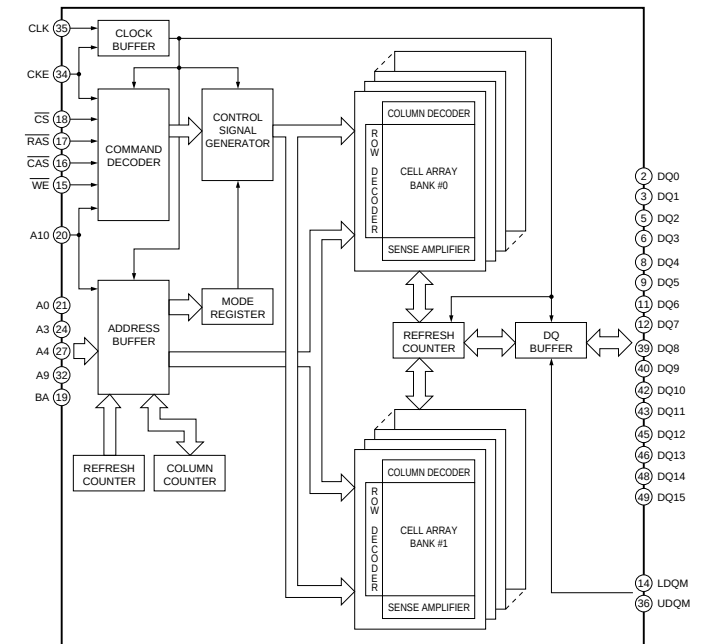


No.	Port	Name	I/O	Function
1	Vss	VSS		GND
2	DATA	DATA	I	Serial data input
3	CLOCK	CLOCK	I	Data shift clock input
4	LCK	LCK	O	Data latch clock
5	Q0	VIA	O	VIDEO Selector A
6	Q1	VIB	O	VIDEO Selector B
7	Q2	VIC	O	VIDEO Selector C
8	Q3	YCSEP	O	Y/C Separation
9	Q4	N.C.	O	
10	Q5	N.C.	O	
11	Q6	/VR1	O	VIDEO Rec Out Selector 1
12	Q7	/VR2	O	VIDEO Rec Out Selector 2
13	Q8	CMP0	O	Compornent Selector 0
14	Q9	CMP1	O	Compornent Selector 1
15	Q10	N.C.	O	
16	Q11	I/E	O	Internal/External Synchronization
17	/OE	/OE	I	Output Enable
18	VDD	VDD		Power supply



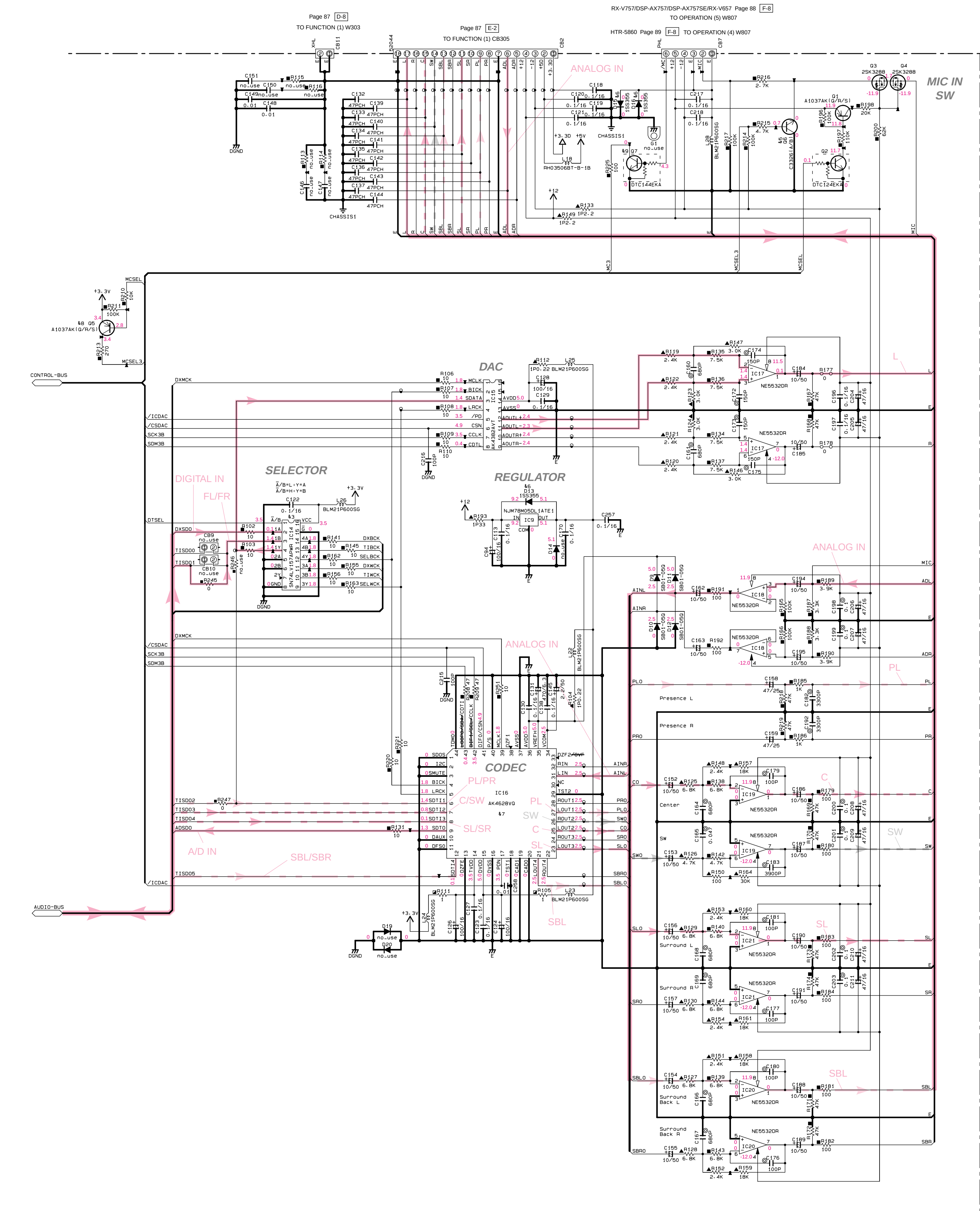


CAPACITOR		
REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	H
⊙	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	
⊙	CERAMIC TUBULAR CAPACITOR	
⊙	POLYESTER FILM CAPACITOR	
①	POLYSTYRENE FILM CAPACITOR	
①	MICA CAPACITOR	
⊙	POLYPROPYLENE FILM CAPACITOR	
⊙	SEMICONDUCTIVE CERAMIC CAPACITOR	
⊙	POLYPHENYLENE SULFIDE FILM CAPACITOR	
RESISTOR		
REMARKS	PARTS NAME	
NO MARK	CARBON FILM RESISTOR (P=5)	H
⊙	CARBON FILM RESISTOR (P=10)	
⊙	METAL OXIDE FILM RESISTOR	
⊙	METAL FILM RESISTOR	
⊙	METAL PLATE RESISTOR	
⊙	FIRE PROOF CARBON FILM RESISTOR	
⊙	CEMENT MOLDED RESISTOR	
⊙	SEMI VARIABLE RESISTOR	
⊙	CHIP RESISTOR	

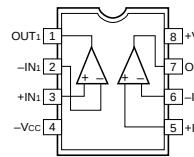


- * All voltages are measured with a 10MΩ/V DC electronic volt meter.
 - * Components having special characteristics are marked Δ , and must be replaced with parts having specifications equal to those originally installed.
 - * Schematic diagram is subject to change without notice.
- 電圧は、内部抵抗10MΩの電圧計で測定したものです。
- Δ 印のある部品は、安全性確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
- 本回路図は、標準回路図です。改良のため予告なく変更することがございます。

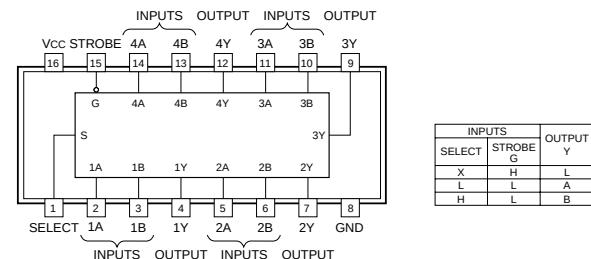
■ SCHEMATIC DIAGRAM (DSP 2/2)



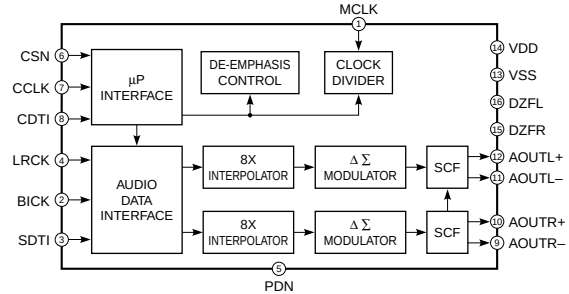
IC17-21 : NE5532DR
Dual OP-Amp



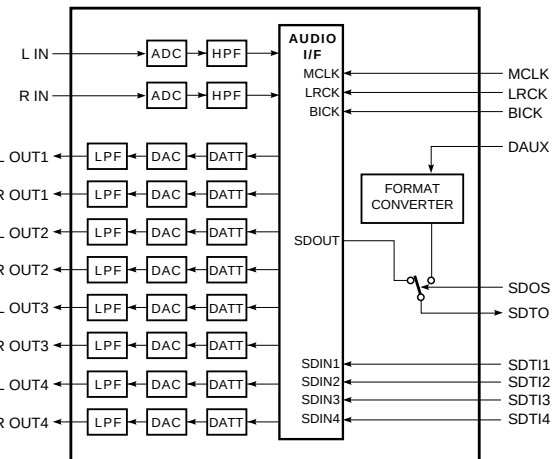
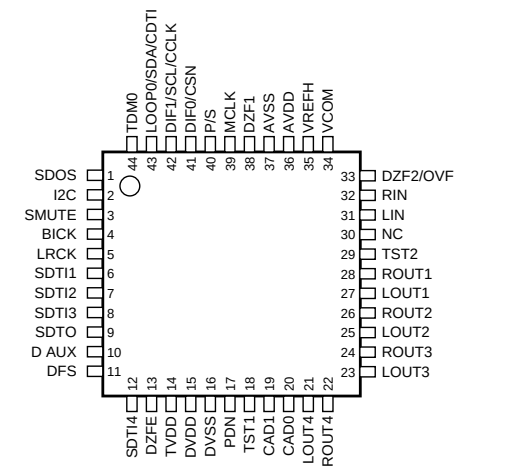
IC14 : SN74LV157APWR
2 to 1 Data Selectors



IC15 : AK4382AVT
D/A Converter



IC16 : AK4628VQ
192kHz 24bit 8ch CODEC



Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
K1	U1	GP1FA553T2 10TX179 10TX177
K2	U2-4	GP1FA553R2 10RX179 10RX177
K3	IC7-14	SN74LV157APWR 74VHC157MTCX
K4	IC6	W981606CH-7 1542816100A1-7TL W1216161-77G
K5	06	25C33261A/B) 25C33261B) 25C9938A1A/B) 25D0704K1K1
K6	D3-B; 13; 15; 16	15S395 MA111
K7	IC16	AK4628VQ AK4628AVQ
K8	05	25A1037AK10/R/S) 25A1238A1E/F)
K9	07	DTCL46KA KRC104S-RTX

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
⊙	CERAMIC TUBULAR CAPACITOR
⊖	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
①	MICA CAPACITOR
⊕	POLYPROPYLENE FILM CAPACITOR
⊙	SEMICONDUCTIVE CERAMIC CAPACITOR
⊖	POLYPHENYLENE SULFIDE FILM CAPACITOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
⊗	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
⊖	METAL FILM RESISTOR
⊕	METAL PLATE RESISTOR
⊗	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊖	SEMI VARIABLE RESISTOR
⊕	CHIP RESISTOR

NOTICE (model)

- (J)..... JAPAN
- (U)..... U.S.A
- (C)..... CANADA
- (R)..... GENERAL
- (T)..... CHINA
- (K)..... KOREA
- (A)..... AUSTRALIA
- (B)..... BRITISH
- (G)..... EUROPE
- (L)..... SINGAPORE
- (E)..... SOUTH EUROPE
- (V)..... TAIWAN

* All voltages are measured with a 10MΩ/V DC electronic volt meter.
* Components having special characteristics are marked △, and must be replaced with parts having specifications equal to those originally installed.
* Schematic diagram is subject to change without notice.

* 電圧は、内部抵抗10MΩの電圧計で測定したものです。
* △印のある部品は、安全性確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
* 本回路図は、標準回路図です。改良のため予告なく変更することがございます。

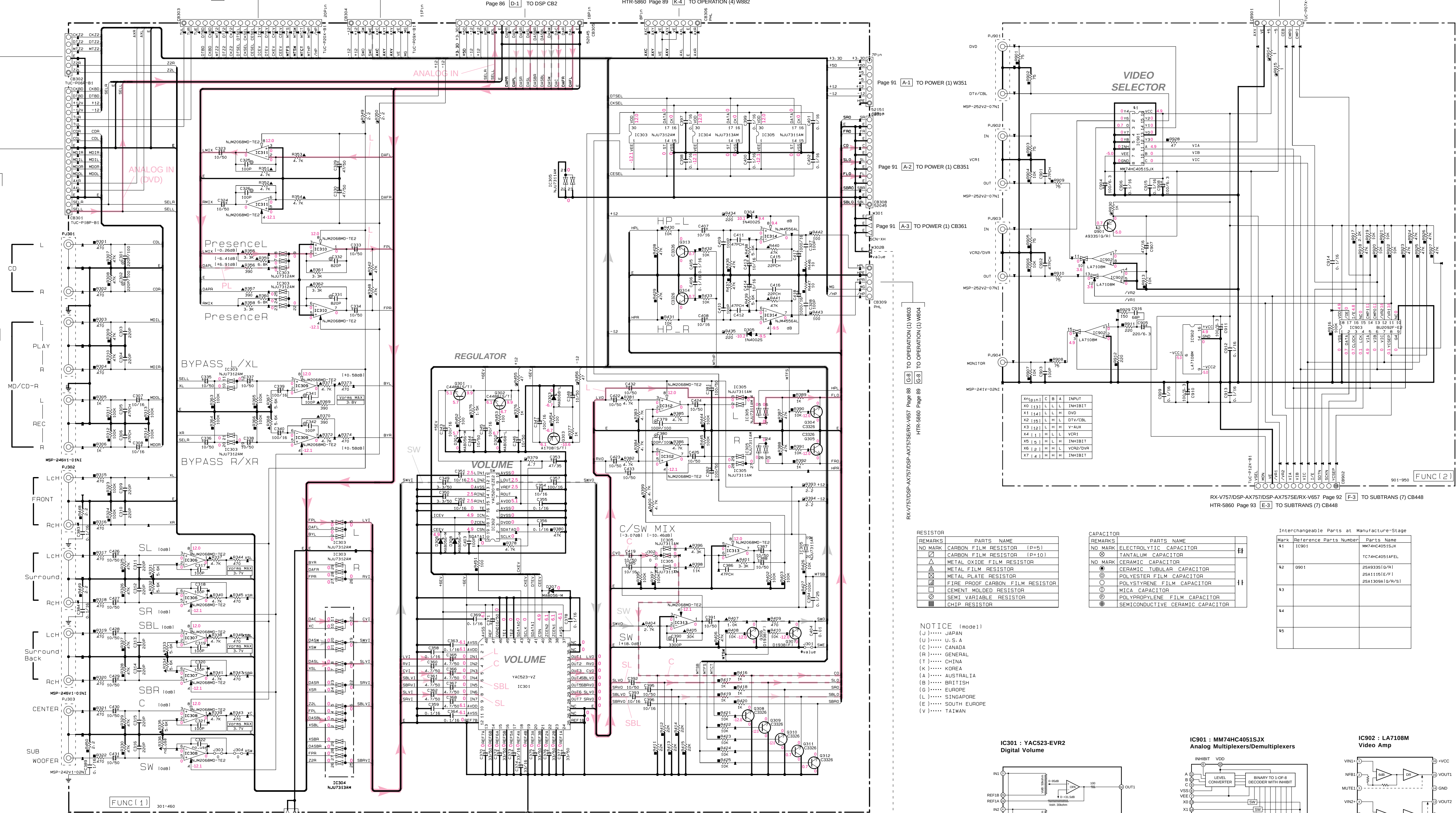
■ SCHEMATIC DIAGRAM (FUNCTION)

RX-V757/DSP-AX757/DSP-AX757SE/RX-V657 Page 92 [J-3] TO SUBTRANS (2) CB460
HTR-5860 Page 93 [K-3] TO SUBTRANS (2) CB460

RX-V757/DSP-AX757/DSP-AX757SE/RX-V657 Page 92 [K-3] TO SUBTRANS (2) CB459
HTR-5860 Page 93 [L-3] TO SUBTRANS (2) CB459

RX-V757/DSP-AX757/DSP-AX757SE/RX-V657 Page 88 [K-4] TO OPERATION (5) W882
HTR-5860 Page 89 [K-4] TO OPERATION (4) W882

RX-V757/DSP-AX757/DSP-AX757SE/RX-V657 Page 92 [L-3] TO SUBTRANS (2) CB461
HTR-5860 Page 93 [L-3] TO SUBTRANS (2) CB461



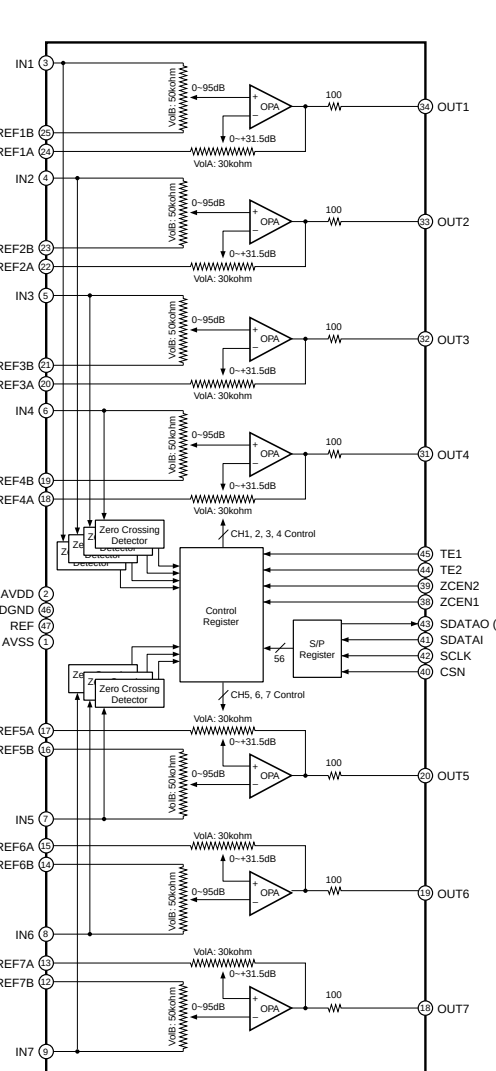
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
□	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
■	METAL PLATE RESISTOR
▨	FIRE PROOF CARBON FILM RESISTOR
▩	CEMENT MOLDED RESISTOR
⊗	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
□	TANTALUM CAPACITOR
△	CERAMIC CAPACITOR
▲	CERAMIC TUBULAR CAPACITOR
■	METAL FILM CAPACITOR
▨	POLYSTYRENE FILM CAPACITOR
▩	MICA CAPACITOR
⊗	POLYPROPYLENE FILM CAPACITOR
■	SEMICONDUCTIVE CERAMIC CAPACITOR

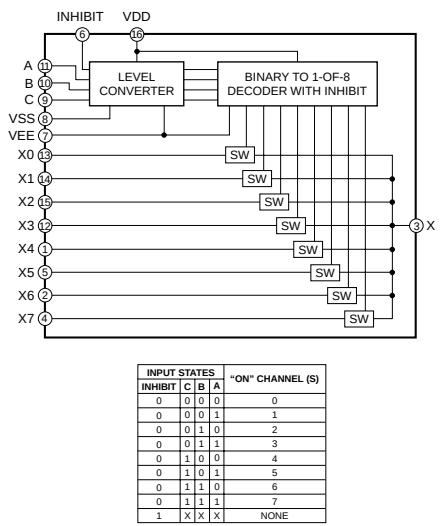
Mark	Reference Parts Number	Parts Name
K1	IC801	MM74HC4051SJK
K2	Q901	2SA933S(D/R)
K3		2SA1115(E/F)
K4		2SA1309A(D/R/S)
K5		

NOTICE (model)
(J)..... JAPAN
(U)..... U.S.A.
(C)..... CANADA
(R)..... GENERAL
(T)..... CHINA
(K)..... KOREA
(A)..... AUSTRALIA
(B)..... BRITISH
(G)..... EUROPE
(L)..... SINGAPORE
(E)..... SOUTH EUROPE
(V)..... TAIWAN

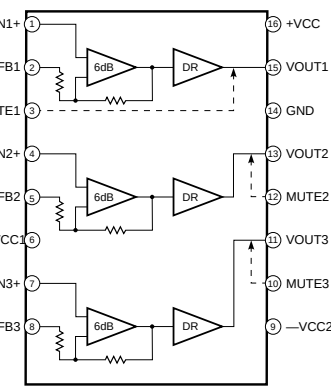
IC301 : YAC523-EVR2
Digital Volume



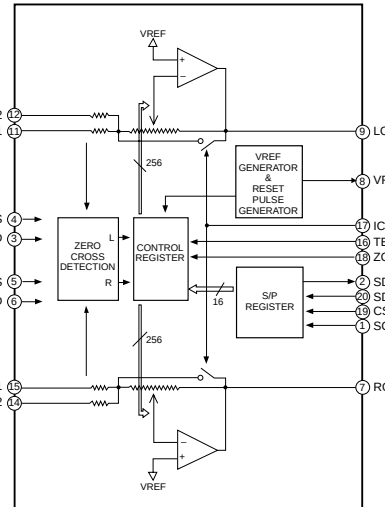
IC901 : MM74HC4051SJK
Analog Multiplexers/Demultiplexers



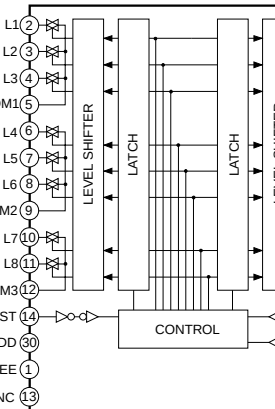
IC902 : LA7108M
Video Amp



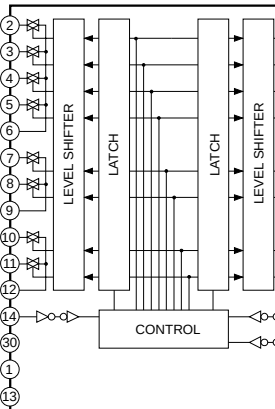
IC302 : YAC520-EE2
High Grade Stereophonic Digital
Volume



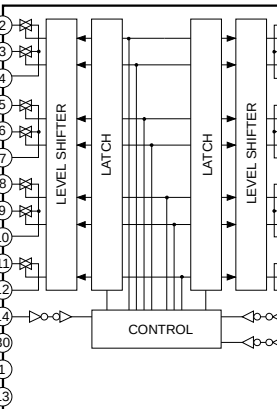
IC303 : NJU7312AM
Analog Function Switch



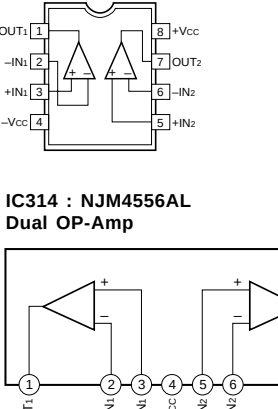
IC304 : NJU7313AM
Analog Function Switch



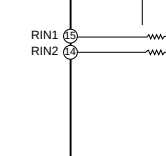
IC305 : NJU7311AM
Analog Function Switch



IC306-313 : NJM2068MD-TE2
Dual OP-Amp



IC314 : NJM4556AL
Dual OP-Amp

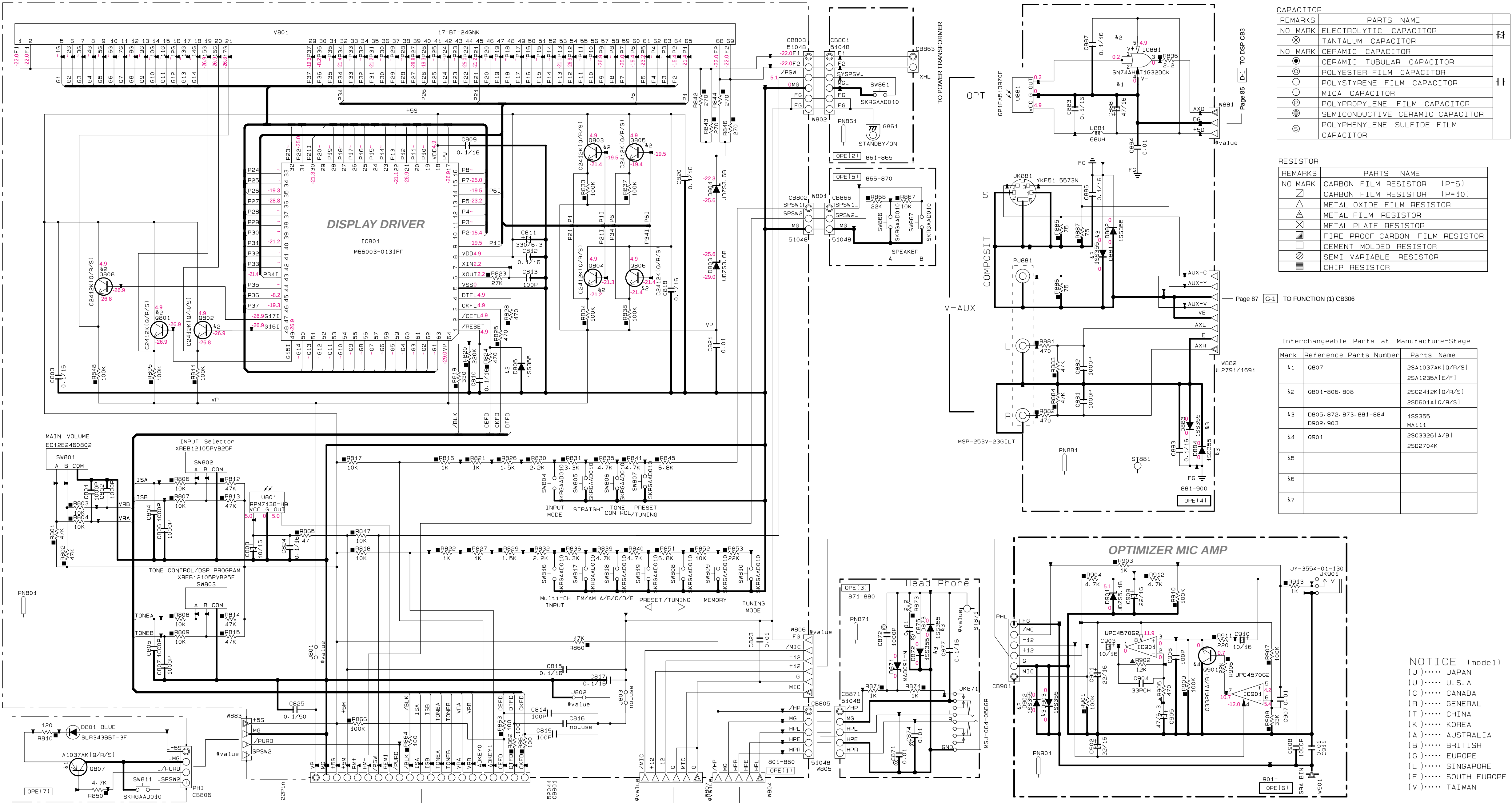


• All voltages are measured with a 10MΩ/V DC electronic volt meter.
• Components having special characteristics are marked △, and must be replaced with parts having specifications equal to those originally installed.
• Schematic diagram is subject to change without notice.

• 電圧は、内部抵抗10MΩの電圧計で測定したものです。
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■ SCHEMATIC DIAGRAM (OPERATION)

HTR-5860



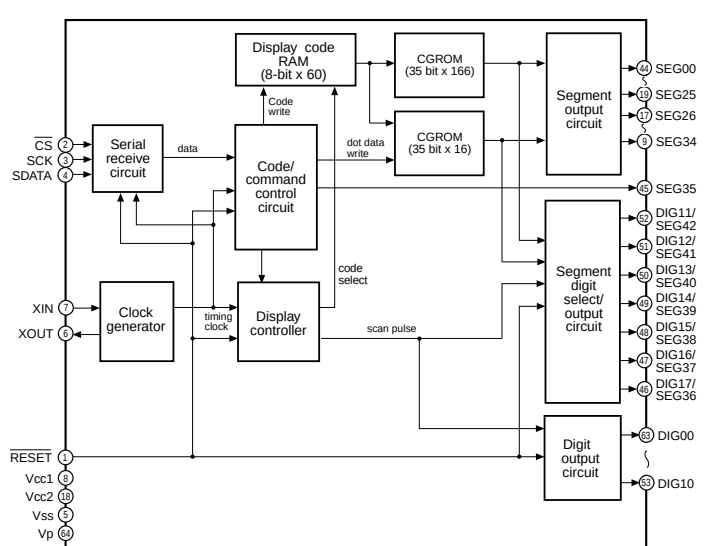
REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	⊘
⊗	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	○
●	CERAMIC TUBULAR CAPACITOR	
⊙	POLYESTER FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
⊖	MICA CAPACITOR	
⊕	POLYPROPYLENE FILM CAPACITOR	
⊗	SEMICONDUCTIVE CERAMIC CAPACITOR	
⊙	POLYPHENYLENE SULFIDE FILM CAPACITOR	

REMARKS	PARTS NAME	
NO MARK	CARBON FILM RESISTOR (P=5)	□
□	CARBON FILM RESISTOR (P=10)	
△	METAL OXIDE FILM RESISTOR	
⊠	METAL FILM RESISTOR	
⊞	METAL PLATE RESISTOR	
⊞	FIRE PROOF CARBON FILM RESISTOR	
⊞	CEMENT MOLDED RESISTOR	
⊞	SEMI VARIABLE RESISTOR	
⊞	CHIP RESISTOR	

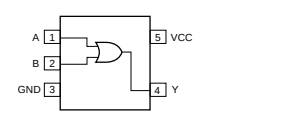
Mark	Reference Parts Number	Parts Name
⋈1	0807	2SA1037AK(Q/R/S) 2SA1235A(E/F)
⋈2	0801-806, 808	2SC2412K(Q/R/S) 2SD061A(Q/R/S)
⋈3	D805, 872, 873, 881-884 D902, 903	1SS355 MA111
⋈4	0901	2SC3326(A/B) 2SD2704K
⋈5		
⋈6		
⋈7		

NOTICE (model)
(J)..... JAPAN
(U)..... U.S.A
(C)..... CANADA
(R)..... GENERAL
(T)..... CHINA
(K)..... KOREA
(A)..... AUSTRALIA
(B)..... BRITISH
(G)..... EUROPE
(L)..... SINGAPORE
(E)..... SOUTH EUROPE
(V)..... TAIWAN

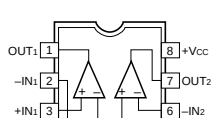
IC801 : M66003-0131FP
FL Display Driver



IC881 : SN74AHCT1G32DCKR
Single 2 Input OR

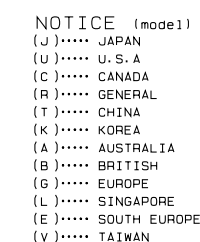


IC901 : μPC4570G2
Dual OP-Amp

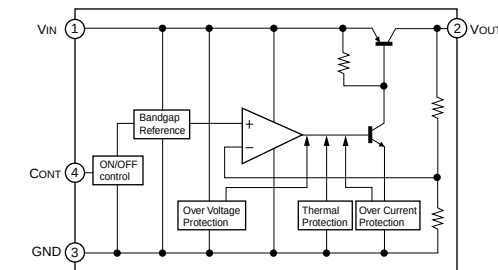
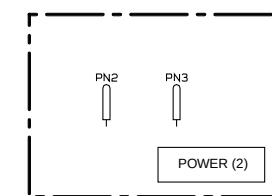


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* Schematic diagram is subject to change without notice.

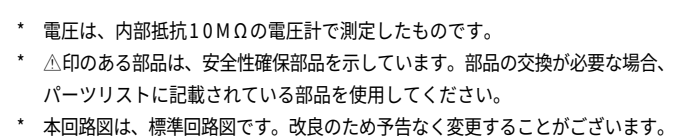
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RX-V757/DSP-AX757/DSP-AX757SE/RX-V657

SXX	LOC	Destination Part List (SW Control)	X	C	A
863	K451	V43920 MSJ-059-124PC	X	X	
864		V455030 DTC144EXA	X		
865	4462	V497260 A1700815/11	X	X	
866	4454	V455030 DTC144EXA	X	X	
867	L452	V424890 BLNCHPNC030	X		
868	C500	8H3747 Q1716	X	X	
869	C501	451250 Q1716	X		
870	R075 R076	WB78420 B11	X	X	
871	R072	R035610 1K	X	X	
872	R074	R030710 10K	X	X	
873	D451	V109380 M40505-0	X	X	

X: NOT USED

NOTICE (mode))
(J)..... JAPAN
(U)..... U. S. A
(C)..... CANADA
(R)..... GENERAL
(Y)..... CHINA
(K)..... KOREA
(A)..... AUSTRALIA
(B)..... BRITISH
(G)..... EUROPE
(L)..... SINGAPORE
(F)..... SOUTH FLORIDA

Pin diagram of the AD633 precision centred gain multiplier. The chip has 8 pins. Pin 1 is OUT1, Pin 2 is -IN1, Pin 3 is +IN1, Pin 4 is -Vcc, Pin 5 is +IN2, Pin 6 is -IN2, Pin 7 is OUT2, and Pin 8 is +Vcc. The internal circuit shows two op-amp-like blocks with feedback loops.

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RESISTOR	
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=1)
⊗	CARBON FILM RESISTOR (P=10)
⊗	METAL GLAZE FILM RESISTOR
⊗	METAL FILM RESISTOR
⊗	METAL PLATE RESISTOR
⊗	FILM PROOF CARBON FILM RESISTOR
⊗	CEMENT MOLDED RESISTOR
⊗	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR	
REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
⊗	CERAMIC TUBULAR CAPACITOR
⊗	POLYESTER FILM CAPACITOR
⊗	POLYBUTYLENE FILM CAPACITOR
⊗	MICA CAPACITOR
⊗	POLYPROPYLENE FILM CAPACITOR
⊗	SEMICONDUCTIVE CERAMIC CAPACITOR

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NOTICE (model)
(J)..... JAPAN
(U)..... U. S. A
(C)..... CANADA
(R)..... GENERAL
(T)..... CHINA
(K)..... KOREA
(A)..... AUSTRALIA
(B)..... BRITISH
(G)..... EUROPE
(L)..... SINGAPORE
(E)..... SOUTH EUROPE
(V)..... TAIWAN
```

#	J	U	C	R.T.L	K	A.B (BX/BS), O.E	B (DGP/AT7502)	
51	O	X	X	X	X	X	X	D4
52	X	X	X	X	O	X	O	
53	4701-702	0P50000	0P50000	0P50000	0P50000	X	X	Zail Decipher
54	XL703	X	X	X	4-43361MHz M75000	4-43361MHz M75000	4-43361MHz M75000	
55	C820-821	X	X	X	18PCH US65112	18PCH US65112	18PCH US65112	
56	8749	X	X	X	1 HV75310	1 HV75310	1 HV75310	
57	C747	X	X	X	4716 US83747	4716 US83747	4716 US83747	Pseudo
58	C833-833	X	X	X	X	230P US65222	230P US65222	
59	8646-847	0P35447	0P35447	0P35447	0P35447	2-2K P85622	2-2K P85622	
60	0831-834	X	CLIMB-831 US67310	CLIMB-831 VZ72500	X	2-2K VZ72500	2-2K VZ72500	
61	C862-863	X	10/16 US67310	10/16 US67310	X	X	10/16 US67310	Zail-2
62	872-873	X	0P35515	0P35515	X	X	0P35515	
63	880-881	X	15K P83710	15K P83710	X	X	0P35515	
64	880-881	X	2-2K P85622	2-2K P85622	X	X	2-2K P85622	
65	880-881	X	2-2K P85622	2-2K P85622	X	X	2-2K P85622	7/under-DGP/AT7502, on-1/2

X: NOT

#	S	U	J	U	C	R	L	X	A	B	SP	W	G	ST	B	(DSP-AN-7528)	
518	RB44	B45	X	150	RO30910	X	X	X	150	RO30910	X	X	X	470	RO30910		
519	CS14	C35	X	470	RO30910	X	X	X	470	RO30910	X	X	X	200P	FM5632		
521	FB34	X	X	MSP-2423-3	YB2520	X	X	X	MSP-2423-3	YB2520	X	X	X	200P	FM5632		
526	RB76	873	X	RD350	1	X	X	X	RD350	1	X	X	X	RD350			
529	1082	X	X	RD350	1	X	X	X	RD350	1	X	X	X	RD350			
530	CR72	873	X	RD350	1	X	X	X	RD350	1	X	X	X	RD350			
531	0831	X	X	RD350	1	X	X	X	RD350	1	X	X	X	RD350			
534	RB33	834	X	X	X	X	X	X	X	X	X	X	X	X			
535	7696	X	X	X	X	X	X	X	X	X	X	X	X	X			
536	C87	X	X	X	X	X	X	X	X	X	X	X	X	X			
537	XB1	X	X	X	X	X	X	X	X	X	X	X	X	X			
538	RB44	B45	X	150	RO30910	X	X	X	150	RO30910	X	X	X	470	RO30910		
539	CS14	C35	X	470	RO30910	X	X	X	470	RO30910	X	X	X	200P	FM5632		
541	FB34	X	X	MSP-2423-3	YB2520	X	X	X	MSP-2423-3	YB2520	X	X	X	200P	FM5632		
546	RB76	873	X	RD350	1	X	X	X	RD350	1	X	X	X	RD350			
549	1082	X	X	RD350	1	X	X	X	RD350	1	X	X	X	RD350			
550	CR72	873	X	RD350	1	X	X	X	RD350	1	X	X	X	RD350			
551	0831	X	X	RD350	1	X	X	X	RD350	1	X	X	X	RD350			
554	RB33	834	X	X	X	X	X	X	X	X	X	X	X	X			
555	7696	X	X	X	X	X	X	X	X	X	X	X	X	X			
556	C87	X	X	X	X	X	X	X	X	X	X	X	X	X			
557	XB1	X	X	X	X	X	X	X	X	X	X	X	X	X			
558	RB44	B45	X	150	RO30910	X	X	X	150	RO30910	X	X	X	470	RO30910		
559	CS14	C35	X	470	RO30910	X	X	X	470	RO30910	X	X	X	200P	FM5632		
561	FB34	X	X	MSP-2423-3	YB2520	X	X	X	MSP-2423-3	YB2520	X	X	X	200P	FM5632		
566	RB76	873	X	RD350	1	X	X	X	RD350	1	X	X	X	RD350			
569	1082	X	X	RD350	1	X	X	X	RD350	1	X	X	X	RD350			
570	CR72	873	X	RD350	1	X	X	X	RD350	1	X	X	X	RD350			
571	0831	X	X	RD350	1	X	X	X	RD350	1	X	X	X	RD350			
574	RB33	834	X	X	X	X	X	X	X	X	X	X	X	X			
575	7696	X	X	X	X	X	X	X	X	X	X	X	X	X			
576	C87	X	X	X	X	X	X	X	X	X	X	X	X	X			
577	XB1	X	X	X	X	X	X	X	X	X	X	X	X	X			
578	RB44	B45	X	150	RO30910	X	X	X	150	RO30910	X	X	X	470	RO30910		
579	CS14	C35	X	470	RO30910	X	X	X	470	RO30910	X	X	X	200P	FM5632		

[illegible][illegible]

Pin diagram of the 74VHC04 hex inverters. The package has 14 pins. Pin 1 is OUT1, Pin 2 is -IN1, Pin 3 is +IN1, Pin 4 is -Vcc, Pin 5 is +IN2, Pin 6 is -IN2, Pin 7 is OUT2, Pin 8 is +Vcc.

Point ⑥ (Pin 3 of IC711)

Tek 7P11

2.00 V

5.450 ms

A Ch1

Point ⑦ (Pin 12 of IC711)

Tek P011

50

0

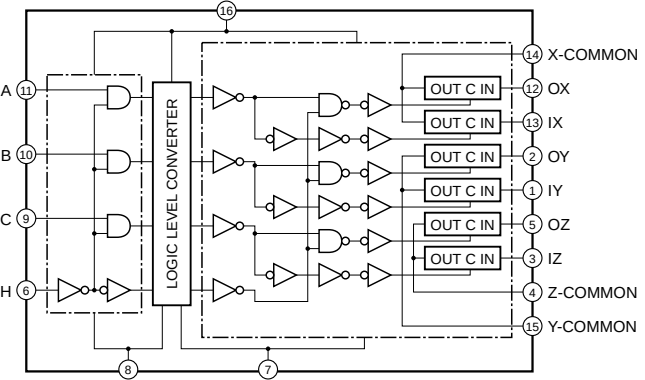
2.00 V

46.0ms

A. Ch1

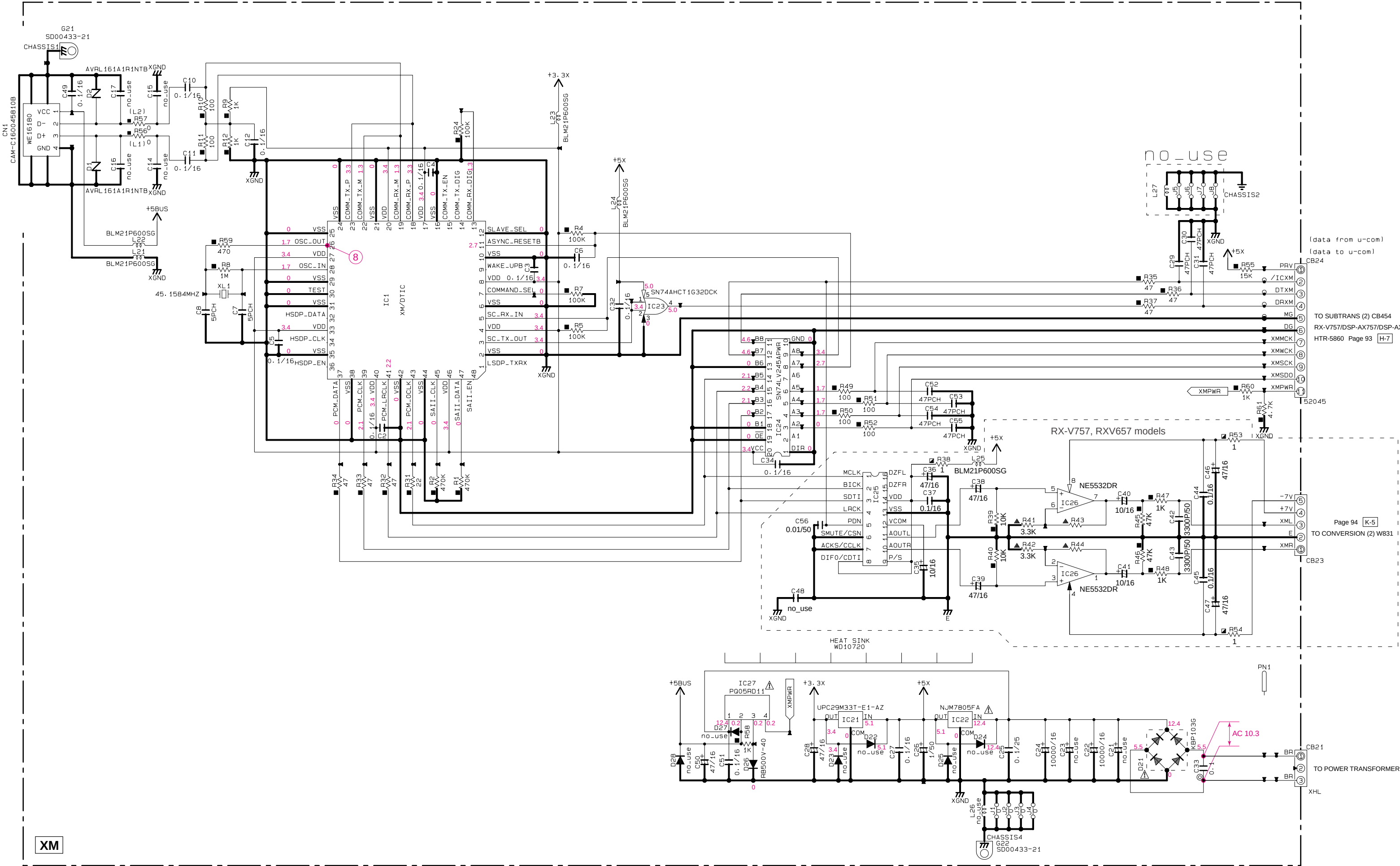
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CONTROL INPUTS				CMF CHANNEL	
INHBIT (Pin 6)	C (Pin 9)	B (Pin 10)	A (Pin 11)	0X (Pin 12, 0Y (Pin 2), 0Z (Pin 5)	1X (Pin 13, 1Y (Pin 1), 1Z (Pin 3)
L	L	L	L	0X, 0Y, 0Z	
L	L	L	H	1X, 0Y, 0Z	
L	L	H	L	0X, 1Y, 0Z	
L	L	H	H	1X, 1Y, 0Z	
L	H	L	L	0X, 0Y, 1Z	
L	H	L	H	1X, 0Y, 1Z	
L	H	H	L	0X, 1Y, 1Z	
L	H	H	H	1X, 1Y, 1Z	
H	*	*	*	NOTE	
* Don't Care					

SCHEMATIC DIAGRAM (XM)



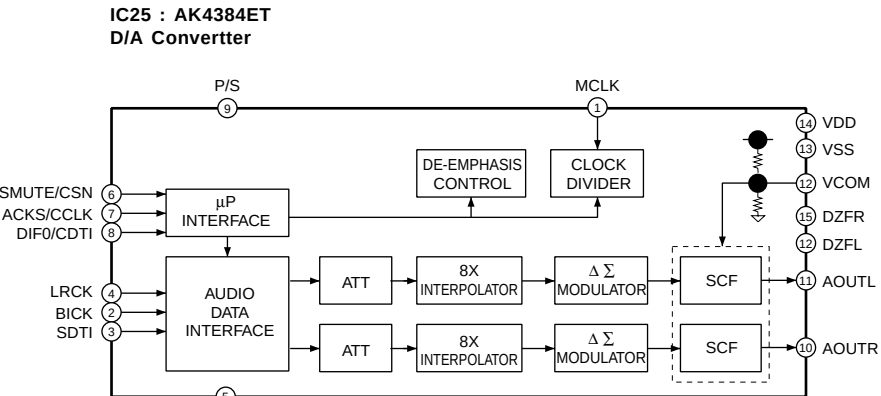
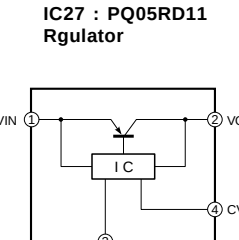
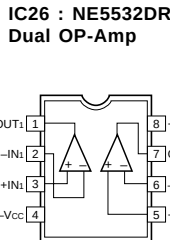
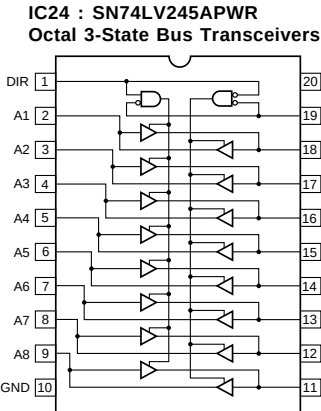
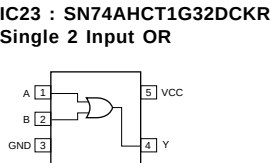
REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	H
⊗	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	H
●	CERAMIC TUBULAR CAPACITOR	
⊙	POLYESTER FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
①	MICA CAPACITOR	
Ⓟ	POLYPROPYLENE FILM CAPACITOR	
⊗	SEMICONDUCTIVE CERAMIC CAPACITOR	
Ⓢ	POLYPHENYLENE SULFIDE FILM CAPACITOR	

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
⊠	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
Ⓢ	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊗	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

NOTICE (model)

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XM



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Point ⑧ (Pin 26 of IC1)

