

TA-VE800G

SERVICE MANUAL

AEP Model
UK Model



This amplifier incorporates the Dolby Pro Logic Surround system. Manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby," the double-D symbol  and "Pro Logic" are trademarks of Dolby Laboratories Licensing Corporation.

SPECIFICATIONS

Amplifier section

POWER OUTPUT

Stereo mode 4 ohms DIN 1 kHz
100 W + 100 W

Surround mode 4 ohms at 1 kHz,
THD 0.8 %

Terminals	Output
Front	100 W/ch
Centre	100 W
Rear	40 W/ch

Frequency response

PHONO: RIAA equalization curve
 ± 0.5 dB
CD, TAPE, DAT/MD, SATL, LD, VIDEO 1, 2:
10 Hz-50 kHz ± 0.5 dB
(Direct Pass)

Inputs

	Sensitivity	Impedance	S/N (weighting network, input level)
PHONO (MM)	2.5 mV	50 kilohms (A, 2.5 mV)	75 dB**
CD	200 mV		
TUNER, TAPE, DAT/MD, VIDEO 1, 2, 3, SATL, LD	150 mV	50 kilohms (A, 250 mV)	82 dB**

** '78 IHF



INTEGRATED AV AMPLIFIER
SONY®

Outputs	REC OUT VIDEO 1, 2 (AUDIO) OUT: Voltage: 250 mV, Impedance: 10 kilohms WOOFER OUT Voltage: 2 V Impedance: 1 kilohms PHONES: Accepts low and high impedance headphones
BASS BOOST	+10 dB at 70 Hz
TONE	±8 dB at 100 Hz and 10 kHz
Video section	
Inputs	VIDEO 1, 2, 3, LD, SATL: 1 Vp-p 75 ohms
Outputs	VIDEO 1, 2, MONITOR: 1 Vp-p 75 ohms
General System	Tuner section: PLL quartz-locked digital synthesizer system Preamplifier section: Low-noise NF type equalizer Power amplifier section: Pure-complimentary SEPP
Power requirements	220-230 V AC, 50/60 Hz
Power consumption	275 W
AC outlets	Switched, 120 W
Dimensions	430 x 160 x 365 mm (17 x 6 ³ / ₈ x 14 ³ / ₈ inches)
Mass (Approx.)	11.0 kg (24 lb 4 oz)
Supplied accessories	Remote commander (remote) (1) Size AA (R6) batteries (2) IR repeater (1) Video cable (1) Getting Started and Basic Operation Guide (1)

Design and specifications are subject to
change without notice.

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Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK $\triangle$ OR DOTTED LINE
WITH MARK $\triangle$ ON THE SCHEMATIC DIAGRAMS AND IN
THE PARTS LIST ARE CRITICAL TO SAFE OPERATION.
REPLACE THESE COMPONENTS WITH SONY PARTS
WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS
MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1

SERVICE NOTE

ALL CLEAR

Mode which erases all the user memories registered in this unit and sets to setting at shipment.

Method:

1. With the power turned OFF, press the POWER button while pressing the TAPE MONITOR button and VIDEO 2 button simultaneously to turn ON the power.
2. ALL CLEAR ! will be displayed on the fluorescent indicator tube, and ALL CLEAR will be executed.

FACTORY SET

Mode which sets the memory of the unit to the setting of adjustment and check at factory. (Not used for servicing.)

Method:

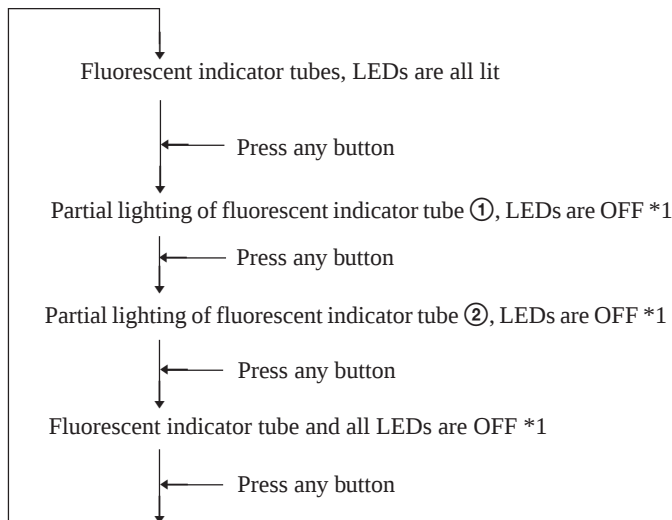
1. With the power turned OFF, press the POWER button while pressing the SPEAKER button and TAPE button simultaneously to turn ON the power.
2. FACTORY SET will be displayed on the fluorescent indicator tube, and FACTORY SET will be executed.

Note: In case you return the unit to the customer, do not perform FACTORY SET. If you do it, perform ALL CLEAR.

Fluorescent indicator tube, LED all lit mode and key check mode

Method:

1. With the power turned OFF, press the POWER button while pressing the TAPE MONITOR button, VIDEO 1 button, and VIDEO 2 button simultaneously to turn ON the power.
2. The fluorescent display tubes and LEDs will all light up.
3. The display will change as follows each time buttons other than GENRE and MODE are pressed. Therefore, it can be checked if buttons have been input properly by whether the display changes.



*1 Those other than the POWER LED go OFF.

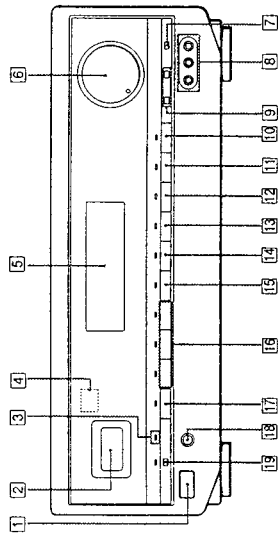
4. To exit the mode, press the POWER button to turn OFF the power.

Adjustment of OSD Screen Position

The position of the screen can be adjusted freely to correct the deviation of the OSD screen caused by the monitor type that users are using.

1. Move the cursor of the remote commander attached, and display the OSD screen.
2. Click the MAIN MENU FUNCTION of the OSD screen.
3. Next click TV SET.
4. Next click GRAPHIC POSITION SET.
5. The screen for adjusting the OSD screen position will be displayed. Adjust the position with the remote commander attached.
6. Click EXIT to end.

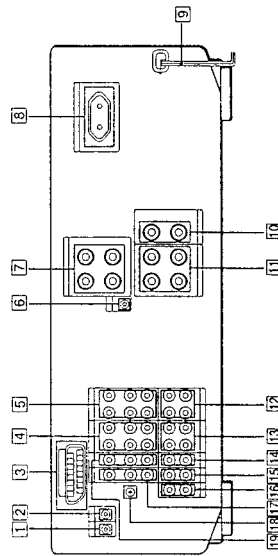
Front Panel Descriptions



- 1 POWER switch
- 2 Infrared (IR) emitter
Emits IR codes to command programme sources.
- 3 Infrared (IR) codes selling indicator
Lights up when the unit receives IR codes.
- 4 IR sensor
When recording IR codes from the remote controls of other components, point the remote's emitter at this area during operation.
- 5 Display
Shows the programme source, function, and tuning frequency, etc.
- 6 MASTER VOLUME control
Adjusts the overall sound volume.
- 7 SOUND FIELD button
Turns the sound field on and off.
- 8 VIDEO 3 INPUT jacks
For connecting camcorders or video game units, etc.
- 9 PRESET TUNING +/-
Selects preset stations.
- 10 PHONO button
Selects the record player connected to the PHONO jacks.
- 11 TUNER button
Selects the tuner.
- 12 CD button
Selects the compact disc player connected to the CD jacks.
- 13 DAT/MD button
Selects the DAT or MiniDisc deck connected to the DAT/MD jacks.
- 14 SATL button
Selects the satellite decoder connected to the SATL jacks.
- 15 LD (Laser Disc) button
Selects the laser disc player connected to the LD jacks.
- 16 VIDEO 1-3 buttons
Selects the video components connected to the VIDEO 1-3 jacks.
- 17 TAPE MONITOR button
For monitoring audio programme sources during recording.
- 18 PHONES jack
For connecting stereo headphones.
- 19 SPEAKERS selector
For turning the speakers OFF or ON.

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Rear Panel Descriptions



- 1 IR OUT
- 2 CTRL-A1
- 3 MONITOR
- 4 VIDEO 2
- 5 VIDEO 1
- 6 MIX AUDIO OUT
- 7 FRONT SPEAKERS
- 8 SWITCHED AC OUTLET
Mains lead
- 9 CENTER SPEAKER
- 10 REAR SPEAKERS
- 11 TAPE
- 12 DAT/MD
- 13 CD
- 14 TUNER
- 15 PHONO
- 16 SATL
- 17 # SIGNAL GND terminal
- 18 LD

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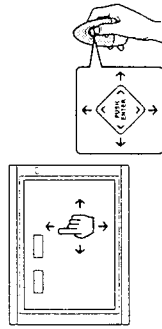
SECTION 2 GENERAL

This section is extracted from instruction manual.

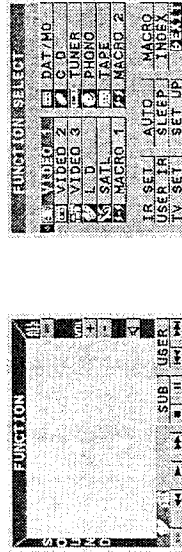
Introduction

Features

On-screen control of Audio/Video components
The TA-VESUNG Integrated AV Amplifier is an audio/video control centre with a unique interface. By connecting the amplifier to your TV, an on-screen display appears and lets you operate the various connected audio/video components. Use the remote to move the pointer (hand shaped icon) on the on-screen display and select functions.

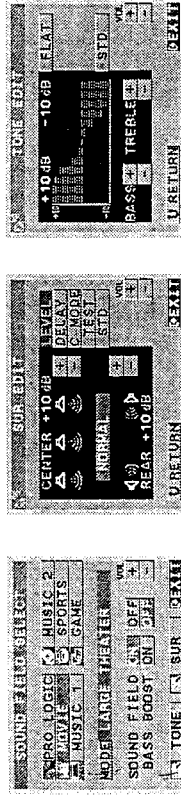


This unit's on-screen display lets you control audio/video components as well as any other device that can be controlled by an infrared remote control, such as lighting fixtures.
For details on how the amplifier controls other equipment, see page 6.

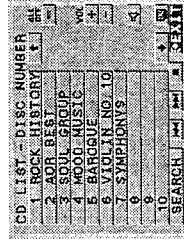


Introduction

A wide variety of sound fields including Dolby Pro Logic surround
Since the amplifier comes preset with 12 different sound fields (like HALL, THEATER, ARENA, etc.), you can enjoy exciting sound effects simply by choosing one from the SOUND FIELD SELECT screen.
The amplifier also incorporates a Dolby Pro Logic decoder, so you can enjoy programmes recorded in Dolby Surround with a surround effect similar to a movie theatre.

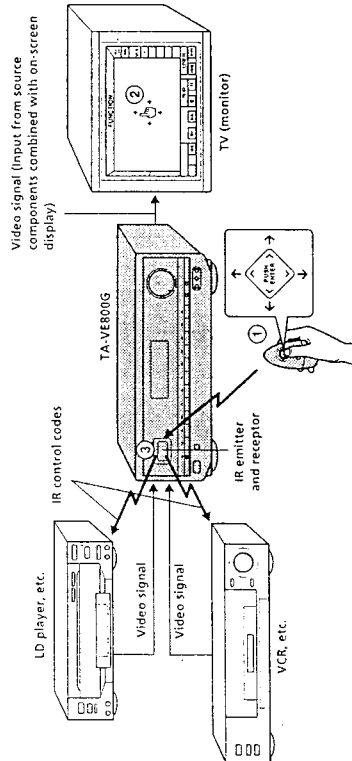


CD Changer Control
Connecting a Sony CD-changer equipped with a Control A1 terminal allows you to access and display the disc information stored in the CD-changer in alphabetical order, numerical order, or by group name. You can also select the disc to be played from the on-screen display using the amplifier's remote.



Understanding How the Amplifier Works

The remote control supplied with the TA-VE800G uses infrared (IR) rays to command the amplifier and control the on-screen display. Since this amplifier uses menu operations, you must connect a TV.



On-screen operation

- 1 The remote commander emits an infrared (IR) signal when you press direction control button (① above).
- 2 This controls the movement of the pointer (hand icon) in the on-screen display (② above).
- 3 When you move the pointer to an on-screen icon, and press the centre of the direction control button, the infrared (IR) emitter transmits the corresponding IR control code to the respective programme source (③ above).

If the screen does not appear or the pointer does not move when you press the direction control button

The IR code from the remote is not fully reaching the infrared receptor on the amplifier (② above). Make sure there are no obstacles between the remote and the amplifier.

If the programme source fails to respond or is slow to respond

The IR control code from the IR repeater is not fully reaching the infrared receptor on the programme source. Connect the extra IR repeater (supplied) and position it facing the programme source (see "IR Repeater Lookups" on page 8).

If some of the programmed on-screen controls are unresponsive or slow, rerecord the IR codes for those buttons (see "Registering non-Sony Audio/Video equipment" on page 16).

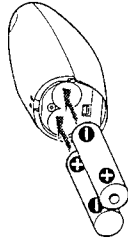
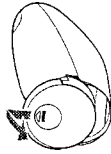
The TV is used as a monitor

To watch TV programmes, use the TV tuner built into your VCR. The VCR controls in the on-screen display let you switch the programme positions using the amplifier's remote.

You can use the TV's tuner when the amplifier is turned off, but operations must be performed using the remote supplied with the TV.

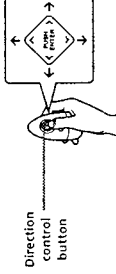
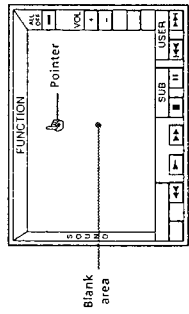
Inserting Batteries Into the Remote

- 1 Open the cover on the bottom of the remote.
- 2 Insert two size-AA (R6) batteries with correct polarity (+/-).
- 3 Close the cover.



How to Use the Remote

The supplied remote lets you perform almost all of the amplifier operations. Operation is simple; press the direction control button on the remote once to recall the on-screen display, then press the corner of the direction control pad representing the direction you want to move the pointer (hand shaped icon) on the on-screen display. Position the pointer so that the finger tip is positioned on one of the on-screen items, then press and quickly release the centre of the direction control button to "click" the item.



To turn on the amplifier
Press the direction control button on the remote once or twice to turn on the unit.

To avoid damage caused by battery leakage and corrosion

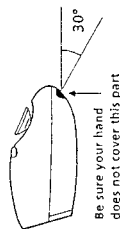
Remove the batteries when the commander will not be used for a long time.

Battery life

- Normal operation can be expected about three months using Sony SUM-3 (NS), and a half year using Sony AM-3 (NW) alkaline batteries. Since the remote consumes power whenever you pick it up and an on-screen display appears, the service life of the batteries may be less than three months, depending on how much you handle the remote.
- Do not expose the remote sensor to direct sunlight or lighting apparatuses. Doing so may cause a malfunction.

Hints on handling the remote

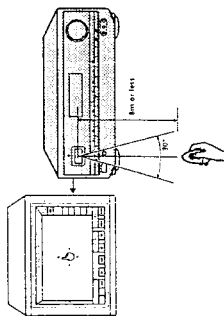
- Do not cover the IR emitter when operating the remote.



- Hold the remote with its direction control button facing up, as shown below.



- To make the on-screen display disappear, position the pointer in the blank area, and press the centre of the direction control button.
- Be sure to point the remote at the receiver. Do not point the remote at the TV.
- Place the receiver near (next to, or below) the TV.



Registering a TV

Registering a Sony TV

If your Sony TV can be controlled by an infrared remote, and it is connected to the amplifier by its AV 1 jack, IR code registration is unnecessary.

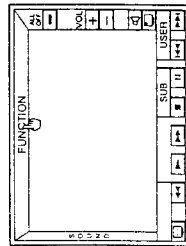
Registering a non-Sony TV

Complete the following procedure to set the amplifier to turn on your TV automatically whenever you turn on the amplifier.

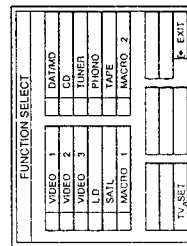
Registration

- Turn on the amplifier and the TV set.
Make sure the input selector on the TV set is set to AV 1.

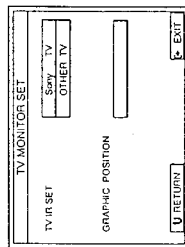
- Click FUNCTION in the main menu.



- Click TV SET.



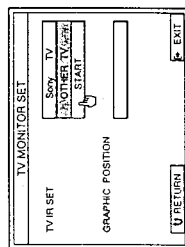
- Click OTHER TV (or click "Sony TV" for a Sony TV).



If you are using a Sony TV
The IR codes are programmed automatically and registration is complete (click RETURN or EXIT).

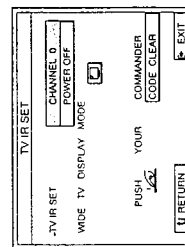
Before going to step 5, cover the IR sensor on the TV to prevent accidental operation. Otherwise, the on-screen display may be turned off during the programming procedure.

- Click START.

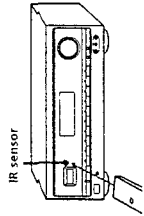


- When "PUSH YOUR COMMANDER" appears on the TV screen, press the button on the TV's remote that corresponds to the highlighted control button.

Programme the button used to turn ON your TV (e.g., CH0, CH1, CH+, etc.) as "CHANNEL 0".



When programming the IR code, point the remote at the IR sensor on the amplifier from a distance no greater than 10 cm (4 inches) and hold down the button on the remote for about 5 seconds until the instruction "RELEASE YOUR COMMANDER" appears.



Keep the remote pointed horizontally at the IR sensor until the code is programmed.
If you tilt or move the remote during the programming process, the IR code may not be programmed correctly.

- 7 Repeat this procedure for the remaining buttons that appear on the TV screen. If an IR code was not programmed correctly, the IR code setting indicator will flash.

To exit to the main menu
Click EXIT.

To return to a previous menu
Click RETURN.

To erase TV IR codes
Click CODE CLEAR.

- To erase a specific IR code
 - 1 Click SINGLE IR CODE CLEAR.
 - 2 Click the button you want to clear.
 - 3 "Are you sure?" appears for confirmation.
 - Click YES to erase the code.
 - "CODE CLEAR" appears in the display.
- To stop before erasing a code, click NO.
- To erase another code repeat steps 2 and 3.
- To erase all the TV IR codes
 - 1 Click TV IR CODE CLEAR.
 - 2 "Are you sure?" appears for confirmation.
 - Click YES to erase the codes.
 - "CODE CLEAR" appears in the display. To stop before erasing the codes, click NO.
- To erase all the IR codes
 - 1 Click ALL IR CODE CLEAR.
 - 2 "Are you sure?" appears for confirmation.
 - Click YES to erase the codes.
 - "CODE CLEAR" appears in the display. To stop before erasing all the codes, click NO.

Notes

- Some IR codes may not have been successfully programmed, even if "RELEASE YOUR COMMANDER" appears on the TV screen. In this case, try programming the IR code again. If the IR code still cannot be programmed, follow the procedure described in "Programming Other Infrared (IR) Codes (USER IR setting)" on page 20.
- With certain TV sets, made by other manufacturers, you may not be able to programme the ZOOM button. In such a case, use the remote supplied with your TV for this operation.

To change from another manufacturer's TV set to a Sony TV set

Connect the amplifier's MONITOR OUT jack to the VIDEO 1 input jack of the Sony TV set. Follow steps 1 to 3, then click SONY TV in step 4.

Registering Audio/Video Equipment

Registering Sony audio/video equipment

If your Sony audio and video equipment can be controlled by an infrared remote, simply connect them to the jacks shown on the following table; registration is unnecessary.

Amplifier jacks	Equipment to be connected
VIDEO 1	Sony VTR 3 (VHS)
VIDEO 2	Sony VTR 1 (Beta)
VIDEO 3	Sony VTR 2 (8 mm)
LD	Sony LD player
SATL	Sony Satellite decoder
TUNER	Sony Tuner
DAT/MD	Sony DAT deck
CD	Sony CD player (CD 1)
TAPE	Sony Tape deck
MONITOR	Sony TV

The following cases require registration of Sony products

- When connecting a Sony MD deck to the DAT/MD jacks.

- When connecting a Sony audio product with CONTROL-A1 compatibility.
- When connecting a Sony product to jacks other than those specified in the previous table (e.g., when connecting a Sony LD player to the VIDEO 3 jacks).
- When exchanging non-Sony audio or video equipment with a Sony product.

Notes

- If your VCR has a COMMAND CODE selector switch (for VTR1, VTR2, or VTR3), set the switch to the applicable setting.
- If your CD changer has a COMMAND MODE selector switch (for CD 1, CD 2, or CD 3), normally it should be set to "CD 1". However, if your CD changer has VIDEO OUT terminals, set the command mode to "CD 2" or "CD 3" ("CD 3" should only be used when making CONTROL-A1 connections).

Registering non-Sony audio/video equipment

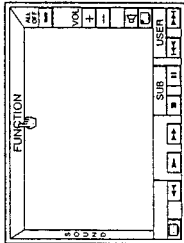
If you connect audio or video equipment made by another manufacturer, you must programme the IR codes used by the equipment before you can control it through the amplifier.

You can programme up to 120 IR codes, including user IR codes; however, depending on the type of codes recorded, the maximum limit may be less than 100. It may be difficult or impossible to programme up to 120 codes under the following conditions:

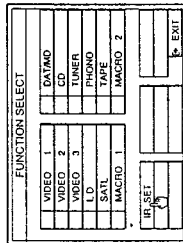
- When programming IR codes of special remotes such as card type remotes, or remotes for household appliances such as air conditioners.
- When programming from remotes with weak batteries.
- When programming IR codes that have been programmed to a programmable remote (i.e., any IR code not originally supplied in the respective remote).

Registration

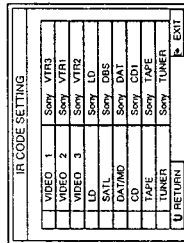
- 1 Click FUNCTION in the main menu.



- 2 Click IR SET.



- 3 Click the appropriate function.



Preparing and Using the Remote

- 4 Click "Sony" for a Sony product or OTHER for a non-Sony product.

If the programme source is a Sony product the IR codes are programmed automatically and registration is complete (click RETURN or EXIT). To take advantage of CONTROL-A1 compatible audio components, such as multi-disc CD players, click CONTROL-A1 to select CONTROL-A1.

- 5 Click the respective programme source.

If the equipment is not a video deck or laser disc player
Cover the IR sensor on the equipment to prevent accidental operation during the programming procedure, click START, then go to step 6.

If the equipment is a video deck or laser disc player:
1 Click START.

- 2 Click the manufacturer of the respective equipment and the IR codes for that programme source are registered automatically. (If the manufacturer is not listed, cover the IR sensor on the equipment to prevent accidental operation during the programming procedure, click "OTHER", then go to step 6).

- 3 Click TEST.
If the selected programme source turns on, it means the IR codes have been registered. This ends the procedure.

If the programme source does not turn on, click the number button beside the manufacturer's name to select another number, then click TEST again. If the programme source still does not turn on, cover the IR sensor on the equipment to prevent accidental operation during the programming procedure, click "OTHER", then go to step 6.

When using a video deck from another manufacturer
Check to see if the supplied remote uses +/- or 1- and 2- buttons to enter 2 digit programme positions. Since the +/- or 1- and 2- codes are not pre-programmed in this unit, do the following operations to programme these codes manually.

- 1 Select the manufacturer (as shown in step 2 above).
2 Click +/- 2- CODE SET.

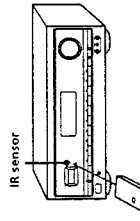
- 3 When "PUSH YOUR COMMANDER" appears on the TV screen, press the button on your VCR's remote that corresponds to the control button highlighted on the TV screen (see step 6 for details).

(continued)

Preparing and Using the Remote

- 6 When "PUSH YOUR COMMANDER" appears on the TV screen, press the button on your audio/video equipment's remote that corresponds to the control button highlighted on the TV screen. is the POWER switch.

When programming the IR code, point the remote at the IR sensor on the amplifier from a distance no greater than 10 cm (4 inches) and hold down the button on the remote for about 5 seconds until the instruction "RELEASE YOUR COMMANDER" appears and the IR code setting indicator turns off.



Keep the remote pointed horizontally at the IR sensor until the code is programmed. If you tilt or move the remote during the programming process, the IR code may not be recorded correctly.

Repeat this procedure for the remaining buttons
After you've programmed all the IR codes, the IR CODE SETTING menu reappears.

To programme special IR codes that do not appear as on-screen controls
See "Programming Other Infrared (IR) Codes (USER IR setting)" on page 20.

- 7 Repeat steps 3 to 6 to programme IR codes from other programme sources.

To exit to the main menu
Click EXIT.

To return to a previous menu
Click RETURN.

- To erase IR codes
Click CODE CLEAR.
• To erase a specific IR code
1 Click SINGLE IR CODE CLEAR.
2 Click the button you want to clear.
• "Are you sure?" appears for confirmation.
3 Click YES to erase the code.
• "CODE CLEAR" appears in the display.
To stop before erasing a code, click NO.
To erase another code repeat steps 2 and 3.
• To erase all the IR codes for the current component (e.g., OTHER CD)
1 Click (OTHER CD) CODE CLEAR.
• "Are you sure?" appears for confirmation.
2 Click YES to erase the codes.
• "CODE CLEAR" appears in the display.
To stop before erasing the codes, click NO.
1 Click ALL IR CODE CLEAR.
• "Are you sure?" appears for confirmation.
2 Click YES to erase the codes.
• "CODE CLEAR" appears in the display.
To stop before erasing all the codes, click NO.

- If the IR codes do not operate as expected
• Perform the programming operation(s) again to make sure the IR codes were programmed correctly.
• If you experience difficulty operating the INPUT, number, or ENTER buttons of a video deck or laserdisc player after automatic registration from the manufacturer list in step 5, programme the IR codes for that equipment manually as shown in step 6.
• On some laser disc players made by other manufacturers, the and buttons may not operate correctly even after automatic registration from the manufacturer list in step 5. If this happens, perform step 6 to manually programme the IR codes for the and buttons, as well as any other buttons that you want to use with the laser disc player.
• If you register a playback source as TOSHIBA 2 or RCA 2, you cannot turn the TV set on or off using the amplifier's remote (the power will not go on when you click TEST).
• Some IR codes may not have been successfully programmed, even if "RELEASE YOUR COMMANDER" appears on the TV screen. In this case, try programming the IR code again. If the IR code still cannot be programmed, follow the procedure described in "Programming Other Infrared (IR) Codes (USER IR setting)" on page 20.
• The unit may not be able to record IR codes with special waveforms produced on some remotes.

Notes

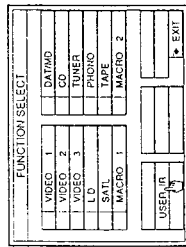
- Do not register the same type of component (i.e., an LD player) at several different functions.
- The unit emits an IR signal that cancels the automatic playback function of programme sources, such as laser disc and CD players, designed to start playing the moment they are turned on. To activate the auto play feature, set the amplifier's AUTO PLAY function to on.
- Keep the infrared sensor away from fluorescent light or direct sunlight. Otherwise, the IR codes may not be recorded.
- Even if the main lead has been disconnected from the mains, recorded IR codes will stay in the memory for approximately two weeks. If they disappear, "ALL CLEAR" will appear on the TV screen the next time you turn on the amplifier.
- Do not operate the remote supplied with the TA-VE800G when "PUSH YOUR COMMANDER" appears on the TV screen in step 6. Programming IR codes from the supplied remote may cause the TA-VE800G to malfunction.

Programming Other Infrared (IR) Codes (USER IR setting)

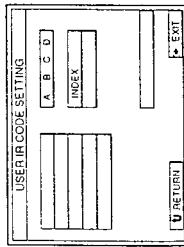
Use the USER IR CODE SETTING menu to programme any IR codes that could not be programmed in "Registering Audio/Video Equipment". These can include codes for audio and video equipment, as well as other types of equipment, made by almost any manufacturer. The following procedure lets you to programme up to 20 USER IR codes.

1 Click FUNCTION in the main menu.

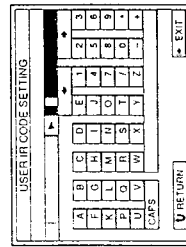
2 Click USER IR.



3 Click A B C D to select a user IR code page, then click INDEX.



4 Spell out a name for the IR code by clicking each character in order. The name is stored automatically.



To enter a space
Click the space bar

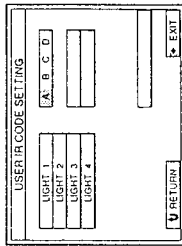
To switch between upper and lower case letters
Click CAPS.

If you make a mistake

Click ← or → to move the cursor to the character to be changed, then click the correct character (or click the space bar to erase the character).

5 After entering the name, click RETURN to go back to the USER IR CODE SETTING menu. Repeat steps 3 through 5 until you enter the names of all the IR codes you want to programme.

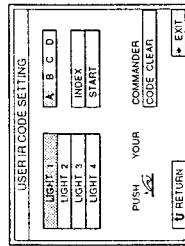
6 Click the name of the first IR code.



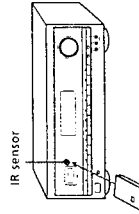
Before going to step 7, cover the IR sensor on the respective equipment to prevent accidental operation during the programming procedure.

7 Click on START.

When "PUSH YOUR COMMANDER" appears on the TV screen, press the button you want to programme.



When programming the IR code, point the remote at the IR sensor on the amplifier from a distance no greater than 10 cm (4 inches) and hold down the button on the remote for about 5 seconds until the instruction "RELEASE YOUR COMMANDER" appears and the IR code setting indicator turns off.



Keep the remote pointed horizontally at the IR sensor until the code is programmed.
If you tilt or move the remote during the programming procedure, the IR code may not be programmed correctly.

Repeat this procedure for the remaining buttons
After you've programmed all the IR codes, the IR CODE SETTING menu reappears.

To reprogramme a specific IR code
Click the button where the IR code was programmed, then click START.

To Erase IR codes

Click CODE CLEAR.

- To erase one specific IR code
 1. Click SINGLE IR CODE CLEAR.
 2. Click the button you want to clear.
 3. "Are you sure?" appears for confirmation.
 - "CODE CLEAR" appears in the display.
 - To stop before erasing a code, click NO.
 - To erase another code repeat steps 2 and 3.
 - To erase all the user IR codes
 1. Click USER IR CODE CLEAR.
 2. "Are you sure?" appears for confirmation.
 3. Click YES to erase the codes.
 - "CODE CLEAR" appears in the display.
 - To stop before erasing the codes, click NO.
 - To all the IR codes
 1. Click ALL IR CODE CLEAR.
 2. "Are you sure?" appears for confirmation.
 3. Click YES to erase the codes.
 - "CODE CLEAR" appears in the display.
 - To stop before erasing all the codes, click NO.

Notes

- Even if the amplifier's mains lead has been disconnected from the mains, programmed IR codes will stay in the memory for approximately two weeks. If they disappear, "ALL CLEAR" will appear on the TV screen when you turn on the unit again.
- The power switch on some air conditioners use two independent IR codes, even when there is only one switch. If you cannot turn the air conditioner off with the IR code programmed for the on/off switch, repeat the procedure and programme the on and off IR codes separately.
- The operation of some air conditioner remote commanders require two-way signal exchange with the air conditioner itself. Though it is possible to programme the IR codes of such remote commanders in the unit, their use may not result in normal air conditioner operation.
- The unit may not be able to register IR codes with special waveforms produced on some remote commanders.

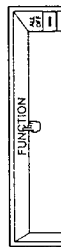
Selecting a Component

To listen to or watch a connected component, go to the function select menu and click on the programme source you desire.

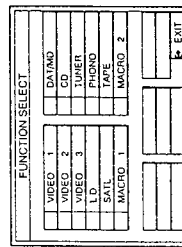
- Before you begin, make sure you have:
 - Connected the IR repeater and all components securely and correctly as indicated on pages 8 to 11.
 - Registered the IR codes for the connected components as indicated on pages 12 to 21.
 - Turned MASTER VOLUME to the leftmost position (0) to avoid damaging your speakers.

1. Pick up the remote and press the button once or twice to turn on the amplifier. Your monitor should turn on automatically, if not see pages 14 to 15 to register your monitor.

2. Click FUNCTION in the main menu.



3. Click the component you desire.
The component starts playing automatically.



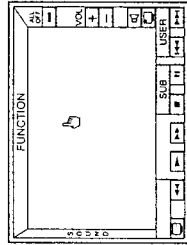
To listen to or watch	Click
Video tapes	VIDEO 1, VIDEO 2 or VIDEO 3
Laser discs	LD
Satellite broadcasts	SATL
Digital Audio Tapes (DAT) or MiniDiscs (MD)	DAT/MD
Compact Discs (CD)	CD
Radio programmes	TUNER
Records	PHONO*
Analog audio cassettes	TAPE**

* Control buttons do not appear when you select PHONO.

** The tape icon turns green during tape monitoring.

To exit to the main menu
Click EXIT.

4. Click VOL + or - to adjust the volume.
To adjust the volume of the TV's speakers, use the volume control on the TV.



Control buttons

To operate the selected component

The control buttons at the bottom of the screen function as a remote control for the selected component. Click the button representing the operation you desire. Refer to the manual supplied with the component you are controlling for details regarding its operation.

To show other control buttons for the selected component
Click SUB.

To execute IR commands programmed from other remotes

1. Click USER.
2. Click A B C D repeatedly to display the command you desire.
3. Click the button for the respective command.
To programme IR codes from other remotes, see page 20.

To mute the sound

Click [MUTE]. The icon changes to [MUTE] and turns green. "MUTE ON" then "MUTING" appear in the display on the amplifier. To turn the sound back on, click on the icon again.

To turn off the MONITOR when listening to an audio source

Click [MONITOR] in the bottom left corner. See "Remote Operation of Audio Sources Without the TV (illuminated control flasher)" on page 36 for details regarding remote operation without the TV.

To turn off the selected component

Click [OFF] in the bottom left corner.

To turn off all connected components

Click ALL OFF [ALL OFF].

If you have components that turn on only when you press the play button, they will not turn off if you click ALL OFF when the AUTO PLAY function (see page 37) is off. In this case, click [PLAY] then on the play button (▶),

- Notes**
- If the on-screen display does not appear when using a TV monitor.
 - The input selector on your TV may be set to "TV" instead of "VIDEO". In this case, use the input selector on your TV to set its input to "VIDEO".

- The AUTO PLAY function is set at the factory to start playing the component immediately after it is selected. To turn AUTO PLAY off, see page 37.
- Components of the same type will be controlled simultaneously by the on-screen controls.
- For example, if you use the on-screen controls to start playing one of two Sony basic disc players in the room, the other will also start playing at the same time.
- If a component does not respond, it may be because IR codes from the IR repeater are not fully reaching the selected component source. If this happens, change the position of the IR repeater or programme source.
- If an audio source is selected when the current source is a video source, the video source signal changes to SATL.

Watching TV or Video programmes

When you watch TV or video programmes, we recommend you play audio position through the amplifier instead of your TV's speaker. This lets you take advantage of the amplifier's surround sound effects, like Dolby Surround, and lets you use the amplifier's remote to control the audio.

Turn off the speakers on your TV before you start so you can enjoy the surround sound from your amplifier.

Watching TV programmes

You can use the TV tuner built in to your video deck to watch TV programmes using the amplifier's on-screen operations.

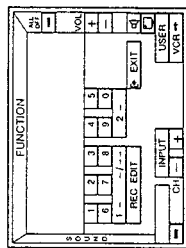
- Select the appropriate function (e.g. "VIDEO 2").
 - Click TV* in the VCR controls at the bottom of the screen.
- The control panels switches to the video deck's TV controls.

Click CH- or + to change the programme position.

To return to the VCR controls, click VTR*.

We recommend switching to the VCR controls before switching functions. If you leave directly from the TV controls in the FUNCTION SELECT menu, the AUTO PLAY (page 37) function will not operate the next time you select the video deck as a programme source.

- To select TV programme positions directly when watching TV programmes using the built-in tuner on your VCR**
- Click SUB in the video deck control panel to display the direct selection controls.
- When using a non-Sony VCR, be sure to programme -/ or 1- and 2- codes manually as shown on page 17. These codes are not pre-programmed in this unit.



To change the video input of a Sony VCR

Click the INPUT icon in the video deck control panel. Likewise, to watch a TV programme after watching a video tape, stop the VCR, click INPUT, then use the on-screen controls to select the desired programme position.

To switch the screen size when using a wide TV monitor Click [] repeatedly to select the screen size you desire.

Selecting a Component Using the Controls on the Front Panel

- Press POWER to turn on the amplifier.
- Press the button for the component you want to use.

To listen to or watch	Press
Video tapes	VIDEO 1, VIDEO 2 or VIDEO 3
Laser discs	LD
Satellite broadcasts	SATL
Digital Audio Tapes (DAT) or MiniDiscs (MD)	DAT/MD
Analog audio cassettes	TAPE MONITOR
Compact Discs (CD)	CD
Radio programmes	TUNER
Records	PHONO

- Turn on the component, for example, a CD player, and start playback.

- When you listen with headphones**
- Connect the headphones to the PHONES jack and set the SPEAKERS selector to OFF.

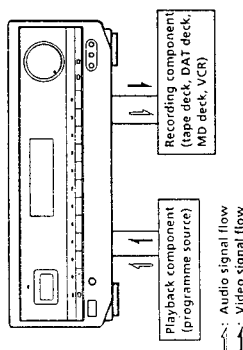
23GB

24GB

Recording

This amplifier makes it easy to record to and from the components connected to the amplifier. You don't have to connect playback and recording components directly; once you select a programme source on the amplifier, you can record and edit from the on-screen display as you normally would using the controls on each component.

Before you begin, make sure you've connected all components properly.



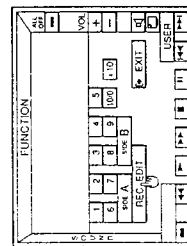
You can record on a cassette tape, Digital Audio Tape, MiniDisc, or video tape (etc.) using the amplifier. See the instruction manual of your recording component if you need help.

- Click FUNCTION in the main menu.
- Click the programme source you want to record ("LD" for example).

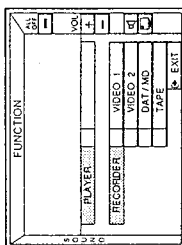
- Click on SUB.



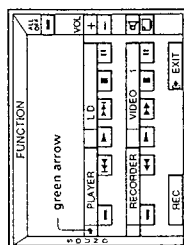
- Click REC EDIT.



- Click the component you want to record to ("VIDEO 1" for example).



The control panels for both components appear on the TV screen. "PLAYER" for the programme source, and "RECORDER" for the programme destination.

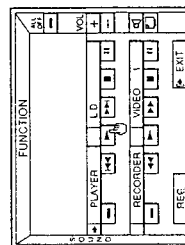


The green arrow indicates the source component. When recording, the green arrow should be next to "PLAYER".

Clicking a RECORDER control while recording cuts off the programme source (PLAYER).

- Insert a blank tape into the recording component (or VCR, etc.) and adjust the recording level, if necessary.

- Click the REC to start recording, then click the PLAYER button. Recording begins.



To control the recorder (when not recording)

Click RECORDER. "RECORDER" becomes the source component and you can use the RECORDER controls to record and playback the recording (etc.).

Click [PLAYER] to return control to the original source component.

To monitor the recorded sound when recording to a 3-head cassette deck

1. Click EXIT.
2. Click FUNCTION in the main menu.
3. Click TAPE.

To stop recording

Click on  of the recording unit.

To return to the main menu.

Click EXIT.

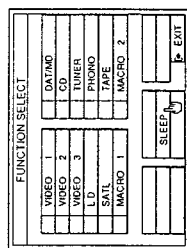
Notes

- There is no sound output from the recording component even though all the buttons on the recording unit's control panel are operational.
- If you click RECORDER during recording, the source being recorded will be cut off.
- If you leave the REC EDIT menu by clicking FUNCTION, SOUND, or EXIT, recording continues, but control returns to the PLAYER side, even if you previously clicked RECORDER.
- If you open the FUNCTION SELECT menu and click another programme source while recording, the newly selected programme source will be recorded.
- Some cassette decks require that you press the  REC and  buttons simultaneously to start recording. To perform one button from the on-screen display, be sure to record the recording signal as shown in steps 1 to 7 of "Registering non-Sony audio/video equipment" (pages 16 to 19) for both Sony and non-Sony products.
- Sound input through the TAPE connectors on the rear panel cannot be recorded on a recording unit.
- When you record on a DAT or MD connected to the DAT / MD REC OUT jacks, sound adjustments do not effect the recording.

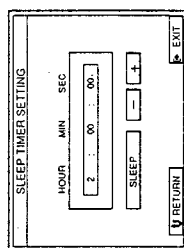
Using the Sleep Timer

You can set the amplifier to turn off automatically at a time you specify.

1. Click FUNCTION in the main menu.
2. Click SLEEP.



3. Click TIMER repeatedly to select the length of the sleep timer. The timer changes as shown below:



2:00:00 → 1:30:00 → 1:00:00 → 0:30:00 → OFF

Notes

- You can also freely specify the time. Click + or - to change the sleep time in 1 minute intervals. You can specify up to 5 hours.

To return to the main menu

Click EXIT.

To go to the previous menu

Click RETURN.

When the sleep timer is set

"SLEEP" appears in the upper left corner of the main menu.



Notes

- You can check the time remaining before the amplifier turns off. Click FUNCTION, then click SLEEP. The remaining time appears in the on-screen display.

25 GB

26 GB

Introduction

The TA-VE800G is provided with a variety of surround features which allow you to listen to a wide range of sound in surround sound. Additionally, adjustable parameters to let you customize the sound to your preference.

To use a pre-programmed sound field

See "Using Pre-programmed Sound Fields" on this page. This section describes how to recall the sound fields and provides a description of each sound field.

To take advantage of Dolby Pro Logic Surround sound

See "Getting the Most Out of Dolby Pro Logic Surround Sound" on page 28. This section describes how to adjust the levels of your speaker system and customize the PRO LOGIC sound fields.

You can find Dolby Surround-encoded software by looking at the packaging

However, some videos and laser discs may use Dolby Surround sound even if it's not indicated on the package.

To create your own sound field

See "Customizing Sound Fields" on page 29 to adjust the tone and surround parameters.

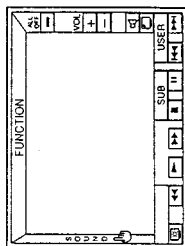
For additional information regarding surround sound

See the "Glossary" on pages 45 and 46.

Using Pre-programmed Sound Fields

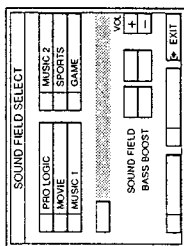
You can take advantage of surround sound simply by selecting one of the pre-programmed sound fields according to the programme you want to play.

1. While playing a programme source, click SOUND in the main menu.



2. Click a sound field genre to select the type of sound field you desire.

The previously selected mode turns on automatically.



To play without surround effects
Select "ACOUSTIC" from MUSIC 2. The surround effects are
disabled but you can still adjust the tone (see page 29).

To turn off the sound fields
Click SOUND FIELD ON/OFF.

Sound fields	
GENRE	MODE
PRO LOGIC	TO
PRO LOGIC	DECODE
ENHANCED	Obtain prog. games processed with Dolby Surround.
	Obtain additional output from rear speakers when decoding Dolby Surround programmes.
MOVIE	SMALL THEATER
	LARGE THEATER
	MONO MOVIE
MUSIC 1	SMALL HALL
	LARGE HALL
MUSIC 2	KARAOKE
	ACOUSTIC
	Reduce the vocal tracks of stereo music sources.
	Reproduce normal 2 channel stereo with tone control (TONE).
SPORTS	ARENA
	Reproduce the feeling of a large concert arena. Great for Rock and Roll.
STADIUM	
	Reproduce the feeling of a large open-air stadium. Great for electric sounds.
GAME	GAME
	Obtain maximum audio impact from video game software.

Getting the Most Out of Dolby Pro Logic Surround Sound

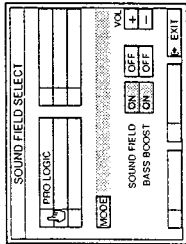
To obtain the best possible Dolby Pro Logic Surround sound, first select the centre mode according to your speaker system. Then, equalize the speaker levels and adjust the delay time of the PRO LOGIC sound field.

Note that you must have at least one additional pair of speakers and/or one centre speaker to do the following adjustments.

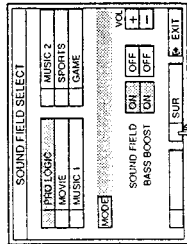
Selecting the centre mode

The amplifier offers you four centre modes: PHANTOM, 3 CHANNEL LOGIC, NORMAL, and WIDE. Each mode is designed for a different speaker configuration. Select the mode that best suits your speaker system configuration.

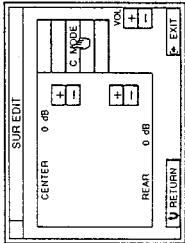
- 1 Click SOUND in the main menu.
- 2 Click PRO LOGIC to select the pro logic sound field.



- 3 Click SUR.
The Dolby Pro Logic SUR EDIT screen appears.
To select the pro logic sound field.



- 4 Click C MODE repeatedly until the centre mode you want is displayed. Select the centre mode by referring to the following chart.



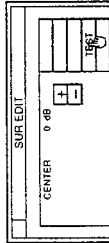
If you have	Select	So that
Front and rear speakers, no centre speaker	PHANTOM	The sound of the centre channel is output from the front speakers.
Front and centre speakers, no rear speaker	3 CH LOGIC (3 Channel Logic)	The sound of the rear channel is output from the front speakers.
Front and rear speakers, and a small centre speaker	NORMAL	The bass sound of the centre channel is output from the front speakers (because a small speaker cannot produce enough bass).
Front and rear speakers, and a centre speaker equivalent to your front speakers	WIDE	For wide range speakers, and a centre speaker equivalent to your front speakers.

Adjusting the speaker volume

The test tone feature lets you set the volume of your speakers to the same level. (If all of your speakers have equal performance, you don't have to adjust the speaker volume.)

Using the remote lets you adjust the volume level from your listening position.

- 1 Click TEST.
The tone is emitted from each speaker sequentially. The speaker emitting the test tone is shown in red on the TV screen.



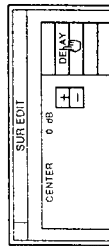
- Adjust the volume levels so that you hear the test tone from each speaker at the same volume level when you are in your listening position.
 - To adjust the volume between the front right and front left speakers, use the BALANCE control on the front of the amplifier.
 - To adjust the level of centre speaker, click CENTER + or -.
 - To adjust the level of rear speakers, click REAR + or -.
- Click TEST to turn off the test tone.

You can adjust all speakers at one time. Use MASTER VOLUME on the front of the amplifier.

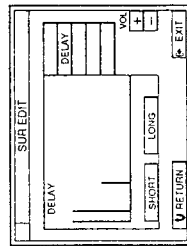
Adjusting the delay time

You can make the surround sound more effective by delaying the output from the rear speakers (delay time). You can adjust the delay time in 0.1 ms steps within the range of 15 to 30 ms. For example, if you've placed the rear speakers in a large room or apart from your listening position, set the delay time shorter.

- Start playing a programme source encoded with Dolby surround sound.
- Click DELAY.



- Click SHORT or LONG to adjust the delay time.



To return to the main menu
Click EXIT.

To go to the previous menu
Click RETURN.

- To reset the current sound field to the original factory settings
Click STD.

Adjusting the tone

You can adjust the tone of the speakers. Follow the procedure described in "Adjusting the tone" below.

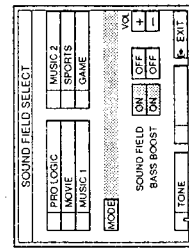
Customizing the Sound Fields

Each sound field is composed of an equalizer (bass, midrange, or treble) and surround sound parameters — variables of sound — that create the sound image. You can customize the sound fields by adjusting the speaker level (LEVEL) and effect (EFFECT) surround parameters to suit your listening situation. Once you customize the sound fields, they are stored in memory unless the amplifier is unplugged for about 1 week.

Adjusting the tone

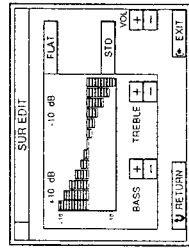
Adjust the tone of the front, centre and rear speakers for optimum sound. You can adjust the tone of all sounds fields, including Dolby Surround.

- Start playing a programme source, then click SOUND in the main menu.
- Click the genre of sound field you want to reset. The previously selected mode turns on automatically.
- Click MODE repeatedly to select the mode you want to adjust.
- Click TONE. The TONE EDIT menu appears.



(continued)

- Click BASS + or - to adjust the level of the low frequencies and click TREBLE + or - to adjust the level of the high frequencies as you desire.



Note
You may hear some noise as you adjust the parameters.

To start adjustment with a flat equalizer curve
Click FLAT.

To reset the tone parameter of the selected sound field to the original factory settings
Click STD.

To exit to the main menu
Click EXIT.

To return to the previous menu
Click RETURN.

To adjust the volume
Click VOL + or -.

Adjusting surround sound parameters

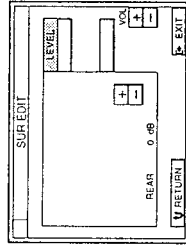
Change the surround parameters to fit your listening situation. You can adjust the speaker levels and the overall presence of the sound field.

To adjust the parameters of the PRO LOGIC sound field, see "Getting the Most Out of Dolby Pro Logic Surround Sound" on page 28.

- Start playing a programme source, then click SOUND in the main menu.
- Click the genre of sound field you want to reset. The previously selected mode turns on automatically.
- Click MODE repeatedly to select the mode you want to adjust.

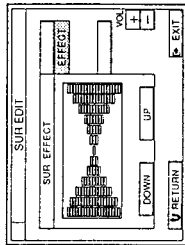
- Click SUR. The SUR EDIT menu appears.

To adjust the speaker levels
Click LEVEL then click + or - to adjust the speakers to the levels you prefer.



To adjust the effect level

Click EFFECT then click UP or DOWN to adjust the presence of the sound field to the level you prefer.



To reset all parameters of the current sound field to the original factory settings
Click STD.

To exit to the main menu
Click EXIT.

To return to the previous menu
Click RETURN.

To adjust the volume
Click VOL + or -.

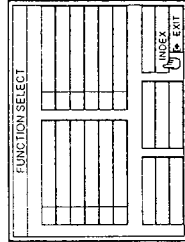
Note
If you make new adjustments to a sound field, the previous settings are replaced by the new ones.

Using the INDEX functions

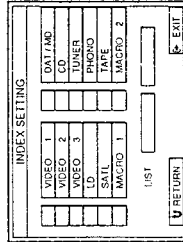
The index functions let you customize the function menu, tuner preset list, and CD list. You can specify the icons and names up to 8 characters long for each function button, specify names up to 8 characters long for each preset radio station, and specify names up to 12 characters long for each compact disc (up to 200 discs) or group of discs in a CD changer.

Changing icons and names of function buttons

- 1 Click FUNCTION in the main menu. The FUNCTION SELECT menu appears.
- 2 Click INDEX. The INDEX SETTING screen appears.



- 3 Click the icon to be changed.
- 4 Click the icon you desire from the icon menu, then click RETURN.
- 5 Click the function button to be changed.

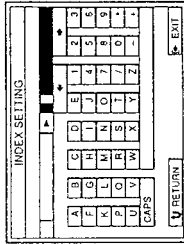


The preset list appears. Click on A, B, or C to select the page. Then click on 0 to 9 to select the preset to be named.

(continued)

31^{GB}

- 2 Spell out the name by clicking each character in order. The name is stored automatically.

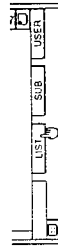


To enter a space
Click the space bar.
To switch between upper and lower case letters
Click CAPS.
If you make a mistake
Click ← or → to move the cursor to the character to be changed, then click the correct character (or click the space bar to erase the character).

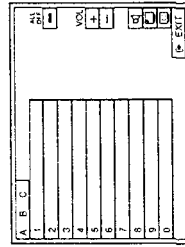
To go back to the previous menu
Click RETURN.
To exit to the main menu
Click EXIT.

Tuning preset stations using the LIST function

- 1 Click FUNCTION in the main menu. The FUNCTION SELECT menu appears.
- 2 Click TUNER.
- 3 Click LIST.



- 4 The preset list appears. Click on A, B, or C to select the page. Then click on 1 to 0 to tune the respective preset.

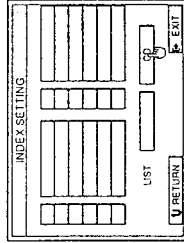


32^{GB}

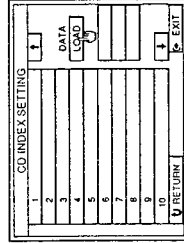
Adding names to CDs in a Sony CD changer equipped with a CTRL A1 jack

If your CD changer is a Sony product with a CTRL A1 jack, you can download all of the CD name data in the CD changer, thus saving you the trouble of adding names one by one.

- 1 Click the LIST CD button in the INDEX SETTING screen.



- 2 Click the DATA LOAD button.



CD name data is downloaded and after a few minutes, the downloaded data appears in the CD INDEX SETTING menu.

Notes

- The DATA LOAD button will not appear if the CD changer is not registered as a Sony CONTROL A1 CD in the IR CODE SETTING menu (see page 17) or if the CD changer is not turned on.
- The DATA LOAD procedure will not work if the CD change is not turned on or if the CTRL A1 connection is incomplete (see page 9).
- If the following characters have been recorded in the CD changer, they will appear as blanks in the on-screen display: # \$; * @ ÷

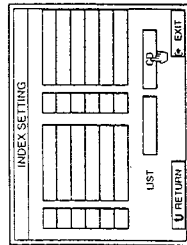
To go back to the previous menu
Click RETURN.

To exit to the main menu
Click EXIT.

Adding names to CDs in non-Sony CD changers or Sony CD changers without CTRL A1 jacks

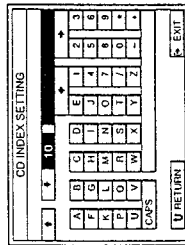
If your CD changer is not a Sony Product or does not have a CTRL A1 jack, you will have to add names manually as follows:

- 1 Click the LIST CD button in the INDEX SETTING screen.



- 2 To name a disc
Click TITLE. Display the number of the disc to be named by clicking the $\uparrow$ or $\downarrow$ icon on the right side of screen, then click the disc to be named.
To name a group
Click GROUP, then click the group to be named.

- 3 Spell out the name by clicking each character in order. The name is stored automatically.



To enter a space
Click the space bar.
To switch between upper and lower case letters
Click CAPS.

If you make a mistake
Click $\leftarrow$ or $\rightarrow$ to move the cursor to the character to be changed, then click the correct character (or click the space bar to erase the character).

To go back to the previous menu
Click RETURN.

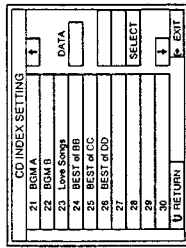
To exit to the main menu
Click EXIT.

Operating a CD Changer

Grouping CDs

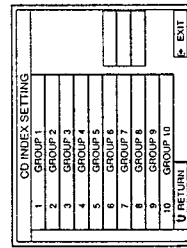
You use the on-screen display to assign your CDs to one or more groups.

- 1 Click FUNCTION in the main menu.
The FUNCTION SELECT menu appears.
- 2 Click INDEX.
The INDEX SETTING screen appears.
- 3 Click the LIST CD button.
- 4 Click SELECT, then click the disc you want to assign to a new group.



If the disc you want is not displayed
Click the $\uparrow$ or $\downarrow$ icon to display the disc.

- 5 Click the names of the groups you want to assign the CD to.
For example, to assign the CD to both "GROUP 1" and "GROUP 4", click both group names so that they are highlighted.



To remove the CD from one or more groups
Click the highlighted group name so that it goes out.

To go back to the previous menu
Click RETURN.

To go back to the main menu
Click EXIT.

(continued)

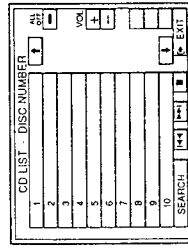
33⁶⁸

Playing CDs with the LIST function

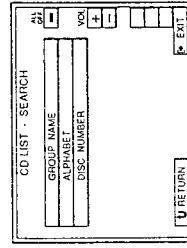
- 1 Click FUNCTION in the main menu.
The FUNCTION SELECT menu appears.
- 2 Click CD.
- 3 Click LIST.



- 4 Click the $\uparrow$ or $\downarrow$ icons to see the next or previous 10 discs, then click the disc. Playback starts automatically.
When a Sony CD changer equipped with a CTRL A1 jack is connected, the disc capacity shown on screen changes automatically in accordance with the capacity of the CD changer.



To locate a specific disc
Click SEARCH, the CD LIST - SEARCH screen appears.



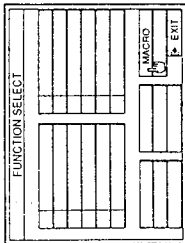
- To display the discs in a certain group
Click GROUP NAME, then click the name of the group in which the CD is located.
The CD list for that group is displayed. Click the $\uparrow$ or $\downarrow$ icons to display disc, then click the disc. Playback starts automatically.
- To display the discs in alphabetical order:
Click ALPHABET, after a few seconds, discs are displayed in alphabetical order.
Click the $\uparrow$ or $\downarrow$ icons to display disc, then click the disc. Playback starts automatically.

34⁶⁸

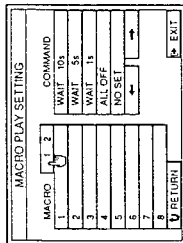
Operating Several Components in Sequence Automatically (macro play)

The macro functions (1 and 2) let you link up to eight IR command codes in sequential order for execution as a single command. You can specify the IR codes from both the preset and user IR code lists. The macros can then be executed either manually (by selecting them from the FUNCTION SELECT menu) or automatically (by specifying them in the AUTO START SETTING menu (see page 37)).

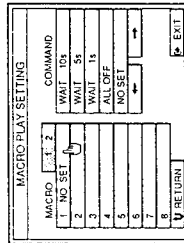
- 1 Click FUNCTION in the main menu.
The FUNCTION SELECT menu appears.
- 2 Click MACRO.
The MACRO PLAY SETTING menu appears.



- 3 Click MACRO 1 or 2.



- 4 Click macro step number 1.
This is the first IR code in the macro sequence.



- 5 Click ← or → to show the IR codes available for that button.
The IR codes recorded for the various components in the FUNCTION SELECT menu and the IR codes in the user IR menu set appear in groups of 5 at the right of the screen.

To specify a time lag between commands
Click ← or → repeatedly to display the time lag commands (WAIT 10s, WAIT 5s, and WAIT 1s).
To specify an IR code to turn off all the components
Click ← or → repeatedly to display ALL OFF.

Note

If the macro was selected for automatic execution at startup with the AUTO START function (see page 37), ALL OFF cannot be selected in that macro.

- 6 Click on the IR code you desire.
The name of the IR code appears in the highlighted macro step number and the next macro step number is highlighted.
- 7 Repeat steps 5 and 6 to enter up to eight IR codes.

To erase an entered IR code

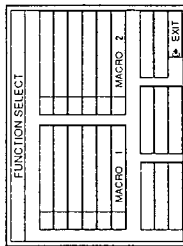
- 1 Click the code you want to erase so it will be highlighted.
- 2 Click ← or → repeatedly until NO SET appears at the right of the screen.
- 3 Click NO SET to erase the IR code highlighted in step 1.

To enter IR codes randomly

- 1 Click a numbered macro button.
- 2 Click ← or → repeatedly until the IR code you desire appears at the right of the screen.
- 3 Click the IR code.

To execute a macro

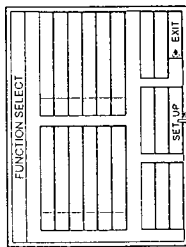
- 1 Click FUNCTION in the main menu.
The FUNCTION SELECT menu appears.
- 2 Click MACRO 1 or MACRO 2.
Execution of the specified IR codes starts automatically.



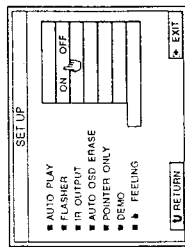
Remote Operation of Audio Sources Without the TV (illuminated control flasher)

The Illuminated Control Flasher (or flasher) function allows you to control audio programme sources without using the TV's on-screen display by using only the remote and the front panel of the amplifier. When you press the direction control button, the indicator lamps on the front panel light up in succession. These lamps let you select and control the operations that appear in the display on the amplifier.

- 1 Click FUNCTION in the main menu.
The FUNCTION SELECT menu appears.
- 2 Click SET UP.



- 3 Click FLASHER ON.



- 4 Click an audio programme source in the FUNCTION SELECT menu.
- 5 Click the TV off icon to turn off the TV monitor.



Note
The TV off icon for the flasher function only appears when you select audio programme sources.

- 6 Press the left or right side of the direction control button.
Various operations for the selected programme source appear in the display each time you press the direction control button. The indicator corresponding to the operation button on the front panel also lights up.
The operations available for each programme source are shown below.

Programme source	Operations
DAT/ND	← → → → → → → →
CD	← → → → → → → →
TUNER	PRESET- PRESET +
PHONO	No display
TAPE	← → → → → → → →
All sources	INPUT SELECT, ALL OFF, TV ON, VOLUME +, VOLUME -

- 7 Click the remote when the operation you want appears in the display.

To select another programme source

- 1 Select the remote when INPUT SELECT appears in the display.
- 2 Move the remote commander from left to right.
The various programme sources appear in the display one at a time. If you select a video programme source, the TV set will turn on automatically.

- To cancel the flasher function
Click the remote when TV ON appears in the display, or select a video component.

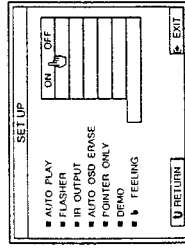
Note

If you select "ALL OFF" in the flasher mode, the next time the amplifier is turned on it turns on in flasher mode. The amplifier turns on normally, however, if there are components set to auto start (see page 37).

Playing Sources Automatically (auto play)

The AUTO PLAY function lets you set the amplifier to start playing the programme sources immediately after they are selected from the FUNCTION SELECT menu. The amplifier comes with AUTO PLAY set to ON.

- 1 Click FUNCTION in the main menu. The FUNCTION SELECT menu appears.
- 2 Click SET UP.
- 3 Click AUTO PLAY ON or OFF to select auto play on or off.



To return to the main menu
Click EXIT.

To go to the previous menu
Click RETURN.

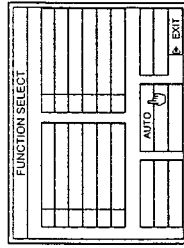
Notes

- If you select another component during playback, the current component stops and the newly selected component starts playing.
- The AUTO PLAY function does not work when you operate the amplifier using the controls on the front panel.
- The AUTO PLAY function may not work for components with poor remote control response. If you experience this, reposition the IR repeater closer to that component to facilitate reception of the IR command codes.

Starting a Source Automatically at Power On (auto start)

The AUTO START function lets you set the amplifier to start playing a specific programme source immediately whenever you turn on the amplifier.

- 1 Click FUNCTION in the main menu. The FUNCTION SELECT menu appears.
- 2 Click AUTO.
- 3 The AUTO START SETTING screen appears.



- 3 Click the component you want to start playing automatically when the amplifier is turned on. Only one programme source can be selected.

To automatically start the component played last the next time you turn on the amplifier
Click LAST.

To execute a macro automatically when you turn on the amplifier
Click MACRO 1 or MACRO 2 when the AUTO PLAY function is ON and the programme source is specified in the MACRO PLAY setting (see page 35).
When LAST is specified, the programme source last played will turn on automatically the next time you turn on the amplifier.

To cancel the AUTO START function

Click NO SET in step 3.
AUTO START will not operate when you turn on the amplifier.

To return to the main menu
Click EXIT.

To go to the previous menu
Click RETURN.

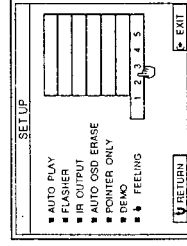
Note

Macros containing the ALL OFF command (see page 35) cannot be selected for use with the AUTO START function.

Adjusting the Sensitivity of the Remote

You can select from five different sensitivity levels that determine the speed at which the pointer moves.

- 1 Click FUNCTION in the main menu. The FUNCTION SELECT menu appears.
- 2 Click SET UP.
- 3 Click FEELING 1 through 5 to select the sensitivity level you desire. The higher the number, the faster the speed.



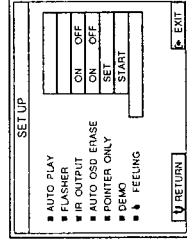
To return to the main menu
Click EXIT.

To go to the previous menu
Click RETURN.

Selecting the Display Parameters

Use this procedure to select one of three display modes: AUTO OSD ERASE, POINTER ONLY, or DEMO. It also allows you to switch the IR OUTPUT setting when you use the IR repeater.

- 1 Click FUNCTION in the main menu. The FUNCTION SELECT menu appears.
- 2 Click SET UP.
- 3 Click AUTO OSD ERASE ON or OFF, POINTER ONLY SET or DEMO START to select the display mode as necessary. If necessary, click IR OUTPUT ON or OFF.



AUTO OSD ERASE:

This display mode is useful during laser disc operations since it allows you to see chapter numbers that otherwise might be hidden by the control panel. When this mode is on, control panel disappear whenever you click and hold down a control button. When you release the button, the control panel reappears.

POINTER ONLY:

This display mode allows you to use the pointer to point to various on screen items, such as during a presentation (etc.). When you click POINTER ONLY SET, the on-screen display disappears except for the pointer and an EXIT button. To freeze the pointer, hold down the button on the remote.

DEMO:

This display mode activates a programme that explains the various functions of the amplifier. Please note that when the programme is running it replaces previously stored data (such as surround sound parameters) with data from the programme. Therefore, you should only use the DEMO mode when no data has been stored or when reinitialising data does not matter.

Click START to activate the programme. To stop the programme, click the button on the remote two or three times or turn off the amplifier.

IR OUTPUT:

When it is set to OFF, the IR signals are only output from the IR OUT jack on the rear panel. No IR signals will be output from the IR repeater on the front panel. When the IR OUTPUT is set to OFF, "IR OFF" appears in the main menu.

Normally, IR OUTPUT should be set to ON.

To return to the main menu
Click RETURN.

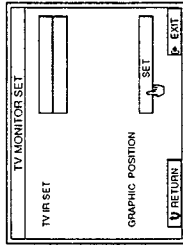
To go to the previous menu
Click RETURN.

Adjusting the Position of the On-Screen Display

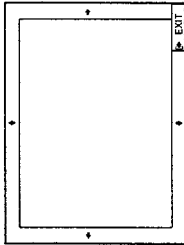
The graphic position function (GRAPHIC POSITION) lets you make fine adjustments to the overall position of the on-screen display control panel.

- 1 Click FUNCTION in the main menu.
The POSITION SELECT menu appears.
- 2 Click TV SET.
- 3 Click GRAPHIC POSITION SET.

The position adjustment screen appears.



The position adjustment screen appears.



Click the borders to adjust the position so you can just see the top, bottom, right and left edges of the boarder.

- 4 Click EXIT.

To return to the main menu
Click EXIT.

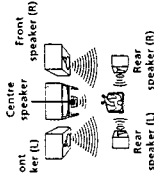
To go to the previous menu
Click RETURN.

Glossary

Centre mode

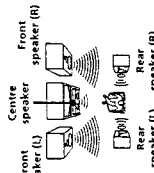
Selects all speakers to enhance Dolby Pro Logic Surround mode. To obtain the best possible surround sound, select one of the following four centre modes according to your speaker system.

- **NORMAL mode**
Selects NORMAL mode if you have front and rear speakers and a small centre speaker. Since a small speaker cannot reproduce low-frequency sounds, the centre channel is output from the front speakers.

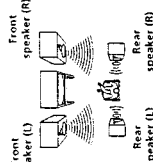


WIDE mode

Selects WIDE mode if you have front and rear speakers and a large centre speaker. With the WIDE mode, you can take full advantage of Dolby Surround sound.

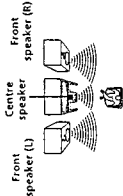


- **PHANTOM mode**
Selects PHANTOM mode if you have front and rear speakers but no centre speaker. The sound of the centre channel is output from the front speakers.



3 CH LOGIC mode

Selects 3 CH LOGIC mode if you have front and centre speakers but no rear speaker. The sound of the rear channel is output from the front speakers to let you experience some of the surround sound without using rear speakers.



Delay time

Time lag between the surround sound output from front speakers and rear speakers. By adjusting the delay time of the rear speakers, you can obtain the feeling of presence. Make the delay time shorter when you are closer to your listening position, and make it shorter when you have placed them in a large room or apart from your listening position.

Dolby Pro Logic Surround

Decoding system of Dolby Surround sound standardized in TV programmes and movies. Compared with the former Dolby Surround system, Dolby Pro Logic Surround improves sound quality using extra channels. It adds left-to-right panning, and music. These channels manipulate the sound to be heard and enhance the action as it happens on the screen. To take advantage of Dolby Pro Logic, you should have at least one pair of rear, also called surround, speakers. You should also need to select the appropriate centre mode to enjoy a full effect.

Dolby Surround

Encoding and decoding system of Dolby Surround sound for consumer use. Dolby Surround decodes the extra channels on the Dolby Surround-encoded sound tracks of movie videos and TV programmes and produces sound effects and colours that make the action seem to envelop you.

The amplifier offers Dolby Surround (PRO LOGIC) as one of the pre-programmed sound fields. If you have rear or centre speaker(s), select the appropriate centre mode. The Dolby Surround sound field by selecting the appropriate centre mode to take advantage of Dolby Pro Logic Surround sound.

Effect level

Combination of the level of early reflections and reverberation. You can adjust the effect level in 6 levels. As you select higher levels, the room becomes "live," and as you select lower levels, the room becomes "dead."

Parameter

Variable of sound that composes sound image, such as tone or delay time. You can customize the pre-programmed sound fields by adjusting parameters to suit your listening situation.

Programmable remote

Remote control with "learning" capability. You can control not only Sony components but also other components by learning the control signals of these components.

Sound field

Sound pattern produced by a sounding source or sources in a given environment due to direct and reflected sounds and the acoustics of the environment. The amplifier offers pre-programmed sound fields like PRO LOGIC, MODE, MUSIC 1, MUSIC 2, SPORTS and DANCE, so that you can enjoy surround sound easily.

Station index

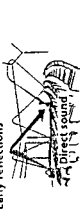
For convenience to preset radio stations. You can group preset stations by assigning the same station index to them.

Surround sound

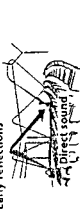
Sound that consists of three elements: direct sound, early reflected sound (early reflections) and reverberative sound (reverberation). The acoustics where you hear the sound affect the way these three sound elements are heard. These sound elements are reproduced by the speakers. You can actually feel the size and the type of a concert hall.

Types of sound

Early reflections

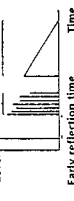


Reverberation



Transition of sound from rear speakers

Direct sound Early reflections Reverberation



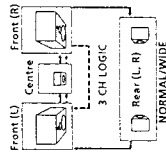
Additional Information

Test tone

Signal given out by the amplifier for adjusting the speaker volume. The test tone will come out as follows.

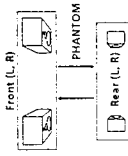
- In a system with a centre speaker (NORMAL/WIDE3 CH LOGIC modes)

The test tone is output from the front L (left), centre, front R (right), and rear speakers in succession.



- In a system without a centre speaker (PHANTOM mode)

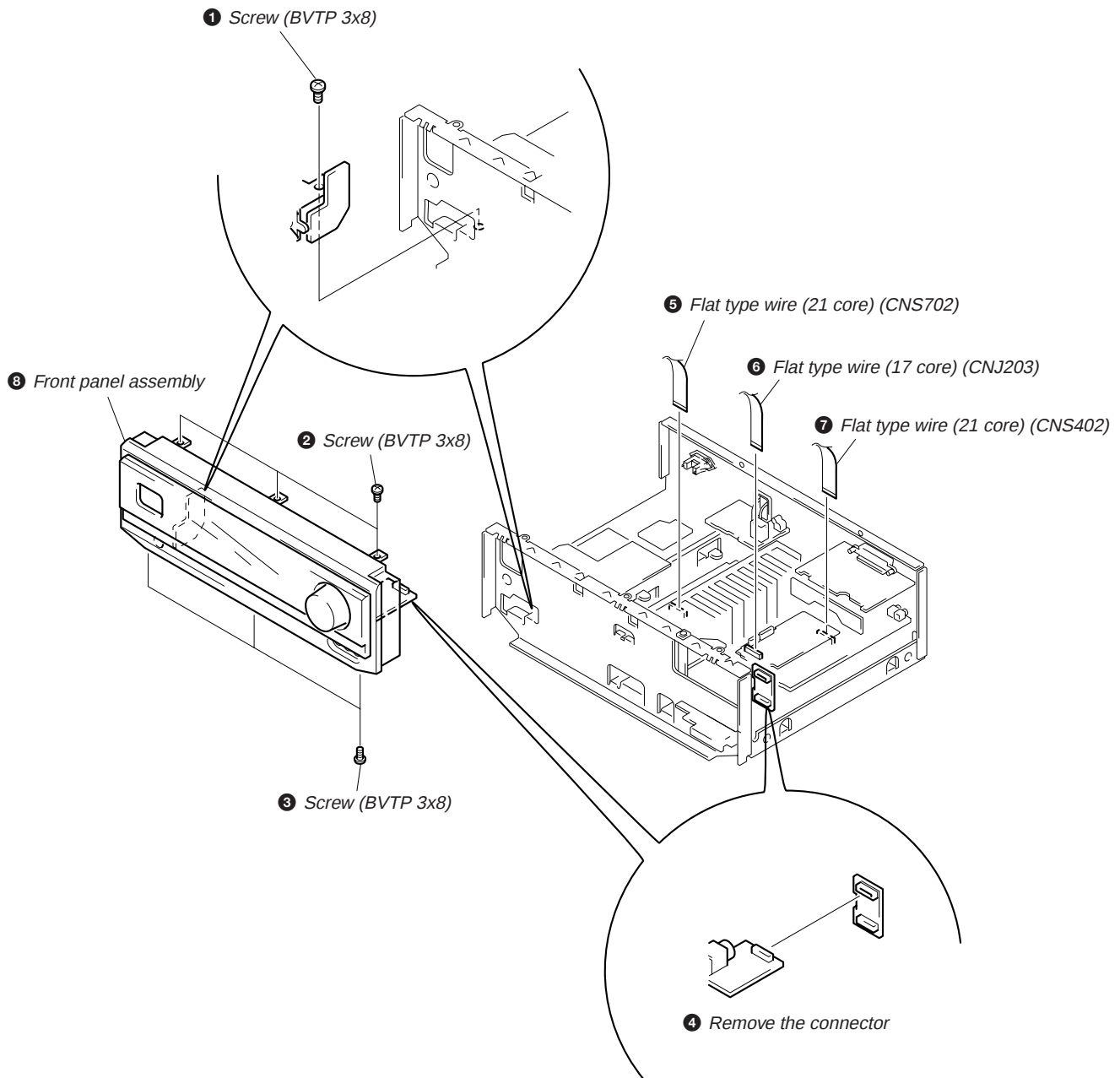
The test tone is output from the front and the rear speakers alternately.



SECTION 3 DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

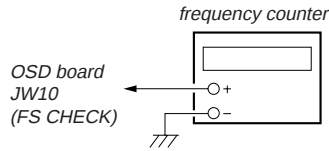
3-1. FRONT PANEL ASSEMBLY



SECTION 4 ELECTRICAL ADJUSTMENT

Video Frequency Adjustment

Connection:

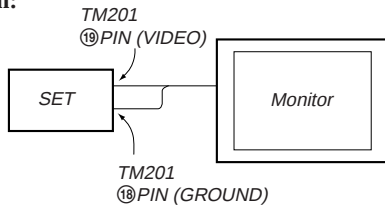


Method:

1. Press the POWER button without connecting anything to the external input terminal (VIDEO IN etc.).
2. Adjust CT202 of the OSD board so that the reading on the frequency counter becomes $17.734475 \text{ MHz} \pm 40 \text{ MHz}$.

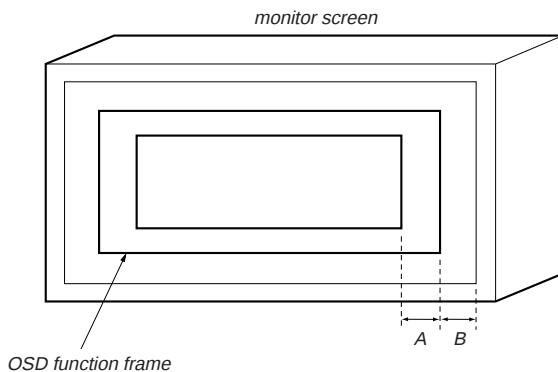
OSD Width Adjustment

Connection:



Method:

1. With the power turned OFF, press the TAPE MONITOR button and VIDEO 2 button simultaneously and turn on the power. The position of the OSD image set by the user will be cleared and set to position set at shipment.
2. The OSD function frame will be displayed on the monitor. This screen will disappear in a few seconds automatically when the input of codes using the remote commander stops.
If it disappears during adjustments, move the cursor of the attached remote commander. The screen will appear again.
3. While watching the monitor screen, adjust CT201 of the OSD board so that the following standard is satisfied.



Adjustment standard:

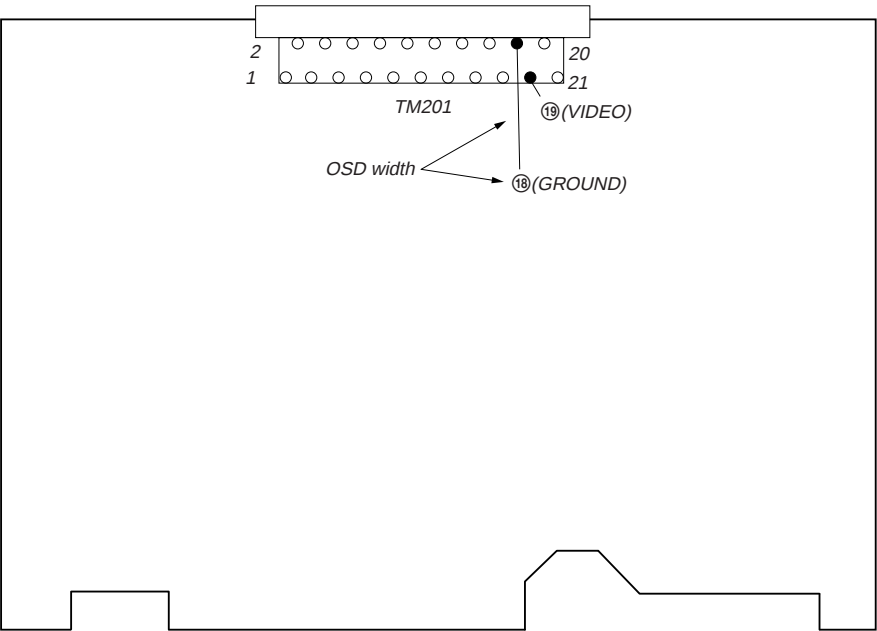
Adjust so that the width A of the OSD function frame becomes the same as space B of the monitor screen.

NOTE:

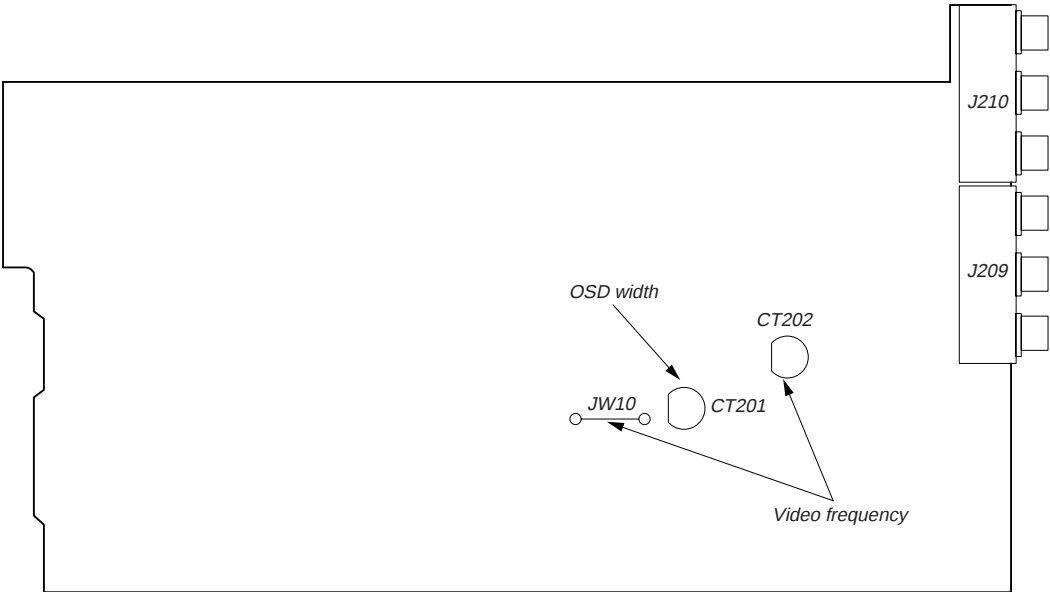
Extra margin is provided in this adjustment in consideration of the deviation of the screen according to the type of monitor used. Consequently, the user is able to adjust the position of the screen freely. (For details, refer to "Adjustment of OSD Screen Position" in 1. Service Note. Refer to page 3.)

Adjustment Location:

[S. VIDEO BOARD]

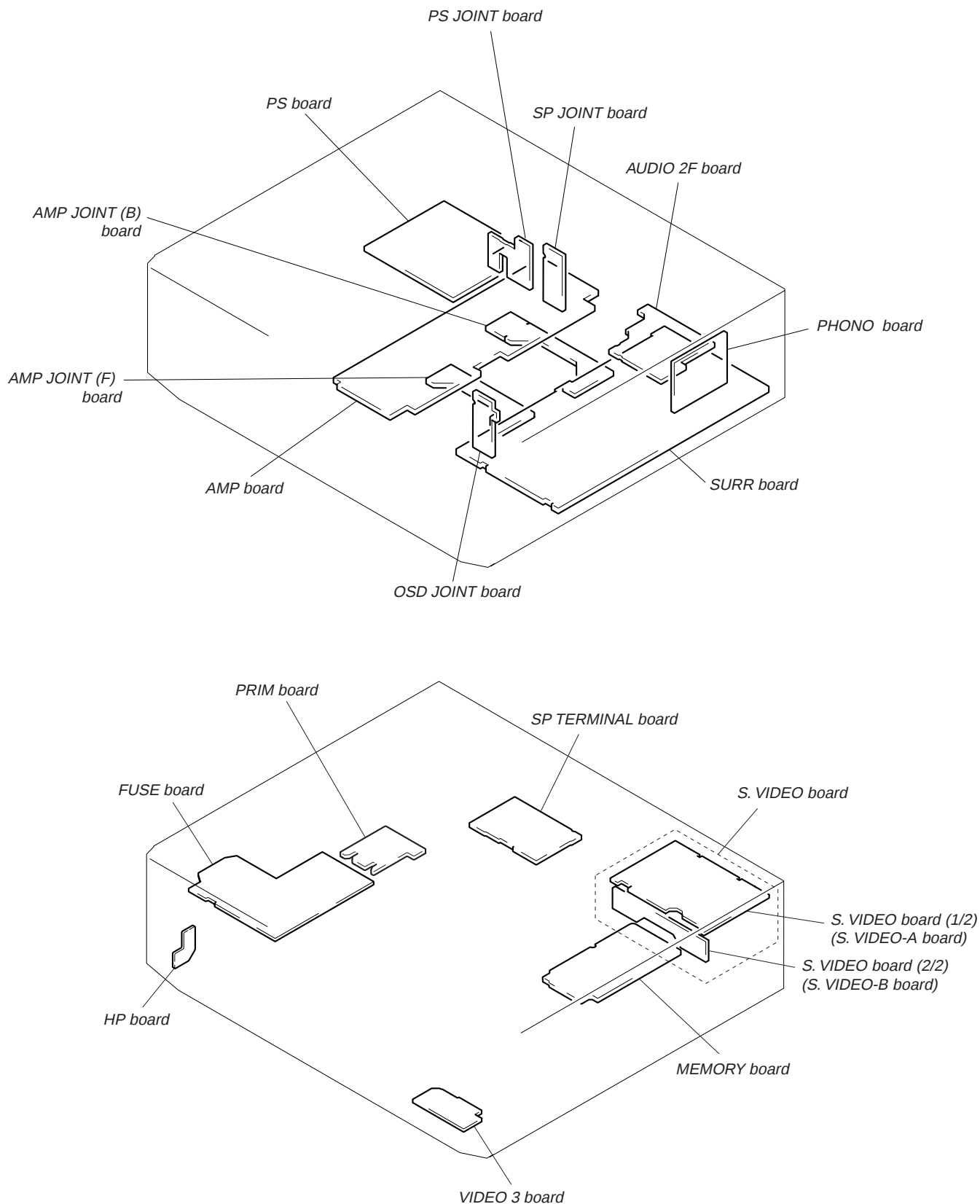


[OSD BOARD]

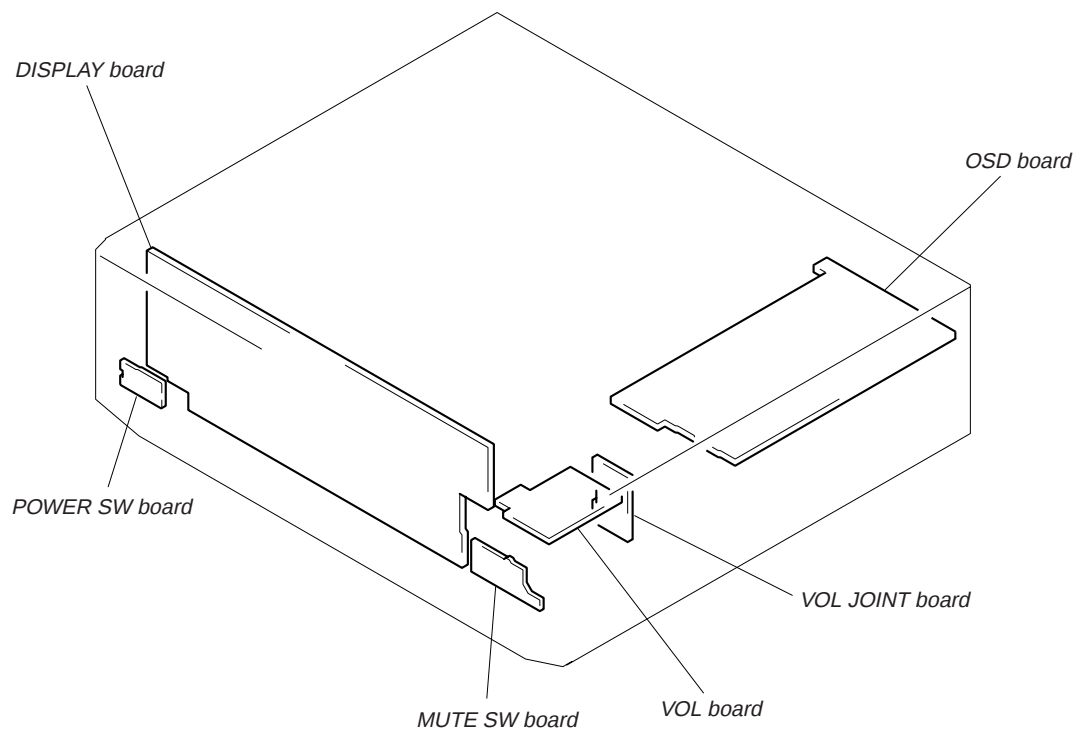


SECTION 5 DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION



Note: The boards S. VIDEO-A and S. VIDEO-B are supplied as the S. VIDEO board.



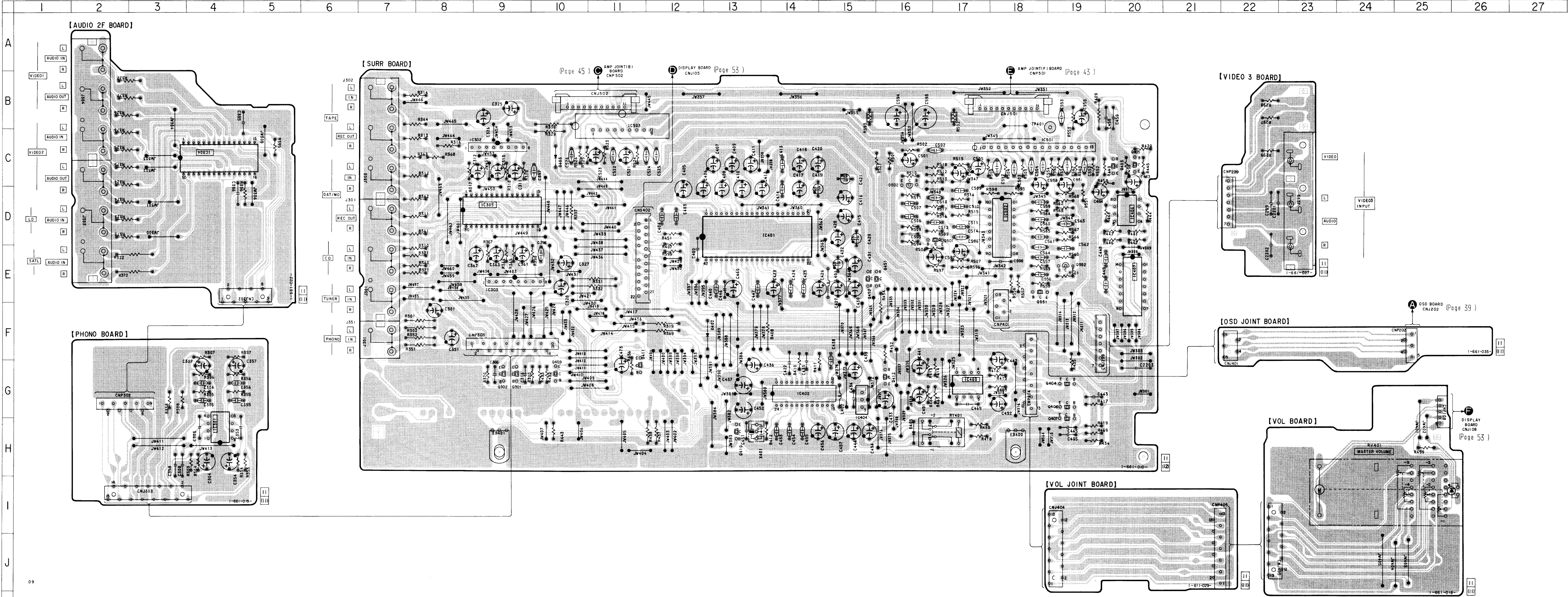
5-2. PRINTED WIRING BOARD — SURROUND SECTION —
• See page 25 for Circuit Boards Location.

• Semiconductor
Location

Ref. No.	Location
D402	F-13
D403	C-10
D405	H-16
IC301	H-4
IC302	C-8
IC303	E-9
IC304	C-4
IC305	D-9
IC401	D-14
IC402	G-14
IC403	G-17
IC404	G-15
IC406	D-20
IC407	E-20
IC501	C-18
IC502	D-18
IC503	B-11
Q301	G-9
Q302	G-9
Q403	C-20
Q404	G-19
Q405	C-20
Q406	G-19
Q407	G-19
Q409	G-10
Q410	H-13
Q411	F-11
Q412	G-16
Q451	F-16
Q452	E-15
Q501	D-17
Q502	C-16
Q551	E-18
Q552	E-19

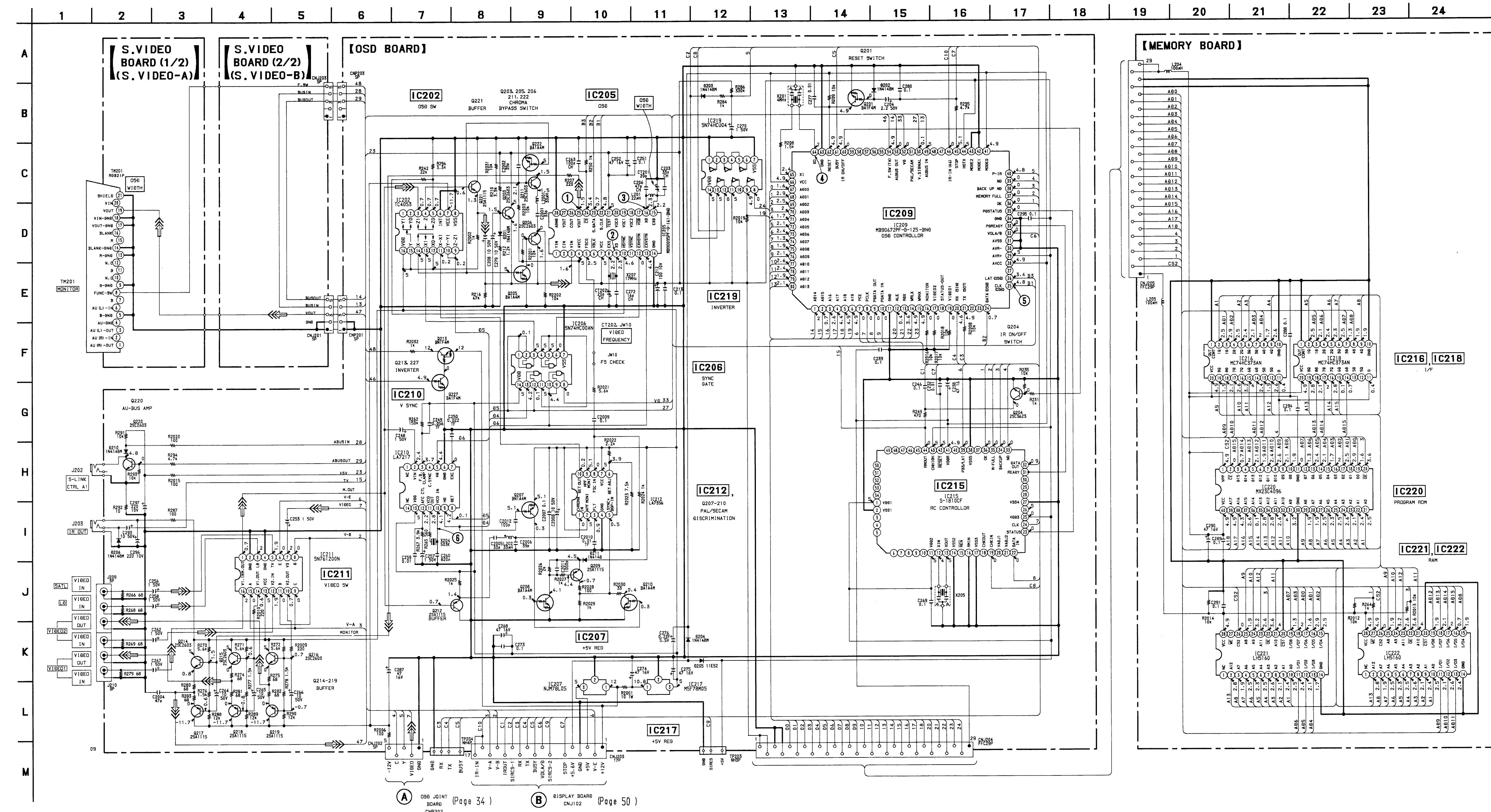
Note:

- : parts extracted from the component side.
- △ : Internal component.
- ▨ : Pattern from the side which enable seeing.

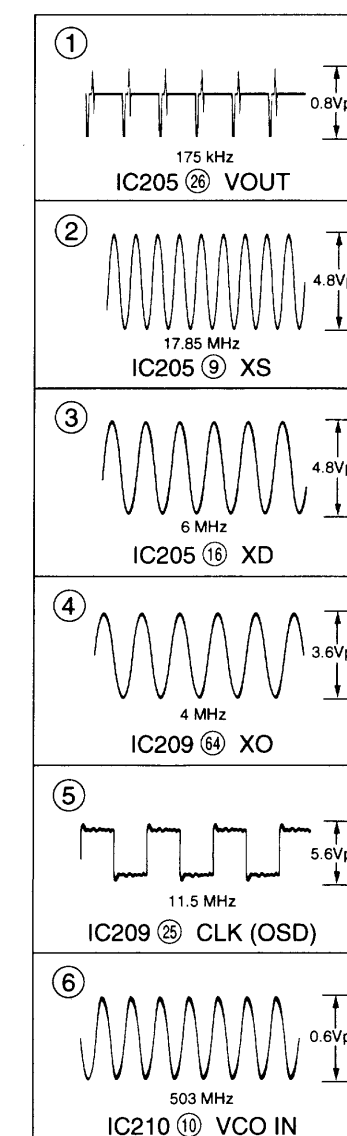


5-4. SCHEMATIC DIAGRAM — OSD SECTION —

- See page 59 for IC Block Diagrams.
- See page 64 for IC Pin Functions.



- Waveforms

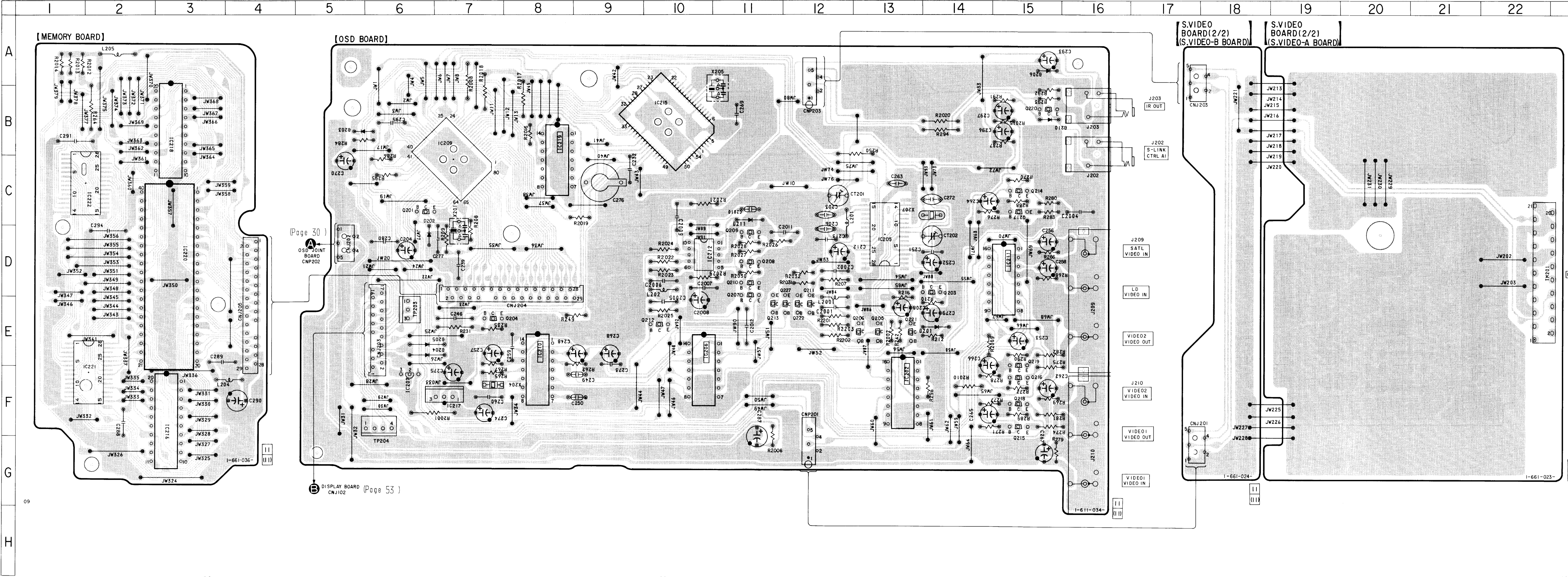


NOTE

- All capacitors are in μF unless otherwise noted. $\text{pF} = \mu\text{F} \times 1000$ or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- Δ : internal component.
-  : panel designation.
-  : B+ Line.
-  : B- Line.
-  : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (input impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.

➡➡➡:VIDEO

5-5. PRINTED WIRING BOARD — OSD SECTION —
• See page 25 for Circuit Boards Location.



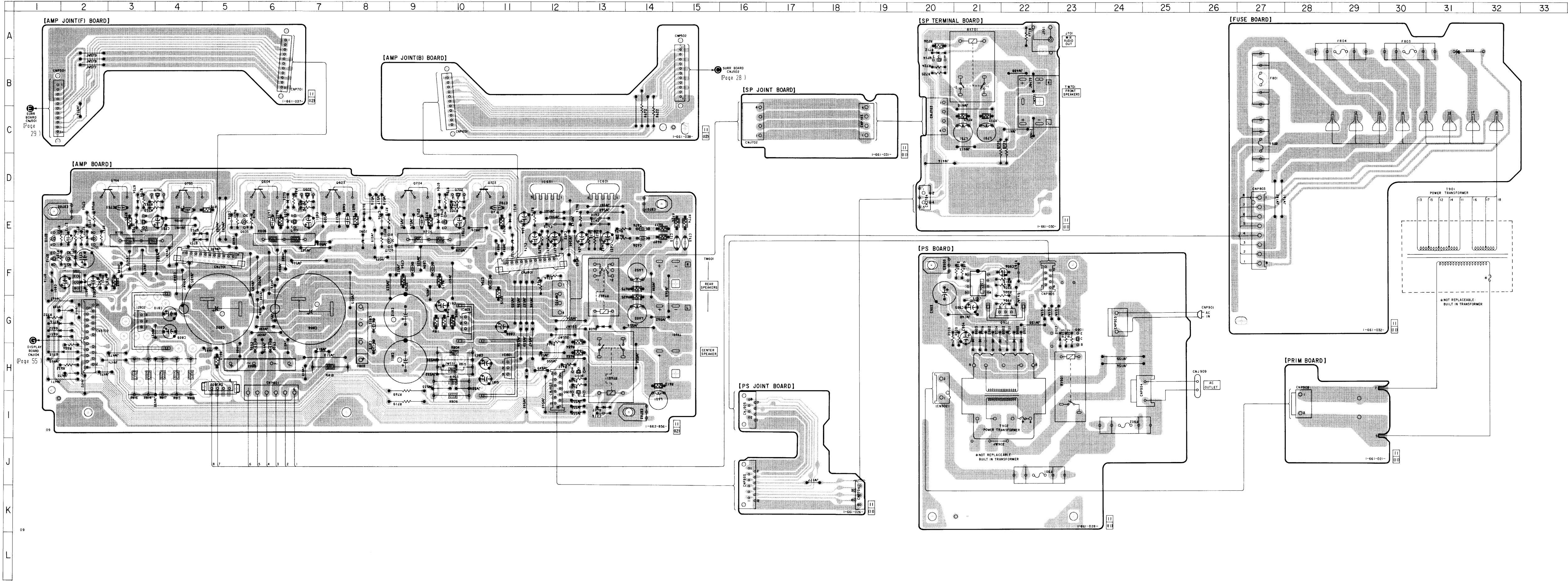
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D201	E-14	IC222	C-2
D202	C-6		
D203	B-5	Q201	C-6
D204	E-7	Q203	D-14
D205	E-7	Q204	E-8
D206	A-15	Q205	E-13
D210	B-15	Q206	E-13
D211	C-11	Q207	D-11
		Q208	D-11
IC202	F-13	Q209	D-11
IC205	D-13	Q210	D-11
IC206	E-10	Q211	D-12
IC207	F-6	Q212	E-10
IC209	B-7	Q213	E-11
IC210	E-8	Q214	C-15
IC211	D-15	Q215	F-15
IC212	D-10	Q216	F-15
IC215	B-10	Q217	C-15
IC216	F-3	Q218	F-15
IC217	F-7	Q219	E-15
IC218	B-3	Q220	B-15
IC219	B-8	Q221	E-13
IC220	D-3	Q222	E-12
IC221	E-1	Q227	D-12

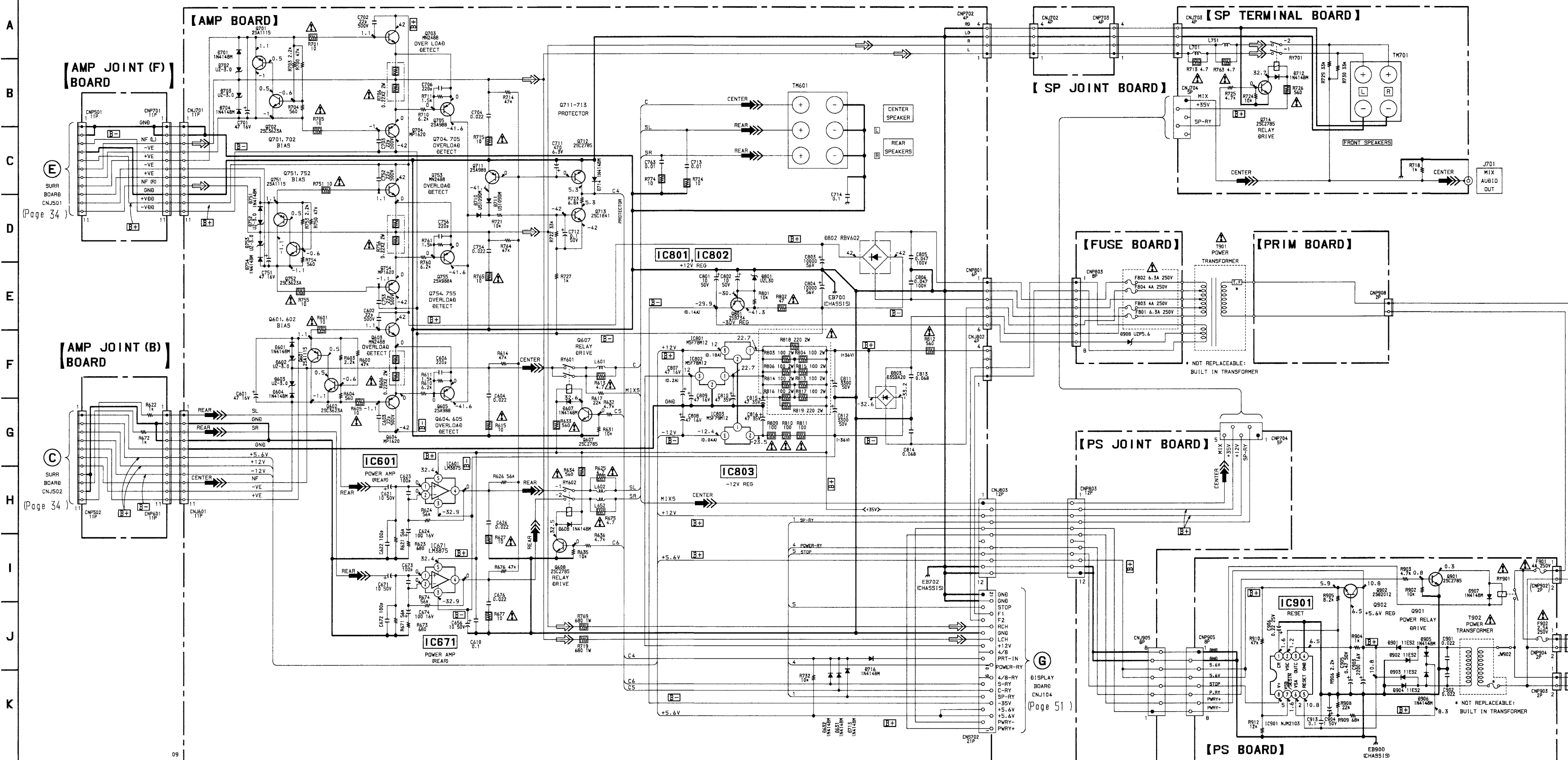
5-6. PRINTED WIRING BOARD — AMP SECTION —
• See page 25 for Circuit Boards Location.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D601	E-8	IC601	D-13
D602	E-8	IC651	D-12
D603	E-6	IC801	H-11
D604	E-6	IC802	G-3
D607	D-13	IC803	G-10
D608	G-13	IC901	F-21
D631	G-1		
D632	G-1	Q601	E-6
D701	E-11	Q602	D-7
D702	F-11	Q603	D-7
D703	E-9	Q604	D-6
D704	D-9	Q605	E-5
D710	E-2	Q607	I-12
D711	F-2	Q608	H-12
D712	B-20	Q701	E-10
D713	H-1	Q702	D-10
D714	F-1	Q703	D-11
D716	G-1	Q704	D-9
D751	F-4	Q705	F-8
D752	E-4	Q711	F-2
D753	E-3	Q712	F-1
D754	D-3	Q713	E-1
D801	G-2	Q714	B-20
D802	H-6	Q751	E-3
D803	H-8	Q752	D-4
D901	G-22	Q753	D-4
D902	G-21	Q754	D-3
D903	G-22	Q755	F-2
D904	G-21	Q801	F-2
D905	G-21	Q901	G-23
D906	G-21	Q902	G-22
D907	G-23		
D908	B-31		



Note:
• : parts extracted from the component side.
• : Pattern from the side which enable seeing.



NOTE

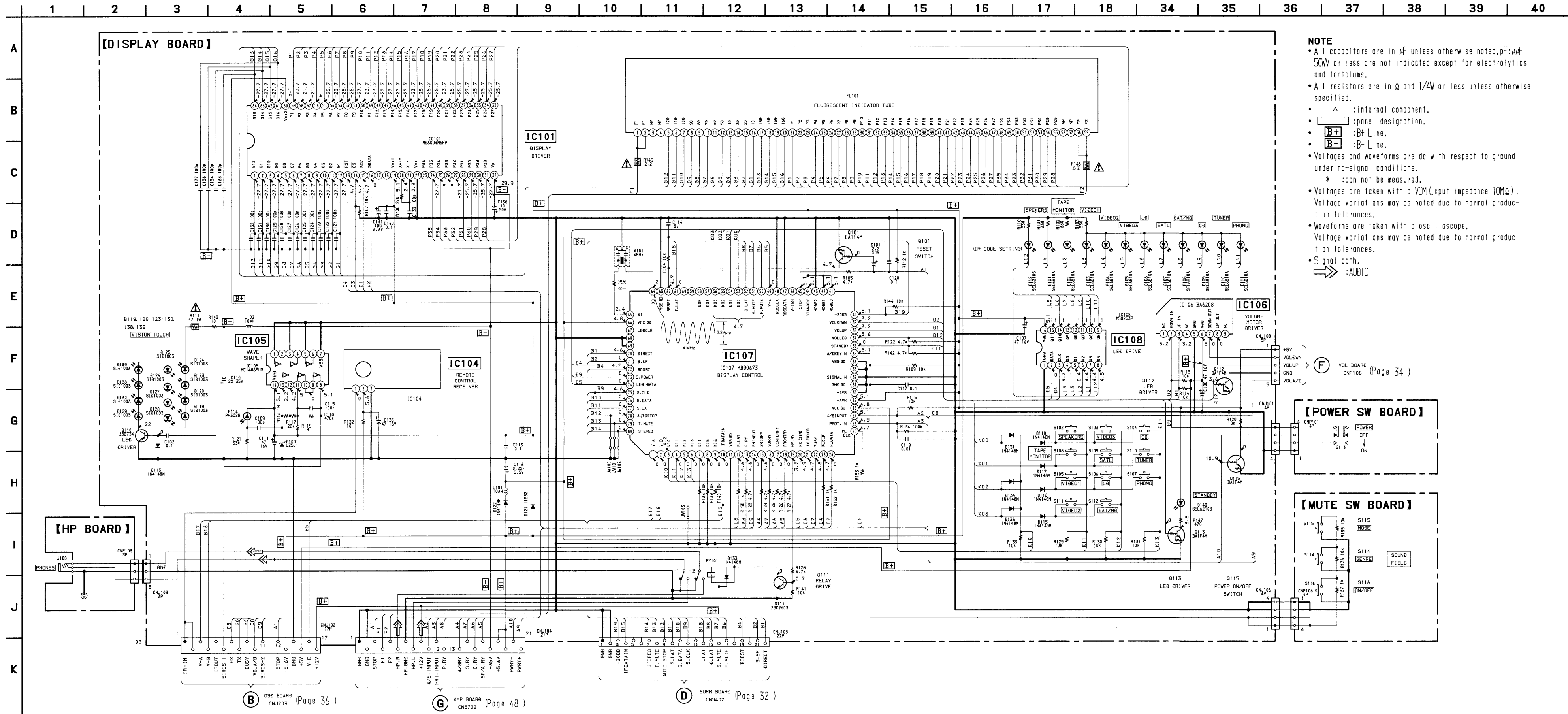
- All capacitors are in μF unless otherwise noted, pF: μpF
- 50W or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
-  : nonflammable resistor.
-  : panel designation.

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

-  :B+ Line.
-  :B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Signal path.
 -  :AUDIO
 -  :SURROUND

5-8. SCHEMATIC DIAGRAM — DISPLAY SECTION —

- See page 61 for IC Block Diagrams.
- See page 62 for IC Pin Functions.



- See page 25 for Circuit Boards Location.

D ←
SURRE BOARD
CNS402
(Page 28)

B ←
OSD BOARD
CNJ 203
(Page 39)

F ←

VOL BOARD
CNPI08

(Page 30)

【 MUTE SW BOARD 】

【POWER SW BOARD】

【 HP BOARD 】

• Semiconductor Location			
Ref. No.	Location	Ref. No.	Location
D101	E-19	D128	C-18
D102	E-17	D129	C-19
D103	E-15	D130	C-19
D104	E-14	D131	C-7
D105	E-13	D133	A-16
D106	E-12	D134	C-7
D107	E-10	D136	C-7
D108	E-9	D138	C-18
D109	E-8	D139	B-18
D110	E-7	D140	B-19
D111	E-5	D1001	B-18
D112	E-18		
D113	D-19	IC101	C-11
D114	B-16	IC104	C-15
D115	C-7	IC105	A-17
D116	C-7	IC106	F-6
D117	C-7	IC107	C-9
D118	B-7	IC108	D-13
D119	D-19		
D120	D-19	Q101	B-7
D121	C-14	Q110	D-19
D122	C-6	Q111	B-17
D123	C-18	Q112	E-11
D124	C-18	Q113	A-18
D125	C-19	Q115	D-18

Note:

-  : parts extracted from the component side.
-  : Internal component.
-  : Pattern from the side which enable seeing.

— SURROUND SECTION —



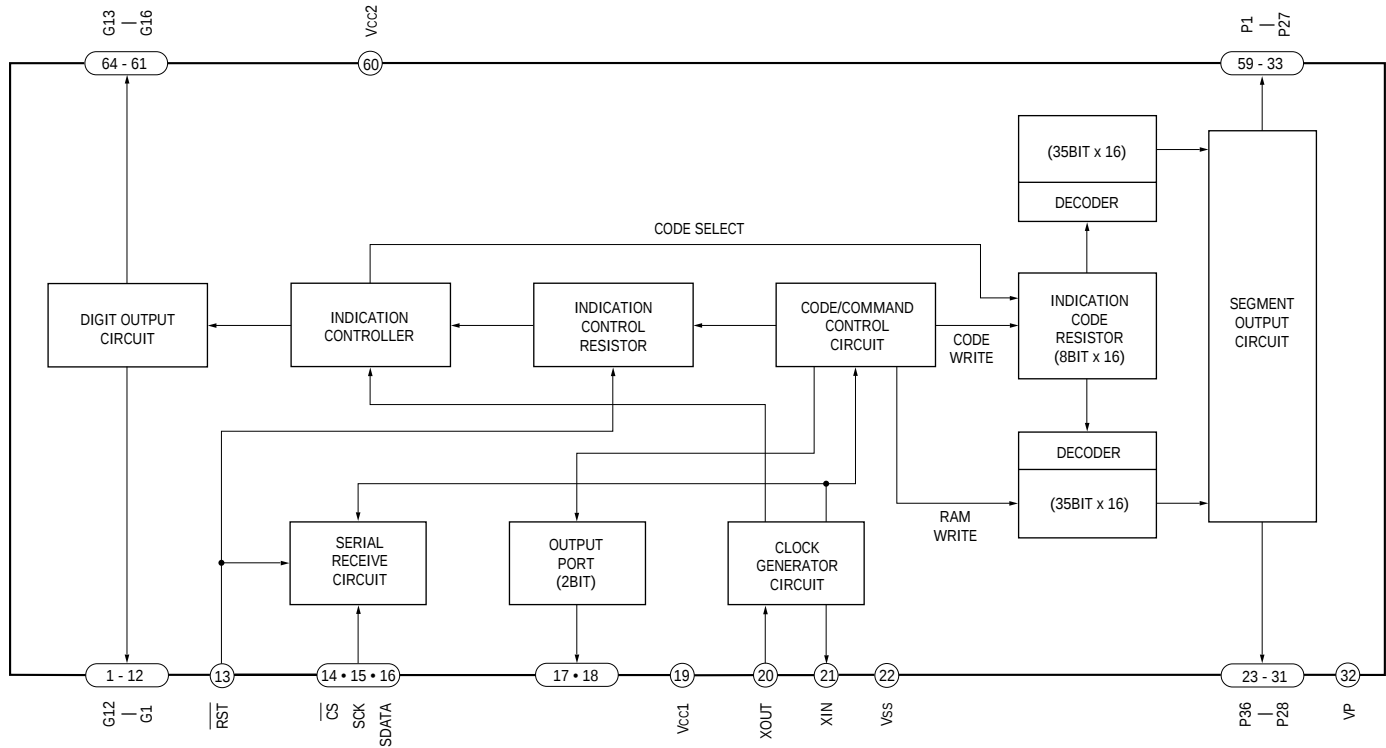
— 59



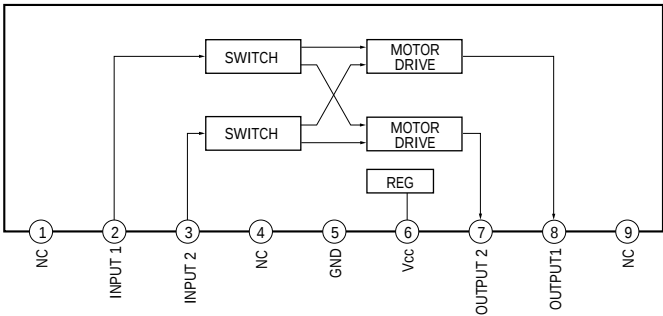
— 60 —



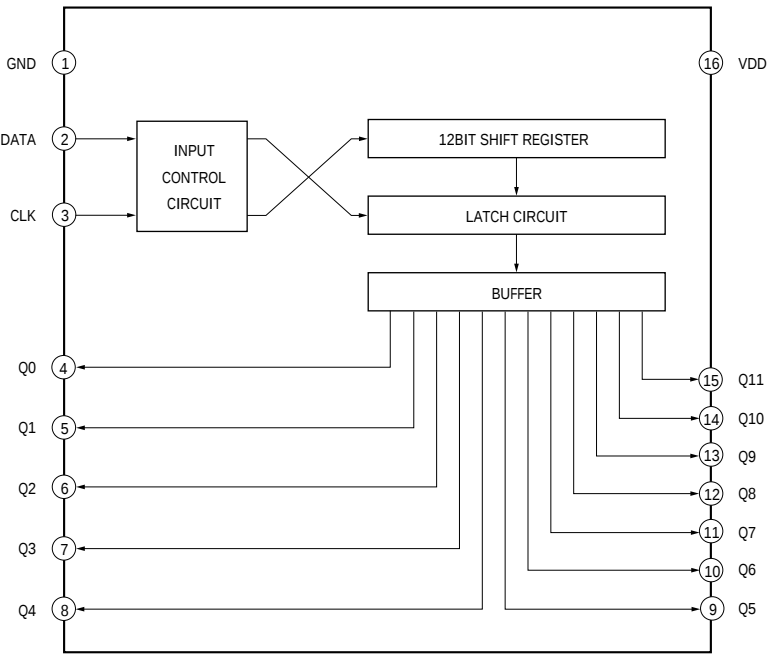
IC101 M66004M6FP



IC106 BA6208



IC108 M50253P



5-11. IC PIN FUNCTION

• IC107 DISPLAY CONTROL (MB90673PF-G-166-BND)

Pin No.	Pin Name	I/O	Function
1	V-A	O	Video selector control output
2	V-B	O	Video selector control output
3	KI0	I	Key input
4	KI1	I	Key input
5	KI2	I	Key input
6	KI3	I	Key input
7	KI4	I	Not used
8	KI5	I	Not used
9	KI6	I	Not used
10	IFDATAIN	I	Not used
11	Vss (D)	–	Ground (Digital)
12	FLLAT	O	Latch output to display driver
13	P. RY	O	Power relay drive
14	RMINPUT	I	SIRCS signal input
15	BRIGRY	O	Bridgable relay drive (Not used)
16	SURRY	O	Surround speaker relay drive
17	CENTERRY	O	Center speaker relay drive
18	FRONTRY	O	Front speaker relay drive
19	HP. RY	O	Phones relay drive
20	RX (SIN)	I	Serial data input from OSD controller
21	TX (SOUT)	O	Serial data output to OSD controller
22	BUSY	I/O	Input/output to communicate with the OSD controller
23	FL CLR	O	Reset output to display driver
24	FL DATA	O	Serial data output to display driver
25	FL CLK	O	Serial clock output to display driver
26	PROT. IN	I	Protector detection input
27	4/8INPUT	I	Not used
28	Vcc (A)	–	Power supply (+5V) (Analog)
29	+AVR	–	Reference voltage (+5V)
30	–AVR	–	Reference voltage (Connect to ground)
31	GND (D)	–	Ground (Digital)
32	SIGNALIN	I	A/D signal input (Not used)
33	—	–	Not used
34	Vss (D)	–	Ground (Digital)
35	A/DKEYIN	I	A/D key input
36	STANDBY	O	Standby LED drive output
37	VOLLED	O	Volume LED drive output
38	VOLUP	O	Volume motor driver control output
39	VOLDOWN	O	Volume motor driver control output
40	–20DB	O	– 20dB mute (Not used)

Pin No.	Pin Name	I/O	Function
41	MODE0	I	Mode select terminal (Fixed at “H”)
42	MODE1	I	Mode select terminal (Fixed at “H”)
43	MODE2	I	Mode select terminal (Fixed at “L”)
44	STANDBY	I	Standby terminal (+5V)
45	STOP	I	Request input of reset interrupt
46	V-INH	O	Video inhibit output (Not used)
47	RDSDATA	I	RDS data input (Not used)
48	RDSCLK	I	RDS clock input (Not used)
49	V-E	O	Video selector control output
50	F. MUTE	O	Function mute control output
51	S. MUTE	O	Surround mute control output
52	D. LAT	O	Latch output to dolby surround decoder
53	KO0	O	Key control signal output
54	DO1	O	Key control signal output
55	DO2	O	Key control signal output
56	DO3	O	Key control signal output
57	DO4	O	Key control signal output (Not used)
58	DO5	O	Key control signal output (Not used)
59	—	—	Not used
60	—	—	Not used
61	T. LAT	O	Latch output to tone control
62	RESET	I	System reset input
63	Vss (D)	—	Ground (Digital)
64	XO	O	System clock (4 MHz)
65	XI	I	System clock (4 MHz)
66	Vcc (D)	—	Power supply (+5V) (Digital)
67	LEDCLR	O	LED data output (Not used)
68	—	—	Not used
69	—	—	Not used
70	DIRECT	O	Source direct/surround relay drive output
71	S. EF	O	Surround effect switch control output
72	BOOST	O	Low boost switch control output
73	S. POWER	I	Power key input (Not used)
74	LED-DATA	O	LED data output
75	S. CLK	O	Serial clock output
76	S. DATA	O	Serial data output
77	S. LAT	O	Serial latch output
78	AUTOSTOP	I	Auto stop detection (Not used)
79	T. MUTE	O	Tuner mute control output (Not used)
80	STEREO	I	Stereo detection (Not used)

• IC205 OSD (MB90095PF-G-161-BND)

Pin No.	Pin Name	I/O	Function
1	YIN	I	Luminous signal input for superimpose displays (Not used)
2	CIN	I	Chroma signal input for superimpose displays (Not used)
3	VIN	I	Composite signal input for superimpose displays
4	AVcc	–	Power supply (+5V) (Analog)
5	FSCO	O	Color burst phase signal output
6	VBLK	O	Vertical blanking period output (Not used)
7	Vcc	–	Power supply (+5V)
8	EXS	I	External circuit of the clock generator for color burst signals (17MHz)
9	XS	O	External circuit of the clock generator for color burst signals (17MHz)
10	HSYNC	O	H. SYNC/COMPOSIT SYNC signal output
11	VSYN	O	V. SYNC signal output (Not used)
12	EXHSYN	I	External H. SYNC signal input
13	EXVSYN	I	External V. SYNC signal input
14	GND	–	Ground
15	EXD	I	External circuit of the display dot clock generator
16	XD	O	External circuit of the display dot clock generator
17	VOB	O	Character and background period signal output (Not used)
18	VOC2	O	Chroma signal output (Not used)
19	VOC1	O	Chroma signal output (Not used)
20	VOC0	O	Chroma signal output (Not used)
21	TEST	I	Test pin
22	S. CLK	I	Shift clock input for serial transmission
23	S. DATA	I	Serial data input
24	CS	I	Chip select input
25	VOUT	O	Composite video signal output
26	COUT	O	Chroma signal output (Not used)
27	YOUT	O	Luminous signal output (Not used)
28	AGND	–	Ground (Analog)

• IC209 OSD CONTROLLER (MB90672PF-G-125-BND)

Pin No.	Pin Name	I/O	Function
1, 2	AD14, AD15	I/O	Address bus and data bus input/output
3 to 6	A16 to A19	I/O	Address bus input/output
7	PCE	O	Chip Enable output to RC controller (For communication using personal computers)
8	PCLK	O	Clock output to RC controller (For communication using personal computers)
9	PDATA OUT	O	Data output to RC controller (For communication using personal computers)
10	PDATA IN	I	Data input from RC controller (For communication using personal computers)
11	GND	–	Ground
12	ALE	O	Address latch enable output
13	RDX	O	Read strobe output to data bus
14	WRLX	O	Write strobe output to data bus
15	WRHX	O	
16	MONITOR	O	Not used
17	VIDEO2	O	
18	STATUS-OUT	O	
19	VIDEO1	O	
20	RX (SIN)	I	Serial data input from display control
21	TX (SOT)	O	Serial data output to display control
22	—	O	Not used
23	—	O	
24	DATA (OSD)	O	Serial data output to OSD
25	CLK (OSD)	O	Serial clock output to OSD
26	LAT (OSD)	O	Latch output to OSD
27	—	O	Not used
28	AVcc	–	Power supply (+5.6V)
29	AVR +	–	Power supply (+5V)
30	AVR –	–	Ground
31	AVss	–	
32	VOLA/D	I	Volume control signal input
33	PDREADY	I	READY signal input from to RC controller
34	GND	–	Ground
35	PDSTATUS	I	STATUS signal input from to RC controller
36	OK	I	Learning OK signal input from RC controller
37	MEMORY FULL	I	Memory full signal input from RC controller
38	BACK UP NG	I	Back up NG signal input from RC controller
39	NG	I	Learning NG signal input from RC controller
40	P-IR	I	Input to the integral calculus circuit of the remote control reception signal

RC: Remote commander

Pin No.	Pin Name	I/O	Function
41	MODE0	I	Mode setting (Fixed at “H”)
42	MODE1	I	Mode setting (Fixed at “L”)
43	MODE2	I	Mode setting (Fixed at “L”)
44	HSTX	–	Hardware standby (Fixed at “H”)
45	STOP	I	Request input of reset interrupt
46	IR-IN (A6)	I	IR sensor remote control input
47	—	O	Not used
48	—	O	Not used
49	AUBUS IN	I	S-LINK control A1 signal input
50	V. SIGNAL	I	H-sync switching signal input
51	PAL/SECAM	I	Not used
52	VD	I	Vertical drive signal input
53	AUBUS OUT	O	S-LINK control A1 signal output
54	F. SW (TA)	O	To control output into monitor
55	—	O	Not used
56	—	O	Not used
57	—	O	Not used
58	—	O	Not used
59	—	O	Not used
60	IR ON/OFF	O	IR remote control ON/OFF output
61	BUSY	O	Input/output to communicate with the display control
62	RESET	I	Reset signal input
63	GND	–	Ground
64	XO	O	Clock (4 MHz)
65	XI	I	Clock (4 MHz)
66	Vcc	–	Power supply (+5.6V)
67 to 100	AD00 to AD13	I/O	Address bus and data bus input/output

• IC215 RC CONTROLLER (S-1810CF-049)

Pin No.	Pin Name	I/O	Function
1	VDD1	–	Power supply (+5V)
2	Vss1	–	Ground
3 to 10	—	I	Key matrix sense input (Not used)
11	VDD2	–	Power supply (+5V)
12	XIN	I	Clock (4MHz)
13	XOUT	O	Clock (4MHz)
14	Vss2	–	Ground
15	$\overline{\text{REN}}$	O	Power supply control of the remote control signal reception circuit (Not used)
16	RMIN	I	Remote control reception signal input (Not used) (Fixed at “L”)
17	Vss3	–	Ground
18	CHKOUT	O	Output of the remote control reception signal amplifier circuit (Not used)
19	CHKIN	I	Input to the waveform shaper circuit of the remote control reception signal
20	VADJ1	I	For the first detection voltage adjustment of the low voltage detection circuit connected to the resistor (Not used)
21	VADJ2	I	For the second detection voltage adjustment of the low voltage detection circuit connected to the resistor (Not used)
22	DATA IN	I	DATA input from OSD controller
23	STATUS	I/O	STATUS signal input/output to OSD controller
24	CLK	I	Serial clock input (Also serves as a port input.)
25	VDD3	–	Power supply (+5V)
26	—	–	Not used
27	Vss4	–	Ground
28, 29	—	I	Test pin
30	—	I/O	Port input/output (Not used.)
31	READY	I/O	READY signal input/output OSD controller
32	DATA OUT	O	DATA output to OSD controller
33	NG	O	Learning NG signal output
34	BACKUP	O	Backup NG signal output
35	M-FULL	O	Memory full signal output
36	OK	O	Learning OK signal output
37	—	O	Not used
38	Vss5	–	Ground
39	PB3/LAT	I	External interrupt input
40	—	O	Output of the waveform shaper circuit of the remote control reception signal (Not used)
41	VDDR	–	Power supply for the built-in SRAM (+5.6V)
42	$\overline{\text{RESET}}$	I	Reset input “L” : Reset
43	CHHIGH	–	Connected to the power supply. (+5V)
44	RMOUT	O	Remote control transmission signal output
45 to 54	—	O	Key matrix scanning output (Not used)

SECTION 6 EXPLODED VIEWS

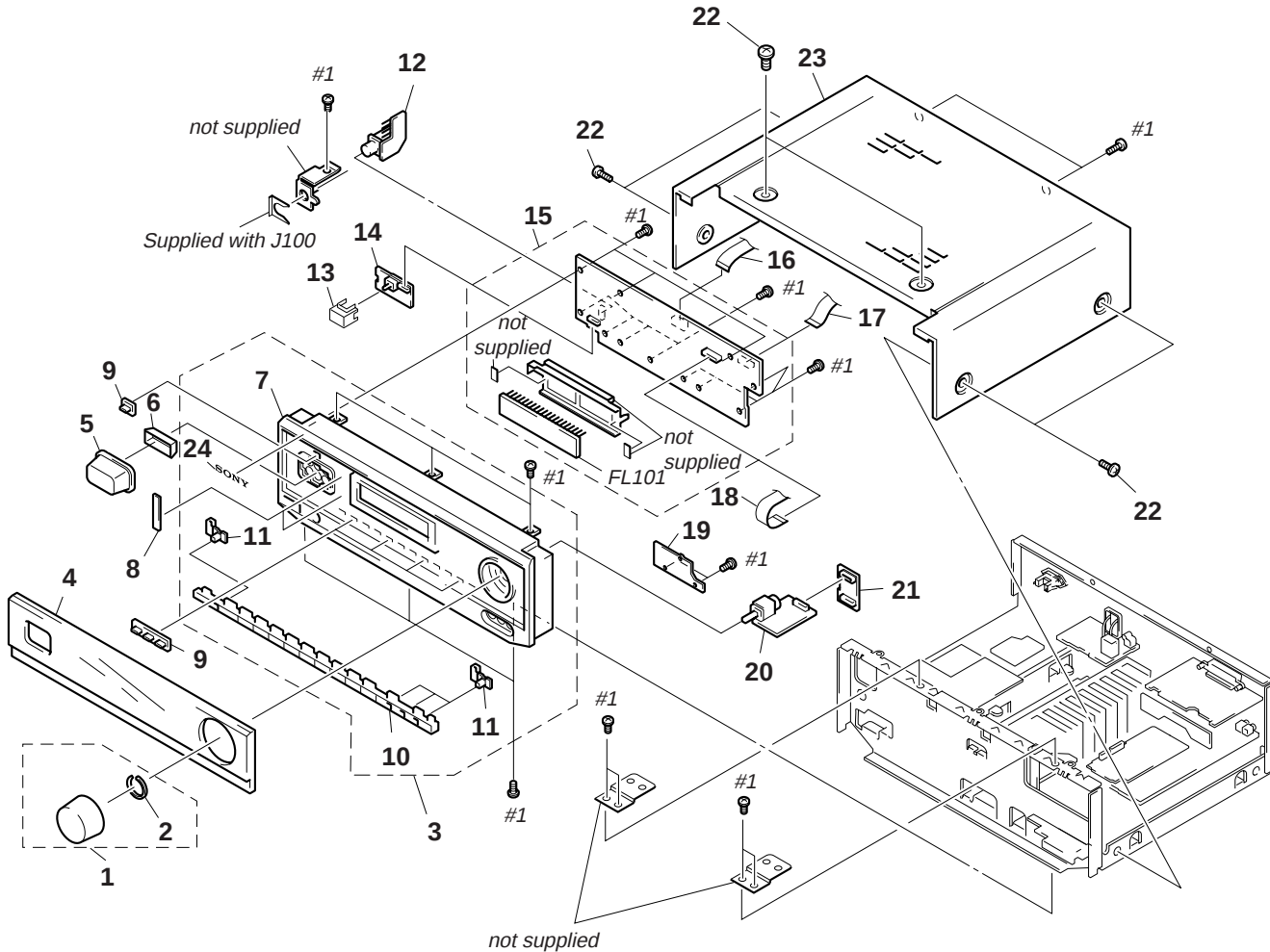
NOTE:

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

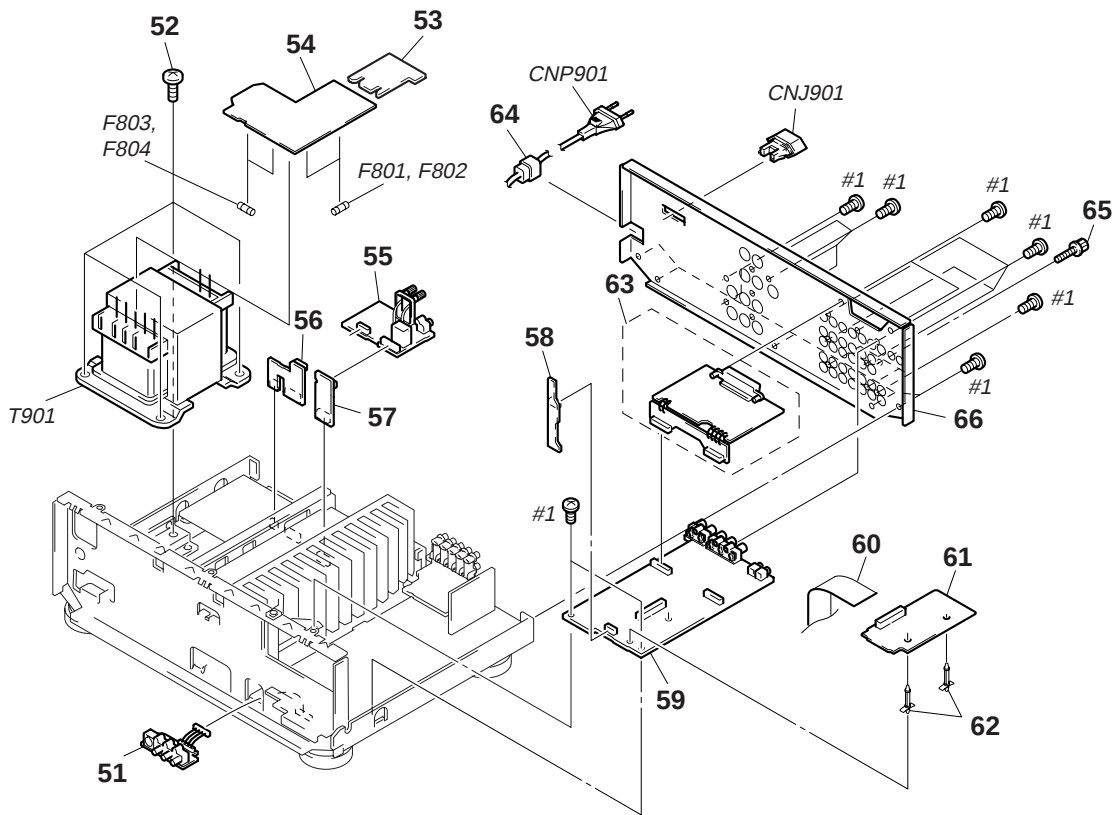
The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

6-1. CASE AND FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4947-074-1	KNOB (R48) ASSY		* 14	1-661-055-11	POWER SW BOARD	
2	3-350-426-01	SPRING, RING		* 15	A-4390-303-A	DISPLAY BOARD, COMPLETE	
3	X-4947-527-1	PANEL ASSY, FRONT		16	1-773-709-11	WIRE (FLAT TYPE) (21 CORE)(170 mm)	
4	4-982-069-31	PLATE (A9), INDICATION		17	1-773-723-11	WIRE (FLAT TYPE) (21 CORE)(320 mm)	
5	4-974-131-01	COVER (LED)		18	1-773-638-11	WIRE (FLAT TYPE) (17 CORE)	
6	4-974-125-01	REFLECTOR (LED)		* 19	1-661-017-11	MUTE SW BOARD	
7	4-982-070-31	PANEL (A9), FRONT		* 20	1-661-018-11	VOL BOARD	
8	4-984-644-01	CUSHION (DW)		* 21	1-661-029-11	VOL JOINT BOARD	
9	4-974-132-01	INDICATOR (F)(three pieces in one package)		22	3-704-366-01	SCREW (CASE) (M3X8)	
10	4-974-135-11	BUTTON (F)		* 23	4-979-945-81	CASE (414532)	
11	4-974-134-01	BUTTON (S)		24	4-963-404-21	EMBLEM (5-A), SONY	
* 12	1-661-020-11	HP BOARD		FL101	1-517-519-11	INDICATOR TUBE, FLUORESCENT	
13	4-980-109-01	BUTTON (P-M)					

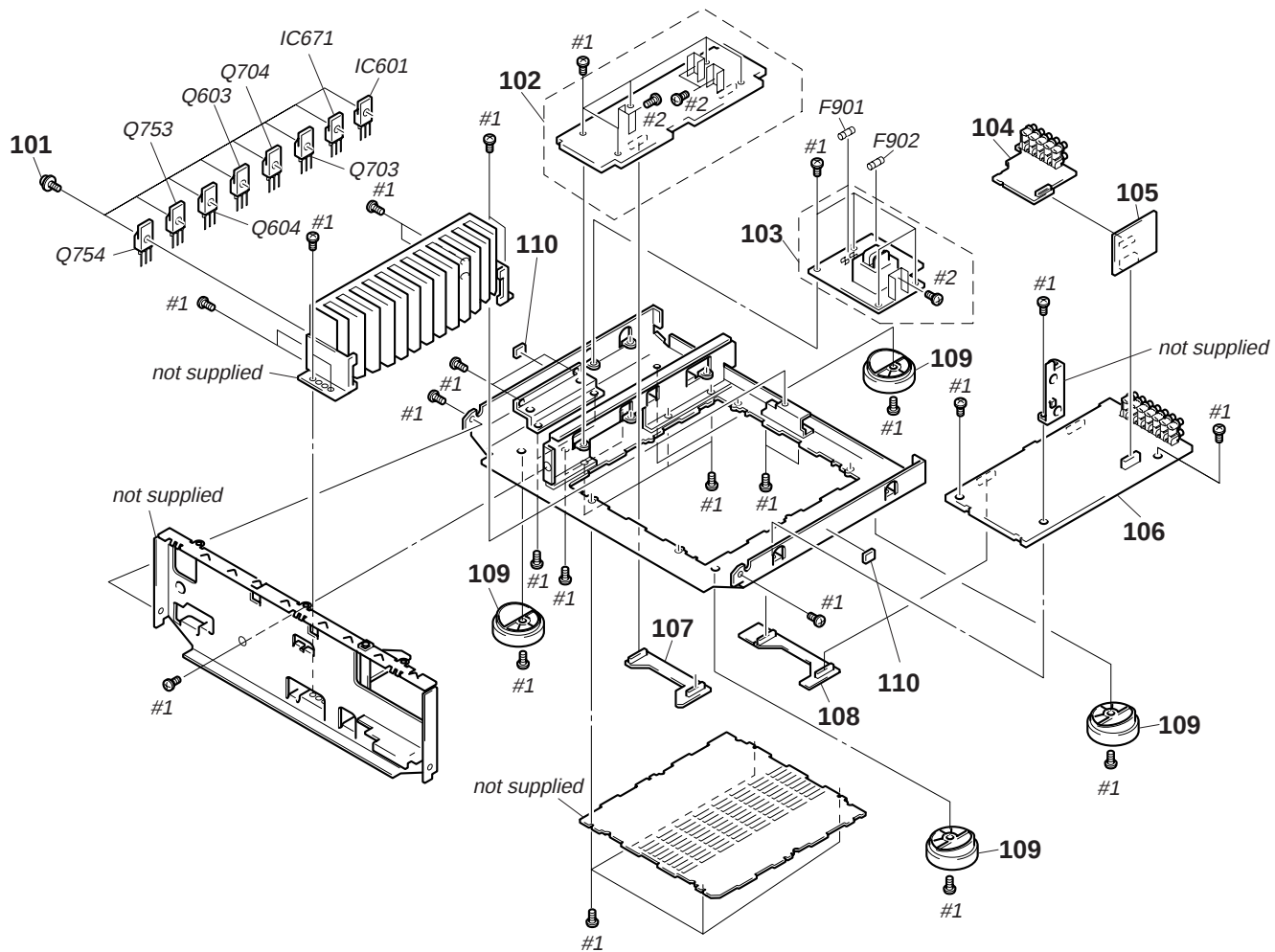
6-2. BACK PANEL SECTION



The components identified by mark $\triangle$ or dotted line with mark $\triangle$ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 51	1-661-027-11	VIDEO 3 BOARD		* 63	A-4390-304-A	S.VIDEO BOARD, COMPLETE	
52	4-381-962-11	SCREW +BVT 4X8 (S)		* 64	3-703-244-00	BUSHING (2104), CORD	
* 53	1-661-021-11	PRIM BOARD		65	4-947-010-01	SCREW, FEEDER FIXED	
* 54	1-661-032-11	FUSE BOARD					
* 55	1-661-030-11	SP TERMINAL BOARD		* 66	4-982-067-11	PANEL, BACK	
				$\triangle$ CNJ909	1-526-794-11	OUTLET, AC	
* 56	1-661-026-11	PS JOINT BOARD		$\triangle$ CNP901	1-769-744-11	CORD, POWER	
* 57	1-661-031-11	SP JOINT BOARD		$\triangle$ F801	1-532-506-51	FUSE, TIME LAG (6.3A 250V)	
* 58	1-661-035-11	OSD JOINT BOARD		$\triangle$ F802	1-532-506-51	FUSE, TIME LAG (6.3A 250V)	
* 59	A-4390-245-A	OSD BOARD, COMPLETE					
60	1-773-840-11	WIRE (FLAT TYPE) (29 CORE)		$\triangle$ F803	1-532-504-51	FUSE, TIME LAG (4A 250V)	
				$\triangle$ F804	1-532-504-51	FUSE, TIME LAG (4A 250V)	
* 61	1-661-036-11	MEMORY BOARD		$\triangle$ T901	1-429-542-12	TRANSFORMER, POWER	
* 62	3-703-353-07	SUPPORT, PC BOARD					

6-3. CHASSIS SECTION



The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	3-905-609-01	SCREW (TRANSISTOR)		△ F901	1-532-504-51	FUSE, TIME LAG (4A 250V)	
* 102	A-4390-236-A	AMP BOARD, COMPLETE		△ F902	1-532-464-51	FUSE, TIME LAG (2.5A 250V)	
* 103	A-4390-240-A	PS BOARD, COMPLETE		IC601	8-759-085-89	IC LM3875-S	
* 104	1-661-022-11	AUDIO 2F BOARD		IC671	8-759-085-89	IC LM3875-S	
* 105	1-661-019-11	PHONO BOARD		Q603	8-749-010-25	TRANSISTOR MN2488-OPY-M	
* 106	A-4390-237-A	SURR BOARD, COMPLETE		Q604	8-749-010-26	TRANSISTOR MP1620-OPY-M	
* 107	1-661-037-11	AMP JOINT (F) BOARD		Q703	8-749-010-25	TRANSISTOR MN2488-OPY-M	
* 108	1-661-038-11	AMP JOINT (B) BOARD		Q704	8-749-010-26	TRANSISTOR MP1620-OPY-M	
109	X-4947-025-1	FOOT ASSY		Q753	8-749-010-25	TRANSISTOR MN2488-OPY-M	
110	4-985-642-01	CUSHION		Q754	8-749-010-26	TRANSISTOR MP1620-OPY-M	

SECTION 7 ELECTRICAL PARTS LIST

AMP

Note:

The components identified by mark $\triangle$ or dotted line with mark $\triangle$ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F : nonflammable

- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA...: μ PA..., uPB...: μ PB...,
uPC...: μ PC..., uPD...: μ PD...
- CAPACITORS
uF : μ F
- COILS
uH : μ H

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
*	A-4390-236-A	AMP BOARD, COMPLETE *****					C808	1-104-664-11	ELECT	47uF	20%	16V	
	7-682-548-04	SCREW +BVTT 3X8 (S)					C809	1-104-664-11	ELECT	47uF	20%	16V	
							C810	1-126-967-11	ELECT	47uF	20%	35V	
							C811	1-126-974-11	ELECT	3300uF	20%	50V	
							C812	1-126-974-11	ELECT	3300uF	20%	50V	
		< CAPACITOR >				C813	1-136-495-11	FILM	0.068uF	5%	50V		
C601	1-104-664-11	ELECT	47uF	20%	16V								
C602	1-107-597-11	CERAMIC	22PF	10%	500V	C814	1-136-495-11	FILM	0.068uF	5%	50V		
C603	1-107-597-11	CERAMIC	22PF	10%	500V	C815	1-126-967-11	ELECT	47uF	20%	35V		
C604	1-136-157-00	FILM	0.022uF	5%	50V	C816	1-126-967-11	ELECT	47uF	20%	35V		
C606	1-162-286-31	CERAMIC	220PF	10%	50V			< CONNECTOR >					
C610	1-164-159-11	CERAMIC	0.1uF		50V								
C621	1-124-907-11	ELECT	10uF	20%	50V	CNJ601	1-770-404-11	HOUSING, CONNECTOR (PC BOARD) 11P					
C622	1-162-282-31	CERAMIC	100PF	10%	50V	CNJ701	1-770-404-11	HOUSING, CONNECTOR (PC BOARD) 11P					
C623	1-162-282-31	CERAMIC	100PF	10%	50V	* CNJ802	1-564-507-11	PLUG, CONNECTOR 4P					
C624	1-104-665-11	ELECT	100uF	20%	16V	CNJ803	1-770-382-11	CONNECTOR, BOARD TO BOARD 12P					
						CNP702	1-770-481-11	PIN, CONNECTOR 4P					
C626	1-136-157-00	FILM	0.022uF	5%	50V								
C656	1-124-907-11	ELECT	10uF	20%	50V	* CNP801	1-560-259-00	CONNECTOR PIN,WITH LOCK 6P					
C671	1-124-907-11	ELECT	10uF	20%	50V	CNS702	1-764-926-11	CONNECTOR,FFC(LIF(NON-ZIF))21P					
C672	1-162-282-31	CERAMIC	100PF	10%	50V			< DIODE >					
C673	1-162-282-31	CERAMIC	100PF	10%	50V								
C674	1-104-665-11	ELECT	100uF	20%	16V	D601	8-719-987-63	DIODE 1N4148M					
C676	1-136-157-00	FILM	0.022uF	5%	50V	D602	8-719-010-15	DIODE UZ-3.0BS					
C701	1-104-664-11	ELECT	47uF	20%	16V	D603	8-719-010-15	DIODE UZ-3.0BS					
C702	1-107-597-11	CERAMIC	22PF	10%	500V	D604	8-719-987-63	DIODE 1N4148M					
C703	1-107-597-11	CERAMIC	22PF	10%	500V	D607	8-719-987-63	DIODE 1N4148M					
C704	1-136-157-00	FILM	0.022uF	5%	50V	D608	8-719-987-63	DIODE 1N4148M					
C706	1-162-286-31	CERAMIC	220PF	10%	50V	D631	8-719-987-63	DIODE 1N4148M					
C711	1-126-941-11	ELECT	470uF	20%	6.3V	D632	8-719-987-63	DIODE 1N4148M					
C712	1-124-463-00	ELECT	0.1uF	20%	50V	D701	8-719-987-63	DIODE 1N4148M					
C713	1-101-004-00	CERAMIC	0.01uF		50V	D702	8-719-010-15	DIODE UZ-3.0BS					
C714	1-164-159-11	CERAMIC	0.1uF		50V	D703	8-719-010-15	DIODE UZ-3.0BS					
C751	1-104-664-11	ELECT	47uF	20%	16V	D704	8-719-987-63	DIODE 1N4148M					
C752	1-107-597-11	CERAMIC	22PF	10%	500V	D710	8-719-815-85	DIODE 1S1585					
C753	1-107-597-11	CERAMIC	22PF	10%	500V	D711	8-719-815-85	DIODE 1S1585					
C754	1-136-157-00	FILM	0.022uF	5%	50V	D713	8-719-987-63	DIODE 1N4148M					
C756	1-162-286-31	CERAMIC	220PF	10%	50V	D714	8-719-987-63	DIODE 1N4148M					
C763	1-101-004-00	CERAMIC	0.01uF		50V	D716	8-719-987-63	DIODE 1N4148M					
C801	1-124-907-11	ELECT	10uF	20%	50V	D751	8-719-987-63	DIODE 1N4148M					
C802	1-124-907-11	ELECT	10uF	20%	50V	D752	8-719-010-15	DIODE UZ-3.0BS					
C803	1-111-263-11	ELECT	10000uF	20%	56V	D753	8-719-010-15	DIODE UZ-3.0BS					
C804	1-111-263-11	ELECT	10000uF	20%	56V	D754	8-719-987-63	DIODE 1N4148M					
C805	1-137-420-11	FILM	0.047uF	10%	100V	D801	8-719-934-22	DIODE HZS30-2L					
C806	1-137-420-11	FILM	0.047uF	10%	100V	D802	8-719-302-38	DIODE RBV-602-01					
C807	1-104-664-11	ELECT	47uF	20%	16V	D803	8-719-028-23	DIODE D3SBA20-4101					

Ref. No.	Part No.	Description	Remark
< GROUND TERMINAL >			
EB700	1-537-770-21	TERMINAL BOARD, GROUND	
EB701	1-537-770-21	TERMINAL BOARD, GROUND	
EB702	1-537-770-21	TERMINAL BOARD, GROUND	
< IC >			
IC601	8-759-085-89	IC LM3875-S	
IC671	8-759-085-89	IC LM3875-S	
IC801	8-759-604-39	IC M5F78M12	
IC802	8-759-604-39	IC M5F78M12	
IC803	8-759-604-45	IC M5F79M12	
< COIL >			
L601	1-420-872-00	COIL, AIR-CORE	
L602	1-420-872-00	COIL, AIR-CORE	
L652	1-420-872-00	COIL, AIR-CORE	
< TRANSISTOR >			
Q601	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q602	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q603	8-749-010-25	TRANSISTOR MN2488-OPY-M	
Q604	8-749-010-26	TRANSISTOR MP1620-OPY-M	
Q605	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q607	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q608	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q701	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q702	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q703	8-749-010-25	TRANSISTOR MN2488-OPY-M	
Q704	8-749-010-26	TRANSISTOR MP1620-OPY-M	
Q705	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q711	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q712	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q713	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q751	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q752	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q753	8-749-010-25	TRANSISTOR MN2488-OPY-M	
Q754	8-749-010-26	TRANSISTOR MP1620-OPY-M	
Q755	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q801	8-729-140-97	TRANSISTOR 2SB734-34	
< RESISTOR >			
R600	1-249-437-11	CARBON 47K 5%	1/4W
△ R601	1-249-393-11	CARBON 10 5%	1/4W F
R603	1-249-421-11	CARBON 2.2K 5%	1/4W F
R604	1-249-414-11	CARBON 560 5%	1/4W F
△ R605	1-249-393-11	CARBON 10 5%	1/4W F
△ R606	1-233-352-31	ENCAPSLATED	
R610	1-247-850-11	CARBON 6.2K 5%	1/4W
R611	1-249-419-11	CARBON 1.5K 5%	1/4W F
△ R613	1-249-389-11	CARBON 4.7 5%	1/4W F
R614	1-249-439-11	CARBON 68K 5%	1/4W
△ R615	1-249-393-11	CARBON 10 5%	1/4W F

Ref. No.	Part No.	Description	Remark
R617	1-249-435-11	CARBON 33K 5%	1/4W
R621	1-249-438-11	CARBON 56K 5%	1/4W
R623	1-249-415-11	CARBON 680 5%	1/4W F
R624	1-249-438-11	CARBON 56K 5%	1/4W
△ R625	1-249-389-11	CARBON 4.7 5%	1/4W F
R626	1-249-438-11	CARBON 56K 5%	1/4W
△ R627	1-249-393-11	CARBON 10 5%	1/4W F
R631	1-249-429-11	CARBON 10K 5%	1/4W
R632	1-249-425-11	CARBON 4.7K 5%	1/4W F
△ R633	1-249-414-11	CARBON 560 5%	1/4W F
△ R634	1-249-414-11	CARBON 560 5%	1/4W F
R635	1-249-429-11	CARBON 10K 5%	1/4W
R636	1-249-425-11	CARBON 4.7K 5%	1/4W F
R671	1-249-438-11	CARBON 56K 5%	1/4W
R673	1-249-415-11	CARBON 680 5%	1/4W F
R674	1-249-438-11	CARBON 56K 5%	1/4W
△ R675	1-249-389-11	CARBON 4.7 5%	1/4W F
R676	1-249-437-11	CARBON 47K 5%	1/4W
△ R677	1-249-393-11	CARBON 10 5%	1/4W F
R700	1-249-437-11	CARBON 47K 5%	1/4W
△ R701	1-249-393-11	CARBON 10 5%	1/4W F
R703	1-249-421-11	CARBON 2.2K 5%	1/4W F
R704	1-249-414-11	CARBON 560 5%	1/4W F
△ R705	1-249-393-11	CARBON 10 5%	1/4W F
△ R706	1-233-352-31	ENCAPSLATED	
R710	1-247-850-11	CARBON 6.2K 5%	1/4W
R711	1-249-419-11	CARBON 1.5K 5%	1/4W F
R714	1-249-437-11	CARBON 47K 5%	1/4W
△ R715	1-249-393-11	CARBON 10 5%	1/4W F
△ R719	1-215-868-00	METAL OXIDE 680 5%	1W
R721	1-249-429-11	CARBON 10K 5%	1/4W
R722	1-249-435-11	CARBON 33K 5%	1/4W
R723	1-249-427-11	CARBON 6.8K 5%	1/4W F
△ R724	1-249-393-11	CARBON 10 5%	1/4W F
R727	1-249-417-11	CARBON 1K 5%	1/4W F
R732	1-249-429-11	CARBON 10K 5%	1/4W
R750	1-249-437-11	CARBON 47K 5%	1/4W
△ R751	1-249-393-11	CARBON 10 5%	1/4W F
R753	1-249-421-11	CARBON 2.2K 5%	1/4W F
R754	1-249-414-11	CARBON 560 5%	1/4W F
△ R755	1-249-393-11	CARBON 10 5%	1/4W F
△ R756	1-233-352-31	ENCAPSLATED	
R760	1-247-850-11	CARBON 6.2K 5%	1/4W
R761	1-249-419-11	CARBON 1.5K 5%	1/4W F
R764	1-249-438-11	CARBON 56K 5%	1/4W
△ R765	1-249-393-11	CARBON 10 5%	1/4W F
△ R769	1-215-868-00	METAL OXIDE 680 5%	1W
△ R774	1-249-393-11	CARBON 10 5%	1/4W F
R801	1-249-429-11	CARBON 10K 5%	1/4W
△ R802	1-249-401-11	CARBON 47 5%	1/4W F
△ R803	1-215-886-11	METAL OXIDE 100 5%	2W F
△ R804	1-215-886-11	METAL OXIDE 100 5%	2W F

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

AMP	AMP JOINT (B)	AMP JOINT (F)	AUDIO 2F	DISPLAY
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Ref. No.	Part No.	Description	Remark			
△ R806	1-215-886-11	METAL OXIDE	100	5%	2W	F
△ R809	1-249-405-11	CARBON	100	5%	1/4W	F
△ R810	1-249-405-11	CARBON	100	5%	1/4W	F
△ R811	1-249-405-11	CARBON	100	5%	1/4W	F
△ R812	1-249-414-11	CARBON	560	5%	1/4W	F
△ R813	1-215-886-11	METAL OXIDE	100	5%	2W	F
△ R814	1-215-886-11	METAL OXIDE	100	5%	2W	F
△ R815	1-215-886-11	METAL OXIDE	100	5%	2W	F
△ R816	1-215-886-11	METAL OXIDE	100	5%	2W	F
△ R817	1-215-886-11	METAL OXIDE	100	5%	2W	F
△ R818	1-215-888-00	METAL OXIDE	220	5%	2W	F
△ R819	1-215-888-00	METAL OXIDE	220	5%	2W	F
< RELAY >						
RY601	1-515-741-11	RELAY				
RY602	1-515-920-11	RELAY (24V)				
< TERMINAL >						
* TM601	1-537-882-11	TERMINAL BOARD 6P (CENTER SPEAKER, REAR SPEAKERS)				

* 1-661-038-11	AMP JOINT (B) BOARD *****					
< CONNECTOR >						
CNP502	1-770-553-11	CONNECTOR, BOARD TO BOARD 11P				
CNP601	1-770-553-11	CONNECTOR, BOARD TO BOARD 11P				
< RESISTOR >						
R622	1-249-417-11	CARBON	1K	5%	1/4W	F
R672	1-249-417-11	CARBON	1K	5%	1/4W	F

* 1-661-037-11	AMP JOINT (F) BOARD *****					
< CONNECTOR >						
CNP501	1-770-553-11	CONNECTOR, BOARD TO BOARD 11P				
CNP701	1-770-553-11	CONNECTOR, BOARD TO BOARD 11P				

* 1-661-022-11	AUDIO 2F BOARD *****					
< CAPACITOR >						
C395	1-162-282-31	CERAMIC	100PF	10%	50V	
C396	1-162-294-31	CERAMIC	0.001uF	10%	50V	

Ref. No.	Part No.	Description	Remark			
< CONNECTOR >						
CNJ302	1-695-093-11	SOCKET, CONNECTOR 9P				
< IC >						
IC304	8-759-805-14	IC LC7822				
< JACK >						
J303	1-770-015-11	JACK, PIN 6P (VIDEO2 AUDIO OUT, LD AUDIO IN, SATL AUDIO IN)				
J304	1-770-015-11	JACK, PIN 6P (VIDEO1 AUDIO IN/OUT, VIDEO2 AUDIO IN)				
< RESISTOR >						
R322	1-249-417-11	CARBON	1K	5%	1/4W	F
R323	1-249-417-11	CARBON	1K	5%	1/4W	F
R324	1-249-417-11	CARBON	1K	5%	1/4W	F
R325	1-249-417-11	CARBON	1K	5%	1/4W	F
R326	1-249-417-11	CARBON	1K	5%	1/4W	F
R327	1-249-417-11	CARBON	1K	5%	1/4W	F
R372	1-249-417-11	CARBON	1K	5%	1/4W	F
R373	1-249-417-11	CARBON	1K	5%	1/4W	F
R374	1-249-417-11	CARBON	1K	5%	1/4W	F
R375	1-249-417-11	CARBON	1K	5%	1/4W	F
R376	1-249-417-11	CARBON	1K	5%	1/4W	F
R377	1-249-417-11	CARBON	1K	5%	1/4W	F
R395	1-249-417-11	CARBON	1K	5%	1/4W	F
R396	1-249-425-11	CARBON	4.7K	5%	1/4W	F

*	A-4390-303-A	DISPLAY BOARD, COMPLETE *****				
< CAPACITOR >						
C101	1-124-257-00	ELECT	2.2uF	20%	50V	
C102	1-164-159-11	CERAMIC	0.1uF		50V	
C107	1-126-785-11	ELECT	47uF	20%	16V	
C108	1-126-785-11	ELECT	47uF	20%	16V	
C109	1-162-282-31	CERAMIC	100PF	10%	50V	
C110	1-126-796-11	ELECT	22uF	20%	50V	
C111	1-126-785-11	ELECT	47uF	20%	16V	
C113	1-164-159-11	CERAMIC	0.1uF		50V	
C114	1-164-159-11	CERAMIC	0.1uF		50V	
C115	1-162-282-31	CERAMIC	100PF	10%	50V	
C116	1-104-905-11	CAPACITOR	0.22F		5.5V	
C117	1-164-159-11	CERAMIC	0.1uF		50V	
C119	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C120	1-164-159-11	CERAMIC	0.1uF		50V	
C121	1-162-282-31	CERAMIC	100PF	10%	50V	
C122	1-162-282-31	CERAMIC	100PF	10%	50V	
C123	1-162-282-31	CERAMIC	100PF	10%	50V	

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

DISPLAY

Ref. No.	Part No.	Description			Remark
C124	1-162-282-31	CERAMIC	100PF	10%	50V
C125	1-162-282-31	CERAMIC	100PF	10%	50V
C126	1-162-282-31	CERAMIC	100PF	10%	50V
C127	1-162-282-31	CERAMIC	100PF	10%	50V
C128	1-162-282-31	CERAMIC	100PF	10%	50V
C129	1-162-282-31	CERAMIC	100PF	10%	50V
C130	1-162-282-31	CERAMIC	100PF	10%	50V
C131	1-162-282-31	CERAMIC	100PF	10%	50V
C132	1-162-282-31	CERAMIC	100PF	10%	50V
C133	1-162-282-31	CERAMIC	100PF	10%	50V
C134	1-162-282-31	CERAMIC	100PF	10%	50V
C135	1-126-786-11	ELECT	47uF	20%	16V
C136	1-162-282-31	CERAMIC	100PF	10%	50V
C137	1-162-282-31	CERAMIC	100PF	10%	50V
C138	1-126-795-11	ELECT	10uF	20%	50V
C139	1-162-282-31	CERAMIC	100PF	10%	50V
C140	1-164-159-11	CERAMIC	0.1uF		50V
C141	1-124-584-00	ELECT	100uF	20%	10V
< CONNECTOR >					
* CNJ101	1-565-480-11	CONNECTOR, BOARD TO BOARD 4P			
CNJ102	1-764-958-11	CONNECTOR, FFC (LIF(NON-ZIF)) 17P			
CNJ103	1-770-396-11	HOUSING, CONNECTOR (PC BOARD) 3P			
CNJ104	1-766-034-11	CONNECTOR,FFC(LIF(NON-ZIF))21P			
CNJ105	1-770-718-11	SOCKET, CONNECTOR 22P			
* CNJ106	1-565-480-11	CONNECTOR, BOARD TO BOARD 4P			
CNJ108	1-770-398-11	HOUSING, CONNECTOR(PC BOARD)5P			
< DIODE >					
D101	8-719-301-49	DIODE	SEL2810A (SPEAKERS)		
D102	8-719-301-49	DIODE	SEL2810A (TAPE MONITOR)		
D103	8-719-301-49	DIODE	SEL2810A (VIDEO1)		
D104	8-719-301-49	DIODE	SEL2810A (VIDEO2)		
D105	8-719-301-49	DIODE	SEL2810A (VIDEO3)		
D106	8-719-301-49	DIODE	SEL2810A (LD)		
D107	8-719-301-49	DIODE	SEL2810A (SATL)		
D108	8-719-301-49	DIODE	SEL2810A (DAT/MD)		
D109	8-719-301-49	DIODE	SEL2810A (CD)		
D110	8-719-301-49	DIODE	SEL2810A (TUNER)		
D111	8-719-301-49	DIODE	SEL2810A (PHONO)		
D112	8-719-313-43	DIODE	SEL6210S-TH10 (IR CODE SETTING)		
D113	8-719-987-63	DIODE	1N4148M		
D114	8-719-118-33	DIODE	PH302D		
D115	8-719-987-63	DIODE	1N4148M		
D116	8-719-987-63	DIODE	1N4148M		
D117	8-719-987-63	DIODE	1N4148M		
D118	8-719-987-63	DIODE	1N4148M		
D119	8-719-059-67	DIODE	SID1003BQ-TP19 (VISION TOUCH)		
D120	8-719-059-67	DIODE	SID1003BQ-TP19 (VISION TOUCH)		
D121	8-719-024-99	DIODE	11ES2-NTA2B		
D122	8-719-987-63	DIODE	1N4148M		
D123	8-719-059-67	DIODE	SID1003BQ-TP19 (VISION TOUCH)		

Ref. No.	Part No.	Description	Remark			
D124	8-719-059-67	DIODE	SID1003BQ-TP19 (VISION TOUCH)			
D125	8-719-059-67	DIODE	SID1003BQ-TP19 (VISION TOUCH)			
D128	8-719-059-67	DIODE	SID1003BQ-TP19 (VISION TOUCH)			
D129	8-719-059-67	DIODE	SID1003BQ-TP19 (VISION TOUCH)			
D130	8-719-059-67	DIODE	SID1003BQ-TP19 (VISION TOUCH)			
D131	8-719-987-63	DIODE	1N4148M			
D133	8-719-987-63	DIODE	1N4148M			
D134	8-719-987-63	DIODE	1N4148M			
D136	8-719-987-63	DIODE	1N4148M			
D138	8-719-059-67	DIODE	SID1003BQ-TP19 (VISION TOUCH)			
D139	8-719-059-67	DIODE	SID1003BQ-TP19 (VISION TOUCH)			
D140	8-719-313-43	DIODE	SEL6210S-TH10 (STANDBY)			
D1001	8-719-010-36	DIODE	UZ-5.1BS			
< FLUORESCENT INDICATOR >						
FL101	1-517-519-11	INDICATOR TUBE, FLUORESCENT				
< IC >						
IC101	8-759-261-63	IC	M66004M6FP			
IC104	1-233-617-11	IC	ENCAPSULATED COMPONENT			
IC105	8-759-240-69	IC	TC4069UBP			
IC106	8-759-962-08	IC	BA6208			
IC107	8-759-440-05	IC	MB90673-G-166-BND			
IC108	8-759-635-31	IC	M50253P			
< COIL >						
L101	1-410-509-11	INDUCTOR	10uH			
L102	1-410-509-11	INDUCTOR	10uH			
< TRANSISTOR >						
Q101	8-729-900-36	TRANSISTOR	DTC124ES			
Q110	8-729-140-97	TRANSISTOR	2SB734-34			
Q111	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q112	8-729-900-36	TRANSISTOR	DTC124ES			
Q113	8-729-900-36	TRANSISTOR	DTC124ES			
Q115	8-729-900-36	TRANSISTOR	DTC124ES			
< RESISTOR >						
R101	1-249-411-11	CARBON	330	5%	1/4W	
R102	1-249-411-11	CARBON	330	5%	1/4W	
R103	1-249-411-11	CARBON	330	5%	1/4W	
R104	1-249-429-11	CARBON	10K	5%	1/4W	
R105	1-249-425-11	CARBON	4.7K	5%	1/4W	
R106	1-249-419-11	CARBON	1.5K	5%	1/4W	
R107	1-249-429-11	CARBON	10K	5%	1/4W	
R108	1-249-434-11	CARBON	27K	5%	1/4W	
R109	1-249-429-11	CARBON	10K	5%	1/4W	
R110	1-249-411-11	CARBON	330	5%	1/4W	
R111	1-215-861-00	METAL OXIDE	47	5%	1W	
R112	1-249-417-11	CARBON	1K	5%	1/4W	

DISPLAY
FUSE
HP
MEMORY

Ref. No.	Part No.	Description	Remark
R113	1-249-429-11	CARBON 10K 5%	1/4W
R114	1-249-429-11	CARBON 10K 5%	1/4W
R115	1-249-429-11	CARBON 10K 5%	1/4W
R116	1-247-903-00	CARBON 1M 5%	1/4W
R117	1-249-433-11	CARBON 22K 5%	1/4W
R118	1-247-895-00	CARBON 470K 5%	1/4W
R119	1-247-903-00	CARBON 1M 5%	1/4W
R120	1-249-429-11	CARBON 10K 5%	1/4W
R121	1-249-435-11	CARBON 33K 5%	1/4W
R122	1-249-425-11	CARBON 4.7K 5%	1/4W F
R123	1-249-425-11	CARBON 4.7K 5%	1/4W F
R124	1-249-425-11	CARBON 4.7K 5%	1/4W F
R125	1-249-425-11	CARBON 4.7K 5%	1/4W F
R126	1-249-425-11	CARBON 4.7K 5%	1/4W F
R127	1-249-425-11	CARBON 4.7K 5%	1/4W F
R128	1-249-425-11	CARBON 4.7K 5%	1/4W F
R129	1-249-429-11	CARBON 10K 5%	1/4W
R130	1-249-429-11	CARBON 10K 5%	1/4W
R131	1-249-429-11	CARBON 10K 5%	1/4W
R132	1-249-393-11	CARBON 10 5%	1/4W F
R133	1-249-429-11	CARBON 10K 5%	1/4W
R134	1-249-441-11	CARBON 100K 5%	1/4W
R138	1-249-429-11	CARBON 10K 5%	1/4W
R139	1-249-429-11	CARBON 10K 5%	1/4W
R140	1-249-429-11	CARBON 10K 5%	1/4W
R141	1-249-429-11	CARBON 10K 5%	1/4W
R142	1-249-425-11	CARBON 4.7K 5%	1/4W F
R143	1-249-393-11	CARBON 10 5%	1/4W F
R144	1-249-429-11	CARBON 10K 5%	1/4W
△ R145	1-249-385-11	CARBON 2.2 5%	1/6W F
△ R146	1-249-385-11	CARBON 2.2 5%	1/6W F
R147	1-249-413-11	CARBON 470 5%	1/4W
R150	1-249-417-11	CARBON 1K 5%	1/4W F
R151	1-249-417-11	CARBON 1K 5%	1/4W F
R152	1-249-417-11	CARBON 1K 5%	1/4W F
R153	1-249-417-11	CARBON 1K 5%	1/4W F
< RELAY >			
RY101	1-515-614-11	RELAY	
< SWITCH >			
S102	1-554-303-21	SWITCH, TACTILE (SPEAKERS)	
S103	1-554-303-21	SWITCH, TACTILE (VIDEO3)	
S104	1-554-303-21	SWITCH, TACTILE (CD)	
S105	1-554-303-21	SWITCH, TACTILE (VIDEO1)	
S106	1-554-303-21	SWITCH, TACTILE (LD)	
S107	1-554-303-21	SWITCH, TACTILE (PHONO)	
S108	1-554-303-21	SWITCH, TACTILE (TAPE MONITOR)	
S109	1-554-303-21	SWITCH, TACTILE (SATL)	
S110	1-554-303-21	SWITCH, TACTILE (TUNER)	
S111	1-554-303-21	SWITCH, TACTILE (VIDEO2)	
S112	1-554-303-21	SWITCH, TACTILE (DAT/MD)	

Ref. No.	Part No.	Description	Remark
< VIBRATOR >			
X101	1-567-819-11	VIBRATOR, CERAMIC (4MHz)	

*	1-661-032-11	FUSE BOARD	*****
< CONNECTOR >			
* CNP803	1-564-674-11	PIN, CONNECTOR 8P	
< DIODE >			
D908	8-719-014-66	DIODE UZP-5.6B	
< FUSE >			
△ F801	1-532-506-51	FUSE, TIME LAG (6.3A 250V)	
△ F802	1-532-506-51	FUSE, TIME LAG (6.3A 250V)	
△ F803	1-532-504-51	FUSE, TIME LAG (4A 250V)	
△ F804	1-532-504-51	FUSE, TIME LAG (4A 250V)	
< FUSE HOLDER >			
FH801	1-533-223-11	HOLDER, FUSE	
FH802	1-533-223-11	HOLDER, FUSE	
FH803	1-533-223-11	HOLDER, FUSE	
FH804	1-533-223-11	HOLDER, FUSE	
FH851	1-533-223-11	HOLDER, FUSE	
FH852	1-533-223-11	HOLDER, FUSE	
FH853	1-533-223-11	HOLDER, FUSE	
FH854	1-533-223-11	HOLDER, FUSE	

*	1-661-020-11	HP BOARD	*****
< CONNECTOR >			
CNP103	1-770-387-11	PIN, CONNECTOR (PC BOARD) 3P	
< JACK >			
J100	1-568-519-41	JACK, LARGE TYPE (PHONES)	

*	1-661-036-11	MEMORY BOARD	*****
< CAPACITOR >			
C288	1-164-159-11	CERAMIC 0.1uF	50V
C289	1-164-159-11	CERAMIC 0.1uF	50V
C290	1-104-664-11	ELECT 47uF	20% 16V
C291	1-164-159-11	CERAMIC 0.1uF	50V
C294	1-164-159-11	CERAMIC 0.1uF	50V

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

MEMORY	MUTE SW	OSD
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Ref. No.	Part No.	Description	Remark			
< CONNECTOR >						
CNP205	1-764-238-11	CONNECTOR, BOARD TO BOARD 28P				
< IC >						
IC216	8-759-037-88	IC MC74HC373AN				
IC218	8-759-037-88	IC MC74HC373AN				
IC220	8-759-442-38	IC MX23C4096-12-SOX5039				
IC221	8-759-289-94	IC LH5160TF				
IC222	8-759-289-94	IC LH5160TF				
< COIL >						
L204	1-410-521-11	INDUCTOR 100uH				
L205	1-410-521-11	INDUCTOR 100uH				
< RESISTOR >						
R264	1-249-417-11	CARBON	1K	5%	1/4W	F
R2012	1-249-429-11	CARBON	10K	5%	1/4W	
R2013	1-249-429-11	CARBON	10K	5%	1/4W	
R2014	1-249-429-11	CARBON	10K	5%	1/4W	

*	1-661-017-11	MUTE SW BOARD	*****			
< CONNECTOR >						
* CNP106	1-565-295-11	PLUG, CONNECTOR 4P				
< RESISTOR >						
R135	1-249-429-11	CARBON	10K	5%	1/4W	
R136	1-249-429-11	CARBON	10K	5%	1/4W	
R137	1-249-417-11	CARBON	1K	5%	1/4W	F
< SWITCH >						
S114	1-554-303-21	SWITCH, TACTILE (SOUND FIELD, GENRE)				
S115	1-554-303-21	SWITCH, TACTILE (SOUND FIELD, MODE)				
S116	1-554-303-21	SWITCH, TACTILE (SOUND FIELD, ON/OFF)				

*	A-4390-245-A	OSD BOARD, COMPLETE	*****			
< CAPACITOR >						
C203	1-102-518-11	CERAMIC	33PF	5%	50V	
C204	1-126-961-11	ELECT	2.2uF	20%	50V	
C206	1-102-852-91	CERAMIC	47PF	5%	50V	
C208	1-124-907-11	ELECT	10uF	20%	50V	
C212	1-124-443-00	ELECT	100uF	20%	10V	
C213	1-164-159-11	CERAMIC	0.1uF		50V	
C232	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C239	1-164-159-11	CERAMIC	0.1uF		50V	
C246	1-164-159-11	CERAMIC	0.1uF		50V	

Ref. No.	Part No.	Description	Remark			
C248	1-124-903-11	ELECT	1uF	20%	50V	
C249	1-136-162-00	FILM	0.056uF	5%	50V	
C250	1-136-157-00	FILM	0.022uF	5%	50V	
C251	1-164-159-11	CERAMIC	0.1uF		50V	
C252	1-104-664-11	ELECT	47uF	20%	16V	
C253	1-124-903-11	ELECT	1uF	20%	50V	
C256	1-124-903-11	ELECT	1uF	20%	50V	
C257	1-124-903-11	ELECT	1uF	20%	50V	
C258	1-124-903-11	ELECT	1uF	20%	50V	
C259	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C260	1-162-293-31	CERAMIC	820PF	10%	50V	
C262	1-124-903-11	ELECT	1uF	20%	50V	
C263	1-102-106-00	CERAMIC	100PF	10%	50V	
C264	1-124-907-11	ELECT	10uF	20%	50V	
C265	1-124-907-11	ELECT	10uF	20%	50V	
C266	1-124-907-11	ELECT	10uF	20%	50V	
C267	1-124-903-11	ELECT	1uF	20%	50V	
C268	1-104-664-11	ELECT	47uF	20%	16V	
C269	1-164-159-11	CERAMIC	0.1uF		50V	
C270	1-124-903-11	ELECT	1uF	20%	50V	
C272	1-102-952-00	CERAMIC	16PF	5%	50V	
C273	1-164-159-11	CERAMIC	0.1uF		50V	
C274	1-104-664-11	ELECT	47uF	20%	16V	
C275	1-104-664-11	ELECT	47uF	20%	16V	
C276	1-104-905-11	CAPACITOR	0.22F		5.5V	
C277	1-162-306-11	CERAMIC	0.01uF	30%	16V	
C279	1-124-907-11	ELECT	10uF	20%	50V	
C280	1-164-159-11	CERAMIC	0.1uF		50V	
C287	1-104-664-11	ELECT	47uF	20%	16V	
C293	1-124-907-11	ELECT	10uF	20%	50V	
C295	1-164-159-11	CERAMIC	0.1uF		50V	
C296	1-104-666-11	ELECT	220uF	20%	10V	
C297	1-104-666-11	ELECT	220uF	20%	10V	
C2001	1-162-211-31	CERAMIC	33PF	5%	50V	
C2002	1-162-213-31	CERAMIC	39PF	5%	50V	
C2004	1-162-215-31	CERAMIC	47PF	5%	50V	
C2005	1-162-211-31	CERAMIC	33PF	5%	50V	
C2006	1-162-213-31	CERAMIC	39PF	5%	50V	
C2007	1-164-159-11	CERAMIC	0.1uF		50V	
C2008	1-124-907-11	ELECT	10uF	20%	50V	
C2009	1-164-159-11	CERAMIC	0.1uF		50V	
C2010	1-136-153-00	FILM	0.01uF	5%	50V	
C2011	1-162-294-31	CERAMIC	1000PF	10%	50V	
C2012	1-162-282-31	CERAMIC	100PF	10%	50V	
< CONNECTOR >						
CNJ202	1-750-179-11	SOCKET, CONNECTOR 5P				
CNJ203	1-764-922-11	CONNECTOR, FFC (LIF(NON-ZIF)) 17P				
CNJ204	1-764-934-11	CONNECTOR, FFC (LIF(NON-ZIF)) 29P				
CNP201	1-750-180-11	PIN, CONNECTOR (PC BOARD) 5P				
CNP203	1-750-180-11	PIN, CONNECTOR (PC BOARD) 5P				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< TRIMMER >				Q213	8-729-900-63	TRANSISTOR DTA124ES	
CT201	1-141-227-00	CAP, TRIMMER 20PF		Q214	8-729-620-05	TRANSISTOR 2SC2603-EF	
CT202	1-141-227-00	CAP, TRIMMER 20PF		Q215	8-729-620-05	TRANSISTOR 2SC2603-EF	
< DIODE >				Q216	8-729-620-05	TRANSISTOR 2SC2603-EF	
D201	8-719-987-63	DIODE 1N4148M		Q217	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D202	8-719-987-63	DIODE 1N4148M		Q218	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D203	8-719-987-63	DIODE 1N4148M		Q219	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D204	8-719-987-63	DIODE 1N4148M		Q220	8-729-620-05	TRANSISTOR 2SC2603-EF	
D205	8-719-024-99	DIODE 11ES2-NTA2B		Q221	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D206	8-719-987-63	DIODE 1N4148M		Q222	8-729-900-80	TRANSISTOR DTC114ES	
D210	8-719-987-63	DIODE 1N4148M		Q227	8-729-900-36	TRANSISTOR DTC124ES	
D211	8-719-987-63	DIODE 1N4148M		< RESISTOR >			
< IC >				R207	1-249-409-11	CARBON 220 5%	1/4W F
IC202	8-759-140-53	IC uPD4053BC		R208	1-249-419-11	CARBON 1.5K 5%	1/4W F
IC205	8-759-395-25	IC MB90095PF-G-161-BND		R209	1-249-429-11	CARBON 10K 5%	1/4W
IC206	8-759-916-12	IC SN74HC00AN		R210	1-249-424-11	CARBON 3.9K 5%	1/4W F
IC207	8-759-708-05	IC NJM78L05A		R212	1-249-418-11	CARBON 1.2K 5%	1/4W F
IC209	8-759-426-13	IC MB90672PF-G-125-BND		R216	1-249-437-11	CARBON 47K 5%	1/4W
IC210	8-759-341-79	IC LA7217		R231	1-249-417-11	CARBON 1K 5%	1/4W F
IC211	8-759-061-95	IC SN761200		R235	1-249-429-11	CARBON 10K 5%	1/4W
IC212	8-759-293-64	IC LA7356		R242	1-249-433-11	CARBON 22K 5%	1/4W
IC215	8-759-394-96	IC S-1810CF-049		R249	1-249-413-11	CARBON 470 5%	1/4W F
IC217	8-759-604-35	IC M5F78M05L		R250	1-249-417-11	CARBON 1K 5%	1/4W F
IC219	8-759-917-18	IC SN74HCU04AN		R262	1-247-883-00	CARBON 150K 5%	1/4W
< JACK >				R265	1-249-414-11	CARBON 560 5%	1/4W F
J202	1-507-967-11	JACK (S-LINK, CTRL A1)		R266	1-249-403-11	CARBON 68 5%	1/4W F
J203	1-507-967-11	JACK (IR OUT)		R267	1-249-424-11	CARBON 3.9K 5%	1/4W F
J209	1-766-399-11	JACK, PIN 3P		R268	1-249-403-11	CARBON 68 5%	1/4W F
		(VIDEO2 VIDEO OUT, LD VIDEO IN, SATL VIDEO IN)		R269	1-249-403-11	CARBON 68 5%	1/4W F
J210	1-766-399-11	JACK, PIN 3P		R270	1-249-426-11	CARBON 5.6K 5%	1/4W
		(VIDEO1 VIDEO IN/OUT, VIDEO2 VIDEO IN)		R271	1-249-426-11	CARBON 5.6K 5%	1/4W
				R272	1-249-426-11	CARBON 5.6K 5%	1/4W
< COIL >				R274	1-249-403-11	CARBON 68 5%	1/4W F
L201	1-410-515-11	INDUCTOR 33uH		R275	1-249-403-11	CARBON 68 5%	1/4W F
L2001	1-410-515-11	INDUCTOR 33uH		R276	1-249-419-11	CARBON 1.5K 5%	1/4W F
< TRANSISTOR >				R277	1-249-419-11	CARBON 1.5K 5%	1/4W F
Q201	8-729-900-36	TRANSISTOR DTC124ES		R278	1-249-419-11	CARBON 1.5K 5%	1/4W F
Q203	8-729-620-05	TRANSISTOR 2SC2603-EF		R279	1-249-403-11	CARBON 68 5%	1/4W F
Q204	8-729-141-30	TRANSISTOR 2SC3623A-LK		R280	1-249-403-11	CARBON 68 5%	1/4W F
Q205	8-729-900-80	TRANSISTOR DTC114ES		R281	1-249-403-11	CARBON 68 5%	1/4W F
Q206	8-729-620-05	TRANSISTOR 2SC2603-EF		R282	1-249-403-11	CARBON 68 5%	1/4W F
Q207	8-729-422-57	TRANSISTOR UN4111		R283	1-249-403-11	CARBON 68 5%	1/4W F
Q208	8-729-900-80	TRANSISTOR DTC114ES		R284	1-249-417-11	CARBON 1K 5%	1/4W F
Q209	8-729-119-76	TRANSISTOR 2SA1175-HFE		R286	1-247-891-00	CARBON 330K 5%	1/4W
Q210	8-729-900-80	TRANSISTOR DTC114ES		R287	1-247-807-31	CARBON 100 5%	1/4W
Q211	8-729-620-05	TRANSISTOR 2SC2603-EF		R288	1-249-430-11	CARBON 12K 5%	1/4W
Q212	8-729-119-76	TRANSISTOR 2SA1175-HFE		R289	1-249-430-11	CARBON 12K 5%	1/4W
				R290	1-249-430-11	CARBON 12K 5%	1/4W
				R291	1-249-429-11	CARBON 10K 5%	1/4W
				R292	1-249-393-11	CARBON 10 5%	1/4W F
				R293	1-249-429-11	CARBON 10K 5%	1/4W

OSD	OSD JOINT	PHONO	POWER SW
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R294	1-249-425-11	CARBON	4.7K 5% 1/4W F	*	1-661-019-11	PHONO BOARD *****	
R295	1-249-425-11	CARBON	4.7K 5% 1/4W F			< CAPACITOR >	
R296	1-247-843-11	CARBON	3.3K 5% 1/4W				
△ R2001	1-215-857-11	METAL OXIDE	10 5% 1W F				
R2002	1-249-417-11	CARBON	1K 5% 1/4W F	C303	1-162-282-31	CERAMIC	100PF 10% 50V
R2006	1-247-807-31	CARBON	100 5% 1/4W	C304	1-104-664-11	ELECT	47uF 20% 16V
				C305	1-130-480-00	MYLAR	0.0056uF 5% 50V
R2008	1-249-429-11	CARBON	10K 5% 1/4W	C306	1-130-473-00	MYLAR	0.0015uF 5% 50V
R2009	1-249-409-11	CARBON	220 5% 1/4W F	C307	1-124-903-11	ELECT	1uF 20% 50V
R2010	1-249-409-11	CARBON	220 5% 1/4W F				
R2015	1-247-807-31	CARBON	100 5% 1/4W	C308	1-164-159-11	CERAMIC	0.1uF 50V
R2016	1-249-429-11	CARBON	10K 5% 1/4W	C353	1-162-282-31	CERAMIC	100PF 10% 50V
				C354	1-104-664-11	ELECT	47uF 20% 16V
R2017	1-249-429-11	CARBON	10K 5% 1/4W	C355	1-130-480-00	MYLAR	0.0056uF 5% 50V
R2018	1-249-429-11	CARBON	10K 5% 1/4W	C356	1-130-473-00	MYLAR	0.0015uF 5% 50V
R2019	1-249-429-11	CARBON	10K 5% 1/4W				
R2020	1-247-807-31	CARBON	100 5% 1/4W	C357	1-124-903-11	ELECT	1uF 20% 50V
R2021	1-249-426-11	CARBON	5.6K 5% 1/4W	C358	1-164-159-11	CERAMIC	0.1uF 50V
						< CONNECTOR >	
R2022	1-249-421-11	CARBON	2.2K 5% 1/4W F	CNJ303	1-695-096-11	SOCKET, CONNECTOR 15P	
R2023	1-247-852-11	CARBON	7.5K 5% 1/4W	CNP302	1-695-088-11	PIN, CONNECTOR (PC BOARD) 9P	
R2024	1-249-417-11	CARBON	1K 5% 1/4W F			< IC >	
R2025	1-249-417-11	CARBON	1K 5% 1/4W F	IC301	8-759-636-74	IC M5218AP-22	
R2026	1-247-838-00	CARBON	2K 5% 1/4W			< RESISTOR >	
				R303	1-249-441-11	CARBON	100K 5% 1/4W
R2027	1-249-417-11	CARBON	1K 5% 1/4W F	R304	1-249-416-11	CARBON	820 5% 1/4W F
R2028	1-247-807-31	CARBON	100 5% 1/4W	R305	1-247-897-11	CARBON	560K 5% 1/4W
R2029	1-249-417-11	CARBON	1K 5% 1/4W F	R306	1-249-437-11	CARBON	47K 5% 1/4W
R2030	1-249-399-11	CARBON	33 5% 1/4W	R307	1-249-441-11	CARBON	100K 5% 1/4W
R2031	1-249-429-11	CARBON	10K 5% 1/4W				
				R308	1-247-807-31	CARBON	100 5% 1/4W
R2032	1-249-417-11	CARBON	1K 5% 1/4W F	R353	1-249-441-11	CARBON	100K 5% 1/4W
R2201	1-249-429-11	CARBON	10K 5% 1/4W	R354	1-249-416-11	CARBON	820 5% 1/4W F
R2202	1-249-429-11	CARBON	10K 5% 1/4W	R355	1-247-897-11	CARBON	560K 5% 1/4W
R2203	1-249-429-11	CARBON	10K 5% 1/4W	R356	1-249-437-11	CARBON	47K 5% 1/4W
		< TEST PIN >		R357	1-249-441-11	CARBON	100K 5% 1/4W
* TP203	1-560-061-00	PIN, CONNECTOR 3P		R358	1-247-807-31	CARBON	100 5% 1/4W
* TP204	1-560-062-00	PIN, CONNECTOR 4P					
		< VIBRATOR >					
X201	1-567-819-11	VIBRATOR, CERAMIC (4MHz)					
X204	1-579-583-11	VIBRATOR, CERAMIC (504kHz)					
X205	1-567-819-11	VIBRATOR, CERAMIC (4MHz)					
X207	1-579-057-11	VIBRATOR, CRYSTAL (17MHz)					

				*	1-661-055-11	POWER SW BOARD *****	
						< CONNECTOR >	
*	1-661-035-11	OSD JOINT BOARD *****					
		< CONNECTOR >		* CNP101	1-565-295-11	PLUG, CONNECTOR 4P	
						< SWITCH >	
CNJ401	1-750-179-11	SOCKET, CONNECTOR 5P		S113	1-554-118-00	SWITCH, PUSH (1 KEY)(POWER)	
CNP202	1-750-180-11	PIN, CONNECTOR (PC BOARD) 5P					

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

PRIM

PS

PS JOINT

S.VIDEO

SP JOINT

Ref. No.	Part No.	Description	Remark
*	1-661-021-11	PRIM BOARD *****	
		< CONNECTOR >	
CNP908	1-564-321-00	PIN, CONNECTOR 2P	

*	A-4390-240-A	PS BOARD, COMPLETE *****	
	7-682-548-04	SCREW +BVTT 3X8 (S)	
		< CAPACITOR >	
C901	1-161-494-00	CERAMIC 0.022uF	25V
C902	1-161-494-00	CERAMIC 0.022uF	25V
C903	1-124-556-11	ELECT 2200uF	20% 16V
C904	1-126-961-11	ELECT 2.2uF	20% 50V
C905	1-124-902-00	ELECT 0.47uF	20% 50V
C906	1-124-464-11	ELECT 0.22uF	20% 50V
C913	1-164-159-11	CERAMIC 0.1uF	50V
C914	1-164-159-11	CERAMIC 0.1uF	50V
		< CONNECTOR >	
CNP903	1-564-321-00	PIN, CONNECTOR 2P	
CNP904	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P	
CNP905	1-770-380-11	CONNECTOR, BOARD TO BOARD 8P	
		< DIODE >	
D901	8-719-024-99	DIODE 11ES2-NTA2B	
D902	8-719-024-99	DIODE 11ES2-NTA2B	
D903	8-719-024-99	DIODE 11ES2-NTA2B	
D904	8-719-024-99	DIODE 11ES2-NTA2B	
D905	8-719-987-63	DIODE 1N4148M	
D906	8-719-987-63	DIODE 1N4148M	
D907	8-719-987-63	DIODE 1N4148M	
		< GROUND TERMINAL >	
EB900	1-537-770-21	TERMINAL BOARD, GROUND	
		< FUSE HOLDER >	
△F901	1-532-504-51	FUSE, TIME LAG (4A 250V)	
△F902	1-532-464-51	FUSE, TIME LAG (2.5A 250V)	
		< FUSE HOLDER >	
FH901	1-533-223-11	HOLDER, FUSE	
FH902	1-533-223-11	HOLDER, FUSE	
FH951	1-533-223-11	HOLDER, FUSE	
FH952	1-533-223-11	HOLDER, FUSE	
		< IC >	
IC901	8-759-333-83	IC NJM2103D	

Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q901	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q902	8-729-209-15	TRANSISTOR 2SD2012	
		< RESISTOR >	
R902	1-249-429-11	CARBON 10K	5% 1/4W
R903	1-249-425-11	CARBON 4.7K	5% 1/4W F
R904	1-249-417-11	CARBON 1K	5% 1/4W F
R905	1-249-428-11	CARBON 8.2K	5% 1/4W
R906	1-249-421-11	CARBON 2.2K	5% 1/4W F
R908	1-249-433-11	CARBON 22K	5% 1/4W
R909	1-249-439-11	CARBON 68K	5% 1/4W
R910	1-249-437-11	CARBON 47K	5% 1/4W
R912	1-249-430-11	CARBON 12K	5% 1/4W
		< RELAY >	
△RY901	1-515-999-11	RELAY, POWER	
		< TRANSFORMER >	
△T902	1-429-236-11	TRANSFORMER, POWER	

*	1-661-026-11	PS JOINT BOARD *****	
		< CONNECTOR >	
CNJ905	1-770-405-11	CONNECTOR, BOARD TO BOARD 8P	
CNP704	1-750-180-11	PIN, CONNECTOR (PC BOARD) 5P	
CNP803	1-770-407-11	CONNECTOR, BOARD TO BOARD 12P	

*	A-4390-304-A	S.VIDEO BOARD, COMPLETE *****	
		< CONNECTOR >	
CNJ201	1-750-179-11	SOCKET, CONNECTOR 5P	
CNJ203	1-750-179-11	SOCKET, CONNECTOR 5P	
		< TERMINAL >	
TM201	1-561-534-00	SOCKET, PIN 21P (MONITOR)	

*	1-661-031-11	SP JOINT BOARD *****	
		< CONNECTOR >	
CNJ702	1-770-569-11	SOCKET 4P	
CNP703	1-770-481-11	PIN, CONNECTOR 4P	

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SP TERMINAL

SURR

Ref. No.	Part No.	Description	Remark
*	1-661-030-11	SP TERMINAL BOARD *****	
		< CONNECTOR >	
CNJ703	1-770-569-11	SOCKET 4P	
CNJ704	1-750-179-11	SOCKET, CONNECTOR 5P	
		< DIODE >	
D712	8-719-987-63	DIODE 1N4148M	
		< JACK >	
J701	1-770-377-31	JACK, PIN 1P (MIX AUDIO OUT)	
		< COIL >	
L701	1-420-872-00	COIL, AIR-CORE	
L751	1-420-872-00	COIL, AIR-CORE	
		< TRANSISTOR >	
Q714	8-729-119-79	TRANSISTOR 2SC2785-FEK	
		< RESISTOR >	
△ R713	1-249-389-11	CARBON 4.7 5% 1/4W F	
R718	1-249-417-11	CARBON 1K 5% 1/4W F	
R724	1-249-429-11	CARBON 10K 5% 1/4W	
R725	1-249-425-11	CARBON 4.7K 5% 1/4W F	
△ R726	1-249-414-11	CARBON 560 5% 1/4W F	
R729	1-249-435-11	CARBON 33K 5% 1/4W	
R730	1-249-435-11	CARBON 33K 5% 1/4W	
△ R763	1-249-389-11	CARBON 4.7 5% 1/4W F	
		< RELAY >	
RY701	1-515-741-11	RELAY	
		< TERMINAL >	
TM701	1-537-894-11	TERMINAL BOARD (SP)(FRONT SPEAKERS)	

*	A-4390-237-A	SURR BOARD, COMPLETE *****	
		< CAPACITOR >	
C301	1-126-163-11	ELECT 4.7uF 20% 50V	
C311	1-124-907-11	ELECT 10uF 20% 50V	
C312	1-124-907-11	ELECT 10uF 20% 50V	
C313	1-124-907-11	ELECT 10uF 20% 50V	
C316	1-164-159-11	CERAMIC 0.1uF 50V	
C325	1-104-664-11	ELECT 47uF 20% 16V	
C326	1-104-664-11	ELECT 47uF 20% 16V	
C327	1-104-664-11	ELECT 47uF 20% 16V	

Ref. No.	Part No.	Description	Remark
C328	1-104-664-11	ELECT 47uF 20% 16V	
C351	1-126-163-11	ELECT 4.7uF 20% 50V	
C361	1-124-907-11	ELECT 10uF 20% 50V	
C362	1-124-907-11	ELECT 10uF 20% 50V	
C363	1-124-907-11	ELECT 10uF 20% 50V	
C366	1-164-159-11	CERAMIC 0.1uF 50V	
C397	1-102-106-00	CERAMIC 100PF 10% 50V	
C398	1-102-074-00	CERAMIC 0.001uF 10% 50V	
C400	1-162-282-31	CERAMIC 100PF 10% 50V	
C403	1-136-157-00	FILM 0.022uF 5% 50V	
C404	1-136-161-00	FILM 0.047uF 5% 50V	
C405	1-104-666-11	ELECT 220uF 20% 10V	
C406	1-124-907-11	ELECT 10uF 20% 50V	
C407	1-124-907-11	ELECT 10uF 20% 50V	
C408	1-124-907-11	ELECT 10uF 20% 50V	
C409	1-124-907-11	ELECT 10uF 20% 50V	
C410	1-104-666-11	ELECT 220uF 20% 10V	
C411	1-124-907-11	ELECT 10uF 20% 50V	
C412	1-124-907-11	ELECT 10uF 20% 50V	
C413	1-136-165-00	FILM 0.1uF 5% 50V	
C414	1-136-165-00	FILM 0.1uF 5% 50V	
C415	1-124-902-00	ELECT 0.47uF 20% 50V	
C416	1-126-963-11	ELECT 4.7uF 20% 50V	
C417	1-124-902-00	ELECT 0.47uF 20% 50V	
C418	1-126-963-11	ELECT 4.7uF 20% 50V	
C419	1-124-250-11	ELECT 0.15uF 20% 50V	
C420	1-126-962-11	ELECT 3.3uF 20% 50V	
C421	1-124-250-11	ELECT 0.15uF 20% 50V	
C422	1-162-282-31	CERAMIC 100PF 10% 50V	
C423	1-104-664-11	ELECT 47uF 20% 16V	
C424	1-136-165-00	FILM 0.1uF 5% 50V	
C425	1-136-165-00	FILM 0.1uF 5% 50V	
C426	1-124-902-00	ELECT 0.47uF 20% 50V	
C427	1-126-963-11	ELECT 4.7uF 20% 50V	
C428	1-126-963-11	ELECT 4.7uF 20% 50V	
C429	1-124-250-11	ELECT 0.15uF 20% 50V	
C430	1-124-902-00	ELECT 0.47uF 20% 50V	
C431	1-126-962-11	ELECT 3.3uF 20% 50V	
C432	1-124-250-11	ELECT 0.15uF 20% 50V	
C433	1-104-666-11	ELECT 220uF 20% 10V	
C435	1-164-159-11	CERAMIC 0.1uF 50V	
C436	1-126-961-11	ELECT 2.2uF 20% 50V	
C437	1-104-666-11	ELECT 220uF 20% 10V	
C438	1-136-165-00	FILM 0.1uF 5% 50V	
C439	1-124-907-11	ELECT 10uF 20% 50V	
C440	1-130-469-00	MYLAR 680PF 5% 50V	
C441	1-124-907-11	ELECT 10uF 20% 50V	
C442	1-124-907-11	ELECT 10uF 20% 50V	
C443	1-164-159-11	CERAMIC 0.1uF 50V	
C444	1-124-907-11	ELECT 10uF 20% 50V	
C445	1-164-159-11	CERAMIC 0.1uF 50V	
C446	1-164-159-11	CERAMIC 0.1uF 50V	

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C447	1-136-173-00	FILM	0.47uF 5% 50V	C561	1-130-476-00	MYLAR	0.0027uF 5% 50V
C448	1-136-165-00	FILM	0.1uF 5% 50V	C562	1-136-157-00	FILM	0.022uF 5% 50V
C449	1-136-165-00	FILM	0.1uF 5% 50V	C563	1-102-947-00	CERAMIC	10PF 5% 50V
C451	1-164-159-11	CERAMIC	0.1uF 50V	C564	1-102-947-00	CERAMIC	10PF 5% 50V
C452	1-104-666-11	ELECT	220uF 20% 10V	C567	1-102-937-00	CERAMIC	4PF ±0.25PF 50V
C453	1-136-159-00	FILM	0.033uF 5% 50V	C593	1-124-916-11	ELECT	22uF 20% 63V
C454	1-130-473-00	MYLAR	0.0015uF 5% 50V	C594	1-124-916-11	ELECT	22uF 20% 63V
C455	1-136-159-00	FILM	0.033uF 5% 50V	C595	1-164-159-11	CERAMIC	0.1uF 50V
C456	1-124-903-11	ELECT	1uF 20% 50V	C596	1-104-664-11	ELECT	47uF 20% 16V
C457	1-104-666-11	ELECT	220uF 20% 10V	C597	1-104-664-11	ELECT	47uF 20% 16V
C458	1-164-159-11	CERAMIC	0.1uF 50V	C598	1-162-282-31	CERAMIC	100PF 10% 50V
C459	1-164-159-11	CERAMIC	0.1uF 50V	C2203	1-164-159-11	CERAMIC	0.1uF 50V
C460	1-104-666-11	ELECT	220uF 20% 10V	< CONNECTOR >			
C463	1-124-907-11	ELECT	10uF 20% 50V	CNJ299	1-770-864-11	CONNECTOR, BOARD TO BOARD 7P	
C464	1-124-907-11	ELECT	10uF 20% 50V	CNJ501	1-770-404-11	HOUSING, CONNECTOR (PC BOARD) 11P	
C465	1-162-199-31	CERAMIC	10PF 5% 50V	CNJ502	1-770-404-11	HOUSING, CONNECTOR (PC BOARD) 11P	
C473	1-126-963-11	ELECT	4.7uF 20% 50V	CNP303	1-695-091-11	PIN, CONNECTOR (PC BOARD) 15P	
C491	1-124-907-11	ELECT	10uF 20% 50V	CNP401	1-750-180-11	PIN, CONNECTOR (PC BOARD) 5P	
C492	1-124-907-11	ELECT	10uF 20% 50V	CNP404	1-695-090-11	PIN, CONNECTOR (PC BOARD) 13P	
C494	1-124-907-11	ELECT	10uF 20% 50V	CNS402	1-764-962-11	CONNECTOR, FFC (LIF(NON-ZIF)) 21P	
C495	1-164-159-11	CERAMIC	0.1uF 50V	< DIODE >			
C501	1-124-907-11	ELECT	10uF 20% 50V	D402	8-719-987-63	DIODE 1N4148M	
C502	1-102-106-00	CERAMIC	100PF 10% 50V	D403	8-719-024-99	DIODE 11ES2-NTA2B	
C503	1-102-989-00	CERAMIC	68PF 5% 500V	D405	8-719-987-63	DIODE 1N4148M	
C504	1-102-989-00	CERAMIC	68PF 5% 500V	< GROUND TERMINAL >			
C505	1-124-443-00	ELECT	100uF 20% 10V	EB400	1-537-770-21	TERMINAL BOARD, GROUND	
C506	1-136-159-00	FILM	0.033uF 5% 50V	EB401	1-537-770-21	TERMINAL BOARD, GROUND	
C507	1-136-171-00	FILM	0.33uF 5% 50V	< IC >			
C508	1-104-664-11	ELECT	47uF 20% 16V	IC302	8-759-634-50	IC M5218AL	
C509	1-136-495-11	FILM	0.068uF 5% 50V	IC303	8-759-634-50	IC M5218AL	
C510	1-136-153-00	FILM	0.01uF 5% 50V	IC305	8-759-805-14	IC LC7822	
C511	1-130-476-00	MYLAR	0.0027uF 5% 50V	IC401	8-759-248-74	IC LA2785	
C512	1-136-157-00	FILM	0.022uF 5% 50V	IC402	8-759-341-23	IC LV1011	
C513	1-102-947-00	CERAMIC	10PF 5% 50V	IC403	8-759-634-51	IC M5218AP	
C514	1-102-947-00	CERAMIC	10PF 5% 50V	IC404	8-759-701-59	IC NJM78M09FA	
C517	1-102-937-00	CERAMIC	4PF ±0.25PF 50V	IC406	8-759-634-51	IC M5218AP	
C521	1-124-907-11	ELECT	10uF 20% 50V	IC407	8-759-801-01	IC LC4966	
C522	1-102-106-00	CERAMIC	100PF 10% 50V	IC501	8-749-010-79	IC STK350-030	
C523	1-104-664-11	ELECT	47uF 20% 16V	IC502	8-759-072-32	IC TC9184P	
C524	1-102-989-00	CERAMIC	68PF 5% 500V	IC503	8-749-011-16	IC STK350-230	
C525	1-102-989-00	CERAMIC	68PF 5% 500V	< JACK >			
C526	1-102-937-00	CERAMIC	4.0PF ±0.25PF 50V	J301	1-770-015-11	JACK, PIN 6P (DAT/MD REC OUT, CD IN, TUNER IN)	
C551	1-124-907-11	ELECT	10uF 20% 50V	J302	1-770-015-11	JACK, PIN 6P (TAPE IN/REC OUT, DAT/MD IN)	
C552	1-102-106-00	CERAMIC	100PF 10% 50V	J351	1-774-725-11	JACK, PIN 2P (PHONO IN)	
C553	1-102-989-00	CERAMIC	68PF 5% 500V				
C554	1-102-989-00	CERAMIC	68PF 5% 500V				
C555	1-124-443-00	ELECT	100uF 20% 10V				
C556	1-136-159-00	FILM	0.033uF 5% 50V				
C557	1-136-171-00	FILM	0.33uF 5% 50V				
C558	1-104-664-11	ELECT	47uF 20% 16V				
C559	1-136-495-11	FILM	0.068uF 5% 50V				
C560	1-136-153-00	FILM	0.01uF 5% 50V				

SURR

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
< COIL >							R368	1-249-441-11	CARBON	100K	5%	1/4W	
							R369	1-249-417-11	CARBON	1K	5%	1/4W	F
L401	1-410-509-11	INDUCTOR 10uH											
L402	1-410-509-11	INDUCTOR 10uH					R370	1-249-425-11	CARBON	4.7K	5%	1/4W	F
							R371	1-249-429-11	CARBON	10K	5%	1/4W	
							R397	1-249-417-11	CARBON	1K	5%	1/4W	F
							R398	1-249-425-11	CARBON	4.7K	5%	1/4W	F
							R407	1-249-417-11	CARBON	1K	5%	1/4W	F
Q301	8-729-141-30	TRANSISTOR 2SC3623A-LK											
Q302	8-729-141-30	TRANSISTOR 2SC3623A-LK											
Q403	8-729-141-30	TRANSISTOR 2SC3623A-LK					R408	1-249-431-11	CARBON	15K	5%	1/4W	
Q404	8-729-141-30	TRANSISTOR 2SC3623A-LK					R409	1-249-425-11	CARBON	4.7K	5%	1/4W	F
Q405	8-729-141-30	TRANSISTOR 2SC3623A-LK					R410	1-249-436-11	CARBON	39K	5%	1/4W	
							R411	1-249-439-11	CARBON	68K	5%	1/4W	
Q406	8-729-141-30	TRANSISTOR 2SC3623A-LK					R412	1-247-903-00	CARBON	1M	5%	1/4W	
Q407	8-729-141-30	TRANSISTOR 2SC3623A-LK											
Q409	8-729-900-63	TRANSISTOR DTA124ES					R413	1-249-441-11	CARBON	100K	5%	1/4W	
Q410	8-729-900-63	TRANSISTOR DTA124ES					R414	1-249-429-11	CARBON	10K	5%	1/4W	
Q411	8-729-900-63	TRANSISTOR DTA124ES					R415	1-249-433-11	CARBON	22K	5%	1/4W	
							R416	1-249-413-11	CARBON	470	5%	1/4W	F
Q412	8-729-620-05	TRANSISTOR 2SC2603-EF					R417	1-249-425-11	CARBON	4.7K	5%	1/4W	F
Q451	8-729-900-63	TRANSISTOR DTA124ES											
Q452	8-729-900-36	TRANSISTOR DTC124ES					R418	1-249-413-11	CARBON	470	5%	1/4W	F
Q501	8-729-141-30	TRANSISTOR 2SC3623A-LK					R419	1-249-425-11	CARBON	4.7K	5%	1/4W	F
Q502	8-729-202-67	TRANSISTOR 2SK246-GR3					R420	1-249-425-11	CARBON	4.7K	5%	1/4W	F
							R432	1-249-441-11	CARBON	100K	5%	1/4W	
Q551	8-729-141-30	TRANSISTOR 2SC3623A-LK					R433	1-249-437-11	CARBON	47K	5%	1/4W	
Q552	8-729-202-67	TRANSISTOR 2SK246-GR3											
							R434	1-249-441-11	CARBON	100K	5%	1/4W	
							R435	1-249-437-11	CARBON	47K	5%	1/4W	
							R436	1-249-437-11	CARBON	47K	5%	1/4W	
R301	1-249-409-11	CARBON 220	5%	1/4W	F		R437	1-249-416-11	CARBON	820	5%	1/4W	F
R302	1-249-441-11	CARBON 100K	5%	1/4W			R438	1-249-429-11	CARBON	10K	5%	1/4W	
R310	1-249-421-11	CARBON 2.2K	5%	1/4W	F								
R311	1-249-417-11	CARBON 1K	5%	1/4W	F		R441	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R312	1-249-417-11	CARBON 1K	5%	1/4W	F		R442	1-249-429-11	CARBON	10K	5%	1/4W	
							R443	1-249-433-11	CARBON	22K	5%	1/4W	
R313	1-249-417-11	CARBON 1K	5%	1/4W	F		R444	1-249-429-11	CARBON	10K	5%	1/4W	
R314	1-249-417-11	CARBON 1K	5%	1/4W	F		R445	1-249-417-11	CARBON	1K	5%	1/4W	F
R315	1-249-441-11	CARBON 100K	5%	1/4W									
R316	1-249-437-11	CARBON 47K	5%	1/4W			R446	1-249-417-11	CARBON	1K	5%	1/4W	F
R317	1-249-437-11	CARBON 47K	5%	1/4W			R447	1-249-431-11	CARBON	15K	5%	1/4W	
							R448	1-249-429-11	CARBON	10K	5%	1/4W	
R318	1-249-441-11	CARBON 100K	5%	1/4W			R449	1-249-417-11	CARBON	1K	5%	1/4W	F
R319	1-249-417-11	CARBON 1K	5%	1/4W	F		R450	1-249-441-11	CARBON	100K	5%	1/4W	
R320	1-249-425-11	CARBON 4.7K	5%	1/4W	F								
R321	1-249-429-11	CARBON 10K	5%	1/4W			R451	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R329	1-247-807-31	CARBON 100	5%	1/4W			R452	1-249-441-11	CARBON	100K	5%	1/4W	
							R453	1-249-441-11	CARBON	100K	5%	1/4W	
R330	1-247-807-31	CARBON 100	5%	1/4W			R454	1-249-437-11	CARBON	47K	5%	1/4W	
R331	1-247-807-31	CARBON 100	5%	1/4W			R463	1-249-441-11	CARBON	100K	5%	1/4W	
R332	1-247-807-31	CARBON 100	5%	1/4W									
R351	1-249-409-11	CARBON 220	5%	1/4W	F		R464	1-249-429-11	CARBON	10K	5%	1/4W	
R352	1-249-441-11	CARBON 100K	5%	1/4W			R465	1-249-433-11	CARBON	22K	5%	1/4W	
							R468	1-249-413-11	CARBON	470	5%	1/4W	F
R360	1-249-421-11	CARBON 2.2K	5%	1/4W	F		R469	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R361	1-249-417-11	CARBON 1K	5%	1/4W	F		R501	1-249-417-11	CARBON	1K	5%	1/4W	F
R362	1-249-417-11	CARBON 1K	5%	1/4W	F								
R363	1-249-417-11	CARBON 1K	5%	1/4W	F		R502	1-249-441-11	CARBON	100K	5%	1/4W	
R364	1-249-417-11	CARBON 1K	5%	1/4W	F		R503	1-249-413-11	CARBON	470	5%	1/4W	F
							R504	1-249-440-11	CARBON	82K	5%	1/4W	
R365	1-249-441-11	CARBON 100K	5%	1/4W			R505	1-249-433-11	CARBON	22K	5%	1/4W	
R366	1-249-437-11	CARBON 47K	5%	1/4W			R506	1-249-413-11	CARBON	470	5%	1/4W	F
R367	1-249-437-11	CARBON 47K	5%	1/4W									

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R507	1-249-427-11	CARBON	6.8K 5% 1/4W F	*	1-661-027-11	VIDEO 3 BOARD	
R508	1-247-883-00	CARBON	150K 5% 1/4W			*****	
R509	1-247-843-11	CARBON	3.3K 5% 1/4W			< CAPACITOR >	
R510	1-247-903-00	CARBON	1M 5% 1/4W				
R511	1-249-441-11	CARBON	100K 5% 1/4W				
R512	1-249-426-11	CARBON	5.6K 5% 1/4W				
R513	1-249-436-11	CARBON	39K 5% 1/4W				
R514	1-247-887-00	CARBON	220K 5% 1/4W				
R515	1-249-434-11	CARBON	27K 5% 1/4W				
R516	1-249-426-11	CARBON	5.6K 5% 1/4W			< CONNECTOR >	
R517	1-249-418-11	CARBON	1.2K 5% 1/4W F	CNP299	1-770-865-11	CONNECTOR, BOARD TO BOARD 7P	
R518	1-249-415-11	CARBON	680 5% 1/4W F			< JACK >	
R519	1-249-428-11	CARBON	8.2K 5% 1/4W F				
R521	1-249-417-11	CARBON	1K 5% 1/4W F	J299	1-778-056-11	JACK, PIN 3P	
R523	1-249-438-11	CARBON	56K 5% 1/4W			(VIDEO3 INPUT, VIDEO, AUDIO L/R)	
R524	1-249-413-11	CARBON	470 5% 1/4W F			< RESISTOR >	
R525	1-249-415-11	CARBON	680 5% 1/4W F				
R526	1-249-438-11	CARBON	56K 5% 1/4W				
R551	1-249-417-11	CARBON	1K 5% 1/4W F	R297	1-249-403-11	CARBON	68 5% 1/4W F
R552	1-249-441-11	CARBON	100K 5% 1/4W	R298	1-249-403-11	CARBON	68 5% 1/4W F
R553	1-249-413-11	CARBON	470 5% 1/4W F	R299	1-249-403-11	CARBON	68 5% 1/4W F
R554	1-249-440-11	CARBON	82K 5% 1/4W			*****	
R555	1-249-433-11	CARBON	22K 5% 1/4W	*	1-661-029-11	VOL JOINT BOARD	
R556	1-249-413-11	CARBON	470 5% 1/4W F			*****	
R557	1-249-427-11	CARBON	6.8K 5% 1/4W F			< CONNECTOR >	
R558	1-247-883-00	CARBON	150K 5% 1/4W				
R559	1-247-843-11	CARBON	3.3K 5% 1/4W				
R560	1-247-903-00	CARBON	1M 5% 1/4W	CNJ404	1-695-095-11	SOCKET, CONNECTOR 13P	
R561	1-249-441-11	CARBON	100K 5% 1/4W	CNP405	1-695-090-11	PIN, CONNECTOR (PC BOARD) 13P	
R562	1-249-426-11	CARBON	5.6K 5% 1/4W			*****	
R563	1-249-436-11	CARBON	39K 5% 1/4W	*	1-661-018-11	VOL BOARD	
R564	1-247-887-00	CARBON	220K 5% 1/4W			*****	
R565	1-249-434-11	CARBON	27K 5% 1/4W			< CONNECTOR >	
R566	1-249-426-11	CARBON	5.6K 5% 1/4W				
R567	1-249-418-11	CARBON	1.2K 5% 1/4W F				
R568	1-249-415-11	CARBON	680 5% 1/4W F	CNJ405	1-695-095-11	SOCKET, CONNECTOR 13P	
R569	1-249-428-11	CARBON	8.2K 5% 1/4W F	CNP108	1-770-389-11	PIN, CONNECTOR (PC BOARD) 5P	
△ R592	1-249-397-11	CARBON	22 5% 1/4W F			< RESISTOR >	
△ R593	1-249-397-11	CARBON	22 5% 1/4W F				
R594	1-247-903-00	CARBON	1M 5% 1/4W	R499	1-249-411-11	CARBON	330 5% 1/4W
R595	1-249-425-11	CARBON	4.7K 5% 1/4W F			< VARIABLE RESISTOR >	
R596	1-249-419-11	CARBON	1.5K 5% 1/4W F				
R597	1-249-419-11	CARBON	1.5K 5% 1/4W F				
R598	1-249-425-11	CARBON	4.7K 5% 1/4W F	RV401	1-225-245-11	RES, VAR, CARBON 100KX5 (MASTER VOLUME)	
R599	1-249-417-11	CARBON	1K 5% 1/4W F			*****	
		< RELAY >					
RY401	1-515-614-11	RELAY					
		< VIBRATOR >					
X401	1-579-952-21	VIBRATOR, CERAMIC (8MHz)					

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

TA-VE800G

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	

16	1-773-709-11	WIRE (FLAT TYPE) (21 CORE)	
17	1-773-723-11	WIRE (FLAT TYPE) (21 CORE)	
18	1-773-638-11	WIRE (FLAT TYPE) (17 CORE)	
60	1-773-840-11	WIRE (FLAT TYPE) (29 CORE)	
△ CNJ909	1-526-794-11	OUTLET, AC	
△ CNP901	1-769-744-11	CORD, POWER	
△ F801	1-532-506-51	FUSE, TIME LAG (6.3A 250V)	
△ F802	1-532-506-51	FUSE, TIME LAG (6.3A 250V)	
△ F803	1-532-504-51	FUSE, TIME LAG (4A 250V)	
△ F804	1-532-504-51	FUSE, TIME LAG (4A 250V)	
△ F901	1-532-504-51	FUSE, TIME LAG (4A 250V)	
△ F902	1-532-464-51	FUSE, TIME LAG (2.5A 250V)	
FL101	1-517-519-11	INDICATOR TUBE, FLUORESCENT	
IC601	8-759-085-89	IC LM3875-S	
IC671	8-759-085-89	IC LM3875-S	
Q603	8-749-010-25	TRANSISTOR MN2488-OPY-M	
Q604	8-749-010-26	TRANSISTOR MP1620-OPY-M	
Q703	8-749-010-25	TRANSISTOR MN2488-OPY-M	
Q704	8-749-010-26	TRANSISTOR MP1620-OPY-M	
Q753	8-749-010-25	TRANSISTOR MN2488-OPY-M	
Q754	8-749-010-26	TRANSISTOR MP1620-OPY-M	
△ T901	1-429-542-12	TRANSFORMER, POWER	

ACCESSORIES & PACKING MATERIALS			

1-473-658-11	REMOTE COMMANDER (RM-VR1)		
1-501-594-11	ANTENNA (FM)		
1-501-721-11	ANTENNA (LOOP)		
3-856-144-11	MANUAL, INSTRUCTION		
	(ENGLISH,FRENCH,SPANISH,PORTUGUESE)		
3-856-144-21	MANUAL, INSTRUCTION		
	(GERMAN,DUTCH,SWEDISH)		
3-856-144-31	MANUAL, INSTRUCTION (DANISH, FINISH)		
3-856-145-11	MANUAL, INSTRUCTION (Basic Operation)		
	(ENGLISH)		
3-856-145-21	MANUAL, INSTRUCTION (Basic Operation)		
	(FRENCH)		
3-856-145-31	MANUAL, INSTRUCTION (Basic Operation)		
	(SPANISH)		
3-856-145-41	MANUAL, INSTRUCTION (Basic Operation)		
	(PORTUGUESE)		
3-856-145-51	MANUAL, INSTRUCTION (Basic Operation)		
	(GERMAN)		
3-856-145-61	MANUAL, INSTRUCTION (Basic Operation)		
	(DUTCH)		
3-856-145-71	MANUAL, INSTRUCTION (Basic Operation)		
	(SWEDISH)		
3-856-145-81	MANUAL, INSTRUCTION (Basic Operation)		
	(DANNISH)		
3-856-145-91	MANUAL, INSTRUCTION (Basic Operation)		
	(FINISH)		

Ref. No.	Part No.	Description	Remark
*	4-982-213-01	CUSHION	
*	4-983-910-01	INDIVIDUAL CARTON	
	4-987-339-01	COVER, BATTERY (for RM-VR1)	

HARDWARE LIST			

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-682-548-04	SCREW +BVTT 3X8 (S)	

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Replace only with part number specified.