

TA-VE810G

SERVICE MANUAL

AEP Model
UK Model



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SPECIFICATIONS

Amplifier section		Input (ANALOG)			
POWER OUTPUT					
Stereo mode	4 ohms DIN 1 kHz, 100W + 100W				
			Sensitivity	Impedance	S/N
Surround mode	(4 ohms DIN 1 kHz) Front: 100 W + 100 W Centre*: 100 W Rear*: 100 W/ch * No sound may be output when using certain sound sources and/or sound mode settings.	PHONO	2.5 mV	50 kilohms	75 dB* (A, 2.5 mV)
		CD, LD/DVD	200 mV		
		TAPE, DAT/MD, VIDEO, SATL, TUNER	150 mV	50 kilohms	82 dB* (A, 150mV)
		5.1 INPUT	200 mV	50 kilohms	82 dB* (A, 150mV)
5.1 mode	(4 ohms DIN 1 kHz) Front: 100 W + 100 W Centre: 100 W Rear: 100 W/ch	* '78 IHF			
Frequency response	PHONO: RIAA equalization curve ±0.5 dB CD, TAPE, DAT/MD, LD/DVD, SATL, TUNER, VIDEO: 10 Hz ~ 50 kHz ^{+0.5} / ₋₂ dB (Direct Pass)				
		Outputs	REC OUT (AUDIO) OUT: Voltage 150 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		

— Continued on next page —

INTEGRATED AV AMPLIFIER



SONY®

Video section

Inputs 1 Vp-p 75 ohms

Outputs 1 Vp-p 75 ohms

General

System Preamplifier section:
Low-noise NF type
equalizer
Power amplifier section:
Pure-complimentary
SEPP

Power requirements 230 V AC, 50/60 Hz

Power consumption 240 W

AC outlets 1 switched, total 100 W

Dimensions 430 x 155 x 350 mm
(17 x 6 1/8 x 13 7/8 inches)

Mass (Approx.) 11.5 kg (25 lb 5 oz)

Supplied accessories
- Remote commander
RM-VR101 (remote) (1)
- Size AA (R6) batteries (2)
- IR repeater (1)

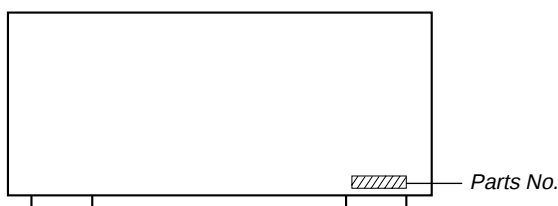
Design and specifications are subject to
change without notice.

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MODEL IDENTIFICATION

— BACK PANEL —



Parts No.	Model
4-989-880-5□	AEP, German, East European model
4-989-880-6□	UK model

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  OR DOTTED LINE WITH MARK  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

SERVICING NOTE

ALL CLEAR

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

Procedure:

1. With the power turned OFF, press the **POWER** button while pressing the **MODE** button, **AUDIO FUNCTION >** and **VIDEO FUNCTION >** 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.)

Procedure:

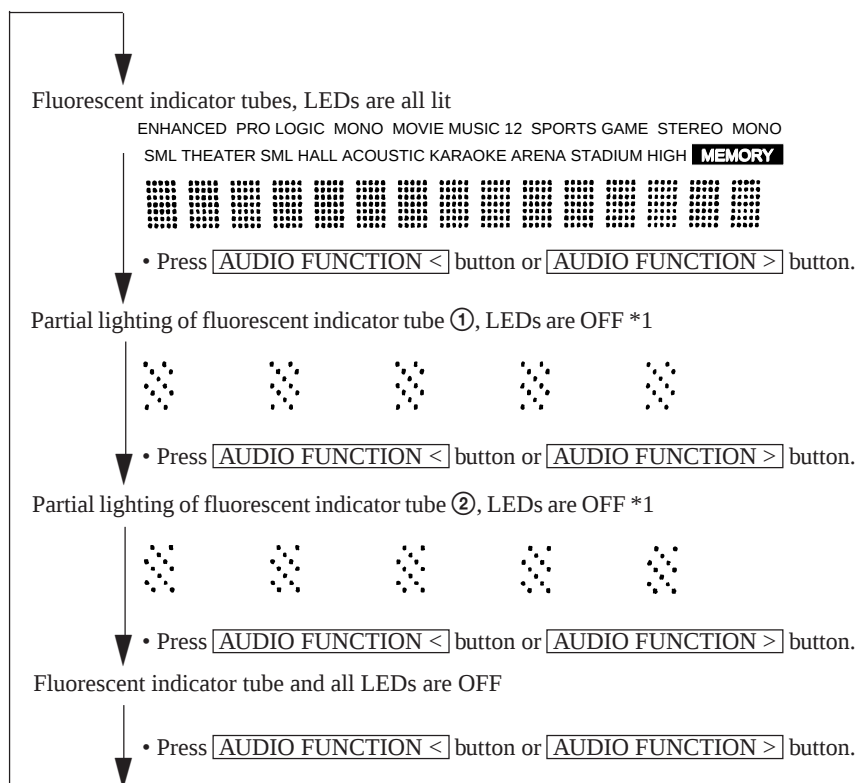
1. With the power turned OFF, press the **POWER** button while pressing the **MODE** button and **AUDIO FUNCTION >** button simultaneously to turn ON the power.
2. FACTORY SET will be displayed on the fluorescent indicator tube, and FACTORY SET will be executed.

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

Procedure:

1. With the power turned OFF, press the **POWER** button while pressing the **MODE** button and **VIDEO FUNCTION >** button simultaneously to turn ON the power.
2. The fluorescent display tubes and LEDs will all light up. Release the buttons in the order of **VIDEO FUNCTION >**, and **MODE**.
3. The Fluorescent indicator tube display changes as follows by pressing the **AUDIO FUNCTION <**, **AUDIO FUNCTION >**. (Pressing the other buttons will exit this mode.)



*1 Those other than the STANDBY 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 supplied as an accessory, and display the OSD screen.
2. Click the SET UP 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 supplied as an accessory.
6. Click EXIT to end.

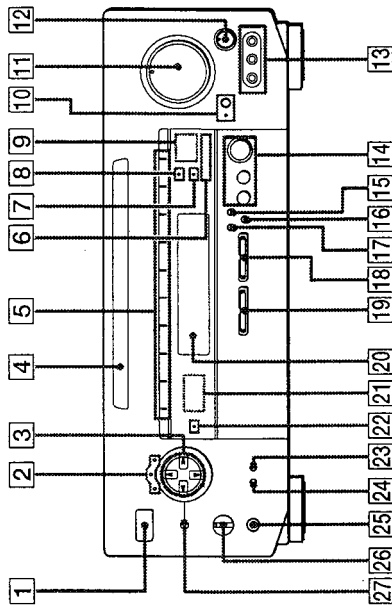
Key Check Mode

Method:

1. With the power OFF, while pressing the **MODE** button and **AUDIO FUNCTION <** button together, press the **POWER** button.
2. "KEY TEST [18]" will be displayed on the FL display tube.
3. The [XX] number is counted down each time a button other than **POWER** is pressed until it becomes [00]. (Buttons pressed once will not be counted again when pressed another time.)
4. When the number becomes [00], press the **POWER** button and exit the mode.

Front Panel Descriptions

You can control the amplifier using the front panel instead of the remote. For details of the operations, see the pages in parenthesis.



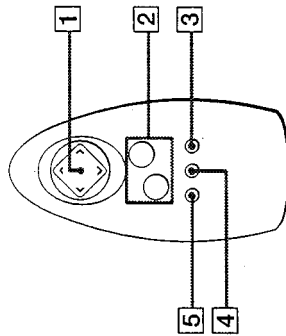
- | | | | |
|----|--------------------------------------|----|------------------------------|
| 1 | POWER switch | 16 | SET UP button (41) |
| 2 | SUR indicator (40) | 19 | 5.1 INPUT button (39) |
| 3 | INDEX indicator (42) | 17 | DIRECT PASS button (39) |
| 4 | IR emitter (4) | 18 | AUDIO FUNCTION selector (38) |
| 5 | FUNCTION indicators | 19 | VIDEO FUNCTION selector (38) |
| 6 | 5.1 INPUT indicator (39) | 20 | Display |
| 7 | DIRECT PASS indicator (39) | 21 | IR receptor (11) |
| 8 | LEARNING SENSOR indicator | 22 | STANDBY indicator |
| 9 | IR sensor (14) | 23 | DISPLAY button (42) |
| 10 | BASS BOOST button and indicator (39) | 24 | DIMMER button (39) |
| 11 | MASTER VOLUME control (38) | 25 | PHONES jack (39) |
| 12 | BALANCE control (39) | 26 | SPEAKERS selector (8) |
| 13 | VIDEO 3 input jacks (9) | 27 | DPC MODE button (40, 42) |
| 14 | SOUND FIELD buttons (40) | | |
| | SOUND FIELD ON/OFF button | | |
| | GENRE button | | |
| | MODE button | | |

37^{GB}

38^{GB}

Remote Descriptions

Although the direction control button lets you perform almost all of the amplifier operations, for certain operations, you can also control the amplifier using the other (short-cut) buttons. For details of the operations, see the pages in parenthesis.

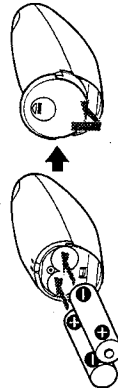


- | | |
|---|-----------------------------------|
| 1 | Direction control button (11, 12) |
| 2 | VOL +/- (20) |
| 3 | ALL OFF |
| 4 | TV/VIDEO |
| 5 | TV : switches TV's input mode. |
| | FLASHER (42) |

Using the Remote

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 (+/-), then close the cover.



Notes on the remote

Battery life

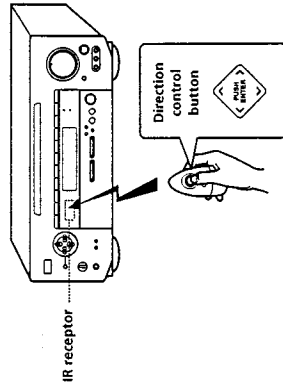
Under normal use, the batteries should last for about 6 months. When the remote no longer operates the amplifier, replace both batteries with new ones.

Notes

- Do not leave the remote in an extremely hot or humid place.
- Do not use a new battery with an old one.
- Do not expose the remote sensor to direct sunlight or lighting apparatuses. Doing so may cause a malfunction.
- If you don't use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

Turning on the amplifier and bringing up the on-screen display on your TV (or monitor)

To turn on the amplifier, point the remote at the IR receptor, and then press the direction control button on the remote once or twice. To bring up the on-screen display, turn on your TV and set it to the appropriate video input. If you register the IR code of your TV (see "Registering a TV (or Monitor)" on page 13), you can turn on your TV automatically whenever you turn on the amplifier.

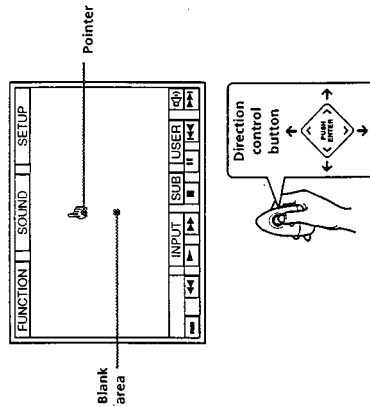


(continued)

How to use the remote

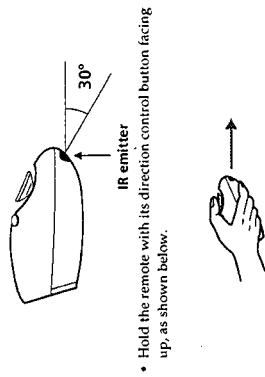
The supplied remote lets you perform almost all of the amplifier operations.

This section describes how to use the direction control button. For other remote operations, see page 38.



Notes on handling the remote

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



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

- 1 Press the direction control button on the remote once to recall the on-screen display.

- 2 Press repeatedly (or hold down) the corner of the direction control button (←, →, ↑, ↓) in the direction you want to move the pointer (hand-shaped icon) on the on-screen display.

- 3 To "click" on an item, position the pointer so that it is on one of the on-screen items, then press and quickly release the centre of the direction control button (indicated by "PUSH ENTER").

To make the on-screen display disappear

Position the pointer in the blank area, and press the centre of the direction control button.

Registering a TV (or Monitor)

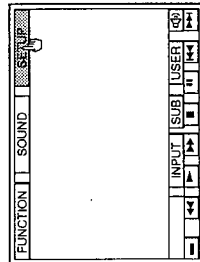
You must register the IR code of your TV (or monitor) in order to turn on your TV automatically whenever you turn on the amplifier.

IR code registration is unnecessary in the following case

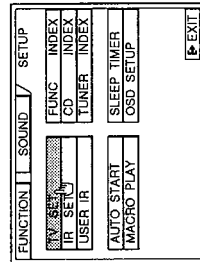
If your TV is a Sony product that can be controlled by an infrared remote, and it is connected to the amplifier by its VIDEO 1 video input jack, you do not need to register its IR code.

Registering IR codes

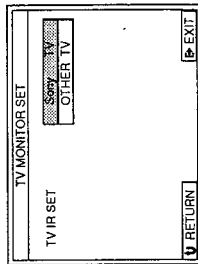
- 1 Turn on the amplifier and the TV.
Make sure the input selector on the TV is set to the video input.
- 2 Click SETUP in the main menu.



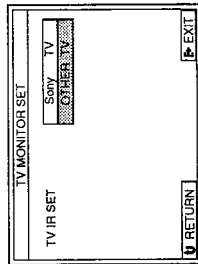
- 3 Click TV SET.



- 4 • Sony TV
1 Click Sony TV.
The IR codes are automatically registered and registration is complete.

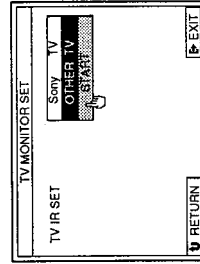


- Non-Sony TV
1 Click OTHER TV.
2 Go to step 5.



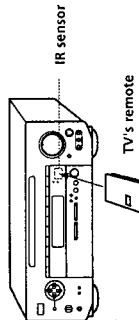
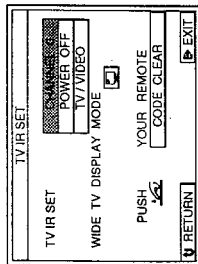
- 5 Cover the IR sensor on the TV to prevent accidental operation. Otherwise, the on-screen display may be turned off during the registration procedure.

- 6 Click START.



- 7 When "PUSH YOUR REMOTE" appears in the on-screen display, press the button on the TV's remote that corresponds to the highlighted control button (e.g., POWER OFF).

- TV/VIDEO: Use to program the cyclic input selector button on your TV's remote. This allows you to switch the TV's input selector using this unit's remote. Do not program an independent input selector button at this setting.
- WIDE TV DISPLAY MODE: Use to program the wide TV mode button on your TV's remote.



When registering the IR code, be sure to do the following; otherwise, the IR code may not be registered correctly.

- Point the remote at the IR sensor on the amplifier from a distance of less than 1 inch (3 cm).
- Hold down the button on the remote for about 2 or 3 seconds until the "RECEIVING" display switches to "RELEASE YOUR REMOTE".
- Keep the remote pointed horizontally at the IR sensor until the code is registered.

- 8 Repeat step 7 for the remaining buttons that appear in the on-screen display. If "NG" is displayed, an IR code was not registered correctly. In this case, repeat step 7 again.

To return to the main menu
Click EXIT.

To return to a previous menu
Click RETURN.

Note

Some IR codes may not have been successfully registered, even if "RELEASE YOUR REMOTE" appears on the TV screen. In this case, try registering the IR code again. If the IR code still cannot be registered, follow the procedure described in "Registering Desired Components (User IR setting)" on page 28.

Erasing TV IR codes

Click CODE CLEAR in the TV IR SET menu that appears when you click START.

- To erase a specific IR code
1 Click SINGLE IR CODE CLEAR.
"SELECT CLEAR CODE KEY" appears.
2 Click the button you want to clear.
"Are you sure?" appears.
3 Click YES to erase the code.
To cancel erasing, click NO.

To erase another code repeat steps 2 and 3.

- To erase all the TV IR codes

- 1 Click TV IR CODE CLEAR.
"Are you sure?" appears.
- 2 Click YES to erase the codes.
"CODE CLEAR" appears in the display.
To cancel erasing, click NO.

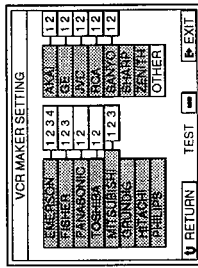
(continued)



reen Control

2 Click the manufacturer of the component you want.

The IR codes for that component are automatically registered.



If the manufacturer is not listed, cover the IR sensor on the component to prevent accidental operation during the registration procedure, click **OTHER**, then go to step 6.

3 Click **TEST**.

If the selected component turns on, the IR codes have been registered. The registration is complete.

If the component does not turn on:

Click the number button beside the manufacturer's name to select another number, then click **TEST** again.

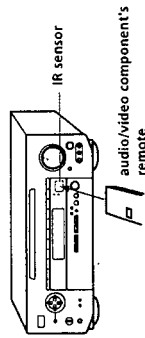
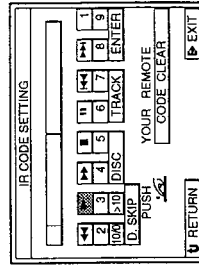
If the component still does not turn on:

Cover the IR sensor on the component to prevent accidental operation during the registration procedure is complete, click **OTHER**, then go to step 6.

6 When "PUSH YOUR REMOTE" appears, press the button on your **audio/video component's remote** that corresponds to the control button highlighted.

[] is the **POWER** switch.

After you have registered all the IR codes, the **IR CODE SETTING** menu reappears.



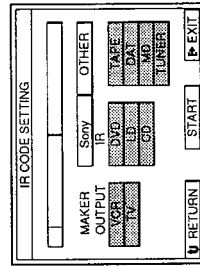
When registering the IR code, be sure to do the following; otherwise, the IR code may not be registered correctly.

- Point the remote at the IR sensor on the amplifier from a distance of less than 1 inch (3 cm).
- Hold down the button on the remote for about 2 or 3 seconds until the "RECEIVING" display switches to "RELEASE YOUR REMOTE".
- Keep the remote pointed horizontally at the IR sensor until the code is registered.

7 Repeat steps 3 to 6 to register IR codes from other components.

Setting Up the Remote for On-Sc

5 Click the respective component.



If the component is not a VCR or laser disc player

1 Cover the IR sensor on the component to prevent accidental operation during the registration procedure.

2 Click **START**, then go to step 6.

If the component is a VCR, DVD or laser disc player:

1 Click **START**.

A list of other manufacturers appears.



To return to the main menu

Click EXIT.

To return to a previous menu

Click RETURN.

To register special IR codes that do not appear as on-screen controls
See "Registering Desired Components (User IR setting)" on page 28.

Notes

- If the IR codes do not operate as expected, perform the registration operation(s) again to make sure the IR codes are registered correctly. If the IR code still cannot be registered, see "Registering Desired Components (User IR setting)" on page 28.
- If you experience difficulty operating the INPUT, number, or ENTER buttons of a VCR or LD player after automatic registration in step 5, register the IR codes for that component manually as shown in step 6.
- When using components made by other manufacturers, certain operations may not be possible even after selecting manufacturer (in step 5). In this case, register the IR codes for those buttons manually as shown in step 6.
- If you register a playback source as TOSHIBA 2 or RCA 2, you cannot turn the TV on or off using the amplifier's remote (the power will not go on when you click TEST).
- Do not register the same type of component (e.g., an LD player) at several different functions.
- You can register about 200 IR codes, including user IR codes (see page 28); however, depending on the type of codes recorded, the maximum limit may be less than 100. It may be difficult or impossible to register about 200 codes under the following conditions:
 - When registering from remotes with weak batteries.
 - When registering IR codes that have been registered to a programmable remote (e.g., any IR code not originally supplied in the respective remote).
- Keep the IR sensor away from fluorescent light or direct sunlight. Otherwise, the IR codes may not be registered.
- If the mains lead is disconnected for about two weeks, the registered IR codes will be erased. "ALL CLEAR!" will appear on the TV screen the next time you turn on the amplifier.
- Some remote controls supplied with audio and video components made by other manufacturers may have a special format. In such cases, it may not be possible for the amplifier to learn (or properly execute) their command codes.

Erasing IR codes

Click CODE CLEAR in the IR CODE SETTING menu that appears when you click START.

• To erase a specific IR code

- Click SINGLE IR CODE CLEAR.
"SELECT CLEAR CODE KEY" appears.
- Click the button you want to clear.
"Are you sure?" appears.
- Click YES to erase the code.
"CODE CLEAR!" appears.
To cancel erasing, 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)

- Click (OTHER CD) CODE CLEAR.
"Are you sure?" appears.
- Click YES to erase the codes.
"CODE CLEAR!" appears.
To cancel erasing, click NO.

• To erase all the IR codes

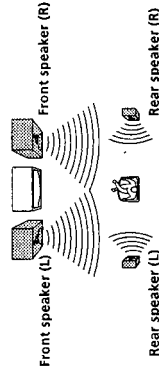
- Click ALL IR CODE CLEAR.
"Are you sure?" appears.
- Click YES to erase the codes.
"CODE CLEAR!" appears.
To cancel erasing, click NO.

What is Dolby Pro Logic Surround?

Dolby Pro Logic Surround is a decoding system standardized in TV programmes and movies. Dolby Pro Logic Surround improves sound image by using four separate channels. These channels manipulate the sound and enhance the action as it happens on the screen.

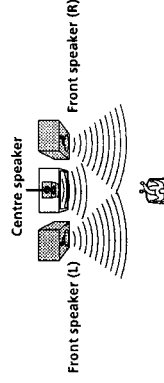
PHANTOM mode

Select this 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

Select this mode if you have front and centre speakers but no rear speakers. 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.

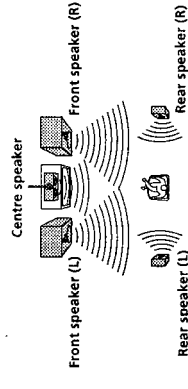


Specifying the centre mode

To take advantage of Dolby Pro Logic Surround, you should connect at least one pair of rear speakers and/or one centre speaker, plus a TV and a VCR. Also, to enjoy a full effect, you need to select the appropriate centre mode (WIDE, NORMAL, PHANTOM, or 3 CH LOGIC modes) on the amplifier, according to your speaker system.

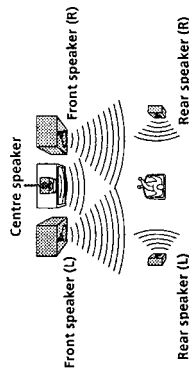
WIDE mode

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



NORMAL mode

Select this mode if you have front and rear speakers and a small centre speaker. Since a small speaker cannot produce enough bass, the bass sound of the centre channel is output from the front speakers.

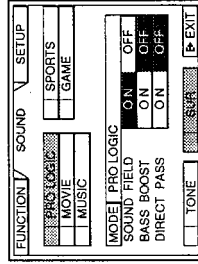


Adjusting the Speaker Volume

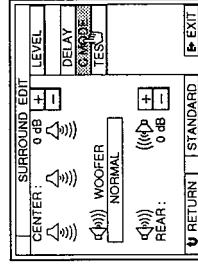
To enjoy Dolby Pro Logic Surround sound, select the appropriate centre mode. Then adjust the volume of each speaker using the test tone that the amplifier provides. The test tone feature lets you set the volume of your speakers to the same level. (If all of your speakers have equal performance, you do not have to adjust the speaker volume.)

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

- 1 Click SOUND in the main menu.
- 2 Click PRO LOGIC, then click SUR.



- 3 Click C MODE repeatedly to display the centre mode appropriate for your speaker system (see page 18).



4

Click TEST.

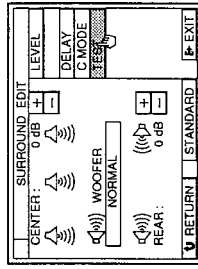
You will hear a test tone from the speakers in the following order. The speaker emitting the test tone is shown in red on the SURROUND EDIT menu.

WIDE, NORMAL: Front (left) → Centre →

Front (right) → Rear

PHANTOM: Front (left and right) → Rear

3CH LOGIC: Front (left) → Centre → Front (right)



- 5 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:

- Click CENTER + or - to adjust the level of the centre speaker from -15.0 dB to +10.0 dB (1 dB/steps).
During this adjustment, the test tone is emitted from the centre speaker.
- Click REAR + or - to adjust the level of the rear speakers from -15.0 dB to +10.0 dB (1 dB/steps).
During this adjustment, the test tone is emitted from both speakers simultaneously.

- 6 Click TEST when you are done adjusting. The test tone is turned off.

To return to the main menu
Click EXIT.

To return to a previous menu
Click RETURN.

You can adjust all speakers at one time
Use VOL +/- on the remote.

You can increase the output level of the rear speakers

You can raise the output of the rear speakers by 5 dB. When turning on the receiver, press POWER and MODE simultaneously to display "GAIN Up". To return the output level to normal, repeat this procedure to display "GAIN NORMAL."

Selecting a Component

You can listen to or watch a connected component by clicking on the component in the on-screen display.

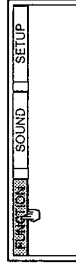
Before you begin, make sure you have:

- Registered the IR codes for the connected components (see pages 13 to 17).
- Turned MASTER VOL on the front panel to the leftmost position (0) to avoid damaging your speakers.
- Set the Auto Play function to ON. (The factory setting is ON, see page 30).
- Selected the appropriate speaker system (see page 8).
- Set BALANCE on the front panel to the centre position.

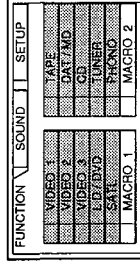
- 1 Press the button on the remote once or twice to turn on the amplifier.

The TV turns on automatically, and the main menu appears. If the TV does not turn on automatically, see pages 13 to 14 to register your TV.

- 2 Click FUNCTION in the main menu.



- 3 Click the component you want. The control buttons appear, then the component turns on and starts playing automatically.



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

*1 If you connect the component to jacks other than those specified in the table, click the appropriate one according to your connection (e.g., if you connect the LD player to the VIDEO 3 jacks, click VIDEO 3 to watch the LD).

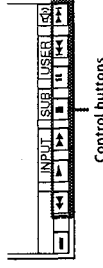
*2 For details about watching TV programmes, see page 21.

*3 Control buttons do not appear when you select PHONO.

- 4 Use VOL + or - on the remote to adjust the volume.

To adjust the volume of the TV's speakers, use the volume control on the TV.

To operate the selected component, click the control buttons. For details of the functions of the control buttons, see the instructions of the selected component. To display other control buttons for the selected component, click SUB.



To turn off the selected component
Click in the bottom left corner. To turn on the component, follow steps 1 to 3.

To turn off all components
Press ALL OFF on the remote control.

To mute the sound
Click . The icon changes to . "MUTING" appears in the display on the front panel. To turn the sound back on, click on the icon again.

To listen to decoded Dolby Digital (AC-3) programme sources
Click FUNCTION, then click 5.1 INPUT.
The video signal from the LD/DVD VIDEO IN jack is automatically paired with the audio signals from the 5.1 INPUT jacks. When set to this mode, the audio signals bypass the amplifier's sound fields. To customize the sound of the 5.1 INPUT, use the controls on your Dolby Digital (AC-3) decoder.
To listen to the analog audio signals input to the LD/DVD AUDIO (L and R) jacks, select LD/DVD from the FUNCTION menu.

You can play video and audio components at the same time
Play a video component you want, then play audio component. Make sure the AUTO PLAY function is set to off (see page 30).

Notes

- Components of the same type (e.g., Sony LD player) will be controlled simultaneously by the on-screen controls.
- If a component does not respond, it may be because IR codes from the IR emitter are not fully reaching the component. In this case, connect the extra IR repeater (supplied) and position it facing the component (see "Infrared (IR) Repeater Hookups" on page 6). If the IR repeater is already connected, change the position of the IR repeater or programme source.
- When 5.1 INPUT is selected, sound fields cannot be selected or edited.

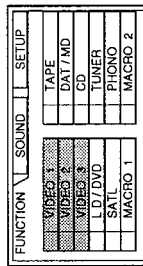
Watching TV or Video Programmes

Use the TV tuner built-in to the VCR to watch TV programmes; otherwise, the on-screen display will change to a TV programme when you switch channels. Also, set the VCR's TV tuner to skip channels where there is no broadcast so that an image is always displayed on the TV screen; otherwise, the on-screen display will be distorted.

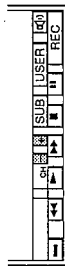
Before you begin, make sure you have:

- Connected your TV and VCR to the amplifier (see pages 8 to 9).

- 1 Select the appropriate VCR component (e.g., VIDEO 2).



- 2 Click CH + or - to select the channel you desire.



If the Auto Play function is set to on (page 30)

Be sure to click to stop playback from the VCR before clicking CH + or -.

To change the video input of a Sony VCR
Click SUB, then click INPUT.

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

- For non-Sony TVs: You must register the IR code for the wide TV mode button on your TV's remote (see pages 13 and 14).

Recording

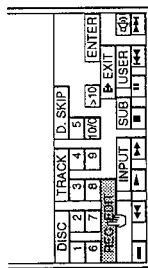
You can control both playback and recording components using the amplifier's on-screen display. If necessary, see the instructions of your recording component.

Recording to audio tape or MD

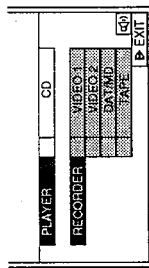
- 1 Click FUNCTION in the main menu.
- 2 Click the playback component you want (e.g., CD).
- 3 Click SUB.



- 4 Click REC EDIT.



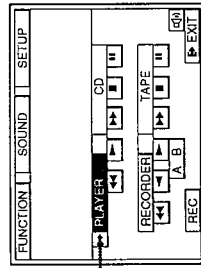
- 5 Click a recording component (e.g., TAPE).



The control buttons for both components appear. "PLAYER" for the playback component, and "RECORDER" for the recording component.

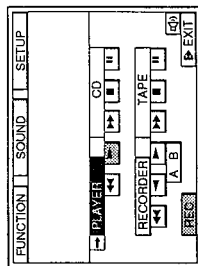
The arrow indicates the operative component.

arrow



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

- 7 Click REC to start recording, then click the play button () on the PLAYER control. Recording starts. Do not click any RECORDER controls while recording. This will cut off the source being recorded.



To stop recording

Click the recording component's control.

To control the recorder after recording

Click RECORDER. RECORDER becomes the operative component and you can use the RECORDER controls to rewind and playback the recording (etc.).

Click PLAYER to operate the playback component.

To return to the main menu

Click EXIT.

Notes

- 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.
- Some tape decks require that you press the buttons simultaneously to start recording. To perform one-button recording from the on-screen display, be sure to record the recording signal as shown in steps 1 to 7 of "Registering IR codes" (pages 15 to 16).
- Sound input through the 5.1 INPUT jacks cannot be recorded on a recording component.
- When you record on a component connected to the DAT/MD REC OUT or TAPE REC OUT jacks, sound adjustments do not affect the recording.

■ Recording other components to video tape

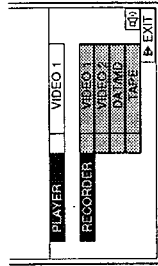
- 1 Click FUNCTION in the main menu.
- 2 Click the video playback component you want (VCR 1, VCR 2, LD/DVD, etc.).
- 3 Click REC.



- 4 Click REC EDIT.

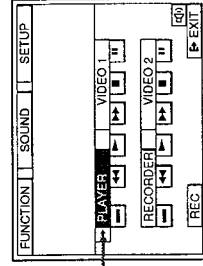


- 5 Click a recording component (e.g., VIDEO 2).



The control buttons for both components appear. "PLAYER" for the playback component, and "RECORDER" for the recording component. The arrow indicates the operative component.

arrow



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

- 7 Click REC to start recording; then click the play button (▶) on the PLAYER control. Recording starts. Do not click any RECORDER controls while recording. This will cut off the source being recorded.

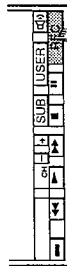
To stop recording
Click the recording component's ■ control.

To control the recorder after recording
Click RECORDER. RECORDER becomes the operative component and you can use the RECORDER controls to rewind and playback the recording (etc.).
Click PLAYER to operate the playback component.

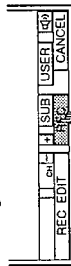
To return to the main menu
Click EXIT.

■ Recording TV programmes to video tape

- 1 Click FUNCTION in the main menu and select a VCR 1 or 2.
- 2 Tune in the TV programme on your video deck.
- 3 Click REC.



- 4 Click REC again to start recording.



Using the Pre-programmed Sound Fields

The sound fields let you select a sound characteristic to enhance the type of programmes or music you are listening to. To make the most out of this feature, we recommend that you connect centre and/or rear speakers.

Sound fields

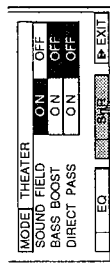
Genre	Mode	Surround effect
PRO LOGIC**	PRO LOGIC	Decodes programmes processed with Dolby Surround.
	ENHANCED PRO LOGIC	Additional output from rear speakers when decoding Dolby Surround programmes.
MOVIE	CINEMA STUDIO A	Reproduces the sound characteristics of the Sony Pictures Entertainment "Cary Grant Theatre" cinema production studio.
	CINEMA STUDIO B	Reproduces the sound characteristics of the Sony Pictures Entertainment "Kim Novak Theatre" cinema production studio.
	THEATER	Adds acoustic reflections of a theatre to decoded Dolby Surround signals.
	NIGHT THEATER	Compresses the dynamic range for listening at low volume levels.
	MONO MOVIE	Creates a theatre-like environment from movies with monaural soundtracks.
MUSIC	SMALL HALL	Reproduces the acoustics of a rectangular concert hall. Ideal for soft acoustic sounds.
	LARGE HALL	
	JAZZ CLUB	Reproduces the acoustics of a jazz club.
	LIVE HOUSE	Reproduces the acoustics of a rock and roll club.
	ACOUSTIC**	Reproduces normal 2-channel stereo with equalization (TONE).
SPORTS	STADIUM	Reproduces the feeling of a large open-air stadium. Great for electric sounds.
GAME	GAME	Obtains maximum audio impact from video game software.

** If you select PRO LOGIC, be sure to adjust the volume level of the centre and/or rear speakers to get the most out of the Dolby Pro Logic Surround Sound (see pages 18 and 19).
** If you select ACOUSTIC, the hookups of the centre and/or rear speakers are unnecessary.

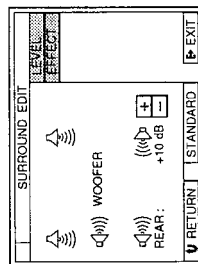
Adjusting the effect or speaker levels

Adjust the effect and speaker level parameters to fit your listening situation. See the chart "Adjustable sound parameters" on page 25 for parameters you can adjust in each sound field.

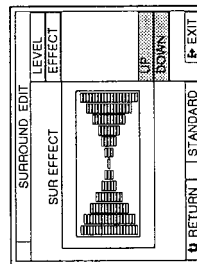
- 1 While playing a component, click **SOUND** in the main menu to display the **SOUND FIELD SELECT** menu.
- 2 Click a sound field genre, then click **MODE** repeatedly until the mode you want appears.
- 3 Click **SUR**.



- 4 Click the icon for the parameter you want to adjust.
The parameter chart for your selection appears. See the next page for details of each adjustment.



- 5 Click an adjustment icon (+ / - , UP / DOWN, SHORT, LONG, etc.) to adjust the parameter.

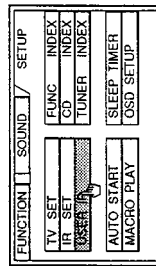


To reset all parameters (except for the delay time) of the current sound field to the factory settings.
Click **STANDARD**.

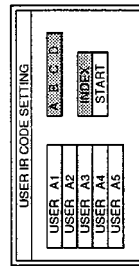
Registering Desired Components (User IR setting)

Use the **USER IR CODE SETTING** menu to register any IR codes that could not be registered in "Registering Audio and Video Components" on page 15. By registering User IR codes, you can control a variety of appliances (such as air conditioners) as well as audio/video components. You can register up to 20 User IR codes.

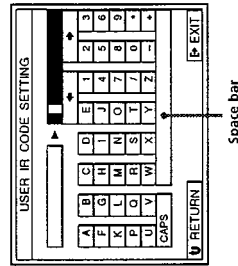
- 1 Click **SETUP** in the main menu to display the **SETUP** menu, then click **USER IR**.



- 2 Click **A B C D** to select a User IR code page, then click **INDEX**.

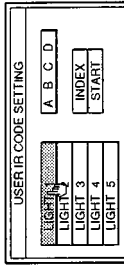


- 3 Create a name for the IR code by clicking each character. The name is automatically stored. To enter a space, click the space bar. To switch between upper and lower case letters, click **CAPS**. If you made a mistake, click **←** or **→** to move the cursor to the character to be changed, then click the correct character.



- 4 Click **RETURN** to go back to the **USER IR CODE SETTING** menu, then repeat steps 2 to 4 until you enter the names of all the IR codes you want to register.

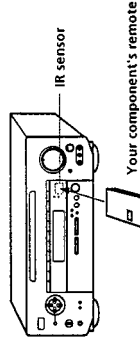
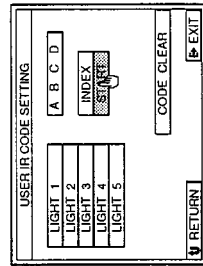
- 5 Click the name of the first IR code.



- 6 Cover the IR sensor on the respective component to prevent accidental operation during the registration procedure.

- 7 Click **START**.

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



Your component's remote

When registering the IR code, be sure to do the following; otherwise, the IR code may not be registered correctly.

- Point the remote at the IR sensor on the amplifier from a distance of less than 1 inch (3 cm).
- Hold down the button on the remote for about 2 or 3 seconds until the "RECEIVING" display switches to "RELEASE YOUR REMOTE".
- Keep the remote pointed horizontally at the IR sensor until the code is registered.

To register a specific IR code

Click the button where the IR code was registered, then click **START**.

Notes

- If the mains lead is disconnected for about two weeks, the registered IR codes will be cleared. "ALL CLEAR" will appear on the TV screen the next time you turn on the amplifier.
- 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 registered for the on/off switch, repeat the procedure and register the on and off IR codes separately.
- The amplifier may not be able to register IR codes with special waveforms produced on some remote controls.

Erasing IR codes

Click CODE CLEAR in the USER IR CODE SETTING menu.

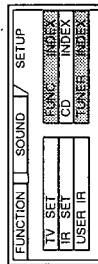
- To erase a specific IR code
 - Click SINGLE IR CODE CLEAR.
 - "SELECT CLEAR CODE KEY" appears.
 - Select the button you want to clear.
 - "Are you sure?" appears.
 - Click YES to erase the code.
 - "CODE CLEAR" appears.
 - To cancel erasing, click NO.
- To erase another code, repeat steps 2 and 3.

- To erase all the User IR codes
 - Click USER IR CODE CLEAR.
 - "Are you sure?" appears.
 - Click YES to erase the codes.
 - "CODE CLEAR" appears.
 - To cancel erasing, click NO.

Indexing

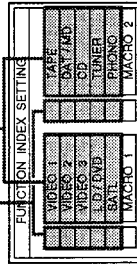
The Index functions let you specify icons for each function button and names up to 8 characters long for each function button and preset radio station.

- Click SETUP in the main menu to display the SETUP menu, then click FUNC INDEX or TUNER INDEX.



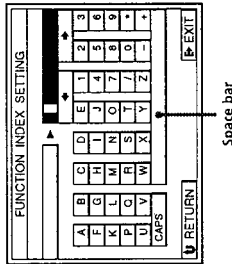
- For the function buttons (FUNCTION INDEX)
 - Click the icon to be specified.
 - Click the icon you want from the icon menu, then click RETURN.
 - Click the function button to be specified.

Icons



- For the preset radio stations (TUNER INDEX)
 - Click LIST TUNER to display the preset list.
 - Click ABC to select the page, then select the station to be named.

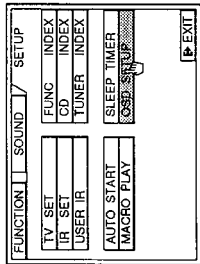
- Create the new name by clicking each character. The name is stored automatically. To enter a space, click the space bar. If you made a mistake, click ← or → to move the cursor to the character to be changed, then click the correct character.



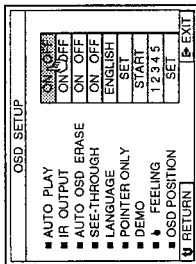
Playing Components Automatically (Auto Play)

The Auto Play function lets you set the amplifier to start playing the components immediately after they are selected from the FUNCTION SELECT menu. The amplifier comes from the factory with Auto Play set to on.

- Click SETUP in the main menu to display the SETUP menu, then click OSD SETUP.



- Click AUTO PLAY ON or OFF.



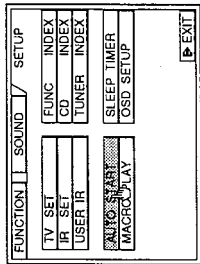
Notes

- The Auto Play function does not work when you operate the amplifier from the front panel.
- The amplifier cancels the automatic playback function of components designed to start playing when they are turned on (such as laser disc and CD players). To activate the auto play function, set the amplifier's Auto Play to on.

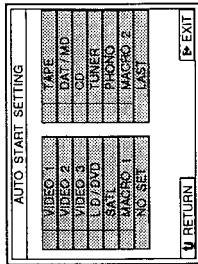
Starting a Component Automatically at Power On (Auto Start)

The Auto Start function lets you set the amplifier to start playing a specific component immediately whenever you turn on the amplifier.

- Click SETUP in the main menu to display the SETUP menu, then click AUTO START.



- Click the component you want.
 - To start the last-played component automatically when you turn on the amplifier, click LAST.
 - To do a macro automatically when you turn on the amplifier, click MACRO 1 or MACRO 2. Be sure that the Auto Play function is set to on.



To cancel the Auto Start function
Click NO SET in step 2.

Note

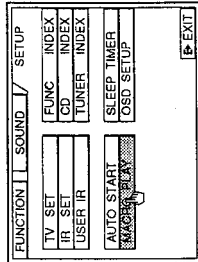
A Macro Play setting containing the ALL OFF command cannot be selected for Auto Start.

Starting Several Components in Sequence Automatically (Macro Play)

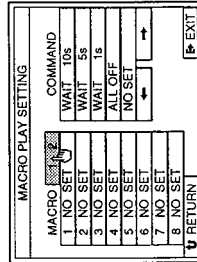
The Macro Play function lets you link several IR codes in a sequential order as a single command. The amplifier provides 2 pages (MACRO 1 and 2). You can specify up to 8 of the registered IR codes for each page.

Setting the sequence of IR codes

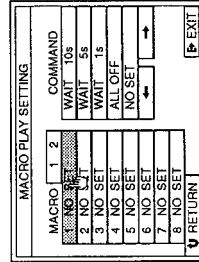
- 1 Click SETUP in the main menu to display the SETUP menu, then click MACRO PLAY.



- 2 Click MACRO 1 or 2.



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



- 4 Click ← or → to show the IR codes available for that button. The registered IR codes appear at the right of the screen.

- To specify a time lag between commands, click ← or → repeatedly until the time lag commands (WAIT 10s, WAIT 5s, and WAIT 1s) appear.

- To specify an IR code to turn off all the components, click ← or → repeatedly until ALL OFF appears.

- 5 Click the IR code you want.

The name of the IR code appears in the highlighted macro step number and the highlight moves to next macro step number.

- 6 Repeat steps 4 and 5 to enter up to 8 IR codes.

To erase an entered IR code

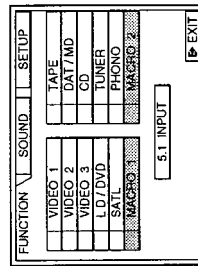
- 1 Click the code you want to erase.
- 2 Click ← or → repeatedly until NO SET appears at the right of the screen.
- 3 Click NO SET.

Note

The ALL OFF command is not available for the Macro Play selected for Auto Start.

Starting a Macro Play

Click FUNCTION in the main menu, then click MACRO 1 or MACRO 2. The specified IR codes start automatically.

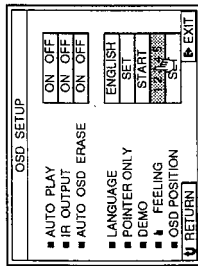


You can start a Macro Play automatically when you turn on the amplifier by selecting a Macro Play in the Auto Start function (see page 30).

Adjusting the Sensitivity of the Remote

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

- 1 Click SETUP in the main menu to display the SETUP menu, then click OSD SETUP.
- 2 Click FEELING 1 to 5 to select the sensitivity level you want. The higher the number, the faster the speed.

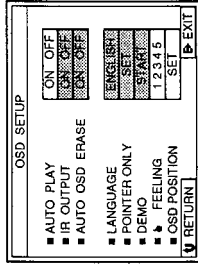


Changing the Display Settings

Selecting the display parameters

You can select the display modes (AUTO OSD ERASE, POINTER ONLY or DEMO) and the display type (LANGUAGE). You can also switch the IR OUTPUT setting when you connect the IR repeater.

- 1 Click SETUP in the main menu to display the SETUP menu, then click OSD SETUP.
- 2 Select the display parameters you want to change.



- To select the display mode, click AUTO OSD ERASE (ON or OFF), POINTER ONLY (SET) or DEMO (START).

AUTO OSD ERASE: This display mode is useful during LD player operations since it allows you to see chapter numbers that otherwise might be hidden by the control panel. When this mode is on, control panels disappear whenever you click and hold down the direction control button on the remote. 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 direction control button on the remote.

DEMO: This display mode activates a programme that explains the various functions of the amplifier. Note that when the programme is running, it replaces previously stored data (such as surround sound parameters) with data from the programme. Click START to activate the programme. To stop the programme, press any button on remote or amplifier.

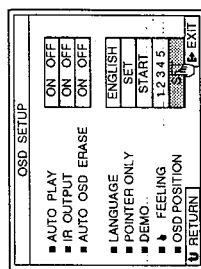
Adjusting the position of the on-screen display

You can adjust the overall position of the on-screen display control panel.

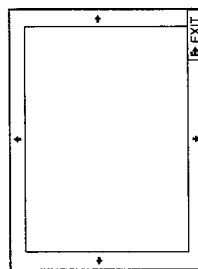
- 1 Click SETUP in the main menu to display the SETUP menu, then click OSD SETUP.

- 2 Click OSD POSITION SET.

The position adjustment screen appears.



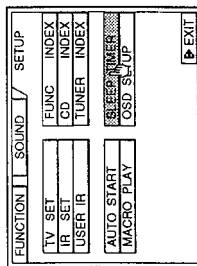
- 3 Click the borders to adjust the position so you can just see the top, bottom, right and left edges of the border.



Using the Sleep Timer

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

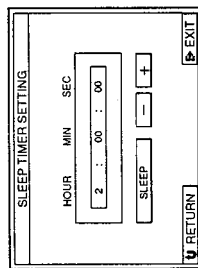
- 1 Click SETUP in the main menu to display the SETUP menu, then click SLEEP TIMER.



- 2 Click TIMER repeatedly to select the length of the sleep timer.

Each time you click TIMER, the menu changes as follows:

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



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

You can also freely specify the time

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

You can check the time remaining before the amplifier turns off

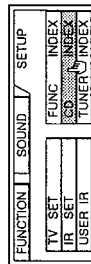
Click FUNCTION, then click SLEEP. The remaining time appears in the on-screen display.

Operating a CD Changer

Downloading the CD name data in a Sony CD changer with a CTRL A1 jack

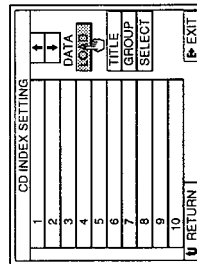
You can download all of the CD name data in a Sony CD changer that is equipped with a CTRL A1 jack, thus saving you the trouble of adding names one by one. Make sure that the CONTROL A1 connection is complete (see page 7) and the CD changer is registered as a Sony CONTROL A1 CD in the IR CODE SETTING menu (see page 15).

- 1 Click SETUP in the main menu to display the SETUP menu, then click CD INDEX.



- 2 Click DATA LOAD.

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



Note

If the characters (# \$; * ä ö ü) have been recorded in the CD changer, they will appear as blanks in the on-screen display.

- To select the display type, click LANGUAGE (ENGLISH, FRENCH or GERMAN).

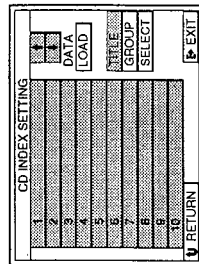
LANGUAGE: This setting lets you specify the language appearing in the on-screen display and the display on the front of the amplifier. You can choose between three languages: English, French and German.

- To switch the IR OUTPUT setting, click IR OUTPUT ON or OFF. When it is set to OFF, the IR signals are output only from the IR OUT jack on the rear panel. No IR signals will be output from the IR emitter 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.

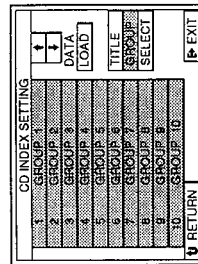
Indexing a CD

You can specify the names up to 12 characters for each CD (up to 200 discs) or group of discs in a CD changer.

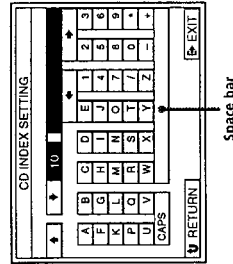
- 1 Click SETUP in the main menu, then click CD INDEX.
- 2 To name a disc, click TITLE. And then Click $\uparrow$ or $\downarrow$ to display the number of the disc to be named, then click the disc.



- To name a group, click GROUP, then click the group to be named.



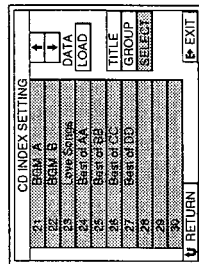
- 3 Create the new name by clicking each character. The name is automatically stored. To enter a space, click the space bar. If you made a mistake, click $\leftarrow$ or $\rightarrow$ to move the cursor to the character to be changed, then click the correct character.



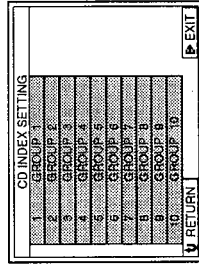
Grouping CDs

You can assign your CDs to one or more groups.

- 1 Click SETUP in the main menu, then click CD INDEX.
- 2 Click SELECT, then click the disc you want to assign to a new group. If the disc you want does not appear, click $\uparrow$ or $\downarrow$.



- 3 Click the names of the groups to which you want to assign the CD.



- 3 To remove the CD from one or more groups Click the highlighted group name so that it goes out in step 3.

You can assign the CD to one or more group
For example, to assign the CD to both "GROUP 1" and "GROUP 4," click both group names in step 3.

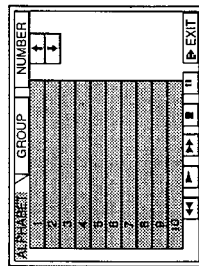
Searching for a CD quickly

- 1 Click FUNCTION in the main menu, then click CD.

- 2 Click LIST.

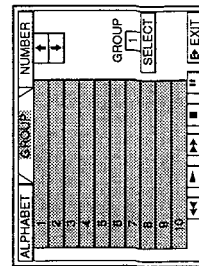


- 3 To search in alphabetical order
 - 1 Click ALPHABET to display the discs in alphabetical order.
 - 2 Click the disc. If the disc you want is not displayed, click $\uparrow$ or $\downarrow$.

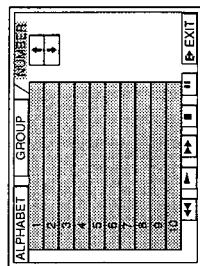


- To search using the group names

- 1 Click GROUP. The GROUP SELECT button and a group number appear at the right side of the screen. If there is no group corresponding to the respective group number, "NO ENTRY" is displayed.
- 2 Click SELECT to display groups 1-10.
- 3 Click the group you desire. The group number and disc list for the selected group appear on screen.
- 4 Click the disc. If the disc you want is not displayed, click $\uparrow$ or $\downarrow$.



- To search by disc number.
 - 1 Click NUMBER to display the discs in numerical order.
 - 2 Click the disc. If the disc you want is not displayed, click $\uparrow$ or $\downarrow$.



Playback starts automatically.

Notes

- Depending on the type of CD changer connected (3 or 5 disc changer, etc.), you may not be able to select the CD by clicking the disc name. In this case, select the CD from the normal CD control panel.
- If the CD changer is made by another manufacturer, and the sequence of operations required to start playback is other than; $\odot$ pressing a numeric button followed by $\odot$ pressing the disc button, then playback may not start when you click the disc name. In this case, return to the main menu, click SUB, and operate the CD changer according to its normal playback procedure.

(continued)

Selecting a Component

For the on-screen operations, see page 20.

- 1 Press **POWER** to turn on the amplifier, then press **VIDEO FUNCTION** or **AUDIO FUNCTION** repeatedly until the component you want appears in the display.

VIDEO FUNCTION

To listen to or watch	Select*
Video tapes	VIDEO 1, VIDEO 2 or VIDEO 3
Laser discs (LD) or DVD	LD/DVD
Satellite broadcasts	SATL

* The **FUNCTION** set up (see page 41) allows you to delete the names of components which are not connected. When a function is set to "NO" in the **FUNCTION** set up menu, it cannot be selected.

AUDIO FUNCTION

To listen to or watch	Select*
Digital Audio Tapes (DAT) or MiniDiscs (MD)	DAT/MD
Compact Discs (CD)	CD
Analog audio tapes	TAPE
Radio programmes	TUNER
Records	PHONO

* The **FUNCTION** set up (see page 41) allows you to delete the names of components which are not connected. When a function is set to "NO" in the **FUNCTION** set up menu, it cannot be selected.

- 2 Start playing the component, then use **MASTER VOLUME** to adjust the volume.

Recording

For the on-screen operations, see page 22.

- 1 Press **VIDEO FUNCTION** or **AUDIO FUNCTION** repeatedly to select the playback component you want to record.
- 2 Insert a blank tape into the recording component and adjust the recording level, if necessary.
- 3 Start recording on the recording component, then start playing the playback component.

To stop recording

Stop both components.

Notes

- Sound input through the 5.1 **INPUT** jacks cannot be recorded.
- Sound input through the **TAPE IN** jacks cannot be recorded.
- When you record on a component connected to the **DAT/MD REC OUT** or **TAPE REC OUT** jacks, sound adjustments do not effect the recording.

To	Do This
Reinforce the bass	Press BASS BOOST to turn on the BASS BOOST indicator.
Adjust the balance	Turn the BALANCE control to the left (L) or right (R).
Enjoy high quality sound	Press DIRECT PASS to bypass audio effects the equalizer, bass reinforcement, and surround effects. The DIRECT PASS indicator lights up.

When you listen with headphones

Connect the headphones to the **PHONES** jack and set the **SPEAKERS** selector to **OFF**.

To listen to decoded Dolby Digital (AC-3) programme sources

Press 5.1 **INPUT**. The 5.1 **INPUT** indicator lights up and the function automatically switches to **LD/DVD**. To listen to analog signals from the component connected to the **LD/DVD** jacks, select **LD/DVD** using the **VIDEO FUNCTION** selector.

To adjust the brightness of the display

Press **DIMMER** repeatedly to select the brightness you desire.

Playing audio and video components at the same time

- 1 Press **VIDEO FUNCTION** repeatedly to select the video component you want.
- 2 Press **AUDIO FUNCTION** repeatedly to select the audio component you want.
- 3 Start playing the selected video and audio components.

Adjusting the Sound

The adjusted sounds are stored automatically.

To select the sound fields

For the on-screen operations, see page 25.

Press **GENRE** repeatedly to display the sound fields genres, then press **MODE** repeatedly to display the sound fields mode. For the list of sound fields, see page 24.

To turn off the sound fields

Press **SOUND FIELD ON/OFF**.

To adjust the tone parameters

For the on-screen operations, see page 26.

- 1 Start playing a component, then select the sound field you want to adjust.

- 2 Press **DPC MODE** repeatedly until the **TONE** indicator lights up.

- 3 Use digital processing control buttons ($\wedge / \vee$) to select **BASS** or **TREBLE**.

Bass adjustment

Initial setting is: 0 dB

Treble adjustment

Initial setting is: 0 dB

- 4 Use digital processing control buttons ($< / >$) to adjust the tone level. You can adjust the level ± 10 dB in 2 dB steps.

- 5 Repeat steps 3 and 4 to make all necessary adjustments.

 **To turn off the equalizer or tone adjustments without erasing them**
Press **DIRECT PASS**.

To adjust the surround sound parameters

For the on-screen operations, see page 27.

- 1 Start playing a component, then select the sound field you want to adjust.

- 2 Press **DPC MODE** repeatedly until the **SUR** indicator lights up.

- 3 Use digital processing control buttons ($\wedge / \vee$) to select the parameter you want.
See "Surround (SUR) parameters" below for details.

- 4 Use digital processing control buttons ($< / >$) to adjust the level of the parameter.

Note

Certain menu items may not be available for adjustment depending on the current settings and menu modes. Unavailable items appear dimmed when shown in the display.

Surround (SUR) parameters

Surround effect level

It lets you adjust the "presence" of the current surround effect.

Delay time (Dolby Surround mode only)

Initial setting is: **DELAY 20**

It lets you adjust the delay time of the Dolby Pro Logic surround sound.

See page 27 for details.

Rear speaker level

Initial setting is: **REAR SP 0 dB**

Lets you adjust level of the rear speakers.

See page 19 or 27 for details.

Centre speaker level

Initial setting is: **CENT SP 0 dB**

Lets you adjust the level of the centre speaker.

See page 19 or 27 for details.

Customizing the Amplifier Operations

The menu operations allow you to customize various aspects of the amplifier to suit your listening environment, your speakers, your components, and your personal preferences.
For the on-screen speaker setup operations, see page 19.

- 1 Press **SET UP**.
"SET UP" appears in the display.

- 2 Press **SET UP** repeatedly to display one of the following menus:

CENTER MODE
DISPLAY SETUP
FUNCTION HOOKUP

- 3 Use digital processing control buttons ($\wedge / \vee$) to select the parameter you want.

- 4 Use digital processing control buttons ($< / >$) to adjust the parameter.

- 5 Repeat steps 2 and 4 to make all necessary adjustments.

- 6 Press **SET UP** twice to exit the set up mode.

Set up parameters

Centre mode

Initial setting is: **CENTER (NORMAL)**
See page 18 for details.

■ DISPLAY set up

Dimmer level

This setting lets you select brightness of the display on the front panel.

- You can select between four different settings.

Control A1 mode

Initial setting is: **CTRL A1 (AUTO)**

This setting lets you specify the display mode for Control A1 components.

- **AUTO** displays "PLAY", "STOP", "PAUSE" or "REC" for about 8 seconds when the operation switches.
- **FIX** displays "PLAY", "STOP", "PAUSE", "REC" or the contents of a disc or track memo of a CD or MD at all times.
- **OFF** turns off the operation status display.

Notes

- This setting is only effective when the IR code setting is set to Sony Control A1.
- If the disc or track memo contains a character that the amplifier cannot display, "-" appears for that character.

■ FUNCTION set up

VIDEO1, VIDEO2, LD/DVD, SATL, TAPE, DAT/MD, CD, TUNER, PHONO

Initial setting is: **YES**

These settings let you delete the names of unconnected components from the function lists.

- **YES** displays the name of the respective component (jacks).
- **NO** deletes the name of the respective component (jacks).

Notes

- When a function is set to "NO", it cannot be selected.
- If an S-LINK signal (Control A1, Control S) is input to the S-LINK jack from a component whose function was set to "NO", the function will automatically switch to "YES" and that function will be selected.

Indexing

Using the index functions, you can specify names up to 8 characters long for each component.

For the on-screen operations, see page 29.

1 Press AUDIO FUNCTION or VIDEO FUNCTION repeatedly to select a component.

2 Press DFC MODE repeatedly until the INDEX indicator lights up.

3 Create a name using the digital processing control buttons.

Press Δ or ∇ to select a character, and then press $\rightarrow$ to move the cursor to the next position. The name is stored automatically.

To insert a space, press Δ or ∇ until a blank space appears in the display. The space appears between " and A.

If you've made a mistake, press $\leftarrow$ or $\rightarrow$ repeatedly until the character you want to change flashes. Then select the right character.

4 Repeat steps 1 to 3 to assign index names to other components or stations.

To switch the display

Each time you press DISPLAY, the display switches between the index name $\rightarrow$ component name (or frequency) $\rightarrow$ track memo^{a)} $\rightarrow$ disc memo^{a)}.

• If the Control-A1 display mode is set to "AUTO" or "FIX" when listening to a Control-A1 compatible tape or DAT deck, the Control-A1 operations are displayed together with the index name and component name.

Example: TAPE [PLAY] $\rightarrow$ index name [PLAY] $\rightarrow$ disc memo^{a)} $\rightarrow$ track memo^{a)}
^{a)} If the Control-A1 display mode is set to "FIX" when listening to a Control-A1 compatible CD player or MD deck, you can display the disc memo and track memo information in addition to the Control-A1 operations.

Example: CD [PLAY] $\rightarrow$ index name [PLAY] $\rightarrow$ disc memo^{a)} $\rightarrow$ track memo^{a)}
^{a)} Up to 13 characters for CD (15 for MD).
^{a)} Up to 14 characters for CD (15 for MD).

Playing Components Without the TV (Flasher)

Using the flasher function, you can control components without using the TV's on-screen display. Instead, you use the remote and the display on the front panel of the amplifier.

1 Press the FLASHER button on the remote to turn off the on-screen display.
 If you are listening to an audio source the TV turns off automatically.

2 Press the left or right corner of the direction control button repeatedly.
 Each time you press the direction control button the amplifier displays a different operation (the FUNCTION indicators also light to help separate the different operations).
 The operations available for each component are shown below.

Component	Operations
VIDEO 1, 2, 3	FLASHER OFF, POWER ON/OFF, $\leftarrow$, $\rightarrow$, Δ , ∇ , II, CH $\rightarrow$, CH $\rightarrow$, REC
LD/DVD	FLASHER OFF, POWER ON/OFF, $\leftarrow$, $\rightarrow$, Δ , ∇ , II, I-REW, II, I-FF
CD	FLASHER OFF, POWER ON/OFF, $\leftarrow$, $\rightarrow$, Δ , ∇ , II, I-REW, II, I-FF, DISC SKIP
TUNER	FLASHER OFF, PRESET CH $\rightarrow$, PRESET CH $\rightarrow$
TAPE	FLASHER OFF, POWER ON/OFF, $\leftarrow$, $\rightarrow$, Δ , ∇ , II, REC
DAT	FLASHER OFF, $\leftarrow$, $\rightarrow$, Δ , ∇ , II, I-REW, II, I-FF, REC
MD	FLASHER OFF, POWER ON/OFF, $\leftarrow$, $\rightarrow$, Δ , ∇ , II, I-REW, II, I-FF, REC
PHONO	FLASHER OFF
SATL	FLASHER OFF, POWER ON/OFF, CH $\rightarrow$, CH $\rightarrow$
5.1 INPUT	FLASHER OFF, POWER ON/OFF, $\leftarrow$, $\rightarrow$, Δ , ∇ , II, I-REW, II, I-FF

* Sony CD player only.

3 Click the remote when the operation you want appears in the front panel display.
 The " $\leftarrow$ " and " $\rightarrow$ " displays indicate that no operations are available at the current flasher position.

To select another component

Press the up or down corner of the direction control button. The component names appear in the display one at a time. If you select a video component, the TV will turn on automatically.

To temporarily cancel the Flasher function

Press the left or right corner of the direction control button repeatedly to display "FLASHER OFF", then click the remote.

You can also cancel by pressing FLASHER on the remote.

If you turn off the amplifier while the Flasher function is on

The next time the amplifier is turned on "FLASHER START" is displayed and the amplifier turns on in the flasher mode.

Glossary

Centre mode
Setting of speakers to enhance Dolby Pro Logic Surround mode. To obtain the best possible surround sound, select one of the four centre modes (WIDE, NORMAL, PHANTOM or 3 CH LOGIC) according to your speaker system.

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 image by using four separate channels: off-screen audio effects, on-screen dialog, left-to-right panning, and music. These channels manipulate the sound to be heard and enhance the action as it happens on the screen.

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 echoes 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), we recommend that you customize 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.

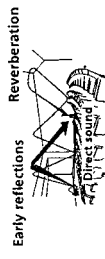
Sound field

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 to let you enjoy surround sound easily.

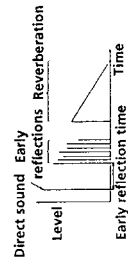
Surround sound

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 combined in such a way that you can actually feel the size and the type of a concert hall.

• Types of sound

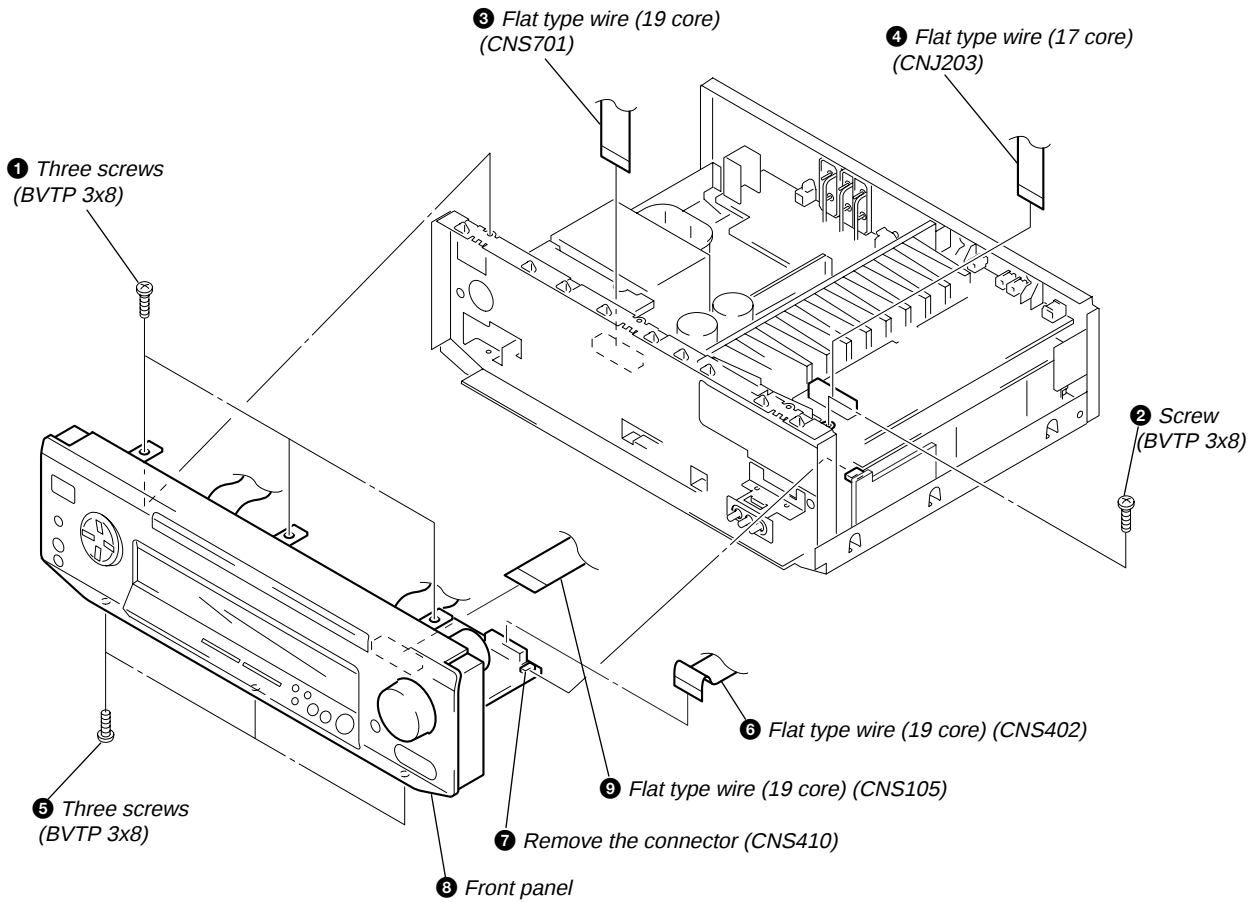


- Transition of sound from rear speakers

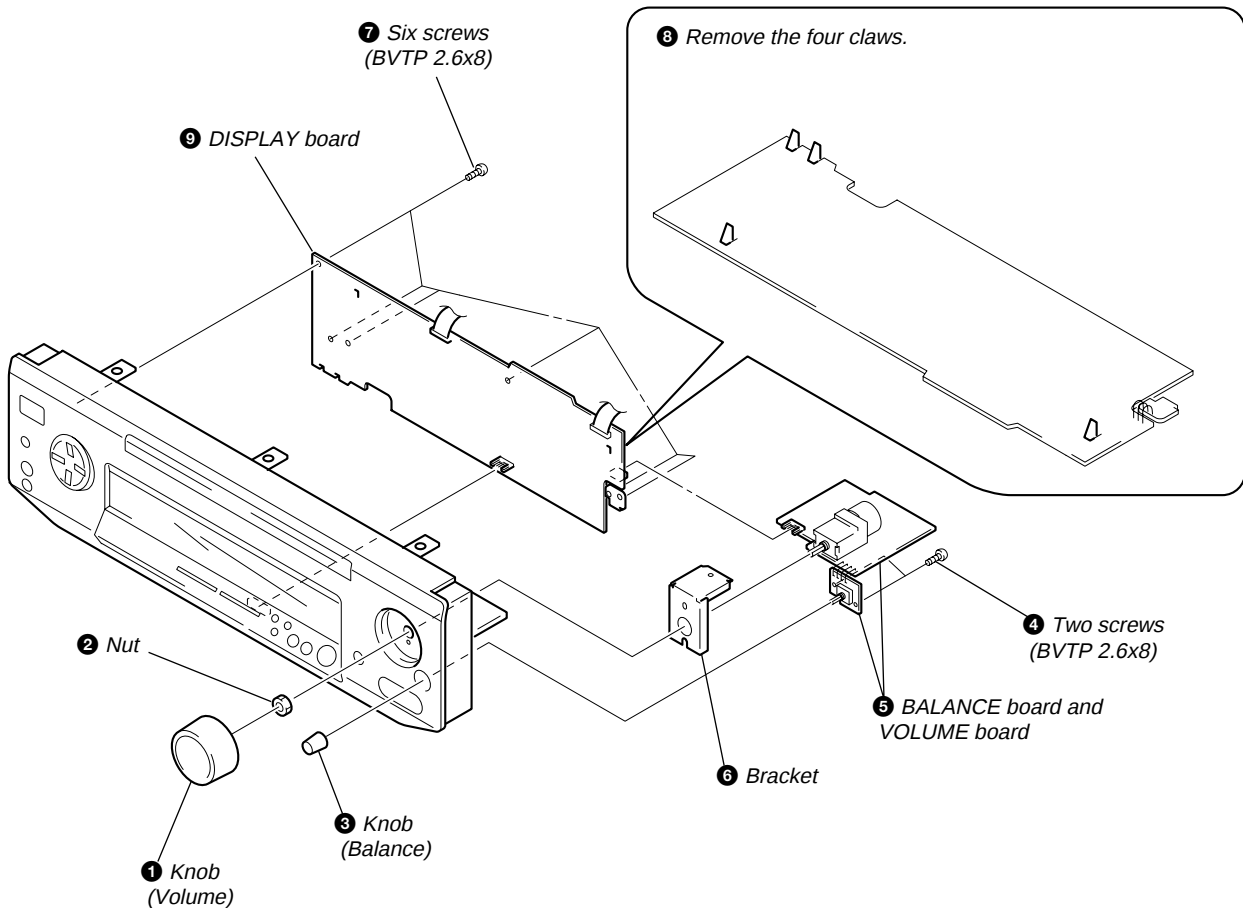


SECTION 3 DISASSEMBLY

3-1. FRONT PANEL



3-2. BALANCE BOARD, DISPLAY BOARD AND VOLUME BOARD

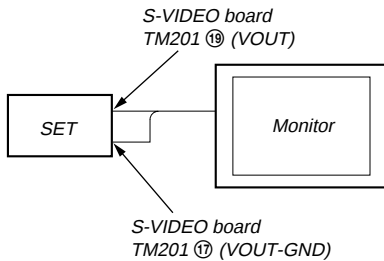


SECTION 4 ELECTRICAL ADJUSTMENT

OSD WIDTH Adjustment

Note: Perform “ALL CLEAR” before this adjustment.
(Refer to Servicing note on page 4)

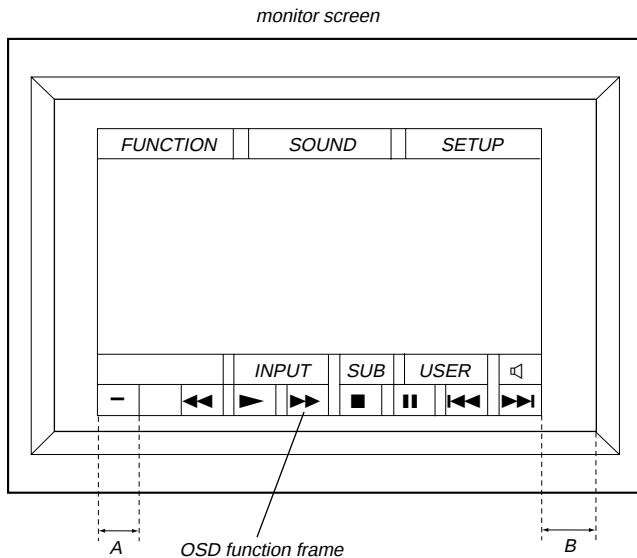
Connection:



Procedure:

1. Press the **[POWER]** button and turn ON the power.
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 remote commander supplied as an accessory. The screen will appear again.
3. While watching the monitor screen, adjust CT201 of the OSD board so that the following adjustment standard is satisfied.

Adjustment standard:



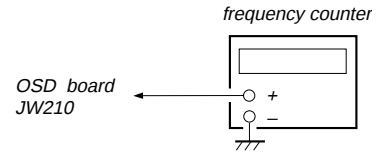
Adjust so that the width B becomes one and a half times of width A.
 $1.5A = B$

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. Servicing note. Refer to page 4.)

OSD COLOR BURST Adjustment

Connection:

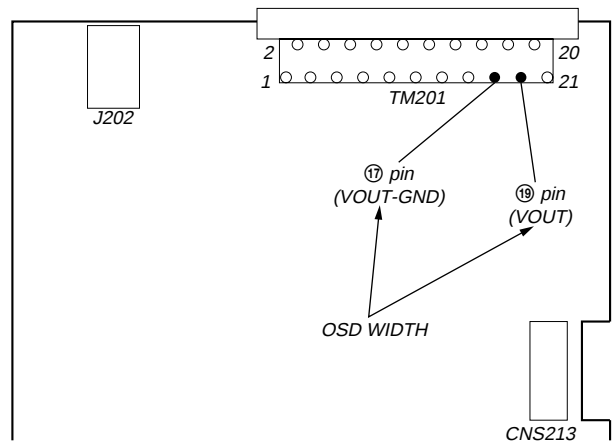


Procedure:

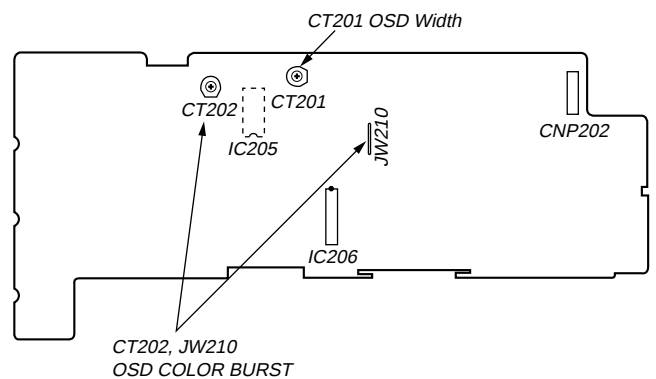
1. Without anything connected to the external input terminal, press the **[POWER]** button and turn ON the power.
2. Adjust CT202 of the OSD board so that the reading on the frequency counter becomes $4.433619 \text{ MHz} \pm 10 \text{ MHz}$.

Adjustment Location

[S-VIDEO BOARD] — Component Side —

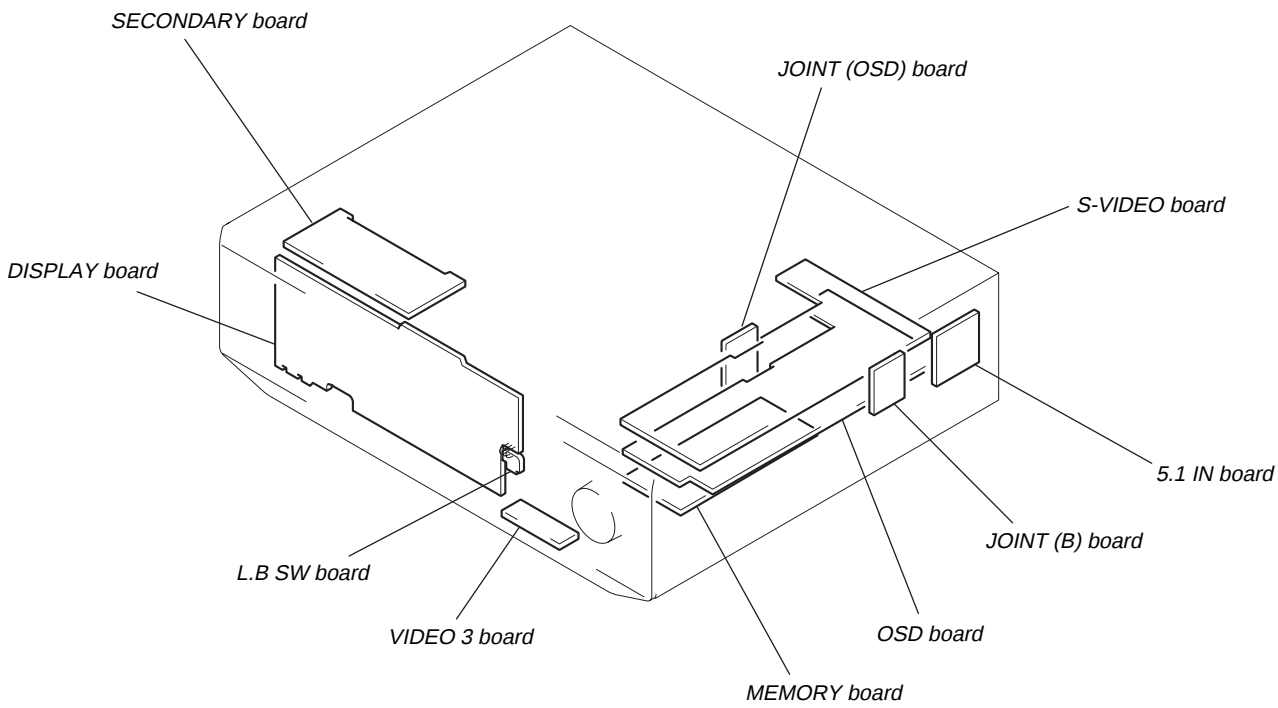
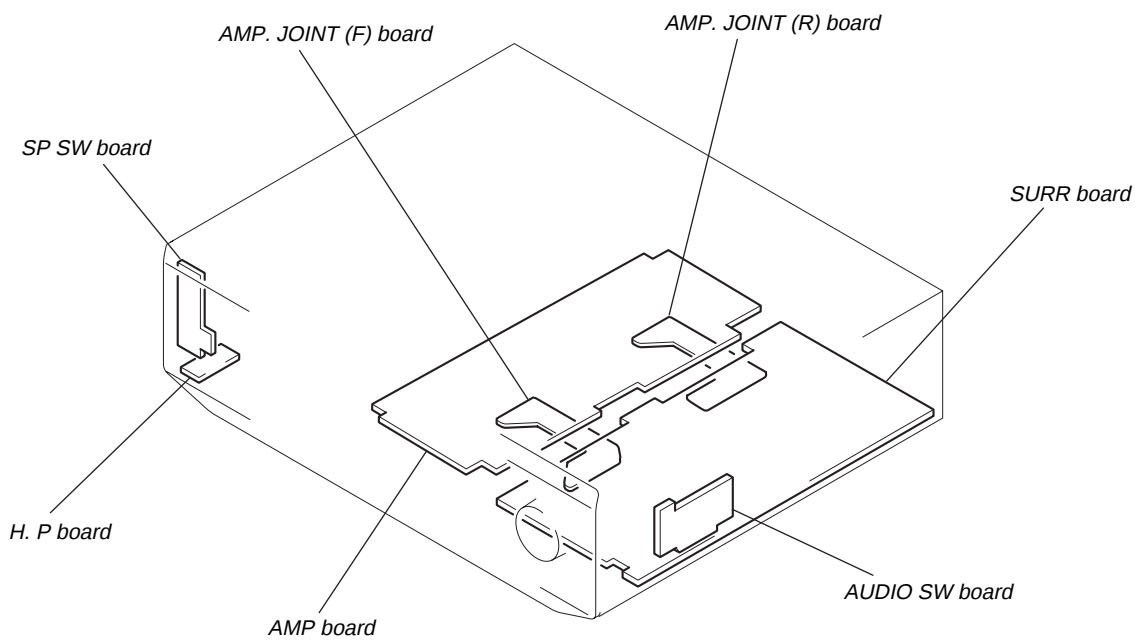
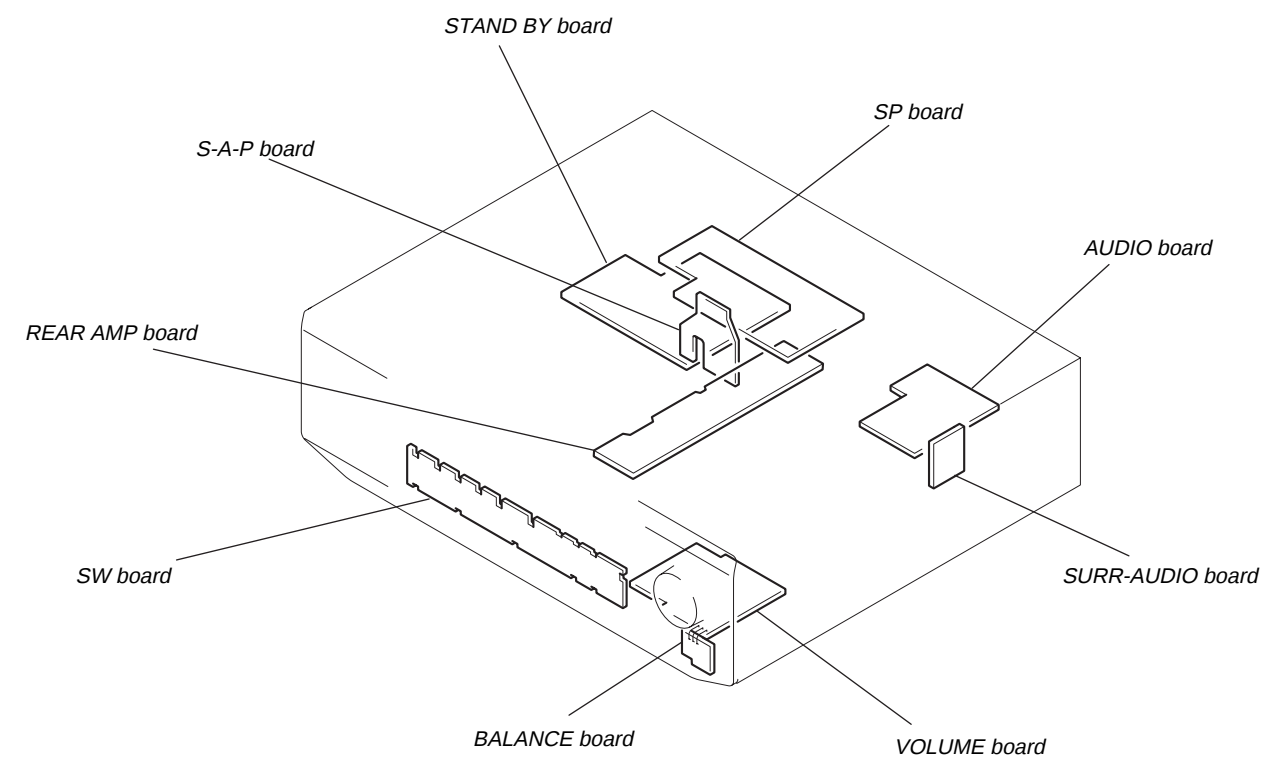


[OSD BOARD] — Component Side —



SECTION 5
DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION

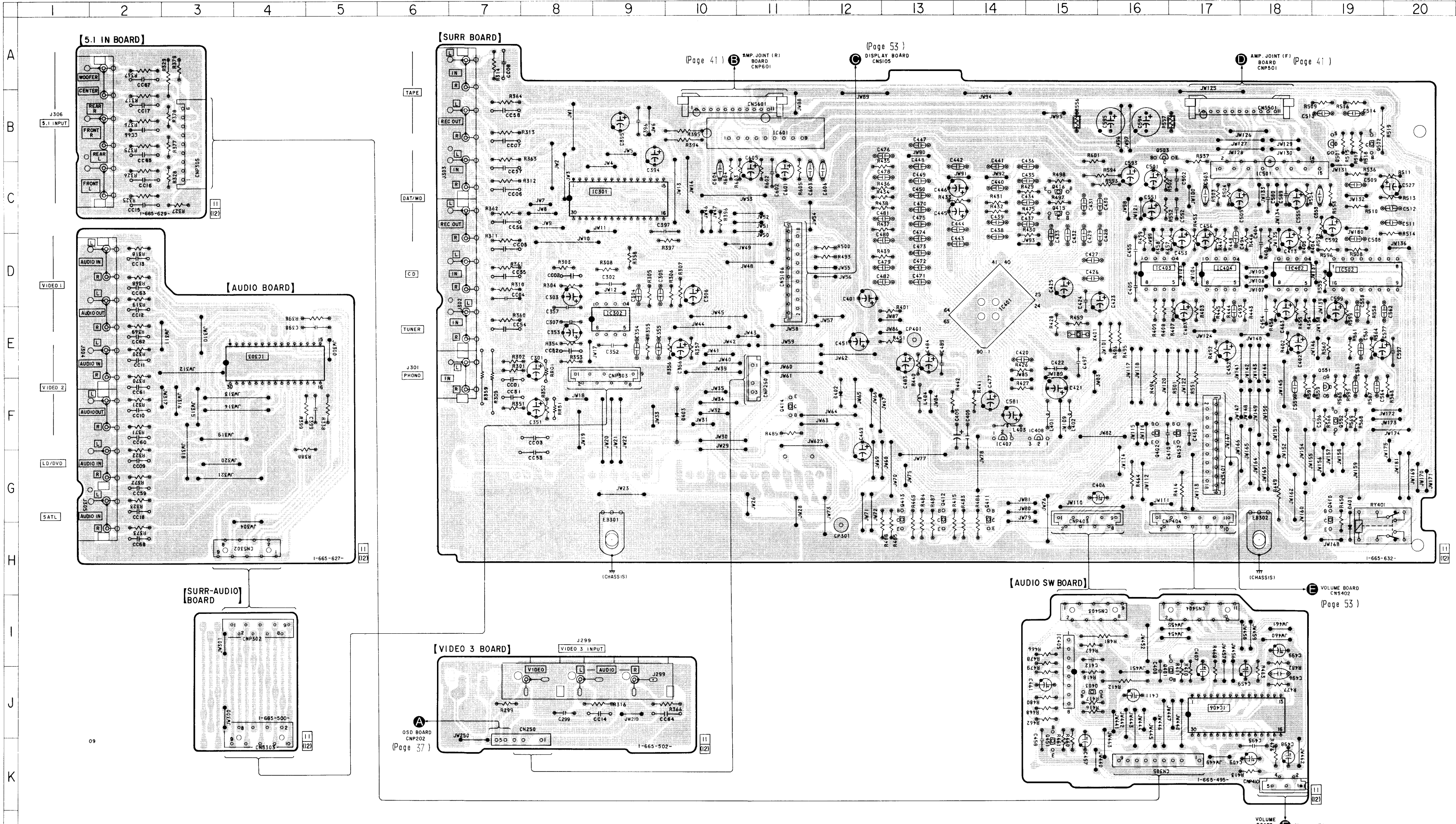


5-2. PRINTED WIRING BOARD — DOLBY SURROUND SECTION —
• See page 24 for Circuit Boards Location.

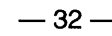
• Semiconductor Location

Ref. No.	Location
D401	G-19
D402	F-12
D403	F-10
IC301	C-9
IC302	E-9
IC303	E-4
IC401	E-14
IC402	D-18
IC403	D-16
IC404	D-17
IC405	I-15
IC406	J-17
IC407	F-14
IC408	F-15
IC501	C-18
IC502	D-19
IC601	B-11
Q401	J-16
Q402	G-16
Q403	J-15
Q410	G-19
Q411	G-14
Q412	G-13
Q413	G-13
Q414	F-11
Q415	C-15
Q416	C-15
Q451	K-15
Q452	G-17
Q501	B-19
Q502	B-19
Q503	B-16
Q551	E-19
Q552	F-19

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



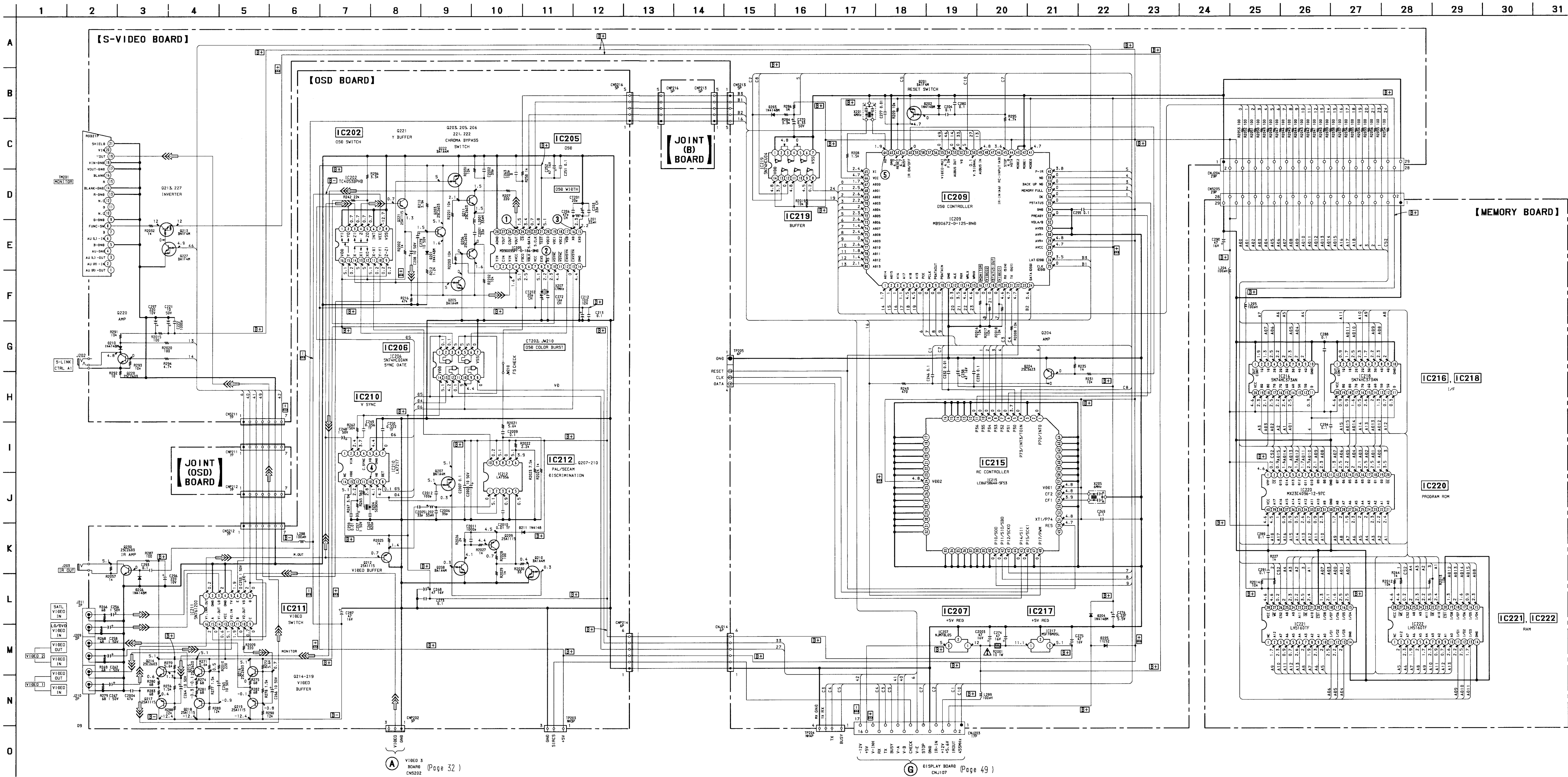
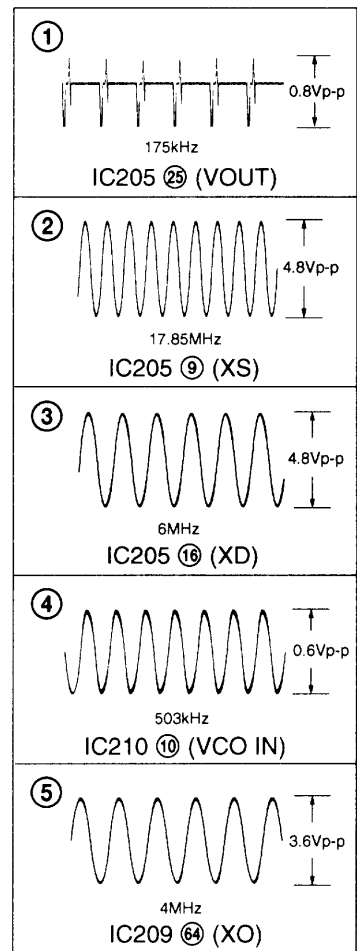
— 29 —



5-4. SCHEMATIC DIAGRAM — OSD SECTION —

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

- **Waveforms**



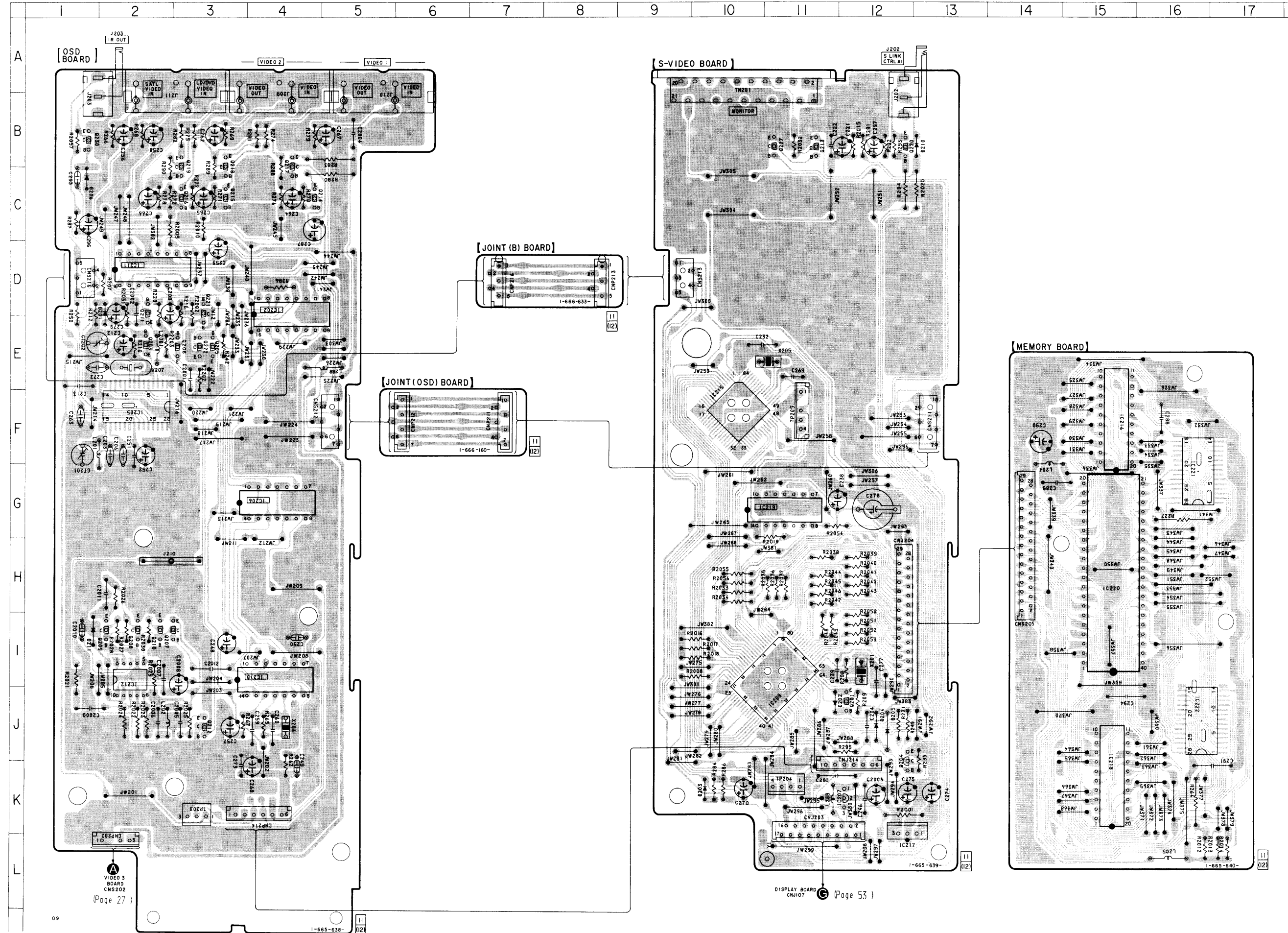
NOTE

- All capacitors are in μF unless otherwise noted, 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.
-  : internal component.
-  : 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.
-  :adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (input impedance $\geq 10M\Omega$). 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.
-  :VÍDEO

5-5. PRINTED WIRING BOARD — OSD SECTION —
• See page 24 for Circuit Boards Location.



• Semiconductor Location

Ref. No.	Location
D201	D-2
D202	J-11
D203	K-10
D204	J-12
D205	J-12
D206	C-1
D210	B-3
D211	I-1
IC202	D-4
IC205	F-2
IC206	G-4
IC207	K-11
IC209	J-11
IC210	I-4
IC211	D-2
IC212	I-2
IC215	F-10
IC216	F-15
IC217	L-12
IC218	K-15
IC219	G-10
IC220	H-15
IC221	G-16
IC222	J-16
Q201	J-12
Q203	E-2
Q204	K-12
Q205	E-3
Q206	E-3
Q207	I-2
Q208	I-2
Q209	I-2
Q210	I-2
Q211	D-2
Q212	J-3
Q213	B-11
Q214	C-4
Q215	C-3
Q216	C-3
Q217	B-4
Q218	C-3
Q219	C-3
Q220	B-12
Q221	D-3
Q222	E-3
Q227	B-11
Q230	B-1

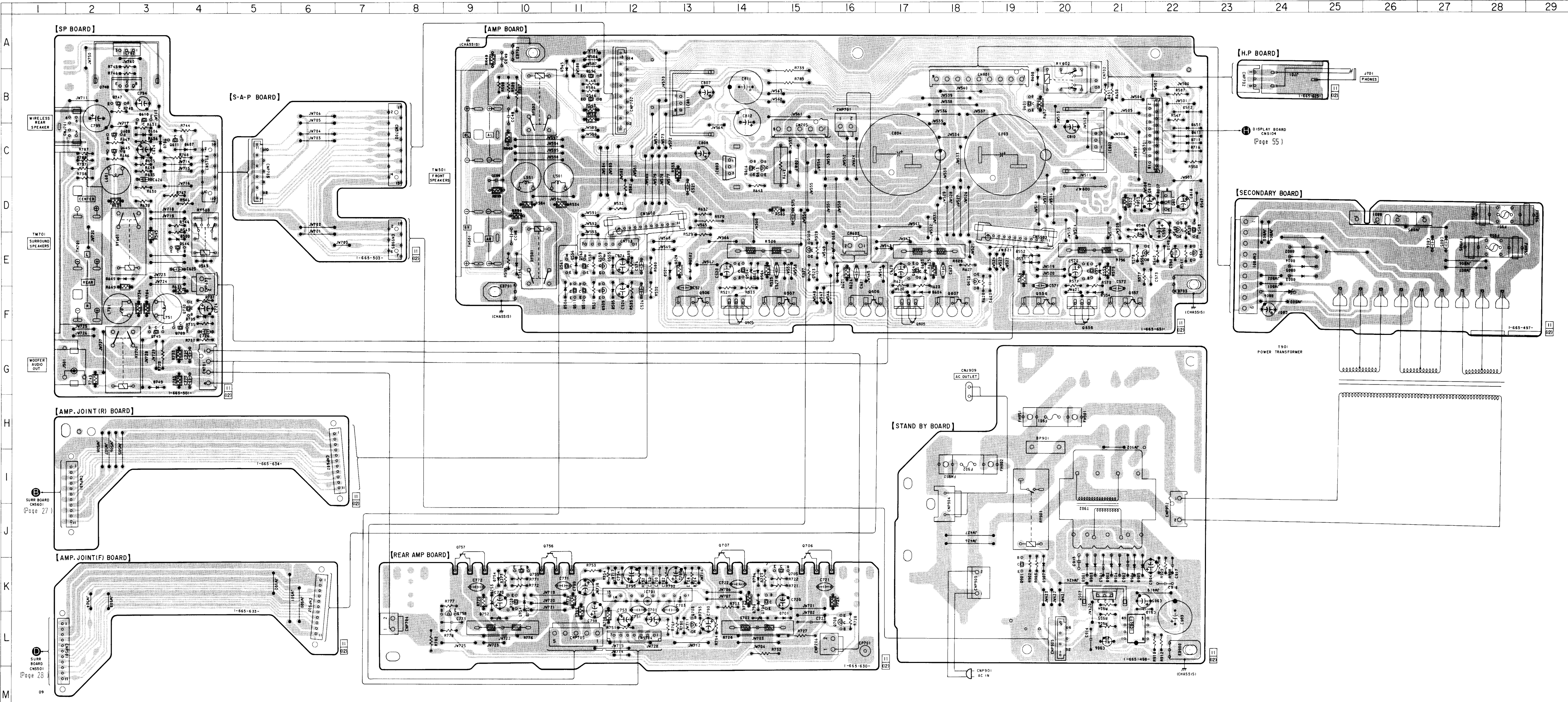
Note:
• ○ : parts extracted from the component side.
• ■ : Pattern from the side which enable seeing.

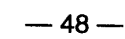
5-6. PRINTED WIRING BOARD — POWER AMP SECTION —
• See page 24 for Circuit Boards Location.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D500	E-4	IC701	K-12
D501	E-13	IC702	A-3
D502	E-13	IC801	B-13
D503	E-14	IC802	C-21
D504	E-14	IC803	C-14
D505	F-12	IC901	L-21
D506	F-22		
D512	B-22	Q504	E-14
D543	E-4	Q505	F-14
D545	B-11	Q506	F-13
D546	E-10	Q507	F-15
D547	D-23	Q508	E-15
D548	D-21	Q509	F-11
D549	E-22	Q510	F-11
D551	E-19	Q511	F-11
D552	E-19	Q544	E-4
D553	E-21	Q546	B-11
D554	F-21	Q547	E-23
D555	E-12	Q548	E-22
D556	E-11	Q549	E-22
D601	E-16	Q554	E-21
D602	E-16	Q555	F-21
D603	E-17	Q556	F-20
D604	F-18	Q557	F-21
D605	C-3	Q558	E-21
D606	C-3	Q559	E-11
D607	C-4	Q560	E-11
D608	B-19	Q561	E-11
D611	C-22	Q596	B-11
D649	E-2	Q601	B-19
D651	C-22	Q604	E-17
D701	L-15	Q606	F-17
D702	L-14	Q607	F-18
D703	K-14	Q608	E-18
D704	K-14	Q609	C-3
D705	F-4	Q610	B-3
D706	C-3	Q611	C-4
D711	C-22	Q613	C-14
D716	C-22	Q616	C-14
D749	G-3	Q645	C-3
D751	K-10	Q703	K-13
D752	L-9	Q704	K-15
D753	K-9	Q705	K-15
D754	K-9	Q706	J-15
D801	D-26	Q707	J-14
D802	E-24	Q708	L-16
D803	E-24	Q709	F-4
D804	E-24	Q710	F-4
D805	E-24	Q745	F-3
D806	F-24	Q747	B-2
D807	D-22	Q748	B-2
D901	K-20	Q754	K-10
D902	K-21	Q755	K-10
D903	K-21	Q756	K-10
D904	K-21	Q757	J-9
D905	K-21	Q758	L-9
D906	K-21	Q801	D-22
D907	K-20	Q901	K-19
		Q902	K-20

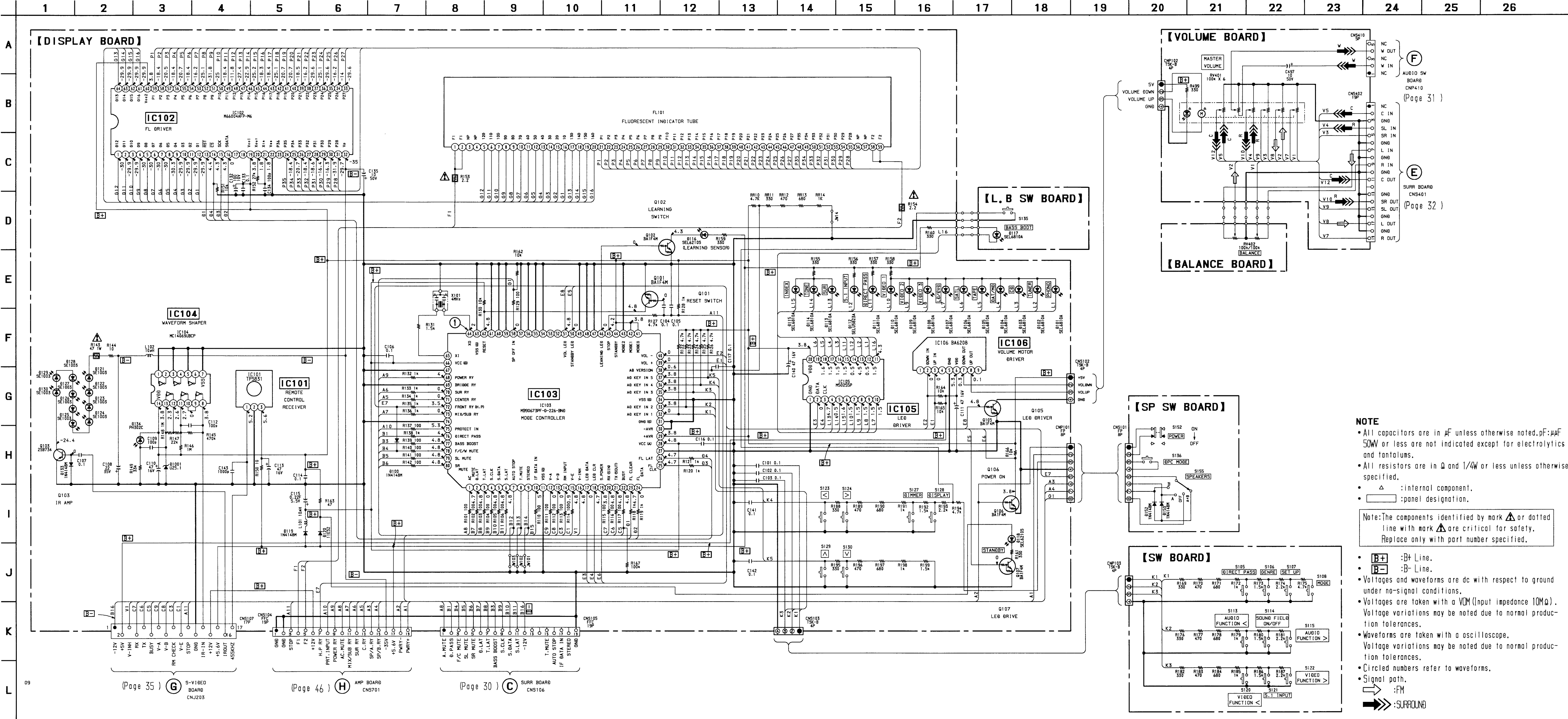
Note:
• : parts extracted from the component side.
• : Pattern from the side which enable seeing.





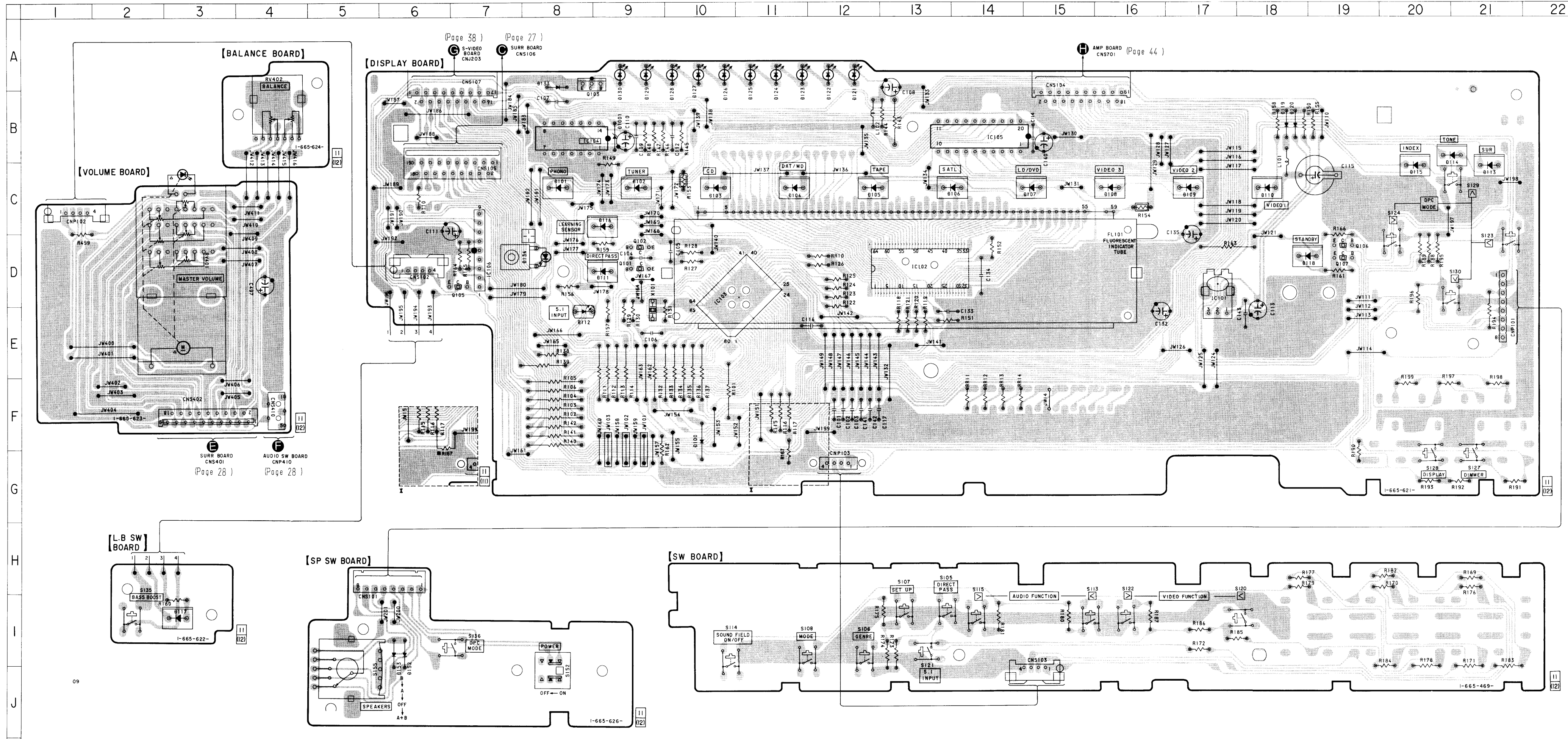
5-8. SCHEMATIC DIAGRAM — PANEL SECTION —

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



5-9. PRINTED WIRING BOARD — PANEL SECTION —

• See page 24 for Circuit Boards Location.



• Semiconductor Location

Ref. No.	Location
D100	F-10
D101	C-8
D102	C-9
D103	C-10
D104	C-11
D105	C-12
D106	C-14
D107	C-15
D108	C-16
D109	C-17
D110	C-18
D111	D-9
D112	E-8
D113	C-21
D114	C-21
D115	C-20
D116	C-9
D117	I-3
D118	D-19
D119	B-18
D120	B-18
D121	B-12
D122	B-12
D123	B-11
D124	B-11
D125	B-11
D126	B-10
D127	B-10
D128	B-10
D129	A-9
D130	A-9
D133	A-8
D134	D-8
D152	J-6
D153	J-6
D1001	B-9
IC101	D-17
IC102	D-13
IC103	D-10
IC104	B-8
IC105	B-14
IC106	D-7
Q101	D-9
Q102	D-9
Q103	A-8
Q105	D-7
Q106	D-19
Q107	D-19

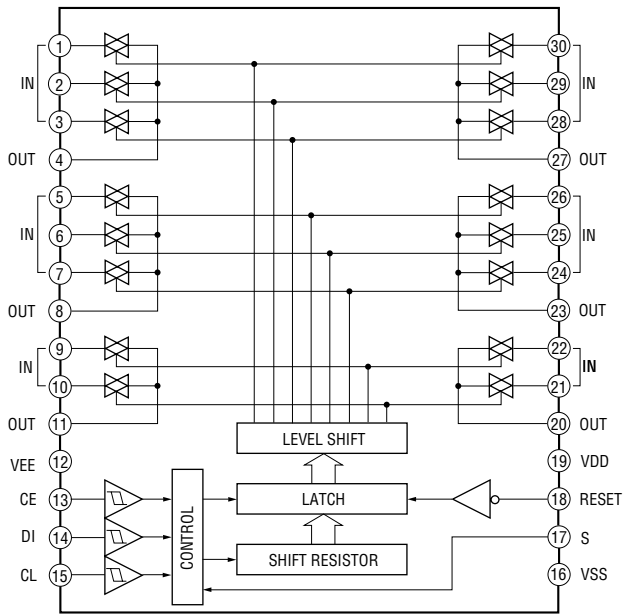
Note:

- : parts extracted from the component side.
- : parts mounted on the conductor side.
- △ : internal component.
- ▨ : Pattern of the rear side.

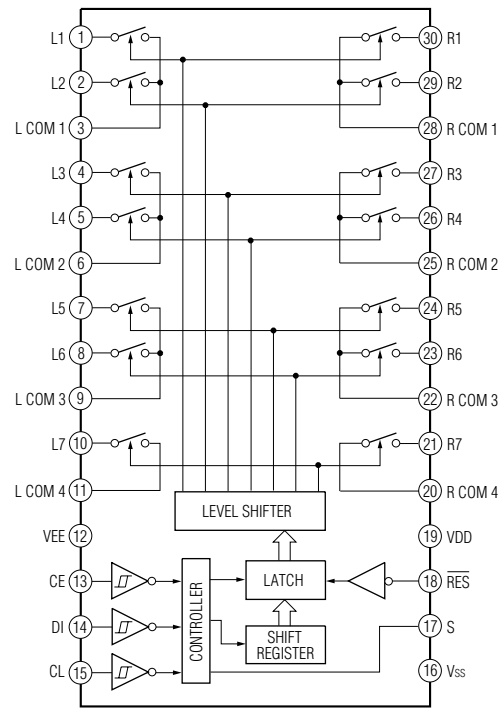
5-10. IC BLOCK DIAGRAMS

• DOLBY SURROUND Section

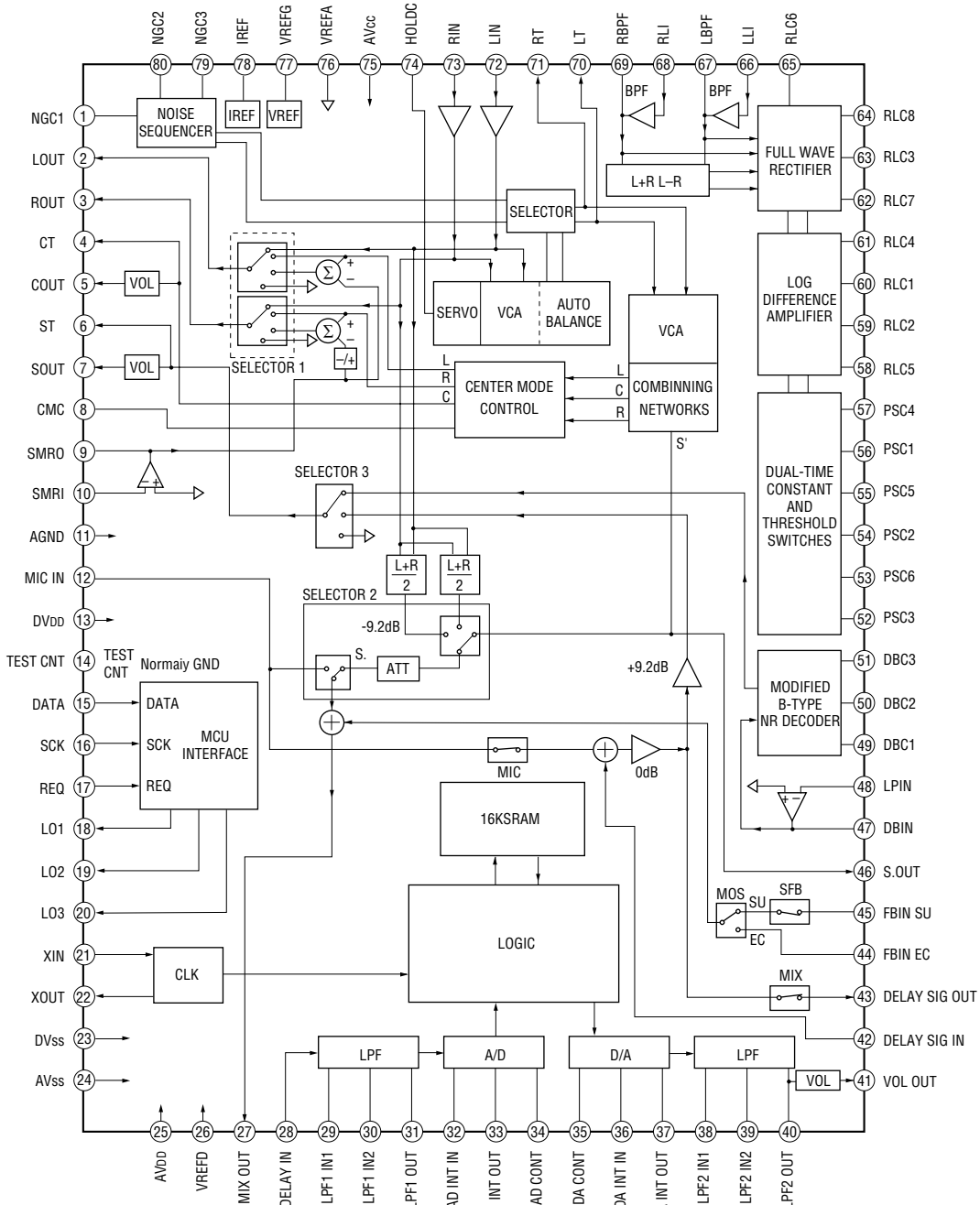
IC301, 303 LC7822



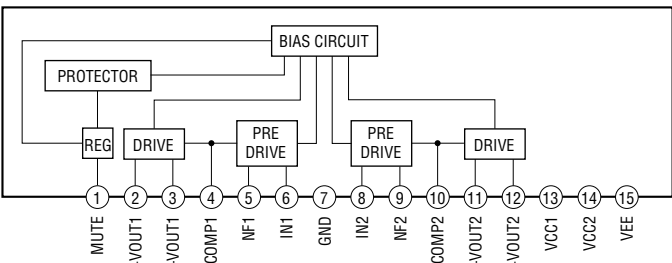
IC406 LC7823



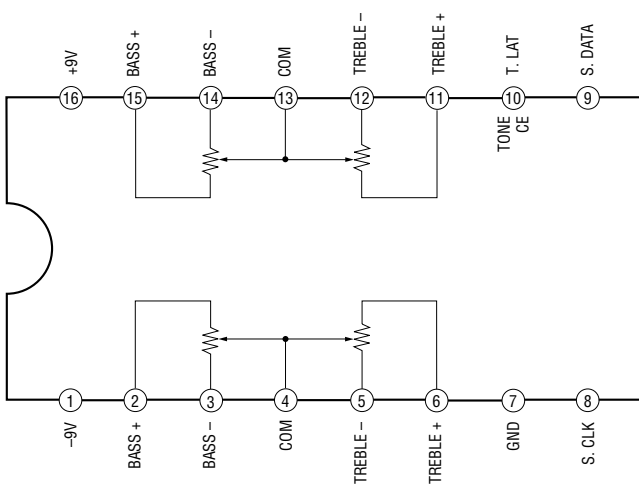
IC401 M62460FP



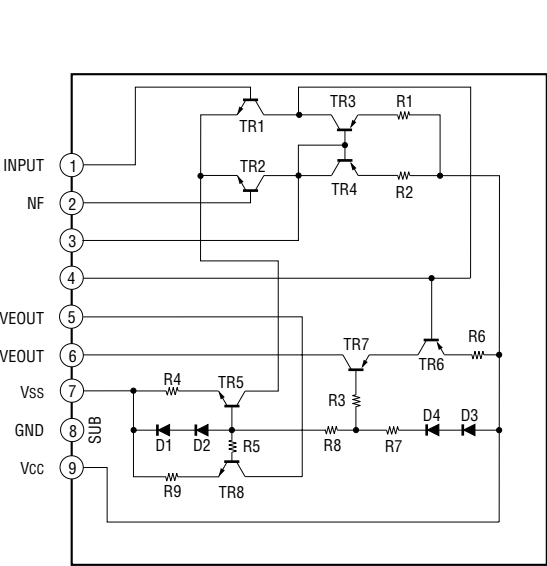
IC501 uPC2581V



IC502 TC9184P

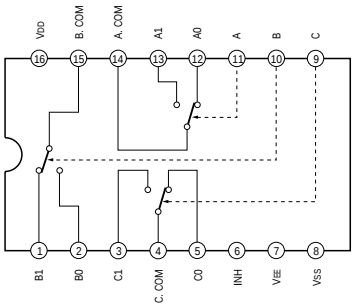


IC601 STK350-230

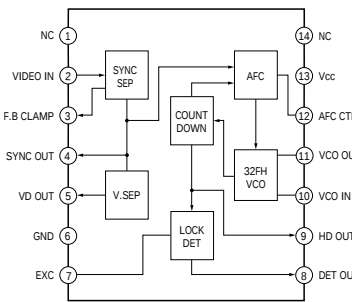


• OSD Section

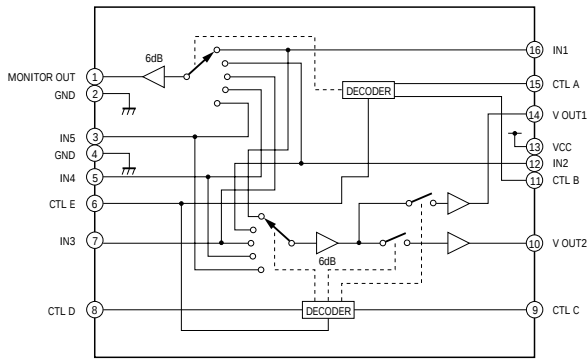
IC202 uPD4053BC



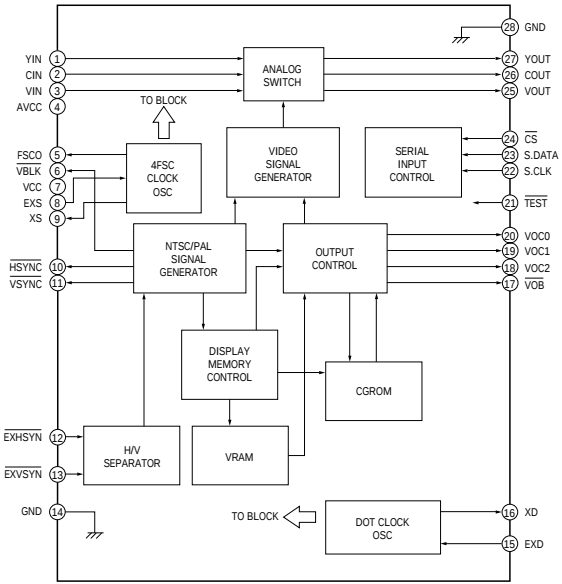
IC210 LA7217



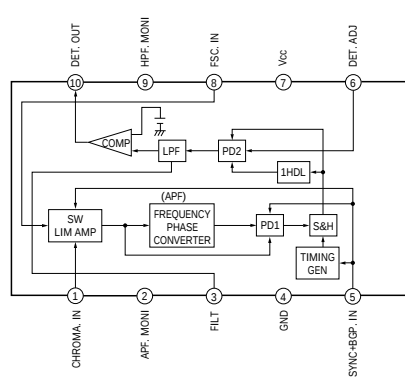
IC211 SN761200



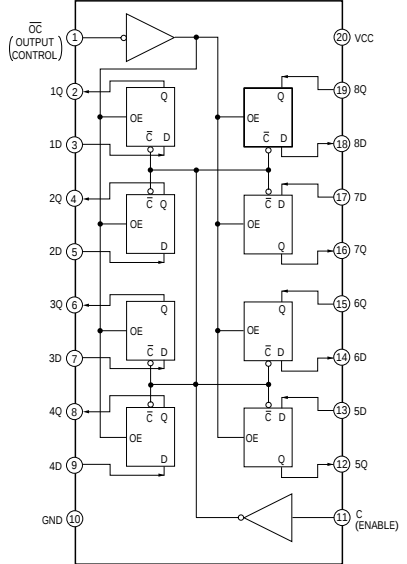
IC205 MB90095PF-186-BND



IC212 LA7356

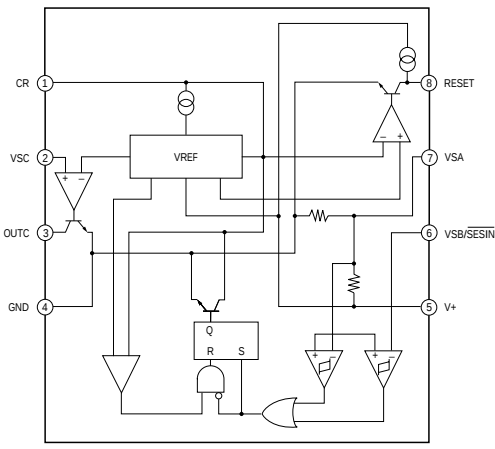


IC216, 218 SN74HC373AN



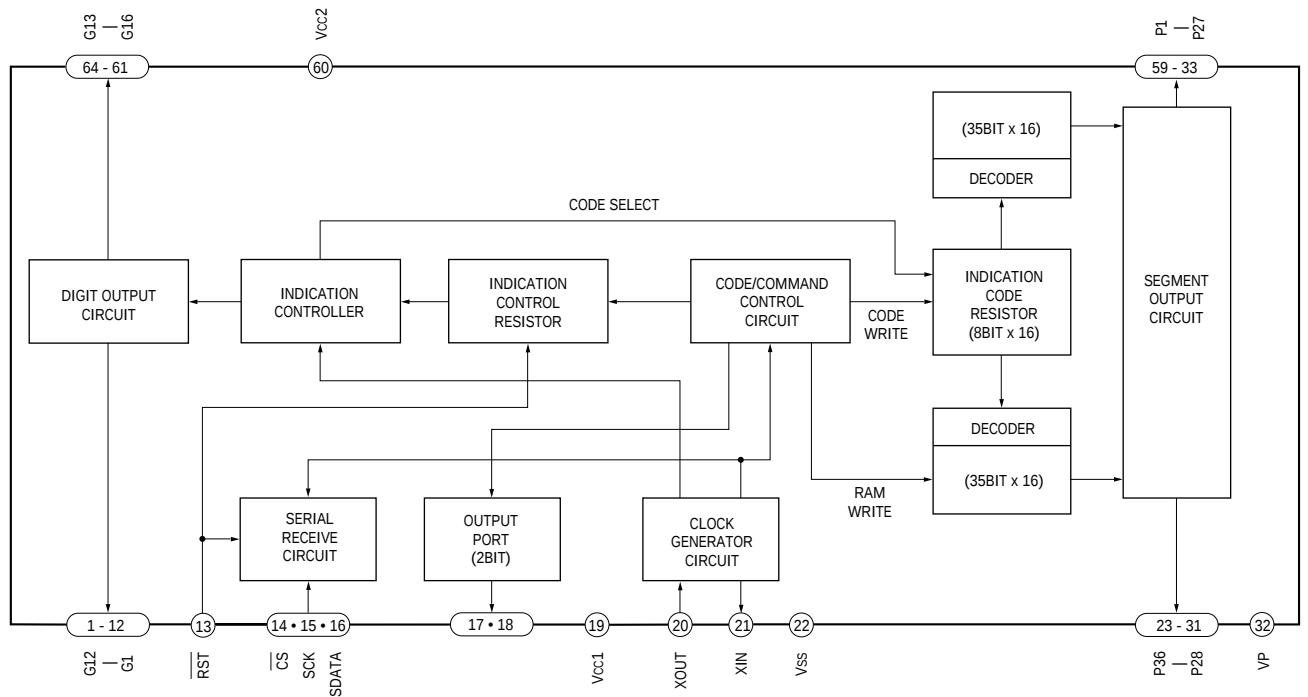
• POWER AMP Section

IC901 NJM2103D

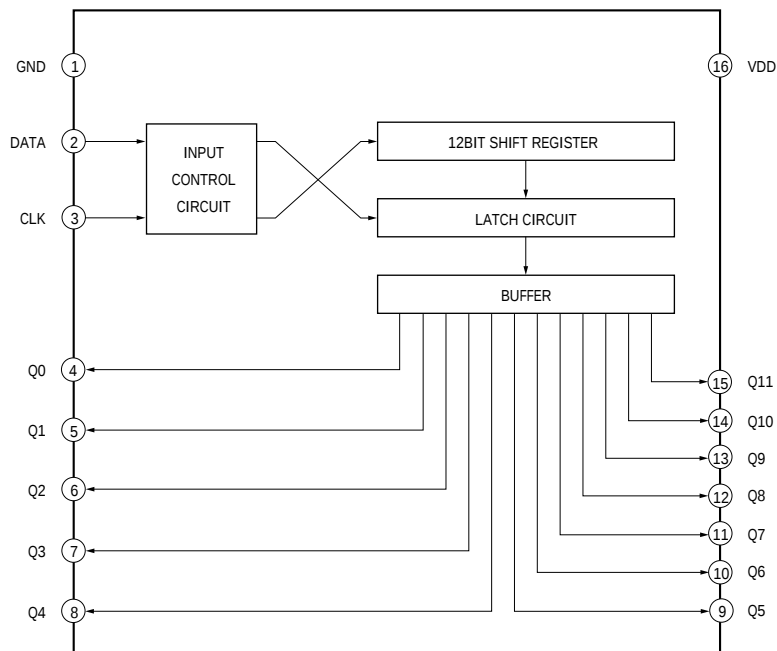


• PANEL Section

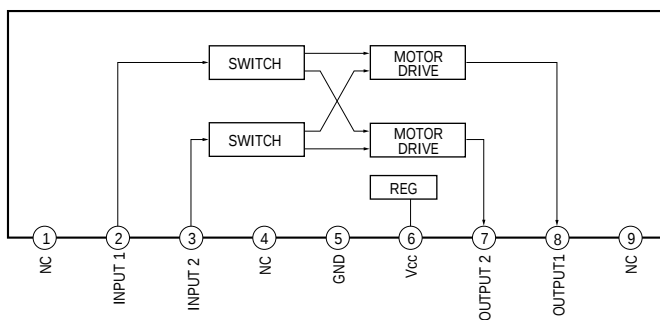
IC102 M66004AFP-M6



IC105 M50255P



IC106 BA6208



5-11. IC PIN FUNCTIONS

• IC103 Mode Controller (MB90673PF-G-226-BND)

Pin No.	Pin Name	I/O	Function
1	AC MUTE	O	Mute signal output to Rear power amp
2	D. LAT	O	Latch output to Dolby surround processor
3	T. LAT	O	Latch output to Tone controller
4	S. CLK	O	Serial clock output to Dolby surround processor
5	S. DATA	O	Serial data output to Dolby surround processor
6	S. LAT	O	Latch output to PLL
7	AUTO STOP	I	Auto-stop signal input from tuner (Not used)
8	T. MUTE	O	Mute signal output to tuner (Not used)
9	STEREO	I	Stereo-ID input from tuner (Not used)
10	IF DATA IN	I	Serial data input from tuner
11	VSS (D)	—	Ground
12	V-A	O	VIDEO CONTROL A signal output
13	V-B	O	VIDEO CONTROL B signal output
14	RM INPUT	I	SIRCS input
15	V-E	O	VIDEO CONTROL E signal output
16	V-INH	O	Video inhibit signal output (Not used)
17	LED DATA	O	Serial data output to LED driver
18	LED CLR	O	Serial clock output to LED driver
19	S. POWER	I	Input of power key (Not used)
20	RX (SIN)	I	Serial data input from OSD controller (U-ART0)
21	TX (SOUT)	O	Serial data output from OSD controller (U-ART0)
22	BUSY	I/O	Serial clock input/output with OSD controller (U-ART0)
23	FL CLEAR	O	Clear signal output to FL driver
24	FL DATA	O	Serial data output to FL driver
25	FL CLK	O	Serial clock output to FL driver
26	FL LAT	O	Chip select output to FL driver
27	—	—	Ground
28	VCC (A)	—	+5V power supply
29	+AVR	I	Reference voltage input +5V (AD)
30	—AVR	I	Reference voltage input 0V (Ground)
31	GND (D)	—	Ground
32	AD KEY IN 1	I	Key input 1 (AD)
33	AD KEY IN 2	I	Key input 2 (AD)
34	VSS (D)	—	Ground
35	AD KEY IN 3	I	Key input 3 (AD)
36	AD KEY IN 4	I	Key input 4 (AD)
37	AD KEY IN 5	I	Key input 5 (AD)
38	AD VERSION	I	AD version setting input
39	VOL +	O	Volume motor control signal output
40	VOL —	O	Volume motor control signal output

• Abbreviation

FL : Fluorescent indicator tube

Pin No.	Pin Name	I/O	Function
41	MODE 0	I	Mode setting pin (Fixed at “H”)
42	MODE 1	I	Mode setting pin (Fixed at “H”)
43	MODE 2	I	Mode setting pin (Fixed at “L”)
44	STANDBY	I	Standby signal input of hardware
45	STOP	I	STOP signal input
46	LEARNING LED	O	LEARNING LED drive signal output
47	—	—	Ground
48	—	—	Ground
49	CTRA IN	I	CONTROL-A serial input (Not used)
50	STANDBY LED	O	STANDBY LED drive signal output
51	VOL LED	O	VOLUME LED drive signal output
52	S-OUT	O	M-BUS output (Not used)
53	CTA OUT	O	CONTROL-A serial output (Not used)
54	VIDEO 1 (MBUS)	I	M-BUS (VIDEO 1) input (Not used)
55	VIDEO 2 (MBUS)	I	M-BUS (VIDEO 2) input (Not used)
56	TV (MBUS)	I	M-BUS (TV) input (Not used)
57	—	—	Ground
58	SP OFF IN	I	Speaker ON/OFF signal input
59	—	—	Ground
60	—	—	Ground
61	—	—	Ground
62	RESET	I	Reset input “L” reset
63	VSS (D)	—	Ground
64	XO	O	Clock output (4MHz)
65	XI	I	Clock input (4MHz)
66	VCC (D)	—	+5V power supply
67	—	—	Ground
68	POWER RY	O	Main power relay switching output
69	BRIDGE RY	—	Ground
70	SUR RY	O	Surround relay switching output
71	CENTER RY	O	Center speaker switching output
72	FRONT RY (H.P)	O	Front speaker switching output
73	MIX/SUB RY	O	MIX/SUB switching output
74	—	—	Ground
75	PROTECT IN	I	Protector signal input
76	DIRECT PASS	O	Direct pass replay drive signal output
77	BASS BOOST	O	Bass boost switching signal output
78	F/C/W/ MUTE	O	Front/Center/Woofer line mute signal output
79	SL MUTE	O	Rear Lch line mute signal output
80	SR MUTE	O	Rear Rch line mute signal output

• IC205 OSD (MB90095PF-G-186-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	VSNC	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	VOC 2	O	Chroma signal output (Not used)
19	VOC 1	O	Chroma signal output (Not used)
20	VOC 0	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)

• Abbreviation

OSD: On Screen Display

• **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	O	Address bus 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	I	Control-S input (Monitor) (Not used)
17	VIDEO 2	I	Control-S input (VIDEO 2) (Not used)
18	STATUS-OUT	O	Control-S status output (Not used)
19	VIDEO 1	I	Control-S input (VIDEO 1)
20	RX (SIN)	I	Serial data input from mode control (U-ART0 reception)
21	TX (SOT)	O	Serial data output to mode control (U-ART0 transmission)
22	P PRES	O	Reset output (For communication using personal computers) (Not used)
23	TEST 1	O	Test port (Open)
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	—	–	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 (Not used)
33	PREADY	I	Learning code reception ready signal input “L” : nothing
34	GND	–	Ground
35	PSTATUS	I	Infrared rays transmission data 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

- Abbreviation
OSD: On Screen Display

Pin No.	Pin Name	I/O	Function
41	MODE 0	I	Mode setting (Fixed at “H”)
42	MODE 1	I	Mode setting (Fixed at “L”)
43	MODE 2	I	Mode setting (Fixed at “L”)
44	HSTX	I	Hardware standby (Fixed at “H”)
45	STOP	I	Request input of reset interrupt
46	IR-IN (A6)	I	IR sensor remote control input (Not used)
47, 48	—	—	Not used
49	AUBUS IN	I	S-LINK control A1 signal input
50	V. SIGNAL	I	H-sync switching signal input
51	SIRCS-IN	I	SIRCS signal input
52	VD	I	PAL: 60 [flame/s] signal detect VD input
53	AUBUS OUT	O	S-LINK control A1 signal output
54	F. SW	O	To control output into monitor
55	VIDEO-MUT	O	Image mute output
56 to 59	—	—	Not used
60	IR ON/OFF	O	IR remote control ON/OFF output “H” off
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 (LC86F5864A-5F53)

Pin No.	Pin Name	I/O	Function
1	P70/INT0	I	Chip enable input from OSD controller
2	P71/INT1	I	Chip enable input (For on-board) (Not used)
3	P72/INT 2/TOIN	I	Not used (Connector to ground)
4	P73/INT 3/TOIN	I	SIRCS signal input
5	P30	I	Power supply normality signal input
6	P31	O	Infrared rays transmission data status signal output to OSD controller “L” nothing
7	P32	O	Learning NG signal output to OSD controller
8	P33	O	Back-up NG signal output to OSD controller
9	P34	O	Memory-full signal output to OSD controller
10	P35	O	Learning OK signal output to OSD controller
11	P36	O	Data reception ready signal output to OSD controller
12	P37	O	Not used (Connected to ground)
13	P40	O	Not used (Connected to ground)
14	P41	O	Not used (Connected to ground)
15	P42	O	Not used (Connected to ground)
16	P43	O	Not used (Connected to ground)
17	P44	O	Not used (Connected to ground)
18	P45	O	Not used (Connected to ground)
19	P46	O	Not used (Connected to ground)
20	P47	O	Not used (Connected to ground)
21	P50/SDA	O	Not used (Connected to ground)
22	P51/SCL	O	Not used (Connected to ground)
23	VSS2	–	Ground
24	VDD2	–	+5V power supply
25	P20/SDA	O	Not used (Connected to ground)
26	P21/SCL	O	Not used (Connected to ground)
27	P22/TXD	O	Not used (Connected to ground)
28	P23/PXD	O	Not used (Connected to ground)
29	P24/UCLK	O	Not used (Connected to ground)
30	P25	O	Not used (Connected to ground)
31	P26	O	Not used (Connected to ground)
32	P27	O	Not used (Connected to ground)
33	P00	O	Not used (Connected to ground)
34	P01	O	Not used (Connected to ground)
35	P02	O	Not used (Connected to ground)
36	P03	O	Not used (Connected to ground)
37	P04	O	Not used (Connected to ground)
38	P05	O	Not used (Connected to ground)
39	P06	O	Not used (Connected to ground)
40	P07	O	Not used (Connected to ground)

- Abbreviation
RC : Remote commander
OSD: On Screen Display

Pin No.	Pin Name	I/O	Function
41	P10/SOO	O	Serial data output to OSD controller
42	P11/SIO/SB0	I	Serial data input to OSD controller
43	P12/SCKO	I	Serial clock input from OSD controller
44	P13/SO1	–	Ground
45	P14/SI1	I	Serial data input (For on-board) (Not used)
46	P15/SCK1	I	Serial clock input (For on-board) (Not used)
47	P16/BUZ	O	Not used
48	P17/PWM	O	SIRCS signal output (Carrier = PWM output)
49	TEST1	O	Open
50	RES	I	Reset input “L” reset
51	XT1/P74	–	Not used (Connected to +5V)
52	XT2	–	Not used (Connected to +5V)
53	VSS1	–	Ground
54	CF1	I	Clock input (6MHz)
55	CF2	O	Clock output (6MHz)
56	VDD1	–	+5V power supply
57	P80/AN0	I	Not used (Connected to ground)
58	P81/AN1	I	Not used (Connected to ground)
59	P82/AN2	I	Not used (Connected to ground)
60	P83/AN3	I	Not used (Connected to ground)
61	P84/AN4	I	Not used (Connected to ground)
62	P85/AN5	I	Not used (Connected to ground)
63	P86/AN6	I	Not used (Connected to ground)
64	P87/AN7	I	Not used (Connected to ground)

SECTION 6 EXPLODED VIEWS

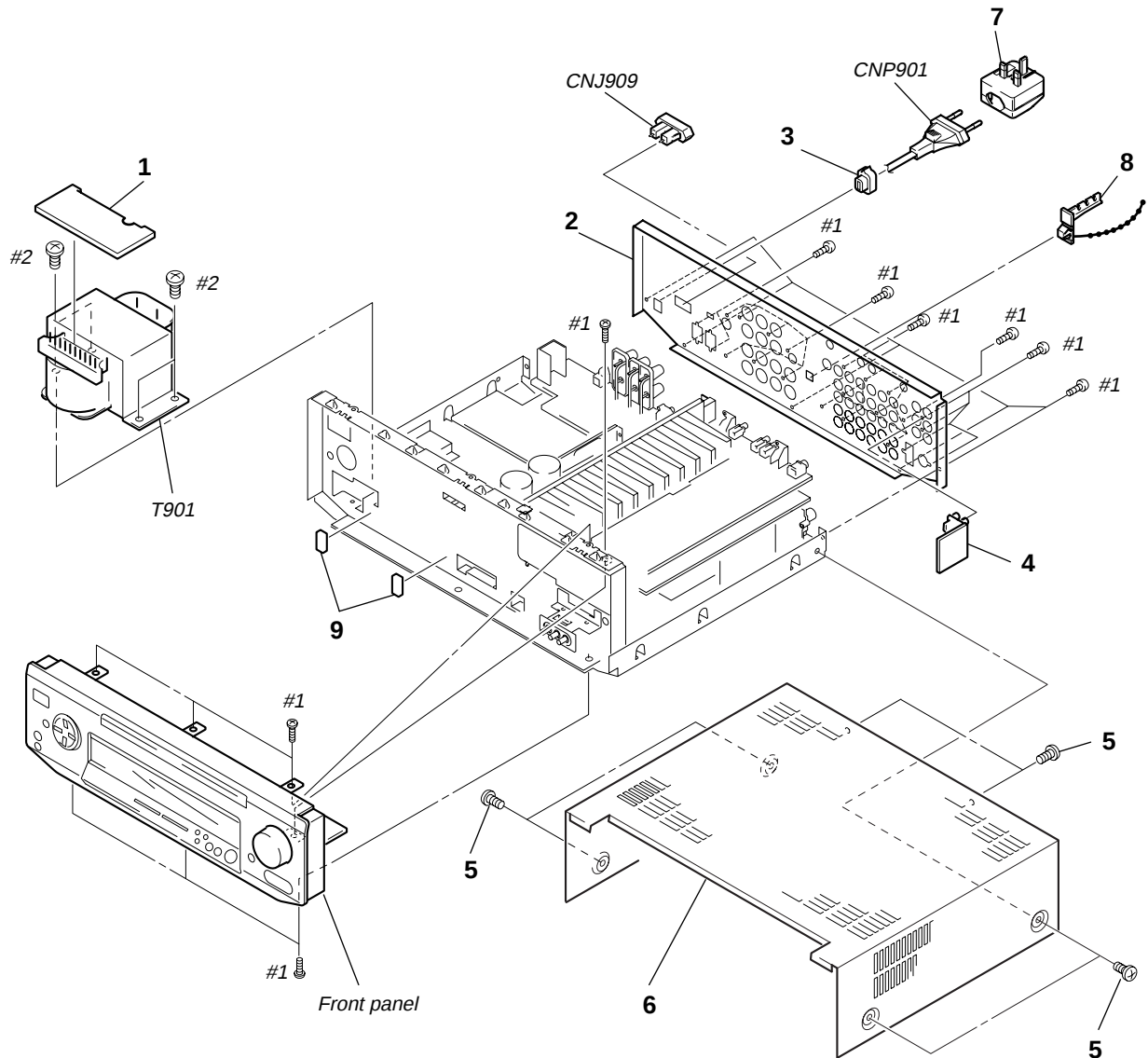
NOTE:

- 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.

- Abbreviation
G : German model
EE : East European model

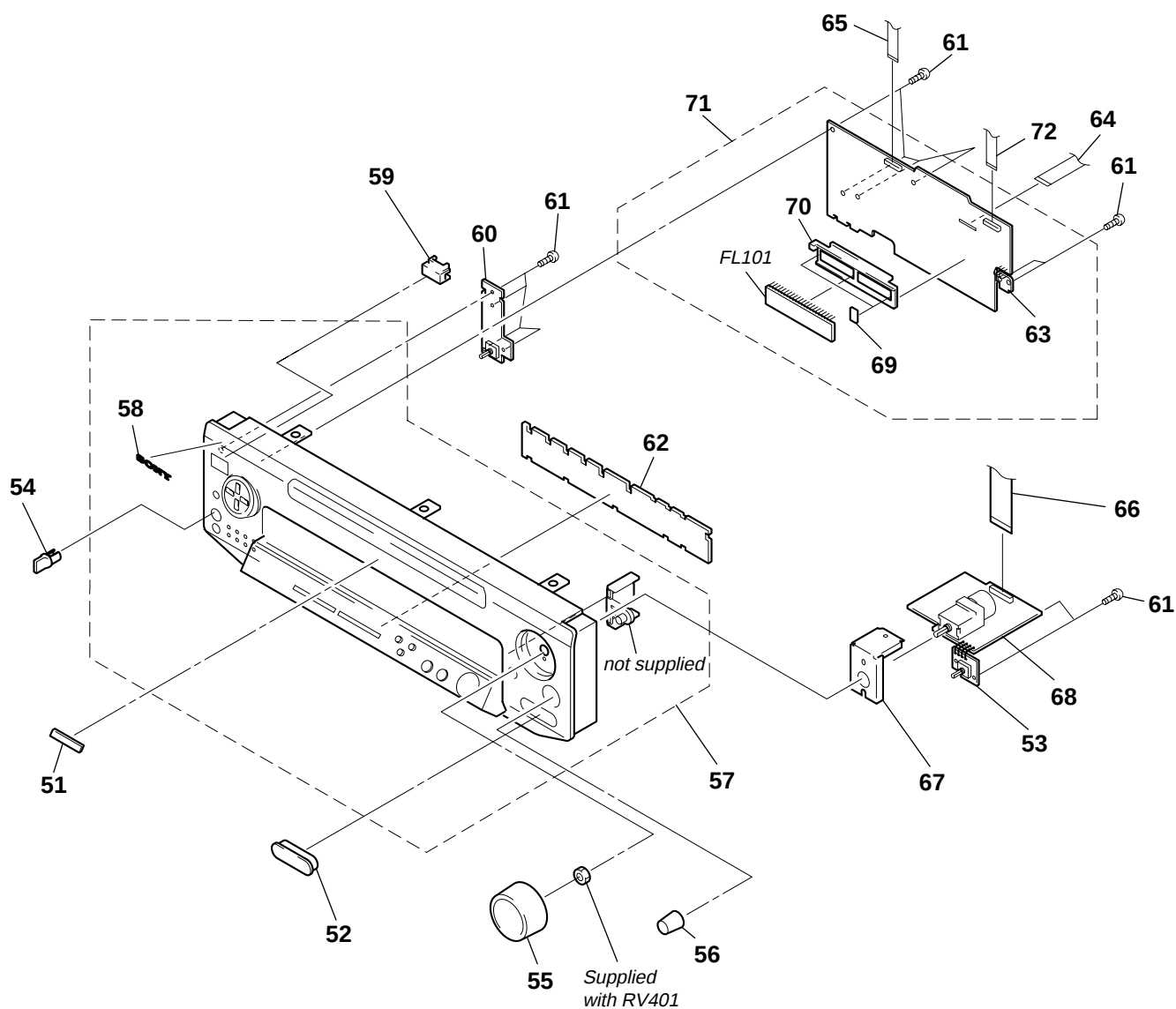
The components identified by mark $\triangle$ or dotted line with mark $\triangle$ are critical for safety.
Replace only with part number specified.

6-1. CASE SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 1	1-665-497-11	SECONDARY BOARD		$\triangle$ 7	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK)	
* 2	4-989-880-51	PANEL, BACK (AEP,G,EE)		8	4-956-370-12	BAND, PLUG FIXED (UK)	
* 2	4-989-880-61	PANEL, BACK (UK)		9	4-985-642-01	CUSHION	
* 3	3-703-244-00	BUSHING (2104), CORD		$\triangle$ CNJ909	1-526-794-11	OUTLET, AC	
* 4	1-665-629-11	5.1 IN BOARD		$\triangle$ CNP901	1-769-744-11	CORD, POWER	
5	3-704-366-01	SCREW (CASE) (M3X8)		$\triangle$ T901	1-431-318-11	TRANSFORMER, POWER	
* 6	X-4947-772-1	CASE ASSY					

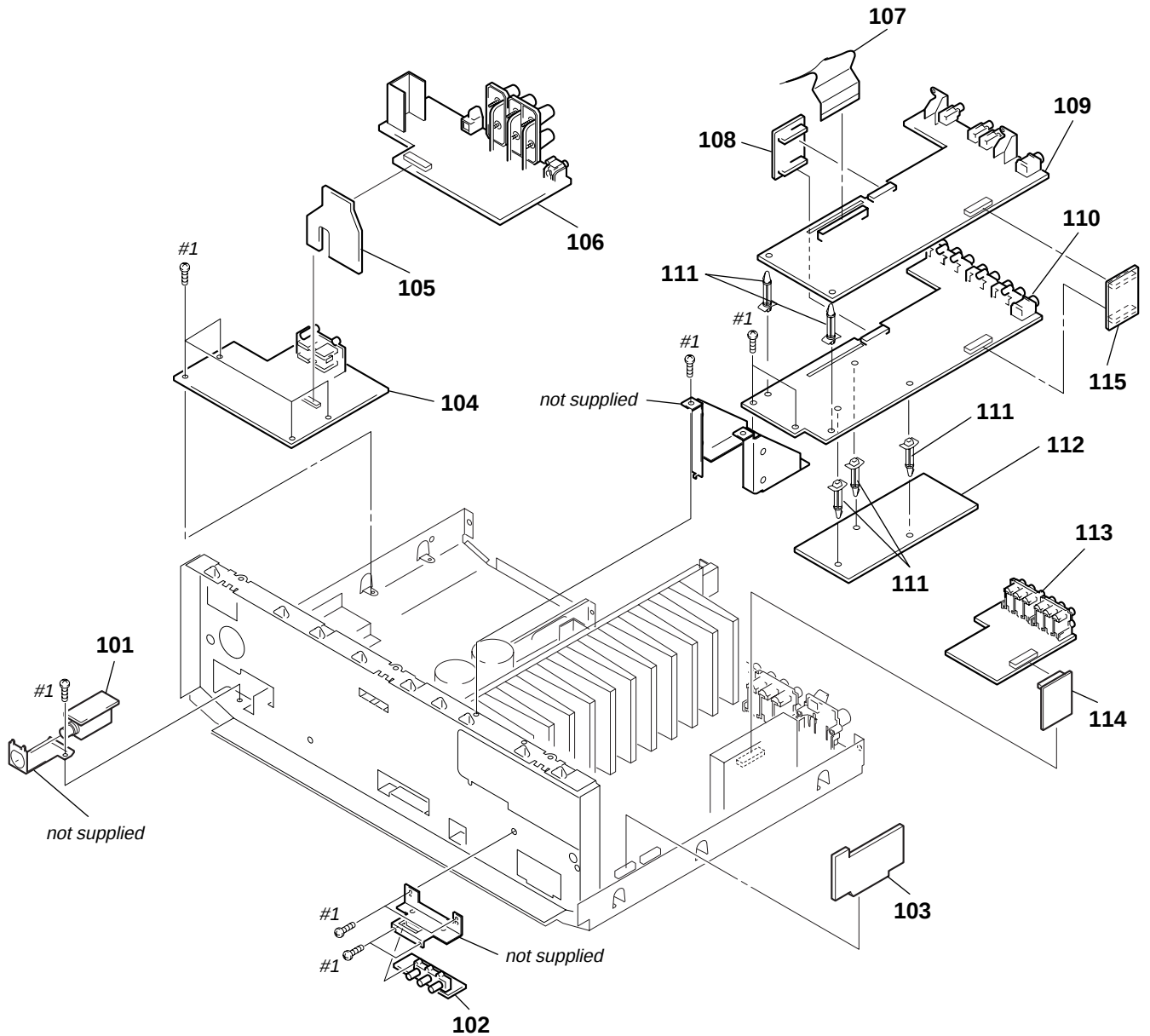
6-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description
51	4-991-066-01	EMBLEM, VISION TOUCH
52	4-982-083-01	COVER (V3)
* 53	1-665-624-11	BALANCE BOARD
54	4-957-383-01	KNOB (F14)
55	X-4947-074-1	KNOB (R48) ASSY
56	4-980-639-01	KNOB (R14)
57	X-4948-332-1	PANEL ASSY, FRONT
58	3-008-600-11	EMBLEM (5-AR), SONY
59	4-980-109-01	BUTTON (P-M)
* 60	1-665-626-11	SP SW BOARD
61	4-951-620-01	SCREW (2.6X8), +BVTP
* 62	1-665-469-11	SW BOARD

Ref. No.	Part No.	Description	Remark
* 63	1-665-622-11	L.B SW BOARD	
64	1-773-131-11	WIRE (FLAT TYPE) (19 CORE)(33cm)	
65	1-773-117-11	WIRE (FLAT TYPE) (19 CORE)(18cm)	
66	1-773-108-11	WIRE (FLAT TYPE) (19 CORE)(10cm)	
* 67	4-989-878-01	BRACKET (VOL)	
* 68	1-665-623-11	VOLUME BOARD	
* 69	4-921-941-01	CUSHION (FL)	
* 70	4-981-656-01	HOLDER (C), FL INDICATION TUBE	
* 71	A-4398-101-A	DISPLAY BOARD, COMPLETE	
72	1-773-041-11	WIRE (FLAT TYPE) (17 CORE)	
FL101	1-517-519-11	INDICATOR TUBE, FLUORESCENT	

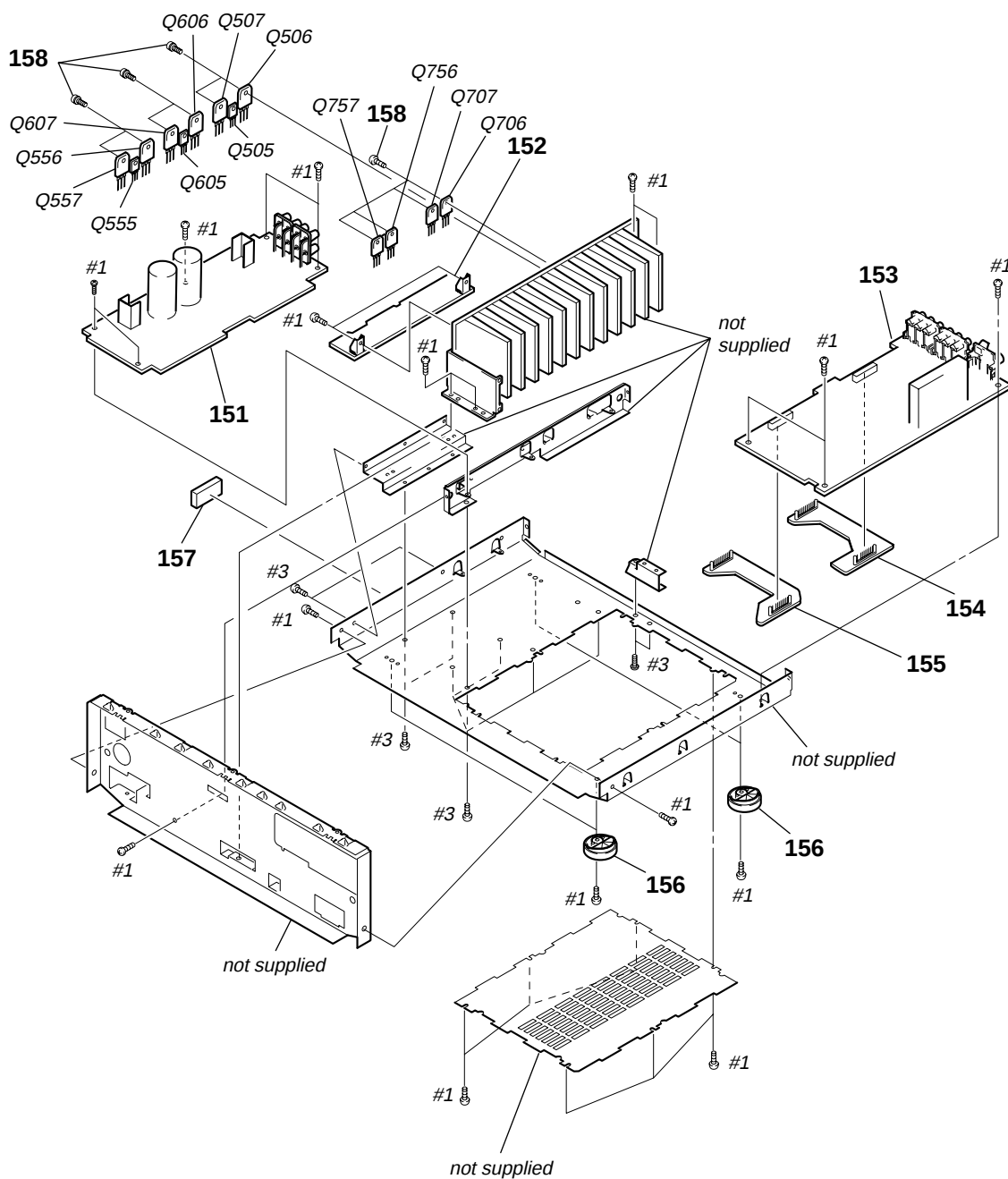
6-3. OSD BOARD SECTION



Ref. No.	Part No.	Description	Remark
* 101	1-665-625-11	H.P. BOARD	
* 102	1-665-502-11	VIDEO 3 BOARD	
* 103	1-665-495-11	AUDIO SW BOARD	
* 104	A-4398-121-A	STAND BY BOARD, COMPLETE (UK)	
* 104	A-4398-145-A	STAND BY BOARD, COMPLETE (AEP,G,EE)	
* 105	1-665-503-11	S-A-P BOARD	
* 106	A-4398-146-A	SP BOARD, COMPLETE	
* 107	1-782-718-11	WIRE (FLAT TYPE) (29 CORE)	
* 108	1-666-160-11	JOINT (OSD) BOARD	

Ref. No.	Part No.	Description	Remark
* 109	A-4398-114-A	S-VIDEO BOARD, COMPLETE	
* 110	A-4398-113-A	OSD BOARD, COMPLETE	
* 111	3-703-353-07	SUPPORT, PC BOARD	
* 112	A-4398-112-A	MEMORY BOARD, COMPLETE	
* 113	A-4398-102-A	AUDIO BOARD, COMPLETE	
* 114	1-665-500-11	SURR-AUDIO BOARD	
* 115	1-666-633-11	JOINT (B) BOARD	
* 116	3-703-353-09	SUPPORT, PC BOARD	

6-4. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 151	A-4398-105-A	AMP BOARD, COMPLETE		Q555	8-729-209-15	TRANSISTOR 2SD2012	
* 152	A-4398-142-A	REAR AMP BOARD, COMPLETE		Q556	8-749-010-25	IC MN2488-OPY-M	
* 153	A-4398-106-A	SURR BOARD, COMPLETE		Q557	8-749-010-26	IC MP1620-OPY-M	
* 154	1-665-634-11	AMP.JOINT (R) BOARD		Q605	8-729-209-15	TRANSISTOR 2SD2012	
* 155	1-665-633-11	AMP.JOINT (F) BOARD					
156	X-4947-207-1	FOOT ASSY (F50150S)		Q606	8-749-010-25	IC MN2488-OPY-M	
157	3-831-441-99	CUSHION, STOPPER		Q607	8-749-010-26	IC MP1620-OPY-M	
158	3-905-609-01	SCREW (TRANSISTOR)		Q706	8-749-010-25	IC MN2488-OPY-M	
Q505	8-729-209-15	TRANSISTOR 2SD2012		Q707	8-749-010-26	IC MP1620-OPY-M	
Q506	8-749-010-25	IC MN2488-OPY-M		Q756	8-749-010-25	IC MN2488-OPY-M	
Q507	8-749-010-26	IC MP1620-OPY-M		Q757	8-749-010-26	IC MP1620-OPY-M	

SECTION 7 ELECTRICAL PARTS LIST

5.1 IN

AMP

Note:

The components identified by mark Δ or dotted line with mark Δ 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
- Abbreviation
G : German model
EE : East European model

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark				
*	1-665-629-11	5.1 IN BOARD					C572	1-107-597-11	CERAMIC	22PF	10%	500V		

		< CAPACITOR >					C573	1-162-286-31	CERAMIC	220PF	10%	50V		
							C574	1-126-964-11	ELECT	10uF	20%	50V		
							C575	1-136-157-00	FILM	0.022uF	5%	50V		
		CC15	1-162-282-31	CERAMIC	100PF	10%	50V	C576	1-136-153-00	FILM	0.01uF	5%	50V	
		CC16	1-162-282-31	CERAMIC	100PF	10%	50V	C590	1-126-935-11	ELECT	470uF	20%	6.3V	
		CC17	1-162-282-31	CERAMIC	100PF	10%	50V							
		CC65	1-162-282-31	CERAMIC	100PF	10%	50V	C598	1-126-965-11	ELECT	22uF	20%	50V	
		CC66	1-162-282-31	CERAMIC	100PF	10%	50V	C620	1-126-967-11	ELECT	47uF	20%	16V	
CC67	1-162-282-31	CERAMIC	100PF	10%	50V	C621	1-107-597-11	CERAMIC	22PF	10%	500V			
		< CONNECTOR >					C622	1-107-597-11	CERAMIC	22PF	10%	500V		
							C623	1-162-286-31	CERAMIC	220PF	10%	50V		
CNP305	1-564-524-11	PLUG, CONNECTOR 9P					C803	1-117-203-11	ELECT	10000uF	20%	63V		
							C804	1-117-203-11	ELECT	10000uF	20%	63V		
		< JACK >					C807	1-126-967-11	ELECT	47uF	20%	16V		
							C808	1-126-967-11	ELECT	47uF	20%	16V		
J306	1-779-355-11	JACK, PIN 6P (5.1 INPUT)					C810	1-126-967-11	ELECT	47uF	20%	16V		
		< RESISTOR >					C811	1-126-952-11	ELECT	1000uF	20%	35V		
							C812	1-126-951-11	ELECT	470uF	20%	35V		
R317	1-249-421-11	CARBON	2.2K	5%	1/4W	F	C817	1-126-967-11	ELECT	47uF	20%	50V		
R325	1-249-421-11	CARBON	2.2K	5%	1/4W	F	C818	1-126-967-11	ELECT	47uF	20%	50V		
R326	1-249-421-11	CARBON	2.2K	5%	1/4W	F	CC48	1-136-153-00	FILM	0.01uF	5%	50V		
R327	1-249-429-11	CARBON	10K	5%	1/4W									
R328	1-249-429-11	CARBON	10K	5%	1/4W		CC49	1-136-153-00	FILM	0.01uF	5%	50V		
							CC98	1-136-153-00	FILM	0.01uF	5%	50V		
R329	1-249-429-11	CARBON	10K	5%	1/4W		CC99	1-136-153-00	FILM	0.01uF	5%	50V		
R367	1-249-421-11	CARBON	2.2K	5%	1/4W	F								
R375	1-249-421-11	CARBON	2.2K	5%	1/4W	F			< CONNECTOR >					
R376	1-249-421-11	CARBON	2.2K	5%	1/4W	F								
R377	1-249-429-11	CARBON	10K	5%	1/4W		CNP701	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P					
							CNP702	1-695-091-11	PIN, CONNECTOR (PC BOARD) 15P					
R378	1-249-429-11	CARBON	10K	5%	1/4W		CNS502	1-770-404-11	HOUSING,CONNECTOR (PC BOARD) 11P					
R379	1-249-429-11	CARBON	10K	5%	1/4W		CNS602	1-770-404-11	HOUSING,CONNECTOR (PC BOARD) 11P					
							CNS701	1-569-323-11	SOCKET, CONNECTOR 19P					

									< DIODE >					
*	A-4398-105-A	AMP BOARD, COMPLETE					D501	8-719-987-63	DIODE	1N4148M				
		*****					D502	8-719-010-06	DIODE	UZ-2.2BS				
							D503	8-719-010-06	DIODE	UZ-2.2BS				
		7-685-872-09	SCREW +BVTT 3X8 (S)					D504	8-719-987-63	DIODE	1N4148M			
								D505	8-719-987-63	DIODE	1N4148M			
		< CAPACITOR >												
		C520	1-126-967-11	ELECT	47uF	20%	16V	D506	8-719-987-63	DIODE	1N4148M			
		C521	1-107-597-11	CERAMIC	22PF	10%	500V	D512	8-719-987-63	DIODE	1N4148M			
		C522	1-107-597-11	CERAMIC	22PF	10%	500V	D545	8-719-987-63	DIODE	1N4148M			
		C523	1-162-286-31	CERAMIC	220PF	10%	50V	D546	8-719-987-63	DIODE	1N4148M			
C524	1-126-964-11	ELECT	10uF	20%	50V	D547	8-719-987-63	DIODE	1N4148M					
C525	1-136-157-00	FILM	0.022uF	5%	50V	D548	8-719-815-85	DIODE	1S1585					
C526	1-136-153-00	FILM	0.01uF	5%	50V	D549	8-719-815-85	DIODE	1S1585					
C570	1-126-967-11	ELECT	47uF	20%	16V	D551	8-719-987-63	DIODE	1N4148M					
C571	1-107-597-11	CERAMIC	22PF	10%	500V	D552	8-719-010-06	DIODE	UZ-2.2BS					

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D553	8-719-010-06	DIODE UZ-2.2BS		Q613	8-729-281-53	TRANSISTOR 2SC1815-GR	
D554	8-719-987-63	DIODE 1N4148M		Q616	8-729-900-36	TRANSISTOR DTC124ES	
D555	8-719-987-63	DIODE 1N4148M		Q801	8-729-140-97	TRANSISTOR 2SB734-34	
D556	8-719-987-63	DIODE 1N4148M		< RESISTOR >			
D601	8-719-987-63	DIODE 1N4148M		R521	1-247-840-00	CARBON 2.4K 5%	1/4W
D602	8-719-010-06	DIODE UZ-2.2BS		R523	1-249-414-11	CARBON 560 5%	1/4W F
D603	8-719-010-06	DIODE UZ-2.2BS		△ R524	1-249-408-11	CARBON 180 5%	1/4W F
D604	8-719-987-63	DIODE 1N4148M		△ R525	1-249-408-11	CARBON 180 5%	1/4W F
D608	8-719-987-63	DIODE 1N4148M		△ R526	1-233-352-41	ENCAPSULATED COMPONENT	
D611	8-719-987-63	DIODE 1N4148M		R527	1-247-850-11	CARBON 6.2K 5%	1/4W
D651	8-719-987-63	DIODE 1N4148M		R528	1-249-419-11	CARBON 1.5K 5%	1/4W F
D711	8-719-987-63	DIODE 1N4148M		R529	1-249-437-11	CARBON 47K 5%	1/4W
D716	8-719-987-63	DIODE 1N4148M		R530	1-249-421-11	CARBON 2.2K 5%	1/4W F
D807	8-719-934-22	DIODE HZS30-2L		R531	1-249-433-11	CARBON 22K 5%	1/4W
< GROUND TERMINAL >				R532	1-249-437-11	CARBON 47K 5%	1/4W
* EB701	1-537-738-21	TERMINAL, EARTH		△ R533	1-249-393-11	CARBON 10 5%	1/4W F
* EB702	1-537-738-21	TERMINAL, EARTH		△ R534	1-249-389-11	CARBON 4.7 5%	1/4W F
* EB703	1-537-738-21	TERMINAL, EARTH		R535	1-249-431-11	CARBON 15K 5%	1/4W
< IC >				R539	1-249-427-11	CARBON 6.8K 5%	1/4W F
IC801	8-759-391-87	IC BA78M12P		R540	1-249-417-11	CARBON 1K 5%	1/4W F
IC802	8-759-391-87	IC BA78M12P		R541	1-249-429-11	CARBON 10K 5%	1/4W
IC803	8-759-604-45	IC M5F79M12		R547	1-249-425-11	CARBON 4.7K 5%	1/4W F
< COIL >				R548	1-249-429-11	CARBON 10K 5%	1/4W
L501	1-411-906-11	COIL, AIR-CORE		△ R549	1-249-393-11	CARBON 10 5%	1/4W F
L551	1-411-906-11	COIL, AIR-CORE		R550	1-249-429-11	CARBON 10K 5%	1/4W
< TRANSISTOR >				R571	1-247-840-00	CARBON 2.4K 5%	1/4W
Q504	8-729-119-76	TRANSISTOR 2SA1175-HFE		R573	1-249-414-11	CARBON 560 5%	1/4W F
Q505	8-729-209-15	TRANSISTOR 2SD2012		△ R574	1-249-408-11	CARBON 180 5%	1/4W F
Q506	8-749-010-25	IC MN2488-OPY-M		△ R575	1-249-408-11	CARBON 180 5%	1/4W F
Q507	8-749-010-26	IC MP1620-OPY-M		△ R576	1-233-352-41	ENCAPSULATED COMPONENT	
Q508	8-729-140-82	TRANSISTOR 2SA988-PAFAEA		R577	1-247-850-11	CARBON 6.2K 5%	1/4W
Q509	8-729-281-53	TRANSISTOR 2SC1815-GR		R578	1-249-419-11	CARBON 1.5K 5%	1/4W F
Q510	8-729-900-63	TRANSISTOR DTA124ES		R579	1-249-437-11	CARBON 47K 5%	1/4W
Q511	8-729-900-63	TRANSISTOR DTA124ES		R580	1-249-421-11	CARBON 2.2K 5%	1/4W F
Q546	8-729-119-79	TRANSISTOR 2SC2785-FEK		R581	1-249-433-11	CARBON 22K 5%	1/4W
Q547	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA		R582	1-249-437-11	CARBON 47K 5%	1/4W
Q548	8-729-119-79	TRANSISTOR 2SC2785-FEK		△ R583	1-249-393-11	CARBON 10 5%	1/4W F
Q549	8-729-140-82	TRANSISTOR 2SA988-PAFAEA		△ R584	1-249-389-11	CARBON 4.7 5%	1/4W F
Q554	8-729-119-76	TRANSISTOR 2SA1175-HFE		R585	1-249-431-11	CARBON 15K 5%	1/4W
Q555	8-729-209-15	TRANSISTOR 2SD2012		R586	1-249-429-11	CARBON 10K 5%	1/4W
Q556	8-749-010-25	IC MN2488-OPY-M		R587	1-249-425-11	CARBON 4.7K 5%	1/4W F
Q557	8-749-010-26	IC MP1620-OPY-M		△ R588	1-249-393-11	CARBON 10 5%	1/4W F
Q558	8-729-140-82	TRANSISTOR 2SA988-PAFAEA		R589	1-249-434-11	CARBON 27K 5%	1/4W F
Q559	8-729-281-53	TRANSISTOR 2SC1815-GR		R590	1-249-434-11	CARBON 27K 5%	1/4W F
Q560	8-729-900-63	TRANSISTOR DTA124ES		R597	1-249-434-11	CARBON 27K 5%	1/4W F
Q561	8-729-900-63	TRANSISTOR DTA124ES		R598	1-249-434-11	CARBON 27K 5%	1/4W F
Q596	8-729-119-79	TRANSISTOR 2SC2785-FEK		R621	1-247-840-00	CARBON 2.4K 5%	1/4W
Q601	8-729-119-79	TRANSISTOR 2SC2785-FEK		R623	1-249-414-11	CARBON 560 5%	1/4W F
Q604	8-729-119-76	TRANSISTOR 2SA1175-HFE		△ R624	1-249-408-11	CARBON 180 5%	1/4W F
Q605	8-729-209-15	TRANSISTOR 2SD2012		△ R625	1-249-408-11	CARBON 180 5%	1/4W F
Q606	8-749-010-25	IC MN2488-OPY-M		△ R626	1-233-352-41	ENCAPSULATED COMPONENT	
Q607	8-749-010-26	IC MP1620-OPY-M		R627	1-247-850-11	CARBON 6.2K 5%	1/4W
Q608	8-729-140-82	TRANSISTOR 2SA988-PAFAEA		R628	1-249-419-11	CARBON 1.5K 5%	1/4W F
				R632	1-249-437-11	CARBON 47K 5%	1/4W
				△ R642	1-215-889-00	METAL OXIDE 330 5%	2W F
				R643	1-249-441-11	CARBON 100K 5%	1/4W

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

AMP

AMP.JOINT (F)

AMP.JOINT (R)

AUDIO

AUDIO SW

Ref. No.	Part No.	Description	Remark			
R650	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R651	1-249-429-11	CARBON	10K	5%	1/4W	
△ R652	1-249-393-11	CARBON	10	5%	1/4W	F
R655	1-249-441-11	CARBON	100K	5%	1/4W	
△ R739	1-215-868-00	METAL OXIDE	680	5%	1W	F
△ R789	1-215-868-00	METAL OXIDE	680	5%	1W	F
△ R802	1-249-401-11	CARBON	47	5%	1/4W	F
R803	1-247-843-11	CARBON	3.3K	5%	1/4W	
△ RR48	1-249-393-11	CARBON	10	5%	1/4W	F
△ RR49	1-249-393-11	CARBON	10	5%	1/4W	F
△ RR98	1-249-393-11	CARBON	10	5%	1/4W	F
△ RR99	1-249-393-11	CARBON	10	5%	1/4W	F
< RELAY >						
RY501	1-515-920-11	RELAY (24V)				
RY502	1-515-920-11	RELAY (24V)				
RY602	1-515-793-11	RELAY				
< TERMINAL >						
* TM501	1-537-519-11	TERMINAL BOARD (SP)(FRONT SPEAKER)				

* 1-665-633-11	AMP.JOINT (F) BOARD					

< CONNECTOR >						
CNP501	1-770-553-11	CONNECTOR, BOARD TO BOARD 11P				
CNP502	1-770-553-11	CONNECTOR, BOARD TO BOARD 11P				

* 1-665-634-11	AMP.JOINT (R) BOARD					

< CONNECTOR >						
CNP601	1-770-553-11	CONNECTOR, BOARD TO BOARD 11P				
CNP602	1-770-553-11	CONNECTOR, BOARD TO BOARD 11P				

* A-4398-102-A	AUDIO BOARD, COMPLETE					

< CAPACITOR >						
C398	1-162-282-31	CERAMIC	100PF	10%	50V	
C399	1-162-294-31	CERAMIC	0.001uF	10%	50V	
CC09	1-162-282-31	CERAMIC	100PF	10%	50V	
CC10	1-162-282-31	CERAMIC	100PF	10%	50V	
CC11	1-162-282-31	CERAMIC	100PF	10%	50V	
CC12	1-162-282-31	CERAMIC	100PF	10%	50V	
CC13	1-162-282-31	CERAMIC	100PF	10%	50V	
CC18	1-162-282-31	CERAMIC	100PF	10%	50V	
CC59	1-162-282-31	CERAMIC	100PF	10%	50V	
CC60	1-162-282-31	CERAMIC	100PF	10%	50V	
CC61	1-162-282-31	CERAMIC	100PF	10%	50V	
CC62	1-162-282-31	CERAMIC	100PF	10%	50V	
CC63	1-162-282-31	CERAMIC	100PF	10%	50V	
CC68	1-162-282-31	CERAMIC	100PF	10%	50V	

Ref. No.	Part No.	Description	Remark			
< CONNECTOR >						
CNS302	1-695-093-11	SOCKET, CONNECTOR 9P				
< IC >						
IC303	8-759-805-14	IC LC7822				
< JACK >						
J304	1-770-015-11	JACK, PIN 6P (VIDEO 1 AUDIO IN/OUT, VIDEO 2 AUDIO IN)				
J305	1-774-411-11	JACK, PIN 6P (VIDEO 2 AUDIO OUT, LD/DVD AUDIO IN,SATL AUDIO IN)				
< RESISTOR >						
R318	1-249-417-11	CARBON	1K	5%	1/4W	F
R319	1-249-417-11	CARBON	1K	5%	1/4W	F
R320	1-249-417-11	CARBON	1K	5%	1/4W	F
R321	1-249-417-11	CARBON	1K	5%	1/4W	F
R322	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R323	1-249-417-11	CARBON	1K	5%	1/4W	F
R338	1-249-437-11	CARBON	47K	5%	1/4W	
R368	1-249-417-11	CARBON	1K	5%	1/4W	F
R369	1-249-417-11	CARBON	1K	5%	1/4W	F
R370	1-249-417-11	CARBON	1K	5%	1/4W	F
R371	1-249-417-11	CARBON	1K	5%	1/4W	F
R372	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R373	1-249-417-11	CARBON	1K	5%	1/4W	F
R388	1-249-437-11	CARBON	47K	5%	1/4W	
R398	1-249-417-11	CARBON	1K	5%	1/4W	F
R399	1-249-425-11	CARBON	4.7K	5%	1/4W	F

*	1-665-495-11	AUDIO SW BOARD *****				
< CAPACITOR >						
C407	1-126-795-11	ELECT	10uF	20%	50V	
C408	1-164-159-11	CERAMIC	0.1uF		50V	
C409	1-126-795-11	ELECT	10uF	20%	50V	
C411	1-126-795-11	ELECT	10uF	20%	50V	
C412	1-164-159-11	CERAMIC	0.1uF		50V	
C457	1-126-795-11	ELECT	10uF	20%	50V	
C458	1-164-159-11	CERAMIC	0.1uF		50V	
C459	1-126-795-11	ELECT	10uF	20%	50V	
C461	1-126-795-11	ELECT	10uF	20%	50V	
C495	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C496	1-164-070-11	CERAMIC	100PF	5%	50V	
C498	1-126-786-11	ELECT	47uF	20%	16V	
C499	1-126-786-11	ELECT	47uF	20%	16V	
< CONNECTOR >						
CNP410	1-750-180-11	PIN, CONNECTOR (PC BOARD) 5P				
CNS403	1-695-093-11	SOCKET, CONNECTOR 9P				
CNS404	1-695-094-11	SOCKET, CONNECTOR 11P				

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

AUDIO SW

BALANCE

DISPLAY

Ref. No.	Part No.	Description	Remark			
< IC >						
IC405	8-759-634-50	IC M5218AL				
IC406	8-759-805-15	IC LC7823				
< TRANSISTOR >						
Q401	8-729-922-37	TRANSISTOR 2SD2144S				
Q403	8-729-922-37	TRANSISTOR 2SD2144S				
Q451	8-729-922-37	TRANSISTOR 2SD2144S				
< RESISTOR >						
R410	1-247-887-00	CARBON	220K	5%	1/4W	
R411	1-249-417-11	CARBON	1K	5%	1/4W	F
R412	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R413	1-249-441-11	CARBON	100K	5%	1/4W	
R416	1-249-441-11	CARBON	100K	5%	1/4W	
R417	1-249-417-11	CARBON	1K	5%	1/4W	F
R418	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R460	1-247-887-00	CARBON	220K	5%	1/4W	
R461	1-249-417-11	CARBON	1K	5%	1/4W	F
R462	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R463	1-249-441-11	CARBON	100K	5%	1/4W	
R466	1-249-441-11	CARBON	100K	5%	1/4W	
R467	1-249-417-11	CARBON	1K	5%	1/4W	F
R468	1-249-417-11	CARBON	1K	5%	1/4W	F
R469	1-249-441-11	CARBON	100K	5%	1/4W	
R476	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R477	1-249-417-11	CARBON	1K	5%	1/4W	F
R478	1-249-441-11	CARBON	100K	5%	1/4W	
R479	1-249-429-11	CARBON	10K	5%	1/4W	
R480	1-249-441-11	CARBON	100K	5%	1/4W	
R481	1-247-807-31	CARBON	100	5%	1/4W	
R482	1-247-807-31	CARBON	100	5%	1/4W	

*	1-665-624-11	BALANCE BOARD	*****			
< VARIABLE RESISTOR >						
RV402	1-225-447-11	RES, VAR, CARBON 100K/100K (BALANCE)				

*	A-4398-101-A	DISPLAY BOARD, COMPLETE	*****			
*	4-921-941-01	CUSHION (FL)				
*	4-981-656-01	HOLDER (C), FL INDICATION TUBE				
< CAPACITOR >						
C101	1-164-159-11	CERAMIC	0.1uF		50V	
C102	1-164-159-11	CERAMIC	0.1uF		50V	
C103	1-164-159-11	CERAMIC	0.1uF		50V	
C104	1-164-159-11	CERAMIC	0.1uF		50V	
C105	1-164-159-11	CERAMIC	0.1uF		50V	
C106	1-164-159-11	CERAMIC	0.1uF		50V	
C107	1-164-159-11	CERAMIC	0.1uF		50V	
C108	1-126-796-11	ELECT	22uF	20%	35V	
C109	1-162-282-31	CERAMIC	100PF	10%	50V	

Ref. No.	Part No.	Description	Remark		
C110	1-126-786-11	ELECT	47uF	20%	16V
C111	1-126-786-11	ELECT	47uF	20%	16V
C112	1-162-282-31	CERAMIC	100PF	10%	50V
C113	1-126-786-11	ELECT	47uF	20%	16V
C114	1-164-159-11	CERAMIC	0.1uF		50V
C115	1-104-905-11	CAPACITOR	0.22F		5.5V
C116	1-164-159-11	CERAMIC	0.1uF		50V
C117	1-164-159-11	CERAMIC	0.1uF		50V
C132	1-126-177-11	ELECT	100uF	20%	10V
C133	1-164-159-11	CERAMIC	0.1uF		50V
C134	1-162-282-31	CERAMIC	100PF	10%	50V
C135	1-126-795-11	ELECT	10uF	20%	50V
C140	1-126-786-11	ELECT	47uF	20%	16V
C141	1-164-159-11	CERAMIC	0.1uF		50V
C142	1-164-159-11	CERAMIC	0.1uF		50V
C143	1-162-294-31	CERAMIC	0.001uF	10%	50V
< CONNECTOR >					
CNP101	1-779-365-11	CONNECTOR, PC BOARD (PLUG) 8P			
CNP103	1-779-366-11	CONNECTOR, BOARD TO BOARD 4P			
CNS102	1-770-397-11	HOUSING, CONNECTOR(PC BOARD)4P			
CNS104	1-569-308-11	SOCKET, CONNECTOR (L TYRE) 19P			
CNS105	1-691-650-11	SOCKET, CONNECTOR 19P			
CNS107	1-568-438-11	SOCKET, CONNECTOR 17P			
< DIODE >					
D100	8-719-987-63	DIODE	1N4148M		
D101	8-719-313-45	DIODE	SEL6810A-TH10 (PHONO)		
D102	8-719-313-45	DIODE	SEL6810A-TH10 (TUNER)		
D103	8-719-313-45	DIODE	SEL6810A-TH10 (CD)		
D104	8-719-313-45	DIODE	SEL6810A-TH10 (DAT/MD)		
D105	8-719-313-45	DIODE	SEL6810A-TH10 (TAPE)		
D106	8-719-313-45	DIODE	SEL6810A-TH10 (SATL)		
D107	8-719-313-45	DIODE	SEL6810A-TH10 (LD/DVD)		
D108	8-719-313-45	DIODE	SEL6810A-TH10 (VIDEO 3)		
D109	8-719-313-45	DIODE	SEL6810A-TH10 (VIDEO 2)		
D110	8-719-313-45	DIODE	SEL6810A-TH10 (VIDEO 1)		
D111	8-719-313-45	DIODE	SEL6810A-TH10 (DIRECT PASS)		
D112	8-719-064-63	DIODE	SELU5823A-TP15 (5.1 INPUT)		
D113	8-719-313-45	DIODE	SEL6810A-TH10 (SUR)		
D114	8-719-313-45	DIODE	SEL6810A-TH10 (TONE)		
D115	8-719-313-45	DIODE	SEL6810A-TH10 (INDEX)		
D116	8-719-313-43	DIODE	SEL6210S-TH10 (LEARNING SENSOR)		
D118	8-719-313-43	DIODE	SEL6210S-TH10 (STANDBY)		
D119	8-719-987-63	DIODE	1N4148M		
D120	8-719-024-99	DIODE	11ES2-NTA2B		
D121	8-719-053-79	DIODE	SE1003-C-TP		
D122	8-719-053-79	DIODE	SE1003-C-TP		
D123	8-719-053-79	DIODE	SE1003-C-TP		
D124	8-719-053-79	DIODE	SE1003-C-TP		
D125	8-719-053-79	DIODE	SE1003-C-TP		
D126	8-719-053-79	DIODE	SE1003-C-TP		
D127	8-719-053-79	DIODE	SE1003-C-TP		
D128	8-719-053-79	DIODE	SE1003-C-TP		
D129	8-719-053-79	DIODE	SE1003-C-TP		
D130	8-719-053-79	DIODE	SE1003-C-TP		
D133	8-719-987-63	DIODE	1N4148M		

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D134	8-719-118-33	PHOTO DIODE PH302D		R131	1-249-419-11	CARBON 1.5K 5%	1/4W F
D1001	8-719-010-38	DIODE UZ-5.1BSB		R132	1-249-417-11	CARBON 1K 5%	1/4W F
		< FLUORESCENT INDICATOR >		R133	1-249-417-11	CARBON 1K 5%	1/4W F
FL101	1-517-519-11	INDICATOR TUBE, FLUORESCENT		R134	1-249-417-11	CARBON 1K 5%	1/4W F
		< IC >		R135	1-249-417-11	CARBON 1K 5%	1/4W F
IC101	8-759-462-46	IC TPS831		R136	1-249-417-11	CARBON 1K 5%	1/4W F
IC102	8-759-442-92	IC M66004AFP-M6		R137	1-247-807-31	CARBON 100 5%	1/4W
IC103	8-759-484-62	IC MB90673PF-G-226-BND		R138	1-249-417-11	CARBON 1K 5%	1/4W F
IC104	8-759-240-69	IC TC4069UBP		R139	1-247-807-31	CARBON 100 5%	1/4W
IC105	8-759-634-84	IC M50255P		R140	1-247-807-31	CARBON 100 5%	1/4W
IC106	8-759-962-08	IC BA6208		R141	1-247-807-31	CARBON 100 5%	1/4W
		< COIL >		R142	1-247-807-31	CARBON 100 5%	1/4W
L101	1-410-509-11	INDUCTOR 10uH		△R143	1-215-861-00	METAL OXIDE 47 5%	1W F
L102	1-410-509-11	INDUCTOR 10uH		R144	1-249-393-11	CARBON 10 5%	1/4W F
		< TRANSISTOR >		R145	1-247-895-00	CARBON 470K 5%	1/4W
Q101	8-729-900-36	TRANSISTOR DTC124ES		R146	1-247-903-00	CARBON 1M 5%	1/4W
Q102	8-729-900-36	TRANSISTOR DTC124ES		R147	1-249-433-11	CARBON 22K 5%	1/4W
Q103	8-729-140-97	TRANSISTOR 2SB734-34		R148	1-247-903-00	CARBON 1M 5%	1/4W
Q105	8-729-900-36	TRANSISTOR DTC124ES		R149	1-249-435-11	CARBON 33K 5%	1/4W
Q106	8-729-900-36	TRANSISTOR DTC124ES		R150	1-249-393-11	CARBON 10 5%	1/4W F
Q107	8-729-900-36	TRANSISTOR DTC124ES		R151	1-249-429-11	CARBON 10K 5%	1/4W
		< RESISTOR >		R152	1-249-434-11	CARBON 27K 5%	1/4W
R101	1-247-807-31	CARBON 100 5%	1/4W	△R153	1-249-385-11	CARBON 2.2 5%	1/6W F
R102	1-247-807-31	CARBON 100 5%	1/4W	△R154	1-249-385-11	CARBON 2.2 5%	1/6W F
R103	1-247-807-31	CARBON 100 5%	1/4W	R155	1-249-411-11	CARBON 330 5%	1/4W
R104	1-247-807-31	CARBON 100 5%	1/4W	R156	1-249-411-11	CARBON 330 5%	1/4W
R105	1-247-807-31	CARBON 100 5%	1/4W	R157	1-249-411-11	CARBON 330 5%	1/4W
R106	1-247-807-31	CARBON 100 5%	1/4W	R158	1-249-411-11	CARBON 330 5%	1/4W
R107	1-247-807-31	CARBON 100 5%	1/4W	R159	1-249-411-11	CARBON 330 5%	1/4W
R108	1-247-807-31	CARBON 100 5%	1/4W	R161	1-249-411-11	CARBON 330 5%	1/4W
R109	1-247-807-31	CARBON 100 5%	1/4W	R162	1-249-429-11	CARBON 10K 5%	1/4W
R110	1-247-807-31	CARBON 100 5%	1/4W	R163	1-249-401-11	CARBON 47 5%	1/4W F
R111	1-247-807-31	CARBON 100 5%	1/4W	R164	1-249-429-11	CARBON 10K 5%	1/4W
R112	1-247-807-31	CARBON 100 5%	1/4W	R165	1-249-429-11	CARBON 10K 5%	1/4W
R113	1-247-807-31	CARBON 100 5%	1/4W	R166	1-249-429-11	CARBON 10K 5%	1/4W
R114	1-247-807-31	CARBON 100 5%	1/4W	R167	1-249-441-11	CARBON 100K 5%	1/4W F
R115	1-247-807-31	CARBON 100 5%	1/4W	R188	1-249-411-11	CARBON 330 5%	1/4W
R116	1-247-807-31	CARBON 100 5%	1/4W	R189	1-249-413-11	CARBON 470 5%	1/4W F
R117	1-247-807-31	CARBON 100 5%	1/4W	R190	1-249-415-11	CARBON 680 5%	1/4W F
R118	1-249-417-11	CARBON 1K 5%	1/4W F	R191	1-249-417-11	CARBON 1K 5%	1/4W F
R119	1-249-417-11	CARBON 1K 5%	1/4W F	R192	1-249-419-11	CARBON 1.5K 5%	1/4W F
R120	1-249-417-11	CARBON 1K 5%	1/4W F	R193	1-249-421-11	CARBON 2.2K 5%	1/4W F
R121	1-249-417-11	CARBON 1K 5%	1/4W F	R194	1-249-425-11	CARBON 4.7K 5%	1/4W F
R122	1-249-425-11	CARBON 4.7K 5%	1/4W F	R195	1-249-411-11	CARBON 330 5%	1/4W
R123	1-249-425-11	CARBON 4.7K 5%	1/4W F	R196	1-249-413-11	CARBON 470 5%	1/4W F
R124	1-249-425-11	CARBON 4.7K 5%	1/4W F	R197	1-249-415-11	CARBON 680 5%	1/4W F
R125	1-249-425-11	CARBON 4.7K 5%	1/4W F	R198	1-249-417-11	CARBON 1K 5%	1/4W F
R126	1-249-425-11	CARBON 4.7K 5%	1/4W F	R199	1-249-419-11	CARBON 1.5K 5%	1/4W F
R127	1-249-425-11	CARBON 4.7K 5%	1/4W F	RR10	1-249-425-11	CARBON 4.7K 5%	1/4W F
R128	1-249-417-11	CARBON 1K 5%	1/4W F	RR11	1-249-411-11	CARBON 330 5%	1/4W
R129	1-247-807-31	CARBON 100 5%	1/4W	RR12	1-249-413-11	CARBON 470 5%	1/4W F
R130	1-249-429-11	CARBON 10K 5%	1/4W	RR13	1-249-415-11	CARBON 680 5%	1/4W F
				RR14	1-249-417-11	CARBON 1K 5%	1/4W F
						< SWITCH >	
				S123	1-762-751-11	SWITCH, TACTILE (<)	
				S124	1-762-751-11	SWITCH, TACTILE (>)	

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

DISPLAY	H.P	JOINT (B)	JOINT (OSD)	L.B SW	MEMORY	OSD
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Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
S127	1-762-751-11	SWITCH, TACTILE (DIMMER)					C290	1-126-967-11	ELECT	47uF	20%	16V	
S128	1-762-751-11	SWITCH, TACTILE (DISPLAY)					C291	1-164-159-11	CERAMIC	0.1uF		50V	
S129	1-762-751-11	SWITCH, TACTILE (Λ)					C294	1-164-159-11	CERAMIC	0.1uF		50V	
S130	1-762-751-11	SWITCH, TACTILE (∨)					< CONNECTOR >						
< VIBRATOR >													
X101	1-567-819-11	VIBRATOR, CERAMIC (4MHz)					< IC >						

*	1-665-625-11	H.P BOARD					IC216	8-759-916-94	IC	SN74HC373AN			

< CONNECTOR >													
* CNP702	1-564-518-11	PLUG, CONNECTOR 3P					< COIL >						
< JACK >													
J701	1-568-519-41	JACK, LARGE TYPE (PHONES)					< RESISTOR >						

*	1-666-633-11	JOINT (B) BOARD					R227	1-249-417-11	CARBON	1K	5%	1/4W F	

< CONNECTOR >													
CNP213	1-750-180-11	PIN, CONNECTOR (PC BOARD) 5P					R264	1-249-417-11	CARBON	1K	5%	1/4W F	
CNP216	1-750-180-11	PIN, CONNECTOR (PC BOARD) 5P					R2012	1-249-429-11	CARBON	10K	5%	1/4W	

< CONNECTOR >													
CNP211	1-695-087-11	PIN, CONNECTOR (PC BOARD) 7P					R2013	1-249-429-11	CARBON	10K	5%	1/4W	
CNP212	1-695-087-11	PIN, CONNECTOR (PC BOARD) 7P					R2014	1-249-429-11	CARBON	10K	5%	1/4W	

*	1-666-160-11	JOINT (OSD) BOARD					< CAPACITOR >						

< CONNECTOR >													
CNP211	1-695-087-11	PIN, CONNECTOR (PC BOARD) 7P					C203	1-102-518-11	CERAMIC	33PF	5%	50V	
CNP212	1-695-087-11	PIN, CONNECTOR (PC BOARD) 7P					C206	1-102-852-91	CERAMIC	47PF	5%	50V	

*	1-665-622-11	L.B SW BOARD					C208	1-126-964-11	ELECT	10uF	20%	50V	

< DIODE >													
D117	8-719-313-45	DIODE SEL6810A-TH10 (BASS BOOST)					C212	1-126-933-11	ELECT	100uF	20%	10V	
< RESISTOR >													
R160	1-249-411-11	CARBON	330	5%	1/4W	C213	1-164-159-11	CERAMIC	0.1uF		50V		
< SWITCH >													
S135	1-762-751-11	SWITCH, TACTILE (BASS BOOST)					C248	1-126-960-11	ELECT	1uF	20%	50V	

*	A-4398-112-A	MEMORY BOARD, COMPLETE					C249	1-136-162-00	FILM	0.056uF	5%	50V	

< CAPACITOR >													
C288	1-164-159-11	CERAMIC	0.1uF	50V		C250	1-136-157-00	FILM	0.022uF	5%	50V		
C289	1-164-159-11	CERAMIC	0.1uF	50V		C251	1-164-159-11	CERAMIC	0.1uF		50V		

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C296	1-126-923-11	ELECT	220uF 20% 10V	Q214	8-729-620-05	TRANSISTOR 2SC2603-EF	
C2001	1-162-211-31	CERAMIC	33PF 5% 50V	Q215	8-729-620-05	TRANSISTOR 2SC2603-EF	
C2002	1-162-213-31	CERAMIC	39PF 5% 50V	Q216	8-729-620-05	TRANSISTOR 2SC2603-EF	
C2004	1-162-215-31	CERAMIC	47PF 5% 50V	Q217	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C2005	1-162-211-31	CERAMIC	33PF 5% 50V	Q218	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C2006	1-162-213-31	CERAMIC	39PF 5% 50V	Q219	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C2007	1-164-159-11	CERAMIC	0.1uF 50V	Q221	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C2008	1-126-964-11	ELECT	10uF 20% 50V	Q222	8-729-900-80	TRANSISTOR DTC114ES	
C2009	1-164-159-11	CERAMIC	0.1uF 50V	Q230	8-729-620-05	TRANSISTOR 2SC2603-EF	
C2010	1-136-153-00	FILM	0.01uF 5% 50V	< RESISTOR >			
C2011	1-162-294-31	CERAMIC	0.001uF 10% 50V	R207	1-249-409-11	CARBON 220 5% 1/4W F	
C2012	1-162-282-31	CERAMIC	100PF 10% 50V	R210	1-249-424-11	CARBON 3.9K 5% 1/4W F	
< CONNECTOR >				R212	1-249-418-11	CARBON 1.2K 5% 1/4W F	
* CNP214	1-564-509-11	PLUG, CONNECTOR 6P		R216	1-249-437-11	CARBON 47K 5% 1/4W	
CNS212	1-695-092-11	SOCKET, CONNECTOR 7P		R242	1-249-433-11	CARBON 22K 5% 1/4W	
CNS216	1-750-179-11	SOCKET, CONNECTOR 5P		R250	1-249-417-11	CARBON 1K 5% 1/4W F	
< TRIMMER >				R262	1-247-883-00	CARBON 150K 5% 1/4W	
CT201	1-141-227-00	CAP, TRIMMER 20PF		R265	1-249-414-11	CARBON 560 5% 1/4W F	
CT202	1-141-227-00	CAP, TRIMMER 20PF		R266	1-249-403-11	CARBON 68 5% 1/4W F	
< DIODE >				R267	1-249-424-11	CARBON 3.9K 5% 1/4W F	
D201	8-719-987-63	DIODE 1N4148M		R268	1-249-403-11	CARBON 68 5% 1/4W F	
D206	8-719-987-63	DIODE 1N4148M		R269	1-249-403-11	CARBON 68 5% 1/4W F	
D211	8-719-987-63	DIODE 1N4148M		R270	1-249-426-11	CARBON 5.6K 5% 1/4W	
< IC >				R271	1-249-426-11	CARBON 5.6K 5% 1/4W	
IC202	8-759-140-53	IC UPD4053BC		R272	1-249-426-11	CARBON 5.6K 5% 1/4W	
IC205	8-759-459-81	IC MB90095PF-G-186-BND		R274	1-249-403-11	CARBON 68 5% 1/4W F	
IC206	8-759-916-12	IC SN74HC00AN		R275	1-249-403-11	CARBON 68 5% 1/4W F	
IC210	8-759-341-79	IC LA7217		R276	1-249-419-11	CARBON 1.5K 5% 1/4W F	
IC211	8-759-061-95	IC SN761200		R277	1-249-419-11	CARBON 1.5K 5% 1/4W F	
IC212	8-759-293-64	IC LA7356		R278	1-249-419-11	CARBON 1.5K 5% 1/4W F	
< JACK >				R279	1-249-403-11	CARBON 68 5% 1/4W F	
J203	1-563-330-11	JACK (IR OUT)		R280	1-249-403-11	CARBON 68 5% 1/4W F	
J209	1-766-400-11	JACK, PIN 2P (VIDEO 2 IN/OUT)		R281	1-249-403-11	CARBON 68 5% 1/4W F	
J210	1-766-400-11	JACK, PIN 2P (VIDEO 1 VIDEO IN/OUT)		R282	1-249-403-11	CARBON 68 5% 1/4W F	
J211	1-766-400-11	JACK, PIN 2P (SATL VIDEO OUT, LC/DVD VIDEO OUT)		R283	1-249-403-11	CARBON 68 5% 1/4W F	
< COIL >				R287	1-247-807-31	CARBON 100 5% 1/4W	
L201	1-410-513-11	INDUCTOR 22uH		R288	1-249-430-11	CARBON 12K 5% 1/4W	
L202	1-410-515-11	INDUCTOR 33uH		R289	1-249-430-11	CARBON 12K 5% 1/4W	
L288	1-410-521-11	INDUCTOR 100uH		R290	1-249-430-11	CARBON 12K 5% 1/4W	
L2001	1-410-515-11	INDUCTOR 33uH		R296	1-247-843-11	CARBON 3.3K 5% 1/4W	
< TRANSISTOR >				R2002	1-249-417-11	CARBON 1K 5% 1/4W F	
Q203	8-729-620-05	TRANSISTOR 2SC2603-EF		R2009	1-249-409-11	CARBON 220 5% 1/4W F	
Q205	8-729-900-80	TRANSISTOR DTC114ES		R2010	1-249-409-11	CARBON 220 5% 1/4W F	
Q206	8-729-620-05	TRANSISTOR 2SC2603-EF		R2021	1-249-426-11	CARBON 5.6K 5% 1/4W	
Q207	8-729-422-57	TRANSISTOR UN4111		R2022	1-249-421-11	CARBON 2.2K 5% 1/4W F	
Q208	8-729-900-80	TRANSISTOR DTC114ES		R2023	1-247-852-11	CARBON 7.5K 5% 1/4W	
Q209	8-729-119-76	TRANSISTOR 2SA1175-HFE		R2024	1-249-417-11	CARBON 1K 5% 1/4W F	
Q210	8-729-900-80	TRANSISTOR DTC114ES		R2025	1-249-417-11	CARBON 1K 5% 1/4W F	
Q211	8-729-620-05	TRANSISTOR 2SC2603-EF		R2026	1-247-838-00	CARBON 2K 5% 1/4W	
Q212	8-729-119-76	TRANSISTOR 2SA1175-HFE		R2027	1-249-417-11	CARBON 1K 5% 1/4W F	
				R2028	1-247-807-31	CARBON 100 5% 1/4W	
				R2029	1-249-417-11	CARBON 1K 5% 1/4W F	
				R2030	1-249-399-11	CARBON 33 5% 1/4W F	
				R2031	1-249-429-11	CARBON 10K 5% 1/4W	
				R2201	1-249-429-11	CARBON 10K 5% 1/4W	
				R2202	1-249-429-11	CARBON 10K 5% 1/4W	

OSD

REAR AMP

S-A-P

Ref. No.	Part No.	Description	Remark		
R2203	1-249-429-11	CARBON 10K 5%	1/4W		
< TEST PIN >					
* TP203	1-560-061-00	PIN, CONNECTOR 3P			
< VIBRATOR >					
X204	1-579-583-11	VIBRATOR, CERAMIC (503kHz)			
X207	1-579-057-11	VIBRATOR, CRYSTAL (17MHz)			

*	A-4398-142-A	REAR AMP BOARD, COMPLETE	*****		
< CAPACITOR >					
C700	1-162-294-31	CERAMIC 0.001uF 10%	50V		
C701	1-126-964-11	ELECT 10uF 20%	50V		
C702	1-162-282-31	CERAMIC 100PF 10%	50V		
C703	1-102-233-00	CERAMIC 33PF 10%	500V		
C704	1-162-282-31	CERAMIC 100PF 10%	50V		
C705	1-126-933-11	ELECT 100uF 20%	10V		
C720	1-126-967-11	ELECT 47uF 20%	16V		
C721	1-107-597-11	CERAMIC 22PF 10%	500V		
C722	1-107-597-11	CERAMIC 22PF 10%	500V		
C723	1-162-286-31	CERAMIC 220PF 10%	50V		
C751	1-126-964-11	ELECT 10uF 20%	50V		
C752	1-162-282-31	CERAMIC 100PF 10%	50V		
C753	1-102-233-00	CERAMIC 33PF 10%	500V		
C754	1-162-282-31	CERAMIC 100PF 10%	50V		
C755	1-126-933-11	ELECT 100uF 20%	10V		
C770	1-126-967-11	ELECT 47uF 20%	16V		
C771	1-107-597-11	CERAMIC 22PF 10%	500V		
C772	1-107-597-11	CERAMIC 22PF 10%	500V		
C773	1-162-286-31	CERAMIC 220PF 10%	50V		
C793	1-126-923-11	ELECT 220uF 20%	10V		
C798	1-128-560-11	ELECT 22uF 20%	100V		
C799	1-128-560-11	ELECT 22uF 20%	100V		
< CONNECTOR >					
CNP704	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P			
* CNP705	1-564-242-00	PIN, CONNECTOR 5P			
CNP706	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P			
CNS704	1-564-510-11	PLUG, CONNECTOR 7P			
< DIODE >					
D701	8-719-987-63	DIODE 1N4148M			
D702	8-719-010-06	DIODE UZ-2.2BS			
D703	8-719-010-06	DIODE UZ-2.2BS			
D704	8-719-987-63	DIODE 1N4148M			
D751	8-719-987-63	DIODE 1N4148M			
D752	8-719-010-06	DIODE UZ-2.2BS			
D753	8-719-010-06	DIODE UZ-2.2BS			
D754	8-719-987-63	DIODE 1N4148M			
< IC >					
IC701	8-759-326-52	IC uPC2581V			

Ref. No.	Part No.	Description	Remark			
< TRANSISTOR >						
Q703	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA				
Q704	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q705	8-729-141-30	TRANSISTOR 2SC3623A-LK				
Q706	8-749-010-25	IC MN2488-OPY-M				
Q707	8-749-010-26	IC MP1620-OPY-M				
Q708	8-729-140-82	TRANSISTOR 2SA988-PAFAEA				
Q754	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q755	8-729-141-30	TRANSISTOR 2SC3623A-LK				
Q756	8-749-010-25	IC MN2488-OPY-M				
Q757	8-749-010-26	IC MP1620-OPY-M				
Q758	8-729-140-82	TRANSISTOR 2SA988-PAFAEA				
< RESISTOR >						
R701	1-249-417-11	CARBON 1K 5%	1/4W	F		
R702	1-249-439-11	CARBON 68K 5%	1/4W			
R703	1-249-439-11	CARBON 68K 5%	1/4W			
R704	1-247-820-11	CARBON 360 5%	1/4W			
R721	1-249-437-11	CARBON 47K 5%	1/4W			
R722	1-249-421-11	CARBON 2.2K 5%	1/4W	F		
R723	1-249-414-11	CARBON 560 5%	1/4W	F		
△ R724	1-249-408-11	CARBON 180 5%	1/4W	F		
△ R725	1-249-408-11	CARBON 180 5%	1/4W	F		
△ R726	1-233-352-41	ENCAPSULATED COMPONENT				
R727	1-247-850-11	CARBON 6.2K 5%	1/4W			
R728	1-249-419-11	CARBON 1.5K 5%	1/4W	F		
R732	1-249-437-11	CARBON 47K 5%	1/4W			
R751	1-249-417-11	CARBON 1K 5%	1/4W	F		
R752	1-249-439-11	CARBON 68K 5%	1/4W			
R753	1-249-439-11	CARBON 68K 5%	1/4W			
R754	1-247-820-11	CARBON 360 5%	1/4W			
R771	1-249-437-11	CARBON 47K 5%	1/4W			
R772	1-249-421-11	CARBON 2.2K 5%	1/4W	F		
R773	1-249-414-11	CARBON 560 5%	1/4W	F		
△ R774	1-249-408-11	CARBON 180 5%	1/4W	F		
△ R775	1-249-408-11	CARBON 180 5%	1/4W	F		
△ R776	1-233-352-41	ENCAPSULATED COMPONENT				
R777	1-247-850-11	CARBON 6.2K 5%	1/4W			
R778	1-249-419-11	CARBON 1.5K 5%	1/4W	F		
R782	1-249-437-11	CARBON 47K 5%	1/4W			
R790	1-249-417-11	CARBON 1K 5%	1/4W	F		
R793	1-249-435-11	CARBON 33K 5%	1/4W			
R794	1-249-425-11	CARBON 4.7K 5%	1/4W	F		
△ R798	1-249-393-11	CARBON 10 5%	1/4W	F		
△ R799	1-249-393-11	CARBON 10 5%	1/4W	F		

*	1-665-503-11	S-A-P BOARD	*****			
< CONNECTOR >						
CNP703	1-695-089-11	PIN, CONNECTOR (PC BOARD) 11P				
CNS702	1-695-096-11	SOCKET, CONNECTOR 15P				
CNS905	1-695-092-11	SOCKET, CONNECTOR 7P				

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

S-VIDEO

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
*	A-4398-114-A	S-VIDEO BOARD, COMPLETE					R231	1-249-417-11	CARBON	1K	5%	1/4W	F
		*****					R235	1-249-417-11	CARBON	1K	5%	1/4W	F
							R249	1-249-413-11	CARBON	470	5%	1/4W	F
< CAPACITOR >													
C204	1-164-159-11	CERAMIC	0.1uF		50V		R284	1-247-843-11	CARBON	3.3K	5%	1/4W	
C221	1-126-964-11	ELECT	10uF	20%	50V		R286	1-247-903-00	CARBON	1M	5%	1/4W	
C222	1-162-294-31	CERAMIC	0.001uF	10%	50V		R291	1-249-429-11	CARBON	10K	5%	1/4W	
C238	1-126-967-11	ELECT	47uF	20%	16V		R292	1-249-393-11	CARBON	10	5%	1/4W	F
C239	1-164-159-11	CERAMIC	0.1uF		50V		R293	1-249-429-11	CARBON	10K	5%	1/4W	
							R294	1-249-425-11	CARBON	4.7K	5%	1/4W	F
C246	1-164-159-11	CERAMIC	0.1uF		50V		R295	1-249-425-11	CARBON	4.7K	5%	1/4W	F
C269	1-164-159-11	CERAMIC	0.1uF		50V		△R2001	1-215-857-11	METAL OXIDE	10	5%	1W	F
C270	1-124-252-00	ELECT	0.33uF	20%	50V		R2008	1-249-429-11	CARBON	10K	5%	1/4W	
C274	1-126-967-11	ELECT	47uF	20%	16V		R2015	1-247-807-31	CARBON	100	5%	1/4W	
C275	1-126-967-11	ELECT	47uF	20%	16V								
							R2016	1-249-429-11	CARBON	10K	5%	1/4W	
C276	1-104-905-11	CAPACITOR	0.22F		5.5V		R2017	1-249-429-11	CARBON	10K	5%	1/4W	
C277	1-162-306-11	CERAMIC	0.01uF	20%	16V		R2018	1-249-429-11	CARBON	10K	5%	1/4W	
C280	1-164-159-11	CERAMIC	0.1uF		50V		R2019	1-249-429-11	CARBON	10K	5%	1/4W	
C295	1-164-159-11	CERAMIC	0.1uF		50V		R2020	1-247-807-31	CARBON	100	5%	1/4W	
C297	1-126-923-11	ELECT	220uF	20%	10V								
							R2032	1-249-417-11	CARBON	1K	5%	1/4W	F
C2003	1-126-967-11	ELECT	47uF	20%	16V		R2033	1-247-807-31	CARBON	100	5%	1/4W	
< CONNECTOR >							R2034	1-247-807-31	CARBON	100	5%	1/4W	
CNJ203	1-568-440-11	SOCKET, CONNECTOR 17P					R2035	1-247-807-31	CARBON	100	5%	1/4W	
CNJ204	1-779-768-11	SOCKET, CONNECTOR 29P					R2036	1-247-807-31	CARBON	100	5%	1/4W	
* CNJ214	1-564-509-11	PLUG, CONNECTOR 6P					R2037	1-247-807-31	CARBON	100	5%	1/4W	
* CNS211	1-695-092-11	SOCKET, CONNECTOR 7P					R2038	1-247-807-31	CARBON	100	5%	1/4W	
* CNS213	1-750-179-11	SOCKET, CONNECTOR 5P					R2039	1-247-807-31	CARBON	100	5%	1/4W	
							R2040	1-247-807-31	CARBON	100	5%	1/4W	
< DIODE >							R2041	1-247-807-31	CARBON	100	5%	1/4W	
D202	8-719-987-63	DIODE	1N4148M				R2042	1-247-807-31	CARBON	100	5%	1/4W	
D203	8-719-987-63	DIODE	1N4148M				R2043	1-247-807-31	CARBON	100	5%	1/4W	
D204	8-719-987-63	DIODE	1N4148M				R2044	1-247-807-31	CARBON	100	5%	1/4W	
D205	8-719-024-99	DIODE	11ES2-NTA2B				R2045	1-247-807-31	CARBON	100	5%	1/4W	
D210	8-719-987-63	DIODE	1N4148M				R2046	1-247-807-31	CARBON	100	5%	1/4W	
							R2047	1-247-807-31	CARBON	100	5%	1/4W	
< IC >							R2048	1-247-807-31	CARBON	100	5%	1/4W	
IC207	8-759-708-05	IC	NJM78L05A				R2049	1-247-807-31	CARBON	100	5%	1/4W	
IC209	8-759-426-13	IC	MB90672-G-125-BND				R2050	1-247-807-31	CARBON	100	5%	1/4W	
IC215	8-759-488-36	IC	LC86F5864A-5F53				R2051	1-247-807-31	CARBON	100	5%	1/4W	
IC217	8-759-604-35	IC	M5F78M05L				R2052	1-247-807-31	CARBON	100	5%	1/4W	
IC219	8-759-917-18	IC	SN74HCU04AN				R2053	1-247-807-31	CARBON	100	5%	1/4W	
							R2054	1-247-807-31	CARBON	100	5%	1/4W	
< JACK >							R2055	1-247-807-31	CARBON	100	5%	1/4W	
J202	1-563-330-11	JACK (S-LINK CTAL A1)					R2056	1-247-807-31	CARBON	100	5%	1/4W	
< COIL >													
L289	1-410-521-11	INDUCTOR		100uH			TM201	1-561-534-00	SOCKET, PIN 21P (MONITOR)				
< TRANSISTOR >													
Q201	8-729-900-36	TRANSISTOR	DTC124ES				* TP204	1-560-062-00	PIN, CONNECTOR 4P				
Q204	8-729-141-30	TRANSISTOR	2SC3623A-LK				TP205	1-691-766-11	PLUG (MICRO CONNECTOR) 4P				
Q213	8-729-900-63	TRANSISTOR	DTA124ES				< VIBRATOR >						
Q220	8-729-620-05	TRANSISTOR	2SC2603-EF				X201	1-567-819-11	VIBRATOR, CERAMIC (4MHz)				
Q227	8-729-900-36	TRANSISTOR	DTC124ES				X205	1-567-776-41	VIBRATOR, CERAMIC (6MHz)				
< RESISTOR >							*****						
R208	1-249-419-11	CARBON	1.5K	5%	1/4W	F							
R209	1-249-429-11	CARBON	10K	5%	1/4W								

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

SECONDARY

SP

Ref. No.	Part No.	Description	Remark			
*	1-665-497-11	SECONDARY BOARD *****				
< CAPACITOR >						
C801	1-126-967-11	ELECT	47uF	20%	16V	
C805	1-130-781-00	FILM	0.22uF	10%	100V	
C806	1-130-781-00	FILM	0.22uF	10%	100V	
< CONNECTOR >						
* CNP801	1-564-905-11	PIN, CONNECTOR 9P				
< DIODE >						
D801	8-719-302-37	DIODE	RBV-602			
D802	8-719-024-99	DIODE	11ES2-NTA2B			
D803	8-719-024-99	DIODE	11ES2-NTA2B			
D804	8-719-024-99	DIODE	11ES2-NTA2B			
D805	8-719-024-99	DIODE	11ES2-NTA2B			
D806	8-719-014-66	DIODE	UZP-5.6B			
< FUSE >						
△ F950	1-532-506-51	FUSE, TIME-LAG (T6.3AL/250V)				
△ F951	1-532-506-51	FUSE, TIME-LAG (T6.3AL/250V)				
< FUSE HOLDER >						
FH905	1-533-217-31	HOLDER, FUSE				
FH906	1-533-217-31	HOLDER, FUSE				
FH955	1-533-217-31	HOLDER, FUSE				
FH966	1-533-217-31	HOLDER, FUSE				
< TRANSFORMER >						
△ T901	1-431-318-11	TRANSFORMER, POWER				

*	A-4398-146-A	SP BOARD, COMPLETE *****				
< CAPACITOR >						
C624	1-126-964-11	ELECT	10uF	20%	50V	
C625	1-136-157-00	FILM	0.022uF	5%	50V	
C626	1-136-153-00	FILM	0.01uF	5%	50V	
C724	1-126-964-11	ELECT	10uF	20%	50V	
C725	1-136-157-00	FILM	0.022uF	5%	50V	
C726	1-136-153-00	FILM	0.01uF	5%	50V	
C775	1-136-157-00	FILM	0.022uF	5%	50V	
C794	1-126-964-11	ELECT	10uF	20%	50V	
C795	1-126-941-11	ELECT	470uF	20%	25V	
< CONNECTOR >						
CNP603	1-564-320-00	PIN, CONNECTOR 2P				
CNS703	1-695-094-11	SOCKET, CONNECTOR 11P				
CNJ701	1-774-136-11	CONNECTOR, ROUND TYPE 6P (WIRELESS REAR SPEAKER)				
< DIODE >						
D500	8-719-987-63	DIODE	1N4148M			
D543	8-719-987-63	DIODE	1N4148M			
D605	8-719-987-63	DIODE	1N4148M			
D606	8-719-987-63	DIODE	1N4148M			

Ref. No.	Part No.	Description	Remark			
D607	8-719-987-63	DIODE 1N4148M				
D649	8-719-987-63	DIODE 1N4148M				
D705	8-719-987-63	DIODE 1N4148M				
D706	8-719-987-63	DIODE 1N4148M				
D749	8-719-987-63	DIODE 1N4148M				
< IC >						
IC702	8-759-605-01	IC M5F78M18L				
< JACK >						
J501	1-770-377-31	JACK, PIN 1P (WOOFER AUDIO OUT)				
< COIL >						
L601	1-411-906-11	COIL, AIR-CORE				
L701	1-411-906-11	COIL, AIR-CORE				
L751	1-411-906-11	COIL, AIR-CORE				
< TRANSISTOR >						
Q544	8-729-119-79	TRANSISTOR 2SC2785-FEK				
Q609	8-729-281-53	TRANSISTOR 2SC1815-GR				
Q610	8-729-900-63	TRANSISTOR DTA124ES				
Q611	8-729-900-63	TRANSISTOR DTA124ES				
Q645	8-729-119-79	TRANSISTOR 2SC2785-FEK				
Q709	8-729-281-53	TRANSISTOR 2SC1815-GR				
Q710	8-729-900-63	TRANSISTOR DTA124ES				
Q745	8-729-119-79	TRANSISTOR 2SC2785-FEK				
Q747	8-729-119-79	TRANSISTOR 2SC2785-FEK				
Q748	8-729-030-19	TRANSISTOR 2SB1640				
< RESISTOR >						
R543	1-249-429-11	CARBON 10K	5%	1/4W		
R544	1-249-425-11	CARBON 4.7K	5%	1/4W	F	
△ R545	1-249-393-11	CARBON 10	5%	1/4W	F	
R546	1-249-421-11	CARBON 2.2K	5%	1/4W	F	
R629	1-249-437-11	CARBON 47K	5%	1/4W		
R630	1-249-421-11	CARBON 2.2K	5%	1/4W	F	
R631	1-249-433-11	CARBON 22K	5%	1/4W		
R633	1-249-393-11	CARBON 10	5%	1/4W	F	
△ R634	1-249-389-11	CARBON 4.7	5%	1/4W	F	
R635	1-249-431-11	CARBON 15K	5%	1/4W		
R636	1-249-433-11	CARBON 22K	5%	1/4W		
R646	1-249-432-11	CARBON 18K	5%	1/4W	F	
R647	1-249-429-11	CARBON 10K	5%	1/4W		
R648	1-249-425-11	CARBON 4.7K	5%	1/4W	F	
R649	1-249-393-11	CARBON 10	5%	1/4W	F	
R729	1-249-437-11	CARBON 47K	5%	1/4W		
R730	1-249-421-11	CARBON 2.2K	5%	1/4W	F	
R731	1-249-433-11	CARBON 22K	5%	1/4W		
R733	1-249-393-11	CARBON 10	5%	1/4W	F	
△ R734	1-249-389-11	CARBON 4.7	5%	1/4W	F	
R735	1-249-431-11	CARBON 15K	5%	1/4W		
R737	1-249-429-11	CARBON 10K	5%	1/4W		
R738	1-247-886-11	CARBON 200K	5%	1/4W		
R743	1-249-425-11	CARBON 4.7K	5%	1/4W	F	
R744	1-249-425-11	CARBON 4.7K	5%	1/4W	F	
R745	1-249-421-11	CARBON 2.2K	5%	1/4W	F	

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

SP

SP SW

STAND BY

SURR

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
R746	1-249-421-11	CARBON	2.2K	5%	1/4W	F	* CNP904	1-580-230-21	PIN, CONNECTOR (PC BOARD) 2P				
R747	1-249-429-11	CARBON	10K	5%	1/4W		CNP905	1-695-087-11	PIN, CONNECTOR (PC BOARD) 7P				
R748	1-249-425-11	CARBON	4.7K	5%	1/4W	F							
△R749	1-249-393-11	CARBON	10	5%	1/4W	F	< DIODE >						
R783	1-249-393-11	CARBON	10	5%	1/4W	F	D901	8-719-024-99	DIODE	11ES2-NTA2B			
△R784	1-249-389-11	CARBON	4.7	5%	1/4W	F	D902	8-719-024-99	DIODE	11ES2-NTA2B			
R787	1-249-429-11	CARBON	10K	5%	1/4W		D903	8-719-024-99	DIODE	11ES2-NTA2B			
R788	1-247-886-11	CARBON	200K	5%	1/4W		D904	8-719-024-99	DIODE	11ES2-NTA2B			
		< RELAY >					D905	8-719-987-63	DIODE	1N4148M			
RY503	1-515-793-11	RELAY					D906	8-719-987-63	DIODE	1N4148M			
RY601	1-515-920-11	RELAY (24V)					D907	8-719-987-63	DIODE	1N4148M			
RY701	1-515-920-11	RELAY (24V)					< GROUND TERMINAL >						
		< TERMINAL >					* EB900	1-537-738-21	TERMINAL, EARTH				
* TM701	1-537-882-11	TERMINAL BOARD 6P (SURROUND SPEAKERS)					< FUSE >						
*****							△F901	1-532-504-51	FUSE TIME-LAG (T4.6AL/250V)				
		< CONNECTOR >					△F902	1-532-464-51	FUSE TIME-LAG (T2.5AL/250V)				
* 1-665-626-11	SP SW BOARD	*****					< FUSE HOLDER >						
		< CONNECTOR >					FH901	1-533-217-31	HOLDER, FUSE				
* CNS101	1-695-808-11	CONNECTOR, PC BOARD 8P					FH902	1-533-217-31	HOLDER, FUSE				
		< DIODE >					FH951	1-533-217-31	HOLDER, FUSE				
		< DIODE >					FH952	1-533-217-31	HOLDER, FUSE				
D152	8-719-987-63	DIODE	1N4148M				< IC >						
D153	8-719-987-63	DIODE	1N4148M				IC901	8-759-333-83	IC	NJM2103D			
		< SWITCH >					< TRANSISTOR >						
S136	1-762-751-11	SWITCH, TACTILE (DPC MODE)					Q901	8-729-119-79	TRANSISTOR	2SC2785-FEK			
S152	1-554-118-00	SWITCH, PUSH (1 KEY)(POWER)					Q902	8-729-209-15	TRANSISTOR	2SD2012			
S155	1-762-268-11	SWITCH, ROTARY (SPEAKERS)					< RESISTOR >						
*****							R902	1-249-429-11	CARBON	10K	5%	1/4W	
* A-4398-121-A	STAND BY BOARD, COMPLETE (UK)	*****					R903	1-249-425-11	CARBON	4.7K	5%	1/4W	F
		< DIODE >					R904	1-249-417-11	CARBON	1K	5%	1/4W	F
* A-4398-145-A	STAND BY BOARD, COMPLETE (AEP,G,EE)	*****					R905	1-249-428-11	CARBON	8.2K	5%	1/4W	F
		< DIODE >					R906	1-249-421-11	CARBON	2.2K	5%	1/4W	F
7-685-872-09	SCREW +BVTT 3X8 (S)					R908	1-249-433-11	CARBON	22K	5%	1/4W		
		< CAPACITOR >					R909	1-249-439-11	CARBON	68K	5%	1/4W	
C901	1-161-494-00	CERAMIC	0.022uF			25V	R910	1-249-437-11	CARBON	47K	5%	1/4W	
C902	1-161-494-00	CERAMIC	0.022uF			25V	R912	1-249-430-11	CARBON	12K	5%	1/4W	
C903	1-126-768-11	ELECT	2200uF	20%	16V		< RELAY >						
C904	1-126-960-11	ELECT	1uF	20%	50V		△RY901	1-515-999-11	RELAY, POWER				
C905	1-126-959-11	ELECT	0.47uF	20%	50V		< TRANSFORMER >						
C906	1-124-464-11	ELECT	0.22uF	20%	50V		△T902	1-429-236-11	TRANSFORMER, POWER				
C913	1-164-159-11	CERAMIC	0.1uF			50V	*****						
C914	1-164-159-11	CERAMIC	0.1uF			50V	* A-4398-106-A	SURR BOARD, COMPLETE	*****				
C915	1-136-173-00	FILM	0.47uF	5%	50V		< CAPACITOR >						
C916	1-164-159-11	CERAMIC	0.1uF			50V	C301	1-126-963-11	ELECT	4.7uF	20%	50V	
C917	1-164-159-11	CERAMIC	0.1uF			50V							
		< CONNECTOR >											
CNP903	1-564-321-00	PIN, CONNECTOR 2P											

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SURR

Ref. No.	Part No.	Description			Remark
C302	1-162-282-31	CERAMIC	100PF	10%	50V
C303	1-126-967-11	ELECT	47uF	20%	16V
C304	1-130-480-00	MYLAR	0.0056uF	5%	50V
C305	1-106-347-00	MYLAR	1500PF	5%	200V
C306	1-126-960-11	ELECT	1uF	20%	50V
C307	1-164-159-11	CERAMIC	0.1uF		50V
C351	1-126-963-11	ELECT	4.7uF	20%	50V
C352	1-162-282-31	CERAMIC	100PF	10%	50V
C353	1-126-967-11	ELECT	47uF	20%	16V
C354	1-130-480-00	MYLAR	0.0056uF	5%	50V
C355	1-106-347-00	MYLAR	1500PF	5%	200V
C356	1-126-960-11	ELECT	1uF	20%	50V
C357	1-164-159-11	CERAMIC	0.1uF		50V
C394	1-126-967-11	ELECT	47uF	20%	16V
C395	1-126-967-11	ELECT	47uF	20%	16V
C396	1-162-282-31	CERAMIC	100PF	10%	50V
C397	1-162-294-31	CERAMIC	0.001uF	10%	50V
C401	1-126-964-11	ELECT	10uF	20%	50V
C402	1-126-964-11	ELECT	10uF	20%	50V
C403	1-126-964-11	ELECT	10uF	20%	50V
C404	1-162-199-31	CERAMIC	10PF	5%	50V
C405	1-162-199-31	CERAMIC	10PF	5%	50V
C406	1-126-964-11	ELECT	10uF	20%	50V
C410	1-164-159-11	CERAMIC	0.1uF		50V
C413	1-126-964-11	ELECT	10uF	20%	50V
C420	1-136-165-00	FILM	0.1uF	5%	50V
C421	1-126-933-11	ELECT	100uF	20%	16V
C422	1-164-159-11	CERAMIC	0.1uF		50V
C423	1-126-933-11	ELECT	100uF	20%	16V
C424	1-164-159-11	CERAMIC	0.1uF		50V
C425	1-126-965-11	ELECT	22uF	20%	50V
C426	1-136-177-00	FILM	1uF	5%	50V
C427	1-136-153-00	FILM	0.01uF	5%	50V
C428	1-130-474-00	MYLAR	0.0018uF	5%	50V
C429	1-136-163-00	FILM	0.068uF	5%	50V
C430	1-136-165-00	FILM	0.1uF	5%	50V
C431	1-136-165-00	FILM	0.1uF	5%	50V
C432	1-136-163-00	FILM	0.068uF	5%	50V
C433	1-136-153-00	FILM	0.01uF	5%	50V
C434	1-130-474-00	MYLAR	0.0018uF	5%	50V
C435	1-136-165-00	FILM	0.1uF	5%	50V
C436	1-136-165-00	FILM	0.1uF	5%	50V
C437	1-130-467-00	MYLAR	470PF	5%	50V
C438	1-136-165-00	FILM	0.1uF	5%	50V
C439	1-130-470-00	MYLAR	820PF	5%	50V
C440	1-130-480-00	MYLAR	0.0056uF	5%	50V
C441	1-136-161-00	FILM	0.047uF	5%	50V
C442	1-136-175-00	FILM	0.68uF	5%	50V
C443	1-136-169-00	FILM	0.22uF	5%	50V
C444	1-136-169-00	FILM	0.22uF	5%	50V
C445	1-126-963-11	ELECT	4.7uF	20%	50V
C446	1-126-963-11	ELECT	4.7uF	20%	50V
C447	1-136-169-00	FILM	0.22uF	5%	50V
C448	1-136-169-00	FILM	0.22uF	5%	50V
C449	1-136-165-00	FILM	0.1uF	5%	50V
C450	1-136-161-00	FILM	0.047uF	5%	50V
C451	1-126-964-11	ELECT	10uF	20%	50V
C452	1-126-964-11	ELECT	10uF	20%	50V

Ref. No.	Part No.	Description			Remark
C453	1-126-964-11	ELECT	10uF	20%	50V
C454	1-162-199-31	CERAMIC	10PF	5%	50V
C455	1-162-199-31	CERAMIC	10PF	5%	50V
C456	1-126-964-11	ELECT	10uF	20%	50V
C460	1-164-159-11	CERAMIC	0.1uF		50V
C463	1-126-964-11	ELECT	10uF	20%	50V
C469	1-126-963-11	ELECT	4.7uF	20%	50V
C470	1-136-161-00	FILM	0.047uF	5%	50V
C471	1-136-165-00	FILM	0.1uF	5%	50V
C472	1-136-165-00	FILM	0.1uF	5%	50V
C473	1-136-157-00	FILM	0.022uF	5%	50V
C474	1-136-157-00	FILM	0.022uF	5%	50V
C475	1-136-165-00	FILM	0.1uF	5%	50V
C476	1-130-469-00	MYLAR	680PF	5%	50V
C477	1-126-967-11	ELECT	47uF	20%	16V
C478	1-136-165-00	FILM	0.1uF	5%	50V
C479	1-136-165-00	FILM	0.1uF	5%	50V
C480	1-130-469-00	MYLAR	680PF	5%	50V
C481	1-136-165-00	FILM	0.1uF	5%	50V
C482	1-136-165-00	FILM	0.1uF	5%	50V
C483	1-126-967-11	ELECT	47uF	20%	16V
C484	1-126-933-11	ELECT	100uF	20%	16V
C485	1-164-159-11	CERAMIC	0.1uF		50V
C486	1-126-964-11	ELECT	10uF	20%	50V
C489	1-164-159-11	CERAMIC	0.1uF		50V
C493	1-136-165-00	FILM	0.1uF	5%	50V
C494	1-136-165-00	FILM	0.1uF	5%	50V
C497	1-162-282-31	CERAMIC	100PF	10%	50V
C501	1-126-964-11	ELECT	10uF	20%	50V
C502	1-162-282-31	CERAMIC	100PF	10%	50V
C503	1-107-601-11	CERAMIC	33PF	5%	500V
C505	1-126-933-11	ELECT	100uF	20%	16V
C508	1-136-163-00	FILM	0.068uF	5%	50V
C509	1-136-154-00	FILM	0.012uF	5%	50V
C511	1-106-353-00	MYLAR	0.0027uF	5%	50V
C512	1-136-157-00	FILM	0.022uF	5%	50V
C513	1-136-171-00	FILM	0.33uF	5%	50V
C514	1-136-159-00	FILM	0.033uF	5%	50V
C527	1-126-964-11	ELECT	10uF	20%	50V
C539	1-162-282-31	CERAMIC	100PF	10%	50V
C551	1-126-964-11	ELECT	10uF	20%	50V
C552	1-162-282-31	CERAMIC	100PF	10%	50V
C553	1-107-601-11	CERAMIC	33PF	5%	500V
C555	1-126-933-11	ELECT	100uF	20%	16V
C558	1-136-163-00	FILM	0.068uF	5%	50V
C559	1-136-154-00	FILM	0.012uF	5%	50V
C561	1-106-353-00	MYLAR	0.0027uF	5%	50V
C562	1-136-157-00	FILM	0.022uF	5%	50V
C563	1-136-171-00	FILM	0.33uF	5%	50V
C564	1-136-159-00	FILM	0.033uF	5%	50V
C577	1-126-964-11	ELECT	10uF	20%	50V
C580	1-162-294-31	CERAMIC	0.001uF	10%	50V
C581	1-126-964-11	ELECT	10uF	20%	50V
C589	1-162-282-31	CERAMIC	100PF	10%	50V
C592	1-126-967-11	ELECT	47uF	20%	16V
C593	1-126-923-11	ELECT	220uF	20%	10V
C594	1-128-560-11	ELECT	22uF	20%	100V

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
C595	1-128-560-11	ELECT	22uF	20%	100V				< JACK >				
C596	1-164-159-11	CERAMIC	0.1uF		50V								
C597	1-162-282-31	CERAMIC	100PF	10%	50V		J301	1-774-725-11	JACK, PIN 2P (PHONO IN)				
C599	1-126-967-11	ELECT	47uF	20%	16V		J302	1-770-015-11	JACK, PIN 6P				
									(TUNER IN, CD IN, DAT/MD RECOU)				
C601	1-126-964-11	ELECT	10uF	20%	50V		J303	1-770-015-11	JACK, PIN 6P (DAT/MD IN, TAPE RECOU/IN)				
C602	1-162-282-31	CERAMIC	100PF	10%	50V				< COIL >				
C603	1-102-989-00	CERAMIC	68PF	5%	500V								
C604	1-164-040-11	CERAMIC	4PF	0.25PF	50V								
C605	1-126-967-11	ELECT	47uF	20%	16V		L401	1-410-509-11	INDUCTOR 10uH				
							L402	1-410-509-11	INDUCTOR 10uH				
C606	1-102-989-00	CERAMIC	68PF	5%	500V		L403	1-410-509-11	INDUCTOR 10uH				
CC01	1-162-282-31	CERAMIC	100PF	10%	50V		L404	1-410-509-11	INDUCTOR 10uH				
CC02	1-162-282-31	CERAMIC	100PF	10%	50V				< TRANSISTOR >				
CC03	1-162-282-31	CERAMIC	100PF	10%	50V								
CC04	1-162-282-31	CERAMIC	100PF	10%	50V		Q402	8-729-922-37	TRANSISTOR 2SD2144S				
							Q410	8-729-119-79	TRANSISTOR 2SC2785-FEK				
CC05	1-162-282-31	CERAMIC	100PF	10%	50V		Q411	8-729-900-63	TRANSISTOR DTA124ES				
CC06	1-162-282-31	CERAMIC	100PF	10%	50V		Q412	8-729-900-63	TRANSISTOR DTA124ES				
CC07	1-162-282-31	CERAMIC	100PF	10%	50V		Q413	8-729-900-63	TRANSISTOR DTA124ES				
CC51	1-162-282-31	CERAMIC	100PF	10%	50V								
CC52	1-162-282-31	CERAMIC	100PF	10%	50V		Q414	8-729-900-63	TRANSISTOR DTA124ES				
							Q415	8-729-900-36	TRANSISTOR DTC124ES				
CC53	1-162-282-31	CERAMIC	100PF	10%	50V		Q416	8-729-900-36	TRANSISTOR DTC124ES				
CC54	1-162-282-31	CERAMIC	100PF	10%	50V		Q452	8-729-922-37	TRANSISTOR 2SD2144S				
CC55	1-162-282-31	CERAMIC	100PF	10%	50V		Q501	8-729-202-67	TRANSISTOR 2SK246-GR3				
CC56	1-162-282-31	CERAMIC	100PF	10%	50V								
CC57	1-162-282-31	CERAMIC	100PF	10%	50V		Q502	8-729-141-30	TRANSISTOR 2SC3623A-LK				
		< CONNECTOR >					Q503	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA				
CNP250	1-691-765-11	PLUG (MICRO CONNECTOR) 3P					Q551	8-729-202-67	TRANSISTOR 2SK246-GR3				
CNP303	1-695-088-11	PIN, CONNECTOR (PC BOARD) 9P					Q552	8-729-141-30	TRANSISTOR 2SC3623A-LK				
CNP403	1-695-088-11	PIN, CONNECTOR (PC BOARD) 9P							< RESISTOR >				
CNP404	1-695-089-11	PIN, CONNECTOR (PC BOARD) 11P					R301	1-249-409-11	CARBON 220 5% 1/4W F				
CNS106	1-569-323-11	SOCKET, CONNECTOR 19P					R302	1-249-441-11	CARBON 100K 5% 1/4W				
							R303	1-249-441-11	CARBON 100K 5% 1/4W				
CNS401	1-569-323-11	SOCKET, CONNECTOR 19P					R304	1-249-416-11	CARBON 820 5% 1/4W F				
CNS501	1-770-404-11	HOUSING,CONNECTOR (PC BOARD) 11P					R305	1-247-897-11	CARBON 560K 5% 1/4W				
CNS601	1-770-404-11	HOUSING,CONNECTOR (PC BOARD) 11P											
		< DIODE >					R306	1-249-437-11	CARBON 47K 5% 1/4W				
D401	8-719-987-63	DIODE 1N4148M					R307	1-249-441-11	CARBON 100K 5% 1/4W				
D402	8-719-987-63	DIODE 1N4148M					R308	1-247-807-31	CARBON 100 5% 1/4W				
D403	8-719-024-99	DIODE 11ES2-NTA2B					R309	1-249-417-11	CARBON 1K 5% 1/4W F				
							R310	1-249-425-11	CARBON 4.7K 5% 1/4W F				
		< GROUND TERMINAL >											
* EB301	1-537-738-21	TERMINAL, EARTH					R311	1-249-417-11	CARBON 1K 5% 1/4W F				
* EB302	1-537-738-21	TERMINAL, EARTH					R312	1-249-425-11	CARBON 4.7K 5% 1/4W F				
		< IC >					R313	1-249-417-11	CARBON 1K 5% 1/4W F				
IC301	8-759-805-14	IC LC7822					R314	1-249-417-11	CARBON 1K 5% 1/4W F				
IC302	8-759-636-74	IC M5218AP-22					R351	1-249-409-11	CARBON 220 5% 1/4W F				
IC401	8-759-392-97	IC M62460FP											
IC402	8-759-634-51	IC M5218AP					R352	1-249-441-11	CARBON 100K 5% 1/4W				
IC403	8-759-634-51	IC M5218AP					R353	1-249-441-11	CARBON 100K 5% 1/4W				
							R354	1-249-416-11	CARBON 820 5% 1/4W F				
IC404	8-759-634-51	IC M5218AP					R355	1-247-897-11	CARBON 560K 5% 1/4W				
IC407	8-759-189-27	IC M5278L10-TP					R356	1-249-437-11	CARBON 47K 5% 1/4W				
IC408	8-759-708-05	IC NJM78L05A											
IC501	8-759-326-52	IC uPC2581V					R357	1-249-441-11	CARBON 100K 5% 1/4W				
IC502	8-759-462-99	IC TC9184P					R358	1-247-807-31	CARBON 100 5% 1/4W				
							R359	1-249-417-11	CARBON 1K 5% 1/4W F				
IC601	8-749-011-16	IC STK350-230					R360	1-249-425-11	CARBON 4.7K 5% 1/4W F				
							R361	1-249-417-11	CARBON 1K 5% 1/4W F				
							R362	1-249-425-11	CARBON 4.7K 5% 1/4W F				
							R363	1-249-417-11	CARBON 1K 5% 1/4W F				
							R364	1-249-417-11	CARBON 1K 5% 1/4W F				
							R394	1-247-807-31	CARBON 100 5% 1/4W				

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Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R395	1-247-807-31	CARBON	100	5%	1/4W	R493	1-249-417-11	CARBON	1K	5%	1/4W F
R396	1-249-417-11	CARBON	1K	5%	1/4W F	R494	1-249-417-11	CARBON	1K	5%	1/4W F
R397	1-249-425-11	CARBON	4.7K	5%	1/4W F	R495	1-249-421-11	CARBON	2.2K	5%	1/4W F
R401	1-249-433-11	CARBON	22K	5%	1/4W	R496	1-249-421-11	CARBON	2.2K	5%	1/4W F
R402	1-249-434-11	CARBON	27K	5%	1/4W	R497	1-247-887-00	CARBON	220K	5%	1/4W
R403	1-249-417-11	CARBON	1K	5%	1/4W F	R498	1-247-887-00	CARBON	220K	5%	1/4W
R404	1-249-425-11	CARBON	4.7K	5%	1/4W F	R499	1-249-417-11	CARBON	1K	5%	1/4W F
R405	1-249-440-11	CARBON	82K	5%	1/4W	R500	1-249-417-11	CARBON	1K	5%	1/4W F
R406	1-247-895-00	CARBON	470K	5%	1/4W	R501	1-249-417-11	CARBON	1K	5%	1/4W F
R407	1-249-441-11	CARBON	100K	5%	1/4W	R502	1-249-439-11	CARBON	68K	5%	1/4W
R408	1-249-429-11	CARBON	10K	5%	1/4W	R503	1-249-439-11	CARBON	68K	5%	1/4W
R409	1-249-433-11	CARBON	22K	5%	1/4W	R504	1-249-413-11	CARBON	470	5%	1/4W F
R414	1-249-417-11	CARBON	1K	5%	1/4W F	R508	1-249-436-11	CARBON	39K	5%	1/4W
R415	1-249-425-11	CARBON	4.7K	5%	1/4W F	R509	1-247-903-00	CARBON	1M	5%	1/4W
R426	1-249-429-11	CARBON	10K	5%	1/4W	R510	1-249-425-11	CARBON	4.7K	5%	1/4W F
R427	1-249-429-11	CARBON	10K	5%	1/4W	R511	1-249-434-11	CARBON	27K	5%	1/4W
R428	1-247-903-00	CARBON	1M	5%	1/4W	R513	1-249-426-11	CARBON	5.6K	5%	1/4W
R429	1-247-872-11	CARBON	51K	5%	1/4W	R514	1-249-418-11	CARBON	1.2K	5%	1/4W F
R430	1-247-887-00	CARBON	220K	5%	1/4W	R515	1-249-441-11	CARBON	100K	5%	1/4W
R431	1-247-864-11	CARBON	24K	5%	1/4W	R516	1-247-843-11	CARBON	3.3K	5%	1/4W
R432	1-247-864-11	CARBON	24K	5%	1/4W	R517	1-247-883-00	CARBON	150K	5%	1/4W
R433	1-247-891-00	CARBON	330K	5%	1/4W	R518	1-249-427-11	CARBON	6.8K	5%	1/4W F
R434	1-249-437-11	CARBON	47K	5%	1/4W	R519	1-249-413-11	CARBON	470	5%	1/4W F
R435	1-249-431-11	CARBON	15K	5%	1/4W	R536	1-247-897-11	CARBON	560K	5%	1/4W
R436	1-247-852-11	CARBON	7.5K	5%	1/4W	R537	1-249-417-11	CARBON	1K	5%	1/4W F
R437	1-249-437-11	CARBON	47K	5%	1/4W	R551	1-249-417-11	CARBON	1K	5%	1/4W F
R438	1-249-431-11	CARBON	15K	5%	1/4W	R552	1-249-439-11	CARBON	68K	5%	1/4W
R439	1-247-852-11	CARBON	7.5K	5%	1/4W	R553	1-249-439-11	CARBON	68K	5%	1/4W
R440	1-259-880-11	CARBON	2.2M	5%	1/4W	R554	1-249-413-11	CARBON	470	5%	1/4W F
R441	1-249-441-11	CARBON	100K	5%	1/4W	R555	1-249-419-11	CARBON	1.5K	5%	1/4W F
R442	1-247-883-00	CARBON	150K	5%	1/4W	△ R556	1-249-393-11	CARBON	10	5%	1/4W F
R443	1-249-431-11	CARBON	15K	5%	1/4W	△ R557	1-249-393-11	CARBON	10	5%	1/4W F
R444	1-249-429-11	CARBON	10K	5%	1/4W	R558	1-249-436-11	CARBON	39K	5%	1/4W
R445	1-249-429-11	CARBON	10K	5%	1/4W	R559	1-247-903-00	CARBON	1M	5%	1/4W
R446	1-249-419-11	CARBON	1.5K	5%	1/4W F	R560	1-249-425-11	CARBON	4.7K	5%	1/4W F
R447	1-249-429-11	CARBON	10K	5%	1/4W	R561	1-249-434-11	CARBON	27K	5%	1/4W
R448	1-249-429-11	CARBON	10K	5%	1/4W	R563	1-249-426-11	CARBON	5.6K	5%	1/4W
R449	1-249-425-11	CARBON	4.7K	5%	1/4W F	R564	1-249-418-11	CARBON	1.2K	5%	1/4W F
R450	1-249-441-11	CARBON	100K	5%	1/4W	R565	1-249-441-11	CARBON	100K	5%	1/4W
R451	1-249-433-11	CARBON	22K	5%	1/4W	R566	1-247-843-11	CARBON	3.3K	5%	1/4W
R452	1-249-434-11	CARBON	27K	5%	1/4W	R567	1-247-883-00	CARBON	150K	5%	1/4W
R453	1-249-417-11	CARBON	1K	5%	1/4W F	R568	1-249-427-11	CARBON	6.8K	5%	1/4W F
R454	1-249-425-11	CARBON	4.7K	5%	1/4W F	R569	1-249-413-11	CARBON	470	5%	1/4W F
R455	1-249-440-11	CARBON	82K	5%	1/4W	R591	1-247-897-11	CARBON	560K	5%	1/4W
R456	1-247-895-00	CARBON	470K	5%	1/4W	R592	1-249-425-11	CARBON	4.7K	5%	1/4W F
R457	1-249-441-11	CARBON	100K	5%	1/4W	R593	1-249-435-11	CARBON	33K	5%	1/4W
R458	1-249-429-11	CARBON	10K	5%	1/4W	R594	1-249-425-11	CARBON	4.7K	5%	1/4W F
R459	1-249-433-11	CARBON	22K	5%	1/4W	R595	1-247-903-00	CARBON	1M	5%	1/4W
R464	1-249-417-11	CARBON	1K	5%	1/4W F	R596	1-249-419-11	CARBON	1.5K	5%	1/4W F
R465	1-249-425-11	CARBON	4.7K	5%	1/4W F	R599	1-249-425-11	CARBON	4.7K	5%	1/4W F
R475	1-247-872-11	CARBON	51K	5%	1/4W	R601	1-249-417-11	CARBON	1K	5%	1/4W F
R483	1-249-441-11	CARBON	100K	5%	1/4W	R602	1-249-439-11	CARBON	68K	5%	1/4W
R484	1-249-441-11	CARBON	100K	5%	1/4W	R603	1-249-413-11	CARBON	470	5%	1/4W F
R485	1-249-441-11	CARBON	100K	5%	1/4W	R604	1-249-439-11	CARBON	68K	5%	1/4W
R486	1-249-437-11	CARBON	47K	5%	1/4W	R605	1-249-413-11	CARBON	470	5%	1/4W F
R487	1-249-437-11	CARBON	47K	5%	1/4W	RR01	1-249-418-11	CARBON	1.2K	5%	1/4W F
R488	1-249-437-11	CARBON	47K	5%	1/4W	RR51	1-249-418-11	CARBON	1.2K	5%	1/4W F
R489	1-249-437-11	CARBON	47K	5%	1/4W						

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

SURRE

SURRE-AUDIO

SW

VIDEO 3

VOLUME

Ref. No.	Part No.	Description	Remark
		< RELAY >	
RY401	1-515-614-11	RELAY	
		< VIBRATOR >	
X401	1-567-819-11	VIBRATOR, CERAMIC (4MHz)	

*	1-665-500-11	SURRE-AUDIO BOARD	

		< CONNECTOR >	
CNP302	1-695-088-11	PIN, CONNECTOR (PC BOARD) 9P	
CNS303	1-695-093-11	SOCKET, CONNECTOR 9P	

*	1-665-469-11	SW BOARD	

		< CONNECTOR >	
CNS103	1-770-397-11	HOUSING, CONNECTOR(PC BOARD)4P	
		< RESISTOR >	
R169	1-249-411-11	CARBON 330 5% 1/4W	
R170	1-249-413-11	CARBON 470 5% 1/4W	F
R171	1-249-415-11	CARBON 680 5% 1/4W	F
R172	1-249-417-11	CARBON 1K 5% 1/4W	F
R173	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R174	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R175	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R176	1-249-411-11	CARBON 330 5% 1/4W	
R177	1-249-413-11	CARBON 470 5% 1/4W	F
R178	1-249-415-11	CARBON 680 5% 1/4W	F
R179	1-249-417-11	CARBON 1K 5% 1/4W	F
R180	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R181	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R182	1-249-411-11	CARBON 330 5% 1/4W	
R183	1-249-413-11	CARBON 470 5% 1/4W	F
R184	1-249-415-11	CARBON 680 5% 1/4W	F
R185	1-249-417-11	CARBON 1K 5% 1/4W	F
R186	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R187	1-249-421-11	CARBON 2.2K 5% 1/4W	F
		< SWITCH >	
S105	1-762-751-11	SWITCH, TACTILE (DIRECT PASS)	
S106	1-762-751-11	SWITCH, TACTILE (GENRE)	
S107	1-762-751-11	SWITCH, TACTILE (SET UP)	
S108	1-762-751-11	SWITCH, TACTILE (MODE)	
S113	1-762-751-11	SWITCH, TACTILE (AUDIO FUNCTION <)	
S114	1-762-751-11	SWITCH, TACTILE (SOUND FIELD ON/OFF)	
S115	1-762-751-11	SWITCH, TACTILE (AUDIO FUNCTION >)	
S120	1-762-751-11	SWITCH, TACTILE (VIDEO FUNCTION <)	
S121	1-762-751-11	SWITCH, TACTILE (5.1 INPUT)	
S122	1-762-751-11	SWITCH, TACTILE (VIDEO FUNCTION >)	

Ref. No.	Part No.	Description	Remark
*	1-665-502-11	VIDEO 3 BOARD	

		< CAPACITOR >	
C299	1-164-159-11	CERAMIC 0.1uF	50V
		< JACK >	
J299	1-779-868-11	JACK, PIN 3P (VIDEO 3 INPUT)	
		< RESISTOR >	
R299	1-249-403-11	CARBON 68 5% 1/4W	F
R316	1-249-417-11	CARBON 1K 5% 1/4W	F
R366	1-249-417-11	CARBON 1K 5% 1/4W	F

*	1-665-623-11	VOLUME BOARD	

		< CAPACITOR >	
C497	1-126-964-11	ELECT 10uF 20% 50V	
		< CONNECTOR >	
CNP102	1-770-388-11	PIN, CONNECTOR (PC BOARD) 4P	
CNS402	1-569-323-11	SOCKET, CONNECTOR 19P	
CNS410	1-750-179-11	SOCKET, CONNECTOR 5P	
		< RESISTOR >	
R499	1-249-411-11	CARBON 330 5% 1/4W	
		< VARIABLE RESISTOR >	
RV401	1-225-445-11	RES, VAR, CARBON 100KX6 (MASTER VOLUME)	

		MISCELLANEOUS	

△ 7	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK)	
64	1-773-131-11	WIRE (FLAT TYPE) (19 CORE)(33cm)	
65	1-773-117-11	WIRE (FLAT TYPE) (19 CORE)(18cm)	
66	1-773-108-11	WIRE (FLAT TYPE) (19 CORE)(10cm)	
72	1-773-041-11	WIRE (FLAT TYPE) (17 CORE)	
107	1-782-718-11	WIRE (FLAT TYPE) (29 CORE)	
△ CNJ909	1-526-794-11	OUTLET, AC	
△ CNP901	1-769-744-11	CORD, POWER	
FL101	1-517-519-11	INDICATOR TUBE, FLUORESCENT	
Q505	8-729-209-15	TRANSISTOR 2SD2012	
Q506	8-749-010-25	IC MN2488-OPY-M	
Q507	8-749-010-26	IC MP1620-OPY-M	
Q555	8-729-209-15	TRANSISTOR 2SD2012	
Q556	8-749-010-25	IC MN2488-OPY-M	
Q557	8-749-010-26	IC MP1620-OPY-M	
Q605	8-729-209-15	TRANSISTOR 2SD2012	
Q606	8-749-010-25	IC MN2488-OPY-M	
Q607	8-749-010-26	IC MP1620-OPY-M	
Q706	8-749-010-25	IC MN2488-OPY-M	
Q707	8-749-010-26	IC MP1620-OPY-M	

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

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
Q756	8-749-010-25	IC MN2488-OPY-M	
Q757	8-749-010-26	IC MP1620-OPY-M	
⚠ T901	1-431-318-11	TRANSFORMER, POWER	

ACCESSORIES & PACKING MATERIALS			

1-475-138-11	REMOTE COMMANDER (RM-VR101)		
1-475-324-11	RAY-CATCHER UNIT (WITH PLUG)		
3-810-765-11	MANUAL,COMMONNESS INSTRUCTION (CONTROL A1) (ENGLISH) (UK)		
3-810-765-21	MANUAL,COMMONNESS INSTRUCTION (ENGLISH,FRENCH,GERMAN,SPANISH,DUTCH, SWEDISH,ITALIAN,PORTUGUESE,CHINESE) (AEP,G,EE)		
3-861-065-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH,DUTCH,SWEDISH)		
3-861-065-21	MANUAL, INSTRUCTION (GERMAN,SPANISH,ITALIAN,PORTUGUESE) (AEP,G,EE)		
4-995-439-01	COVER, BATTERY (For RM-VR101)		

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