

STR-G1ES

SERVICE MANUAL

*US Model
Canadian Model*



SPECIFICATIONS

Audio Power Specifications

For the customers in the U.S.A.

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
With 8 ohm loads both channels driven, from 20 - 20,000 Hz; rated 80 watts per channel minimum RMS power, with no more than 0.04 % total harmonic distortion from 250 milliwatts to rated output.

	Surround mode (8 ohms)
FRONT (at 20 Hz - 20 kHz)	85 W + 85 W
CENTER* (at 20 Hz - 20 kHz)	85 W
REAR (at 1 kHz)	20 W + 20 W

* Only in the DOLBY SUR, THEATER and LIVE modes.

Other Specifications

Amplifier section (front)

Continuous RMS power (at 20 Hz-20 kHz)

8 ohms: 85 W + 85 W
4 ohms: 80 W + 80 W

Dynamic power output (in the stereo mode)	8 ohms, at 1 kHz IHF	120 W + 120 W
	4 ohms, at 1 kHz IHF	175 W + 175 W
	2 ohms, at 1 kHz IHF	205 W + 205 W
Frequency response	PHONO	RIAA equalization curve ± 0.5 dB
	CD, DAT/MD, TAPE, VIDEO 1,2,3,4, LD	10 Hz - 20 kHz ± 3 dB
Damping factor (8 ohms, at 1kHz)		50
Input sensitivity/ impedance	PHONO MM	2.5 mV, 50 kilohms
	CD, DAT/MD, TAPE, VIDEO 1,2,3,4, LD	250 mV 50 kilohms
	MAIN IN	1 V, 50 kilohms
S/N	PHONO MM	87 dB 79 dB** (A, 2.5mV)
	CD, DAT/MD, TAPE, VIDEO 1,2,3,4, LD	105 dB 85 dB** (A, 150mV)

** '78 IHF

— Continued on next page —

FM STEREO/FM-AM RECEIVER
SONY®

Output sensitivity/impedance	DAT/MD, TAPE, VIDEO 1,2	250 mV 10 kilohms
	HEADPHONES	Accepts headphones of high and low impedance
	SURROUND OUT REAR	1 V, 1 kilohm
	SURROUND OUT CENTER	1 V, 1 kilohm
	SURROUND OUT MONO	1 V, 1 kilohm
	PRE OUT	1 V, 1 kilohm
MUTING		-20 dB
DBFB		+10 dB at 70 Hz
LOW FILTER		90 Hz, 12 dB/oct

Digital signal processor section

Modulation (A/D conversion)	High Density Linear Converter																				
Demonstration (D/A conversion)	High Density Linear Converter (Pulse D/A Converter)																				
Sampling frequency	48 kHz																				
Equalizer	<table border="1"> <tr> <td>Band</td> <td>3-band, Bass/Treble/Mid</td> </tr> <tr> <td>Turnover frequency</td> <td>Bass: 125 Hz – 1 kHz Treble: 1 kHz – 8 kHz</td> </tr> <tr> <td>Center frequency</td> <td>Mid: 54 Hz – 8 kHz</td> </tr> <tr> <td>Level</td> <td>±10 dB, 1 dB step</td> </tr> <tr> <td>Slope (Q)</td> <td>3-step selectable, Wide, Mid, Narrow</td> </tr> </table>	Band	3-band, Bass/Treble/Mid	Turnover frequency	Bass: 125 Hz – 1 kHz Treble: 1 kHz – 8 kHz	Center frequency	Mid: 54 Hz – 8 kHz	Level	±10 dB, 1 dB step	Slope (Q)	3-step selectable, Wide, Mid, Narrow										
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Surround	<table border="1"> <tr> <td>ROOM SIZE</td> <td>16-step adjustable</td> </tr> <tr> <td>WALL</td> <td>16-step adjustable</td> </tr> <tr> <td>SEAT POSITION F/R</td> <td>16-step adjustable</td> </tr> <tr> <td>SEAT POSITION L/R</td> <td>16-step adjustable</td> </tr> <tr> <td>EFFECT LEVEL</td> <td>20-step adjustable</td> </tr> <tr> <td>REVERB TIME</td> <td>16-step adjustable</td> </tr> <tr> <td>DELAY TIME***</td> <td>15.0 ms – 30.0 ms, 0.1 ms step</td> </tr> <tr> <td>REAR LEVEL</td> <td>-50 to +10 dB, 1 dB step</td> </tr> <tr> <td>CENTER LEVEL****</td> <td>-50 to +10 dB, 1 dB step</td> </tr> <tr> <td>INPUT BALANCE****</td> <td>Automatic</td> </tr> </table>	ROOM SIZE	16-step adjustable	WALL	16-step adjustable	SEAT POSITION F/R	16-step adjustable	SEAT POSITION L/R	16-step adjustable	EFFECT LEVEL	20-step adjustable	REVERB TIME	16-step adjustable	DELAY TIME***	15.0 ms – 30.0 ms, 0.1 ms step	REAR LEVEL	-50 to +10 dB, 1 dB step	CENTER LEVEL****	-50 to +10 dB, 1 dB step	INPUT BALANCE****	Automatic
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INPUT BALANCE****	Automatic																				

*** Only in the DOLBY SUR mode.

**** Only in the DOLBY SUR, THEATER and LIVE modes.

FM tuner section

Frequency range	87.5 – 108.0 MHz				
Antenna terminals	75 ohms, unbalanced				
Sensitivity at 50 dB	18.3 dBf, 4.5 µV (mono) 38.3 dBf, 45 µV (stereo)				
Usable sensitivity	11.2 dBf, 2 µV (IHF)				
S/N	<table border="1"> <tr> <td>Mono</td> <td>80 dB</td> </tr> <tr> <td>Stereo</td> <td>74 dB</td> </tr> </table>	Mono	80 dB	Stereo	74 dB
Mono	80 dB				
Stereo	74 dB				
Harmonic distortion at 1 kHz	<table border="1"> <tr> <td>Mono</td> <td>0.3 %</td> </tr> <tr> <td>Stereo</td> <td>0.5 %</td> </tr> </table>	Mono	0.3 %	Stereo	0.5 %
Mono	0.3 %				
Stereo	0.5 %				
IM distortion	<table border="1"> <tr> <td>Mono</td> <td>0.3 %</td> </tr> <tr> <td>Stereo</td> <td>0.5 %</td> </tr> </table>	Mono	0.3 %	Stereo	0.5 %
Mono	0.3 %				
Stereo	0.5 %				
Separation	45 dB at 1 kHz				
Frequency response	30 Hz – 15 kHz ±2 dB				
Selectivity	60 dB at 400 kHz				
Capture ratio	1.2 dB				
AM suppression ratio	54 dB				
Image response ratio	70 dB				
IF response ratio	70 dB				
Spurious response ratio	80 dB				
RF intermodulation at 800 kHz	60 dB				
Auto tuning threshold	30 dBf				

AM tuner section

Frequency range	530 – 1,710 kHz (with 10 kHz interval) 531 – 1,710 kHz (with 9 kHz interval)
Antenna	Loop antenna
Usable sensitivity	50 dB/m (at 1,000 kHz or 999 kHz)
S/N	54 dB (at 50 mV/m)
Harmonic distortion	0.5% (50 mV/m, 400 Hz)
Selectivity	35 dB (9 kHz), 40 dB (10 kHz)
Auto tuning threshold	55 dB/m

Video section

Inputs	VIDEO 1,2,3,4, LD: 1 Vp-p 75 ohms	
Outputs	VIDEO 1,2, MONITOR: 1 Vp-p 75 ohms	
S VIDEO INPUT	VIDEO 1,2,3,4, LD	Luminance: 1 Vp-p 75 ohms Chrominance: 0.286 Vp-p 75 ohms
S VIDEO OUT	VIDEO 1,2, MONITOR	Luminance: 1 Vp-p 75 ohms Chrominance: 0.286 Vp-p 75 ohms

General

System	Tuner section	PLL quartz-locked digital synthesizer system
	Power amplifier section	Pure-complimentary SEPP
Power requirements		120 V AC, 60 Hz
Power consumption (during standby: 5W)		U.S.A. model: 300 W Canada model: 430 VA
AC outlets		Three switched, total 120 W/1A max.
Dimensions (including projecting parts and controls)		Approx. 430 x 148 x 397 mm (w/h/d) (17 x 5 13/16 x 15 3/4 inches)
Mass		Approx. 14.0 kg (30 lb 14 oz)

Supplied accessories

- FM wire antenna (1)
- AM loop antenna (1)
- Remote commander (RM-VP1) (1)
- Sony batteries SUM-3(NS) (2)
- Remote Control (RC) antenna (1)
- IR repeater (1)
- Quick reference guide (1)

Design and specifications are subject to change without notice.

SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

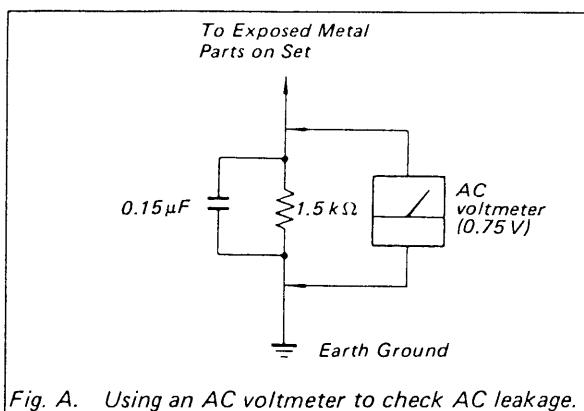


Fig. A. Using an AC voltmeter to check AC leakage.

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.

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ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

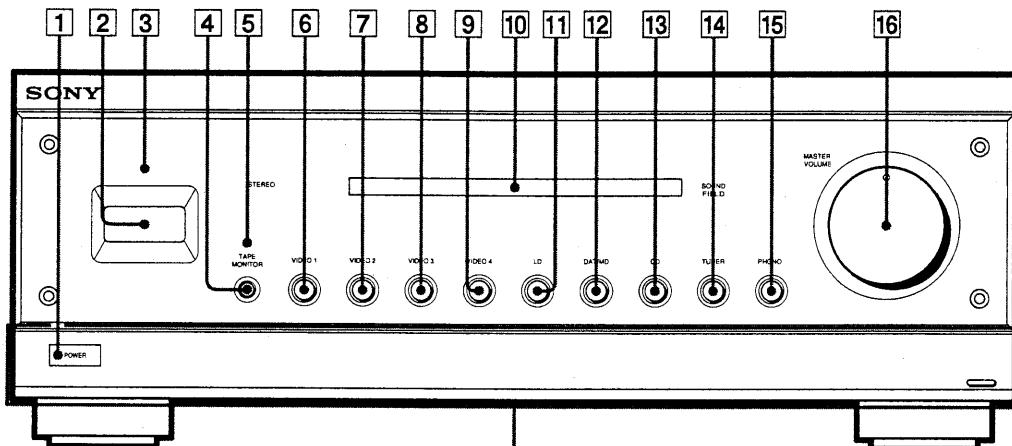
This section is extracted from
instruction manual.

SECTION 1 GENERAL

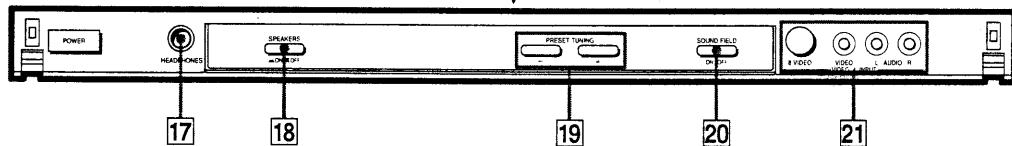
Chapter 5 General Information

Identifying the Parts and Controls

Front Panel



Under the bottom cover



- 1 POWER switch**
- 2 Infrared emitter and sensor**
Emits and receives infrared signal commands.
- 3 IR (Infrared) emitter indicator**
Lights up when the unit sends out an infrared signal.
- 4 TAPE MONITOR button**
Press to monitor the original sound while recording a program source.
- 5 TAPE MONITOR indicator**
Lights up during tape monitoring.
- 6 VIDEO1**
Selects the video unit connected to the VIDEO1 connectors (playback and recording).
- 7 VIDEO2**
Selects the video unit connected to the VIDEO2 connectors (playback and recording).
- 8 VIDEO3**
Selects the video unit connected to the VIDEO3 connectors (playback only).
- 9 VIDEO4**
Selects the 8mm video unit connected to VIDEO4 connectors (playback only).
- 10 Display**
Shows the functions or the tuning frequency etc..
- 11 LD (Laser Disc)**
Selects the laser disc player connected to the LD connectors.
- 12 DAT/MD (Digital Audio Tape/MiniDisc)**
Selects the DAT deck or MiniDisc recorder connected to the DAT/MD connectors.
- 13 CD (Compact Disc)**
Selects the compact disc player connected to the CD connectors.
- 14 TUNER (pages 21, 22, 23)**
Selects the tuner.
- 15 PHONO**
Selects the phono player connected to the PHONO connectors.
- 16 MASTER VOLUME (page 17)**
Turn to adjust the volume.
- 17 HEADPHONES**
Connects stereo headphones.
- 18 SPEAKERS (ON/OFF)**
Press to turn the speakers on or off.
- 19 PRESET TUNING (- / +) (pages 21, 22, 23)**
Press to select preset radio stations.
- 20 SOUND FIELD (ON/OFF)**
Press to turn the selected sound field on and off.
- 21 VIDEO4 INPUT jacks**
For connecting input from an 8mm video unit.

Unpacking

Chapter 1 Getting Started

Hooking Up the System

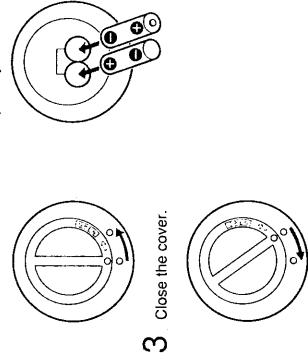
Checking the Supplied Accessories

After unpacking, check that the following accessories are present.

- FM wire antenna
- AM loop antenna
- Remote commander (RM-VP1)
- Sony batteries SUM-3 (NS)
- Remote Control (RC) antenna
- IR repeater
- Quick reference guide

Inserting the Batteries Into the Remote Commander (RM-VP1)

- 1 Open the cover.
- 2 Two size AA (R6) batteries with correct polarity.



Note
After inserting batteries into the remote commander, place it undisturbed on a flat surface for about 10 seconds to allow the internal circuitry to calibrate.

To avoid damage caused by battery leakage and corrosion
When the commander will not be used for a long time, remove the batteries.

- Battery life**
- Normal operation can be expected about a half year using Sony SUM-3 (NS), and a year using Sony AM-3 (NW) alkaline batteries. Since the remote commander consumes power whenever you pick it up and an on-screen display appears, the service life of the batteries may be less than half a year, depending on how much you handle the remote commander.
 - When the batteries become weak, LOW will appear on the display during the initial on-screen displays (but possibly not at the deeper menu levels). When EMPTY appears, the batteries are almost completely drained and will soon need to be replaced.

This section explains the connection of the antennas, program sources, speakers and AC power sources.

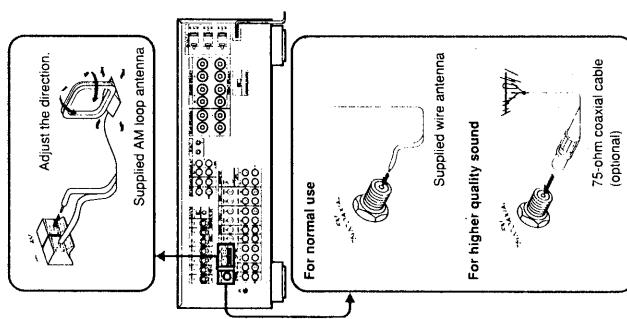
Notes

- Make sure all connections have been made before plugging the power cord into an AC outlet and pressing the POWER switch.
- Insert the plugs firmly into the jacks. Loose connections may cause hum and noise.
- Jacks and plugs of connecting cords are color coded as follows:

Red jacks and plugs: Right audio channel
White jacks and plugs: Left audio channel
Yellow jacks and plugs: Video signals

Connecting the FM and AM Antennas

Though a wire FM antenna is supplied with your STR-GES, you can obtain better reception if you connect an outdoor FM antenna to the unit with a 75-ohm coaxial cable. The AM loop antenna supplied with your unit is adequate for most AM broadcasts.



Note
To prevent noise pick-up, keep the AM loop antenna away from the unit and TV set.

If your area has poor AM reception

If the AM reception in your area is poor, connect an 18- to 45-foot (6- to 15-meter) insulated wire to the AM antenna terminal and extend the wire outdoors, keeping it as horizontal as possible.

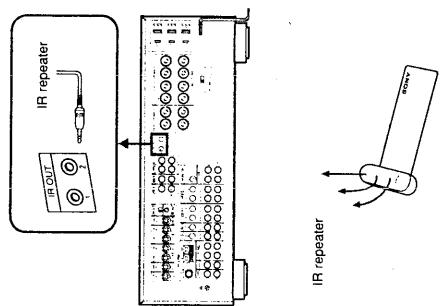
(There is no need to disconnect the supplied antenna.)

To prevent hum

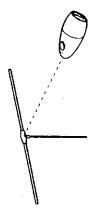
Connect a ground wire to the ANTENNA ground terminal (→). If you use an outdoor antenna, be sure to connect the ground wire for lightning protection.

Connecting the IR Repeater

If you experience trouble controlling electrical equipment, it may be due to weak IR (infrared) signal transmission from the infrared emitter. In this case, turn off the unit, unplug the power cord, and connect the plug end of the IR repeater to IR OUT on the unit. Then using the adhesive side of the emitter section, secure the IR repeater so that its front faces the equipment to be controlled. Note that the outputs of both IR OUT connectors are identical.



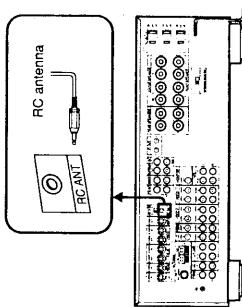
To maximize RF signal transmission efficiency:
— Position the RC antenna perpendicular to the signal path of the remote commander (see below).



- Operate the remote commander within about 24 feet (about 7 m) of the RC antenna.
- Keep the RC antenna at least 20 inches (about 50 cm) away from metallic objects.

Connecting the RC Antenna

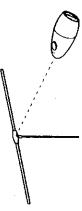
Since the remote commander controls the unit using RF (Radio Frequency) signals, you must connect the RC (Remote Control) antenna to the unit before you can use the remote commander.



Connecting the IR Repeater

The IR repeater supplied with the unit can be connected to the IR OUT terminal on the back panel of the unit. The IR OUT terminal is also connected to another IR repeater unit via a cable.

To maximize RF signal transmission efficiency:
— Position the RC antenna perpendicular to the signal path of the remote commander (see below).



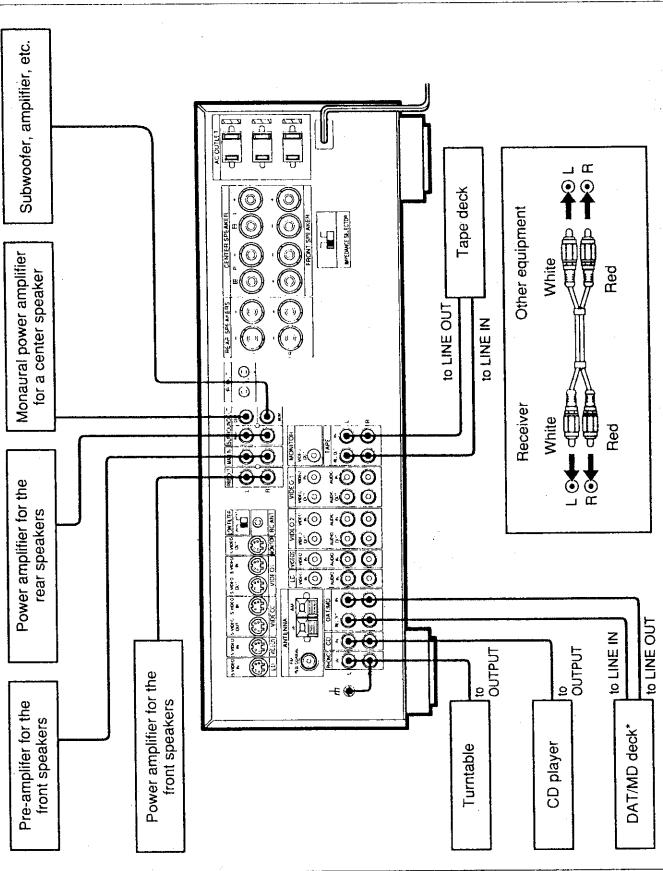
- Operate the remote commander within about 24 feet (about 7 m) of the RC antenna.
- Keep the RC antenna at least 20 inches (about 50 cm) away from metallic objects.

Connecting the RC Antenna

Connecting the IR Repeater

Hooking Up the System

Connecting Audio Equipment



* To connect both DAT and MD recorder, connect one of the units to the available VIDEO AUDIO INPUT jacks.

Connecting External Power Amplifiers and a Pre-amplifier

The unit has built-in amplifiers that are powerful enough for normal speaker output. However, additional power amplifiers and a pre-amplifier can be connected to obtain more powerful output. In this case, follow the precautions below concerning amplifier connections.

When connecting a monaural power amplifier for a center speaker
Connect the input jack of the power amplifier to the PRE SURROUND OUT CENTER jack.

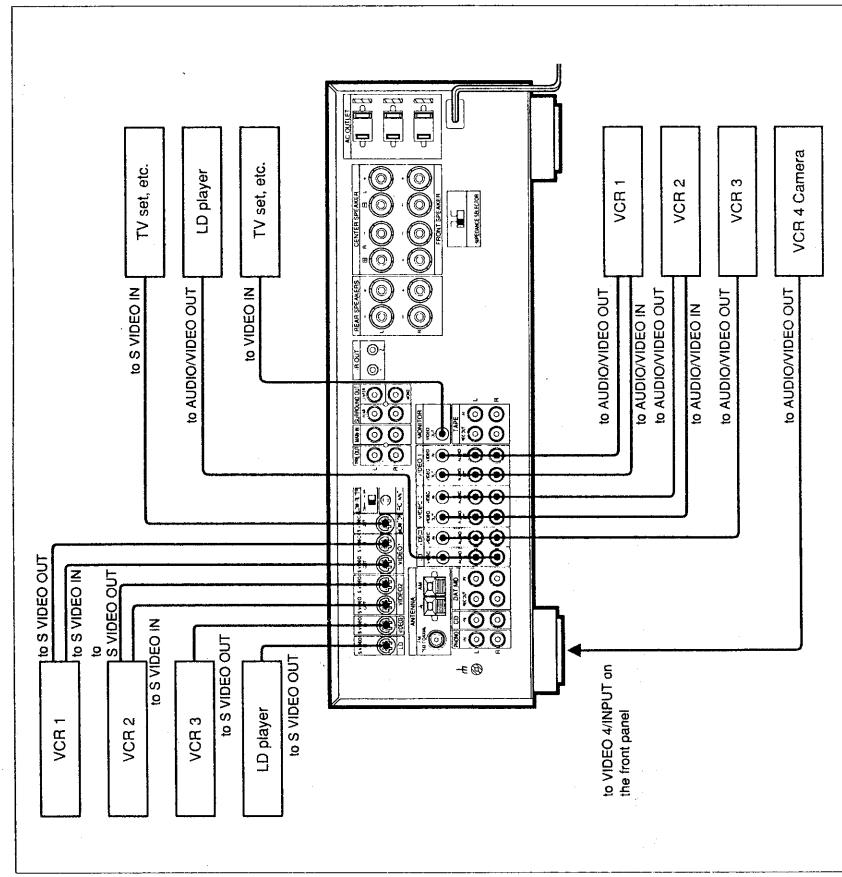
When connecting a subwoofer with a power amplifier
Connect the line input jack of the subwoofer to the PRE SURROUND OUT MONO jack.

When using a subwoofer without a power amplifier, connect it through a monaural power amplifier.

Connecting Video Equipment

Connecting a VCR and TV set equipped with S jacks

Use connecting cords with S-connector plugs to connect the VCR and TV to the S VIDEO jacks.
Use a normal connecting cord for the audio connections, as in the case of a VCR without S VIDEO connectors.



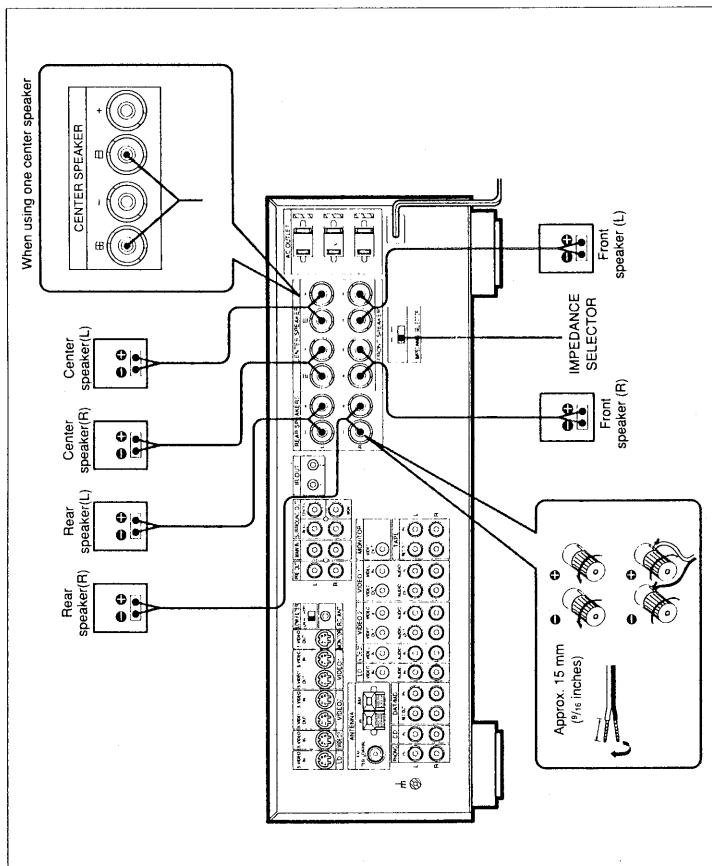
Notes

- The S VIDEO circuitry and the VIDEO circuitry of this unit are independent of each other. The signals input from the S VIDEO jacks are not output to the VIDEO jacks, and the signals input from the VIDEO jacks are not output to the S VIDEO jacks. Therefore, video dubbing is only possible between respective sets of S VIDEO jacks or VIDEO jacks.
- A higher quality picture results when you use the S jacks to connect a VCR and TV set with S connectors. If your TV set has no S connector, connect it through the VIDEO OUT jack. In this case do not:
 - Connect your VCR through S VIDEO IN jacks.
 - Connect your VCR through both the S VIDEO IN and VIDEO jacks at the same time.

Hooking Up the System

Connecting Speaker Systems

You can connect front, center and rear speakers to the unit.

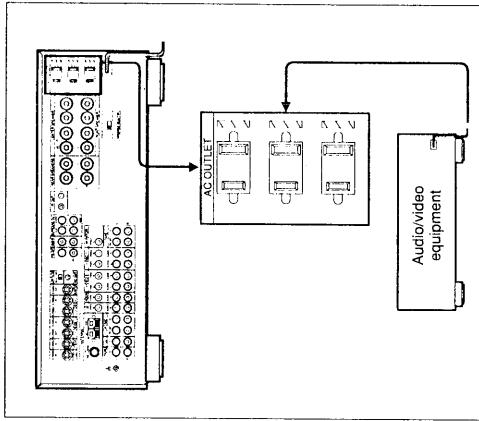


Note
When connecting a speaker cord to a speaker terminal, make sure that the polarity (+ or -) of the speaker cord is correct. If the polarity is reversed for any pair of speakers, the sound will be distorted and the bass will be weak.

On the IMPEDANCE SELECTOR
The unit has an IMPEDANCE SELECTOR for front speakers(s).
• When using front and center speakers with a nominal impedance of 4 ohms or higher, set to the 4 Ω position.
• When using front and center speakers with a nominal impedance of 8 ohms or higher, set to the 8 Ω position.

Connecting to the Power Outlet

The three switched AC outlets on the rear panel allow you to use the unit as a power source for other audio or video equipment. If you connect other audio or video equipment to the switched outlets, the equipment will turn on and off simultaneously with the unit. The switched outlets are thus convenient for connecting equipment that cannot be turned on or off by infrared control.

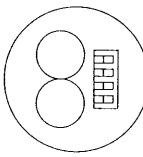


Caution
• Be careful that the total power consumption of each equipment connected to the outlets on the unit does not exceed 120 watts.
• Do not connect electrical home appliances such as an electric iron, fan, TV, or other high-wattage equipment to these outlets.

Preventing Interference Between Two or More Remote Commanders

If you use two or more STR-G1ES at the same time, interference may occur between the RF signals, causing the units to operate erratically. You can prevent this by the use of a unique security number which distinguishes the signals of a given unit from those of the other units. Follow the procedure below to assign a security number to each unit.

- 1 Turn off the power to the unit.
- 2 Press the ON button while holding down the PHONO and CD buttons on the front panel of the unit. SECURITY No. appears on the display. Specify a number between 0 and 15 by pressing PRESET TUNING – or + on the front panel. Make sure that the number is different from the security codes of the other units.
- 3 After a few seconds, SECURITY VALID appears, indicating that the code has been recorded.
- 4 Enter the same security number into the remote commander. To do this, open the battery compartment and remove the batteries. You will see a set of yellow switches as shown below.



Use the tip of a pen or some other pointed object to flip up the appropriate switches for each digit of the security number. Note that all switches are down for zero, and all switches are up for fifteen.

SECURITY NO.	Remote commander	SECURITY NO.	Remote commander	SECURITY NO.	Remote commander
0	HHHH	8	HHHH	9	HHHH
1	HHHH	10	HHHH	11	HHHH
2	HHHH	12	HHHH	13	HHHH
3	HHHH	14	HHHH	15	HHHH
4	HHHH				
5	HHHH				
6	HHHH				
7	HHHH				

How to Use the Remote Commander (RM-VP1)

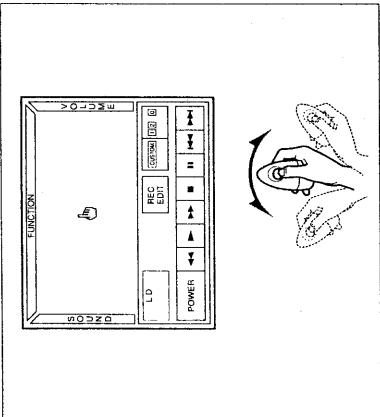
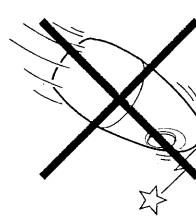
Use the remote commander to turn on the STR-G1ES and to control the pointer on the TV screen.

- When using the remote commander, keep the button parallel to the floor.
- Press the button on the remote commander to turn on the unit.
- A slight move of the wrist is all you need to direct the pointer.
- By moving the remote commander, you can position the pointer onto a menu or control button on the TV screen.
- Activate control buttons selected by the pointer by pressing the button on the remote commander.
- If you place the commander on a flat surface, the on-screen display will disappear after a few seconds.
- The on-screen display will appear each time you touch or press the button on the remote commander.
- The pointer position freezes when you hold down the button.

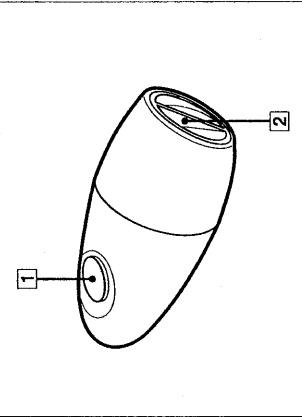
Notes

Caution!

Since the remote commander is comprised of delicate circuitry and parts, do not subject it to sudden changes in temperatures or shocks.



FUNCTION: Selects the program source, selects the SET UP menu, and turns off power to the unit and other electrical equipment.
VOLUME: Controls the volume of the program source
CONTROL PANEL: Activates the respective program source
SOUND: Selects the sound field



1 Click button
Press this button to activate a button or select a menu item on the screen.
2 Battery compartment
Insert batteries here (see page 6).

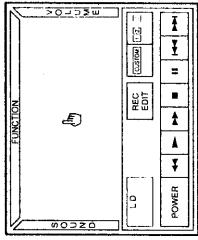
Performing the Basic Set Up

Initial TV Set Up — TV SET UP

After doing the TV SET UP procedure, the TV set will turn on whenever you turn on the STR-G1ES with the remote commander. This procedure is unnecessary if the TV set is a Sony product with an infrared remote commander and connected to the unit through the VIDEO1 input jack of the TV set.

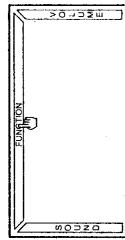
1 Turn on the STR-G1ES and TV set.

Make sure to change the input selector on the TV set to video input.
The main menu appears.



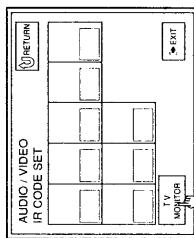
2 Click on FUNCTION in the main menu.

The FUNCTION menu appears.



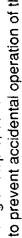
4 Click on AUDIO/VIDEO IR CODE SET.

The IR CODE SET menu appears.

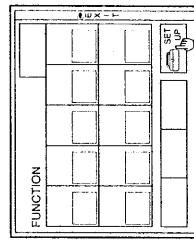


5 Click on TV MONITOR.

The TV SET UP menu appears.



Note
Before proceeding to step 6, cover the remote control sensor of the TV set to prevent accidental operation of the TV set while you record the IR codes.
(Continued on next page.)



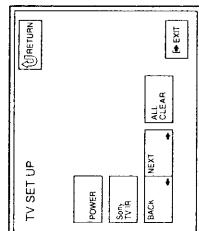
To return to the main menu, click on EXIT.

Performing the Basic Set Up

(Continued from previous page.)

Recording Infrared (IR) Command Codes — AUDIO/VIDEO IR CODE SET —

- 6** Follow the instructions on the TV screen to record the IR code of the respective remote commander button.
- Point the remote commander at the words "Vision Touch" on the left side of the front panel at a distance of about 12 inches (30 cm), and hold down the button indicated by the screen instructions.



If you have Sony audio or video equipment with an infrared remote commander, simply connect it to the appropriate STR-G1ES connector. (IR code set up is unnecessary (see table below).)

- when you connect a Sony product to connectors other than those specified for it in the table below. (for example, when connecting a Sony LD player to the VIDEO3 connectors).
- when exchanging a non-Sony audio or video program source with a Sony product.

STR-G1ES connectors	Equipment to be connected
VIDEO1	Sony VCR* (Beta or ED Beta VCR to VTR1.)
VIDEO2	Sony VCR* (8mm VCR to VTR2.)
VIDEO3	Sony VCR* (VHS VCR to VTR3.)
LD	Sony LD player
DAT/MD*	Sony DAT deck
CD	Sony CD player
TAPE	Sony Tape Deck
MONITOR	Sony TV (VIDEO1 jack)

- * If your VCR has a COMMAND CODE selector switch (i.e., for VTR1, VTR2, or VTR3), set the switch to the applicable setting.
- ** You must do the IR code setup procedure for Sony products when connecting a Sony MD recorder to these connectors.

If you connected a audio or video equipment made by another manufacturer, you must first record the IR codes used by that equipment before you can control it using the STR-G1ES.

You can record up to 80 IR codes (AUDIO/VIDEO and CUSTOM). However, you may experience recording difficulties or reach the IR code capacity even before 80 IR codes in the following cases:

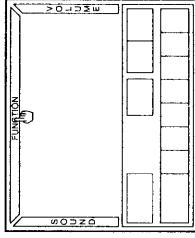
- when recording the IR codes of special remote commanders, card type models or those for air conditioners.
- when recording from remote commanders with weak batteries.

For this reason, you should record their IR codes of the important commands first and skip the rest.

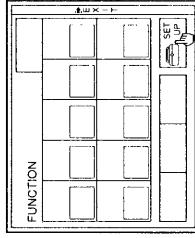
- 1** Turn on the STR-G1ES and TV set.

The main menu appears.

- 2** Click on FUNCTION in the main menu.



- 3** Click on SET UP.
- The SET UP menu appears.



- To return to the main menu, click on EXIT.

- 4** Click on AUDIO/VIDEO IR CODE SET.
- The AUDIO/VIDEO IR CODE SET menu appears.

Note

Click on ALL CLEAR to erase all recorded IR codes.

To exit from the menu

Click on EXIT.

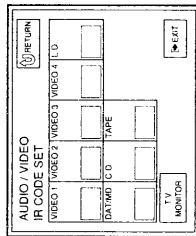
To go to the previous menu

Click on RETURN.

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

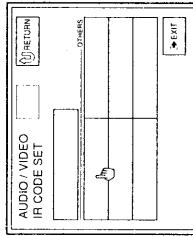
Connect the unit to the VIDEO1 input jacks of the Sony TV set. Follow steps 1 through 5, then click on SONY TV IR in step 6.

- 5** Click on the program source (function).
- The program source menu appears allowing you to specify the IR code set of a Sony product or the product of another manufacturer.



Recommended Sony products and previously recorded program sources appear in the respective boxes.

- 6** If the program source is a Sony product but the connector used is not the one listed in the table on page 14 for the respective product, go to step 8 to change the IR code setting for the respective program source menu button.
- If the program source is not a Sony product, click on the respective program source under "OTHERS". The IR code setting menu appears.



Note

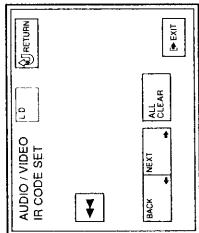
When recording the infrared command codes of equipment of other manufacturers, keep the original equipment off, or cover their remote control sensor.

(Continued on next page.)

Performing the Basic Set Up

(Continued from previous page.)

- 7** Follow the instructions on the TV screen to record the necessary IR codes of the respective remote commander.
- Point the remote commander at the words "VisionTouch" on the left side of the front panel at a distance of about 12 inches (30 cm) and hold down the button indicated by the screen instructions. To skip unnecessary IR codes, click on NEXT. After you have finished recording all necessary IR codes, click on EXIT to leave the menu.



At most, 5 seconds are required for recording the IR code. If nothing happens after 5 seconds, click once on NEXT, then on BACK, then try to record the IR code again with the remote commander closer to the unit. OK appears on the screen when the IR code has been successfully recorded.

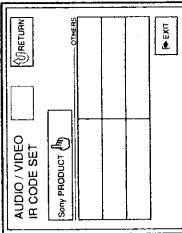
To register special commands that do not appear on the screen, see "Storing Other Manufacturers' Infrared Command Codes — CUSTOM IR CODE SET" on page 36.

After all codes have been recorded, the AUDIO/VIDEO IR CODE SET menu of step 5 reappears.

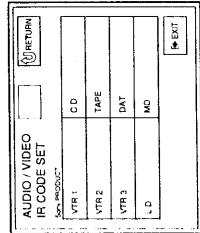
This ends the IR code setting procedure for non-Sony program sources.

Note
Click on ALL CLEAR to erase all recorded IR codes.

- 8** Click on Sony PRODUCT.



- 9** Click on the program source.
The Sony PRODUCT IR codes are automatically entered.



The selected program source appears in a message and the IR code setting menu of step 5 reappears.

Note
If this procedure does not work for a given Sony product (i.e., the MDS-101 MiniDisc recorder or older Sony products), follow steps 6 and 7 to record the IR codes of that product as a non-Sony program source.

Before doing this procedure, make sure the selected equipment is turned off or its remote control sensor is covered.

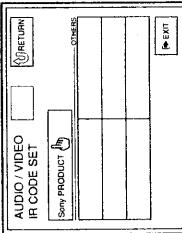
- 10** Repeat steps 5 through 9 to set the IR codes of additional program sources.

To exit from the menu
Click on EXIT.

To go to the previous menu
Click on RETURN.

Note
The STR-G1ES emits an IR signal that cancels the automatic playback function of program sources, such as LD and CD players, designed to start playing the moment they are turned on.

- 8** Click on Sony PRODUCT.



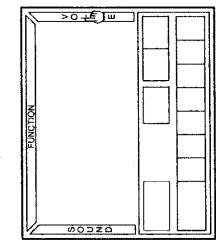
Use the main menu to adjust the volume, select and control program sources, and select the sound field.

Adjusting the Volume

Use the main menu to adjust the volume, select and control program sources, and select the sound field.

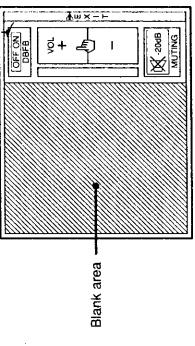
- 1** Click on VOLUME in the main menu.

The sound control panel appears.



- 2** To increase or reduce the volume.

Click on the VOL+ or - button.



If you want to see the whole screen while playing a visual program source, click on a blank area in the main menu and hold down the button on the remote commander. The on-screen display disappears until you release the button.

- For more powerful bass**
Click on DBFB (Dynamic Bass Feedback) to turn it on.
Click again to turn off.

To mute the speakers

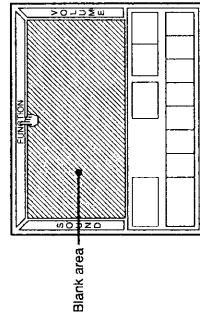
Click on MUTING to turn on the -20 dB indicator.
Click again to turn off.

Selecting From the Main Menu

Chapter 2 Basic Operations

Playing a Program Source

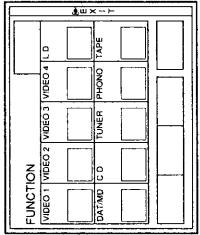
- 1** Click on FUNCTION in the main menu.
The FUNCTION menu appears.



If you want to see the whole screen while playing a visual program source, click on a blank area in the main menu and hold down the button on the remote commander. The on-screen display disappears until you release the button.

- 2** Click on the program source.

The control panel of the selected program source appears with the main menu, and the program source starts playing. In the case of video sources, a bar lights up above the respective icon when selected.



To return to the main menu, click on EXIT.
To turn off the TV set, click on TV OFF.
To turn on the TV set, press the button on the remote commander.

Notes

- MONITOR appears above the tape icon during tape monitoring.
- The AUTO PLAY function plays the program source immediately after it is selected. To turn the AUTO PLAY function off, see page 34.
- If you leave the remote commander on a flat surface for a few seconds, the on-screen display will disappear. To see the on-screen display again, touch or press the remote commander button.
- No control panel appears when you click on PHONO.

Selecting From the Main Menu

- To show additional control buttons
Click on the "1|2" ... "0" - button.
- To show CUSTOM IR control buttons
Click on CUSTOM. (See page 36.)

To watch TV programs

Select the FUNCTION menu, click on the video deck for which you have recorded IR codes, then click on the TV selector button in the VCR control panel. TV control buttons appear. To return to the VCR, click on video cassette icon in the TV control panel. If you leave directly from the TV control panel to the FUNCTION menu, the AUTO PLAY function will not activate the VCR when you select it as a program source at a later time.

To play a program source manually

You can select program sources manually by pressing the buttons on the front panel of the STR-G11ES. Manually selected sources, however, cannot be played with the AUTO PLAY or POWER ON/AUTO START (see page 35) functions, and must be operated from their respective control panels.

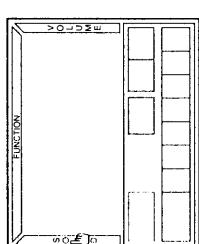
- Program sources of the same type will be simultaneously controlled by remote commander.

For example, if you use the remote commander to start playing one of two Sony laser disc players in the room, the other will start playing at the same time.

It is recommended that you use the remote commander to turn on all electrical equipment at the same time as the unit and that you do not turn off any electrical equipment independently of the unit. This will prevent the occurrence of conflicting operations later, such as turning off the TV as you turn on other equipment.

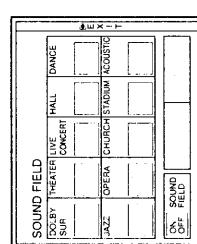
If a program source does not respond, it may be because infrared command codes from the unit are not fully reaching the given program source. If this occurs, change the position of the unit on the given program source, or connect the plug end of the IR repeater to IR OUT on the unit. (See page 7.)

Notes



2 Click on a sound field.

The selected sound field turns on. Make sure that the SOUND FIELD is on. If not, click on the button to turn it on.



2 Click on a sound field.

The selected sound field turns on. Make sure that the SOUND FIELD is on. If not, click on the button to turn it on.

Once you select a sound field for a program source (except for the TAPE function), the sound field is activated whenever you select the source afterwards.

To return to the main menu, click on EXIT.

SOUND FIELD	Applications
DOLBY SUR	For Dolby surround encoded video programs
THEATER	For movie programs on video tapes or laser discs
LIVE	For music programs on video tapes or laser discs
HALL	For orchestral music, chamber music or an instrumental solo
DANCE	For dance music
JAZZ	For jazz
OPERA	For operas or musicals
CHURCH	For church music or pipe organ
STADIUM	For live concerts in an open-air stadium
ACOUSTIC	The surround effect is off, and the equalizer effect is on.

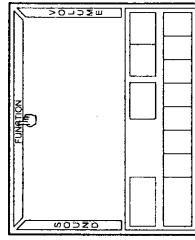
To customize the parameters of the selected sound field See "Adjusting the Digital Surround Parameters" on page 30
To specify the room size and other parameters in order to bring the sound conditions closer to that of a live performance.

Adding Names (INDEX)

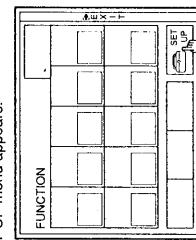
Using the INDEX menu, you can specify names of up to 12 characters for each program source except the tuner. You can also use the INDEX menu to add the station names to the preset radio station buttons. (To preset a radio station, see page 22, "Presetting Stations.")

Adding Names to Program Sources

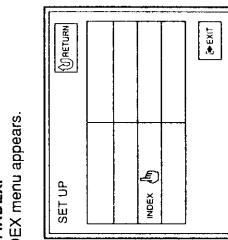
- 1 Click on FUNCTION in the main menu.
The FUNCTION menu appears.



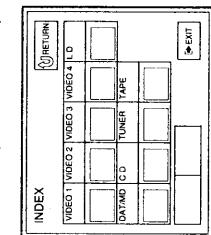
- 2 Click on SET UP.
The SET UP menu appears.



- 3 Click on INDEX.
The INDEX menu appears.



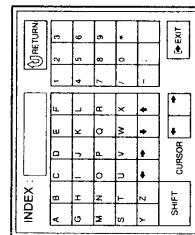
- 4 Click on the program source name or the icon to be changed.
Character input buttons or icons appear.
You can select all program sources except TUNER.



- 5 If you clicked on the program source name, spell out the new name by clicking on each character.
After clicking, the character appears in the box after INDEX:
INDEX :

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	*	#	~
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

To correct an entered character, click on ← or → to highlight the character. To erase an entered character, click on ↵ or → to highlight the character, then click on the blank character. To change the character set, click on SHIFT. Each click selects uppercase letters or lowercase letters.



- If you clicked on an icon in step 4, select a new icon from the icon menu.

- 4 Click on EXIT.
To exit from the menu
Click on RETURN.
- 5 Go to the previous menu
Click on RETURN.

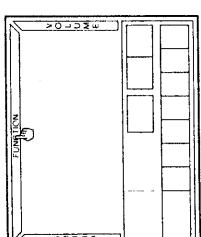
Adding Names (INDEX)

Adding Radio Station Names to Preset Radio Station Buttons

Use the INDEX menu to specify station names of up to 6 characters for the preset radio station buttons.

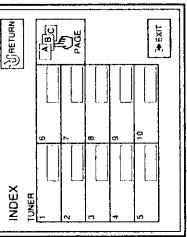
1 Click on FUNCTION in the main menu.

The FUNCTION menu appears.



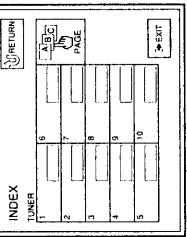
5 Click on SHIFT to select the index page (A, B or C) containing the preset radio station to be named.

Each click selects A, B, or C.



5 Click on SHIFT to select the index page (A, B or C) containing the preset radio station to be named.

Each click selects A, B, or C.



4 Click on TUNER.

The INDEX menu for radio station storage appears.

The AM tuning interval is preset to 10 kHz. When using the receiver where the frequency allocation system is based on a 9 kHz interval, make the following adjustments.

1 Turn on the power and tune in any AM station.

2 Turn off the power.

3 Press the POWER button while holding down the PRESET TUNING + button on the front panel of the unit.

To change the AM tuning interval back to 10 kHz, repeat the above steps.

Note

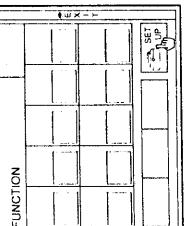
When the interval is changed, all preset stations are erased. After changing the interval, be sure to preset the stations again (See "Presetting Stations" on page 22).

Automatic Tuning

Follow the procedure below to tune in radio stations.

1 Click on FUNCTION in the main menu.

The FUNCTION menu appears.



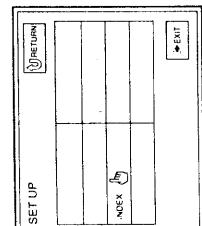
6 Click on the station to be named.

Character input buttons appear.

7 Spell out the name by clicking on each character.

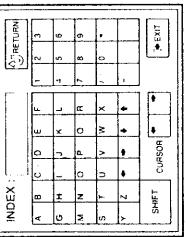
After clicking, the character appears in the box after INDEX.. To correct an entered character, click on ← or → to highlight the character, then click on the correct character. To erase an entered character, click on ← or → to highlight the character, then click on the blank button.

To change the character set, click on SHIFT. Each click selects uppercase letters or lowercase letters.



3 Click on INDEX.

The INDEX menu appears.



To exit from the menu
Click on EXIT.

To go to the previous menu
Click on RETURN.

Tuning in Radio Broadcasts

Selecting the AM Tuning Interval

The AM tuning interval is preset to 10 kHz. When using the receiver where the frequency allocation system is based on a 9 kHz interval, make the following adjustments.

1 Turn on the power and tune in any AM station.

2 Turn off the power.

3 Press the POWER button while holding down the PRESET TUNING + button on the front panel of the unit.

To change the AM tuning interval back to 10 kHz, repeat the above steps.

Note

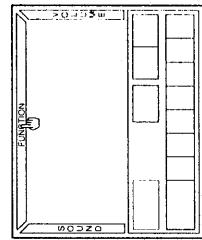
When the interval is changed, all preset stations are erased. After changing the interval, be sure to preset the stations again (See "Presetting Stations" on page 22).

Automatic Tuning

Follow the procedure below to tune in radio stations.

1 Click on FUNCTION in the main menu.

The FUNCTION menu appears.



To show the tuner control panel without the preset station menu

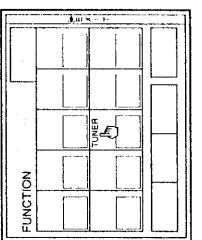
Click on EXIT. The REC EDIT, CUSTOM and LIST buttons appear at this time. To return to the preset station menu with the tuner control panel, click on LIST.

Note

When listening to an AM station, keep the AM loop antenna away from the TV set to prevent noise pickup.

2 Click on TUNER.

The preset station menu and the tuner control panel appear.



To return to the main menu, click on EXIT.

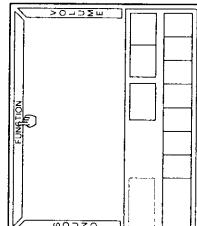
21

Tuning in Radio Broadcasts

Presetting Stations

You can preset up to 30 FM or AM radio stations, then recall them later with the click of a button.

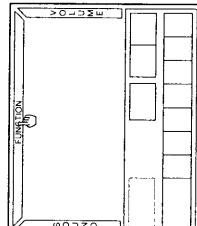
- Click on **FUNCTION** in the main menu.



- Click on **FREQ – or +** to tune in the station to be stored.

The tuner begins scanning for radio stations in the respective direction, then stops when it finds a strong station. Click on either button to continue scanning. Click on **BAND** to switch between FM and AM.

- Click on **FUNCTION** in the main menu.



- Click on **FREQ – or +** to tune in the station to be stored.

The tuner begins scanning for radio stations in the respective direction, then stops when it finds a strong station. Click on either button to continue scanning. Click on **BAND** to switch between FM and AM.

- Click on **MEMORY**.

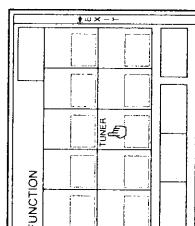
- Click on the button (1 to 10) to be used to store the radio station.
The button lights up, and the selected station is stored to the selected button.

- Repeat steps 3 through 6 to preset more stations.

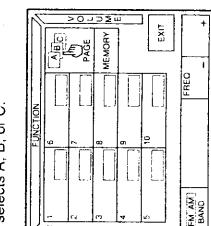
To replace a preset station with a new one
Do the procedure in exactly the same way. The new station will replace the preset station already stored to the selected button.

To show the tuner control panel without the preset station menu
Click on **EXIT**. The REC EDIT, CUSTOM and LIST buttons appear at this time. To return to the preset station menu with the tuner control panel, click on **LIST**.

- Click on **TUNER**.
The preset station menu and the tuner control panel appear.

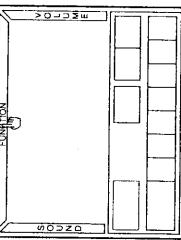


- Click on **SHIFT** to select a memory page (A, B, or C).
Each click selects A, B, or C.

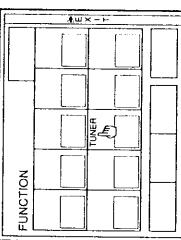


- Click on **FUNCTION** in the main menu.

The FUNCTION menu appears.

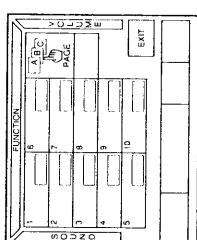


- Click on **TUNER**.
The preset station menu and the tuner control panel appear.



To return to the main menu, click on **EXIT**.

- Click on **PAGE** to select the page (A, B or C).
Each click selects page A, B or C.

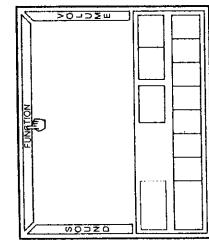


Recording Audio Sources

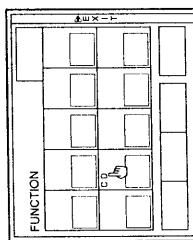
Use this procedure to record to a cassette tape deck, DAT deck or MiniDisc recorder.

- Click on **FUNCTION** in the main menu.
In this example, the recording unit is a cassette tape deck.

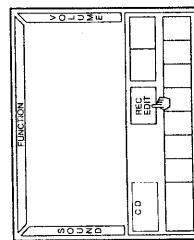
- Click on **FUNCTION** in the main menu.
The control panel of the cassette tape deck appears.



- Click on **REC EDIT**.
The menu for the REC EDIT button appears.



- Click on **REC EDIT**.
The menu for the REC EDIT button appears.

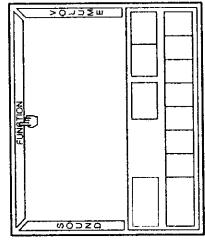


- Note**
Sound input through the TAPE connectors on the rear panel cannot be recorded by a recording unit.
- To stop recording, click on **■** of the recording unit.
 - To leave the audio recording menu, click on **EXIT**.
 - To record radio broadcasts, click on **EXIT** in the preset station menu. REC EDIT will appear. Then do steps 3 through 5 in the procedure above.

Note
Sound input through the TAPE connectors on the rear panel cannot be recorded by a recording unit.

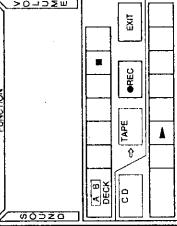
Video Tape Dubbing

- Click on **FUNCTION** in the main menu.
The FUNCTION menu appears.

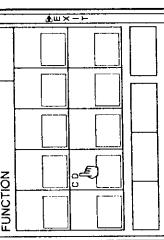


- Click on **REC** of the recording unit.
In this example, the recording unit is a cassette tape deck.
The control panel of the cassette tape deck appears.

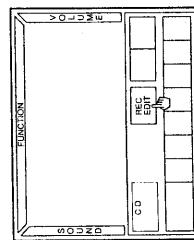
- Click on **FUNCTION** in the main menu.
The control panel of the audio source appears.



- Click on **REC EDIT**.
The menu for the REC EDIT button appears.



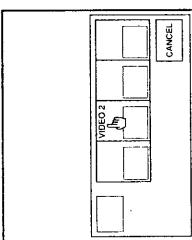
- Click on **REC EDIT**.
The menu for the REC EDIT button appears.



- Click on **REC EDIT**.
The menu for the REC EDIT button appears.

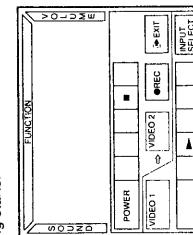
The menu for the REC EDIT button appears.

- Click on **VIDEO 1** in the main menu.
In this example, video deck 1 is the video source.
The control panel of video deck 1 appears.



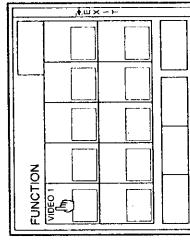
To cancel the process, click on **CANCEL**.

- Click on **VIDEO 2** in the main menu.
In this example, video deck 2 is the recording unit.
The control panel of both units appear.



- Note**
Verify that the recording unit is set to the VIDEO IN connectors (external video input). If not, set the input selector to VIDEO IN either manually or remotely (by the video deck's remote commander or the INPUT SELECT button on the screen).

- Click on **REC** of the video recording unit.



To return to the main menu, click on **EXIT**.

- If necessary, play the selected video source and pause where video dubbing is to start.
Click on **▶** of the video source to play, then click on **■** to pause.

- Note**
• There is no video output from the video recording unit even though all buttons on the video recording unit's control panel are operational.
• If you click on another program source during recording, the tape recording stops and the selected source will start playing.

- Click on **▶** of the video source.
Dubbing starts.

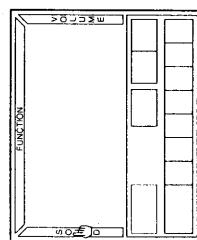
- To stop dubbing**
Click on **■** of video recording unit.
To leave the video dubbing menu
Click on **EXIT**.

Preparing Your Space for Dolby Surround Sound

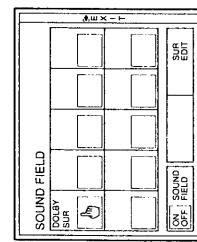
The STR-G1ES's Dolby ProLogic Surround Decoder reproduces the Dolby surround sound code available on some entertainment software to produce the same dynamic sound normally available only in movie theaters. In this procedure, you will maximize the Dolby surround sound effect by:

- 1 specifying the Dolby surround mode for your speaker configuration
- 2 adjusting the speaker volume level
- 3 adjusting the delay time of the rear speakers.

1 Click on SOUND in the main menu.
The SOUND FIELD menu appears.

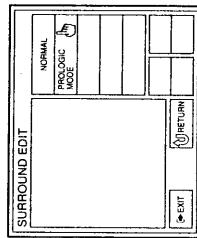


2 Click on DOLBY SUR, then on SUR EDIT.
The SURROUND EDIT menu appears.

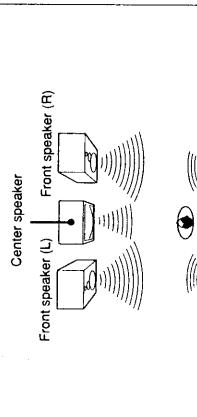


To return to the main menu, click on EXIT.

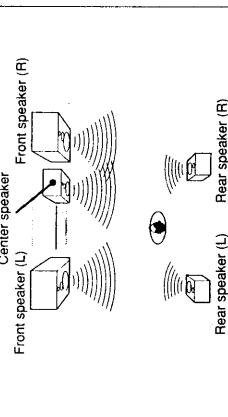
3 Select the Dolby surround sound mode by clicking on PROLOGIC MODE.
Each click selects NORMAL, WIDE, PHANTOM, or 3CH LOGIC mode.



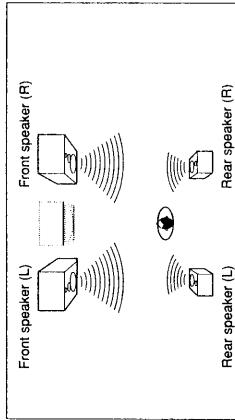
Four possible Dolby surround sound modes
NORMAL mode
Select this mode when using a small center speaker (e.g., the TV speaker). The front speakers output the bass sound of the center channel since the small speaker produces insufficient bass.



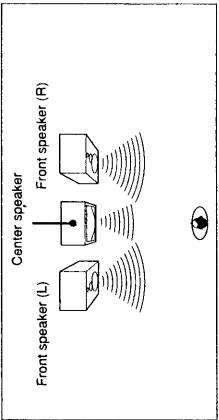
WIDE mode
Select this mode when using a medium to large center speaker.



PHANTOM mode
Select this mode when not using a center speaker. The front speakers output the sound of the center channel.

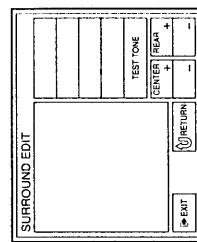


3CH. (Channel) LOGIC mode
Select this mode when using only front and center speakers. The front speakers output the sound of the rear channel.

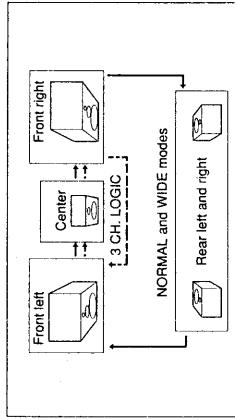


Note
Some commercially available software may have Dolby surround sound tracks even when this is not indicated on the package.

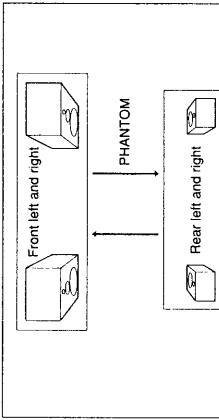
4 Adjust the speaker volume by clicking on TEST TONE.
TEST TONE changes to ON and a test tone is sequentially emitted from each speaker. See below for the respective tone sequence of your speaker configuration.



Test tone sequence with center speaker
The test tone moves clockwise from the front-left speaker to the rear speakers, then back to the front-left speaker.



Test tone sequence without center speaker
The test tone alternates between the front speakers and the rear speakers.



5 Equalize the volume of all speakers.
Click on CENTER + or CENTER - to adjust the volume of the front speaker and REAR + and REAR - to adjust the volume of the rear speakers.

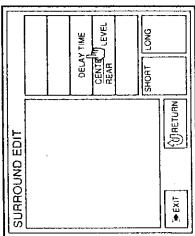
6 Click on TEST TONE.
TEST TONE changes to OFF and the test tone stops.

(Continued on next page.)

Preparing Your Space for Dolby Surround Sound

(Continued from previous page.)

- 7** Adjust the delay time by clicking on **DELAY TIME** while listening to a program source. Click on **SHORT** or **LONG** to adjust the delay time.



Adjusting a Sound Field Program

The digital signal processor in the STR-GIES consists of two parts: (1) a digital surround processor which electronically reproduces the acoustics of various listening environments, and (2) a digital parametric equalizer which controls the output level of specific frequency ranges. These parts function together to create the acoustic qualities of specific listening environments (sound fields).

The unit comes with 10 factory-set sound fields, each with varying digital surround processor and parametric equalizer parameters tailored for specific types of music (i.e., jazz or opera) or listening situations (i.e., church or stadium). A number of adjustable parameters, such as room size and seat position, also allow you to customize each sound field to your own taste.

Description of Sound Fields

Sound Field	Characteristics	Applicable music source
DOLBY SUR	Decodes programs processed with the Dolby surround effect.	Dolby surround encoded movie software
THEATER	Adds the reflections of a theater to decoded signals of the Dolby pro logic decoder.	Dolby surround encoded movie software
LIVE	Adds the reflections of a large concert hall to decoded signals of the Dolby pro logic decoder.	Dolby surround encoded music software
HALL	Reproduces the acoustics of a rectangular concert hall with soft sound. It is effective for playing a program source with hard sound.	Orchestral music, chamber music, or an instrumental solo
DANCE	The equalizer boosts high and low frequencies, and dynamic sounds are reproduced.	Pop or dance music
JAZZ	Reproduces the acoustics of a live house. The equalizer boosts high frequencies, adding sharpness to sounds.	Jazz
OPERA	Reproduces the acoustics of an opera house, maintains clearness of vocals.	Opera
CHURCH	Reproduces the acoustics of a church made of wood.	Baroque music, string orchestra or choral group
STADIUM	Reproduces the acoustics of an outdoor stadium with a long pre-delay time. It is effective for playing a program source recorded in a stadium.	Pop or rock music
ACOUSTIC	The surround effect is off.	

Sound Field Setting

The following table shows the parameters that can be adjusted for each sound field.

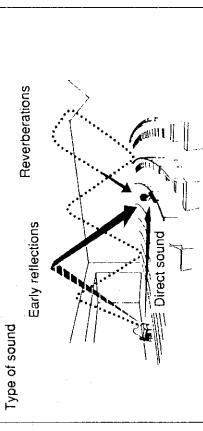
Parameter	SOUND FIELD	DOLBY SUR	THEATER	LIVE	HALL	DANCE	JAZZ	OPERA	CHURCH	STADIUM	ACOUSTIC
Equalizer	O	O	O	O	O	O	O	O	O	O	O
Room size	X	O	O	O	O	O	O	O	O	O	X
Wall	X	O	O	O	O	O	O	O	O	O	O
Seat position front/rear	X	O	O	O	O	O	O	O	O	O	X
Seat position left/right	X	O	O	O	O	O	O	O	O	O	X
Effect level	X	O	O	O	O	O	O	O	O	O	X
Reverb time	X	O	O	O	O	O	O	O	O	O	X
Delay time	O	X	X	X	X	X	X	X	X	X	X
Rear level	O	O	O	O	O	O	O	O	O	O	X
Center level	O	O	O	X	X	X	X	X	X	X	X

O: adjustable X: non-adjustable

How the Digital Surround Processor Works

Sounds that you hear within an enclosed space such as a movie theater or concert hall can be classified as direct sound, reflected sound (early reflections) or reverberative sound (reverberation). When we hear these sounds, we get a sense of the size and type of the space.

By reproducing early reflections, reverberation and other sound characteristics, the digital surround processor recreates the acoustics of particular spaces. When combined with the digital equalizer, unique "sound fields" can be produced.



Note
Since each sound field is determined by both fixed and adjustable parameters, sound fields will not sound the same even when all adjustable parameters are equal.

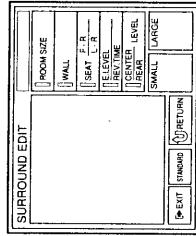
Adjusting a Sound Field Program

Your STR-G1ES comes with ten preset sound fields.

Adjustable parameters (digital equalizer and digital surround) are also provided to allow each sound field to be customized. Use the two following procedures to adjust the digital surround parameters and digital equalizer parameters.

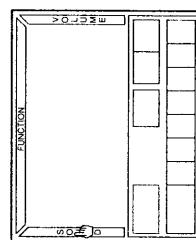
Before starting the procedure, you must play back a program source so that you can monitor the sound while making the adjustments. The specified sound field is linked to the program source (except for the TAPE function) and is activated whenever the program source is selected.

- 4 Click on the parameter to be changed.**
For a description of the digital surround parameters, see page 29.

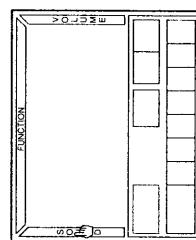


Adjusting the Digital Surround Parameters

- 1 While playing a program source, click on SOUND in the main menu.**
The SOUND FIELD menu appears.



- 2 Click on a sound field.**
Make sure that SOUND FIELD is on. If not, click on the button to turn it on.
Once a sound field has been selected, all changes made to its parameters are automatically saved.



- 3 Click on SUR EDIT.**
To return to the main menu, click on EXIT.

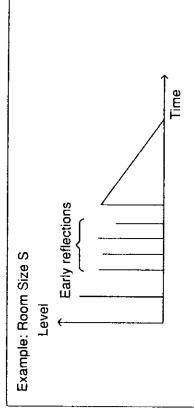
- 4 Adjust the parameter.**
Depending on the parameter, use the SMALL/LARGE, SOFT/HARD, arrows or +/- buttons to make the adjustment.
Clicking on STANDARD restores all sound field parameters (digital surround and digital equalizer) to their factory settings and returns the volume level of center and rear speakers to 0 dB.

Note

You may hear some noise as you adjust the parameters.

■ Room Size Simulation

The sound emitted from a sound source is reflected many times between the left and right walls, ceiling, and floor before it reaches our ears. In a large room, the sound takes more time to bounce from one surface to another than in a smaller room. The ROOM SIZE parameter controls the spacing of early reflections to simulate the room size.



5 Adjust the parameter.

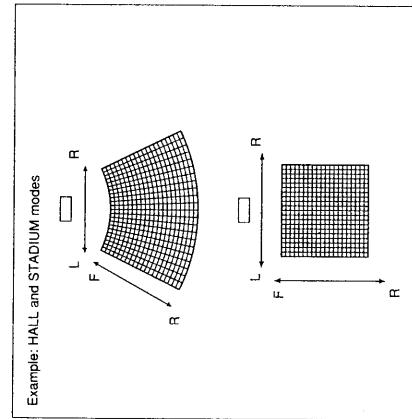
Depending on the parameter, use the SMALL/LARGE, SOFT/HARD, arrows or +/- buttons to make the adjustment.
Clicking on STANDARD restores all sound field parameters (digital surround and digital equalizer) to their factory settings and returns the volume level of center and rear speakers to 0 dB.

Note

You may hear some noise as you adjust the parameters.

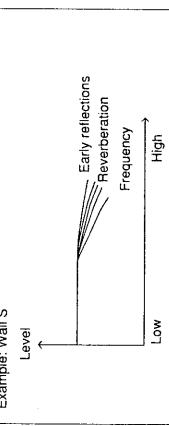
■ Seat Position Simulation

When you sit at the front of a room, you will hear more direct sound from the front speakers, and the component of reflected sounds from the front speakers grows as you move to the rear. Similarly, the component of reflected sound changes when you move from left to right, and vice versa. The F-R and L-R parameters control the balance of the direct and reflected sound and other components of sound to simulate your listening position.



■ Wall Material Simulation

When sound is reflected by a wall made of soft material such as wood or a wall covered with a curtain, the high frequency components are reduced. A hard wall is highly reflective and does not significantly effect the frequency response of the reflected sound. The WALL parameter controls the level of high frequencies to simulate the wall material.



■ Effect Level

Effect level is the combination of the level of early reflections and reverberations. The adjustable level is divided into 20 segments. As you select higher levels, the room becomes more "live"; and as you select lower levels, the room becomes more "dead".

■ Reverberation Time

This parameter adjusts the length of the reverberation — the time required for reverberative sound to decrease to -60 dB.

- If you select ACOUSTIC**
This sound field has no adjustable digital surround sound parameters. Only the digital parametric equalizer can be adjusted. See "Adjusting the Digital Parametric Equalizer" on page 32.

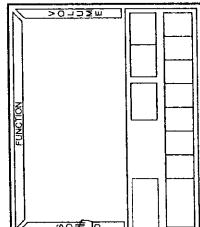
- 3 Click on SUR EDIT.**
The SURROUND EDIT menu of the respective sound field appears.

Adjusting a Sound Field Program

Adjusting the Digital Parametric Equalizer

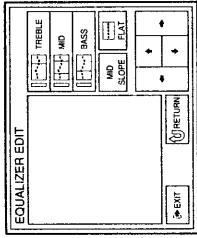
The parametric equalizer is a tone control system with adjustable center frequency and slope. The unit provides flexible equalization using one-band parametric equalizers with center frequency and slopes, and 2-band shelving equalizers with adjustable turnover points. Before adjusting the digital parametric equalizer, play back the program source. You can adjust the equalizer while listening to the actual sound.

- 1 While playing a program source, click on **SOUND** in the main menu.
The SOUND menu appears.



- 3 Click on **EQ EDIT**.
The EQUALIZER EDIT menu appears.

4 Click on TREBLE, MIDDLE or BASS to adjust the frequency.
The graph for the selected frequency band appears.



- 5 Click on ← or → to select the frequency to be adjusted.

Click on ↑ or ↓ to raise or lower the level of the selected frequency.

Note

You may hear some noise as you adjust the parameters.

- 6 Click on MID SLOPE if you want to adjust the center frequency band (MID).
Each click selects WIDE, MIDDLE or NARROW.

- 7 Repeat steps 4 through 6 to adjust other frequency bands.



To return to the main menu, click on EXIT.

Click on EXIT.

To return to the previous menu
Click on RETURN.

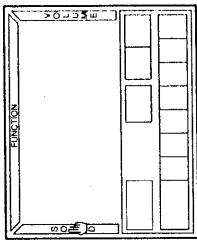
To begin adjusting with a flat equalization curve
Click on FLAT to flatten the curve.

If the center frequency band overlaps the bass or treble frequency band during adjustment
The level of both bands are added together.
The display of the equalization curve level is limited to ±10dB.

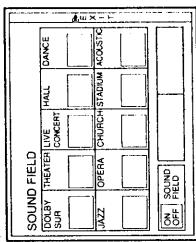
Changing the Sound Field

Once a sound field is selected for a program source, including preset sound fields (see "Selecting a Preset Sound Field" on page 18), the sound field is activated each time you select the source (except for the TAPE function). Follow the procedure below to change the sound field linked to a given program source.

- 1 While playing the program source, click on **SOUND** in the main menu.
The SOUND FIELD menu appears.



- 2 Click on the new sound field.
The sound field is activated.
Make sure that SOUND FIELD is on. If not, click on the button to turn it on.



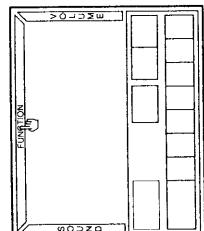
To return to the main menu, click on EXIT.
To customize the digital surround parameters, see "Adjusting the Digital Surround Parameters" on page 30.

Chapter 4 Additional Features Enjoying Two Program Sources at the Same Time

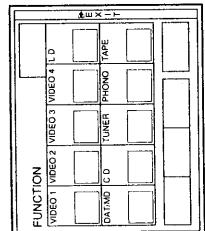
Starting Program Sources Automatically — AUTO PLAY

Use the procedure below to play two program sources at the same time (for example, to play a laser disc while listening to a compact disc). Before starting the procedure, make sure that the AUTO PLAY function is off (see the following section, "Starting Program Sources Automatically — AUTO PLAY").

- Click on FUNCTION in the main menu.
The FUNCTION menu appears.



- Click on a video program source.
The control panel appears.
Click on the buttons to operate the video source.



- Click on FUNCTION, then click on an audio program source.
The control panel appears.
Click on the buttons to operate the audio source.

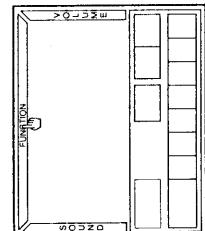
- To stop play
Click on the stop button of the respective program source.
- Note**
If you do not turn off the AUTO PLAY function, the newly selected program source starts playing and previously selected program source stops.

- Notes**
- If you select a program source while another is playing, the current program source stops, and the newly selected program source starts playing.
 - The AUTO PLAY function does not work when you operate the unit from its front panel.

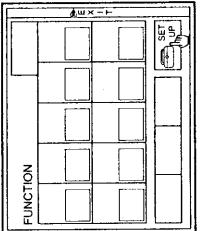
Starting a Specified Program Source Automatically — POWER ON AUTO START

When AUTO PLAY is on, program sources will start playing immediately when you select them.

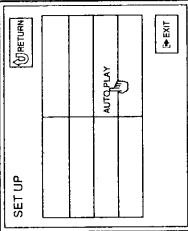
- Click on FUNCTION in the main menu.
The FUNCTION menu appears.



- Click on SET UP.
The SET UP menu appears.



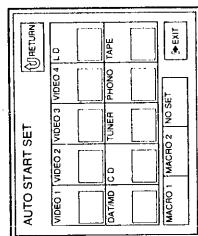
- Click on AUTO PLAY.
Clicking on AUTO PLAY alternately turns AUTO PLAY on and off.
To return to the main menu, click on EXIT.



- To leave the menu
Click on EXIT.
- To return to the previous menu
Click on RETURN.

After specifying the program source with POWER ON AUTO START, the program source will automatically turn on and start playing when you turn on the unit with the remote commander.

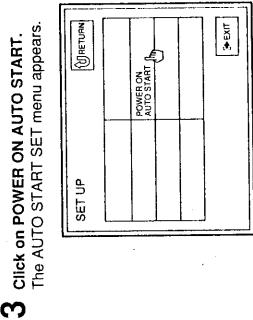
- Click on the program source to start playing automatically.
Only one menu item can be selected at a time (including MACRO1 or MACRO2).



- To clear the AUTO START SET menu setting
Click on NO SET. The POWER ON AUTO START function does not operate when you turn on the unit.

- To leave the menu
Click on EXIT.

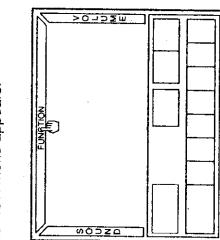
- Note**
The POWER ON AUTO START function does not work when you operate the unit from its front panel.



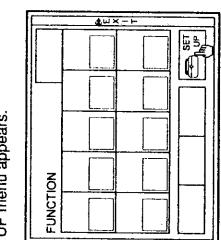
Storing Other Manufacturers' Infrared Command Codes—CUSTOM IR CODE SET

Use the CUSTOM IR CODE SET menu to store infrared command codes that do not appear in the AUDIO/VIDEO IR CODE SET menu. These include codes for audio, video and other equipment made by manufacturers other than Sony. In the procedure below, you will enter the name of the code, then record the IR code itself. Up to 20 codes can be recorded.

- Click on FUNCTION in the main menu.

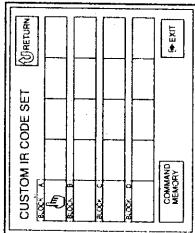


- Click on SET UP.

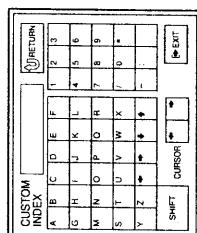


- To return to the main menu, click on EXIT.

- Click on an empty button.
The button is selected, and the CUSTOM INDEX menu appears.

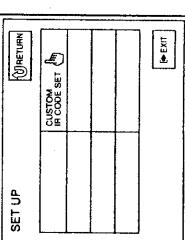


- Spell out the name by clicking on each character.
After clicking, the character appears in the box after CUSTOM INDEX.



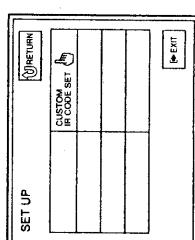
- To correct an entered character, click on \leftarrow or \rightarrow to highlight the character, then click on the correct character. To erase an entered character, click on \leftarrow or \rightarrow to highlight the character, then click on the blank button.
- To change the character set, click on SHIFT. Each click selects uppercase letters or lowercase letters.

- After entering the name, click on RETURN.
The CUSTOM IR CODE SET menu reappears.
Repeat steps 4 through 6 until you enter all the names of the IR codes you will record.



- To return to the main menu, click on EXIT.

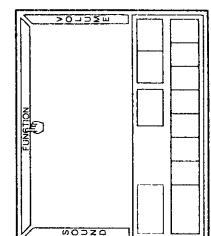
- Click on CUSTOM IR CODE SET.
The CUSTOM IR CODE SET menu appears.



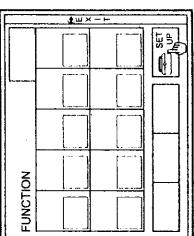
Starting Program Sources and Other Electrical Equipment Automatically and Sequentially—MACRO PLAY SET

A macro is a command that can activate up to ten IR codes consisting of codes from the IR code set or user IR code set. Macros can be activated manually through the FUNCTION menu or by the POWER ON/AUTO START function.

- Click on FUNCTION in the main menu.

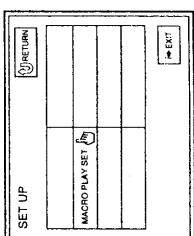


- Click on SET UP.
The SET UP menu appears.



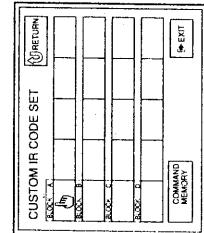
- To return to the main menu, click on EXIT.

- Click on MACRO PLAY SET.
The MACRO PLAY SET menu appears.

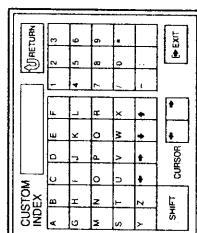


(Continued on next page.)

- Click on an empty button.
The button is selected, and the CUSTOM INDEX menu appears.



- Spell out the name by clicking on each character.
After clicking, the character appears in the box after CUSTOM INDEX.



- To correct an entered character, click on \leftarrow or \rightarrow to highlight the character, then click on the correct character. To erase an entered character, click on \leftarrow or \rightarrow to highlight the character, then click on the blank button.
- To change the character set, click on SHIFT. Each click selects uppercase letters or lowercase letters.

- After entering the name, click on RETURN.
The CUSTOM IR CODE SET menu reappears.
Repeat steps 4 through 6 until you enter all the names of the IR codes you will record.



- To return to the main menu, click on EXIT.

- Click on CUSTOM IR CODE SET.
The CUSTOM IR CODE SET menu appears.

Note
The power switch on air conditioners may use two independent codes, even when there is only one switch. If you cannot turn the air conditioner off with the code recorded for the on/off switch, repeat the procedure and record the on and off codes separately.

Starting Program Sources and Other Electrical Equipment Automatically and Sequentially — MACRO PLAY SET

(Continued from previous page.)

-

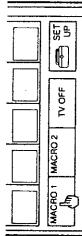
Click on button “1”.
The number indicates the sequence in command code will be executed.

- Click on BACK or NEXT to display the selectable command codes in the COMMAND buttons.**
Clicking on the button causes different command codes in the CUSTOM IR CODE SET and program sources in the FUNCTION menu to appear.
To specify a time lag between the end of one program source and the start of another, click on NEXT until the required time lag appears among the COMMAND buttons (i.e., WAIT 1 SEC, WAIT 10 SEC, etc.).

Click on a command code from among the COMMAND buttons.
The name of the selected command code appears on the numbered button, and the next numbered button lights up. Repeat this procedure until you enter all the command codes you want. To erase a command code click on the respective numbered button, then on the NEXT button until NO SET appears among the COMMAND buttons. The command code is erased when you click on the NO SET.

leave the menu, click on EXIT.

enter command codes randomly, click on the numbered button, then on the command code.



Selecting the Pointer Type and Display Color – DISPLAY MODE

Use the DISPLAY MODE menu to select from three types of pointers and four display colors.

-

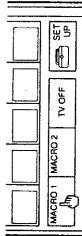
The number indicates the sequence in which the command code will be executed.

- Click on BACK or NEXT to display the selectable command codes in the COMMAND buttons.**
Clicking on the button causes different command codes in the CUSTOM IR CODE SET and program sources in the FUNCTION menu to appear.
To specify a time lag between the end of one program source and the start of another, click on NEXT until the required time lag appears among the COMMAND buttons (i.e., WAIT 5 SEC, WAIT 10 SEC, etc.).

Click on a command code from among the COMMAND buttons.
The name of the selected command code appears on the numbered button, and the next numbered button lights up. Repeat this procedure until you enter all the command codes you want. To erase a command code click on the respective numbered button, then on the NEXT button until NO SET appears among the COMMAND buttons. The command code is erased when you click on the NO SET.

leave the menu, click on EXIT.

enter command codes randomly, click on the numbered button, then on the command code.



Specifying the Sensitivity of the Remote Commander — COMMANDER SENSITIVITY

You can select three sensitivity levels that determine the need at which the pointer moves.

- A screenshot of a computer monitor displaying the main menu of a software application. The menu bar at the top reads "FILE", "EDIT", "FUNCTION", "FORMAT", and "HELP". Below the menu bar is a large empty rectangular area. Along the left edge of this area, there is a vertical toolbar with several small icons. The icon for "FUNCTION" is highlighted with a yellow box and a mouse cursor arrow pointing to it. At the bottom of the screen, there is a horizontal status bar with the word "DIALOGS" on the left side.

2 Click on **SET UP**.
The **SET UP** menu appears.

- | Function | | | |
|------------------|----------------------|----------------------|----------------------|
| $\sin x - 1$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x + 1$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x \cdot 1$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x / 1$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^2$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{-1}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/2}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/3}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/4}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/5}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/6}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/7}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/8}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/9}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/10}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/11}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/12}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/13}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
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| $\sin x^{1/17}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/18}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/19}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/20}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/21}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/22}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/23}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/24}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/25}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/26}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/27}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/28}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/29}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/30}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/31}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/32}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
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| $\sin x^{1/40}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/41}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
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| $\sin x^{1/70}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/71}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/72}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/73}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/74}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/75}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/76}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/77}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/78}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
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| $\sin x^{1/81}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/82}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/83}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
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| $\sin x^{1/88}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/89}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/90}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/91}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/92}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/93}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/94}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/95}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/96}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/97}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/98}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/99}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| $\sin x^{1/100}$ | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Click on COMMANDER SENSITIVITY.
The selected number increases by one with each click raising the commander's sensitivity accordingly.

Note
If you find it difficult to change the commander sensitivity, it may be because the setting is too high (i.e., 5), turn off the unit, then turn on the power while holding down the VIDEOC and VIDEO4 buttons. The Commander sensitivity will return to a lower factory set value.

To leave the menu
click on EXIT.

To return to the previous menu
click on RETURN.

SECTION 2

ELECTRICAL ADJUSTMENT

[ONSCREEN SECTION]

Color Burst Signal Adjustment

Setting :

Signal : None
 Frequency counter : TP101

Procedure :

Adjust to 3.579600 ± 10 Hz with CT101

H. sync Signal Adjustment-1

Setting :

Signal : None
 Frequency counter : IC104 8pin

Procedure :

Adjust to 15.734 kHz with RV108

H. sync Signal Adjustment-2

Setting :

Signal : None
 Frequency counter : IC109 8pin

Procedure :

Adjust to 15.734 kHz with RV109

Color Reproducibility Adjustment

Procedure :

1. Turn power ON while pressing **VIDEO 4** and **DAT/MD** buttons.

Adjustment Location :

[ONSCREEN BOARD] – Component side –

2. Adjust the picture frame as shown in Fig. A when using a color bar chart for adjustment with RV104.

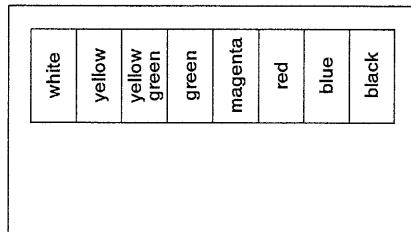
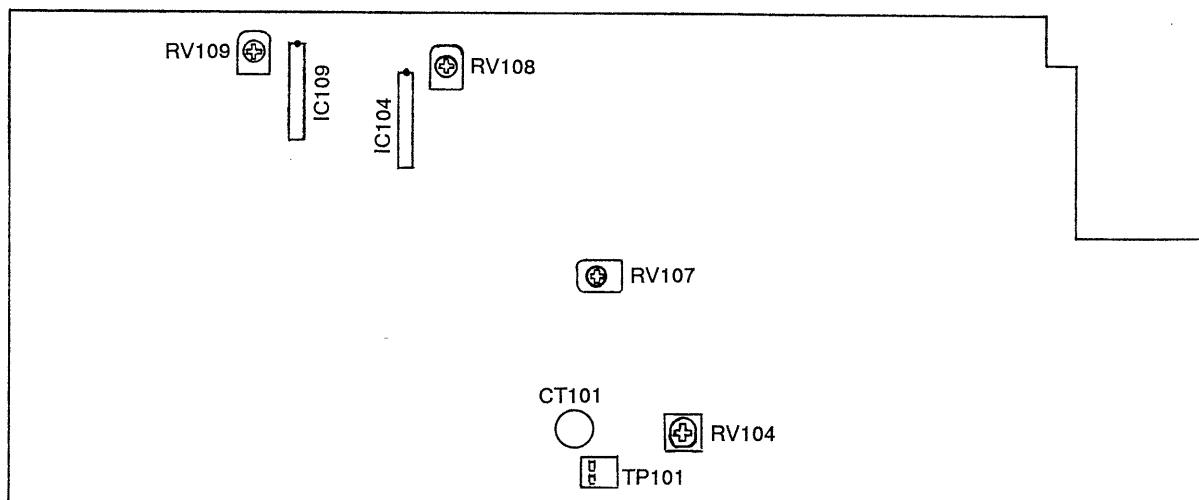
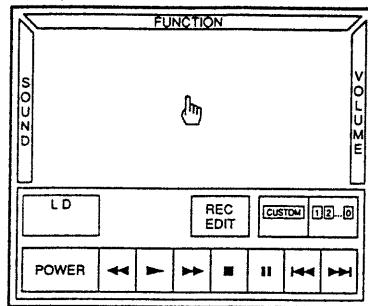


Fig. A. (picture of monitor screen)

H. POSITION Adjustment

Procedure :

1. Set the state that OSD appears by grasping the remote commander.
2. Adjust with RV107 so that the following TV monitor screen goes to the center of the monitor.

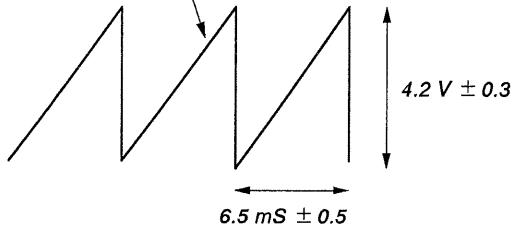


REMOTE CONTROL SECTION

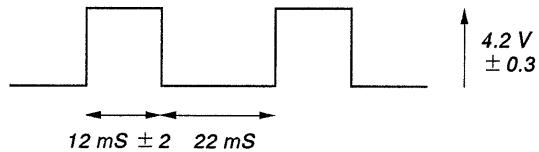
RM-VPI Electrical Adjustment

1. Short-circuit A and B without power supply (+3 V).
2. Connector power supply (+3 V).
3. When following waveform appears on XDAC, YDAC, it is good.

Confirm this line goes linear.

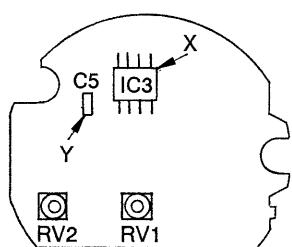


4. Turn power supply (+3 V) off.
5. Remove A and B short-circuit position, short-circuit B and C.
6. Turn power supply (+3 V) on.
7. Set the remote commander at a standstill. adjust with RV1 so that X (IC3 ① pin) goes $+2.2 \pm 0.1$ V and with RV2 so that Y goes $+2.2 \pm 0.1$ V.
8. AT CLK following waveform appears, it is good.



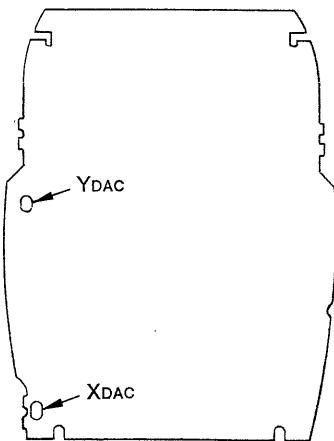
SENSOR BOARD

Component Side



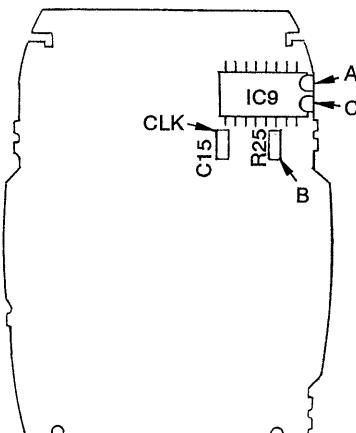
REMOTE CONTROL BOARD

Conductor Side



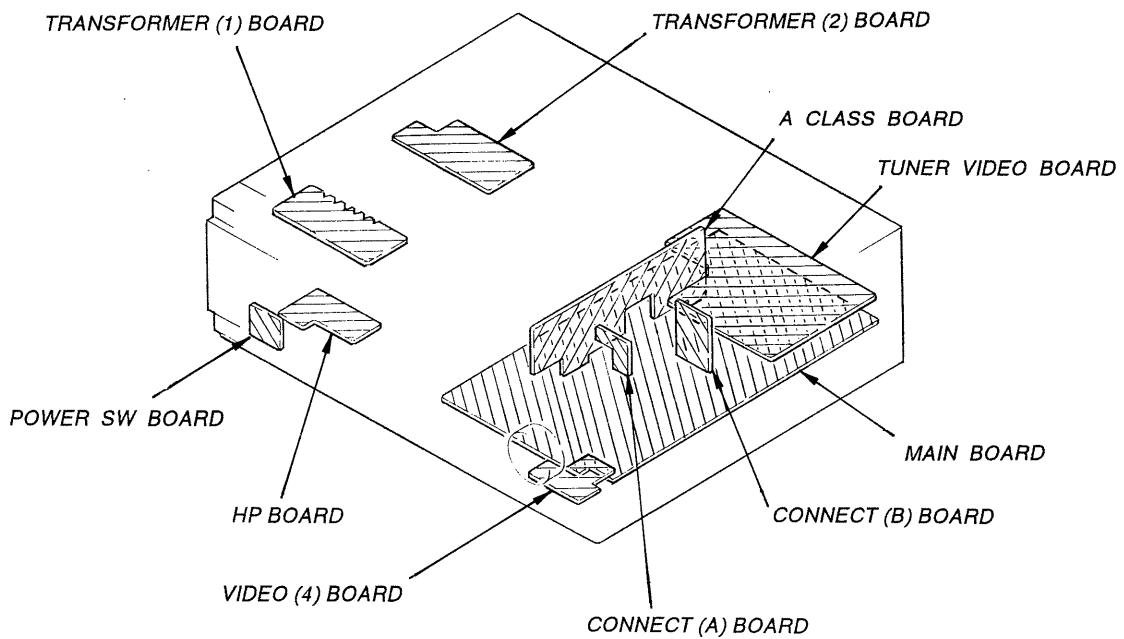
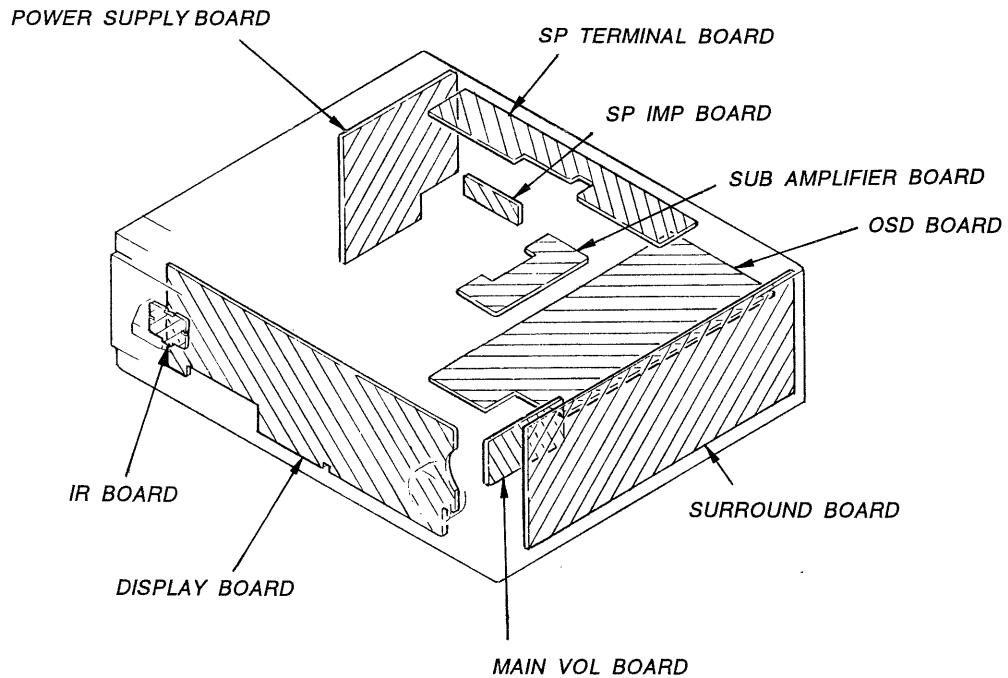
REMOTE CONTROL BOARD

Component Side



SECTION 3 DIAGRAMS

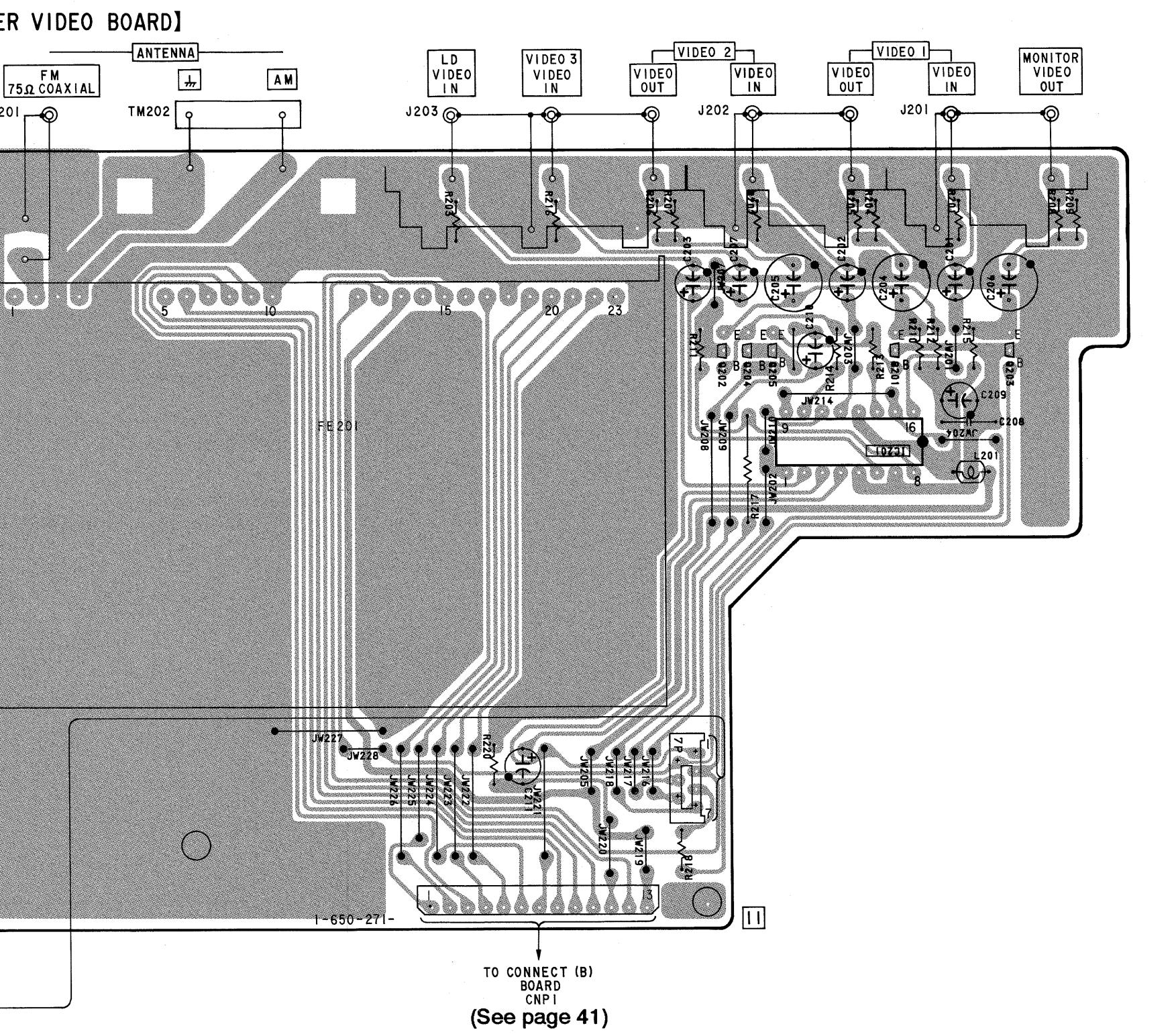
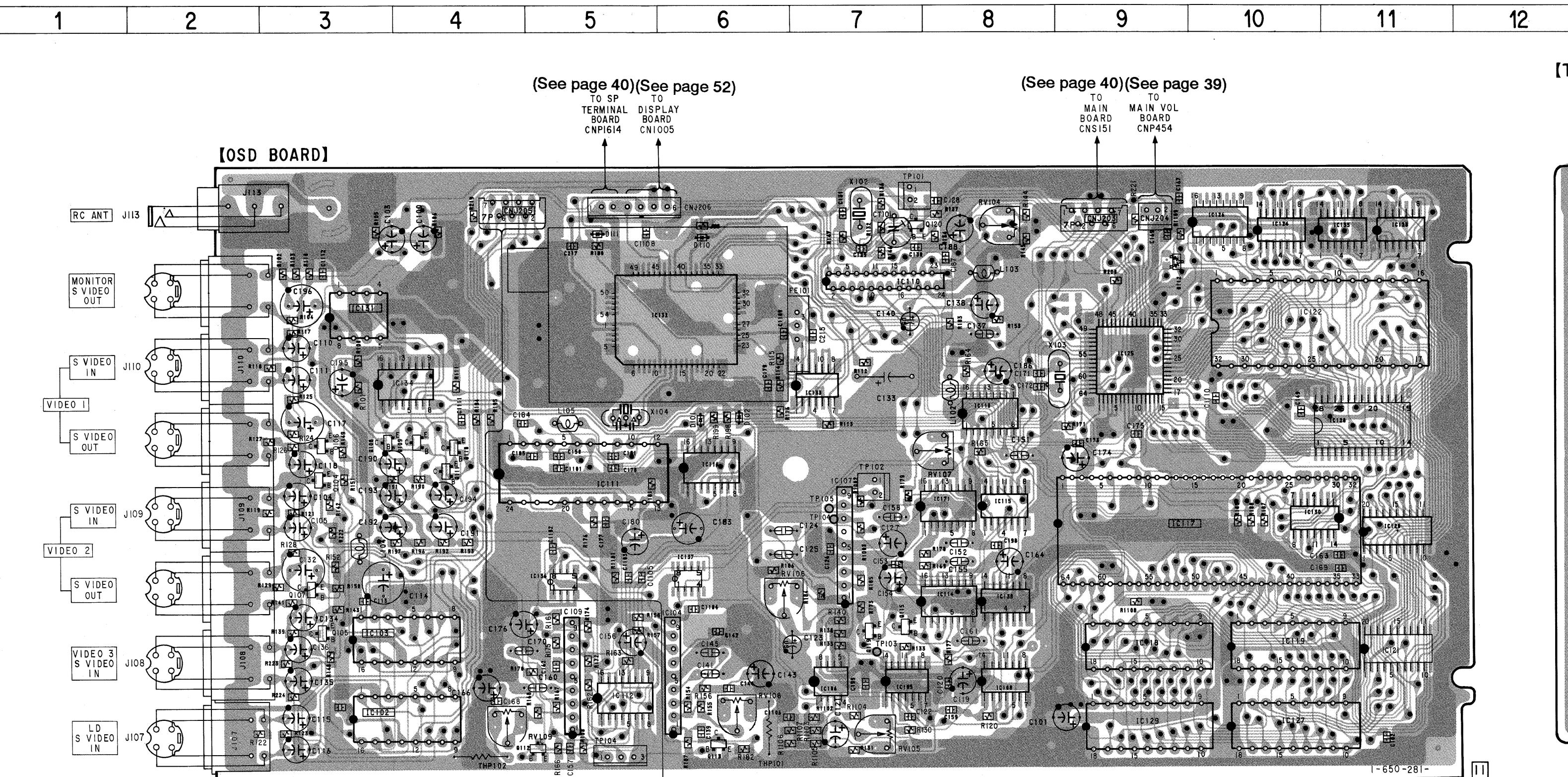
3-1. CIRCUIT BOARDS LOCATION



3-2. TUNER, ON SCREEN SECTION PRINTED BOARDS • See page 63 for Semiconductor Lead Layouts.

• Semiconductor Location

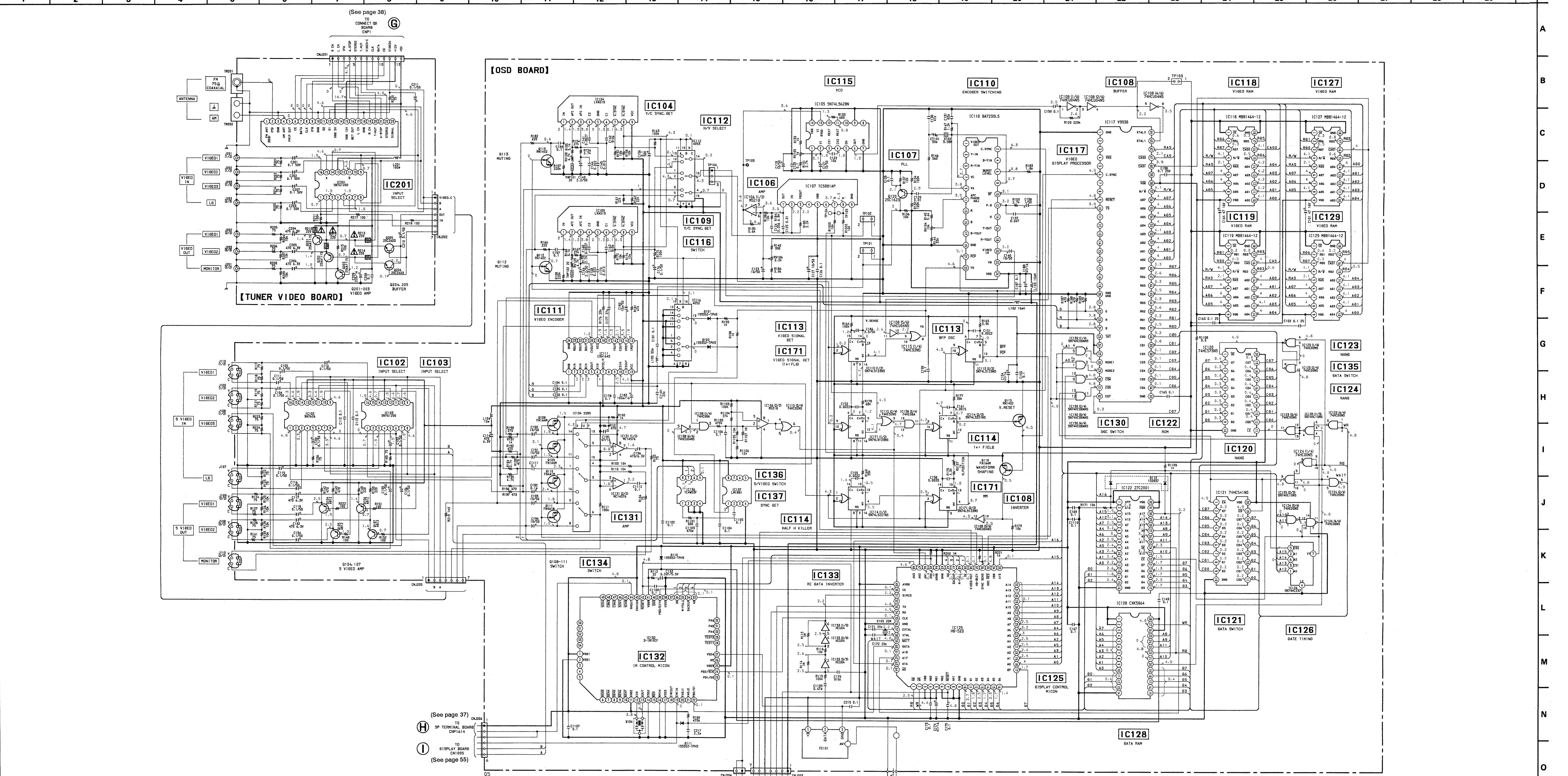
Ref. No.	Location
D101	C6
D102	C6
D110	B6
D111	B5
D112	B9
IC102	F4
IC103	E4
IC104	E6
IC105	E7
IC106	E7
IC107	D7
IC108	E8
IC109	E5
IC110	B7
IC111	D5
IC112	E5
IC113	C8
IC114	E8
IC115	D8
IC116	D6
IC117	D10
IC118	E9
IC119	E10
IC120	D11
IC121	E11
IC122	C10
IC123	B11
IC124	B10
IC125	C9
IC126	B10
IC127	F10
IC128	C11
IC129	F9
IC130	D10
IC131	C3
IC132	C6
IC133	C7
IC134	C4
IC135	B11
IC136	E5
IC137	E6
IC138	E8
IC171	D8
IC201	C17
Q104	D3
Q105	E3
Q106	D3
Q107	E3
Q108	D3
Q109	D4
Q110	D4
Q111	D4
Q112	F5
Q113	F6
Q115	E7
Q119	E7
Q120	B7
Q201	C18
Q202	C18
Q203	C18
Q204	C17
Q205	C17



Note:
— : parts extracted from the component side.
● : Through hole.

3-3. TUNER, ON SCREEN SECTION SCHEMATIC DIAGRAM • See page 65 for IC Block Diagrams.

1 — **2** — **3** — **4** — **5** — **6** —



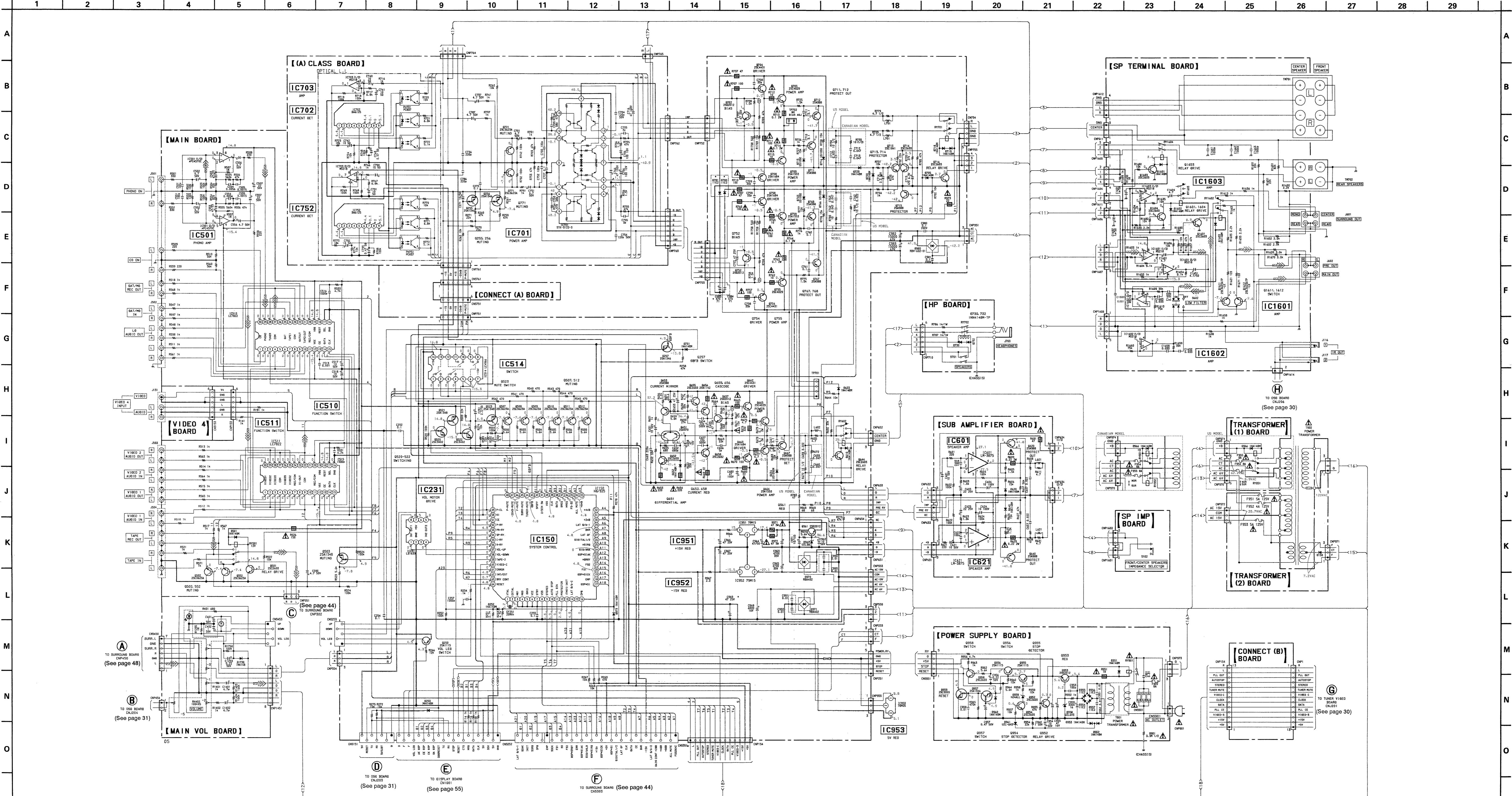
M

Note:

- All capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$ 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise specified.
-  : nonflammable resistor.

<p>Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.</p>	<p>Note: Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
--	--

-  : B + Line.
-  : panel designation.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM ($10 \text{ M}\Omega/\text{V}$).
Voltage variations may be noted due to normal production tolerances.



e:
All capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$
50 WV or less are not indicated except for electrolytics
and tantalums.
All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise
specified.
 nonflammable resistor

<p>Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.</p>	<p>Note: Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
--	--

— : B + Line.
- - - : B - Line

Voltages and waveforms are dc with respect to ground under

no-signal (detuned) conditions.

Voltages are taken with a VOM ($10 \text{ M}\Omega/\text{V}$).
Voltage variations may be noted due to normal production.

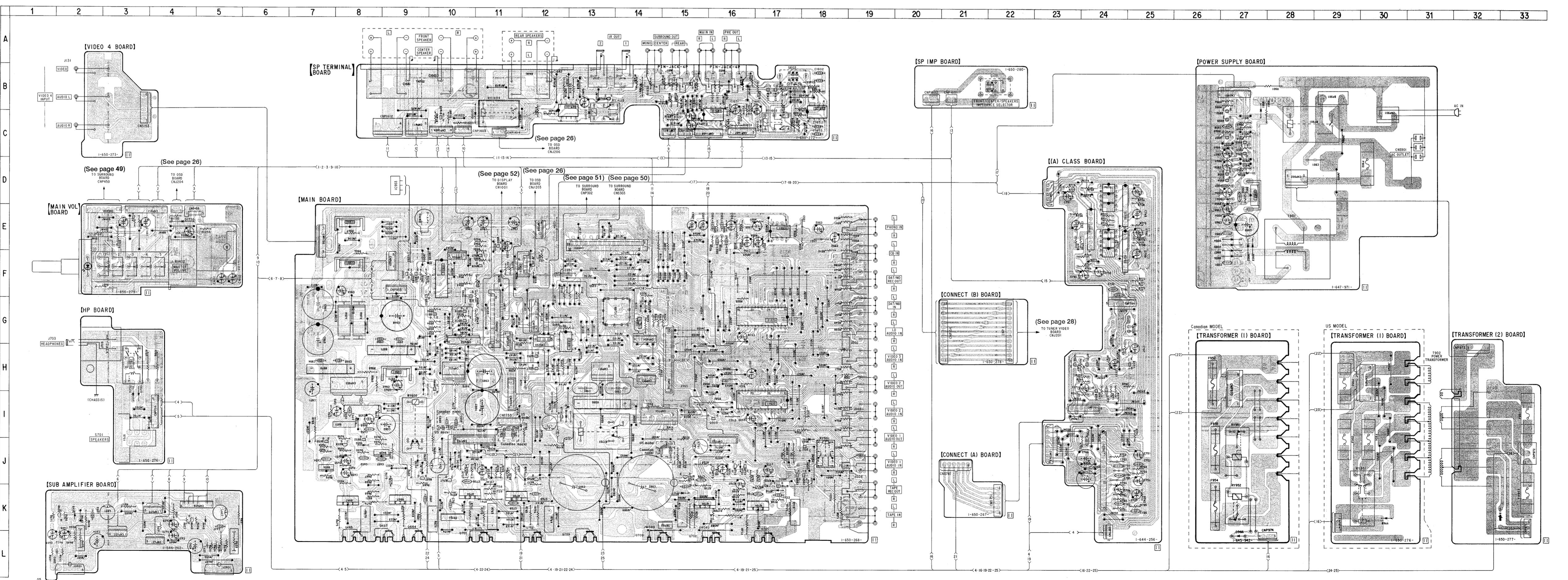
Voltage variations may be noted due to normal production tolerances.

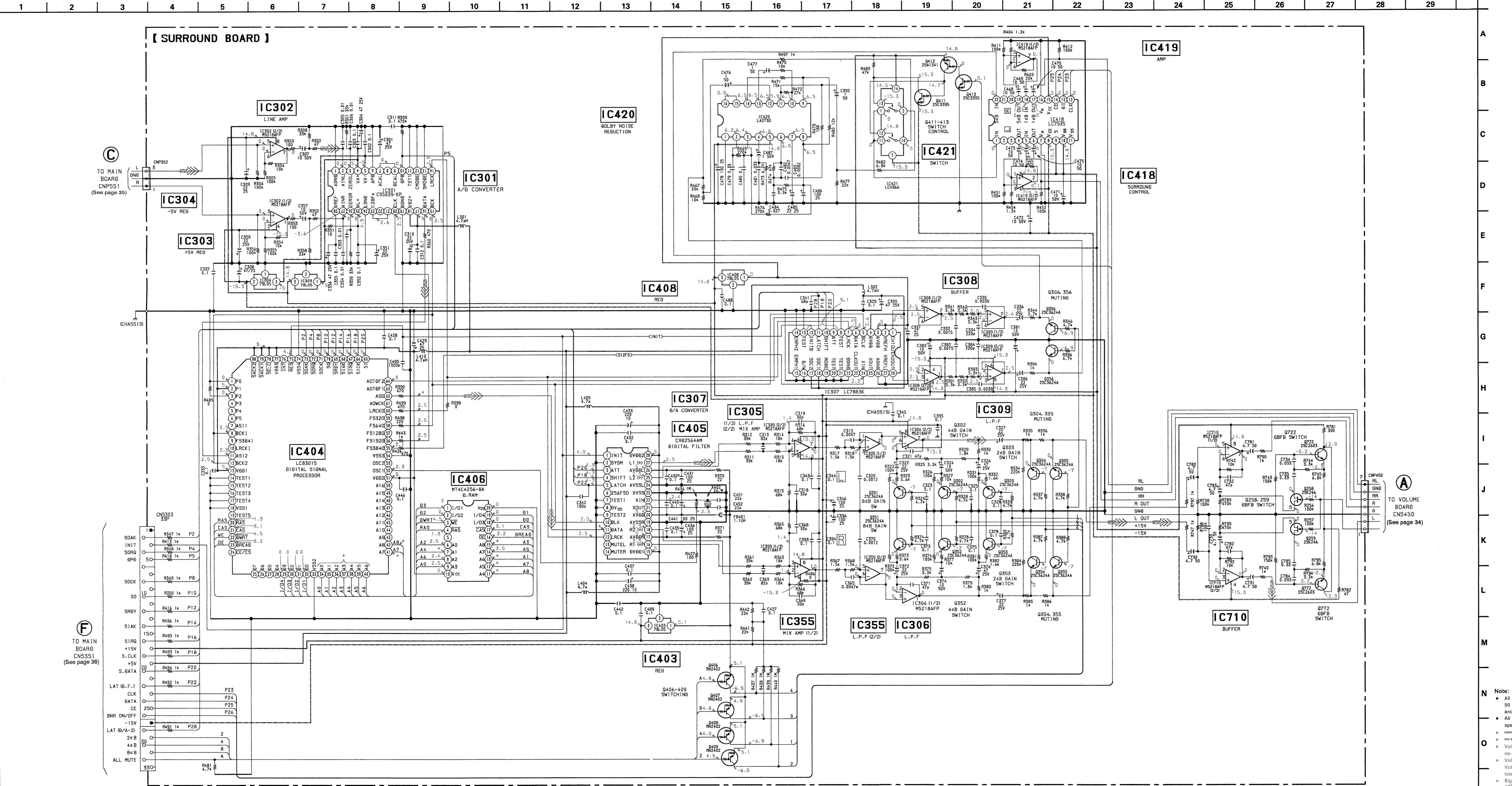
Signal path.

3-5. MAIN SECTION PRINTED WIRING BOARDS • See page 63 for Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D150	K-22	Q250	H-12
D252	G-14	Q255	H-24
D253	F-12	Q256	H-23
D501	J-17	Q257	H-12
D610	H-9	Q501	J-17
D620	K-2	Q502	J-17
D621	H-12	Q503	I-15
D622	K-5	Q504	F-10
D651	J-8	Q508	F-10
D652	J-8	Q509	G-10
D654	J-9	Q510	G-10
D705	I-12	Q511	G-9
D715	K-15	Q512	F-10
D716	K-17	Q520	F-9
D720	J-16	Q521	F-9
D723	J-17	Q523	E-11
D730	I-3	Q552	J-17
D731	H-11	Q620	K-1
D732	J-11	Q640	K-4
D766	J-10	Q651	I-7
D780	J-11	Q652	J-8
D781	J-10	Q653	J-8
D951	B-27	Q655	J-7
D952	E-27	Q656	J-7
D953	E-27	Q657	K-8
D954	E-27	Q658	J-8
D955	E-27	Q663	K-9
D956	F-27	Q664	K-9
D957	E-27	Q665	K-8
D958	D-26	Q666	K-8
D959	D-27	Q667	J-9
D960	C-26	Q702	K-15
D961	D-26	Q704	K-16
D963	K-27(Canadian)	Q705	K-17
D966	K-30(US)	Q708	K-15
D970	H-7	Q709	K-14
D971	H-8	Q711	J-15
D972	G-12	Q712	K-17
D980	I-5	Q713	J-15
D1601	O-10	Q714	J-16
D1602	C-13	Q715	J-10
D1603	C-16	Q716	J-12
D1730	E-4	Q721	H-23
IC150	G-13	Q752	K-12
IC231	G-12	Q755	K-10
IC501	E-17	Q758	K-11
IC510	E-17	Q759	K-13
IC511	I-17	Q777	J-10
IC514	F-10	Q768	J-12
IC601	K-2	Q771	H-24
IC621	K-5	Q952	B-26
IC701	J-24	Q953	D-27
IC702	E-4	Q954	D-26
IC753	F-24	Q955	C-27
IC752	F-24	Q956	C-27
IC951	F-8	Q957	D-26
IC952	E-8	Q958	D-26
IC953	D-9	Q959	C-26
IC1601	C-15	Q961	H-9
IC1602	C-18	Q1601	B-15
IC1603	B-12	Q1602	C-10
PH701	D-24	Q1604	B-13
PH751	E-24	Q1611	B-17
		Q1612	B-17





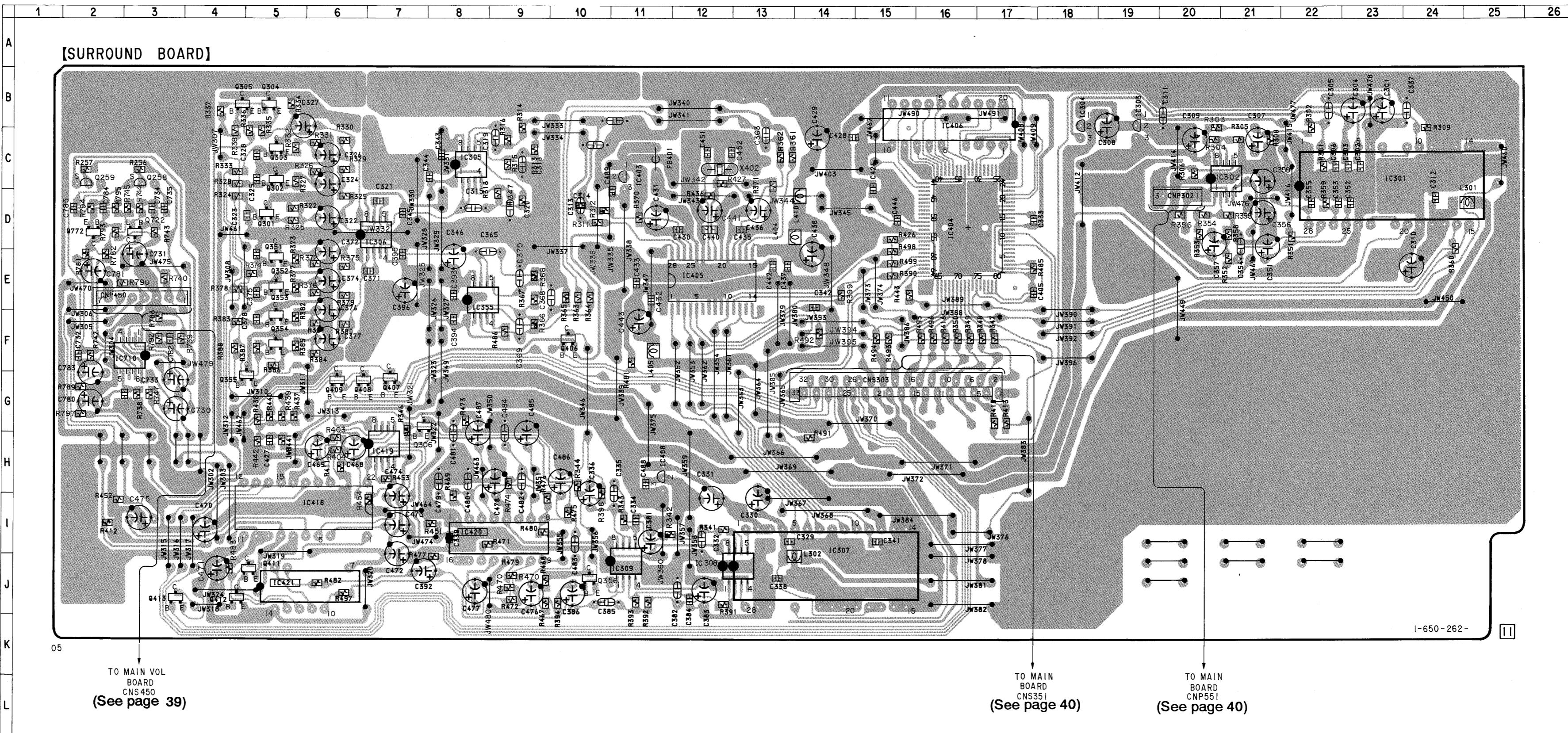
3-7. DIGITAL SECTION PRINTED WIRING BOARD • See page 63 for Semiconductor Lead Layouts.

Ref. No.	Location
IC301	C-23
IC302	C-21
IC303	B-19
IC304	B-18
IC305	C-8
IC306	D-7
IC307	J-14
IC308	J-13
IC309	J-11
IC355	E-8
IC403	C-11
IC404	D-16
IC405	E-12
IC406	B-16
IC408	H-11
IC418	I-6
IC419	H-7
IC420	I-9
IC421	J-6
IC710	F-3
Q258	C-3
Q259	C-2
Q301	D-5
Q302	C-5
Q303	C-5
Q304	B-5
Q305	B-4
Q306	G-7
Q351	E-5
Q352	E-5
Q353	F-5
Q354	F-5
Q355	G-5
Q356	J-10
Q406	F-10
Q407	G-7
Q408	G-6
Q409	G-6
Q411	J-5
Q412	J-4
Q413	J-3
Q722	D-3
Q722	D-2

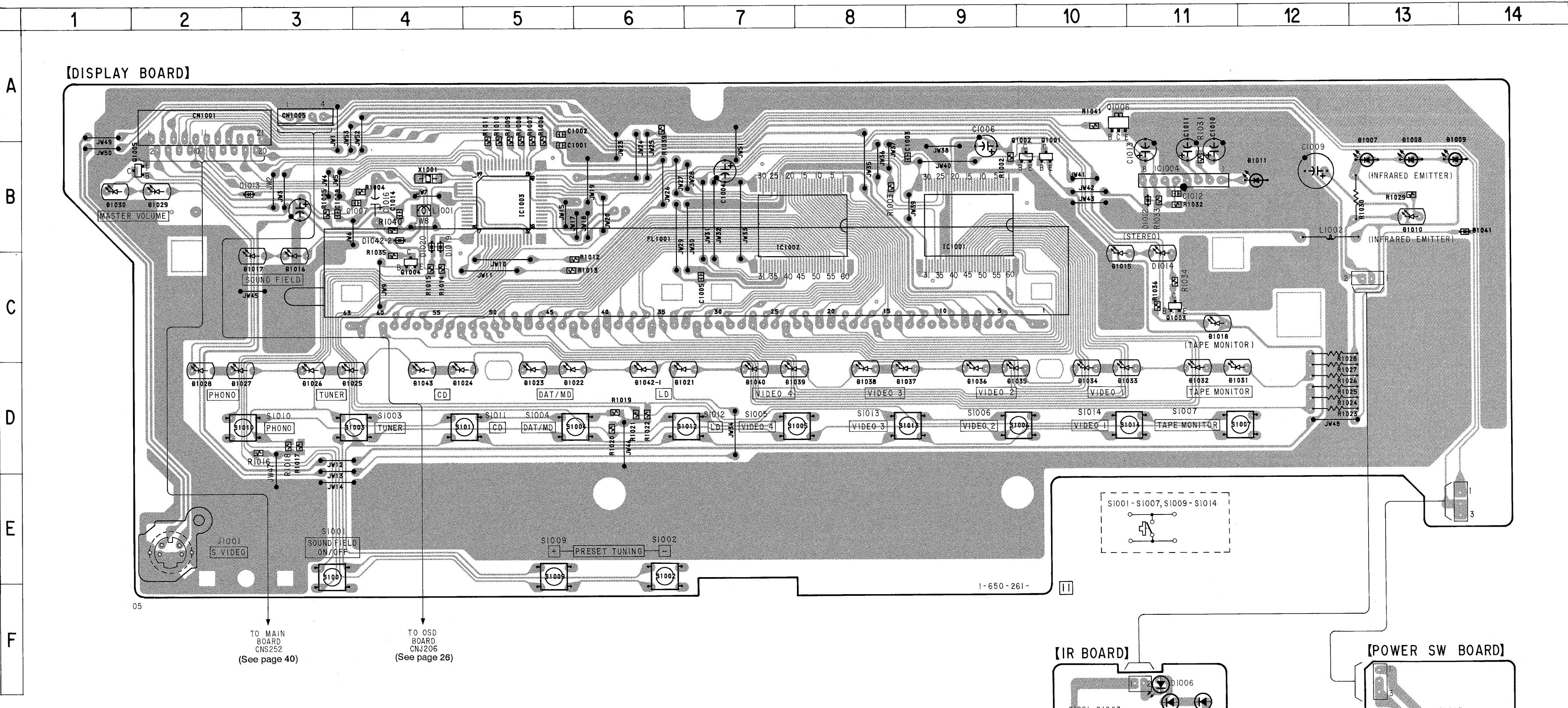
Note:

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : Through hole.
- : Pattern from the side which enables seeing.
(The other layers' patterns are not indicated.)

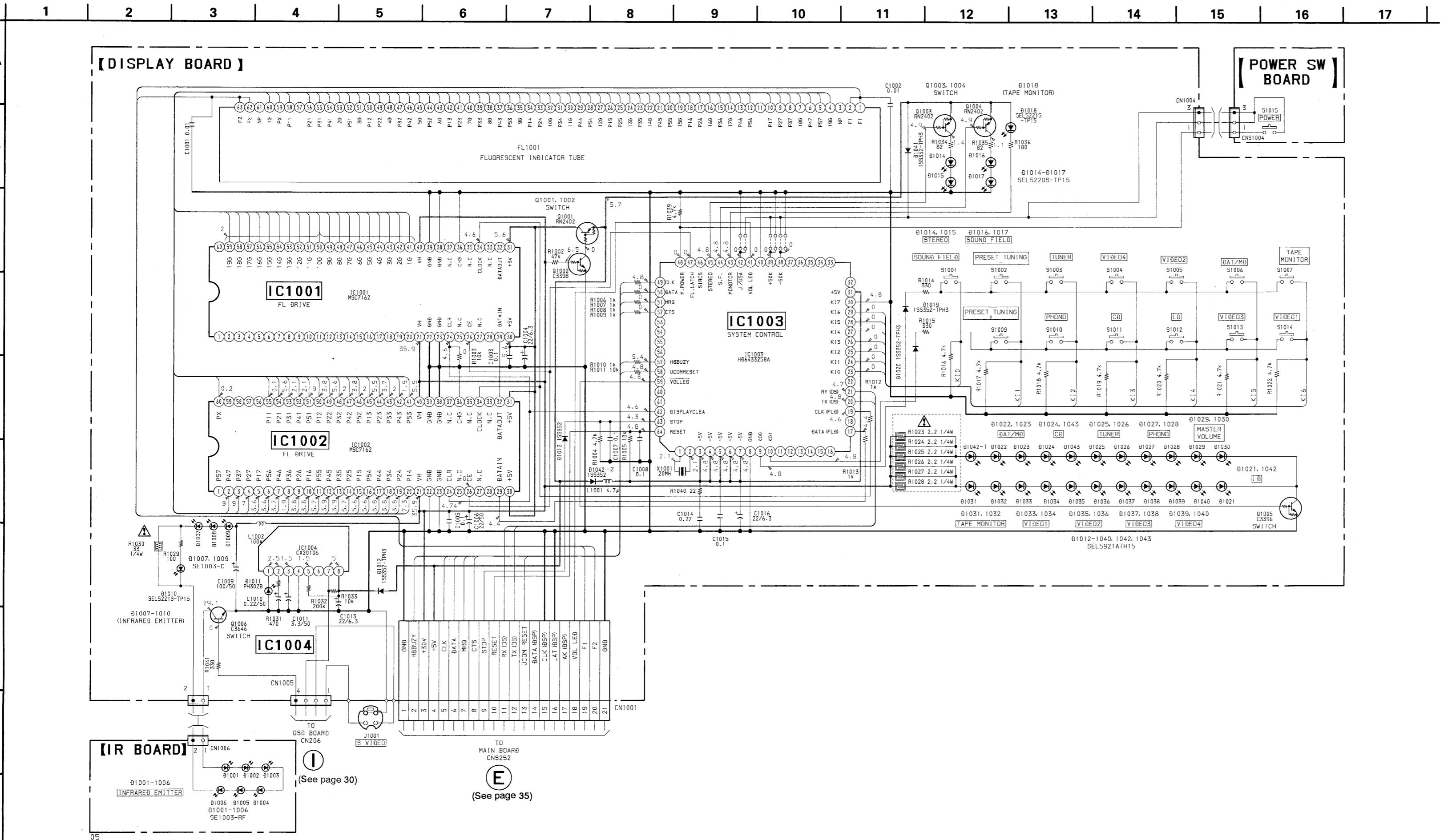
Caution:
Pattern face side: Parts on the pattern face side seen from
(Conductor Side) the pattern face are indicated.
Parts face side: Parts on the parts face side seen from the
(Component Side) parts face are indicated.



3-8. DISPLAY SECTION PRINTED WIRING BOARDS • See page 63 for Semiconductor Lead Layouts.

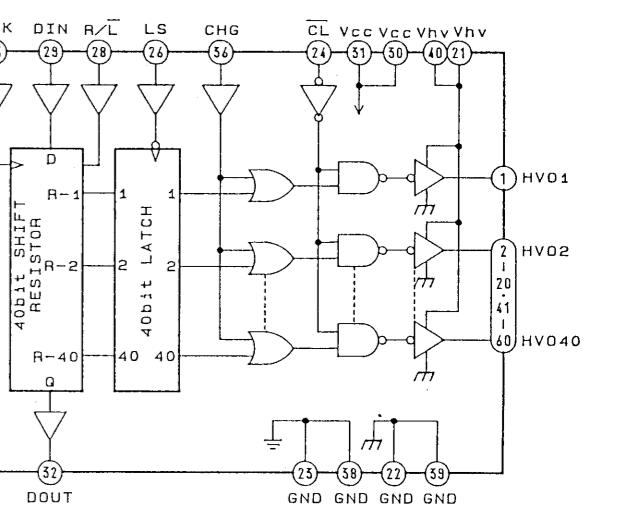


3-9. DISPLAY SECTION SCHEMATIC DIAGRAM

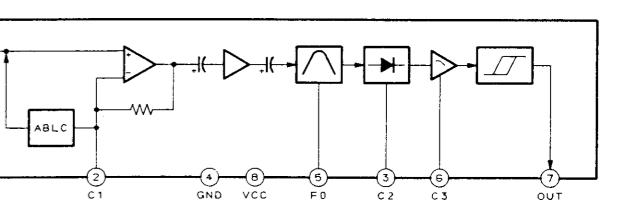


• IC Block Diagrams

IC1001, 1002 MSC7162



IC1004 CXA20106



Note:

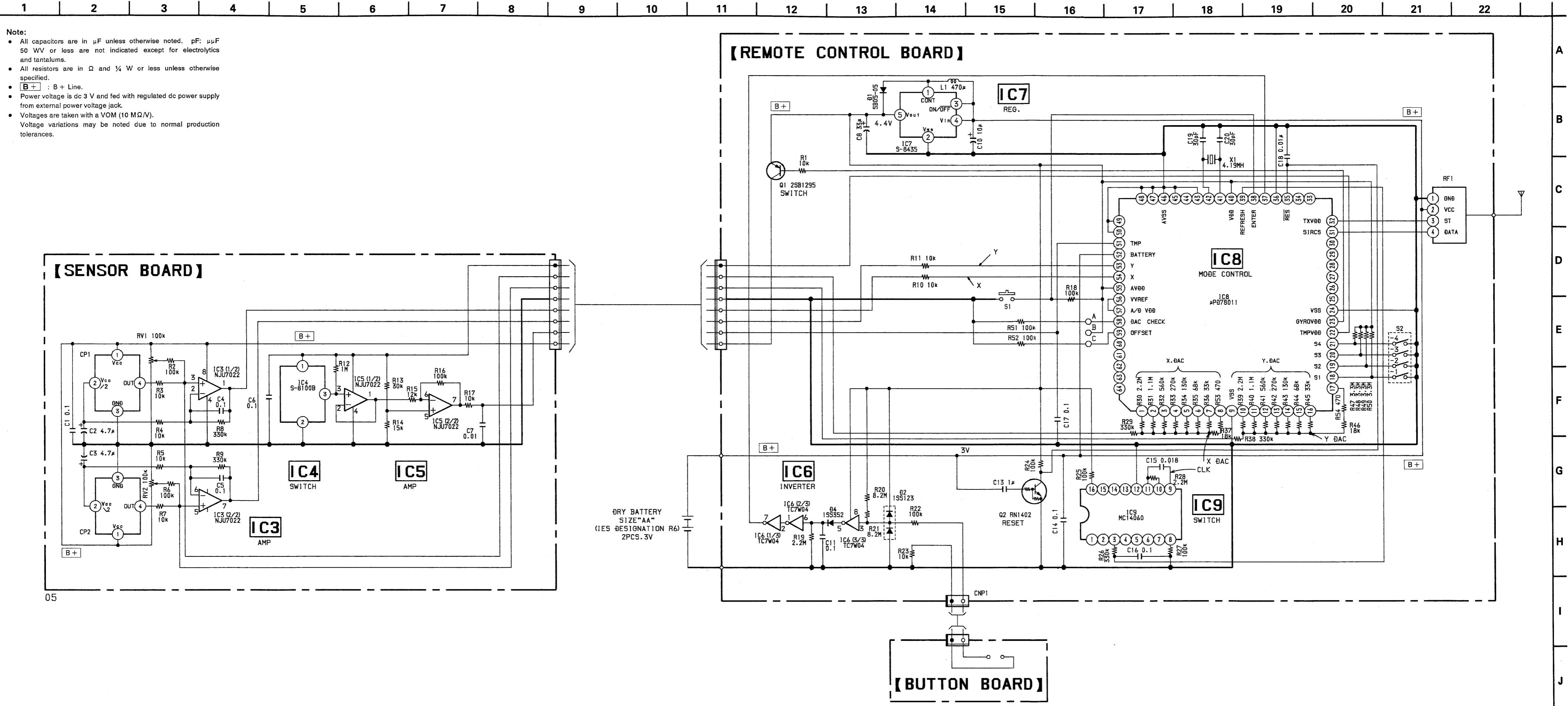
- All capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$ 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4$ W or less unless otherwise specified.
- : nonflammable resistor.

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

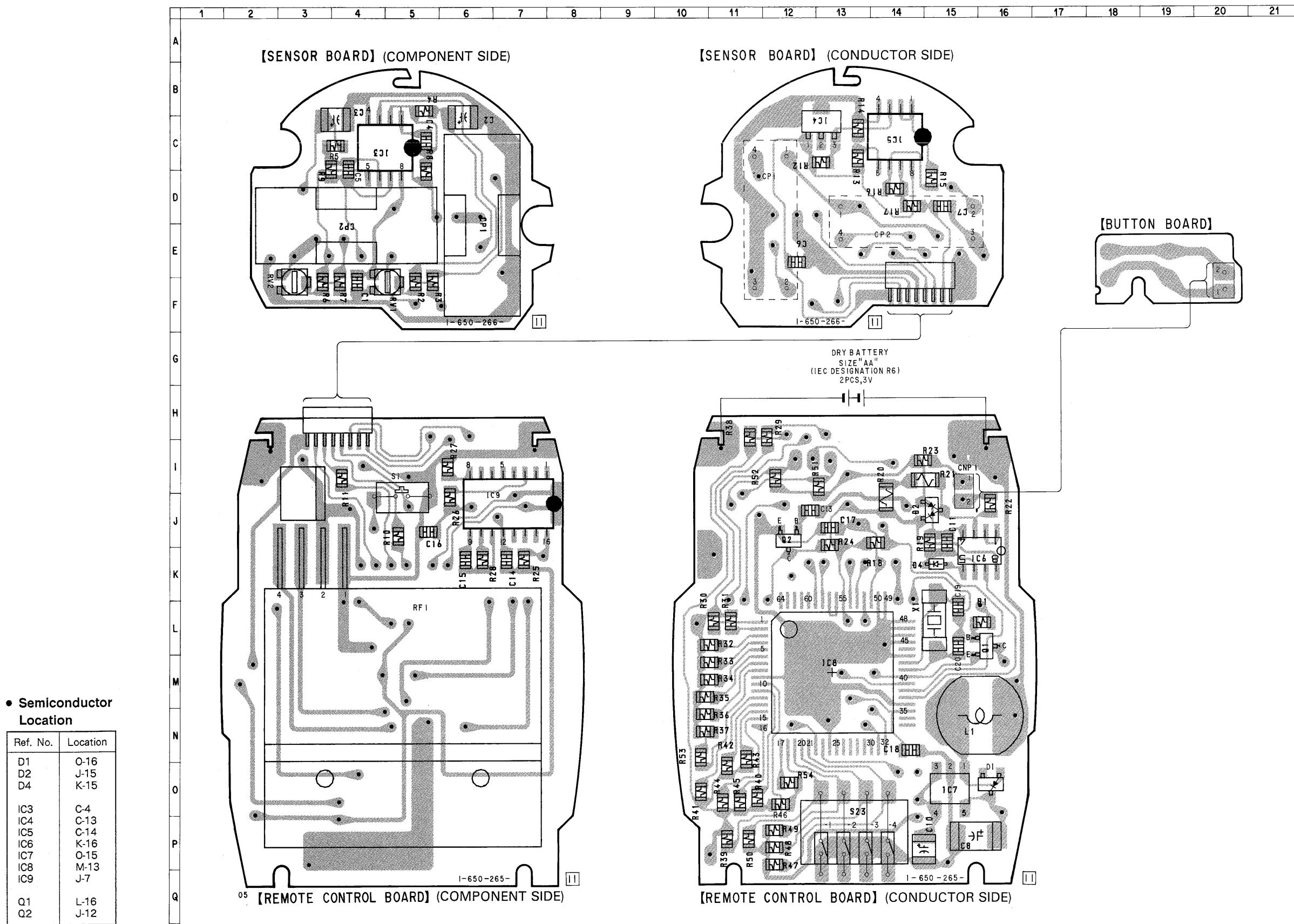
Note:
Les composants identifiés par une marque \triangle sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- : B + Line.
- : panel designation.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (10 M Ω /V). Voltage variations may be noted due to normal production tolerances.

3-10. REMOTE CONTROL SECTION SCHEMATIC DIAGRAM



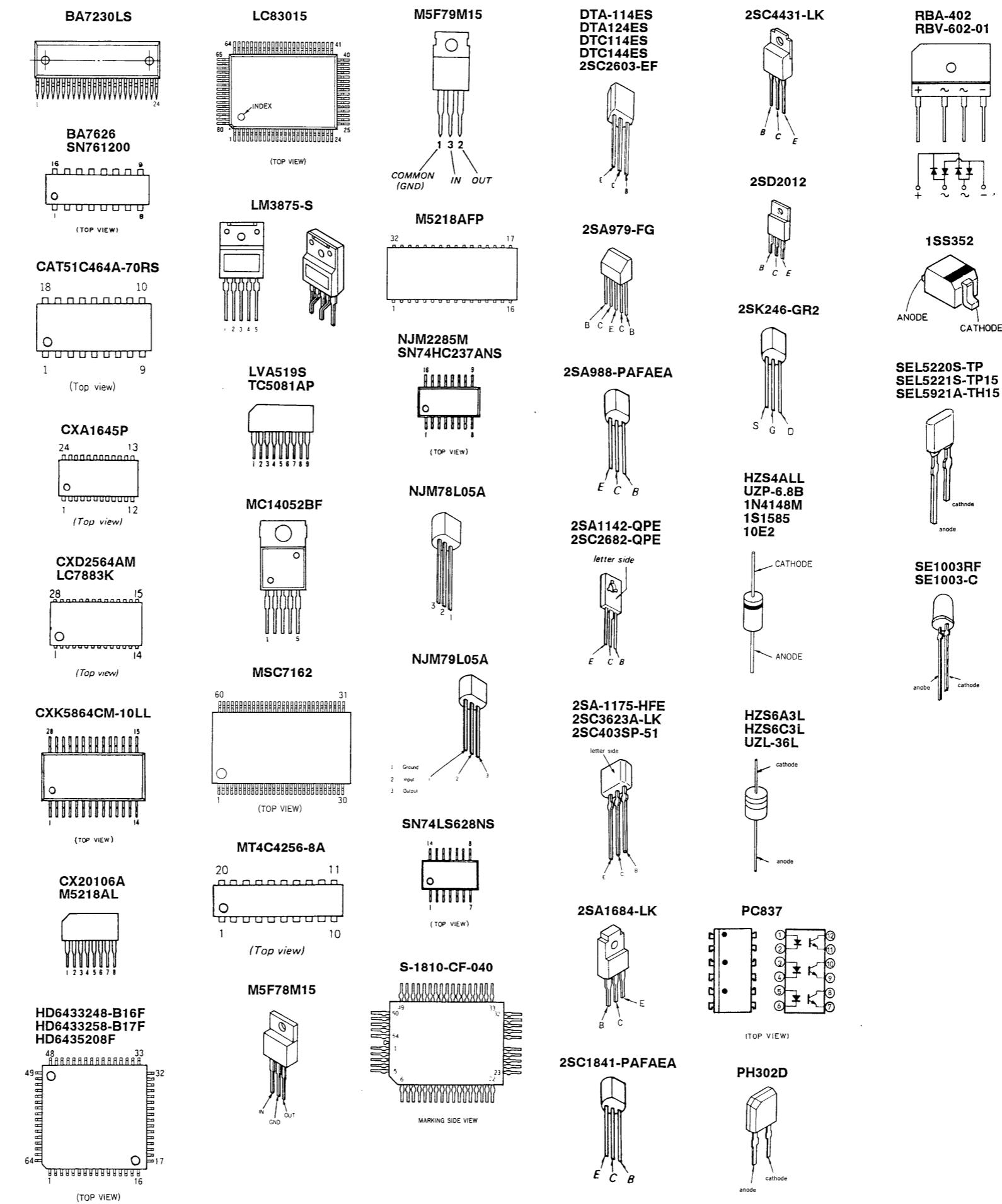
3-11. REMOTE CONTROL SECTION PRINTED WIRING BOARDS



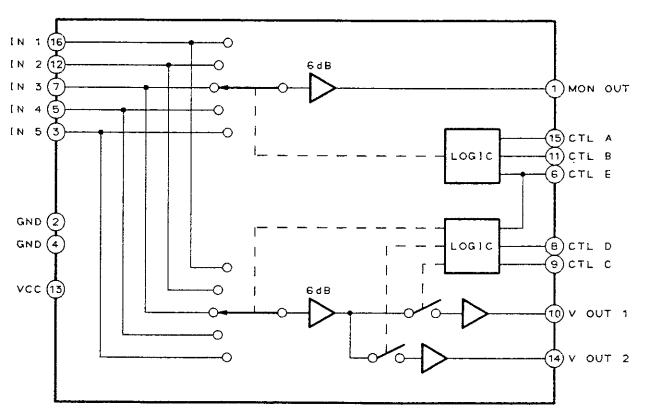
Note:

● — : parts extracted from the component side.

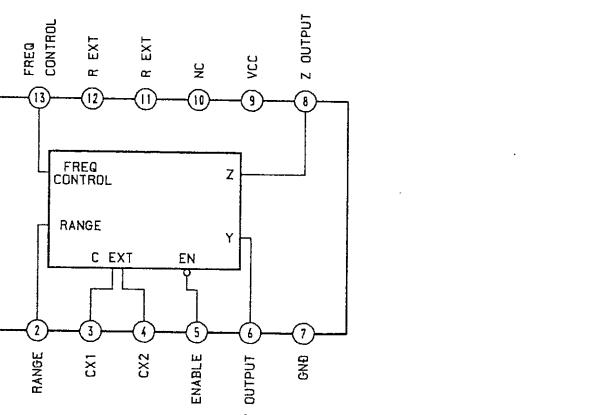
• Semiconductor Lead Layouts



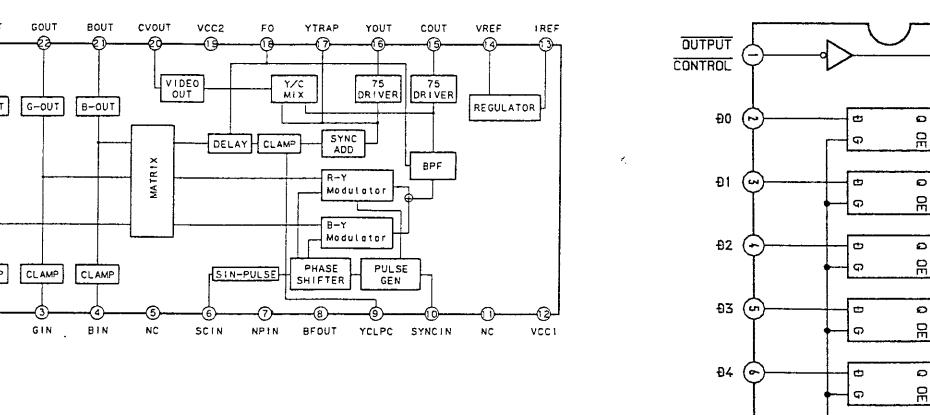
IC102 BA7626



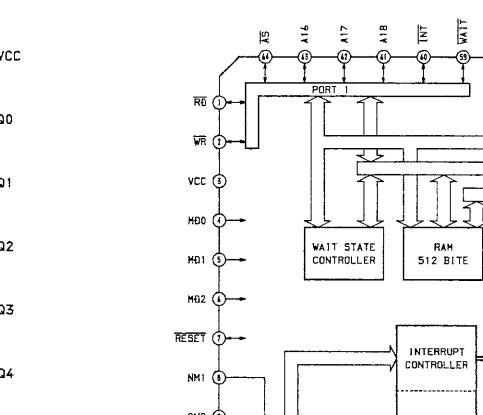
IC105 SN74LS628NS



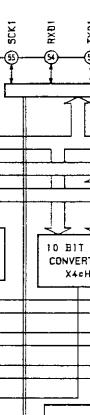
IC111 CXA1645P



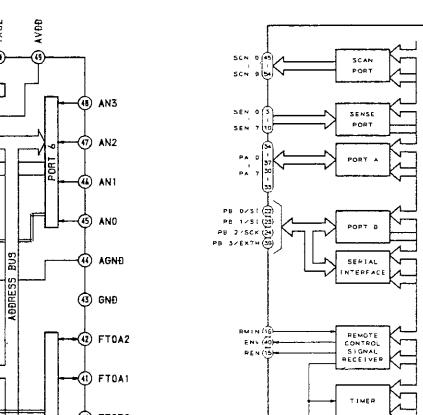
IC117 V9938



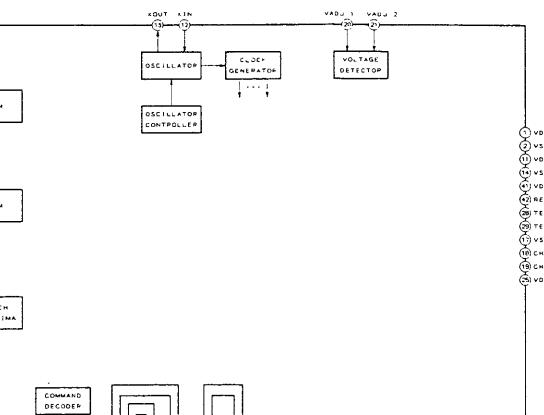
IC120 SN74HC573BNS



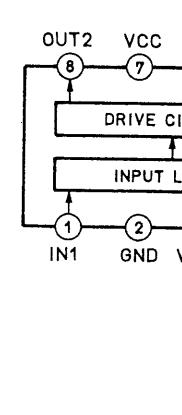
IC125 HD6435208F



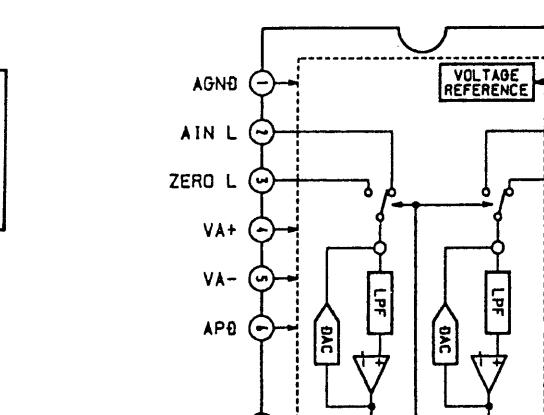
IC132 S-1810CF-040



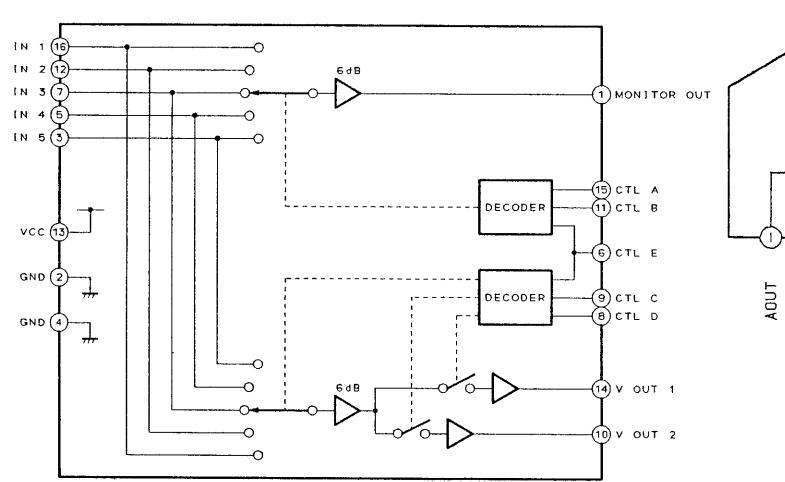
IC231 LB1639



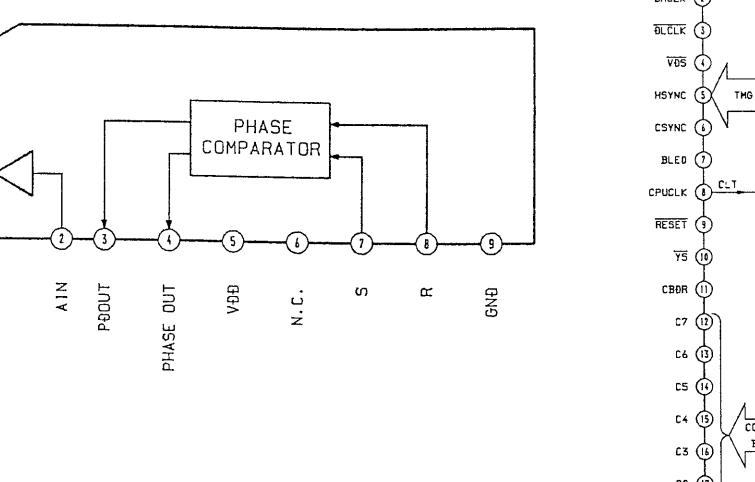
IC301 AK5339



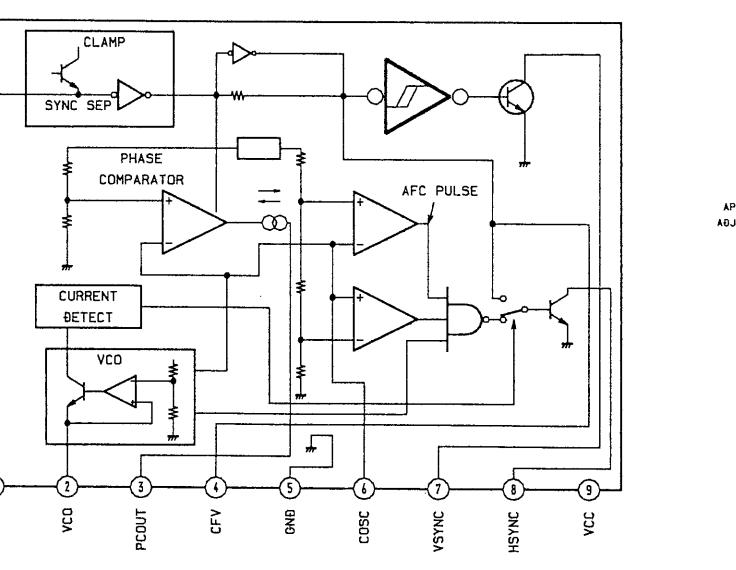
IC103, 201 SN761200N



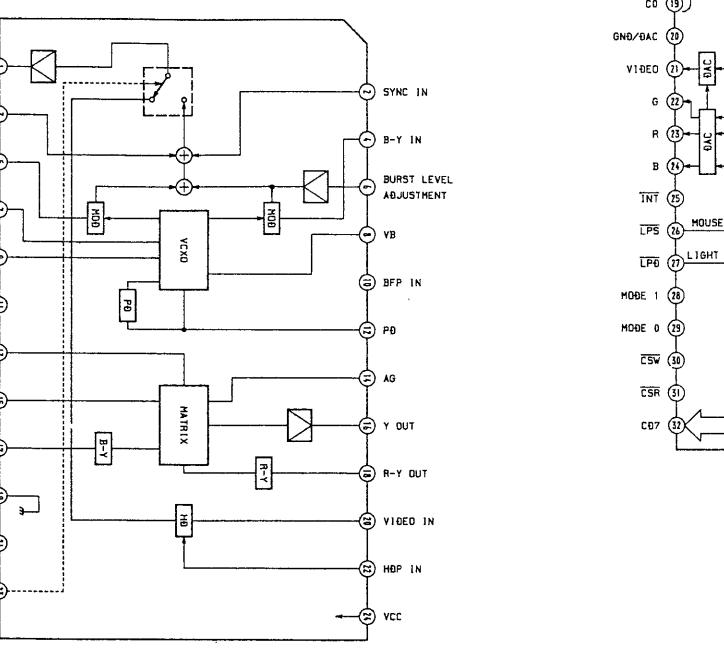
IC107 TC5081AP



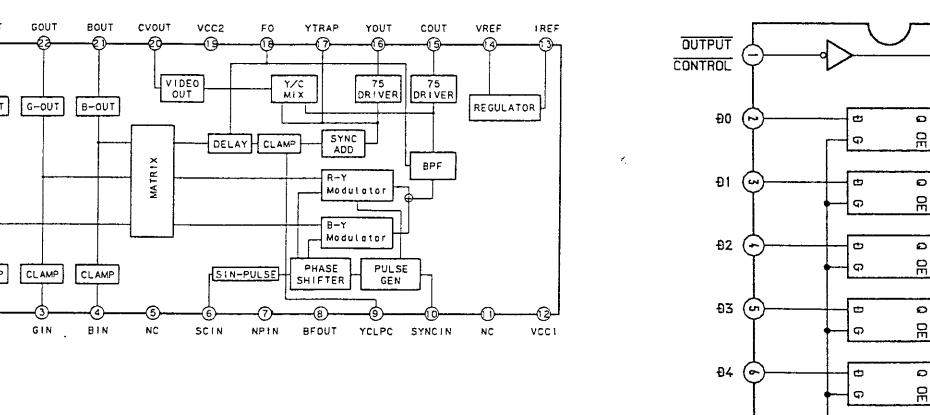
IC104, 109 LVA519S



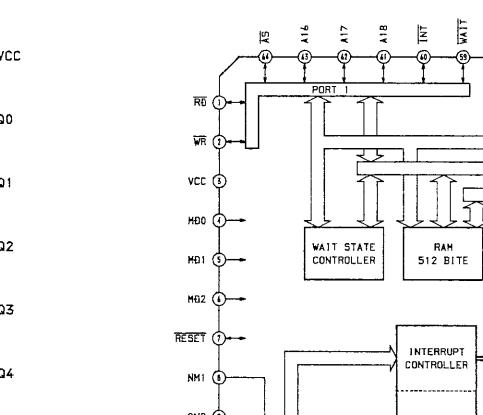
IC110 BA7230LS



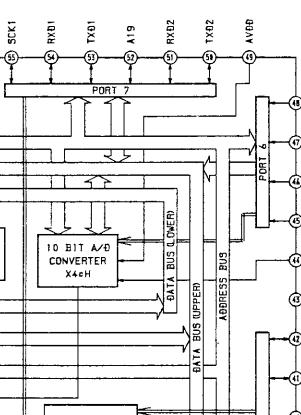
IC111 CXA1645P



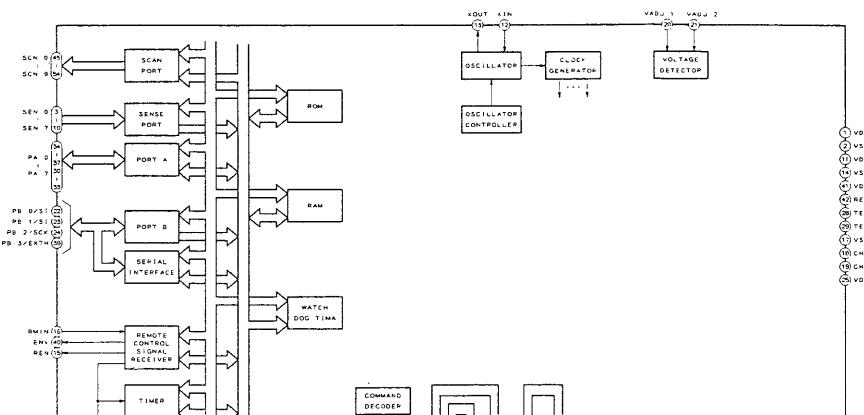
IC121 SN74HC541ANS



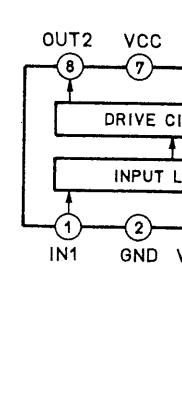
IC136 TC4W53F



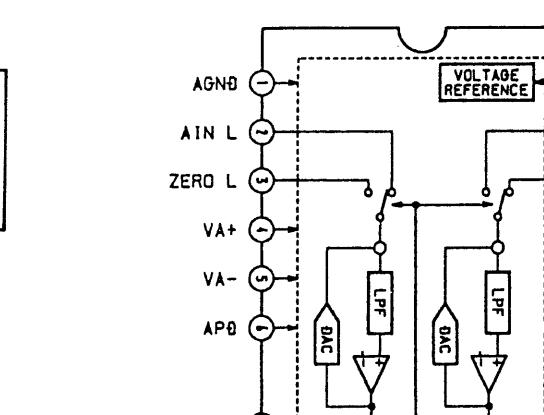
IC137 LM1881M

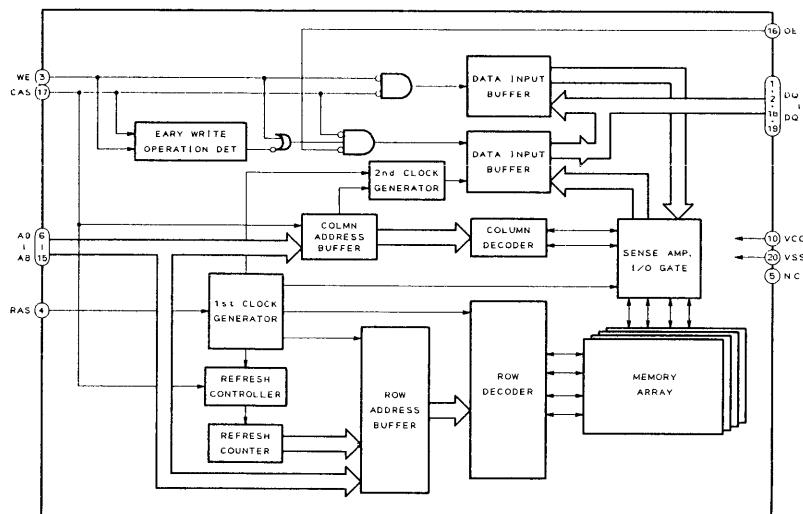
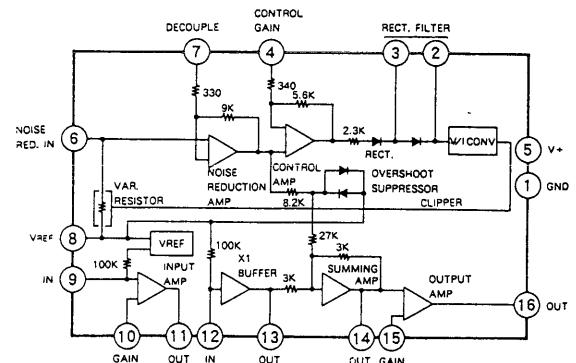
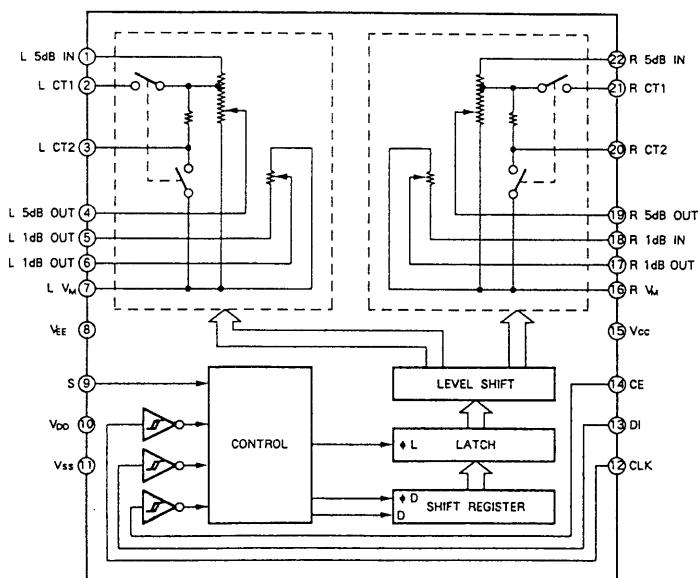
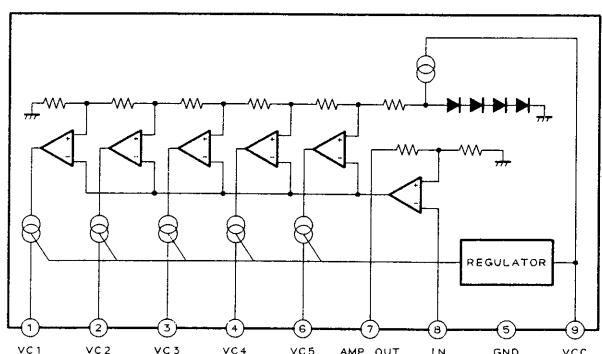


IC510, 511 LC7822



IC405 CXD2564AM



IC406 MT4C4256-8A**IC420 LA2730****IC418 LC7535****IC702 BA6125**

SECTION 4

EXPLODED VIEWS

NOTE:

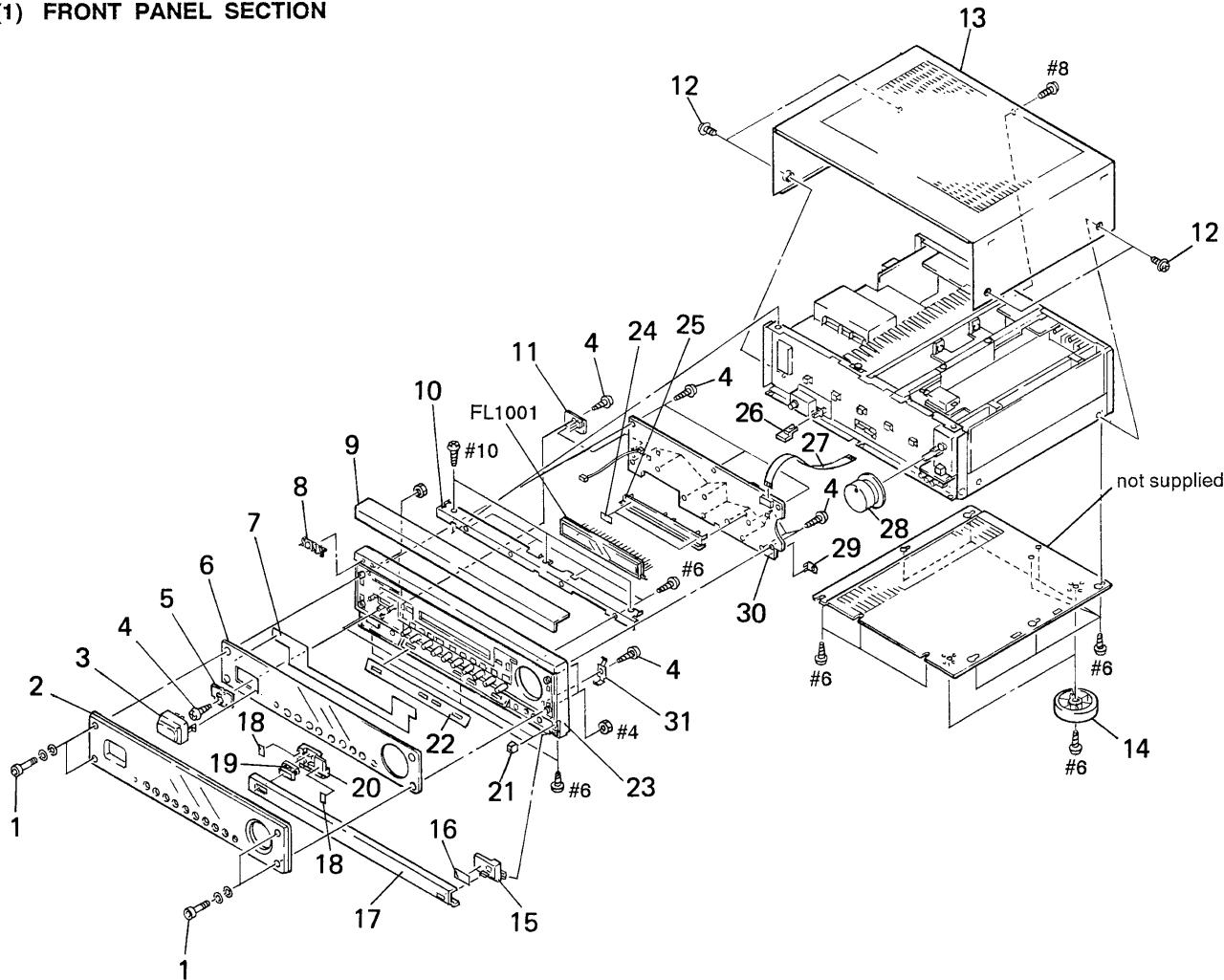
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts Example:
KNOB, BALANCE (WHITE) . . . (RED)
↑ ↑
Parts Color Cabinet's Color

- 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 is given in the last of this parts list.

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

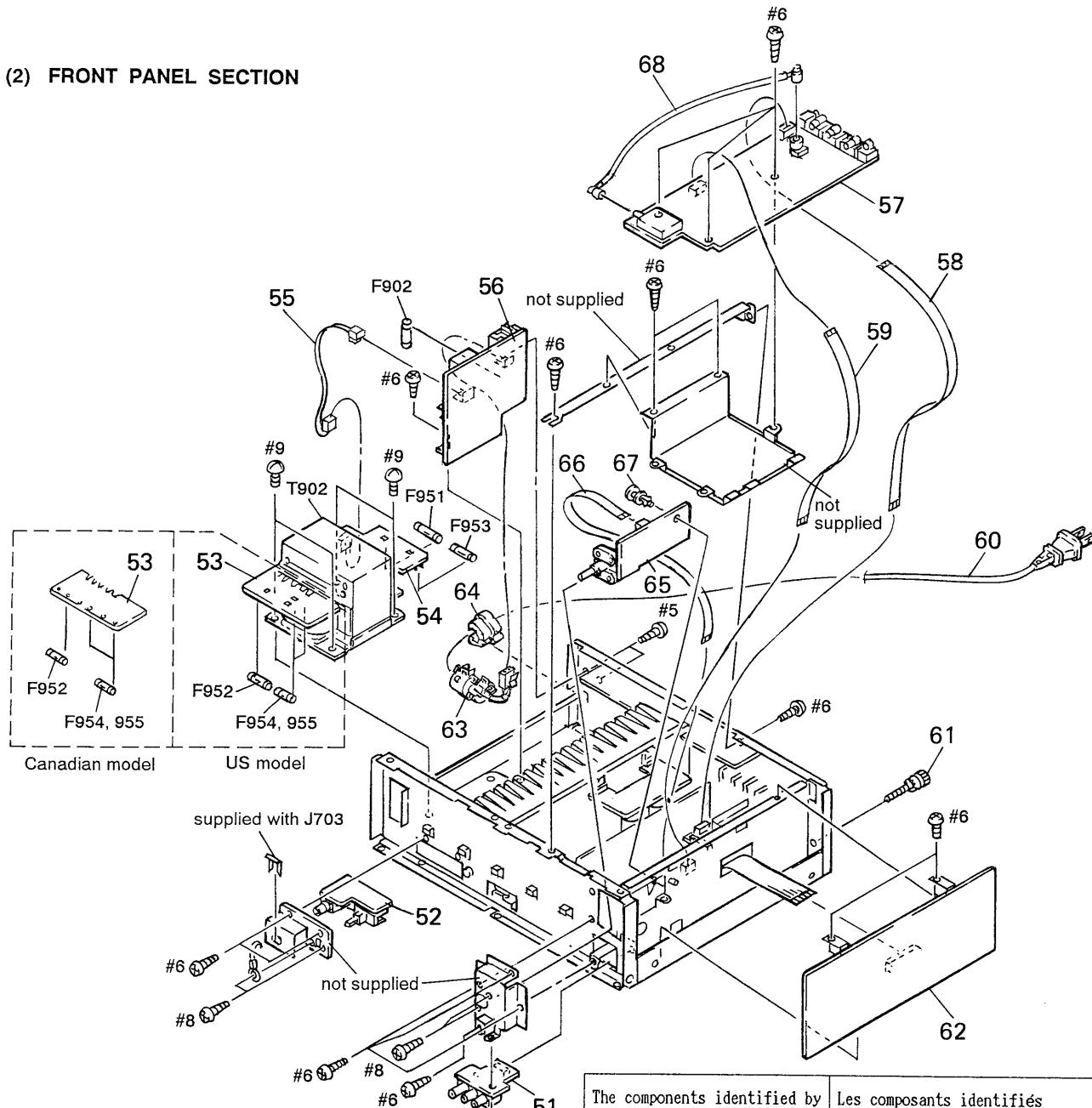
Les composants identifiés par une marque \triangle sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

(1) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-963-237-01	BOLT (M4X16), HEXAGON SOCKET		17	4-962-536-01	LID	
2	4-962-528-01	WINDOW, TRANSPARENT		18	4-962-974-01	TAPE (SQUARE), ADHESIVE	
3	4-962-534-01	COVER (LED)		19	4-962-532-01	BUTTON (POWER)	
4	4-951-620-01	SCREW (2.6X8), +BVTP		20	X-4944-264-1	HINGE (L) ASSY	
* 5	1-650-264-11	IR BOARD		21	3-736-779-41	MAGNET	
6	4-962-529-01	PLATE, INDICATION		22	4-962-526-01	PLATE (PVC), ORNAMENTAL	
7	4-962-975-01	ILLUMINATOR		23	4-962-525-01	BASE, PANEL	
8	4-942-568-01	EMBLEM (NO.5), SONY		* 24	4-921-941-51	CUSHION (FL)	
9	4-962-535-01	PANEL (T)		25	4-933-419-01	HOLDER (FL)	
10	4-962-538-01	BRACKET (FP)		26	4-962-533-01	BUTTON	
* 11	1-650-263-11	POWER SW BOARD		27	1-690-091-11	WIRE, FLAT TYPE (21 CORE)	
12	3-704-366-01	SCREW (CASE) (M3X8)		28	X-4944-194-1	KNOB (R48) ASSY	
* 13	4-927-877-11	CASE		* 29	4-964-230-01	PLATE (SVD), GROUND	
14	X-4941-617-1	FOOT (58175) ASSY		* 30	A-4365-635-A	DISPLAY BOARD, COMPLETE	
15	X-4944-263-1	HINGE (R) ASSY		* 31	4-962-544-01	PLATE (S.P), GROUND	
16	4-962-974-11	TAPE (SQUARE), ADHESIVE					FL1001 1-519-628-11 INDICATOR TUBE, FLUORESCENT

(2) FRONT PANEL SECTION



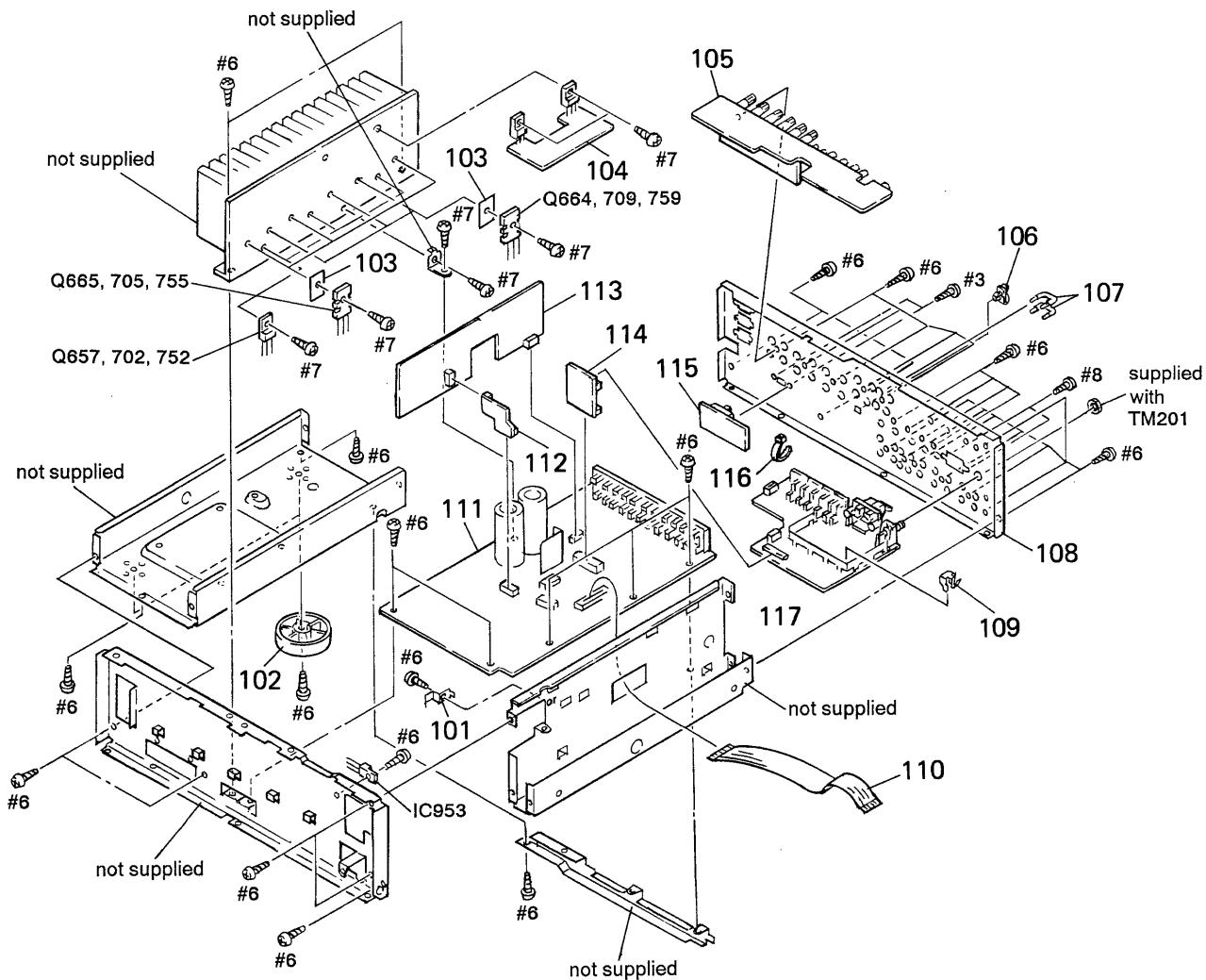
The components identified by mark \triangle or dotted line with mark. \triangle are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
* 51	1-650-273-11	VIDEO 4 BOARD	
* 52	1-650-274-11	HP BOARD	
* 53	1-650-276-11	TRANSFORMER (1) BOARD (US)	
* 53	1-645-942-11	TRANSFORMER (1) BOARD (Canadian)	
* 54	1-650-277-11	TRANSFORMER (2) BOARD	
55	1-696-073-21	LEAD (WITH CONNECTOR) (2 CORE)	
* 56	A-4365-617-A	POWER SUPPLY BOARD, COMPLETE	
* 57	A-4365-636-A	OSD BOARD, COMPLETE	
58	1-575-780-11	WIRE, FLAT TYPE (7 CORE)	
59	1-690-421-11	WIRE, FLAT TYPE (7 CORE)	
60	1-559-479-11	CORD, POWER	
61	4-947-010-01	SCREW, FEEDER FIXED	
* 62	A-4365-633-A	SURROUND BOARD, COMPLETE	
63	1-543-619-41	CORE RING	

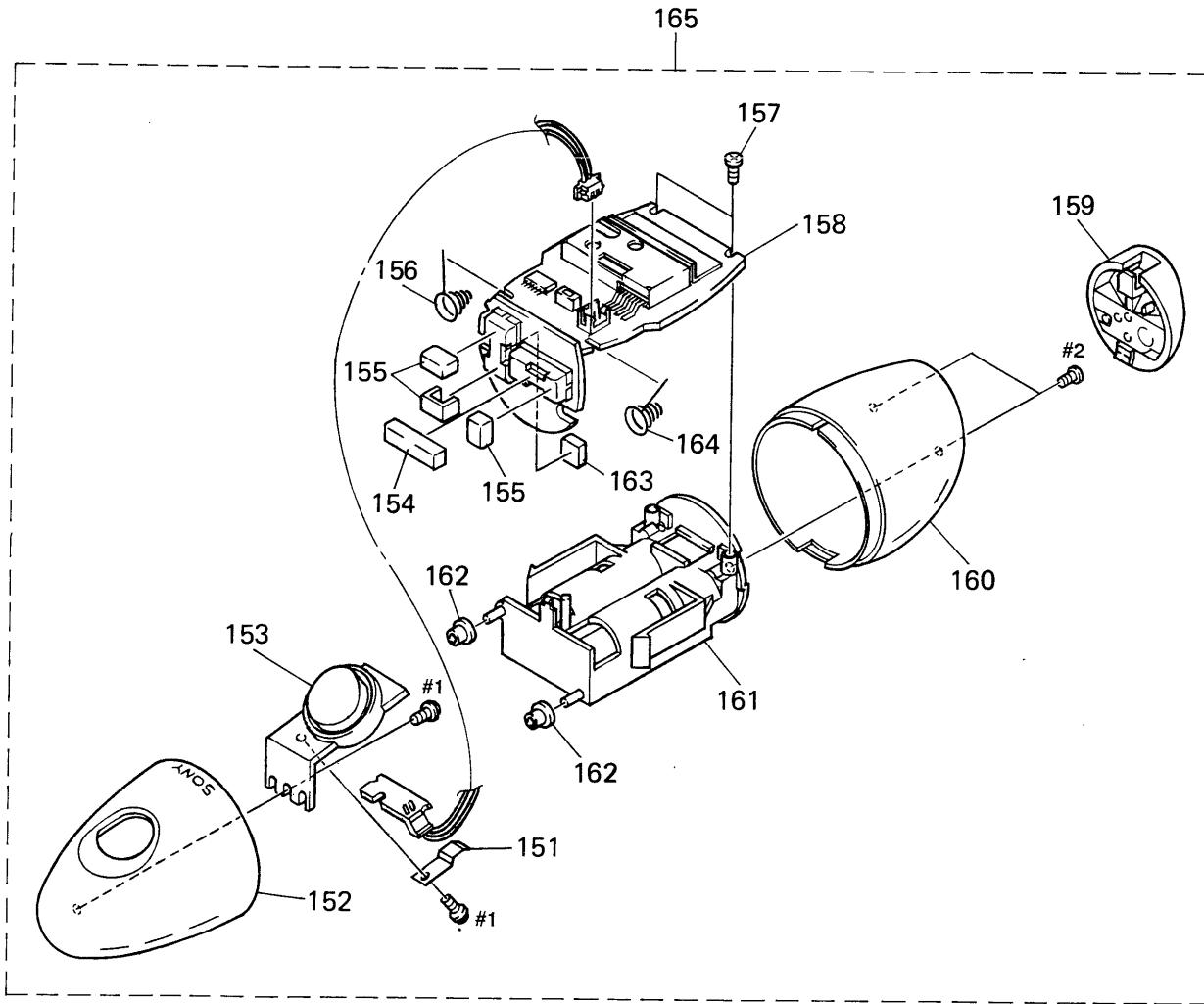
Ref. No.	Part No.	Description	Remark
64	4-916-783-01	BUSHING, CORD	
* 65	1-650-279-11	MAIN VOL BOARD	
66	1-575-848-11	WIRE, FLAT TYPE (5 CORE)	
67	3-531-576-11	RIVET	
* 68	1-555-110-00	CABLE, PIN	
△F902	1-532-749-11	FUSE, GLASS TUBE (8A 125V)	
△F951	1-576-109-11	FUSE (5A 125V)	
△F952	1-576-108-11	FUSE (4A 125V)	
△F953	1-576-109-11	FUSE (5A 125V)	
△F954	1-532-749-11	FUSE, GLASS TUBE (8A 125V)	
△F955	1-532-749-11	FUSE, GLASS TUBE (8A 125V)	
△T902	1-423-645-11	TRANSFORMER, POWER (US)	
△T902	1-423-695-11	TRANSFORMER, POWER (Canadian)	

(3) MAIN BOARD SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	4-962-545-01	BRACKET (MV)		* 114	1-650-278-11	CONNECT (B) BOARD	
102	X-4941-617-1	FOOT (58175) ASSY		* 115	1-650-280-11	SP IMP BOARD	
103	4-958-259-01	SHEET, RADIATION		116	3-655-653-21	BAND (TAITON), BINDING	
* 104	A-4365-630-A	REAR AMPLIFIER BOARD, COMPLETE		* 117	A-4365-608-A	TUNER VIDEO BOARD, COMPLETE	
* 105	A-4365-609-A	SP TERMINAL BOARD, COMPLETE		IC953	8-759-231-53	IC M5F7805S	
* 106	4-949-235-01	HOOK		Q657	8-729-209-15	TRANSISTOR 2SD2012	
107	1-535-706-11	PLUG, JUMPER		Q664	8-729-021-05	TRANSISTOR 2SA1553-R0	
* 108	4-962-537-01	PANEL, BACK (US)		Q665	8-729-021-06	TRANSISTOR 2SC4029-R0	
* 108	4-962-537-11	PANEL, BACK (Canadian)		Q702	8-729-209-15	TRANSISTOR 2SD2012	
* 109	4-964-231-01	PLATE (T.U.), GROUND		Q705	8-729-021-06	TRANSISTOR 2SC4029-R0	
110	1-696-550-11	WIRE (FLAT TYPE) (33 CORE)		Q709	8-729-021-05	TRANSISTOR 2SA1553-R0	
* 111	A-4365-549-A	MAIN BOARD, COMPLETE (Canadian)		Q752	8-729-209-15	TRANSISTOR 2SD2012	
* 111	A-4365-629-A	MAIN BOARD, COMPLETE (US)		Q755	8-729-021-06	TRANSISTOR 2SC4029-R0	
* 112	1-650-267-11	CONNECT (A) BOARD		Q759	8-729-021-05	TRANSISTOR 2SA1553-R0	
* 113	A-4365-631-A	A CLASS BOARD, COMPLETE					

(4) REMOTE COMMANDER SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	4-963-106-01	RETAINER, PC BOARD		159	X-4944-184-1	LID ASSY, BATTERY CASE	
152	4-962-491-01	SHELL (U)		160	4-962-492-01	SHELL (L)	
153	4-962-765-01	BUTTON (ENTER)		161	4-962-495-01	CHASSIS	
154	4-964-843-01	CUSHION		162	4-964-841-01	SHOCK ABSORBER (A)	
155	4-964-842-01	SHOCK ABSORBER (B)		163	4-964-914-01	SHOCK ABSORBER (C)	
156	4-963-399-01	SPRING (R), BATTERY COIL		164	4-963-398-01	SPRING (L), BATTERY COIL	
157	3-318-203-61	SCREW (B1.7X4), TAPPING		165	A-4352-701-A	OVERALL ASSY	
* 158	A-4357-534-A	REMOTE CONTROL BOARD, COMPLETE					

A CLASS

SECTION 5

ELECTRICAL PARTS LIST

NOTE:

- 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.
 - -XX and -X mean standardized parts, so they may have some difference from the original one.
 - **RESISTORS**
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
 - SEMICONDUCTORS
In each case, $u:\mu$, for example:
 $uA : \mu A$. $uPA : \mu PA$.
 $uPB : \mu PB$. $uPC : \mu PC$. $uPD : \mu PD$.
 - CAPACITORS
 $uF : \mu F$
 - COILS
 $uH : \mu H$

When indicating parts by reference number, please include the board

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

Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

A CLASS	CONNECT (A)	CONNECT (B)	DISPLAY
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R742	1-249-441-11	CARBON	100K 5% 1/4W	C1007	1-165-319-11	CERAMIC CHIP	0.1uF 50V
R748	1-249-441-11	CARBON	100K 5% 1/4W	C1008	1-165-319-11	CERAMIC CHIP	0.1uF 50V
△R751	1-249-417-11	CARBON	1K 5% 1/4W F	C1009	1-124-122-11	ELECT	100uF 20% 50V
R753	1-249-437-11	CARBON	47K 5% 1/4W	C1010	1-124-903-11	ELECT	1uF 20% 50V
△R754	1-249-413-11	CARBON	470 5% 1/4W F	C1011	1-124-464-11	ELECT	0.22uF 20% 50V
R755	1-249-437-11	CARBON	47K 5% 1/4W	C1013	1-124-638-11	ELECT	22uF 20% 10V
△R756	1-249-419-11	CARBON	1.5K 5% 1/4W F	C1014	1-104-905-11	CAP, DOUBLE LAYERS	0.22F
△R766	1-249-417-11	CARBON	1K 5% 1/4W F	C1015	1-165-319-11	CERAMIC CHIP	0.1uF 50V
△R767	1-249-427-11	CARBON	6.8K 5% 1/4W F	C1016	1-124-638-11	ELECT	22uF 20% 10V
R768	1-249-441-11	CARBON	100K 5% 1/4W	< CONNECTOR >			
R769	1-249-441-11	CARBON	100K 5% 1/4W	* CN1001 1-695-382-11 PIN, CONNECTOR (PC BOARD) 21P			
R770	1-249-429-11	CARBON	10K 5% 1/4W	* CN1004 1-565-835-11 SOCKET, CONNECTOR 3P			
△R771	1-249-427-11	CARBON	6.8K 5% 1/4W F	* CN1005 1-564-519-11 PLUG, CONNECTOR 4P			
R772	1-247-848-11	CARBON	5.1K 5% 1/4W	D1007	8-719-157-80	SE1003-C (INFRARED Emitter)	
R773	1-249-432-11	CARBON	18K 5% 1/4W	D1008	8-719-157-80	SE1003-C (INFRARED Emitter)	
R774	1-249-429-11	CARBON	10K 5% 1/4W	D1009	8-719-157-80	SE1003-C (INFRARED Emitter)	
R792	1-249-441-11	CARBON	100K 5% 1/4W	D1010	8-719-046-44	DIODE SEL5221S-TP15 (INFRARED Emitter)	
△R797	1-249-417-11	CARBON	1K 5% 1/4W F	D1011	8-719-118-33	DIODE PH302D	
R798	1-249-441-11	CARBON	100K 5% 1/4W	D1012	8-719-016-74	DIODE 1SS352	

*	1-650-267-11	CONNECT (A) BOARD	*****	D1013	8-719-016-74	DIODE 1SS352	
			< CONNECTOR >	D1014	8-719-032-83	DIODE SEL5220S-TP15 (STEREO)	
*	CNS751	1-691-176-11 CONNECTOR (BOARD TO BOARD) 6P		D1015	8-719-032-83	DIODE SEL5220S-TP15 (STEREO)	
*	CNS761	1-691-176-11 CONNECTOR (BOARD TO BOARD) 6P		D1016	8-719-032-83	DIODE SEL5220S-TP15 (SOUND FIELD)	

*	1-650-278-11	CONNECT (B) BOARD	*****	D1017	8-719-032-83	DIODE SEL5220S-TP15 (SOUND FIELD)	
			< CONNECTOR >	D1018	8-719-046-44	DIODE SEL5221S-TP15 (TAPE MONITOR)	
*	CNP1	1-691-170-11 PIN, CONNECTOR 13P		D1019	8-719-016-74	DIODE 1SS352	
*	CNP154	1-691-183-11 CONNECTOR (BOARD TO BOARD) 13P		D1020	8-719-016-74	DIODE 1SS352	

*	A-4365-635-A	DISPLAY BOARD, COMPLETE	*****	D1021	8-719-046-36	DIODE SEL5921A-TH15 (LD)	
			< CONNECTOR >	D1022	8-719-046-36	DIODE SEL5921A-TH15 (DAT/MD)	
*	4-921-941-51	CUSHION (FL)		D1023	8-719-046-36	DIODE SEL5921A-TH15 (DAT/MD)	
	4-933-419-01	HOLDER (FL)		D1024	8-719-046-36	DIODE SEL5921A-TH15 (CD)	

*	C1001	1-164-232-11 CERAMIC CHIP	0.01uF 50V	D1025	8-719-046-36	DIODE SEL5921A-TH15 (TUNER)	
	C1002	1-164-232-11 CERAMIC CHIP	0.01uF 50V	D1026	8-719-046-36	DIODE SEL5921A-TH15 (TUNER)	
	C1003	1-165-319-11 CERAMIC CHIP	0.1uF 50V	D1027	8-719-046-36	DIODE SEL5921A-TH15 (PHONO)	
	C1004	1-124-638-11 ELECT	22uF 20% 10V	D1028	8-719-046-36	DIODE SEL5921A-TH15 (PHONO)	
	C1005	1-165-319-11 CERAMIC CHIP	0.1uF 50V	D1029	8-719-046-36	DIODE SEL5921A-TH15 (MASTER VOLUME)	
	C1006	1-124-916-11 ELECT	22uF 20% 63V	D1030	8-719-046-36	DIODE SEL5921A-TH15 (MASTER VOLUME)	
				D1031	8-719-046-36	DIODE SEL5921A-TH15 (TAPE MONITOR)	

			< CAPACITOR >	D1032	8-719-046-36	DIODE SEL5921A-TH15 (TAPE MONITOR)	
				D1033	8-719-046-36	DIODE SEL5921A-TH15 (VIDEO 1)	
				D1034	8-719-046-36	DIODE SEL5921A-TH15 (VIDEO 1)	
				D1035	8-719-046-36	DIODE SEL5921A-TH15 (VIDEO 2)	
				D1036	8-719-046-36	DIODE SEL5921A-TH15 (VIDEO 2)	
				D1037	8-719-046-36	DIODE SEL5921A-TH15 (VIDEO 3)	
				D1038	8-719-046-36	DIODE SEL5921A-TH15 (VIDEO 3)	
				D1039	8-719-046-36	DIODE SEL5921A-TH15 (VIDEO 4)	

The components identified by mark △ or dotted line with mark. △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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DISPLAY

HP

Ref. No.	Part No.	Description	Remark
D1040	8-719-046-36	DIODE SEL5921A-TH15 (VIDEO 4)	
D1041	8-719-016-74	DIODE ISS352	
D1042-1	8-719-046-36	DIODE SEL5921A-TH15 (LD)	
D1042-2	8-719-016-74	DIODE ISS352	
D1043	8-719-046-36	DIODE SEL5921A-TH15 (CD)	
		< FILTER >	
FL1001	1-519-628-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC1001	8-759-512-46	IC MSC7162	
IC1002	8-759-512-46	IC MSC7162	
IC1003	8-759-194-51	IC HD6433248-B16F	
IC1004	8-759-938-39	IC CX20106A	
		< JACK >	
J1001	1-764-224-11	CONNECTOR (S TERMINAL) (S VIDEO)	
		< COIL >	
L1001	1-410-377-31	INDUCTOR CHIP 4.7uH	
L1002	1-408-080-00	INDUCTOR 100uH	
		< TRANSISTOR >	
Q1001	8-729-207-68	TRANSISTOR RN2402	
Q1002	8-729-805-41	TRANSISTOR 2SC3398	
Q1003	8-729-207-68	TRANSISTOR RN2402	
Q1004	8-729-207-68	TRANSISTOR RN2402	
Q1005	8-729-805-43	TRANSISTOR 2SC3396	
Q1006	8-729-810-05	TRANSISTOR 2SC3646-T-TC	
		< RESISTOR >	
R1002	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R1003	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R1004	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R1005	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R1006	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R1007	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R1008	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R1009	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R1010	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R1011	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R1012	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R1013	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R1014	1-216-037-00	METAL CHIP 330 5% 1/10W	
R1015	1-216-037-00	METAL CHIP 330 5% 1/10W	
R1016	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R1017	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R1018	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R1019	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R1020	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R1021	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R1022	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
△R1023	1-249-421-11	CARBON 2.2K 5% 1/4W F	
△R1024	1-249-421-11	CARBON 2.2K 5% 1/4W F	
△R1025	1-249-421-11	CARBON 2.2K 5% 1/4W F	
△R1026	1-249-421-11	CARBON 2.2K 5% 1/4W F	
△R1027	1-249-421-11	CARBON 2.2K 5% 1/4W F	
△R1028	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R1029	1-216-025-00	METAL CHIP 100 5% 1/10W	
△R1030	1-249-399-11	CARBON 33 5% 1/4W F	
R1031	1-216-041-00	METAL CHIP 470 5% 1/10W	
R1032	1-216-104-00	METAL CHIP 200K 5% 1/10W	
R1033	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R1034	1-216-023-00	METAL CHIP 82 5% 1/10W	
R1035	1-216-023-00	METAL CHIP 82 5% 1/10W	
R1036	1-216-031-00	METAL CHIP 180 5% 1/10W	
R1039	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R1040	1-216-009-00	METAL CHIP 22 5% 1/10W	
R1041	1-216-037-00	METAL CHIP 330 5% 1/10W	

< SWITCH >

S1001	1-554-303-21	SWITCH, TACTILE (SOUND FIELD)
S1002	1-554-303-21	SWITCH, TACTILE (PRESET TUNING -)
S1003	1-554-303-21	SWITCH, TACTILE (TUNER)
S1004	1-554-303-21	SWITCH, TACTILE (VIDEO 4)
S1005	1-554-303-21	SWITCH, TACTILE (VIDEO 2)

S1006	1-554-303-21	SWITCH, TACTILE (DAT/MD)
S1007	1-554-303-21	SWITCH, TACTILE (TAPE MONITOR)
S1009	1-554-303-21	SWITCH, TACTILE (PRESET TUNING +)
S1010	1-554-303-21	SWITCH, TACTILE (PHONO)
S1011	1-554-303-21	SWITCH, TACTILE (CD)

S1012	1-554-303-21	SWITCH, TACTILE (LD)
S1013	1-554-303-21	SWITCH, TACTILE (VIDEO 3)
S1014	1-554-303-21	SWITCH, TACTILE (VIDEO 1)

< VIBRATOR >

X1001	1-567-928-11	VIBRATOR, CERAMIC (20MHz)
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* 1-650-274-11 HP BOARD

< CONNECTOR >

* CNP710 1-564-521-11 PLUG, CONNECTOR 6P

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HP **IR** **MAIN**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< DIODE >							
D730	8-719-987-63	DIODE	1N4148M	C252	1-164-159-11	CERAMIC	0.1uF
D732	8-719-987-63	DIODE	1N4148M	C254	1-164-159-11	CERAMIC	0.1uF
< JACK >							
J703	1-507-796-71	JACK (HEADPHONES)		C255	1-164-159-11	CERAMIC	0.1uF
< RESISTOR >							
▲R786	1-215-869-11	METAL OXIDE	1K 5% 1W F	C257	1-162-294-31	CERAMIC	0.001uF 10%
▲R787	1-215-869-11	METAL OXIDE	1K 5% 1W F	C501	1-162-282-31	CERAMIC	100PF
< RELAY >							
RY702	1-515-727-11	RELAY		C502	1-124-927-11	ELECT	4.7uF
< SWITCH >							
S701	1-570-272-11	SWITCH, PUSH (1 KEY) (SPEAKERS)		C503	1-124-477-11	ELECT	47uF

* 1-650-264-11	IR BOARD			C504	1-130-480-00	MYLAR	0.0056u

< CONNECTOR >							
* CN1006	1-564-336-00	PIN, CONNECTOR 2P		C505	1-162-294-31	CERAMIC	1500PF
< DIODE >							
D1001	8-719-047-10	DIODE	SE1003RF (INFRARED Emitter)	C506	1-124-907-11	ELECT	4.7uF
D1002	8-719-047-10	DIODE	SE1003RF (INFRARED Emitter)	C507	1-124-916-11	ELECT	22uF
D1003	8-719-047-10	DIODE	SE1003RF (INFRARED Emitter)	C513	1-162-294-31	CERAMIC	0.001uF
D1004	8-719-047-10	DIODE	SE1003RF (INFRARED Emitter)	C515	1-162-294-31	CERAMIC	0.001uF
D1005	8-719-047-10	DIODE	SE1003RF (INFRARED Emitter)	C516	1-162-294-31	CERAMIC	0.001uF

D1006	8-719-047-10	DIODE	SE1003RF (INFRARED Emitter)	C517	1-124-907-11	ELECT	10uF

* A-4365-549-A	MAIN BOARD, COMPLETE (Canadian)			C518	1-124-907-11	ELECT	10uF

* A-4365-629-A	MAIN BOARD, COMPLETE (US)			C526	1-164-159-11	CERAMIC	0.1uF

* 3-309-144-21	HEAT SINK			C551	1-162-282-31	CERAMIC	100PF
* 4-880-403-11	HEAT SINK			C552	1-124-927-11	ELECT	4.7uF
* 4-904-446-01	PLATE, GROUND			C553	1-124-477-11	ELECT	47uF
* 4-931-903-01	HEAT SINK (D1)			C554	1-130-480-00	MYLAR	0.0056u
* 4-942-204-01	PLATE, GROUND			C555	1-106-347-00	MYLAR	1500PF

7-682-548-04	SCREW +BVTT	3X8 (S)		C556	1-124-927-11	ELECT	4.7uF
< CAPACITOR >							
C251	1-124-925-11	ELECT	2.2uF 20% 100V	C557	1-124-916-11	ELECT	22uF

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MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C713	1-136-161-00	FILM	0.047uF 5% (Canadian)	* CNP654 1-564-507-11	PLUG, CONNECTOR 4P		
C714	1-124-925-11	ELECT	2.2uF 20%	CNP751 1-691-163-11	PIN, CONNECTOR 6P		
C715	1-124-472-11	ELECT	470uF 20%	CNP752 1-691-162-11	PIN, CONNECTOR 5P		
C757	1-124-477-11	ELECT	47uF 20%	CNP753 1-691-165-11	PIN, CONNECTOR 8P		
				* CNP754 1-564-242-00	PIN, CONNECTOR 5P		
C758	1-102-233-00	CERAMIC	33PF 10%	* CNP755 1-564-507-11	PLUG, CONNECTOR 4P		
C759	1-102-233-00	CERAMIC	33PF 10%	CNP951 1-564-104-00	PIN, CONNECTOR 3P		
C760	1-136-165-00	FILM	0.1uF 5%	CNP953 1-564-242-00	PIN, CONNECTOR 5P		
C761	1-136-165-00	FILM	0.1uF 5%	* CNP955 1-564-506-11	PLUG, CONNECTOR 3P		
C762	1-136-157-00	FILM	0.022uF 5%	* CNS151 1-568-826-11	SOCKET, CONNECTOR 7P		
C762	1-136-161-00	FILM	0.047uF 5% (Canadian)	CNS252 1-568-838-11	SOCKET, CONNECTOR 21P		
C763	1-136-161-00	FILM	0.047uF 5% (Canadian)	* CNS253 1-568-824-11	SOCKET, CONNECTOR 5P		
				CNS351 1-695-218-11	SOCKET, CONNECTOR 33P		
C962	1-124-907-11	ELECT	10uF 20%			< DIODE >	
C963	1-126-955-11	ELECT	4700uF 20%	D252 8-719-987-63	DIODE	IN4148M	
C964	1-124-910-11	ELECT	47uF 20%	D253 8-719-987-63	DIODE	IN4148M	
C965	1-126-955-11	ELECT	4700uF 20%	D501 8-719-987-63	DIODE	IN4148M	
C966	1-124-477-11	ELECT	47uF 20%	D610 8-719-987-63	DIODE	IN4148M	
C967	1-124-477-11	ELECT	47uF 20%	D623 8-719-987-63	DIODE	IN4148M	
C968	1-126-017-11	ELECT	6800uF 20%	D651 8-719-933-35	DIODE	HZS6A3L	
C969	1-124-477-11	ELECT	47uF 20%	D652 8-719-987-63	DIODE	1N4148M	
C971	1-124-667-11	ELECT	10uF 20%	D654 8-719-815-85	DIODE	1S1585	
C980	1-106-391-12	MYLAR	0.1uF 5%	D705 8-719-987-63	DIODE	1N4148M	
C981	1-106-391-12	MYLAR	0.1uF 5%	D715 8-719-815-85	DIODE	1S1585	
C982	1-104-819-11	ELECT	15000uF 99%	D716 8-719-815-85	DIODE	1S1585	
C983	1-104-819-11	ELECT	15000uF 99%	D718 8-719-987-63	DIODE	1N4148M	
C984	1-128-573-11	ELECT	470uF 20%	D720 8-719-987-63	DIODE	1N4148M	
C985	1-128-573-11	ELECT	470uF 20%	D723 8-719-987-63	DIODE	1N4148M	
C991	1-164-096-11	CERAMIC	0.01uF	D731 8-719-987-63	DIODE	1N4148M	
C992	1-164-096-11	CERAMIC	0.01uF	D765 8-719-815-85	DIODE	1S1585	
C993	1-164-096-11	CERAMIC	0.01uF	D766 8-719-815-85	DIODE	1S1585	
C994	1-164-096-11	CERAMIC	0.01uF	D780 8-719-200-02	DIODE	10E2	
				D781 8-719-200-02	DIODE	10E2	
				D963 8-719-002-70	DIODE	UZL-36L	
CF251	1-567-928-11	VIBLATOR, CERAMIC		D970 8-719-312-09	DIODE	RBA-402	
				D971 8-719-312-09	DIODE	RBA-402	
				D973 8-719-987-63	DIODE	1N4148M	
				D980 8-719-302-38	DIODE	RBV-602-01	
						< IC >	
* CNP153	1-569-798-11	PLUG, CONNECTOR 6P		IC150 8-759-194-50	IC	HD6433258-B17F	
CNP154	1-691-170-11	PIN, CONNECTOR 13P		IC231 8-759-820-62	IC	LB1639	
CNP251	1-691-767-11	PLUG (MICRO CONNECTOR) 5P		IC501 8-759-111-44	IC	UPC4570C-1	
* CNP253	1-564-506-11	PLUG, CONNECTOR 3P		IC510 8-759-805-14	IC	LC7822	
* CNP551	1-564-506-11	PLUG, CONNECTOR 3P		IC511 8-759-805-14	IC	LC7822	
* CNP554	1-564-506-11	PLUG, CONNECTOR 3P		IC514 8-759-801-01	IC	LC4966	
* CNP559	1-564-506-11	PLUG, CONNECTOR 3P		IC951 8-759-604-40	IC	M5F78M15L	
* CNP651	1-564-506-11	PLUG, CONNECTOR 3P		IC952 8-759-604-46	IC	M5F79M15L	
* CNP652	1-564-104-00	PIN, CONNECTOR (B3P-VH) 3P		IC953 8-759-231-53	IC	M5F7805S	
* CNP653	1-564-509-11	PLUG, CONNECTOR 6P					

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark				
< JACK >											
J501	1-691-260-11	JACK, PIN 6P (PHONO IN/CD IN/DAT/MD (REC(OUT)))		Q708	8-729-141-37	TRANSISTOR	2SA1684-LK				
J502	1-691-260-11	JACK, PIN 6P (VIDEO 3 AUDIO IN/LD AUDIO IN/MD(IN))		Q709	8-729-021-05	TRANSISTOR	2SA1553-RO				
J503	1-691-260-11	JACK, PIN 6P (VIDEO 1 AUDIO OUT/VIDEO 2(AUDIO IN/OUT))		Q711	8-729-140-82	TRANSISTOR	2SA988-PAFAEA				
J504	1-691-260-11	JACK, PIN 6P (TAPE (IN/REC OUT)/VIDEO 1 AUDIO IN)		Q712	8-729-140-82	TRANSISTOR	2SA988-PAFAEA				
< COIL >											
L602	1-420-872-00	COIL, AIR CORE		Q713	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA				
L701	1-420-872-00	COIL, AIR CORE		Q714	8-729-620-05	TRANSISTOR	2SC2603-EF				
L751	1-420-872-00	COIL, AIR CORE		Q715	8-729-140-82	TRANSISTOR	2SA988-PAFAEA				
< TRANSISTOR >											
Q250	8-729-119-76	TRANSISTOR	2SA1175-HFE	Q716	8-729-620-05	TRANSISTOR	2SC2603-EF				
Q257	8-729-900-63	TRANSISTOR	DTA124ES	Q752	8-729-209-15	TRANSISTOR	2SD2012				
Q501	8-729-620-05	TRANSISTOR	2SC2603-EF	Q754	8-729-141-46	TRANSISTOR	2SC4431-LK				
Q502	8-729-141-30	TRANSISTOR	2SC3623A-LK	Q755	8-729-021-06	TRANSISTOR	2SC4029-RO				
Q503	8-729-900-61	TRANSISTOR	DTA114ES	Q758	8-729-141-37	TRANSISTOR	2SA1684-LK				
Q507	8-729-141-30	TRANSISTOR	2SC3623A-LK	Q759	8-729-021-05	TRANSISTOR	2SA1553-RO				
Q508	8-729-141-30	TRANSISTOR	2SC3623A-LK	Q767	8-729-140-82	TRANSISTOR	2SA988-PAFAEA				
Q509	8-729-141-30	TRANSISTOR	2SC3623A-LK	Q768	8-729-140-82	TRANSISTOR	2SA988-PAFAEA				
Q510	8-729-141-30	TRANSISTOR	2SC3623A-LK	Q961	8-729-209-15	TRANSISTOR	2SD2012				
Q511	8-729-141-30	TRANSISTOR	2SC3623A-LK	< RESISTOR >							
Q512	8-729-141-30	TRANSISTOR	2SC3623A-LK	△R114	1-249-417-11	CARBON	1K 5% 1/4W F				
Q520	8-729-900-80	TRANSISTOR	DTC114ES	△R116	1-249-417-11	CARBON	1K 5% 1/4W F				
Q521	8-729-900-61	TRANSISTOR	DTA114ES	△R138	1-249-417-11	CARBON	1K 5% 1/4W F				
Q522	8-729-900-80	TRANSISTOR	DTC114ES	△R141	1-249-417-11	CARBON	1K 5% 1/4W F				
Q523	8-729-900-61	TRANSISTOR	DTA114ES	△R191	1-249-417-11	CARBON	1K 5% 1/4W F				
Q552	8-729-141-30	TRANSISTOR	2SC3623A-LK	△R251	1-249-422-11	CARBON	2.7K 5% 1/4W F				
Q644	8-729-620-05	TRANSISTOR	2SC2603-EF	R252	1-249-441-11	CARBON	100K 5% 1/4W				
Q651	8-729-620-18	TRANSISTOR	2SA979-FG	△R253	1-249-425-11	CARBON	4.7K 5% 1/4W F				
Q652	8-729-620-05	TRANSISTOR	2SC2603-EF	△R254	1-249-417-11	CARBON	1K 5% 1/4W F				
Q653	8-729-140-82	TRANSISTOR	2SA988-PAFAEA	R258	1-249-437-11	CARBON	47K 5% 1/4W				
Q655	8-729-620-05	TRANSISTOR	2SC2603-EF	R266	1-249-429-11	CARBON	10K 5% 1/4W				
Q656	8-729-141-06	TRANSISTOR	2SA1142-QPE	R267	1-249-429-11	CARBON	10K 5% 1/4W				
Q657	8-729-209-15	TRANSISTOR	2SD2012	R268	1-249-429-11	CARBON	10K 5% 1/4W				
Q658	8-729-141-05	TRANSISTOR	2SC2682-QPE	△R269	1-249-413-11	CARBON	470 5% 1/4W F				
Q662	8-729-141-46	TRANSISTOR	2SC4431-LK	R272	1-249-429-11	CARBON	10K 5% 1/4W				
Q663	8-729-141-37	TRANSISTOR	2SA1684-LK	R273	1-249-437-11	CARBON	47K 5% 1/4W				
Q664	8-729-021-05	TRANSISTOR	2SA1553-RO	R274	1-249-429-11	CARBON	10K 5% 1/4W				
Q665	8-729-021-06	TRANSISTOR	2SC4029-RO	R275	1-249-429-11	CARBON	10K 5% 1/4W				
Q667	8-729-140-82	TRANSISTOR	2SA988-PAFAEA	R278	1-249-437-11	CARBON	47K 5% 1/4W				
Q702	8-729-209-15	TRANSISTOR	2SD2012	R501	1-249-411-11	CARBON	330 5% 1/4W				
Q704	8-729-141-46	TRANSISTOR	2SC4431-LK	R502	1-249-441-11	CARBON	100K 5% 1/4W				
Q705	8-729-021-06	TRANSISTOR	2SC4029-RO	R503	1-249-441-11	CARBON	100K 5% 1/4W				
				△R504	1-249-416-11	CARBON	820 5% 1/4W F				
				R505	1-247-897-11	CARBON	560K 5% 1/4W				
				R506	1-249-437-11	CARBON	47K 5% 1/4W				
				R507	1-247-903-00	CARBON	1M 5% 1/4W				
				△R508	1-249-409-11	CARBON	220 5% 1/4W F				
				△R509	1-249-409-11	CARBON	220 5% 1/4W F				
				R510	1-249-438-11	CARBON	56K 5% 1/4W				
				△R511	1-249-417-11	CARBON	1K 5% 1/4W F				

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MAIN

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark				
△R513	1-249-417-11	CARBON	1K	5%	1/4W	F	△R598	1-249-417-11	CARBON	1K	5%	1/4W	F
△R514	1-249-417-11	CARBON	1K	5%	1/4W	F	R599	1-249-426-11	CARBON	5.6K	5%	1/4W	
△R515	1-249-417-11	CARBON	1K	5%	1/4W	F	R635	1-260-072-11	CARBON	4.7	5%	1/2W	
△R517	1-249-417-11	CARBON	1K	5%	1/4W	F	R644	1-249-429-11	CARBON	10K	5%	1/4W	
△R518	1-249-417-11	CARBON	1K	5%	1/4W	F	R650	1-249-434-11	CARBON	27K	5%	1/4W	
R520	1-249-441-11	CARBON	100K	5%	1/4W		△R651	1-249-417-11	CARBON	1K	5%	1/4W	F
△R521	1-249-417-11	CARBON	1K	5%	1/4W	F	R652	1-249-435-11	CARBON	33K	5%	1/4W	
R522	1-249-429-11	CARBON	10K	5%	1/4W		△R653	1-249-409-11	CARBON	220	5%	1/4W	F
R523	1-249-426-11	CARBON	5.6K	5%	1/4W		△R654	1-249-409-11	CARBON	220	5%	1/4W	F
R524	1-249-441-11	CARBON	100K	5%	1/4W		△R655	1-249-415-11	CARBON	680	5%	1/4W	F
△R526	1-247-811-31	CARBON	150	5%	1/4W	F	△R656	1-249-421-11	CARBON	2.2K	5%	1/4W	F
△R531	1-249-425-11	CARBON	4.7K	5%	1/4W	F	△R657	1-249-425-11	CARBON	4.7K	5%	1/4W	F
△R533	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R658	1-249-435-11	CARBON	33K	5%	1/4W	
R539	1-249-433-11	CARBON	22K	5%	1/4W		R659	1-249-426-11	CARBON	5.6K	5%	1/4W	
△R540	1-249-413-11	CARBON	470	5%	1/4W	F	R662	1-249-411-11	CARBON	330	5%	1/4W	
△R541	1-249-413-11	CARBON	470	5%	1/4W	F	R663	1-249-435-11	CARBON	33K	5%	1/4W	
△R542	1-249-413-11	CARBON	470	5%	1/4W	F	△R664	1-249-397-11	CARBON	22	5%	1/4W	F
△R543	1-249-413-11	CARBON	470	5%	1/4W	F	△R665	1-247-807-31	CARBON	100	5%	1/4W	F
△R544	1-249-413-11	CARBON	470	5%	1/4W	F	△R666	1-249-419-11	CARBON	1.5K	5%	1/4W	F
△R545	1-249-413-11	CARBON	470	5%	1/4W	F	R667	1-249-437-11	CARBON	47K	5%	1/4W	
△R547	1-249-417-11	CARBON	1K	5%	1/4W	F	△R668	1-249-414-11	CARBON	560	5%	1/4W	F
△R548	1-249-417-11	CARBON	1K	5%	1/4W	F	△R669	1-249-397-11	CARBON	22	5%	1/4W	F
R551	1-249-411-11	CARBON	330	5%	1/4W		△R670	1-247-807-31	CARBON	100	5%	1/4W	F
R552	1-249-441-11	CARBON	100K	5%	1/4W		R671	1-249-431-11	CARBON	15K	5%	1/4W	
R553	1-249-441-11	CARBON	100K	5%	1/4W		R672	1-260-076-11	CARBON	10	5%	1/2W	
△R554	1-249-416-11	CARBON	820	5%	1/4W	F	△R675	1-249-389-11	CARBON	4.7	5%	1/4W	F
R555	1-247-897-11	CARBON	560K	5%	1/4W		R676	1-249-411-11	CARBON	330	5%	1/4W	
R556	1-249-437-11	CARBON	47K	5%	1/4W		△R677	1-249-389-11	CARBON	4.7	5%	1/4W	F
R557	1-247-903-00	CARBON	1M	5%	1/4W		R678	1-217-611-00	RES, METAL PLATE			0.1	
△R558	1-249-409-11	CARBON	220	5%	1/4W	F	R679	1-217-611-00	RES, METAL PLATE			0.1	
△R559	1-249-409-11	CARBON	220	5%	1/4W	F	△R680	1-249-397-11	CARBON	22	5%	1/4W	F
R560	1-249-438-11	CARBON	56K	5%	1/4W		△R681	1-249-419-11	CARBON	1.5K	5%	1/4W	F
△R561	1-249-417-11	CARBON	1K	5%	1/4W	F	R683	1-249-431-11	CARBON	15K	5%	1/4W	
△R563	1-249-417-11	CARBON	1K	5%	1/4W	F	R692	1-249-435-11	CARBON	33K	5%	1/4W	
△R564	1-249-417-11	CARBON	1K	5%	1/4W	F	R702	1-249-429-11	CARBON	10K	5%	1/4W	
△R565	1-249-417-11	CARBON	1K	5%	1/4W	F	△R707	1-247-807-31	CARBON	100	5%	1/4W	F
△R567	1-249-417-11	CARBON	1K	5%	1/4W	F	△R708	1-249-419-11	CARBON	1.5K	5%	1/4W	F
△R568	1-249-417-11	CARBON	1K	5%	1/4W	F	R709	1-249-437-11	CARBON	47K	5%	1/4W	
△R571	1-249-417-11	CARBON	1K	5%	1/4W	F	△R710	1-247-807-31	CARBON	100	5%	1/4W	F
R574	1-249-441-11	CARBON	100K	5%	1/4W		△R711	1-247-807-31	CARBON	100	5%	1/4W	F
R589	1-249-433-11	CARBON	22K	5%	1/4W		△R712	1-249-393-11	CARBON	10	5%	1/4W	F
R590	1-249-426-11	CARBON	5.6K	5%	1/4W		R713	1-217-611-00	RES, METAL PLATE			0.1	
R591	1-249-441-11	CARBON	100K	5%	1/4W		R714	1-217-611-00	RES, METAL PLATE			0.1	
R592	1-249-433-11	CARBON	22K	5%	1/4W		△R715	1-249-393-11	CARBON	10	5%	1/4W	F
R593	1-249-426-11	CARBON	5.6K	5%	1/4W		△R725	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R594	1-249-426-11	CARBON	5.6K	5%	1/4W		△R726	1-249-417-11	CARBON	1K	5%	1/4W	F
R595	1-249-426-11	CARBON	5.6K	5%	1/4W		R727	1-249-431-11	CARBON	15K	5%	1/4W	
R596	1-249-426-11	CARBON	5.6K	5%	1/4W		R728	1-249-431-11	CARBON	15K	5%	1/4W	
△R597	1-249-417-11	CARBON	1K	5%	1/4W	F							

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MAIN

MAIN VOL

OSD

Ref. No.	Part No.	Description	Remark		
R729	1-260-072-11	CARBON	4.7	5%	1/2W
R730	1-260-076-11	CARBON	10	5%	1/2W
R731	1-249-429-11	CARBON	10K	5%	1/4W
R732	1-249-433-11	CARBON	22K	5%	1/4W
R733	1-249-437-11	CARBON	47K	5%	1/4W
△R734	1-249-417-11	CARBON	1K	5%	1/4W F
R735	1-249-434-11	CARBON	27K	5%	1/4W
△R737	1-249-401-11	CARBON	47	5%	1/4W F
△R757	1-247-807-31	CARBON	100	5%	1/4W F
△R758	1-249-419-11	CARBON	1.5K	5%	1/4W F
R759	1-249-437-11	CARBON	47K	5%	1/4W
△R760	1-247-807-31	CARBON	100	5%	1/4W F
△R761	1-247-807-31	CARBON	100	5%	1/4W F
△R762	1-249-393-11	CARBON	10	5%	1/4W F
R763	1-217-611-00	RES, METAL PLATE			0.1
R764	1-217-611-00	RES, METAL PLATE			0.1
△R765	1-249-393-11	CARBON	10	5%	1/4W F
△R775	1-249-419-11	CARBON	1.5K	5%	1/4W F
△R776	1-249-417-11	CARBON	1K	5%	1/4W F
R777	1-249-431-11	CARBON	15K	5%	1/4W
R778	1-249-431-11	CARBON	15K	5%	1/4W
R779	1-260-072-11	CARBON	4.7	5%	1/2W
R780	1-260-076-11	CARBON	10	5%	1/2W
△R783	1-249-401-11	CARBON	47	5%	1/4W F
R785	1-249-437-11	CARBON	47K	5%	1/4W
△R787	1-249-401-11	CARBON	47	5%	1/4W F
△R966	1-249-381-11	CARBON	1	5%	1/4W F
△R967	1-249-385-11	CARBON	2.2	5%	1/6W F
△R968	1-249-403-11	CARBON	68	5%	1/4W F
△R969	1-249-403-11	CARBON	68	5%	1/4W F
R970	1-249-426-11	CARBON	5.6K	5%	1/4W
△R971	1-215-909-11	METAL OXIDE	47	5%	3W F
△R972	1-215-909-11	METAL OXIDE	47	5%	3W F
△R973	1-249-397-11	CARBON	22	5%	1/4W F
△R1708	1-249-414-11	CARBON	560	5%	1/4W F
R1709	1-249-431-11	CARBON	15K	5%	1/4W
△R1758	1-249-414-11	CARBON	560	5%	1/4W F
R1759	1-249-431-11	CARBON	15K	5%	1/4W
< RELAY >					
RY501	1-515-614-11	RELAY			
RY602	1-515-676-11	RELAY			
RY701	1-515-741-11	RELAY			
< TEST PIN >					
* TP701	1-560-062-00	PIN, CONNECTOR 4P			
* TP702	1-560-060-00	PIN, CONNECTOR 2P			

Ref. No.	Part No.	Description	Remark					
*	1-650-279-11	MAIN VOL BOARD	*****					
< CAPACITOR >								
< CONNECTOR >								
C401	1-124-903-11	ELECT	1uF	20%	50V			
C402	1-124-903-11	ELECT	1uF	20%	50V			
C1253	1-124-464-11	ELECT	0.22uF	20%	50V			
C1401	1-124-927-11	ELECT	4.7uF	20%	100V			
C1402	1-124-927-11	ELECT	4.7uF	20%	100V			
< DIODE >								
D1730	8-719-987-63	DIODE	1N4148M					
< RESISTOR >								
△R401	1-249-415-11	CARBON	680	5%	1/4W F			
R1255	1-247-903-00	CARBON	1M	5%	1/4W			
△R1401	1-249-417-11	CARBON	1K	5%	1/4W F			
△R1402	1-249-417-11	CARBON	1K	5%	1/4W F			
R1403	1-249-441-11	CARBON	100K	5%	1/4W			
R1404	1-249-441-11	CARBON	100K	5%	1/4W			
R1750	1-249-441-11	CARBON	100K	5%	1/4W			
R1750	1-249-441-11				(MASTER VOLUME)			
< VARIABLE RESISTOR >								
RV402	1-223-537-11	RES, VAR, CARBON	100KX5					

*	A-4365-636-A	OSD BOARD, COMPLETE	*****					
< CAPACITOR >								
C100	1-124-463-00	ELECT	0.1uF	20%	50V			
C101	1-124-477-11	ELECT	47uF	20%	25V			
C102	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V			
C103	1-124-463-00	ELECT	0.1uF	20%	50V			
C104	1-124-463-00	ELECT	0.1uF	20%	50V			
C105	1-124-463-00	ELECT	0.1uF	20%	50V			
C110	1-124-463-00	ELECT	0.1uF	20%	50V			
C111	1-124-463-00	ELECT	0.1uF	20%	50V			
C112	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V			
C113	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V			
C114	1-124-472-11	ELECT	470uF	20%	10V			

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OSD

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C115	1-124-463-00	ELECT	0.1uF	20%	50V	C167	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C116	1-124-463-00	ELECT	0.1uF	20%	50V	C168	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C117	1-124-472-11	ELECT	470uF	20%	10V	C169	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C118	1-124-463-00	ELECT	0.1uF	20%	50V	C170	1-136-154-00	FILM	0.012uF	5%	50V
C119	1-124-907-11	ELECT	10uF	20%	50V	C171	1-163-234-11	CERAMIC CHIP	20PF	5%	50V
C120	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C172	1-163-234-11	CERAMIC CHIP	20PF	5%	50V
C121	1-124-907-11	ELECT	10uF	20%	50V	C173	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C122	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V	C174	1-124-477-11	ELECT	47uF	20%	25V
C123	1-124-907-11	ELECT	10uF	20%	50V	C175	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C124	1-136-162-00	FILM	0.056uF	5%	50V	C176	1-124-463-00	ELECT	0.1uF	20%	50V
C125	1-136-153-00	FILM	0.01uF	5%	50V	C177	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C126	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C178	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C127	1-124-907-11	ELECT	10uF	20%	50V	C179	1-163-140-00	CERAMIC CHIP	910PF	5%	50V
C128	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C180	1-124-907-11	ELECT	10uF	20%	50V
C129	1-164-232-11	CERAMIC CHIP	0.01uF		50V	C181	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C130	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	C183	1-126-101-11	ELECT	100uF	20%	16V
C131	1-163-115-00	CERAMIC CHIP	82PF	5%	50V	C184	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C132	1-124-472-11	ELECT	470uF	20%	10V	C185	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C133	1-125-486-11	DOUBLE LAYERS	0.22F		5.5V	C186	1-123-382-00	ELECT	3.3uF	20%	100V
C134	1-124-463-00	ELECT	0.1uF	20%	50V	C187	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C135	1-124-463-00	ELECT	0.1uF	20%	50V	C188	1-124-477-11	ELECT	47uF	20%	25V
C136	1-124-463-00	ELECT	0.1uF	20%	50V	C190	1-124-907-11	ELECT	10uF	20%	50V
C137	1-136-161-00	FILM	0.047uF	5%	50V	C191	1-124-907-11	ELECT	10uF	20%	50V
C138	1-124-903-11	ELECT	1uF	20%	50V	C192	1-124-463-00	ELECT	0.1uF	20%	50V
C139	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C193	1-124-907-11	ELECT	10uF	20%	50V
C140	1-124-907-11	ELECT	10uF	20%	50V	C194	1-124-907-11	ELECT	10uF	20%	50V
C141	1-130-476-00	MYLAR	0.0027uF	5%	50V	C195	1-124-477-11	ELECT	47uF	20%	25V
C142	1-163-140-00	CERAMIC CHIP	910PF	5%	50V	C196	1-124-472-11	ELECT	470uF	20%	10V
C143	1-124-925-11	ELECT	2.2uF	20%	100V	C198	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C144	1-163-033-00	CERAMIC CHIP	0.022uF		50V	C199	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C145	1-136-154-00	FILM	0.012uF	5%	50V	C215	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C149	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C1101	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C150	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C1102	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C151	1-130-475-00	MYLAR	0.0022uF	5%	50V	C1103	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C152	1-130-475-00	MYLAR	0.0022uF	5%	50V	C1104	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C153	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C1105	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C154	1-124-477-11	ELECT	47uF	20%	25V	C1106	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C155	1-130-475-00	MYLAR	0.0022uF	5%	50V	C1108	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C156	1-124-463-00	ELECT	0.1uF	20%	50V	C1109	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C157	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C1110	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C158	1-130-477-00	MYLAR	0.0033uF	5%	50V	C1111	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C159	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C1112	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C160	1-130-476-00	MYLAR	0.0027uF	5%	50V	< JACK >					
C161	1-130-473-00	MYLAR	0.0015uF	5%	50V	* CNJ203 1-568-826-11 SOCKET, CONNECTOR 7P					
C162	1-163-140-00	CERAMIC CHIP	910PF	5%	50V	* CNJ204 1-564-336-00 PIN, CONNECTOR 2P					
C163	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	* CNJ205 1-568-826-11 SOCKET, CONNECTOR 7P					
C164	1-124-477-11	ELECT	47uF	20%	25V	* CNJ206 1-564-509-11 PLUG, CONNECTOR 6P					
C165	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V						
C166	1-124-925-11	ELECT	2.2uF	20%	100V						

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark				
< TRIMMER >											
CT101	1-141-227-00	CAP, TRIMMER	20PF	IC136	8-759-242-64	IC	TC4W53F				
< DIODE >											
D101	8-719-016-74	DIODE	1SS352	IC137	8-759-987-27	IC	LM1881M				
D102	8-719-016-74	DIODE	1SS352	IC138	8-759-925-76	IC	SN74HC08ANS				
D110	8-719-016-74	DIODE	1SS352	IC171	8-759-902-88	IC	SN74LS123NS				
D111	8-719-016-74	DIODE	1SS352	< JACK >							
D112	8-719-400-18	DIODE	MA152WK	J107	1-566-846-11	CONNECTOR, (S) TERMINAL 4P (LD S VIDEO IN)					
< FRONT END >											
FE101	1-239-789-11	ENCAPSULATED COMPONENT		J108	1-764-676-11	CONNECTOR (ROUND TYPE) (VIDEO 2 S VIDEO OUT/VIDEO 3 S VIDEO IN)					
< IC >											
IC102	8-759-991-78	IC	BA7626	J109	1-764-676-11	CONNECTOR (ROUND TYPE) (VIDEO 1 S VIDEO OUT/VIDEO 2 S VIDEO IN)					
IC103	8-759-061-95	IC	SN761200	J110	1-764-676-11	CONNECTOR (ROUND TYPE) (MONITOR S VIDEO OUT/VIDEO 1 S VIDEO IN)					
IC104	8-759-996-03	IC	LVA519S	J113	1-566-740-11	JACK (RC ANT)					
IC105	8-759-931-47	IC	SN74LS628NS	< COIL >							
IC106	8-759-636-55	IC	M5218AFP	L102	1-410-470-11	INDUCTOR	10uH				
IC107	8-759-250-81	IC	TC5081AP	L103	1-410-470-11	INDUCTOR	10uH				
IC108	8-759-927-29	IC	SN74HC04ANS	L104	1-410-470-11	INDUCTOR	10uH				
IC109	8-759-996-03	IC	LVA519S	L105	1-410-476-11	INDUCTOR	33uH				
IC110	8-759-914-57	IC	BA7230LS	< TRANSISTOR >							
IC111	8-752-066-16	IC	CXA1645P	Q104	8-729-216-22	TRANSISTOR	2SA1162-G				
IC112	8-759-300-71	IC	HD14053BFP	Q105	8-729-216-22	TRANSISTOR	2SA1162-G				
IC113	8-759-902-88	IC	SN74LS123NS	Q106	8-729-216-22	TRANSISTOR	2SA1162-G				
IC114	8-759-907-81	IC	SN74LS221NS	Q107	8-729-216-22	TRANSISTOR	2SA1162-G				
IC115	8-759-925-85	IC	SN74HC32ANS	Q108	8-729-113-72	TRANSISTOR	FN1A4M-M33				
IC116	8-759-009-06	IC	MC14052BF	Q109	8-729-113-72	TRANSISTOR	FN1A4M-M33				
IC117	8-759-922-51	IC	V9938	Q110	8-729-113-72	TRANSISTOR	FN1A4M-M33				
IC118	8-759-247-11	IC	CAT51C464A-70RS	Q111	8-729-113-72	TRANSISTOR	FN1A4M-M33				
IC119	8-759-247-11	IC	CAT51C464A-70RS	Q112	8-729-207-56	TRANSISTOR	RN1402				
IC120	8-759-926-80	IC	SN74HC573BNS	Q113	8-729-207-56	TRANSISTOR	RN1402				
IC121	8-759-926-77	IC	SN74HC541ANS	Q115	8-729-207-56	TRANSISTOR	RN1402				
IC122	8-759-261-56	IC	MB83400B-15	Q119	8-729-113-72	TRANSISTOR	FN1A4M-M33				
IC123	8-759-927-46	IC	SN74HC00ANS	Q120	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
IC124	8-759-927-46	IC	SN74HC00ANS	< RESISTOR >							
IC125	8-759-048-99	IC	HD6435208F	R100	1-216-051-00	METAL CHIP	1.2K 5% 1/10W				
IC126	8-759-926-41	IC	SN74HC237ANS	R101	1-216-041-00	METAL CHIP	470 5% 1/10W				
IC127	8-759-247-11	IC	CAT51C464A-70RS	R102	1-216-022-00	METAL CHIP	75 5% 1/10W				
IC128	8-752-356-60	IC	CXK5864CM-10LL	R103	1-216-073-00	METAL CHIP	10K 5% 1/10W				
IC129	8-759-247-11	IC	CAT51C464A-70RS	R104	1-216-022-00	METAL CHIP	75 5% 1/10W				
IC130	8-759-925-76	IC	SN74HC08ANS	R105	1-216-022-00	METAL CHIP	75 5% 1/10W				
IC131	8-759-057-42	IC	MC14576BP	R106	1-216-022-00	METAL CHIP	75 5% 1/10W				
IC132	8-759-194-52	IC	S-1810CF-040	R107	1-216-105-00	METAL CHIP	220K 5% 1/10W				
IC133	8-759-927-29	IC	SN74HC04ANS	R108	1-216-105-00	METAL CHIP	220K 5% 1/10W				
IC134	8-759-056-33	IC	NJM2285M	R110	1-216-073-00	METAL CHIP	10K 5% 1/10W				
IC135	8-759-925-78	IC	SN74HC10ANS								

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Ref. No.	Part No.	Description	Remark		Ref. No.	Part No.	Description	Remark			
R111	1-216-097-00	METAL CHIP	100K	5%	1/10W	R162	1-216-081-00	METAL CHIP	22K	5%	1/10W
R112	1-216-009-00	METAL CHIP	22	5%	1/10W	R163	1-216-097-00	METAL CHIP	100K	5%	1/10W
R113	1-216-121-00	METAL CHIP	1M	5%	1/10W	R164	1-216-097-00	METAL CHIP	100K	5%	1/10W
R114	1-216-121-00	METAL CHIP	1M	5%	1/10W	R165	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R115	1-216-097-00	METAL CHIP	100K	5%	1/10W	R166	1-216-041-00	METAL CHIP	470	5%	1/10W
R116	1-216-073-00	METAL CHIP	10K	5%	1/10W	R167	1-216-083-00	METAL CHIP	27K	5%	1/10W
R117	1-216-022-00	METAL CHIP	75	5%	1/10W	R168	1-216-066-00	METAL CHIP	5.1K	5%	1/10W
R118	1-216-022-00	METAL CHIP	75	5%	1/10W	R169	1-216-085-00	METAL CHIP	33K	5%	1/10W
R119	1-216-022-00	METAL CHIP	75	5%	1/10W	R170	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R120	1-216-105-00	METAL CHIP	220K	5%	1/10W	R171	1-216-073-00	METAL CHIP	10K	5%	1/10W
R121	1-216-022-00	METAL CHIP	75	5%	1/10W	R172	1-216-073-00	METAL CHIP	10K	5%	1/10W
R122	1-216-022-00	METAL CHIP	75	5%	1/10W	R173	1-216-073-00	METAL CHIP	10K	5%	1/10W
R123	1-216-022-00	METAL CHIP	75	5%	1/10W	R174	1-216-073-00	METAL CHIP	10K	5%	1/10W
R124	1-216-022-00	METAL CHIP	75	5%	1/10W	R175	1-216-097-00	METAL CHIP	100K	5%	1/10W
R125	1-216-073-00	METAL CHIP	10K	5%	1/10W	R176	1-216-080-00	METAL CHIP	20K	5%	1/10W
R126	1-216-073-00	METAL CHIP	10K	5%	1/10W	R177	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R127	1-216-022-00	METAL CHIP	75	5%	1/10W	R178	1-216-093-00	METAL CHIP	68K	5%	1/10W
R128	1-216-022-00	METAL CHIP	75	5%	1/10W	R179	1-216-064-00	METAL CHIP	4.3K	5%	1/10W
R129	1-216-073-00	METAL CHIP	10K	5%	1/10W	R180	1-216-113-00	METAL CHIP	470K	5%	1/10W
R130	1-216-049-00	METAL CHIP	1K	5%	1/10W	R181	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R131	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	R182	1-216-033-00	METAL CHIP	220	5%	1/10W
R132	1-216-097-00	METAL CHIP	100K	5%	1/10W	R183	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R133	1-216-045-00	METAL CHIP	680	5%	1/10W	R184	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R134	1-216-097-00	METAL CHIP	100K	5%	1/10W	R185	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R135	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	R186	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R136	1-216-073-00	METAL CHIP	10K	5%	1/10W	R187	1-216-041-00	METAL CHIP	470	5%	1/10W
R137	1-216-073-00	METAL CHIP	10K	5%	1/10W	R188	1-216-041-00	METAL CHIP	470	5%	1/10W
R138	1-216-073-00	METAL CHIP	10K	5%	1/10W	R189	1-216-041-00	METAL CHIP	470	5%	1/10W
R139	1-216-073-00	METAL CHIP	10K	5%	1/10W	R190	1-216-049-00	METAL CHIP	1K	5%	1/10W
R140	1-216-039-00	METAL CHIP	390	5%	1/10W	R191	1-216-049-00	METAL CHIP	1K	5%	1/10W
R141	1-216-022-00	METAL CHIP	75	5%	1/10W	R192	1-216-041-00	METAL CHIP	470	5%	1/10W
R142	1-216-041-00	METAL CHIP	470	5%	1/10W	R193	1-216-041-00	METAL CHIP	470	5%	1/10W
R143	1-216-041-00	METAL CHIP	470	5%	1/10W	R194	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R144	1-216-085-00	METAL CHIP	33K	5%	1/10W	R195	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R145	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	R196	1-216-041-00	METAL CHIP	470	5%	1/10W
R146	1-216-043-00	METAL CHIP	560	5%	1/10W	R197	1-216-041-00	METAL CHIP	470	5%	1/10W
R147	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	R198	1-216-049-00	METAL CHIP	1K	5%	1/10W
R148	1-216-025-00	METAL CHIP	100	5%	1/10W	R199	1-216-049-00	METAL CHIP	1K	5%	1/10W
R149	1-216-033-00	METAL CHIP	220	5%	1/10W	R200	1-216-121-00	METAL CHIP	1M	5%	1/10W
R150	1-216-033-00	METAL CHIP	220	5%	1/10W	R219	1-216-049-00	METAL CHIP	1K	5%	1/10W
R151	1-216-025-00	METAL CHIP	100	5%	1/10W	R221	1-216-049-00	METAL CHIP	1K	5%	1/10W
R152	1-216-025-00	METAL CHIP	100	5%	1/10W	R222	1-216-025-00	METAL CHIP	100	5%	1/10W
R153	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	R223	1-216-022-00	METAL CHIP	75	5%	1/10W
R154	1-216-083-00	METAL CHIP	27K	5%	1/10W	R224	1-216-022-00	METAL CHIP	75	5%	1/10W
R155	1-216-066-00	METAL CHIP	5.1K	5%	1/10W	R1002	1-216-073-00	METAL CHIP	10K	5%	1/10W
R156	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	R1003	1-216-073-00	METAL CHIP	10K	5%	1/10W
R157	1-216-073-00	METAL CHIP	10K	5%	1/10W	R1101	1-216-037-00	METAL CHIP	330	5%	1/10W
R158	1-216-073-00	METAL CHIP	10K	5%	1/10W	R1102	1-216-113-00	METAL CHIP	470K	5%	1/10W
R161	1-216-081-00	METAL CHIP	22K	5%	1/10W						

OSD

POWER SUPPLY

Ref. No.	Part No.	Description		Remark
R1103	1-216-097-00	METAL CHIP	100K	5% 1/10W
R1104	1-216-083-00	METAL CHIP	27K	5% 1/10W
R1105	1-216-073-00	METAL CHIP	10K	5% 1/10W

R1106	1-216-075-00	METAL CHIP	12K	5% 1/10W
R1107	1-216-121-00	METAL CHIP	1M	5% 1/10W
R1108	1-216-304-11	METAL CHIP	3.3	5% 1/10W
R1109	1-216-049-00	METAL CHIP	1K	5% 1/10W

< VARIABLE RESISTOR >

RV104	1-238-600-11	RES, ADJ, CARBON 10K
RV105	1-241-761-11	RES, ADJ, CERMET 1K
RV106	1-241-762-11	RES, ADJ, CERMET 2.2K
RV107	1-241-761-11	RES, ADJ, CERMET 1K
RV108	1-241-763-11	RES, ADJ, CERMET 4.7K

RV109	1-241-763-11	RES, ADJ, CERMET 4.7K
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< THERMISTOR(POSITIVE) >

THP101	1-806-366-11	THERMISTOR (POSITIVE)
THP102	1-806-366-11	THERMISTOR (POSITIVE)

< TEST PIN >

- * TP101 1-560-060-00 PIN, CONNECTOR 2P
- * TP102 1-560-060-00 PIN, CONNECTOR 2P
- * TP103 1-560-060-00 PIN, CONNECTOR 2P
- * TP104 1-560-061-00 PIN, CONNECTOR 3P

< VIBRATOR >

X102	1-567-505-11	OSCILLATOR, CRYSTAL (3.58MHz)
X103	1-577-121-11	VIBRATOR, CRYSTAL (20MHz)
X104	1-577-358-21	VIBRATOR, CERAMIC

* A-4365-617-A POWER SUPPLY BOARD, COMPLETE

* 1-533-293-11 FUSE HOLDER
* 3-309-144-21 HEAT SINK
7-682-547-09 SCREW +BVTT 3X6 (S)

< BASE POST >

* BP901 1-535-139-00 BASE POST 19MM (10MM PITCH) 2P

< CAPACITOR >

C901	1-161-744-51	CERAMIC	0.01uF	400V
C951	1-101-004-00	CERAMIC	0.01uF	50V
C952	1-101-004-00	CERAMIC	0.01uF	50V
C953	1-164-073-11	CERAMIC	100PF	10% 50V
C954	1-124-907-11	ELECT	10uF	20% 50V
C955	1-124-477-11	ELECT	47uF	20% 25V

Ref. No.	Part No.	Description		Remark
C956	1-124-464-11	ELECT	0.22uF	20% 50V
C957	1-124-902-00	ELECT	0.47uF	20% 50V
C958	1-101-004-00	CERAMIC	0.01uF	50V

C959	1-126-936-11	ELECT	3300uF	20% 16V
C960	1-124-903-11	ELECT	1uF	20% 50V

< CONNECTOR >

* CNP901 1-564-321-00 PIN, CONNECTOR 2P
CNP902 1-564-321-00 PIN, CONNECTOR 2P
CNS901 1-540-062-11 OUTLET, AC (POLAR) (AC OUTLET)
CNS951 1-691-767-11 PLUG (MICRO CONNECTOR) 5P

< DIODE >

D951	8-719-987-63	DIODE	1N4148M
D952	8-719-987-63	DIODE	1N4148M
D953	8-719-987-63	DIODE	1N4148M
D954	8-719-200-02	DIODE	10E2
D955	8-719-200-02	DIODE	10E2

D956	8-719-200-02	DIODE	10E2
D957	8-719-200-02	DIODE	10E2
D958	8-719-933-41	DIODE	HZS6C3L
D959	8-719-985-53	DIODE	HZS4ALL
D960	8-719-987-63	DIODE	1N4148M

D961	8-719-933-41	DIODE	HZS6C3L
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< FUSE >

△F902 1-532-749-11 FUSE, GLASS TUBE (8A 125V)

< TRANSISTOR >

Q952	8-729-620-05	TRANSISTOR	2SC2603-EF
Q953	8-729-209-15	TRANSISTOR	2SD2012
Q954	8-729-620-05	TRANSISTOR	2SC2603-EF
Q955	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q956	8-729-119-76	TRANSISTOR	2SA1175-HFE

Q957	8-729-900-63	TRANSISTOR	DTA124ES
Q958	8-729-620-05	TRANSISTOR	2SC2603-EF
Q959	8-729-900-89	TRANSISTOR	DTC144ES

< RESISTOR >

R901	1-202-725-00	SOLID	3.3M 10%	1/2W
R951	1-247-691-11	CARBON	18 5%	1/4W
△R952	1-249-417-11	CARBON	1K 5%	1/4W F
R954	1-249-433-11	CARBON	22K 5%	1/4W
R955	1-249-437-11	CARBON	47K 5%	1/4W
△R956	1-249-425-11	CARBON	4.7K 5%	1/4W F
R957	1-249-429-11	CARBON	10K 5%	1/4W
△R958	1-249-417-11	CARBON	1K 5%	1/4W F
R959	1-249-429-11	CARBON	10K 5%	1/4W

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POWER SUPPLY	POWER SW	SP IMP	SP TERMINAL
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Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R960	1-249-429-11	CARBON	10K	5%	1/4W	C1680	1-162-294-31	CERAMIC	0.001uF	10%	50V
R962	1-249-426-11	CARBON	5.6K	5%	1/4W	C1691	1-124-903-11	ELECT	1uF	20%	50V
R963	1-247-807-31	CARBON	100	5%	1/4W	C1692	1-124-903-11	ELECT	1uF	20%	50V
R964	1-249-426-11	CARBON	5.6K	5%	1/4W	< CONNECTOR >					
R965	1-247-895-00	CARBON	470K	5%	1/4W	CNP16061-564-517-11	PLUG, CONNECTOR 2P				
			< RELAY >			* CNP16031-564-518-11	PLUG, CONNECTOR 3P				
RY901	1-515-701-11	RELAY				* CNP16041-564-519-11	PLUG, CONNECTOR 4P				
			< TRANSFORMER >			* CNP16071-564-520-11	PLUG, CONNECTOR 5P				
AT901	1-448-517-21	TRANSFORMER, POWER (US)				* CNP16081-564-520-11	PLUG, CONNECTOR 5P				
AT901	1-448-517-31	TRANSFORMER, POWER (Canadian)									

*	1-650-263-11	POWER SW BOARD				< DIODE >					
			*****			D1601	8-719-987-63	DIODE	1N4148M		
			< CONNECTOR >			D1602	8-719-987-63	DIODE	1N4148M		
*	CNS10041-560-666-00	PIN, CONNECTOR 3P				D1603	8-719-987-63	DIODE	1N4148M		
			< SWITCH >			< IC >					
S1015	1-554-303-21	SWITCH, TACTILE (POWER)				IC1601	8-759-634-51	IC	M5218AP		
			*****			IC1602	8-759-634-51	IC	M5218AP		
*	1-650-280-11	SP IMP BOARD				IC1603	8-759-634-51	IC	M5218AP		
			*****			< JACK >					
			< CONNECTOR >			J116	1-507-967-11	JACK			
*	CNP16011-564-517-11	PLUG, CONNECTOR 2P				J117	1-507-967-11	JACK			
*	CNP16021-564-518-11	PLUG, CONNECTOR 3P				J601	1-750-530-11	JACK, PIN 4P (MONO/SURROUND (CENTER/REAR))			
			< SWITCH >			J602	1-750-531-11	JACK, PIN 4P (MAIN IN/PRE OUT)			
S602	1-571-083-11	SWITCH, SLIDE				< TRANSISTOR >					
			*****			Q1601	8-729-620-05	TRANSISTOR	2SC2603-EF		
*	A-4365-609-A	SP TERMINAL BOARD, COMPLETE				Q1603	8-729-620-05	TRANSISTOR	2SC2603-EF		
			*****			Q1604	8-729-620-05	TRANSISTOR	2SC2603-EF		
			< CAPACITOR >			Q1611	8-729-141-30	TRANSISTOR	2SC3623A-LK		
C1601	1-124-927-11	ELECT	4.7uF	20%	100V	Q1612	8-729-141-30	TRANSISTOR	2SC3623A-LK		
C1602	1-130-489-00	MYLAR	0.033uF	5%	50V	< RESISTOR >					
C1603	1-130-489-00	MYLAR	0.033uF	5%	50V	R1601	1-249-433-11	CARBON	22K	5%	1/4W
C1604	1-124-927-11	ELECT	4.7uF	20%	100V	R1602	1-247-838-00	CARBON	2K	5%	1/4W
C1641	1-162-294-31	CERAMIC	0.001uF	10%	50V	△R1603	1-249-417-11	CARBON	1K	5%	1/4W F
C1642	1-162-294-31	CERAMIC	0.001uF	10%	50V	R1604	1-247-854-11	CARBON	9.1K	5%	1/4W
C1643	1-162-294-31	CERAMIC	0.001uF	10%	50V	△R1605	1-249-421-11	CARBON	2.2K	5%	1/4W F
C1651	1-124-927-11	ELECT	4.7uF	20%	100V	R1606	1-249-429-11	CARBON	10K	5%	1/4W
C1652	1-130-489-00	MYLAR	0.033uF	5%	50V	R1607	1-249-437-11	CARBON	47K	5%	1/4W
C1653	1-130-489-00	MYLAR	0.033uF	5%	50V	△R1608	1-249-417-11	CARBON	1K	5%	1/4W F

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SP TERMINAL
SUB AMPLIFIER

Ref. No.	Part No.	Description	Remark		
△R1613	1-249-417-11	CARBON	1K	5%	1/4W F
R1620	1-247-842-11	CARBON	3K	5%	1/4W
R1630	1-247-903-00	CARBON	1M	5%	1/4W
R1631	1-249-440-11	CARBON	82K	5%	1/4W
△R1632	1-249-421-11	CARBON	2.2K	5%	1/4W F

△R1633	1-249-421-11	CARBON	2.2K	5%	1/4W F
△R1634	1-249-418-11	CARBON	1.2K	5%	1/4W F
R1635	1-249-429-11	CARBON	10K	5%	1/4W
△R1636	1-249-417-11	CARBON	1K	5%	1/4W F
R1651	1-249-433-11	CARBON	22K	5%	1/4W
R1652	1-247-838-00	CARBON	2K	5%	1/4W
△R1653	1-249-417-11	CARBON	1K	5%	1/4W F
R1654	1-247-854-11	CARBON	9.1K	5%	1/4W
△R1655	1-249-421-11	CARBON	2.2K	5%	1/4W F
R1656	1-249-429-11	CARBON	10K	5%	1/4W
R1657	1-249-437-11	CARBON	47K	5%	1/4W
△R1658	1-249-417-11	CARBON	1K	5%	1/4W F
R1659	1-249-436-11	CARBON	39K	5%	1/4W
R1660	1-247-876-11	CARBON	75K	5%	1/4W
△R1663	1-249-417-11	CARBON	1K	5%	1/4W F
R1670	1-247-842-11	CARBON	3K	5%	1/4W
R1681	1-249-429-11	CARBON	10K	5%	1/4W
R1682	1-249-429-11	CARBON	10K	5%	1/4W
R1683	1-249-429-11	CARBON	10K	5%	1/4W
△R1699	1-249-417-11	CARBON	1K	5%	1/4W F

< RELAY >

RY1602 1-515-793-11 RELAY
 RY1603 1-515-793-11 RELAY
 RY1604 1-515-790-11 RELAY

< SWITCH >

S602 1-692-721-11 SWITCH, SLIDE

< TERMINAL >

* TM702 1-537-519-11 TERMINAL BOARD (SP)
 (FRONT SPEAKER/CENTER SPEAKER)
 * TM703 1-537-616-11 TERMINAL BOARD (SP) (REAR SPEAKER)

* A-4365-630-A SUB AMPLIFIER BOARD, COMPLETE

< CAPACITOR >

C601	1-124-907-11	ELECT	10uF	20%	50V
C602	1-162-282-31	CERAMIC	100PF	10%	50V
C603	1-124-916-11	ELECT	22uF	20%	63V
C604	1-124-667-11	ELECT	10uF	20%	100V
C607	1-136-157-00	FILM	0.022uF	5%	50V

Ref. No.	Part No.	Description	Remark		
C621	1-124-907-11	ELECT	10uF	20%	50V
C622	1-162-282-31	CERAMIC	100PF	10%	50V
C623	1-124-916-11	ELECT	22uF	20%	63V
C624	1-124-667-11	ELECT	10uF	20%	100V
C627	1-136-157-00	FILM	0.022uF	5%	50V

< CONNECTOR >

* CNP631 1-564-506-11 PLUG, CONNECTOR 3P
 * CNP632 1-564-506-11 PLUG, CONNECTOR 3P
 * CNP633 1-564-506-11 PLUG, CONNECTOR 3P
 CNP634 1-691-767-11 PLUG (MICRO CONNECTOR) 5P

< DIODE >

D620 8-719-987-63 DIODE 1N4148M
 D640 8-719-987-63 DIODE 1N4148M

< IC >

IC601 8-759-085-89 IC LM3875-S
 IC621 8-759-085-89 IC LM3875-S

< COIL >

L601 1-420-872-00 COIL, AIR CORE
 L621 1-420-872-00 COIL, AIR CORE

< TRANSISTOR >

Q620 8-729-140-82 TRANSISTOR 2SA988-PAFAEA
 Q640 8-729-140-82 TRANSISTOR 2SA988-PAFAEA

< RESISTOR >

△R601	1-249-409-11	CARBON	220	5%	1/4W F
R602	1-249-441-11	CARBON	100K	5%	1/4W
△R603	1-249-420-11	CARBON	1.8K	5%	1/4W F
R604	1-249-441-11	CARBON	100K	5%	1/4W
△R605	1-249-419-11	CARBON	1.5K	5%	1/4W F
R606	1-249-431-11	CARBON	15K	5%	1/4W
R607	1-249-438-11	CARBON	56K	5%	1/4W
△R608	1-249-393-11	CARBON	10	5%	1/4W F
R609	1-217-151-00	RES, METAL PLATE			0.22
△R611	1-249-389-11	CARBON	4.7	5%	1/4W F
△R621	1-249-409-11	CARBON	220	5%	1/4W F
R622	1-249-441-11	CARBON	100K	5%	1/4W
△R623	1-249-420-11	CARBON	1.8K	5%	1/4W F
R624	1-249-441-11	CARBON	100K	5%	1/4W
△R625	1-249-419-11	CARBON	1.5K	5%	1/4W F
R626	1-249-431-11	CARBON	15K	5%	1/4W
R627	1-249-437-11	CARBON	47K	5%	1/4W
△R628	1-249-393-11	CARBON	10	5%	1/4W F
R629	1-217-151-00	RES, METAL PLATE			0.22
△R631	1-249-389-11	CARBON	4.7	5%	1/4W F

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SURROUND

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark			
▲R691	1-249-401-11	CARBON	47	5%	1/4W	F	C353	1-164-232-11	CERAMIC CHIP	0.01uF		50V

*	A-4365-633-A	SURROUND BOARD, COMPLETE					C354	1-136-153-00	FILM	0.01uF	5%	50V

< CAPACITOR >												
C301	1-124-477-11	ELECT	47uF	20%	25V	C355	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C302	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C356	1-124-477-11	ELECT	47uF	20%	25V	
C303	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C357	1-124-907-11	ELECT	10uF	20%	50V	
C304	1-124-477-11	ELECT	47uF	20%	25V	C359	1-124-916-11	ELECT	22uF	20%	63V	
C305	1-136-153-00	FILM	0.01uF	5%	50V	C363	1-164-068-11	CERAMIC	82PF	5%	50V	
C306	1-164-232-11	CERAMIC CHIP	0.01uF		50V	C365	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C307	1-124-907-11	ELECT	10uF	20%	50V	C368	1-164-057-11	CERAMIC	30PF	5%	50V	
C308	1-124-477-11	ELECT	47uF	20%	25V	C369	1-164-057-11	CERAMIC	30PF	5%	50V	
C309	1-124-916-11	ELECT	22uF	20%	63V	C370	1-130-472-00	MYLAR	0.0012uF	5%	50V	
C310	1-124-916-11	ELECT	22uF	20%	63V	C371	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C311	1-136-165-00	FILM	0.1uF	5%	50V	C372	1-124-916-11	ELECT	22uF	20%	63V	
C312	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C373	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C313	1-164-068-11	CERAMIC	82PF	5%	50V	C374	1-124-907-11	ELECT	10uF	20%	50V	
C315	1-130-479-00	MYLAR	0.0047uF	5%	50V	C375	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C318	1-164-057-11	CERAMIC	30PF	5%	50V	C376	1-124-477-11	ELECT	47uF	20%	25V	
C319	1-164-057-11	CERAMIC	30PF	5%	50V	C377	1-124-916-11	ELECT	22uF	20%	63V	
C320	1-130-472-00	MYLAR	0.0012uF	5%	50V	C378	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C321	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	C381	1-124-907-11	ELECT	10uF	20%	50V	
C322	1-124-916-11	ELECT	22uF	20%	63V	C382	1-130-473-00	MYLAR	0.0015uF	5%	50V	
C323	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C383	1-124-907-11	ELECT	10uF	20%	50V	
C324	1-124-907-11	ELECT	10uF	20%	50V	C384	1-163-001-11	CERAMIC CHIP	220PF	10%	50V	
C325	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C385	1-130-478-00	MYLAR	0.0039uF	5%	50V	
C326	1-124-477-11	ELECT	47uF	20%	25V	C386	1-124-916-11	ELECT	22uF	20%	63V	
C327	1-124-916-11	ELECT	22uF	20%	63V	C392	1-124-903-11	ELECT	1uF	20%	50V	
C328	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C393	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C329	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C394	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C330	1-124-477-11	ELECT	47uF	20%	25V	C395	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C331	1-124-477-11	ELECT	47uF	20%	25V	C396	1-124-478-11	ELECT	100uF	20%	25V	
C332	1-130-473-00	MYLAR	0.0015uF	5%	50V	C405	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C333	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C427	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C334	1-163-001-11	CERAMIC CHIP	220PF	10%	50V	C428	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C335	1-130-478-00	MYLAR	0.0039uF	5%	50V	C429	1-124-477-11	ELECT	47uF	20%	25V	
C336	1-124-916-11	ELECT	22uF	20%	63V	C430	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C337	1-136-165-00	FILM	0.1uF	5%	50V	C431	1-124-478-11	ELECT	100uF	20%	25V	
C341	1-163-113-00	CERAMIC CHIP	68PF	5%	50V	C432	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C342	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	C433	1-126-176-11	ELECT	220uF	20%	10V	
C343	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C435	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C344	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C436	1-124-478-11	ELECT	100uF	20%	25V	
C345	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C437	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C346	1-124-478-11	ELECT	100uF	20%	25V	C438	1-126-176-11	ELECT	220uF	20%	10V	
C351	1-124-916-11	ELECT	22uF	20%	63V	C440	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V	
C352	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	C441	1-124-478-11	ELECT	100uF	20%	25V	

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SURROUND

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark
C468	1-124-907-11	ELECT	10uF	20%	50V	IC306	8-759-636-55	IC M5218AFP	
C469	1-124-907-11	ELECT	10uF	20%	50V	IC307	8-759-040-59	IC LC7883K	
C470	1-124-907-11	ELECT	10uF	20%	50V	IC308	8-759-636-55	IC M5218AFP	
C471	1-124-907-11	ELECT	10uF	20%	50V	IC309	8-759-636-55	IC M5218AFP	
C472	1-124-907-11	ELECT	10uF	20%	50V	IC355	8-759-636-55	IC M5218AFP	
C473	1-124-907-11	ELECT	10uF	20%	50V	IC403	8-759-708-05	IC NJM78L05A	
C474	1-124-907-11	ELECT	10uF	20%	50V	IC404	8-759-075-34	IC LC83015	
C475	1-124-907-11	ELECT	10uF	20%	50V	IC405	8-752-359-50	IC CXD2564AM	
C476	1-124-903-11	ELECT	1uF	20%	50V	IC406	8-759-165-17	IC MT4C4256-8A	
C477	1-124-903-11	ELECT	1uF	20%	50V	IC408	8-759-708-05	IC NJM78L05A	
C478	1-124-478-11	ELECT	100uF	20%	25V	IC418	8-759-820-11	IC LC7535	
C479	1-136-171-00	FILM	0.33uF	5%	50V	IC419	8-759-636-55	IC M5218AFP	
C480	1-136-165-00	FILM	0.1uF	5%	50V	IC420	8-759-823-24	IC LA2730	
C481	1-136-159-00	FILM	0.033uF	5%	50V	IC421	8-759-801-01	IC LC4966	
C482	1-130-479-00	MYLAR	0.0047uF	5%	50V	IC710	8-759-636-55	IC M5218AFP	
C483	1-130-482-00	MYLAR	0.0082uF	5%	50V	< COIL >			
C484	1-136-158-00	FILM	0.027uF	5%	50V	L301	1-410-377-31	INDUCTOR CHIP	4.7uH
C485	1-124-916-11	ELECT	22uF	20%	63V	L302	1-410-377-31	INDUCTOR CHIP	4.7uH
C486	1-124-478-11	ELECT	100uF	20%	25V	L404	1-410-377-31	INDUCTOR CHIP	4.7uH
C487	1-124-903-11	ELECT	1uF	20%	50V	L405	1-410-377-31	INDUCTOR CHIP	4.7uH
C488	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	L410	1-410-377-31	INDUCTOR CHIP	4.7uH
C489	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	< TRANSISTOR >			
C730	1-124-927-11	ELECT	4.7uF	20%	100V	Q258	8-729-201-56	TRANSISTOR	2SK246-GR2
C731	1-124-927-11	ELECT	4.7uF	20%	100V	Q259	8-729-201-56	TRANSISTOR	2SK246-GR2
C732	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	Q301	8-729-422-29	TRANSISTOR	2SD601A-S
C733	1-124-927-11	ELECT	4.7uF	20%	100V	Q302	8-729-422-29	TRANSISTOR	2SD601A-S
C734	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V	Q303	8-729-422-29	TRANSISTOR	2SD601A-S
C735	1-164-336-11	CERAMIC CHIP	0.33uF		25V	Q304	8-729-422-29	TRANSISTOR	2SD601A-S
C780	1-124-927-11	ELECT	4.7uF	20%	100V	Q305	8-729-422-29	TRANSISTOR	2SD601A-S
C781	1-124-927-11	ELECT	4.7uF	20%	100V	Q306	8-729-422-29	TRANSISTOR	2SD601A-S
C782	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	Q351	8-729-422-29	TRANSISTOR	2SD601A-S
C783	1-124-927-11	ELECT	4.7uF	20%	100V	Q352	8-729-422-29	TRANSISTOR	2SD601A-S
C784	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V	Q353	8-729-422-29	TRANSISTOR	2SD601A-S
C785	1-164-336-11	CERAMIC CHIP	0.33uF		25V	Q354	8-729-422-29	TRANSISTOR	2SD601A-S
< CONNECTOR >									
* CNP302	1-564-506-11	PLUG, CONNECTOR 3P				Q355	8-729-422-29	TRANSISTOR	2SD601A-S
* CNP450	1-564-522-11	PLUG, CONNECTOR 7P				Q356	8-729-422-29	TRANSISTOR	2SD601A-S
CNS303	1-695-218-11	SOCKET, CONNECTOR 33P				Q406	8-729-207-68	TRANSISTOR	RN2402
< FERRITE BEAD >									
FB401	1-410-397-21	FERRITE BEAD INDUCTOR				Q407	8-729-207-68	TRANSISTOR	RN2402
< IC >									
IC301	8-759-504-36	IC AK5339				Q408	8-729-207-68	TRANSISTOR	RN2402
IC302	8-759-636-55	IC M5218AFP				Q409	8-729-207-68	TRANSISTOR	RN2402
IC303	8-759-708-05	IC NJM78L05A				Q411	8-729-805-45	TRANSISTOR	2SC3395
IC304	8-759-700-65	IC NJM79L05A				Q412	8-729-901-06	TRANSISTOR	DTA144EK
IC305	8-759-636-55	IC M5218AFP				Q413	8-729-805-45	TRANSISTOR	2SC3395
						Q722	8-729-802-80	TRANSISTOR	2SC3661
						Q772	8-729-802-80	TRANSISTOR	2SC3661

SURROUND

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< RESISTOR >							
R256	1-216-097-00	METAL CHIP	100K 5% 1/10W	R354	1-216-073-00	METAL CHIP	10K 5% 1/10W
R257	1-216-097-00	METAL CHIP	100K 5% 1/10W	R355	1-216-097-00	METAL CHIP	100K 5% 1/10W
R301	1-216-085-00	METAL CHIP	33K 5% 1/10W	R356	1-216-097-00	METAL CHIP	100K 5% 1/10W
R302	1-216-017-00	METAL CHIP	47 5% 1/10W	R358	1-216-085-00	METAL CHIP	33K 5% 1/10W
R303	1-216-025-00	METAL CHIP	100 5% 1/10W	R359	1-216-085-00	METAL CHIP	33K 5% 1/10W
R304	1-216-073-00	METAL CHIP	10K 5% 1/10W	R360	1-216-041-00	METAL CHIP	470 5% 1/10W
R305	1-216-097-00	METAL CHIP	100K 5% 1/10W	R361	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
R306	1-216-097-00	METAL CHIP	100K 5% 1/10W	R362	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
R308	1-216-085-00	METAL CHIP	33K 5% 1/10W	R363	1-216-079-00	METAL CHIP	18K 5% 1/10W
R309	1-216-113-00	METAL CHIP	470K 5% 1/10W	R364	1-216-079-00	METAL CHIP	18K 5% 1/10W
R311	1-216-689-11	METAL CHIP	39K 0.5% 1/10W	R365	1-216-093-00	METAL CHIP	68K 5% 1/10W
R312	1-216-689-11	METAL CHIP	39K 0.5% 1/10W	R366	1-216-093-00	METAL CHIP	68K 5% 1/10W
R313	1-216-079-00	METAL CHIP	18K 5% 1/10W	R367	1-216-053-00	METAL CHIP	1. 5K 5% 1/10W
R314	1-216-079-00	METAL CHIP	18K 5% 1/10W	R368	1-216-053-00	METAL CHIP	1. 5K 5% 1/10W
R315	1-216-093-00	METAL CHIP	68K 5% 1/10W	R370	1-216-009-00	METAL CHIP	22 5% 1/10W
R316	1-216-093-00	METAL CHIP	68K 5% 1/10W	R371	1-216-009-00	METAL CHIP	22 5% 1/10W
R317	1-216-053-00	METAL CHIP	1. 5K 5% 1/10W	R372	1-216-097-00	METAL CHIP	100K 5% 1/10W
R318	1-216-053-00	METAL CHIP	1. 5K 5% 1/10W	R373	1-216-062-00	METAL CHIP	3. 6K 5% 1/10W
R322	1-216-097-00	METAL CHIP	100K 5% 1/10W	R374	1-216-065-00	METAL CHIP	4. 7K 5% 1/10W
R323	1-216-062-00	METAL CHIP	3. 6K 5% 1/10W	R375	1-216-061-00	METAL CHIP	3. 3K 5% 1/10W
R324	1-216-065-00	METAL CHIP	4. 7K 5% 1/10W	R376	1-216-097-00	METAL CHIP	100K 5% 1/10W
R325	1-216-061-00	METAL CHIP	3. 3K 5% 1/10W	R377	1-216-073-00	METAL CHIP	10K 5% 1/10W
R326	1-216-097-00	METAL CHIP	100K 5% 1/10W	R378	1-216-065-00	METAL CHIP	4. 7K 5% 1/10W
R327	1-216-073-00	METAL CHIP	10K 5% 1/10W	R379	1-216-055-00	METAL CHIP	1. 8K 5% 1/10W
R328	1-216-065-00	METAL CHIP	4. 7K 5% 1/10W	R380	1-216-049-00	METAL CHIP	1K 5% 1/10W
R329	1-216-055-00	METAL CHIP	1. 8K 5% 1/10W	R381	1-216-097-00	METAL CHIP	100K 5% 1/10W
R330	1-216-049-00	METAL CHIP	1K 5% 1/10W	R382	1-216-054-00	METAL GLAZE	1. 6K 5% 1/10W
R331	1-216-097-00	METAL CHIP	100K 5% 1/10W	R383	1-216-065-00	METAL CHIP	4. 7K 5% 1/10W
R332	1-216-054-00	METAL GLAZE	1. 6K 5% 1/10W	R384	1-216-105-00	METAL CHIP	220K 5% 1/10W
R333	1-216-065-00	METAL CHIP	4. 7K 5% 1/10W	R385	1-216-049-00	METAL CHIP	1K 5% 1/10W
R334	1-216-105-00	METAL CHIP	220K 5% 1/10W	R386	1-216-049-00	METAL CHIP	1K 5% 1/10W
R335	1-216-049-00	METAL CHIP	1K 5% 1/10W	R387	1-216-065-00	METAL CHIP	4. 7K 5% 1/10W
R336	1-216-049-00	METAL CHIP	1K 5% 1/10W	R388	1-216-065-00	METAL CHIP	4. 7K 5% 1/10W
R337	1-216-065-00	METAL CHIP	4. 7K 5% 1/10W	R390	1-216-041-00	METAL CHIP	470 5% 1/10W
R338	1-216-065-00	METAL CHIP	4. 7K 5% 1/10W	R391	1-216-061-00	METAL CHIP	3. 3K 5% 1/10W
R341	1-216-061-00	METAL CHIP	3. 3K 5% 1/10W	R392	1-216-061-00	METAL CHIP	3. 3K 5% 1/10W
R342	1-216-061-00	METAL CHIP	3. 3K 5% 1/10W	R393	1-216-061-00	METAL CHIP	3. 3K 5% 1/10W
R343	1-216-061-00	METAL CHIP	3. 3K 5% 1/10W	R394	1-216-049-00	METAL CHIP	1K 5% 1/10W
R344	1-216-059-00	METAL CHIP	2. 7K 5% 1/10W	R396	1-216-065-00	METAL CHIP	4. 7K 5% 1/10W
R346	1-216-065-00	METAL CHIP	4. 7K 5% 1/10W	R399	1-216-295-11	METAL GLAZE	0 5% 1/10W
R347	1-216-049-00	METAL CHIP	1K 5% 1/10W	R403	1-216-080-00	METAL CHIP	20K 5% 1/10W
R348	1-216-049-00	METAL CHIP	1K 5% 1/10W	R404	1-216-051-00	METAL CHIP	1. 2K 5% 1/10W
R349	1-216-049-00	METAL CHIP	1K 5% 1/10W	R411	1-216-097-00	METAL CHIP	100K 5% 1/10W
R350	1-216-049-00	METAL CHIP	1K 5% 1/10W	R412	1-216-097-00	METAL CHIP	100K 5% 1/10W
R351	1-216-001-00	METAL CHIP	10 5% 1/10W	R413	1-216-049-00	METAL CHIP	1K 5% 1/10W
R352	1-216-017-00	METAL CHIP	47 5% 1/10W	R416	1-216-049-00	METAL CHIP	1K 5% 1/10W
R353	1-216-025-00	METAL CHIP	100 5% 1/10W	R418	1-216-049-00	METAL CHIP	1K 5% 1/10W
				R426	1-216-041-00	METAL CHIP	470 5% 1/10W

SURROUND				TRANSFORMER (1)			TRANSFORMER (2)		
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark		
R427	1-216-025-00	METAL CHIP	100 5% 1/10W	R782	1-216-017-00	METAL CHIP	47 5% 1/10W		
R436	1-216-121-00	METAL CHIP	1M 5% 1/10W	R788	1-216-097-00	METAL CHIP	100K 5% 1/10W		
R437	1-216-121-00	METAL CHIP	1M 5% 1/10W	R789	1-216-113-00	METAL CHIP	470K 5% 1/10W		
R438	1-216-121-00	METAL CHIP	1M 5% 1/10W	R790	1-216-049-00	METAL CHIP	1K 5% 1/10W		
R439	1-216-121-00	METAL CHIP	1M 5% 1/10W	R792	1-216-073-00	METAL CHIP	10K 5% 1/10W		
R440	1-216-121-00	METAL CHIP	1M 5% 1/10W	R793	1-216-101-00	METAL CHIP	150K 5% 1/10W		
R441	1-216-081-00	METAL CHIP	22K 5% 1/10W	R794	1-216-061-00	METAL CHIP	3.3K 5% 1/10W		
R442	1-216-081-00	METAL CHIP	22K 5% 1/10W	R795	1-216-069-00	METAL CHIP	6.8K 5% 1/10W		
R443	1-216-049-00	METAL CHIP	1K 5% 1/10W	R797	1-216-049-00	METAL CHIP	1K 5% 1/10W		
R451	1-216-097-00	METAL CHIP	100K 5% 1/10W						
R452	1-216-097-00	METAL CHIP	100K 5% 1/10W				< VIBRATOR >		
R453	1-216-080-00	METAL CHIP	20K 5% 1/10W	X402	1-567-970-11	VIBRATOR, CRYSTAL (24MHz)			
R454	1-216-051-00	METAL CHIP	1.2K 5% 1/10W				*****		
R467	1-216-080-00	METAL CHIP	20K 5% 1/10W	*	1-645-942-11	TRANSFORMER (1) BOARD (Canadian)	*****		
R468	1-216-073-00	METAL CHIP	10K 5% 1/10W				*****		
R469	1-216-107-00	METAL CHIP	270K 5% 1/10W	*	1-650-276-11	TRANSFORMER (1) BOARD (US)	*****		
R470	1-216-073-00	METAL CHIP	10K 5% 1/10W				*****		
R471	1-216-077-00	METAL CHIP	15K 5% 1/10W	*	1-533-293-11	FUSE HOLDER			
R472	1-216-083-00	METAL CHIP	27K 5% 1/10W				< CONNECTOR >		
R473	1-216-068-00	METAL CHIP	6.2K 5% 1/10W				CNP970 1-564-242-00 PIN, CONNECTOR 5P		
R474	1-216-089-91	METAL GLAZE	47K 5% 1/10W				* CNP974 1-564-506-11 PLUG, CONNECTOR 3P		
R475	1-216-061-00	METAL CHIP	3.3K 5% 1/10W						
R476	1-216-107-00	METAL CHIP	270K 5% 1/10W				< DIODE >		
R477	1-216-081-00	METAL CHIP	22K 5% 1/10W	D966	8-719-987-63	DIODE 1N4148M			
R479	1-216-031-00	METAL CHIP	180 5% 1/10W				< FUSE >		
R480	1-216-075-00	METAL CHIP	12K 5% 1/10W				△F954 1-532-749-11 FUSE, GLASS TUBE (8A 125V)		
R481	1-216-065-00	METAL CHIP	4.7K 5% 1/10W				△F955 1-532-749-11 FUSE, GLASS TUBE (8A 125V)		
R482	1-216-069-00	METAL CHIP	6.8K 5% 1/10W				< RELAY >		
R483	1-216-089-91	METAL GLAZE	47K 5% 1/10W				RY951 1-515-894-11 RELAY (US)		
R485	1-216-295-11	METAL GLAZE	0 5% 1/10W				RY951 1-515-918-11 RELAY (Canadian)		
R486	1-216-295-11	METAL GLAZE	0 5% 1/10W				RY952 1-515-918-11 RELAY (Canadian)		
R491	1-216-049-00	METAL CHIP	1K 5% 1/10W				*****		
R492	1-216-049-00	METAL CHIP	1K 5% 1/10W	*	1-650-277-11	TRANSFORMER (2) BOARD	*****		
R493	1-216-049-00	METAL CHIP	1K 5% 1/10W				*****		
R494	1-216-049-00	METAL CHIP	1K 5% 1/10W	*	1-533-293-11	FUSE HOLDER			
R495	1-216-049-00	METAL CHIP	1K 5% 1/10W				< CONNECTOR >		
R496	1-216-049-00	METAL CHIP	1K 5% 1/10W				* CNP971 1-564-506-11 PLUG, CONNECTOR 3P		
R497	1-216-049-00	METAL CHIP	1K 5% 1/10W				CNP972 1-564-104-00 PIN, CONNECTOR 3P		
R498	1-216-033-00	METAL CHIP	220 5% 1/10W				CNP973 1-564-321-00 PIN, CONNECTOR 2P		
R499	1-216-041-00	METAL CHIP	470 5% 1/10W						
R738	1-216-097-00	METAL CHIP	100K 5% 1/10W						
R739	1-216-113-00	METAL CHIP	470K 5% 1/10W						
R740	1-216-049-00	METAL CHIP	1K 5% 1/10W						
R742	1-216-073-00	METAL CHIP	10K 5% 1/10W						
R743	1-216-101-00	METAL CHIP	150K 5% 1/10W						
R744	1-216-061-00	METAL CHIP	3.3K 5% 1/10W						
R745	1-216-069-00	METAL CHIP	6.8K 5% 1/10W						
R747	1-216-049-00	METAL CHIP	1K 5% 1/10W						
R781	1-216-039-00	METAL CHIP	390 5% 1/10W						

The components identified by mark ▲ or dotted line with mark ▲ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ▲ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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TUNER VIDEO

VIDEO 4

Ref. No.	Part No.	Description	Remark
< DIODE >			

D150 8-719-014-82 DIODE UZP-6.8B

< FUSE >

△F951 1-576-109-11 FUSE (5A 125V)
 △F952 1-576-108-11 FUSE (4A 125V)
 △F953 1-576-109-11 FUSE (5A 125V)

* A-4365-608-A TUNER VIDEO BOARD, COMPLETE

< CAPACITOR >

C201 1-124-463-00 ELECT 0.1uF 20% 50V

C202 1-124-463-00 ELECT 0.1uF 20% 50V

C203 1-124-463-00 ELECT 0.1uF 20% 50V

C204 1-124-472-11 ELECT 470uF 20% 10V

C205 1-124-472-11 ELECT 470uF 20% 10V

C206 1-124-472-11 ELECT 470uF 20% 10V

C207 1-124-463-00 ELECT 0.1uF 20% 50V

C208 1-164-159-11 CERAMIC 0.1uF 50V

C209 1-124-120-11 ELECT 220uF 20% 25V

C210 1-124-463-00 ELECT 0.1uF 20% 50V

C211 1-124-463-00 ELECT 0.1uF 20% 50V

< CONNECTOR >

* CNJ202 1-568-826-11 SOCKET, CONNECTOR 7P

* CNS1 1-691-183-11 CONNECTOR (BOARD TO BOARD) 13P

< FRONT END >

FE201 1-239-561-11 ENCAPSULATED COMPONENT (FCC)

< IC >

IC201 8-759-061-95 IC SN761200

< JACK >

J201 1-568-751-51 JACK, PIN (2P SHIELD TYPE)
 (VIDEO IN(VIDEO 1)/VIDEO OUT(MON/TOR))J202 1-568-751-51 JACK, PIN (2P SHIELD TYPE)
 (VIDEO IN(VIDEO 2)/VIDEO OUT(VIDEO 1))J203 1-568-752-51 JACK, PIN (3P SHIELD TYPE)
 (VIDEO IN(VIDEO 3/LD)/VIDEO OUT(VIDEO 2))

< COIL >

L201 1-410-521-11 INDUCTOR 100uH

Ref. No.	Part No.	Description	Remark
< TRANSISTOR >			

Q201 8-729-119-76 TRANSISTOR 2SA1175-HFE

Q202 8-729-119-76 TRANSISTOR 2SA1175-HFE

Q203 8-729-119-76 TRANSISTOR 2SA1175-HFE

Q204 8-729-119-78 TRANSISTOR 2SC403SP-51

Q205 8-729-119-78 TRANSISTOR 2SC403SP-51

< RESISTOR >

△R210 1-249-409-11 CARBON 220 5% 1/4W F

R201 1-247-804-11 CARBON 75 5% 1/4W

R202 1-247-804-11 CARBON 75 5% 1/4W

R203 1-247-804-11 CARBON 75 5% 1/4W

R204 1-249-429-11 CARBON 10K 5% 1/4W

R205 1-247-804-11 CARBON 75 5% 1/4W

R206 1-247-804-11 CARBON 75 5% 1/4W

R207 1-249-429-11 CARBON 10K 5% 1/4W

R208 1-247-804-11 CARBON 75 5% 1/4W

R209 1-249-429-11 CARBON 10K 5% 1/4W

R211 1-249-441-11 CARBON 100K 5% 1/4W

△R212 1-249-409-11 CARBON 220 5% 1/4W F

△R213 1-249-417-11 CARBON 1K 5% 1/4W F

△R214 1-249-417-11 CARBON 1K 5% 1/4W F

R215 1-247-807-31 CARBON 100 5% 1/4W

R216 1-247-804-11 CARBON 75 5% 1/4W

R217 1-247-807-31 CARBON 100 5% 1/4W

R218 1-247-807-31 CARBON 100 5% 1/4W

R220 1-247-804-11 CARBON 75 5% 1/4W

< TERMINAL >

* TM201 1-562-907-11 CONNECTOR, F-J (FM 75Ω COAXIAL)

TM202 1-536-707-00 TERMINAL BOARD, PUSH 2P (AM)

* 1-650-273-11 VIDEO 4 BOARD

* 4-962-543-01 PLATE (V.D.), GROUND

< CONNECTOR >

* CNS153 1-565-482-11 CONNECTOR, BOARD TO BOARD 6P

< JACK >

J131 1-580-174-21 JACK, PIN (3P FRONT)
 (VIDEO 4 INPUT(VIDEO/AUDIO))

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

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Ref. No.	Part No.	Description	Remark
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MISCELLANEOUS

27	1-690-091-11	WIRE, FLAT TYPE (21 CORE)	
55	1-696-073-21	LEAD (WITH CONNECTOR) (2 CORE)	
58	1-575-780-11	WIRE, FLAT TYPE (7 CORE)	
59	1-690-421-11	WIRE, FLAT TYPE (7 CORE)	
60	1-559-479-11	CORD, POWER	
63	1-543-619-41	CORE, RING	
66	1-575-848-11	WIRE, FLAT TYPE (5 CORE)	
* 68	1-555-110-00	CABLE, PIN (Canadian)	
107	1-535-706-11	PLUG, JUMPER	
110	1-696-550-11	WIRE (FLAT TYPE) (33 CORE)	
△T902	1-423-645-11	TRANSFORMER, POWER (US)	
△T902	1-423-695-11	TRANSFORMER, POWER (Canadian)	

ACCESSORIES & PACKING MATERIALS

1-501-374-11	ANTENNA, LOOP	
3-757-830-21	CARD	
3-757-830-31	CARD (Canadian)	
3-757-831-21	MANUAL, INSTRUCTION (ENGLISH)	
3-757-831-31	MANUAL, INSTRUCTION (FRENCH) (Canadian)	
*	4-950-766-01	LABEL, FCC DIGITAL DEVICE (US)
*	4-964-565-01	CUSHION
*	4-964-566-01	INDIVIDUAL CARTON
	8-917-208-90	REPEATER, IR RM-IR100 SET

- Please refer to page73 for the remote commander (RM-VP1)

HARDWARE LIST

#1	7-685-103-19	+ PTPWH (2X5)	
#2	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT	
#3	7-621-775-00	SCREW +B 2.6X3	
#4	7-684-014-00	N 4, TYPE 1	
#5	7-685-649-79	SCREW +BTP 3X8 TYPE2 N-S	
#6	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#7	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	
#8	7-682-547-09	SCREW +BVTT 3X6 (S)	
#9	7-682-561-04	SCREW +BVTT 4X8 (S)	
#10	7-682-548-04	SCREW +BVTT 3X8 (S)	

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STR-G1ES

9-959-241-11

Sony Corporation
Audio Group

—94—

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