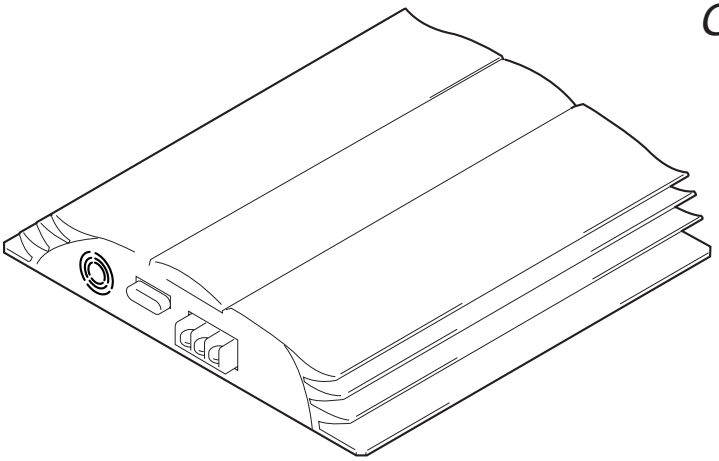
XM-754HX

SERVICE MANUAL

Ver 1.1 2001. 08

US Model
Canadian Model
AEP Model
UK Model
E Model



SPECIFICATIONS

AUDIO POWER SPECIFICATIONS (US model)
POWER OUTPUT AND TOTAL HARMONIC DISTORTION
75 watts per channel minimum continuous average power into 4 ohms, both channels driven from 20 Hz to 20 kHz with no more than 0.04% total harmonic distortion per Car Audio Ad Hoc Committee standards.

Other Specifications

Circuit system: OTL (output transformerless) circuit
Pulse power supply
Inputs: RCA pin jacks
High level input connector
Outputs: Speaker terminals
Speaker impedance
1* – 8 Ω (stereo)
2* – 8 Ω (when used as a bridging amplifier)
Maximum outputs (HI-CURRENT/HI-VOLTAGE)
Four speakers :
90/170 W x 4 (at 4 Ω)
Three speakers :
90 W x 2 + 250W x 1 / 170W x 2 + 400W x 1 (at 4 Ω)
Two speakers :
250/400 W x 2 (at 4 Ω)
Rated outputs (HI-CURRENT/HI-VOLTAGE)
(supply voltage at 14.4 V)
Four speakers :
35/75 W x 4 (20 Hz – 20 kHz, 0.04% THD, at 4 Ω)
50/100 W x 4 (20 Hz – 20 kHz, 0.1% THD, at 2 Ω)
Two speakers :
100/200 W x2 (20 Hz – 20 kHz, 0.1% THD, at 4 Ω)
Frequency response
5 Hz – 50 kHz ($^{+0.5}_{-3}$ dB)
Harmonic distortion
0.005% or less (at lkHz, 4 Ω)
Input level adjustment range
0.2 – 4.0 V (RCA pin jacks)
0.4 – 8.0 V (High level input)
High-pass filter: 50 – 200 Hz, –12 dB/oct
Low-pass filter: 50 – 200 Hz, –12 dB/oct
Low boost: 0 – 10 dB (40 Hz)
Power requirements: 12 V DC car battery (negative ground)
Power supply voltage
10.5 – 16 V
Current drain: at rated output : 40 A
(4Ω HI-VOLTAGE mode)
Remote input : 1.5 mA
Dimensions: Approx. 258 x 50 x 320 mm (w/h/d)
(10 1/4 x 2 x 12 5/8 in.) not incl. projecting parts and controls
Mass: Approx. 3.5 kg (7 lb. 11 oz.) not incl. accessories

Supplied accessories
Mounting screws (4),
Terminal cap (1)

Design and specifications are subject to change without notice.

* HI-CURRENT only

STEREO POWER AMPLIFIER

9-925-796-12
2001H0400-1

Sony Corporation
e Vehicle Company
Shinagawa Tec Service Manual Production Group

SONY®

Features

- Maximum power output of 170 watts per channel (at 4 Ω).
- This unit can be used as a bridging amplifier with a maximum output of 400 watts.
- Direct connection can be made with the speaker output of your car audio if it is not equipped with a line output (High level input connection).
- Built-in variable LPF (Low-pass filter), HPF (High-pass filter) and low boost circuit.
- Possible to switch between HI-CURRENT mode (1-2 Ω) and HI-VOLTAGE mode (2 - 4 Ω).
- Protection circuit and indicator provided.
- Pulse power supply* for stable, regulated output power.
- New circuit which removes the source resistance from the final MOS FET output stage, and drives the speaker directly.

* ***Pulse power supply***

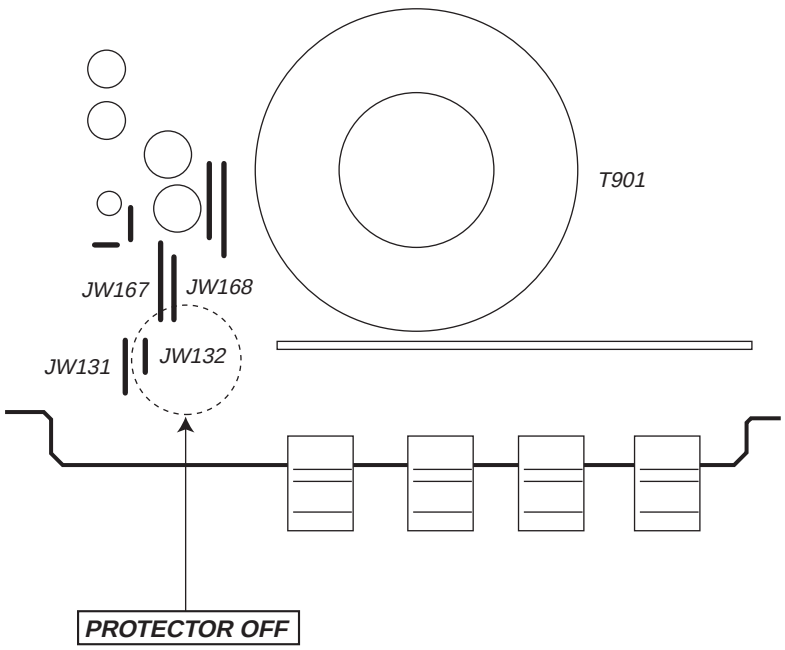
This unit has a built-in power regulator which converts the power supplied by the DC 12 V car battery into high speed pulses using a semiconductor switch. These pulses are stepped up by the built-in pulse transformer and separated into both positive and negative power supplies before being converted into direct current again. This is to regulate fluctuating voltage from the car battery. This light weight power supply system provides a highly efficient power supply with a low impedance output.

TABLE OF CONTENTS

SECTION 1
SERVICING NOTE

CANCELLING THE PROTECTOR DURING SERVICING

Cut JW132 on the amplifier board to cancel the protector.
After servicing always be sure to return JW132 to its original state.



This section is extracted from instruction manual.

Location and Function of Controls

1 **MODE indicator**
Indicates HI-CURRENT mode or HI-VOLTAGE mode.

2 **POWER/PROTECTOR indicator**
- OVER CURRENT lights up in green during normal operation. The color will change from green to amber when receiving a powerful signal.
- OFF SET lights up green during normal operation. The color will change from green to amber when the voltage going out to the Speaker terminal or the Pin Jack is too high.
- THERMAL lights up in green during normal operation. The color will change from green to amber when the temperature rises to an unsafe level. The color will return to green when the temperature returns to normal.

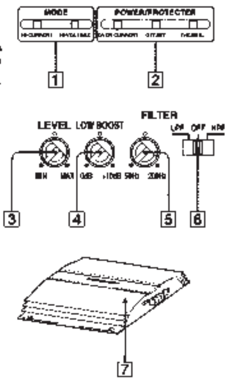
3 **LEVEL adjustment control**
The input level can be adjusted with this control when using source equipment made by other manufacturers. Turn it to MAX when the output level of the car audio seems low.

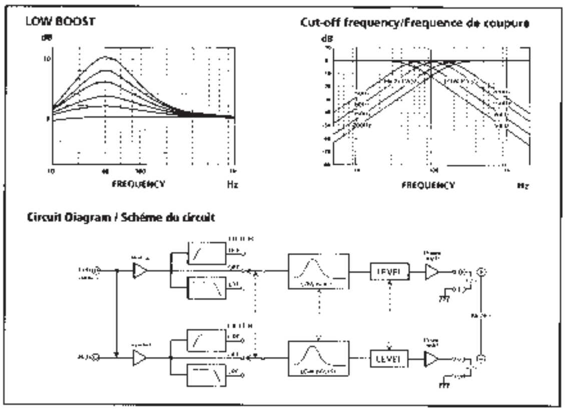
4 **LOW BOOST level control**
Turn this control to boost the frequencies around 40 Hz to a maximum of 10 dB.

5 **Cut-off frequency adjustment control**
Sets the cut-off frequency (50–200 Hz) for the low-pass or high-pass filters.

6 **FILTER selector switch**
When the switch is in the LPF position, the filter is set to low-pass. When in the HPF position, the filter is set to high-pass.

7 **HI-CURRENT/HI-VOLTAGE mode switch (located on the bottom of the unit)**
Remove the bottom cover to access the switch.
- In HI-CURRENT mode the speaker impedance is 1 to 2 Ω. This mode sends a signal via parallel circuits for a powerful sound.
- In HI-VOLTAGE mode the speaker impedance is 2 to 4 Ω. In this mode you can enjoy clear sound with the dynamic range.





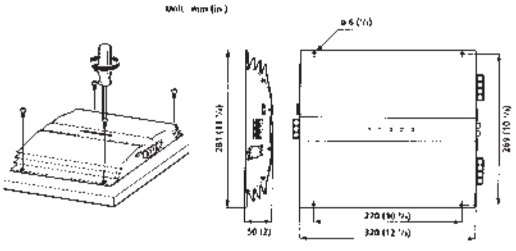
Installation

Before Installation

- Mount the unit either inside the trunk or under a seat.
- Choose the mounting location carefully so the unit will not interfere with the normal movements of the driver and it will not be exposed to direct sunlight or hot air from the heater.
- Do not install the unit under the floor carpet, where the heat dissipation from the unit will be considerably impaired.

First, place the unit where you plan to install it, and mark the positions of the four screw holes on the surface of the mounting board (not supplied). Then drill the holes approximately 3 millimeters (mm) in diameter and mount the unit onto the board with the supplied mounting screws. The supplied mounting screws are 15 mm long. Therefore, make sure that the mounting board is thicker than 15 mm.

Unit: mm (in.)



Connections

Precautions

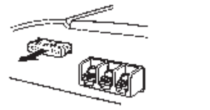
- This unit is designed for negative ground 12 V DC operation only.
- Use speakers with suitable impedance:
  — HI-CURRENT mode: 1 to 2 Ω
  — HI-VOLTAGE mode: 2 to 4 Ω
- Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers.
- Avoid installing the unit where:
  - it would be subject to high temperatures such as from direct sunlight or hot air from the heater
  - it would be exposed to rain or moisture
  - it would be subject to dust or dirt.
- If your car is parked in direct sunlight and there is a considerable rise in temperature inside the car, allow the unit to cool down before use.
- When installing the unit horizontally, be sure not to cover the fins with the floor carpet etc.
- If this unit is placed too close to the car radio, interference may occur. In this case, relocate the amplifier away from the car radio.
- If no power is being supplied to the cassette player or tuner, check the connections.
- This power amplifier employs a protection circuit* to protect the transistors and speakers if the amplifier malfunctions. Do not attempt to test the protection circuits by covering the heat sink or connecting improper loads.
- Do not use the unit on a weak battery as its optimum performance depends on a good power supply.
- For safety reasons, keep your car audio volume moderate so that you can still hear sounds outside your car.

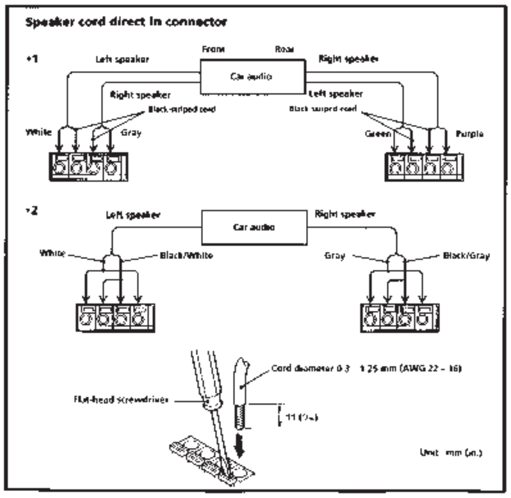
Fuse Replacement

If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction. In such a case, consult your nearest Sony dealer.

Warning

When replacing the fuse, be sure to use one matching the amperage stated above the fuse holder. Never use a fuse with an amperage rating exceeding the one supplied with the unit as this could damage the unit.

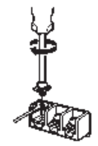




Caution

- Before making any connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Be sure to use speakers with an adequate power rating. If you use small capacity speakers, they may be damaged.
- Do not connect the ⊖ terminal of the speaker system to the car chassis, and do not connect the ⊖ terminal of the right speaker with that of the left speaker.
- Install the input and output cords away from the power supply lead as running them close together can generate some interference noise.
- This unit is a high powered amplifier. Therefore, it may not perform to its full potential if used with the speaker cords supplied with the car.
- If your car is equipped with a computer system for navigation or some other purpose, do not remove the ground wire from the car battery. If you disconnect the wire, the computer memory may be erased. To avoid short circuits when making connections, disconnect the +12 V power supply lead until all the other leads have been connected.

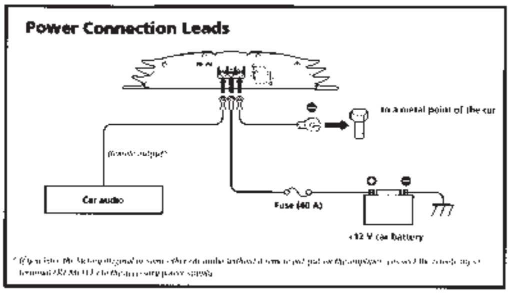
Make the terminal connections as illustrated below.



Note
Tighten the screws firmly, but be careful not to apply too much force as doing so may damage the screws.*

* *The torque value should be less than 1 N•m.*

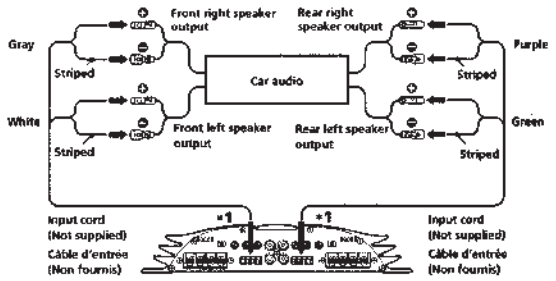
Pass the leads through the cap, connect the leads, then cover the terminals with the cap.



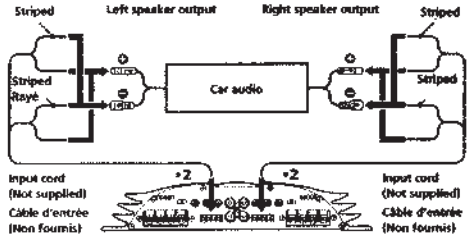
Notes on the power supply
- *Connect the +12 V power supply lead only after all the other leads have been connected.*
- ***Be sure to connect the ground lead of the unit securely to a metal point of the car. A loose connection may cause a malfunction of the amplifier.***
- *Be sure to connect the remote control lead of the car audio to the remote terminal.*
- *When using a car audio without a remote output on the amplifier, connect the remote input terminal (REMOTE) to the accessory power supply.*
- *Use the power supply lead with a fuse attached (40 A).*
- *Place the fuse in the power supply lead as close as possible to the car battery.*
- *Make sure that the leads to be connected to the* ***+12 V*** *and* ***GND*** *terminals of the unit are larger than 10-Gauge (AWG-10).*
- *When using the optional RC power amplifier connection cord, consult that manual for proper use.*

Input Connections

High Level Input Connection (with Speaker Connection 1, 2 or 4) — A

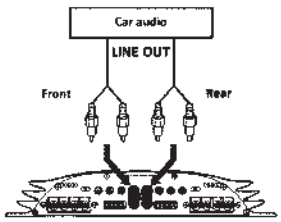


High Level Input Connection (with Speaker Connection 3) — B

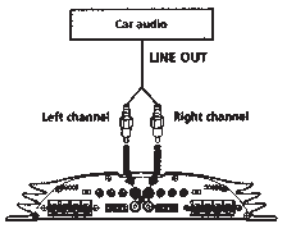


Note
Make sure that the right speaker output from the car audio is connected to the connector marked "REAR" on the unit.

Line Input Connection (with Speaker Connection 1, 2 or 4) — C



Line Input Connection (with Speaker Connection 3) — D

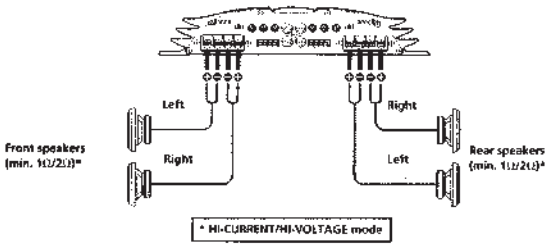


Note
Make sure that the line output from the car audio is connected to the jack marked "L (MONO)" on the unit.

Speaker Connections

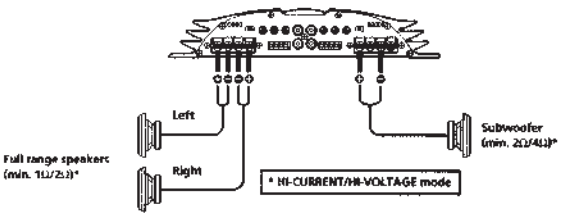
4-Speaker System (with Input Connection A or C) — 1

For details on the settings of switches and controls, refer to "Location and Function of Controls."



3-Speaker System (with Input Connection A or C) — 2

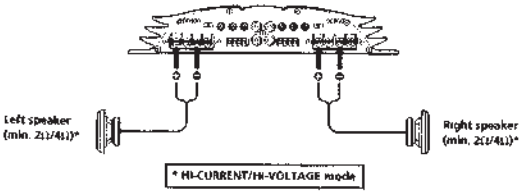
For details on the settings of switches and controls, refer to "Location and Function of Controls."



Notes
- *In this system, the volume of the subwoofer will be controlled by the car audio fader control.*
- *In this system, the output signals to the subwoofer are a combination of both the REAR L and R INPUT jacks or the REAR high level input connector signals.*

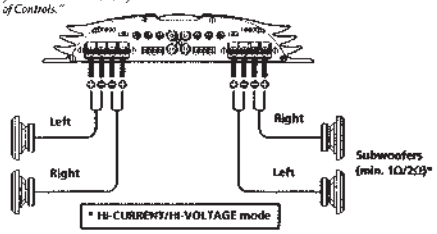
2-Speaker System (with Input Connection B or D) — 3

For details on the settings of switches and controls, refer to "Location and Function of Controls."



2-Way System (with Input Connection A or C) — 4

For details on the settings of switches and controls, refer to "Location and Function of Controls."

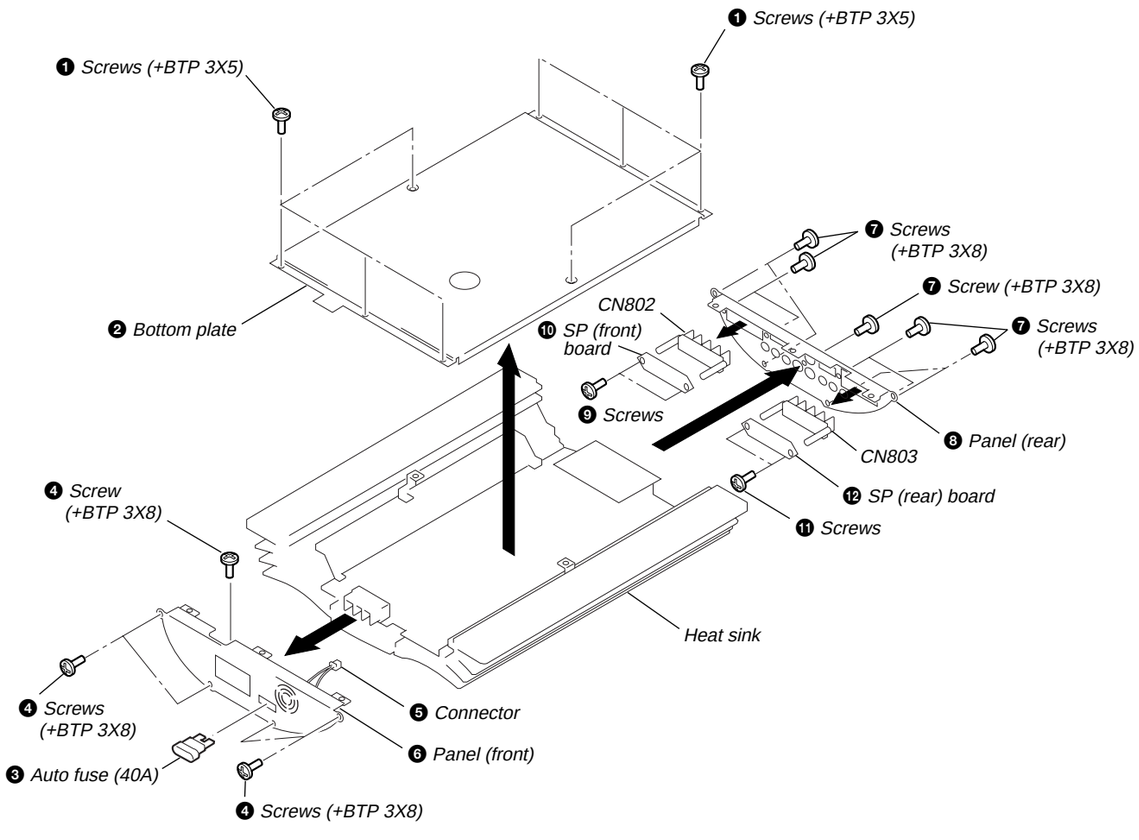


Note
In this system, the volume of the subwoofers will be controlled by the car audio fader control.

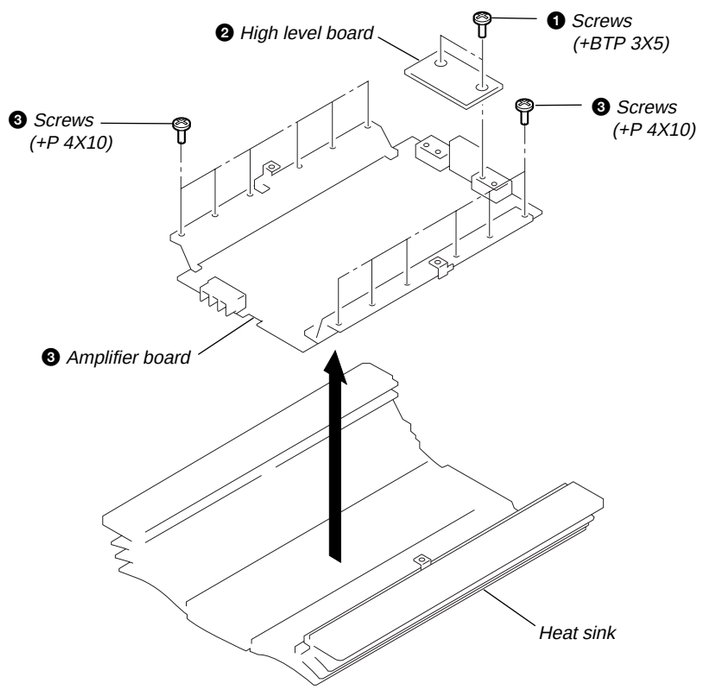
SECTION 3
DISASSEMBLY

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

3-1. BOTTOM PLATE, PANEL (FRONT), PANEL (REAR), SP (FRONT) BOARD, SP (REAR) BOARD REMOVAL



3-2. AMPLIFIER BOARD REMOVAL



SECTION 4
ELECTRICAL ADJUSTMENT

Bias Adjustment

Procedure :

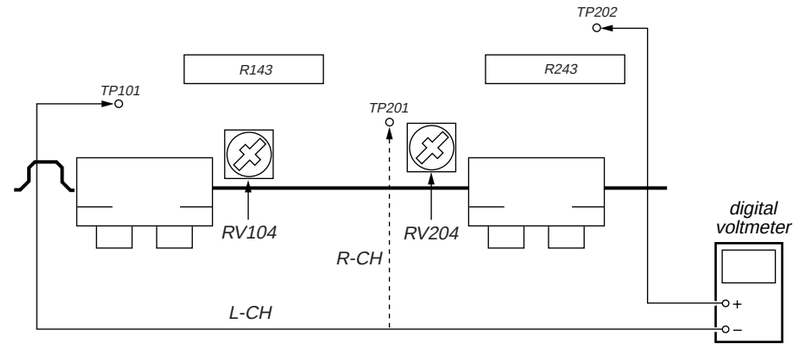
1. Rotare semi-fixed resistors RV104, RV204, RV304 and RV404 fully counterclockwise as viewed from the component side
2. No signal is entered, as input signal.
3. Apply the source voltage 14.4V between +12V, REMOTE and GND terminals.
4. Adjust the RV104 (FRONT L-CH), RV204 (FRONT R-CH), RV304 (REAR L-CH) and RV404 (REAR R-CH) so that the digital voltmeter reading becomes the adjustment limits below.

Adjustment Limits : 3 ± 0.3mV

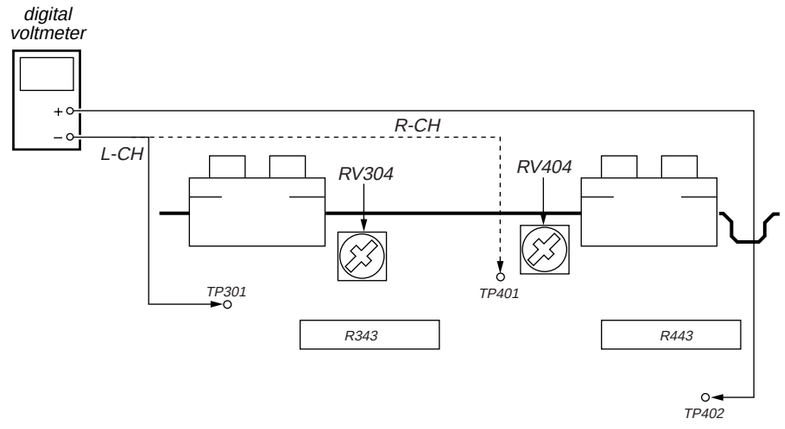
Adjustment Location :

[AMPLIFIER BOARD] (Component side)

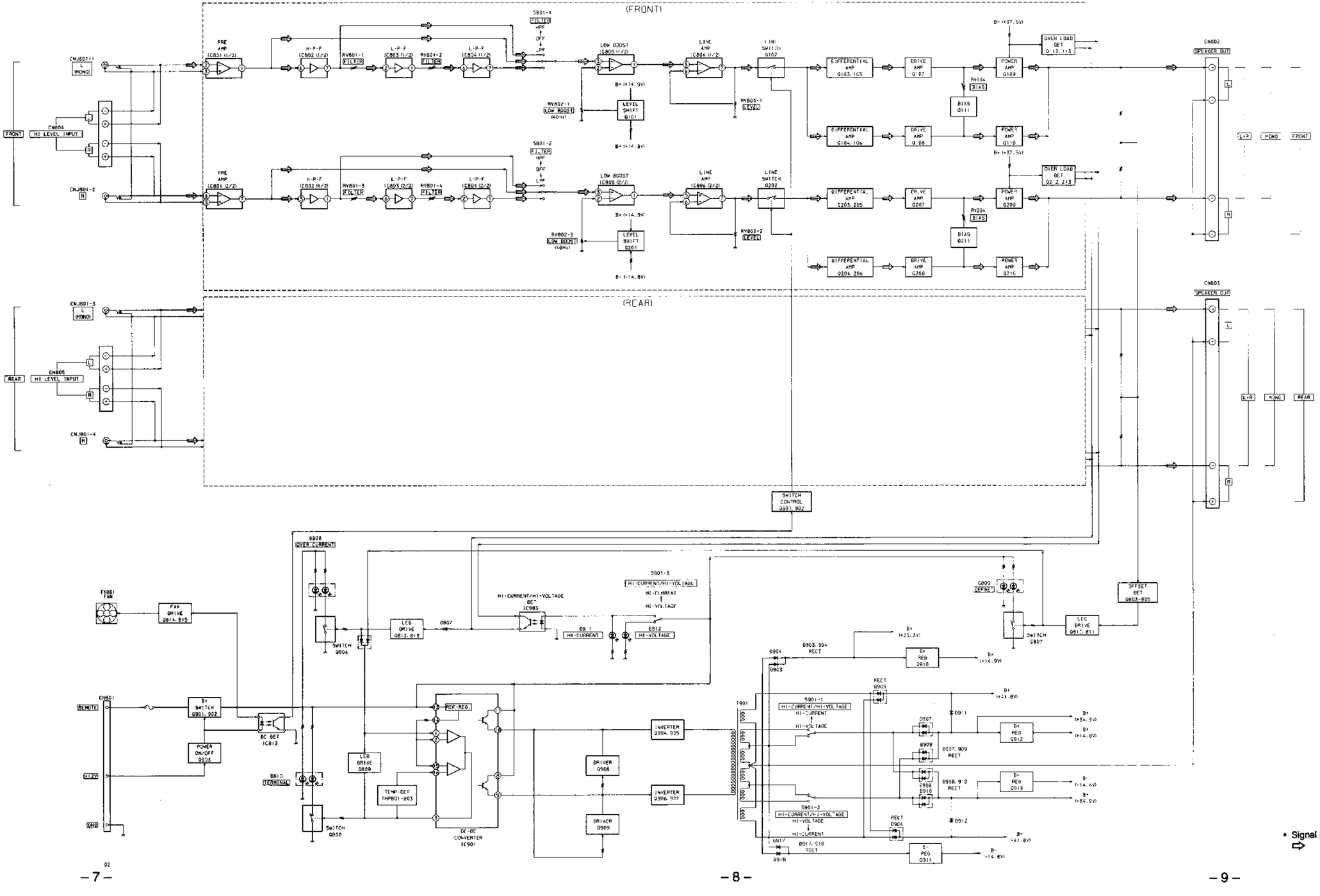
– FRONT –



– REAR –



5-1. BLOCK DIAGRAM



• Signal path. ⇨

● WAVEFORMS

① 13Vp-p, 33 µsec

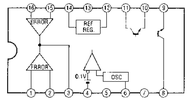
② 12Vp-p, 33 µsec

③ 29Vp-p, 33 µsec

④ 80Vp-p, 33 µsec

● IC BLOCK DIAGRAM

IC901 µPC494GS



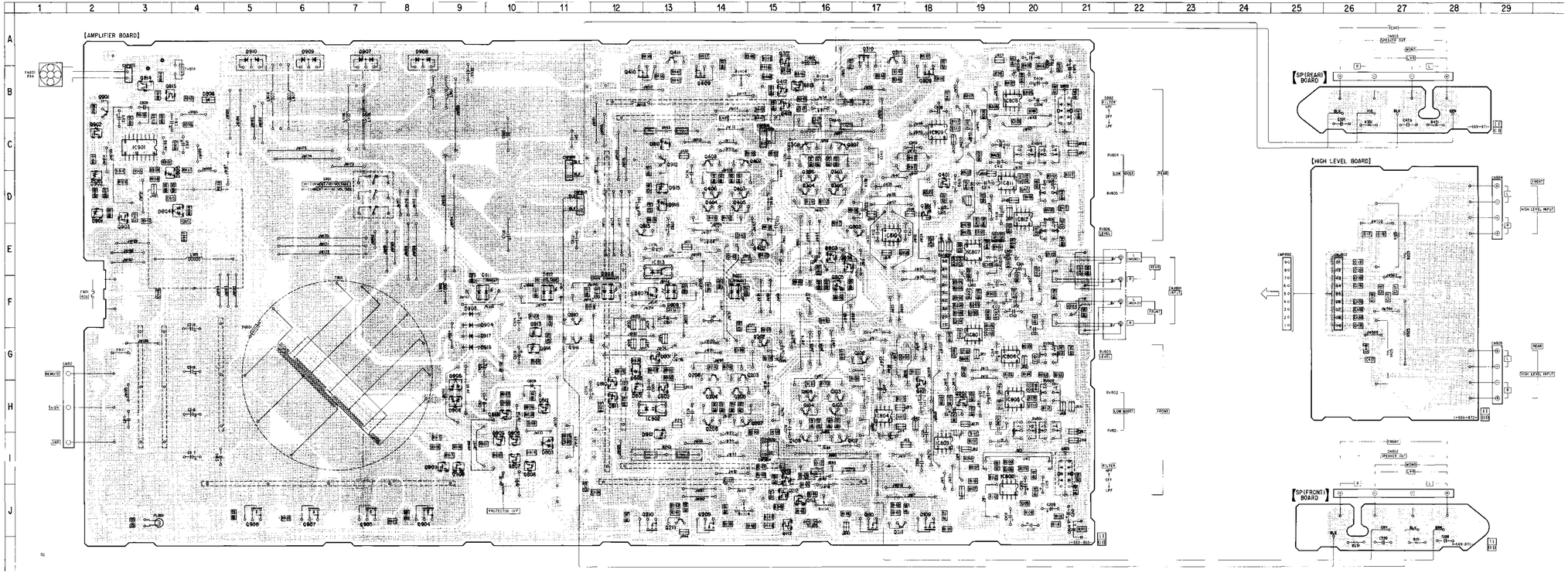
Note on Printed Wiring Boards:
Note:
- ⟷: parts extracted from the component side.
- ⟷: Pattern from the side which enables seeing.

● SEMICONDUCTOR LOCATION

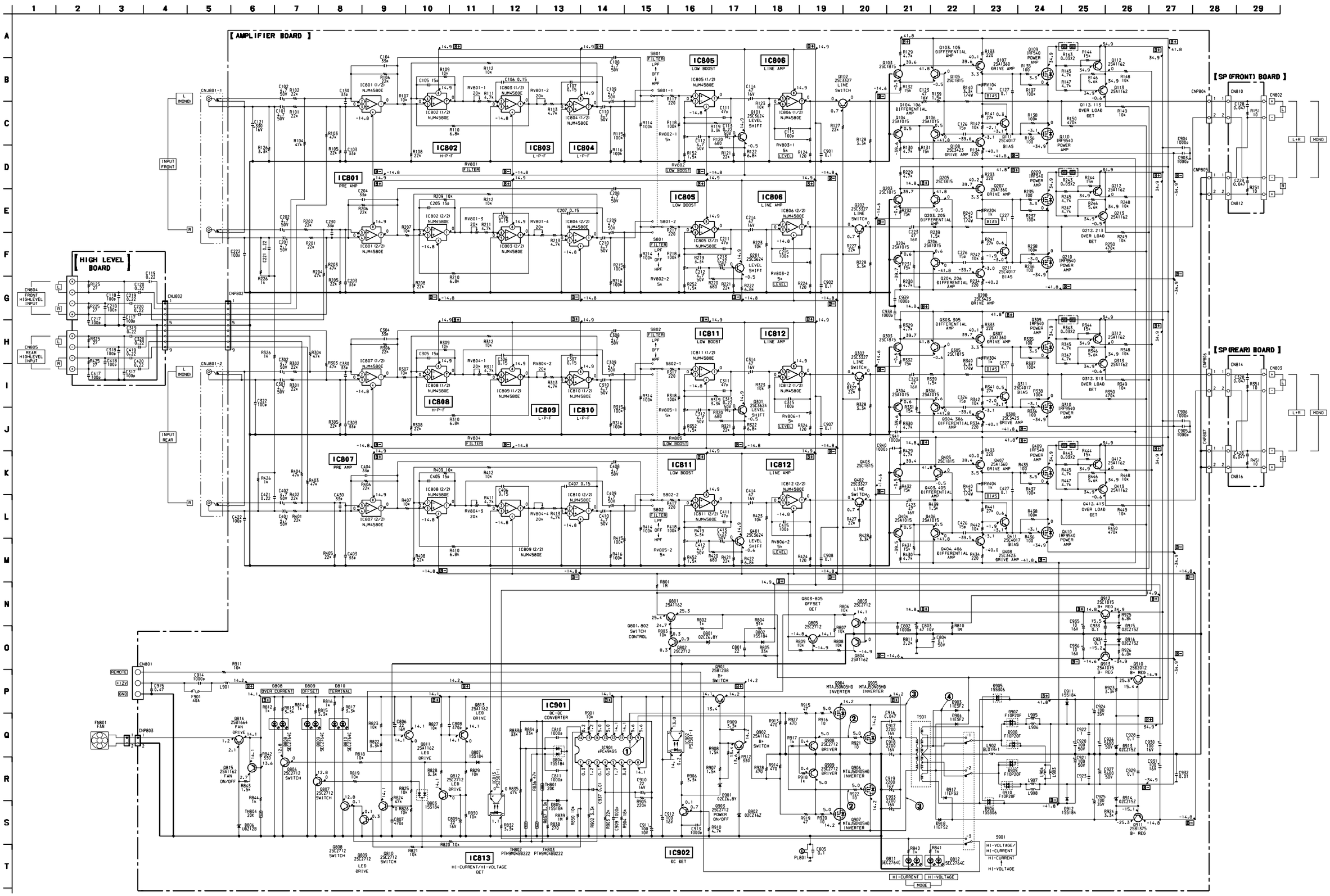
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D801	H-12	IC813	E-13	Q401	D-18
D802	G-12	IC901	C-3		
D803	I-11	IC902	H-13	Q402	E-15
D804	D-4			Q403	D-14
D805	D-4			Q404	D-14
		Q101	H-18	Q405	D-14
D806	B-4	Q102	G-16	Q406	D-14
D807	F-12	Q103	H-16		
D808	F-12	Q104	H-16	Q407	C-14
D809	F-13	Q105	H-16	Q408	C-14
D810	F-14			Q409	B-14
		Q106	H-16	Q410	B-12
D811	F-11	Q107	I-16	Q411	A-13
D812	F-9	Q108	I-15		
D901	D-2	Q109	J-18	Q412	B-15
D902	D-2	Q110	J-17	Q413	B-15
D903	F-9			Q801	G-13
		Q111	J-17	Q802	H-13
D904	F-9	Q112	J-15	Q803	E-16
D905	G-9	Q113	J-15		
D906	H-9	Q201	H-18	Q804	E-16
D907	A-7	Q202	G-15	Q805	F-16
D908	A-8			Q806	I-10
		Q203	G-14	Q807	I-10
D909	A-6	Q204	H-14	Q808	I-10
D910	A-5	Q205	H-14		
D911	C-13	Q206	G-14	Q809	I-10
D912	H-13	Q207	H-14	Q810	H-12
D913	F-10			Q811	H-12
		Q208	H-14	Q812	H-10
D914	G-10	Q209	J-14	Q813	H-10
D915	D-13	Q210	J-12		
D916	D-13	Q211	J-13	Q814	B-3
D917	G-9	Q212	J-15	Q815	B-3
D918	G-9			Q901	B-2
		Q213	I-15	Q902	C-2
		Q301	D-18	Q903	D-3
IC801	G-19	Q302	E-16		
IC802	I-19	Q303	D-16	Q904	J-8
IC803	I-18	Q304	D-15	Q905	J-7
IC804	H-17			Q906	J-5
IC805	H-19	Q305	D-16	Q907	J-6
		Q306	D-16	Q908	I-9
IC806	G-19	Q307	C-18		
IC807	E-19	Q308	C-15	Q909	I-9
IC808	B-19	Q309	B-17	Q910	F-11
IC809	C-18			Q911	G-11
IC810	E-17	Q310	A-17	Q912	C-13
		Q311	A-17	Q913	E-12
IC811	D-19	Q312	A-15		
IC812	D-20	Q313	B-15		

Note on Schematic Diagram:
Note:
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- [ ]: panel designation.
- B+: B+ Line.
- ▬: adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from REMOTE and +12V terminals.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.

5-2. PRINTED WIRING BOARDS



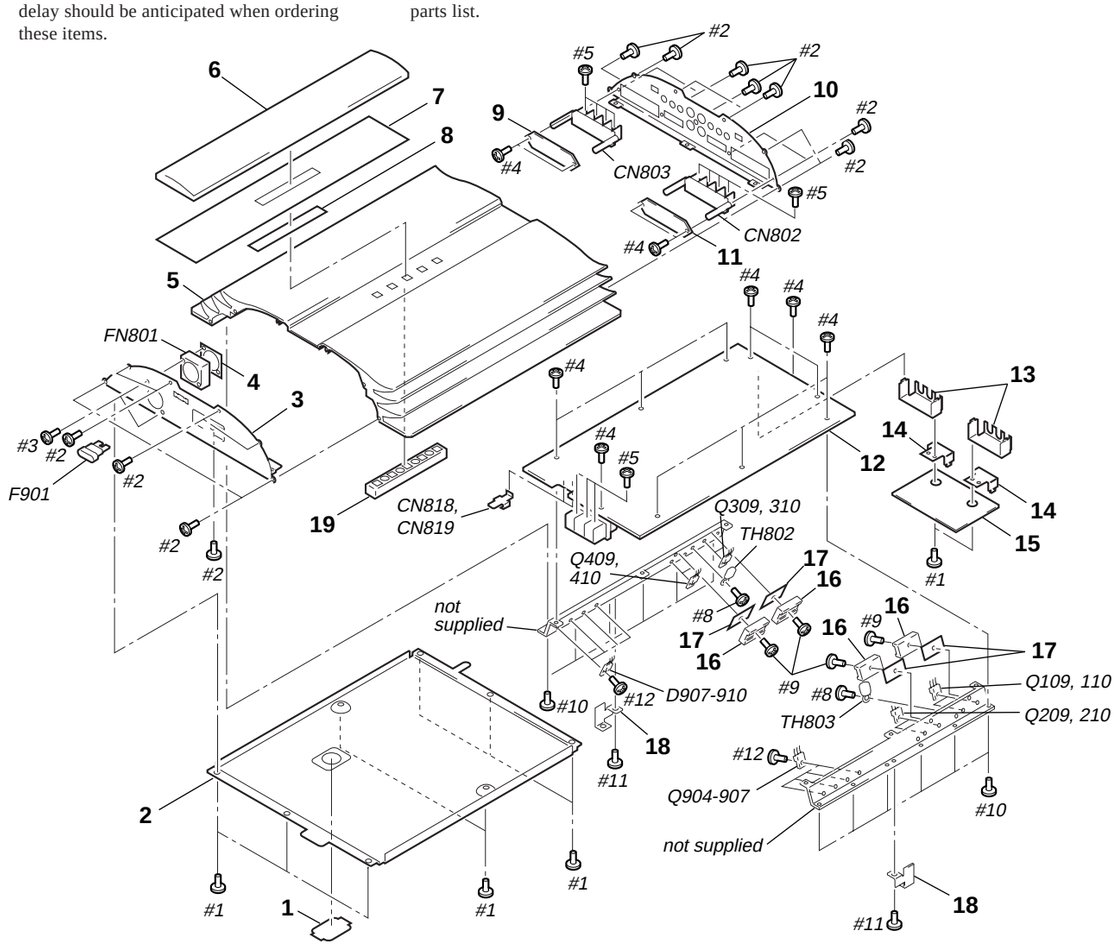
5-3. SCHEMATIC DIAGRAM



SECTION 6
EXPLODED VIEW

NOTE :

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.



Ref. No.	Part No.	Description	Remark
1	3-023-803-01	COVER	
* 2	3-023-796-01	PLATE, BOTTOM	
* 3	3-023-131-01	PANEL, FRONT	
* 4	3-023-795-01	BRACKET (FAN)	
* 5	3-023-801-01	HEAT SINK	
* 6	3-023-797-11	PLATE, ORNAMENTAL	
* 7	3-025-082-01	SHEET (DOUBLE-FACE)	
* 8	3-023-804-01	SHEET, DIFFUSION	
* 9	1-669-871-11	SP (REAR) BOARD	
* 10	3-023-132-01	PANEL, REAR	
* 11	1-669-870-11	SP (FRONT) BOARD	
* 12	A-3313-744-A	AMPLIFIER BOARD, COMPLETE	
* 13	3-023-798-01	BRACKET (VR)	
* 14	3-023-799-01	BRACKET (HIGH LEVEL)	
* 15	1-669-872-11	HIGH LEVEL BOARD	
* 16	3-936-982-01	PLATE (TR), RETAINER	
* 17	3-025-081-01	SHEET (INSULATING)	
* 18	3-023-800-01	BRACKET (BOTTOM PLATE)	
* 19	3-025-083-01	RUBBER, LIGHT INTERCEPTION	
CN802	1-694-425-11	TERMINAL BOARD (4P) (FRONT SPEAKER OUT)	
CN803	1-694-425-11	TERMINAL BOARD (4P) (REAR SPEAKER OUT)	

Ref. No.	Part No.	Description	Remark
CN818	1-537-479-11	TERMINAL	
CN819	1-537-479-11	TERMINAL	
D907	8-719-210-30	DIODE F10P20F(R)	
D908	8-719-210-30	DIODE F10P20F(R)	
D909	8-719-210-30	DIODE F10P20F(R)	
D910	8-719-210-30	DIODE F10P20F(R)	
F901	1-533-743-11	FUSE (BLADE TYPE) (AUTO FUSE) (40A)	
FN801	1-763-107-11	MOTOR, FAN	
Q109	8-729-038-52	TRANSISTOR IRF540(H)	
Q110	8-729-038-01	TRANSISTOR IRF9540(H)	
Q209	8-729-038-52	TRANSISTOR IRF540(H)	
Q210	8-729-038-01	TRANSISTOR IRF9540(H)	
Q309	8-729-038-52	TRANSISTOR IRF540(H)	
Q310	8-729-038-01	TRANSISTOR IRF9540(H)	
Q409	8-729-038-52	TRANSISTOR IRF540(H)	
Q410	8-729-038-01	TRANSISTOR IRF9540(H)	
Q904	8-729-030-72	TRANSISTOR MTAJ50N05HD	
Q905	8-729-030-72	TRANSISTOR MTAJ50N05HD	
Q906	8-729-030-72	TRANSISTOR MTAJ50N05HD	
Q907	8-729-030-72	TRANSISTOR MTAJ50N05HD	
TH802	1-809-664-51	THERMISTOR, POSITIVE	
TH803	1-809-664-51	THERMISTOR, POSITIVE	

AMPLIFIER

SECTION 7
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, -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 : µ , for example :
  uA.... : µ A.... , uPA.... : µ PA....
  uPB.... : µ PB.... , uPC.... : µ PC....
  uPD.... : µ PD....
- CAPACITORS
  uF : µ F
- COILS
  uH : µ H
- Abbreviation
  G : German

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

Ref. No.	Part No.	Description			Remark
*	A-3313-744-A	AMPLIFIER BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-126-047-11	ELECT	4.7uF	20%	50V
C102	1-126-047-11	ELECT	4.7uF	20%	50V
C103	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C104	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C105	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C106	1-136-167-00	FILM	0.15uF	5%	50V
C107	1-136-167-00	FILM	0.15uF	5%	50V
C108	1-126-047-11	ELECT	4.7uF	20%	50V
C109	1-126-047-11	ELECT	4.7uF	20%	50V
C110	1-126-047-11	ELECT	4.7uF	20%	50V
C111	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C112	1-126-047-11	ELECT	4.7uF	20%	50V
C113	1-126-957-11	ELECT	0.22uF	20%	50V
C114	1-126-008-11	ELECT	47uF	20%	16V
C115	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C121	1-104-661-11	ELECT	330uF	20%	16V
C123	1-126-008-11	ELECT	47uF	20%	16V
C126	1-102-951-00	CERAMIC	15PF	5%	50V
C127	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C130	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C201	1-126-047-11	ELECT	4.7uF	20%	50V
C202	1-126-047-11	ELECT	4.7uF	20%	50V
C203	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C204	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C205	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C206	1-136-167-00	FILM	0.15uF	5%	50V
C207	1-136-167-00	FILM	0.15uF	5%	50V
C208	1-126-047-11	ELECT	4.7uF	20%	50V
C209	1-126-047-11	ELECT	4.7uF	20%	50V
C210	1-126-047-11	ELECT	4.7uF	20%	50V
C211	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C212	1-126-047-11	ELECT	4.7uF	20%	50V
C213	1-126-957-11	ELECT	0.22uF	20%	50V
C214	1-126-008-11	ELECT	47uF	20%	16V
C215	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C221	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C222	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C223	1-126-008-11	ELECT	47uF	20%	16V
C226	1-102-951-00	CERAMIC	15PF	5%	50V
C227	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C230	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C301	1-126-047-11	ELECT	4.7uF	20%	50V
C302	1-126-047-11	ELECT	4.7uF	20%	50V
C303	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C304	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C305	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C306	1-136-167-00	FILM	0.15uF	5%	50V
C307	1-136-167-00	FILM	0.15uF	5%	50V
C308	1-126-047-11	ELECT	4.7uF	20%	50V
C309	1-126-047-11	ELECT	4.7uF	20%	50V
C310	1-126-047-11	ELECT	4.7uF	20%	50V
C311	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C312	1-126-047-11	ELECT	4.7uF	20%	50V
C313	1-126-957-11	ELECT	0.22uF	20%	50V
C314	1-126-008-11	ELECT	47uF	20%	16V
C315	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C322	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C323	1-126-008-11	ELECT	47uF	20%	16V
C326	1-102-951-00	CERAMIC	15PF	5%	50V
C327	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C330	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C401	1-126-047-11	ELECT	4.7uF	20%	50V
C402	1-126-047-11	ELECT	4.7uF	20%	50V
C403	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C404	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C405	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C406	1-136-167-00	FILM	0.15uF	5%	50V
C407	1-136-167-00	FILM	0.15uF	5%	50V
C408	1-126-047-11	ELECT	4.7uF	20%	50V
C409	1-126-047-11	ELECT	4.7uF	20%	50V
C410	1-126-047-11	ELECT	4.7uF	20%	50V
C411	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C412	1-126-047-11	ELECT	4.7uF	20%	50V
C413	1-126-957-11	ELECT	0.22uF	20%	50V
C414	1-126-008-11	ELECT	47uF	20%	16V
C415	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C421	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C422	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C423	1-126-008-11	ELECT	47uF	20%	16V
C426	1-102-951-00	CERAMIC	15PF	5%	50V
C427	1-165-319-11	CERAMIC CHIP	0.1uF		50V

Ref. No.	Part No.	Description			Remark
C430	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C801	1-124-282-00	ELECT	22uF	20%	16V
C802	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C803	1-126-967-11	ELECT	47uF	20%	10V
C804	1-126-956-11	ELECT	0.1uF	20%	50V
C805	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C806	1-128-551-11	ELECT	22uF	20%	25V
C807	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C808	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C809	1-128-551-11	ELECT	22uF	20%	25V
C810	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C811	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C901	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C902	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C903	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C904	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C905	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C906	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C907	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C908	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C909	1-106-343-00	MYLAR	1000PF	5%	200V
C910	1-128-551-11	ELECT	22uF	20%	25V
C911	1-126-933-11	ELECT	100uF	20%	10V
C912	1-126-933-11	ELECT	100uF	20%	16V
C913	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C914	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C915	1-136-173-00	FILM	0.47uF	5%	50V
C916	1-106-383-00	MYLAR	0.047uF	5%	200V
C917	1-111-044-11	ELECT	2200uF	20%	16V
C918	1-111-044-11	ELECT	2200uF	20%	16V
C919	1-111-044-11	ELECT	2200uF	20%	16V
C920	1-126-052-11	ELECT	100uF	20%	50V
C921	1-126-052-11	ELECT	100uF	20%	50V
C922	1-136-177-00	FILM	1uF	5%	50V
C923	1-136-177-00	FILM	1uF	5%	50V
C924	1-126-052-11	ELECT	100uF	20%	35V
C925	1-126-052-11	ELECT	100uF	20%	35V
C926	1-125-826-11	CAP ACIT OR	5600uF		50V
C927	1-125-826-11	CAP ACIT OR	5600uF		50V
C928	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C929	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C930	1-126-009-11	ELECT	100uF	20%	16V
C931	1-126-009-11	ELECT	100uF	20%	16V
C932	1-107-364-11	MYLAR	0.01uF	10%	200V
C933	1-111-044-11	ELECT	2200uF	20%	16V
C933	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C934	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C935	1-126-157-11	ELECT	10uF	20%	16V
C936	1-126-157-11	ELECT	10uF	20%	16V
C937	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C938	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C939	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C940	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C941	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
		<CONNECTOR>			
CN801	1-537-477-21	TERMINAL BOARD (3P) (REMOTE, +12V , GND)			
CN818	1-537-479-11	TERMINAL			
CN819	1-537-479-11	TERMINAL			
CNP802	1-784-917-11	CONNECTOR, BOARD TO BOARD 9P			
* CNP803	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P			
CNP804	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P			
CNP805	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P			
CNP806	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P			
CNP807	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P			
		<PIN JACK>			
CNJ801	1-779-078-51	JACK, PIN 4P (INPUT)			
		<DIODE>			
D801	8-719-025-34	DIODE 02CZ6.8-TE85L			
D802	8-719-801-78	DIODE 1SS184			
D803	8-719-801-78	DIODE 1SS184			
D804	8-719-801-78	DIODE 1SS184			
D805	8-719-801-78	DIODE 1SS184			
D806	8-719-158-49	DIODE RD12SB2			
D807	8-719-801-78	DIODE 1SS184			
D808	8-719-070-01	LED SEC2764C (OVER CURRENT)			
D809	8-719-070-01	LED SEC2764C (OFFSET)			
D810	8-719-070-01	LED SEC2764C (THERMAL)			
D811	8-719-070-01	LED SEC2764C (HI-CURRENT)			
D812	8-719-070-01	LED SEC2764C (HI-VOL TAGE)			
D901	8-719-025-34	DIODE 02CZ6.8-TE85L			
D902	8-719-025-50	DIODE 02CZ16-TE85L			
D903	8-719-987-67	DIODE 11EFS2			
D904	8-719-987-67	DIODE 11EFS2			
D905	8-719-054-55	DIODE 1SS306(TE85L)			
D906	8-719-054-55	DIODE 1SS306(TE85L)			
D907	8-719-210-30	DIODE F10P20F(R)			
D908	8-719-210-30	DIODE F10P20F(R)			
D909	8-719-210-30	DIODE F10P20F(R)			
D910	8-719-210-30	DIODE F10P20F(R)			
D911	8-719-801-78	DIODE 1SS184			
D912	8-719-801-78	DIODE 1SS184			
D913	8-719-025-49	DIODE 02CZ15-TE85L			
D914	8-719-025-49	DIODE 02CZ15-TE85L			
D915	8-719-025-49	DIODE 02CZ15-TE85L			
D916	8-719-025-49	DIODE 02CZ15-TE85L			
D917	8-719-987-67	DIODE 11EFS2			
D918	8-719-987-67	DIODE 11EFS2			
		<IC>			
IC801	8-759-711-82	IC NJM4580E			
IC802	8-759-711-82	IC NJM4580E			
IC803	8-759-711-82	IC NJM4580E			
IC804	8-759-711-82	IC NJM4580E			
IC805	8-759-711-82	IC NJM4580E			
IC806	8-759-711-82	IC NJM4580E			
IC807	8-759-711-82	IC NJM4580E			
IC808	8-759-711-82	IC NJM4580E			
IC809	8-759-711-82	IC NJM4580E			
IC810	8-759-711-82	IC NJM4580E			
IC811	8-759-711-82	IC NJM4580E			
IC812	8-759-711-82	IC NJM4580E			
IC813	8-719-156-72	PHOTO COUPLER PS2501-1KA			

Ver 1.1

AMPLIFIER

Ref. No.	Part No.	Description	Remark
IC901	8-759-144-88	ICUPC494GS	
IC902	8-719-156-72	PHOTO COUPLER PS2501-1KA	
		<JUMPER RESISTOR>	
JR1	1-216-295-00	CONDUCTOR CHIP	
JR2	1-216-295-00	CONDUCTOR CHIP	
JR3	1-216-295-00	CONDUCTOR CHIP	
JR4	1-216-295-00	CONDUCTOR CHIP	
JR5	1-216-295-00	CONDUCTOR CHIP	
JR6	1-216-295-00	CONDUCTOR CHIP	
JR7	1-216-295-00	CONDUCTOR CHIP	
JR8	1-216-295-00	CONDUCTOR CHIP	
JR9	1-216-295-00	CONDUCTOR CHIP	
JR10	1-216-295-00	CONDUCTOR CHIP	
JR11	1-216-295-00	CONDUCTOR CHIP	
JR12	1-216-295-00	CONDUCTOR CHIP	
JR13	1-216-295-00	CONDUCTOR CHIP	
JR14	1-216-295-00	CONDUCTOR CHIP	
JR15	1-216-295-00	CONDUCTOR CHIP	
JR16	1-216-295-00	CONDUCTOR CHIP	
JR17	1-216-295-00	CONDUCTOR CHIP	
JR18	1-216-295-00	CONDUCTOR CHIP	
JR19	1-216-295-00	CONDUCTOR CHIP	
JR20	1-216-295-00	CONDUCTOR CHIP	
JR21	1-216-295-00	CONDUCTOR CHIP	
JR22	1-216-295-00	CONDUCTOR CHIP	
JR23	1-216-295-00	CONDUCTOR CHIP	
JR24	1-216-295-00	CONDUCTOR CHIP	
JR26	1-216-296-00	CONDUCTOR CHIP	
JR27	1-216-296-00	CONDUCTOR CHIP	
JR28	1-216-296-00	CONDUCTOR CHIP	
JR29	1-216-296-00	CONDUCTOR CHIP	
JR30	1-216-296-00	CONDUCTOR CHIP	
JR31	1-216-296-00	CONDUCTOR CHIP	
JR32	1-216-296-00	CONDUCTOR CHIP	
JR33	1-216-296-00	CONDUCTOR CHIP	
JR35	1-216-296-00	CONDUCTOR CHIP	
JR41	1-216-296-00	CONDUCTOR CHIP	
JR42	1-216-296-00	CONDUCTOR CHIP	
JR43	1-216-296-00	CONDUCTOR CHIP	
JR44	1-216-296-00	CONDUCTOR CHIP	
JR45	1-216-296-00	CONDUCTOR CHIP	
JR46	1-216-296-00	CONDUCTOR CHIP	
JR47	1-216-296-00	CONDUCTOR CHIP	
		<COIL>	
L901	1-419-851-11	INDUCTOR 50uH	
L902	1-410-396-71	INDUCTOR 0.45uH	
L903	1-410-396-41	FERRITE BEAD INDUCTOR 0.45uH	
L904	1-410-396-41	FERRITE BEAD INDUCTOR 0.45uH	
L905	1-410-396-41	FERRITE BEAD INDUCTOR 0.45uH	
L906	1-410-396-41	FERRITE BEAD INDUCTOR 0.45uH	
L907	1-410-396-41	FERRITE BEAD INDUCTOR 0.45uH	
L908	1-410-396-41	FERRITE BEAD INDUCTOR 0.45uH	
		<PILOT LAMP>	
PL801	1-518-540-00	LAMP , PILOT	

Ref. No.	Part No.	Description	Remark
		<TRANSISTOR>	
Q101	8-729-422-29	TRANSISTOR 2SD601A-S	
Q102	8-729-203-48	TRANSISTOR 2SC3327-A	
Q103	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q104	8-729-173-38	TRANSISTOR 2SA733-K	
Q105	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q106	8-729-173-38	TRANSISTOR 2SA733-K	
Q107	8-729-209-18	TRANSISTOR 2SA1360-Y	
Q108	8-729-203-45	TRANSISTOR 2SC3423-O	
Q109	8-729-038-52	TRANSISTOR IRF540(H)	
Q110	8-729-038-01	TRANSISTOR IRF9540(H)	
Q111	8-729-954-51	TRANSISTOR 2SC1545	
Q112	8-729-216-21	TRANSISTOR 2SA1162-Y	
Q113	8-729-216-21	TRANSISTOR 2SA1162-Y	
Q201	8-729-422-29	TRANSISTOR 2SD601A-S	
Q202	8-729-203-48	TRANSISTOR 2SC3327-A	
Q203	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q204	8-729-173-38	TRANSISTOR 2SA733-K	
Q205	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q206	8-729-173-38	TRANSISTOR 2SA733-K	
Q207	8-729-209-18	TRANSISTOR 2SA1360-Y	
Q208	8-729-203-45	TRANSISTOR 2SC3423-O	
Q209	8-729-038-52	TRANSISTOR IRF540(H)	
Q210	8-729-038-01	TRANSISTOR IRF9540(H)	
Q211	8-729-954-51	TRANSISTOR 2SC1545	
Q212	8-729-216-21	TRANSISTOR 2SA1162-Y	
Q213	8-729-216-21	TRANSISTOR 2SA1162-Y	
Q301	8-729-422-29	TRANSISTOR 2SD601A-S	
Q302	8-729-203-48	TRANSISTOR 2SC3327-A	
Q303	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q304	8-729-173-38	TRANSISTOR 2SA733-K	
Q305	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q306	8-729-173-38	TRANSISTOR 2SA733-K	
Q307	8-729-209-18	TRANSISTOR 2SA1360-Y	
Q308	8-729-203-45	TRANSISTOR 2SC3423-O	
Q309	8-729-038-52	TRANSISTOR IRF540(H)	
Q310	8-729-038-01	TRANSISTOR IRF9540(H)	
Q311	8-729-954-51	TRANSISTOR 2SC1545	
Q312	8-729-216-21	TRANSISTOR 2SA1162-Y	
Q313	8-729-216-21	TRANSISTOR 2SA1162-Y	
Q401	8-729-422-29	TRANSISTOR 2SD601A-S	
Q402	8-729-203-48	TRANSISTOR 2SC3327-A	
Q403	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q404	8-729-173-38	TRANSISTOR 2SA733-K	
Q405	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q406	8-729-173-38	TRANSISTOR 2SA733-K	
Q407	8-729-209-18	TRANSISTOR 2SA1360-Y	
Q408	8-729-203-45	TRANSISTOR 2SC3423-O	
Q409	8-729-038-52	TRANSISTOR IRF540(H)	
Q410	8-729-038-01	TRANSISTOR IRF9540(H)	
Q411	8-729-954-51	TRANSISTOR 2SC1545	
Q412	8-729-216-21	TRANSISTOR 2SA1162-Y	
Q413	8-729-216-21	TRANSISTOR 2SA1162-Y	
Q801	8-729-216-21	TRANSISTOR 2SA1162-Y	
Q802	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q803	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q804	8-729-216-21	TRANSISTOR 2SA1162-Y	

Ref. No.	Part No.	Description			Remark
Q805	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q806	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q807	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q808	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q809	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q810	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q811	8-729-216-21	TRANSISTOR 2SA1162-Y			
Q812	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q813	8-729-216-21	TRANSISTOR 2SA1162-Y			
Q814	8-729-106-68	TRANSISTOR 2SD1615A-GP			
Q815	8-729-216-21	TRANSISTOR 2SA1162-Y			
Q901	8-729-041-38	TRANSISTOR 2SB1241TV2Q			
Q902	8-729-216-21	TRANSISTOR 2SA1162-Y			
Q903	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q904	8-729-030-72	TRANSIST OR MT AJ50N05HD			
Q905	8-729-030-72	TRANSIST OR MT AJ50N05HD			
Q906	8-729-030-72	TRANSIST OR MT AJ50N05HD			
Q907	8-729-030-72	TRANSIST OR MT AJ50N05HD			
Q908	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q909	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q910	8-729-209-15	TRANSISTOR 2SD2012			
Q911	8-729-141-83	TRANSISTOR 2SB1094-LK			
Q912	8-729-119-78	TRANSISTOR 2SC403SP-51			
Q913	8-729-173-38	TRANSISTOR 2SA733-K			
		<RESISTOR>			
R101	1-208-518-11	RES,CHIP	22K	2%	1/10W
R102	1-208-518-11	RES,CHIP	22K	2%	1/10W
R103	1-216-238-00	RES,CHIP	47K	2%	1/8W
R104	1-216-238-00	RES,CHIP	47K	2%	1/8W
R105	1-208-518-11	RES,CHIP	22K	2%	1/10W
R106	1-208-518-11	RES,CHIP	22K	2%	1/10W
R107	1-208-462-11	RES,CHIP	10K	2%	1/10W
R108	1-216-230-00	RES,CHIP	22K	2%	1/8W
R109	1-208-462-11	RES,CHIP	10K	2%	1/10W
R110	1-216-671-11	MET AL CHIP	6.8K	0.5%	1/10W
R111	1-216-214-00	RES,CHIP	4.7K	2%	1/10W
R112	1-208-462-11	RES,CHIP	10K	2%	1/10W
R113	1-216-214-00	RES,CHIP	4.7K	2%	1/8W
R114	1-208-534-11	RES,CHIP	100K	2%	1/10W
R115	1-208-534-11	RES,CHIP	100K	2%	1/10W
R116	1-208-534-11	RES,CHIP	100K	2%	1/10W
R117	1-216-635-11	MET AL CHIP	220	0.5%	1/10W
R118	1-208-534-11	RES,CHIP	100K	2%	1/10W
R119	1-208-449-11	RES,CHIP	3.3K	2%	1/10W
R120	1-216-647-11	MET AL CHIP	680	0.5%	1/10W
R121	1-208-518-11	RES,CHIP	22K	2%	1/10W
R122	1-216-671-11	MET AL CHIP	6.8K	0.5%	1/10W
R123	1-208-462-11	RES,CHIP	10K	2%	1/10W
R124	1-208-760-11	RES,CHIP	120	2%	1/10W
R126	1-216-210-00	RES,CHIP	3.3K	2%	1/8W
R127	1-208-518-11	RES,CHIP	22K	2%	1/10W
R128	1-208-449-11	RES,CHIP	3.3K	2%	1/10W
R129	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R130	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R131	1-208-810-11	RES,CHIP	15K	2%	1/10W
R132	1-208-810-11	RES,CHIP	15K	2%	1/10W
R133	1-216-635-11	MET AL CHIP	220	0.5%	1/10W

Ref. No.	Part No.	Description			Remark
R134	1-216-635-11	MET AL CHIP	220	0.5%	1/10W
R135	1-208-365-11	RES,CHIP	100	2%	1/8W
R136	1-208-365-11	RES,CHIP	100	2%	1/8W
R137	1-208-534-11	RES,CHIP	100K	2%	1/10W
R138	1-208-534-11	RES,CHIP	100K	2%	1/10W
R139	1-249-419-11	CARBON	1.5K	5%	1/4W
R140	1-247-843-11	CARBON	3.3K	5%	1/4W
R141	1-216-685-11	MET AL CHIP	27K	0.5%	1/10W
R142	1-208-462-11	RES,CHIP	10K	2%	1/10W
R143	1-240-179-11	MET AL PLATE	0.03X2		5W F
R144	1-208-810-11	RES,CHIP	15K	2%	1/10W
R145	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R146	1-208-800-11	RES,CHIP	5.6K	2%	1/10W
R147	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R148	1-208-510-11	RES,CHIP	10K	2%	1/8W
R149	1-208-510-11	RES,CHIP	10K	2%	1/8W
R150	1-208-550-11	RES,CHIP	470K	2%	1/10W
R152	1-208-441-11	RES,CHIP	1.5K	2%	1/10W
R201	1-208-518-11	RES,CHIP	22K	2%	1/10W
R202	1-208-518-11	RES,CHIP	22K	2%	1/10W
R203	1-208-526-11	RES,CHIP	47K	2%	1/10W
R204	1-208-526-11	RES,CHIP	47K	2%	1/10W
R205	1-208-518-11	RES,CHIP	22K	2%	1/10W
R206	1-208-518-11	RES,CHIP	22K	2%	1/10W
R207	1-208-462-11	RES,CHIP	10K	2%	1/10W
R208	1-208-518-11	RES,CHIP	22K	2%	1/10W
R209	1-208-462-11	RES,CHIP	10K	2%	1/10W
R210	1-208-506-11	RES,CHIP	6.8K	2%	1/8W
R211	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R212	1-208-462-11	RES,CHIP	10K	2%	1/10W
R213	1-216-214-00	RES,CHIP	4.7K	2%	1/8W
R214	1-208-534-11	RES,CHIP	100K	2%	1/10W
R215	1-208-534-11	RES,CHIP	100K	2%	1/10W
R216	1-208-534-11	RES,CHIP	100K	2%	1/10W
R217	1-216-635-11	MET AL CHIP	220	0.5%	1/10W
R218	1-216-246-00	RES,CHIP	100K	2%	1/8W
R219	1-208-449-11	RES,CHIP	3.3K	2%	1/10W
R220	1-216-647-11	MET AL CHIP	680	0.5%	1/10W
R221	1-208-518-11	RES,CHIP	22K	2%	1/10W
R222	1-216-671-11	MET AL CHIP	6.8K	0.5%	1/10W
R223	1-208-462-11	RES,CHIP	10K	2%	1/10W
R224	1-208-760-11	RES,CHIP	120	2%	1/10W
R226	1-208-437-11	RES,CHIP	1K	2%	1/10W
R227	1-208-518-11	RES,CHIP	22K	2%	1/10W
R228	1-208-449-11	RES,CHIP	3.3K	2%	1/10W
R229	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R230	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R231	1-208-810-11	RES,CHIP	15K	2%	1/10W
R232	1-208-810-11	RES,CHIP	15K	2%	1/10W
R233	1-216-635-11	MET AL CHIP	220	0.5%	1/10W
R234	1-216-635-11	MET AL CHIP	220	0.5%	1/10W
R235	1-208-365-11	RES,CHIP	100	2%	1/8W
R236	1-208-365-11	RES,CHIP	100	2%	1/8W
R237	1-208-534-11	RES,CHIP	100K	2%	1/10W
R238	1-208-534-11	RES,CHIP	100K	2%	1/10W
R239	1-249-419-11	CARBON	1.5K	5%	1/4W
R240	1-247-843-11	CARBON	3.3K	5%	1/4W
R241	1-216-685-11	MET AL CHIP	27K	0.5%	1/10W

AMPLIFIER

Ref. No.	Part No.	Description			Remark
R242	1-208-462-11	RES,CHIP	10K	2%	1/10W
R243	1-240-179-11	MET AL PLATE	0.03X2		5W F
R244	1-208-810-11	RES,CHIP	15K	2%	1/10W
R245	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R246	1-208-800-11	RES,CHIP	5.6K	2%	1/10W
R247	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R248	1-208-510-11	RES,CHIP	10K	2%	1/8W
R249	1-208-510-11	RES,CHIP	10K	2%	1/8W
R250	1-208-550-11	RES,CHIP	470K	2%	1/10W
R252	1-208-441-11	RES,CHIP	1.5K	2%	1/10W
R301	1-208-518-11	RES,CHIP	22K	2%	1/10W
R302	1-208-518-11	RES,CHIP	22K	2%	1/10W
R303	1-208-526-11	RES,CHIP	47K	2%	1/10W
R304	1-208-526-11	RES,CHIP	47K	2%	1/10W
R305	1-216-230-00	RES,CHIP	22K	2%	1/8W
R306	1-208-518-11	RES,CHIP	22K	2%	1/10W
R307	1-208-462-11	RES,CHIP	10K	2%	1/10W
R308	1-208-518-11	RES,CHIP	22K	2%	1/10W
R309	1-208-462-11	RES,CHIP	10K	2%	1/10W
R310	1-208-506-11	RES,CHIP	6.8K	2%	1/8W
R311	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R312	1-208-462-11	RES,CHIP	10K	2%	1/10W
R313	1-216-214-00	RES,CHIP	4.7K	2%	1/8W
R314	1-208-534-11	RES,CHIP	100K	2%	1/10W
R315	1-208-534-11	RES,CHIP	100K	2%	1/10W
R316	1-208-534-11	RES,CHIP	100K	2%	1/10W
R317	1-216-182-00	RES,CHIP	220	2%	1/8W
R318	1-208-534-11	RES,CHIP	100K	2%	1/10W
R319	1-208-449-11	RES,CHIP	3.3K	2%	1/10W
R320	1-216-647-11	MET AL CHIP	680	0.5%	1/10W
R321	1-208-518-11	RES,CHIP	22K	2%	1/10W
R322	1-216-671-11	MET AL CHIP	6.8K	0.5%	1/10W
R323	1-208-462-11	RES,CHIP	10K	2%	1/10W
R324	1-208-760-11	RES,CHIP	120	2%	1/10W
R326	1-208-437-11	RES,CHIP	1K	2%	1/10W
R327	1-208-518-11	RES,CHIP	22K	2%	1/10W
R328	1-208-449-11	RES,CHIP	3.3K	2%	1/10W
R329	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R330	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R331	1-208-810-11	RES,CHIP	15K	2%	1/10W
R332	1-208-810-11	RES,CHIP	15K	2%	1/10W
R333	1-216-635-11	MET AL CHIP	220	0.5%	1/10W
R334	1-216-635-11	MET AL CHIP	220	0.5%	1/10W
R335	1-208-365-11	RES,CHIP	100	2%	1/8W
R336	1-208-365-11	RES,CHIP	100	2%	1/8W
R337	1-208-534-11	RES,CHIP	100K	2%	1/10W
R338	1-208-534-11	RES,CHIP	100K	2%	1/10W
R339	1-249-419-11	CARBON	1.5K	5%	1/4W
R340	1-247-843-11	CARBON	3.3K	5%	1/4W
R341	1-216-685-11	MET AL CHIP	27K	0.5%	1/10W
R342	1-208-462-11	RES,CHIP	10K	2%	1/10W
R343	1-240-179-11	MET AL PLATE	0.03X2		5W F
R344	1-208-810-11	RES,CHIP	15K	2%	1/10W
R345	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R346	1-208-800-11	RES,CHIP	5.6K	2%	1/10W
R347	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R348	1-208-510-11	RES,CHIP	10K	2%	1/8W
R349	1-208-510-11	RES,CHIP	10K	2%	1/8W
R350	1-208-550-11	RES,CHIP	470K	2%	1/10W
R352	1-208-441-11	RES,CHIP	1.5K	2%	1/10W
R401	1-208-518-11	RES,CHIP	22K	2%	1/10W
R402	1-208-518-11	RES,CHIP	22K	2%	1/10W
R403	1-208-526-11	RES,CHIP	47K	2%	1/10W
R404	1-208-526-11	RES,CHIP	47K	2%	1/10W
R405	1-208-518-11	RES,CHIP	22K	2%	1/10W
R406	1-208-518-11	RES,CHIP	22K	2%	1/10W
R407	1-208-462-11	RES,CHIP	10K	2%	1/10W
R408	1-208-518-11	RES,CHIP	22K	2%	1/10W
R409	1-208-462-11	RES,CHIP	10K	2%	1/10W
R410	1-208-506-11	RES,CHIP	6.8K	2%	1/8W
R411	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R412	1-208-462-11	RES,CHIP	10K	2%	1/10W
R413	1-216-214-00	RES,CHIP	4.7K	2%	1/8W
R414	1-208-534-11	RES,CHIP	100K	2%	1/10W
R415	1-208-534-11	RES,CHIP	100K	2%	1/10W
R416	1-208-534-11	RES,CHIP	100K	2%	1/10W
R417	1-216-635-11	MET AL CHIP	220	0.5%	1/10W
R418	1-208-534-11	RES,CHIP	100K	2%	1/10W
R419	1-208-449-11	RES,CHIP	3.3K	2%	1/10W
R420	1-216-647-11	MET AL CHIP	680	0.5%	1/10W
R421	1-208-518-11	RES,CHIP	22K	2%	1/10W
R422	1-216-671-11	MET AL CHIP	6.8K	0.5%	1/10W
R423	1-208-462-11	RES,CHIP	10K	2%	1/10W
R424	1-208-760-11	RES,CHIP	120	2%	1/10W
R426	1-208-437-11	RES,CHIP	1K	2%	1/10W
R427	1-208-518-11	RES,CHIP	22K	2%	1/10W
R428	1-208-449-11	RES,CHIP	3.3K	2%	1/10W
R429	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R430	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R431	1-208-810-11	RES,CHIP	15K	2%	1/10W
R432	1-208-810-11	RES,CHIP	15K	2%	1/10W
R433	1-216-635-11	MET AL CHIP	220	0.5%	1/10W
R434	1-216-635-11	MET AL CHIP	220	0.5%	1/10W
R435	1-208-365-11	RES,CHIP	100	2%	1/8W
R436	1-208-365-11	RES,CHIP	100	2%	1/8W
R437	1-208-534-11	RES,CHIP	100K	2%	1/10W
R438	1-208-534-11	RES,CHIP	100K	2%	1/10W
R439	1-249-419-11	CARBON	1.5K	5%	1/4W
R440	1-247-843-11	CARBON	3.3K	5%	1/4W
R441	1-216-685-11	MET AL CHIP	27K	0.5%	1/10W
R442	1-208-462-11	RES,CHIP	10K	2%	1/10W
R443	1-240-179-11	MET AL PLATE	0.03X2		5W F
R444	1-208-810-11	RES,CHIP	15K	2%	1/10W
R445	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R446	1-208-800-11	RES,CHIP	5.6K	2%	1/10W
R447	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R448	1-208-510-11	RES,CHIP	10K	2%	1/8W
R449	1-208-510-11	RES,CHIP	10K	2%	1/8W
R450	1-208-550-11	RES,CHIP	470K	2%	1/10W
R452	1-216-202-00	RES,CHIP	1.5K	2%	1/8W
R801	1-208-558-11	RES,CHIP	1M	2%	1/10W
R802	1-208-437-11	RES,CHIP	1K	2%	1/10W
R803	1-208-510-11	RES,CHIP	10K	2%	1/8W
R804	1-216-698-11	MET AL CHIP	91K	0.5%	1/10W
R805	1-208-522-11	RES,CHIP	33K	2%	1/10W

Ref. No.	Part No.	Description			Remark
R806	1-208-462-11	RES,CHIP	10K	2%	1/10W
R807	1-208-462-11	RES,CHIP	10K	2%	1/10W
R808	1-208-462-11	RES,CHIP	10K	2%	1/10W
R809	1-208-462-11	RES,CHIP	10K	2%	1/10W
R810	1-208-558-11	RES,CHIP	1M	2%	1/10W
R811	1-208-494-11	RES,CHIP	2.2K	2%	1/8W
R812	1-208-486-11	RES,CHIP	1K	2%	1/8W
R813	1-216-210-00	RES,CHIP	3.3K	2%	1/8W
R814	1-208-486-11	RES,CHIP	1K	2%	1/8W
R815	1-216-210-00	RES,CHIP	3.3K	2%	1/8W
R816	1-208-486-11	RES,CHIP	1K	2%	1/8W
R817	1-216-210-00	RES,CHIP	3.3K	2%	1/8W
R818	1-208-462-11	RES,CHIP	10K	2%	1/10W
R819	1-208-510-11	RES,CHIP	10K	2%	1/8W
R820	1-208-462-11	RES,CHIP	10K	2%	1/10W
R821	1-208-462-11	RES,CHIP	10K	2%	1/10W
R822	1-216-210-00	RES,CHIP	3.3K	2%	1/8W
R823	1-208-462-11	RES,CHIP	10K	2%	1/10W
R824	1-216-238-00	RES,CHIP	47K	2%	1/8W
R825	1-208-462-11	RES,CHIP	10K	2%	1/10W
R826	1-208-510-11	RES,CHIP	10K	2%	1/8W
R827	1-208-462-11	RES,CHIP	10K	2%	1/10W
R828	1-208-449-11	RES,CHIP	3.3K	2%	1/10W
R829	1-208-462-11	RES,CHIP	10K	2%	1/10W
R830	1-208-462-11	RES,CHIP	10K	2%	1/10W
R832	1-216-210-00	RES,CHIP	3.3K	2%	1/8W
R833	1-208-522-11	RES,CHIP	33K	2%	1/10W
R834	1-208-522-11	RES,CHIP	33K	2%	1/10W
R835	1-208-526-11	RES,CHIP	47K	2%	1/10W
R836	1-208-526-11	RES,CHIP	47K	2%	1/10W
R837	1-208-449-11	RES,CHIP	3.3K	2%	1/10W
R838	1-208-423-11	RES,CHIP	270	2%	1/10W
R839	1-208-558-11	RES,CHIP	1M	2%	1/10W
R840	1-208-486-11	RES,CHIP	1K	2%	1/8W
R841	1-208-486-11	RES,CHIP	1K	2%	1/8W
R842	1-208-425-11	RES,CHIP	330	2%	1/10W
R843	1-208-441-11	RES,CHIP	1.5K	2%	1/10W
R844	1-208-486-11	RES,CHIP	1K	2%	1/8W
R850	1-208-462-11	RES,CHIP	10K	2%	1/10W
R901	1-208-462-11	RES,CHIP	10K	2%	1/10W
R902	1-208-449-11	RES,CHIP	3.3K	2%	1/10W
R903	1-208-518-11	RES,CHIP	22K	2%	1/10W
R904	1-208-812-11	RES,CHIP	18K	2%	1/10W
R905	1-218-760-11	RES,CHIP	220K	2%	1/10W
R906	1-216-210-00	RES,CHIP	3.3K	2%	1/8W
R907	1-216-202-00	RES,CHIP	1.5K	2%	1/8W
R908	1-216-202-00	RES,CHIP	1.5K	2%	1/8W
R909	1-208-449-11	RES,CHIP	3.3K	2%	1/10W
R910	1-208-453-11	RES,CHIP	4.7K	2%	1/10W
R911	1-249-429-11	CARBON	10K	5%	1/4W
R912	1-208-474-11	RES,CHIP	330	2%	1/8W
R913	1-208-478-11	RES,CHIP	470	2%	1/8W
R914	1-208-478-11	RES,CHIP	470	2%	1/8W
R915	1-208-405-11	RES,CHIP	47	2%	1/8W
R916	1-216-150-00	RES,CHIP	10	2%	1/8W
R917	1-208-437-11	RES,CHIP	1K	2%	1/10W
R918	1-208-437-11	RES,CHIP	1K	2%	1/10W
R919	1-208-405-11	RES,CHIP	47	2%	1/8W
R920	1-216-150-00	RES,CHIP	10	2%	1/8W
R921	1-216-150-00	RES,CHIP	10	2%	1/8W
R922	1-216-150-00	RES,CHIP	10	2%	1/8W
R923	1-216-210-00	RES,CHIP	3.3K	2%	1/8W
R924	1-216-210-00	RES,CHIP	3.3K	2%	1/8W
R925	1-208-506-11	RES,CHIP	6.8K	2%	1/8W
R926	1-208-506-11	RES,CHIP	6.8K	2%	1/8W
R927	1-208-478-11	RES,CHIP	470	2%	1/8W
R928	1-208-478-11	RES,CHIP	470	2%	1/8W
		< VARIABLE RESIST OR >			
RV104	1-241-761-11	RES, ADJ, CARBON 1K (BIAS)			
RV204	1-241-761-11	RES, ADJ, CARBON 1K (BIAS)			
RV304	1-241-761-11	RES, ADJ, CARBON 1K (BIAS)			
RV404	1-241-761-11	RES, ADJ, CARBON 1K (BIAS)			
RV801	1-225-647-11	RES, VAR 20K/20K/20K/20K (FRONT LOW BOOST)			
RV802	1-225-648-11	RES, VAR 5K/5K (FRONT LOW BOOST)			
RV803	1-225-648-11	RES, VAR 5K/5K (FRONT LEVEL)			
RV804	1-225-647-11	RES, VAR 20K/20K/20K/20K (REAR LOW BOOST)			
RV805	1-225-648-11	RES, VAR 5K/5K (REAR LOW BOOST)			
RV806	1-225-648-11	RES, VAR 5K/5K (REAR LEVEL)			
		< SWITCH >			
S801	1-572-185-11	SWITCH, SLIDE (FRONT FIL TER)			
S802	1-572-185-11	SWITCH, SLIDE (REAR FIL TER)			
S901	1-771-387-11	SWITCH, TOGGLE (HI-CURRENT/HI-VOL TAGE)			
		< TRANSFORMER >			
T901	1-431-882-21	TRANSFORMER, DC-DC CONVER TER			
		< THERMISTOR >			
TH801	1-808-877-11	THERMISTOR			
TH802	1-809-664-51	THERMISTOR, POSITIVE			
TH803	1-809-664-51	THERMISTOR, POSITIVE			
TH804	1-808-877-11	THERMISTOR			
**********					
*	1-669-872-11	HIGH LEVEL BOARD			
		**********			
		< CAP ACIT OR >			
C117	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C118	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C119	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C120	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C217	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C218	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C219	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C220	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C317	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C318	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C319	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C320	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C417	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C418	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C419	1-164-222-11	CERAMIC CHIP	0.22uF		25V

HIGH LEVEL **SP (FRONT)** **SP (REAR)**

Ref. No.	Part No.	Description	Remark
C420	1-164-222-11	CERAMIC CHIP 0.22uF 25V	
		<CONNECTOR>	
CN804	1-784-904-21	CONNECTOR 4P (REAR HIGH LEVEL INPUT L/R)	
CN805	1-784-904-31	CONNECTOR 4P (FRONT HIGH LEVEL INPUT L/R)	
CNJ802	1-784-916-11	CONNECTOR, BOARD TO BOARD 9P	
		< RESISTOR >	
R125	1-216-471-11	METAL OXIDE 27 5% 3W F	
R225	1-216-471-11	METAL OXIDE 27 5% 3W F	
R325	1-216-471-11	METAL OXIDE 27 5% 3W F	
R425	1-216-471-11	METAL OXIDE 27 5% 3W F	
**********			
*	1-669-870-11	SUB (FRONT) BOARD	
		**********	
		<CAPACITOR>	
C128	1-106-383-00	MYLAR 0.047uF 5% 200V	
C228	1-106-383-00	MYLAR 0.047uF 5% 200V	
		<CONNECTOR>	
CN802	1-694-425-11	TERMINAL BOARD (4P) (FRONT SPEAKER OUT)	
		< RESISTOR >	
R151	1-215-857-11	METAL OXIDE 10 5% 1W F	
R251	1-215-857-11	METAL OXIDE 10 5% 1W F	
**********			
*	1-669-871-11	SUB (REAR) BOARD	
		**********	
		<CAPACITOR>	
C328	1-106-383-00	MYLAR 0.047uF 5% 200V	
C428	1-106-383-00	MYLAR 0.047uF 5% 200V	
		<CONNECTOR>	
CN803	1-694-425-11	TERMINAL BOARD (4P) (REAR SPEAKER OUT)	
		< RESISTOR >	
R351	1-215-857-11	METAL OXIDE 10 5% 1W F	
R451	1-215-857-11	METAL OXIDE 10 5% 1W F	
**********			
		MISCELLANEOUS	
		**********	
CN802	1-694-425-11	TERMINAL BOARD (4P) (FRONT SPEAKER OUT)	
CN803	1-694-425-11	TERMINAL BOARD (4P) (REAR SPEAKER OUT)	
CN818	1-537-479-11	TERMINAL	
CN819	1-537-479-11	TERMINAL	
D907	8-719-210-30	DIODE F10P20F(R)	
D908	8-719-210-30	DIODE F10P20F(R)	
D909	8-719-210-30	DIODE F10P20F(R)	
D910	8-719-210-30	DIODE F10P20F(R)	
F901	1-533-743-11	FUSE (BLADE TYPE) (AUTO FUSE) (40A)	
FN801	1-763-107-11	MOTOR, FAN	
Q109	8-729-038-52	TRANSISTOR IRF540(H)	
Q110	8-729-038-01	TRANSISTOR IRF9540(H)	
Q209	8-729-038-52	TRANSISTOR IRF540(H)	
Q210	8-729-038-01	TRANSISTOR IRF9540(H)	
Q309	8-729-038-52	TRANSISTOR IRF540(H)	
Q310	8-729-038-01	TRANSISTOR IRF9540(H)	
Q409	8-729-038-52	TRANSISTOR IRF540(H)	
Q410	8-729-038-01	TRANSISTOR IRF9540(H)	
Q904	8-729-030-72	TRANSISTOR MT AJ50N05HD	
Q905	8-729-030-72	TRANSISTOR MT AJ50N05HD	
Q906	8-729-030-72	TRANSISTOR MT AJ50N05HD	
Q907	8-729-030-72	TRANSISTOR MT AJ50N05HD	
TH802	1-809-664-51	THERMISTOR, POSITIVE	
TH803	1-809-664-51	THERMISTOR, POSITIVE	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	3-013-264-01	COVER, 3P TERMINAL TABLE	
	3-367-410-01	SCREW (DIA. 5X15), TAPPING	
	3-701-639-00	BAG, POLYETHYLENE	
	3-862-338-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (EXCEPT G)	
	3-862-338-21	MANUAL, INSTRUCTION (GERMAN, ITALIAN) (AEP ,UK,G,E)	
	3-862-338-31	MANUAL, INSTRUCTION (SPANISH, PORTUGUESE) (AEP ,UK,E)	
	3-862-338-41	MANUAL, INSTRUCTION (DUTCH, SWEDISH) (AEP ,UK,E)	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-544-14	SCREW +BTP 3X5 TYPE2 N-S	
#2	7-685-546-19	SCREW +BTP 3X8 TYPE2 N-S	
#3	7-685-797-09	SCREW +PTT 2.6X16 (S)	
#4	7-685-646-79	SCREW +P 3X8 TYPE2 N-S	
#5	3-912-431-11	SCREW M 4X8 (P)	
#8	7-685-144-11	SCREW +P 3X5 TYPE2 N-S	
#9	7-685-649-79	SCREW +P 3X14 TYPE2 N-S	
#10	7-685-660-79	SCREW +P 4X10 TYPE2 N-S	
#11	7-685-645-79	SCREW +P 3X6 TYPE2 N-S	
#12	7-682-949-01	SCREW +PSW 3X10	

XM-754HX

SONY

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model

SUPPLEMENT-1

File this supplement with the service manual.

Subject:
Red Color Panal Addition

(ECN-CS804006)

The difference parts are described in this service manual supplement-1.
Please refer to XM-754HX service manual previously issued for the other information.

• DIFFERENCE PARTS LIST

Page	Former				New			
	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
17	*3	3-023-131-01	PANEL, FRONT		*3	3-023-131-01	PANEL, FRONT (BLUE)	
					*3	3-023-131-11	PANEL, FRONT (RED)	
	*5	3-023-801-01	HEAT SINK		*5	3-023-801-01	HEAT SINK (BLUE)	
					*5	3-023-801-11	HEAT SINK (RED)	
	*6	3-023-797-11	PLATE, ORNAMENTAL		*6	3-023-797-11	PLATE, ORNAMENTAL (BLUE) .....(BLUE)	
					*6	3-023-797-31	PLATE, ORNAMENTAL (CLEAR).....(RED)	
	*10	3-023-132-01	PANEL, REAR		*10	3-023-132-01	PANEL, REAR (BLUE)	
					*10	3-023-132-11	PANEL, REAR (RED)	

NOTE:
- 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.

9-925-796-81

Sony Corporation
Personal & Mobile Communication Company

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REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.1	2001. 08	The CORRECTION-1 is included into Ver 1.1
1.0	1998. 01	New