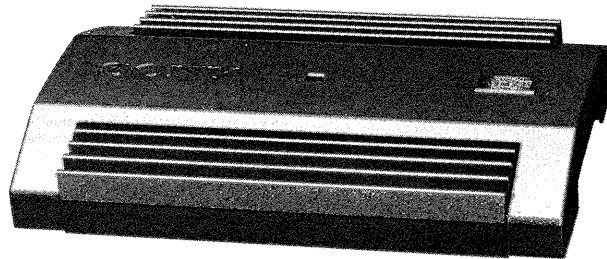


XM-450G

SERVICE MANUAL

*US Model
Canadian Model
AEP Model
UK Model
E Model*



SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

50 watts per channel minimum continuous average power into 4 ohms, both channels driven from 20 Hz to 20 kHz with no more than 0.03% 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
Outputs Speaker terminals
Speaker impedance 1 – 8 ohms (stereo)
2 – 8 ohms (when used as a bridging amplifier)
Maximum output 100 W per channel with 4-speaker system (at 4 ohms)
200 W per channel with 4-speaker system (at 2 ohms)
380 W per channel with 2-speaker system (at 4 ohms)
500 W per channel with 2-speaker system (at 2 ohms)
Rated outputs (supply voltage at 14.4 V)
50 W per channel with 4-speaker system (20 Hz – 20 kHz, 0.03 % THD, at 4 ohms)

95 W per channel with 4-speaker system (20 Hz – 20 kHz, 0.08 % THD, at 2 ohms)
125 W per channel with 4-speaker system (20 Hz – 20 kHz, 0.1 % THD, at 1 ohms)
50 W × 2 (20 Hz – 20 kHz, 0.03 % THD, at 4 ohms) + 190 W × 1 (20 Hz – 20 kHz, 0.08 % THD, at 4 ohms) with 3-speaker system
95 W × 2 (20 Hz – 20 kHz, 0.08 % THD, at 2 ohms) + 250 W × 1 (20 Hz – 20 kHz, 0.1 % THD, at 2 ohms) with 3-speaker system
190 W per channel with 2-speaker system (20 Hz – 20 kHz, 0.08 % THD, at 4 ohms)
250 W per channel with 2-speaker system (20 Hz – 20 kHz, 0.1 % THD, at 2 ohms)

— Continued on next page —

STEREO POWER AMPLIFIER
SONY®



SECTION 1 GENERAL

This section is extracted from instruction manual.

Frequency response	5 Hz – 100 kHz ($+0$ dB)
Harmonic distortion	0.003 % or less (at 1kHz, 4 ohms, 16 W)
Input level adjustment range	0.2 – 2 V
High-pass filter (INPUT A, B, C and D)	80 Hz, – 12 dB/oct
Low-pass filter for subwoofer (INPUT A, B, C and D)	50 Hz, 80 Hz, – 18 dB/oct
Power requirements	12 V DC car battery (negative ground)
Power supply voltage	10.5 – 16 V
Current drain	at rated output: 27 A (4 ohms, 40 W $\times$ 4) at 10 % THD: 32 A Remote input: 5 mA
Dimensions	Approx. 230 $\times$ 60 $\times$ 360 mm (w/h/d) (9 $\frac{1}{8}$ $\times$ 2 $\frac{3}{8}$ $\times$ 14 $\frac{1}{4}$ in.) not incl. projecting parts and controls
Mass	Approx. 4.6 kg (10 lb. 7 oz.) not incl. accessories
Supplied accessories	Mounting screws (4) Remote control lead (1)

Design and specifications are subject to change without notice.

Precaution

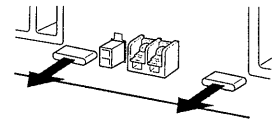
- This unit is designed for negative ground 12 V DC operation only.
- Use speakers with an impedance of 1 to 8 ohms. (2 to 8 ohms when used as a bridging amplifier)
- Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers.
- 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.



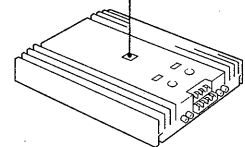
*Protection circuit

This amplifier is provided with a protection circuit that operates in the following cases:

- when the unit is overheated
- when a DC current is generated
- when the speaker terminals are short circuited.

The color of the POWER/PROTECTOR indicator will change from green to red, and the unit will shut down. If this happens, turn off the connected equipment, take out the cassette tape or disc, and determine the cause of the malfunction. If the amplifier has overheated, wait until the unit cools down before use.

POWER/PROTECTOR indicator



If you have any questions or problems concerning your unit that are not covered in this manual, please consult your nearest Sony dealer.

Features

- Rated power output of 50 watts per channel (at 4 ohms).
- The XM-450G can be used as 2 channel amplifier with a rated output of 190 watts (at 4 ohms).
- Dual mode connection possible a multi-speaker system.
- Protection circuit 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.
- Twin power supply with rectification circuits for each channel.

* Pulse power supply

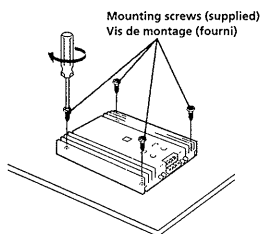
This unit has a built-in power regulator which converts the power supplied by the DC 12 V car battery into high speed pulses using a semiconductor switch. These pulses are stepped up by the built-in pulse transformer and separated into both positive and negative power supplies before being converted 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.

Installation

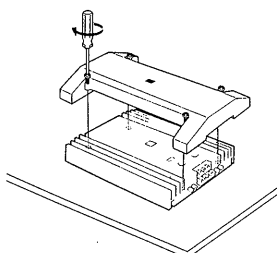
Before Installation

- Mount the unit either inside the trunk or under a seat.
- Choose the mounting location carefully so that 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.

Firstly, use the template printed on the back of the carton to mark the positions of the four screw holes on the surface of the mounting board (not supplied). Then drill the holes whose diameter should be approximately 3 millimeters (mm) 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.



After all the connections are completed, place the cover on the unit with the supplied screws as shown below.



Installation

Avant l'installation

- Installez l'appareil dans le coffre ou sous un siège.
- Choisissez avec soin l'emplacement de sorte que l'appareil ne gêne pas les mouvements du conducteur et qu'il ne soit pas exposé au soleil ou à l'air chaud du chauffage.
- N'installez pas l'appareil sous le tapis de sol car la dissipation thermique ne pourrait pas se faire correctement.

Utilisez le gabarit imprimé au dos du carton pour marquer la position des quatre trous sur la plaque de montage (non fournie). Percez des trous d'environ 3 millimètres (mm) de diamètre, puis fixez l'appareil à l'aide des vis fournies. Celles-ci font 15 mm de long; vérifiez, par conséquent, que la plaque fait au moins 15 mm d'épaisseur.

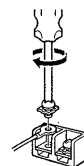
Une fois que toutes les connexions sont terminées, installez le cache sur l'appareil à l'aide des vis fournies, comme illustré ci-dessous.

Connections

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 $\ominus$ terminal of the speaker system to the car chassis, and do not connect the $\ominus$ 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 to 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.



Connexions

Attention

- Avant d'effectuer les connexions, débranchez le fil de masse de la borne de la batterie pour éviter un court-circuit.
- Utilisez des haut-parleurs d'une capacité adéquate. Si vous utilisez des haut-parleurs de faible capacité, ils risquent d'être endommagés.
- Ne raccordez pas la borne $\ominus$ des haut-parleurs à la carrosserie de la voiture ni la borne $\ominus$ du haut-parleur droit à celle du haut-parleur gauche.
- Éloignez les cordons d'entrée et de sortie du fil d'alimentation électrique pour éviter que des interférences ne se produisent.
- Cet appareil est un amplificateur de haute puissance et il peut ne pas atteindre sa puissance maximale si les cordons de haut-parleurs originaux de la voiture lui sont raccordés.
- Si la voiture est équipée d'un ordinateur de navigation ou d'un autre appareil, ne débranchez pas le fil de masse de la batterie de la voiture, sinon les données mémorisées seront effacées. Pour éviter un court-circuit lorsque vous effectuez les branchements, branchez le fil d'alimentation de +12 volts uniquement après avoir branché tous les autres fils.

Effectuez les connexions de la manière indiquée ci-dessous.

Note

When you tighten the screw, be careful not to apply too much torque* as doing so may damage the screw.

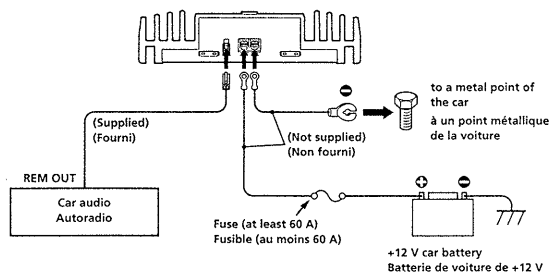
* The torque value should be less than 1 N•m.

Remarque

Ne serrez* pas trop fort la vis car vous pourriez l'endommager.

* Le couple de serrage devrait être inférieur à 1 N•m.

Power Connection Leads Fils d'alimentation électrique



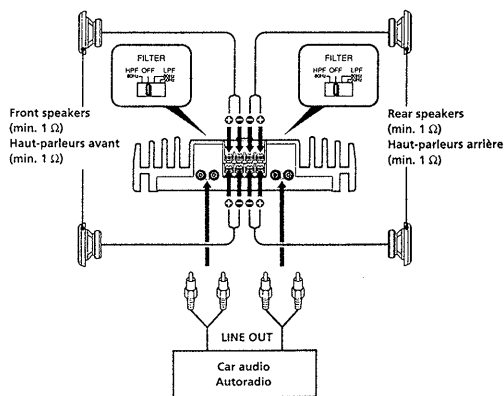
Notes on the power supply

- 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.
- Use the power supply lead with a fuse attached (at least 60 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 this unit respectively must be larger than 8-Gauge (AWG-8) or with the sectional area of more than 8 mm².

Remarques sur l'alimentation électrique

- Raccordez le fil d'alimentation de +12 volts uniquement après avoir réalisé toutes les autres connexions.
- Raccordez solidement le fil de masse de l'appareil à une partie métallique de la voiture, car une connexion relâchée peut être à l'origine d'une défaillance de l'amplificateur.
- Assurez-vous que le fil de télécommande de l'autoradio est raccordé à la borne de télécommande.
- Utilisez un fil d'alimentation équipé d'un fusible d'au moins 60 ampères.
- Fixez le fusible du fil d'alimentation électrique le plus près possible de la batterie de la voiture.
- Vous devez raccorder des fils de calibre supérieur à 8 (AWG-8) ou d'une section supérieure à 8 mm² aux bornes +12V et GND.

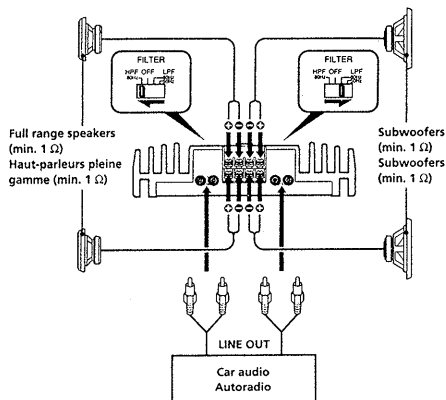
4-Speaker system Système à 4 haut-parleurs



Note
The A, B, C and D INPUT jacks correspond with the SPEAKER OUT terminals. Make sure the car audio LINE OUT cable follow through to the correct speaker.

Remarque
Les prises A, B, C et D INPUT correspondent aux bornes SPEAKER OUT. Veillez à brancher le câble audio de voiture LINE OUT sur le haut-parleur adéquat.

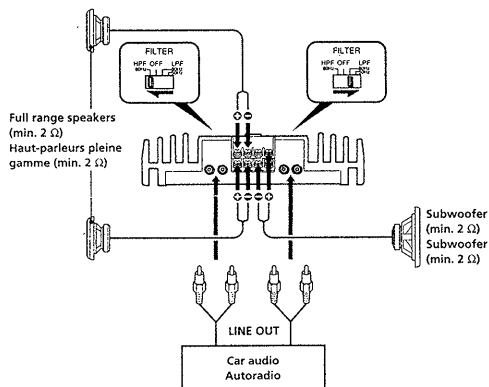
2-Way System Système à 2 voies



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

Remarque
Dans ce système, le volume des subwoofers est contrôlé par le fader de l'autoradio.

3-Speaker System Système à 3 haut-parleurs



Notes
• In this system, the volume of the subwoofer will be controlled by the car audio fader control.
• If you wish to use a subwoofer as a monaural speaker, connect the speaker as illustrated above. The output signals to the subwoofer will be the combination of the both right and left output signals.

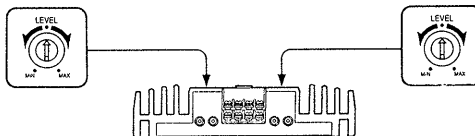
Remarques
• Dans ce système, le volume du subwoofer est contrôlé par le fader de l'autoradio.
• Si vous souhaitez utiliser un subwoofer comme haut-parleur mono, raccordez le haut-parleur comme indiqué sur l'illustration ci-dessus. Les signaux de sortie du subwoofer sont constitués des signaux de sortie des canaux gauche et droit.

Level Adjustment Control

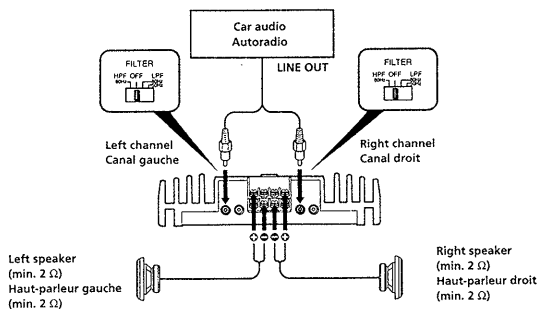
The input level can be adjusted with this control when using source equipment of other manufacturers. Turn it to MAX when the output level of the car audio seems low.

Commande de réglage de niveau

Le niveau d'entrée peut être modifié par cette commande. Utilisez-la pour ajuster le niveau d'entrée du son quand vous utilisez un appareil d'un autre fabricant. Réglez-la sur MAX si le niveau de sortie de l'autoradio semble trop faible.



2-Speaker System Système à 2 haut-parleurs



Note
Use only the A and C INPUT jacks for connecting the outputs from the car audio and connect the speaker leads to the ♂-A (MONO)-♀ and ♂-C (MONO)-♀ terminals of this unit.

Remarque
Utilisez uniquement les prises INPUT A et C pour connecter les sorties de l'autoradio et raccordez les fils de haut-parleurs aux bornes ♂-A (MONO)-♀ et ♂-C (MONO)-♀ de l'amplificateur.

SECTION 2

ELECTRICAL ADJUSTMENT

IDLING CURRENT ADJUSTMENT

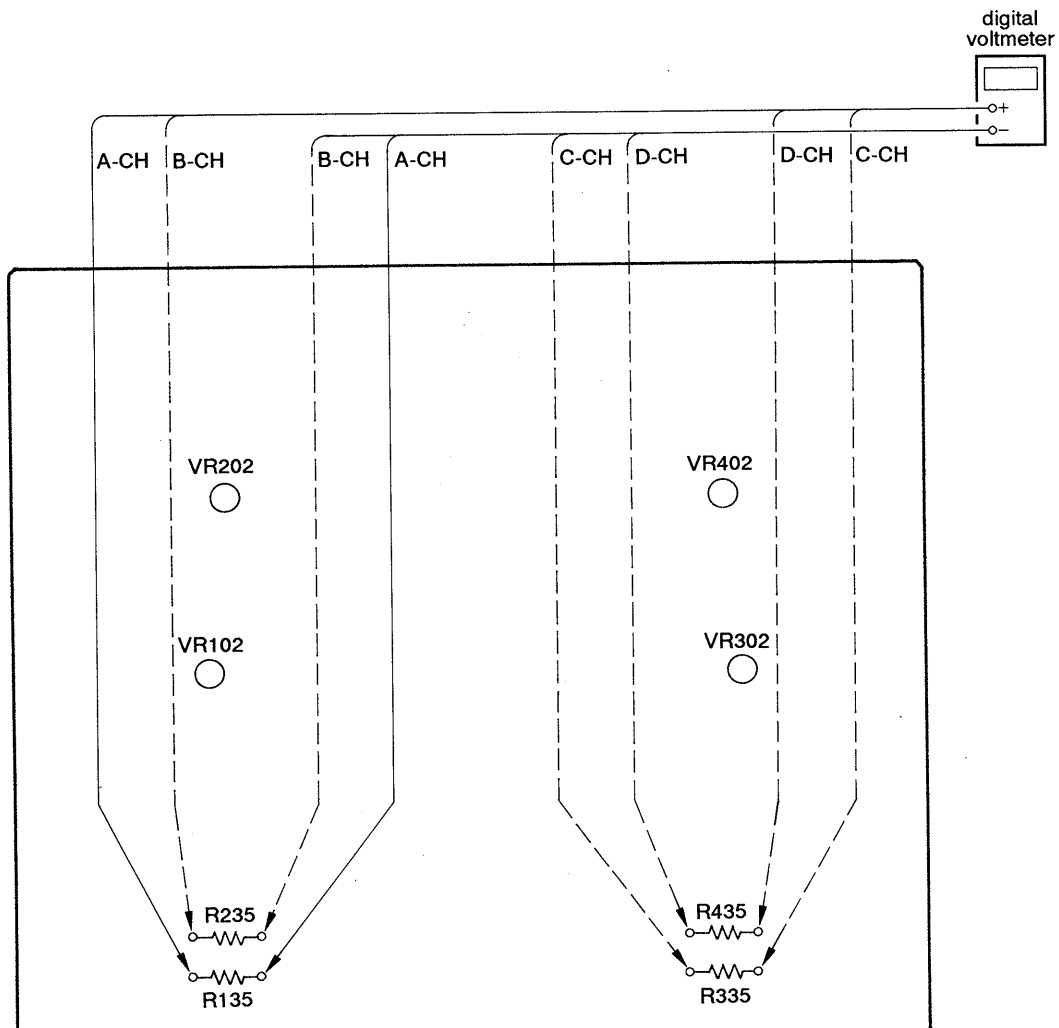
Procedure :

1. Rotate Semi-fixed resistors VR102, VR202, VR302 and VR402 fully counterclockwise as viewed from the solder side.
2. No signal is entered, as input signal.
3. Apply the source voltage 14.4 V between +12 V, REMOTE and GND terminals.
4. Adjust the VR102 (A-CH), VR202 (B-CH), VR302 (C-CH) and VR402 (D-CH) so that the digital voltmeter reading becomes the adjustment limits below.

Adjustment Limits : $1.5 \pm 0.5 \text{ mV}$

Adjustment Location :

[MAIN AMP BOARD] (Conductor Side)

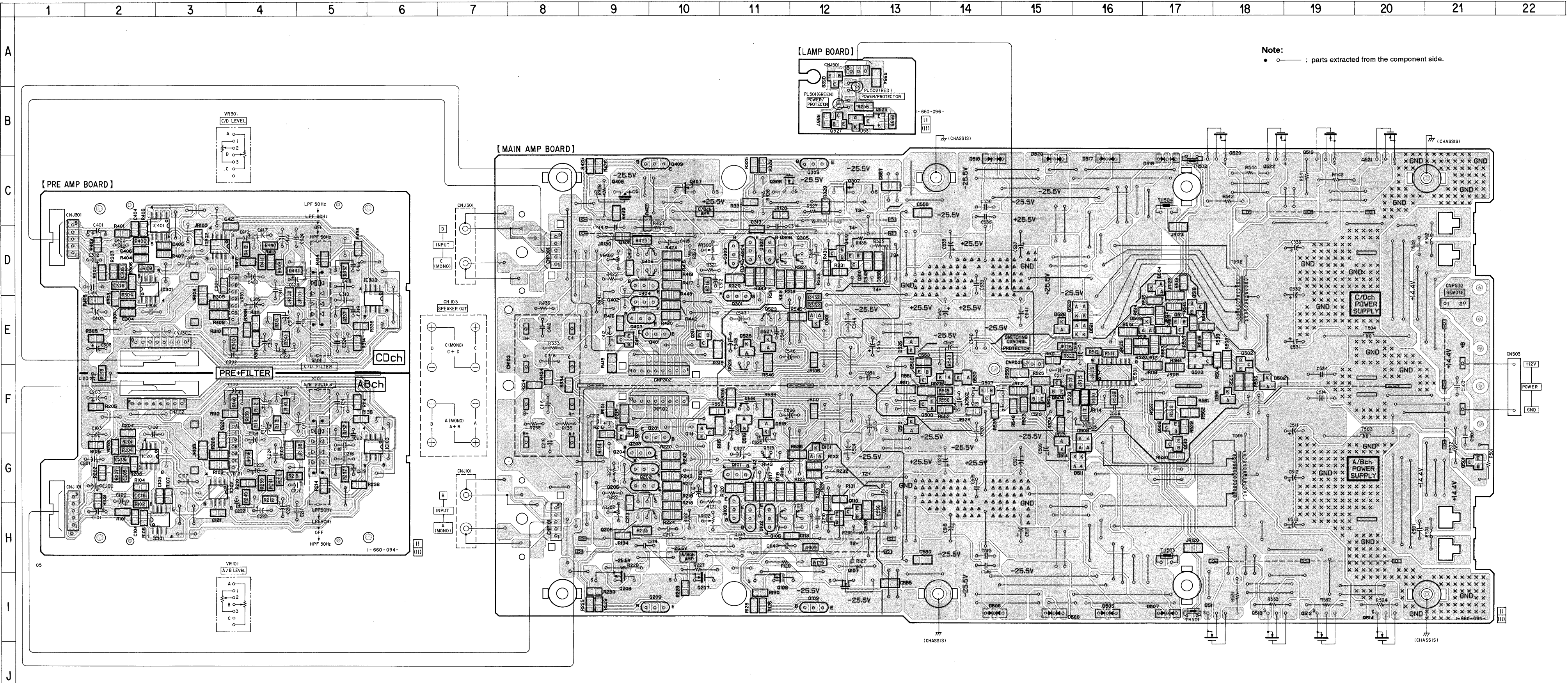


SECTION 3
DIAGRAMS

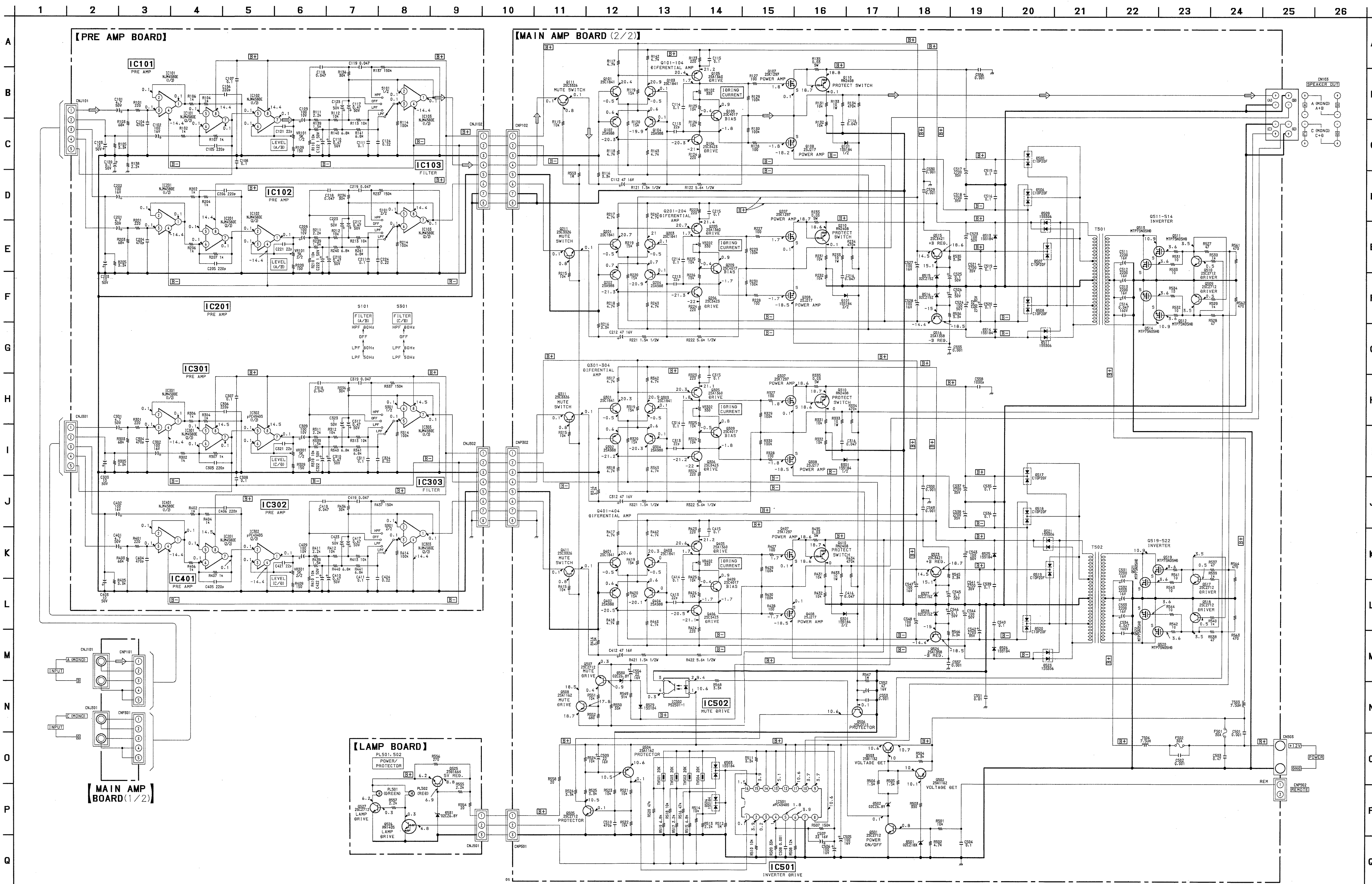
3-1. PRINTED WIRING BOARDS

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	G-12	Q205	H-9
D301	E-12	Q206	G-9
D501	F-18	Q207	I-10
D502	F-18	Q208	I-9
D503	E-16	Q209	I-10
D504	E-17	Q210	H-12
D505	I-16	Q211	G-9
D506	I-16	Q301	E-11
D507	I-17	Q302	D-11
D508	I-14	Q303	D-11
D509	G-16	Q304	D-11
D511	I-16	Q305	D-12
D513	F-13	Q306	D-11
D514	G-15	Q307	C-12
D515	F-11	Q308	C-11
D516	G-11	Q309	C-12
D517	C-16	Q310	D-12
D518	C-14	Q311	E-10
D519	C-17	Q401	E-10
D520	C-15	Q402	E-9
D521	E-16	Q403	E-9
D523	E-15	Q404	F-9
D525	E-13	Q405	D-9
D526	E-15	Q406	D-10
D527	E-11	Q407	C-10
D528	E-11	Q408	C-9
D529	F-14	Q409	C-10
D530	F-14	Q410	D-12
D531	B-13	Q411	E-9
IC101	H-3	Q501	G-21
IC102	G-4	Q502	E-18
IC103	G-6	Q503	F-17
IC201	G-2	Q504	F-15
IC301	D-3	Q505	F-13
IC302	D-3	Q506	F-14
IC303	D-6	Q507	F-13
IC401	D-3	Q508	F-17
IC501	F-16	Q509	F-17
IC502	F-14	Q510	G-17
Q101	G-11	Q511	I-17
Q102	H-11	Q512	I-19
Q103	H-11	Q513	I-18
Q104	H-11	Q514	I-20
Q105	H-12	Q515	G-11
Q106	H-11	Q516	F-11
Q107	I-12	Q517	E-17
Q108	I-11	Q518	D-17
Q109	I-12	Q519	B-19
Q201	G-9	Q520	B-18
Q202	G-9	Q521	C-20
Q203	G-9	Q522	C-18
Q204	G-9	Q523	E-11
		Q524	F-11
		Q525	B-13
		Q526	A-12
		Q527	B-12



3-2. SCHEMATIC DIAGRAM



SECTION 4

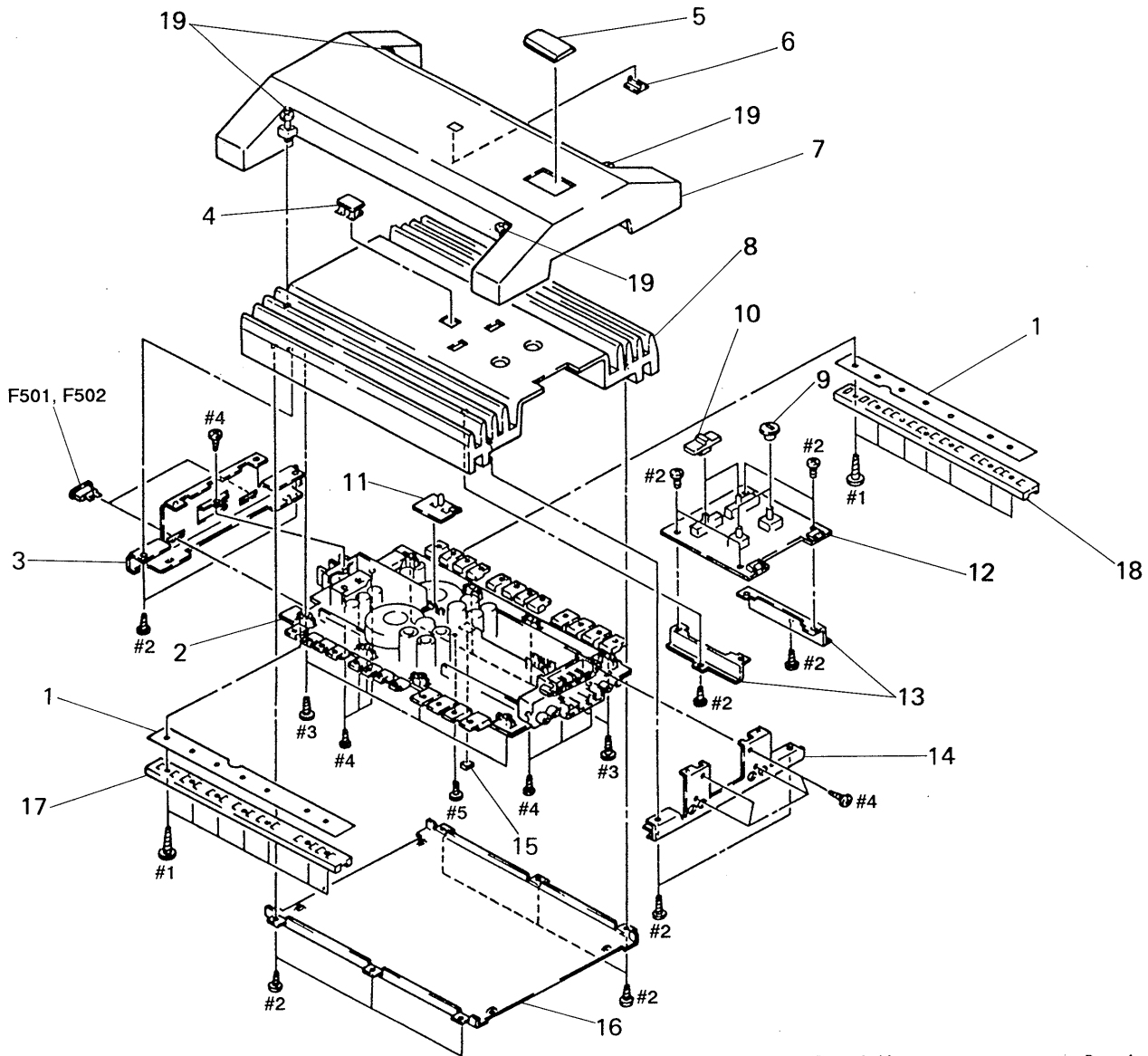
EXPLODED VIEW

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 and accessories and packing materials are given in the last of the electrical parts list.



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-934-370-01	SHEET, INSULATING		* 11	1-660-096-11	LAMP BOARD	
* 2	A-3309-196-A	MAIN AMP BOARD, COMPLETE		* 12	A-3309-195-A	PRE AMP BOARD, COMPLETE	
* 3	3-934-364-01	PANEL (B)		* 13	3-934-369-01	BRACKET (PCB)	
4	3-926-387-01	PLATE, LIGHT GUIDE		* 14	3-926-384-01	PANEL (A)	
5	3-925-536-01	EMBLEM (MOBIL ES) (US/Canadian)		* 15	3-395-832-01	SPACER	
5	3-933-978-01	EMBLEM (10HM DRIVE) (AEP, UK, E, German)		* 16	3-926-398-01	PLATE, BOTTOM	
* 6	3-926-390-01	INDICATOR		* 17	3-934-367-01	BRACKET (L)	
* 7	3-926-399-11	COVER		* 18	3-934-368-01	BRACKET (R)	
* 8	3-934-371-01	SINK, HEAT		19	3-929-468-01	SCREW (M3X16)	
* 9	3-934-363-01	KNOB (VOL)		F501	1-532-947-11	FUSE (BRADE TYPE) (AUTO FUSE) (30A)	
* 10	3-934-366-01	KNOB (SW)		F502	1-532-947-11	FUSE (BRADE TYPE) (AUTO FUSE) (30A)	

LAMP

MAIN AMP

SECTION 5
ELECTRICAL PARTS LISTSEE ADDITIONAL
INFORMATION

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: 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

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	1-660-096-11	LAMP BOARD *****		C314	1-162-806-11	CERAMIC	0.1uF 10% 50V
		< DIODE >		C315	1-162-806-11	CERAMIC	0.1uF 10% 50V
D531	8-719-025-34	DIODE 02CZ6. 8-TE85L		C316	1-136-161-00	FILM	0.047uF 5% 50V
		< PILOT LAMP >		C412	1-124-910-11	ELECT	47uF 20% 50V
PL501	1-517-460-11	LAMP, PILOT (GREEN) (POWER/PROTECTOR)		C413	1-163-235-11	CERAMIC CHIP	22PF 5% 50V
PL502	1-517-460-21	LAMP, PILOT (RED) (POWER/PROTECTOR)		C414	1-162-806-11	CERAMIC	0.1uF 10% 50V
		< TRANSISTOR >		C415	1-162-806-11	CERAMIC	0.1uF 10% 50V
Q525	8-729-106-68	TRANSISTOR 2SD1615A-GP		C416	1-136-161-00	FILM	0.047uF 5% 50V
Q526	8-729-207-60	TRANSISTOR RN1405		C501	1-130-471-00	MYLAR	0.001uF 5% 50V
Q527	8-729-271-21	TRANSISTOR 2SC2712Y-TE85L		C502	1-130-471-00	MYLAR	0.001uF 5% 50V
		< RESISTOR >		C503	1-136-173-00	FILM	0.47uF 5% 50V
R554	1-220-242-11	METAL GLAZE 22 5% 1/4W		C504	1-136-165-00	FILM	0.1uF 5% 50V
R555	1-216-659-11	METAL CHIP 2.2K 0.5% 1/10W		C505	1-126-933-11	ELECT	100uF 20% 16V
R556	1-218-780-11	METAL GLAZE 270 5% 1/4W		C506	1-126-933-11	ELECT	100uF 20% 10V
R557	1-216-659-11	METAL CHIP 2.2K 0.5% 1/10W		C507	1-126-233-11	ELECT	22uF 20% 50V
*****				C508	1-130-471-00	MYLAR	0.001uF 5% 50V
*	A-3309-196-A	MAIN AMP BOARD, COMPLETE *****		C509	1-126-233-11	ELECT	22uF 20% 50V
	1-537-479-11	TERMINAL		C510	1-163-133-00	CERAMIC CHIP	470PF 5% 50V
		< CAPACITOR >		C511	1-128-320-11	ELECT	2200uF 20% 16V
C112	1-124-910-11	ELECT 47uF 20% 50V		C512	1-128-320-11	ELECT	2200uF 20% 16V
C113	1-163-235-11	CERAMIC CHIP 22PF 5% 50V		C513	1-128-320-11	ELECT	2200uF 20% 16V
C114	1-162-806-11	CERAMIC 0.1uF 10% 50V		C514	1-136-961-11	FILM	0.047uF 10% 160V
C115	1-162-806-11	CERAMIC 0.1uF 10% 50V		C515	1-162-806-11	CERAMIC	0.1uF 10% 50V
C116	1-136-161-00	FILM 0.047uF 5% 50V		C516	1-162-806-11	CERAMIC	0.1uF 10% 50V
C212	1-124-910-11	ELECT 47uF 20% 50V		C517	1-111-100-11	ELECT	2700uF 20% 35V
C213	1-163-235-11	CERAMIC CHIP 22PF 5% 50V		C518	1-111-100-11	ELECT	2700uF 20% 35V
C214	1-162-806-11	CERAMIC 0.1uF 10% 50V		C519	1-162-806-11	CERAMIC	0.1uF 10% 50V
C215	1-162-806-11	CERAMIC 0.1uF 10% 50V		C520	1-162-806-11	CERAMIC	0.1uF 10% 50V
C216	1-136-161-00	FILM 0.047uF 5% 50V		C521	1-111-100-11	ELECT	2700uF 20% 35V
C312	1-124-910-11	ELECT 47uF 20% 50V		C522	1-111-100-11	ELECT	2700uF 20% 35V
C313	1-163-235-11	CERAMIC CHIP 22PF 5% 50V		C523	1-126-052-11	ELECT	100uF 20% 50V
				C524	1-126-052-11	ELECT	100uF 20% 50V
				C525	1-126-956-91	ELECT	0.1uF 20% 50V
				C526	1-126-956-91	ELECT	0.1uF 20% 50V
				C527	1-126-052-11	ELECT	100uF 20% 16V
				C528	1-126-052-11	ELECT	100uF 20% 16V
				C529	1-163-205-00	CERAMIC CHIP	0.001uF 5% 50V
				C530	1-163-205-00	CERAMIC CHIP	0.001uF 5% 50V
				C531	1-128-320-11	ELECT	2200uF 20% 16V

MAIN AMP

Ref.No.	Part No.	Description	Remark
C532	1-128-320-11	ELECT 2200uF 20% 16V	
C533	1-128-320-11	ELECT 2200uF 20% 16V	
C534	1-136-961-11	FILM 0.047uF 10% 160V	
C535	1-162-806-11	CERAMIC 0.1uF 10% 50V	
C536	1-162-806-11	CERAMIC 0.1uF 10% 50V	
C537	1-111-100-11	ELECT 2700uF 20% 35V	
C538	1-111-100-11	ELECT 2700uF 20% 35V	
C539	1-162-806-11	CERAMIC 0.1uF 10% 50V	
C540	1-162-806-11	CERAMIC 0.1uF 10% 50V	
C541	1-111-100-11	ELECT 2700uF 20% 35V	
C542	1-111-100-11	ELECT 2700uF 20% 35V	
C543	1-126-052-11	ELECT 100uF 20% 50V	
C544	1-126-052-11	ELECT 100uF 20% 50V	
C545	1-126-956-91	ELECT 0.1uF 20% 50V	
C546	1-126-956-91	ELECT 0.1uF 20% 50V	
C547	1-126-052-11	ELECT 100uF 20% 16V	
C548	1-126-052-11	ELECT 100uF 20% 16V	
C549	1-163-205-00	CERAMIC CHIP 0.001uF 5% 50V	
C550	1-163-205-00	CERAMIC CHIP 0.001uF 5% 50V	
C551	1-136-153-00	FILM 0.01uF 5% 50V	
C552	1-126-967-11	ELECT 47uF 20% 16V	
C553	1-163-275-11	CERAMIC CHIP 0.001uF 5% 50V	
C554	1-126-233-11	ELECT 22uF 20% 50V	
C555	1-163-205-00	CERAMIC CHIP 0.001uF 5% 50V	
C556	1-163-205-00	CERAMIC CHIP 0.001uF 5% 50V	
C557	1-163-205-00	CERAMIC CHIP 0.001uF 5% 50V	
C558	1-163-205-00	CERAMIC CHIP 0.001uF 5% 50V	

< CONNECTOR >

CN103	1-694-072-11	TERMINAL BOARD 8P (SPEAKER OUT)
CN503	1-537-920-11	TERMINAL BOARD (SP) (POWER)

< JACK >

CNJ101	1-770-068-21	JACK, PIN 2P (INPUT A/B)
CNJ301	1-770-068-21	JACK, PIN 2P (INPUT C/D)

< CONNECTOR >

CNP101	1-766-801-11	CONNECTOR, BOARD TO BOARD 5P
CNP102	1-766-929-11	CONNECTOR, BOARD TO BOARD 8P
CNP301	1-766-801-11	CONNECTOR, BOARD TO BOARD 5P
CNP302	1-766-929-11	CONNECTOR, BOARD TO BOARD 8P
* CNP501	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P
* CNP502	1-750-140-11	PIN, CONNECTOR (PC BOARD) 2P (REMOTE)

< DIODE >

D101	8-719-801-78	DIODE 1SS184
D301	8-719-801-78	DIODE 1SS184
D501	8-719-025-51	DIODE 02CZ18-TE85L

Ref.No.	Part No.	Description	Remark
D502	8-719-025-34	DIODE 02CZ6.8-TE85L	
D503	8-719-801-78	DIODE 1SS184	
D504	8-719-801-78	DIODE 1SS184	
D505	8-719-058-11	DIODE C10P20F	
D506	8-719-058-11	DIODE C10P20F	
D507	8-719-058-11	DIODE C10P20F	
D508	8-719-058-11	DIODE C10P20F	
D509	8-719-054-55	DIODE 1SS306 (TE85L)	
D511	8-719-054-55	DIODE 1SS306 (TE85L)	
D513	8-719-801-78	DIODE 1SS184	
D514	8-719-801-78	DIODE 1SS184	
D515	8-719-025-49	DIODE 02CZ15-TE85L	
D516	8-719-025-49	DIODE 02CZ15-TE85L	
D517	8-719-058-11	DIODE C10P20F	
D518	8-719-058-11	DIODE C10P20F	
D519	8-719-058-11	DIODE C10P20F	
D520	8-719-058-11	DIODE C10P20F	
D521	8-719-054-55	DIODE 1SS306 (TE85L)	
D523	8-719-054-55	DIODE 1SS306 (TE85L)	
D525	8-719-801-78	DIODE 1SS184	
D526	8-719-801-78	DIODE 1SS184	
D527	8-719-025-49	DIODE 02CZ15-TE85L	
D528	8-719-025-49	DIODE 02CZ15-TE85L	
D529	8-719-801-78	DIODE 1SS184	
D530	8-719-025-34	DIODE 02CZ6.8-TE85L	

< IC >

IC501	8-759-144-88	IC uPC494GS
IC502	8-719-156-73	IC PHOTO COUPLER PS2501-1LA

< CHIP CONDUCTOR >

JR101	1-216-295-00	CONDUCTOR, CHIP (2012)
JR104	1-216-295-00	CONDUCTOR, CHIP (2012)
JR105	1-216-296-00	CONDUCTOR, CHIP (3216)
JR106	1-216-295-00	CONDUCTOR, CHIP (2012)
JR109	1-216-295-00	CONDUCTOR, CHIP (2012)
JR110	1-216-295-00	CONDUCTOR, CHIP (2012)
JR111	1-216-296-00	CONDUCTOR, CHIP (3216)
JR112	1-216-296-00	CONDUCTOR, CHIP (3216)
JR113	1-216-295-00	CONDUCTOR, CHIP (2012)
JR114	1-216-295-00	CONDUCTOR, CHIP (2012)
JR115	1-216-296-00	CONDUCTOR, CHIP (3216)
JR116	1-216-296-00	CONDUCTOR, CHIP (3216)
JR117	1-216-295-00	CONDUCTOR, CHIP (2012)
JR118	1-216-296-00	CONDUCTOR, CHIP (3216)
JR119	1-216-296-00	CONDUCTOR, CHIP (3216)
JR120	1-216-296-00	CONDUCTOR, CHIP (3216)
JR121	1-216-296-00	CONDUCTOR, CHIP (3216)

MAIN AMP

Ref. No.	Part No.	Description	Remark
JR122	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR123	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR124	1-216-296-00	CONDUCTOR, CHIP	(3216)
JR125	1-216-295-00	CONDUCTOR, CHIP	(2012)
JR126	1-216-295-00	CONDUCTOR, CHIP	(2012)
JR128	1-216-295-00	CONDUCTOR, CHIP	(2012)
JR130	1-216-295-00	CONDUCTOR, CHIP	(2012)

< TRANSISTOR >

Q101	8-729-184-53	TRANSISTOR	2SC1845-EA
Q102	8-729-140-82	TRANSISTOR	2SA988-PAFAEA
Q103	8-729-184-53	TRANSISTOR	2SC1845-EA
Q104	8-729-140-82	TRANSISTOR	2SA988-PAFAEA
Q105	8-729-209-18	TRANSISTOR	2SA1360-Y
Q106	8-729-203-45	TRANSISTOR	2SC3423-O
Q107	8-729-031-83	TRANSISTOR	2SK1304
Q108	8-729-031-81	TRANSISTOR	2SJ217
Q109	8-729-954-51	TRANSISTOR	2SC1545
Q110	8-729-207-74	TRANSISTOR	RN2408
Q111	8-729-202-38	TRANSISTOR	2SC3326N
Q201	8-729-184-53	TRANSISTOR	2SC1845-EA
Q202	8-729-140-82	TRANSISTOR	2SA988-PAFAEA
Q203	8-729-184-53	TRANSISTOR	2SC1845-EA
Q204	8-729-140-82	TRANSISTOR	2SA988-PAFAEA
Q205	8-729-209-18	TRANSISTOR	2SA1360-Y
Q206	8-729-203-45	TRANSISTOR	2SC3423-O
Q207	8-729-031-83	TRANSISTOR	2SK1304
Q208	8-729-031-81	TRANSISTOR	2SJ217
Q209	8-729-954-51	TRANSISTOR	2SC1545
Q210	8-729-207-74	TRANSISTOR	RN2408
Q211	8-729-202-38	TRANSISTOR	2SC3326N
Q301	8-729-184-53	TRANSISTOR	2SC1845-EA
Q302	8-729-140-82	TRANSISTOR	2SA988-PAFAEA
Q303	8-729-184-53	TRANSISTOR	2SC1845-EA
Q304	8-729-140-82	TRANSISTOR	2SA988-PAFAEA
Q305	8-729-209-18	TRANSISTOR	2SA1360-Y
Q306	8-729-203-45	TRANSISTOR	2SC3423-O
Q307	8-729-031-83	TRANSISTOR	2SK1304
Q308	8-729-031-81	TRANSISTOR	2SJ217
Q309	8-729-954-51	TRANSISTOR	2SC1545
Q310	8-729-207-74	TRANSISTOR	RN2408
Q311	8-729-202-38	TRANSISTOR	2SC3326N
Q401	8-729-184-53	TRANSISTOR	2SC1845-EA
Q402	8-729-140-82	TRANSISTOR	2SA988-PAFAEA
Q403	8-729-184-53	TRANSISTOR	2SC1845-EA
Q404	8-729-140-82	TRANSISTOR	2SA988-PAFAEA
Q405	8-729-209-18	TRANSISTOR	2SA1360-Y
Q406	8-729-203-45	TRANSISTOR	2SC3423-O
Q407	8-729-031-83	TRANSISTOR	2SK1304

Ref. No.	Part No.	Description	Remark
Q408	8-729-031-81	TRANSISTOR	2SJ217
Q409	8-729-954-51	TRANSISTOR	2SC1545
Q410	8-729-207-74	TRANSISTOR	RN2408
Q411	8-729-202-38	TRANSISTOR	2SC3326N
Q501	8-729-271-21	TRANSISTOR	2SC2712Y-TE85L
Q502	8-729-216-22	TRANSISTOR	2SA1162-G
Q503	8-729-106-60	TRANSISTOR	2SB1115A
Q504	8-729-216-22	TRANSISTOR	2SA1162-G
Q505	8-729-271-21	TRANSISTOR	2SC2712Y-TE85L
Q506	8-729-271-21	TRANSISTOR	2SC2712Y-TE85L
Q507	8-729-271-21	TRANSISTOR	2SC2712Y-TE85L
Q508	8-729-216-22	TRANSISTOR	2SA1162-G
Q509	8-729-271-21	TRANSISTOR	2SC2712Y-TE85L
Q510	8-729-271-21	TRANSISTOR	2SC2712Y-TE85L
Q511	8-729-035-83	TRANSISTOR	MTP75N06HD
Q512	8-729-035-83	TRANSISTOR	MTP75N06HD
Q513	8-729-035-83	TRANSISTOR	MTP75N06HD
Q514	8-729-035-83	TRANSISTOR	MTP75N06HD
Q515	8-729-207-82	TRANSISTOR	2SC3421-Y
Q516	8-729-207-89	TRANSISTOR	2SA1358-Y
Q517	8-729-271-21	TRANSISTOR	2SC2712Y-TE85L
Q518	8-729-271-21	TRANSISTOR	2SC2712Y-TE85L
Q519	8-729-035-83	TRANSISTOR	MTP75N06HD
Q520	8-729-035-83	TRANSISTOR	MTP75N06HD
Q521	8-729-035-83	TRANSISTOR	MTP75N06HD
Q522	8-729-035-83	TRANSISTOR	MTP75N06HD
Q523	8-729-207-82	TRANSISTOR	2SC3421-Y
Q524	8-729-207-89	TRANSISTOR	2SA1358-Y

< RESISTOR >

R115	1-208-510-61	METAL GLAZE	10K	2%	1/8W
R116	1-208-449-61	METAL GLAZE	3.3K	2%	1/10W
R117	1-216-214-00	METAL GLAZE	4.7K	2%	1/8W
R118	1-216-214-00	METAL GLAZE	4.7K	2%	1/8W
R119	1-208-810-11	METAL GLAZE	15K	2%	1/8W
R120	1-208-810-11	METAL GLAZE	15K	2%	1/8W
R121	1-249-677-11	CARBON	1.5K	5%	1/2W
R122	1-249-691-11	CARBON	5.6K	5%	1/2W
R123	1-216-182-00	METAL GLAZE	220	2%	1/8W
R124	1-216-182-00	METAL GLAZE	220	2%	1/8W
R125	1-208-462-61	METAL GLAZE	10K	2%	1/10W
R126	1-208-462-61	METAL GLAZE	10K	2%	1/10W
R127	1-249-528-11	CARBON	100	5%	1/4W
R128	1-249-528-11	CARBON	100	5%	1/4W
R129	1-208-534-61	METAL GLAZE	100K	2%	1/10W
R130	1-208-534-61	METAL GLAZE	100K	2%	1/10W
R131	1-208-462-61	METAL GLAZE	10K	2%	1/10W
R132	1-208-462-61	METAL GLAZE	10K	2%	1/10W
R133	1-215-857-11	METAL OXIDE	10	5%	1W

MAIN AMP

Ref. No.	Part No.	Description	Remark
R134	1-208-550-61	METAL GLAZE	470K 2% 1/10W
R135	1-219-695-11	REGISTER	0.03 5W
R142	1-216-214-00	METAL GLAZE	4.7K 2% 1/8W
R143	1-216-214-00	METAL GLAZE	4.7K 2% 1/8W
R215	1-208-510-61	METAL GLAZE	10K 2% 1/8W
R216	1-208-449-61	METAL GLAZE	3.3K 2% 1/10W
R217	1-216-214-00	METAL GLAZE	4.7K 2% 1/8W
R218	1-216-214-00	METAL GLAZE	4.7K 2% 1/8W
R219	1-208-810-11	METAL GLAZE	15K 2% 1/8W
R220	1-208-810-11	METAL GLAZE	15K 2% 1/8W
R221	1-249-677-11	CARBON	1.5K 5% 1/2W
R222	1-249-691-11	CARBON	5.6K 5% 1/2W
R223	1-216-182-00	METAL GLAZE	220 2% 1/8W
R224	1-216-182-00	METAL GLAZE	220 2% 1/8W
R225	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R226	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R227	1-249-528-11	CARBON	100 5% 1/4W
R228	1-249-528-11	CARBON	100 5% 1/4W
R229	1-208-534-61	METAL GLAZE	100K 2% 1/10W
R230	1-208-534-61	METAL GLAZE	100K 2% 1/10W
R231	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R232	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R233	1-215-857-11	METAL OXIDE	10 5% 1W
R234	1-208-550-61	METAL GLAZE	470K 2% 1/10W
R235	1-219-695-11	REGISTER	0.03 5W
R242	1-216-214-00	METAL GLAZE	4.7K 2% 1/8W
R243	1-216-214-00	METAL GLAZE	4.7K 2% 1/8W
R315	1-208-510-61	METAL GLAZE	10K 2% 1/8W
R316	1-208-449-61	METAL GLAZE	3.3K 2% 1/10W
R317	1-216-214-00	METAL GLAZE	4.7K 2% 1/8W
R318	1-216-214-00	METAL GLAZE	4.7K 2% 1/8W
R319	1-208-810-11	METAL GLAZE	15K 2% 1/8W
R320	1-208-810-11	METAL GLAZE	15K 2% 1/8W
R321	1-249-677-11	CARBON	1.5K 5% 1/2W
R322	1-249-691-11	CARBON	5.6K 5% 1/2W
R323	1-216-182-00	METAL GLAZE	220 2% 1/8W
R324	1-216-182-00	METAL GLAZE	220 2% 1/8W
R325	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R326	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R327	1-249-528-11	CARBON	100 5% 1/4W
R328	1-249-528-11	CARBON	100 5% 1/4W
R329	1-208-534-61	METAL GLAZE	100K 2% 1/10W
R330	1-208-534-61	METAL GLAZE	100K 2% 1/10W
R331	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R332	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R333	1-215-857-11	METAL OXIDE	10 5% 1W
R334	1-208-550-61	METAL GLAZE	470K 2% 1/10W
R335	1-219-695-11	REGISTER	0.03 5W

Ref. No.	Part No.	Description	Remark
R342	1-216-214-00	METAL GLAZE	4.7K 2% 1/8W
R343	1-216-214-00	METAL GLAZE	4.7K 2% 1/8W
R415	1-208-510-61	METAL GLAZE	10K 2% 1/8W
R416	1-208-449-61	METAL GLAZE	3.3K 2% 1/10W
R417	1-216-214-00	METAL GLAZE	4.7K 2% 1/8W
R418	1-216-214-00	METAL GLAZE	4.7K 2% 1/8W
R419	1-208-810-11	METAL GLAZE	15K 2% 1/8W
R420	1-208-810-11	METAL GLAZE	15K 2% 1/8W
R421	1-249-677-11	CARBON	1.5K 5% 1/2W
R422	1-249-691-11	CARBON	5.6K 5% 1/2W
R423	1-216-182-00	METAL GLAZE	220 2% 1/8W
R424	1-216-182-00	METAL GLAZE	220 2% 1/8W
R425	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R426	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R427	1-249-528-11	CARBON	100 5% 1/4W
R428	1-249-528-11	CARBON	100 5% 1/4W
R429	1-208-534-61	METAL GLAZE	100K 2% 1/10W
R430	1-208-534-61	METAL GLAZE	100K 2% 1/10W
R431	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R432	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R433	1-215-857-11	METAL OXIDE	10 5% 1W
R434	1-208-550-61	METAL GLAZE	470K 2% 1/10W
R435	1-219-695-11	REGISTER	0.03 5W
R442	1-216-214-00	METAL GLAZE	4.7K 2% 1/8W
R443	1-216-214-00	METAL GLAZE	4.7K 2% 1/8W
R501	1-247-725-11	CARBON	10K 5% 1/4W
R502	1-247-721-11	CARBON	4.7K 5% 1/4W
R503	1-208-474-61	METAL GLAZE	330 2% 1/8W
R504	1-208-449-61	METAL GLAZE	3.3K 2% 1/10W
R505	1-216-655-11	METAL CHIP	1.5K 0.5% 1/10W
R506	1-216-655-11	METAL CHIP	1.5K 0.5% 1/10W
R507	1-218-756-11	METAL GLAZE	150K 2% 1/10W
R508	1-208-464-61	METAL GLAZE	12K 2% 1/10W
R509	1-208-522-61	METAL GLAZE	33K 2% 1/10W
R510	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R511	1-208-449-61	METAL GLAZE	3.3K 2% 1/10W
R512	1-208-558-61	METAL GLAZE	1M 2% 1/10W
R513	1-216-659-11	METAL CHIP	2.2K 0.5% 1/10W
R514	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R515	1-216-671-11	METAL CHIP	6.8K 0.5% 1/10W
R516	1-208-526-61	METAL GLAZE	47K 2% 1/10W
R517	1-216-659-11	METAL CHIP	2.2K 0.5% 1/10W
R518	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R519	1-208-506-11	METAL GLAZE	6.8K 2% 1/8W
R520	1-208-526-61	METAL GLAZE	47K 2% 1/10W
R521	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R522	1-208-462-61	METAL GLAZE	10K 2% 1/10W
R523	1-208-462-61	METAL GLAZE	10K 2% 1/10W

MAIN AMP

PRE AMP

Ref. No.	Part No.	Description	Remark
R524	1-208-462-61	METAL GLAZE 10K 2%	1/10W
R525	1-216-210-00	METAL GLAZE 3.3K 2%	1/8W
R526	1-208-449-61	METAL GLAZE 3.3K 2%	1/10W
R527	1-208-405-61	METAL GLAZE 47 2%	1/8W
R528	1-208-405-61	METAL GLAZE 47 2%	1/8W
R529	1-208-437-61	METAL GLAZE 1K 2%	1/10W
R530	1-208-437-61	METAL GLAZE 1K 2%	1/10W
R531	1-249-504-11	CARBON 10 5%	1/4W
R532	1-249-504-11	CARBON 10 5%	1/4W
R533	1-249-504-11	CARBON 10 5%	1/4W
R534	1-249-504-11	CARBON 10 5%	1/4W
R535	1-216-210-00	METAL GLAZE 3.3K 2%	1/8W
R536	1-216-210-00	METAL GLAZE 3.3K 2%	1/8W
R537	1-208-405-61	METAL GLAZE 47 2%	1/8W
R538	1-208-405-61	METAL GLAZE 47 2%	1/8W
R539	1-208-437-61	METAL GLAZE 1K 2%	1/10W
R540	1-208-437-61	METAL GLAZE 1K 2%	1/10W
R541	1-249-504-11	CARBON 10 5%	1/4W
R542	1-249-504-11	CARBON 10 5%	1/4W
R543	1-249-504-11	CARBON 10 5%	1/4W
R544	1-249-504-11	CARBON 10 5%	1/4W
R545	1-216-210-00	METAL GLAZE 3.3K 2%	1/8W
R546	1-216-210-00	METAL GLAZE 3.3K 2%	1/8W
R547	1-208-558-61	METAL GLAZE 1M 2%	1/10W
R548	1-208-449-61	METAL GLAZE 3.3K 2%	1/10W
R549	1-216-698-11	METAL CHIP 91K 0.5%	1/10W
R550	1-208-522-61	METAL GLAZE 33K 2%	1/10W
R551	1-208-510-61	METAL GLAZE 10K 2%	1/8W
R552	1-216-647-11	METAL CHIP 680 0.5%	1/10W
R553	1-208-558-61	METAL GLAZE 1M 2%	1/10W
R558	1-220-242-11	METAL GLAZE 22 5%	1/4W
R561	1-208-478-61	METAL GLAZE 470 2%	1/8W
R562	1-208-478-61	METAL GLAZE 470 2%	1/8W
R563	1-208-478-61	METAL GLAZE 470 2%	1/8W
R564	1-208-478-61	METAL GLAZE 470 2%	1/8W

< TRANSFORMER >

T501	1-429-665-11	TRANSFORMER, DC-DC CONVERTER
T502	1-429-665-11	TRANSFORMER, DC-DC CONVERTER
T503	1-424-112-11	COIL, CHOKE 7.5UH
T504	1-424-112-11	COIL, CHOKE 7.5UH

< THERMISTOR >

TH501	1-808-877-11	THERMISTOR
TH502	1-808-877-11	THERMISTOR
TH503	1-808-877-11	THERMISTOR
TH504	1-808-877-11	THERMISTOR

Ref. No.	Part No.	Description	Remark
< VARIABLE RESISTOR >			
VR102	1-241-683-11	RES, ADJ, CARBON 220	
VR202	1-241-683-11	RES, ADJ, CARBON 220	
VR302	1-241-683-11	RES, ADJ, CARBON 220	
VR402	1-241-683-11	RES, ADJ, CARBON 220	

* A-3309-195-A PRE AMP BOARD, COMPLETE			

< CAPACITOR >			
C101	1-124-720-11	ELECT 4.7uF	20% 50V
C102	1-126-052-11	ELECT 100uF	20% 16V
C103	1-126-048-11	ELECT 10uF	20% 50V
C104	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C105	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C106	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C107	1-136-165-00	FILM 0.1uF	5% 50V
C108	1-136-165-00	FILM 0.1uF	5% 50V
C109	1-124-994-11	ELECT 100uF	20% 10V
C110	1-126-772-11	ELECT 0.47uF	20% 50V
C111	1-136-165-00	FILM 0.1uF	5% 50V
C117	1-126-772-11	ELECT 0.47uF	20% 50V
C118	1-136-161-00	FILM 0.047uF	5% 50V
C119	1-136-161-00	FILM 0.047uF	5% 50V
C120	1-126-956-91	ELECT 0.1uF	20% 50V
C121	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C122	1-126-044-11	ELECT 1uF	20% 50V
C123	1-126-044-11	ELECT 1uF	20% 50V
C124	1-136-169-00	FILM 0.22uF	5% 50V
C201	1-124-720-11	ELECT 4.7uF	20% 50V
C202	1-126-052-11	ELECT 100uF	20% 16V
C203	1-126-048-11	ELECT 10uF	20% 50V
C204	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C205	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C206	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C209	1-124-994-11	ELECT 100uF	20% 10V
C210	1-126-772-11	ELECT 0.47uF	20% 50V
C211	1-136-165-00	FILM 0.1uF	5% 50V
C217	1-126-772-11	ELECT 0.47uF	20% 50V
C218	1-136-161-00	FILM 0.047uF	5% 50V
C219	1-136-161-00	FILM 0.047uF	5% 50V
C221	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C222	1-126-044-11	ELECT 1uF	20% 50V
C223	1-126-044-11	ELECT 1uF	20% 50V
C224	1-136-169-00	FILM 0.22uF	5% 50V
C301	1-124-720-11	ELECT 4.7uF	20% 50V
C302	1-126-052-11	ELECT 100uF	20% 16V
C303	1-126-048-11	ELECT 10uF	20% 50V

Ref. No.	Part No.	Description	Remark		
C304	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C305	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C306	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C307	1-136-165-00	FILM	0.1uF	5%	50V
C308	1-136-165-00	FILM	0.1uF	5%	50V
C309	1-124-994-11	ELECT	100uF	20%	10V
C310	1-126-772-11	ELECT	0.47uF	20%	50V
C311	1-136-165-00	FILM	0.1uF	5%	50V
C317	1-126-772-11	ELECT	0.47uF	20%	50V
C318	1-136-161-00	FILM	0.047uF	5%	50V
C319	1-136-161-00	FILM	0.047uF	5%	50V
C321	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C322	1-126-044-11	ELECT	1uF	20%	50V
C323	1-126-044-11	ELECT	1uF	20%	50V
C324	1-136-169-00	FILM	0.22uF	5%	50V
C401	1-124-720-11	ELECT	4.7uF	20%	50V
C402	1-126-052-11	ELECT	100uF	20%	16V
C403	1-126-048-11	ELECT	10uF	20%	50V
C404	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C405	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C406	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C409	1-124-994-11	ELECT	100uF	20%	10V
C410	1-126-772-11	ELECT	0.47uF	20%	50V
C411	1-136-165-00	FILM	0.1uF	5%	50V
C417	1-126-772-11	ELECT	0.47uF	20%	50V
C418	1-136-161-00	FILM	0.047uF	5%	50V
C419	1-136-161-00	FILM	0.047uF	5%	50V
C421	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C422	1-126-044-11	ELECT	1uF	20%	50V
C423	1-126-044-11	ELECT	1uF	20%	50V
C424	1-136-169-00	FILM	0.22uF	5%	50V

< CONNECTOR >

CNJ101	1-766-798-11	CONNECTOR, BOARD TO BOARD 5P
CNJ102	1-766-928-11	CONNECTOR, BOARD TO BOARD 8P
CNJ301	1-766-798-11	CONNECTOR, BOARD TO BOARD 5P
CNJ302	1-766-928-11	CONNECTOR, BOARD TO BOARD 8P

< IC >

IC101	8-759-711-82	IC NJM4580E
IC102	8-759-711-82	IC NJM4580E
IC103	8-759-711-82	IC NJM4580E
IC201	8-759-711-82	IC NJM4580E
IC301	8-759-711-82	IC NJM4580E
IC302	8-759-711-82	IC NJM4580E
IC303	8-759-711-82	IC NJM4580E
IC401	8-759-711-82	IC NJM4580E

Ref. No.	Part No.	Description	Remark		
< CHIP CONDUCTOR >					
JR101	1-216-296-00	CONDUCTOR, CHIP	(3216)		
JR102	1-216-296-00	CONDUCTOR, CHIP	(3216)		
JR103	1-216-295-00	CONDUCTOR, CHIP	(2012)		
JR104	1-216-296-00	CONDUCTOR, CHIP	(3216)		
JR105	1-216-296-00	CONDUCTOR, CHIP	(3216)		
JR106	1-216-295-00	CONDUCTOR, CHIP	(2012)		
JR107	1-216-296-00	CONDUCTOR, CHIP	(3216)		
JR108	1-216-296-00	CONDUCTOR, CHIP	(3216)		
JR109	1-216-295-00	CONDUCTOR, CHIP	(2012)		
< RESISTOR >					
R101	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R102	1-208-437-61	METAL GLAZE	1K	2%	1/10W
R103	1-208-826-11	METAL GLAZE	68K	2%	1/10W
R104	1-208-437-61	METAL GLAZE	1K	2%	1/10W
R105	1-208-449-61	METAL GLAZE	3.3K	2%	1/10W
R106	1-208-437-61	METAL GLAZE	1K	2%	1/10W
R107	1-208-437-61	METAL GLAZE	1K	2%	1/10W
R109	1-216-029-00	METAL CHIP	150	5%	1/10W
R110	1-208-462-61	METAL GLAZE	10K	2%	1/10W
R111	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R112	1-208-462-61	METAL GLAZE	10K	2%	1/10W
R113	1-208-462-61	METAL GLAZE	10K	2%	1/10W
R114	1-208-534-61	METAL GLAZE	100K	2%	1/10W
R136	1-208-817-11	METAL GLAZE	30K	2%	1/10W
R137	1-218-756-11	METAL GLAZE	150K	2%	1/10W
R138	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R139	1-208-441-61	METAL GLAZE	1.5K	2%	1/10W
R140	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R141	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R201	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R202	1-208-437-61	METAL GLAZE	1K	2%	1/10W
R203	1-208-826-11	METAL GLAZE	68K	2%	1/10W
R204	1-208-437-61	METAL GLAZE	1K	2%	1/10W
R205	1-208-449-61	METAL GLAZE	3.3K	2%	1/10W
R206	1-208-437-61	METAL GLAZE	1K	2%	1/10W
R207	1-208-437-61	METAL GLAZE	1K	2%	1/10W
R209	1-216-029-00	METAL CHIP	150	5%	1/10W
R210	1-208-462-61	METAL GLAZE	10K	2%	1/10W
R211	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R212	1-208-462-61	METAL GLAZE	10K	2%	1/10W
R213	1-208-462-61	METAL GLAZE	10K	2%	1/10W
R214	1-208-534-61	METAL GLAZE	100K	2%	1/10W
R236	1-208-817-11	METAL GLAZE	30K	2%	1/10W
R237	1-218-756-11	METAL GLAZE	150K	2%	1/10W
R239	1-208-441-61	METAL GLAZE	1.5K	2%	1/10W
R240	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W

PRE AMP

SEE ADDITIONAL
INFORMATION

Ref. No.	Part No.	Description	Remark		
R241	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R301	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R302	1-208-437-61	METAL GLAZE	1K	2%	1/10W
R303	1-208-826-11	METAL GLAZE	68K	2%	1/10W
R304	1-208-437-61	METAL GLAZE	1K	2%	1/10W
R305	1-208-449-61	METAL GLAZE	3.3K	2%	1/10W
R306	1-208-437-61	METAL GLAZE	1K	2%	1/10W
R307	1-208-437-61	METAL GLAZE	1K	2%	1/10W
R309	1-216-029-00	METAL CHIP	150	5%	1/10W
R310	1-208-462-61	METAL GLAZE	10K	2%	1/10W
R311	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R312	1-208-462-61	METAL GLAZE	10K	2%	1/10W
R313	1-208-462-61	METAL GLAZE	10K	2%	1/10W
R314	1-208-534-61	METAL GLAZE	100K	2%	1/10W
R336	1-208-817-11	METAL GLAZE	30K	2%	1/10W
R337	1-218-756-11	METAL GLAZE	150K	2%	1/10W
R339	1-208-441-61	METAL GLAZE	1.5K	2%	1/10W
R340	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R341	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R401	1-216-635-11	METAL CHIP	220	0.5%	1/10W
R402	1-208-437-61	METAL GLAZE	1K	2%	1/10W
R403	1-208-826-11	METAL GLAZE	68K	2%	1/10W
R404	1-208-437-61	METAL GLAZE	1K	2%	1/10W
R405	1-208-449-61	METAL GLAZE	3.3K	2%	1/10W
R406	1-208-437-61	METAL GLAZE	1K	2%	1/10W
R407	1-208-437-61	METAL GLAZE	1K	2%	1/10W
R409	1-216-029-00	METAL CHIP	150	5%	1/10W
R410	1-208-462-61	METAL GLAZE	10K	2%	1/10W
R411	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R412	1-208-462-61	METAL GLAZE	10K	2%	1/10W
R413	1-208-462-61	METAL GLAZE	10K	2%	1/10W
R414	1-208-534-61	METAL GLAZE	100K	2%	1/10W
R436	1-208-817-11	METAL GLAZE	30K	2%	1/10W
R437	1-218-756-11	METAL GLAZE	150K	2%	1/10W
R439	1-208-441-61	METAL GLAZE	1.5K	2%	1/10W
R440	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R441	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W

< SWITCH >

S101	1-762-716-11	SWITCH, SLIDE (A/B FILTER)
S301	1-762-716-11	SWITCH, SLIDE (C/D FILTER)

< VARIABLE RESISTOR >

VR101	1-225-295-11	RES, ADJ CARBON 5k
VR301	1-225-295-11	RES, ADJ CARBON 5k

Ref. No.	Part No.	Description	Remark
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MISCELLANEOUS

F501	1-532-947-11	FUSE (BRADE TYPE) (AUTO FUSE) (30A)
F502	1-532-947-11	FUSE (BRADE TYPE) (AUTO FUSE) (30A)

HARDWARE LIST

#1	7-685-562-19	SCREW +BTP 4X14 TYPE2 N-S
#2	7-682-546-04	SCREW +PTT 3X5 (S)
#3	7-685-548-19	SCREW +BTP 3X12 TYPE2 N-S
#4	7-682-548-09	SCREW +PTT 3X8 (S)
#5	7-685-544-19	SCREW +BTP 3X5 TYPE2 N-S

ACCESSORIES & PACKING MATERIALS

*	3-701-634-00	BAG, POLYETHYLENE
	3-810-862-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH)
	3-810-862-21	MANUAL, INSTRUCTION (GERMAN, ITALIAN) (AEP, UK, E, German)
	3-810-862-31	MANUAL, INSTRUCTION (SPANISH, PORTUGUESE) (AEP, UK, E)
	3-810-862-41	MANUAL, INSTRUCTION (DUTCH, SWEDISH) (AEP, UK, E)
	3-927-239-01	SCREW (+PTT 5X35)

English

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XM-450G

SONY[®] SERVICE MANUAL

*US Model
Canadian Model
AEP Model
UK Model
E Model*

SUPPLEMENT-1

File this Supplement with the Service Manual.

Subject : ELECTRICAL PARTS LIST

(ENG-96016)

		Before change			After change		
Page	Ref. No.	Part No.	Description	Remark	Part No.	Description	Remark
20	—				1-782-013-11	CORD (WITH CONNECTOR) (REMOTE CONTROL)	

XM-450G

SONY®

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model

CORRECTION-1

Correct your service manual as shown below.

 : Indicates corrected portion.

Page	INCORRECT				CORRECT			
	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
14	PL501	1-517-460-11	LAMP, PILOT (GREEN) (POWER/PROTECTOR)		PL501	1-517-460-21	LAMP, PILOT (GREEN) (POWER/PROTECTOR)	
	PL501	1-517-460-21	LAMP, PILOT (RED) (POWER/PROTECTOR)		PL501	1-517-460-11	LAMP, PILOT (RED) (POWER/PROTECTOR)	

(RPC-99001)

XM-450G

SONY®

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model

CORRECTION-2

Correct your service manual as shown below.

 : Indicates corrected portion.

Page	INCORRECT				CORRECT			
	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
18	T503	1-424-112-11	COIL, CHOKE 7.5uH		T503	<u>1-419-851-11</u>	COIL, CHOKE <u>50uH</u>	
	T504	1-424-112-11	COIL, CHOKE 7.5uH		T504	<u>1-419-851-11</u>	COIL, CHOKE <u>50uH</u>	

(ECN-CSA20800)