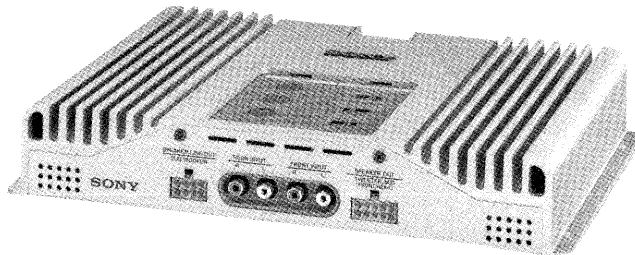


XM-C2000

SERVICE MANUAL

US Model
Canadian Model
AEP Model
E Model
UK Model



SPECIFICATIONS

Power supply system
Pulse power supply circuitry

Speaker impedance
2 – 8 ohms

Maximum power output (4 ohms)

High/Front speaker	Mid-range/Rear speaker	Sub-woofer	
		stereo	monaural
65 W × 2	65 W × 2	65 W × 2	200 W

Rated power output at 14.4 V battery voltage
(4 ohms) (Ad Hoc Committee standards)

High/Front speaker	Mid-range/Rear speaker	Sub-woofer	
		stereo	monaural
30 W × 2	30 W × 2	30 W × 2	80 W
70 Hz – 20 kHz 0.04% THD	70 Hz – 20 kHz 0.04% THD	20 – 140 Hz 0.04% THD	20 – 140 Hz 0.1% THD

Frequency response
High/Front: 70 Hz – 100 kHz (± 3 dB)
Mid-range/Rear: 70 Hz – 100 kHz (± 3 dB)
Sub-woofer: 5 – 140 Hz (± 3 dB)
(Sub-woofer line output:
5 – 140 Hz)

Harmonic distortion
Less than 0.005% 4 ohms
(Sub-woofer line output:
less than 0.003%)

Input level adjustment range
0.2 – 2 V

Signal-to-noise ratio
More than 108 dB (IHF-A, WTD)

Crossover frequency
High/Mid-range crossover point
3.5 kHz, 5 kHz, 7 kHz
Front (2-way only)
HPF: 70 Hz, 100 Hz, 140 Hz
Mid/Rear
HPF: 70 Hz, 100 Hz, 140 Hz
Sub-woofer
LPF: 70 Hz, 100 Hz, 140 Hz
Sub-woofer line output
LPF: 70 Hz, 100 Hz, 140 Hz

Crossover slope
12 dB/oct (Crossover point)
6 dB/oct (Front, Mid/Rear HPF)
18 dB/oct (Sub-woofer LPF)

Power requirements
12 V DC car battery (negative
ground)

Source voltage
10.5 – 16 V

Current drain
27 A (at rated output)
30 A (at 10% THD)

Dimensions
Approx. 296 × 50 × 209 mm
(w/h/d) (11 $\frac{3}{4}$ × 2 × 8 $\frac{1}{4}$ in.)

Mass
Approx. 2.8 kg
(6 lb. 3 oz.)

Accessories supplied
Mounting screws (4)
Protection plate (1)
Speaker leads (2 sets)

Design and specifications subject to change without
notice.

STEREO POWER AMPLIFIER
SONY®

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
SECTION 1. GENERAL		
	Features	3
	Precautions	3
	Location and Function of Controls	3
	Installation	4
	Connections	4
	Examples of System Connection	4
	Output Adjustments	6
	Crossover Frequencies	6
SECTION 2. DIAGRAMS		
	2-1. Block Diagram	7
	2-2. Printed Wiring Board	10
	2-3. Schematic Diagram	13
SECTION 3. EXPLODED VIEWS16		
SECTION 4. ELECTRICAL PARTS LIST17		

SECTION 1 GENERAL

This section is extracted from instruction manual.

Features

- The built-in 2/3 way switchable crossover network enables you to enjoy the multi-way speaker system with easy installation.
- Powerful output of 65 watts x 6 max. (50 watts x 4 + 200 watts max. at 4 ohms with 5 channel connection).
- Pulse power supply* for stable and regulated output power.

Pulse power supply

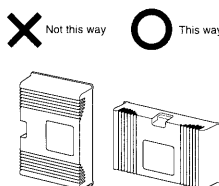
This unit has a built-in converter which converts the power supply from the DC 12 volt car battery into high speed pulse signals by the use of the semiconductor switch. These signals will be stepped up by the built-in pulse transformer and separated into both positive and negative power separated into both positive and negative power supplies before converted into the direct current again. This is to regulate the otherwise variable voltage of the car battery. This light weight power supply system provides the highly efficient power supply with low impedance output.

Precautions

- This unit is designed for negative ground 12 V DC operation only.
- Use speakers with impedance of 2 to 8 ohms.
- Avoid installing the unit where it would be subjected to:
 - high temperatures caused by direct sunlight or hot air from the heater.
 - rain or moisture.
 - dust or dirt.
- Be sure to select the setting for either the 2-way or 3-way system before installing the unit.
- When installing the unit vertically, make sure that the fins of the heat sink are vertical to the floor.

- When installing the unit horizontally, make sure that the fins are not covered by the floor carpet etc..
- If the unit is installed too close to a car radio, it may cause interference in radio reception. In such a case, place the unit away from the radio.
- If your car is parked in direct sunlight and there is a considerable rise in temperature inside the car, allow the unit to cool off before operating.
- The unit has a built-in protection circuit* to protect the transistors and speakers if the amplifier malfunctions. However, do not attempt to test this protection circuit by covering the heat sink or overloading the connections.
- For safety reasons, keep the volume of the car audio moderate so that you can still hear the sound outside your car.

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



3

4

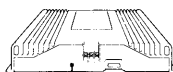
Location and Function of Controls

Protection circuit

This unit has a built-in protection circuit which operates in the following cases when:

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

When the protection circuit is activated, 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 and take out the cassette tape or CD and determine the cause of the malfunction. If the unit has overheated, wait until the unit cools off.



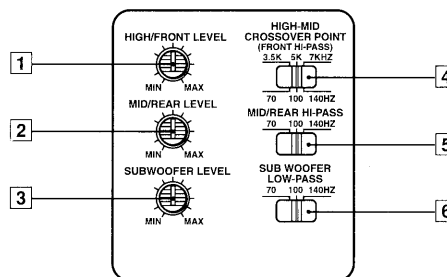
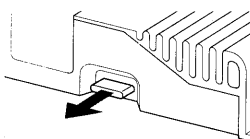
POWER/PROTECTOR indicator

Fuse Replacement

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

Warning

Use the specified amperage fuse. Use of a higher amperage fuse may cause serious damage to the unit.



1 HIGH/FRONT LEVEL (output) control

For adjusting the output level of the high frequency audio signal or that of the front speakers.

2 MID/REAR LEVEL (output) control

For adjusting the output level of the mid frequency audio signal or that of the rear speakers.

3 SUBWOOFER LEVEL (output) control

For adjusting the output level of the low frequency audio signal.

4 HIGH-MID CROSSOVER POINT (FRONT HI-PASS) (filter selector) switch

3-way system: for selecting the crossover frequency point (3.5K, 5K or 7KHZ) for the high-mid-range audio signal. (The frequencies below the selected point for the high-range audio signal will be cut off. At the same time the frequencies above that point for the mid-range audio signal will be cut off as well.)

2-way system: for selecting the crossover frequency point (70, 100 or 140HZ) for the front channels. (The frequencies below the selected point will be cut off.)

5 MID/REAR HI-PASS (filter selector) switch

For selecting the crossover frequency point (70, 100 or 140HZ) for the mid-range audio signal or that of the rear speaker outputs. (The frequencies below the selected point will be cut off.)

6 SUB WOOFER LOW-PASS (filter selector) switch

For selecting the crossover frequency point (70, 100 or 140HZ) for the low-range audio signal. (The frequencies above the selected point will be cut off.)

5

6

Installation

Before Installation

- Be sure to select the setting of the 3 WAY/2 WAY selector on the bottom of the unit before installing the unit. (See page 10 for details.) If the setting is not correct, the sound may be distorted and the speakers may be damaged.
- Install the unit inside the trunk room.
- Choose the mounting location carefully so that the unit will not interfere with the normal driving functions of the driver and that the unit will not be exposed to direct sunlight or hot air from the heater.

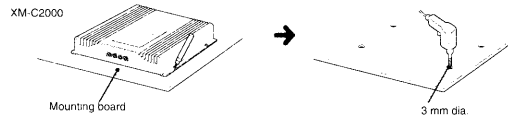
- The board to which this unit is to be mounted has to be more than 15 millimeters (mm) (19/32 in.) thick and sound.
- Do not install the unit under the floor carpet, where the heat dissipation from the unit will be considerably impaired.

If you find it difficult to install the unit for yourself, consult the dealer.

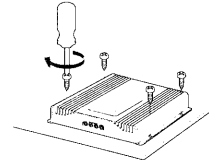
Trunk Installation

Prepare a sound mounting board with enough thickness (more than 15 mm) to install the unit securely.

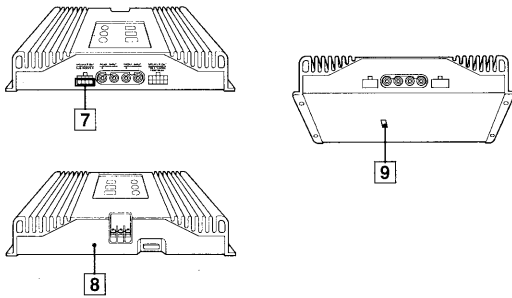
- 1 Place the unit directly onto the mounting board and mark the four bolt holes, then drill the holes (3 mm (1/8 in.) dia.).



- 2 Secure the unit to the board with the supplied screws.



- 3 Install the unit in the trunk room.



7 Low-range output terminals

An extra amplifier for sub-woofers can be connected to these terminals. (The output level and cut off frequency point are adjustable with the SUBWOOFER LEVEL control and SUB WOOFER LOW-PASS switch.)

8 POWER/PROTECTOR indicator

Lights up in green while the unit is in operation. The color will change from green to red and the unit will shut down when the protection circuit is activated due to a malfunction of the unit.

9 3 WAY/2 WAY selector

For selecting the setting of the 2-way or 3-way system.

Note

Be sure to select the appropriate setting before installing the unit.

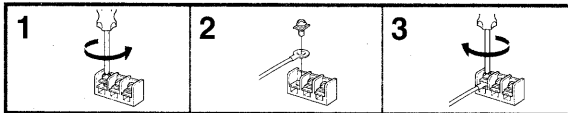
Connections

Caution

- Before making any connections, disconnect the ground terminal of the car battery to prevent short circuits.
- Connect the red 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 part of the car. A loose connection may cause a malfunction of the unit.
- If you place the power supply lead too close to the input or output cords, it may cause some interference noise. Try to place them away from each other.
- Due to the built-in high-power amplifier, make sure that the speakers have adequate power handling capacities. If you use the speakers with lesser capacities, such as the ones supplied to a car, they can be damaged.
- Do not connect any active speakers (with built-in amplifiers) to the speaker leads of the unit. Doing so may damage the active speakers. Therefore, be sure to connect the passive speakers to these leads.

- Do not connect the \ominus terminal of the speaker system with the car chassis, and never connect the \ominus terminal of the right speaker with that of the left speaker.
- If your car is equipped with a computer navigation system etc., do not disconnect the ground wire from the car battery. If you do so, the memories of the computer may be erased. In such a case, make the connections without removing the ground wire but be sure to connect the + 12 volt input lead only after all the other connections are completed to avoid short circuits.
- This unit handles a current over 30 amperes at maximum power output. When connecting GND and + 12V terminals of the unit, be sure to use a lead whose sectional area is equal to or greater than 5 mm², and whose thickness is equal to or greater than 10-gauge (AWG-10), so as to take advantage of the performance of the amplifier.

Make the terminal connections as illustrated below.

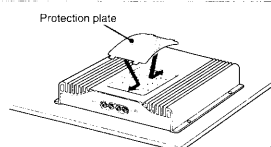


When you tighten the screw, be careful not to apply too much torque* as doing so may damage the screw.

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

Installation of the Protection Plate

When all the connections are made and all the settings of the controls and switches are completed, attach the supplied protection plate to prevent the settings of switches and controls to be accidentally changed.

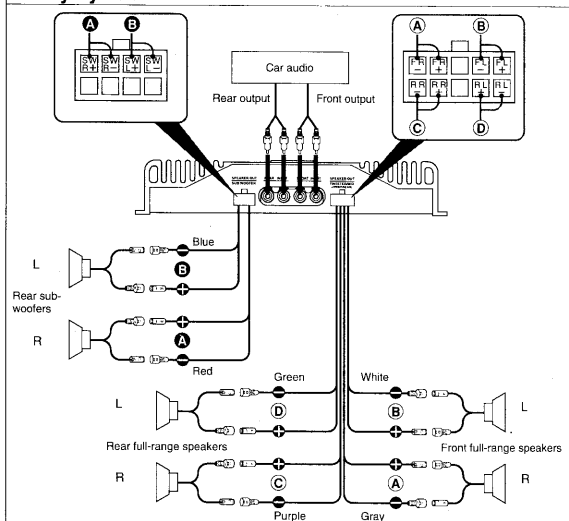


7

8

Examples of System Connection

2-Way System



Notes

- Set the 3 WAY/2 WAY selector to the 2 WAY position.
- The balance of the outputs between the front and rear speakers can be adjusted by the fader control of the car audio.

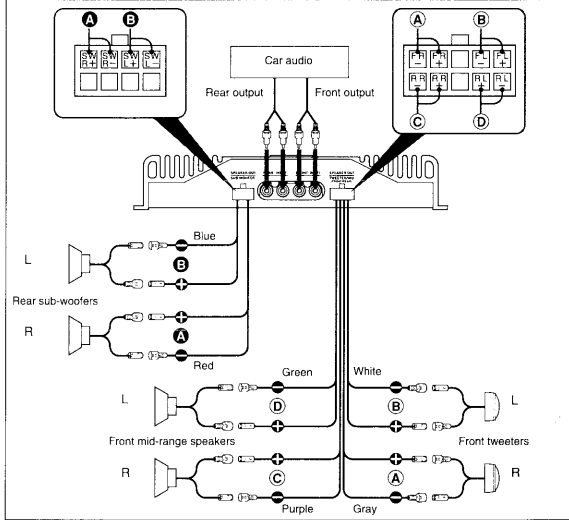
- The output level of the sub-woofers will not be affected by the fader control.
- If your car audio has only 2 channels available for the audio outputs, connect them to the FRONT INPUT jacks. In this case, the output signals for the rear speakers will be the same as those of the front speakers; therefore adjust the fader control to the center position.

9

10

Examples of System Connections

3-Way System



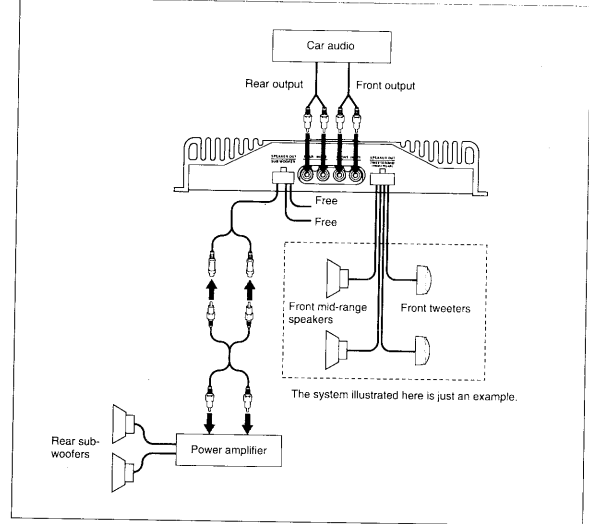
Notes

- Set the 3 WAY/2 WAY selector to the 3 WAY position.
- In this setting the fader control of the car audio will function in a normal manner; therefore you can adjust the volume of the rear sub-woofers.
- If your car audio has only 2 channels available for the audio outputs, connect them to the FRONT INPUT jacks. In this case, the output signals for the rear sub-woofer will be same as the constituent of the low-range frequencies going into the front speakers; therefore adjust the fader control to the center position.

CAUTION

Do not move the setting of the 3 WAY/2 WAY selector after all the connections have been completed as doing so may damage the tweeters.

Additional Power Amplifier for Rear Sub-Woofers

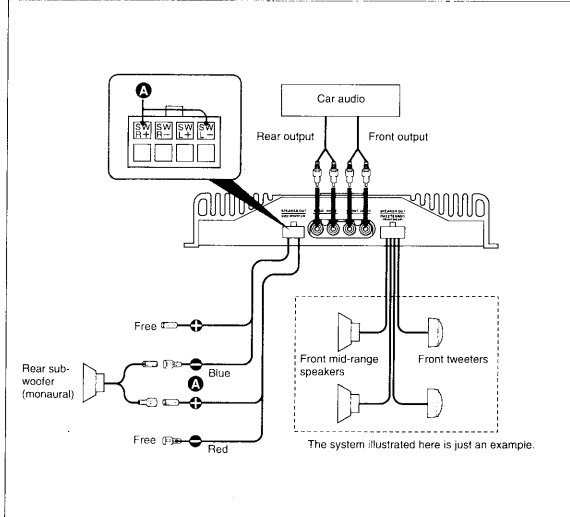


11

12

Examples of System Connection

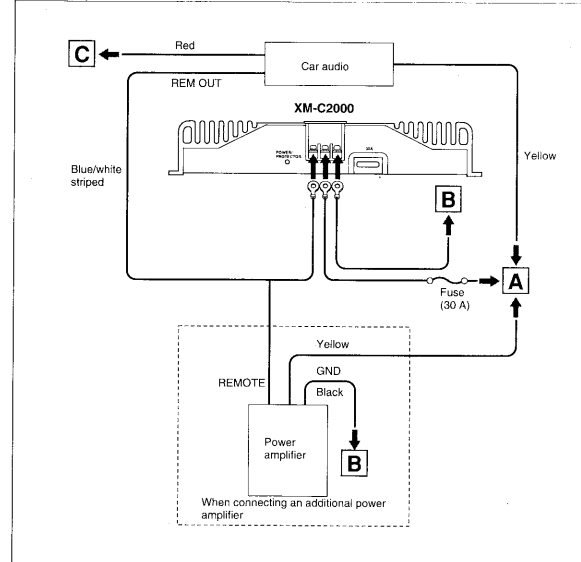
Using a Sub-Woofers as a Monaural Speaker



Note

If you wish to use a sub-woofer as a monaural speaker, connect the speaker as illustrated above. The output signals of the sub-woofer will be the combination of both right and left output signals.

Connections of the Leads



- A To the +12 volt terminal of the car battery
- B To the metal part of the car
- C To the +12 volt power terminal which is energized in the accessory position of the ignition key

13

14

Output Adjustments

When you are installing either a 2-way or 3-way system, adjust the level of the mid-range sound first, then the high and finally the low. Make sure that the low sound is turned down completely while adjusting the high and the mid-range sound. If the low sound is present, it will be difficult to balance the overall sound. After these adjustments are completed, turn up the low sound and adjust the whole balance.

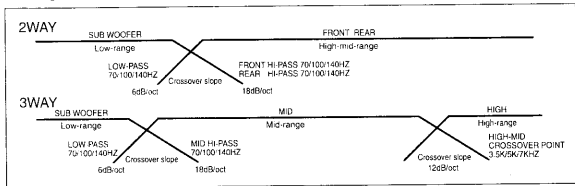
2-Way system

- 1 Turn down the volume of the car audio completely. Then adjust the crossover frequencies to fit the connected speakers' frequency response ranges. See page 17 about the crossover frequencies.
- 2 Set the HIGH/FRONT LEVEL and the MID/REAR LEVEL controls to the center positions and the SUBWOOFER LEVEL control to the MIN position.
- 3 Play back some music and turn up the volume to a moderate level with the car audio.
- 4 Adjust the HIGH/FRONT LEVEL and the MID/REAR LEVEL controls to the optimum level. You can adjust the fader control of the car audio to get the same effect.
- 5 While checking the congeniality of the audio relationship between the speakers to be smooth and natural by playing back some music with a lot of bass sound, adjust the SUBWOOFER LEVEL control to balance the sound.
- 6 If the congeniality of sound is not smooth, readjust the LEVEL controls. If such measures do not improve the situation, turn down the volume control of the car audio completely and rearrange the settings of the filter selector switches and then readjust the LEVEL controls.
- 7 Repeat steps 1 to 6 until the optimum sound is achieved.

Crossover Frequencies

Set the crossover frequencies by changing the setting of each filter selector switch to suit the frequency response of the connected speakers. See the diagram below.

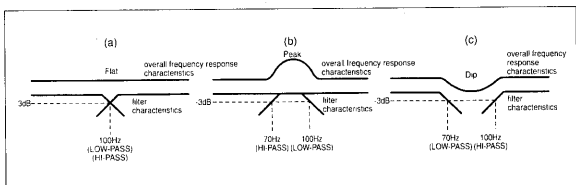
Setting of crossover frequencies



Congeniality of Audio Relationship — Setting of Filter Selector Switches

If the SUB WOOFER LOW-PASS and MID/REAR HI-PASS filter selector switches are set at the same crossover frequency points, both audio compasses will drop by 3 dB when they meet and the overall frequency response will be flat. See diagram (a). If the filter selector switches are set to different frequencies, the overall frequency response characteristics may have uneven sections. See diagram (b) and (c).

However, in some cases depending on the different types of car and the location of the speakers, these settings may improve the overall sound.



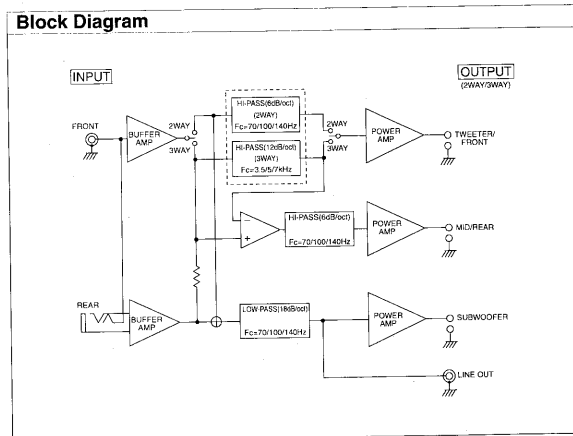
Output Adjustments

3-Way system

- 1 Turn down the volume of the car audio completely. Then adjust the crossover frequencies to fit the connected speakers' frequency response ranges. See page 17 about the crossover frequencies.
- 2 Set the HIGH/FRONT LEVEL and the MID/REAR LEVEL controls to the center and the SUBWOOFER LEVEL control to the MIN position.
- 3 Play back some music and turn up the volume to a moderate level with the car audio.
- 4 Adjust the HIGH/FRONT LEVEL and the MID/REAR LEVEL controls to the optimum level.
- 5 While checking the congeniality of the audio relationship between the speakers to be smooth and natural by playing back some music with a lot of bass sound, adjust the SUBWOOFER LEVEL control to balance the sound.

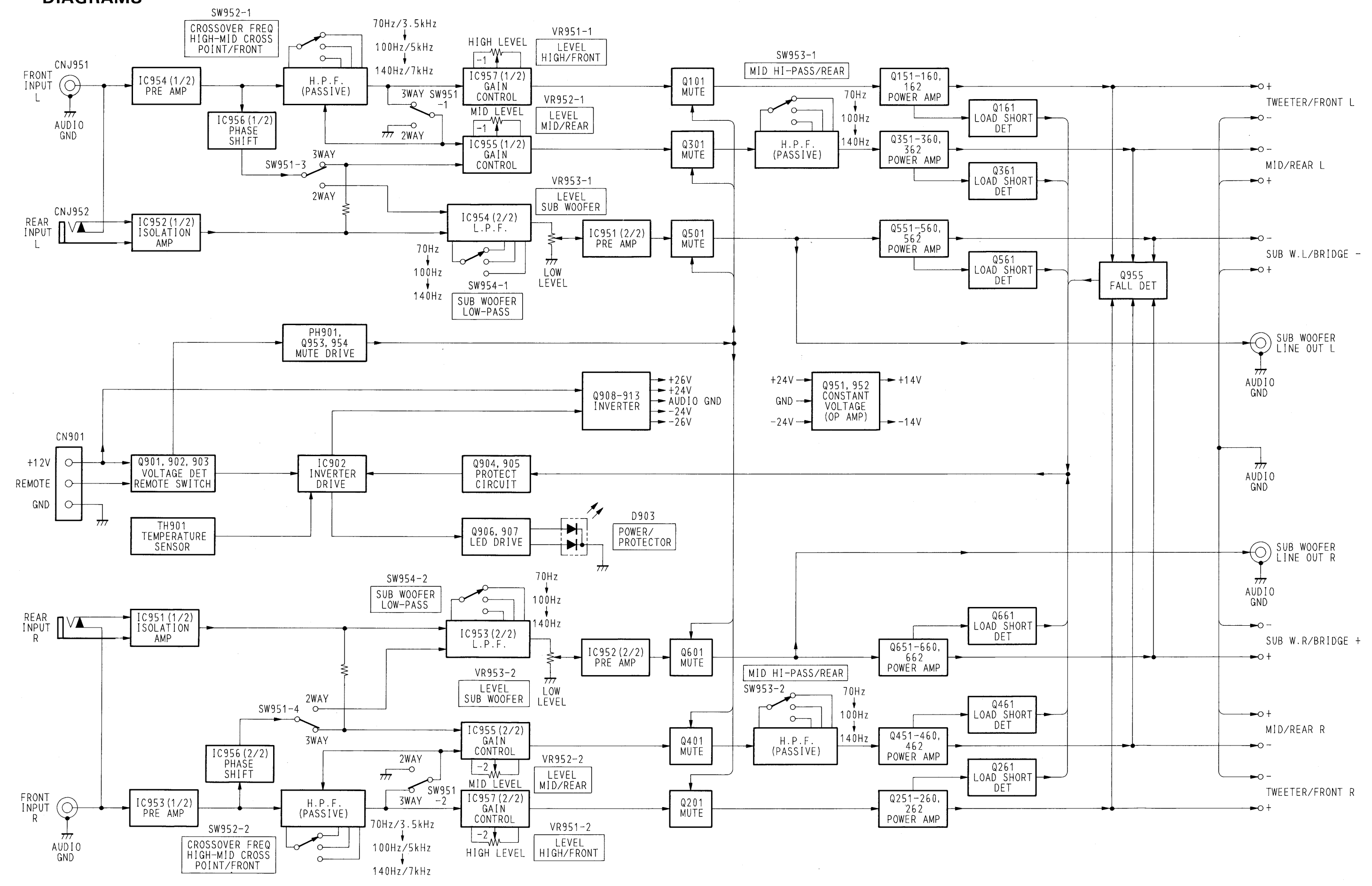
- 6 If the congeniality of sound is not smooth, readjust the LEVEL controls. If such measures do not improve the situation, turn down the volume control of the car audio completely and rearrange the settings of the filter selector switches and then readjust the LEVEL controls.
- 7 Repeat steps 1 to 6 until the optimum sound is achieved.

Block Diagram

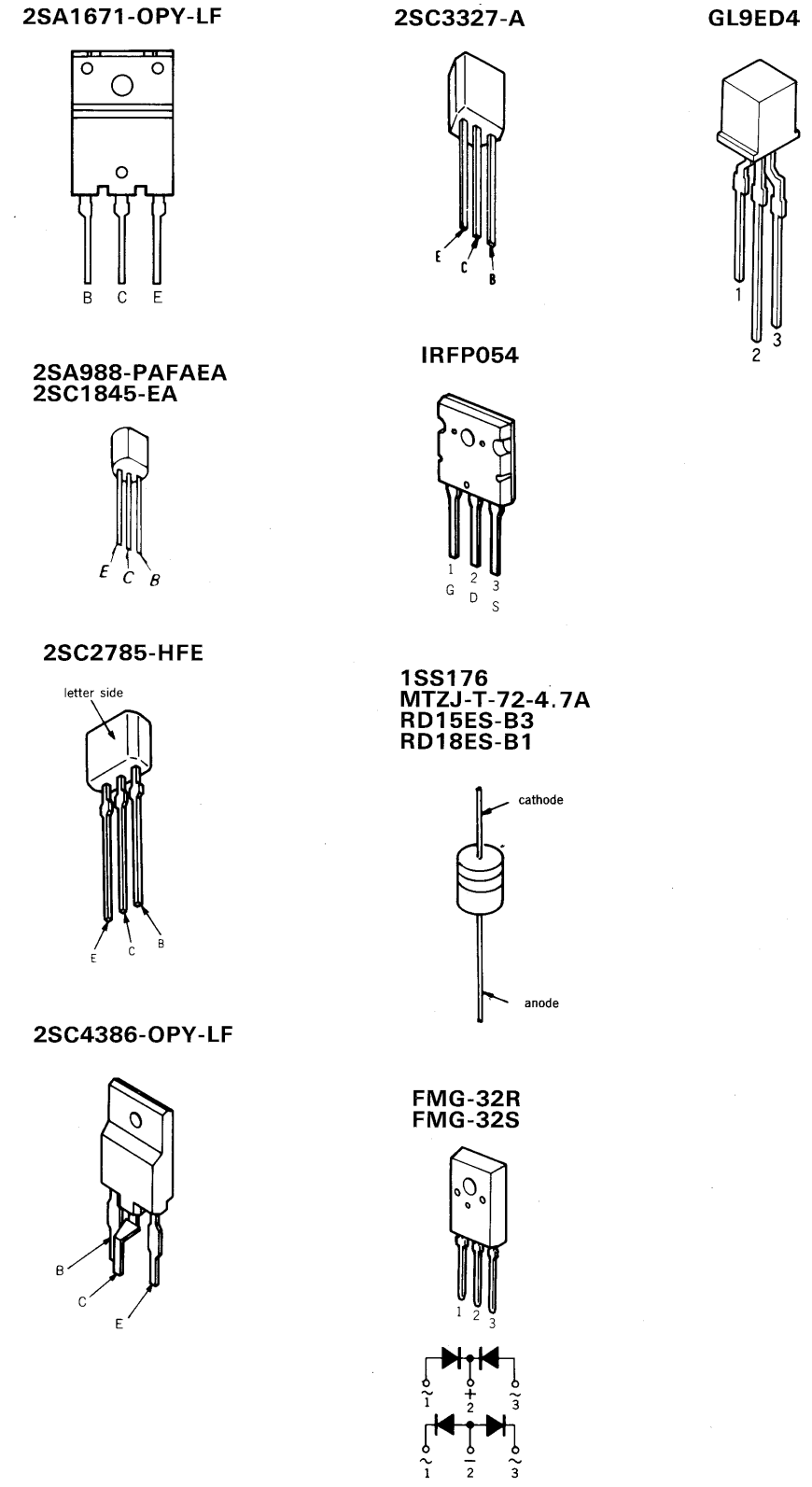


SECTION 2
DIAGRAMS

2-1. BLOCK DIAGRAM



● Semiconductor Lead Layouts

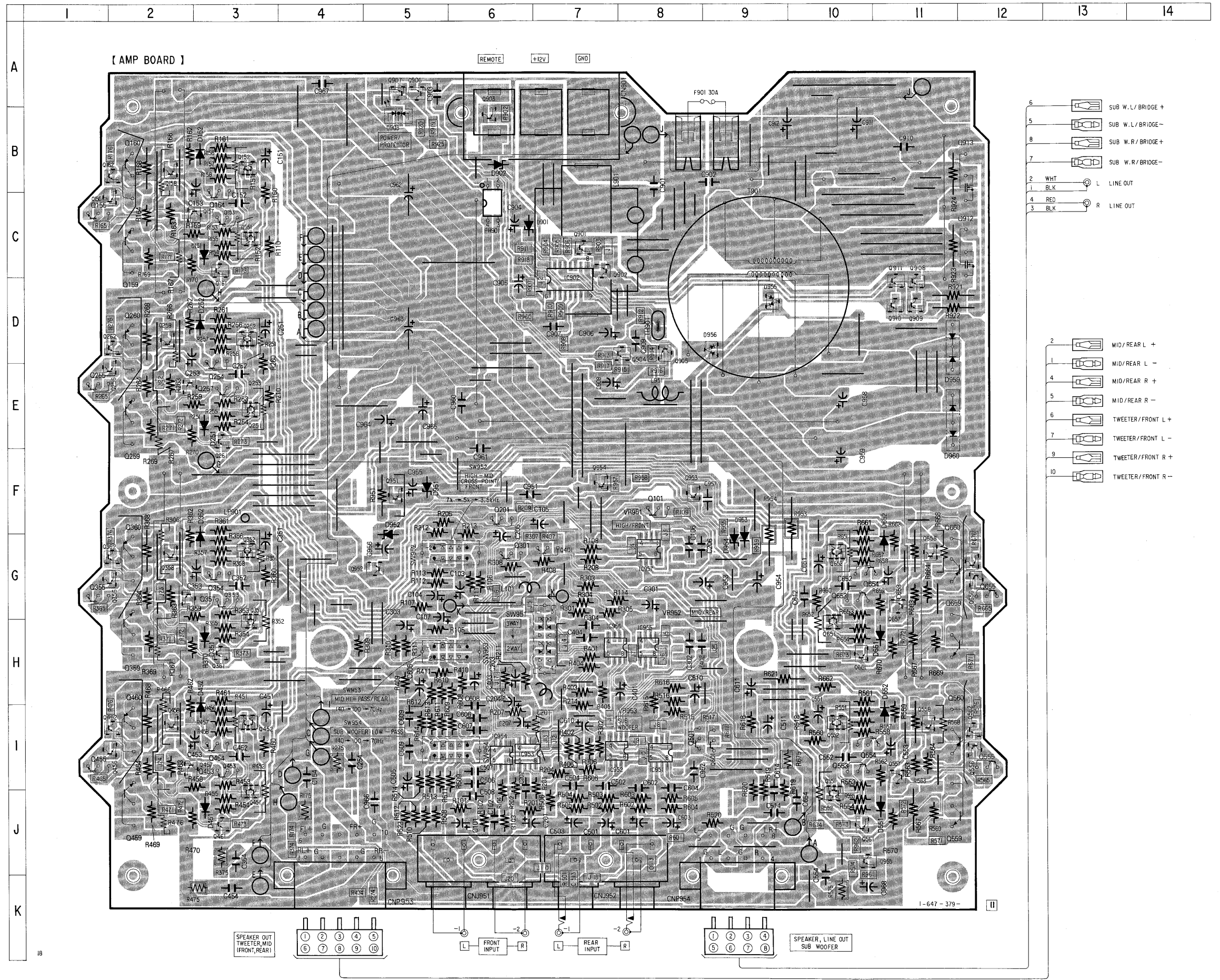


● Semiconductor Location

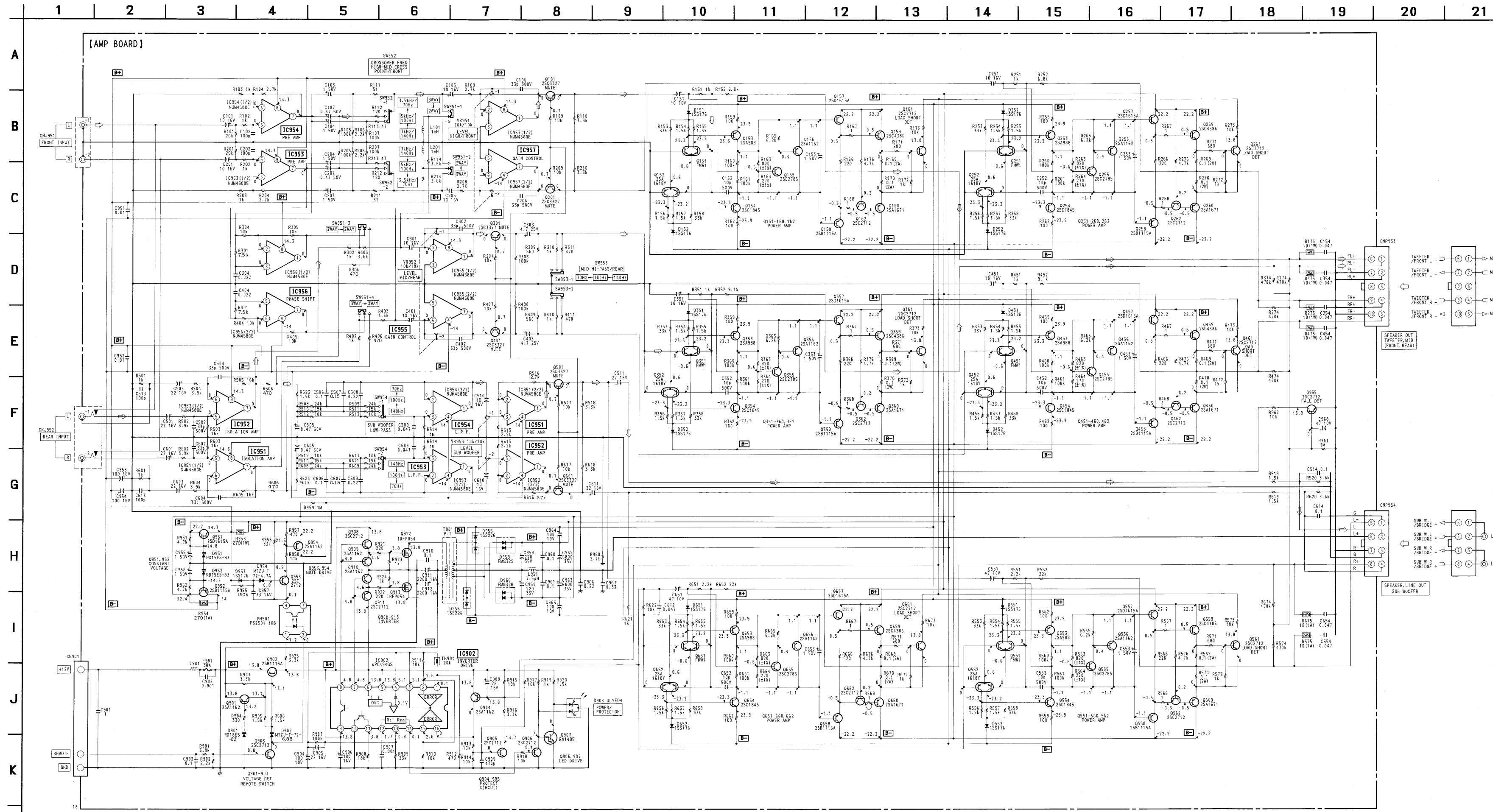
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D151	C-3	0161	C-3	0552	I-10
D152	B-2	0162	B-2	0553	I-10
D251	E-3	0201	F-6	0554	I-10
D252	D-3	0251	E-3	0555	I-12
D351	H-3	0252	D-3	0556	I-12
D352	G-2	0253	E-3	0557	I-11
D451	J-2	0254	D-3	0558	I-11
D452	I-2	0255	E-1	0559	J-12
D551	J-11	0256	E-1	0560	I-11
D552	I-11	0257	E-2	0561	J-10
D651	H-11	0258	D-2	0562	I-12
D652	G-11	0259	E-2	0601	I-9
D901	C-6	0260	D-2	0651	H-10
D902	B-6	0261	E-3	0652	G-10
D903	B-5	0262	D-1	0653	G-10
D951	F-5	0301	G-6	0654	G-11
D952	G-5	0351	H-3	0655	G-12
D953	F-9	0352	G-3	0656	G-12
D954	F-9	0353	G-3	0657	G-11
D955	D-9	0354	G-3	0658	G-11
D956	D-9	0355	G-1	0659	H-11
D959	D-11	0356	G-1	0660	G-11
D960	E-11	0357	G-2	0661	H-10
		0358	G-2	0662	G-12
IC902	D-7	0359	H-2	0901	C-7
IC952	C-7	0360	G-2	0902	C-7
IC953	I-6	0361	H-3	0903	A-6
IC954	I-6	0362	G-1	0904	D-8
IC955	F-8	0401	G-7	0905	D-8
IC956	F-7	0451	J-3	0906	A-5
IC957	G-8	0452	I-3	0907	A-5
		0453	I-3	0908	D-11
		0454	I-3	0909	D-11
0101	F-8	0455	I-1	0910	D-11
0151	C-3	0456	I-1	0911	D-11
0152	B-3	0457	I-2	0912	C-12
0153	C-3	0457	I-2	0912	C-12
0154	B-3	0458	I-2	0913	B-12
0155	C-1	0459	J-2	0951	F-5
0156	C-2	0460	I-2	0952	G-5
0157	C-2	0461	J-3	0953	F-8
0158	B-2	0462	I-1	0954	F-7
0159	C-2	0501	I-9	0955	J-10
0160	B-2	0551	H-10		

Note:
 ● : parts extracted from the component side.
 ○ : parts extracted from the conductor side.
 ■ : Pattern on the side which is seen.

2-2. PRINTED WIRING BOARD



2-3. SCHEMATIC DIAGRAM



- Note:**
- All capacitors are in μF unless otherwise noted. $\text{pF} = \mu\text{F}$ 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
 - % : indicates tolerance.
 - \square : nonflammable resistor.
 - $\text{B}+$: B+ Line
 - $\text{B}-$: B- Line
 - Power voltage is dc 14.4V and fed with regulated dc power supply from +12V and REMOTE terminals.
 - Voltage is dc with respect to ground under no-signal (detuned) conditions.
 - Voltages are taken with a VOM (Input Impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
 - Signal path.
 - \curvearrowright : L-CH

SECTION 3 EXPLODED VIEWS

NOTE:

● -XX, -X mean standardized parts, so they may have differences from the original one.

● Color Indication of Appearance Parts

Example:

KNOB, BALANCE (WHITE)... (RED)

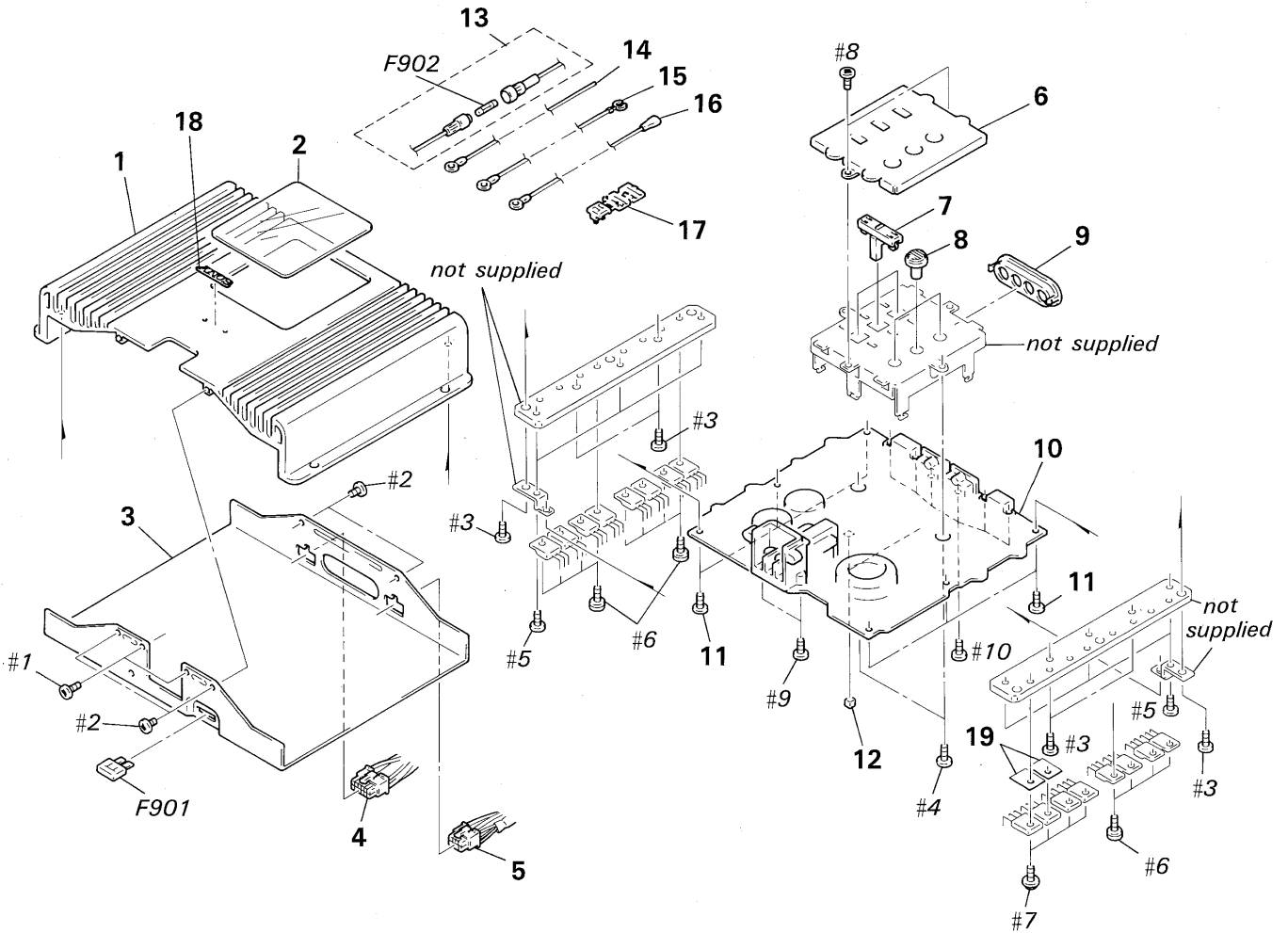
↑
↑
 Parts color Cabinet's color

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

● The mechanical parts with no reference number in the exploded views are not supplied.

● Hardware (#mark) list is given in the last of this parts list.

● Abbreviations
G: German



Ref. No.	Part No.	Description	Remark
* 1	3-385-629-01	HEAT SINK	
* 2	3-385-634-01	PLATE, TRANSPARENT	
* 3	3-385-631-01	PLATE, BOTTOM (US, Canadian)	
* 3	3-385-631-11	PLATE, BOTTOM (AEP, UK, G, E)	
4	1-751-184-11	CORD (WITH, CONNECTOR) (10P)	
5	1-751-183-11	CORD (WITH, CONNECTOR) (8P)	
* 6	3-385-632-01	PANEL (CENTER)	
7	3-385-636-01	KNOB (SW)	
8	3-385-635-01	KNOB (VR)	
* 9	3-387-152-01	COVER	
* 10	A-3295-474-A	AMP BOARD, COMPLETE	

Ref. No.	Part No.	Description	Remark
11	4-909-982-01	SCREW, TAPPING	
12	9-911-841-XX	CUSHION (B)	
13	1-557-656-11	CORD (WITH TERMINAL) (AEP, UK, E)	
* 14	1-575-055-11	CORD (WITH TERMINAL) (BUCK UP) (AEP, UK, E)	
* 15	1-575-056-11	CORD (WITH TERMINAL) (G) (AEP, UK, E)	
* 16	1-575-090-11	CORD (WITH TERMINAL) (REM) (AEP, UK, E)	
17	1-562-594-11	CONNECTOR (GL-1814T) (AEP, UK, E)	
18	3-718-147-21	EMBLEM (NO. 6), SONY	
19	3-366-819-01	SHEET (C), INSULATING	
F901	1-532-947-11	FUSE (BRAD TYPE) (AUTO FUSE)	
F902	1-532-563-11	FUSE, GLASS TUBE (20A)	

SECTION 4 ELECTRICAL PARTS LIST

AMP

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

- Abbreviations
G: German

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

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark						
*	A-3295-474-A	AMP BOARD, COMPLETE *****					C401	1-124-915-11	ELECT	10uF	20%	63V				
		< CAPACITOR >					C402	1-107-202-00	MICA	10PF	5%	50V				
C101	1-124-915-11	ELECT	10uF	20%	63V		C403	1-123-369-00	ELECT	4.7uF	20%	25V				
C102	1-107-085-00	MICA	100PF	5%	50V		C404	1-130-487-00	MYLAR	0.022uF	5%	50V				
C103	1-124-791-11	ELECT	1.0uF	20%	100V		C451	1-124-915-11	ELECT	10uF	20%	16V				
C104	1-124-791-11	ELECT	1.0uF	20%	100V		C452	1-107-202-00	MICA	10PF	5%	500V				
C105	1-124-915-11	ELECT	10uF	20%	63V		C453	1-124-791-11	ELECT	1.0uF	20%	100V				
C106	1-107-202-00	MICA	10PF	5%	500V		C454	1-136-161-00	FILM	0.047uF	5%	50V				
C107	1-123-379-00	ELECT	0.47uF	20%	50V		C501	1-126-233-11	ELECT	22uF	20%	50V				
C151	1-124-915-11	ELECT	10uF	20%	16V		C502	1-107-202-00	MICA	10PF	5%	500V				
C152	1-107-202-00	MICA	10PF	5%	500V		C503	1-126-233-11	ELECT	22uF	20%	50V				
C153	1-124-791-11	ELECT	1.0uF	20%	100V		C504	1-107-202-00	MICA	10PF	5%	500V				
C154	1-136-161-00	FILM	0.047uF	5%	50V		C505	1-123-379-00	ELECT	0.47uF	20%	50V				
C201	1-124-915-11	ELECT	10uF	20%	63V		C506	1-136-165-00	FILM	0.1uF	5%	50V				
C202	1-107-085-00	MICA	100PF	5%	50V		C507	1-136-167-00	FILM	0.15uF	5%	50V				
C203	1-124-791-11	ELECT	1.0uF	20%	100V		C508	1-136-169-00	FILM	0.22uF	5%	50V				
C204	1-124-791-11	ELECT	1.0uF	20%	100V		C509	1-136-161-00	FILM	0.047uF	5%	50V				
C205	1-124-915-11	ELECT	10uF	20%	63V		C510	1-124-915-11	ELECT	10uF	20%	63V				
C206	1-107-202-00	MICA	10PF	5%	500V		C511	1-126-233-11	ELECT	22uF	20%	50V				
C207	1-123-379-00	ELECT	0.47uF	20%	50V		C513	1-163-117-00	CERAMIC CHIP	100PF	5%	50V				
C251	1-124-915-11	ELECT	10uF	20%	16V		C514	1-136-165-00	FILM	0.1uF	5%	50V				
C252	1-107-202-00	MICA	10PF	5%	500V		C551	1-124-915-11	ELECT	10uF	20%	16V				
C253	1-124-791-11	ELECT	1.0uF	20%	100V		C552	1-107-202-00	MICA	10PF	5%	500V				
C254	1-136-161-00	FILM	0.047uF	5%	50V		C553	1-124-791-11	ELECT	1.0uF	20%	100V				
C301	1-124-915-11	ELECT	10uF	20%	63V		C554	1-136-161-00	FILM	0.047uF	5%	50V				
C302	1-107-202-00	MICA	10PF	5%	500V		C601	1-126-233-11	ELECT	22uF	20%	50V				
C303	1-123-369-00	ELECT	4.7uF	20%	25V		C602	1-107-202-00	MICA	10PF	5%	500V				
C304	1-130-487-00	MYLAR	0.022uF	5%	50V		C603	1-126-233-11	ELECT	22uF	20%	50V				
C351	1-124-915-11	ELECT	10uF	20%	16V		C604	1-107-202-00	MICA	10PF	5%	500V				
C352	1-107-202-00	MICA	10PF	5%	500V		C605	1-123-379-00	ELECT	0.47uF	20%	50V				
C353	1-124-791-11	ELECT	1.0uF	20%	100V		C606	1-136-165-00	FILM	0.1uF	5%	50V				
C354	1-136-161-00	FILM	0.047uF	5%	50V		C607	1-136-167-00	FILM	0.15uF	5%	50V				
							C608	1-136-169-00	FILM	0.22uF	5%	50V				
							C609	1-136-161-00	FILM	0.047uF	5%	50V				

AMP

Ref. No.	Part No.	Description		Remark	
C610	1-124-915-11	ELECT	10uF	20%	63V
C611	1-126-233-11	ELECT	22uF	20%	50V
C612	1-136-161-00	FILM	0.047uF	5%	50V
C613	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C614	1-136-165-00	FILM	0.1uF	5%	50V
C651	1-124-915-11	ELECT	10uF	20%	16V
C652	1-107-202-00	MICA	10PF	5%	500V
C653	1-124-791-11	ELECT	1.0uF	20%	100V
C654	1-136-161-00	FILM	0.047uF	5%	50V
C901	1-136-177-00	FILM	1uF	5%	50V
C902	1-130-471-00	MYLAR	0.001uF	5%	50V
C903	1-136-366-00	FILM	0.1uF	5%	50V
C904	1-124-443-00	ELECT	100uF	20%	10V
C905	1-124-234-00	ELECT	22uF	20%	16V
C906	1-126-101-11	ELECT	100uF	20%	16V
C907	1-130-471-00	MYLAR	0.001uF	5%	50V
C908	1-124-234-00	ELECT	22uF	20%	16V
C909	1-136-367-11	FILM	470PF	5%	50V
C910	1-136-165-00	FILM	0.1uF	5%	50V
C911	1-128-531-11	ELECT	2200uF	20%	16V
C912	1-128-531-11	ELECT	2200uF	20%	16V
C951	1-130-483-00	MYLAR	0.01uF	5%	50V
C952	1-130-483-00	MYLAR	0.01uF	5%	50V
C953	1-124-122-11	ELECT	100uF	20%	50V
C954	1-124-122-11	ELECT	100uF	20%	50V
C955	1-124-791-11	ELECT	1.0uF	20%	100V
C956	1-124-791-11	ELECT	1.0uF	20%	100V
C957	1-124-242-00	ELECT	33uF	20%	25V
C958	1-104-829-11	ELECT	220uF	20%	35V
C959	1-104-829-11	ELECT	220uF	20%	35V
C960	1-136-165-00	FILM	0.1uF	5%	50V
C961	1-136-165-00	FILM	0.1uF	5%	50V
C962	1-104-828-11	ELECT	6800uF	20%	35V
C963	1-104-828-11	ELECT	6800uF	20%	35V
C964	1-126-101-11	ELECT	100uF	20%	16V
C965	1-126-101-11	ELECT	100uF	20%	16V
C966	1-136-169-00	FILM	0.22uF	5%	50V
C967	1-136-171-00	FILM	0.33uF	5%	50V
C968	1-124-126-00	ELECT	47uF	20%	10V

< CONNECTOR >

* CN901 1-537-480-11 TERMINAL BOARD (3P)

< JACK >

CNJ951 1-580-281-21 JACK, PIN 2P (FRONT INPUT)

CNJ952 1-580-281-21 JACK, PIN 2P (REAR INPUT)

Ref. No.	Part No.	Description	Remark	
		< CONNECTOR >		
* CNP953	1-691-786-11	PIN, CONNECTOR(PC BOARD)10P(SPEAKER OUT)		
CNP954	1-580-283-11	PIN, CONNECTOR(PC BOARD)8P (SPEAKER, LINE OUT)		
		< DIODE >		
D151	8-719-802-30	DIODE 1SS176		
D152	8-719-802-30	DIODE 1SS176		
D251	8-719-802-30	DIODE 1SS176		
D252	8-719-802-30	DIODE 1SS176		
D351	8-719-802-30	DIODE 1SS176		
D352	8-719-802-30	DIODE 1SS176		
D451	8-719-802-30	DIODE 1SS176		
D452	8-719-802-30	DIODE 1SS176		
D551	8-719-802-30	DIODE 1SS176		
D552	8-719-802-30	DIODE 1SS176		
D651	8-719-802-30	DIODE 1SS176		
D652	8-719-802-30	DIODE 1SS176		
D901	8-719-110-48	DIODE RD18ES-B1		
D902	8-719-947-29	DIODE MTZJ-T-72-6.8B		
D903	8-719-989-31	LED GL9ED4 (POWER/PROTECTOR)		
D951	8-719-110-42	DIODE RD15ES-B3		
D952	8-719-110-42	DIODE RD15ES-B3		
D953	8-719-802-30	DIODE 1SS176		
D954	8-719-947-12	DIODE MTZJ-T-72-4.7A		
D955	8-719-800-76	DIODE 1SS226		
D956	8-719-800-76	DIODE 1SS226		
D959	8-719-023-35	DIODE FMG-32S		
D960	8-719-023-34	DIODE FMG-32R		
		< IC >		
IC902	8-759-144-88	IC uPC494GS		
IC951	8-759-711-82	IC NJM4580E		
IC952	8-759-711-82	IC NJM4580E		
IC953	8-759-711-82	IC NJM4580E		
IC954	8-759-711-82	IC NJM4580E		
IC955	8-759-711-82	IC NJM4580E		
IC956	8-759-711-82	IC NJM4580E		
IC957	8-759-711-82	IC NJM4580E		

< JUMPER RESISTOR >

JR001	1-216-296-00	METAL CHIP	0	5%	1/8W
JR002	1-216-295-00	METAL CHIP	0	5%	1/10W
JR003	1-216-296-00	METAL CHIP	0	5%	1/8W
JR004	1-216-295-00	METAL CHIP	0	5%	1/10W
JR005	1-216-296-00	METAL CHIP	0	5%	1/8W
JR006	1-216-295-00	METAL CHIP	0	5%	1/10W
JR007	1-216-295-00	METAL CHIP	0	5%	1/10W

Ref. No.	Part No.	Description	Remark
JR008	1-216-296-00	METAL CHIP	0 5% 1/8W
JR009	1-216-295-00	METAL CHIP	0 5% 1/10W
JR010	1-216-295-00	METAL CHIP	0 5% 1/10W
JR011	1-216-295-00	METAL CHIP	0 5% 1/10W
JR012	1-216-296-00	METAL CHIP	0 5% 1/8W
JR013	1-216-296-00	METAL CHIP	0 5% 1/8W
JR014	1-216-295-00	METAL CHIP	0 5% 1/10W
JR015	1-216-295-00	METAL CHIP	0 5% 1/10W
JR016	1-216-296-00	METAL CHIP	0 5% 1/8W
JR017	1-216-295-00	METAL CHIP	0 5% 1/10W
JR018	1-216-296-00	METAL CHIP	0 5% 1/8W
JR019	1-216-296-00	METAL CHIP	0 5% 1/8W
JR020	1-216-296-00	METAL CHIP	0 5% 1/8W
JR021	1-216-295-00	METAL CHIP	0 5% 1/10W
JR022	1-216-295-00	METAL CHIP	0 5% 1/10W
JR023	1-216-295-00	METAL CHIP	0 5% 1/10W
JR024	1-216-295-00	METAL CHIP	0 5% 1/10W
< COIL >			
L101	9-910-999-33	COIL, CHOKE	1mH
L201	9-910-999-33	COIL, CHOKE	1mH
L901	1-406-692-11	COIL, CHOKE	
L951	1-424-112-11	COIL, CHOKE	7.5uH
< PHOTO INTERRUPTER >			
PH901	8-719-156-72	PHOTO INTERRUPTER	PS2501-1KB
< TRANSISTOR >			
Q101	8-729-203-48	TRANSISTOR	2SC3327-A
Q151	8-729-903-10	TRANSISTOR	FMW1
Q152	8-729-232-66	TRANSISTOR	2SA1618Y
Q153	8-729-140-82	TRANSISTOR	2SA988-PAFAEA
Q154	8-729-184-53	TRANSISTOR	2SC1845-EA
Q155	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q156	8-729-216-22	TRANSISTOR	2SA1162-G
Q157	8-729-106-68	TRANSISTOR	2SD1615A-GP
Q158	8-729-106-60	TRANSISTOR	2SB1115A-YQ
Q159	8-729-321-55	TRANSISTOR	2SC4386-OPY-LF
Q160	8-729-321-56	TRANSISTOR	2SA1671-OPY-LF
Q161	8-729-271-22	TRANSISTOR	2SC2712-G
Q162	8-729-271-22	TRANSISTOR	2SC2712-G
Q201	8-729-203-48	TRANSISTOR	2SC3327-A
Q251	8-729-903-10	TRANSISTOR	FMW1
Q252	8-729-232-66	TRANSISTOR	2SA1618Y
Q253	8-729-140-82	TRANSISTOR	2SA988-PAFAEA
Q254	8-729-184-53	TRANSISTOR	2SC1845-EA
Q255	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q256	8-729-216-22	TRANSISTOR	2SA1162-G

Ref. No.	Part No.	Description	Remark
Q257	8-729-106-68	TRANSISTOR	2SD1615A-GP
Q258	8-729-106-60	TRANSISTOR	2SB1115A-YQ
Q259	8-729-321-55	TRANSISTOR	2SC4386-OPY-LF
Q260	8-729-321-56	TRANSISTOR	2SA1671-OPY-LF
Q261	8-729-271-22	TRANSISTOR	2SC2712-G
Q262	8-729-271-22	TRANSISTOR	2SC2712-G
Q301	8-729-203-48	TRANSISTOR	2SC3327-A
Q351	8-729-903-10	TRANSISTOR	FMW1
Q352	8-729-232-66	TRANSISTOR	2SA1618Y
Q353	8-729-140-82	TRANSISTOR	2SA988-PAFAEA
Q354	8-729-184-53	TRANSISTOR	2SC1845-EA
Q355	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q356	8-729-216-22	TRANSISTOR	2SA1162-G
Q357	8-729-106-68	TRANSISTOR	2SD1615A-GP
Q358	8-729-106-60	TRANSISTOR	2SB1115A-YQ
Q359	8-729-321-55	TRANSISTOR	2SC4386-OPY-LF
Q360	8-729-321-56	TRANSISTOR	2SA1671-OPY-LF
Q361	8-729-271-22	TRANSISTOR	2SC2712-G
Q362	8-729-271-22	TRANSISTOR	2SC2712-G
Q401	8-729-203-48	TRANSISTOR	2SC3327-A
Q451	8-729-903-10	TRANSISTOR	FMW1
Q452	8-729-232-66	TRANSISTOR	2SA1618Y
Q453	8-729-140-82	TRANSISTOR	2SA988-PAFAEA
Q454	8-729-184-53	TRANSISTOR	2SC1845-EA
Q455	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q456	8-729-216-22	TRANSISTOR	2SA1162-G
Q457	8-729-106-68	TRANSISTOR	2SD1615A-GP
Q458	8-729-106-60	TRANSISTOR	2SB1115A-YQ
Q459	8-729-321-55	TRANSISTOR	2SC4386-OPY-LF
Q460	8-729-321-56	TRANSISTOR	2SA1671-OPY-LF
Q461	8-729-271-22	TRANSISTOR	2SC2712-G
Q462	8-729-271-22	TRANSISTOR	2SC2712-G
Q501	8-729-203-48	TRANSISTOR	2SC3327-A
Q551	8-729-903-10	TRANSISTOR	FMW1
Q552	8-729-232-66	TRANSISTOR	2SA1618Y
Q553	8-729-140-82	TRANSISTOR	2SA988-PAFAEA
Q554	8-729-184-53	TRANSISTOR	2SC1845-EA
Q555	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q556	8-729-216-22	TRANSISTOR	2SA1162-G
Q557	8-729-106-68	TRANSISTOR	2SD1615A-GP
Q558	8-729-106-60	TRANSISTOR	2SB1115A-YQ
Q559	8-729-321-55	TRANSISTOR	2SC4386-OPY-LF
Q560	8-729-321-56	TRANSISTOR	2SA1671-OPY-LF
Q561	8-729-271-22	TRANSISTOR	2SC2712-G
Q562	8-729-271-22	TRANSISTOR	2SC2712-G
Q601	8-729-203-48	TRANSISTOR	2SC3327-A
Q651	8-729-903-10	TRANSISTOR	FMW1
Q652	8-729-232-66	TRANSISTOR	2SA1618Y
Q653	8-729-140-82	TRANSISTOR	2SA988-PAFAEA



Ref. No.	Part No.	Description	Remark
Q654	8-729-184-53	TRANSISTOR 2SC1845-EA	
Q655	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q656	8-729-216-22	TRANSISTOR 2SA1162-G	
Q657	8-729-106-68	TRANSISTOR 2SD1615A-GP	
Q658	8-729-106-60	TRANSISTOR 2SB1115A-YQ	
Q659	8-729-321-55	TRANSISTOR 2SC4386-OPY-LF	
Q660	8-729-321-56	TRANSISTOR 2SA1671-OPY-LF	
Q661	8-729-271-22	TRANSISTOR 2SC2712-G	
Q662	8-729-271-22	TRANSISTOR 2SC2712-G	
Q901	8-729-216-22	TRANSISTOR 2SA1162-G	
Q902	8-729-106-60	TRANSISTOR 2SB1115A-YQ	
Q903	8-729-271-22	TRANSISTOR 2SC2712-G	
Q904	8-729-216-22	TRANSISTOR 2SA1162-G	
Q905	8-729-271-22	TRANSISTOR 2SC2712-G	
Q906	8-729-271-22	TRANSISTOR 2SC2712-G	
Q907	8-729-207-60	TRANSISTOR RN1405	
Q908	8-729-271-22	TRANSISTOR 2SC2712-G	
Q909	8-729-216-22	TRANSISTOR 2SA1162-G	
Q910	8-729-216-22	TRANSISTOR 2SA1162-G	
Q911	8-729-271-22	TRANSISTOR 2SC2712-G	
Q912	8-729-710-01	TRANSISTOR IRFP054	
Q913	8-729-710-01	TRANSISTOR IRFP054	
Q951	8-729-106-68	TRANSISTOR 2SD1615A-GP	
Q952	8-729-106-60	TRANSISTOR 2SB1115A-YQ	
Q953	8-729-271-22	TRANSISTOR 2SC2712-G	
Q954	8-729-216-22	TRANSISTOR 2SA1162-G	
Q955	8-729-271-22	TRANSISTOR 2SC2712-G	
< RESISTOR >			
R101	1-259-459-11	CARBON 20K 5%	1/6W
R102	1-259-428-11	CARBON 1K 5%	1/6W
R103	1-259-428-11	CARBON 1K 5%	1/6W
R104	1-259-438-11	CARBON 2.7K 5%	1/6W
R105	1-259-476-11	CARBON 100K 5%	1/6W
R106	1-259-436-11	CARBON 2.2K 5%	1/6W
R107	1-259-476-11	CARBON 100K 5%	1/6W
R108	1-259-438-11	CARBON 2.7K 5%	1/6W
R109	1-216-073-00	METAL CHIP 10K 5%	1/10W
R110	1-259-440-11	CARBON 3.3K 5%	1/6W
R111	1-259-397-11	CARBON 51 5%	1/6W
R112	1-259-406-11	CARBON 120 5%	1/6W
R113	1-259-396-11	CARBON 47 5%	1/6W
R114	1-259-441-11	CARBON 3.6K 5%	1/6W
R151	1-247-713-11	CARBON 1K 5%	1/4W
R152	1-247-723-11	CARBON 6.8K 5%	1/4W
R153	1-259-464-11	CARBON 33K 5%	1/6W
R154	1-259-432-11	CARBON 1.5K 5%	1/6W
R155	1-259-432-11	CARBON 1.5K 5%	1/6W

Ref. No.	Part No.	Description	Remark
R156	1-259-432-11	CARBON 1.5K 5%	1/6W
R157	1-259-432-11	CARBON 1.5K 5%	1/6W
R158	1-259-464-11	CARBON 33K 5%	1/6W
R159	1-259-404-11	CARBON 100 5%	1/6W
R160	1-259-476-11	CARBON 100K 5%	1/6W
R161	1-259-476-11	CARBON 100K 5%	1/6W
R162	1-259-404-11	CARBON 100 5%	1/6W
R163	1-214-727-00	METAL 820 1%	1/4W
R164	1-214-118-00	METAL 270 1%	1/4W
R165	1-216-068-00	METAL CHIP 6.2K 5%	1/10W
R166	1-247-704-11	CARBON 220 5%	1/4W
R167	1-249-447-11	CARBON 1 5%	1/4W
R168	1-249-447-11	CARBON 1 5%	1/4W
R169	1-217-611-00	RES, METAL PLATE 0.1	2W
R170	1-217-611-00	RES, METAL PLATE 0.1	2W
R171	1-216-045-00	METAL CHIP 680 5%	1/10W
R172	1-216-049-00	METAL CHIP 1K 5%	1/10W
R173	1-216-073-00	METAL CHIP 10K 5%	1/10W
R174	1-216-113-00	METAL CHIP 470K 5%	1/10W
R175	1-215-857-11	METAL OXIDE 10 5%	1W F
R176	1-216-214-00	METAL GLAZE 4.7K 5%	1/8W
R201	1-259-459-11	CARBON 20K 5%	1/6W
R202	1-259-428-11	CARBON 1K 5%	1/6W
R203	1-259-428-11	CARBON 1K 5%	1/6W
R204	1-259-438-11	CARBON 2.7K 5%	1/6W
R205	1-259-476-11	CARBON 100K 5%	1/6W
R206	1-259-436-11	CARBON 2.2K 5%	1/6W
R207	1-259-476-11	CARBON 100K 5%	1/6W
R208	1-259-438-11	CARBON 2.7K 5%	1/6W
R209	1-216-073-00	METAL CHIP 10K 5%	1/10W
R210	1-259-440-11	CARBON 3.3K 5%	1/6W
R211	1-259-397-11	CARBON 51 5%	1/6W
R212	1-259-406-11	CARBON 120 5%	1/6W
R213	1-259-396-11	CARBON 47 5%	1/6W
R214	1-259-441-11	CARBON 3.6K 5%	1/6W
R251	1-247-713-11	CARBON 1K 5%	1/4W
R252	1-247-723-11	CARBON 6.8K 5%	1/4W
R253	1-259-464-11	CARBON 33K 5%	1/6W
R254	1-259-432-11	CARBON 1.5K 5%	1/6W
R255	1-259-432-11	CARBON 1.5K 5%	1/6W
R256	1-259-432-11	CARBON 1.5K 5%	1/6W
R257	1-259-432-11	CARBON 1.5K 5%	1/6W
R258	1-259-464-11	CARBON 33K 5%	1/6W
R259	1-259-404-11	CARBON 100 5%	1/6W
R260	1-259-476-11	CARBON 100K 5%	1/6W
R261	1-259-476-11	CARBON 100K 5%	1/6W
R262	1-259-404-11	CARBON 100 5%	1/6W
R263	1-214-727-00	METAL 820 1%	1/4W

Ref. No.	Part No.	Description			Remark
R264	1-214-118-00	METAL	270	1%	1/4W
R265	1-216-068-00	METAL CHIP	6.2K	5%	1/10W
R266	1-247-704-11	CARBON	220	5%	1/4W
R267	1-249-447-11	CARBON	1	5%	1/4W
R268	1-249-447-11	CARBON	1	5%	1/4W
R269	1-217-611-00	RES, METAL PLATE 0.1			2W
R270	1-217-611-00	RES, METAL PLATE 0.1			2W
R271	1-216-045-00	METAL CHIP	680	5%	1/10W
R272	1-216-049-00	METAL CHIP	1K	5%	1/10W
R273	1-216-073-00	METAL CHIP	10K	5%	1/10W
R274	1-216-113-00	METAL CHIP	470K	5%	1/10W
R275	1-215-857-11	METAL OXIDE	10	5%	1W F
R276	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R301	1-259-449-11	CARBON	7.5K	5%	1/6W
R302	1-259-428-11	CARBON	1K	5%	1/6W
R303	1-259-441-11	CARBON	3.6K	5%	1/6W
R304	1-259-452-11	CARBON	10K	5%	1/6W
R305	1-259-452-11	CARBON	10K	5%	1/6W
R306	1-259-420-11	CARBON	470	5%	1/6W
R307	1-216-073-00	METAL CHIP	10K	5%	1/10W
R308	1-259-476-11	CARBON	100K	5%	1/6W
R309	1-259-422-11	CARBON	560	5%	1/6W
R310	1-259-428-11	CARBON	1K	5%	1/6W
R311	1-259-420-11	CARBON	470	5%	1/6W
R351	1-247-713-11	CARBON	1K	5%	1/4W
R352	1-247-154-00	CARBON	9.1K	5%	1/4W
R353	1-259-464-11	CARBON	33K	5%	1/6W
R354	1-259-432-11	CARBON	1.5K	5%	1/6W
R355	1-259-432-11	CARBON	1.5K	5%	1/6W
R356	1-259-432-11	CARBON	1.5K	5%	1/6W
R357	1-259-432-11	CARBON	1.5K	5%	1/6W
R358	1-259-464-11	CARBON	33K	5%	1/6W
R359	1-259-404-11	CARBON	100	5%	1/6W
R360	1-259-476-11	CARBON	100K	5%	1/6W
R361	1-259-476-11	CARBON	100K	5%	1/6W
R362	1-259-404-11	CARBON	100	5%	1/6W
R363	1-214-727-00	METAL	820	1%	1/4W
R364	1-214-118-00	METAL	270	1%	1/4W
R365	1-216-068-00	METAL CHIP	6.2K	5%	1/10W
R366	1-247-704-11	CARBON	220	5%	1/4W
R367	1-249-447-11	CARBON	1	5%	1/4W
R368	1-249-447-11	CARBON	1	5%	1/4W
R369	1-217-611-00	RES, METAL PLATE 0.1			2W
R370	1-217-611-00	RES, METAL PLATE 0.1			2W
R371	1-216-045-00	METAL CHIP	680	5%	1/10W
R372	1-216-049-00	METAL CHIP	1K	5%	1/10W
R373	1-216-073-00	METAL CHIP	10K	5%	1/10W
R374	1-216-113-00	METAL CHIP	470K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R375	1-215-857-11	METAL OXIDE	10	5%	1W F
R376	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R401	1-259-449-11	CARBON	7.5K	5%	1/6W
R402	1-259-428-11	CARBON	1K	5%	1/6W
R403	1-259-441-11	CARBON	3.6K	5%	1/6W
R404	1-259-452-11	CARBON	10K	5%	1/6W
R405	1-259-452-11	CARBON	10K	5%	1/6W
R406	1-259-420-11	CARBON	470	5%	1/6W
R407	1-216-073-00	METAL CHIP	10K	5%	1/10W
R408	1-259-476-11	CARBON	100K	5%	1/6W
R409	1-259-422-11	CARBON	560	5%	1/6W
R410	1-259-428-11	CARBON	1K	5%	1/6W
R411	1-259-420-11	CARBON	470	5%	1/6W
R451	1-247-713-11	CARBON	1K	5%	1/4W
R452	1-247-154-00	CARBON	9.1K	5%	1/4W
R453	1-259-464-11	CARBON	33K	5%	1/6W
R454	1-259-432-11	CARBON	1.5K	5%	1/6W
R455	1-259-432-11	CARBON	1.5K	5%	1/6W
R456	1-259-432-11	CARBON	1.5K	5%	1/6W
R457	1-259-432-11	CARBON	1.5K	5%	1/6W
R458	1-259-464-11	CARBON	33K	5%	1/6W
R459	1-259-404-11	CARBON	100	5%	1/6W
R460	1-259-476-11	CARBON	100K	5%	1/6W
R461	1-259-476-11	CARBON	100K	5%	1/6W
R462	1-259-404-11	CARBON	100	5%	1/6W
R463	1-214-727-00	METAL	820	1%	1/4W
R464	1-214-118-00	METAL	270	1%	1/4W
R465	1-216-068-00	METAL CHIP	6.2K	5%	1/10W
R466	1-247-704-11	CARBON	220	5%	1/4W
R467	1-249-447-11	CARBON	1	5%	1/4W
R468	1-249-447-11	CARBON	1	5%	1/4W
R469	1-217-611-00	RES, METAL PLATE 0.1			2W
R470	1-217-611-00	RES, METAL PLATE 0.1			2W
R471	1-216-045-00	METAL CHIP	680	5%	1/10W
R472	1-216-049-00	METAL CHIP	1K	5%	1/10W
R473	1-216-073-00	METAL CHIP	10K	5%	1/10W
R474	1-216-113-00	METAL CHIP	470K	5%	1/10W
R475	1-215-857-11	METAL OXIDE	10	5%	1W F
R476	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R501	1-216-049-00	METAL CHIP	1K	5%	1/10W
R502	1-259-442-11	CARBON	3.9K	5%	1/6W
R503	1-259-457-11	CARBON	16K	5%	1/6W
R504	1-259-442-11	CARBON	3.9K	5%	1/6W
R505	1-259-457-11	CARBON	16K	5%	1/6W
R506	1-259-420-11	CARBON	470	5%	1/6W
R508	1-259-461-11	CARBON	24K	5%	1/6W
R509	1-259-461-11	CARBON	24K	5%	1/6W
R510	1-259-456-11	CARBON	15K	5%	1/6W
R511	1-259-456-11	CARBON	15K	5%	1/6W

Ref. No.	Part No.	Description	Remark		
R512	1-259-452-11	CARBON	10K	5%	1/6W
R513	1-259-452-11	CARBON	10K	5%	1/6W
R514	1-259-500-11	CARBON	1M	5%	1/6W
R515	1-259-436-11	CARBON	2.2K	5%	1/6W
R516	1-259-438-11	CARBON	2.7K	5%	1/6W
R517	1-216-073-00	METAL CHIP	10K	5%	1/10W
R518	1-259-440-11	CARBON	3.3K	5%	1/6W
R519	1-259-432-11	CARBON	1.5K	5%	1/6W
R520	1-259-441-11	CARBON	3.6K	5%	1/6W
R523	1-249-419-11	CARBON	1.5K	5%	1/4W
R551	1-247-717-11	CARBON	2.2K	5%	1/4W
R552	1-249-462-11	CARBON	22K	5%	1/4W
R553	1-259-464-11	CARBON	33K	5%	1/6W
R554	1-259-432-11	CARBON	1.5K	5%	1/6W
R555	1-259-432-11	CARBON	1.5K	5%	1/6W
R556	1-259-432-11	CARBON	1.5K	5%	1/6W
R557	1-259-432-11	CARBON	1.5K	5%	1/6W
R558	1-259-464-11	CARBON	33K	5%	1/6W
R559	1-259-404-11	CARBON	100	5%	1/6W
R560	1-259-476-11	CARBON	100K	5%	1/6W
R561	1-259-476-11	CARBON	100K	5%	1/6W
R562	1-259-404-11	CARBON	100	5%	1/6W
R563	1-214-727-00	METAL	820	1%	1/4W
R564	1-214-118-00	METAL	270	1%	1/4W
R565	1-216-068-00	METAL CHIP	6.2K	5%	1/10W
R566	1-247-704-11	CARBON	220	5%	1/4W
R567	1-249-447-11	CARBON	1	5%	1/4W
R568	1-249-447-11	CARBON	1	5%	1/4W
R569	1-217-611-00	RES, METAL PLATE 0.1			2W
R570	1-217-611-00	RES, METAL PLATE 0.1			2W
R571	1-216-045-00	METAL CHIP	680	5%	1/10W
R572	1-216-049-00	METAL CHIP	1K	5%	1/10W
R573	1-216-073-00	METAL CHIP	10K	5%	1/10W
R574	1-216-113-00	METAL CHIP	470K	5%	1/10W
R575	1-215-857-11	METAL OXIDE	10	5%	1W F
R576	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R601	1-216-049-00	METAL CHIP	1K	5%	1/10W
R602	1-259-442-11	CARBON	3.9K	5%	1/6W
R603	1-259-457-11	CARBON	16K	5%	1/6W
R604	1-259-442-11	CARBON	3.9K	5%	1/6W
R605	1-259-457-11	CARBON	16K	5%	1/6W
R606	1-259-420-11	CARBON	470	5%	1/6W
R608	1-259-461-11	CARBON	24K	5%	1/6W
R609	1-259-461-11	CARBON	24K	5%	1/6W
R610	1-259-456-11	CARBON	15K	5%	1/6W
R611	1-259-456-11	CARBON	15K	5%	1/6W
R612	1-259-452-11	CARBON	10K	5%	1/6W
R613	1-259-452-11	CARBON	10K	5%	1/6W

Ref. No.	Part No.	Description	Remark		
R614	1-259-500-11	CARBON	1M	5%	1/6W
R615	1-259-436-11	CARBON	2.2K	5%	1/6W
R616	1-259-438-11	CARBON	2.7K	5%	1/6W
R617	1-216-073-00	METAL CHIP	10K	5%	1/10W
R618	1-259-440-11	CARBON	3.3K	5%	1/6W
R619	1-259-432-11	CARBON	1.5K	5%	1/6W
R620	1-259-441-11	CARBON	3.6K	5%	1/6W
R621	1-247-713-11	CARBON	1K	5%	1/4W
R622	1-259-452-11	CARBON	10K	5%	1/6W
R623	1-249-556-11	CARBON	9.1K	5%	1/4W
R651	1-247-717-11	CARBON	2.2K	5%	1/4W
R652	1-249-462-11	CARBON	22K	5%	1/4W
R653	1-259-464-11	CARBON	33K	5%	1/6W
R654	1-259-432-11	CARBON	1.5K	5%	1/6W
R655	1-259-432-11	CARBON	1.5K	5%	1/6W
R656	1-259-432-11	CARBON	1.5K	5%	1/6W
R657	1-259-432-11	CARBON	1.5K	5%	1/6W
R658	1-259-464-11	CARBON	33K	5%	1/6W
R659	1-259-404-11	CARBON	100	5%	1/6W
R660	1-259-476-11	CARBON	100K	5%	1/6W
R661	1-259-476-11	CARBON	100K	5%	1/6W
R662	1-259-404-11	CARBON	100	5%	1/6W
R663	1-214-727-00	METAL	820	1%	1/4W
R664	1-214-118-00	METAL	270	1%	1/4W
R665	1-216-068-00	METAL CHIP	6.2K	5%	1/10W
R666	1-247-704-11	CARBON	220	5%	1/4W
R667	1-249-447-11	CARBON	1	5%	1/4W
R668	1-249-447-11	CARBON	1	5%	1/4W
R669	1-217-611-00	RES, METAL PLATE 0.1			2W
R670	1-217-611-00	RES, METAL PLATE 0.1			2W
R671	1-216-045-00	METAL CHIP	680	5%	1/10W
R672	1-216-049-00	METAL CHIP	1K	5%	1/10W
R673	1-216-073-00	METAL CHIP	10K	5%	1/10W
R674	1-216-113-00	METAL CHIP	470K	5%	1/10W
R675	1-215-857-11	METAL OXIDE	10	5%	1W F
R676	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R901	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R902	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R903	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R904	1-216-186-00	METAL GLAZE	330	5%	1/8W
R905	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W
R906	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W
R907	1-216-252-00	METAL GLAZE	180K	5%	1/8W
R908	1-216-079-00	METAL CHIP	18K	5%	1/10W
R909	1-216-085-00	METAL CHIP	33K	5%	1/10W
R910	1-216-073-00	METAL CHIP	10K	5%	1/10W
R911	1-216-073-00	METAL CHIP	10K	5%	1/10W
R912	1-216-041-00	METAL CHIP	470	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R913	1-216-073-00	METAL CHIP	10K	5%	1/10W
R914	1-216-073-00	METAL CHIP	10K	5%	1/10W
R915	1-216-073-00	METAL CHIP	10K	5%	1/10W
R916	1-216-210-00	METAL GLAZE	3.3K	5%	1/8W
R917	1-216-073-00	METAL CHIP	10K	5%	1/10W
R918	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R919	1-216-198-00	METAL CHIP	1K	5%	1/8W
R920	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W
R921	1-247-704-11	CARBON	220	5%	1/4W
R922	1-247-704-11	CARBON	220	5%	1/4W
R923	1-247-713-11	CARBON	1K	5%	1/4W
R924	1-247-713-11	CARBON	1K	5%	1/4W
R925	1-216-210-00	METAL CHIP	3.3K	5%	1/8W
R951	1-247-721-11	CARBON	4.7K	5%	1/4W
R952	1-247-721-11	CARBON	4.7K	5%	1/4W
R953	1-213-136-00	METAL OXIDE	270	5%	1W F
R954	1-213-136-00	METAL OXIDE	270	5%	1W F
R955	1-216-101-00	METAL CHIP	150K	5%	1/10W
R956	1-216-085-00	METAL CHIP	33K	5%	1/10W
R957	1-216-041-00	METAL CHIP	470	5%	1/10W
R958	1-216-073-00	METAL CHIP	10K	5%	1/10W
R959	1-216-121-00	METAL CHIP	1M	5%	1/10W
R960	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R961	1-216-121-00	METAL CHIP	1M	5%	1/10W
R962	1-216-073-00	METAL CHIP	10K	5%	1/10W
< SWITCH >					
SW951	1-572-906-11	SWITCH, SLIDE (3WAY/2WAY)			
SW952	1-571-428-11	SWITCH, SLIDE (HIGH-MID CROSS POINT/FRONT)			
SW953	1-571-428-11	SWITCH, SLIDE (MID HI-PASS/REAR)			
SW954	1-571-428-11	SWITCH, SLIDE (SUB WOOFER LOW-PASS)			
< TRANSFORMER >					
T901	1-423-666-11	TRANSFORMER, DC-DC CONVERTER			
< THERMISTOR >					
TH901	1-808-877-11	THERMISTOR			
< VARIABLE RESISTOR >					
VR951	1-238-584-11	RES, VAR, CARBON 10K/10K (LEVEL HIGH/FRONT)			
VR952	1-238-584-11	RES, VAR, CARBON 10K/10K (LEVEL MID/REAR)			
VR953	1-238-584-11	RES, VAR, CARBON 10K/10K (LEVEL SUB/WOOFER)			

Ref. No.	Part No.	Description	Remark		
MISCELLANEOUS *****					
4	1-751-184-11	CORD (WITH, CONNECTOR) (10P)			
5	1-751-183-11	CORD (WITH, CONNECTOR) (8P)			
F901	1-532-947-11	FUSE (BRADE TYPE) (AUTO FUSE)			
F902	1-532-563-11	FUSE, GLASS TUBE (20A)			

ACCESSORIES & PACKING MATERIALS *****					
13	1-557-656-11	CORD (WITH TERMINAL) (AEP, UK, E)			
* 14	1-575-055-11	CORD (WITH TERMINAL) (BUCK UP) (AEP, UK, E)			
* 15	1-575-056-11	CORD (WITH TERMINAL) (G) (AEP, UK, E)			
* 16	1-575-090-11	CORD (WITH TERMINAL) (REM) (AEP, UK, E)			
17	1-562-594-11	CONNECTOR (CL-1814T) (AEP, UK, E)			
F902	1-532-563-11	FUSE, GLASS TUBE (20A)			
3-367-410-01	SCREW (DIA. 5X15), TAPPING				
*	3-386-137-01	INDIVIDUAL CARTON			
*	3-386-139-01	CUSHION, CORRUGATED FIBERBOARD			
*	3-701-634-00	BAG, POLYETHYLENE			
	3-706-714-00	GROMMET (AEP, UK, E)			
3-756-475-11	MANUAL, INSTRUCTION (ENGLISH, GERMAN, SPANISH, CHINESE) (AEP, UK, G, E)				
3-756-475-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (US, Canadian)				
3-756-475-41	MANUAL, INSTRUCTION (FRENCH, DUTCH, SWEDISH, ITALIAN, PORTUGUESE) (AEP, UK)				

HARDWARE LIST *****					
#1	7-685-646-79	SCREW +BTP 3X8 TYPE2 N-S			
#2	7-685-645-79	SCREW +BTP 3X6 TYPE2 N-S			
#3	7-685-547-11	SCREW +BTP 3X10 TYPE2 N-S			
#4	7-685-645-79	SCREW +P 3X6 TYPE2 SLIT			
#5	7-685-545-11	SCREW +BTP 3X6 TYPE2 N-S			
#6	7-682-949-01	SCREW +PSW 3X10			
#7	7-682-950-01	SCREW +PSW 3X12			
#8	7-621-770-87	SCREW +PTT 2.6X5 (S)			
#9	7-685-145-19	SCREW +PTP 3X6			
#10	7-685-146-19	SCREW +PTP 3X8			

