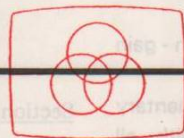


# TA-F470

## SERVICE MANUAL



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Canadian Model  
AEP Model



### SPECIFICATIONS

#### Amplifier

Continuous RMS power output (both channels driven simultaneously)

		Canadian Model	AEP Model	Germany Model
DIN 1kHz	4 ohms	110W+110W	110W+110W	110W+110W
	6 ohms	—	100W+100W	—
	8 ohms	90W+90W	90W+90W	90W+90W
20Hz-20kHz	4 ohms	—	90W+90W THD 0.02%	90W+90W THD 0.02%
20Hz-20kHz	8 ohms	80W+80W THD 0.008%	80W+80W 0.008%	80W+80W 0.008%

#### Tone controls

	Response	Turnover frequency
BASS	±10dB (100Hz)	500Hz
TREBLE	±10dB (15kHz)	3kHz

#### Input

Input jack	Jack type	Sensitivity	Impedance	S/N (weighting network, input level)
PHONO	MM	2.0mV	50 kilohms	92dB (A, 5mV)
	MC			
TUNER, CD, AUX, TAPE/DAT	Phono	150mV	50 kilohms	100dB (150mV)

#### Output

Output jack	Jack type	Voltage/impedance
REC OUT	Phono	Voltage 150mV Impedance 1 kohms
SPEAKERS	—	Model for Scandinavian countries, Spain and Portugal Accepts speakers of 6-16 ohms. Models for other countries Accepts speakers of 4-16 ohms.
HEADPHONES	Stereo phone	Accepts low and high impedance headphones.

#### Loudness (Attenuation 30dB)

+6dB (100Hz) / +3dB (10kHz)

#### Subsonic filter

6dB/octave, attenuation below 15Hz

#### Intermodulation (IM) distortion (60Hz : 7kHz = 4 : 1)

Less than 0.008% at rated output

#### Frequency response

PHONO : RIAA equalization curve  
±0.5dB

TUNER, CD, AUX, TAPE 1, TAPE 2/  
DAT : 7Hz-100kHz ±3dB

#### Residual noise

Less than 170 μV (network A)

#### Damping factor

70 (8 ohms, 1kHz)

— Continued on page 2 —



INTEGRATED STEREO AMPLIFIER  
**SONY**

**General System**

Preamplifier : Low - noise , high - gain equalizer amplifier

Power amplifier : Pure-complementary SEPP OCL power amplifier with all stages directly coupled

**Power requirements** Canadian Model : 120V AC, 60Hz  
AEP/Germany Model : 220-230V AC, 50Hz

**Power consumption** Canadian Model : 430VA  
AEP/Germany Model : 210W

**Dimensions** Approx. 430×148×372mm (w/h/d)  
(17×7 3/8 × 14 3/4 inches)

**Weight** Approx. 9.4kg (20 lb 12 oz)

Design and specifications subject to change without notice.

**Note**

This appliance conforms with EEC directive 87/308/EEC regarding interference suppression.

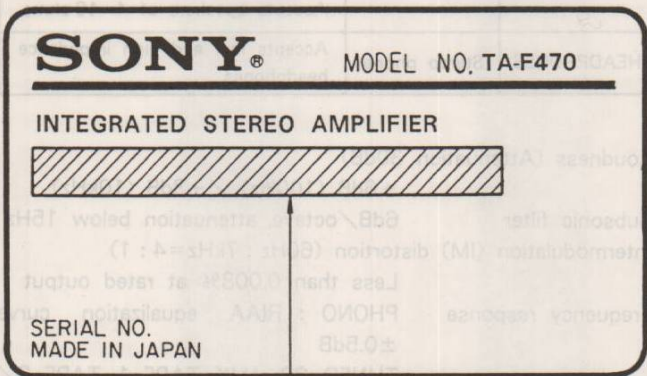
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Output Jack	Jack type	Voltage/Impedance
REC OUT	Phono	Voltage 150mV Impedance 1 kΩ
SPEAKERS		Model for Scandinavian countries Accessories for other countries

**MODEL IDENTIFICATION**

-Specification Label-



Canadian model : AC 120V~60Hz  
AEP/Germany model : AC 220-230V~50Hz

- Continued on page 3 -

Germany Model	AEP Model	Canadian Model	4-ohm	8-ohm	16-ohm
110W+110W	110W+110W	110W+110W	110W+110W	110W+110W	110W+110W
100W+100W	100W+100W	100W+100W	100W+100W	100W+100W	100W+100W
90W+90W	90W+90W	90W+90W	90W+90W	90W+90W	90W+90W
80W+80W	80W+80W	80W+80W	80W+80W	80W+80W	80W+80W
70W+70W	70W+70W	70W+70W	70W+70W	70W+70W	70W+70W
60W+60W	60W+60W	60W+60W	60W+60W	60W+60W	60W+60W
50W+50W	50W+50W	50W+50W	50W+50W	50W+50W	50W+50W
40W+40W	40W+40W	40W+40W	40W+40W	40W+40W	40W+40W
30W+30W	30W+30W	30W+30W	30W+30W	30W+30W	30W+30W
20W+20W	20W+20W	20W+20W	20W+20W	20W+20W	20W+20W
10W+10W	10W+10W	10W+10W	10W+10W	10W+10W	10W+10W

**SAFETY-RELATED COMPONENT WARNING!!**

COMPONENTS IDENTIFIED BY MARK OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

**ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!**

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

### SAFETY CHECK-OUT

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

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

### LEAKAGE TEST

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

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

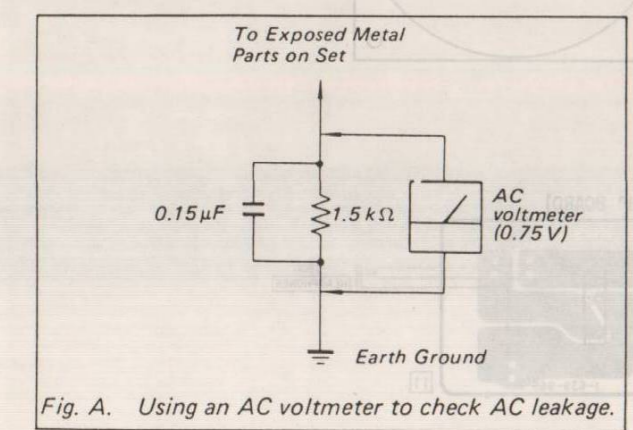


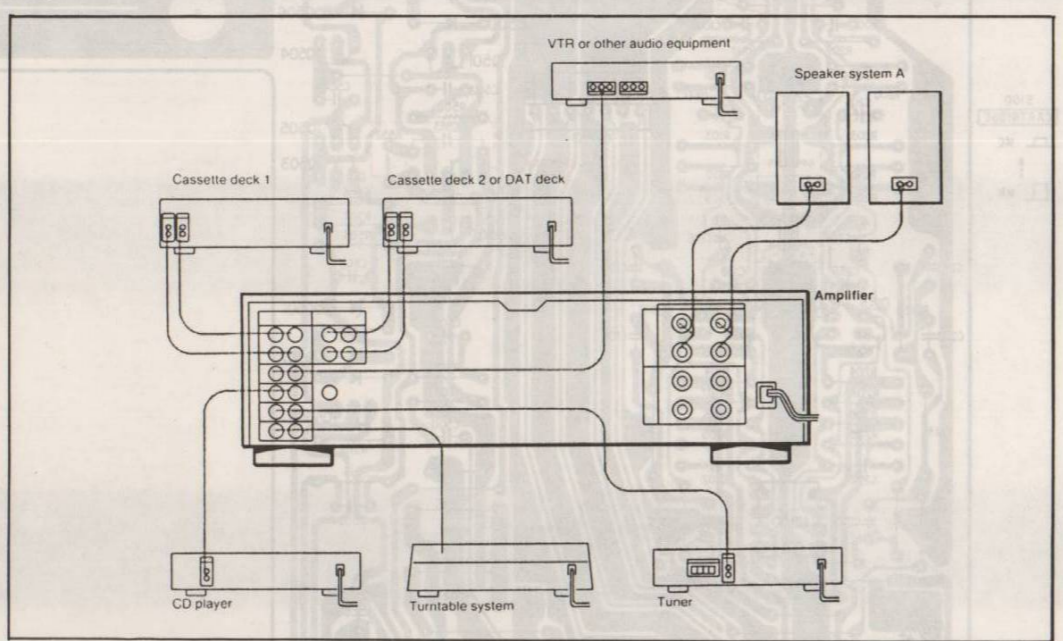
Fig. A. Using an AC voltmeter to check AC leakage.

## SECTION 1 GENERAL

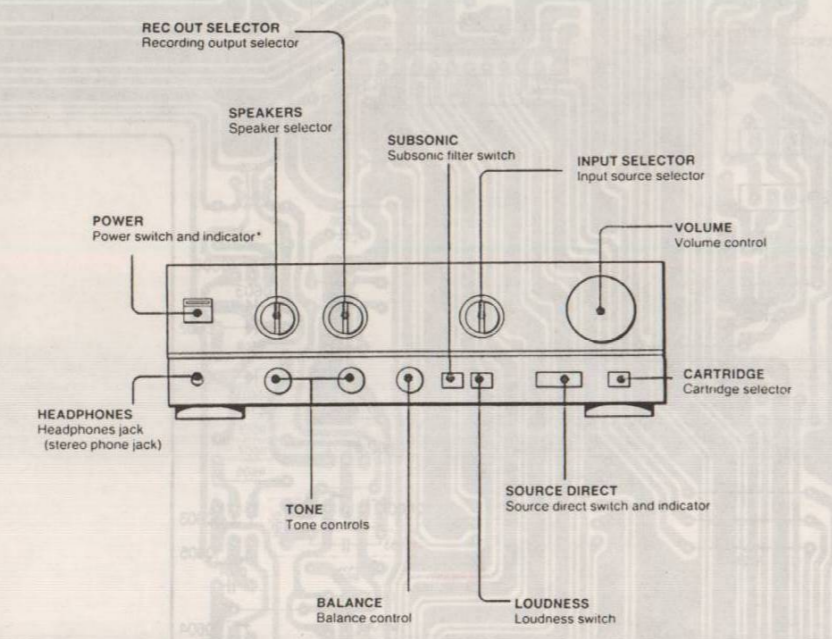
This section is extracted from instruction manual.

### 1-1. CONNECTIONS

- Notes on Connection**
- Connect the AC power cord last. Make sure power is off.
  - Cord plugs and jacks are color coded. Red plugs and jacks are for right channel (R) and white ones for left channel (L).
  - Fully insert cable connectors into jacks. Loose connections may cause hum or noise.



### 1-2. PARTS IDENTIFICATION

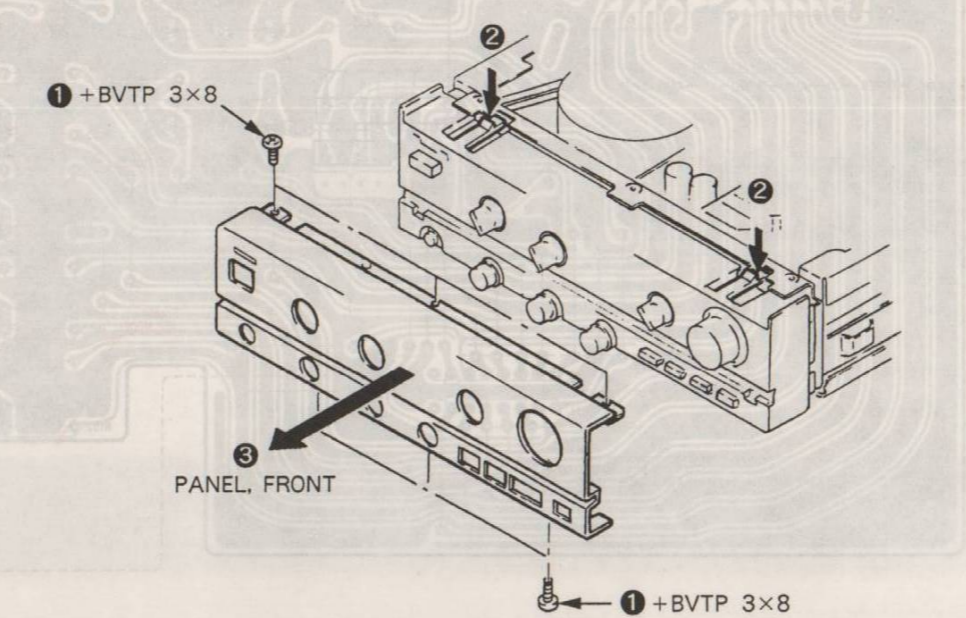


\* After the power is turned on, the POWER indicator lights in red and immediately changed to green. If it remains in red, turn off the power, check that speakers and other devices are properly connected, and turn on the power again.

## SECTION 2 DISASSEMBLY

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

1. Remove screws 1  $\times$  6.
2. Push leaves 2 down to release 2 claws.
3. Pull front panel in the direction of arrow 3.



1 +BVTP 3 $\times$ 8

1 +BVTP 3 $\times$ 8

PANEL, FRONT

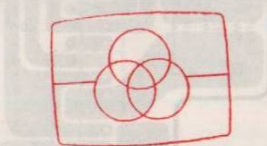
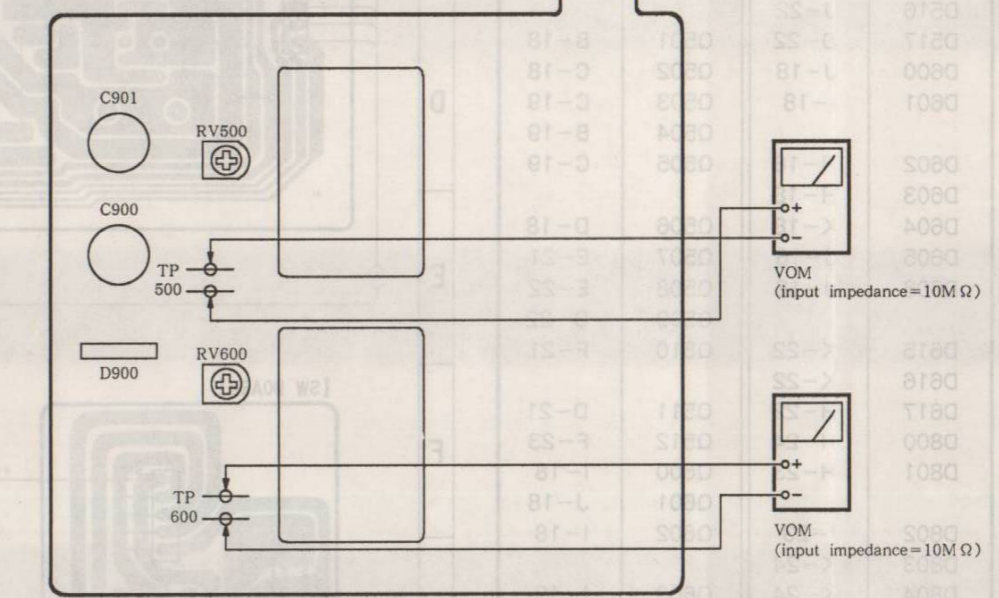
## SECTION 3 ELECTRICAL ADJUSTMENTS

### Bias Current Adjustment

- Procedure:**
1. Set main volume to minimum.
  2. Turn the power on and confirm that RY800 will turn on at about 12 seconds after power-on.
  3. Adjust RV500 (L-ch) and RV600 (R-ch) so that the voltages across TP500 and TP600 become within the adjustment values.

**Adjustment Values:**  
5mV  $\pm$  0.3mV

[MAIN BOARD] (Component Side)



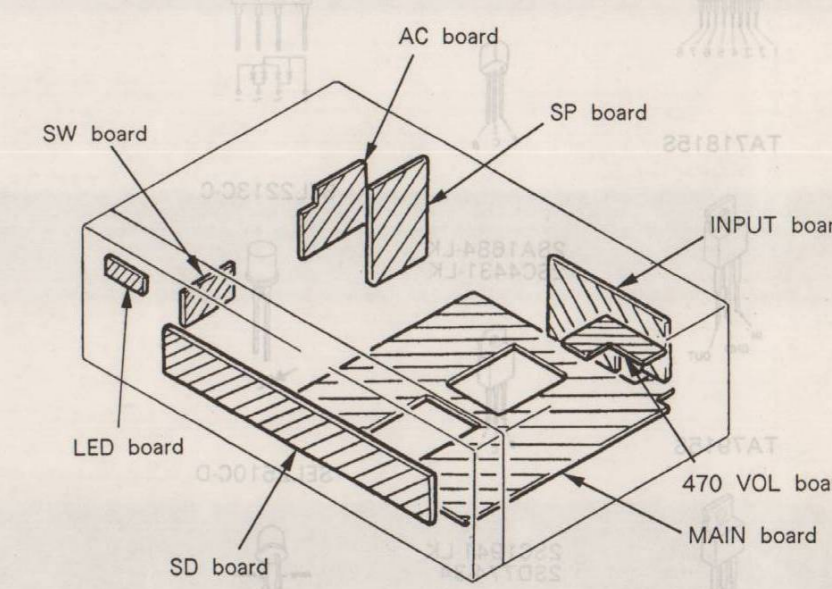
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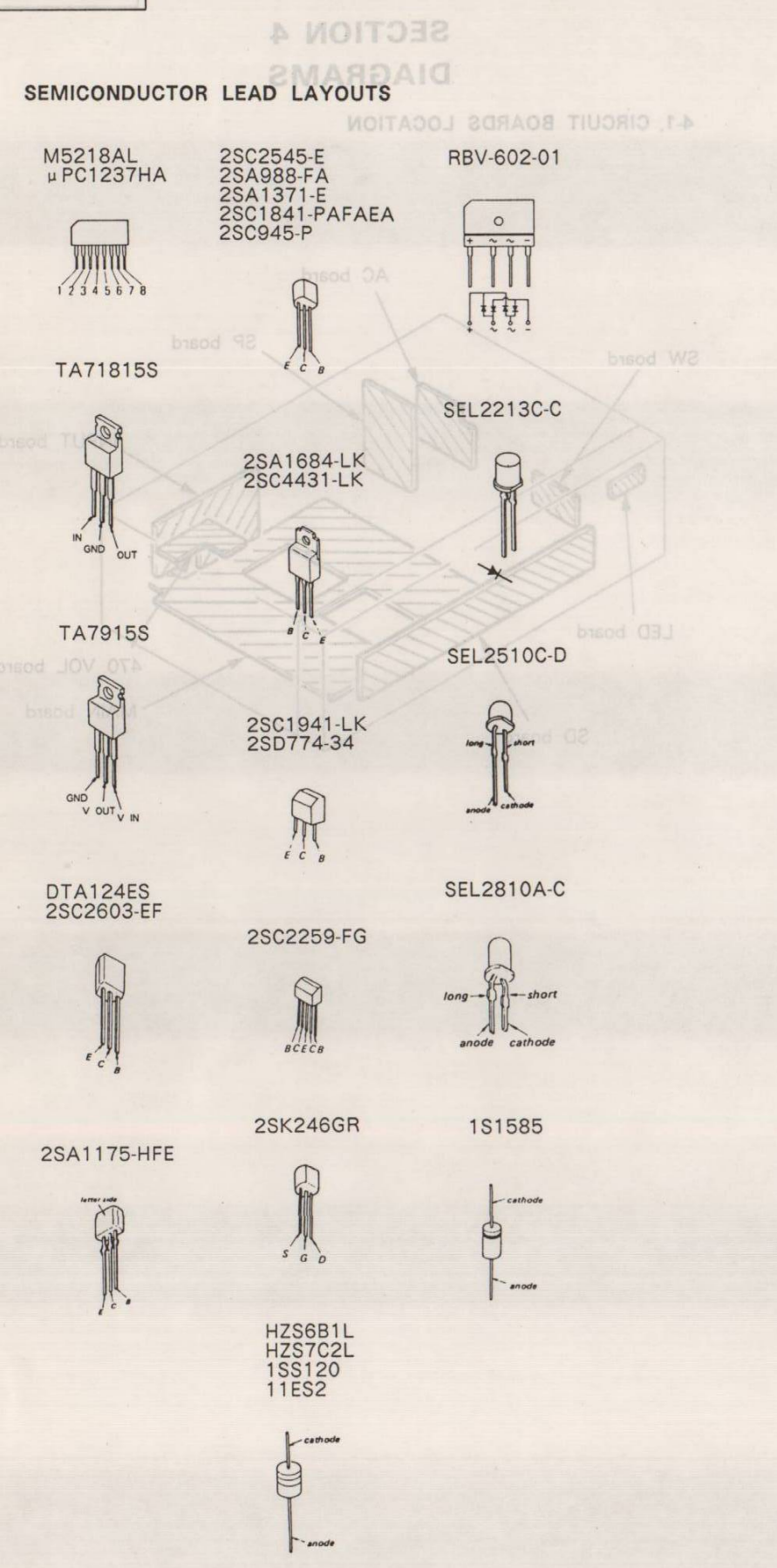
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## SECTION 4 DIAGRAMS

### 4-1. CIRCUIT BOARDS LOCATION



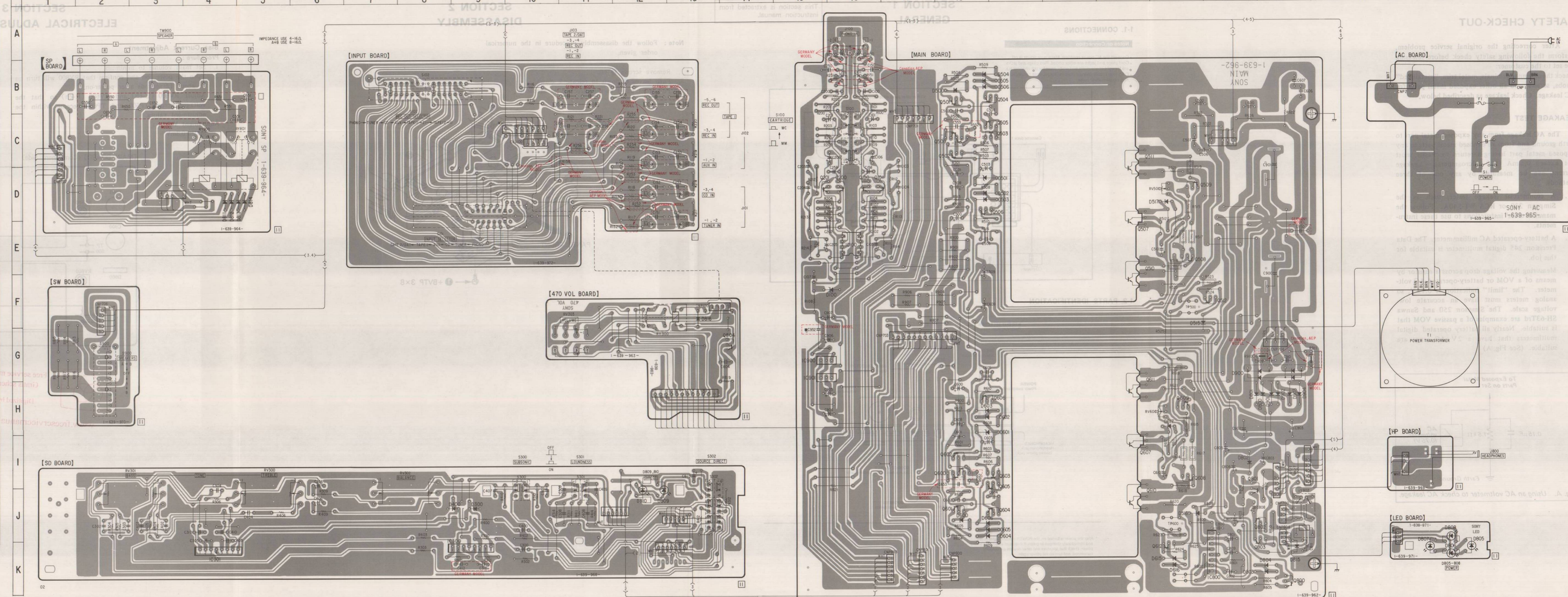
4-2. PRINTED WIRING BOARDS

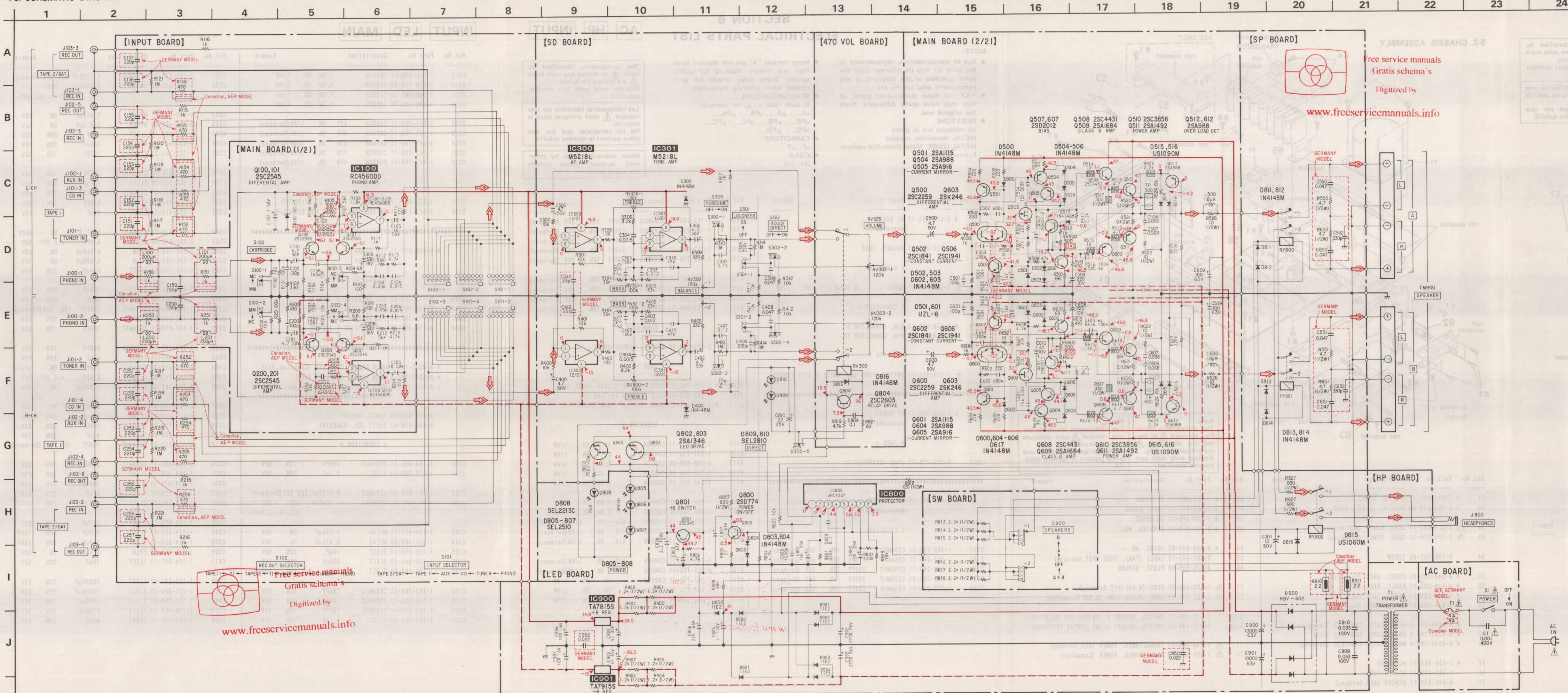


SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location
D100	F-16	IC100	E-16
D300	J-9	IC300	K-9
D400	J-9	IC301	K-4
D500	B-18	IC800	K-23
D501	D-18	IC900	G-15
		IC901	H-15
D502	D-18		
D503	D-18		
D504	B-18	Q100	D-16
D505	B-18	Q101	D-16
D506	B-18	Q200	D-16
		Q201	D-15
		Q500	C-18
D515	G-23		
D516	J-22		
D517	D-22	Q501	B-18
D600	J-18	Q502	C-18
D601	I-18	Q503	C-19
		Q504	B-19
		Q505	C-19
D602	H-18		
D603	H-18		
D604	K-18	Q506	D-18
D605	J-18	Q507	E-21
D606	J-18	Q508	E-22
		Q509	D-22
		Q510	F-21
D615	K-22		
D616	K-22		
D617	H-22	Q511	D-21
D800	H-24	Q512	F-23
D801	H-23	Q600	I-18
		Q601	J-18
		Q602	I-18
D802	I-23		
D803	K-24		
D804	K-24	Q603	I-19
D805	K-27	Q604	J-19
D806	K-27	Q605	J-19
		Q606	H-18
		Q607	I-21
D807	K-27		
D808	K-27		
D809	J-12	Q608	I-22
D810	J-12	Q609	H-22
D811	D-4	Q610	J-21
		Q611	H-21
		Q612	K-22
D812	D-4		
D813	D-5		
D814	D-5	Q800	K-24
D815	K-24	Q801	J-23
D816	F-13	Q802	J-24
		Q803	K-24
		Q804	G-14
D900	G-24		
D901	H-24		
D902	H-24		
D903	H-24		
D904	H-24		

Note:  
 ○ : parts extracted from the component side.  
 ⊙ : Pattern on the side which is seen.





**Note:**

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

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

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

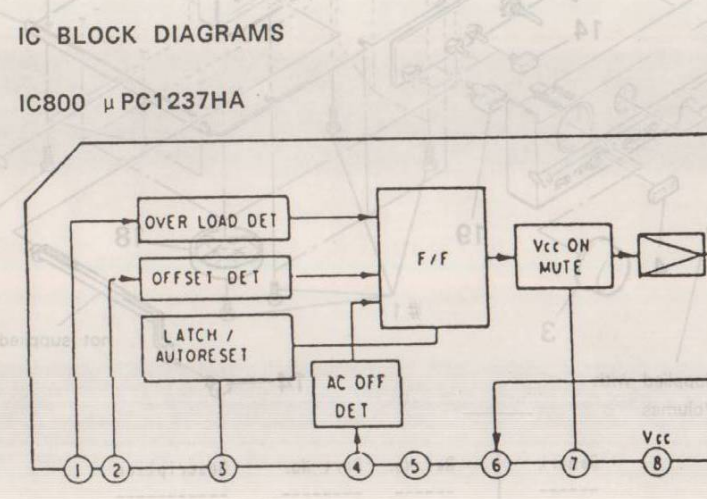
**Note:**  
The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

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

: B+ Line  
 : B- Line  
 : adjustment for repair.

• Voltage and waveforms are dc with respect to ground under no-signal conditions.  
 • Voltages are taken with a VOM (Input impedance 10M  $\Omega$ ). Voltage variations may be noted due to normal production tolerances.  
 • Signal path.

: PHONO



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SECTION 5 EXPLODED VIEWS

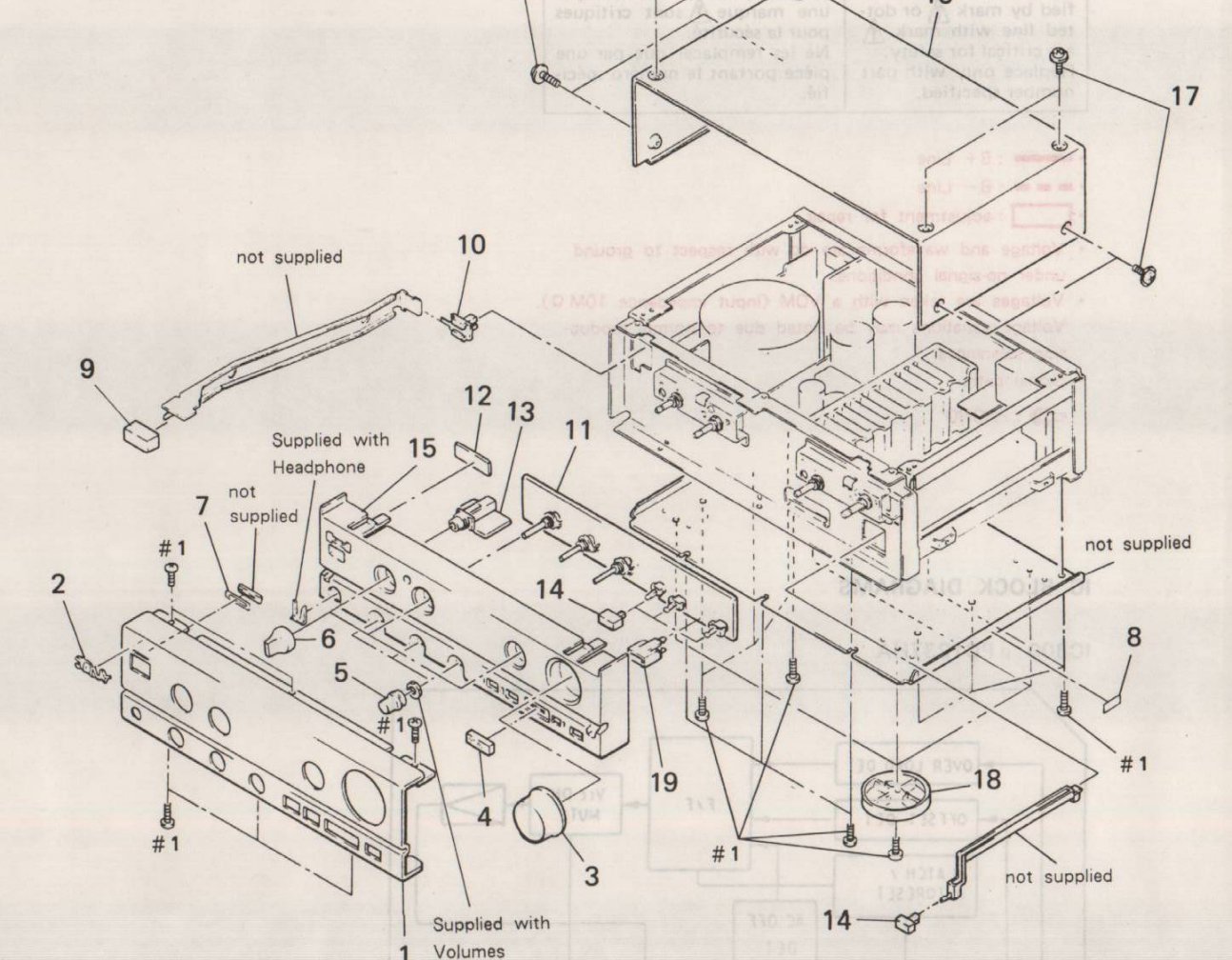
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color indication of Appearance Parts Example: KNOB, BALANCE (WHITE)...(RED) Parts color Cabinet's color
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware(#mark) list is given in the last of this parts list.

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

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

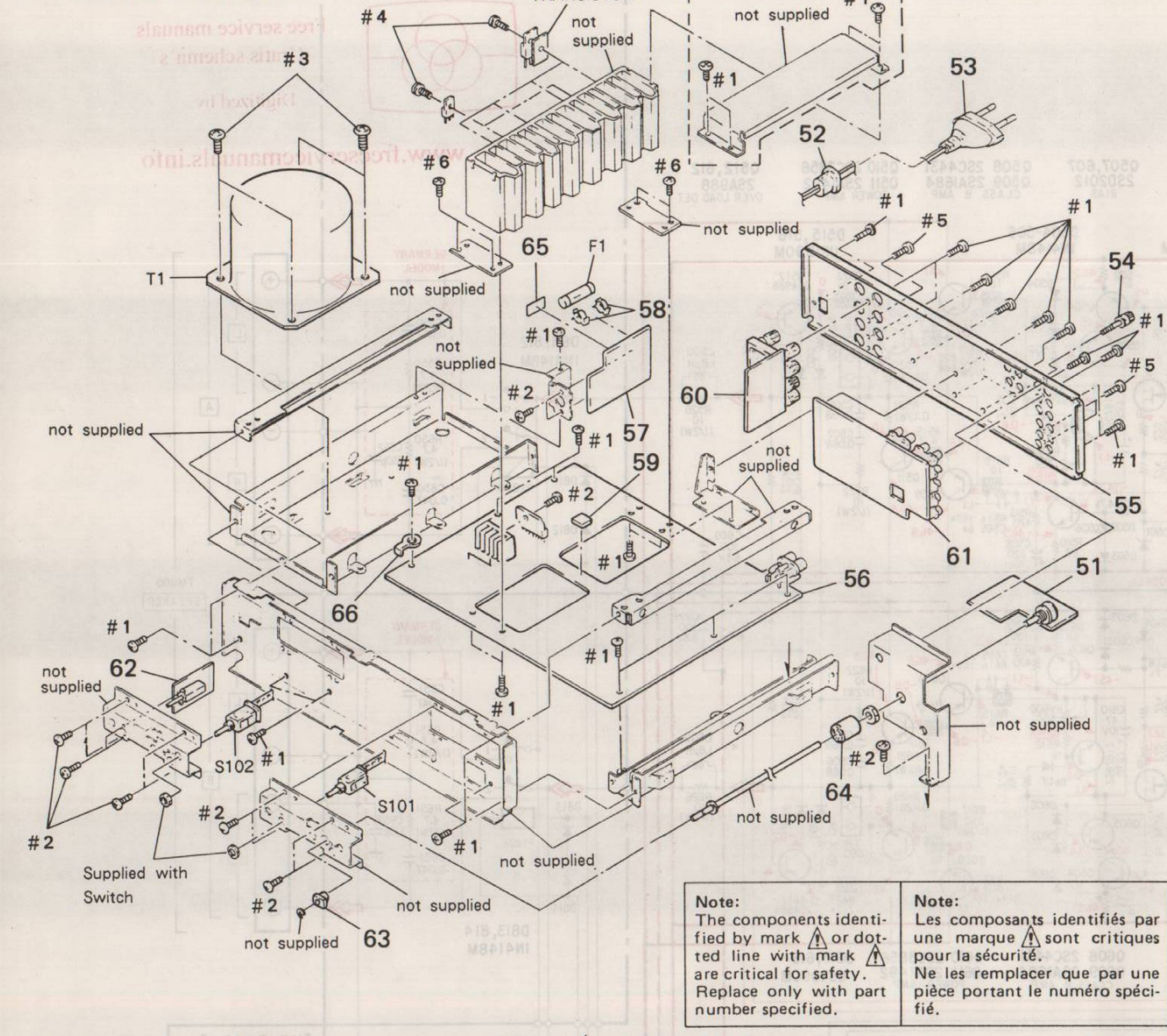
5-1. FRONT PANEL ASSEMBLY



Ref. No.	Part No.	Description	Remark
1	4-945-617-01	PANEL, FRONT	
2	4-908-848-01	EMBLEM, SONY	
3	X-4941-616-1	KNOB (R53) ASSY	
4	4-945-622-01	PLATE (S/D), INDICATION	
5	4-945-600-01	KNOB (R21)	
6	4-945-601-01	KNOB (F25)	
7	4-945-175-01	INDICATOR (PSW)	
8	4-926-836-01	CUSHION (BUTTON)	
9	4-929-289-01	BUTTON	
10	4-875-466-11	JOINT (F2), KNOB	
11	* A-4345-179-A	SD BOARD, COMPLETE (Canadian, AEP)	
11	* A-4345-199-A	SD BOARD, COMPLETE (Germany)	

Ref. No.	Part No.	Description	Remark
12	* 1-639-971-11	LED BOARD	
13	* 1-639-969-11	HP BOARD	
14	4-945-176-01	BUTTON (18X11)	
15	* 4-945-605-01	PANEL (BASE), FRONT	
16	* 4-945-618-01	CASE	
17	3-704-366-01	SCREW (CASE) (M3X8)	
18	X-4941-617-1	FOOT (58175) ASSY	
19	4-945-177-01	HOUSE, LIGHTING	

5-2. CHASSIS ASSEMBLY



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

Note: Les composants identifiés par une marque ou une ligne pointillée avec une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
51	* 1-639-963-11	470 VOL BOARD	
52	* 3-703-244-00	BUSHING (2104), CORD	
53	1-575-651-11	CORD, POWER (AEP, Germany)	
53	1-575-975-11	CORD, POWER (Canadian)	
54	3-706-165-00	SCREW	
55	* 4-944-985-01	PANEL, BACK (Canadian)	
55	* 4-944-985-11	PANEL, BACK (AE1)	
55	* 4-944-985-21	PANEL, BACK (AE2)	
55	* 4-944-985-31	PANEL, BACK (Germany)	
56	* A-4345-166-A	MAIN BOARD, COMPLETE (Canadian, AE1)	
56	* A-4345-186-A	MAIN BOARD, COMPLETE (AE2)	
56	* A-4345-188-A	MAIN BOARD, COMPLETE (Germany)	
57	* 1-639-965-11	AC BOARD	
58	1-533-225-11	HOLDER FUSE	
59	4-946-613-11	SPACER (AEP, Germany)	

Ref. No.	Part No.	Description	Remark
60	* 1-639-964-11	SP BOARD	
61	* 1-639-972-11	INPUT BOARD	
62	* 1-639-970-11	SW BOARD	
63	* 4-945-610-01	BEARING, VOL	
64	* 4-945-611-01	JOINT, VR	
65	3-701-947-18	LABEL (T4A), FUSE (AEP, Germany)	
66	4-870-539-00	PLATE, GROUND	
F1	1-532-350-00	FUSE (4.0A) (AEP, Germany)	
F1	1-532-749-11	FUSE, GLASS TUBE (8.0A) (Canadian)	
S101	1-572-796-11	SWITCH, ROTARY SLIDE (REC OUT SELECTOR)	
S102	1-572-795-11	SWITCH, ROTARY SLIDE (INPUT SELECTOR)	
T1	1-450-588-11	TRANSFORMER, POWER (AEP, Germany)	
T1	1-450-588-11	TRANSFORMER, POWER (Canadian)	

SECTION 6 ELECTRICAL PARTS LIST

AC HP INPUT

INPUT LED MAIN

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS All resistors are in ohms METAL: Metal-film resistor METAL OXIDE: Metal Oxide-film resistor F: nonflammable
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS In each case, u:  $\mu$ , for example: uA...:  $\mu$ A..., uPA...:  $\mu$ PA..., uPB...:  $\mu$ PB..., uPC...:  $\mu$ PC..., uPD...:  $\mu$ PD... ● CAPACITORS uF:  $\mu$ F ● COILS uH:  $\mu$ H

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

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

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

Ref. No.	Part No.	Description	Remark
*	1-639-965-11	AC BOARD	*****
	1-533-225-11	HOLDER, FUSE	
< CAPACITOR >			
C1	1-161-741-00	CERAMIC 0.001uF 10% 400V	
< CONNECTOR >			
CNP1	* 1-568-226-11	PIN, CONNECTOR 2P	
CNP2	* 1-564-321-21	PIN, CONNECTOR 2P	
< SWITCH >			
S1	1-554-920-11	SWITCH, PUSH (AC POWER) (1 KEY) (POWER)	
*****			
*	1-639-969-11	HP BOARD	*****
< JACK >			
J800	1-507-796-71	JACK (HEADPHONES)	
*****			
*	1-639-972-11	INPUT BOARD	*****
< CAPACITOR >			

Ref. No.	Part No.	Description	Remark
C156	1-162-286-31	CERAMIC 220PF 10% 50V (Germany)	
C157	1-162-286-31	CERAMIC 220PF 10% 50V (Germany)	
C251	1-162-286-31	CERAMIC 220PF 10% 50V (Germany)	
C252	1-162-286-31	CERAMIC 220PF 10% 50V (Germany)	
C253	1-162-286-31	CERAMIC 220PF 10% 50V (Germany)	
C254	1-162-286-31	CERAMIC 220PF 10% 50V (Germany)	
C255	1-162-286-31	CERAMIC 220PF 10% 50V (Germany)	
C256	1-162-286-31	CERAMIC 220PF 10% 50V (Germany)	
C257	1-162-286-31	CERAMIC 220PF 10% 50V (Germany)	
< CONNECTOR >			
CNJ100	1-562-087-00	SOCKET, CONNECTOR 4P	
< JACK >			
J101	* 1-573-142-31	JACK, PIN 4P (TUNER IN/CD IN)	
J102	1-568-978-11	JACK 6P (AUX IN/TAPE 1)	
J103	* 1-573-142-21	JACK, PIN 4P (TAPE 2/DAT)	
< RESISTOR >			
R115	1-247-713-11	CARBON 1K 5% 1/4W	
R116	1-247-713-11	CARBON 1K 5% 1/4W	
R117	1-246-545-00	CARBON 1.0M 5% 1/4W	
R118	1-246-545-00	CARBON 1.0M 5% 1/4W	
R119	1-246-545-00	CARBON 1.0M 5% 1/4W	
*****			
* 1-639-972-11	INPUT BOARD	*****	
< CAPACITOR >			

Ref. No.	Part No.	Description	Remark
R218	1-246-545-00	CARBON 1.0M 5% 1/4W	
R219	1-246-545-00	CARBON 1.0M 5% 1/4W	
R220	1-246-545-00	CARBON 1.0M 5% 1/4W	
R221	1-246-545-00	CARBON 1.0M 5% 1/4W	
R252	1-247-708-11	CARBON 470 5% 1/4W(Germany)	
R253	1-247-708-11	CARBON 470 5% 1/4W(Germany)	
R254	1-247-708-11	CARBON 470 5% 1/4W(Germany)	
R255	1-247-708-11	CARBON 470 5% 1/4W(Germany)	
R256	1-247-708-11	CARBON 470 5% 1/4W(Germany)	
< SWITCH >			
S101	1-571-669-11	SWITCH, SLIDE (INPUT SELECTOR)	
S102	1-571-115-11	SWITCH, SLIDE (REC OUT SELECTOR)	
*****			
*	1-639-971-11	LED BOARD	*****
< DIODE >			
D805	8-719-303-02	LED SEL2510C-D (POWER)	
D806	8-719-303-02	LED SEL2510C-D (POWER)	
D807	8-719-303-02	LED SEL2510C-D (POWER)	
D808	8-719-302-23	LED SEL2213C-C (POWER)	
*****			
C602	1-164-083-11	CERAMIC 680PF 10% 50V	
C603	1-124-477-11	ELECT 47uF 20% 25V	
C604	1-102-316-00	CERAMIC 15PF 5% 500V	
C605	1-102-943-00	CERAMIC 6.0PF +/-0.5PF 50V	
C606	1-136-163-00	FILM 0.068uF 5% 50V	
C607	1-124-130-00	ELECT 100uF 20% 63V	
C608	1-123-306-00	ELECT 47uF 20% 10V	
C553	8-719-303-02	LED SEL2510C-D (POWER)	100PF 10% 50V(Germany)
C600	1-123-369-00	ELECT 4.7uF 20% 50V	
C601	1-164-073-11	CERAMIC 100PF 10% 50V	
*****			
* A-4345-166-A	MAIN BOARD, COMPLETE (Canadian, AE1)		
* A-4345-186-A	MAIN BOARD, COMPLETE (AE2)		
* A-4345-188-A	MAIN BOARD, COMPLETE (Germany)		
*****			
4-870-539-00	PLATE, GROUND		
4-946-076-01	SHEET (C), ADHESIVE		
< CAPACITOR >			
C100	1-164-075-11	CERAMIC 150PF 10% 50V	
C101	1-123-369-00	ELECT 4.7uF 20% 50V	
C102	1-161-375-00	CERAMIC 0.0022uF 30% 50V(Germany)	
C102	1-161-377-00	CERAMIC 0.0047uF 30% 50V (Canadian, AEP)	
C800	1-164-085-11	CERAMIC 0.001uF 10% 50V	
C801	1-124-478-11	ELECT 100uF 20% 25V	
C802	1-124-478-11	ELECT 100uF 20% 25V	
C803	1-124-918-11	ELECT 47uF 20% 63V	
C805	1-124-791-11	ELECT 1.0uF 20% 100V	
C806	1-124-919-11	ELECT 220uF 20% 63V	
C807	1-124-927-11	ELECT 4.7uF 20% 100V	
C808	1-124-925-11	ELECT 2.2uF 20% 100V	
C809	1-136-165-00	FILM 0.1uF 5% 50V	
C811	1-124-907-11	ELECT 10uF 20% 50V	
*****			
C900	1-125-684-11	ELECT 10000uF 20% 63V	
C901	1-125-684-11	ELECT 10000uF 20% 63V	
C902	1-128-358-51	ELECT 2700uF 20% 56V	
C903	1-128-358-51	ELECT 2700uF 20% 56V	
C904	1-124-918-11	ELECT 47uF 20% 63V	

MAIN

Ref.No.	Part No.	Description	Remark
C905	1-124-918-11	ELECT 47uF 20%	63V
C906	1-124-122-11	ELECT 100uF 20%	50V
C907	1-124-122-11	ELECT 100uF 20%	50V
C909	1-106-379-12	MYLAR 0.033uF 5%	200V
C910	1-106-379-12	MYLAR 0.033uF 5%	200V
C950	1-162-596-00	CERAMIC 0.022uF 10%	50V (Germany)
C952	1-162-596-00	CERAMIC 0.022uF 10%	50V (Germany)
< CONNECTOR >			
CNP700 *	1-564-506-11	PLUG, CONNECTOR 3P	
CNP701 *	1-564-510-11	PLUG, CONNECTOR 7P	
CNP703 *	1-564-515-11	PLUG, CONNECTOR 12P	
CNP704 *	1-564-104-00	PIN, CONNECTOR 3P	
CNP800 *	1-564-339-00	PIN, CONNECTOR 5P	
CNP801 *	1-564-341-11	PIN, CONNECTOR 7P	
CNP803 *	1-564-340-00	PIN, CONNECTOR 6P	
CNP804 *	1-564-337-00	PIN, CONNECTOR 3P	
< DIODE >			
D100	8-719-933-50	DIODE HZS7C2L	
D500	8-719-912-20	DIODE 1SS120	
D501	8-719-933-36	DIODE HZS6B1L	
D502	8-719-912-20	DIODE 1SS120	
D503	8-719-912-20	DIODE 1SS120	
D504	8-719-912-20	DIODE 1SS120	
D505	8-719-912-20	DIODE 1SS120	
D506	8-719-912-20	DIODE 1SS120	
D515	8-719-815-85	DIODE 1S1585	
D516	8-719-815-85	DIODE 1S1585	
D517	8-719-912-20	DIODE 1SS120	
D600	8-719-912-20	DIODE 1SS120	
D601	8-719-933-36	DIODE HZS6B1L	
D602	8-719-912-20	DIODE 1SS120	
D603	8-719-912-20	DIODE 1SS120	
D604	8-719-912-20	DIODE 1SS120	
D605	8-719-912-20	DIODE 1SS120	
D606	8-719-912-20	DIODE 1SS120	
D615	8-719-815-85	DIODE 1S1585	
D616	8-719-815-85	DIODE 1S1585	
D617	8-719-912-20	DIODE 1SS120	
D800	8-719-200-82	DIODE 11ES2	
D801	8-719-200-82	DIODE 11ES2	
D802	8-719-200-82	DIODE 11ES2	
D803	8-719-912-20	DIODE 1SS120	
D804	8-719-912-20	DIODE 1SS120	
D815	8-719-912-20	DIODE 1SS120	
D900	8-719-302-38	DIODE RBV-602-01	
D901	8-719-200-82	DIODE 11ES2	
D902	8-719-200-82	DIODE 11ES2	

Ref.No.	Part No.	Description	Remark
D903	8-719-200-82	DIODE 11ES2	
D904	8-719-200-82	DIODE 11ES2	
< IC >			
IC100	8-759-981-98	IC RC4560DD	
IC800	8-759-111-68	IC uPC1237HA	
IC900	8-759-231-59	IC TA7815S	
IC901	8-759-245-87	IC TA7915S	
< JACK >			
J100 *	1-573-140-21	JACK, PIN 2P (PHONO IN)	
< COIL >			
L100	1-424-397-11	COIL, CHOKE 200uH (Germany)	
L101	1-424-397-11	COIL, CHOKE 200uH (Germany)	
L200	1-424-397-11	COIL, CHOKE 200uH (Germany)	
L201	1-424-397-11	COIL, CHOKE 200uH (Germany)	
L500	1-428-133-13	COIL, AIR-CORE	
L600	1-428-133-13	COIL, AIR-CORE	
< TRANSISTOR >			
Q100	8-729-354-52	TRANSISTOR 2SC2545-E	
Q101	8-729-354-52	TRANSISTOR 2SC2545-E	
Q200	8-729-354-52	TRANSISTOR 2SC2545-E	
Q201	8-729-354-52	TRANSISTOR 2SC2545-E	
Q500	8-729-620-17	TRANSISTOR 2SC2259-FG	
Q501	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q502	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q503	8-729-224-62	TRANSISTOR 2SK246GR	
Q504	8-729-108-14	TRANSISTOR 2SA988-FA	
Q505	8-729-803-76	TRANSISTOR 2SA1371-E	
Q506	8-729-142-01	TRANSISTOR 2SC1941-LK	
Q507	8-729-209-15	TRANSISTOR 2SD2012	
Q508	8-729-141-46	TRANSISTOR 2SC4431-LK	
Q509	8-729-141-37	TRANSISTOR 2SA1684-LK	
Q510	8-729-320-71	TRANSISTOR 2SC3856-OY	
Q511	8-729-320-72	TRANSISTOR 2SA1492-OY	
Q512	8-729-104-14	TRANSISTOR 2SA988-FA	
Q600	8-729-620-17	TRANSISTOR 2SC2259-FG	
Q601	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q602	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q603	8-729-224-62	TRANSISTOR 2SK246GR	
Q604	8-729-108-14	TRANSISTOR 2SA988-FA	
Q605	8-729-803-76	TRANSISTOR 2SA1371-E	
Q606	8-729-142-01	TRANSISTOR 2SC1941-LK	
Q607	8-729-209-15	TRANSISTOR 2SD2012	

Note: The components identified by a triangle symbol in this manual are critical for safety. Replace only with parts specified by the number shown.

MAIN

Ref. No.	Part No.	Description	Remark
Q608	8-729-141-46	TRANSISTOR 2SC4431-LK	
Q609	8-729-141-37	TRANSISTOR 2SA1684-LK	
Q610	8-729-320-71	TRANSISTOR 2SC3856-OY	
Q611	8-729-320-72	TRANSISTOR 2SA1492-OY	
Q612	8-729-108-14	TRANSISTOR 2SA988-FA	
Q800	8-729-140-96	TRANSISTOR 2SD774-34	
Q801	8-729-194-57	TRANSISTOR 2SC945-P	
Q802	8-729-900-63	TRANSISTOR DTA124ES	
Q803	8-729-900-63	TRANSISTOR DTA124ES	
< RESISTOR >			
R100	1-247-700-11	CARBON 100 5% 1/4W	
R101	1-249-469-11	CARBON 100K 5% 1/4W	
R102	1-247-706-11	CARBON 330 5% 1/4W	
R103	1-249-469-11	CARBON 100K 5% 1/4W	
R104	1-247-725-11	CARBON 10K 5% 1/4W	
R105	1-247-700-11	CARBON 100 5% 1/4W (Canadian, AEP)	
R105	1-247-702-11	CARBON 150 5% 1/4W (Germany)	
R106	1-247-710-11	CARBON 560 5% 1/4W	
R107	1-247-710-11	CARBON 560 5% 1/4W	
R108	1-247-716-11	CARBON 1.8K 5% 1/4W	
R109	1-249-457-11	CARBON 6.8 5% 1/4W	
R110	1-247-700-11	CARBON 100 5% 1/4W	
R111	1-246-545-00	CARBON 1.0M 5% 1/4W	
R112	1-249-844-11	CARBON 56K 1% 1/2W	
R113	1-249-818-11	CARBON 4.7K 1% 1/2W	
R114	1-247-704-11	CARBON 220 5% 1/4W	
R150	1-259-428-11	CARBON 1K 5% 1/6W (Germany)	
R151	1-259-428-11	CARBON 1K 5% 1/6W (Germany)	
R200	1-247-700-11	CARBON 100 5% 1/4W	
R201	1-249-469-11	CARBON 100K 5% 1/4W	
R202	1-247-706-11	CARBON 330 5% 1/4W	
R203	1-249-469-11	CARBON 100K 5% 1/4W	
R204	1-247-725-11	CARBON 10K 5% 1/4W	
R205	1-247-700-11	CARBON 100 5% 1/4W (Canadian, AEP)	
R205	1-247-702-11	CARBON 150 5% 1/4W (Germany)	
R206	1-247-710-11	CARBON 560 5% 1/4W	
R207	1-247-710-11	CARBON 560 5% 1/4W	
R209	1-249-457-11	CARBON 6.8 5% 1/4W	
R210	1-247-700-11	CARBON 100 5% 1/4W	
R211	1-246-545-00	CARBON 1.0M 5% 1/4W	
R212	1-249-844-11	CARBON 56K 1% 1/2W	
R213	1-249-818-11	CARBON 4.7K 1% 1/2W	
R214	1-247-704-11	CARBON 220 5% 1/4W	
R250	1-259-428-11	CARBON 1K 5% 1/6W (Germany)	
R251	1-259-428-11	CARBON 1K 5% 1/6W (Germany)	
R500	1-247-713-11	CARBON 1K 5% 1/4W	
R501	1-249-469-11	CARBON 100K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
R502	1-247-704-11	CARBON 220 5% 1/4W	
R503	1-247-717-11	CARBON 2.2K 5% 1/4W	
R504	1-247-704-11	CARBON 220 5% 1/4W	
R505	1-247-704-11	CARBON 220 5% 1/4W	
R506	1-247-704-11	CARBON 220 5% 1/4W	
R507	1-249-463-11	CARBON 27K 5% 1/4W	
R508	1-247-721-11	CARBON 4.7K 5% 1/4W	
R509	1-247-694-11	CARBON 33 5% 1/4W	
R510	1-247-698-11	CARBON 68 5% 1/4W	
R511	1-247-717-11	CARBON 2.2K 5% 1/4W	
R512	1-247-713-11	CARBON 1K 5% 1/4W	
R513	1-249-915-11	CARBON 470 1% 1/4W	
R514	1-247-688-11	CARBON 10 5% 1/4W F	
R515	1-247-688-11	CARBON 10 5% 1/4W F	
R516	1-249-469-11	CARBON 100K 5% 1/4W	
R517	1-247-745-11	CARBON 330 5% 1/2W F	
R518	1-249-455-11	CARBON 4.7 5% 1/4W F	
R519	1-249-455-11	CARBON 4.7 5% 1/4W F	
R520	1-217-611-00	RES. METAL PLATE 0.1	
R521	1-217-611-00	RES. METAL PLATE 0.1	
R522	1-247-727-11	CARBON 10 5% 1/2W	
R523	1-247-717-11	CARBON 2.2K 5% 1/4W F	
R524	1-249-460-11	CARBON 15K 5% 1/4W	
R525	1-247-887-00	CARBON 220K 5% 1/4W	
R526	1-247-727-11	CARBON 10 5% 1/2W	
R527	1-247-750-11	CARBON 680 5% 1/2W	
R552	1-249-393-11	CARBON 10 5% 1/4W (Germany)	
R600	1-247-713-11	CARBON 1K 5% 1/4W	
R601	1-249-469-11	CARBON 100K 5% 1/4W	
R602	1-247-704-11	CARBON 220 5% 1/4W	
R603	1-247-717-11	CARBON 2.2K 5% 1/4W	
R604	1-247-704-11	CARBON 220 5% 1/4W	
R605	1-247-704-11	CARBON 220 5% 1/4W	
R606	1-247-704-11	CARBON 220 5% 1/4W	
R607	1-249-463-11	CARBON 27K 5% 1/4W	
R608	1-247-721-11	CARBON 4.7K 5% 1/4W	
R609	1-247-694-11	CARBON 33 5% 1/4W	
R610	1-247-698-11	CARBON 68 5% 1/4W	
R611	1-247-717-11	CARBON 2.2K 5% 1/4W	
R612	1-247-713-11	CARBON 1K 5% 1/4W	
R613	1-249-915-11	CARBON 470 1% 1/4W	
R614	1-247-688-11	CARBON 10 5% 1/4W F	
R615	1-247-688-11	CARBON 10 5% 1/4W F	
R616	1-249-469-11	CARBON 100K 5% 1/4W	
R617	1-247-745-11	CARBON 330 5% 1/2W F	
R618	1-249-455-11	CARBON 4.7 5% 1/4W F	
R619	1-249-455-11	CARBON 4.7 5% 1/4W F	
R620	1-217-611-00	RES. METAL PLATE 0.1	
R621	1-217-611-00	RES. METAL PLATE 0.1	

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

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

Ref. No.	Part No.	Description	Remark
R622	1-247-727-11	CARBON 10 5% 1/2W	
R623	1-247-717-11	CARBON 2.2K 5% 1/4W F	
R624	1-249-460-11	CARBON 15K 5% 1/4W	
R625	1-247-887-00	CARBON 220K 5% 1/4W	
R626	1-247-727-11	CARBON 10 5% 1/2W	
R627	1-247-750-11	CARBON 680 5% 1/2W	
R652	1-249-393-11	CARBON 10 5% 1/4W (Germany)	
R801	1-247-887-00	CARBON 220K 5% 1/4W	
R802	1-247-881-00	CARBON 120K 5% 1/4W	
R803	1-249-461-11	CARBON 18K 5% 1/4W	
R804	1-247-721-11	CARBON 4.7K 5% 1/4W	
R805	1-247-693-11	CARBON 27 5% 1/4W	
R806	1-247-721-11	CARBON 4.7K 5% 1/4W	
R807	1-247-751-11	CARBON 820 5% 1/2W	
R808	1-249-467-11	CARBON 68K 5% 1/4W	
R810	1-247-237-00	CARBON 750 5% 1/2W	
R812	1-247-740-11	CARBON 120 5% 1/2W	
R820	1-247-725-11	CARBON 10K 5% 1/4W	
R821	1-247-699-11	CARBON 82 5% 1/4W	
R900	1-247-753-11	CARBON 1.2K 5% 1/2W	
R901	1-247-753-11	CARBON 1.2K 5% 1/2W	
R902	1-247-753-11	CARBON 1.2K 5% 1/2W	
R903	1-247-753-11	CARBON 1.2K 5% 1/2W	
R904	1-247-753-11	CARBON 1.2K 5% 1/2W	
R905	1-247-753-11	CARBON 1.2K 5% 1/2W	
R906	1-247-753-11	CARBON 1.2K 5% 1/2W	
R907	1-247-753-11	CARBON 1.2K 5% 1/2W	
R910	1-806-882-11	THERMISTOR (POSITIVE) 2.2 (Canadian, AEP)	
R911	1-806-882-11	THERMISTOR (POSITIVE) 2.2 (Canadian, AEP)	
< VARIABLE RESISTOR >			
RV500	1-237-455-11	RES. ADJ. CARBON 500 (BIAS CURRENT L)	
RV600	1-237-455-11	RES. ADJ. CARBON 500 (BIAS CURRENT R)	
< RELAY >			
RY802	1-515-787-21	RELAY	
< SWITCH >			
S100	1-571-111-11	SWITCH, PUSH (1 KEY) (CATRIDGE)	
*****			
* A-4345-199-A SD BOARD, COMPLETE (Germany)			
* A-4345-179-A SD BOARD, COMPLETE (Canadian, AEP)			
*****			
4-945-177-01 HOUSE, LIGHTING (Canadian, AEP)			

Ref. No.	Part No.	Description	Remark
< CAPACITOR >			
C300	1-123-369-00	ELECT 4.7uF 20% 50V	
C302	1-136-154-00	FILM 0.012uF 5% 50V	
C303	1-136-154-00	FILM 0.012uF 5% 50V	
C304	1-130-473-00	MYLAR 0.0015uF 5% 50V	
C305	1-164-073-11	CERAMIC 100PF 10% 50V	
C306	1-123-369-00	ELECT 4.7uF 20% 50V	
C307	1-136-166-00	FILM 0.12uF 5% 50V	
C308	1-162-286-31	CERAMIC 220PF 10% 50V	
C309	1-136-161-00	FILM 0.047uF 5% 50V	
C310	1-164-062-11	CERAMIC 47PF 5% 50V	
C312	1-164-031-11	CERAMIC 33PF 5% 50V (Germany)	
C400	1-123-369-00	ELECT 4.7uF 20% 50V	
C402	1-136-154-00	FILM 0.012uF 5% 50V	
C403	1-136-154-00	FILM 0.012uF 5% 50V	
C404	1-130-473-00	MYLAR 0.0015uF 5% 50V	
C405	1-164-073-11	CERAMIC 100PF 10% 50V	
C406	1-123-369-00	ELECT 4.7uF 20% 50V	
C407	1-136-166-00	FILM 0.12uF 5% 50V	
C408	1-162-286-31	CERAMIC 220PF 10% 50V	
C409	1-136-161-00	FILM 0.047uF 5% 50V	
C410	1-164-062-11	CERAMIC 47PF 5% 50V	
C412	1-164-031-11	CERAMIC 33PF 5% 50V (Germany)	
C810	1-126-233-11	ELECT 22uF 20% 50V	
< DIODE >			
D300	8-719-912-20	DIODE 1SS120	
D400	8-719-912-20	DIODE 1SS120	
D809	8-719-301-52	LED SEL2810A-C (DIRECT)	
D810	8-719-301-52	LED SEL2810A-C (DIRECT)	
< IC >			
IC300	8-759-634-50	IC M5218AL	
IC301	8-759-634-50	IC M5218AL	
< RESISTOR >			
R300	1-247-725-11	CARBON 10K 5% 1/4W	
R301	1-247-725-11	CARBON 10K 5% 1/4W	
R302	1-246-545-00	CARBON 1.0M 5% 1/4W	
R303	1-247-700-11	CARBON 100 5% 1/4W	
R304	1-247-726-11	CARBON 33K 5% 1/4W	
R305	1-247-726-11	CARBON 33K 5% 1/4W	
R306	1-247-724-11	CARBON 8.2K 5% 1/4W	
R309	1-247-706-11	CARBON 330 5% 1/4W	
R310	1-246-545-00	CARBON 1.0M 5% 1/4W	
R311	1-247-725-11	CARBON 10K 5% 1/4W	

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

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



**SD SP SW 470 VOL**

Ref. No.	Part No.	Description	Remark
R312	1-247-725-11	CARBON 10K 5% 1/4W	
R314	1-246-545-00	CARBON 1.0M 5% 1/4W	
R400	1-247-725-11	CARBON 10K 5% 1/4W	
R401	1-247-725-11	CARBON 10K 5% 1/4W	
R402	1-246-545-00	CARBON 1.0M 5% 1/4W	
R403	1-247-700-11	CARBON 100 5% 1/4W	
R404	1-247-726-11	CARBON 33K 5% 1/4W	
R405	1-247-726-11	CARBON 33K 5% 1/4W	
R406	1-247-724-11	CARBON 8.2K 5% 1/4W	
R409	1-247-706-11	CARBON 330 5% 1/4W	
R410	1-246-545-00	CARBON 1.0M 5% 1/4W	
R411	1-247-725-11	CARBON 10K 5% 1/4W	
R412	1-247-725-11	CARBON 10K 5% 1/4W	
R414	1-246-545-00	CARBON 1.0M 5% 1/4W	
< VARIABLE RESISTOR >			
RV300	1-241-056-11	RES. VAR. CARBON 100K/100K (TREBLE)	
RV301	1-241-056-11	RES. VAR. CARBON 100K/100K (BASS)	
RV302	1-238-513-11	RES. VAR. CARBON 150K/150K (BALANCE)	
< SWITCH >			
S300	1-571-112-21	SWITCH. PUSH (1 KEY) (SUBSONIC)	
S301	1-571-112-21	SWITCH. PUSH (1 KEY) (LOUDNESS)	
S302	1-572-642-11	SWITCH. PUSH (1 KEY) (SOURCE DIRECT)	
*****			
* 1-639-964-11 SP BOARD			
*****			
< CAPACITOR >			
C550	1-136-161-00	FILM 0.047uF 5% 50V (Germany)	
C551	1-136-161-00	FILM 0.047uF 5% 50V (Germany)	
C552	1-164-079-11	CERAMIC 330PF 10% 50V (Germany)	
C650	1-136-161-00	FILM 0.047uF 5% 50V (Germany)	
C651	1-136-161-00	FILM 0.047uF 5% 50V (Germany)	
C652	1-164-079-11	CERAMIC 330PF 10% 50V (Germany)	
< CONNECTOR >			
CNP702	* 1-564-509-11	PLUG. CONNECTOR 6P	
< DIODE >			
D811	8-719-912-20	DIODE 1SS120	
D812	8-719-912-20	DIODE 1SS120	
D813	8-719-912-20	DIODE 1SS120	
D814	8-719-912-20	DIODE 1SS120	

Ref. No.	Part No.	Description	Remark
< RESISTOR >			
R550	1-247-482-11	CARBON 4.7 5% 1/2W (Germany)	
R551	1-247-482-11	CARBON 4.7 5% 1/2W (Germany)	
R650	1-247-482-11	CARBON 4.7 5% 1/2W (Germany)	
R651	1-247-482-11	CARBON 4.7 5% 1/2W (Germany)	
< RELAY >			
RY800	1-515-501-00	RELAY	
RY801	1-515-501-00	RELAY	
< TERMINAL >			
TM900	1-537-227-11	TERMINAL BOARD (SPEAKER) (AE2)	
TM900	1-537-228-11	TERMINAL BOARD (SPEAKER) (EXCEPT AE2)	
*****			
* 1-639-970-11 SW BOARD			
*****			
< CONNECTOR >			
CNP706	* 1-564-508-11	PLUG. CONNECTOR 5P	
< RESISTOR >			
R813	1-247-756-11	CARBON 2.2K 5% 1/2W	
R814	1-247-756-11	CARBON 2.2K 5% 1/2W	
R815	1-247-756-11	CARBON 2.2K 5% 1/2W	
R816	1-247-756-11	CARBON 2.2K 5% 1/2W	
R817	1-247-756-11	CARBON 2.2K 5% 1/2W	
R818	1-247-756-11	CARBON 2.2K 5% 1/2W	
< SWITCH >			
S900	1-572-797-11	SWITCH. ROTARY SLIDE (SPEAKER)	
*****			
* 1-639-963-11 470 VOL BOARD			
*****			
< CAPACITOR >			
C804	1-136-165-00	FILM 0.1uF 5% 50V	
< CONNECTOR >			
CNP100	1-560-941-00	PIN. CONNECTOR 4P	
< DIODE >			
D816	8-719-912-20	DIODE 1SS120	

**470 VOL**

Ref. No.	Part No.	Description	Remark
< TRANSISTOR >			
Q804	8-729-620-05	TRANSISTOR 2SC2603-EF	
< RESISTOR >			
R819	1-249-425-11	CARBON 4.7K 5% 1/4W	
< VARIABLE RESISTOR >			
RV303	1-241-557-11	RES. VAR. CARBON 120K/120K (VOLUME)	
< RELAY >			
RY300	1-515-787-21	RELAY	

\*\*\*\*\*

MISCELLANEOUS  
\*\*\*\*\*

- 53  $\Delta$  1-575-651-11 CORD. POWER (AEP, Germany)
- 53  $\Delta$  1-575-975-11 CORD. POWER (Canadian)
- F1  $\Delta$  1-532-350-00 FUSE (4.0A) (AEP, Germany)
- F1  $\Delta$  1-532-749-11 FUSE. GLASS TUBE (8.0A) (Canadian)
- S101 1-572-796-11 SWITCH. ROTARY SLIDE (REC OUT SELECTOR)
- S102 1-572-795-11 SWITCH. ROTARY SLIDE (INPUT SELECTOR)
- T1  $\Delta$  1-450-568-11 TRANSFORMER. POWER (AE1, AE2, Germany)
- T1  $\Delta$  1-450-588-11 TRANSFORMER. POWER (Canadian)

\*\*\*\*\*

ACCESSORY & PACKING MATERIAL  
\*\*\*\*\*

- 3-753-389-11 MANUAL. INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (Canadian, AEP)
- 3-753-389-41 MANUAL. INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP, Germany)
- \* 4-931-985-01 CUSHION
- \* 4-944-053-01 INDIVIDUAL CARTON

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**HARDWARE LIST**  
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

- # 1 7-685-646-79 SCREW +BVTP 3X8 TYPE2 IT-3
- # 2 7-682-547-04 SCREW +BVTT 3X6 (S)
- # 3 7-682-560-04 SCREW +BVTT 4X6 (S)
- # 4 7-682-549-04 SCREW +BVTT 3X10 (S)
- # 5 7-621-849-00 SCREW (BV/RING)
- # 6 7-685-647-79 SCREW +BVTP 3X10 TYPE2 IT-3



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

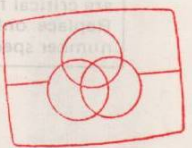
Note: The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.  
 Note: Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

470 VOL

Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >	
0804	8-128-820-02	TRANSISTOR 2SC2803-E1	
		< RESISTOR >	
0819	1-249-422-11	CARBON A.TX 2W 1/4W	
		< VARIABLE RESISTOR >	
RV203	1-241-821-11	REC. VAR. CARBON 100K/10K (VOLUME)	
		< RELAY >	
RY300	1-812-107-21	RELAY	
*****			
MISCELLANEOUS			
*****			
83	1-812-821-11	CORD, POWER (AER, Germany)	
83	1-812-828-11	CORD, POWER (Canadian)	
F1	1-212-260-00	TUBE (4.0A) (AER, Germany)	
F1	1-212-442-11	TUBE, GLASS TUBE (4.0A) (Canadian)	
S101	1-212-190-11	SWITCH, ROTARY SLIDE (REC. OUT SELECTOR)	
S102	1-212-191-11	SWITCH, ROTARY SLIDE (INPUT SELECTOR)	
T1	1-420-288-11	TRANSFORMER, POWER (AER, AER, Germany)	
T1	1-420-288-11	TRANSFORMER, POWER (Canadian)	
*****			
ACCESSORY & PACKING MATERIAL			
*****			
	3-121-299-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH)	
	3-121-299-11	MANUAL, INSTRUCTION (SPANISH, PORTUGUESE) (Canadian, AER)	
	3-121-299-11	MANUAL, INSTRUCTION (GERMAN, DUTCH)	
	4-401-322-01	CUSHION (SWEDISH, ITALIAN) (AER, Germany)	
	4-401-022-01	INDIVIDUAL CARTON	
*****			
HARDWARE LIST			
*****			
1	1-882-642-10	SCREW +BVTT 3X8 TYPE1 JT-3	
2	1-882-642-10	SCREW +BVTT 3X8 (S)	
3	1-882-642-10	SCREW +BVTT 4X8 (S)	
4	1-882-642-10	SCREW +BVTT 3X10 (S)	
5	1-882-642-10	SCREW (BV/RING)	
6	1-882-642-10	SCREW +BVTT 3X10	

Note: The components identified by the mark  or dot  are critical for safety. Use only the parts specified.

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



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