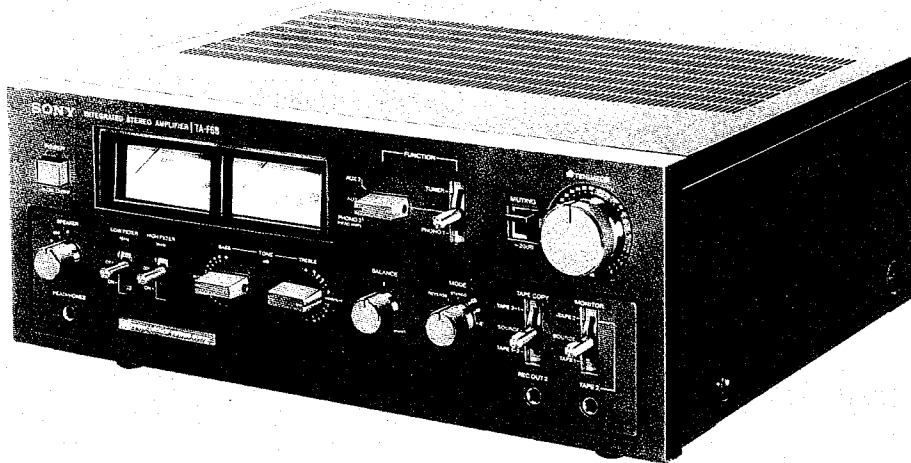


TA-F6B

US Model
 Canadian Model
 AEP Model
 UK Model
 E Model



INTEGRATED STEREO AMPLIFIER

SPECIFICATIONS


GENERAL

Power Requirements:	120 V ac, 60 Hz (US, Canadian model) 110 – 120 V and 220 – 240 V ac, adjustable 50/60 Hz (AEP, UK, E model)
Power Consumption:	190 W (US model) 490 VA (Canadian model) 450 W (AEP, E model) 550 W (UK model)
Dimensions:	Approx. 430 (w) x 170 (h) x 390 (d) mm 16 ⁷ / ₈ (w) x 6 ³ / ₄ (h) x 15 ³ / ₈ (d) inches including projecting parts and controls
Weight:	Approx. 12.5 kg, 27 lb 9 oz (net) Approx. 14.2 kg, 31 lb 5 oz (in shipping carton)


POWER AMPLIFIER SECTION

Power Output and Total Harmonic Distortion:	With 8 Ω loads, both channels driven, from 20–20,000 Hz; rated 100 W per channel minimum RMS power, with no more than 0.03 % total harmonic distortion from 250 mW to rated output. (US, Canadian model)
Continuous RMS Power Output:	At 20 Hz–20 kHz 100 W + 100 W (8 Ω) According to DIN 45500 100 W + 100 W (8 Ω) (AEP, UK, E model)
Power Bandwidth (IHF):	5 Hz – 35 kHz (50 W output, 0.03 % THD, 8 Ω) (AEP, UK, E model)
Harmonic Distortion:	Less than 0.03 % at rated output Less than 0.015 % at 1 W/10 W output
Intermodulation (IM) Distortion:	Less than 0.03 % at rated output Less than 0.008 % at 1 W/10 W output (60 Hz : 7 kHz = 4 : 1)
Frequency Response:	DC – 100 kHz ⁺⁰ ₋₁ dB

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND  MARK ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS 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 UN TRAMÉ ET UNE MARQUE  SUR LES DIAGRAMMES SCHEMATIQUES, LES VUES EXPLOSÉES 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 DES SUPPLÉMENTS PUBLIÉS PAR SONY.

– Continued on page 2 –

SONY[®]

SERVICE MANUAL

S/N Ratio: Greater than 115 dB, short-circuited input
Residual Noise: Less than 50 μ V (8 Ω , network A)
Damping Factor: 50 (8 Ω , 1 kHz)
Inputs: POWER INPUT
 Sensitivity 1.3 V (4.5 dB), for rated output
 Impedance 50 k Ω

Outputs: SPEAKER terminals A, B
 Accept speakers of 4 – 16 Ω
 (US, Canadian model)
 Accept speakers of 8 – 16 Ω
 (AEP, UK, E model)
 HEADPHONES jack
 Accepts low and high-impedance stereo headphones

Filters: LOW
 6 dB/octave attenuation below 15 Hz
 HIGH
 6 dB/octave attenuation above 9 kHz

Residual Noise: $-\infty$ (infinity)

Inputs:

	Sensitivity	Impedance	Phono overload (1 kHz)	S/N (weighting network, input level)
PHONO 1	2.5 mV (-50 dB)	50 k Ω	250 mV	85 dB (A, 2.5 mV)
PHONO 2 (HEAD AMP)	0.08 mV (-80 dB)	100 Ω	8 mV	70 dB (A, 0.08 mV)
TUNER AUX 1, 2 TAPE 1, 2	150 mV (-14.5 dB)	50 k Ω	—	105 dB (A, 150 mV)

PREAMPLIFIER SECTION

Harmonic Distortion: Less than 0.003 %
 (TUNER \rightarrow PRE OUTPUT, 10 V output, 1 kHz)

Intermodulation (IM) Distortion: Less than 0.003 %
 (60 Hz : 7 kHz = 4 : 1) (TUNER \rightarrow PRE OUTPUT, 10 V output)

Frequency Response: PHONO 1, 2 RIAA equalization \pm 0.2 dB
 TUNER
 AUX 1, 2) 2 Hz – 150 kHz $\begin{matrix} +0 \\ -1 \end{matrix}$ dB
 TAPE 1, 2

Tone Controls: BASS
 \pm 10 dB at 60 Hz
 TREBLE
 \pm 10 dB at 25 kHz

Outputs:

	Voltage	Impedance
REC OUT 1, 2	150 mV (-14.5 dB) (13.5 V at max.)	10 k Ω
PRE OUTPUT	1.3 V (4.5 dB) (10 V at max.)	2.5 k Ω (max.)

0 dB = 0.775 V

MODEL IDENTIFICATION

Specification Label

UK model

SONY ASCO	INTEGRATED STEREO AMPLIFIER
	MODEL NO. TA-F6B AC 110-120/220-240V ~ 50/60Hz 550W SERIAL NO.
MADE IN JAPAN	

Canadian model

SONY ASCO	INTEGRATED STEREO AMPLIFIER
	MODEL NO. TA-F6B AC 120V 60Hz 490VA SERIAL NO.
MADE IN JAPAN	

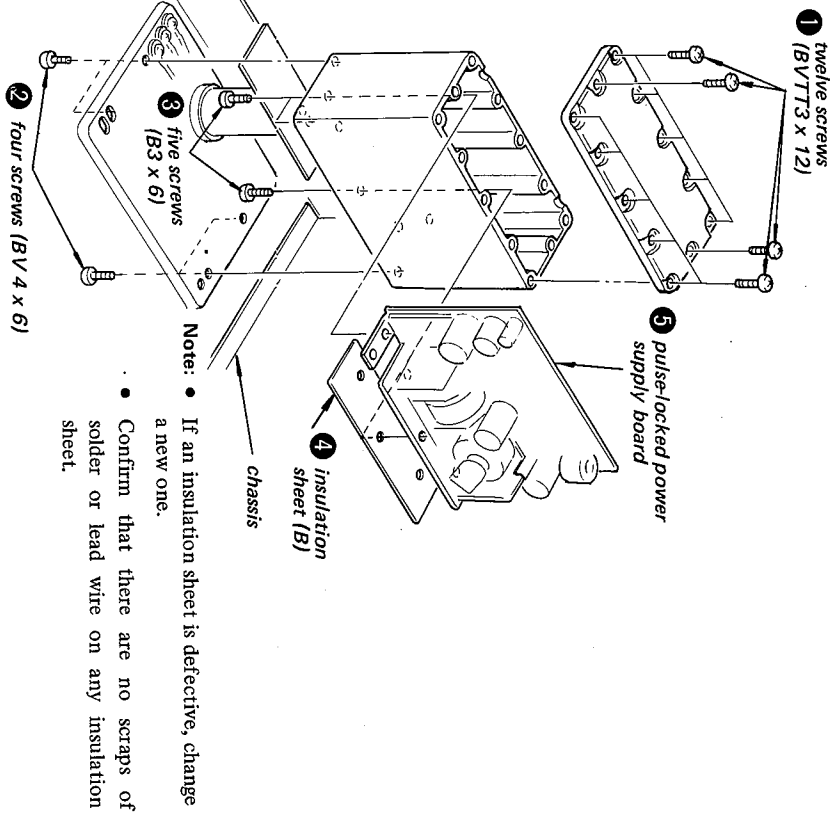
AEP, E model

SONY ASCO	INTEGRATED STEREO AMPLIFIER
	MODEL NO. TA-F6B AC 110-120/220-240V ~ 50/60Hz 450W SERIAL NO.
MADE IN JAPAN	

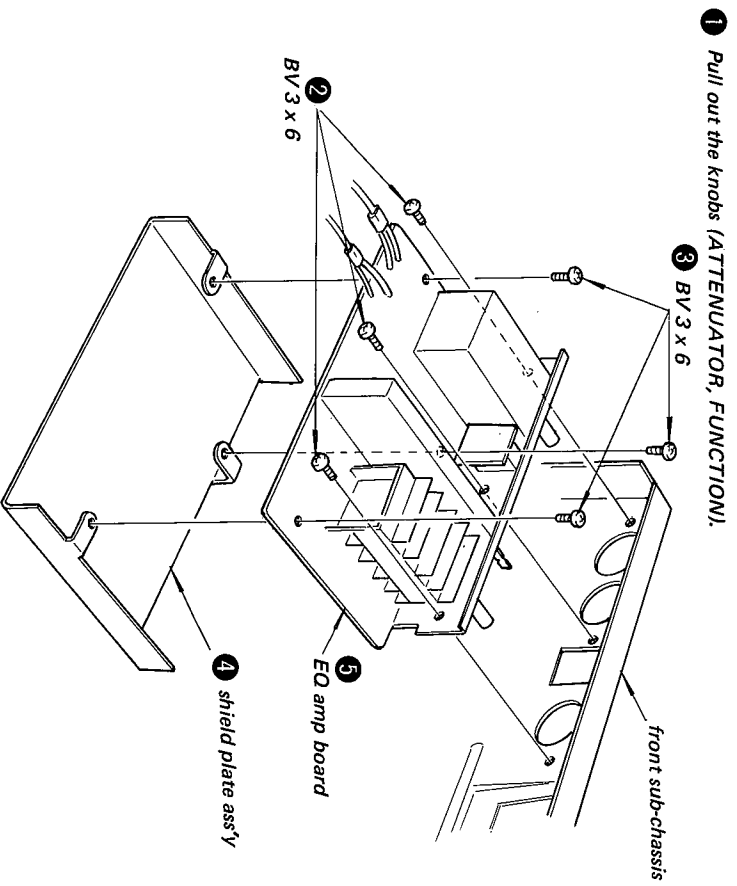
US model

SONY ASCO	INTEGRATED STEREO AMPLIFIER
	MODEL NO. TA-F6B AC 120V 60Hz 190W SERIAL NO.
MADE IN JAPAN	

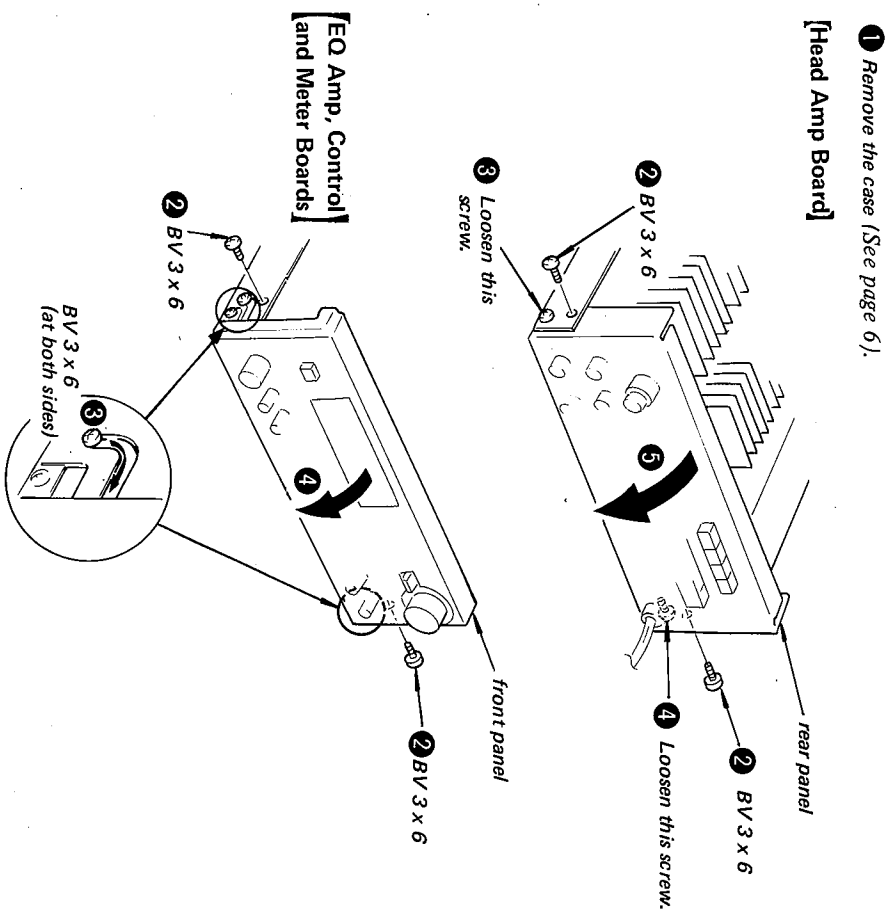
PULSE-LOCKED POWER SUPPLY BOARD REMOVAL



EQ AMP BOARD REMOVAL

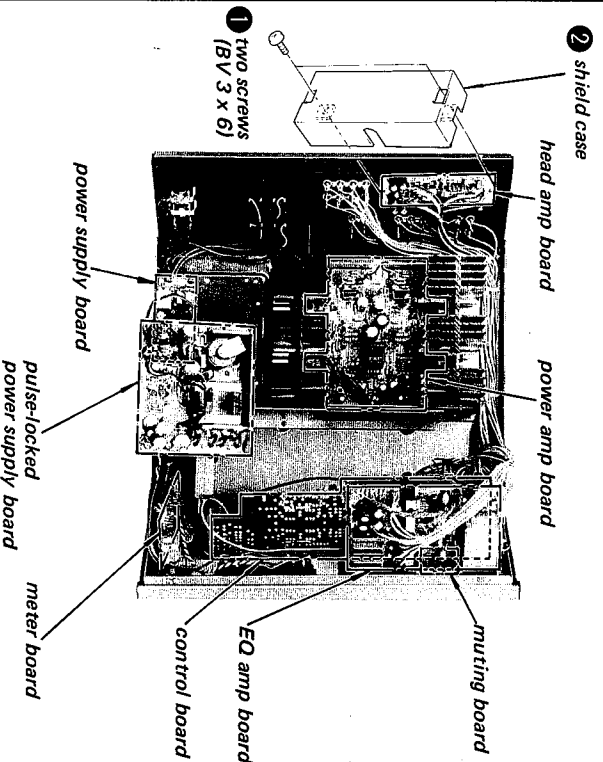


CIRCUIT BOARDS CHECKING AND REPAIRING

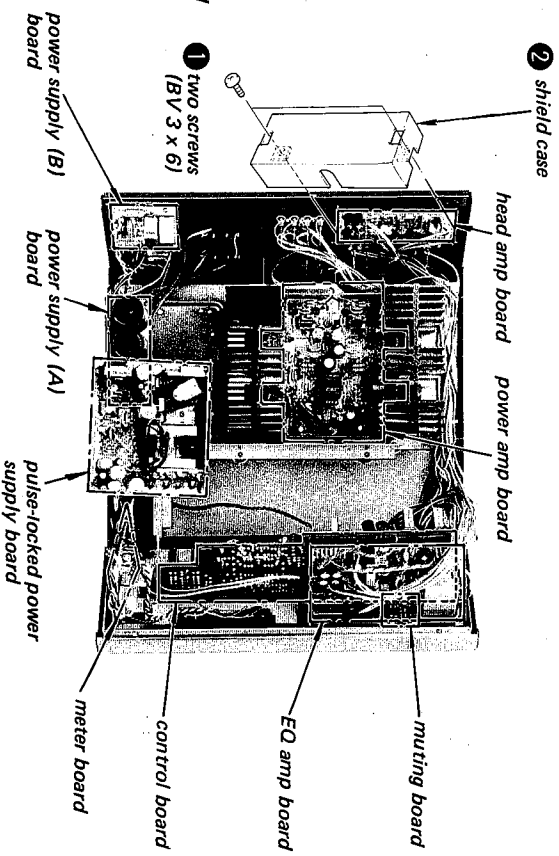


Each circuit board is located as shown below.

(US, Canadian model)



(AEP, UK, E model)

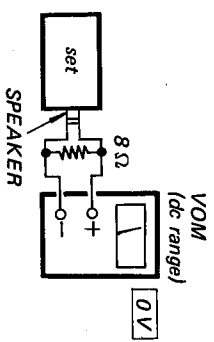


SECTION 3
ADJUSTMENTS

Note: 1. DC BIAS and DC BALANCE adjustments should be performed about several minutes later after the POWER switch (S10) is turned on.
2. Repeat DC BIAS and DC BALANCE adjustments two or three times.
3. After replacing the power transistors, DC BIAS and DC BALANCE adjustments should be performed.

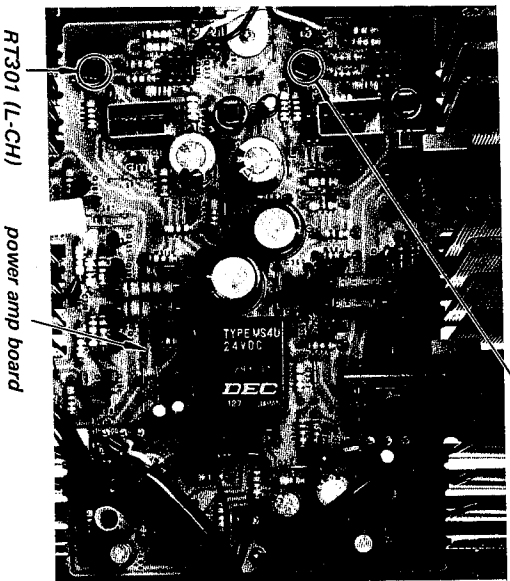
DC Balance Adjustment

Procedure:



Adjust RT301 (L-CH) and RT351 (R-CH) for 0 V reading on the VOM.

Adjustment Location:

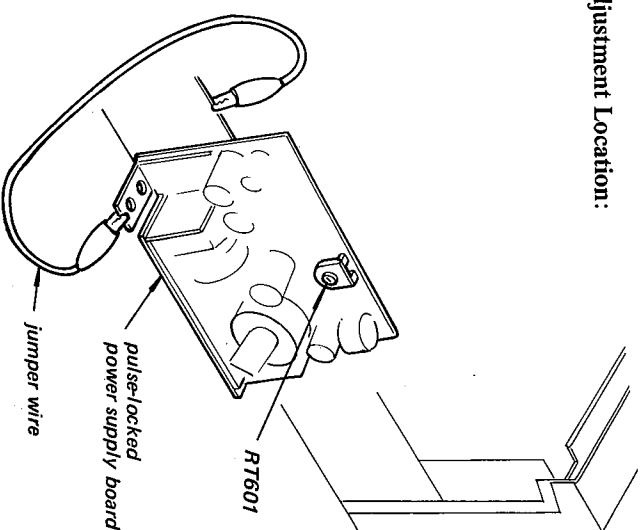


DC Voltage Adjustment

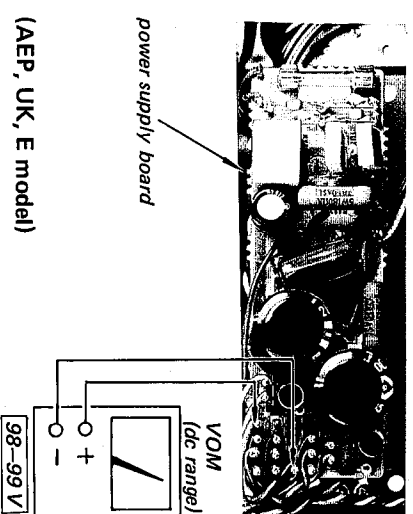
Procedure:

1. Connect a jumper wire.
2. Adjust RT601 for 98–99 V reading on the VOM.

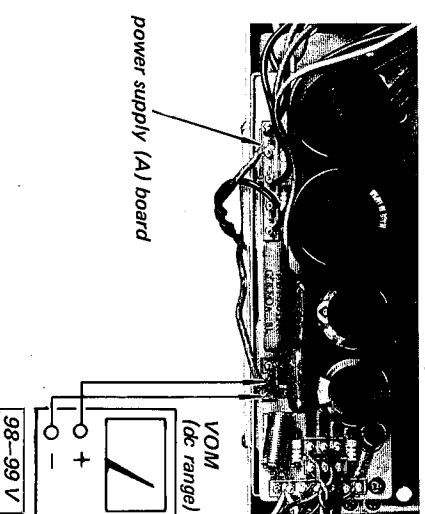
Adjustment Location:



(US, Canadian model)



(AEP, UK, E model)

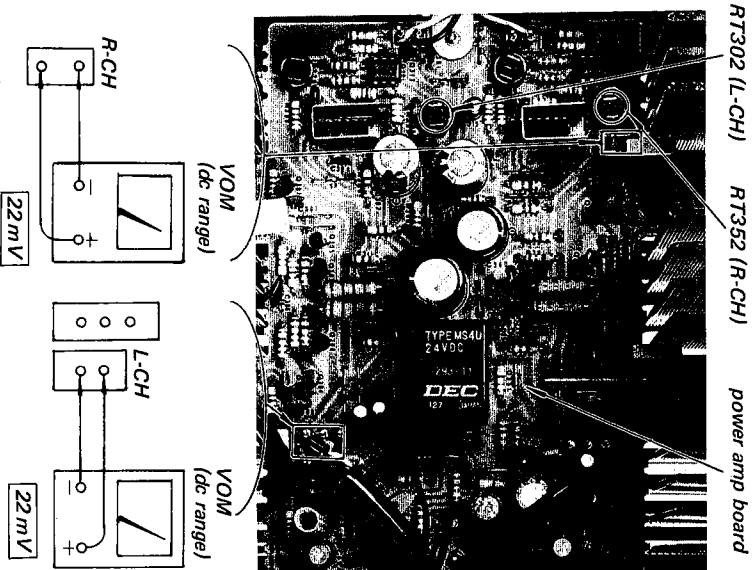


DC Bias Adjustment

Procedure:

Adjust RT302 (L-CH) and RT352 (R-CH) for 22 mV reading with no signal input.

Adjustment Location:



Meter Level Adjustment

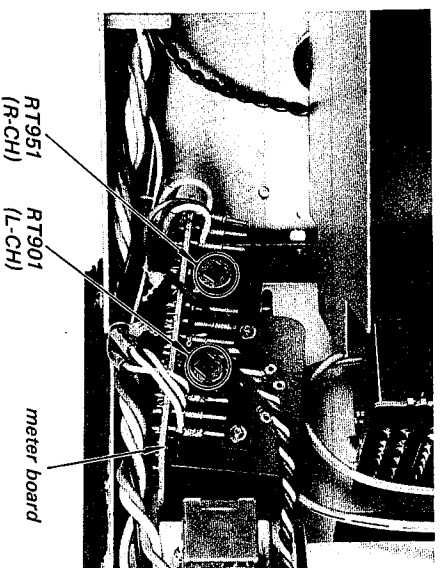
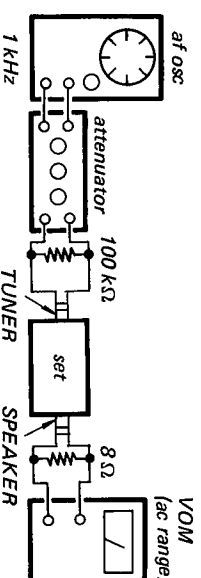
Setting:

FUNCTION switch: TUNER

Procedure:

1. Turn the VOLUME control fully clockwise.
2. Adjust the TUNER input level for 2.83 V (1 W) reading on the VOM.
3. Adjust RT901 (L-CH) and RT951 (R-CH) so that the power meters indicate 1 W.

Adjustment Location:



1. REPLACEMENT OF THE TRANSFORMERS IN THE PULSE-LOCKED POWER-SUPPLY CIRCUIT

The lead wire arrangement for each of T601-603 in the inverter circuit are shown in Figs. 1 and 2.

As the repair parts, T603 is formed by an iron core and a coil winding, but T601 and T602 are only iron core. Thus, if the coils are defective, arrange a new transformer as shown in Fig. 1. Note that the lead lengths must be exact. Also wind the coil carefully.

The lead wires ⑤ to ⑧ are as follows:

- lead wire diameter: ⑦ and ⑧ are of equal diameter
- ⑤ and ⑥ are of equal diameter
- ⑤ longer than ⑥
- ⑦ longer than ⑧

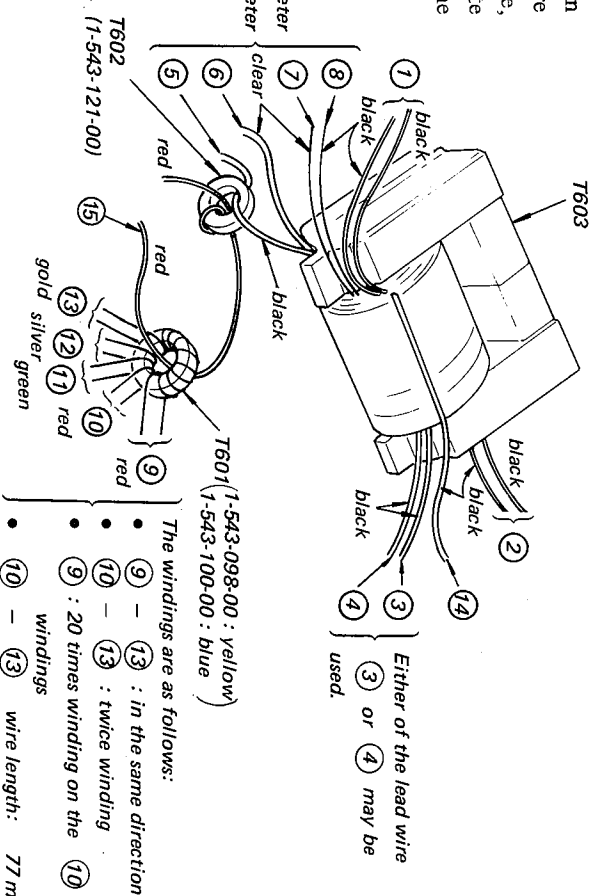


Fig. 1

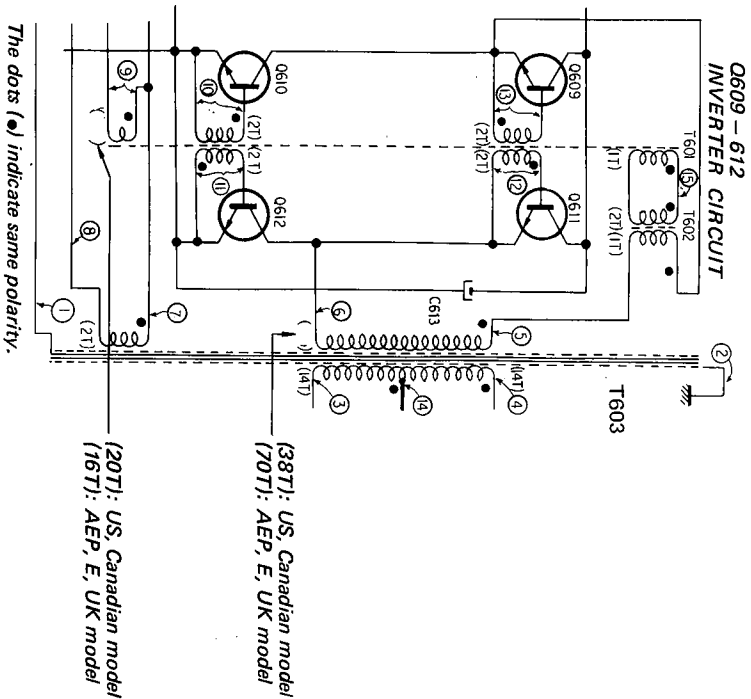


Fig. 2

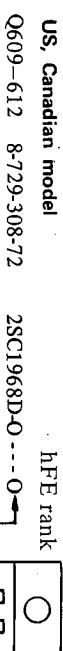
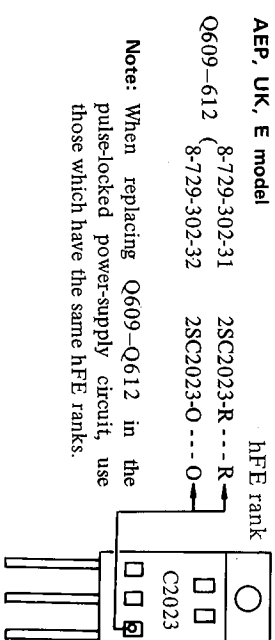
3. INVERTER CIRCUIT TRANSISTOR REPLACEMENT (Q609-612)

1) Be sure that there are no bits of solder and wire ends on the places marked *2 in Fig. 3.

2) Proceed the following items surely when replacing the transistors (Q609-612).

* Apply thermal compound coat to the positions marked *1 and *2 in Fig. 3 before mounting the transistors.

* Lay the F-shaped plate flat to ensure uniform contact with all 4 transistors (see Fig. 4).



2. PULSE-LOCKED POWER SUPPLY BOARD REPAIRING

This set has a pulse-locked power-supply circuit which is quite different from a conventional power-supply circuit. The pulse-locked power-supply directly rectifies and smooths the ac input power to produce the higher dc voltages required in the power supply circuit. When servicing this set, note the following.

1) To prevent unwanted radiation due to pulse signals in the pulse-locked power-supply circuit, the pulse-locked power-supply board is shielded by the aluminum diecast box.

2) The negative circuit of the secondary rectifier in the pulse-locked power-supply circuit is grounded by screws in the aluminum diecast box. When checking the pulse-locked power-supply board out of the box, use a jumper wire as shown.

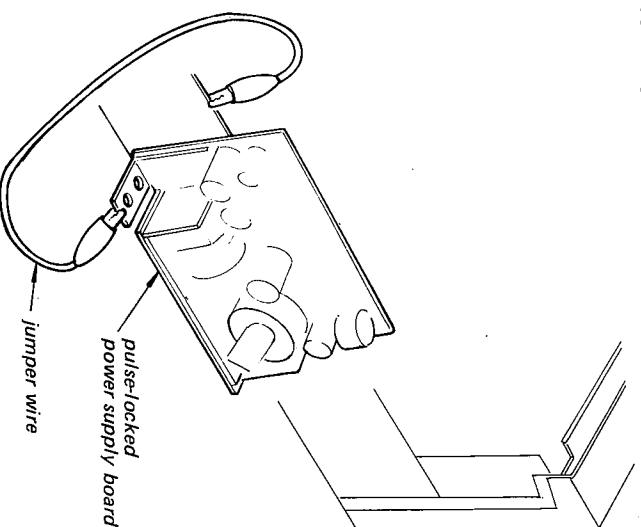


Fig. 3

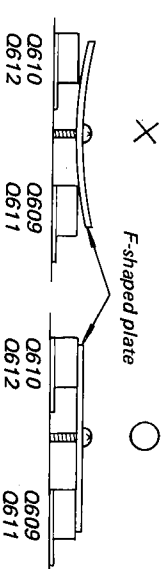
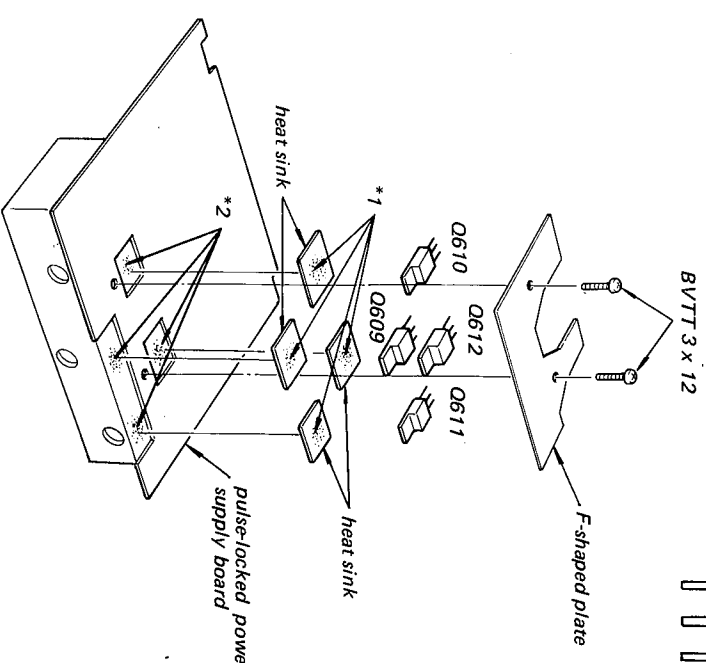
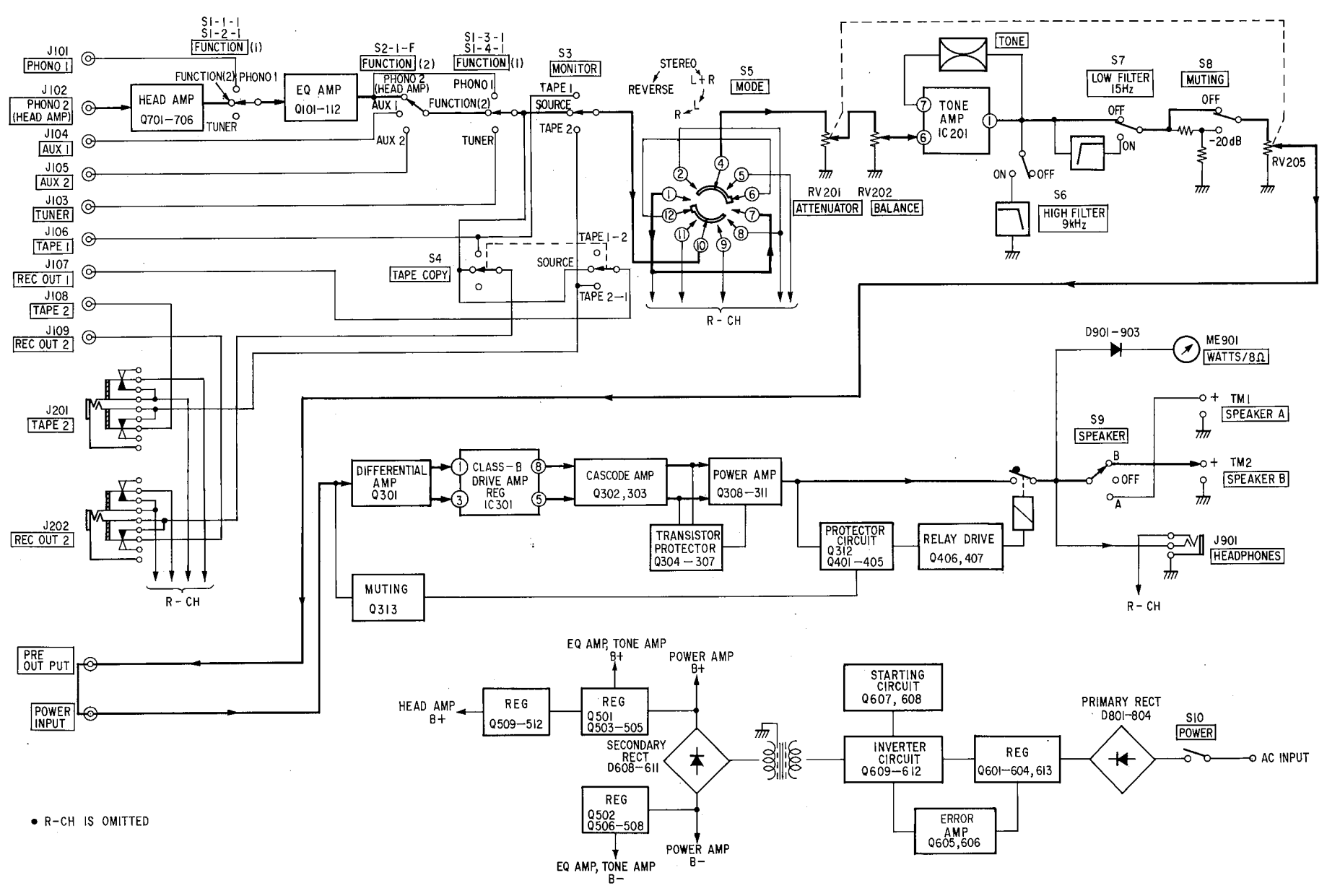


Fig. 4

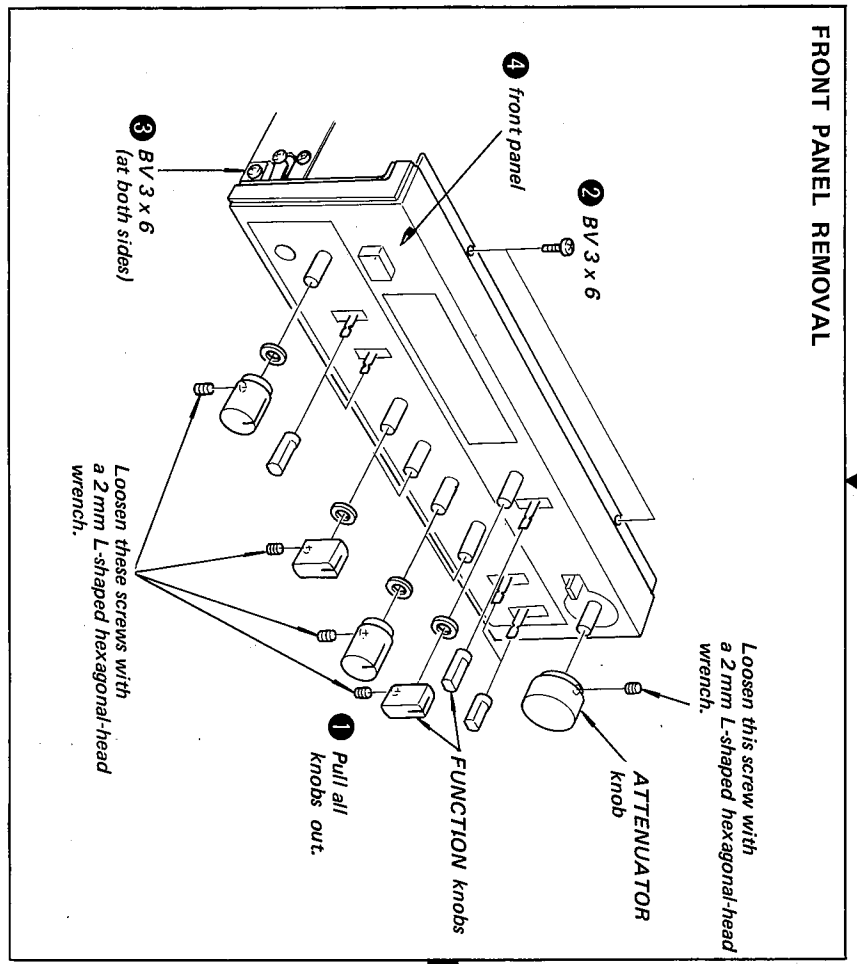
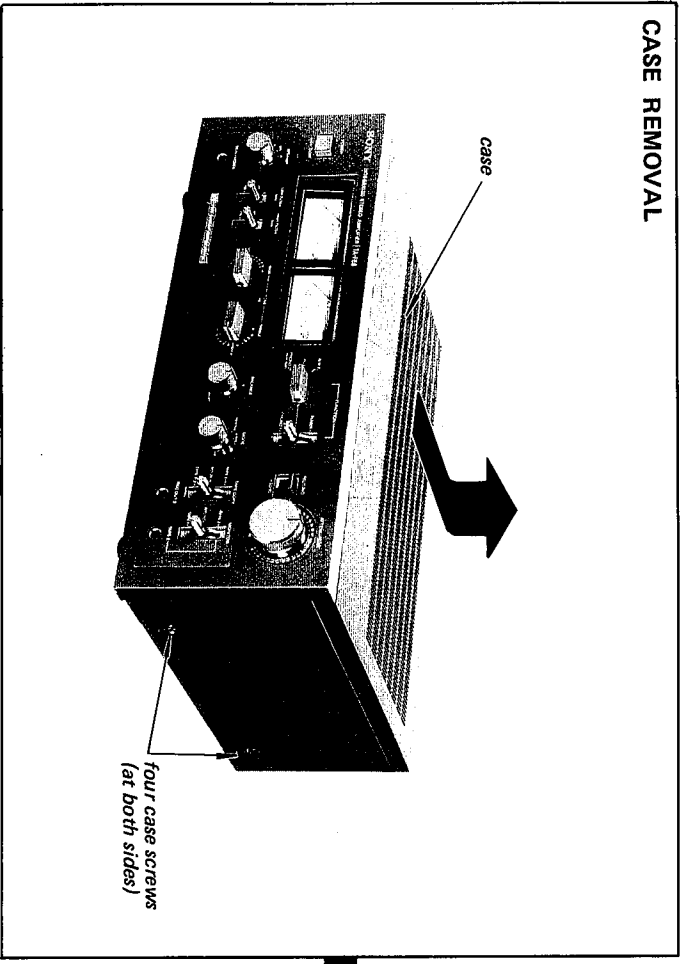
SECTION 1
BLOCK DIAGRAM



TA-F6B TA-F6B

• Follow the disassembly procedure in the numerical order given.

SECTION 2
DISASSEMBLY

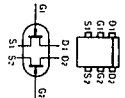


SECTION 4
DIAGRAMS

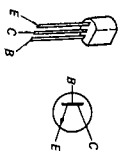
• Replacement Semiconductors

For replacement, use semiconductors except in ().

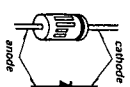
Q101, 151: 2SK97



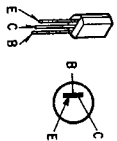
Q110, 160: 2SD667
Q510: 2SC1475 (2SC1670)



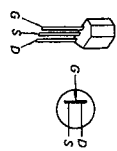
D102, 103: EOB01-26 (EOA01-26R)
D152, 153: EOB01-202
D201, 202: EOB01-21 (EOA01-21R)
D251, 252



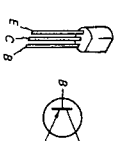
Q102, 103, 106, 108
Q152, 153, 156, 158
Q705, 706, 755, 756 } : 2SA872E (2SA872)



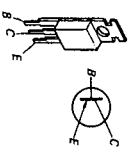
Q501, 502: 2SK42-4 (2SK42)



Q503: 2SC1061

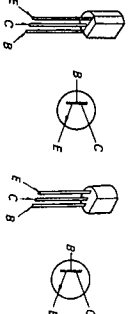


Q508: 2SA671

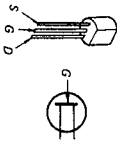


Q104, 154: 2SK23A-840 (blue) (2SK23A)

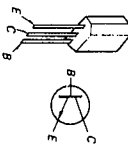
Q504, 505: 2SC1775F (2SC1890)
Q511, 512



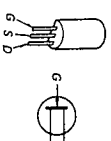
Q105, 155, 509: 2SK30A



Q701-704: 2SC1637-1 (2SC1637)
Q751-754



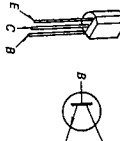
Q107, 112: 2SK43-4 (2SK43)
Q157, 162



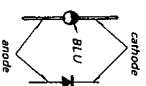
IC201, 251: HA1457



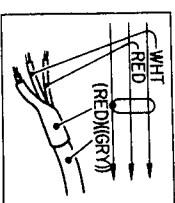
Q109, 159: 2SC1775E (2SC1775)



D101, 151: MV12N



Note:
• Color code of sleeving over the end of the jacket.



• : parts extracted from the component side.
• : B+ pattern
• : B- pattern

4-1. EQ AMP BOARD MOUNTING DIAGRAM
— Conductor Side —

D	Q
153 152 102	161 159 160
151	158 155 156
	152 157 153
	154 151
103	162
	112
	104
101	101 107 103 102
	105 106 108
	109
	111 110

