

# A.G.Tannenbaum

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## **Electronic Service Data**

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**SANSUI**

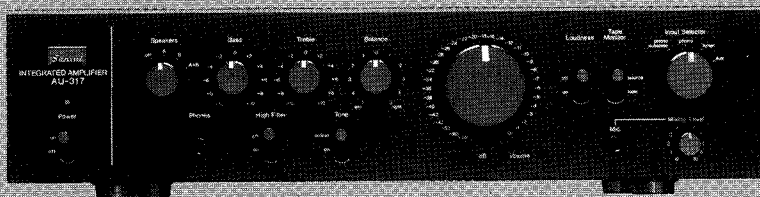
AU-317  
INTEGRATED STEREO AMPLIFIER



# SERVICE MANUAL

## INTEGRATED STEREO AMPLIFIER

# SANSUI AU-317



## SPECIFICATIONS

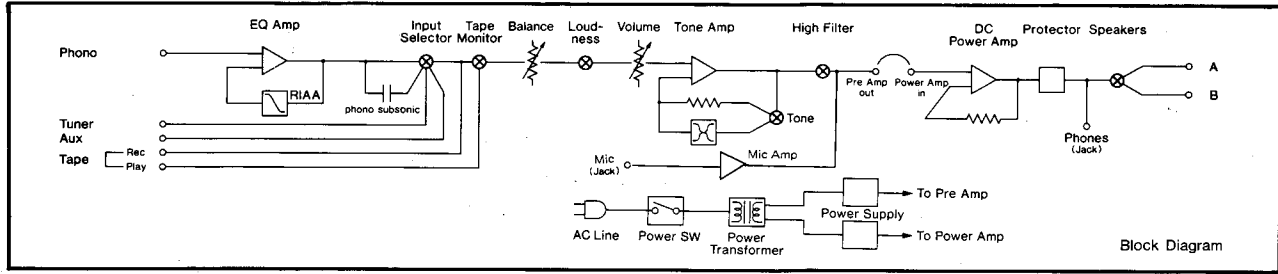
<b>Power output</b>	Min. RMS, both channels driven, from 20 to 20,000 Hz, with no more than 0.03% total harmonic distortion 50 watts per channel into 8 ohms
<b>Load impedance</b>	8 ohms
<b>Power bandwidth</b>	20 to 20,000 Hz at or below rated min. RMS power output and total harmonic distortion
<b>Total harmonic distortion</b>	less than 0.03% at or below rated min. RMS power output
<b>Intermodulation distortion</b>	(70 Hz: 7 kHz = 4:1 SMPTE method) less than 0.03%
<b>Frequency response (at 1 watt) (POWER AMP IN)</b>	DC to 200,000 Hz +0 dB -2.5 dB
<b>Damping factor</b>	approximately 70 at 8 ohms load
<b>RIAA curve deviation (PHONO)</b>	+0.2 dB -0.2 dB (20 to 20,000 Hz)
<b>Input sensitivity and impedance (1 kHz, for rated power output)</b>	PHONO . . . . . 2.5 mV/47 kilohms (Max. input capability 200 mV at 1 kHz, less than 0.008% total harmonic distortion)
	MIC . . . . . 8 mV/47 kilohms
	AUX, TAPE PLAY . . . . . 150 mV/47 kilohms
	POWER AMP IN . . . . . 1 V/47 kilohms
<b>Output level (1,000 Hz)</b>	TAPE REC . . . . . 150 mV
	PRE OUT . . . . . 1 V
<b>Channel separation (1 kHz, at rated power output)</b>	PHONO . . . . . better than 65 dB
	AUX . . . . . better than 73 dB
<b>Hum and noise (short-circuit, A-network)</b>	PHONO . . . . . 77 dB
	AUX . . . . . 100 dB
<b>Controls</b>	BASS . . . . . ±11 dB (50 Hz)
	TREBLE . . . . . ±10 dB (15 kHz)
	PHONO SUBSONIC . . . . . -3 dB (13 Hz), 6 dB/oct
	HIGH FILTER . . . . . -3 dB (7 kHz), 6 dB/oct
	LOUDNESS (VOLUME control) -30 dB
	. . . . . 9 dB at 50 Hz
	. . . . . 7 dB at 10 kHz
<b>Power requirements</b>	Power voltage . . . . . 100, 120, 220, 240V (50/60 Hz)
	For U.S.A. & Canada . . . . . 120 V (60 Hz)
<b>Power consumption</b>	Maximum consumption . . . . . 365 watts
	Rated consumption . . . . . 215 watts 265 VA
<b>Dimensions</b>	430 mm (16-15/16") W 110 mm (4-3/8") H 340 mm (13-3/8") D
<b>Weight</b>	9.7 kg (21.4 lbs) net 11.0 kg (24.3 lbs) packed

\* Design and specifications subject to changes without notice for improvements.

**Sansui**

SANSUI ELECTRIC CO., LTD.

# 1. BLOCK DIAGRAM



# 2. ADJUSTMENTS

## 1. Driver Circuit Board Adjustments (Refer to Fig. 2-1 below)

- Note: 1. Master Volume . . . . . Minimum  
 2. Room Temperature . . . . . 18°C ~ 28°C  
 (65°F ~ 83°F)

3. For adjustment, run the unit for more than 3 minutes after the power is switched on.

### 1. DC 0 V adjustment

	MEASURE OUTPUT	ADJUST	ADJUST FOR
L-CH	Speaker Terminal between (+) and (-)	F-2754 VR03, VR01	DC 0 V
R-CH	Speaker Terminal between (+) and (-)	F-2754 VR04, VR02	DC 0 V

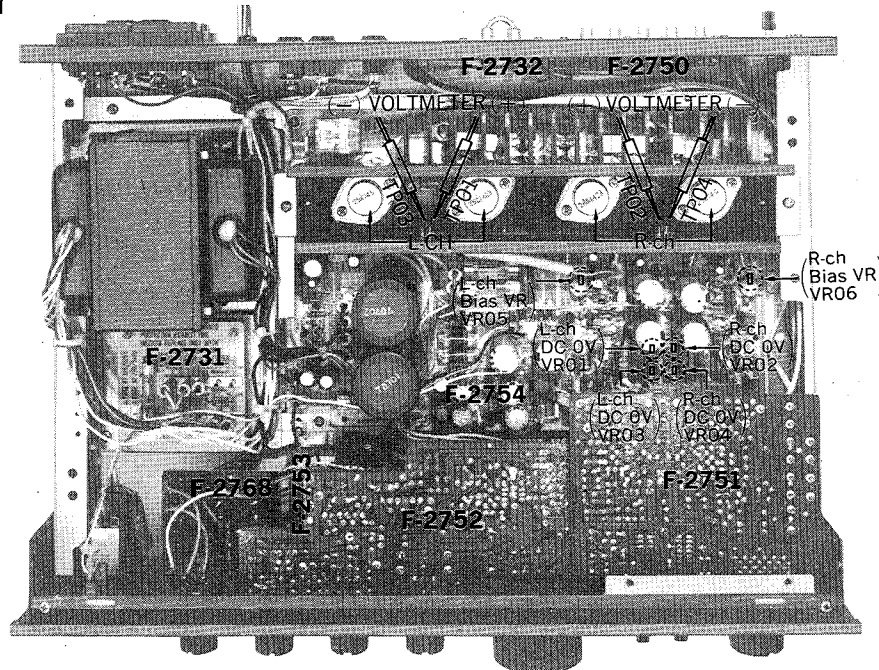
Note: At first, set VR01, VR03 for L-CH and VR02, VR04 for R-CH to center position, then make the rough adjustment by VR03, VR04 and fine adjust by VR01, VR02.

### 2. Bias Current adjustment

	MEASURE OUTPUT	ADJUST	ADJUST FOR
L-CH	Between TP01 (+) and TP03 (-)	F-2754 VR05	DC 10 mV
R-CH	Between TP02 (+) and TP04 (-)	F-2754 VR06	DC 10 mV

- Note: 1. By turning adjustment volumes, VR05 and VR06, counterclockwise, the bias current is decreased.  
 2. In case of adjusting or confirming bias current, avoid such a measurement that the power transistors are heated.

Fig. 2-1



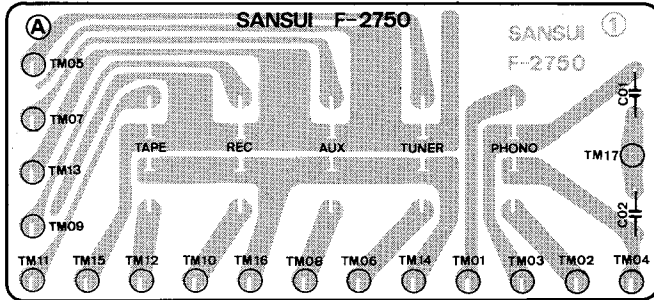
### 3. PARTS LOCATION & PARTS LIST

Since some of capacitors and resistors are omitted from parts lists in this Service Manual, refer to the Common Parts List for capacitors & resistors which was appended previously to each Sansui Manual.

#### 1) F-2750 Input Terminal Circuit Board

(Stock No. 7595701)

Conductor Side



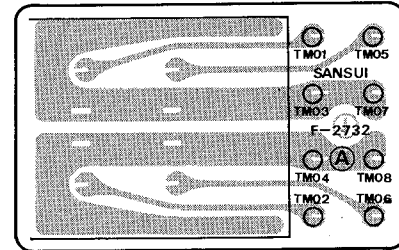
##### Parts List

Parts No.	Stock No.	Description
	2200510	10P Input Terminal

#### 2) F-2732 Pre-Main Connection Circuit Board

(Stock No. 7595991)

Conductor Side

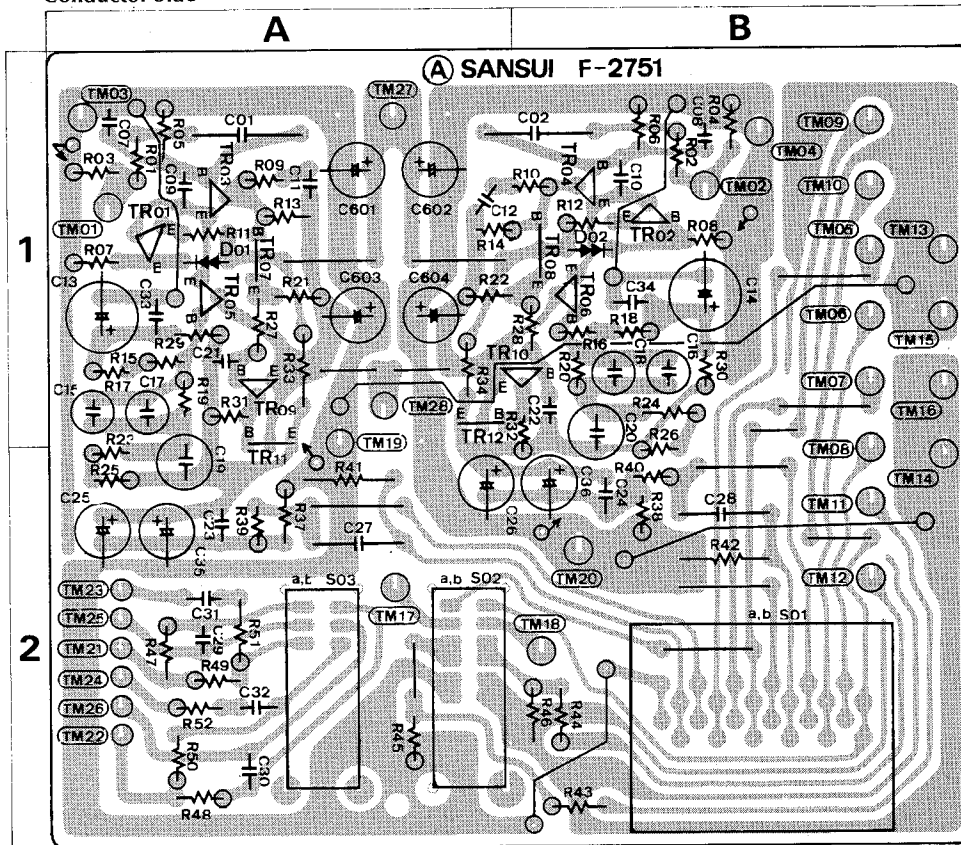


##### Parts List

Parts No.	Stock No.	Description
	2200500	4P Input Terminal

#### 3) F-2751 Equalizer Circuit Board (Stock No. 7551201)

Conductor Side

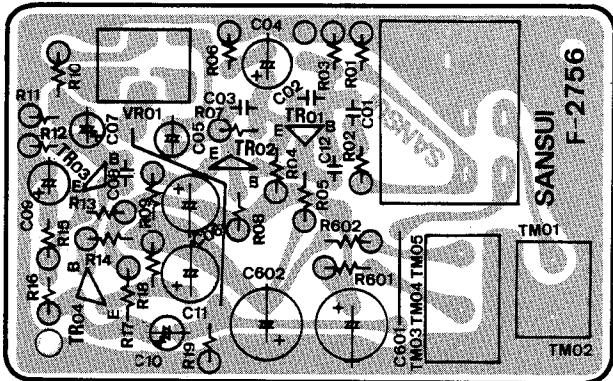


##### Parts List

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	
TR01,02	0300931	2SA872 E	1A,1B	C 11,12	0620101	100pF	1A	R 23,24	0231304	300kΩ	1/2W M.R.	2A,1B
TR03~06	0300900,1	2SA906 G,H	1A,1B	C 15,16	0620151	150pF	1A,1B	R 25,26	0231153	15kΩ		2A,2B
TR07~10	0306550	2SC1775 E	1A,1B	C 17,18	0625272	2700pF	1A,1B	R 33,34	0103392	3.9kΩ	1/2W C.R.	1A
TR11,12	0300760,1	2SA917 1,2	1A	C 19,20	0625103	10000pF	2A,1B	S 01	1102740	Rotary Switch, input selector		2B
D 01,02	0340120	VD1212 Varistor	1A,1B	R 15,16	0231561	560Ω	1A,1B	S 02	1171030	Lever Switch, tape monitor		2A
C 01,02	0602109	1μF 100V M.C.	1A,1B	R 17,18	0231220	22Ω	1A,1B	S 03	1171020	Lever Switch, loudness		2A
C 07,08	0620101	100pF 50V P.C.	1A,1B	R 19,20	0231273	27kΩ	1A,1B					

4) F-2756 Mic Amp Circuit Board (Stock No. 7610191)

Conductor Side

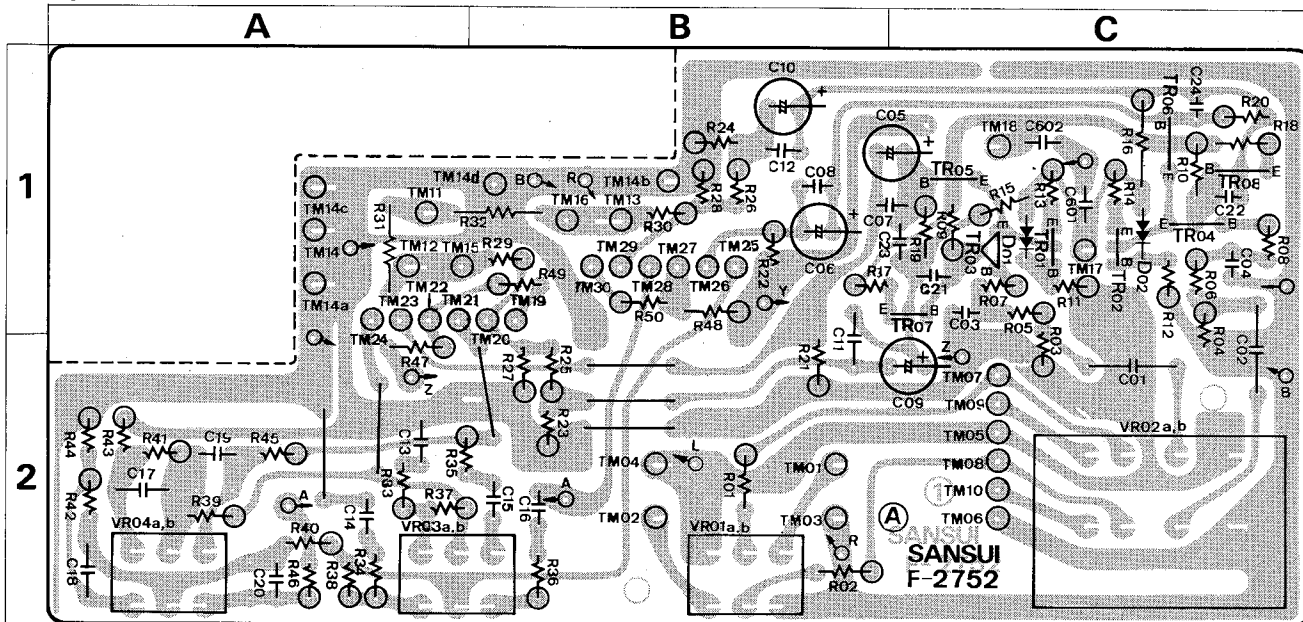


Parts List

Parts No.	Stock No.	Description
TR01	0300931	2SA872E
TR02	0306550	2SC1775E
TR03	0300931	2SA872E
TR04	0306550	2SC1775E
R 601, 602	0200121	120Ω 1/4W N.I.R.
VR01	1090270	20kΩ (A) Volume, mixing level
J 01	2430330	Jack, mic

5) F-2752 Tone Control Circuit Board (Stock No. 7562021)

Conductor Side



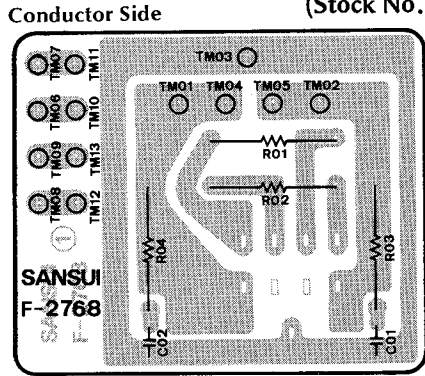
Parts List

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position
TR01, 02	0300931	2SA872 E	1C	D 01, 02	0340120	VD1212 Varistor	1C	VR02	1090290	250kΩ x 2 Volume	2C
TR03 ~ 06	0300900, 1	2SA906 G, H	} Transistor	VR01	1015320, 1	250kΩ (M.N) x 2 Balance Volume	2B	VR03	1015310, 1	100kΩ (C) x 2 Treble Volume	2A
TR07, 08	0306550	2SC1775 E		1C	VR04	1015310, 1	100kΩ (C) x 2 Bass Volume	2A			

Abbreviations

<b>C.R.</b> : Carbon Resistor	<b>N.I.R.</b> : Non-Inflammable Resistor	<b>C.C.</b> : Ceramic Capacitor
<b>S.R.</b> : Solid Resistor	<b>M.C.</b> : Mylar Capacitor	<b>Mi.C.</b> : Mica Capacitor
<b>Ce.R.</b> : Cement Resistor	<b>E.C.</b> : Electrolytic Capacitor	<b>O.C.</b> : Oil Capacitor
<b>M.R.</b> : Metal Film Resistor	<b>BP.E.C.:</b> Bi-Polar Electrolytic Capacitor	<b>P.C.</b> : Polystyrene Capacitor
<b>F.R.</b> : Fusing Resistor		<b>T.C.</b> : Tantalum Capacitor

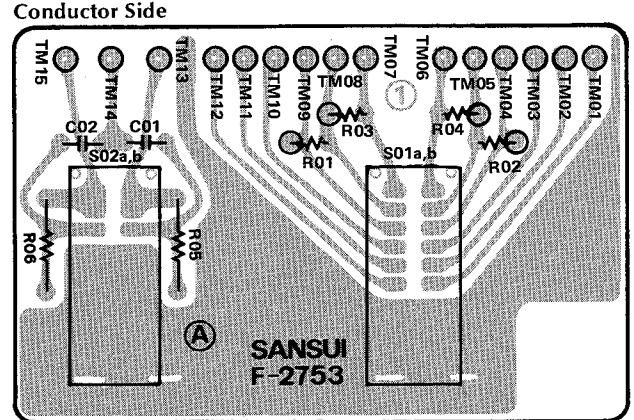
6) F-2768 Output Connection Circuit Board (Stock No. 7595711)



Parts List

Parts No.	Stock No.	Description
R 01, 02	0202221	220Ω 2W N.I.R.
R 03, 04	0105100	10Ω 2W C.R.
J 01	2430350	Jack, headphone

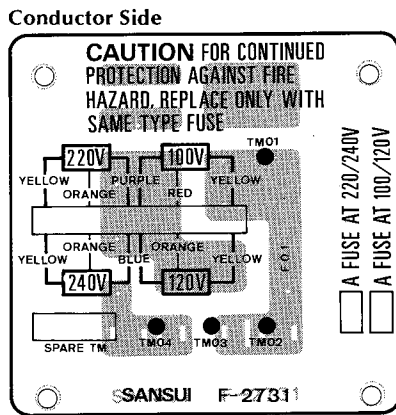
7) F-2753 Filter Circuit Board (Stock No. 7562031)



Parts List

Parts No.	Stock No.	Description
S 01	1171040	Lever Switch, tone defeat
S 02	1171030	Lever Switch, tape monitor

8) F-2731 Voltage Selector Circuit Board (Stock No. 7595721)



Parts List

Parts No.	Stock No.	Description
F 601	0432290 2310220	5A 125V AC Fuse Fuse Holder

● Figures

Connectors & Pin Ass'y

Connectors

Type A (3~10 pins)	Type B (2~6 pins)	Stock No
		2 Pins 2420450
		3 Pins 2420460
		3 Pins (R/D) 2420650
		4 Pins 2420470
		5 Pins 2420480
		6 Pins 2420490

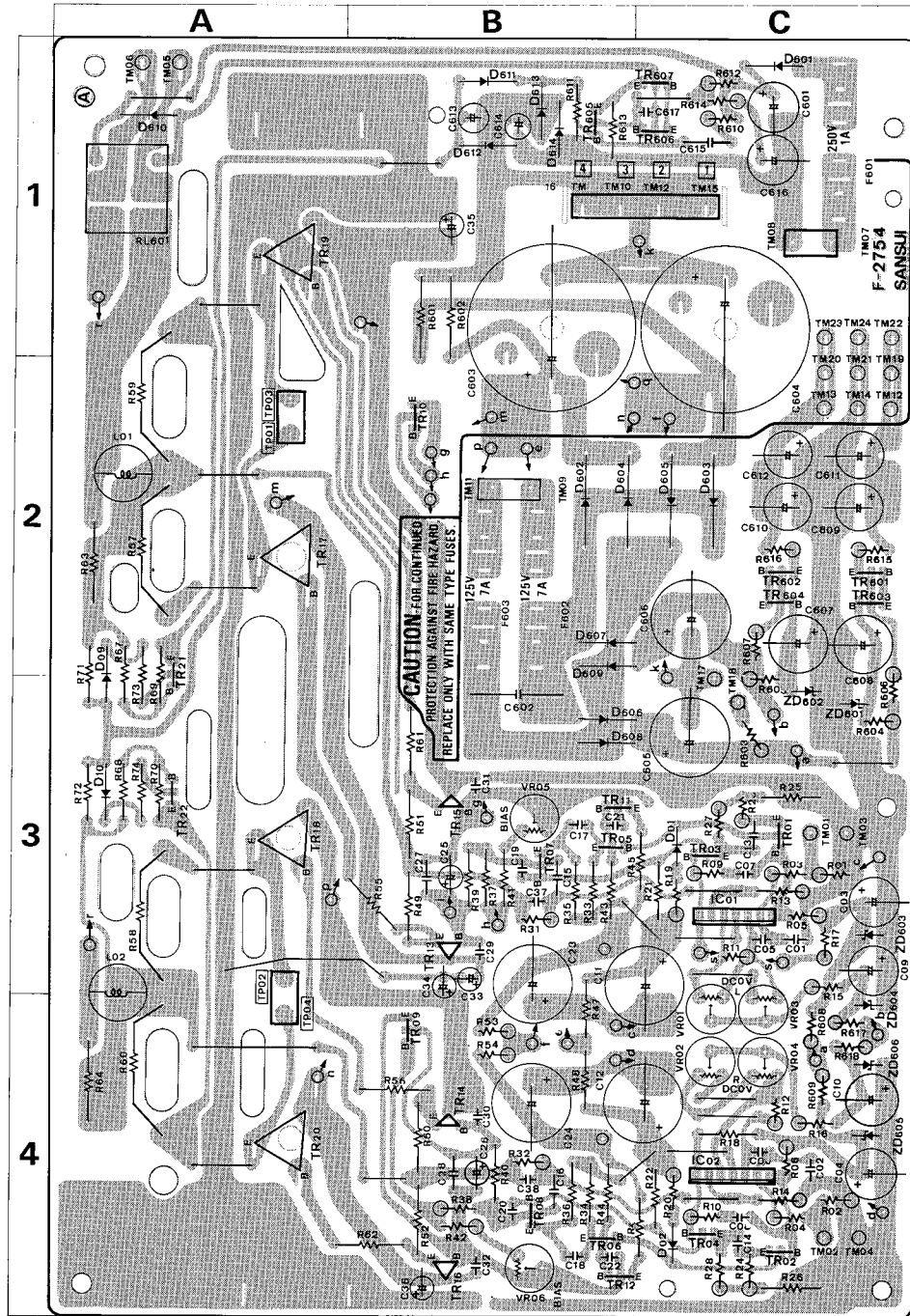
NOTE: Since stock number of female connectors (type B) with wires are not shown in each parts list of Complete circuit board, please refer to the above parts list when ordering the connector.

Pin Ass'y

Type A (3~10 pins)	Type B (3~10 pins)	Type C (3~10 pins)
Type D (2~6 pins)	Type E (2~6 pins)	Type F (2~6 pins)

9) F-2754 Power Amplifier Circuit Board (Stock No. 7571801)

Conductor Side

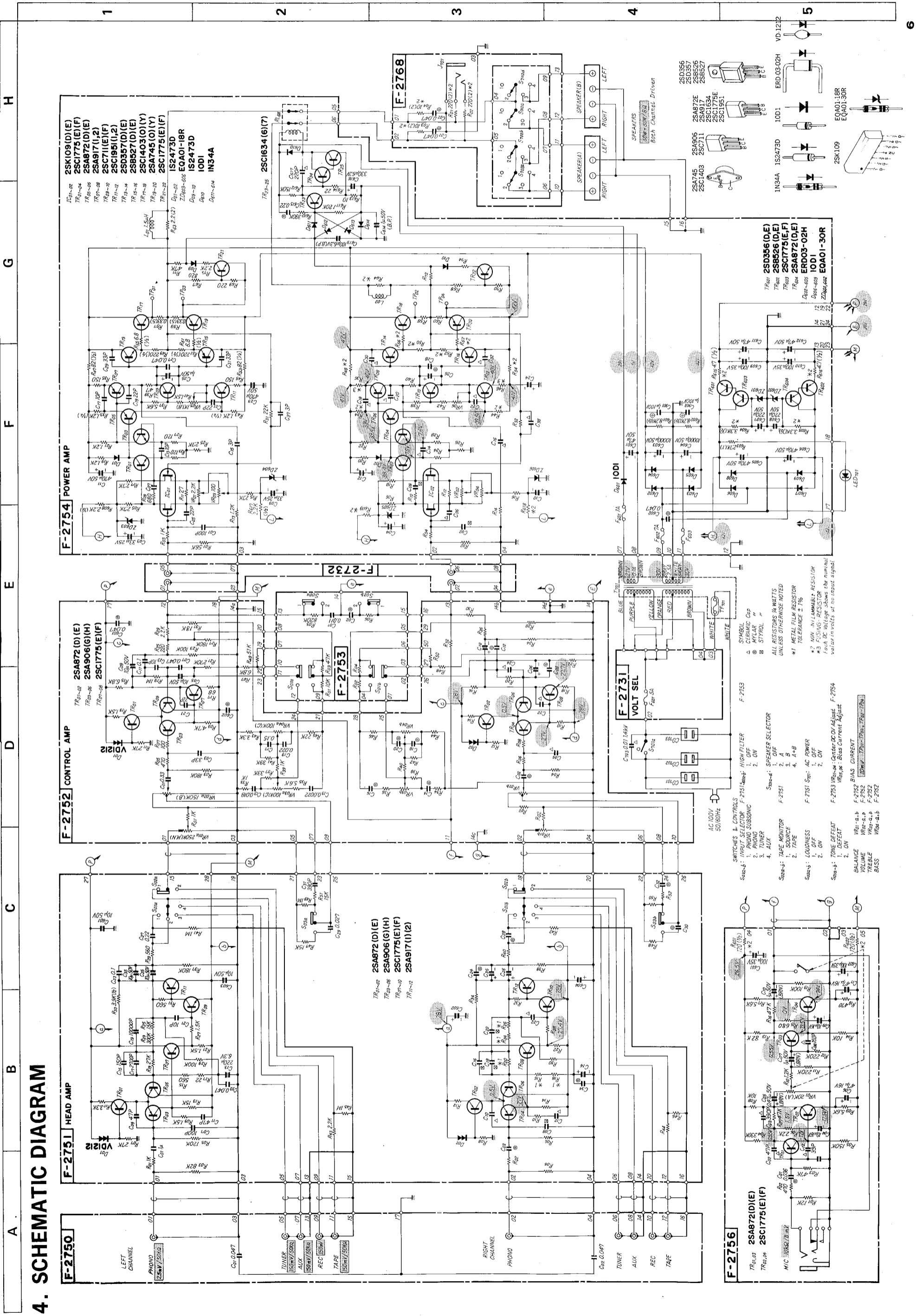


Parts List

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position
TR01 ~04	0306550	2SC1775 E.	3C,4C	D 601	0310340	10D1	1C	R 601, 602	0103822	8.2kΩ 1/8W C.R.	1B
TR05, 06	0300931	2SA872 E.	3B,4B	D 602 ~605	0311570	ERD03-02H	2B,2C	R 603	0105272	2.7kΩ 2W C.R.	3C
TR07, 08	0300760, 1	2SA917 1,2	3B,4B	D 606 ~610	0310340	10D1	3A,2B	R 604, 605	0200332	3.3kΩ	3C
TR09, 10	0305731, 2	2SC711 E.F.	4B,2B	D 611 ~614	0310400	1N34A	1B	R 606, 607	0200470	47Ω	2C,3C
TR11, 12	0306360, 1	2SC1951 1,2	3B,4B	ZD601, 602	0316110	EOA01-30R	3C	R 608, 609	0200222	2.2kΩ 1/8W N.I.R.	4C
TR13, 14	0308611, 2	2SD357 D.E.	3B,4B	ZD603 ~606	0316020	EOA01-18R	4C,3C	R 615, 616	0200479	47Ω	2C
TR15, 16	0303441, 2	2SB527 D.E.	3B,4B	C 01, 02	0620101	100pF 50V	3C,4C	R 617, 618	0200222	2.2kΩ	4C
TR17, 18	0306181, 2	2SC1403 O.Y.	2A,3A	C 07, 08	0620271	270pF 50V	3C,4C	L 01, 02	4210290	RF Coil 1.5μH	2A,3A
TR19, 20	0300611, 2	2SA745 O.Y.	1A,4A	C 602	0605477	0.047μF 250V M.C.	3B	RL01	1150400	Relay	
TR21, 22	0306550	2SC1775 E.	2A,3A	C 603, 604	0549114	10000μF 50V E.C.	2B,2C	VR01, 02	1034230	2.2kΩ (B)	4C
TR23 ~25	0306581, 2	2SC1634 6,7		C 901, 902	0602109	1μF 100V M.C.		VR03, 04	1034150	100Ω (B)	4C
TR601	0308451, 2	2SD356 D.E.	2C	R 47, 48	0200820	82Ω	4B	VR05, 06	1035070	1kΩ (B)	3B,4B
TR602	0303281, 2	2SB526 D.E.	2C	R 49 ~52	0200221	220Ω	4B	F 601	0432220	1A250V AC Fuse	1C
TR603	0306550	2SC1775 E.	2C	R 53, 54	0200820	82Ω	4B	F 602, 603	0432500	7A125V AC Fuse	1C
TR604	0300931	2SA872 E.	2C	R 55, 56	0200689	6.8Ω	3B,4B		2030050	Transistor Socket	
IC 01, 02	0370281, 2	2SK109 D.E.	IC	R 57 ~60	0135338	0.33Ω 5W Co.R.	2-4A		2310220	Fuse Holder (Large)	
D 01, 02	0311160	1S2473D	3C,4C	R 61, 62	0200689	6.8Ω 1/8W N.I.R.	3B,4B		2410650	2P Pin Ass'y Type D	
D 09, 10	0311160	1S2473D	Diode	R 63, 64	0202229	2.2Ω 2W N.I.R.	2A,4A				



**4. SCHEMATIC DIAGRAM**



La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.  
 Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.  
 Design and specifications subject to change without notice for improvements.

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- SWITCHES & CONTROLS**
- SW-1: INPUT SELECTOR F-2751
  - SW-2: PHONO SUBSWIC F-2751
  - SW-3: TUNER F-2751
  - SW-4: AUX F-2751
  - SW-5: TAPE MONITOR F-2751
  - SW-6: SOURCE F-2751
  - SW-7: TAPE F-2751
  - SW-8: LOUDNESS F-2751
  - SW-9: TONE DEFEAT F-2751
  - SW-10: DEFEAT F-2751
  - SW-11: BALANCE F-2751
  - SW-12: VOLUME F-2751
  - SW-13: TREBLE F-2751
  - SW-14: BASS F-2751
- SYMBOLS**
- CERAMIC CAP
  - △ MYLAR
  - STYROL
- ALL RESISTORS IN OHMS UNLESS OTHERWISE NOTED**
- \*1 METAL FILM RESISTOR TOLERANCE ± 1%
  - \*2 1/4W 5% TOLERANCE RESISTOR
  - \*3 FUSING RESISTOR
- Each DC voltage shows the nominal value in volts at no input signal.

