

# SERVICE MANUAL

INTEGRATED STEREO AMPLIFIER

**SANSUI AU-20000**



*Sansui*

SANSUI ELECTRIC CO., LTD.

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This service manual is designed for service engineers to repair, adjust, maintain and order the replacement parts of the AU-20000 correctly. When ordering the parts, use the stock number and parts name specifically referring to the Parts Location and Parts Lists. For general usage and maintenance of the unit, please refer to the Operating Instructions attached with the unit.

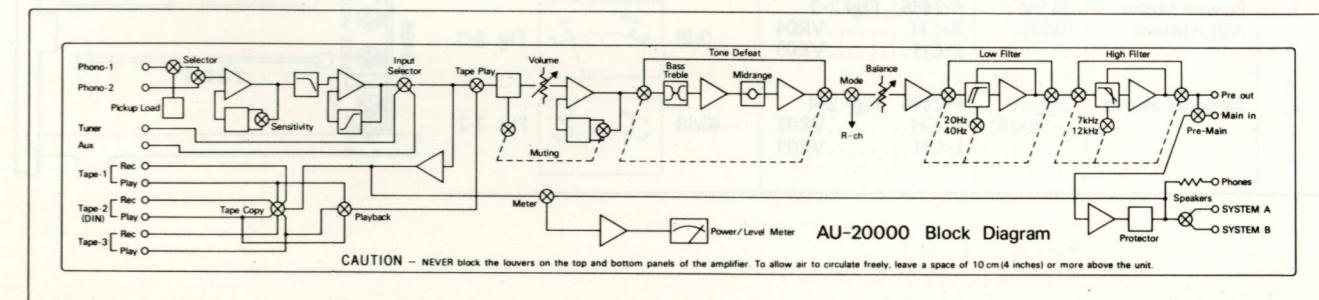
## 1. SPECIFICATIONS

### 1-1. Troubleshooting Chart

<b>POWER OUTPUT</b>	
Min. RMS, both channels driven, from 20 to 20,000Hz, with no more than 0.05% total harmonic distortion	
170 watts per channel into 8 ohms	
170 watts per channel into 4 ohms	
85 watts per channel into 16 ohms	
Min. RMS, both channels driven, at 1,000Hz, with no more than 0.05% total harmonic distortion	
180 watts per channel into 8 ohms	
170 watts per channel into 4 ohms	
<b>LOAD IMPEDANCE</b>	4, 8, 16 ohms (SYSTEM A or B)
<b>POWER BANDWIDTH</b>	20 to 20,000Hz at or below rated min. RMS power output and total harmonic distortion
<b>TOTAL HARMONIC DISTORTION</b>	less than 0.05% at or below rated min. RMS power output
<b>INTERMODULATION DISTORTION</b>	(70Hz:7kHz=4:1 SMPTE method) less than 0.05%
<b>FREQUENCY RESPONSE (at 1 watt)</b>	10 to 50,000Hz $\pm 0$ dB
<b>DAMPING FACTOR</b>	approximately 80 at 8 ohms load
<b>INPUT SENSITIVITY AND IMPEDANCE</b>	(1kHz for rated power output)
PHONO-1	1.5, 3, 6 mV/30, 50, 100 kilo-ohms
PHONO-2	1.5, 3, 6 mV/50 kiloohms (Max. input capability: 800 mV at 1 kHz, less than 0.1% total harmonic distortion and SENSITIVITY switch at 6 mV)
TUNER	130 mV/50 kiloohms
AUX	130 mV/50 kiloohms
TAPE-1, 2 PLAY(pin jacks)	130 mV/50 kiloohms
TAPE-2 REC/PLAY (DIN socket)	130 mV
MAIN IN	700 mV/50 kiloohms
<b>OUTPUT LEVEL (1,000Hz)</b>	
TAPE-1, 2, 3 REC (pin jacks)	130 mV
PRE OUT	30 mV
<b>CHANNEL SEPARATION (1kHz, at rated power output)</b>	700 mV
PHONO-1, 2	better than 55dB
TUNER	better than 60dB
AUX	better than 60dB
TAPE-1, 2, 3 PLAY	better than 60dB
MAIN IN	better than 65dB
<b>HUM AND NOISE (IHF)</b>	
PHONO-1, 2	better than 70dB
TUNER	better than 80dB
AUX	better than 80dB
TAPE-1, 2, 3 PLAY	better than 80dB
MAIN IN	better than 100dB
<b>CONTROLS</b>	
BASS	$\pm 10$ dB (30Hz)
MIDRANGE	$\pm 5$ dB (1 kHz)
TREBLE	$\pm 10$ dB (20 kHz)
LOW FILTER	-3dB (20, 40 Hz), 12dB/oct.
HIGH FILTER	-3dB (7 kHz), 6dB/oct.
MUTING	0, -10, -30dB
<b>POWER REQUIREMENTS</b>	
POWER VOLTAGE	100, 120, 220, 240V 50/60Hz
	120V (Usable 110~130V) (for U.S.A. & Canada only)
POWER CONSUMPTION	360 watts (rated)
	1,110 watts (max.)
DEMENSIONS	460 mm (18 $\frac{1}{8}$ ) W
	178 mm (7 $\frac{1}{16}$ ) H
	400 mm (15 $\frac{3}{4}$ ) D
WEIGHT	23.6 kg (52.0 lbs) net
	26.4 kg (58.2 lbs) packed

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

## BLOCK DIAGRAM



## 2. ADJUSTMENTS

### 2-1. Driver Circuit Board Adjustments

- Note: 1. Master Volume.....Minimum  
 2. Room Temperature .....10~35°C  
 3. For adjustment, run the unit for more than 5 minutes after the power is switched on.

STEP	SUBJECT	EQUIPMENT	MEASURE OUTPUT	ADJUST	ADJUST FOR	CONDITION
1.	DC 0V	DC Volt Meter	Speaker Terminal Fig. 3	F-2507 VR01 (Fig. 2)	0V ±10mV	VR02....Minimum (Counterclockwise) ※ 2)
2.	Bias Current	DC Volt Meter	F-2510 2-4 (Connector Pin) (Fig. 1)	F-2507 VR02 (Fig. 2)	35mV ※ 1)	$I_1 = \frac{V}{R_1 + R_2}$ $= \frac{35}{0.94} \approx 35\text{mA}$ $R_1, R_2 = 0.47\Omega$ $V = 35\text{mV}$

※ 1) Instead of measuring bias current, set the voltage to 35mV by VR02 between connector-pins 2 and 4 on both channels as Fig. 1, since there are no quick acting fuses in the power amplifier sections.

※ 2) On one channel, bias current,  $I_1$  is current which flows into one power transistor, 25C1585. Nemaly, total current on one channel =  $I_1 \times 3$

L-CH.....TR01, TR05, TR09  
 R-CH.....TR02, TR06, TR10

Fig. 1 Back Panel

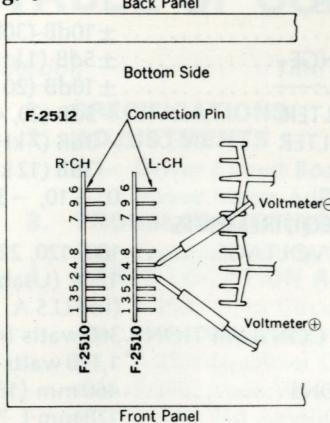


Fig. 2 Back Panel

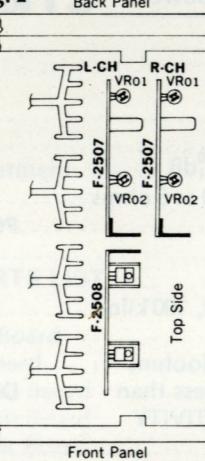
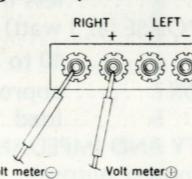


Fig. 3 Speaker Terminal

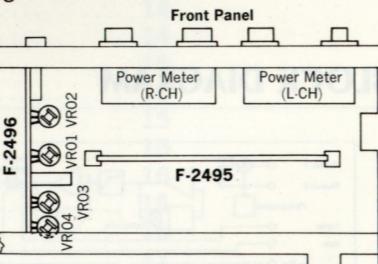


### 2-2. Power Meter Adjustments

- Note: 1. Room Temperature.....23±5°C  
 2. Speaker load.....8Ω  
 3. Meter Position .....0dB  
 4. Master Volume .....Max.  
 5. Input .....AUX  
 6. Input Signal .....Sine Curve (1kHz)  
 7. For adjustment, run the unit for more than 5 minutes after the power is switched on.

STEP	SUBJECT	OUTPUT LEVEL	ADJUST	METER POSITION
1.	Power Meter Adjustment	36.9V (0dB)	F-2496 Fig. 2-3 R-CH.....VR04 L-CH.....VR03	0dB Fig. 2-1
2.	Same as above	369mV (-40dB)	F-2496 Fig. 2-4 R-CH.....VR02 L-CH.....VR01	-40dB Fig. 2-2

Fig. 2-3



## 3. TROUBLESHOOTING

### 3-1. Troubleshooting Chart

Symptom	Cause
<b>1. Troubles on Power Supply Section</b>	
1-1. Voltage ±B not supplied to F-2496, F-2507	1) Defective AC line of power section 1. AC Fuse F701 open 2. Imperfect contact of AC switch, S702 3. R01 or R02 open on F-2511 4. Inoperative inrush absorber circuit
2) ±85V, Input voltage not supplied to F-2508	5. F01 or F02 open on F-2511 6. Defective D03 or D04 on F-2511 7. Defective D01 or D02 on F-2508 8. Defective TR01, TR02 or TR05~TR11 on F-2508 9. Defective ZD01 on F-2508
3) ±35V not supplied to F-2496	10. Defective D01 or D02 on F-2508 11. Defective TR03, TR04 or TR11~TR16 12. Defective ZD02 on F-2508
4) ±65V not supplied to F-2507	
<b>2. Troubles on Power Amplifier Section</b>	
2-1. Power Amplifier inoperative	1) AC Fuse, F701 opens 1. Power transistor shorted 2. TR01 opened on F-2497 3. TR10 or TR11 shorted on F-2507 4. TR08 or TR09 shorted on F-2507 5. D06 or D07 shorted on F-2507 6. TR02, TR06 or TR07 shorted on F-2507 7. VR01 or VR02 out of adjustment or defective on F-2507 8. TR01 shorted on F-2497
2-2. Improper Bias Current	
<b>3. Troubles on Power Meter Circuit</b>	1. VR01 or VR02 out of adjustment on F-2496 2. Defective IC01, IC02 on F-2496 3. Defective D01~D08 on F-2496 4. Defective TR01~TR04 on F-2496 5. Defective Meter switch S01 6. Defective Meter M701

**Symptom****Cause****4. Troubles on Speaker Protector Circuit**

- 1) Relay, RL01 not switched OFF  
     1. Defective D09~D14 on F-2511  
     2. Defective TR03 or TR04 on F-2511  
     3. Defective relay, RL01
- 2) RL01 & RL02 not switched OFF at the moment when setting power switch to ON  
     4. Defective C08 on F-2511  
     5. Defective TR01 or TR02 on F-2511  
     6. Defective relay, RL02  
     7. RL01 inoperative due to defective D17 on F-2511
- 3) When power transistors overheat protector relay RL01 inoperative  
     8. Defective posistor PR01 on F-2509
- 4) Protector indicator lamp not lighted  
     9. Defective TR05 on F-2511  
     10. Defective LED, LD701

\*As each voltage of speaker protector circuit floats from chassis, it can not be measured to the earth point.

**5. Troubleshooting on Pre Amp. Section**

\*(Input Signal.....AUX or PHONO Input Terminal)

**5-1. No signal from output terminal**

- 1) Inoperative Power Amp. when setting PRE-MAIN separate switch to SEPARATED  
     1. Power Amp. inoperative  
     (Input signal.....MAIN-IN Terminal)
- 2) Operative Power Amp. when setting PRE-MAIN separate switch to SEPARATED  
     2. Pre Amp. inoperative  
     (Input signal.....MAIN-IN Terminal)

**5-2. AUX inoperative**

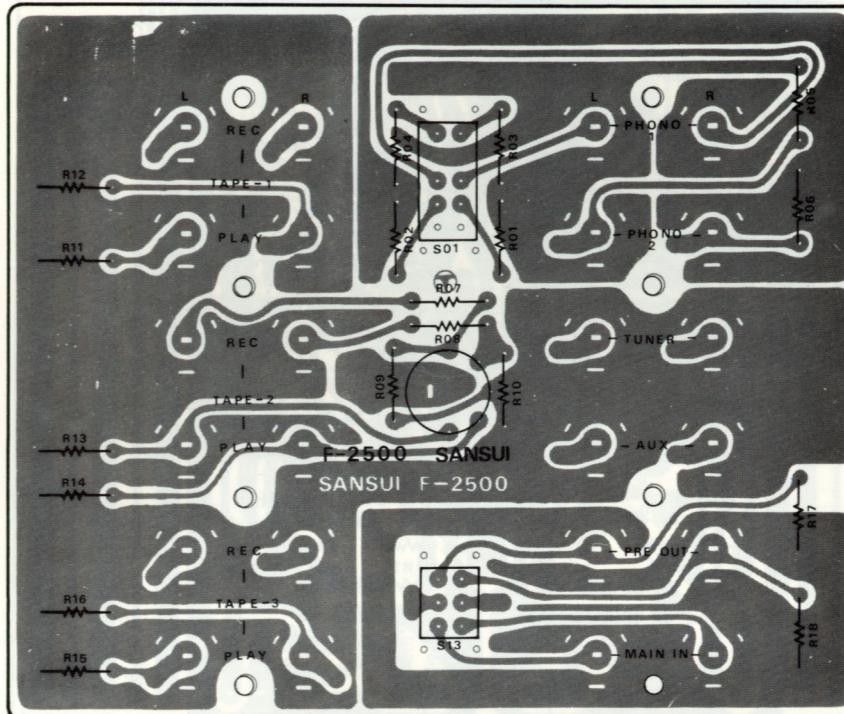
- 1) Inoperative Pre Amp. when setting Tone push switch to IN  
     1. Defective Tone push switch S01 on F-2496  
     2. Defective TR01~TR16 on F-2495
- 2) Inoperative Pre Amp. when setting Tone push switch to defeat  
     3. Defective TR01~TR04 on F-2503  
     4. Defective TR01~TR04 on F-2498
- 3) Inoperative on AUX of Input Selector switch  
     5. Defective Input Selector switch, S01 on F-2502  
     6. Defective TAPE PLAY switch, S02 on F-2502  
     7. Defective Muting switch, S03 on F-2502  
     8. Defective TR01~TR08 on F-2505

**5-3. Filter inoperative**

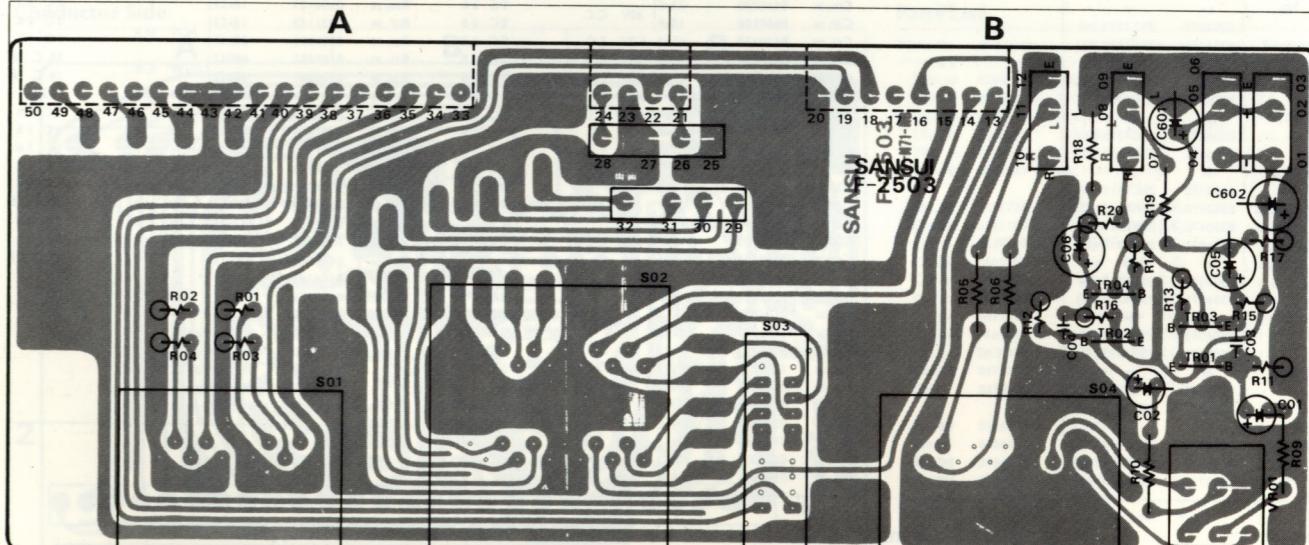
- 1) Low filter inoperative  
     1. Defective low filter switch, S02 on F-2504
- 2) High filter inoperative  
     2. Defective high filter switch, S01 on F-2504

**5-4. PHONO inoperative**

1. Defective Pickup Load switch, S01 on F-2500  
     2. Defective Phono switch, S703  
     3. Defective TR01~TR16 on F-2501

**4. PARTS LOCATIONS AND PARTS LISTS****4-1. F-2500 Input Circuit Board (Stock No. 7593641)****Conductor Side****Parts List**

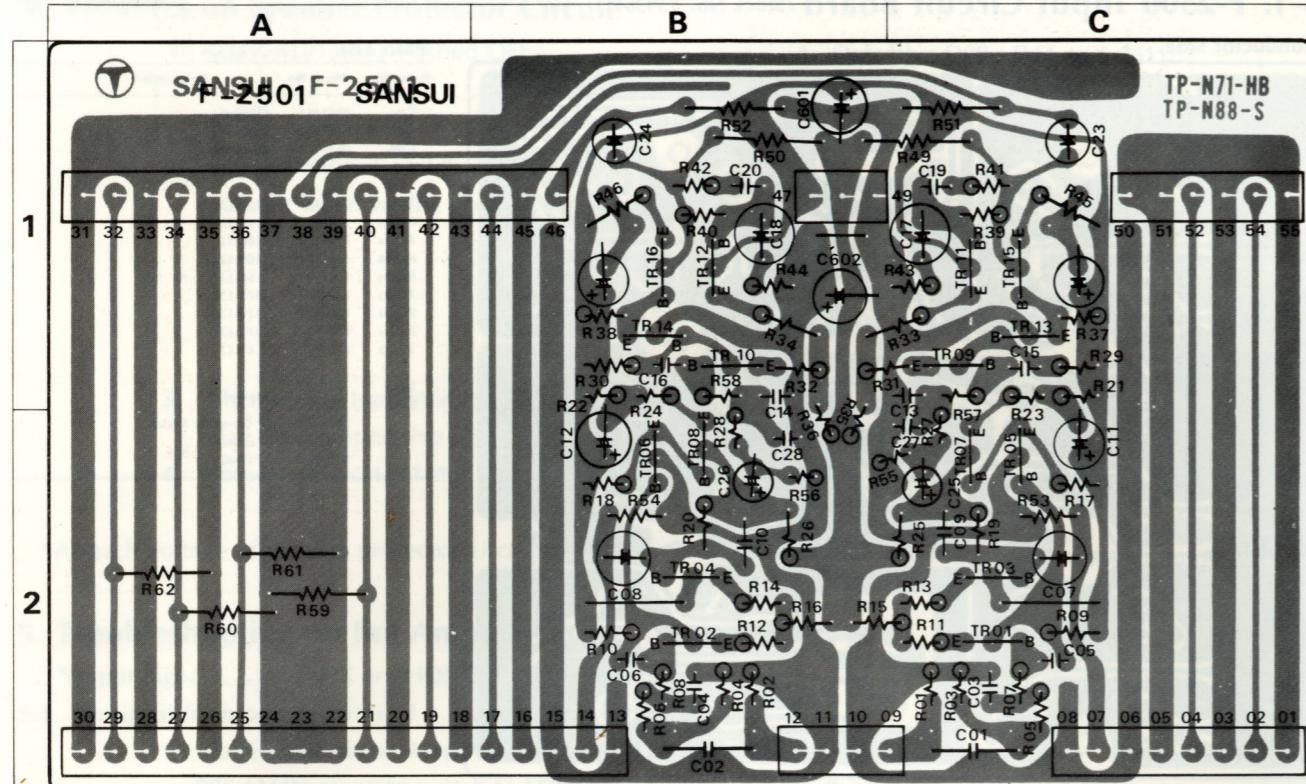
Parts No.	Stock No.	Description
C601	0657473	47000 pF
C602	0657473	47000 pF
C603	0657473	47000 pF
C604	0657473	47000 pF
R01, 02	0107104	100kΩ
R03, 04	0107393	39kΩ
R05, 06	0107104	100kΩ
R07, 08	0107104	100kΩ
R09, 10	0107683	68kΩ
R11, 12	0107474	470kΩ
R13, 14	0107474	470kΩ
R15, 16	0107474	470kΩ
R17, 18	0107473	47kΩ
S01	1110290	Slide Switch
S02	1110280	SP Connector Socket
	2090030	1P (white)
	2430260	1P (Red) Jack
	2430270	1P (Red)

**4-2. F-2503 Tape Copy Circuit Board (Stock No. 7593661)****Conductor Side****Parts List**

Parts No.	Stock No.	Description	Position
TR01, 02	0300470, I	2SC726 (F, G)	B
TR03, 04	0306270, I	2SC1708 F, G)	B
C01, 02	0519102	3.3μF 50V E.C.	B
C03, 04	0660151	150μF 50V C.C.	B
C05, 06	0519106	4.7μF 60V	B
C601	0515100	10μF 50V	B
C602	0515100	10μF 50V	B
R01, 02	0231822	8.2kΩ ½W M.R.	A
R03, 04	0231392	3.9kΩ ½W M.R.	B
R05, 06	0107272	2.7kΩ	B
R09, 10	0107102	1kΩ	B
R11, 12	0106104	100kΩ	B
R13, 14	0106183	270kΩ	B
R15, 16	0106183	18kΩ	B
R17	0106104	100kΩ	B
R18	0107104	100kΩ	B
R19	0107561	560Ω	B
R20	0106561	560Ω	B
VR01	1015160	50kΩ (A) × 2 Variable Resistor	B
S01	1101730	SRA-1-2-3, SRA-2-4-4	A
S02	1102670	Rotary Switch	A
S03	1170960	SLS Lever Switch	B
S04	1101720	SRA-1-2-5	B
	2410580	3P (D Type) Pin Ass'y	

#### 4-3. F-2501 Equalizer Circuit Board (Stock No. 7550801)

Conductor Side



## Parts List

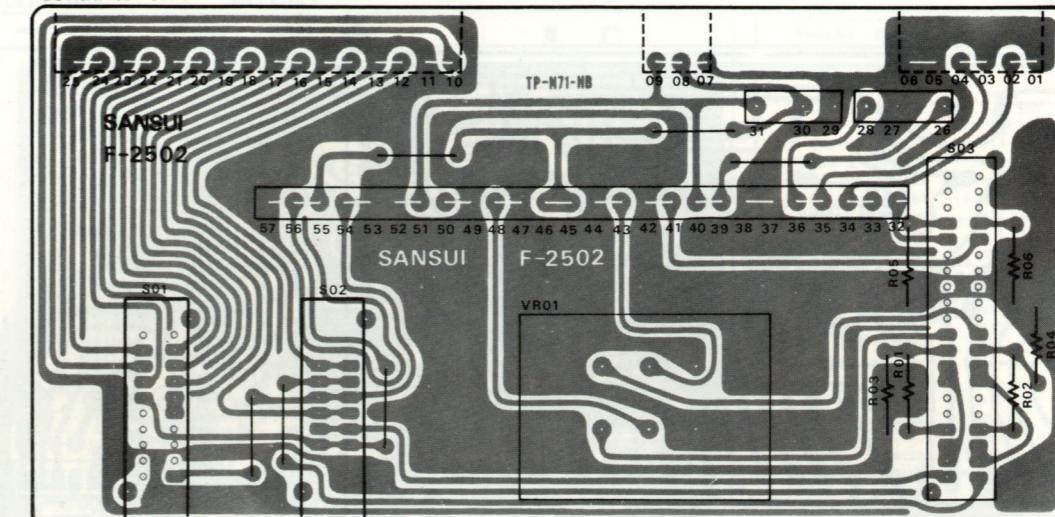
Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position
TR01	0306071	2SC1313 (G)		C01, 02	0600228	0.22/ $\mu$ F 50V M.C.	2C, 2B	R23, 24	0106391	390 $\Omega$ 1/4W C.R.	1C, 1B
	0306072	2SC1313 (H)		C03, 04	0600330	33pF 50V	2C, 2B	R25, 26	0106183	18k $\Omega$ 1/4W C.R.	2C, 2B
TR02	0306071	2SC1313 (G)		C05, 06	0600100	10pF 50V	2C, 2B	R27, 28	0231153	15k $\Omega$ 1/2W M.R.	2C, 2B
	0306072	2SC1313 (H)		C07, 08	0503470	47/ $\mu$ F 6.3V E.C.	2C, 2B	R29, 30	0231823	82k $\Omega$ 1/2W M.R.	1C, 1B
TR03	0306071	2SC1313 (G)		C09, 10	0600100	10pF 50V	2C, 2B	R31, 32	0106681	680 $\Omega$ 1/4W C.R.	1B, C, 1B
	0306072	2SC1313 (H)		C11, 12	0510470	47/ $\mu$ F 6.3V E.C.	2C, 2B	R33, 34	0106681	680 $\Omega$ 1/4W C.R.	1B, C, 1B
TR04	0306071	2SC1313 (G)		C13, 14	0630476	0.0047/ $\mu$ F 50V P.C.	1C, 1B	R35, 36	0231334	330k $\Omega$ 1/2W M.R.	1, 2B
	0306072	2SC1313 (H)		C15, 16	0660330	33pF 50V C.C.	1C, 1B	R37, 38	0106223	22k $\Omega$ 1/4W C.R.	1C, 1B
TR05, 06	0300470, 1	2SA726 (F, G)	2C, 2B	C17, 18	0530476	47/ $\mu$ F 6.3V E.C.	1C, 1B	R39, 40	0231684	680k $\Omega$ 1/2W M.R.	1C, 1B
	0300470, 1	2SA726 (F, G)	2C, 2B	C19, 20	0630476	0.0047/ $\mu$ F 50V P.C.	1C, 1B	R41, 42	0231563	56k $\Omega$ 1/2W M.R.	1C, 1B
TR07, 08	0300470, 1	2SA726 (F, G)	Transistor	C21, 24	0533339	3.3/ $\mu$ F 25V E.C.	2C, 2B	R43, 44	0231123	12k $\Omega$ 1/4W C.R.	1C, 1B
	0306071	2SC1313 (G)		C25, 26	0533339	3.3/ $\mu$ F 25V E.C.	2C, 2B	R45, 46	0106101	100 $\Omega$ 1/4W C.R.	1C, 1B
TR09	0306072	2SC1313 (H)		C27, 28	0620221	220pF 50V P.C.	2C, 2B	R47, 50	0231472	4.7k $\Omega$ 1/4W M.R.	1B, C, 1B
	0306071	2SC1313 (G)		C40, 41	0515100	10/ $\mu$ F 50V E.C.	1B	R51, 52	0107473	47k $\Omega$ 1/4W C.R.	1C, 1B
TR10	0306072	2SC1313 (H)		C42, 43	0515100	10/ $\mu$ F 50V E.C.	1B	R53, 54	01231103	10k $\Omega$ 1/2W M.R.	2C, 2B
	0306071	2SC1313 (G)		R01, 02	0106224	220k $\Omega$ 1/4W C.R.	2C, 2B	R55, 56	0106224	220k $\Omega$ 1/4W C.R.	2B, C, 2B
TR11	0306072	2SC1313 (H)		R03, 04	0106224	220k $\Omega$ 1/4W C.R.	2C, 2B	R57, 58	0106332	3.3k $\Omega$ 1/4W C.R.	1C, 1B
	0306071	2SC1313 (G)		R05, 06	0106222	2.2k $\Omega$ 1/4W C.R.	2C, 2B	R61, 62	0107474	470k $\Omega$ 1/4W C.R.	2A
TR12	0306072	2SC1313 (H)		R07, 08	0106102	1k $\Omega$ 1/4W C.R.	2C, 2B	2410710	3P (A Type)		
	0306071	2SC1313 (G)		R09, 10	0231823	82k $\Omega$ 1/2W M.R.	2C, 2B	2410720	4P (A Type)		
TR13, 14	0306072	2SC1313 (H)		R11, 12	0106681	680 $\Omega$ 1/4W C.R.	2C, 2B	2410730	6P (A Type)		
	0306071	2SC1313 (G)		R13, 14	0106681	680 $\Omega$ 1/4W C.R.	2C, 2B	2410740	8P (A Type)		
TR15, 16	0300470	2SA726 (F, G)	1C, 1B	R15, 16	0231334	330k $\Omega$ 1/2W M.R.	2B, C, 2B	2410750	10P (A Type)		
	0306070, 1	2SA917 (1, 2)	1C, 1B	R17, 18	0106223	22k $\Omega$ 1/4W C.R.	2C, 2B				
TR17, 18	0306072	2SC1313 (H)		R19, 20	0231333	33k $\Omega$ 1/2W M.R.	2C, 2B				
	0306071	2SC1313 (G)		R21, 22	0106561	560 $\Omega$ 1/4W C.R.	1C, 1B				

\* Same rank transistors should be used in TR01, TR02, TR03, TR04, TR09, TR10, TR11 and TR12.

For example, in case that 2SC1313 (G) is used in TR01, TR02, use 2SC1313 (G) in TR03, TR04.

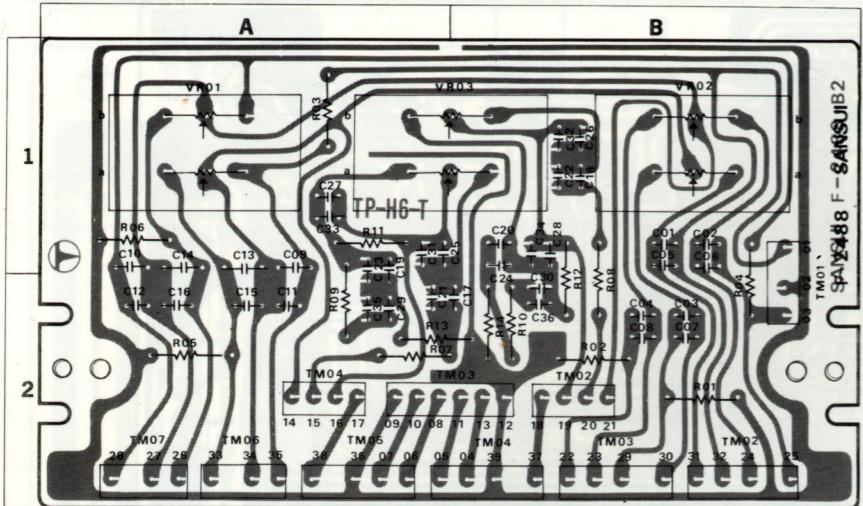
#### 4-4. F-2502 Main Volume Circuit Board (Stock No. 7593651)

Conductor Side



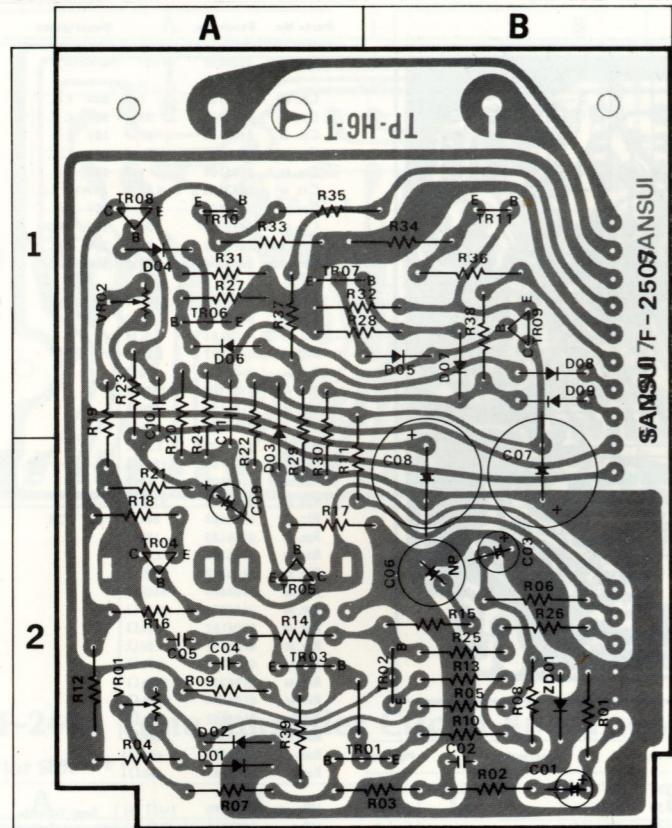
#### 4-6. F-2488 Tone Control Circuit Board (Stock No. 7561291)

Conductor Side



#### 4-10. F-2507 Driver Circuit Board (Stock No. 7571261)

Conductor Side



## Parts List

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position
※TR01	{ 0306270.1 or or	2SC1708 (F, G)	2 A, B	0306351	2SC1811-1 (2)		1 A
※TR02	{ 0306290.1 or or	2SC1400 (E, V)	2 B	0306411	2SC1720 (B)		
TR03	{ 0306270.1 2SA847 (F, G)	2SC1708 (F, G)	2 A	0306412	2SC1720 (V)		
TR04	{ 0306290.1 or or	2SC1400 (E, V)	2 A	0300700	2SA818 (O)		
TR05	{ 0306260 or or	2SC1628 (O)	Transistor 2 A	0300701	2SA818 (Y)		
TR06	{ 0306261 0305951.2	2SC1628 (Y)	1 A	0300700	2SA818 (O)		
TR07	{ 0300510.1 0306260	2SC945 (Q, P)	1 A, B	0300701	2SA818 (Y)		
※TR08	{ 0306261 or or	2SC1628 (Y)	1 A	0300701	2SC1811-1 (1)		

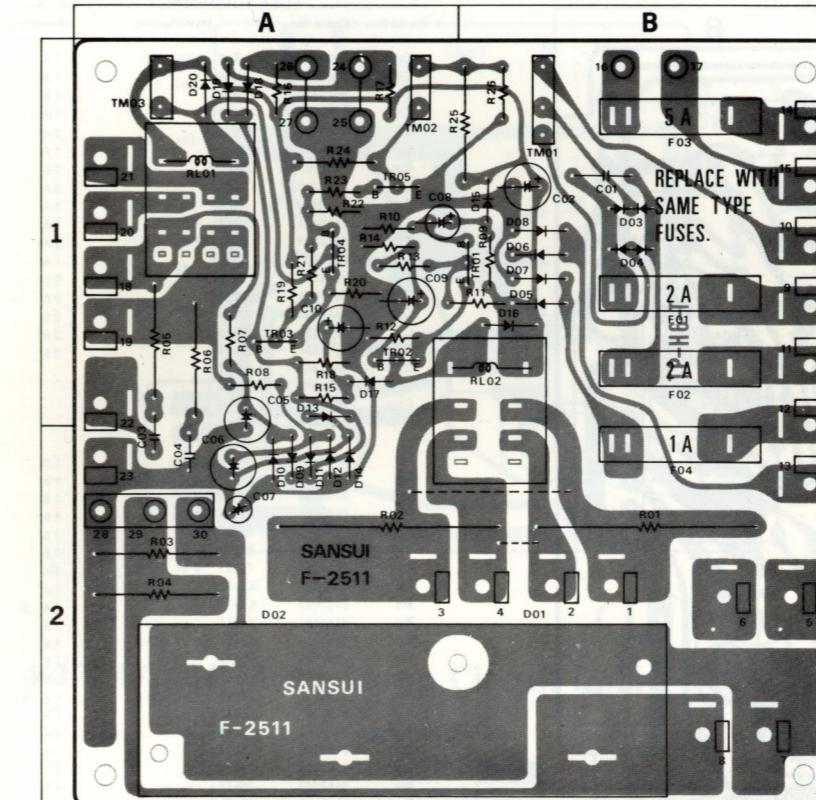
\* Same rank transistors should be used in TR01, TR02 and TR04, TR05 and TR08, TR09, TR10, TR11.

For example, in case that 2SA818 (O) is used in TR04, use 2SC1628 (O) in TR05.

Parts No.	Stock No.	Description	Position
D01	0311160	152473D	2 A
D02	0311160	152473D	2 A
D03	0340120	V1D212	1 A, B
D04	0311160	152473D	1 A
D05	0311160	152473D	1 B
D06	0311160	152473D	1 A
D07	0311160	152473D	1 B
D08	0311160	152473D	1 B
D09	0311160	152473D	1 B
ZD01	{ 0316490 or or or	RD-22E (B) RD-22E (C)	2 B
ZD01	{ 0316500	RD-22E (C)	
C01	0519102	3.3/ $\mu$ F 50V E.C.	2 B
C02	0660680	68 pF 50V C.C.	2 B
C03	0513330	33/ $\mu$ F 25V E.C.	2 B
C04	0660220	22 pF 50V C.C.	2 A
C05	0660209	2 pF 50V C.C.	2 A
C06	0530101	100/ $\mu$ F 6.3V E.C.	2 B
C07	0519903	100/ $\mu$ F 80V E.C.	1, 2 B
C08	0519903	100/ $\mu$ F 80V E.C.	1, 2 B
C09	0515339	3.3/ $\mu$ F 50V E.C.	2 A
C10	0657473	47000 pF 50V C.C.	1 A
C11	0657473	47000 pF 50V C.C.	1, 2 B
R01	0107224	220 k $\Omega$	2 B
R02	0107222	2.2 k $\Omega$	2 B
R03	0107102	1 k $\Omega$	2 A, B
R04	0107333	33 k $\Omega$	2 A
R05	0107123	12 k $\Omega$	2 B
R06	0103822	8.2 k $\Omega$	2 B
R07	0107104	100 k $\Omega$	2 A
R08	0107822	8.2 k $\Omega$	2 B
R09	0107182	1.8 k $\Omega$	2 A
R10	0107470	47 $\Omega$	2 B
R11	0107331	330 $\Omega$	1, 2 A, B
R13	0107470	47 $\Omega$	2 B
R14	0107681	680 $\Omega$	2 A
R15	0107182	1.8 k $\Omega$	2 B
R16	0107682	6.8 k $\Omega$	2 A
R17	0107333	33 k $\Omega$	2 A, B
R18	0107121	120 $\Omega$	2 A
R19	0107392	3.9 k $\Omega$	1, 2 A
R20	0107102	1 k $\Omega$	1, 2 A
R21	0107560	56 $\Omega$	1 W C.R.
R22	0107121	120 $\Omega$	1, 2 A
R23	0107391	390 $\Omega$	1 A
R24	0107391	390 $\Omega$	1, 2 A
R25	0107104	100 k $\Omega$	2 B
R26	0107821	820 $\Omega$	2 B
R27	0107122	1.2 k $\Omega$	1 A
R28	0107122	1.2 k $\Omega$	1 A, B
R29	0107103	10 k $\Omega$	1, 2 A
R30	0107103	10 k $\Omega$	1, 2 A
R31	0107222	2.2 k $\Omega$	1 A
R32	0107222	2.2 k $\Omega$	1 A, B
R33	0103470	47 $\Omega$	1 A
R34	0103470	47 $\Omega$	1 A, B
R35	0103479	4.7 $\Omega$	1 A, B
R36	0103479	4.7 $\Omega$	1 B
R37	0107331	330 $\Omega$	1 A
R38	0107331	330 $\Omega$	1 B
R39	0107103	10 k $\Omega$	2 A
R901	0107103	10 k $\Omega$	
VR01	1035350	4.7 k $\Omega$ (B)	Semi-Variable Resistor 2 A
VR02	1035310	1 k $\Omega$ (B)	
	2420290	2145-6A 6P (A Type)	Connector 2 A
	2420310	2145-10A 10P (A Type)	

#### 4-11. F-2511 Protector Circuit Board (Stock No. 7593711)

Conductor Side



## Parts List

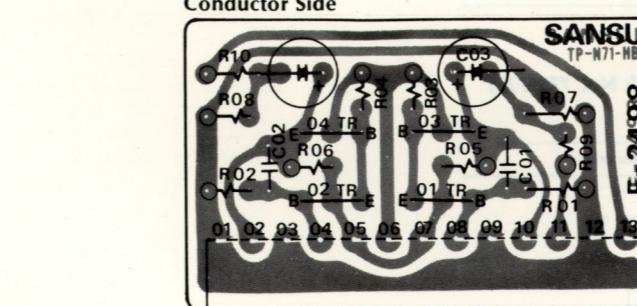
Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position
TR01	0306131-3	2SC1364 (6, 7, 8)	1 B	※D04	{ 0310540 or or	1S1850R CO8P-2-R	1 B
TR02	0306131-3	2SC1364 (6, 7, 8)	1 A	D05	0310340	10D1 (1S2226)	1 B
TR03	0306131-3	2SC1364 (6, 7, 8)	1 A	D06	0310340	10D1 (1S2226)	1 B
TR04	0306131-3	2SC1364 (6, 7, 8)	1 A	D07	0310340	10D1 (1S2226)	Diode 1 B
TR05	0306131-3	2SC1364 (6, 7, 8)	1 A	D08	0310340	10D1 (1S2226)	1 B
D01	0311440	SG5T (S)	2 B	D09	0311160	1S2473D	2 A
D02	0311450	SG5T (R)	2 A	D10	0311160	1S2473D	2 A
※D03	{ 0310530 or or	1S1850 CO8P-2-N	1 B	D11	0311160	1S2473D	2 A
	{ 0311420	(S-5 Type Black)		D12	0311160	1S2473D	2 A

\* Please note the followings when replacing the diode D03 and D04.

In case of using 1S1850 in D03, use 1S1850R in D04 and use CO8P-2 against CO8P-2-N in D03.

#### 4-12. F-2498 Filter Amplifier Circuit Board (Stock No. 7593631)

Conductor Side

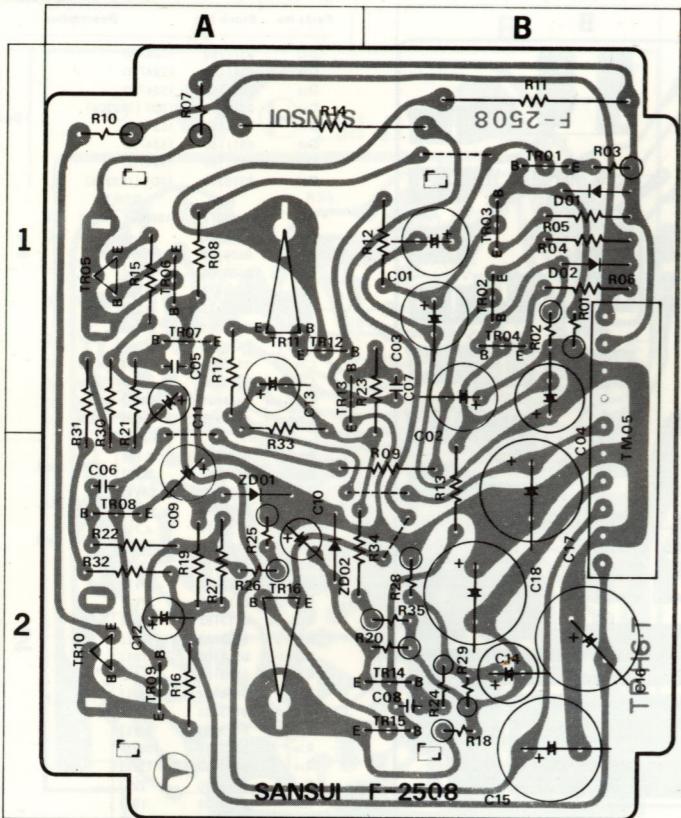


## Parts List

Parts No.	Stock No.	Description
TR01, 02	0300470	2SA726 (F, G)
TR03, 04	0306270	2SC1708 (F, G)
C01, 02	0660151	150 pF 50V C.C.
C03, 04	0519106	4.7/ $\mu$ F 50V E.C.
R01, 02	0106105	1M52
R03, 04	0106274	270k $\Omega$
R05, 06	0106183	18k $\Omega$
R07, 08	0106104	100k $\Omega$
R09, 10	0106561	560k $\Omega$
	2420270	3P (A Type)
	2420310	10P (A Type)

#### 4-13. F-2508 Regulated Power Supply Circuit Board (Stock No. 7501341)

Conductor Side

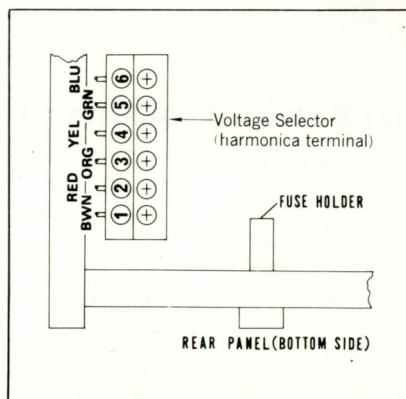


## 5. FIGURES

### 5-1. Semiconductors

SEMICONDUCTORS	COMPLETE CIRCUIT BOARD	SEMICONDUCTORS	COMPLETE CIRCUIT BOARD
2SA726 2SA847 2SA850 2SC1313 2SC1708 2SC1735	F-2508 F-2507 F-2498 F-2501 F-2495 F-2496 F-2502 F-2503 F-2505	10D-1	F-2511
2SA733 2SC1400 2SC1364 2SC945 2SC1951 2SC1811 2SA917 2SA896 2SA849	F-2497 F-2507 F-2511 F-2501 F-2502 F-2505 F-2496	VD1212 MV13SA	F-2507 F-2508 F-2496
2SD381	F-2508	1S2473	F-2511 F-2507 F-2496
2SA839 2SC1669 2SD382	F-2507 F-2508	RD-15E RD-22E	F-2508 F-2507 F-2496
2SA818 2SC1628	F-2507	SG52TR (-) SG52TS (+)	F-2511
TA7136	F-2496	1S1850 (+) 1S1850R (-)	F-2511
2SA908 2SB554 2SC1585 2SD424	POWER TRANSISTOR		
2SC1720 (6)	F-2507		

### 5-3. Power Supply Voltage changeover



### 5-2. Connector & Pin Ass'y

#### Connector

Type A (3~10 pins)	Type B (2~6 pins)	Stock No.
		2 Pins 2420250 3 Pins 2420220 4 Pins 2420230 5 Pins 2420210 6 Pins 2420240

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

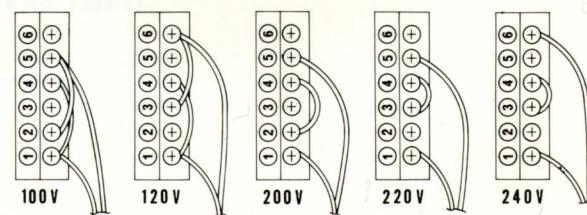
Type A (3~10 pins)	Type B (3~10 pins)	Type C (3~10 pins)
Type D (2~6 pins)	Type E (2~6 pins)	Type F (2~6 pins)

#### Abbreviations

C.R.	: Carbon Resistor	BP.E.C.:	Bi-Polar Electrolytic Capacitor
S.R.	: Solid Resistor	C.C.	: Ceramic Capacitor
Ce.R.	: Cement Resistor	Mi.C.	: Mica Capacitor
M.R.	: Metallized Film Resistor	O.C.	: Oil Capacitor
M.C.	: Mylar Capacitor	P.C.	: Polystyrene Capacitor
E.C.	: Electrolytic Capacitor	T.C.	: Tantalum Capacitor

\*In accordance with AC line voltage in your area, input AC voltages of this unit can be easily obtained by changing connections as shown in Fig. 5-1.

Fig. 5-1



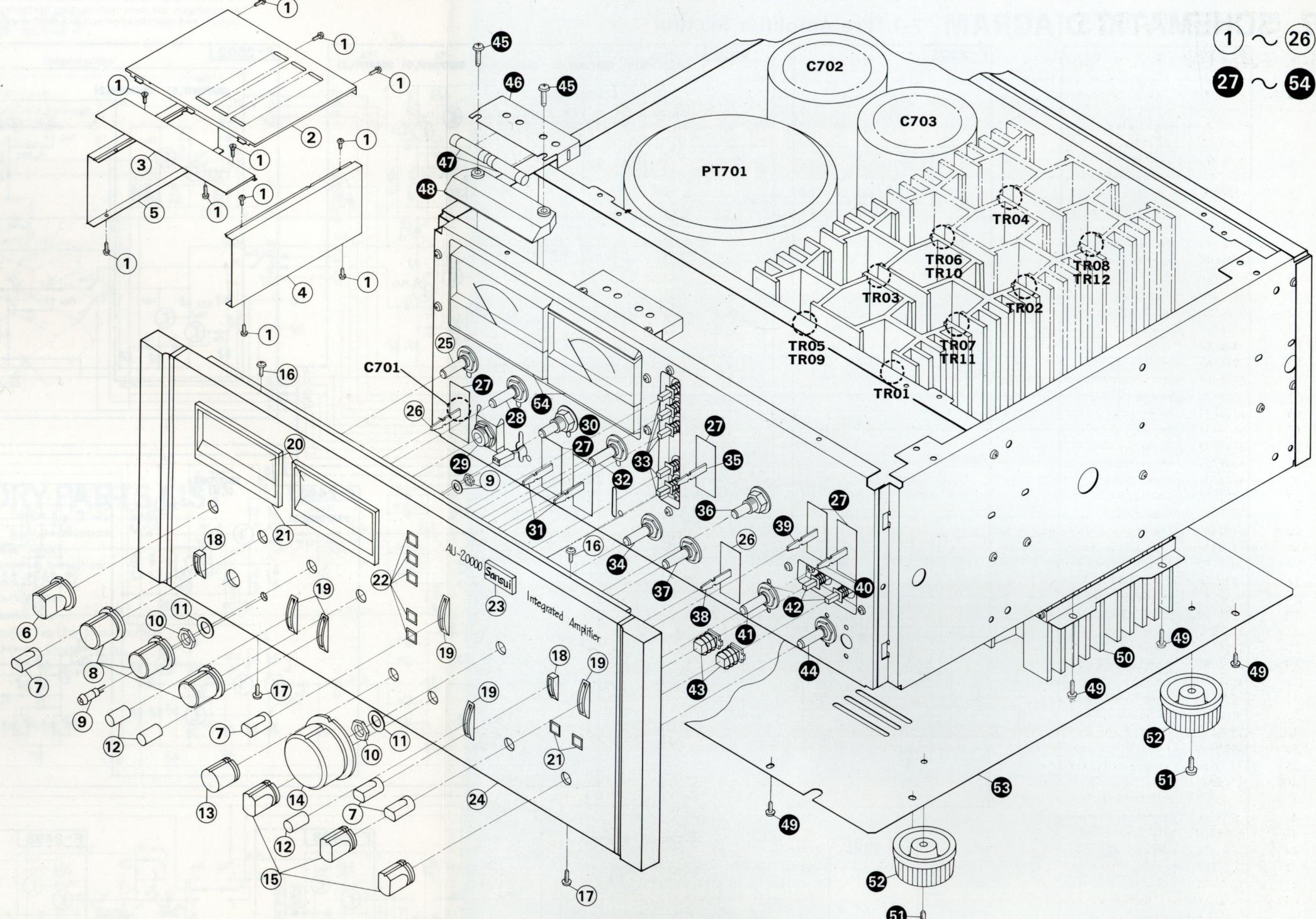
## 6. OTHER PARTS

### 6-1. Parts List (Front Side)

Parts No.	Stock No.	Description
1	5109222	Binding Head Tapping Screw, M3×8
2	5006411	Metal Bonnet (2)
3	5006500	Metal Bonnet (1)
4	5309700	Side Plate (Right)
5	5309690	Side Plate (Left)
6	5318260	C-6 Type Knob, Speakers
7	5326510	E-2 Type Knob, lever switch
8	5318250	B-6 Type Knob, Triple Tone Control
9	7726080	Light Emitted Diode Ass'y (A)
10	5110781	Hex. Nut, M9
11	5120084	Plain Washer, 9φ
12	5326520	E-3 Type Knob, lever switch
13	5318270	D-6 Type Knob, Balance
14	5318230	Z-5 Type Knob, Volume
15	5318280	F-6 Type Knob, rotary volume
16	5166610	Flat Countersunk Head Screw, M3×6
17	5109222	Binding Head Tapping Screw, M3×8
18	5286731	Lever Guide (1)
19	5286741	Lever Guide (2)
20	5446250	Meter Glass
21	5309760	Meter Hood
22	5286721	Knob Guide
23	5336580	SANSUI Mark
24	7007250	Front Panel
25	1102630	Rotary Switch Y-244, Speakers
26	1170330	Lever Switch, Power
27	5047470	Masking, lever switch
28	1090090, 1	50kΩ×2 Bass Volume
29	2430240	Headphone Jack
30	1090100, 1	50kΩ×2 Midrange Volume
31	1171000	Lever Switch, Filters
32	1090110, 1	50kΩ×2 Treble Volume
33	1131080	Push Switch (SUE-62)
34	1090180	100kΩ×2 Balance Volume
35	1170090	Lever Switch, Muting
36	1015160	50kΩ×2 Volume
37	1101720	Rotary Switch SRA-125, Mode
38	1170960	Lever Switch, Tape Playback
39	1170880	Lever Switch, Tape Play
40	1170950	Lever Switch, Input Selector
41	1102670	Rotary Switch SRA-244, Tape Copy
42	1131070	Push Switch (SUE24)
43	5326530	Push Switch Knob
44	1101730	Rotary Switch SRA-123, Sensitivity
45	5101147	Binding Head Screw, M3×14
46	5286780	Illumination Cover
47	0420050	7V 300mA Fuse Type Lamp
48	5446240	Illumination Plate
49	5109222	Binding Head Tapping Screw, M3×8
50	5937151	Heat Sink
51	5101163	Binding Head Screw, M4×10
52	5517050	Leg
53	5058382	Bottom Plate
54	4300910	Power Meter

### 6-2. Other Parts List

Parts No.	Stock No.	Description	Parts No.	Stock No.	Description	Parts No.	Stock No.	Description	Parts No.	Stock No.	Description
TR01, 02	{ 0306310-3 or 0308470, 1 } 2SC1585 (R, O, Y)		TR09, 10	{ 0306310-3 or 0308470, 1 } 2SD424 (R, O)		C706	0601477	0.047μF	F701	{ 0431320 or 0431390 }	10A 250V (AC 100~120V) 6A 250V (AC 220~240V) AC
TR03, 04	{ 0300730-2 or 0303300 } 2SA908 (R, O, Y)		TR09, 10	{ 0306310-3 or 0308470, 1 } 2SD424 (R, O)		C707	0601477	0.047μF 50V C.C.	2230051	Ground Terminal	
TR05, 06	{ 0306310-3 or 0308470, 1 } 2SC1585 (R, O, Y)	Transistor	TR11, 12	{ 0300730-2 or 0303300 } 2SB554 (R, O)		C708	0601477	0.047μF	2300060	Fuse Holder	
TR07, 08	{ 0300730-2 or 0303300 } 2SA908 (R, O, Y)		C701	0659801	0.01μF 150V C.C.	R701	0104100	10Ω	2450060	AC Outlet	
			C702	0559842	22000μF 80V E.C.	R702	0104100	10Ω	3800250	Power Cord	
			C703	0559842	22000μF 50V C.C.	R703	0104100	10Ω	3910190	Cord Clip, power cord	
			C705	0601477	0.047μF 50V C.C.	R704	0104100	10Ω	2210280	4P Speaker Terminal	
			PT701	4002400	Power Transformer						

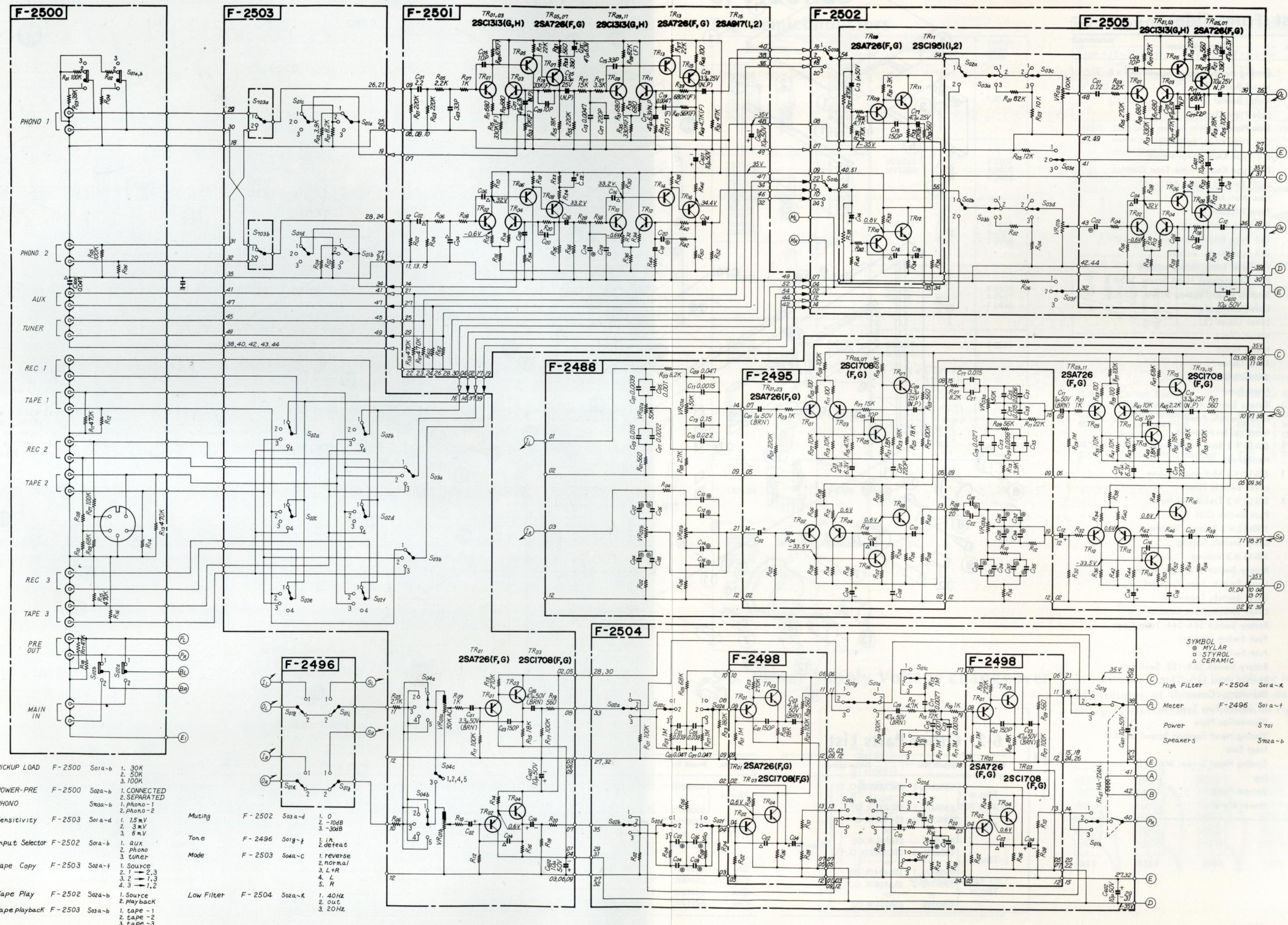


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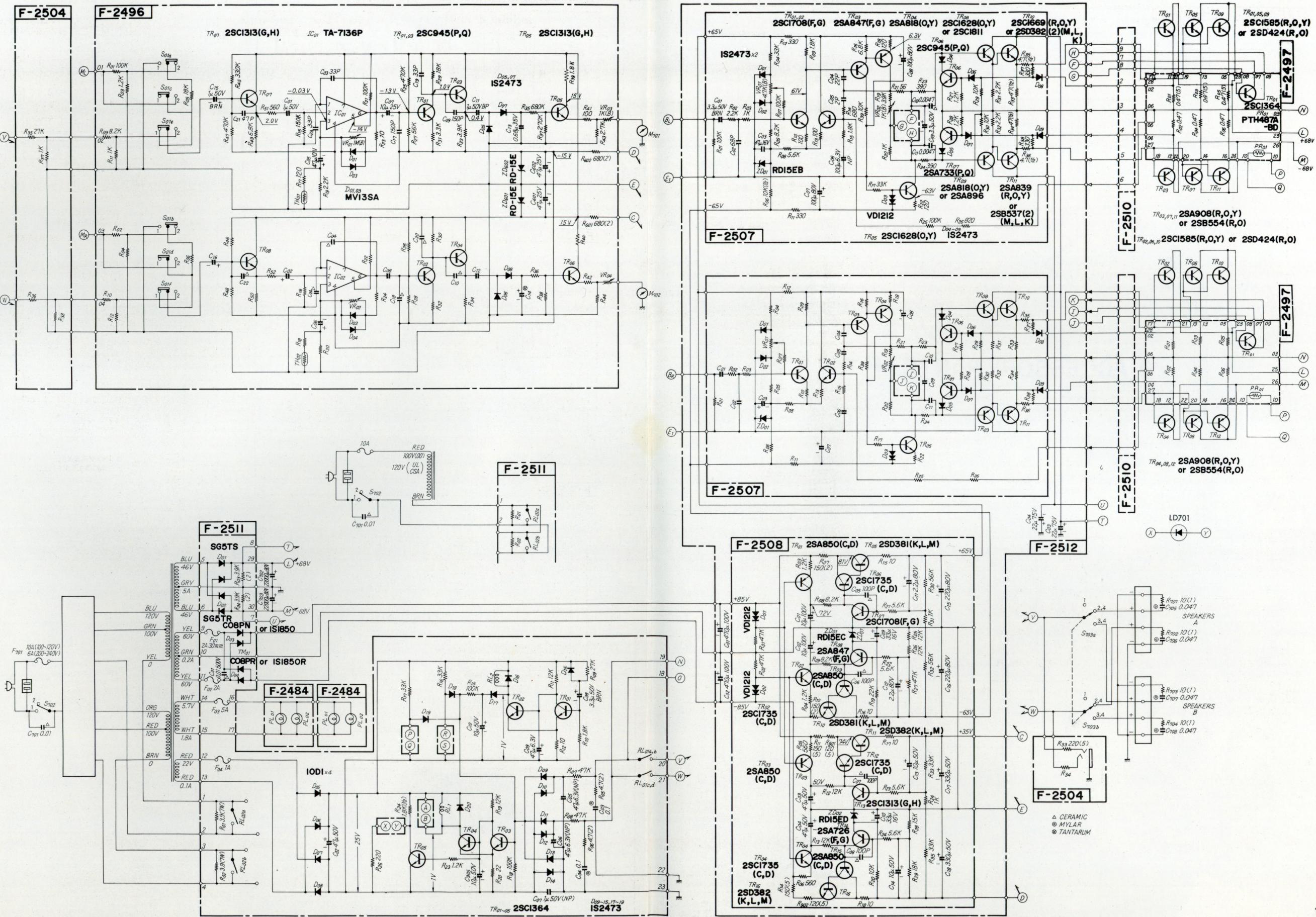
27 ~ 54

## 7. SCHEMATIC DIAGRAM / 7-1. Pre Amplifier Section

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

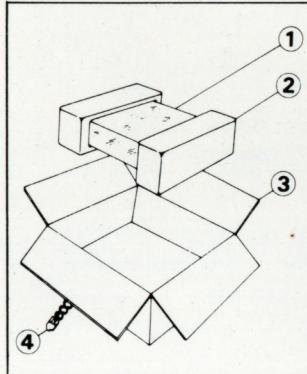


## 7-2. Power Amplifier Section



## 8. PACKING LIST

Parts No.	Stock No.	Description
1	9116650	Vinyl Cover
2	9027890	Stylofoam Packing
3	9009130	Carton Case
4	5996080	Curl Stopper



## 9. ACCESSORY PARTS LIST

Parts No.	Stock No.	Description
1	9209370	Operating Instructions
2	2410560	Short Pin Plug
3	9296090	Caution Sheet
4	9396700	Caution Tug
5	9396880	Caution Tug (For Short Pin Plug)
6	9566930	Schematic Diagram



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