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# SERVICE MANUAL

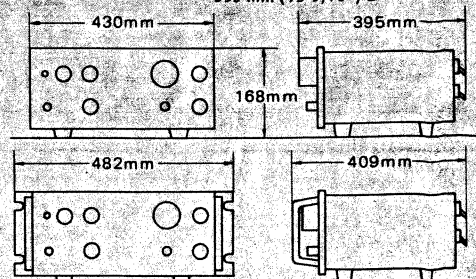
INTEGRATED STEREO AMPLIFIER

## SANSUI AU-719



### SPECIFICATIONS

- Power output**  
 Min. RMS, both channels driven, from 10 to 20,000 Hz, with no more than 0.015 % total harmonic distortion  
 90 watts per channel into 8 ohms
- Load Impedance** . . . . . 8 ohms
- Total harmonic distortion**  
 . . . . . less than 0.015 % at or below rated min. RMS power output
- Intermodulation distortion (70 Hz : 7 kHz = 4:1 SMPTE method)** . . . . . less than 0.015 % at or below rated min. RMS power output
- Rise time** . . . . . 0.5  $\mu$ sec
- Slew rate** . . . . .  $\pm 170$  V/ $\mu$ sec
- Frequency response (at 1 watt)**  
 . . . . . DC to 400,000 Hz, +0 dB, -3 dB
- Damping factor (1 kHz, both channels driven)**  
 . . . . . 110 into 8 ohms
- RIAA curve deviation (PHONO, 20 Hz to 20 kHz)**  
 . . . . . +0.2 dB, -0.2 dB
- Input sensitivity and impedance (1 kHz, for rated power output)**  
 PHONO-1, 2 . . . . . 2.5 mV/47 kilohms  
 (Max. input capability; 230 mV at 1 kHz, less than 0.01 % total harmonic distortion)
- AUX, TUNER, TAPE PLAY**  
 . . . . . 200 mV/47 kilohms
- Output level and impedance (1,000 Hz)**  
 TAPE REC . . . . . 200 mV into 47 kilohms/600 ohms
- Channel separation (1 kHz, at rated power output)**  
 PHONO-1, 2 . . . . . 65 dB  
 . . . . . 70 dB
- Hum and noise (short-circuit, A-network)**  
 PHONO-1, 2 . . . . . 88 dB  
 AUX, TUNER, TAPE PLAY . . . . . 100 dB
- Controls**  
 BASS . . . . .  $\pm 10$  dB (50 Hz)  
 Tone selector . . . . . 150 Hz, 300 Hz
- TREBLE** . . . . .  $\pm 10$  dB (15 kHz)  
 Tone selector . . . . . 3 kHz, 6 kHz
- SUBSONIC** . . . . . -3 dB (16 Hz), 6 dB/oct
- MUTING** . . . . . -20 dB
- LOUDNESS (VOLUME control: -30 dB position)**  
 . . . . . 10 dB at 50 Hz  
 . . . . . 6 dB at 10 kHz
- Power requirements**  
 Power voltage . . . . . 100, 120, 220, 240 V (50/60 Hz)  
 For U.S.A. & Canada . . . . . 120 V (60 Hz)
- Power consumption**  
 Rated consumption . . . . . 450 watts 530 VA
- Dimensions** . . . . . 430 mm (16-15/16") W  
 . . . . . 168 mm (6-5/8") H  
 . . . . . 395 mm (15-9/16") D



**Weight** . . . . . 16.0 kg (35.3 lbs) net  
 . . . . . 17.7 kg (39.0 lbs) packed

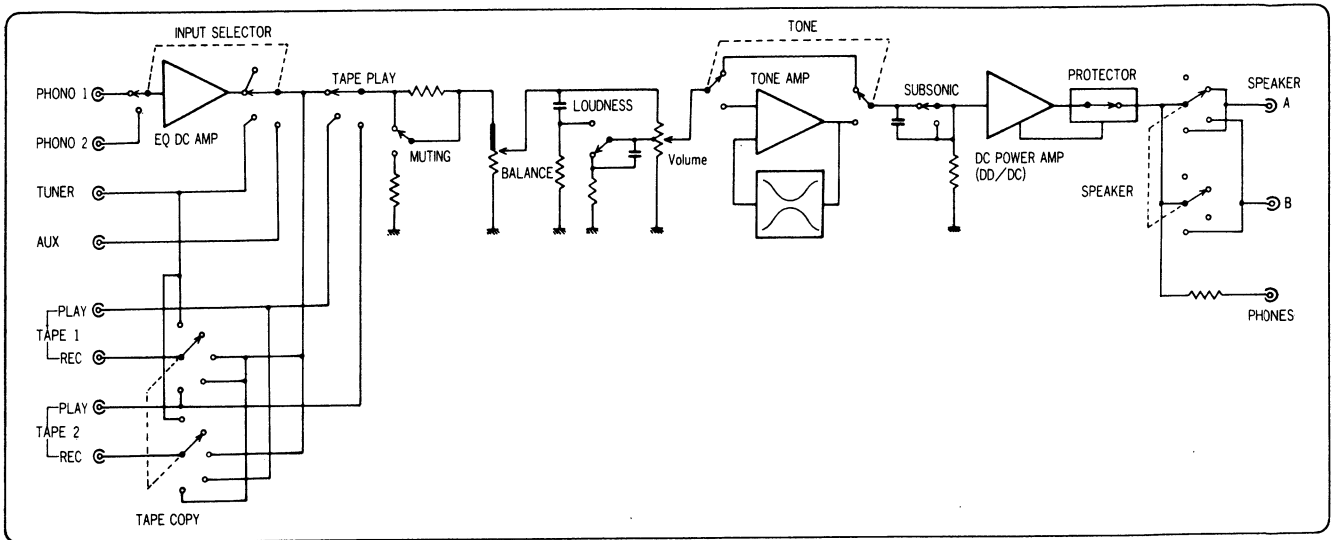
- \* Design and specifications subject to changes without notice for improvements.
- \* In order to simplify the explanation illustrations may sometimes differ from the originals.

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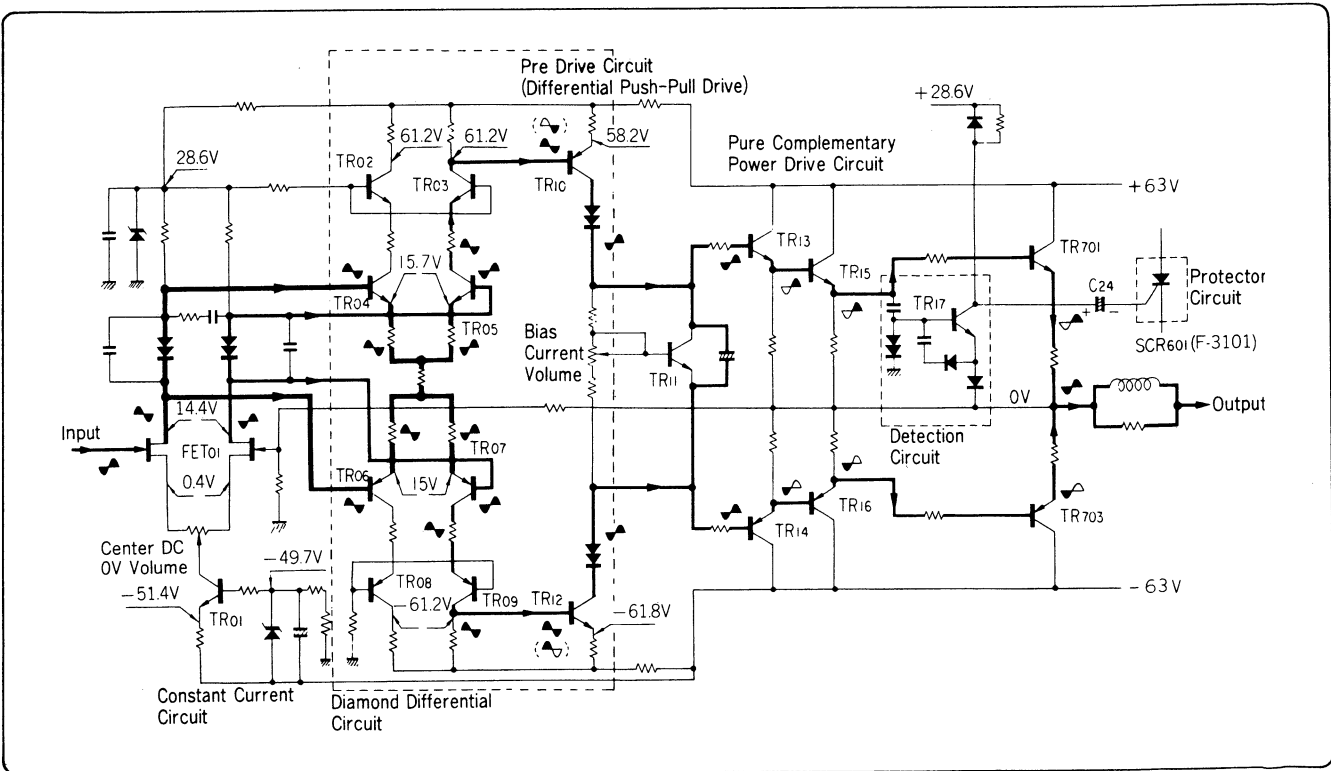


SANSUI ELECTRIC CO., LTD.

# 1. BLOCK DIAGRAM



# 2. OPERATION BLOCK DIAGRAM OF DRIVER STAGE



### 3. ADJUSTMENTS

- Notes: 1. Master Volume . . . . . Minimum  
 2. Room Temperature . . . . . 18°C ~ 28°C (65°F ~ 83°F)  
 3. When replacing some parts or circuit board, refer to description in REMARKS.  
 4. For this adjustment, run the unit for more than 3 minutes after the power is switched ON.

#### 3-1. Driver Circuit (F-2926, F-2927) Adjustment (See Fig. 3-1 & 3-2)

STEP	SUBJECT	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	DC 0V Adj. L-ch	Speaker terminal (L-ch)	VR01 (L-ch) F-2926	DC 0V ± 5 mV	Before turning ON power switch, set VR01 to center position.
2.	DC 0V Adj. R-ch	Speaker terminal (R-ch)	VR01 (R-ch) F-2927		
3.	Bias current Adj. L-ch	Between emitters of power transistors, TR701 & TR703 (See Fig. 3-1)	VR02 (L-ch) F-2926	DC 23 mV ± 1 mV	• Before turning ON power switch, turn VR02 fully counterclockwise. This bias current adjustment converts current value into voltage by Ohm's law.
4.	Bias current Adj. R-ch	Between emitters of power transistors, TR702 & TR704 (See Fig. 3-1)	VR02 (R-ch) F-2927		

#### 3-2. Equalizer (F-3095) Adjustment (See Fig. 3-3)

STEP	SUBJECT	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	DC 0V Adj. L-ch	Between GND & TP	VR01 (L-ch) F-3095	DC 0V ± 50 mV	Before turning ON power switch, set VR01 & VR02 to center position.
2.	DC 0V Adj. R-ch	Between GND & TP	VR02 (R-ch) F-3095		

Fig. 3-1 Driver Circuit Board (F-2926, F-2927)

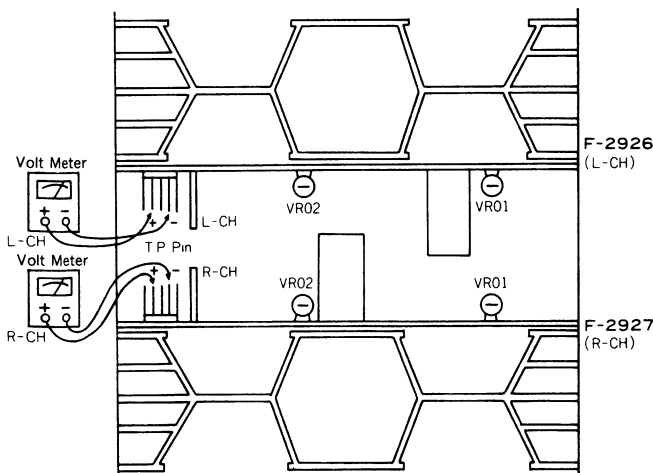


Fig. 3-3 Equalizer Circuit Board (F-3095)

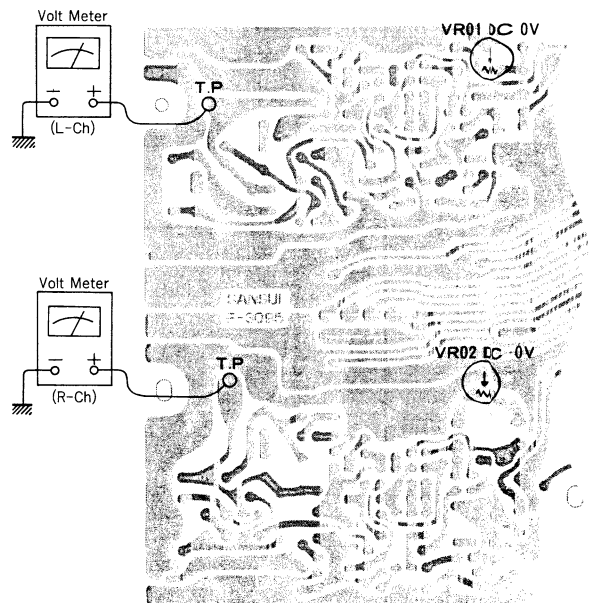
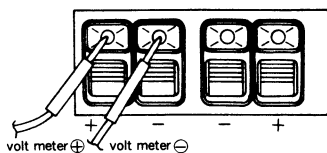


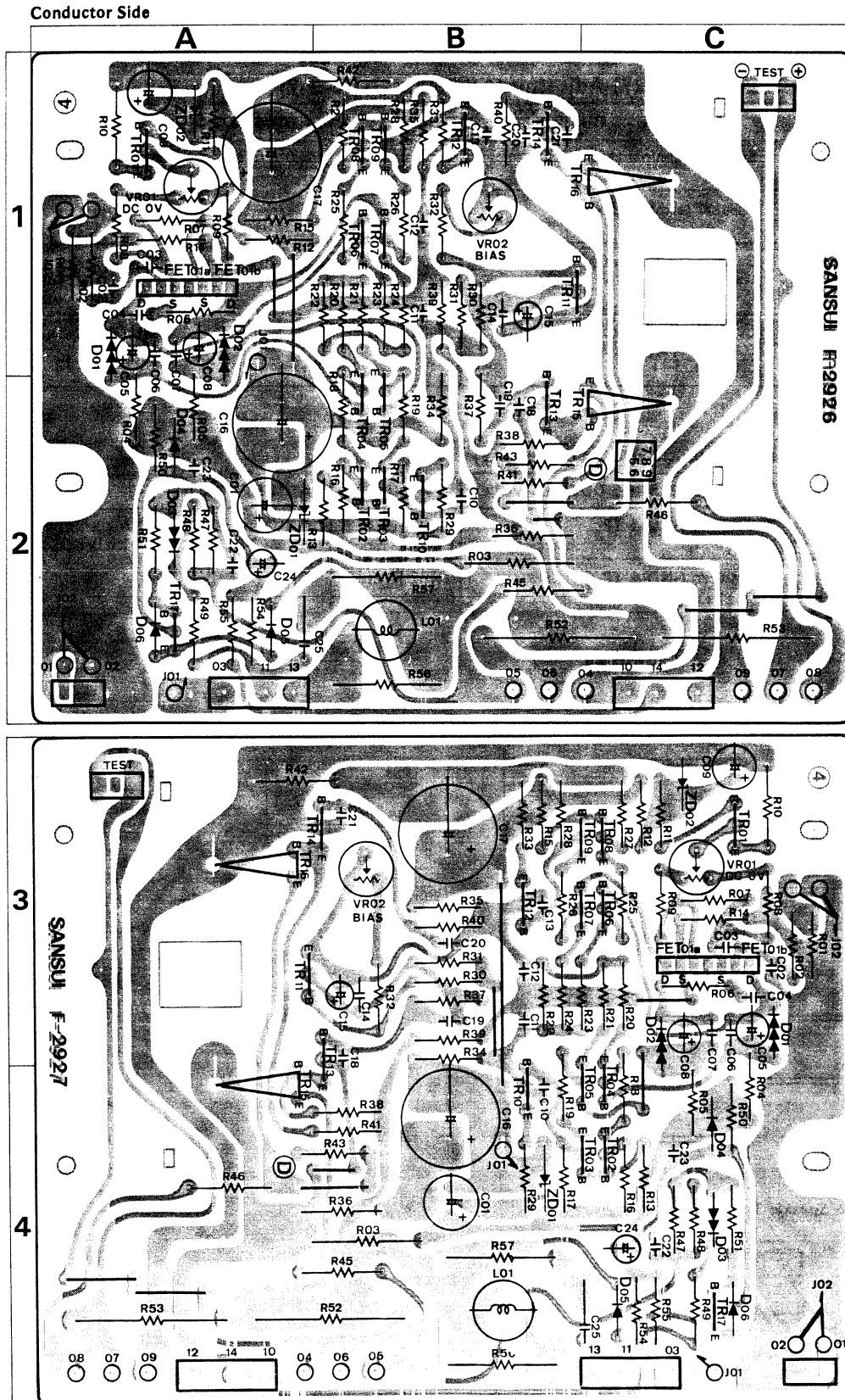
Fig. 3-2 Speaker Terminal



# 4. PARTS LOCATION & PARTS LIST

- 4-1. F-2926 Driver Circuit Board (L-CH) (Stock No. 7572351)
- 4-2. F-2927 Driver Circuit Board (R-CH) (Stock No. 7572361)

• 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.

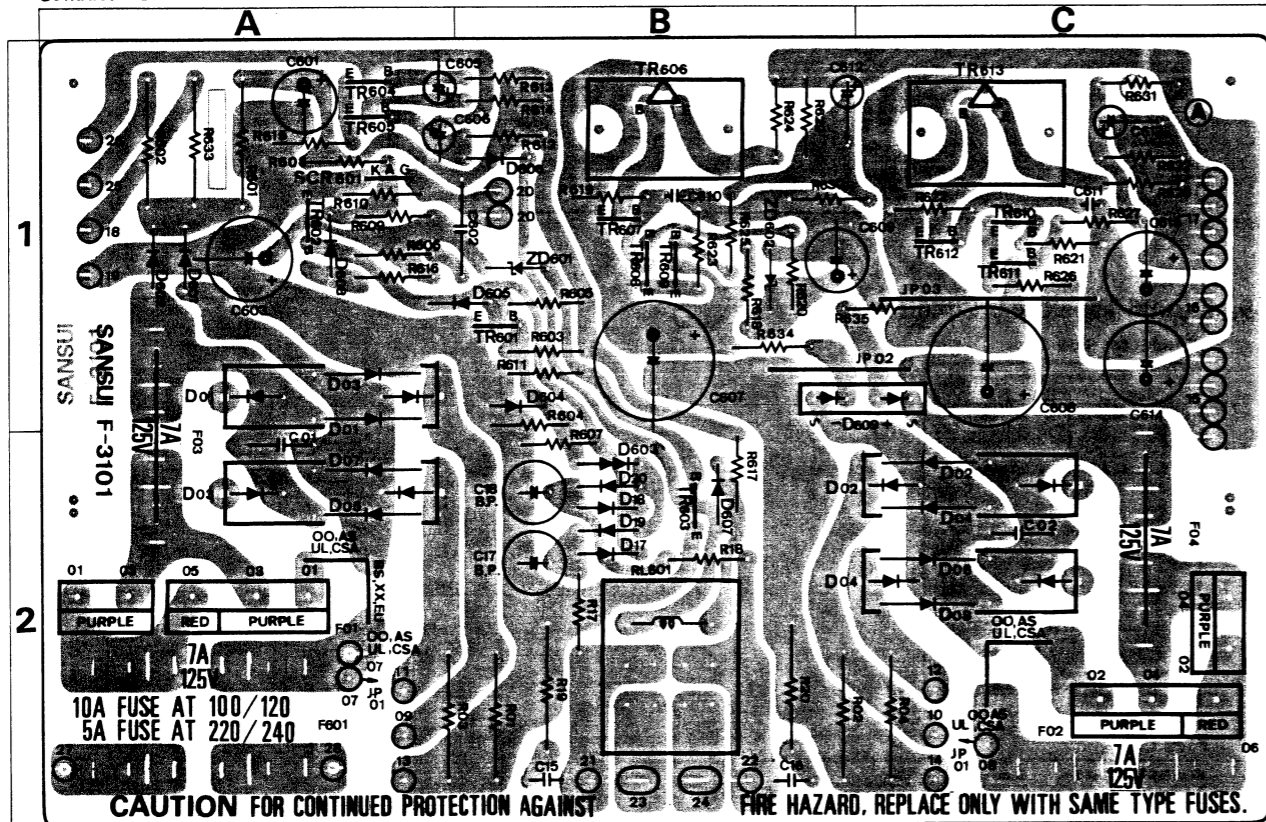


Parts List <F-2926, F-2927>

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position
●Transistor				●Diode				F-2926 F-2927			
TR01	0306680,1	2SC2071 B,V	1A 3C	D 01,02	0340170	MV-103	1A 3C	R 03	0212182	1.8kΩ 2W N.I.R.	4B
TR02 ~ 05	0306740,1	2SC1845 F,E	2B 4B,C	D 03	0340150	MV-12	2A 4C	R 04,05	0231392	3.9kΩ 1/2W M.R.	4C
TR06 ~ 09	0301090,1	2SA992 F,E	1B 3B,C	D 04	0310400	1N34A	2A 4C	R 52,53	0169140	0.33Ω 5W Co.R.	4A,B
TR10	0301030,1	2SA939 B,V	2B 4B	D 05,06	0311160	1S2473D	1A 4C	R 56	0212109	1Ω 2W	4B
TR11	0306951,2	2SC945 Q,P	2B 3A	●Zener Diode				R 57	0212100	10Ω 2W	4B
TR12,13	0306680,1	2SC2071 B,V	1B,2B 3B	ZD01	0317190	RD-27F (B)	2A 4B	L 01	4290370	Filter Coil	4B
TR14	0301030,1	2SA939 B,V	1B 3B	ZD02	0316310	RD13E B	1A 3C	VR01	1033570	Volume 100Ω B DC 0V 1B	
TR15	0308441,2	2SD382 M,L	2C 4A	C 02	0622101	100pF 125V P.C.	1A 3C	VR02	1035290	Volume 470Ω B Bias	3B
TR16	0303271,2	2SB537 M,L	1C 3A	C 03	0623220	22pF 125V P.C.	1A 3C				
TR17	0306740,1	2SC1845 F,E	2A 4C	C 04	0622102	1000pF 125V P.C.	1A 3C				
●FET				C 10,13	0669503	3pF 50V C.T.	2B,1B 4B,3B				
FET01	0370361 ~ 4	μPA68H-L1, L2, M1, M2	1A 3C	C 25	0681014	0.047μF 400V F.C.	2A 4B,C				

4-3. F-3101 Power Supply & Protector Circuit Board (Stock No. 7503471)

Conductor Side

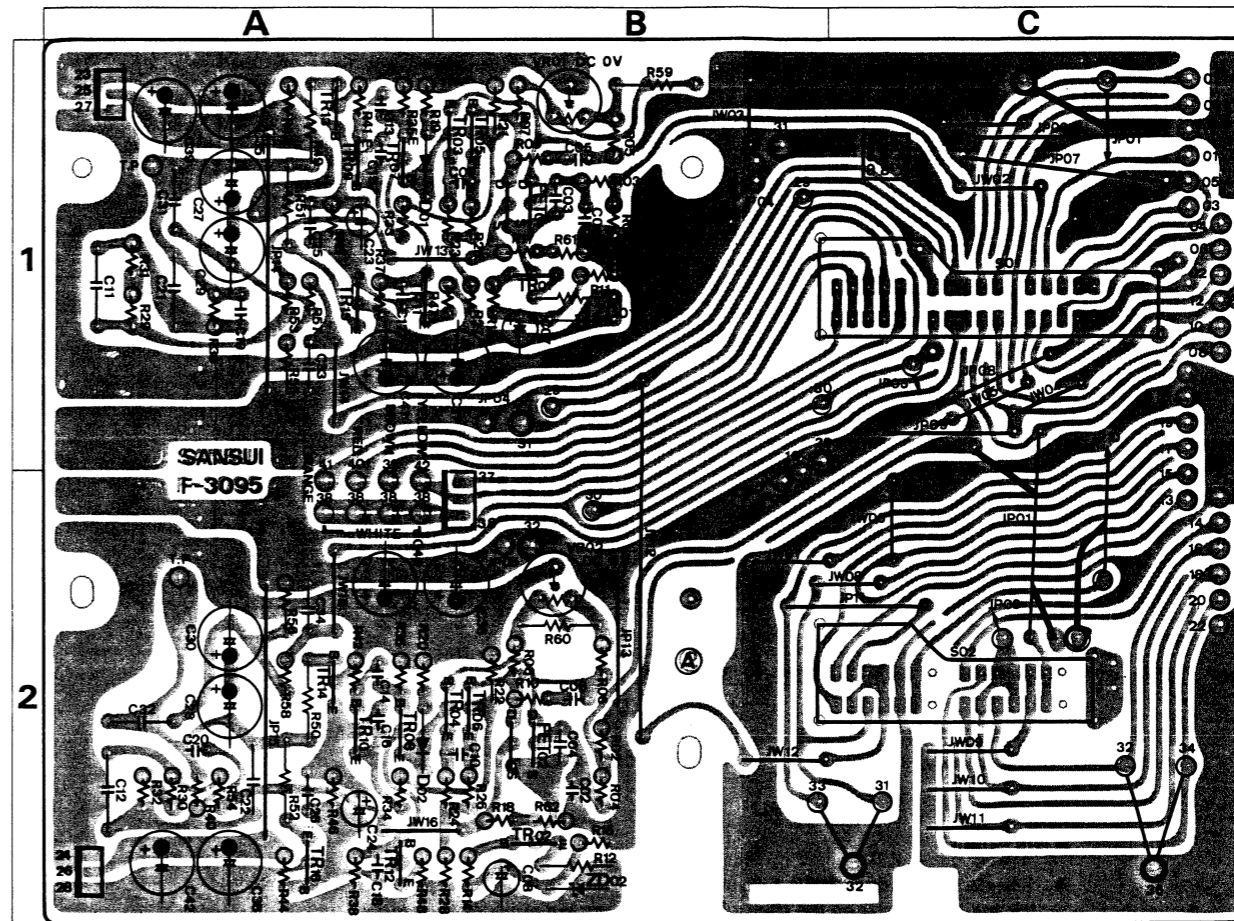


Parts List

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position
●Transistor				D 17 ~ 20				C 01,02			
TR601 ~ 05	0306951,2	2SC945 Q,P	1A,B,2B	D 17 ~ 20	0311160	1S2473D	2B	C 01,02	0655103	10000pF 500V C.C.	2A,C
TR606	0308451,2	2SD356 D,E	1B	D 601,602	0310350	10D2 (1S2227)	1A	R 01 ~ 04	0212332	3.3kΩ 2W N.I.R.	2A,B,C
TR607	0306811,2	2SD357 D,E	1B	D 603	0340150	MV-12	2B	R 19,20	0212100	10Ω 2W N.I.R.	2B
TR608,609	0304701,1	2SA726 F,G	1B	D 604 ~ 06	0311160	1S2473D	1B	R 601	0212391	390Ω 2W N.I.R.	1A
TR610,611	0306071,2	2SC1313 G,H	1B	D 608	0311160	1S2473D	1A	R 602,633	0212272	2.7kΩ 2W N.I.R.	1A
TR612	0306071,2	2SC1313 G,H	1C	D 609	0311700	RB-152	1B,C	RL601	1150480	Relay	2B
TR613	0303281,2	2SB526 D,E	1C	●Zener Diode				F 01	0432290	5A 125V AC Fuse	2A
	0303441,2	2SB527 D,E	1C	ZD601	0316390	RD6.2E B	1B		0432290	7A 125V AC Fuse	
				ZD602	0316310	RD13E B	1B		0434060	10A 250V AC Fuse	
●Diode				SCR 601	0350020	SCR 2SF656	1A				
D 01,02	0311290	SS-3	1A,2C								
D 03,04	0311300	SS-3R	2A,2C								

4-4. F-3095 Head Amp. Circuit Board (Stock No. 7551561)

Conductor Side



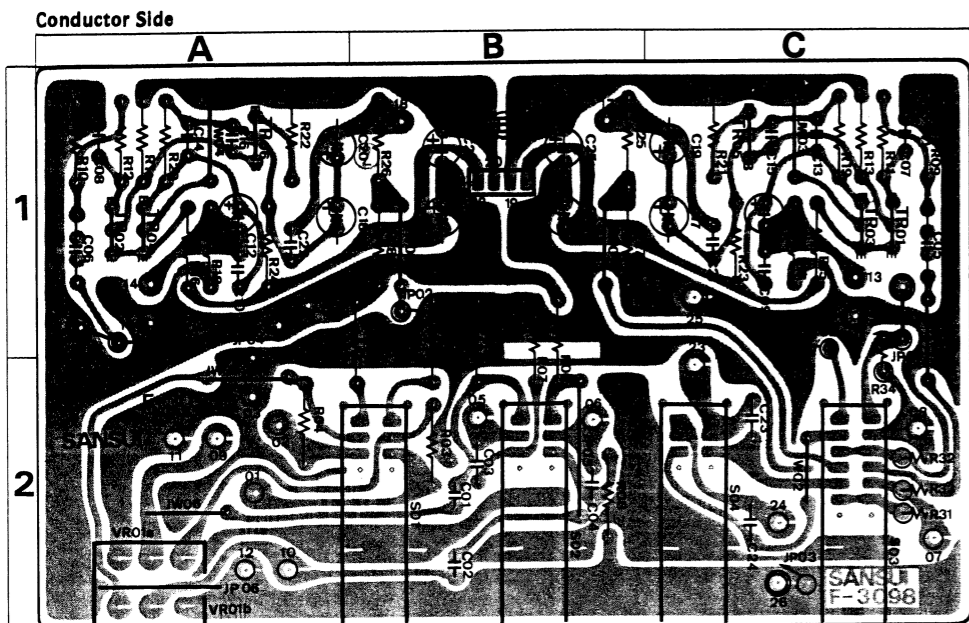
Parts List

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position
●Transistor				●Diode				R 05 ~ 08			
TR01,02	0306740,1	2SC1845 F,E	1,2B	D 01,02	0311160	1S2473D	1,2A	R 29,30	0231392	3.9kΩ 1/2W M.R.	1,2B
TR03 ~ 06	0306071	2SC1313 G,H	1,2B	R 29,40	0231563	56kΩ 1/2W M.R.	1,2A	R 39,40	0231472	4.7kΩ 1/2W M.R.	1,2A
TR07 ~ 10	0301090,1	2SA992 F,E	1,2A	●Zener Diode				VR01,02	1034190	Volume 470Ω B, DC 0V	1,2B
TR11,12	0306740,1	2SC1845 F,E	1,2A	ZD01,02	0316320	RD13E C	1B,2B	S 01	1190420	Rotary Switch, selector	1C
TR13,14	0308521,2	2SD438 E,F	1,2A	C 01,02	0622151	150pF 125V P.C.	1,2B	S 02	1190410	Rotary Switch, tape copy	2C
TR15,16	0303361,2	2SB560MP E,F	1,2A	C 03,04	0623220	22pF 125V P.C.	1,2B				
●FET				C 05,06	0622391	390pF 125V P.C.	1,2B				
FET01,02	0370311,2	2SK129A L,M	1,2B	C 11,12	0682029	0.059μF 100V F.C. (P.P.)	1,2B				
				C 21,22	0682016	0.016μF 100V F.C. (P.P.)	1,2A				

● Abbreviations

C.R. . . . .	Carbon Resistor	E.L. . . . .	Low Leak Electrolytic Capacitor
S.R. . . . .	Solid Resistor	E.B. . . . .	Bi-Polar Electrolytic Capacitor
Ce.R. . . . .	Cement Resistor	E.BL. . . . .	Low Leak Bi-Polar Electrolytic Capacitor
M.R. . . . .	Metal Film Resistor	Ta.C. . . . .	Tantalum Capacitor
F.R. . . . .	Fusing Resistor	F.C. . . . .	Film Capacitor
N.I.R. . . . .	Non-Inflammable Resistor	M.P. . . . .	Metalized Paper Capacitor
C.C. . . . .	Ceramic Capacitor	P.C. . . . .	Polystyrene Capacitor
C.T. . . . .	Ceramic Capacitor, Temperature Compensation	G.C. . . . .	Gimmic Capacitor
E.C. . . . .	Electrolytic Capacitor		

4-5. F-3098 Tone Control Circuit Board (Stock No. 7562941)

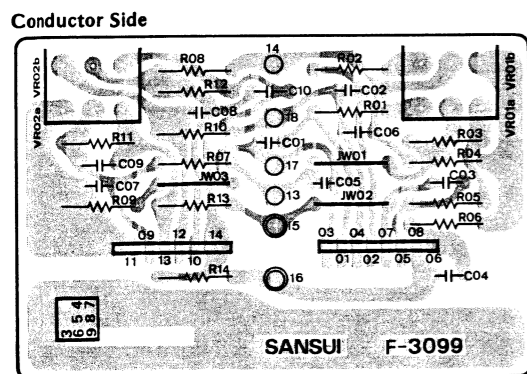


Parts List

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position
• Transistor							
TR01 - 04	0306071	2SC1313 G, H	1A.1C	S 01	1171770	Lever Switch, muting	2B
TR05, 06	0301090, 1	2SA992 F, E	1A.1C	S 02	1171770	Lever Switch, loudness	2B
				S 03	1171800	Lever Switch, tone	2C
				S 04	1171770	Lever Switch, subsonic	2C
C 01, 02	0622511	510pF 125V P.C.	2B				
VR01	1015320, 1	Volume 250kΩ, balance	2A				

• The circuit boards, F-3099, F-3100, F-3094 & F-3096 are not supplied as the assembled, the individual parts on the circuit boards, however are provided for orders.

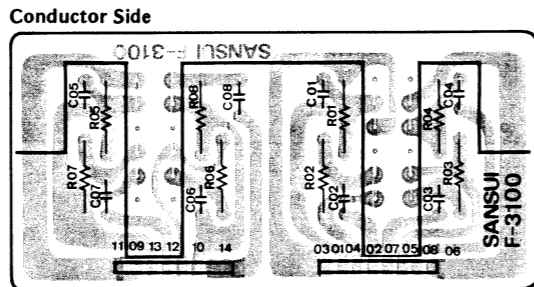
4-6. F-3099 Tone Circuit Board



Parts List

Parts No.	Stock No.	Description
VR01, 02	1015360, 1	Volume 100kΩ C, bass & treble

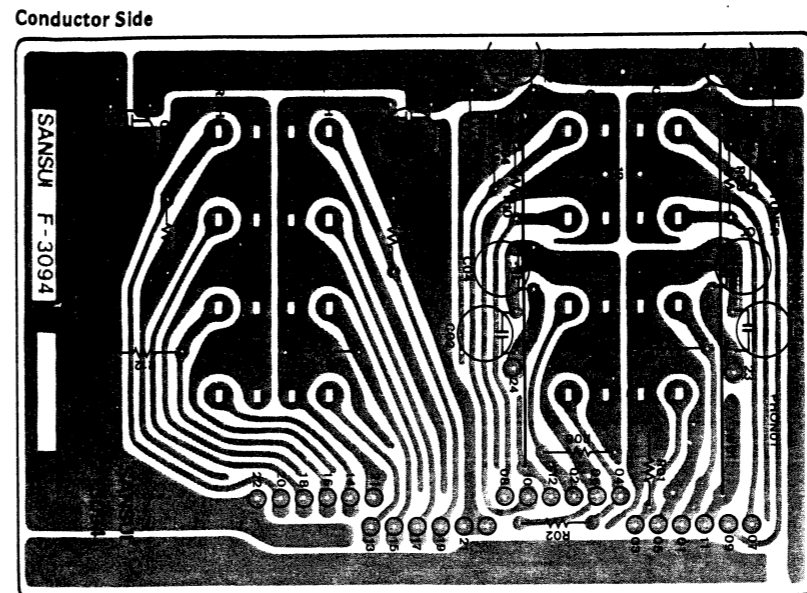
4-7. F-3100 Turn Over Circuit Board



Parts List

Parts No.	Stock No.	Description
S 01	1131410	Push Switch, turn over

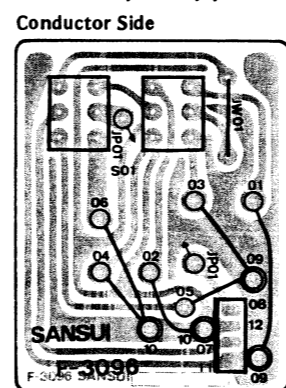
4-8. F-3094 Input Circuit Board



Parts List

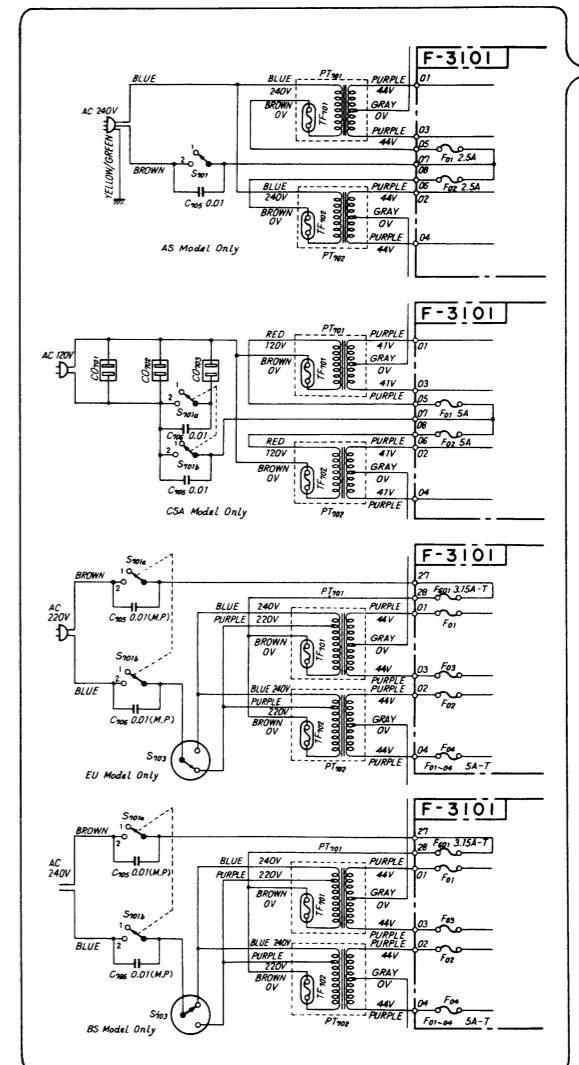
Parts No.	Stock No.	Description
2200580		4P Input Terminal, tape
2200620		4P Input Terminal, phone tuner, aux

4-9. F-3096 Tape Copy Circuit Board



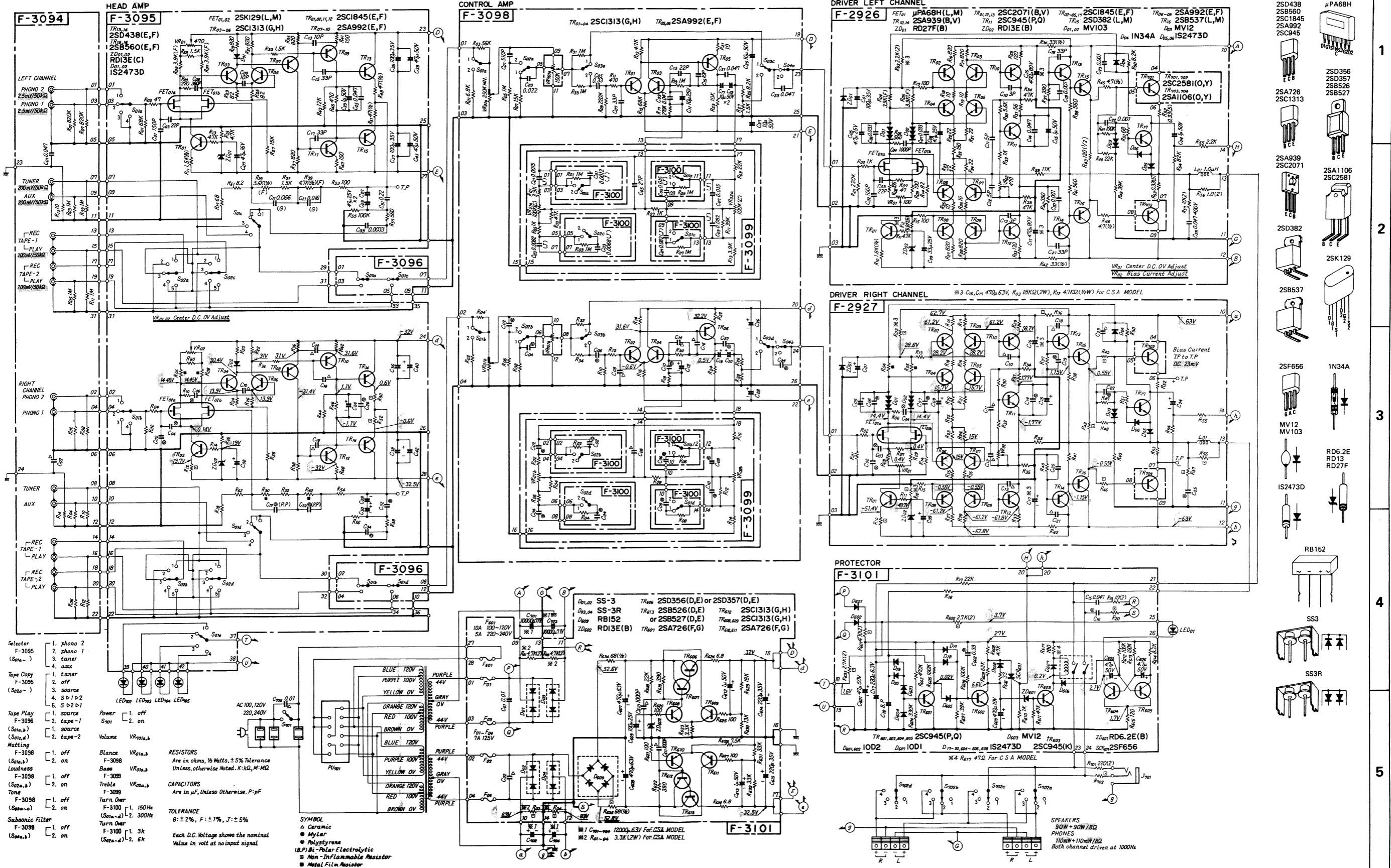
Parts List

Parts No.	Stock No.	Description
S 01	1131400	Push Switch, tape play



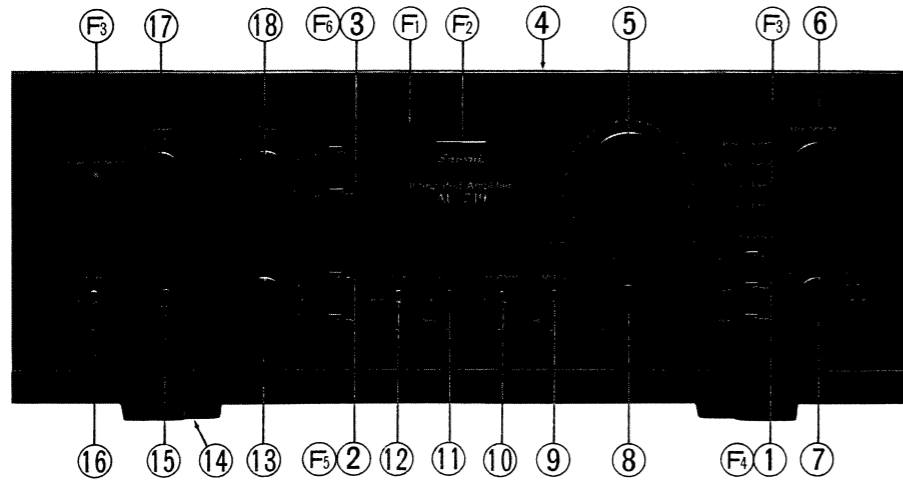
• Design and specifications subject to change without notice for improvement.  
 • La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.  
 • Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

# 6. SCHEMATIC DIAGRAM

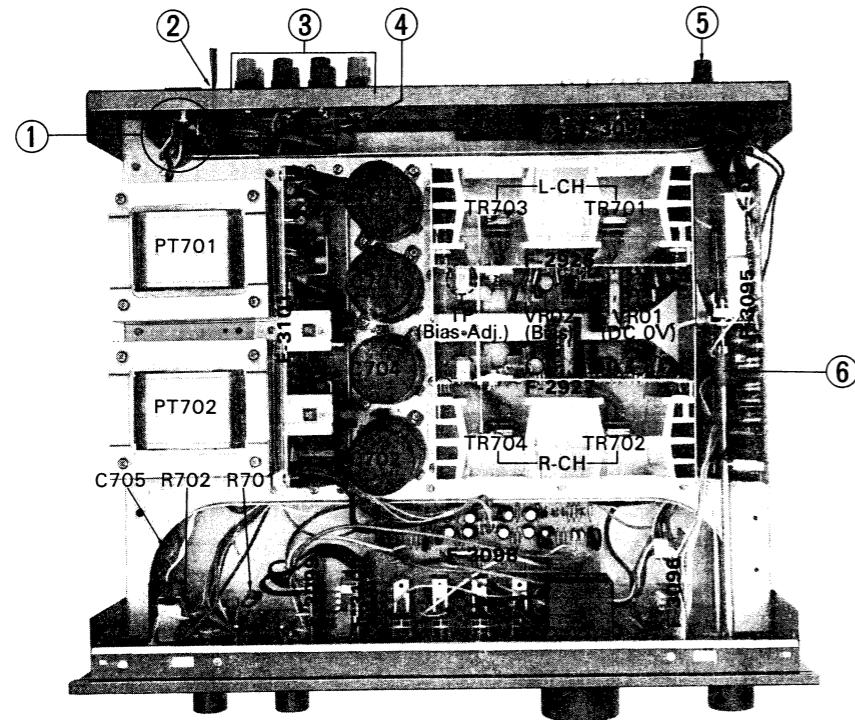


5. OTHER PARTS

5-1. Front View



5-2. Top View



Parts List <Front View>

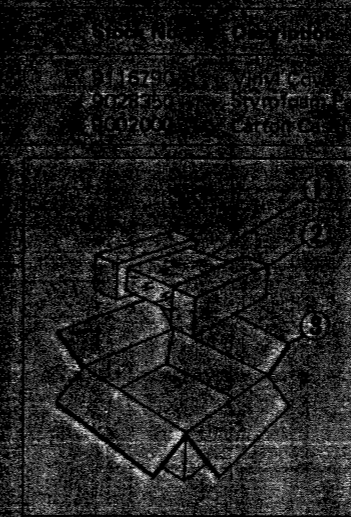
No.	Stock No.	Description
F 1	7008390	Front Panel Ass'y
	5457540	Front Panel
	5048221	Masking Sheet
F 2	5506980	Rubber Packing
	5330660	Sensui Badge
	5152210	CS Ring
F 3	0319190	LED
	5326620	Push Knob, tape play
F 4	6906480	Spring
	5286721	Knob Guide, tape play
1	1131400	Push Switch, tape play
	5326620	Push Knob, bass turn over
F 5	6906480	Spring
	5286721	Knob Guide, bass turn
2	1131410	Push Switch, turn over
	5326620	Push Switch, treble turn over
F 6	6906480	Spring
	5286721	Knob Guide, treble turn over
3	1131410	Push Switch, treble turn over
	5006801	Bonnet
4	5318863	Knob, volume
	1090450	Volume 150k $\Omega$
5	5319240	Knob, input selector
	1190420	Rotary Switch, input selector

Parts List <Top View>

No.	Stock No.	Description
7	5319250	Knob, tape copy
	1190410	Rotary Switch, tape copy
8	5319280	Knob Balance Volume
	1015320, 1	Volume 250k $\Omega$ , balance
9	5326612	Knob, muting
	1171770	Lever Switch, muting
10	5326612	Knob, loudness
	1171770	Lever Switch, loudness
11	5326612	Knob, subsonic
	1171770	Lever Switch, subsonic
12	5326612	Knob, tone
	1171800	Lever Switch, tone
13	5319250	Knob, bass
	1015360, 1	Volume, 100k $\Omega$ C, bass
14	5507350	Leg
	2430290	Jack, phone
15	5326612	Knob, power switch
	1172000	Power Switch
16	5319250	Knob, Speakers
	1101930, 1	Rotary Switch, speakers
17	5319250	Knob, treble
	1015360, 1	Volume 100k $\Omega$ C, treble

Note: Parts numbered with F is included in Front panel Ass'y.

7. PACKING LIST



8. ACCESSORY PARTS LIST

Stock No.	Description
5238260	Schematic Diagram
9204490	Operating Instructions
5338340	Rack Mounting Adaptor



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