SERVICE MANUAL

STEREO AMPLIFIER

SANSUI AU-7700

Sansui

SANSUI ELECTRIC CO., LTD.

This service manual is designed for service engineers to repair, adjust, maintain and order the replacement parts of the AU-7700 correctly.
When ordering the parts, use the stock numder and parts name specifically referring to the Parts Locations & Parts Lists.
For general usage and maintenance of the unit, please refer to the Operating Instructions attached with the unit.

TABLE OF CONTENTS

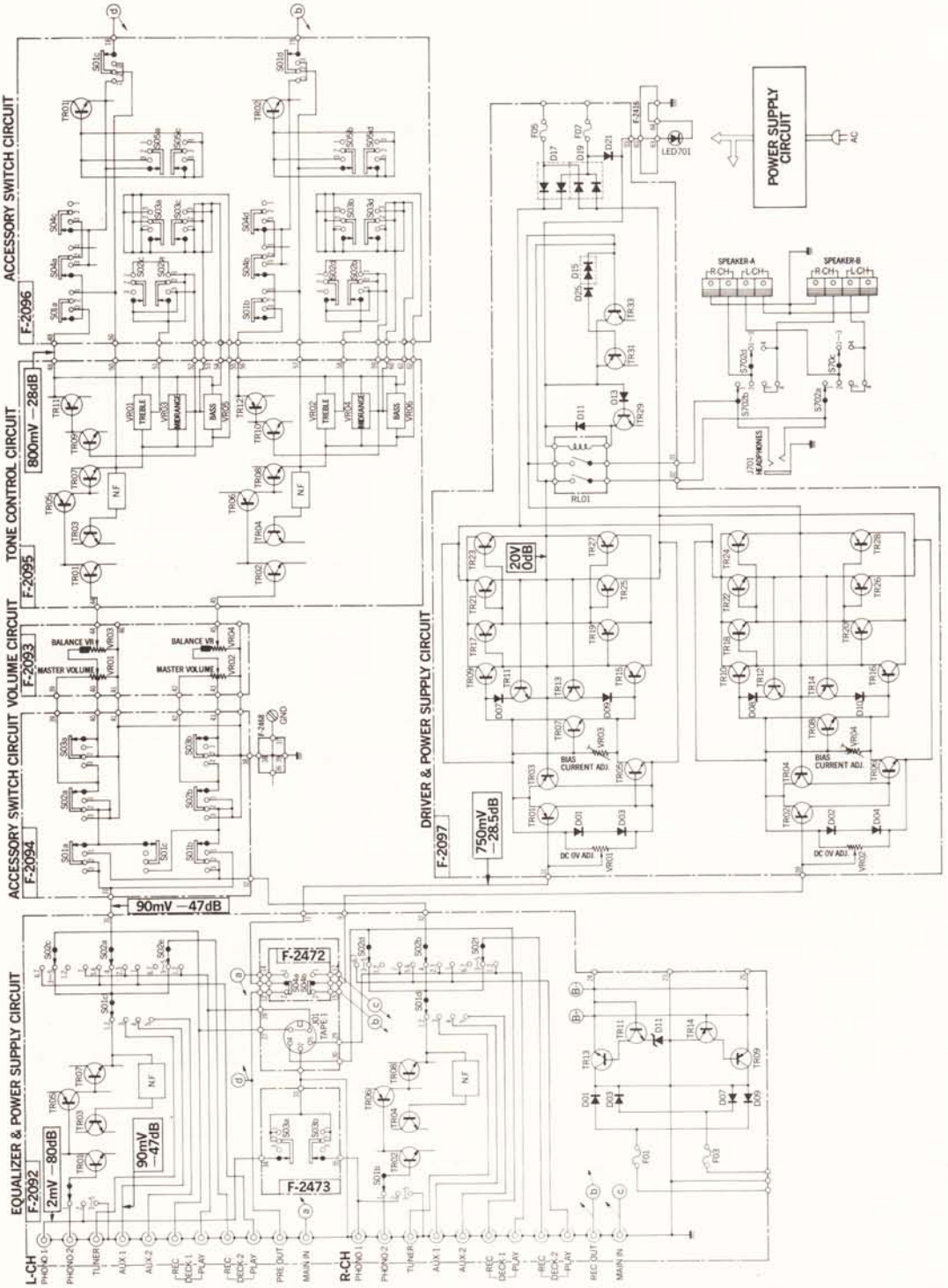
1. SPECIFICATIONS

POWER OUTPUT (at rated distortion)
CONTINUOUS RMS POWER OUTPUT
.....54 Watts per channel × 2
(both channels driven)
LOAD IMPEDANCE 8Ω
POWER BAND .....20 to 20,000Hz
TOTAL HARMONIC DISTORTION
.....less than 0.1% (from AUX)
Music power (IHF).....250W (4Ω 1,000Hz)
140W (8Ω 1,000Hz)
Continuous rms power output ..55+55W (8Ω 1,000Hz)
INTERMODULATION DISTORTION (at rated power output 70Hz: 7,000Hz=4: 1 SMPTE method)
OVERALL .....less than 0.15%
PREAMPLIFIER ONLY .less than 0.1%
POWER (MAIN) AMPLIFIER ONLY
.....less than 0.1%
FREQUENCY RESPONSE (at 1 Watt output)
OVERALL .....10 to 50,000Hz $^{+0.5}_{-1}$dB
POWER (MAIN) AMPLIFIER ONLY
.....5 to 50,000Hz $^{+0}_{-1}$dB
EQUALIZATION (RIAA curve)
.....30 to 15,000Hz ±0.5dB
DAMPING FACTOR 30 (8Ω)
INPUT SENSITIVITY AND INPEDANCE
(1kHz, for rated power output)
PHONO-1 .....2.5mV 30kΩ, 50kΩ, 100kΩ adjustable
PHONO-2 .....2.5mV 50kΩ
(Max. input capability: 300mV at 0.2% total harmonic distortion)
TUNER 100mV 50kΩ
AUX-1 & -2 .....100mV 50kΩ
TAPE DECK-1 & -2 (Pin Jacks)..100mV 50kΩ
TAPE DECK-1 (DIN Socket)....100mV 50kΩ
MAIN IN 800mV 50kΩ
OUTPUT LEVEL (1kHz)
TAPE DECK-1 & -2 (Pin Jacks)..100mV
TAPE DECK-1 (DIN Socket)....30mV
PRE OUT 800mV
(Max. output level: 5V at 0.5% total harmonic distortion)
CROSSTALK (1kHz, for rated power output)
PHONO-1 & -2 .....better than 50dB
TUNER .....better than 50dB
AUX-1 & -2 .....better than 55dB
TAPE DECK-1 & -2.....better than 55dB
MAIN IN .....better than 60dB

HUM AND NOISE (IHF)
PHONO-1 & -2 .....better than 75dB
TUNER .....better than 85dB
AUX-1 & -2 .....better than 85dB
TAPE DECK-1 & -2.....better than 85dB
MAIN IN .....better than 100dB
SWITCHES AND CONTROLS
BASS (±5 steps).....±13dB at 50Hz
TONE SELECTOR (TURNOVER FREQUENCIES)
.....150Hz, 300Hz, 600Hz
MIDRANGE (±5 steps)..±5dB at 1kHz
TREBLE (±5 steps).....±13dB at 15kHz
TONE SELECTOR (TURNOVER FREQUENCIES)
.....2kHz, 4kHz, 8kHz
LOUDNESS (Volume Control: −30dB)
LOW BOOST .....+10dB at 50Hz
HIGH & LOW BOOST ..+10dB at 50Hz
+8dB at 10kHz
LOW FILTER .....−3dB at 20Hz (12dB/oct.)
−3dB at 60Hz (12dB/oct.)
HIGH FILTER .....−3dB at 7kHz (6dB/oct.)
−3dB at 12kHz (12dB/oct.)
MUTING .....−30dB, −15dB
OTHERS
TRANSISTORS 57
DIODES 22
ZENER DIODES 3
LED 1
POWER REQUIREMENTS ..100, 117, 220, 240V, 50/60Hz
POWER CONSUMPTION ..120W (rated), 350W (max.)
DIMENSIONS .....434mm (17⅛") W
130mm (5⅛") H
315mm (12 7/16") D
WEIGHT .....12.3kg (27.1 lbs) Net,
14.0kg (30.9 lbs) Packed

* Design and specification subject to change without notice for improvements.

2. BLOCK DIAGRAM AND VALUE OF EACH LEVEL



S01a~d: SELECTOR (F-2092) S02a~f: TAPE PLAY (F-2092) S01a~c: MODE (F-2094) S03a, b: LOUDNESS (F-2094) S01a~d: HIGH FILTER (F-2096) S02a~d: TONE SELECTOR TREBLE S702a~d: SPEAKER S04: PRE-MAIN (F-2472)
1. PHONO-2 1. COPY 1 ▶ 2 DECK-2 1. REVERSE 1. LOW BOOST 1. 7kHz 1. OFF 1. SEPARATED
2. PHONO-1 2. COPY 2 ▶ 1 DECK-1 2. NORMAL 2. OUT 2. OUT (F-2096) 2. A 2. CONNECTED
3. TUNER 3. DECK 1 ▶ 2 DECK-1 3. MONO 3. HIGH & LOW BOOST 3. 12kHz 1. 2kHz 3. B
4. AUX 1 4. SOURCE S02a, b: MUTING (F-2094) S04a~d: LOW FILTER (F-2096) S01a~d: TONE & FILTER (F-2096) 2. 4kHz 4. A+B
5. AUX 2 5. DECK-2 1. −15dB 1. 60Hz 1. FILTER ONLY 3. 8kHz S03a, b: PICK UP LOAD (F-2473)
6. COPY 2 ▶ 1 DECK-2 2. OUT 2. DEFEAT S03a~d: TONE SELECTOR BASS 1. 30kΩ
7. COPY 2 ▶ 1 DECK-1 3. −30dB 2. 20Hz 3. TONE & FILTER (F-2096) 1. 60Hz 2. 50kΩ
2. 200Hz 3. 100kΩ
3. 150Hz

Condition of Level Measuring

*Value of each level in block diagram was measured by the followings.

1. MASTER VOLUME control ..Maximum
2. BASS, MIDRANGE, TREBLE & BALANCE volume controls ....Center
3. TONE & FILTER switch controls ..... TONE & FILTER
4. Input ....PHONO-1, 2 2mV 1kHz Sine Wave
   AUX-1, 2 90mV 1kHz Sine Wave
   (output impedance of 600Ω at an audio oscillator)
5. Output ..20V (50W) 8Ω

Note: Each voltage value is for reference and measured by a VTVM. In some recorders, the actual voltage value is in minor difference from the reference value.

3. ADJUSTMENT

3-1. Driver Circuit Board Adjustment (See Fig. 3-1, 3-2 and 3-3)

Note: 1. Confirm the AC power supply voltage.
2. MASTER VOLUME .....Minimum
3. SPEAKERS Selector.....A
4. Make the SP terminals free (no load).
5. For adjustment, run the unit for more than 3 minutes after the power is switched ON.
6. Room temperature should be 18~28°C (65~83°F) for bias current adjustment.

STEP	SUBJECT	EQUIPMENT	MEASURE OUTPUT	ADJUST	ADJUST FOR	CONDITION
1	DC 0V L-ch	DC volt meter	SP terminal L-ch (See Fig. 3-3)	F-2097 VR01	0V ±10mV	◦Turn volumes of VR03, VR04 CCW
2	DC 0V R-ch	Same as above	SP terminal R-ch (See Fig. 3-3)	F-2097 VR02	Same as above	
The unit installing quick acting fuses						
3-1	Bias current L-ch	DC milliammeter	F-2097 F01	F-2097 VR03	45 ±10mA	◦Step down meter's range accordingly
4-1	Bias current R-ch	Same as above	F-2097 F02	F-2097 VR04	Same as above	
※The unit not installing quick acting fuses						
3-2	Bias current L-ch	DC milliammeter	Between a red wire & plus side of C602 on F-2416 (See Fig. 3-2)	F-2097 VR03	45 ±10mA	◦Step down meter's range accordingly
4-2	Bias current R-ch	Same as above	Between other red wire & plus side of C602 on F-2416 (See Fig. 3-2)	F-2097 VR04	Same as above	

※ Bias current adjustment on the unit not installing quick acting fuses.

1) Disconnect a red wire (plus side) from C602 on F-2416 which goes to driver & power supply circuit board, F-2097, then confirm that collector voltage +41V of power transistor, TR23 (L-ch) or TR24 (R-ch) on F-2097 is not supplied.
2) Adjust VR03 (L-ch) or VR04 (R-ch) so that bias current on one channel at the disconnected points between A and B (see Fig. 3-2) is 45±10mA.
3) After connecting the red wire again, adjust it on another channel as same as steps 1) and 2).

Fig. 3-1

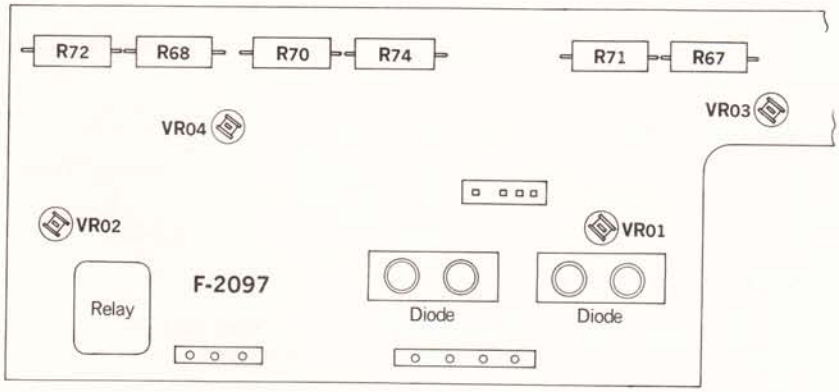


Fig. 3-3

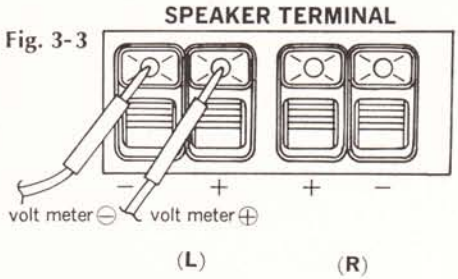
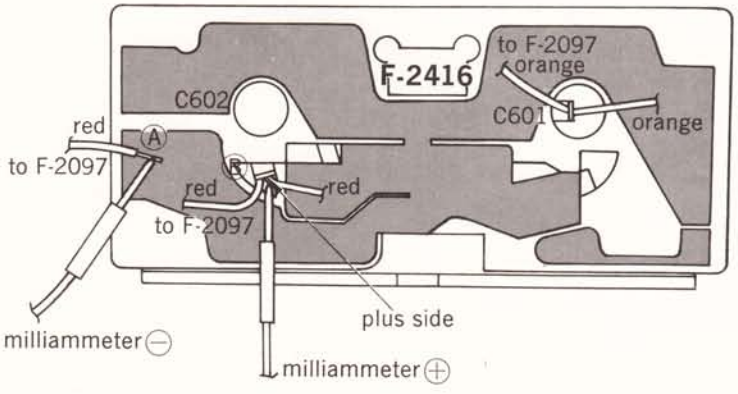


Fig. 3-2



4. TROUBLESHOOTING CHART

4-1. Troubleshooting on Power Supply Section

Symptom **Check Point** **Cause & What to Do**

1. No power supplied to each section

1-1. Indicator lamp for power not lighted
- 1. Power supply cord open
- 2. Imperfect contact of power switch, S701
- 3. Power fuse, F701 open
- 4. Defective power transformer, T701
- 5. F07 on F-2097 open
- 6. Defective D21 on F-2097
- 7. Imperfect contact of voltage selector, PU01

1-2. Indicator lamp for power lighted

1) ±41V not supplied to collector on each power transistors (+41V, TR21~TR24, −41V, TR25~TR28)
- 8. F05 or F07 on F2097 open
- 9. Defective D17 or D19 on F-2097

2) +24V not supplied to terminal [24] and −25V not supplied to terminal [25] on F-2092
- 10. Defective power transformer, T701
- 11. F01 (or F03) on F-2092 open
- 12. Defective D01, D03, D07 or D09 on F-2092
- 13. Defective TR09, TR11, TR13 or TR15 on F-2092

4-2. Troubleshooting on Audio Section

1. Relay, RL01 inoperative
(protector circuit inoperative)
- 1. F07 on F-2097 open
- 2. Defective D21 on F-2097
- 3. Defective D13, D15 or D25 on F-2097
- 4. Defective TR29, TR31 or TR33 on F-2097
- 5. Defective relay, RL01 on F-2097
- 6. Defective TR21 or TR23 (TR22 or TR24) on F-2097
- 7. Defective TR25 or TR27 (TR26 or TR28) on F-2097

2. Bias current not adjustable to +45mA by VR03 (L-ch) or VR04 (R-ch) on F-2097
- 8. Defective TR05 or TR07 (TR06 or TR08) on F-2097
- 9. Defective VR03 (VR04) on F-2097

3. Center Voltage not adjustable to 0V by VR01 (L-ch) or VR02 (R-ch) on F-2097
- 10. Defective TR05 (TR06) on F-2097
- 11. Defective VR01 (VR02) on F-2097

Symptom	Check Point	Cause & What to Do

4. TUNER or AUX input inoperative

4-1. Both channels inoperative
- 1. Imperfect contact of speakers switch, S702a, c (S702b, d)
- 2. Defective Power Supply Section

4-2. One channel inoperative
* Set MODE switch to REVERSE

1) Inoperative channel reverses
- 3. Tuner connected from this set has faulty
- 4. Imperfect contact of SELECTOR switch, S01c (S01d)
- 5. Imperfect contact of TAPE PLAY switch, S02a (S02b)

2) Inoperative channel not reverses
* Set TONE & FILTER switch to DEFEAT

2-1) The inoperative channel becomes operating
- 6. Defective TR09 or TR11 (TR10 or TR12) on F-2095
- 7. Imperfect contact of LOW FILTER switch, S04a, c (S04b, d)
- 8. Defective TR01 (TR02) on F-2096

2-2) The inoperative channel is still not operating
- 9. Defective TR01, TR03, TR05 or TR07 (TR02, TR04, TR06 or TR08) on F-2095
- 10. Imperfect contact of PRE-MAIN switch, S04a (S04b)
- 11. Defective Driver & Power Supply Circuit Board

5. PHONO inoperative

5-1. Both channels inoperative
- 1. Refer to 4-1. of 4. Both channels inoperative

5-2. One channel inoperative
* Set MODE switch to REVERSE

1) Inoperative channel reverses
- 2. Turntable connected from this set has faulty
- 3. Imperfect contact of SELECTOR switch, S01a (S01b)
- 4. Defective TR01, TR03, TR05 or TR07 (TR02, TR04, TR06 or TR08) on F-2092

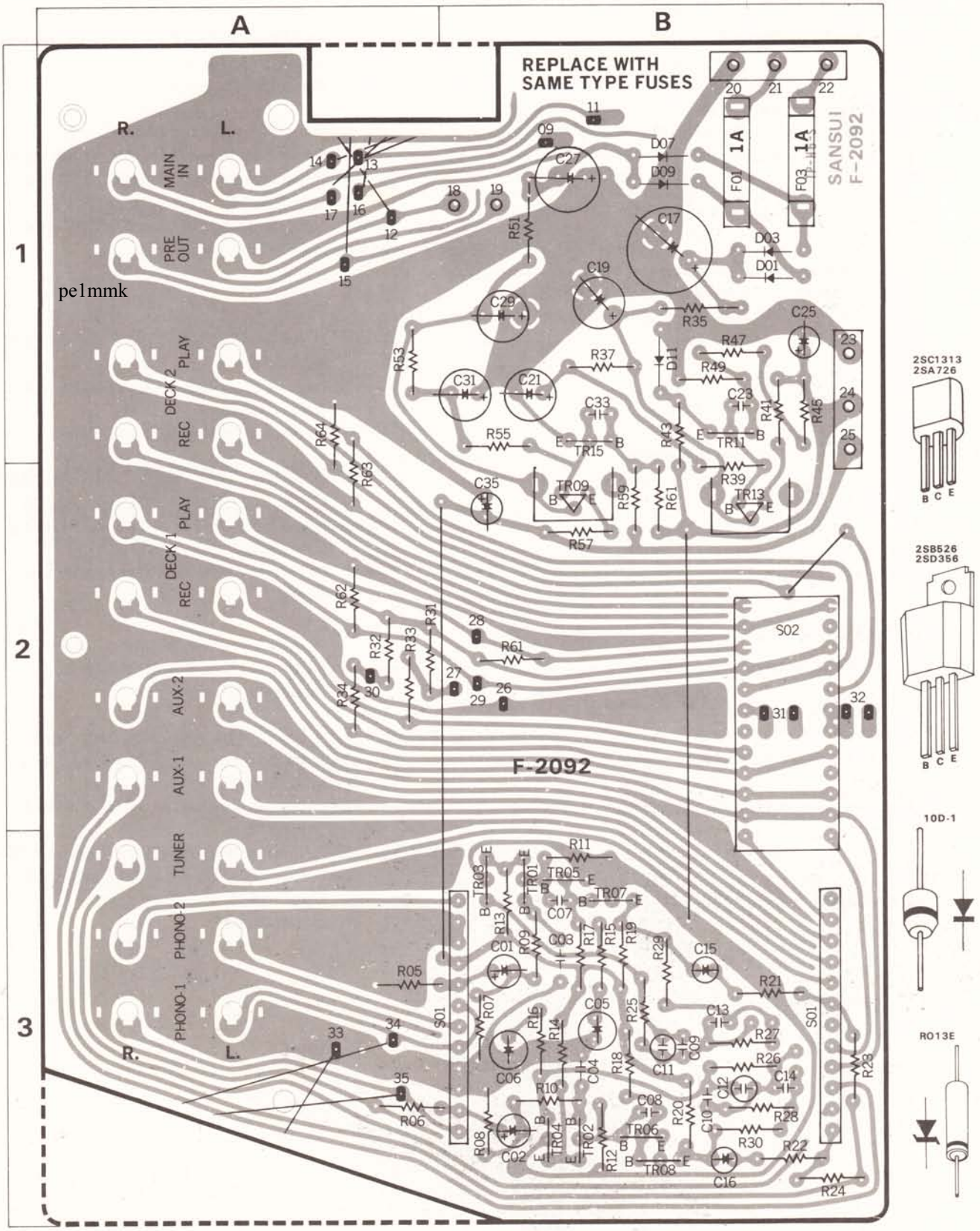
2) Inoperative channel not reverses
- 5. Refer to 4-2. of 4. One channel inoperative

5. PARTS LOCATIONS AND PARTS LISTS

5-1. F-2092 Equalizer & Power Supply Circuit Board

(Stock No. 7550580 Complete Circuit Board F-2092)

Conductor Side



Parts List

Parts No.	Stock No.	Description	Position
TR01, 02	0306071, 2	2SC1313 Ⓡ (G, H)	3 B
TR03, 04	0306071, 2	2SC1313 Ⓡ (G, H)	3 B
TR05, 06	0300470, 1	2SA726 Ⓦ (F, G)	3 B
TR07, 08	0306070~2	2SC1313 Ⓡ (F, G, H) Transistor	3 B
TR09	0303280~2	2SB526 (C, D, E)	2 B
TR11	0306070~2	2SC1313 Ⓡ (F, G, H)	1 B
TR13	0308450~2	2SD356 (C, D, E)	2 B
TR15	0300470, 1	2SA726 Ⓦ (F, G)	1 B
D01	0310340	10D-1	1 B
D03	0310340	10D-1 Diode	1 B
D07	0310340	10D-1	1 B
D09	0310340	10D-1	1 B
D11	0316310	RO13E(B) Zener Diode	1 B
C01, 02	0519103	0.47μF 50V E.C.	2 B
C03, 04	0660330	33pF 50V C.C.	2 B
C05, 06	0532100	10μF 16V E.C.	2 B
C07, 08	0660470	47pF 50V C.C.	2 B
C09, 10	0600826	0.0082μF 50V M.C.	2 B
C11, 12	0621561	560pF 50V P.C.	2 B
C13, 14	0600276	0.0027μF 50V M.C.	2 B
C15, 16	0533339	3.3μF 25V E.C.	2 B
C17	0515221	220μF 50V E.C.	1 B
C19	0514101	100μF 35V E.C.	1 B
C21	0515470	47μF 50V E.C.	1 B
C23	0660221	220pF 50V C.C.	1 B
C25	0513100	10μF 25V E.C.	1 B
C27	0515101	100μF	1 B
C29	0515470	47μF 50V E.C.	1 B
C31	0515470	47μF	1 A, B
C33	0660221	220pF 50V C.C.	1 B
C35	0513479	4.7μF 25V E.C.	2 B
C901, 902	0601107	0.01μF 50V M.C.	
C903	0515339	3.3μF	
C904, 905	0657223	0.022μF 50V C.C.	
C906, 907	0660101	100pF	
R01, 02	0107563	56kΩ	3 A
R03, 04	0107473	47kΩ	3 A
R05, 06	0107224	220kΩ	3 A
R07, 08	0107224	220kΩ	3 B
R09, 10	0107152	1.5kΩ	3 B
R11, 12	0107822	8.2kΩ	3 B
R13, 14	0107124	120kΩ	3 B
R15, 16	0107821	820Ω	3 B
R17, 18	0107223	22kΩ ¼W C.R.	3 B
R19, 20	0107472	4.7kΩ	3 B
R21, 22	0107101	100Ω	3 B
R23, 24	0107563	56kΩ	3 B
R25, 26	0107474	470kΩ	3 B
R27, 28	0107273	27kΩ	3 B
R29, 30	0107561	560Ω	3 B
R31, 32	0107104	100kΩ	2 A
R33, 34	0107224	220kΩ	2 A
R35	0104181	180Ω 1 W C.R.	1 B
R37	0107272	2.7kΩ	1 B
R39	0107821	820Ω	2 B
R41	0107220	22Ω	1 B
R43	0107821	820Ω ¼W C.R.	1, 2 B
R45	0107392	3.9kΩ	1 B
R47	0107471	470Ω	1 B
R49	0107682	6.8kΩ	1 B

Parts List

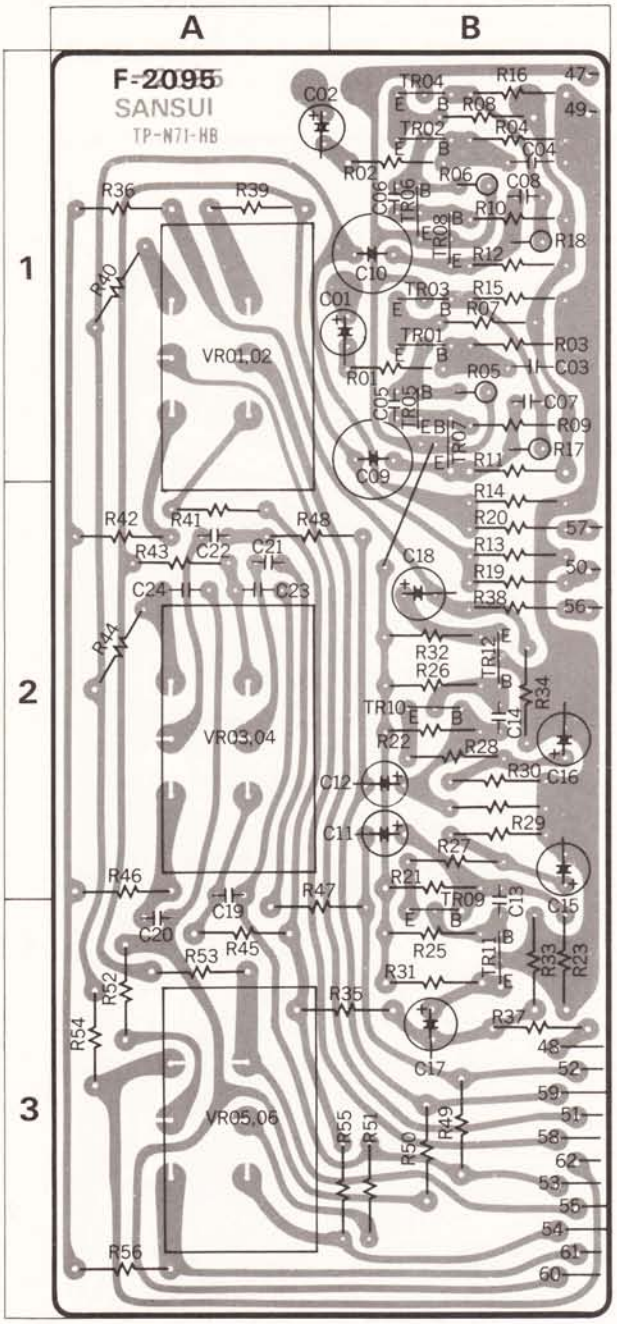
Parts No.	Stock No.	Description	Position
R51	0103331	330Ω ½W C.R.	1 B
R53	0107392	3.3kΩ	1 A
R55	0107122	1.2kΩ	1 B
R57	0107330	33Ω	2 B
R59	0107153	15kΩ	2 B
R60	0107153	15kΩ ¼W C.R.	2 B
R61	0107474	470kΩ	2 B
R62	0107474	470kΩ	2 A
R63	0107474	470kΩ	1, 2 A
R64	0107474	470kΩ	1, 2 A
R901, 902	0107104	100kΩ	
S01	1102550	SRE2-4-5 Rotary Switch	3 B
S02	1102560	SRE2-6-7	2, 3 B
F01	0430830	1A (20m/m) Fuse	1 B
F03	0430830	1A (20m/m)	1 B
	2310150	Fuse Holder	
	2430250	Pin Jack	
	5936691	Heat Sink	

Abbreviations

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

5-2. F-2095 Tone Control Circuit Board (Stock No. 7560820 Complete Circuit Board F-2095)

Conductor Side

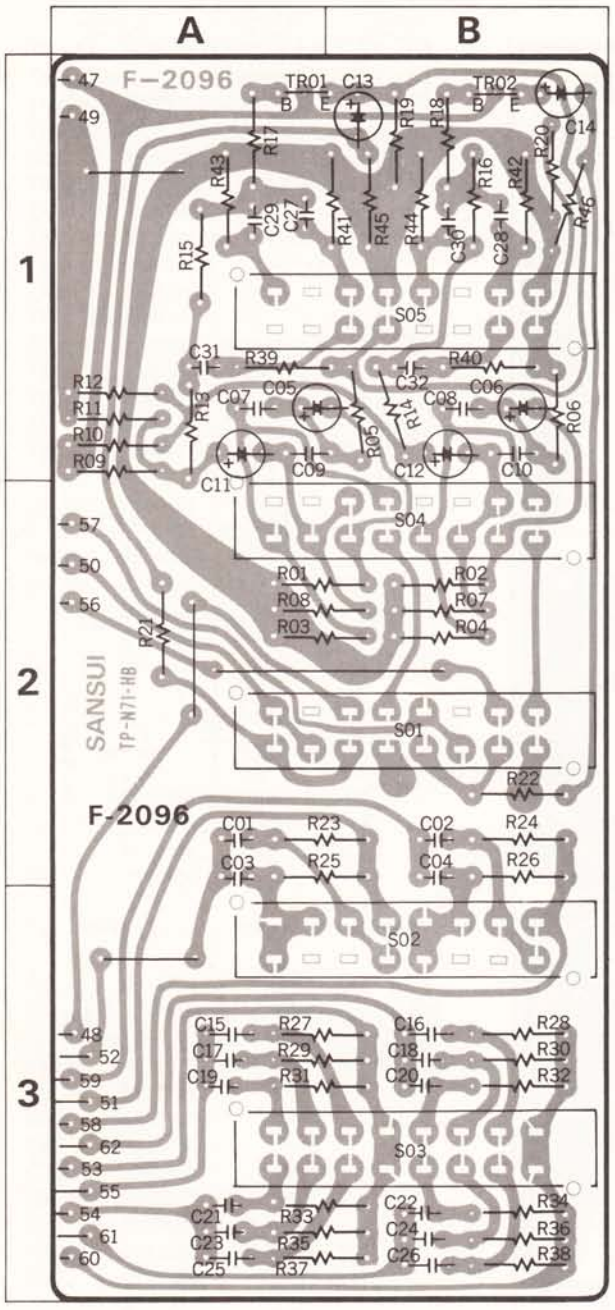


Parts List

Parts No.	Stock No.	Description			Position
TR01, 02	0306070, 1	2SC1313 Ⓡ (F, G)		Transistor	1 B
TR03, 04	0306070, 1	2SC1313 Ⓡ (F, G)			1 B
TR05, 06	0300470, 1	2SA726 Ⓦ (F, G)			1 B
TR07, 08	0306070, 1	2SC1313 Ⓡ (F, G)			1, 2B. 1B
TR09, 10	0306070, 1	2SC1313 Ⓡ (F, G)			3 B . 2 B
TR11, 12	0300470, 1	2SA726 Ⓦ (F, G)			3 B
C01, 02	0519103	0.47μF	50V E.C.		1 A , B
C03, 04	0660330	33pF			1 B
C05, 06	0660470	47pF	50V C.C.		1 B
C07, 08	0660680	68pF			1 B
C09, 10	0533100	10μF	25V BP.E.C.		1, 2B. 1B
C11, 12	0519105	2.2μF	50V E.C.		2 B
C13, 14	0660100	10pF	50V C.C.		2, 3B. 2B
C15, 16	0510100	10μF	16V E.C.		2 B
C17, 18	0519001	10μF	25V E.C.		3 B . 2 B
C19, 20	0601686	0.0068μF			2 A . 3 A
C21, 22	0601476	0.0047μF	50V M.C.		2 A
C23, 24	0601686	0.0068μF			2 A
C901, 902	0601107	0.01μF			
C903	0657223	0.022μF	50V C.C.		
R01, 02	0107222	2.2kΩ	¼W C.R.		1 B
R03, 04	0107124	120kΩ			1 B
R05, 06	0106822	8.2kΩ	¼W C.R. (E.L.R.)		1 B
R07, 08	0107124	120kΩ	¼W C.R.		1 B
R09, 10	0107223	22kΩ			1 B
R11, 12	0107472	4.7kΩ			1 B
R13, 14	0107104	100kΩ			2 B
R15, 16	0107222	2.2kΩ			1 B
R17, 18	0106183	18kΩ	¼W C.R. (E.L.R.)		1 B
R19, 20	0107101	100Ω	¼W C.R.		2 B
R21, 22	0107824	820kΩ			2 B
R23, 24	0107154	150kΩ			3 B . 2 B
R25, 26	0107123	12kΩ			3 B . 2 B
R27, 28	0107121	120Ω			2 B
R29, 30	0107332	3.3kΩ			2 B
R31, 32	0107332	3.3kΩ			3 B . 2 B
R33, 34	0107104	100kΩ			2 B . 2 B
R35, 36	0107101	100Ω			3A, B. 1A
R37, 38	0107101	100Ω			3 B . 2 B
R39, 40	0107272	2.7kΩ			1 A
R41, 42	0107272	2.7kΩ			2 A
R43, 44	0107472	4.7kΩ			2 A
R45	0107472	4.7kΩ			3 A
R46	0107472	4.7kΩ			2 A
R47, 48	0107273	27kΩ			3 A , B
R49, 50	0107223	22kΩ			3 B
R51, 52	0107222	2.2kΩ			3 B . 3 A
R53, 54	0107822	8.2kΩ			3 A
R55, 56	0107822	8.2kΩ			3 B . 3 A
VR01, 02	1060060, 1	50kΩ (B)×2	Variable Resistor (Stop Type)		1 A
VR03, 04	1060060, 1	50kΩ (B)×2			2 A
VR05, 06	1060060, 1	50kΩ (B)×2			3 A

5-3. F-2096 Accessory Switch Circuit Board (Stock No. 7592130 Complete Circuit Board F-2096)

Conductor Side



Parts List

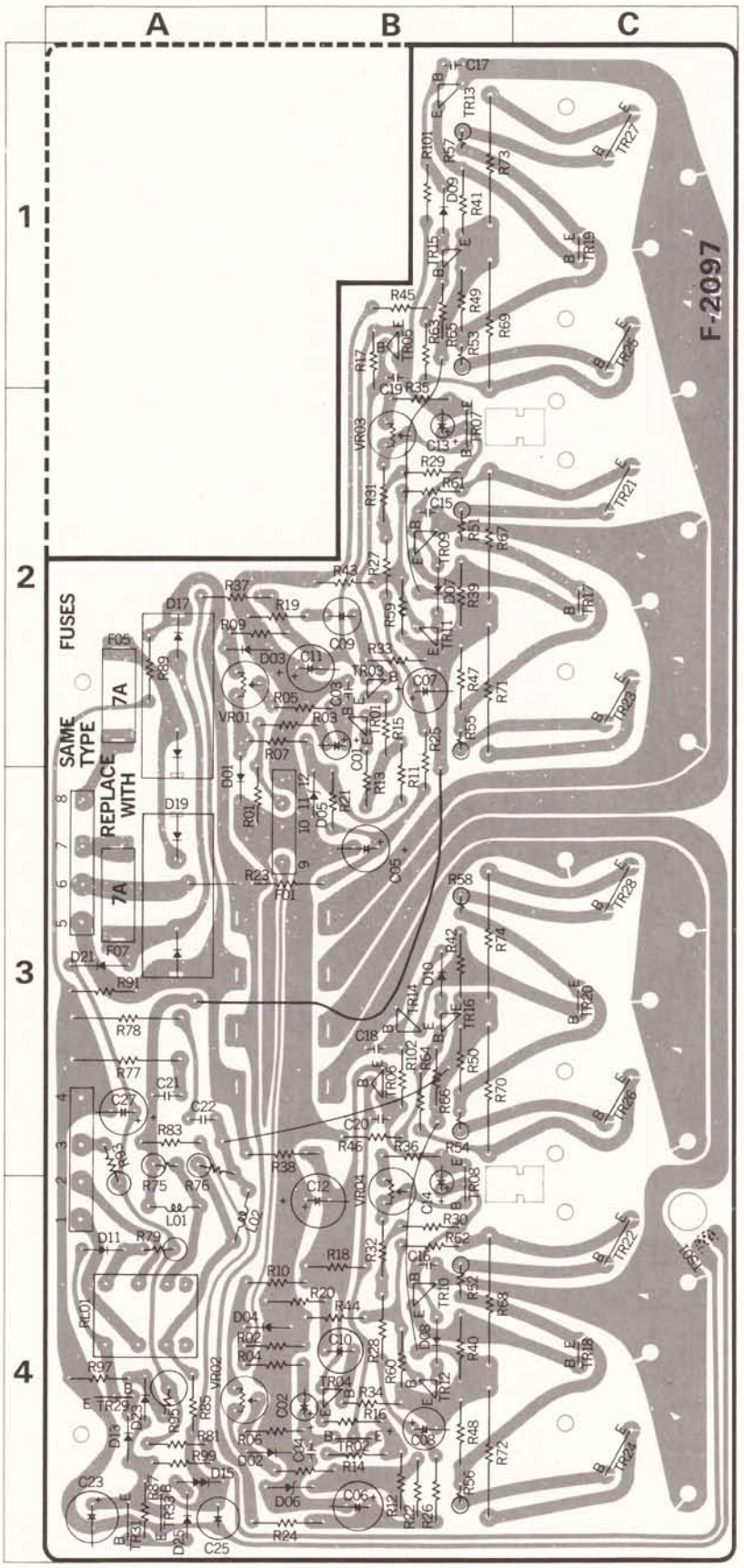
Parts No.	Stock No.	Description	Position
TR01,02	0306070, 1	2SC1313® (F, G) Transistor	1A, B. 1B
C01, 02	0621821	820 pF 50V P.C.	2A. 2B
C03, 04	0601156	0.0015μF 50V M.C.	2A. 2B
C05, 06	0573228	0.22μF 25V T.C.	1A, B. 1B
C07, 08	0601687	0.068μF } 50V M.C.	1A. 1B
C09, 10	0601277	0.027μF }	1A, B. 1B
C11, 12	0519101	1μF } 50V E.C.	1A. 1B
C13, 14	0519105	2.2μF }	1B
C15, 16	0601687	0.068μF	3A. 3B
C17, 18	0601227	0.022μF	3A. 3B
C19, 20	0601686	0.0068μF	3A. 3B
C21, 22	0601686	0.0068μF	3A. 3B
C23, 24	0601227	0.022μF } 50V M.C.	3A. 3B
C25, 26	0601687	0.068μF	3A. 3B
C27, 28	0601106	0.001μF	1A. 1B
C29, 30	0601156	0.0015μF	1A. 1B
C31, 32	0601276	0.0027μF	1A. 1B
R01, 02	0107474	470kΩ	2A, B. 2B
R03, 04	0107474	470kΩ	2A, B. 2B
R05, 06	0107393	39kΩ	1B
R07, 08	0107394	390kΩ	2B. 2A, B
R09, 10	0107274	270kΩ	1A
R11, 12	0107274	270kΩ	1A
R13, 14	0107472	4.7kΩ	1A. 1B
R15, 16	0107123	12kΩ	1A. 1B
R17, 18	0107102	1kΩ	1A. 1B
R19, 20	0107682	6.8kΩ	1B
R21, 22	0107101	100Ω	2A. 2B
R23, 24	0107105	1MΩ } ¼W C.R.	2A, B. 2B
R25, 26	0107105	1MΩ	2A, B. 2B
R27, 28	0107105	1MΩ	3A, B. 3B
R29, 30	0107105	1MΩ	3A, B. 3B
R31, 32	0107105	1MΩ	3A, B. 3B
R33, 34	0107105	1MΩ	3A, B. 3B
R35, 36	0107105	1MΩ	3A, B. 3B
R37, 38	0107105	1MΩ	3A, B. 3B
R39, 40	0107105	1MΩ	1A, B. 1B
R41, 42	0107105	1MΩ	1B
R43, 44	0107105	1MΩ	1A. 1B
R45, 46	0107104	100kΩ	1B
S01	1170500	SLC14351	2A. B
S02	1170490	SLC14301	3A. B
S03	1170490	SLC14301 Lever Switch	3A. B
S04	1170490	SLC14301	2A. B
S05	1170490	SLC14301	1A. B

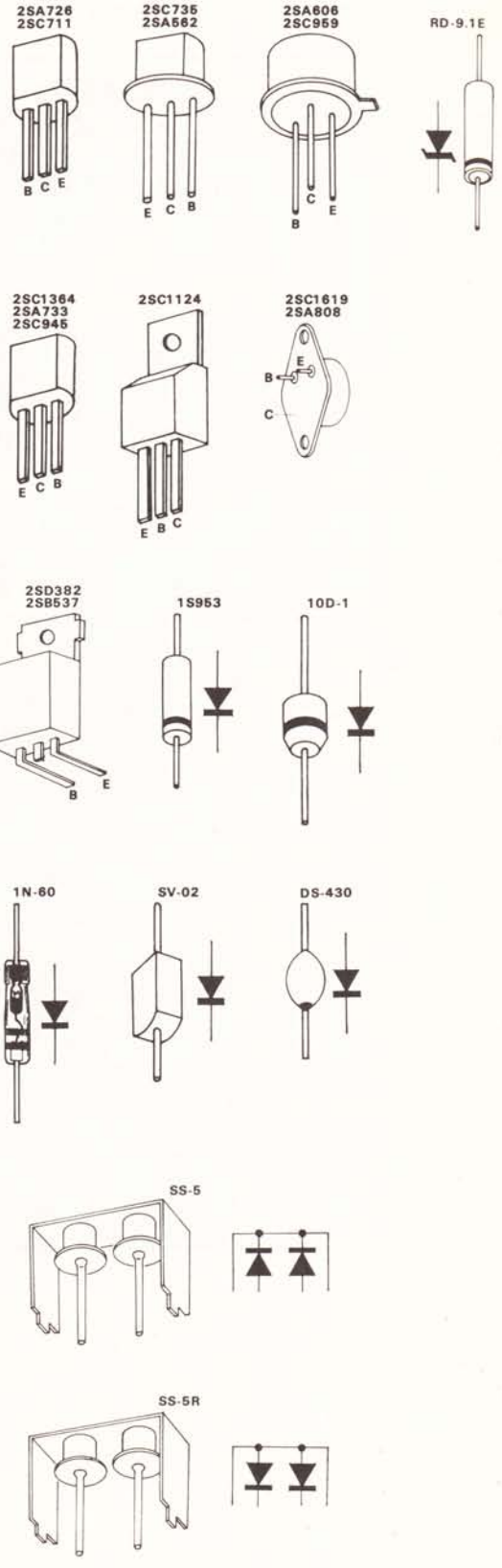
Abbreviations

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

5-4. F-2097 Driver & Power Supply Circuit Board (Stock No. 7570910 Complete Circuit Board F-2097)

Conductor Side





Parts List

Parts No.	Stock No.	Description	Position
TR01, 02	0300470, 1	2SA726 Ⓦ (F, G)	2B . 4B
TR03, 04	0300470, 1	2SA726 Ⓦ (F, G)	2B . 4B
TR05, 06	0305900, 1	2SC1124 (1, 2)	1B . 3B
TR07, 08	0305731~3	2SC711 (E, F, G)	2B . 3, 4B
TR09, 10	0305742, 3	2SC959 (L, K)	2B
TR11, 12	0305640, 1	2SC735 (O, Y)	2B . 4B
TR13, 14	0300212, 3	2SA606 (L, K)	1B . 3B
TR15, 16	0300220, 1	2SA562 (O, Y)	1B . 3B
TR17, 18	0308441, 2	2SD382 (M, L) Transistor	2C . 4C
TR19, 20	0303271, 2	2SB537 (M, L)	1C . 3C
TR21, 22	0306190~3	2SC1619 (R, O, Y)	2C . 4C
TR23, 24	0306190~3	2SC1619 (R, O, Y)	2C . 4C
TR25, 26	0300630~3	2SA808 (R, O, Y)	1C . 3C
TR27, 28	0300630~3	2SA808 (R, O, Y)	1C . 3C
TR29	0306130~2	2SC1364 (5, 6, 7)	4A
TR31	0300510~2	2SA733 (P, Q, R)	4A
TR33	0305950~2	2SC945 (R, Q, P)	4A
D01, 02	0340090	DS-430	2,3A.4A,B
D03, 04	0340090	DS-430	2A,B.4A,B
D05, 06	0316230	RD-9.1E(B)	3B . 4B
D07, 08	0311050	1S953	2B . 4B
D09, 10	0311050	1S953	1B . 3B
D11	0310340	10D-1	4A
D13	0311050	1S953	4A
D15	0310490	SV-02 Diode	4A
D17	0311310	SS-5	2A
D19	0311320	SS-5R	3A
D21	0310340	10D-1	3A
D23	0310331	1N60	4A
D25	0340090	DS-430	4A
D27	0310331	1N60	
D28	0310031	1N60	
TS01	0320110	TS3-85 Thermistor	4C
C01, 02	0519105	2.2μF 50V E.C.	2B . 4B
C03, 04	0660470	49pF 50V C.C.	2B . 4B
C05, 06	0515101	100μF 50V E.C.	3A . 4B
C07, 08	0515470	47μF 50V E.C.	2B . 4B
C09, 10	0530470	47μF 6.3V E.C.	2B . 4B
C11, 12	0515101	100μF 50V E.C.	2B . 4B
C13, 14	0515109	1μF 50V E.C.	2B . 4A, B
C15, 16	0660100	10pF 50V C.C.	2B . 4B
C17, 18	0660100	10pF 50V C.C.	1B . 3A
C19, 20	0660220	22pF 50V C.C.	1B . 3A
C21, 22	0601687	0.068μF 50V M.C.	3A
C23	0510471	470μF 6.3V E.C.	4A
C25	0531101	100μF 10V E.C.	4A
C27	0515330	33μF 50V E.C.	3A
C901	0601106	0.001μF 50V M.C.	
C903, 904	0601107	0.01μF 50V M.C.	
R01, 02	0107474	470kΩ ¼W C.R.	3A . 4A,B
R03, 04	0107103	10kΩ ¼W C.R.	2A,B.4A,B
R05, 06	0107104	100kΩ ¼W C.R.	2B . 4A,B
R07, 08	0107822	8.2kΩ ¼W C.R.	2A, B. 4B
R09, 10	0107393	39kΩ ¼W C.R.	2A,B.4A,B
R11, 12	0107472	4.7kΩ ¼W C.R.	2, 3B. 4B
R13, 14	0107220	22Ω ¼W C.R.	2, 2B. 4B
R15, 16	0107220	22Ω ¼W C.R.	2B . 4B
R17, 18	0107821	820Ω ¼W C.R.	1, 2B . 4B
R19, 20	0107332	3.3kΩ ¼W C.R.	2A, B. 4B

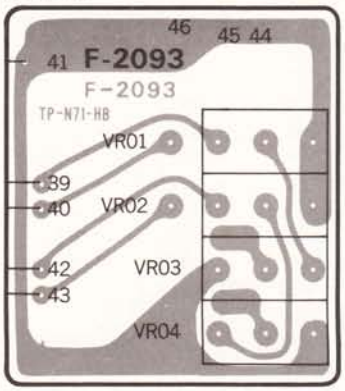
Parts No.	Stock No.	Description	Position
R21, 22	0103472	4.7kΩ ½W C.R.	3B . 4B
R23, 24	0103181	180Ω ½W C.R.	3A,B.4A,B
R25, 26	0103102	1kΩ ½W C.R.	2,3B .4B
R27, 28	0103472	4.7kΩ ½W C.R.	2B . 4B
R29, 30	0107390	39Ω ¼W C.R.	2B . 4B
R31, 32	0107682	6.8kΩ ¼W C.R.	2B . 4B
R33, 34	0107104	100kΩ ¼W C.R.	2B . 4B
R35, 36	0107122	1.2kΩ ¼W C.R.	2B . 3B
R37, 38	0103101	100Ω ½W C.R.	2A,B. 3AB
R39, 40	0103102	1kΩ ½W C.R.	2B . 4B
R41, 42	0103102	1kΩ ½W C.R.	1B . 3B
R43, 44	0107183	18kΩ ¼W C.R.	2B . 4B
R45, 46	0107183	18kΩ ¼W C.R.	1B . 3B
R47, 48	0103101	100Ω ½W C.R.	2B . 4B
R49, 50	0103101	100Ω ½W C.R.	1B . 3B
R51, 52	0103100	10Ω ½W C.R.	2B . 4B
R53, 54	0103100	10Ω ½W C.R.	1B . 3B
R55, 56	0103100	10Ω ½W C.R.	2B . 4B
R57, 58	0103100	10Ω ½W C.R.	1B . 3B
R59, 60	0107102	1kΩ ¼W C.R.	2B . 4B
R61, 62	0107471	470Ω ¼W C.R.	2B . 4B
R63, 64	0107471	470Ω ¼W C.R.	1B . 3B
R65, 66	0107102	1kΩ ¼W C.R.	1B . 3B
R67, 68	0133478	0.47Ω 3W Ce.R.	2B . 4B
R69, 70	0133478	0.47Ω 3W Ce.R.	1,2B . 3B
R71, 72	0133478	0.47Ω 3W Ce.R.	2B . 4B
R73, 74	0133478	0.47Ω 3W Ce.R.	1B . 3B
R75	0104479	4.7Ω 1W C.R.	3A
R76	0104479	4.7Ω 1W C.R.	3A
R77	0105100	10Ω 2W C.R.	3A
R78	0105100	10Ω 2W C.R.	3A
R79	0104181	180Ω 1W C.R.	4A
R81	0107823	82kΩ ¼W C.R.	4A
R83	0107823	82kΩ ¼W C.R.	3A
R85	0107104	100kΩ ¼W C.R.	4A
R87	0107473	47kΩ ¼W C.R.	4A
R89	0103682	6.8kΩ ½W C.R.	2A
R91	0103682	6.8kΩ ½W C.R.	3A
R93	0105182	1.8kΩ 2W C.R.	3, 4A
R95	0105182	1.8kΩ 2W C.R.	4A
R97	0107221	220Ω ¼W C.R.	4A
R99	0107223	22kΩ ¼W C.R.	4A
R100, 101	0107102	1kΩ ¼W C.R.	1B
RL01	1150251	RABK-2B Relay	4A
L01, 02	4290210	2.5μH Micro Inductor	4A, B
F05, 07	0430920	7A (20m/m) Fuse	2A . 3A
VR01, 02	1035110	4.7kΩ (B) Semi Variable Resistor	2A
VR03, 04	1035070	1kΩ (B) Semi Variable Resistor	2B . 3, 4B
	2310150	Fuse Holder	
	5937061	Heat Sink	

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

5-5. F-2093 Volume Circuit Board

Conductor Side



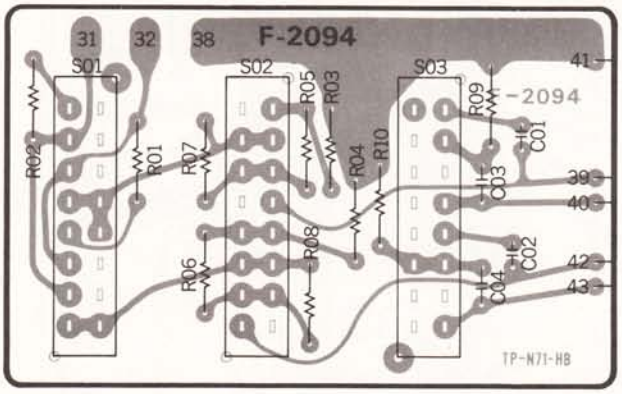
Parts List

Parts No.	Stock No.	Description	
VR01~04	1060320	250kΩ (MN,B)×4	Variable Resistor

5-6. F-2094 Accessory Switch Circuit Board

(Stock No. 7592120 Complete Circuit Board F-2094)

Conductor Side



Parts List

Parts No.	Stock No.	Description		
C01, 02	0660391	390pF	50V	C.C.
C03, 04	0601227	0.022μF	50V	M.C.
R01, 02	0107103	10kΩ		
R03, 04	0107103	10kΩ		
R05, 06	0107823	82kΩ	1/4W	C.R.
R07, 08	0107184	180kΩ		
R09, 10	0107223	22kΩ		
S01	1170500	SLC14351		
S02	1170490	SLC14301		Lever Switch
S03	1170490	SLC14301		

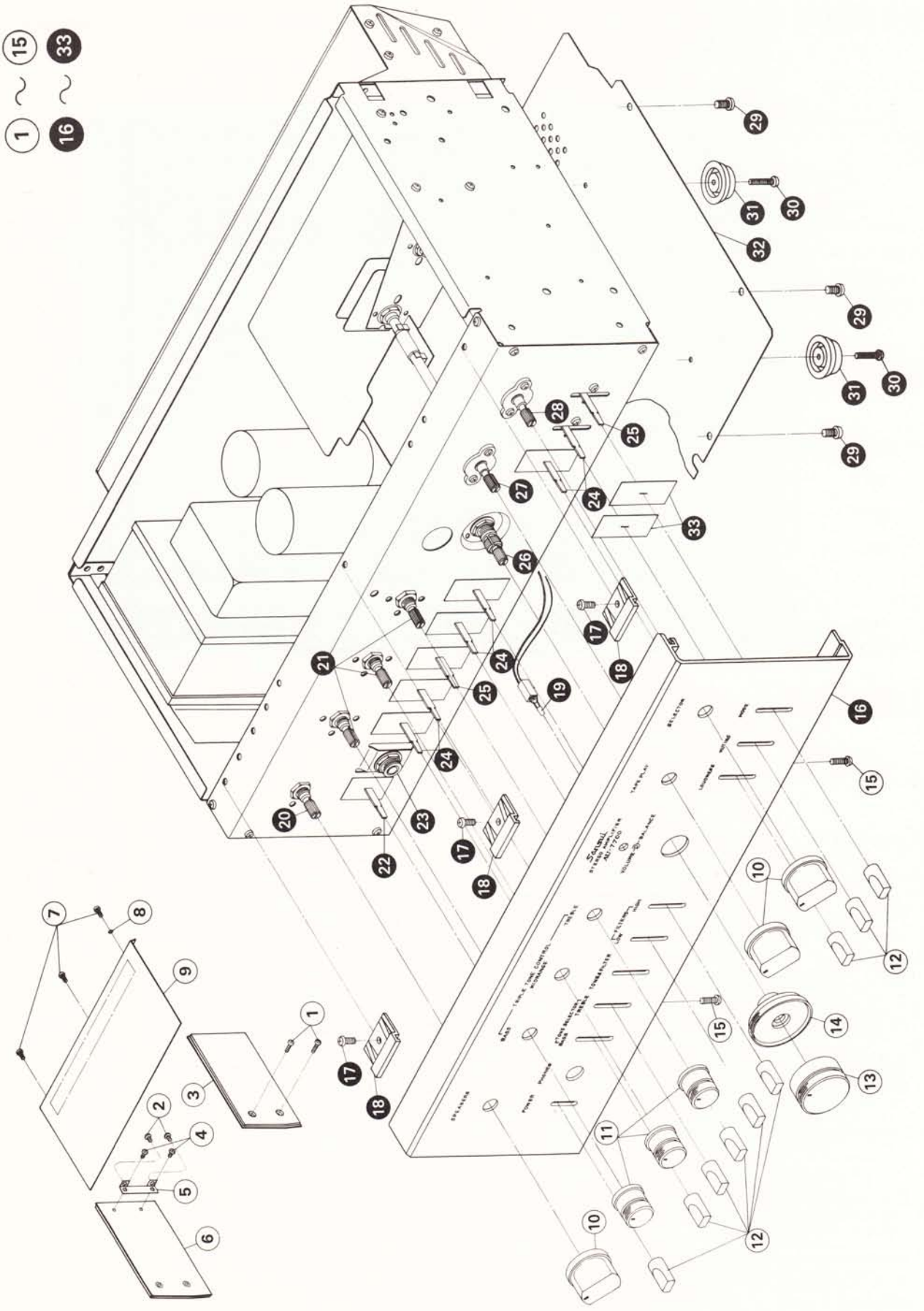
5-7. Other Parts (Front Side)

Parts List

Parts No.	Stock No.	Description
1	5101161	Binding Head Screw, M4×6
2	5109222	Binding Head Tapping Screw, M3×8
3	5309270	Side Panel (Right)
4	5109121	Binding Head Tapping Screw, M3×6
5	5269830	Side Panel Retainer
6	5309260	Side Panel (Left)
7	5109222	Binding Head Tapping Screw, M3×8
8	5122540	Toothed Lock Washer (External), 3φ
9	5006340	Metal Bonnet
10	5317880	S-5 Type Knob
11	5318040	S-5 Type Knob (Tone Control)
12	5326460	E-1 Type Knob (Lever Switch)
13	5318001	W0-3 Type Knob (Volume)
14	5318080	U-5 Type Knob (Balance)
15	5109222	Binding Head Tapping Screw, M3×8
16	5309210	Front Panel
	5269800	Holder (Light Emitted Diode)
17	5109222	Binding Head Tapping Screw, M3×8
18	5269880	Stopper (Front Panel)
19	7726080	Light Emitted Diode (SDB-501A-RD)
20	1101560, 1	Rotary Switch Y-1-4-4 (Speaker)
21	1090060, 1	50kΩ (B)×2 Tone Control Volume
22	1170330	Lever Switch (Power)
23	2430190	Headphone Jack
24	1170490	Lever Switch (Control)
25	1170500	Lever Switch (Control, Mode)
26	1060320	250kΩ (MN, B)×4 Volume, Balance Volume
27	1102560	Rotary Switch SRE2-6-7 (Tape Play)
28	1102550	Rotary Switch SRE2-4-5 (Selector)
29	5109222	Binding Head Tapping Screw, M3×8
30	5166520	Washer Head Tapping Screw, M3×12
31	5516940	Foot
32	5058220	Bottom Plate
33	5047470	Masking (Lever Switch)

Abbreviations

C.R.	: Carbon Resistor	BP.E.C.	: Bi-Polar Electrolytic Capacitor
S.R.	: Solid Resistor		
Ce.R.	: Cement Resistor	C.C.	: Ceramic capacitor
M.R.	: Metallized Film Resistor	Mi.C.	: Mica Capacitor
		O.C.	: Oil Capacitor
M.C.	: Mylar Capacitor	P.C.	: Polystyrene Capacitor
E.C.	: Electrolytic Capacitor	T.C.	: Tantalum Capacitor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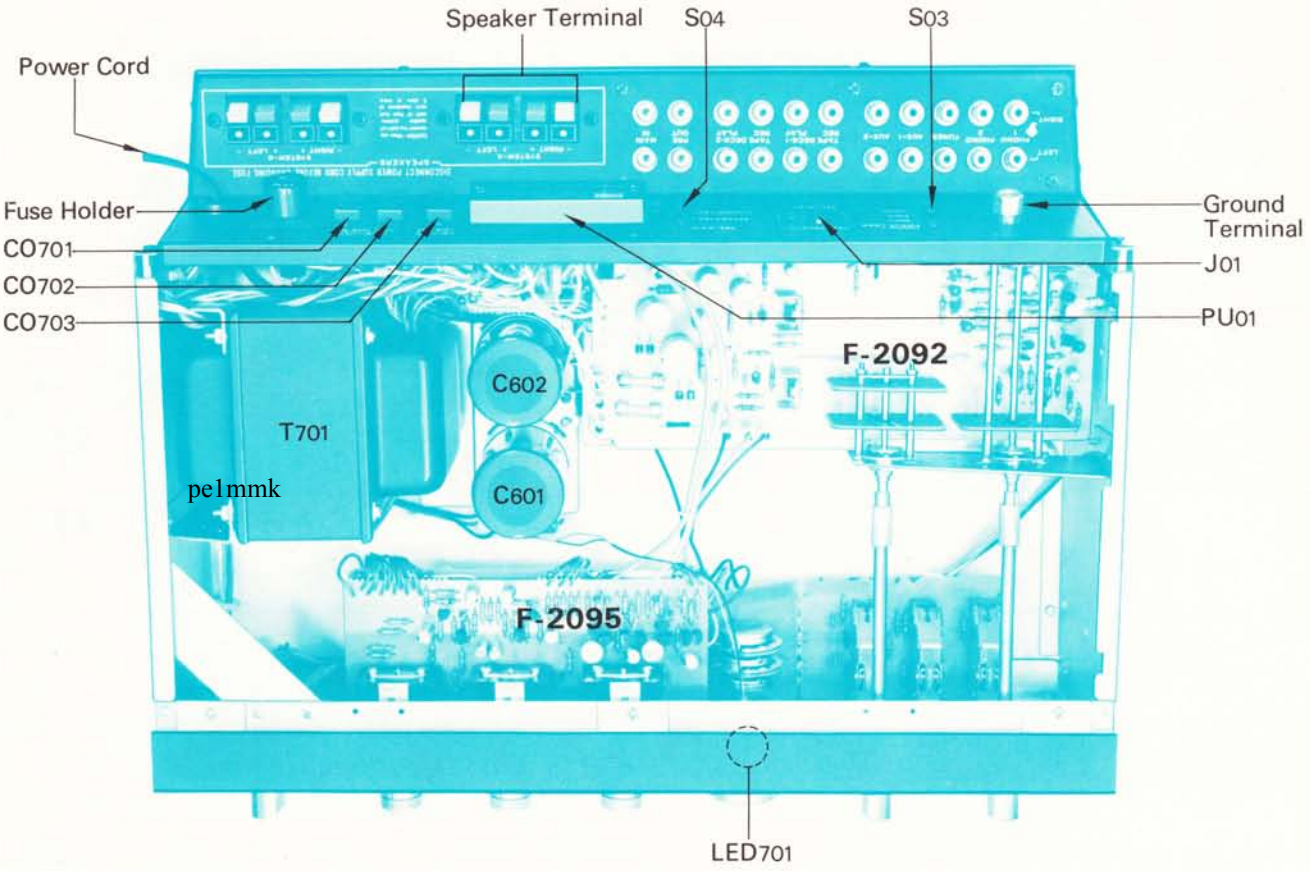
1
16

5-8. Other Parts (Top Side)

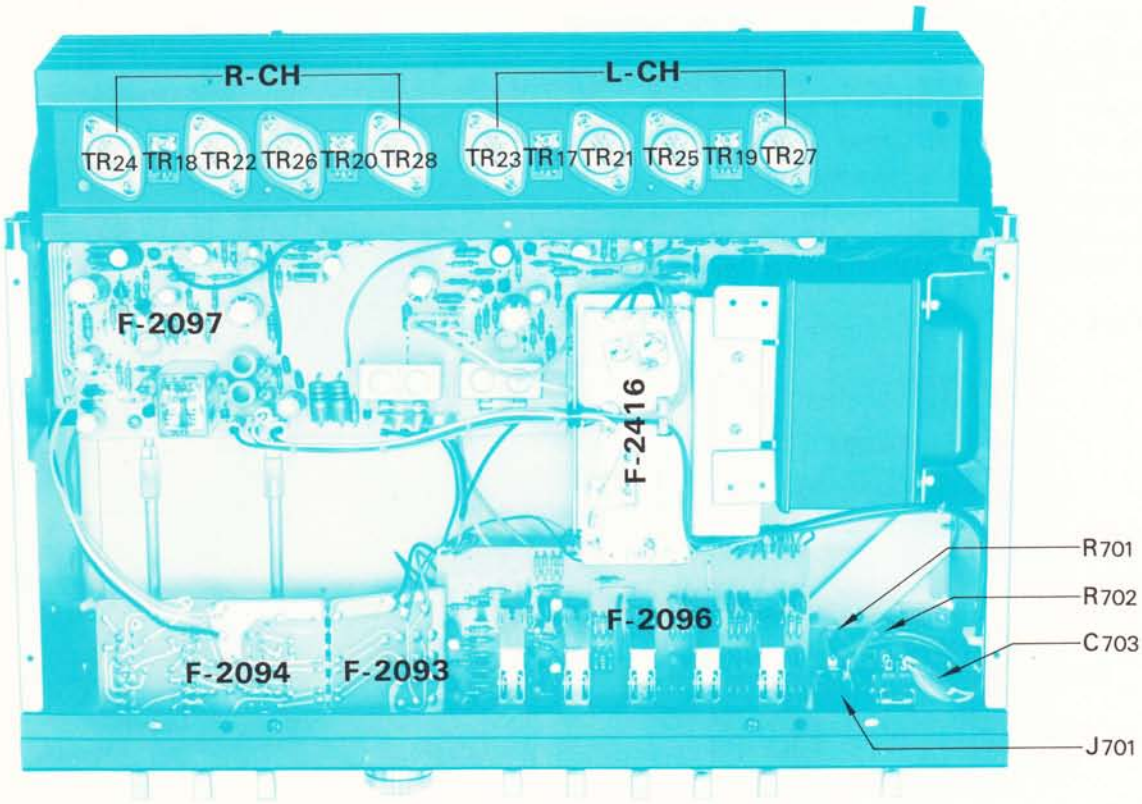


Parts List

Parts No.	Stock No.	Description
C601	0559360	10000μF 50V E.C.
C602	0559360	10000μF 50V E.C.
LED701	7726080	SDB-501A-RD Light Emitted Diode
J01	2090040	DIN Jack
S03	1110290	SSB02332 Slide Switch
S04	1110280	SSB02230 Slide Switch
CO701~703	2450050	AC Outlet
F701	0431290	6A Power Fuse (100~117V)
	0431260	3A Power Fuse (220~240V)
	2300060	Fuse Holder
T701	4002110	Power Transformer

Parts No.	Stock No.	Description
PU01	2410080	Voltage Selector, socket
	2410090	Voltage Selector, plug
	2290100	4P Speaker Terminal
	3800020	Power Cord (KP-200)
	2230050	Ground Terminal

5-9. Other Parts (Bottom Side)



Parts List

Parts No.	Stock No.	Description	
TR17	0308441, 2	2SD382 (M, L)	Transistor
TR18	0308441, 2	2SD382 (M, L)	
TR19	0303271, 2	2SB537 (M, L)	
TR20	0303271, 2	2SB537 (M, L)	
TR21	0306190~3	2SC1619 (R, O, Y)	
TR22	0306190~3	2SC1619 (R, O, Y)	
TR23	0306190~3	2SC1619 (R, O, Y)	
TR24	0306190~3	2SC1619 (R, O, Y)	
TR25	0300630~3	2SA808 (R, O, Y)	
TR26	0300630~3	2SA808 (R, O, Y)	
TR27	0300630~3	2SA808 (R, O, Y)	
TR28	0300630~3	2SA808 (R, O, Y)	
C703	0659801	0.01μF 1.4kV C.C.	
R701	0104221	220Ω 1W C.R.	
R702	0104221	220Ω 1W C.R.	
J701	2430190	Headphone Jack	

Abbreviations

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

6. REPLACEMENT OF POWER TRANSISTORS

1) Remove 4 pcs-screws installing on left (or right) side panel.
2) Remove 11 pcs-screws installing on bottom plate.
3) Remove all connectors and screws, ① and ② (see Fig. 6-1) installing on F-2097.
4) Remove screw, ③, ④, ⑤ and ⑥ (see Fig. 6-2) installing heat sink.
5) Remove driver & power supply circuit board ass'y (F-2097), then replace the transistors with new ones.

Fig. 6-1

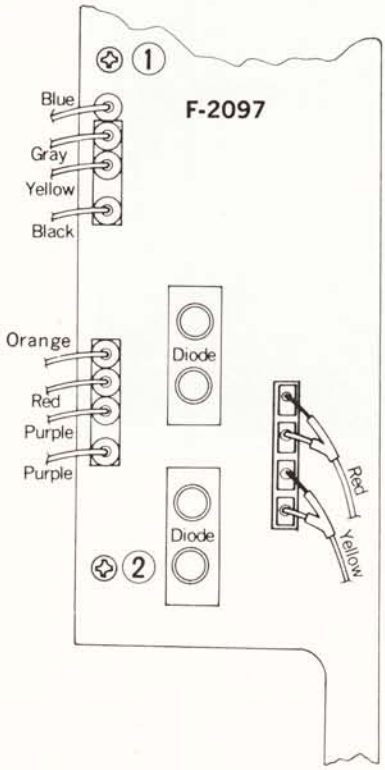
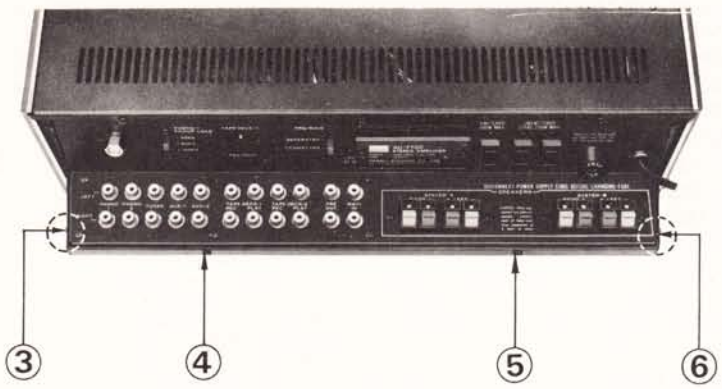
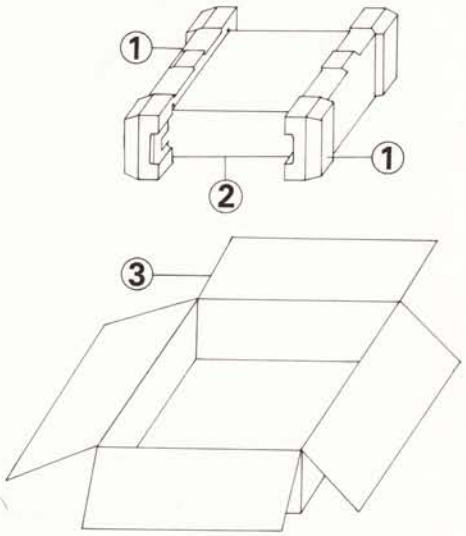


Fig. 6-2



7. PACKING LIST

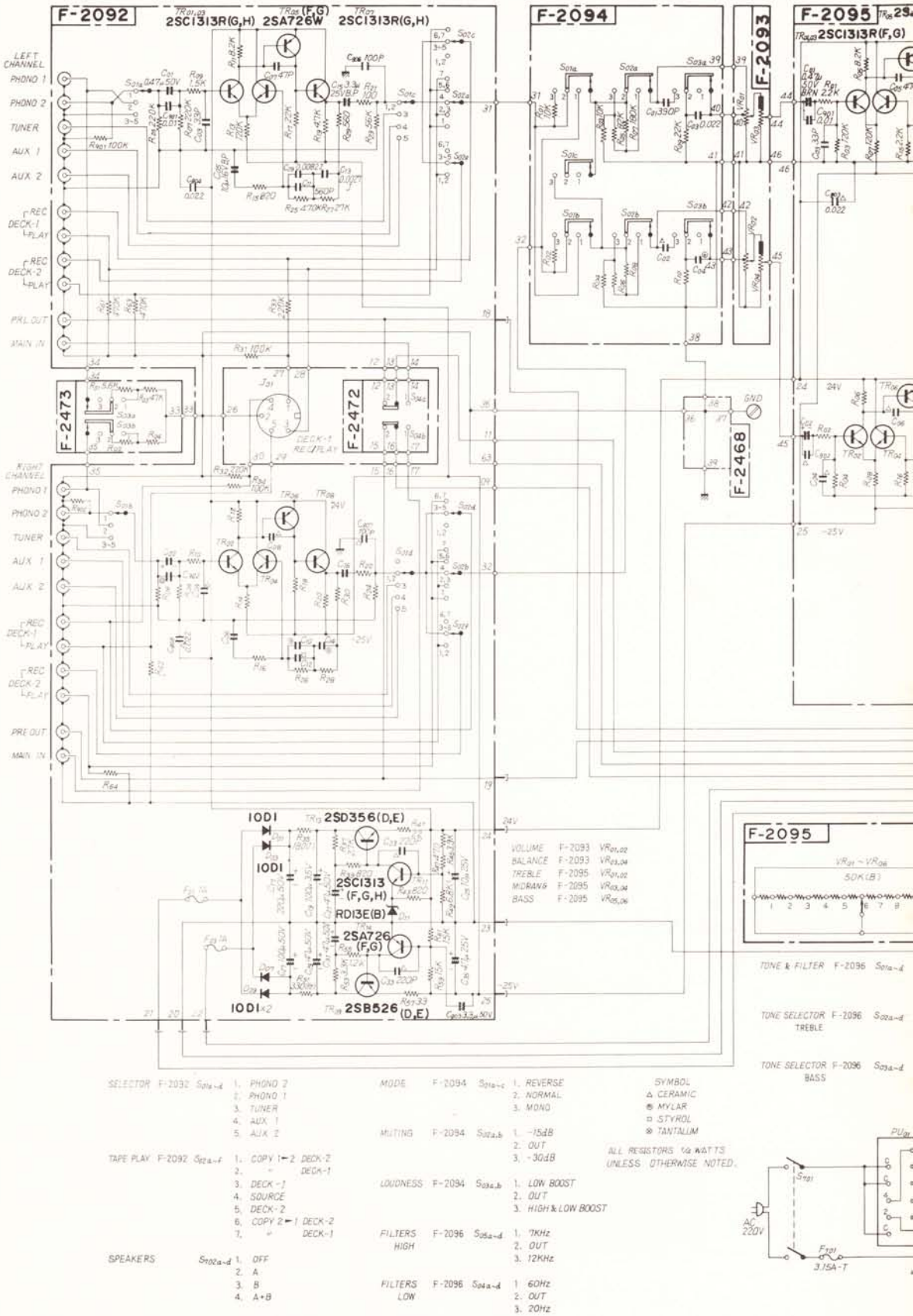
Parts No.	Stock No.	Description
1	9027810	Stylofoam Packing
2	9116152	Vinyl Cover
3	9008051	Carton Case



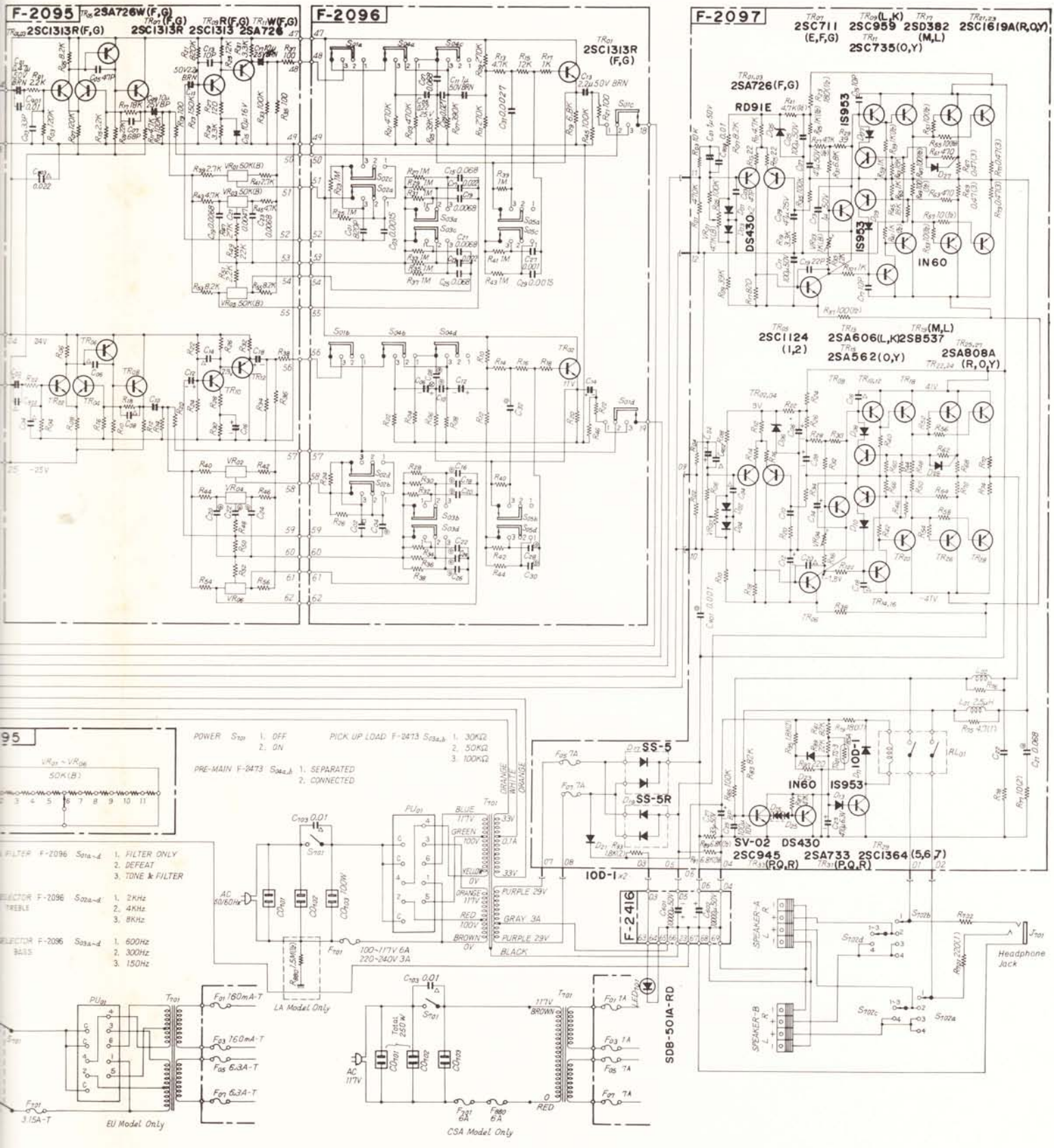
8. ACCESSORY PARTS LIST

Stock No.	Description
5066250	Pin Plug Cover
9208250	Operating Instructions
9228250	Operating Instruction Sheet

9. SCHEMATIC DIAGRAM



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



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