

# SERVICE MANUAL

## STEREO AMPLIFIER **SANSUI AU-5500**



**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-5500 correctly. When ordering the parts, use the stock number 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.

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# 1. SPECIFICATIONS

POWER OUTPUT (at rated distortion)  
 CONTINUOUS RMS POWER OUTPUT  
     .....32 Watts per channel × 2  
     (both channels driven)  
 LOAD IMPEDANCE.....8Ω  
 POWER BAND.....20 to 20,000Hz  
 TOTAL HARMONIC DISTORTION  
     .....less than 0.15% (from AUX)  
     Music power (IHF).....130W (4Ω 1,000Hz)  
     90W (8Ω 1,000Hz)  
     Continuous rms power output ..35+35W (8Ω 1,000Hz)  
 INTERMODULATION DISTORTION (at rated power  
     output 70Hz: 7,000Hz=4: 1 SMPTE method)  
     OVERALL .....less than 0.2%  
     PREAMPLIFIER ONLY ....less than 0.1%  
     POWER (MAIN) AMPLIFIER ONLY  
     .....less than 0.1%  
 FREQUENCY RESPONSE (at 1 Watt output)  
     OVERALL .....10 to 35,000Hz  $\pm 1^{+0.5}$ dB  
     POWER (MAIN) AMPLIFIER ONLY  
     .....5 to 35,000Hz  $\pm 1^0$ dB  
 EQUALIZATION (RIAA curve)  
     .....30 to 15,000Hz  $\pm 0.5$ dB  
 DAMPING FACTOR .....30 (8Ω)  
 INPUT SENSITIVITY AND INPEDANCE  
     (1KHz, for rated power output)  
     PHONO .....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: 4V at 0.5% total harmonic  
     distortion)  
 CHANNEL SEPARATION (1KHz, at rated power output)  
     PHONO .....better than 50dB  
     TUNER .....better than 55dB  
     AUX-1 & -2 .....better than 55dB  
     TAPE DECK-1 & -2.....better than 55dB  
     MAIN IN .....better than 60dB  
 HUM AND NOISE (IHF)  
     PHONO .....better than 70dB  
     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  
 MIDRANGE (±5 steps)..±5dB at 1KHz  
 TREBLE (±5 steps).....±13dB at 15KHz  
 LOUDNESS (Volume Control: -30dB)  
     .....+10dB at 50Hz  
     +8dB at 10KHz  
 LOW FILTER .....-3dB at 70Hz (6dB/oct.)  
 HIGH FILTER .....-3dB at 7KHz (6dB/oct.)  
 MUTING .....-20dB

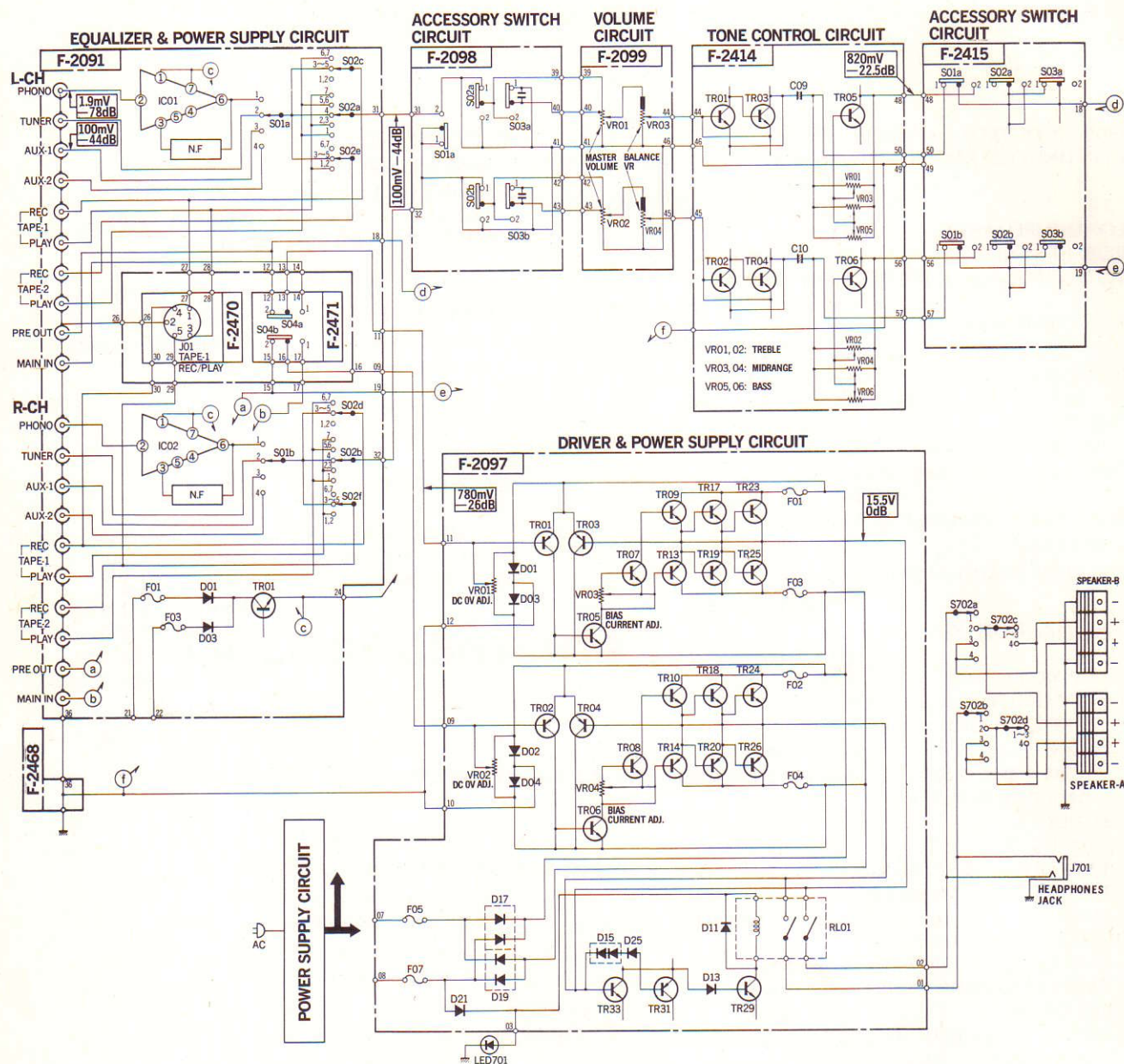
## OTHERS

TRANSISTORS.....30  
 ICs.....2  
 DIODES .....14  
 ZENER DIODES .....2  
 LED .....1  
 POWER REQUIREMENTS..100, 117, 220, 240V, 50/60Hz  
 POWER CONSUMPTION..70W (rated), 210W (max.)  
 DIMENSIONS .....434mm (17  $\frac{1}{8}$ " W  
     130mm (5  $\frac{1}{8}$ " H  
     315mm (12  $\frac{7}{16}$ " D  
 WEIGHT .....10.4Kg (22.9 lbs) Net,  
     12.1Kg (26.7 lbs) Packed

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



## 2. BLOCK DIAGRAM AND VALUE OF EACH LEVEL



S01a,b: SELECTOR(F-2091)

1. PHONO
2. TUNER
3. AUX-1
4. AUX-2

S02a-f: TAPE PLAY(F-2091)

1. COPY 1 ▶ 2 DECK-2
2. COPY 1 ▶ 2 DECK-1
3. DECK-1
4. SOURCE
5. DECK-2
6. COPY 2 ▶ 1 DECK-2
7. COPY 2 ▶ 1 DECK-1

S01a : MODE(F-2098)

1. STEREO
2. MONO

S02a,b: MUTING(F-2098)

1. OUT
2. -20dB

S03a,b: LOUDNESS(F-2098)

1. OUT
2. IN

S01a,b: TONE(F-2415)

1. DEFEAT
2. IN

S02a,b: HIGH FILTER(F-2415)

1. OUT
2. IN

S03a,b: LOW FILTER(F-2415)

1. OUT
2. IN

S04a,b: PRE-MAIN(F-2091)

1. SEPARATED
2. CONNECTED

S701 : POWER

1. OFF
2. ON

S702a-d: SPEAKERS

1. OFF
2. A
3. B
4. A+B

### 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 control.....IN
4. Input .....PHONO-1 1.9mV 1kHz Sine Wave

AUX-1, 2 100mV 1kHz Sine Wave (output impedance of 600Ω at an audio oscillator)

5. Output .....15.5V (30W) 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 Figs 3-1 and 3-2)

- Note:**
1. Confirm the AC power supply voltage.
  2. MASTER VOLUME .....Minimum
  3. SPEAKER 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. 3-2)	F-2097B VR01	0V±10mV	◦Turn volumes of VR03, VR04 Counter clock wise
2	DC 0V R-ch	Same as above	SP terminal R-ch (See Fig. 3-2)	F-2097B VR02	Same as above	
3	Bias current L-ch	DC milliammeter	F-2097B F01 (See Fig. 3-1)	F-2097B VR03	25±10mA	◦Step down meter's range accordingly
4	Bias current R-ch	Same as above	F-2097B F02 (See Fig. 3-1)	F-2097B VR04	Same as above	

Fig. 3-1

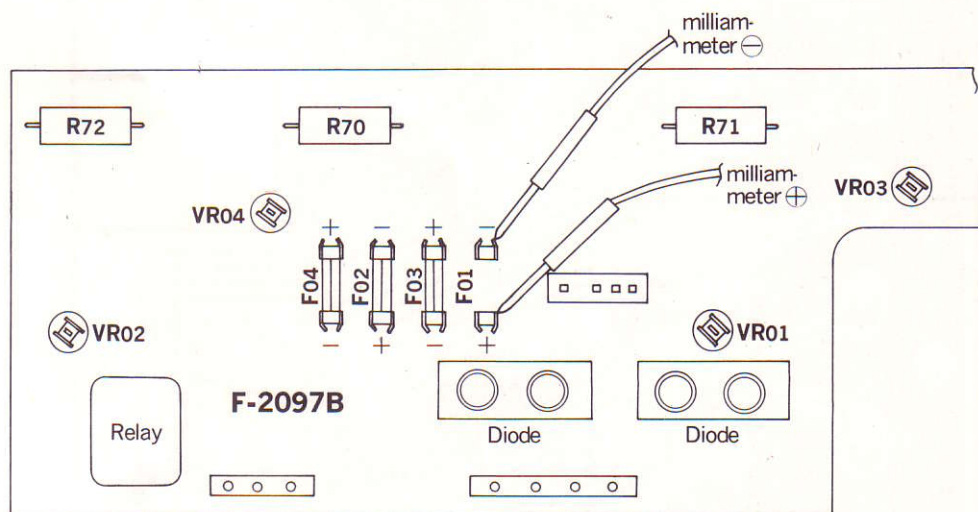
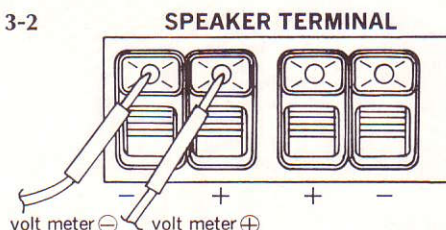


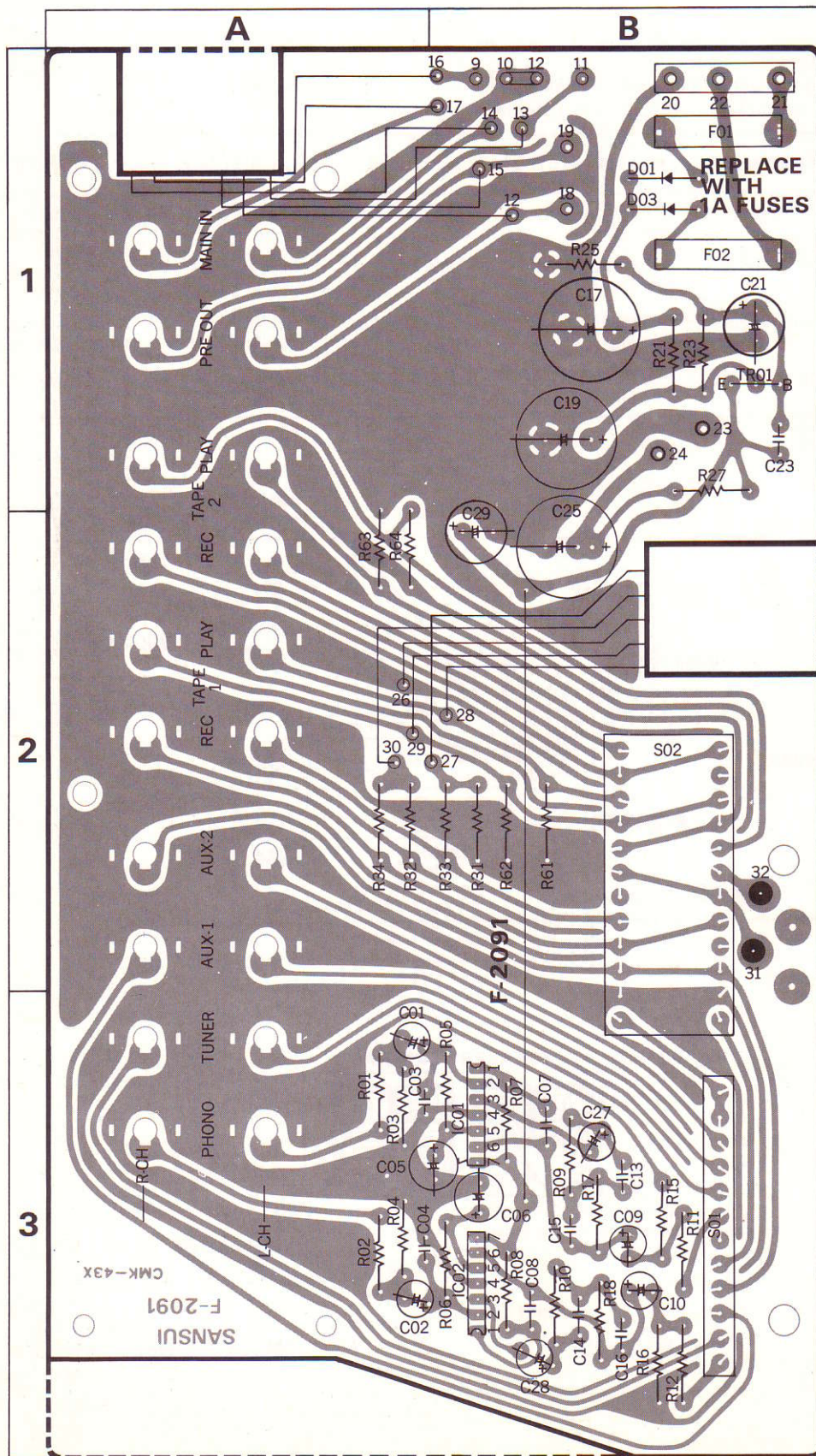
Fig. 3-2





## 4. PARTS LOCATIONS AND PARTS LISTS

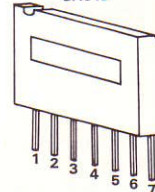
### 4-1. F-2091 Equalizer & Power Supply Circuit Board (Stock No. 7550590 Complete Circuit Board F-2091) Conductor Side



2SC1364



BA312



10D-1





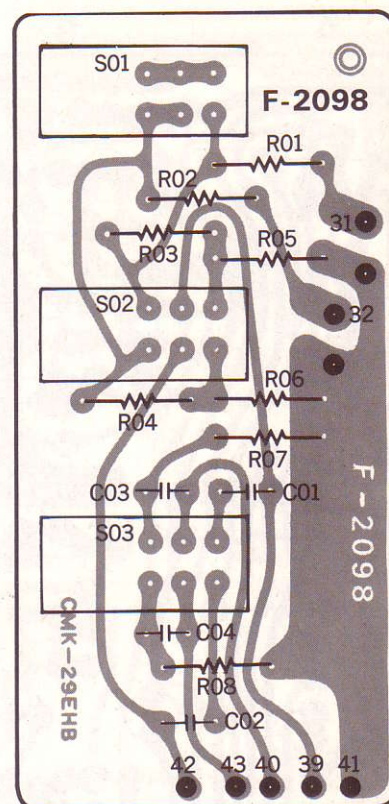
## Parts List

Parts No.	Stock No.	Description	Position
TR01	0306132	2SC1364 (7) Transistor	1 B
IC01, 02	0360190	BA312 IC	3 B
D01, 02	0310340	10D-1 Diode	1 B
C01, 02	0519105	2.2 $\mu$ F 50V E.C.	3 A
C03, 04	0660470	47pF 50V C.C.	3 A
C05, 06	0510470	47 $\mu$ F 6.3V E.C.	3 A, 3 B
C07, 08	0660220	22pF 50V C.C.	3 B
C09, 10	0519103	0.47 $\mu$ F 50V E.C.	3 B
C13, 14	0600686	0.068 $\mu$ F 50V M.C.	3 B
C15, 16	0620222	2200pF 50V P.C.	3 B
C17, 19	0515331	330 $\mu$ F } 50V E.C.	1 B
C21	0515101	100 $\mu$ F } 50V E.C.	1 B
C23	0660471	470 $\mu$ F 50V C.C.	1 B
C25	0514221	220 $\mu$ F 35V E.C.	2 B
C27, 28	0515109	1 $\mu$ F 50V E.C.	3 B
R01, 02	0107152	1.5k $\Omega$ }	3 A
R03, 04	0107154	150k $\Omega$ }	3 A
R05, 06	0107683	68k $\Omega$ }	3 B
R07, 08	0107394	390k $\Omega$ }	3 B
R09, 10	0107684	680k $\Omega$ }	3 B
R11, 12	0107121	120 $\Omega$ }	3 B
R15, 16	0107104	100k $\Omega$ }	3 B
R17, 18	0107333	33k $\Omega$ } $\frac{1}{4}$ W C.R.	3 B
R21	0107820	82 $\Omega$ }	1 B
R23	0107682	6.8k $\Omega$ }	1 B
R25	0107333	33k $\Omega$ }	1 B
R27	0107331	330 $\Omega$ }	1 B
R31, 32	0107104	100k $\Omega$ }	2 B, 2 A
R33, 34	0107224	220k $\Omega$ }	2 B, 2 A
R61-64	0107474	470k $\Omega$ }	2 B, 2 A
R601, 602	0104221	220 $\Omega$ 1W C.R.	
R909, 910	0107824	820k $\Omega$ }	$\frac{1}{4}$ W C.R.
R935, 936	0107102	1k $\Omega$ }	
S01	1101540	SRE-1-2-4 } Rotary Switch	3 B
S02	1102560	SRE-2-6-7 }	2, 3 B
F01, 03	0430830	1A Fuse	1 B
	2310150	Fuse Holder	
	2430250	Pin Jack	

## 4-2. F-2098 Accessory Switch Circuit Board

(Stock No. 7592170 Complete Circuit Board F-2098)

### Conductor Side



## Parts List

Parts No.	Stock No.	Description
C01, 02	0660391	390 pF 50V C.C.
C03, 04	0601227	0.022 $\mu$ F 50V M.C.
R01, 02	0107103	10k $\Omega$ }
R03, 04	0107474	470k $\Omega$ }
R05, 06	0107823	82k $\Omega$ }
R07, 08	0107223	22k $\Omega$ }
S01-03	1170340	SX15-5 Lever Switch

### Abbreviations

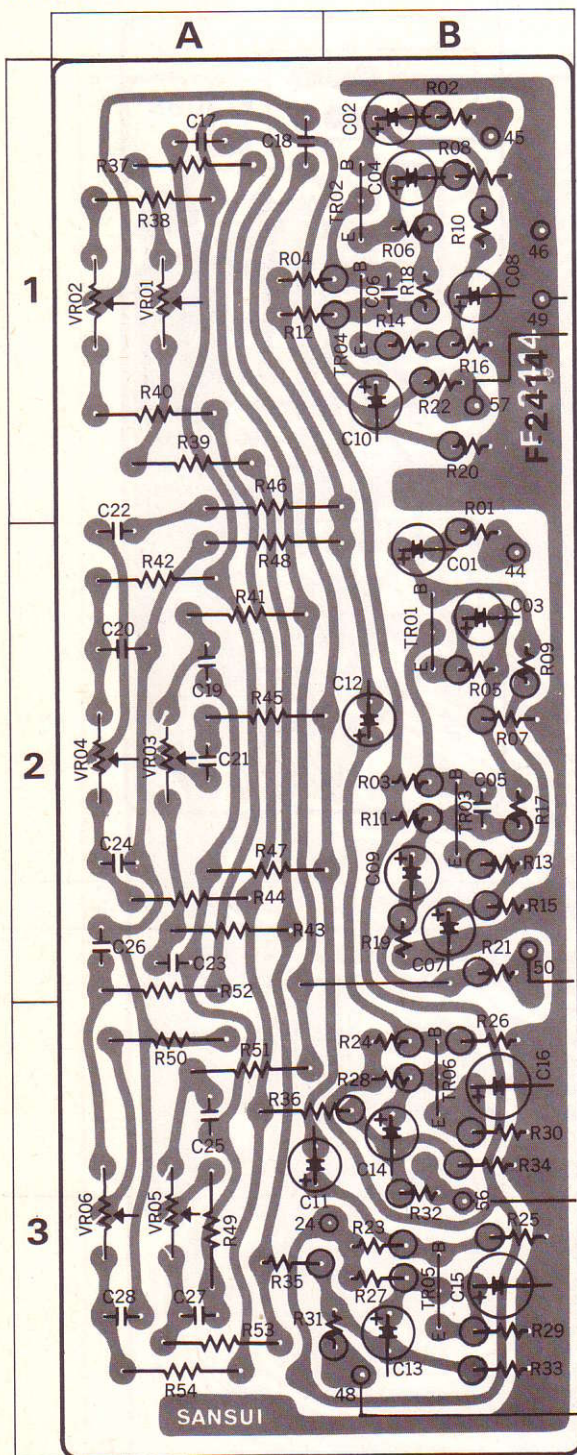
C.R. : Carbon Resistor	BP.E.C.: Bi-Polar Electrolytic Capacitor
S.R. : Solid Resistor	C.C. : Ceramic capacitor
Ce.R. : Cement Resistor	Mi.C. : Mica Capacitor
M.R. : Metallized Film Resistor	O.C. : Oil Capacitor
M.C. : Mylar Capacitor	P.C. : Polystyrene Capacitor
E.C. : Electrolytic Capacitor	T.C. : Tantalum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



# 4-3. F-2414 Tone Control Circuit Board

(Stock No. 7560830 Complete Circuit Board F-2414)

## Conductor Side



2SC1313



## Parts List

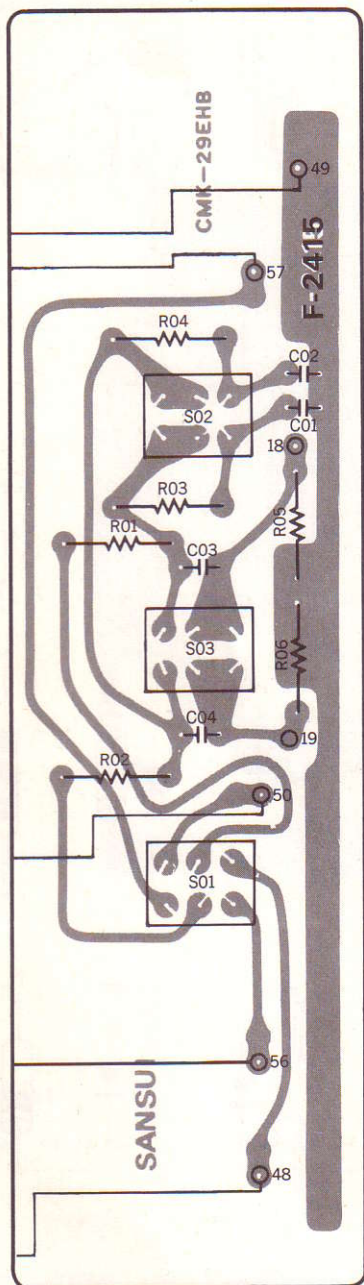
Parts No.	Stock No.	Description	Position
TR01, 02	0306071	2SC1313® (G)	Transistor
TR03, 04	0306071	2SC1313® (G)	
TR05, 06	0306071	2SC1313® (G)	
C01, 02	0519105	2.2μF 50V	E.C.
C03, 04	0510470	47μF 6.3V	
C05, 06	0660330	33pF 50V	
C07, 08	0510470	47μF 6.3V	E.C.
C09, 10	0519001	10μF 25V	
C11, 12	0519101	1μF 50V	
C13, 14	0519001	10μF 25V	E.C.
C15, 16	0510101	100μF 6.3V	
C17, 18	0601226	0.0022μF	
C19, 20	0601686	0.0068μF	50V M.C.
C21, 22	0601476	0.0047μF	
C23, 24	0601686	0.0068μF	
C25, 26	0601686	0.0068μF	
C27, 28	0601686	0.0068μF	
R01, 02	0106332	3.3kΩ	2B. 1B
R03, 04	0106683	68kΩ	
R05, 06	0106102	1kΩ	
R07, 08	0106332	3.3kΩ	2B. 1B
R09, 10	0106334	330kΩ	
R11, 12	0106472	4.7kΩ	
R13, 14	0106221	220Ω	2B. 1B
R15, 16	0106122	1.2kΩ	
R17, 18	0106333	33kΩ	
R19, 20	0106104	100kΩ	1/4W C.R. (E.L.R.)
R21, 22	0106101	100Ω	
R23, 24	0106224	220kΩ	
R25, 26	0106333	33kΩ	3B
R27, 28	0106562	5.6kΩ	
R29, 30	0106102	1kΩ	
R31, 32	0106221	220Ω	3A, B. 3B
R33, 34	0106104	100kΩ	
R35, 36	0106101	100Ω	
R37, 38	0107272	2.7kΩ	1A
R39, 40	0107272	2.7kΩ	
R41, 42	0107472	4.7kΩ	
R43, 44	0107472	4.7kΩ	2A
R45, 46	0107273	27kΩ	
R47, 48	0107223	22kΩ	
R49, 50	0107222	2.2kΩ	3A
R51, 52	0107822	8.2kΩ	
R53, 54	0107822	8.2kΩ	
VR01, 02	1015111	50kΩ (B) × 2	TREBLE Volume
VR03, 04	1015111	50kΩ (B) × 2	MIDRANGE Volume
VR05, 06	1015111	50kΩ (B) × 2	BASS Volume



## 4-4. F-2415 Accessory Switch Circuit Board

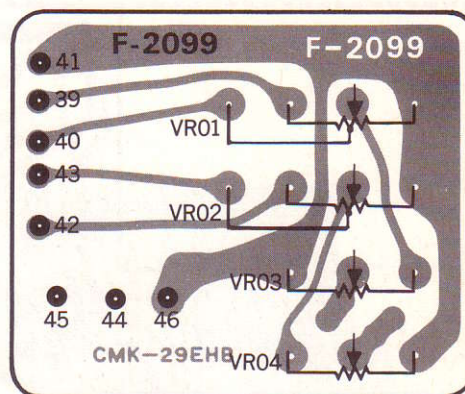
(Stock No. 7592150 Complete Circuit Board F-2415)

### Conductor Side



## 4-5. F-2099 Volume Circuit Board

### Conductor Side



### Parts List

Parts No.	Stock No.	Description
VR01-04	1060320	250k $\Omega$ (MN, B) $\times$ 4 Volume

### Parts List

Parts No.	Stock No.	Description
C01, 02	0601686	0.0068 $\mu$ F } 50V M.C.
C03, 04	0601477	0.047 $\mu$ F }
R01, 02	0107332	3.3k $\Omega$ } $\frac{1}{4}$ W C.R.
R03, 04	0107824	820k $\Omega$ }
R05, 06	0107104	100k $\Omega$ }
S01-03	1170340	SX15-5 Lever Switch

### Abbreviations

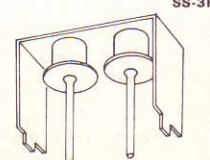
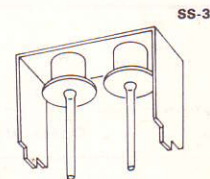
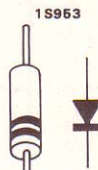
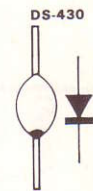
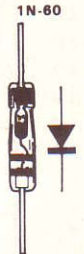
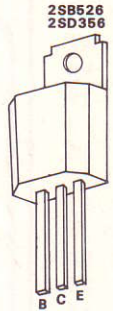
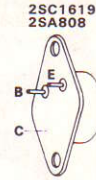
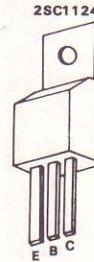
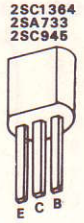
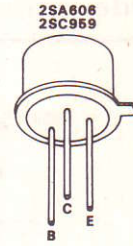
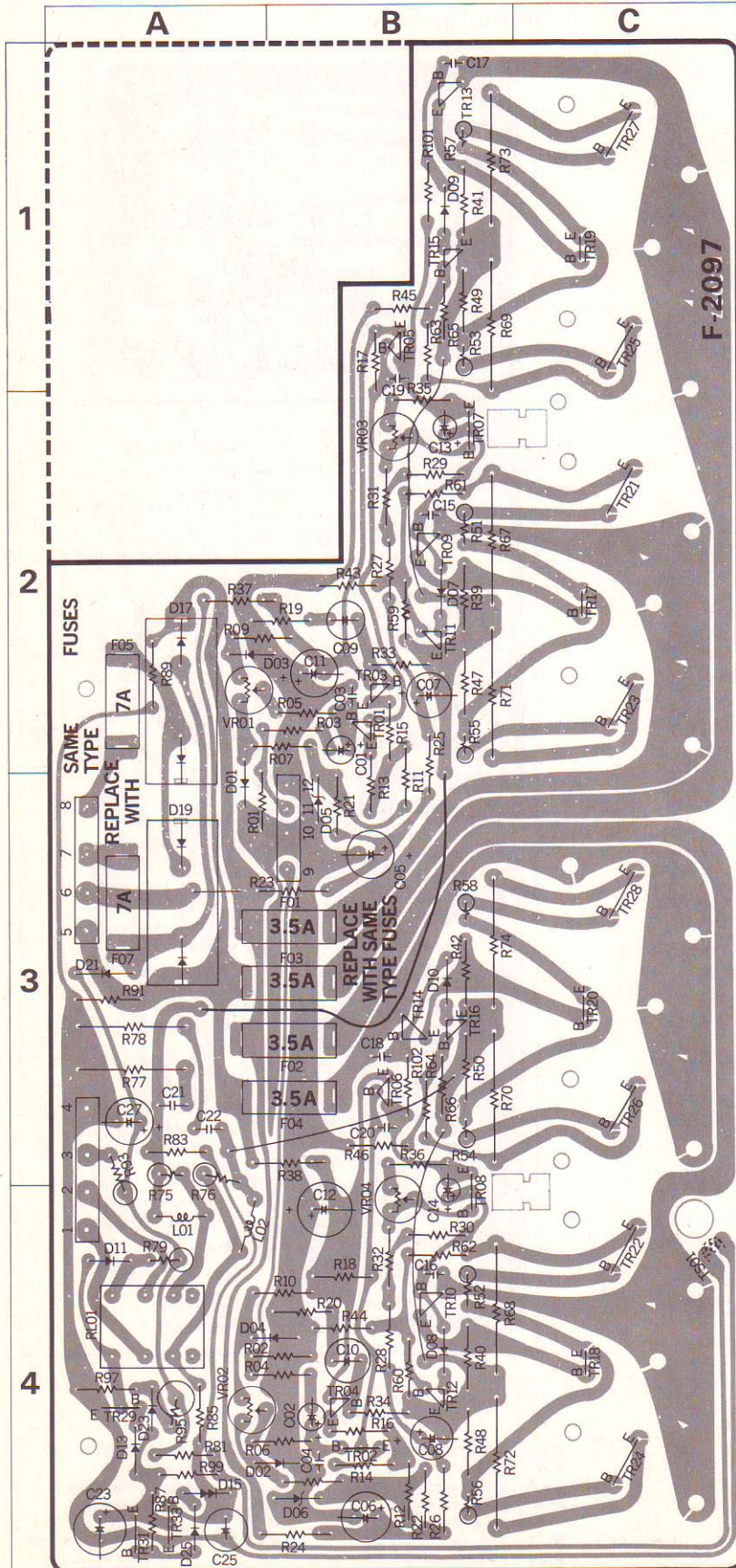
<b>C.R.</b> : Carbon Resistor	<b>BP.E.C.</b> : Bi-Polar Electrolytic Capacitor
<b>S.R.</b> : Solid Resistor	<b>C.C.</b> : Ceramic capacitor
<b>Ce.R.</b> : Cement Resistor	<b>Mi.C.</b> : Mica Capacitor
<b>M.R.</b> : Metallized Film Resistor	<b>O.C.</b> : Oil Capacitor
<b>M.C.</b> : Mylar Capacitor	<b>P.C.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



## 4-6. F-2097B Driver & Power Supply Circuit Board

Conductor Side

(Stock No. 7570920 Complete Circuit Board F-2097B)





## Parts List

Parts No.	Stock No.	Description	Position
TR01, 02	0300470, 1	2SA726 (F, G)	Transistor
TR03, 04	0300470, 1	2SA726 (F, G)	
TR05, 06	0300590, 1	2SC1124 (1, 2)	
TR07, 08	0305731~3	2SC711 (E, F, G)	
TR09, 10	0305742, 3	2SC959 (L, K)	
TR13, 14	0300212, 3	2SA606 (L, K)	
TR17, 18	0308450~2	2SD356 (C, D, E)	
TR19, 20	0303280~2	2SB526 (C, D, E)	
TR23, 24	0306192	2SC1619 (O)	
TR25, 26	0300632	2SA808 (O)	
TR29	0306130~2	2SC1364 (5, 6, 7)	Diode
TR31	0300510~2	2SA733 (P, Q, R)	
TR33	0305950~2	2SC945 (R, Q, P)	
D01, 02	0340090	DS-430	
D03, 04	0340090	DS-430	
D05, 06	0316230	RD-9.1E(B)	
D11	0310340	10D-1	
D13	0311050	1S953	
D15	0310490	SV-02	
D17	0311310	SS-3	
D19	0311320	SS-3R	Thermistor
D21	0310340	10D-1	
D23	0310331	1N60	
D25	0340090	DS-430	
TS01	0320110	TS3-85A	
C01, 02	0519105	2.2 $\mu$ F 50V E.C.	Resistor
C03, 04	0660470	47pF 50V C.C.	
C05, 06	0515101	100 $\mu$ F 50V E.C.	
C07, 08	0515330	33 $\mu$ F 50V E.C.	
C09, 10	0530470	47 $\mu$ F 6.3V E.C.	
C11, 12	0515101	100 $\mu$ F 50V E.C.	
C13, 14	0515109	1 $\mu$ F 50V E.C.	
C15, 16	0660100	10pF 50V C.C.	
C17, 18	0660100	10pF 50V C.C.	
C19, 20	0660220	22pF 50V C.C.	
C21, 22	0601687	0.068 $\mu$ F 50V M.C.	Capacitor
C23	0510471	470 $\mu$ F 6.3V E.C.	
C25	0531101	100 $\mu$ F 10V E.C.	
C27	0515330	33 $\mu$ F 50V E.C.	
C901	0601106	0.001 $\mu$ F 50V M.C.	
R01, 02	0107474	470k $\Omega$	Resistor
R03, 04	0107103	10k $\Omega$	
R05, 06	0107104	100k $\Omega$	
R07, 08	0107822	8.2k $\Omega$	
R09, 10	0107393	39k $\Omega$	
R11, 12	0107562	5.6k $\Omega$	
R13, 14	0107100	10 $\Omega$	
R15, 16	0107100	10 $\Omega$	
R17, 18	0107102	1k $\Omega$	
R19, 20	0107272	2.7k $\Omega$	
R21, 22	0103222	2.2k $\Omega$	Resistor
R23, 24	0103181	180 $\Omega$	
R25, 26	0103821	820 $\Omega$	
R27, 28	0103392	3.9k $\Omega$	
R29, 30	0107470	47 $\Omega$	
R31, 32	0107682	6.8k $\Omega$	
R33, 34	0107563	56k $\Omega$	
R35, 36	0107122	1.2k $\Omega$	
R37, 38	0103101	100 $\Omega$	
R39, 40	0103102	1k $\Omega$	

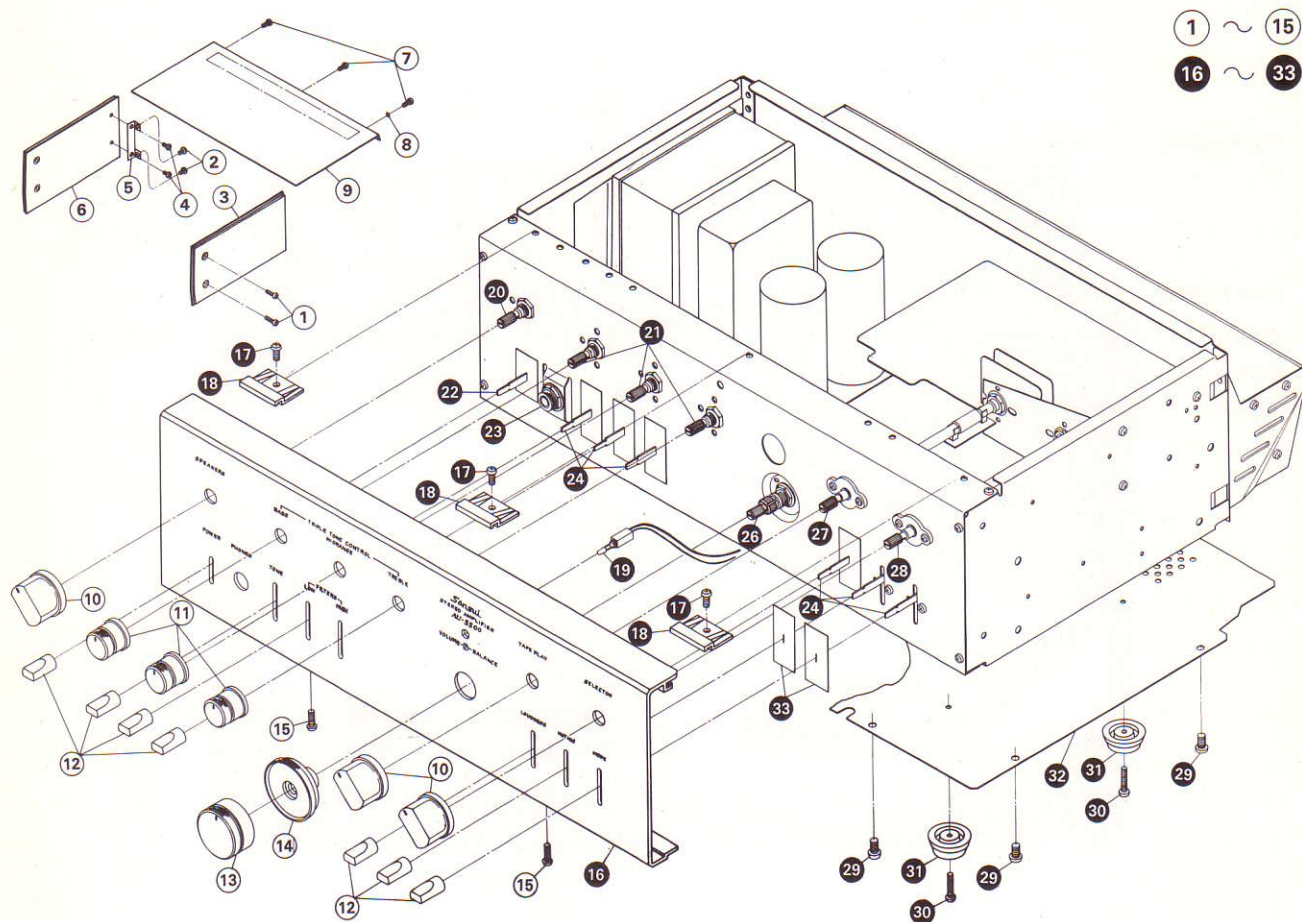
Parts No.	Stock No.	Description	Position
R41, 42	0103102	1k $\Omega$ $\frac{1}{2}$ W C.R.	1 B . 3 B
R47, 48	0103221	220 $\Omega$	2 B . 4 B
R49, 50	0103221	220 $\Omega$	1 B . 3 B
R51, 52	0103100	10 $\Omega$ $\frac{1}{2}$ W C.R.	1 B . 3 B
R53, 54	0103100	10 $\Omega$	2 B . 4 B
R55, 56	0103100	10 $\Omega$	1,2 B . 3B
R69, 70	0133478	0.47 $\Omega$ 3W Ce.R.	2 B . 4 B
R71, 72	0133478	0.47 $\Omega$	3 A
R75, 76	0104479	4.7 $\Omega$ 1W C.R.	3 A
R77, 78	0105100	10 $\Omega$ 2W C.R.	4 A
R79	0104180	180 $\Omega$ 1W C.R.	4 A
R81	0107823	82k $\Omega$	4 A
R83	0107823	82k $\Omega$	3 A
R85	0107104	100k $\Omega$ $\frac{1}{4}$ W C.R.	4 A
R87	0107473	47k $\Omega$	4 A
R89	0103562	5.6k $\Omega$ $\frac{1}{2}$ W C.R.	2 A
R91	0103562	5.6k $\Omega$	3 A
R93	0105182	1.8k $\Omega$ 2W C.R.	3, 4 A
R95	0105182	1.8k $\Omega$	4 A
R97	0107221	220 $\Omega$	4 A
R99	0107223	22k $\Omega$ $\frac{1}{4}$ W C.R.	4 A
R909	0107102	1k $\Omega$	
RL01	1150251	RABK-2B Relay	4 A
L101, 102	4290210	2.5 $\mu$ H Micro Inductor	4 A , B
VR01, 02	1035110	4.7k $\Omega$ (B) Semi Variable	2 A
VR03, 04	1035070	1k $\Omega$ (B) Resistor	2 B . 3, 4B
F01~04	0433680	3.5A Quick Acting Fuse	3 A , B
F05, 07	0430920	7A Power Fuse	2 A , 3 A
	5937070	Heat Sink	
	2310150	Fuse Holder	

### Abbreviations

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



## 4-7. Other Parts (Front Side)



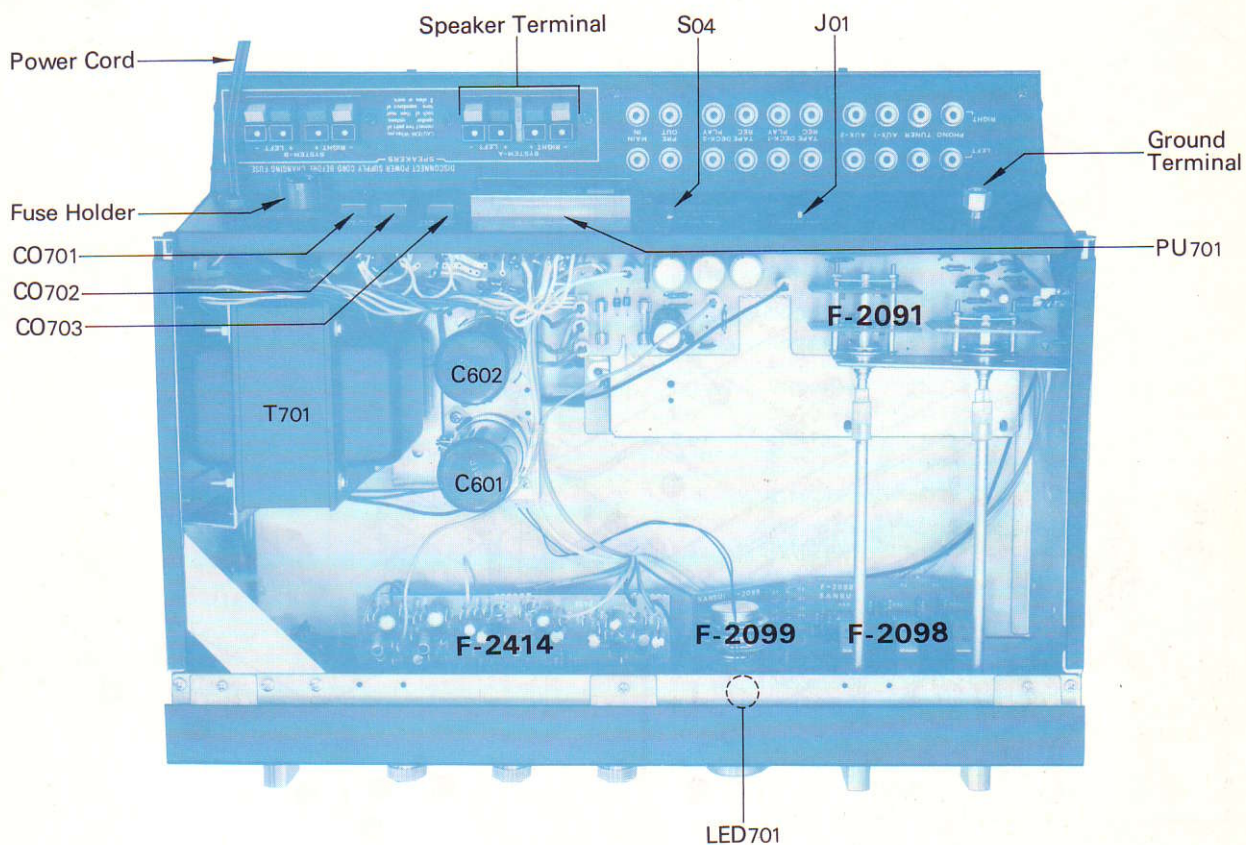
## Parts List

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	5318041	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	{ 5309230 5269800	Front Panel Holder (Light Emitted Diode)

Parts No.	Stock No.	Description
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 (Speakers)
21	1015111	50kΩ (B)×2, Tone Control Volume
22	1170330	Lever Switch (Power)
23	2430190	Headphones Jack
24	1170340	Lever Switch
26	1060320	250kΩ (MN, B)×4 Volume, Balance Volume
27	1102560	Rotary Switch SRE-2-6-7 (Tape Play)
28	1101540	Rotary Switch SRE-1-2-4 (Selector)
29	5109222	Binding Head Tapping Screw, M3×8
30	5166520	Washer Head Tapping Screw, M3×12
31	5516940	Foot
32	5058221	Bottom Plate
33	5047460	Masking (Lever Switch)



## 4-8. Other Parts (Top Side)



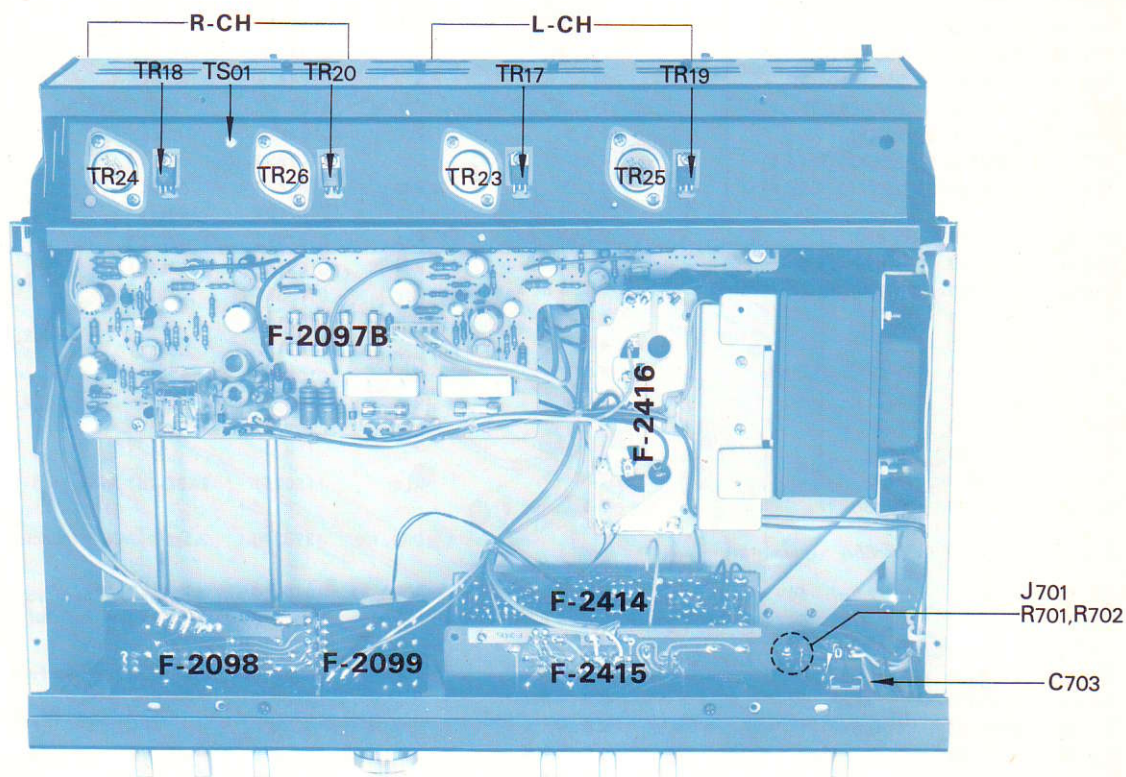
### Parts List

Parts No.	Stock No.	Description
C601	0559332	4700 $\mu$ F } 50V E.C.
C602	0559332	
LED701	7727080	SDB-501A-RD Light Emittted Diode
J01	2090030	DIN Jack
S04	1110280	Slide Switch
CO701	2450050	AC Outlet
CO702	2450050	
CO703	2450050	
F701	0431270	4A Power Fuse (100~117V)
	0431240	2A Power Fuse (220~240V)
	2300060	Fuse Holder

Parts No.	Stock No.	Description
PU701	2410080	Voltage Selector, socket
	2410090	Voltage Selector, plug
T701	4002130	Power Transformer
	2290100	4P Speaker Terminal
	3800020	Power Cord (KP-200)
	2230050	Ground Terminal



## 4-9. Other Parts (Bottom Side)



### Parts List

Parts No.	Stock No.	Description
TR17	0308450-2	2SD356 (C,D,E)
TR18	0308450-2	2SD356 (C,D,E)
TR19	0303280-2	2SB526 (C,D,E)
TR20	0303280-2	2SB526 (C,D,E)
TR23	0306190	2SC1619 (0)
TR24	0306190	2SC1619 (0)
TR25	0300620	2SA808 (0)
TR26	0300620	2SA808 (0)
TS01	0320110	TS3-85A Tharmistor
C703	0659801	0.01 $\mu$ F 1.4kV C.C.
R701	0104221	220 $\Omega$
R702	0104221	220 $\Omega$
J701	2430190	Headphones 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



# 5. TROUBLESHOOTING CHART

## 5-1. Troubleshooting on power Supply Section

Symptom	Check Point	Cause
<b>1. No power supplied to each section</b>		
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 F2097B open 6. Defective D21 on F-2097B 7. Imperfect contact of voltage selector
1-2. Indicator lamp for power lighted		
1) $\pm 35V$ not supplied to collector on each power transistor (+35V, TR23, TR24, -35V, TR25, TR26)		8. F05 or F07 on F2097B open 9. Defective D17 or D19 on F-2097B
2) +24V not supplied to terminal 24 on F-2091		10. Defective power transformer, T701 11. F01 or F03 on F-2091 open 12. Defective D01 or D03 on F-2091 13. Defective TR01 on F-2091

## 5-2. Troubleshooting on Audio Section

### 1. Quick acting fuse open

1-1. After replacement, F01 (F02) on F-2097B open again		1. Defective TR23 (TR24) on F-2097B 2. Defective TR09 TR17 (TR10 or TR18) on F-2097B
1-2. After replacement, F03 (F04) on F-2097B open again		3. Defective TR25 (TR26) on F-2097B 4. Defective TR13 or TR19 (TR14 or TR20) on F-2097B 5. Defective TR05 (TR06) on F-2097B
1-3. After replacement, fuse not open		
1) Bias current adjustable		6. Set the bias current to +25mV by VR03 (VR04) on F-2097B (refer to 3. ADJUSTMENT)
2) Bias current not adjustable		7. Defective VR03 (VR04) on F-2097B 8. Defective TR05 or TR07 (TR06 or TR08) on F-2097B
3) Center voltage adjustable		9. Set the center voltage to 0V by VR01 (VR02) on F-2097B (refer to 3. ADJUSTMENT)
4) Center voltage not adjustable		10. Defective VR01 (VR02) on F-2097B 11. Defective TP01 or TR03 (TR02 or TR04) on F-2097B 12. Defective D01 or D03 (D02 or D04) on F-2097B



Symptom

Check Point

Cause

## 2. TUNER or AUX inoperative

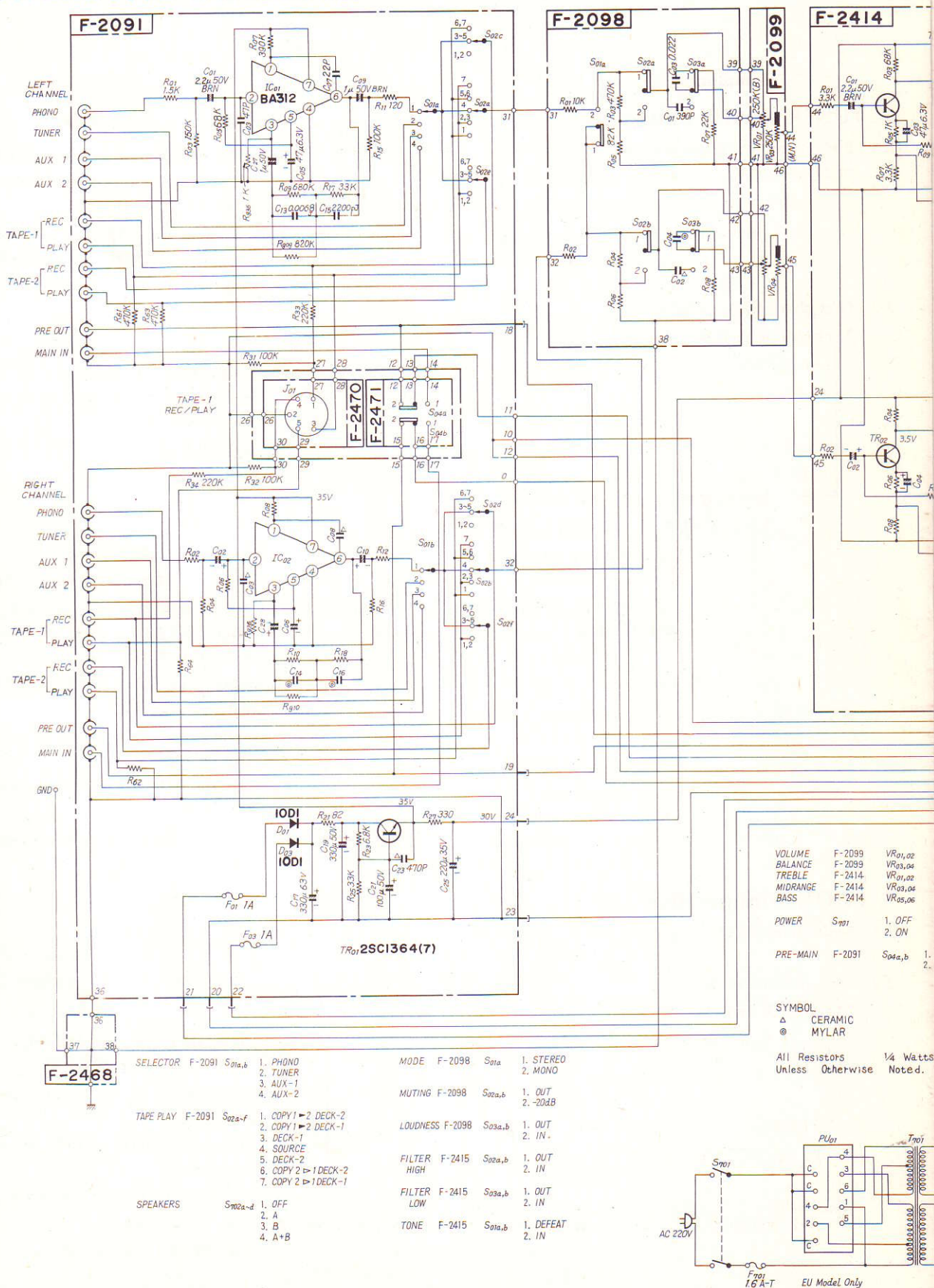
- 2-1. Both channels inoperative
- 1. Defective relay, RL01 on F-2097B
  - 2. Imperfect contact of SPEAKERS switch, S702a, c (S702b, d)
  - 3. Defective TR29, TR31 or TR33 on F-2097B
  - 4. Defective D13, D15 or D25 on F-2097B
  - 5. Defective Power Supply Section
- 2-2. One channel inoperative
- \* Set MODE switch to MONO
- 1) Inoperative channel reverses
    - 6. Tuner connected from this set has faulty
    - 7. Imperfect contact of SELECTOR switch, S01a (S01b)
    - 8. 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
        - 9. Defective TR05 (TR06) on F-2414
      - 2-2) The inoperative channel is still not operating
        - 10. Defective TR01 or TR03 (TR02 or TR04) on F-2414
        - 11. Imperfect contact of HIGH FILTER switch, S02a (S02b)
        - 12. Imperfect contact of LOW FILTER switch, S03a (S03b)
        - 13. Imperfect contact of PRE-MAIN switch, S04a (S04b)
        - 14. Defective Driver & Power Supply Circuit Board

## 3. PHONO inoperative

- 3-1. Both channels inoperative
- 1. Refer to 2-1. of 2.  
Both channels inoperative
- 3-2. One channel inoperative
- \* Set MODE switch to MONO
- 1) Inoperative channel reverses
    - 2. Turntable connected from this set has faulty
    - 3. Imperfect contact of SELECTOR switch, S01a (S02b)
    - 4. Imperfect contact of TAPE PLAY switch, S02a (S02b)
    - 5. Defective IC01 (IC02) on F-2091
  - 2) Inoperative channel not reverses
    - 6. Refer to 2-2. of 2.  
One channel inoperative

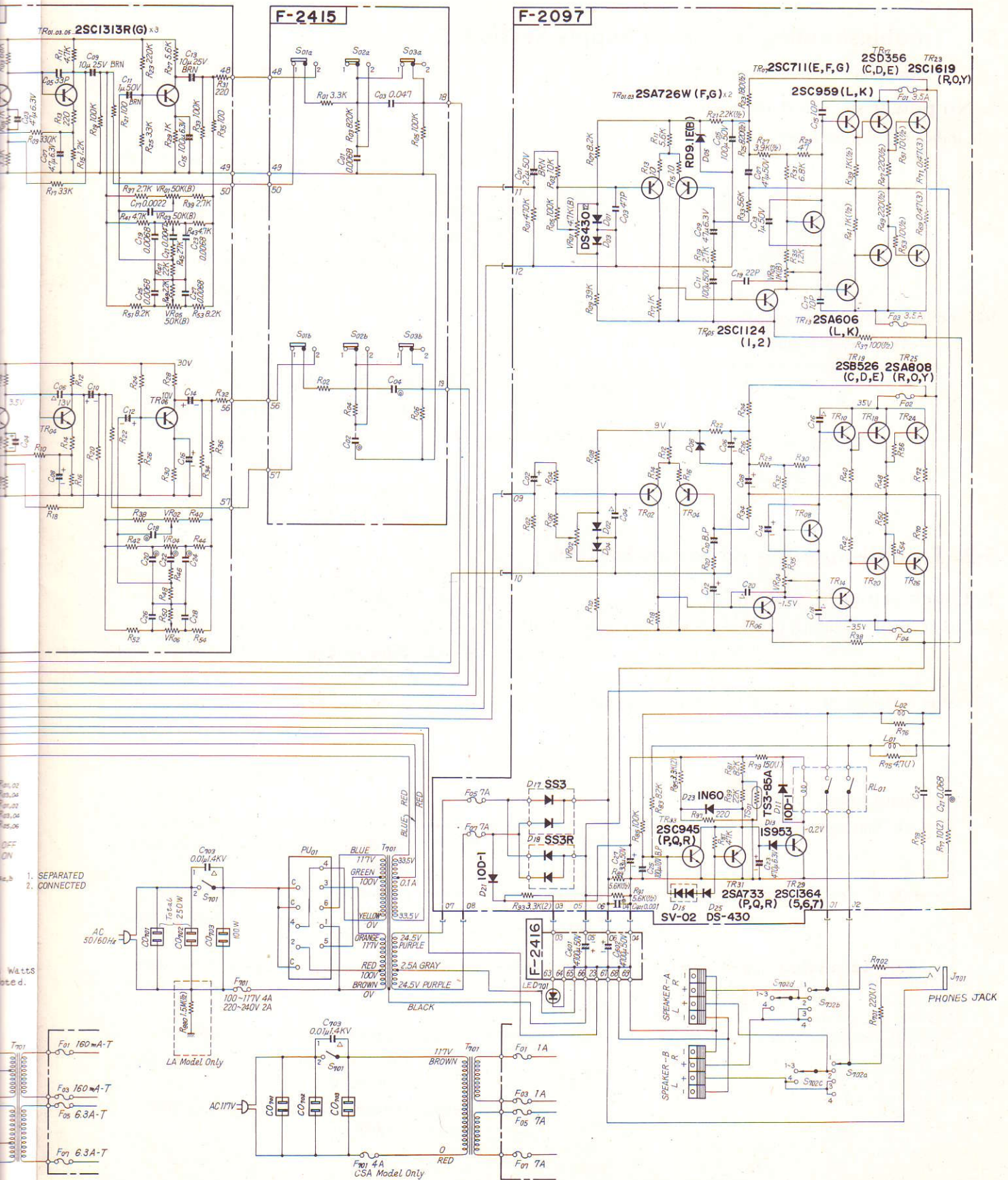


# 6. SCHEMATIC DIAGRAM





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





## 7. 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. 7-1) installing on F-2097B.
- 4) Remove screw, ③, ④, ⑤ and ⑥ (See Fig. 7-2) installing heat sink.
- 5) Remove driver & power supply circuit board ass'y (F-2097B), then replace the transistors with new ones.

Fig. 7-1

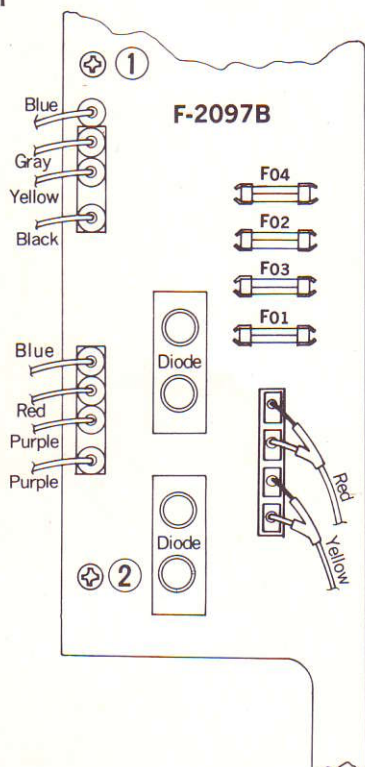
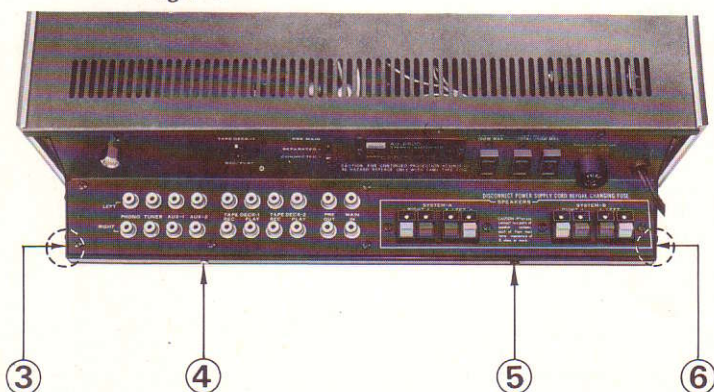
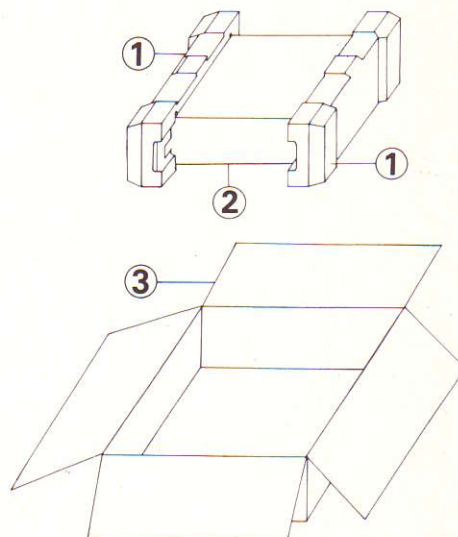


Fig. 7-2



## 8. PACKING LIST

Parts No.	Stock No.	Description
1	9027810	Stylofoam Packing
2	9116152	Vinyl Cover
3	9008111	Carton Case



## 9. ACCESSORY PARTS LIST

Stock No.	Description
0433680	3.5A Quick Acting Fuse
5066250	Pin Plug Cover
9208290	Operating Instructions
9228290	Operating Instruction Sheet