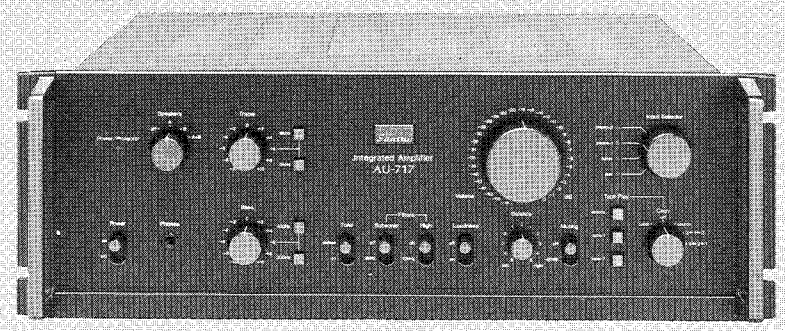
SERVICE MANUAL

INTEGRATED STEREO AMPLIFIER

SANSUI AU-517/717



Sansui

SANSUI ELECTRIC CO., LTD.

SPECIFICATIONS

AU-517

Power output
Min. RMS, both channels driven, from 20 to 20,000 Hz, with no more than 0.025% total harmonic distortion
65 watts per channel into 8 ohms
Load impedance . . . . . 8 ohms
Power bandwidth . . . . . 20 to 20,000 Hz at or below rated min. RMS power output and total harmonic distortion
Total harmonic distortion (POWER AMP IN) . . . . . less than 0.025% at or below rated min. RMS power output
Intermodulation distortion (70 Hz:7 kHz = 4:1 SMPTE method) . . . . . less than 0.025%
Frequency response (at 1 watt) (POWER AMP IN) . . . . . 0 to 200,000 Hz +0 dB –3 dB
RIAA curve deviation (PHONO) . . . . . +0.2 dB –0.2 dB (20 to 20,000 Hz)
Damping factor . . . . . approximately 60 at 8 ohms load

Input sensitivity and impedance (1 kHz, for rated power output)
PHONO . . . . . 2.5 mV/47 kilohms
(Max. input capability: 320 mV at 1 kHz, less than 0.01% harmonic distortion)
AUX, TAPE . . . . . 150 mV/47 kilohms
Output level (1,000 Hz)
TAPE REC (pin jack) . . . . . 150mV/47 kilohms
PRE OUT . . . . . 1V/47 kilohms
Channel separation (1 kHz, at rated power output)
PHONO . . . . . better than 60 dB
AUX . . . . . better than 65 dB
Hum and noise (short-circuit, A-network)
PHONO . . . . . 78 dB
AUX . . . . . 100 dB
Controls
BASS . . . . . +10 dB (50 Hz)
TREBLE . . . . . +10 dB (15 kHz)
SUBSONIC FILTER . . . . . –3 dB (16 Hz), 6 dB/oct
LOUDNESS (–30 dB) . . . . . 9 dB at 50 Hz
7 dB at 10 kHz

Power requirements
Power voltage 100, 120, 220, 240V (50/60Hz)
120V (Usable 110 – 130V)
60 Hz (for U.S.A. & Canada only)
Power consumption
Maximum consumption . . . . 660 watts
Rated consumption . . . . . 345 watts 420 VA
Dimentions . . . . . 430 mm (16-15/16") W
168 mm (6-5/8") H
389 mm (15-3/8") D
Weight . . . . . 16.5 kg (36.4 lbs) net
18.5 kg (40.8 lbs) packed

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

1. SPCIFICATIONS

AU-717

Power output
Min. RMS, both channels driven, from 20 to 20,000 Hz, with no more than 0.025% total harmonic distortion
85 watts per channel into 8 ohms

Load impedance . . . . . 8 ohms

Power bandwidth . . . . . 20 to 20,000 Hz at or below rated min. RMS power output and total harmonic distortion

Total harmonic distortion (POWER AMP IN)
. . . . . less than 0.025% at or below rated min. RMS power output

Intermodulation distortion (70 Hz: 7 kHz = 4:1 SMPTE method)
. . . . . less than 0.025%

Frequency response (at 1 watt) (POWER AMP IN)
. . . . . 0 to 200,000 Hz +0 dB -3 dB

RIAA curve deviation (PHONO) . . . . +0.2 dB –0.2 dB (20 to 20,000 Hz)

Damping factor . . . . . approximately 60 at 8 ohms load

Input sensitivity and impedance (1 kHz, for rated power output)
PHONO . . . . . 2.5 mV/47 kilohms
(Max. input capability; 350 mV at 1 kHz, less than 0.01% total harmonic distortion)
AUX, TAPE . . . . . 150 mV/47 kilohms

Output level (1,000 Hz)
TAPE REC (pin jack) . . . . . 150 mV/47 kilohms
PRE OUT . . . . . 1 V/47 kilohms

Channel separation (1 kHz, at rated power output)
PHONO . . . . . better than 60 dB
AUX . . . . . better than 65 dB

Hum and noise (short-circuit, A-network)
PHONO . . . . . 78 dB
AUX . . . . . 100 dB

Controls
BASS . . . . . ±10 dB (50 Hz)
Tone selector . . . . . 200, 400 Hz
TREBLE . . . . . ±10 dB (15 kHz)
Tone selector . . . . . 3, 6 kHz
SUBSONIC FILTER . . . . . –3 dB (16 Hz), 6 dB/oct
HIGH FILTER . . . . . –3 dB (10 kHz), 6 dB/oct
MUTING . . . . . –20 dB
LOUDNESS (–30 dB) . . . . . 9 dB at 50 Hz
7 dB at 10 kHz

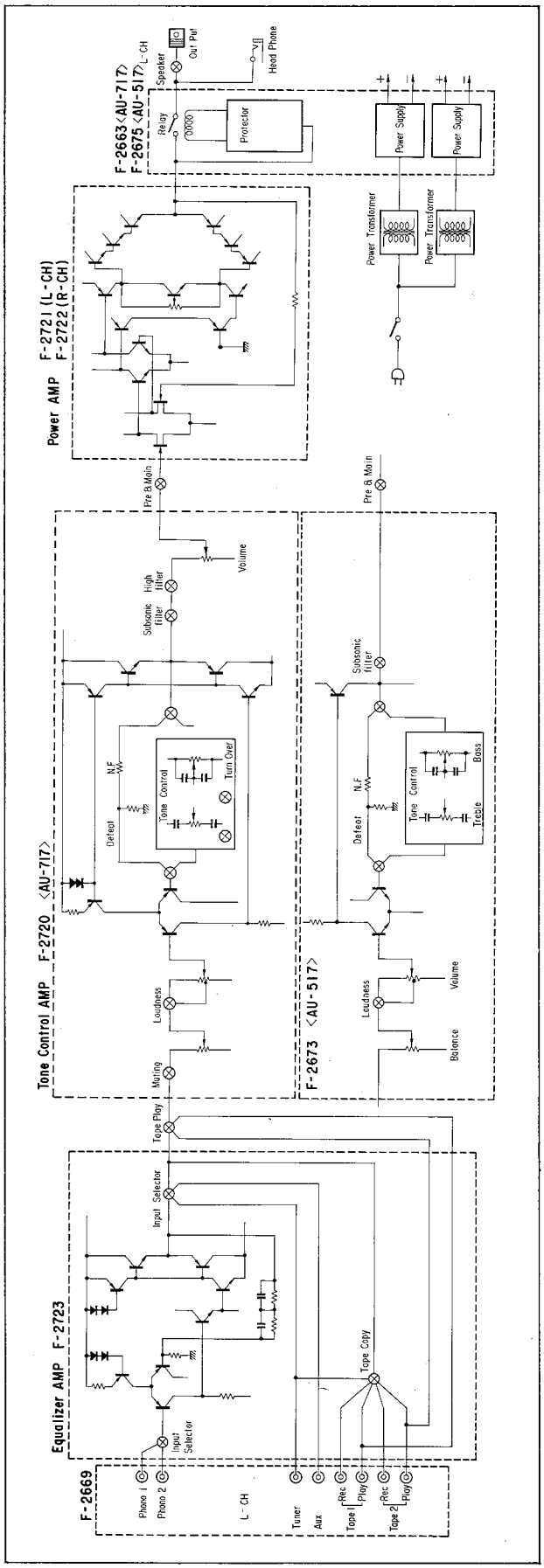
Power requirements
Power voltage . . . . . 100, 120, 220, 240V (50/60 Hz)
120V (Usable 110 – 130V) 60 Hz (for U.S.A. & Canada only)

Power consumption
Maximum consumption . . . . . 735 watts
Rated consumption . . . . . 425 watts 500 VA

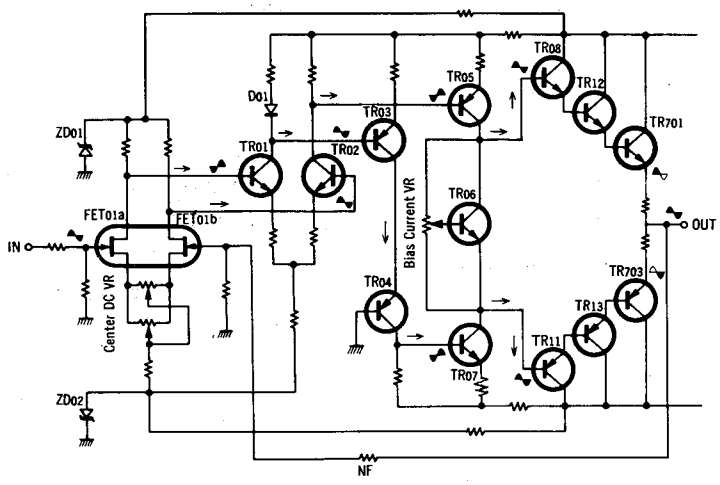
Dimentions . . . . . 430 mm (16-15/16") W
168 mm (6-5/8") H
389 mm (15-3/8") D

Weight . . . . . 17.8 kg (39.2 lbs) net
19.8 kg (43.7 lbs) packed

2. BLOCK DIAGRAM



3. ADVANTAGE AND OPERATION OF POWER AMPLIFIER CIRCUITRY SECTION



3-1. Advantage

◇There is neccessity not to decrease the phase response till DC range in order to increase the music signal response of extremely low frequency range. Therefore, this amplifier is employing no capacitors except ones for phase compensation, and has an almost perfect transient characteristics.

◇The first stage FET (2SK97) is a dual FET of even characteristics and has a large Gm and no-leakage current at normal temparature.
To avoid the influence by temperature drift, such as center voltage (0V) deviation, this FET is used as differential amplifier and operates at cross point which is the optimum point of drain current (at about 3mA) against the temperature drift.

◇Transistors, TR05 and TR07, the push-pull pre-driver stage functions as current differential amplifier that the stabilized operation can be obtained. In addition, the collector current of these transistors is enough high to make linearity excellent.

◇Since this Amplifier employs phase advancer circuits [C06, C08, C15, R29, C16 and R30], which have not been frequently used, to compensate the phase characteristics on high frequency range and is also made to have enough current on each stage to increase the through-rate, the performance on high frequency range is conspicuously improved.

◇To avoid the voltage deviation, regulated power supply circuit composed of ZD01, ZD02 is employed.

3-2. Operation

The use of differential amplification at first stage dual FET, (FET01, FET02) and connection of the FET to the differential amplifier composed of TR01, TR02, make possible to obtain enough gain and remarkable low distortion.
The output signals of TR01 and TR02 are untiphase.
The output signal of TR02 adds to TR05, on the other hand, the output phase of TR01 is inverted by TR03, then, it becomes input signal of TR04 and TR07 which are cascoded connection.
The output signals at TR05 and TR07 are inphase that the operation of this stage is push-pull drive and current differential amplification. The power amplifier of the final stage is composed of SEPP (Single Ended Push-Pull) symmetry comple mentary in 3-stage darlington connection type.
TR09 and TR10 are composing current limiter circuit to protect power transistor from break-down by overload.

4. ADJUSTMENTS

4-1. Driver Circuit Board Adjnstments (See the picture of top view on page 3.)

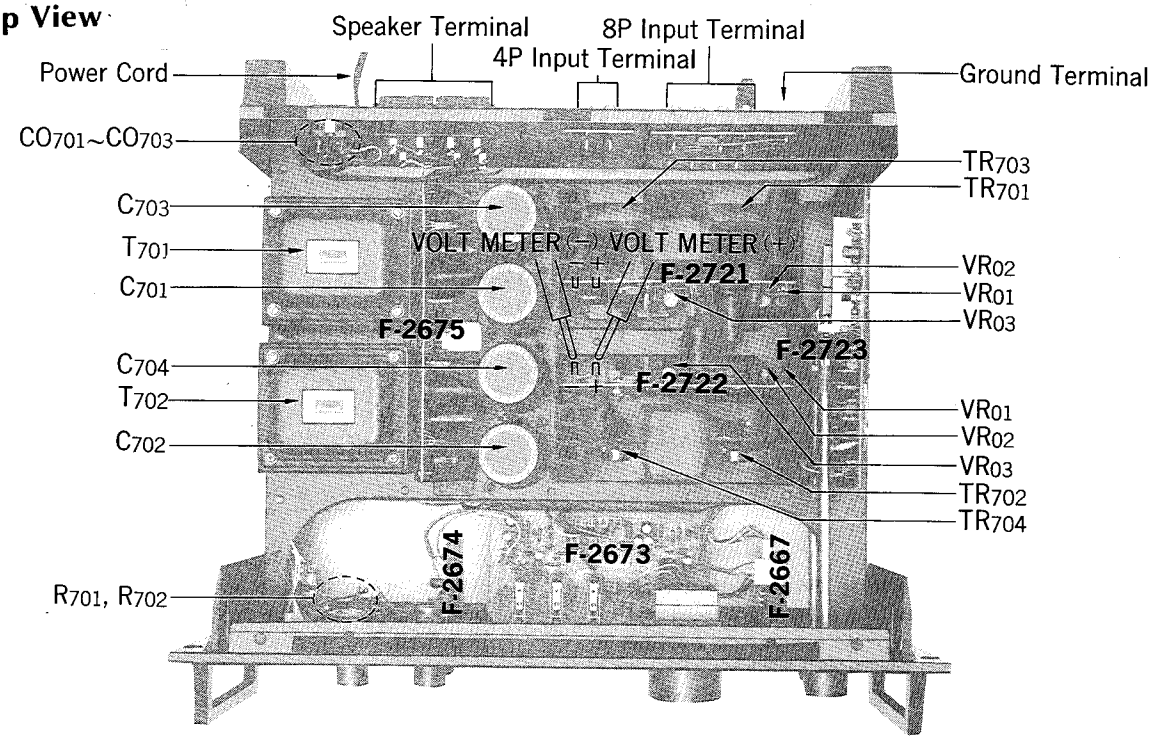
Note: 1. Master Volume.....Minimum
2. Room Temperature.....
3. For adjustment, run the unit for more than 3 minutes after the power is switched on.

STEP	SUBJECT	EQUIPMENT	MEASURE OUTPUT	ADJUST	ADJUST FOR	CONDITION
1.	DC 0V L-CH	DC Volt Meter	Speaker Terminal	F-2721 VR01, VR02	DC 0V±5mV	◦ Set VR01 and VR02 to center position. ◦ Then, for the purpose of proceeding the accurate adjustment, set the voltage to 0 volt by VR01 first and VR02 next.
2.	DC 0V R-CH	Same as above	Same as above	F-2722 VR01, VR02	DC 0V±5mV	
3.	Bias Current L-CH	Same as above	TP Terminal (+) (−) of F-2721	F-2721 VR03	DC 20mV±1mV	◦ By turning VR03 counterclockwise, the bias current is decreased gradually.
4.	Bias Current R-CH	Same as above	TP Terminal (+) (−) of F-2722	F-2722 VR03	DC 20mV±1mV	

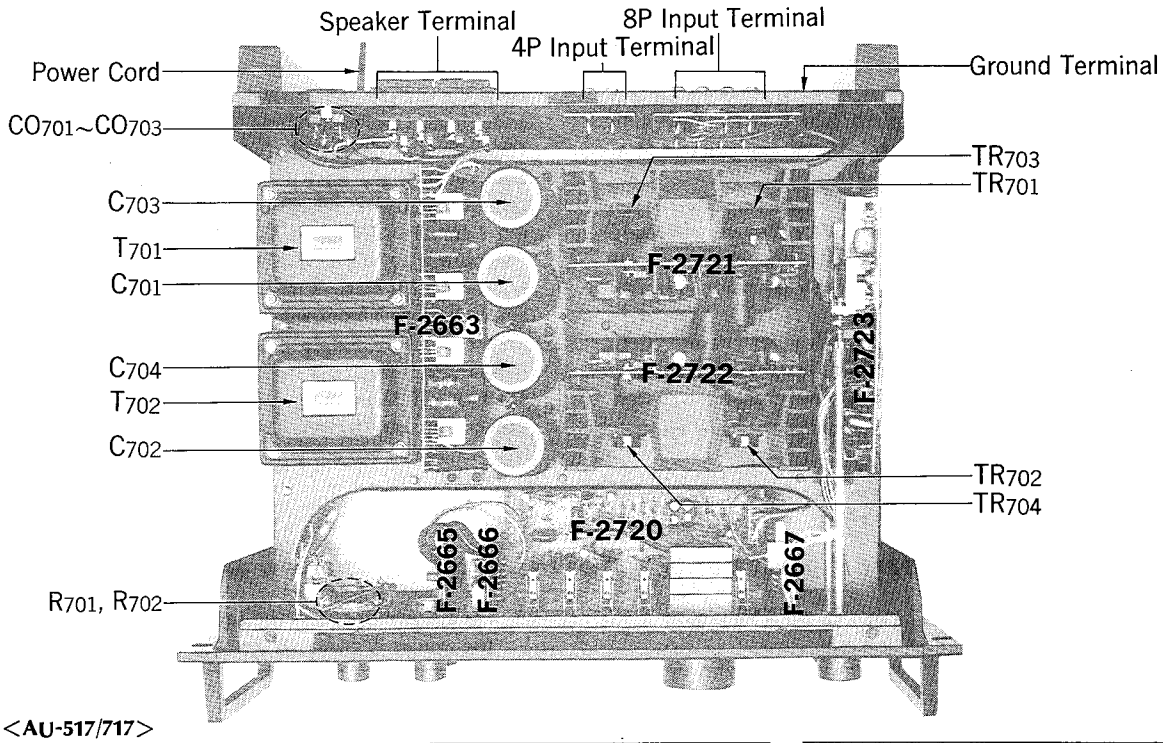
5. OTHER PARTS

5-1. Top View

〈AU-517〉



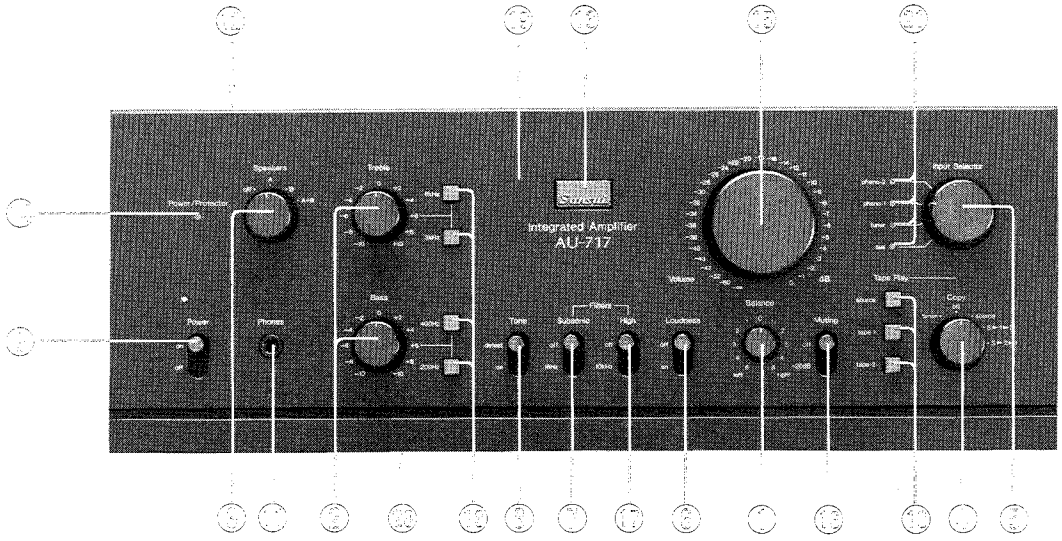
〈AU-717〉



Parts List <AU-517/717>

Parts No.	Stock No.	Description
C705	0659801	0.01μF 150V M.C.
C707~714	0602109	1.0μF 100V M.C.
R701, 702	0202221	220Ω 2W N.I.R.
CO701~703	2450060	AC Outlet XX
	5066280	AC Outlet EU, BS
	2290190	Speaker Terminal
	3800010	Power Cord XX
	3800190	Power Cord EU
	3800320	Power Cord BS
	2300060	Power Fuse Holder XX
	2300090	Power Fuse Holder EU, BS
	2410091	Voltage Selector Plug XX
	2410830	Voltage Selector Socket XX
	2411240	Voltage Selector SW EU, BS
	2230052	Ground Terminal
AU-517 Only		
TR701, 702	0306450-2	2SC1403A R, O, Y } Transistor
TR703, 704	0300830-2	2SA745A R, O, Y }
C701~704	0559518	12000μF 63V E.C.
T701, 702	4002590	Power Transformer XX
	4002594	Power Transformer EU, BS
	4002592	Power Transformer UL, CSA
F701	0432270	3.5A 125V } Power Fuse XX
	0432500	7A 125V }
	0435140	2.5A Power Fuse EU, BS
AU-717 Only		
TR701, 702	0305840-2	2SC1116 R, O, Y } Transistor
TR703, 704	0300520-2	2SA747 R, O, Y }
C701~704	0559520	15000μF 63V E.C.
T701, 702	4002580	Power Transformer XX
	4002584	Power Transformer EU, BS
	4002582	Power Transformer UL, CSA
F701	0432290	5A 125V } Power Fuse XX
	0434060	10A 250V }
	0435150	3.15A Power Fuse EU, BS

5-2. Front View 〈AU-717〉



Parts List <AU-517/717>

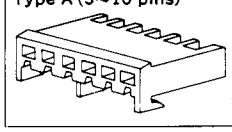
Parts No.	Stock No.	Description
1	5318850	N-7 Type Knob
	1015170, 1	250kΩ (MN)×2 Balance Volume L=25 P=5
2	5318840	K-7 Type Knob
	1015230, 1	100kΩ (C)×2 Treble, Bass Volume L=25 P=7
3	5318840	K-7 Type Knob
	1101780, 1	Rotary Switch, Speakers
4	5318840	K-7 Type Knob
	1190410	Rotary Switch, Tape Copy
5	5318830	I-7 Type Knob
	1190410	Rotary Switch, Input Selector
8	5326611	Lever Switch Knob
	1171150	Lever Switch, Tone Defeat
9	5326611	Lever Switch Knob
	1171630	Lever Switch, Power
	1171610	Lever Switch, Power EU, BS
10	5326620	Push Switch Knob
	5286721	Knob Guide
	1131400	Push Switch, Tape Play
11	2430290	Head Phone Jack
12	5006670	Bonnet
13	5336600	Sansui Badge
14	0319110	Light Emitted Diode
	5507070	Leg
AU-517 Only		
6	5326611	Lever Switch Knob
	1171120	Lever Switch, Loudnes
7	5326611	Lever Switch Knob
	1171120	Lever Switch, Subsonic Filter
15	5318860	H-7 Type Knob
	1090250	150kΩ×2 Volume L=25 P=7
19	7007580	Front Panel Ass'y
20	5058740	Bottom Plate
AU-717 Only		
6	5326611	Lever Switch Knob
	1171130	Lever Switch, Loudnes
7	5326611	Lever Switch Knob
	1171130	Lever Switch, Subsonic Filter
15	5318860	H-7 Type Knob
	1090280	150kΩ×2 5kΩ×2 Volume L=25 P=9
16	5326611	Lever Switch Knob
	1171120	Lever Switch, Muting
17	5326611	Lever Switch Knob
	1171130	Lever Switch, High Filter
18	5326620	Push Switch Knob
	5286721	Knob Guide
	1131400	Push Switch, Turn Over
19	7007570	Front Panel Ass'y
20	5058730	Bottom Plate
21	0319110	Light Emitted Diode

● Figures

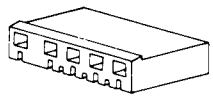
Connectors & Pin Ass'y

Connectors

Type A (3~10 pins)



Type B (2~6 pins)

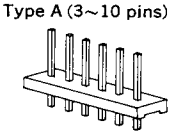


Stock No.	
2 Pins	2420450
3 Pins	2420460
3 Pins(RED)	2420650
4 Pins	2420470
5 Pins	2420480
6 Pins	2420490

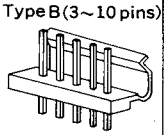
NOTE: Since stock number of famale connectors (type B) with wires are not shown in each parts list of Complete circuit board, please refer to the above parts list when ordering the connector.

Pin Ass'y

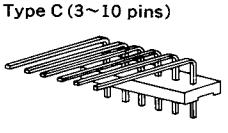
Type A (3~10 pins)



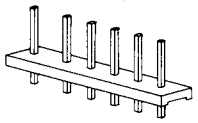
Type B (3~10 pins)



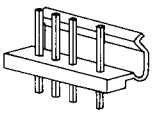
Type C (3~10 pins)



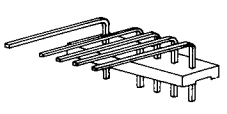
Type D (2~6 pins)



Type E (2~6 pins)



Type F (2~6 pins)



Abbreviations

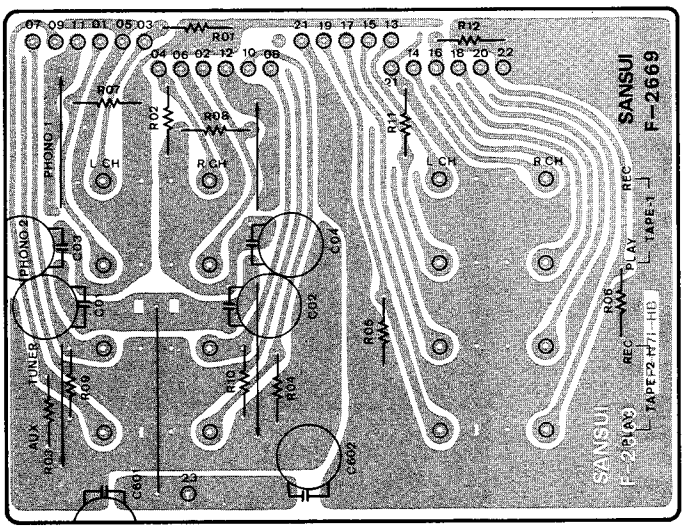
C.R.	:	Carbon Resistor	**E.C.**	:	Electrolytic Capacitor
S.R.	:	Solid Resistor	**BP.E.C.**	:	Bi-Polar Electrolytic Capacitor
Ce.R.	:	Cement Resistor	**C.C.**	:	Ceramic Capacitor
M.R.	:	Metal Film Resistor	**Mi.C.**	:	Mica Capacitor
F.R.	:	Fusing Resistor	**O.C.**	:	Oil Capacitor
N.I.R.	:	Non-Inflammable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

6. PARTS LOCATION & PARTS LIST

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

6-1. F-2669 Input Terminal Circuit Board (AU-517 Stock No. 7595201) (AU-717 Stock No. 7595171)

Conductor Side

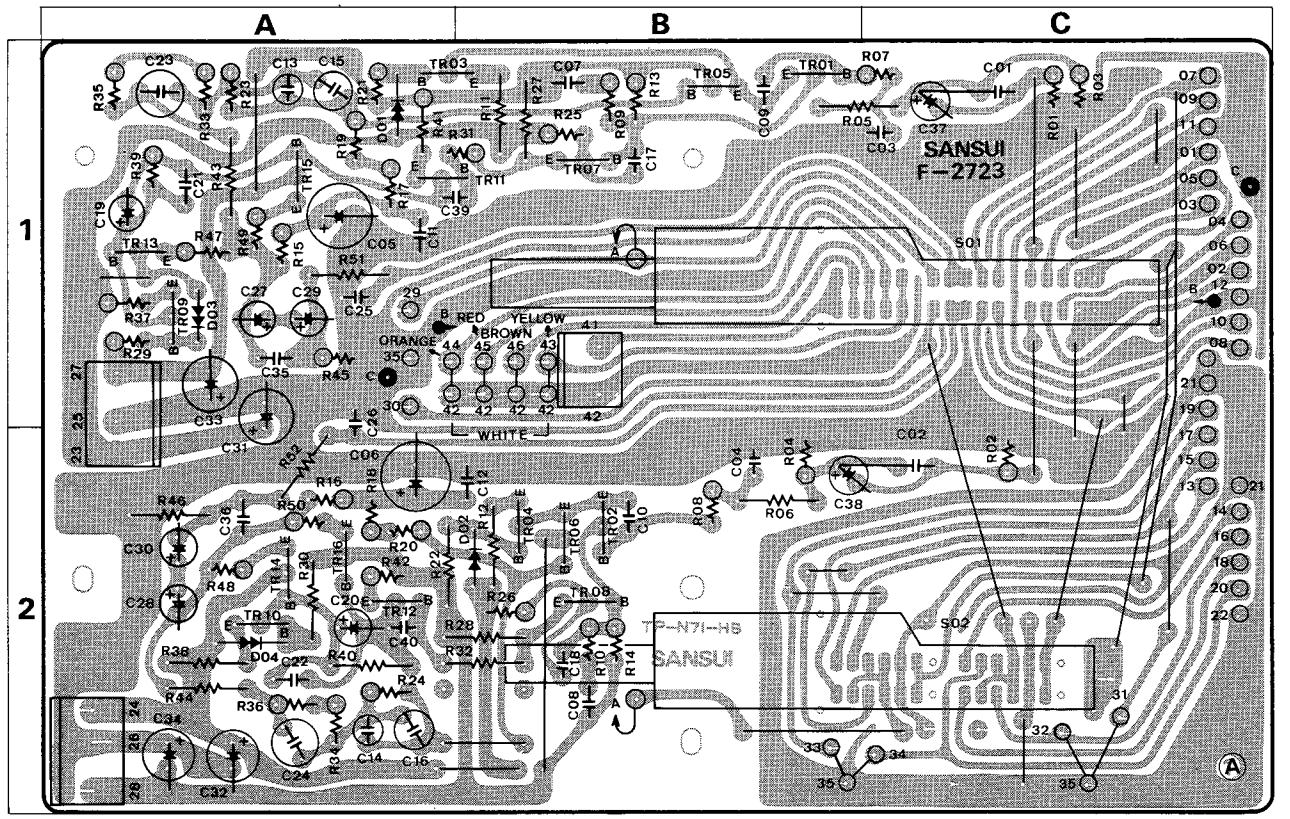


Parts List

Parts No.	Stock No.	Description
	2200480	8P Input Terminal

6-2. F-2723 Equalizer Circuit Board (AU-517 Stock No. 7551171) (AU-717 Stock No. 7551161)

Conductor Side



Parts List

Parts No.	Stock No.	Description	Position
TR01, 02	0300900, 1	2SA906 (G, H)	1 B, 2 B
TR03, 04	0300470, 1	2SA726(W) (F, G)	1 A, 2 B
TR05, 06	0300900, 1	2SA906 (G, H)	1 B, 2 B
TR07, 08	0306290, 1	2SC1400(1) (E, U)	1 B, 2 B
TR09, 10	0300890, 1	2SA750(3) (E, U)	1 A, 2 A
TR11, 12	0306290, 1	2SC1400(1) (E, U)	1 A, 2 A
TR13, 14	0306290, 1	2SC1400(1) (E, U)	1 A, 2 A
TR15, 16	0300890, 1	2SA750(3) (E, U)	1 A, 2 A
D01, 02	0340120	VD1212	1 A, 2 B
D03, 04	0340120	VD1212	1 A, 2 A

Transistor

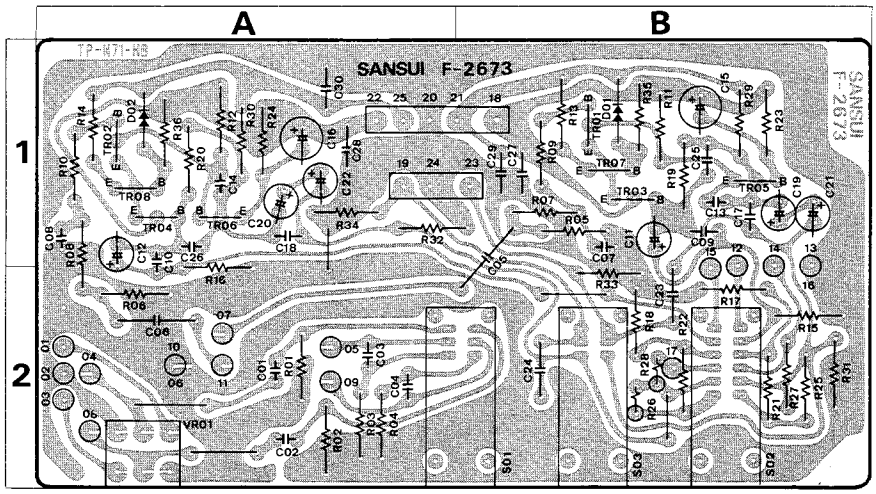
Varistor

Parts No.	Stock No.	Description	Position
C01, 02	0602109	1.0μF 100V M.C.	1 C, 2 C
C07, 08	0620121	120pF	1 B, 2 B
C13, 14	0620151	150pF 50V P.C.	1 A, 2 A
C15, 16	0625272	2700pF	1 A, 2 A
C23, 24	0625103	10000pF	1 A, 2 A
R17, 18	0231561	560Ω	1 A, 2 A
R19, 20	0231220	22Ω	1 A, 2 A
R23, 24	0231273	27kΩ ½W M.R.	1 A, 2 A
R33, 34	0231153	15kΩ	1 A, 2 A
R35, 36	0231304	300kΩ	1 A, 2 A

Parts No.	Stock No.	Description	Position
R47, 48	0193820	82Ω ¼W F.R.	1 A, 2 A
R49, 50	0193820	82Ω	1 A, 2 A
S01	1190420	Input Rotary Switch	1 B, C
S02	1190410	Tape Copy Rotary Switch	2 B, C
	2410920	3P Pin Ass'y Type E	
AU-717 Only			
	2410910	2P Pin Ass'y Type E	

6-3. F-2673 Tone Control Circuit Board (AU-517 Stock No. 7561841)

Conductor Side

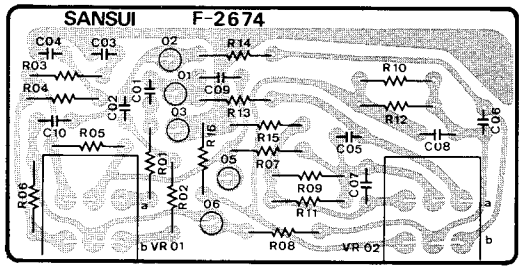


Parts List

Parts No.	Stock No.	Description	Position
TR01, 02	0306010, 1	2SC1222(2) (U, E)	1B, 1A
TR03, 04	0306010, 1	2SC1222(2) (U, E)	1B, 1A
TR05, 06	0300890, 1	2SA750(3) (E, U)	1B, 1A
TR07, 08	0306010, 1	2SC1222(2) (U, E)	1B, 1A
		Transistor	
D01, 02	0340120	VD1212 Varistor	1B, 2B
C01, 02	0610361	360pF 50V P.C.	2A
C05, 06	0602338	0.33μF 100V M.C.	
VR01	1015170, 1	250kΩ (MN)×2 Balance VR	2A
S01	1171120	Loudness Lever Switch	2A, B
S02	1171150	Tone Defeat Lever Switch	2B
S03	1171120	Subsonic Filter Lever Switch	2B
	2410570	5P Pin Ass'y Type D	
	2410920	3P Pin Ass'y Type E	

6-4. F-2674 Bass & Treble Volume Circuit Board (AU-517 Stock No. 7561861)

Conductor Side

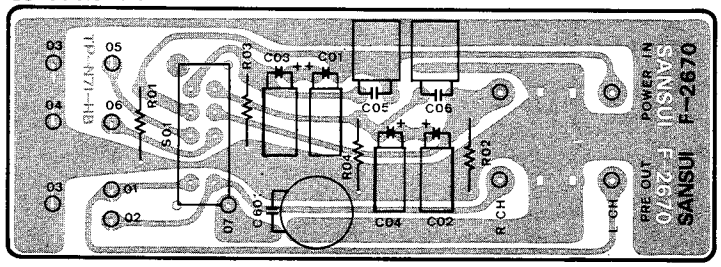


Parts List

Parts No.	Stock No.	Description
VR01, 02	1015230, 1	100kΩ (C)×2 Treble, Bass Volume

6-5. F-2670 Pre-Main Switch Circuit Board (AU-517 Stock No. 7595211) (AU-717 Stock No. 7595191)

Conductor Side

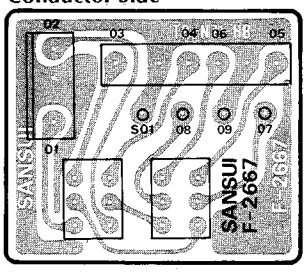


Parts List

Parts No.	Stock No.	Description
S01	1110290	PRE-MAIN Slide Switch
	2200500	4P Input terminal

6-6. F-2667 Tape Play Circuit Board (AU-517 Stock No. 7595181) (AU-717 Stock No. 7595221)

Conductor Side

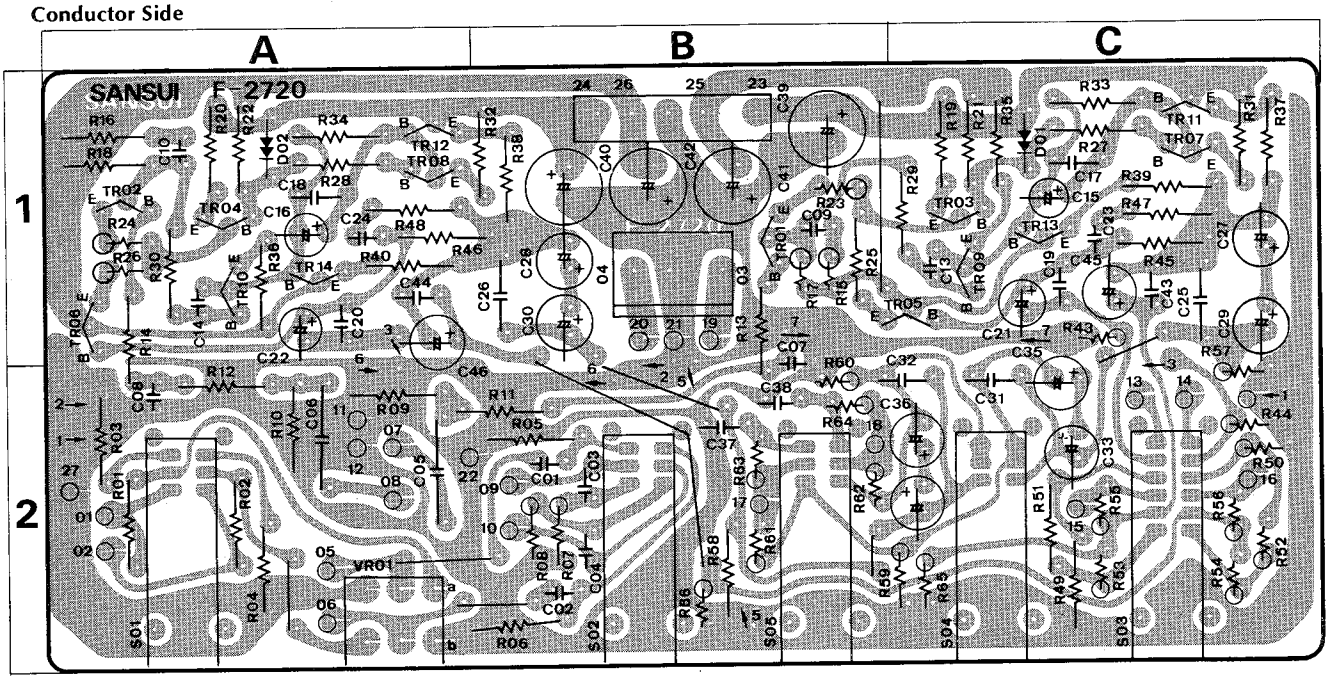


Parts List

Parts No.	Stock No.	Description
S01	1131400	Tape Push Switch
	2410700	6P Pin Ass'y Type F
	2410920	3P Pin Ass'y Type E

6-7. F-2720 Tone Control Circuit Board (AU-717 Stock No. 7561941)

Conductor Side



Parts List

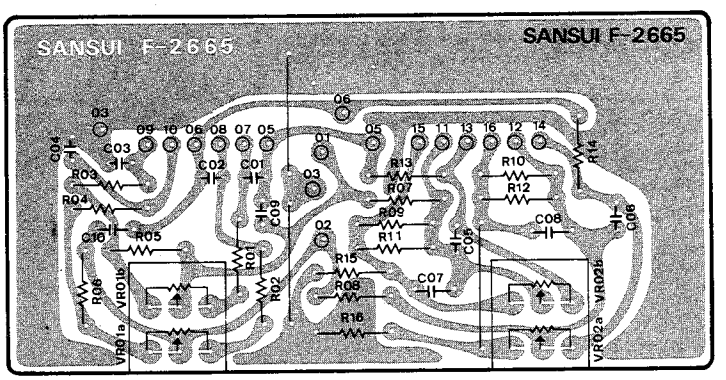
Parts No.	Stock No.	Description	Position
TR01, 02	0360370~2	2SA798 (F, G, H)	1B, 1A
TR03, 04	0300470, 1	2SA726(W) (F, G)	1C, 1A
TR05, 06	0306290, 1	2SC1400(1) (E, U)	1C, 1A
TR07, 08	0300890, 1	2SA750(S) (E, U) Transistor	1C, 1A
TR09, 10	0306290, 1	2SC1400(1) (E, U)	1C, 1A
TR11, 12	0306290, 1	2SC1400(1) (E, U)	1C, 1A
TR13, 14	0300890, 1	2SA750(S) (E, U)	1C, 1A

Parts No.	Stock No.	Description	Position
D01, 02	0340120	VD1212 Varistor	1C, 1A
C01, 02	0620361	360pF 50V P.C.	2B
C05, 06	0602338	0.33μF 100WV M.C.	2A
C09, 10	0620121	120pF 50V P.C.	1B, 1A
R37, 38	0191820	82Ω ¼W F.R.	1C, 1B
R39, 40	0191820	82Ω ¼W F.R.	1C, 1A
VR01	1015170, 1	250kΩ(MN)×2 Balance VR	2A

Parts No.	Stock No.	Description	Position
S01	1171130	Muting SW	2A
S02	1171130	Loudness SW	2B
S03	1171150	Tone Defeat SW	2C
S04	1171130	Subsonik Filter SW	2C
S05	1171130	High Filter SW	2B
	2410570	5P Pin Ass'y Type D	
	2410920	3P Pin Ass'y Type E	

6-8. F-2665 Bass & Treble Volume Circuit Board (AU-717 Stock No. 7561851)

Conductor Side

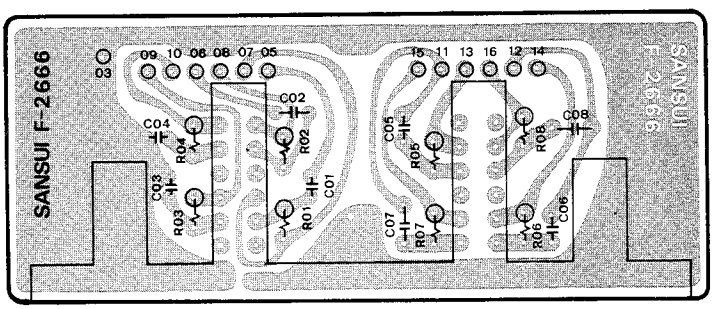


Parts List

Parts No.	Stock No.	Description
VR01, 02	1015230, 1	100kΩ (C)×2 Treble, Bass Volume

6-9. F-2666 Turn Over Switch Circuit Board (AU-717 Stock No. 7561871)

Conductor Side

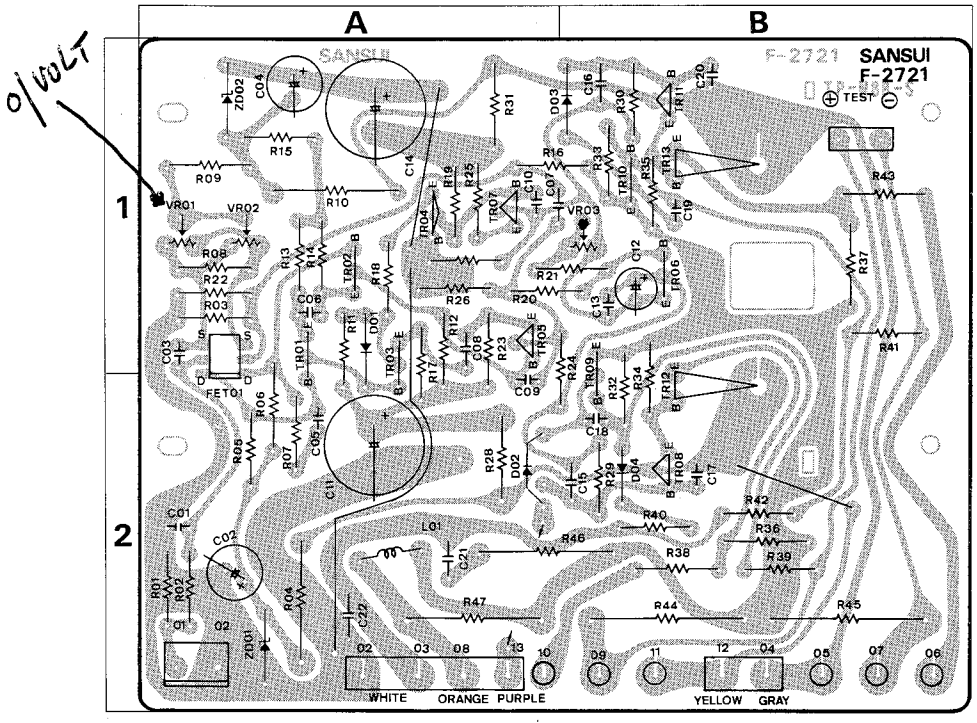


Parts List

Parts No.	Stock No.	Description
S01	1131410	Turn Over Push SW

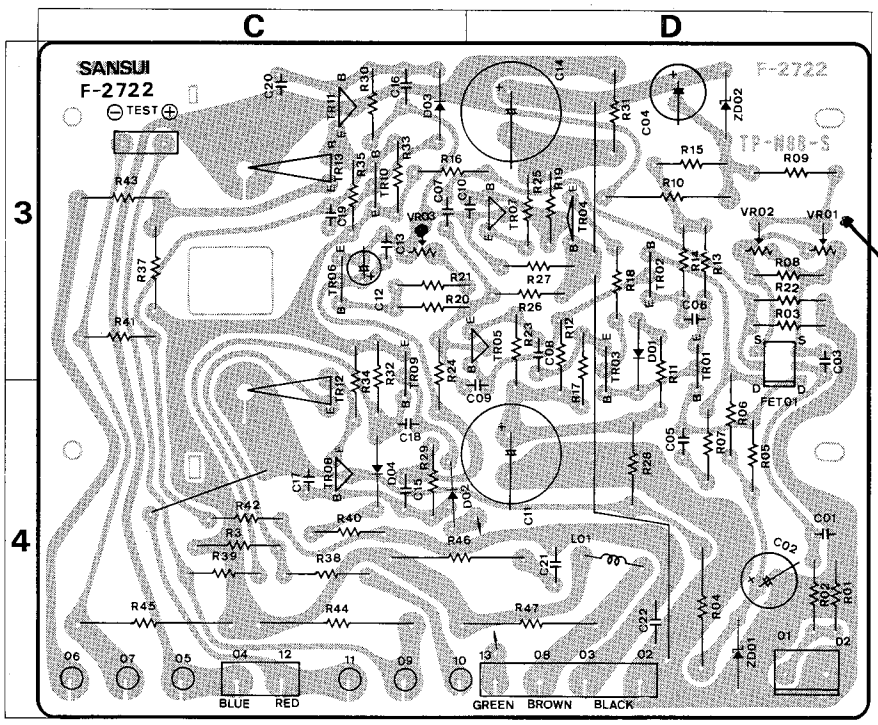
6-10. F-2721 Driver Circuit Board (L-CH) (AU-517 Stock No. 7571721) (AU-717 Stock No. 7571741)

Conductor Side



6-11. F-2722 Driver Circuit Board (R-ch) (AU-517 Stock No. 7571731) (AU-717 Stock No. 7571751)

Conductor Side

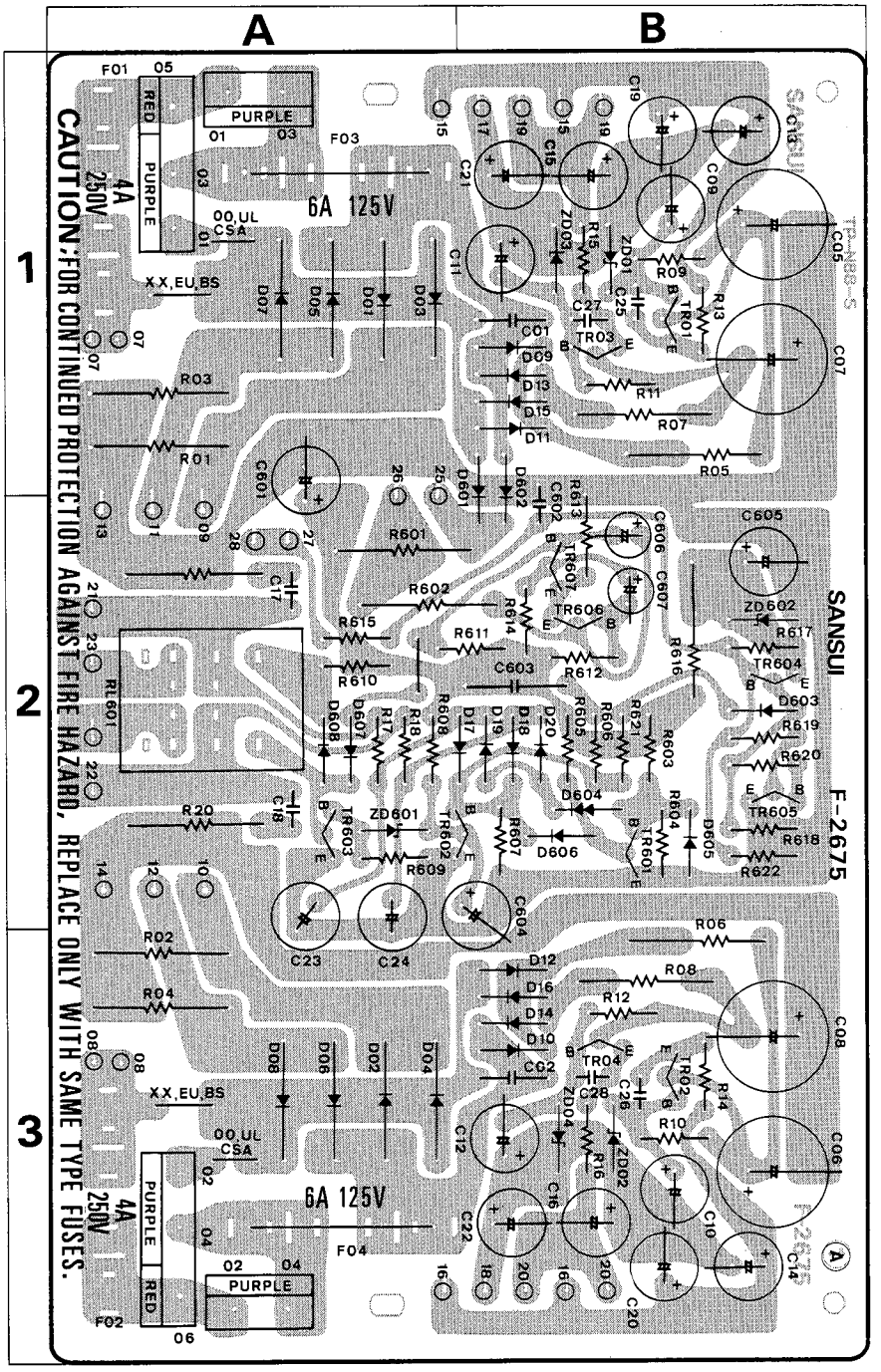


Parts List

Parts No.	Stock No.	Description	Position
TR01	0306290, 1	2SC1400(1)(E, U)	1A.3D
TR02	0306290, 1	2SC1400(1)(E, U)	1A.3D
TR03	0300890, 1	2SA750(3) (E, U)	1A.3D
TR04	0300890, 1	2SA750(3) (E, U)	1A.3D
TR05	0300791, 2	2SA899 (B, V)	1A.3D
TR06	0305951, 2	2SC945 (Q, P)	1B.3C
TR07	0306401, 2	2SC1904 (B, V)	1A.3D
TR08	0306401, 2	2SC1904 (B, V)	2B.4C
TR09	0305951, 2	2SC945 (Q, P)	1,2B.3,4C
TR11	0300791, 2	2SA899 (B, V)	1B.3C
TR12	0308441-3	2SD382 (M, L, K)	2B.4C
TR13	0303271, 2	2SB537 (M, L, K)	1B.3C
		Transistor	
FT01	0370251, 2	2SK97 FET	
D01	0311160	1S2473D	1A.3D
D02	0311160	1S2473D	2A.4C
D03	0311160	1S2473D	1B.3C
D04	0311160 / 0311180	1S2473D / 1S1588	2B.4C
		Diode	
ZD01	0316170	EQB01-22	2A.4D
ZD02	0316170	EQB01-22	1A.3D
		Zener Diode	
C01	0620101	100pF 50V P.C.	2A.4D
C05	0620331	330pF 50V P.C.	2A.4D
C07	0669505	5pF 50V C.C.	1B.3C
R04	0202222	2.2kΩ 2W N.I.R.	2A.4D
R05	0231332	3.3kΩ ½W M.R.	2A.4D
R06	0231332	3.3kΩ ½W M.R.	2A.4D
R09	0103392	3.9kΩ ½W C.R.	1A.3D
R10	0202152	1.5kΩ 2W N.I.R.	1A.3D
R28	0210470	47Ω ½W N.I.R.	2A.4D
R31	0210470	47Ω ½W N.I.R.	1A.3D
R36	0103560	56Ω ½W C.R.	2B.4C
R37	0103560	56Ω ½W C.R.	1B.3C
R38	0103479	4.7Ω ½W C.R.	2B.4D
R43	0103479	4.7Ω ½W C.R.	1B.3C
R44	0135338	0.33Ω 5W Ce.R.	2B.4C
R45	0135338	0.33Ω 5W Ce.R.	2B.4C
R46	0202100	10Ω 2W N.I.R.	2A,B.4C,D
R47	0132229	2.2Ω 2W Ce.R.	2A.4C
L01	4210290	1.5μH Coil	2A.4D
VR01	1033570	100Ω(B) Volume	1A.3D
VR02	1035330	2.2kΩ(B) Volume	1A.3D
VR03	1035310	1kΩ(B) Volume	2A.4D
AU-517 Only			
R03	0107102	1kΩ ¼W C.R.	1A.3D
R16	0107223	22kΩ ¼W C.R.	1A,B.3C,D
R28	0210560	56Ω ½W N.I.R.	2A.4D
R31	0210560	56Ω ½W N.I.R.	1A.3D
AU-717 Only			
R03	0107122	1.2kΩ ¼W C.R.	1A.3D
R16	0107273	27kΩ ¼W C.R.	1A,B.3C,D
R22	0107103	10kΩ ¼W C.R.	1A.3D
R28	0210470	47Ω ½W N.I.R.	2A.4D
R31	0210470	47Ω ½W N.I.R.	1A.3D

6-12. F-2675 Power Supply & Protector Circuit Board (AU-517 Stock No. 7502331)

Conductor Side



Parts List

Parts No.	Stock No.	Description	Position
TR01, 02	0308521, 2	2SD438 (E, F)	1B, 3B
TR03, 04	0303361, 2	2SB560 (E, F)	1B, 3B
TR601	0305951, 2	2SC945 (Q, P)	2B
TR602	0305951, 2	2SC945 (Q, P)	2B
TR603	0305951, 2	2SC945 (Q, P)	2A
TR604	0300510, 1	2SA733 (P, Q)	2B
TR605	0305951, 2	2SC945 (Q, P)	2B
TR606	0305951, 2	2SC945 (Q, P)	2B
TR607	0305951, 2	2SC945 (Q, P)	2B
D01, 02	0311530	30D2	1A, 3A
D03, 04	0311530	30D2	2A
D05, 06	0311530	30D2	1A, 3A
D07, 08	0311530	30D2	1A, 3A
D09, 10	0310350	10D2 (1S2227)	1B, 3B
D11, 12	0310350	10D2 (1S2227)	1B, 3B
D13, 14	0310350	10D2 (1S2227)	1B, 3B
D15, 16	0310350	10D2 (1S2227)	3B, 3B

Transistor: TR601–607
Diode: D01–16

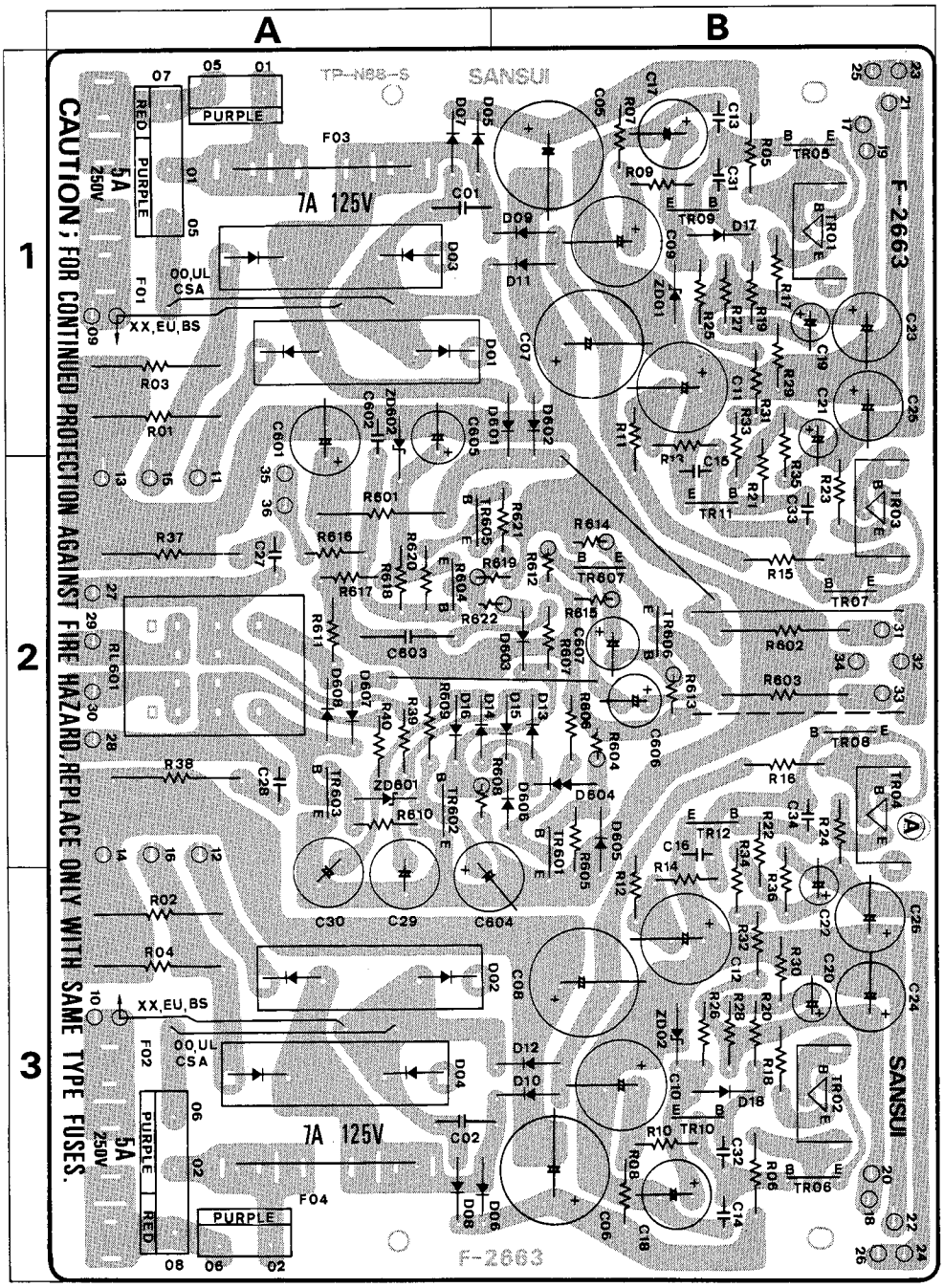
Parts No.	Stock No.	Description	Position
D17~18	0311160	1S2473D	2B
	0311180	1S1588	
D19~20	0311160	1S2473D	2B
	0311180	1S1588	
D601	0310350	10D2 (1S2227)	2A
D602	0310350	10D2 (1S2227)	2A
D603	0311160	1S2473D	2B
D604	0340120	VD1212 Varistor	2B
D605	0311160	1S2473D	2B
D606	0311160	1S2473D	2B
D607	0311160	1S2473D	2B
D608	0310340	10D1 (1S2226)	2A
ZD01, 02	0316570	RD33E (B)	1B, 3B
ZD03, 04	0316570	RD33E (B)	1B, 3B
ZD601	0315760	EQA01-06R	2B
ZD602	0316390	RD6.2E (B)	2B
C01~02	0655103	10000pF 500V C.C.	1B, 3B

Diode: D17–20, D601–608
Zener Diode: ZD01–04, ZD601–602

Parts No.	Stock No.	Description	Position
C603	0602338	0.33μF 100WV M.C.	2B
R01, 02	0202272	2.7kΩ 2W N.I.R.	1A, 3A
R03, 04	0202272	2.7kΩ 2W N.I.R.	1A, 3A
R05, 06	0210101	100Ω ½W N.I.R.	2B, 3B
R07, 08	0210101	100Ω ½W N.I.R.	1B, 3B
R19, 20	0202100	10Ω	2A
R601	0202391	390Ω 2W N.I.R.	2B
R602	0202222	2.2kΩ 2W N.I.R.	2B
R616	0210472	4.7kΩ ½W N.I.R	2B
RL601	1150250	Relay	2A
	1150370	Relay	
F01, 02	0435160	4A 125V Power fuse UL, CSA	1B, 3B
	0432300	6A 125V AC fuse XX	
	0435160	4A-T AC fuse EU, BS	
	2310220	Fuse Holder XX	
	2310230	Fuse Holder EU, BS	

6-13. F-2663 Power Supply & Protector Circuit Board (AU-717 Stock No. 7502321)

Conductor Side



Parts List

Parts No.	Stock No.	Description	Position
TR01, 02	0308451, 2	2SD356 (D, E)	1 B . 3 B
TR03, 04	0303281, 2	2SB526 (D, E)	2 B
TR05, 06	0306270, 1	2SC1708 (E, U)	1 B . 3 B
TR07, 08	0300710, 1	2SA847(1)(F, G)	2 B
TR09, 10	0306270, 1	2SC1708 (F, G)	1 B . 3 B
TR11, 12	0300710, 1	2SA847 (F, G)	2 B
TR601	0305951, 2	2SC945 (Q, P) Transistor	2 B
TR602	0305951, 2	2SC945 (Q, P)	2 A
TR603	0305951, 2	2SC945 (Q, P)	2 A
TR604	0300510, 1	2SA733 (P, Q)	2 A
TR605	0305951, 2	2SC945 (Q, P)	2 A
TR606	0305951, 2	2SC945 (Q, P)	1 B
TR607	0305951, 2	2SC945 (Q, P)	1 B
D01, 02	0311290	SS-3	1 A . 3 A
D03, 04	0311300	SS-3R	1 A . 3 A
D05, 06	0310350	10D2 (1S2227)	1 A . 3 A
D07, 08	0310350	10D2 (1S2227)	1 A . 3 A
D09, 10	0310350	10D2 (1S2227)	1 A . 3 A
D11, 12	0310350	10D2 (1S2227)	1 A . 3 A

Parts No.	Stock No.	Description	Position
D13-14	0311160	1S2473D	1 B . 1 A
	0311180	1S1588 Diode	
D15-16	0311160	1S2473D	1 B . 1 A
	0311180	1S1588	
D17-18	0311160	1S2473D	1 B . 3 B
	0311180	1S1588	
D601	0310350	10D2 (1S2227)	2 A
D602	0310350	10D2 (1S2227)	2 A
D603	0311160	1S2473D	2 B
D604	0340120	VD1212 Varistor	2 B
D605	0311160	1S2473D	2 B
D606	0311160	1S2473D Diode	2 B
D607	0311160	1S2473D	2 B
D608	0310340	10D1 (1S2226)	2 A
D609	0340120	VD1212 Varistor	
D610	0340120	VD1212	
ZD01, 02	0316310	RD-13E (B)	1 B . 3 B
ZD601	0315760	EQA01-06R Zener Diode	2 A
ZD602	0316390	RD-6.2E (B)	1 A

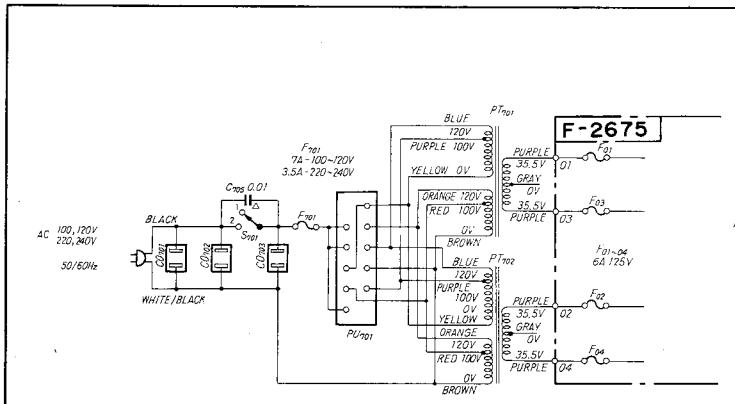
Parts No.	Stock No.	Description	Position
C01, 02	0655103	10000pF 500V C.C.	1 A . 3 A
C03, 04	0655103	10000pF	1 A . 3 A
C603	0602338	0.33μF 100WV M.C.	2 B
R01, 02	0202332	3.3kΩ 2 W N.I.R.	1 A . 3 A
R03, 04	0202332	3.3kΩ	1 A . 3 A
R05, 06	0210101	100Ω ½W N.I.R	1 B . 3 B
R15, 16	0210101	100Ω	2 B
R37, 38	0202100	10Ω 2 W N.I.R.	2 A
R601	0202391	390Ω	2 B
R602	0202272	2.7kΩ	2 B
R603	0202272	2.7kΩ	2 B
R617	0210472	4.7kΩ ½W N.I.R.	2 A
RL601	1150250	Relay	2 A
	1150370	Relay	
F01, 02	0432290	5A 125V Power fuse UL, CSA	1 A . 3 A
F01-04	0432500	7A 125V AC fuse XX	1 A . 3 B
	0435170	5A-T AC fuse EU, BS	
	2310220	Fuse Holder XX	
	2310230	Fuse Holder EU, BS	

7. SCHEMATIC DIAGRAM

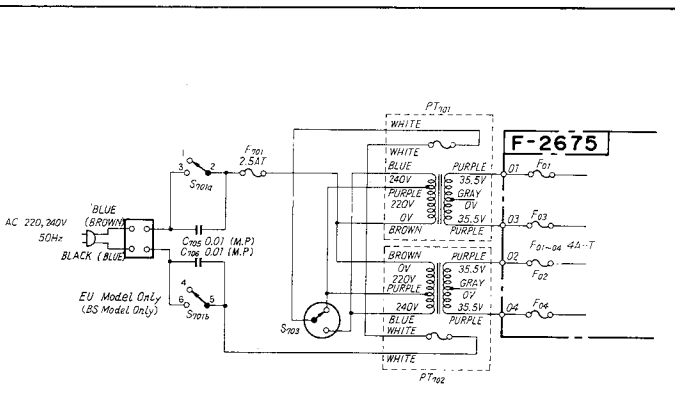
7-1. AU-517 Power Supply Section

XX EU. BS Model Only

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



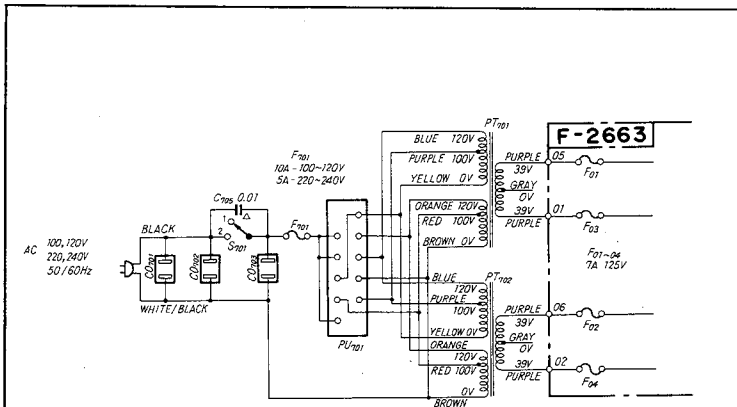
XX Model Only



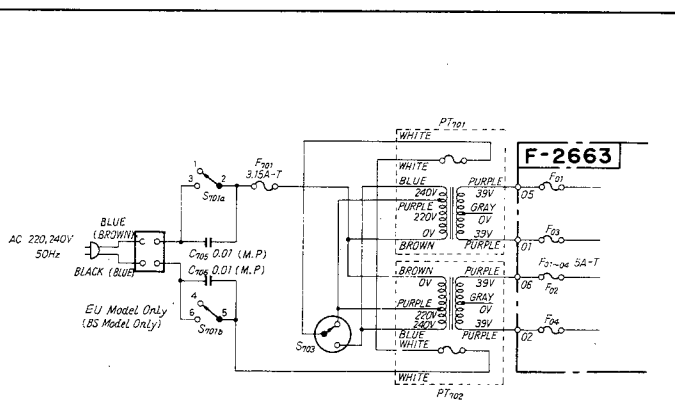
EU. BS Model Only

7-2. AU-717 Power Supply Section

XX EU. BS Model Only



XX Model Only



EU. BS Model Only

NOTE:

AS to U.L., C.S.A., B.S., ES and XX marked in the Parts Lists, note the followings:

U.L., C.S.A. ....Approved parts used in the unit which is applicable to the U.S. and Canada under safety standard.

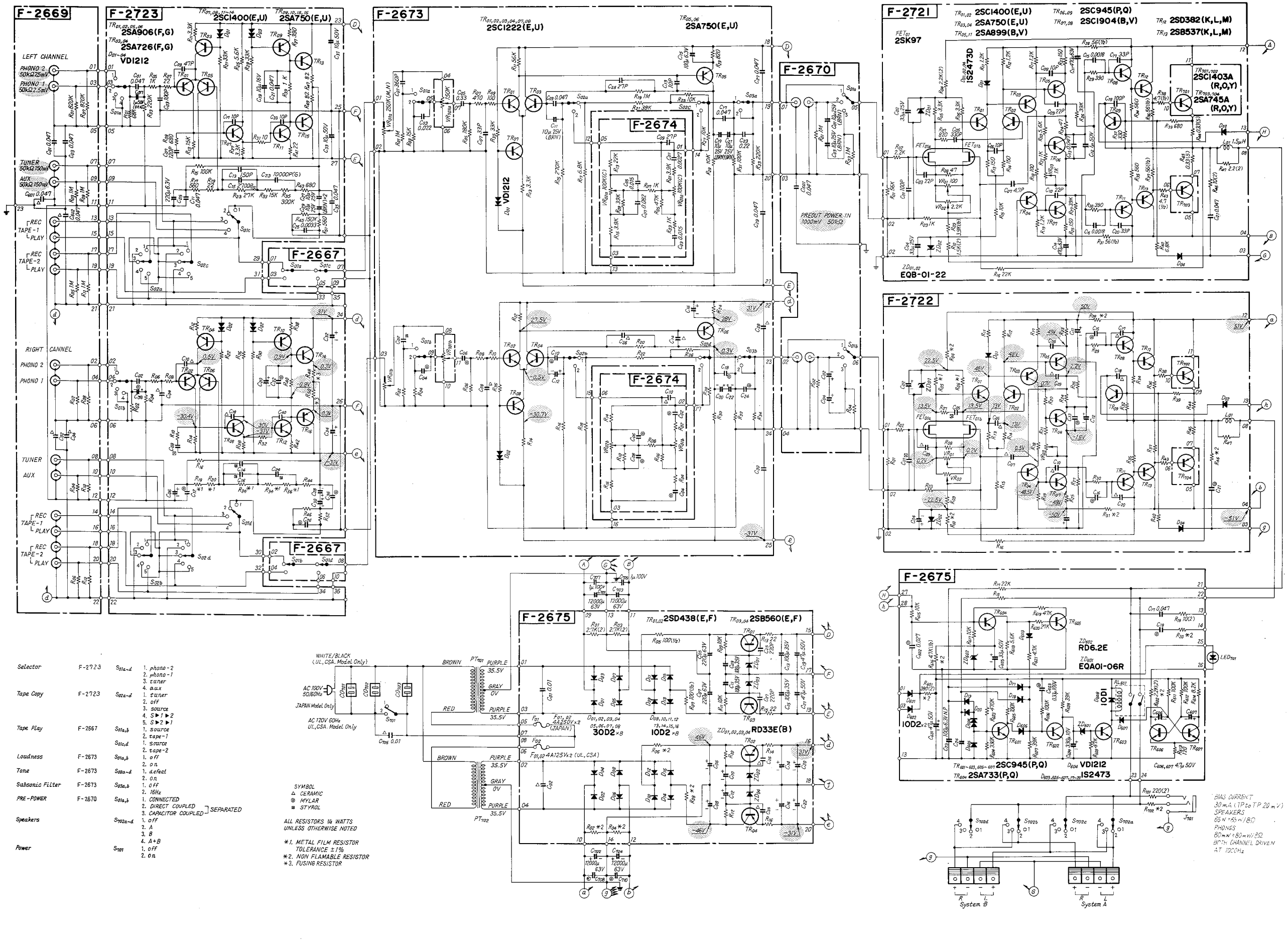
B.S. .....Approved parts used in the unit which is applicable to British under safety reguirement.

E.U. .....Approved parts used in the unit which is applicable to Sweeden, Denmark, Norway, Finland, West Germany, and Switzerland under safety reguirement.

XX .....Parts used in the unit which is applicable to other countries excepting mentioned above.

※ In parts lists, parts with no above mark in of "Description" are all the same as XX marked parts.

7-3. AU-517



Selector	F-2723	S_{01a-d}	1. phono-2 2. phono-1 3. tuner 4. aux
Tape Copy	F-2723	S_{02a-d}	1. tuner 2. off 3. source 4. S ▶ 1 ▶ 2 5. S ▶ 2 ▶ 1
Tape Play	F-2667	$S_{01a,b}$	1. source 2. tape-1
		$S_{01c,d}$	1. source 2. tape-2
Loudness	F-2673	$S_{01a,b}$	1. off 2. on
Tone	F-2673	S_{02a-d}	1. defeat 2. on
Subsonic Filter	F-2673	$S_{03a,b}$	1. off 2. 16Hz
PRE-POWER	F-2670	$S_{01a,b}$	1. CONNECTED 2. DIRECT COUPLED ┐ SEPARATED 3. CAPACITOR COUPLED ┘
Speakers		S_{02a-d}	1. off 2. A 3. B 4. A+B
Power		S_{101}	1. off 2. on

2SA733 2SA750 2SD560 2SC945 2SC1222 2SC1400 2SD438

2SA726 2SA847 2SA906 2SC1708

2SB537 2SD382

2SA899 2SC1904

2SA745A 2SC1403A

2SK97

10D1 10D2

VD1212

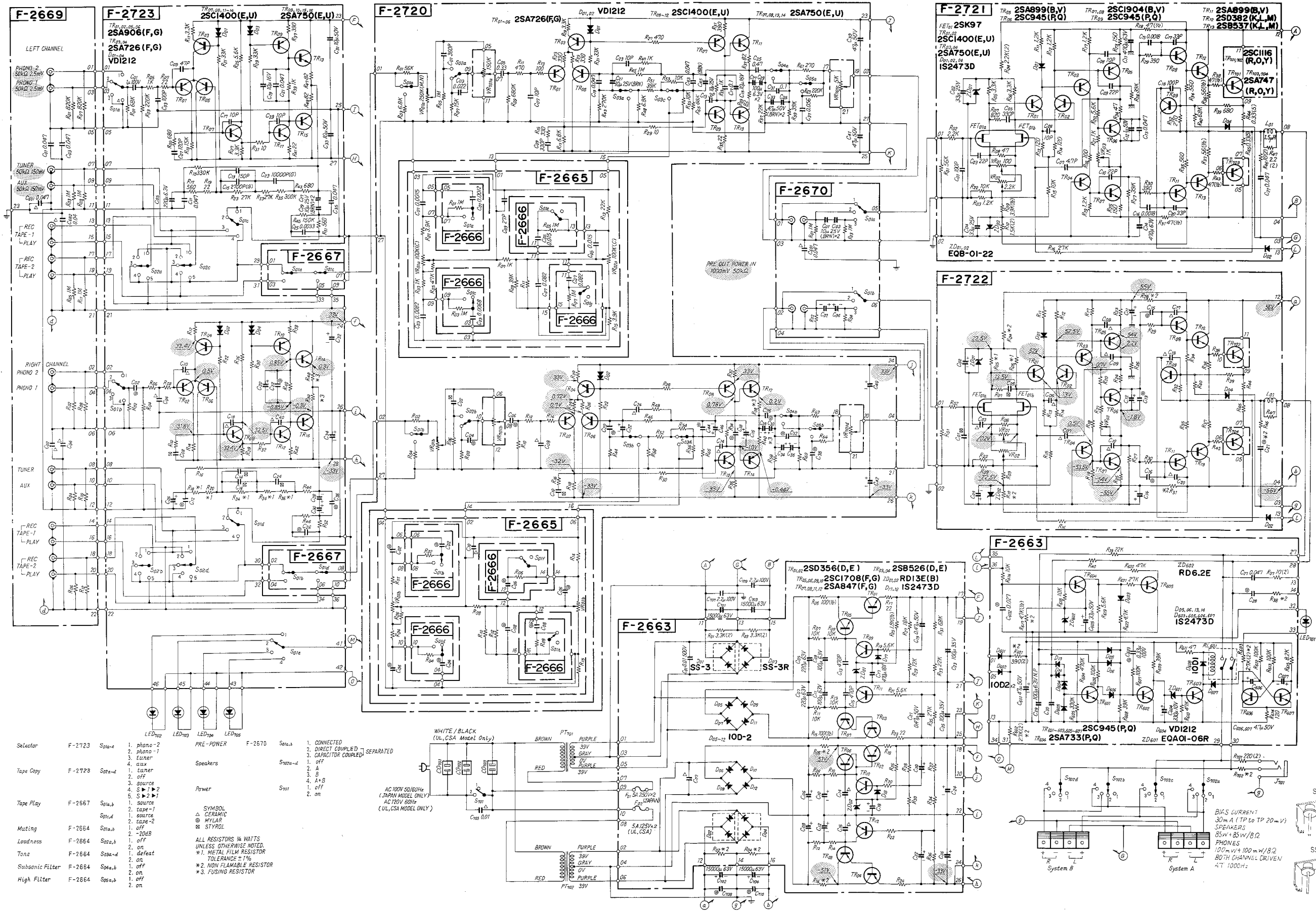
1S2473D

EQA01-06R EQB01-22 RD6.2E RD13E

30D-2

1 2 3 4 5

7-4. AU-717



Selector	F-2723	S_{01a-d}	1. phono-2 2. phono-1 3. tuner 4. aux
Tape Copy	F-2728	S_{02a-d}	1. tuner 2. off 3. source 4. S ▶1 ▶2 5. S ▶2 ▶1
Tape Play	F-2667	$S_{01a,b}$	1. source 2. tape-1
		$S_{01c,d}$	1. source 2. tape-2
Muting	F-2664	$S_{01a,b}$	1. off 2. -20dB
Loudness	F-2664	$S_{02a,b}$	1. off 2. on
Tone	F-2664	S_{03a-d}	1. defeat 2. on
Subsonic Filter	F-2664	$S_{04a,b}$	1. off 2. on
High Filter	F-2664	$S_{05a,b}$	1. off 2. on
PRE-POWER	F-2670	$S_{01a,b}$	1. CONNECTED 2. DIRECT COUPLED 3. CAPACITOR COUPLED
Speakers		S_{102a-d}	1. off 2. A 3. B 4. A+B
Power		S_{101}	1. off 2. on

SEPARATED

SYMBOL
△ CERAMIC
Ⓜ MYLAR
⊠ STYROL

ALL RESISTORS ¼ WATTS UNLESS OTHERWISE NOTED.
*1. METAL FILM RESISTOR TOLERANCE ±1%
*2. NON FLAMABLE RESISTOR
*3. FUSING RESISTOR

2SA733
2SA750
2SC945
2SC1222
2SC1400

2SA726
2SA947
2SA906
2SC1708

2SB526
2SD356

2SB537
2SD382

2SA747
2SC116

2SA899
2SC1904

2SK97

1OD1
1OD2

VD1212

1S2473D

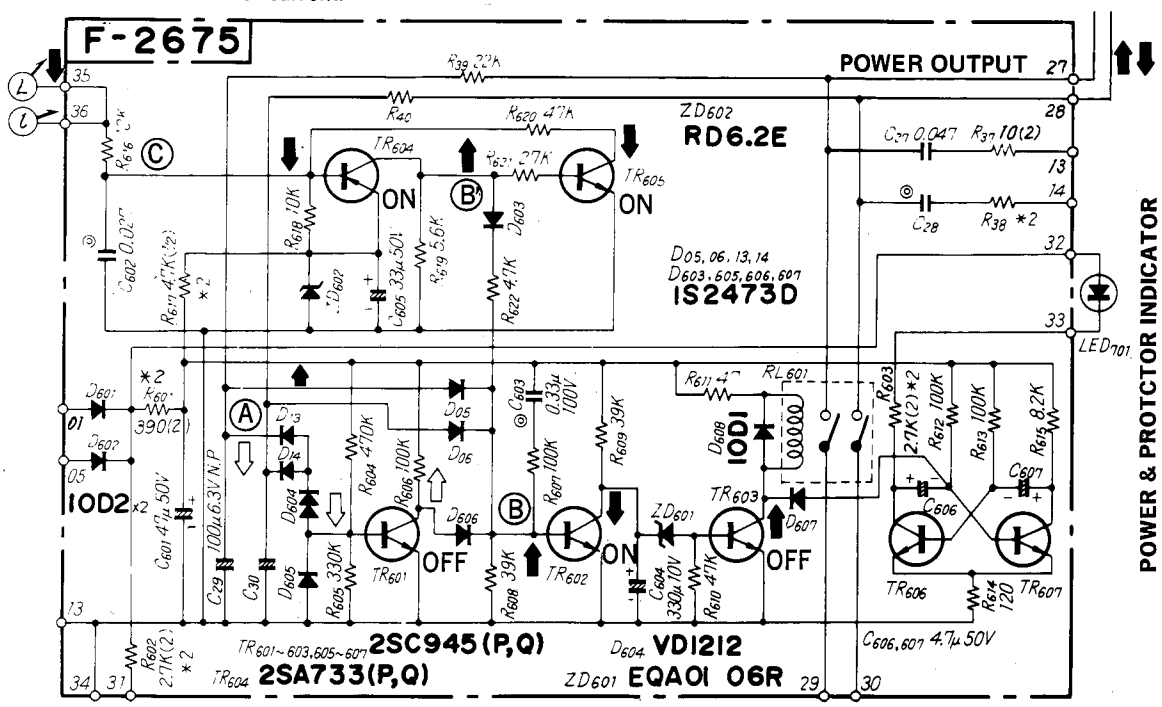
EQA01-06R
EQB01-22
RD6.2E
RD13E

SS-3

SS-3R

8. OPERATION OF PROTECTOR CIRCUIT

This protector circuit contains two functions at abnormal condition; a speaker protector circuit against DC voltage appearing at output, and speaker protector circuit against over-current.



A. Speaker Protection Circuit against DC voltage appearing at output Ⓐ

1. When an abnormal negative voltage appears at output Ⓐ, TR601 turns off, TR602 turns on and TR603 turns off so that the relay, RL601, keeps off in order to protect loudspeakers from break-down.
2. While the relay, RL601, keeps OFF, zero voltage (center voltage) controlling TR607 through D607 will increase, resultly the LED701 as protector indicator, starts flickering.
3. When abnormal positive voltage appears at output Ⓐ, the voltage is supplied to TR602 directly, and the operation of the protector circuit is same as above mentioned 1.

B. Speaker Protection Circuit against abnormal over-current

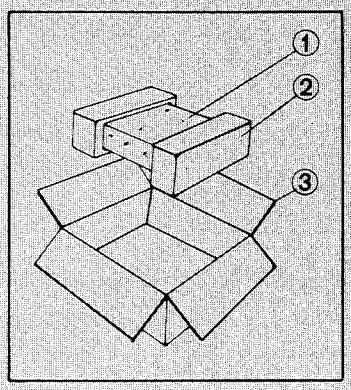
1. At the moment when abnormal excessive current flows into power transistors, a transistor (TR09) detecting excessive over-current, on power stage becomes ON.
2. Then, DC voltage at Ⓒ decreases, resulfly TR604 turns on, and positive certain voltage appears at Ⓑ'.
3. As mentioned above, when TR602 turns on, the relay, RL601, keeps OFF; a certain positive voltage at Ⓑ' turns on TR605 too, resultly collector voltage of TR605 decreases and its collector voltage keeps a certain voltage at Ⓒ simultaneously.
4. By keeping a certain DC voltage at Ⓒ., the LED701 as protector indicator continues flikering, even though all circuits work completely.

C. Operation of astable multivibrator

1. When control (bias) voltage is not supplied to the base of TR607 in abnormal condition, TR606 and TR607, on astable multivibrator repeat turning (switching) on and off alternately each other by charging and discharging of capacitors, C606 & C607, resultly, the LED701 as protector indicator continues flikering.
2. When the relay, RL601 is turned on, base voltage of TR607 becomes zero volt through D607 and TR606 becomes ON, resultly LED701 as power indicator lights up.

9. PACKING LIST

Parts No.	Stock No.	Description
1	9116670	Vinyl Cover
2	9028020	Stylofoam Packing (L)
	9028030	Stylofoam Packing (R)
3	9009710	Cartom Case (AU-717)
	9009700	Cartom Case (AU-517)



10. ACCESSORY PARTS LIST

Stock No.	Description
9202520	Operating Instructions (AU-517)
9202500	Operating Instructions (AU-717)
5192082	Hexagon Wrench (1.5mm)
9116580	Vinyl Bag For Wrench
9237540	Schematic Diagram (AU-517)
9237550	Schematic Diagram (AU-717)
5396340	Rack Mounting Adaptor (each)
5216100	Rear Stand (each)

MEMO

Sansui

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