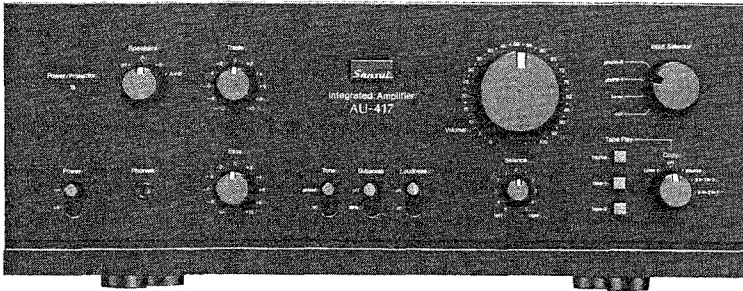


# SERVICE MANUAL

## INTEGRATED STEREO AMPLIFIER

# SANSUI AU-417



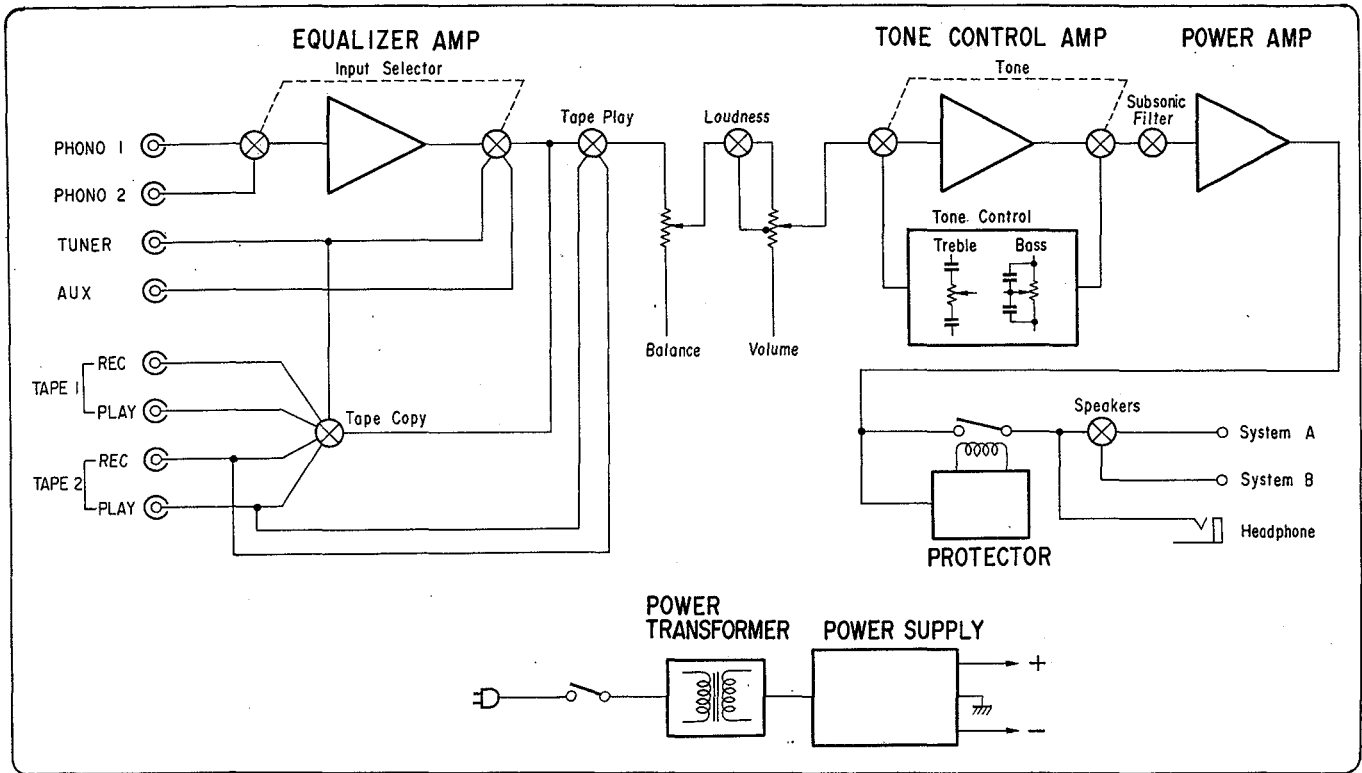
### SPECIFICATIONS

- Power output**  
 Min. RMS, both channels driven, from 20 to 20,000 Hz, with no more than 0.02 % total harmonic distortion  
 65 watts per channel into 8 ohms  
**Load impedance** . . . . . 8 ohms  
**Total harmonic distortion**  
 . . . . . less than 0.02 % at or below rated min. RMS power output  
**Intermodulation distortion (70 Hz : 7 kHz = 4:1 SMPTE method)**  
 . . . . . less than 0.02 % at or below rated min. RMS power output  
**Frequency response (at 1 watt)**  
 . . . . . 5 to 100,000 Hz +0 dB -3 dB  
**Damping factor (1 kHz, both channels driven)**  
 . . . . . 60 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 . . . . . 2.5 mV/47 kilohms  
 (Max. input capability; 300 mV at 1 kHz, less than 0.01 % total harmonic distortion)  
 AUX, TUNER, TAPE PLAY  
 . . . . . 150 mV/47 kilohms  
**Output level and impedance (1,000 Hz)**  
 TAPE REC (pin jack). 150 mV into 47 kilohms/600 ohms  
**Channel separation (1 kHz, at rated power output)**  
 PHONO . . . . . 60 dB  
 AUX, TUNER, TAPE PLAY  
 . . . . . 65 dB  
**Hum and noise (short-circuit, A-network)**  
 PHONO . . . . . 80 dB  
 AUX, TUNER, TAPE PLAY  
 . . . . . 100 dB  
**Controls**  
 BASS . . . . . ±10 dB (50 Hz)  
 TREBLE . . . . . ±10 dB (15 kHz)  
 SUBSONIC . . . . . -3 dB (16 Hz), 6 dB/oct  
 LOUDNESS (VOLUME control: -30 dB position)  
 . . . . . 9 dB at 50 Hz  
 . . . . . 7 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**  
**Maximum consumption**  
 . . . . . 300 watts  
**Rated consumption**  
 . . . . . 200 watts 240 VA  
**Dimensions** . . . . . 430 mm (16-15/16") W  
 . . . . . 168 mm (6-5/8") H  
 . . . . . 395 mm (15-9/16") D  
**Weight** . . . . . 12.2 kg (26.9 lbs) net  
 . . . . . 14.3 kg (31.5 lbs) packed

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



# 1. BLOCK DIAGRAM



# 2. ADJUSTMENTS

## 2-1. Driver Circuit Board Adjustments (See the picture of top view on page 7.)

Note: 1. Master Volume . . . . . Minimum  
 2. Room Temperature . . . . . 18°C ~ 28°C

3. For adjustment, run the unit for more than 3 minutes after the power is switched on.

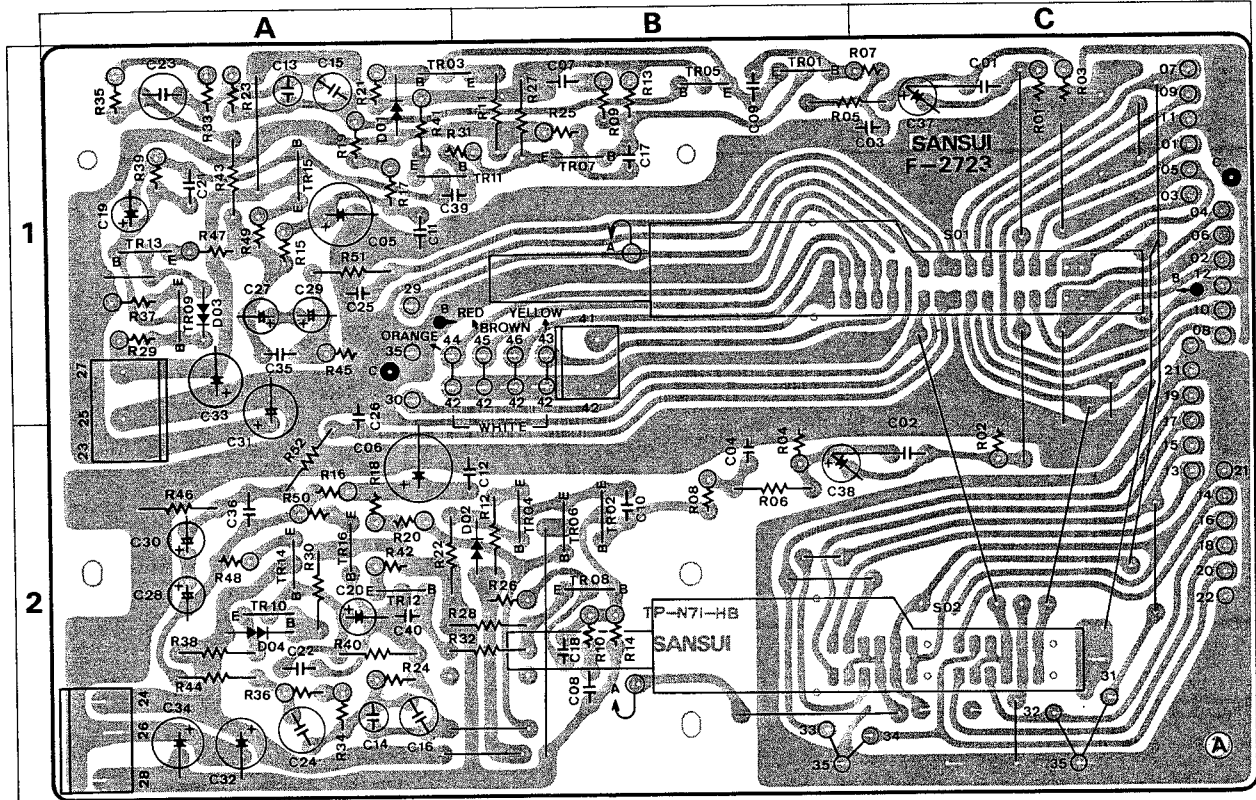
STEP	SUBJECT	EQUIPMENT	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	DC 0V L-CH	DC Volt Meter	Speaker Terminal	F-2721 VR01	DC 0V ±5 mV	○ By turning VR03 counterclockwise, the bias current is decreased gradually.
2.	DC 0V R-CH	Same as above	Same as above	F-2722 VR01	DC 0V ±5 mV	
3.	Bias Current L-CH	Same as above	TP Terminal (+) (-) of F-2721	F-2721 VR03	DC 20 mV ±1 mV	
4.	Bias Current R-CH	Same as above	TP Terminal (+) (-) of F-2722	F-2722 VR03	DC 20 mV ±1 mV	

### 3. 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.

#### 3-1. F-2723 Equalizer Amp Circuit Board (Stock No. 7551381)

Conductor Side



#### Parts List

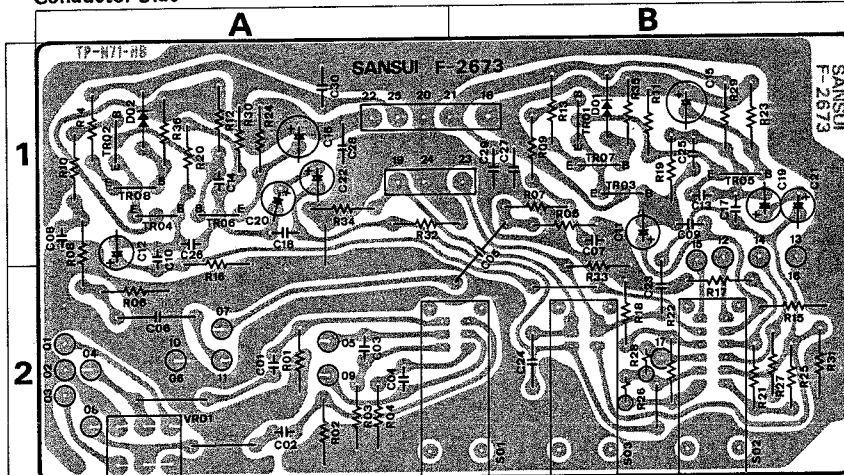
Parts No.	Stock No.	Description	Position
<b>•Transistors</b>			
TR01, 02	0300900, 1	2SA906 G, H	1B.2B
TR03, 04	0300470, 1	2SA726 F, G	1A.2B
TR05, 06	0300900, 1	2SA906 G, H	1B.2B
TR07, 08	0306290, 1	2SC1400 (1) E, U	1B.2B
TR09, 10	0300890, 1	2SA750 (3) E, U	1A.2A
TR11, 12	0306290, 1	2SC1400 (1) E, U	1A.2A
TR13, 14	0306290, 1	2SC1400 (1) E, U	1A.2A
TR15, 16	0300890, 1	2SA750 (3) E, U	1A.2A

Parts No.	Stock No.	Description	Position
<b>•Varistors</b>			
D 01, 02	0340150	MV-12	1A.2B
D 03, 04	0340150	MV-12	1A.2A
C 01, 02	0602109	1.0μF 100V M.C.	1C.2C
C 07, 08	0621121	120pF 50V P.C.	1B.2B
C 13, 14	0620151	150pF 50V P.C.	1A.2A
C 15, 16	0625272	2700pF 50V P.C.	1A.2A
C 23, 24	0625103	10000pF 50V P.C.	1A.2A

Parts No.	Stock No.	Description	Position
R 17, 18	0231561	580Ω 1/2W M.R.	1A.2A
R 23, 24	0231273	27kΩ 1/2W M.R.	1A.2A
R 35, 36	0231304	300kΩ 1/2W M.R.	1A.2A
R 47, 48	0193820	82Ω 1/4W F.R.	1A.2A
R 49, 50	0193820	82Ω 1/4W F.R.	1A.2A
S 01	1190420	Input Selector Switch	1B, C
S 02	1190410	Tape Copy Selector Switch	2B, C

#### 3-2. F-2673 Control Amp Circuit Board (Stock No.7562621)

Conductor Side

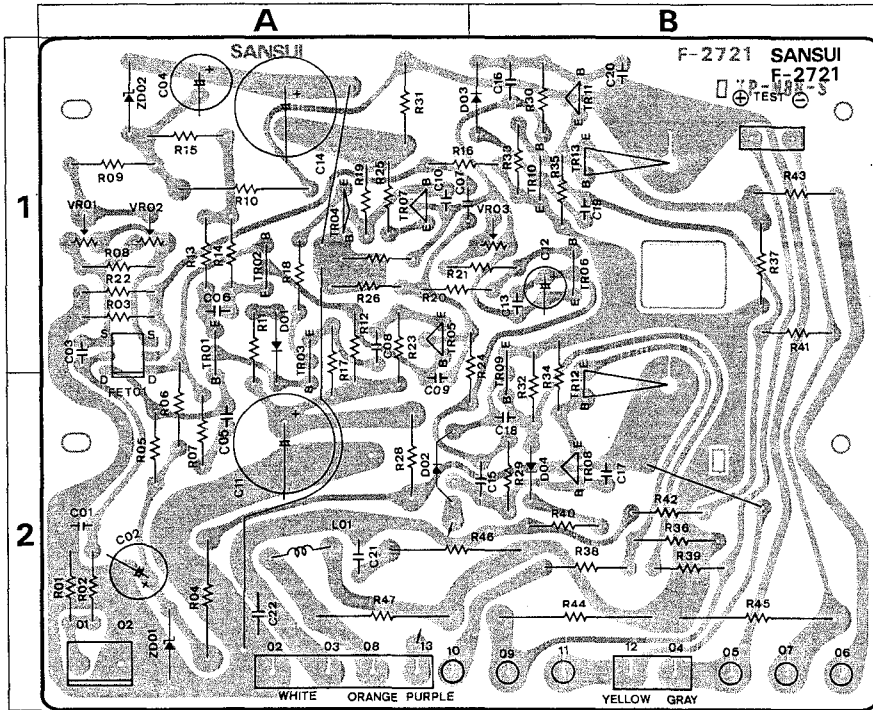


#### Parts List

Parts No.	Stock No.	Description	Position
<b>•Transistors</b>			
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
<b>•Varistor</b>			
D 01, 02	0340150	MV-12	1B.1A
C 01, 02	0620431	430pF 50V P.C.	2A
C 05, 06	0602338	0.33μF 100V M.C.	1B.2A
VR01	1015270, 1	250kΩ (M.N) x 2 Balance VR	2A
S 01	1171120	Loudness Switch	2A, B
S 02	1171150	Tone Defeat Switch	2B
S 03	1171120	Subsonic Filter Switch	2B

3-3. F-2721 L-ch Driver Amp Circuit Board (Stock No. 7572111)

Conductor Side

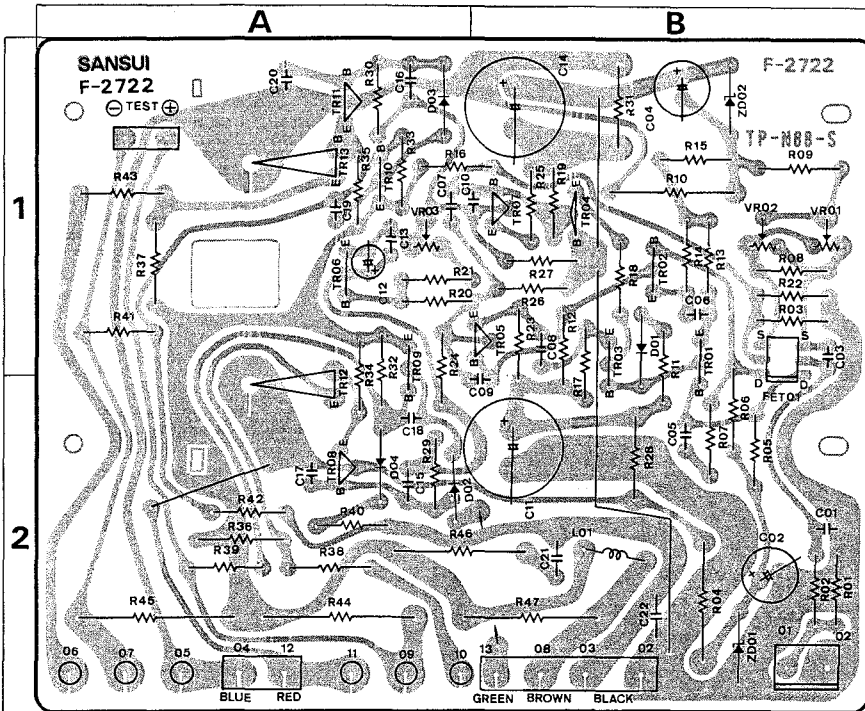


Parts List

Parts No.	Stock No.	Description	Position
●Transistors			
TR01	0306290, 1	2SC1400 (1) E, U	1A
TR02	0306290, 1	2SC1400 (1) E, U	1A
TR03	0300890, 1	2SA750 (3) E, U	1A
TR05	0300791, 2	2SA899 B, V	1A
TR06	0305951, 2	2SC945 O, P	1B
TR07	0306401, 2	2SC1904 B, V	1A, 2B
TR09	0305951, 2	2SC945 O, P	1B, 2B
TR12	0308441 ~ 3	2SD382 M, L, K	1B, 2B
TR13	0303271 ~ 3	2SB537 M, L, K	1B
●FET			
FET01	0370311, 2	2SK129 L, M	1, 2A
●Diode			
D 01, 02	0311160	1S2473D	1A, 2A
D 04	0311160	1S2473D	2B
●Zener Diodes			
ZD01, 02	0316060	EQA01-22R	1A, 2A
C 01	0621101	100pF 50V P.C.	2A
C 05	0620331	330pF 50V P.C.	2A
C 07	0669505	5pF 50V C.C.	1A, B
R 04	0212272	2.7kΩ 2W N.I.R.	2A
R 09	0200392	3.9kΩ 1/2W N.I.R.	1A
R 10	0212272	2.7kΩ 2W N.I.R.	1A
R 17, 19	0210122	1.2kΩ 1/2W N.I.R.	1A
R 23, 25	0191151	150Ω 1/4W F.R.	1A
R 28, 31	0210330	33Ω 1/2W N.I.R.	1A
R 36, 37	0210221	220Ω 1/2W N.I.R.	2B, 1B
R 38, 43	0210479	4.7Ω 1/2W N.I.R.	2B, 1B
R 44, 45	0135338	0.33Ω 5W Ce.R.	2B
R 46	0212100	10Ω 2W N.I.R.	2A, B
R 47	0212229	2.2Ω 2W N.I.R.	2A
L 01	4210290	1.5μH RF Coil	2A
VR01	1033570	100Ω (B) DC 0V Adjust VR	1A
VR03	1035310	1kΩ (B) Bias Current Adjust VR	1B

3-4. F-2722 R-ch Driver Amp Circuit Board (Stock No. 7572121)

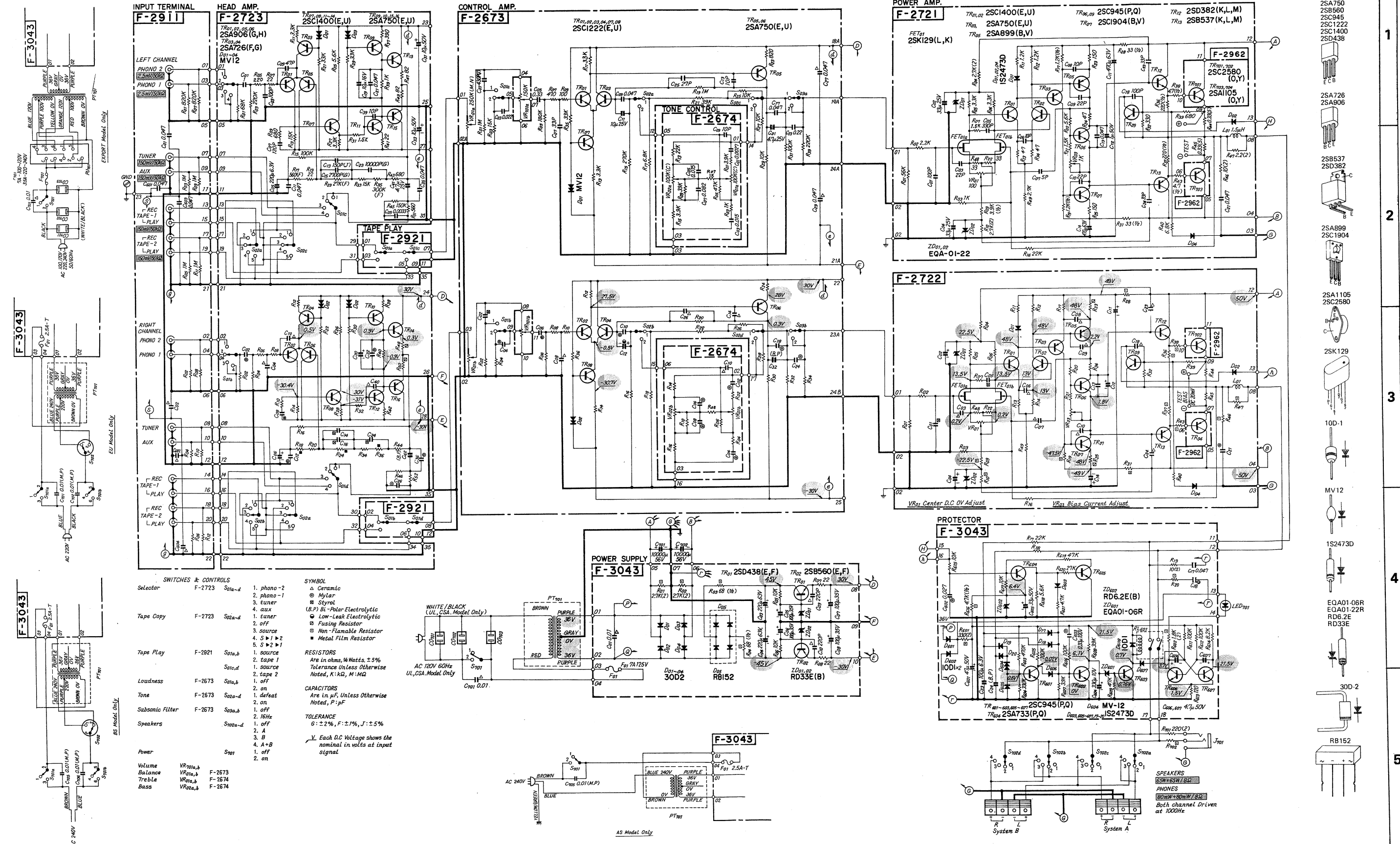
Conductor Side



Parts List

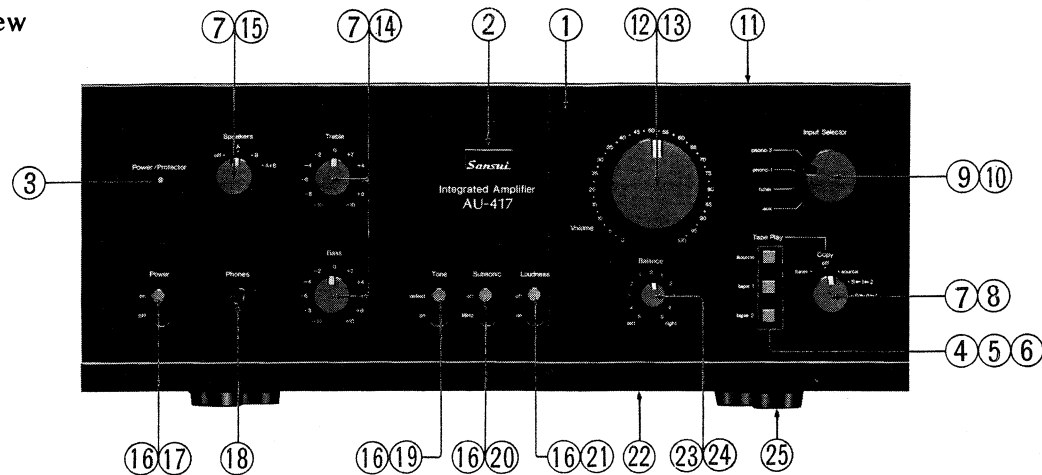
Parts No.	Stock No.	Description	Position
●Transistors			
TR01, 02	0306290, 1	2SC1400 (1) E, U	1B
TR03	0300890, 1	2SA750 (3) E, U	1B
TR05	0300791, 2	2SA899 B, V	1B
TR06	0305951, 2	2SC945 O, P	1A
TR07	0306401, 2	2SC1904 B, V	1B, 2A
TR09	0305951, 2	2SC945 O, P	1A, 2A
TR12	0308441 ~ 3	2SD382 M, L, K	2A
TR13	0303271 ~ 3	2SB537 M, L, K	1A
●FET			
FET01	0370311, 2	2SK129 L, M	1B
●Diodes			
D 01, 02	0311160	1S2473D	1B, 2A
D 04	0311160	1S2473D	2A
●Zener Diodes			
ZD01, 02	0316060	EQA01-22R	2B, 1B
C 01	0621101	100pF 50V P.C.	2B
C 05	0620331	330pF 50V P.C.	2B
C 07	0669505	5pF 50V C.C.	1A
R 04	0212272	2.7kΩ 2W N.I.R.	2B
R 09	0200392	3.9kΩ 1/2W N.I.R.	1B
R 10	0212272	2.7kΩ 2W N.I.R.	1B
R 17, 19	0210122	1.2kΩ 1/2W N.I.R.	1, 2B, 1B
R 23, 25	0191151	150Ω 1/4W F.R.	1B
R 28, 31	0210330	33Ω 1/2W N.I.R.	2B, 1B
R 36, 37	0210221	220Ω 1/2W N.I.R.	2A, 1A
R 38, 43	0210479	4.7Ω 1/2W N.I.R.	2A, 1A
R 44, 45	0135338	0.33Ω 5W Ce.R.	2A
R 46	0212100	10Ω 2W N.I.R.	2A, B
R 47	0212229	2.2Ω 2W N.I.R.	2B
L 01	4210290	1.5μH RF Coil	2B
VR01	1033570	100Ω (B) DC 0V Adjust VR	1B
VR03	1035310	1kΩ (B) Bias Current Adjust VR	1A

4. SCHEMATIC DIAGRAM



### 5. OTHER PARTS

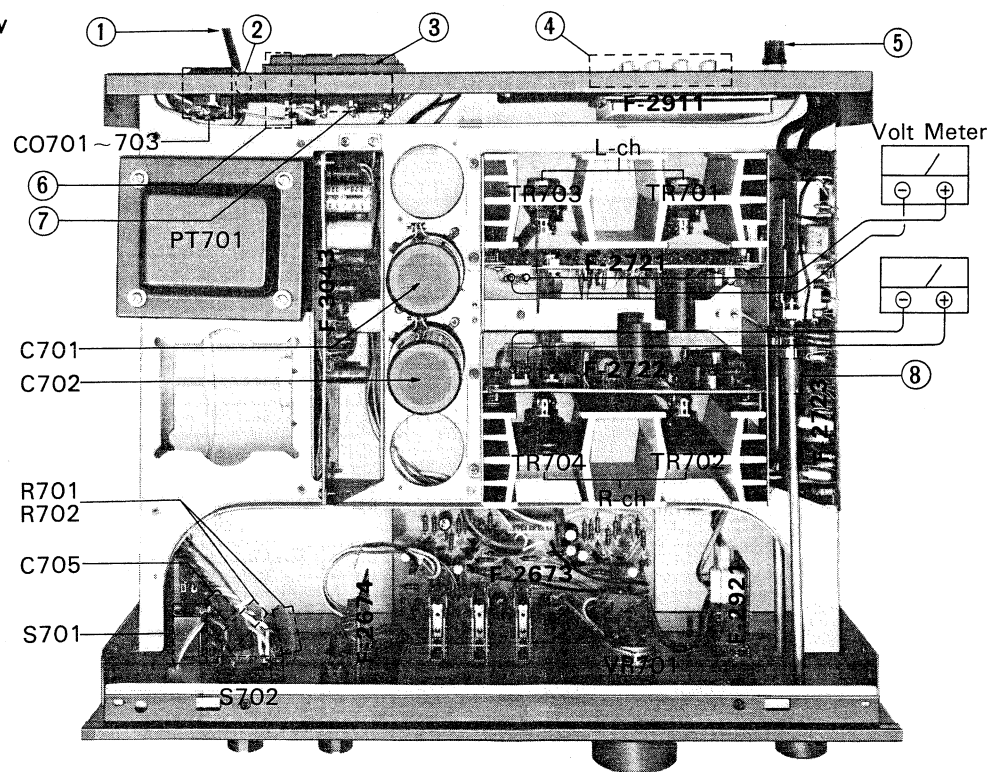
5-1. Front View



Parts List

Parts No.	Stock No.	Description	Parts No.	Stock No.	Description	Parts No.	Stock No.	Description
1	7008270	Front Panel Ass'y	10	1190420	Rotary Switch, Input Selector	19	1171150	Lever Switch, tone
2	5336600	Sansui Badge	11	5006821	Bonnet	20	1171120	Lever Switch, subsonic filter
3	0319120	LED	12	5318910	Knob, Volume	21	1171120	Lever Switch, loudness
4	5326620	Knob, push switch	13	1011180	150kΩ x 2 Volume	22	5059170	Bottom Plate
5	5286721	Knob Guide, Push Switch	14	1015360, 1	100kΩ (C) x 2 Treble, Bass Volume	23	5318940	Knob, balance volume
6	6906480	Spring, push switch	15	1101470, 1	Rotary Switch, speakers	24	1015340, 1	250kΩ (MN) x 2 Balance Volume
7	5318930	Knob, tape copy, speakers, treble, bass	16	5326612	Knob, lever switch	25	5507070	Leg
8	1190410	Rotary Switch, tape copy	17	1171630	Lever Switch, power			
9	5318920	Knob, selector	18	2430290	Head Phone Jack Socket			

5-2. Top View



Parts List

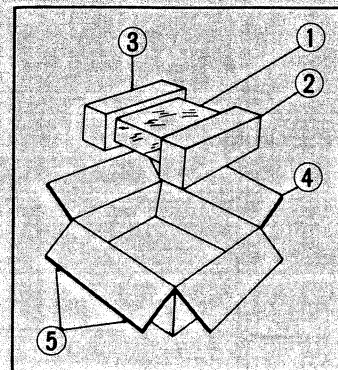
Parts No.	Stock No.	Description	Parts No.	Stock No.	Description	Parts No.	Stock No.	Description
1	3800470	Power Cord	7	2410091	Voltage Selector, plug	R 701, 702	0202221	220Ω 2W N.I.R.
2	3910490	Strain Relief		2410830	Voltage Selector, socket	PT 701	4002900	Power Transformer
3	2290190	Speaker Terminal	8	6046041	Shaft Joint	VR701	1011180, 1	150kΩ x 2 Volume
4	2200620	4P Input Terminal (PHONO-1, 2)	TR 701, 702	0306760, 1	2SC2580NLB C, Y	S 701	1172000	Lever Switch, power
	2200580	4P Input Terminal (TUNER AUX) (TAPE-1, 2)	TR 703, 704	0301110, 1	2SA1105NLB O, Y	S 702	1101470, 1	Rotary Switch, speakers
5	2230190	Ground Terminal	C 701, 702	0559385	10000μF 58V E.C.	CO701~703	2450070	AC Outlet
6	2300060	Power Fuse Holder	C 705	0659801	0.01μF 150V C.C.			

### 6. PACKING LIST

Parts No.	Stock No.	Description
1	9116790	Vinyl Cover
2	9028030	Styrofoam Packing (Right Side)
3	9028021	Styrofoam Packing (Left Side)
4	9001800	Carton Case
5	5996080	Curl Stopper

### 7. ACCESSORY PARTS LIST

Stock No.	Description
9204510	Operating Instructions
9238160	Schematic Diagram
5396720	Rack Mounting Adaptor (each)



### MEMO

**Sansui**

SANSUI ELECTRONICS CORPORATION: 55-11 Queens Blvd. Woodside, N.Y. 11377 U.S.A.  
 333 West Alondra Blvd. Gardena, California 90247 U.S.A.  
 3036 Koapaka St. Honolulu, Hawaii 96819 U.S.A.

SANSUI AUDIO EUROPE N.V.: North Trade Bldg (9th floor) Noorderlaan 133-Bus 1,2030 Antwerp, Belgium  
 SANSUI AUDIO EUROPE S.A.: Arabella center, 6 Frankfurt AM Main, Lyoner Strasse 44-48, West Germany

SANSUI ELECTRIC COMPANY LTD.: 14-1, Izumi 2-chome, Suginamiku, Tokyo 168 Japan PHONE: (03) 323-1111/TELEX:232-2076