

SERVICE MANUAL



MODEL 4VR-5445

FM/AM 4-CHANNEL STEREO RECEIVER

DIMENSIONS : H-5 7/8", W-22 7/8", D-14" WEIGHT : 33 lbs.

SPECIFICATIONS

AUDIO SECTION

Total Dynamic Power : 200W(50W+50W+50W+50W)
IHF 4Ω
136W(34W+34W+34W+34W)
IHF 8Ω
Continuous Power : 132W(33W+33W+33W+33W)
4Ω
104W(26W+26W+26W+26W)
8Ω
Load Impedance : 4~16Ω (IN CASE OF BTL
CONNECTION 8-16Ω)
Harmonic Distortion
at Rated Power : 0.5% at 1kHz
IM Distortion
at Rated Power : 0.8% at 1kHz
Power Band width : 20Hz~30kHz
Frequency Response : 15Hz~50kHz
Channel Separation : 50dB at 1kHz
Input Sensitivity for
Rated Output : Phono 2.5mV
Aux. 100mV
Tape Play 100mV
Equalizer : RIAA
S.E.A. Control Range : ±12dB for Front & Rear Channel
S.E.A. Center Frequency : 40, 250, 1,000, 5,000, 15,000Hz
Signal to Noise Ratio : Phono 65dB
Aux 70dB

Loudness : +10dB at 50Hz
+3dB at 10kHz
Damping Factor : More than 30
FM TUNER SECTION
Tuning Range : 88~108MHz
Usable Sensitivity : 2.0μV
IF Stages : 5 stages
Image Rejection : 60dB
T. H. D. : 0.5% at 1kHz, 100% Mod.
IF Rejection : 90dB
Capture Ratio : 2.0dB
Selectivity : 65dB
Signal to Noise Ratio : 65dB
AM Suppression : 50dB

FM MULTIPLEX SECTION

Separation : Better than 35dB at 1kHz
Distortion : 1% at 1kHz
Carrier Leak : 50dB
SCA Rejection : 50dB

AM TUNER SECTION

Tuning Range : 535~1605kHz
Usable Sensitivity : 30μV
Image Rejection : 45dB
IF Rejection : 50dB
Selectivity : 20dB
Antenna : Built-in Ferrite Core Antenna

CONTROL SECTION

Selector : 4CH AUX 1, 2, Phono, FM AUTO, FM Mono, AM
Master Volume : Front/Rear Channel
Balance : Front/Rear Channel
S.F.C.S. Level Control :
Mode : Mono, 2 Ch Stereo, SFCS 4 Ch, 4 Ch Stereo
S. E. A. : 5 Element Front/Rear Channel
Loudness : 4 Ch (Front/Rear) Push Switch
FM Muting : Push Switch
FM Muting Level Control : Equipped on Rear Panel
Tape Monitor : Front, Rear, A — B
Speaker & Power SW : Power Off, Front, Front + Rear (BTL), Rear, Phones/SPEAKER "OFF"
4 Ch Reverse SW : Equipped (Push Switch)

JACK & TERMINAL

Headphone : 4 Ch Jack (Front/Rear)
Tape Monitor : 4 Ch Jack (Front/Rear)
Tape out & P/B : RCA Pin Jack, 4 Ch & DIN Standard Socket x 2
Phono : 2 Ch
4 Ch Aux-1 : 4 Ch
4 Ch Aux-2 : 4 Ch
FM—DET out : Equipped
Speaker : 4 Ch
Remote Control Jack : Equipped (w/Remote Control SW)
Antenna Terminal : FM (300Ω), FM Int. AM
AC Outlet : Switched x 1, Unswitched x 1

INDICATORS

FM Stereo : Equipped
Tuning Meter : Equipped
Fine Tuning : Equipped w/dial needle's Eye (Bull's Eye)

REMOVAL OF CHASSIS

- 1. Loosen 8 screws ④ from the bottom of the Wooden Case.
- 2. Pull out the chassis in the arrow direction it up slightly with both hands.

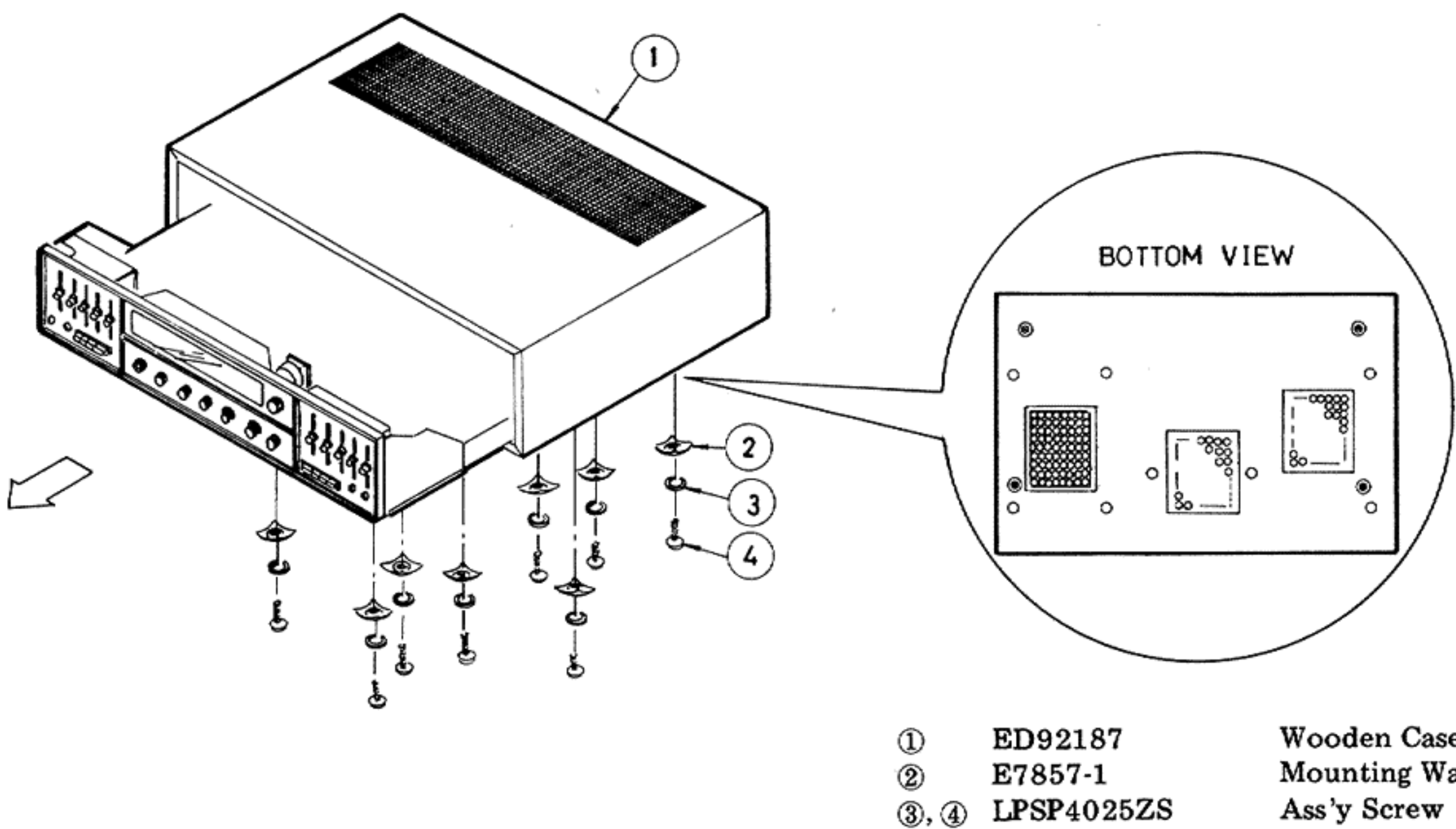


Fig. 1

FINAL PACKING ASS'Y

Parts Name	Parts No.
Packing Ass'y	E38129-123
Envelope	E32332-008
Carton Case	4VR-5445-PK
Packing Materials	4VR-5445-NZ

MAIN PARTS ARRANGEMENT

TOP VIEW

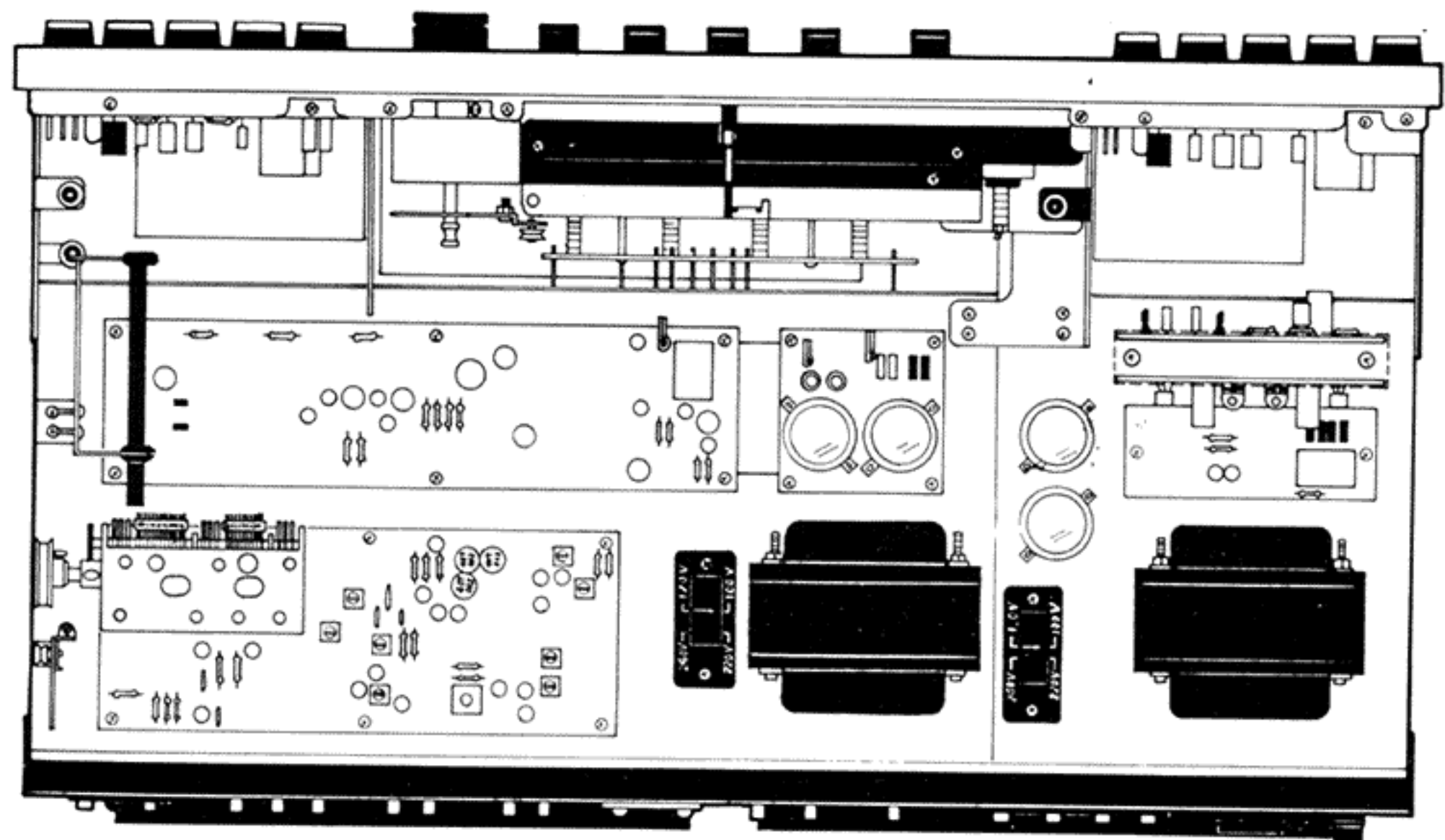


Fig. 2

BOTTOM VIEW

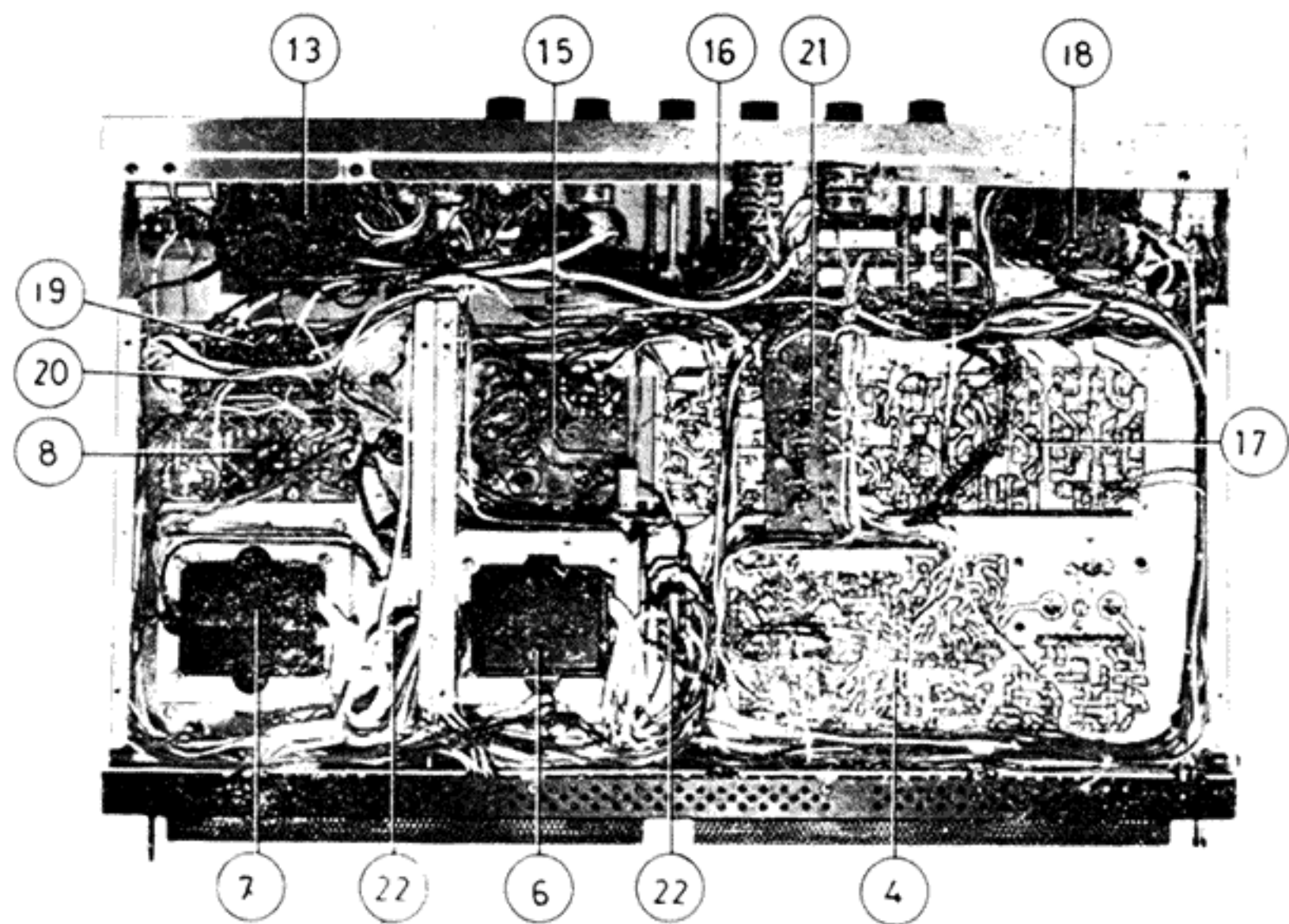


Fig. 3

Dwg. No.	Parts No.	Parts Name	Dwg. No.	Parts No.	Parts Name
1	E03145-006	Bar Antenna Coil Ass'y	14	TAC-147	SEA Circuit Board Ass'y
2	E03324-001S	FM Front End Ass'y	15	TAP-115	Power Supply Circuit Board Ass'y
3	E46061-001S	Tension Control Ass'y	16	TAP-130	Scale Lamp Circuit Board Ass'y
4	TFM-202GUA2	AM FM Tuner Circuit Board Ass'y	17	TAP-114	Pre & Driver Amplifier Circuit Board Ass'y
5	E04085	Volt. Selector Plug	18	TAC-155	Tape Selector Switch Circuit Board Ass'y
6, 7	E03098-22	Power Transformer	19	E03163-114	Circuit Board Socket (for TAP-116)
8	TAC-153	Rear Protector Circuit Board Ass'y	20	E03163-118	Circuit Board Socket (for TAD-80)
9, 10	E03300-001	Electrolytic Capacitor C25, 26	21	TAC-173	Volume & Selector Switch Circuit Board Ass'y
11	TAD-80	Rear Driver Amplifier Circuit Board Ass'y	22	E04084-002	Volt. Selector Socket
12	TAP-116	SFCS-SEA Amplifier Circuit Board Ass'y	23	E46822-001	Circuit Board Holder
13	TAC-154	Loudness Switch Circuit Board Ass'y			

WIRE CONNECTION OF SPEAKER SELECTOR & AC POWER SWITCH

(E03438-001)

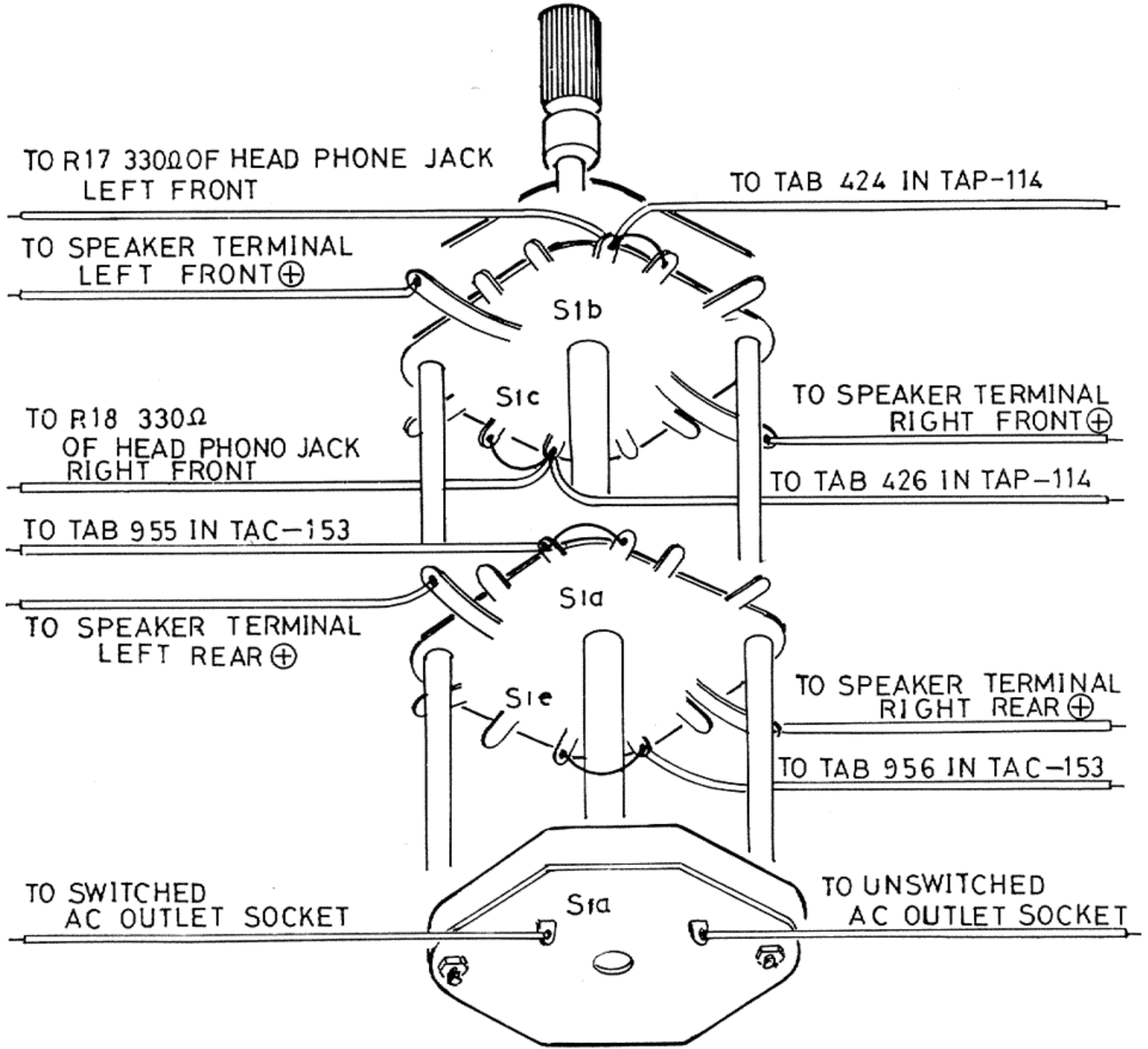


Fig. 4

HOW TO B. T. L. CONNECTION OF SPEAKERS SYSTEM

B. T. L. = Balanced Transformer Less.

- ① Connect the Left speaker between the LEFT FRONT ⊕ and the LEFT REAR ⊕ terminal.
- ② Connect the Right speaker between the RIGHT FRONT ⊕ and the RIGHT REAR ⊕ terminal.
- ③ Don't use common earth between Right and Left speaker system.
- ④ Turn the Speaker Selection in FRONT + REAR (B. T. L.).
- ⑤ Set the B. T. L. Switch to B. T. L. position.

REAR PANEL VIEW

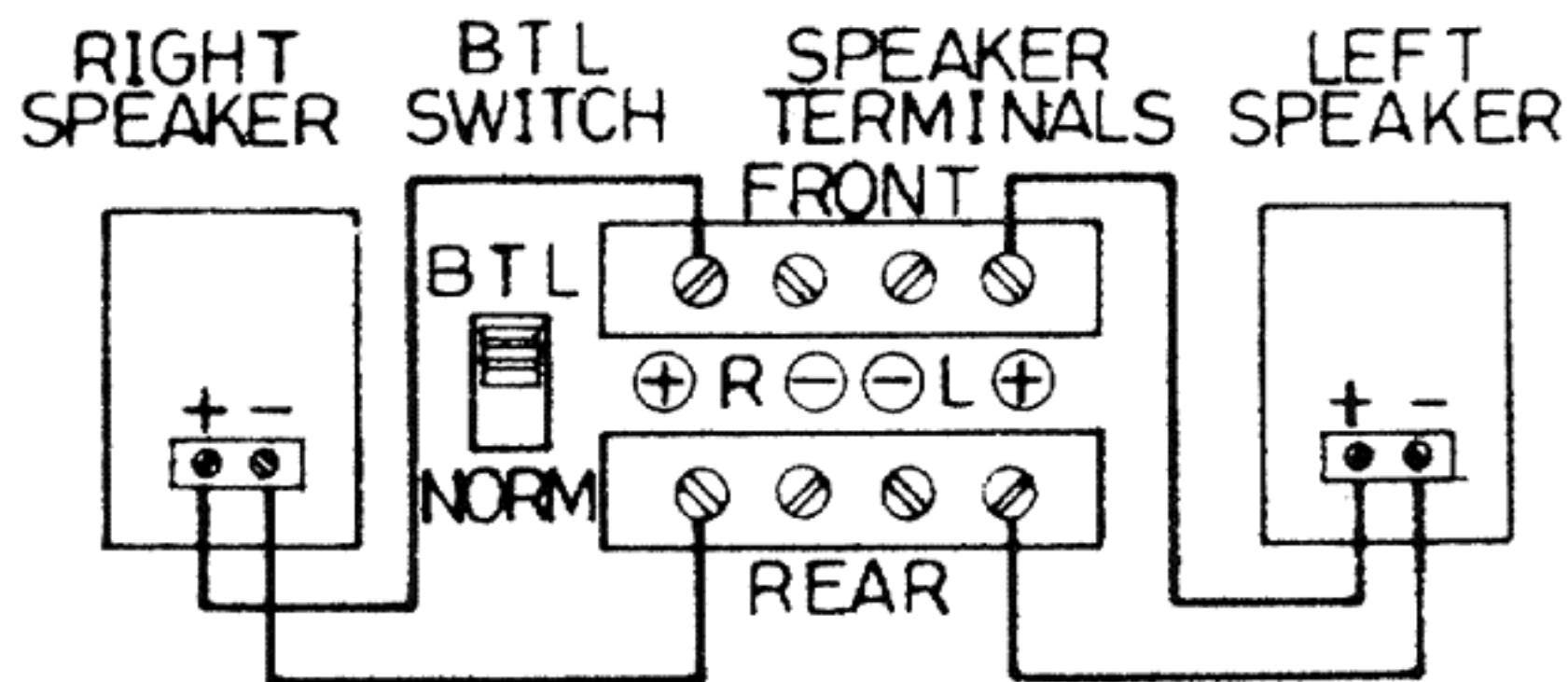


Fig. 5

HOW TO FIT THE DIAL CORD

- ① Set the variable capacitor on maximum capacity.
- ② Dial drum has to be fixed with 2 screws.
- ③ Fit the dial cord in accordance with arrow marks.
- ④ Wind the cord around tuning shaft 3 turns and dial drum 2 turns.
- ⑤ Put the needle to needle rail and than fix the dial cord.

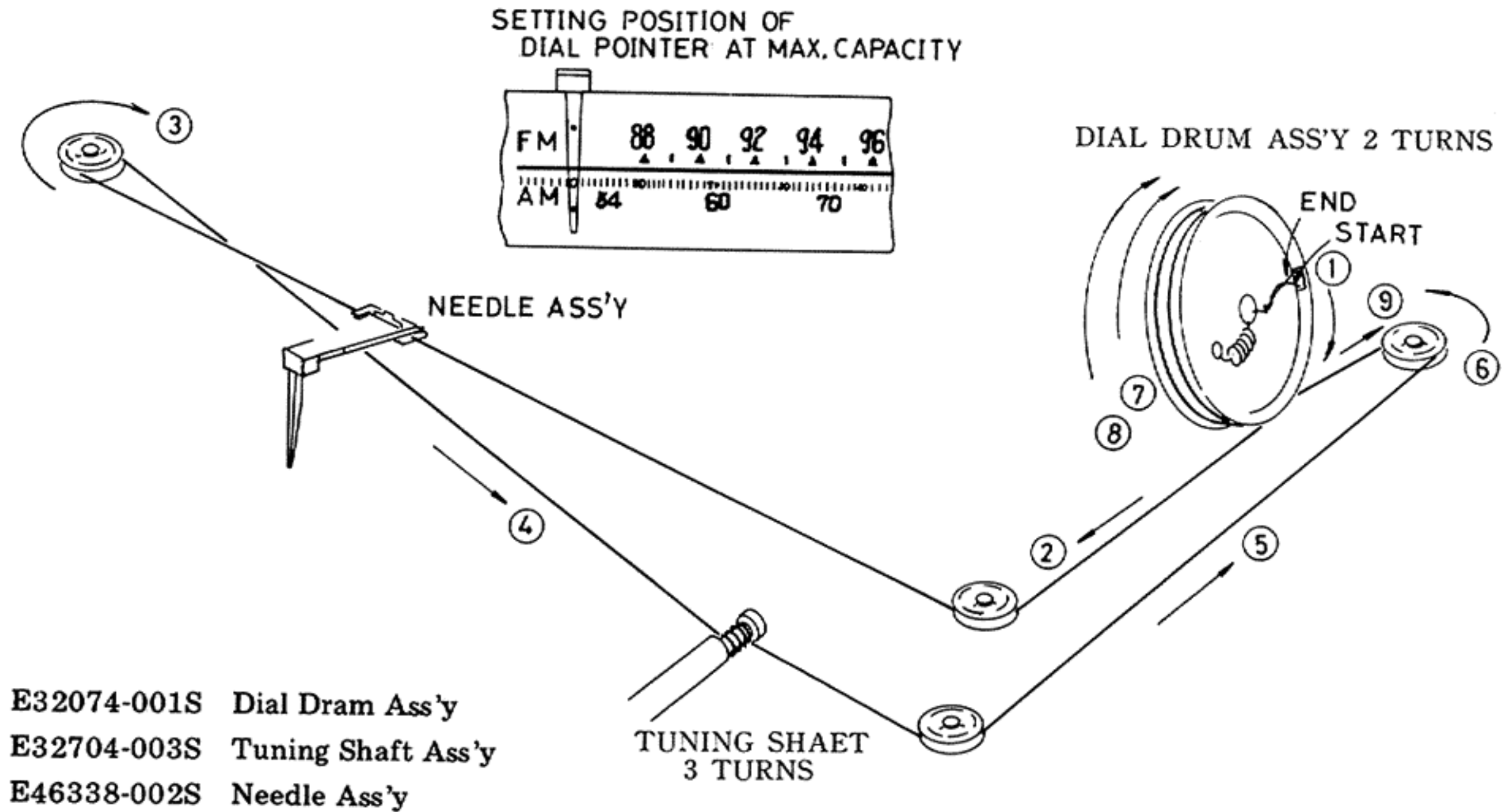
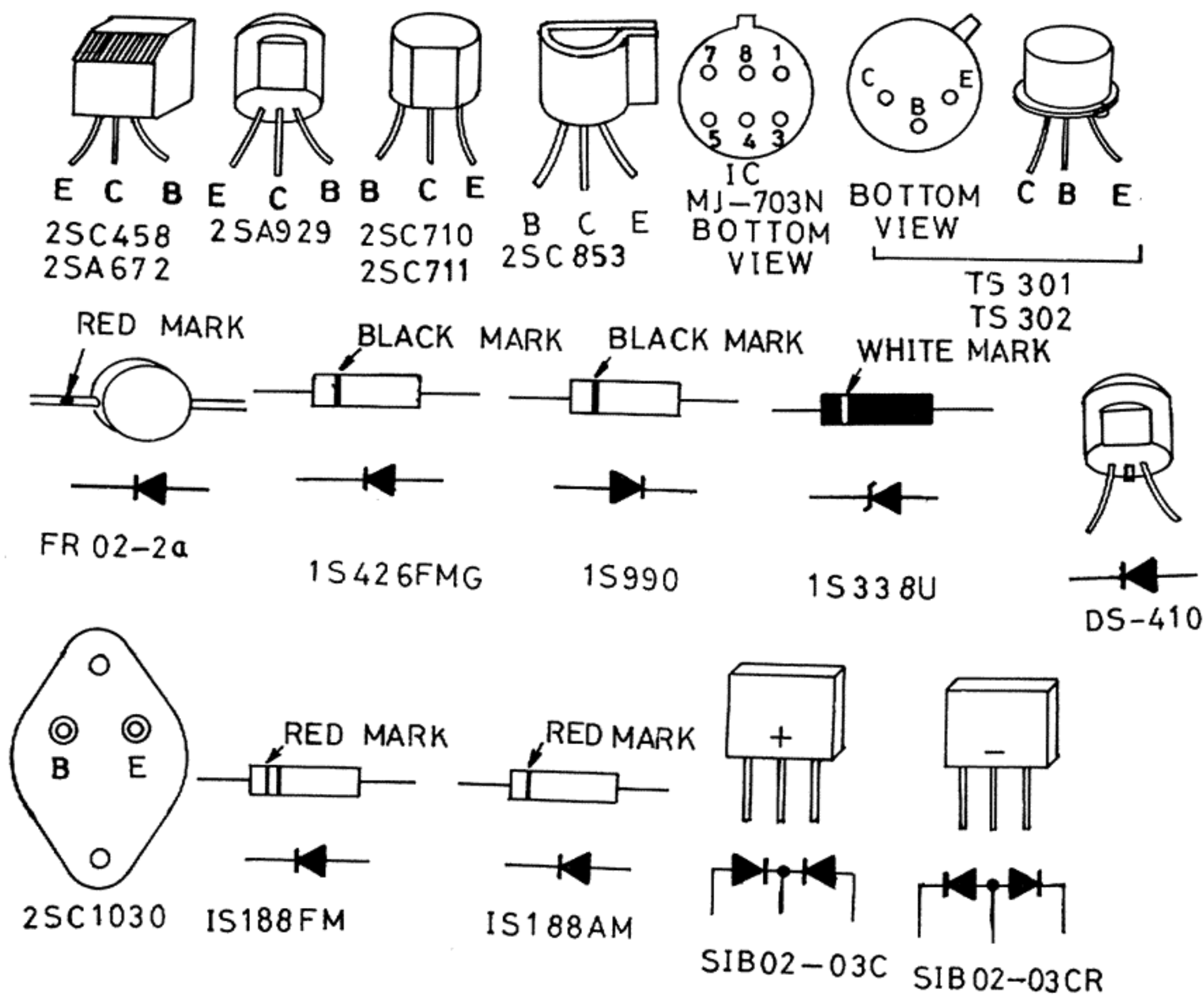


Fig. 6

USED TRANSISTORS, IC & DIODE



ALIGNMENT INSTRUCTION

Maintain line voltage at YOUR LINE voltage. Use only enough generator output to obtain a suitable indication.
Allow 15 minutes warm up for receiver and equipment.

AM ALIGNMENT — Selector in AM Position —

1. AM IF Stage I

Test equipment

- Signal generator : Tune in 455kHz and connect output of S. S. G. to loop antenna (See Fig. 11).
- VTVM : Set to AC low range and connect to speaker terminals on rear panel.
Set volume control at maximum.
Set the tuning gang to minimum position.
- Alignment : Adjust generator output so that the VTVM reading becomes 2V approximately. Adjust T104, T105 for maximum gain.

AM IF Stage II

Test equipment

- Oscilloscope : Connect vertical input of scope to AM out on TFM-202GUA2 Tuner Circuit Board Ass'y.
- Sweep Generator : Adjust generator level and sweep to observe IF response curve. Set generator output as low as possible.
- Marker : Couple Marker output (455kHz, 450kHz, 460kHz) lightly to Sweeper out.
- Adjustment : Repeat alignment T104, T105 until maximum gain and Symmetry are obtained. (See chart below)

AM IF Stage III Using Genescope

Test equipment

- Genescope : Connect output of Genescope to Base of Converter and Vertical input of Genescope to AM out (See chart below).

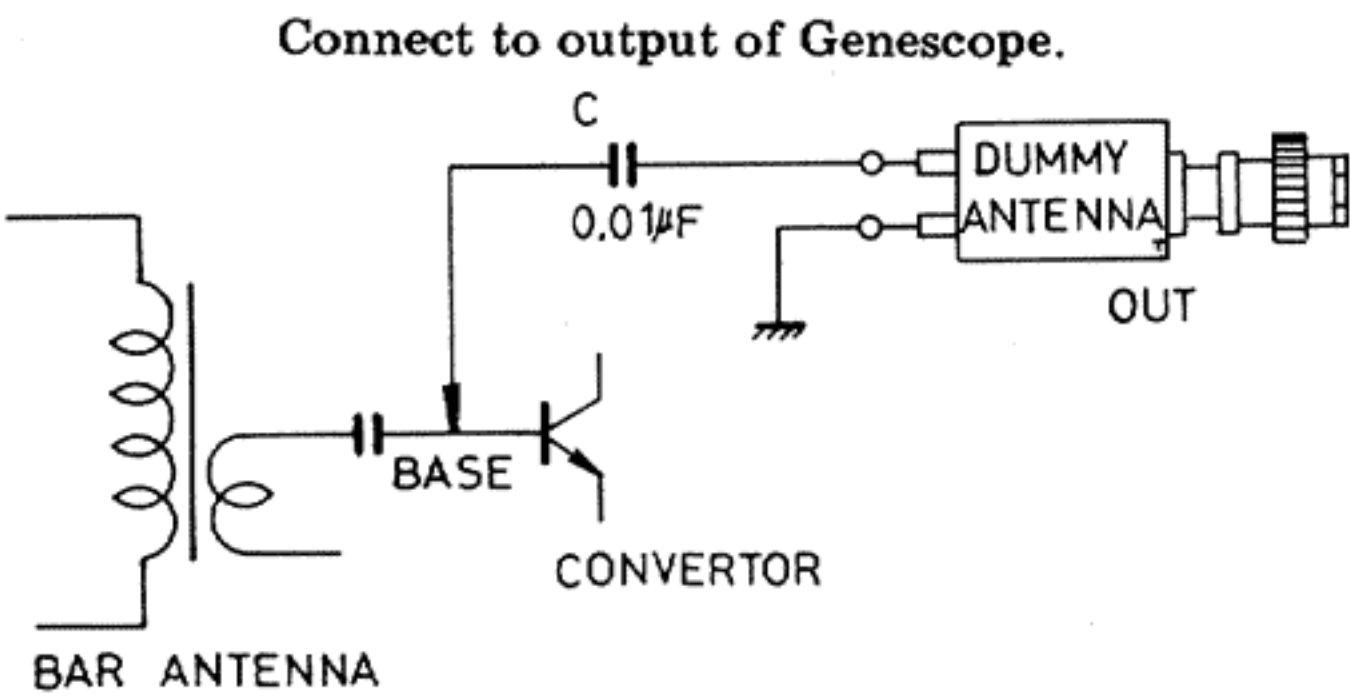


Fig. 8

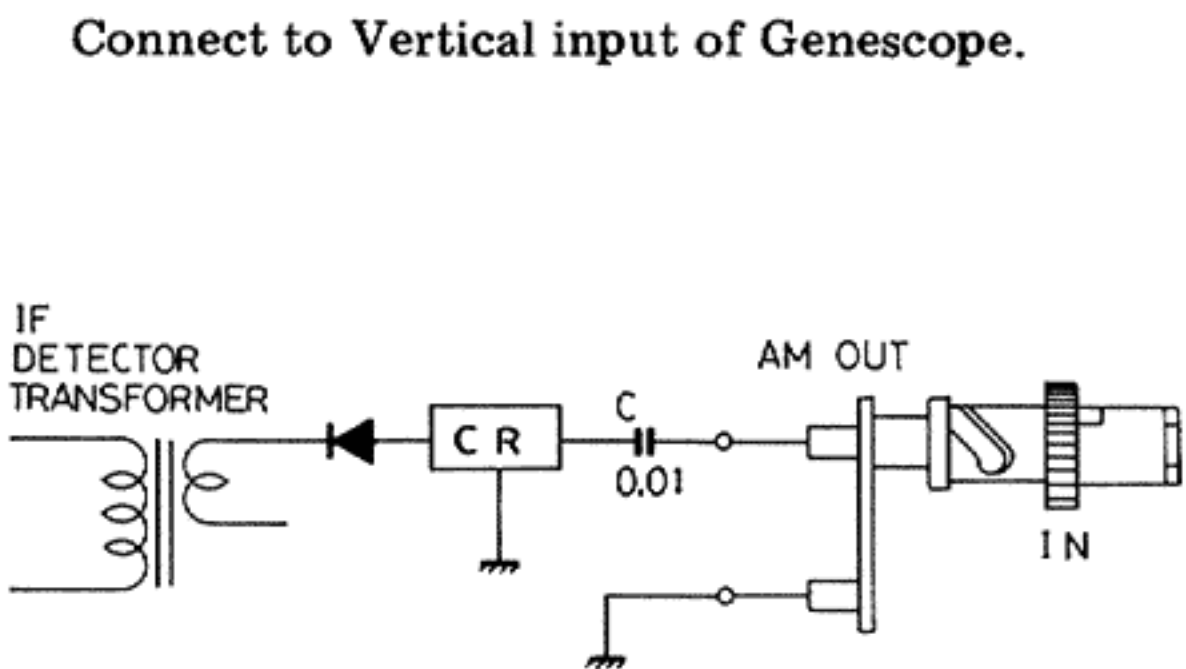


Fig. 9

Adjustment :

Genescope		Adjust	Waveform
Output Level	Input Level		
Vary with amplitude from maximum output to 55dB (0.5mV) approximately.	0.3V/6cm	Repeat alignment T104 and T105 until maximum gain and symmetry are obtained.	

2. RF Stage

Test equipment

Signal generator : To apply generator output, use loop antenna as shown below.
VTVM : Connection (See chart below).

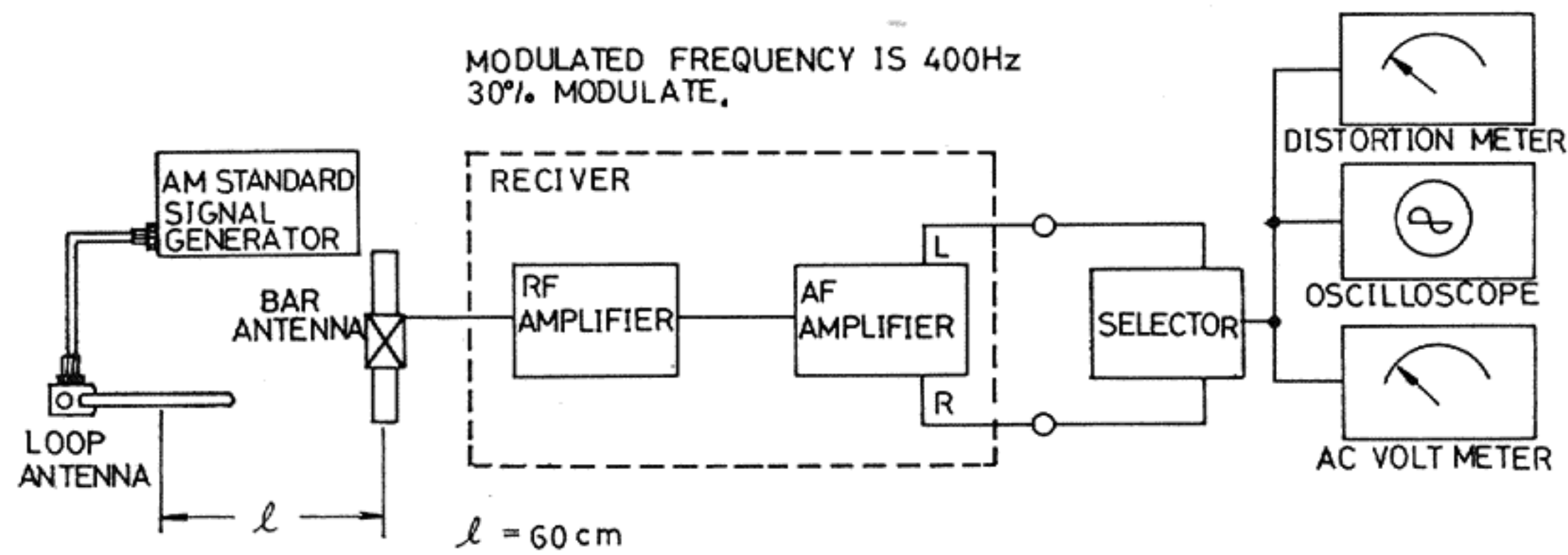


Fig. 11

Alignment :

STEP	GENERATOR	ADJUST	DESCRIPTION
1	600kHz	T107 (Osc. Coil)	} Repeat the step 1~3 for Tuning Dial Scale Correctly
2	1400kHz	TCO (Trimmer)	
3	1000kHz	Check Dial Scale	
4	600kHz	Slide Bar Antenna Coil	{ Adjust for maximum output by moving Coil of Bar Ant. along ferrite core. Adjust for maximum output.
5	1400kHz	TCA (Trimmer)	
Repeat above steps as necessary to obtain maximum sensitivity.			

FM ALIGNMENT

1. IF Stage I

Test equipment

Sweeper : Connect to test point on FM Tuner Ass'y.
Marker : Couple 10.7MHz output lightly to sweeper output.
Oscilloscope : For vertical input connections, See Fig. 12, 13.

FM IF Stage II

Test equipment

Genescope : Connect output of Genescope to Base of top Transistor on IF Stages and Vertical input of Genescope to FM Detect out (See Fig. 12, 13).

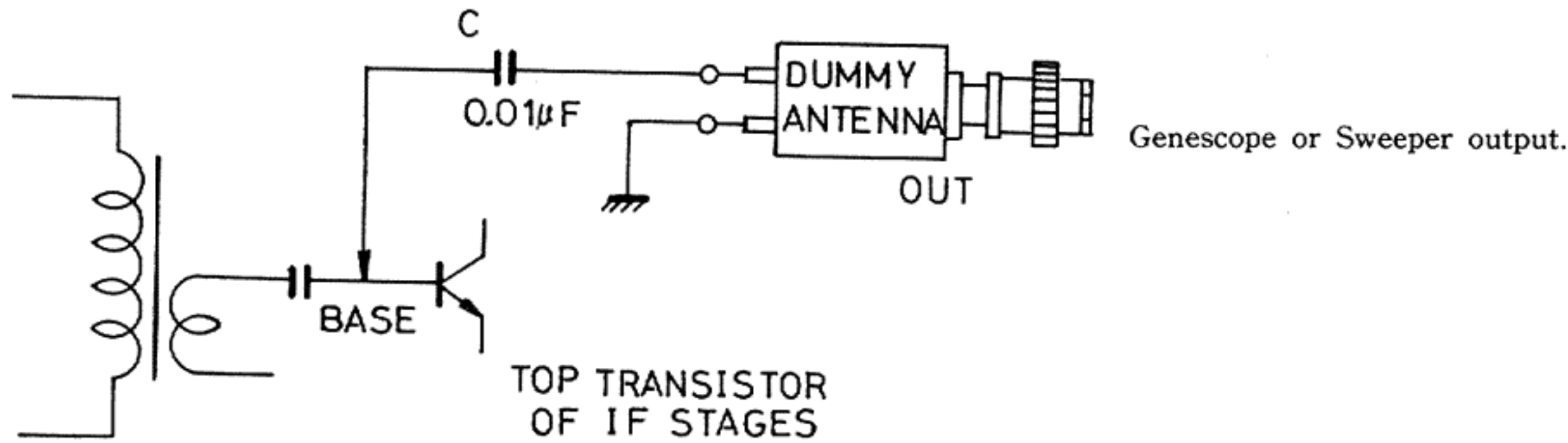


Fig. 12

Alignment :

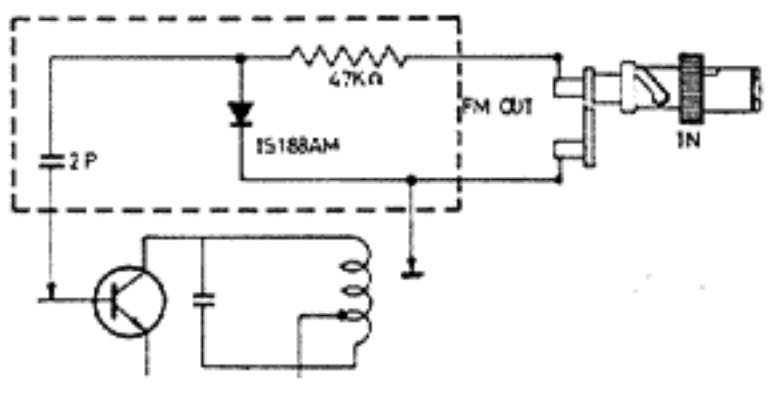
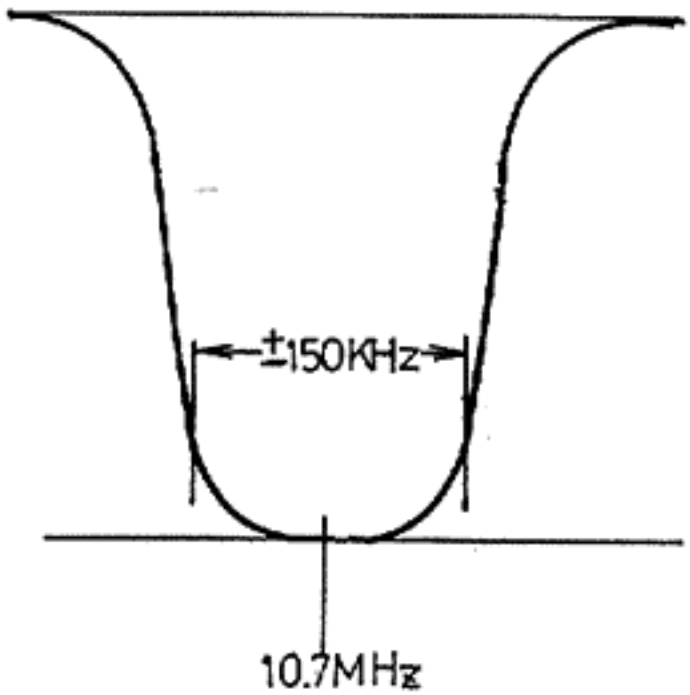
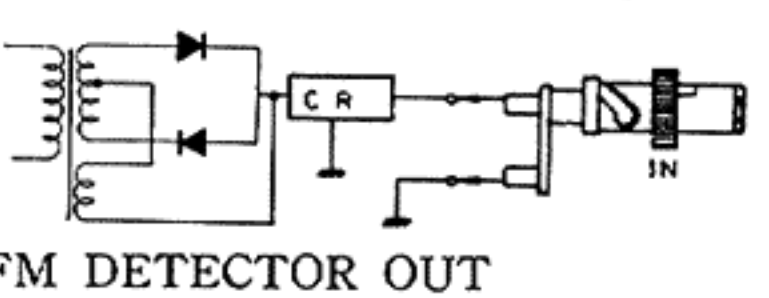
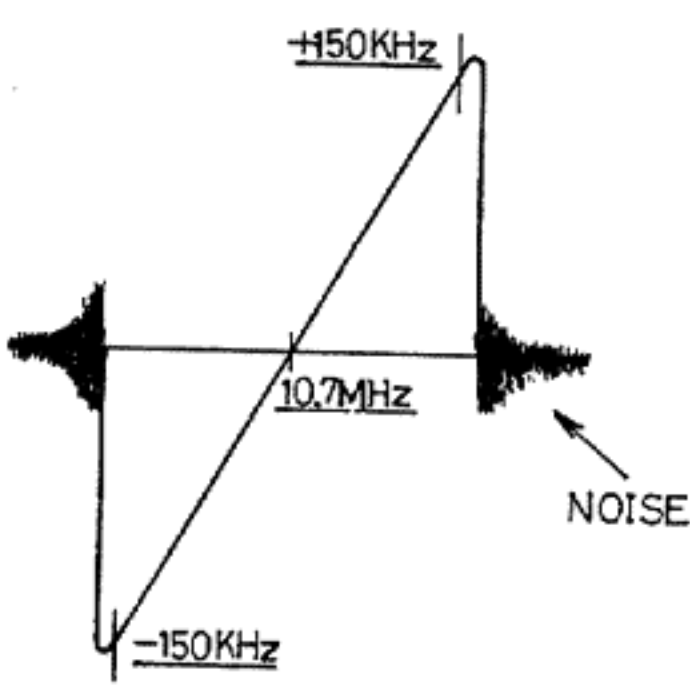
STEP	CONNECT OSCILLOSCOPE	ADJUST	WAVEFORM ON OSCILLOSCOPE	DESCRIPTION
1	Make use of detector 	IF T101	 10.7MHz RESPONSE OF BAND-PASS FREQUENCY CURVE	Repeat alignment IF until maximum gain and symmetly are obtained. IF : See Fig. 14.
2	DETECTOR TRANSFORMER FM OUT  FM DETECTOR OUT	T102	 +150KHz 10.7MHz -150KHz NOISE DETECTED FREQUENCIES CURVE	Adjust generator level and Sweep to observe detector "S" curve. And adjust top core of T102 so that center meter reading of "0" first and Bottom core for max. gain and straightness of clossover line.
3	Repeat the step 1 and 2 until maximum gain and symmetry are obtained.			

Fig. 13

2. RF stage

Test equipment

Signal generator : Connect 300 ohms*balanced output of standard signal generator to FM antenna terminal.
Modulation 400Hz 100%.

VTVM : Set to AC low range and connect to speaker terminal on the rear panel.
Adjust Generator output so that the VTVM reading becomes 2V approximately.

Alignment :

STEP	GENERATOR	ADJUST	DESCRIPTION
1	88.0MHz	LO	Repeat the STEP 1~3 for Tuning Dial Scale Correctly
2	108.0MHz	TCO	
3	98.0MHz	Check Dial Scale	
Next			
4	88.0MHz	LA LR	Repeat the STEP 4~5 for maximum amplitude
5	108.0MHz	TCA TCR	
6	Repeat above steps as necessary to obtain maximum sensitivity.		

Fig. 14

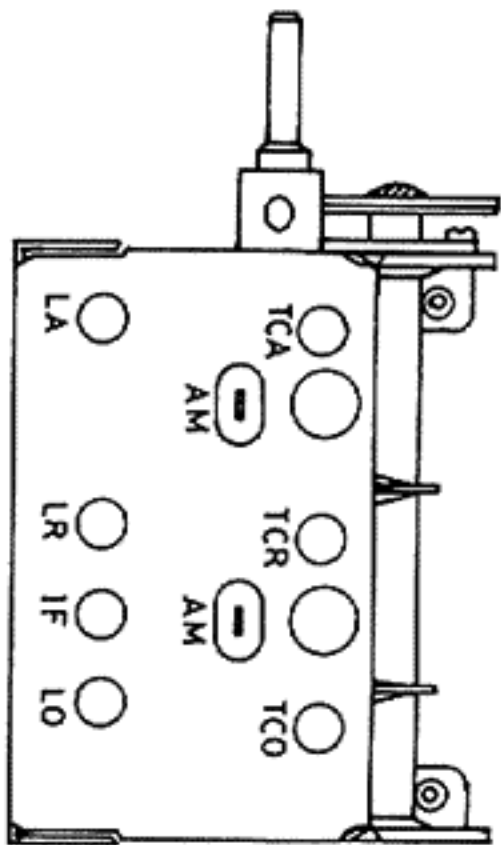


Fig. 14

ADJUSTMENT OF M. P. X. CIRCUIT

Connection of Measurement Instruments

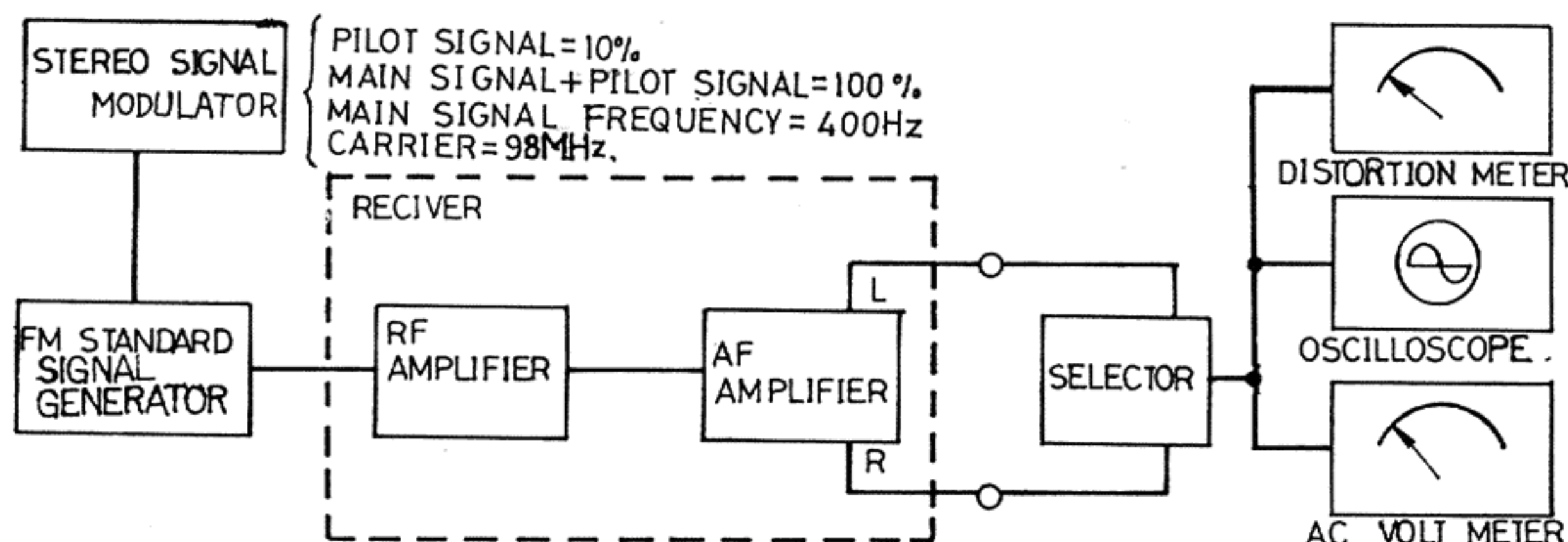


Fig. 15

- Set output carrier level of S. S. G. to 60dB (1mV), carrier frequency is 98MHz.
 - Set the modulation of S. S. G. carrier to 7.5kHz deviation by only PILOT signal of FM stereo modulator.
 - Then set the modulation of S. S. G. carrier to 75kHz deviation (100%) by adjust the output level of FM stereo modulator that are the sum of PILOT and MAIN signal. Modulated frequency of MAIN signal is 400Hz.
 - Set the output signal of FM stereo modulator as PILOT signal 19kHz only.
 - Connect V. T. V. M., oscilloscope &, Distortion meter to Base of Transistor X109.
 - Then adjust T108 for maximum amplitude of wave form 38kHz on oscilloscope is obtained.
 - Set output signal of FM stereo modulator to the sum of PILOT and SUB signal.
 - Connect V. T. V. M., oscilloscope & distortion meter to L out on TFM-202GUA2
 - Then adjust T109 for maximum output volume of M. P. X. circuit is obtained.
- NOTE :
- When set the output signal of FM stereo modulator as L only, V. T, V. M., oscilloscope & distortion meter should be reading at L out only. (R→R only.)
 - Adjust 19kHz coil T108 and 38kHz coil T109 so that minimum distortion are obtained preferably.
- Connect V. T. V. M., oscilloscope & distortion meter to speaker terminal thru. the SELECTOR (See Fig. 15).
 - Set output signal of FM stereo modulator to the sum of PILOT and MAIN signal.
 - Then adjust R176 so that separate R-ch and L-ch output signal completely.

ADJUSTMENT OF T103, TUNING METER AND MUTING SWITCH

NOTE : FM IF alignment should be performed before starting this procedure.

T103

Genescope : Connect output of Genescope to Test point and Vertical input of it to cross T103 secondary winding.
Alignment : Repeat alignment top core of T103 until maximum gain and symmetry (See Fig. 13)

TUNING METER

S. S. G. : Connect 100dB (100mV) output of S. S. G. to 300 ohm balanced antenna terminal.
Alignment : Adjust R192 10K Ω Variable Resistor for tuning meter reading of "9".

MUTING — T103 alignment should be preformed before starting this procedure.—

— Turn the Variable Resistor of Muting Adjust on rear panel to minimum position. —
S. S. G. : Connect 27dB (20 μ V) output of S. S. G. to 300 Ω balanced antenna terminal.
Alignment : Adjust this Variable Resistor for muting "on" after Muting switch pushed "on".

CENTER VOLTAGE TEST

— Speaker Selector in System 1 — Disconnect Speakers. —

Connect DC V. T. V. M. across the Speaker Terminal (System 1). Meter should read 0 volt. ($\pm 150\text{mV}$).

If reading value of meter are not 0 volt. ($\pm 150\text{mV}$), find the cause of trouble and repair it.

Do not connect Speakers to System 1 until the cause of the trouble is found and repaired it.

IDLING CURRENT ADJUSTMENT

Optimum idling current is $15\text{mA} \sim 20\text{mA}$ at approximately. Adjustment is performed as follow.

— Power Switch off — Volume control at minimum position — Disconnect speakers. —

- ① Disconnect the wire that connected the Switch of power Transistor X1 to the tab 413 TAP-114.
- ② Insert an ammeter with shunt wire between the Emitter of Power Transistor X1 and the tab 413 on TAP-114.
- ③ Power Switch on and then disconnect shunt wire from the ammeter.
- ④ The ammeter should read $15\text{mA} \sim 20\text{mA}$.
- ⑤ If the ammeter reading of volume are not $15\text{mA} \sim 20\text{mA}$, adjust ※ IC adj. Variable Resistor R727 for ammeter reading of $15\text{mA} \sim 20\text{mA}$.
- ⑥ Remove the ammeter and restore circuit to normal.
- ⑦ Adjust idling current of other channel using the same method (1~6).

※ IC adj. = Idling current adjustor.

MEASUREMENT INSTRUMENT

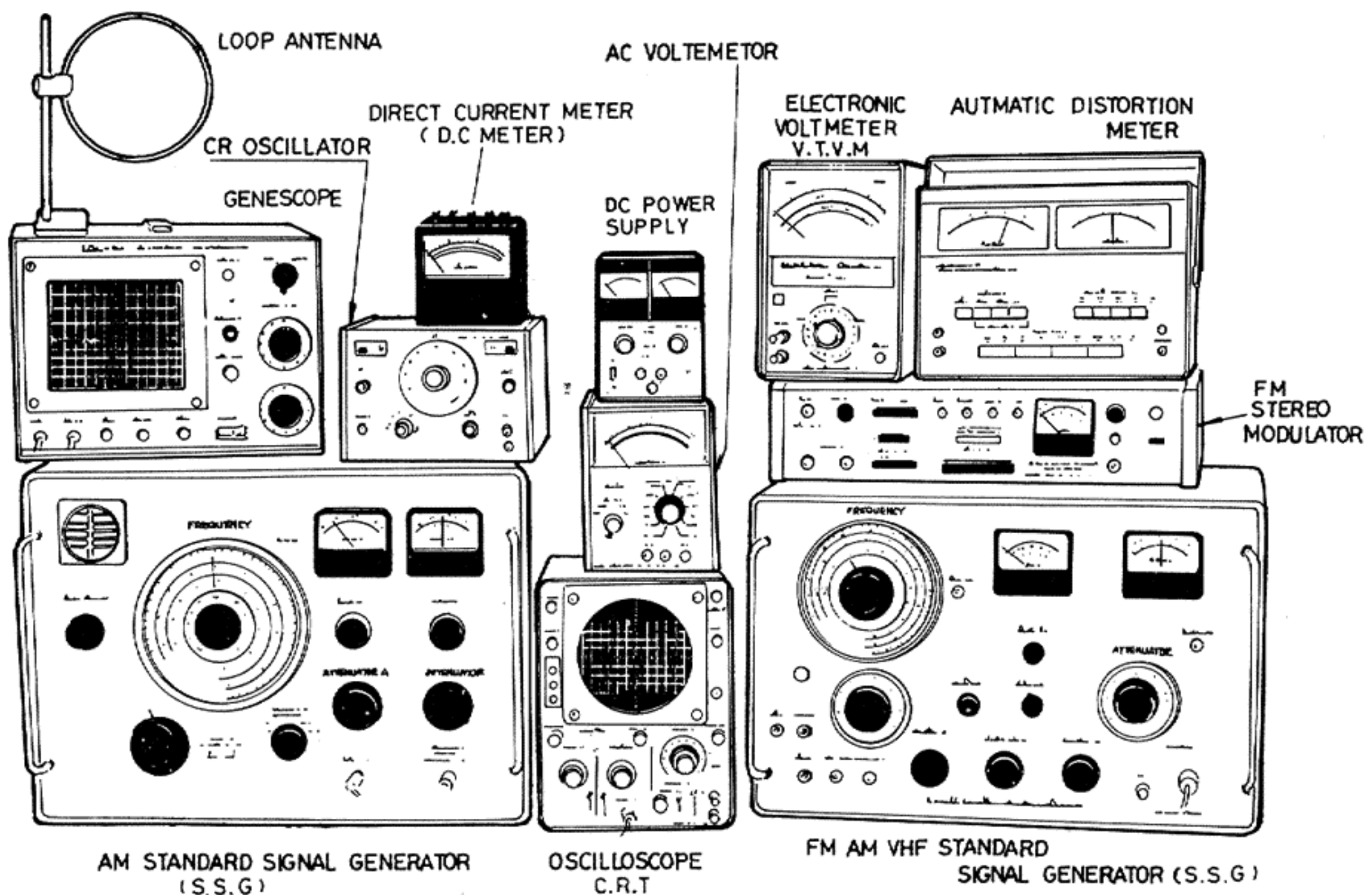


Fig. 16

TAP-115 POWER SUPPLY CIRCUIT BOARD ASS'Y

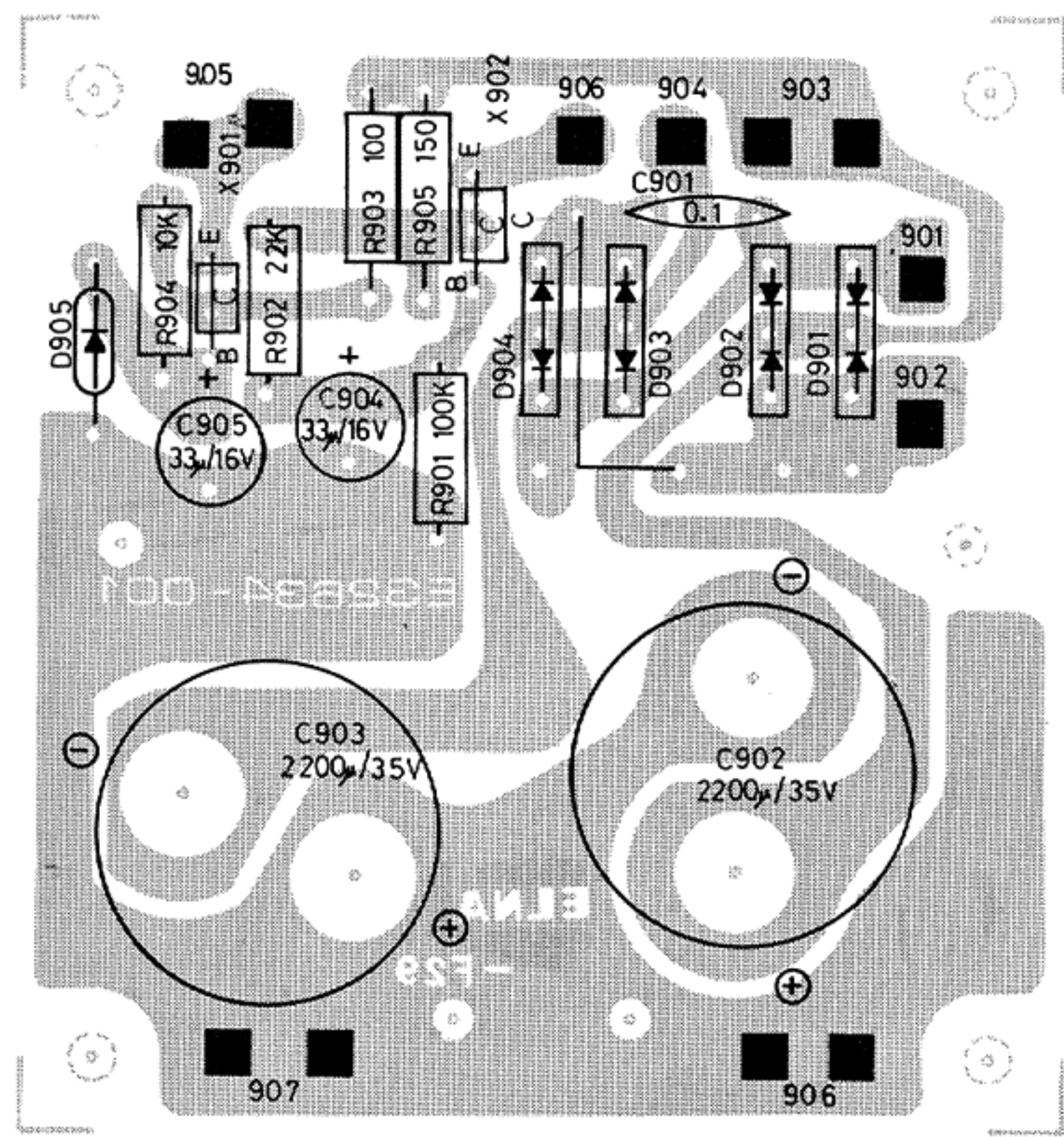


Fig. 17

WIRE CONNECTION

Tab No.	Tab Name	Connection
901	AC IN (20V)	From Secondary 20V line of Power Transformer
902	AC IN (20V)	From Secondary 20V line of Power Transformer
903	+B1	1) To Tab 407 ON TAP-139 2) To Collector of Power Transistor (X1, X2)
904	- B1	To Tab 408 On TAP-139
905	Tuner +B3	1) To Tab 933 ON TAC-175 2) To Common of Select Switch S3e
906	S.E.A., PHONO +B2	To Tab 308 ON TAP-139
907	EARTH	1) From Secondary 6.8V line of Power Transformer 2) From Secondary 0V line of Power Transformer
908	EARTH	1) From Speaker Terminals 2) To Tuning Meter Lamp

THE LIST OF MAIN PARTS FOR REPLECEMENT

Dwg. No.	Parts No.	Parts Name	Description
1	TAP-115	Circuit Board Ass'y	
2	Q03108-30	Electrolytic Capacitor	(33µ/16V) C905
3	Q03110-30	" "	(33µ/25V) C904
4	E03300-001	" "	(2200µ/35V) C902, 903
5	Q42309-01	Ceramic Capacitor	C901
6	E0771-6	Z. Diode	(1S338U) D905
7	E03155-001	Si Diode	(S1B02-03C) D901, 902
8	E03155-002	"	(S1B02-03CR) D903, 904
9	2SC509	Si Transistor	X901, 902

THE LIST OF FRONT MECHANICAL PARTS FOR REPLACEMENT

Dwg. No.	Parts No.	Parts Name	Description
1	E46604-001	Slide Knob	(Balance)
2	E03423-001	Push Switch Knob	
3	E46607-001	Knob	
4	E46824-001	Double Knob	
5	E46826-001	"	
6	E46605-001S	Tuning Knob	(Volume)
7	E46825-001	Double Knob	
8	E46642-001	Balance Remote Cap Ass'y	
9	E32780-003	Window Screen	
10	E1589-004	Front Panel Ass'y	
11	SHSA3008C	Front Panel Fixing Screw	for JVC
12	E46820-001	Balance Remote Cover	
13	E03380-001	8P Plug	
14	E46819-001	Balance Remote Holder	
15	E32773-001	Dial Scale	
16	E32772-001	Color Screen	(For Tape Monitor)
17	WAS10000	Lock Washer	
18	E1587-002	Front Bracket Ass'y	
19	E45105-001	Mini Screen	
20	E32776-002	Slide Volume Holder	
21	E32783-001	Dial Bracket	(Right)
22	E32827-001	Shield Plate	
23	Q03963-001	Jack Ass'y	
24	E32775-002	Slide Volume Holder	
25	TAC-147	S. E. A Circuit Board Ass'y	
25A	E03397-001S	Slide Variable Resistor	(Select)
26	TAC-155	Tape Select Switch Circuit Board Ass'y	
27	E32704-003S	Tuning Shaft Ass'y	
28	SSSP3005NS	Screw	
29	E32771-001	Volume Bracket	
30	QSR5286-202	Ratary Switch	(Balance)
31	E03441-001	Variable Resistor	
32	E03433-001	"	
33	E03441-003	"	
34	E03438-001	Rotary Switch	
35	E46838-002	Needle Ass'y	(Mastor Volume)
36	E03174-003	Tuning Meter	
37	E46821-001	Meter Holder	
38	Q03110-A	Lamp Socket	
39	E32154-001	Reflector	
40	TAP-130	Scale Lamp Circuit Board Ass'y	SFCS Control
40A	SBSB3020N	Tapping Screw	
41	Q04967-9	Pilot Lamp 8V 0.3A	
42	50689	Lamp Socket	
43	TAC-173	Volume & Select Switch Circuit Board Ass'y	
44	E32774-001	Shield Plate	(For fixing Dial Scale)
45	Q04962-005	Mini Lamp 6V 35mA	
46	53243-4	Rubber Bushing	
47	E44942-001S	Lamp Holder	
48	TAC-154	Loudness Switch Circuit Board Ass'y	

EXPLODED VIEW OF FRONT MECHANICAL PARTS

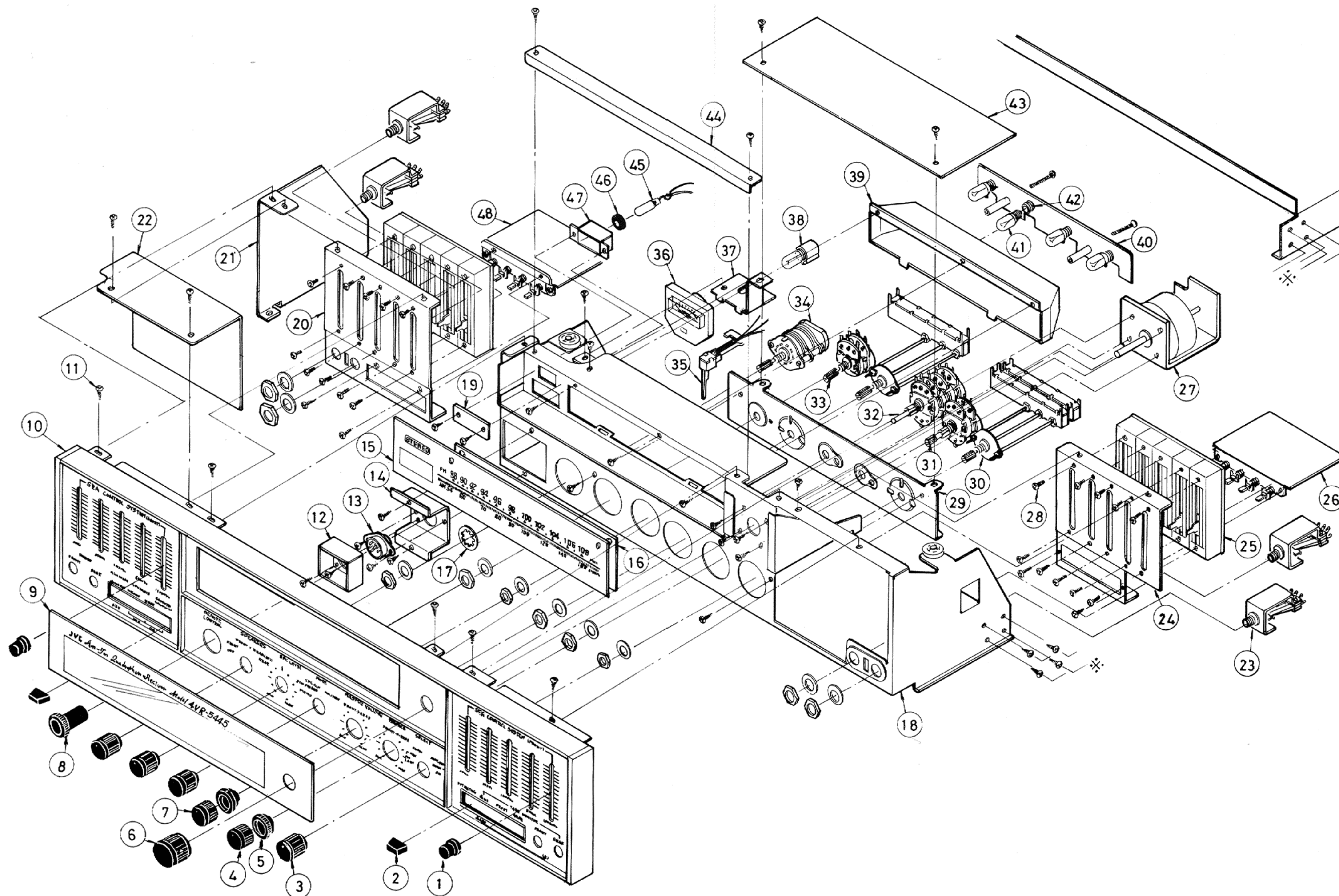


Fig. 18

EXPLODED VIEW OF REAR PANEL PARTS

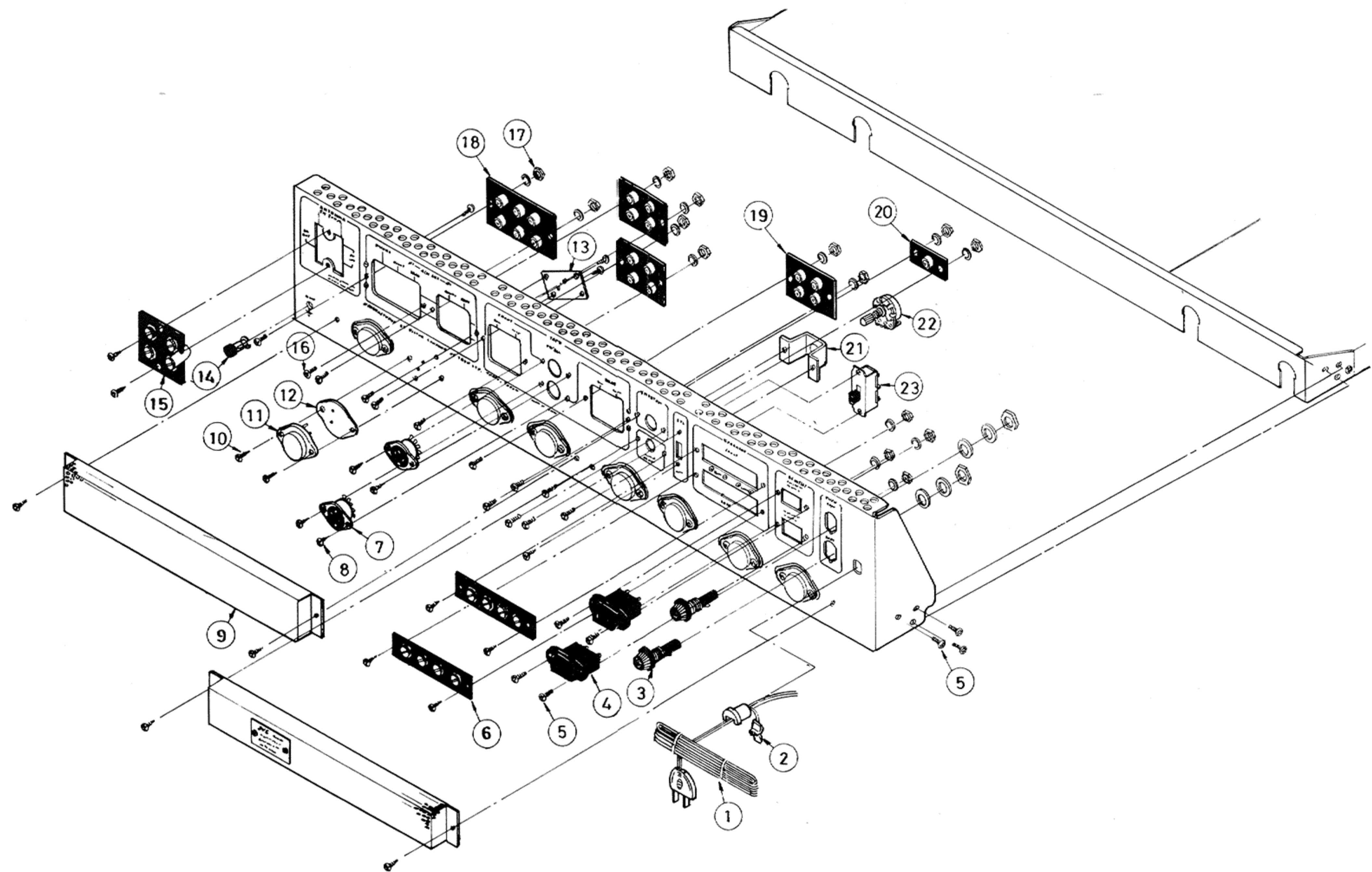


Fig. 19

THE LIST OF REAR PANEL PARTS FOR REPLECEMENT

Dwg. No.	Parts No.	Parts Name	Description
1	Q03056-14	Power Cord With Plug	(UL)
2	E31704-001	Cord Stopper	(UL)
3	Q30210-001	Fuse Socket Ass'y	
4	Q30120-001	AC Socket	(UL)
5	SBSB3010M	Tapping Screw	
6	Q30156-002	Terminal Board Ass'y	Speaker
7	Q03967	DIN Socket Ass'y	
8	SBSB30008N	Tapping Screw	
9	E32441-001	Cover	
10	SPBP3012NS	Screw	
11	2SC1030	Power Transistor	
12	E41542-8	Insulator	

Dwg. No.	Parts No.	Parts Name	Description
13	E04086S	Transistor Socket	
14	E04069S	Push Terminal	Earth
15	Q30156-006	Terminal Board Ass'y	Antenna
16	SPSP3010MS	Screw	
17	NNZ3000ZS	Nut	
18	E03043-60	Pin Jack Ass'y	Phono Aux
19	E03043-40	"	Tape
20	E03043-10	"	FM Out
21	E46602-001	Variable Resistor	Bracket
22	E03415-001	"	50K (B) R21
23	Q03749-2	Slide Switch	BTL-Normal

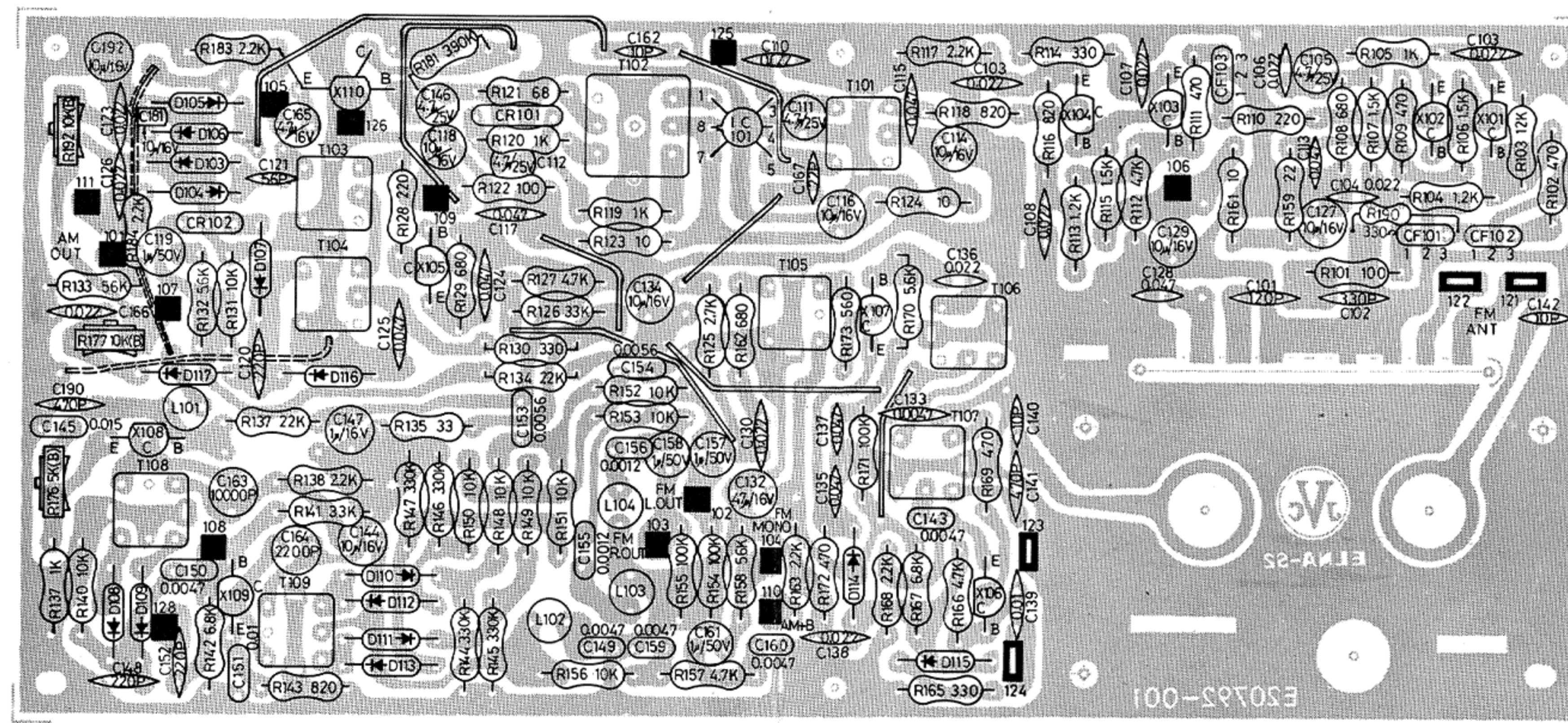


Fig. 20

WIRE CONNECTIPN

Tab No.	Name	Connection
101	AM OUT	to Tab AM IN on TAC-173
102	FM L OUT	to Tab FM L IN on TAC-173
103	FM R OUT	to Tab FM R IN on TAC-173
104	FM MONO OUT	to Tab FM MONO IN on TAC-173
105	FM DET OUT	to Pin Jack Ass'y of FM DET OUT on Rear Panel
106	FM +B3	to Tab FM +B on TAC-173
107	TUNING METER	to Tuning Meter
108	FM STEREO MUTING	to Tab 931 on TAC-175
109	+B3	to Tab 905 on TAP-115
110	AM +B3	to Tab AM +B on TAC-173
111	MUTING DET. OUT	to Muting Adjust Variable Resistor on Rear Panel
121	FM ANT	to FM ANTENNA Terminal on Rear Panel
122	FM ANT	" "
123	EARTH	to Black Wire from Bar Antenna
124	AM IN	to Yellow Wire from Bar Antenna
125	FM MUTING	to Tab 933 on TAC-175
126	EARTH	" "
128	FM STEREO RADAR	to Tab 926 on TAC-175

TFM-202GUA2 THE LIST OF MAIN PARTS FOR REPLECEMENT

Dwg. No.	Parts No.	Parts Name	Description
1	TFM-202GUA2	Circuit Board Ass'y	
2	Q03108-5	Electrolytic Capacitor	(4.7 μ /16V) C165
3	Q03108-10	"	(10 μ /16V) C114,116,118,127,129,134, 144, 147, 181
4	Q03108-50	"	(47 μ /16V) C132
5	Q03110-4.7	"	(4.7 μ /25V) C105,111,112,146
6	Q03112-1	"	(1 μ /50V) C119,157,158,161
7	Q03244-122	Mylar Capacitor	C155,156
8	Q03244-222	"	C191
9	Q03244-472	"	C143,149,150,159,160
10	Q03244-562	"	C153,154
11	Q03244-103	"	C151
12	Q03244-153	"	C145

Dwg. No.	Parts No.	Parts Name	Description
13	Q04051-10	Ceramic Capacitor	C140,142,162
14	Q04051-22	"	C167
15	Q04051-56	"	C121
16	Q04051-120	"	C101
17	Q04051-220	"	C120,148,152
18	Q04051-330	"	C102
19	Q04051-470	"	C141,190
20	E03375-047	"	C113,115,117,124,125,128,133,135,137
21	Q046962-01(A)	"	C139
22	Q46962-02(A)	"	C103,104,106~110,123,126,130,136, 138, 166
23	E0752-11	C.R Block	CR-101 (FM DET)
24	E0752-9	"	CR-102 (AM DET)
25	Q03269-222	Polystirol Capacitor	C164
26	Q03269-103	"	C163
27	E03078-28	IF Transformer	T101 (FM)
28	E03134-016	"	T102 (FM DET)
29	E03078-29	"	T103 (FM MUTING)
30	E03079-17	AM OSC Coil	T107 (AM)
31	E03062-26	IF Transformer	T106 (AM)
32	E03062-30	"	T105 (AM)
33	E03062-23	"	T104 (AM)
34	E03357-001	Ceramic Filter	CF101~103
35	E03117-012	MPX Coil	T108,109
36	E03404-002	SCA Filter	L101
37	E03407-002	Choke Coil	L102~104
38	Q04846-5	Variable Resistor	10K(B) R177,192
39	Q04845-3	"	5K(B) R176
40	1S188AM	Ge Diode	D107,116,117
41	1S188FM	"	D103~106,108,109
42	1S426GFM	"	D110~113
43	1S990	Si Diode	D114,115
44	NJ703N	IC	IC101
45	2SC710B	Si Transistor	X101~105, 107
46	2SC711E	"	X108~110
47	2SC929E	"	X106
48	E03145-006	Bar Ant Coil Ass'y	(AM)
49	E03324-001S	FM Front End Ass'y	

TAC-175 FM MUTING, STEREO RADAR AND BULL'S EYE CIRCUIT BOARD ASS'Y

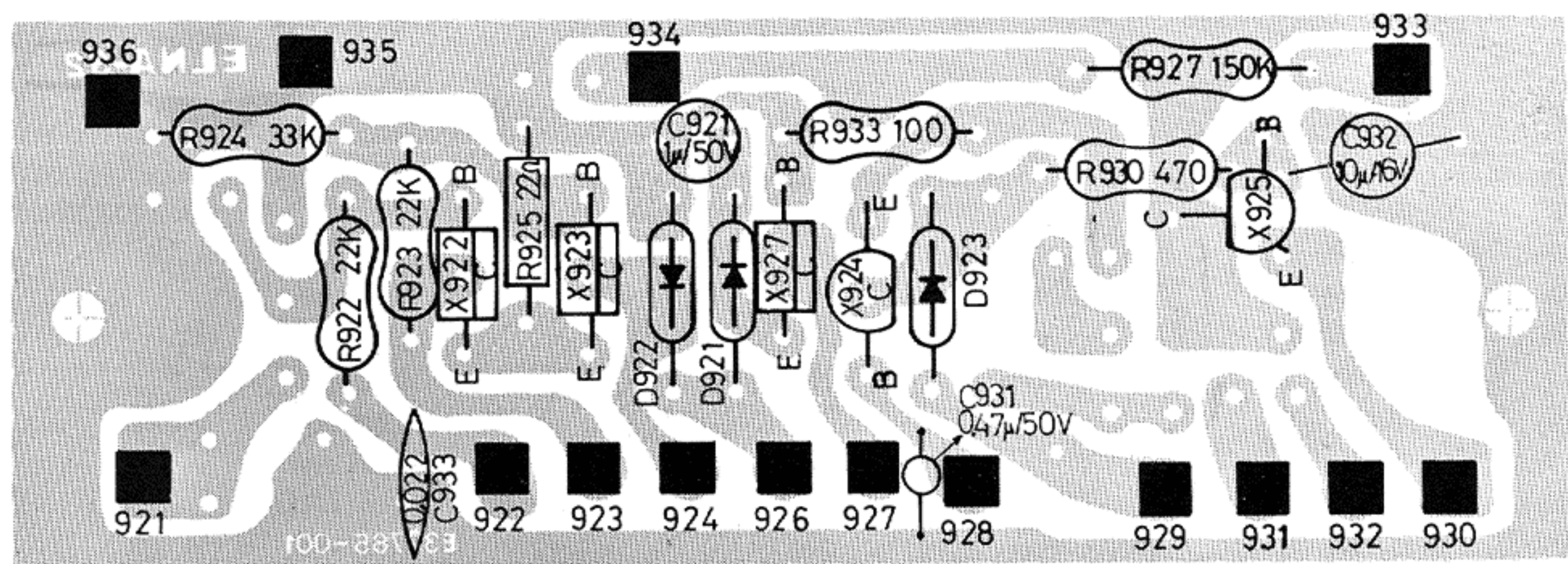


Fig. 23

WIRE CONNECTION

Tab No.	Tab Name	Connection
922	FM + B3	1) From Tab 933 on TAC-175 2) To Tab 109 on TFM-202GUA2
923	Bull's Eye (RED)	To Red Lamp of Bull's Eye
924	Bull's Eye (ORANGE)	To Orange Lamp of Bull's Eye
926	FM Stereo Radar In	From Tab 128 on TFM-202GUA2
927	FM Stereo Radar Out	To Lamp of Stereo Radar
928	Muting In	From ② of Muting V.Resistor R19
929	Muting Out	To Tab 842 on TAC-155
930	"	To Tab 108 on TFM-202GUA2
933	FM + B3	1) To Tab 922 on TAC-175 2) From Tab 905 on TAP-115
924	Muting	From ③ of Muting V.Resistor R19
926	Earth	To Tab 126 on TFM-202GUA2

TAC-175 THE LIST OF MAIN PARTS FOR REPLECEMENT

Dwg. No.	Parts No.	Parts Name	Description
1	TAC-175	Circuit Board Ass'y	
2	Q03112-1	Electrolytic Capacitor	(1μ/50V) C921
3	Q03112-05	" "	(0.47μ/50V) C931
4	Q03108-10	" "	(10μ/16V) C932
5	Q46962-021(A)	Ceramic Capacitor	C933
6	1S188AM	Ge Diode	D921, 922, 923
7	2SC711E	Si Transistor	X924
8	2SC458LC	"	X922, 923, 297
9	2SA638E	"	X925

TAP-114 THE LIST OF MAIN PARTS FOR REPLECEMENT

Dwg. No.	Parts No.	Parts Name	Description
1	Q03108-10	Electrolytic Capacitor	(10μ/16V) C211, 212
2	Q03110-100	"	(100μ/25V) C215
3	Q03112-1	"	(1μ/50V) C201, 202, 213, 214
4	Q03104-30	"	(33μ/63V) C216, 217
5	Q03244-332	Mylar Capacitor	C207, 208
6	Q03244-103	"	C209, 210
7	Q04052-150	Ceramic Capacitor	C218, 219
8	Q04052-100	"	C205, 206
9	Q46962-1000	"	C203, 204
10	2SC458LGC	Si Transistor	X201~204
11	Q03104-30	Electrolytic Capacitor	(33μ/6.3V) C313, 314
12	Q03108-30	"	(33μ/16V) C311, 312
13	Q03108-10	"	(10μ/16V) C307, 308
14	Q03110-30	"	(33μ/25V) C309, 310
15	Q03110-100	"	(100μ/25V) C315
16	Q03112-1	"	(1μ/50V) C301, 302
17	Q46962-1000	Ceramic Capacitor	C303, 304
18	Q04052-56	"	C305, 306
19	2SC458LGC	Si Transistor	X301, 302, 303, 304
20	Q03110-10	Electrolytic Capacitor	(10μ/25V) C407, 408
21	Q03110-50	"	(41μ/25V) C409
22	Q03112-1	"	C401, 402, (1μ/50V) C405, 406
23	Q04052-150	Ceramic Capacitor	C403, 404
24	Q46962-1000	"	C411, 412
25	2SC458LGC	Si Transistor	X401, 402
26	Q04843-2	Variable Resistor	1KΩ (B) R727, 728
27	Q03108-10	Electrolytic Capacitor	(10μ/16V) C703
28	Q03112-1	"	(1μ/50V) C701, 702
29	Q03112-30	"	(33μ/50V) C707, 708
30	Q03112-100	"	(100μ/50V) C709
31	Q03104-200	"	(220μ/6.3V) C705, 706
32	Q03244-473	Mylar Capacitor	C723, 724
33	Q04052-22	Ceramic Capacitor	C719, 720
34	Q46962-1000	"	C717, 718
35	Q46962-01	"	C721, 722
36	E04026-4	Thermistor	R731, 732
37	E03125-001	Varistor	(DS-410) D701, 702
38	1S990	Si Diode	D703~708
39	2SA672B	Si Transistor	X701, 702
40	TS-301D or E	} Pair	X705, 706
41	TS-302D or E		X707, 708
42	TS-301 D or E		X703, 704
43	Q03104-30	Electrolytic Capacitor	(33μ/6.3V) C453~456
44	Q03108-30	"	(33μ/16V) C451, 452
45	2SC458LC	Si Transistor	X451~413
46	2SC853M or L	Si Transistor	X454
47	1S990	Si Diode	D451~454
48	LC2-C	Relay	

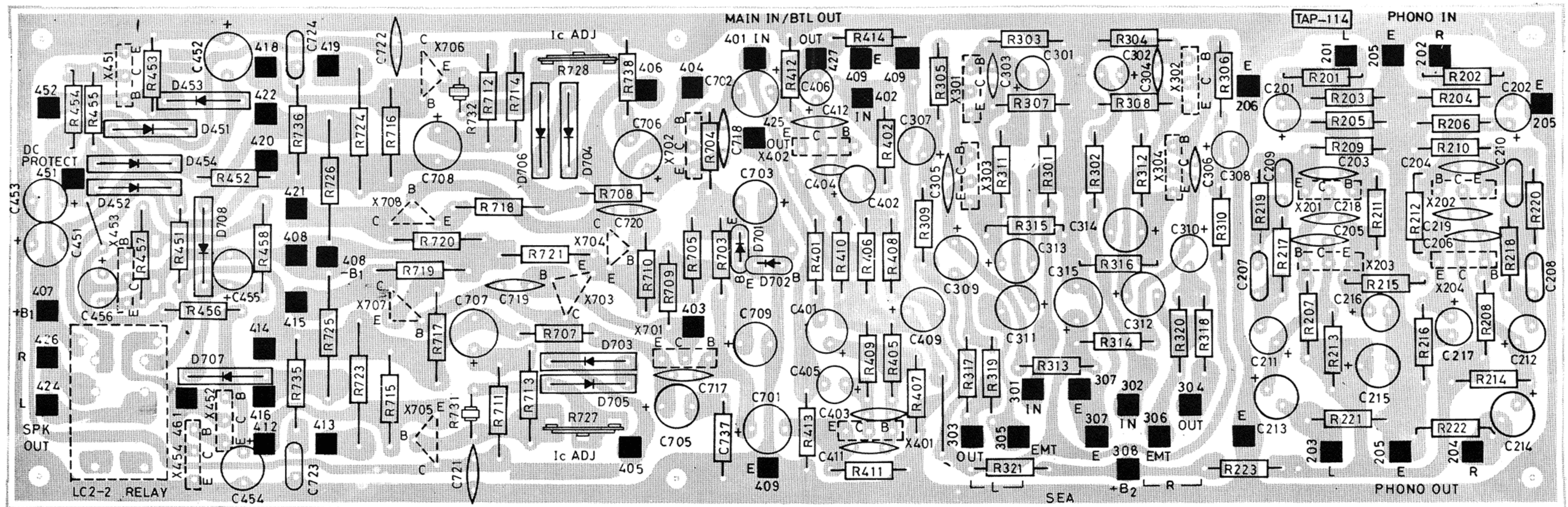


Fig. 22

WIRE CONNECTION

Tab No.	Name	Connection
PHONO EQUALIZER SECTION		
201	PHONO IN (L)	from Phono Pin Jack Ass'y on Rear Panel (L)
202	PHONO IN (R)	from Phono Pin Jack Ass'y on Rear Panel (R)
203	PHONO OUT (L)	to Tab of Phono IN (L) on TAC-173
204	PHONO OUT (R)	to Tab of Phono IN (R) on TAC-173
205	PHONO EARTH	from Phono Pin Jack Ass'y on Rear Panel
206	EARTH	to Earth Tab on TAC-173 (Amplifier)
S. E. A. AMPLIFIER SECTION		
301	S. E. A. IN (L)	from VOLUME OUT (L, F) Tab on TAC-173
302	S. E. A. IN (R)	from VOLUME OUT (R, F) Tab on TAC-173
303	S. E. A. OUT (L)	to Tab (L) Marked ③ of Variable Resistor on TAC-147
304	S. E. A. OUT (R)	to Tab (R) Marked ③ of Variable Resistor on TAC-147
305	S. E. A. EMT OUT (L)	to Tab (L) Marked ① of Variable Resistor on TAC-147
306	S. E. A. EMT OUT (R)	to Tab (R) Marked ① of Variable Resistor on TAC-147
307	S. E. A. EARTH	to Earth Tab on TAC-147
308	"	to Earth Tab of Master Volume on TAC-173
MAIN IN & B. T. L. OUT SECTION		
401	Main IN (L, F)	from 819 Tab on TAC-154
402	Main IN (R, F)	from 821 Tab on TAC-154
403		from C852 on TAC-173
404		to C853 on TAC-173

Tab No.	Name	Connection
405		from Common Tab of S853e on TAC-173
406		from Common Tab of S853f on TAC-173
409	Main EARTH	
425	B.T.L. OUT (for L, R)	to B.T.L. Switch S2a
427	" (for R, R)	to B.T.L. Switch S2b
407	+B1	from 903 Tab on TAP-115
408	-B1	from 904 Tab on TAP-115
412	X705 EMITTER	to Base of Power Transistor (X1)
413		to Emitter of Power Transistor (X1)
414	Main AMP. OUT (L, F)	to Collector of Power Transistor (X3)
415		to Base of Power Transistor (X3)
416		to Emitter of Power Transistor (X3)
418		to Base of Power Transistor (X2)
419		to Emitter of Power Transistor (X2)
420		to Collector of Power Transistor (X4)
421		to Base of Power Transistor (X4)
422		to Emitter of Power Transistor (X4)
424	SPEAKER OUT (L, F)	to Tab ②, ③ of Speaker Selector S1b
426	" (R, F)	to Tab ②, ③ of Speaker Selector S1c
451	Protector	from Tab 959 on TAC-153
452	"	from Tab 960 on TAC-153
461	"	to Tab 965 on TAC-153

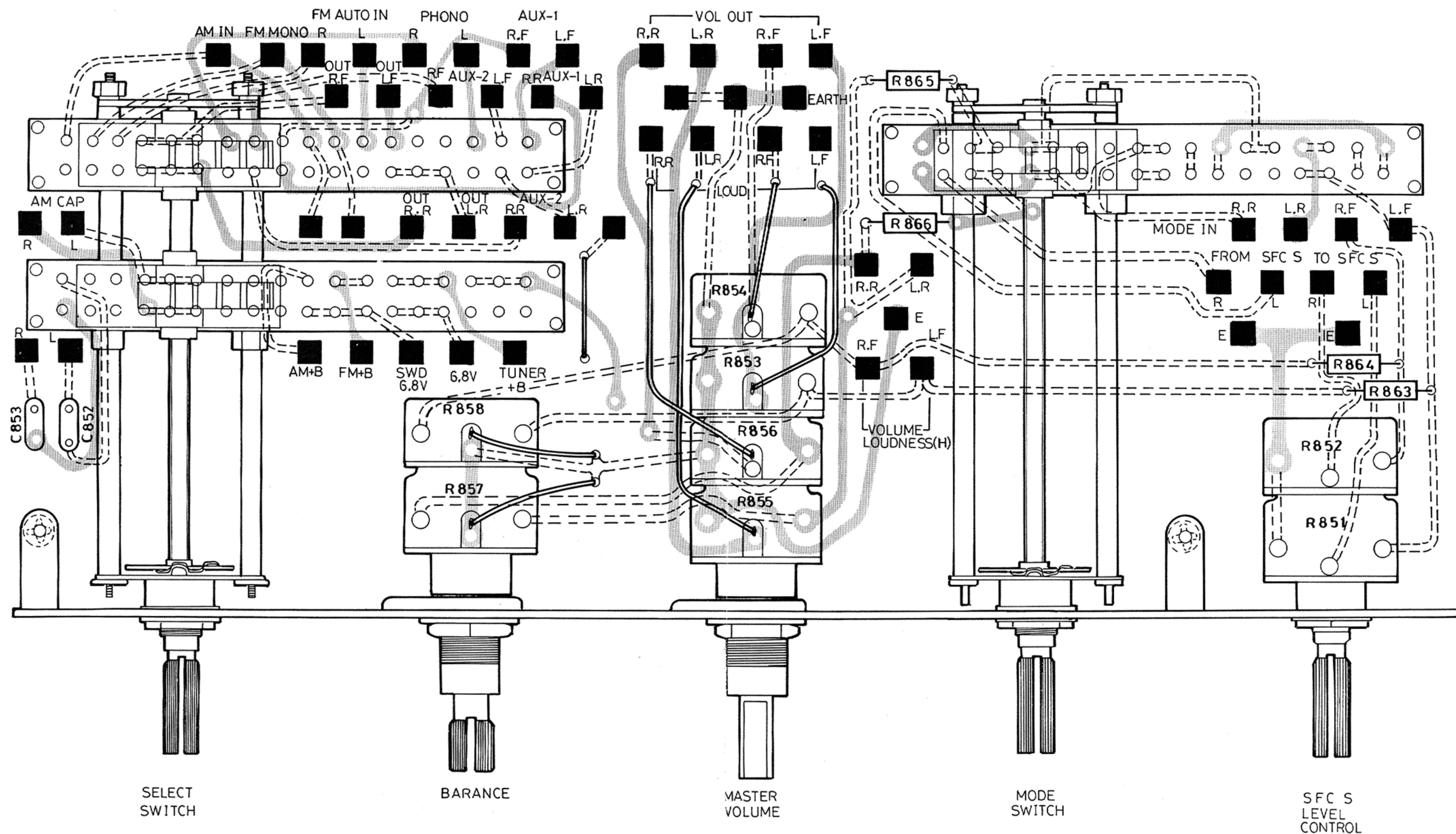


Fig. 23

THE LIST OF MEIN PARTS FOR REPLACEMENT

Dwg. No.	Parts No.	Parts Name	Description
1	E32771-001	Volume Bracket	
2	E03414-003	Variable Resistor (SFCS)	100K(B)×2 R851, 852
3	E03433-001	Variable Resistor (Master)	100K(B)×4C.T R853~856
4	E03441-001	Variable Resistor (Balance)	100K(W)×2 R857~858

Dwg. No.	Parts No.	Parts Name	Description
5	QSR5286-200A	Rotary Switch (Mode)	S851
6	QSR5164-202	Rotary Switch (Select)	S852
7	Q03244-472	Mylar Capacitor	C852, 853
8	SBSB3006Z	Tapping Screw	C852

WIRE CONNECTION

No.	Tab Name	Connection
1	AM IN	to Tab 101 on TFM-202GUA2
2	FM MONO	to Tab 104 on TFM-202GUA2
3	FM AUTO IN (R)	to Tab 103 on TFM-202GUA2
4	" (L)	to Tab 102 on TFM-202GUA2
5	PHONO IN (R)	to Tab 204 on TAP-114
6	" (L)	to Tab 203 on TAP-114
7	AUX-1 (R, F)	to AUX-1 Pin Jack Ass'y on Rear Panel
8	" (L, F)	" "
9	" (R, R)	" "
10	" (L, R)	" "
11	AUX-2 (R, F)	to AUX-2 Pin Jack Ass'y on Rear Panel
12	" (L, F)	" "
13	" (R, R)	" "
14	" (L, R)	" "
15	OUT (L, F)	to Tab 828 on TAC-155
16	" (R, F)	" 831 "
17	" (L, R)	" 835 "
18	" (R, R)	" 839 "
19	TUNER +B	to Tab 905 on TAP-115
20	AM +B	to Tab 110 on TFM-202GUA2
21	FM +B	to Tab 106 on TFM-202GUA2
22	6.8V	to 6.8V Secondary Winding of Power Transformer for Rear Channels
23	SWD 6.8V	to Lamp of Tuning Meter and Diode (D1)
24	VOLUME OUT (L, F)	to Tab 301 on TAP-114
25	" (R, F)	" 302 "
26	" (L, R)	to Tab 351 on TAP-116
27	" (R, R)	" 352 "
28	LOUDNESS (L, F)	to Tab 803 on TAC-154
29	" (R, F)	" 804 "
30	" (L, R)	" 809 "
31	" (R, R)	" 810 "
32	LOUDNESS (H) (L, F)	" 801 "
33	" (R, F)	" 802 "
34	" (L, R)	" 807 "
35	" (R, R)	" 808 "
36	MODE IN (L, F)	to Tab 828 on TAC-155
37	" (R, F)	" 832 "
38	" (L, R)	" 836 "
39	" (R, R)	" 840 "
40	TO SFCS (L)	to Tab 501 on TAP-116
41	" (R)	" 502 "
42	FROM SFCS (L)	" 503 "
43	" (R)	" 504 "
44	AM CAP (L)	to Tab 403, 405 on TAP-114
45	" (R)	" 404, 406 "

★ MARKS ARE SLIDE VARIABLE RESISTOR TAB.

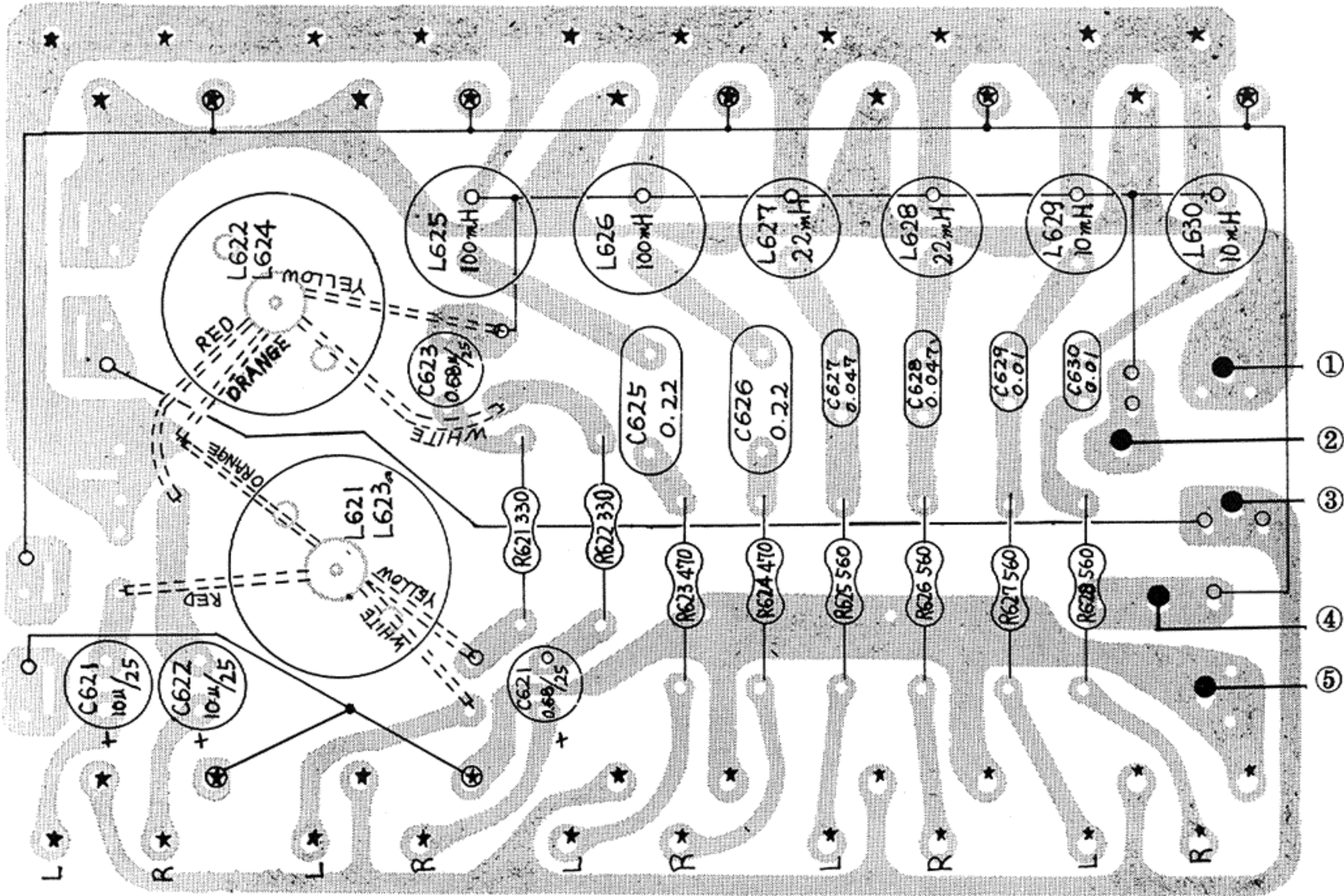


Fig. 24

FRONT CHANNEL

Tab No.	Name	Connection
1	S. E. A. (C) L	to Tab 303 on TAP-114
2	EARTH	to Tab 307 on TAP-114
3	S. E. A. (E) L	to Tab 305 on TAP-114
4	S. E. A. (C) R	to Tab 304 on TAP-114
5	S. E. A. (E) R	to Tab 306 on TAP-114

REAR CHANNEL

Tab No.	Name	Connection
1	S. E. A. (C) L	to Tab 353 on TAP-116
2	EARTH	to Tab 357 on TAP-116
3	S. E. A. (E) L	to Tab 355 on TAP-116
4	S. E. A. (C) R	to Tab 354 on TAP-116
5	S. E. A. (E) R	to Tab 356 on TAP-116

THE LIST OF MAIN PARTS FOR REPLECEMENT

Dwg. No.	Parts No.	Parts Name	Description	Dwg. No.	Parts No.	Parts Name	Description
1	E03108-11	Choke Coil	L621~624	5	E03131-0.68	Tantal Capacitor	C623, 624
2	E0747-12	Ferri Inductor	L627, 628 (22mH)	6	" -10	"	C621, 622
3	" -9	"	L629, 630 (10mH)	7	Q03244-103	Mylar Capacitor	C629, 630
4	" -11	"	L625, 626 (100mH)	8	" -473	"	C627, 628
				9	" -224	"	C625, 628
				10	E47605-001	Shield Ring	

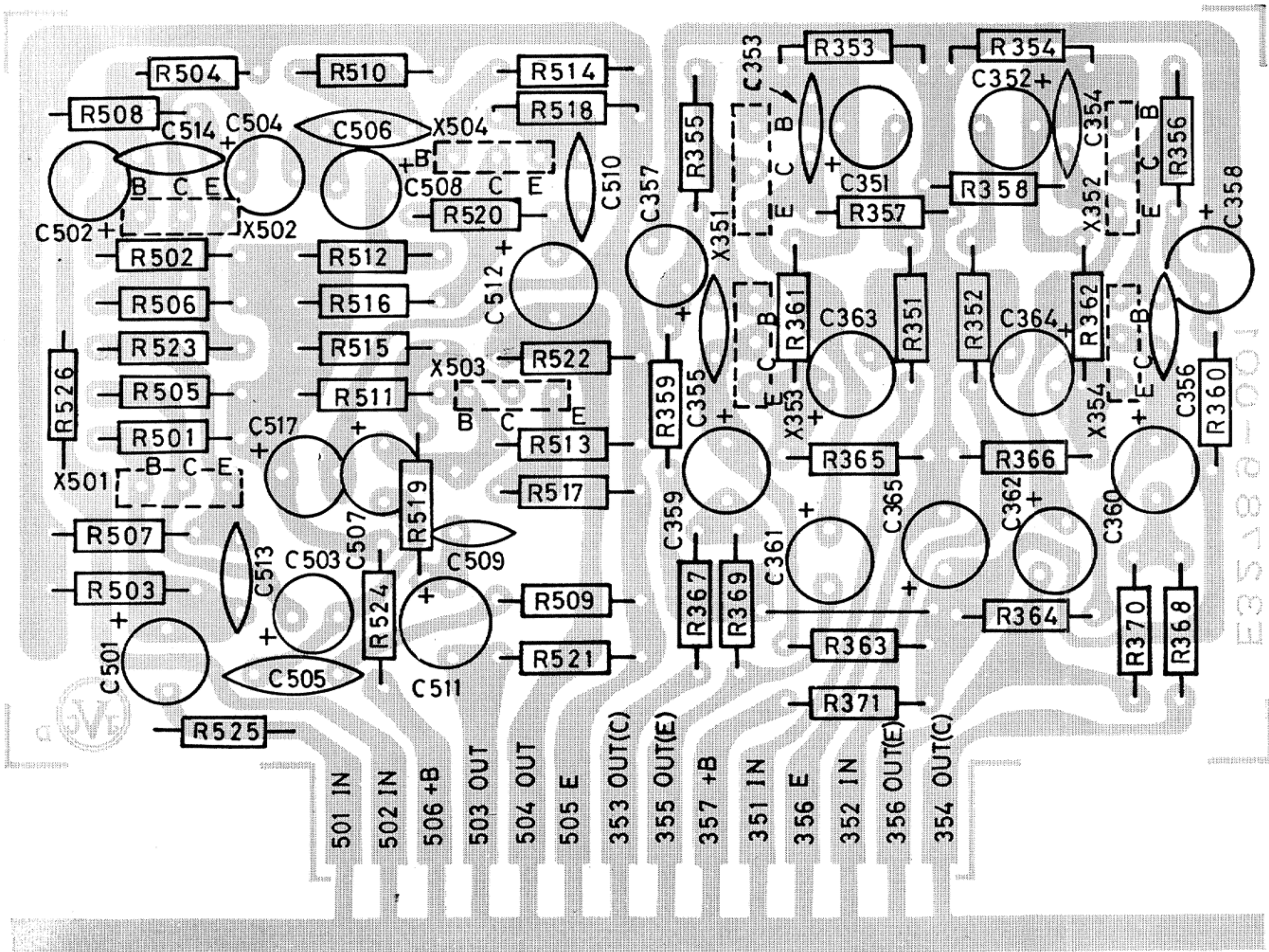


Fig. 25

THE LIST OF MAIN PARTS FOR REPLECEMENT

Dwg. No.	Parts No.	Parts Name	Description
1	Q03112-1	Electrolytic Capacitor	(1 μ /50V) C501~504,511,512
2	Q03110-200	Electrolytic Capacitor	(220 μ /25V) C517
3	Q03244-103	Mylar Capacitor	C509
4	Q03244-563	"	C510
5	Q03244-683	"	C505
6	Q03244-104	"	C506
7	Q04052-100	Ceramic Capacitor	C515, 516
8	Q46962-1000	"	C513, 514
9	2SC458LGC	Si Transistor	X501~504
10	Q03104-30	"	(33 μ /6.3V) C363, 364
11	Q03108-10	Electrolytic Capacitor	(10 μ /16V) C357, 358
12	Q03108-30	"	(33 μ /16V) C361, 362
13	Q03110-30	"	(33 μ /25V) C359, 360
14	Q03110-100	"	(100 μ /25V) C365
15	Q03112-1	"	(1 μ /50V) C351, 352
16	Q46962-1000	Ceramic Capacitor	C353, 354
17	Q04052-56	Ceramic Capacitor	C355, 356
18	2SC458LGC	Si Transistor	X351~354

WIRE CONNECTION

Tab No.	Name	Connection
501	SFCS IN	to Tab of TO SFCS. L on TAC-173 (to Tab ③ of SFCS Variable Resistor R851)
502	"	to Tab of TO SFCS. R on TAC-173 (to Tab ③ of SFCS Variable Resistor R852)
503	SFCS OUT	to Tab of FROM SFCS. L on TAC-173
504	"	to Tab of FROM SFCS. R on TAC-173
505	EARTH	to Tab 358 on TAP-116 and Tab Earth on TAC-147
506	+B	to Tab 308 on TAP-114 and Tab 357 on TAP-116
351	S. E. A. IN (L, R)	to Tab VOLUME OUT L, R on TAC-173

Tab No.	Name	Connection
352	S. E. A. IN (R, R)	to Tab of VOLUME OUT R, R on TAC-173
353	S. E. A. OUT (L, R)	to Tab ③ of LEFT S.E.A. Variable Resistor on TAC-147 and Tab 813 on TAC-154
354	S. E. A. OUT (R, R)	to Tab ③ of RIGHT S.E.A. Variable Resistor on TAC-147 and Tab 811 on TAC-154
355	S. E. A. EMT OUT (L, R)	to Tab ① of LEFT S. E. A. Variable Resistor on TAC-147
356	S. E. A. EMT OUT (R, R)	to Tab ① of RIGHT S. E. A. Variable Resistor on TAC-147
357	+B	to Tab 906 on TAP-115 and Tab 506 on TAP-116
358	EARTH	to Tab of VOLUME OUT E on TAC-173 and Tab 505 on TAP-116

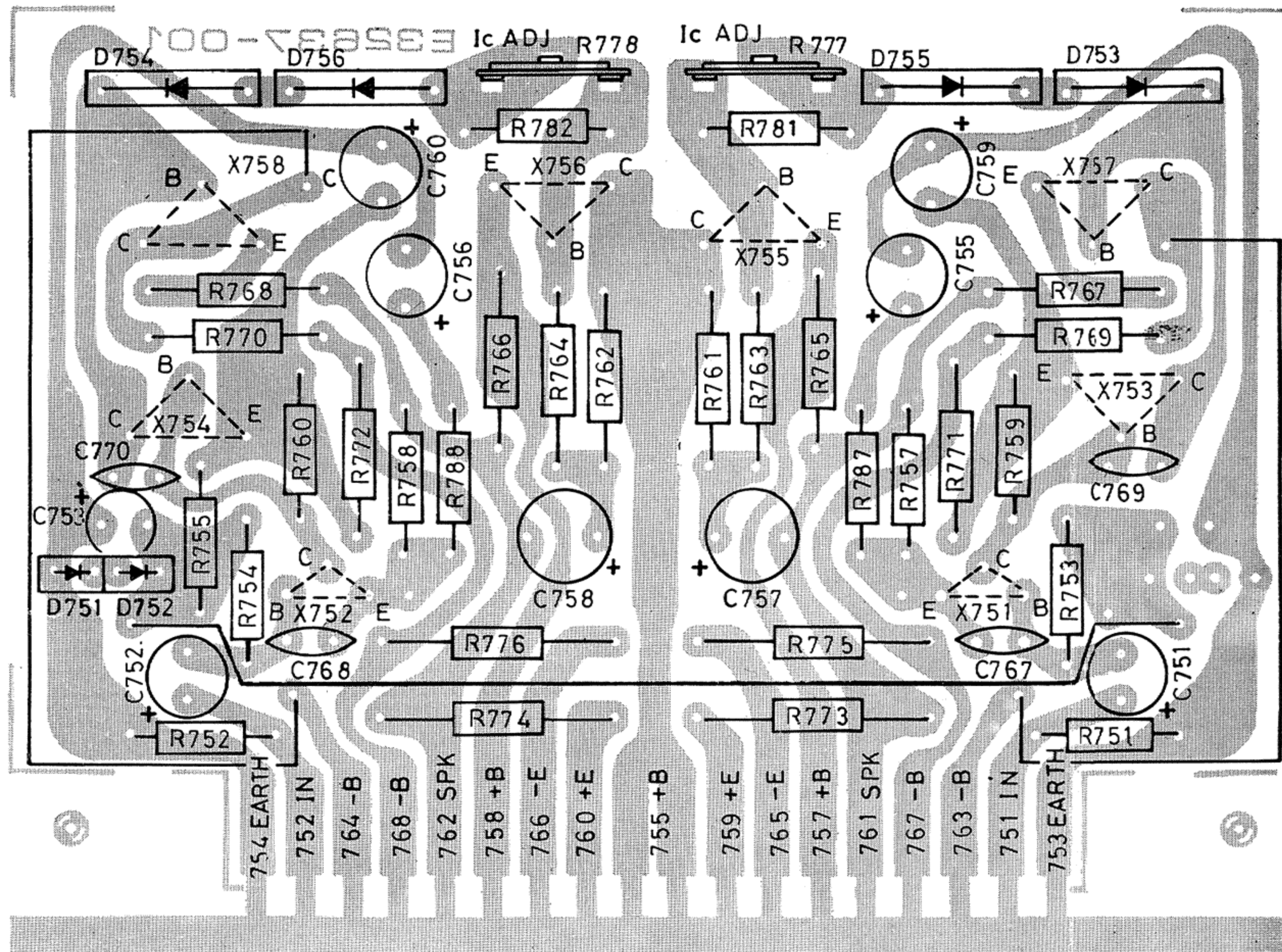


Fig. 26

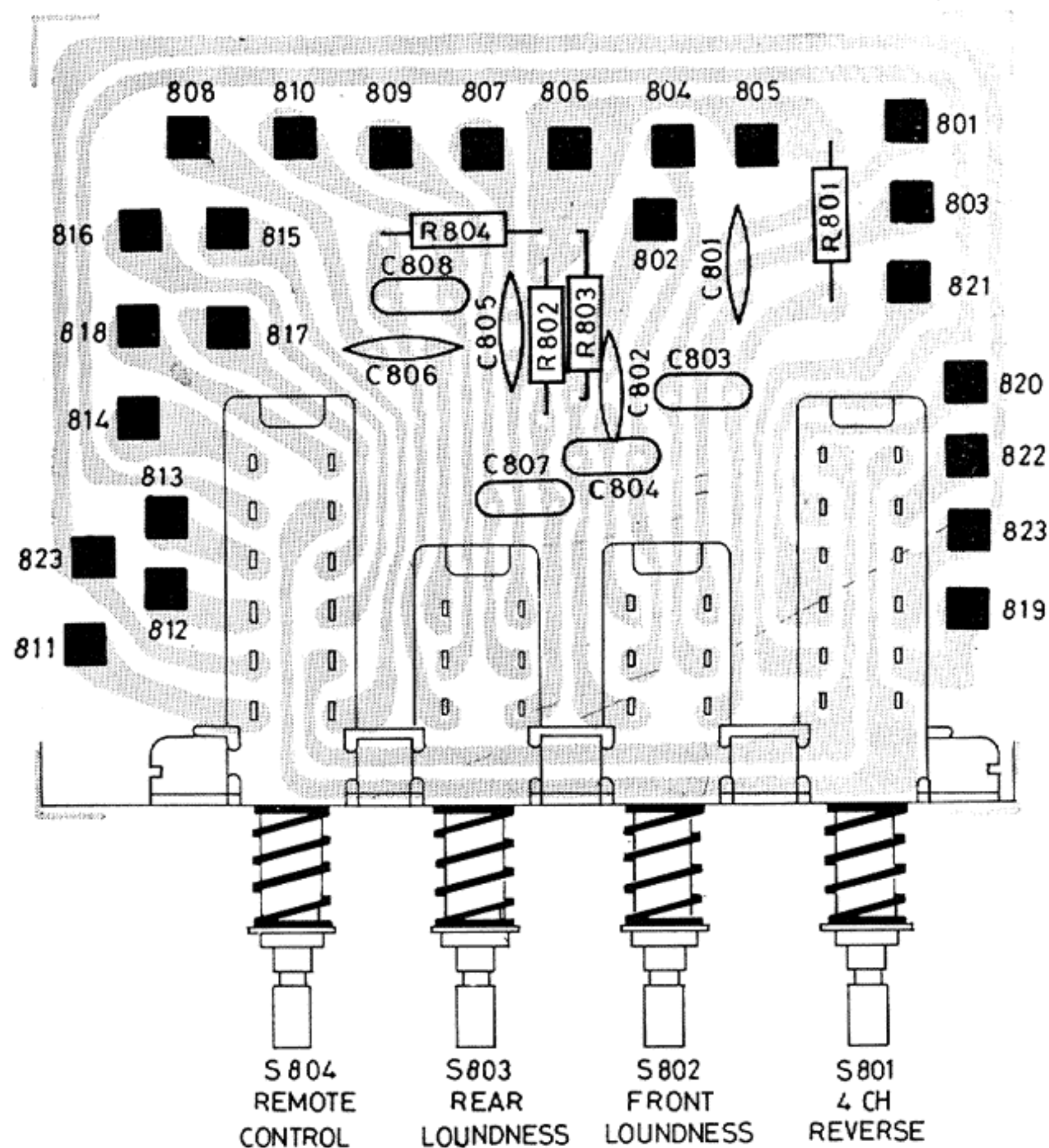
THE LIST OF MAIN PARTS FOR REPLECEMENT

Dwg. No.	Parts No.	Parts Name	Description
1	E03347-002 (N)	M.F. Resistor	R773~776
2	Q04843-2	Variable Resistor	R777~778
3	Q03108-10	Electrolytic Capacitor	(10 μ /16V) C753
4	Q03112-1	"	(1 μ /50V) C751, 752
5	Q03112-30	"	(33 μ /50V) C757, 758
6	Q03112-100	"	(100 μ /50V) C759, 760
7	Q03104-200	"	(220 μ /6.3V) C757, 756
8	Q46962-1000	Ceramic Capacitor	C767, 768
9	Q04052-22	"	C769, 770
10	2SA672B	Si Transistor	X751, 752
11	TS-301D or E	"	X755, 756
12	TS-302D or E	Pair	X757, 758
13	TS-301D or E	"	X753, 754
14	E03125-001	Varistor	(DS-410) D751, 752
15	1S990	Si Diode	D753~756
16	E04026-4	Thermistor	(SDT-20) R781, 782

WIRE CONNECTION

Tab No.	Name	Connection
751	Main IN (L, R)	to Tab of B. T. L. Switch S2a
752	Main IN (R, R)	" S2b
753	EARTH (L, R)	to Tab 754 on TAD-80
754	EARTH (R, R)	to Tab $\ominus$ of C25, and Tab $\oplus$ of C26
755	+B	to Tab $\oplus$ of Electrolytic Capacitor C25 (2200 μ F/35WV) and Collector of Power Transistor (X5,6)
757	(+) B (L, R)	to Base of Power Transistor X5
758	(+) B (R, R)	to Base of Power Transistor X6
759	(+) E (L, R)	to Emitter of Power Transistor X5
760	(+) E (R, R)	to Emitter of Power Transistor X6

Tab No.	Name	Connection
761	SPK (Speaker)	to Tab 951 on TAC-153, and Collector of Power Transistor X7
762	"	to Tab 952 on TAC-153, and Collector of Power Transistor X8
763	(-) B (L, R)	to Base of Power Transistor X7
764	(-) B (R, R)	to Base of Power Transistor X8
765	(-) E (L, R)	to Emitter of X7 and Tab 953 on TAC-153
766	(-) E (R, R)	to Emitter of X8 and Tab 954 on TAC-153
767	-B (L, R)	to Tab 768 on TAD-80
768	-B (R, R)	to Tab $\ominus$ of Electrolytic Capacitor C26



WIRE CONNECTION

Fig. 27

Tab No.	Name	Connection
801	Loudness (H)	to Tab (L, F) Loudness (H) on TAC-173 (to Tab ③ of Variable Resistor R853)
802	//	to Tab (R, F) Loudness (H) on TAC-173 (to Tab ③ of Variable Resistor R854)
803	Loudness	to Tab (L, F) Loudness on TAC-173 (to Tab ④ of Variable Resistor R853)
804	//	to Tab (R, F) Loudness on TAC-173 (to Tab ④ of Variable Resistor R854)
805	Earth	to Tab (E) Volume on TAC-173 (to Tab ① of Variable Resistor R851~854)
806	//	
807	Loudness (H)	to Tab (L, R) Loudness (H) on TAC-173 (to Tab ③ of Variable Resistor (R855)
808	//	to Tab (R, R) Loudness (H) on TAC-173 (to Tab ③ of Variable Resistor R856)
809	Loudness	to Tab (L, R) Loudness on TAC-173 (to Tab ④ of Variable Resistor R855)
810	//	to Tab (R, R) Loudness on TAC-173 (to Tab ④ Variable Resistor R856)
811	4CH Remote (IN) (R, R)	to Tab 354 SEA OUT (R, R) on TAP-116 and Pin ⑧ of 8 Pin Socket
812	4CH Remote (OUT) (R, R)	to Pin ⑥ of 8 Pin Socket
813	4CH Remote (IN) (L, R)	to Tab 353 SEA OUT (L, R) on TAP-116 and Pin ④ of 8 Pin Socket
814	4CH Remote (OUT) (L, R)	to Pin ② of 8 Pin Socket
815	4CH Remote (IN) (R, F)	from Tab SEA OUT (R, F) on TAC-147 and to Pin ⑤ of 8 P Socket
816	4CH Remote (OUT) (R, F)	from Pin ③ of 8P Scket
817	4CH Remote (IN) (L, F)	from Tab SEA OUT (L, F) on TAC-147 and to Pin ⑦ of 8P Socket
818	4CH Remote (OUT) (L, F)	from Pin ① of 8P Socket
819	Reverce SW OUT (L, F)	to Tab 401 Main IN on TAP-114
820	Reverce SW OUT (L, R)	to Tab of BTL Switch S2a
821	Reverce SW OUT (R, F)	to Tab 402 Main IN on TAP-114
822	Reverce SW OUT (R, R)	to Tab of BTL Switch S2b

THE LIST OF MAIN PARTS FOR REPLECEMENT

Dwg. No.	Parts No.	Parts Name	Descritipon	Dwg. No.	Parts No.	Parts Name	Description
1	Q04052-470	Ceramic Capacitor	C801,802,805,806	3	Q30525-001	Push SW Ass'y	S801~804
2	Q03244-333	Mylar Capacitor	C803,804,807,808	4	E46832-001	Push SW Bracket	

TAC-155 TAPE SELECT SW CIRCUIT BOARD ASS'Y

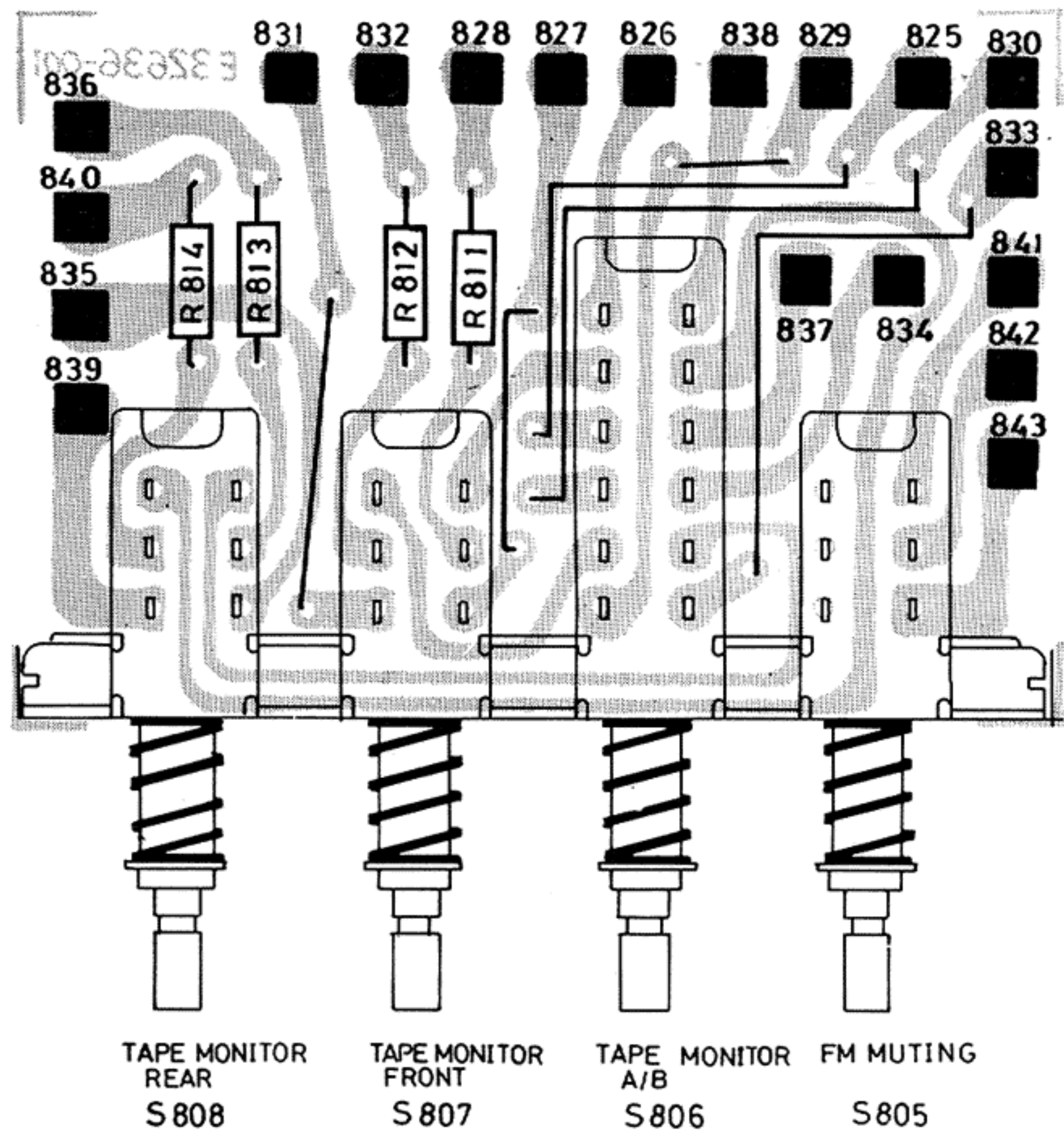


Fig. 28

WIRE CONNECTION

Tab. No	Name	Connection
825	Tape Monitor (A)	to Tab (L) Front of Tape monitor Pin Jack Ass'y on Rear Panel
826	" (B)	to Tab (L) Front of Tape (B) Jack Ass'y on Front Panel
827	Source IN	to Tab of Select Switch S852a on Tab 173 and Tab (L) Front of Rewrding out Pin Jack Ass'y on Rear Panel
828	Tape Monitor Out	to Tab of Select Switch S851a on TAC-173
829	Tape Monitor (A)	to Tab (R) Front of Tape manitor Pin Jack Ass'y on Rear Panel
830	" (B)	to Tab (R) Front of Tape (B) Jack Ass'y on Front Panel
831	Source IN	to Comimon Tab of Select Switch S852b on TAC-173 and Tab (R) Front of Recording Out Pin Jack A'ssy on Rear Panel
832	Tape Monitor Out.	to Comimon Tab of Select Switch S851b on TAC-173
833	Tape Monitor (A)	to Tab (L) Rear of Tape monitor Pin Jack Ass'y on Rear Panel
834	" (B)	to Tab (L) Rear of Tape (B) Jack Ass'y on Front Panel
835	Source IN	from Comimon Tab of Select Switch S852C on TAC-173 and to Tab (L) Reer of Recording Out Pin Jack Ass'y on Rear Panel
836	Source Out	to Common Tabe of Mode Switch S851C on TAC-173
837	Tape Monitor (A)	from Tab (R) Rear of Tape monitor Pin Jack Ass'y on Rear Panel
838	Tape Monitor (B)	from Tab (R) Rear of Tape (B) Jack Ass'y on Front Panel
839	Source IN	from Common Tab of Select Switch S852d on TAC-173 and to Tab (R) of Rear Recording Out Pin Jack Ass'y on Rear Panel
840	Source Out	to Common Tab of Mode Switch S851 on TAC-173
841	Muting SW	to Tab 934 on TAC-175
842	"	to Tab 930 on TAC-175
843	"	to Tab 932 on TAC-175

THE LIST OF MAIN PARTS FOR REPLECEMENT

Dwg. No.	Parts No.	Parts Name	Description
1	Q30526-001	Push SW Ass'y	S805~808

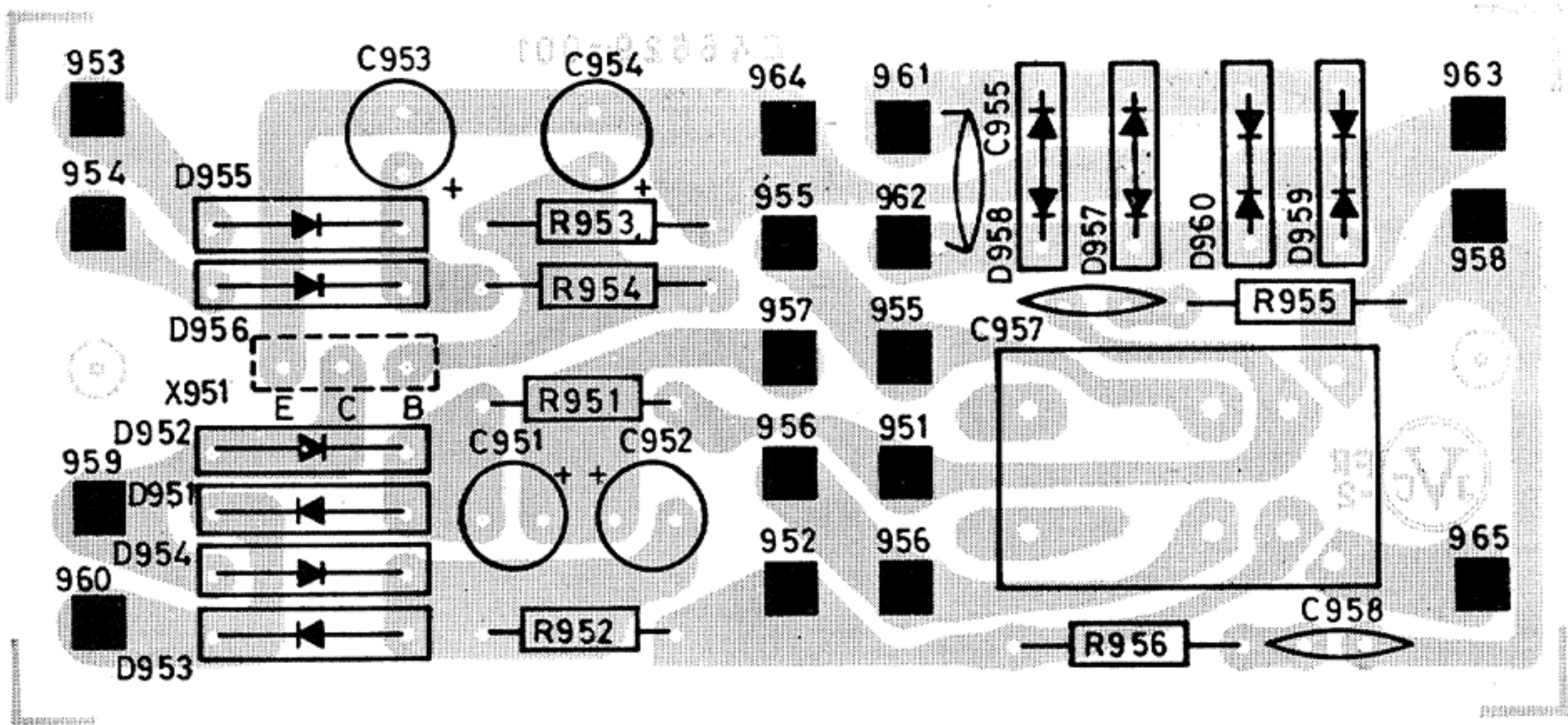


Fig. 29

WIRE CONNECTION

Tab No.	Name	Connection
951	Protect IN (L, R)	to Tab 761 on TAD-80
952	Protect IN (R, R)	to Tab 762 on TAD-80
953	AC Protect IN (L, R)	to Tab 765 on TAD-80
954	AC Protect IN (R, R)	to Tab 766 on TAD-80
955	Speaker OUT (L, R)	to Tab Left Rear ⊕ of Speaker Terminals and H. Phones Jack through R19
956	Speaker OUT (R, R)	to Tab Right Rear ⊕ of Speaker Terminals and H. Phones Jack through R20
957	Earth	to Chassis Base
958	Earth	to Chassis Base
959	Protect OUT (−DC)	to Tab 451 on TAP-114
960	Protect OUT (+DC, AC)	to Tab 452 on TAP-114
961	AC IN	to Red Wire (20V) of Transformer
962	AC IN	“ “
963	+B1 OUT	to Tab ⊕ of Electrolytic Capacitor C25 (2200μF/35WV)
964	−B1 OUT	to Tab ⊖ of Electrolytic Capacitor C26 (2200μF/35WV)
965	Relay +DC	to Tab 461 on TAP-114

THE LIST OF MAIN PARTS FOR REPLECEMENT

Dwg. No.	Parts No.	Parts Name	Description	Dwg. No.	Parts No.	Parts Name	Description
1	Q03104-30	Electrolytic Capacitor	{33μ/6.3V C953, 954	6	1S990	Si Diode	D951~956
2	Q03108-30	“	{33μ/16V C951, 952	7	E03155-001	“	SIB02-03C
3	Q03244-473	Mylar Capacitor	C957, 958				D959, 960
4	Q42309-01	Ceramic Capacitor	C955	8	E03155-002	“	SIB02-03CR
5	2SC458LC	Si Transistor	X951				D957, 958

NOTE : A sort of Resistor's Parts Number shown below.

Parts No.	Sort of Resistor
Q04804-	Carbon Resistor $\frac{1}{2}W$
Q04800-	" $\frac{1}{4}W$
04091-	Composition Resistor $\frac{1}{2}W$
04090-	" $\frac{1}{4}W$
Q04772-	Metal Oxide Resistor 2W

When you order Resistor, write required Resistor value in addition to the right-hand of hyphen.

For example: Q04804-1K=Carbon Resistor 1K Ω $\frac{1}{2}W$.

Q02772-100=Metal Oxide Resistor 100 Ω 2W.

Q04800-4.7K=Carbon Resistor 4.7K Ω $\frac{1}{4}W$.

04091-5.6K=Composition Resistor 5.6K Ω $\frac{1}{2}W$.

MAKER'S NAME OF USED TRANSISTOR, IC AND DIODE

2SA929	Sanyo	SIB02-03C	Fuji	2SC710	Mitsubishi
2SC853		SIB02-03CR		2SC711	
1S426FMG		FR02-2a			
DS-410			Hitachi	1S990	JRC
TS-301		2SC458		1S338U	
TS-302		2SA672			
1S188AM		2SC1030		MJ-703N	NEC
1S188FM					

CHECK POINT AFTER REPAIR

Please make sure of the following respect when repair is Completes.

- Each broadcasting frequency accords with dial scale accurately.
- No abnormal oscillations occur in FM & AM reception.
- Modulation hum is pratically not appreciable.
- Normal gain and output are obtained.
- Both high and low range of audio frequency are not decreased exceptionally.
- S. E. A. Controls operate normally.
- Normal fuse used :

100V~120V	2.3A	} For NIVICO
200V~240V	1.2A	
120V (UL)	2A	For U. S. A.

ACCESSORIES

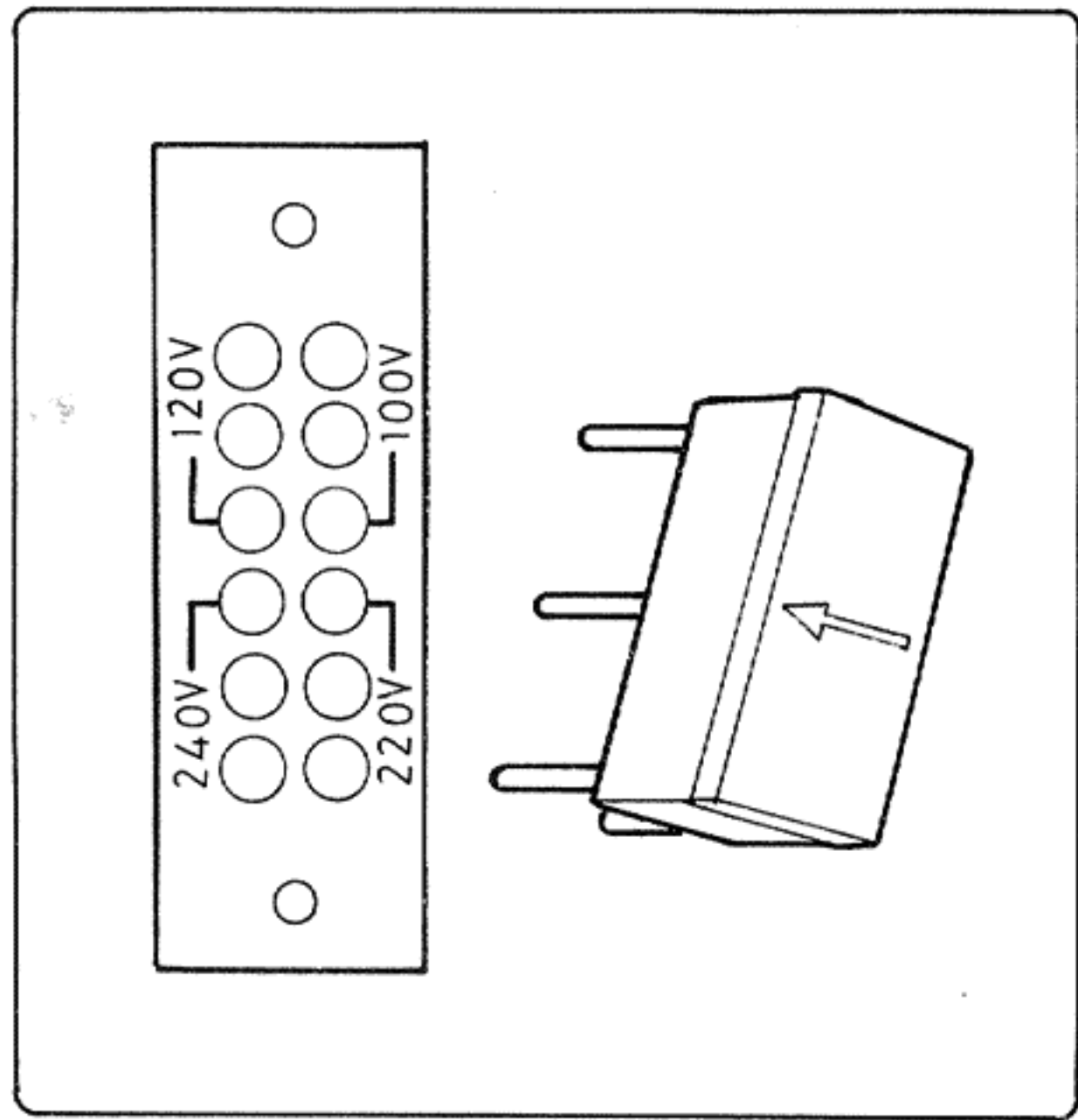
Parts No.	Parts Name	Q'ty
E41202-9	Envelope	1
E30580-269B	Inst. Book	1
E64103-001	Polishing Cloth	1
Q04741-2	Fuse 2A	2
04112-1.2	Fuse 1.2A 200V~240V	1
04112-2.3	Fuse 2.3A 100V~120V	1
E30539-298B	Schematic Diagram	1

IMPORTANT

The Voltage Selection and Fuse Replacement of this set. (Note the indication of primary fuse(s))

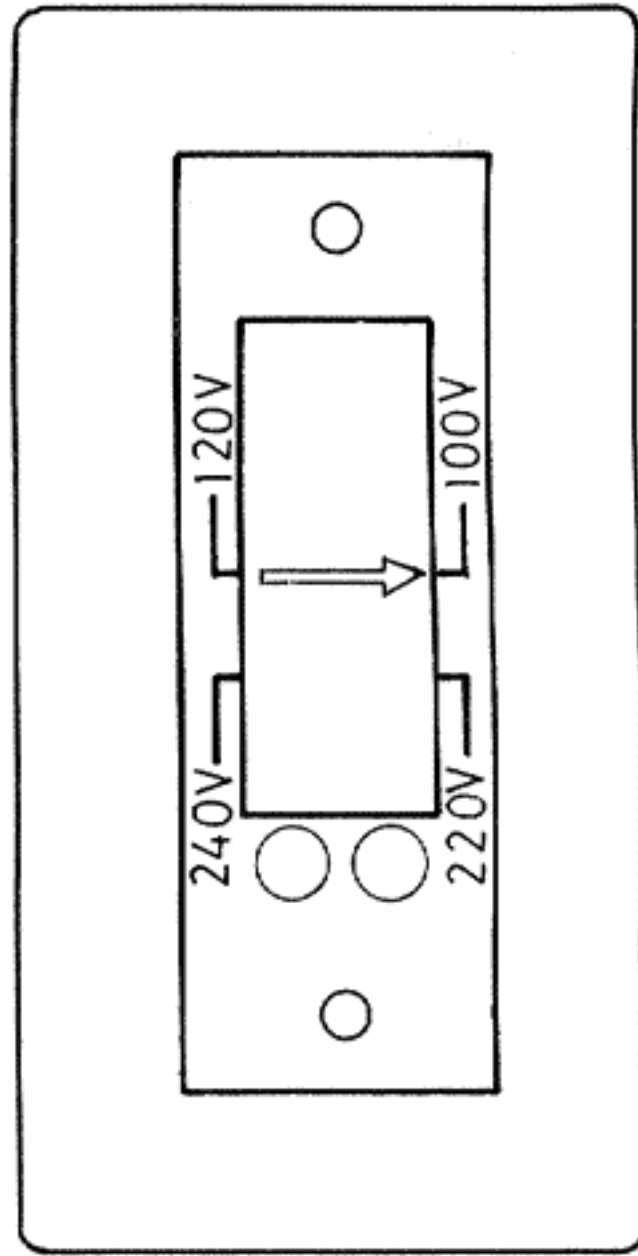
Although this set is pre-set for the use on your area's AC line voltage without any re-adjustment, it can be used on all AC voltages in the world through following adjustments.

To change the voltage, remove a voltage selector cover located on the rear panel near the power cord or on the chassis base inside the enclosure, and replace the plug so that its arrow coincides with the required voltage marked on the selector socket. Do not forget to replace the fuse as well with one of appropriate capacity.



The AC line voltage

	100V – 120V	200V – 240V
Use a	0.25A fuse	0.2A fuse
	0.5A fuse	0.2A fuse
	0.8A fuse	0.5A fuse
	1 A fuse	0.5A fuse
	1.2A fuse	0.8A fuse
	2.3A fuse	1.2A fuse
	3.3A fuse	1.8A fuse
	4.0A fuse	2.3A fuse
	5.0A fuse	2.3A fuse
	6.0A fuse	3.3A fuse

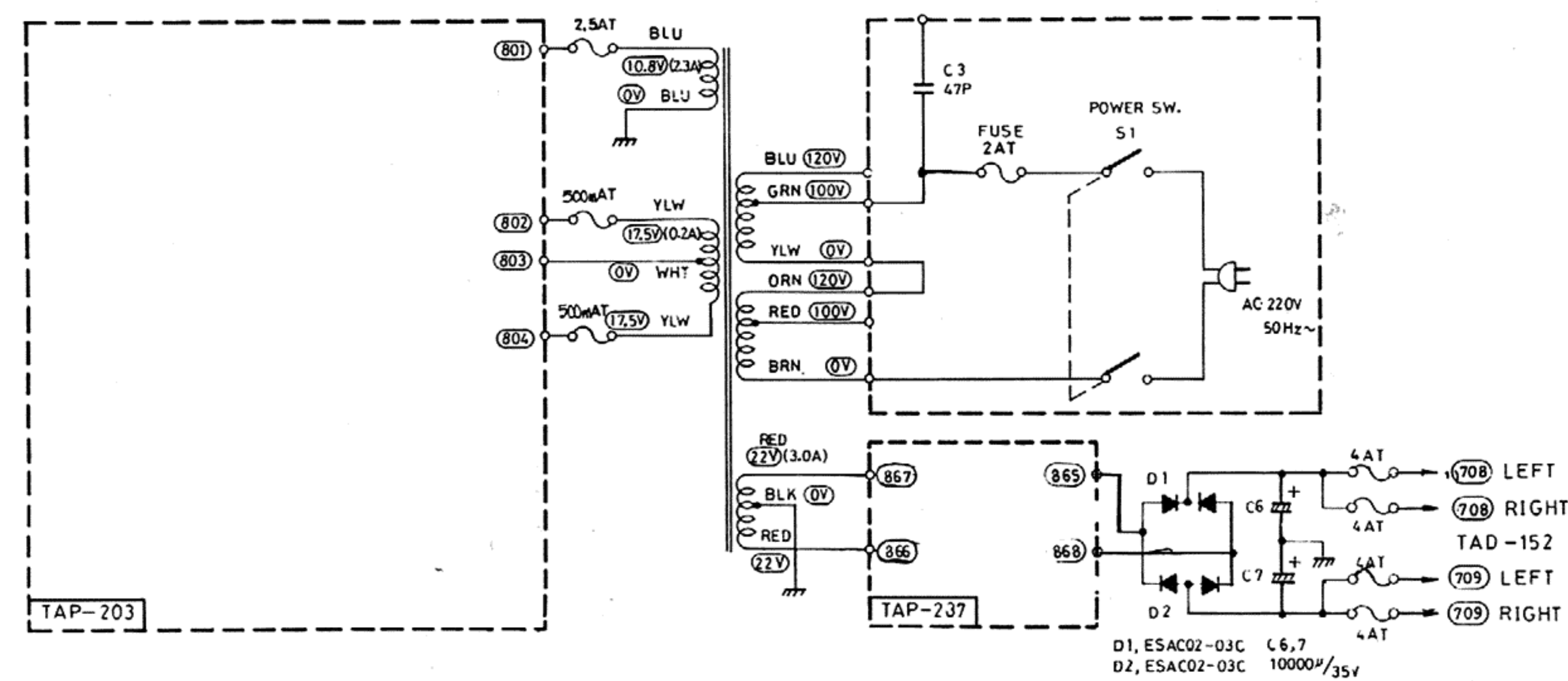


* This Schematic Diagram is for U.S.A.

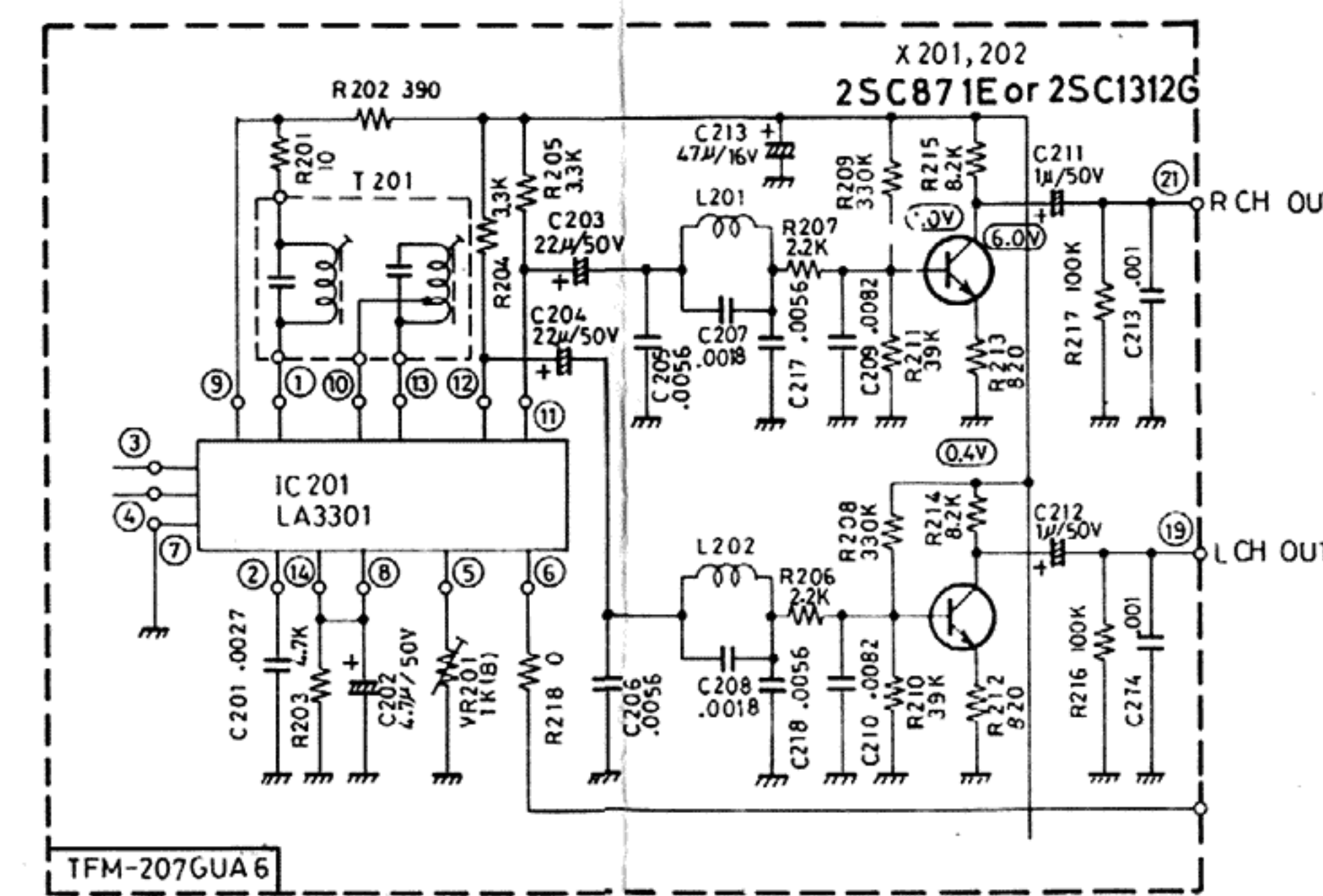
Subject to change without notice.
Printed in Japan E30539-425B, (O)

(E) FOR EUROPE

■ PRIMARY CIRCUIT (AC 220V 50Hz~)

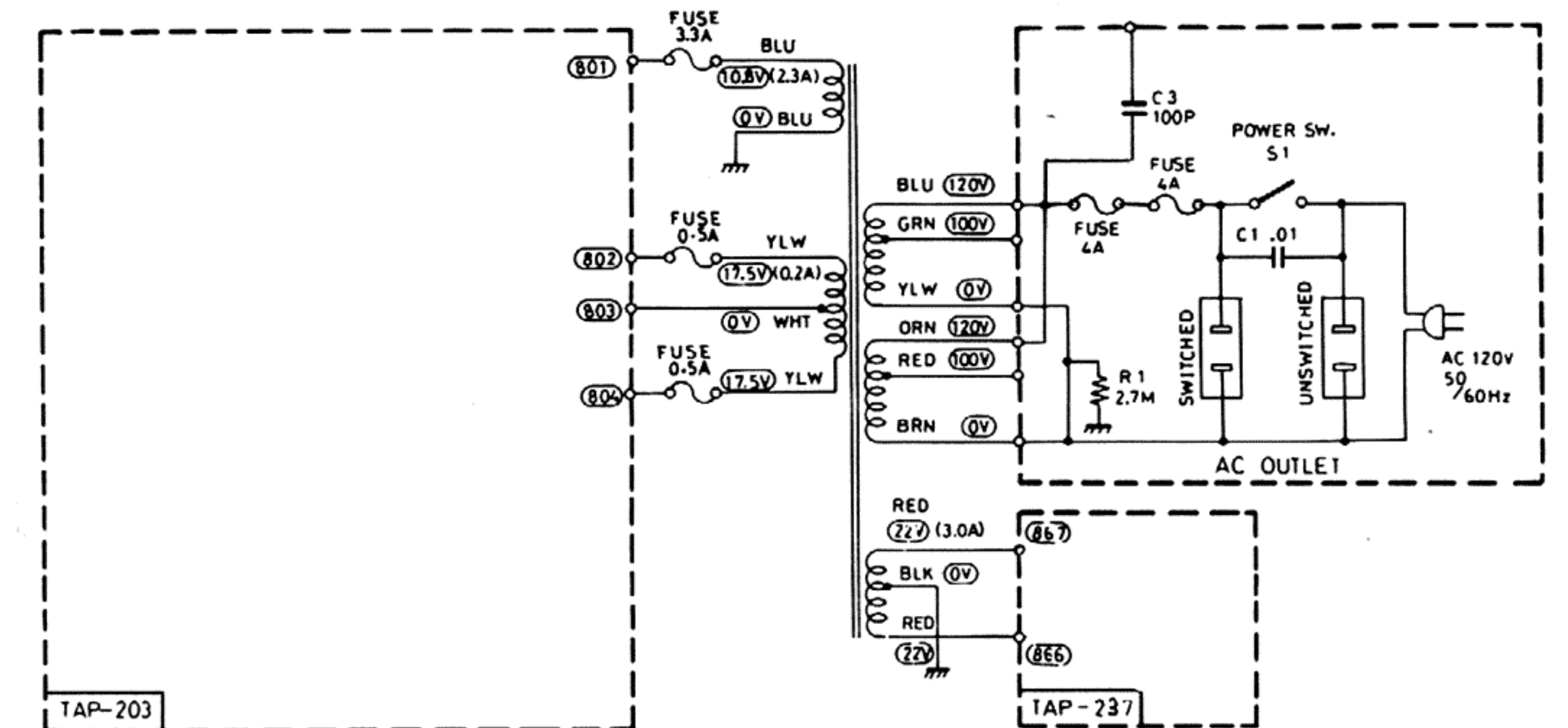


■ FM MPX CIRCUIT (DE-EMPHASIS 50μS)



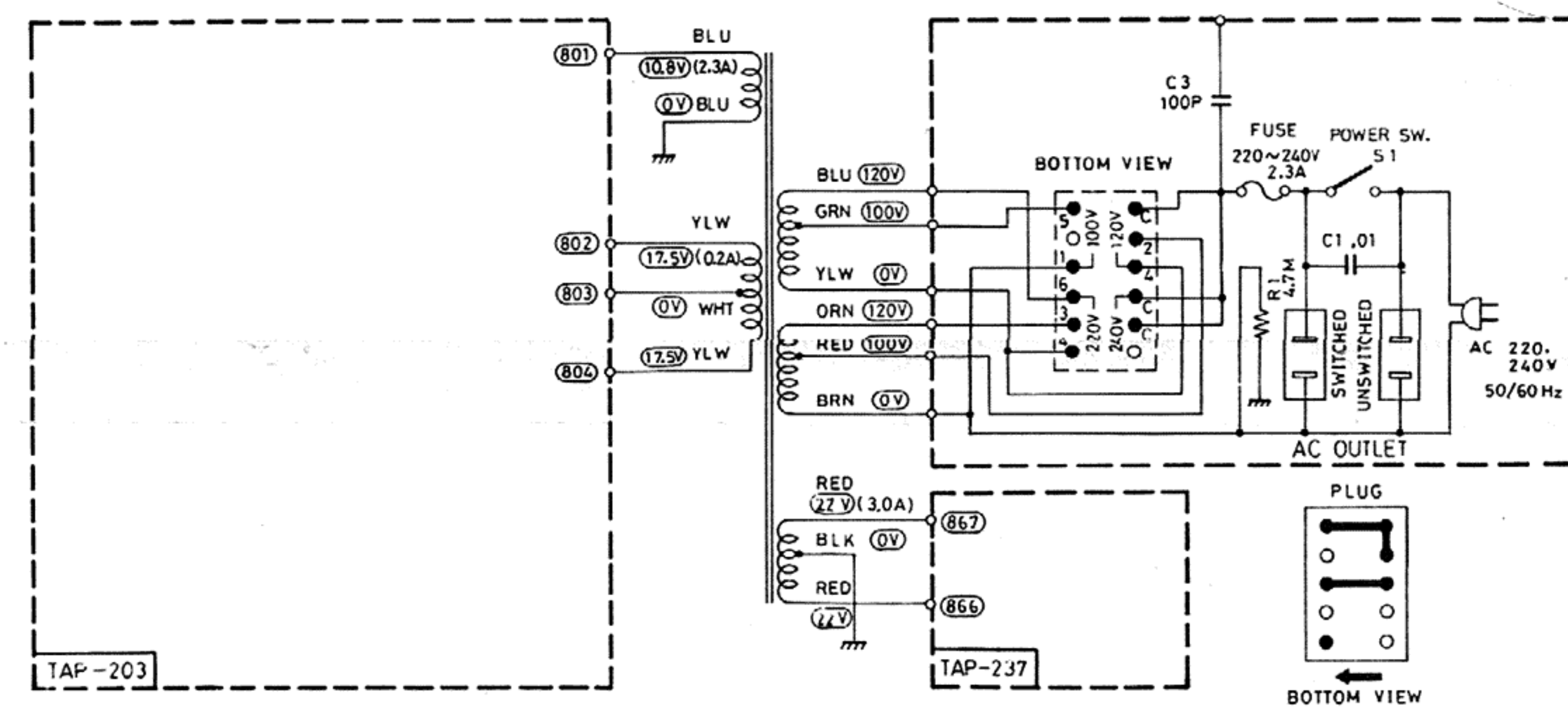
(M) FOR CANADA

■ PRIMARY CIRCUIT (AC 120V 50/60Hz)

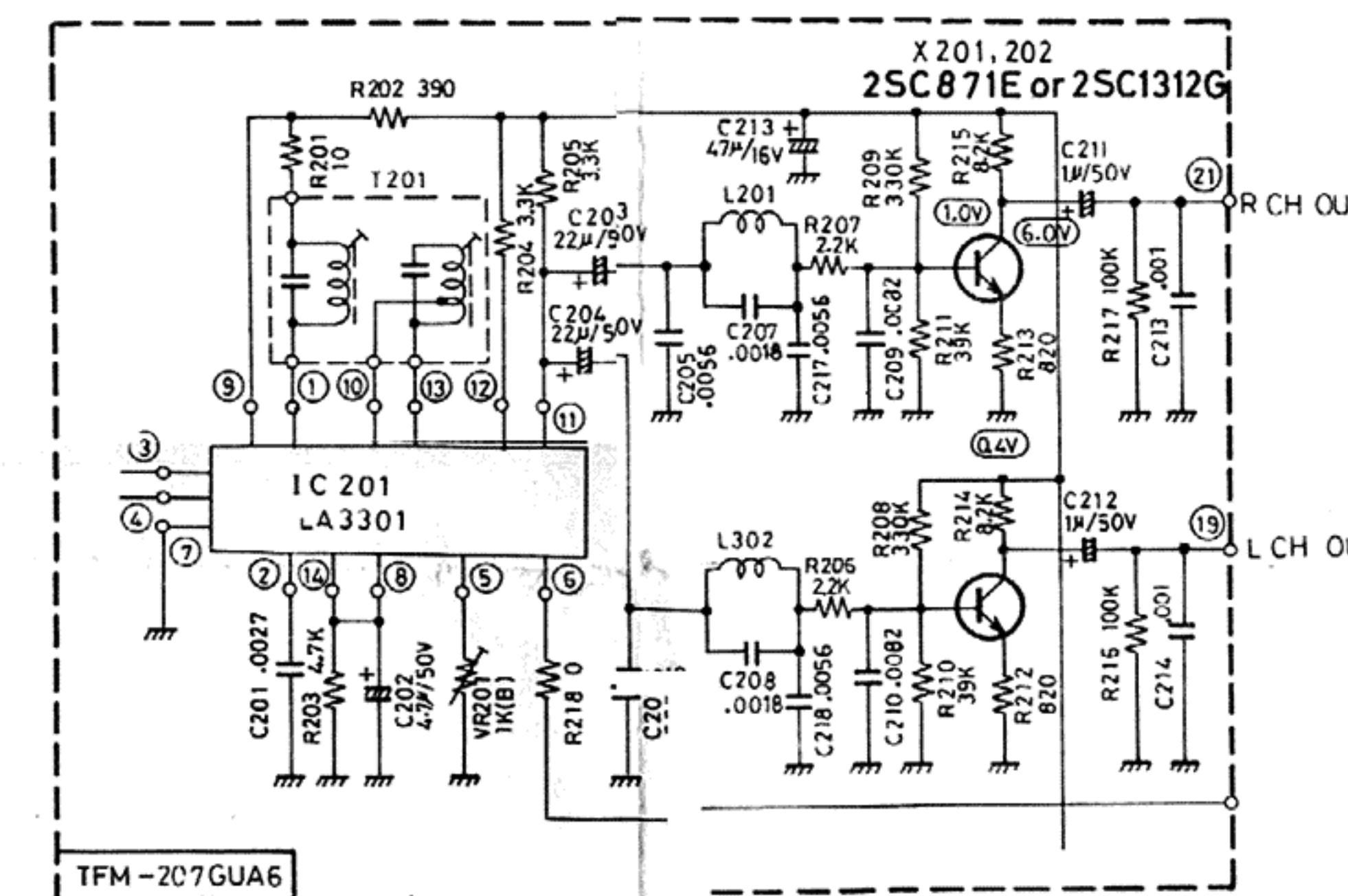


(F) FOR EUROPE

■ PRIMARY CIRCUIT (AC 220, 240V 50/60 Hz)

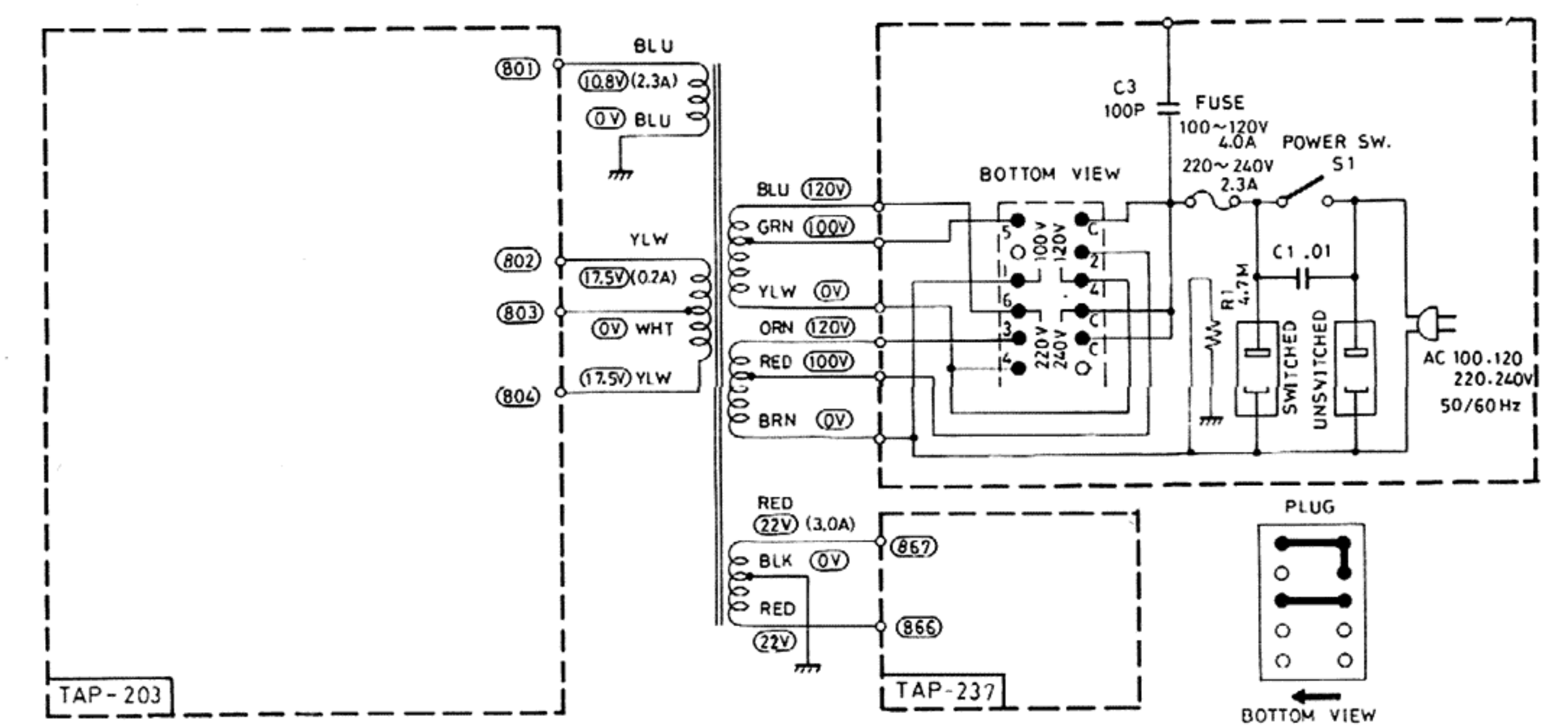


■ FM MPX CIRCUIT (DE-EMPHASIS 50μS)



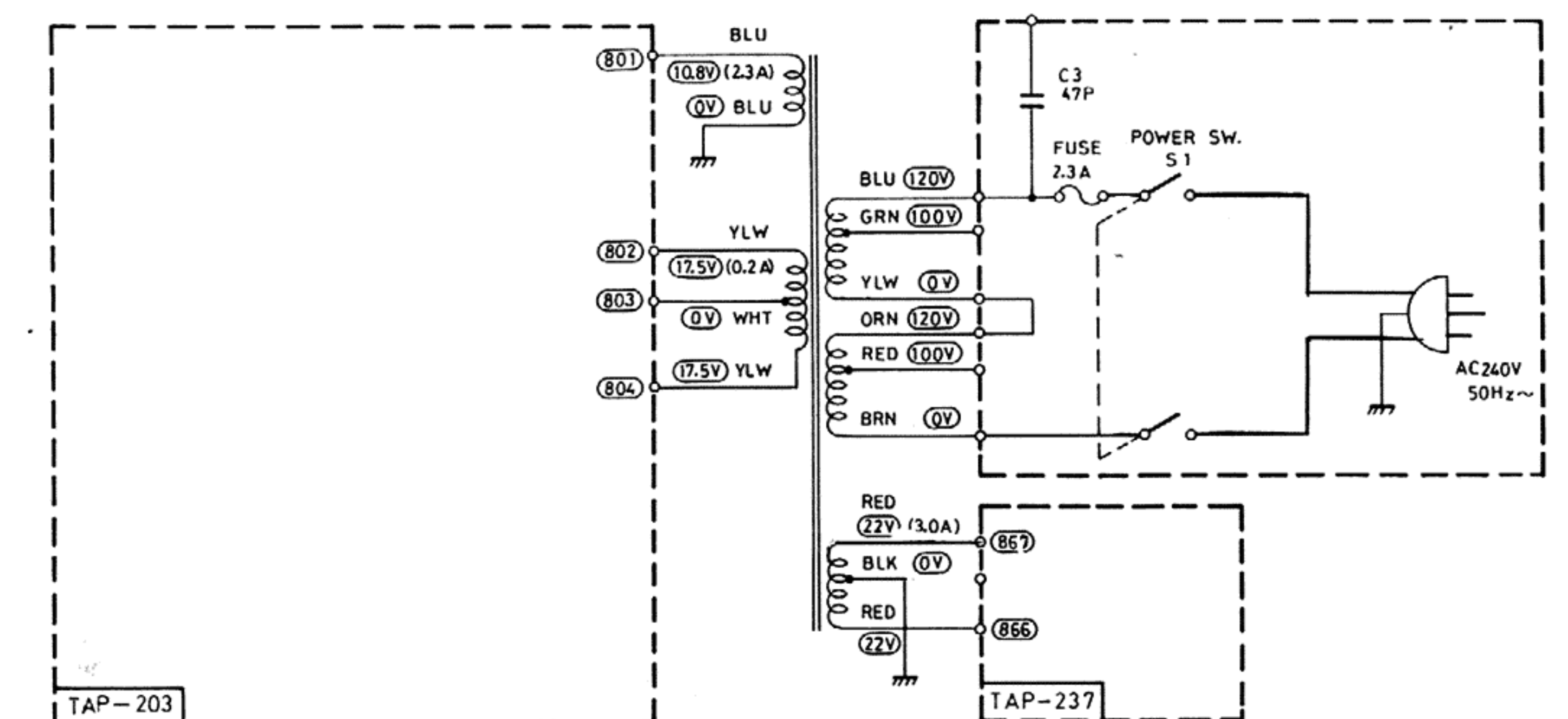
(P) (U) FOR PACEX NEX AND OTHER COUNTRIES

■ PRIMARY CIRCUIT (AC 100, 120, 220, 240 V 50/60 Hz)

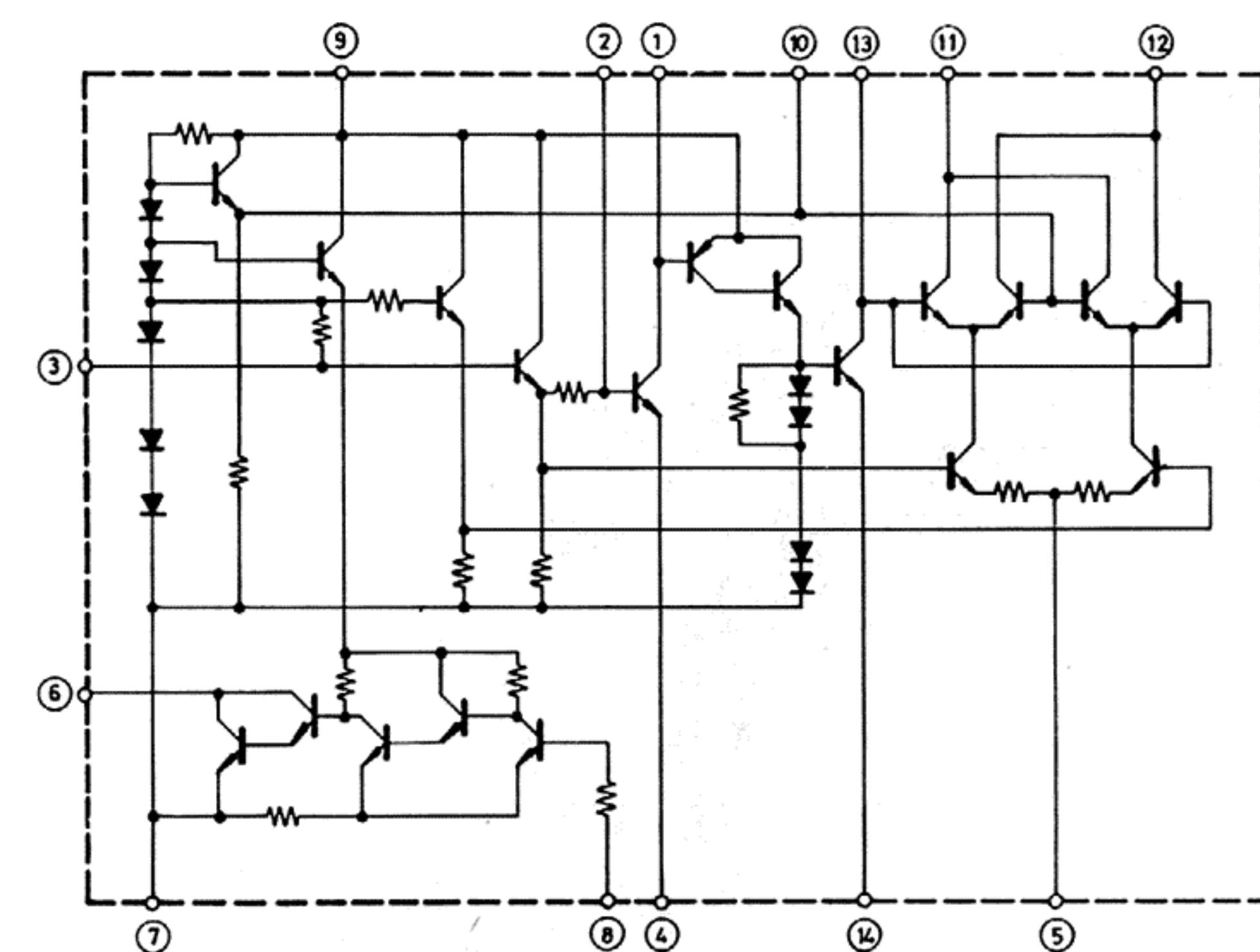


(A) FOR AUSTRALIA AND ENGLAND

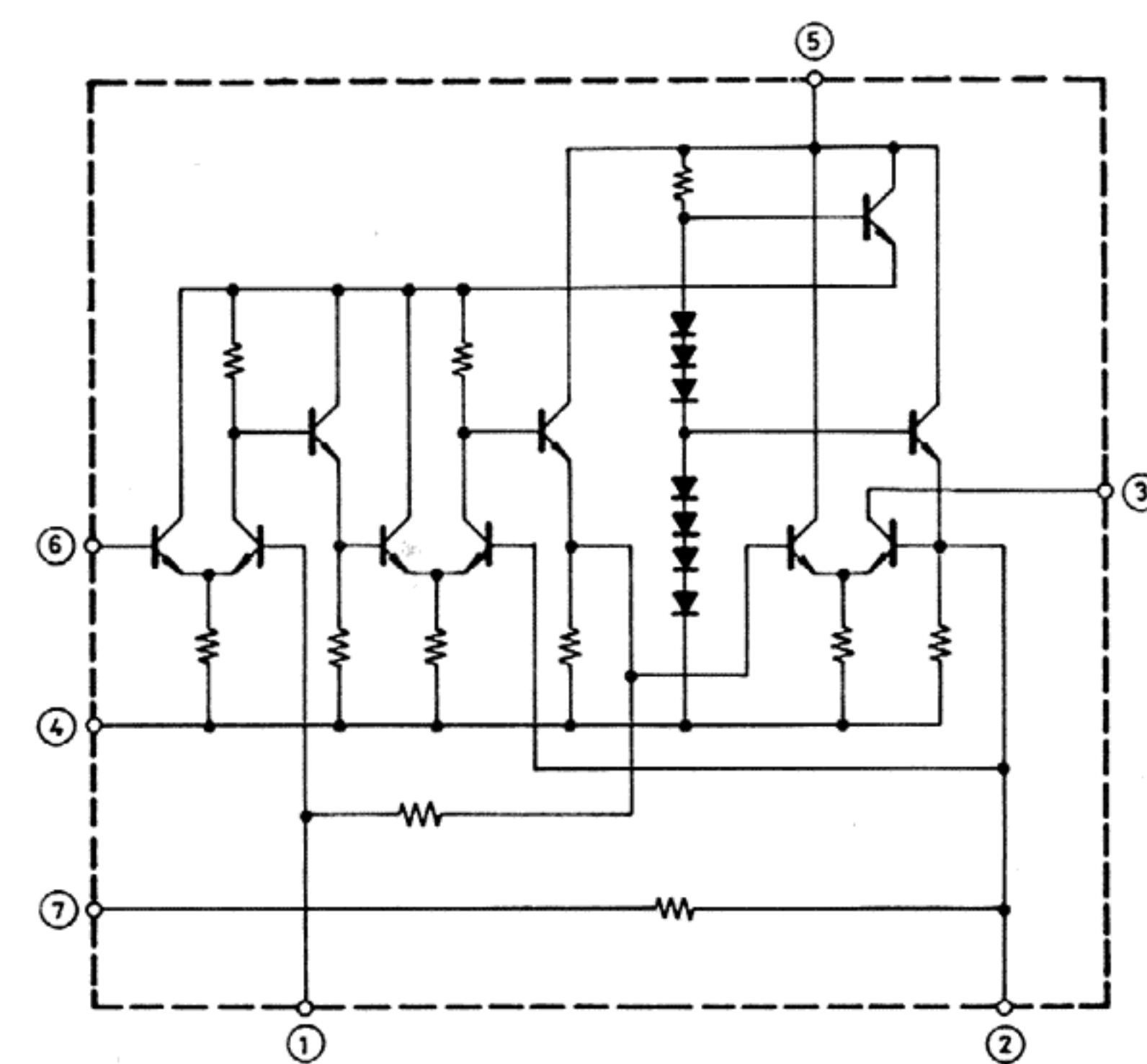
■ PRIMARY CIRCUIT (AC 240V 50Hz~)



IC201 (LA3301)



IC102 (TA7061AP)



IC 01

