REALISTIC®

Service Manual

31-2078

STA-16B

AM/FM STEREO RECEIVER

Catalog Number: 31-2078

CUSTOM MANUFACTURED FOR RADIO SHACK TC A DIVISION OF TANDY CORPORATION

CONTENTS

1) ELECTRICAL PERFORMANCE SPECIFICATIONS

AM BAND

	UNIT	NOMINAL	LIMIT
Frequency Coverage	kHz	515 – 1650	520 – 1625
IF	kHz	455	–
Antenna Sensitivity for S/N 20 dB			
at 600 kHz	μV/m	200	500
at 1000 kHz	μV/m	200	500
at 1400 kHz	μV/m	200	500
Terminal Sensitivity (S/N 20 dB)	μV	15	–
ACA at S/N 6 dB Sensitivity at 1000 kHz	dB	30	22
AGC Distortion at 1000 kHz			
1000 mV/m, 80 % modulation	%	4	10
AGC Figure of Merit	dB	45	38
IF Rejection at 600 kHz	dB	36	28
Image Rejection at 1400 kHz	dB	45	35
Distortion at 5 mV/m 30 % modulation 400 Hz	%	1.5	3.5
Tape Out Level 5 mV/m 30 % modulation 400 Hz	mV	250	200
Fidelity 5 mV/m Input (1 kHz = 0 dB) –6 dB down	Hz	50 – 2500	–
Whistle Modulation of 2nd and 3rd Harmonic			
at 1 and 5 mV/m Input	%	5	10
Calibration Accuracy at 600 kHz	kHz	–	± 25
at 1400 kHz	kHz	–	± 50
S/N Ratio at 5 mV/m Input, 1000 kHz	dB	43	37

FM BAND

	UNIT	NOMINAL	LIMIT
Frequency Coverage (For UL AND C.S.A.)	MHz	86.5 – 108.5	88 – 108
Frequency Coverage (For European and Australian)	MHz	*87.5 – 108.5	87.5 – 108
IF	MHz	10.7	–
IHF Sensitivity at 90, 98 and 106 MHz	μV	2.8 (14.1 dBf)	5.0 (19.2 dBf)
S/N Ratio at 1 mV Input	dB	58	50
FM Limiting – 3 dB	μV	3	6
IF Rejection at 90 MHz	dB	70	60
Image Rejection at 106 MHz	dB	45	35
Capture Ratio	dB	2.5	6
ACA ± 400 kHz at 100 μV	dB	40	25
Audio THD 400 Hz, 75 kHz Dev.	%	0.6	1.5
Calibration Accuracy at 90 MHz	kHz	–	± 500
at 106 MHz	kHz	–	± 500
AFC Holding Range with 1 mV Signal	kHz	± 300	± 300 ± 150
THD at Maximum Signal Handling Capacity			
of 200 mV Input	%	1.5	4
Tape Out Level 75 kHz Dev. 400 Hz 1 mV	V	1	1 ± 3 dB

NOTE: All sets must meet the requirements of the FCC. Frequency response must meet the 75 μsec. de-emphasis for UL and C.S.A. models (50 μsec. de-emphasis for European and Australian models).

*European models must not be able to tune below 87.5 MHz.

FM MPX SECTION

	UNIT	NOMINAL	LIMIT
Stereo Indicator "ON" Level	μV	10	20
Separation at 1 mV			
at 100 Hz	dB	33	25
at 1 kHz	dB	38	30
at 10 kHz	dB	30	22
Stereo Distortion 1 mV 1 kHz	%	0.8	2.0
38 kHz Rejection	dB	55	40
SCA Rejection	dB	55	40

AUDIO SECTION

	UNIT	NOMINAL	LIMIT
Input Impedance PHONO Mag.	K ohm	50	—
AUX	K ohm	450	—
Output Power at THD of 0.9 %, 8 ohm			
Both Channels Driven at 1 kHz	W	7.0	5.5
Power Output, 8 ohms, Both Channels Driven,			
THD 0.9 %, 30 Hz – 20 kHz	W	6	5
Sensitivity for Rated Power			
PHONO Mag.	mV	2.5	3.5
AUX	mV	150	200
Frequency Response at AUX (1W ± 2 dB)	Hz	40 – 22 k	50 – 18 k
BASS Action at 100 Hz	dB	± 10	± 10 ± 3
TREBLE Action at 10 kHz	dB	± 10	± 10 ± 3
Hum and Noise at Min. VOLUME	mV	1	3
Hum and Noise at Max. VOLUME, Tone Max. (AUX mode)	mV	20	70
Signal to Noise Ratio			
at PHONO Mag. 5 mV Input (Input Short)	dB	60	50
at AUX 200 mV Input	dB	60	50
Cross Talk at 1 kHz AUX	dB	60	45
Bass Compensation at 100 Hz, –30 dB VOLUME	dB	+9	+9 ± 3
Treble Compensation at 10 kHz, –30 dB VOLUME	dB	+4	+4 ± 3
TAPE OUT Level PHONO Mag.			
at 5 mV Input	mV	250	200
AUX at 200 mV Input	mV	250	200
PHONO Mag. Eq. Response at 100 Hz	dB	+13	+13 ± 2
at 10 kHz	dB	–13	–13 ± 2
PHONO Mag. Overload (THD = 0.9 %)	mV	82	70

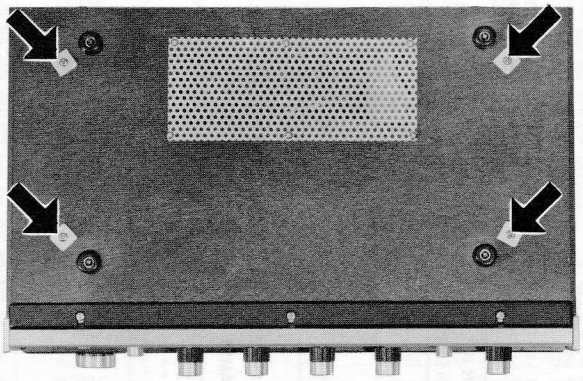
NOTE: The supply voltage is 120 volt AC, 60 Hz (for UL and C.S.A. models) from a regulated power supply. (Use 220/240 volt AC, 50 Hz for European and 240 volt AC, 50 Hz for Australian models.)

The power source must be isolated from other equipment connected to antenna or output.

The room temperature is 25 degrees C.

Nominal Specs represent the design specs; all units should be able to approximate these – some will exceed and some may drop slightly below these specs. Limit Specs represent the absolute worst condition which still might be considered acceptable; in no case should a unit perform to less than within any Limit Specs.

2) DISASSEMBLY INSTRUCTIONS

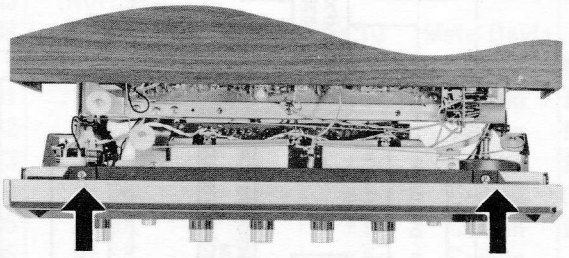


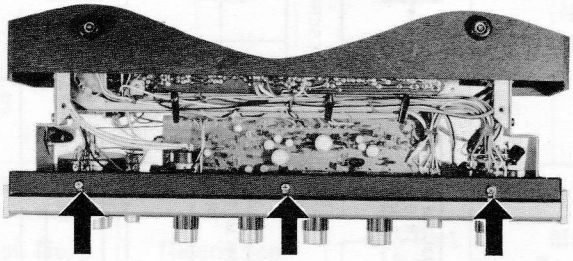
1) To remove chassis from wooden cabinet.

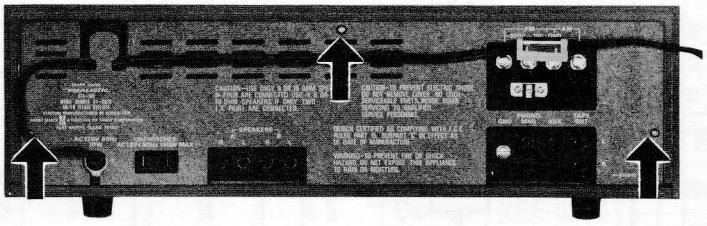
Turn the cabinet upside down and remove the four Pan head screws from the bottom cabinet.

2) Removal of front panel (Aluminium panel).

a. Remove the chassis from wooden cabinet as described in 1).
b. Pull out the main chassis.
c. Remove the two Pan head screws from the top and the three Pan head screws from the bottom of the front panel.
d. Remove knobs and pull off panel.



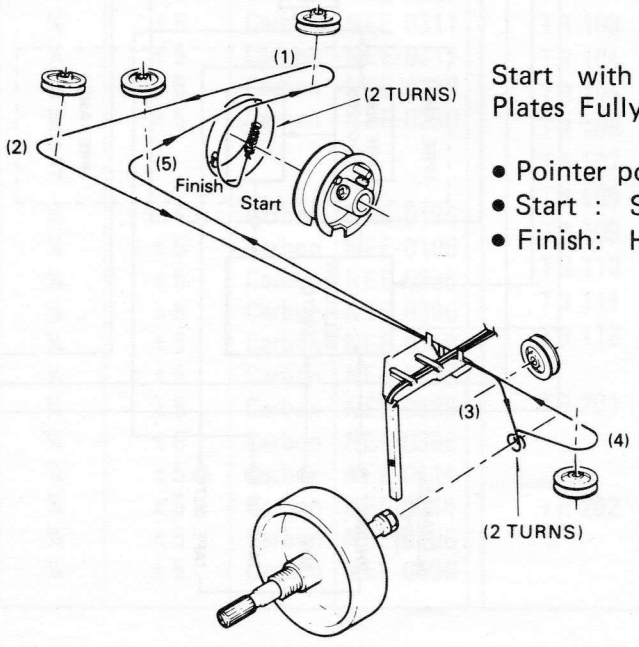




3) To remove rear panel from chassis.

Remove the three Pan head screws from the rear panel.

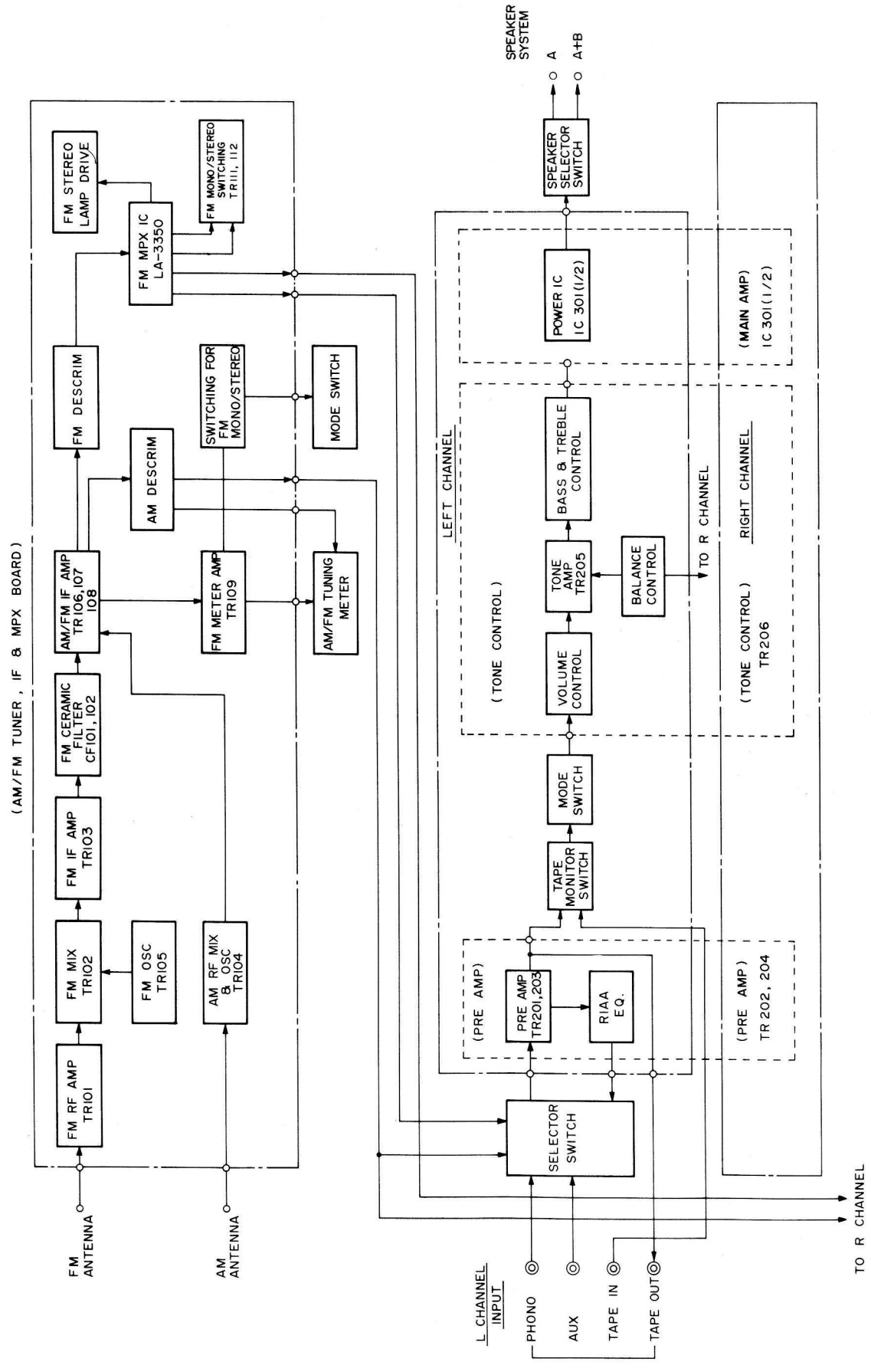
3) DIAL STRINGING DIAGRAM



Start with Capacitor set with Plates Fully Unmeshed.

- Pointer position: HIGH END
- Start : Spring
- Finish: Hook

4) BLOCK DIAGRAM



5) ALIGNMENT INSTRUCTIONS

EQUIPMENT REQUIRED

1. AM Signal Generator
2. AC Voltmeter
3. Oscilloscope

TUNER COIL & TRIMMER LOCATIONS

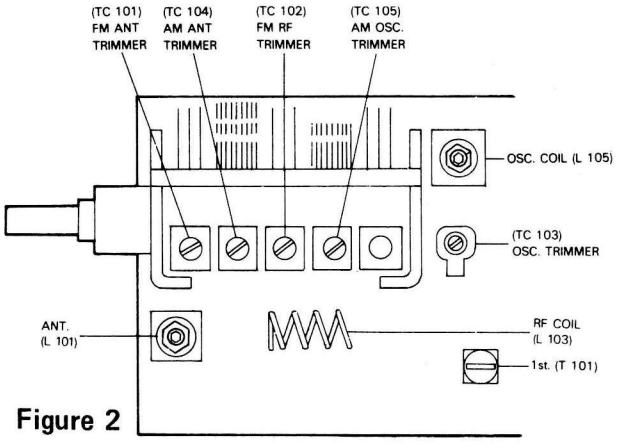


Figure 2

AM IF & RF ALIGNMENT

NOTE:

- Signal Generator output should be no higher than necessary to obtain an output reading.
- Maintain line voltage at 120 volts. (UL, C.S.A.) (Use 220/240V AC For European & Australian Models.)
- Set SELECTOR Switch to AM.
- See P.C.B. illustrates for alignment points/adjustments.

STEP	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUSTMENT	REMARKS
1	Connect standard loop ANTENNA to Signal Generator and radiate signal into the AM Ferrite antenna. See Fig. 3.	455 kHz (400 Hz, 30% MOD)	Point of non-interference (near 600 kHz)	AC Voltmeter to TAPE OUT Jack	T106 T107 T108 T109	Adjust for maximum reading
2	Same as above	600 kHz (400 Hz, 30% MOD)	600 kHz	Same as above	T105 (OSC Coil) L602 (AM ANT Coil)	Adjust for maximum reading
3	Same as above	1400 kHz (400 Hz, 30% MOD)	1400 kHz	Same as above	TC105 (OSC Trimmer) TC104 (ANT Trimmer)	Adjust for maximum reading
4	Repeat Steps 2 and 3 until no further change is noticed.					
5	Same as Step 1.	1000 kHz (400 Hz, 30% MOD) Output level to 100 mV/m	Point of non-interference and no signal	AM Strength Meter on Receiver	Select value of R160	Select value so Meter Pointer on Receiver reads between 80 % and 90 % on the Meter

AM ALIGNMENT SET-UP

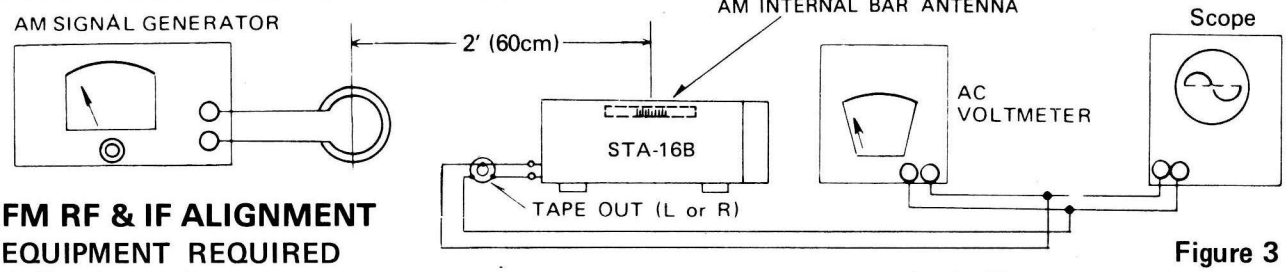


Figure 3

FM RF & IF ALIGNMENT

EQUIPMENT REQUIRED

1. FM Signal Generator . . . . . Output Level: 1 mV
2. Sweep Generator
3. AC Voltmeter
4. Oscillator
5. Distortion Meter

NOTE:

- Signal Generator output should be no higher than necessary to obtain an output reading.
- Set SELECTOR Switch to FM.
- Maintain Line voltage at 120 volts. (UL, C.S.A.) (220/240 V AC For European & Australian Models.)
- Refer to P.C.B. illustrations for test points/adjustments.

STEP	GENERATOR COUPLING	GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUSTMENT	REMARKS
1	Sweep Generator to TP3 on FM Front end boad	10.7 MHz (1400 kHz Sweep)	Any dial setting where no noise or interference exists	Scope to TP7 at R151 (MPX input) AM/FM/MPX Board	T101, 102, 103, 104 (Primary) FM IFT	Adjust for maximum amplitude and proper linearity between ±150 kHz markers Refer to Fig. 5.
2	Sweep Generator to TP3 thru FM Dummy antena (300 ohm)	10.7 MHz (1400 kHz Sweep)	Any dial setting where no noise or interference exists	Scope to TP7 at R151 (MPX input) AM/FM/MPX Board	T101, 102 FM IFT	Adjust for maximum amplitude and proper linearity between ±150 kHz markers. Refer to Fig. 5.
3	Same as above	10.7 MHz (1400 kHz Sweep)	Any dial setting where no noise or interference exists	Scope to TP7 at R151 (MPX input) AM/FM/MPX Board	T104 FM IFT (Primary and Secondary)	Adjust for symmetrical "S" curve as shown in Fig. 4
4	Signal Generator to FM Antenna Terminal thru FM Dummy antenna (300 ohm)	98 MHz (400 Hz, 100% MOD)	Tune for Maximum reading on meter	Distortion Meter to TAPE OUT Jack	T104 FM Discrim. (Secondary)	Adjust for minimum distortion
5	Same as above	*86.5 MHz See Note in Step 7.	Tuning gang fully closed	AC Voltmeter and Scope to TAPE OUT Jack	L105 (FM OSC)	Adjust for maximum reading on meter
6	Same as above	108.5 MHz	Tuning gang fully opened	AC Voltmeter and Scope to TAPE OUT Jack	TC103 (FM OSC Trimmer)	Adjust for maximum reading on meter
7	Repeat Steps 5 and 6 until Tuning Range Covers exactly from 86.5 MHz to 108.5 MHz. (*European & Australian models must not be able to tune below 87.5 MHz.)					
8	Signal Generator to FM Dummy antenna (300 ohm)	90 MHz	90 MHz Tune to Signal	AC Voltmeter and Scope to TAPE OUT Jack	L101 (FM ANT Coil) L103 (FM RF Coil; stretch or squeeze)	Adjust for maximum reading on meter
9	Same as above	106 MHz	106 MHz Tune to Signal	AC Voltmeter and Scope to TAPE OUT Jack	TC101 (FM ANT Trimmer) TC102 (FM RF Trimmer)	Adjust for maximum reading on meter
10	Repeat Steps 8 and 9 until no further improvement is noticed.					
11	Same as Step (8) ANT. input: 1 mV	98 MHz	98 MHz Tune to Signal	—	T110	Adjust for maximum reading on meter
12	Same as Step (8) ANT. input: 100 mV	98 MHz	98 MHz Tune to Signal	—	VR101	Adjust so the Meter Pointer on Receiver is full scale.

FM ALIGNMENT SET-UP

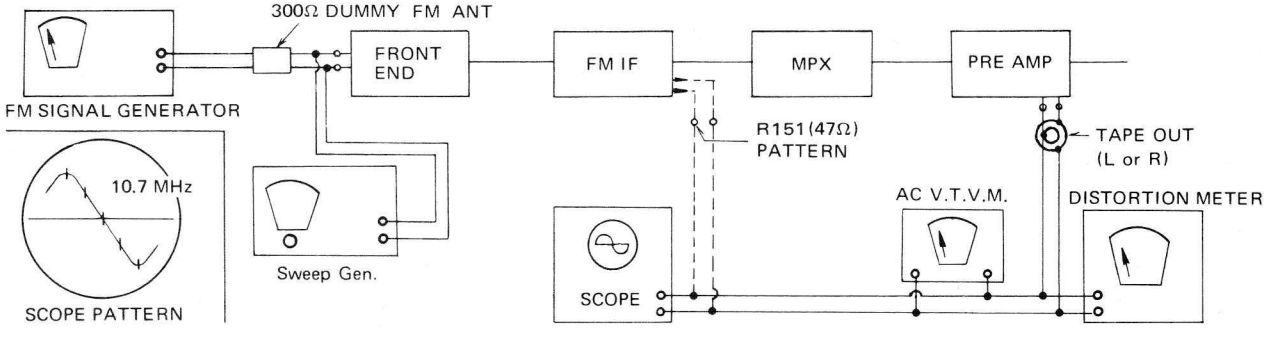


Figure 4

Figure 5

FM STEREO ALIGNMENT

EQUIPMENT REQUIRED

1. Stereo Modulator. . . . Connect Stereo Modulator to EXT, Mod. terminal FM signal generator.
   Modulation Level of 19 kHz Pilot Signal . . . 8–10%
2. FM Signal Generator. . Output Level . . . . . 1 mV
   Frequency . . . . . Approximately 98 MHz.
   Deviation . . . . . 75 kHz 100 % modulation of composite signal.
3. Audio Generator
4. AC Voltmeter
5. Oscilloscope
6. Distortion Meter
7. Frequency Counter

NOTE:

- See P.C.B. illustration for alignment/test points.
- Set SELECTOR switch to FM and MODE switch to STEREO.

MULTIPLEX & SEPARATION ALIGNMENT

STEP	SIGNAL GENERATOR COUPLING	STEREO MODULATION	INDICATOR	ADJUSTMENT	REMARKS
1	Connect to FM Antenna Terminal thru FM Dummy antenna (300 ohm)	Mono. 1 kHz (1000 Hz, No Mod) Input 1 mV	Counter connected to TP14 at Pin No. 12 of IC	VR103	Adjust for 19 kHz ±50 Hz on Counter. Refer to Fig. 6.
2	Same as above	Composite MPX Signal 1 kHz on Left Channel ONLY	AC Voltmeter connected for TAPE OUT Jack of Right Channel	VR102 (Separation)	Adjust for minimum reading. Refer to Fig. 7.
3	Same as above	Composite MPX Signal 1 kHz on Right Channel ONLY	AC Voltmeter connected for TAPE OUT Jack of Left Channel	Same as above	Same as above
4	Repeat Steps 2 and 3 until AC Voltmeter reading is at least -33 dB re same channel output (i.e., 33 dB separation).				
5	Same as Step 1.	Composite Signal 1 kHz	AC Voltmeter connected to TAPE OUT Jack	Select value of R179.	With 10 μV antenna input signal, stereo indicator lamp should come on.

FM STEREO ALIGNMENT SET-UP

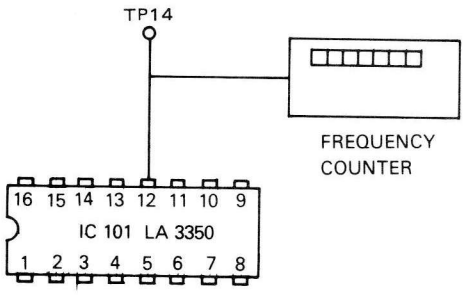


Figure 6

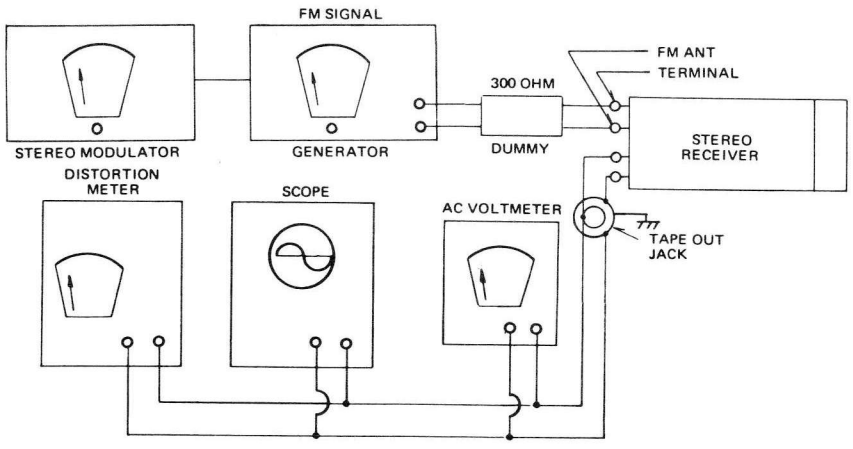
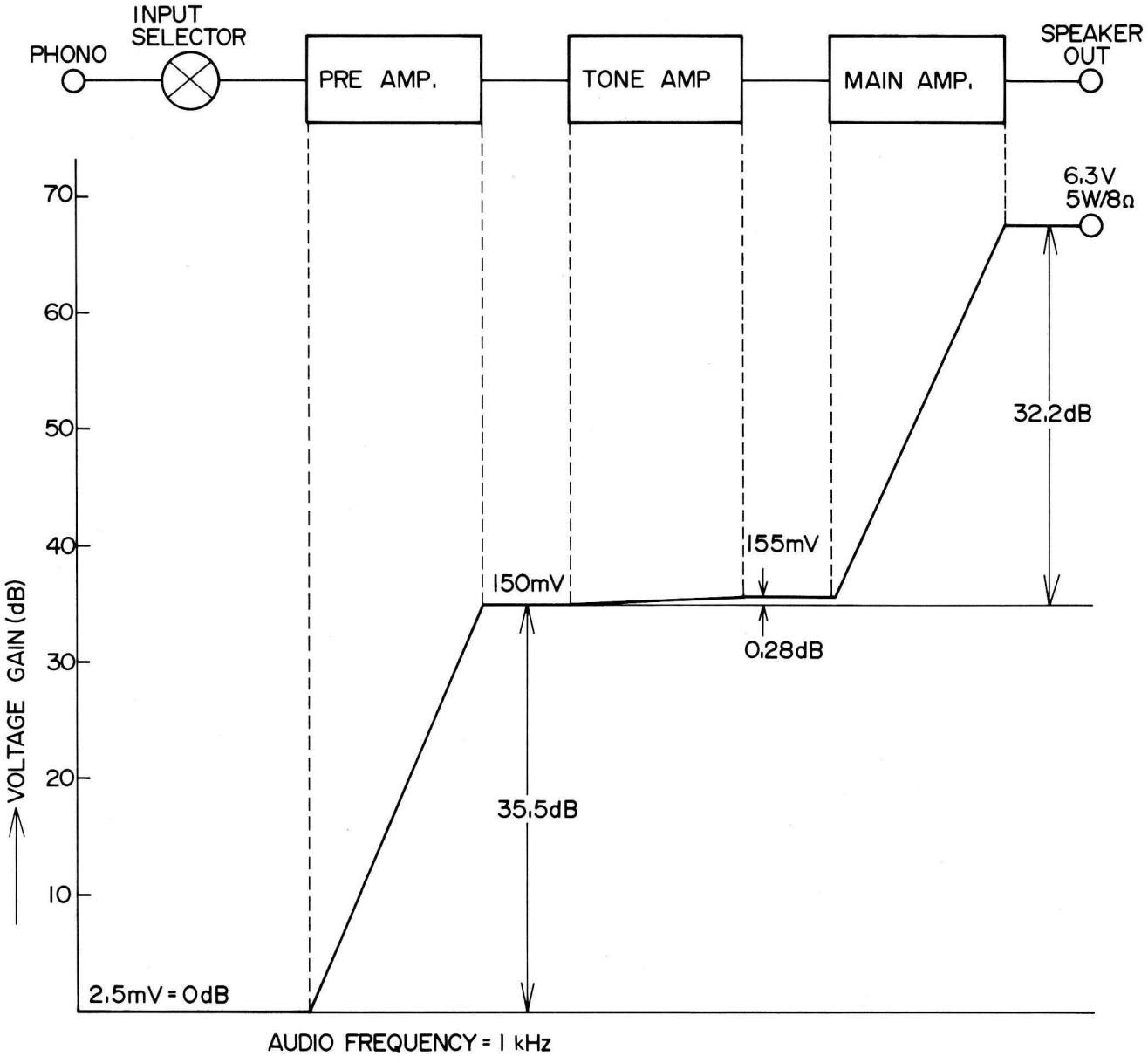


Figure 7

6) LEVEL DIAGRAM



THE VALUE SELECTED PARTS

The value of some parts is selected at the factory for optimum operation. If the circuitry does not operate properly, you can change these values.

C101: In some case, oscillation may take place in FM reception. Removing this capacitor may stop oscillation.

R128: This is to control level of local oscillator. Use larger value to decrease level.

R160: As noted on page 7, this is to control AM Signal Strength Meter. Use larger value to decrease Meter deflection.

R179: Use smaller value to increase FM STEREO indicator sensitivity.

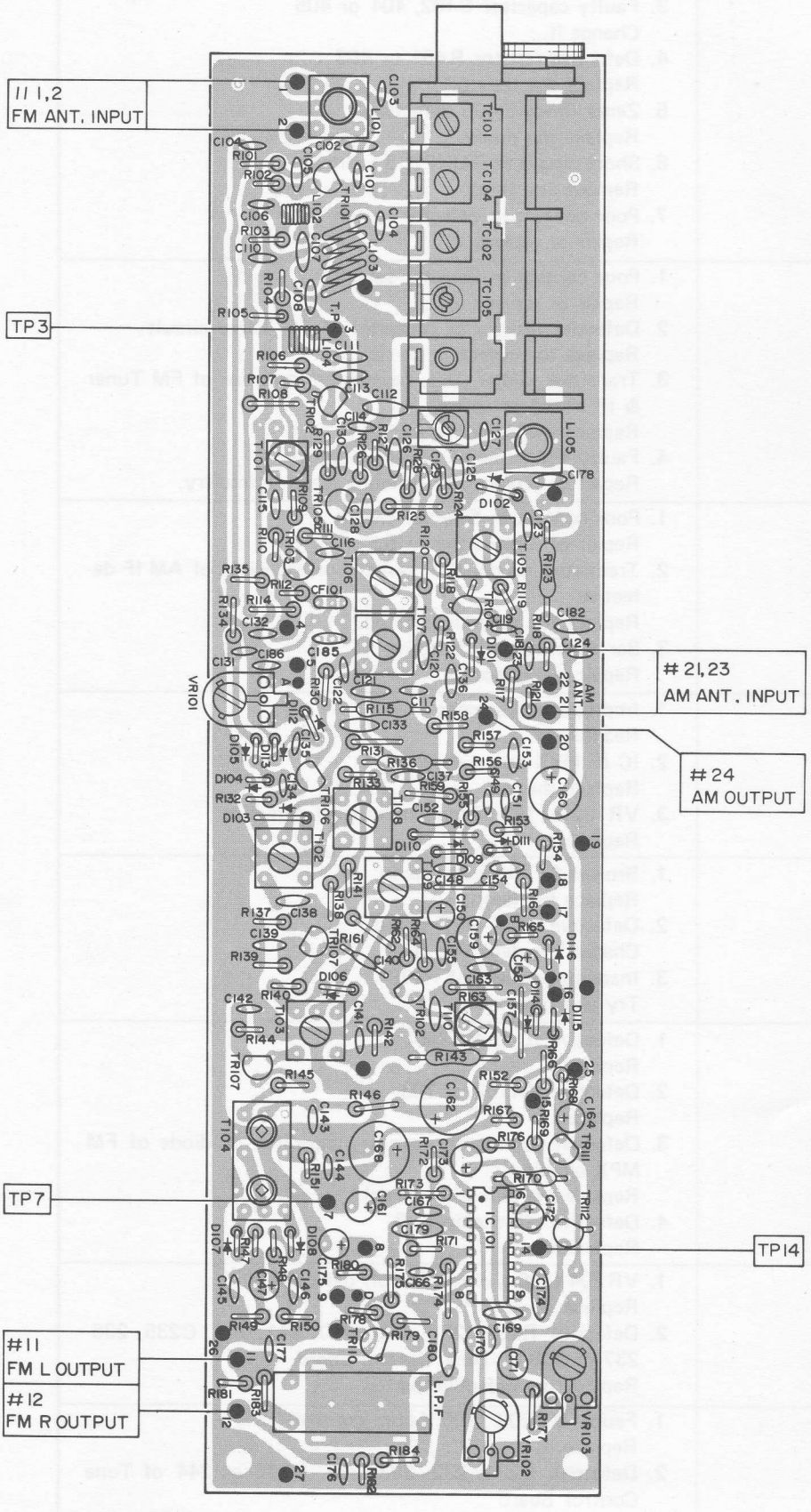
7) TROUBLESHOOTING

SYMPTOM	CAUSE/REMEDY
1) No output.	1. Faulty AC power cord Replace the cord. 2. Defective power switch Replace the switch. 3. Broken wire in the power transformer Replace the transformer.
2) Pilot lamp does not light.	1. Broken lamp Replace the lamp. 2. Open in the power transformer tertiary winding Replace the power transformer.
3) Pilot lamp lights but no speaker output.	1. Defective capacitor C403 Replace the defective capacitor. 2. Defective diode D401, 402, 403 or 404 Replace the defective diode(s). 3. Defective in the power transformer secondary winding Replace the power transformer.
4) Blows fuse.	1. Defective diode D401–404 in the rectifier circuit Replace the defective diode(s). 2. Short-circuit in the rectifier circuit Remove the short. 3. Short-circuit in Main Amp circuitry Repair circuit and/or replace the defective power IC 301.
5-1) No output one channel with VOLUME at maximum and BALANCE at center, when a test signal is applied to the terminal of non-operating channel of the BALANCE control VR202.	1. Defective transistor TR205, 206 or TR301–308 Replace the defective transistor(s). 2. Defective resistor or capacitor of TONE or MAIN AMP circuit Replace the defective part(s). 3. Defective power IC 301 Replace the power IC.
5-2) No output when a test signal is applied to the input terminals.	1. Defective transistor, resistor or capacitor of PRE AMP circuit Replace the defective part(s). 2. Defective MONO/STEREO switch Replace or repair the switch. 3. Defective Selector switch Replace the Selector switch.
6) Speaker works normally but headphone does not work.	1. Defective R601 (left) or R602 (right) Change it.
7) All the inputs work normally except "AUX" input.	1. Poor contact in "AUX" input jack Replace or repair it. 2. Defective resistor R501, 502, 503, or 504 Replace it. 3. Poor contact in Selector switch Repair or replace the switch.
8) "PHONO" input not operative.	1. Poor contact in "PHONO" input jack Repair or replace it. 2. Faulty Selector switch Repair or replace the switch.
9) "TAPE OUT" inoperative.	1. Poor contact in "TAPE OUT" output jack Repair or replace it.

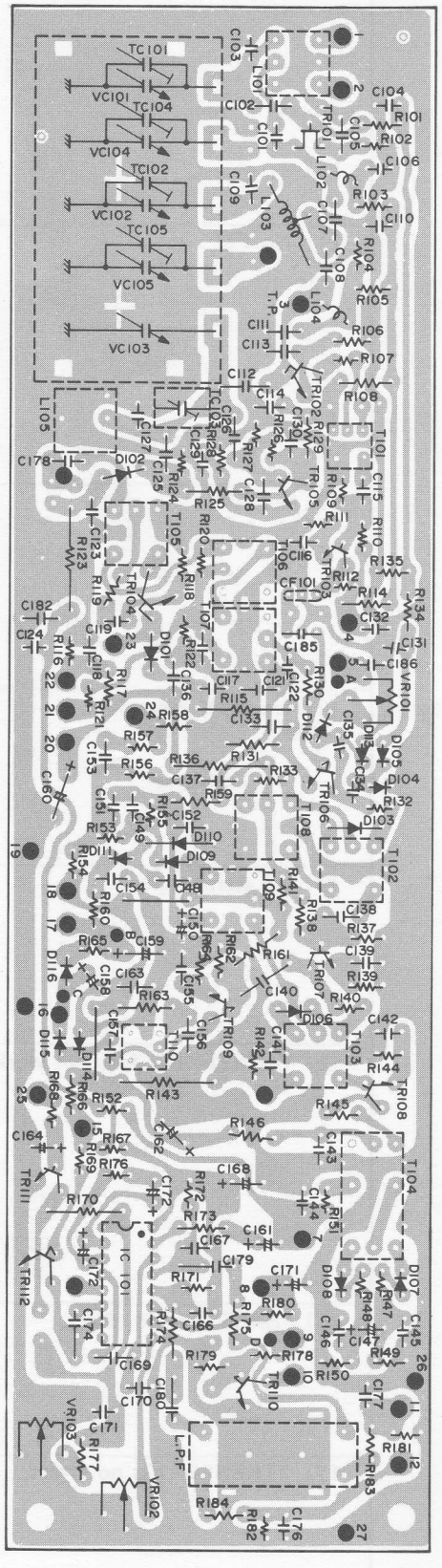
SYMPTOM	CAUSE/REMEDY
10) No AM or FM. (TUNER B+ voltage is not 11—12V).	1. Broken tertiary winding in the power transformer Replace the transformer. 2. Defective diode D405 Change the defective diode. 3. Faulty capacitor C402, 404 or 405 Change it. 4. Defective resistor R401 or 403 Replace the resistor. 5. Zener diode D406 defective Replace the diode. 6. Short circuit in TUNER B+ circuit Remove the short. 7. Poor contact in Selector switch Repair or replace it.
11) No FM.	1. Poor contact in Selector switch Repair or replace it. 2. Defective resistor or capacitor of FM Tuner circuit Replace the defective part(s). 3. Transistor, diode, IFT, resistor or capacitor of FM Tuner & IF board defective Replace the defective part(s). 4. Faulty FM Antenna lead-in/circuitry Repair or replace the Antenna lead-in/circuitry.
12) No AM.	1. Poor contact in Selector switch Repair or replace the switch. 2. Transistor, diode, IFT, resistor or capacitor of AM IF defective Replace the defective part(s). 3. Bar-Antenna coil defective Repair or replace it.
13) No MPX separation.	1. Improper adjustment Readjust it. 2. IC of MPX board defective Replace the IC. 3. VR102 or 103 (Trimmer resistor) defective Replace it.
14) No stereo light.	1. Broken ST. indicator lamp Replace the lamp. 2. Defective IC of MPX board Change the defective IC. 3. Inadequate value of R179 Try changing value.
15) FM STEREO does not work.	1. Defective IC (LA 3350) Replace it. 2. Defective VR102 or 103 Replace it. 3. Defective transistor, resistor, capacitor or diode of FM MPX circuit Replace the defective part(s). 4. Defective pilot lamp PL6 Replace it.
16) "BASS" has no effect.	1. VR204 (100 K ohm control) defective Replace it. 2. Defective R237, 238, 239, 240, 241, 242, C235, 236 237 or 238 of Tone Control Board Replace the defective part(s).
17) "TREBLE" has no effect.	1. Faulty VR203 (100 K ohm control) Replace it. 2. Defective C231, 232, 233, 234, R243 or 244 of Tone Control Board Replace the defective part(s).

8) AM/FM TUNER, IF & MPX P.C.B. (TOP & BOTTOM VIEWS)

TOP VIEW

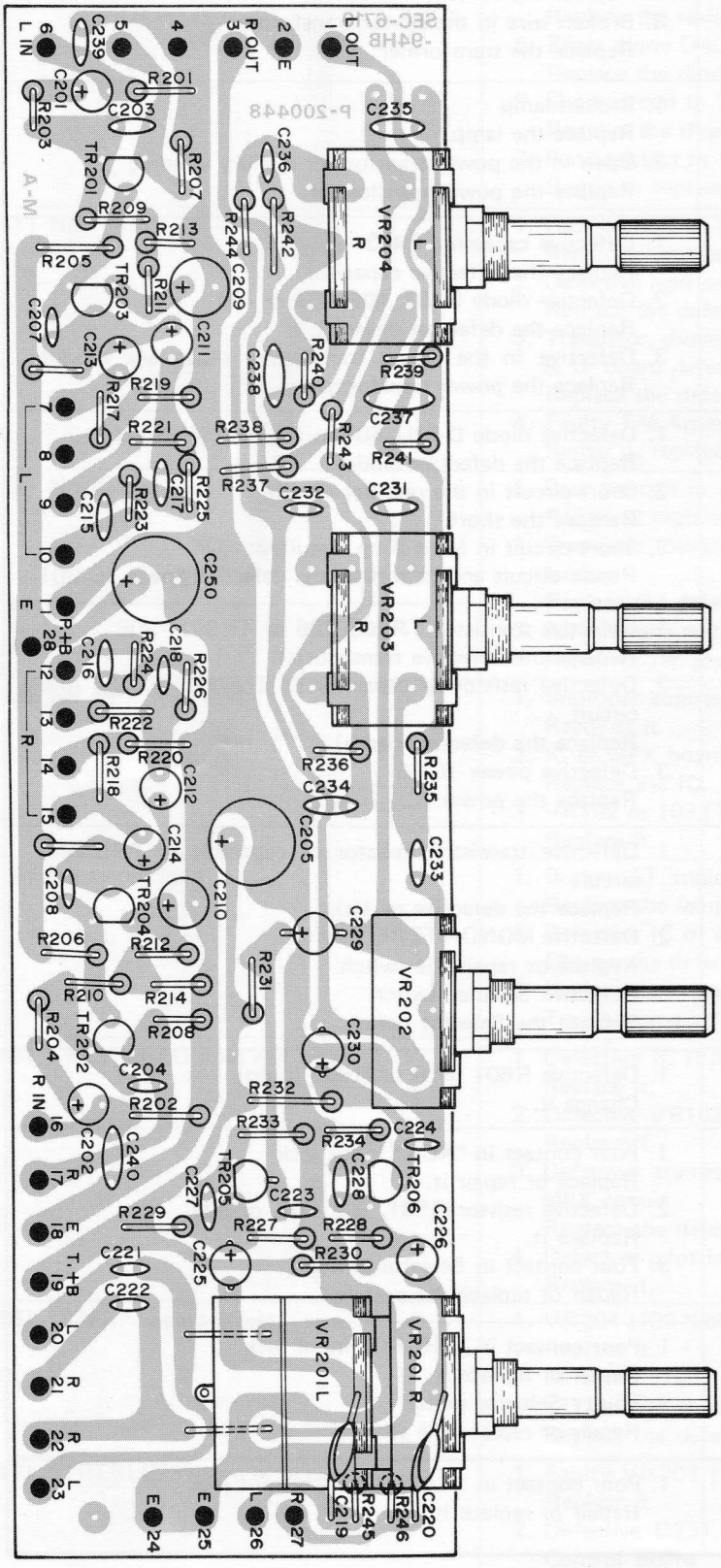


BOTTOM VIEW

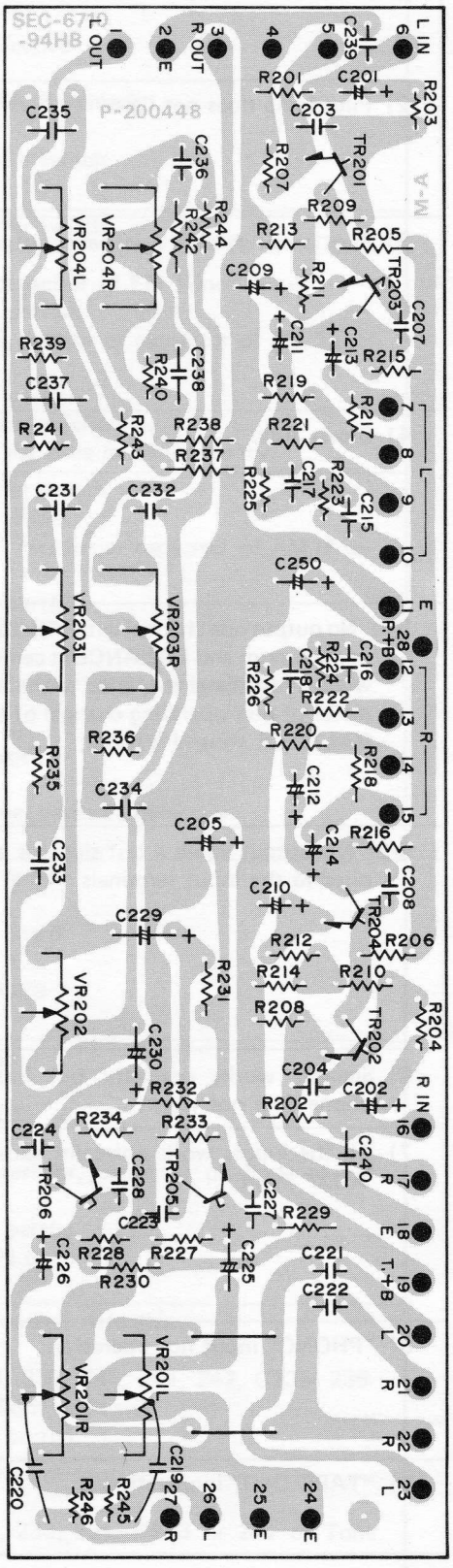


9) PRE AMP & TONE CONTROL P.C.B. (TOP & BOTTOM VIEWS)

TOP VIEW

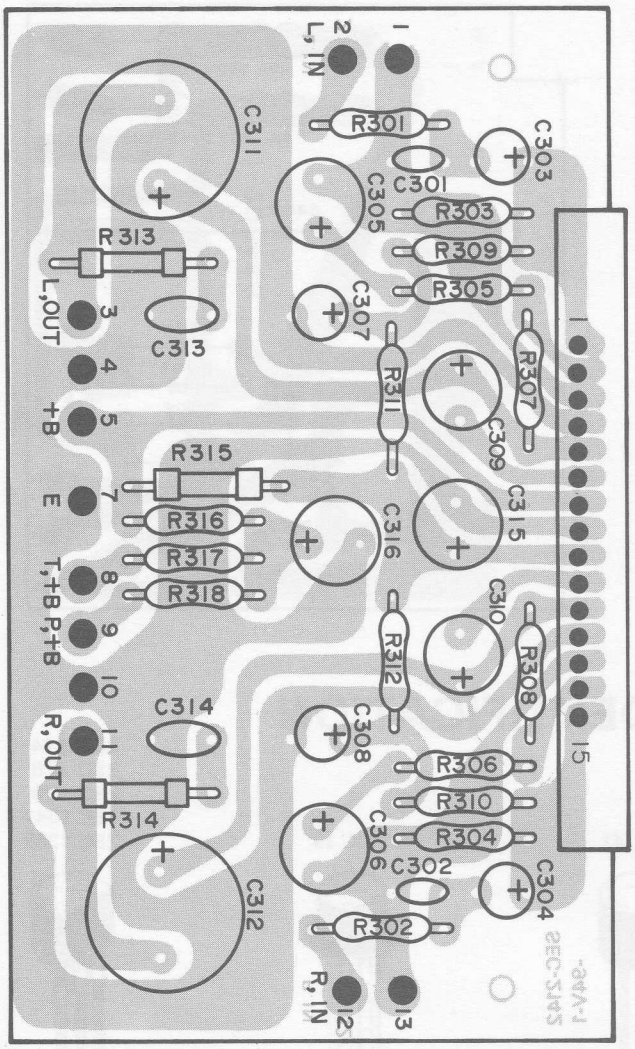


BOTTOM VIEW

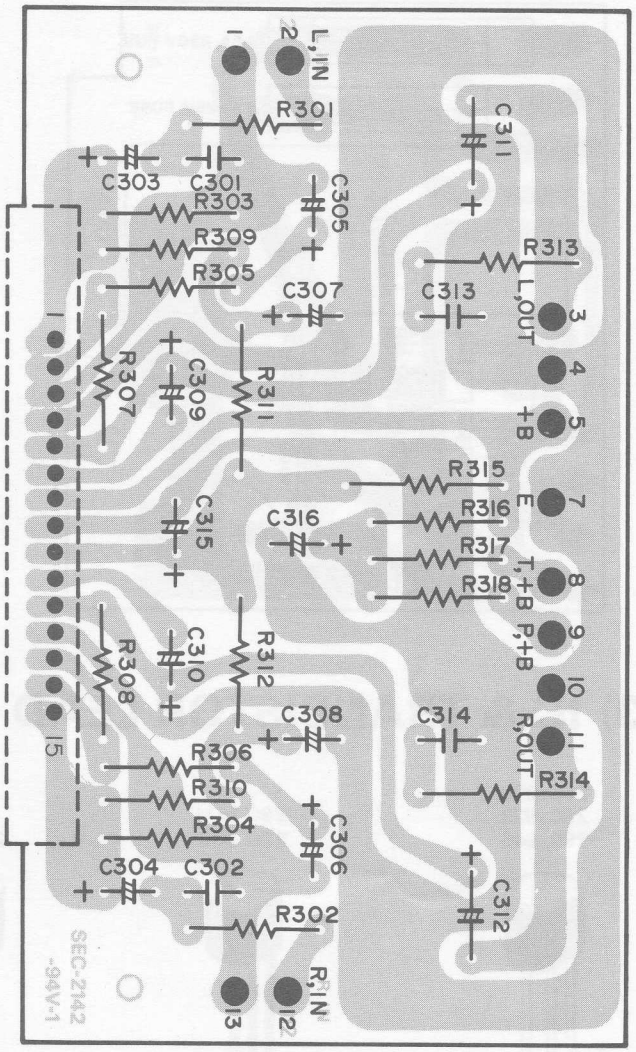


10) MAIN AMP P.C.B. (TOP & BOTTOM VIEWS)

TOP VIEW

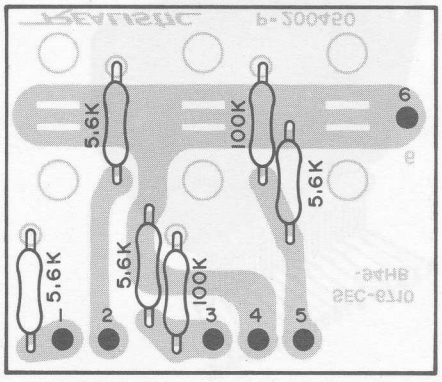


BOTTOM VIEW

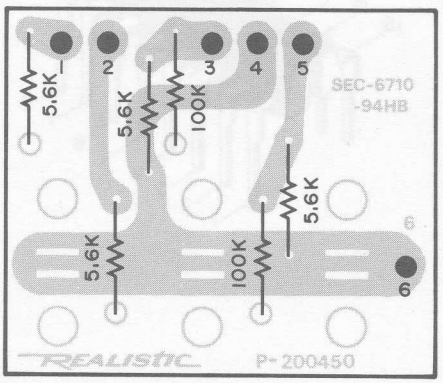


11) JACK P.C.B. (TOP & BOTTOM VIEWS)

TOP VIEW

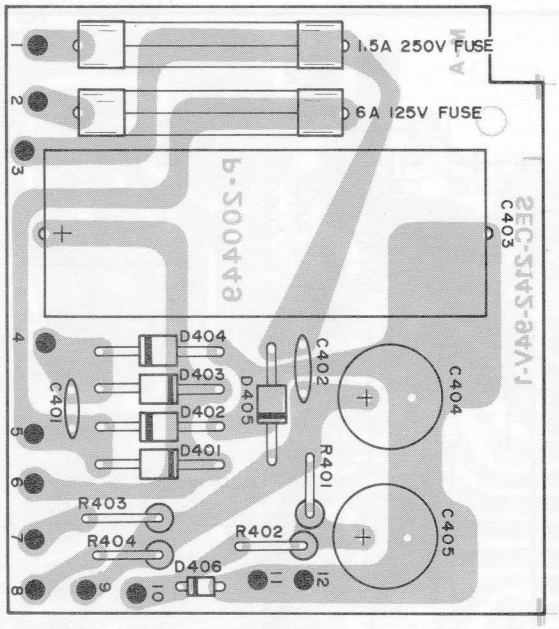


BOTTOM VIEW

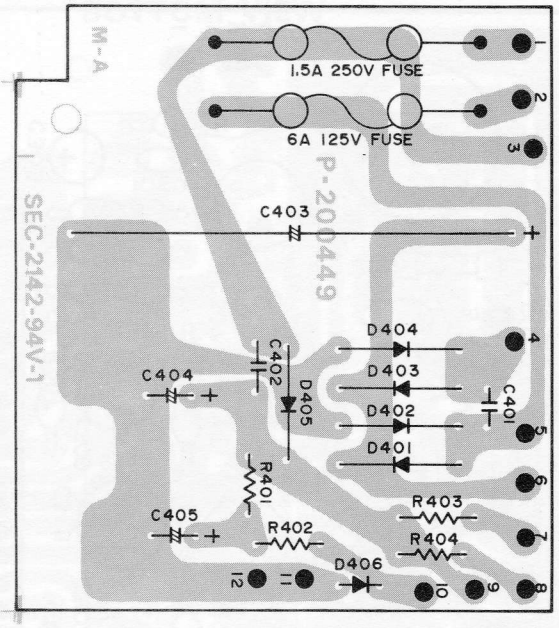


12) POWER SUPPLY P.C.B. (TOP & BOTTOM VIEWS)

TOP VIEW

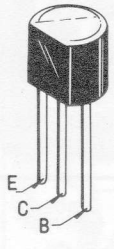


BOTTOM VIEW



13) IC & TRANSISTOR LEAD IDENTIFICATION

2SC 900
2SC 923
2SC 945



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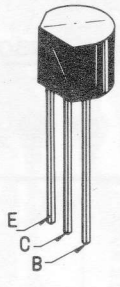
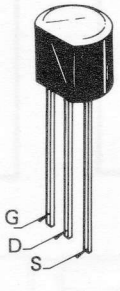
2SC 930



2SK 41



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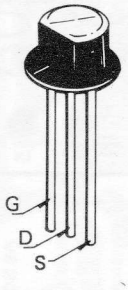

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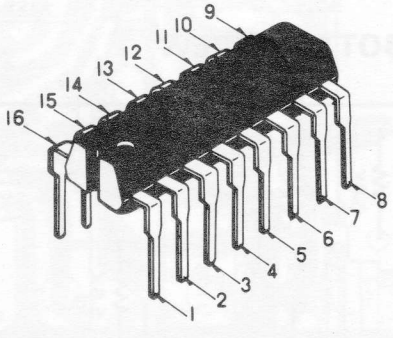
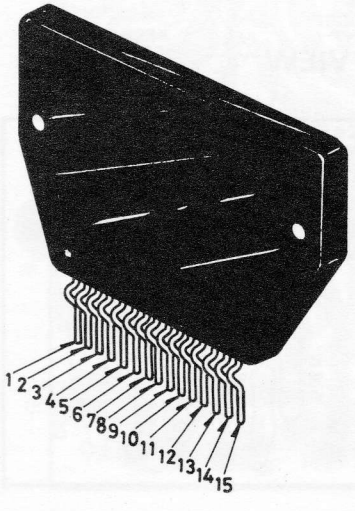
2SC 1359

IC LA3350



IC STK-435



14) ELECTRICAL PARTS LIST

CAPACITORS

Ref. No.	Value (F)	Voltage (V)	Tolerance (%)	Material
C 101*	1P	25	± 0.5	Ceramic
C 102	30P	25	± 5	Ceramic
C 103	15P(NPO)	25	± 5	Ceramic
C 104	0.01μ	25	+80 −20	Ceramic
C 105	0.01μ	25	+80 −20	Ceramic
C 106	0.01μ	25	+80 −20	Ceramic
C 107	30P	25	± 5	Ceramic
C 108	10P	25	± 5	Ceramic
C 109	15P(NPO)	25	± 5	Ceramic
C 110	0.01μ	25	+80 −20	Ceramic
C 111	150P	25	± 5	Ceramic
C 112	1P	25	± 0.5	Ceramic
C 113	0.01μ	25	+80 −20	Ceramic
C 114	0.01μ	25	+80 −20	Ceramic
C 115	0.01μ	25	+80 −20	Ceramic
C 116	0.01μ	25	+80 −20	Ceramic
C 117	0.04μ	25	+80 −20	Ceramic
C 118	0.04μ	25	+80 −20	Ceramic
C 119	0.01μ	50	± 10	Mylar
C 120	0.04μ	25	+80 −20	Ceramic
C 121	0.04μ	25	+80 −20	Ceramic
C 122	0.0047μ	50	± 10	Mylar
C 123	0.01μ	25	+80 −20	Ceramic
C 124	0.01μ	25	+80 −20	Ceramic
C 125	7P	25	± 0.5	Ceramic
C 126	7P(NPO)	25	± 0.5	Ceramic
C 127	18P(N470)	25	± 5	Ceramic
C 128	15P(NPO)	25	± 5	Ceramic
C 129	10P(NPO)	25	± 5	Ceramic
C 130	0.01μ	25	+80 −20	Ceramic
C 131	0.01μ	25	+80 −20	Ceramic
C 132	0.02μ	25	+80 −20	Ceramic
C 133	0.02μ	25	+80 −20	Ceramic
C 134	10P	25	± 5	Ceramic
C 135	30P	25	± 5	Ceramic
C 136	0.02μ	25	+80 −20	Ceramic
C 137	0.02μ	25	+80 −20	Ceramic
C 138	0.01μ	25	+80 −20	Ceramic
C 139	0.04μ	25	+80 −20	Ceramic
C 140	5P	25	± 0.5	Ceramic
C 141	0.01μ	25	+80 −20	Ceramic
C 142	0.02μ	25	+80 −20	Ceramic
C 143	0.02μ	25	+80 −20	Ceramic
C 144	220P	25	± 5	Ceramic
C 145	100P	25	± 5	Ceramic
C 146	100P	25	± 5	Ceramic
C 147	10μ	10	+50 −10	Electrolytic
C 148	220P	25	± 5	Ceramic
C 149	0.015μ	50	± 10	Mylar
C 150	10μ	10	+50 −10	Electrolytic
C 151	0.015μ	50	± 10	Mylar
C 152	0.04μ	25	+80 −20	Ceramic
C 153	0.047μ	50	± 10	Mylar
C 154	0.02μ	25	+80 −20	Ceramic
C 155	0.01μ	25	+80 −20	Ceramic
C 156	0.01μ	25	+80 −20	Ceramic
C 157	100P	25	± 5	Ceramic
C 158	4.7μ	10	+50 −10	Electrolytic
C 159	100μ	10	+50 −10	Electrolytic
C 160	470μ	16	+50 −10	Electrolytic
C 161	3.3μ	16	+75 −10	Electrolytic
C 162	1000μ	16	+50 −10	Electrolytic
C 163	0.04μ	25	+80 −20	Ceramic
C 164	1μ	50	+75 −10	Electrolytic
C 165	(Not used)			
C 166	0.015μ	50	± 10	Mylar (UL & C.S.A.)
	0.01μ	50	± 10	Mylar (European & Australian)
C 167	0.015μ	50	± 10	Mylar (UL & C.S.A.)

*May not be used on some units.

Ref. No.	Value (F)	Voltage (V)	Tolerance (%)	Material
C 167	0.01μ	50	± 10	Mylar (European & Australian)
C 168	330μ	16	+50 −10	Electrolytic
C 169	0.047μ	50	± 10	Mylar
C 170	680P	50	± 5	Polystyrene
C 171	1500P	50	± 5	Polystyrene
C 172	0.22μ	25	± 20	Aluminum
C 173	0.47μ	25	± 20	Aluminum
C 174	0.1μ	50	± 10	Mylar
C 175	47μ	16	+50 −10	Electrolytic
C 176	0.01μ	50	± 10	Mylar
C 177	0.01μ	50	± 10	Mylar
C 178	1800P	50	± 5	Polystyrene
C 179	0.22μ	50	± 10	Mylar
C 180	0.22μ	50	± 10	Mylar
C 182	0.1μ	50	± 10	Mylar
C 185	0.01μ	25	+80 −20	Ceramic
C 186	0.02μ	25	+80 −20	Ceramic
C 201	1μ	25	+75 −10	Electrolytic
C 202	1μ	25	+75 −10	Electrolytic
C 203	100P	25	± 5	Ceramic
C 204	100P	25	± 5	Ceramic
C 205	330μ	25	+50 −10	Electrolytic
C 206	220μ	25	+50 −10	Electrolytic
C 207	100P	25	± 5	Ceramic
C 208	100P	25	± 5	Ceramic
C 209	22μ	10	+50 −10	Electrolytic
C 210	22μ	10	+50 −10	Electrolytic
C 211	3.3μ	25	+75 −10	Electrolytic
C 212	3.3μ	25	+75 −10	Electrolytic
C 213	1μ	25	+75 −10	Electrolytic
C 214	1μ	25	+75 −10	Electrolytic
C 215	0.0047μ	50	± 10	Mylar
C 216	0.0047μ	50	± 10	Mylar
C 217	0.015μ	50	± 10	Mylar
C 218	0.015μ	50	± 10	Mylar
C 219	0.15μ	50	± 10	Mylar
C 220	0.15μ	50	± 10	Mylar
C 221	0.001μ	50	± 10	Mylar
C 222	0.001μ	50	± 10	Mylar
C 223	470P(YP)	25	± 5	Ceramic
C 224	470P(YP)	25	± 5	Ceramic
C 225	1μ	25	+75 −10	Electrolytic
C 226	1μ	25	+75 −10	Electrolytic
C 227	100P	25	± 5	Ceramic
C 228	100P	25	± 5	Ceramic
C 229	1μ	25	+75 −10	Electrolytic
C 230	1μ	25	+75 −10	Electrolytic
C 231	0.0012μ	50	± 10	Mylar
C 232	0.0012μ	50	± 10	Mylar
C 233	0.012μ	50	± 10	Mylar
C 234	0.012μ	50	± 10	Mylar
C 235	0.01μ	50	± 10	Mylar
C 236	0.01μ	50	± 10	Mylar
C 237	0.1μ	50	± 10	Mylar
C 238	0.1μ	50	± 10	Mylar
C 239	180P	25	± 5	Ceramic
C 240	180P	25	± 5	Ceramic
C 301	470P	50	± 10	Ceramic
C 302	470P	50	± 10	Ceramic
C 303	0.47μ	50	+75 −10	Electrolytic
C 304	0.47μ	50	+75 −10	Electrolytic
C 305	220μ	25	+50 −10	Electrolytic
C 306	220μ	25	+50 −10	Electrolytic
C 307	10μ	35	+50 −10	Electrolytic
C 308	10μ	35	+50 −10	Electrolytic
C 309	47μ	25	+50 −10	Electrolytic
C 310	47μ	25	+50 −10	Electrolytic
C 311	2200μ	25	+50 −10	Electrolytic
C 312	2200μ	25	+50 −10	Electrolytic
C 313	0.1μ	50	± 10	Mylar
C 314	0.1μ	50	± 10	Mylar
C 315	100μ	35	+50 −10	Electrolytic
C 316	220μ	25	+50 −10	Electrolytic
C 401	0.01μ	50	+80 −20	Ceramic
C 402	0.01μ	50	+80 −20	Ceramic
C 403	2200μ	35	+50 −10	Electrolytic
C 404	470μ	25	+50 −10	Electrolytic
C 405	1000μ	25	+50 −10	Electrolytic

Ref. No.	Value (F)	Voltage (V)	Tolerance (%)	Material
C 601	0.02μ	25	+80 −20	Ceramic
C 602	0.02μ	25	+80 −20	Ceramic
C 603	0.15μ	50	± 10	Mylar
C 604	0.15μ	50	± 10	Mylar

CERAMIC FILTER

Ref. No.	Description	R/S Part No.	Mfr's Part No.
CF 101	SEF-10.7 MA	C-0550	P-140022 or P-140030

COILS & TRANSFORMERS

Ref. No.	Description	R/S Part No.	Mfr's Part No.
L 101	FM Ant. Coil	CA-3593	P-110036
L 102	FM Trap Coil	CB-2171	P-360003
L 103	FM RF Coil	CA-4736	P-340015
L 104	FM Trap Coil	CB-2171	P-360003
L 105	FM Osc. Coil (UL & C.S.A.)	CA-4528	P-120029
L 105	FM Osc. Coil (European & Australian)		P-120033
L 601	Balun Coil	CA-0942	P-110012
L 602	AM Ant. Coil	CA-0657	P-110084
T 101	FM IFT (7F-007)	CA-7265	P-140007
T 102	FM IFT (10F-011)	CA-7254	P-140011
T 103	FM IFT (10F-011)	CA-7254	P-140011
T 104	FM IFT (10F-014)	CA-7286	P-140014
T 105	AM Osc. Coil (OC-008)	CA-4438	P-120008
T 106	AM IFT (OA-011)	CA-7281	P-130011
T 107	AM IFT (OA-010)	CA-7428	P-130010
T 108	AM IFT (OA-005)	CA-7112	P-130005
T 109	AM IFT (OA-012)	CA-7116	P-130012
T 110	FM IFT (7F-008)	CA-7284	P-140008
T 601	Power Transformer (UL & C.S.A.)	TA-0645	P-100373
T 601	Power Transformer (European & Australian)		P-100496

DIODES

Ref. No.	Type No.	R/S Part No.	Manufacturer
D 101	IN-60P	DX-0162	HITACHI
D 102	IS 2139B	DX-0292	JRC
D 103	WG-713	DX-0543	ITT
D 104	IN-60P	DX-0162	HITACHI
D 105	IN-60P	DX-0162	HITACHI
D 106	WG-713	DX-0543	ITT
D 107	IN-60P	DX-0162	HITACHI
D 108	IN-60P	DX-0162	HITACHI
D 109	IN-60P	DX-0162	HITACHI
D 110	IN-60P	DX-0162	HITACHI
D 111	IN-60P	DX-0162	HITACHI
D 112	IN-60P	DX-0162	HITACHI
D 113	IN-60P	DX-0162	HITACHI
D 114	IN-60P	DX-0162	HITACHI
D 115	IN-60P	DX-0162	HITACHI
D 116	WG-713	DX-0543	ITT
D 401	SR1K-2	DX-0475	UNIZON
	or 10D-1		INTER-RECTIFIER
	or 10E-1		INTER-RECTIFIER
D 402	SR1K-2	DX-0475	UNIZON
	or 10D-1		INTER-RECTIFIER
	or 10E-1		INTER-RECTIFIER
D 403	SR1K-2	DX-0475	UNIZON
	or 10D-1		INTER-RECTIFIER
	or 10E-1		INTER-RECTIFIER
D 404	SR1K-2	DX-0475	UNIZON
	or 10D-1		INTER-RECTIFIER
	or 10E-1		INTER-RECTIFIER
D 405	SR1K-2	DX-0475	UNIZON
	or 10D-1		INTER-RECTIFIER
	or 10E-1		INTER-RECTIFIER
D 406	WZ-120	DX-0536	JRC
	or RD-120		NEC

FILTER

Ref. No.	Description	R/S Part No.	Mfr's Part No.
LPF 101	LC Filter	CA-3373	P-510006

FUSES

Ref. No.	Description	R/S Part No.	Mfr's Part No.
	Fuse with Lead 250V, 1.5 A (Quick type) (UL & C.S.A.)	HF-1112	P-250042
	Fuse with Lead 250V, 1.6 A (Quick type) (European & Australian)		P-250096
	Fuse with Lead 125V, 6 A (Quick type) (UL & C.S.A.)		P-250106
	Fuse with Lead 250V, 6.3 A (Quick type) (European & Australian)		P-250107

INTEGRATED CIRCUITS

Ref. No.	Type No.	R/S Part No.	Manufacturer
IC 101	LA 3350	MX-3215	SANYO
IC 301	STK-435	MX-3447	SANYO

LAMPS

Ref. No.	Description	R/S Part No.	Mfr's Part No.
PL 2	Dial Lamp 12V, 150 mA	L-0529	P-240038
		L-0529	or P-240056

Ref. No.	Description	R/S Part No.	Mfr's Part No.
PL 3	Dial Lamp 12V, 150 mA	L-0529	P-240038
			or
		L-0529	P-240056
PL 4	Dial Lamp 12V, 150 mA	L-0529	P-240038
			or
		L-0529	P-240056
PL 5	Meter Lamp 12V, 150 mA	L-0529	P-240038
			or
		L-0529	P-240056
PL 6	Stereo Lamp 10V, 30 mA		P-240074
			or
			P-240098

LIGHT EMITTING DIODE

Ref. No.	Type No.	R/S Part No.	Manufacturer
PL 1	SR 106D (Red)	L-0846	NEC

METER

Ref. No.	Description	R/S Part No.	
	AM/FM Signal Strength	M-0251	P-230009

RESISTORS

Ref. No.	Value (ohm)	Wattage (W)	Tolerance (%)	Material	R/S Part No.
R 101	100K	¼	± 5	Carbon	NEE-0371
R 102	220	¼	± 5	Carbon	NEE-0149
R 103	330	¼	± 5	Carbon	NEE-0159
R 104	6.8K	¼	± 5	Carbon	NEE-0262
R 105	33K	¼	± 5	Carbon	NEE-0324
R 106	1.5K	¼	± 5	Carbon	NEE-0206
R 107	820	¼	± 5	Carbon	NEE-0187
R 108	330	¼	± 5	Carbon	NEE-0159
R 109	3.3K	¼	± 5	Carbon	NEE-0230
R 110	10K	¼	± 5	Carbon	NEE-0281
R 111	2.2K	¼	± 5	Carbon	NEE-0216
R 112	330	¼	± 5	Carbon	NEE-0159
R 113	(Not used)				
R 114	22	¼	± 5	Carbon	NEE-0078
R 115	4.7K	¼	± 5	Carbon	NEE-0247
R 116	1K	¼	± 5	Carbon	NEE-0196
R 117	10K	¼	± 5	Carbon	NEE-0281
R 118	1.5K	¼	± 5	Carbon	NEE-0206
R 119	12	¼	± 5	Carbon	NEE-0067
R 120	27K	¼	± 5	Carbon	NEE-0316
R 121	4.7K	¼	± 5	Carbon	NEE-0247
R 122	3.3K	¼	± 5	Carbon	NEE-0230
R 123	470K	¼	± 5	Carbon	NEE-0423
R 124	47K	¼	± 5	Carbon	NEE-0340
R 125	220K	¼	± 5	Carbon	NEE-0396
R 126	15K	¼	± 5	Carbon	NEE-0297
R 127	10K	¼	± 5	Carbon	NEE-0281
R 128*	3.3K	¼	± 5	Carbon	NEE-0230
R 129	100	¼	± 5	Carbon	NEE-0132
R 130	1.5K	¼	± 5	Carbon	NEE-0206
R 131	1K	¼	± 5	Carbon	NEE-0196
R 132	330	¼	± 5	Carbon	NEE-0154
R 133	56K	¼	± 5	Carbon	NEE-0345
R 134	10K	¼	± 5	Carbon	NEE-0281
R 135	33K	¼	± 5	Carbon	NEE-0324
R 136	100	¼	± 5	Carbon	NEE-0132
R 137	3.3K	¼	± 5	Carbon	NEE-0230
R 138	18K	¼	± 5	Carbon	NEE-0303
R 139	560	¼	± 5	Carbon	NEE-0176
R 140	1K	¼	± 5	Carbon	NEE-0196
R 141	22	¼	± 5	Carbon	NEE-0078
R 142	3.3K	¼	± 5	Carbon	NEE-0230
R 143	3.3K	¼	± 5	Carbon	NEE-0247
R 144	2.2K	¼	± 5	Carbon	NEE-0216
R 145	1K	¼	± 5	Carbon	NEE-0196
R 146	330	¼	± 5	Carbon	NEE-0154
R 147	1K	¼	± 5	Carbon	NEE-0196
R 148	1K	¼	± 5	Carbon	NEE-0196
R 149	10K	¼	± 5	Carbon	NEE-0281
R 150	10K	¼	± 5	Carbon	NEE-0281
R 151	47	¼	± 5	Carbon	NEE-0099
R 152	470K	¼	± 5	Carbon	NEE-0423
R 153	4.7K	¼	± 5	Carbon	NEE-0247
R 154	100K	¼	± 5	Carbon	NEE-0371
R 155	10K	¼	± 5	Carbon	NEE-0281
R 156	33K	¼	± 5	Carbon	NEE-0324
R 157	15K	¼	± 5	Carbon	NEE-0297
R 158	1.8K	¼	± 5	Carbon	NEE-0210
R 159	4.7K	¼	± 5	Carbon	NEE-0247
R 160*	27K	¼	± 5	Carbon	NEE-0316
R 161	22K	¼	± 5	Carbon	NEE-0311
R 162	3.3K	¼	± 5	Carbon	NEE-0230
R 163	2.7K	¼	± 5	Carbon	NEE-0224
R 164	1K	¼	± 5	Carbon	NEE-0196
R 165	22K	¼	± 5	Carbon	NEE-0311
R 166	10K	¼	± 5	Carbon	NEE-0281
R 167	150	¼	± 5	Carbon	NEE-0142
R 168	4.7K	¼	± 5	Carbon	NEE-0247
R 169	4.7K	¼	± 5	Carbon	NEE-0247
R 170	100	¼	± 5	Carbon	NEE-0132
R 171	3.3K	¼	± 5	Carbon	NEE-0230
R 172	3.3K	¼	± 5	Carbon	NEE-0230
R 173	1K	¼	± 5	Carbon	NEE-0196
R 174	1K	¼	± 5	Carbon	NEE-0196
R 175	1K	¼	± 5	Carbon	NEE-0196
R 176	1K	¼	± 5	Carbon	NEE-0196
R 177	8.2K	¼	± 5	Carbon	NEE-0271
R 178	6.8K	¼	± 5	Carbon	NEE-0262
R 179*	15K	¼	± 5	Carbon	NEE-0297
R 180	180	¼	± 5	Carbon	NEE-0144
R 181	3.3K	¼	± 5	Carbon	NEE-0247
R 182	3.3K	¼	± 5	Carbon	NEE-0247
R 183	5.6K	¼	± 5	Carbon	NEE-0297
R 184	5.6K	¼	± 5	Carbon	NEE-0297
R 201	220K	¼	± 5	Carbon	NEE-0396
R 202	220K	¼	± 5	Carbon	NEE-0396
R 203	1K	¼	± 5	Carbon	NEE-0196
R 204	1K	¼	± 5	Carbon	NEE-0196
R 205	100K	¼	± 5	Carbon	NEE-0371

* May vary from unit to unit.

Ref. No.	Value (ohm)	Wattage (W)	Tolerance (%)	Material	R/S Part No.
R 206	100K	¼	± 5	Carbon	NEE-0371
R 207	330	¼	± 5	Carbon	NEE-0159
R 208	330	¼	± 5	Carbon	NEE-0159
R 209	100K	¼	± 5	Carbon	NEE-0371
R 210	100K	¼	± 5	Carbon	NEE-0371
R 211	470	¼	± 5	Carbon	NEE-0169
R 212	470	¼	± 5	Carbon	NEE-0169
R 213	510	¼	± 5	Carbon	
R 214	510	¼	± 5	Carbon	
R 215	10K	¼	± 5	Carbon	NEE-0281
R 216	10K	¼	± 5	Carbon	NEE-0281
R 217	2.7K	¼	± 5	Carbon	NEE-0224
R 218	2.7K	¼	± 5	Carbon	NEE-0224
R 219	220K	¼	± 5	Carbon	NEE-0396
R 220	220K	¼	± 5	Carbon	NEE-0396
R 221	8.2K	¼	± 5	Carbon	NEE-0271
R 222	8.2K	¼	± 5	Carbon	NEE-0271
R 223	15K	¼	± 5	Carbon	NEE-0297
R 224	15K	¼	± 5	Carbon	NEE-0297
R 225	150K	¼	± 5	Carbon	NEE-0384
R 226	150K	¼	± 5	Carbon	NEE-0384
R 227	82K	¼	± 5	Carbon	NEE-0360
R 228	82K	¼	± 5	Carbon	NEE-0360
R 229	680K	¼	± 5	Carbon	NEE-0433
R 230	680K	¼	± 5	Carbon	NEE-0433
R 231	5.6K	¼	± 5	Carbon	NEE-0257
R 232	5.6K	¼	± 5	Carbon	NEE-0257
R 233	470	¼	± 5	Carbon	NEE-0169
R 234	470	¼	± 5	Carbon	NEE-0169
R 235	47K	¼	± 5	Carbon	NEE-0340
R 236	47K	¼	± 5	Carbon	NEE-0340
R 237	2.7K	¼	± 5	Carbon	NEE-0224
R 238	2.7K	¼	± 5	Carbon	NEE-0224
R 239	33K	¼	± 5	Carbon	NEE-0324
R 240	33K	¼	± 5	Carbon	NEE-0324
R 241	5.6K	¼	± 5	Carbon	NEE-0257
R 242	5.6K	¼	± 5	Carbon	NEE-0257
R 243	22K	¼	± 5	Carbon	NEE-0311
R 244	22K	¼	± 5	Carbon	NEE-0311
R 245	3.3K	¼	± 5	Carbon	NEE-0230
R 246	3.3K	¼	± 5	Carbon	NEE-0230
R 301	1K	¼	± 5	Carbon	NEE-0196
R 302	1K	¼	± 5	Carbon	NEE-0196
R 303	220K	¼	± 5	Carbon	NEE-0396
R 304	220K	¼	± 5	Carbon	NEE-0396
R 305	220	¼	± 5	Carbon	NEE-0149
R 306	220	¼	± 5	Carbon	NEE-0149
R 307	12K	¼	± 5	Carbon	NEE-0388
R 308	12K	¼	± 5	Carbon	NEE-0388
R 309	390K	¼	± 5	Carbon	NEE-0414
R 310	390K	¼	± 5	Carbon	NEE-0414
R 311	220K	¼	± 5	Carbon	NEE-0396
R 312	220K	¼	± 5	Carbon	NEE-0396
R 313	4.7	1	± 5	Metal Oxide	
R 314	4.7	1	± 5	Metal Oxide	
R 315	100	1	± 5	Metal Oxide	
R 316	1.2K	¼	± 5	Carbon	NEE-0199
R 317	470	¼	± 5	Carbon	NEE-0169
R 318	100	¼	± 5	Carbon	NEE-0132
R 401	15	¼	± 5	Carbon	NEE-0074
R 402	33	½	± 5	Carbon	NEF-0087
R 403	(Not used)				
R 404	820	1	± 10	Metal Oxide	NEE-0371
R 501	100K	¼	± 5	Carbon	NEE-0371
R 502	100K	¼	± 5	Carbon	NEE-0257
R 503	5.6K	¼	± 5	Carbon	NEE-0257
R 504	5.6K	¼	± 5	Carbon	NEE-0257
R 505	5.6K	¼	± 5	Carbon	NEE-0257
R 506	5.6K	¼	± 5	Carbon	NEE-0169
R 601	470	¼	± 5	Carbon	NEE-0169
R 602	470	¼	± 5	Carbon	
R 603	2.2M (UL & C.S.A.)	½	± 5	Carbon	

SWITCHES

Ref. No.	Description	R/S Part No.	Mfr's Part No.
Sa1-Sa6	SELECTOR	S-1216	P-180179
Sb1-Sb2	MODE	S-7182	P-180023
Sc1-Sc2	SPEAKERS	S-7182	P-180023

TRANSISTORS

Ref. No.	Type No.	Manufacturer
TR 101	2SK 19 (GR)	TOSHIBA
	2SK 41 (F)	SANYO
TR 102	2SC 1047 (C,D)	MATSUSHITA
TR 103	2SC 930 (D,E)	SANYO
TR 104	2SC 829 (D)	MATSUSHITA
TR 105	2SC 1359 (C,D)	MATSUSHITA
TR 106	2SC 930 (D,E)	SANYO
TR 107	2SC 930 (D,E)	SANYO
TR 108	2SC 930 (D,E)	SANYO
TR 109	2SC 930 (D,E)	SANYO
TR 110	2SC 945L (P)	NEC
TR 111	2SC 945L (P)	NEC
TR 112	2SC 945L (P)	NEC
TR 201	2SC 900 (E,U)	NEC
	2SC 644 (R,S)	MATSUSHITA
	2SC 1571 (H)	SANYO
TR 202	2SC 900 (E,U)	NEC
	2SC 644 (R,S)	MATSUSHITA
	2SC 1571 (H)	SANYO

Ref. No.	Description	Manufacturer
TR 203	2SC 923 (U)	NEC
	2SC 828 (S)	MATSUSHITA
	2SC 1571 (H)	SANYO
TR 204	2SC 923 (U)	NEC
	2SC 828 (S)	MATSUSHITA
	2SC 1571 (H)	SANYO
TR 205	2SC 923 (U)	NEC
	2SC 828 (S)	MATSUSHITA
	2SC 1571 (H)	SANYO
TR 206	2SC 923 (U)	NEC
	2SC 828 (S)	MATSUSHITA
	2SC 1571 (H)	SANYO

VARIABLE CAPACITORS

Ref. No.	Description	R/S Part No.	Mfr's Part No.
TC 101 102 104 & VC 101 ~105	Tuning Gang	C-4301	P-150015
TC 103	Trimmer (1P X 10)	CA-0249	P-16007
TC 105	Trimmer (1P X 10)	CA-0249	P-16007

VARIABLE RESISTORS

Ref. No.	Description	R/S Part No.	Mfr's Part No.
VR 101	FM Signal Meter 50Kohm B		
VR 102	MPX Separation 1Kohm B		
VR 103	19 kHz Frequency Adjust 5Kohm B		
VR 201	VOLUME with POWER Switch 50 Kohm B X 2 (TV-1)	P-1834	P-170119
VR 202	BALANCE 100 KohmW	P-1663	P-170173
VR 203	BASS 100 Kohm A X 2	P-4015	P-170118
VR 204	TREBLE 100 Kohm A X 2	P-4015	P-170118

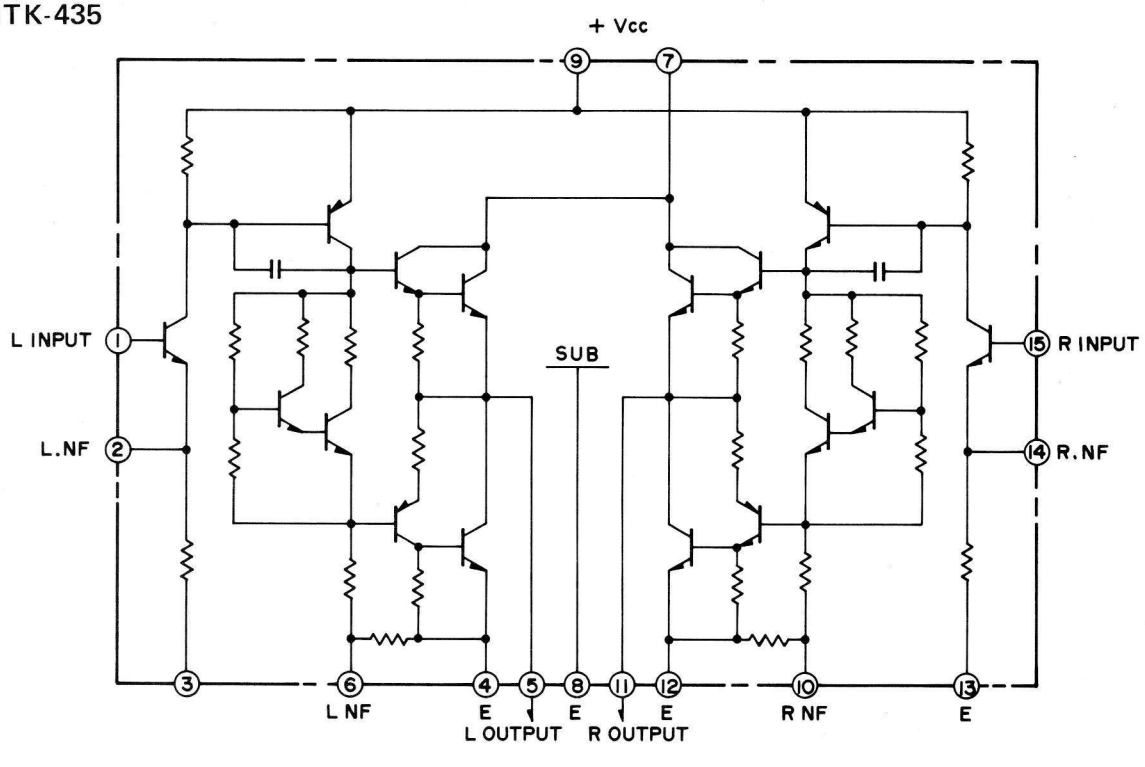
15) MECHANICAL PARTS LIST

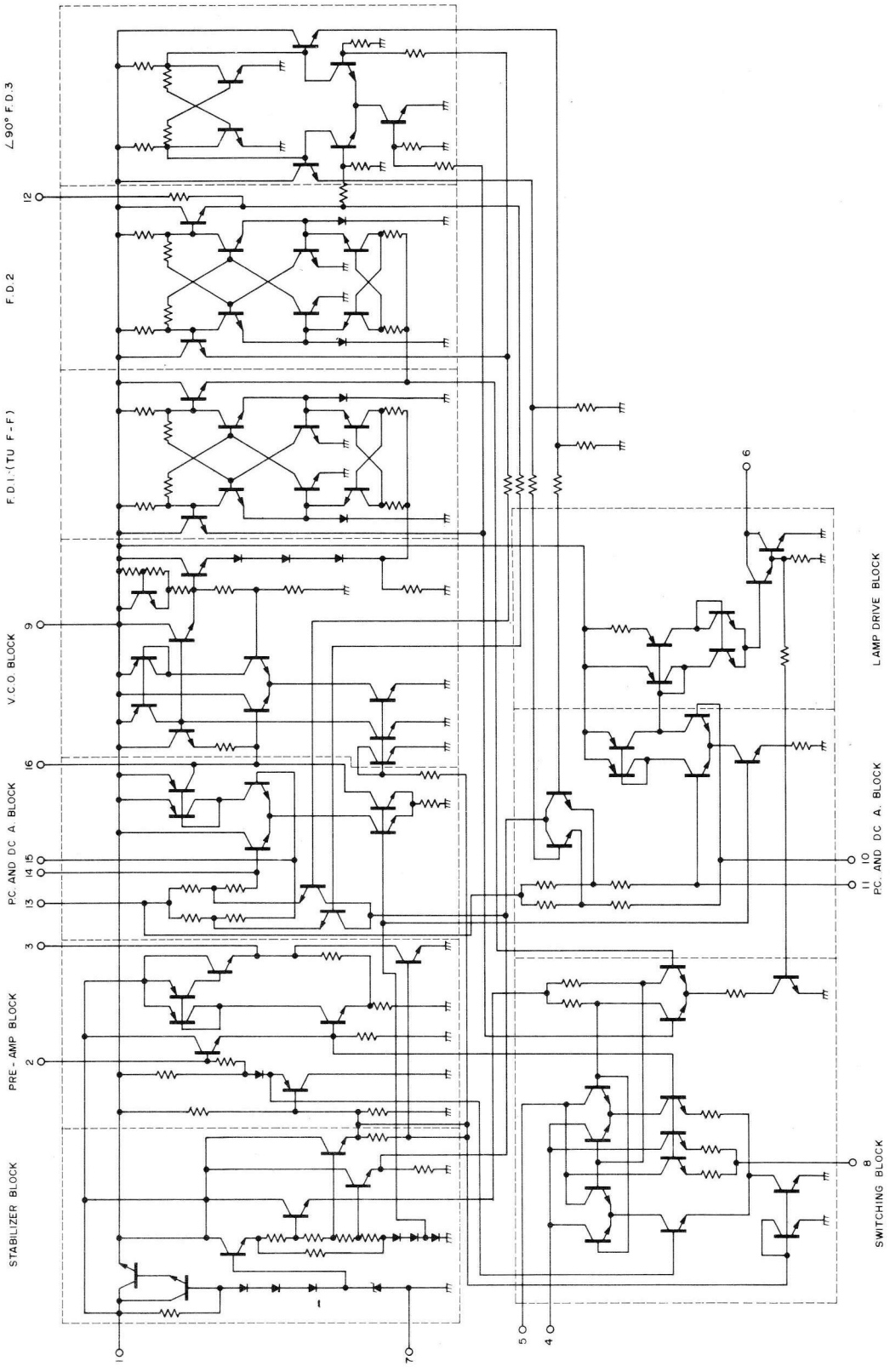
Ref. No.	Description	R/S Part No.	Mfr's Part No.
1	Front Chassis Ass'y	Z-3777	P-400107
2	Sub-Pulley Bracket (A)	HB-2854	P-410756
3	Sub-Pulley Bracket (B)	HB-2855	P-410757
4	Meter Ass'y	M-0251	P-230009
5	Meter Lamp Cover	HB-3007	P-410274
6	Lamp Holder	HB-2423	P-260012
7	Fuse Type Lamp (12V,150mA)	L-0529	P-240038 or P-240056
8	Sub-Pulley	RA-2436	P-610162
9	Pilot Lamp Cover	HB-2857	P-410646
10	Stereo Indicator Lamp with Lead (10V, 30mA)	L-0679	P-240074 or P-240056
11	Stereo Lamp Cover	HB-2881	P-680091
12	Tuning Shaft Ass'y	D-3230	P-420256
13	Dial Scale (UL & C.S.A.)	G-0305	P-640108
	Dial Scale (European & Australian)		P-640109
14	Dial Holder	HB-6294	P-700151
15	Rotary Switch	S-1216	P-180179
16	Push Switch	S-7182	P-180023
17	PRE & TONE Amp P.C.B.	X-7580	U-14080
18	Pointer Ass'y	D-1182	P-450043
19	Headphone Bracket	HB-2858	P-410761
20	Headphone Jack	J-0445	P-190010
21	Shield Sheet	HB-2859	P-410839
22	Main Chassis (UL, C.S.A., European)		P-400105
	Main Chassis (Australian)		P-400119
23	Jack Holder (A)	HB-1391	P-410410
24	Jack Holder (B)	HB-1392	P-410411
25	Power Transformer (UL,C.S.A.)	TA-0645	P-100373
	Power Transformer (European & Australian)		P-100496
26	Power Supply P.C.B.	X-7567	U-17047
27	AM Bar Antenna Cushion		P-680117
28	Antenna Bracket (D)	HB-2860	P-410759
29	AM Bar Antenna	CA-0659	P-110084
30	Antenna Holder		P-610340
31	Antenna Bracket (B)	HB-1058	P-410147
32	AC Cord (UL, C.S.A.)	W-1000	P-310001
	AC Cord (European except U.K.)		P-310091
	AC Cord (Australian)		P-310041
	AC Cord (U.K.)		P-310068
33	AC Cord Strain Relief (UL, C.S.A. & European)	HB-0598	P-480010
	AC Cord Strain Relief (Australian)		P-480037
34	AC Outlet	J-6399	P-190086
35	Power Transformer Holder	HB-6961	P-411027
36	Heat Sink	HH-0247	P-411320
37	MAIN Amp P.C.B.	X-7581	U-16062
38	Tuner, IF & MPX P.C.B.	X-7579	U-12036
39	Dial Pulley	D-0358	P-610328
40	Dial Spring	RA-5839	P-440017
41	Dial String		
42	AC Outlet Cover	HB-3862	P-480119
43	Wire Stay (D)	HB-2425	P-450032
44	4P Lug Terminal	J-4363	P-320043
45	Jack P.C.B.	X-0911	U-23075
46	Line Antenna Bracket (UL, C.S.A. & European)	HB-6962	P-690298
	Line Antenna Bracket (Australian)		P-410980
47	Line Antenna Insulator (UL, C.S.A. & European)	HB-6963	P-690214
	Line Cord Insulator (Australian)		P-480138
48	*Front Panel Ass'y	Z-2786	P-610377
49	Tuning Knob	K-2185	P-650158
50	Control Knob	K-2186	P-650159
51	Push Switch Knob	K-2187	P-650167
52	Cabinet Ass'y	Z-2787	P-620047
53	Back Board (UL)	Z-3282	P-630072
	Back Board (C.S.A.)		P-630073
	Back Board (European)		P-630074
	Back Board (Australian)		P-630075
54	Light-intercepting Cushion	HB-2873	P-480110
55	Light-intercepting Sheet	HB-2433	P-820258
56	Fiber Sheet	HB-1114	P-480016
57	Shield Case	HB-6380	P-410862
58	Balun Coil P.C.B.	X-4972	P-200244
59	Sub-Pulley Bracket (C)	HB-2856	P-410758
60	Wire Stay (A)	H-3498	P-450006
61	Ventilation Sheet	HB-6966	P-480124
62	Foot	F-0223	P-610494
63	Power IC (STK-435)	MX-3447	
64	Dial Scale Holder (A)	HB-6612	P-411300
65	Dial Scale Holder (B)	HB-6960	P-411301
66	Dial Scale Holder (C)	HB-6613	P-411302

HARDWARE			
Ref. No.	Description	R/S Part No.	Mfr's Part No.
S 1	Tapping Screw 3 X 8 PT-2		
S 2	Wood Screw 3.1 X 12 PW		
S 3	Wood Screw 3.1 X 10 PW		
S 4	Tapping Screw 3 X 6 BT-2		
S 5	Screw 4 X 20 P		
S 6	Screw with Washer 3 X 4 P		
S 7	Screw with Lock Washer Ass'y 3 X 8 PT-2		
S 8	Screw with Washer 3 X 6 P		
S 9	Shaft for Sub-Pulley (Screw with Spacer) 3 X 9 X 3		
S10	Screw with Washer 4 X 12 P		
S11	Screw with Washer 3 X 16 P		
W1	Washer 3W		
W2	Ground Lug Washer		
W3	Square Washer	HD-8195	P-410033
W4	Washer 4W		
W5	Toothed Lock Washer (Outside) 3ϕ		
N1	Nut 4N		
N2	Nut 3N		
SW1	Spring Washer 4SW		
SW2	Spring Washer 3SW		
R1	Rivet (YB-429) 3.2 ϕ X 7.37		
R2	Nylon Rivet 3 ϕ X 5.5		

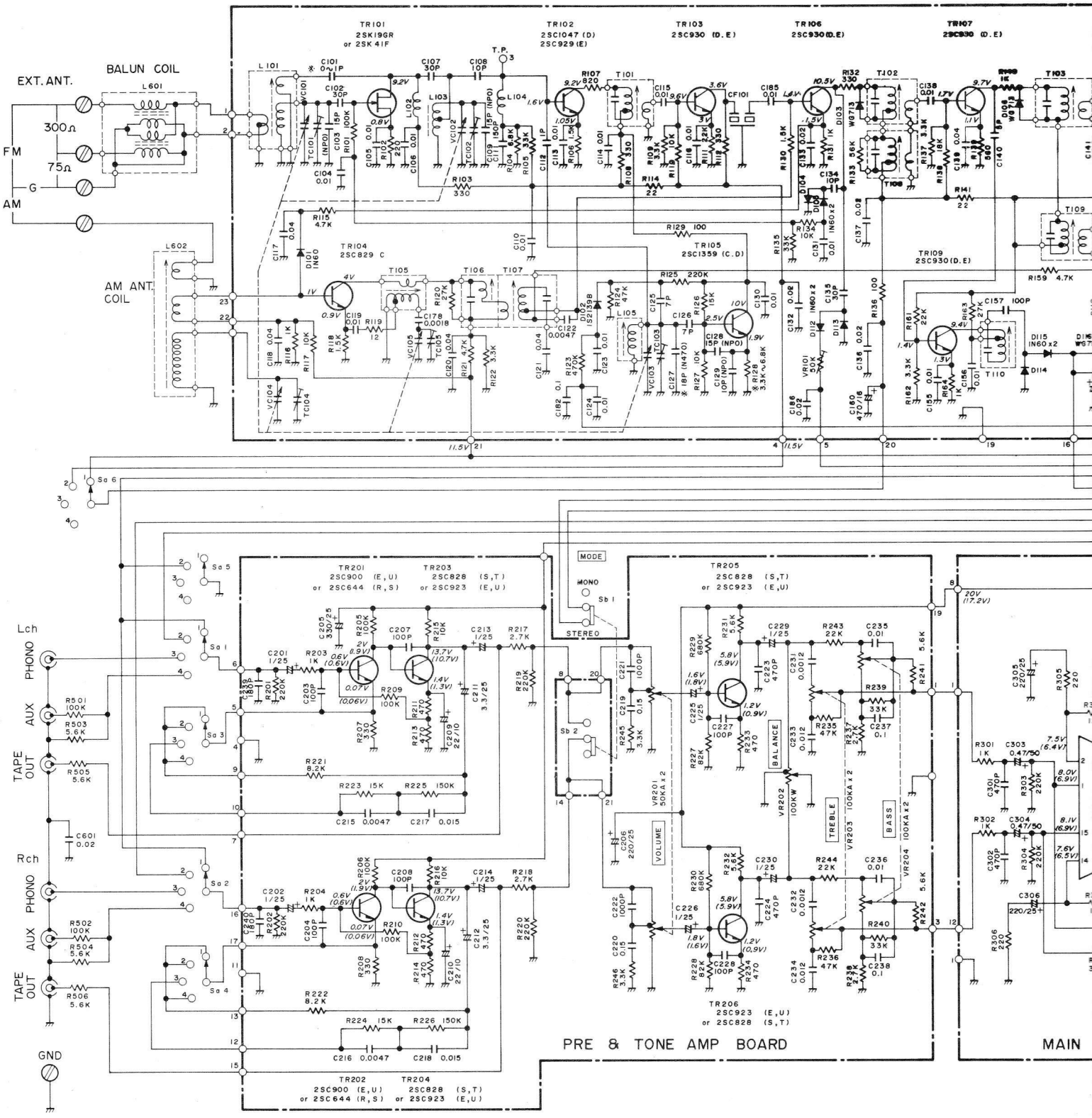
16) IC INTERNAL DIAGRAM

STK-435



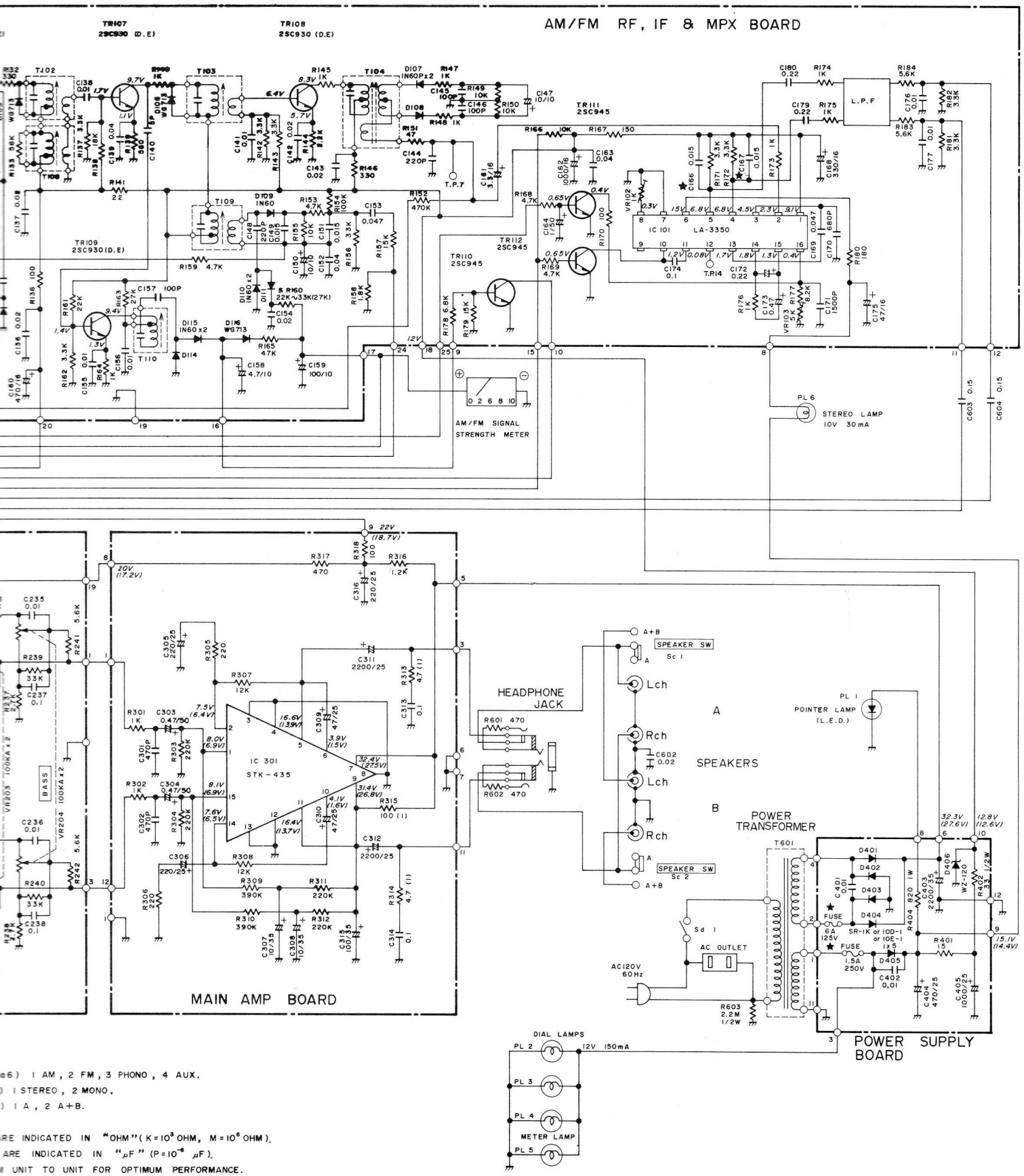

∠90° F.D.3
F.D.2
F.D.I.(TU F-F)
V.C.O. BLOCK
PC. AND DC A. BLOCK
PRE-AMP BLOCK
STABILIZER BLOCK
LAMP DRIVE BLOCK
PC. AND DC A. BLOCK
SWITCHING BLOCK
12
9
16
15
14
13
3
2
1
7
5
4
6
11
10
8

17) SCHEMATIC DIAGRAM



NOTE

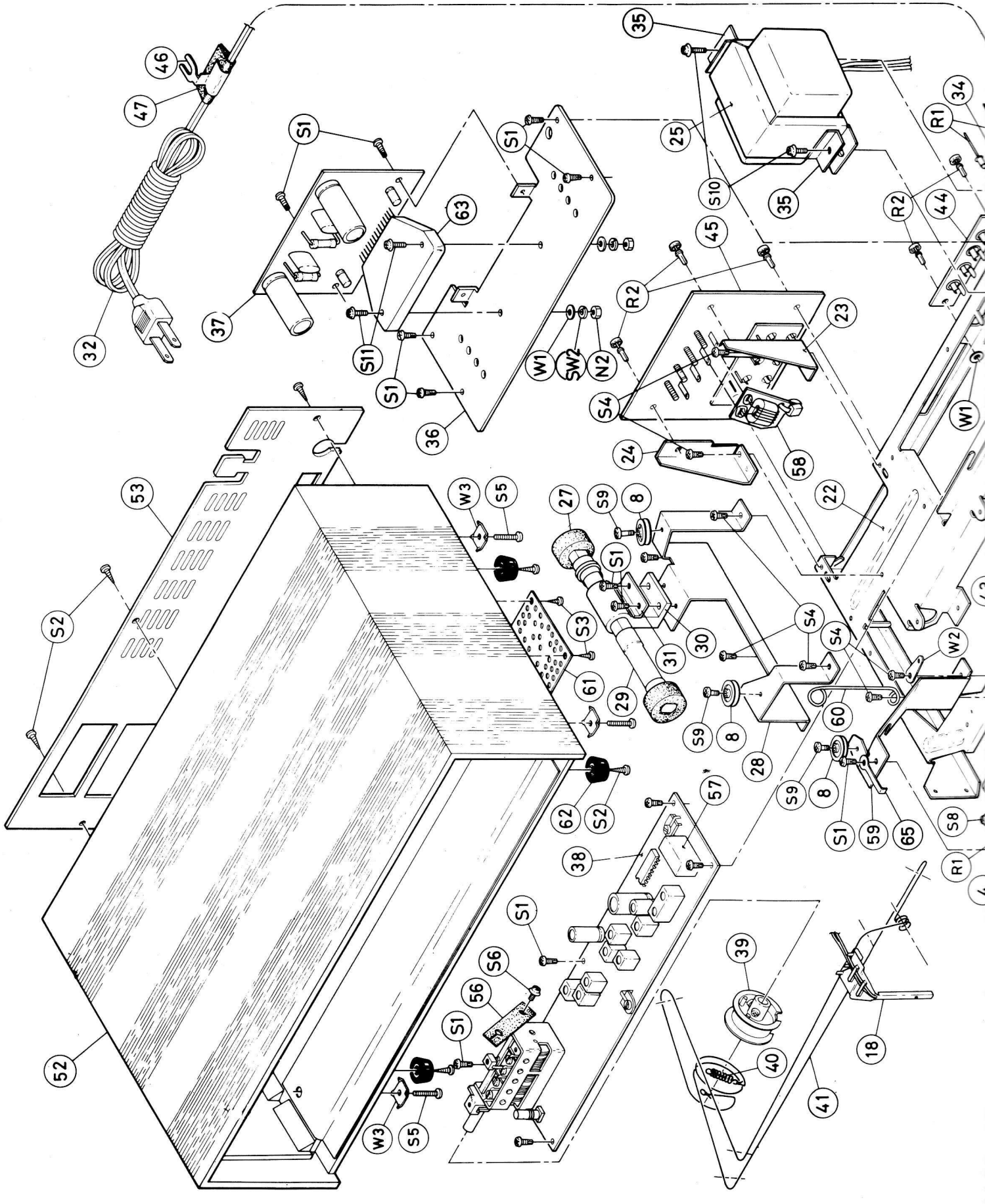
1) SELECTOR SWITCH (Sa1~Sa6) 1 AM, 2 FM, 3 PHONO, 4 AUX.
2) MODE SWITCH (Sb1, Sb2) 1 STEREO, 2 MONO.
3) SPEAKER SWITCH (Sc1 Sc2) 1 A, 2 A+B.
4) POWER SWITCH (Sd1).
5) ALL RESISTANCE VALUES ARE INDICATED IN "OHM" ($K=10^3$ OHM, $M=10^6$
6) ALL CAPACITANCE VALUES ARE INDICATED IN "μF" ($P=10^{-6}$ μF).
7) ※ VALUE MAY VARY FROM UNIT TO UNIT FOR OPTIMUM PERFORMANCE
8) VOLTAGES ARE MEASURED UNDER TWO CONDITIONS : WITH NO INPUT AND OUTPUT POWER (INSIDE PARENTHESIS).
9) ★ FOR EUROPEAN AND AUSTRALIAN MODELS, DIFFERENT VALUE IS USED.
C166/C167 : 0.01μF FUSE: 6.3A, 250V : 1.6A, 250V

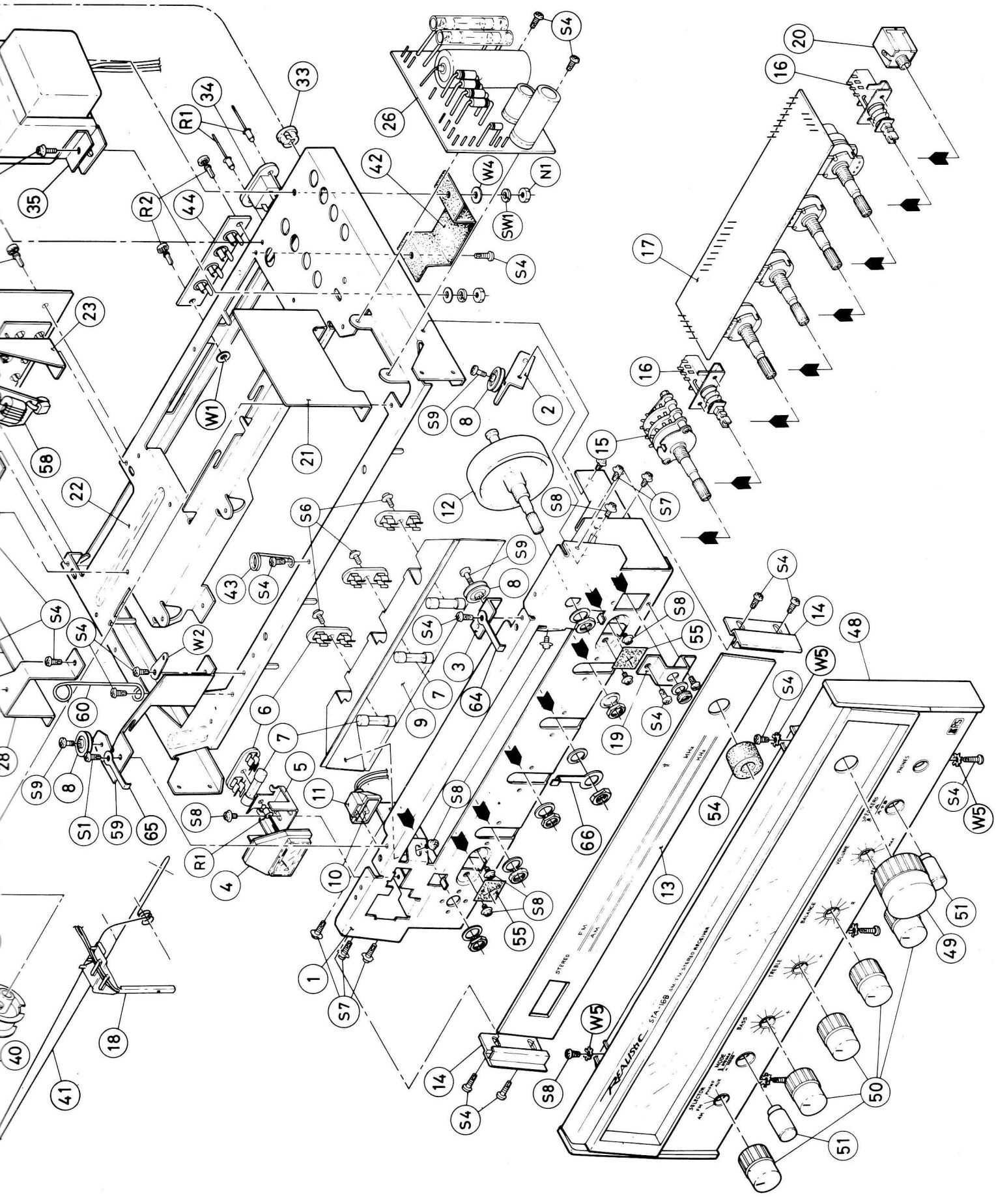


6) 1 AM, 2 FM, 3 PHONO, 4 AUX.
) 1 STEREO, 2 MONO.
) 1 A, 2 A+B.

RE INDICATED IN "OHM" ($K=10^3$ OHM, $M=10^6$ OHM).
ARE INDICATED IN "μF" ($P=10^{-6}$ μF).
UNIT TO UNIT FOR OPTIMUM PERFORMANCE.
UNDER TWO CONDITIONS : WITH NO INPUT AND AT 5 WATTS
ARENTHESIS).
TRALIAN MODELS, DIFFERENT VALUE IS USED.
A, 250V : 1.6A, 250V

18) EXPLODED VIEW




STEREO
FM
AM
REALISTIC
STA-168
AM-FM STEREO RECEIVER
SELECTOR
MODE
BASS
TREBLE
BALANCE
VOLUME
PHONES

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CANADA: BARRIE, ONTARIO L4M 4W5

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