

SERVICE MANUAL

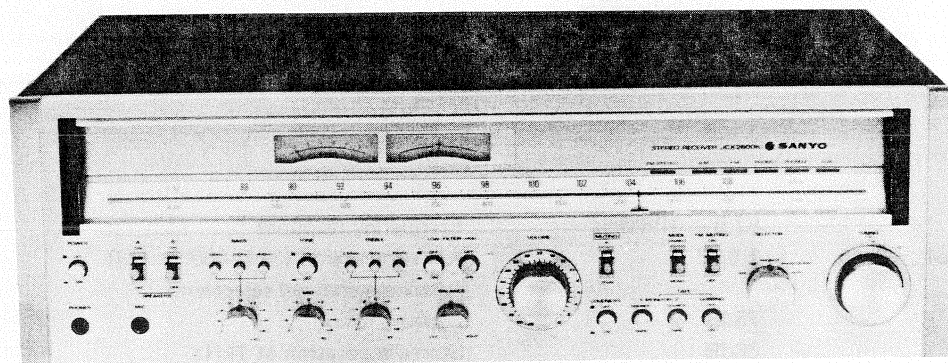
STEREO RECEIVER



SANYO

JCX 2600KR

(SCAN)



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SPECIFICATIONS

Power Amplifier Section

Continuous power	120 watts x 2 (at 4 ohms), 100 watts x 2 (at 8 ohms) (1% Distortion)
Total harmonic distortion	0.01% (1kHz, 85W output, 8 ohms)
Input sensitivity/Impedance	1V/50k ohms
Damping factor	60 (at 8 ohms)

Pre-Amplifier Section

Input sensitivity and impedance		Tone control response	
PHONO 1	2.5mV/50k ohms	BASS at 100Hz (T.O.) 400Hz	±10dB
PHONO 2	2.5mV/50k ohms	TREBLE at 10kHz (T.O.) 2.5kHz	±10dB
MIC	6.5mV/50k ohms	MID at 1kHz	±5dB
AUX	150mV/50k ohms	Low filter response	30Hz (-12dB/oct.)
TAPE PLAY 1	150mV/50k ohms	High filter response	8kHz (-6dB/oct.)
TAPE PLAY 2	150mV/50k ohms	Loudness control response	
TAPE PLAY 2 (DIN)	150mV/50k ohms	Volume set -30dB position at 100Hz	+10dB
Phono overload level		Volume set -30dB position at 10kHz	+4dB
PHONO 1/PHONO 2	150mV	Hum and noise ratio	
Output level		PHONO 1/PHONO 2	70dB
TAPE REC 1	150mV	AUX	90dB
TAPE REC 2	150mV		
TAPE REC 2 (DIN)	30mV/80k ohms		
PRE OUT	1V/2.2k ohms		
Frequency response			
PHONO 1/PHONO 2 (RIAA 20Hz - 20kHz)	±0.2dB		
AUX (20Hz - 20kHz)	±1dB		

FM Tuner Section

Frequency range	87.5 - 108MHz	Frequency response	30Hz - 15kHz (±3dB)
Usable sensitivity (at Mono)	1.5µV	AM suppression (30% 400Hz AM)	60dB
Signal-to-noise ratio		Alternate channel selectivity	55dB (DIN)
at Mono	73dB	Capture ratio	1.2dB
at Stereo	66dB	Stereo separation at 1kHz	46dB
Harmonic distortion		Aerial input	300 ohms balanced 75 ohms unbalanced
at Mono	0.1%		
at Stereo	0.15%		

MW Tuner Section

Frequency range	510 - 1605kHz	Image rejection	55dB
Sensitivity	280µV/m	IF rejection	64dB
Signal-to-noise ratio	46dB	Aerial	External ferrite bar aerial

General

Power requirements	AC: 115/220V, 50Hz
Power consumption	580W
Dimensions	21-11/32" W x 7-3/8" H x 16-9/16" D (540 x 186 x 420 mm)
Weight	Approx. 40 lbs. 13 ozs. (18.5kg)

* Specifications are subject to change without notice.

MODIFICATION NOTICE



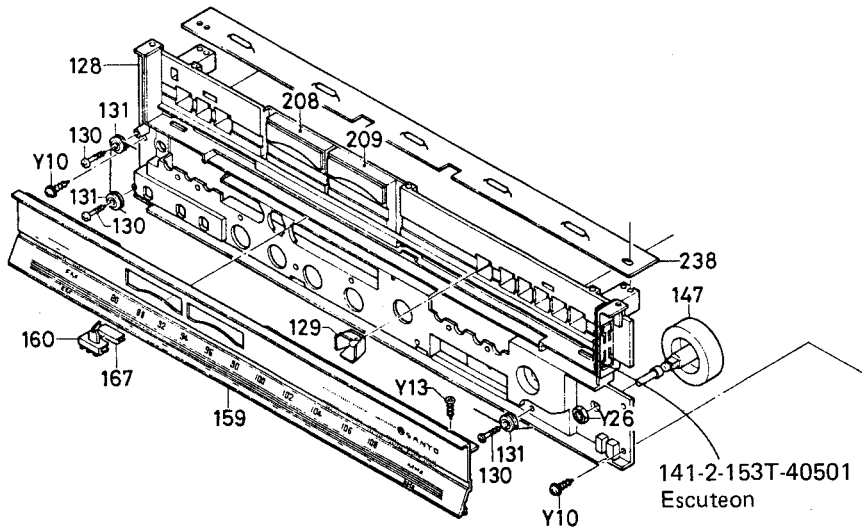
STEREO RECEIVER

JCX 2600 (USA)
 JCX 2600
 JCX 2600RK (SCAN)

Date Sep. 20, 1978 Issued by _____

The following corrections should be made in the SERVICE MANUALS and PARTS (PRICE) LIST.

		Section	Key No.	Part No.	Description	Q'ty	Remark	Reason
1	From							
	To			141-2-153T-40501	Escutcheon (Ref. no. 128, right side)	1	Add	D
2	From							
	To							
3	From							
	To							

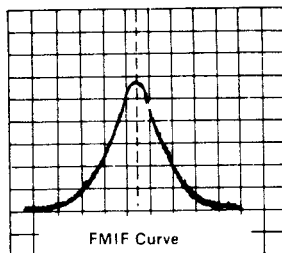


INTERCHANGEABLE	NOT INTERCHANGEABLE	Serial No. Chassis No.	Effective from
Q'ty of initial production before modification.		Identification of modified unit.	
REASON FOR MODIFICATION			
A Standardization	C Improvement of reliability	E Miss print	G
B Change of materials	D Improvement of performance	F Miss register	

FM IF ADJUSTMENT

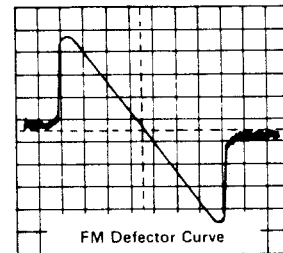
1. V curve adjustment

- 1) Connect TP-3 (HOT) and TP-4 (GROUND) to the output terminal of the sweep generator, and TP-5 (H) and TP-17 (G) to the input terminal.
- 2) Connect a resistance load of about 10 to 50 K-ohms to the input of the sweep generator and disconnect the tuning meter leadwires from the circuit board.
- 3) Cut off ceramic capacitor C261 (0.022 μ F) at one end.
- 4) Make adjustment while keeping the output from the sweep generator at the low level (where noise appears on the waveform).
- 5) While watching the sweep waveform, adjust the T201 until the sweep waveform presents the pattern as in Fig. 1.



2. S curve adjustment

- 1) Connect TP-3 (H) and TP-6 (E) to the output the sweep generator. Connect TP201 (H) and TP104 (E) to its input.
NOTE: It is necessary to connect a capacitor (1 μ F/16V) to the input of the sweep generator (H) for cutting DC current.
- 2) Adjust the T202 until the S curve presents the pattern as in Fig. 2. Avoid turning the T203 unless absolutely necessary.
*TP-4 is a shield plate, TP-5 is a R215 (15 K-ohm) and TP-17 is a shield case of T203.



CENTER ADJUSTMENT OF TUNING METER

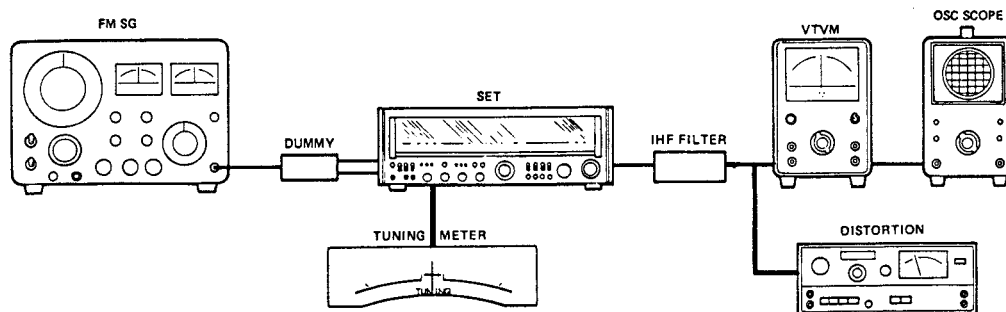
Set FM SG as follows: modulation frequency 1 KHz, frequency deviation 75 KHz DIV. (100% modulation).

Connect a 300 ohm balanced dummy to the 300 ohm terminal of the external antenna and a filter to TP-9 or TP-10 (H) and TP-11 (G).

- 1) Set the tuning dial of the unit to 98 MHz (where no Broadcasting signal is coming in).
- 2) While keeping the FM SG output level to less than -20 dB, adjust the T202 until the tuning meter needle stands at the center point.
- 3) Apply 60 dB (1 mV) to the 300 ohm terminal of the external antenna and adjust the tuning dial so that the tuning meter needle stands at the center point.

- 4) Reduce the distortion factor to a minimum by turning the T203.
- 5) Repeat steps 2), 3) and 4).
- 6) Turn the core of T201 only slightly until the distortion factor becomes minimal.
- 7) Set the FM SG output level to 0. Confirm tuning meter needle stands at the center point. If needle is not at center point, repeat from step 2).
- 8) Set the FM SG output level to the same level as item 3). Confirm the distortion factor is minimum when the tuning meter needle is at center point.

NOTE: Use Hum and Sub-carrier Filter to obtain accurate distortion factor.



FM TRACKING ADJUSTMENT

Set FM SG as follows: modulation frequency 1 KHz, frequency deviation 75 KHz DIV. (100% modulation). Connect VTVM to TP-9 or TP-10 (H) and TP-11 (G).

Flip the MODE switch of the unit to "MONO".

- 1) Make LOW TRACKING adjustment by means of L101, L102 and L103. Use 90 MHz FM signal for this purpose.
- 2) Make HIGH TRACKING adjustment by means of CT-1, CT-2 and CT-3. Use 106 MHz FM signal for this purpose.

- 3) Make complete TRACKING adjustment by repeating steps (1) and (2).

*When properly adjusted, the distortion factor of the output from the unit is reduced to a minimum, provided that the distortion factor of the SG output is about 3%.

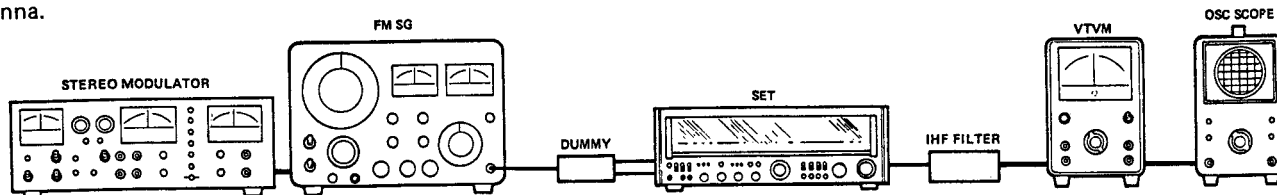
19 KHz PILOT CANCELER ADJUSTMENT

Set the frequency of FM SG to 98 MHz and the pilot signal of the stereo modulator to a modulation degree of 9%. Connect a filter to TP-6 or TP-7 (H) and TP-18 (G).

- 1) Set the tuning dial of the unit to 98 MHz.
- 2) Apply 60 dB (1 mV) to 300 ohm terminal of external antenna.

- 3) Turn R305 (SVR) until the leakage of 19 KHz becomes minimum.

NOTE: Use 19 KHz band-pass filter.



FM VCO ADJUSTMENT

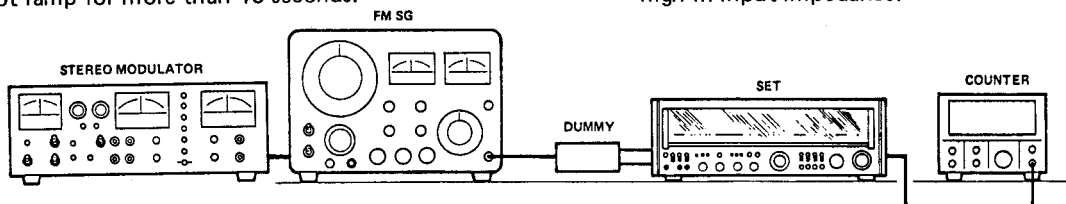
Set the frequency of FM SG to 98 MHz (where no broadcasting signal is coming in), the muting switch of the unit to ON, the pilot signal of the stereo modulation to a modulation degree of 9% and mode switch to MONO. Connect a frequency counter to TP-8 (H) and TP-11 (G).

- 1) Increase the output level of FM SG until the stereo pilot lamp of the unit glows. Then, keep the glowing of the stereo pilot lamp for more than 10 seconds.

- 2) Adjust R309 (SVR) until the frequency counter reading becomes 76 KHz \pm 76 Hz immediately after cutting off the SG output (viz. after the stereo pilot lamp has gone out).

* Do not make this adjustment immediately after setting to ON the power switch of the unit.

* For this adjustment, use a frequency counter relatively high in input impedance.



FM MUTING LEVEL ADJUSTMENT

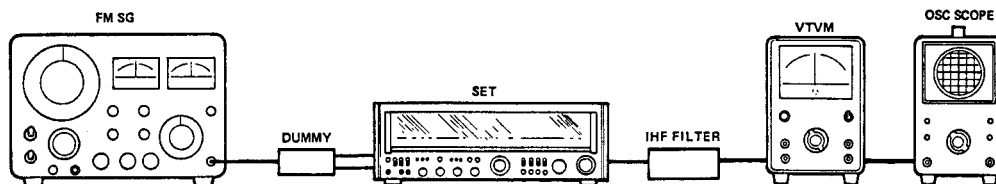
Set FM SG as follows: modulation frequency 1 KHz, frequency deviation 75 KHz DIV. (100% modulation). Then, set the muting switch of the unit to ON. Connect a filter to TP-9 or TP-10 (H) and TP-11 (G).

- 1) Set FM SG to 98 MHz and tune the unit to that frequency.

- 2) Apply 16 dB to the 300 ohm terminal of external antenna.

- 3) Turn R217 (SVR) and set it at the position where the VTVM needle stops swinging or the waveform on the oscilloscope becomes very small.

* When the muting function is ON, the waveform decreases in size, and weak signals and noise are cut off.



SEPARATION ADJUSTMENT

Set FM SG as follows: modulation frequency 1 KHz, frequency 98 MHz. Set the pilot signal of the stereo modulator to a modulation degree of 9%.

$$PL + L + R = 75 \text{ KHz DIV.} \\ (9\% + 91\%)$$

Select the "STEREO" mode by the mode switch of the unit. Connect a filter to TP-9 or TP-10 (H) and TP-11 (G).

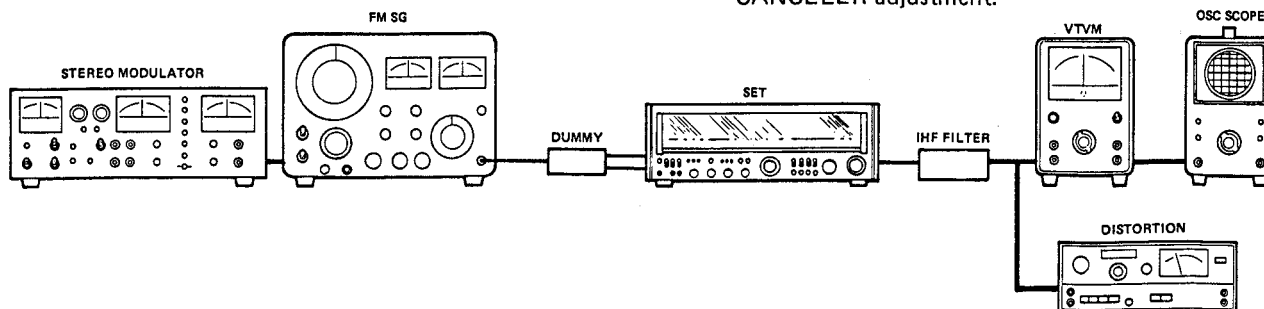
- 1) Set the input to the unit (i.e. voltage at the 300 ohm terminal of the external antenna) to 60 dB (This corresponds to 66 dB - 1.995 mV in terms of FM SG output).

- 2) Generator L-R signals by the stereo modulator and tune the unit completely to their level. (In this state, the distortion factor is reduced to a minimum.)

- 3) Switch the stereo modulator from R to L channels. Reduce signal output leakage of each channel to a minimum by adjusting R301 (SVR).

* When making this adjustment, use a lowpass filter and eliminate 19 KHz and 38 KHz carrier components.

* Make this adjustment after VCO and 19 KHz PILOT CANCELER adjustment.

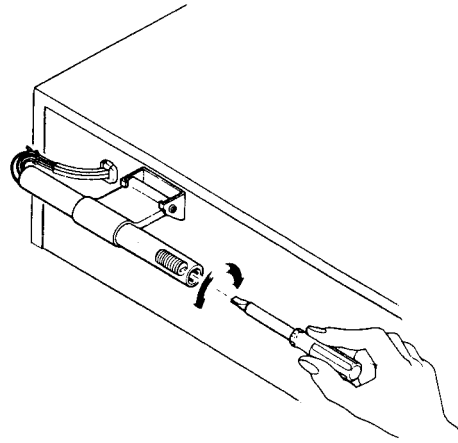


MW TRACKING ADJUSTMENT

Connect VTVM to TP-12 (H) and TP-13 (G).

- 1) Set the frequency of AM SG to 600 KHz and the tuning dial of the unit to 600 KHz.
- 2) Set the position of BAR ANTENNA as requested and dress the leadwires of BAR ANTENNA before making adjustment.
- 3) Turn the core of L105 (BAR ANTENNA) until the output of the unit becomes maximum.
- 4) Set the frequency of AM SG to 1400 KHz and the tuning dial of the unit to 1400 KHz.
- 5) Turn CT-5 (VC TRIMMER) until the output of the unit becomes maximum.
- 6) Repeat the above steps from 1). until the output of the unit becomes maximum at both 600 KHz and 1400 KHz.

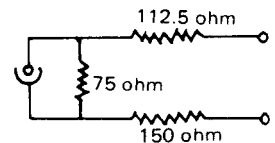
NOTE: Use plastic screw driver for this adjustment.



FM ALIGNMENT

Step	Adjusting Circuit	Connections		SG frequency	Position of tuning dial	Adjustment	VTVM Oscilloscope
		Input	Output				
1	I.F.	Connect sweep generator to FM TP-3 (H) & TP-4 (G) . . . shield plate	Connect oscilloscope to test point TP-5 (H), TP-17 (G)	10.7 MHz (0% modulation)	Near max. capacitance of tuning gang with no station signal.	T201	
2	Ratio Det.		Connect oscilloscope to test point TP-16 (H), TP-17 (G)			T202, T203	
3	OSC.	Connect FM SG. to FM ANT. Terminals or TP-1 (H) & TP-2 (G)	Connect VTVM to TP-9 (H) & TP-11 (G)	87.0 MHz (400 Hz 30% modulation)	Low end of dial scale	L104	Max.
4			TP-10 (H) & TP-11 (G)	109.0 MHz (400 Hz 30% modulation)	High end of dial scale		
5	ANT.	Connect FM SG. to FM ANT. Terminals or TP-1 (H) & TP-2 (G)	Connect VTVM to TP-9 (H) & TP-11 (G)	90.0 MHz (400 Hz 30% modulation)	90.0 MHz on dial scale	L101, L102, L103	Max.
6			TP-9 (H) & TP-11 (G)	106.0 MHz (400 Hz 30% modulation)	106.0 MHz on dial scale	CT-1, CT-2, CT-3	
7	Repeat adjustments						

- PREPARE:
1. Set the dial pointer to very left line of dial scale.
 2. Connect sweep generator, FM SG, VTVM and oscilloscope. FM ANT input impedance is 300 ohm.
 3. Use a screwdriver with plastic grip for all adjustments.
 4. Use a 300 ohm balanced dummy load.

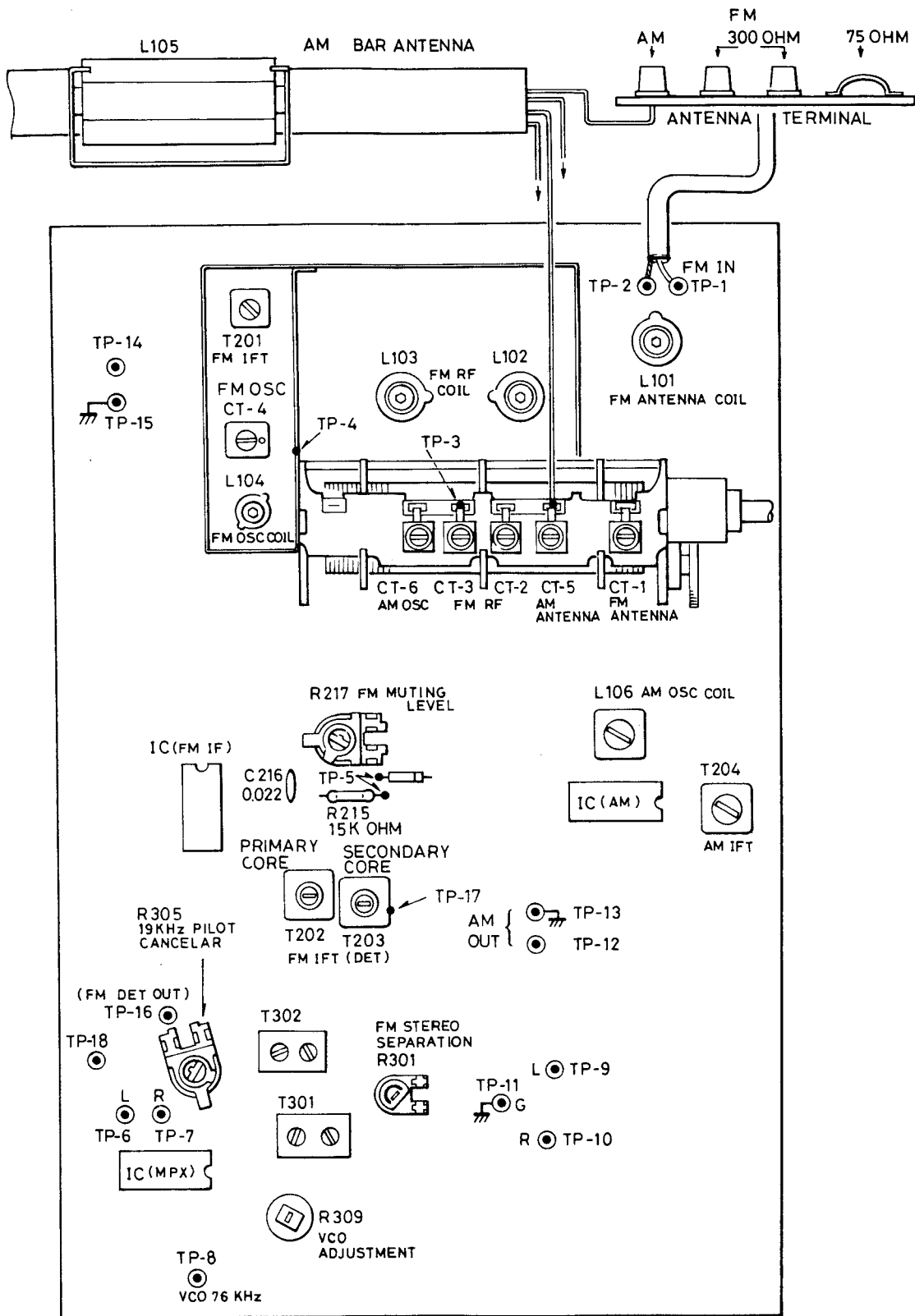


MW ALIGNMENT

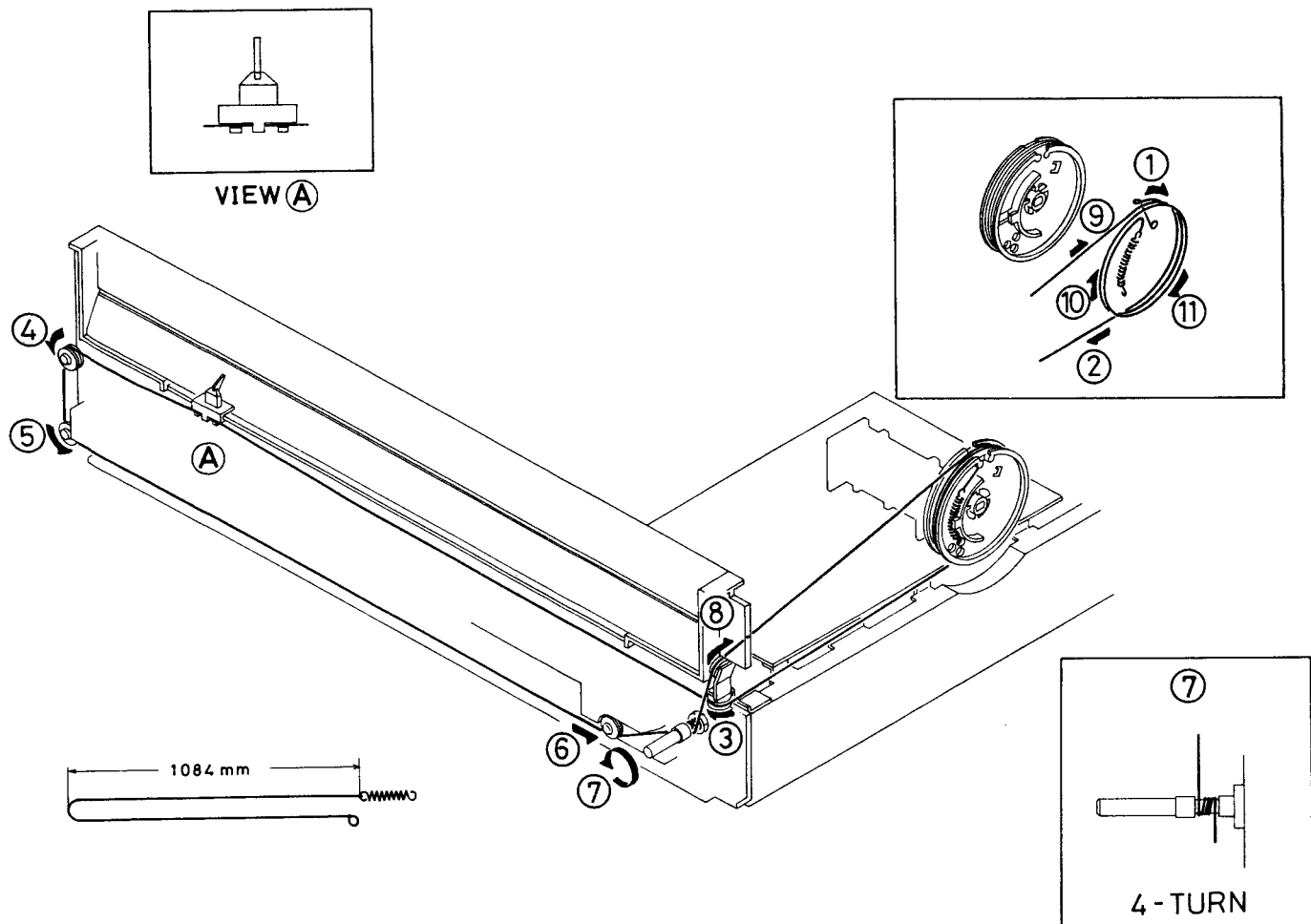
Step	Adjusting Circuit	Connections		SG frequency	Position of tuning dial	Adjustment	VTVM Oscilloscope
		Input	Output				
1	I.F.T.	Connect AM SG to test loop-antenna	Connect oscilloscope to TP-12 (H) & TP-13 (G)	455 KHz (400 Hz 30% modulation)	Low end of dial scale. With no station signal.	T204	Max.
2	OSC.	Connect AM SG to test loop-antenna	Connect VTVM to TP-12 (H) & TP-13 (G)	505 KHz (400 Hz 30% modulation)	Low end of dial scale	L106	Max.
3				1700 KHz (400 Hz 30% modulation)	High end of dial scale		
4	ANT.	Connect AM SG to test loop-antenna	Connect VTVM to TP-12 (H) & TP-13 (G)	600 KHz (400 Hz 30% modulation)	600 KHz on dial scale	L105	Max.
5				1400 KHz (400 Hz 30% modulation)	1400 KHz on dial scale		
6	Repeat adjustments.						

- PREPARE:
1. Set the dial pointer to very left line on dial scale.
 2. Use a screwdriver with plastic grip for all adjustments.
 3. Selector switch to "MW".
 4. Connect sweep generator, AM SG, VTVM and oscilloscope.

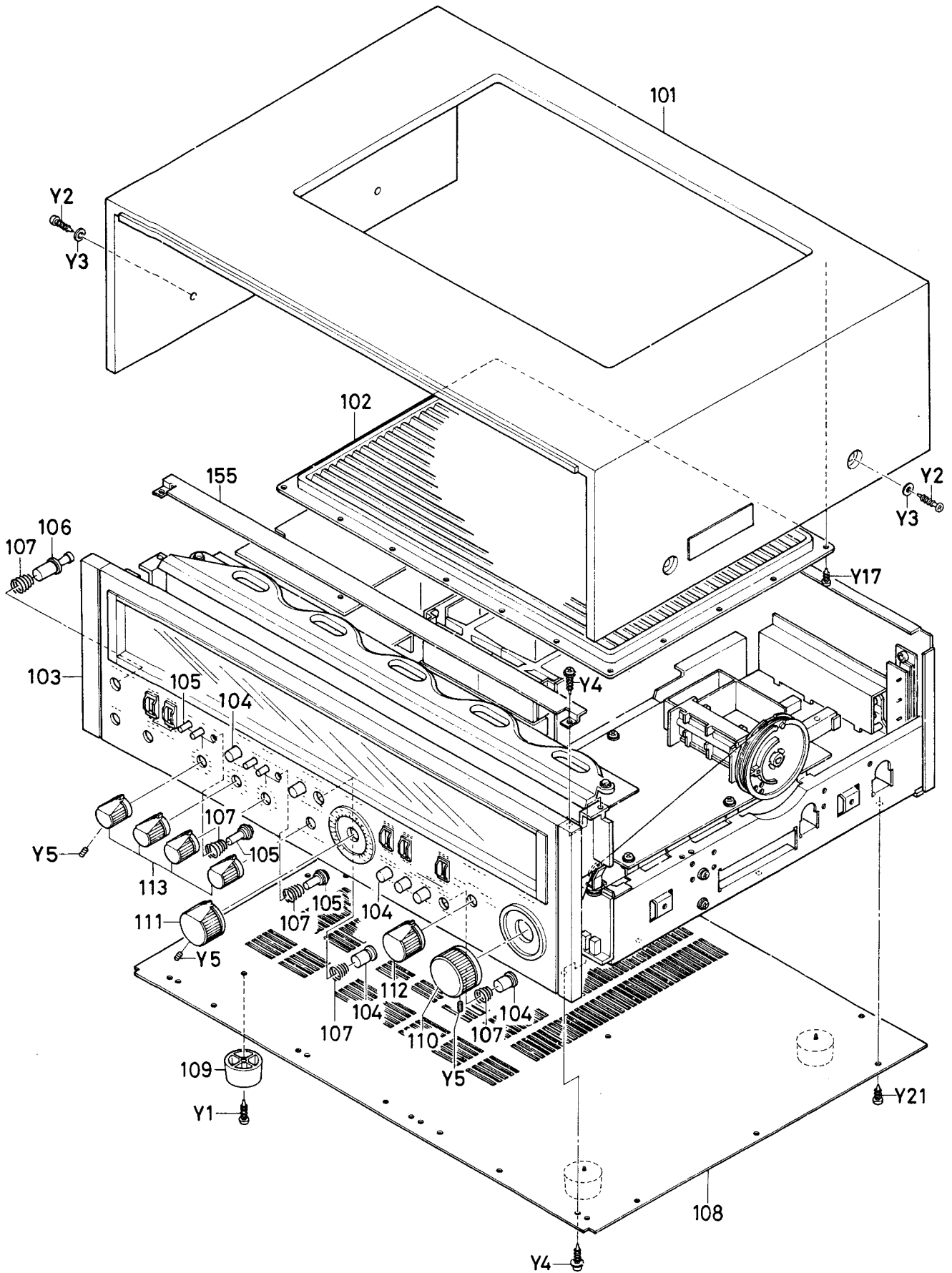
PARTS LOCATION



DIAL CORD STRINGING



CABINET EXPLODED VIEW



PARTS LIST

Ref. No.	Part No.	Description	Q'ty
PACKING			
	141-6-132T-92100	Individual Carton	1
	141-6-316T-96300	Pad	2
	141-6-316T-96400	Pad	2
	141-6-230T-25350	Inner Polyethylene Bag, Inst. B	1
	123-6-453R-00100	Inspection Sheet	2
	141-6-231T-07000	Inner Polyethylene Bag, Set	1
	141-6-230T-10250	Inner Polyethylene Bag, Power Cord	1
	141-6-230T-06100	Inner Polyethylene Bag, Spanner	1
ACCESSARY			
	141-6-410T-15800	Instruction Book	1
	141-2-419T-00200	Spanner, Rotary Knob	1
	4-245T-00171	Antenna, AM	1
	141-6-415T-22900	Notice	1
	141-4-415T-23000	Notice	1
	141-4-415T-23500	Notice	1
CABINET			
101	141-0-111T-34901	Cabinet Assy	1
102	141-2-242T-02100	Lattice Assy	1
103	141-0-122T-22802	Front Panel Assy	1
104	141-0-161T-50700	Push Button Assy (141-9-161T-09400)	7
105	141-0-161T-50800	Push Button Assy (141-9-161T-03500)	6
106	141-0-161T-50701	Push Button Assy Power Switch (141-9-161T-03600)	1
107	141-2-855T-21500	Spring Coil	14
108	141-0-125T-14001	Bottom Lid Assy	1
109	141-0-174T-06900	Stand Assy (141-9-174T-00700)	4
110	141-2-163T-48700	Rotary Knob, Tuning	1
111	141-0-163T-48800	Rotary Knob Assy, Volume (141-9-163T-05200)	1
112	141-0-163T-39600	Rotary Knob Assy, Function	1
113	141-0-163T-43300	Rotary Knob Assy, Tone (141-9-163T-02800)	4
114	141-6-472T-14900	Caution Label	2
CHASSIS			
121	141-2-126T-26600	Back Lid Assy	1
122	141-2-315T-16000	Reinforcement	1
123	141-2-315T-16100	Reinforcement, Center	1
124	141-2-315T-16200	Reinforcement, Right	1
125	141-2-315T-16300	Reinforcement	1
126	141-2-315T-15600	Reinforcement, Front	1
127	141-2-310T-10800	Bracket	1
128	141-0-214T-02400	Bracket Flame Assy	1
129	141-2-329T-05600	Reflector	1
130	141-2-421T-20900	Special Screw, Pulley	5
131	141-2-661T-71300	Pulley, Dial	5
132	141-2-310T-10300	Bracket, Pulley	1
133	141-2-310T-09700	Bracket, Pre Amp	1
134	141-2-310T-09800	Bracket, Main Amp	2
135	141-2-310T-09900	Bracket, Heatsink	2
136	141-2-210T-07200	Bracket, Shaft	1
137	141-2-368T-14300	Heat Shink, Power TR	2
138	141-2-310T-10000	Bracket, SP Socket	1
139	141-2-365T-39300	Bracket, Switch SP	1
140	141-2-365T-39400	Bracket, Switch Lever	1
141	141-2-253T-10900	Joint, Tape Monitor	3
142	141-2-753T-33600	Shaft, Tape Monitor	3
143	141-2-457T-23600	Special Washer	3
144	141-0-753T-36000	Shaft Assy, Function Switch	1
145	141-2-310T-11800	Bracket	1
146	141-2-253T-11700	Joint	1
147	141-0-566T-07200	Tuning Shaft Assy	1
148	141-2-464T-24000	Fixer	2

Ref. No.	Part No.	Description	Q'ty
149	141-2-464T-20700	Fixer	2
150	141-2-382T-09800	Terminal	2
151	141-2-464T-20671	Fixer	15
152	141-2-464T-20672	Fixer	5
153	141-2-472T-01201	Lug	7
154	141-2-329T-05400	Reflector, Dial	1
155	141-2-328T-05600	Shield Light, Dial	1
156	141-2-447T-16800	Cushion, Pre Amp	1
157	141-2-464T-26000	Fixer	1
158	141-2-472T-01001	Lug	1
159	141-0-146T-16602	Dial Scale Assy	1
160	141-0-511T-13000	Pointer Assy	1
161	141-2-538T-08700	Drum	1
162	141-2-855T-14800	Spring Coil	1
163	141-2-340T-00200	Rope	1
164	141-0-162T-13900	Lever Knob Assy	5
165	141-2-135T-53300	Cover	5
166	141-2-310T-11000	Bracket	1
167	141-2-246T-12900	Sheet	1
168	141-2-310T-11100	Bracket	2
169	141-2-464T-08700	Fixer	1
170	141-2-310T-10500	Bracket	1
171	141-2-369T-05400	Bracket Coil	1
172	141-2-243T-02700	Base	2
173	141-2-464T-20600	Fixer	2
174	141-2-457T-23000	Special Washer	2
175	141-2-411T-08100	Plate Nut, Voltage Select	1
176	141-2-464T-14400	Fixer	1
177	141-2-310T-16800	Bracket, Fuse	1
178	141-2-327T-17900	Insulator	1
SCREW MOUNTING			
Y1		Binding Head Tapping Screw 4 x 18 mm	4
Y2		Binding Head Screw 4 x 14 mm	4
Y3		Washer 4 x 13 x 1.2 mm	4
Y4		Washer Head Tapping Screw 3 x 12 mm	6
Y5		Headless Screw with Hexagon Hole 3 x 4 mm	6
Y6		Tapping Screw 3 x 6 mm	3
Y7		Tapping Screw 4 x 8 mm	4
Y8		Hexagon Nut 5 mm	4
Y9		Hexagon Nut 10 mm	1
Y10		Washer Head Tapping Screw 3 x 10 mm	84
Y11		Binding Head Tapping Screw 3 x 10 mm	25
Y12		External Toothlock Washer 3 x 6.5 x 0.45 mm	6
Y13		Tapping Screw 3 x 12 mm	4
Y14		Washer Head Tapping Screw 3 x 16 mm	6
Y15		Binding Head Screw 3 x 10 mm	2
Y16		Spring Washer 5 x 9.2 x 1.3 mm	4
Y17		Round Head Wood Screw 3.1 x 10 mm	10
Y18		Pan Head Screw 3 x 50 mm	1
Y19		Spring Washer 3 x 5.9 x 0.7 mm	1
Y20		Binding Head Screw 3 x 8 mm	4
Y21		Tapping Screw 3 x 8 mm	13
Y22		Washer 3 mm	2
Y23		Hexagon Nut 3 mm	2
Y24		Washer Head Tapping Screw 3 x 8 mm	2
Y25		Pan Head Screw with Spring Washer 3 x 8 mm	14
Y26		Hexagon Nut 9 x 0.75 mm	1
Y27		Pan Head Screw with Spring Washer 3 x 18 mm	8
ELECTRICAL PARTS			
201	4-251T-88200	Power Trans	1
202	4-243T-81500	Power Cord	1
203	141-2-382T-09700	Terminal	2

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
204	4-236T-13300	Plug	2
205	4-235T-39671	Socket, Pre Out Power In	1
206	141-2-382T-07000	Terminal	2
208	4-511T-08200	Meter, Signal	1
209	4-511T-08300	Meter, Tuning	1
210	4-257T-24104	Ant Coil Assy (L105)	1
211		Transistor 2SD425 R or O (Q711, 811)	2
212		Transistor 2SB555 R or O (Q712, 812)	2
213	4-235T-52200	Socket, Power TR	4
214	4-235T-55600	Socket, Power TR	1
215	4-235T-55671	Socket, Power TR	1
216	4-235T-55700	Socket, Power TR	1
217	4-235T-55771	Socket, Power TR	1
218	4-235T-54600	Socket 4 Pin, Meter	1
219	4-235T-43400	Socket 4 Pin	1
220	4-235T-51900	Socket 5 Pin	1
221	4-235T-51800	Socket 4 Pin	1
222	4-235T-52400	Socket 6 Pin	1
223	141-2-368T-11000	Heat Sink	1
224	4-231T-37683	Switch, Voltage Selector	1
225	123-2-472R-01000	Lug	1
226 (C132)		Ceramic 220PF ±10% 50V	1
MAIN AMP LEFT CHANNEL PCB ASSY			
224	141-4-230T-49002	P.C. Board Assy, Main Amp Left Channel	1
SVR701, 702	4-236T-12971	Plug 4P	2
	4-222T-62373	Semifixed Variable Resistor 1K	2
L701	4-265T-05800	VHF Coil	1
Q709		Transistor 2SC1624 Y or O	1
Q710		Transistor 2SA814 Y or O	1
Q704,705		Transistor 2SC1628 Y	2
Q706		Transistor 2SA818 Y	1
Q701,702, 703		Transistor 2SA942 BL	3
Q707		Transistor 2SC1175 E	1
Q708		Transistor 2SA659 E	1
D701,702, 704,705, 706,707, 708		Diode DS442X	7
D703		Varystor STV-3H GR	1
	4-209T-01173	Pozistor	1
CAPACITORS			
C703,704		Electrolytic, 100µF 63V	2
C707		Electrolytic, 220µF 16V	1
C701		Electrolytic, 1µF 50V	1
C708		Mylar, 0.1µF 50V ±20%	1
C711		Mylar, 0.047µF 50V ±20%	1
C709,710		Mylar, 0.015µF 50V ±20%	2
C702		Mylar, 470PF 50V ±10%	1
C706		Ceramic, 100PF 500V ±10%	1
C705		Ceramic, 33PF 500V ±10%	1
C712	4-223T-06400	Capacitor 0.047µF 150V	1
RESISTORS			
R724,725		Cement, 0.33ohm ±10% 5W	2
R727		Metal, 10ohm ±5% 1W	1
R726		Metal, 5.6ohm ±5% 1W	1
R707,712, 718,719		Metal, 150ohm ±5% 1/2W	4
R713,714		Metal, 100ohm ±5% 1/2W	2
R728,729		Metal, 56ohm ±5% 1/2W	2
R720,721		Metal, 10ohm ±5% 1/2W	2
R702		Carbon, 470Kohm ±5% 1/4W	1
R703,715		Carbon, 47Kohm ±5% 1/4W	2
R709		Carbon, 27Kohm ±5% 1/4W	1
R705,706		Carbon, 8.2Kohm ±5% 1/4W	2

Ref. No.	Part No.	Description	Q'ty
R708		Carbon, 3.3Kohm ±5% 1/4W	1
R711		Carbon, 2.2Kohm ±5% 1/4W	1
R710		Carbon, 1.8Kohm ±5% 1/4W	1
R723		Carbon, 1Kohm ±5% 1/4W	1
R701,722		Carbon, 1Kohm ±5% 1/4W	2
R704		Carbon, 330ohm ±5% 1/4W	1
R716		Carbon, 18Kohm ±5% 1/4W	1
R730		Carbon, 150ohm ±5% 1/4W	1
R731		Carbon, 150ohm ±5% 1/4W	1
MAIN AMP RIGHT CHANNEL PCB ASSY			
225	141-4-230T-49102	P.C. Board Assy, Main Amp Right Channel	1
	4-236T-12971	Plug 4P	2
SVR801, 802	4-222T-62373	Semifixed Variable Resistor 1K	2
L801	4-265T-05800	VHF Coil	1
Q809		Transistor 2SC1624 Y or O	1
Q810		Transistor 2SA814 Y or O	1
Q804,805		Transistor 2SC1628 Y	2
Q806		Transistor 2SA818 Y	1
Q801,802, 803		Transistor 2SA942 BL	3
Q807		Transistor 2SC1175 E	1
Q808		Transistor 2SA659 E	1
D801,802, 804,805, 806,807, 808		Diode DS442X	7
D803		Varystor STV-3H GR	1
	4-209T-01173	Pozistor	1
CAPACITORS			
C803,804		Electrolytic, 100µF 63V	2
C807		Electrolytic, 220µF 16V	1
C801		Electrolytic, 1µF 50V	1
C808		Mylar, 0.1µF 50V ±20%	1
C811		Mylar, 0.047µF 50V ±20%	1
C809,810		Mylar, 0.015µF 50V ±20%	2
C802		Mylar, 470PF 50V ±10%	1
C806		Ceramic, 100PF 500V ±10%	1
C805		Ceramic, 33PF 500V ±10%	1
C812	4-223T-06400	Capacitor, 0.047µF 150V	1
RESISTORS			
R824,825		Cement, 0.33ohm ±10% 5W	2
R827		Metal, 10ohm ±5% 1W	1
R826		Metal, 5.6ohm ±5% 1W	1
R807,812, 818,819		Metal, 150ohm ±5% 1/2W	4
R813,814		Metal, 100ohm ±5% 1/2W	2
R828,829		Metal, 56ohm ±5% 1/2W	2
R820,821		Metal, 10ohm ±5% 1/2W	2
R802		Carbon, 470Kohm ±5% 1/4W	1
R803,815		Carbon, 47Kohm ±5% 1/4W	2
R809		Carbon, 27Kohm ±5% 1/4W	1
R805,806		Carbon, 8.2Kohm ±5% 1/4W	2
R808		Carbon, 3.3Kohm ±5% 1/4W	1
R811		Carbon, 2.2Kohm ±5% 1/4W	1
R810		Carbon, 1.8Kohm ±5% 1/4W	1
R823		Carbon, 1Kohm ±5% 1/4W	1
R801,822		Carbon, 1Kohm ±5% 1/4W	2
R804		Carbon, 330ohm ±5% 1/4W	1
R816		Carbon, 18Kohm ±5% 1/4W	1
R830		Carbon, 150ohm ±5% 1/4W	1
R831		Carbon, 150ohm ±5% 1/4W	1

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
TONE AMP PCB ASSY			
226	141-4-230T-49200	PCB Assy, Tone Amp (140-9-230T-93200)	1
	4-222T-62200	Variable Resistor	3
Q552,553, 652,653		Transistor 2SC1570 G	4
Q551,651		Transistor 2SA929 G	2
CAPACITORS			
C554,654		Electrolytic, 100 μ F 10V	2
C566,567		Electrolytic, 220 μ F 25V	2
C556,564, 656,664		Electrolytic, 100 μ F 16V	4
C557,562, 565,657, 662,665		Electrolytic, 4.7 μ F 25V	6
C551,651		Electrolytic, 1.0 μ F 50V (Nonpolar)	2
C558,559, 658,659		Mylar, 0.022 μ F 50V \pm 5%	4
C560,561, 660,661		Mylar, 0.0047 μ F 50V \pm 5%	4
C552,553, 652,653		Ceramic, 47PF 50V \pm 10%	4
C555,563, 655,653		Ceramic, 12PF 50V \pm 10%	4
RESISTORS			
R570,670		Carbon, 270Kohm \pm 5% 1/4W	2
R559,659		Carbon, 220Kohm \pm 5% 1/4W	2
R553,573, 653,673		Carbon, 100Kohm \pm 5% 1/4W	4
R554,654		Carbon, 56Kohm \pm 5% 1/4W	2
R563,663		Carbon, 27Kohm \pm 5% 1/4W	2
R562,662		Carbon, 22Kohm \pm 5% 1/4W	2
R560,561, 660,661		Carbon, 15Kohm \pm 5% 1/4W	4
R556,656		Carbon, 12Kohm \pm 5% 1/4W	2
R566,567, 666,667		Carbon, 6.8Kohm \pm 5% 1/4W	4
R564,565, 571,664, 665,671		Carbon, 5.6Kohm \pm 5% 1/4W	6
R557,657		Carbon, 4.7Kohm \pm 5% 1/4W	2
R572,672		Carbon, 3.9Kohm \pm 5% 1/4W	2
R558,658		Carbon, 2.7Kohm \pm 5% 1/4W	2
R555,655		Carbon, 1.8Kohm \pm 5% 1/4W	2
R568,668		Carbon, 1.2Kohm \pm 5% 1/4W	2
R551,651		Carbon, 560ohm \pm 5% 1/4W	2
R569,669		Carbon, 100Kohm \pm 5% 1/4W	2
R552,652		Carbon, 220Kohm \pm 5% 1/4W	2
TONE SWITCH PCB ASSY			
227	141-4-230T-49301	PCB Assy, Tone Switch	1
S11,12	4-231T-73100	Push Switch	1
S9,10	4-231T-73200	Push Switch	1
S13,14	4-231T-73300	Push Switch	1
S7	4-231T-73900	Push Switch	1
Q581,681		Transistor 2SC1570 G	2
Q582,682		Transistor 2SC945 P	2
CAPACITORS			
C592,692		Electrolytic, 4.7 μ F 25V	2
C591,691		Electrolytic, 1.0 μ F 50V	2
C589,590, 689,690		Mylar, 0.1 μ F 50V \pm 5%	4
C584,586, 684,686		Mylar, 0.068 μ F 50 \pm 5%	4
C585,587, 685,687		Mylar, 0.022 μ F 50V \pm 5%	4

Ref. No.	Part No.	Description	Q'ty
C593,693		Mylar, 0.0082 μ F 50V \pm 5%	2
C580,581, 582,680, 681,682		Mylar, 0.0015 μ F 50V \pm 5%	6
C583,683		Mylar, 0.0015 μ F 50V \pm 5%	2
C588,688		Mylar, 470PF 50V \pm 10%	2
C595,695		Mylar, 0.01 μ F 50V \pm 10%	2
RESISTORS			
R699		Carbon, 47Kohm \pm 5% 1/4W	1
R581,582, 583,681, 682,683		Carbon, 1Mohm \pm 5% 1/4W	6
R584,585, 586,684, 685,686		Carbon, 1Mohm \pm 5% 1/4W	6
R596,696		Carbon, 1Mohm \pm 5% 1/4W	2
R589,689		Carbon, 270Kohm \pm 5% 1/4W	2
R591,592, 691,692		Carbon, 220Kohm \pm 5% 1/4W	4
R594,694		Carbon, 100Kohm \pm 5% 1/4W	2
R588,688		Carbon, 39Kohm \pm 5% 1/4W	2
R593,693		Carbon, 4.7Kohm \pm 5% 1/4W	2
R590,595, 690,695		Carbon, 2.2Kohm \pm 5% 1/4W	4
R587,687		Carbon, 1Kohm \pm 5% 1/4W	2
R597,697		Carbon, 5.6Kohm \pm 5% 1/4W	2
R598,698, 599		Carbon, 220Kohm \pm 5% 1/4W	3
VOLUME & BALANCE PCB ASSY			
228	141-4-230T-49401	PCB Assy, Volume & Balance	1
	4-222T-62400	Variable Resistor, Volume	1
	4-222T-56600	Variable Resistor, Balance	1
CAPACITORS			
C541,641		Ceramic, 220PF 50V \pm 10%	2
MUTING SWITCH PCB ASSY			
229	141-4-230T-49501	PCB Assy, Muting Switch	1
	4-231T-73400	Special Switch	4
RESISTORS			
R542,642		Carbon, 47Kohm \pm 5% 1/4W	2
R541,641		Carbon, 5.6Kohm \pm 5% 1/4W	2
LOUDNESS SWITCH PCB ASSY			
230	141-4-230T-49600	PCB Assy, Loudness Switch	1
S	4-231T-74000	(140-9-230T-93600) Push Switch	1
CAPACITOR			
C542,642		Mylar, 0.082 μ F 50V \pm 5%	2
RESISTORS			
R543,643		Carbon, 4.7Kohm \pm 5% 1/4W	2
R544,644		Carbon, 1Mohm \pm 5% 1/4W	2

RTS LIST

Ref. No.	Part No.	Description	Q'ty
EADPHONE PCB ASSY			
11	141-4-230T-49800	PCB Assy, Headphone (141-9-230T-93800)	1
	4-235T-36771	Socket	1
SPEAKER SWITCH PCB ASSY			
12	141-4-230T-49902	PCB Assy, Speaker Switch	1
401,402	4-231T-73400	Special Switch	2
		Metal Resistor, 220ohm ±5% 1W	2
POWER SWITCH PCB ASSY			
33	141-4-230T-73501	PCB Assy, Power Switch	1
	4-231T-76472	Push Switch	1
	4-223T-04700	Capacitor	1
	141-2-381T-04200	Bracket, Fuse	4
	4-234T-02171	Fuse 630mA	2
SPEAKER TERMINAL, MUTING PCB ASSY			
34	141-4-230T-50201	P.C. Board Assy, Speaker Terminal, Muting	1
	4-232T-05200	Relay	1
	4-232T-05271	Relay } or	1
	4-237T-07071	Terminal Board	2
413		Transistor 2SD438 E	1
411,412, 414		Transistor 2SC945 P	3
420,421		Diode 1N4002 or 1N4003	2
411,412, 413,414, 415,416		Diode DS442X or 1S2472	6
417,418, 422,423, 424,425, 426		Diode DS442X or 1S2472	7
419		Diode YZ047	1
CAPACITORS			
411		Electrolytic, 100μF 25V Nonpola	1
414,415		Electrolytic, 0.47μF 50V Nonpola	2
412		Electrolytic, 47μF 25V	1
413		Electrolytic, 1μF 50V	1
RESISTORS			
414,417		Carbon, 220Kohm ±5% 1/4W	2
424		Carbon, 100Kohm ±5% 1/4W	1
419		Carbon, 47Kohm ±5% 1/4W	1
415,416, 425		Carbon, 33Kohm ±5% 1/4W	3
426		Carbon, 27Kohm ±5% 1/4W	1
411,412, 420,421, 423,427		Carbon, 22Kohm ±5% 1/4W	6
422		Carbon, 1.8Kohm ±10% 1/4W	1
413,418		Carbon, 1Kohm ±5% 1/4W	2
HONO AMP PCB ASSY			
35	141-4-230T-50371	PCB Assy, Phono Amp	1
1	4-231T-74100	Rotary Switch	1

Ref. No.	Part No.	Description	Q'ty
S2,3,4	4-231T-73800	Push Switch	1
	141-2-322T-42300	Shield Plate	1
	4-235T-45700	Socket, Phono 1, 2, AUX	1
	4-235T-48400	Socket, Tape 1, 2	2
	4-236T-10273	Plug 6 Pin	1
D501,601		Diode 1N4001	2
IC501,601		IC HA 1457	2
CAPACITORS			
C510,511		Electrolytic, 470 μF 25V	2
C501,601		Electrolytic, 4.7 μF 25V	2
C509,609		Electrolytic, 1 μF 50V (Non Polar)	2
C503,603		Electrolytic, 47 μF 16V	2
C506,606		Styrol, 6800PF 50V ±2%	2
C507,607		Styrol, 1800PF 50V ±2%	2
C508,608		Styrol, 130PF 50V ±5%	2
C504,604		Ceramic, 100PF 50V ±10%	2
C502,602		Ceramic, 47PF 50V ±10%	2
C505,605		Ceramic, 22PF 50V ±10%	2
C512,513, 514,515		Ceramic, 0.01 μF 50V +80-20%	4
RESISTORS			
R505,605		Metal, 510Kohm ±1% 1/4W	2
R506,606		Metal, 39Kohm ±1% 1/4W	2
R503,603		Carbon, 100Kohm ±5% 1/4W	2
R502,602		Carbon, 2.2Kohm ±5% 1/4W	2
R501,508, 601,608		Carbon, 100Kohm ±5% 1/4W	4
R511,611		Carbon, 3.3Kohm ±5% 1/4W	2
R509,510 609,610		Carbon, 2.2Kohm ±5% 1/4W	4
R504,604		Carbon, 820ohm ±5% 1/4W	2
R507,607		Carbon, 560ohm ±5% 1/4W	2
DIN PCB ASSY			
236	141-4-230T-50501	PCB Assy, DIN	1
	4-235T-53200	Socket	1
RESISTORS			
R512,612		Carbon, 270Kohm ±5% 1/4W	2
FUNCTION INDICATOR PCB ASSY			
237	141-4-230T-50771	PCB Assy, Function Indicator	1
	4-612T-08100	Lamp, 6.3V 65mA Function	5
	4-612T-08200	Lamp, 6V 30mA Stereo	1
DIAL LIGHT PCB ASSY			
238	141-4-230T-50801	PCB Assy, Dial Light	1
	4-612T-07371	Lamp	5
	4-237T-00171	Terminal Board	7
	4-234T-03671	Fuse 2A	1
	141-2-381T-04200	Bracket, Fuse	2
	141-6-476T-11200	Indication Label	1
FUSE PCB ASSY			
239	141-4-230T-73471	PCB Assy, Fuse	1
	141-4-281T-04200	Bracket Fuse	4
	4-234T-06171	Fuse, 2.5A	1
	4-234T-06471	Fuse, 5A	1
	4-237T-00171	Terminal Board	4

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
DC POWER SUPPLY PCB ASSY			
240	141-4-230T-51971	P.C. Board Assy, Power Supply	1
	4-236T-13472	Plug 3P	1
	4-236T-13479	Plug 10P	1
Q901		Transistor 2SD386 E	1
Q902		Transistor 2SD333 E	1
Q903		Transistor 2SC1175 E	1
Q904		Transistor 2SD438 E	1
Q905		Transistor 2SB514 E	1
Q906		Transistor 2SA659 E	1
Q907		Transistor 2SB560 E	1
D902		Diode W02	1
D903		Diode XZ135	1
D904		Diode XZ132	1
CAPACITORS			
C911,912		Electrolytic, 470 μ F 50V	2
C913,921,922		Electrolytic, 100 μ F 35V	3
C916,917		Electrolytic, 47 μ F 35V	2
C915		Electrolytic, 1000 μ F 16V	1
C914		Electrolytic, 220 μ F 16V	1
C918		Electrolytic, 47 μ F 16V	1
C923,924		Electrolytic, 4.7 μ F 35V	2
C907,908,909,910		Ceramic, 0.01 μ F 50V +100-0%	4
C919,920		Ceramic, 0.001 μ F 50V +80-20%	2
RESISTORS			
R906		Metal, 100ohm \pm 5% 3W	1
R921,923		Metal, 180ohm \pm 5% 1/2W	2
R920,922		Metal, 220ohm \pm 5% 1/2W	2
R909		Metal, 56ohm \pm 5% 1/2W	1
R908		Metal, 10ohm \pm 5% 1/2W	1
R917,919		Carbon, 27Kohm \pm 5% 1/4W	2
R910,911		Carbon, 22Kohm \pm 5% 1/4W	2
R916		Carbon, 18Kohm \pm 5% 1/4W	1
R915		Carbon, 15Kohm \pm 5% 1/4W	1
R907,912,913,914		Carbon, 2.2Kohm \pm 5% 1/4W	4
R918		Carbon, 1.2Kohm \pm 5% 1/4W	1
MIC AMP PCB ASSY			
241	141-4-230T-49771	P.C. Board, Mic Amp	1
	141-2-322T-42200	Shield Plate	1
	4-235T-36700	Socket	1
Q522		Transistor 2SC1570 G	1
Q521		Transistor 2SA929 G	1
CAPACITORS			
C528,529		Electrolytic, 33 μ F 25V	2
C524,525		Electrolytic, 22 μ F 16V	2
C521		Electrolytic, 1 μ F 50V	1
C526		Electrolytic, 1.0 μ F 50V Nonpolar	1
C523		Ceramic, 47PF 50V \pm 5%	1
C522		Ceramic, 470PF 50V \pm 10%	1
C527		Ceramic, 12PF 50V \pm 10%	1
RESISTORS			
R523		Carbon, 220Kohm \pm 5% 1/4W	1
R524		Carbon, 100Kohm \pm 5% 1/4W	1
R530		Carbon, 100Kohm \pm 5% 1/4W	1
R525		Carbon, 56Kohm \pm 5% 1/4W	1
R526		Carbon, 12Kohm \pm 5% 1/4W	1
R521		Carbon, 10Kohm \pm 5% 1/4W	1

Ref. No.	Part No.	Description	Q'ty
R528		Carbon, 4.7Kohm \pm 5% 1/4W	1
R529		Carbon, 2.7Kohm \pm 5% 1/4W	1
R522		Carbon, 2.2Kohm \pm 5% 1/4W	1
R527		Carbon, 470ohm \pm 5% 1/4W	1
TUNER PCB ASSY			
242	141-4-230T-48706	PCB Assy, Tuner	1
L101	4-265T-03700	VHF Coil	1
L102	4-265T-50300	VHF Coil	1
L103	4-265T-50400	VHF Coil	1
L104	4-265T-03900	VHF Coil	1
T201	4-256T-05140	I.F.T	1
T202	4-256T-10100	I.F.T	1
T203	4-256T-10200	I.F.T	1
T204	4-256T-10930	I.F.T	1
L201	4-253T-10600	Filter	1
L106	4-258T-15540	OSC Coil	1
	4-224T-11100	Variable Capacitor	1
L107, L202	4-253T-08600	Hi-frequ Choke	2
T301, T302	4-255T-01400	MPX Coil	2
R217	4-222T-39476	Semifixed Variable Resistor 20K-B	1
R301	4-222T-39577	Semifixed Variable Resistor 50K	1
R309	4-222T-62080	Semifixed Variable Resistor 3.3K	1
	4-236T-10271	Plug, Meter	1
	4-236T-10271	Plug, Switch	1
	141-2-322T-41900	Shield Plate	1
	141-2-322T-42000	Shield Plate	1
	4-256T-81000	IF Filter	} or
	4-256T-81071	IF Filter	
	4-256T-81072	IF Filter	
	4-256T-81073	IF Filter	
	4-256T-81074	IF Filter	}
R305	4-222T-39478	Semifixed Variable Resistor 100K-B	
L203,204	4-253T-08600	Hi-frequ Choke	2
	4-236T-10271	Plug, Function Switch	1
	4-236T-10272	Plug, Meter Switch	1
CF4	4-256T-80971	IF Filter	1
	141-2-323T-00500	Shield Box, L101	1
CT4	4-224T-08800	Trimmer	1
Q101		Transistor 2SK59 GR	1
Q102		Transistor 2SC535 B	1
Q103		Transistor 2SC930 E CONV	1
Q301		Transistor 2SC536 F AUD or GAUD	1
Q302		Transistor 2SC536 G AUD	1
Q361		Transistor 2SC945 P	1
Q362,363		Transistor 2SC945 P or Q	2
Q360		Transistor 2SC945 P	1
Q351		Transistor 2SC945 P	1
Q358, 357		Transistor 2SD655 E	2
Q306,308		Transistor 2SA702 F ALF	2
Q305,359,304		Transistor 2SC536 G AUD	3
Q307,309		Transistor 2SC1571 G AUD	2
Q352,353,		Transistor 2SC536 G AUD or FAUD	2
Q354,356		Transistor 2SC536 G AUD	2
Q355		Transistor 2SA608 E	1
Q364		Transistor 2SC536 G AUD	1
D102,103		Diode 1S2473	2
D101		Diode 1S2473 or DS442X	1
D201		Diode 1S2473 or DS442X	1
D104,202		Diode 1S188 FM	2
D203		Diode MA26	1
D364,351		Diode 1S2473 or DS442X	2
D356,357		Diode 1S2473 or DS442X	2
D362		Diode 1S2473 or DS442X	1
D359,360,361		Diode 1S2473 or DS442X	3

RTS LIST

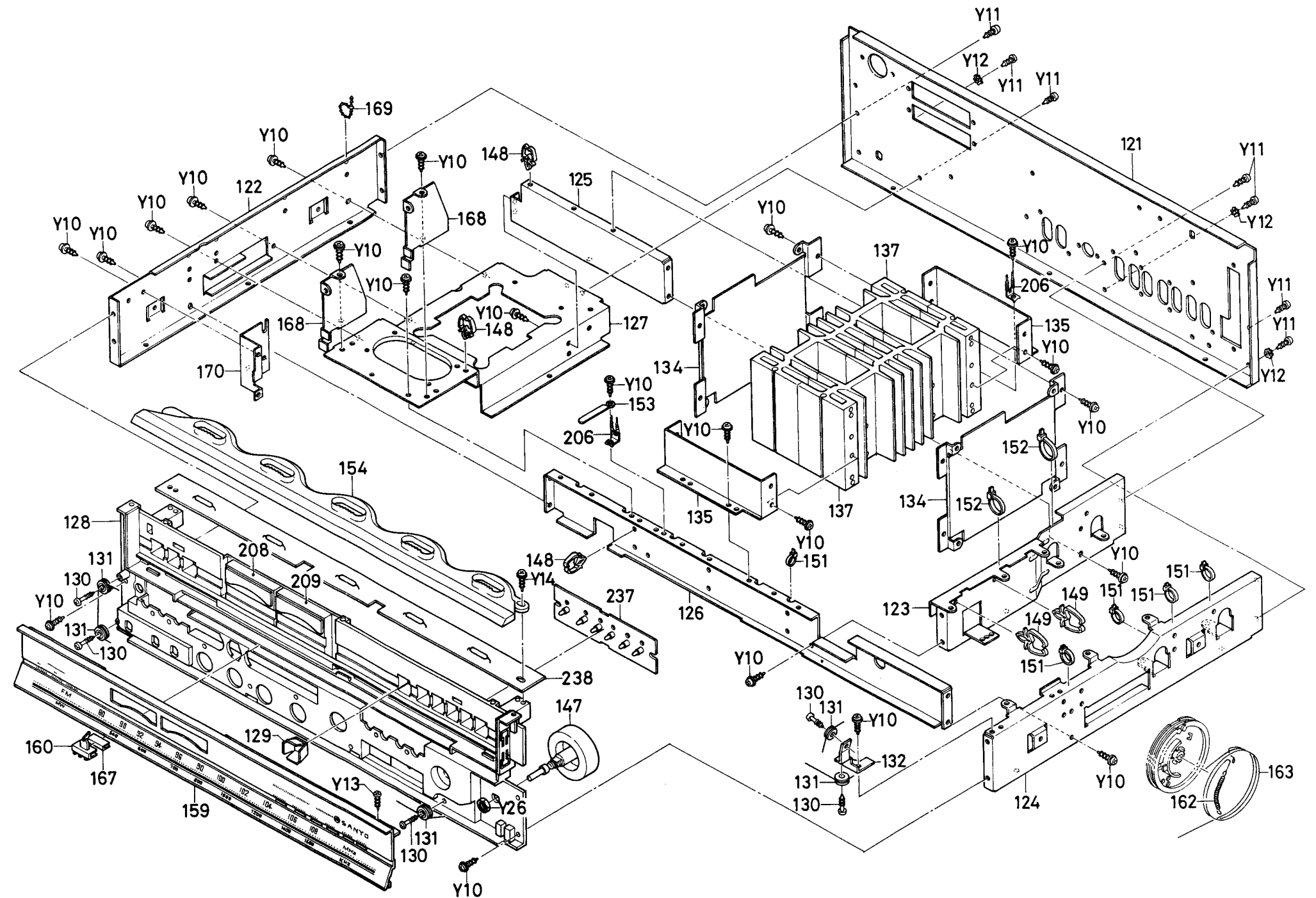
Ref. No.	Part No.	Description	Q'ty
363,204		Diode 1S2473 or DS442X	2
354,353		Diode 1S2472	2
355		Diode 1S188 FM	1
205		Diode 1S2473	1
358		Diode 1S2473 or DS442X	1
365		Diode 1S2473 or DS442X	1
1		IC HA-1138	1
2		IC LA-1222	1
3		IC HV-1137W	1
4		IC HA-11223	1
CAPACITORS			
130		Ceramic, 1PF 50V ± 0.25 PF	1
110		Ceramic, 2PF 50V ± 0.25 PF	1
106		Ceramic, 7PF 50V ± 0.25 PF	1
113		Ceramic, 6PF 50V ± 0.25 PF	1
101		Ceramic, 12PF 50V $\pm 10\%$	1
104		Ceramic, 15PF 50V $\pm 10\%$	1
105		Ceramic, 18PF 50V $\pm 10\%$	1
126		Ceramic, 10PF 50V $\pm 10\%$	1
112		Ceramic, 20PF 50V $\pm 5\%$	1
115		Ceramic, 15PF 50V $\pm 5\%$	1
114		Ceramic, 33PF 50V $\pm 10\%$	1
209		Ceramic, 33PF 50V $\pm 10\%$	1
223		Ceramic, 0.01 μ F 50V +80-20%	1
225		Ceramic, 56PF 50V $\pm 5\%$	1
111		Ceramic, 100PF 50V $\pm 10\%$	1
227		Ceramic, 220PF 50V $\pm 10\%$	1
102		Ceramic, 0.001 μ F 50V $\pm 10\%$	1
103,131		Ceramic, 0.001 μ F 50V $\pm 10\%$	2
109,117,116		Ceramic, 0.01 μ F 50V +80-20%	3
108,123,122		Ceramic, 0.01 μ F 50V +80-20%	3
119,201,202,203,204,205		Ceramic, 0.01 μ F 50V +80-20%	6
221,107		Ceramic, 0.01 μ F 50V +80-20%	2
118,124,216		Ceramic, 0.022 μ F 50V +80-20%	3
127,206,207		Ceramic, 0.047 μ F 50V +80-20%	3
208,212,214		Ceramic, 0.047 μ F 50V +80-20%	3
215		Ceramic, 0.047 μ F 50V +80-20%	1
218,222		Ceramic, 0.01 μ F 50V +80-20%	2
217,224		Ceramic, 0.01 μ F 50V +80-20%	2
129		Ceramic, 0.001 μ F 50V $\pm 10\%$	1
304		Styrol, 1000PF 125V $\pm 5\%$	1
125		Styrol, 300PF 125V $\pm 5\%$	1
120		Mylar, 0.01 μ F 50V $\pm 20\%$	1
128,309		Mylar, 0.01 μ F 50V $\pm 20\%$	2
229		Mylar, 0.027 μ F 50V $\pm 20\%$	1
228		Mylar, 0.01 μ F 50V $\pm 20\%$	1
230		Mylar, 0.068 μ F 50V $\pm 20\%$	1
305		Mylar, 0.0022 μ F 50V $\pm 10\%$	1
308		Mylar, 0.0015 μ F 50V $\pm 10\%$	1
322,332		Mylar, 0.015 μ F 50V $\pm 5\%$	2
321,331		Mylar, 0.0022 μ F 50V $\pm 10\%$	2
303		Mylar, 0.047 μ F 50V $\pm 20\%$	1
314		Electrolytic, 470 μ F 16V	1
313		Electrolytic, 220 μ F 16V	1
213,232		Electrolytic, 100 μ F 16V	2
212		Electrolytic, 10 μ F 16V	1
226		Electrolytic, 33 μ F 10V	1
210,219		Electrolytic, 1 μ F 50V	2
220		Electrolytic, 0.47 μ F 50V	1
211		Electrolytic, 4.7 μ F 25V	1
302		Electrolytic, 2.2 μ F 50V	1
C310,307		Electrolytic, 3.3 μ F 25V	2
C323,333		Electrolytic, 0.47 μ F 50V	2
C306		Al Electrolytic, 0.47 μ F 10V $\pm 20\%$	1

Ref. No.	Part No.	Description	Q'ty
C312,311		Al Electrolytic, 0.33 μ F 10V $\pm 20\%$	2
C315		Electrolytic, 0.47 μ F 50V	1
C354		Electrolytic, 0.47 μ F 50V $\pm 20\%$ (Non Polar)	1
C352		Electrolytic, 100 μ F 35V	1
C351		Electrolytic, 10 μ F 35V	1
C355		Electrolytic, 1 μ F 50V	1
C233		Electrolytic, 47 μ F 10V	1
C231		Electrolytic, 47 μ F 10V	1
C356		Electrolytic, 0.47 μ F 50V $\pm 20\%$ (Non Polar)	1
C357		Electrolytic, 0.47 μ F 50V	1
C234		Al Electrolytic, 0.1 μ F 10V	1
RESISTORS			
R102		Carbon, 10ohm $\pm 5\%$ 1/4W	1
R203		Carbon, 560ohm $\pm 5\%$ 1/4W	1
R113		Carbon, 100ohm $\pm 5\%$ 1/4W	1
R324,334		Carbon, 270ohm $\pm 5\%$ 1/4W	2
R368		Carbon, 270ohm $\pm 5\%$ 1/4W	1
R227		Carbon, 330ohm $\pm 5\%$ 1/4W	1
R202,206		Carbon, 330ohm $\pm 5\%$ 1/4W	2
R205,207		Carbon, 330ohm $\pm 5\%$ 1/4W	2
R210		Carbon, 470ohm $\pm 5\%$ 1/4W	1
R201		Carbon, 330ohm $\pm 5\%$ 1/4W	1
R381		Carbon, 1Kohm $\pm 5\%$ 1/4W	1
R360		Carbon, 1Kohm $\pm 5\%$ 1/4W	1
R342		Carbon, 1Kohm $\pm 5\%$ 1/4W	1
R230		Carbon, 1Kohm $\pm 5\%$ 1/4W	1
R105		Carbon, 1Kohm $\pm 5\%$ 1/4W	1
R306,220		Carbon, 1Kohm $\pm 5\%$ 1/4W	2
R321,331		Carbon, 1.2Kohm $\pm 5\%$ 1/4W	2
R379		Carbon, 1Kohm $\pm 5\%$ 1/4W	1
R204		Carbon, 2.2Kohm $\pm 5\%$ 1/4W	1
R226,213		Carbon, 2.2Kohm $\pm 5\%$ 1/4W	2
R208		Carbon, 2.2Kohm $\pm 5\%$ 1/4W	1
R110,115		Carbon, 2.7Kohm $\pm 5\%$ 1/4W	2
R225		Carbon, 3.3Kohm $\pm 5\%$ 1/4W	1
R311		Carbon, 3.3Kohm $\pm 5\%$ 1/4W	1
R325,335		Carbon, 3.3Kohm $\pm 5\%$ 1/4W	2
R209		Carbon, 3.9Kohm $\pm 5\%$ 1/4W	1
R303,304		Carbon, 3.9Kohm $\pm 5\%$ 1/4W	2
R223		Carbon, 1.8Kohm $\pm 5\%$ 1/4W	1
R320		Carbon, 5.6Kohm $\pm 5\%$ 1/4W	1
R332		Carbon, 5.6Kohm $\pm 5\%$ 1/4W	1
R104		Carbon, 5.6Kohm $\pm 5\%$ 1/4W	1
R343		Carbon, 5.6Kohm $\pm 5\%$ 1/4W	1
R356		Carbon, 8.2Kohm $\pm 5\%$ 1/4W	1
R352		Carbon, 8.2Kohm $\pm 5\%$ 1/4W	1
R231		Carbon, 8.2Kohm $\pm 5\%$ 1/4W	1
R372		Carbon, 10Kohm $\pm 5\%$ 1/4W	1
R373		Carbon, 10Kohm $\pm 5\%$ 1/4W	1
R374		Carbon, 10Kohm $\pm 5\%$ 1/4W	1
R111,308		Carbon, 10Kohm $\pm 5\%$ 1/4W	2
R211		Carbon, 12Kohm $\pm 5\%$ 1/4W	1
R322		Carbon, 5.6Kohm $\pm 5\%$ 1/4W	1
R103,107		Carbon, 150ohm $\pm 5\%$ 1/4W	2
R109,222		Carbon, 150ohm $\pm 5\%$ 1/4W	2
R114		Carbon, 680ohm $\pm 5\%$ 1/4W	1
R330		Carbon, 5.6Kohm $\pm 5\%$ 1/4W	1
R340		Carbon, 270ohm $\pm 5\%$ 1/4W	1
R112		Carbon, 10Kohm $\pm 5\%$ 1/4W	1
R377		Carbon, 47ohm $\pm 5\%$ 1/4W	1
R378		Carbon, 15Kohm $\pm 5\%$ 1/4W	1
R317		Carbon, 22Kohm $\pm 5\%$ 1/4W	1
R233		Carbon, 100Kohm $\pm 5\%$ 1/4W	1
R232		Carbon, 150Kohm $\pm 5\%$ 1/4W	1
R218		Carbon, 12Kohm $\pm 5\%$ 1/4W	1
R361		Carbon, 22Kohm $\pm 5\%$ 1/4W	1
R363		Carbon, 150Kohm $\pm 5\%$ 1/4W	1

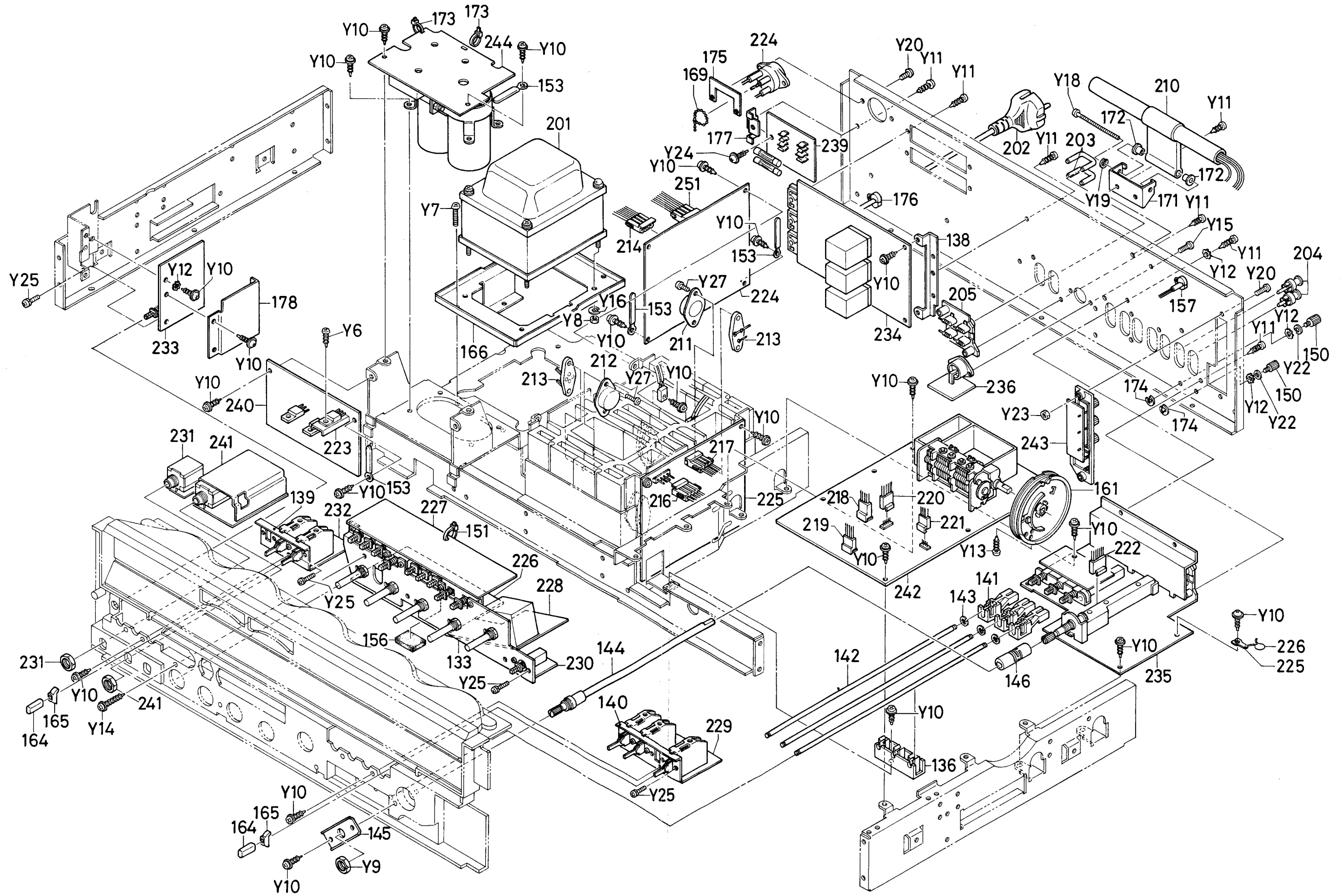
PARTS LIST

CHASSIS EXPLODED VIEW

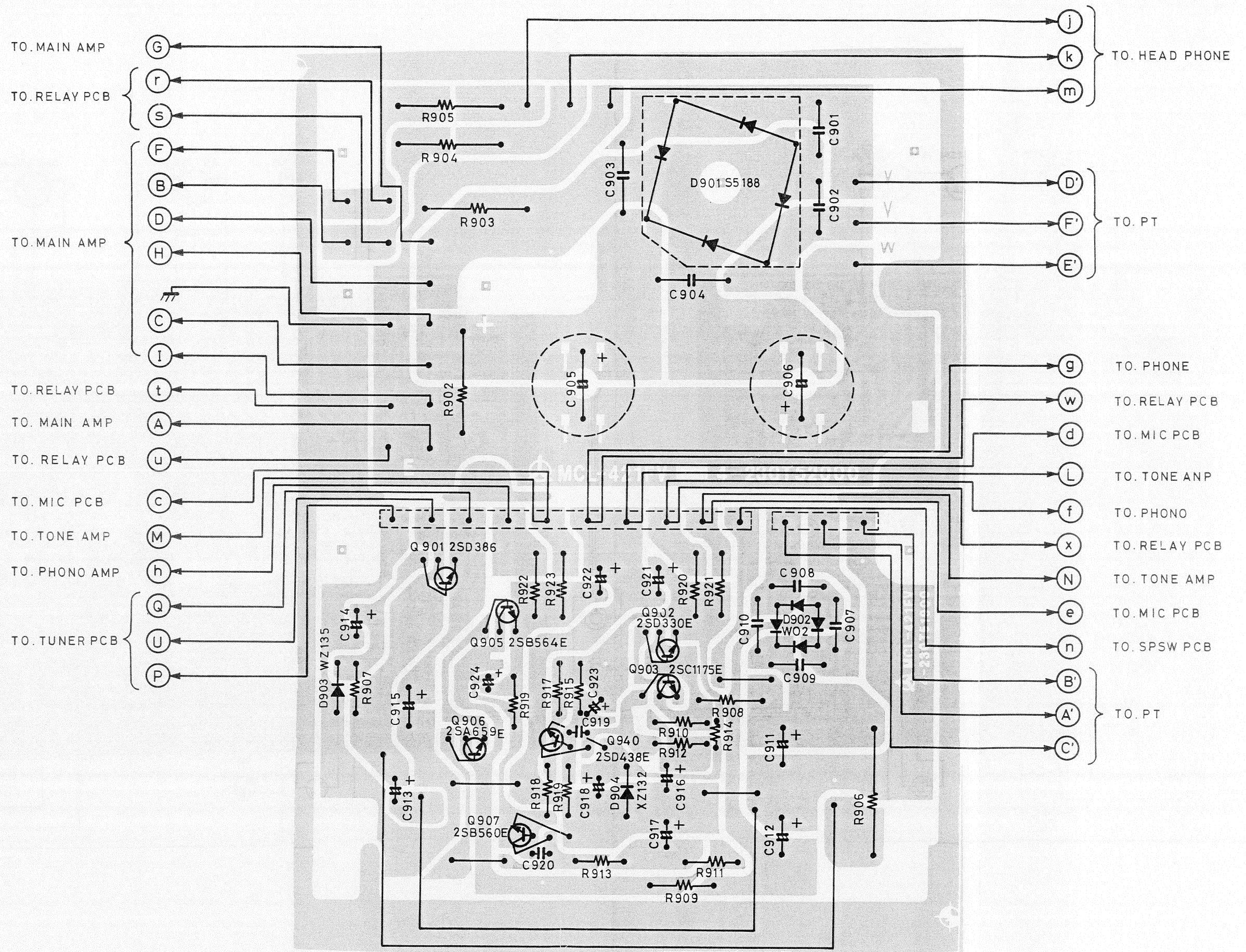
Ref. No.	Part No.	Description	Q'ty
R108,221,212		Solid, 56ohm ±10% 1/2W	3
R314,315		Solid, 56ohm ±10% 1/2W	2
R312		Solid, 100ohm ±10% 1/2W	1
R337,327		Carbon, 27Kohm ±5% 1/4W	2
R216		Carbon, 47Kohm ±5% 1/4W	1
R215		Carbon, 15Kohm ±5% 1/4W	1
R354		Carbon, 15Kohm ±5% 1/4W	1
R302		Carbon, 18Kohm ±5% 1/4W	1
R365		Carbon, 22Kohm ±5% 1/4W	1
R366		Carbon, 22Kohm ±5% 1/4W	1
R359		Carbon, 22Kohm ±5% 1/4W	1
R323,333		Carbon, 27Kohm ±5% 1/4W	2
R353		Carbon, 27Kohm ±5% 1/4W	1
R307,369		Carbon, 33Kohm ±5% 1/4W	2
R106,224		Carbon, 39Kohm ±5% 1/4W	2
R101,214		Carbon, 47Kohm ±5% 1/4W	2
R370		Carbon, 47Kohm ±5% 1/4W	1
R357		Carbon, 47Kohm ±5% 1/4W	1
R362		Carbon, 68Kohm ±5% 1/4W	1
R116		Carbon, 56Kohm ±5% 1/4W	1
R341		Carbon, 10Kohm ±5% 1/4W	1
R358		Carbon, 82Kohm ±5% 1/4W	1
R345		Carbon, 82Kohm ±5% 1/4W	1
R375		Carbon, 82Kohm ±5% 1/4W	1
R376		Carbon, 100Kohm ±5% 1/4W	1
R344		Carbon, 100Kohm ±5% 1/4W	1
R336,326		Carbon, 100Kohm ±5% 1/4W	2
R228		Carbon, 100Kohm ±5% 1/4W	1
R229,219		Carbon, 100Kohm ±5% 1/4W	2
R371		Carbon, 150Kohm ±5% 1/4W	1
R310		Carbon, 220Kohm ±5% 1/4W	1
R117		Carbon, 330Kohm ±5% 1/4W	1
R367		Carbon, 39Kohm ±5% 1/4W	1
R355		Carbon, 10ohm ±5% 1/4W	1
R380		Carbon, 22Kohm ±5% 1/4W	1
ANTENNA PCB ASSY			
243	140-4-230T-48800	PCB Assy, Antenna (140-9-230T-81200)	1
T101	4-268T-00100	VHF Coil Trans	1
	141-2-382T-07700	Terminal, Antenna	1
	141-2-464T-08700	Fixer	2
DC POWER SUPPLY (POWER AMP) PCB ASSY			
244	141-4-230T-52071	P.C. Board Assy, DC Power Supply (Power Amp)	1
D901		Diode S5188	1
CAPACITORS			
C901~904		Ceramic, 0.01μF 50V +80-20%	4
C905,906	4-163T-01301	Capacitor Assy	1
RESISTORS			
R902,903		Metal, 3.9Kohm ±5% 2W	2
R904,905		Metal, 390ohm ±5% 2W	2



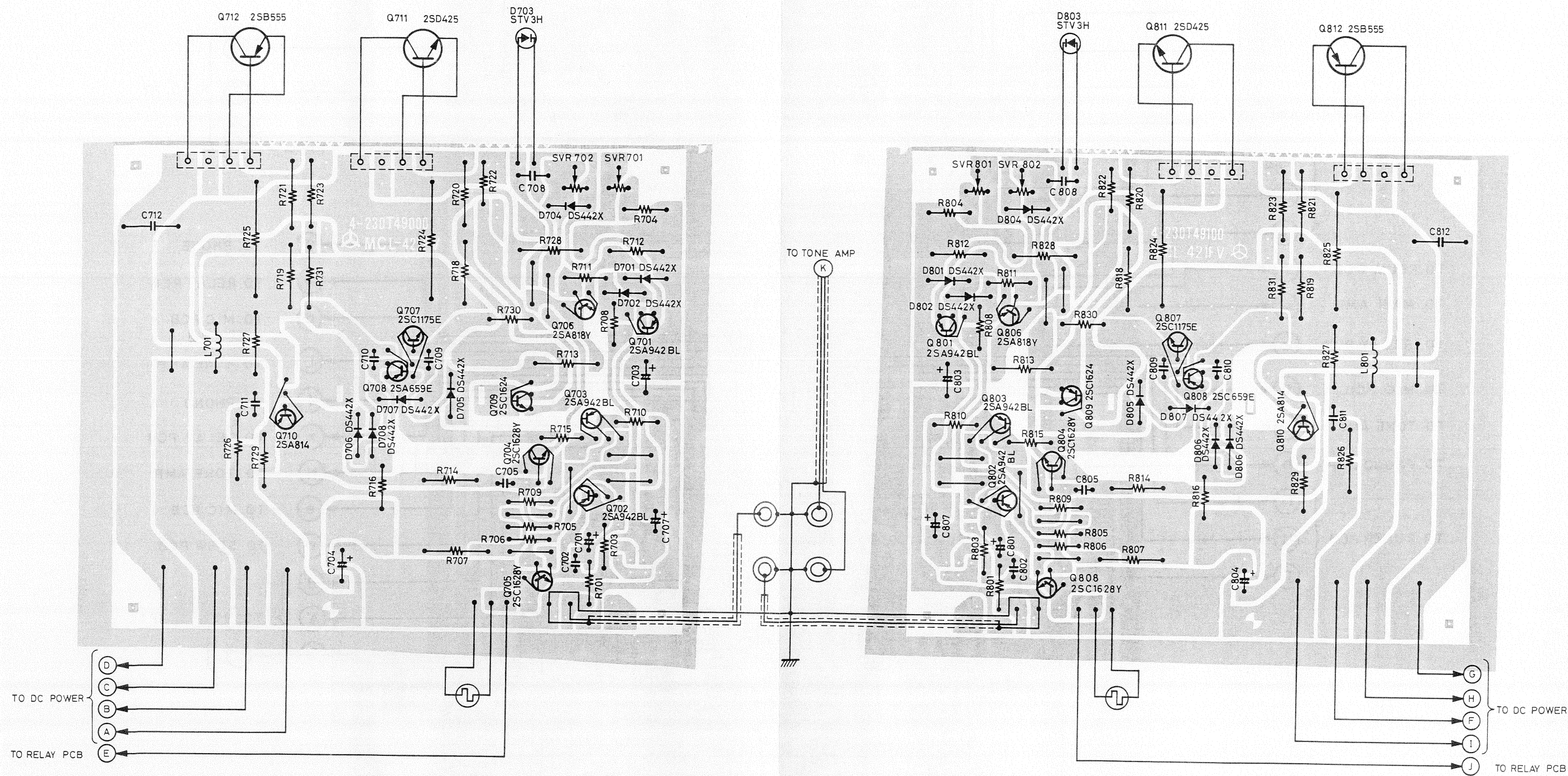
CHASSIS EXPLODED VIEW



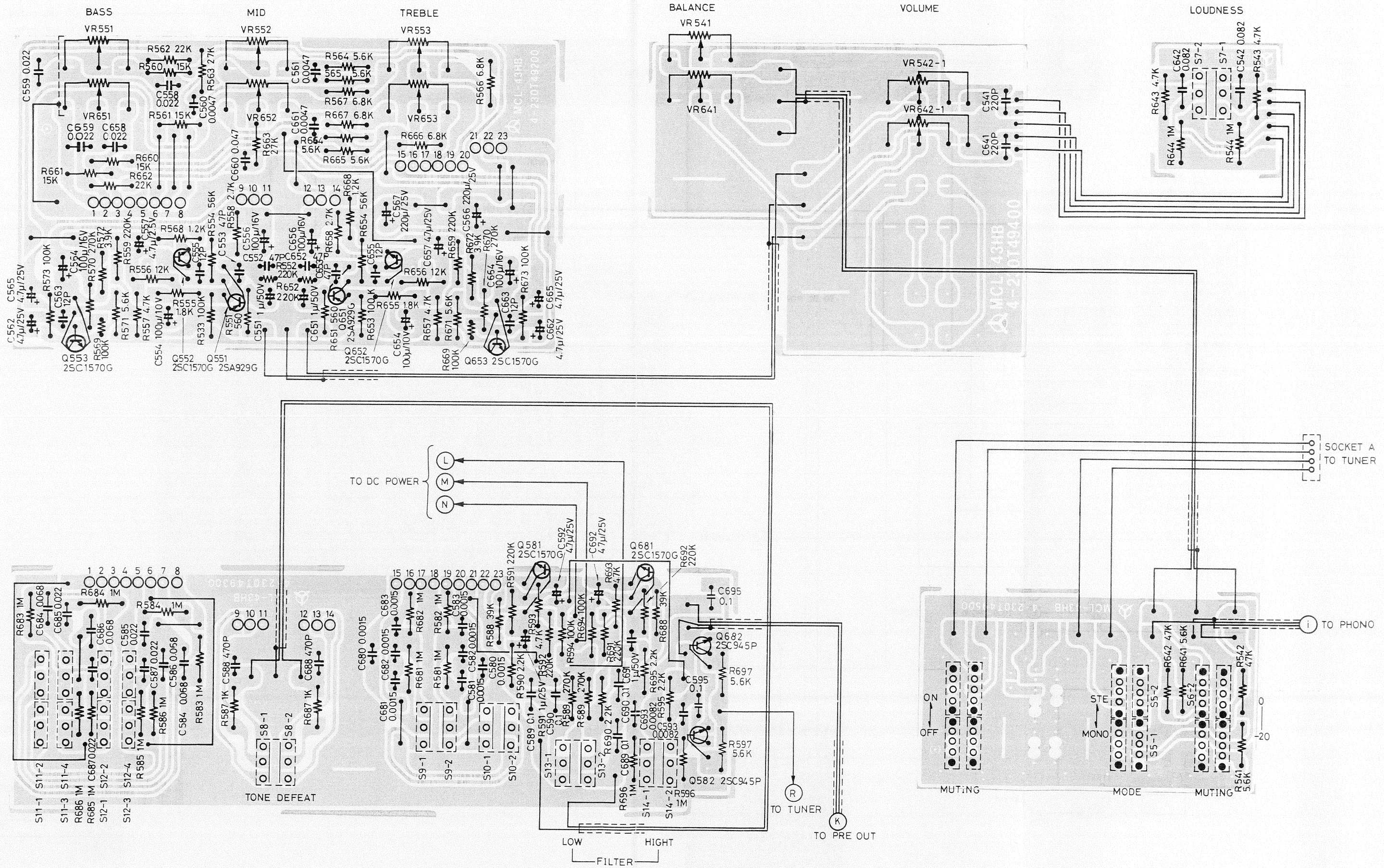
WIRING DIAGRAM



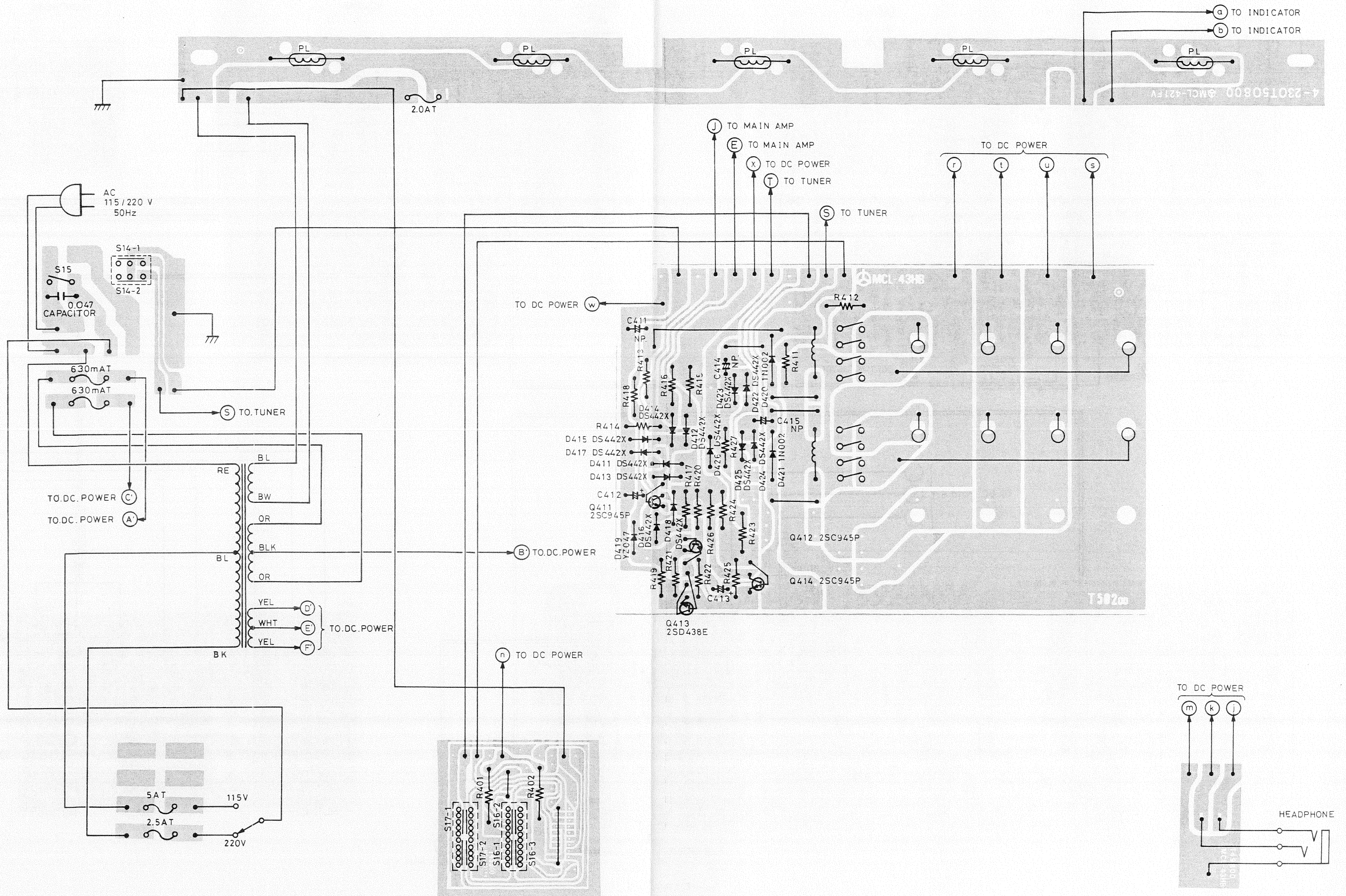
WIRING DIAGRAM



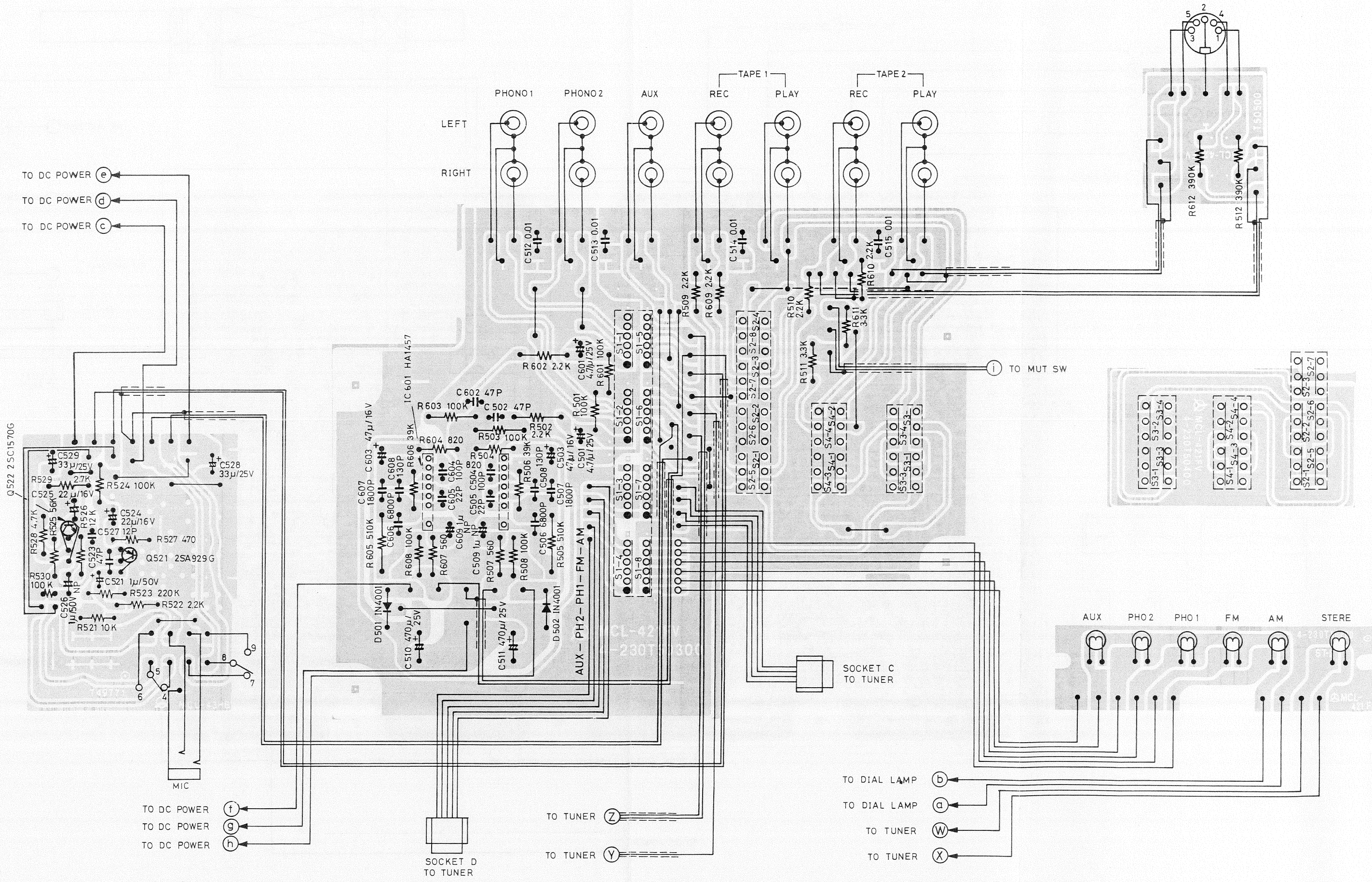
WIRING DIAGRAM



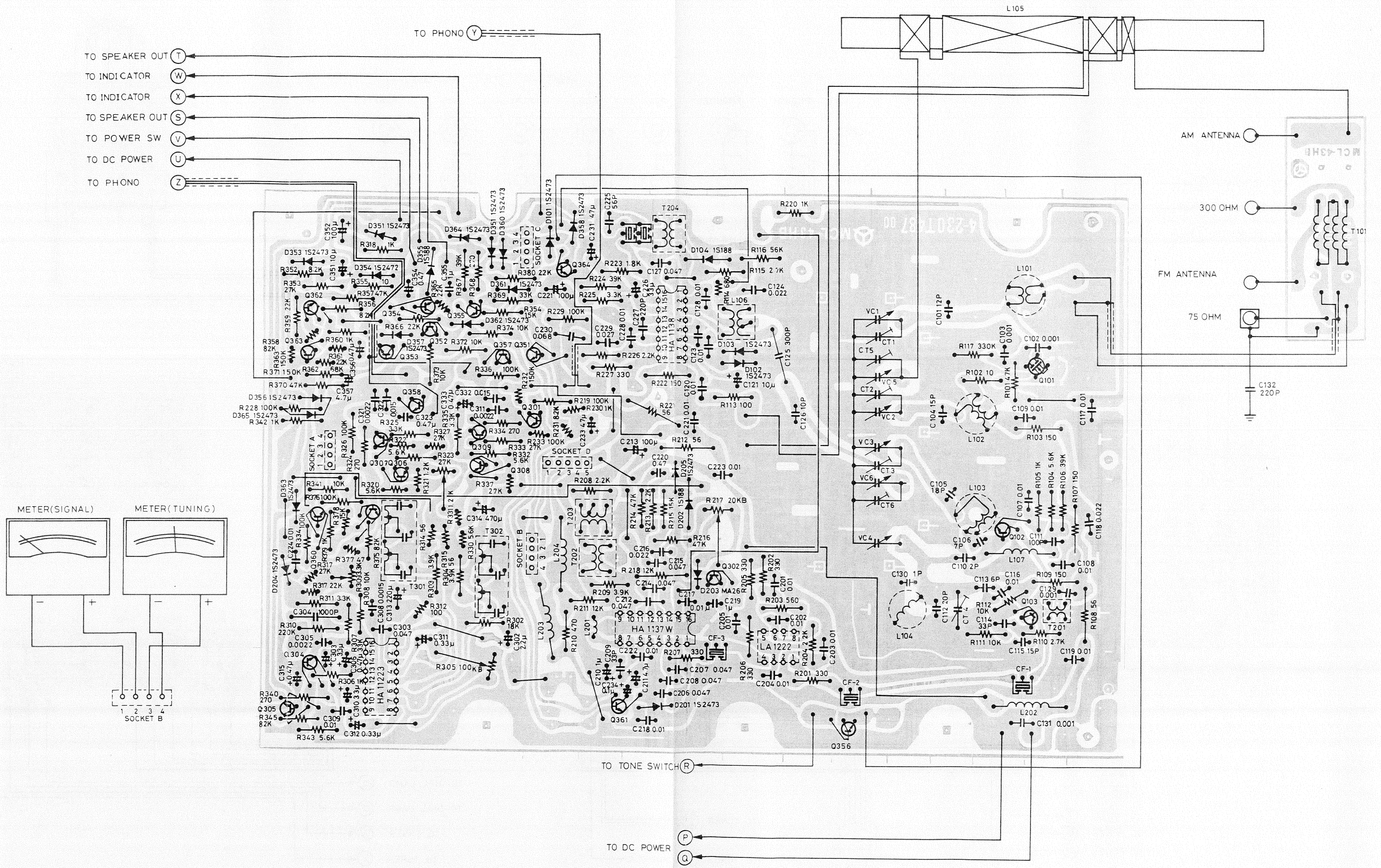
WIRING DIAGRAM



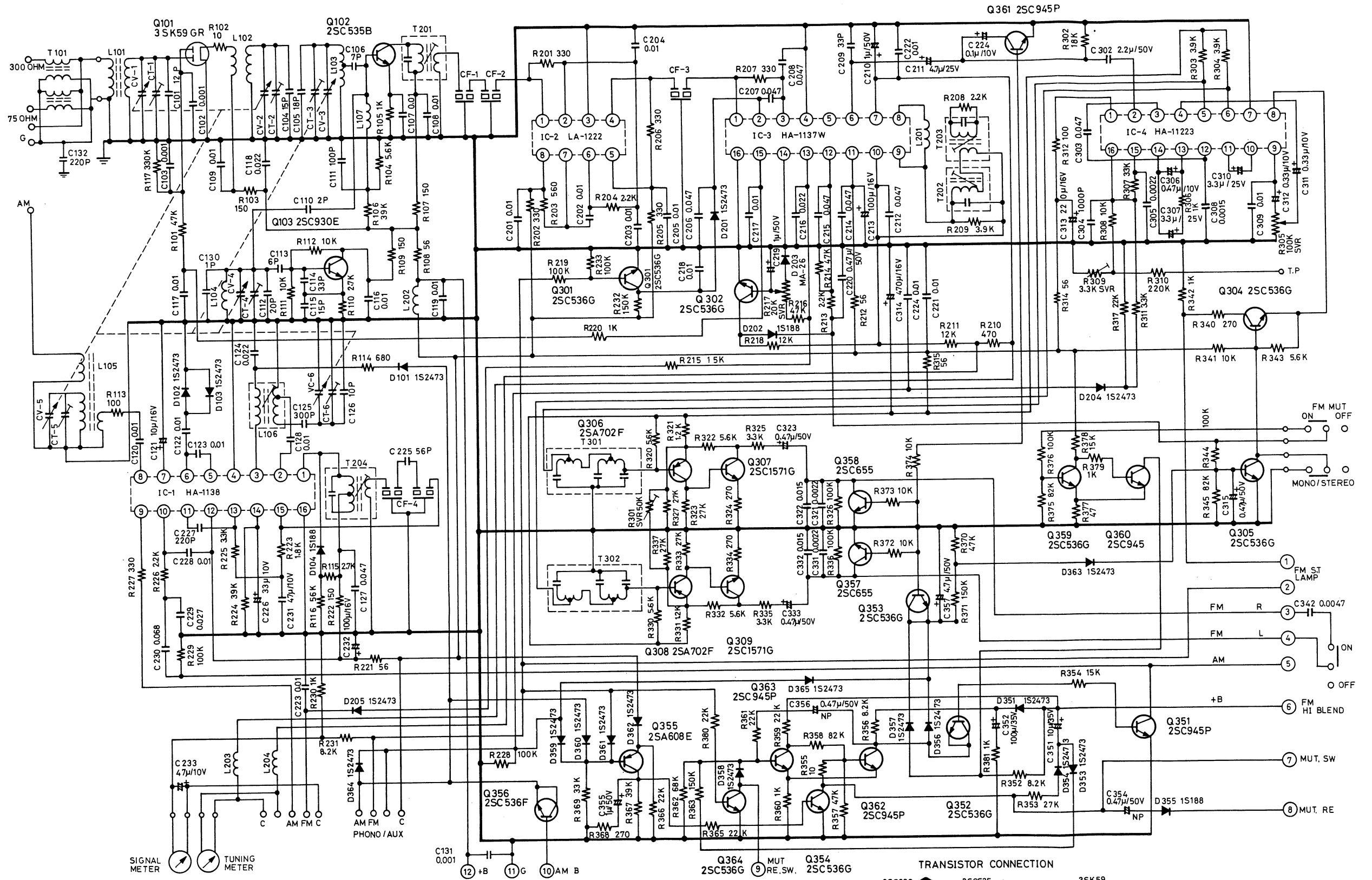
WIRING DIAGRAM



WIRING DIAGRAM



SCHEMATIC DIAGRAM (TUNER)

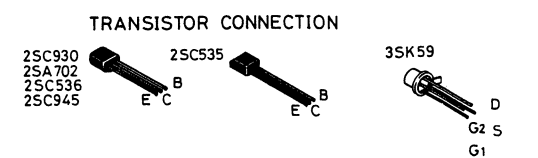


Voltage of Transistors (v)

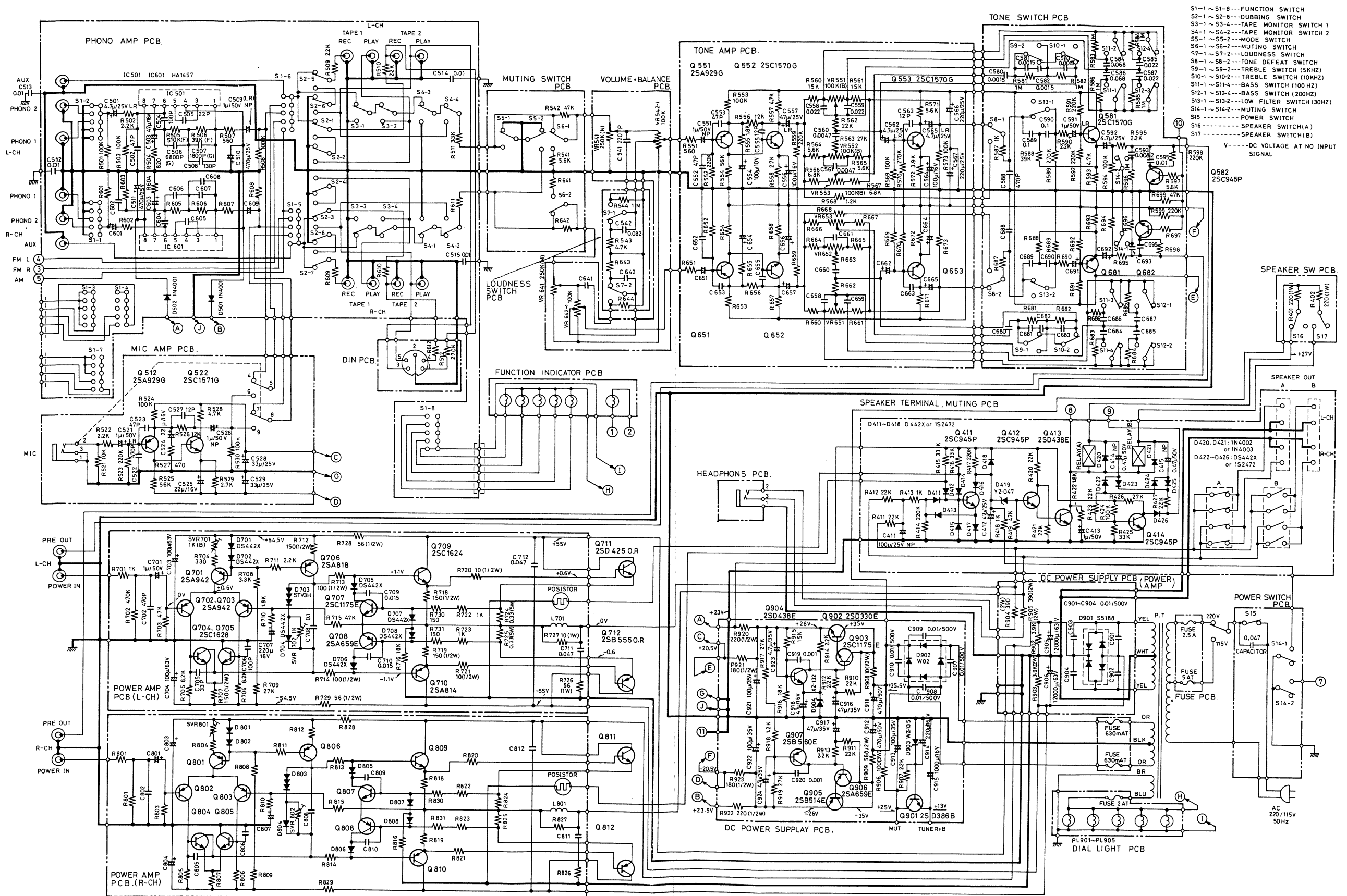
Q101	Q102	Q103	Q306	Q307	Q357/358	Q359	Q360	
G1	0	B	1.4	5.57	9.81	0.91	0	
4.2	B	1.4	5.57	9.81	0.91	0	0.66	
9.6	C	11.5	11.29	0.91	4.23	0	0.1	
0	E	0.84	4.9	10.34	0.3	0	0.03	
0						0.03	0.03	
Q304	Q305	Q355	Q363	Q362	Q354	Q353	Q352	Q356
B	0	11.88	0.59	2.92	0	0	0	-0.2 V
0.07	B	0	11.88	0.59	2.92	0	0	-0.2 V
11.47	C	0.07	0	11.94	2.32	2.92	1.9	2.32
0.07	E	0	11.86	2.28	2.28	0	1.91	2.32

Voltage of ICs

IC 1		IC 2		IC 3		IC 4	
1	9.88	9	0	1	1.3	1	1.97
2	2.68	10	3.63	2	1.3	2	1.97
3	11.45	11	4.11	3	0	3	1.97
4	9.88	12	11.43	4	10.7	4	0
5	4.72	13	2.66	5	11.35	5	0
6	7.86	14	2.8	6	1.29	6	5.44
7	1.92	15	2.62	7	9.64	7	5.57
8	0.87	16	0	8	10.61	8	5.49
						9	5.5
						10	5.51
						11	11.42
						12	4.72
						13	2.73
						14	2.59
						15	2.74
						16	2.74
						17	0.57
						18	9.73
						19	2.74
						20	2.74
						21	4.5
						22	2.95



SCHEMATIC DIAGRAM



- S1-1 ~ S1-8 --- FUNCTION SWITCH
 - S2-1 ~ S2-8 --- DUBBING SWITCH
 - S3-1 ~ S3-4 --- TAPE MONITOR SWITCH 1
 - S4-1 ~ S4-2 --- TAPE MONITOR SWITCH 2
 - S5-1 ~ S5-2 --- MODE SWITCH
 - S6-1 ~ S6-2 --- MUTING SWITCH
 - S7-1 ~ S7-2 --- LOUDNESS SWITCH
 - S8-1 ~ S8-2 --- TONE DEFEAT SWITCH
 - S9-1 ~ S9-2 --- TREBLE SWITCH (5KHZ)
 - S10-1 ~ S10-2 --- TREBLE SWITCH (10KHZ)
 - S11-1 ~ S11-4 --- BASS SWITCH (100HZ)
 - S12-1 ~ S12-4 --- BASS SWITCH (200HZ)
 - S13-1 ~ S13-2 --- LOW FILTER SWITCH (30HZ)
 - S14-1 ~ S14-2 --- MUTING SWITCH
 - S15 --- POWER SWITCH
 - S16 --- SPEAKER SWITCH(A)
 - S17 --- SPEAKER SWITCH(B)
- V --- DC VOLTAGE AT NO INPUT SIGNAL

	IC 501	IC 601	HA1457
1	0.2V	0.1V	22.5V
2	0.1V	22.5V	21.5V
3	0.1V	22.5V	21.5V
4	0.1V	22.5V	21.5V
5	0.1V	22.5V	21.5V
6	0.1V	22.5V	21.5V
7	0.1V	22.5V	21.5V
8	0.1V	22.5V	21.5V

	Q411	Q412	Q413	Q414	Q901	Q902	Q903	Q904	Q905	Q906	Q907
B	0V	1.2V	-0.6V	0.6V	13.6V	26.6V	27.2V	16.0V	-25.4V	-24.8V	-0.55V
C	-8.6V	1.0V	-9.6V	1.0V	10.0V	20.6V	-35.0V	27.2V	-35.0V	-34.2V	-27.0V
E	0V	0.6V	0V	0V	13.0V	26.0V	26.6V	13.4V	-26V	-25.4V	0V

	Q521	Q522	Q551	Q552	Q553	Q581	Q582	Q701	Q702	Q703	Q704	Q705	Q706	Q707	Q708	Q709	Q710	Q711	Q712
B	0V	1.2V	-0.6V	0.6V	13.6V	26.6V	27.2V	16.0V	-25.4V	-24.8V	-0.55V	-8.6V	1.0V	-9.6V	1.0V	10.0V	20.6V	-35.0V	27.2V
C	-8.6V	1.0V	-9.6V	1.0V	10.0V	20.6V	-35.0V	27.2V	-35.0V	-34.2V	-27.0V	0.7V	-5.2V	0.7V	-9.2V	-6.6V	-1.5V	0V	52.7V
E	0V	0.6V	0V	0V	13.0V	26.0V	26.6V	13.4V	-26V	-25.4V	0V	0.7V	-5.2V	0.7V	-9.2V	-6.6V	-1.5V	0V	52.7V

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