

REALISTIC[®]

Service Manual

31-1997

STA-720 AM/FM STEREO RECEIVER

Catalog Number: 31-1997



CUSTOM MANUFACTURED FOR RADIO SHACK  A DIVISION OF TANDY CORPORATION

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SPECIFICATIONS

		NOMINAL	LIMIT	UNIT
FM SECTION				
1. TUNING COVERAGE		87.4–109*	88–108	MHz
2. DIAL CALIBRATION ACCURACY	90 MHz	±50	±100	kHz
	98 MHz	±50	±100	kHz
	106 MHz	±50	±100	kHz
3. USABLE SENSITIVITY		1.7	2.4	μV
	(NOISE & DISTORTION –30 dB)	9.8	12.8	dBf
4. IMAGE REJECTION (at 106 MHz)		55	50	dB
5. IF REJECTION (at 90 MHz)		80	70	dB
6. FULL LIMITING (at –3 dB)		1.2	1.8	μV
7. IF BANDWIDTH (6 dB down)			±150	kHz
8. DISTORTION (1 mV INPUT)		0.15	0.5	%
9. SIGNAL-TO-NOISE RATIO (1 mV INPUT)		70	65	dB
10. DE-EMPHASIS (at 50~10000 Hz)		±1.5	±2	dB
11. DISCRIMINATOR BANDWIDTH (Peak-to-Peak)		400	300	kHz
12. AFC HOLDING RANGE (with 1 mV signal)		±1200	±800	kHz
13. OUTPUT VOLTAGE	MONO	0.75	0.75±3 dB	V
	(at 75 kHz dev., 400 Hz mod., 1 mV input)			
	STEREO	0.7	0.7±3 dB	V
14. MUTING THRESHOLD		6	4–10	μV
15. OVERLOAD (THD at 98 MHz, 100% mod.)		0.3	0.8	%
	100 mV RF INPUT			
16. SPURIOUS RESPONSE at 98 MHz		80	70	dB
	ANTENNA INPUT 3 μV, 1/2 IF, 103.35 MHz			
17. CAPTURE RATIO (1 mV INPUT)		1.0	2.5	dB
18. ALTERNATE CHANNEL SELECTIVITY		55	45	dB
	(100 μV INPUT)			
19. 50 dB QUIETING SENSITIVITY at 98 MHz		3.0	6.0	μV
		16.1	20.8	dBf
MPX SECTION				
1. STEREO SEPARATION	100 Hz	40	28	dB
	(100% mod., 1 mV input)			
	1 kHz	45	32	dB
	10 kHz	38	25	dB
2. DISTORTION		0.3	0.8	%
	(100% mod., 1 mV input)			
	1 kHz			
3. STEREO BEACON SENSITIVITY (pilot 7%)		8	5–12	μV
4. RESIDUAL 19 kHz & 38 kHz (1 mV input)		40	30	dB
5. SUPPRESSION OF SCA INTERFERENCE			40	dB
	(1 mV input)			
AM SECTION				
1. TUNING COVERAGE		510–1660	520–1620	kHz
2. DIAL CALIBRATION ACCURACY	600 kHz		±15	kHz
	1,000 kHz		±20	kHz
	1,400 kHz		±40	kHz
3. USABLE SENSITIVITY	600 kHz, 1000 kHz, 1400 kHz			
	(400 Hz, 30% mod.,	320	600	μV/m
	noise & distortion –20 dB)	25	40	μV
	Radiated Terminal			
4. IMAGE REJECTION (at 1,400 kHz)		48	40	dB
5. IF REJECTION (at 600 kHz)		35	28	dB
6. AGC FIGURE OF MERIT		40	35	dB
	(from 100 mV/m at 1,000 kHz)			
7. DISTORTION		0.8	2.0	%
	(400 Hz, 30% mod., 5 mV/m input)			
8. IF BANDWIDTH (6 dB down)			6–14	kHz

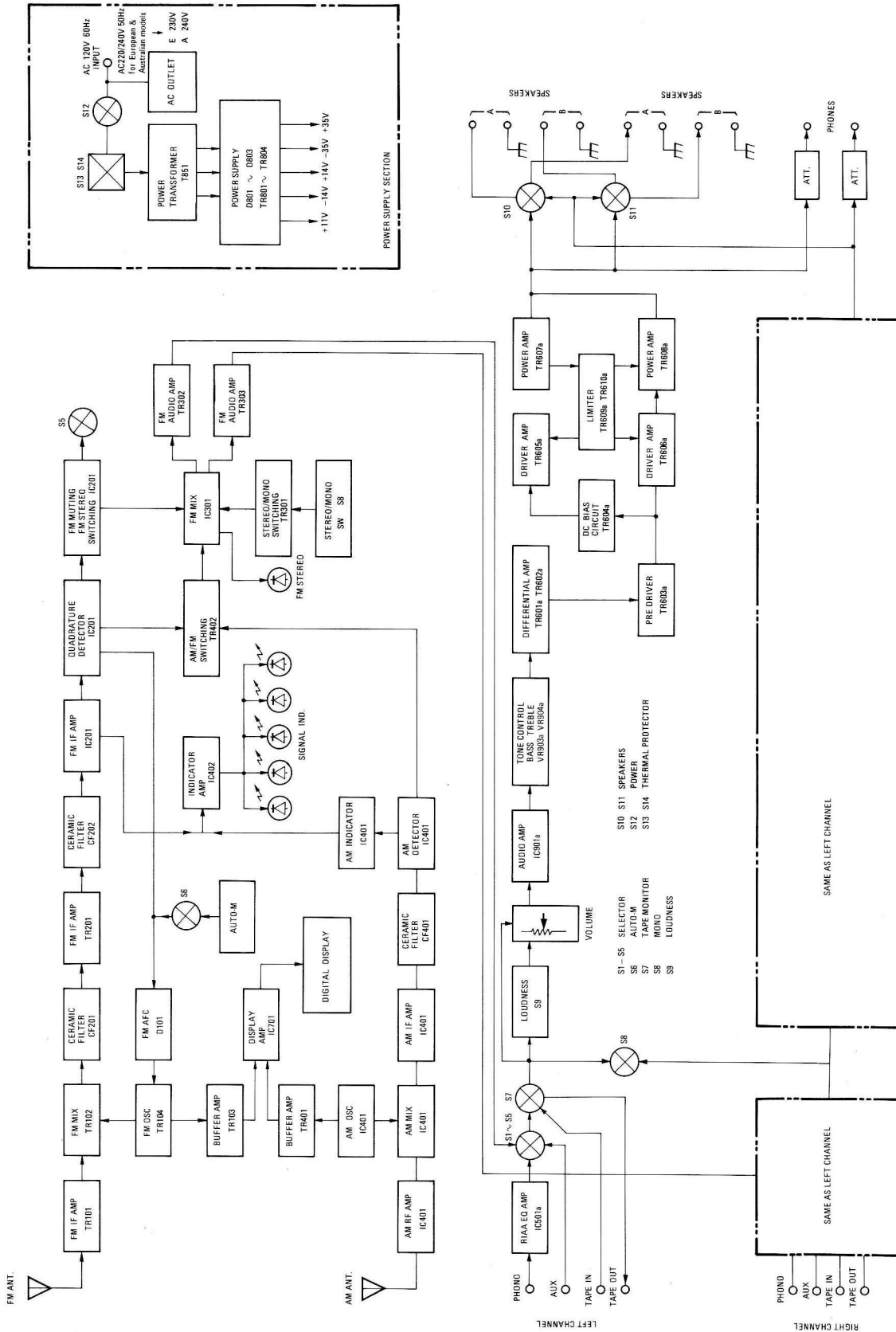
		NOMINAL	LIMIT	UNIT
9.	OUTPUT VOLTAGE (1 kHz 30% mod., 5 mV/m input)	250	200	mV
10.	AUDIO RESPONSE (5 mV/m input from 50 Hz to 2.3 kHz, 0 dB @1,000 kHz)	-4	-6	dB
11.	SELECTIVITY 200 μ V/m	32	25	dB
12.	SIGNAL-TO-NOISE RATIO (1,000 kHz, with antenna input 10 mV/m)	50	40	dB
13.	AM BEAT 1 ~ 50 mV/m 50 ~ 100 mV/m		10	%
			15	%
AUDIO SECTION				
1.	RMS OUTPUT POWER (distortion <0.15%, 20 Hz ~ 20 kHz) BOTH CHANNELS DRIVEN 8 Ω	27	25	W
2.	IM DISTORTION (at 20 W output 70/7,000 Hz 4/1)	0.03	0.15	%
3.	HARMONIC DISTORTION (at 20 W output) 20 Hz 1,000 Hz 20,000 Hz	0.02	0.05	%
		0.02	0.05	%
		0.03	0.08	%
4.	FREQUENCY RESPONSE (AUX, 8 Ω load, 1 W output, 20 Hz ~ 20 kHz)	± 1	± 1.5	dB
5.	INPUT SENSITIVITY (for 25 W output) PHONO AUX TAPE MON	2.5	2.5 \pm 0.3	mV
		160	160 \pm 30	mV
		160	160 \pm 30	mV
6.	INPUT IMPEDANCE PHONO AUX TAPE MON	50K		ohm
		70K		ohm
		70K		ohm
7.	TONE CONTROL BASS 100 Hz TREBLE 10 kHz	± 10	$\pm 10 \pm 2$	dB
		± 10	$\pm 10 \pm 2$	dB
8.	EQUALIZATION RIAA: 30 ~ 15,000 Hz		RIAA ± 2	dB
9.	PHONO AMP OVER LOAD CAPABILITY (at 0.2%)	140	110	mV
10.	LOUDNESS COMPENSATION (volume -30 dB) 10 kHz 100 Hz	+4	+4 \pm 2	dB
		+7	+7 \pm 2	dB
11.	CHANNEL SEPARATION (AUX input 100 ~ 10,000 Hz)	45	40	dB
12.	SIGNAL-TO-NOISE RATIO (input shorted) 10 mV input, IHF-A PHONO AUX	81	76	dB
		85	92	dB
13.	RESIDUAL NOISE	0.7	1.5	mV
14.	LOAD IMPEDANCE		4-16	ohm
15.	POWER SOURCE 120 Volts, 60 Hz AC* 48 WATTS, No Signal 147 WATTS, Full Signal			

* 220/240 VAC, 50 Hz for European and Australian Models.

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

NOTE: 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 Spec.

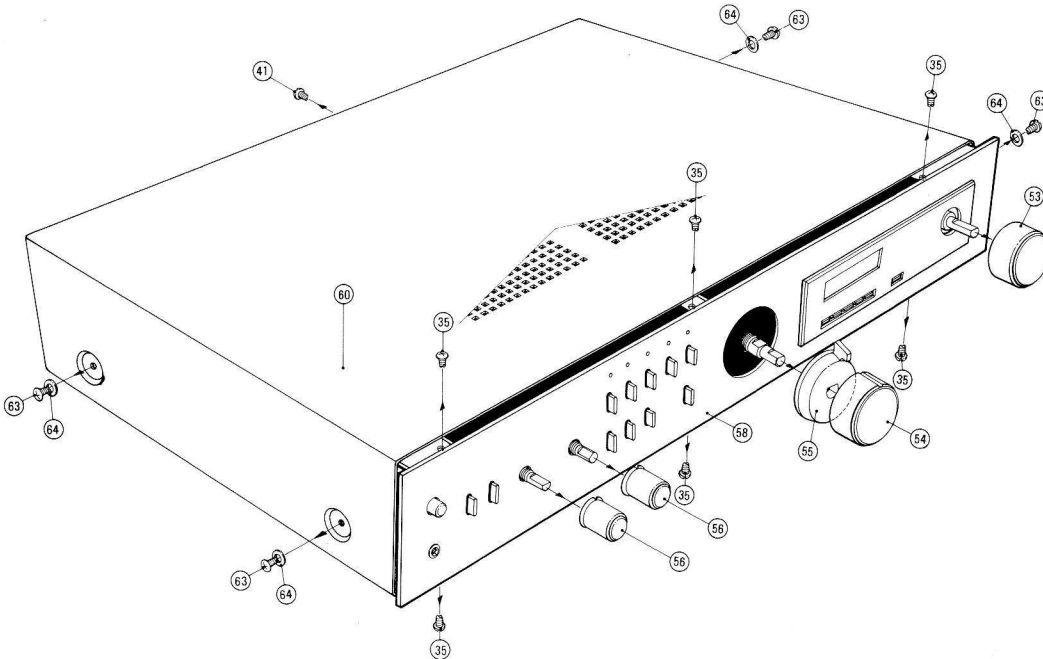
BLOCK DIAGRAM



DISASSEMBLY INSTRUCTIONS

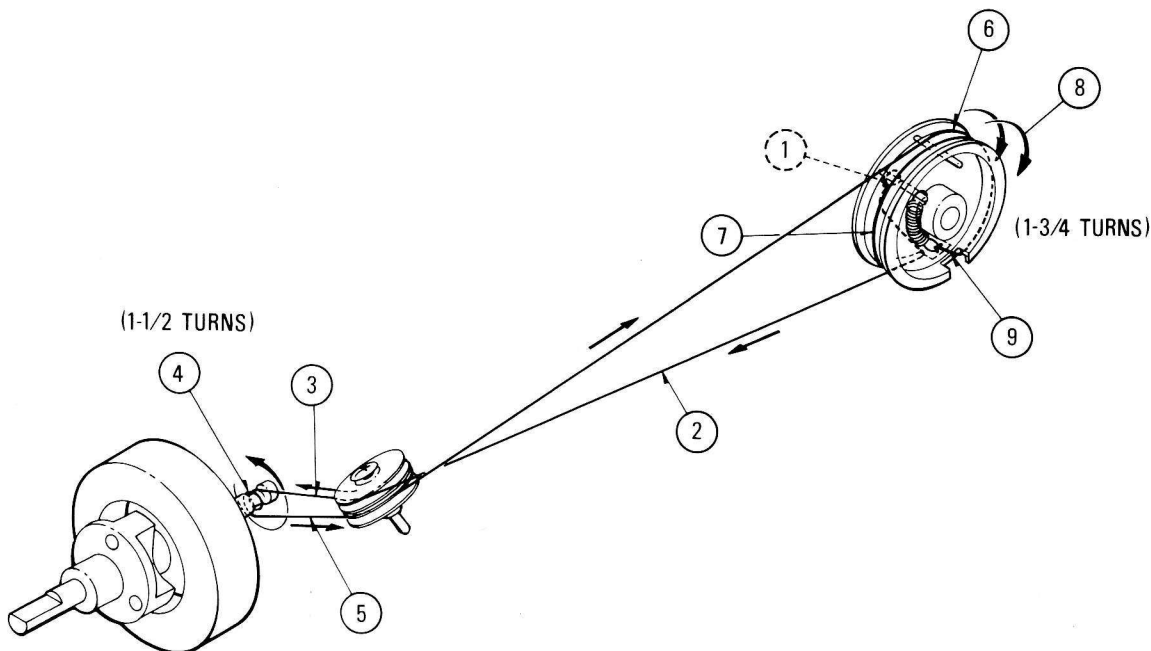
1. Removing chassis from metal enclosure.
Remove five screws (#63 & #41) from sides and back.
2. Removing the Front Panel
Pull off all of the control knobs except for push buttons.
Remove six screws (#35) from top and bottom of the Front Panel then remove the Front Panel.

(Refer to Miscellaneous Parts List for descriptions of numbered parts.)



DIAL STRINGING DIAGRAM

Note: Tuning capacitor should be in fully closed position.



ALIGNMENT PROCEDURES

Do not attempt alignment unless the following equipment is available.

- | | | |
|------------------------|------------------------|----------------------|
| 1. AM Signal Generator | 4. FM Signal Generator | 7. Distortion meter |
| 2. Oscilloscope | 5. Stereo Modulator | 8. DC Voltmeter |
| 3. AC Voltmeter | 6. Audio Generator | 9. Frequency Counter |

Note: Remove line cord antenna from FM external antenna terminal when aligning.

AM IF & RF ALIGNMENT

Output of signal generator should be no higher than necessary to obtain an output reading.
Signal Generator Modulation: 30%
Set SELECTOR switch to AM.

STEP	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RECEIVER DIAL SETTING	INDICATOR	ADJUSTMENT Refer Fig. 4.	REMARKS
1	Refer Fig. 1	455 kHz (400 Hz Mod.)	Point of non-interference (on/about 600 kHz)	AC Voltmeter to TAPE OUT jack	T401 (IFT)	Adjust for maximum reading.
2	Same as Step 1	600 kHz (400 Hz Mod.)	600 kHz	Same as Step 1	L401 (OSC Coil) L451 (ANT Coil)	Same as Step 1
3	Same as Step 1	1400 kHz (400 Hz Mod.)	1400 kHz	Same as Step 1	TC402 (OSC Trimmer) TC401 (ANT Trimmer)	Same as Step 1

Note: Remove line cord antenna from FM external antenna terminal when aligning.

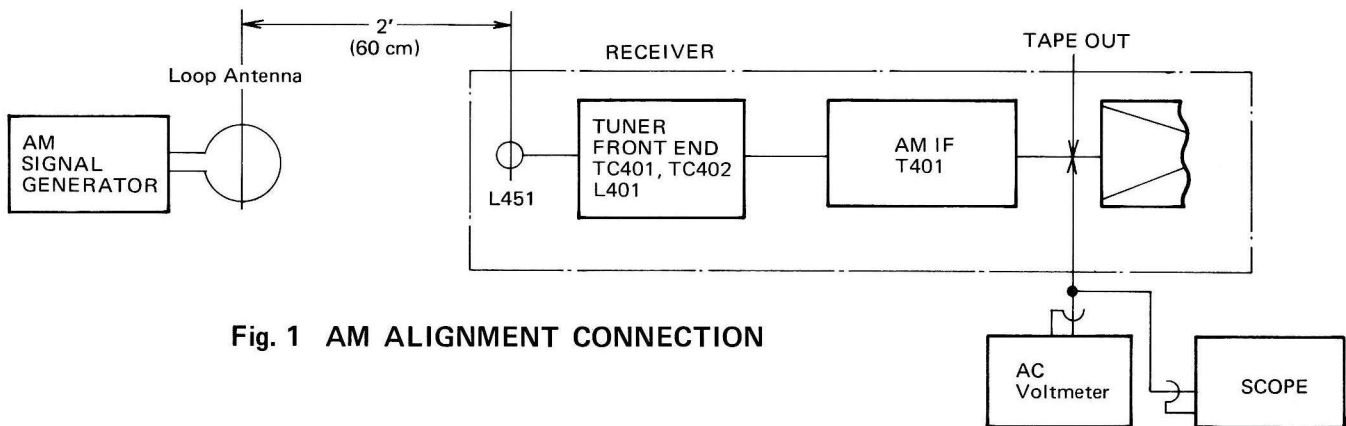


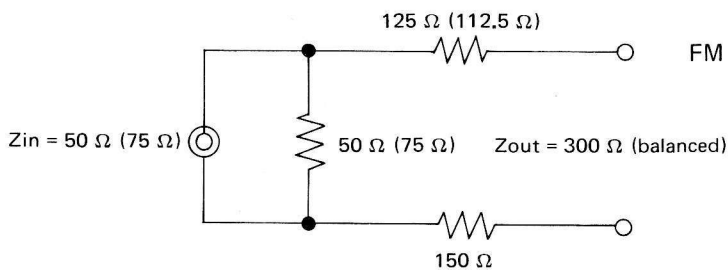
Fig. 1 AM ALIGNMENT CONNECTION

FM RF AND IF ALIGNMENT

Signal generator output should be no higher than necessary to obtain an output reading.
 Set Selector switch to FM.
 Signal Generator deviation: 75 kHz NOTE: Be sure to disconnect FM line cord antenna during alignment.

STEP	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RECEIVER DIAL SETTING	INDICATOR	ADJUSTMENT Refer Fig. 4.	REMARKS
1	Connect to FM Antenna Terminal through FM Dummy Antenna (300 Ω) Fig. 2	90 MHz (400 Hz Mod.)	90 MHz	AC Voltmeter connected to TAPE OUT jack	L101 (ANT. COIL) L102 (RF COIL) L104 (OSC. COIL)	Adjust for maximum reading on AC Voltmeter.
2	Same as Step 1	106 MHz (400 Hz Mod.)	106 MHz	Same as Step 1	TC101 (ANT. Trimmer) TC102 (RF Trimmer) TC103 (OSC. Trimmer)	Same as Step 1
Repeat steps 1 & 2 until no further improvement is possible.						
3	Same as Step 1	90 MHz (400 Hz Mod.)	90 MHz	Same as Step 1	T101 (IFT)	Same as Step 1
4	Same as Step 1	98 MHz (400 Hz Mod.)	98 MHz	DC Voltmeter connected to Pin #31 and TP on PCB #0074A	T201	Adjust for zero reading on DC Voltmeter.
5	Same as Step 1	98 MHz (400 Hz Mod.)	98 MHz	Distortion Meter connected to TAPE OUT jack	T202	Adjust for minimum distortion.
6	Same as Step 1	98 MHz (400 Hz Mod.)	98 MHz	SIGNAL STRENGTH Indicator LED	VR201	Adjust for Full Signal Indication with input of 500 μV
7	Same as Step 1 (Set Selector switch to FM MUTE.)	98 MHz (400 Hz Mod.)	98 MHz	Same as Step 1	VR202	Adjust for zero reading on AC Voltmeter with SG output level of 6 μV

For European model, the lowest frequency of FM tuning range should not be below 87.5 MHz.



FM Dummy Antenna to 300 Ω antenna terminal of Receiver

Fig. 2 FM DUMMY ANTENNA

MPX ALIGNMENT

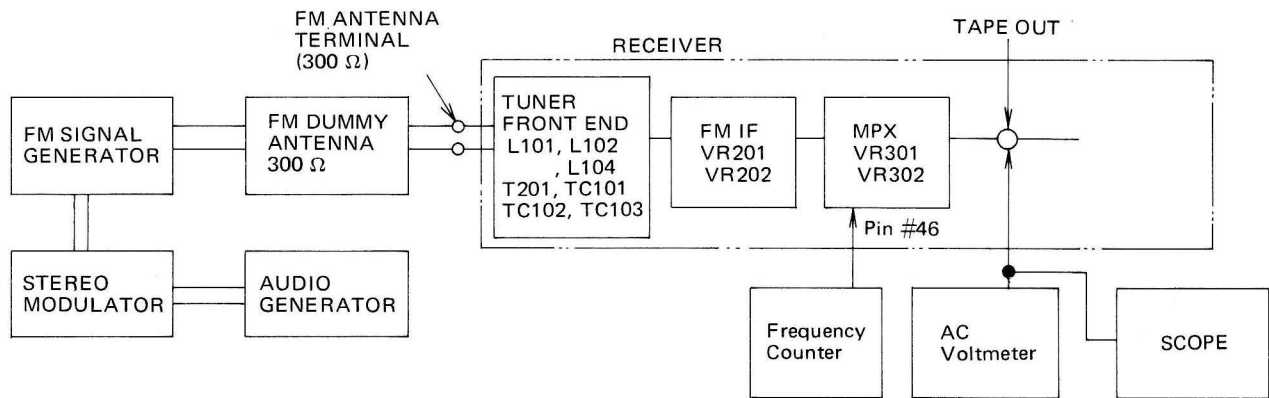


Fig. 3 FM RF, IF AND MPX ALIGNMENT CONNECTION

Set SELECTOR Switch to FM. Tune for 98 MHz on band. Signal Generator output level: 1000 μ V Deviation: 75 kHz at 100% modulation of composite signal Connect Signal Generator to FM Antenna Terminal through FM Dummy Antenna (300 Ω).						
STEP	19 kHz (PILOT SIGNAL) MODULATION Level	SIGNAL GENERATOR Freq. Set to	OUTPUT INDICATOR Connected to	ADJUST Refer Fig. 4	ADJUST FOR	NOTE
1			Frequency counter connected to Pin #46 and Ground	VR301	19 kHz	
2	8%	Composite 1 kHz R channel	AC Voltmeter connected to TAPE OUT jack of R channel			Adjust input for Audio out- put of about 0.7 V.
3	8%	Composite 1 kHz L channel	AC Voltmeter connected to TAPE OUT jack of R channel	VR302	minimum	AC Voltmeter reading should be at least 32 dB below read- ing in step 2.
4	8%	Composite 1 kHz R channel	AC Voltmeter connected to TAPE OUT jack of L channel	VR302	minimum	same as Step 3
If you did not obtain -32 dB readings in steps 3 and 4 (compared with step 2), readjust VR302 until you obtain -32 dB reading for both steps 3 and 4.						

MAIN AMPLIFIER ALIGNMENT

INDICATOR	ADJUSTMENT	REMARKS
DC Voltmeter	VR601a,b	Adjust for 0.005 – 0.015 volts across R619 a, b with no signal.

ALIGNMENT POINTS

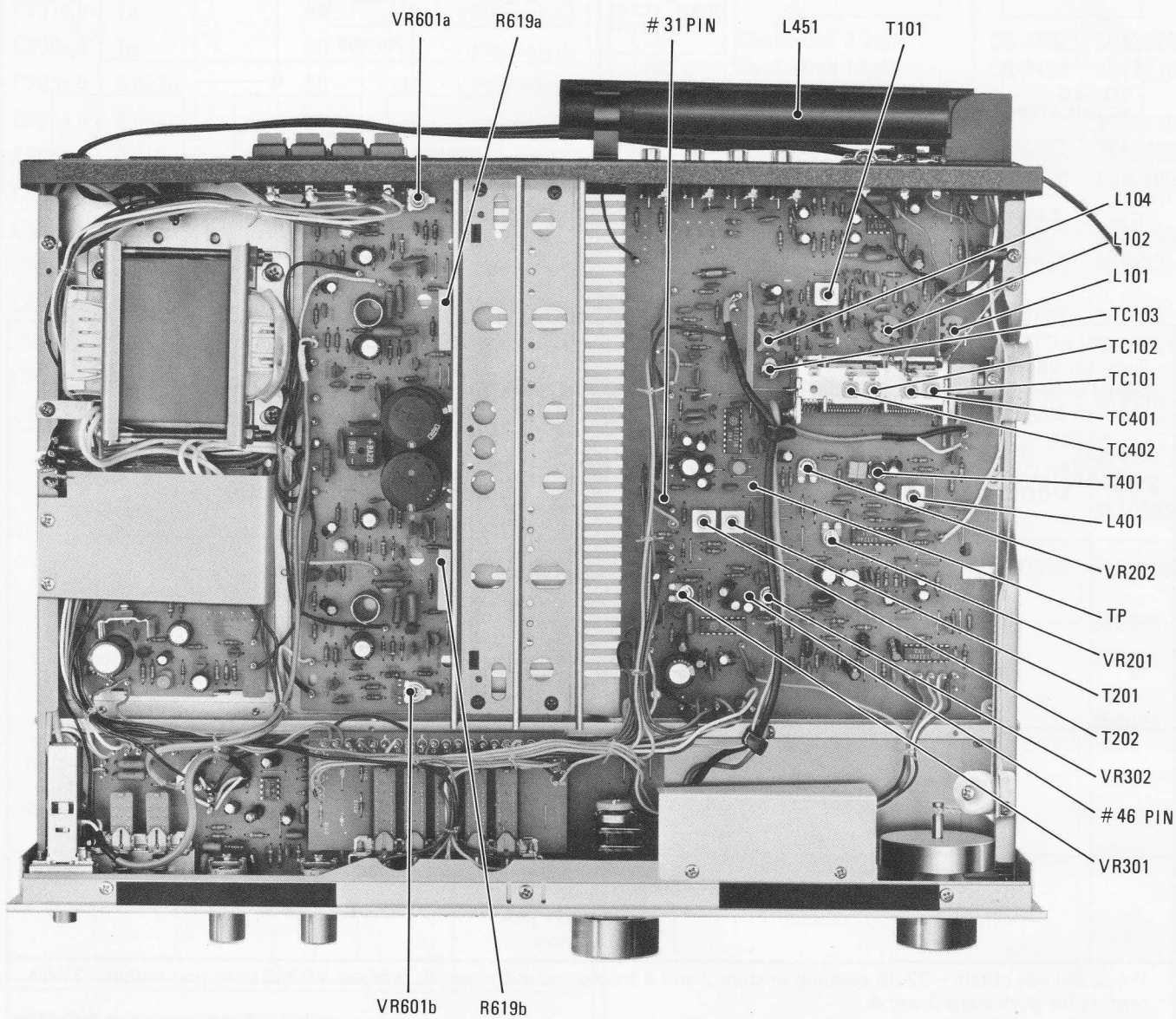
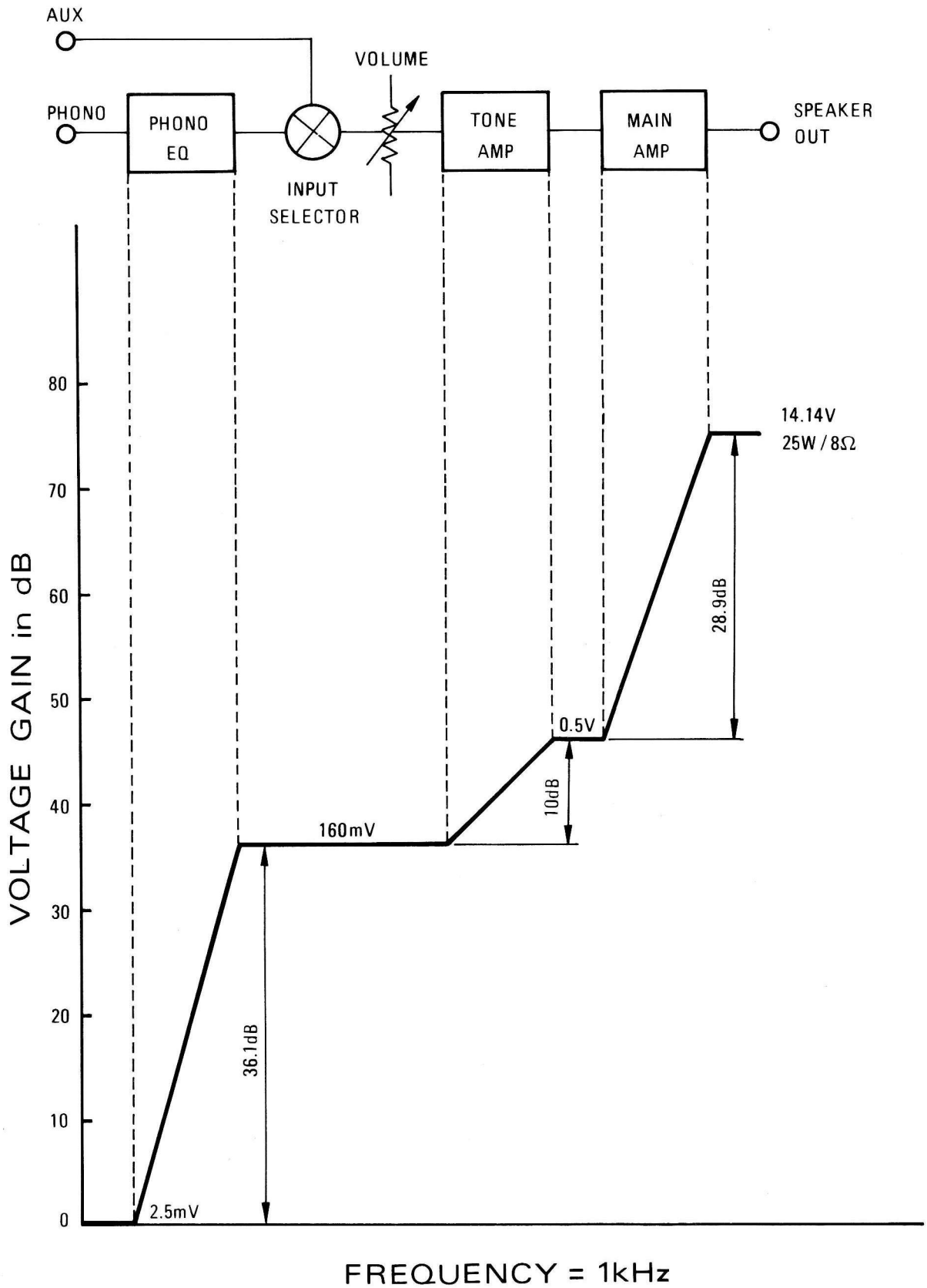


Fig.4

LEVEL DIAGRAM



TROUBLESHOOTING

SYMPTOM	CAUSE AND REMEDY
1. Receiver not operative; function indicator does not light.	<ul style="list-style-type: none"> A) Faulty AC power cord Replace the cord. B) Defect in the power switch Replace the switch. C) Broken wire in the power transformer Replace the transformer. D) Blown power fuse F002 Replace the fuse.
2. Fuse blows when power is turned on.	<ul style="list-style-type: none"> A) Power transformer T851 defective Replace the transformer. B) Short in the primary or secondary of the transformer circuitry Repair the short. C) Damaged rectifier D801 Replace the rectifier. D) Short circuit in the rectifier circuit Repair the short.
3. Function indicator lights but no sound from both channels.	<ul style="list-style-type: none"> A) SPEAKERS switch S10 or S11 defective Replace the defective switch(es). B) Defect in transistors TR605a,b – TR608a,b of Main Amp Board #6079 Replace the defective transistor(s).
4. A speakers do not work.	<ul style="list-style-type: none"> A) Speaker switch S10 defective Replace the switch.
5. B speakers do not work.	<ul style="list-style-type: none"> A) Speaker switch S11 defective Replace the switch.
6. One channel does not work with VOLUME at maximum with a test signal applied to the center terminal of VOLUME control VR902 of the dead channel.	<ul style="list-style-type: none"> A) Defective IC901 Replace IC901. B) Defect in transistor TR601–TR610 of Main Amp Board #6079 Locate and correct the defect. C) Break in copper foil of printed circuit board #9046 or #6079 Repair or replace circuit board(s). D) Short in speaker output terminal Repair the short. E) Defective resistor R901, R601, R603–R610, R615–R620 Replace the defective resistor(s). F) Defective capacitor C901, C601, C603 or C604 Replace the defective capacitor(s).

SYMPTOM	CAUSE AND REMEDY
7. Same as (6) above but channel operates when test signal is applied as in (6).	A) Defective PHONO switch S2 or TAPE MON switch S7 Repair or replace the switch(es). B) Defective BALANCE control VR901 Replace. C) Resistor R910 defective Replace the resistor.
8. Speaker works normally but headphone do not work.	A) Headphone plug does not mate with jack. Replace the plug. B) Defective resistor R651a,b Replace the resistor(s).
9. All inputs work normally except for AUX input.	A) Poor contact in AUX input jack Repair or replace the jack. B) Faulty AUX switch S1 Repair or replace the switch. C) Defective resistor R510 Replace the resistor.
10. PHONO input not operative	A) Defective IC501 Replace the IC. B) Faulty resistor R501, R503–R509 Replace the faulty resistor(s). C) Faulty capacitor C501–C503 Replace the faulty capacitor(s). D) Poor contact in PHONO input jack Repair or replace the jack. E) Faulty PHONO switch S2 Repair or replace the switch.
11. TAPE MON not operative	A) Defective TAPE MON switch S7 Repair or replace the switch. B) Defective contact in TAPE IN jack(s) Repair or replace the jack(s).
12. FM does not operate.	A) Short circuit in Tuner B+ circuit Repair the short. B) Defective FM(S4) or FM MUTE(S5) switch Repair or replace the switch(es). C) Resistor R219, R306, R317 or R318 defective Replace the defective resistor(s). D) Choke coil L201 defective Replace the coil. E) Capacitor C302 defective Replace the capacitor. F) Defective IC IC201 or IC301 Replace the defective IC(s). G) Defective IFT T101 Replace IFT.

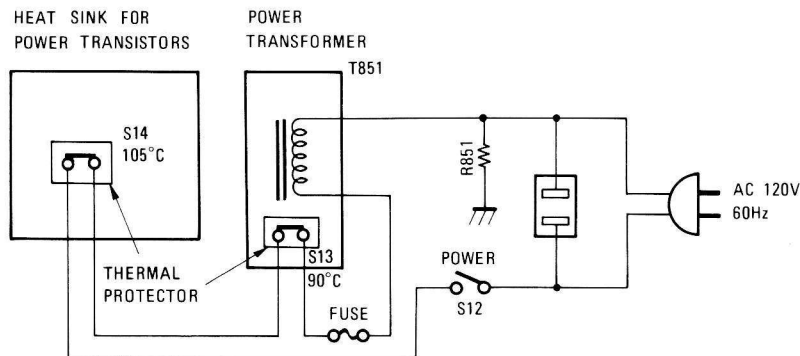
SYMPTOM	CAUSE AND REMEDY
	H) Defective transistor TR101, TR102, TR103 or coil L101, L104 Replace the defective component(s). I) Faulty lead-in Repair the faulty lead-in.
13. Poor multiplex separation	A) Improper adjustment Readjust VR302 (refer to ALIGNMENT PROCEDURE on page 9). B) Transistor TR302, TR303 or IC IC301 of Tuner Board #0074 defective Replace the defective component(s). C) Variable resistor VR301 or VR302 defective Replace the defective variable resistor(s).
14. Stereo indicator does not light.	A) Defective indicator LED D406 Replace the LED. B) Improper adjustment of VR301 of Tuner Board #0074 Make readjustment. (Refer to MPX ALIGNMENT on page 9.) C) Defective IC IC301 or resistor R426 Replace the defective component(s).
15. FM volume not sufficient	A) If volume of both L and R channels not enough: Front-End section defective, or faulty IFT T101 IC IC201 or transistor TR201 of Tuner Board #0074 Locate and replace the defective component(s). B) If sound of one channel not enough: Defective TR302 in case of L channel, or defective TR303 in case of R channel Replace the defective transistor.
16. AM does not operate	A) Damaged IC401 of Tuner Board #0074 Replace the IC. B) Defective L401, T401, T402 or CF401 Replace the defective component(s). C) One of resistors of Tuner Board #0074 (AM section) defective Replace the defective resistor. D) One of capacitors of Tuner Board #0074 (AM section) defective Replace the defective capacitor. E) AM switch S3 defective Repair or replace the switch. F) Defective Tuning gang capacitor Repair or replace. G) Damaged AM Bar antenna Repair or replace bar antenna.

SYMPTOM	CAUSE AND REMEDY
17. LOUDNESS has no effect.	A) Defective LOUDNESS switch S9 Replace the switch. B) Defective capacitor C911, C912 or resistor R911 Replace the defective component(s). C) Defective VOLUME control VR902 Replace.
18. Stereo-Mono not effective	A) Defective MONO switch S8 Replace the switch.
19. TAPE MONitor not effective	A) Defective TAPE MON switch S7 Replace the switch. B) Poor contact in TAPE MON IN jacks Repair or replace the jack(s).
20. BASS control has no effect.	A) BASS control VR903 defective Replace. B) Defective capacitor C903, C904 or resistor R915, R917 Replace the defective component(s).
21. TREBLE control has no effect.	A) TREBLE control VR904 defective Replace. B) Defective capacitor C905–C907 or resistor R918, R919 Replace the defective component(s).
22. Excessive noise with PHONO input	A) Faulty IC501 Replace the IC. B) Faulty R501–R504, C501 or C506 Replace the faulty component(s).
23. Noisy VOLUME control	A) Defective VOLUME control VR902 Replace the variable resistor. B) Defective capacitor C503, C901, C908 or C601 Replace the defective capacitor(s).
24. SIGNAL STRENGTH indicator LED not functioning	A) Defective LED D401–D405 or IC402 Replace the defective component(s). B) In case of FM reception, VR201 or D202 defective Replace the defective component(s). C) In case of AM reception, IC401 or R416 defective Replace the defective component(s).
25. AUTO-Magic AFC has no effect when AUTO-M switch is ON.	A) Defective D101, R118, R220 or C213 Replace the defective component(s).

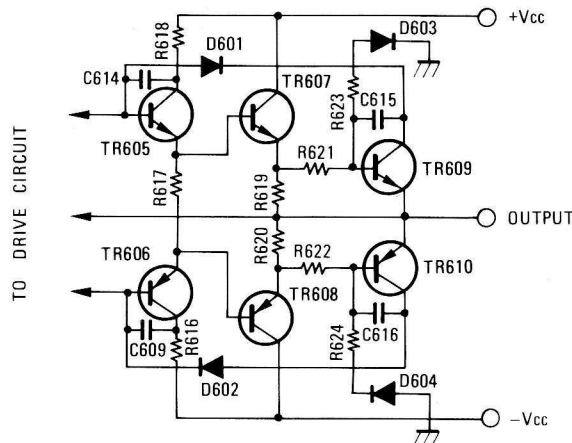
SYMPTOM	CAUSE AND REMEDY
26. Frequency counter LED does not light when FM or FM MUTE button is pressed in.	A) Diode D803 defective Replace the diode. B) Capacitor C701, C704, C810 Replace the defective capacitor(s).
27. Frequency counter misreads in AM or FM reception.	A) Defective crystal XR701 Replace the crystal. B) Defective IC IC701 or transistor TR702–TR705 Replace the defective component(s).
28. Frequency counter misreads in only AM reception.	A) Defective AM switch S3 Replace the switch.

NOTES

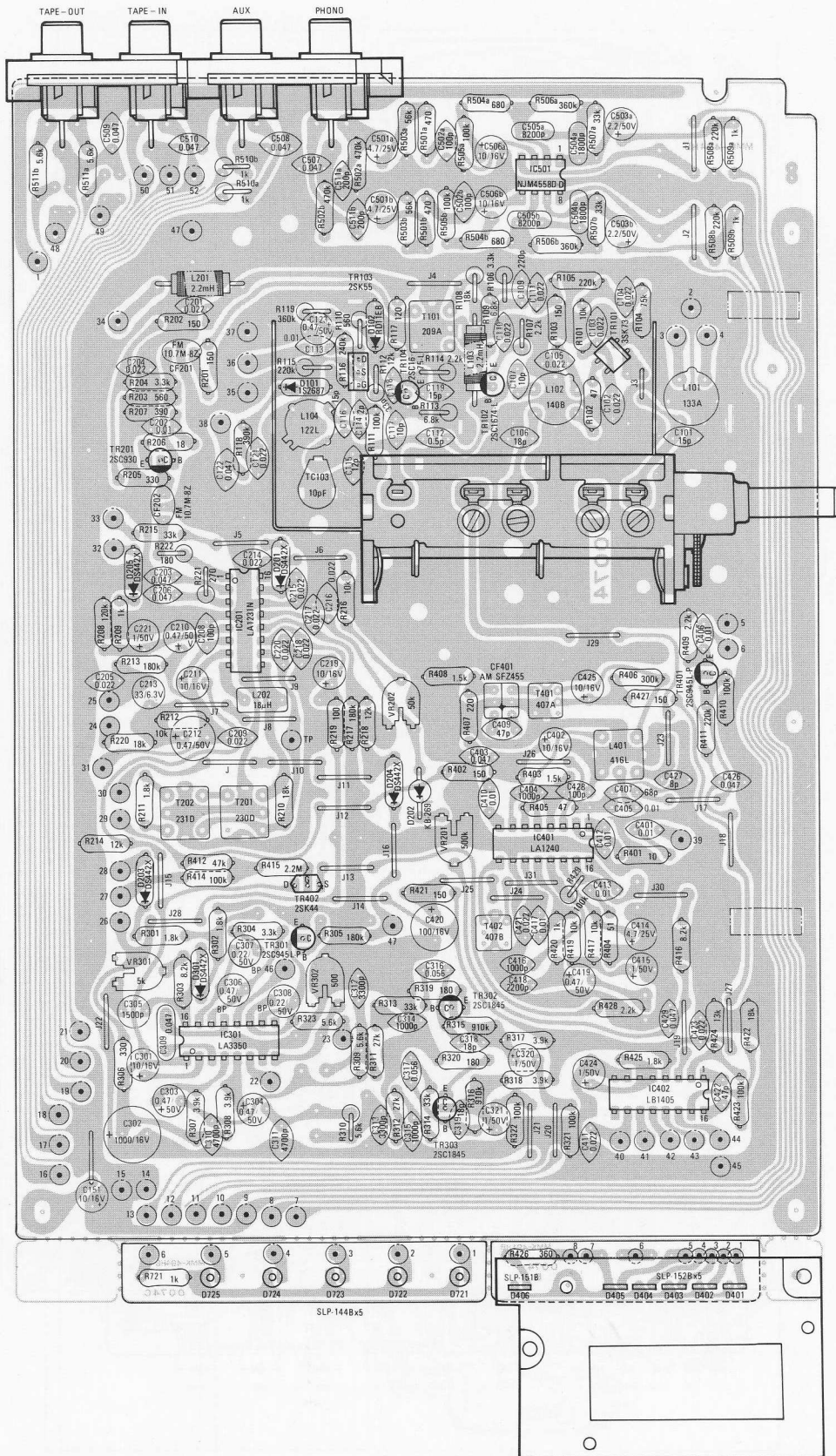
- This Receiver have two built-in over load thermal protection for abnormal operation. When the temperature of thermal protector [one is installed with heat sink (S14, 105°C) and the other with power transformer (S13, 90°C)] does rise abnormally ($105 \pm 5^\circ\text{C}$ or $90 \pm 5^\circ\text{C}$), the thermal protector will automatically cut out, and as soon as the temperature goes down sufficiently ($35 \pm 15^\circ\text{C}$), the thermal protector turns back-on automatically.
If the Receiver does turn itself off, check ventilation and speaker connections.



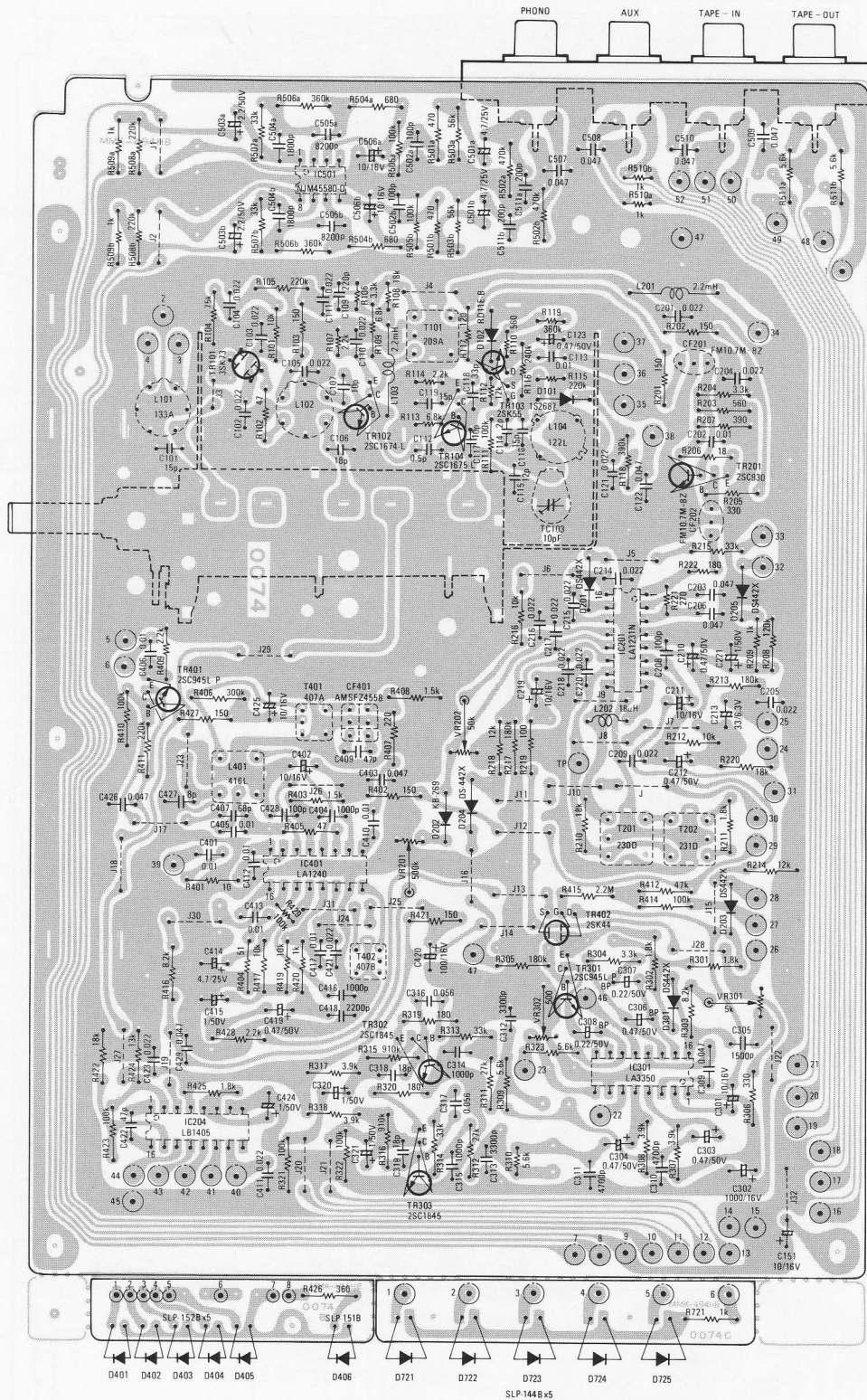
- Transistors TR609 and TR610 protect audio output stage when abnormally high current flows in TR607 and TR608 due to excessive input drive, or a too low impedance load connected at output. TR609 and TR610 are not normally biased on and collectors of these transistors (through D603 and D604 diodes) reduce biases on TR605 and TR606. This decreases drive to output transistors TR607 and TR608 to reduce the current. This occurs not only to protect the circuit but also the speakers against high level switching clicks and pop noises.



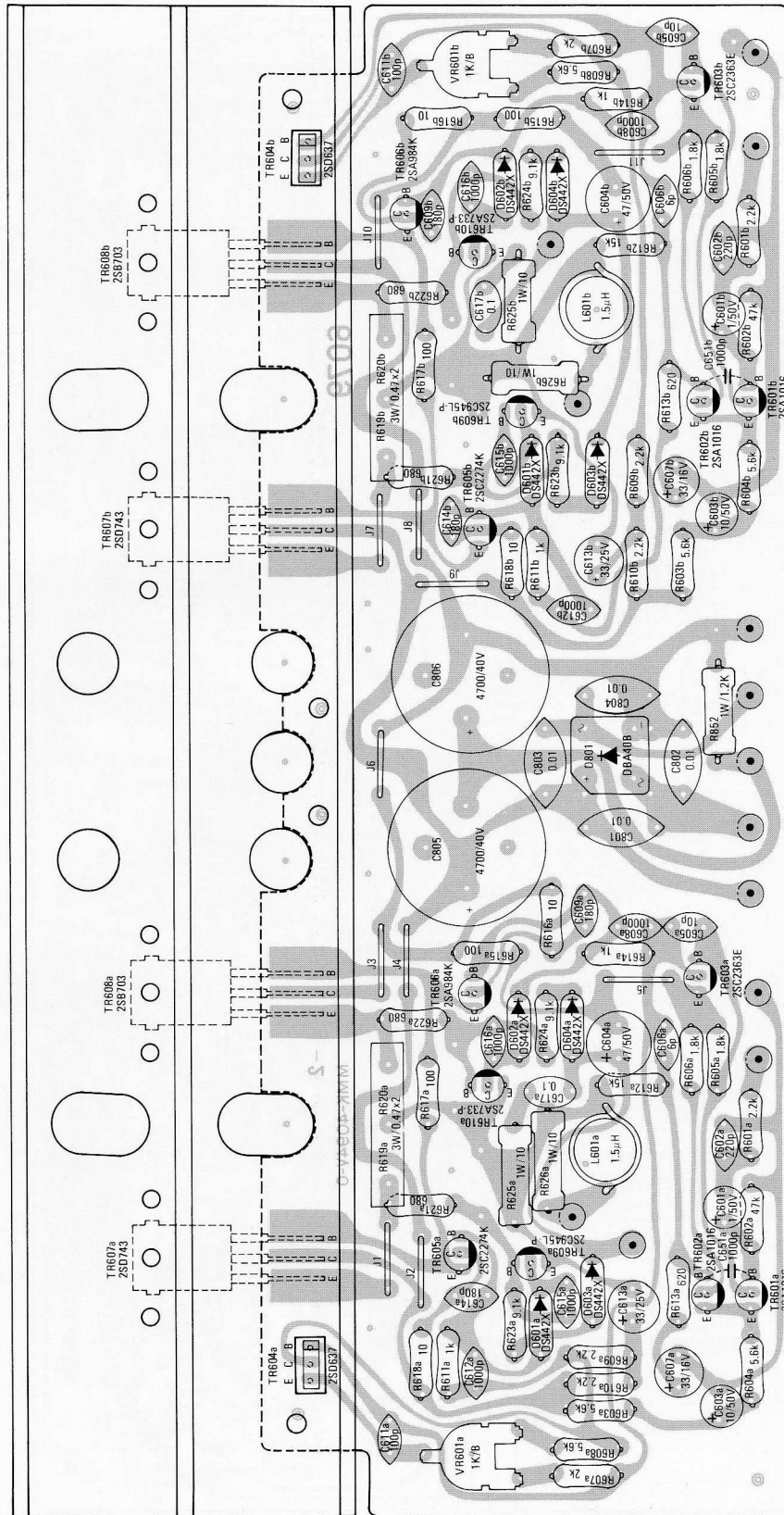
0074 TUNER BOARD (TOP VIEW)



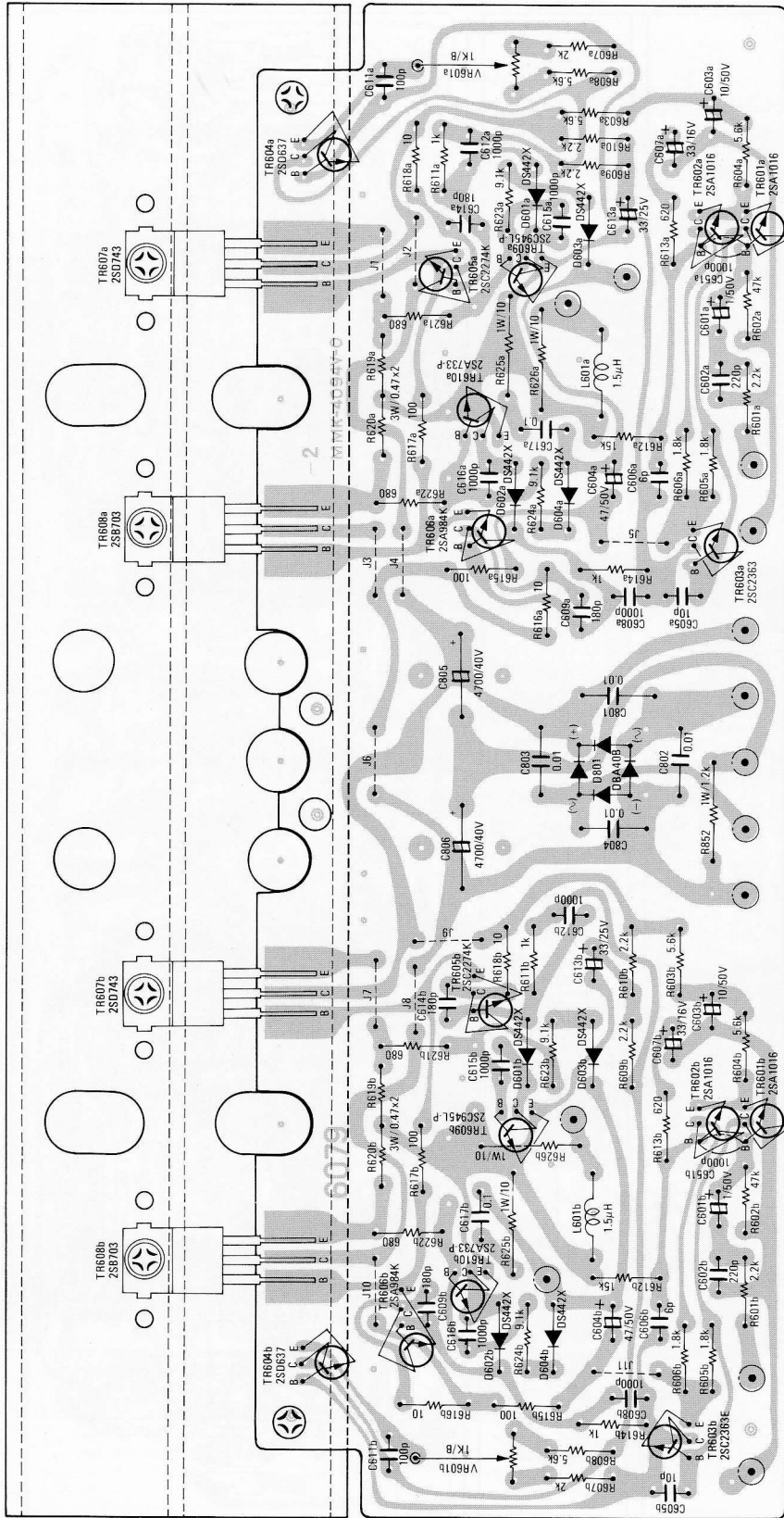
0074 TUNER BOARD (BOTTOM VIEW)



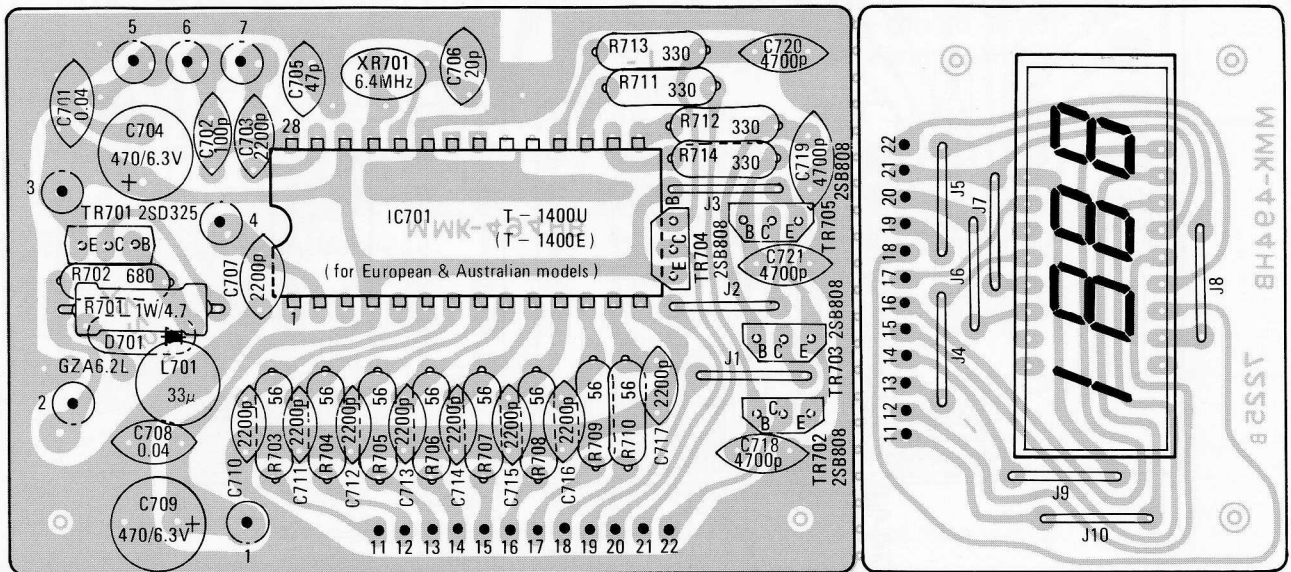
6079 MAIN AMP BOARD (TOP VIEW)



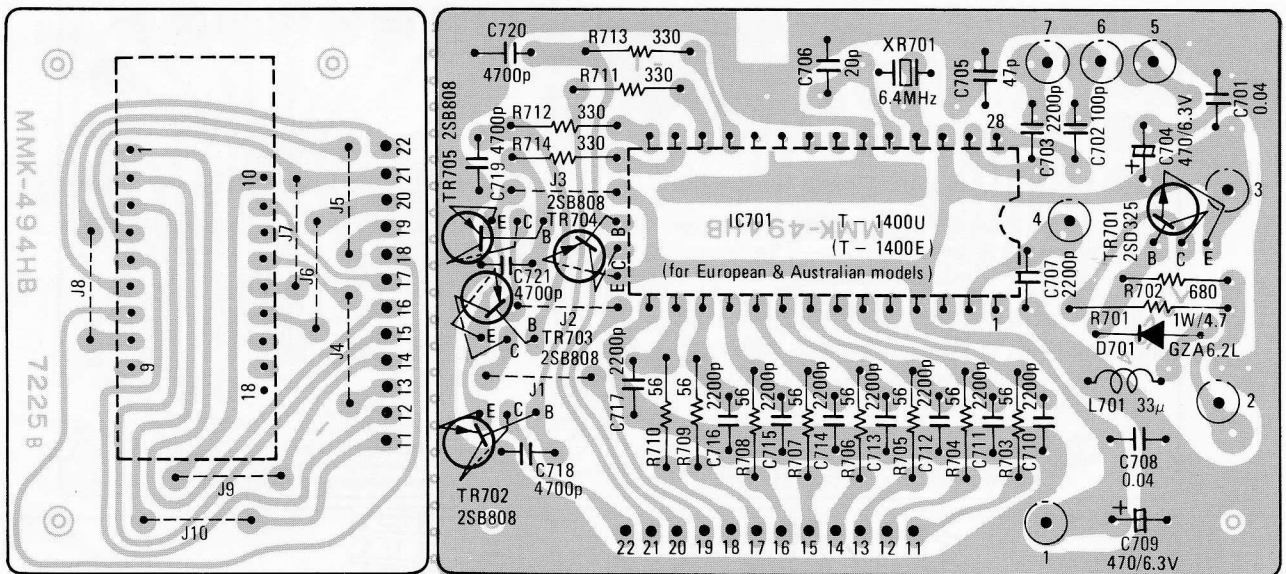
6079 MAIN AMP BOARD (BOTTOM VIEW)



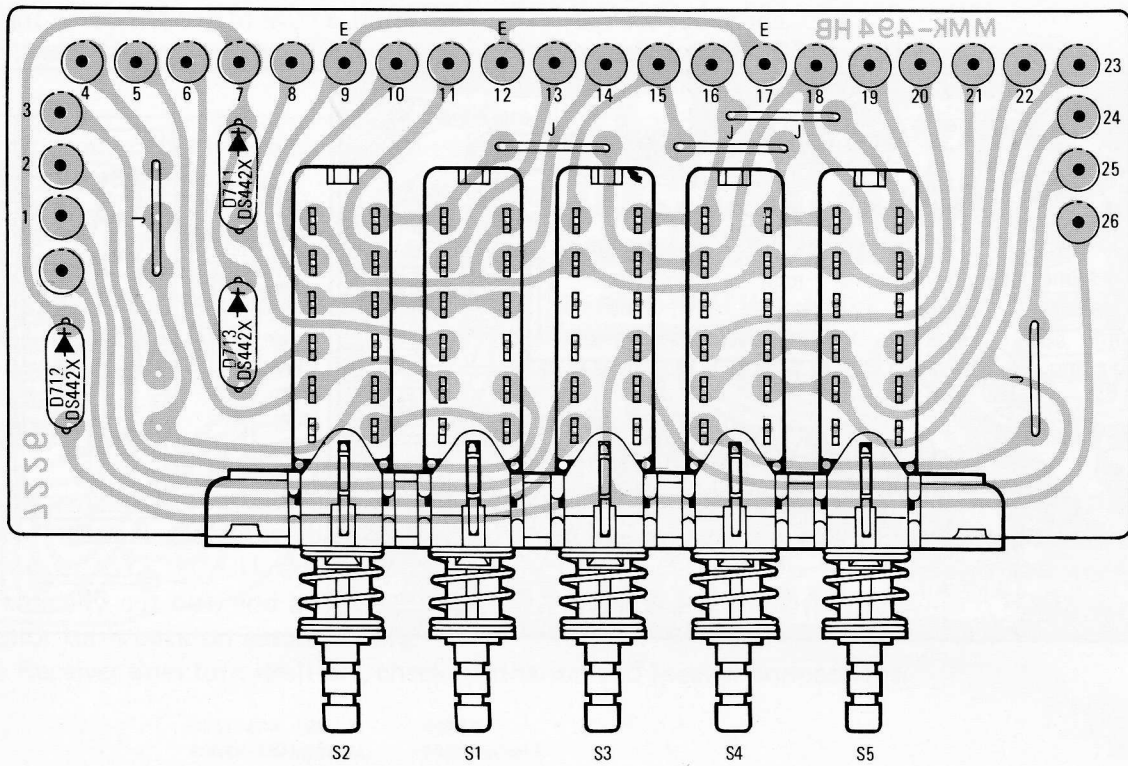
7225 FREQUENCY COUNTER BOARD (TOP VIEW)



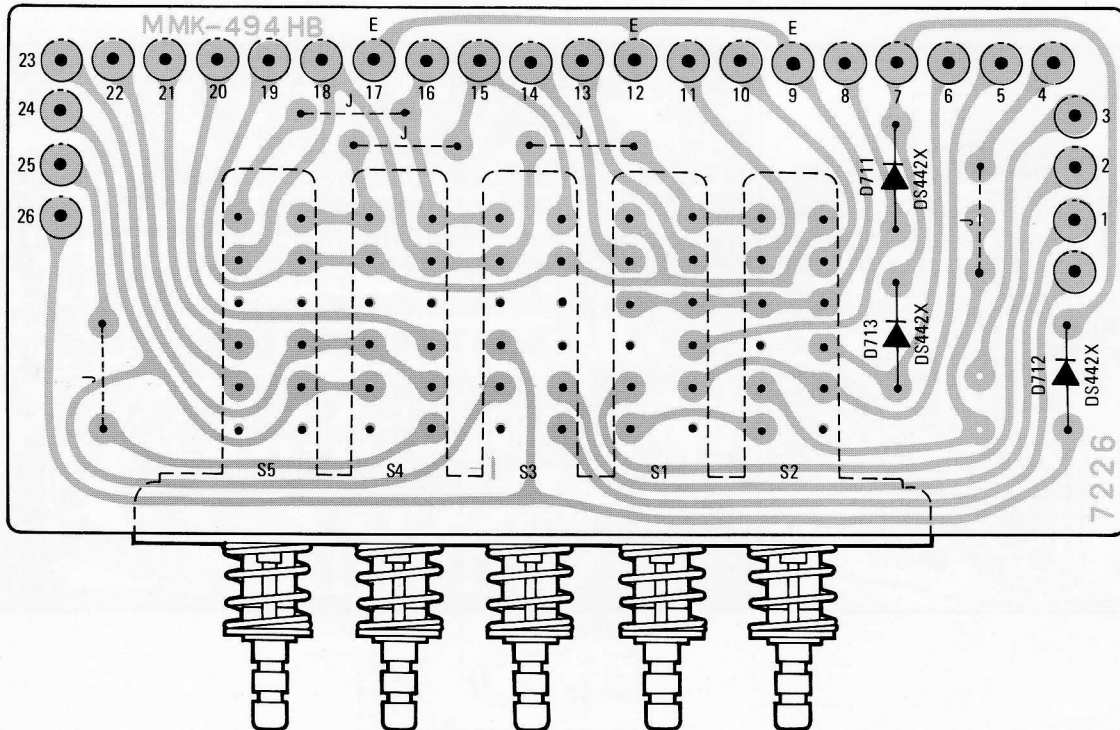
7225 FREQUENCY COUNTER BOARD (BOTTOM VIEW)



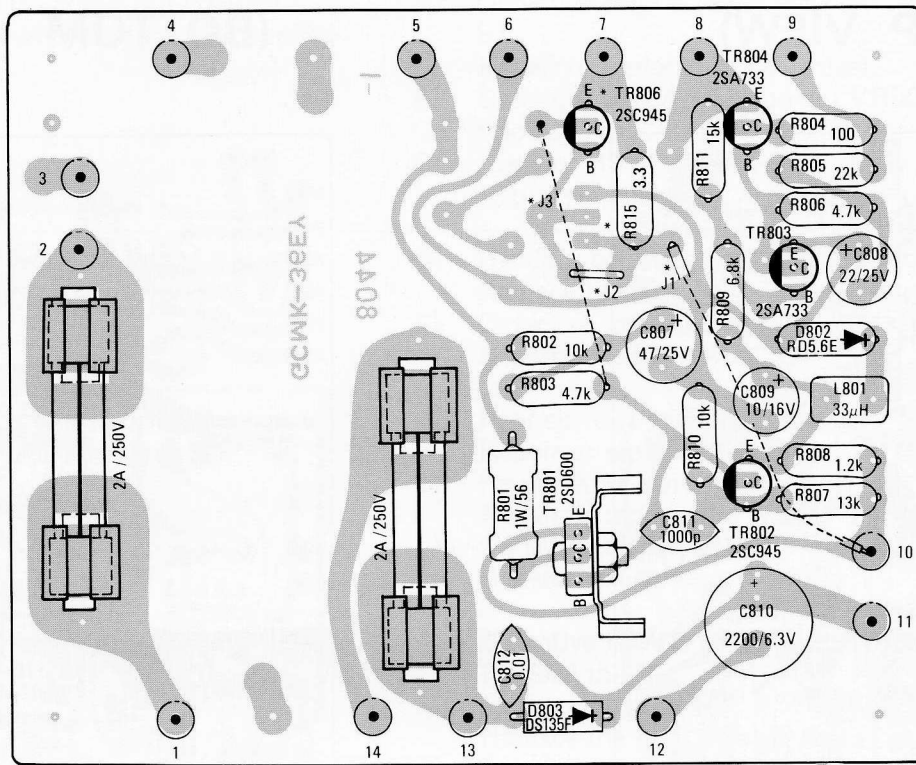
7226 SWITCH BOARD (TOP VIEW)



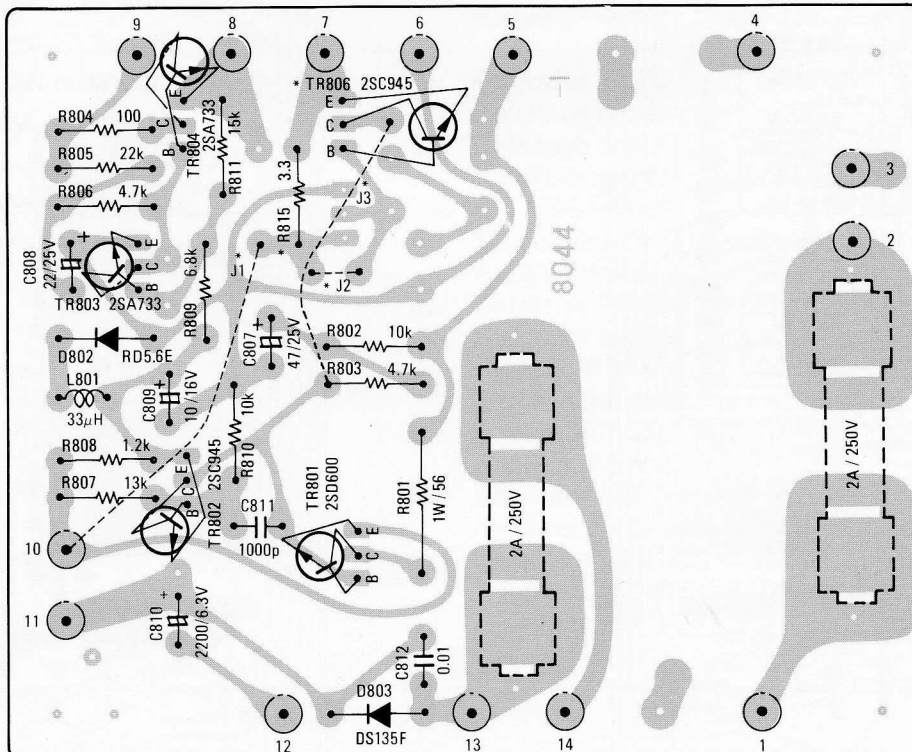
7226 SWITCH BOARD (BOTTOM VIEW)



8044 POWER SUPPLY BOARD (TOP VIEW)



8044 POWER SUPPLY BOARD (BOTTOM VIEW)

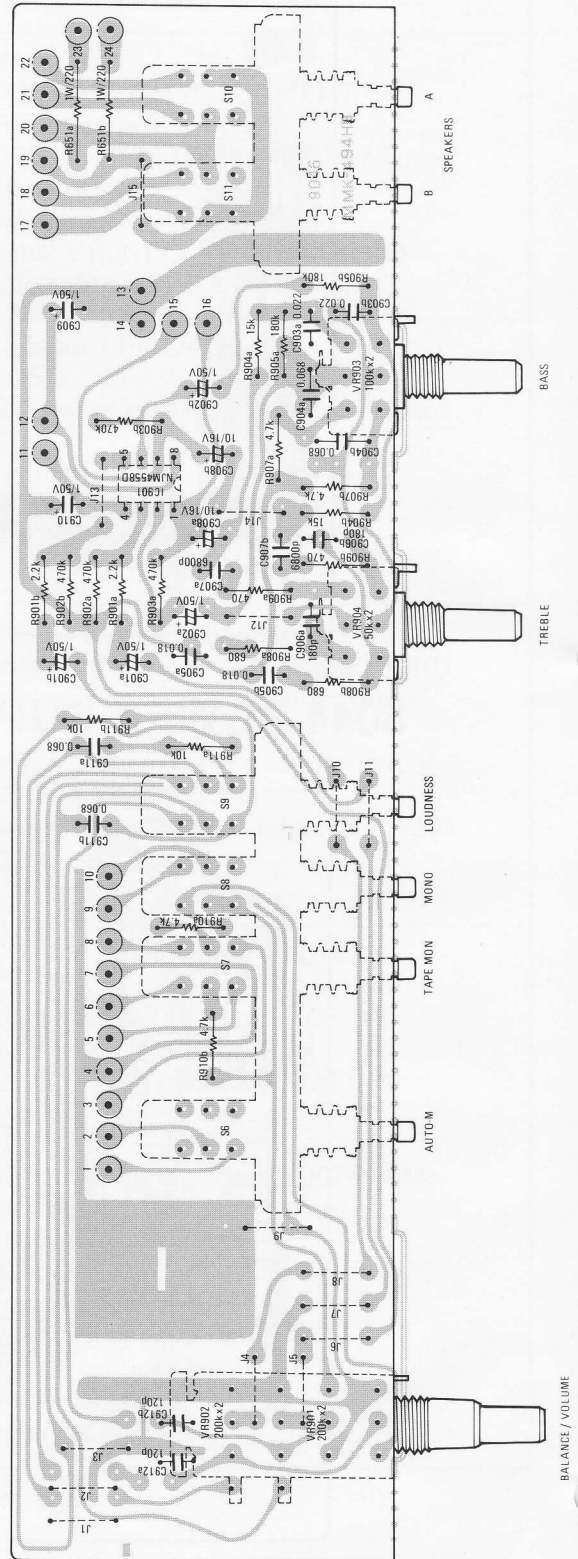
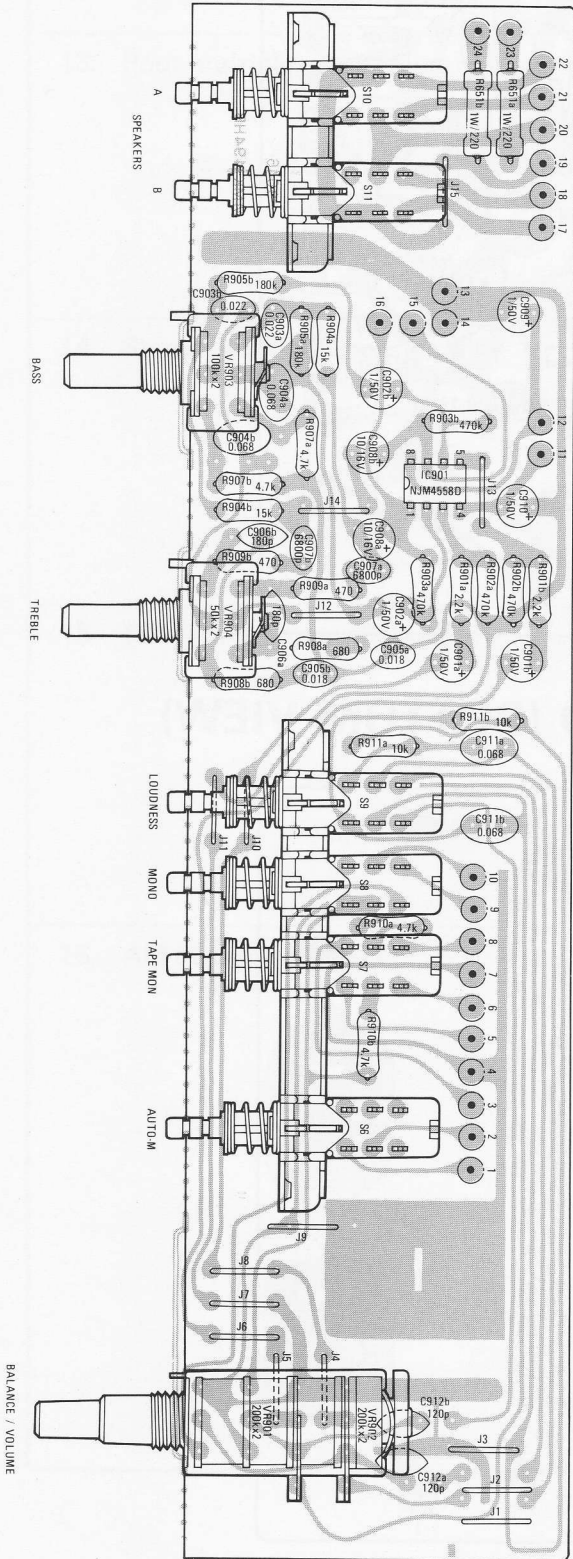


Star (*) marked components are used in Canadian models only.

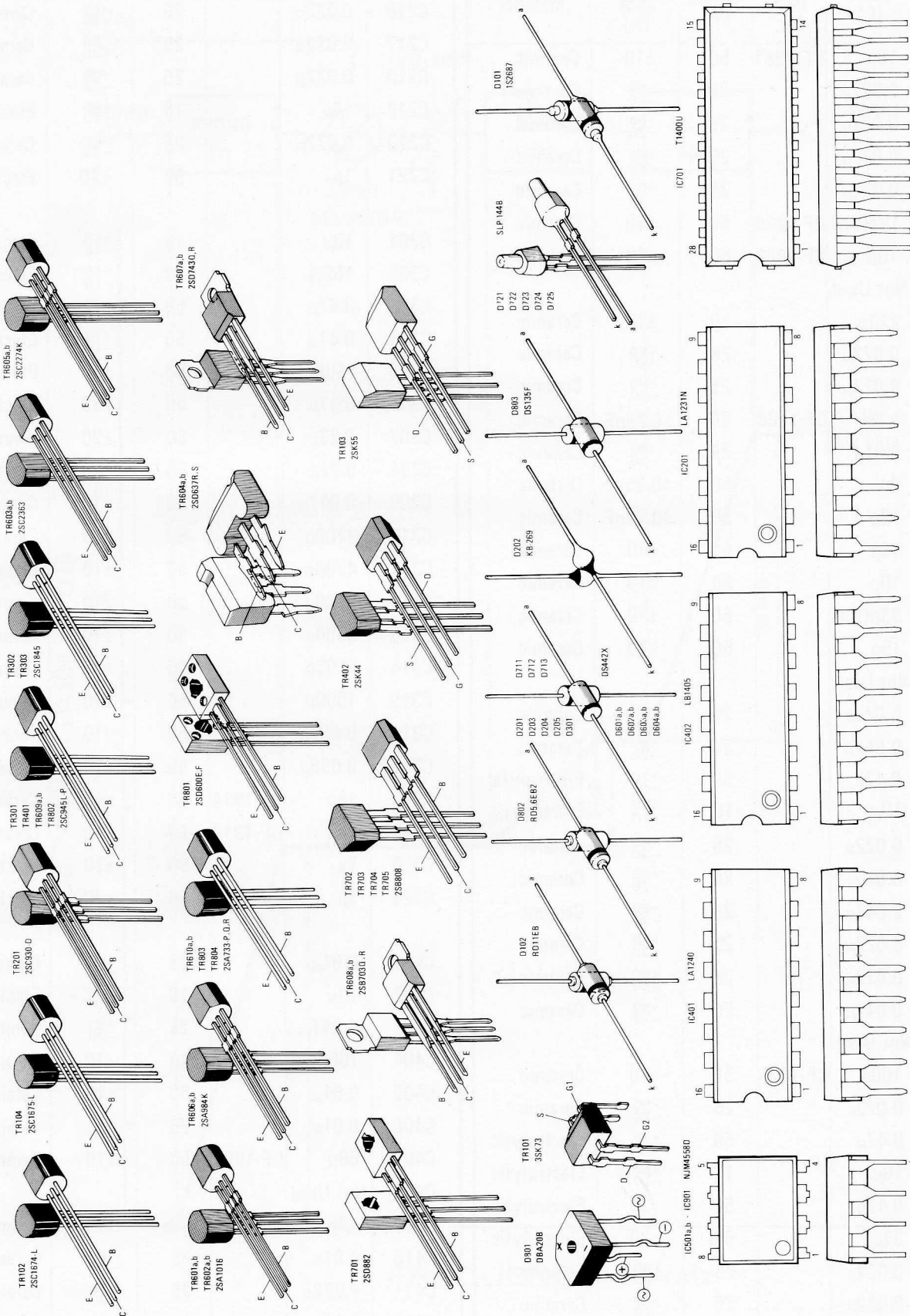
9046 TONE CONTROL BOARD

(TOP VIEW)

(BOTTOM VIEW)



SEMICONDUCTOR LEAD IDENTIFICATIONS



CAPACITORS					
Ref. No.	Value (F)	R/S Part No.	Voltage (V)	Tolerance (%)	Material
C101	15p	CF-7281	50	±10	Ceramic
C102	0.022μ		25	+80 -20	Ceramic
C103	0.022μ		25	+80 -20	Ceramic
C104	0.022μ		25	+80 -20	Ceramic
C105	0.022μ		25	+80 -20	Ceramic
C106	18p(SH)	CF-1226	50	±10	Ceramic
C107	10p	CF-1902	50	±10	Ceramic
C108	Not Used				
C109	220p		50	±10	Ceramic
C110	0.022μ		25	+80 -20	Ceramic
C111	0.022μ		25	+80 -20	Ceramic
C112	0.5p	CF-1100	50	±0.25pF	Ceramic
C113	0.01μ		25	+80 -20	Ceramic
C114	2p		50	±0.25pF	Ceramic
C115	12p		50	±0.25pF	Ceramic
C116	15p		50	±10	Ceramic
C117	10p		50	±10	Ceramic
C118	33p(UJ)		50	±10	Ceramic
C119	15p		50	±10	Ceramic
C120	Not Used				
C121	0.022μ		25	+80 -20	Ceramic
C122	0.047μ		25	+80 -20	Ceramic
C123	0.47μ		50	+75 -10	Electrolytic
C151	10μ		16	+50 -10	Electrolytic
C201	0.022μ		25	+80 -20	Ceramic
C202	0.01μ		25	+80 -20	Ceramic
C203	0.047μ		25	+80 -20	Ceramic
C204	0.022μ		25	+80 -20	Ceramic
C205	0.022μ		25	+80 -20	Ceramic
C206	0.047μ		25	+80 -20	Ceramic
C207	Not Used				
C208	100p	CF-1425	50	±10	Ceramic
C209	0.022μ		25	+80 -20	Ceramic
C210	0.47μ		50	+75 -10	Electrolytic
C211	10μ		16	+50 -10	Electrolytic
C212	0.47μ		50	±20	Electrolytic
C213	33μ		6.3	±20	Electrolytic
C214	0.022μ		25	+80 -20	Ceramic
C215	0.022μ		25	+80 -20	Ceramic

Ref. No.	Value (F)	R/S Part No.	Voltage (V)	Tolerance (%)	Material
C216	0.022μ		25	+80 -20	Ceramic
C217	0.022μ		25	+80 -20	Ceramic
C218	0.022μ		25	+80 -20	Ceramic
C219	10μ		16	+50 -10	Electrolytic
C220	0.022μ		25	+80 -20	Ceramic
C221	1μ		50	±20	Electrolytic
C301	10μ		16	+50 -10	Electrolytic
C302	1000μ		16	+50 -10	Electrolytic
C303	0.47μ		50	+75 -10	Electrolytic
C304	0.47μ		50	+75 -10	Electrolytic
C305	1500p		50	±10	Polystyrene
C306	0.47μ		50	±20	Electrolytic
C307	0.22μ		50	±20	Electrolytic
C308	0.22μ		50	±20	Electrolytic
C309	0.047μ		50	±10	Ceramic
C310	4700p		50	±10	Ceramic
C311	4700p		50	±10	Ceramic
*C312	3300p		50	±10	Ceramic
*C313	3300p		50	±10	Ceramic
C314	1000p		50	±10	Ceramic
C315	1000p		50	±10	Ceramic
C316	0.056μ		50	±10	Ceramic
C317	0.056μ		50	±10	Ceramic
C318	18p	CF-1914	50	±10	Ceramic
C319	18p	CF-1914	50	±10	Ceramic
C320	1μ		50	±20	Electrolytic
C321	1μ		50	±20	Electrolytic
C401	0.01μ		25	+80 -20	Ceramic
C402	10μ		16	+50 -10	Electrolytic
C403	0.047μ		25	+80 -20	Ceramic
C404	1000p		50	±10	Ceramic
C405	0.01μ		50	±10	Ceramic
C406	0.01μ		25	+80 -20	Ceramic
C407	68p	CF-1959	50	±10	Ceramic
C408	Not Used				
C409	47p	CF-1366	50	±10	Ceramic
C410	0.01μ		25	+80 -20	Ceramic
C411	0.022μ		25	+80 -20	Ceramic
C412	0.01μ		25	+80 -20	Ceramic

*C312, C313: 1200p for European/Australian models

Ref. No.	Value (F)	R/S Part No.	Voltage (V)	Tolerance (%)	Material	Ref. No.	Value (F)	R/S Part No.	Voltage (V)	Tolerance (%)	Material
C413	0.01 μ		25	$\begin{smallmatrix} +80 \\ -20 \end{smallmatrix}$	Ceramic	C610a,b	Not Used				
C414	4.7 μ		25	$\begin{smallmatrix} +75 \\ -10 \end{smallmatrix}$	Electrolytic	C611a,b	100p	CF-1155	50	± 10	Ceramic
C415	1 μ		50	$\begin{smallmatrix} +75 \\ -10 \end{smallmatrix}$	Electrolytic	C612a,b	1000p		50	± 10	Ceramic
C416	1000p		50	± 10	Ceramic	C613a,b	33 μ		25	$\begin{smallmatrix} +50 \\ -10 \end{smallmatrix}$	Electrolytic
C417	0.01 μ		25	$\begin{smallmatrix} +80 \\ -20 \end{smallmatrix}$	Ceramic	C614a,b	180p	CF-7283	500	± 10	Ceramic
C418	2200p		50	± 10	Ceramic	C615a,b	1000p		50	± 10	Ceramic
C419	0.47 μ		50	$\begin{smallmatrix} +75 \\ -10 \end{smallmatrix}$	Electrolytic	C616a,b	1000p		50	± 10	Ceramic
C420	100 μ		16	$\begin{smallmatrix} +50 \\ -10 \end{smallmatrix}$	Electrolytic	C617a,b	0.1 μ		50	± 10	Polyester
C421	0.022 μ		25	$\begin{smallmatrix} +80 \\ -20 \end{smallmatrix}$	Ceramic	C651a,b	1000p		50	± 10	Ceramic
C422	47p	CF-1366	50	± 10	Ceramic	C701	0.04 μ		25	$\begin{smallmatrix} +80 \\ -20 \end{smallmatrix}$	Ceramic
C423	0.022 μ		25	$\begin{smallmatrix} +80 \\ -20 \end{smallmatrix}$	Ceramic	C702	100p	CF-1425	50	± 10	Ceramic
C424	1 μ		50	$\begin{smallmatrix} +75 \\ -10 \end{smallmatrix}$	Electrolytic	C703	2200p		25	± 20	Ceramic
C425	10 μ		16	$\begin{smallmatrix} +50 \\ -10 \end{smallmatrix}$	Electrolytic	C704	470 μ		6.3	± 20	Electrolytic
C426	0.047 μ		25	$\begin{smallmatrix} +80 \\ -20 \end{smallmatrix}$	Ceramic	C705	47p		50	± 10	Ceramic
C427	8p(UJ)		50	± 5	Ceramic	C706	20p		50	± 10	Ceramic
C428	100p	CF-1425	50	± 10	Ceramic	C707	2200p		50	± 10	Ceramic
C429	0.047 μ		25	$\begin{smallmatrix} +80 \\ -20 \end{smallmatrix}$	Ceramic	C708	0.04 μ		25	$\begin{smallmatrix} +80 \\ -20 \end{smallmatrix}$	Ceramic
C451	8p		50	± 5	Ceramic	C709	470 μ		6.3	± 20	Electrolytic
C501a,b	4.7 μ		25	$\begin{smallmatrix} +75 \\ -10 \end{smallmatrix}$	Electrolytic	C710	2200p		25	± 20	Ceramic
C502a,b	100p		50	± 10	Ceramic	C711	2200p		25	± 20	Ceramic
C503a,b	2.2 μ		50	$\begin{smallmatrix} +50 \\ -10 \end{smallmatrix}$	Electrolytic	C712	2200p		25	± 20	Ceramic
C504a,b	1800p		50	± 10	Polyester	C713	2200p		25	± 20	Ceramic
C505a,b	8200p		50	± 10	Polyester	C714	2200p		25	± 20	Ceramic
C506a,b	10 μ		16	$\begin{smallmatrix} +50 \\ -10 \end{smallmatrix}$	Electrolytic	C715	2200p		25	± 20	Ceramic
C507	0.047 μ		25	$\begin{smallmatrix} +80 \\ -20 \end{smallmatrix}$	Ceramic	C716	2200p		25	± 20	Ceramic
C508	0.047 μ		25	$\begin{smallmatrix} +80 \\ -20 \end{smallmatrix}$	Ceramic	C717	2200p		25	± 20	Ceramic
C509	0.047 μ		25	$\begin{smallmatrix} +80 \\ -20 \end{smallmatrix}$	Ceramic	C718	4700p		50	± 20	Ceramic
C510	0.047 μ		25	$\begin{smallmatrix} +80 \\ -20 \end{smallmatrix}$	Ceramic	C719	4700p		50	± 20	Ceramic
C511a,b	200p		50	± 10	Ceramic	C720	4700p		50	± 20	Ceramic
C601a,b	1 μ		50	$\begin{smallmatrix} +75 \\ -10 \end{smallmatrix}$	Electrolytic	C721	4700p		50	± 20	Ceramic
C602a,b	220p	CF-7282	50	± 10	Ceramic	C722	1000p		50	± 10	Ceramic
C603a,b	10 μ		50	± 20	Electrolytic	C723	1000p		50	± 20	Ceramic
C604a,b	47 μ		50	$\begin{smallmatrix} +50 \\ -10 \end{smallmatrix}$	Electrolytic	C801	0.01 μ	CF-1811	500	$\begin{smallmatrix} +100 \\ -0 \end{smallmatrix}$	Ceramic
C605a,b	10p	CF-1105	500	± 0.25 pF	Ceramic	C802	0.01 μ	CF-1811	500	$\begin{smallmatrix} +100 \\ -0 \end{smallmatrix}$	Ceramic
C606a,b	6p		50	± 0.25 pF	Ceramic	C803	0.01 μ	CF-1811	500	$\begin{smallmatrix} +100 \\ -0 \end{smallmatrix}$	Ceramic
C607a,b	33 μ		16	$\begin{smallmatrix} +50 \\ -10 \end{smallmatrix}$	Electrolytic	C804	0.01 μ	CF-1811	500	$\begin{smallmatrix} +100 \\ -0 \end{smallmatrix}$	Ceramic
C608a,b	1000p		50	± 10	Ceramic	C805	4700 μ	CF-1490	40	$\begin{smallmatrix} +50 \\ -10 \end{smallmatrix}$	Electrolytic
C609a,b	180p		500	± 10	Ceramic	C806	4700 μ	CF-1490	40	$\begin{smallmatrix} +50 \\ -10 \end{smallmatrix}$	Electrolytic
						C807	47 μ		25	$\begin{smallmatrix} +50 \\ -10 \end{smallmatrix}$	Electrolytic
						C808	22 μ		25	$\begin{smallmatrix} +50 \\ -10 \end{smallmatrix}$	Electrolytic
						C809	10 μ		16	$\begin{smallmatrix} +50 \\ -10 \end{smallmatrix}$	Electrolytic

Ref. No.	Value (F)	R/S Part No.	Voltage (V)	Tolerance (%)	Material
C810	2200 μ		6.3	+50 -10	Electrolytic
C811	1000p		50	\pm 10	Ceramic
C812	0.01 μ		25	+80 -20	Ceramic
C901a,b	1 μ		50	+75 -10	Electrolytic
C902a,b	1 μ		50	+75 -10	Electrolytic
C903a,b	0.022 μ		50	\pm 10	Polyester
C904a,b	0.068 μ		50	\pm 10	Polyester
C905a,b	0.018 μ		50	\pm 10	Polyester
C906a,b	180p	CF-1470	50	\pm 10	Ceramic
C907a,b	6800p		50	\pm 10	Polyester
C908a,b	10 μ		16	+50 -10	Electrolytic
C909a,b	1 μ		50	+75 -10	Electrolytic
C910a,b	1 μ		50	+75 -10	Electrolytic
C911a,b	0.068 μ		50	\pm 10	Polyester
C912a,b	120p		50	\pm 10	Ceramic

COILS & TRANSFORMERS			
Ref. No.	Description	R/S Part No.	Mfr's Part No.
L101	FM Ant. Coil 133A	CA-8078	35501331
L102	FM RF Coil 140B	CA-8099	35501402
L103	Choke Coil 2.2mH	CB-2482	35129228
L104	FM OSC Coil 122L	CA-5345	35501226
L201	Choke Coil 2.2mH	CB-2482	35129228
L202	Choke Coil 18 μ H	CB-2494	35127180
L401	AM IFT Coil 416L		35504166
L451	AM Ant. Coil	A-0358	35400651
T101	FM IFT Coil 209A	CA-8080	35702091
T201	FM Det. Coil 230D	CA-8081	35702304
T202	FM Det. Coil 231D	CA-8082	35702314
T401	AM IFT Coil 407A	CA-7834	35704071
T402	AM IFT Coil 407B		35704072
L601a,b	Choke Coil 1.5 μ H	CB-2405	35199007
L701	Choke Coil 33 μ H		35125330
L801	Choke Coil 33 μ H		35105330
T851	Power Transformer(UL)	TA-0810	35900368
T851	Power Transformer (CSA)		35900369
T851	Power Transformer (Europe)		35900372
T851	Power Transformer (Australia)		35900373

CERAMIC FILTERS			
Ref. No.	Description	R/S Part No.	Mfr's Part No.
CF201	FM 10.7M-8Z		35300030
CF202	FM 10.7M-8Z		35300030
CF401	AM SFZ455B	C-0869	35300023

CRYSTAL			
Ref. No.	Description	R/S Part No.	Mfr's Part No.
XR701	6.4MHz HC-18U	MX-2637	35200005

DIODES

Ref. No.	Type No.	R/S Part No.	Mfr's Part No.	Manufacturer	Ref. No.	Type No.	R/S Part No.	Mfr's Part No.	Manufacturer
D101	1S2687	DX-0302	30600560	JRC	D701	GZA6.2L	L-1138	30602281	Sanyo
D102	RD11EB		30602121	NEC	D702	SL-2435		88140007	Sanyo
D201	DS442X	DX-0317	30602241	Sanyo	D711	DS442X		30602241	Sanyo
D202	KB269		30600490	UNIZON	D712	DS442X		30602241	Sanyo
D203	DS442X		30602241	Sanyo	D713	DS442X		30602241	Sanyo
D204	DS442X		30602241	Sanyo	D721	SLP-144B		30601721	Sanyo
D205	DS442X		30602241	Sanyo	D722	SLP-144B		30601721	Sanyo
D301	DS442X		30602241	Sanyo	D723	SLP-144B		30601721	Sanyo
D401	SLP-152B	L-1139	88150003	Sanyo	D724	SLP-144B	30601721	Sanyo	
D402	SLP-152B	L-1139	88150003	Sanyo	D725	SLP-144B	30601721	Sanyo	
D403	SLP-152B	L-1139	88150003	Sanyo	D801	DBA40B	DX-1381	30602251	Sanyo
D404	SLP-152B	L-1139	88150003	Sanyo	D802	RD5.6EB2		30602061	NEC
D405	SLP-152B	L-1139	88150003	Sanyo	D803	DS135F		DX-1380	30601981
D406	SLP-151B	L-1140	88110004	Sanyo					
D601a,b	DS442X		30602241	Sanyo					
D602a,b	DS442X		30602241	Sanyo					
D603a,b	DS442X		30602241	Sanyo					
D604a,b	DS442X		30602241	Sanyo					

INTEGRATED CIRCUITS

Ref. No.	Type No.	R/S Part No.	Mfr's Part No.	Manufacturer	Substitute	
					Type No.	Manufacturer
IC201	LA1231N	MX-4368	30900920	Sanyo		
IC301	LA3350	MX-3215	30900310	Sanyo		
IC401	LA1240	MX-4367	30900460	Sanyo	HA1197	Hitachi
IC402	LB1405	MX-3836	30900530	Sanyo		
IC501a,b	NJM4558D-D		30900363	JRC	AN6552F	Matsushita
IC701	T1400U	DX-1382	30900930	Toshiba(USA/Canada)		
IC701	T1400E		30900931	Toshiba (Europe/Australia)		
IC901	NJM4558D-V		30900361	JRC	AN6552	Matsushita

P.C. BOARD ASSEMBLY

Ref. No.	Description	R/S Part No.	Mfr's Part No.	Ref. No.	Description	R/S Part No.	Mfr's Part No.
0074	TUNER BOARD	X-6023	97007410	8044	POWER SUPPLY BOARD	X-6026	97804410
6079	MAIN AMP BOARD	X-6024	97607910	9046	TONE CONTROL BOARD	X-6027	97904610
7225	FREQ. COUNTER BOARD	X-6028	97722510				
7226	SWITCH BOARD	X-6025	97722610				

RESISTORS						Ref. No.	Value (Ω)	R/S Part No.	Wattage (W)	Tolerance (%)	Material
R101	10K		1/4	±5	Carbon	R311	27K		1/4	±5	Carbon
R102	47		1/4	±5	Carbon	R312	27K		1/4	±5	Carbon
R103	150		1/4	±5	Carbon	R313	33K		1/4	±5	Carbon
R104	75K		1/4	±5	Carbon	R314	33K		1/4	±5	Carbon
R105	220K		1/4	±5	Carbon	R315	910K		1/4	±5	Carbon
R106	3.3K		1/4	±5	Carbon	R316	910K		1/4	±5	Carbon
R107	2.2K		1/4	±5	Carbon	R317	3.9K		1/4	±5	Carbon
R108	18K		1/4	±5	Carbon	R318	3.9K		1/4	±5	Carbon
R109	6.8K		1/4	±5	Carbon	R319	180		1/4	±5	Carbon
R110	560		1/4	±5	Carbon	R320	180		1/4	±5	Carbon
R111	100K		1/4	±5	Carbon	R321	100K		1/4	±5	Carbon
R112	12K		1/4	±5	Carbon	R322	100K		1/4	±5	Carbon
R113	6.8K		1/4	±5	Carbon	R323	5.6K		1/4	±5	Carbon
R114	2.2K		1/4	±5	Carbon	R401	10		1/4	±5	Carbon
R115	220K		1/4	±5	Carbon	R402	150		1/4	±5	Carbon
R116	240K		1/4	±5	Carbon	R403	1.5K		1/4	±5	Carbon
R117	120		1/4	±5	Carbon	R404	51		1/4	±5	Carbon
R118	390K		1/4	±5	Carbon	R405	47		1/4	±5	Carbon
R119	360K		1/4	±5	Carbon	R406	300K		1/4	±5	Carbon
R201	150		1/4	±5	Carbon	R407	220		1/4	±5	Carbon
R202	150		1/4	±5	Carbon	R408	1.5K		1/4	±5	Carbon
R203	560		1/4	±5	Carbon	R409	2.2K		1/4	±5	Carbon
R204	3.3K		1/4	±5	Carbon	R410	100K		1/4	±5	Carbon
R205	330		1/4	±5	Carbon	R411	220K		1/4	±5	Carbon
R206	18		1/4	±5	Carbon	R412	47K		1/4	±5	Carbon
R207	390		1/4	±5	Carbon	R413	Not Used				
R208	120K		1/4	±5	Carbon	R414	100K		1/4	±5	Carbon
R209	1K		1/4	±5	Carbon	R415	2.2M		1/4	±5	Carbon
R210	18K		1/4	±5	Carbon	R416	8.2K		1/4	±5	Carbon
R211	1.8K		1/4	±5	Carbon	R417	10K		1/4	±5	Carbon
R212	10K		1/4	±5	Carbon	R418	Not Used				
R213	180K		1/4	±5	Carbon	R419	10K		1/4	±5	Carbon
R214	12K		1/4	±5	Carbon	R420	1K		1/4	±5	Carbon
R215	33K		1/4	±5	Carbon	R421	150		1/4	±5	Carbon
R216	10K		1/4	±5	Carbon	R422	18K		1/4	±5	Carbon
R217	180K		1/4	±5	Carbon	R423	100K		1/4	±5	Carbon
R218	12K		1/4	±5	Carbon	R424	13K		1/4	±5	Carbon
R219	100		1/4	±5	Carbon	R425	1.8K		1/4	±5	Carbon
R220	18K		1/4	±5	Carbon	R426	360		1/4	±5	Carbon
R221	270		1/4	±5	Carbon	R427	150		1/4	±5	Carbon
R222	180		1/4	±5	Carbon	R428	2.2K		1/4	±5	Carbon
R301	1.8K		1/4	±5	Carbon	R429	100K		1/4	±5	Carbon
R302	1.8K		1/4	±5	Carbon	R501a,b	470		1/4	±5	Carbon
R303	8.2K		1/4	±5	Carbon	R502a,b	470K		1/4	±5	Carbon
R304	3.3K		1/4	±5	Carbon	R503a,b	56K		1/4	±5	Carbon
R305	180K		1/4	±5	Carbon	R504a,b	680		1/4	±5	Carbon
R306	330		1/4	±5	Carbon	R505a,b	100K		1/4	±5	Carbon
R307	3.9K		1/4	±5	Carbon	R506a,b	360K		1/4	±5	Carbon
R308	3.9K		1/4	±5	Carbon	R507a,b	33K		1/4	±5	Carbon
R309	5.6K		1/4	±5	Carbon	R508a,b	220K		1/4	±5	Carbon
R310	5.6K		1/4	±5	Carbon	R509a,b	1K		1/4	±5	Carbon
						R510a,b	1K		1/4	±5	Carbon

Ref. No.	Value (Ω)	R/S Part No.	Wattage (W)	Tolerance (%)	Material
R511a,b	5.6K		1/4	±5	Carbon
*R512a,b	330K		1/4	±5	Carbon
*R513a,b	470K		1/4	±5	Carbon
R601a,b	2.2K		1/4	±5	Carbon
R602a,b	47K		1/4	±5	Carbon
R603a,b	5.6K		1/4	±5	Carbon
R604a,b	5.6K		1/4	±5	Carbon
R605a,b	1.8K		1/4	±5	Carbon
R606a,b	1.8K		1/4	±5	Carbon
R607a,b	2K		1/4	±5	Carbon
R608a,b	5.6K		1/4	±5	Carbon
R609a,b	2.2K		1/4	±5	Carbon
R610a,b	2.2K		1/4	±5	Carbon
R611a,b	1K		1/4	±5	Carbon
R612a,b	15K		1/4	±5	Carbon
R613a,b	620		1/4	±5	Carbon
R614a,b	1K		1/4	±5	Carbon
R615a,b	100	RX-0175	1/4	±5	Carbon
R616a,b	10	RX-0174	1/4	±5	Carbon
R617a,b	100		1/4	±5	Carbon
R618a,b	10	RX-0174	1/4	±5	Carbon
R619a,b	0.47		3	±5	Metal
R620a,b	0.47		3	±5	Metal
R621a,b	680		1/4	±5	Carbon
R622a,b	680		1/4	±5	Carbon
R623a,b	9.1K		1/4	±5	Carbon
R624a,b	9.1K		1/4	±5	Carbon
R625a,b	10		1	±10	Metal
R626a,b	10		1	±10	Metal
R651a,b	220		1	±5	Metal Oxide
R701	4.7		1	±5	Metal
R702	680		1/4	±5	Carbon
R703	56		1/4	±5	Carbon
R704	56		1/4	±5	Carbon
R705	56		1/4	±5	Carbon
R706	56		1/4	±5	Carbon
R707	56		1/4	±5	Carbon
R708	56		1/4	±5	Carbon
R709	56		1/4	±5	Carbon
R710	56		1/4	±5	Carbon
R711	330		1/4	±5	Carbon
R712	330		1/4	±5	Carbon
R713	330		1/4	±5	Carbon
R714	330		1/4	±5	Carbon
R721	1K		1/4	±5	Carbon
R801	56		1**	±5	Metal
R802	10K		1/4	±5	Carbon
R803	4.7K		1/4	±5	Carbon
R804	100	RX-0175	1/4	±5	Carbon
R805	22K		1/4	±5	Carbon
R806	4.7K		1/4	±5	Carbon

Ref. No.	Value (Ω)	R/S Part No.	Wattage (W)	Tolerance (%)	Material
R807	13K		1/4	±5	Carbon
R808	1.2K		1/4	±5	Carbon
R809	6.8K		1/4	±5	Carbon
R810	10K		1/4	±5	Carbon
R811	15K		1/4	±5	Carbon
**R815	3.3		1/4	±5	Carbon
R851	2.2M		1/2	±10	Solid
R852	1.2K		1	±5	Metal Oxide
R901a,b	2.2K		1/4	±5	Carbon
R902a,b	470K		1/4	±5	Carbon
R903a,b	470K		1/4	±5	Carbon
R904a,b	15K		1/4	±5	Carbon
R905a,b	180K		1/4	±5	Carbon
R906a,b	Not Used				
R907a,b	4.7K		1/4	±5	Carbon
R908a,b	680		1/4	±5	Carbon
R909a,b	470		1/4	±5	Carbon
R910a,b	4.7K		1/4	±5	Carbon
R911a,b	10K		1/4	±5	Carbon

SWITCHES

Ref. No.	Description	R/S Part No.	Mfr's Part No.
S1-5	Input Selector	S-7475	27200176
S6-9	AUTO-M, TAPE MON, MONO, LOUDNESS	S-7476	27200177
S10,11	SPEAKERS	S-7477	27200178
S12	POWER	S-1399	27200181
S13	THERMAL PROTECTOR 90°C		30700370
S14	THERMAL PROTECTOR 105°C	S-1357	30700320
S12	POWER (For Europe/Australia)		27200144

**R801: 2 watts for Canadian models

* R512a,b R513a,b for European/Australian models only

**R815 for Canadian models only

TRANSISTORS

Ref. No.	Type No.	R/S Part No.	Mfr's Part No.	Manufacturer	Substitute	
					Type No.	Manufacturer
TR101	3SK73		30400171	Toshiba		
TR102	2SC1674L		30201111	NEC		
TR103	2SK55		30400131	Hitachi		
TR104	2SC1675L		30201121	NEC		
TR201	2SC930		30200271	Sanyo		
TR301	2SC945L-P		30201031	NEC	2SC536K	Sanyo
TR302	2SC1845		30201541	NEC	2SC2240	Toshiba
TR303	2SC1845		30201541	NEC	2SC2240	Toshiba
TR401	2SC945L-P		30201031	NEC	2SC536K	Sanyo
TR402	2SK44		30400103	Sanyo		
TR601a,b	2SA1016		30000771	Sanyo	2SA992	NEC
TR602a,b	2SA1016		30000771	Sanyo	2SA992	NEC
TR603a,b	2SC2363		30201444	Sanyo	2SD666	Hitachi
TR604a,b	2SD637R,S		30300401	Matsushita	2SC2021	Toyco
TR605a,b	2SC2274K		30201451	Sanyo	2SC2002	NEC
TR606a,b	2SA984K		30000661	Sanyo	2SA958	NEC
TR607a,b	2SD743Q,R		30300511	NEC	2SC1826	Sanken
TR608a,b	2SB703Q,R		30100211	NEC	2SA768	Sanken
TR609a,b	2SC945L-P		30201031	NEC	2SC536K	Sanyo
TR610a,b	2SA733P,Q		30000425	NEC	2SA608K	Sanyo
TR701	2SD325		30300151	Sanyo	2SD330	Sanyo
TR702	2SB808		30100241	Sanyo	2SB643	Matsushita
TR703	2SB808		30100241	Sanyo	2SB643	Matsushita
TR704	2SB808		30100241	Sanyo	2SB643	Matsushita
TR705	2SB808		30100241	Sanyo	2SB643	Matsushita
TR801	2SD600E or F		30300311	Sanyo	2SD415	NEC
TR802	2SC945L-P		30201031	NEC	2SC536K	Sanyo
TR803	2SA733Q,R		30000425	NEC	2SA608K	Sanyo
TR804	2SA733Q,R		30000425	NEC	2SA608K	Sanyo
TR805	Not Used					
**TR806	2SC945L-P		30201031	NEC		

**TR806 for Canadian models only

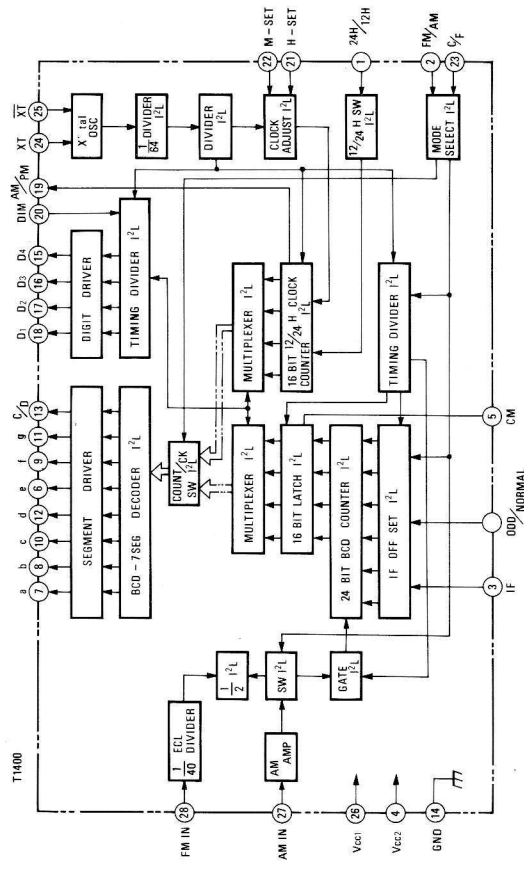
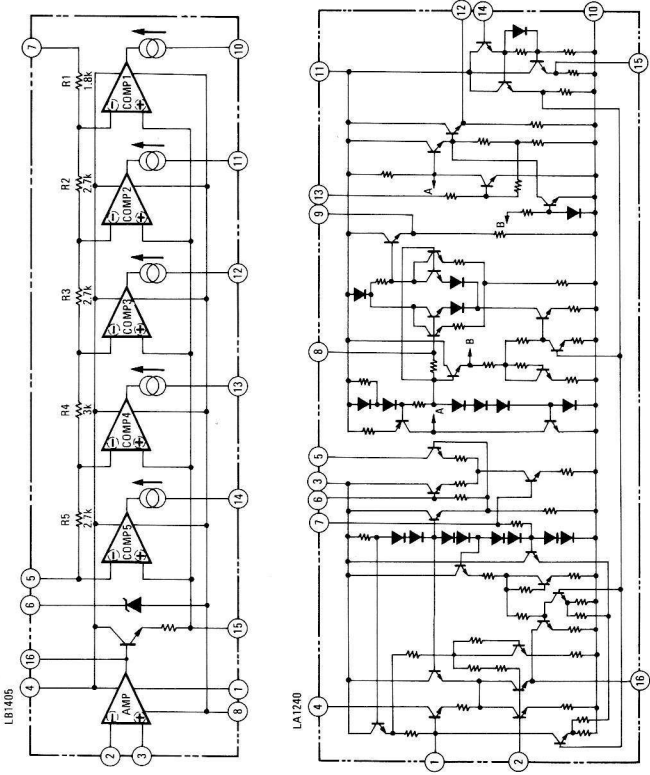
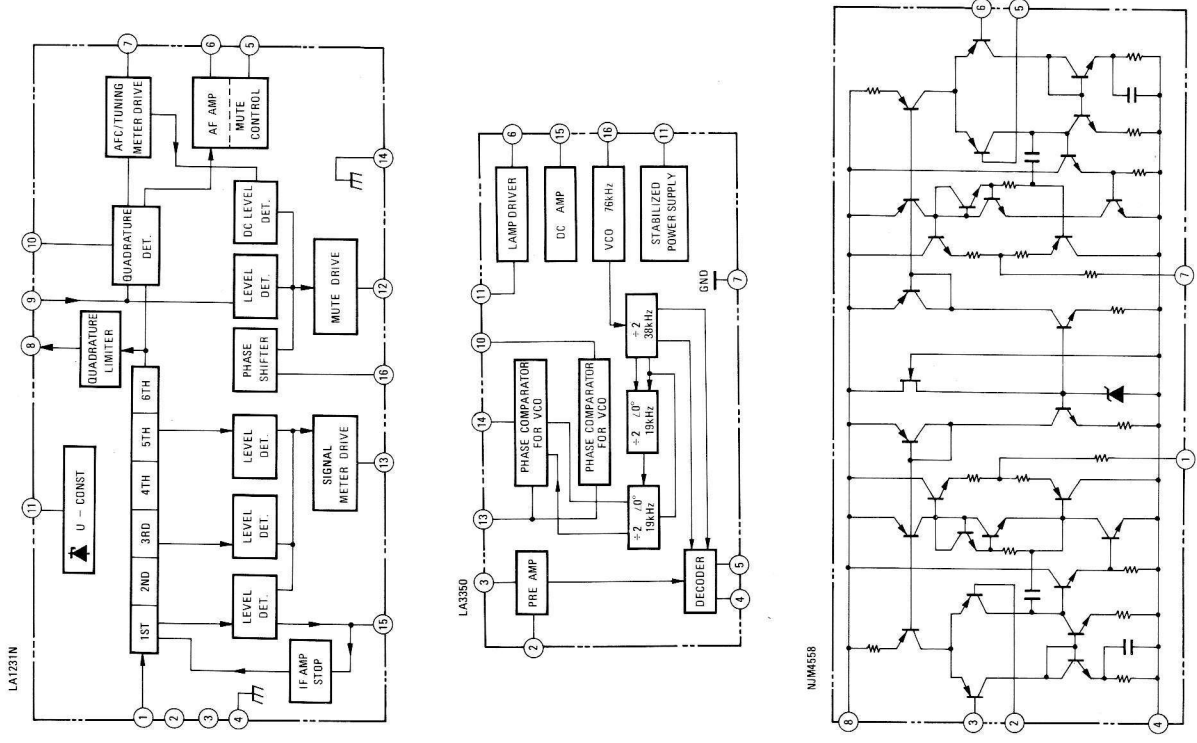
VARIABLE CAPACITORS

Ref. No.	Description	R/S Part No.	Mfr's Part No.
VC101	Tuning Capacitor (Includes TC101, TC102, TC401 & TC402)	C-4547	26250101
TC103	Trimmer 10pF	C-0424	26010023

VARIABLE RESISTORS

Ref. No.	Description	R/S Part No.	Mfr's Part No.
VR201	FM SIGNAL Ind. Sensitivity 500k Ω	P-7074	28101504
VR202	FM Muting Level Control 50k Ω	P-0880	28101503
VR301	PLL VCO 19kHz Adjust 5k Ω	P-0840	28101502
VR302	MPX Separation Adjust 500 Ω	P-0881	28101501
VR601a,b	Bias Adjust 1k Ω	P-6528	28104102
VR901a,b	BALANCE Control 200k Ω		28000208
VR902a,b	VOLUME Control 200k Ω		28000208
VR903a,b	BASS Control 100k Ω	P-4029	28000205
VR904a,b	TREBLE Control 50k Ω	P-5011	28000204

IC EQUIVALENT CIRCUIT



MISCELLANEOUS PARTS LIST

Ref. No.	Description	R/S Part No.	Mfr's Part No.	Ref. No.	Description	R/S Part No.	Mfr's Part No.
1	Wire Wrap Pin 16mm		19105001	49	Dial Drum		21005002
2	4P Phono Jack	J-1116	33041300	50	Plastic Pulley		84085001
3	Shield Plate A		09111001	51	Pulley Shaft D		24006001
4	Shield Plate B		09112001	52	Spring Coil for Dial Drum		19042001
5	Shield Plate C		09113001	53	Tuning Knob	K-4074	29422001
6	Shield Plate D		09114001	54	VOLUME Knob	K-4075	29423001
7	Heat Sink	HH-0373	15132001	55	BALANCE Knob	K-4076	29424001
8	Bind Screw Tite B M3x8		40630081	56	BASS & TREBLE Knob	K-4077	29425001
9	Bind Screw M3x12		40430121	57	POWER Switch Button	K-4078	29426001
10	Washer M3		42120321	58	Front Panel Assembly (Includes Acryl Panel and Push Buttons)	Z-5488	10790A02
11	Wire Wrap Pin 13mm		19044001				
	Jumper Wire 10mm		92010110	59	Bottom Plate		05069001
12	Heat Sink for TR801	HH-0374	15094001	60	Metal Cover	Z-5489	70056001
13	Fuse Clamp Holder	HB-9805	34023001	61	Plastic Foot		84380001
14	Fuse 2A 250V	HF-1173	38337220	62	Bind Head Screw Tite B M4x15		40640151
15	Back Panel		11790A52	63	Bind Head Screw Tite B M4x8		40640085
16	4P SPEAKER Terminal	HB-9806	53044500	64	Flat Washer M4 Black		42150427
17	AC Cord with Plug		62110054		Fuse 1A, 250V (For Europe/Australia)		38444210
18	AC Cord Strain Relief SR4P-4		74089001		AC Cord with Plug (For Europe)		62110039
19	Ground Terminal	HB-0953	53012300		5P DIN Jack (For Europe/Australia)		34057001
20	Washer M3		42100008		AC Cord with Plug (For Australia)		62010013
21	Nut M3		41113070		AC Cord Strain Relief (For Australia)		74045001
22	Ground Lug M3		51036001				
23	Antenna Terminal	J-4533	53032500				
24	Spring Washer M3		42250341				
25	Plastic Pivot M3, 5	HD-5015	84310001				
26	Line Cord Antenna		63101001				
27	Fiber Support Line Cord Antenna		75017003				
28	AC Receptacle IR10		34048001				
29	Headphone Jack	J-1117	33032600				
30	Metal Fitting for AC Switch		63490001				
31	Metal Fitting for Push Switch		63491001				
32	Tuning Shaft Assembly	RT-2835	23061001				
33	LED Holder		84393001				
34	Pan Head Screw M3x6		40330061				
35	Brazer Screw Tite B M3x8		40230081				
36	Metal Fitting for Pulley		63492001				
37	Metal Clamper for Thermal Protector		63493001				
38	Metal Fitting for Heat Sink		63494001				
39	Ground Lug		63408001				
40	Wire Clamper		63075001				
41	Brazer Screw Tite C M3x8		40000120				
42	Bind Head Screw Tite B M3x8		40630085				
44	Bind Head Screw Tite B M4x8		40640081				
45	Washer M4		42120421				
46	Shield Cloth for Volume Control		73264001				
47	Shield Plate		09110001				
48	Metal Fitting for Shield Plate		63495001				

RADIO SHACK  **A DIVISION OF TANDY CORPORATION**

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TANDY CORPORATION

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