

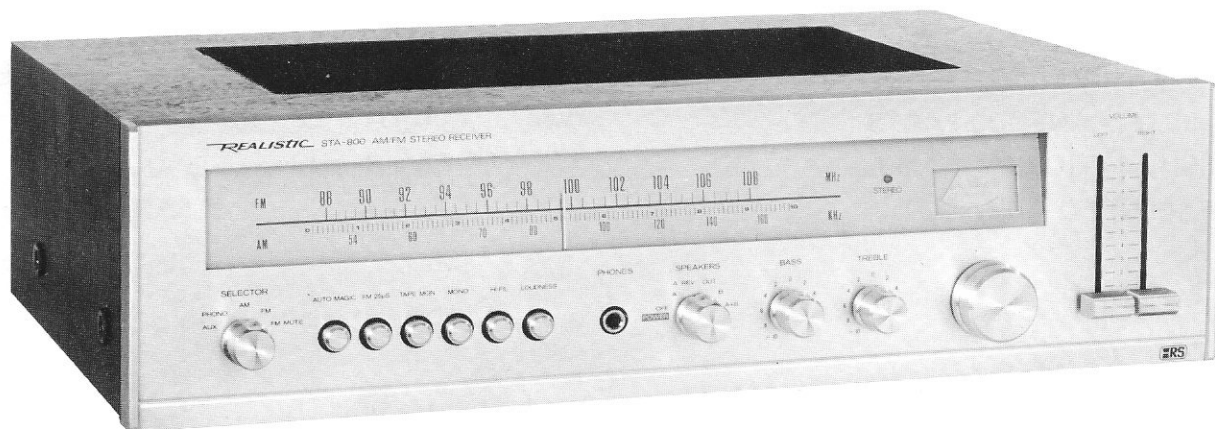
REALISTIC[®]

180

Service Manual

31-2088

STA-800
AM / FM STEREO RECEIVER
Catalog Number: 31-2088



CUSTOM MANUFACTURED FOR RADIO SHACK  A DIVISION OF TANDY CORPORATION

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SPECIFICATIONS

		NOMINAL	LIMIT	UNIT	
FM SECTION					
1. TUNING COVERAGE		87.5–108.5	88–108	MHz	
2. DIAL CALIBRATION ACCURACY	90 MHz		±250	kHz	
	98 MHz		±350	kHz	
	106 MHz		±250	kHz	
3. USABLE SENSITIVITY		2.0	3.0	μV	
	(NOISE & DISTORTION –30 dB)	11.2	14.8	dBf	
4. IMAGE REJECTION (at 98 MHz)		50	45	dB	
5. IF REJECTION (at 90 MHz)		80	70	dB	
6. FULL LIMITING (at –3 dB)		2.0	3.0	μV	
7. IF BANDWIDTH (6 dB down)			±150	kHz	
8. DISTORTION (1 mV INPUT)		0.3	0.8	%	
9. SIGNAL-TO-NOISE RATIO (1 mV INPUT)		65	58	dB	
10. DE-EMPHASIS 75 μsec. (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)		±1000	±800	kHz	
13. OUTPUT VOLTAGE	MONO	700	700±3	dB	
	(at 75 kHz dev., 400 Hz mod., 1 mV input)	STEREO	600±3	dB	
14. MUTING THRESHOLD		5	4–16	μV	
15. OVERLOAD (THD at 98 MHz, 100% mod.)		1	1.5	%	
	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)		2	3.5	dB	
18. ALTERNATE CHANNEL SELECTIVITY		50	40	dB	
	(100 μV INPUT)				
MPX SECTION					
1. STEREO SEPARATION	100 Hz	38	27	dB	
	(100% mod., 1 mV input)	40	32	dB	
	1 kHz	30	20	dB	
	10 kHz	0.5	1.2	%	
2. DISTORTION					
	(100% mod. 1 mV input)	1 kHz			
3. STEREO BEACON SENSITIVITY (pilot 7%)		10	3–16	μV	
4. RESIDUAL 19 kHz & 38 kHz (1 mV input)		50	40	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		±30	kHz	
	1,400 kHz		±40	kHz	
3. USABLE SENSITIVITY	600 kHz, 1000 kHz, 1400 kHz				
	(400 Hz, 30% mod.,	Radiated	250	500	μV/m
	noise & distortion –20 dB)	Terminal	25	40	μV
4. IMAGE REJECTION (at 1,400 kHz)			35	30	dB
5. IF REJECTION (at 600 kHz)			30	25	dB
6. AGC FIGURE OF MERIT		45	30	dB	
	(from 100 mV/m at 1,000 kHz)				
7. DISTORTION		1.5	2.5	%	
	(400 Hz, 30% mod., 5 mV/m input)				
8. IF BANDWIDTH (6 dB down)			6–14	kHz	
9. OUTPUT VOLTAGE		250	200	mV	
	(1 kHz 30% mod., 5 mV/m input)				

	NOMINAL	LIMIT	UNIT
10. AUDIO RESPONSE (5 mV/m input from 400 Hz to 3 kHz, 0 dB @1,000 kHz)	-4	-6	dB
11. SELECTIVITY 200 μ V/m	28	20	dB
12. SIGNAL-TO-NOISE RATIO (1000 kHz, with antenna input 5 mV/m)	40	32	dB
13. AM BEAT 1 ~ 50 mV/m		10	%
50 ~ 100 mV/m		15	%
AUDIO SECTION			
1. RMS OUTPUT POWER (distortion <0.15%, 20 Hz ~ 20 kHz)			
PER CHANNEL DRIVEN 8 Ω	50	40	W
4 Ω	55	45	W
BOTH CHANNELS DRIVEN 8 Ω	40	35	W
4 Ω	45	35	W
(IHF power @ 1 kHz, 8 Ω , \pm 1 dB)			
2. IM DISTORTION	0.2	0.5	%
(at 25 W output 70/7,000 Hz 4/1)			
3. HARMONIC DISTORTION (at 25 W output)			
100 Hz	0.1	0.12	%
1,000 Hz	0.1	0.12	%
10,000 Hz	0.1	0.12	%
4. FREQUENCY RESPONSE (AUX, 8 Ω load, 1 W output, 30 Hz ~ 20 kHz)	\pm 1	\pm 1.5	dB
5. INPUT SENSITIVITY (for 35 W output) PHONO	2.8	2.8 \pm 0.5	mV
AUX	180	180 \pm 40	mV
TAPE MON	180	180 \pm 40	mV
6. INPUT IMPEDANCE PHONO	50K		ohm
AUX	70K		ohm
TAPE MON	70K		ohm
7. TONE CONTROL BASS 100 Hz	\pm 10	\pm 10 \pm 2	dB
TREBLE 10 kHz	\pm 8	\pm 8 \pm 2	dB
8. EQUALIZATION RIAA: 30 ~ 15,000 Hz		RIAA \pm 2	dB
9. PHONO AMP OVER LOAD CAPABILITY (at 1%)	120	100	mV
10. HIGH FILTER 10 kHz	-6	-6 \pm 2	dB
11. LOUDNESS COMPENSATION (volume -30 dB) 10 kHz	4	4 \pm 2	dB
100 Hz	10	10 \pm 2	dB
12. CHANNEL SEPARATION	40	35	dB
(AUX input 100 ~ 10,000 Hz)			
13. SIGNAL-TO-NOISE RATIO (input shorted)			
PHONO	60	55	dB
AUX	70	60	dB
14. RESIDUAL NOISE	1.5	3	mV
15. LOAD IMPEDANCE		4-16	ohm
16. POWER SOURCE 120 Volts, 60 Hz AC*			
20 WATTS, No Signal			
170 WATTS, Full Signal			

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

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.

DISASSEMBLY INSTRUCTIONS

1. Removing chassis from wooden cabinet. (Refer to Fig. A)
Remove the five screws (#58 & #66) from both sides of the wooden cabinet and back panel.
2. Removing the Front Panel. (Refer to Fig. A)
 - a) Remove the knobs from SELECTOR, SPEAKERS, BASS, TREBLE, Tuning and VOLUME.
 - b) Remove four screws (#65) from both sides of Front Panel and remove panel.

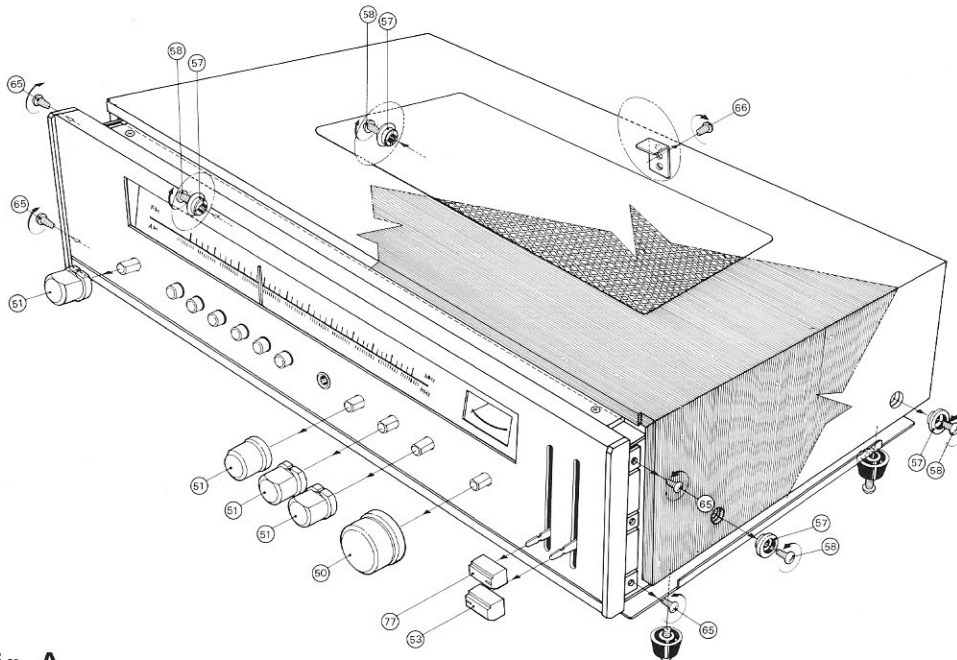
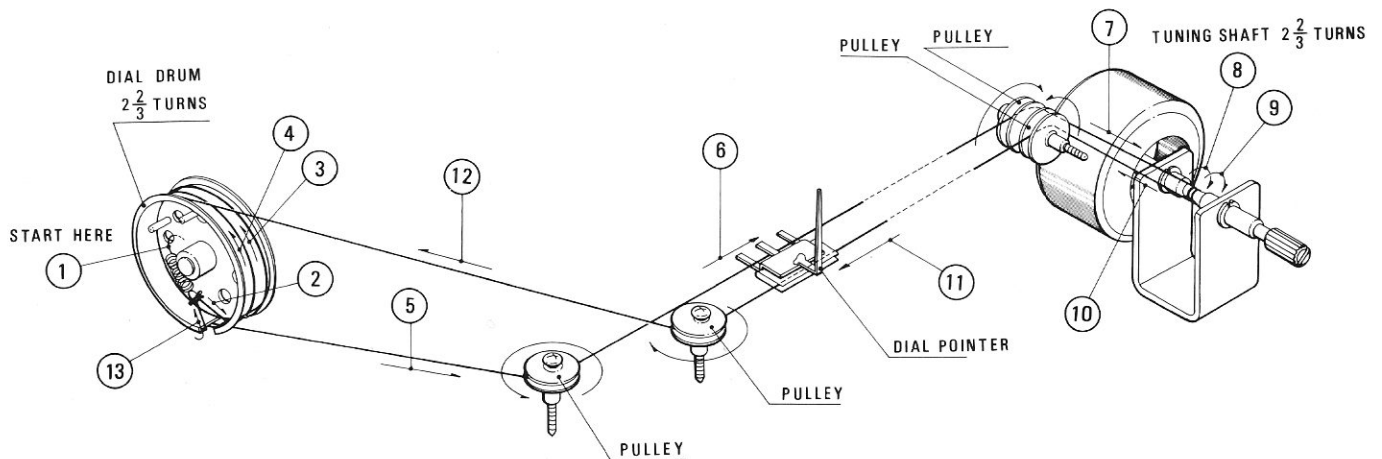


Fig. A

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 SW1 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	T402 (IFT)	Adjust for maximum reading.
2	Same as Step 1	600 kHz (400 Hz Mod.)	600 kHz	Same as Step 1	L402 (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	TC105 (OSC Trimmer) TC104 (ANT Trimmer)	Same as Step 1
4	Same as Step 1	1000 kHz (400 Hz Mod.)	1000 kHz	Same as Step 1	VR402	Adjust for 160 mV Audio output.
5	Same as Step 1	1000 kHz (400 Hz Mod.)	1000 kHz	Receiver's SIGNAL Meter	VR401	Adjust for 70% reading of full scale with input of 5 mV/m.

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

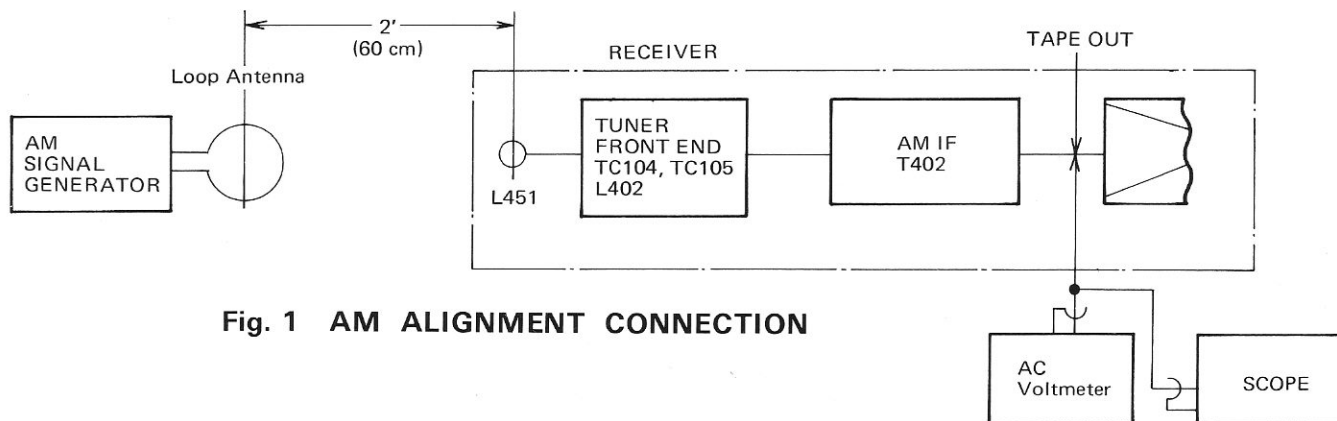


Fig. 1 AM ALIGNMENT CONNECTION

FM RF AND IF ALIGNMENT

Signal generator output should be no higher than necessary to obtain an output reading.

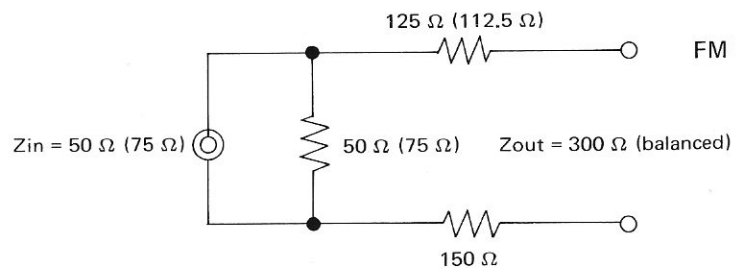
Set Selector switch to FM.

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) L103 (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 across R211 (5.1 K Ω)	T201 (Bottom Core)	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	T201 (Top Core)	Adjust for minimum distortion.
6	Same as Step 1	98 MHz (400 Hz Mod.)	98 MHz	Receiver's SIGNAL Meter	VR203	Adjust for 70% reading of full scale with input of 1 mV.
7	Same as Step 1 (Set Selector switch to FM MUTE.)	98 MHz (400 Hz Mod.)	98 MHz	Oscilloscope connected to TAPE OUT jack	VR204	Adjust so output just appears with an input signal level of 5 μ V.

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

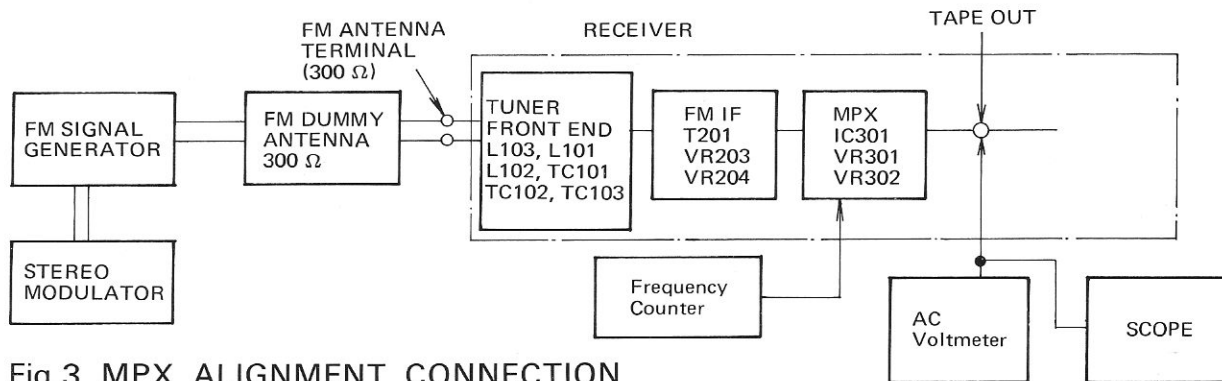


Fig.3 MPX ALIGNMENT CONNECTION

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).

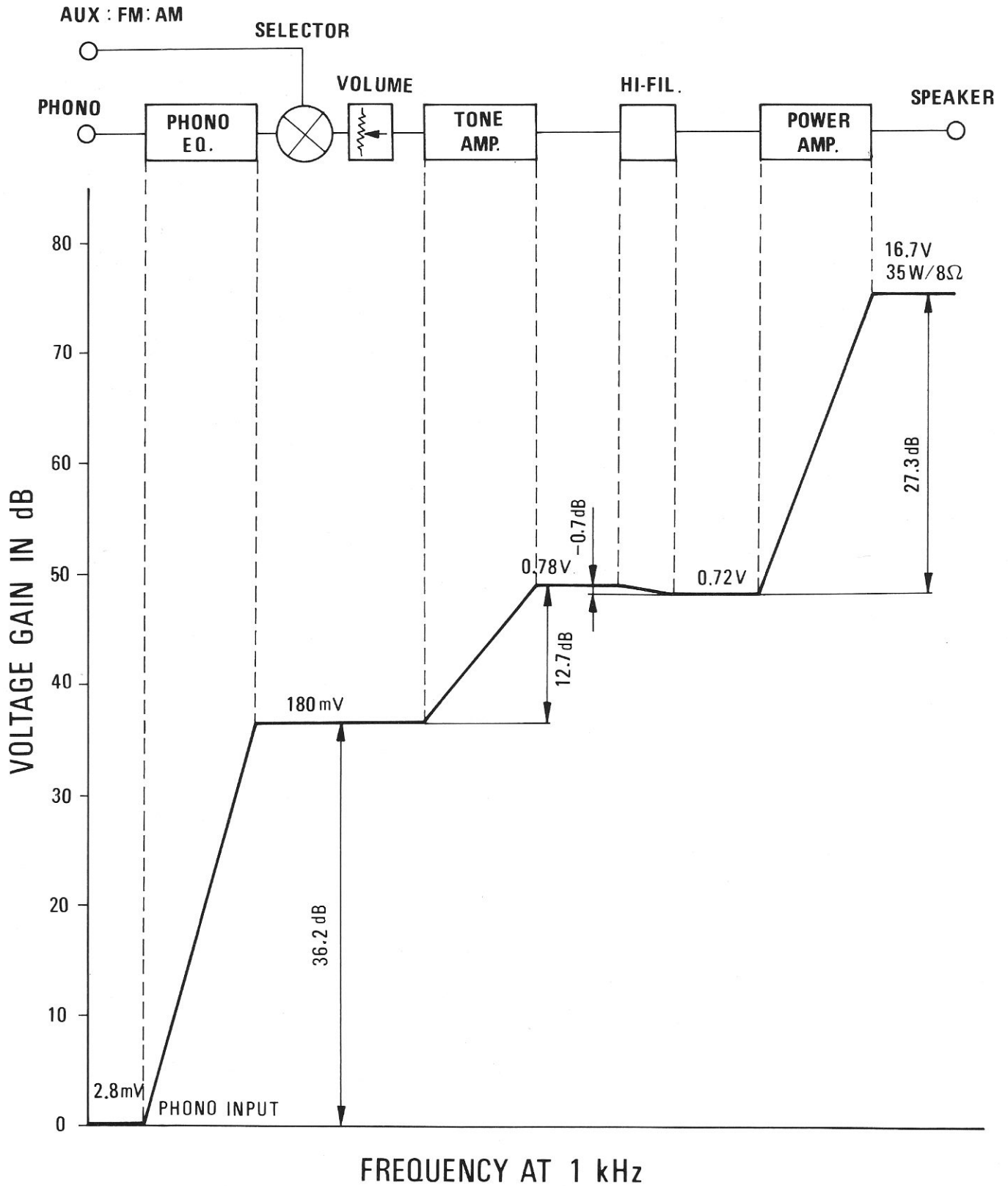
STEP	19 kHz (PILOT SIGNAL) MODULATION Level	SIGNAL GENERATOR Freq. Set to	OUTPUT INDICATOR Connected to	ADJUST Refer Fig. 4	ADJUST FOR	NOTE
1	8%	Composite 1 kHz R channel	AC Voltmeter to TAPE OUT jack of R channel			Adjust input for audio output of about 0.6V
2	8%	Composite 1 kHz L channel	AC Voltmeter to TAPE OUT jack of R channel	VR301	Minimum	AC Voltmeter reading should be at least 40 dB below reading in step 1.
3	8%	Composite 1 kHz R channel	AC Voltmeter to TAPE OUT jack of L channel	VR301	Minimum	Same as Step 2.
4	PILOT OFF	Carrier only	Frequency Counter Connect to TP (#10 pin) of PCB 0055A and ground	VR302	19 kHz	

If you did not obtain -40 dB readings in steps 2 and 3 (compared with step 1), readjust VR301 until you obtain -40 dB reading for both steps 2 and 3.

MAIN AMPLIFIER ALIGNMENT

INDICATOR	ADJUSTMENT	REMARKS
DC Voltmeter	VR601 a, b	Adjust for 0.005 V ~ 0.015 V across R623 a, b with no signal

LEVEL DIAGRAM



ALIGNMENT & CHECK POINTS

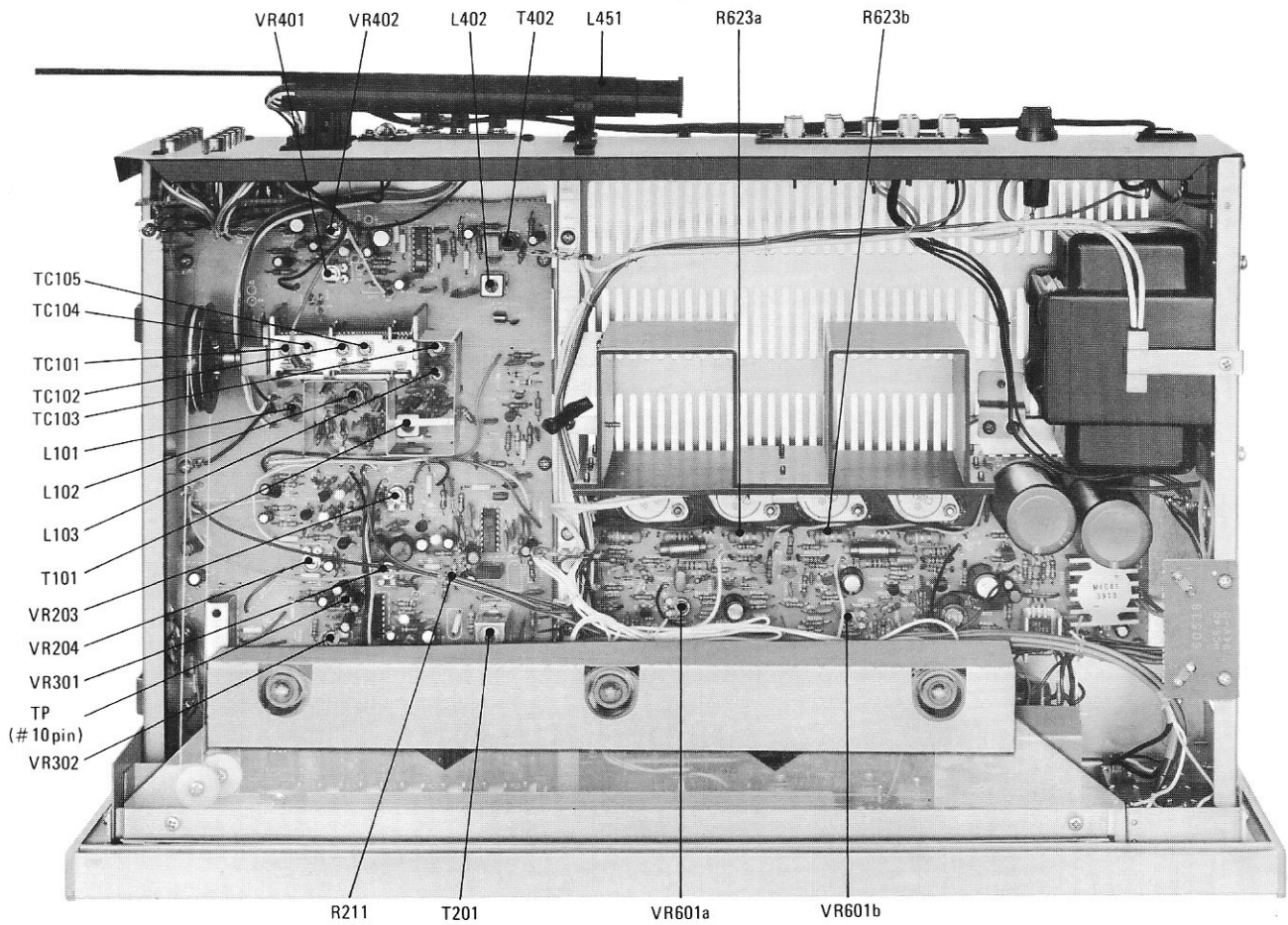
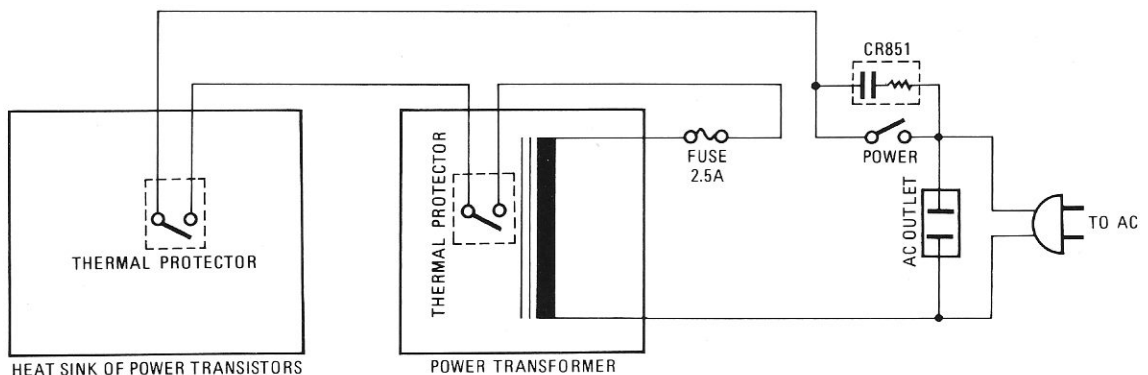


FIGURE 4

NOTE: This Receiver has two built-in over load thermal protectors for abnormal operation. When the temperature of the thermal protector (one is installed with heat sink and the other is installed with power transformer) does rise abnormally ($100 \pm 5^\circ\text{C}$), 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.



TROUBLESHOOTING

SYMPTOM	CAUSE AND REMEDY
1) Receiver not operative; pilot lamp 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) Broken power fuse 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. E) Short circuit in power transistor TR609a, b or TR610a, b Replace the defective transistor and check circuit.
3) Pilot lamp does not light.	<ul style="list-style-type: none"> A) Defective lamp(s) Replace lamp(s). B) Open in the transformer T851 tertiary winding Replace the transformer.
4) Pilot lamp lights but no sound from either channel.	<ul style="list-style-type: none"> A) Resistor R801, R807, R508, R509, R904 or R915 open Replace. B) Capacitor C507, C508, C801, C802, C807 or C808 defective Replace the defective capacitor(s). C) Diode D801 damaged Replace the diode. D) Open in secondary winding of the power transformer T851 Replace the transformer.
5) "A" Speakers do not work.	<ul style="list-style-type: none"> A) Speaker switch SW8 defective Replace the switch.
6) "B" Speakers do not work.	<ul style="list-style-type: none"> A) Speaker switch SW8 defective Replace the switch.

SYMPTOM	CAUSE AND REMEDY
7) One channel does not work with VOLUME at maximum, with a test signal applied to the center terminal of VOLUME control (VR551 or VR552) of the dead channel.	A) Defect in transistor TR901, TR902 or TR903 of Audio Amp Board 6053 Locate and correct the defect. B) Defect in transistor TR601-TR610 of Audio Amp Board 6053 Locate and correct the defect. C) Break in copper foil of printed circuit board 6053 Repair or replace circuit board. D) Short in speaker output terminal Repair the short. D) Defective resistor R903, R904, R906, R907, R914, R915, R603-R606, R609, R610, R615, R620-R627 Replace the defective resistor(s).
8) Same as 7 above but channel operates when test signal is applied as 7.	A) Defective IC IC501 Replace the IC. B) Faulty resistor R503, R504, R508 or R509 Replace the faulty resistor(s). C) Faulty capacitor C501 or C506 Replace the faulty capacitor(s). D) Defective selector switch SW1 Repair or replace the switch.
9) Speaker works normally but headphones do not work.	A) Headphone plug does not mate with jack Replace the plug. B) Defective resistor R629a, b Replace the resistor.
10) All inputs work normally except AUX input.	A) Poor contact in AUX input jack Repair or replace the jack. B) Poor contact in selector switch SW1 Repair or replace the switch.
11) PHONO input not operative.	A) Poor contact in PHONO input jack Repair or replace the jack. B) Faulty selector switch SW1 Repair or replace the switch. C) Defective IC IC501 Replace the IC.
12) TAPE OUT not operative.	A) Defective contact in TAPE OUT jack Repair or replace the jack.

SYMPTOM	CAUSE AND REMEDY
13) FM does not operate.	<p>A) Defective resistor R107, R114, R207, R316, R317 or R235. Replace the defective resistor(s).</p> <p>B) Short circuit in Tuner B+ circuit Repair the short.</p> <p>C) Poor contact in selector switch SW1 Repair or replace the switch.</p> <p>D) Defective diode D201 Replace the diode.</p> <p>E) Capacitor C301 defective Replace the capacitor.</p> <p>F) Defective transistor TR201 or IC IC201 Replace the defective component.</p> <p>G) Defective IFT T201 Replace the IFT.</p> <p>H) Defective capacitor C211 Replace the capacitor.</p> <p>I) Defective transistor TR101, TR102, TR103 or Coil L101, L102, L103 of Tuner Board 0055 Replace the defective component(s).</p> <p>J) Faulty lead-in Repair or replace the lead-in.</p>
14) Poor multiplex separation	<p>A) Improper adjustment Readjust T201, VR301 and VR302. (Refer to ALIGNMENT PROCEDURE on Page 8 & 9)</p> <p>B) Defective IC IC301 Replace the IC.</p> <p>C) Variable resistor VR301 or VR302 defective. Replace the variable resistor(s).</p>
15) Stereo indicator does not light.	<p>A) Defective LED D303 Replace the LED.</p> <p>B) Defective IC IC301 or resistor R322 of Tuner board 0055A Replace the defective component(s).</p> <p>C) Defective diode D301 Replace the diode.</p>
16) FM volume not sufficient.	<p>A) If volume of both L and R channels not enough: Front End defective, or faulty transistor TR201, IC IC201, IFT T201 or diode D203, capacitor C211 or faulty TR301, TR302, IC301 or C301 of Tuner Board 0055A Replace the defective component(s).</p> <p>B) If sound of one channel not enough: Defective L301 in case of L channel, or defective L302 in case of R channel Replace the defective coil.</p>

SYMPTOM	CAUSE AND REMEDY
17) AM does not operate.	A) Damaged IC401 or TR402 of Tuner Board 0055 Replace the damaged component(s). B) Defective L401, L404, T401 or T402 of Tuner Board 0055 Replace the defective component(s). C) Defective diode D401 or D402 of Tuner Board 0055 Replace the defective diode(s). D) One of resistors of Tuner Board 0055 defective Replace the defective part. E) One of capacitors of Tuner Board 0055 defective Replace the defective part. F) Selector switch SW1 defective Repair or replace the switch. G) Defective Tuning Gang Replace Tuning Gang. H) Damaged AM bar antenna Repair or replace the bar antenna.
18) LOUDNESS has no effect.	A) Defective LOUDNESS switch SW5 Replace the switch. B) Defective C701 or R703 Replace defective component(s). C) Defective VOLUME control VR551 or VR552 Replace.
19) STEREO-MONO not effective	A) Defective MONO switch SW4 Replace the switch.
20) TAPE MONITOR not effective	A) Defective TAPE MON switch SW3 Replace the switch. B) Poor contact in TAPE IN input jacks Repair or replace jack. C) Resistor R702 defective Replace the resistor.
21) BASS control has no effect.	A) VR902 defective Replace. B) Defective C908, C909 or R908, R910, R912 of Audio Amp Board 6053. Replace the defective component(s).
22) TREBLE control has no effect.	A) VR901 defective Replace. B) Defective C906, C907, R909, R911, R913 of Audio Amp Board 6053 Replace the defective component(s).
23) Excessive noise with PHONO input	A) Faulty IC IC501 Replace the IC. B) Faulty R501, R503, R504 or C501, C506 Replace the faulty component(s).

SYMPTOM	CAUSE AND REMEDY
24) Noisy VOLUME control	A) Defective VR551 or VR552 Replace the variable resistor. B) Defective capacitor C506, C901, C905 or C912 Replace the defective capacitor(s).
25) SIGNAL meter not functioning.	A) Defective meter Replace the meter. B) In case of FM reception, IC201, D204 or TH201 defective Replace the defective component(s). C) In case of AM reception, IC401 or VR401 defective Replace the defective component(s).
26) AUTO-MAGIC AFC has no effect when AUTO-M switch is ON. (White light behind the tuning meter does not change to red when the tuning control is touched.)	A) Transistor TR701, TR702 or IC IC701 defective Replace the defective component(s). B) Resistor R706, R715, R716 or R718 defective Replace the defective resistor(s). C) Diode D701, D702 or D852 defective Replace the defective diode(s). D) Capacitor C704 or C705 defective Replace the defective capacitor(s). E) Defective switch SW2. Replace the switch.
27) Red light does not light when the tuning control is released.	A) Defective transistor TR701 (open) or TR702 (short) Replace the defective transistor(s).
28) HI-FIL has no effect.	A) Defective switch SW6 Replace the switch. B) Defective capacitor C702 Replace the capacitor.

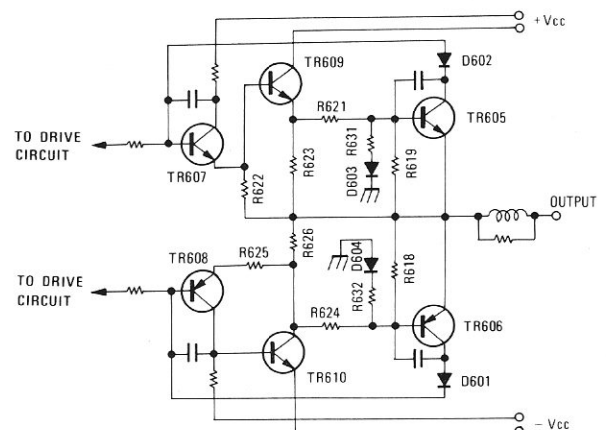
NOTE:

Transistors TR605 and TR606 protect the audio output stage when abnormally high current flows through TR609 and TR610, caused by excessive drive at input, or too low impedance load is connected at output. If increase of the current is excessive, the voltage across R623 and R626 will turn on TR605 and TR606 which are normally not biased "on".

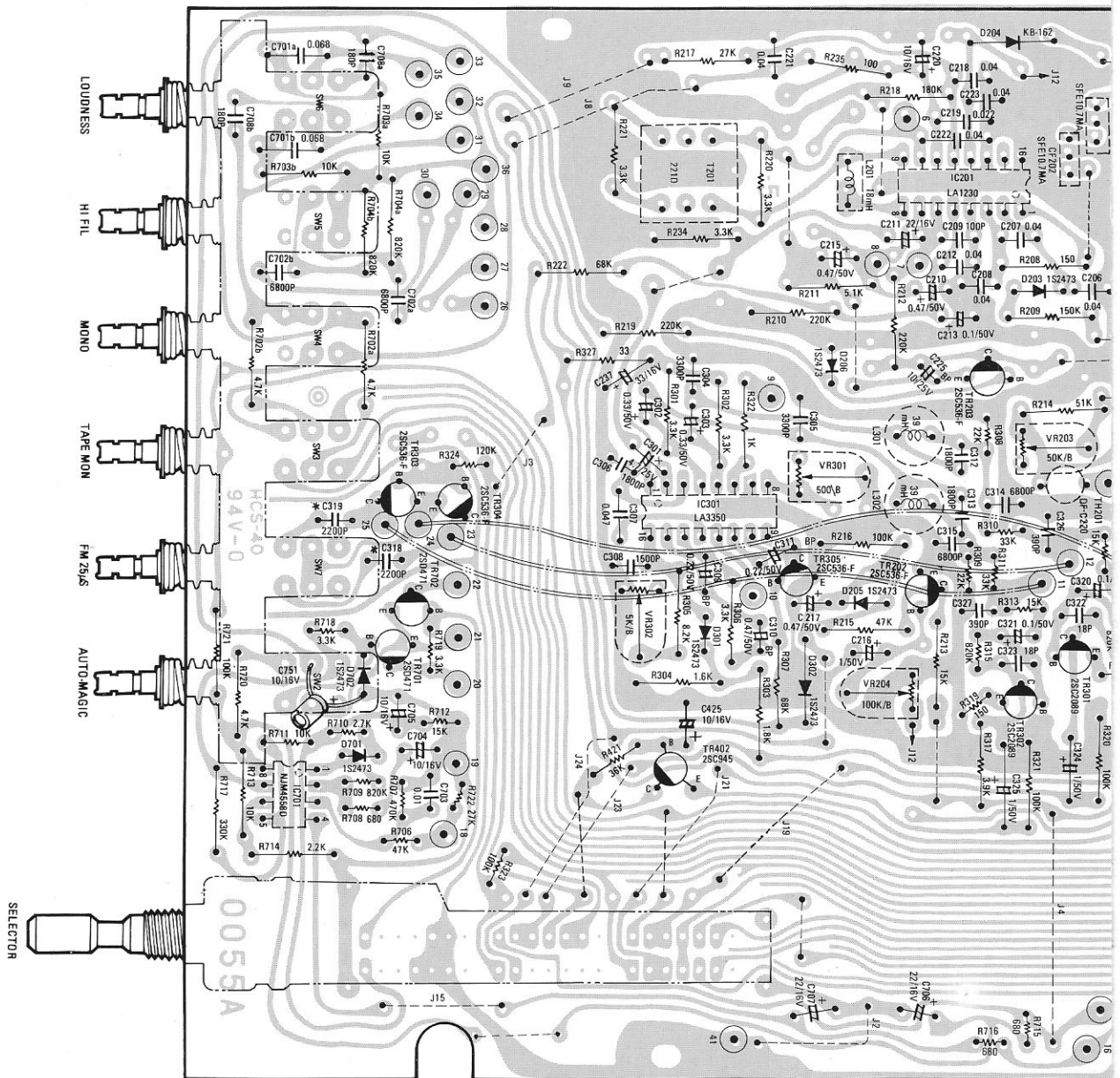
The collector potential of these transistors (through D601 and D602 diodes) reduces bias on TR607 and TR608, which causes output transistor current (TR609 and TR610) to reduce.

This performs two safety functions.

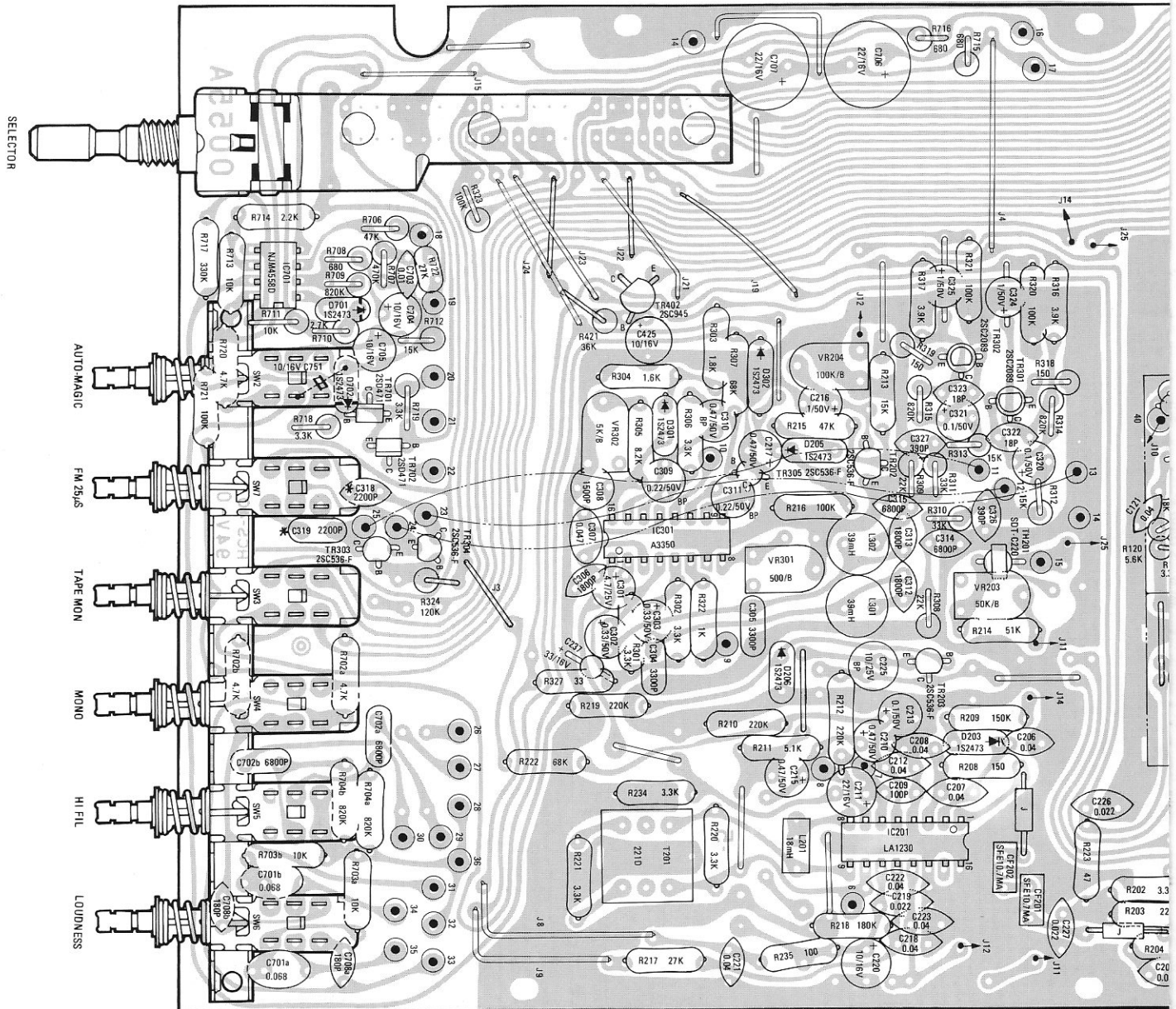
1. Protects the output circuit devices.
2. Protects the speakers from loud clicks, pops and excessive levels.



0055 TUNER BOAF

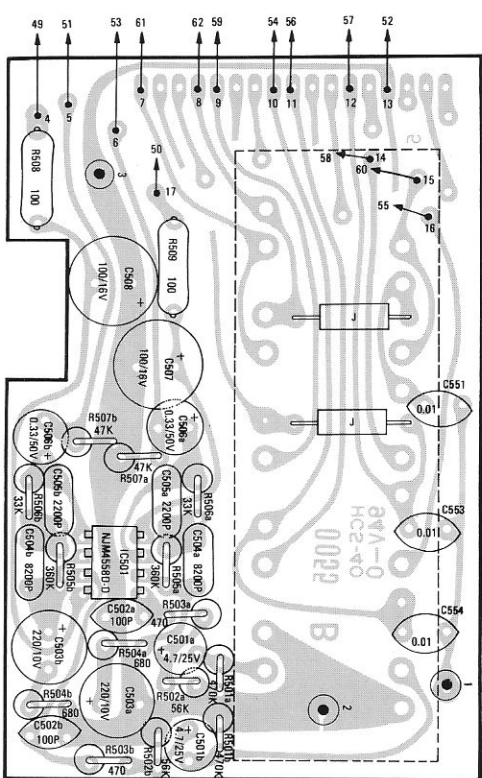
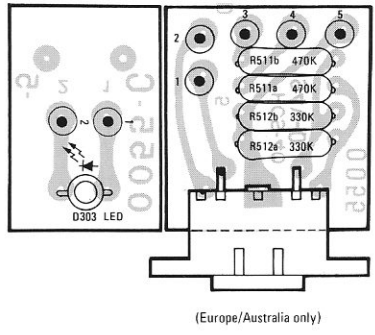
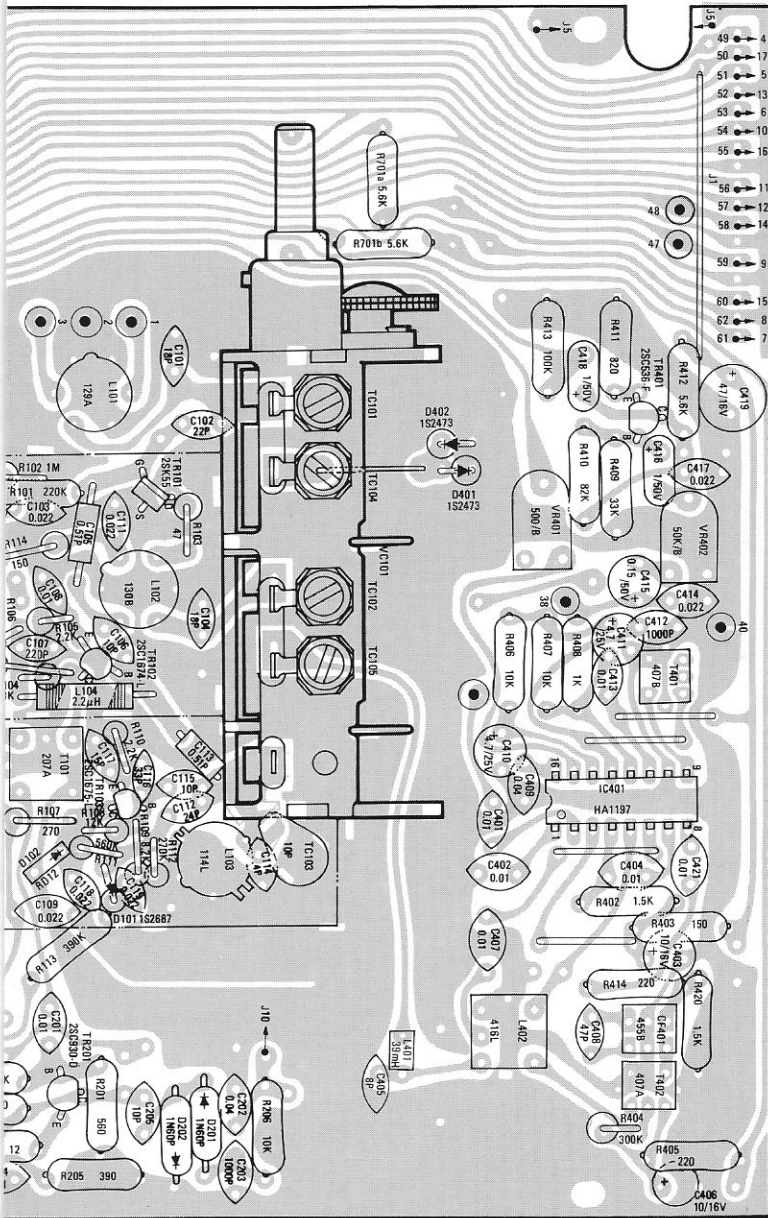


* C318/C319 1200P for European/Australian models

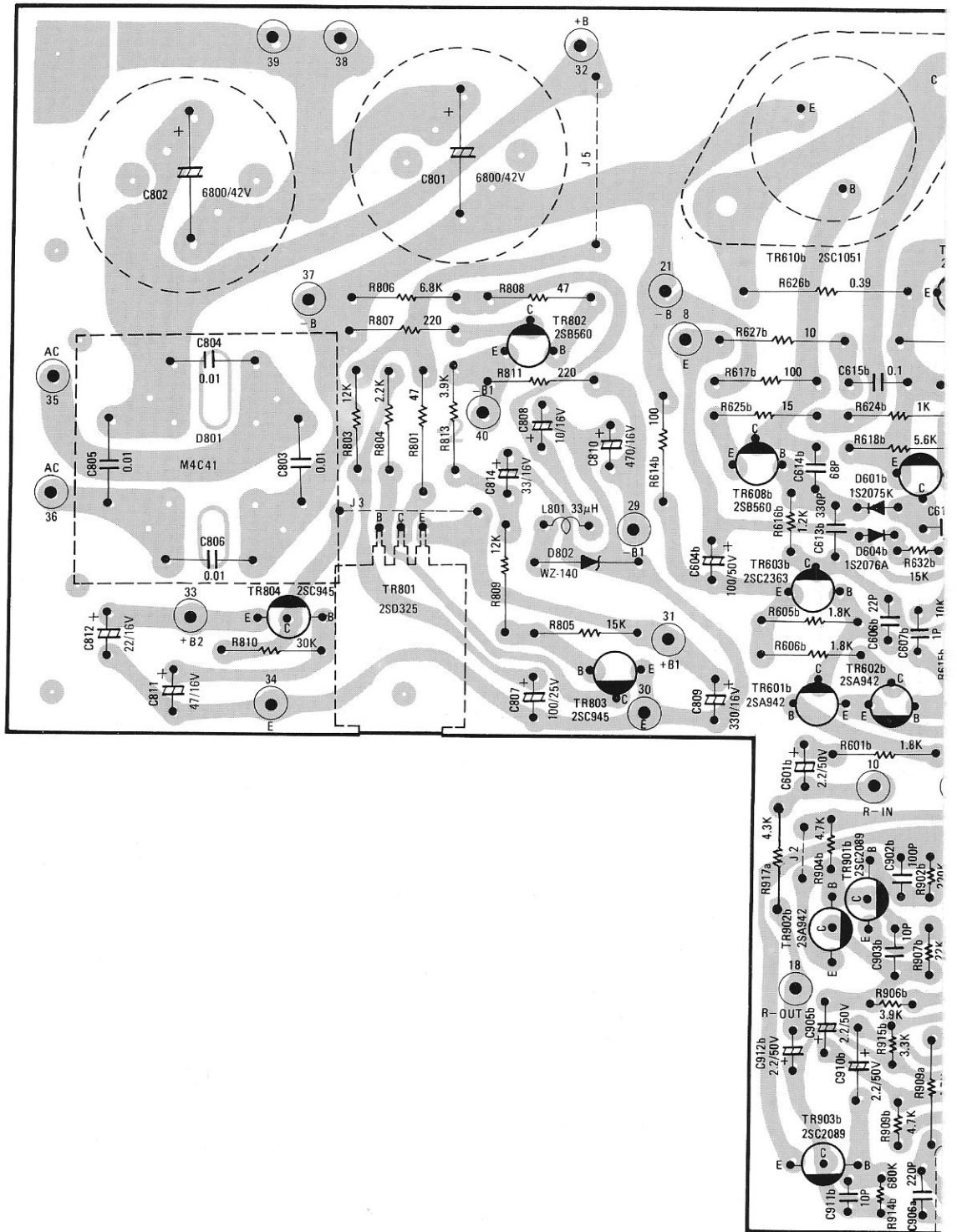


* C318/C319 1200P for European/Australian models

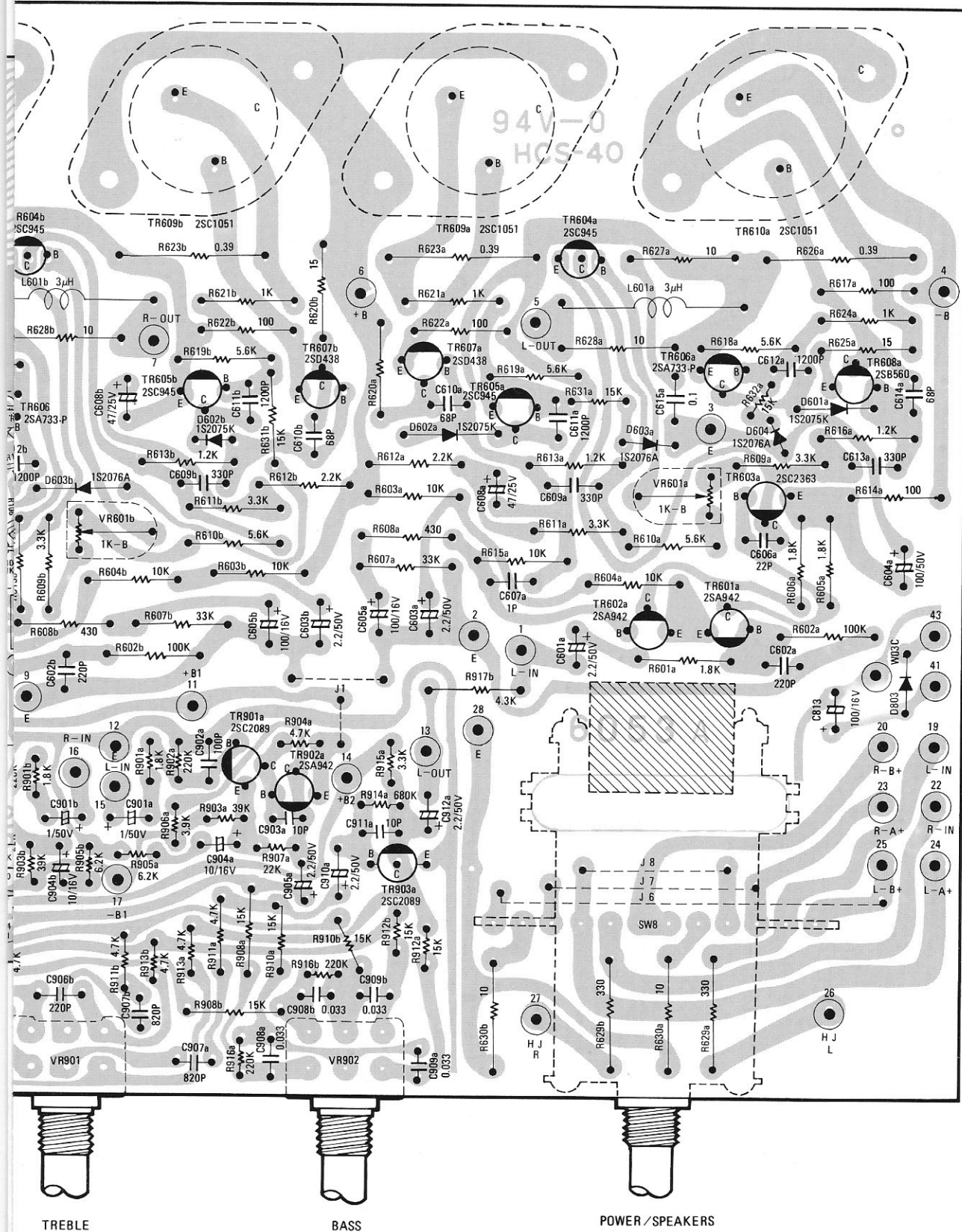
BOARD (TOP VIEW)



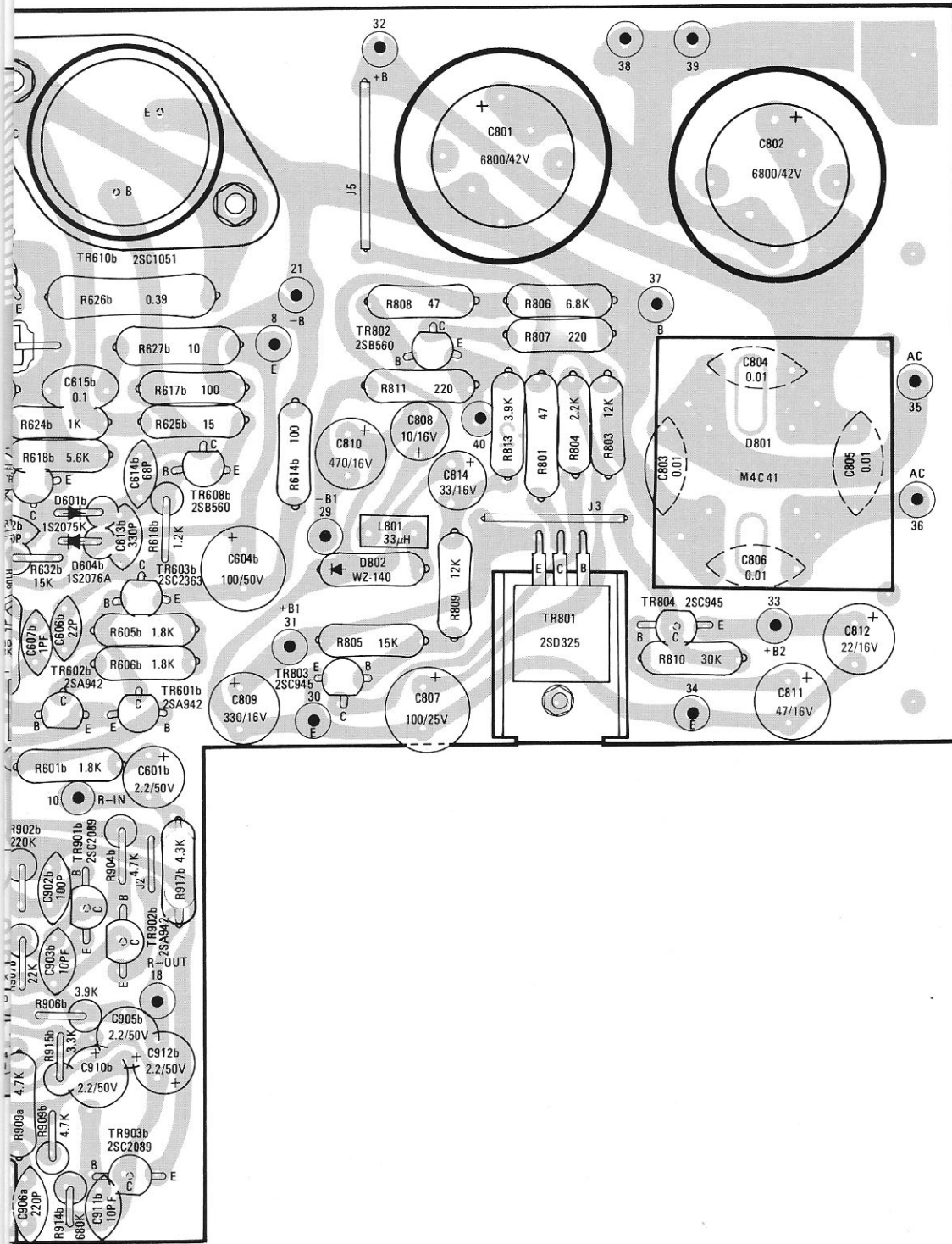
6053 AUDIO AMP BO.



BOARD (BOTTOM VIEW)



PC BOARD (TOP VIEW)



ELECTRICAL PARTS LIST

CAPACITORS						Ref. No.	Value (F)	R/S Part No.	Voltage (V)	Tolerance (%)	Material
C101	18P	CF1226	50	±10	Ceramic	C220	10μ		16	+50 -10	Electrolytic
C102	22P	CF-1250	50	±10	Ceramic	C221	0.04μ	CF-1776	25	+80 -20	Ceramic
C103	0.022μ	CF-1769	25	+80 -20	Ceramic	C222	0.04μ	CF-1776	25	+80 -20	Ceramic
C104	18P	CF-1226	50	±10	Ceramic	C223	0.04μ	CF-1776	25	+80 -20	Ceramic
C105	0.51P		500	±10	Ceramic	C224	Not Used				
C106	10P	CF-1893	50	±5	Ceramic	C225	10μ		25	±20	Electrolytic
C107	220P	CF-1425	50	±10	Ceramic	C226	0.022μ	CF-1769	25	+80 -20	Ceramic
C108	0.01μ	CF-1744	25	+80 -20	Ceramic	C227	0.022μ	CF-1769	25	+80 -20	Ceramic
C109	0.022μ	CF-1769	25	+80 -20	Ceramic	C237	33μ		16	+50 -20	Electrolytic
C111	0.022μ	CF-1769	25	+80 -20	Ceramic	C301	4.7μ		25	+75 -10	Electrolytic
C112	24P	CF-1833	50	±5	Ceramic	C302	0.33μ		50	+75 -10	Electrolytic
C113	0.51P		500	±10	Ceramic	C303	0.33μ		50	+75 -10	Electrolytic
C114	4P	CF-2013	50	±10	Ceramic	C304	3300P		50	±10	Polyester
C115	10P	CF-2011	50	±5	Ceramic	C305	3300P		50	±10	Polyester
C116	33P	CF-1310	50	±10	Ceramic	C306	1800P	CF-2046	50	±10	Ceramic
C117	15P	CF-1188	50	±5	Ceramic	C307	0.047μ		50	±10	Polyester
C118	0.022μ	CF-1769	25	+80 -20	Ceramic	C308	1500P		50	±10	Polystyrene
C119	0.022μ	CF-1769	25	+80 -20	Ceramic	C309	0.22μ		50	±20	Electrolytic
C121	0.04μ	CF-1776	25	+80 -20	Ceramic	C310	0.47μ		50	±20	Electrolytic
C201	0.01μ	CF-1774	25	+80 -20	Ceramic	C311	0.22μ		50	±20	Electrolytic
C202	0.04μ	CF-1776	25	+80 -20	Ceramic	C312	1800P	CF-2046	50	±10	Ceramic
C203	1000P	CF-1553	50	±10	Ceramic	C313	1800P	CF-2046	50	±10	Ceramic
C204	0.01μ	CF-1699	50	+80 -20	Ceramic	C314	6800P		50	±10	Ceramic
C205	10P	CF-1893	50	±5	Ceramic	C315	6800P		50	±10	Ceramic
C206	0.04μ	CF-1776	25	+80 -20	Ceramic	C316	Not Used				
C207	0.04μ	CF-1776	25	+80 -20	Ceramic	C317	Not Used				
C208	0.04μ	CF-1776	25	+80 -20	Ceramic	*C318	2200P		50	±10	Polyester
C209	100P	CF-1425	50	+10 +75	Ceramic	*C319	2200P		50	±10	Polyester
C210	0.47μ		50	-10	Electrolytic	C320	0.1μ		50	+75 -10	Electrolytic
C211	22μ		16	+50 -10	Electrolytic	C321	0.1μ		50	+75 -10	Electrolytic
C212	0.04μ	CF-1776	25	+80 -20	Ceramic	C322	18P		50	±10	Ceramic
C213	0.1μ		50	+75 -10	Electrolytic	C323	18P		50	±10	Ceramic
C214	Not Used					C324	1μ		50	+75 -10	Electrolytic
C215	0.47μ		50	+75 -10	Electrolytic	C325	1μ		50	+75 -10	Electrolytic
C216	1μ		50	+75 -10	Electrolytic	C326	390P	CF-2045	50	±10	Ceramic
C217	0.47μ		50	+75 -10	Electrolytic	C327	390P	CF-2045	50	±10	Ceramic
C218	0.04μ	CF-1776	25	+80 -20	Ceramic	C401	0.01μ	CF-1744	25	+80 -20	Ceramic
C219	0.022μ	CF-1769	25	+80 -20	Ceramic	C402	0.01μ	CF-1744	25	+80 -20	Ceramic
						C403	10μ		16	+50 -10	Electrolytic

Ref. No.	Value (F)	R/S Part No.	Voltage (V)	Tolerance (%)	Material	Ref. No.	Value (F)	R/S Part No.	Voltage (V)	Tolerance (%)	Material
C404	0.01 μ	CF-1744	25	+80 -20	Ceramic	C605a,b	100 μ		16	+50 -10	Electrolytic
C405	8P	CF-1893	50	± 5	Ceramic	C606a,b	22P	CF-1981	50	± 10	Ceramic
C406	10 μ		16	+50 -10	Electrolytic	C607a,b	1P	CF-1808	50	± 10	Ceramic
C407	0.01 μ	CF-1744	25	+80 -20	Ceramic	C608a,b	47 μ		25	+50 -10	Electrolytic
C408	47P	CF-1366	50	± 10	Ceramic	C609a,b	330P	CF-1514	50	± 10	Ceramic
C409	0.04 μ	CF-1776	25	+80 -20	Ceramic	C610a,b	68P	CF-1959	50	± 10	Ceramic
C410	4.7 μ		25	+75 -10	Electrolytic	C611a,b	1200P	CF-1582	50	± 10	Ceramic
C411	4.7 μ		25	+75 -10	Electrolytic	C612a,b	1200P	CF-1582	50	± 10	Ceramic
C412	0.001 μ		25	± 10	Ceramic	C613a,b	330P	CF-1514	50	± 10	Ceramic
C413	0.01 μ	CF-1744	25	+80 -20	Ceramic	C614a,b	68P	CF-1959	50	± 10	Ceramic
C414	0.022 μ	CF-1769	25	+80 -20	Ceramic	C615a,b	0.1 μ		50	± 10	Polyester
C415	0.15 μ		50	+75 -10	Electrolytic	C701a,b	0.068 μ		50	± 10	Polyester
C416	1 μ		50	+75 -10	Electrolytic	C702a,b	6800P		50	± 10	Polyester
C417	0.02 μ		50	± 10	Polyester	C703	0.01 μ	CF-1744	25	+80 -20	Ceramic
C418	1 μ		50	+75 -10	Electrolytic	C704	10 μ		16	+50 -10	Electrolytic
C419	47 μ		16	+50 -10	Electrolytic	C705	10 μ		16	+50 -10	Electrolytic
C420	Not Used					C706	22 μ		16	+50 -10	Electrolytic
C421	0.01 μ	CF-1744	25	+80 -20	Ceramic	C707	22 μ		16	+50 -10	Electrolytic
C425	33 μ		16	+50 -10	Electrolytic	C708a,b	180P	CF-1470	50	± 10	Ceramic
C451	0.04 μ	CF-1776	25	+80 -20	Ceramic	C751	10 μ		16	+50 -10	Electrolytic
C452	0.022 μ	CF-1744	25	+80 -20	Ceramic	C801	6800 μ		42	+50 -10	Electrolytic
C501a,b	4.7 μ		25	+75 -10	Electrolytic	C802	6800 μ		42	+50 -10	Electrolytic
C502a,b	100P	CF-1425	50	± 10	Ceramic	C803	0.01 μ	CF-1811	500	+100 -0	Ceramic
C503a,b	220 μ		6.3	+50 -10	Electrolytic	C804	0.01 μ	CF-1811	500	+100 -0	Ceramic
C504a,b	8200P		50	± 10	Polyester	C805	0.01 μ	CF-1811	500	+100 -0	Ceramic
C505a,b	2200P		50	± 10	Polyester	C806	0.01 μ	CF-1811	500	+100 -0	Ceramic
C506a,b	0.33 μ		50	+75 -10	Electrolytic	C807	100 μ		25	+50 -10	Electrolytic
C507	100 μ		16	+50 -10	Electrolytic	C808	10 μ		16	+50 -10	Electrolytic
C508	100 μ		16	+50 -10	Electrolytic	C809	330 μ		16	+50 -10	Electrolytic
C551	0.01 μ	CF-1744	25	+80 -20	Ceramic	C810	470 μ		16	+50 -10	Electrolytic
C552	0.04 μ	CF-1776	25	+80 -20	Ceramic	C811	47 μ		16	+50 -10	Electrolytic
C553	0.01 μ	CF-1744	25	+80 -20	Ceramic	C812	22 μ		16	+50 -10	Electrolytic
C554	0.01 μ	CF-1744	25	+80 -20	Ceramic	C813	100 μ		16	+50 -10	Electrolytic
C555	0.04 μ	CF-1776	25	+80 -20	Ceramic	C814	33 μ		16	+50 -10	Electrolytic
C601a,b	2.2 μ		50	+75 -10	Electrolytic	*C851	0.022 μ		250	± 20	Polyester
C602a,b	220P	CF-1490	50	± 10	Ceramic	*C852	0.022 μ		250	± 20	Polyester
C603a,b	2.2 μ		50	+75 -10	Electrolytic	C901a,b	1 μ		50	+75 -10	Electrolytic
C604a,b	100 μ		50	+50 -10	Electrolytic	C902a,b	100P	CF-1425	50	± 10	Ceramic
						C903a,b	10P	CF-1177	50	± 10	Ceramic
						C904a,b	10 μ		16	+50 -10	Electrolytic

Ref. No.	Value (F)	R/S Part No.	Voltage (V)	Tolerance (%)	Material
C905a,b	2.2 μ		50	+75 -10	Electrolytic
C906a,b	220P	CF-1490	50	\pm 10	Ceramic
C907a,b	820P	CF-2047	50	\pm 10	Ceramic
C908a,b	0.033 μ		50	\pm 10	Polyester
C909a,b	0.033 μ		50	\pm 10	Polyester
C910a,b	2.2 μ		50	+75 -10	Electrolytic
C911a,b	10P	CF-1177	50	\pm 10	Ceramic
C912a,b	2.2 μ		50	+75 -10	Electrolytic
C951a,b	1000P		50	\pm 10	Polyester

CERAMIC FILTERS

Ref. No.	Description	R/S Part No.	Mfr's Part No.
CF201	FM SFE10.7MA	C-0546	35300012
CF202	FM SFE10.7MA	C-0546	35300012
CF401	AM CFT455B	C-0869	35300023

COILS & TRANSFORMERS

Ref. No.	Description	R/S Part No.	Mfr's Part No.
L101	FM Ant. Coil 129A	CA-3865	35501291
L102	FM RF Coil 130B	CA-4909	35501302
L103	FM OSC Coil 114L	CA-4565	35501146
L104	Choke Coil 2.2 μ H	CB-2376	35102228
L201	Inductor 18mH		35109180
L301	Choke Coil 39mH	CB-2449	35117393
L302	Choke Coil 39mH	CB-2449	35117393
L401	Choke Coil 0.8 μ H	CB-2448	35199002
L402	AM OSC Coil 416L	CA-4910	35504166
L451	AM Bar Ant. Coil	CA-0293	35400491
L601a,b	Choke Coil 3 μ H	CB-2396	35199005
L801	Choke Coil 33 μ H	CB-2397	35105330
T101	FM IFT 207A	CA-7830	35702071
T201	FM IFT 221D	CA-7831	35072214
T401	AM IFT 407B	CA-7835	35704072
T402	AM IFT 407A	CA-7834	35704071
T851	Power Transformer (UL)	TA-0654	35900250
T851	Power Transformer (CSA)		35900317
T851	Power Transformer (Europe)		35900311
T851	Power Transformer (Australia)		35900312

CR COMPONENT

Ref. No.	Description	R/S Part No.	Mfr's Part No.
CR851	Spark Killer (UL)	C-0981	43000020
CR851	Spark Killer (CSA)		43000017
Not used for European and Australian models.			

DIODES

Ref. No.	Type No.	R/S Part No.	Mfr's Part No.	Manufacturer
D101	1S2687	DX-0302	30600560	JRC
D102	RD12E	DX-0403	30600650	NEC
D201	1N60P	DX-0162	30600011	UNISON
D202	1N60P	DX-0162	30600011	UNISON
D203	1S2473	DX-0299	30600410	Toyo Electronics
D204	Not Used			
D205	1S2473	DX-0299	30600410	Toyo Electronics
D206	1S2473	DX-0299	30600410	Toyo Electronics
D301	1S2473	DX-0299	30600410	Toyo Electronics
D302	1S2473	DX-0299	30600410	Toyo Electronics
D303	LD64R	L-0858	30600961	Toyo Electronics
D401	1S2473	DX-0299	30600410	Toyo Electronics
D402	1S2473	DX-0299	30600410	Toyo Electronics
D601a,b	1S2075K	DX-1118	30601001	Toyo Electronics
D602a,b	1S2075K	DX-1118	30601001	Toyo Electronics
D603a,b	1S2076A	DX-1056	30601271	Toyo Electronics
D604a,b	1S2076A	DX-1056	30601271	Toyo Electronics
D701	1S2473	DX-0299	30600410	Toyo Electronics
D702	1S2473	DX-0299	30600410	Toyo Electronics
D801	M4C41	DX-1122	30601231	Hitachi
D802	WZ-140	DX-0713	30600911	JRC
D803	W03C	DX-0526	30600871	Hitachi
D851	Not Used			
D852	S1VB-10		30601061	Shindengen

INTEGRATED CIRCUITS

Ref. No.	Type No.	R/S Part No.	Part No.	Manufacturer
IC201	LA1230	MX-3210	30900380	Sanyo
IC301	A3350	MX-3215	30900310	Sanyo
IC401	HA1197	MX-3467	30900400	Hitachi
IC501	NJM4558D-D	MX-3449	30900363	JRC
IC701	NJM4558D	MX-3835	30900361	JRC

LAMPS

Ref. No.	Description	R/S Part No.	Mfr's Part No.
PL1	Meter Lamp 8V, 250mA		37008019
PL2	Meter Lamp 8V, 250mA		37008019
PL3	Dial Lamp 8V, 300mA	L-0718	37008041
PL4	Dial Lamp 8V, 300mA	L-0718	37008041
PL5	Dial Lamp 8V, 300mA	L-0718	37008041

METER

Ref. No.	Description	R/S Part No.	Mfr's Part No.
M1	TUNING 250 μ A	M-0423	60250015

P.C.BOARDS (ASSEMBLED)

Ref. No.	Description	R/S Part No.	Mfr's Part No.
0055A	Tuner	X-8117	97005510A
0055B	Pre-Amplifier		97005510B
6053A	Audio & Power Supply	X-8118	97605310A
6053B	Fuse		97605310B
7192	Meter Lamp	X-8119	97719210

RESISTORS

Ref. No.	Value (Ω)	R/S Part No.	Wattage (W)	Tolerance (%)	Material
R101	220K		1/4	± 5	Carbon
R102	1M		1/4	± 5	Carbon
R103	47		1/4	± 5	Carbon
R104	3.3K		1/4	± 5	Carbon
R105	2.2K		1/4	± 5	Carbon
R106	18K		1/4	± 5	Carbon
R107	270		1/4	± 5	Carbon
R108	12K		1/4	± 5	Carbon
R109	8.2K		1/4	± 5	Carbon
R110	2.2K		1/4	± 5	Carbon
R111	560K		1/4	± 5	Carbon
R112	270K		1/4	± 5	Carbon
R113	390K		1/4	± 5	Carbon
R114	150		1/4	± 5	Carbon
R120	5.6K		1/4	± 5	Carbon
R201	560		1/4	± 5	Carbon
R202	3.3K		1/4	± 5	Carbon
R203	330		1/4	± 5	Carbon
R204	12		1/4	± 5	Carbon
R205	390		1/4	± 5	Carbon
R206	10K		1/4	± 5	Carbon
R207	Not Used				
R208	150		1/4	± 5	Carbon
R209	150K		1/4	± 5	Carbon
R210	220K		1/4	± 5	Carbon
R211	5.1K		1/4	± 5	Carbon
R212	220K		1/4	± 5	Carbon
R213	15K		1/4	± 5	Carbon
R214	51K		1/4	± 5	Carbon
R215	47K		1/4	± 5	Carbon
R216	100K		1/4	± 5	Carbon
R217	27K		1/4	± 5	Carbon
R218	180K		1/4	± 5	Carbon
R219	220K		1/4	± 5	Carbon
R220	3.3K		1/4	± 5	Carbon
R221	3.3K		1/4	± 5	Carbon
R222	68K		1/4	± 5	Carbon
R223	47		1/4	± 5	Carbon
R224	Not Used				
R225	Not Used				
R226	Not Used				
R227	Not Used				
R228	Not Used				
R229	Not Used				
R230	Not Used				
R231	Not Used				
R232	Not Used				
R233	Not Used				
R234	3.3K		1/4	± 5	Carbon
R235	100		1/4	± 5	Carbon

Ref. No.	Value (Ω)	R/S Part No.	Wattage (W)	Tolerance (%)	Material	Ref. No.	Value (Ω)	R/S Part No.	Wattage (W)	Tolerance (%)	Material
R301	3.9K		1/4	±5	Carbon	*R511a,b	470K		1/4	±5	Carbon
R302	3.9K		1/4	±5	Carbon	*R512a,b	330K		1/4	±5	Carbon
R303	1.8K		1/4	±5	Carbon						
R304	1.6K		1/4	±5	Carbon	R601a,b	1.8K		1/4	±5	Carbon
R305	8.2K		1/4	±5	Carbon	R602a,b	100K		1/4	±5	Carbon
R306	3.3K		1/4	±5	Carbon	R603a,b	10K		1/4	±5	Carbon
R307	68K		1/4	±5	Carbon	R604a,b	10K		1/4	±5	Carbon
R308	22K		1/4	±5	Carbon	R605a,b	1.8K		1/4	±5	Carbon
R309	22K		1/4	±5	Carbon	R606a,b	1.8K		1/4	±5	Carbon
R310	33K		1/4	±5	Carbon	R607a,b	33K		1/4	±5	Carbon
R311	33K		1/4	±5	Carbon	R608a,b	430		1/4	±5	Carbon
R312	15K		1/4	±5	Carbon	R609a,b	3.3K		1/4	±5	Carbon
R313	15K		1/4	±5	Carbon	R610a,b	5.6K		1/4	±5	Carbon
R314	820K		1/4	±5	Carbon	R611a,b	3.3K		1/4	±5	Carbon
R315	820K		1/4	±5	Carbon	R612a,b	2.2K		1/4	±5	Carbon
R316	3.9K		1/4	±5	Carbon	R613a,b	1.2K		1/4	±5	Carbon
R317	3.9K		1/4	±5	Carbon	R614a,b	100	RX-0104	1/4	±5	Carbon
R318	150		1/4	±5	Carbon	R615a,b	10K		1/4	±5	Carbon
R319	150		1/4	±5	Carbon	R616a,b	1.2K		1/4	±5	Carbon
R320	100K		1/4	±5	Carbon	R617a,b	100	RX-0104	1/4	±5	Carbon
R321	100K		1/4	±5	Carbon	R618a,b	5.6K		1/4	±5	Carbon
R322	1K		1/4	±5	Carbon	R619a,b	5.6K		1/4	±5	Carbon
R323	100K		1/4	±5	Carbon	R620a,b	15	RX-0112	1/4	±5	Carbon
R324	120K		1/4	±5	Carbon	R621a,b	1K		1/4	±5	Carbon
R325	Not Used					R622a,b	100	RX-0104	1/4	±5	Carbon
R326	Not Used					R623a,b	0.39		2	±10	Carbon
R327	33		1/4	±5	Carbon	R624a,b	1K		1/4	±5	Carbon
R401	Not Used					R625a,b	15	RX-0112	1/4	±5	Carbon
R402	1.5K		1/4	±5	Carbon	R626a,b	0.39		2	±5	Metal Oxide
R403	150		1/4	±5	Carbon	R627a,b	10		1	±5	Metal Oxide
R404	300K		1/4	±5	Carbon	R628a,b	10		1	±5	Metal Oxide
R405	220		1/4	±5	Carbon	R629a,b	330		1	±5	Metal Oxide
R406	10K		1/4	±5	Carbon	R630a,b	10		1	±5	Metal Oxide
R407	10K		1/4	±5	Carbon	R631a,b	15K		1/4	±5	Carbon
R408	1K		1/4	±5	Carbon	R632a,b	15K		1/4	±5	Carbon
R409	33K		1/4	±5	Carbon	R701a,b	5.6K		1/4	±5	Carbon
R410	82K		1/4	±5	Carbon	R702a,b	4.7K		1/4	±5	Carbon
R411	820		1/4	±5	Carbon	R703a,b	10K		1/4	±5	Carbon
R412	5.6K		1/4	±5	Carbon	R704a,b	820K		1/4	±5	Carbon
R413	100K		1/4	±5	Carbon	R705a,b	Not Used				
R414	220		1/4	±5	Carbon	R706	47K		1/4	±5	Carbon
R420	1.5K		1/4	±5	Carbon	R707	470K		1/4	±5	Carbon
R421	36K		1/4	±5	Carbon	R708	680		1/4	±5	Carbon
R501a,b	470K		1/4	±5	Carbon	R709	820K		1/4	±5	Carbon
R502a,b	56K		1/4	±5	Carbon	R710	2.7K		1/4	±5	Carbon
R503a,b	470		1/4	±5	Carbon	R711	10K		1/4	±5	Carbon
R504a,b	680		1/4	±5	Carbon	R712	15K		1/4	±5	Carbon
R505a,b	360K		1/4	±5	Carbon	R713	10K		1/4	±5	Carbon
R506a,b	33K		1/4	±5	Carbon	R714	2.2K		1/4	±5	Carbon
R507a,b	47K		1/4	±5	Carbon	R715	680		1/4	±5	Carbon
R508	100	RX-0104	1/4	±5	Carbon	R716	680		1/4	±5	Carbon
R509	100	RX-0104	1/4	±5	Carbon	R717	330K		1/4	±5	Carbon
						R718	3.3K		1/4	±5	Carbon

*For European and Australian models only.

Ref. No.	Value (Ω)	R/S Part No.	Wattage (W)	Tolerance (%)	Material
R719	3.3K		1/4	±5	Carbon
R720	4.7K		1/4	±5	Carbon
R721	100K		1/4	±5	Carbon
R722	27K		1/4	±5	Carbon
R801	47		1	±5	Metal Oxide
R802	Not Used				
R803	12K		1/4	±5	Carbon
R804	2.2K		1/4	±5	Carbon
R805	15K		1/4	±5	Carbon
R806	6.8K		1/4	±5	Carbon
R807	220	RX-0102	1/4	±5	Carbon
R808	47		1/4	±5	Carbon
R809	12K		1/4	±5	Carbon
R810	30K		1/4	±5	Carbon
R811	220		1/4	±5	Carbon
R812	Not Used				
R813	3.9K		1/4	±5	Carbon
R851	2.2M		1/2	±10	Solid
R901a,b	1.8K		1/4	±5	Carbon
R902a,b	220K		1/4	±5	Carbon
R903a,b	39K		1/4	±5	Carbon
R904a,b	4.7K		1/4	±5	Carbon
R905a,b	6.2K		1/4	±5	Carbon
R906a,b	3.9K		1/4	±5	Carbon
R907a,b	22K		1/4	±5	Carbon
R908a,b	15K		1/4	±5	Carbon
R909a,b	4.7K		1/4	±5	Carbon
R910a,b	15K		1/4	±5	Carbon
R911a,b	4.7K		1/4	±5	Carbon
R912a,b	15K		1/4	±5	Carbon
R913a,b	4.7K		1/4	±5	Carbon
R914a,b	680K		1/4	±5	Carbon
R915a,b	3.3K		1/4	±5	Carbon
R916a,b	220K		1/4	±5	Carbon
R917a,b	4.3K		1/4	±5	Carbon

SWITCHES			
Ref. No.	Description	R/S Part No.	Mfr's Part No.
SW1a-f	SELECTOR	S-1296	27100145
SW2	AUTO-M	S-1297	27200096
SW3	TAPE MON	S-1297	27200096
SW4	MONO	S-1297	27200096
SW5	LOUDNESS	S-1297	27200096
SW6	HI-FIL	S-1297	27200096
SW7	FM 25μS	S-1297	27200096
SW8a,b	SPEAKERS (Include Power SW)	S-0804	27100146
SW9	Thermal Switch 100°C	S-0945	30700300
SW10	POWER (UL, CSA)		27100146
SW10	POWER (Europe/Australia)		27100162
SW11	Thermal Switch 100°C	S-0945	30700300

THERMISTOR			
Ref. No.	Description	R/S Part No.	Mfr's Part No.
TH201	TD5-C220	T-1213	30700120

TRANSISTORS

Ref. No.	Type No.	Manufacturer	Mfr's Part No.	Substitute	
				Type No.	Manufacturer
TR101	2SK55	Hitachi	30400131	2SK19	Toshiba
TR102	2SC1674-L	NEC	30201111	2SC1906	Hitachi
TR103	2SC1675-L	NEC	30201121	2SC1432	Hitachi
TR201	2SC930-D	Sanyo	30200271	2SC929	Sanyo
TR202	2SC536-F	Sanyo	30200131	2SC945	NEC
TR203	2SC536-F	Sanyo	30200131	2SC1815	Toshiba
TR301	2SC2089BL	Toshiba	30201132	2SC2240	Toshiba
TR302	2SC2089BL	Toshiba	30201132	2SC2240	Toshiba
TR303	2SC536-F	Sanyo	30200131	2SC1815	Toshiba
TR304	2SC536-F	Sanyo	30200131	2SC1815	Toshiba
TR305	2SC536-F	Sanyo	30200131	2SC1815	Toshiba
TR401	2SC536-F	Sanyo	30200131	2SC1815	Toshiba
TR402	2SC945	NEC	30201031	2SC536	Sanyo
TR601a,b	2SA942	Toshiba	30000622	2SA970	Toshiba
TR602a,b	2SA942	Toshiba	30000622	2SA970	Toshiba
TR603a,b	2SC2363	Sanyo	30201445	2SC1951	Sony
TR604a,b	2SC945	NEC	30201031	2SC536	Sanyo
TR605a,b	2SC945	NEC	30201031	2SC536	Sanyo
TR606a,b	2SA733-P	NEC	30000425	2SA844	Hitachi
TR607a,b	2SD438	Sanyo	30300250	2SD600	Sanyo
TR608a,b	2SB560	Sanyo	30100041	2SB631	Sanyo
TR609a,b	2SC1051L	Sanyo	30200982	2SD631	Hitachi
TR610a,b	2SC1051L	Sanyo	30200982	2SD631	Hitachi
TR701	2SD471	NEC	30300280	2SC1384	Matsushita
TR702	2SD471	NEC	30300280	2SC1384	Matsushita
TR801	2SD325	Sanyo	30300151	2SD330	Sanyo
TR802	2SB560	Sanyo	30100041	2SB631	Sanyo
TR803	2SC945	NEC	30201031	2SC536	Sanyo
TR804	2SC945	NEC	30201031	2SC536	Sanyo
TR901a,b	2SC2089	Toshiba	30201161	2SC2240	Toshiba
TR902a,b	2SA942	Toshiba	30000451	2SA970	Toshiba
TR903a,b	2SC2089	Toshiba	30201161	2SC2240	Toshiba

VARIABLE CAPACITORS			
Ref. No.	Description	R/S Part No.	Mfr's Part No.
TC103 VC101	Trimmer ECV-1ZW10P31 Tuning Capacitor (with trimmers TC101, TC102, TC104 and TC105)	C-0424 C-4547	26010023 26250101

VARIABLE RESISTORS			
Ref. No.	Description	R/S Part No.	Mfr's Part No.
VR203	FM Meter Sensitivity 50 k Ω /B	P-0880	28101503
VR204	Auto-Stereo & Muting Level Control 100 k Ω /B	P-0879	28101104
VR301	MPX Separation 500 Ω /B	P-0881	28101501
VR302	PLL VCO Adjust 5k Ω /B	P-0840	28101502
VR401	AM Meter Sensitivity 500 Ω /B	P-0839	28101501
VR402	AM Output Level Control 50 k Ω /B		28101503
VR551	VOLUME Control 200 k Ω /B	P-1847	28200027
VR552	VOLUME Control 200 k Ω /B	P-1847	28200027
VR601a,b	Bias Adjust 1 k Ω /B	P-0839	28101102
VR901a,b	TREBLE Control 100 k Ω /B	P-4016	28000143
VR902a,b	BASS Control 100 k Ω /B	P-4016	28000143

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	Jumper Wire JPW03		92000001	51	Knob for SELECTOR, BASS, TREBLE and POWER/ SPEAKERS	K-3497	29342001
2	10P Pin Jack	J-0927	33100500	52	Push Switch Knob	K-3498	29343001
3	Shield Plate (Smaller)	RT-1335	09078001	53	Slide VOLUME Knob (Right)	K-3499	29344001
4	Shield Plate (Larger)		09098001	54	Wooden Cabinet	Z-4773	85086001
5	Fuseholder FH002	F-1017	34032001	55	Bottom Plate	Z-3869	05052001
6	AC Outlet IR10	J-6376	34048001	56	Plastic Foot	F-0183	74074001
7	AC Cord Strain Relief SR4P-4		74089001	57	Plastic Washer		84092001
8	AC Cord with Plug (UL)		62110054	58	Screw M4x15		40640155
9	Ground Terminal X-PO701	HB-0953	53012300	59	Screw M5x15		40350151
10	Flat Washer 3x10x0.8		42100008	60	Fiber Plate		74144001
11	10P Screw Terminal	J-4430	53100240	61	Spring Washer M4		42250441
12	Fuse ST-6 2.5A 125A (UL)	HF-0021	38337125	62	Flat Washer M4		42120421
13	Nut M3 for GND Terminal		41113070	63	Screw M3x12 tite C		40730121
14	Spring Washer M3		42250341	64	Wire Wrap Pin 13mm		19044001
15	Line Cord Antenna	H-3533	63101001	65	Screw M3x8 Tapping		40630085
16	Fiber for Line Cord Antenna	H-1901	75017003	66	Screw 3x8		40000120
17	Bar Antenna		35400491	67	Back Panel	Z-4771	11785A51
18	Bar Antenna Holder	A-4413	84290001	68	Lug Terminal 1P1LIP		51025002
19	Earth Lug		51036001	69	Ground Lug		63408001
20	Plastic Rivet 2.5		84246001	70	Wire Bundler		63075001
21	Antenna Terminal	J-4533	53032500	71	Dial Scale	D-5355	20118001
22	Front Chassis		03075002	72	Dial Drum	D-0342	21008003
23	Side Chassis (Left)		04036001	73	Pan Screw M3x10		40130101
24	Headphone Jack	J-0928	33031700	74	Pan Screw M3x6		40330061
25	Pulley Shaft 15mm	RT-1224	24001002	75	Dial Lamp Acryl Plate	HB-7585	71039002
26	Pulley Shaft 6mm	HB-5101	24003001	76	Ferrite Bead	HB-4474	32000001
27	Plastic Pulley	D-0250	84085001	77	Slide VOLUME Knob (Left)	K-3500	29345001
28	Fiber Washer		75048001	78	Mylar Sheet for Dial Pointer		84276001
29	Shield Plate for Tuning Shaft	HB-0963	75047001	79	Fit Metal for Thermal Protector SW11		63432001
30	Tuning Shaft Assembly	D-3245	23053001	80	Light Shield Fiber for Meter Fuse 250V 1.25A (Europe/Australia)	HB-5132	73218001 38444212
31	Side Chassis (Right)		04035001		Fuseholder (Europe/Australia)		34065001
32	Center Chassis		01096001		AC Cord with Plug (Europe)		62110039
33	Metal Fitting for Heat Sink	HB-7211	63368001		AC Cord with Plug (Australia)		62010013
34	Mounting Bracket for P.C.B.	HB-7210	63369001		Fuseholder N3 (CSA)		34069001
35	Power Transformer		35900250		5 Pin DIN Jack (Europe/Australia)		34074001
36	Meter Light Reflector Case	HB-7209	08057002	81	Light Shield Fiber		73274001
37	Meter Filter (Red)	HB-5120	74122001		AC Cord with Plug (CSA)		62110042
38	Tuning Meter 250 μ A		60250015		Wired-in Fuse 3A, 125V (UL)		38354130
39	Dial Pointer	D-1275	25054002		Wired-in Fuse 3A, 125V (CSA)		38124130
40	Spring Coil for Dial Drum	RB-5314	19045001				
41	Angle Bracket for P.C.B.	HH-0324	63386001				
42	Heat Sink	HH-0257	15090001				
43	Heat Sink Plate	HH-0258	15091001				
44	Metal Fitting for Thermal Protector	HB-7611	63359002				
45	Spring for Meter	HB-0958	19041002				
46	Light Shield Plate (Right)	HB-8616	73268001				
47	Light Shield Plate (Left)	HB-8617	73269001				
48	Insulation Fiber		75057001				
49	Front Panel Assembly	Z-4772	10785A03				
50	Tuning Knob	K-3496	29341001				

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