TOSHIBA

STEREO RADIO CASSETTE RECORDER

RT-7027

SPECIFICATIONS

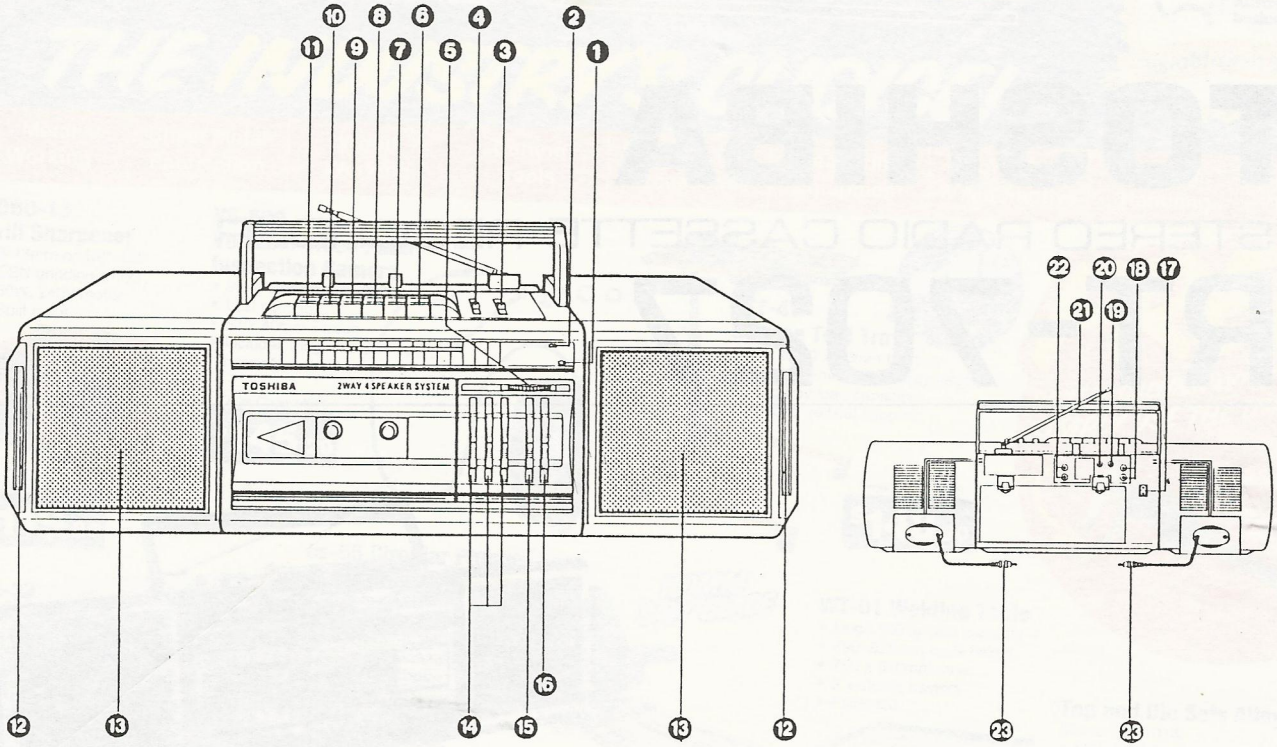
Cassette Tape Used:	Normal: C-30, C-60, C-90
Tape Speed:	4.8 cm/sec
Track System:	Four-track two-channel stereophonic
Recording System:	AC bias
Erasing System:	Magnet erasing
Frequency Response:	60 Hz to 12 kHz
Receiving Frequency:	FM: 87.5 MHz to 108 MHz AM: 526.5 kHz to 1606.5 kHz
Intermediate Frequency:	FM: 10.7 MHz AM: 455 kHz
Antenna:	FM: telescopic antenna AM: ferrite-core antenna
Speakers:	100 mm (dia) dynamic x 2 15 mm (dia) piezo-electric type x 2
Jacks:	[MIC] jack x 1, Impedance 200 ohm to 2k ohm [SPEAKER] jack x 2, Impedance 3.2 ohm to 8 ohm [PHONES] jack x 1 [AUX/CD] jack x 2
Power Supply:	AC 120V, 60 Hz (U.S.A., Canada) AC 240V, 50Hz (Australia) DC 12V IEC R20 ("D" cell) x 8
Power Consumption:	16W
Dimensions:	576(W) x 170(H) x 155(D) mm
Weight:	3.2 kg (without batteries)

Specifications are subject to change without notice.

TA, TC, AY

PRINTED IN JAPAN 22905760 Aug., 1987 Ⓢ

OPERATING CONTROLS



❶ [MIC] Built-in Microphone
❷ [FM-ST] Indicator
❸ [FUNCTION] Selector
Note:
TAPE/RADIO [OFF] position.
This unit remains connect to mains supply in the TAPE/RADIO [OFF] position. Disconnect the power cord when the unit is not going to be used for a long time.
❹ [BEAT/FM MODE] Selector
❺ [TUNING] Knob
❻ [● RECORD] Key
❼ [◀ PLAY] Key
❽ [▶▶ REW] Key
❾ [◀◀ FF] Key
❿ [■ / ▲ STOP/EJECT] Key
⓫ [II PAUSE] Key
⓬ Tweeter Speakers
⓭ Woofer Speakers
⓮ [GRAPHIC EQUALIZER] Controls
⓯ [BALANCE] Control
⓰ [VOLUME] Control
⓱ [AC POWER] Socket
⓲ [SPEAKER] Jacks
⓳ [PHONES] Jack
⓴ [MIC] Jack
㉑ Telescopic Antenna
㉒ [AUX/CD] Jack
㉓ Speaker Plug

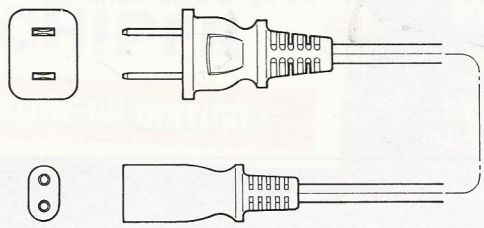
Nameplate (U.S.A., Canada)

TOSHIBA STEREO RADIO CASSETTE RECORDER
MODEL NO. RT-7027
LISTED 789K
POWER SOURCE
AC 120V 60Hz 16W | DC 12V IEC R20 ("D" CELL)×8
TOSHIBA CORPORATION
TOKYO JAPAN MADE IN KOREA

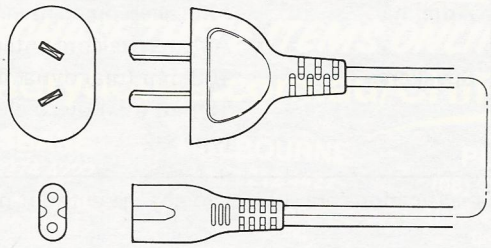
Nameplate (Australia)

TOSHIBA STEREO RADIO CASSETTE RECORDER
MODEL NO. RT-7027
POWER SOURCE
AC 240V ~ 50Hz 16W | DC 12V ⎓ IEC R20 ("D" CELL)×8
TOSHIBA CORPORATION
25809798.
TOKYO JAPAN MADE IN KOREA

Power Cord (U.S.A., Canada)



Power Cord (Australia)



DISASSEMBLY INSTRUCTIONS

FRONT CABINET REMOVAL

1. Open the cassette lid by pressing the STOP/EJECT button.
2. Remove three screws Ⓐ , and the front cabinet will be removed.

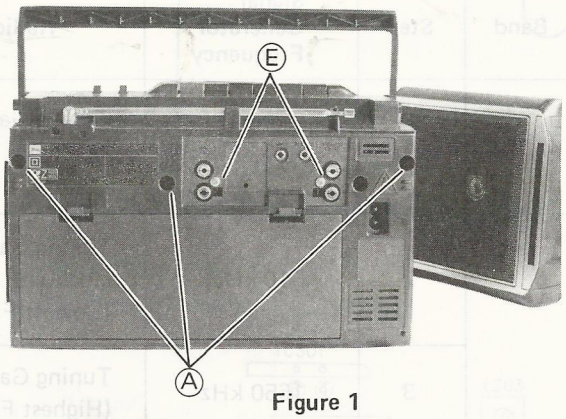


Figure 1

MECHANISM ASSEMBLY REMOVAL

1. Remove front cabinet.
2. Remove three screws Ⓑ .
3. Remove connector Ⓒ .
4. Opened frame Ⓓ and the mechanism assembly wiil be removed.

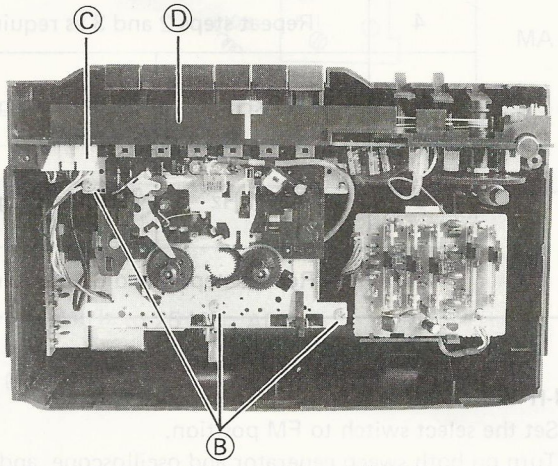


Figure 2

MAIN P.C. BOARD REMOVAL

1. Remove front cabinet and mechanism assembly.
2. Remove two screws Ⓔ .
3. Unlock location Ⓕ and the main P.C. Board will be removed.

EQUALIZER P.C. BOARD REMOVAL

1. Remove front cabinet.
2. Unlock three locations Ⓖ and the equalizer P.C. Board will be removed.

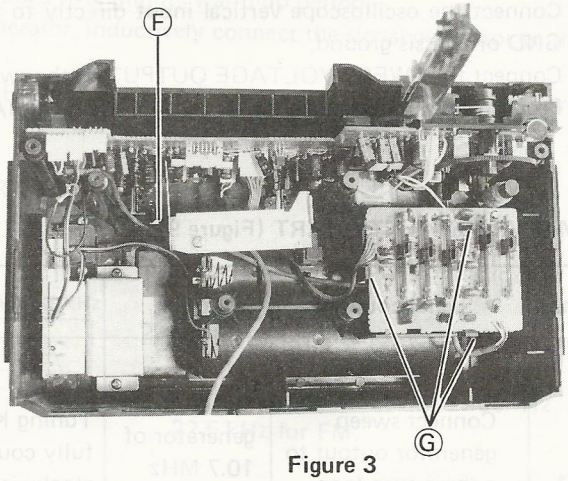


Figure 3

SPEAKER FRONT CABINET REMOVAL

1. Remove four screws Ⓗ and the speaker front cabinet will be removed.

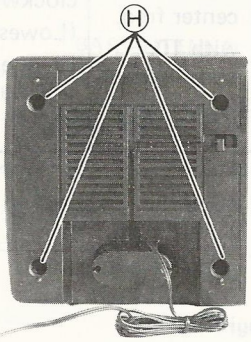


Figure 4

DIAL CORD RESTRINGING

1. Turn tuning capacitor counterclockwise fully.
2. Proceed dial cord restringing in steps ① to ⑦ .
3. Mount the pointer to stop line on the tuner frame.

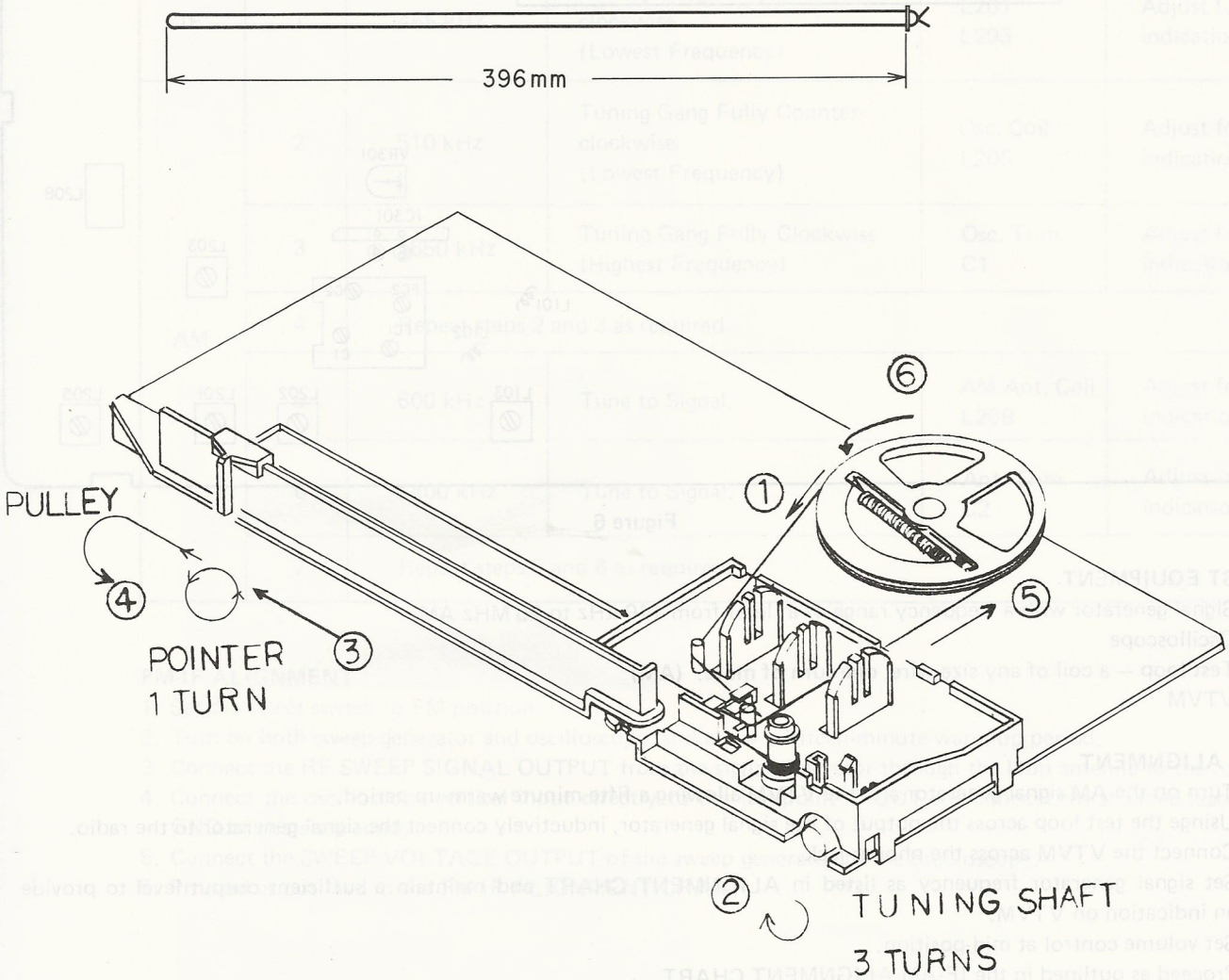


Figure 5

ADJUSTMENTS

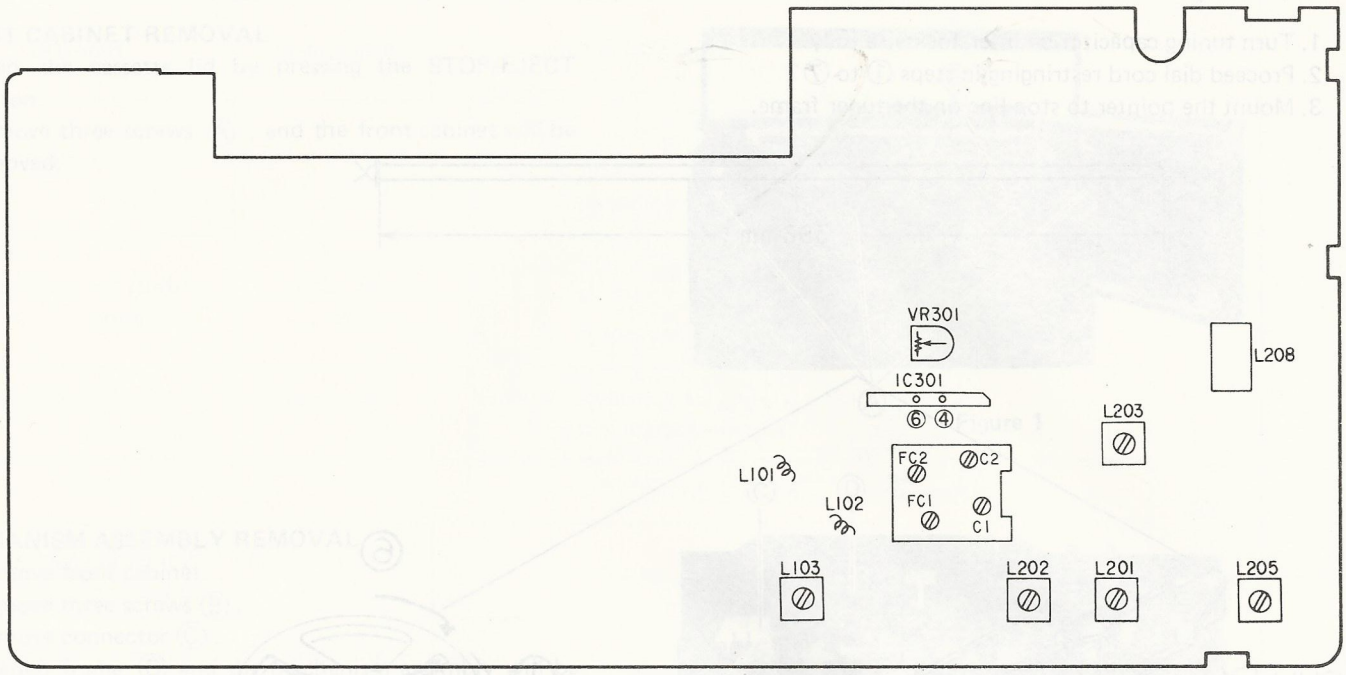


Figure 6

TEST EQUIPMENT

1. Signal generator with a frequency range of at least from 140 kHz to 25 MHz AM.
2. Oscilloscope
3. Test loop – a coil of any size wire, one turn of more. (AM)
4. VTVM

AM ALIGNMENT

1. Turn on the AM signal generator and the VTVM allowing a fifte-minute warm-up period.
2. Usinge the test loop across the output of hte signal generator, inductively connect the signal generator to the radio.
3. Connect the VTVM across the phones jack.
4. Set signal generator frequency as listed in ALIGNMENT CHART and maintain a sufficient output level to provide an indication on VTVM.
5. Set volume control at mid-position.
6. Proceed as outlined in the IF-AM ALIGNMENT CHART.

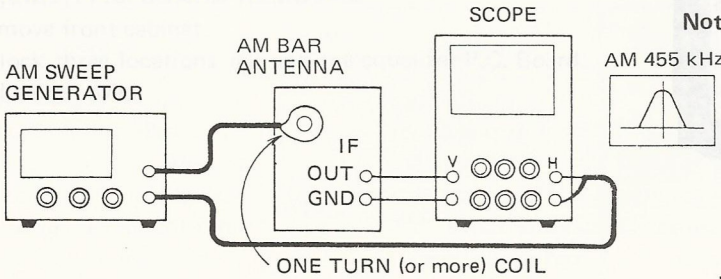


Figure 7

Note: 1. Use a screwdriver with plastic grip for all adjustments.
2. Standard test frequency 400 Hz and modulation 30% for AM.
3. Standard test frequency 400 Hz and deviation 22.5 kHz for FM.

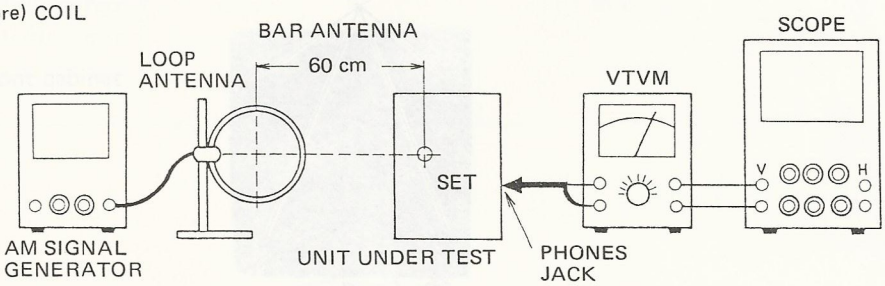


Figure 8

AM ALIGNMENT CHART (Figures 7 & 8)

Band	Step	Signal Generator Frequency	Radio Dial Setting	Adjustment	Remarks
IF	1	455 kHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	L201 L203	Adjust for maximum indication.
AM	2	510 kHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	Osc. Coil L205	Adjust for maximum indication.
	3	1650 kHz	Tuning Gang Fully Clockwise (Highest Frequency)	Osc. Trim. C1	Adjust for maximum indication.
	4	Repeat steps 2 and 3 as required.			
	5	600 kHz	Tune to Signal.	AM Ant. Coil L208	Adjust for maximum indication.
	6	1400 kHz	Tune to Signal.	Ant. Trim. C2	Adjust for maximum indication.
	7	Repeat steps 5 and 6 as required.			

FM-IF ALIGNMENT

1. Set the select switch to FM position.
2. Turn on both sweep generator and oscilloscope, and allow a fifteen-minute warm-up period.
3. Connect the RF SWEEP SIGNAL OUTPUT from the signal generator through the loop antenna to the receiver.
4. Connect the oscilloscope vertical input directly to the test point IF OUT and connect the shielded lead to the test point GND or chassis ground.
5. Connect the SWEEP VOLTAGE OUTPUT of the sweep generator to the oscilloscope.
6. Proceed as outlined in the FM-IF ALIGNMENT CHART.

FM-IF ALIGNMENT CHART (Figure 9)

Step	Signal coupling	Equip.	Tuning	Connection	Adjust. point	Pattern
1	Connect sweep generator output to a three-turn loop antenna of 10 cm diameter.	Sweep generator of 10.7 MHz center freq. with 10.7 MHz marker.	Tuning Knob fully counter-clockwise (Lowest Frequency.)	Set scope for connecting output signal from TUN OUT to vertical axis of scope "V" and sweep generator output to horizontal axis "H".	L103 L202	Turn the IF Transformer L202 fully counterclockwise to obtain a single peak. Adjust coil L103 in order until the best single peak is obtained. Figure 10. Finally turn the coil L202 to obtain S curve. See Figure 11.

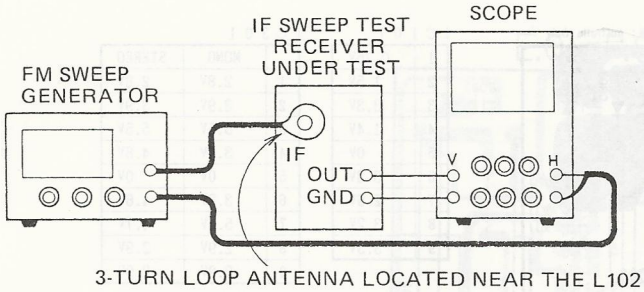
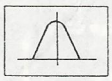
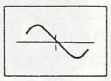


Figure 9



COUNTER-CLOCKWISE

Figure 10



S CURVE

10.7 MHz

Figure 11

FM-RF ALIGNMENT

1. Turn on the signal generator and the VTVM, and allow a fifteen-minute warm-up period.
2. Connect the signal generator output through a 75 ohm dummy antenna across FM ANT.
3. Connect the VTVM across the headphone jack.
4. Set the volume control to mid-position.
5. Adjust the signal generator frequency as indicated in FM-RF ALIGNMENT CHART, and maintain a sufficient signal output level to provide a measurable indication.
6. Proceed as outlined in the FM-RF ALIGNMENT CHART.

FM-RF ALIGNMENT CHART (Figure 12)

Step	Signal Generator	Radio Dial Setting	Adjustment	Remarks
1	87.5 MHz	Tuning Knob Fully Counter-clockwise (Lowest Frequency)	Osc. Coil L102	Adjust for maximum output indication.
2	108 MHz	Tuning Knob Fully Clockwise (Highest Frequency)	Osc. Trim. in P.V.C. FC1	Adjust for maximum output indication.
3	Repeat steps 1 and 2 as required.			
4	90 MHz	Tune to signal	Ant. Coil L101	Adjust for maximum output indication.
5	106 MHz		Ant. Trim. in P.V.C. FC2	
6	Repeat steps 4 and 5 as required.			

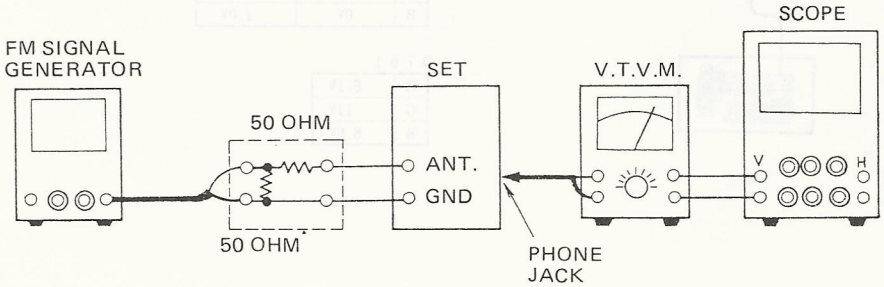


Figure 12

FREE RUN FREQUENCY ALIGNMENT

Adjust VR301 under no signal condition so as to obtain 38 kHz ± 75 Hz. (Figure 13)

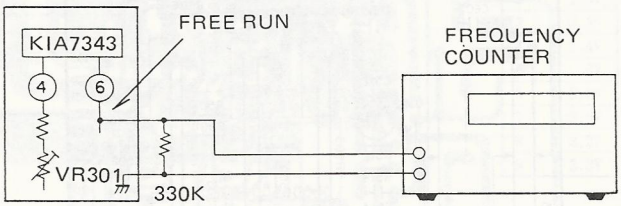
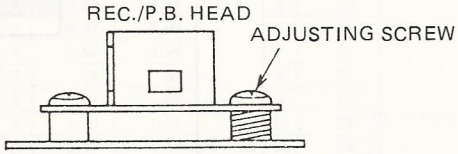


Figure 13

RECORD/PLAYBACK HEAD ADJUSTMENT

A 8 kHz test tape must be used for this adjustment. Connect a VTVM or an oscilloscope to the headphones jack or speaker terminal and adjust the azimuth by using a phillips screwdriver to maintain the maximum output voltage.



Fiugre 14

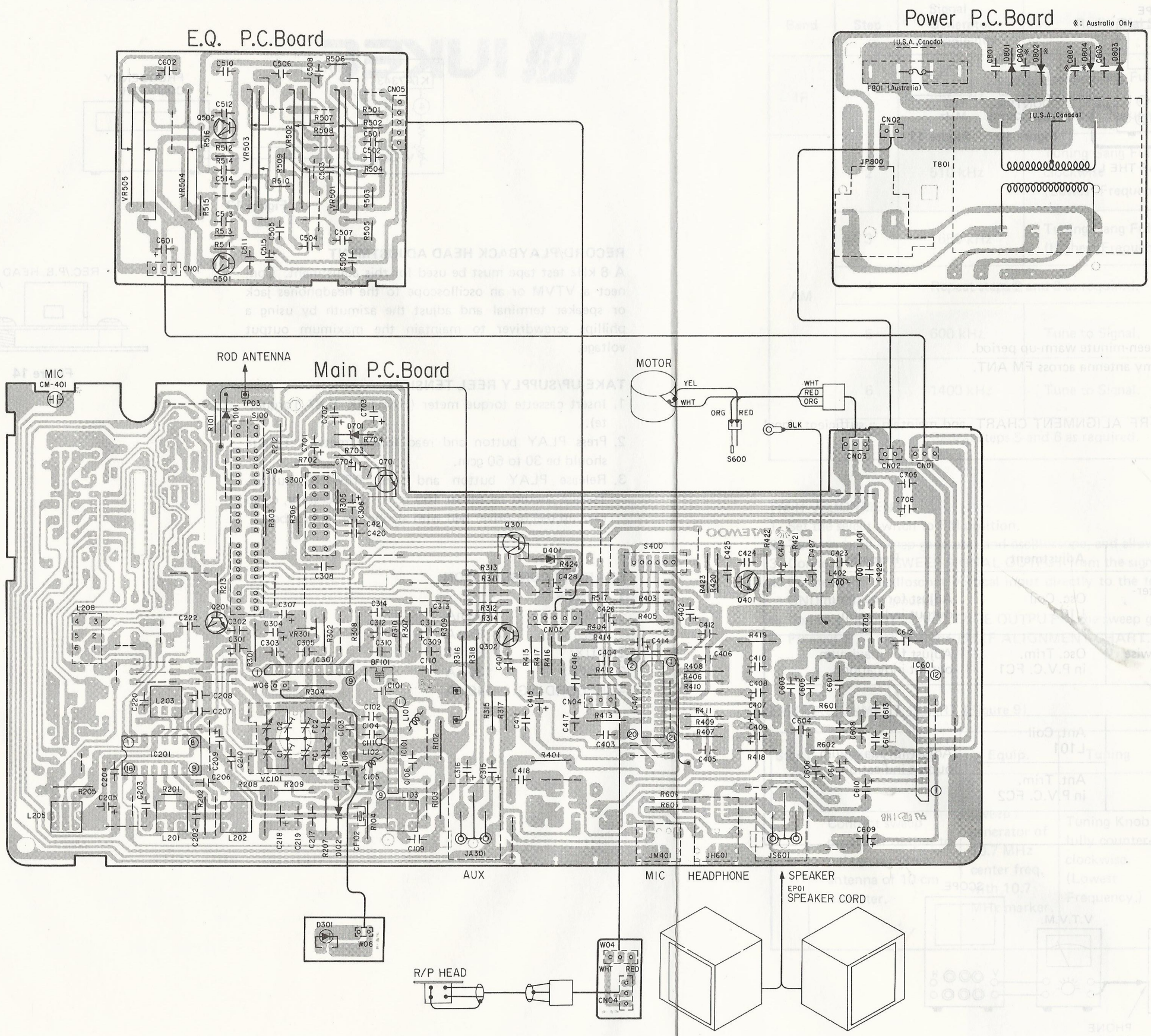
TAKE-UP/SUPPLY REEL TENSION

1. Insert cassette torque meter (HARTAK X-87 Torquette).
2. Press PLAY button and read torque meter. Torque should be 30 to 60 gcm.
3. Release PLAY button and press REWIND button. Torque should be 65 to 150 gcm. If necessary, clean take-up reel or driver belt with alcohol, or replace belt.

CURRENT CONSUMPTION

1. TUNER
   FM: 100mA
   AM: 87mA
2. AUX: 87mA
3. TAPE: 130mA
4. RECORDING: 140mA

ELECTRICAL PARTS LOCATIONS



IC101

1	0.75V
2	1.5V
3	3.3V
4	1.4V
5	0V
6	3.3V
7	2.6V
8	3.2V
9	3.3V

IC301

	MONO	STEREO
1	2.8V	2.8V
2	3.9V	3.9V
3	5.5V	5.5V
4	3.7V	4.8V
5	0V	0V
6	3.8V	4.6V
7	5.5V	4.7V
8	2.9V	2.9V
9	2.9V	2.9V

IC201

	AM	FM
1	1.5V	0V
2	1.5V	0V
3	2.3V	2.3V
4	2.3V	2.3V
5	0.9V	0.9V
6	0.9V	0.9V
7	0V	0V
8	0V	0V
9	1.5V	1.5V
10	5.1V	4.5V
11	5.1V	4.5V
12	1.4V	1.4V
13	1.4V	1.4V
14	1.4V	1.4V
15	1.4V	1.4V
16	5.1V	4.5V

IC401

1	4.8V
2	3.6V
3	1.8V
4	2V
5	2V
6	0V
7	2V
8	2V
9	2V
10	2V
11	0V
12	2V
13	0.2V
14	2V
15	2V
16	2V
17	2V
18	0V
19	2V
20	2V
21	1.8V

IC401

Pin No. 6 \ Pin No. 2	0V	3.6V
0V	TUNER, AUX OPERATING	TAPE PLAY OPERATING
3.6V	TIMER, AUX RECORDING MODE	TAPE RECORDING MODE

IC601

1	11.5V
2	6V
3	6.5V
4	0.67V
5	0.035V
6	0V
7	0.035V
8	0.67V
9	0V
10	6.1V
11	11.5V
12	12V

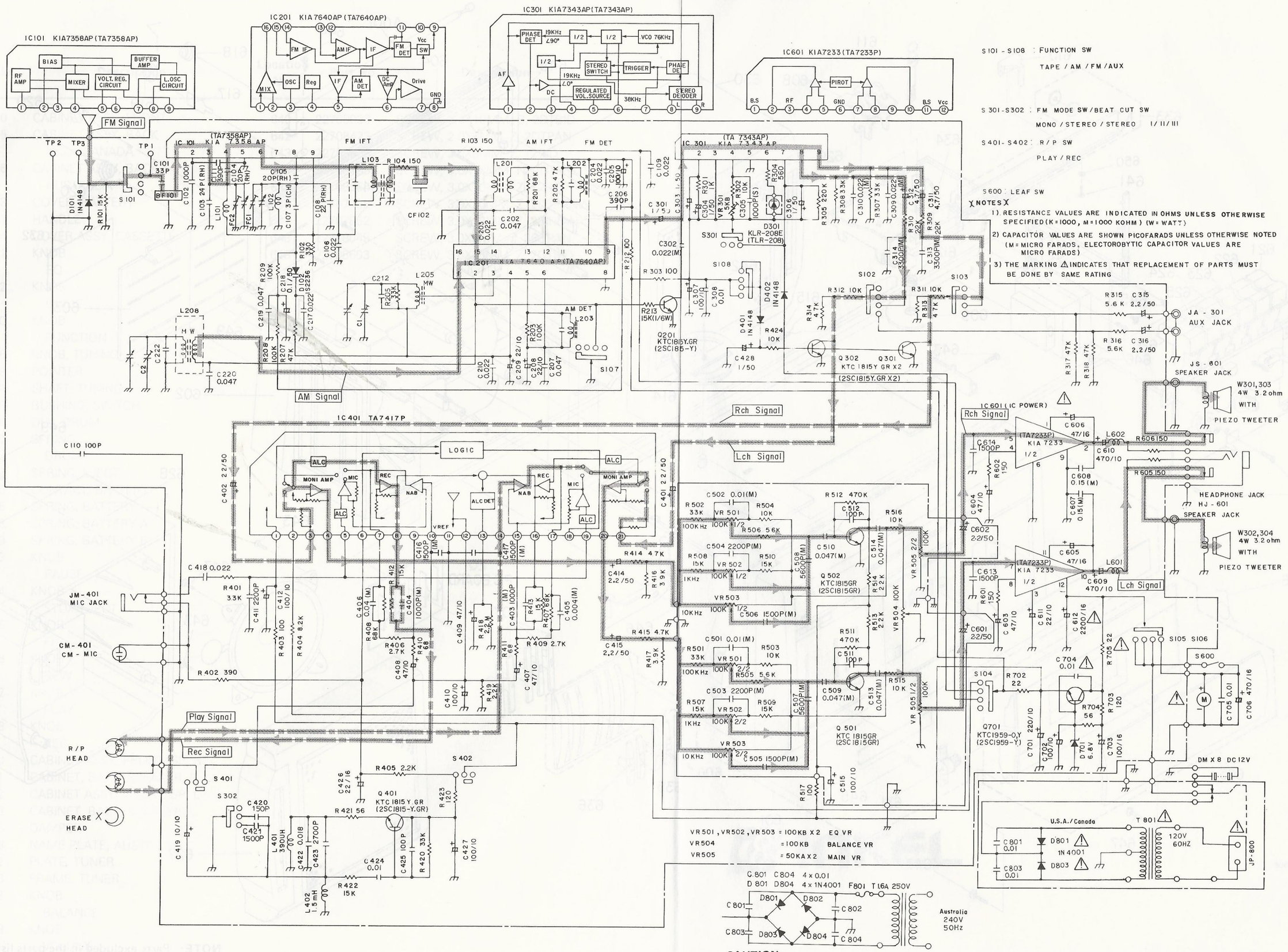
Q401

	PLAY	RECORDING
E	0V	0.75V
C	0V	4.6V
B	0V	1.0V

Q701

E	6.1V
C	11V
B	6.8V

SCHEMATIC DIAGRAM



S101 - S108 : FUNCTION SW
TAPE / AM / FM / AUX

S301 - S302 : FM MODE SW / BEAT CUT SW
MONO / STEREO / STEREO I / II / III

S401 - S402 : R/P SW
PLAY / REC

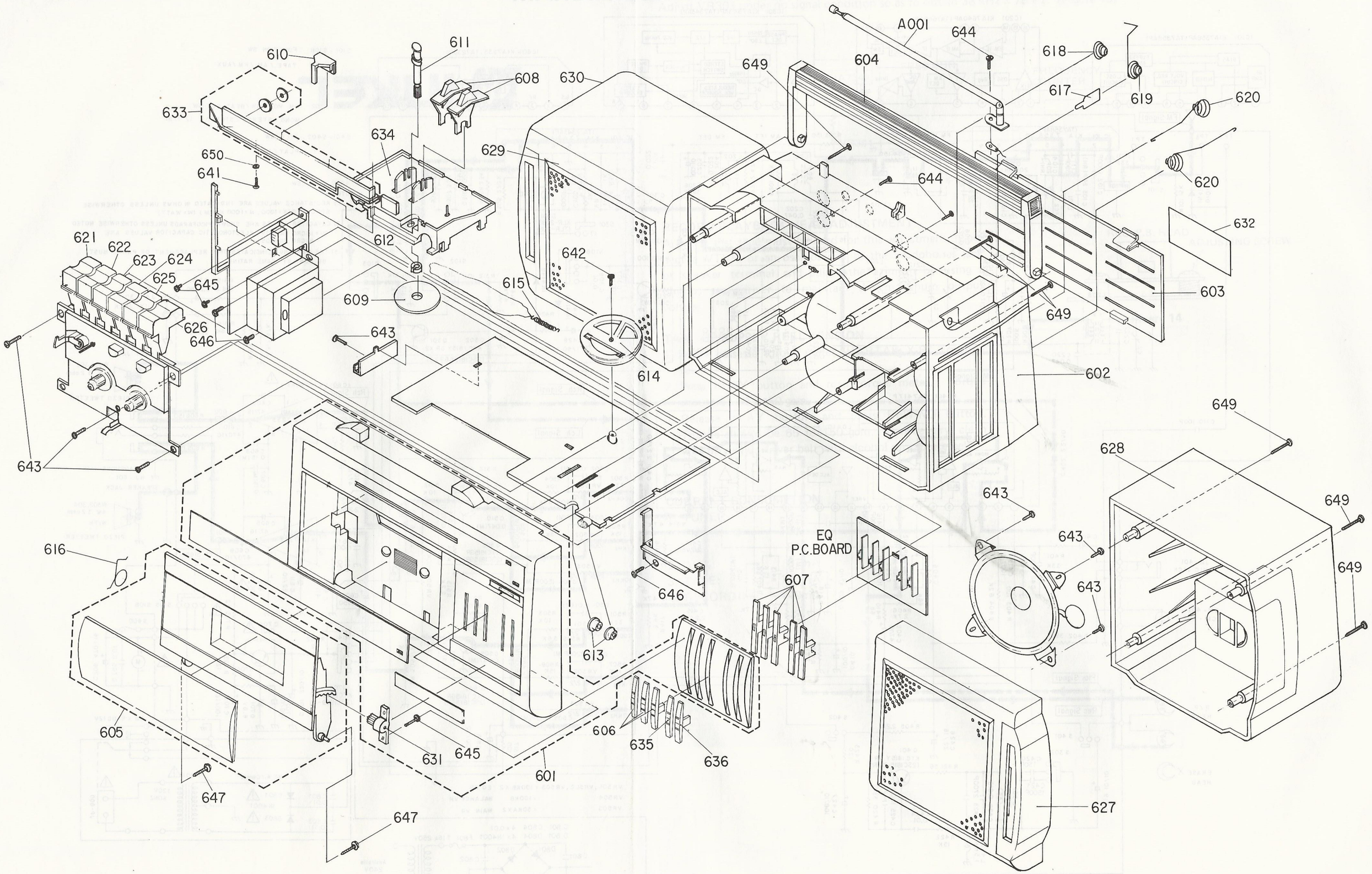
S600 : LEAF SW

NOTES

1) RESISTANCE VALUES ARE INDICATED IN OHMS UNLESS OTHERWISE SPECIFIED (K=1000, M=1000 KOHM) (W=WATT)
2) CAPACITOR VALUES ARE SHOWN PICOFARADS UNLESS OTHERWISE NOTED (M=MICRO FARADS, ELECTOROBYTIC CAPACITOR VALUES ARE MICRO FARADS)
3) THE MARKING ⚠ INDICATES THAT REPLACEMENT OF PARTS MUST BE DONE BY SAME RATING

CAUTION:
The ⚠ mark, the Location No. circled with oval in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

CABINET EXPLODED VIEW



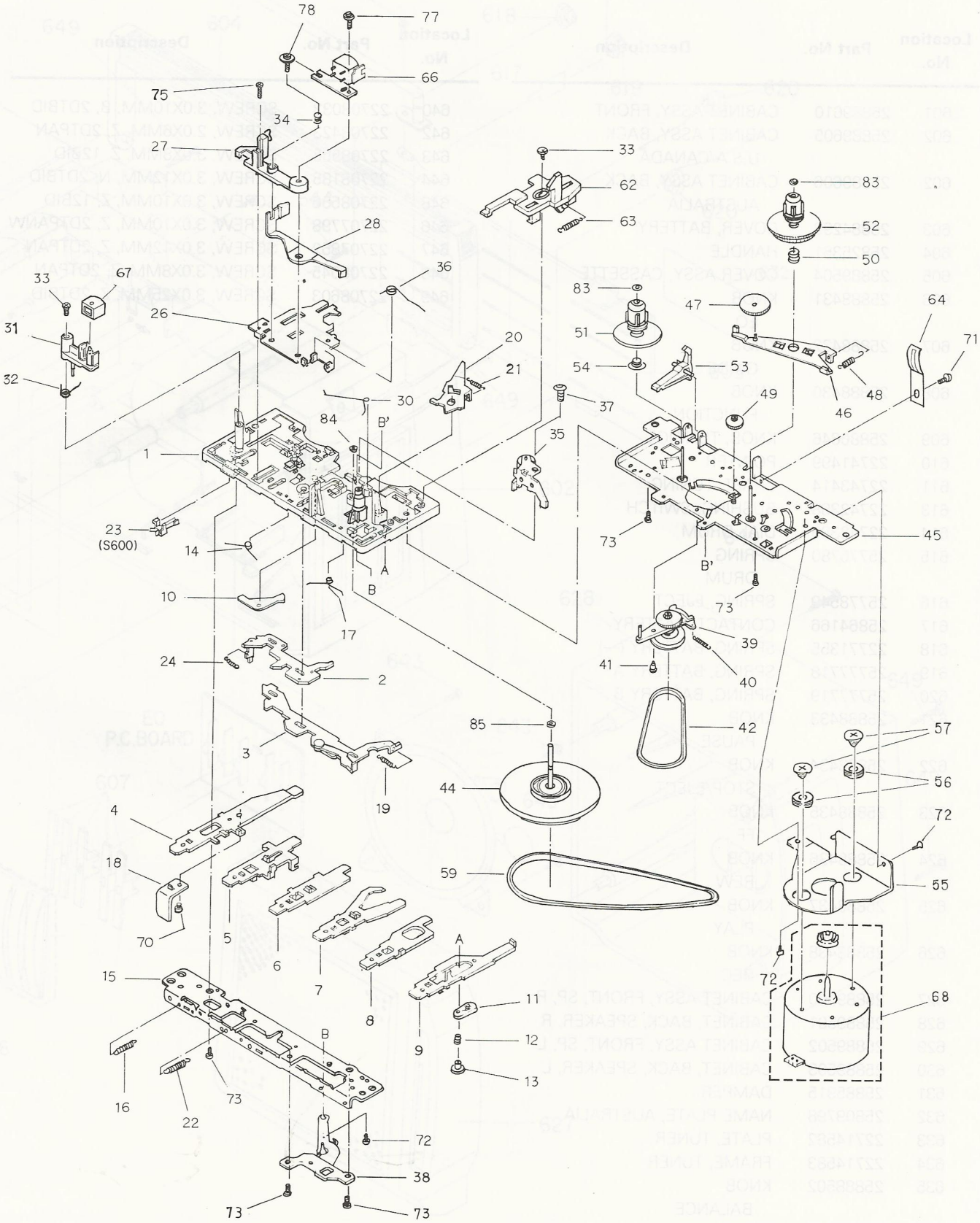
NOTE: Parts excluded in the parts list are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

CABINET PARTS LIST

Location No.	Part No.	Description
601	25889610	CABINET ASSY, FRONT
602	25889605	CABINET ASSY, BACK U.S.A/CANADA
602	25889606	CABINET ASSY, BACK AUSTRALIA
603	25884293	COVER, BATTERY
604	25825361	HANDLE
605	25889504	COVER ASSY, CASSETTE
606	25888431	KNOB EQ
607	25888432	KNOB GUIDE
608	25888430	KNOB FUNCTION
609	25886646	KNOB, TUNING
610	22741499	POINTER
611	22743414	SHAFT, TUNING
613	22742388	BUSHING, SWITCH
614	22742389	DIAL DRUM
615	25776780	SPRING DRUM
616	25778549	SPRING, EJECT
617	25864166	CONTACT, BATTERY
618	22771355	SPRING, BATTERY (—)
619	25777718	SPRING, BATTERY A
620	25777719	SPRING, BATTERY B
621	25888433	KNOB PAUSE
622	25888434	KNOB STOP/EJECT
623	25888435	KNOB FF
624	25888436	KNOB REW
625	25888437	KNOB PLAY
626	25888438	KNOB REC
627	25889500	CABINET ASSY, FRONT, SP, R
628	25889501	CABINET, BACK, SPEAKER, R
629	25889502	CABINET ASSY, FRONT, SP, L
630	25889503	CABINET, BACK, SPEAKER, L
631	25885915	DAMPER
632	25809798	NAME PLATE, AUSTRALIA
633	22714582	PLATE, TUNER
634	22714583	FRAME, TUNER
635	25888502	KNOB BALANCE
636	25888503	KNOB VOLUME

Location No.	Part No.	Description
640	22708033	SCREW, 3.0X10MM, B, 2DTBID
642	22708423	SCREW, 2.0X6MM, Z, 2DTPAN
643	22708555	SCREW, 3.0X8MM, Z, 12BID
644	22708185	SCREW, 3.0X12MM, N, 2DTBID
645	22708556	SCREW, 3.0X10MM, Z, 12BID
646	22707798	SCREW, 3.0X10MM, Z, 2DTPANW
647	22707852	SCREW, 3.0X12MM, Z, 2DTPAN
648	22708045	SCREW, 3.0X8MM, Z, 2DTPAN
649	22708603	SCREW, 3.0X25MM, Z, 2DTBID

MECHANISM EXPLODED VIEW



NOTE: Parts excluded in the parts list are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

MECHANISM PARTS LIST

Location No.	Part No.	Description
1	25781344	BASE ASSY, MAIN
2	25724998	PLATE, SWITCH
3	25784604	ACTUATOR ASSY
4	25784394	LEVER REC BUTTON
5	25784395	LEVER PLAY BUTTTON
6	25784396	LEVER RWD BUTTON
7	25784397	LEVER FF BUTTON
8	25784398	LEVER STOP/EJECT BUTTON
9	25784399	LEVER, PAUSE BUTTON
10	25784496	LEVER, REWIND
11	25784401	LEVER, PAUSE
12	25776903	SPRING PAUSE LEVER
13	25743199	STOPPER, PAUSE
14	25776904	SPRING BUTTON LEVER (E)
15	25792017	SUB CHASSIS
16	25776905	SPRING BUTTON LEVER (A)
17	25776906	SPRING BUTTON LEVER (C)
18	25779705	PLATE REC SPRING
19	25776907	SPRING ACTUATOR
20	25784494	LEVER, AUTO
21	25776908	SPRING AUTO LEVER
22	25776909	SPRING PLAY LEVER
23	22108016	LEAF SWITCH S600
24	25776971	SPRING SWITCH ACTUATOR
26	25733549	PANEL, HEAD
27	25733550	BASE, HEAD
28	25784608	PLATE ASSY, SENCING
30	25778326	SPRING HEAD PANEL
31	25747266	ARM, MG
32	25770082	SPRING MG ARM
33	22708501	SCREW, SPECIAL
34	25778327	SPRING AZIMUTH
35	25797148	ARM ASSY, PRESSURE ROLLER
36	25778548	SPRING PRESSURE ROLLER
40	25776910	SPRING RF PULLEY ARM
41	22708724	SCREW, COLLAR
44	25797121	FLYWHEEL ASSY
45	25784609	BASE ASSY, REEL
46	25784610	PLATE ASSY, TAKE-UP
47	25757202	GEAR, TAKE-UP
48	25776911	SPRING T.G PLATE
49	25756544	GEAR FF
50	25777418	SPRING BACK TENSION
51	25712476	REEL ASSY, SUPPLY
52	25754537	REEL ASSY, TAKE-UP
53	25747303	LEVER, RECORD SAFETY
54	25777715	SPRING BACK TENSION
56	25761541	CUSHION, MOTOR
57	22708502	SCREW, COLLAR, MOTOR
59	25759055	BELT, MAIN
62	25747267	SLIDE LEVER, EJECT
63	25776912	SPRING EJECT LEVER
64	25779621	PLATE SPRING, CASSETTE
66	22217529	HEAD, RECORD/PLAYBACK
70	22708010	SCREW, 2.0X3MM, TAMS
71	22708503	SCREW, 2.0X3MM
72	22708504	SCREW, 2.0X4MM
73	22708423	SCREW, 2.0X6MM, Z, 2DTPAN
75	22701290	SCREW, 2.0X6MM, Z, PAN
77	22708015	SCREW, 2.0X7MM, CAP
78	22708507	SCREW, 2.0X7MM, AZIMUTH
83	25766440	WASHER, 1.2X3.8X0.4T, PO
84	22703441	WASHER 1.55X3.8X0.5
85	25766336	WASHER 2.05x4x0.5
39	25111057	RF PULLEY ARM ASSY
42	25759056	RF BELT
67	22218311	HEAD, ERASE
68	22125892	MOTOR

PARTS LIST

CAUTION:
The ⚠ mark, the Location No. circled with oval in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

ABBREVIATIONS

1. **CAPACITOR:** CD = Ceramic Disk, PF = Plastic Film, BL = Barrier Layer, EL = Electrolytic, MY = Mylar, PP = Polypropylene, PS = Polystyrene, TT = Tantalum, PE = Polyethylene
   MFD = Microfarad, PF = Picofarad, V = Voltage, NP = Non Polarity
2. **RESISTOR:** CF = Carbon Film, CC = Carbon Composition, OMF = Oxide Metal Film, MF = Metal Film
   K = Kilo (1000), M = Mega (1000000)
3. **TOLERANCE**

Symbol	G	J	K	M	N	Z	P
%	±2	±5	±10	±20	±30	−20+80	0+100

Symbol	C	D
pF	±0.25	±0.5

Location No.	Part No.	Description
IC/TRANSISTORS		
IC101	B0325502	IC, TA7358AP KIA7358AP
IC201	B0356385	IC, TA7640AP KIA7640AP
IC301	B0325355	IC, TA7343AP KIA7343AP
IC401	B0326210	IC, TA7417P
IC601	B0319970	IC, TA7233P KIA7233P
Q201	A6317460	TRANSISTOR, 2SC1815NEW-GR KTC1815-GR
Q301	A6317460	TRANSISTOR, 2SC1815NEW-GR KTC1815-GR
Q302	A6317460	TRANSISTOR, 2SC1815NEW-GR KTC1815-GR
Q401	A6317460	TRANSISTOR, 2SC1815NEW-GR KTC1815-GR
Q501	A6317460	TRANSISTOR, 2SC1815NEW-GR KTC1815-GR
Q502	A6317460	TRANSISTOR, 2SC1815NEW-GR KTC1815-GR
Q701	A6319280	TRANSISTOR, 2SC1959NEW-O KTC1959-O
DIODES		
D101	A7180000	DIODE, 1N4148
D102	A7289000	DIODE, 1S2236 KDS-2236
D301	A8603140	DIODE, TLR208, LED KLR-208E
D401	22115608	DIODE, 1N4148
D701	A7112540	DIODE, 05AZ6.8, ZENER
D801	A7978380	DIODE, S5277B 1N4001
D802	A7978380	DIODE, S5277B 1N4001 AUSTRALIA
D803	A7978380	DIODE, S5277B 1N4001
D804	A7978380	DIODE, S5277B 1N4001 AUSTRALIA
ELECTRICAL PARTS		
A001	22124805	ROD ANTENNA
BF101	22153121	FILTER, FM RF, PFWB5
CF102	22153510	FILTER, CERAMIC
CM401	22154265	MICROPHONE, BUILT-IN
EP01	22166537	SPEAKER CORD
⚠ F801	22144293	FUSE, 250V, 1.6A AUSTRALIA
FC801	22165047	HOLDER, FUSE AUSTRALIA
JA301	22198343	JACK, US-2P AUX
JH601	22198344	JACK, 3.5MM HEADPHONE
JM401	22198345	JACK, 3.5MM MICROPHONE
⚠ JP800	22169187	AC SOCKET AUSTRALIA
⚠ JP800	22169189	AC SOCKET U.S.A/CANADA
JS601	22198343	JACK, US-2P SPEAKER
L101	22294815	COIL FM RF
L102	22295262	COIL FM OSCILLATOR
L103	22265920	IF TRANSFORMER FM IFT
L201	22264958	IF TRANSFORMER AM IFT
L202	22265921	IF TRANSFORMER FM DET
L203	22264959	IF TRANSFORMER AM DET

Location No.	Part No.	Description
L205	22245537	COIL, OSCILLATOR, MW
L208	22243140	COIL, ANTENNA, AM
L401	22292246	COIL, 390UH BIAS OSILLATOR
L402	22292247	COIL, 1.5MH BIAS OSILLATOR
S101	22108037	SLIDE SWITCH S101-108FUNCTION
S202	22108038	SLIDE SWITCH S201-204AM BAND
S301	22108038	SLIDE SWITCH S301-302FM MODE
S401	22108039	SLIDE SWITCH RECORD/PLAYBACK
S600	22108016	LEAF SWITCH POWER
⚠ T801	22224983	POWER TRANSFORMER U.S.A/CANADA
⚠ T801	22224986	POWER TRANSFORMER AUSTRALIA
W301	22152685	SPEAKER, 10CM, 3.2 OHM WOOFER
W302	22152685	SPEAKER, 10CM, 3.2 OHM WOOFER
W303	22152585	SPEAKER, 1CM TWEETER
W304	22152585	SPEAKER, 1CM TWEETER

CAPACITORS

Location No.	Part No.	Description
C101	20311330	CD, 33PF, 50V, J
C102	20341103	CD, 0.01MFD, 50V, Z
C103	22360922	CD, 24PF, 50V, J(RH)
C104	20314200	CD, 20PF, 50V, J(RH)
C105	20314200	CD, 20PF, 50V, J(RH)
C106	20341223	CD, 0.022MFD, 50V, Z
C108	20314220	CD, 22PF, 50V, D(RH)
C109	20341223	CD, 0.022MFD, 50V, Z
C110	20311101	CD, 100PF, 50V, J
C202	20341473	CD, 0.047MFD, 50V, Z
C203	20341223	CD, 0.022MFD, 50V, Z
C204	20341223	CD, 0.022MFD, 50V, Z
C205	20414101	EL, 100MFD, 10V
C206	20311391	CD, 390PF, 50V, J
C207	20341473	CD, 0.047MFD, 50V, Z
C208	20414221	EL, 220MFD, 10V
C209	20414221	EL, 220MFD, 10V
C210	20341223	CD, 0.022MFD, 50V, Z
C217	20341223	CD, 0.022MFD, 50V, Z
C218	20418108	EL, 0.1MFD, 50V
C219	20341473	CD, 0.047MFD, 50V, Z
C220	20341473	CD, 0.047MFD, 50V, Z
C301	20418109	EL, 1MFD, 50V
C303	20418109	EL, 1MFD, 50V
C304	20418109	EL, 1MFD, 50V
C305	20381102	PP, 1000PF, 100V, J
C306	20418109	EL, 1MFD, 50V
C307	20414101	EL, 100MFD, 10V
C308	20341103	CD, 0.01MFD, 50V, Z
C309	20371223	MY, 0.022MFD, 50V, J
C310	20371223	MY, 0.022MFD, 50V, J
C311	20418479	EL, 4.7MFD, 50V
C312	20418479	EL, 4.7MFD, 50V
C313	22371332	MY, 3300PF, 50V, J
C314	22371332	MY, 3300PF, 50V, J
C315	20418229	EL, 2.2MFD, 50V
C316	20418229	EL, 2.2MFD, 50V
C401	20418229	EL, 2.2MFD, 50V
C402	20418229	EL, 2.2MFD, 50V
C403	20371102	MY, 1000PF, 50V, J
C404	20371102	MY, 1000PF, 50V, J
C405	20371473	MY, 0.047MFD, 50V, J
C406	20371473	MY, 0.047MFD, 50V, J
C407	20414470	EL, 47MFD, 10V
C408	20414470	EL, 47MFD, 10V
C409	20414470	EL, 47MFD, 10V
C410	20414101	EL, 100MFD, 10V
C411	20371222	MY, 2200PF, 50V, J
C412	20414101	EL, 100MFD, 10V
C414	20418229	EL, 2.2MFD, 50V
C415	20418229	EL, 2.2MFD, 50V
C416	20371152	MY, 1500PF, 50V, J
C417	20371152	MY, 1500PF, 50V, J
C418	20371223	MY, 0.022MFD, 50V, J
C419	20415100	EL, 10MFD, 16V
C420	20343151	CD, 150PF, 50V, K
C421	20343152	CD, 1500PF, 50V, K
C422	20371183	MY, 0.018MFD, 50V, J
C423	20371272	MY, 2700PF, 50V, J
C424	20341103	CD, 0.01MFD, 50V, Z
C425	20311101	CD, 100PF, 50V, J
C426	20415220	EL, 22MFD, 16V
C427	20414101	EL, 100MFD, 10V
C428	20418109	EL, 1MFD, 50V
C501	20371103	MY, 0.01MFD, 50V, J
C502	20371103	MY, 0.01MFD, 50V, J
C503	20371222	MY, 2200PF, 50V, J
C504	20371222	MY, 2200PF, 50V, J
C505	20371152	MY, 1500PF, 50V, J
C506	20371152	MY, 1500PF, 50V, J
C507	22371562	MY, 5600PF, 50V, J
C508	22371562	MY, 5600PF, 50V, J
C509	20371473	MY, 0.047MFD, 50V, J
C510	20371473	MY, 0.047MFD, 50V, J
C511	20311101	CD, 100PF, 50V, J
C512	20311101	CD, 100PF, 50V, J

Location No.	Part No.	Description
C513	20371473	MY, 0.047MFD, 50V, J
C514	20371473	MY, 0.047MFD, 50V, J
C515	20414101	EL, 100MFD, 10V
C601	20418229	EL, 2.2MFD, 50V
C602	20418229	EL, 2.2MFD, 50V
C603	20414470	EL, 47MFD, 10V
C604	20414470	EL, 47MFD, 10V
C605	22485470	EL, 47MFD, 16V
C606	22485470	EL, 47MFD, 16V
C607	20371154	MY, 0.15MFD, 100V, J
C608	20371154	MY, 0.15MFD, 100V, J
C609	20414471	EL, 470MFD, 10V
C610	20414471	EL, 470MFD, 10V
C611	20414470	EL, 47MFD, 10V
C612	20415222	EL, 2200MFD, 16V
C701	20414221	EL, 220MFD, 10V
C702	20414101	EL, 100MFD, 10V
C703	20415101	EL, 100MFD, 16V
C704	20341103	CD, 0.01MFD, 50V, Z
C705	20341103	CD, 0.01MFD, 50V, Z
C706	22485471	EL, 470MFD, 16V
C801	20341103	CD, 0.01MFD, 50V, Z
C802	20341103	CD, 0.01MFD, 50V, Z AUSTRALIA
C803	20341103	CD, 0.01MFD, 50V, Z
C804	20341103	CD, 0.01MFD, 50V, Z AUSTRALIA
VC101	22308629	VARIABLE CAPACITOR

RESISTORS

Location No.	Part No.	Description
R101	22545153	CF, 15K OHM, 1/4W, J
R102	20514331	CF, 330 OHM, 1/4W, J
R103	20514151	CF, 150 OHM, 1/4W, J
R104	20514151	CF, 150 OHM, 1/4W, J
R201	20512683	CF, 68K OHM, 1/6W, J
R202	20514472	CF, 4.7K OHM, 1/4W, J
R203	22545104	CF, 100K OHM, 1/4W, J
R205	22545333	CF, 33K OHM, 1/4W, J
R207	22545473	CF, 47K OHM, 1/4W, J
R208	22545104	CF, 100K OHM, 1/4W, J
R209	22545104	CF, 100K OHM, 1/4W, J
R212	20514101	CF, 100 OHM, 1/4W, J
R301	20514102	CF, 1K OHM, 1/4W, J
R302	20514103	CF, 10K OHM, 1/4W, J
R303	20514220	CF, 22 OHM, 1/4W, J
R304	20514561	CF, 560 OHM, 1/4W, J
R305	20512224	CF, 220K OHM, 1/6W, J
R306	20512102	CF, 1K OHM, 1/6W, J
R307	20514332	CF, 3.3K OHM, 1/4W, J
R308	20514332	CF, 3.3K OHM, 1/4W, J
R309	20514222	CF, 2.2K OHM, 1/4W, J
R310	20514222	CF, 2.2K OHM, 1/4W, J
R311	20514103	CF, 10K OHM, 1/4W, J
R312	20514103	CF, 10K OHM, 1/4W, J
R313	20514472	CF, 4.7K OHM, 1/4W, J
R314	20514472	CF, 4.7K OHM, 1/4W, J
R315	20514562	CF, 5.6K OHM, 1/4W, J
R316	20514562	CF, 5.6K OHM, 1/4W, J
R317	22545473	CF, 47K OHM, 1/4W, J
R318	22545473	CF, 47K OHM, 1/4W, J
R401	20514332	CF, 3.3K OHM, 1/4W, J
R402	22545391	CF, 390 OHM, 1/4W, J
R403	20514101	CF, 100 OHM, 1/4W, J
R404	22545823	CF, 82K OHM, 1/4W, J
R405	20514103	CF, 10K OHM, 1/4W, J
R406	20514272	CF, 2.7K OHM, 1/4W, J
R407	22545683	CF, 68K OHM, 1/4W, J
R408	22545683	CF, 68K OHM, 1/4W, J
R409	20514272	CF, 2.7K OHM, 1/4W, J
R410	20514680	CF, 68 OHM, 1/4W, J
R411	20514680	CF, 68 OHM, 1/4W, J
R412	22545153	CF, 15K OHM, 1/4W, J
R413	22545153	CF, 15K OHM, 1/4W, J
R414	20514472	CF, 4.7K OHM, 1/4W, J
R415	20514472	CF, 4.7K OHM, 1/4W, J
R416	20514392	CF, 3.9K OHM, 1/4W, J
R417	20514392	CF, 3.9K OHM, 1/4W, J
R418	22545225	CF, 2.2M OHM, 1/4W, J
R419	20514222	CF, 2.2K OHM, 1/4W, J
R420	22545333	CF, 33K OHM, 1/4W, J
R421	22545560	CF, 56 OHM, 1/4W, J
R422	22545153	CF, 15K OHM, 1/4W, J
R423	20514121	CF, 120 OHM, 1/4W, J
R424	20514103	CF, 10K OHM, 1/4W, J
R501	20512333	CF, 33K OHM, 1/6W, J
R502	20512333	CF, 33K OHM, 1/6W, J
R503	20512103	CF, 10K OHM, 1/6W, J
R504	20512103	CF, 10K OHM, 1/6W, J
R505	20514562	CF, 5.6K OHM, 1/4W, J
R506	20514562	CF, 5.6K OHM, 1/4W, J
R507	22545153	CF, 15K OHM, 1/4W, J
R508	22545153	CF, 15K OHM, 1/4W, J
R509	22545153	CF, 15K OHM, 1/4W, J
R510	22545153	CF, 15K OHM, 1/4W, J
R511	22545474	CF, 470K OHM, 1/4W, J
R512	22545474	CF, 470K OHM, 1/4W, J
R513	20512222	CF, 2.2K OHM, 1/6W, J
R514	20512222	CF, 2.2K OHM, 1/6W, J
R515	20512103	CF, 10K OHM, 1/6W, J
R516	20512103	CF, 10K OHM, 1/6W, J
R517	20514101	CF, 100 OHM, 1/4W, J
R601	20514151	CF, 150 OHM, 1/4W, J
R602	20514151	CF, 150 OHM, 1/4W, J
R605	20514151	CF, 150 OHM, 1/4W, J
R606	20514151	CF, 150 OHM, 1/4W, J
R702	20514220	CF, 22 OHM, 1/4W, J

Location No.	Part No.	Description
R703	20514121	CF, 120 OHM, 1/4W, J
R704	22545560	CF, 56 OHM, 1/4W, J
R705	20514220	CF, 22 OHM, 1/4W, J
VR301	22659011	VARIABLE, SEMI FIXED, 5K-B FREE RUN
VR501	22657491	VARIABLE, 100K OHM EQUALIZER 100KHZ
VR502	22657491	VARIABLE, 100K OHM EQUALIZER 1KHZ
VR503	22657491	VARIABLE, 100K OHM EQUALIZER 10KHZ
VR504	22657492	VARIABLE, 100K OHM BALANCE
VR505	22657491	VARIABLE, 100K OHM VARIABLE

ACCESSORIES

Location No.	Part No.	Description
AC01	22908480	OWNER"S MANUAL U.S.A
AC01	22908481	OWNER"S MANUAL CANADA
AC01	22908484	OWNER"S MANUAL AUSTRALIA
⚠ AC02	22176624	POWER CORD U.S.A/CANADA
⚠ AC02	22176720	POWER CORD AUSTRALIA