

Service Manual

Portable Stereo Component System

Radio Cassette
RX-CS720

Colour

(K) . . . Black Type



Area

Suffix for Model No.	Area	Colour
(G)	Latin America/Asia	(K)
(GC)	Middle Near East	

TAPE DECK : SG-20 MECHANISM SERIES

■ Specifications

■ Radio

Frequency range	
FM	88 – 108 MHz
MW	530 – 1605 kHz
SW1	2.3 – 7.0 MHz
SW2	7.0 – 22.0 MHz
Intermediate frequency	
FM	10.7 MHz
AM	455 kHz
Sensitivity	
FM	14 dB/50 mW (– 3 dB limit sens.)
MW	53 dB/m/50mW
SW1	52 dB/m/50mW
SW2	19 dB/50mW

■ Tape Recorder

Track system	4 track, 2 channel, stereo
Recording system	AC bias
Erasing system	Magnet
Monitor system	Variable sound monitor
Frequency range	
Normal	40 – 10,000 Hz

Note :

Specifications are subject to change without notice
Weight and dimensions are approximate.

■ General

Power requirement

AC 110 – 127V/200 – 220V/230 – 250V, 50/60 Hz
Power consumption; 18W

Battery 9V (Six R20/LR20, UM-1 batteries)

Power Output 50W (25W x 2) ...PMPO
8W (4W x 2) ...RMS (max.)

Speakers 2 Woofer; 12 cm
2 Tweeter; 1.5 cm

Jacks

Input CD/LINE IN: -10dB/47 kΩ
Output SPEAKER: 2.7~8Ω
Headphones: 32Ω

Dimensions (W x H x D)

597 x 199 x 163 mm
Main unit; 305 x 199 x 163 mm
Speaker box; 150 x 198 x 150 mm
3.8kg without batteries

Weight

Panasonic®

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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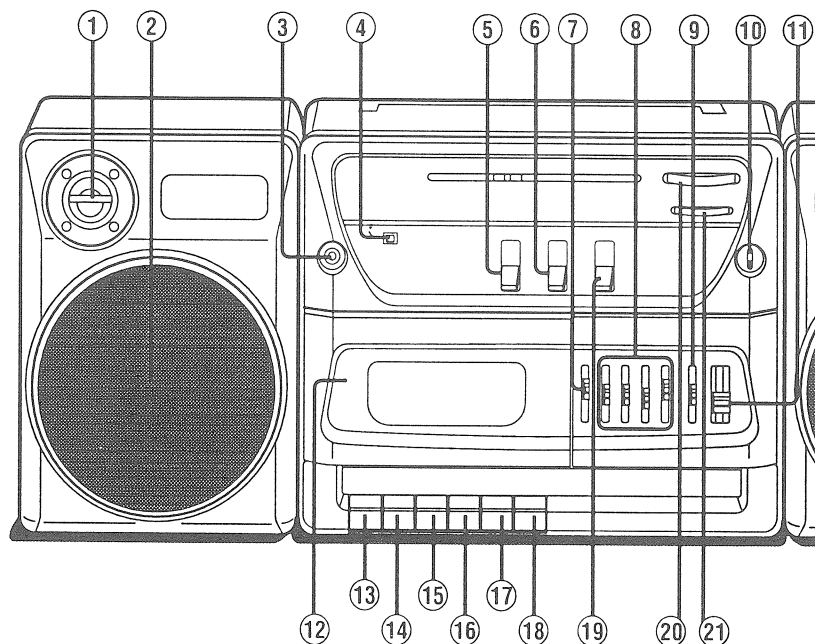
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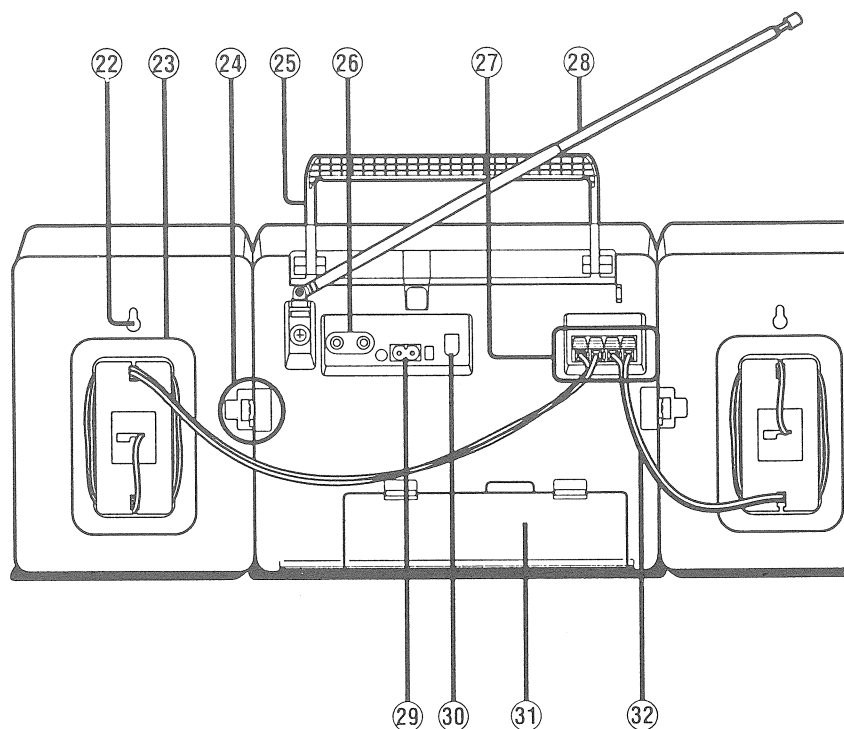
Before Use

Be sure to disconnect the mains cord before adjusting the voltage selector.

Use a minus (–) screwdriver to set the voltage selector (on the rear panel) to the voltage setting for the area in which unit will be used. (If the power supply in your area is 117 V or 120 V, set to the "127 V" position.)

Note that this unit will be seriously damaged if this setting is not made correctly. (There is no voltage selector for some countries; the correct voltage is already set.)

Location of Controls



Basic controls

- ① Speakers (Tweeter)
- ② Speakers (Woofer)
- ③ Headphones jack (PHONES)
- ④ FM stereo indicator (FM STEREO)
- ⑤ FM mode/beat proof selector (FM MODE/B.P)
- ⑥ Function selector (SELECTOR)
- ⑦ Balance control (BALANCE)
- ⑧ Graphic equalizer controls (GRAPHIC EQUALIZER)
- ⑨ Extra bass system control (XBS LEVEL)
- ⑩ Built-in microphone (MIC)
- ⑪ Volume control (VOLUME)

Cassette deck controls

- ⑫ Cassette deck holder
- ⑬ Recording button (RECORD)
- ⑭ Playback button (▶ PLAY)
- ⑮ Rewind/review button (◀◀ REW/REV)
- ⑯ Fast forward/cue button (▶▶ FF/CUE)
- ⑰ Stop/eject button (■/▲ STOP/EJECT)
- ⑱ Pause button (|| PAUSE)

Tuner controls

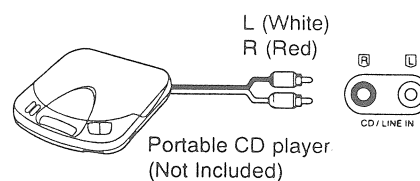
- ⑲ Band switch (BAND)
- ⑳ Tuning dial (TUNING)
- ㉑ Fine tuning dial (FINE TUNING)

Rear panel section

- ㉒ Speaker wall mounts
- ㉓ Speaker cable compartments
- ㉔ Speaker release levers
- ㉕ Handle
- ㉖ CD input jacks (CD/LINE IN)

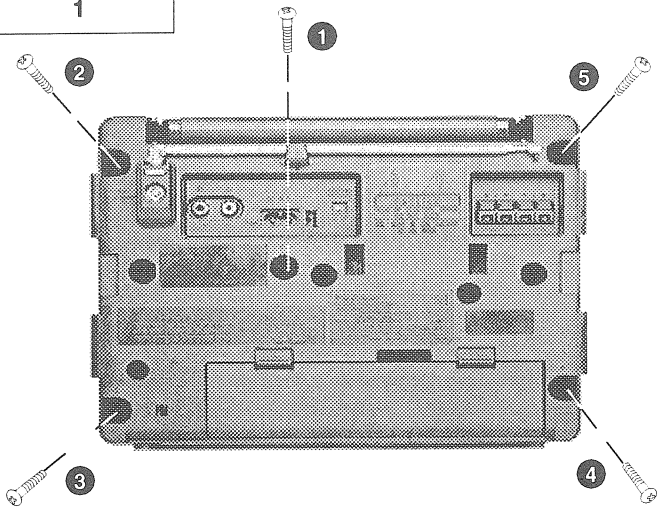
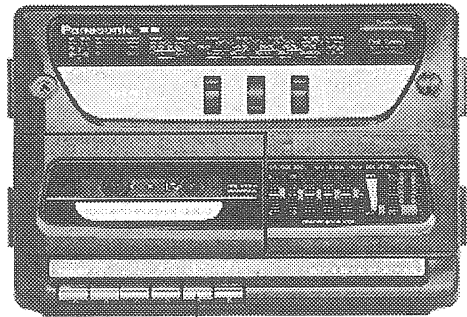
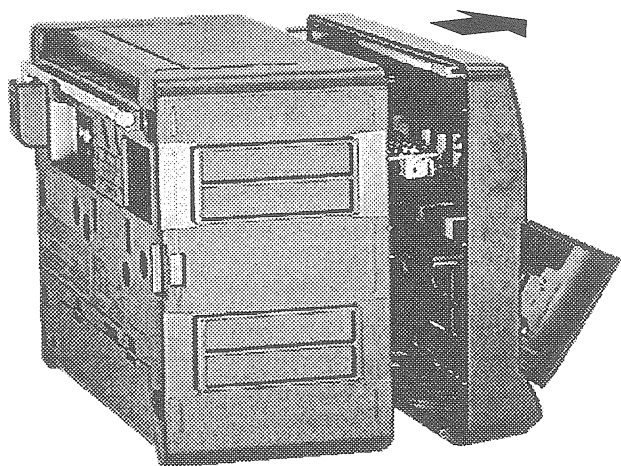
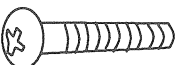
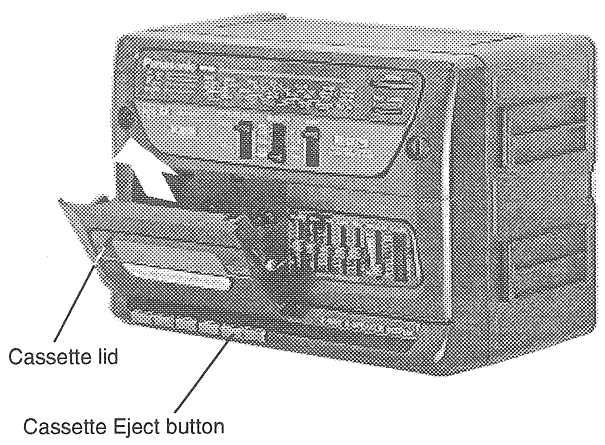
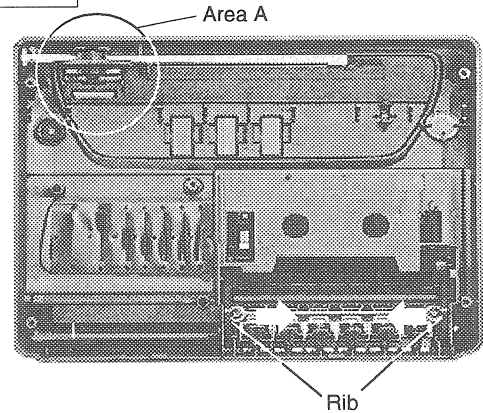
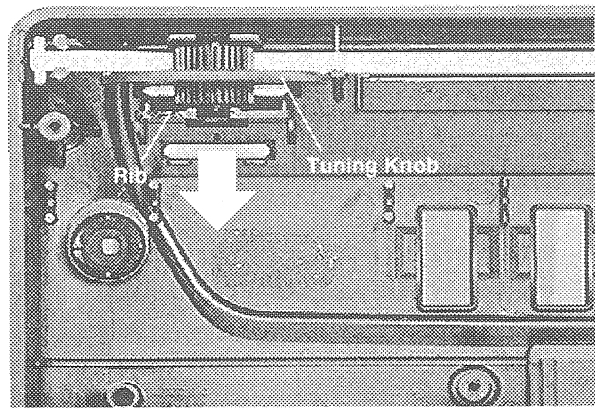
When listening to, or recording, a CD, set SELECTOR to **CD**/ LINE .

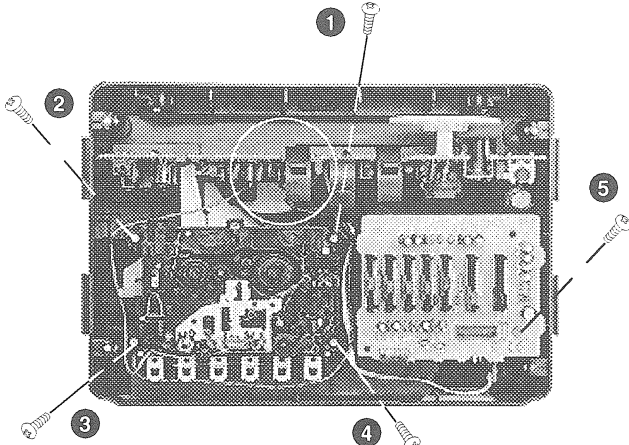
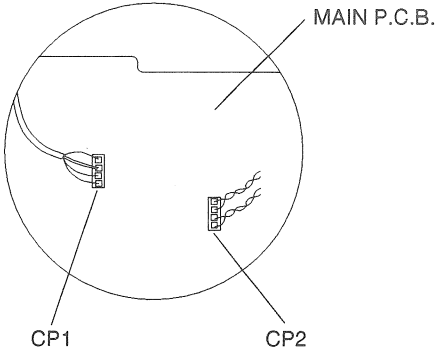
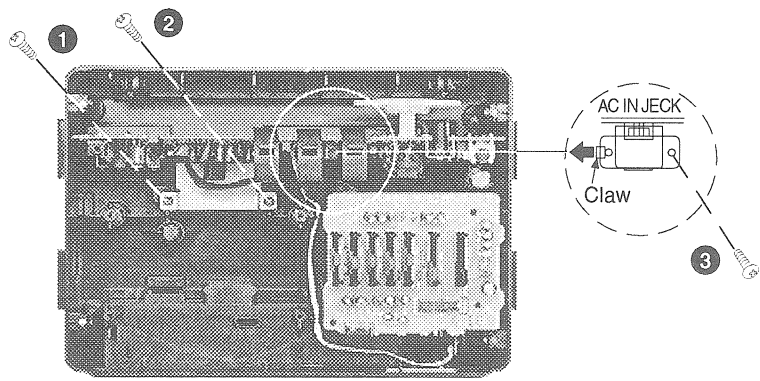
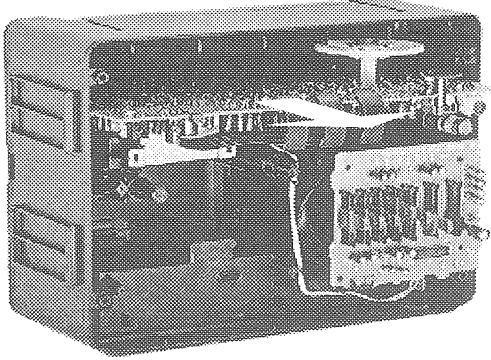
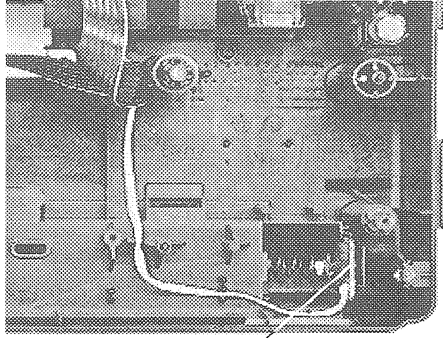
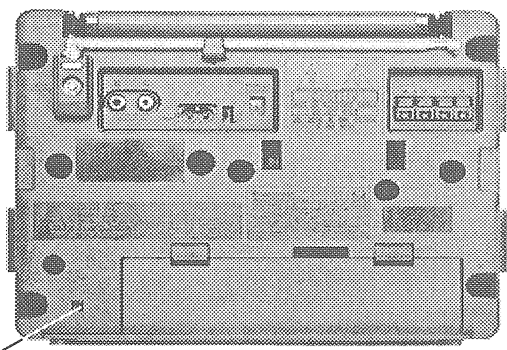
- When not using the CD/LINE IN jacks, disconnect the connector from it.



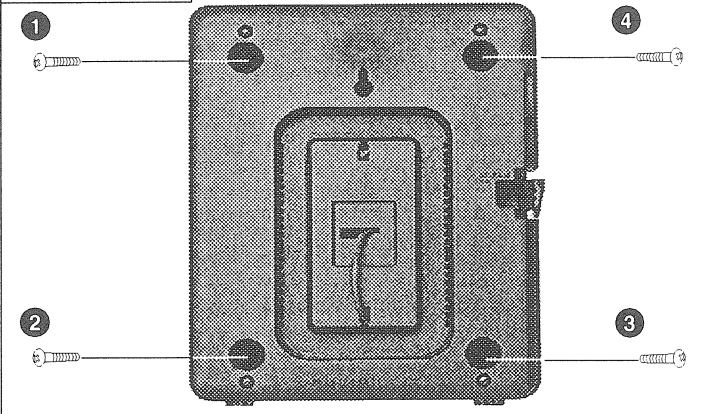
- ㉗ Speaker terminals (SPEAKER)
- ㉘ Telescopic antenna
- ㉙ AC IN socket (AC IN ~)
- ㉚ Voltage selector (VOLTAGE SELECTOR)
- ㉛ Battery compartment cover
- ㉜ Speaker cables

■ Disassembly Instructions

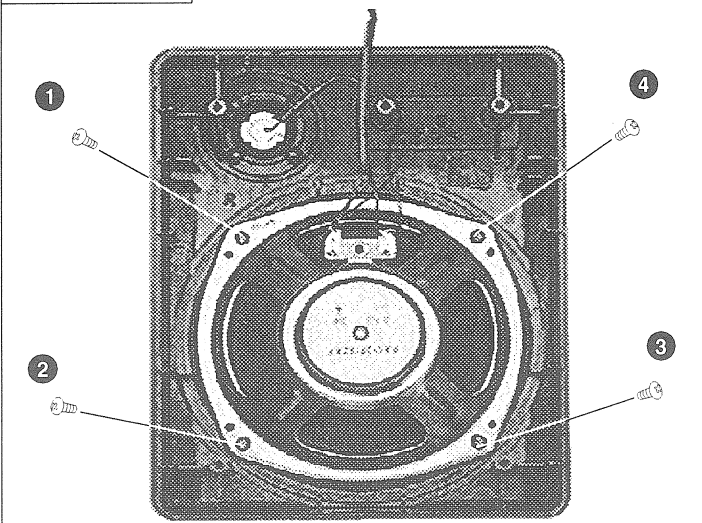
Ref. No. 1 Removal of the Front Cabinet Procedure 1 1. Remove the 5 screws (❶ ~ ❺)  2. Press the stop/eject button.  STOP/EJECT Button 3. Remove the front cabinet in the direction of arrow.   XTV3+20G Ref. No. 1 ❶ ~ ❺ Ref. No. 8 ❶ ~ ❹	Ref. No. 2 Removal of the Cassette Lid Procedure 2 1. Press the Eject button. 2. Remove the cassette lid in the direction of arrow. 
Ref. No. 3 Removal of the Cassette Holder Procedure 1 → 3 1. Remove the 2 ribs in the direction of arrow. 	Ref. No. 4 Removal of the Tuning Knob Procedure 1 → 4 1. Refer Area A in Ref. No. 3. 2. Press the Rib in the direction of arrow and pull out the Knob. 

Ref. No. 5	Removal of the Mechanism Unit and Graphic Equalizer P.C.B.
Procedure 1 → 5	1. Remove 5 screws (① ~ ⑤). 2. Release 2 connectors (CP1, CP2). 3. Remove the mechanism unit and graphic equalizer P.C.B.
	  Ref. No. 5 ① ~ ⑤ Ref. No. 6 ① ~ ③
Ref. No. 6	Removal of the Main P.C.B.
Procedure 1 → 5 → 6	1. Remove the 3 screw (① ~ ③). 2. Release the claw in the direction of arrow. 3. Pull out the main P.C.B. in the direction of arrow.
	
Ref. No. 7	Removal of the Battery P.C.B.
Procedure 1 → 5 → 7	1. Release the claw on the back of the rear cabinet using a screwdriver. 2. Pull out the Battery P.C.B.
	  Ref. No. 9 ① ~ ④

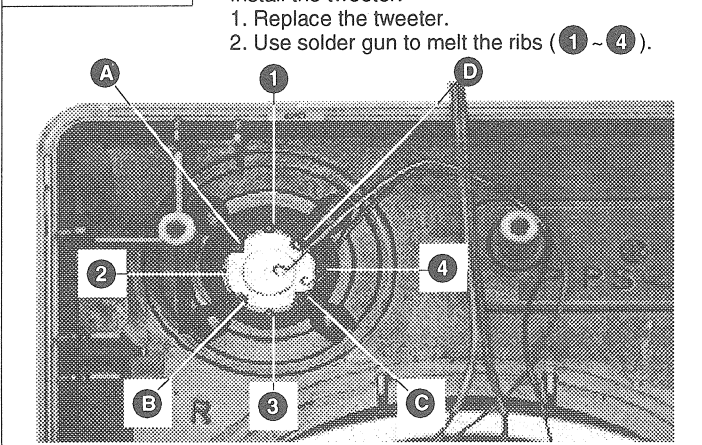
Ref. No. 8	Removal of the Speaker Front Cabinet
Procedure 8	1. Remove 4 screws (❶ ~ ❹).



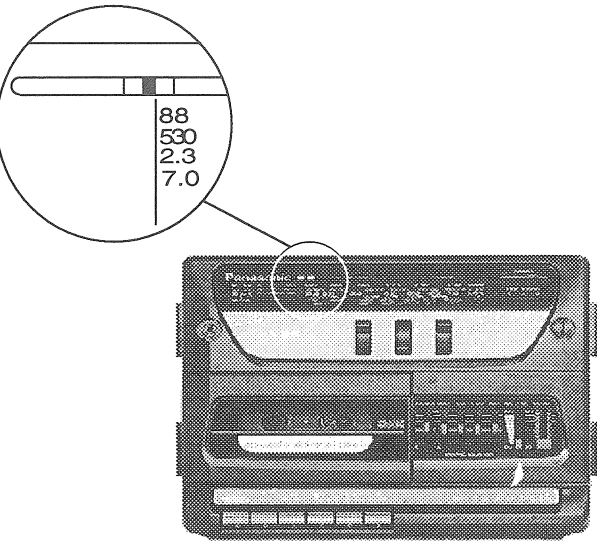
Ref. No. 9	Removal of the Woofer
Procedure 8 → 9	1. Remove 4 screws (❶ ~ ❹).



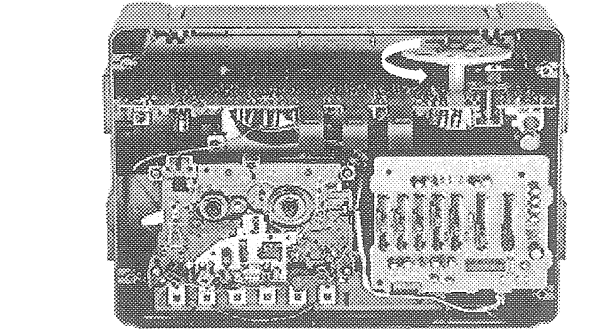
Ref. No. 10	Removal of the Tweeter
Procedure 8 → 10	1. Cut the 4 melted ribs with knife (❶ ~ ❹). 2. Remove the tweeter. Install the tweeter. 1. Replace the tweeter. 2. Use solder gun to melt the ribs (❶ ~ ❹).



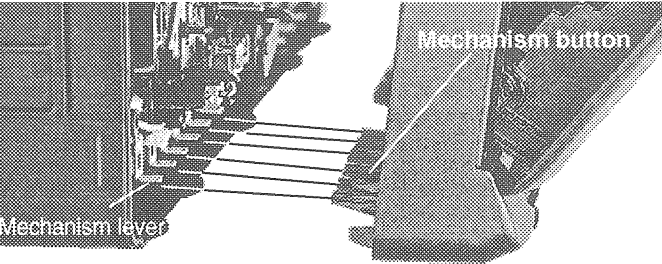
■ Front Cabinet Assembly



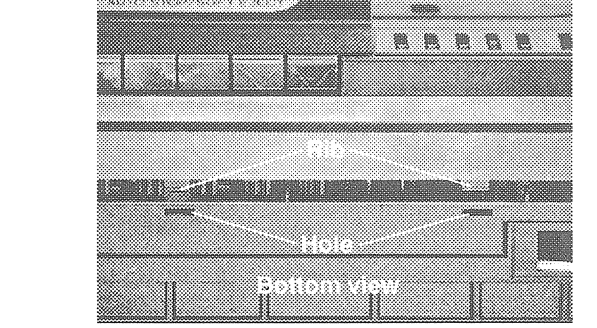
1. Line the dial pointer in the front cabinet assembly exactly before the line.



2. Turn the vericon gear on the main P.C.B. fully in anticlockwise direction.

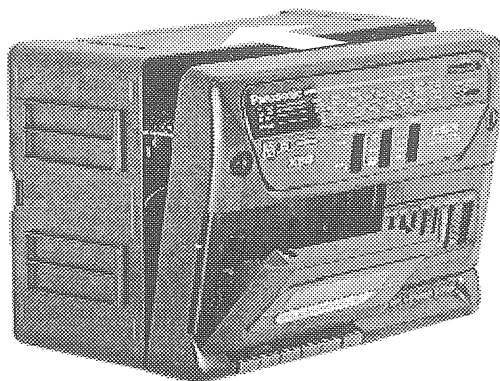


3. Ensure mechanism button is below mechanism lever when fixing.



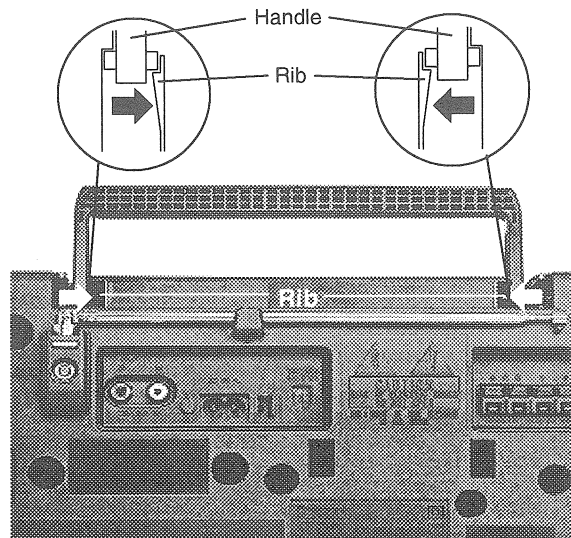
4. Push the 2 ribs into the 2 holes.

■ Front Cabinet Assembly

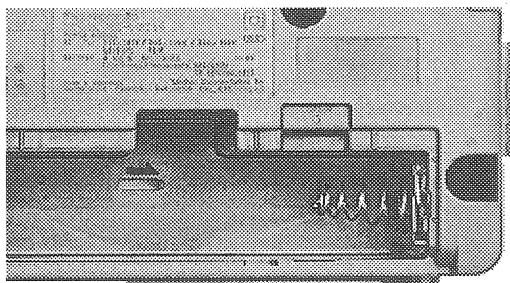


5. Replace the front cabinet.
6. Ensure the cassette lid can be closed after fixing.

- To remove the handle.
1. Release the 2 ribs.
 2. Slide out the handle.



What To Do When The Tape Is Entangled



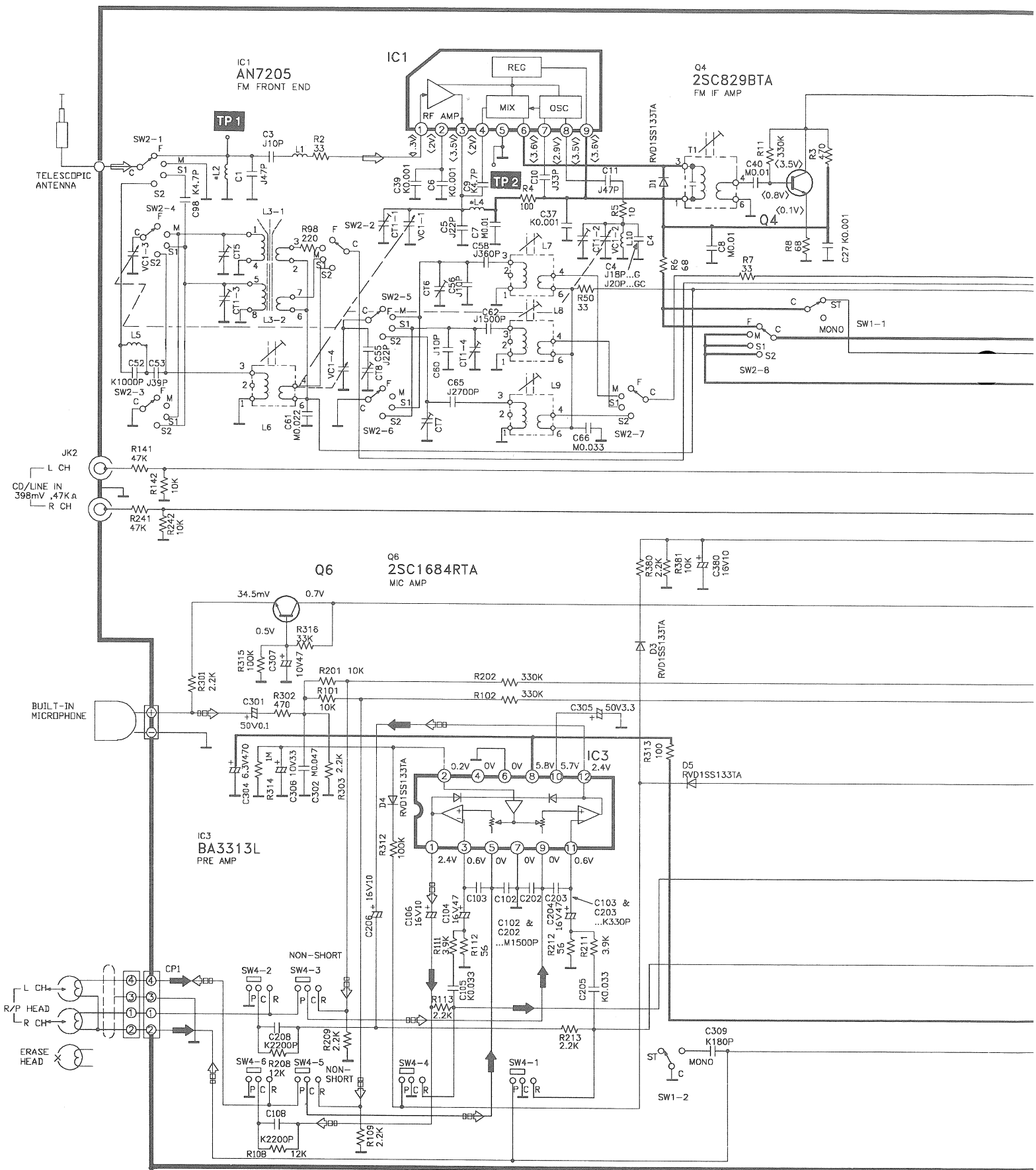
When the tape is caught in the pinch roller, etc., release the tape by turning the pulley on the motor with a screw-driver in the direction of arrow.

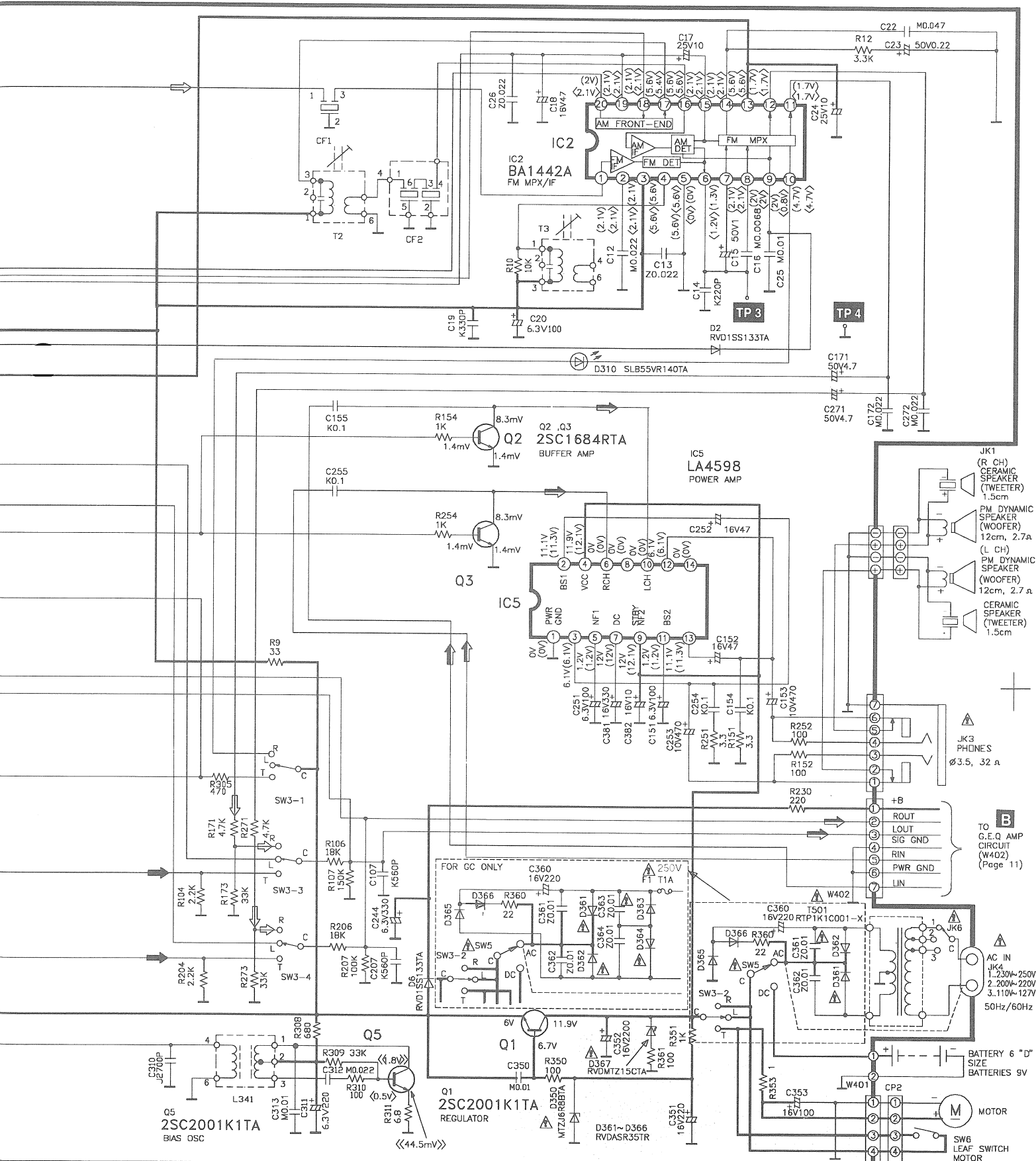
■ Terminal Guide of ICs, Transistors & Diodes

AN7205	BA1442A	AN7332K	BA3313L	LA4598
2SC1684RTA 2SC2001K1TA 2SC829BTA	MTZJ6R8BTA RVDMTZ15CTA	RVD1SR35TR	RVD1SS133TA	SLB55VR140TA

■ Schematic Diagram

A MAIN CIRCUIT





NOTES:

- SW1-1 ~ SW1-2 : FM Mode/Beatproof Select Switch. (ST/II... STEREO/BEATPROOF II, MONO/I... MONO/BEATPROOF I)
- SW2-1 ~ SW2-8 : Band Select Switch. (F...FM, M...MW, S1...SW1, S2...SW2)
- SW3-1 ~ SW3-4 : Function Select Switch. (L...CD/LINE, R...RADIO, T...TAPE/OFF)
- SW4-1 ~ SW4-6 : Record/Playback Switch. (R...RECORD, P...PALYBACK)
- SW5 : AC Power/Battery Select Switch (JK4).
- SW6 : Motor Switch
- VR100 : Balance.
- VR200-1 ~ VR200-2 : Graphic Equalizer VR (330Hz).
- VR300-1 ~ VR300-2 : Graphic Equalizer VR (1kHz).
- VR400-1 ~ VR400-2 : Graphic Equalizer VR (3.3kHz).
- VR500-1 ~ VR500-2 : Graphic Equalizer VR (10kHz).
- VR600-1 ~ VR600-2 : XBS Level Control VR.
- VR700-1 ~ VR700-2 : Volume Control VR.

- Battery Current consumption:

Vol. min..... 60mA (RADIO)
130mA (TAPE)

Vol. max..... 450mA (RADIO)
500mA (TAPE)

Measurement condition:
Radio : FM 60 dB, 30%mod
AM 74 dB/m, 30%mod
Tape : 315 Hz, 0dB

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

No mark... Tape Playback < > ... FM
() ... AM << >>... RECORD

CAUTION !

- IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.
- Cover the parts boxes made of plastics with aluminum foil.
 - Ground the soldering iron.
 - Put a conductive mat on the work table.
 - Do not touch the pins of IC or LSI with fingers directly.

- Important safety notice :
Components identified by  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
- This schematic diagram may be modified at anytime with the development of new technology.

-  ... MAIN SIGNAL LINE
-  ... TAPE PLAYBACK SIGNAL LINE
-  ... RECORDING SIGNAL LINE
-  ... FM SIGNAL LINE
-  ... +B LINE

• MW-RF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 1)	REMARKS
CONNECTIONS	FREQUENCY				
"	511 kHz (G) 514 ± 3 kHz (GC)	Tuning capacitor fully closed.	"	L7 (MW OSC Coil)	Adjust for maximum output.
"	1650 kHz (G) 1639 ± 5 kHz (GC)	Tuning capacitor fully opened.	"	CT6 (MW OSC Trimmer)	Adjust for maximum output.
"	550 kHz	Tune to signal	"	[*1] L3-1 (MW ANT Coil)	Adjust for maximum output. Adjust L3-1 by moving coil bobbin along ferrite core.
"	1500 kHz	"	"	CT5 (MW ANT Trimmer)	Adjust for maximum output.
[*1] Fix antenna coil with wax after completing alignment.					

• SW1-RF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 1)	REMARKS
CONNECTIONS	FREQUENCY				
"	2.25 MHz	Tuning capacitor fully closed.	"	L8 (SW1 OSC Coil)	Adjust for maximum output.
"	7.23 MHz	Tuning capacitor fully opened.	"	CT1-4 (SW1 OSC Trimmer)	Adjust for maximum output.
"	2.30 MHz	Tune to signal	"	[*1] L3-2 (SW1 ANT Coil)	Adjust for maximum output. Adjust L3-2 by moving coil bobbin along ferrite core.
"	7.00 MHz	"	"	CT1-3 (SW1 ANT Trimmer)	Adjust for maximum output.
[*1] Fix antenna coil with wax after completing alignment.					

• SW2-RF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 1)	REMARKS
CONNECTIONS	FREQUENCY				
"	6.84 MHz	Tuning capacitor fully closed.	"	L9 (SW2 OSC Coil)	Adjust for maximum output.
"	22.79 MHz	Tuning capacitor fully opened.	"	CT7 (SW2 OSC Trimmer)	Adjust for maximum output.
"	7.00 MHz	Tune to signal	"	L6 (SW2 ANT Coil)	Adjust for maximum output.

• FM-IF ALIGNMENT

Connect to test point TP1 through ceramic capacitor. Negative side to test point TP2 .	10.7 MHz (Sweep)	Point of non-interference. (on/about 90 MHz)	Connect vert. amp. of scope to test point TP3 . Negative side to test point TP4 .	T1(FM 1st)	Waveform is shown in Fig. 3
"	"	"	"	T3(FM 2nd)	Waveform is shown in Fig. 4

• FM-RF ALIGNMENT

Connect to test point TP1 through FM dummy antenna. Negative side to test point TP2 .	86.2MHz (G) 87.35MHz (GC) ± 50 kHz	Variable capacitor fully closed.	Headphone Jack (32Ω) (Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.)	L10 (FM OSC Coil)	[*2] Adjust for maximum output.
	109.2MHz (G) 108.3MHz ±70 kHz	Variable capacitor fully opened.	"	CT1-2 (FM OSC Trimmer)	"
	106MHz	Tune to signal	"	CT1-1 (FM ANT Trimmer)	"

[*2] Three output response will be present; proper tuning is the center frequency.

■ CASSETTE DECK SECTION

• ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Note : Azimuth Head Alignment is not required due to Aztec Head is used in the cassette mechanism.

• TAPE SPEED ALIGNMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCWAT (3 kHz)	Headphone Jack (32Ω) (Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.)	Motor VR. (show in Fig.5)	3000 ± 50Hz	1. Set the unit to 'TAPE' position. 2. Playback the middle part of the test tape (QZZCWAT). 3. Adjust motor VR for output value of 3000 ± 50Hz shown on frequency counter.

■ ALIGNMENT POINTS

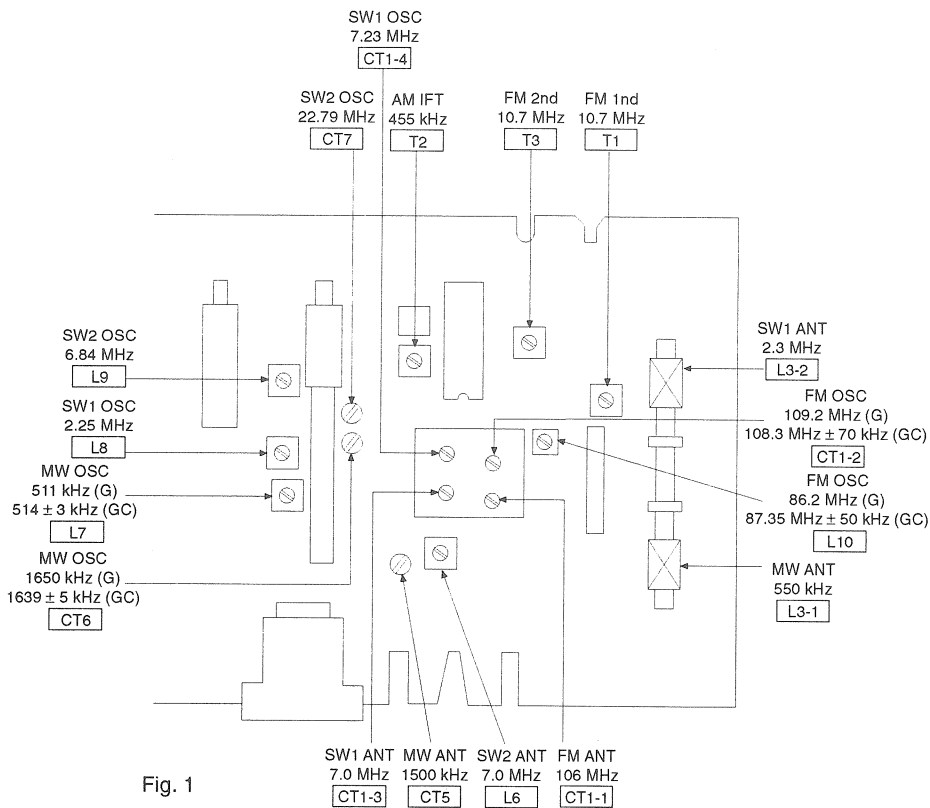


Fig. 1

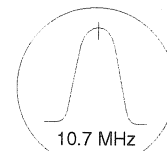
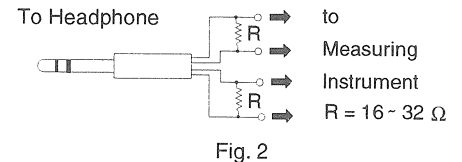
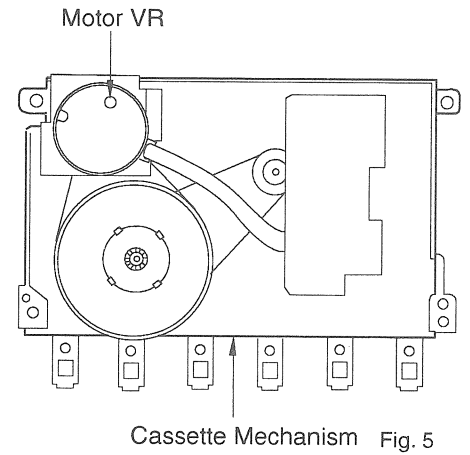


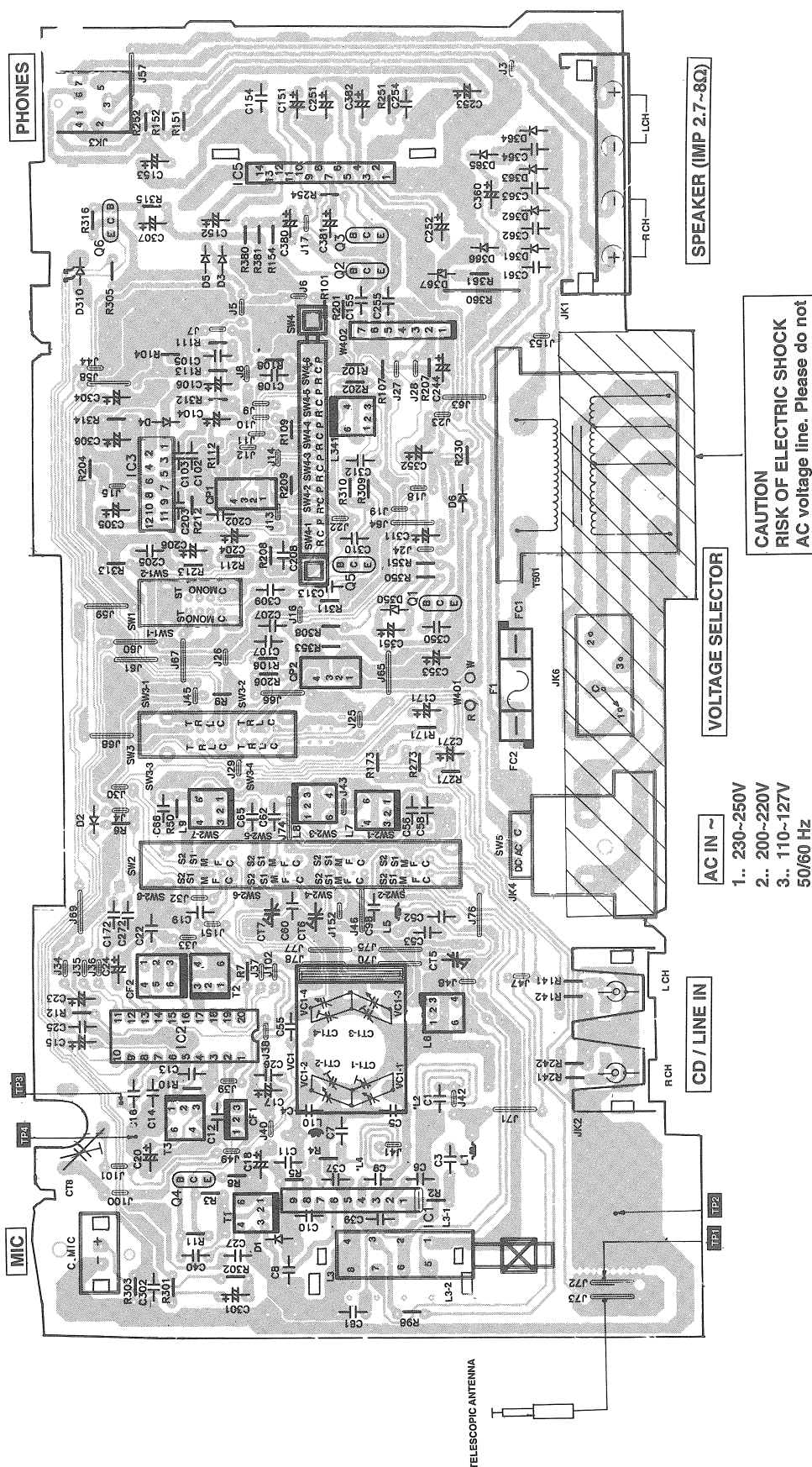
Fig. 3



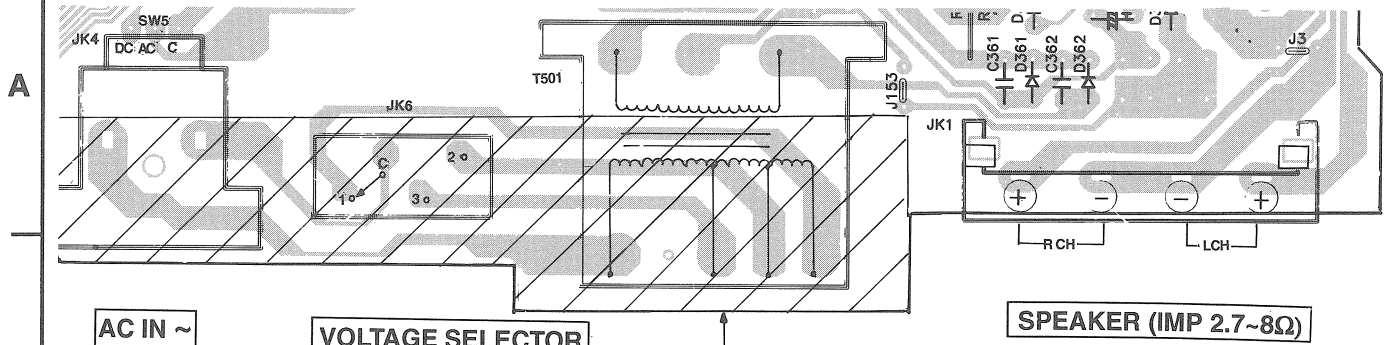
Fig. 4

Printed Circuit Board

A MAIN P.C.B. (REPX0078A) ...GC

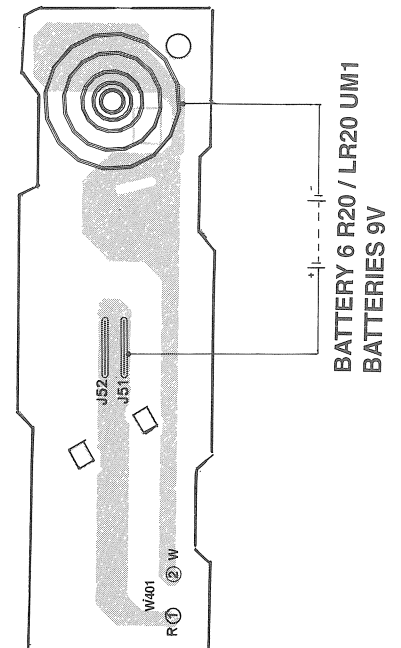
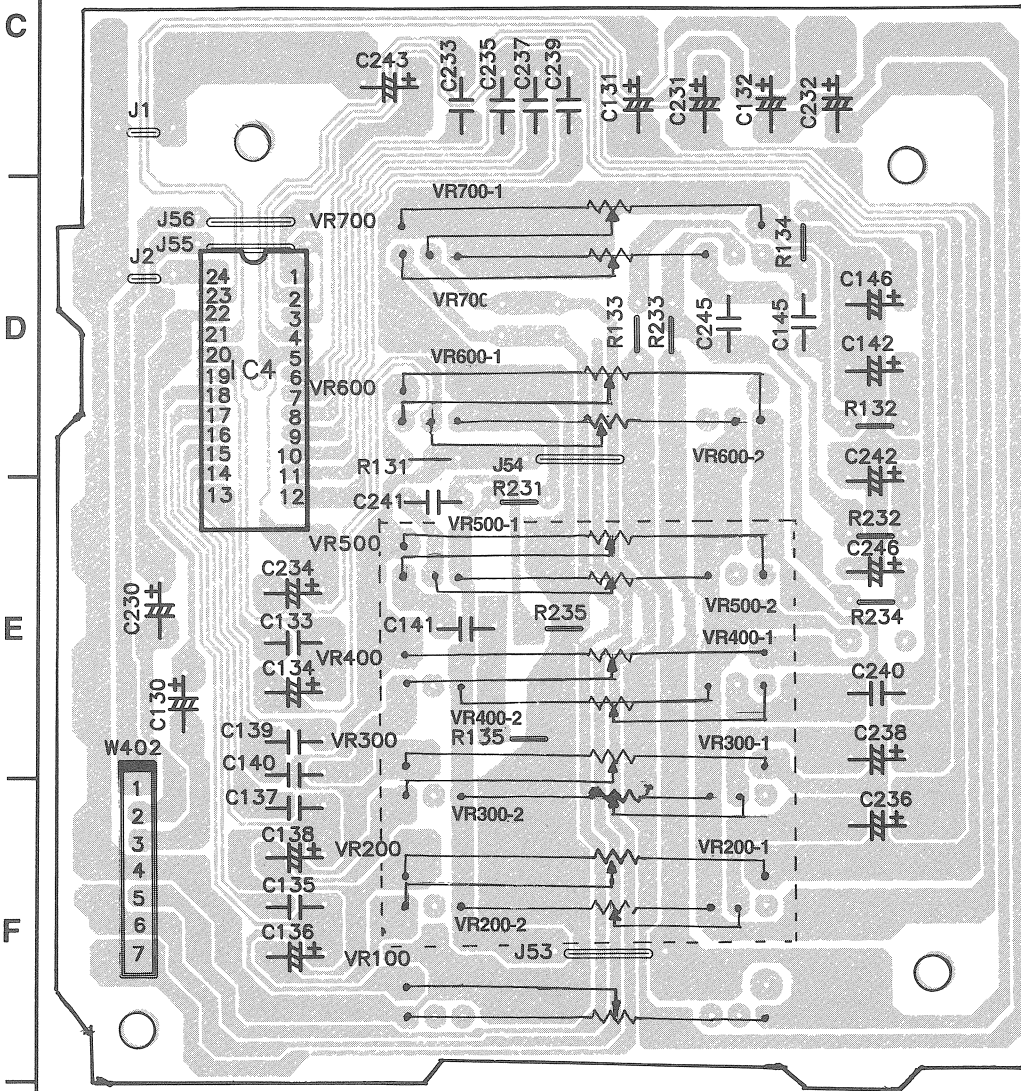


A MAIN P.C.B. (REPX0078C) ...G



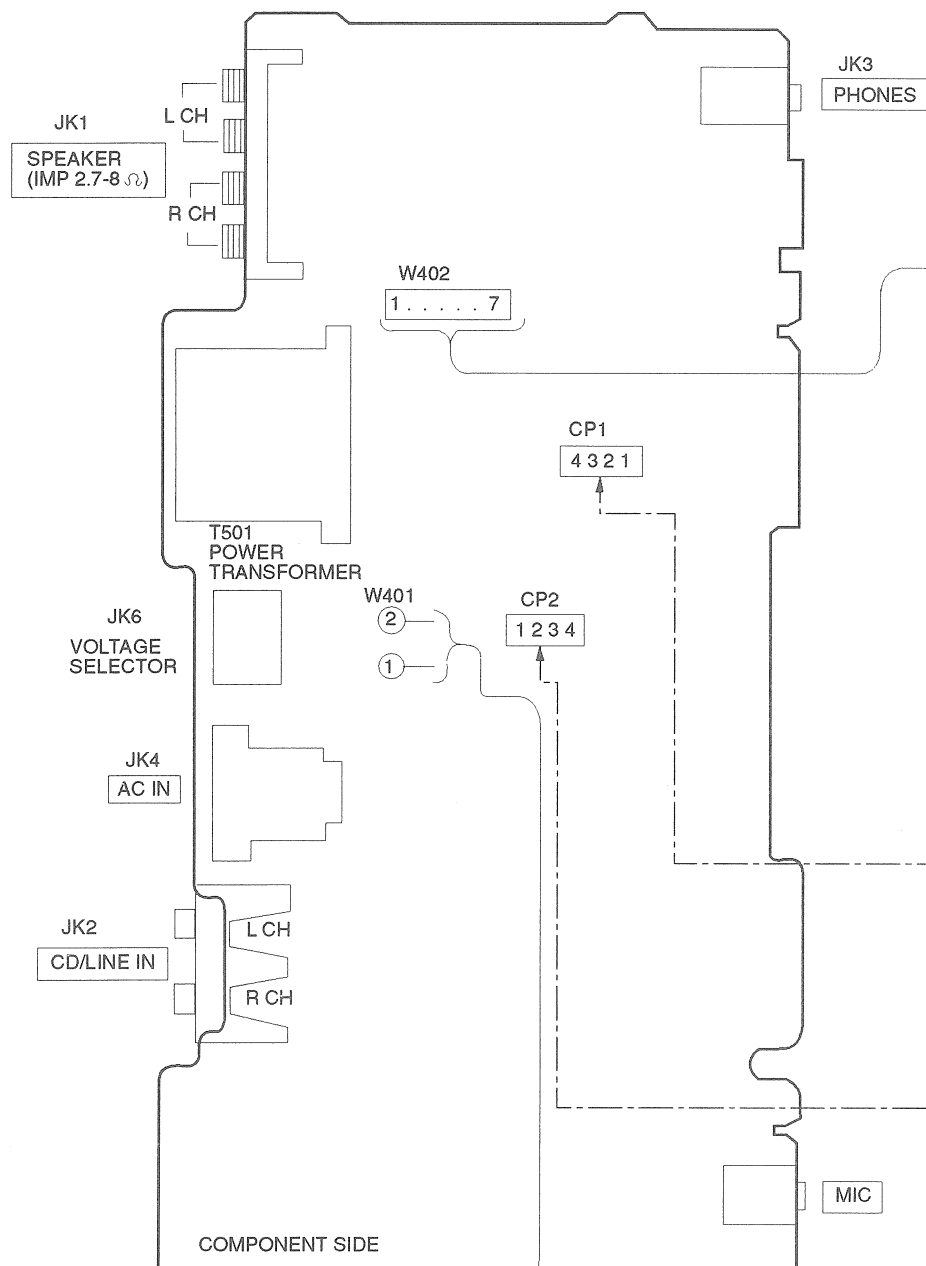
CAUTION
RISK OF ELECTRIC SHOCK
AC voltage line. Please do not touch this portion.

B G.E.Q. P.C.B. (REPX0078C) ...G (REPX0078A) ...GC

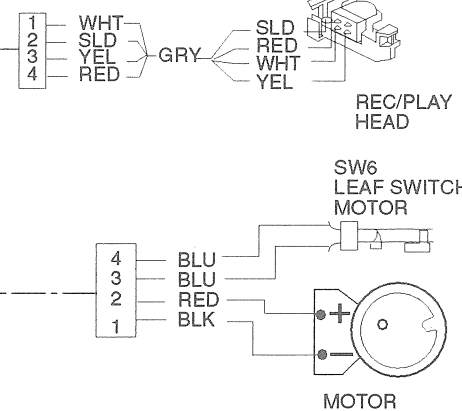
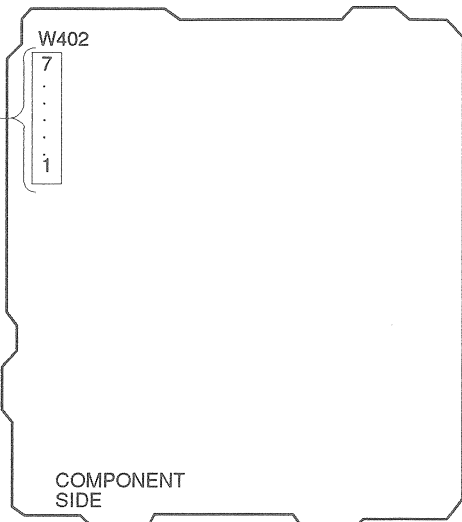


Wire Connection Diagram

A MAIN P.C.B

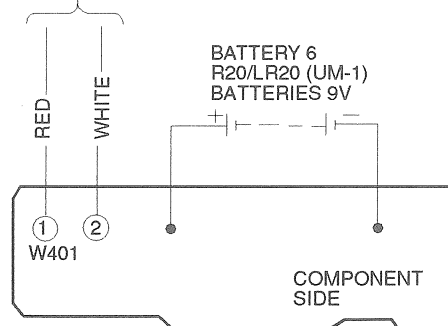


B G.E.Q.P.C.B



NOTES
COLOUR WIRE:

YEL.....YELLOW
WHT.....WHITE
RED.....RED
BLU.....BLUE
BLK.....BLACK
GRY.....GRAY
SLD.....SHIELD WIRE



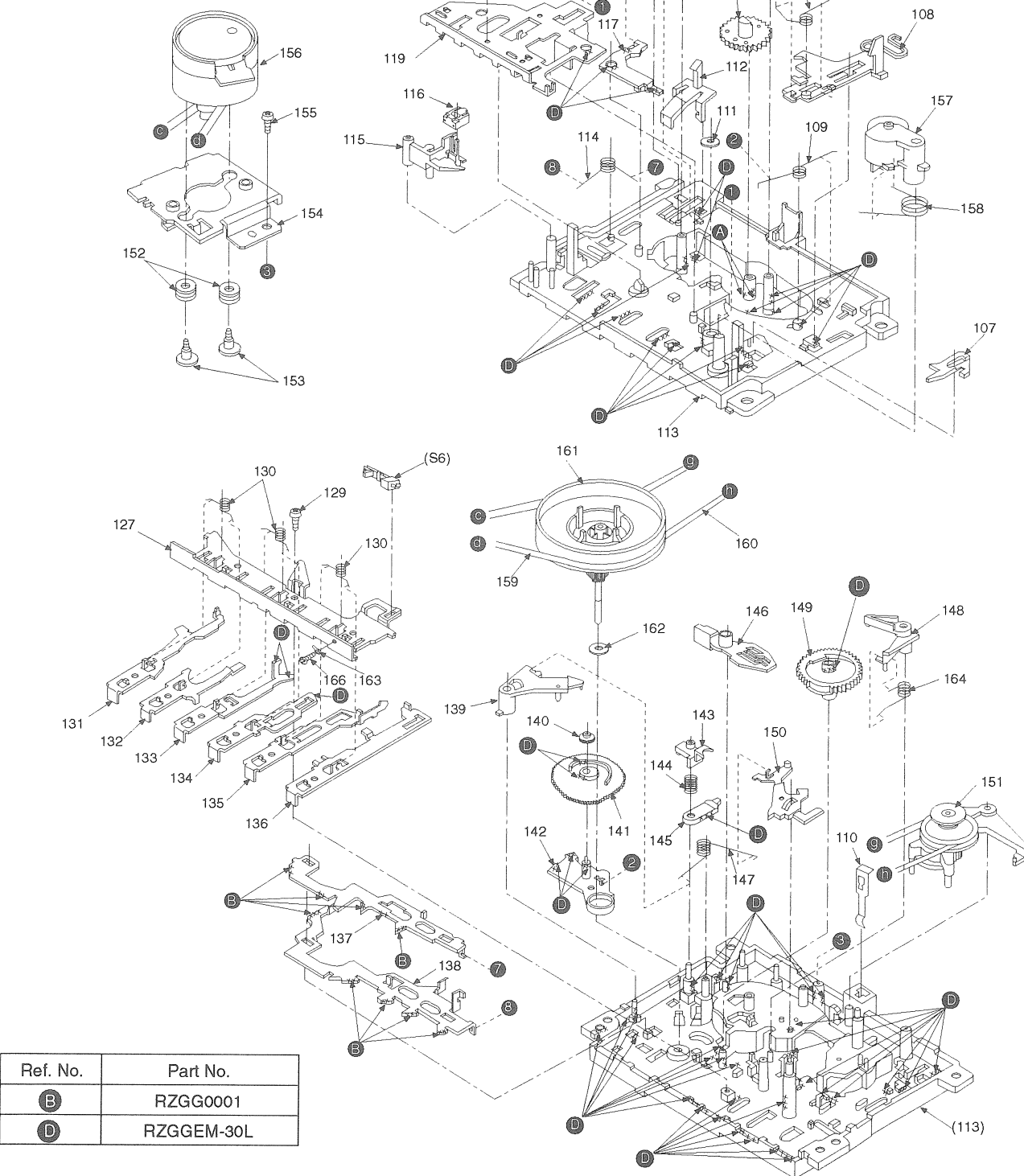
Mechanism Parts Location (RAA0903)

Note :

When changing mechanism parts, apply grease to areas marked "XX" as shown in diagram.

SPECIFICATION

Playback torque	25~55 g.cm
Fast forward torque	65~130 g.cm
Rewind torque	65~130 g.cm



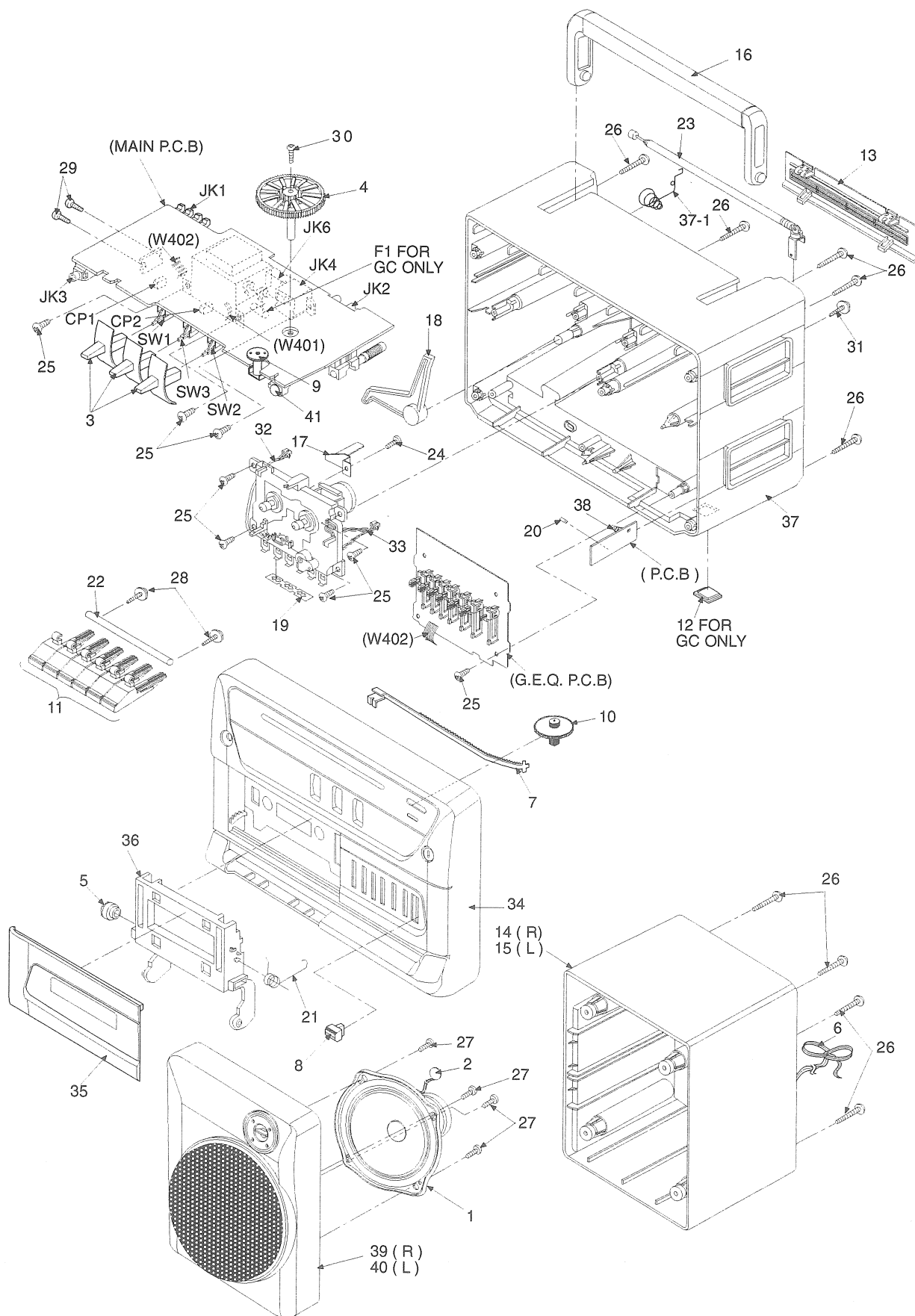
Mechanism Parts List

Notes : [M] in Remarks column indicates parts supplied by MESA

Ref No.	Part No.	Part Name & Description	Remarks
		CASSETTE DECK	
101	RXR0004	TAKE UP REEL ASS'Y	[M]
102	RDG0059	FF RELAY GEAR	[M]
103	RMS0055	REEL SHAFT	[M]
104	RXR0005	SUPPLY REEL ASS'Y	[M]
105	RMB0125	SPRING	[M]
106	RMB0047	SPRING	[M]
107	RML0076	EJECT SELECTION LVR	[M]
108	RMM0029	EJECT SLIDE LEVER	[M]
109	RMB0048	SPRING	[M]
110	RMC0061	SPRING	[M]
111	RHW16009	CAPSTAN WASHER	[M]
112	RML0081-1	RECORD SAFETY LEVER	[M]
113	RFU189ZA	MECHANISM BASE ASS'Y	[M]
114	RMB0046-1	SPRING	[M]
115	RML0080	ERASE HEAD ARM	[M]
116	RBR2CY009	ERASE HEAD	[M]
117	RML0116	BRAKE ARM	[M]
118	RMB0109-1	SPRING	[M]
119	RMA0696	HEAD PANEL	[M]
120	RMQ0384	HEAD BASE	[M]
124	RBR4CY016-M	R/P HEAD	[M]
126	XTN2+12F	SCREW	[M]
127	RMA0109	BACK PLATE	[M]
129	XTN2+6J	SCREW	
130	RMB0043-1	SPRING	[M]
131	RMM0027	PAUSE ROD	[M]
132	RMM0026	STOP ROD	[M]
133	RMM0025	FF ROD	[M]
134	RMM0024	REW ROD	[M]
135	RMM0023	PLAY ROD	[M]

Ref No.	Part No.	Part Name & Description	Remarks
136	RMM0028	REC ROD	[M]
137	RML0078	FUNCTION PLATE	[M]
138	RML0077	LOCK PLATE	[M]
139	RML0072	AS RELEASE LEVER	[M]
140	RMR0227	IDLER GEAR BUSH	[M]
141	RDG0057	IDLER GEAR	[M]
142	RML0074	IDLER LEVER	[M]
143	RMR0211	PAUSE BUSH	[M]
144	RMB0053	SPRING	[M]
145	RML0082	PAUSE LEVER	[M]
146	RML0071	SWAY LEVER	[M]
147	RMB0045	AS SPRING	[M]
148	RXL0042	TRIGGER LEVER ASS'Y	[M]
149	RDK0005	CAM GEAR	[M]
150	RML0073-1	AS PROTECT LEVER	[M]
151	RXP0014	RF CLUTCH ASS'Y	[M]
152	RMG0102	MOTOR RUBBER CUSHION	[M]
153	RHD26002	SCREW	
154	RMA0108	MOTOR BRACKET	[M]
155	XTN26+8J	SCREW	
156	RFM187ZA	MOTOR ASS'Y	[M]
157	RXP0015	PINCH ROLLER ASS'Y	[M]
158	RMB0049	SPRING	[M]
159	RDV0007	BELT.MAIN	[M]
160	RDV0006-1	RF BELT	[M]
161	RXF0012	FLYWHEEL ASS'Y	[M]
162	RHW21008	FLYWHEEL WASHER	[M]
163	RJR0033	EARTH LUG	[M]
164	RMB0044	TRIGGER SPRING	[M]
165	RME0098-2	EJECT SLIDE LEVER SP	[M]
166	XTN2+4F	EARTH LUG SCREW	

■ Cabinet Parts Location



Repalcement Parts List

Notes: * Important safety notice:
Components identified by  mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.
When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list .
* The parenthesized indications in the Remarks columns specify the areas or colour. (Refer to the cover page for area or colour)
Parts without these indications can be used for all areas.
* [M] Indicates in the Remarks columns indicates parts supplied by MESA.

Ref No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RAS12P18ZA-F	WOOFER	[M]
2	RAT0002	TWEETER	[M]
3	RBD562WA-S	SELECTOR KNOB	[M]
4	RDGX0005	VARICON GEAR	[M]
5	RDG5874Z	DAMPER GEAR	[M]
6	REXX0089	SPEAKER CORD	[M]
7	RGJX0001-W	POINTER	[M]
8	RGVX0003	VOLUME KNOB	[M]
9	RGXX0003-K	FINE TUNING KNOB	[M]
10	RGXX0006-K	TUNING KNOB	[M]
11	RGZX0003-S	MECHA BUTTON (SET)	[M]
12	RHR1383ZA	ALIGNMENT HOLE COVER	[M] (GC)
13	RKK2SZA-0	BATTERY COVER	[M]
14	RKPX0002-K	SPEAKER BACK CAB(R)	[M]
15	RKPX0003-K	SPEAKER BACK CAB(L)	[M]
16	RKX3SZA-0	HANDLE	[M]
17	RMC0046	RECORDING SPRING	[M]
18	RMLX0004	RECORDING LEVER	[M]
19	RMXX0004	SPACER	[M]
20	RMZ0280	BATTERY INSULATOR	[M]
21	RUS781YA	EJECT SPRING	[M]
22	SUX102	MECHA. BUTTON HOLDIN	[M]
23	XEARR175ED-Y	R. ANT	
24	XTN2+4F	REC. SPRING SCREW	
25	XTV3+12G	GENERAL SCREWS	
26	XTV3+20G	CASING SCREW	
27	XTV3+8G	MECHA ROD SCREW	
28	XTWS3+8T	MECHANISM BUTTON SCR	
29	XTW3+10F	SCREW FOR IC LA4598	
30	XYN26+C6	VARICON GEAR SCREW	
31	XYN3+F8FY	ANT ROD SCREW	
32	1JSACS700ZC1	REC/PLAY HEAD WIRE U	[M]
33	2JSACS710ZA1	MOTOR WIRE UNIT	[M]
34	RFKGXCS720GK	FRONT CABINET ASS'Y	[M] (G)
34	RFKGXCS720GC	FRONT CABINET ASS'Y	[M] (GC)
35	RFKLXCS720PK	CASS. LID ASS'Y	[M]
36	RFKLXDT610PK	CASS. HOLDER ASS'Y	[M]
37	RFKHXC720GK	REAR CABINET ASS'Y	[M] (G)
37	RFKHXC720GC	REAR CABINET ASS'Y	[M] (GC)

Ref No.	Part No.	Part Name & Description	Remarks
37-1	RJC931ZC	BATTERY SPRING	
38	RJC511ZBS	BATTERY SPRING	[M]
39	RFKAXCT820PA	SPEAKER F/CAB.ASSY(R)	[M]
40	RFKAXCT820PB	SPEAKER F/CAB ASSY(L)	[M]
41	RJM164YA	C. MIC	[M]
		INTEGRATED CIRCUITS	
IC1	AN7205	IC, FM FRONT END	
IC2	BA1442A	IC, AM IF/DEMLTPX	[M]
IC3	BA3313L	IC, REC/PLAY BACK AM	[M]
IC4	AN7332K	IC, GEQ	[M]
IC5	LA4598	IC, POWER AMP	
		TRANSISTORS	
Q1	2SC2001K1TA	TRANSISTOR	
Q2	2SC1684RTA	TRANSISTOR	
Q3	2SC1684RTA	TRANSISTOR	
Q4	2SC829BTA	TRANSISTOR	
Q5	2SC2001K1TA	TRANSISTOR	
Q6	2SC1684RTA	TRANSISTOR	
		DIODES	
D1	RVD1SS133TA	DIODE	
D2	RVD1SS133TA	DIODE	
D3	RVD1SS133TA	DIODE	
D4	RVD1SS133TA	DIODE	
D5	RVD1SS133TA	DIODE	
D6	RVD1SS133TA	DIODE	
D310	SLB55VR140TA	DIODE	[M]
D350	MTZJ6R8BTA	DIODE	
D361	RVD1SR35TR	DIODE	
D362	RVD1SR35TR	DIODE	
D363	RVD1SR35TR	DIODE	 (GC)
D364	RVD1SR35TR	DIODE	 (GC)
D365	RVD1SR35TR	DIODE	
D366	RVD1SR35TR	DIODE	
D367	RVDMTZ15CTA	DIODE	[M] 

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
		VARIABLE RESISTORS		L5	RLQY30S1W	BPF COIL	[M]
				L6	RLA3B44-M	S2 RF	
VR100	RVV1I5G15A	VR, BALANCE	[M]	L7	RL02B108-M	MW OSC	
VR200	RVV2I4G54A	VR, GEQ. (330Hz)	[M]	L8	RL03B91-M	S1 OSC	
VR300	RVV2I4G54A	VR, GEQ. (1kHz)	[M]	L9	RL03B95-M	S2 OSC	
VR400	RVV2I4G54A	VR, GEQ. (3.3kHz)	[M]	L10	RLD4Y53W	FM OSC COIL	[M] (G)
VR500	RVV2I4G54A	VR, GEQ. (10kHz)	[M]	L10	RL04N233-0	FM OSC COIL	[M] (GC)
VR600	RVV2I3B54A	VR, XBS	[M]	L341	RL09B17-T	REC BIAS OSC COIL	
VR700	RRV20R03B54A	VR, VOLUME	[M]	T1	RLI4B153-M	FM IFT	
				T2	RLI2B153-M	AM IFT	
		VARIABLE CAPACITOR		T3	RLI4B153-M	FM IFT	
				T501	RLT5K3G22B-X	POWER TRANSFORMER	[M] ⚠ (GC)
VC1	RCV4RC2V2K-A	VARICON		T501	RLT5K3X10B-X	TRANSFORMER	[M] ⚠ (G)
CT5	RCV20AF1T-A	VARIABLE CAP	[M]				
CT6	RCV20AF1T-A	VARIABLE CAP	[M]			CERAMIC FILTERS	
CT7	RCV10AF1T-A	VARIABLE CAP	[M]				
CT8	RCVMF1PC7B	FINE TUNING		CF1	RVF107WDZT	FM CERAMIC FILTER	
				CF2	RVFSFZ455JL	AM CERAMIC FILTER	
		SWITCHES					
						FUSE	
SW1	RST2B54ZA-H	SW, BEAT PROOF	[M]				
SW2	RST4H18ZA-H	SW, BAND	[M]	F1	XBA2C10TB0	FUSE	⚠ (GC)
SW3	RST3D28ZA-H	SW, FUNCTION	[M]				
SW4	RSH2F18ZA-A	SW, REC				FUSE HOLDER	
SW5	RJ1SE01-H	SW, AC (JK4)	⚠				
SW6	RSH1A003-U	SW, LEAF SWITCH		FC1	EYF52BC	FUSE HOLDER	(GC)
				FC2	EYF52BC	FUSE HOLDER	(GC)
		CONNECTORS				JACKS	
CP1	RJP4G18ZA	MOTOR CONNECTOR		JK1	RJF1098ZA-H	JK, SPEAKER	[M]
CP2	RJP4G18ZA	MOTOR CONNECTOR		JK2	RJF1099YA	JK, LINE IN	
				JK3	RJJ37TK01-C	JK, HP	
				JK4	RJJ1SE01-H	JK, AC	⚠
		COILS & TRANSFORMERS		JK6	RSR3A01YA-H	JK, VOLTAGE SELECT	⚠
L1	RLQY30S1W	BPF COIL	[M]				
L3	RLV5C005-0	BAR ANT	[M]				

■ Resistors & Capacitors

Notes :

- * Capacitor values are in microfarads (μF) unless specified otherwise, P=Pico-farads (pF), F=Farads.
- * Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).
- * Bracketed indications in Ref. No. columns specify the area (Refer to the first page for area).
- Parts without these indications can be used for all areas.
- * [M] Indicates in the values & remarks column indicates parts supplied by MESA

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
		RESISTORS						
			R5	ERDS2TJ100T	10 1/4W	R10	ERDS2TJ103T	10K 1/4W
			R6	ERDS2TJ680T	68 1/4W	R11	ERDS2TJ334T	330K 1/4W
R2	ERDS2TJ330T	33 1/4W	R7	ERDS2TJ330T	33 1/4W	R12	ERDS2TJ332T	3.3K 1/4W
R3	ERDS2TJ471T	470 1/4W	R8	ERDS2TJ680T	68 1/4W	R50	ERDS2TJ330T	33 1/4W
R4	ERDS2TJ101T	100 1/4W	R9	ERDS2TJ330T	33 1/4W	R98	ERDS2TJ221T	220 1/4W

Ref. No.	Part No.	Values & Remarks	
R101	ERDS2TJ103T	10K	1/4W
R102	ERDS2TJ334T	330K	1/4W
R104	ERDS2TJ222T	2.2K	1/4W
R106	ERDS2TJ183T	18K	1/4W
R107	ERDS2TJ154T	150K	1/4W
R108	ERDS2TJ123T	12K	1/4W
R109	ERDS2TJ222T	2.2K	1/4W
R111	ERDS2TJ392T	3.9K	1/4W
R112	ERDS2TJ560T	56	1/4W
R113	ERDS2TJ222T	2.2K	1/4W
R131	ERDS2TJ332T	3.3K	1/4W
R132	ERDS2TJ153T	15K	1/4W
R133	ERDS2TJ222T	2.2K	1/4W
R134	ERDS2TJ222T	2.2K	1/4W
R135	ERDS2TJ102T	1K	1/4W
R141	ERDS2TJ473T	47K	1/4W
R142	ERDS2TJ103T	10K	1/4W
R151	ERDS2TJ3R3T	3.3	1/4W
R152	ERDS2TJ101T	100	1/4W
R154	ERDS2TJ102T	1K	1/4W
R171	ERDS2TJ472T	4.7K	1/4W
R173	ERDS2TJ333T	33K	1/4W
R201	ERDS2TJ103T	10K	1/4W
R202	ERDS2TJ334T	330K	1/4W
R204	ERDS2TJ222T	2.2K	1/4W
R206	ERDS2TJ183T	18K	1/4W
R207	ERDS2TJ104T	100K	1/4W
R208	ERDS2TJ123T	12K	1/4W
R209	ERDS2TJ222T	2.2K	1/4W
R211	ERDS2TJ392T	3.9K	1/4W
R212	ERDS2TJ560T	56	1/4W
R213	ERDS2TJ222T	2.2K	1/4W
R230	ERDS2TJ221T	220	1/4W
R231	ERDS2TJ332T	3.3K	1/4W
R232	ERDS2TJ153T	15K	1/4W
R233	ERDS2TJ222T	2.2K	1/4W
R234	ERDS2TJ222T	2.2K	1/4W
R235	ERDS2TJ102T	1K	1/4W
R241	ERDS2TJ473T	47K	1/4W
R242	ERDS2TJ103T	10K	1/4W
R251	ERDS2TJ3R3T	3.3	1/4W
R252	ERDS2TJ101T	100	1/4W
R254	ERDS2TJ102T	1K	1/4W
R271	ERDS2TJ472T	4.7K	1/4W
R273	ERDS2TJ333T	33K	1/4W
R301	ERDS2TJ222T	2.2K	1/4W
R302	ERDS2TJ471T	470	1/4W
R303	ERDS2TJ222T	2.2K	1/4W

Ref. No.	Part No.	Values & Remarks	
R305	ERDS2TJ471T	470	1/4W
R308	ERDS2TJ681T	680	1/4W
R309	ERDS2TJ333T	33K	1/4W
R310	ERDS2TJ101T	100	1/4W
R311	ERDS2TJ6R8T	6.8	1/4W
R312	ERDS2TJ104T	100K	1/4W
R313	ERDS2TJ101T	100	1/4W
R314	ERDS2TJ105T	1M	1/4W
R315	ERDS2TJ104T	100K	1/4W
R316	ERDS2TJ333T	33K	1/4W
R350	ERDS2TJ101T	100	1/4W
R351	ERDS2TJ102T	1K	1/4W
R353	ERDS2TJ1R0T	1	1/4W
R360	ERG1ANJP220S	22	1W
R361	ERDS2TJ101T	100	1/4W
R380	ERDS2TJ222T	2.2K	1/4W
R381	ERDS2TJ103T	10K	1/4W
		CAPACITORS	
C1	ECBT1H470J5	47P	50V
C3	ECBT1H100JC5	10P	50V
C4	ECBT1H200JC5	20P	50V (GC)
C4	ECBT1H180JC5	18P	50V (G)
C5	ECBT1H220J5	22P	50V
C6	ECBT1H102KB5	1000P	50V
C7	ECBT1C103MS5	0.01	16V
C8	ECBT1C103MS5	0.01	16V
C9	ECBT1H4R7KC5	4.7P	50V
C10	ECBT1H330J5	33P	50V
C11	ECBT1H470J5	47P	50V
C12	ECFR1C223MR	0.022	16V
C13	ECBT1E223ZF5	0.022	25V
C14	ECBT1H221KB5	220P	50V
C15	ECEA1HU010B	1	50V
C16	ECBT1C682KR5	6800P	16V
C17	ECEA1EU100B	10	25V
C18	ECEA1CU470B	47	16V
C19	ECBT1H331KB5	330P	50V
C20	ECEA0JU101B	100	6.3V
C22	ECFR1C473MR	0.047	16V
C23	ECEA1HUR22B	0.22	50V
C24	ECEA1EU100B	10	25V
C25	ECBT1C103MS5	0.01	16V
C26	ECBT1E223ZF5	0.022	25V
C27	ECBT1H102KB5	1000P	50V
C37	ECBT1H102KB5	1000P	50V
C39	ECBT1H102KB5	1000P	50V

Ref. No.	Part No.	Values & Remarks	
C40	ECBT1C103MS5	0.01	16V
C52	ECBT1H102KB5	1000P	50V
C53	ECBT1H390J5	39P	50V
C55	ECBT1H220J5	22P	50V
C56	ECBT1H100JC5	10P	50V
C58	ECQP2A361JZT	360P	100V
C60	ECBT1H100JC5	10P	50V
C61	ECBT0J223MS5	0.022	6.3V
C62	ECQP2A152JZT	1500P	100V
C65	ECQP2A272JZT	2700P	100V
C66	ECFR1C333MR	0.033	16V
C98	ECBT1H4R7KC5	4.7P	50V
C102	ECBT1C152MR5	1500P	16V
C103	ECBT1H331KB5	330P	50V
C104	ECEA1CU470B	47	16V
C105	ECFR1C333KR	0.033	16V
C106	ECEA1CU100B	10	16V
C107	ECBT1H561KB5	560P	50V
C108	ECBT1C222KR5	2200P	16V
C130	ECEA1HKA010B	1	50V
C131	ECEA1HU3R3B	3.3	50V
C132	ECEA1HU3R3B	3.3	50V
C133	ECFR1C823MR	0.082	16V
C134	ECEA1HU010B	1	50V
C135	ECFR1C223MR	0.022	16V
C136	ECEA1HUR33B	0.33	50V
C137	ECBT1C682KR5	6800P	16V
C138	ECEA1HU0R1B	0.1	50V
C139	ECBT1C222KR5	2200P	16V
C140	ECFR1C333KR	0.033	16V
C141	ECBT0J223MS5	0.022	6.3V
C142	ECFR1C223MR	0.022	16V
C145	ECBT1H471KB5	470P	50V
C146	ECEA1HUR47B	0.47	50V
C151	ECEA0JU101B	100	6.3V
C152	ECEA1CU470B	47	16V
C153	ECEA1AU471B	470	10V
C154	ECFR1C104KR	0.1	16V
C155	ECFR1C104KR	0.1	16V
C171	ECEA1HU4R7B	4.7	50V
C172	ECBT0J223MS5	0.022	6.3V
C202	ECBT1C152MR5	1500P	16V
C203	ECBT1H331KB5	330P	50V
C204	ECEA1CU470B	47	16V
C205	ECFR1C333KR	0.033	16V
C206	ECEA1CU100B	10	16V
C207	ECBT1H561KB5	560P	50V
C208	ECBT1C222KR5	2200P	16V

Ref. No.	Part No.	Values & Remarks	
C230	ECEA1HKA010B	1	50V
C231	ECEA1HU3R3B	3.3	50V
C232	ECEA1HU3R3B	3.3	50V
C233	ECFR1C823MR	0.082	16V
C234	ECEA1HU010B	1	50V
C235	ECFR1C223MR	0.022	16V
C236	ECEA1HUR33B	0.33	50V
C237	ECBT1C682KR5	6800P	16V
C238	ECEA1HU0R1B	0.1	50V
C239	ECBT1C222KR5	2200P	16V
C240	ECFR1C333KR	0.033	16V
C241	ECBT0J223MS5	0.022	6.3V
C242	ECFR1C223MR	0.022	16V
C243	ECEA1AU471B	470	10V
C244	ECEA0JU331B	330	6.3V
C245	ECBT1H471KB5	470P	50V

Ref. No.	Part No.	Values & Remarks	
C246	ECEA1HUR47B	0.47	50V
C251	ECEA0JU101B	100	6.3V
C252	ECEA1CU470B	47	16V
C253	ECEA1AU471B	470	10V
C254	ECFR1C104KR	0.1	16V
C255	ECFR1C104KR	0.1	16V
C271	ECEA1HU4R7B	4.7	50V
C272	ECBT0J223MS5	0.022	6.3V
C301	ECEA1HU0R1B	0.1	50V
C302	ECFR1C473MR	0.047	16V
C304	ECEA0JU471B	470	6.3V
C305	ECEA1HU3R3B	3.3	50V
C306	ECEA1AU330B	33	10V
C307	ECEA1AU470B	47	10V
C309	ECKR1H181KB5	180P	50V
C310	ECQP2A272JZT	2700P	100V

Ref. No.	Part No.	Values & Remarks	
C311	ECEA0JU221B	220	6.3V
C312	ECFR1C223MR	0.022	16V
C313	ECBT1C103MS5	0.01	16V
C350	ECFR1C103MR	0.01	16V
C351	ECEA1CU221B	220	16V
C352	ECEA1CU222E	2200	16V
C353	ECEA1CU101B	100	16V
C360	ECEA1CU221B	220	16V
C361	ECKR1H103ZF5	0.01	50V
C362	ECKR1H103ZF5	0.01	50V
C363	ECKR1H103ZF5	0.01	50V (GC)
C364	ECKR1H103ZF5	0.01	50V (GC)
C380	ECEA1CU100B	10	16V
C381	ECEA1CU331B	330	16V
C382	ECEA1CU100B	10	16V

PACKING MATERIALS & ACCESSORIES

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When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.

* The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area)

Parts without these indications can be used for all areas.

* The "(SF)" mark denotes the standard part.

* [M] Indicates in the Remarks columns indicates parts supplied by MESA.

Ref No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPGX0172	GIFT BOX	[M] (G)
P1	RPGX0173	GIFT BOX	[M] (GC)
P2	RPH657ZA	MIRAMAT SHEET	[M]
P3	RPN0462	POLYFOAM	[M]

Ref No.	Part No.	Part Name & Description	Remarks
		ACCESSORIES	
A1	RQT2826-G	INSTR. MANUAL	[M]
A3	RJA0019-2A	AC CORD	 (GC)
A3	RJA0004	AC CORD	 (G) (SF)
A4	SJP5213-2	AC CORD ADAPTOR	(GC)
A4	RJP120ZDS-K	PLUG ADAPTOR	(G)

