

Service Manual

Portable Stereo Component System

Radio Cassette
RX-CT820



Colour
(K) . . . Black Type

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

TAPE DECK : SG-20W 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

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	

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

⚠ 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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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.)

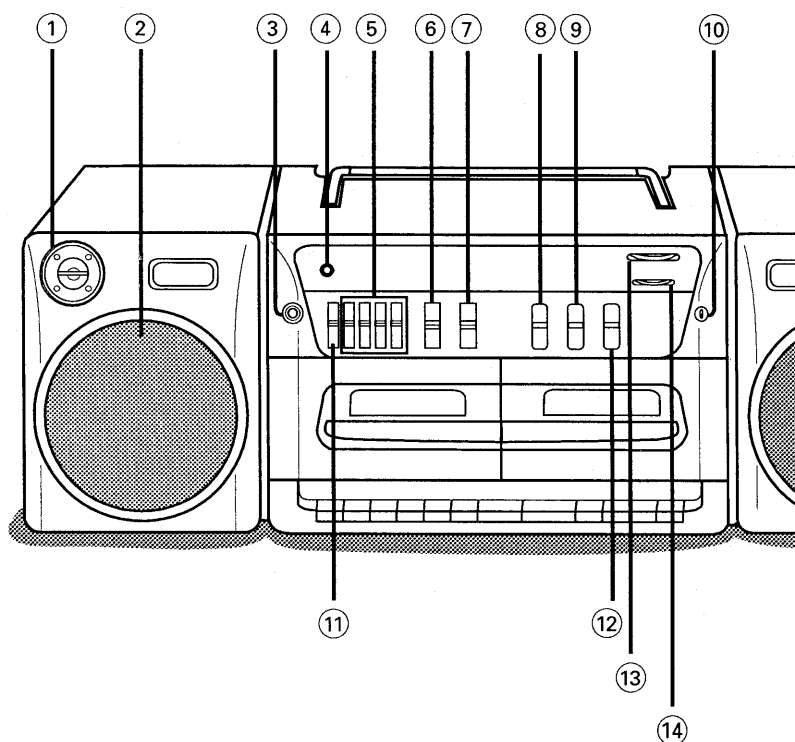
Note that this unit will be seriously damaged if this setting is not made correctly. (There is no voltage selector for some countries; the correct voltage is already set.)

Location of Controls*Basic controls*

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

Tuner controls

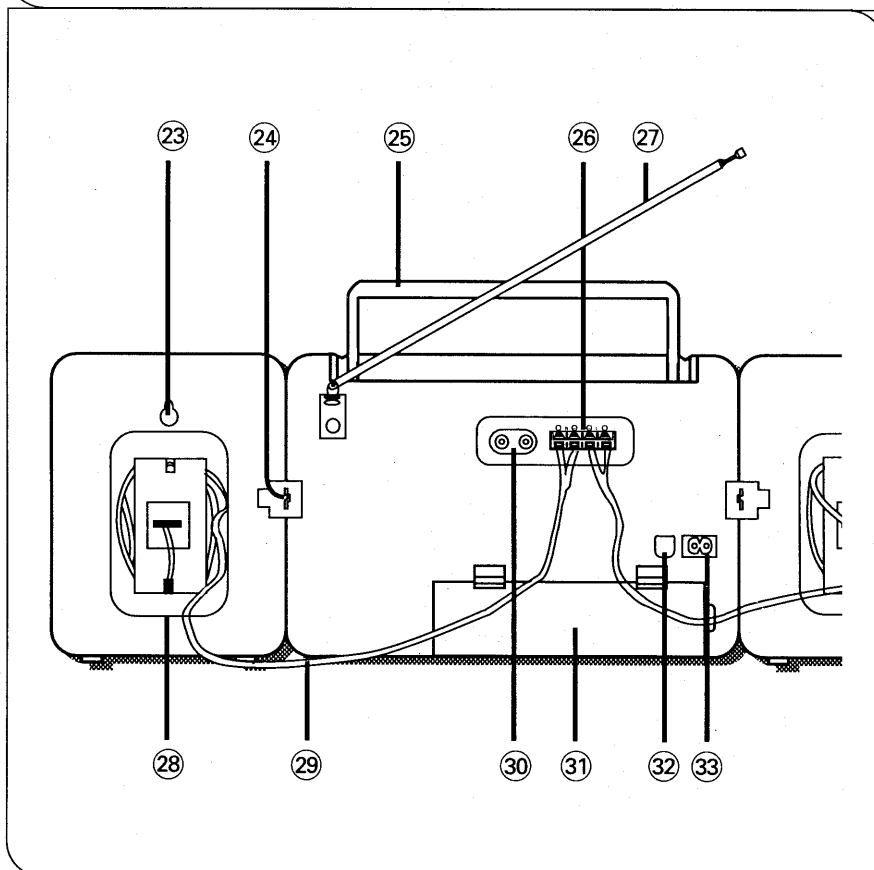
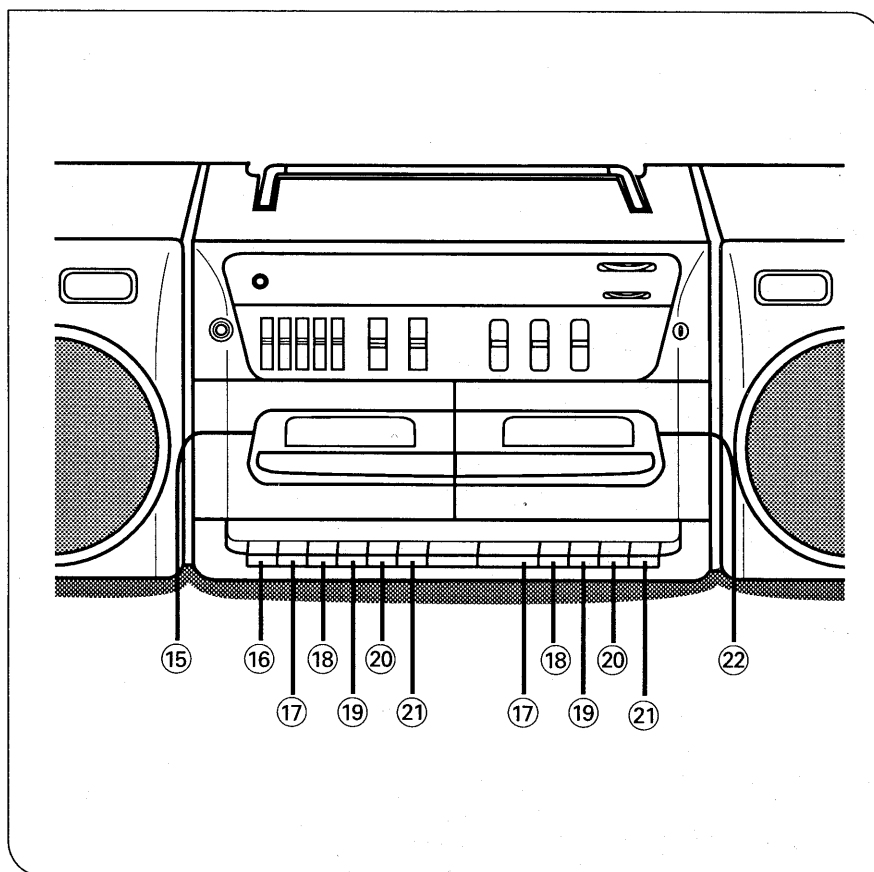
- ⑫ Band selector (BAND)
- ⑬ Tuning control (TUNING)
- ⑭ Fine tuning control (FINE TUNING)



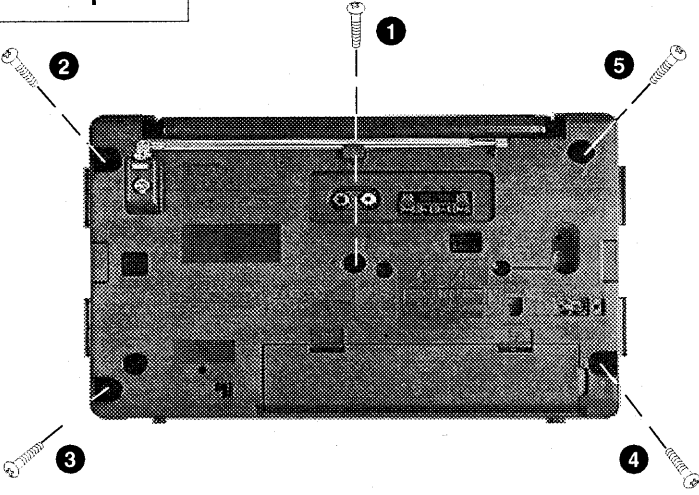
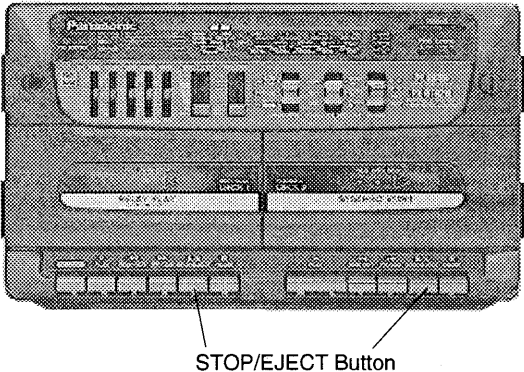
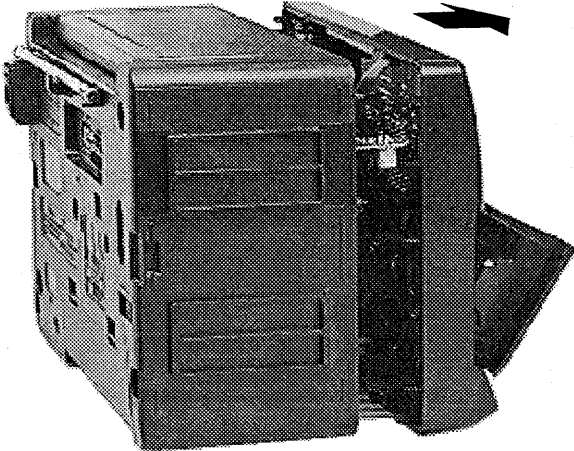
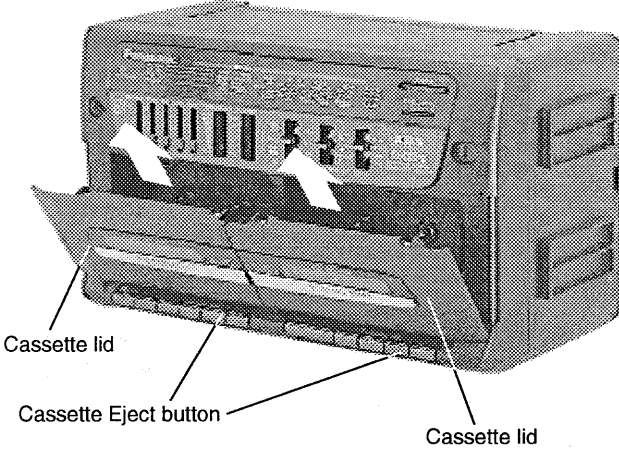
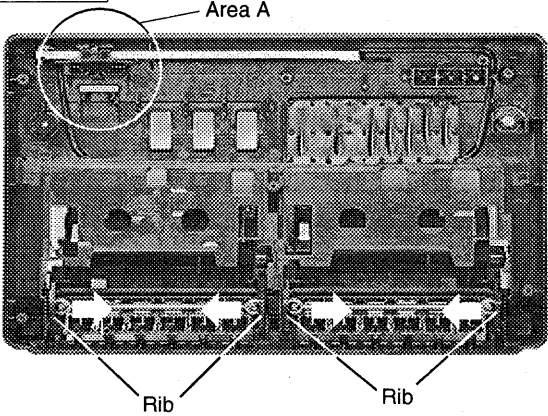
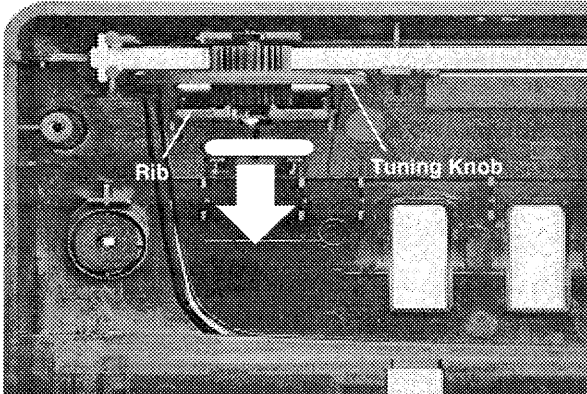
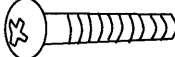
- ⑮ Deck 1 cassette holder (DECK 1)
- ⑯ Recording button (● **RECORD**)
- ⑰ Playback button (▶ **PLAY**)
- ⑱ Rewind/review button (◀◀ **REW/REV**)
- ⑲ Fast forward/cue button (▶▶ **FF/CUE**)
- ⑳ Stop/eject button (■/▲ **STOP/EJECT**)
- ㉑ Pause button (⏸ **PAUSE**)
- ㉒ Deck 2 cassette holder (DECK 2)

Rear Panel Section

- ㉓ Speaker wall mounts
- ㉔ Speaker release levers
- ㉕ Handle
- ㉖ Speaker terminals (**SPEAKER**)
- ㉗ Telescopic antenna
- ㉘ Speaker cable compartments
- ㉙ Speaker cables
- ㉚ CD/LINE input jacks (**CD/LINE IN**)
- ㉛ Battery compartment cover
- ㉜ Voltage selector (**VOLTAGE SELECTOR**)
- ㉝ AC socket (**AC IN~**)

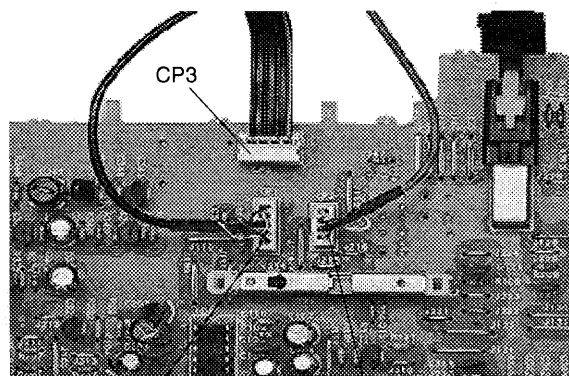
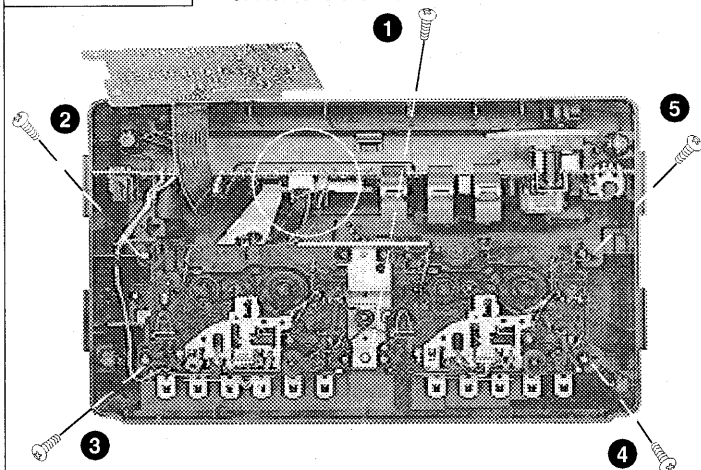


Disassembly Instructions

<div>Ref. No. 1</div>	<div>Removal of the Front Cabinet</div>	<div>Ref. No. 2</div>	<div>Removal of the Cassette Lid</div>
<div>Procedure 1</div>	<div>1. Remove the 5 screws (❶ ~ ❷)</div> <div></div> <div>2. Press the stop/eject button on each tape deck.</div> <div></div> <div>3. Remove the front cabinet in the direction of arrow.</div> <div></div>	<div>Procedure 2</div>	<div>1. Press the Eject button. 2. Remove the cassette lid in the direction of arrow.</div> <div></div>
<div>Ref. No. 3</div>	<div>Removal of the Cassette Holder</div>	<div>Ref. No. 4</div>	<div>Removal of the Tuning Knob</div>
<div>Procedure 1 → 3</div>	<div>1. Remove the 4 ribs in the direction of arrow.</div> <div></div>	<div>Procedure 1 → 4</div>	<div>1. Refer Area A in Ref. No. 3. 2. Press the Rib in the direction of arrow and pull out the Knob.</div> <div></div>
<div><div> XTV3+20G</div><div><div>Ref. No. 1</div><div>❶ ~ ❷</div></div><div><div>Ref. No. 10</div><div>❶ ~ ❷</div></div></div>			

Ref. No. 5	Removal of the Mechanism Unit
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Procedure 1 → 5	<ol style="list-style-type: none"> 1. Remove 5 screws (1 ~ 5). 2. Release 3 connectors (CP1, CP2, CP3). 3. Remove the mechanism unit.
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CP1

CP2



XTV3+12G

Ref. No. 5

1 ~ 5

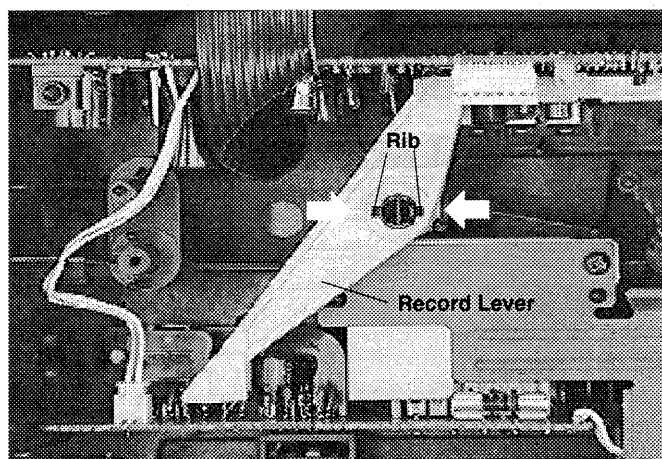
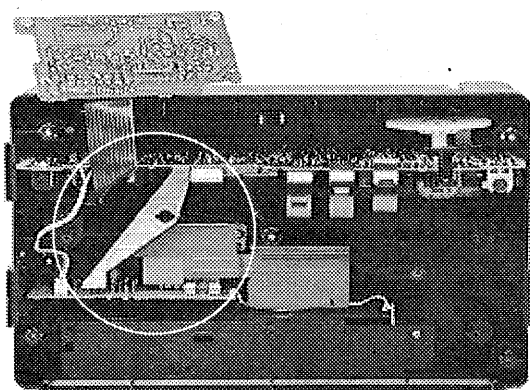
Ref. No. 7

1 ~ 3

Ref. No. 9

Ref. No. 6	Removal of the Record Lever
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Procedure 1 → 5 → 6	<ol style="list-style-type: none"> 1. Press the ribs in the direction of arrow. 2. Pull out the Record Lever.
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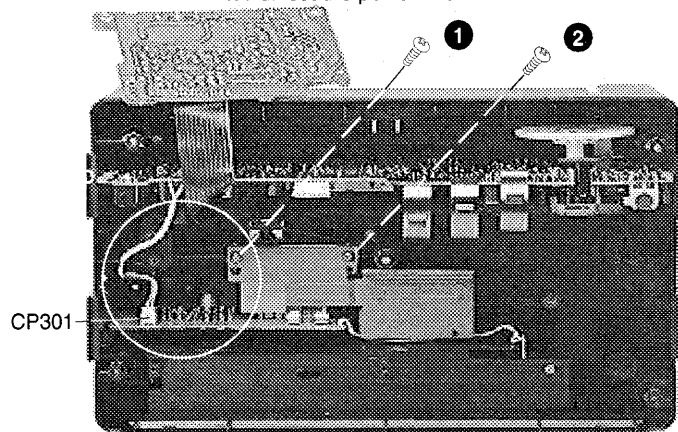


Rib

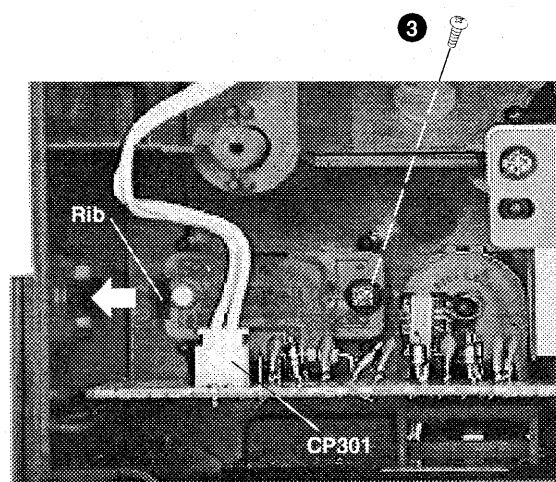
Record Lever

Ref. No. 7	Removal of the Power P.C.B.
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Procedure 1 → 5 → 6 → 7	<ol style="list-style-type: none"> 1. Remove the connector CP301. 2. Remove the 3 screw (1 ~ 3). 3. Release the rib in the direction of arrow. 4. Pull out the power P.C.B.
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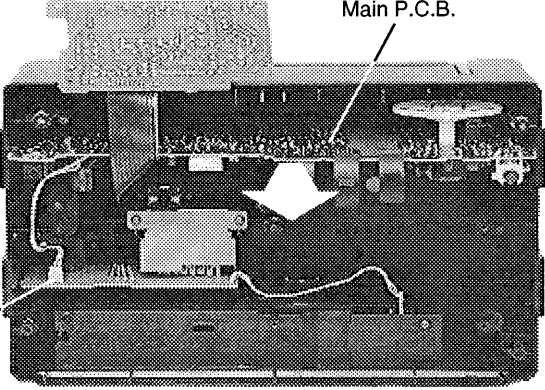
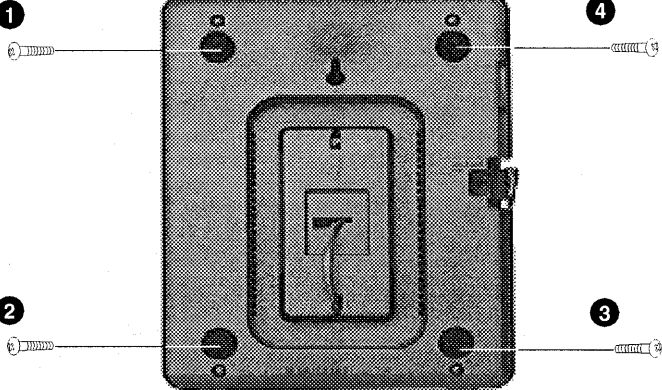
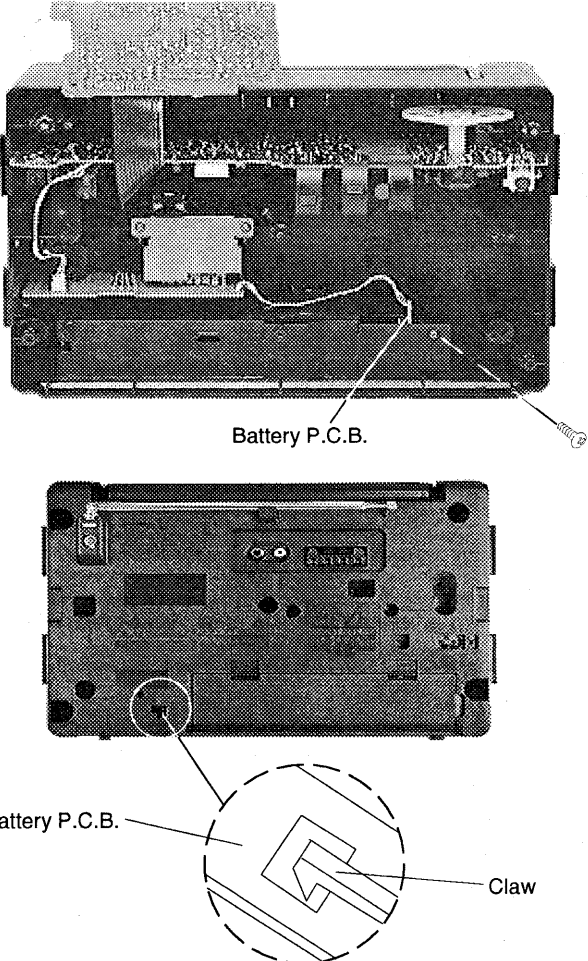
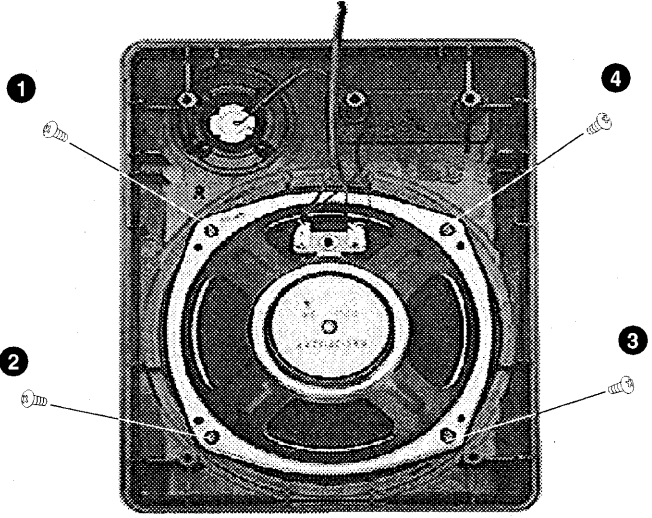
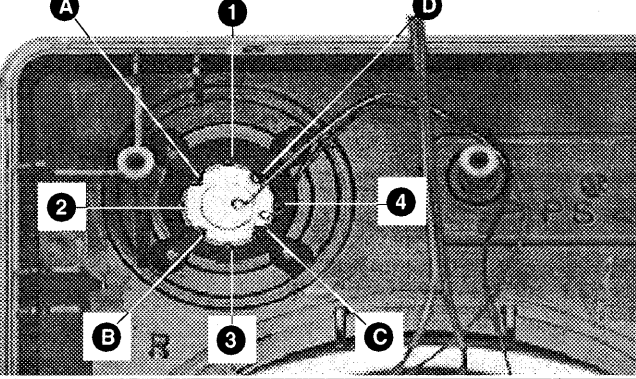



CP301

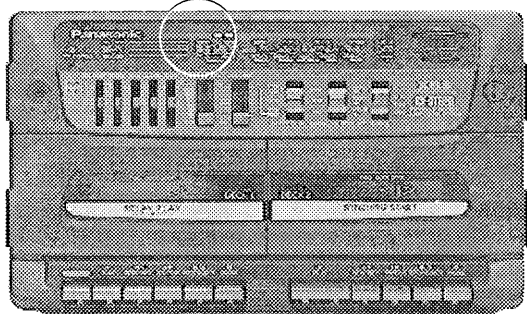
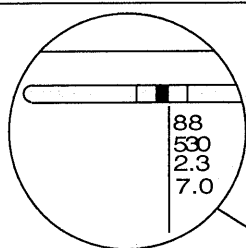


Rib

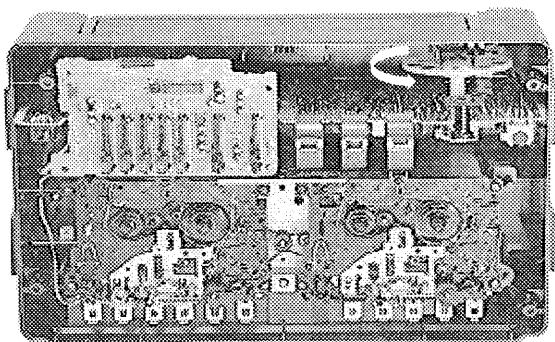
CP301

<div>Ref. No. 8</div> <div>Procedure 1 → 5 → 6 → 8</div>	<div>Removal of the Main P.C.B.</div> <div>1. Remove the connector (CP301). 2. Pull the main P.C.B. in the direction of arrow.</div> <div></div>	<div>Ref. No. 10</div> <div>Procedure 10</div>	<div>Removal of the Speaker Front Cabinet</div> <div>1. Remove 4 screws (1 ~ 4).</div> <div></div>
<div>Ref. No. 9</div> <div>Procedure 1 → 5 → 9</div>	<div>Removal of the Battery P.C.B.</div> <div>1. Remove the screw. 2. Release the claw on the back of the rear cabinet using a screwdriver. 3. Pull out the Battery P.C.B.</div> <div></div>	<div>Ref. No. 11</div> <div>Procedure 10 → 11</div>	<div>Removal of the Woofer</div> <div>1. Remove 4 screws (1 ~ 4).</div> <div></div>
		<div>Ref. No. 12</div> <div>Procedure 10 → 12</div>	<div>Removal of the Tweeter</div> <div>1. Cut the 4 melted ribs with knife (A ~ D). 2. Remove the tweeter. Install the tweeter. 1. Replace the tweeter. 2. Use solder gun to melt the ribs (1 ~ 4).</div> <div></div>
<div> Ref. No. 11 1 ~ 4</div> <div>XTV3+8G</div>			

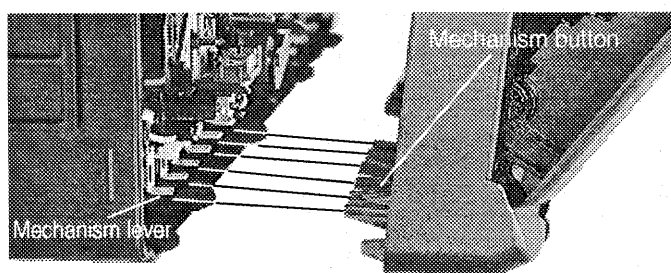
■ Front Cabinet Assembly



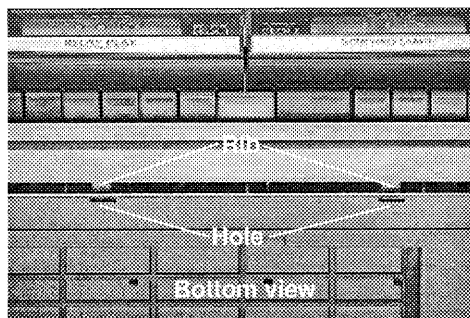
1. Line the dial pointer in the front cabinet assembly exactly before the line



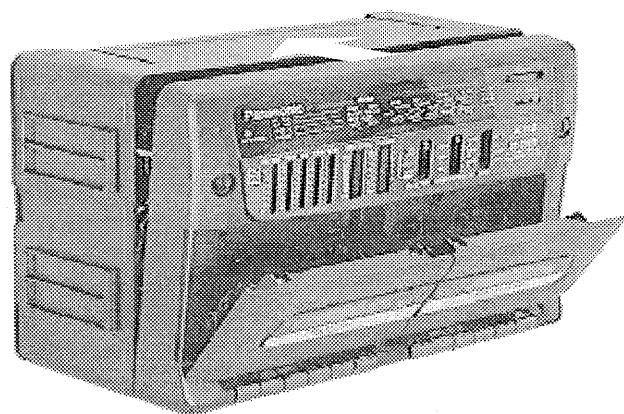
2. Turn the vericon gear on the main P.C.B. fully in anticlockwise direction.



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



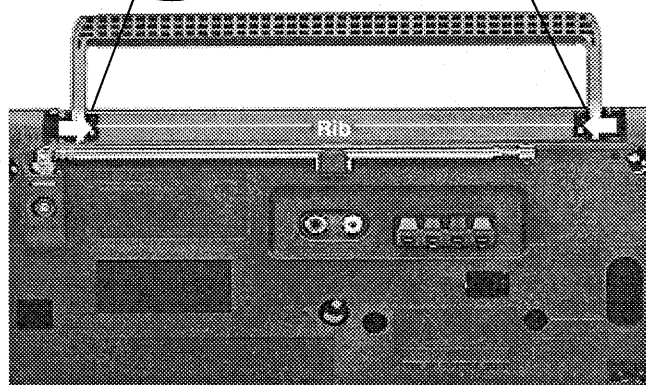
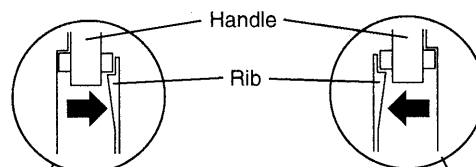
4. Push the 2 ribs into the 2 holes.



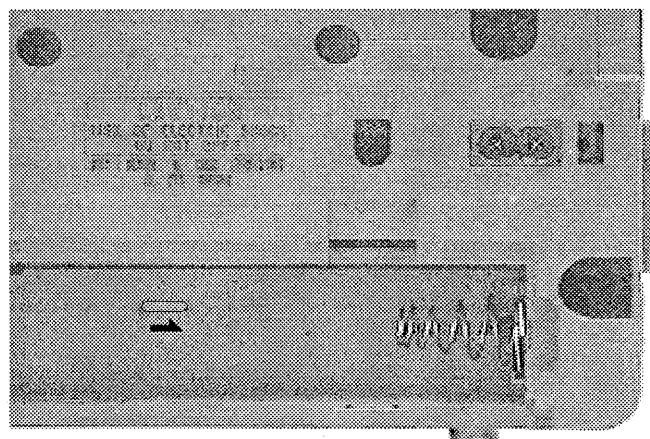
5. Replace the front cabinet.
6. Ensure the cassette lid can be closed after fixing.

To remove the handle.

1. Release the 2 ribs.
2. Slide out the handle.



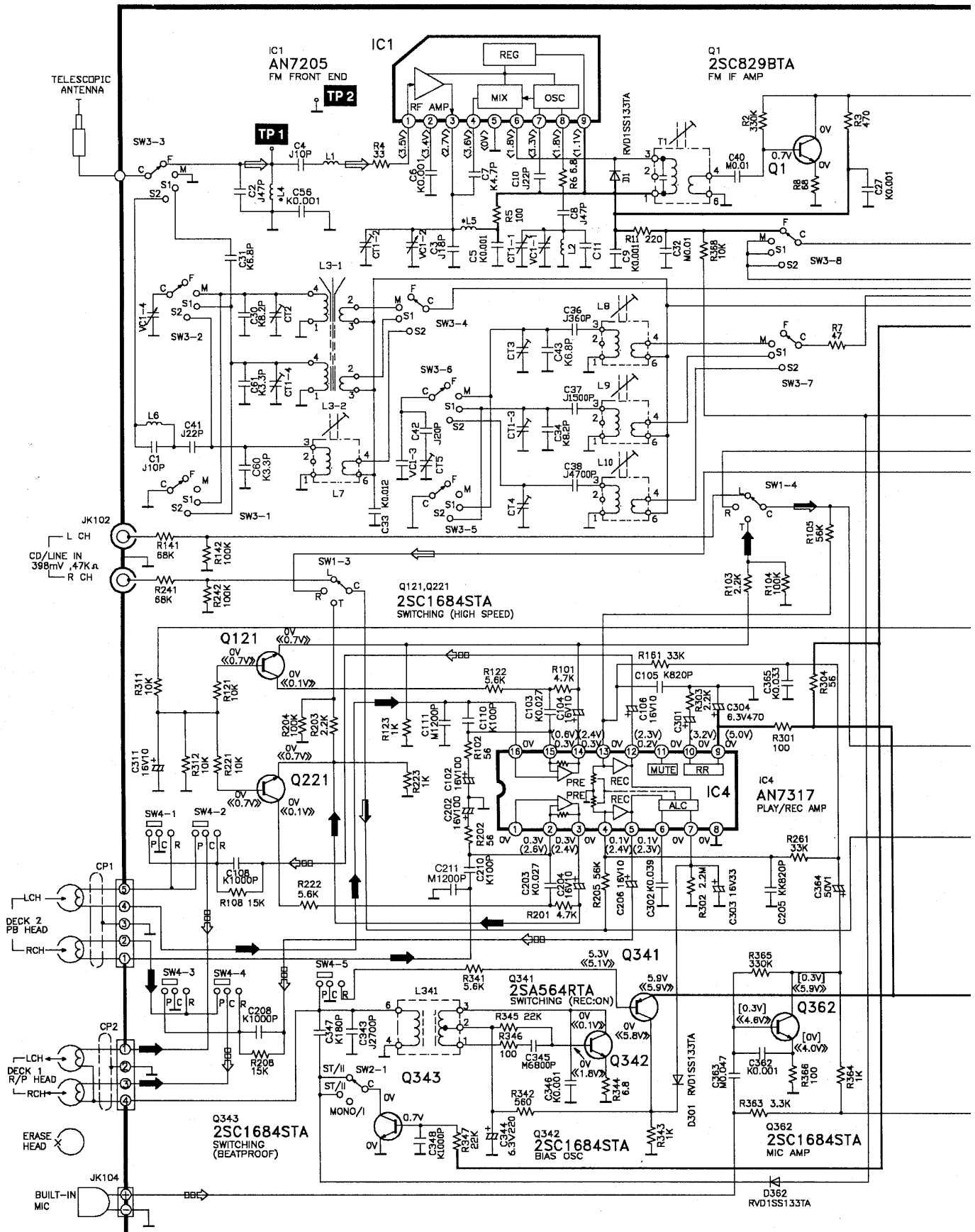
What To Do When The Tape Is Entangled

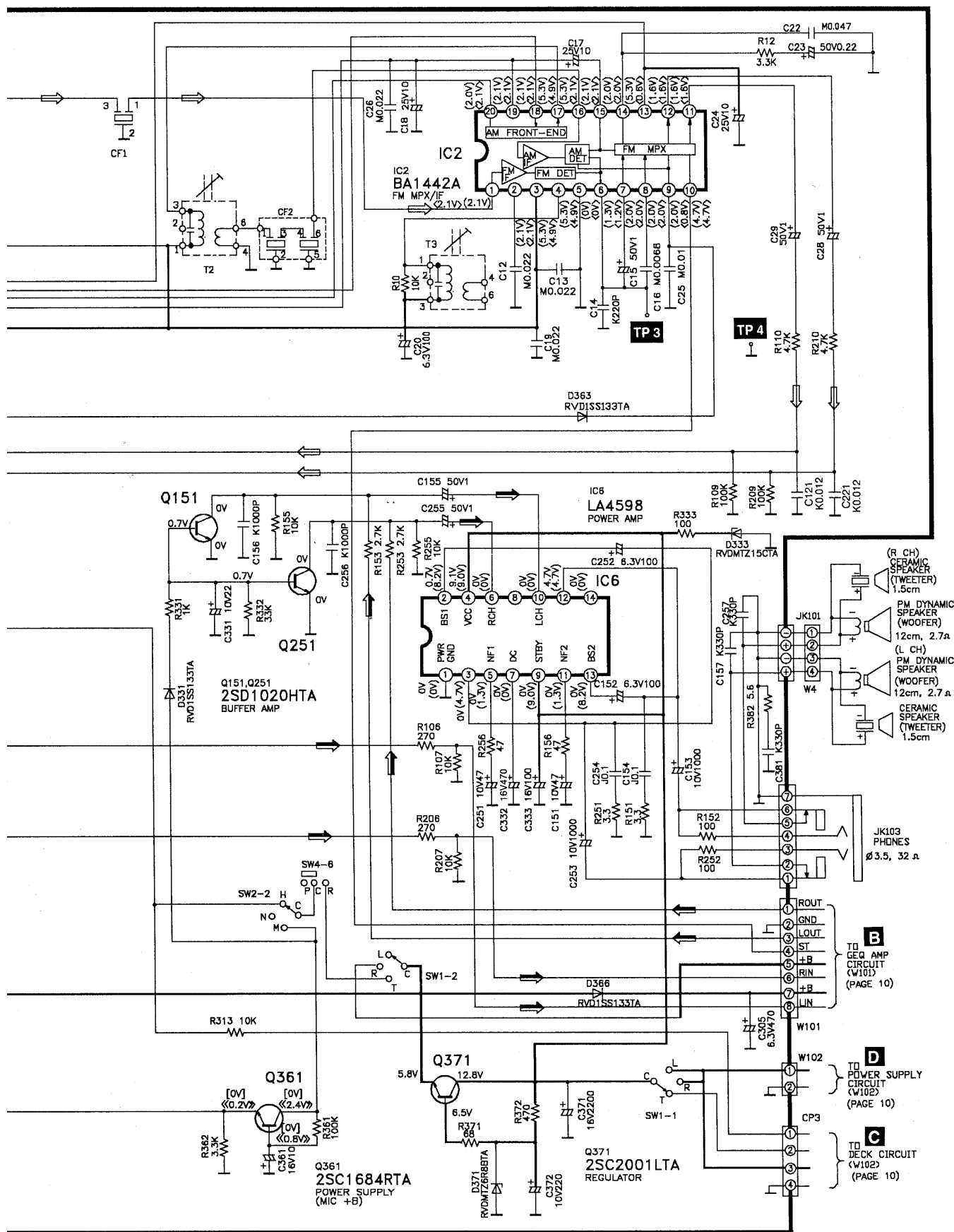


When the tape is caught in the pinch roller, etc., release the tape by turning the pulley on the motor with a screw-driver in the direction of arrow.

Schematic Diagram

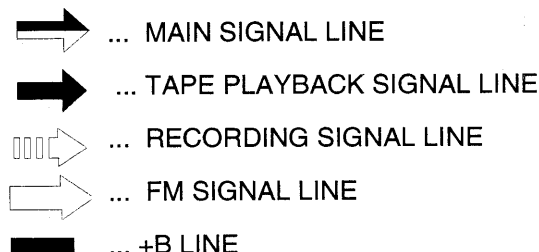
A MAIN CIRCUIT





NOTES:

- SW1-1 ~ SW1-4 : Function Select Switch. (L...CD/LINE, R...RADIO, T...TAPE/OFF)
- SW2-1 ~ SW2-2 : Tape Editing/FM Mode/Beatproof Select Switch. (H...HIGH, N...NORMAL, M...MIC, ST/II... STEREO/BEATPROOF II, MONO/I... MONO/BEATPROOF I)
- SW3-1 ~ SW3-8 : Band Select Switch. (F...FM, M...MW, S1...SW1, S2...SW2)
- SW4-1 ~ SW4-6 : Record/Playback Switch. (R...RECORD, P...PALYBACK)
- S301 : AC Power/Battery Select Switch (JK301).
- S501 : Motor Switch (Deck1).
- S502 : Motor Switch (Deck 2).
- VR301 : Balance.
- VR302-1 ~ VR302-2 : Graphic Equalizer VR (330Hz).
- VR303-1 ~ VR303-2 : Graphic Equalizer VR (1kHz).
- VR304-1 ~ VR304-2 : Graphic Equalizer VR (3.3kHz).
- VR305-1 ~ VR305-2 : Graphic Equalizer VR (10kHz).
- VR306-1 ~ VR306-2 : XBS Level Control VR.
- VR307-1 ~ VR307-2 : Volume Control VR.
- VR501 : Tape Speed Adjustment Switch.



- Battery Current consumption:

Vol. min..... 65mA (RADIO)
160mA (TAPE)

Vol. max..... 550mA (RADIO)
750mA (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 (MW/SW1/SW2) << >>... RECORD

CAUTION !

IC and LSI are sensitive to static electricity.

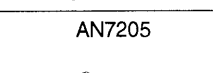
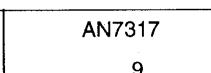
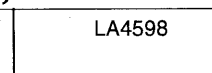
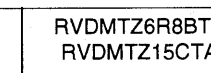
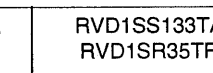
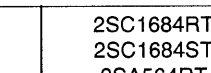



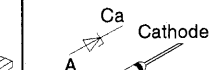

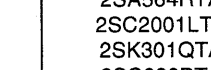
Secondary trouble can be prevented by taking care during repair.

- 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.

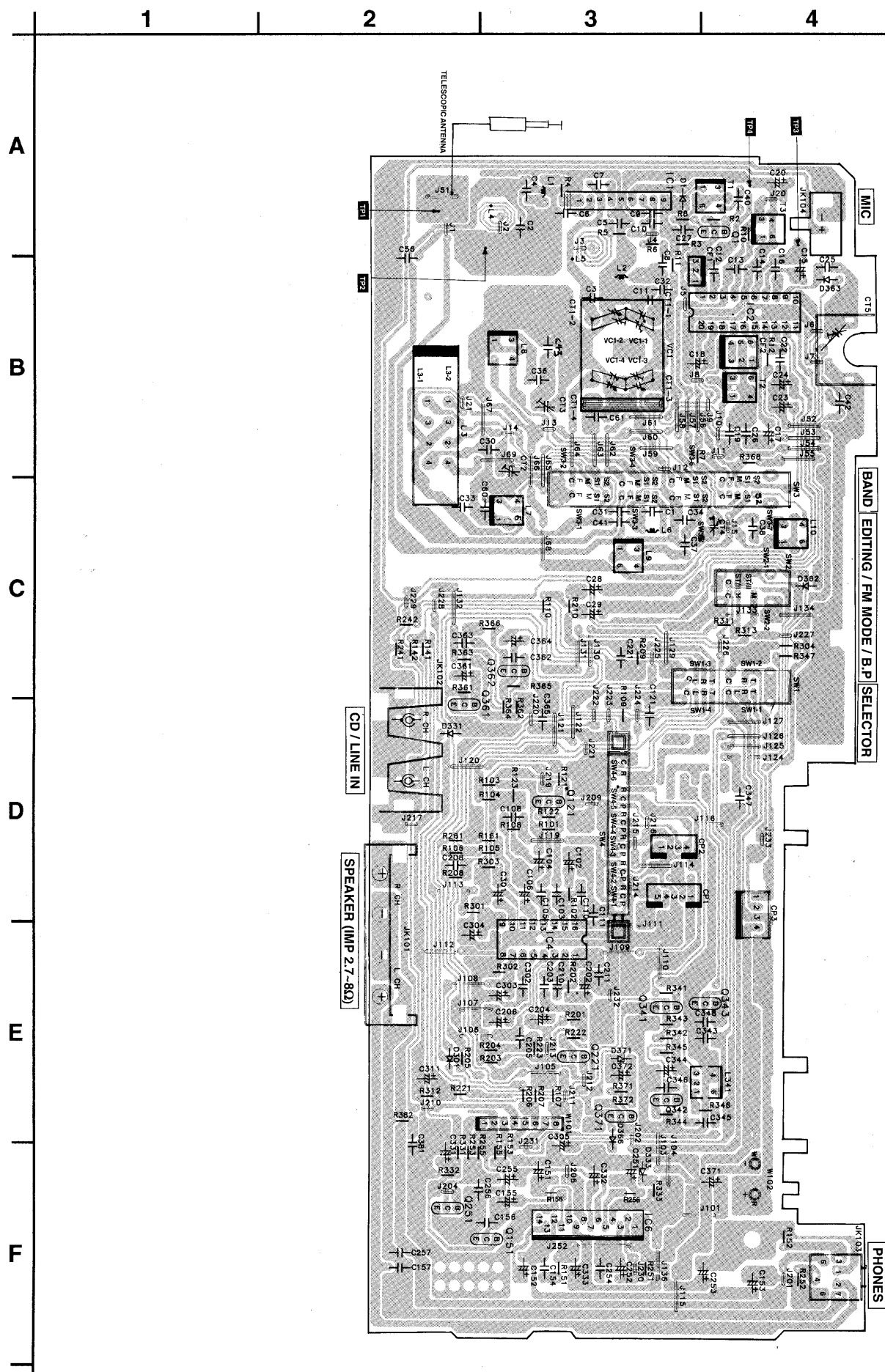
- Important safety notice :
Components identified by:  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

- **This schematic diagram may be modified at anytime with the development of new technology.**

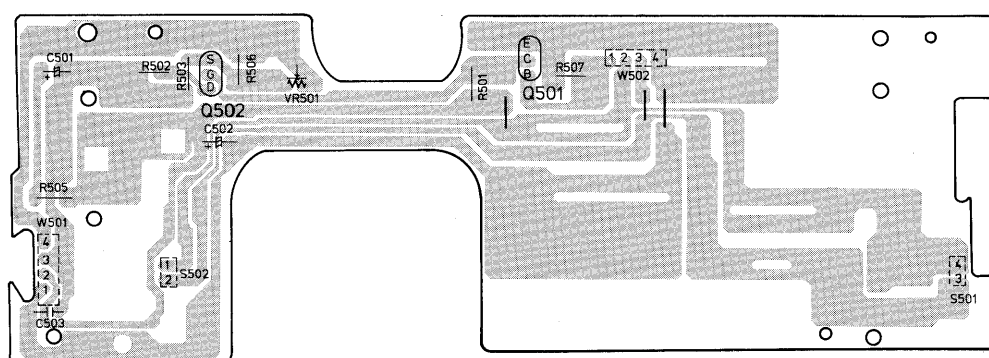
■ Terminal Guide of ICs, Transistors & Diodes

<p>AN7205</p> 	<p>AN7317</p> 	<p>LA4598</p> 	<p>RVDMTZ6R8BTA RVDMTZ15CTA</p> 	<p>RVD1SS133TA RVD1SR35TR</p> 	<p>2SC1684RTA 2SC1684STA 2SA564RTA 2SC2001LTA 2SK301QTA 2SC829BTA</p> 
<p>BA1442A</p> 	<p>AN7332K</p> 	<p>2SD1020HTA</p> 	<p>SLB55VR140TA</p> 		

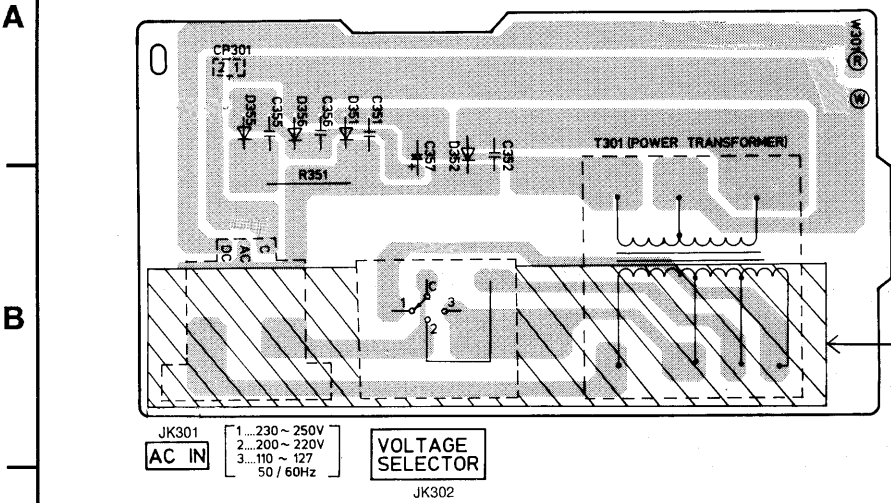
■ Printed Circuit Board



A MAIN P.C.B. (REPX0081A) ...G
(REPX0081B) ...GC

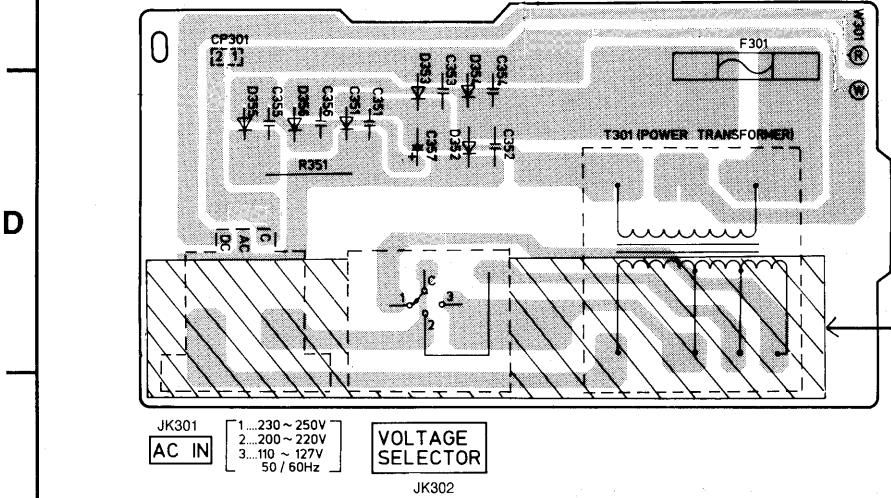


D POWER SUPPLY P.C.B. (REPX0012E) ...G

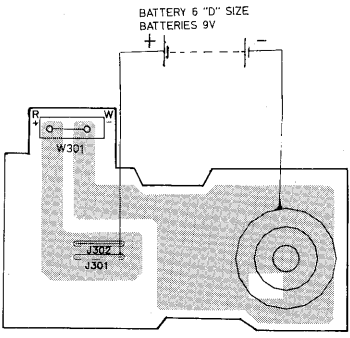


CAUTION
RISK OF ELECTRIC SHOCK
AC voltage line. Please do not
touch this portion.

D POWER SUPPLY P.C.B. (REPX0012F) ...GC



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



— 15 —

■ Measurements And Adjustments

■ TUNER SECTION

• ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

- Set power source voltage to 9 V DC.
- Set volume control to maximum
- Set balance control to center
- Set band switch to MW, SW1, SW2 or FM
- Set selector switch to RADIO
- Set fine tuning control to center
- Set XBS switch to minimum
- Output of signal generator should be no higher than necessary to obtain an output reading.

Note : No FM STEREO alignment is required due to Tuner IC (BA1442A) is used.

• AM-IF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown IN Fig. 1)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	455 kHz 30 % Mod. at 400 Hz	Point of non-interference.(on/about 600kHz)	Headphone Jack (32Ω) (Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.)	T2(AM IFT)	Adjust for maximum output.

• 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.	"	L8 (MW OSC Coil)	Adjust for maximum output.
"	1650 kHz (G) 1639 ± 5 kHz (GC)	Tuning capacitor fully opened.	"	CT3 (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	"	"	CT2 (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.	"	L9 (SW1 OSC Coil)	Adjust for maximum output.
"	7.23 MHz	Tuning capacitor fully opened.	"	CT1-3 (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	"	"	CT1-4 (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.	"	L10 (SW2 OSC Coil)	Adjust for maximum output.
"	22.79 MHz	Tuning capacitor fully opened.	"	CT4 (SW2 OSC Trimmer)	Adjust for maximum output.
"	7.00 MHz	Tune to signal	"	L7 (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.)	L2 (FM OSC Coil)	[*2] Adjust for maximum output.
	109.2MHz (G) 108.3MHz (GC) ±70 kHz	Variable capacitor fully opened.	"	CT1-1 (FM OSC Trimmer)	"
	106MHz	Tune to signal	"	CT1-2 (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 (DECK 1, 2)

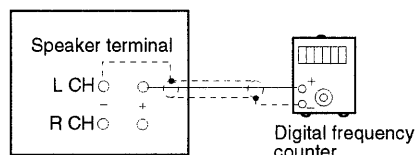
Normal speed (Standard Value : 3000 ± 50 Hz ... Deck 2)
(Standard Value : Deck 2 ± 50 Hz ... Deck 1)
High speed (Standard Value : 5100 Hz ~)

1. Test equipment connection is shown in figure.
2. Set the unit to "TAPE" position.
3. Playback the middle part of the test tape (QZZCWAT) in deck 2.
4. Adjust VR501 for the output value shown below.
5. Playback the middle part of the test tape (QZZCWAT) in deck 1.
6. Repeat step 4.
5. Set the unit to "HIGH" speed position.
6. Place the cassette deck into the REC mode (DECK 1) and the PLAY mode (DECK 2).
7. Repeat step 4.

Note :

The normal speed adjustment must be done before the high speed adjustment.

UNIT



Adjustment Target : 3000 ± 50 Hz ... Normal speed (Deck 2)
Adjustment Target : Deck 2 ± 50 Hz ... Normal speed (Deck 1)
Adjustment Target : 5100 Hz ~ ... High speed

ALIGNMENT POINTS

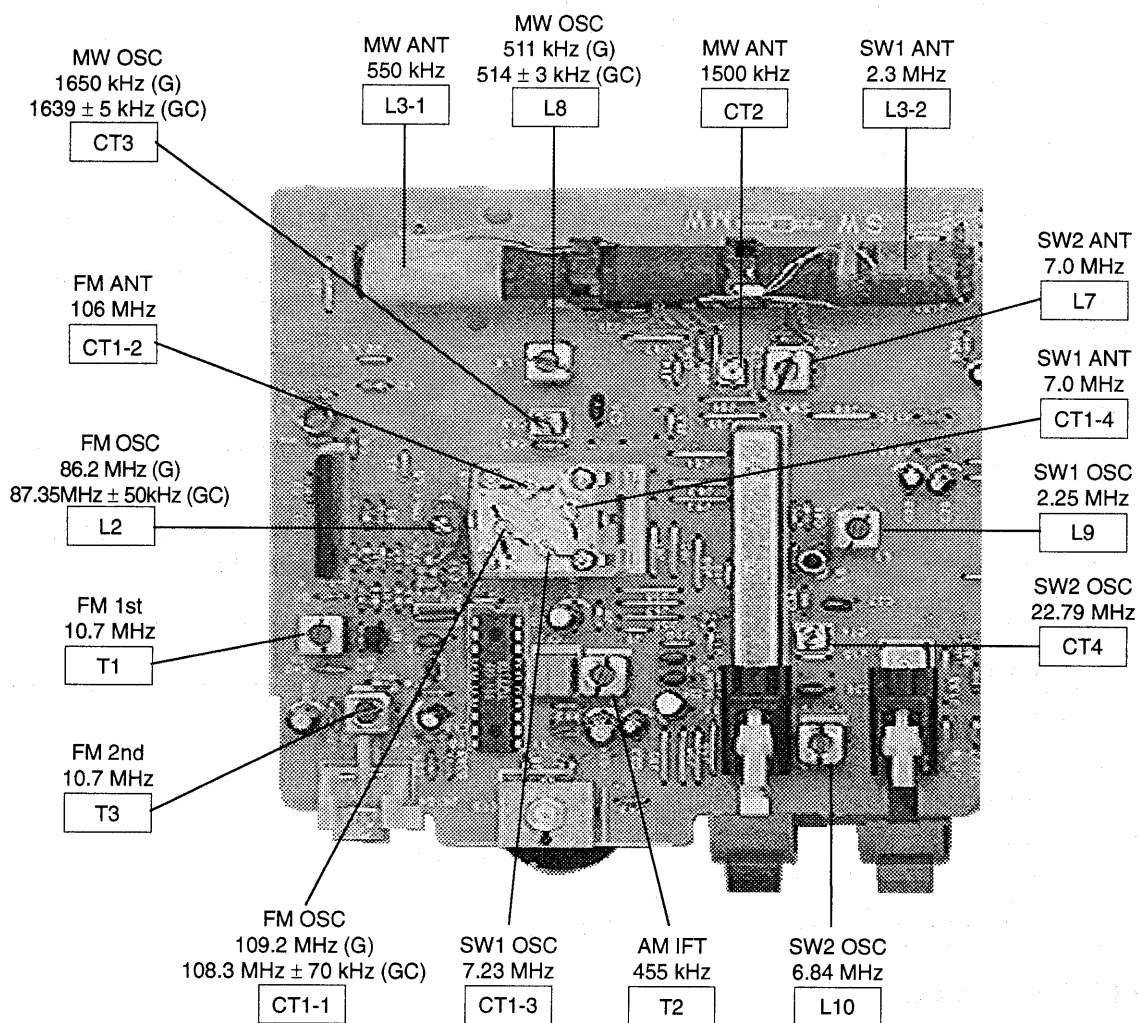


Fig. 1

To Headphone

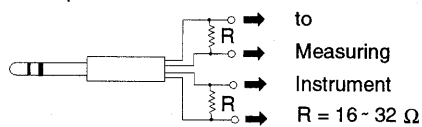


Fig. 2

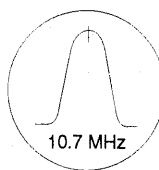


Fig. 3

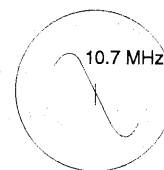
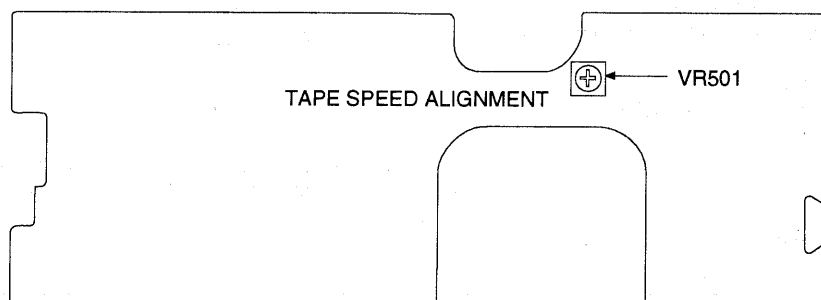


Fig. 4

MECHANISM CONTROL P.C.B.



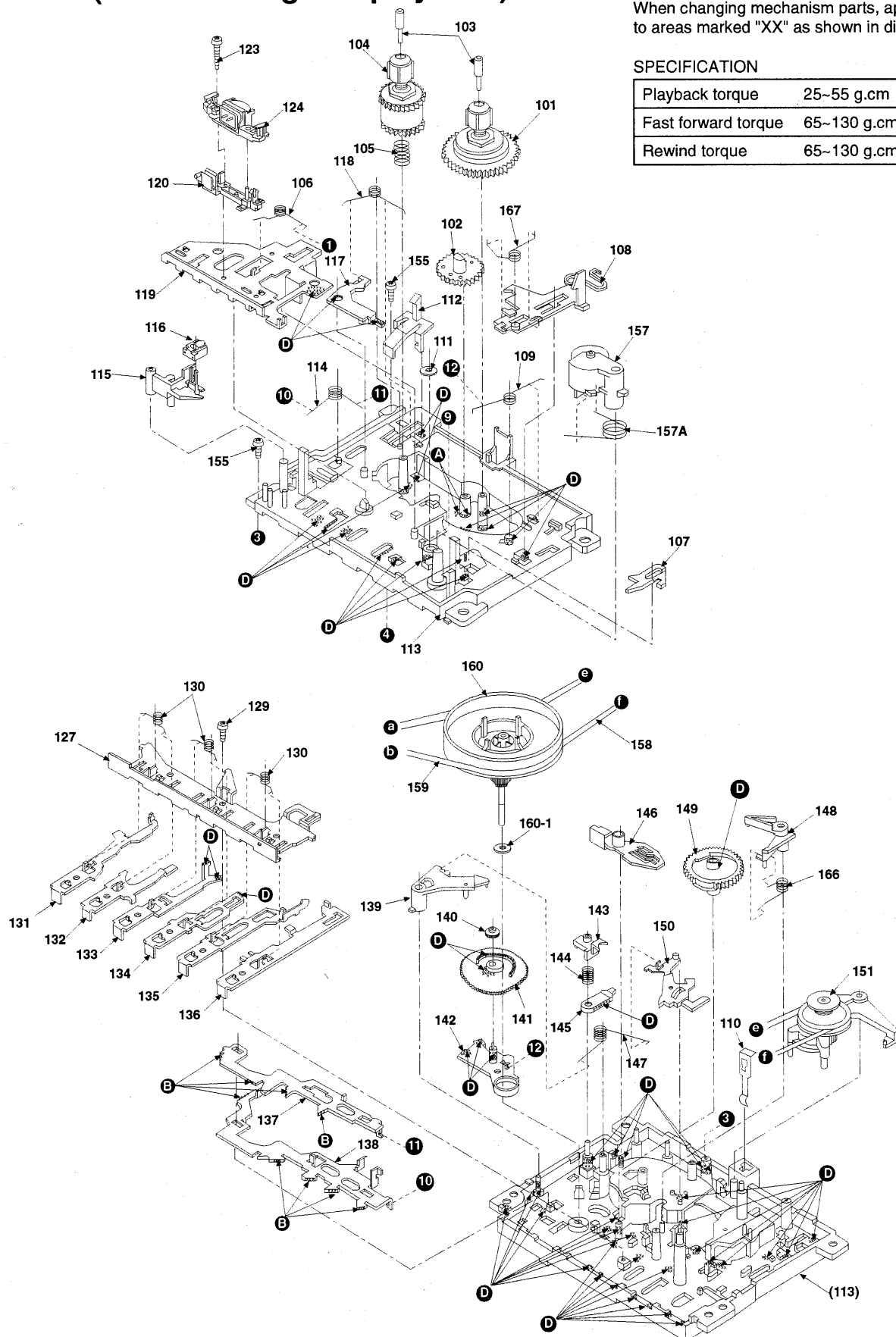
Mechanism Parts Location (RAA0915)

DECK 1 (For recording and playback)

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

SPECIFICATION

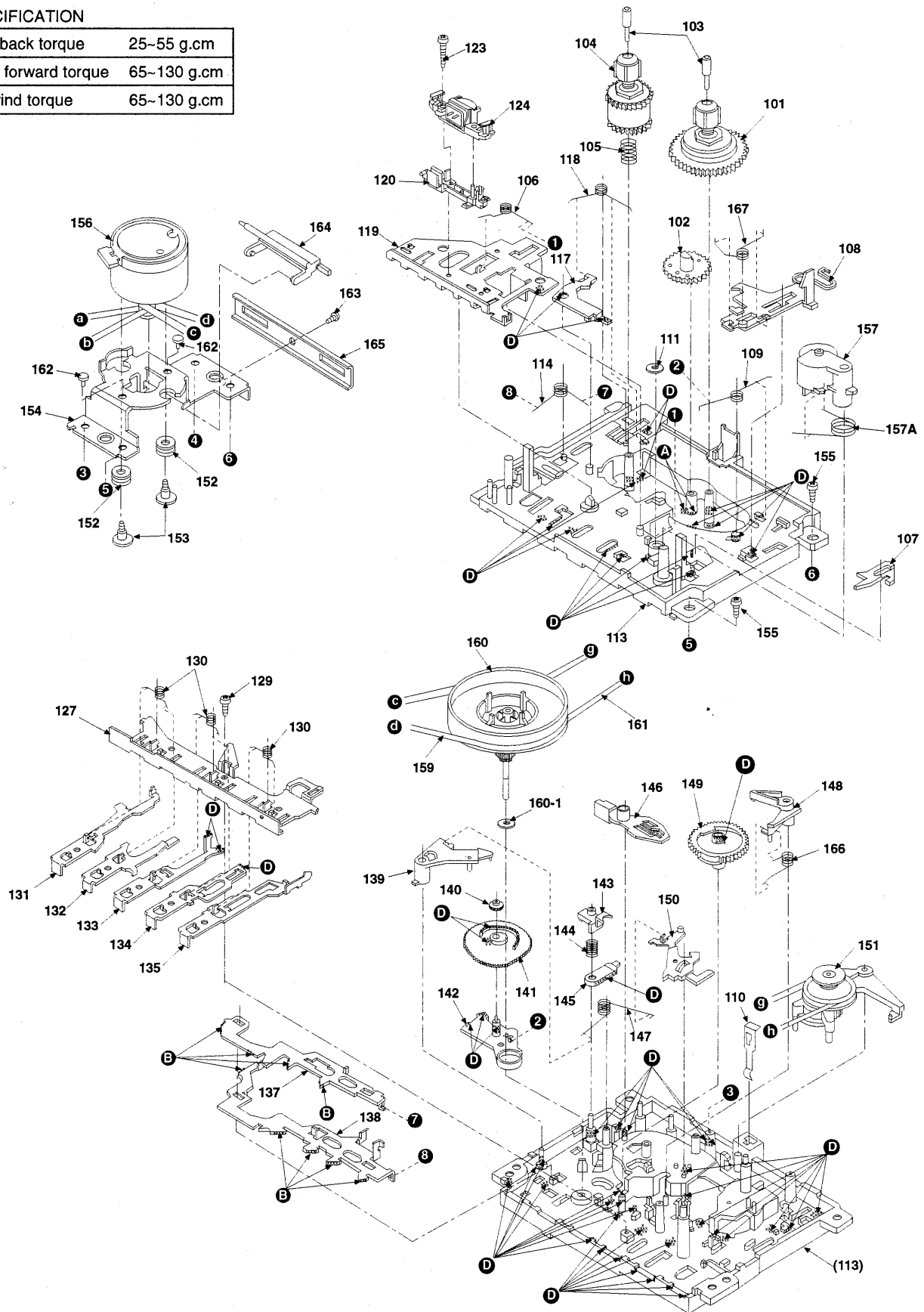
Playback torque	25~55 g.cm
Fast forward torque	65~130 g.cm
Rewind torque	65~130 g.cm



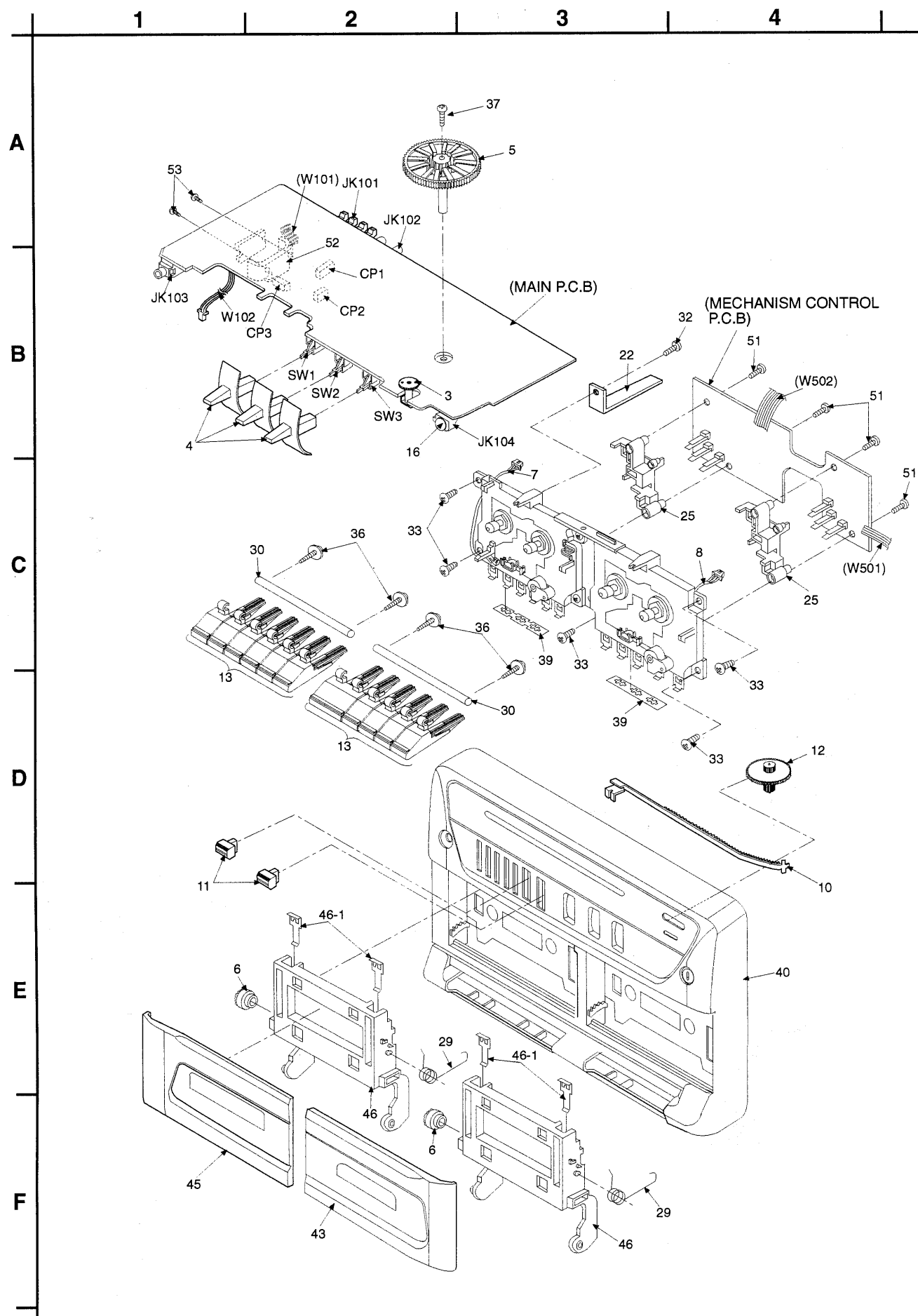
DECK 2 (For playback only)

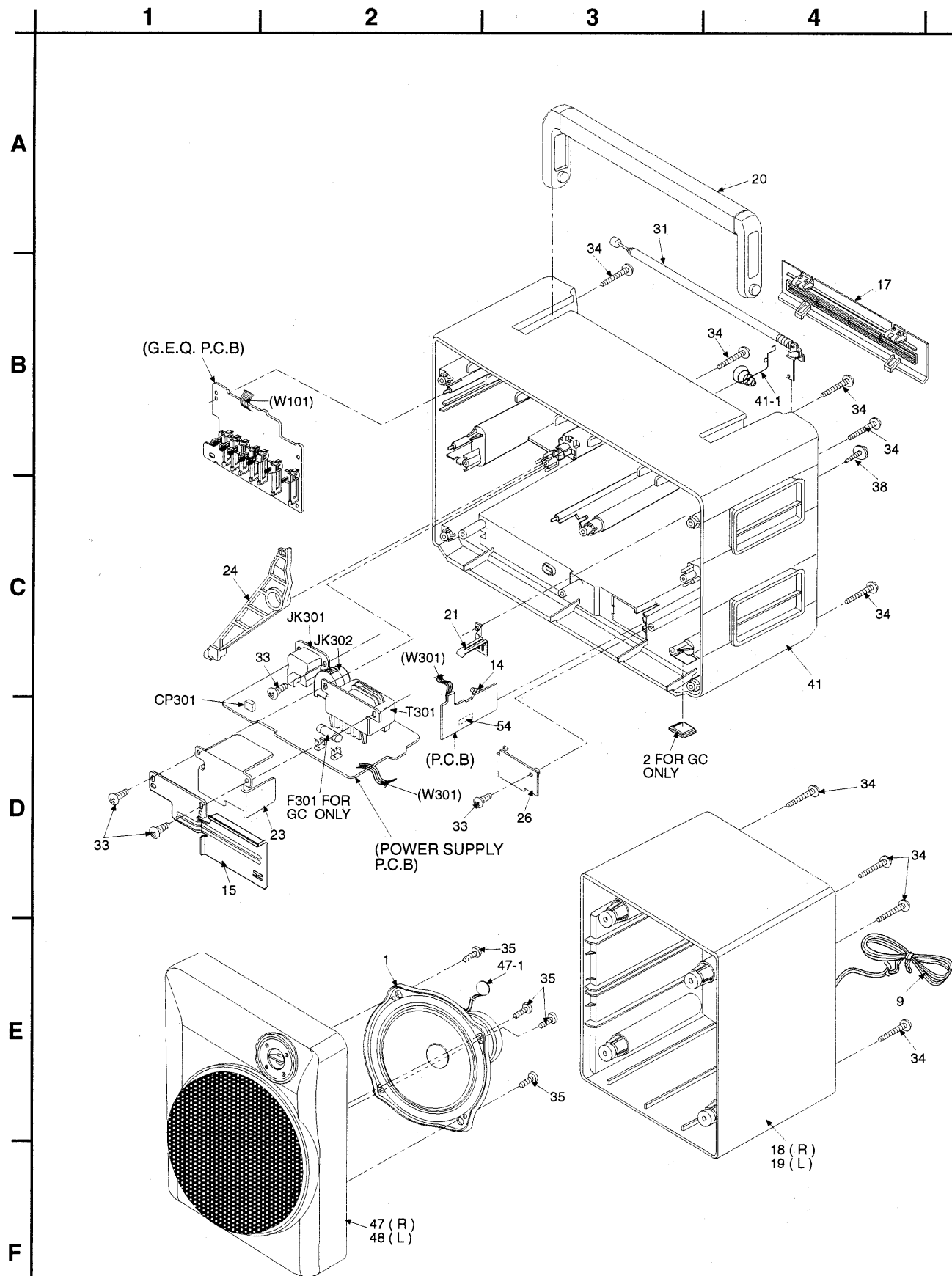
SPECIFICATION

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



■ Cabinet Parts Location





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	RMS0055-1	REEL SHAFT	[M]
104	RXR0005	SUPPLY REEL ASS'Y	[M]
105	RMB0125	BACK TENSION SPRING	[M]
106	RMB0047	HEAD PANEL SPRING	[M]
107	RML0076	EJECT SELECT LEVER	[M]
108	RMM0029	EJECT SLIDE LEVER	[M]
109	RMB0048	IDLER LEVER SPRING	[M]
110	RMC0061	PACK SPRING	[M]
111	RHW16009	CAPSTAN WASHER	[M]
112	RML0081-1	RECORD SAFETY LEVER	[M]
113	RFU189ZA	MECHA CHASSIS ASS'Y	[M]
114	RMB0046-1	LOCK PLATE SPRING	[M]
115	RML0080	ERASE HEAD ARM	[M]
116	RBR2CY009	ERASE HEAD	[M]
117	RML0116	BRAKE ARM	[M]
118	RMB0109-1	BRAKE SPRING	[M]
119	RMA0696	ASTEC HEAD PANEL	[M]
120	RMR0149	HEAD BASE	[M]
123	XTN2+12F	ASTEC HEAD SCREW	[M]
124	RBR4CY016-M	STEREO ASTEC HEAD	[M]
127	RMA0109	BACK PLATE	[M]
129	XTN2+6J	BACK PLATE SCREW	
130	RMB0043-1	ROD OPERATION 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]
136	RMM0028	REC ROD	[M]

Ref No.	Part No.	Part Name & Description	Remarks
137	RML0078	FUNCTION PLATE	[M]
138	RML0077-1	LOCK PLATE	[M]
139	RML0072	RELEASE LEVER	[M]
140	RMR0227	IDLER GEAR BRUSH	[M]
141	RDG0057-1	IDLER GEAR	[M]
142	RML0074	IDLER LEVER	[M]
143	RMR0211-1	PAUSE BUSH	[M]
144	RMB0053	PAUSE LEVER SPRING	[M]
145	RML0082	PAUSE LEVER	[M]
146	RML0071-1	SWING LEVER	[M]
147	RMB0045-1	A.S. SPRING	[M]
148	RML0075	TRIGGER LEVER	[M]
149	RDK0005	CAM GEAR	[M]
150	RML0073-1	PROTECT LEVER	[M]
151	RXP0014	RF CLUTCH ASS'Y	[M]
152	RMG0102-1	MOTOR RUBBER CUSHION	
153	RHD26002	SCREW	
154	RMA0122	MOTOR BRACKET	[M]
155	XTV26+6F	MOTOR BK SCREW	
156	RFKPXCT810PK	MOTOR ASS'Y	[M]
157	RXP0015	PINCH ROLLER ASS'Y	[M]
157A	RMB0049	PINCH ROLLER SPRING	[M]
158	RDV0007	MAIN BELT D	[M]
159	RDV0006-1	RF BELT	[M]
160	RXF0012	FLYWHEEL ASS'Y	[M]
160-1	RHW21008	FLYWHEEL WASHER	[M]
161	RDV0009	MAIN BELT B	[M]
162	RMG0131	SUPPORT CUSHION	[M]
163	XTN26+3F	CONNECTOR SCREW	[M]
164	RML0085	PAUSE RELEASE LEVER	[M]
165	RMA0121	ANGLE	[M]
166	RMB0044	TRIGGER LEVER SPRING	[M]
167	RME0098-2	SPRING	[M]

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	RGQX0001	ALIGNMENT HOLE COVER	[M] (GC)

Ref No.	Part No.	Part Name & Description	Remarks
3	RGXX0003-K	FINE TUNING KNOB	[M]
4	RBD562WA-S	SELECTOR KNOB	[M]
5	RDGX0005	VARICON GEAR	[M]
6	RDG5874ZB	DAMPER GEAR	[M]

Ref No.	Part No.	Part Name & Description	Remarks
7	REXX0009	DECK 1 HEAD LEAD	[M]
8	REXX0010	DECK 2 HEAD LEAD	[M]
9	REXX0089	SPEAKER CORD	[M]
10	RGJX0001-W	POINTER	[M]
11	RGVX0003-H	VOLUME/XBS KNOB	[M]
12	RGXX0006-K	TUNING KNOB	[M]
13	RGZX0002-S	MECHA BUTTON (SET)	[M]
14	RJC511ZBS	BATTERY SPRING	[M]
15	RSCX0004	MOTOR SHIELD PLATE	[M]
16	RJM164YA	C. MIC	[M]
17	RKK2SZA-0	BATTERY COVER	[M]
18	RKPX0002-K	SPEAKER BACK CAB (R)	[M]
19	RKPX0003-K	SPEAKER BACK CAB (L)	[M]
20	RKX4SZA-0	HANDLE	[M]
21	RMAX0002	ANT PLATE	[M]
22	RMCX0008	REC SPRING	[M]
23	RMC1249ZA	TRANSFORMER SHIELD P	[M]
24	RMLX0002	RECORD LEVER	[M]
25	RMR0368	CHASIS	[M]
26	RMVX0005	BATTERY COMPARTMENT	[M]
29	RUS781YA	EJECT SPRING	[M]
30	SUX102	MECHA BUTTON FIXTURE	[M]
31	XEARR175ED-Y	R. ANT	
32	XTN2+4F	RECORD SPRING SCREW	
33	XTV3+12G	MOUNTING SCREW	
34	XTV3+20G	CASING SCREW	
35	XTV3+8G	MECHA ROD SCREW	
36	XTWS3+8T	SCREW	
37	XYN26+C6	VARICON GEAR SCREW	
38	XYN3+F8FY	ANT ROD SCREW	
39	RMXX0004	SPACER	[M]
40	RFGXCT820GK	FRONT CAB. ASS'Y	[M] (G)
40	RFGXCT820GC	FRONT CAB. ASS'Y	[M] (GC)
41	RFKHCT820GK	BACK CAB. ASS'Y	[M] (G)
41	RFKHCT820GC	BACK CAB. ASS'Y	[M] (GC)
41-1	RJC931ZC	BATTERY SPRING	
43	RFKLXCT820PA	CASS. LID ASS'Y (R)	[M]
45	RFKLXCT820PB	CASS. LID ASS'Y (L)	[M]
46	RFKLXCT810PK	CASS. HOLDER ASS'Y	[M]
46-1	RUS757ZAA	TAPE SPRING	[M]
47	RFKAXCT820PA	SPK. FRONT ASS'Y (R)	[M]
47-1	RAT0002	TWEETER	[M]
48	RFKAXCT820PB	SPK. FRONT ASS'Y (L)	[M]
51	XTN2+16GFZ	MECHANISM PCB SCREW	
52	RMXX0015	HEAT SINK	[M]
53	XTW3+10F	SCREW FOR IC LA4598	
54	RMZ0280	BATTERY INSULATOR	[M]

Ref No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUITS	
IC1	AN7205	AMP IC	
IC2	BA1442A	MPX / IF IC	[M]
IC4	AN7317	PLAYBACK/RECORD AMP	[M]
IC5	AN7332K	GEQ IC	[M]
IC6	LA4598	POWER AMP	
		TRANSISTORS	
Q1	2SC829BTA	TRANSISTOR	
Q121	2SC1684STA	TRANSISTOR	
Q151	2SD1020HTA	TRANSISTOR	[M]
Q221	2SC1684STA	TRANSISTOR	
Q251	2SD1020HTA	TRANSISTOR	[M]
Q341	2SA564RTA	TRANSISTOR	
Q342	2SC1684STA	TRANSISTOR	
Q343	2SC1684STA	TRANSISTOR	
Q361	2SC1684RTA	TRANSISTOR	
Q362	2SC1684STA	TRANSISTOR	
Q371	2SC2001LTA	TRANSISTOR	[M]
Q501	2SC1684STA	TRANSISTOR	
Q502	2SK301QTA	TRANSISTOR	[M]
		DIODES	
D1	RVD1SS133TA	DIODE	
D301	RVD1SS133TA	DIODE	
D310	SLB55VR140TA	DIODE	[M]
D331	RVD1SS133TA	DIODE	
D333	RVDMTZ15CTA	DIODE	[M] 
D351	RVD1SR35TR	DIODE	
D352	RVD1SR35TR	DIODE	
D353	RVD1SR35TR	DIODE	 (GC)
D354	RVD1SR35TR	DIODE	 (GC)
D355	RVD1SR35TR	DIODE	
D356	RVD1SR35TR	DIODE	
D362	RVD1SS133TA	DIODE	
D363	RVD1SS133TA	DIODE	
D366	RVD1SS133TA	DIODE	
D371	RVDMTZ6R8BTA	DIODE	
		VARIABLE RESISTORS	
VR301	RVV1I5G15A	VR, BALANCE	[M]
VR302	RVV2I4G54A	VR, EQ. 330Hz	[M]
VR303	RVV2I4G54A	VR, EQ. 1kHz	[M]
VR304	RVV2I4G54A	VR, EQ. 3.3kHz	[M]

Ref No.	Part No.	Part Name & Description	Remarks
VR305	RVV2I4G54A	VR, EQ. 10kHz	[M]
VR306	RRV20R03B54A	VR, XBS CONTROL	[M]
VR307	RRV20R03B54A	VR, VOLUME CONTROL	[M]
VR501	EVNDXAA00B14	VR, TAPE SPEED	
		VARIABLE CAPACITOR	
VC1	RCV4RC2V2K-M	VARICON	
CT2	ECRLA010A53R	TRIMMER	
CT3	ECRLA010A53R	TRIMMER	
CT4	ECRLA010A53R	TRIMMER	
CT5	RCVMFTPC7B	FINE TUNING	
		SWITCHES	
S301	RJ1SE01-H	SW, JACK (JK301)	⚠
S501	RSH1A013-J	SW, MOTOR (DECK 1)	[M]
S502	RSH1A013-J	SW, MOTOR (DECK 2)	[M]
SW1	RST3D28ZA-H	SW, SELECTOR	[M]
SW2	RST3B35ZA-H	SW, MODE	[M]
SW3	RST4H18ZA-H	SW, BAND	[M]
SW4	RSH2F18ZA-A	SW, REC	
		CONNECTORS	
CP1	RJP5G18ZA	PB HEAD CONNECTOR	
CP2	RJP4G18ZA	R/P HEAD CONNECTOR	
CP3	RJS4T5ZA	MAIN-MECHA MOLEX	
CP301	RJP2G4YA	CONNECTOR	
		COILS & TRANSFORMERS	
L1	RLQY30S1W	COIL	[M]
L2	RLD4Y53W	FM OSC COIL	[M] (G)
L2	RL04P002-E	FM OSC COIL	[M] (GC)
L3	RLV5C005-0	FERRITE ANT	[M]
L6	RLQY30S4W	FM RF CHOKE COIL	[M]

Ref No.	Part No.	Part Name & Description	Remarks
L7	RLA3B44-M	SW RF COIL	
L8	RL02B108-M	AM OSC COIL	
L9	RL03B91-M	SW1 OSC COIL	
L10	RL03B95-M	SW2 OSC COIL	
L341	RL09B17-T	OSC COIL	
T1	RLI4B153-M	FM IF COIL	
T2	RLI2B153-M	AM IF COIL	
T3	RLI4B153-M	FM IF COIL	
T301	RLT5K3G22B-X	TRANSFORMER	[M] ⚠ (GC)
T301	RLT5K3X10B-X	TRANSFORMER	[M] ⚠ (G)
		CERAMIC FILTERS	
CF1	RVF107WDZT	CERAMIC FILTER	
CF2	RVFSFZ455JL	AM BPF	
		FUSE	
F301	XBA2C12TB0	FUSE	⚠ (GC)
		FUSE HOLDER	
FC301	EYF52BC	FUSE HOLDER	(GC)
FC302	EYF52BC	FUSE HOLDER	(GC)
		JACKS	
JK101	RJF1098ZA-H	SPEAKER JACK	[M]
JK102	RJF1099YA	LINE IN JACK	
JK103	RJJ37TK01-C	JACK, HEADPHONE	
JK104	RJM164YA	C. MIC	[M]
JK301	RJ1SE01-H	AC JACK	⚠
JK302	RSR3A01ZA-H	VOLTAGE SELECTOR	⚠
		WIRE	
W102	REXX0013	POWER WIRE CONNECTOR	[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						
R2	ERDS2TJ334T	330K 1/4W	R4	ERDS2TJ330T	33 1/4W	R8	ERDS2TJ680T	68 1/4W
R3	ERDS2TJ471T	470 1/4W	R5	ERDS2TJ101T	100 1/4W	R10	ERDS2TJ103T	10K 1/4W
			R6	ERDS2TJ6R8T	6.8 1/4W	R11	ERDS2TJ221T	220 1/4W
			R7	ERDS2TJ470T	47 1/4W	R12	ERDS2TJ332T	3.3K 1/4W

Ref. No.	Part No.	Values & Remarks
R101	ERDS2TJ472T	4.7K 1/4W
R102	ERDS2TJ560T	56 1/4W
R103	ERDS2TJ222T	2.2K 1/4W
R104	ERDS2TJ104T	100K 1/4W
R105	ERDS2TJ563T	56K 1/4W
R106	ERDS2TJ271T	270 1/4W
R107	ERDS2TJ103T	10K 1/4W
R108	ERDS2TJ153T	15K 1/4W
R109	ERDS2TJ104T	100K 1/4W
R110	ERDS2TJ472T	4.7K 1/4W
R121	ERDS2TJ103T	10K 1/4W
R122	ERDS2TJ562T	5.6K 1/4W
R123	ERDS2TJ102T	1K 1/4W
R131	ERDS2TJ332T	3.3K 1/4W
R132	ERDS2TJ223T	22K 1/4W
R133	ERDS2TJ152T	1.5K 1/4W
R134	ERDS2TJ273T	27K 1/4W
R141	ERDS2TJ683T	68K 1/4W
R142	ERDS2TJ104T	100K 1/4W
R151	ERDS2TJ3R3T	3.3 1/4W
R152	ERDS2TJ101T	100 1/4W
R153	ERDS2TJ272T	2.7K 1/4W
R155	ERDS2TJ103T	10K 1/4W
R156	ERDS2TJ470T	47 1/4W
R161	ERDS2TJ333T	33K 1/4W
R201	ERDS2TJ472T	4.7K 1/4W
R202	ERDS2TJ560T	56 1/4W
R203	ERDS2TJ222T	2.2K 1/4W
R204	ERDS2TJ104T	100K 1/4W
R205	ERDS2TJ563T	56K 1/4W
R206	ERDS2TJ271T	270 1/4W
R207	ERDS2TJ103T	10K 1/4W
R208	ERDS2TJ153T	15K 1/4W
R209	ERDS2TJ104T	100K 1/4W
R210	ERDS2TJ472T	4.7K 1/4W
R221	ERDS2TJ103T	10K 1/4W
R222	ERDS2TJ562T	5.6K 1/4W
R223	ERDS2TJ102T	1K 1/4W
R231	ERDS2TJ332T	3.3K 1/4W
R232	ERDS2TJ223T	22K 1/4W
R233	ERDS2TJ152T	1.5K 1/4W
R234	ERDS2TJ273T	27K 1/4W
R241	ERDS2TJ683T	68K 1/4W
R242	ERDS2TJ104T	100K 1/4W
R251	ERDS2TJ3R3T	3.3 1/4W
R252	ERDS2TJ101T	100 1/4W
R253	ERDS2TJ272T	2.7K 1/4W
R255	ERDS2TJ103T	10K 1/4W
R256	ERDS2TJ470T	47 1/4W

Ref. No.	Part No.	Values & Remarks
R261	ERDS2TJ333T	33K 1/4W
R301	ERDS2TJ101T	100 1/4W
R302	ERDS2TJ225T	2.2M 1/4W
R303	ERDS2TJ222T	2.2K 1/4W
R304	ERDS2TJ560T	56 1/4W
R311	ERDS2TJ103T	10K 1/4W
R312	ERDS2TJ103T	10K 1/4W
R313	ERDS2TJ103T	10K 1/4W
R321	ERDS2TJ221T	220 1/4W
R331	ERDS2TJ102T	1K 1/4W
R332	ERDS2TJ333T	33K 1/4W
R333	ERDS2TJ101T	100 1/4W
R341	ERDS2TJ562T	5.6K 1/4W
R342	ERDS2TJ561T	560 1/4W
R343	ERDS2TJ102T	1K 1/4W
R344	ERDS2TJ6R8T	6.8 1/4W
R345	ERDS2TJ223T	22K 1/4W
R346	ERDS2TJ101T	100 1/4W
R347	ERDS2TJ223T	22K 1/4W
R351	ERG1S1220P	22 1W
R361	ERDS2TJ104T	100K 1/4W
R362	ERDS2TJ332T	3.3K 1/4W
R363	ERDS2TJ332T	3.3K 1/4W
R364	ERDS2TJ102T	1K 1/4W
R365	ERDS2TJ334T	330K 1/4W
R366	ERDS2TJ101T	100 1/4W
R368	ERDS2TJ103T	10K 1/4W
R371	ERDS2TJ680T	68 1/4W
R372	ERDS2TJ471T	470 1/4W
R382	ERDS2TJ5R6T	5.6 1/4W
R501	ERDS2TJ105T	1M 1/4W
R502	ERDS2TJ223T	22K 1/4W
R503	ERDS2TJ223T	22K 1/4W
R505	ERDS2TJ102T	1K 1/4W
R506	ERDS2TJ123T	12K 1/4W
R507	ERDS2TJ103T	10K 1/4W
		CAPACITORS
C1	ECBT1H100JC5	10P 50V
C2	ECBT1H470J5	47P 50V
C3	ECBT1H180JC5	18P 50V
C4	ECBT1H100JC5	10P 50V
C5	ECBT1H102KB5	1000P 50V
C6	ECBT1H102KB5	1000P 50V
C7	ECBT1H4R7KC5	4.7P 50V
C8	ECBT1H470J5	47P 50V
C9	ECBT1H102KB5	1000P 50V
C10	ECBT1H220JC5	22P 50V

Ref. No.	Part No.	Values & Remarks
C11	ECBT1H150JC5	15P 50V (G)
C11	ECBT1H180JC5	18P 50V (GC)
C12	ECFR1C223MR	0.022 16V
C13	ECFR1C223MR	0.022 16V
C14	ECBT1H221KB5	220P 50V
C15	ECEA1HKA010B	1 50V
C16	ECBT1C682MR5	6800P 16V
C17	ECEA1EU100B	10 25V
C18	ECEA1EU100B	10 25V
C19	ECFR1C223MR	0.022 16V
C20	ECEA0JKS101B	100 6.3V
C22	ECFR1C473MR	0.047 16V
C23	ECEA1HKAR22B	0.22 50V
C24	ECEA1EU100B	10 25V
C25	ECBT1C103MS5	0.01 16V
C26	ECFR1C223MR	0.022 16V
C27	ECBT1H102KB5	1000P 50V
C28	ECEA1HKA010B	1 50V
C29	ECEA1HKA010B	1 50V
C30	ECBT1H8R2KC5	8.2P 50V
C31	ECBT1H6R8KC5	6.8P 50V
C32	ECBT1C103MS5	0.01 16V
C33	ECFR1C123KR	0.012 16V
C34	ECBT1H8R2KC5	8.2P 50V
C36	ECQP1361JZT	360P 100V [M]
C37	ECQP2A152JZT	1500P 100V
C38	ECQP2A472JZT	4700P 100V
C40	ECBT1C103MS5	0.01 16V
C41	ECBT1H220JC5	22P 50V
C42	ECBT1H200JC5	20P 50V
C43	ECBT1H6R8KC5	6.8P 50V
C56	ECBT1H102KB5	1000P 50V
C60	ECBT1H3R3KC5	3.3P 50V
C61	ECBT1H3R3KC5	3.3P 50V
C102	ECEA1CU101B	100 16V
C103	ECFR1C273KR	0.027 16V
C104	ECEA1CU100B	10 16V
C105	ECBT1H821KB5	820P 50V
C106	ECEA1CU100B	10 16V
C108	ECBT1H102KB5	1000P 50V
C110	ECBT1H101KB5	100P 50V
C111	ECBT1C122MR5	1200P 16V
C121	ECFR1C123KR	0.012 16V
C131	ECEA1HKA010B	1 50V
C132	ECEA1HKA3R3B	3.3 50V
C133	ECEA1HKA3R3B	3.3 50V
C134	ECQV1H104JZ3	0.1 50V
C135	ECEA1HKA010B	1 50V
C136	ECBT0J223MS5	0.022 6.3V

Ref. No.	Part No.	Values & Remarks
C332	ECEA1CU471B	470 16V
C333	ECEA1CU101B	100 16V
C343	ECQP2A272JZT	2700P 100V
C344	ECEA0JU221B	220 6.3V
C345	ECBT1C682MR5	6800P 16V
C346	ECBT1H102KB5	1000P 50V
C347	ECBT1H181KB5	180P 50V
C348	ECBT1H102KB5	1000P 50V
C351	ECKR1H103ZF5	0.01 50V
C352	ECKR1H103ZF5	0.01 50V
C353	ECKR1H103ZF5	0.01 50V (GC)
C354	ECKR1H103ZF5	0.01 50V (GC)
C355	ECKR1H103ZF5	0.01 50V
C356	ECKR1H103ZF5	0.01 50V
C357	ECEA1CU221B	220 16V
C361	ECEA1CU100B	10 16V
C362	ECBT1H102KB5	1000P 50V
C363	ECFR1C473MR	0.047 16V
C364	ECEA1HKA010B	1 50V
C365	ECFR1C333KR	0.033 16V
C371	ECEA1CU222E	2200 16V
C372	ECEA1AU221B	220 10V
C381	ECBT1H331KB5	330P 50V
C501	ECEA1CU330B	33 16V
C502	ECEA1CU221B	220 16V
C503	ECBT1C103MS5	0.01 16V

Ref No.	Part No.	Part Name & Description	Remarks
		ACCESSORIES	
A1	RQT2833-G	INSTR. MANUAL	[M]
A2	RJA0019-2A	AC CORD	(GC) 
A2	RJA0004	AC CORD	(SF) (G) 
A3	RJP120ZDS-K	PLUG ADAPTOR	(G) 
A3	SJP5213-2	AC CORD ADAPTOR	(GC) 