ORDER NO. MD9709A2CS

Service Manual

Portable Stereo Component System

Radio Cassette

RX-CS730

Colour

(K) ..... Black type

Area

Suffix for Model No.	Area	Colour
(GU)	Asia, Latin American, Middle eastern, Africa	(K)
(MG)	Saudi Arabia, Kuwait, Singapore, Malaysia	

TAPE SECTION : SG20 MECHANISM SERIES

■ Specifications

■ RADIO

Frequency range
- FM: 90 - 108 MHz
- MW: 530 - 1605 kHz
- SW1: 2.3 - 7.6 MHz
- SW2: 7.0 - 22.0 MHz

Intermediate frequency
- FM: 10.7 MHz
- AM: 450 kHz

Sensitivity
- FM: 17 dB / 50 mW
- MW: 54 dB / 50 mW
- SW1: 55 dB / 50 mW
- SW2: 47 dB / 50 mW

■ TAPE RECORDER

Track system: 4 track 2 channel, stereo
Recording system: AC bias
Erasing system: Magnetic
Monitor system: Voltage sensing monitor
Frequency range
- Normal: 60 - 14000 Hz

■ GENERAL

Power requirement
- AC: 110-127 V / 220-240 V, 50 / 60 Hz
  Power consumption : 17 W
- Battery: 12 V (eight R20 / R20P, UM-1 batteries)
  ■ Do not use rechargeable type batteries.
- DC IN: 13 - 15.5 V

Power output: 30 W (PMPO)
  2 W + 2 W (RMS) (max.)

Speakers
- 2 Woofers : 12 cm
- 2 Tweeters : 7.6 cm

Jacks
- Output: SPEAKERS : 8 Ω
  Headphones : 32 Ω

Dimensions (WxHxD): 581 x 265 x 221 mm
  Main unit : 251 x 265 x 221 mm
  Speaker box : 165 x 224 x 204 mm

Weight: 4.0 kg (without batteries)

Notes :
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 maintained 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.

Panasonic

■ Contents

■ BEFORE USE

[FOR (GC) area]
Be sure to disconnect the mains cord before adjusting the voltage selector.
(See illustration) Set the voltage selector on the rear panel to the voltage setting for the area in which the unit will be used. (If the power supply in your area is 117V or 120V, set to the "127V" position.)

Note: The unit will not correctly function if this setting is not made correctly. (There is no voltage selector for some destinations; the correct voltage is already set.)

■ Operation Checks

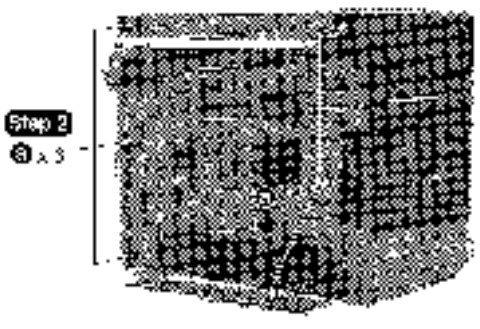
" ATTENTION SERVICER " Some chassis components may have sharp edges. Be careful when disassembling and servicing.

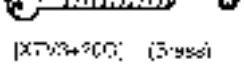
1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**
3. **Select items from the following index when checks or replacement are required.**

• Contents

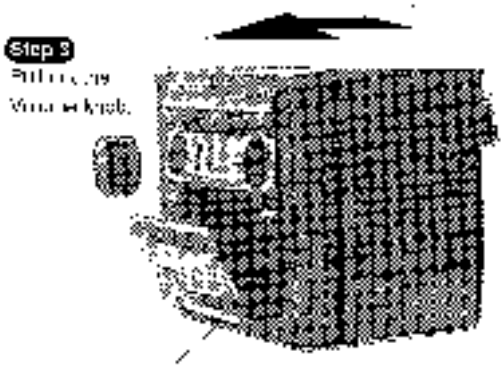
■ Disassembly Of The Front Cabinet

Step 1
Remove the Battery Cover.



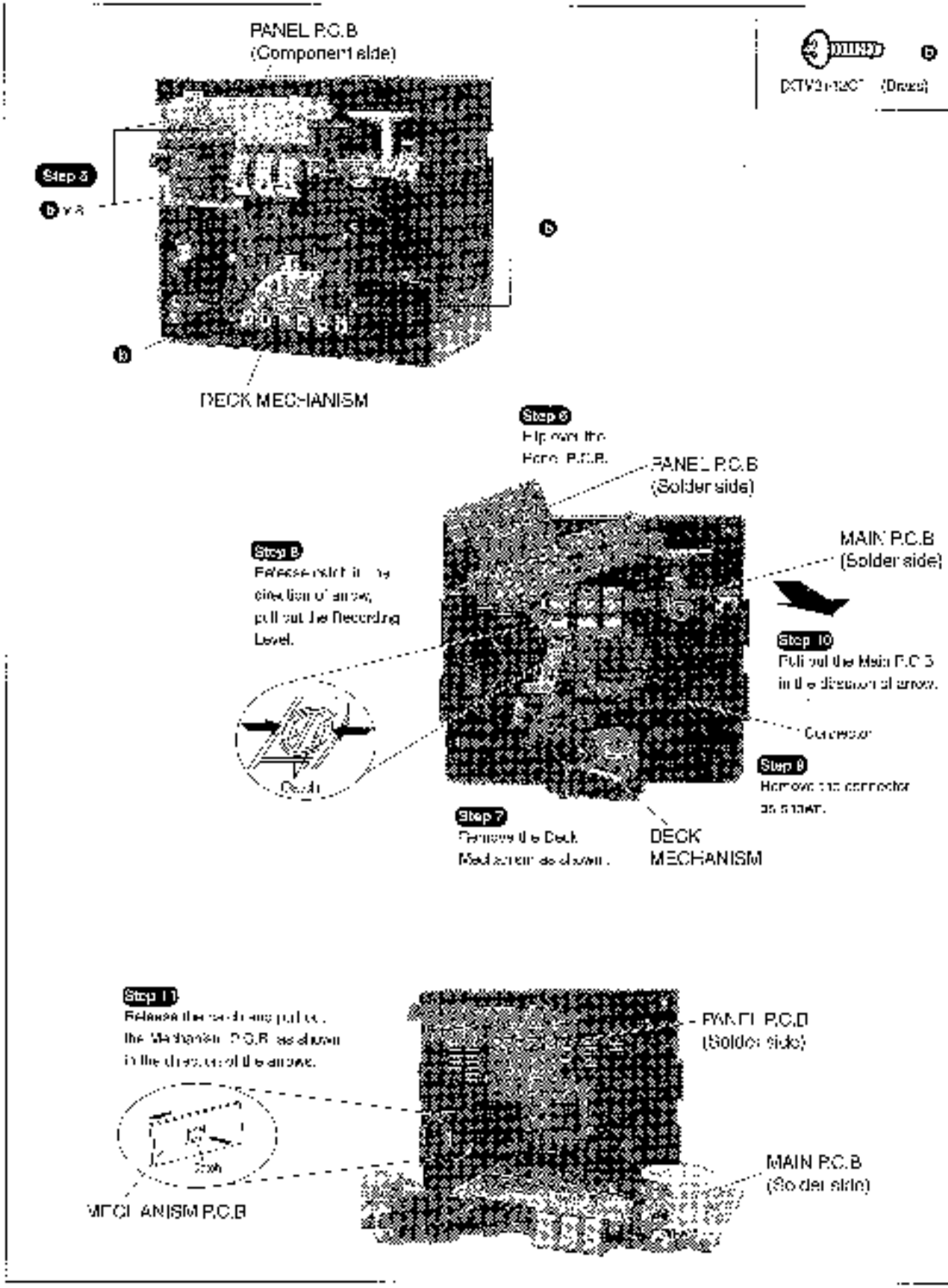


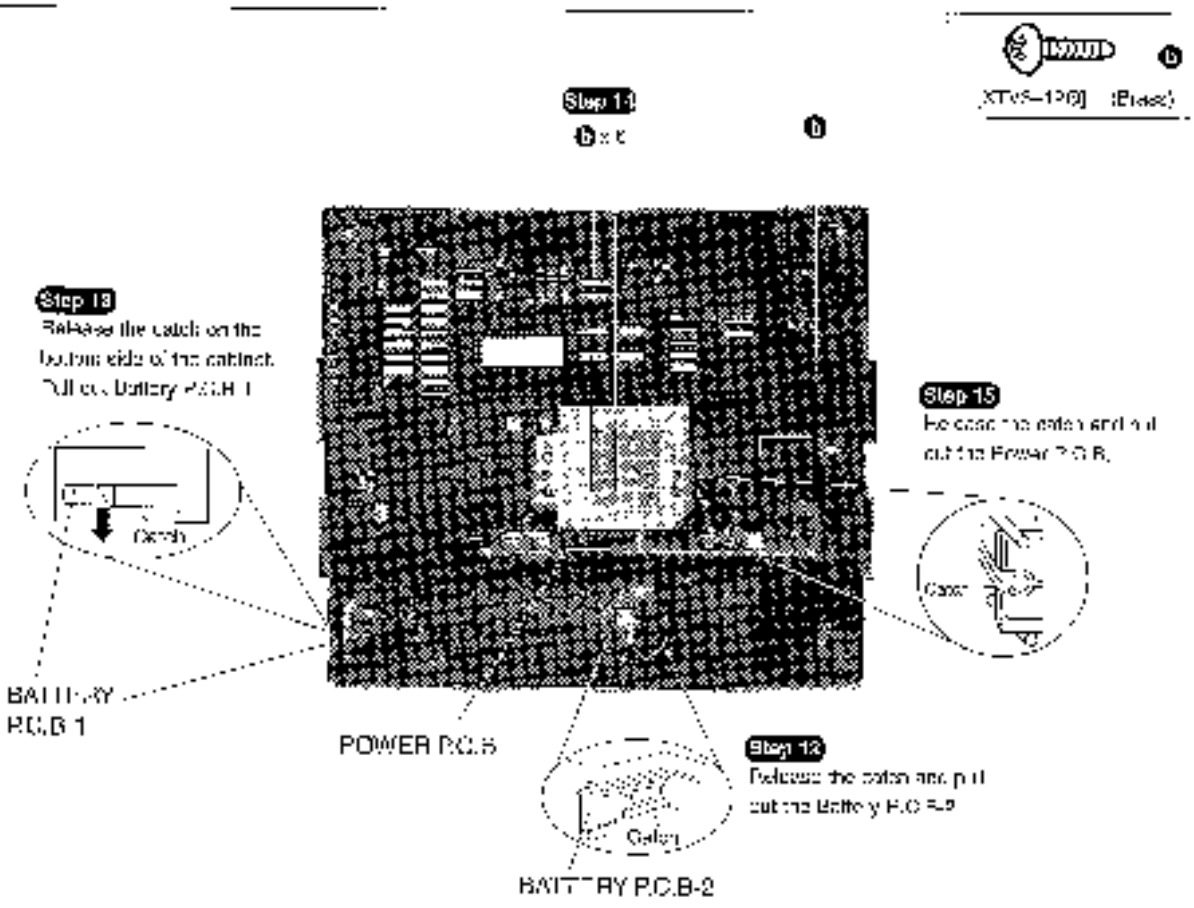
[XTW4+20G] (Brass)

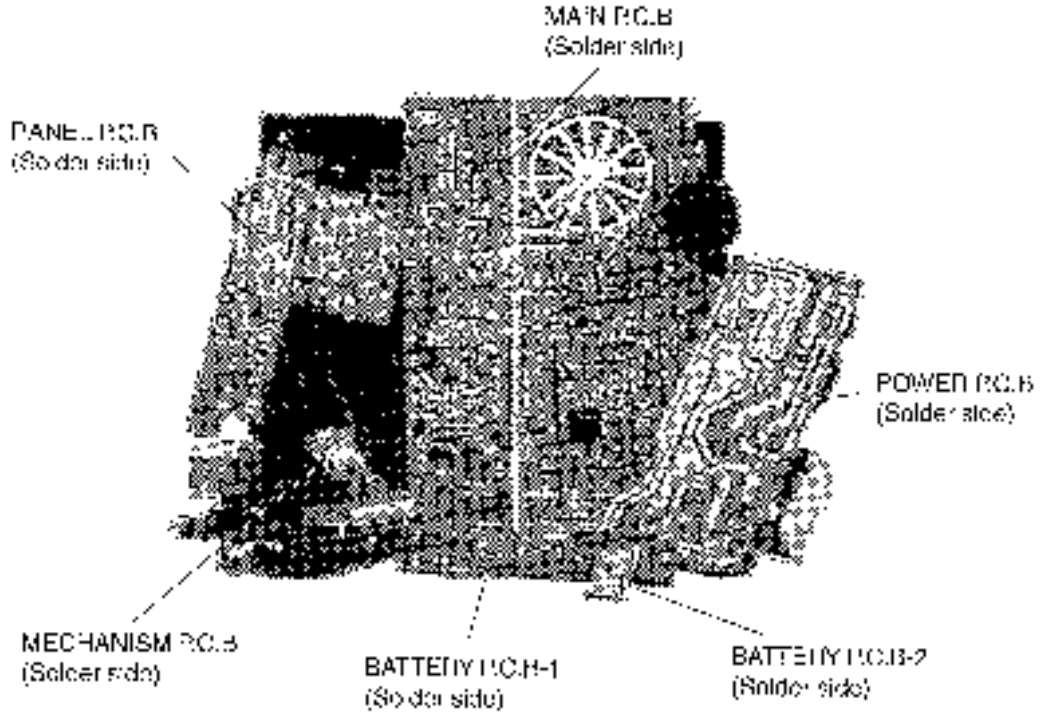


Press the Eject button and remove the front cabinet in the direction of the arrow shown.

■ Checking Procedure For Main, Panel, Mechanism And Power P.C.B.




Step 11
Step 13
Release the catch on the bottom side of the cabinet. Pull out Battery P.C.B 1
Step 15
Release the catch and pull out the Power P.C.B.
BATTERY P.C.B 1
POWER P.C.B
Step 12
Release the catch and pull out the Battery P.C.B-2
BATTERY P.C.B-2


MAIN P.C.B
(Solder side)
PANEL P.C.B
(Solder side)
POWER P.C.B
(Solder side)
MECHANISM P.C.B
(Solder side)
BATTERY P.C.B-1
(Solder side)
BATTERY P.C.B-2
(Solder side)

■ Measurements and Adjustments

● Tuner Section

● ALIGNMENT INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

1. AC power shall be supplied by 120V DC.
2. Set volume control to maximum.
3. Set band switch to FM, MW, SW1 or SW2.
4. Set selector switch to TAPE.
5. Set FM MODE/SP switch to MONO.
6. Set FINE TUNING to center.
7. Output of signal generator should be no higher than necessary to obtain an output reading.

● AM - IF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig.1)	REMARKS
CONNECTIONS	FREQUENCY				
Feed through a loop of several turns of wire and route signal into loop antenna.	455 kHz 30% Mod. at 400Hz	Set to non-interference point (near about 600kHz)	Headphone jack (32Ω) (Connect to right and left channel. Right and left channel is connected. Use a resistor to protect the monitoring circuit.)	IS (AM IF)	Adjust for maximum output

● MW - RF ALIGNMENT

"	(GU) ....531 kHz (GC) ....1,611 kHz ± 3 kHz	Tuning capacitor fully closed.	"	IS (MW OSC. Coil)	Adjust for maximum output.
"	(GL).....1650 kHz (GC).....1680 kHz ± 5 kHz	Tuning capacitor fully opened.	"	CT2 (MW ANT. Trimmer)	Adjust for maximum output.
"	603 kHz	Tune to signal	"	L1 (MW ANT. Coil)	Adjust for maximum output. Adjust LS-1 by moving coil (ANTENNA) ferrite core.
"	1500 kHz	Tune to signal	"	CT2 (MW ANT. Trimmer)	Adjust for maximum output.

(*1) Fix antenna coil will wax after completing alignment.

● SW1 - RF ALIGNMENT

"	2.3-3 MHz	Tuning capacitor fully closed.	"	L5 (SW1 OSC. Coil)	Adjust for maximum output.
"	7.291 MHz	Tuning capacitor fully opened.	"	VC1-3 (SW1 ANT. VC1)	Adjust for maximum output.
"	3.9 MHz	Tune to signal	"	L1-3 (SW1 ANT. Coil)	Adjust for maximum output. Adjust L3-2 by moving coil (ANTENNA) ferrite core.
"	7.0 MHz	Tune to signal	"	VC1-2 (SW1 ANT. VC1)	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 OSC LEAKAGE PROBE)	ADJUSTMENT (Shown in Fig.1)	REMARKS
CONNECTIONS	FREQUENCY				
Connect to test point **TP1** through ceramic capacitor (10pF). Negative side to test point **TP2**	6.84 MHz	Tuning capacitor fully closed.	Headphone jack (S02) (Connect the plug as shown in Fig.3 and connect the test leads of the plug to the measuring equipment.)	L10 (SW2 OSC. Coil)	Adjust for maximum output.
	25.50 MHz	Tuning capacitor fully opened.	"	C 5 (SW2 OSC. Trimmer)	Adjust for maximum output.
	7.0 MHz	Tune to signal.	"	7 (SW2 ANT. Coil)	Adjust for maximum output.

● FM - IF ALIGNMENT

Connect to test point **TP3** through ceramic capacitor. Negative side to test point **TP2**.	10.7 MHz (Sweep)	Put all from (reference point about 90MHz)	Connect test prob. of scope to test point **TP3**. Negative side to test point **TP4**	T7 (FM 1st IFT)	Waveform is shown in Fig. 3
"	"	"	"	T8 (FM 2nd IFT)	Waveform is shown in Fig. 4.

● FM - RF ALIGNMENT

Connect to test point **TP1** through FM dummy antenna. Negative side to test point **TP2**.	(GU)....80.2 MHz (GC)....87.05 MHz ± 50 kHz	Variable capacitor fully closed.	Headphone jack (S02) (Connect the plug as shown in Fig.3 and connect the test leads of the plug to the measuring equipment.)	L2 (FM OSC. Coil)	Adjust for maximum output. [*2]
	(GU)....108.2 MHz (GC)....108.8 MHz ± 70 kHz	Variable capacitor fully closed.	"	VC1-1 (FM OSC. VC.)	"
	98 MHz	Tune to signal.	"	VC1-2 (FM ANT. VC.)	Adjust for maximum output.

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

● Cassette Deck Section

● ALIGNMENT INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Measuring Instruments
- Digital frequency counter

Measuring Conditions
- Make sure the heads are clean.
- Make sure the capstan and pressure rollers are clean.

Test Tape
- Tape speed adjustment (3 kHz, - 10 dB) : QZZCWAT

Note : No Azimuth Head Alignment is required due to Azimuth head is used in the cassette mechanism.

● TAPE SPEED ALIGNMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCWAT	Headphone Jack (S03) (Connect the plug as shown in Fig.3 and connect the test leads of the plug to the measuring equipment.)	Motor VR (As shown in Fig. 6)	3000 ± 30 Hz	1. Set the unit to "TAPE" position. 2. Playback the middle part of the test tape (QZZCWAT). 3. Adjust motor VR for output of 3000 ± 30 Hz shown on frequency counter.

● ALIGNMENT POINTS

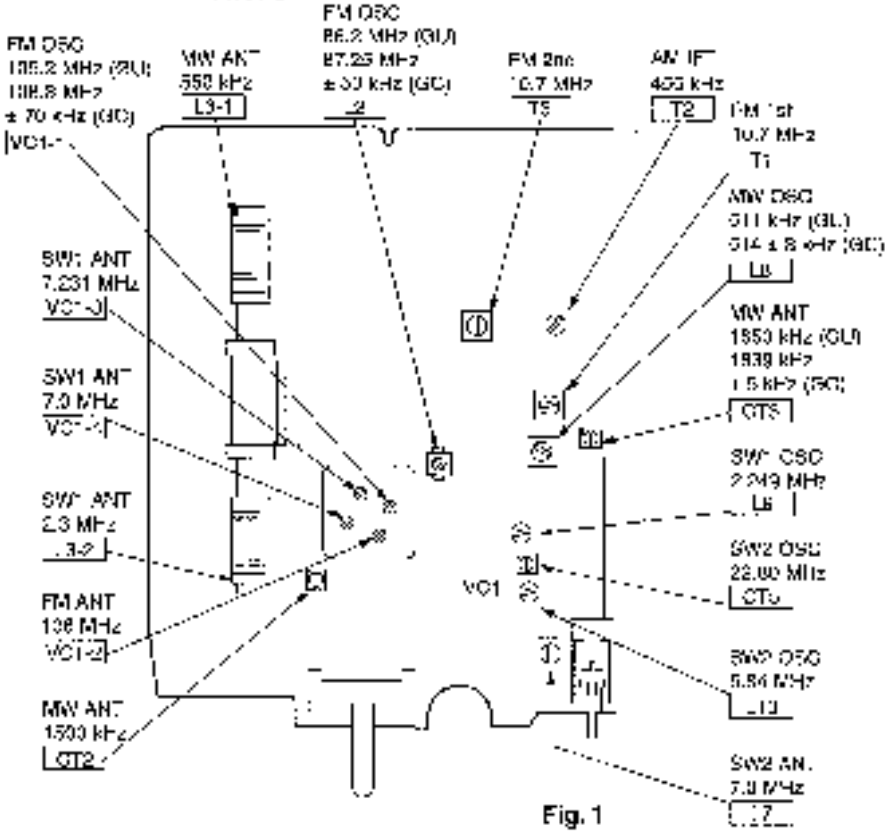


Fig. 1

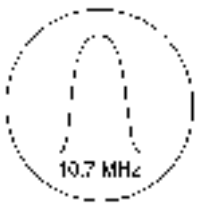


Fig. 3

Fig. 4

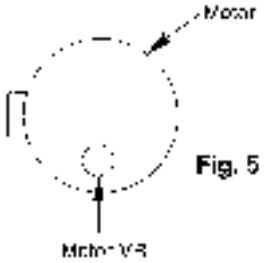
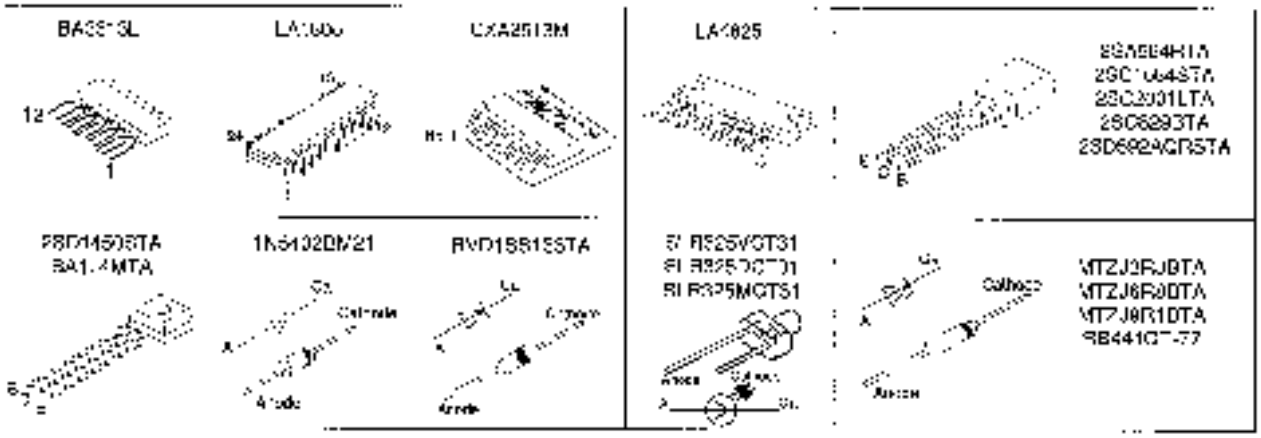


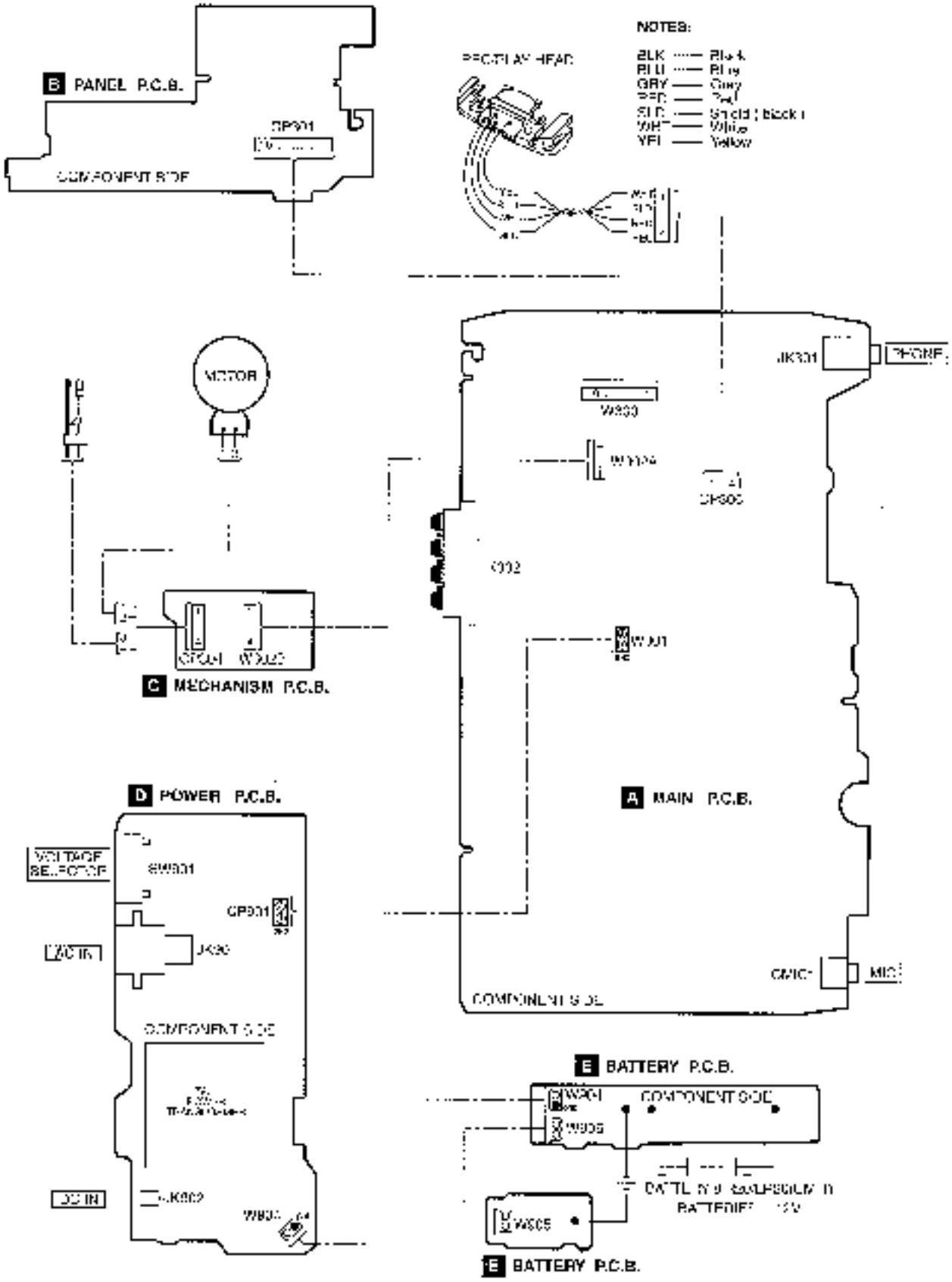
Fig. 5

Fig. 2

■ Terminal Guide of IC's , Transistors and Doides



■ Wiring Connection Diagram



■ Schematic Diagram

(All schematic diagrams may be modified at any time with the development of new technology)

Note :

- S352 : Preset equalizer switch (VOCAL)
- S353 : Preset equalizer switch (FLAT)
- S354 : Preset equalizer switch (CLEAR)
- S355 : Preset equalizer switch (SOFT)
- S356 : Preset equalizer switch (BASS)
- SW1 : SELECTOR switch
- SW3 : BAND select switch
- SW4 : TP switch
- SW5 : FM MODE/DP switch
- SW901 : Voltage selector switch
- VR301 : Volume control VR

- Battery current :

Vol. min. .....390 mA (FM)
390 mA (AM)
468 mA (TAPE)

Vol. max. .... 883 mA (FM)
895 mA (AM)
972 mA (TAPE)

Measurement Instruction
(AM : 74 dBm , 30% Mod.
FM : 0 dBm , 30% Mod.
TAPE : 315 Hz , 0 dB)

- Signal line

: LR line
: Main signal line
: Record signal line
: AM signal line
: AM OSC signal line
: FM/AM signal line
: FM signal line
: FM OSC signal line
: Playback signal line

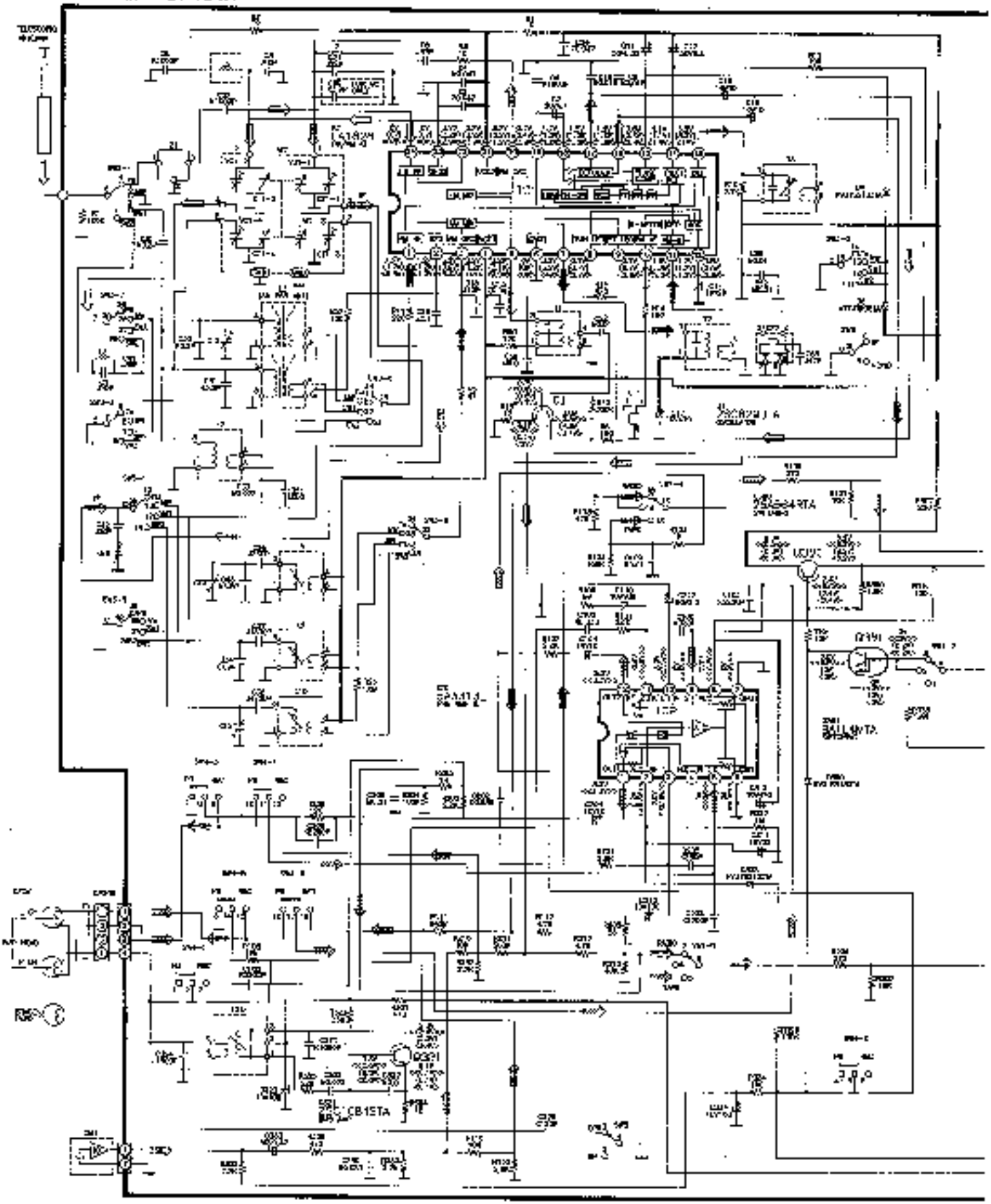
- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and GND (Decipe on the basis of chassis.
Accordingly, there may also some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring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

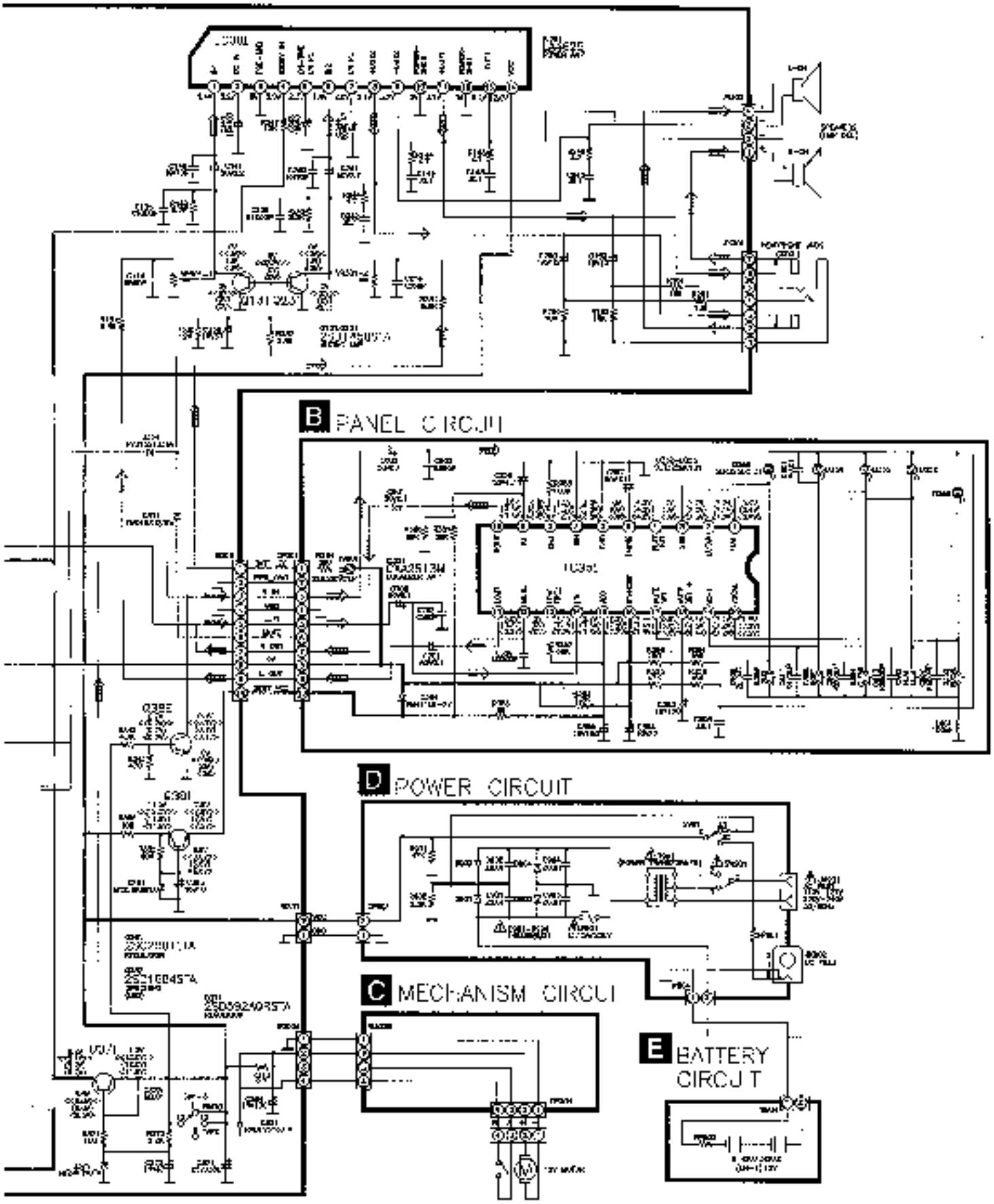
( ) ..... AM, < > ..., FM No mark ... Playback position, << >> ... Record position

- Importance 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 components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !
IC, LSI and VLSI 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.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.
- Put a conductive mat on the work table.

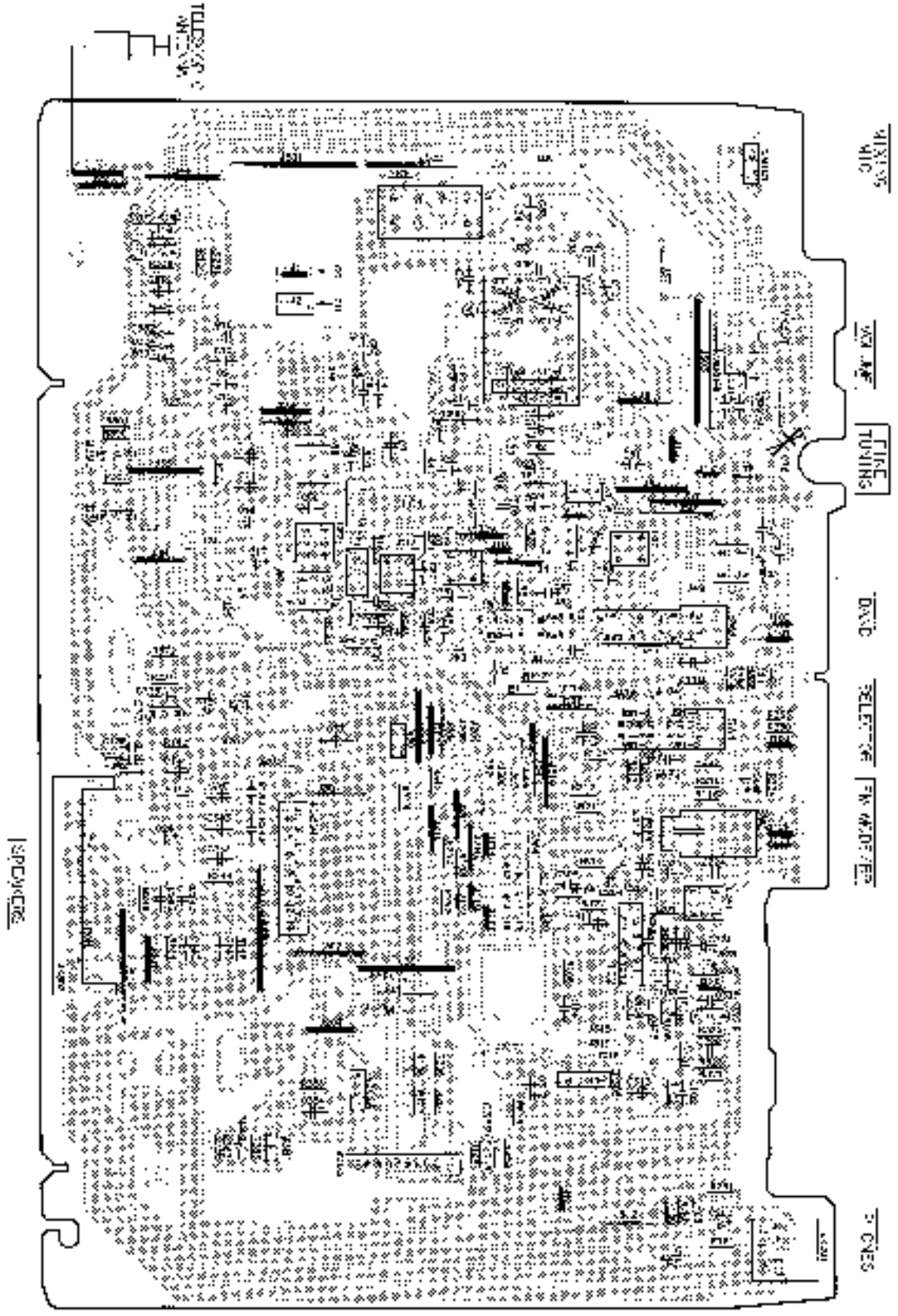
A MAIN CIRCUIT




B PANEL CIRCUIT
D POWER CIRCUIT
C MECHANISM CIRCUIT
E BATTERY CIRCUIT

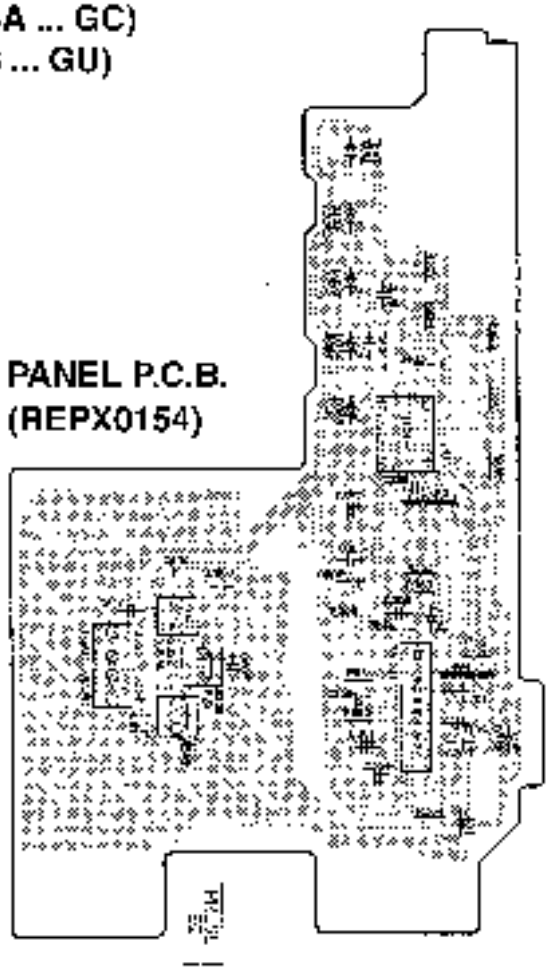
■ Printed Circuit Board

A MAIN P.C.B. (REPX0153A ... GC) (REPX0153 ... GU)

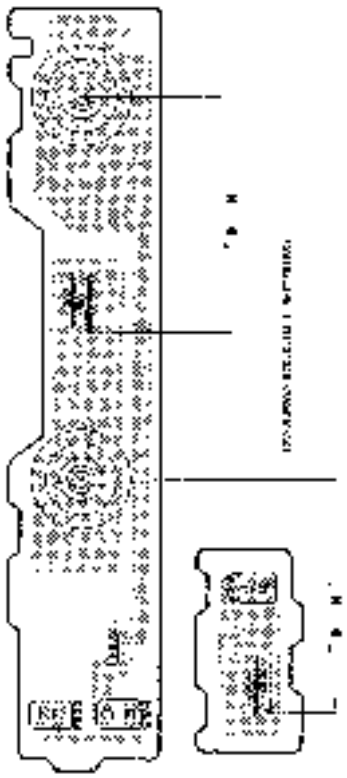


C MECHANISM P.C.B.
(REPX0153A ... GC)
(REPX0153 ... GU)

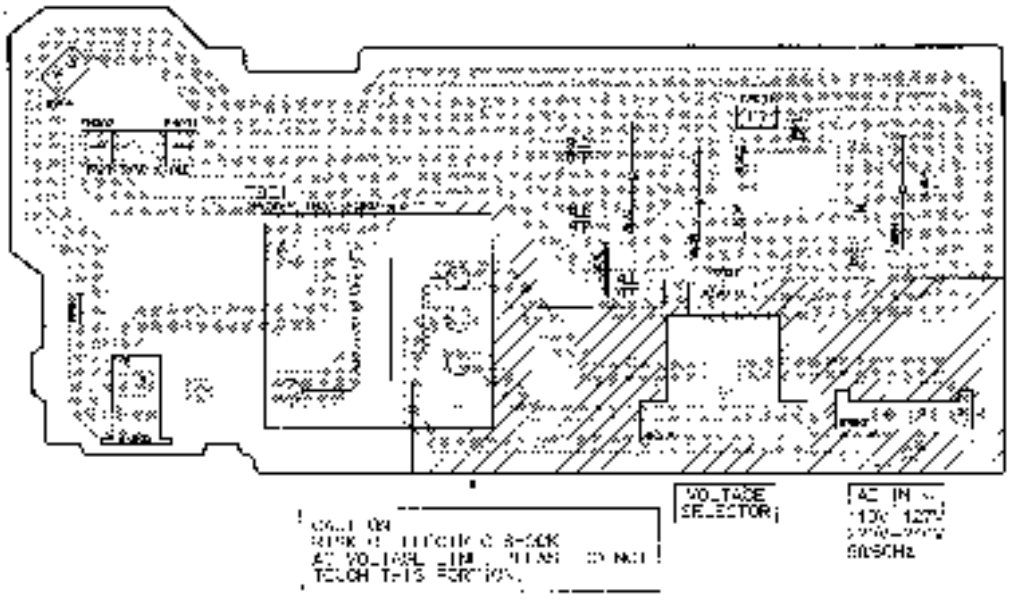
B PANEL P.C.B.
(REPX0154)



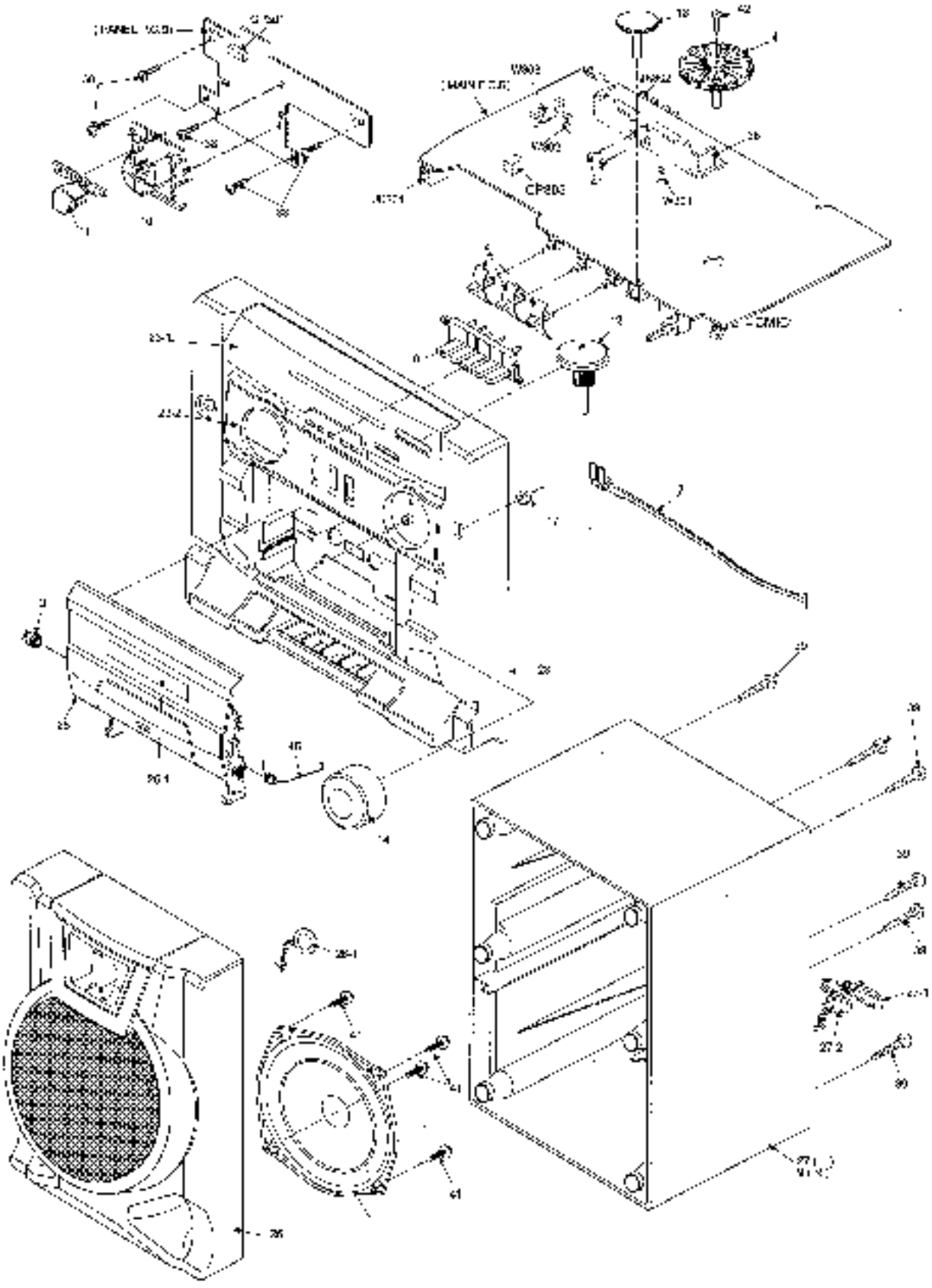
E BATTERY P.C.B.
(REPX0154)

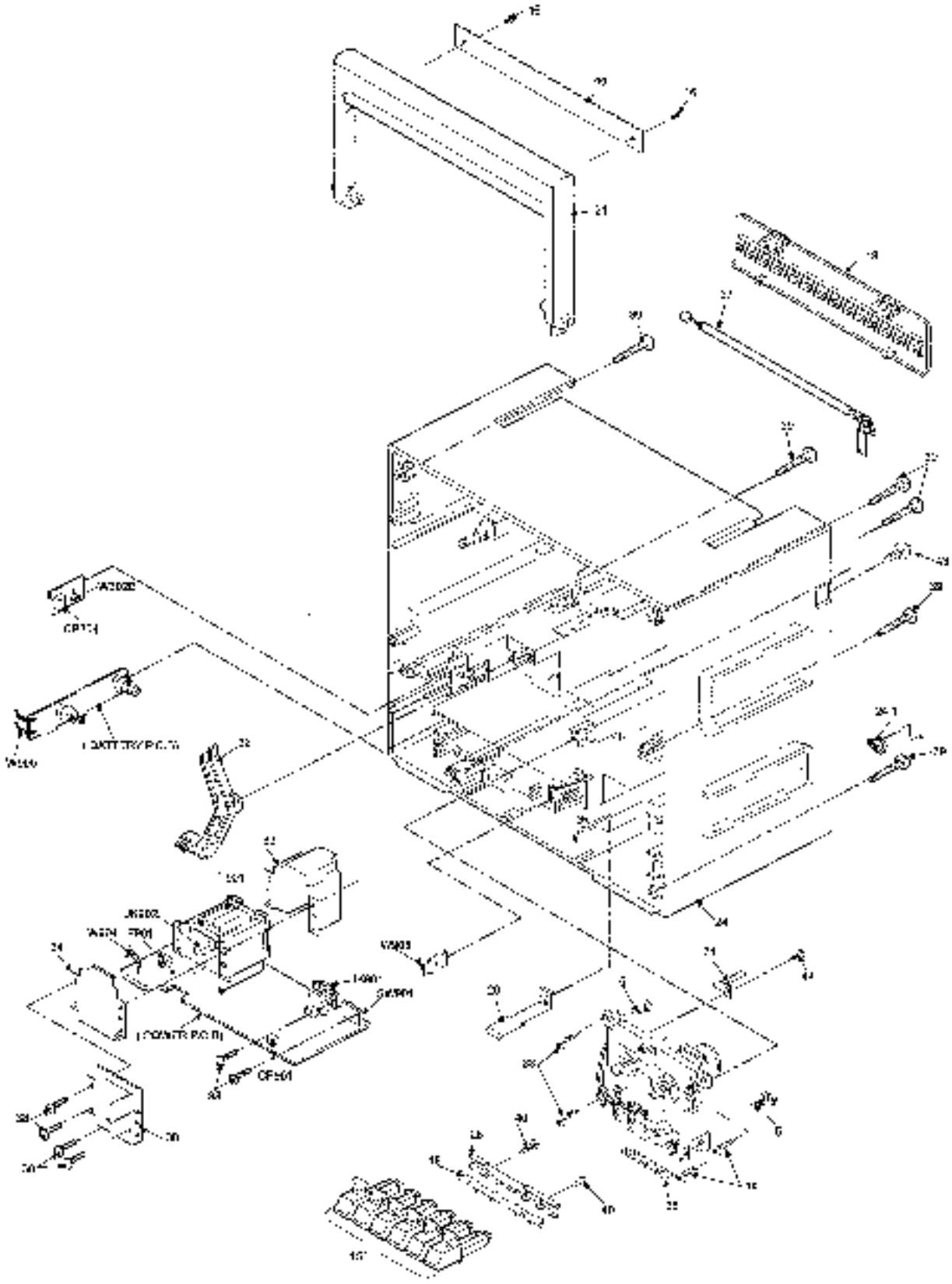


D POWER P.C.B. (REPX0154)



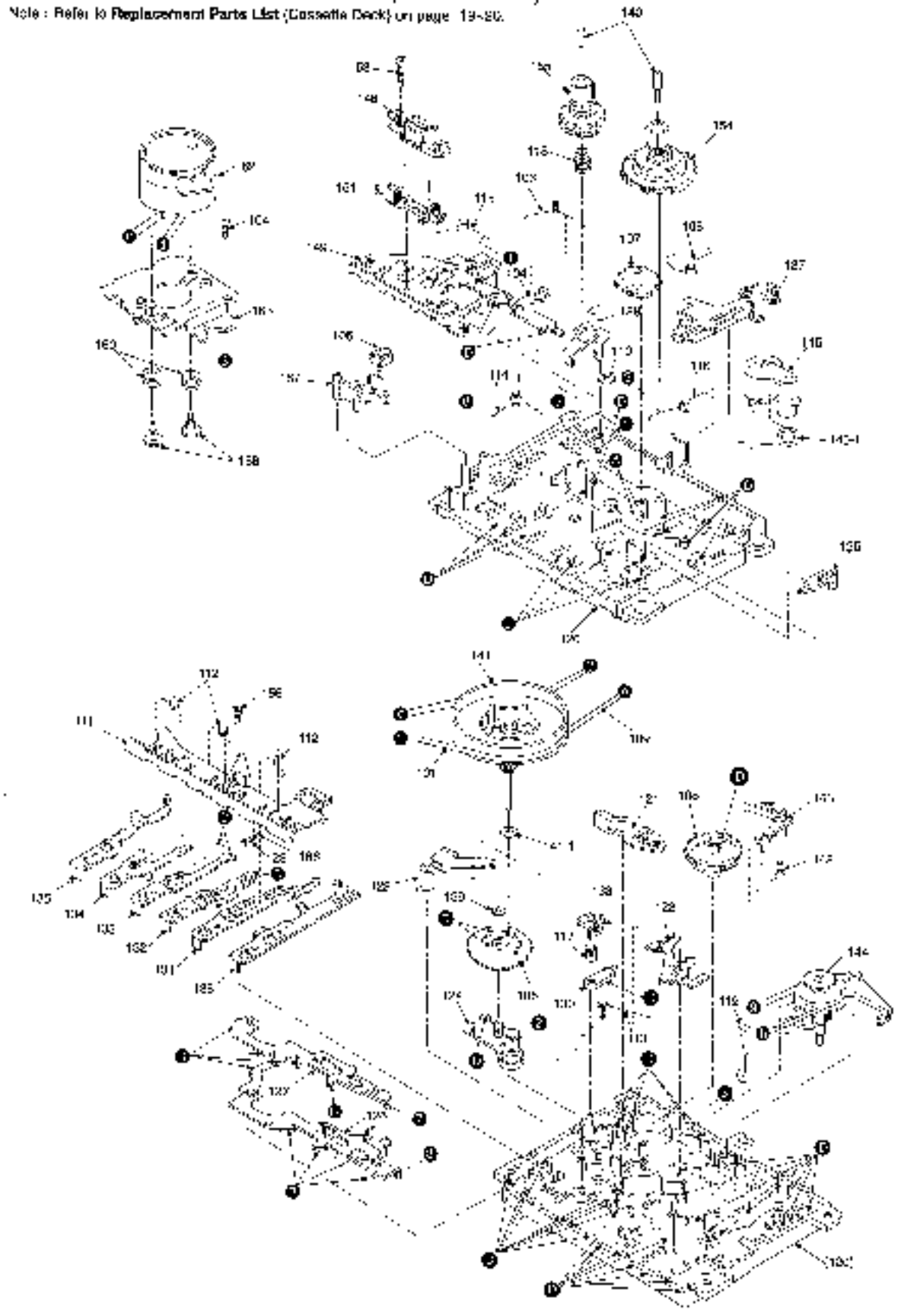
■ Cabinet Parts Location





■ Mechanism Parts Location (RAA0937)

Note : Refer to Replacement Parts List (Cassette Deck) on page 19~20.



■ Replacement Parts List

Notes: * Important safety notice :
Components identified by ⚠ mark have special characteristics important to the safety.
Further more, special parts which have purposes of fire resistance (wire wound resistors), high-quality sound (capacitors), low noise resistors) etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
* The "N" mark denotes the standard parts.
* "M" in Remarks column indicates parts which are supplied by MESA.

Part No.	Part No.	Part Name & Description	Remarks
		CABINET ASSEMBLY	
1	PQSP1004	SPEAKER (WOOFER)	[P]
2	PBD622MA	SELECTOR KNOB	[P]
3	PDG1188	DAMPER (LEAD)	[P]
4	PDG1201	VARIOR GEAR	[P]
5	PEM0017	ACCESSORY	[P]
6	PEM0047	TAPE HEAD (WO)	[P]
7	PGBL1240	CABLE	[P]
8	PQLZ0401A	LED (GREEN)	[P]
9	PWBM1015A0	CD BUFFER ASSEMBLY	[P]
10	PQLP1077	LED BUTTON (EJECTION)	[P]
11	PSPA0221K	EQ BUTTON (TOP)	[P]
12	PSPA0267	TUNING KNOB	[P]
13	PSPA0268	PANEL TUNING KNOB	[P]
14	PSPA0269	VOLUME KNOB	[P]
15	PSJA0269	MULTI FUNCTION (REST)	[P]
16	PMMA0	IDLER ARM ASSEMBLY	[P]
17	PHSA2	VIC RUBBER	[P]
18	PHSA	VIBRATION BEAT	[P]
19	PMSA	BATTERY COVER	[P]
21	PMSA	HANDLE	[P]
22	PMSA	HANDLE (CHANGE)	[P]
23	PMSA	FRONT CASE ASSY	[P]
23	PMSA	FRONT CASE ASSY	[P]
23	PMSA	ANT	[P]
23	PMSA	ANT	[P]
23	PMSA	OPERATION PANEL	[P]
24	PMSA	BACK CASE ASSY	[P]
24	PMSA	BACK CASE ASSY	[P]
24	PMSA	CASE (BOTTOM)	[P]
25	PMSA	CASE LID ASSY	[P]
25	PMSA	CASE LID PANEL	[P]
26	PMSA	SPK FRONT CASE ASSY	[P]
27	PSSA	TWEETER	[P]
27	PMSA	SPK BACK ASSY	[P]
27	PEM	SPEAKER WIRE	[P]
27	PMSA	CORD BUFFER	[P]
28	PMSA	ANGLE PAD	[P]
29	PMSA	ANTENNA	[P]

Part No.	Part No.	Part Name & Description	Remarks
30	PMSA	MAIN GEAR	[M]
31	PMSA	RECORD SPRING	[M]
32	PMSA	RECORDING LEVER	[M]
33	PMV	TRANSMIT GEAR	[M]
34	PMV	TRANSMIT GEAR (LID)	[M]
35	PMSA	IDLER	[M]
36	PMV	PINCH	[M]
37	PMSA	HOLDER ASSY	[M]
38	PMSA	SCREW	[M]
39	PMSA	SCREW	[M]
40	PMV	SCREW	[M]
41	XTW	SCREW	[M]
42	XTW	VARIOR GEAR SCREW	[M]
43	XTW	ANT SCREW	[M]
44	XTN	TRANSMIT GEAR (LID)	[N]
45	PMV	CHASSIS (LID)	[N]
		CASSETTE DECK	
101	PDV	MAIN BELT	[M]
102	PMSA	BRAKE SPRING	[N]
103	PMSA	BRAKE	[N]
104	PMSA	BRAKE	[N]
105	PMSA	PINCH ROLLER	[N]
106	PDV	IDLER (L)	[N]
107	PDV	IDLER (R)	[N]
108	PMV	CAPSTAN	[N]
109	PDV	CAPSTAN BELT	[M]
110	PMV	CAPSTAN WASHER	[M]
111	PMV	BACK PLATE	[M]
112	PMSA	TORQUE (TAKE UP)	[N]
113	PMV	HOLDER	[M]
114	PMV	LOCK PLATE SPRING	[M]
115	PMSA	HEAD PANEL SPRING	[N]
116	PMSA	BUFFER (PART)	[N]
117	PMSA	TABLE (HEAD)	[N]
118	PMSA	AZIMUTH ADJUSTING	[N]
119	PMV	TABLE (CAP)	[N]
120	PMSA	SCREW (HEAD)	[N]
121	PMV	HOLDER (CAP)	[N]
122	PMV	HOLDER (CAP)	[N]
123	PMV	HOLDER (CAP)	[N]
124	PMV	HOLDER (CAP)	[N]
125	PMV	HOLDER (CAP)	[N]

Part No.	Part No.	Part Name & Description	Remarks
126	PMV	HOLDER (CAP)	[N]
127	PMV	HOLDER (CAP)	[N]
128	PMV	HOLDER (CAP)	[N]
129	PMV	HOLDER (CAP)	[N]
130	PMV	HOLDER (CAP)	[N]
131	PMV	HOLDER (CAP)	[N]
132	PMV	HOLDER (CAP)	[N]
133	PMV	HOLDER (CAP)	[N]
134	PMV	HOLDER (CAP)	[N]
135	PMV	HOLDER (CAP)	[N]
136	PMV	HOLDER (CAP)	[N]
137	PMV	HOLDER (CAP)	[N]
138	PMV	HOLDER (CAP)	[N]
139	PMV	HOLDER (CAP)	[N]
140	PMV	HOLDER (CAP)	[N]
141	PMV	HOLDER (CAP)	[N]
142	PMV	HOLDER (CAP)	[N]
143	PMV	HOLDER (CAP)	[N]
144	PMV	HOLDER (CAP)	[N]
145	PMV	HOLDER (CAP)	[N]
146	PMV	HOLDER (CAP)	[N]
147	PMV	HOLDER (CAP)	[N]
148	PMV	HOLDER (CAP)	[N]
149	PMV	HOLDER (CAP)	[N]
150	PMV	HOLDER (CAP)	[N]
151	PMV	HOLDER (CAP)	[N]
152	PMV	HOLDER (CAP)	[N]
153	PMV	HOLDER (CAP)	[N]
154	PMV	HOLDER (CAP)	[N]
155	PMV	HOLDER (CAP)	[N]
156	PMV	HOLDER (CAP)	[N]
157	PMV	HOLDER (CAP)	[N]

Part No.	Part No.	Part Name & Description	Remarks
201	PMV	MECHANISM LEVER	[P]
202	PMV	BLUE LEVER	[P]
203	PMV	EJECT SELECTION (PUSH)	[P]
204	PMV	LOCK PLATE	[P]
205	PMV	FUNCTION (SW)	[P]
206	XTN	ANTENNA (SCREW)	[P]
207	PMV	SWITCH (SW)	[P]
208	PMV	SWITCH	[P]
209	PMV	SWITCH	[P]
210	PMV	SWITCH	[P]
3	PMV	STOP ROD	[P]
30	PMV	PAUSE ROD	[P]
36	PMV	REC ROD	[P]
37	PMV	EJECT LEVER (UP)	[P]
38	PMV	ANTENNA	[P]
39	PMV	HOLDER ASSY	[P]
41	PMV	REEL SHAFT	[P]
41	PMV	FLYWHEEL ASSY	[P]
41-1	PMV	FLYWHEEL WASHER	[P]
42	PMV	TRIGGER SPRING	[P]
43	PMV	TRIGGER LEVER	[P]
44	PMV	REC CLUTCH ASSY	[P]
45	PMV	TAKE UP CLUTCH ASSY	[P]
45-1	PMV	TAKE UP WASHER (PINCH)	[P]
46	PMV	ANTENNA (SCREW)	[P]
47	PMV	HOLDER HEAD PANEL	[P]
51	PMV	HEAD ERASE	[P]
52	XTN	FIXED HEAD SCREW	[M]
53	PMV	TAKE UP CLUTCH ASSY	[N]
54	PMV	SUPPLY REEL ASSY	[M]
55	XTN	LOCK PLATE SCREW	[M]
56	PMV	MOTOR SCREW	[N]
57	PMV	MOTOR (CAPSTAN)	[N]
58	PMV	MOTOR ASSY	[P]
59	PMV	HOLDER	[P]
60	PMV	HOLDER (CAP)	[P]
61	PMV	HOLDER ASSY	[P]
62	PMV	HOLDER	[P]
63	PMV	HOLDER (CAP)	[P]

Ref No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUITS	
IC1	[illegible]	[illegible]	[N]
IC2	SA58131	[illegible]	[N]
IC351	LA4225	[illegible] POWER	[N]
IC451	[illegible]	[illegible] GEQ	[N]
		TRANSISTORS	
Q1	2SC2258TA	TRANSISTOR	[M]
Q101	[illegible]	[illegible]	[M]
Q111	[illegible]	[illegible]	[M]
Q147	[illegible]	[illegible]	[M]
Q151	2SB1386/KR-BL/A	TRANSISTOR	[M]
Q221	2SC2001-T/A	TRANSISTOR	[M]
Q222	2SC1384BTA	TRANSISTOR	[M]
Q251	2SA1048TA	[illegible]	[M]
Q341	FA1145TA	[illegible]	[M]
		DIODES	
D1	RVD1SS133TA	DIODE	[M]
D3	MTZJ39FBTA	DIODE	[M]
D381	RVD1SS133TA	DIODE	[M]
D382	RVD1SS133TA	DIODE	[M]
D383	RVD1RS110A	DIODE	[M]
D401	[illegible]	DIODE	[M]
D402	[illegible]	DIODE	[M]
D403	[illegible]	DIODE	[M]
D405	SLR343VCT31	DIODE	[M]
D406	SLR343VCT31	DIODE	[M]
D407	SLR343UCT31	DIODE	[M]
D408	SLR343VCT31	DIODE	[M]
D801	MTZJ39FBTA	DIODE	[M]
D804	FB841107 37	DIODE	[M]
D871	MTZJ39FBTA	DIODE	[M]
D920	RVD1RS110A	DIODE	[M]
D941	[illegible]	DIODE	[M]
D942	1N4235E361	DIODE	[M]
D943	1N4235EV31	DIODE	[M]
D944	[illegible]	DIODE	[M]
		VARIABLE RESISTORS	
VR201	EVM2UAA00B54	[illegible] VOLUME	[M]

Ref No.	Part No.	Part Name & Description	Remarks
		SWITCHES	
S401	EVQQ41K03K	SW, VOL	[M]
S403	EVQQ41K03R	SW, FLAT	[M]
S404	EVQQ41K03K	SW, [illegible]	[M]
S501	EVQQ41K03K	SW, [illegible]	[M]
S871	[illegible]	SW, [illegible]	[M]
S901	[illegible]	SW, FUNCTION	[M]
S902	[illegible]	SW, BAND	[M]
S903	[illegible]	SW, [illegible]	[M]
S905	[illegible]	SW, HEATPROOF DETECT	[M]
S950	[illegible]	SW, VOLTAGE SELECTOR	[M]
		VARIABLE CAPACITORS	
C872	[illegible]	[illegible] VARIABLE CAPACITOR	[M]
C873	[illegible]	[illegible] VARIABLE CAPACITOR	[M]
C876	[illegible]	TRIMMER CAP	[M]
C878	[illegible]	FINE TUNING CAP	[M]
C901	[illegible]	CAPACITOR	[M]
		CONNECTORS	
CN1C	[illegible]	CONNECTOR, [illegible]	[M]
CP301	[illegible]	3P CONN	[M]
CP304	[illegible]	4P CONNECTOR	[M]
CP305	[illegible]	TAPE HEAD CONN	[M]
CP901	[illegible]	[illegible]	[M]
		COILS & TRANSFORMERS	
L2	[illegible]	AIR COIL	[M]
L3	[illegible]	AM BAR ANT	[M]
L6	[illegible]	COIL	[M]
L7	[illegible]	COIL	[M]
L8	[illegible]	[illegible] COIL	[M]
L9	[illegible]	[illegible]	[M]
L10	[illegible]	[illegible]	[M]
L541	[illegible]	[illegible]	[M]
L72	[illegible]	[illegible] COIL	[M]
T1	[illegible]	FM [illegible]	[M]
T2	[illegible]	AM [illegible]	[M]
T3	[illegible]	[illegible] COIL	[M]
T901	[illegible]	POWER TRANSFORMER	[M]
		[illegible]	
		[illegible]	

Ref No.	Part No.	Part Name & Description	Remarks
		CERAMIC FILTERS	
CF1	[illegible]	[illegible]	[M]
CF2	[illegible]	AM IF	[M]
		FUSES	
F101	[illegible]	[illegible]	[M]
		FUSE PROTECTORS	
R7	[illegible]	FUSE PROTECTOR	[M]
R823	[illegible]	FUSE PROTECTOR	[M]
		FUSE HOLDERS	
FH841	[illegible]	[illegible]	[M]
FH842	[illegible]	[illegible]	[M]
		CABLES	
JW301	[illegible]	[illegible]	[M]
JW302	[illegible]	[illegible]	[M]
JW901	[illegible]	[illegible]	[M]
JW902	[illegible]	[illegible]	[M]
		WIRES	
WR01	REDACTED	MAIN TO POWER WIRE	[M]
WR02	REDACTED	MAIN TO PANEL WIRE	[M]
WR04	[illegible]	BATTERY WIRE (SHORT)	[M]
		PACKING MATERIALS	
[illegible]	[illegible]	[illegible]	[M][N]
[illegible]	[illegible]	[illegible]	[M][N]
[illegible]	[illegible]	INSTRUCTION SHEET	[M]
[illegible]	[illegible]	POLYFOAM	[M]
		ACCESSORIES	
A1	[illegible]	CA-BC3K	[M]
A2	[illegible]	CA-BC3K	[M][N]
A3	[illegible]	AC CORD	[M][N]
A3	[illegible]	AC CORD	[M][N]
A4	[illegible]	ANTENNA (AM)	[M][N]
A5	[illegible]	ANTENNA (FM)	[M][N]

■ Resistors & Capacitors

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 components, be sure to use only manufacturer's specified parts shown in the parts list.
* Capacitor values are in microfarads (μF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000(OHM), 1M=1,000k(OHM)

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
	RESISTORS		R206	ERD25TJ271T	270 1/4W [M]	[illegible]	[illegible]	2.2K 1/4W [M]	C37	ECQP2A[illegible]T	[illegible] [M]
			R207	ERD25TJ103T	10K 1/4W [M]	[illegible]	[illegible]	390 1/4W [M]	C39	ECQP2A[illegible]T	[illegible] [M]
R1	[illegible]J104T	100K 1/4W [M]	R209	ERD25TJ123T	12K 1/4W [M]	[illegible]	[illegible]	39 1/4W [M]	C41	ECBT[illegible]	[illegible] 50V [M]
R5	[illegible]J100T	10 1/4W [M]	R211	ERD25TJ563T	56K 1/4W [M]	[illegible]	[illegible]	3.3K 1/4W [M]	C42	ECBT[illegible]	[illegible] 50V [M]
R9	[illegible]J100T	10 1/4W [M]	R212	ERD25TJ472T	4.7K 1/4W [M]	[illegible]	[illegible]	33K 1/4W [M]	C43	ECBT[illegible]	[illegible] 50V [M]
R4	ERD25TJ100T	10 1/4W [M]	R213	ERD25TJ[illegible]T	[illegible] 1/4W [M]	[illegible]	[illegible]J101T	100 1/4W [M]	C50	ECBT[illegible]	[illegible] [M]
R6	ERD25TJ[illegible]T	[illegible] 1/4W [M]	R216	ERD25TJ1[illegible]T	1[illegible]K 1/4W [M]	[illegible]	[illegible]J153T	15K 1/4W [M]	C51	ECBT[illegible]	[illegible] [M]
R10	ERD25TJ[illegible]T	[illegible] 1/4W [M]	R231	[illegible]	[illegible] 1/4W [M]	R239	ERD25TJ123T	12K 1/4W [M]	C52	ECBT[illegible]	[illegible] [M]
R11	[illegible]J821T	820 1/4W [M]	R243	[illegible]J823T	82K 1/4W [M]	R240	ERD25TJ[illegible]T	470 1/4W [M]	C61	ECU[illegible]	33P 50V [M]
R12	[illegible]J824T	820K 1/4W [M]	R244	ERD25FCVJ4R7T	4.7 1/4W [M]	R242	[illegible]	100 1/4W [M]	C62	ECBT[illegible]	47P 50V [M]
R14	ERD25TJ471T	470 1/4W [M]	R246	ERD25FCVJ4R7T	4.7 1/4W [M]				C63	ECBT[illegible]	[illegible]
R15	ERD25TJ470T	47 1/4W [M]	R258	ERD25TJ[illegible]T	2.2K 1/4W [M]		CAPACITORS		C102	ECF[illegible]	[illegible] [M]
R16	ERD25TJ[illegible]T	1K 1/4W [M]	R270	ERD25TJ1[illegible]T	10K 1/4W [M]				C103	ECBT[illegible]	[illegible] [M]
R17	ERD25TJ[illegible]T	10K 1/4W [M]	R281	[illegible]	100 1/4W [M]	C1	ECCD1H100K5[illegible]	10P 50V [M]	C104	[illegible]	[illegible] [M]
[illegible]	[illegible]	[illegible] 1/4W [M]	R304	[illegible]	220 1/4W [M]	C2	ECBT1H472[illegible]	0.0047 50V [M]	C105	[illegible]	[illegible] [M]
[illegible]	[illegible]	10K 1/4W [M]	R305	[illegible]	4.7 1/2W [M]	C3	ECBT1H150K[illegible]	15P 50V [M]	C106	[illegible]	[illegible] [M]
[illegible]	[illegible]	10K 1/4W [M]	R306	[illegible]	[illegible] 1/4W [M]	C4	ECFF1C473ZF	0.047 16V [M]	C107	[illegible]	[illegible] [M]
R37	[illegible]	10K 1/4W [M]	R321	ERD25TJ471T	470 1/4W [M]	C5	ECBT1H[illegible]	100P 50V [M]	C112	[illegible]	100 10V [M]
R101	[illegible]	8.2K 1/4W [M]	R322	ERD25TJ[illegible]T	[illegible] 1/4W [M]	C6	[illegible]	[illegible] [M]	C114	[illegible]	330P 50V [M]
R102	[illegible]	2.2K 1/4W [M]	R323	ERD25TJ183T	18K 1/4W [M]	C7	[illegible]	4.7 35V [M]	C125	ECBT1H102K[illegible]	1000P 50V [M]
R103	[illegible]	[illegible] 1/4W [M]	R324	[illegible]	51 1/4W [M]	C8	[illegible]	47P 50V [M]	C126	[illegible]	[illegible] [M]
R104	[illegible]	100K 1/4W [M]	R325	[illegible]	470 1/4W [M]	C9	ECFF1C153KR	0.015 16V [M]	C131	[illegible]	[illegible] [M]
R105	[illegible]	36 1/4W [M]	R326	[illegible]	100K 1/4W [M]	C10	ECFF1C153KR	0.015 16V [M]	C142	[illegible]	[illegible] [M]
R106	[illegible]	270 1/4W [M]	R327	[illegible]	2.2K 1/4W [M]	C11	ECA1HMF[illegible]	[illegible] 50V [M]	C143	[illegible]	[illegible] [M]
R107	[illegible]	10K 1/4W [M]	R329	[illegible]	2.2K 1/4W [M]	C12	ECA1HM[illegible]	3.3 50V [M]	C144	[illegible]	[illegible] [M]
R108	[illegible]	12K 1/4W [M]	R330	[illegible]	390 1/4W [M]	C13	ECBT1H[illegible]	[illegible] 50V [M]	C145	[illegible]	[illegible] [M]
R111	[illegible]	390K 1/4W [M]	R335	ERD25TJ153T	15K 1/4W [M]	C14	[illegible]	[illegible] [M]	C203	ECBT1E222KR5	2200P 16V [M]
R112	[illegible]	4.7K 1/4W [M]	R336	ERD25TJ471T	470 1/4W [M]	C15	[illegible]	10 16V [M]	C204	ECA1CM100E	10 16V [M]
R113	[illegible]	[illegible] 1/4W [M]	R337	[illegible]	[illegible] 1/4W [M]	C16	[illegible]	10 16V [M]	C205	ECBT1H[illegible]	[illegible] [M]
R116	[illegible]	10K 1/4W [M]	R338	[illegible]	12K 1/4W [M]	C17	ECA1AM[illegible]	470 10V [M]	C206	[illegible]	[illegible] [M]
R131	[illegible]	[illegible] 1/4W [M]	R3[illegible]	[illegible]	4.7K 1/4W [M]	C18	ECBT1H[illegible]	10P 50V [M]	C210	[illegible]	[illegible] [M]
R132	[illegible]	[illegible] 1/4W [M]	R3[illegible]	[illegible]	470 1/4W [M]	C21	ECBT1H[illegible]	[illegible] 50V [M]	C213	[illegible]	100 [illegible] [M]
R1[illegible]	[illegible]	4.7 1/4W [M]	R347	ERD25TJ103T	10K 1/4W [M]	C24	[illegible]	0.01 [illegible] [M]	C214	ECBT1H560K[illegible]	56P 50V [M]
R1[illegible]	[illegible]	4.7 1/4W [M]	R348	[illegible]	[illegible] 1/4W [M]	C25	[illegible]	0.1 [illegible] [M]	C222	ECBT1H102K[illegible]	1000P 50V [M]
R152	[illegible]	2.2K 1/4W [M]	R354	[illegible]	1K 1/4W [M]	C26	[illegible]	0.047 50V [M]	C240	ECBT1H[illegible]	[illegible] [M]
R160	[illegible]	[illegible] 1/4W [M]	R355	[illegible]	47K 1/4W [M]	C30	[illegible]	0.01 16V [M]	C241	[illegible]	[illegible] [M]
R161	[illegible]	10K 1/4W [M]	R356	[illegible]	[illegible] 1/4W [M]	C27	ECBT1H102KB5	1000P 50V [M]	[illegible]	[illegible]	0.1 50V [M]
R201	[illegible]	3.9K 1/4W [M]	R357	[illegible]	39K 1/4W [M]	C32	ECBT1H5R6K[illegible]	5.6P 50V [M]	[illegible]	[illegible]	0.1 50V [M]
R[illegible]	[illegible]	22K 1/4W [M]	R401	ERD25TJ104T	100K 1/4W [M]	C3[illegible]	[illegible]	[illegible] [M]	C305	ECA1CM100E	10 16V [M]
R[illegible]	[illegible]J102T	1K 1/4W [M]	R402	ERD25TJ153T	15K 1/4W [M]	C3[illegible]	[illegible]	0.047 [illegible] [M]	C311	ECA1CM330E	33 16V [M]
R[illegible]	[illegible]	10K 1/4W [M]	R403	[illegible]	39K 1/4W [M]	C34	ECBT1H5R6K[illegible]	5.6P 50V [M]	C312	[illegible]	470 [illegible] [M]
R[illegible]	[illegible]	[illegible] 1/4W [M]	R404	[illegible]	39K 1/4W [M]	C35	ECCF[illegible]	[illegible] [M]	C313	[illegible]	3.3 50V [M]

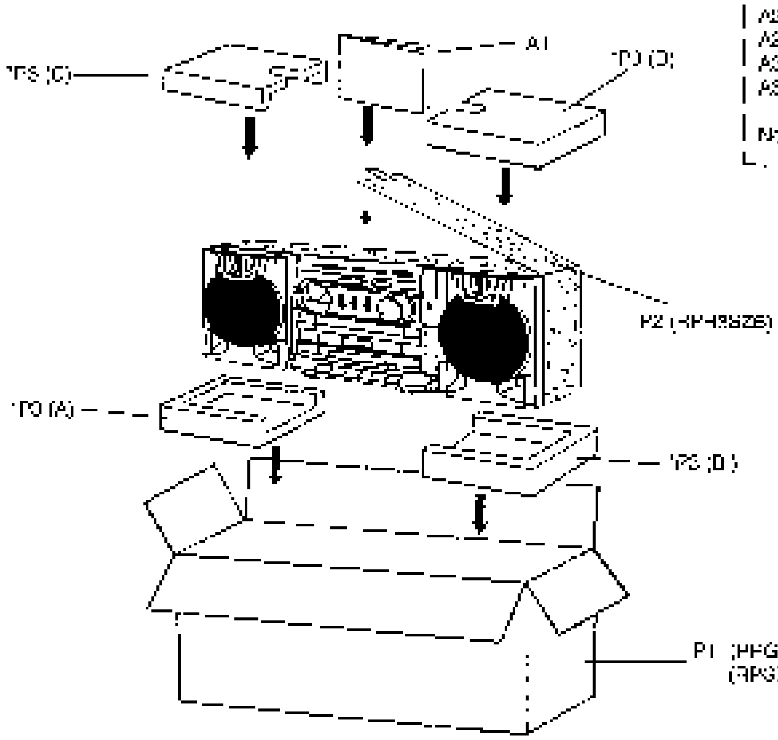
Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C321	[illegible]	1000P 50V [M]	C363	ECEA1CKA101B	100 16V [M]	C6[illegible]	ECRT[illegible]	[illegible] 50V [M]			
C3[illegible]	[illegible]	0.022 16V [M]	C367	ECEA1HKA0R1B	[illegible] 50V [M]	C6[illegible]	[illegible]	0.1 50V [M]			
C3[illegible]	ECA[illegible]	100 16V [M]	C368	ECEA1HKA[illegible]	4.7 50V [M]	C6[illegible]	[illegible]	0.1 50V [M]			
C3[illegible]	[illegible]	1000P 16V [M]	C369	ECST1C[illegible]	[illegible] 50V [M]	C6[illegible]	[illegible]	560P 50V [M]			
C3[illegible]	[illegible]	120P 16V [K]	C371	ECA1EV[illegible]	[illegible] 50V [M]	C6[illegible]	[illegible]	0.1 50V [M]			
C3[illegible]	[illegible]	0.01 16V [M]	C372	ECA1CV[illegible]	47 50V [M]	C6[illegible]	[illegible]	0.1 50V [M]			
C3[illegible]	[illegible]	0.033 16V [M]	C373	ECST1C[illegible]	[illegible] 6V [M]	C8[illegible]	[illegible]	560P 50V [M]			
C3[illegible]	[illegible]	33 16V [M]	C383	ECA1C[illegible]	10 6V [M]	C8[illegible]	[illegible]	0.01 50V [M]			
C3[illegible]	[illegible]	0.47 50V [M]	C384	ECA1C[illegible]	100 6V [M]	C8[illegible]	[illegible]	0.01 50V [M]			
C3[illegible]	[illegible]	100 50V [M]	C[illegible]	ECST1C[illegible]	[illegible] 6V [M]	C8[illegible]	[illegible]	[illegible] 50V [M]			
C3[illegible]	ECA0CM101B	100 16V [M]	C[illegible]	ECST1C[illegible]	0.1 50V [M]	C8[illegible]	[illegible]	[illegible] 50V [M]			
C3[illegible]	ECA0CM470B	47 16V [M]	C[illegible]	[illegible]	3300P 50V [M]						
C3[illegible]	ECA1HM[illegible]	[illegible] 50V [M]	C[illegible]	[illegible]	[illegible] 50V [M]						
C3[illegible]	[illegible]	100 6V [M]	C[illegible]	ECBT1C[illegible]	1000P 16V [M]						
C3[illegible]	[illegible]	22 10V [M]	C[illegible]	ECBT1C[illegible]	3300P 16V [M]						

■ Packaging (Refer to page 20 for the Parts List.)

ACCESSORY

A1 (RQT4297-G) : O/I BOOK
A1 (RQT4298-M ... GU) : O/I BOOK
A2 (RJA0019-2K ... GC) : AC CORD
A2 (RJA0004 ... GU) : AC CORD
A3 (RJP1SG02 H ... GU) : AC PLUG ADAPTOR
A3 (SJP5213-2 ... GU) : AC PLUG ADAPTOR

Note : A2 and A3 items are placed in the battery case.



FS (RPNX0074)
TPS (A)
TPS (B)
TPS (C)
TPS (D)

MESA Printed in Singapore
FS930U19C0P/K/Rj1