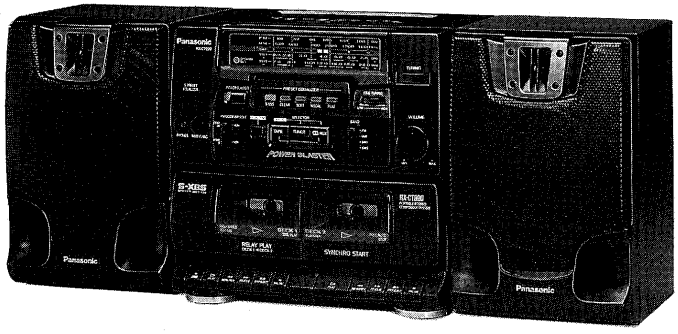
ORDER NO. MD9707057C3

Service Manual

Portable Stereo Component System

Radio Cassette

RX-CT890



Colour

(K) ····· Black Type

Areas

(GC) ····· Saudi Arabia, Kuwait, Singapore, Malaysia

(GU) ····· Asia, Latin America, Middle East and Africa

TAPE DECK : SG20W 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	450 kHz
Sensitivity	
FM	3.55 μ V/50mW output (– 3dB limit sens.)
MW	178 μ V/50mW output
SW1	199.5 μ V/50mW output
SW2	15.85 μ V/50mW output

Tape recorder

Track system	4 track, 2 channel, stereo
Recording system	AC bias
Erasing system	Magnet
Monitor system	Variable sound monitor
Frequency range	
Normal	60 – 14000 Hz

General

Power requirement	
AC	110 – 127V/200 – 220V/ 230 – 250V, 50/60 Hz
	Power consumption: 50W
Battery	12V (Eight R20/LR20, D, UM-1 batteries
	• Do Not use rechargeable type batteries.
Power Output	300W (150 W × 2) ...PMPO
	27W ... RMS (max.)
Speakers	2 Woofer; 12 cm
	2 Tweeter; 1.5cm
Jacks	
Input	CD/LINE IN: – 14dB/49k Ω
Output	SPEAKER: 6 – 16 Ω
	Headphones; 32 Ω
Dimensions	
(W × H × D)	614 × 255 × 215 mm
	Main unit; 283 × 255 × 215 mm
	Speaker box; 174 × 254 × 189 mm
Weight	6.5 kg without batteries

Note:

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

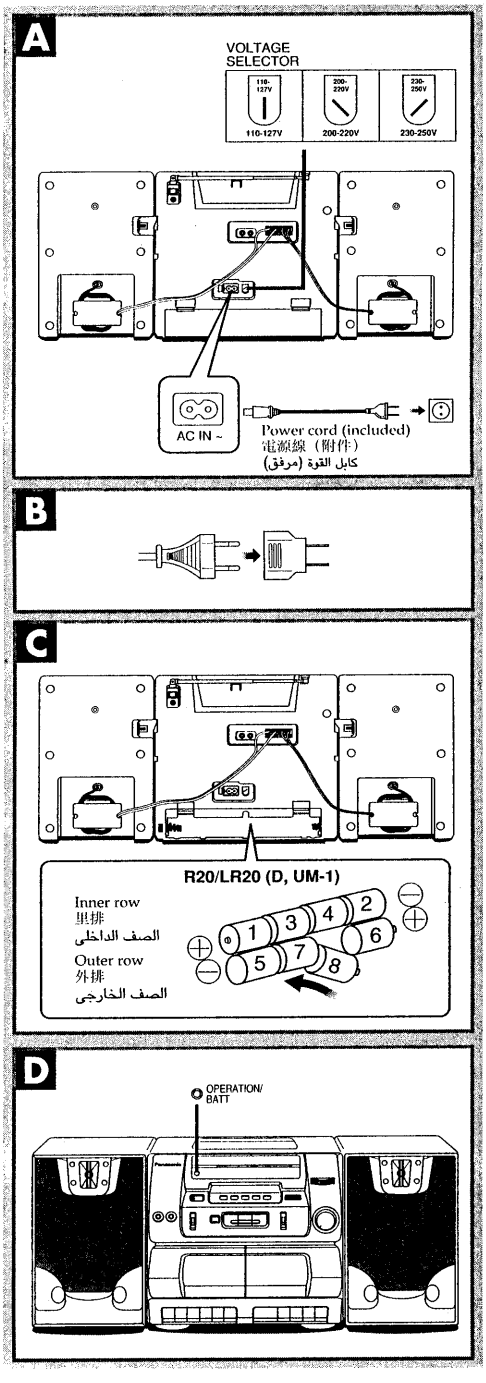
⚠ WARNING

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.

Panasonic®

■ Contents

■ Power Source



Operating unit on AC power A

① Set the voltage. Use a flat-head screw-driver to turn the voltage selector on the rear to the voltage setting for the area in which you will be using the system.
② Connect the included AC power cord to the AC IN socket of the unit and your household AC outlet.

If the power plug will not fit your socket, use the power plug adaptor (included) as illustrated. B

For East Europe areas:
Connect the included AC power cord to the AC IN socket of the unit and your household AC outlet.

Operating unit on battery power (Not included)

Battery installation and removal C

Place unit on a soft cloth when installing and removing batteries to avoid damaging the front panel.

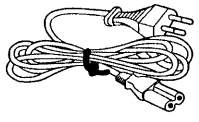
① Disconnect the AC power cord.
② Open the battery cover on the rear panel.
③ Install batteries in the order indicated in the diagram.

Battery life D

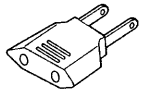
When the OPERATION/BATT indicator goes off (or dims) during play, replace all the batteries with new ones.

■ Accessories

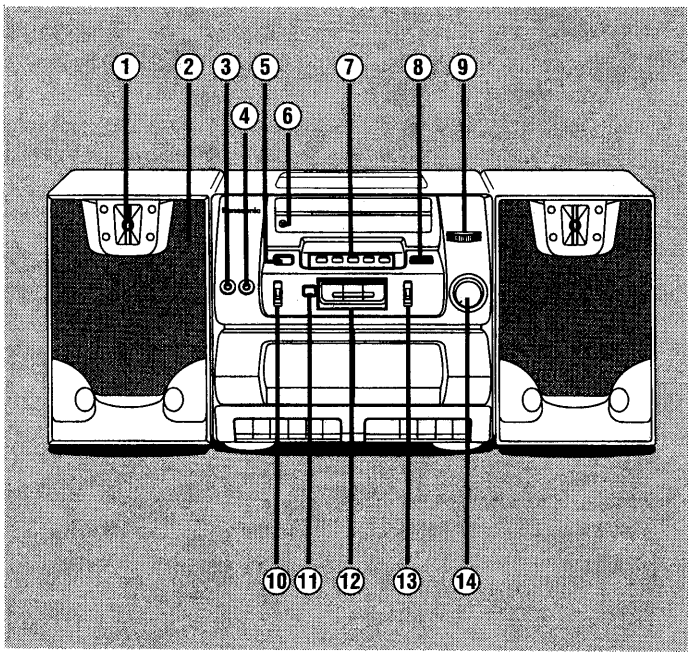
- AC Power Cord { RJA0019-X (GC area) / RJA0004 (GU area) } .....1 pc



- AC plug adaptor { SJP5213-2 (GC area) / RJP1SG02-H (GU area) } .....1 pc

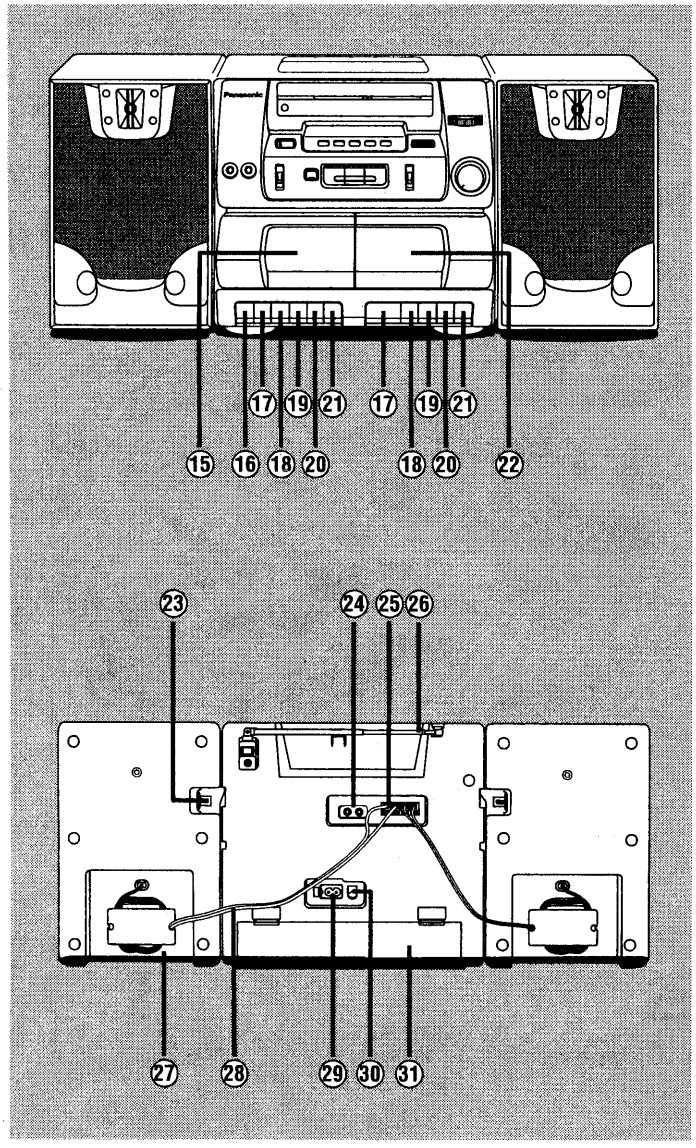


■ Location of Controls



Basic/Tuner controls

① Speakers (Tweeter)
② Speakers (Woofer)
③ Headphones jack (PHONES)
④ Microphone jack (MIXING MIC)
⑤ Power blaster button (POWER BLASTER)
⑥ Operation/battery indicator (OPERATION/BATT)
⑦ Preset equalizer buttons (PRESET EQUALIZER)
⑧ Fine tuning control (FINE TUNING)
⑨ Tuning control (TUNING)
⑩ FM mode/beat proof/edit recording speed selector (FM MODE/BP/EDIT)
⑪ Surround function button (SURROUND)
⑫ Function selector (SELECTOR)
⑬ Band selector (BAND)
⑭ Volume control (VOLUME)



Cassette deck controls

⑮ Deck 1 cassette holder (DECK 1)
⑯ Recording button (● REC)
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 (II PAUSE)
㉒ Deck 2 cassette holder (DECK 2)

Rear Panel Section

㉓ Speaker release levers (RELEASE)
㉔ CD/LINE input jacks (CD/LINE IN)
㉕ Speaker terminals (SPEAKER)
㉖ Telescopic antenna
㉗ Speaker cable compartments
㉘ Speaker cables
㉙ AC socket (AC IN~)
㉚ For areas except East Europe:
Voltage selector (VOLTAGE SELECTOR)
㉛ Battery compartment cover

■ Operation Checks and Main Component Replacement Procedures

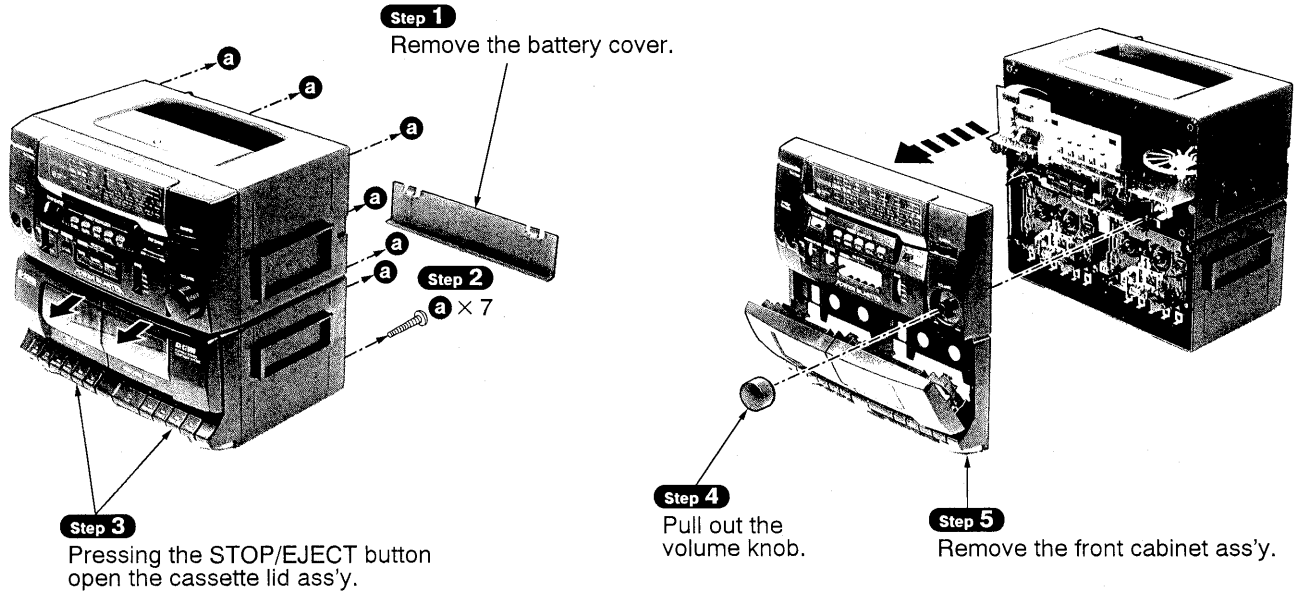
NOTE

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.**
4. **Refer the parts No. on the page of "Main Component Replacement Procedures", if necessary.**

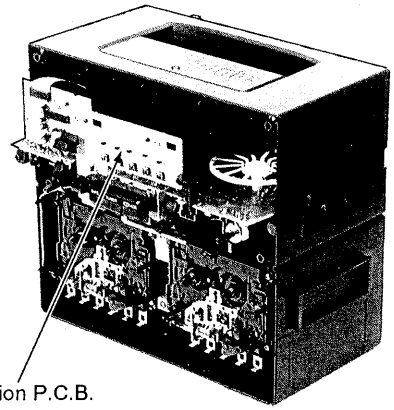
• Contents

■ Checking Procedure for each P.C.B.

1. Checking for the operation P.C.B.

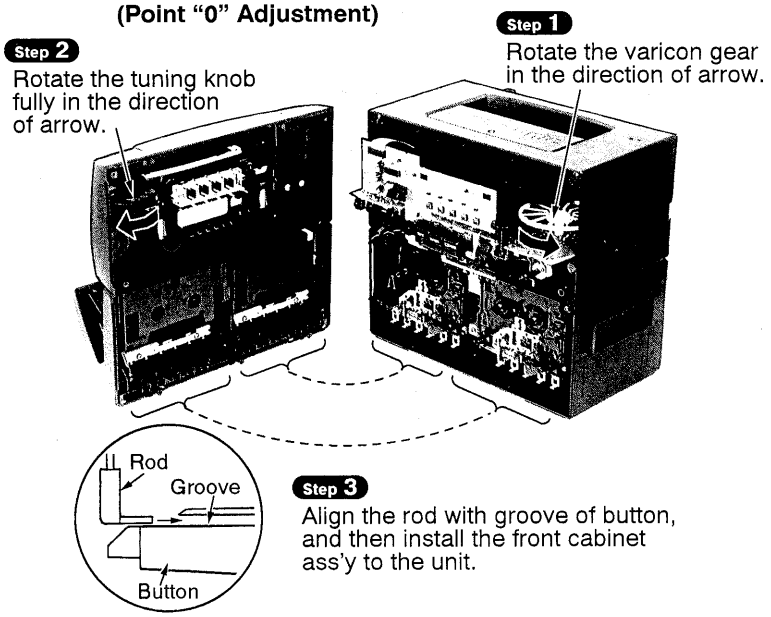


• **Check the operation P.C.B. as shown below.**



■ Installation of the front cabinet ass'y

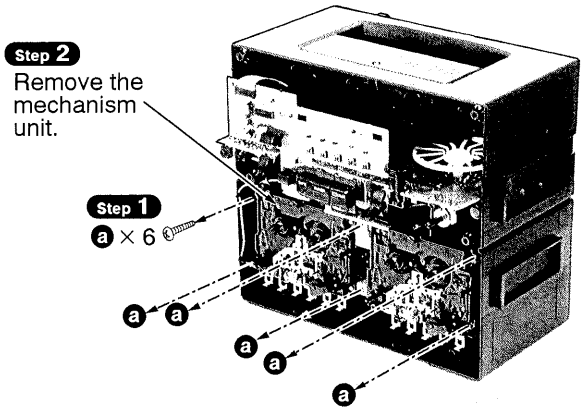
(Point "0" Adjustment)



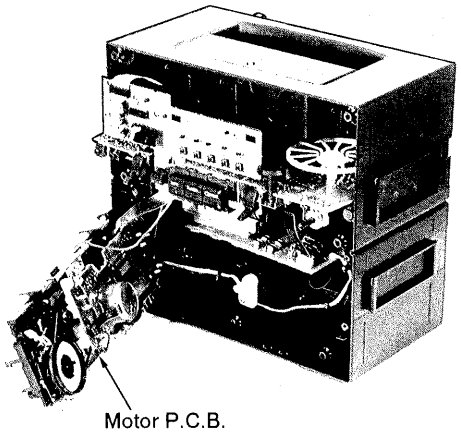
Step 3
Align the rod with groove of button, and then install the front cabinet ass'y to the unit.

2. Checking for the motor P.C.B.

• Follow the item 1 (Step 1 ~ Step 5) in checking procedures for each P.C.B. on page 4.

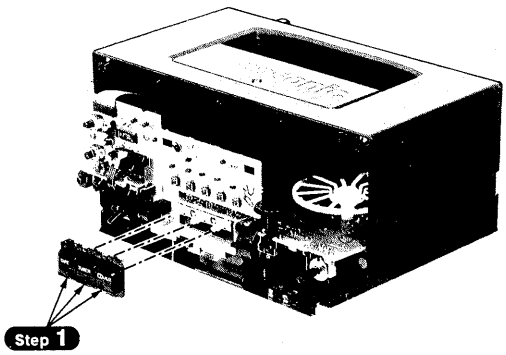


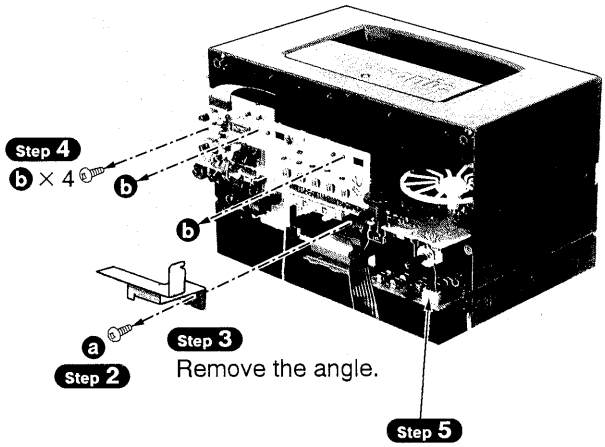
• **Check the motor P.C.B. as shown below.**

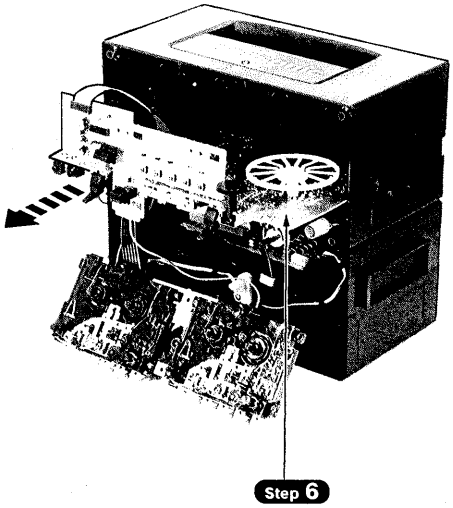


3. Checking for the main P.C.B.

• Follow the item 1 (Step 1 ~ Step 5) in checking procedures for each P.C.B. on page 4.
• Follow the item 2 (Step 1 , Step 2) in checking procedures for each P.C.B. on page 5.

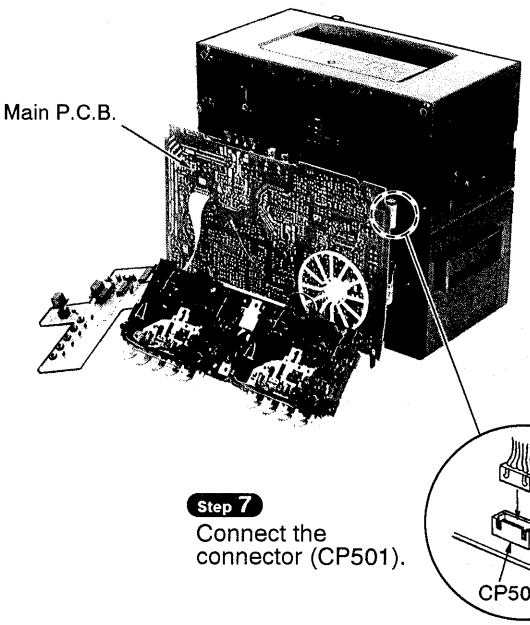






Step 6
Pull out the main P.C.B..

• **Check the main P.C.B. as shown below.**



Step 7
Connect the connector (CP501).

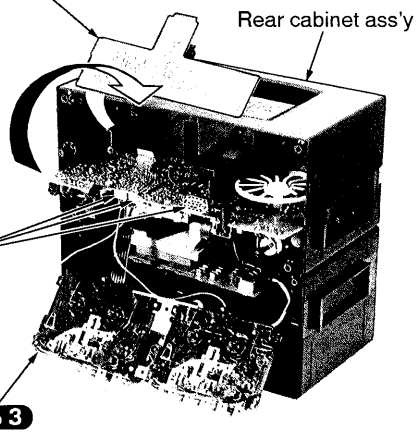
■ Main Component Replacement Procedures

1. Replacement for the pinch roller ass'y, erase head and rec/play head.

- Follow the item 1 (Step 1 ~ Step 5) in checking procedures for each P.C.B. on page 4.
- Follow the item 2 (Step 1 , Step 2) in checking procedures for each P.C.B. on page 5.
- Follow the item 3 (Step 1 ~ Step 4) in checking procedures for each P.C.B. on page 5.

※ Below illustration shows mechanism unit for DECK1. For DECK2 mechanism unit, disassemble it same procedure.

Step 1
Place the operation P.C.B. on the rear cabinet ass'y.

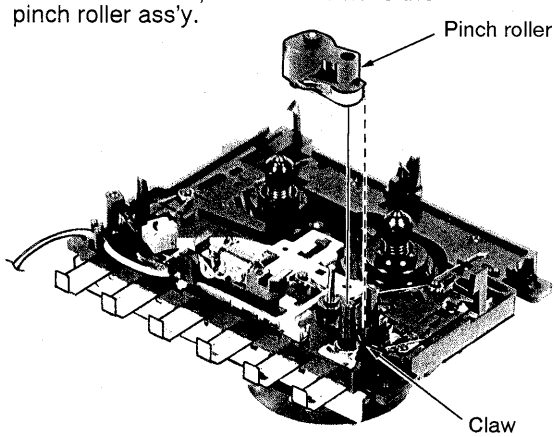


Step 2
Remove the 3 connectors.

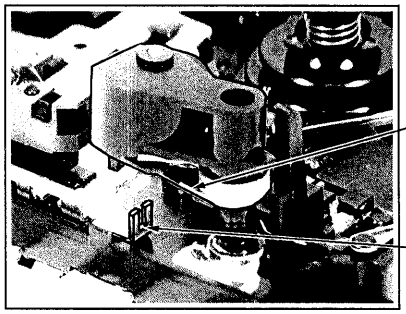
Step 3
Remove the mechanism unit.

■ Removal of the pinch roller ass'y

- Release the claw, and then remove the pinch roller ass'y.

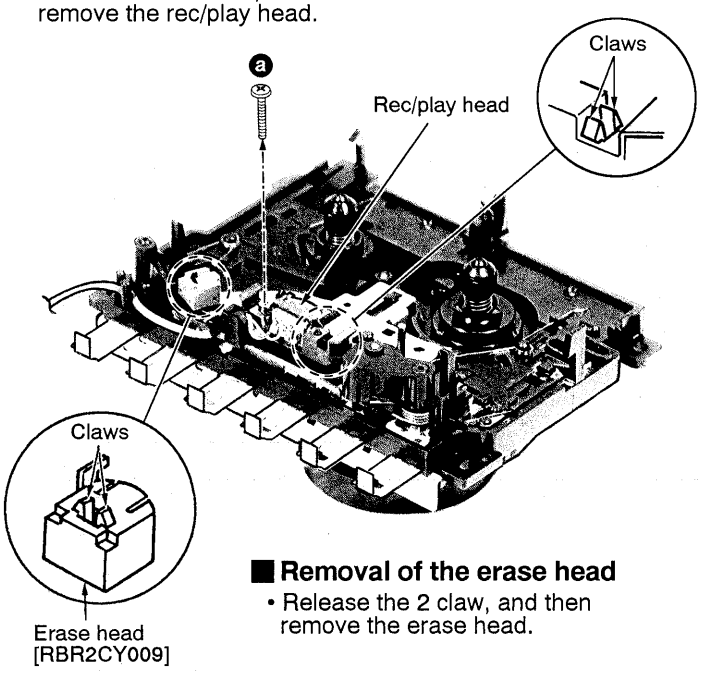


- **Notice for installing the pinch roller ass'y.**
  The pinch roller spring should be aligned with the slot of lever.



■ Removal of the rec/play head

1. Remove the 1 screw (ⓐ).
2. Release the 2 claws, and then remove the rec/play head.

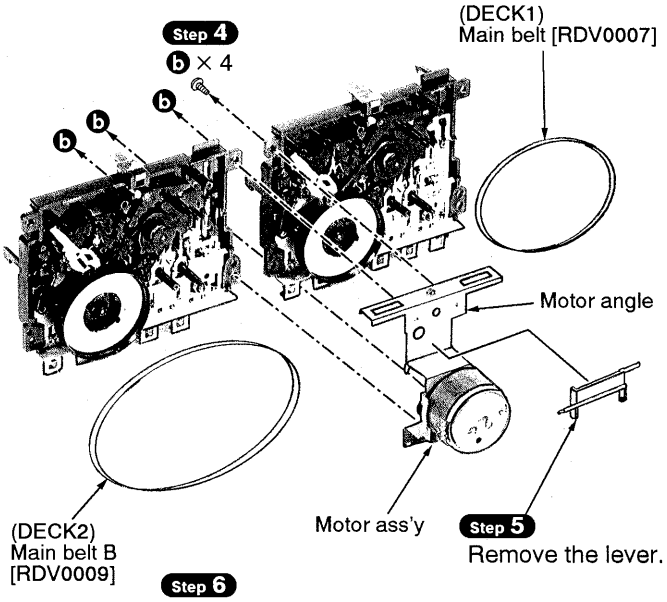


■ Removal of the erase head

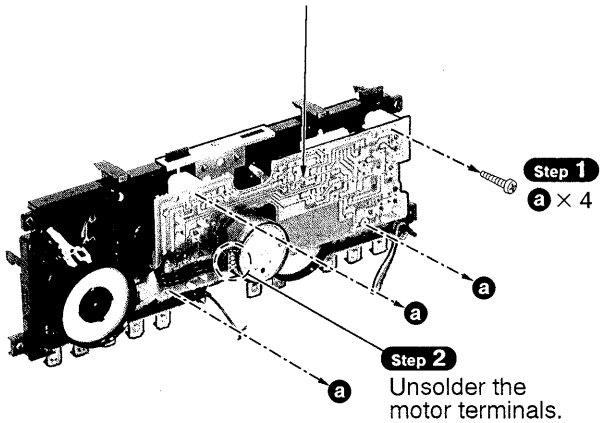
- Release the 2 claw, and then remove the erase head.

2. Replacement for the motor ass'y, main belt and RF belt

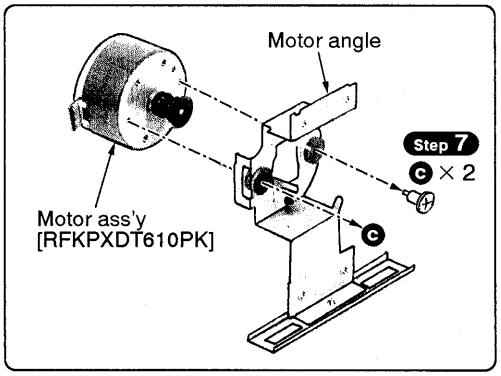
- Follow the item 1 (Step 1 ~ Step 5) in checking procedures for each P.C.B. on page 4.
- Follow the item 2 (Step 1 , Step 2) in checking procedures for each P.C.B. on page 5.
- Follow the item 3 (Step 1 ~ Step 4) in checking procedures for each P.C.B. on page 5.
- Follow the item 1 (Step 1 ~ Step 3) in main component replacement procedures on page 6.

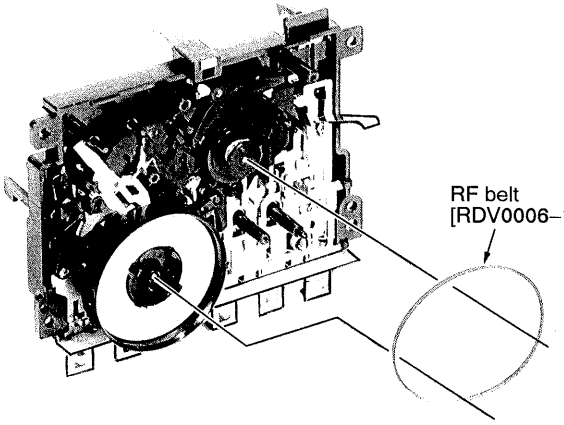


Step 3
Remove the mechanism control P.C.B..

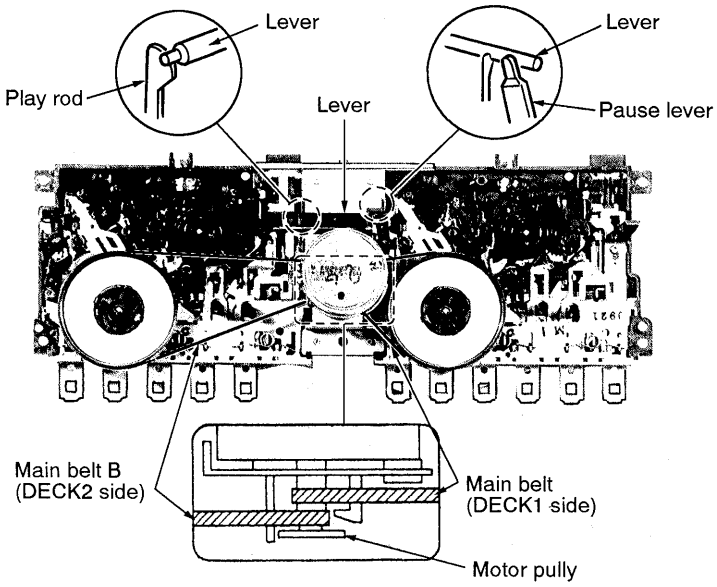


Step 6
Remove the motor ass'y and motor angle.

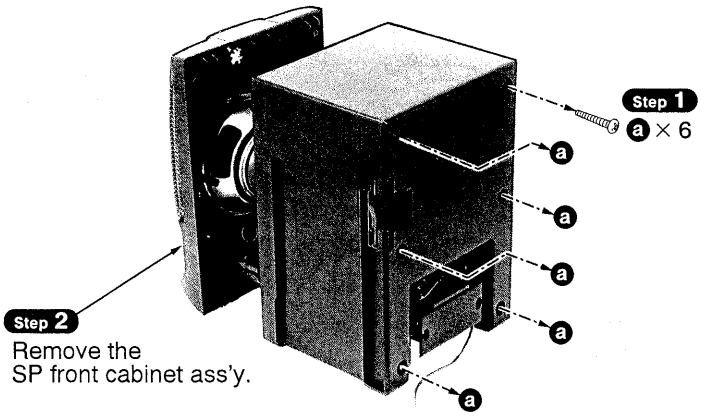


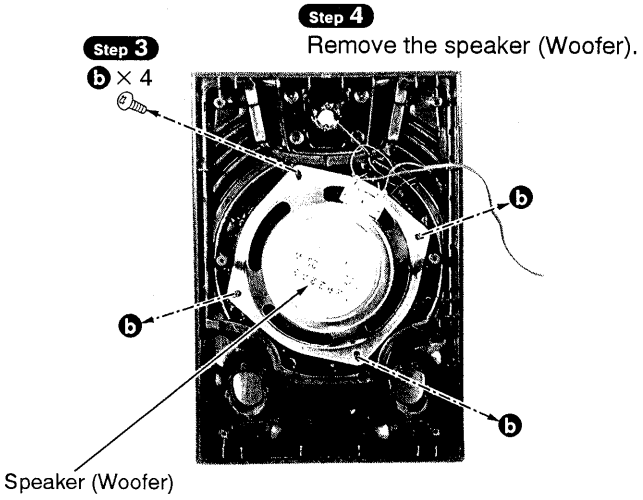


Installation of main belt and lever



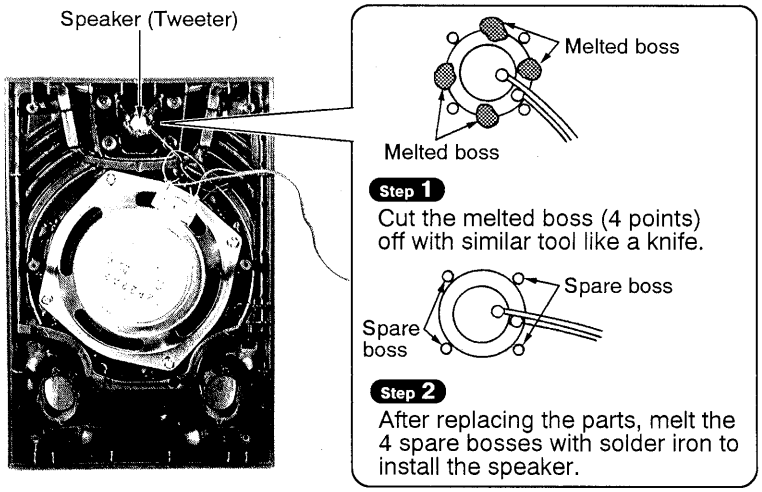
3. Replacement for the speaker (Woofer)



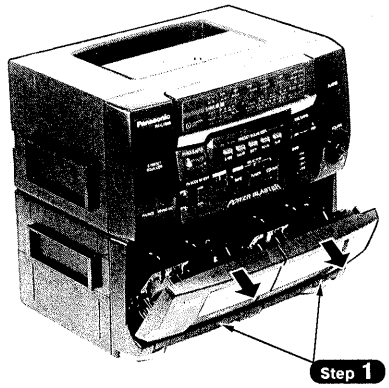


4. Replacement for the speaker (Tweeter)

• Follow the item 3 (Step 1 , Step 2) in main component replacement procedures on page 8.

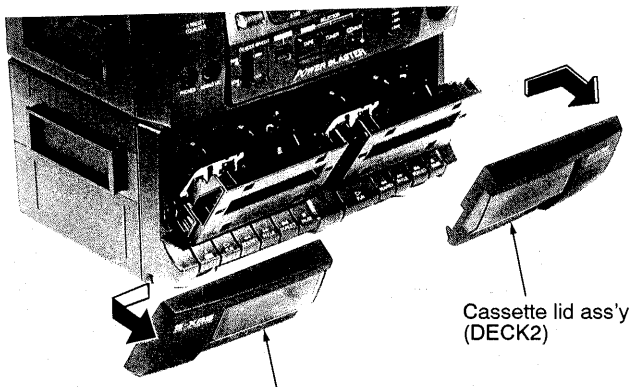


5. Replacement for the cassette lid ass'y



Step 1
Pressing the STOP/EJECT button open the cassette lid ass'y.

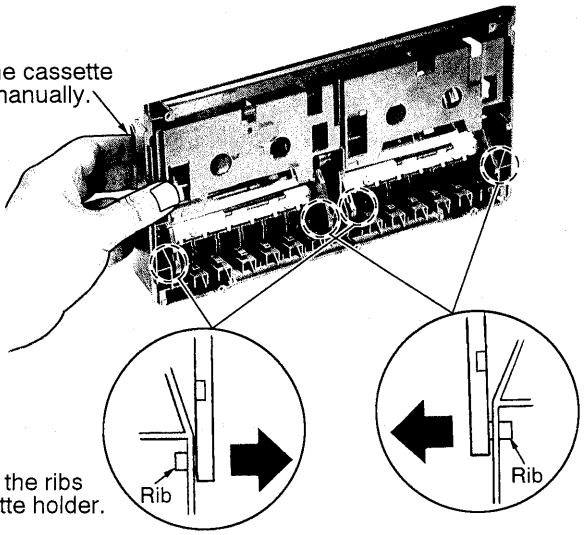
Step 2
Remove the cassette lid ass'y in the direction of arrow.



6. Replacement for the cassette holder

- Follow the item 1 (Step 1 ~ Step 3) in checking procedures for each P.C.B. on page 4.
- Follow the item 5 (Step 1 , Step 2) in main component replacement procedures on page 9.

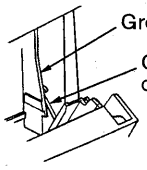
Step 1
Force the cassette holder manually.

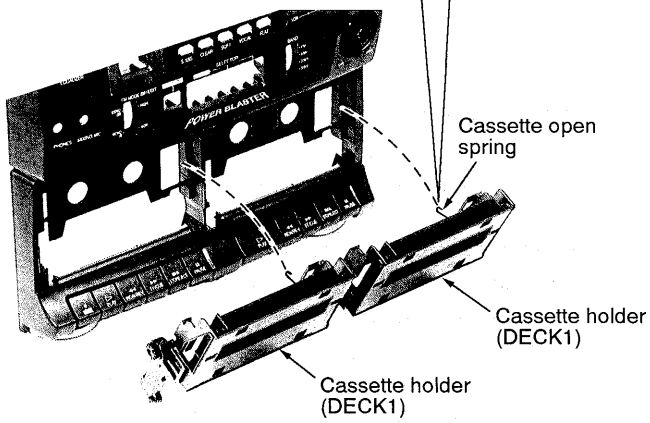


Step 2
Release the ribs of cassette holder.

■ Notice for installation of cassette holder

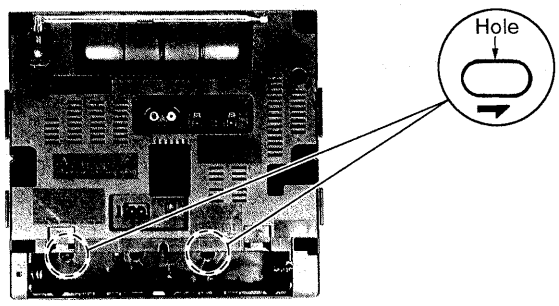
The cassette open spring should be mounted in the groove firmly.





Step 3
Remove the cassette holder.

■ Measure for tape trouble



- If a cassette tape can not be removed from the deck since it is caught by the capstan or pinch roller insert a thin driver into the hole in the back side of this unit and remove the winded tape with rotating the flywheel ass'y in the direction of arrow.

■ Schematic Diagram (See parts list on pages 24 ~ 27.)

Notes:
- **S1-1 ~ S1-8**: Band selector switch in "FM" position.
- **S301-1 ~S301-6**: Function selector switch in "tape" position.
  (S301-1, S301-2 ... CD/LINE, S301-3, S301-4 ... TUNER, S301-5, S301-6 ... TAPE)
- **S303-1, S303-2**: FM mode/beat proof/edit recording speed selector switch in "MONO/I/NOR" position.
- **S304**: Preset equalizer switch (FLAT).
- **S305**: Preset equalizer switch (S-XBS).
- **S306**: Preset equalizer switch (SOFT).
- **S307**: Preset equalizer switch (CLEAR).
- **S308**: Preset equalizer switch (VOCAL).
- **S309-1, S309-2**: Power blaster switch in "OFF" position.
- **S501**: Voltage selector switch in "230 – 250V" position.
- **S502**: AC/DC selector switch (JK501) in "AC" position.
- **S601**: Motor switch (DECK 1).
- **S602**: Motor switch (DECK 2).
- **S603**: REC switch.
- **VR1**: FM MPX adjustment VR.
- **VR301-1, VR302-2**: Volume control VR.
- **VR601**: Tape speed adjustment VR.

- DC voltage measurements are taken with electronics voltmeter.
  The negative terminal of the battery provides negative meter connection point.
  No mark ...Playback position, [ ] ... Record position, < > ... FM, ( ) ... AM
- Battery current:

Vol. min.	Measurement instruction	Vol. max.
390 mA (FM)	AM: 74 dB/m, 30% Mod.	683 mA (FM)
390 mA (AM)	FM: 60 dB, 30% Mod.	685 mA (AM)
458mA (TAPE)	TAPE: 315 Hz, 0 dB	872 mA (TAPE)

- 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.
- 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.

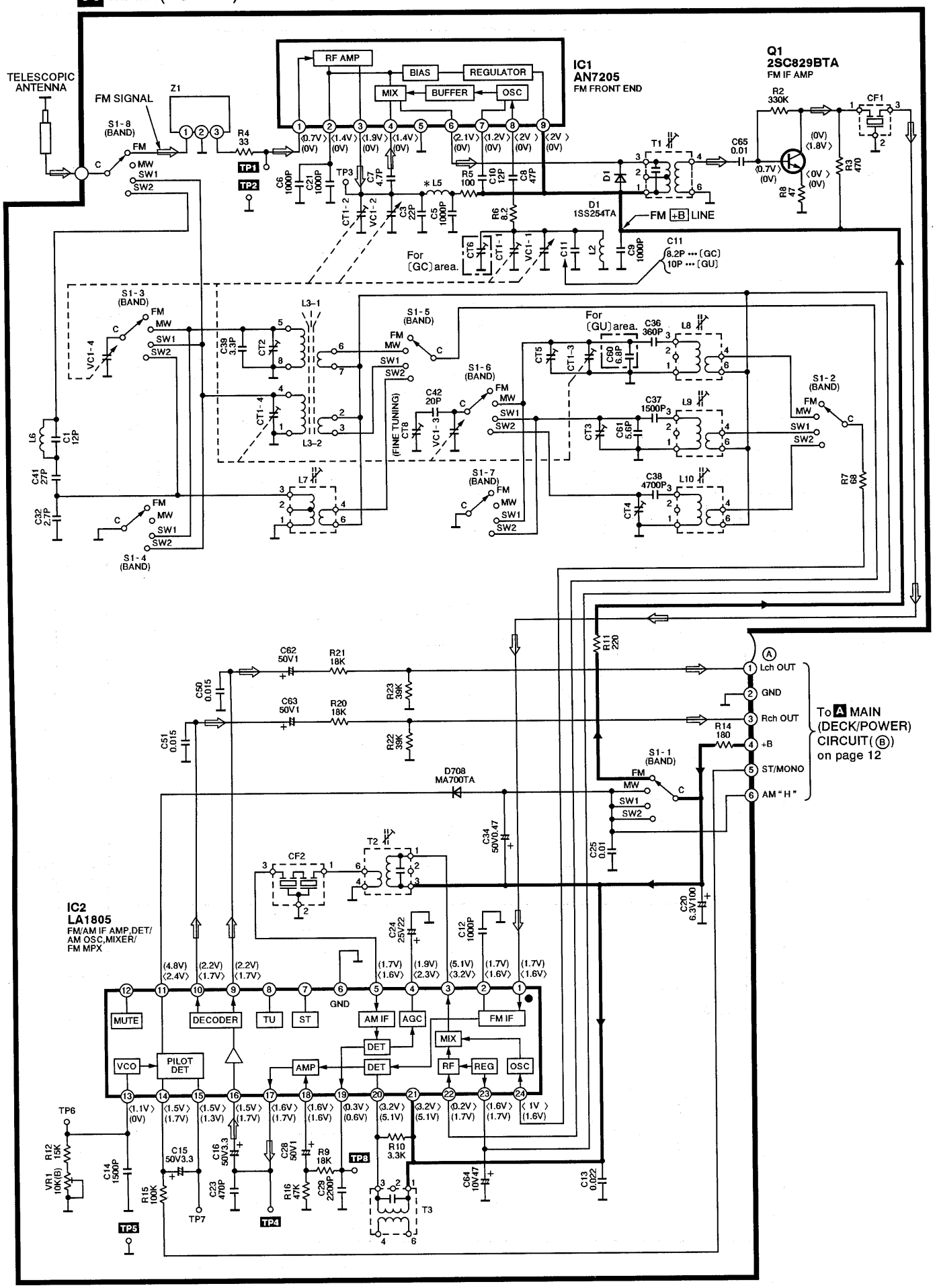
* **Caution!**
IC and LSI are sensitive to static electricity. Secondary trouble can be prevented by taking care during repair.

* Cover the parts boxes made of plastics with aluminum foil.
* Ground the soldering iron.
* Put a conductive mat on the work talbe.
* Do not touch the pins of IC or LSI with fingers directly.

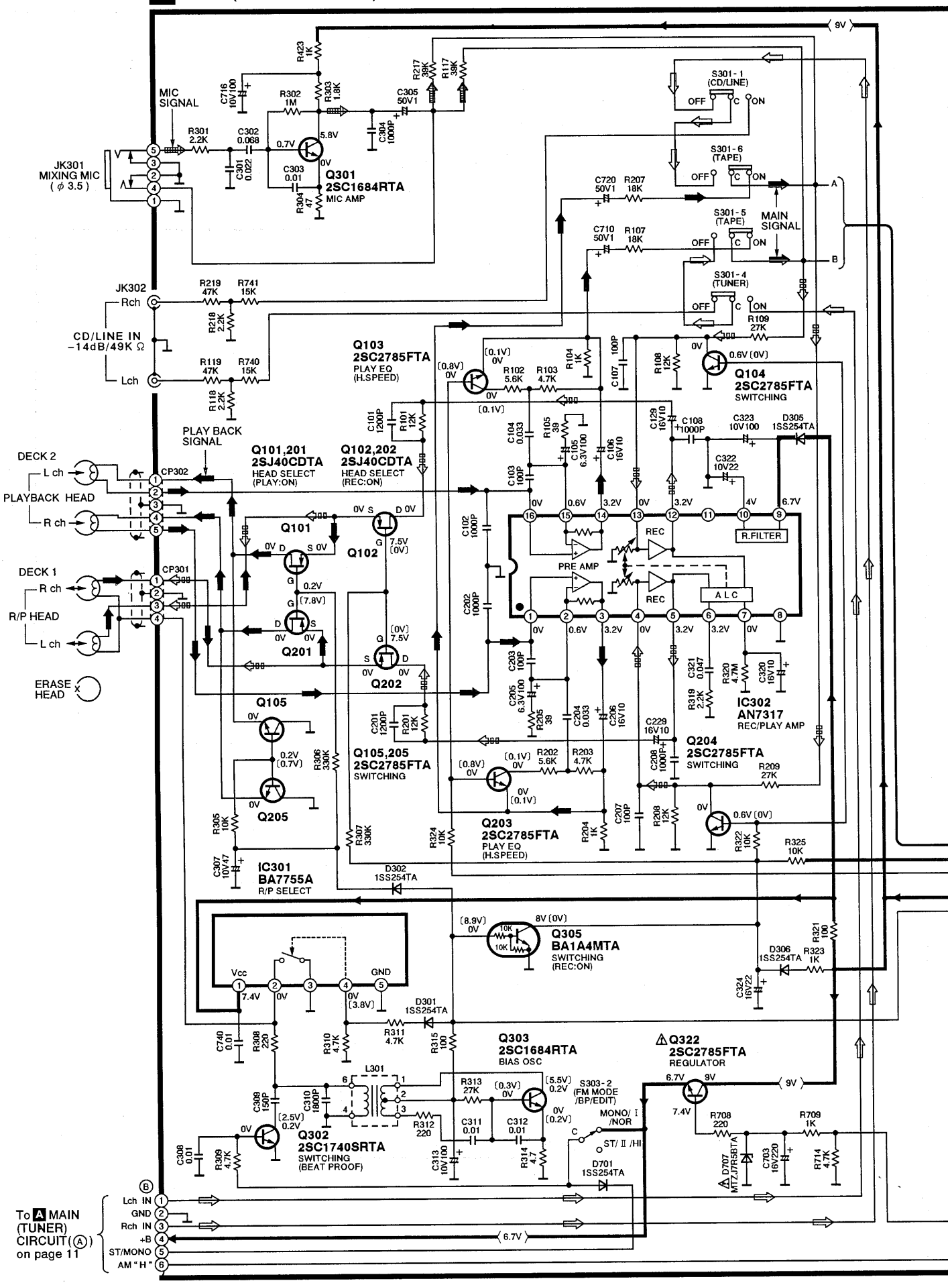
- This schematic diagram may be modified at any time with the development of new technology.

: FM Signal Line
: Mic Signal Line
: Record Signal Line
: Main Signal Line
: Tape Playback Signal Line
: +B Line

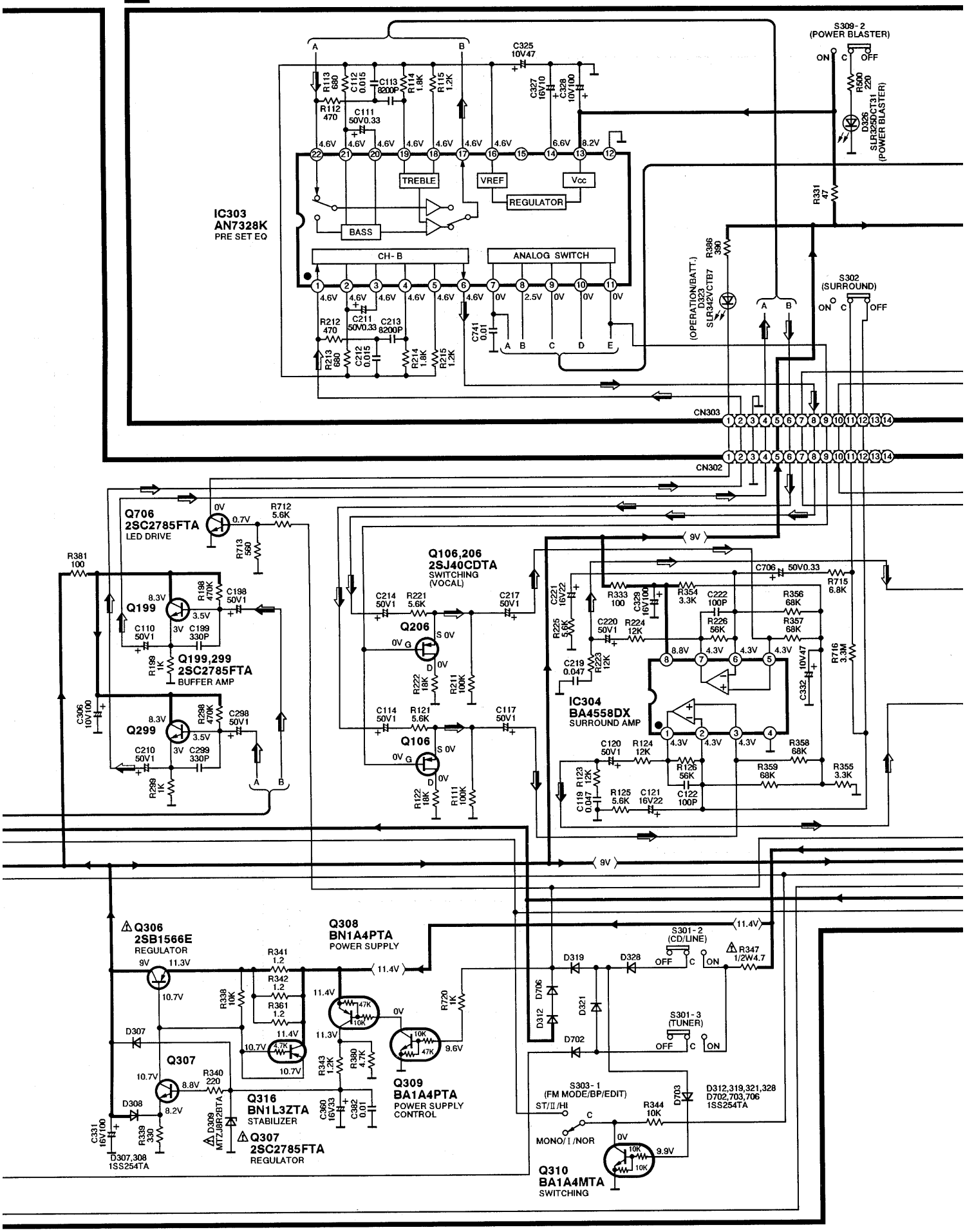
A MAIN(TUNER) CIRCUIT (P.C.Board:on page 17)



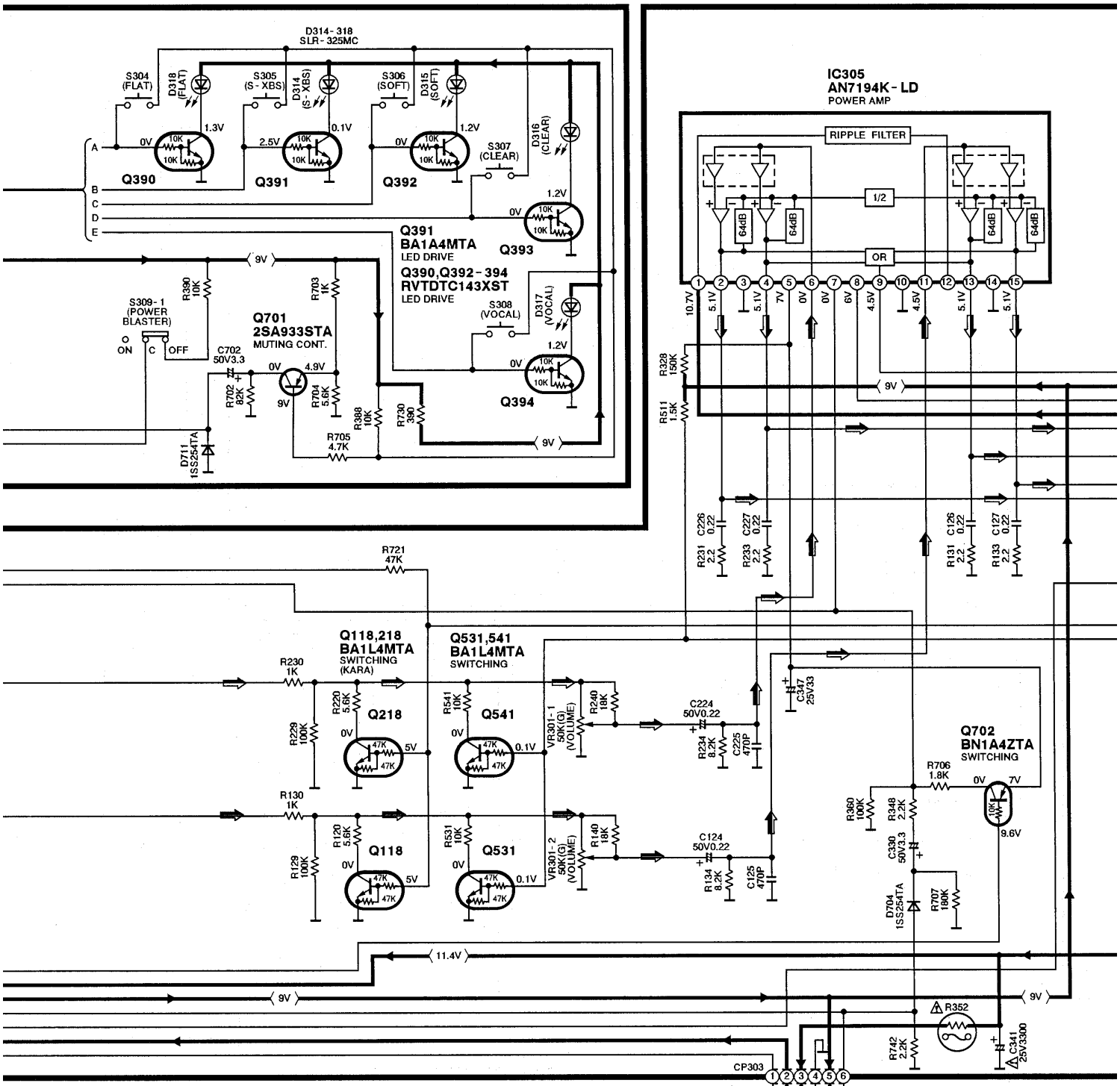
A MAIN(DECK/POWER)CIRCUIT (P.C.Board:on page 17)



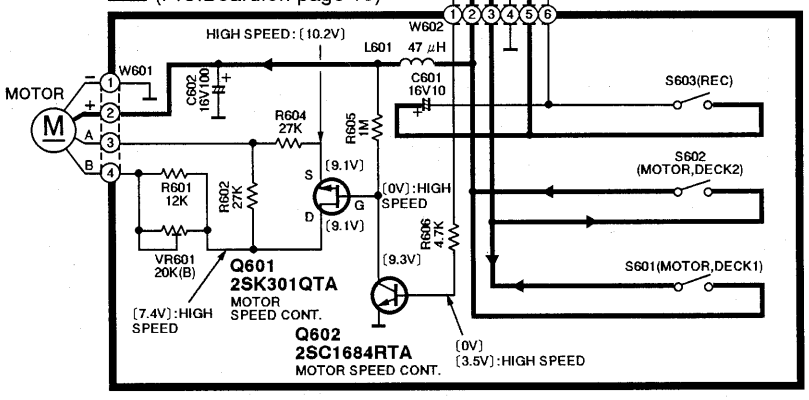
B OPERATION CIRCUIT (P.C.Board:on page 18)

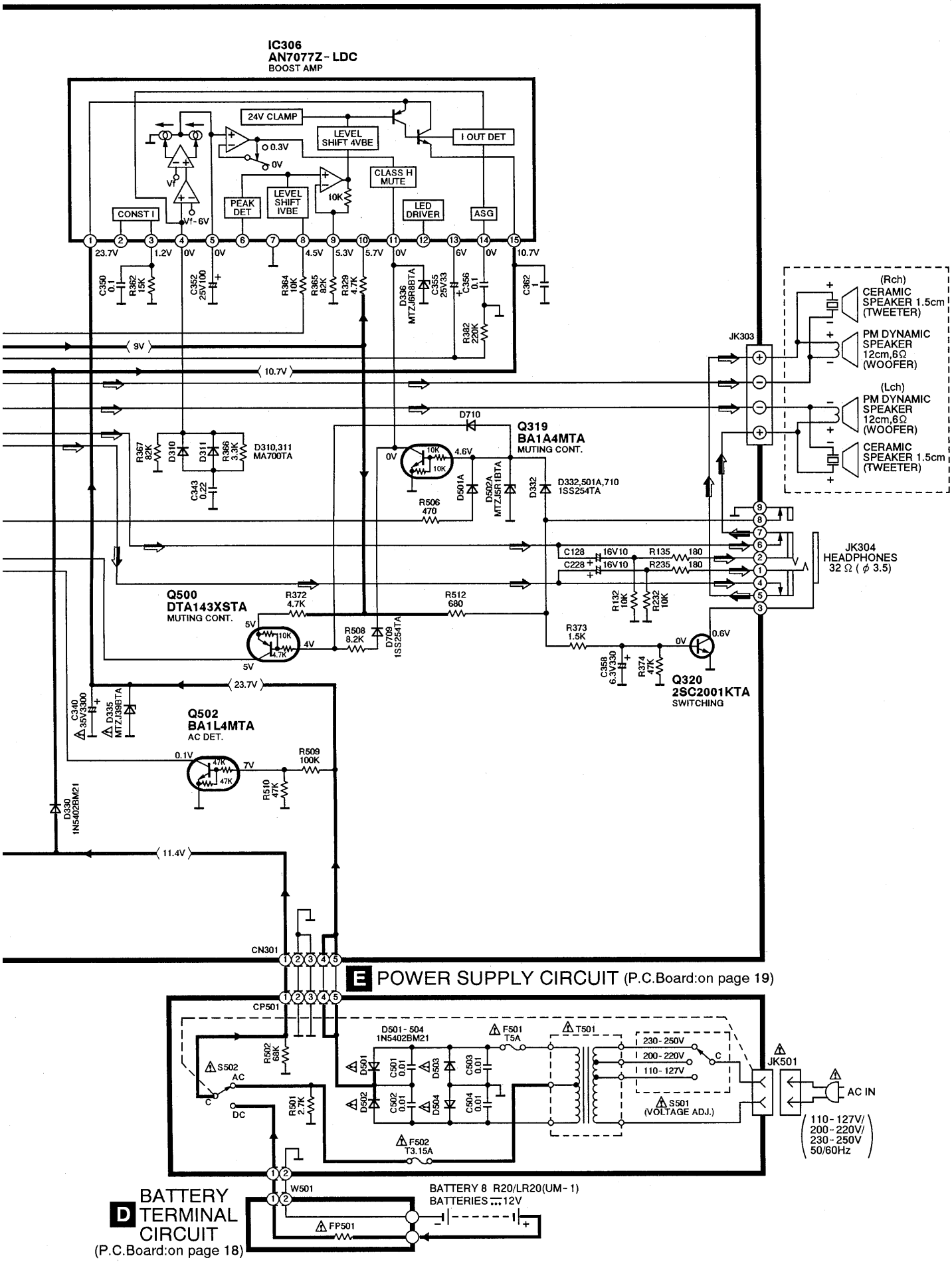


A MAIN(DECK/POWER) CIRCUIT
(P.C.Board:on page 17)



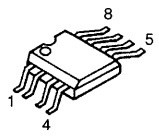
C MOTOR CIRCUIT
(P.C.Board:on page 19)



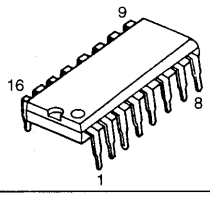

IC306
AN7077Z-LDC
BOOST AMP
24V CLAMP
LEVEL SHIFT 4VBE
I OUT DET
CLASS H MUTE
PEAK DET
LEVEL SHIFT IVBE
LED DRIVER
ASG
CONST I
23.7V
1.2V
0V
0V
4.5V
5.3V
5.7V
0V
6V
0V
10.7V
9V
10.7V
JK303
(Rch)
CERAMIC SPEAKER 1.5cm (TWEETER)
PM DYNAMIC SPEAKER 12cm,6Ω (WOOFER)
(Lch)
PM DYNAMIC SPEAKER 12cm,6Ω (WOOFER)
CERAMIC SPEAKER 1.5cm (TWEETER)
Q319
BA1A4MTA
MUTING CONT.
D710
D310,311
MA700TA
D332,501A,710
1SS254TA
JK304
HEADPHONES
32 Ω (φ 3.5)
Q500
DTA143XSTA
MUTING CONT.
Q320
2SC2001KTA
SWITCHING
Q502
BA1L4MTA
AC DET.
CN301
E POWER SUPPLY CIRCUIT (P.C.Board:on page 19)
CP501
D501-504
1N5402BM21
F501
T5A
T501
230-250V
200-220V
110-127V
S501
(VOLTAGE ADJ.)
JK501
AC IN
110-127V/
200-220V/
230-250V
50/60Hz
S502
AC
DC
F502
T3.15A
W501
BATTERY 8 R20/LR20(UM-1)
BATTERIES ⎓12V
FP501
D BATTERY TERMINAL CIRCUIT
(P.C.Board:on page 18)

● Type Illustration of IC's Transistors and Diodes

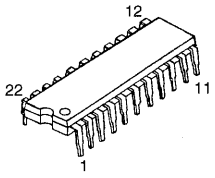
BA4558DX



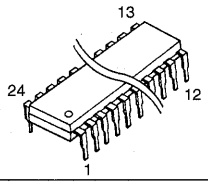
AN7317



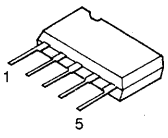
AN7328K



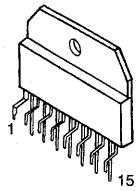
LA1805



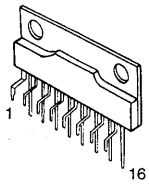
BA7755A



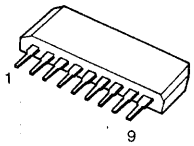
AN7077Z-LDC



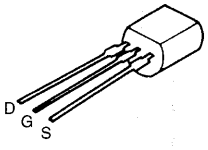
AN7194K-LD



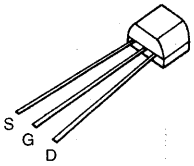
AN7205



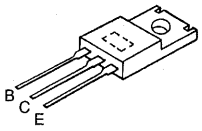
2SK301QTA



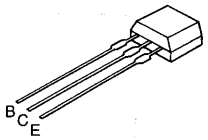
2SJ40CDTA

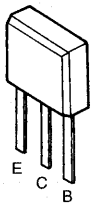


2SB1566E

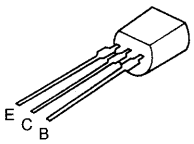


2SA933STA
2SC1740SRTA



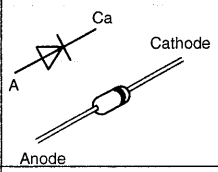


2SC2785FTA RVTDTA143XST
BA1A4MTA
BA1A4PTA
BA1L4MTA
BN1A4PTA
BN1A4ZTA
BN1L3ZTA

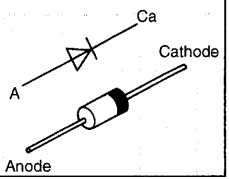


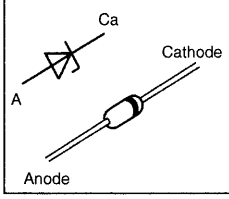
2SC1684RTA
2SC2001KTA
2SC829BTA

1SS254TA
MA700TA



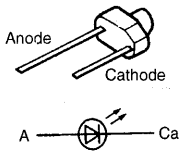
1N5402BM21



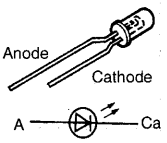


MTZJ5R1BTA
MTZJ6R8BTA
MTZJ7R5BTA
MTZJ8R2BTA
MTZJ39CTA

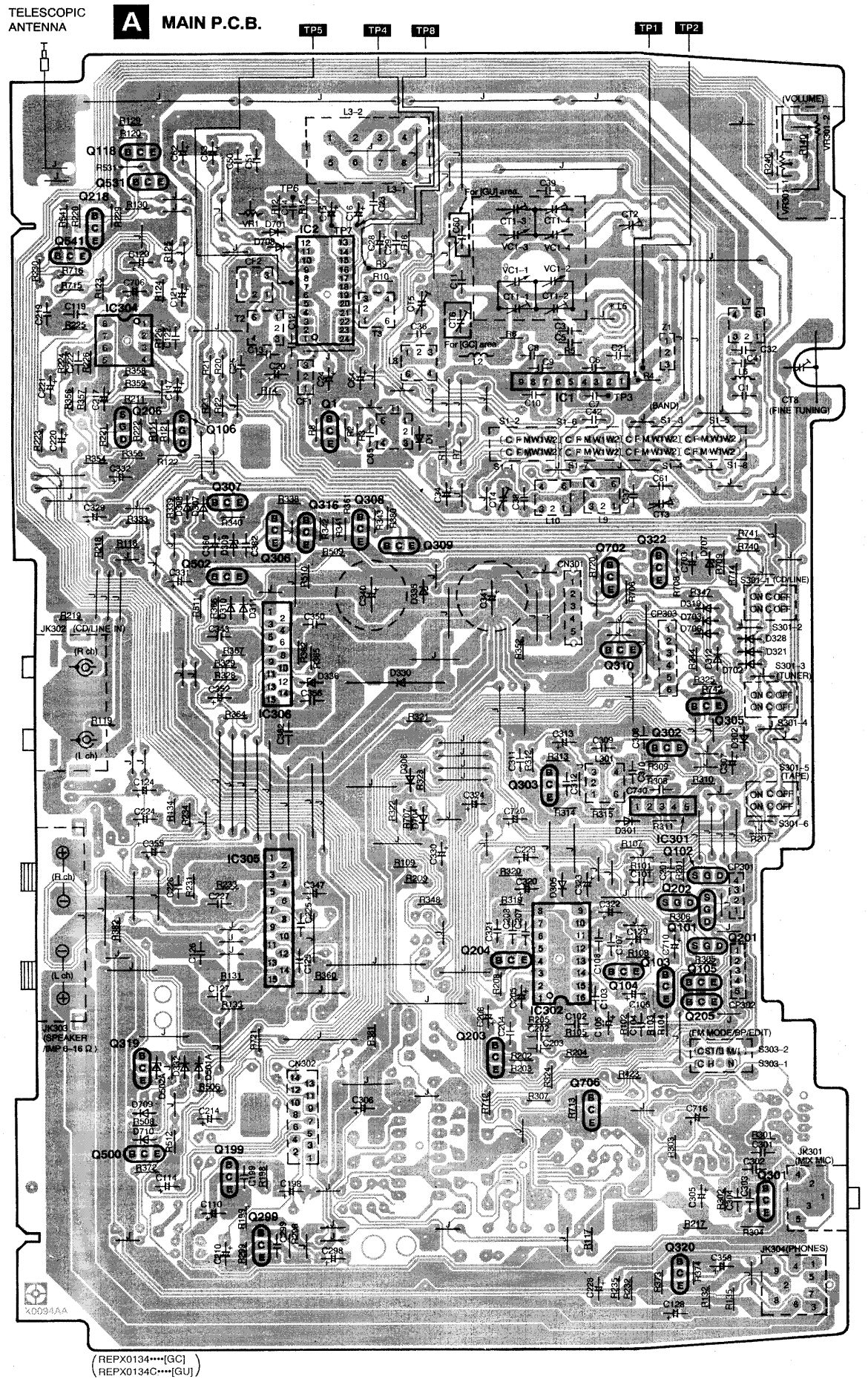
SLR-325MC
SLR325DCT31



SLR342VCTB7



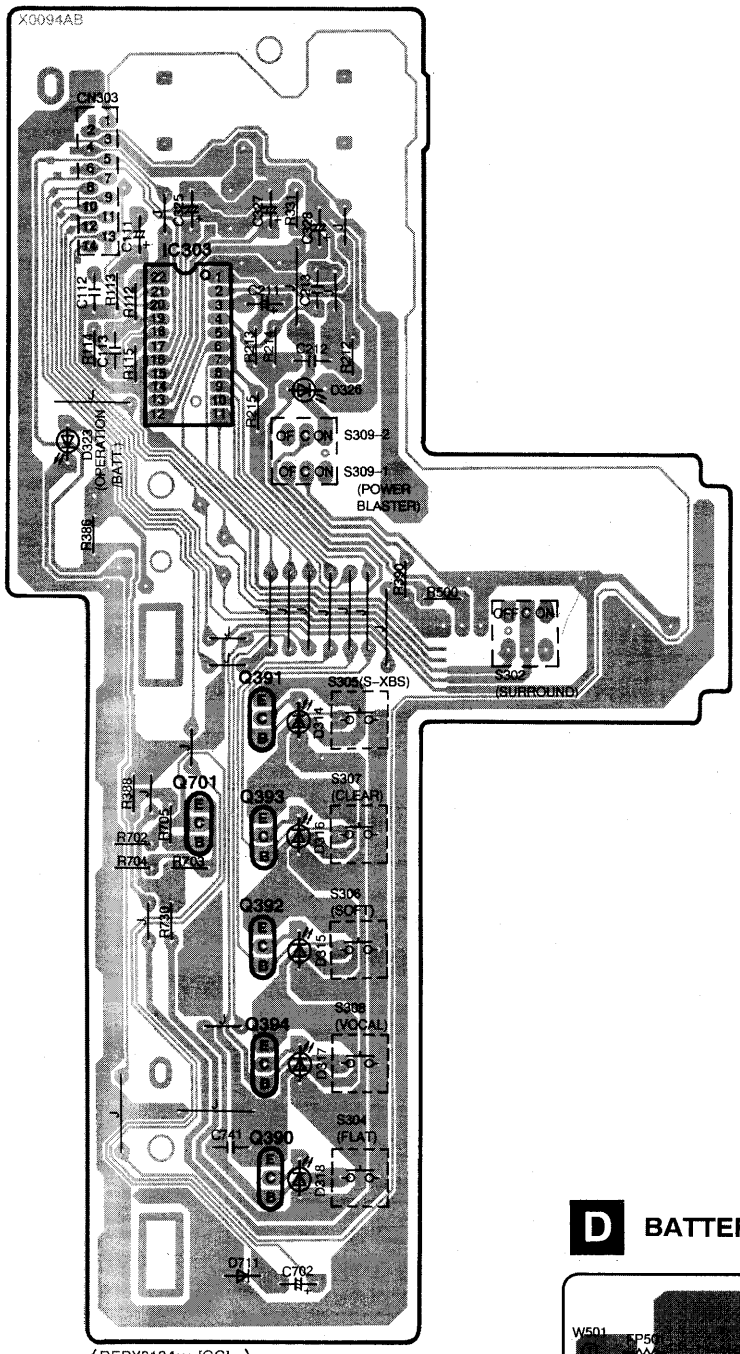
■ Printed Circuit Board



(REPX0134••••[GC]
REPX0134C••••[GU])

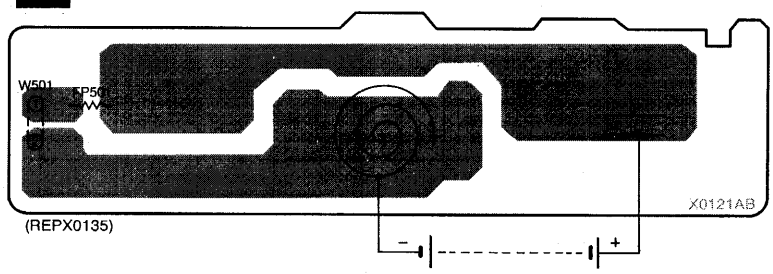
Note: This circuit board diagram may be modified at any time with the development of new technology.

B OPERATION P.C.B.



(REPX0134••••[GC]
REPX0134C••••[GU])

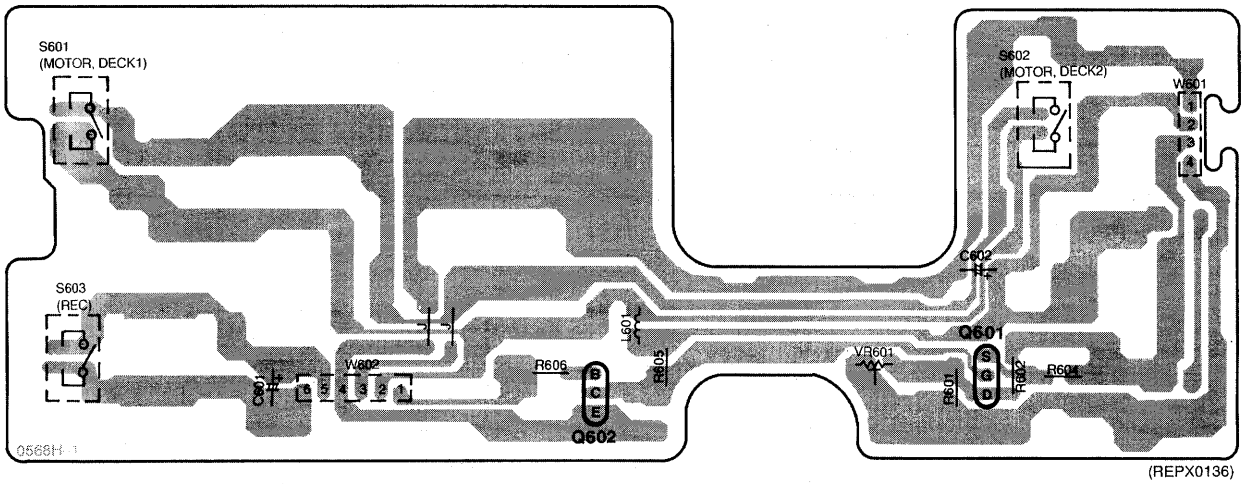
D BATTERY TERMINAL P.C.B.



(REPX0135)

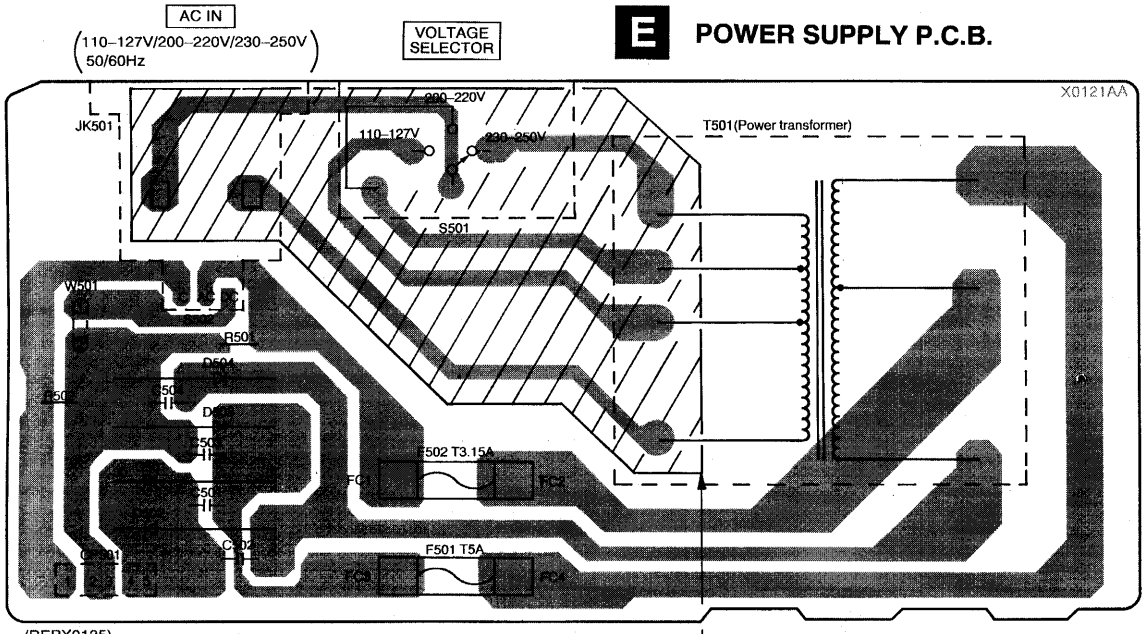
BATTERY 8 R20/LR20(UM-1)
BATTERIES ⎓ 12V

C MOTOR P.C.B.



(REPX0136)

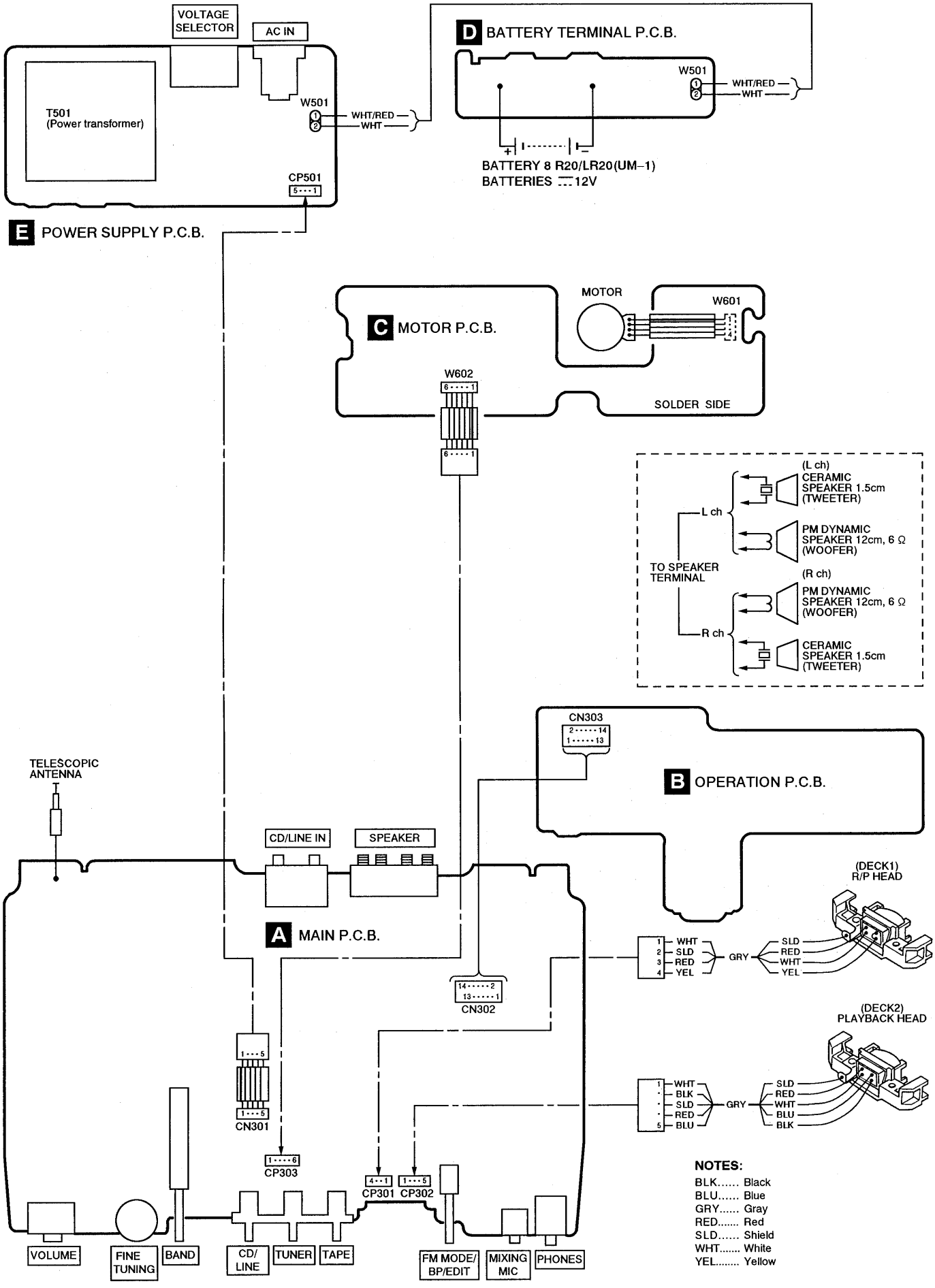
E POWER SUPPLY P.C.B.



(REPX0135)

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

■ Wiring Connection Diagram



NOTES:

BLK..... Black
BLU..... Blue
GRY..... Gray
RED..... Red
SLD..... Shield
WHT..... White
YEL..... Yellow

■ Measurements and Adjustments

• Tuner Section

• ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
•Set power source voltage to 12V DC •Set volume control to maximum •Set band switch to MW, SW1, SW2 or FM •Set selector switch to TUNER	• Set FM MODE/BP/EDIT switch to MONO/I/NOR • Set fine tuning to center • 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)	REMARK
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

"	(GU)...511kHz (GC)...514 ± 3 kHz	Tuning capacitor fully closed.	"	L8 (MW OSC Coil)	Adjust for maximum output.
"	(GU)...1650kHz (GC)...1639 ± 5kHz	Tuning capacitor fully opened.	"	CT1-3 (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

"	2.25 MHz	Tuning capacitor fully closed.	"	L9 (SW1 OSC Coil)	Adjust for maximum output.
"	7.23 MHz	Tuning capacitor fully opened.	"	CT3 (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				
Connect to test point TP1 through ceramic capacitor (10pF) Negative side to test point TP2.	6.84 MHz	Tuning 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 (SW2 OSC Coil)	Adjust for maximum output.
	22.80 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 TP3 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 TP4. Negative side to test point TP5.	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.	(GU).86.2 MHz (GC).87.35 MHz ± 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.
	(GU).109.2 MHz (GC).108.3 MHz ± 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.

• FM VCO ALIGNMENT

FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECTORS ELECTRONIC COUNTER	ADJUSTMENT (Shown in Fig. 1)	SPECIFICATION	REMARKS
98 MHz, 60 dB (CW) connect to test point TP1 through FM dummy antenna. Negative side to TP2.	TP6 ···· (+) TP5 ···· (−)	VR1	75.8 kHz ± 400 Hz	Adjust VR1, for 75.8 kHz ± 400 Hz reading on frequency counter.

• Cassette Deck Section

• ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

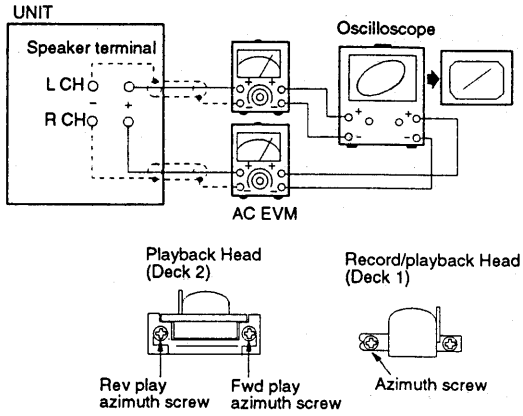
Measuring Instruments
- Digital frequency counter
- Electronic voltmeter (AC EVM)
- Oscilloscope

Test tape
- Tape speed adjustment (3kHz, – 10 dB) : QZZCWAT
- Head azimuth adjustment (8kHz, – 20 dB) : QZZCFM

Measuring condition
- Make sure the heads are clean.
- Make sure the capstan and pressure roller are clean.
- Tape-to-tape recording speed selector : NORMAL

• HEAD AZIMUTH ALIGNMENT (DECK 1, 2)

1. Playback the azimuth adjustment portion (8kHz, –20dB) of the test tape (QZZCFM) . Vary the azimuth adjusting screw until the outputs of the L-ch and R-ch are maximized and lisajous waveform, as illustrated, approaches 0 degrees.
   Note :
   If L-ch and R-ch are not maximized at the same point, adjust to the point where the levels of each channels are maximized and equal.
2. Perform the same adjustment in the play mode.
3. After the adjustment, apply screwlock to the azimuth adjusting screw.

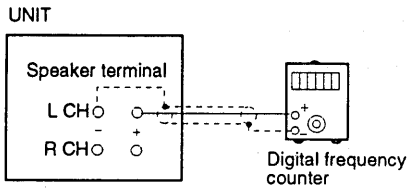


• TAPE SPEED ALIGNMENT (DECK 1, 2)

Normal speed (Standard Value : 3000 ± 30 Hz... Deck 1, 2)
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 **VR601** for the output value shown below. (Fig. 5)
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.



Adjustment Target : 3000 ± 30 Hz ... Normal Speed (Deck 1, 2)
Adjustment Target : 5100 Hz ~ ... High speed

● Alignment Point

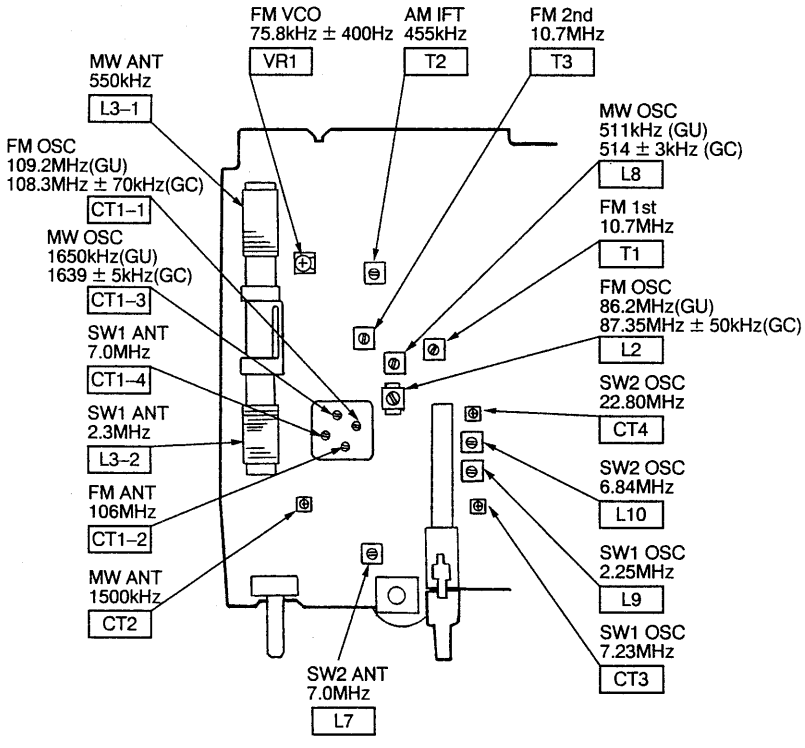


Fig. 1

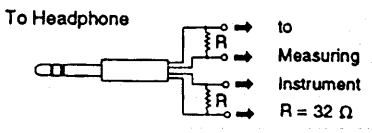


Fig. 2

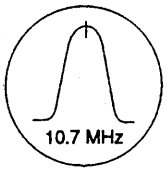


Fig. 3

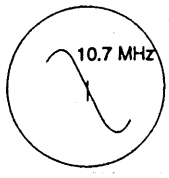


Fig. 4

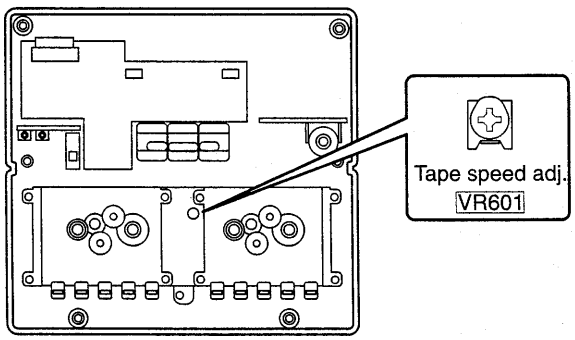


Fig. 5

■ Replacement Parts List (Electrical)

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 manufacture'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.
*[M] Indicates in Remarks columns parts that are supplied by MESA.
*The "(SF)" mark denotes the standard part.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC1	AN7205	IC	[M]
IC2	LA1805	IC	[M]
IC301	BA7755A	IC	[M]
IC302	AN7317	IC	[M]
IC303	AN7328K	IC	[M]
IC304	BA4558DX	IC	[M]
IC305	AN7194K-LD	IC	[M]
IC306	AN7077Z-LDC	IC	[M]
		TRANSISTOR(S)	
Q1	2SC829BTA	TRANSISTOR	[M]
Q101, 102	2SJ40CTA	TRANSISTOR	[M]
Q103-105	2SC2785FTA	TRANSISTOR	[M]
Q106	2SJ40CTA	TRANSISTOR	[M]
Q118	BA1L4MTA	TRANSISTOR	[M]
Q199	2SC2785FTA	TRANSISTOR	[M]
Q201, 202	2SJ40CTA	TRANSISTOR	[M]
Q203-205	2SC2785FTA	TRANSISTOR	[M]
Q206	2SJ40CTA	TRANSISTOR	[M]
Q218	BA1L4MTA	TRANSISTOR	[M]
Q299	2SC2785FTA	TRANSISTOR	[M]
Q301	2SC1684RTA	TRANSISTOR	[M]
Q302	2SC1740SRTA	TRANSISTOR	[M]
Q303	2SC1684RTA	TRANSISTOR	[M]
Q305	BA1A4MTA	TRANSISTOR	[M]
Q306	2SB1566E	TRANSISTOR	[M]⚠
Q307	2SC2785FTA	TRANSISTOR	[M]⚠
Q308	BN1A4PTA	TRANSISTOR	[M]
Q309	BA1A4PTA	TRANSISTOR	[M]
Q310	BA1A4MTA	TRANSISTOR	[M]
Q316	BN1L3ZTA	TRANSISTOR	[M]
Q319	BA1A4MTA	TRANSISTOR	[M]
Q320	2SC2001KTA	TRANSISTOR	[M]
Q322	2SC2785FTA	TRANSISTOR	[M]⚠
Q390-394	BA1A4MTA	TRANSISTOR	[M]
Q500	RVTDTA143XST	TRANSISTOR	[M]
Q502	BA1L4MTA	TRANSISTOR	[M]
Q531	BA1L4MTA	TRANSISTOR	[M]
Q541	BA1L4MTA	TRANSISTOR	[M]
Q601	2SK301QTA	TRANSISTOR	[M]
Q602	2SC1684RTA	TRANSISTOR	[M]
Q701	2SA933STA	TRANSISTOR	[M]
Q702	BN1A4ZTA	TRANSISTOR	[M]
Q706	2SC2785FTA	TRANSISTOR	[M]
		DIODE(S)	
D1	1SS254TA	DIODE	[M]
D301, 302	1SS254TA	DIODE	[M]
D305-308	1SS254TA	DIODE	[M]
D309	MTZJ8R2BTA	DIODE	[M]⚠
D310, 311	MA700TA	DIODE	[M]
D312	1SS254TA	DIODE	[M]
D314-318	SLR-325MC	LED	[M]
D319	1SS254TA	DIODE	[M]
D321	1SS254TA	DIODE	[M]
D323	SLR342VCTB7	LED	[M]
D326	SLR325DCT31	LED	[M]
D328	1SS254TA	DIODE	[M]
D330	1N5402BM21	DIODE	[M]
D332	1SS254TA	DIODE	[M]
D335	MTZJ39CTA	DIODE	[M]⚠
D336	MTZJ6R8BTA	DIODE	[M]
D501	1N5402BM21	DIODE	[M]⚠
D501A	1SS254TA	DIODE	[M]
D502	1N5402BM21	DIODE	[M]⚠
D502A	MTZJ5R1BTA	DIODE	[M]
D503, 504	1N5402BM21	DIODE	[M]⚠
D701-704	1SS254TA	DIODE	[M]
D706	1SS254TA	DIODE	[M]
D707	MTZJ7R5BTA	DIODE	[M]⚠
D708	MA700TA	DIODE	[M]
D709-711	1SS254TA	DIODE	[M]
		VARIABLE RESISTOR(S)	
VR1	EVNDXAA00B14	VR	[M]
VR301	EWCU0AF20G54	VR	[M]
VR601	EVNDXAA00B24	VR	[M]
		VARIABLE CAPASITOR(S)	
CT2-5	ECRLA010A53R	VC	[M]
CT6	ECRLA010A53R	VC	[M] (GC)
CT8	RCVMFTPC7B	VC	[M]
VC1	RCV4RCT0V-R	VC	[M]
		COIL(S)	
L2	RL04P002-E	COIL	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
L3	RLV5C007-0	COIL	[M]
L6	RLQY30S4W	COIL	[M]
L7	RLA3B44-M	COIL	[M]
L8	RL02B108-M	COIL	[M]
L9	RL03B91-M	COIL	[M]
L10	RL03B95-M	COIL	[M]
L301	RL09B17-T	COIL	[M]
L601	RLQZB470KT-D	COIL	[M]
		TRANSFORMER(S)	
T1	RLI4B153-M	TRIMMER	[M]
T2	RLI2B153-M	TRIMMER	[M]
T3	RLI4B153-M	TRIMMER	[M]
T501	RTP1M1E003-X	POWER TRANSFORMER	[M]⚠
		COMPONENT COMBINATION(S)	
Z1	RCRBMT002-H	BAND PASS FILTER	[M]
		FILTER(S)	
CF1	RVF107WDZT	CERAMIC FILTER	[M]
CF2	RVFSFZ455JL	CERAMIC FILTER	[M]
		FUSE(S)	
F501	XBA2C50TB0	FUSE	[M]⚠
F502	XBA2C31TB0	FUSE	[M]⚠
		SWITCH(ES)	
S1	RST4H18ZA-H	SW	[M]
S301	RSP3001-A	SW	[M]
S302	ESB6483	SW	[M]
S303	RST2B54ZA-H	SW	[M]
S304	EVQ21405R	SW	[M]
S305	EVQ21405R	SW	[M]
S306	EVQ21405R	SW	[M]
S307	EVQ21405R	SW	[M]
S308	EVQ21405R	SW	[M]
S309	ESB64513	SW	[M]
S501	RSR3A01ZA-H	SW	[M]⚠
S502	RJJ1A5YA-H	SW (JK501)	[M]⚠
S601	RSH1A013-2I	SW	[M]
S602	RSH1A013-2I	SW	[M]
S603	RSH1A004-1	SW	[M]
		JACK(S)	
JK301	RJJ1D25ZA-C	MIC IN	[M]
JK302	RJF1099YA	AUX IN	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
JK303	RJF1098ZA-H	SPEAKER OUT	[M]
JK304	RJJ39T01	HEADPHONE	[M]
JK501	RJJ1A5YA-H	AC JACK (S502)	[M]⚠
		FUSE PROTECTOR(S)	
FP501	RSFMB50KT-L	FUSE PROTECTOR	[M]⚠
		FUSE HOLDER(S)	
FC1-4	EYF52BC	FUSE HOLDER	[M]
		FUSE RESISTOR(S)	
R352	RSFMB40KT-L	FUSE RESISTOR	[M]⚠
		CONNECTOR(S)	
CN301	RJS1A5505	CONNECTOR(5P)	[M]
CN302	RJS1A6214-1	CONNECTOR(14P)	[M]
CN303	RJS1A6714-Q	CONNECTOR(14P)	[M]
CP301	RJP4G18ZA	CONNECTOR(4P)	[M]
CP302	RJP5G18ZA	CONNECTOR(5P)	[M]
CP303	RJP6G4YA	CONNECTOR(6P)	[M]
CP501	RJP5G4YA	CONNECTOR(5P)	[M]

■ Resistors and Capacitors

Notes : * Capacity values are in microfarads (uF) 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)

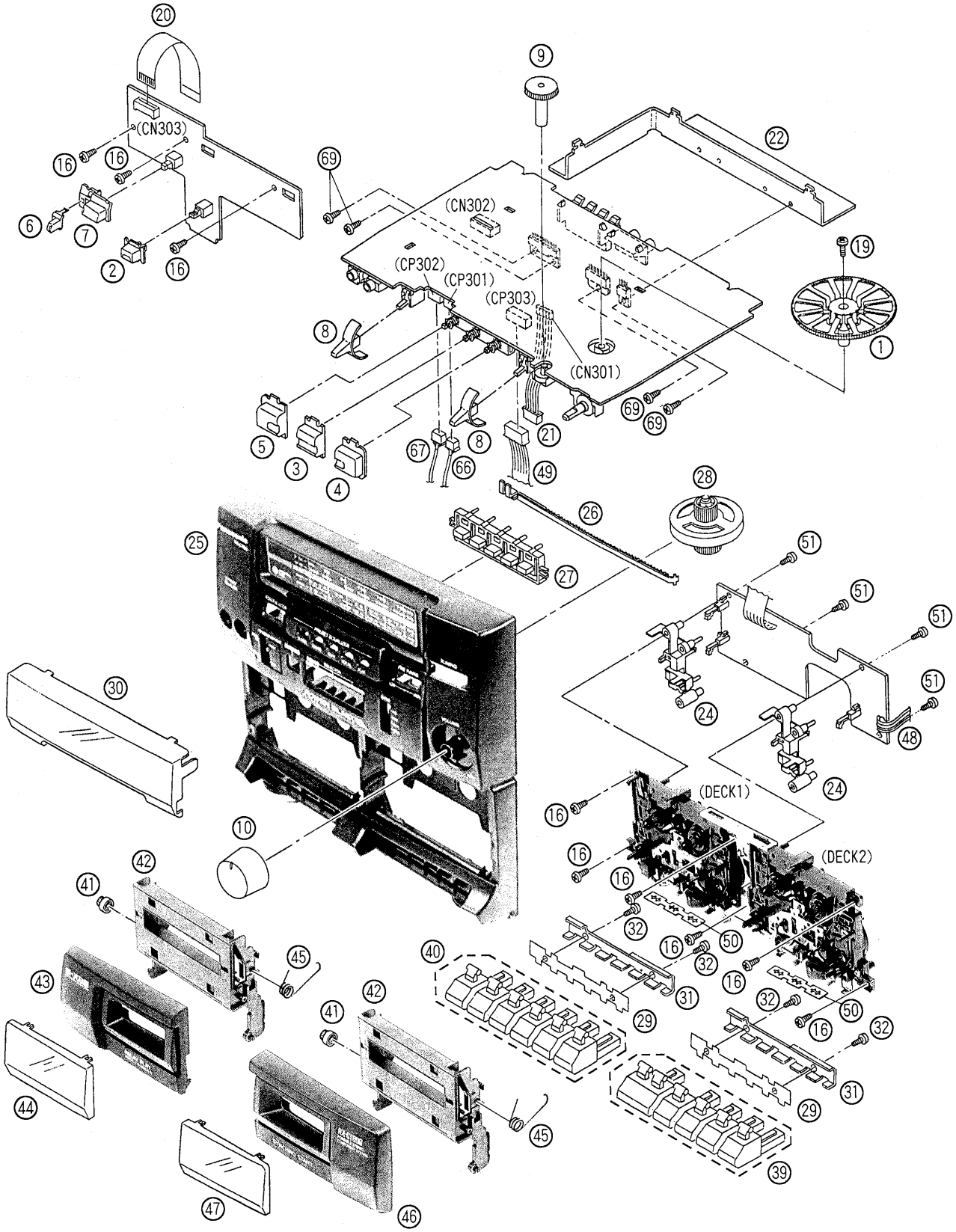
Ref. No.	Part No.	Values & Remarks
		RESISTORS
R2	ERDS2TJ334	1/4W 330K [M]
R3	ERDS2TJ471	1/4W 470 [M]
R4	ERDS2TJ330	1/4W 33 [M]
R5	ERDS2TJ101	1/4W 100 [M]
R6	ERDS2TJ8R2	1/4W 8.2 [M]
R7	ERDS2TJ680	1/4W 68 [M]
R8	ERDS2TJ470	1/4W 47 [M]
R9	ERDS2TJ183	1/4W 18K [M]
R10	ERDS2TJ332	1/4W 3.3K [M]
R11	ERDS2TJ221	1/4W 220 [M]
R12	ERDS2TJ153	1/4W 15K [M]
R14	ERDS2TJ181	1/4W 180 [M]
R15	ERDS2TJ104	1/4W 100K [M]
R16	ERDS2TJ473	1/4W 47K [M]
R20, 21	ERDS2TJ183	1/4W 18K [M]
R22, 23	ERDS2TJ393	1/4W 39K [M]
R101	ERDS2TJ123	1/4W 12K [M]
R102	ERDS2TJ562	1/4W 5.6K [M]
R103	ERDS2TJ472	1/4W 4.7K [M]
R104	ERDS2TJ102	1/4W 1K [M]
R105	ERDS2TJ390	1/4W 39 [M]
R107	ERDS2TJ183	1/4W 18K [M]
R108	ERDS2TJ123	1/4W 12K [M]
R109	ERDS2TJ273	1/4W 27K [M]
R111	ERDS2TJ104	1/4W 100K [M]
R112	ERDS2TJ471	1/4W 470 [M]
R113	ERDS2TJ681	1/4W 680 [M]
R114	ERDS2TJ182	1/4W 1.8K [M]
R115	ERDS2TJ122	1/4W 1.2K [M]
R117	ERDS2TJ393	1/4W 39K [M]
R118	ERDS2TJ222	1/4W 2.2K [M]
R119	ERDS2TJ473	1/4W 47K [M]
R120, 121	ERDS2TJ562	1/4W 5.6K [M]
R122	ERDS2TJ183	1/4W 18K [M]
R123, 124	ERDS2TJ123	1/4W 12K [M]
R125	ERDS2TJ562	1/4W 5.6K [M]
R126	ERDS2TJ563	1/4W 56K [M]
R129	ERDS2TJ104	1/4W 100K [M]
R130	ERDS2TJ102	1/4W 1K [M]
R131	ERDS2TJ2R2	1/4W 2.2 [M]
R132	ERDS2TJ103	1/4W 10K [M]
R133	ERDS2TJ2R2	1/4W 2.2 [M]
R134	ERDS2TJ822	1/4W 8.2K [M]
R135	ERDS2TJ181	1/4W 180 [M]
R140	ERDS2TJ183	1/4W 18K [M]
R198	ERDS2TJ474	1/4W 470K [M]
R199	ERDS2TJ102	1/4W 1K [M]
R201	ERDS2TJ123	1/4W 12K [M]
R202	ERDS2TJ562	1/4W 5.6K [M]
R203	ERDS2TJ472	1/4W 4.7K [M]
R204	ERDS2TJ102	1/4W 1K [M]
R205	ERDS2TJ390	1/4W 39 [M]
R207	ERDS2TJ183	1/4W 18K [M]
R208	ERDS2TJ123	1/4W 12K [M]
R209	ERDS2TJ273	1/4W 27K [M]
R211	ERDS2TJ104	1/4W 100K [M]
R212	ERDS2TJ471	1/4W 470 [M]
R213	ERDS2TJ681	1/4W 680 [M]
R214	ERDS2TJ182	1/4W 1.8K [M]
R215	ERDS2TJ122	1/4W 1.2K [M]
R217	ERDS2TJ393	1/4W 39K [M]
R218	ERDS2TJ222	1/4W 2.2K [M]
R219	ERDS2TJ473	1/4W 47K [M]
R220, 221	ERDS2TJ562	1/4W 5.6K [M]
R222	ERDS2TJ183	1/4W 18K [M]
R223, 224	ERDS2TJ123	1/4W 12K [M]
R225	ERDS2TJ562	1/4W 5.6K [M]
R226	ERDS2TJ563	1/4W 56K [M]
R229	ERDS2TJ104	1/4W 100K [M]
R230	ERDS2TJ102	1/4W 1K [M]
R231	ERDS2TJ2R2	1/4W 2.2 [M]
R232	ERDS2TJ103	1/4W 10K [M]
R233	ERDS2TJ2R2	1/4W 2.2 [M]
R234	ERDS2TJ822	1/4W 8.2K [M]
R235	ERDS2TJ181	1/4W 180 [M]
R240	ERDS2TJ183	1/4W 18K [M]
R298	ERDS2TJ474	1/4W 470K [M]
R299	ERDS2TJ102	1/4W 1K [M]
R301	ERDS2TJ222	1/4W 2.2K [M]
R302	ERDS2TJ105	1/4W 1M [M]
R303	ERDS2TJ182	1/4W 1.8K [M]
R304	ERDS2TJ470	1/4W 47 [M]
R305	ERDS2TJ103	1/4W 10K [M]
R306, 307	ERDS2TJ334	1/4W 330K [M]
R308	ERDS2TJ221	1/4W 220 [M]
R309-311	ERDS2TJ472	1/4W 4.7K [M]
R312	ERDS2TJ221	1/4W 220 [M]
R313	ERDS2TJ273	1/4W 27K [M]
R314	ERDS2TJ4R7	1/4W 4.7 [M]
R315	ERDS2TJ101	1/4W 100 [M]
R319	ERDS2TJ222	1/4W 2.2K [M]
R320	ERDS2TJ475	1/4W 4.7M [M]
R321	ERDS2TJ101	1/4W 100 [M]
R322	ERDS2TJ103	1/4W 10K [M]
R323	ERDS2TJ102	1/4W 1K [M]
R324, 325	ERDS2TJ103	1/4W 10K [M]
R328	ERDS2TJ154	1/4W 150K [M]
R329	ERDS2TJ472	1/4W 4.7K [M]
R331	ERDS2TJ470	1/4W 47 [M]
R333	ERDS2TJ101	1/4W 100 [M]
R338	ERDS2TJ103	1/4W 10K [M]
R339	ERDS2TJ331	1/4W 330 [M]
R340	ERDS2TJ221	1/4W 220 [M]
R341, 342	ERDS2TJ1R2	1/4W 1.2 [M]
R343	ERDS2TJ122	1/4W 1.2K [M]
R344	ERDS2TJ103	1/4W 10K [M]
R347	ERDS1FVJ4R7	1/2W 4.7 [M]⚠
R348	ERDS2TJ222	1/4W 2.2K [M]
R354, 355	ERDS2TJ332	1/4W 3.3K [M]
R356-359	ERDS2TJ683	1/4W 68K [M]
R360	ERDS2TJ104	1/4W 100K [M]
R361	ERDS2TJ1R2	1/4W 1.2 [M]
R362	ERDS2TJ153	1/4W 15K [M]
R364	ERDS2TJ103	1/4W 10K [M]
R365	ERDS2TJ823	1/4W 82K [M]
R366	ERDS2TJ332	1/4W 3.3K [M]
R367	ERDS2TJ823	1/4W 82K [M]
R372	ERDS2TJ472	1/4W 4.7K [M]
R373	ERDS2TJ152	1/4W 1.5K [M]
R374	ERDS2TJ473	1/4W 47K [M]
R380	ERDS2TJ472	1/4W 4.7K [M]
R381	ERDS2TJ101	1/4W 100 [M]
R382	ERDS2TJ224	1/4W 220K [M]
R386	ERDS2TJ391	1/4W 390 [M]
R388	ERDS2TJ103	1/4W 10K [M]
R390	ERDS2TJ103	1/4W 10K [M]
R423	ERDS2TJ102	1/4W 1K [M]
R500	ERDS2TJ221	1/4W 220 [M]
R501	ERDS2TJ272	1/4W 2.7K [M]
R502	ERDS2TJ683	1/4W 68K [M]
R506	ERDS2TJ471	1/4W 470 [M]
R508	ERDS2TJ822	1/4W 8.2K [M]
R509	ERDS2TJ104	1/4W 100K [M]
R510	ERDS2TJ473	1/4W 47K [M]
R511	ERDS2TJ152	1/4W 1.5K [M]
R512	ERDS2TJ681	1/4W 680 [M]
R531	ERDS2TJ103	1/4W 10K [M]
R541	ERDS2TJ103	1/4W 10K [M]
R601	ERDS2TJ123	1/4W 12K [M]
R602	ERDS2TJ273	1/4W 27K [M]
R604	ERDS2TJ273	1/4W 27K [M]
R605	ERDS2TJ105	1/4W 1M [M]
R606	ERDS2TJ472	1/4W 4.7K [M]
R702	ERDS2TJ823	1/4W 82K [M]

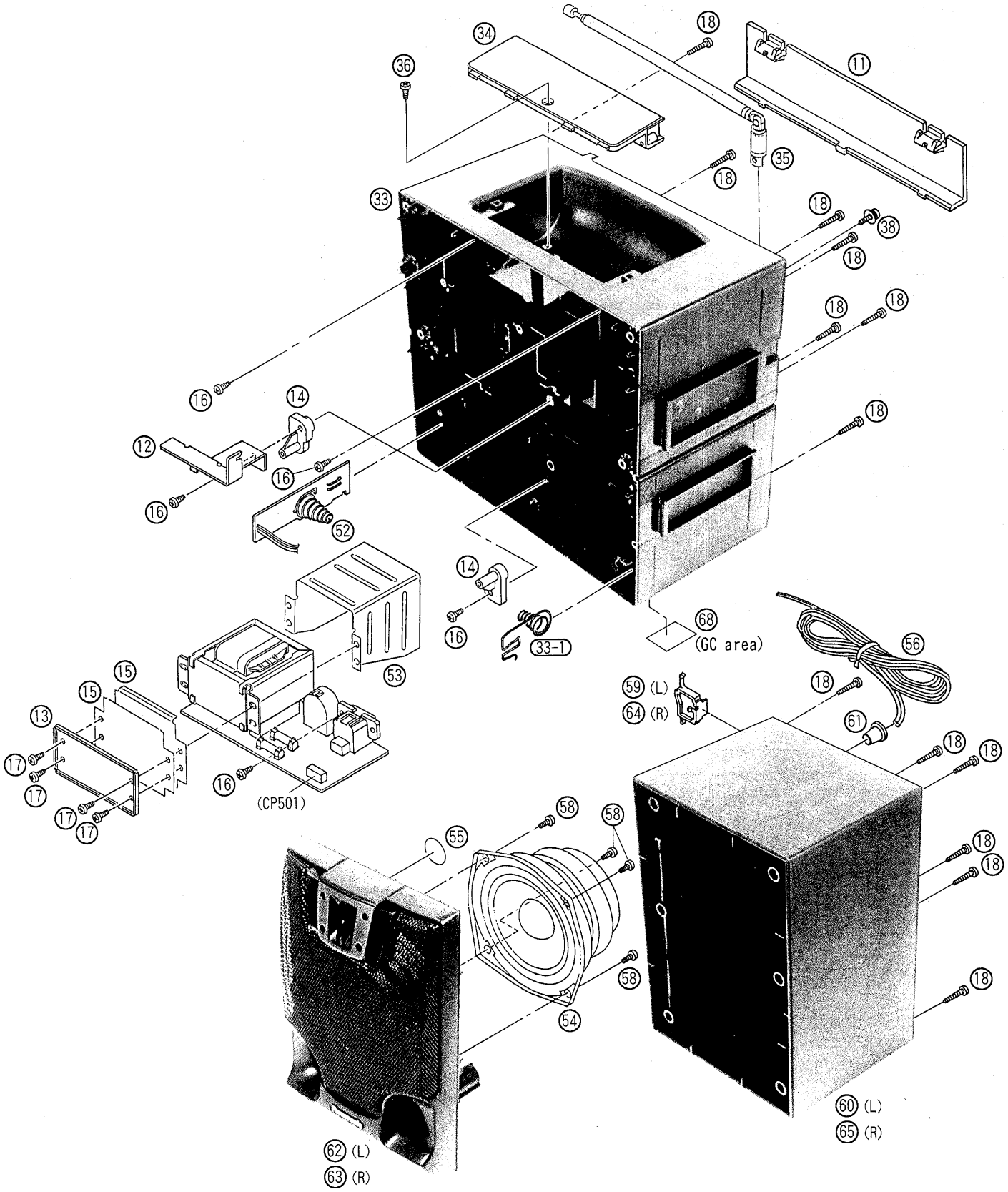
Ref. No.	Part No.	Values & Remarks
R703	ERDS2TJ102	1/4W 1K [M]
R704	ERDS2TJ562	1/4W 5.6K [M]
R705	ERDS2TJ472	1/4W 4.7K [M]
R706	ERDS2TJ182	1/4W 1.8K [M]
R707	ERDS2TJ184	1/4W 180K [M]
R708	ERDS2TJ221	1/4W 220 [M]
R709	ERDS2TJ102	1/4W 1K [M]
R712	ERDS2TJ562	1/4W 5.6K [M]
R713	ERDS2TJ561	1/4W 560 [M]
R714	ERDS2TJ472	1/4W 4.7K [M]
R715	ERDS2TJ682	1/4W 6.8K [M]
R716	ERDS2TJ335	1/4W 3.3M [M]
R720	ERDS2TJ102	1/4W 1K [M]
R721	ERDS2TJ473	1/4W 47K [M]
R730	ERDS2TJ391	1/4W 390 [M]
R740, 741	ERDS2TJ153	1/4W 15K [M]
R742	ERDS2TJ222	1/4W 2.2K [M]
		CAPACITORS
C1	ECBT1H120JC5	50V 12P [M]
C3	ECBT1H220JC5	50V 22P [M]
C5, 6	ECBT1H102KB5	50V 1000P [M]
C7	ECBT1H4R7KC5	50V 4.7P [M]
C8	ECBT1H470J5	50V 47P [M]
C9	ECBT1H102KB5	50V 1000P [M]
C10	ECBT1H120JC5	50V 12P [M]
C11	ECBT1H8R2KC5	50V 8.2P [M] (GC)
C11	ECBT1H100JC5	50V 10P [M] (GU)
C12	ECBT1H102KB5	50V 1000P [M]
C13	ECBT0J223MS5	6.3V 0.022U [M]
C14	ECQP2A152JZT	100V 1500P [M]
C15, 16	ECEA1HKA3R3B	50V 3.3U [M]
C20	ECEA0JKA101B	6.3V 100U [M]
C21	ECBT1H102KB5	50V 1000P [M]
C23	ECBT1H471KB5	50V 470P [M]
C24	ECEA1EKA220B	25V 22U [M]
C25	ECBT1C103MS5	16V 0.01U [M]
C28	ECEA1HKA010B	50V 1U [M]
C29	ECBT1C222MR5	16V 2200P [M]
C32	ECBT1H2R7KC5	50V 2.7P [M]
C34	ECEA1HKAR47B	50V 0.47U [M]
C36	ECQP2A361JZT	100V 360P [M]
C37	ECQP2A152JZT	100V 1500P [M]
C38	ECQP2A472JZT	100V 4700P [M]
C39	ECBT1H3R3KC5	50V 3.3P [M]
C41	ECBT1H270J5	50V 27P [M]
C42	ECBT1H200JC5	50V 20P [M]
C50, 51	ECFR1C153MR	16V 0.015U [M]
C60	ECBT1H6R8KC5	50V 6.8P [M] (GU)
C61	ECBT1H5R6KC5	50V 5.6P [M]
C62, 63	ECEA1HKA010B	50V 1U [M]

Ref. No.	Part No.	Values & Remarks
C64	ECEA1AKA470B	10V 47U [M]
C65	ECBT1C103MS5	16V 0.01U [M]
C101	ECBT1C122MR5	16V 1200P [M]
C102	ECBT1H102KB5	50V 1000P [M]
C103	ECBT1H101KB5	50V 100P [M]
C104	ECFR1C333MR	16V 0.033U [M]
C105	ECEA0JKA101B	6.3V 100U [M]
C106	ECEA1CKA100B	16V 10U [M]
C107	ECBT1H101KB5	50V 100P [M]
C108	ECBT1H102KB5	50V 1000P [M]
C110	ECEA1HKA010B	50V 1U [M]
C111	ECEA1HKAR33B	50V 0.33U [M]
C112	ECBT0J153MS5	6.3V 0.015U [M]
C113	ECFR1C822JR	16V 8200P [M]
C114	ECEA1HKA010B	50V 1U [M]
C117	ECEA1HKA010B	50V 1U [M]
C119	ECFR1C473MR	16V 0.047U [M]
C120	ECEA1HKA010B	50V 1U [M]
C121	ECEA1CKA220B	16V 22U [M]
C122	ECBT1H101KB5	50V 100P [M]
C124	ECEA1HKAR22B	50V 0.22U [M]
C125	ECBT1H471KB5	50V 470P [M]
C126, 127	ECQV1H224JZ3	50V 0.22U [M]
C128, 129	ECEA1CKA100B	16V 10U [M]
C198	ECEA1HKA010B	50V 1U [M]
C199	ECBT1H331KB5	50V 330P [M]
C201	ECBT1C122MR5	16V 1200P [M]
C202	ECBT1H102KB5	50V 1000P [M]
C203	ECBT1H101KB5	50V 100P [M]
C204	ECFR1C333MR	16V 0.033U [M]
C205	ECEA0JKA101B	6.3V 100U [M]
C206	ECEA1CKA100B	16V 10U [M]
C207	ECBT1H101KB5	50V 100P [M]
C208	ECBT1H102KB5	50V 1000P [M]
C210	ECEA1HKA010B	50V 1U [M]
C211	ECEA1HKAR33B	50V 0.33U [M]
C212	ECBT0J153MS5	6.3V 0.015U [M]
C213	ECFR1C822JR	16V 8200P [M]
C214	ECEA1HKA010B	50V 1U [M]
C217	ECEA1HKA010B	50V 1U [M]
C219	ECFR1C473MR	16V 0.047U [M]
C220	ECEA1HKA010B	50V 1U [M]
C221	ECEA1CKA220B	16V 22U [M]
C222	ECBT1H101KB5	50V 100P [M]
C224	ECEA1HKAR22B	50V 0.22U [M]
C225	ECBT1H471KB5	50V 470P [M]
C226, 227	ECQV1H224JZ3	50V 0.22U [M]
C228, 229	ECEA1CKA100B	16V 10U [M]
C298	ECEA1HKA010B	50V 1U [M]
C299	ECBT1H331KB5	50V 330P [M]
C301	ECFR1C223MR	16V 0.022U [M]
C302	ECFR1C683MR	16V 0.068U [M]

Ref. No.	Part No.	Values & Remarks
C303	ECBT1C103MS5	16V 0.01U [M]
C304	ECBT1H102KB5	50V 1000P [M]
C305	ECEA1HKA010B	50V 1U [M]
C306	ECEA1AKA101B	10V 100U [M]
C307	ECEA1AKA470B	10V 47U [M]
C308	ECBT1C103MS5	16V 0.01U [M]
C309	ECQP2A151JZT	100V 150P [M]
C310	ECQP2A182JZT	100V 1800P [M]
C311, 312	ECBT1C103MS5	16V 0.01U [M]
C313	ECEA1AKA101B	10V 100U [M]
C320	ECEA1CKA100B	16V 10U [M]
C321	ECFR1C473MR	16V 0.047U [M]
C322	ECEA1AKA220B	10V 22U [M]
C323	ECEA1AKA101B	10V 100U [M]
C324	ECEA1CKA220B	16V 22U [M]
C325	ECEA1AKA470B	10V 47U [M]
C327	ECEA1CKA100B	16V 10U [M]
C328	ECEA1AKA101B	10V 100U [M]
C329	ECEA1CKA101B	16V 100U [M]
C330	ECEA1HKA3R3B	50V 3.3U [M]
C331	ECEA1CKA101B	16V 100U [M]
C332	ECEA1AKA470B	10V 47U [M]
C340	ECA1VM332E	35V 3300U [M] ⚠
C341	ECA1EM332E	25V 3300U [M] ⚠
C343	ECQV1H224JZ3	50V 0.22U [M]
C347	ECEA1EKA330B	25V 33U [M]
C350	ECFR1C104MR	16V 0.1U [M]
C352	ECEA1EU101B	25V 100U [M]
C355	ECEA1EKA330B	25V 33U [M]
C356	ECFR1C104MR	16V 0.1U [M]
C358	ECEA0JU331B	6.3V 330U [M]
C360	ECEA1CKA330B	16V 33U [M]
C362	ECQV1H105JZ3	50V 1U [M]
C382	ECBT1C103MS5	16V 0.01U [M]
C501-504	ECFR1C103MR	16V 0.01U [M]
C601	ECEA1CKA100B	16V 10U [M]
C602	ECEA1CKA101B	16V 100U [M]
C702	ECEA1HKA3R3B	50V 3.3U [M]
C703	ECEA1CU221B	16V 220U [M]
C706	ECEA1HKAR33B	50V 0.33U [M]
C710	ECEA1HKA010B	50V 1U [M]
C716	ECEA1AKA101B	10V 100U [M]
C720	ECEA1HKA010B	50V 1U [M]
C740, 741	ECBT1C103MS5	16V 0.01U [M]

■ Cabinet Parts Location




(CP501)
(GC area)
(L)
(R)

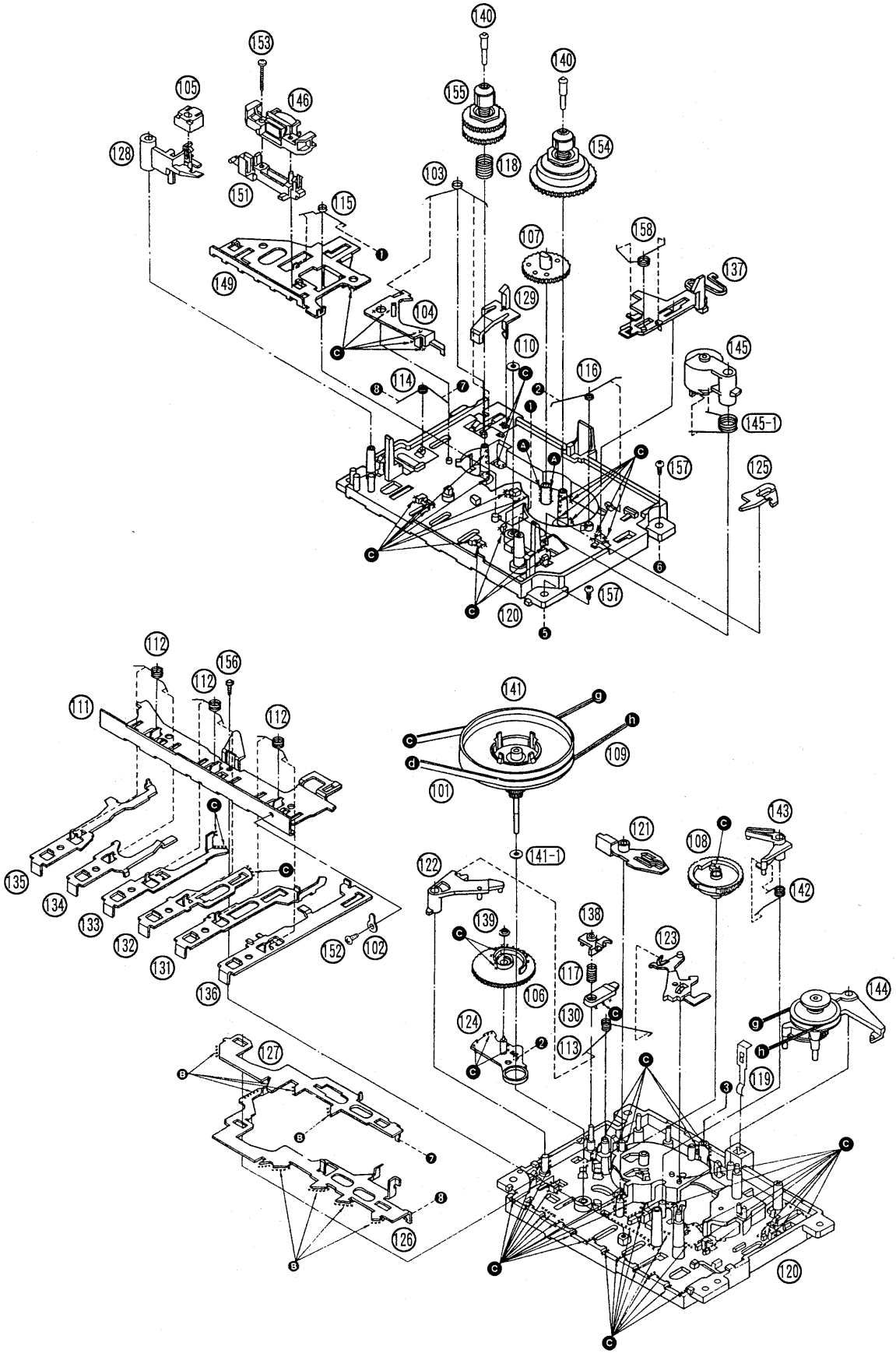
■ Replacement Parts List (Cabinet)

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 manufacture'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.
*[M] Indicates in Remarks columns parts that are supplied by MESA.
*The "(SF)" mark denotes the standard part.

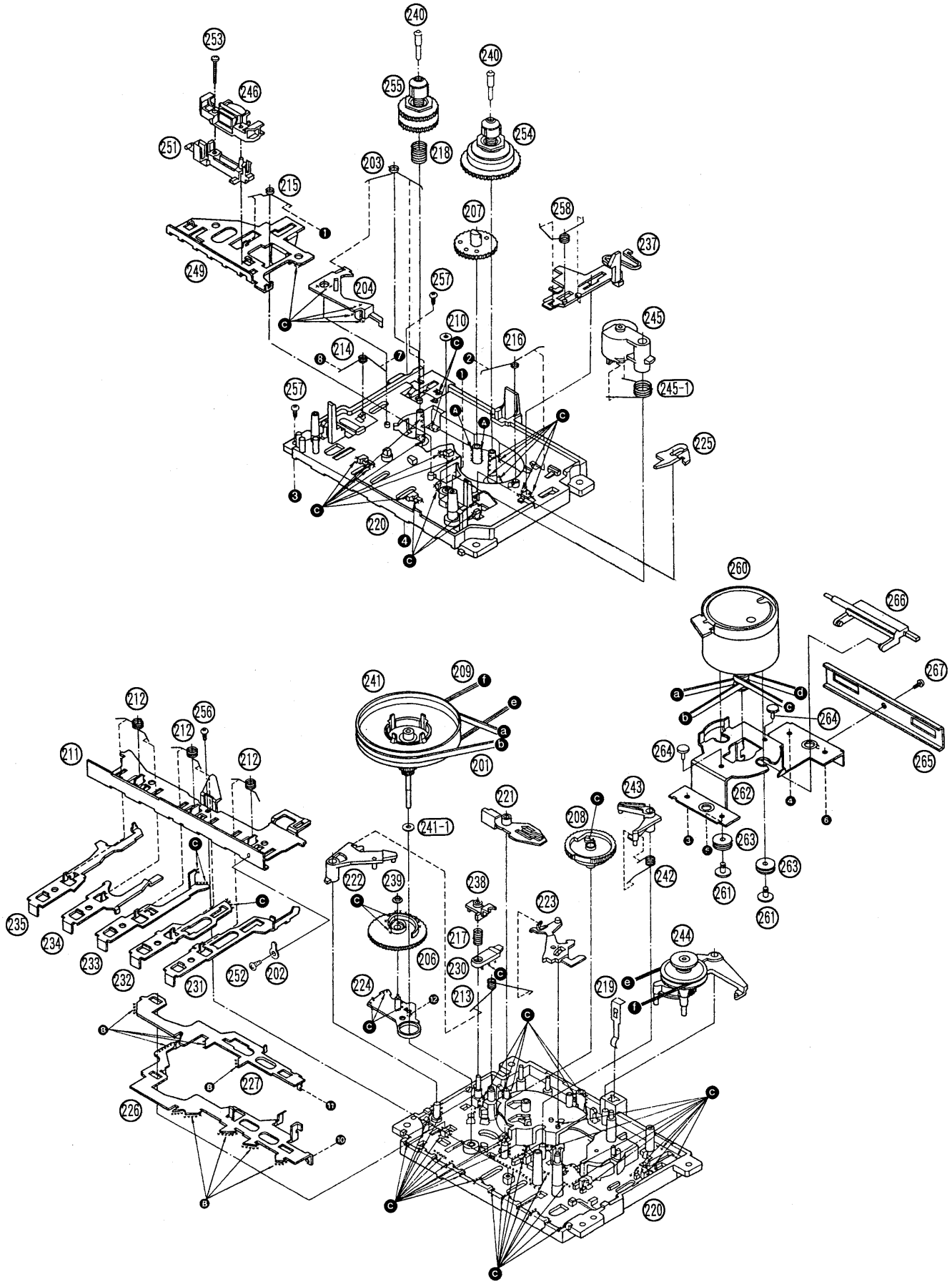
Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RDGX0010	GEAR, VARICON	[M]
2	RGUX0222-K	BUTTON, SURROUND	[M]
3	RGUX0223-K	BUTTON, TUNER	[M]
4	RGUX0224-K	BUTTON, CD/AUX	[M]
5	RGUX0225-K	BUTTON, TAPE	[M]
6	RGUX0227-Q	CAP	[M]
7	RGUX0228-K	BUTTON, MEGA POWER	[M]
8	RGWX0022-K	KNOB, SELECTOR	[M]
9	RGWX0031-K	KNOB, FINE TUNING	[M]
10	RGWX0033-K	KNOB, VOLUME	[M]
11	RKK3472B-0	BATTERY COVER	[M]
12	RMAX0030	ANGLE	[M]
13	RMAX0031	PLATE, TRANSFORMER	[M]
14	RMQX0020-K	MECHA CHASSIS A	[M]
15	RSC0094A	SHIELD PLATE	[M]
16	XTV3+12G	SCREW	[M]
17	XTV3+16G	SCREW	[M]
18	XTV3+20G-M	SCREW	[M]
19	XYN26+C6	SCREW	[M]
20	REEX0044	PANEL TO MAIN WIRE (14P)	[M]
21	REXX0153	POWER WIRE	[M]
22	RMYX0029	HEAT SINK	[M]
24	RMR0368	TR HOLDER	[M]
25	RFKKCT890GCK	FRONT CABIBET ASS'Y	[M] (GC)
25	RFKKCT890GUK	FRONT CABIBET ASS'Y	[M] (GU)
26	RGJX0016-W	POINTER	[M]
27	RGUX0226-Q	BUTTON, PRESET EQ	[M]
28	RGWX0032-K	KNOB, TUNING	[M]
29	RHRX0008	MECHA SEAT	[M]
30	RKWX0099-Q	DIAL WINDOW	[M]
31	RMAX0006	ANGLE BAR	[M]
32	XTV3+8G-M	SCREW	[M]
33	RFKHCT890GCK	REAR CABIBET ASS'Y	[M] (GC)
33	RFKHCT890GUK	REAR CABIBET ASS'Y	[M] (GU)
33-1	RJC91008	BATTERY SPRING	[M]
34	RFKNCT890GUK	HANDLE ASS'Y	[M]
35	XEARR175EA-Y	ROD ANTENNA	[M]
36	XTN3+10CFZ	SCREW	[M]
38	XYN3+F12FY	SCREW	[M]
39	RGZX0028A-K	BUTTON	[M]
40	RGZX0028B-K	BUTTON	[M]
41	RDG0183-L	DAMPER GEAR	[M]
42	RKFX0044-K	CASSETTE HOLDER	[M]
43	RKFX0057-K	CASSETTE LID (L)	[M]
44	RKWX0097-Q	CASSETTE WINDOW (L)	[M]
45	RMEX0002	SPRING, CASSETTE OPEN	[M]
46	RKFX0058-K	CASSETTE LID (R)	[M]
47	RKWX0098-Q	CASSETTE WINDOW (R)	[M]
48	RWJ0104065KX	MOTOR WIRE (4P) (W601)	[M]
49	REXX0156	MECHA WIRE (6P) (W602)	[M]
50	RMXX0004	SPACER	[M]
51	XTN2+14GF	SCREW	[M]
52	RJC511ZBS	BATTERY TERMINAL	[M]
53	RSC0163A	SHIELD PLATE	[M]
54	EASJ12P22A3	WOOFER	[M]
55	EFBS10D49A3	TWEETER	[M]
56	REXX0089	SPEAKER CORD	[M]
58	XTW3+10Q	SCREW	[M]
59	RMR0407	LOCK LEVER (L)	[M]
60	RKP0016C-K	SP. REAR CABINET (L)	[M]
61	RMGX0012-K	CORD BUSHING	[M]
62	RFKGCT890GUA	SP. FRONT CABINET (L) ASS'Y	[M]
63	RFKGCT890GUB	SP. FRONT CABINET (R) ASS'Y	[M]
64	RMR0408	LOCK LEVER (R)	[M]
65	RKP0018C-K	SP. REAR CABINET (R)	[M]
66	REXX0123	HEAD WIRE, DECK 2 (4P)	[M]
67	REXX0135	HEAD WIRE, DECK 1 (5P)	[M]
68	RGQX0001	HOLE COVER	[M] (GC)
69	XTW3+10F	SCREW	[M]

■ Mechanism Parts Location

● DECK 1 (For recording and playback)



● DECK 2 (For playback only)



■ Replacement Parts List (Mechanism)

Ref. No.	Part No.	Part Name & Description	Remarks
		MECHANISM PARTS	
		<DECK 1>	
101	RDV0007	MAIN BELT	[M]
102	RJR0033	EARTH LUG	[M]
103	RMB0109-1	BRAKE SPRING	[M]
104	RML0116	BRAKE	[M]
105	RBR2CY009	E HEAD	[M]
106	RDG0057-1	IDLER GEAR	[M]
107	RDG0059	FF RELAY GEAR	[M]
108	RDK0005-1	CAM GEAR	[M]
109	RDV0006-1	RF BELT	[M]
110	RHW16009	WASHER	[M]
111	RMA0109	BACK PLATE	[M]
112	RMB0043-1	ROD OPERATION SPRING	[M]
113	RMB0045	AS SPRING	[M]
114	RMB0046-1	LOCK PLATE SPRING	[M]
115	RMB0047	HEAD PANEL SPRING	[M]
116	RMB0048-1	IDLER LEVER SPRING	[M]
117	RMB0053	PAUSE LEVER SPRING	[M]
118	RMB0125	BACK TENSION SPRING	[M]
119	RMC0061	SPRING	[M]
120	RFKRCT090P-K	CHASSIS ASS'Y	[M]
121	RML0071-1	SWAY LEVER	[M]
122	RML0072-1	AS RELEASE LEVER	[M]
123	RML0073-1	AS PROTECT LEVER	[M]
124	RML0074-1	IDLER LEVER	[M]
125	RML0076	EJ. SELECTION LEVER	[M]
126	RML0077-1	LOCK PLATE	[M]
127	RML0078	FUNCTION PLATE	[M]
128	RML0080	E HEAD ARM	[M]
129	RML0081-2	LEVER	[M]
130	RML0082	PAUSE LEVER	[M]
131	RMM0023	PLAY ROD	[M]
132	RMM0024	REW ROD	[M]
133	RMM0025	FF ROD	[M]
134	RMM0026	STOP ROD	[M]
135	RMM0027	PAUSE ROD	[M]
136	RMM0028	REC ROD	[M]
137	RMM0029	EJECT SLIDE LEVER	[M]
138	RMR0211-1	PAUSE BUSH	[M]
139	RMR0227	IDLER GEAR BUSH	[M]
140	RMS0055	REEL SHAFT	[M]
141	RXF0012	FLYWHEEL ASS'Y	[M]
141-1	RHW21008	WASHER	[M]
142	RMB0044	TRIGGER SPRING	[M]
143	RML0075	TRIGGER LEVER	[M]
144	RXP0014	RF CLUTCH ASS'Y	[M]
145	RXP0015	PINCH ROLLER ASS'Y	[M]
145-1	RMB0049	PINCH ARM SPRING	[M]
146	RBR4CY016-1M	R/P HEAD	[M]
149	RMA0696	HEAD BASE ASS'Y	[M]
151	RMQ0384	HEAD BASE	[M]
152	XTN2+4F	EARTH LUG SCREW	[M]
153	XTN2+14F	SCREW	[M]
154	RXR0004	TAKE UP REEL ASS'Y	[M]
155	RXR0005	SUPPLY REEL ASS'Y	[M]
156	XTN2+6J	SCREW	[M]
157	XTW26+6L	SCREW	[M]
158	RME0098-2	SPRING	[M]
		<DECK 2>	
201	RDV0009	MAIN BELT B	[M]
202	RJR0033	EARTH LUG	[M]
203	RMB0109-1	BRAKE SPRING	[M]
204	RML0116	BRAKE	[M]
206	RDG0057-1	IDLER GEAR	[M]
207	RDG0059	FF RELAY GEAR	[M]
208	RDK0005-1	CAM GEAR	[M]
209	RDV0006-1	RF BELT	[M]
210	RHW16009	CAPSTAN WASHER	[M]
211	RMA0109	BACK PLATE	[M]
212	RMB0043-1	ROD OPERATION SPRING	[M]
213	RMB0045	AS SPRING	[M]
214	RMB0046-1	LOCK PLATE SPRING	[M]
215	RMB0047	HEAD PANEL SPRING	[M]
216	RMB0048-1	IDLER LEVER SPRING	[M]
217	RMB0053	PAUSE LEVER SPRING	[M]
218	RMB0125	BACK TENSION SPRING	[M]
219	RMC0061	SPRING	[M]
220	RFKRCT090P-K	CHASSIS ASS'Y	[M]
221	RML0071-1	SWAY LEVER	[M]
222	RML0072-1	AS RELEASE LEVER	[M]
223	RML0073-1	AS PROTECT LEVER	[M]
224	RML0074-1	IDLER LEVER	[M]
225	RML0076	EJ. SELECTION LEVER	[M]
226	RML0077-1	LOCK PLATE	[M]
227	RML0078	FUNCTION PLATE	[M]
230	RML0082	PAUSE LEVER	[M]
231	RMM0023	PLAY ROD	[M]
232	RMM0024	REW ROD	[M]
233	RMM0025	FF ROD	[M]
234	RMM0026	STOP ROD	[M]
235	RMM0027	PAUSE ROD	[M]
237	RMM0029	EJECT SLIDE LEVER	[M]
238	RMR0211-1	PAUSE BUSH	[M]
239	RMR0227	IDLER GEAR BUSH	[M]
240	RMS0055-1	REEL SHAFT	[M]
241	RXF0012	FLYWHEEL ASS'Y	[M]
241-1	RHW21008	WASHER	[M]
242	RMB0044	TRIGGER SPRING	[M]
243	RML0075	TRIGGER LEVER	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
244	RXP0014	RF CLUTCH ASS'Y	[M]
245	RXP0015	PINCH ROLLER ASS'Y	[M]
245-1	RMB0049	PINCH ARM SPRING	[M]
246	RBR4CY016-1M	R/P HEAD	[M]
249	RMA0696	HEAD BASE ASS'Y	[M]
251	RMQ0383	HEAD BASE	[M]
252	XTN2+4F	EARTH LUG SCREW	[M]
253	XTN2+14F	SCREW	[M]
254	RXR0004	TAKE UP REEL ASS'Y	[M]
255	RXR0005	SUPPLY REEL ASS'Y	[M]
256	XTN2+6J	SCREW	[M]

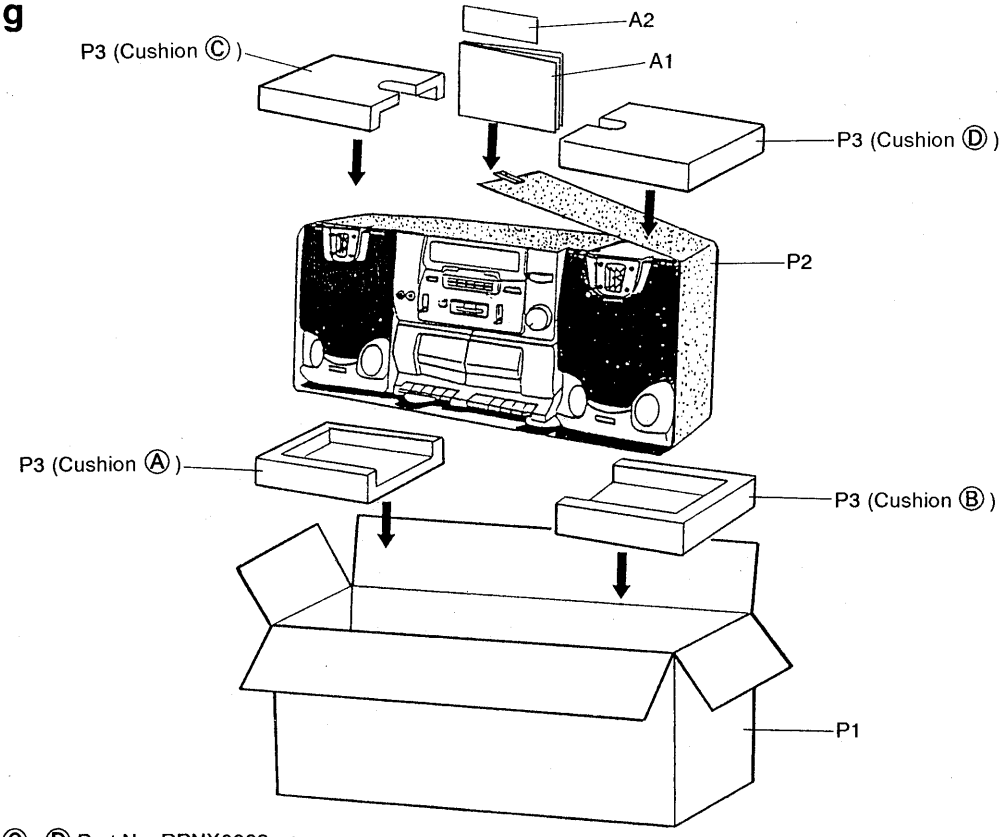
Ref. No.	Part No.	Part Name & Description	Remarks
257	XTW26+6L	SCREW	[M]
258	RME0098-2	SPRING	[M]
260	RFKPXDT610PK	MOTOR ASS'Y	[M]
261	RHD26002	SCREW	[M]
262	RMA0122	MOTOR ANGLE	[M]
263	RMG0102	RUBBER SPACE	[M]
264	RMG0131	RUBBER SPACE	[M]
265	RMA0121	ANGLE	[M]
266	RML0085	LEVER	[M]
267	XTN26+3F	SCREW	[M]

■ Replacement Parts List (Packing, Accessories)

Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPGX0417	GIFT BOX	[M]
P2	RPH3SZB	MIRAMAT SHEET	[M]
P3	RPNX0069	CUSHION	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
		ACCESSORIES	
A1	RQT4032-G	INSTRUCTION MANUAL	[M]
A2	RQCB0169	SERVICENTRE LIST	[M]
A3	RJA0019-1X	AC CORD	[M] (GC) ⚠
A3	RJA0004	AC CORD	[M] (GU) ⚠ (SF)
A4	SJP5213-2	AC PLUG ADAPTOR	[M] (GC) ⚠
A4	RJP1SG02-H	AC PLUG ADAPTOR	[M] (GU) ⚠

■ Packaging



Notes:
P3: Cushion Ⓐ, Ⓑ, Ⓒ, Ⓓ Part No. RPNX0069
A3: AC CORD (RJA0019-X) (GC area)
(RJA0004) (GU area)
A4: AC PLUG ADAPTOR (SJP5213-2) (GC area)
(RJP1SG02-H) (GU area)
} Put them in the battery case.

Printed in Japan
K970702950YH/HH