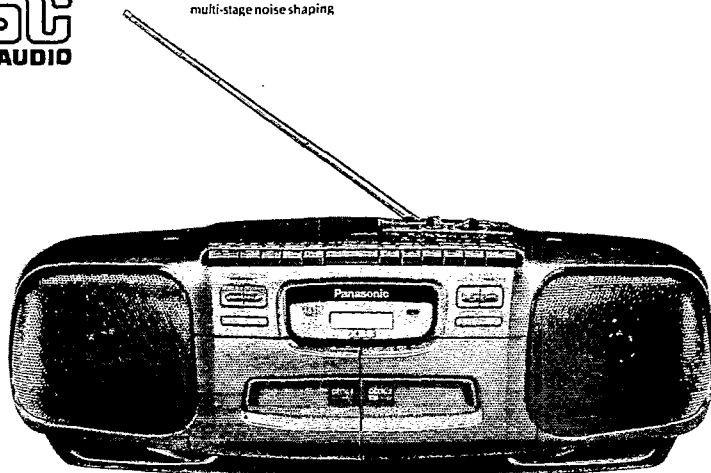


Service Manual

Portable Stereo CD System

COMPACT
disc
DIGITAL AUDIO

MASH*
multi-stage noise shaping



Radio Cassette

RX-DT30

Colour

(K) . . . Black Type

Area

Suffix for Model No.	Area	Colour
(E)	Europe	(K)
(EB)	Great Britain	
(EG)	Germany and Italy	

* MASH is a trademark of NTT.

TAPE DECK : SG-20W MECHANISM SERIES
TRAVERSE DECK : RAE0113Z MECHANISM SERIES

■ SPECIFICATIONS

■ Radio Section

Frequency range	
FM	87.5 ~ 108 MHz
LW(E,EB)	148.5 ~ 285 kHz
MW(E,EB)	520 ~ 1610 kHz
AM(EG)	520 ~ 1610 kHz
Intermediate frequency	
FM	10.7 MHz
AM	459 kHz
Sensitivity	
FM(E,EB)	11.5 dB/50 mW (-3 dB limit sens.)
FM(EG)	12 dB/50 mW
LW(E,EB)	58 dB/m/50 mW
MW(E,EB)	52 dB/m/50 mW
AM(EG)	52 dB/m/50 mW

■ CD Player

Sampling frequency	44.1 kHz
Decoding	16 bit linear
Beam source	Semiconductor laser (wavelength 780 nm)
No. of channels	2 channel, stereo
Wow and flutter	Less than possible measurement data
D/A converter	MASH (1 bit DAC)

■ Tape Recorder

Track system	4 track, 2 channel, stereo
Recording system	AC bias
Erasing system	Multi pole magnet
Monitor system	Variable sound monitor
Frequency range	50 - 14000 Hz
Normal	

■ General

Power requirement	
AC	230 - 240V, 50Hz
Battery	Power consumption: 40W
Speakers	12 V, (8 R20/LR20, UM-1 batteries)
Jacks	10 cm x 2
Output	Headphones; 32Ω
Dimensions (W x H x D)	580 x 192 x 260 mm
Weight	4.6 kg without batteries

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

Panasonic®

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⚠ WARNING

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

■ Contents

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• HANDLING PRECAUTIONS FOR TRAVERSE DECK.....	3	• DIGITAL SERVO SYSTEM.....	38
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■ Precaution of Laser Diode

CAUTION : This product utilizes a laser diode with the unit turned "ON", invisible laser radiation is emitted from the pick up lens.
Wavelength : 780 nm
Maximum output radiation power from pick up : 100 μ W/VDE

Laser radiation from pick up unit is safety level, but be sure the followings:

1. Do not disassemble the optical pick up unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pick up unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pick up lens for a long time.

ACHTUNG: Dieses produkt enthält eine laserdioden. Im eingeschalteten zustand wird unsichtbare laserstrahlung von der lasereinheit abgestrahlt.

Wellenlänge : 780nm
Maximale strahlungsleistung der lasereinheit : 100 μ W/VDE

Die strahlung an der lasereinheit ist ungefährlich, wenn folgende punkte beachtet werden:

1. Die lasereinheit nicht zerlegen, da die strahlung an der freigelegten laserdioden gefährlich ist.
2. Den werkseitig justierten einstellregler der lasereinheit nicht verstellen.
3. Nicht mit optischen instrumenten in die fokussierlinse blicken.
4. Nicht über längere zeit in die fokussierlinse blicken.

ADVARSEL: I dette a apparat anvendes laser.

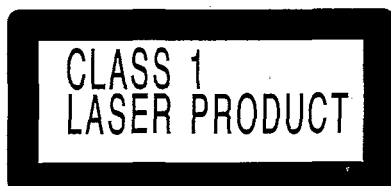
CAUTION!

THIS PRODUCT UTILIZES A LASER.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

■ Use of Caution Labels

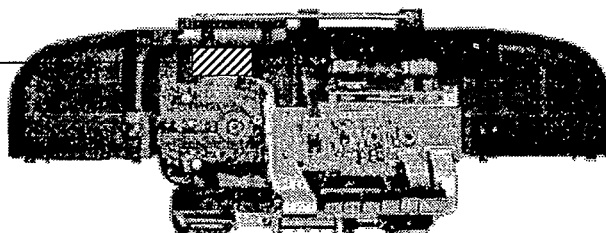
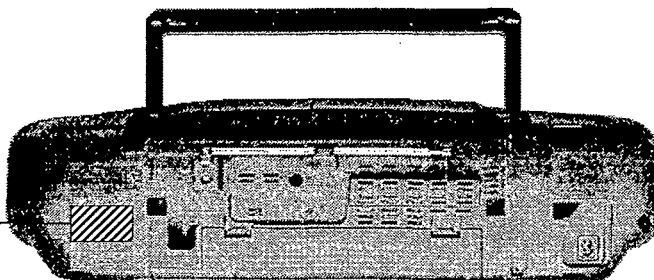
RQT4389ZAA



LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT

DANGER	INVISIBLE LASER RADIATION WHEN OPENED. INTERLOCK DEFECTED. AVOID DIRECT EXPOSURE TO BEAM.
ADVARSEL	USYNLIG LASERSTRÅLING VED ÅBNING. NÅRS SIKKERHEDSFORHOLDENE ER UDE AF FUNKTION. LAD GÅ UDSEJTELSE FOR STRÅLING.
VARO!	AVATTAESSA JA SUOJALUKITUS OHITETTÄESSÄ OLETALTUINA NÄKYMÄTÖNÄ LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING	OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRÄKTA EJ STRÅLEN.
ADVARSEL	USYNLIG LASERSTRÅLING NÄR DEKSEL ÅPNES OG SIKKERHEDSGLAS BRYTES. UNDGÅ EKSPONERING FOR STRÅLEN.
VORSICHT	UNSICHTBARE LASERSTRÄHLUNG, WENN ABDECKUNG GEÖFFNET UND SICHERHEITSVERREGELUNG ÜBERBRÜCKT. NICHT DEM STRAHLAUSSETZEN.

RQLS3119



■ Handling Precautions for Traverse Deck

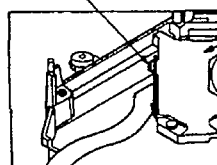
The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.

So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

• Handling of traverse deck (optical pickup)

1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. To prevent the breakdown of the laser diode, an antistatic shorting pin is inserted into the flexible board (FPC board). When removing or connecting the short pin, finish the job in as short time as possible.
3. Take care not to apply excessive stress to the flexible board (FPC board).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.

Variable resistor
(Do not turn)



Optical pickup

Lens (Do not touch)

FPC board
(Handle it carefully)

Be sure to short this position
(Use the shorting pin or clip)

Clip



Shorting pin

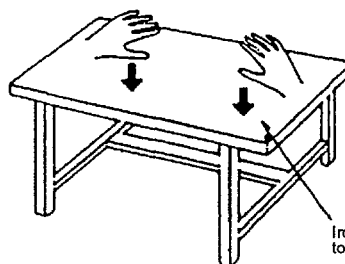


• Grounding for electrostatic breakdown prevention

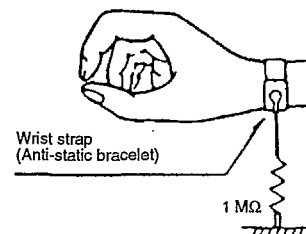
1. Human body grounding
Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding
Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

Caution :

The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).



Iron plate or some metals
to conduct electricity



Wrist strap
(Anti-static bracelet)

1 MΩ

■ Caution for AC Mains Lead

[For [EB] area.]

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

CAUTION !

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OFF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted, please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this lead are coloured in accordance with the following code:

Blue: Neutral

Brown: Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

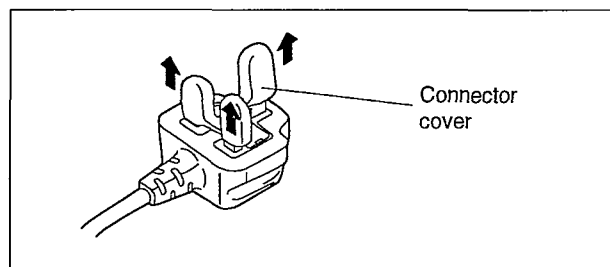
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either or these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth symbol .

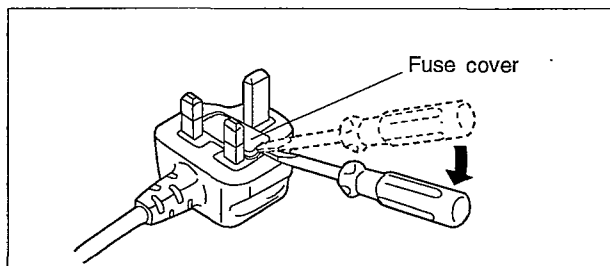
Before use

Remove the connector cover as follows.

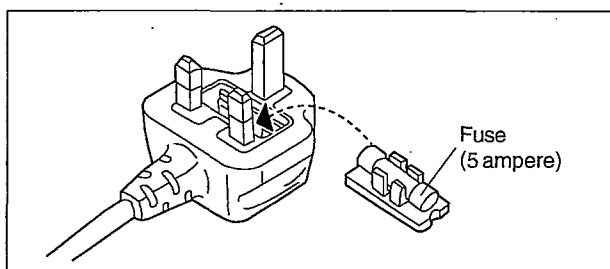


How to replace the fuse

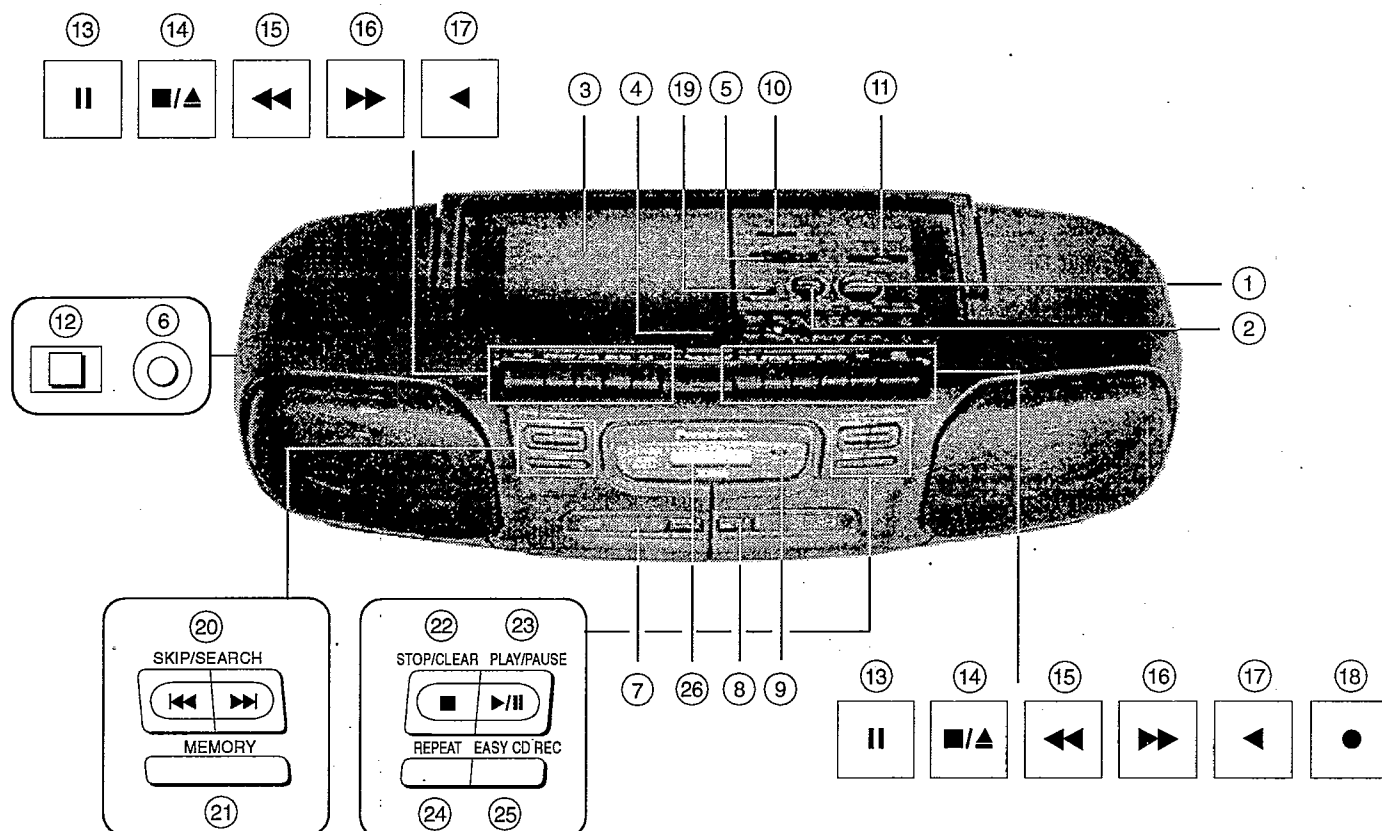
1. Remove the fuse cover with a screwdriver.



2. Replace the fuse and attach the fuse cover.



Location of Controls



Basic Controls

- ① Volume control (VOLUME)
- ② XBS level control (XBS LEVEL)
- ③ Disc lid
- ④ Disc lid open button (▲ CD, CD EJECT)
- ⑤ Function selector/operation switch (SELECTOR)
- ⑥ Headphones jack (PHONES)
- ⑦ Deck 1 tape lid (DECK 1)
- ⑧ Deck 2 tape lid (DECK 2)
- ⑨ Operation/battery indicator (OPR/BATT)

Cassette deck controls

- ⑬ Pause button (|| PAUSE)
- ⑭ Stop/eject button (■ / ▲ STOP/EJECT)
- ⑮ Fast forward/cue button (◀◀ FF/CUE)
- ⑯ Rewind/review button (▶▶ REW/REV)
- ⑰ Playback button (◀ PLAY)
- ⑱ Recording button (● REC)
- ⑲ Edit recording speed button (EDITING MODE)

CD controls

- ⑳ Skip/search buttons (◀◀, ▶▶ SKIP/SEARCH)
- ㉑ Memory button (MEMORY)
- ㉒ Stop/clear button (■ STOP/CLEAR)
- ㉓ Play/pause button (▶ / || PLAY/PAUSE)
- ㉔ Repeat button (REPEAT)
- ㉕ Easy CD recording button (EASY CD REC)
- ㉖ Display panel

Tuner Controls

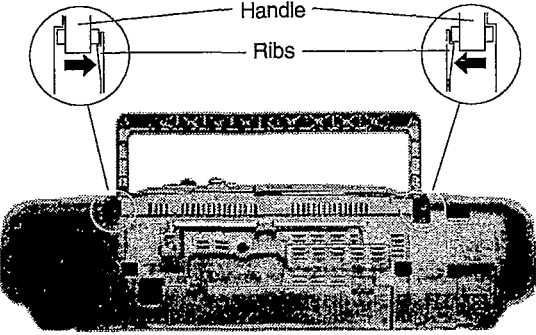
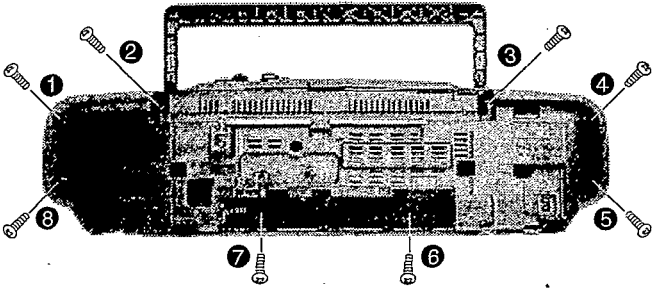
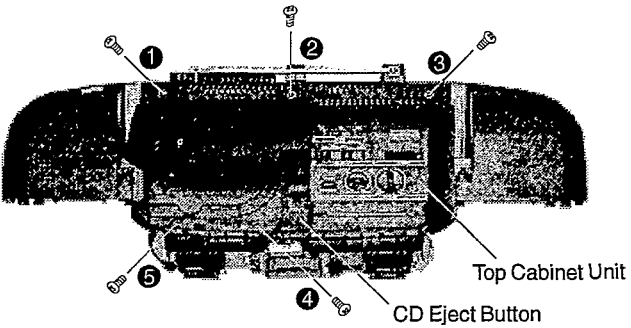
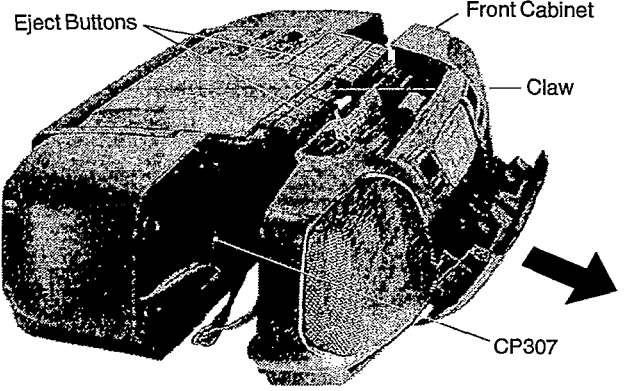
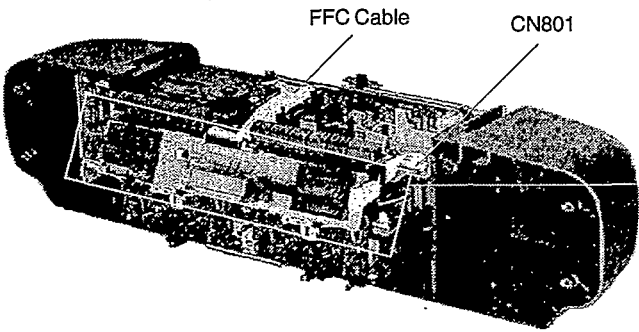
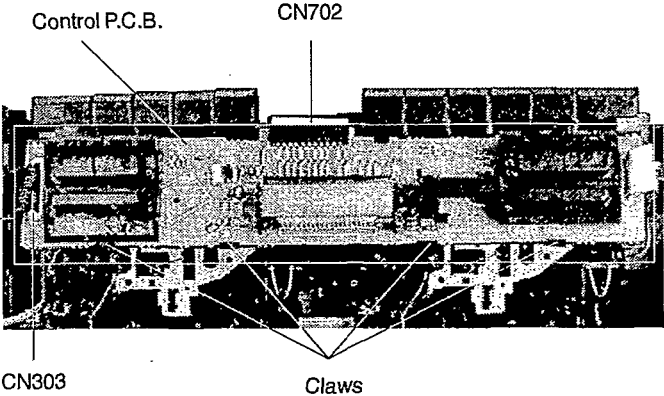
- ⑩ Band switch (BAND)
- ⑪ Tuning dial (TUNING)
- ⑫ For E, EB :
FM mode/beat proof switch (FM MODE/BP)
- For EG :
Beat proof switch (BP)

Disassembly Instructions

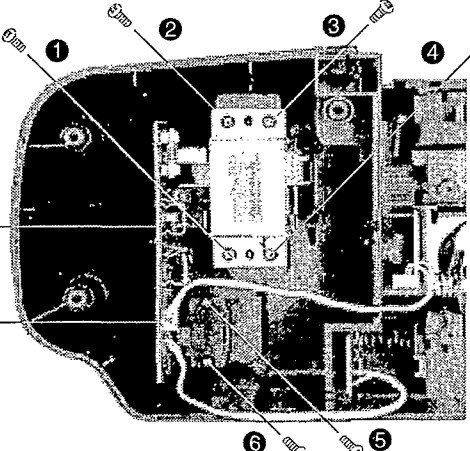
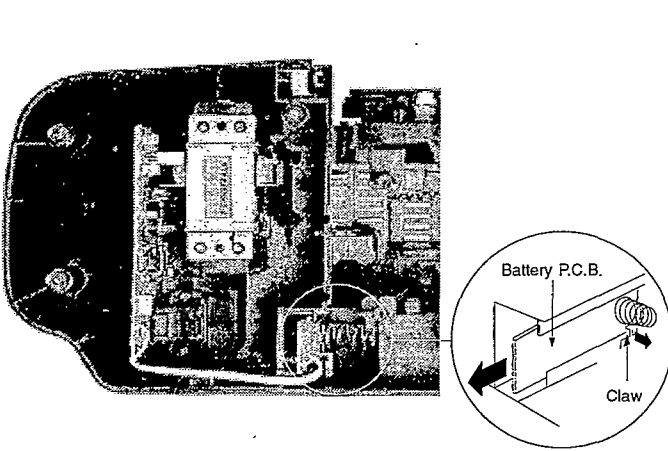
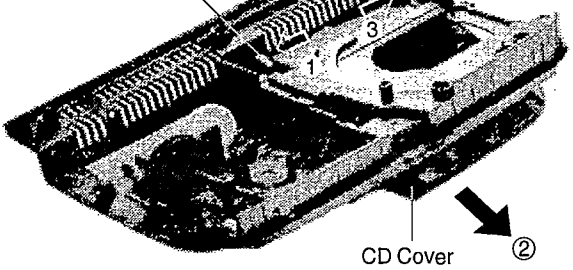
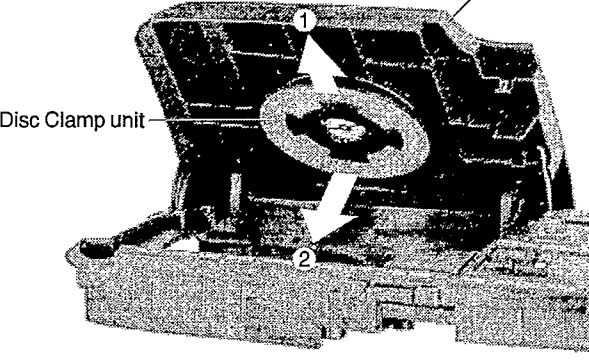
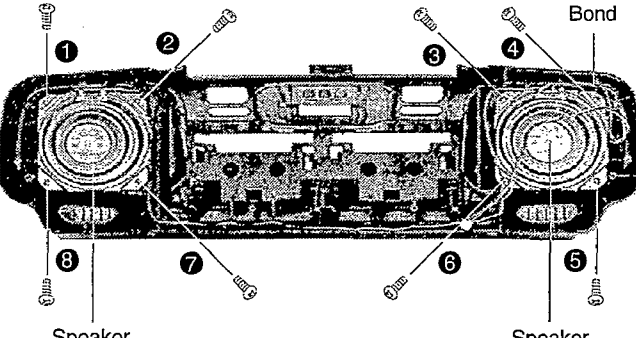
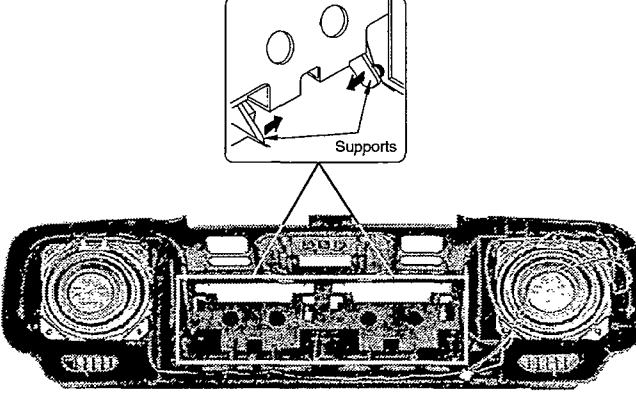
Warning : This product uses a laser diode. Refer to caution statements on page 2.

ACHTUNG :

- Die lasereinheit nicht zerlegen.
- Die lasereinheit darf nur gegen eine vom hersteller spezifizierte einheit ausgetauscht werden.

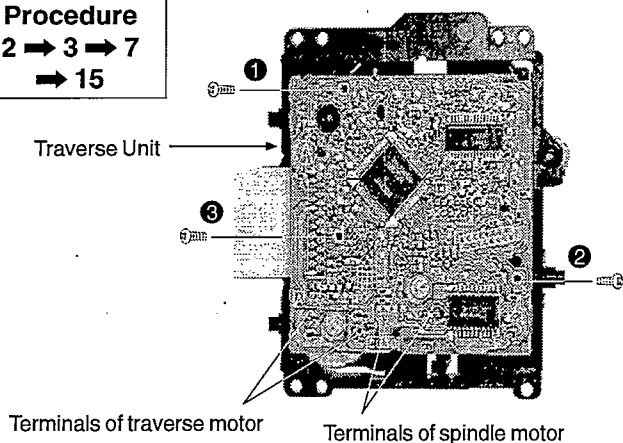
Ref. No. 1	Removal of the Handle	Ref. No. 2	Removal of the Front Cabinet
Procedure 1	1. Release 2 ribs. 2. Pull out the handle.	Procedure 2	1. Remove the battery cover. 2. Remove 8 screws (❶ ~ ❸).
			
Ref. No. 3	Removal of the Top Cabinet Unit		
Procedure 2 ➔ 3	1. Press the CD eject button. 2. Remove 5 screw (❶ ~ ❺). 3. Remove the Top Cabinet Unit.		
			3. Press the 2 eject buttons. 4. Release 1 claw. 5. Remove the front cabinet in the direction of arrow. 6. Remove 1 connector (CP307).
Ref. No. 4	Removal of the Control P.C.B.		
Procedure 2 ➔ 3 ➔ 4	1. Remove 2 connectors (CN303, CN801). 2. Remove FFC cable from the connector CN702 (Control P.C.B.). 3. Release 4 claws.		
			

Ref. No. 5	Removal of the Connector P.C.B.
Procedure 2 → 3 → 5	1. Remove 3 screws (❶ ~ ❸). 2. Remove 4 connectors (CN1, CN304, CN305, CN801). 3. Remove the Connector P.C.B. Connector P.C.B.
Ref. No. 6	Removal of the Mechanism Unit
Procedure 2 → 3 → 4 → 5 → 6	CP301 CP602 Mechanism Unit 1. Remove 2 connectors (CP301, CP602). 2. Remove 6 screws (❶ ~ ❻).
Ref. No. 7	Removal of the Traverse Unit
Procedure 2 → 3 → 7	FFC Cable Traverse Unit 1. Remove 4 screws (❶ ~ ❹). 2. Remove FFC cable from the connector CN702 (Control P.C.B.).
Ref. No. 8	Removal of the Main P.C.B.
Procedure 2 → 3 → 4 → 5 → 6 → 8	CP306 Main P.C.B. 1. Remove 2 screws (❶ ~ ❷). 2. Remove 1 connector (CP306). 3. Pull out the main P.C.B. in the direction of arrow.

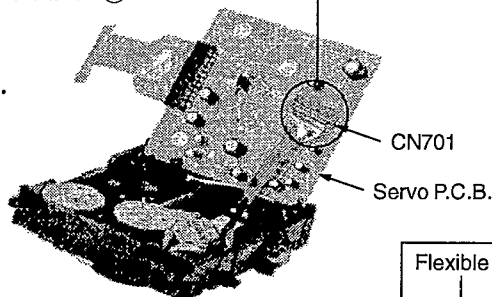
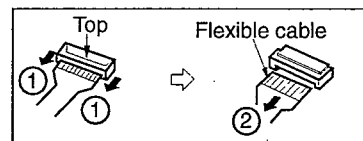
Ref. No. 9	Removal of the Power Supply P.C.B.	Ref. No. 10	Removal of the Battery P.C.B.
Procedure 2 ➡ 9	1. Remove 6 screws (① ~ ⑥). 2. Remove 1 connector (CP306).	Procedure 2 ➡ 9 ➡ 10	1. Release 1 claw. 2. Pull out the battery P.C.B.
	 Power Supply P.C.B. CP306	 Battery P.C.B. Claw	
Ref. No. 11	Removal of the CD Cover	Ref. No. 12	Removal of the Disc Clamp Unit
Procedure 2 ➡ 3 ➡ 11		Procedure 2 ➡ 3 ➡ 12	
	 Ribs CD Cover 1. Hold the CD cover in half-open position. 2. Release the rib in direction of arrow ①. 3. Pull out the CD cover in direction of arrow ②. 4. Release the rib in direction of arrow ③. 5. Pull out the CD cover.	 CD Cover Disc Clamp unit 1. Press the CD eject button and then open the CD cover. 2. Remove the disc clamp unit in the direction of arrow ① follow by ②.	
Ref. No. 13	Removal of the Speakers	Ref. No. 14	Removal of the Cassette Compartment
Procedure 2 ➡ 13	1. Remove 8 screws (① ~ ⑧). 2. Cut black bond at wire dressing point before removal of the speakers.	Procedure 2 ➡ 14	• Release the supports and pull out the compartment.
	 Bond Speaker Speaker	 Supports	

Ref. No.
15

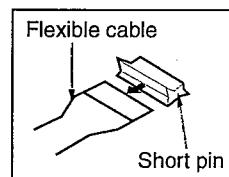
Removal of the Servo P.C.B.

Procedure
2 → 3 → 7
→ 15

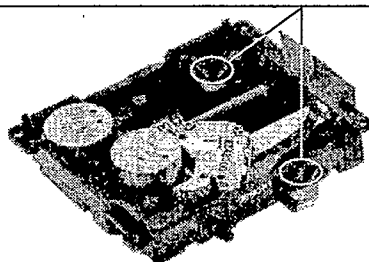
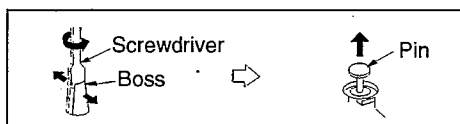
- Removal of the flexible cable
Push the top of the connector in the direction of the arrow ①, and then pull out the flexible cable in the direction of the arrow ②.



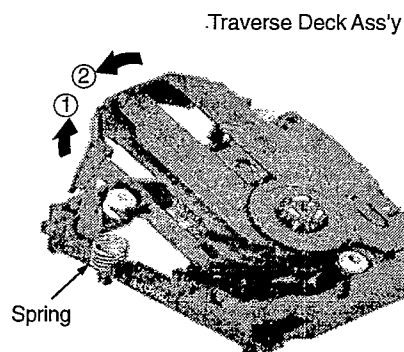
Note:
Insert a short pin into the flexible cable for traverse unit.

Ref. No.
16

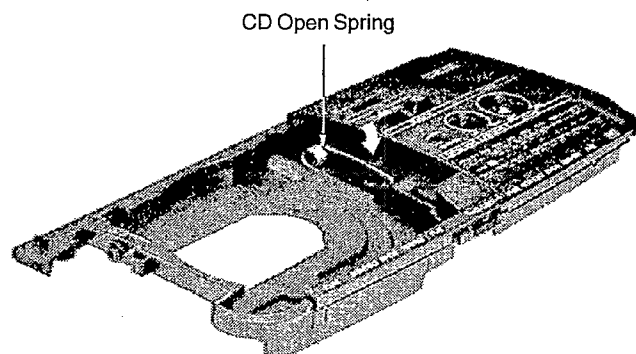
Removal of the Traverse Deck Ass'y

Procedure
2 → 3 → 7
→ 15 → 16

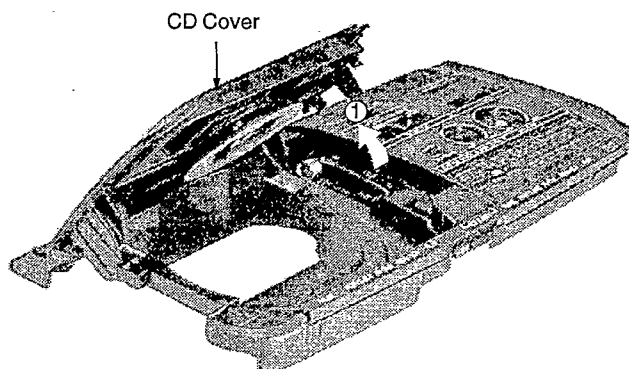
- Widen 2 bosses by using a flat tip screwdriver and remove 2 pins.
- Remove the Traverse Deck Ass'y in direction of arrow ① follow by ②.



■ INSTALLING CD COVER

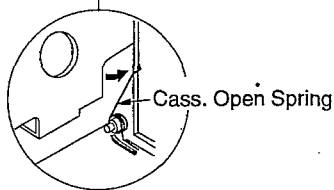
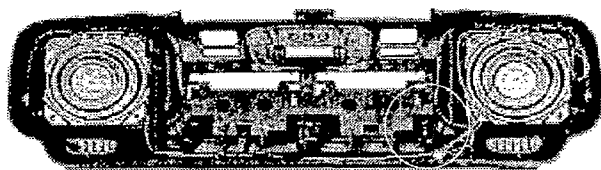


- Install the CD open spring as shown in above diagram.

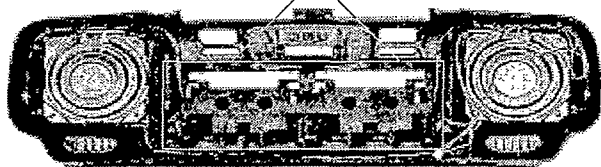
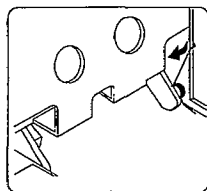


- Install the CD cover onto the top cabinet.
Note: When installing the CD cover, make sure the CD cover is in half open position.
- Release the spring in the direction of arrow ①.

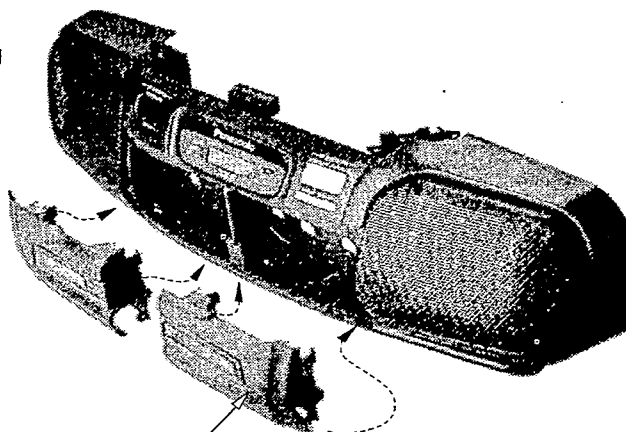
■ INSTALLING CASSETTE COMPARTMENT



1. Install the cass. open spring as shown in above diagram.



3. Release the spring.



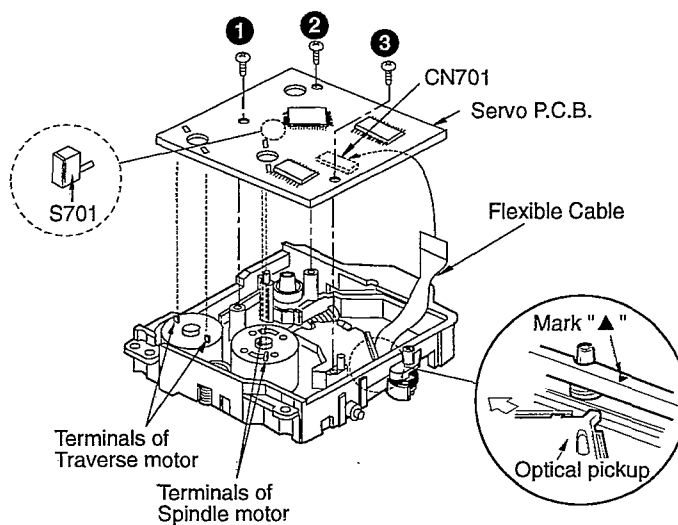
Cassette Compartment

2. Fix the cassette compartment to front cabinet.

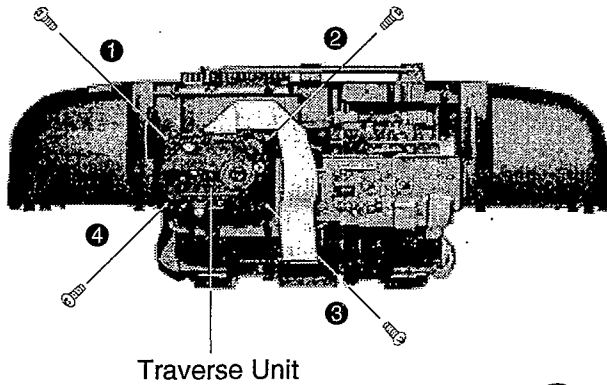
■ INSTALLING SERVO P.C.B.

1. Before installing the servo P.C.B., move the optical pickup toward the outer edge from the mark "▲". (Otherwise, the rest switch (S701) mounted on the servo P.C.B. may be damaged.)
2. Connect the flexible cable to the connector (CN701).
3. Install the servo P.C.B. in the traverse deck ass'y with the 3 screws (① ~ ③).
4. Solder the 2 terminals of the traverse motor and the 2 terminals of the spindle motor.

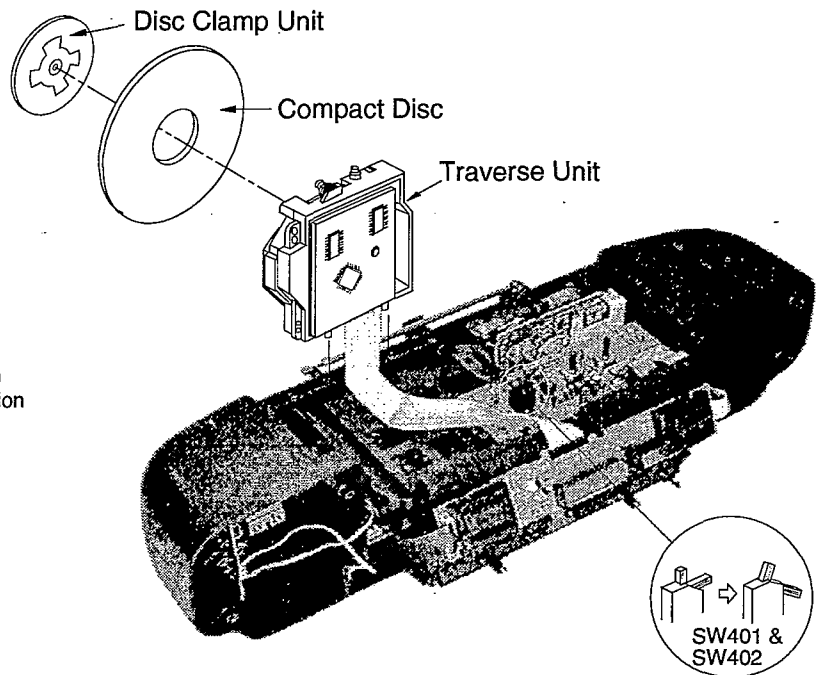
Note : Connect the flexible cable to the connector (CN701) firmly.
Tighten the screws before soldering the terminals.



■ HOW TO CHECK THE TRAVERSE UNIT



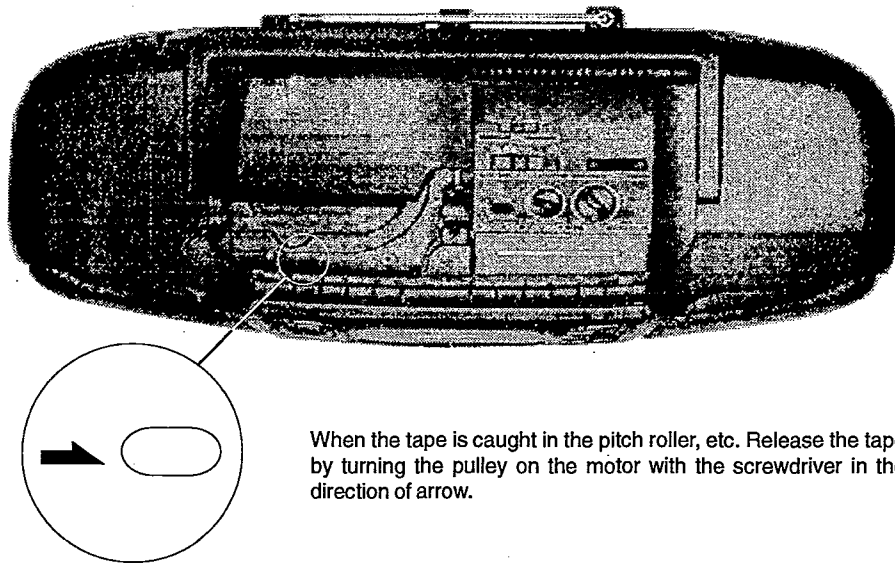
1. Remove the top cabinet unit.
(Refer to disassembly instructions, Ref No. 3)
2. Remove 4 screws. (① ~ ④)



3. Set up the traverse unit as shown in diagram.
4. Install the compact disc and disc clamp unit.

Note : Before perform checking, make sure the switch SW401 and SW402 are switched to "ON" position (as shown in diagram).

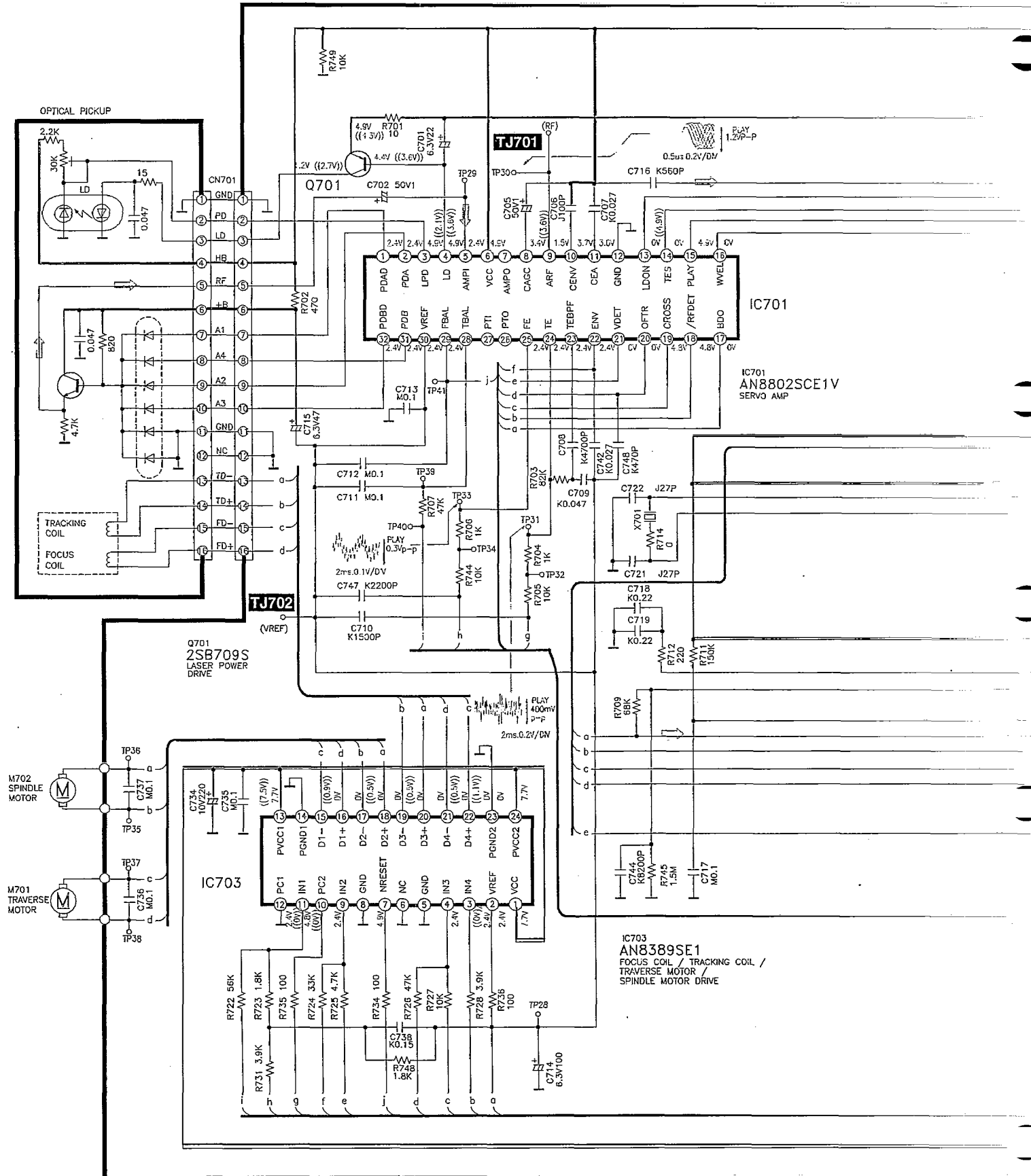
■ WHAT TO DO WHEN THE TAPE IS ENTANGLED

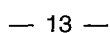


When the tape is caught in the pitch roller, etc. Release the tape by turning the pulley on the motor with the screwdriver in the direction of arrow.

Schematic Diagram

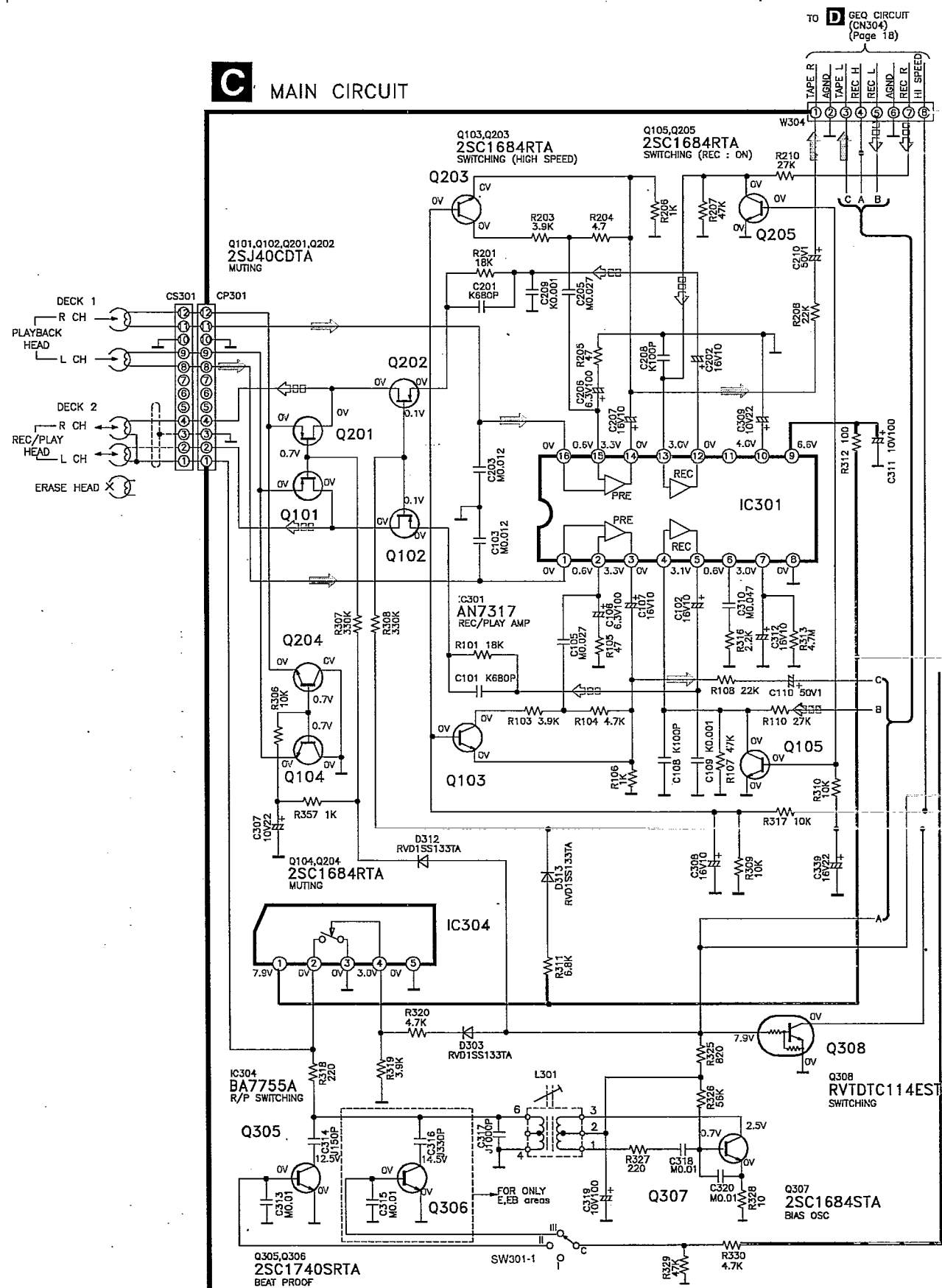
A SERVO CIRCUIT

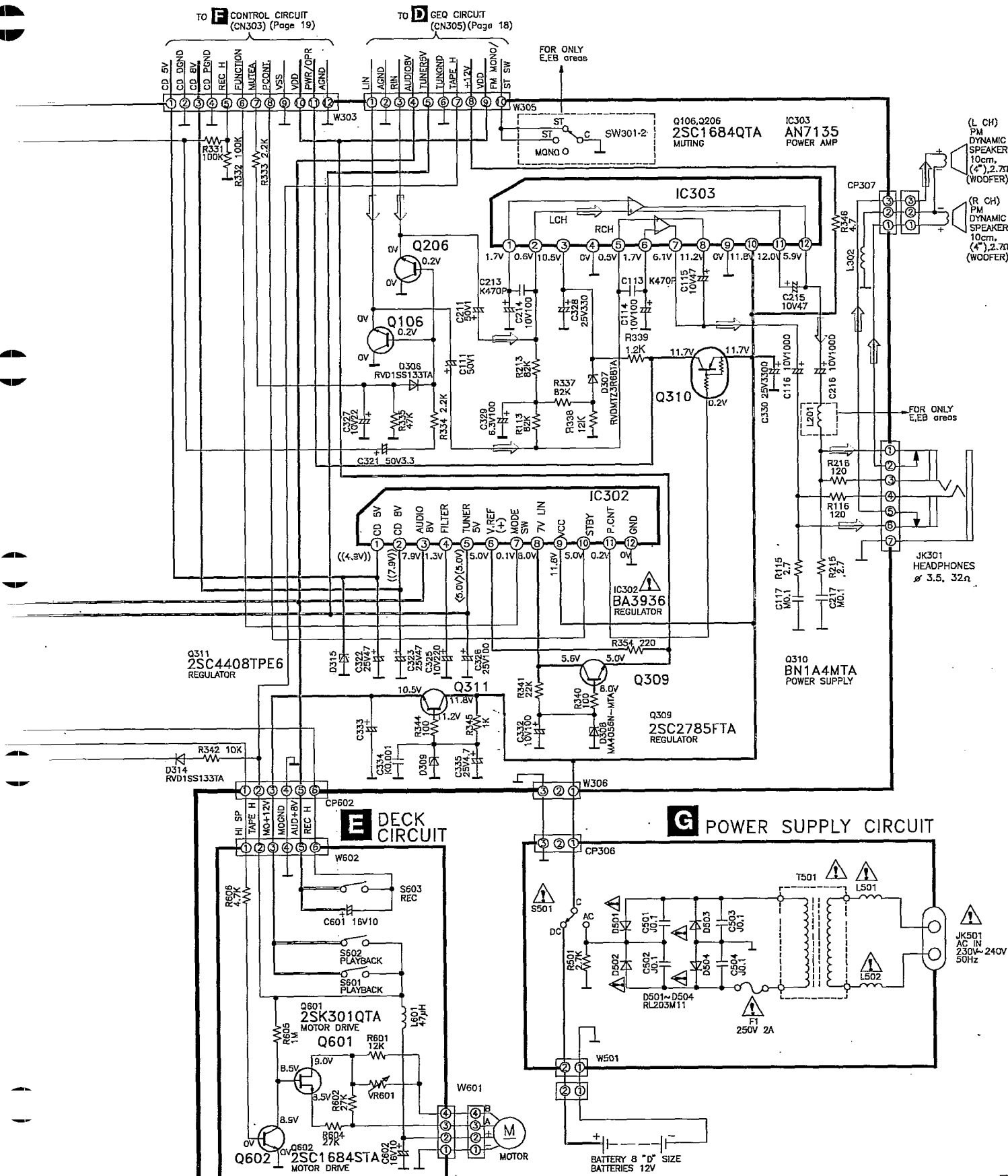




Schematic Diagram

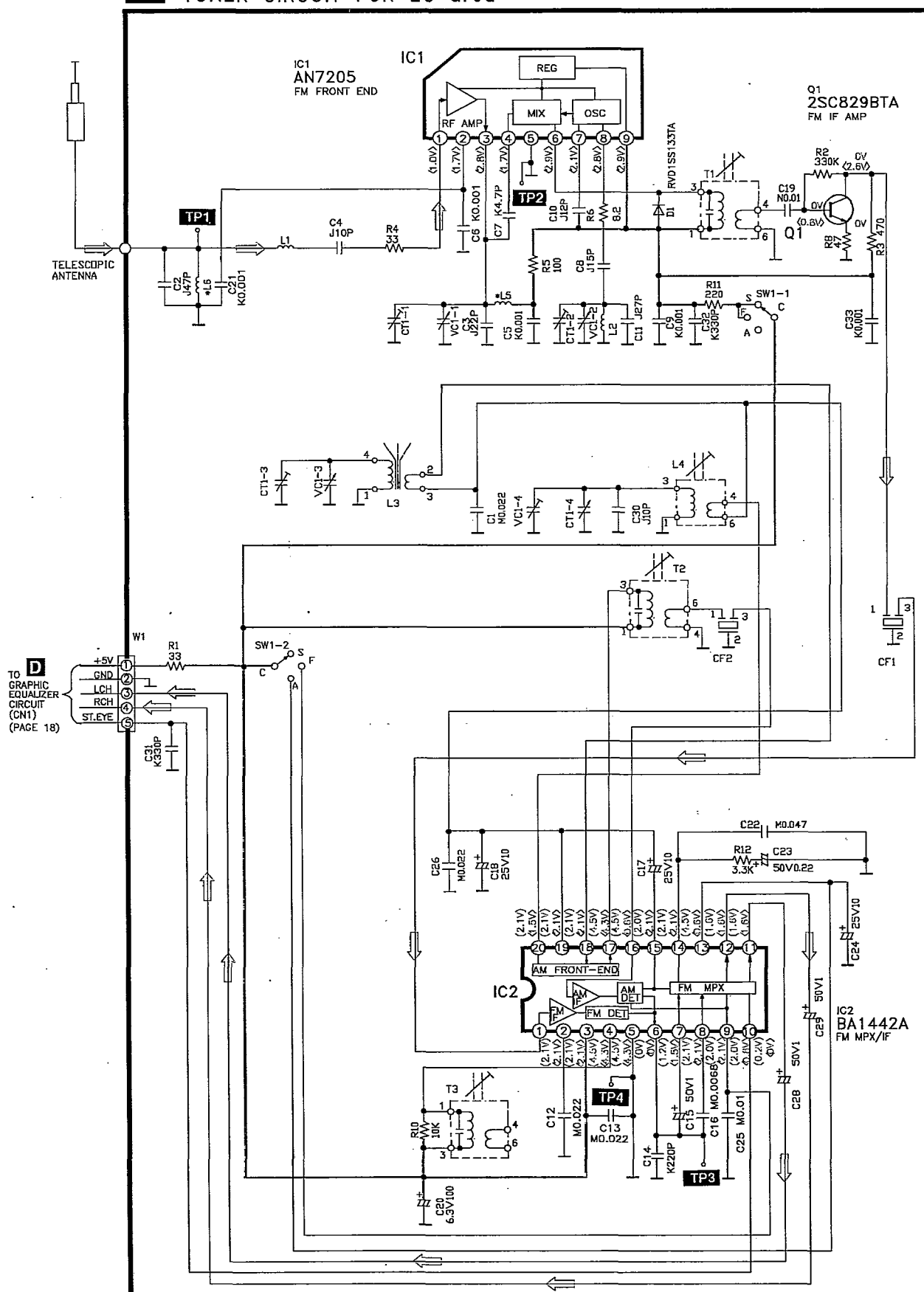
C MAIN CIRCUIT





Schematic Diagram

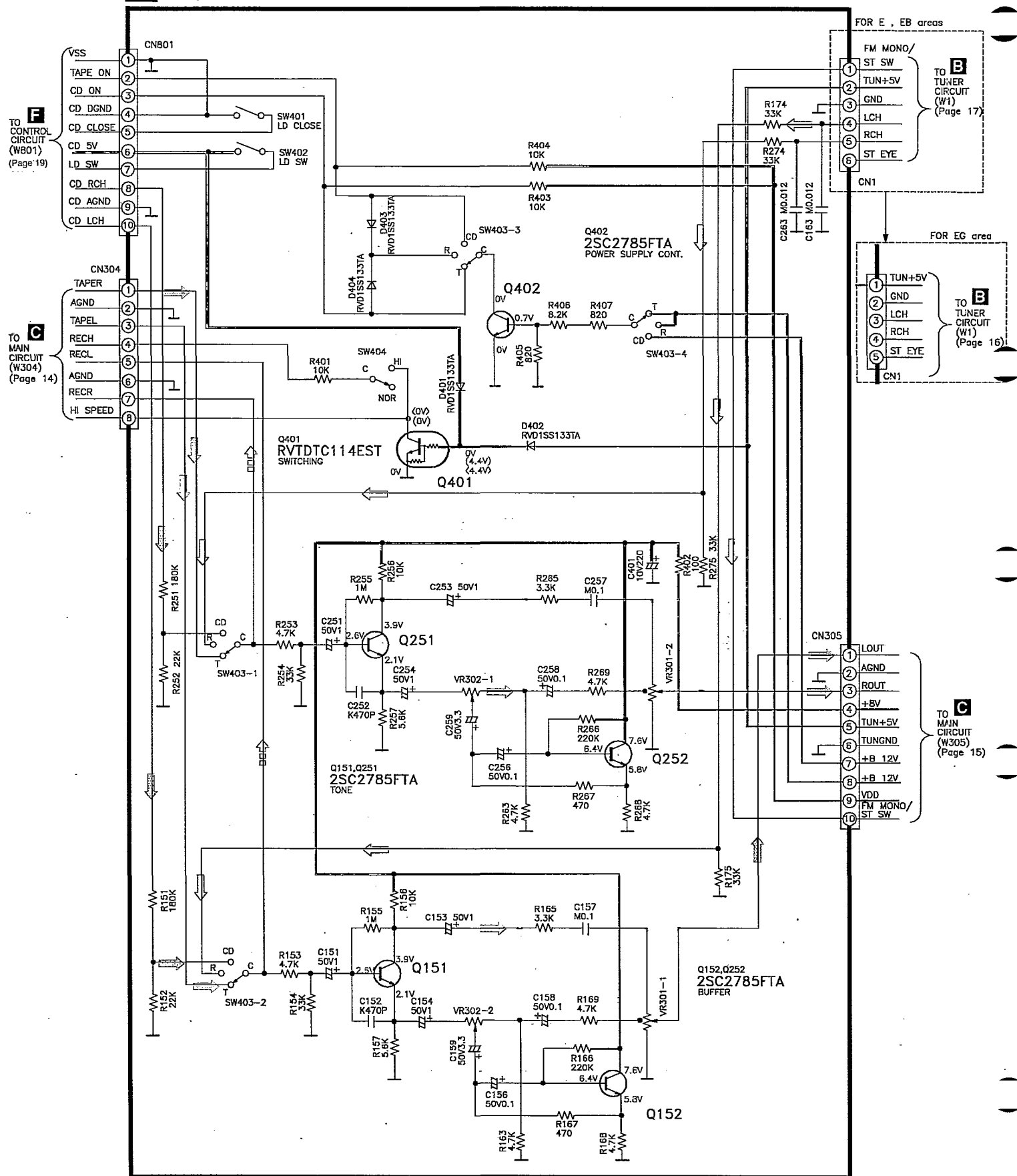
B TUNER CIRCUIT FOR EG area



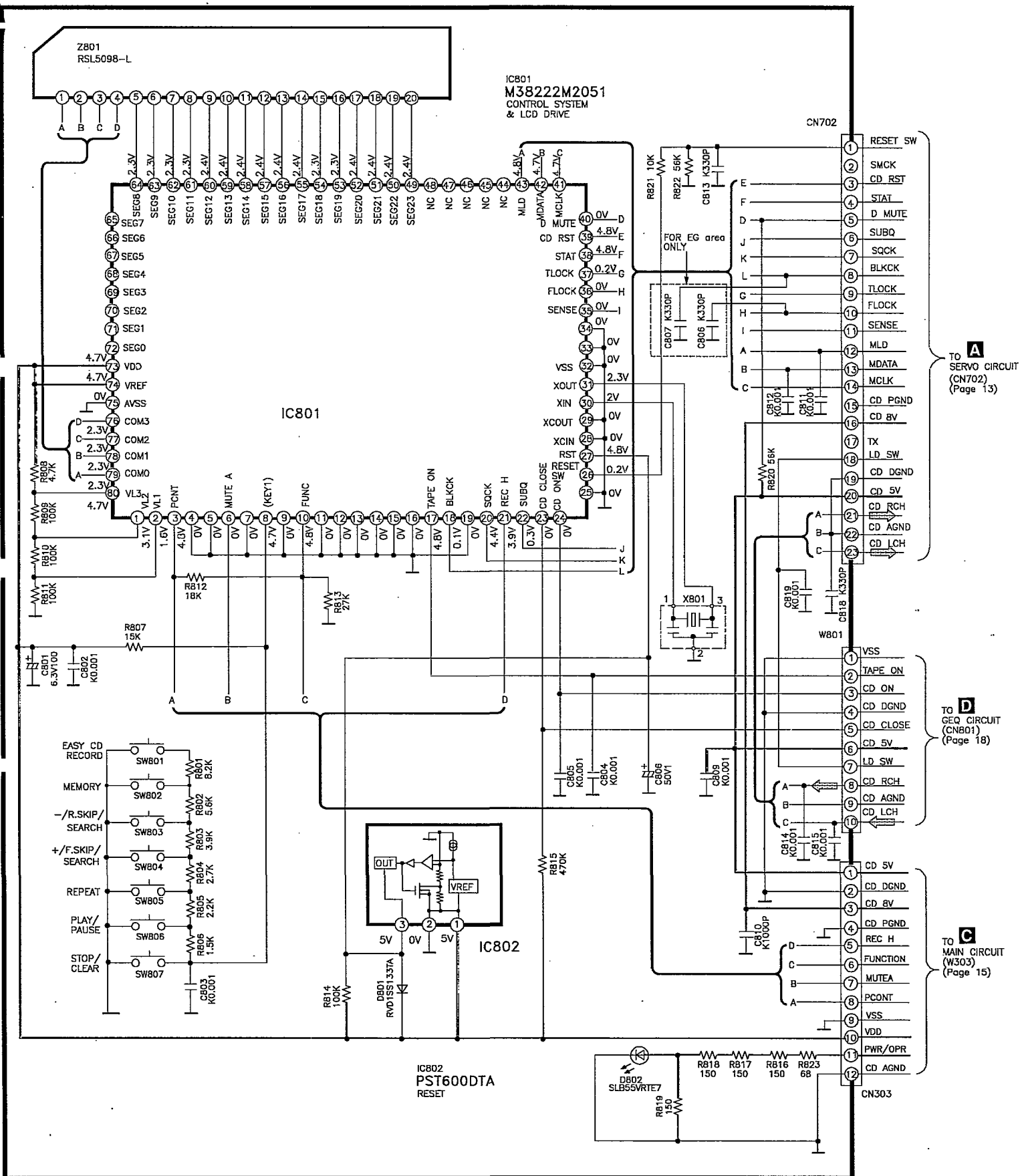


Schematic Diagram

D GEQ CIRCUIT



F CONTROL CIRCUIT



NOTES:

< For MAIN & POWER SUPPLY CIRCUIT >

- SW301-1 : Beatproof Switch. (I...BEATPROOF I, II...BEATPROOF II)
- SW301-2 : FM Stereo Switch. (M...MONO, ST...STEREO)
- S501 : AC/Battery Select Switch.(JK501)

< For DECK CIRCUIT >

- S601 : Deck 1 Playback Switch.
- S602 : Deck 2 Playback Switch.
- S603 : Deck 2 Record Switch.
- VR601 : Tape Speed Adjustment Switch.

< For GEQ CIRCUIT >

- SW401 : CD Open/Close Switch.
- SW402 : CD Loading Switch.
- SW403-1 ~ SW403-4 : Function Select Switch. (CD...CD, R...RADIO, T...TAPE)
- SW404 : Edit Recording Speed Switch.
- VR301-1 ~ VR301-2 : Volume Control V.R.
- VR302-1 ~ VR302-2 : XBS Control V.R.

< For CONTROL CIRCUIT >

- SW801 : Easy CD Record Switch. (EASY CD REC)
- SW802 : Memory Switch. (MEMORY)
- SW803 : CD Reverse Skip Switch. (◀◀)
- SW804 : CD Forward Skip Switch. (▶▶)
- SW805 : CD Repeat Switch. (REPEAT)
- SW806 : CD Play/Pause Switch. (▶/||)
- SW807 : CD Stop/Clear Switch. (■/CLEAR)

< For SERVO CIRCUIT >

- S701 : Rest Switch.

< For TUNER CIRCUIT >

- SW1-1 ~ SW1-8 : Band select switch (F...FM, M...MW, L...LW) ... for E,EB areas.
- SW1-1 ~ SW1-2 : Band select switch (S...FM STEREO, F...FM, A...AM) ... for EG area.

< GENERAL >

- Battery Current consumption:

Vol. min.....	0.037A (RADIO)	Vol. max.....	0.066A (RADIO)
	0.042A (TAPE)		0.090A (TAPE)
	0.052A (CD)		0.085A (CD)

Measurement condition:			
Radio	: FM	60 dB, 30%mod	
	AM(MW/LW)	74 dB/m, 30%mod	
Tape	: 315 Hz, 0dB		
CD	: 1kHz, 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 (()) ... CD < > ... FM
() ... AM(MW/LW) << >> ... RECORD

CAUTION !

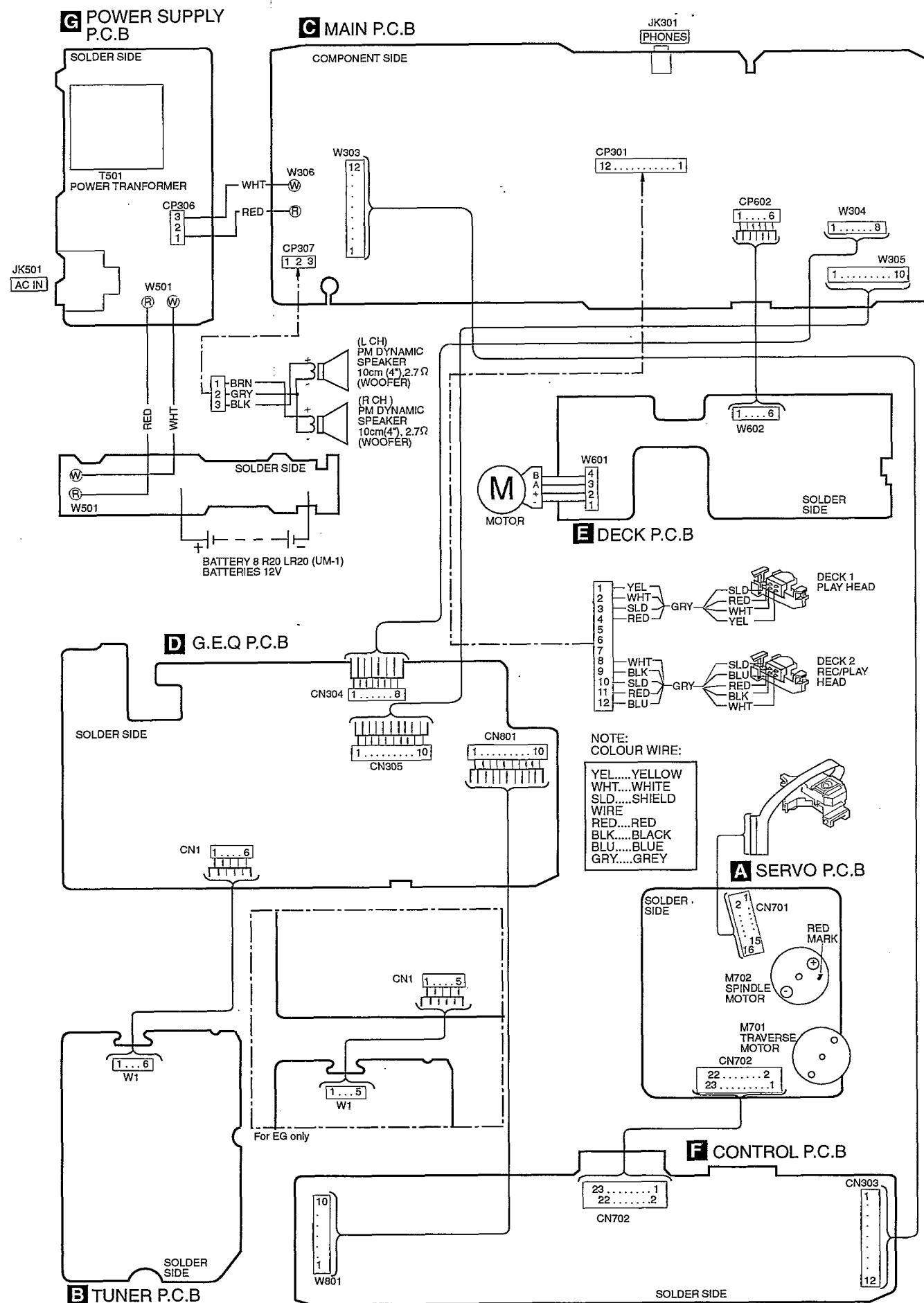
IC and LSI are sensitive to static electricity.

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 Δ 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.



Wire Connection Diagram



Printed Circuit Board

1

2

3

4

5

A

B

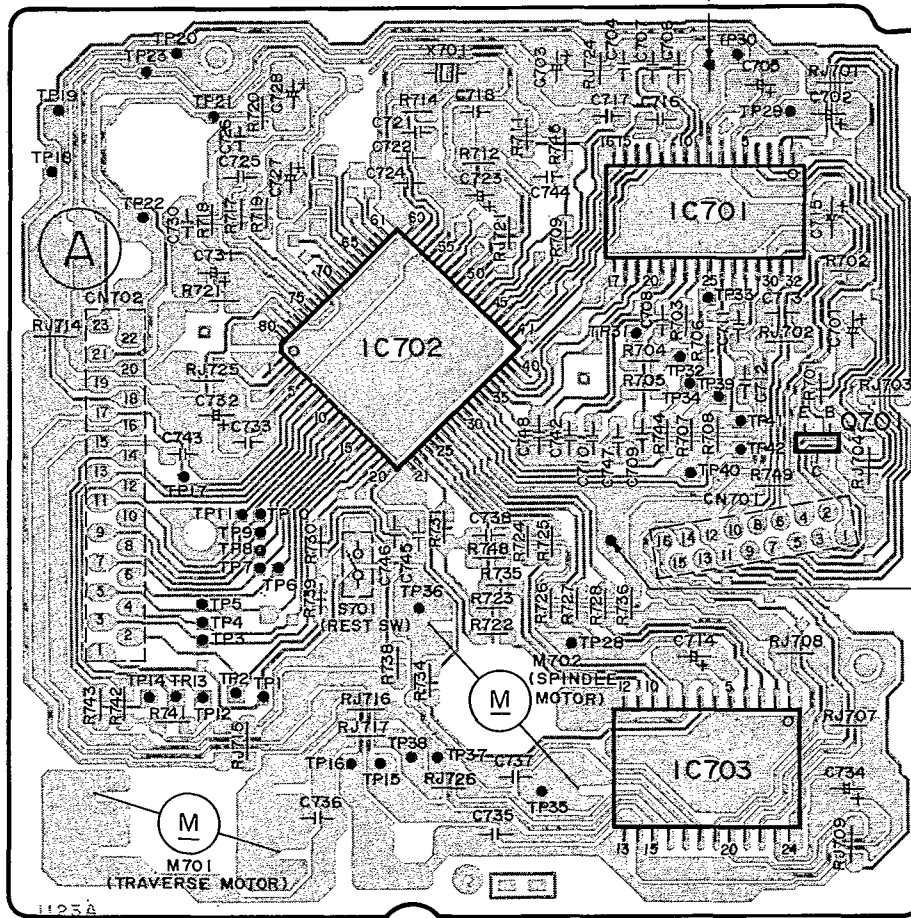
C

D

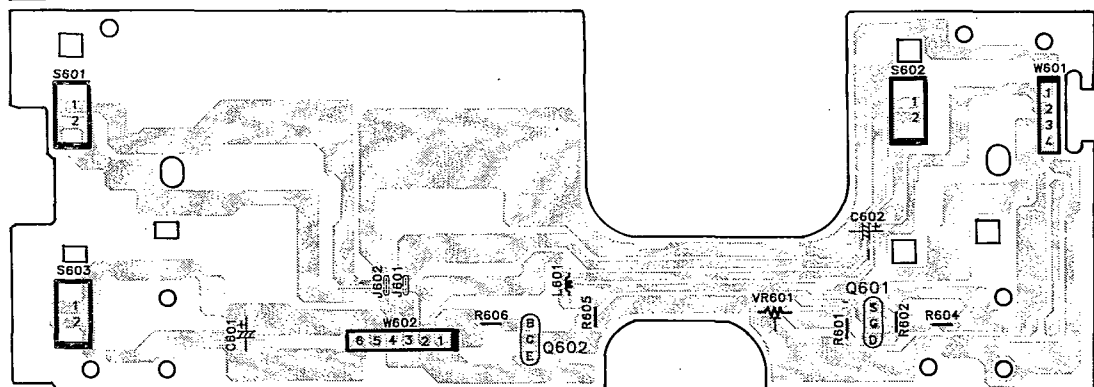
E

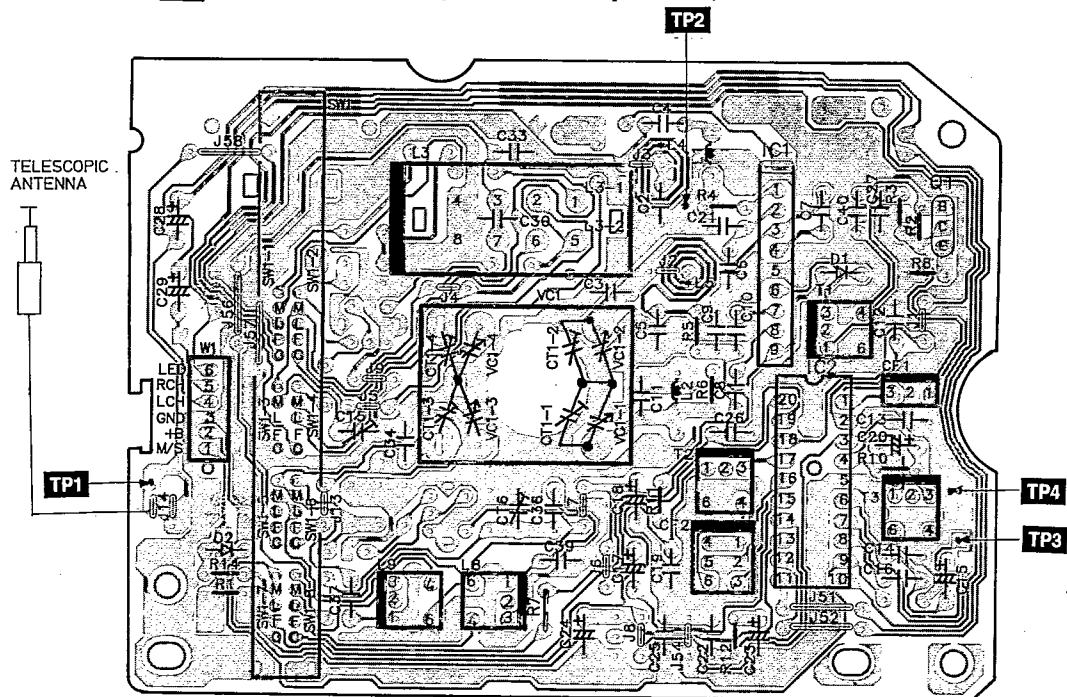
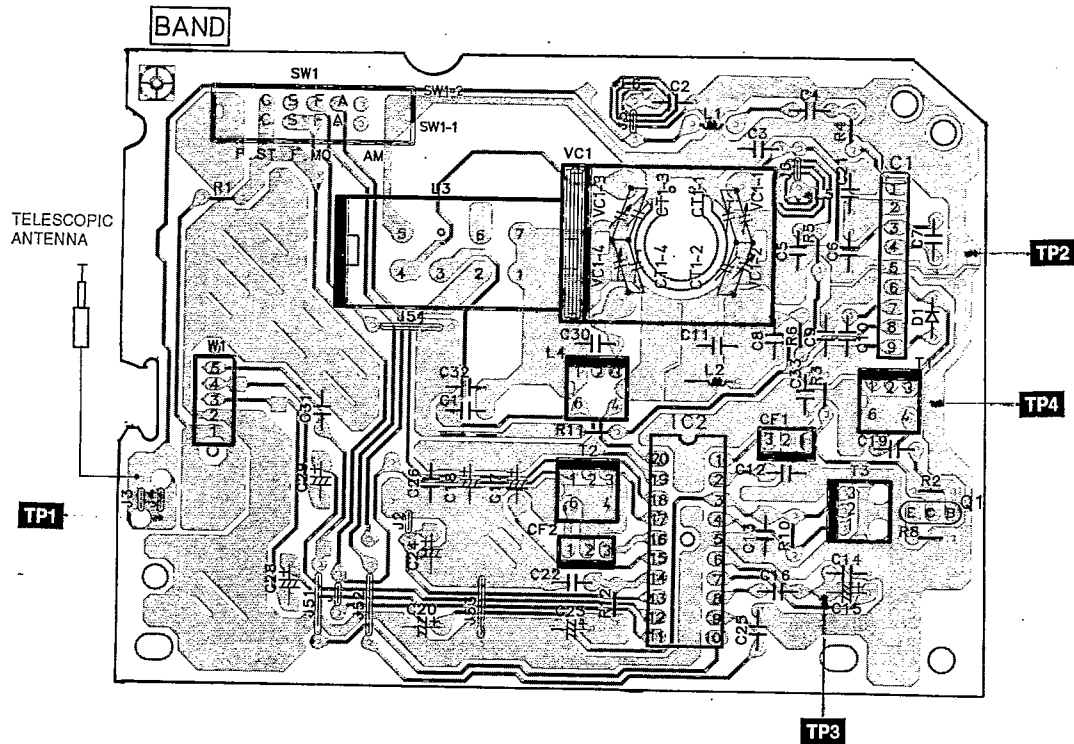
F

A SERVOP.C.B.(REP1650A-N)

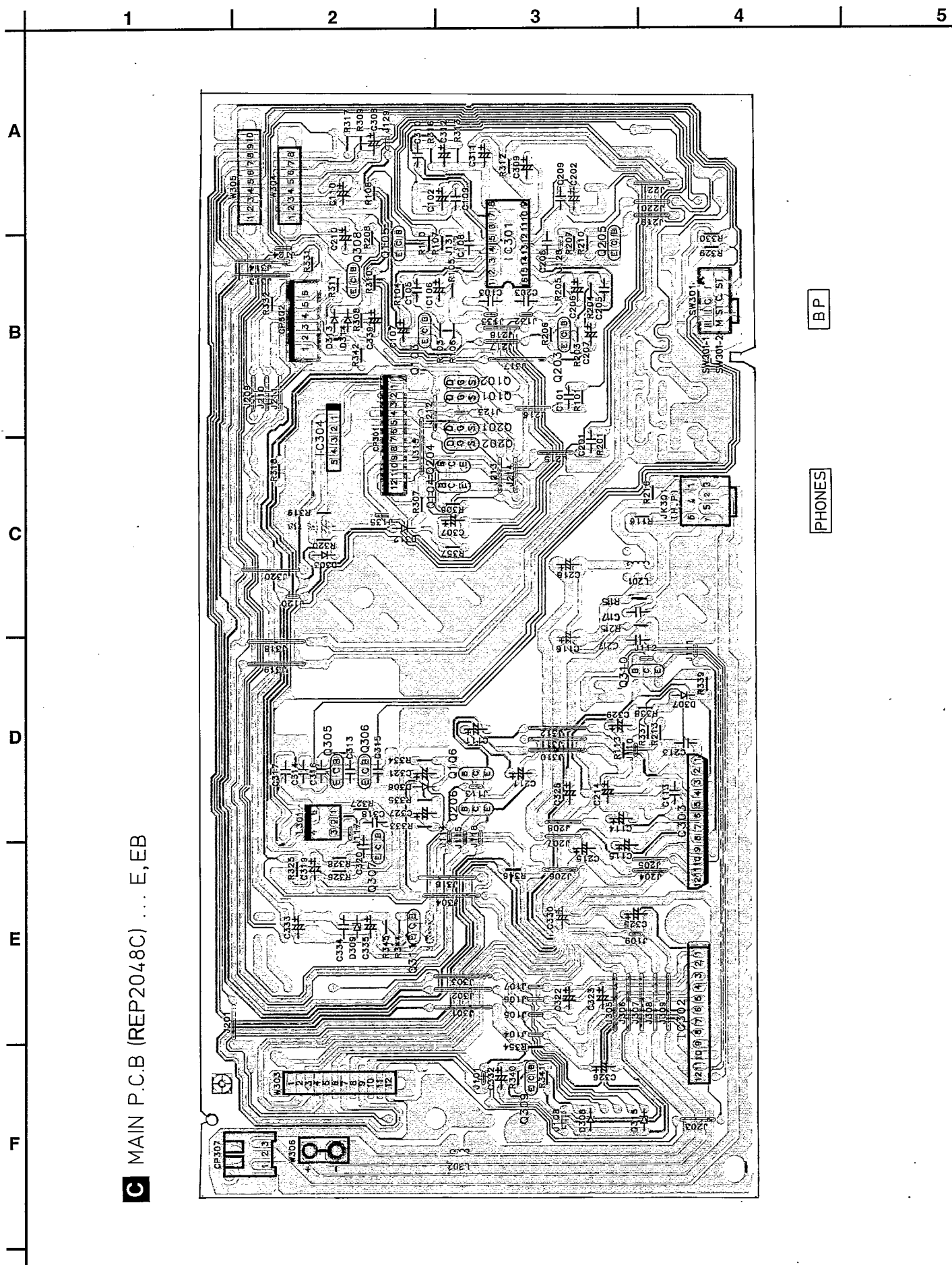
(RF)
TJ701(VREF)
TJ702

E DECK P.C.B (REP2049A)

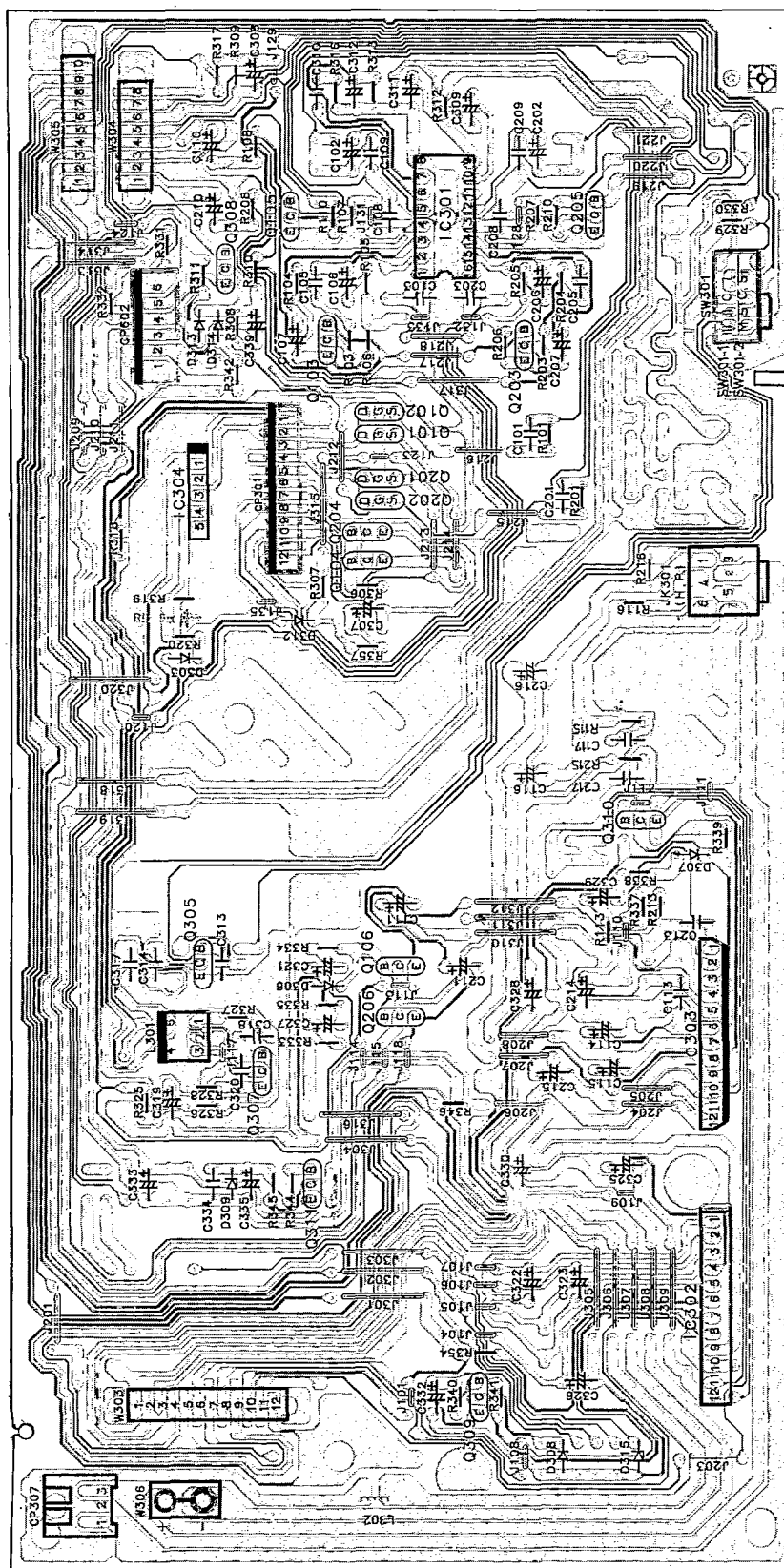


B TUNER P.C.B (REP1788C) ... E,EB**B** TUNER P.C.B (REP2045B) ... EG.

■ Printed Circuit Board

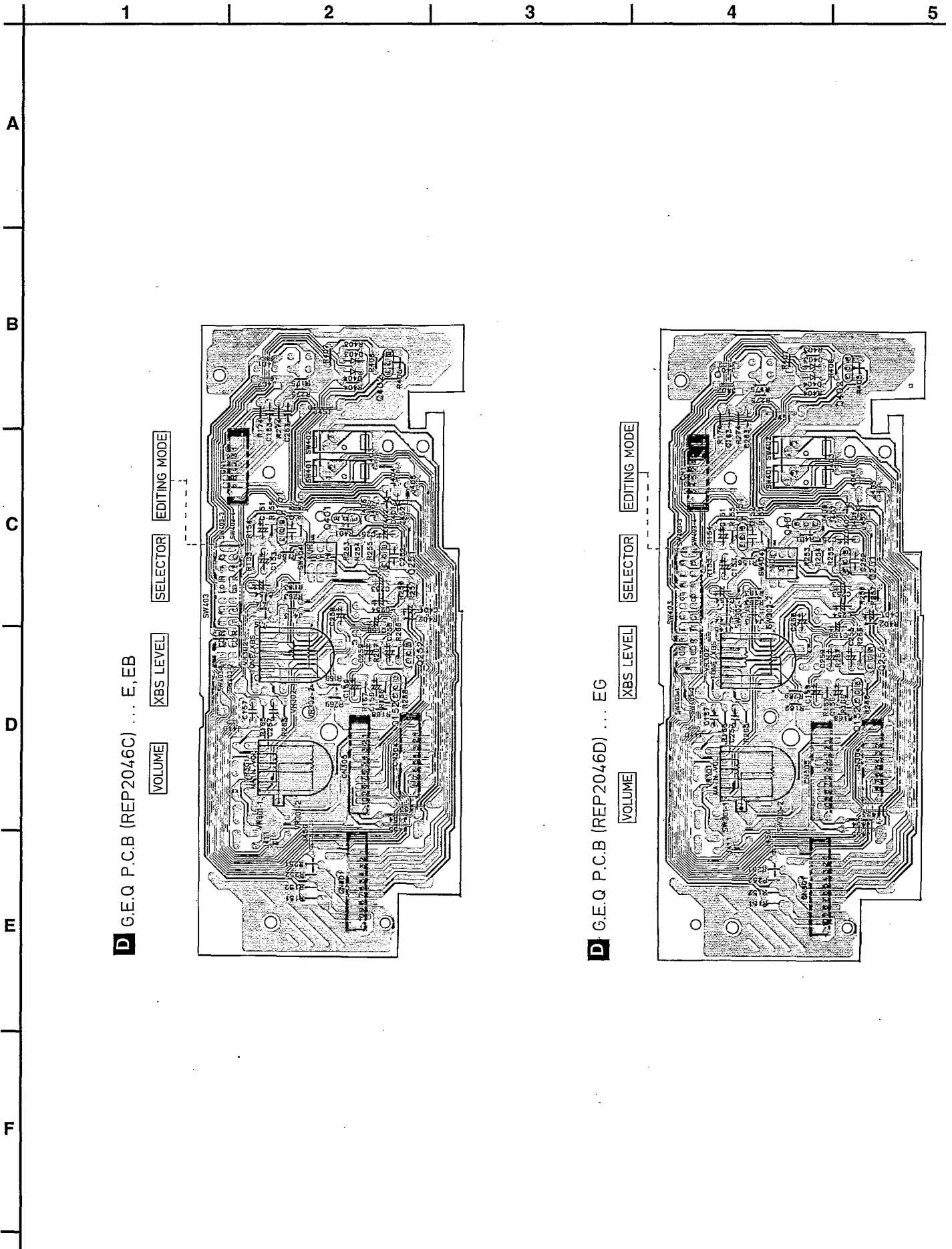


C MAIN P.C.B (REP2048D) ... EG



PHONES

Printed Circuit Board

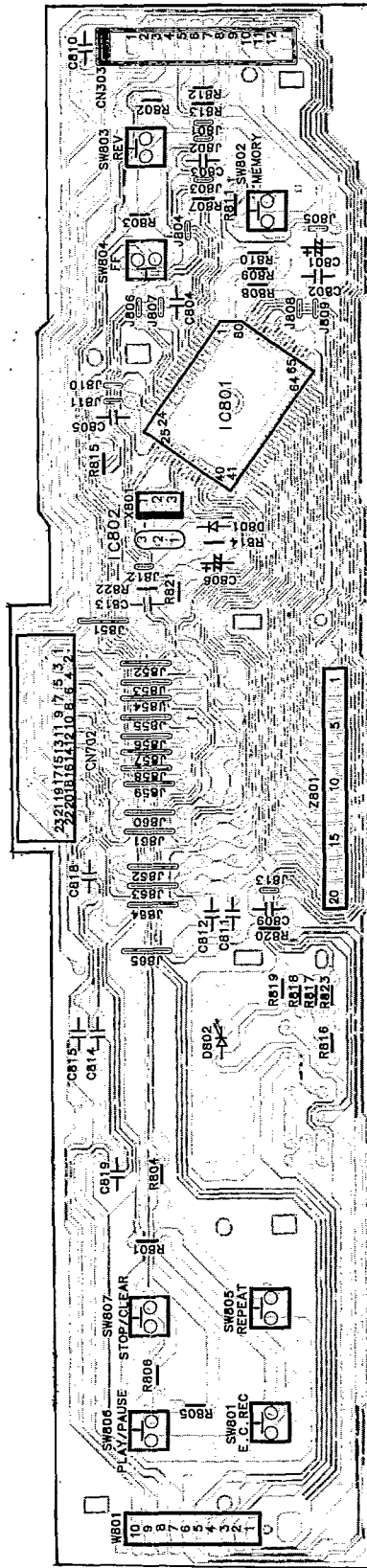
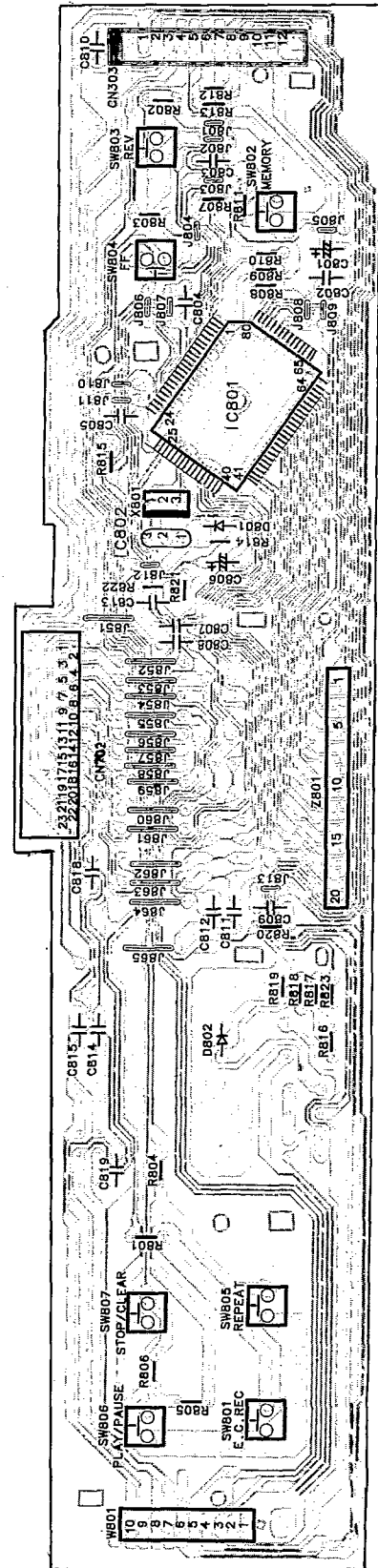


6

7

8

9

F CONTROL P.C.B (REP2046C) ... E,EB**F** CONTROL P.C.B (REP2046D) ... EG

Printed Circuit Board

1

2

3

4

5

A

G POWER P C B (REP2047C)

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

B

C

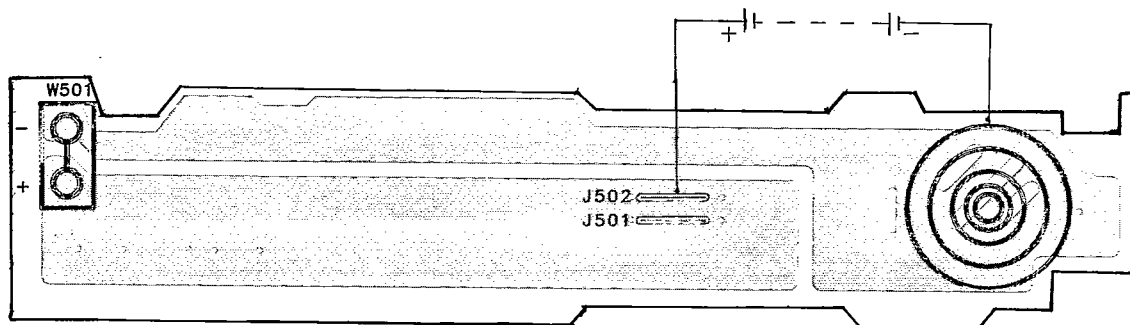
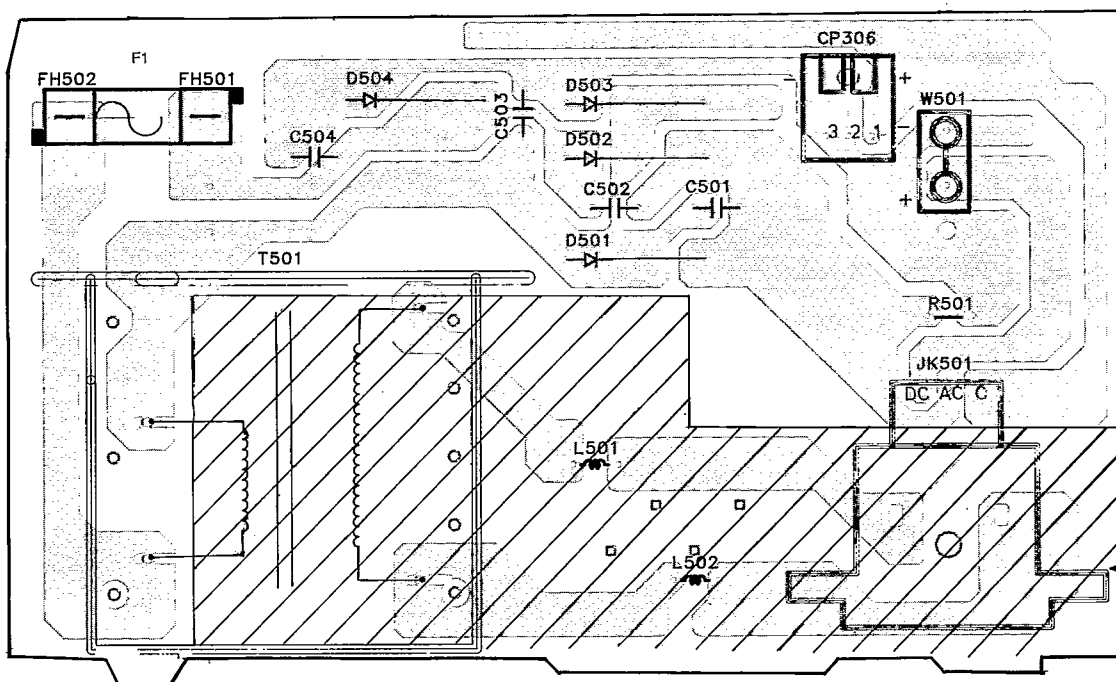
D

AC IN
230~240V

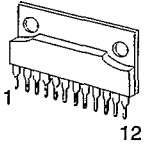
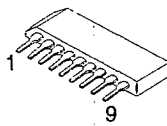
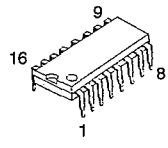
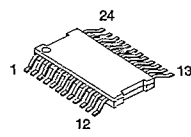
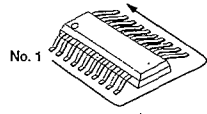
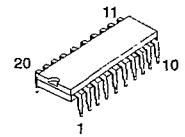
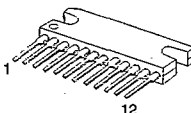
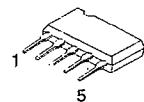
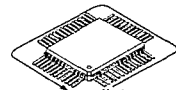
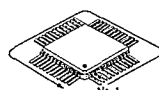
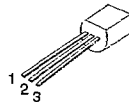
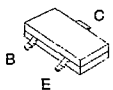
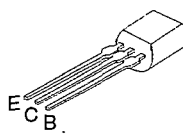
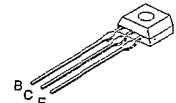
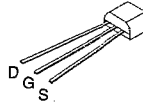
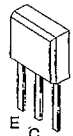
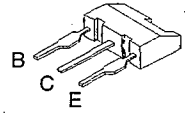
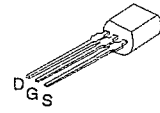
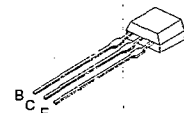
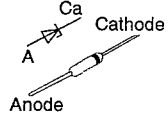
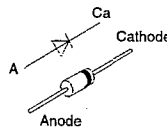
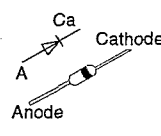
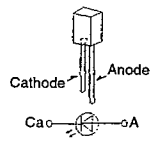
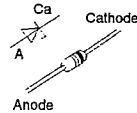
BATTERY 8 R20/LR20 (UM-1)
BATTERIES 12V

E

F



Terminal Guide of ICs, Transistors & Diodes

AN7135 	AN7205 	AN7317 	AN8389SE1 	AN8802SCE1V 32 Pin 	BA1442A 
BA3936 	BA7755A 	M38222M2051 80 Pin 	MN66271RA 80 Pin 	PST600DTA 	2SB709S 
	2SC1684QTA 2SC1684RTA 2SC1684STA 2SC829BTA	2SC2785FTA 	2SJ40CDTA 	BN1A4MTA 	2SC4408TPE6 
2SK301QTA 	2SC1740SRTA RVTDC114EST 	RVDMTZ16BTA RVDMTZ5R6BTA RVDMTZ6R8BTA 	RL203M11 	RVD1SS133TA 	SLB55VRTE7 
MA4056N-MTA 					

■ Terminal Function of IC'S

• IC702 (MN66271RA)

Servo Processor / Digital Signal Processor / Digital Filter / D/A Converter

Pin No.	Mark	I/O	Function
1	BCLK	O	Serial bit clock terminal (Not used, open)
2	LRCK	O	L/R discriminating signal (Not used, open)
3	SRDATA	O	Serial data (Not used, open)
4	DVDD1	I	Power supply (digital circuit) terminal
5	DVSS1	—	GND (digital circuit) terminal
6	TX	O	Digital audio interface signal
7	MCLK	I	Microprocessor command clock signal
8	MDATA	I	Microprocessor command data signal
9	MLD	I	Microprocessor command load signal
10	SENSE	O	Sense signal output (OFT, FESL, MAGEND, NAJEND, POSAD, SFG)
11	/FLOCK	O	Optical servo condition (focus) ("L" : lead-in)
12	/TLOCK	O	Optical servo condition (tracking) ("L" : lead-in)
13	BLKCK	O	Sub-code block clock (f=75Hz)
14	SQCK	I	External clock signal input for sub-code Q register
15	SUBQ	O	Sub-code Q code output
16	DMUTE	I	Muting input ("H" : mute)
17	STAT	O	Status signal output (CRC, CUE, CLVS, TTSTVP, FCLV, SQCK)
18	/RST	I	Reset input
19	SMCK	O	1/2-divided clock signal of crystal oscillating at MSEL = "H" (fSMCK=8.4672MHz) 1/4-divided clock signal of crystal oscillating at MSEL="L" (fSMCK=4.2336MHz)
20	PMCK	O	1/192-divided clock signal of crystal oscillating (fPMCK=88.2kHz) (Not used, open)
21	TRV	O	Traverse servo control output
22	TVD	O	Traverse drive signal output
23	PC	O	Spindle motor ON signal output ("L" : ON)
24	ECM	O	Spindle motor drive signal output (forced mode output)
25	ECS	O	Spindle motor drive signal output (servo error signal output)
26	KICK	O	Kick pulse output
27	TRD	O	Tracking drive output
28	FOD	O	Focus drive output
29	VREF	I	D/A (drive) output (TVD, ECS, TRD, FOD, FBAL, TBAL) Reference voltage input.

Pin No.	Mark	I/O	Function
30	FBAL	O	Focus balance adjustment output (Not used, open)
31	TBAL	O	Tracking balance adjustment output
32	FE	I	Focus error signal input (analog input)
33	TE	I	Tracking error signal input (analog input)
34	RFENV	I	RF envelope signal input
35	VDET	I	Vibration detection signal input ("H" : detection)
36	OFT	I	Off-track signal input ("H" : off track)
37	TRCRS	I	Track cross signal input
38	/RFDET	I	RF detection signal input ("L" : detection)
39	BDO	I	Dropout signal input ("H" : Dropout)
40	LDON	O	Laser on signal output ("H" : ON)
41	TES	O	Tracking error shunt signal output ("H" : shunt)
42	PLAY	O	Play signal out ("H" : PLAY)
43	WVEL	O	Double speed status signal output ("H" : DS)
44	ARF	I	RF signal input
45	IREF	I	Reference current input
46	DRF	I	DSL bias (Not used, open)
47	DSLFL	I/O	DSL loop filter
48	PLLFL	I/O	PLL loop filter
49	VCOF	I/O	VCO loop filter (Not used, open)
50	AVDD2	I	Power supply input (for analog circuit)
51	AVSS2	—	GND (for analog circuit)
52	EFM	O	EFM signal output (Not used, open)
53	PCK	O	PLL extraction clock output (Not used, open) (fPCK=4.321 MHz during normal playback)
54	PDO	O	Phase comparison signal of EFM and PCK signals (Not used, open)
55	SUBC	O	Sub-code serial data output (Not used, open)
56	SBCK	I	Clock input for sub-code serial data (Not used, open)
57	VSS	—	GND
58	X1	I	Crystal oscillating circuit input (f=16.9344MHz)
59	X2	O	Crystal oscillating circuit output (f=16.9344MHz)
60	VDD	I	Power supply input (for oscillating circuit)

Pin No.	Mark	I/O	Function
61	BYTCK	O	Byte clock output (Not used, open)
62	/CLDCK	O	Sub-code frame clock signal output (fCLDCK=7.35kHz during normal playback)
63	FCLK	O	Crystal frame clock signal output (fCLK=7.35kHz, double=14.7kHz)
64	IPFLAG	O	Interpolation flag output ("H" : interpolation) (Not used, open)
65	FLAG	O	Flag output (Not used, open)
66	CLVS	O	Spindle servo phase synchronizing signal output ("H" : CLV, "L" : rough servo) (Not used, open)
67	CRC	O	Sub-code CRC checked output ("H" : OK, "L" : NG) (Not used, open)
68	DEMPH	O	De-emphasis ON signal output ("H" : ON) (Not used, open)
69	RESY	O	Frame resynchronizing signal output (Not used, open)
70	/RST2	I	Reset input through MASH circuit ("L" : Reset)
71	/TEST	I	Test input

Pin No.	Mark	I/O	Function
72	AVDD1	I	Power supply input (for analog circuit)
73	OUTL	O	Left channel audio signal output
74	AVSS1	—	GND
75	OUTR	O	Right channel audio signal output
76	RSEL	I	RF signal polarity assignment input (at "H" level, RSEL="H", at "L" level, RSEL="L")
77	CSEL	I	Crystal oscillating frequency designation input "L" : 16.9344MHz "H" : 33.8688MHz
78	PSEL	I	Test input (normally "L") (Not used, open)
79	MSEL	I	Output frequency switching for SMCK terminal "H" : SMCK=8.4672MHz "L" : SMCK=4.2336MHz (Not used, open)
80	SSEL	I	Output mode switching of SUBQ terminal ("H" : Q code buffer mode)

• IC701 (AN8802SCE1V) Servo Amplifier

Pin No.	Mark	I/O	Function
1	PDAD	I	PDA channel signal input with delay
2	PDA	I	PDA channel signal input without delay
3	LPD	I	Laser PD connection
4	LD	O	Power supply for LD driving
5	AMPI	I	RF amplifier input
6	VCC	I	Power supply connection
7	AMPO	O	RF amplifier output (Not used, open)
8	CAGC	I	AGC loop filter connection
9	ARF	O	RF AGC output
10	CENV	I	Capacitor connection for RF detection
11	CEA	I	Capacitor connection for HPF amplifier
12	GND	—	Ground connection
13	LDON	I	ON/OFF input of LD APC ("H" : ON, "L" : OFF)
14	TES	I	Tracking error shunt signal input
15	PLAY	I	Play signal input ("H" : PLAY)
16	WVEL	I	Double speed ("H" : double, "L" : single)

Pin No.	Mark	I/O	Function
17	BDO	O	Dropout detection control
18	/RFDET	O	RF detection signal ("L" : detection)
19	CROSS	O	Tracking error zero cross output
20	OFTR	O	Off-track detection ("H" : detection)
21	VDET	O	Vibration detection signal output ("H" : detection)
22	ENV	O	Envelope output terminal
23	TEBPF	I	Vibration detection signal input
24	TE	O	Tracking error signal output
25	FE	O	Focus error signal output
26	PTO	O	Potential amplifier inversion input (Not used, open)
27	PTI	I	Potential amplifier inversion output (Not used, open)
28	TBAL	I	Tracking balance signal input
29	FBAL	I	Focus balance signal input
30	VREF	O	Reference voltage output
31	PDB	I	Photo detection Bch input without delay
32	PDBD	I	Photo detection Bch input with delay

• IC801 (M38222M2051)
System Microprocessor

Pin No.	Mark	I/O Division	Function
1	VL2	I	LCD bias reference voltage V2
2	VL1	I	LCD bias reference voltage V1
3	PCNT	O	Power control signal output
4	—	—	GND
5	—	—	GND
6	MUTE A	O	AF muting control signal output
7	—	—	GND
8	KEY1	I	Key source input
9	—	—	GND
10	FUNC	O	Mode select control signal output
11	—	—	GND
16	—	—	GND
17	TAPE ON	I	Tape detect signal input
18	BLKCLK	I	CD subcode block clock signal input
19	—	—	GND
20	SQCK	O	CD subcode clock input
21	REC H	I	REC detect signal input
22	SUBQ	I	CD subcode data input
23	CD CLOSE	I	CD close detect switch signal input
24	CD ON	I	CD detect signal input
25	—	—	GND
26	RESET SW	I	Reset SW (S701) signal input
27	RST	I	System reset signal input
28	XC IN	—	GND
29	XC OUT	—	GND
30	XIN	I	Clock input
31	XOUT	O	Clock output

Pin No.	Mark	I/O Division	Function
32	VSS	—	GND
33	—	—	
34	—	—	
35	SENSE	I	CD sense signal input
36	FLOCK	I	CD focus lock signal input
37	TLOCK	I	CD tracking signal input
38	STAT	I	CD status signal input
39	CD RST	I	CD reset signal input
40	D MUTE	O	CD muting control signal output
41	MCLK	O	CD signal process IC control signal output
42	MDATA	O	CD signal process IC data output
43	MLD	O	CD signal process IC strobe signal output
44	—	—	Not used
48	—	—	
49	SEG23	O	
64	SEG8	—	Not used
65	SEG7	—	
72	SEG0	—	
73	VDD	I	Power supply (+5V)
74	VREF	I	A/D converter reference voltage
75	AVSS	—	GND
76	COM3	O	LCD common signal output
79	COM0	O	
80	VL3	I	

• IC703 (AN8389SE1)

Focus Coil / Tracking Coil / Traverse Motor / Spindle Motor

Pin No.	Mark	I/O	Function
1	VCC	I	Power supply terminal
2	VREF	I	Reference voltage input
3	IN4	I	Motor driver (4) input
4	IN3	I	Motor driver (3) input
5	GND	—	Ground connection
6	NC	—	Ground connection
7	NRESET	I	Reset input
8	GND	—	Ground connection
9	IN2	I	Motor driver (2) input
10	PC2	I	PC2 (power cut) input
11	IN1	I	Motor driver (1) input
12	PC1	I	PC1 (power cut) input (Not used, open)

Pin No.	Mark	I/O	Function
17	PVCC1	I	Power supply (1) for driver
18	PGND1	—	Ground connection (1) for driver
19	D1—	O	Motor driver (1) reverse-action output
20	D1+	O	Motor driver (1) forward-action output
21	D2—	O	Motor driver (2) reverse-action output
22	D2+	O	Motor driver (2) forward-action output
23	D3—	O	Motor driver (3) reverse-action output
24	D3+	O	Motor driver (3) forward-action output
25	D4—	O	Motor driver (4) reverse-action output
26	D4+	O	Motor driver (4) forward-action output
27	PGND2	—	Ground connection (2) for driver
28	PVCC2	I	Power supply (2) for driver

■ Alignment Points

< CD PLAYER SECTION >

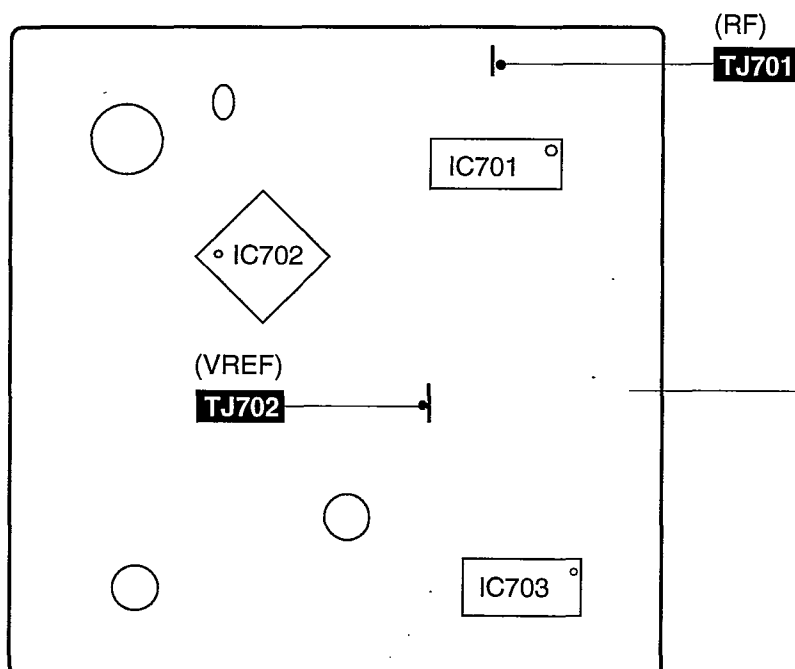


Fig.1

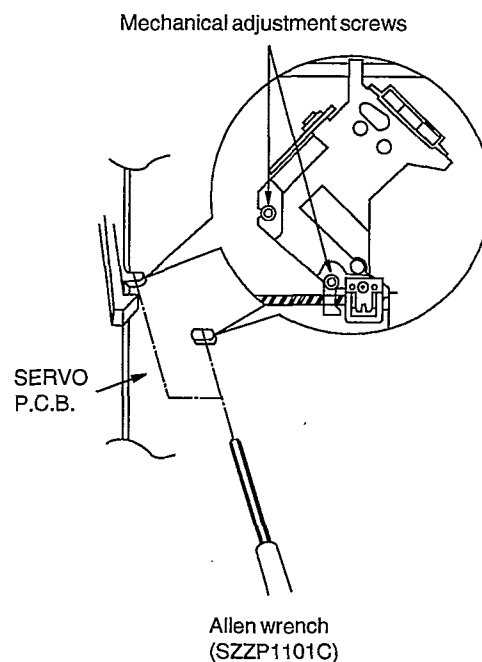


Fig. 2

■ Measurements and Adjustments

■ TUNER SECTION

• ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

- Set power source voltage to 12 V DC.
 - Set volume control to maximum
 - Set band switch to AM(MW, LW) or FM
 - Set selector switch to RADIO
 - Set XBS switch to minimum
 - Output of signal generator should be no higher than necessary to obtain an output reading.
- Note :**
- LW-RF alignment should be performed before MW-RF alignment.
 - 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 or 2)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	459 kHz 30 % Mod. at 400 Hz	Point of non-interference.(on/about 600kHz)	Headphone Jack (32Ω) (Fabricate the plug as shown in Fig.3 and then connect the lead wires of the plug to the measuring instrument.)	T2(AM IFT)	Adjust for maximum output.

• AM-RF ALIGNMENT(EG)

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 2)	REMARKS
CONNECTIONS	FREQUENCY				
"	514 ± 3 kHz	Tuning capacitor fully closed.	"	L4(AM OSC Coil)	Adjust for maximum output.
"	1639 ± 5 kHz	Tuning capacitor fully opened.	"	CT1-4(AM OSC Trimmer)	Adjust for maximum output.
"	550 kHz	Tune to signal	"	[*1] L3(AM ANT Coil)	Adjust for maximum output. Adjust L3 by moving coil bobbin along ferrite core.
"	1500 kHz	"	"	CT1-3(AM ANT Trimmer)	Adjust for maximum output.
[*1] Fix antenna coil with wax after completing alignment.					

• MW-RF ALIGNMENT(E, EB)

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 1)	REMARKS
CONNECTIONS	FREQUENCY				
"	511 kHz	Tuning capacitor fully closed.	"	L9(MW OSC Coil)	Adjust for maximum output.
"	1650 kHz	Tuning capacitor fully opened.	"	CT1-4(MW OSC Trimmer)	Adjust for maximum output.
"	550 kHz	Tune to signal	"	[*1] L3-2(MW ANT Coil)	Adjust for maximum output. Adjust L3-2 by moving coil bobbin along ferrite core.
"	1500 kHz	"	"	CT1-3(MW ANT Trimmer)	Adjust for maximum output.
[*1] Fix antenna coil with wax after completing alignment.					

• LW-RF ALIGNMENT(E, EB)

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 1)	REMARKS
CONNECTIONS	FREQUENCY				
"	136 kHz	Tuning capacitor fully closed.	"	L8(LW OSC Coil)	Adjust for maximum output.
"	297 kHz	Tuning capacitor fully opened.	"	CT6(LW OSC Trimmer)	Adjust for maximum output.
"	145 kHz	Tune to signal	"	[*1] L3-1(LW ANT Coil)	Adjust for maximum output. Adjust L3-1 by moving coil bobbin along ferrite core.
"	285 kHz	"	"	CT5 (LW ANT Trimmer)	Adjust for maximum output.
[*1] Fix antenna coil with wax after completing alignment.					

• FM-IF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 1 or 2)	REMARKS
CONNECTIONS	FREQUENCY				
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. 4
"	"	"	"	T3(FM 2nd)	Waveform is shown in Fig. 5

• FM-RF ALIGNMENT

Connect to test point TP1 through FM dummy antenna. Negative side to test point TP2 .	87.35 MHz $\pm$ 50 kHz(EG)	Variable capacitor fully closed.	Headphone Jack (32 Ω) (Fabricate the plug as shown in Fig.3 and then connect the lead wires of the plug to the measuring instrument.)	L2 (FM OSC Coil)	[*2] Adjust for maximum output.
	86.2 MHz(E,EB)				
	108.3 MHz $\pm$ 50 kHz(EG)	Variable capacitor fully opened.	"	CT1-2 (FM OSC Trimmer)	"
	109.2 MHz(E,EB)				
	106 MHz	Tune to signal	"	CT1-1 (FM ANT Trimmer)	"

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

■ CASSETTE DECK SECTION

• ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

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

• TAPE SPEED ALIGNMENT (DECK 1, 2)

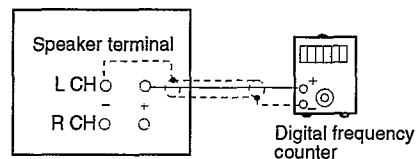
Normal speed (Standard Value : 3000 $\pm$ 50 Hz ... Deck 2)
(Standard Value : Deck 2 $\pm$ 50 Hz ... Deck 1)
High speed (Standard Value : 5100 Hz ~)

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 VR601 for the output value shown in Fig. 6.
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 $\pm$ 50 Hz ... Normal speed (Deck 2)
Adjustment Target : Deck 2 $\pm$ 50 Hz ... Normal speed (Deck 1)
Adjustment Target : 5100 Hz ~ ... High speed

ALIGNMENT POINTS

< TUNER SECTION >

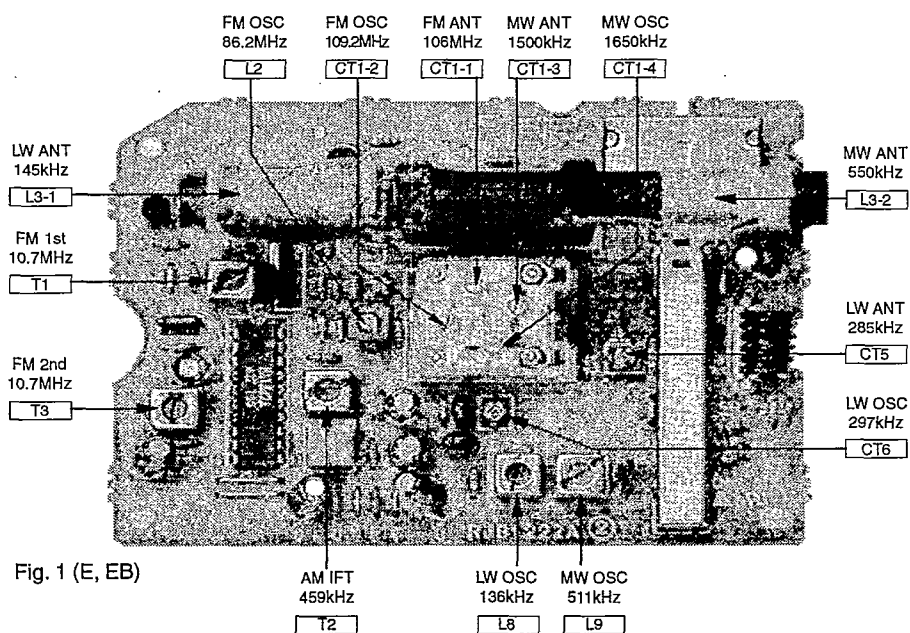


Fig. 1 (E, EB)

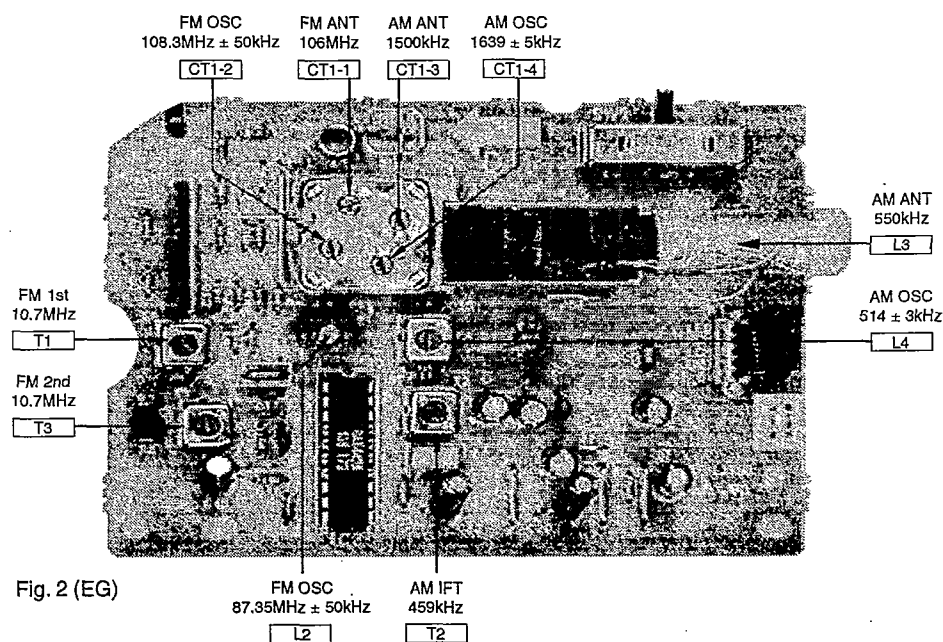


Fig. 2 (EG)

To Headphone

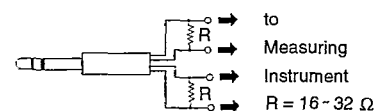


Fig. 3

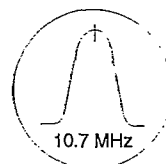


Fig. 4



Fig. 5

< CASSETTE DECK SECTION >

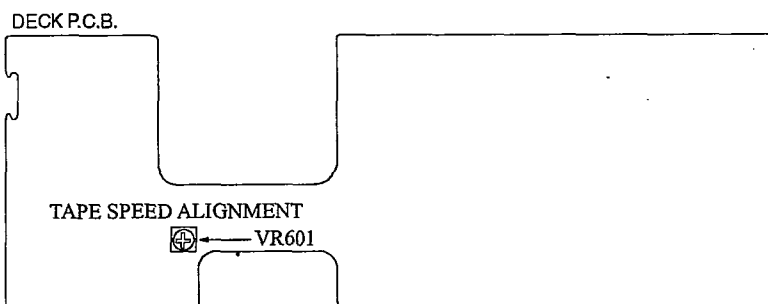


Fig. 6

CD Player Section

Warning: This product uses a laser diode. Refer to caution statements on page 2.

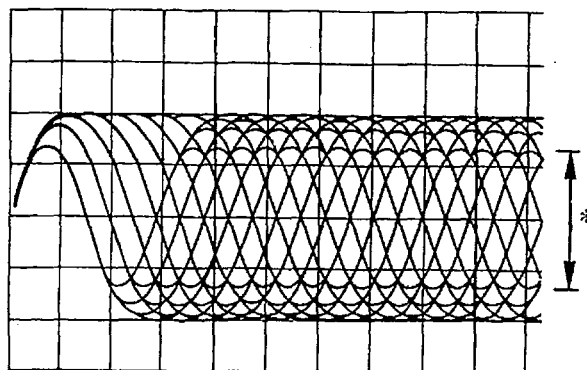
Caution: It is very dangerous to look or touch the laser beam. (laser radiation is invisible)
With the unit turned "on", laser radiation is emitted from the pickup lens.
Avoid exposure to the laser beam, especially when performing adjustments.

Measuring Instruments and Special Tools

- * Test discs
 1. Playability test disc (SZZP1054C).
 2. Uneven test disc (SZZP1056C).
- * Musical program disc (ordinary).
- * Dual-beam oscilloscope with bandwidth of 30 MHz or better (with EXT. trigger and 1 : 1 probe).
- * Allen wrench (M2.0) (SZZP1101C).
- * Lock paint (RZZ0L01)

(1) MECHANICAL ADJUSTMENT

- When the traverse deck is replaced, making adjustments is not necessary. (The traverse deck ass'y is already adjusted.)
 - Make adjustments to improve playability if the traverse deck has not been replaced.
1. Connect the oscilloscope's CH. 1 probe across **TJ701** (RF) (+) and **TJ702** (V-Ref.) (–) on the servo P.C.B. (Refer to Fig. 1 on page 33)
Oscilloscope setting : VOLT200mV.
 SWEEP.....0.5μs.
 Input couplingAC.
 2. Switch the player power **ON**, and play track **19** on the test disc (SZZ1056C).
 (Playing any other track will prevent the HEX screws from being accessed.)
 3. Leave the player in play mode.
 4. Alternately adjust the HEX screws with the 2.0mm allen wrench (SZZP1101C) until the vertical fluctuation of RF signal is minimized and the eye pattern is most stretched. (Refer to Fig. 2 on page 33)
 5. After completing the adjustment, lock the HEX screws with lock paint (RZZ0L01).



* Most stretched eye pattern

(3) CHECK OF PLAY OPERATION AFTER ADJUSTMENT

* Checking skip Search

1. Play an ordinary musical program disc.
2. Press the skip button to check for normal skip search operation (in both the forward and reverse directions).

* Checking Manual Search

1. Play an ordinary musical program disc.
2. Press the manual search button to check for smooth manual search operations at either low or high speed (in both the forward and reverse directions).

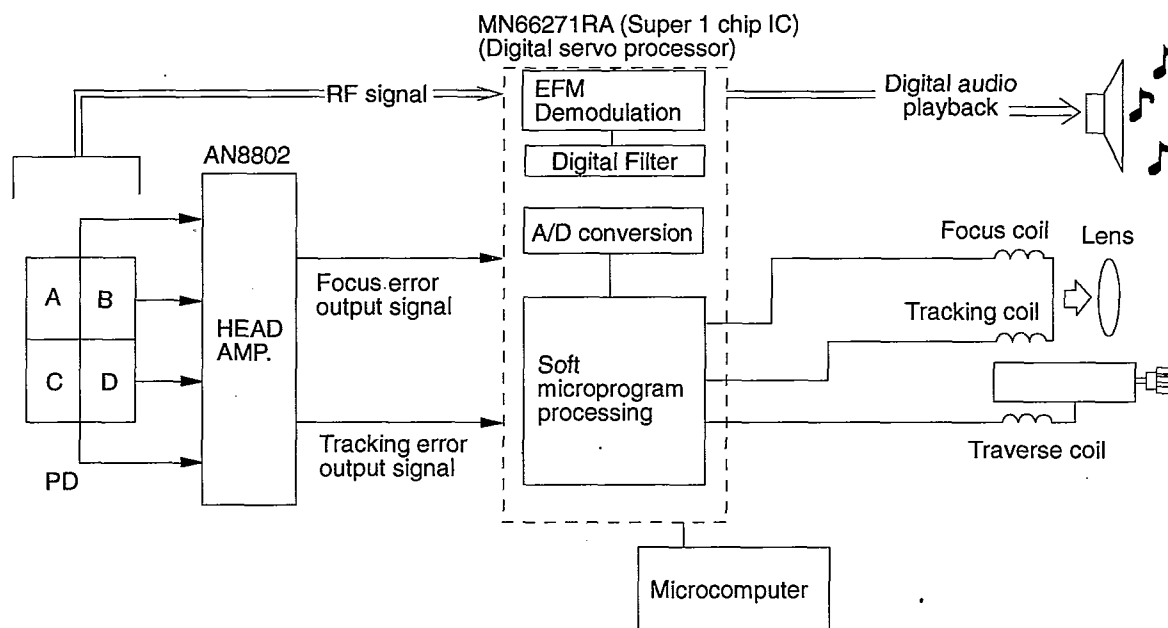
* Checking Playability

1. Play the 0.7mm black dot and the 0.7mm wedge on the test disc (SZZP1054C) and verify that no sound skip or noise occurs.
2. Play the middle tracks of the uneven test disc (SZZP1056C) and verify that no sound skip or noise occurs.

Digital Servo System

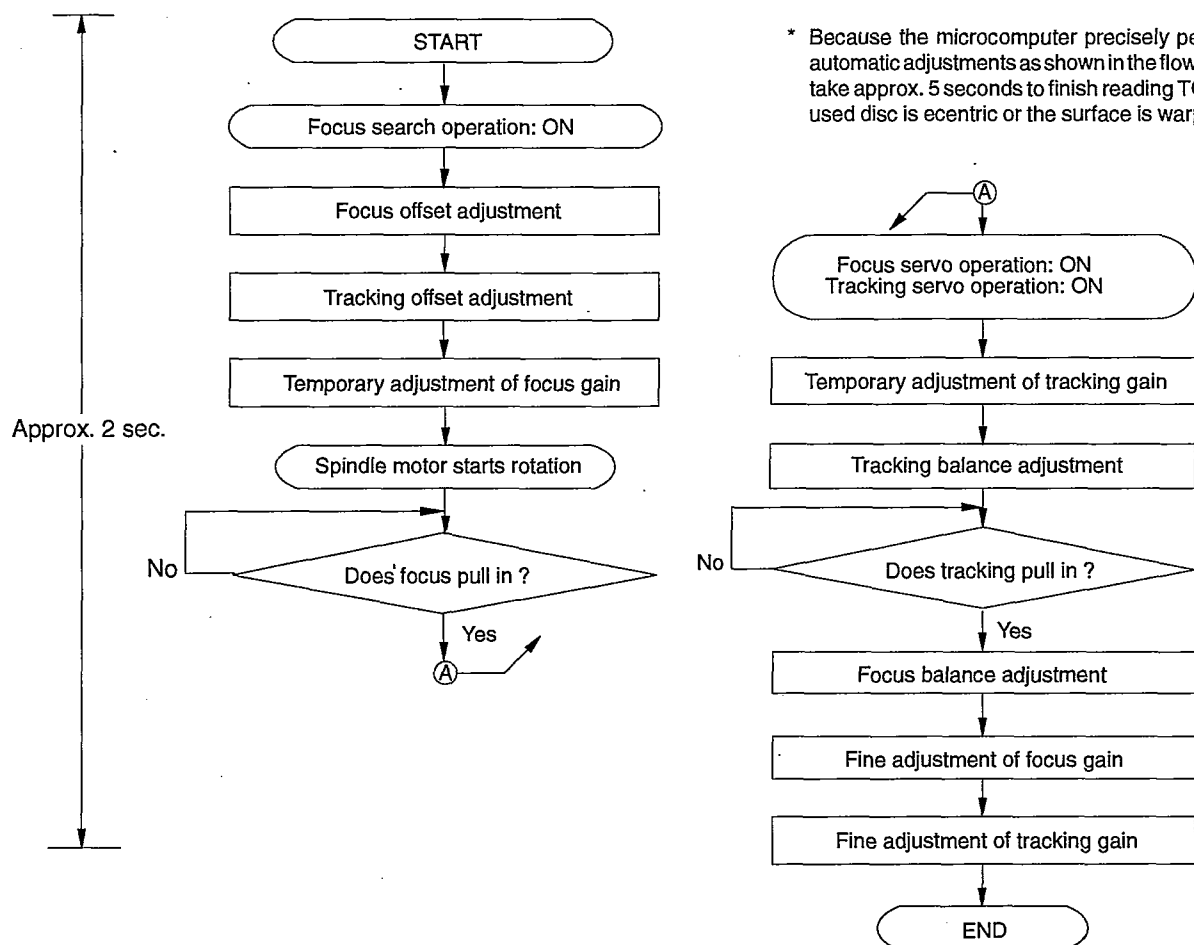
DIGITAL SERVO SYSTEM

This servo system has no adjustment VRs.

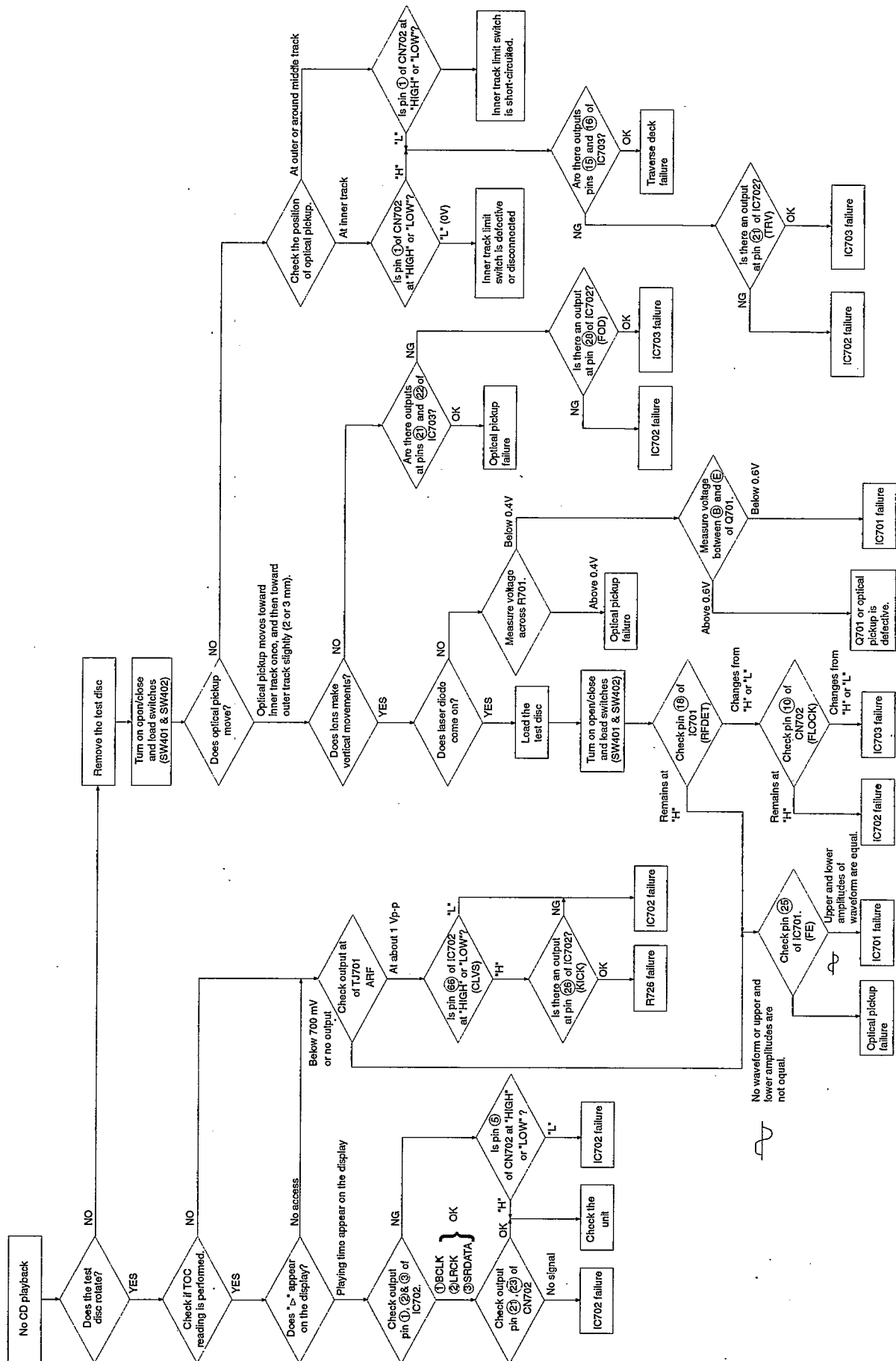


The following flow chart shows the sequence of automatic adjustments.

• Flow chart on automatic adjustment sequence



Troubleshooting Guide



■ Mechanism Parts List

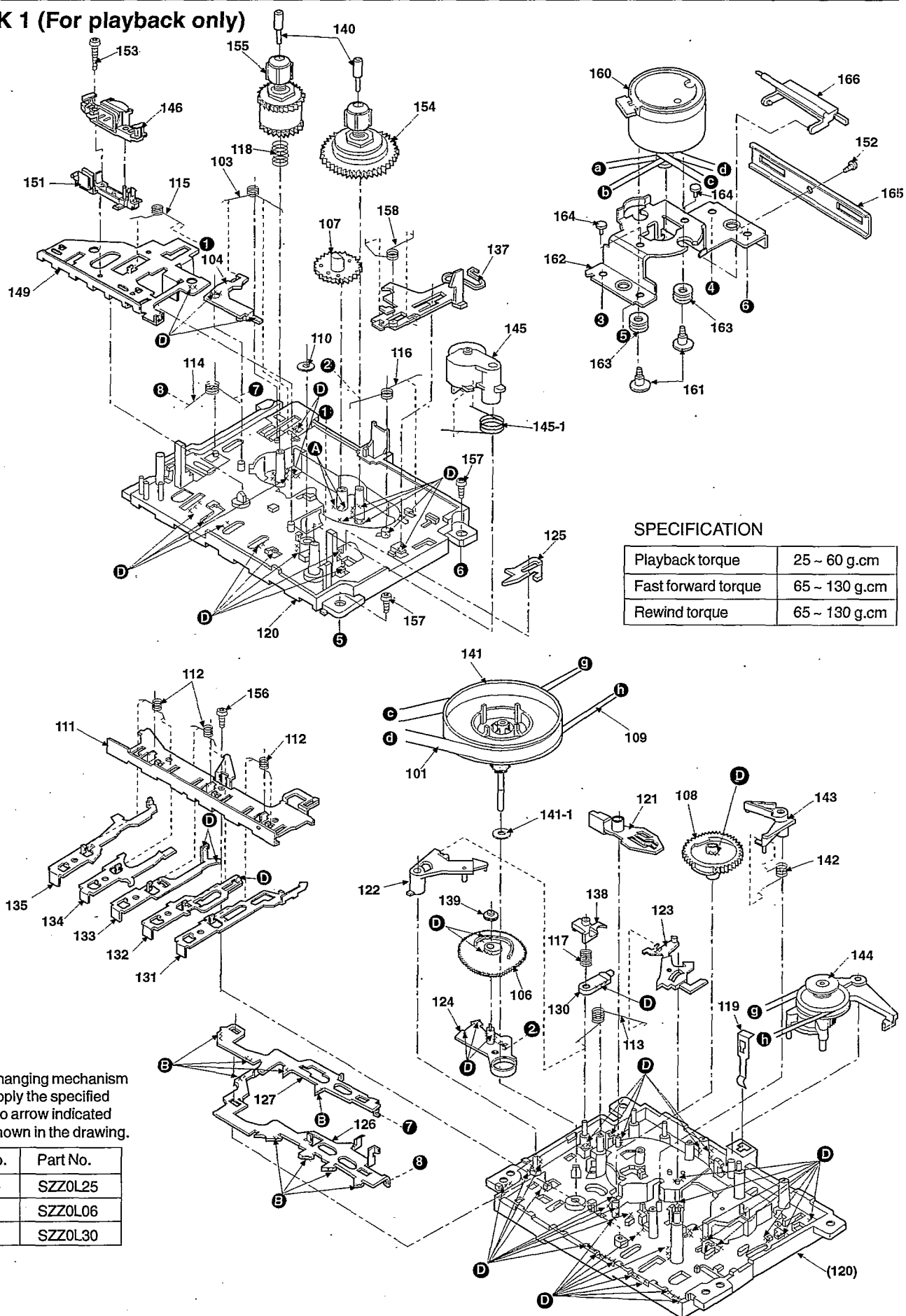
NOTES: [M] Indicates in the Remarks columns indicates parts supplied by MESA.

Ref No.	Part No.	Part Name & Description	Remarks
		CASSETTE MECHANISM	
		(DECK 1)	
101	RDV0009	MAIN BELT B	[M]
103	RMB0109-1	BRAKE SPRING	[M]
104	RML0116	BRAKE	[M]
106	RDG0057	IDLER GEAR	[M]
107	RDG0059	FF RELAY GEAR	[M]
108	RDK0005	CAM GEAR	[M]
109	RDV0006-1	RF BELT	[M]
110	RHW16009	CAPSTAN 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	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	SWAY LEVER	[M]
122	RML0072	AS RELEASE LEVER	[M]
123	RML0073-1	AS PROTECT LEVER	[M]
124	RML0074	IDLER LEVER	[M]
125	RML0076	EJECT SELECTION LEVER	[M]
126	RML0077	LOCK PLATE	[M]
127	RML0078	FUNCTION PLATE	[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]
137	RMM0029	EJECT SLIDE LEVER	[M]
138	RMR0211	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 ASSY	[M]
145	RXP0015	PINCH ROLLER ASSY	[M]
145-1	RMB0049	PINCH ARM SPRING	[M]
146	RBR4CY016-M	R/P HEAD	[M]

[illegible]

Mechanism Parts Location (RAA0921)

DECK 1 (For playback only)



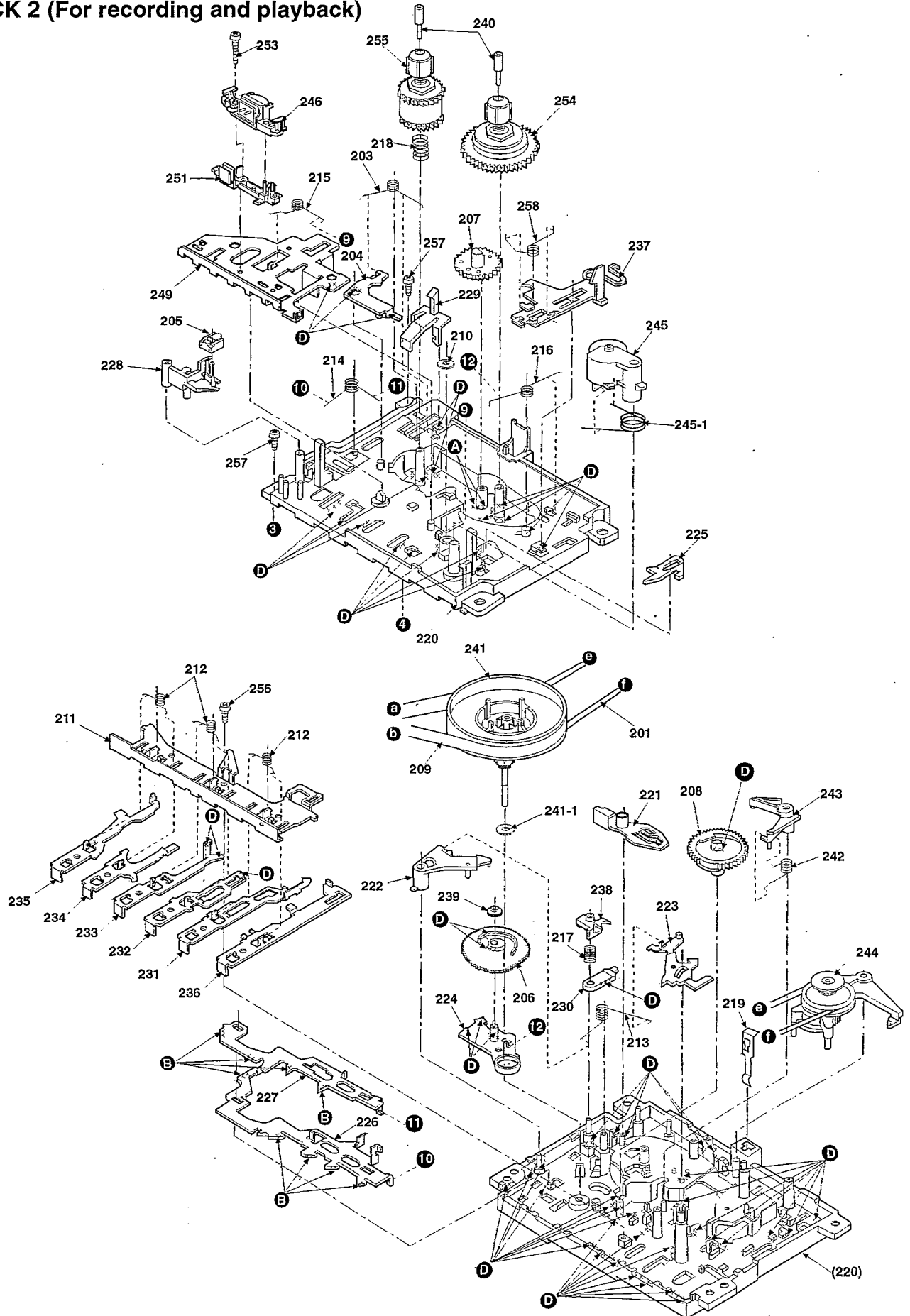
6

7

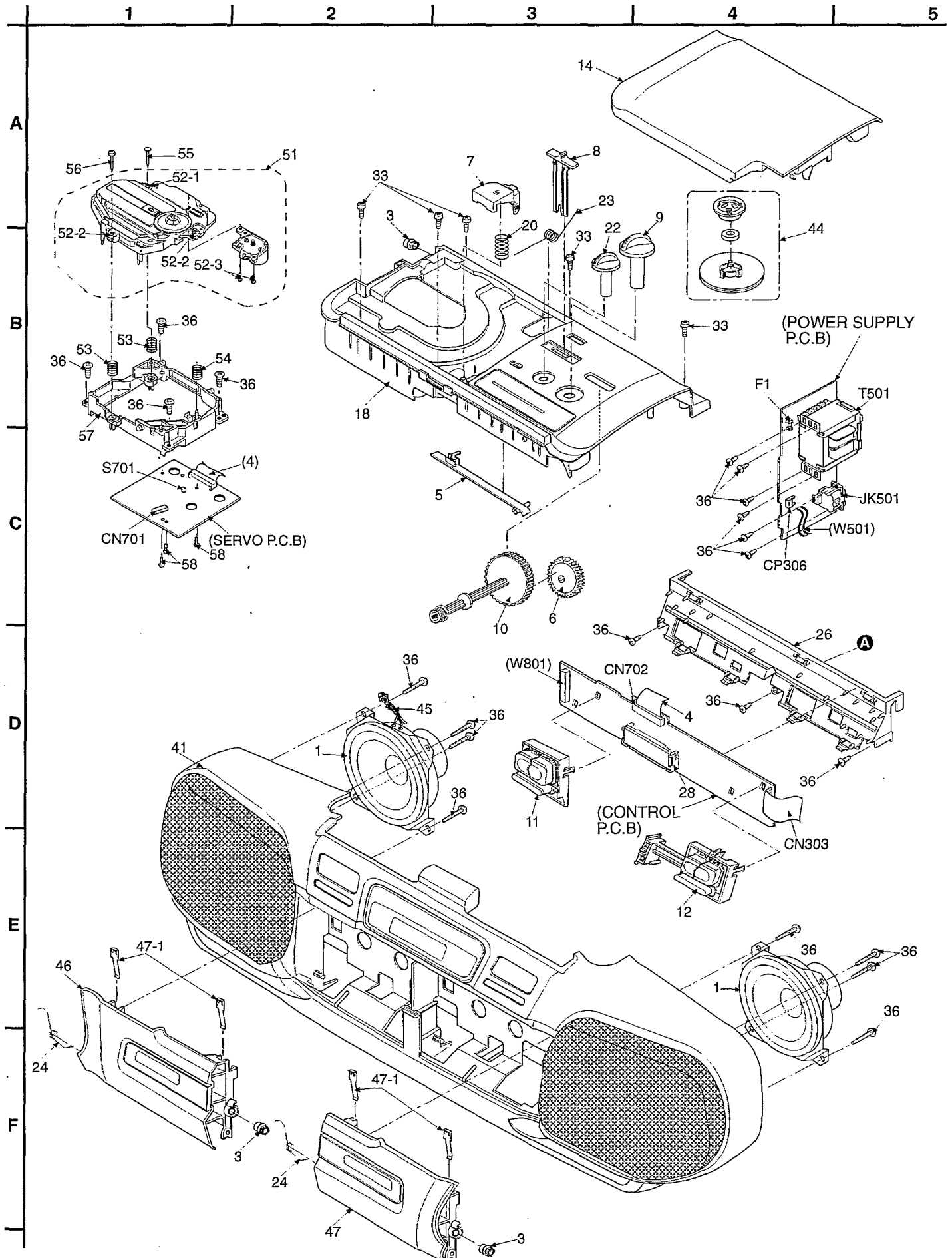
8

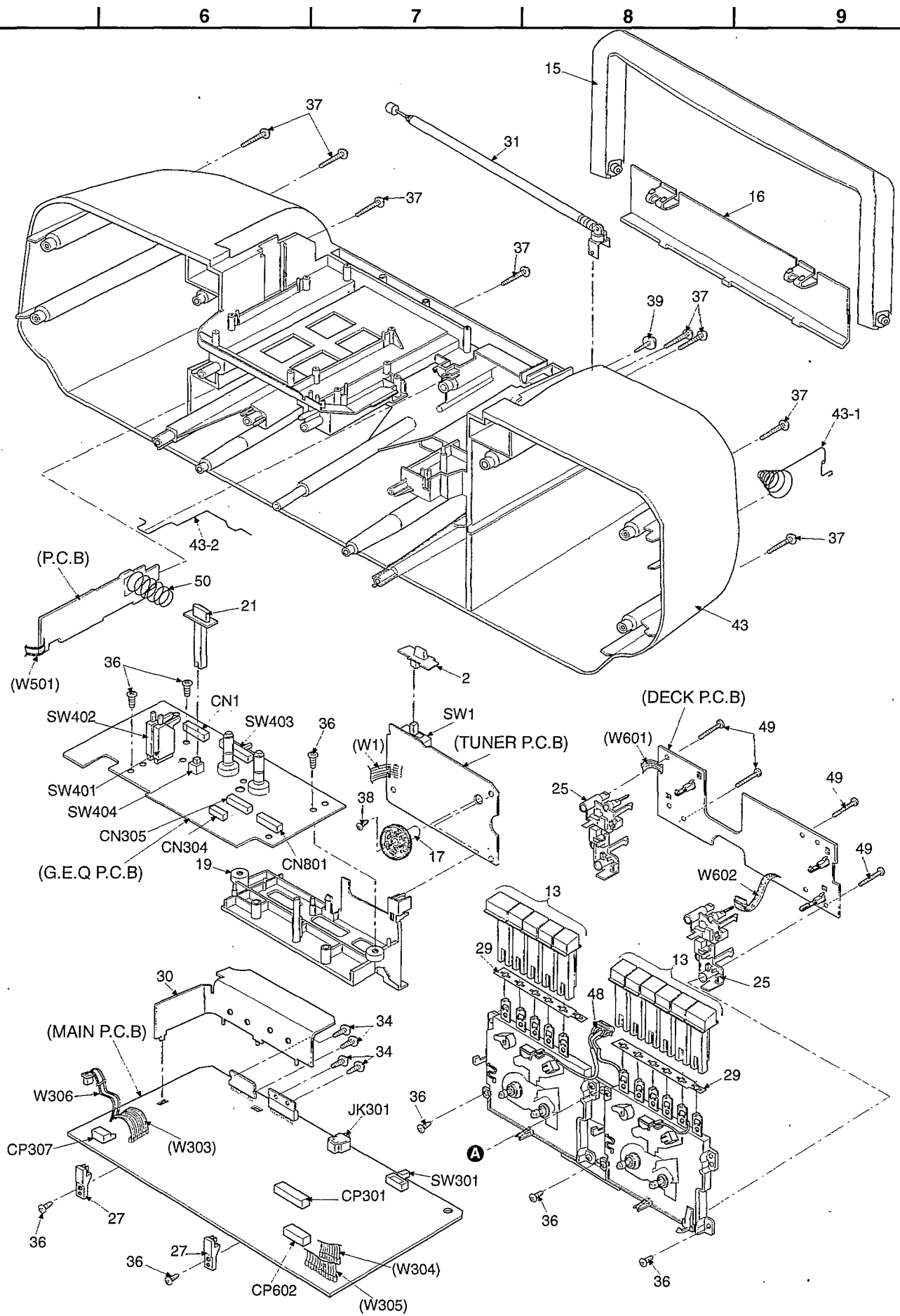
9

DECK 2 (For recording and playback)



Cabinet Parts Location





■ Replacement 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. (Refer to the cover page for area)

Parts without these indications can be used for all areas.

* Warning : This product uses a laser diode. Refer to caution statements on page 2.

ACHTUNG : • Die Lasereinheit nicht zerlegen.

• Die Lasereinheit darf nur gegen eine vom hersteller spezifizierte einheit ausgetauscht werden.

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

Ref No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	EASG10P553C2	SPEAKER	[M]
2	RGV0142-K	BAND KNOB	[M]
3	RDG0183-L	DAMPER GEAR	[M]
4	REE0606	FFC WIRE	[M]
5	RGJ0016-W	POINTER	[M]
6	RDG0293	MID GEAR (2 BAND)	[M] (EG)
6	RDG0295	MID GEAR (4 BAND)	[M] (E, EB)
7	RGU1166-K	CD EJECT BUTTON	[M]
8	RGV0143-K	FUNCTION KNOB	[M]
9	RGW0211-K	VOL. KNOB	[M]
10	RGW0213-K	TUN. KNOB	[M]
11	RGZ0025-K	CD OPR. BUTTON (L)	[M]
12	RGZ0026-K	CD OPR. BUTTON (R)	[M]
13	RGZ0024-K	MECHA BUTTON	[M]
14	RKF0413-K	CD LID	[M]
15	RKH0027-K	HANDLE	[M]
16	RKK347ZB-0	BATT. COVER	[M]
17	RDG0294	VC GEAR (2 BAND)	[M] (EG)
17	RDG0296	VC GEAR (4 BAND)	[M] (E, EB)
18	RFKKXDT30EK	TOP CABINET ASS'Y	[M] (E, EB)
18	RFKKXDT30EGK	TOP CABINET ASS'Y	[M] (EG)
19	RMK0272	TUNE HOLDER	[M]
20	RMB0244	CD BUTTON SPRING	[M]
21	RGU1167-K	EDIT BUTTON	[M]
22	RGW0212-K	TONE KNOB	[M]
23	RME0147	CD OPEN SPRING	[M]
24	RME0162	CASS EJECT SPRING	[M]
25	RMR0368	CHASSIS	[M]
26	RMK0266	PCB CHASSIS	[M]
27	RMR0631-K	PCB HOLDER	[M]
28	RMN0242	LCD HOLDER	[M]
29	RMX0045	SPACER	[M]
30	RMY0153	HEATSINK	[M]
31	XEARR175ED-Y	ROD ANTENNA	
33	XTN3+10CFZ	TOP CAB. SCREW	
34	XTV3+10F	HEAT SINK SCREW	
36	XTV3+12G	SCREW	

Ref No.	Part No.	Part Name & Description	Remarks
37	XTV3+20G	CASING SCREW	
38	XYN26+C6	VC SCREW	
39	XYN3+F8FY	ROD ANT. SCREW	
41	RFKGRXDT30EK	FRONT CAB. ASS'Y	[M]
43	RFKHXDT30EK	BACK CAB. ASS'Y	[M] (E)
43	RFKHXDT30EBK	BACK CAB. ASS'Y	[M] (EB)
43	RFKHXDT30EGK	BACK CAB. ASS'Y	[M] (EG)
43-1	RJC91006	BATT. TERMINAL	[M]
43-2	RJR0132	R. ANT. TERMINAL	[M]
44	RFKNRXDS15PA	DISC HOLDER ASS'Y	[M]
45	REX0643	SP. CONNECT WIRE	[M]
46	RFKLXDT30E1	CASS. LID ASS'Y (L)	[M]
47	RFKLXDT30E2	CASS. LID ASS'Y (R)	[M]
47-1	RUS757ZAA	HALF SPRING	[M]
48	REX0644	HEAD WIRE DECK 1 & 2	[M]
49	XTN2+14GF	SCREW	[M]
50	RJC511YA	BATTERY TERMINAL	[M]
51	RAE0113Z	TRAVERSE UNIT	
52-1	SHGD112	FLOATING RUBBER (A)	
52-2	SHGD113-1	FLOATING RUBBER (B)	
52-3	XQS2+A35FZ	SCREW	
53	RME0109	FLOATING SPRING A	
54	RME0142	FLOATING SPRING B	
55	RMS0123-1	FIXED PIN A	
56	RMS0350	FIXED PIN B	
57	RMR0698-K	TRAVERSE CHASSIS	
58	XTV2+6G	SCREW	
		INTEGRATED CIRCUITS	
IC1	AN7205	IC, RF	
IC2	BA1442A	IC, MPX / IF	[M]
IC301	AN7317	IC, REC/PLAY AMP	[M]
IC302	BA3936	IC, REGULATOR	
IC303	AN7135	IC, POWER	
IC304	BA7755A	IC, SWITCHING	
IC801	M38222M2051	IC, CD CONTROL MICON	[M]
IC802	PST600DTA	IC, RESET	

Ref No.	Part No.	Part Name & Description	Remarks
		TRANSISTORS	
Q1	2SC829BTA	TRANSISTOR	
Q101	2SJ40CDTA	TRANSISTOR	
Q102	2SJ40CDTA	TRANSISTOR	
Q103	2SC1684RTA	TRANSISTOR	
Q104	2SC1684RTA	TRANSISTOR	
Q105	2SC1684RTA	TRANSISTOR	
Q106	2SC1684QTA	TRANSISTOR	
Q151	2SC2785FTA	TRANSISTOR	
Q152	2SC2785FTA	TRANSISTOR	
Q201	2SJ40CDTA	TRANSISTOR	
Q202	2SJ40CDTA	TRANSISTOR	
Q203	2SC1684RTA	TRANSISTOR	
Q204	2SC1684RTA	TRANSISTOR	
Q205	2SC1684RTA	TRANSISTOR	
Q206	2SC1684QTA	TRANSISTOR	
Q251	2SC2785FTA	TRANSISTOR	
Q252	2SC2785FTA	TRANSISTOR	
Q305	2SC1740SRTA	TRANSISTOR	
Q306	2SC1740SRTA	TRANSISTOR	(E, EB)
Q307	2SC1684STA	TRANSISTOR	
Q308	RVTDTTC114EST	TRANSISTOR	
Q309	2SC2785FTA	TRANSISTOR	
Q310	BN1A4MTA	TRANSISTOR	[M]
Q311	2SC4408TPE6	TRANSISTOR	[M]
Q401	RVTDTTC114EST	TRANSISTOR	
Q402	2SC2785FTA	TRANSISTOR	
Q601	2SK301QTA	TRANSISTOR	[M]
Q602	2SC1684STA	TRANSISTOR	
		DIODES	
D1	RVD1SS133TA	DIODE	
D2	RVD1SS133TA	DIODE	(E, EB)
D303	RVD1SS133TA	DIODE	
D306	RVD1SS133TA	DIODE	
D307	RVDMTZ5R6BTA	DIODE	
D308	MA4056N-MTA	DIODE	[M]
D309	RVDMTZ16BTA	DIODE	[M]
D312	RVD1SS133TA	DIODE	
D313	RVD1SS133TA	DIODE	
D314	RVD1SS133TA	DIODE	
D315	RVDMTZ6R8BTA	DIODE	
D401	RVD1SS133TA	DIODE	
D402	RVD1SS133TA	DIODE	
D403	RVD1SS133TA	DIODE	
D404	RVD1SS133TA	DIODE	

Ref No.	Part No.	Part Name & Description	Remarks
D501	RL203M11	DIODE	⚠
D502	RL203M11	DIODE	⚠
D503	RL203M11	DIODE	⚠
D504	RL203M11	DIODE	⚠
D801	RVD1SS133TA	DIODE	
D802	SLB55VRTE7	DIODE	[M]
		VARIABLE RESISTORS	
VR301	EWCT5AF20C54	VR, VOLUME	[M]
VR302	EWC2UAF20C54	VR, TONE	[M]
VR601	EVNDXAA00B24	VR, ZERO VOLTAGE	
		VARIABLE CAPACITORS	
VC1	RCV4LC2VK-A	VARICON	(EG)
VC1	RCV4RC2V2K-M	VARICON	(E, EB)
CT5	ECRLA030E53R	LW ANT TRIMMER	(E, EB)
CT6	ECRLA020E53R	LW OSC TRIMMER	(E, EB)
		SWITCHES	
S501	RJJ1SE01-H	SW, AC IN(JK501)	⚠
S601	RSH1A013-J	SW, DECK 1 PLAYBACK	[M]
S602	RSH1A013-J	SW, DECK 2 PLAYBACK	[M]
S603	RSH1A004-1	SW, DECK REC	[M]
SW1	RSS3B45XA-H	SW, BAND	[M] (EG)
SW1	RSS3H001-H	SW, BAND	[M] (E, EB)
SW301	RSS2A56ZA-H	SW, B.P./FM ST	[M] (EG)
SW301	RSS3B31ZA-H	SW, B.P./FM ST	[M] (E, EB)
SW401	RSH1A012-U	SW, CD OPEN/CLOSE	
SW402	RSH1A012-U	SW, CD LOAD	
SW403	RSS3D001-H	SW, SELECTOR	[M]
SW404	ESB6484	SW, EDIT	
SW801	EVQ21405R	SW, EAST CD REC	
SW802	EVQ21405R	SW, MEMORY	
SW803	EVQ21405R	SW, CD REV SKIP	
SW804	EVQ21405R	SW, CD FWD SKIP	
SW805	EVQ21405R	SW, REPEAT	
SW806	EVQ21405R	SW, PLAY/PAUSE	
SW807	EVQ21405R	SW, STOP/CLEAR	
		CONNECTORS	
CN1	RJS1A5205	CONNECTOR (5P)	[M] (EG)
CN1	RJS1A5206	CONNECTOR (6P)	[M] (E, EB)
CN303	RJS1A5212	CONNECTOR (12P)	[M]
CN304	RJS1A5208	CONNECTOR (8P)	[M]

Ref No.	Part No.	Part Name & Description	Remarks
CN305	RJS1A5210	CONNECTOR (10P)	[M]
CN801	RJS1A5210	CONNECTOR (10P)	[M]
CP301	RJP12G18ZA	CONNECTOR (12P)	
CP306	RJP3G9YA	CONNECTOR (3P)	
CP307	RJP3G9YA	CONNECTOR (3P)	
CP602	RJP6G4YA	CONNECTOR (6P)	
		COILS & TRANSFORMERS	
L1	RLQY30S1W	COIL	[M]
L2	RL04P002-E	FM OSC COIL	[M]
L3	RLV2C023-0	AM FERRITE ANT	[M] (EG)
L3	RLV6C009-0	AM FERRITE ANT	[M] (E, EB)
L4	RL02B105-M	COIL	(EG)
L8	RL01B13-M	LW OSC COIL	(E, EB)
L9	RL02B108-M	AM OSC COIL	(E, EB)
L201	RLB1BVBV-Y	FERRITE BEAD	(E, EB)
L301	RL09B17-T	REC BIAS OSC COIL	
L302	RLB1BVBV-Y	FERRITE BEAD	
L501	RLL500050T-Y	COIL	⚠
L502	RLL500050T-Y	COIL	⚠
L601	RLQZB470KT-D	COIL	
T1	RLI4B153-M	FM IFT	
T2	RLI2B153-M	AM IFT	(E, EB)
T2	RLI2B458-M	AM IFT	(EG)
T3	RLI4B153-M	FM IFT	
T501	RTP1U1B002-X	POWER TRANSFORMER	[M] ⚠
		DISPLAY	
Z801	RSL5098-L	LCD	[M]
		CERAMIC FILTERS	
CF1	RVF107WDZT	FM CF	
CF2	RVFSFU459B	AM CF	[M] (EG)
CF2	RVFSFZ459JL	AM CF	[M] (E, EB)
		OSCILLATORS	
X801	EF0EC4194T4	CERAMIC OSC	
		FUSES	
F1	XBA2C20TB0	FUSE	⚠

Ref No.	Part No.	Part Name & Description	Remarks
		FUSE HOLDERS	
FH501	EYF52BC	FUSE HOLDER	
FH502	EYF52BC	FUSE HOLDER	
		JACKS	
JK301	RJJ37TK01-C	JK. HP	
JK501	RJJ1SE01-H	JK. AC	⚠
		WIRES	
W306	REX0642	POWER WIRE ASS'Y	[M]
W602	REX0641	MECH. WIRE ASS'Y	[M]
		< SERVO >	
		INTEGRATED CIRCUITS	
IC701	AN8802SCE1V	IC, HEAD AMP	
IC702	MN66271RA	IC, DIGITAL LSI	
IC703	AN8389SE1	IC, 4-CH DRIVER	
		TRANSISTOR	
Q701	2SB709S	TRANSISTOR	
		SWITCH	
S701	RSM0006-P	SW, RESET	
		CONNECTORS	
CN701	RJU035T016-1	CONNECTOR (16P)	
CN702	RJS1A6723-1Q	CONNECTOR (23P)	
		OSCILLATOR	
X701	RSXZ16M9M02T	CERAMIC OSC	
		CHIP JUMPERS	
RJ701	ERJ8GEY0R00A	0 1/10W	
RJ702	ERJ8GEY0R00A	0 1/10W	
RJ703	ERJ8GEY0R00A	0 1/10W	
RJ704	ERJ8GEY0R00A	0 1/10W	
RJ707	ERJ8GEY0R00A	0 1/10W	
RJ708	ERJ8GEY0R00A	0 1/10W	
RJ709	ERJ8GEY0R00A	0 1/10W	

Ref No.	Part No.	Part Name & Description	Remarks
RJ714	ERJ8GEY0R00A	0 1/10W	
RJ715	ERJ8GEY0R00A	0 1/10W	
RJ716	ERJ8GEY0R00A	0 1/10W	
RJ717	ERJ8GEY0R00A	0 1/10W	
RJ721	ERJ6GEY0R00A	0 1/10W	
RJ724	ERJ6GEY0R00A	0 1/10W	
RJ725	ERJ6GEY0R00A	0 1/10W	

Ref No.	Part No.	Part Name & Description	Remarks
RJ726	ERJ6GEY0R00A	0 1/10W	
RJ799	ERJ6GEY0R00A	0 1/10W	
		TEST JUMPERS	
TJ701	EYF8CU	TEST JUMPER	
TJ702	EYF8CU	TEST JUMPER	

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
		RESISTORS
R1	ERDS2TJ330T	33 1/4W
R2	ERDS2TJ334T	330K 1/4W
R3	ERDS2TJ471T	470 1/4W
R4	ERDS2TJ330T	33 1/4W
R5	ERDS2TJ101T	100 1/4W
R6	ERDS2TJ8R2T	8.2 1/4W
R7	ERDS2TJ470T	47 1/4W (E, EB)
R8	ERDS2TJ470T	47 1/4W (EG)
R8	ERDS2TJ680T	68 1/4W (E, EB)
R10	ERDS2TJ103T	10K 1/4W
R11	ERDS2TJ221T	220 1/4W
R12	ERDS2TJ332T	3.3K 1/4W
R14	ERDS2TJ103T	10K 1/4W (E, EB)
R101	ERDS2TJ183T	18K 1/4W
R103	ERDS2TJ392T	3.9K 1/4W
R104	ERDS2TJ472T	4.7K 1/4W
R105	ERDS2TJ470T	47 1/4W
R106	ERDS2TJ102T	1K 1/4W
R107	ERDS2TJ473T	47K 1/4W
R108	ERDS2TJ223T	22K 1/4W
R110	ERDS2TJ273T	27K 1/4W
R113	ERDS2TJ823T	82K 1/4W
R115	ERDS2TJ2R7T	2.7 1/4W
R116	ERDS2TJ121T	120 1/4W
R151	ERDS2TJ184T	180K 1/4W
R152	ERDS2TJ223T	22K 1/4W
R153	ERDS2TJ472T	4.7K 1/4W
R154	ERDS2TJ333T	33K 1/4W
R155	ERDS2TJ105T	1M 1/4W
R156	ERDS2TJ103T	10K 1/4W
R157	ERDS2TJ562T	5.6K 1/4W
R163	ERDS2TJ472T	4.7K 1/4W
R165	ERDS2TJ332T	3.3K 1/4W
R166	ERDS2TJ224T	220K 1/4W

Ref. No.	Part No.	Values & Remarks
R167	ERDS2TJ471T	470 1/4W
R168	ERDS2TJ472T	4.7K 1/4W
R169	ERDS2TJ472T	4.7K 1/4W
R174	ERDS2TJ333T	33K 1/4W
R175	ERDS2TJ333T	33K 1/4W
R201	ERDS2TJ183T	18K 1/4W
R203	ERDS2TJ392T	3.9K 1/4W
R204	ERDS2TJ472T	4.7K 1/4W
R205	ERDS2TJ470T	47 1/4W
R206	ERDS2TJ102T	1K 1/4W
R207	ERDS2TJ473T	47K 1/4W
R208	ERDS2TJ223T	22K 1/4W
R210	ERDS2TJ273T	27K 1/4W
R213	ERDS2TJ823T	82K 1/4W
R215	ERDS2TJ2R7T	2.7 1/4W
R216	ERDS2TJ121T	120 1/4W
R251	ERDS2TJ184T	180K 1/4W
R252	ERDS2TJ223T	22K 1/4W
R253	ERDS2TJ472T	4.7K 1/4W
R254	ERDS2TJ333T	33K 1/4W
R255	ERDS2TJ105T	1M 1/4W
R256	ERDS2TJ103T	10K 1/4W
R257	ERDS2TJ562T	5.6K 1/4W
R263	ERDS2TJ472T	4.7K 1/4W
R265	ERDS2TJ332T	3.3K 1/4W
R266	ERDS2TJ224T	220K 1/4W
R267	ERDS2TJ471T	470 1/4W
R268	ERDS2TJ472T	4.7K 1/4W
R269	ERDS2TJ472T	4.7K 1/4W
R274	ERDS2TJ333T	33K 1/4W
R275	ERDS2TJ333T	33K 1/4W
R306	ERDS2TJ103T	10K 1/4W
R307	ERDS2TJ334T	330K 1/4W
R308	ERDS2TJ334T	330K 1/4W
R309	ERDS2TJ103T	10K 1/4W
R310	ERDS2TJ103T	10K 1/4W

Ref. No.	Part No.	Values & Remarks
R311	ERDS2TJ682T	6.8K 1/4W
R312	ERDS2TJ101T	100 1/4W
R313	ERDS2TJ475T	4.7M 1/4W
R316	ERDS2TJ222T	2.2K 1/4W
R317	ERDS2TJ103T	10K 1/4W
R318	ERDS2TJ221T	220 1/4W
R319	ERDS2TJ392T	3.9K 1/4W
R320	ERDS2TJ472T	4.7K 1/4W
R325	ERDS2TJ821T	820 1/4W
R326	ERDS2TJ563T	56K 1/4W
R327	ERDS2TJ221T	220 1/4W
R328	ERDS2TJ100T	10 1/4W
R329	ERDS2TJ473T	47K 1/4W
R330	ERDS2TJ472T	4.7K 1/4W
R331	ERDS2TJ104T	100K 1/4W
R332	ERDS2TJ104T	100K 1/4W
R333	ERDS2TJ222T	2.2K 1/4W
R334	ERDS2TJ222T	2.2K 1/4W
R335	ERDS2TJ473T	47K 1/4W
R337	ERDS2TJ823T	82K 1/4W
R338	ERDS2TJ123T	12K 1/4W
R339	ERDS2TJ122T	1.2K 1/4W
R340	ERDS2TJ101T	100 1/4W
R341	ERDS2TJ223T	22K 1/4W
R342	ERDS2TJ103T	10K 1/4W
R344	ERDS2TJ101T	100 1/4W
R345	ERDS2TJ102T	1K 1/4W
R346	ERDS2TJ4R7T	4.7 1/4W
R354	ERDS2TJ221T	220 1/4W
R357	ERDS2TJ102T	1K 1/4W
R401	ERDS2TJ103T	10K 1/4W
R402	ERDS2TJ101T	100 1/4W
R403	ERDS2TJ103T	10K 1/4W
R404	ERDS2TJ103T	10K 1/4W
R405	ERDS2TJ821T	820 1/4W
R406	ERDS2TJ822T	8.2K 1/4W

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R407	ERDS2TJ821T	820 1/4W	C18	ECEA1CU470B	47 16V (E, EB)	C205	ECFR1C273MR	0.027 16V
R501	ERDS2TJ272T	2.7K 1/4W	C18	ECEA1EU100B	10 25V (EG)	C206	ECEA0JU101B	100 6.3V
R601	ERDS2TJ123T	12K 1/4W	C19	ECBT0J223MS5	0.022 6.3V (E, EB)	C207	ECEA1CU100B	10 16V
R602	ERDS2TJ273T	27K 1/4W	C19	ECBT1C103NS5	0.01 16V (EG)	C208	ECBT1H101KB5	100P 50V
R604	ERDS2TJ273T	27K 1/4W	C20	ECEA0JU101B	100 6.3V	C209	ECBT1H102KB5	1000P 50V
R605	ERDS2TJ105T	1M 1/4W	C21	ECBT1H102KB5	1000P 50V	C210	ECEA1HU010B	1 50V
R606	ERDS2TJ472T	4.7K 1/4W	C22	ECFR1C473MR	0.047 16V	C211	ECEA1HU010B	1 50V
R801	ERDS2TJ822T	8.2K 1/4W	C23	ECEA1HUR22B	0.22 50V	C212	ECBT1H102KB5	1000P 50V (E, EB)
R802	ERDS2TJ562T	5.6K 1/4W	C24	ECEA1EU100B	10 25V	C213	ECBT1H471KB5	470P 50V
R803	ERDS2TJ392T	3.9K 1/4W	C25	ECBT1C103MS5	0.01 16V	C214	ECEA1AU101B	100 10V
R804	ERDS2TJ272T	2.7K 1/4W	C26	ECBT0J223MS5	0.022 6.3V (E, EB)	C215	ECEA1AU470B	47 10V
R805	ERDS2TJ222T	2.2K 1/4W	C26	ECFR1C223MR	0.022 16V (EG)	C216	ECEA1AU102B	1000 10V
R806	ERDS2TJ152T	1.5K 1/4W	C27	ECBT1H102KB5	1000P 50V (E, EB)	C217	ECFR1C104MR	0.1 16V
R807	ERDS2TJ153T	15K 1/4W	C28	ECEA1HU010B	1 50V	C251	ECEA1HU010B	1 50V
R808	ERDS2TJ472T	4.7K 1/4W	C29	ECEA1HU010B	1 50V	C252	ECBT1H471KB5	470P 50V
R809	ERDS2TJ104T	100K 1/4W	C30	ECBT1H100JC5	10P 50V (EG)	C253	ECEA1HU010B	1 50V
R810	ERDS2TJ104T	100K 1/4W	C30	ECBT1H470J5	47P 50V (E, EB)	C254	ECEA1HU010B	1 50V
R811	ERDS2TJ104T	100K 1/4W	C31	ECBT1H331KB5	330P 50V (EG)	C256	ECEA1HU0R1B	0.1 50V
R812	ERDS2TJ183T	18K 1/4W	C32	ECBT1H331KB5	330P 50V (EG)	C257	ECFR1C104MR	0.1 16V
R813	ERDS2TJ273T	27K 1/4W	C33	ECBT0J223MS5	0.022 6.3V (E, EB)	C258	ECEA1HU0R1B	0.1 50V
R814	ERDS2TJ104T	100K 1/4W	C33	ECBT1H102KB5	1000P 50V (EG)	C259	ECEA1HU3R3B	3.3 50V
R815	ERDS2TJ474T	470K 1/4W	C34	ECBT1H180JC5	18P 50V (E, EB)	C263	ECFR1C123MR	0.012 16V
R816	ERDS2TJ151T	150 1/4W	C36	ECQP2A221JZT	220P 100V (E, EB)	C307	ECEA1AU220B	22 10V
R817	ERDS2TJ151T	150 1/4W	C37	ECQP1361JZ	360P 100V (E, EB)	C308	ECEA1CU100B	10 16V
R818	ERDS2TJ151T	150 1/4W	C39	ECQP2A151JZT	150P 100V (E, EB)	C309	ECEA1AU220B	22 10V
R819	ERDS2TJ151T	150 1/4W	C40	ECBT1C103NS5	0.01 16V (E, EB)	C310	ECFR1C473MR	0.047 16V
R820	ERDS2TJ563T	56K 1/4W	C101	ECBT1H681KB5	680P 50V	C311	ECEA1AU101B	100 10V
R821	ERDS2TJ103T	10K 1/4W	C102	ECEA1CU100B	10 16V	C312	ECEA1CU100B	10 16V
R822	ERDS2TJ563T	56K 1/4W	C103	ECBT1C122MR5	1200P 16V	C313	ECBT1C103MS5	0.01 16V
R823	ERDS2TJ680T	68 1/4W	C105	ECFR1C273MR	0.027 16V	C314	ECQP2A151JZT	150P 100V
			C106	ECEA0JU101B	100 6.3V	C315	ECBT1C103MS5	0.01 16V (E, EB)
		CAPACITORS	C107	ECEA1CU100B	10 16V	C316	ECQP2A331JZT	330P 100V (E, EB)
			C108	ECBT1H101KB5	100P 50V	C317	ECQP1102JZT	1000P 100V
C1	ECFR1C223MR	0.022 16V (EG)	C109	ECBT1H102KB5	1000P 50V	C318	ECBT1C103MS5	0.01 16V
C2	ECBT1H470J5	47P 50V	C110	ECEA1HU010B	1 50V	C319	ECEA1AU101B	100 10V
C3	ECBT1H180JC5	18P 50V (E, EB)	C111	ECEA1HU010B	1 50V	C320	ECBT1C103MS5	0.01 16V
C3	ECBT1H270J5	22P 50V (EG)	C112	ECBT1H102KB5	1000P 50V (E, EB)	C321	ECEA1HU3R3B	3.3 50V
C4	ECBT1H100J5	10P 50V	C113	ECBT1H471KB5	470P 50V	C322	ECEA1EU470B	47 25V
C5	ECBT1H102KB5	1000P 50V	C114	ECEA1AU101B	100 10V	C323	ECEA1EU470B	47 25V
C6	ECBT1H102KB5	1000P 50V	C115	ECEA1AU470B	47 10V	C325	ECEA1AU221B	220 10V
C7	ECBT1H477KC5	4.7P 50V	C116	ECEA1AU102B	1000 10V	C326	ECEA1EU101B	100 25V
C8	ECBT1H150J5	15P 50V	C117	ECFR1C104MR	0.1 16V	C327	ECEA1AU220B	22 10V
C9	ECBT1H102KB5	1000P 50V	C151	ECEA1HU010B	1 50V	C328	ECEA1EU331	330 25V
C10	ECBT1H120J5	12P 50V	C152	ECBT1H471KB5	470P 50V	C329	ECEA0JU101B	100 6.3V
C11	ECBT1H220JC5	22P 50V (E, EB)	C153	ECEA1HU010B	1 50V	C330	ECA1EM332BV	3300P 25V [M]
C11	ECBT1H270J5	27P 50V (EG)	C154	ECEA1HU010B	1 50V	C332	ECEA1AU101B	100 10V
C12	ECBT0J223MS5	0.022 6.3V (E, EB)	C156	ECEA1HU0R1B	0.1 50V	C333	ECEA1EU4R7B	4.7 25V (EG)
C12	ECFR1C223MR	0.022 16V (EG)	C157	ECFR1C104MR	0.1 16V	C333	ECEA1EU471B	470 25V (E, EB)
C13	ECBT0J223MS5	0.022 6.3V (E, EB)	C158	ECEA1HU0R1B	0.1 50V	C334	ECBT1H102KB5	1000P 50V
C13	ECFR1C223MR	0.022 16V (EG)	C159	ECEA1HU3R3B	3.3 50V	C335	ECEA1EU4R7B	4.7 25V
C14	ECBT1H221KB5	220P 50V	C163	ECFR1C123MR	0.012 16V	C339	ECEA1CU220B	22 16V
C15	ECEA1HU010B	1 50V	C201	ECBT1H681KB5	680P 50V	C401	ECEA1AU221B	220 10V
C16	ECBT1C682MR5	6800P 16V	C202	ECEA1CU100B	10 16V	C501	ECQB1H104JF3	0.1 50V
C17	ECEA1EU100B	10 25V	C203	ECBT1C122MR5	1200P 16V	C502	ECQB1H104JF3	0.1 50V

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C503	ECQB1H104JF3	0.1 50V	R738	ERJ6GEYJ223V	22K 1/10W			
C504	ECQB1H104JF3	0.1 50V	R739	ERJ6GEYJ681V	680 1/10W			
C601	ECEA1CKA100B	10 16V	R741	ERJ6GEYJ562V	5.6K 1/10W			
C602	ECEA1CKA101B	100 16V	R742	ERJ6GEYJ562V	5.6K 1/10W			
C801	ECEA0JKA101B	100 6.3V	R743	ERJ6GEYJ562V	5.6K 1/10W			
C802	ECBT1H102KB5	1000P 50V	R744	ERJ6GEYJ103V	10K 1/10W			
C803	ECBT1H102KB5	1000P 50V	R745	ERJ6GEYJ155V	1.5M 1/10W			
C804	ECBT1H102KB5	1000P 50V	R748	ERJ6GEYJ182V	1.8K 1/10W			
C805	ECBT1H102KB5	1000P 50V	R749	ERJ8GEYJ103V	10K 1/8W			
C806	ECEA1HKA010B	1 50V						
C807	ECBT1H331KB5	330P 50V (EG)			CAPACITORS			
C808	ECBT1H331KB5	330P 50V (EG)						
C809	ECBT1H102KB5	1000P 50V	C701	ECEA0JKA220	22 6.3V			
C810	ECBT1H102KB5	1000P 50V	C702	ECEA1HKA010I	1 50V			
C811	ECBT1H102KB5	1000P 50V	C703	ECEA0JKA101I	100 6.3V			
C812	ECBT1H102KB5	1000P 50V	C704	ECUZ1E104MBN	0.1 25V			
C813	ECBT1H331KB5	330P 50V	C705	ECEA1HKA010I	1 50V			
C814	ECBT1H102KB5	1000P 50V	C706	ECUE1H101JCN	100P 50V			
C815	ECBT1H102KB5	1000P 50V	C707	ECUV1E273KBN	0.027 25V			
C818	ECBT1H331KB5	330P 50V	C708	ECUE1H472KBN	4700P 50V			
C819	ECBT1H102KB5	1000P 50V	C709	ECUE1C473KBN	0.047 16V			
			C710	ECUE1H152KBN	1500P 50V			
		< SERVO >	C711	ECUZ1E104MBN	0.1 25V			
		RESISTORS	C712	ECUZ1E104MBN	0.1 25V			
			C713	ECUV1C104MBM	0.1 16V			
R701	ERJ6GEYJ100	10 1/10W	C714	ECEA0JKA101I	100 6.3V			
R702	ERJ6GEYJ471V	470 1/10W	C715	ECEA0JKA470I	47 6.3V			
R703	ERJ6GEYJ823	82K 1/10W	C716	ECUE1H561KBN	560P 50V			
R704	ERJ6GEYJ102A	1K 1/10W	C717	ECUZ1E104MBN	0.1 25V			
R705	ERJ6GEYJ103V	10K 1/10W	C718	ECUV1C224KBM	0.22 16V			
R706	ERJ6GEYJ102A	1K 1/10W	C721	ECUE1H270JCN	27P 50V			
R707	ERJ6GEYJ473V	47K 1/10W	C722	ECUE1H270JCN	27P 50V			
R708	ERJ6GEYJ104V	100K 1/10W	C723	ECEA1AKA221I	220 10V			
R709	ERJ6GEYJ683V	68K 1/10W	C724	ECUV1C104MBM	0.1 16V			
R711	ERJ6GEYJ154V	150K 1/10W	C725	ECUE1H102KBN	1000P 50V			
R712	ERJ6GEYJ221V	220 1/10W	C726	ECUE1H102KBN	1000P 50V			
R714	ERJ6GEY0R00A	0 1/10W	C727	ECEA1HPK010I	1 50V			
R717	ERJ6GEYJ102A	1K 1/10W	C728	ECEA1HPK010I	1 50V			
R718	ERJ6GEYJ102A	1K 1/10W	C730	ECUZ1E104MBN	0.1 25V			
R719	ERJ6GEYJ102A	1K 1/10W	C731	ECEA0JK221I	220 6.3V			
R720	ERJ6GEYJ102A	1K 1/10W	C732	ECEA0JK221I	220 6.3V			
R721	ERJ6GEYJ101V	100 1/10W	C733	ECUZ1E104MBN	0.1 25V			
R722	ERJ6GEYJ563V	56K 1/10W	C734	ECEA1AKA221I	220 10V			
R723	ERJ6GEYJ182V	1.8K 1/10W	C735	ECUZNE104MBN	0.1 25V			
R724	ERJ6GEYJ333V	33K 1/10W	C736	ECUZNE104MBN	0.1 25V			
R725	ERJ6GEYJ472V	4.7K 1/10W	C737	ECUZNE104MBN	0.1 25V			
R726	ERJ6GEYJ473V	47K 1/10W	C738	ECUV1C154KBN	0.15 16V			
R727	ERJ6GEYJ103V	10K 1/10W	C742	ECUV1E273KBN	0.027 25V			
R728	ERJ6GEYJ392V	3.9K 1/10W	C743	ECUZNE104MBN	0.1 25V			
R730	ERJ6GEYJ331V	330 1/10W	C744	ECUE1E822KBN	8200P 25V			
R731	ERJ6GEYJ392V	3.9K 1/10W	C745	ECUE1C473MBN	0.047 16V			
R734	ERJ6GEYJ101V	100 1/10W	C746	ECUE1H050DCN	5P 50V			
R735	ERJ6GEYJ101V	100 1/10W	C747	ECUE1H222KBN	2200P 50V			
R736	ERJ6GEYJ101V	100 1/10W	C748	ECUV1H471KBM	470P 50V			

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■ Packing Materials & Accessories

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. (Refer to the cover page for area)

Parts without these indications can be used for all areas.

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

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

* [VRD] Indicates in the Remarks columns indicates parts supplied by Video Recorder Division.

Ref No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPH655ZA	MIRAMAT SHEET	[M]
P2	RPG2429	GIFT BOX	[M] (E)
P2	RPG2430	GIFT BOX	[M] (EG)
P2	RPG2431	GIFT BOX	[M] (EB)
P3	RPN0851	POLYFOAM (SET)	[M]
P4	RPN0852	POLYFOAM (TOP)	[M]

Ref No.	Part No.	Part Name & Description	Remarks
		ACCESSORIES	
A1	RQT2855-B	INSTRUCTION MANUAL	[M] (EB)
A1	RQT2856-G	INSTRUCTION MANUAL	[M] (EG)
A1	RFKSXDT30EK	INSTR. MANUAL ASS'Y	[M] (E)
A2	RJA0019-2K	AC CORD	(SF) (E, EG) 
A2	VJA0733	AC CORD	[VRD](SF)(EB) 