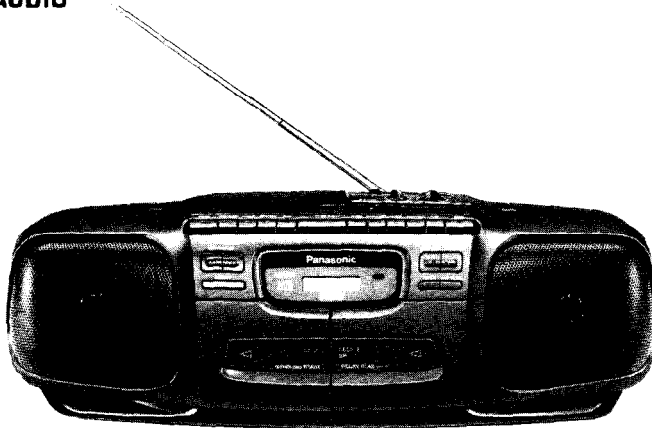


Service Manual

Portable Stereo CD System

MASH*

COMPACT
disc
DIGITAL AUDIO



Radio Cassette

RX-DT30

Colour

(K) Black Type

Area

Suffix for Model No.	Area	Colour
(P)	U.S.A.	(K)
(PC)	Canada	

* MASH is a trademark of NTT.

TAPE DECK : SG-20W MECHANISM SERIES
TRAVERSE DECK : RAE01 13Z MECHANISM SERIES

■ SPECIFICATIONS

■ Radio Section

Frequency range	
FM	88-108MHz
AM	525 - 1705 kHz
Intermediate frequency	
FM	10.7 MHz
AM	455 kHz
Sensitivity	
FM	17 dB/50 mW (-3 dB limit sens.)
AM	51 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	
Normal	50 - 14000 Hz

■ General

Power requirement	
AC	120V, 60Hz
Battery	Power consumption; 30W
Speakers	12 V (8 "D" size, R20/LR20 batteries)
Jacks	10 cm (4") x 2
Output	Headphones; 32Ω
Dimensions (W x H x D)	580x192 x260mm (22 ¹³ / ₁₆ "x7 ³ / ₁₆ "x10 ¹ / ₄ "
Weight	4.5 kg (9 lb. 15 oz.) without batteries

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

Panasonic

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Disassembly Instructions

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

ACHTUNG : Die Lasereinheit nicht zerlegen.

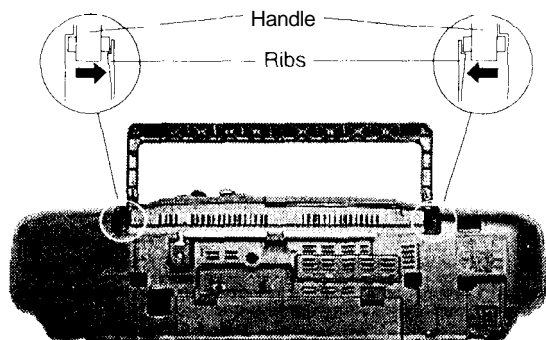
Die Lasereinheit darf nur gegen eine vom Hersteller spezialisierte Einheit ausgetauscht werden.

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

Ref. No. 1 Removal of the Handle

Procedure 1

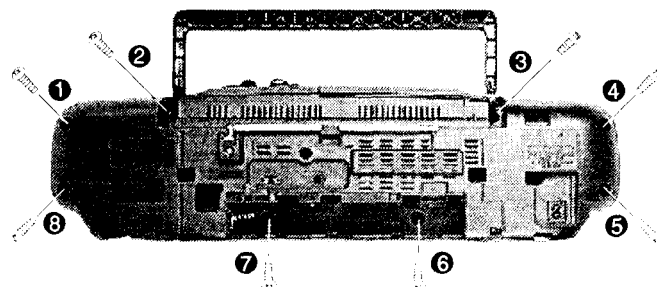
1. Release 2 ribs.
2. Pull out the handle.



Ref. No. 2 Removal of the Front Cabinet

Procedure 2

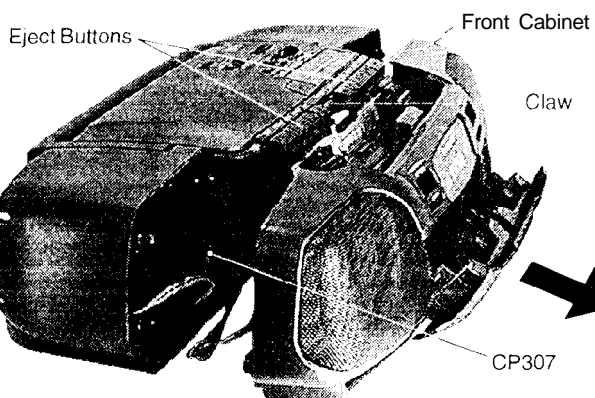
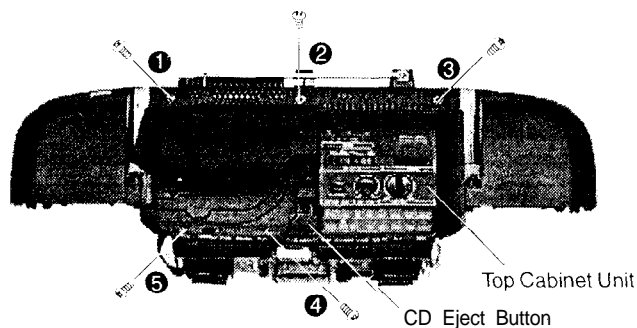
1. Remove the battery cover.
2. Remove 8 screws (1 - 8).



Ref. No. 3 Removal of the Top Cabinet Unit

Procedure 2 → 3

1. Press the CD eject button.
2. Remove 5 screw (1 - 5).
3. Remove the Top Cabinet Unit.

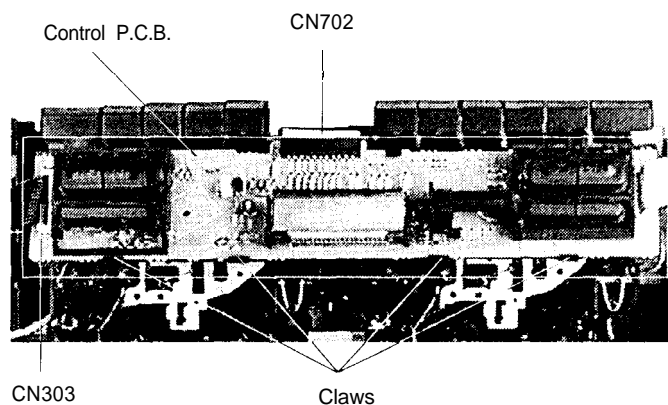
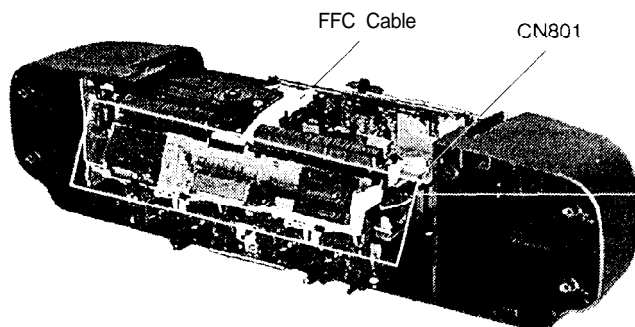


3. Press the 2 eject buttons.
4. Release 1 claw.
5. Remove the front cabinet in the direction of arrow
6. Remove 1 connector (CP307).

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.

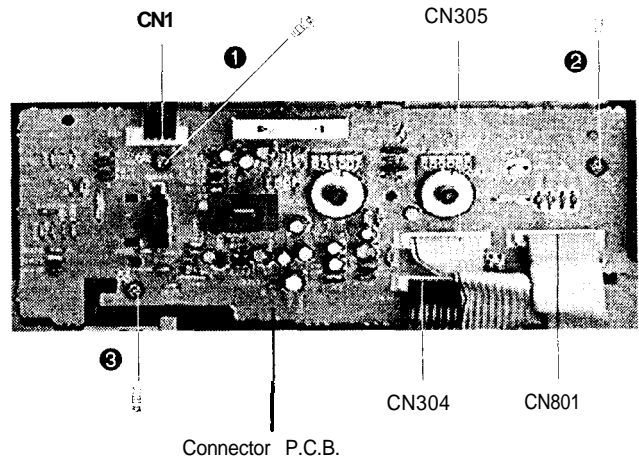
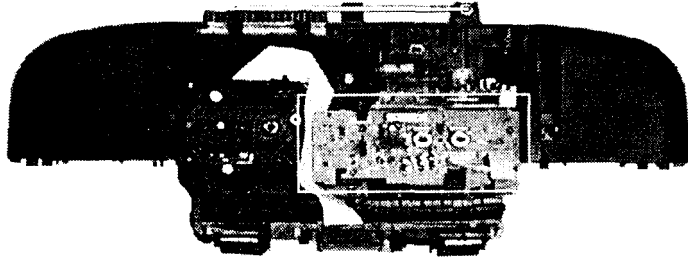


Ref. No.
5

Removal of the Connector P.C.B.

Procedure
2 → 3 → 5

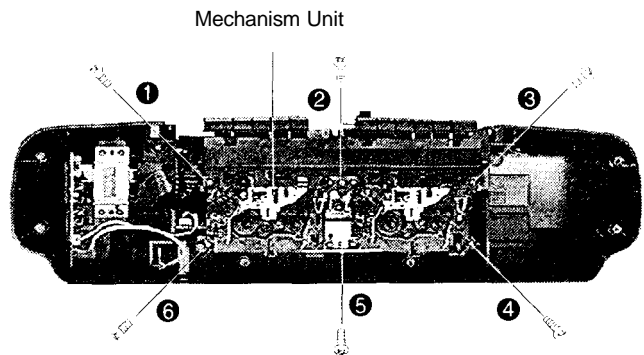
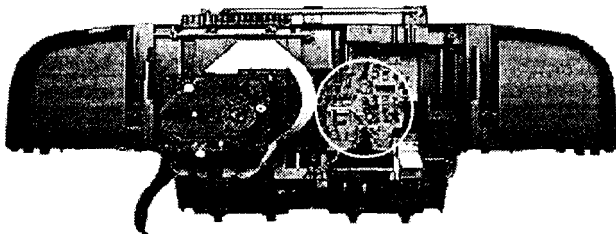
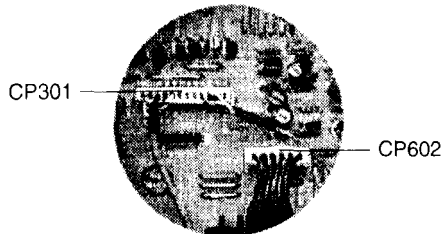
1. Remove 3 screws (❶ - ❸).
2. Remove 4 connectors (CN1, CN304, CN305, CN801).
3. Remove the Connector P.C.B.



Ref. No.
6

Removal of the Mechanism Unit

Procedure
2 → 3 → 4
→ 5 → 6



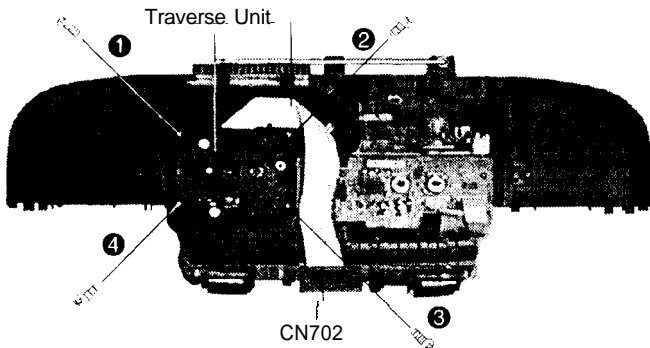
1. Remove 2 connectors (CP301, CP602)
2. Remove 6 screws (❶ - ❹).

Ref. No.
7

Removal of the Traverse Unit

Procedure
2 → 3 → 7

FFC Cable

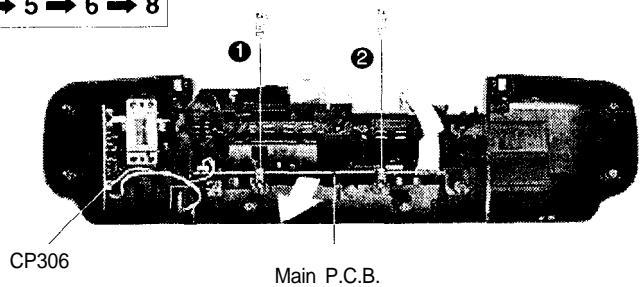


1. Remove 4 screws (❶ - ❹).
2. Remove FFC cable from the connector CN702 (Control P.C.B.)

Ref. No.
8

Removal of the Main P.C.B.

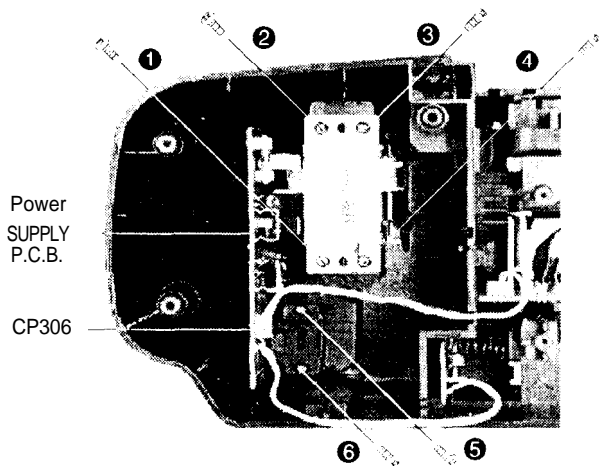
Procedure
2 → 3 → 4
→ 5 → 6 → 8



1. Remove 2 screws (❶ - ❷).
2. Remove 1 connector (CP306).
3. Pull out the main P.C.B. in the direction of arrow.

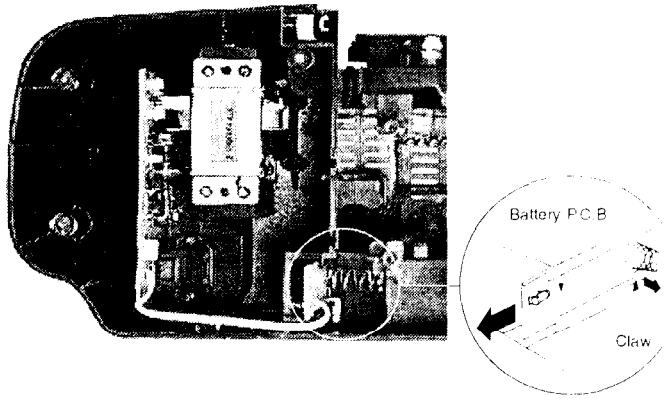
Ref. No. 9
Removal of the Power Supply P.C.B.
Procedure
 2 → 9

1. Remove 6 screws (1 - 6).
2. Remove 1 connector (CP306)

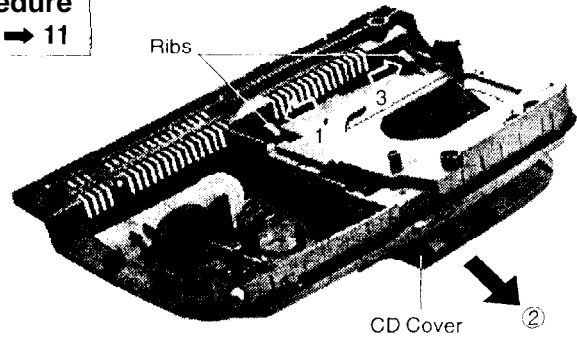


Ref. No. 10
Removal of the Battery P.C.B.
Procedure
 2 → 9 → 10

1. Release 1 claw.
2. Pull out the battery P.C.B.

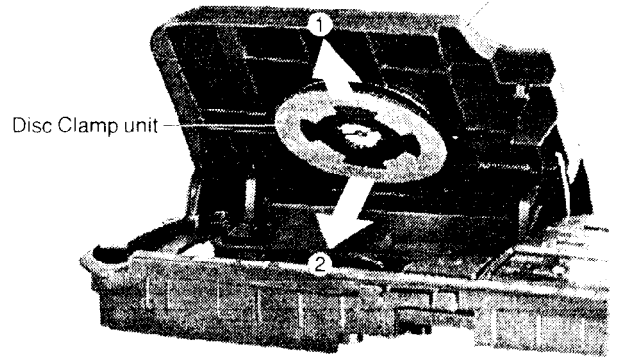


Ref. No. 11
Removal of the CD Cover
Procedure
 2 → 3 → 11



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.

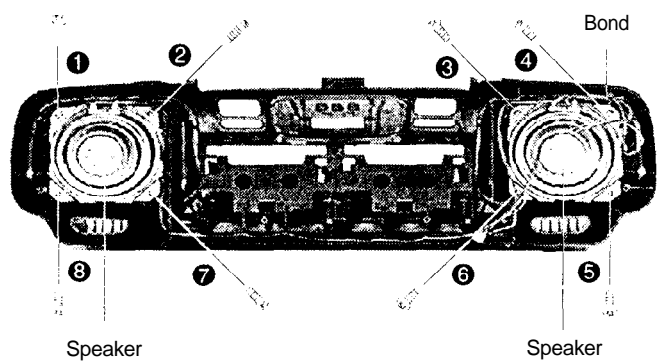
Ref. No. 12
Removal of the Disc Clamp Unit
Procedure
 2 → 3 → 12



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.

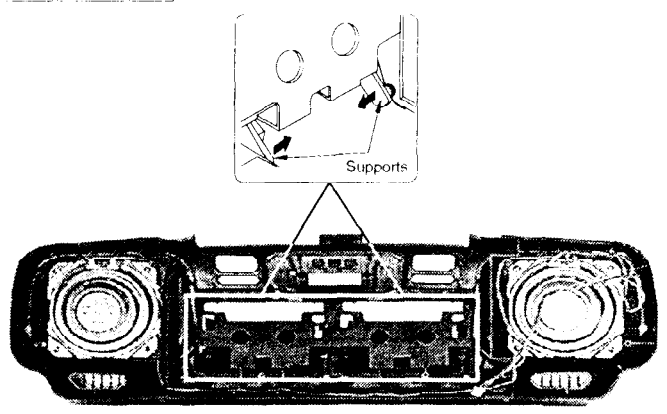
Ref. No. 13
Removal of the Speakers
Procedure
 2 → 13

1. Remove 8 screws (1 - 8).
2. Cut black bond at wire dressing point before removal of the speakers.



Ref. No. 14
Removal of the Cassette Compartment
Procedure
 2 → 14

- Release the supports and pull out the compartment.

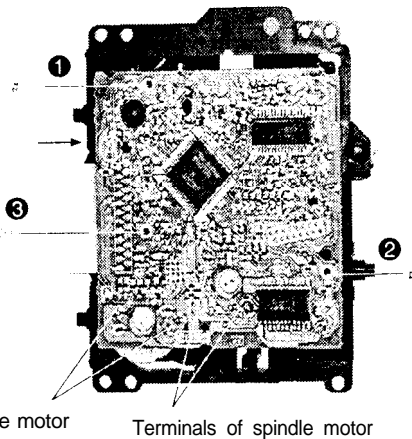


Ref. No.
15

Removal of the Servo P.C.B.

Procedure
2 → 3 → 7
→ 15

Traverse Unit

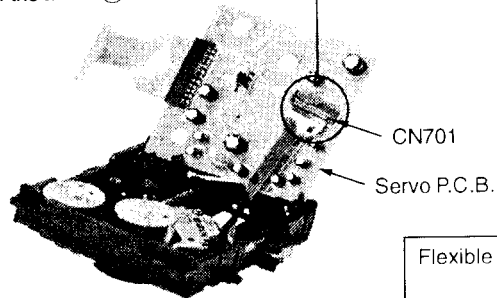
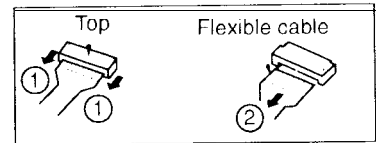


Terminals of traverse motor

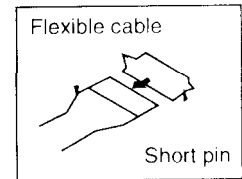
Terminals of spindle motor

1. Remove 3 screws (① - ③).
2. Desolder 2 terminals of spindle motor.
3. Desolder 2 terminals of traverse motor.
4. Remove the flexible cable from CN701

- 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.



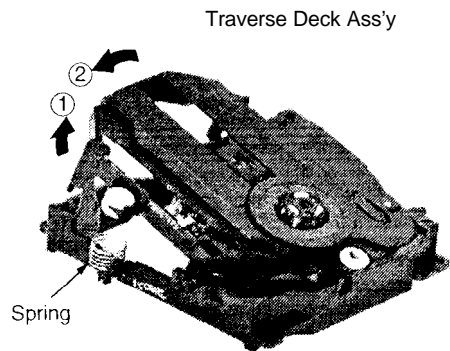
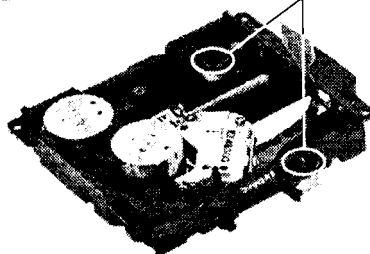
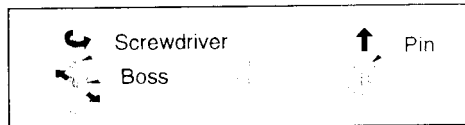
Note:
Insert a short pin into the flexible cable for traverse unit.



Ref. No.
16

Removal of the Traverse Deck Ass'y

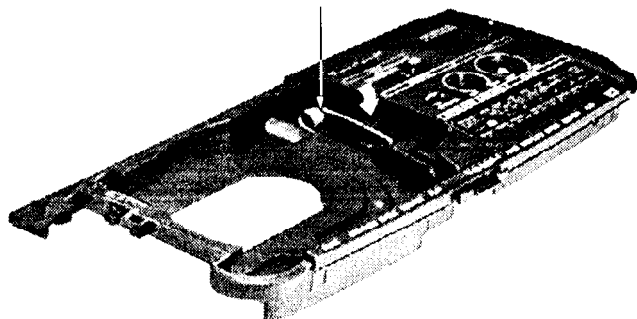
Procedure
2 → 3 → 7
→ 15 → 16



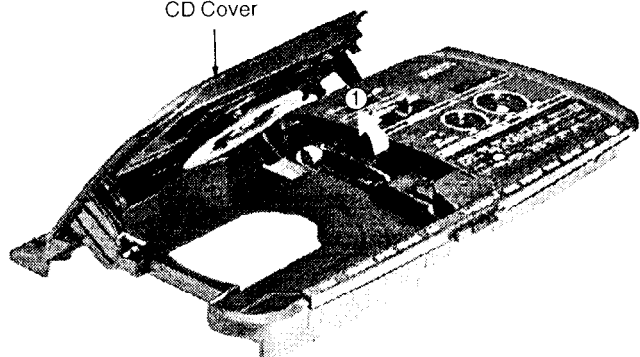
1. Widen 2 bosses by using a flat tip screwdriver and remove 2 pins.
2. Remove the Traverse Deck Ass'y in direction of arrow ① follow by ②.

■ INSTALLING CD COVER

CD Open Spring



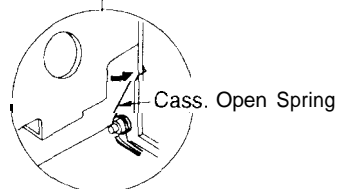
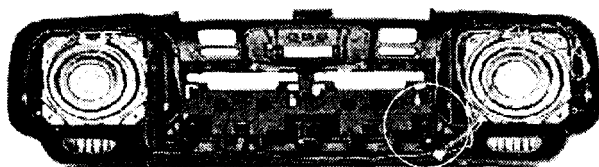
CD Cover



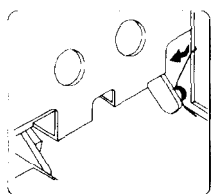
1. Install the CD open spring as shown in above diagram.

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

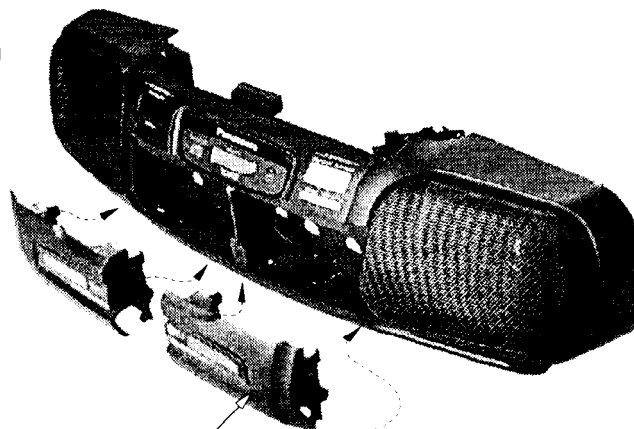
■ INSTALLING CASSETTE COMPARTMENT



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



- 3 Release the spring



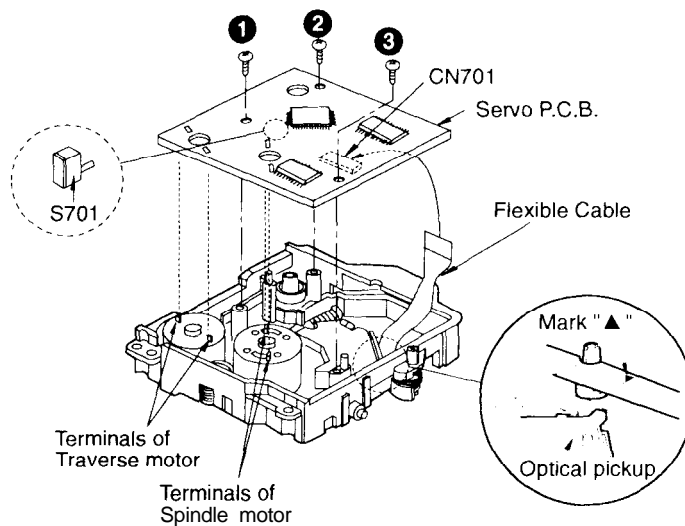
Cassette Compartment

2. Fix the cassette compartment to front cabinet

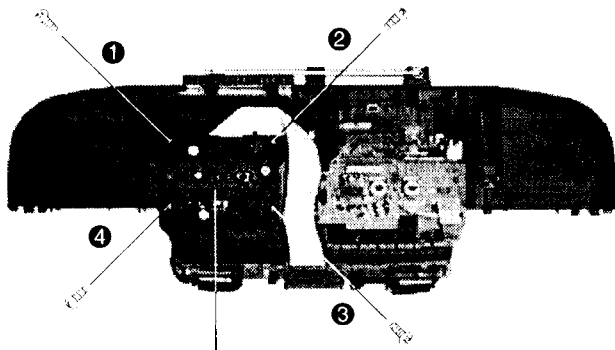
■ INSTALLING SERVO P.C.B.

- 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.

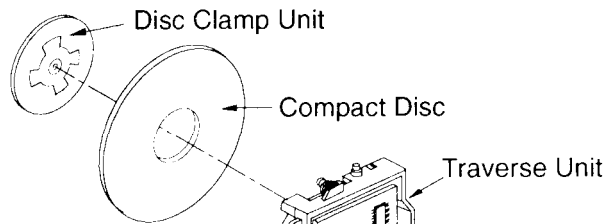


■ HOW TO CHECK THE TRAVERSE UNIT



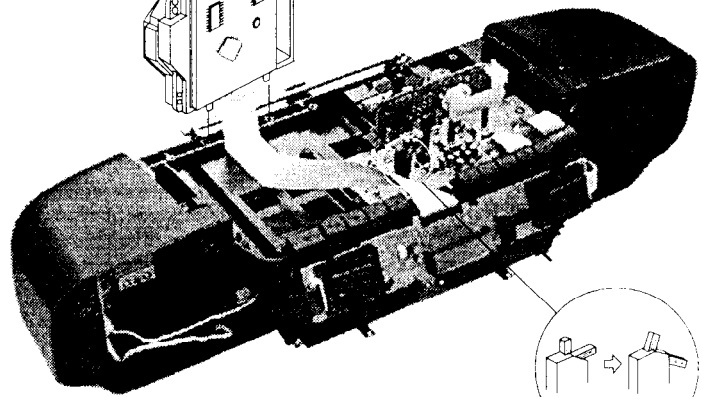
1. Remove the top cabinet unit.
(Refer to disassembly instructions, Fief No. 3)
2. Remove 4 screws. (① ~ ④)

Traverse Unit



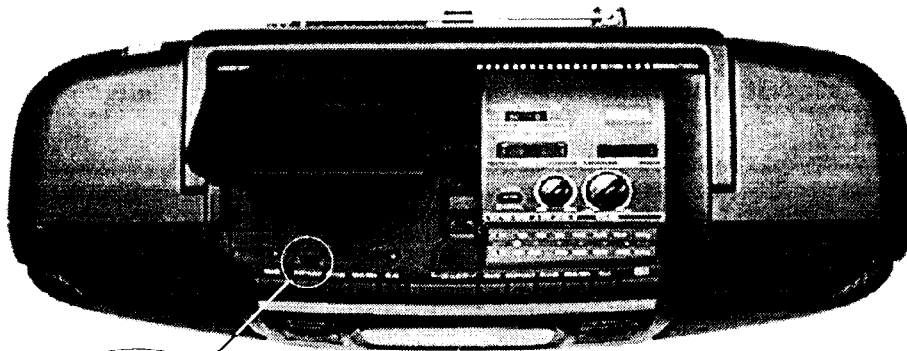
3. Set up the traverse unit as shown in diagram.
4. Install the compact disc and disc clamp unit.

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



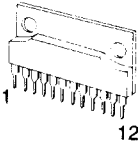
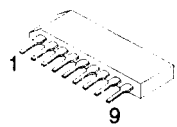
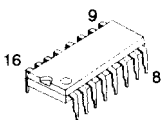
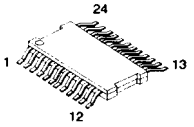
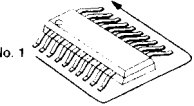
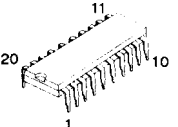
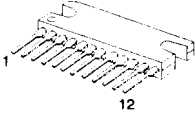
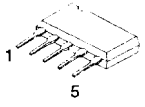
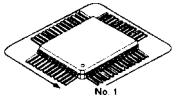
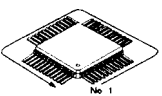
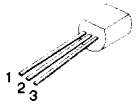

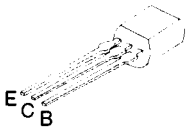
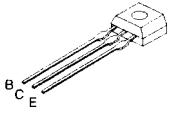
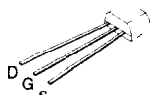
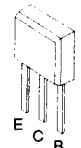
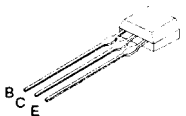
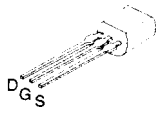
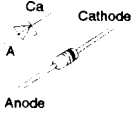
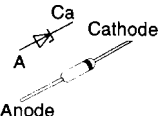
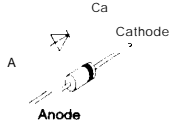
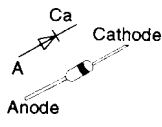
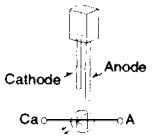
SW401

■ WHAT TO DO WHEN THE TAPE IS ENTANGLED



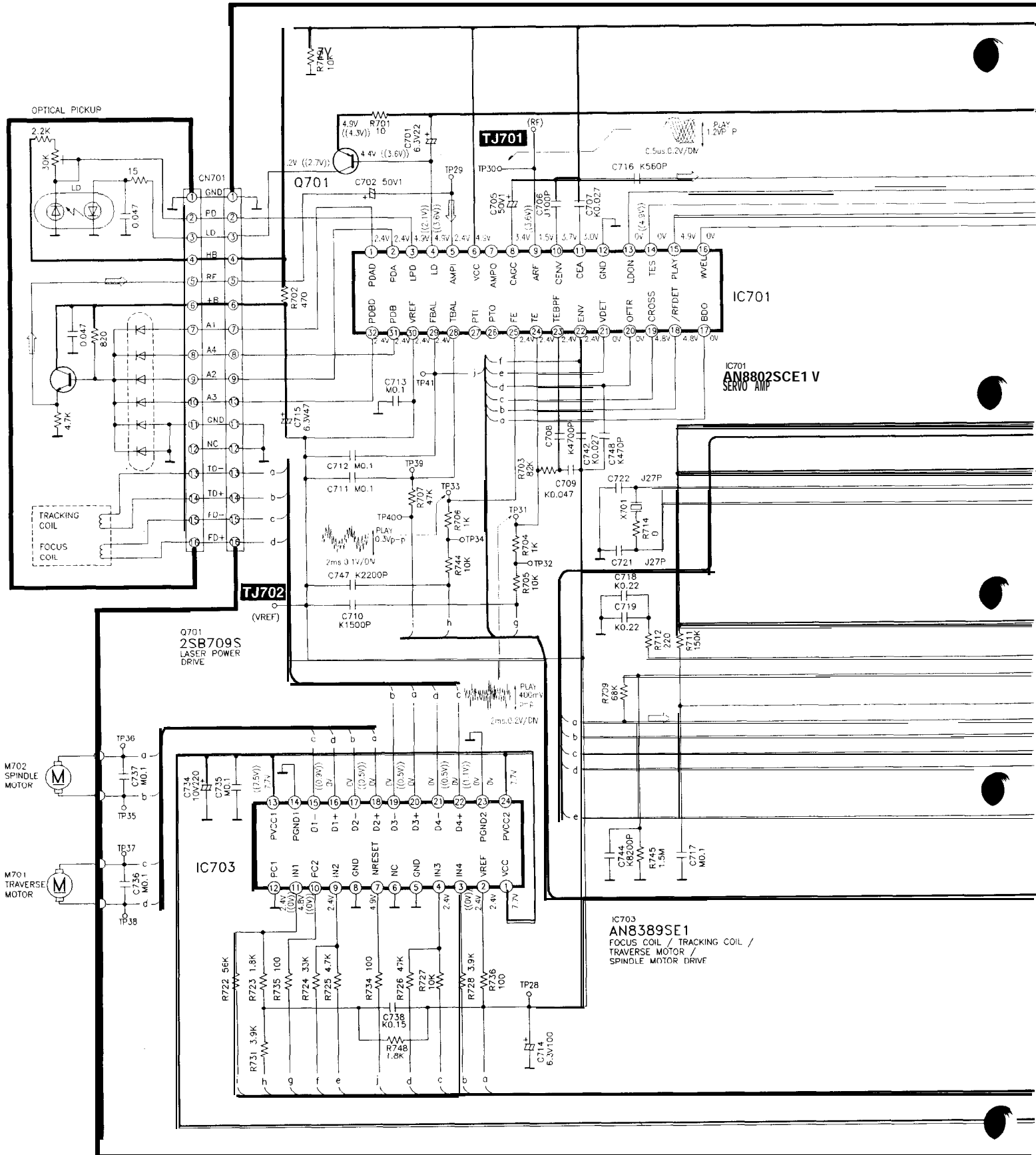
When the tape is caught in the pitch roller, etc. Release the tape by turning the pulley on the motor with the screwdriver in the direction of arrow.

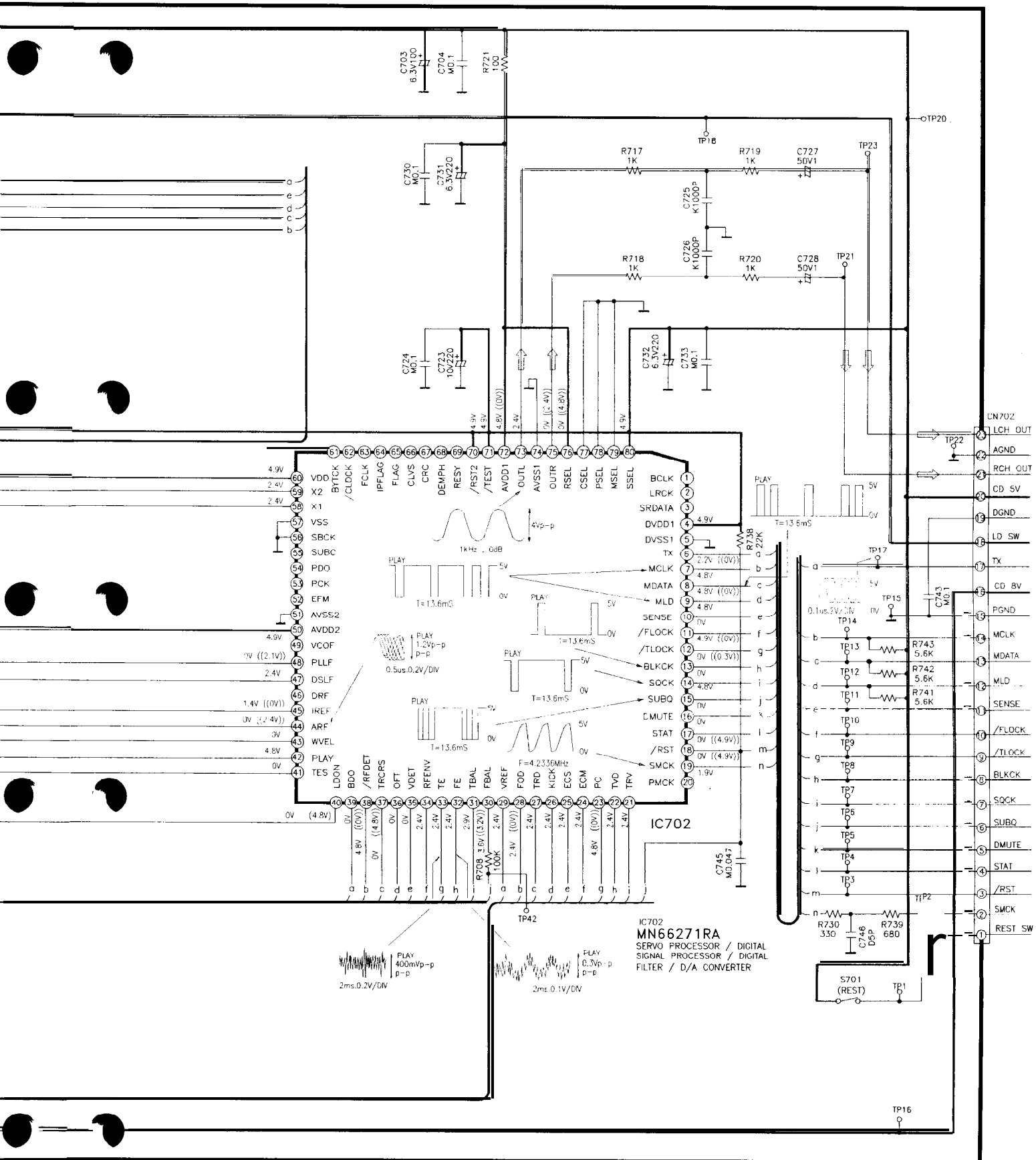
Terminal Guide of ICs, Transistors & Diodes

<p>AN71 35</p> 	<p>AN7205</p> 	<p>AN7317</p> 	<p>AN8389SE1</p> 	<p>AN8802SCE1 V 32 Pin</p> 	<p>BA1442A</p> 
<p>BA3936</p> 	<p>BA7755A</p> 	<p>M38222M2051 80 Pin</p> 	<p>MN66271 RA 80 Pin</p> 	<p>PST600DTA</p> 	<p>2SB709S</p> 
	<p>2SC1684QTA 2SC1684RTA 2SC1684STA</p>	<p>2SC2785FTA</p> 	<p>2SJ40CDTA</p> 	<p>BN1A4MTA</p> 	<p>2SC 1740SRTA RVTDTCC114EST</p> 
<p>2SK301QTA</p> 	<p>MA4056N-MTA</p> 	<p>RVDMTZ5RGBTA RVDMTZ6R8BTA</p> 	<p>RL203M11</p> 	<p>RVD1 SS1 33TA</p> 	<p>SLB55VRTE7</p> 

Schematic Diagram

A SERVO CIRCUIT



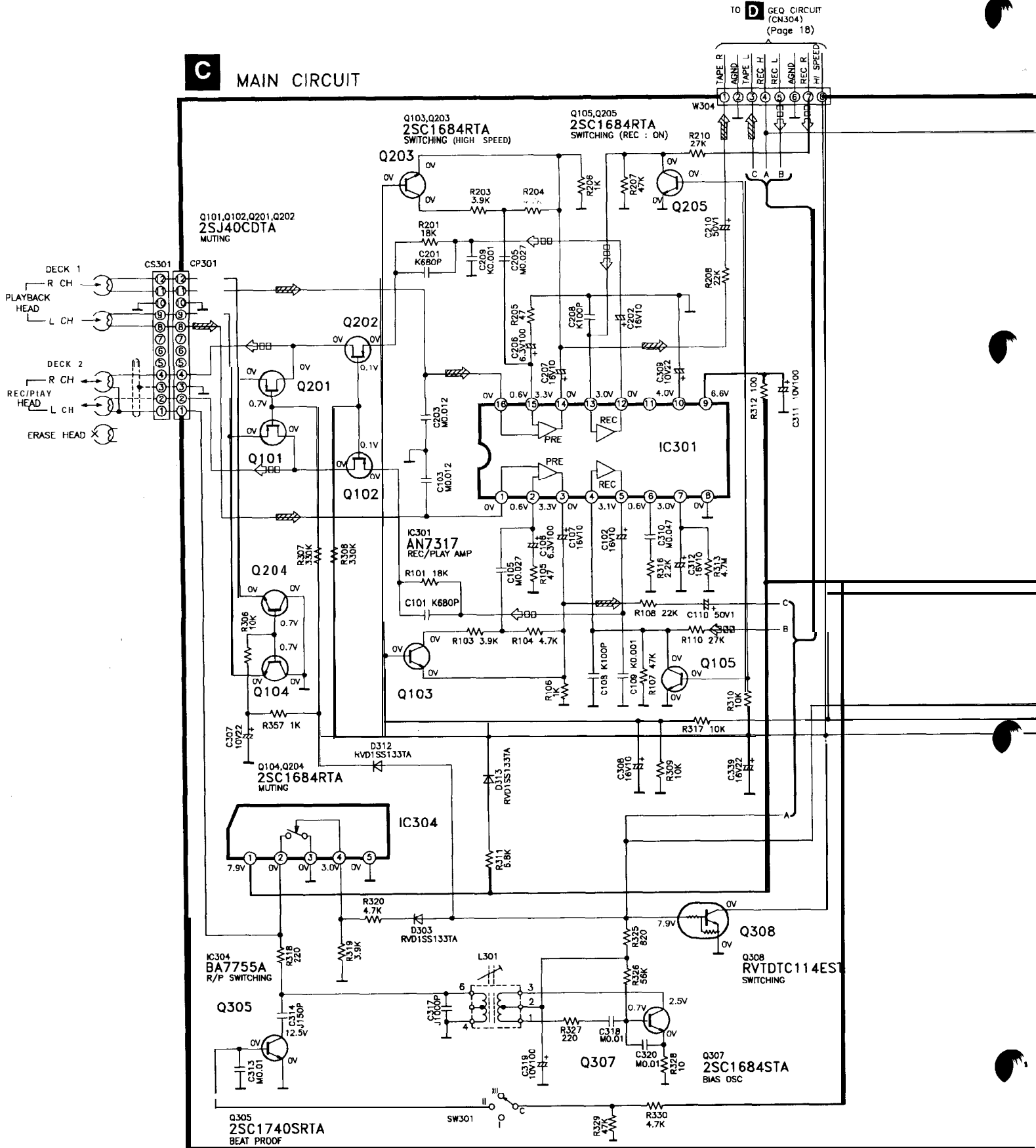


CN702
 1 LCH OUT
 2 AGND
 3 RCH OUT
 4 CD SV
 5 DGND
 6 LD SW
 7 TX
 8 CD 8V
 9 PGND
 10 MCLK
 11 MDATA
 12 MLD
 13 SENSE
 14 /FLOCK
 15 /TLOCK
 16 BLKCK
 17 SUBQ
 18 DMUTE
 19 STAT
 20 /RST
 21 SWCK
 22 REST SW

TO CONTROL CIRCUIT (CN702) (PAGE 17)

Schematic Diagram

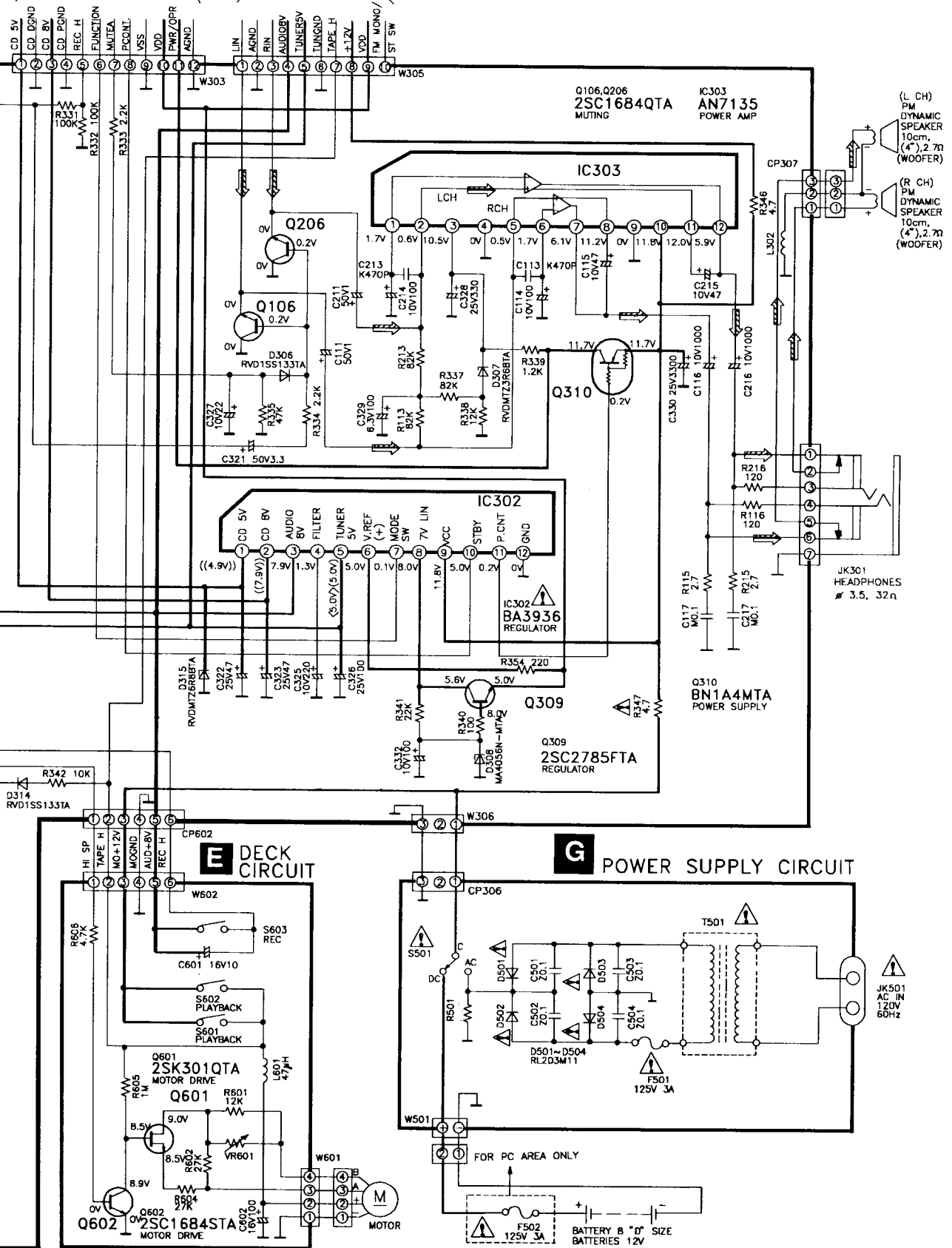
C MAIN CIRCUIT



TO D GEO CIRCUIT (CN304) (Page 18)

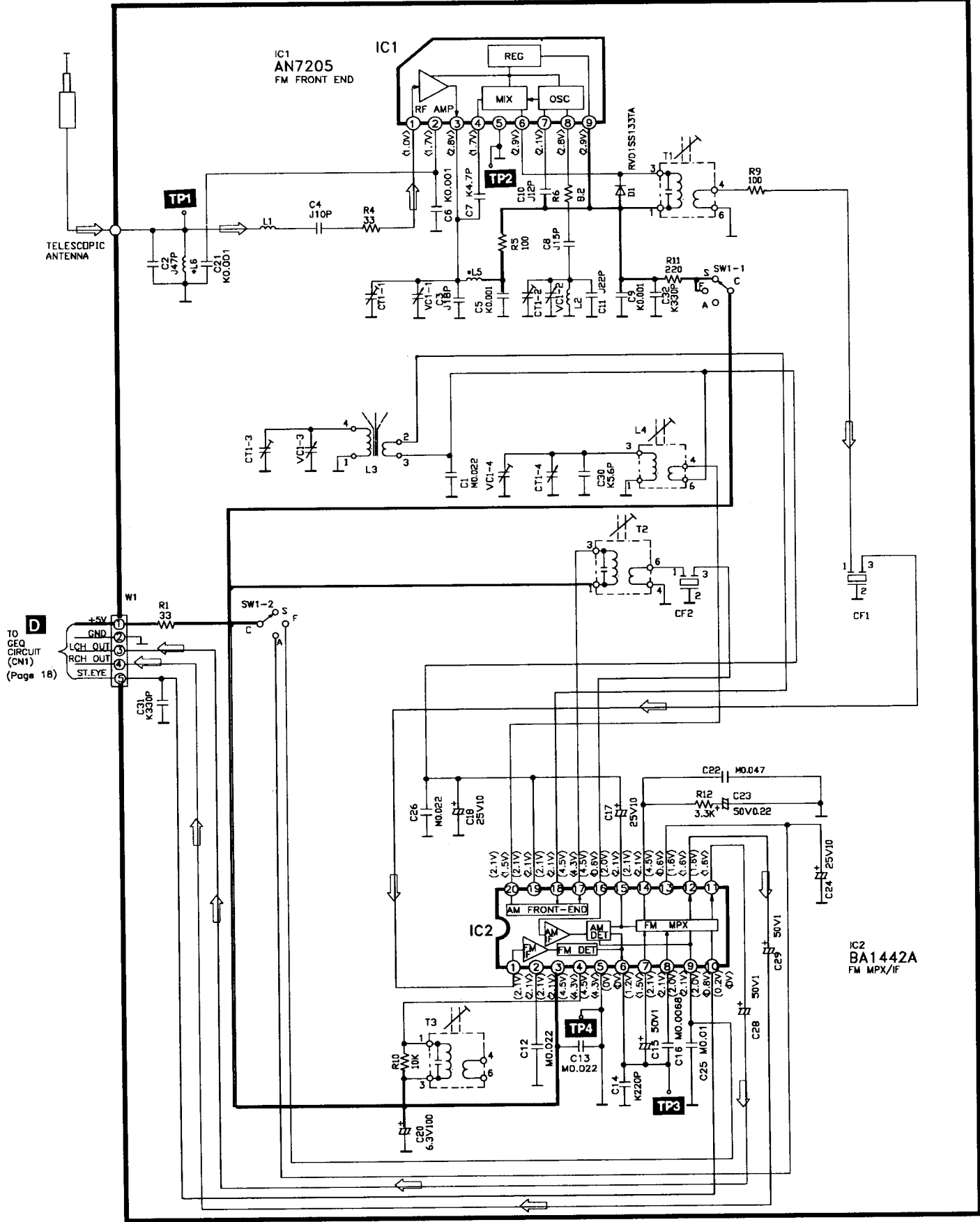
TO **F** CONTROL CIRCUIT (CN303) (Page 17)

TO **D** GEO CIRCUIT (CN305) (Page 18)



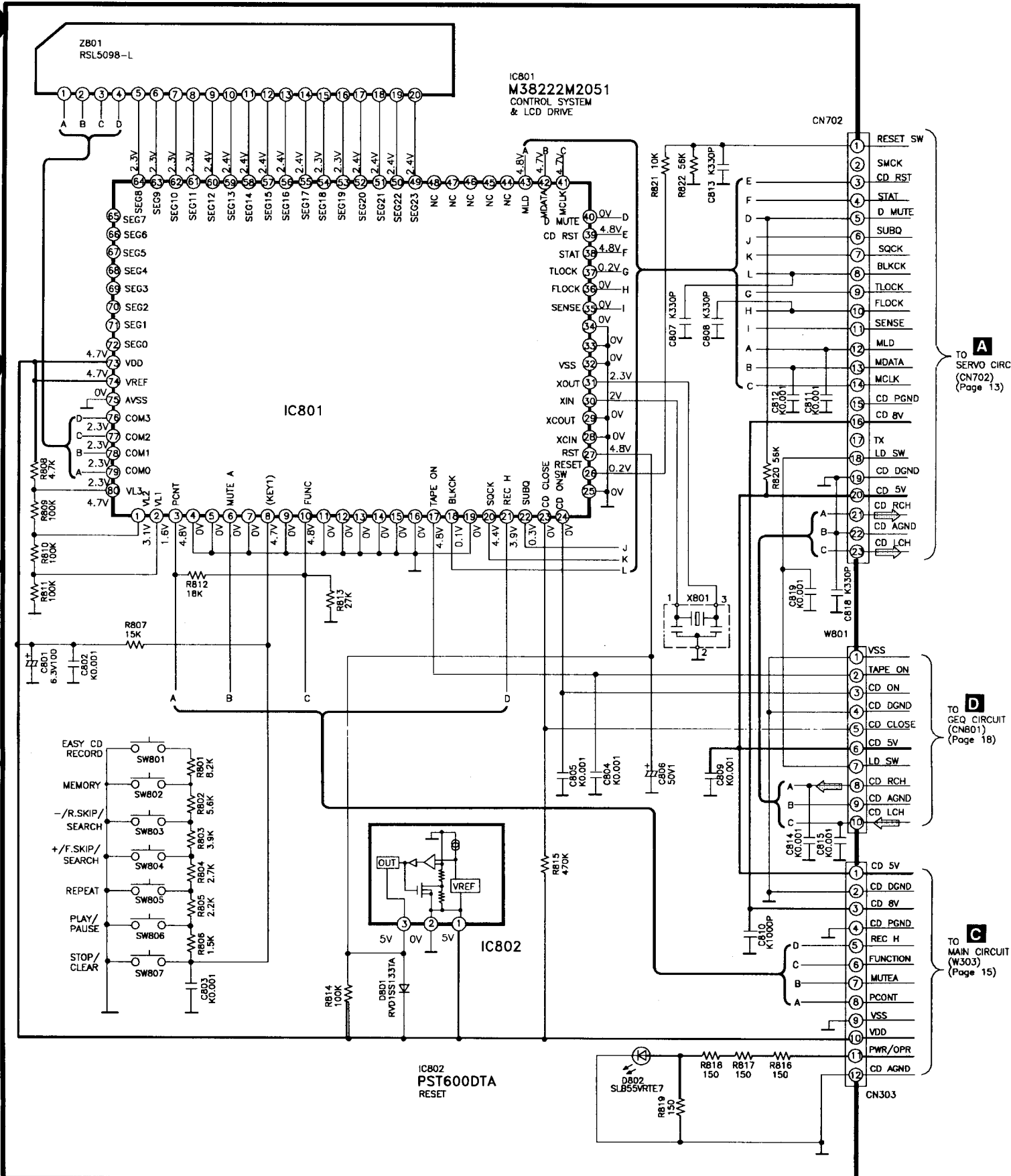
Schematic Diagram

B TUNER CIRCUIT



D
 TO GEO
 CIRCUIT
 (CN1)
 (Page 18)

F CONTROL CIRCUIT



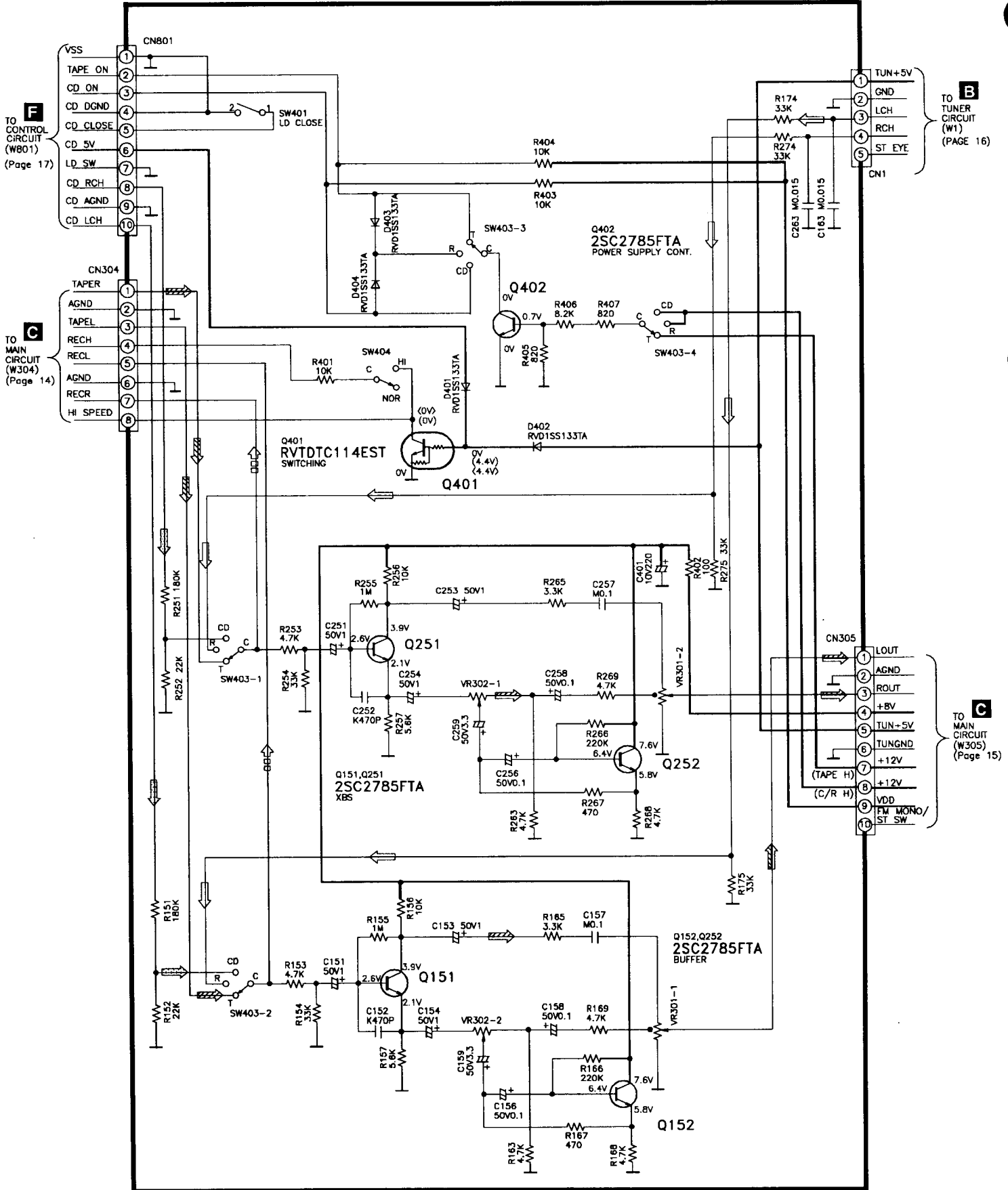
A TO SERVO CIRCUIT (CN702) (Page 13)

D TO GEO CIRCUIT (CN801) (Page 18)

C TO MAIN CIRCUIT (W303) (Page 15)

Schematic Diagram

D GEQ CIRCUIT



NOTES:

< For MAIN & POWER SUPPLY CIRCUIT >

- SW301 Beatproof Switch. (I...BEATPFIOOF I, II...BEATPROOF II)
- S501 AC/BatterySelect 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.
- 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.

c 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. (m/CLEAR)

< For SERVO CIRCUIT >

- S701 : Reset Switch.

<For TUNER CIRCUIT >

- SW1-1 - SW1-2 : Band select switch (S...FM STEREO, F...FM, A...AM)

c 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)

(Measurementcondition:)
	Radio :FM	60 dB, 30%mod	
	AM	74 dB/m, 30%mod	
	Tape :315 Hz, OdB		
	CD :1 kHz, OdB		

- 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

CAUTION !

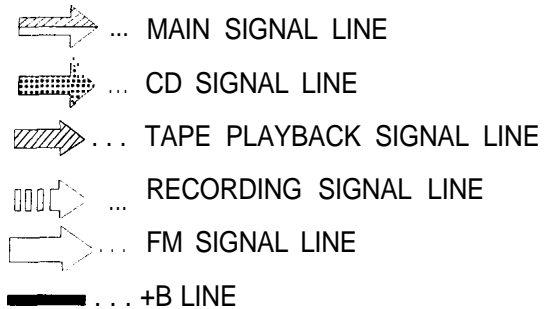
IC and LSI are sensitive to static electricity. Secondary trouble can be prevented by taking care during repair.

- Cover the parts boxes made of plastics with aluminum foil.
- Ground the soldering iron.
- Put aconductive mat on the work table.
- Do not touch the pins of IC or LSI with fingers directly.


• Important safety notice :

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

- This schematic diagram may be modifiedatanytime with thedevelopment of new technology.





CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE 3 A 125V FUSE



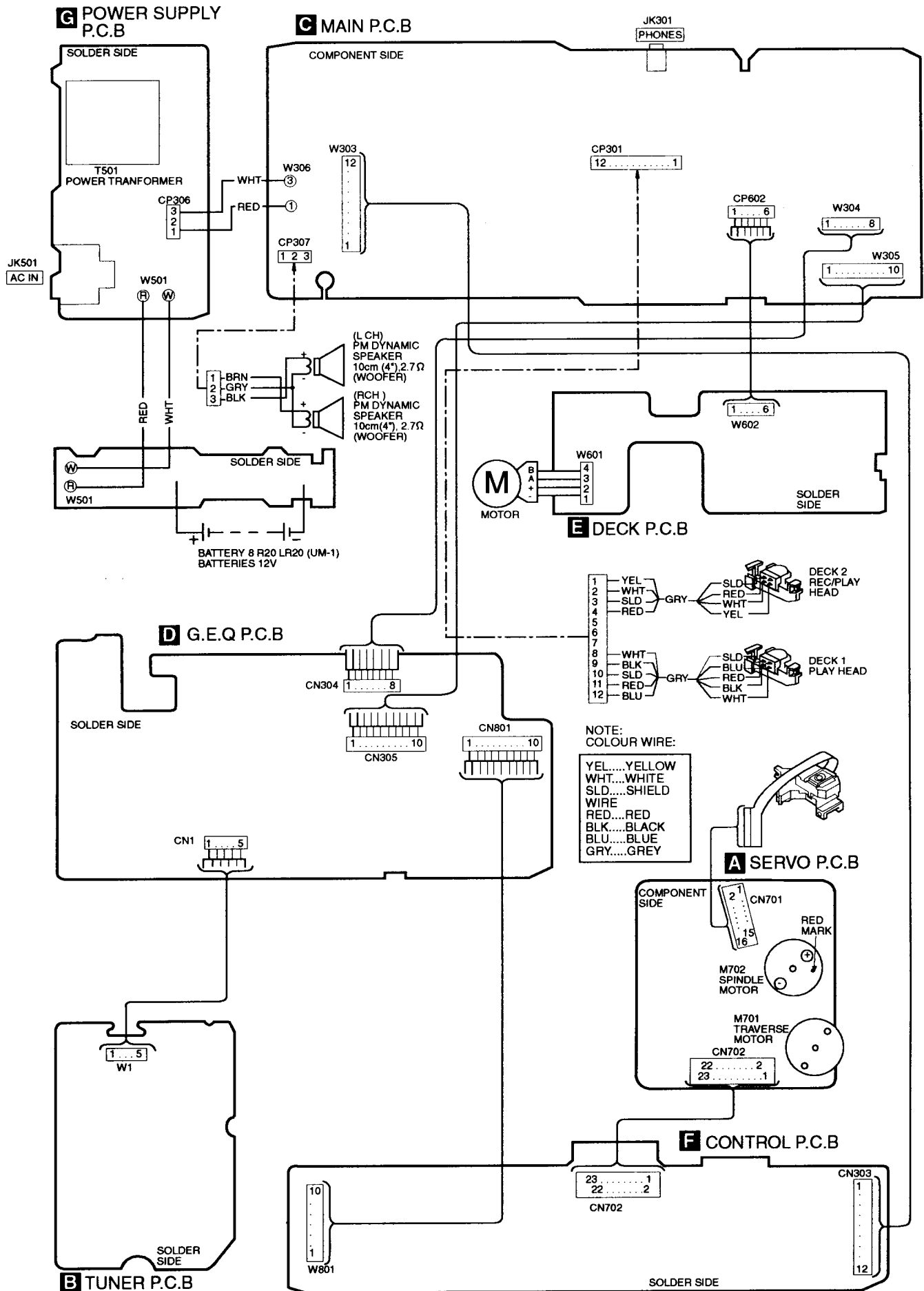
RISK OF FIRE-REPLACE FUSE AS MARKED.

FUSE CAUTION

 This symbol located near the fuse indicates that the fuse-used is a fast operating type. For continued protection against fire harzard, replace with the same type fuse. For fuse rating, refer to the rating adjacent to the symbol.

 Ce symbol indique que ie fusible utilise est a rapide. Pour une protection permanente, n'utiliser que des fusibles de meme type. Ce demier est indique la qu le present symbol est appose.

Wire Connection Diagram



Printed Circuit Board

1 2 3 4 5

A

B

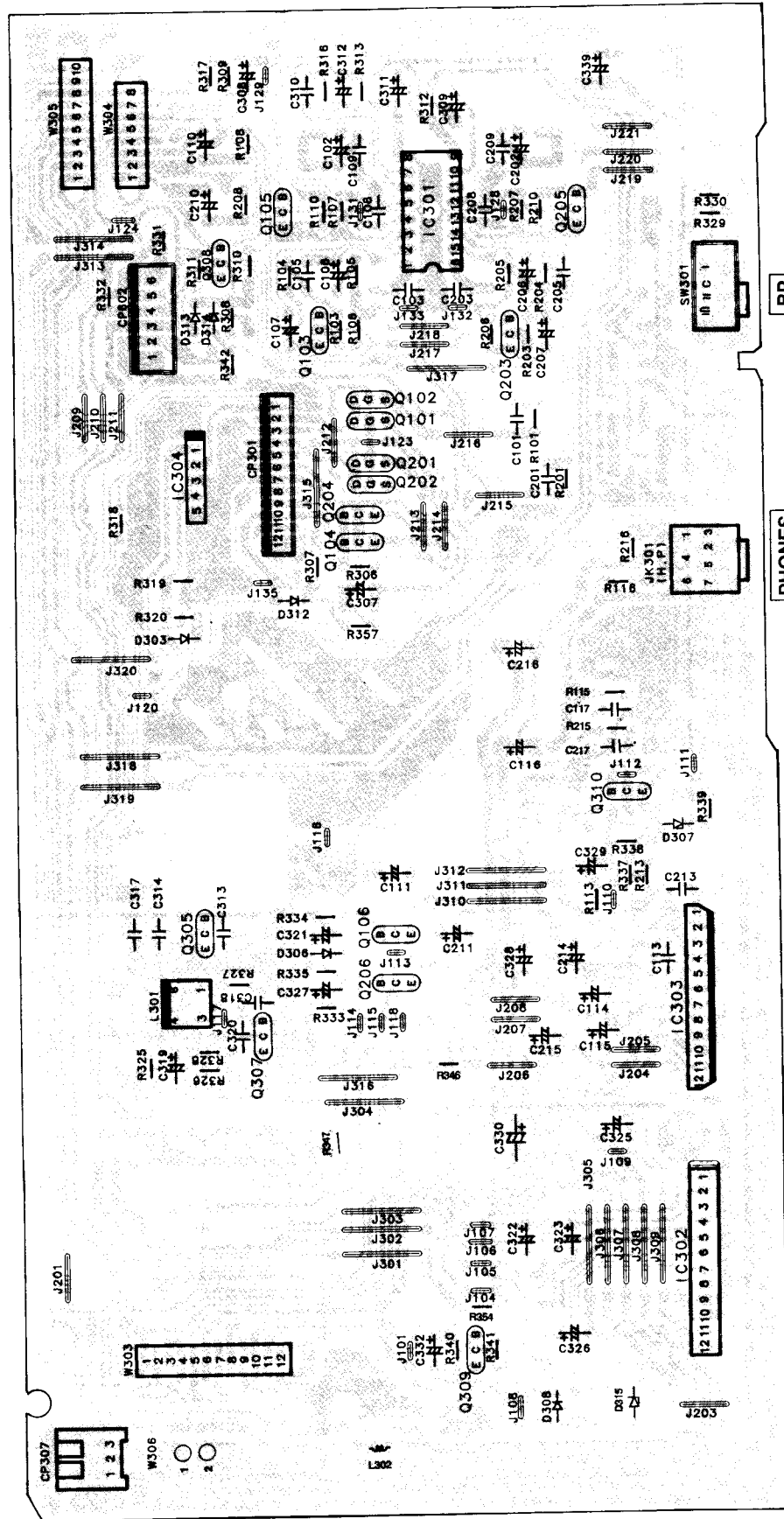
C

D

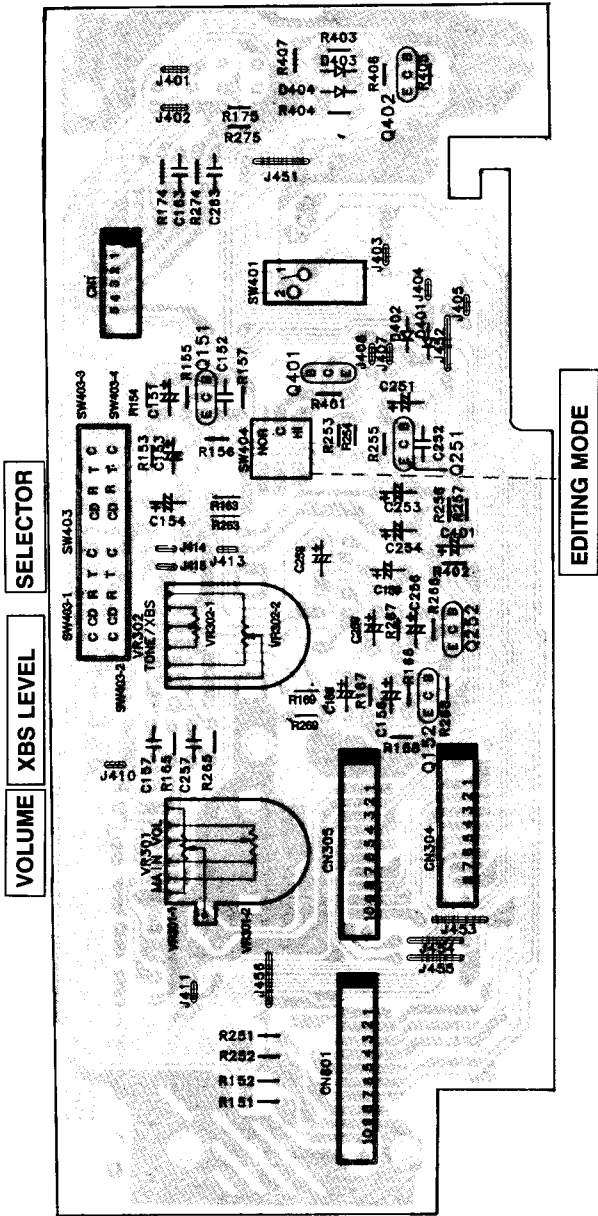
E

F

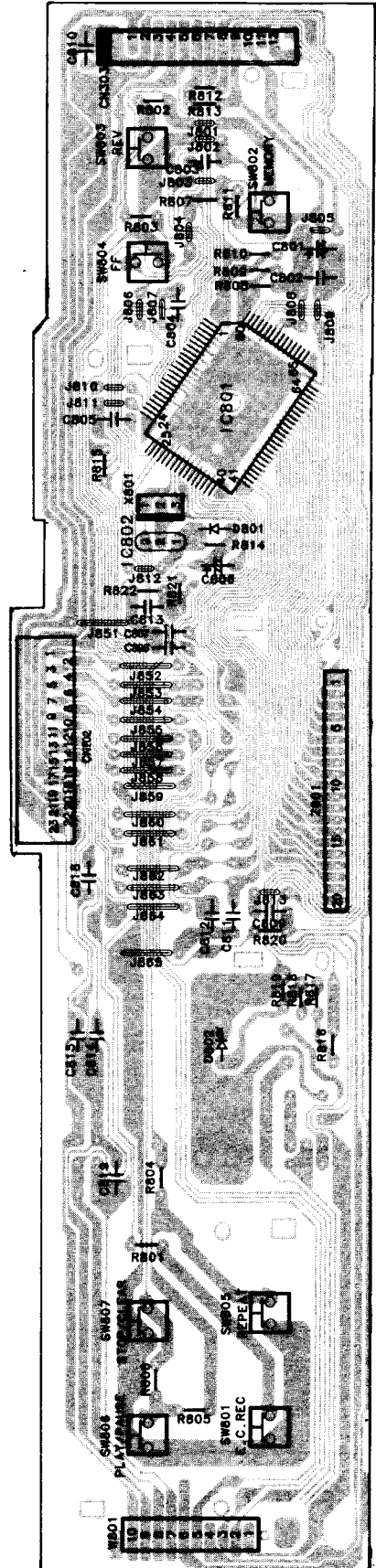
C MAIN P.C.B. (REP2048B)



D G.E.Q. P.C.B. (REP2046B)



F CONTROL P.C.B. (REP2046B)

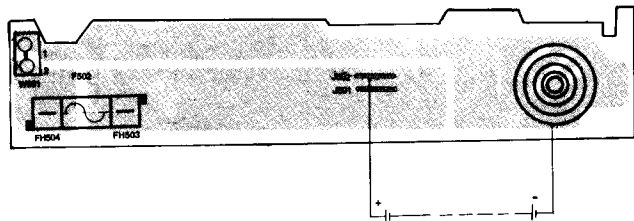
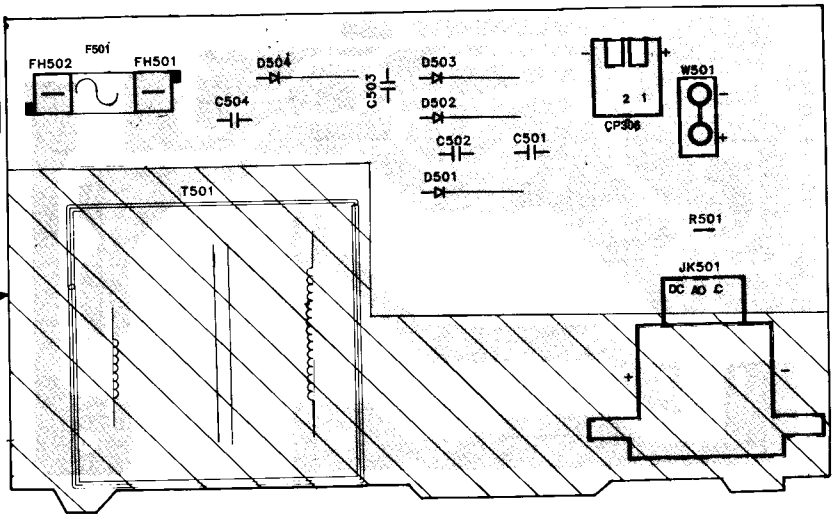


Printed Circuit Board

1 | 2 | 3 | 4 | 5

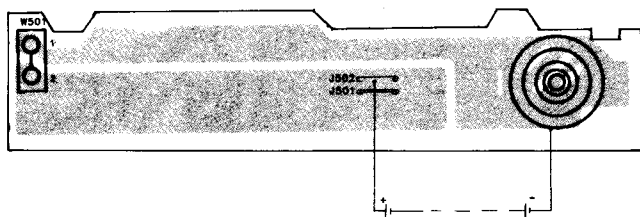
G POWER SUPPLY P.C.B. (REP2047B) ... PC (REP2047E) ... P

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



BATTERY 8 R20 / LR20
BATTERIES 12V

FOR PC ONLY



BATTERY 8 R20 / LR20
BATTERY 12V

FOR P ONLY

Terminal Function of ICs

IC702 (MN66271 RA)

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

Pin No.	Mark	I/O	Function
1	BCLK	0	Serial bit clock terminal (Not used, open)
2	LRCK	0	L/R discriminating signal (Not used, open)
3	SRDATA	0	Serial data (Not used, open)
4	DVDD1		Power supply (digital circuit) terminal
5	DVSS1	-	GND (digital circuit) terminal
6	TX	0	Digital audio interface signal
7	MCLK		Microprocessor command clock signal
8	MDATA		Microprocessor command data signal
9	MLD		Microprocessor command load signal
10	SENSE	0	Sense signal output (OFT, FESL, MAGEND, NAJEND, FQSAD, SFG)
11	/FLOCK	0	Optical servo condition (focus) ('L' : lead-in)
12	/TLOCK	0	Optical servo condition (tracking) ('L' : lead-in)
13	BLKCK	0	Sub-code block clock (f=75Hz)
14	SQCK		External clock signal input for sub-code Cl register
15	SUBQ	0	Sub-code Q code output
16	DMUTE		Muting input ('H' : mute)
17	STAT	0	Status signal output (CRC, CUE, CLVS, ITSTVP, FCLV, SQCK)
18	/RST		Reset input
19	SMCK	0	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	0	1/192-divided clock signal of crystal oscillating (fPMCK=88.2kHz) (Not used, open)
21	TRV	0	Traverse servo control output
22	TVD	0	Traverse drive signal output
23	PC	0	Spindle motor ON signal output ('L' : ON)
24	ECM	0	Spindle motor drive signal output (forced mode output)
25	ECS	0	Spindle motor drive signal output (servo error signal output)
26	KICK	0	Kick pulse output
27	TRD	0	Tracking drive output
28	FOD	0	Focus drive output
29	VREF		D/A (drive) output (TVD, ECS, TRD, FOD, FBAL, TBAL) Reference voltage input.

Pin No.	Mark	I/O	Function
30	FBAL	0	Focus balance adjustment output (Not used, open)
31	TBAL	0	Tracking balance adjustment output
32	FE		Focus error signal input (analog input)
33	TE		Tracking error signal input (analog input)
34	RFENV		RF envelope signal input
35	VDET		Vibration detection signal input ('H' : detection)
36	OFT		Off-track signal input ('H' : off track)
37	TRCRS		Track cross signal input
38	/RFDET		RF detection signal input ('L' : detection)
39	BDO		Dropout signal input ('H' : Dropout)
40	LDON	0	Laser on signal output ('H' : ON)
41	TES	0	Tracking error shunt signal output ('H' : shunt)
42	PLAY	0	Play signal out ('H' : PLAY)
43	WVEL	0	Double speed status signal output ('H' : DS)
44	ARF		RF signal input
45	IREF		Reference current input
46	DRF		DSL bias (Not used, open)
47	DSLFL	I/O	DSL loop filter
48	PLLFL	I/O	PLL loop filter
49	VCOFL	I/O	VCO loop filter (Not used, open)
50	AVDD2		Power supply input (for analog circuit)
51	AVSS2	-	GND (for analog circuit)
52	EFM	0	EFM signal output (Not used, open)
53	PCK	0	PLL extraction clock output (Not used, open) (fPCK=4.321 MHz during normal playback)
54	PDO	0	Phase comparison signal of EFM and PCK signals (Not used, open)
55	SUBC	0	Sub-code serial data output (Not used, open)
56	SBCK		Clock input for sub-code serial data (Not used, open)
57	vss	-	GND
58	X1		Crystal oscillating circuit input (f=16.9344MHz)
59	X2	0	Crystal oscillating circuit output (f=16.9344MHz)
60	VDD		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	IRST2	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 (AN8802SCE1 V) 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	VWEL	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
12	—	—	GND
13	—	—	GND
14	—	—	GND
15	—	—	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	RECH	I	REC detect signal input
22	SUBQ	I	CD subcode data input
23	CD CLOSE	I	CD close detect switch signal input
24	CDON	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	XCOUT	—	GND
30	XIN	I	Clock input
31	XOUT	O	Clock output

Pin No.	Mark	I/O Division	Function
32	VSS	—	GND
33	—	—	GND
34	—	—	GND
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
45	—	—	Not used
46	—	—	Not used
47	—	—	Not used
48	—	—	Not used
49	SEG23	—	LCD segment signal output
50	—	—	Not used
51	—	—	Not used
52	—	—	Not used
53	—	—	Not used
54	—	—	Not used
55	—	—	Not used
56	—	—	Not used
57	—	—	Not used
58	—	—	Not used
59	—	—	Not used
60	—	—	Not used
61	—	—	Not used
62	—	—	Not used
63	—	—	Not used
64	SEG8	—	LCD segment signal output
65	SEG7	—	LCD segment signal output
66	—	—	Not used
67	—	—	Not used
68	—	—	Not used
69	—	—	Not used
70	—	—	Not used
71	—	—	Not used
72	SEGO	—	LCD segment signal output
73	VDD	I	Power supply (+5V)
74	VREF	I	A/D converter reference voltage
75	AVSS	—	GND
76	COM3	—	LCD common signal output
77	—	—	Not used
78	—	—	Not used
79	COMO	—	LCD common signal output
80	VL3	I	LCD bias reference voltage V3

• IC703 (AI' 8389SE1)
Focus Co I / Tracking Coil / Traverse Motor / Spindle Motor

Pin No.	Mark	I/O	Function
1	VCC	I	Power supply terminal
2	VREF	I	Referencevoltage input
3	IN4	I	Motor driver (4) input
4	IN3	I	Motor driver (3) input
5	GND	---	Groundconnection
6	NC	---	Groundconnection
7	N R E S E T	I	Resetinput
8	GND	---	Groundconnection
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 (powercut) input (Not used, open)

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

■ Alignment Points

< CD PLAYER SECTION >

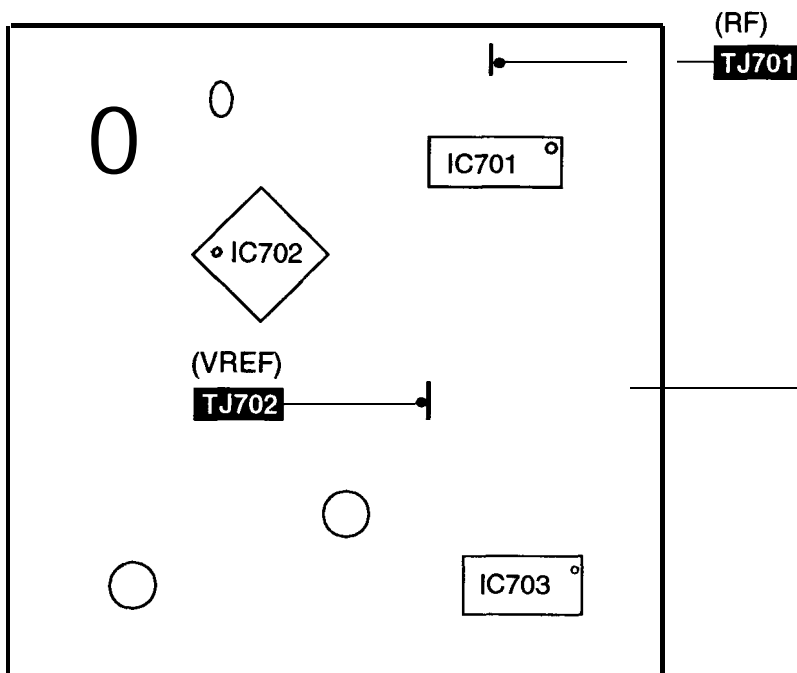


Fig.1

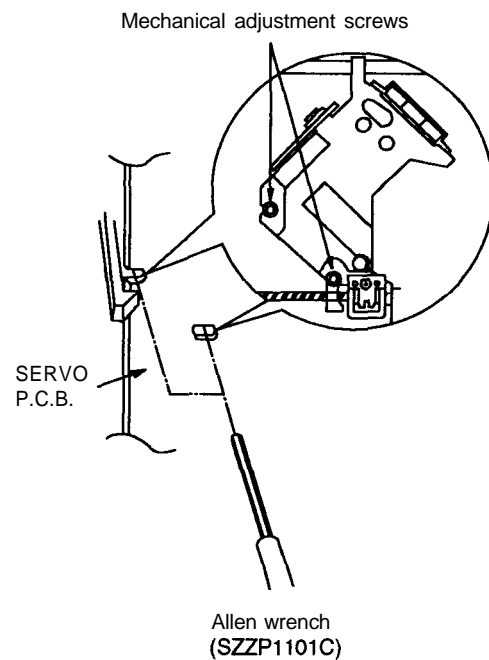


Fig. 2

Measurements and Adjustments

TUNER SECTION

ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE AT-TEMPTING ALIGNMENT

- Set power source voltage to 12 V DC.
- Set volume control to maximum
- Set band switch to AM 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 : • No FM STEREO alignment is required due to Tuner IC(BA1442A) is used.

AM-IF ALIGNMENT

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

AM-RF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Shown in Fig. 1)	REMARKS
CONNECTIONS	FREQUENCY				
"	511 kHz	Tuningcapacitor fully closed.	"	L4(AM OSC Coil)	Adjust for maximum output.
"	1753 kHz	Tuningcapacitor fully opened.	"	CT1 -4(AM OSC Trimmer)	Adjust for maximum output.
"	600 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.

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

FM-RF ALIGNMENT

Connect to test point TP1 through FM dummy antenna. Negative side to test point TP2	66.2 MHz	Variable capacitor fully closed.	Headphone Jack (32Ω) <i>(Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.)</i>	L2 (FM OSC Coil)	[*2] Adjust for maximum output.
	109.2 MHz	Variable capacitor fully opened.	"	CT1 -2 (FM OSC Trimmer)	"
	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

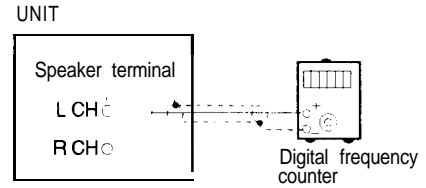
Note : No Azimuth Head Alignment is required due to Aztec Head is used in the cassette mechanism.

• TAPE SPEED ALIGNMENT (DECK 1, 2)

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

1. Test equipment connection is shown in figure.
2. Set the unit to "TAPE" position.
3. Playback the middle part of the test tape (QZZCWAT) in deck 2.
4. Adjust VR601 for the output value shown in 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 ± 50 Hz	. Normal speed (Deck 2)
Adjustment Target : Deck 2 ± 50 Hz	Normal speed (Deck 1)
Adjustment Target : 5100 Hz ~	. . . High speed

■ ALIGNMENT POINTS

< TUNER SECTION >

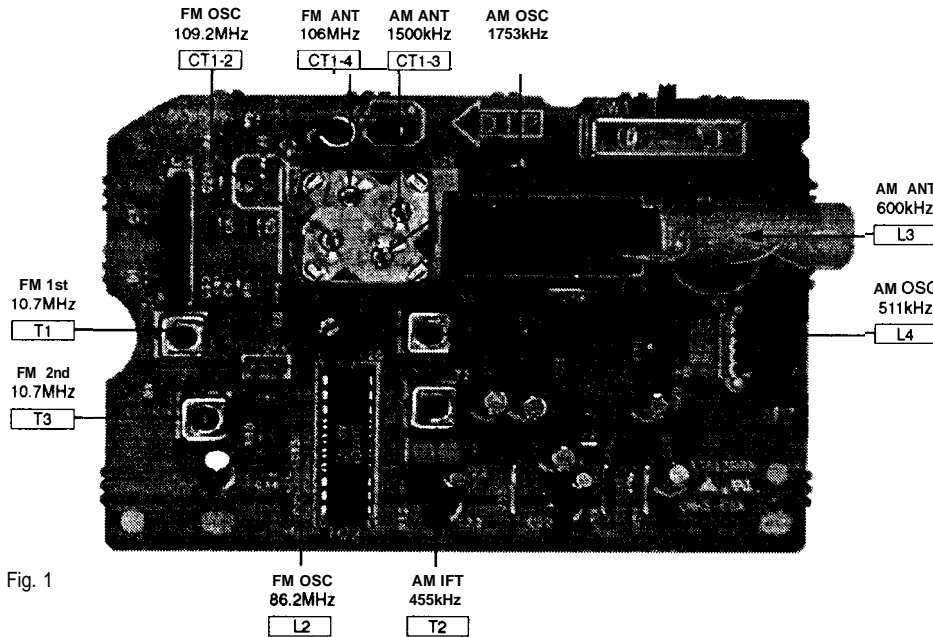


Fig. 1

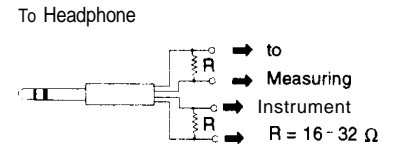


Fig. 2

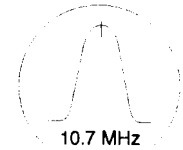


Fig. 3

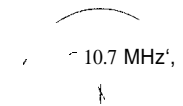


Fig. 4

< CASSETTE DECK SECTION >

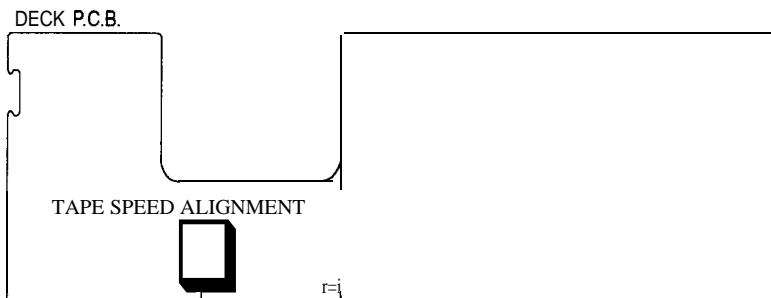


Fig. 5

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).

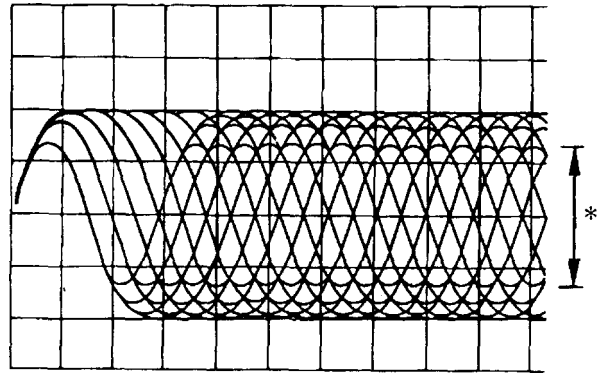
* Dual-beam oscilloscope with bandwidth of 30 MHz or better (with EXT. trigger and 1 :1 probe).

* 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 29)
Oscilloscope setting : VOLT 200mV.
SWEEP 0.5 μ s.
Input coupling AC.
 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 (SZZP1 101 C) until the vertical fluctuation of RF signal is minimized and the eye pattern is most stretched.
(Refer to Fig. 2 on page 29)
 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).

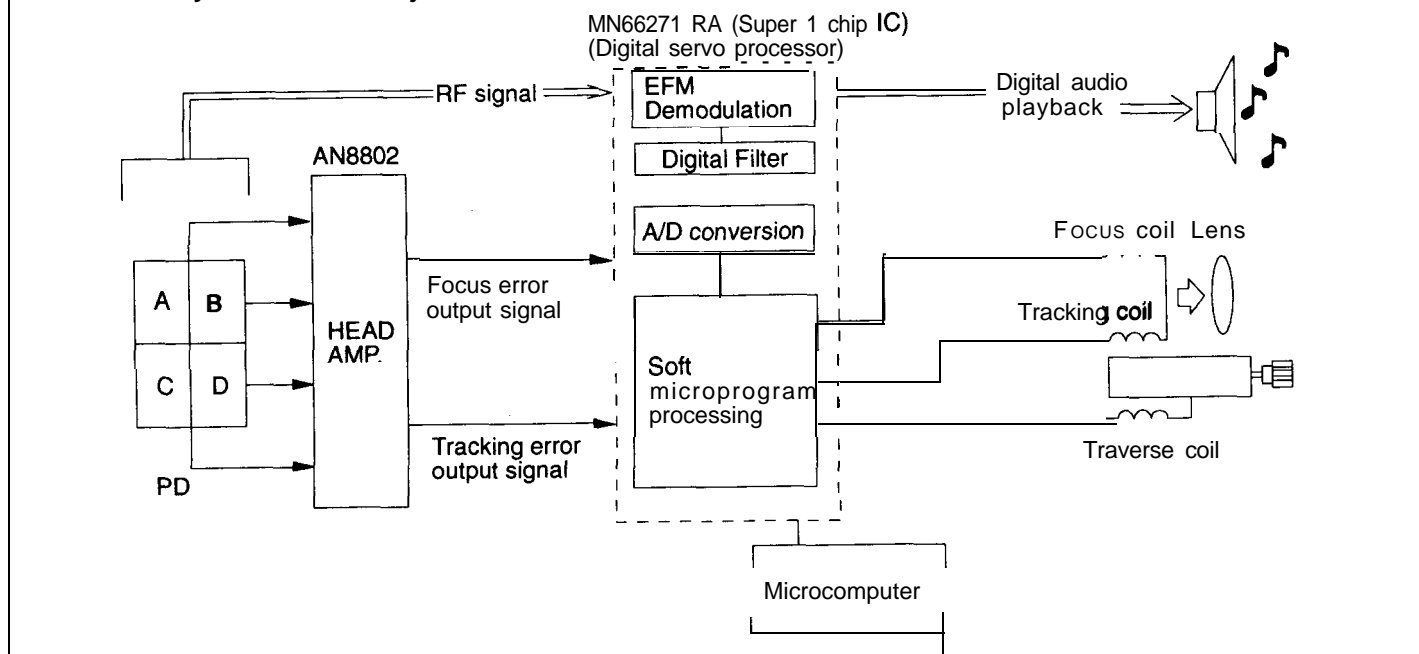
* Checking Playability

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

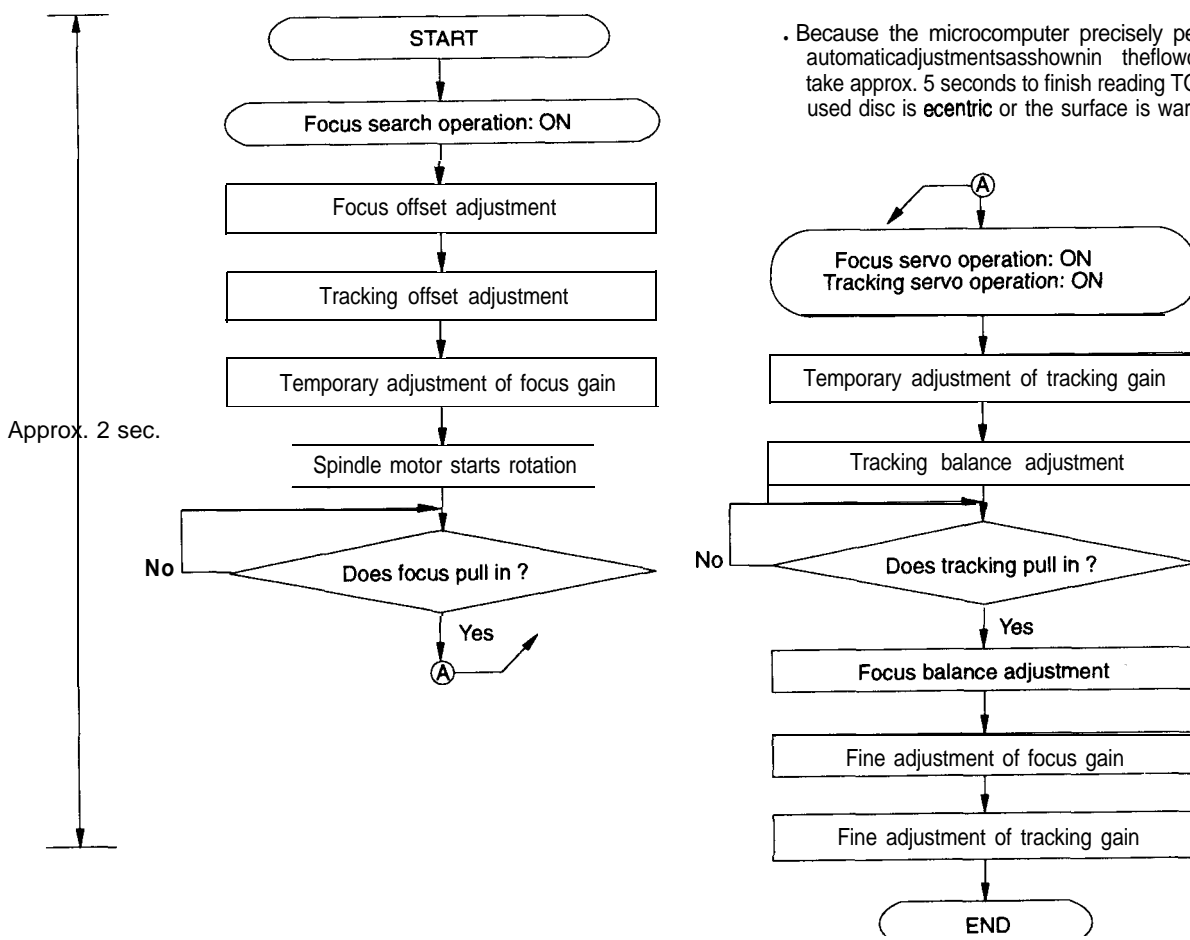
DIGITAL SERVO SYSTEM

This servo system has no adjustment VRs.



The following flow chart shows the sequence of automatic adjustments.

- Flow chart on automatic adjustment sequence



• Because the microcomputer precisely performs the automatic adjustments as shown in the flowchart, it will take approx. 5 seconds to finish reading TOC data if a used disc is **eccentric** or the surface is warped.

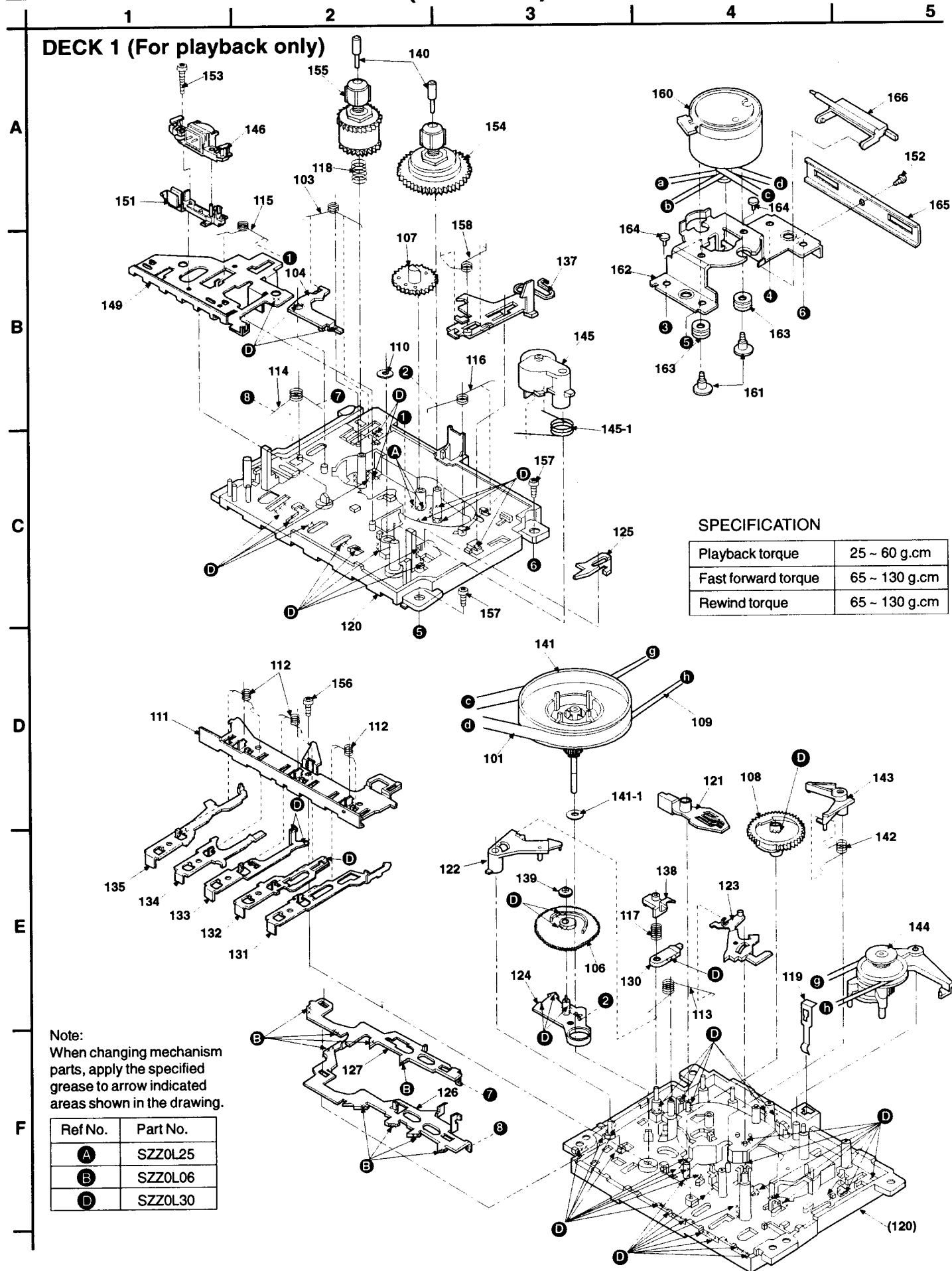
Mechanism Parts List

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

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
		CASSETTE MECHANISM		149	RMA0696	HEAD BASE ASS'Y	[M]
		(DECK 1)		151	RMQ0383	HEAD BASE	[M]
				152	XTN2+4F	EARTH LUG SCREW	
101	RDV0009	MAIN BELT B	[M]	153	XTN2+12F	SCREW	[M]
103	RMB0109-1	BRAKE SPRING	[M]	154	RXR0004	TAKE UP REEL ASS'Y	[M]
104	RML0116	BRAKE	[M]	155	RXR0005	SUPPLY REEL ASS'Y	[M]
106	RDG0057	IDLER GEAR	[M]	156	XTN2+6J	SCREW	
107	RDG0059	FF RELAY GEAR	[M]	157	XTW26+6L	SCREW	
108	RDK0005	CAM GEAR	[M]	158	RME0098-2	SPRING	[M]
109	RDV0006-1	RF BELT	[M]	160	RFKPxDT610PK	DC MOTOR ASS'Y	[M]
110	RHW16009	CAPSTAN WASHER	[M]	161	RHD26002	SCREW	
111	RMA0109	BACK PLATE	[M]	162	RMA0122	ANGLE	[M]
112	RMB0043-1	ROD OPERATION SPRING	[M]	163	RMG0102	RUBBER SPACE	[M]
113	RMB0045	AS SPRING	[M]	164	RMG0131	RUBBER SPACE	[M]
114	RMB0046-1	LOCK PLATE SPRING	[M]	165	RMA0121	ANGLE	[M]
115	RMB0047	HEAD PANEL SPRING	[M]	166	RML0085	LEVER	[M]
116	RMB0048	IDLER LEVER SPRING	[M]				
117	RMB0053	PAUSE LEVER SPRING	[M]				
118	RMB0125	BACK TENSION SPRING	[M]				
119	RMC0061	SPRING	[M]				
120	RFKRC090P-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 LEVE	[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]				

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
		(DECK 2)		245	RXP0015	PINCH ROLLER ASS'Y	[M]
				245-1	RMB0049	PINCH ARM SPRING	[M]
I 201	RDV0007	MAIN BELT	[M]	246	RBR4CY016-M	R/P HEAD	[M]
203	RMB0109-1	BRAKE SPRING	[M]	249	RMA0696	HEAD BASE ASS'Y	[M]
204	RML0116	BRAKE	[M]	251	RMQ0384	HEAD BASE	[M]
205	RBR2CY009	E HEAD	[M]	253	XTN2+12F	SCREW	[M]
206	RDG0057	IDLER GEAR	[M]	254	RXR0004	TAKE UP REEL ASS'Y	[M]
207	RDGO059	FF RELAY GEAR	[M]	I 255	RXR0005	SUPPLY REEL ASS'Y	[M]
208	RDK0005	CAM GEAR	[M]	256	XTN2+6J	SCREW	
209	RDV0006-1	R F B E L T	[M]	257	XTW26+6L	SCREW	
210	RHW16009	CAPSTAN WASHER	[M]	258	RME0098-2	SPRING	[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	RMBO048	IDLER LEVER SPRING	[M]				
217	RMBO053	PAUSE LEVER SPRING	[M]				
218	RMB0125	BACK TENSION SPRING	[M]				
219	RMC0061	SPRING	[M]				
220	RFKRCT090P-K	CHASSIS ASS'Y	[M]				
221	RML0071	SWAY LEVER	[M]				
222	RML0072	AS RELEASE LEVER	[M]				
223	RML0073-1	AS PROTECT LEVER	[M]				
224	RML0074	IDLER LEVER	[M]				
225	RML0076	EJECT SELECTION LEVE	[M]				
226	RML0077	LOCK PLATE	[M]				
227	RML0078	FUNCTION PLATE	[M]				
228	RML0080	E HEAD ARM	[M]				
229	RML0081-1	LEVER	[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]				
236	RMM0028	REC ROD	[M]				
237	RMM0029	EJECT SLIDE LEVER	[M]				
238	RMR0211	PAUSE BUSH	[M]				
239	RMR0227	IDLER GEAR BUSH	[M]				
240	RMS0055	REEL SHAFT	[M]				
241	RXF0012	FLYWHEEL ASS'Y	[M]				
241-1	RHW21008	WASHER	[M]				
242	RMB0044	TRIGGER SPRING	[M]				
243	RML0075	TRIGGER LEVER	[M]				
244	RXP0014	RF CLUTCH ASS'Y	[M]				

Mechanism Parts Location (RAA0921)



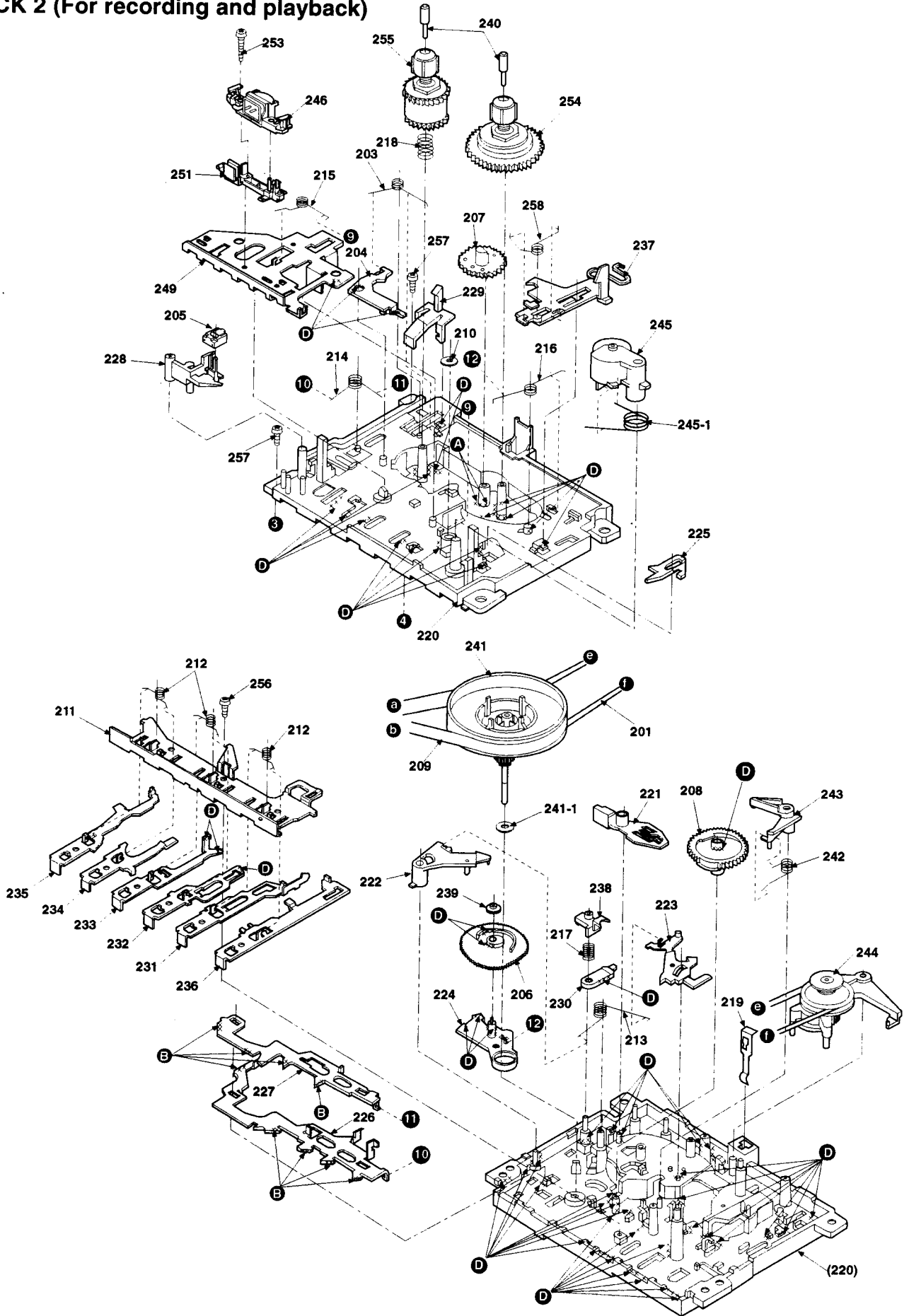
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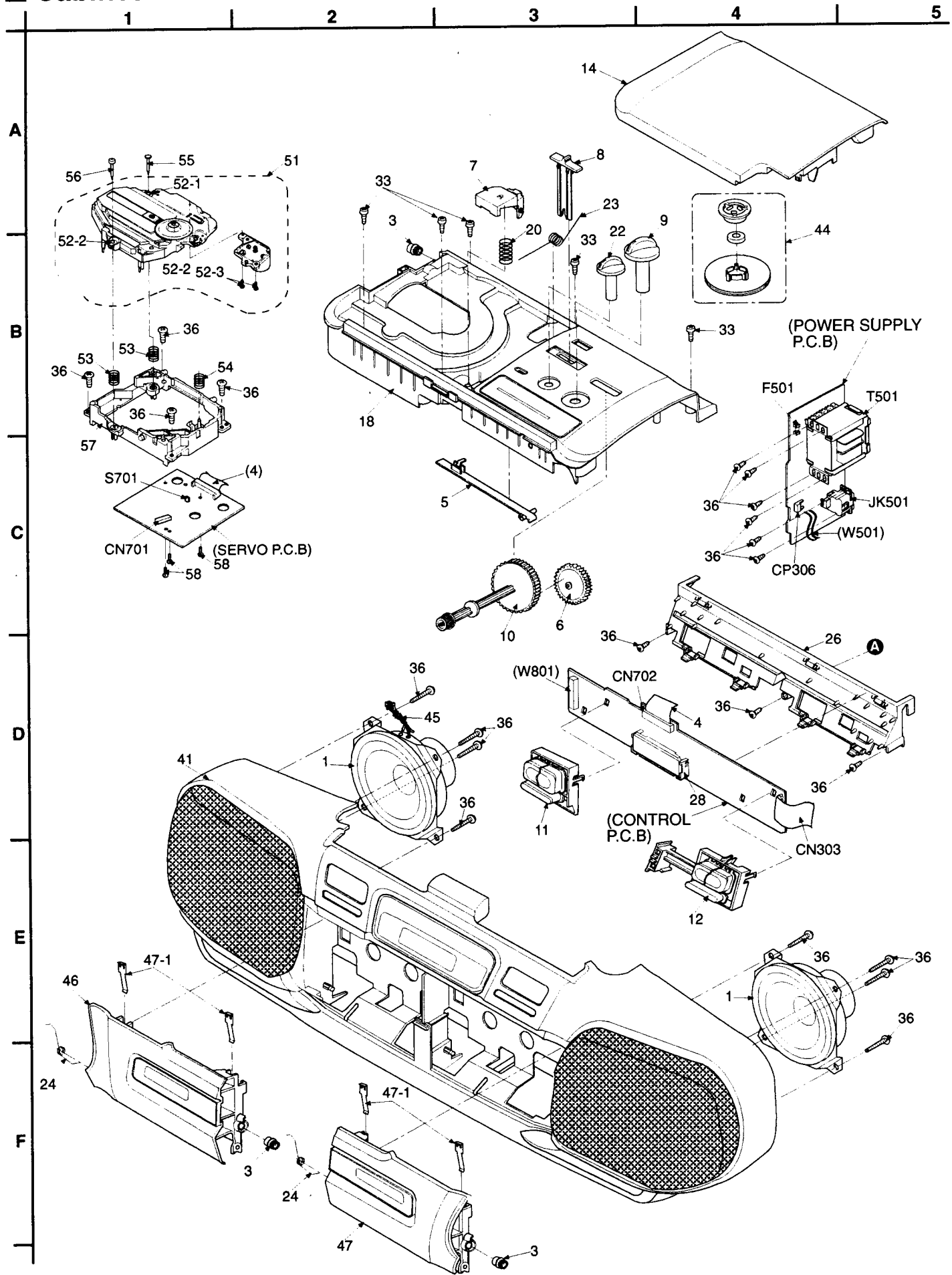
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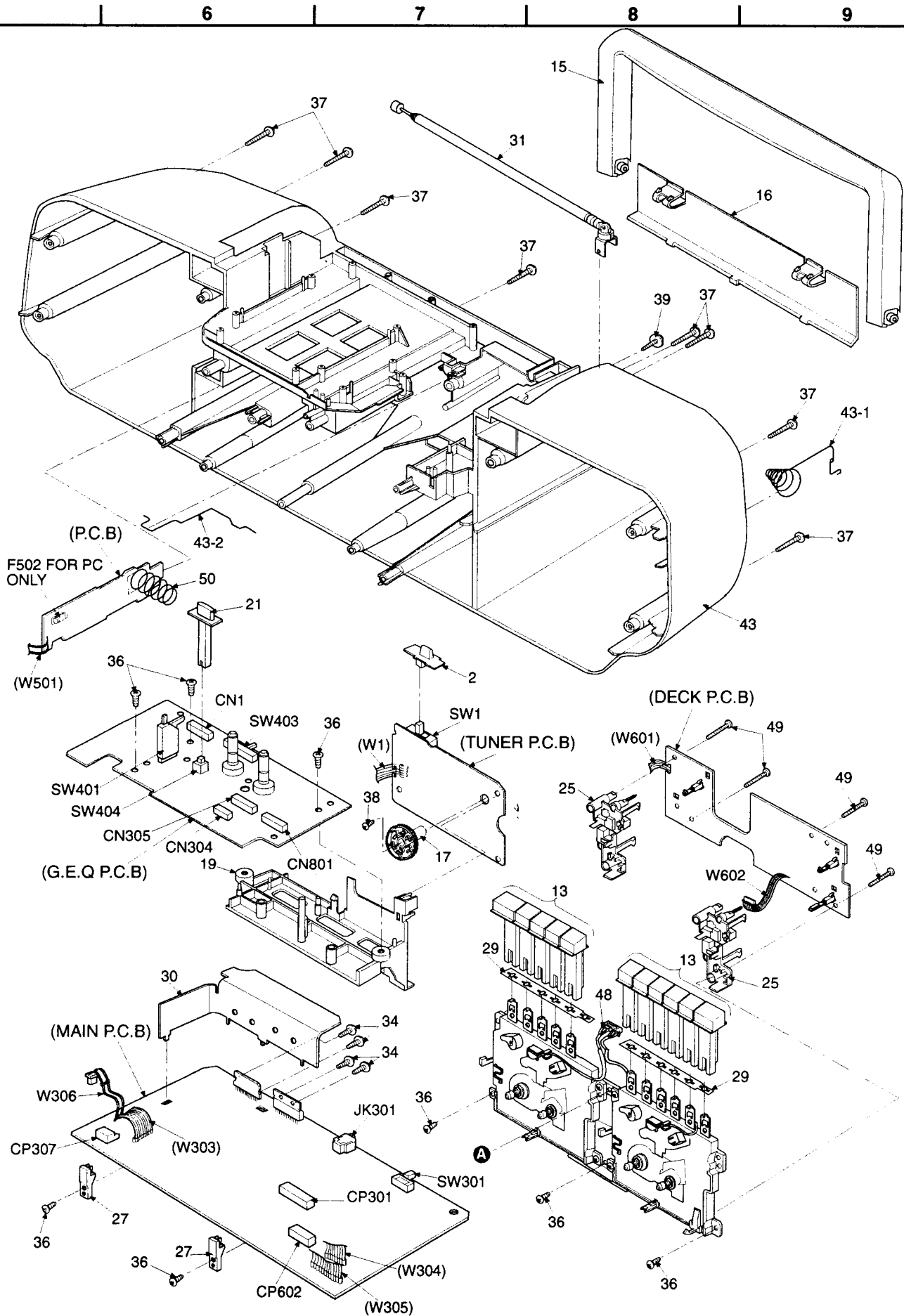
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DECK 2 (For recording and playback)

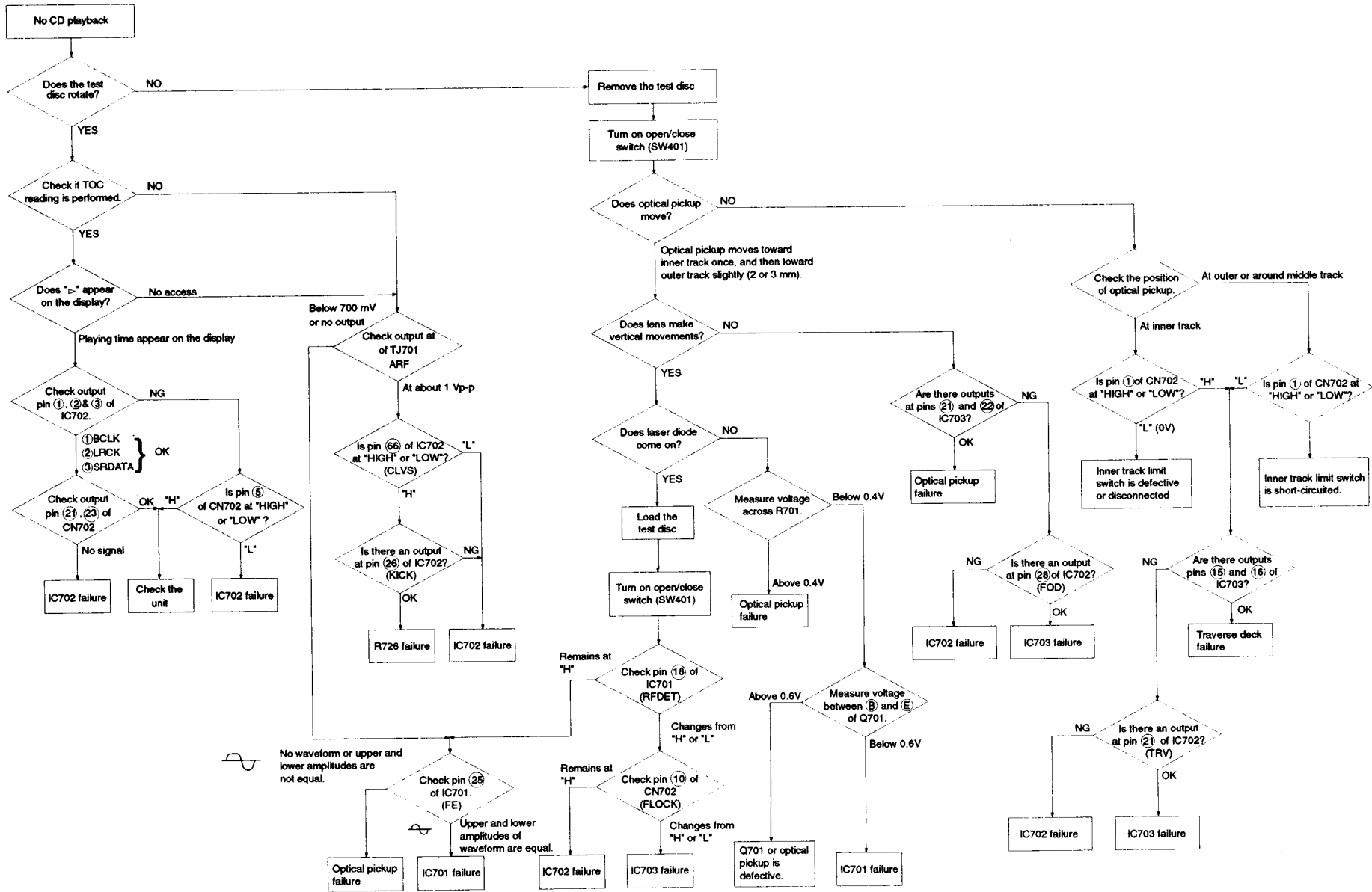


Cabinet Parts Location





Troubleshooting Guide



■ Replacement Parts List

Notes: * Important safety notice:

Components identified by Δ 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.

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

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS					
1	EASG10P553C2	SPEAKER	[M]	43	RFKHXT30PCK	BACK CAB. ASS'Y	[M] (PC)
2	RGV0142-K	BAND KNOB	[M]	43-1	RJC91006	BATT. TERMINAL	[M]
3	RDG0183-L	DAMPER GEAR	[M]	43-2	RJR0132	R. ANT. TERMINAL	[M]
4	REE0606	FFC WIRE	[M]	44	RFKNRXDS15PA	DISC HOLDER ASS'Y	[M]
5	RGJ0016-W	POINTER	[M]	45	REX0643	SP. CONNECT WIRE	[M]
6	RDG0293	MID GEAR (2 BAND)	[M]	46	RFKLXDT30E1	CASS. LID ASS'Y(L)	[M]
7	RGU1166-K	CD EJECT BUTTON	[M]	47	RFKLXDT30E2	CASS. LID ASS'Y(R)	[M]
8	RGV0143-K	FUNCTION KNOB	[M]	47-1	RUS757ZAA	HALF SPRING	[M]
9	RGW0211-K	VOL. KNOB	[M]	48	REX0644	HEAD WIRE DECK 1 & 2	[M]
10	RGW0213-K	TUN. KNOB	[M]	49	XTN2+14GF	SCREW	[M]
11	RGZ0025-K	CD OPR. BUTTON (L)	[M]	50	RJC511YA	BATTERY TERMINAL	[M]
12	RGZ0026-K	CD OPR. BUTTON (R)	[M]	51	RAE0113Z	TRAVERSE UNIT	
13	RGZ0024-K	MECHA BUTTON	[M]	52-1	SHGD112	FLOATING RUBBER (A)	
14	RKF0413-K	CD LID	[M]	52-2	SHGD113-1	FLOATING RUBBER (B)	
15	RKH0027-K	HANDLE	[M]	52-3	XQS2+A35FZ	SCREW	
16	RKK347ZB-0	BATT. COVER	[M]	53	RME0109	FLOATING SPRING A	
17	RDG0294	VC GEAR (2 BAND)	[M]	54	RME0142	FLOATING SPRING B	
18	RFKKXDT30GTK	TOP CAB. ASS'Y	[M]	55	RMS0123-1	FIXED PIN A	
19	RMK0272	TUNER HOLDER	[M]	56	RMS0350	FIXED PIN B	
20	RMB0244	CD BUTTON SPRING	[M]	57	RMR0698-K	TRAVERSE CHASSIS	
21	RGU1167-K	EDIT BUTTON	[M]	58	XTV2+6G	SCREW	
22	RGW0212-K	TONE KNOB	[M]			INTEGRATED CIRCUITS	
23	RME0147	CD OPEN SPRING	[M]	IC1	AN7205	IC. FM RF	
24	RME0162	CASS EJECT SPRING	[M]	IC2	BA1442A	IC. MPX / IF	[M]
25	RMR0368	PCB CHASSIS	[M]	IC301	AN7317	IC. REC/PLAY AMP	[M]
26	RMK0266	PCB HOLD CHASSIS	[M]	IC302	BA3936	IC. REGULATOR	Δ
27	RMR0631-K	PCB HOLDER	[M]	IC303	AN7135	IC. POWER	
28	RMN0242	LCD HOLDER	[M]	IC304	BA7755A	IC. SWITCHING	
29	RMX0045	SPACER	[M]	IC801	M38222M2051	IC. CD CONTROL MCON	[M]
30	RMY0153	HEATSINK	[M]	IC802	PST600DTA	IC. RESET	
31	XEARR175ED-Y	ROD ANTENNA				TRANSISTORS	
33	XTV3+12GFZ	TOP CAB SCREW		Q101	2SJ40CDTA	TRANSISTOR	
34	XTV3+10F	HEAT SINK SCREW		Q102	2SJ40CDTA	TRANSISTOR	
36	XTV3+12G	SCREW		Q103	2SC1684RTA	TRANSISTOR	
37	XTV3+20G	CASING SCREW		Q104	2SC1684RTA	TRANSISTOR	
38	XYN26+C6	SCREW		Q105	2SC1684RTA	TRANSISTOR	
39	XYN3+F8FY	ROD ANT. SCREW		Q106	2SC1684QTA	TRANSISTOR	
41	RFKGRXDT30EK	FRONT CAB. ASS'Y	[M]				
43	RFKHXT30PK	BACK CAB. ASS'Y	[M] (P)				

Ref No.	Part No.	Part Name & Description	Remarks
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	
Q307	2SC1684STA	TRANSISTOR	
Q308	RVTDTC114EST	TRANSISTOR	
Q309	2SC2785FTA	TRANSISTOR	
Q310	BN1A4MTA	TRANSISTOR	[M]
Q401	RVTDTC114EST	TRANSISTOR	
Q402	2SC2785FTA	TRANSISTOR	
Q601	2SK301QTA	TRANSISTOR	[M]
Q602	2SC1684STA	TRANSISTOR	
		DIODES	
D1	RVD1SS133TA	DIODE	
D303	RVD1SS133TA	DIODE	
D306	RVD1SS133TA	DIODE	
D307	RVDMTZ5R6BTA	DIODE	
D308	MA4056N-MTA	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	
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	EWCUAF20C54	VR, XBS	[M]
VR601	EVNDXAAO0B24	VR, ZERO VOLTAGE	

Ref No.	Part No.	Part Name & Description	Remarks
		VARIABLE CAPACITOR	
VC1	RCV4PCT0V 1-A	VARIABLE CAPACITOR	[M]
		SWITCHES	
S501	RJJ1SM02-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]
SW301	RSS2A56ZA-H	SW. B.P./FM ST	[M]
SW401	RSH1A012-U	SW. CD OPEN/CLOSE	
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	EVQ2 1405R	SW. REPEAT	
SW806	EVQ21405R	SW. PLAY/PAUSE	
SW807	EVQ21405R	SW. STOP/CLEAR	
		CONNECTORS	
CN1	RJSIA5205	CONNECTOR (5P)	[M]
CN303	RJSIA5212	CONNECTOR (12P)	[M]
CN304	RJSIA5208	CONNECTOR (8P)	[M]
CN305	RJSIA5210	CONNECTOR (10P)	[M]
CN801	RJSIA5210	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	I FM osc COIL	[M]
L3	RLV2C018-0	AM FERRITE ANT	[M]
L4	RL02B105-M	COIL	
L301	RL09B 17-T	REC BIAS OSC COIL	
L302	RLB1BVBV-Y	FERRITE BEAD	[M]
L601	RLQZB470KT-D	COIL	
T1	RLI4B 153-M	FM IFT	
T2	RLI2B458-M	AM IFT	
T3	RLI4B 153-M	FM IFT	
T501	RTP1U1C002-X	POWER TRANSFORMER	[M] ⚠

Ref No.	Part No.	Part Name & Description	Remarks
		DISPLAY	
Z801	RSL5098-L	LCD	[M]
		CERAMIC FILTERS	
CF1	RVF107WDZT	FM CF	
CF2	RVFSFU455B	AM CF	
		OSCILLATOR	
X801	EF0EC4194T4	CERAMIC OSC	
		FUSES	
F501	XBA1C30NBAL	FUSE	[M] ▲
F502	XBA1C30NBAL	FUSE	[M] (PC)▲
		FUSE HOLDERS	
FH501	EYF52BC	FUSE HOLDER	
FH502	EYF52BC	FUSE HOLDER	
FH503	EYF52BC	FUSE HOLDER	(PC)
FH504	EYF52BC	FUSE HOLDER	(PC)
		JACKS	
JK301	RJJ37TK01-C	JK, HP	
JK501	RJJ1SM02-H	JK, AC	▲
		WIRES	
W306	REX0642	POWER WIRE UNIT	[M]
W602	REX0641	MECHA. WIRE UNIT	[M]
		<SERVO>	
		INTEGRATED CIRCUITS	
IC701	AN8802SCE1V	IC, HEAD AMP	
IC702	MN66271RA	IC, DIGITAL LSI	
IC703	AN8389SE1	IC, 4-CH DRIVER	
		TRANSISTOR	
Q701	2SB709S	TRANSISTOR	

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