

Service Manual

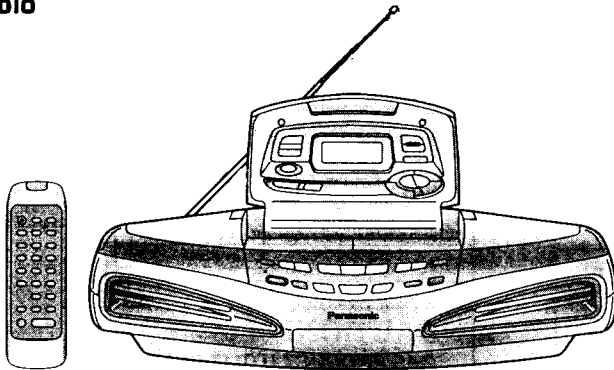
Portable Stereo CD System

Radio Cassette

COMPACT
disc
DIGITAL AUDIO

MASH*
multi-stage noise shaping

RX-ED77



Colour

(K) . . . Black Type

Area

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

* MASH is a trademark of NTT.

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PACKAGING \ УПАКОВКА

Panasonic

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■ Specifications

■ RADIO

Frequency range	
FM	87.50 – 108.00 MHz (50 kHz steps)
LW	144 – 288 kHz (9 kHz steps)
MW	522 – 1611 kHz (9 kHz steps)
Intermediate Frequency	
FM	10.7 MHz
AM	459 kHz
Sensitivity	
FM	19 dB/50 mW
LW	54 dB/m/50 mW
MW	53 dB/m/50 mW

■ TAPE RECORDER

Track system	4 track, 2 channel, stereo
Recording system	AC bias
Erasing system	AC erase
Monitor system	Variable sound monitor
Frequency range	
Normal position	30 – 16000 Hz
High position	30 – 17000 Hz

■ 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)

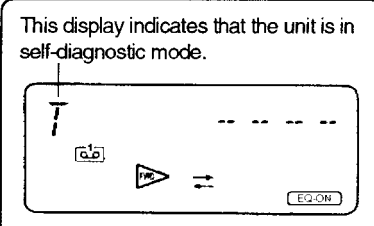
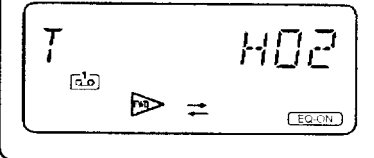
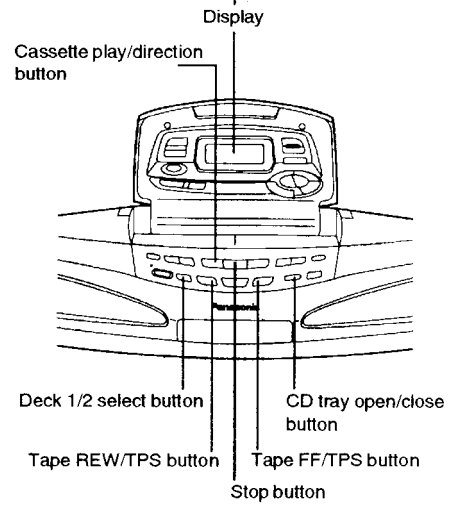
■ GENERAL

Power requirement	
AC	230 – 240 V, 50 Hz Power consumption: 44 W
Battery	15V (Ten R20/LR20, D size, UM-1 batteries)
Memory back-up for computer/clock	6V (Four R6/LR6, AA size, UM-3 batteries)
Power Output	7.5 W x 2 ... RMS (max.)
Speakers	10 cm x 2 (2.7 Ω)
Jacks	
Output	PHONES: 3.5 mm stereo (16 – 32 Ω)
Input	MIX MIC: 3.5 mm (200 – 600 Ω)
Dimensions (W x H x D)	630 x 178 x 296 mm (Top panel close)
Weight	5.6 kg without batteries

Note :

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

Self Diagnostic Function

Display procedure	Display location
<p>Cassette tapes to be readied</p> <ul style="list-style-type: none"> Cassette tape with erasure-prevention tab removed on one side only (A or B). Music cassette tape with erasure-prevention tabs intact on both sides (A and B). <p>Note: In either case, rewind the cassette tape to about the middle.</p> <p>To enter the self-diagnostic mode</p> <ol style="list-style-type: none"> Connect the unit to the power supply and turn the power on. Set reverse mode to "←". (Use the remote control attached with main unit, since the reverse mode cannot be set from the main unit.) Check that there is no cassette tape in the compartment. Hold down the Stop button (■) for at least two seconds, and then keep pressing together with the tape deck FF/TPS button for another 2 seconds. "T" will then appear on the LCD display. (This indicates that the unit has switched from normal display mode to self-diagnostic mode.) <p>To view the display</p> <ul style="list-style-type: none"> To view the self-diagnostic display for tape deck 1 and 2: <ol style="list-style-type: none"> Load a cassette tape into tape deck 1 with the erasure-prevention tab removed on one side only (A or B). Press the FF/TPS button, perform the fast forward winding operation for about 5 seconds and then stop winding using the Stop button (■). Remove the cassette tape, and load a music cassette (containing at least 4 second of music and both erasure-prevention tabs intact). Press the Cassette play/direction button (◀▶). When play begins, press either the FF/TPS button or the REW/TPS, and perform the TPS (tape program search) operation in the direction in which the music is recorded. After TPS operation has completed (when the beginning of music is found and the unit switches back to play mode), stop the tape by pressing the Stop button (■). Repeat steps 1-5 above for deck 2. If an error is detected when the tape deck Stop button (■) is pressed, a self-diagnostic display appears on the LCD display. (If no error occurs, the LCD display shows the tape counter.) If there is more than one error, the error display changes each time the tape deck Stop button (■) is pressed. To change between the self-diagnostic display for tape deck 1 and tape deck 2, press the Deck 1/2 select button (DECK 1/2). To view the self-diagnostic display for the CD player: <ol style="list-style-type: none"> Press the CD tray open/close button (▲ CD OPEN/CLOSE) to open the CD tray. After the tray has been fully open for about 5 seconds, press the CD tray open/close button (▲ CD OPEN/CLOSE) again to close the CD tray. Press the Stop button (■), self-diagnostic display on the LCD display (If no error occurs, LCD display shows "T"). <p>Note: If this procedure is performed for tape decks 1 and 2 and the CD player and an error occurs for each, the LCD display alternates between the self-diagnostic codes for tape deck 1 and 2 and the CD player each time the Stop button (■) is pressed. (If there is no error, the LCD display shows the tape counter.)</p> <p>To return to normal display mode</p> <ul style="list-style-type: none"> Press the Power "STANDBY ⏻" switch once to turn the power off, then press it again to turn the power back on. To view the self-diagnostic display once again, perform steps 1 to 4 of "Entering self-diagnostic mode" above, then press the Stop button (■). <p>Clearing the self-diagnostic memory</p> <ul style="list-style-type: none"> The self-diagnostic error code is stored in memory. To clear memory, first correct the error, and then remove the batteries (including the clock/memory battery) and disconnect the AC power supply. Then, press and hold down the power "STANDBY ⏻" switch for at least 5 seconds. Always be sure to clear memory after an error has been corrected. 	<p>This display indicates that the unit is in self-diagnostic mode.</p>  <p>Example of a self-diagnostic display</p>  

Display content Note : Items marked with (*) are automatically displayed, and do not require the procedure described in the section "To view the display".

Display code	Symptom or condition	Cause and method of correction
* U01	When operating on batteries, power goes off immediately after being turned on.	The batteries are depleted. Replace with new batteries.
* U02	Power cannot be switched on.	Check the power cord (AC) or insert fresh batteries (DC).
H01	Cassette deck does not operate correctly.	Faulty cassette deck mechanism mode detection switch (Deck 1: S951, Deck 2: S971) and plunger. (Check and replace)
H02	Units does not record, or the unit goes into recording mode even when the erasure prevention tabs have been removed from the cassette.	Faulty erasure-prevention tab detection switch (S974, S975) or short-circuit. (Check and replace)
H03	Tape does not play, even when the tape deck play button is pressed. The motor operates when the tape deck play button is pressed, even when no cassette is loaded in the deck.	Faulty tape detection switch (Deck 1: S952, Deck 2: S972) or short-circuit. (Check and replace)
H15	The CD tray closes immediately after it is opened.	Faulty contact of the CD tray open detection switch (SW790). (Check and replace)
H16	The CD tray opens immediately after it is closed.	Faulty contact of the CD tray close detection switch (SW791). (Check and replace)
F01	When the play button is pressed, the tape advances only slightly and then stops.	Reel pulse error. (Faulty Hall IC) (Check and replace)
F02	TPS (tape program search) does not work.	Faulty TPS signal detection or faulty plunger control. (Check and replace mechanism control IC)
F15	When the CD Play button is pressed when either the power is off, or from some function other than CD, it takes excessive time (5 seconds or more) for the CD to play.	Faulty traverse inner circumference position detection switch (S701). (Check and replace)
*F26	When the CD operation mode is selected by pressing the Stop button (■), "F26" is shown on the LCD display, and a CD does not play even when it has been loaded.	Communication error between servo-processor IC and microprocessor IC.
F75	When a CD is loaded, "NO DISC" is displayed and the CD does not play.	Faulty CD circuit power supply. (Faulty power supply IC or CD circuit power supply system.) (Check and replace) Flexible circuit board has become disconnected or broken wiring. (Check and replace) Faulty servo-processor IC. (Check and replace)

■ Operation Checks and Main Component Replacement Procedures

1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures.
Special reassembly procedures are described only when required.
3. Select items from the following index when checks or replacement are required.
4. Refer the Parts No. on the page of "Main Component Replacement Procedures", if necessary.

• Contents

	page
• Checking Procedure for each major P.C.B.	
1. Checking for the LCD P.C.B.	6 & 7
2. Checking for the Servo, Main and Tuner P.C.B.	7
• Main Component Replacement Procedures	
1. Replacement for the Motor Assembly	8
2. Replacement for the Traverse Deck	9 & 10

Warning : This product uses a laser diode. Refer to caution statement on page 3.

ACHTUNG : • Die lasereinheit nicht zerlegen.
• Die lasereinheit darf nur gegen eine vom hersteller spezifizierte einheit ausgetauscht werden.

■ Checking Procedure For Each Major P.C.B.

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

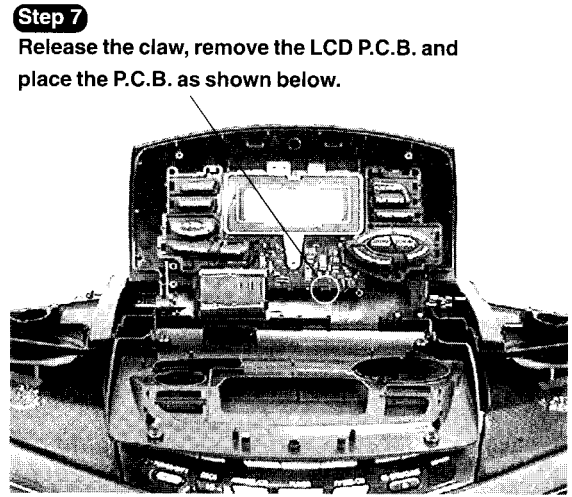
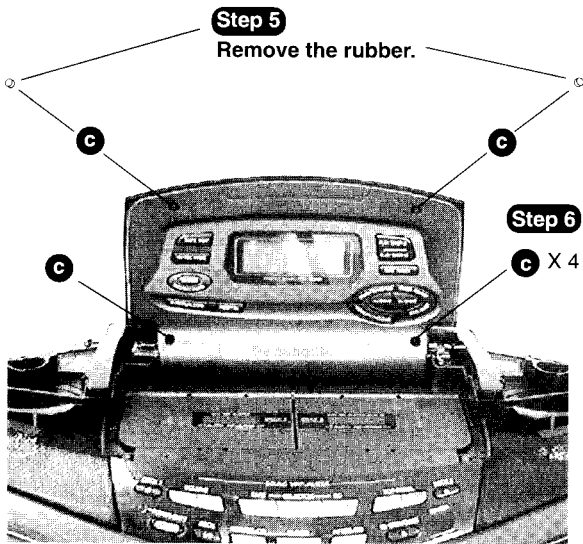
Step 1
a X 6

Step 2
a X 2

Step 3
b X 2

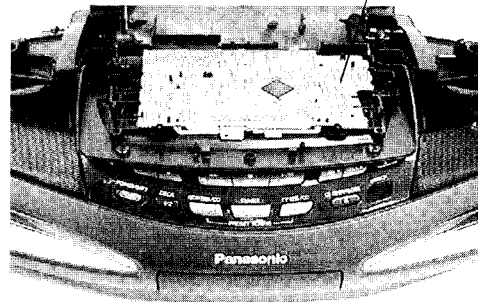
Step 4
b X 2

a (Black)
[XTV3+12GFZ]
 b
[XTV26+8G]
 c (Black)
[XTN26+8GFZ]

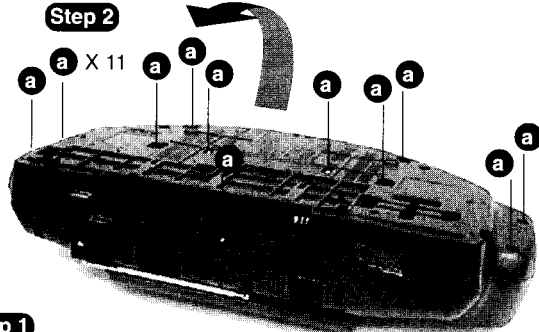
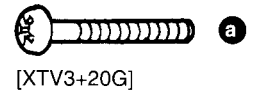


LCD P.C.B.

• Check the LCD P.C.B. as shown.

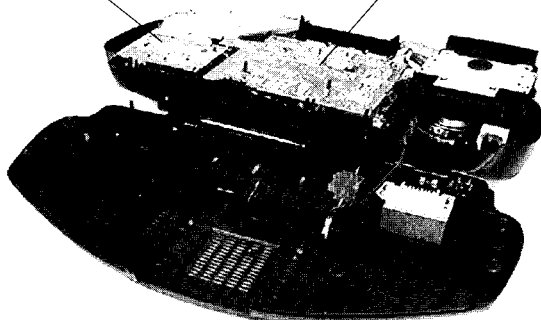


2. Checking for the SERVO, MAIN and TUNER P.C.B.



Step 1
Remove the battery cover.

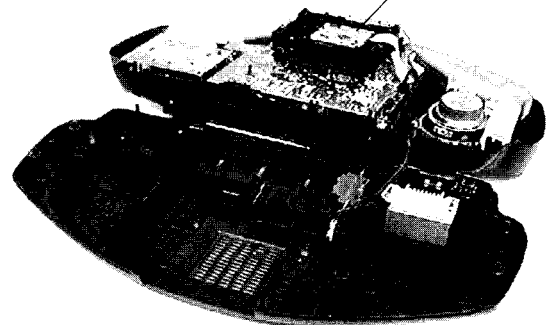
TUNER P.C.B. MAIN P.C.B.



Step 3
Lift up the bottom cabinet and place it as shown below.

• Check the SERVO P.C.B. as shown.

SERVO P.C.B.



Step 4
Lift up the CD traverse unit and place it as shown on the left.

• Check the MAIN P.C.B. and TUNER P.C.B. as shown.

Main Component Replacement Procedures

1. Replacement for the motor assembly.

Step 1

Remove the bottom cabinet.

Step 2

a X 10

Step 3

Desolder the two wires from the motor terminal.



a

[XTBS26+10J]



b

[XTV3+12G]



c

[XTV26+12F]



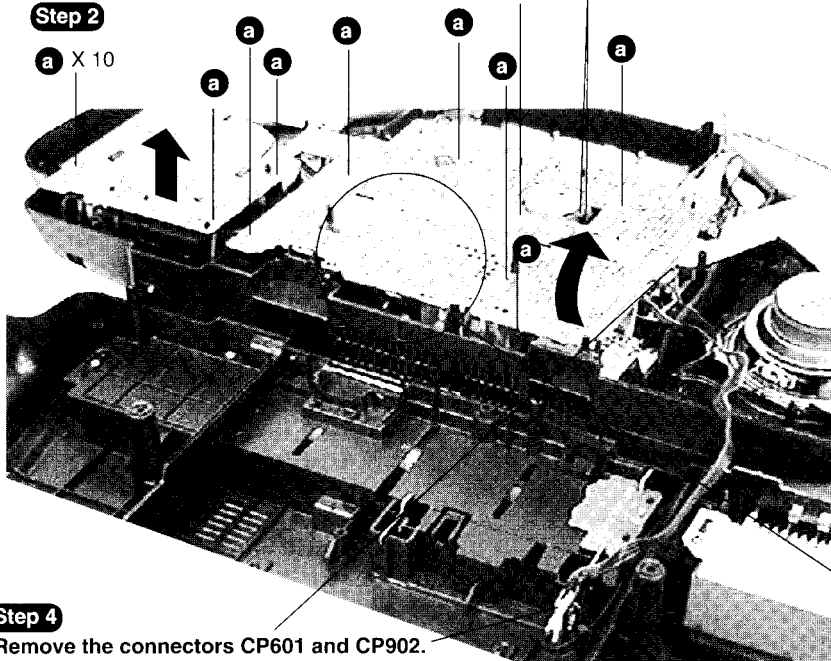
d

[XQN2+C6]



e

[XQN2+C3]

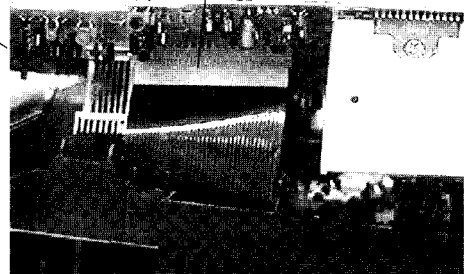


Step 4

Remove the connectors CP601 and CP902.

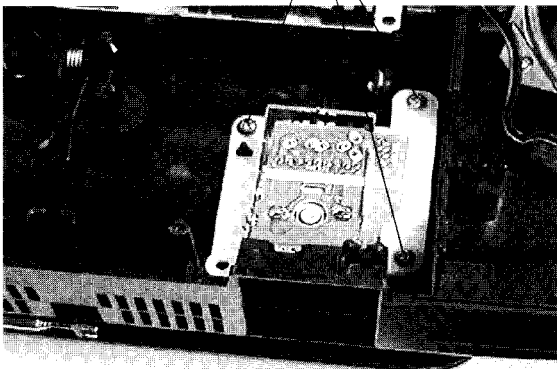
Step 5

Remove the FFC wire from CS8001 and remove the MAIN P.C.B. together with TUNER P.C.B.



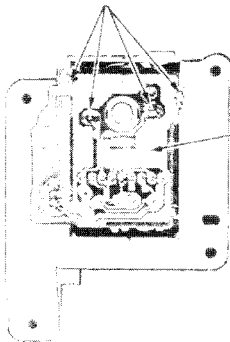
Step 6

b X 3



Step 7

Desolder

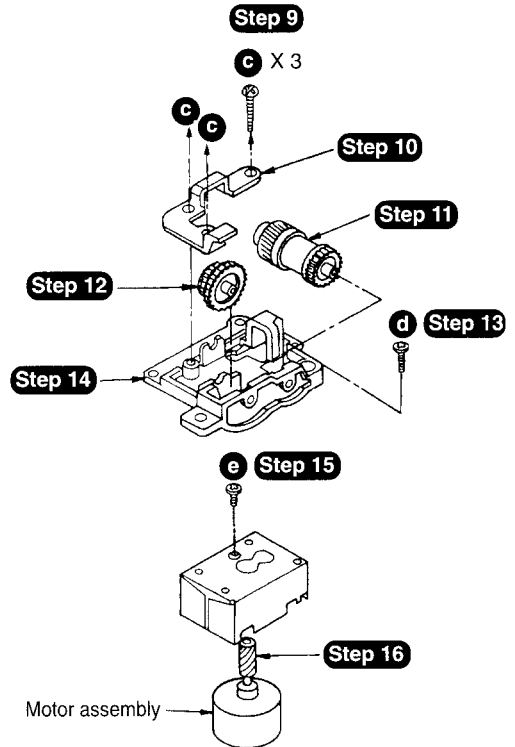


Step 8

Remove the motor P.C.B.

Step 9

c X 3



2. Replacement for the traverse deck.

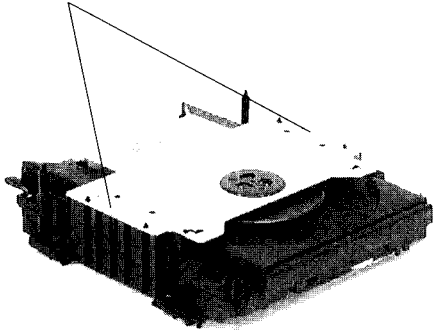


a

[XTN26+6G]

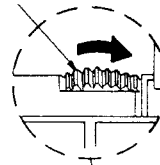
Step 1

a X 2



Step 2

Rotate the gear.

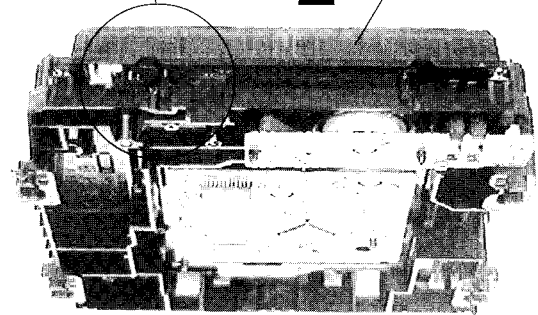


Step 3

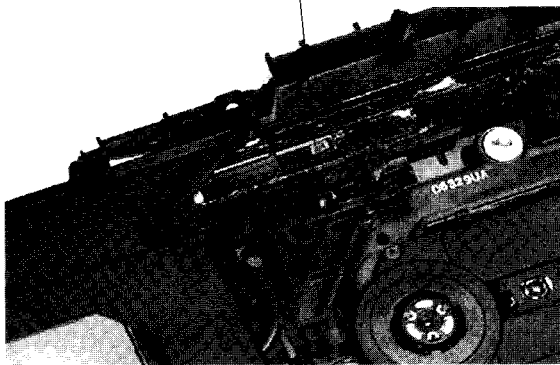
Pull out the CD tray.



CD TRAY



CLAW

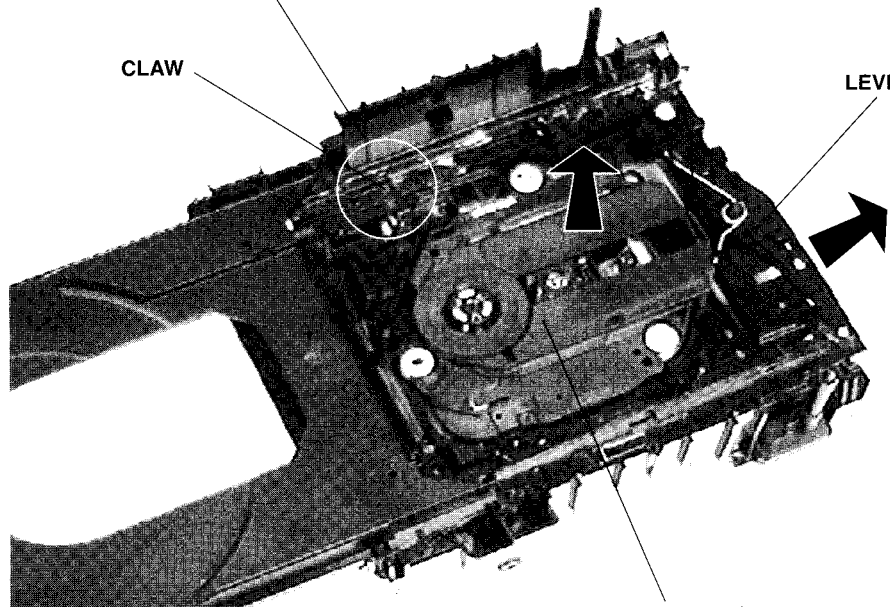


Step 4

Release the claw and pull the lever.

CLAW

LEVER



CD TRAVERSE UNIT

Step 5

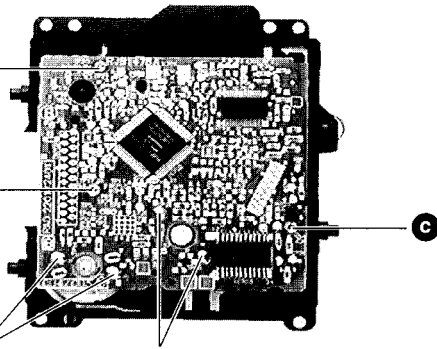
Take out the CD traverse unit.

Step 6

b X 1

Step 7

c X 2



Terminals of traverse motor Terminals of spindle motor

Step 8

Desolder 2 terminals of spindle motor.

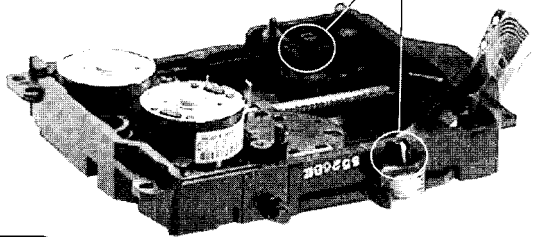
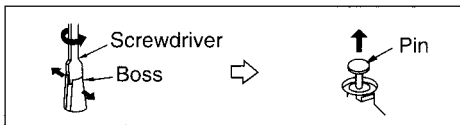
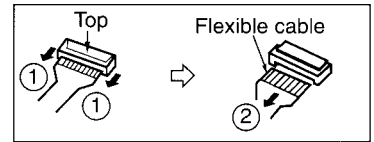
Step 9

Desolder 2 terminals of traverse motor.

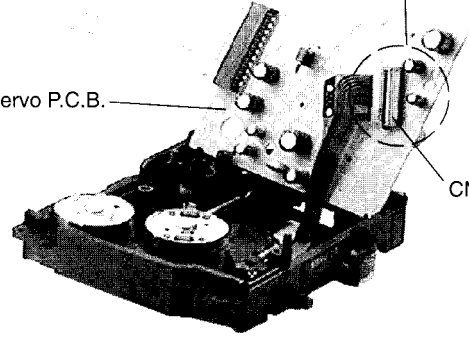
Step 10

Remove the flexible cable from CN701.

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



Servo P.C.B.

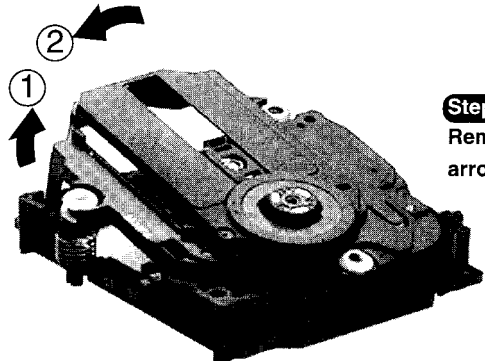
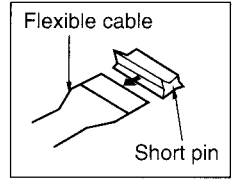


CN701

Step 11

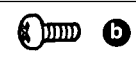
Widen 2 bosses by using a flat tip screwdriver and remove 2 pins.

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



Step 12

Remove the Traverse Deck Ass'y in the direction of arrow ① follow by ②.



b

[XTN2+6G]

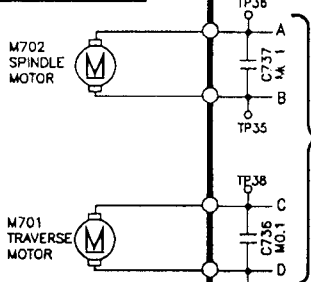
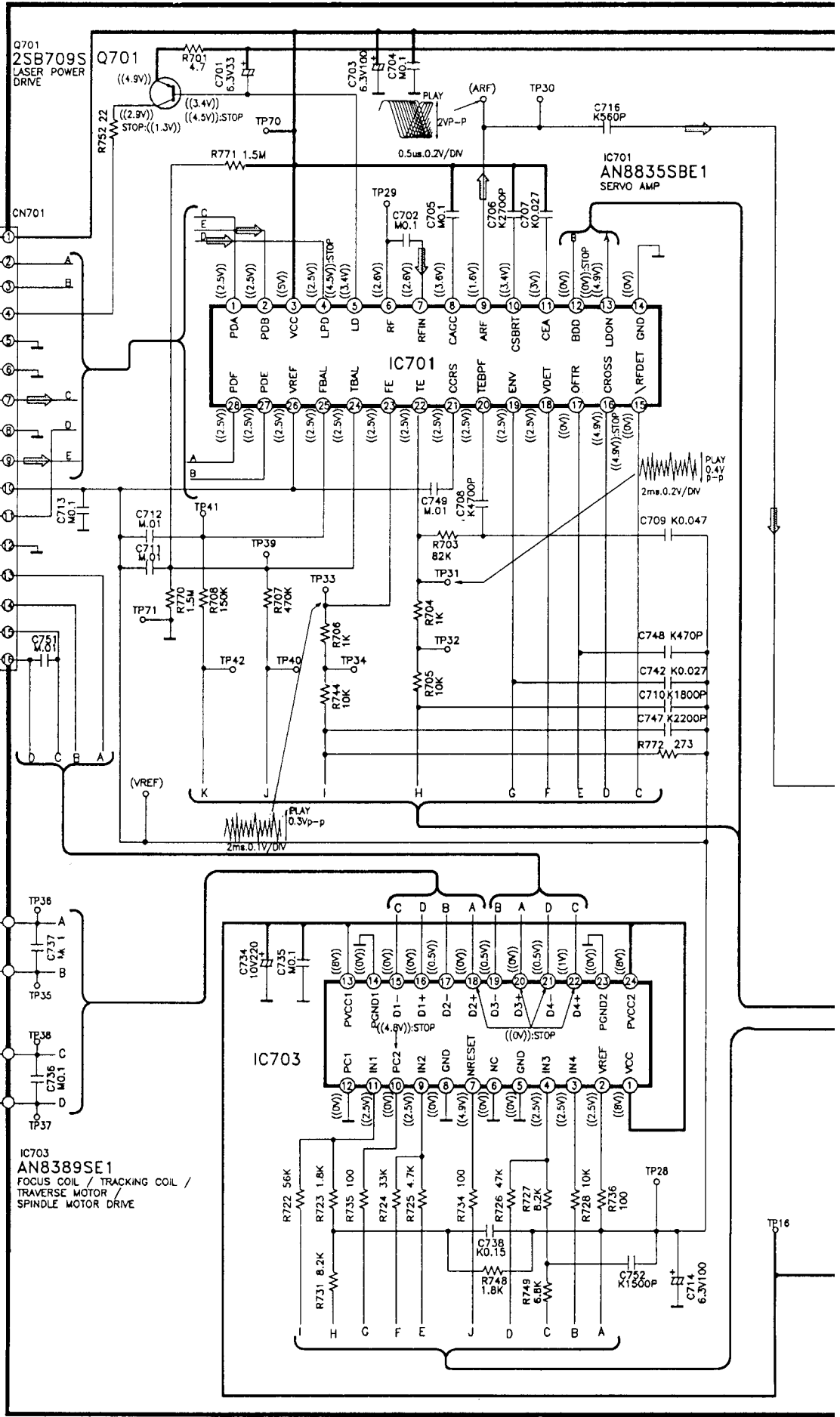
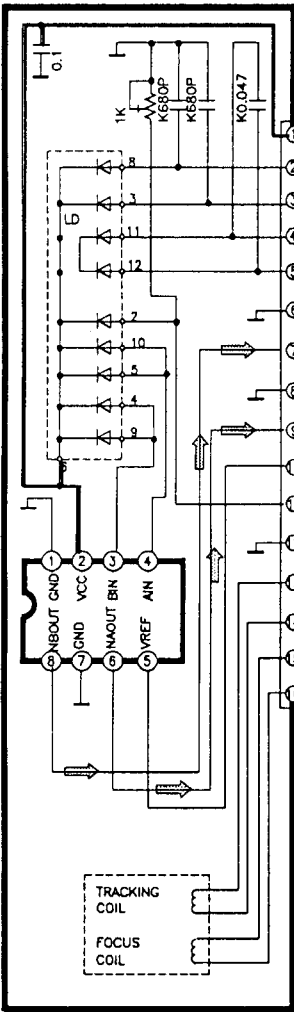


c

[XTV2+6G]

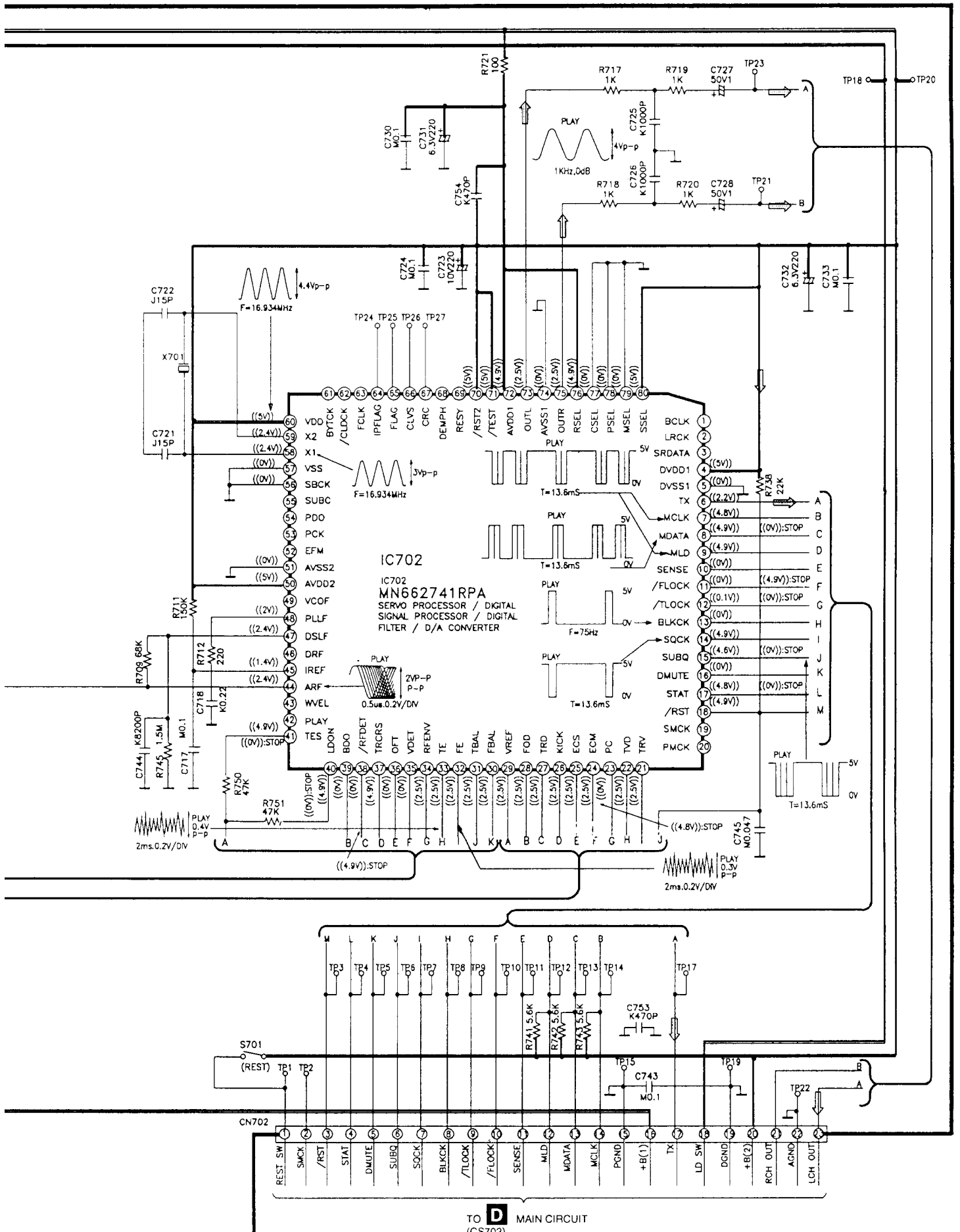
A SERVO CIRCUIT

OPTICAL PICKUP



IC703
AN8389SE1
FOCUS COIL / TRACKING COIL /
TRAVERSE MOTOR /
SPINDLE MOTOR DRIVE

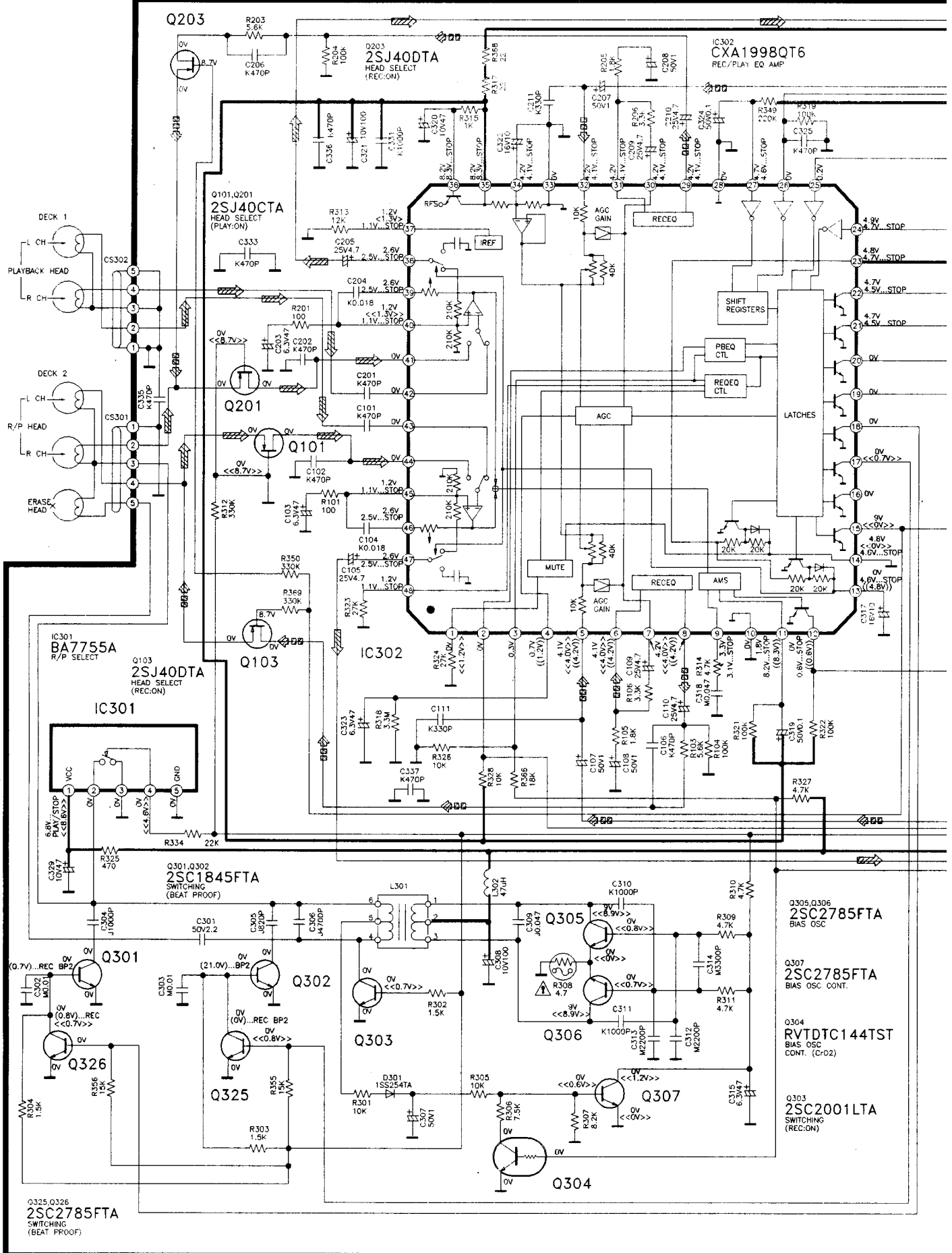


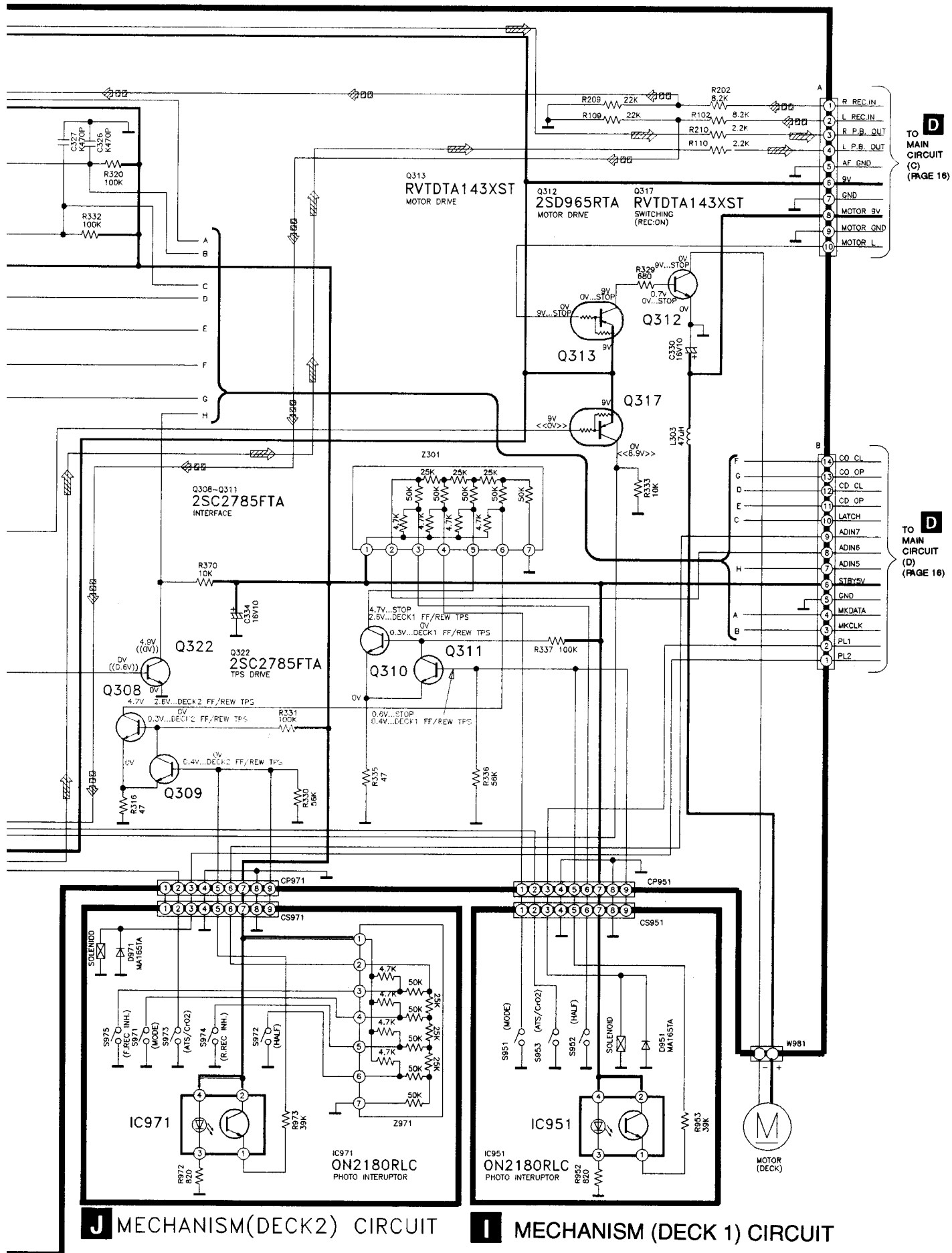


TO **D** MAIN CIRCUIT
 (CS702)
 (PAGE 17)



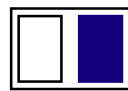
D MAIN CIRCUIT





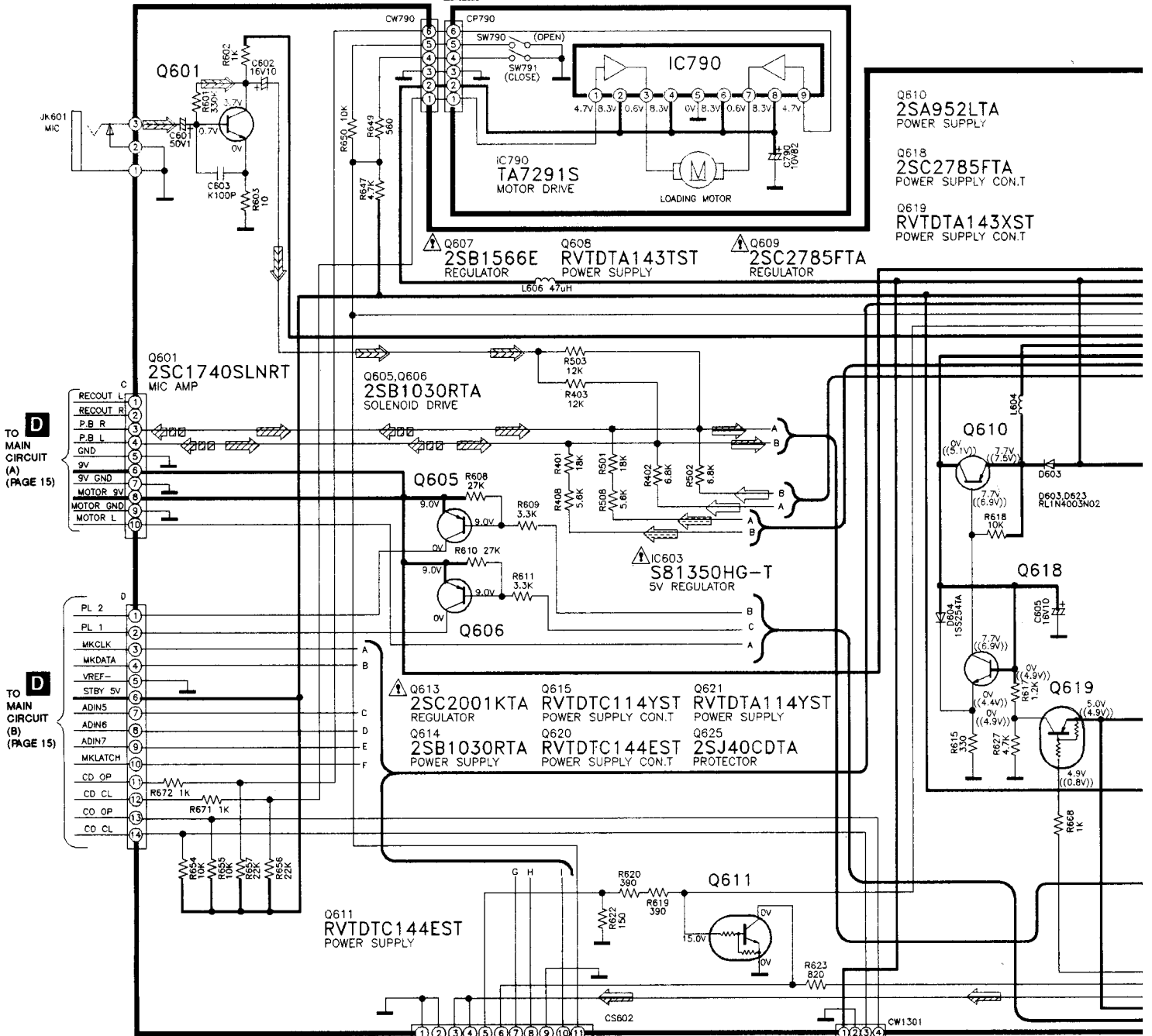
J MECHANISM(DECK2) CIRCUIT

I MECHANISM (DECK 1) CIRCUIT



D MAIN CIRCUIT

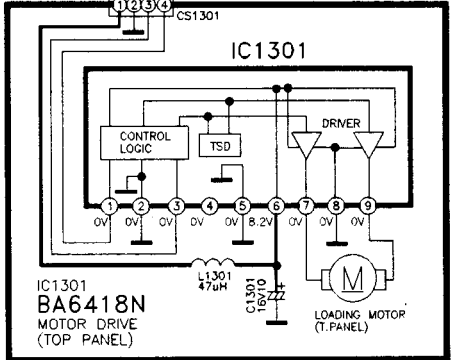
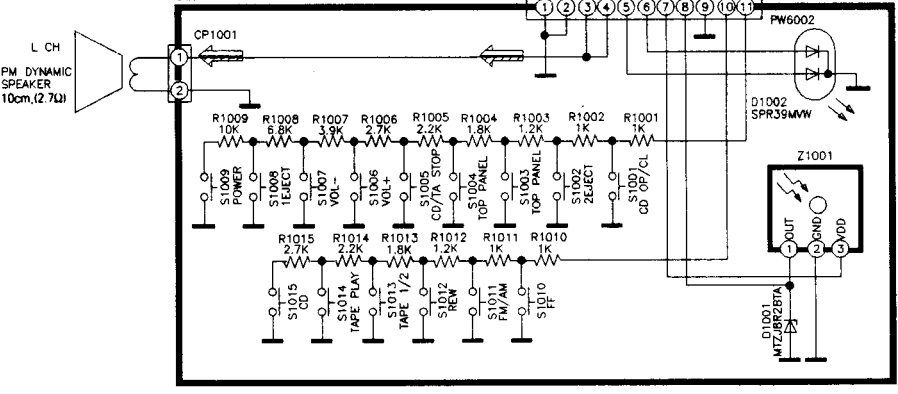
K LOADING MOTOR CIRCUIT



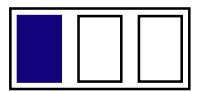
TO MAIN CIRCUIT (A) (PAGE 15)

TO MAIN CIRCUIT (B) (PAGE 15)

E CONTROL CIRCUIT

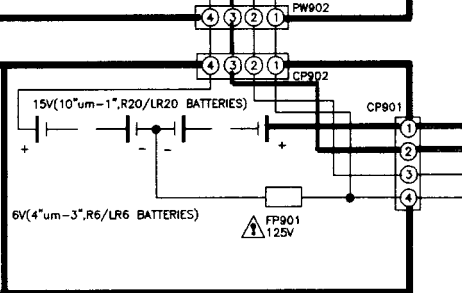
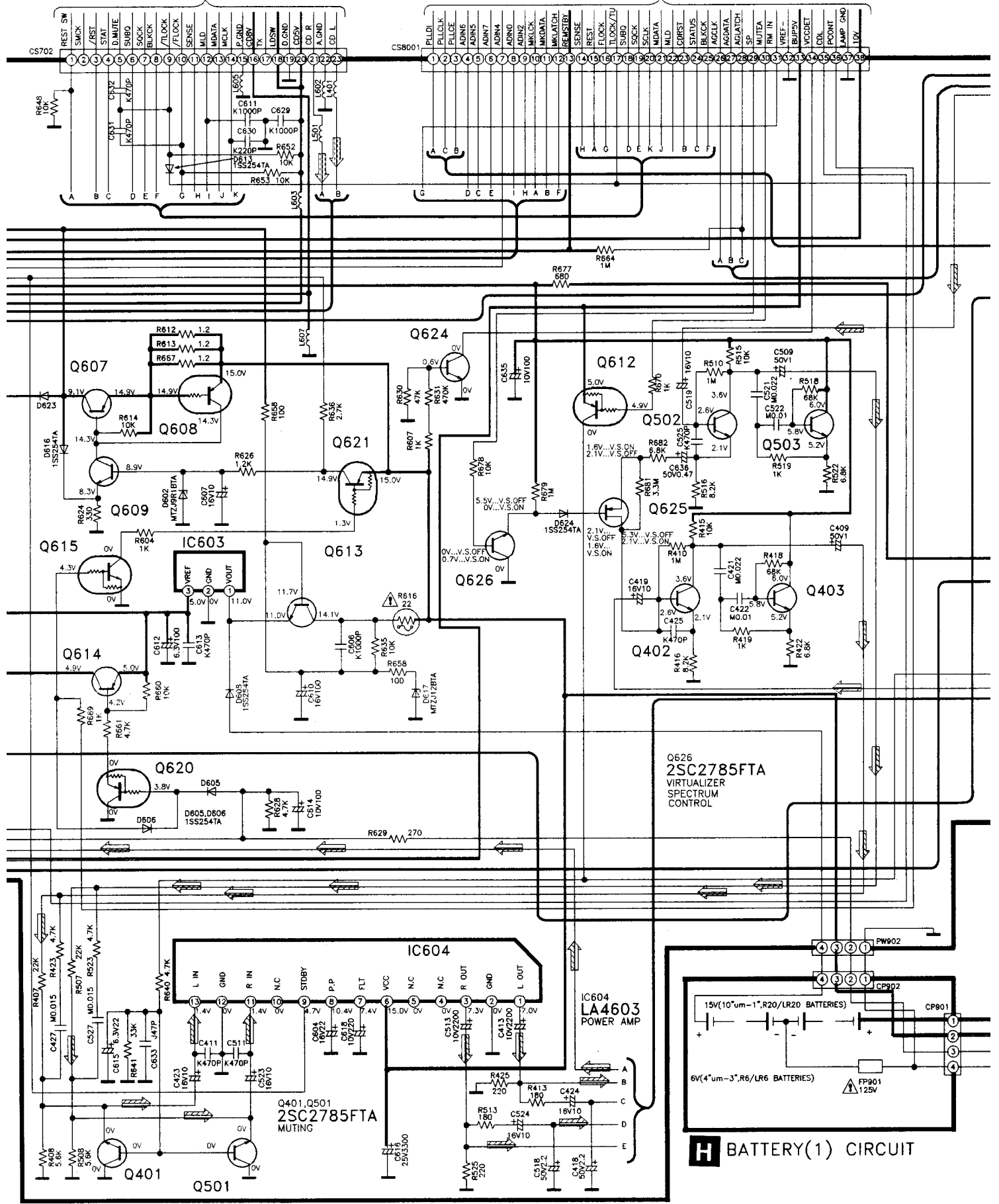


L MOTOR (TOP PANEL) CIRCUIT

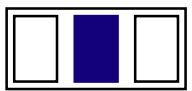


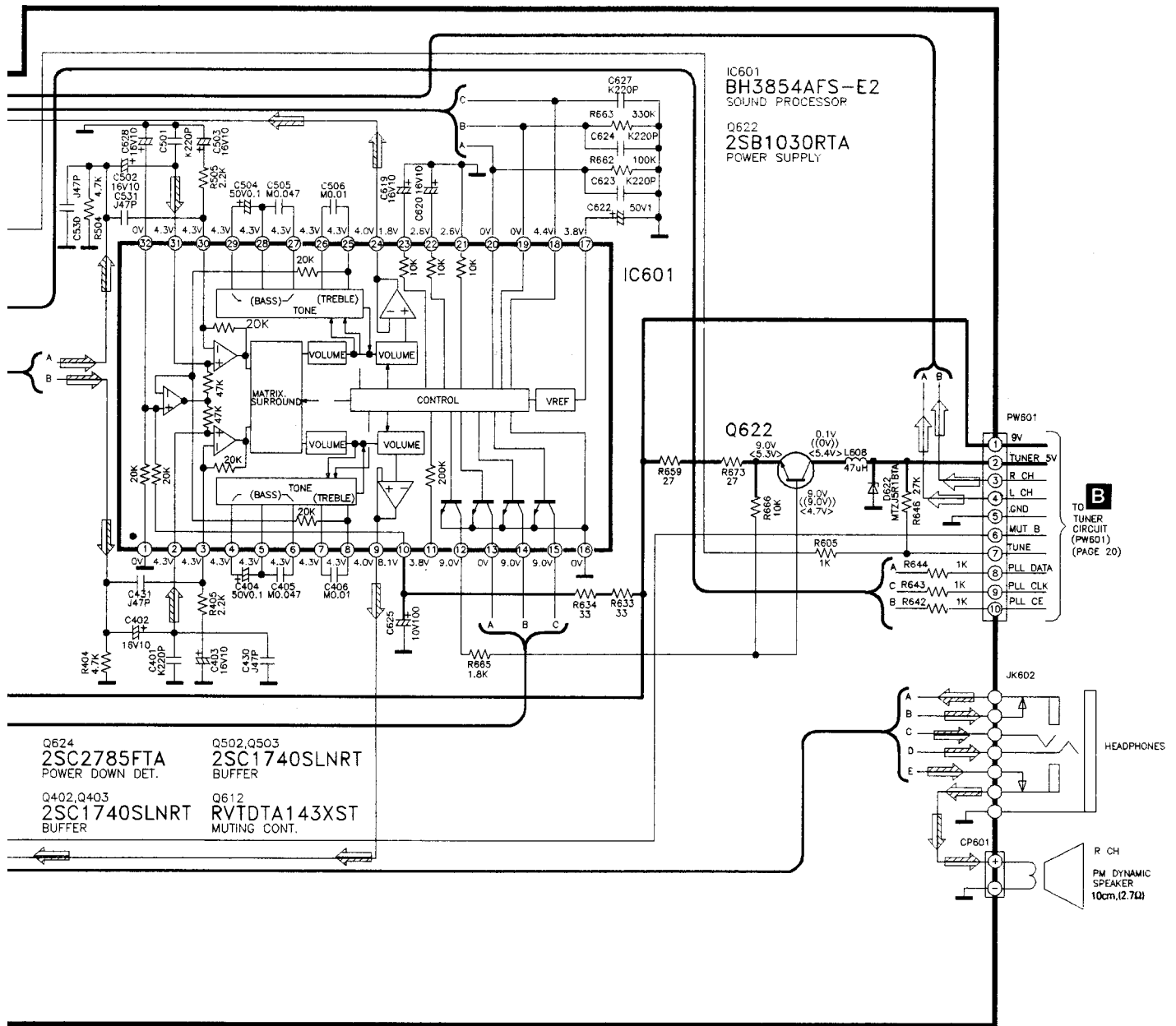
A
TO
CIRCUIT
(CN702)
(PAGE 13)

C
TO
CIRCUIT
(CS801)
(PAGE 19)

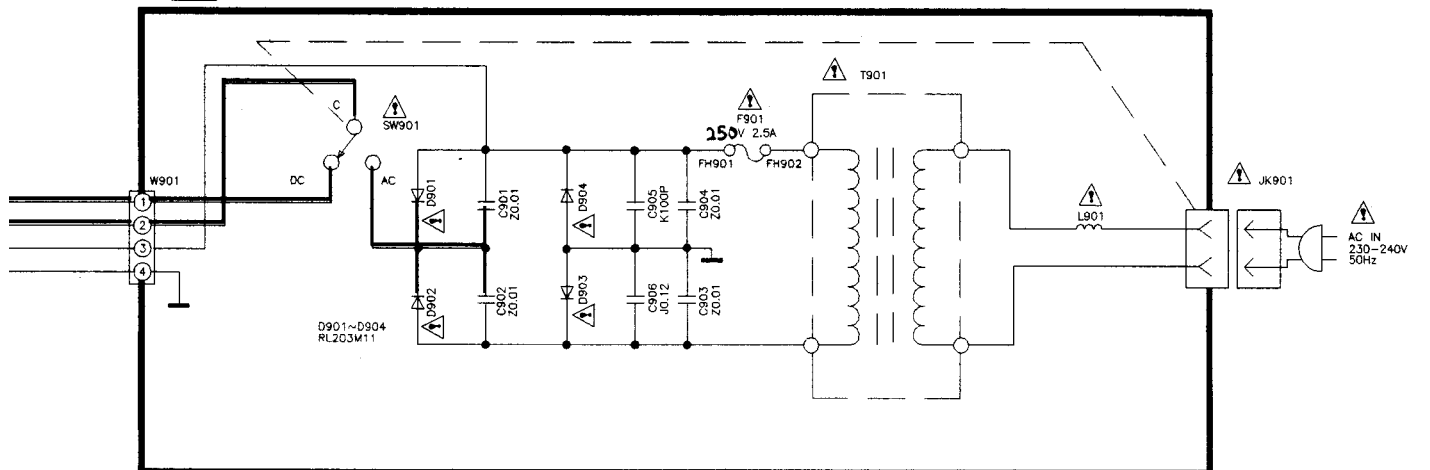


H BATTERY(1) CIRCUIT

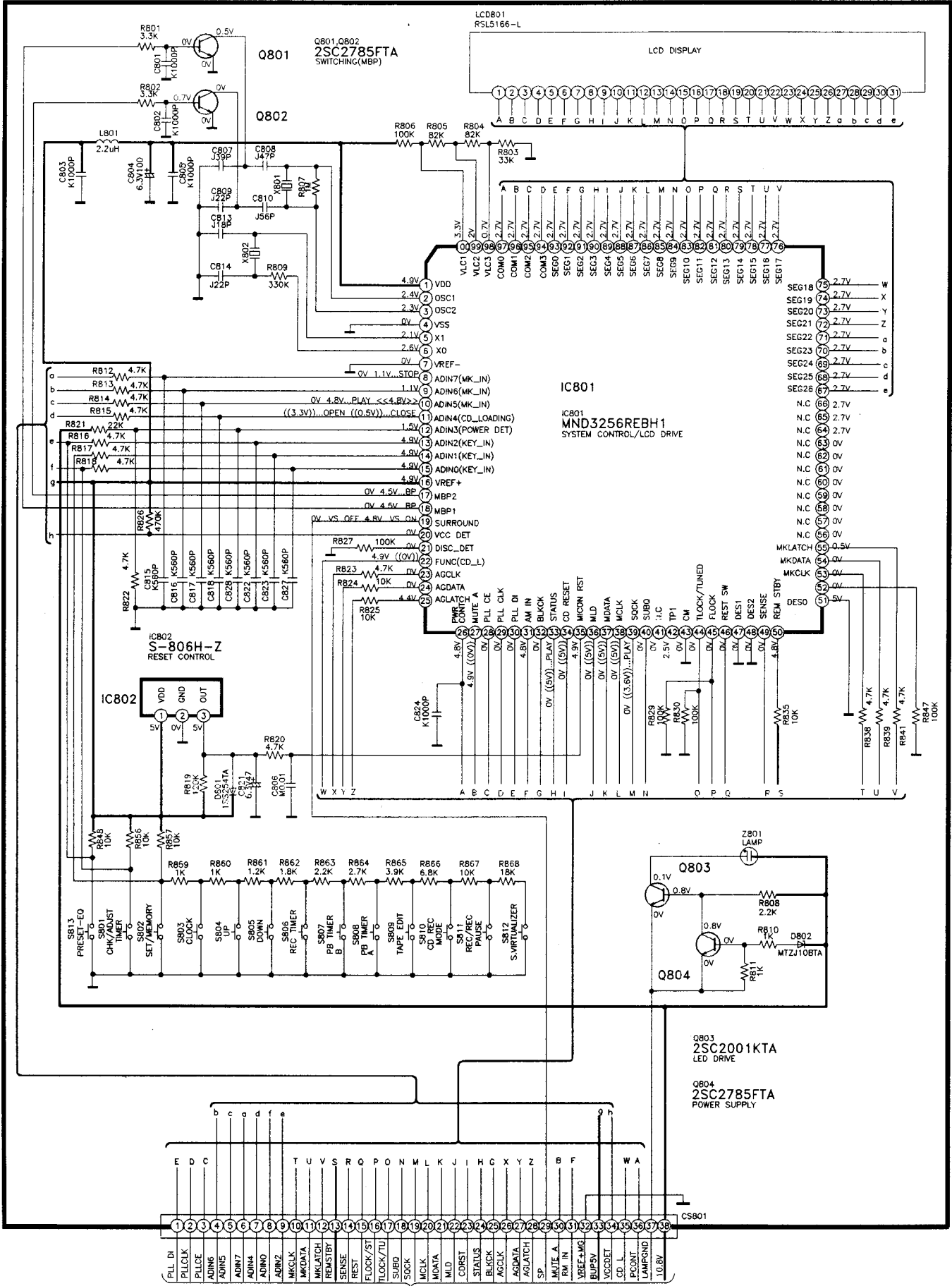




F POWER SUPPLY CIRCUIT

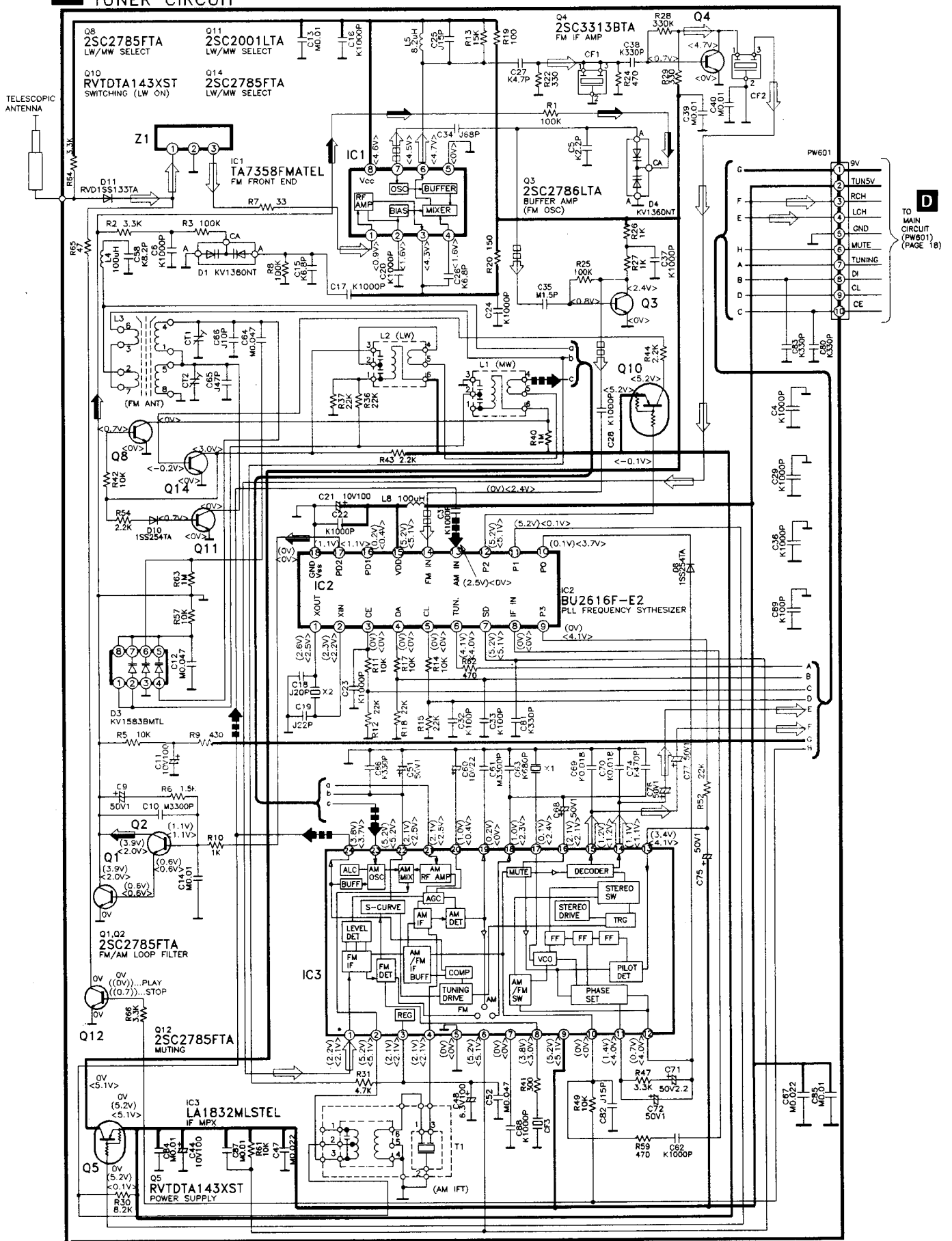


C LCD CIRCUIT

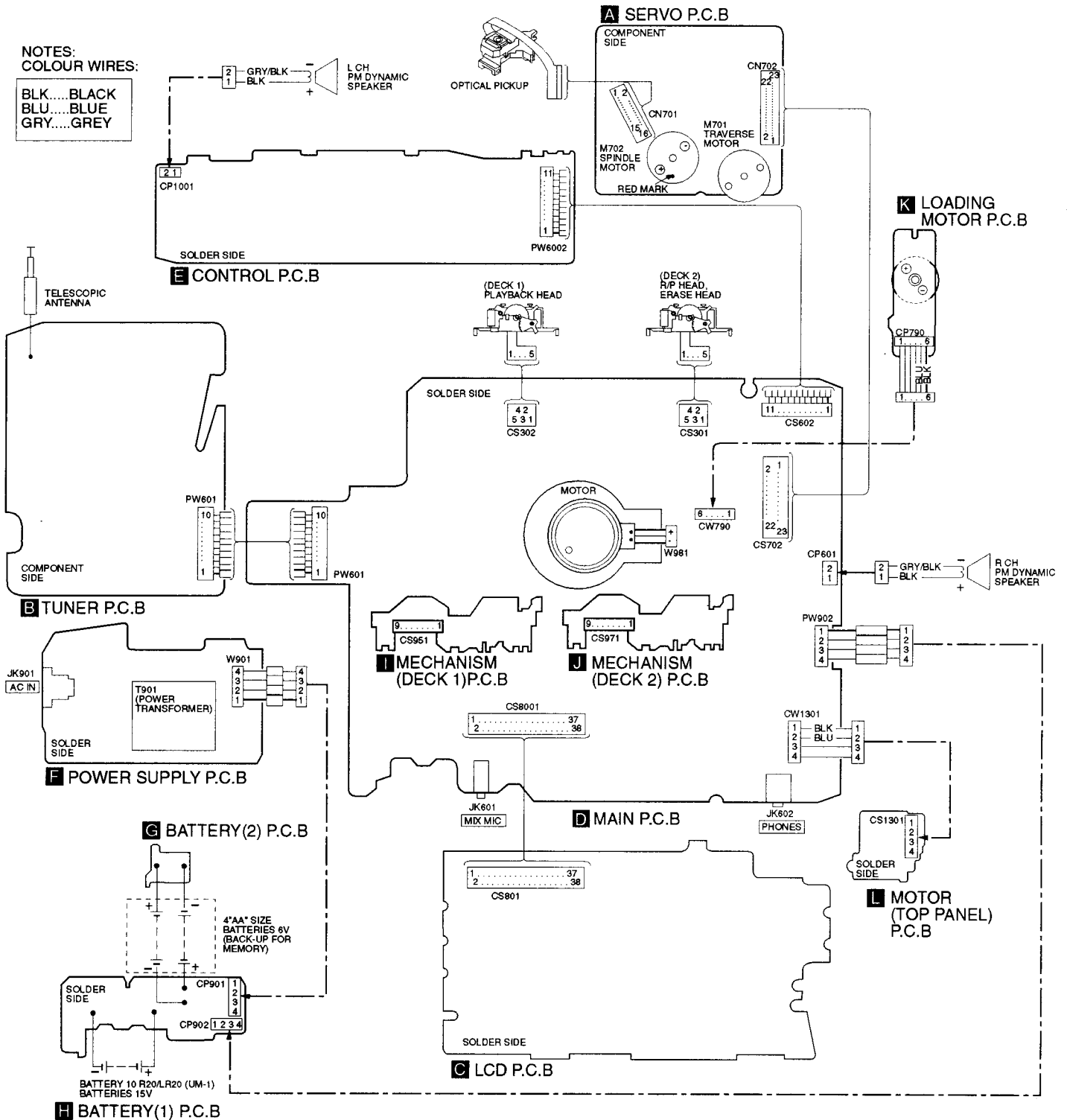


D
TO
MAIN
CIRCUIT
(CS800)
(PAGE 17)

B TUNER CIRCUIT



Wiring Connection Diagram



■ Measurements And Adjustments

■ TUNER SECTION

• ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

- Set power source voltage to 15 V DC.
- Set power switch to ON
- Set function switch to TUNER / BAND
- Set volume level to 40
- Output of signal generator should be no higher than necessary to obtain an output reading.

Note : No FM STEREO alignment is required for this Tuner used.

The parts other than the ones listed below are aligned at the factory before they are supplied. Therefore, alignment of those parts is unnecessary when used for replacement.

• LW-RF 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.	153 kHz	Tune to signal	Headphone Jack (32Ω) (Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.)	[*1] L3-1 (LW ANT Coil)	Adjust for maximum output. Adjust L3-1 by moving coil bobbin along ferrite core.
"	270 kHz	"	"	CT2 (LW ANT Trimmer)	Adjust for maximum output.

[*1] Fix antenna coil with wax after completing alignment.

Caution : LW-RF should be aligned first before aligning MW-RF.

• MW-RF ALIGNMENT

Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	594 kHz	Tune to signal	Headphone Jack (32Ω) (Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.)	[*1] L3-2 (MW ANT Coil)	Adjust for maximum output. Adjust L3-2 by moving coil bobbin along ferrite core.
"	1503 kHz	"	"	CT1 (MW ANT Trimmer)	Adjust for maximum output.

[*1] Fix antenna coil with wax after completing alignment.

■ CASSETTE DECK SECTION

• ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

- Set power source voltage to 15 V DC.
- Set function switch to SELECTOR/TAPE
- Set volume level to 40

• HEAD AZIMUTH ALIGNMENT

TEST TAPE	INDICATOR ELECTRONIC VOLTMETER or OSCILLOSCOPE	ADJUSTMENT	REMARKS
QZZCFM (8 kHz, -20 dB)	Headphone Jack (32Ω) (Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.)	Azimuth Screw (Shown in Fig. 3)	1. Insert the test tape (QZZCFM) and start playback in the forward direction. 2. Adjust the azimuth screw for maximum waveform on the oscilloscope and the similar output on L and R channels. 3. When adjusting the azimuth in the reverse direction, repeat the adjustment several times because of a little slip on the forward direction side.

Caution :

- Please remove the screw-locking bond left on the head base when replacing the azimuth screw.
- After the adjustment, apply screwlock to the azimuth adjusting screw. (Screw-locking bond: RZZ0L01)

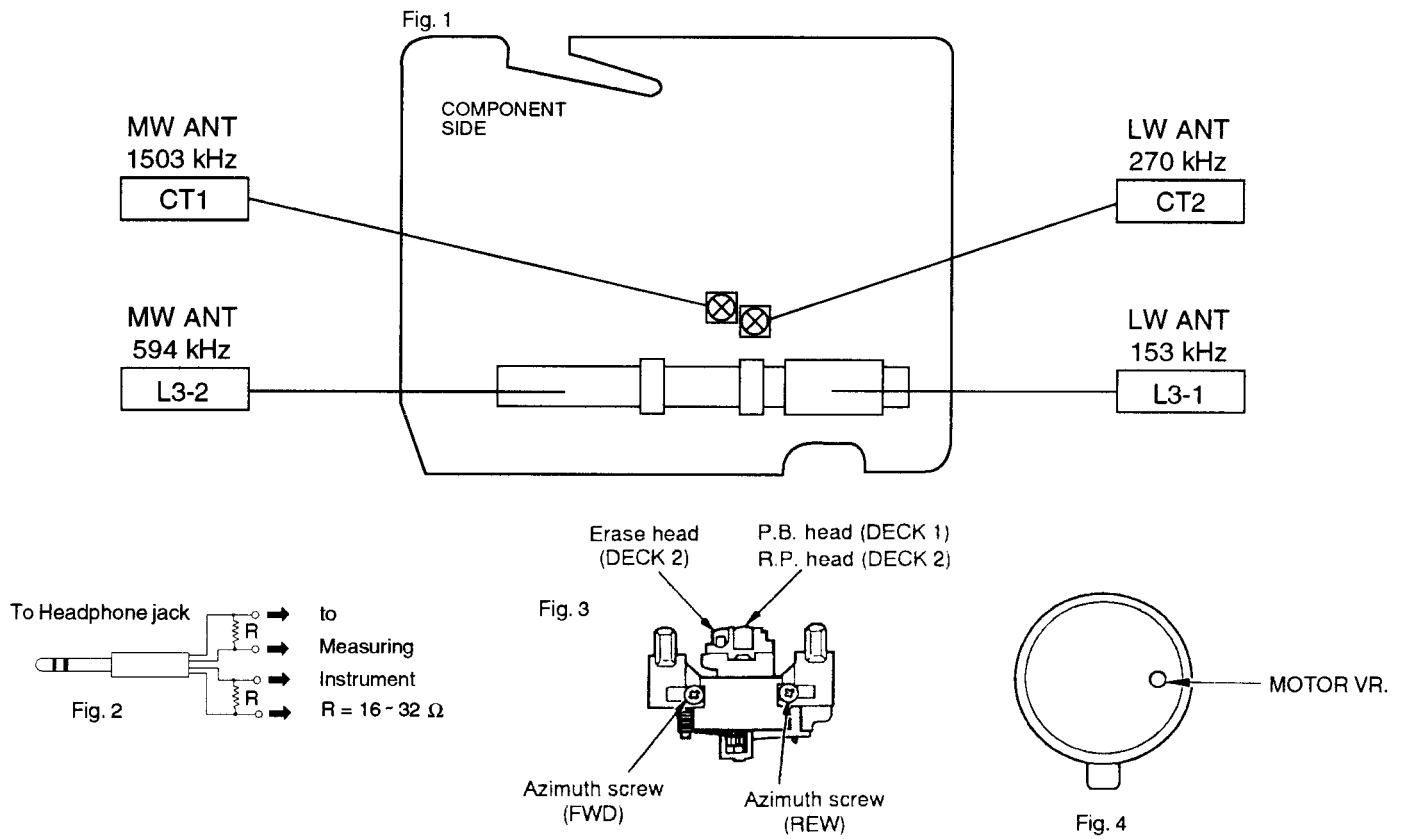
• TAPE SPEED ALIGNMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCWAT (3kHz, -10 dB)	Headphone Jack (32Ω) (Fabricate the plug as shown in Fig.2 and then connect the lead wires of the plug to the measuring instrument.)	Motor VR. (show in Fig.4)	3000 ± 60Hz	1. Insert a test tape (QZZCWAT) in DECK 2 and start playback in forward direction. 2. Adjust motor VR for output value of 3000 ± 20Hz shown on frequency counter. 3. Check that the DECK 2 REV and DECK 1 FWD/REV tape speed are within DECK 2 FWD tape speed ± 60Hz.

CD SECTION

Alignment is unnecessary for CD section of this unit.

ALIGNMENT POINTS



Terminal Guide of IC's, Transistors & Diodes

CXA1998QT6(48P) MN662741RPA(80P) MND3256REBH1(100P)	BH3854AFS-E2	AN8389SE1	AN8835SBE1(28P) BU2616F-E2(18P) LA1832MLSTEL(24P)	TA7358FMATEL KV1583BMTL	BA7755A	LA4603
ON2180RLC	S-806H-Z	S81350HG-T	TA7291S	BA6418N	2SB1030RTA	2SB709S
2SB1566E	2SC2785FTA 2SC2786LTA 2SC3313BTA	2SJ40CDTA 2SJ40CTA 2SJ40DTA	2SA952LTA 2SC1845FTA 2SC2001KTA 2SC2001LTA 2SD965RTA	2SC1740SLNRT RVTDTA114YST RVTDTA143TST RVTDTA143XST RVTDTC114YST RVTDTC144EST RVTDTC144TST		
KV1360NT	SPR39MVW	1SS254TA MA165TA RVD1SS135TA	RL203M11	RL1N4003N02	MTZJ10BTA MTZJ12BTA MTZJ5R1BTA MTZJ8R2BTA MTZJ9R1BTA	

■ Terminal Function Of IC's

• IC702 (MN662741RPA) 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.
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)

Pin No.	Mark	I/O	Function
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	PLLF	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	Sub-code frame clock signal output (fCLDCK=7.35kHz during normal playback)
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)
61	BYTCK	O	Byte clock output (Not used, open)
62	/CLDCK	O	Clock input for sub-code serial data (Not used, open)
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

Pin No.	Mark	I/O	Function
			"L" : 16.9344MHz "H" : 33.8688MHz
78	PSEL	I	Test input (normally "L") (Not used, open)
79	MSEL	I	Output mode switching of SUBQ terminal ("H" : Q code buffer mode)
80	SSEL	I	Output frequency switching for SMCK terminal "H" : SMCK=8.4672MHz "L" : MCK=4.2336MHz (Not used, open)

• IC801 (MND3256REBH1) System Microprocessor

Pin No.	Mark	I/O	Function
1	VDD	I	Power supply input (+5 V)
2	OSC1	O	6.0 MHz clock output
3	OSC2	I	6.0 MHz clock input
4	VSS	—	AD converter reference voltage
5	XI	I	32.7 kHz clock input
6	XO	O	32.7 kHz clock output
7	VREF-	—	AD converter reference voltage (GND)
8	ADIN7	I	AD converter signal input (DECK2: RECINH_F/RECINH_R/HALF)
9	ADIN6	I	AD converter signal input (DECK 1: HALF, DECK 1/2 REEL PAUSE)
10	ADIN5	I	AD converter signal input (TPS, DECK 1/2 REEL PAUSE)
11	ADIN4	I	AD converter signal input (CD TRAY OPEN/CLOSE SW)
12	ADIN3	I	AD converter signal input (Power "on" detect)
13-15	ADIN2-ADIN0	I	AD converter signal input (Operation SW)
16	VREF+	—	AD converter reference voltage (VDD)
17,18	MBP2,MBP1	O	Beat proof control signal output
19	SURROUND	O	Surround signal output
20	VCC DET	I	VCC detect signal input
21	DISC_DET	I	Not used(connect to GND through resistor)
22	FUNC	O	Function control output
23	AGCLK	O	Serial clock output (for ASP)
24	AGDATA	O	Serial data output (for ASP)
25	AGLATCH	O	Latch signal output (for ASP)
26	PW CONT.	O	Power supply circuit control (H: Power ON)
27	MUTE A	O	Muting control signal output (L: MUTE)
28	PLL CE	O	PLL tuner strobe signal output
29	PLL CLK	O	PLL tuner clock output
30	PLL DI	O	PLL tuner control data signal output

Pin No.	Mark	I/O	Function
31	RM IN	I	Remote control signal input
32	BLKCK	I	Sub code block clock input
33	STATUS	I	CD status signal input
34	CD RESET	O	CD reset signal output (L: RESET)
35	MICON RST	I	System reset signal input (L: RESET)
36	MLD	O	CD signal process strobe signal output
37	MDATA	O	CD signal process strobe data output
38	MCLK	O	CD signal process clock signal output
39	SQCK	O	CD sub-code reading clock output
40	SUBQ	I	CD sub-code data input
41	NC	—	No connection
42	TP1	—	No connection
43	CM	I	1-chip microprocessor mode setting input (L: 1-chip)
44	TLOCK/ TUNED	I	CD tracking clock signal input (L: OK)/ tuner receiving signal input (L: TUNED)
45	FLOCK/ST	I	CD focus lock signal input (L: FOCUS OK)/ tuner stereo signal input (L: STEREO)
46	REST SW	I	CD traverse position detection switch signal input (H: most inside position)
47,48	DES1,DES2	I	—
49	SENSE	I	CD sense signal input (H: Detect)
50	STBY	I	Remote control sensor power control
51,52	DES0,DES3	I	—
53	MKCLK	O	Deck control clock output
54	MKDATA	O	Deck control data output
55	MKLATCH	O	Deck control data latch output
56-66	NC	—	No connection
67-93	SEG26-SEG0	O	LCD segment signal output
94-97	COM3-COM0	O	LCD common signal output
98- 100	VLC3-VLC1	I	LCD bias reference voltage input

• IC701 (AN8835SBE1) Servo Amplifier

Pin No.	Mark	I/O	Function
1	PDA	I	PD signal input
2	PDB	I	PD signal input
3	VCC	I	Power supply connection
4	LPD	I	Laser PD connection
5	LD	O	Power out for LD driving
6	RF	O	RF signal output
7	RFIN	I	RF signal input
8	CAGC	I	AGC loop filter connection
9	ARF	O	RF-AGC output
10	CSBRT	I	Capacitor for detection connection
11	CEA	I	Capacitor connection for HPF amplifier
12	BDO	O	BDO output ("H" : drop out)
13	LDON	I	LD APC input ("H" : ON, "L" : OFF)
14	GND	—	Ground connection

Pin No.	Mark	I/O	Function
15	/RFDET	O	NRFDET output ("L" : detection)
16	CROSS	O	CROSS output (Track cross signal output)
17	OFTR	O	Off-track output ("L" : ON track, "H" : OFF track)
18	VDET	O	VDET output ("H" : Vibration detected)
19	ENV	O	RF envelope detection
20	TEBPF	I	Vibration detection signal input
21	CCRS	I	Capacitor for LPF connection
22	TE	O	Tracking error signal output
23	FE	O	Focus error signal output
24	TBAL	I	Tracking balance signal input
25	FBAL	I	Focus balance signal input
26	VREF	O	Reference voltage output
27	PDE	I	PD signal input
28	PDF	I	PD signal input

• IC703 (AN8389SE1) Focus coil / Tracking coil / Traverse motor / Spindle motor driver

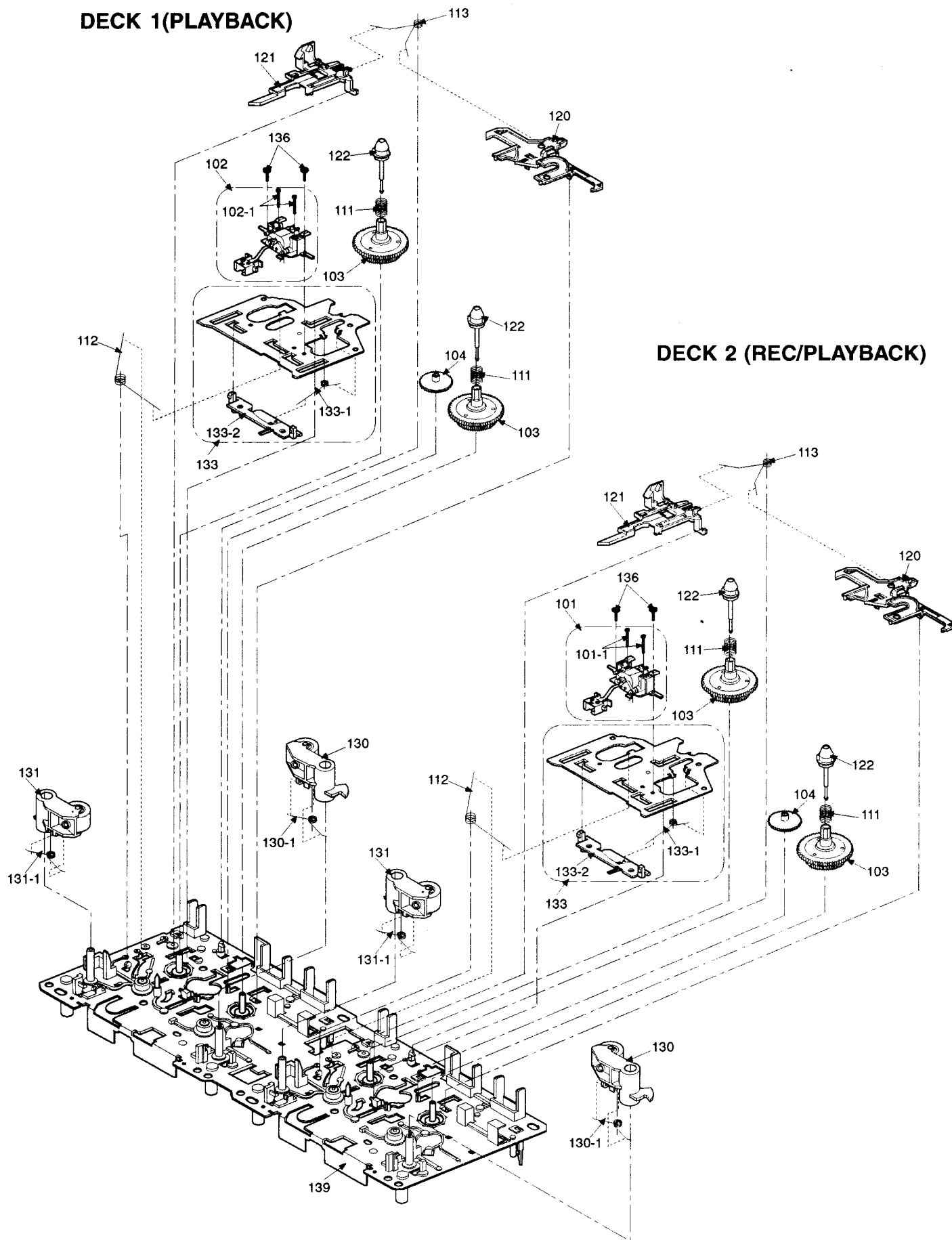
Pin No.	Mark	I/O	Function
1	VCC	I	Power supply terminal
2	VREF	I	Reference voltage input
3	IN4	I	Motor driver (4) input
4	IN3	I	Motor driver (3) input
5	GND	—	Ground connection
6	NC	—	Ground connection
7	NRESET	I	Reset input
8	GND	—	Ground connection
9	IN2	I	Motor driver (2) input
10	PC2	I	PC2 (power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

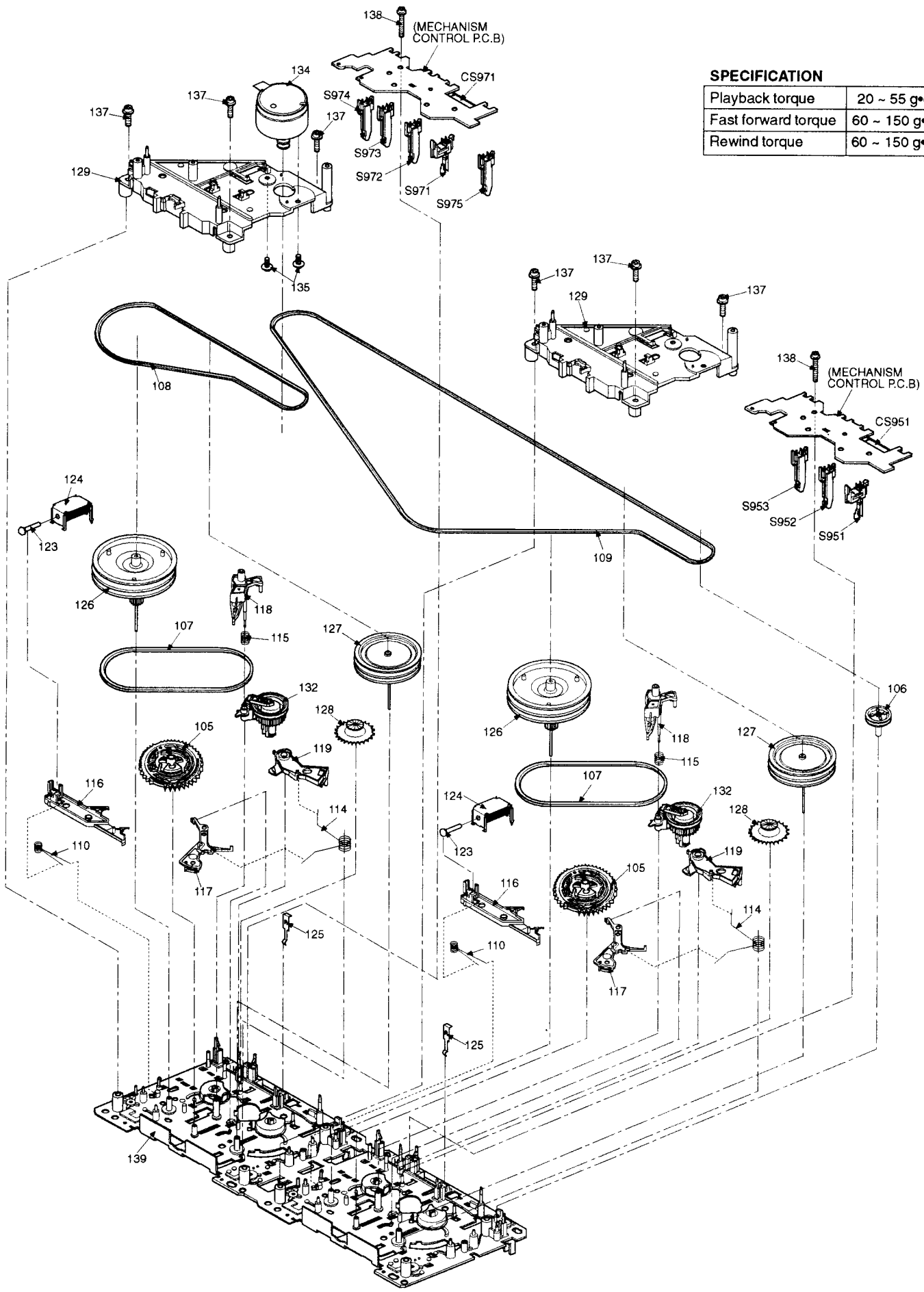
Pin No.	Mark	I/O	Function
13	PVCC1	I	Power supply (1) for driver
14	PGND1	—	Ground connection (1) for driver
15	D1-	O	Motor driver (1) reverse-action output
16	D1+	O	Motor driver (1) forward-action output
17	D2-	O	Motor driver (2) reverse-action output
18	D2+	O	Motor driver (2) forward-action output
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

■ Mechanism Parts Location (RAA3406)

DECK 1 (PLAYBACK)

DECK 2 (REC/PLAYBACK)





SPECIFICATION

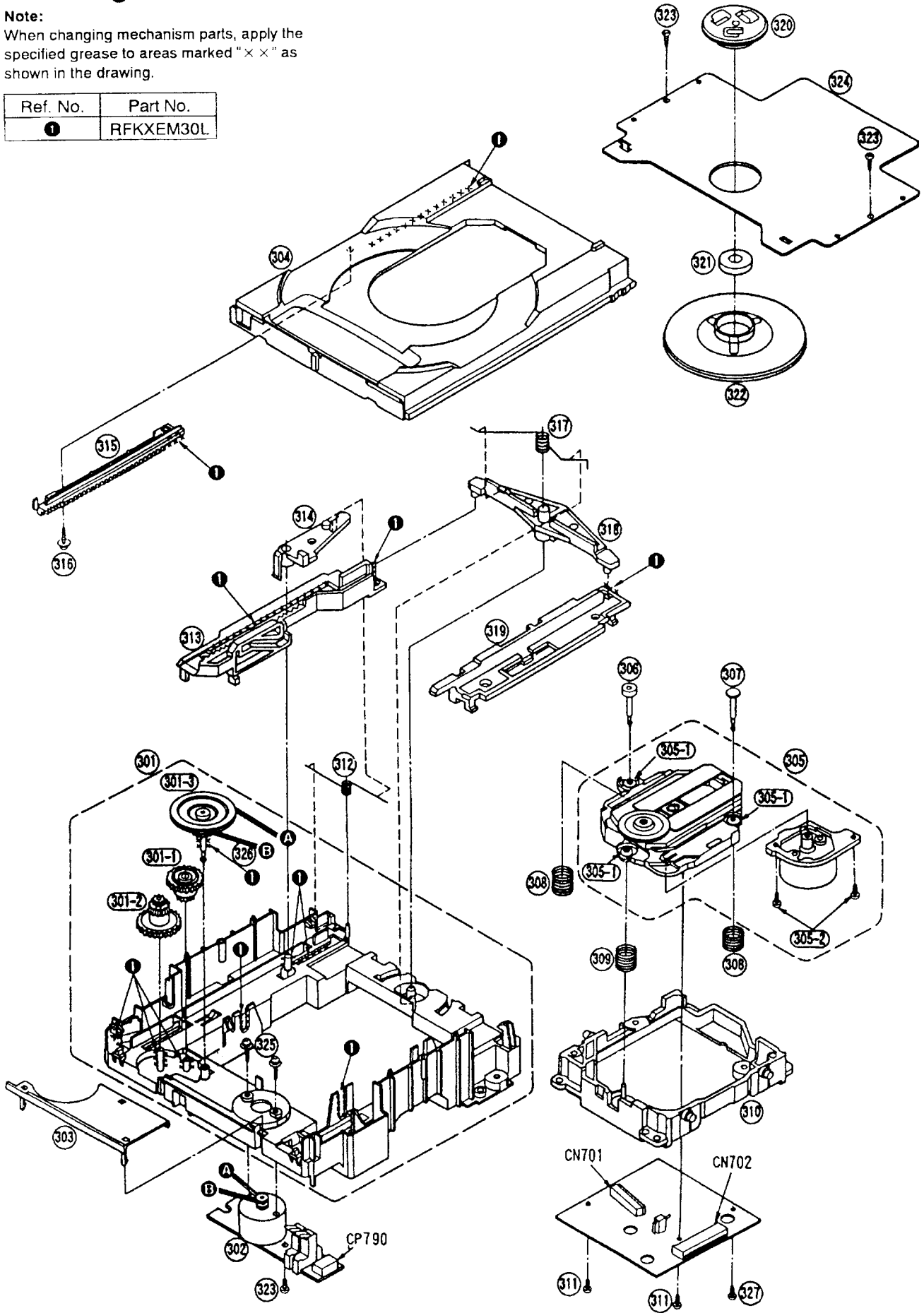
Playback torque	20 ~ 55 g•cm
Fast forward torque	60 ~ 150 g•cm
Rewind torque	60 ~ 150 g•cm

■ Loading Unit Parts Location

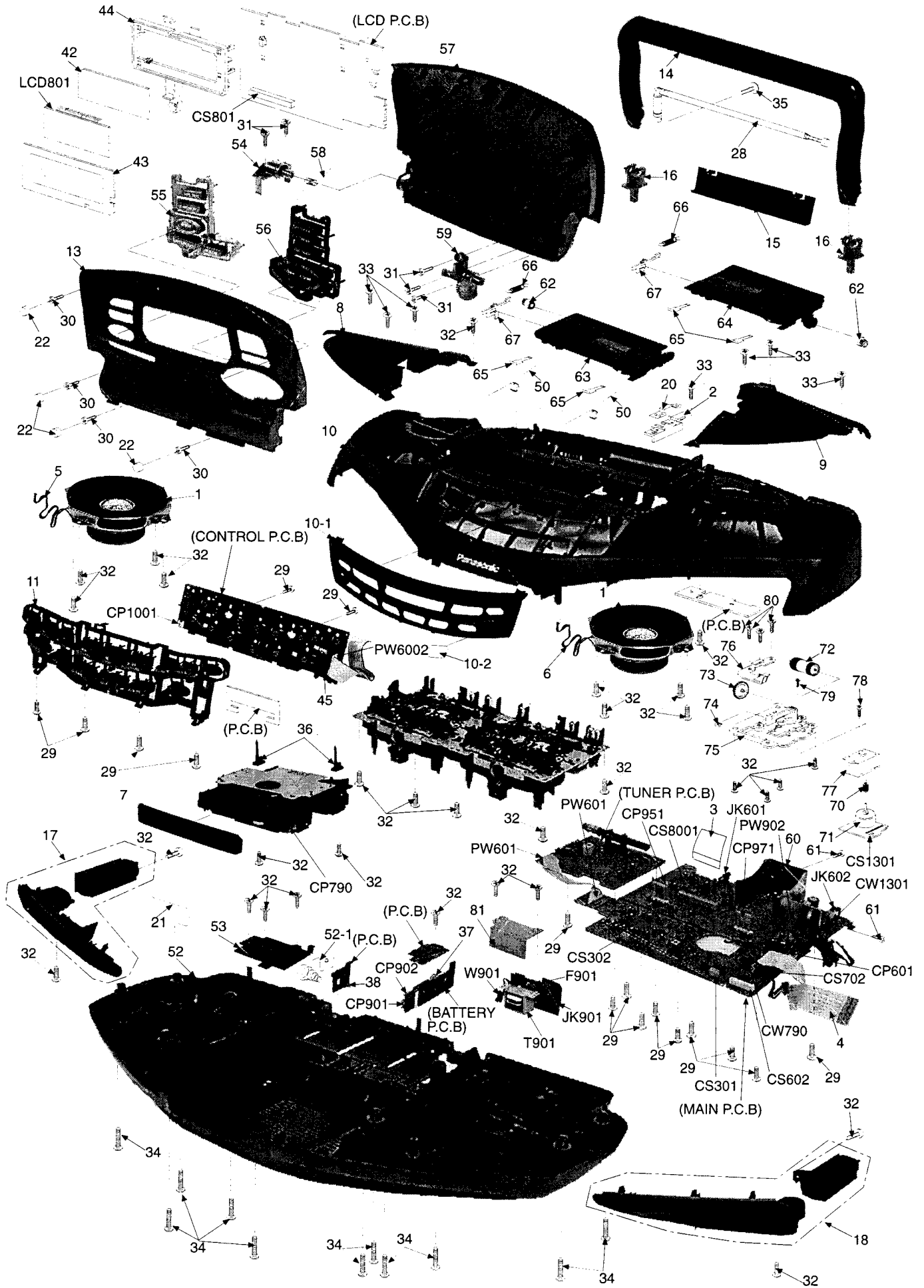
Note:

When changing mechanism parts, apply the specified grease to areas marked "× ×" as shown in the drawing.

Ref. No.	Part No.
①	RFKXEM30L



■ Cabinet Parts Location



Mechanism Parts List

Notes : [M] in Remarks column indicates parts supplied by MESA.

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
		CASSETTE DECK		113	RMB0404	BRAKE ROD SPRING	[M]	129	RMK0283	SUB-CHASSIS	[M]
				114	RMB0406	FR LEVER SPRING	[M]	130	RXL0124	PINCH ROLLER 'F' ASS	[M]
101	RED0037	R/P HEAD BLOCK UNIT	[M]	115	RMB0408	THRUST SPRING	[M]	130-1	RMB0401	PINCH ARM SPRING 'F'	[M]
101-1	RHE5152ZB	SCREW	[M]	116	RML0370	TRIGGER LEVER	[M]	131	RXL0125	PINCH ROLLER 'R' ASS	[M]
102	RED0038	P/B HEAD BLOCK UNIT	[M]	117	RML0371	FR LEVER	[M]	131-1	RMB0402	PINCH ARM SPRING 'R'	[M]
102-1	RHE5152ZB	SCREW	[M]	118	RML0372	WINDING LEVER	[M]	132	RXL0126	WINDING ARM ASS'Y	[M]
103	RDG0300	REEL BASE GEAR	[M]	119	RML0374	EJECT LEVER	[M]	133	RXQ0412	HEAD PANEL ASS'Y	[M]
104	RDG0301	WINDING RELAY GEAR	[M]	120	RMM0131	BRAKE ROD	[M]	133-1	RMB0405	F.R ROD SPRING	[M]
105	RDK0026	MAIN GEAR	[M]	121	RMM0133	EJECT ROD	[M]	133-2	RMM0132	FR ROD	[M]
106	RDR0029	PULLEY	[M]	122	RMQ0519	REEL HUB	[M]	134	REM0070	CAP MOTOR ASS'Y	[M]
107	RDV0033-1	WINDING BELT	[M]	123	RMS0398-1	SHAFT	[M]	135	RHD26022	MOTOR SCREW	[M]
108	RDV0034	CAPSTAN BELT 'A'	[M]	124	RSJ0003	PLUNGER	[M]	136	XTW2+5L	HEAD BLOCK UNIT SCREW	[M]
109	RDV0035	CAPSTAN BELT 'B'	[M]	125	RUS609ZC	SPRING	[M]	137	XTW26+10S	SUB-CHASSIS SCREW	[M]
110	RUW147ZA	SPRING	[M]	126	RXF0049	FLYWHEEL 'F' ASS'Y	[M]	138	XYC2+JF17	PCB EARTH SCREW	[M]
111	RMB0400	REEL SPRING	[M]	127	RXF0050	FLYWHEEL 'R' ASS'Y	[M]	139	RFKJXD70-K	CHASSIS ASS'Y	[M]
112	RMB0403	HEAB PANEL SPRING	[M]	128	RXG0040	FF RELAY GEAR ASS'Y	[M]				

Loading Mechanism Parts List

Notes : [M] in Remarks column indicates parts supplied by MESA.

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
		TRAVERSE DECK		306	RMS0350	PIN (B)	[M]	318	RML0349	LEVER	[M]
				307	RMS0123-1	PIN (A)	[M]	319	RMM0059-1	SLIDE PLATE (B)	[M]
301	RFKJXD70-K	LOADING CHASSIS ASSY	[M]	308	RME0109	SPRING (A)	[M]	320	RMR0334	HOLDER	[M]
301-1	RDG0142	GEAR	[M]	309	RME0142	SPRING (B)	[M]	321	RHM245ZA	MAGNET	[M]
301-2	RDG0193	GEAR	[M]	310	RMR0698-K	TRAVERSE CHASSIS	[M]	322	RXQ0380	MAGNET HOLDER	[M]
301-3	RDP0065	PULLY	[M]	311	XTV2+6G	SCREW	[M]	323	XTN26+6G	SCREW	[M]
302	REM0019	MOTOR	[M]	312	RME0063	SPRING	[M]	324	RMA0793	CLAMPER	[M]
303	RMK0255	BELT COVER	[M]	313	RMM0079-1	SLIDE PLATE (A)	[M]	325	XYN2+F6FZ	SCREW	[M]
304	RGQ0143-K	DISC TRAY	[M]	314	RML0178-1	LEVER	[M]	326	RMG0158	BELT	[M]
305	RAE0150Z	TRAVERSE DECK	[M]	315	RFKNLPG440-K	GEAR ASS'Y (B)	[M]	327	XTN2+6G	SCREW	[M]
305-1	SHGD113-1	RUBBER (1)	[M]	316	RHD20009-1	SCREW	[M]				
305-2	SNSD38	SCREW	[M]	317	RME0087	SPRING	[M]				

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 or colour. (Refer to the cover page for area or colour)

Parts without these indications can be used for all areas.

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

* Warning : This product uses a laser diode. Refer to caution statements on page 3.

ACHTUNG : • Die lasereinheit nicht zerlegen.


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

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS		9	RGK0868-K	SPEAKER COVER (R)	[M]	18	RKT0035-S	PORT (R)	[M]
				10	RFKXED77EBK	UPPER CABINET ASS'Y	[M]	20	RMC0252	FRICTION SPRING	[M]
1	EAS10P377A6	SPEAKER	[M]	10-1	RGP0576B-K	FRONT PANEL	[M]	21	RME0231	ROD ANT TERMINAL	[M]
2	RDB0057	COBRA HOLDER (R)	[M]	10-2	RKW0486-K	FILTER PANEL	[M]	22	RMG0249-K1	SCREW COVER	[M]
3	REE0745	COBRA FFC	[M]	11	RGU1479A-K	FRONT BUTTON	[M]	28	XEAR175EA-Y	ROD ANTENNA	[M]
4	REE0758	CD FFC	[M]	13	RKF0501-K	COBRA FRONT	[M]	29	XTBS26+10J	SCREW	[M]
5	REX0838	SP MAIN WIRE (L)	[M]	14	RKH0040-K	HANDLE	[M]	30	XTN26+8GFZ	COBRA F COVER SCREW	[M]
6	REX0839	SP MAIN WIRE (R)	[M]	15	RKK347ZB-K	BATTERY COVER	[M]	31	XTV26+8G	AUTO VOLUME SCREW	[M]
7	RGK0866-K	CD TRAY LID	[M]	16	RKQ0215-K	HANDLE FIXTURE	[M]	32	XTV3+12G	SP. MOUNTING SCREW	[M]
8	RGK0867-K	SPEAKER COVER (L)	[M]	17	RKT0034-S	PORT (L)	[M]	33	XTV3+12GFZ	TOP CAB SCREW	[M]

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
34	XTV3+20G	CASING SCREW	[M]			TRANSISTORS		Q802	2SC2785FTA	TRANSISTOR	[M]
35	XYN3+F12FY	ROD ANTENNA SCREW	[M]					Q803	2SC2001KTA	TRANSISTOR	[M]
36	RMR1031-W	CD FIXTURE	[M]	Q1	2SC2785FTA	TRANSISTOR	[M]	Q804	2SC2785FTA	TRANSISTOR	[M]
37	RJC511XA	BATT. TERMINAL	[M]	Q2	2SC2785FTA	TRANSISTOR	[M]			DIODES	
38	RJC751ZAA	UM-3 BATT. SPRING	[M]	Q3	2SC2786LTA	TRANSISTOR	[M]				
42	RGL0291-Q	PANEL LIGHT	[M]	Q4	2SC3313BTA	TRANSISTOR	[M]				
43	RGPO488-3Q	LCD PANEL	[M]	Q5	RVTDTA143XST	TRANSISTOR	[M]	D1	KV1360NT	DIODE	[M]
44	RMN0332-1	LCD HOLDER	[M]	Q8	2SC2785FTA	TRANSISTOR	[M]	D3	KV1583BMTL	DIODE	[M]
45	RMN0417	REMOCON SHIELD	[M]	Q10	RVTDTA143XST	TRANSISTOR	[M]	D4	KV1360NT	DIODE	[M]
50	RME0230	OPEN SPRING	[M]	Q11	2SC2001LTA	TRANSISTOR	[M]	D8	1SS254TA	DIODE	[M]
52	RFKJXED77EBK	BOTTOM CHASSIS ASS'Y	[M](EB)	Q12	2SC2785FTA	TRANSISTOR	[M]	D10	1SS254TA	DIODE	[M]
52	RFKJXED77EGK	BOTTOM CHASSIS ASS'Y	[M](EG)	Q14	2SC2785FTA	TRANSISTOR	[M]	D11	RVD1SS135TA	DIODE	[M]
52-1	RJC91010	BATTERY TERMINAL	[M]	Q101	2SJ40CTA	TRANSISTOR	[M]	D301	1SS254TA	DIODE	[M]
53	RMR1032-W	COVER	[M]	Q103	2SJ40DTA	TRANSISTOR	[M]	D602	MTZJ9R1BTA	DIODE	[M]
54	RDB0063-2	COBRA HOLDER (L)	[M]	Q201	2SJ40CTA	TRANSISTOR	[M]	D603	RL1N4003N02	DIODE	[M]
55	RGU1480A-K	LEFT BUTTON	[M]	Q203	2SJ40DTA	TRANSISTOR	[M]	D604	1SS254TA	DIODE	[M]
56	RGU1481A-K	RIGHT BUTTON	[M]	Q301	2SC1845FTA	TRANSISTOR	[M]	D605	1SS254TA	DIODE	[M]
57	RKF0500-K	COBRA REAR COVER	[M]	Q302	2SC1845FTA	TRANSISTOR	[M]	D606	1SS254TA	DIODE	[M]
58	RME0232	BALANCE SPRING	[M]	Q303	2SC2001LTA	TRANSISTOR	[M]	D608	1SS254TA	DIODE	[M]
59	RMS0330A	POWER GEAR	[M]	Q304	RVTDTA143XST	TRANSISTOR	[M]	D613	1SS254TA	DIODE	[M]
60	RMY0192-1	HEAT SINK	[M]	Q305	2SC2785FTA	TRANSISTOR	[M]	D616	1SS254TA	DIODE	[M]
61	XTV3+10F	SCREW (HEAT SINK)	[M]	Q306	2SC2785FTA	TRANSISTOR	[M]	D617	MTZJ12BTA	DIODE	[M]
62	RDG0183-L	DAMPER GEAR	[M]	Q307	2SC2785FTA	TRANSISTOR	[M]	D622	MTZJ5R1BTA	DIODE	[M]
63	RFKXED77-KA	CASS. HOLDER ASS'Y (L)	[M]	Q308	2SC2785FTA	TRANSISTOR	[M]	D623	RL1N4003N02	DIODE	[M]
64	RFKXED77-KB	CASS. HOLDER ASS'Y (R)	[M]	Q309	2SC2785FTA	TRANSISTOR	[M]	D624	1SS254TA	DIODE	[M]
65	RUS757ZAA	CASS. HALF SPRING	[M]	Q310	2SC2785FTA	TRANSISTOR	[M]	D801	1SS254TA	DIODE	[M]
66	RMB0448-J	CASS. E.J. LEV. SPRING	[M]	Q311	2SC2785FTA	TRANSISTOR	[M]	D802	MTZJ10BTA	DIODE	[M]
67	RMM0163	LOCK ROD	[M]	Q312	2SD965RTA	TRANSISTOR	[M]	D901	RL203M11	DIODE	[M] ↑
70	RDG0250A	GEAR	[M]	Q313	RVTDTA143XST	TRANSISTOR	[M]	D902	RL203M11	DIODE	[M] ↑
71	RFKXDT07-K	MOTOR ASS'Y	[M]	Q317	RVTDTA143XST	TRANSISTOR	[M]	D903	RL203M11	DIODE	[M] ↑
72	RFKXDT07-K	GEAR ASS'Y	[M]	Q322	2SC2785FTA	TRANSISTOR	[M]	D904	RL203M11	DIODE	[M] ↑
73	RDG0289	GEAR	[M]	Q325	2SC2785FTA	TRANSISTOR	[M]	D951	MA165TA	DIODE	[M]
74	RMC0253	CLIP	[M]	Q326	2SC2785FTA	TRANSISTOR	[M]	D971	MA165TA	DIODE	[M]
75	RMK0261	CHASSIS	[M]	Q401	2SC2785FTA	TRANSISTOR	[M]	D1001	MTZJ8R2BTA	DIODE	[M]
76	RMR0801-W	ANGLE	[M]	Q402	2SC1740SLNRT	TRANSISTOR	[M]	D1002	SPR39MVV	DIODE	[M]
77	RSC0387	SHIELD CASE	[M]	Q403	2SC1740SLNRT	TRANSISTOR	[M]			SWITCHES	
78	XQN2+C3	SCREW	[M]	Q501	2SC2785FTA	TRANSISTOR	[M]	S801	EVQ21405R	SW. TIMER CHK ADJUST	[M]
79	XQN2+C6	SCREW	[M]	Q502	2SC1740SLNRT	TRANSISTOR	[M]	S802	EVQ21405R	SW. SET/MEMORY	[M]
80	XTV26+12F	SCREW	[M]	Q503	2SC1740SLNRT	TRANSISTOR	[M]	S803	EVQ21405R	SW. CLOCK ADJUST	[M]
81	RSC0469	P.T. SHIELD	[M]	Q601	2SC1740SLNRT	TRANSISTOR	[M]	S804	EVQ21405R	SW. UP	[M]
		INTEGRATED CIRCUITS		Q605	2SB1030RTA	TRANSISTOR	[M]	S805	EVQ21405R	SW. DOWN	[M]
				Q606	2SB1030RTA	TRANSISTOR	[M]	S806	EVQ21405R	SW. REC TIMER	[M]
				Q607	2SB1566E	TRANSISTOR	[M] ↑	S807	EVQ21405R	SW. PLAY TIMER B	[M]
IC1	TA7358FMATEL	IC, FM RF	[M]	Q608	RVTDTA143TST	TRANSISTOR	[M]	S808	EVQ21405R	SW. PLAY TIMER A	[M]
IC2	BU2616F-E2	IC, PLL	[M]	Q609	2SC2785FTA	TRANSISTOR	[M] ↑	S809	EVQ21405R	SW. TAPE EDIT	[M]
IC3	LA1832MLSTEL	IC, IF/MULTI	[M]	Q610	2SA952LTA	TRANSISTOR	[M]	S810	EVQ21405R	SW. CD REC MODE	[M]
IC301	BA7755A	IC, R/P SELECT SWITCH	[M]	Q611	RVTDTA143EST	TRANSISTOR	[M]	S811	EVQ21405R	SW. REC/REC PAUSE	[M]
IC302	CXA1998QT6	IC, R/P EQ AMP	[M]	Q612	RVTDTA143XST	TRANSISTOR	[M]	S812	EVQ21405R	SW. S. VIRTUALIZER	[M]
IC601	BH3854AFS-E2	IC, SOUND PROCESSOR	[M]	Q613	2SC2001KTA	TRANSISTOR	[M] ↑	S813	EVQ21405R	SW. PRESET EQ	[M]
IC603	S81350HG-T	IC, 5V REGULATOR	[M] ↑	Q614	2SB1030RTA	TRANSISTOR	[M]	S951	RSH1A018-1U	SW. MODE (DECK 1)	[M]
IC604	LA4603	IC, POWER	[M]	Q615	RVTDTA114YST	TRANSISTOR	[M]	S952	RSH1A018-2U	SW. HALF (DECK 1)	[M]
IC790	TA7291S	IC, LOADING MOTOR CD	[M]	Q618	2SC2785FTA	TRANSISTOR	[M]	S953	RSH1A019-2U	SW. CrO ₂ (DECK 1)	[M]
IC801	MND3256REBH1	IC, MICRO PROCESSOR	[M]	Q619	RVTDTA143XST	TRANSISTOR	[M]	S971	RSH1A018-1U	SW. MODE (DECK 2)	[M]
IC802	S-806H-Z	IC, RESET	[M]	Q620	RVTDTA143EST	TRANSISTOR	[M]	S972	RSH1A019-2U	SW. HALF (DECK 2)	[M]
IC951	0N2180RLC	IC, PHOTO INTERRUPTOR	[M]	Q621	RVTDTA114YST	TRANSISTOR	[M]	S973	RSH1A019-2U	SW. CrO ₂ (DECK 2)	[M]
IC971	0N2180RLC	IC, PHOTO INTERRUPTOR	[M]	Q622	2SB1030RTA	TRANSISTOR	[M]	S974	RSH1A019-2U	SW. REV. REC (DECK 2)	[M]
IC1301	BA6418N	IC, LOADING MOTOR	[M]	Q624	2SC2785FTA	TRANSISTOR	[M]	S975	RSH1A019-2U	SW. FWD. REC (DECK 2)	[M]
				Q625	2SJ40CDTA	TRANSISTOR	[M]	S1001	EVQ21405R	SW. CD OPEN/CLOSE	[M]
				Q626	2SC2785FTA	TRANSISTOR	[M]				
				Q801	2SC2785FTA	TRANSISTOR	[M]				

Resistors & Capacitors

Notes : * Important safety notice:

Components identified by  mark have special characteristics important for safety.



Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low noise (resistors), etc. are used.

When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list .

* Capacitor values are in microfarads (μF) unless specified otherwise, P=Pico-farads (pF), F=Farads.

* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).


* [M] Indicates in the values & remarks column indicates parts supplied by MESA.

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
	RESISTORS		R104	ERDS2TJ104T	100K 1/4W [M]	R350	ERDS2TJ334T	330K 1/4W [M]	R614	ERDS2TJ103T	10K 1/4W [M]
			R105	ERDS2TJ182T	1.8K 1/4W [M]	R355	ERDS2TJ153T	15K 1/4W [M]	R615	ERDS2TJ331T	330 1/4W [M]
R1	ERDS2TJ104T	100K 1/4W [M]	R106	ERDS2TJ332T	3.3K 1/4W [M]	R356	ERDS2TJ153T	15K 1/4W [M]	R616	ERD2FCVG220T	22  1/4W [M]
R2	ERDS2TJ332T	3.3K 1/4W [M]	R109	ERDS2TJ223T	22K 1/4W [M]	R366	ERDS2TJ183T	18K 1/4W [M]	R617	ERDS2TJ122T	1.2K 1/4W [M]
R3	ERDS2TJ104T	100K 1/4W [M]	R110	ERDS2TJ222T	2.2K 1/4W [M]	R368	ERDS2TJ220T	22 1/4W [M]	R618	ERDS2TJ103T	10K 1/4W [M]
R5	ERDS2TJ103T	10K 1/4W [M]	R201	ERDS2TJ101T	100 1/4W [M]	R369	ERDS2TJ334T	330K 1/4W [M]	R619	ERDS2TJ391T	390 1/4W [M]
R6	ERDS2TJ152T	1.5K 1/4W [M]	R202	ERDS2TJ822T	8.2K 1/4W [M]	R370	ERDS2TJ103T	10K 1/4W [M]	R620	ERDS2TJ391T	390 1/4W [M]
R7	ERDS2TJ330T	33 1/4W [M]	R203	ERDS2TJ562T	5.6K 1/4W [M]	R401	ERDS2TJ183T	18K 1/4W [M]	R622	ERDS2TJ151T	150 1/4W [M]
R8	ERDS2TJ104T	100K 1/4W [M]	R204	ERDS2TJ104T	100K 1/4W [M]	R402	ERDS2TJ682T	6.8K 1/4W [M]	R623	ERDS2TJ821T	820 1/4W [M]
R9	ERDS2TJ471T	470 1/4W [M]	R205	ERDS2TJ182T	1.8K 1/4W [M]	R403	ERDS2TJ123T	12K 1/4W [M]	R624	ERDS2TJ331T	330 1/4W [M]
R10	ERDS2TJ102T	1K 1/4W [M]	R206	ERDS2TJ332T	3.3K 1/4W [M]	R404	ERDS2TJ472T	4.7K 1/4W [M]	R626	ERDS2TJ122T	1.2K 1/4W [M]
R11	ERDS2TJ103T	10K 1/4W [M]	R209	ERDS2TJ223T	22K 1/4W [M]	R405	ERDS2TJ222T	2.2K 1/4W [M]	R627	ERDS2TJ472T	4.7K 1/4W [M]
R12	ERDS2TJ223T	22K 1/4W [M]	R210	ERDS2TJ222T	2.2K 1/4W [M]	R407	ERDS2TJ223T	22K 1/4W [M]	R628	ERDS2TJ472T	4.7K 1/4W [M]
R13	ERDS2TJ153T	15K 1/4W [M]	R301	ERDS2TJ103T	10K 1/4W [M]	R408	ERDS2TJ562T	5.6K 1/4W [M]	R629	ERDS2TJ271T	270 1/4W [M]
R14	ERDS2TJ103T	10K 1/4W [M]	R302	ERDS2TJ152T	1.5K 1/4W [M]	R410	ERDS2TJ105T	1M 1/4W [M]	R630	ERDS2TJ473T	47K 1/4W [M]
R15	ERDS2TJ223T	22K 1/4W [M]	R303	ERDS2TJ152T	1.5K 1/4W [M]	R413	ERDS2TJ181T	180 1/4W [M]	R631	ERDS2TJ474T	470K 1/4W [M]
R17	ERDS2TJ103T	10K 1/4W [M]	R304	ERDS2TJ152T	1.5K 1/4W [M]	R415	ERDS2TJ103T	10K 1/4W [M]	R633	ERDS2TJ330T	33 1/4W [M]
R18	ERDS2TJ223T	22K 1/4W [M]	R305	ERDS2TJ103T	10K 1/4W [M]	R416	ERDS2TJ822T	8.2K 1/4W [M]	R634	ERDS2TJ330T	33 1/4W [M]
R19	ERDS2TJ101T	100 1/4W [M]	R306	ERDS2TJ752T	7.5K 1/4W [M]	R418	ERDS2TJ683T	68K 1/4W [M]	R635	ERDS2TJ103T	10K 1/4W [M]
R20	ERDS2TJ151T	150 1/4W [M]	R307	ERDS2TJ822T	8.2K 1/4W [M]	R419	ERDS2TJ102T	1K 1/4W [M]	R636	ERDS2TJ272T	2.7K 1/4W [M]
R22	ERDS2TJ331T	330 1/4W [M]	R308	ERD2FCVJ4R7T	4.7  1/4W [M]	R422	ERDS2TJ682T	6.8K 1/4W [M]	R640	ERDS2TJ472T	4.7K 1/4W [M]
R24	ERDS2TJ471T	470 1/4W [M]	R309	ERDS2TJ472T	4.7K 1/4W [M]	R423	ERDS2TJ472T	4.7K 1/4W [M]	R641	ERDS2TJ333T	33K 1/4W [M]
R25	ERDS2TJ104T	100K 1/4W [M]	R310	ERDS2TJ472T	4.7K 1/4W [M]	R425	ERDS2TJ221T	220 1/4W [M]	R642	ERDS2TJ102T	1K 1/4W [M]
R26	ERDS2TJ102T	1K 1/4W [M]	R311	ERDS2TJ472T	4.7K 1/4W [M]	R501	ERDS2TJ183T	18K 1/4W [M]	R643	ERDS2TJ102T	1K 1/4W [M]
R27	ERDS2TJ102T	1K 1/4W [M]	R312	ERDS2TJ334T	330K 1/4W [M]	R502	ERDS2TJ682T	6.8K 1/4W [M]	R644	ERDS2TJ102T	1K 1/4W [M]
R28	ERDS2TJ334T	330K 1/4W [M]	R313	ERDS2TJ123T	12K 1/4W [M]	R503	ERDS2TJ123T	12K 1/4W [M]	R646	ERDS2TJ273T	27K 1/4W [M]
R29	ERDS2TJ331T	330 1/4W [M]	R314	ERDS2TJ472T	4.7K 1/4W [M]	R504	ERDS2TJ472T	4.7K 1/4W [M]	R647	ERDS2TJ472T	4.7K 1/4W [M]
R30	ERDS2TJ822T	8.2K 1/4W [M]	R315	ERDS2TJ102T	1K 1/4W [M]	R505	ERDS2TJ222T	2.2K 1/4W [M]	R648	ERDS2TJ103T	10K 1/4W [M]
R31	ERDS2TJ472T	4.7K 1/4W [M]	R316	ERDS2TJ470T	47 1/4W [M]	R507	ERDS2TJ223T	22K 1/4W [M]	R649	ERDS2TJ561T	560 1/4W [M]
R36	ERDS2TJ223T	22K 1/4W [M]	R317	ERDS2TJ220T	22 1/4W [M]	R508	ERDS2TJ562T	5.6K 1/4W [M]	R650	ERDS2TJ103T	10K 1/4W [M]
R37	ERDS2TJ223T	22K 1/4W [M]	R318	ERDS2TJ335T	3.3M 1/4W [M]	R510	ERDS2TJ105T	1M 1/4W [M]	R652	ERDS2TJ103T	10K 1/4W [M]
R40	ERDS2TJ105T	1M 1/4W [M]	R319	ERDS2TJ104T	100K 1/4W [M]	R513	ERDS2TJ181T	180 1/4W [M]	R653	ERDS2TJ103T	10K 1/4W [M]
R41	ERDS2TJ301T	300 1/4W [M]	R320	ERDS2TJ104T	100K 1/4W [M]	R515	ERDS2TJ103T	10K 1/4W [M]	R654	ERDS2TJ103T	10K 1/4W [M]
R42	ERDS2TJ103T	10K 1/4W [M]	R321	ERDS2TJ104T	100K 1/4W [M]	R516	ERDS2TJ822T	8.2K 1/4W [M]	R655	ERDS2TJ103T	10K 1/4W [M]
R43	ERDS2TJ222T	2.2K 1/4W [M]	R322	ERDS2TJ104T	100K 1/4W [M]	R518	ERDS2TJ683T	68K 1/4W [M]	R656	ERDS2TJ223T	22K 1/4W [M]
R44	ERDS2TJ222T	2.2K 1/4W [M]	R323	ERDS2TJ273T	27K 1/4W [M]	R519	ERDS2TJ102T	1K 1/4W [M]	R657	ERDS2TJ223T	22K 1/4W [M]
R47	ERDS2TJ332T	3.3K 1/4W [M]	R324	ERDS2TJ273T	27K 1/4W [M]	R522	ERDS2TJ682T	6.8K 1/4W [M]	R658	ERDS2TJ101T	100 1/4W [M]
R49	ERDS2TJ103T	10K 1/4W [M]	R325	ERDS2TJ471T	470 1/4W [M]	R523	ERDS2TJ472T	4.7K 1/4W [M]	R659	ERDS2TJ270T	27 1/4W [M]
R52	ERDS2TJ223T	22K 1/4W [M]	R326	ERDS2TJ103T	10K 1/4W [M]	R525	ERDS2TJ221T	220 1/4W [M]	R660	ERDS2TJ103T	10K 1/4W [M]
R54	ERDS2TJ222T	2.2K 1/4W [M]	R327	ERDS2TJ472T	4.7K 1/4W [M]	R601	ERDS2TJ334T	330K 1/4W [M]	R661	ERDS2TJ472T	4.7K 1/4W [M]
R57	ERDS2TJ103T	10K 1/4W [M]	R328	ERDS2TJ103T	10K 1/4W [M]	R602	ERDS2TJ102T	1K 1/4W [M]	R662	ERDS2TJ104T	100K 1/4W [M]
R59	ERDS2TJ471T	470 1/4W [M]	R329	ERDS2TJ681T	680 1/4W [M]	R603	ERDS2TJ100T	10 1/4W [M]	R663	ERDS2TJ334T	330K 1/4W [M]
R61	ERDS2TJ103T	10K 1/4W [M]	R330	ERDS2TJ563T	56K 1/4W [M]	R604	ERDS2TJ102T	1K 1/4W [M]	R664	ERDS2TJ105T	1M 1/4W [M]
R62	ERDS2TJ471T	470 1/4W [M]	R331	ERDS2TJ104T	100K 1/4W [M]	R605	ERDS2TJ102T	1K 1/4W [M]	R665	ERDS2TJ182T	1.8K 1/4W [M]
R63	ERDS2TJ105T	1M 1/4W [M]	R332	ERDS2TJ104T	100K 1/4W [M]	R607	ERDS2TJ102T	1K 1/4W [M]	R666	ERDS2TJ103T	10K 1/4W [M]
R64	ERDS2TJ332T	3.3K 1/4W [M]	R333	ERDS2TJ103T	10K 1/4W [M]	R608	ERDS2TJ273T	27K 1/4W [M]	R667	ERDS2TJ1R2T	1.2 1/4W [M]
R65	ERDS2TJ470T	47 1/4W [M]	R334	ERDS2TJ223T	22K 1/4W [M]	R609	ERDS2TJ332T	3.3K 1/4W [M]	R668	ERDS2TJ102T	1K 1/4W [M]
R66	ERDS2TJ332T	3.3K 1/4W [M]	R335	ERDS2TJ470T	47 1/4W [M]	R610	ERDS2TJ273T	27K 1/4W [M]	R669	ERDS2TJ102T	1K 1/4W [M]
R101	ERDS2TJ101T	100 1/4W [M]	R336	ERDS2TJ563T	56K 1/4W [M]	R611	ERDS2TJ332T	3.3K 1/4W [M]	R670	ERDS2TJ102T	1K 1/4W [M]
R102	ERDS2TJ822T	8.2K 1/4W [M]	R337	ERDS2TJ104T	100K 1/4W [M]	R612	ERDS2TJ1R2T	1.2 1/4W [M]	R671	ERDS2TJ102T	1K 1/4W [M]
R103	ERDS2TJ562T	5.6K 1/4W [M]	R349	ERDS2TJ224T	220K 1/4W [M]	R613	ERDS2TJ1R2T	1.2 1/4W [M]	R672	ERDS2TJ102T	1K 1/4W [M]

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R673	ERDS2TJ270T	27 1/4W [M]	R1003	ERDS2TJ122T	1.2K 1/4W [M]	C64	ECFR1C473MR	0.047 16V [M]	C317	ECEA1CKA100B	10 16V [M]
R677	ERDS2TJ681T	680 1/4W [M]	R1004	ERDS2TJ182T	1.8K 1/4W [M]	C65	ECBT1H470J5	47P 50V [M]	C318	ECFR1C473MR	0.047 16V [M]
R678	ERDS2TJ103T	10K 1/4W [M]	R1005	ERDS2TJ222T	2.2K 1/4W [M]	C66	ECBT1H100JC5	10P 50V [M]	C319	ECEA1HKA0R1B	0.1 50V [M]
R679	ERDS2TJ105T	1M 1/4W [M]	R1006	ERDS2TJ272T	2.7K 1/4W [M]	C67	ECFR1C223MR	0.022 16V [M]	C320	ECEA1AKA470B	47 10V [M]
R681	ERDS2TJ335T	3.3M 1/4W [M]	R1007	ERDS2TJ392T	3.9K 1/4W [M]	C68	ECEA1HKA010B	1 50V [M]	C321	ECEA1AKA101B	100 10V [M]
R682	ERDS2TJ682T	6.8K 1/4W [M]	R1008	ERDS2TJ682T	6.8K 1/4W [M]	C69	ECFR1C183KR	0.018 16V [M]	C322	ECEA1CKA100B	10 16V [M]
R801	ERDS2TJ332T	3.3K 1/4W [M]	R1009	ERDS2TJ103T	10K 1/4W [M]	C70	ECFR1C183KR	0.018 16V [M]	C323	ECEA0JKA470B	47 6.3V [M]
R802	ERDS2TJ332T	3.3K 1/4W [M]	R1010	ERDS2TJ102T	1K 1/4W [M]	C71	ECEA1HKA2R2B	2.2 50V [M]	C324	ECEA1HKA0R1B	0.1 50V [M]
R803	ERDS2TJ333T	33K 1/4W [M]	R1011	ERDS2TJ102T	1K 1/4W [M]	C72	ECEA1HKA010B	1 50V [M]	C325	ECBT1H471KB5	470P 50V [M]
R804	ERDS2TJ823T	82K 1/4W [M]	R1012	ERDS2TJ122T	1.2K 1/4W [M]	C74	ECBT1H471KB5	470P 50V [M]	C326	ECBT1H471KB5	470P 50V [M]
R805	ERDS2TJ823T	82K 1/4W [M]	R1013	ERDS2TJ182T	1.8K 1/4W [M]	C75	ECEA1HKA010B	1 50V [M]	C327	ECBT1H471KB5	470P 50V [M]
R806	ERDS2TJ104T	100K 1/4W [M]	R1014	ERDS2TJ222T	2.2K 1/4W [M]	C76	ECEA1HKA010B	1 50V [M]	C329	ECEA1AKA470B	47 10V [M]
R807	ERDS2TJ105T	1M 1/4W [M]	R1015	ERDS2TJ272T	2.7K 1/4W [M]	C77	ECEA1HKA010B	1 50V [M]	C330	ECEA1CKA100B	10 16V [M]
R808	ERDS2TJ222T	2.2K 1/4W [M]				C80	ECBT1H331KB5	330P 50V [M]	C331	ECBT1H102KB5	1000P 50V [M]
R809	ERDS2TJ334T	330K 1/4W [M]		CAPACITORS		C81	ECBT1H331KB5	330P 50V [M]	C333	ECBT1H471KB5	470P 50V [M]
R810	ERDS2TJ102T	1K 1/4W [M]				C82	ECBT1H150JC5	15P 50V [M]	C334	ECEA1CKA100B	10 16V [M]
R811	ERDS2TJ102T	1K 1/4W [M]	C4	RCBS1H102KBY	1000P 50V [M]	C83	ECBT1H331KB5	330P 50V [M]	C335	ECBT1H471KB5	470P 50V [M]
R812	ERDS2TJ472T	4.7K 1/4W [M]	C5	ECBT1H2R2KC5	2.2P 50V [M]	C84	ECBT1C103MS5	0.01 16V [M]	C336	ECBT1H471KB5	470P 50V [M]
R813	ERDS2TJ472T	4.7K 1/4W [M]	C6	RCBS1H102KBY	1000P 50V [M]	C85	ECBT1C103MS5	0.01 16V [M]	C337	ECBT1H471KB5	470P 50V [M]
R814	ERDS2TJ472T	4.7K 1/4W [M]	C9	ECEA1HKN010B	1 50V [M]	C86	ECBT1H331KB5	330P 50V [M]	C401	ECBT1H221KB5	220P 50V [M]
R815	ERDS2TJ472T	4.7K 1/4W [M]	C10	ECBT1C332MR5	3300P 16V [M]	C87	ECBT1C103MS5	0.01 16V [M]	C402	ECEA1CKA100B	10 16V [M]
R816	ERDS2TJ472T	4.7K 1/4W [M]	C11	ECEA1AU101B	100 10V [M]	C88	RCBS1H102KBY	1000P 50V [M]	C403	ECEA1CKA100B	10 16V [M]
R817	ERDS2TJ472T	4.7K 1/4W [M]	C12	ECFR1C473MR	0.047 16V [M]	C89	ECBT1H101KB5	100P 50V [M]	C404	ECEA1HKA0R1B	0.1 50V [M]
R818	ERDS2TJ472T	4.7K 1/4W [M]	C13	ECFR1C103MR	0.01 16V [M]	C101	ECBT1H471KB5	470P 50V [M]	C405	ECFR1C473MR	0.047 16V [M]
R819	ERDS2TJ124T	120K 1/4W [M]	C14	ECBT1C103MS5	0.01 16V [M]	C102	ECBT1H471KB5	470P 50V [M]	C406	ECFR1C103MR	0.01 16V [M]
R820	ERDS2TJ472T	4.7K 1/4W [M]	C15	ECBT1H6R8KC5	6.8P 50V [M]	C103	ECEA0JKA470B	47 6.3V [M]	C409	ECEA1HKA010B	1 50V [M]
R821	ERDS2TJ223T	22K 1/4W [M]	C16	RCBS1H102KBY	1000P 50V [M]	C104	ECFR1C183KR	0.018 16V [M]	C411	ECBT1H471KB5	470P 50V [M]
R822	ERDS2TJ472T	4.7K 1/4W [M]	C17	RCBS1H102KBY	1000P 50V [M]	C105	ECEA1EKA4R7B	4.7 25V [M]	C413	ECA1AM222E	2200 10V [M]
R823	ERDS2TJ472T	4.7K 1/4W [M]	C18	ECBT1H200JC5	20P 50V [M]	C106	ECBT1H471KB5	470P 50V [M]	C418	ECEA1HKA2R2B	2.2 50V [M]
R824	ERDS2TJ103T	10K 1/4W [M]	C19	ECBT1H220JC5	22P 50V [M]	C107	ECEA1HKA010B	1 50V [M]	C419	ECEA1CKA100B	10 16V [M]
R825	ERDS2TJ103T	10K 1/4W [M]	C20	RCBS1H102KBY	1000P 50V [M]	C108	ECEA1HKA010B	1 50V [M]	C421	ECFR1C223MR	0.022 16V [M]
R826	ERDS2TJ474T	470K 1/4W [M]	C21	ECEA1AKA101B	100 10V [M]	C109	ECEA1EKA4R7B	4.7 25V [M]	C422	ECBT1C103MS5	0.01 16V [M]
R827	ERDS2TJ104T	100K 1/4W [M]	C22	RCBS1H102KBY	1000P 50V [M]	C110	ECEA1EKA4R7B	4.7 25V [M]	C423	ECEA1CKA100B	10 16V [M]
R829	ERDS2TJ104T	100K 1/4W [M]	C23	RCBS1H102KBY	1000P 50V [M]	C111	ECBT1H331KB5	330P 50V [M]	C424	ECEA1CKA100B	10 16V [M]
R830	ERDS2TJ104T	100K 1/4W [M]	C24	RCBS1H102KBY	1000P 50V [M]	C201	ECBT1H471KB5	470P 50V [M]	C425	ECBT1H471KB5	470P 50V [M]
R831	ERDS2TJ102T	1K 1/4W [M]	C25	ECBT1H150JC5	15P 50V [M]	C202	ECBT1H471KB5	470P 50V [M]	C427	ECBT0J153MS5	0.015 6.3V [M]
R835	ERDS2TJ103T	10K 1/4W [M]	C26	ECBT1H6R8KC5	6.8P 50V [M]	C203	ECEA0JKA470B	47 6.3V [M]	C430	ECBT1H470J5	47P 50V [M]
R838	ERDS2TJ472T	4.7K 1/4W [M]	C27	ECBT1H4R7KC5	4.7P 50V [M]	C204	ECFR1C183KR	0.018 16V [M]	C431	ECBT1H470J5	47P 50V [M]
R839	ERDS2TJ472T	4.7K 1/4W [M]	C28	RCBS1H102KBY	1000P 50V [M]	C205	ECEA1EKA4R7B	4.7 25V [M]	C501	ECBT1H221KB5	220P 50V [M]
R841	ERDS2TJ472T	4.7K 1/4W [M]	C29	RCBS1H102KBY	1000P 50V [M]	C206	ECBT1H471KB5	470P 50V [M]	C502	ECEA1CKA100B	10 16V [M]
R847	ERDS2TJ104T	100K 1/4W [M]	C31	RCBS1H102KBY	1000P 50V [M]	C207	ECEA1HKA010B	1 50V [M]	C503	ECEA1CKA100B	10 16V [M]
R848	ERDS2TG103T	10K 1/4W [M]	C32	ECBT1H101KB5	100P 50V [M]	C208	ECEA1HKA010B	1 50V [M]	C504	ECEA1HKA0R1B	0.1 50V [M]
R856	ERDS2TG103T	10K 1/4W [M]	C33	ECBT1H101KB5	100P 50V [M]	C209	ECEA1EKA4R7B	4.7 25V [M]	C505	ECFR1C473MR	0.047 16V [M]
R857	ERDS2TG103T	10K 1/4W [M]	C34	ECBT1H680J5	68P 50V [M]	C210	ECEA1EKA4R7B	4.7 25V [M]	C506	ECFR1C103MR	0.01 16V [M]
R859	ERDS2TJ102T	1K 1/4W [M]	C35	ECBT1H1R5M5	1.5P 50V [M]	C211	ECBT1H331KB5	330P 50V [M]	C509	ECEA1HKA010B	1 50V [M]
R860	ERDS2TJ102T	1K 1/4W [M]	C36	RCBS1H102KBY	1000P 50V [M]	C301	ECEA1HN2R2SB	2.2 50V [M]	C511	ECBT1H471KB5	470P 50V [M]
R861	ERDS2TJ122T	1.2K 1/4W [M]	C37	RCBS1H102KBY	1000P 50V [M]	C302	ECBT1C103MS5	0.01 16V [M]	C513	ECA1AM222E	2200 10V [M]
R862	ERDS2TJ182T	1.8K 1/4W [M]	C38	ECBT1H331KB5	330P 50V [M]	C303	ECBT1C103MS5	0.01 16V [M]	C518	ECEA1HKA2R2B	2.2 50V [M]
R863	ERDS2TJ222T	2.2K 1/4W [M]	C39	ECBT1C103MS5	0.01 16V [M]	C304	ECQP1102JZT	1000P 100V [M]	C519	ECEA1CKA100B	10 16V [M]
R864	ERDS2TJ272T	2.7K 1/4W [M]	C40	ECBT1C103MS5	0.01 16V [M]	C305	ECQP1821JZT	820P 100V [M]	C521	ECFR1C223MR	0.022 16V [M]
R865	ERDS2TJ392T	3.9K 1/4W [M]	C44	ECEA1AU101B	100 10V [M]	C306	ECQP2A472JZT	4700P 100V [M]	C522	ECBT1C103MS5	0.01 16V [M]
R866	ERDS2TJ682T	6.8K 1/4W [M]	C47	ECFR1C223MR	0.022 16V [M]	C307	ECEA1HKA010B	1 50V [M]	C523	ECEA1CKA100B	10 16V [M]
R867	ERDS2TJ103T	10K 1/4W [M]	C48	ECEA0JU101B	100 6.3V [M]	C308	ECEA1AU101B	100 10V [M]	C524	ECEA1CKA100B	10 16V [M]
R868	ERDS2TJ183T	18K 1/4W [M]	C51	ECEA1HKA010B	1 50V [M]	C309	ECQP1H473JZ3	0.047 50V [M]	C525	ECBT1H471KB5	470P 50V [M]
R952	ERDS2TJ821T	820 1/4W [M]	C52	ECFR1C473MR	0.047 16V [M]	C310	ECBT1H102KB5	1000P 50V [M]	C527	ECBT0J153MS5	0.015 6.3V [M]
R953	ERDS2TJ393T	39K 1/4W [M]	C58	ECBT1H8R2KC5	8.2P 50V [M]	C311	ECBT1H102KB5	1000P 50V [M]	C530	ECBT1H470J5	47P 50V [M]
R972	ERDS2TJ821T	820 1/4W [M]	C60	ECEA1AKA220B	22 10V [M]	C312	ECBT1C222MR5	2200P 16V [M]	C531	ECBT1H470J5	47P 50V [M]
R973	ERDS2TJ393T	39K 1/4W [M]	C61	ECBT1C332MR5	3300P 16V [M]	C313	ECBT1C222MR5	2200P 16V [M]	C601	ECEA1HKA010B	1 50V [M]
R1001	ERDS2TJ102T	1K 1/4W [M]	C62	RCBS1H102KBY	1000P 50V [M]	C314	ECBT1C332MR5	3300P 16V [M]	C602	ECEA1CKA100B	10 16V [M]
R1002	ERDS2TJ102T	1K 1/4W [M]	C63	ECBT1H681KB5	680P 50V [M]	C315	ECEA0JKA470B	47 6.3V [M]	C603	ECBT1H101KB5	100P 50V [M]

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C604	ECEA1CU220B	22 16V [M]		<SERVOP.C.B.>		C716	ECUV1H561KBN	560P 50V [M]			
C605	ECEA1CKA100B	10 16V [M]		RESISTORS		C717	ECUZNE104MBN	0.1 25V [M]			
C606	ECBT1H102KB5	1000P 50V [M]				C718	ECUV1C224KBN	0.22 16V [M]			
C607	ECEA1CKA100B	10 16V [M]	R701	ERJ6GEYJ4R7V	4.7 1/10W [M]	C721	ECUV1H150JCN	15P 50V [M]			
C610	ECEA1CU101B	100 16V [M]	R703	ERJ6GEYJ823	82K 1/10W [M]	C722	ECUV1H150JCN	15P 50V [M]			
C611	ECBT1H102KB5	1000P 50V [M]	R704	ERJ6GEYJ102V	1K 1/10W [M]	C723	ECEA1AKA221I	220 10V [M]			
C612	ECEA0JU101B	100 6.3V [M]	R705	ERJ6GEYJ103V	10K 1/10W [M]	C724	ECUV1C104MBM	0.1 16V [M]			
C613	ECBT1H471KB5	470P 50V [M]	R706	ERJ6GEYJ102V	1K 1/10W [M]	C725	ECUV1H102KBN	1000P 50V [M]			
C614	ECEA1AU101B	100 10V [M]	R707	ERJ6GEYJ474V	470K 1/10W [M]	C726	ECUV1H102KBN	1000P 50V [M]			
C615	ECEA0JKA220B	22 6.3V [M]	R708	ERJ6GEYJ154V	150K 1/10W [M]	C727	ECEA1HPK010I	1 50V [M]			
C616	ECA1EM332E	3300 25V [M]	R709	ERJ6GEYJ683V	68K 1/10W [M]	C728	ECEA1HPK010I	1 50V [M]			
C618	ECEA1AU221B	220 10V [M]	R711	ERJ6GEYJ154V	150K 1/10W [M]	C730	ECUZNE104MBN	0.1 25V [M]			
C619	ECEA1CKA100B	10 16V [M]	R712	ERJ6GEYJ221V	220 1/10W [M]	C731	ECEA0JKA221I	220 6.3V [M]			
C620	ECEA1CKA100B	10 16V [M]	R717	ERJ6GEYJ102V	1K 1/10W [M]	C732	ECEA0JKA221I	220 6.3V [M]			
C622	ECEA1HKA010B	1 50V [M]	R718	ERJ6GEYJ102V	1K 1/10W [M]	C733	ECUZNE104MBN	0.1 25V [M]			
C623	ECBT1H221KB5	220P 50V [M]	R719	ERJ6GEYJ102V	1K 1/10W [M]	C734	ECEA1AKA221I	220 10V [M]			
C624	ECBT1H221KB5	220P 50V [M]	R720	ERJ6GEYJ102V	1K 1/10W [M]	C735	ECUZNE104MBN	0.1 25V [M]			
C625	ECEA1AKA101B	100 10V [M]	R721	ERJ6GEYJ101V	100 1/10W [M]	C736	ECUZNE104MBN	0.1 25V [M]			
C627	ECBT1H221KB5	220P 50V [M]	R722	ERJ6GEYJ563V	56K 1/10W [M]	C737	ECUZNE104MBN	0.1 25V [M]			
C628	ECEA1CKA100B	10 16V [M]	R723	ERJ6GEYJ182V	1.8K 1/10W [M]	C738	ECUV1C154KBN	0.15 16V [M]			
C629	ECBT1H102KB5	1000P 50V [M]	R724	ERJ6GEYJ333V	33K 1/10W [M]	C742	ECUV1E273KBN	0.027 25V [M]			
C630	ECBT1H221KB5	220P 50V [M]	R725	ERJ6GEYJ472V	4.7K 1/10W [M]	C743	ECUZNE104MBN	0.1 25V [M]			
C631	ECBT1H471KB5	470P 50V [M]	R726	ERJ6GEYJ473V	47K 1/10W [M]	C744	ECUV1E822KBN	8200P 25V [M]			
C632	ECBT1H471KB5	470P 50V [M]	R727	ERJ6GEYJ822V	8.2K 1/10W [M]	C745	ECUV1C473MBN	0.047 16V [M]			
C633	ECBT1H470J5	47P 50V [M]	R728	ERJ6GEYJ103V	10K 1/10W [M]	C747	ECUV1H222KBN	2200P 50V [M]			
C635	ECEA1AU101B	100 10V [M]	R731	ERJ6GEYJ822V	8.2K 1/10W [M]	C748	ECUV1H471KBM	470P 50V [M]			
C636	ECEA1HKAR47B	0.47 50V [M]	R734	ERJ6GEYJ101V	100 1/10W [M]	C749	ECUZNE104MBN	0.1 25V [M]			
C790	ECA1AKF820E	82 10V [M]	R735	ERJ6GEYJ101V	100 1/10W [M]	C751	ECUZNE104MBN	0.1 25V [M]			
C801	ECBT1H102KB5	1000P 50V [M]	R736	ERJ6GEYJ101V	100 1/10W [M]	C752	ECUV1H152KBN	1500P 50V [M]			
C802	ECBT1H102KB5	1000P 50V [M]	R738	ERJ6GEYJ223V	22K 1/10W [M]	C753	ECUV1H471KBM	470P 50V [M]			
C803	ECBT1H102KB5	1000P 50V [M]	R741	ERJ6GEYJ562V	5.6K 1/10W [M]	C754	ECUV1H471KBN	470P 50V [M]			
C804	ECEA0JKS101B	100 6.3V [M]	R742	ERJ6GEYJ562V	5.6K 1/10W [M]						
C805	ECBT1H102KB5	1000P 50V [M]	R743	ERJ6GEYJ562V	5.6K 1/10W [M]		CHIP JUMPERS				
C806	ECBT1C103MS5	0.01 16V [M]	R744	ERJ6GEYJ103V	10K 1/10W [M]	RJ701	ERJ8GEY0R00A	0 1/8W [M]			
C807	ECBT1H390J5	39P 50V [M]	R745	ERJ6GEYJ155V	1.5M 1/10W [M]	RJ702	ERJ8GEY0R00A	0 1/8W [M]			
C808	ECBT1H470J5	47P 50V [M]	R748	ERJ6GEYJ182V	1.8K 1/10W [M]	RJ703	ERJ8GEY0R00A	0 1/8W [M]			
C809	ECBT1H220JC5	22P 50V [M]	R749	ERJ6GEYJ682V	6.8K 1/10W [M]	RJ704	ERJ8GEY0R00A	0 1/8W [M]			
C810	ECBT1H560J5	56P 50V [M]	R750	ERJ6GEYJ473V	47K 1/10W [M]	RJ707	ERJ8GEY0R00A	0 1/8W [M]			
C811	ECBT1C103MS5	0.01 16V [M]	R751	ERJ6GEYJ473V	47K 1/10W [M]	RJ709	ERJ8GEY0R00A	0 1/8W [M]			
C812	ECBT1C103MS5	0.01 16V [M]	R752	ERJ8GEYJ220V	22 1/8W [M]	RJ714	ERJ8GEY0R00A	0 1/8W [M]			
C813	ECBT1H180JC5	18P 50V [M]	R770	ERJ6GEYJ155V	1.5M 1/10W [M]	RJ715	ERJ8GEY0R00A	0 1/8W [M]			
C814	ECBT1H220JC5	22P 50V [M]	R771	ERJ6GEYJ155V	1.5M 1/10W [M]	RJ716	ERJ8GEY0R00A	0 1/8W [M]			
C815	ECBT1H561KB5	560P 50V [M]	R772	ERJ6GEYJ273V	27K 1/10W [M]	RJ717	ERJ8GEY0R00A	0 1/8W [M]			
C816	ECBT1H561KB5	560P 50V [M]				RJ721	ERJ8GEY0R00A	0 1/8W [M]			
C817	ECBT1H561KB5	560P 50V [M]		CAPACITORS		RJ722	ERJ8GEY0R00A	0 1/8W [M]			
C818	ECBT1H561KB5	560P 50V [M]				RJ723	ERJ8GEY0R00A	0 1/8W [M]			
C821	ECEA0JKA470B	47 6.3V [M]	C701	ECEA0JKA330I	33 6.3V [M]	RJ724	ERJ8GEY0R00A	0 1/8W [M]			
C822	ECBT1H561KB5	560P 50V [M]	C702	ECUZNE104MBN	0.1 25V [M]	RJ725	ERJ8GEY0R00A	0 1/8W [M]			
C823	ECBT1H561KB5	560P 50V [M]	C703	ECEA0JKA101I	100 6.3V [M]	RJ726	ERJ8GEY0R00A	0 1/8W [M]			
C824	ECBT1H102KB5	1000P 50V [M]	C704	ECUZNE104MBN	0.1 25V [M]	RJ727	ERJ8GEY0R00A	0 1/8W [M]			
C827	ECBT1H561KB5	560P 50V [M]	C705	ECUZNE104MBN	0.1 25V [M]	RJ728	ERJ8GEY0R00A	0 1/8W [M]			
C828	ECBT1H561KB5	560P 50V [M]	C706	ECUV1H272KBN	2700P 50V [M]	RJ729	ERJ8GEY0R00A	0 1/8W [M]			
C901	ECKR1H103ZF5	0.01 50V [M]	C707	ECUV1E273KBN	0.027 25V [M]	RJ730	ERJ8GEY0R00A	0 1/8W [M]			
C902	ECKR1H103ZF5	0.01 50V [M]	C708	ECUV1H472KBN	4700P 50V [M]						
C903	ECKR1H103ZF5	0.01 50V [M]	C709	ECUV1C473KBN	0.047 16V [M]						
C904	ECKR1H103ZF5	0.01 50V [M]	C710	ECUV1H182KBN	1800P 50V [M]						
C905	ECKR1H101KB5	100P 50V [M]	C711	ECUZNE104MBN	0.1 25V [M]		TEST JUMPERS				
C906	ECQV1H124JZ3	0.12 50V [M]	C712	ECUZNE104MBN	0.1 25V [M]	TJ701	EYF8CU	TEST JUMPER [M]			
C1301	ECEA1CU100	10 16V [M]	C713	ECUV1C104MBM	0.1 16V [M]	TJ702	EYF8CU	TEST JUMPER [M]			
			C714	ECEA0JKA101I	100 6.3V [M]						

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.

* Remote Control Unit : Supply period for three years from terminal of production.

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS				ACCESSORIES		A3	RJA0019-2K	AC CORD  (SF) [M](EG)	
								A3	VJA0733	AC CORD  (SF) [VRD](EB)	
P1	RPG3196	GIFT BOX	[M](EG)	A1	EUR643826	REMOTE CONTROLLER	[M]				
P1	RPG3460	GIFT BOX	[M](EB)	A1-1	UR64EC1638-1	R/C BATTERY COVER	[M]				
P2	RPH0177	MIRAMAT SHEET	[M]	A2	RFKXED77EGK	INST. MANUAL ASS'Y	[M](EG)				
P3	RPN1013	POLYFOAM	[M]	A2	RQT3628-B	INSTRUCTION MANUAL	[M](EB)				

Packaging

