

Service Manual

Portable Stereo CD System

Radio Cassette

RX-DS30

COMPACT
disc
DIGITAL AUDIO

DIGITAL



Color

(K) Black Type

Area

Country Code	Areas	Color
(EB)	Great Britain	(K)
(EG)	Continental Europe Third Region	

RX-FD55 MECHANISM SERIES (AR300)

■ SPECIFICATIONS

General:

Power Requirement: AC; (EB)...240V, 50 Hz
(EG)...220 V, 50 Hz
Battery; 15 V (10 UM-1, R20/LR20 size batteries)

Power Consumption: 43 W (AC only)

Power Output: 50 W (25 W×2)...PMPO

Speaker: Woofer; 12 cm×2 PM Dynamic speaker (2.7Ω)

Input: MIX MIC; 2.5 mV/200~600Ω, Ø3.5
AUX; 200 mV, 47 kΩ

Output: HEADPHONES; 32Ω, Ø3.5
CD; 0.6 Vrms (CD 0 dB)
666 (W)×187 (H)×217 (D) mm

Dimensions: 5.8 kg without batteries

Weight: 5.8 kg without batteries

Disc Player Section:

Sampling Frequency: 44.1 kHz

D-A Conversion: 2 DAC 4 time over sampling

Beam Source: Semiconductor laser (wavelength 780 nm)

No. of Channels: 2 channels, stereo

Frequency Range: 20~20,000 Hz (+1/-2 dB)

Dynamic Range: 93 dB (1 kHz)

S/N Ratio: 95 dB (1 kHz)

Wow and Flutter: Unmeasurable

Radio Section:

Frequency Range: FM; 87.5~108 MHz
MW; 522~1611 kHz
LW; 146~288 kHz

Intermediate Frequency: FM; 10.7 MHz
AM; 459 kHz

Sensitivity: FM; 3.6 μV (S/N: 30 dB)
MW; 89 μV/m (S/N: 20 dB)
LW; 89 μV/m (S/N: 20 dB)

Tape Deck Section:

Frequency Range: 40~16,000 Hz (with normal tape)
40~17,000 Hz (with CrO₂ tape)

Recording System: AC bias (67 kHz), AC erase

Tape Speed: 4.8 cm/s

Monitor System: Variable sound monitor

Track System: 4-track 2-channel stereo recording and playback

Timer/Clock:

Power Supply: Battery; DC 6 V (4 UM-3, R6/LR6 size batteries)

Design and specifications are subject to change without notice.

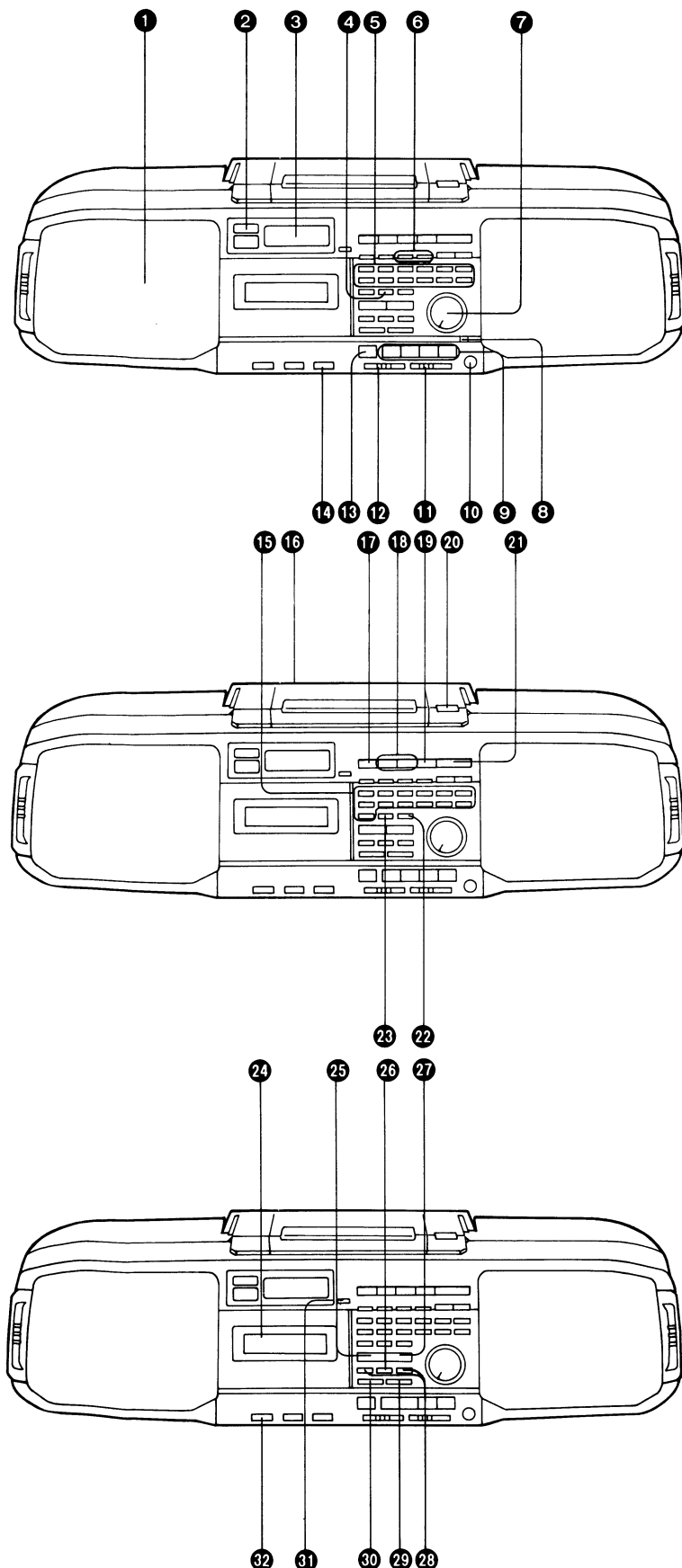
Panasonic®

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

CAUTION:

THIS PRODUCT UTILIZES A LASER.

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

LOCATION OF CONTROLS**TUNER/GENERAL CONTROLS**

- ❶ Speakers (12 cm, 2.7Ω)
- ❷ Tuning Indicator (TUNING)
- ❸ Multi Display
- ❹ Preset Memory Button (PROGRAM)
- ❺ Preset Tuning Buttons
- ❻ Tuning Buttons (TUNING)
- ❼ Volume Control (VOLUME)
- ❽ AC Connection Indicator
- ❾ Function Selectors and Indicators (TAPE/TUNER/CD/AUX)
"TUNER" can also be used for Band Selector.
- ❿ Headphones Jack (PHONES) (Ø3.5, 32Ω)
- ⓫ Tone Control (TONE)
- ⓬ XBS Level Control (XBS LEVEL)
- ⓭ Operation Switch and Indicator (OPERATION)
The main source can also be turned on by pressing the Function Selector.
- ⓮ FM Mode Selector/Beat Proof Switch (FM MODE/B.P)

CD CONTROLS

- ⓯ Numeric Buttons
- ⓰ Disc Compartment Cover
- ⓱ Repeat Button (REPEAT)
- ⓲ Skip/Search Buttons (◀◀/◀◀ • ▶▶/▶▶)
- ⓳ Pause/Edit Pause Button (⏸/E.P)
- ⓴ CD Eject Button (⏏ CD EJECT)
- ⓵ Play/Stop Button (▶/⏏)
- ⓶ Cancel Button (CANCEL)
- ⓷ Program Button (PROGRAM)

DECK CONTROLS

- ⓸ Cassette Compartment
- ⓹ Reverse Playback Button and Indicator (◀)
- ⓺ Stop Button (⏏)
- ⓻ Forward Playback Button and Indicator (▶)
- ⓼ Fast Buttons (◀◀ • ▶▶)
- ⓽ ATLS Button and Indicator (ATLS)
- ⓾ Rec Pause Button and Indicator (⏸)
- ⓿ Eject Button (⏏ EJECT)
- ⓿ Reverse Mode Selector (REVERSE MODE)

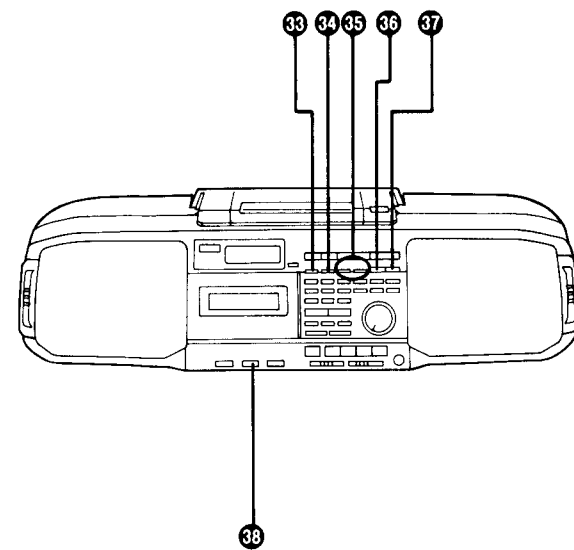
REMOTE CONTROL OPERATION

■ How to Operate the Remote Controller

Aim the transmitter of the remote controller at the Remote Control Sensor on the unit, and press the necessary buttons on the remote controller.

First, press a button on the function section, and then press a button on the operation section, or another key.

- The receiving angle is approx. 60° (30° in each of the left, right, up, and down directions).
- The maximum usable distance is about 7 m when the Remote Controller is aimed directly at the Remote Control Sensor.



TIMER CONTROLS

- 33 ON/OFF Time Button (ON/OFF TIME)
- 34 Adjust Button (ADJUST)
- 35 Time Set Buttons
- 36 Sleep Button (SLEEP)
- 37 Timer Button (TIMER)
- 38 Timer Recording Switch (TIMER-REC)

MULTI DISPLAY

■ FOR TUNER

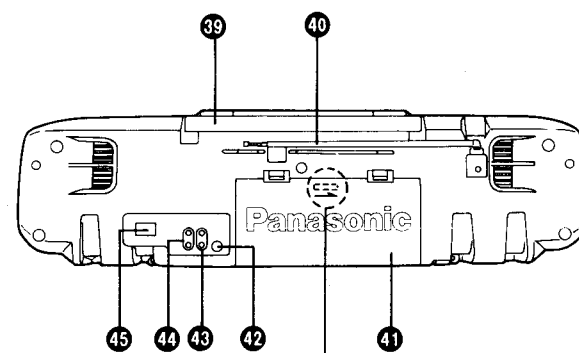
- A Preset Memory Indicator ([PROGRAM])
- B Band Indicators (FM/LW/MW)
- C Frequency Display
- D Preset Channel Display

■ FOR CLOCK/TIMER

- A Timer Indicator (TIMER)
- B Timer Recording Indicator (TIMER-REC)
- C Sleep Indicator (SLEEP)
- D Timer ON/OFF Indicator (ON/OFF)
- E Time Display

■ FOR COMPACT DISC

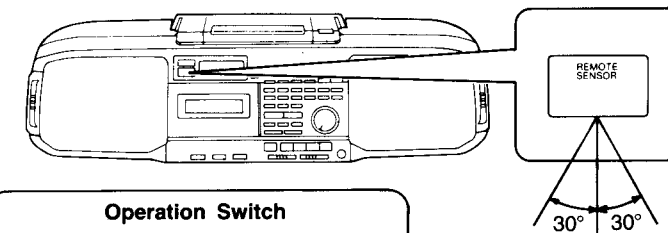
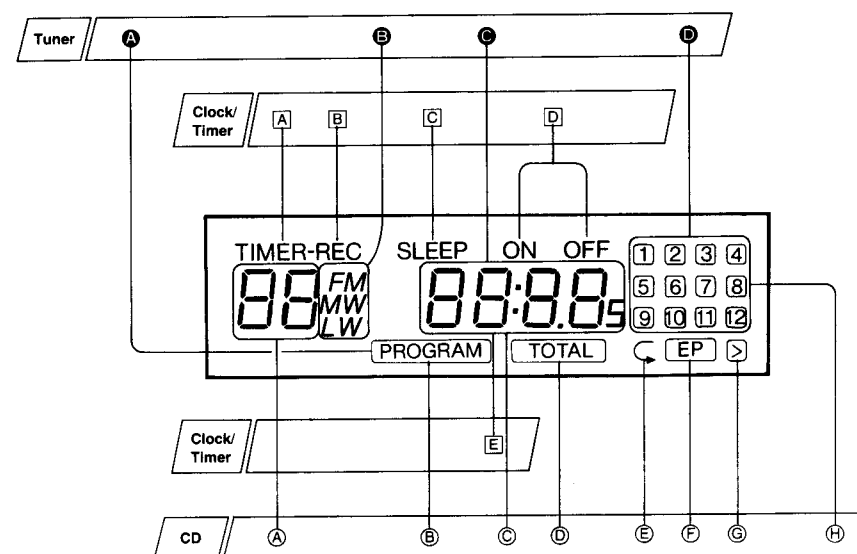
- A Track Display
- B Program Indicator ([PROGRAM])
- C Playing Time Display
- D Total Time Indicator ([TOTAL])
- E Repeat Play Indicator (⏮)
- F Edit-Pause Indicator ([EP])
- G Over Mark Indicator (⏭)
- H Music Matrix



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

REAR PANEL

- 39 Handle
- 40 Telescopic Antenna
- 41 Battery Compartment
- 42 Microphone Jack (MIX MIC) (2.5 mV/200~600Ω, Ø3.5)
- 43 CD Output Jacks (CD OUT) (0.6 Vrms)
- 44 Auxiliary Input Jacks (AUX IN) (200 mV/47 kΩ)
- 45 AC Socket (AC IN ~)



Operation Switch

When using battery, it is not possible to turn on the unit with remote controller.

CD/TUNER operations

1~12, +10:
CD: Numeric Buttons
Tuner: Preset Tuning Buttons
PROGRAM:
CD: Program Button
TUNER: Preset Memory Button
CANCEL:
 Cancel Button (CD only)

TAPE operations

◀: Reverse Playback Button
 ▶: Forward Playback Button
 ⏮: Fast Buttons
 ⏭: Rec-Pause Button
 ■: Stop Button

Functions Selector

"TUNER" key can also be used for Band Selector.

CD operations

REPEAT:
 Repeat Button
 ⏮/⏭/▶/▶▶: Skip/Search Buttons
 ⏮/EP: Pause/Edit-pause Button
 ▶/■: Play/Stop Button

Volume Controls

■ PRECAUTION OF LASER DIODE

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

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

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

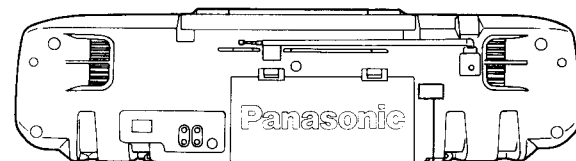
ACHTUNG: Dieses produkt enthält eine laserdiode. Im eingeschalteten zustand wird unsichtbare laserstrahlung von der lasereinheit abgestrahlt.

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

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

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

ADVARSEL: I dette a apparat anvendes laser.



**CLASS 1
LASER PRODUCT**

LUOKAN 1 LASERLAITE

DANGER-Invisible laser radiation when open and interlock defeated. AVOID DIRECT EXPOSURE TO BEAM.

(Inside of product)

VORSICHT-Unsichtbare Laserstrahlung, wenn Abdeckung geöffnet und Sicherheitsverriegelung überbrückt. Nicht dem Strahl aussetzen.

(Im Inneren des Gerätes)

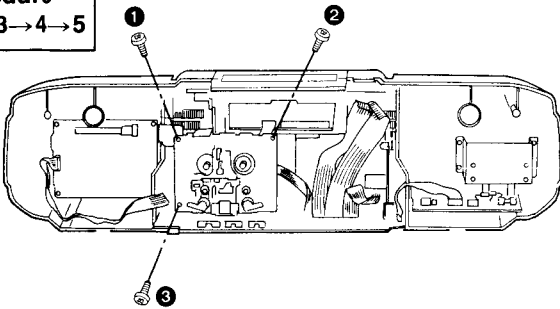
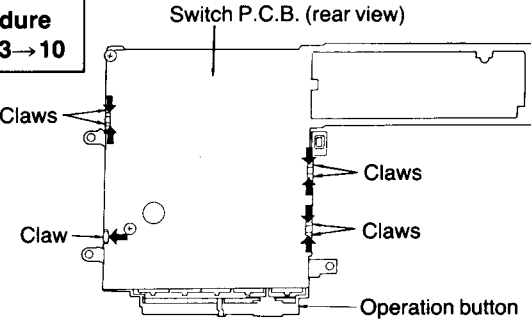
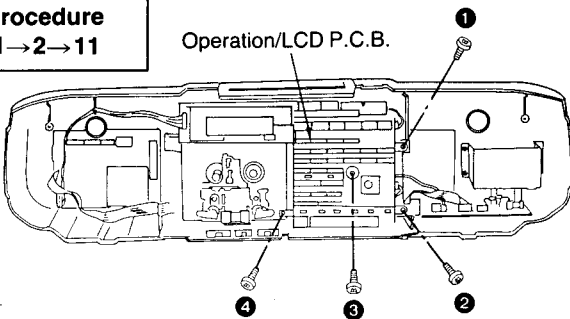
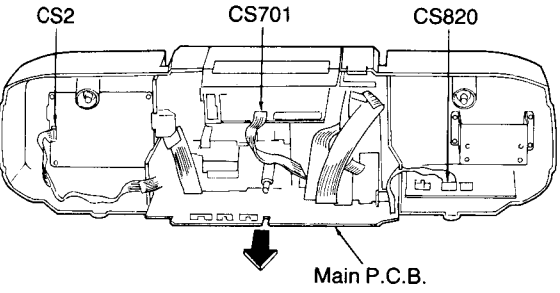
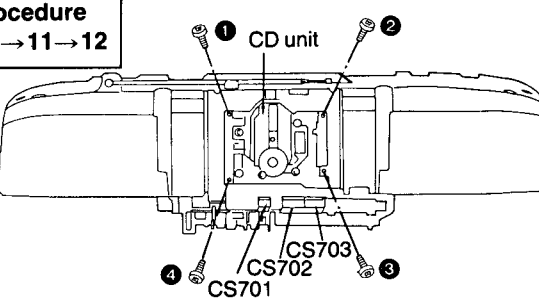
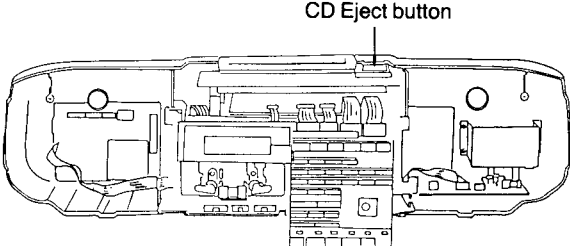
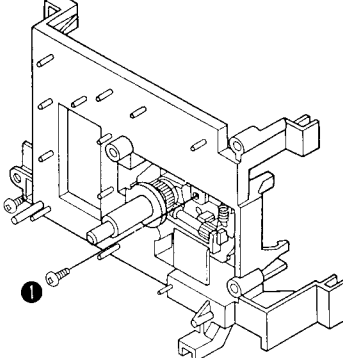
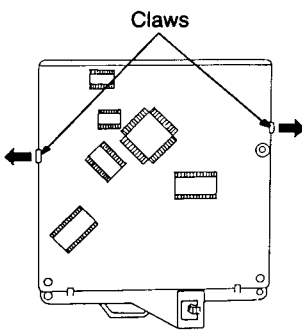
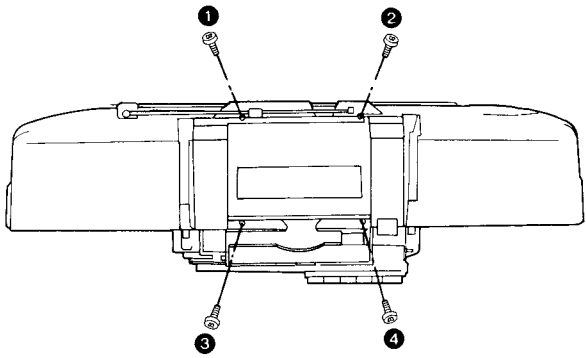
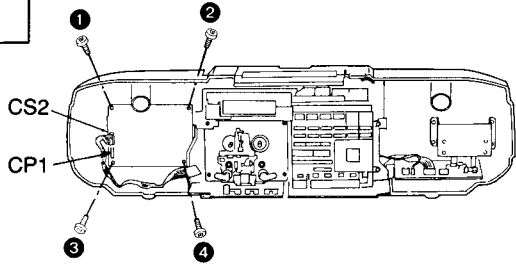
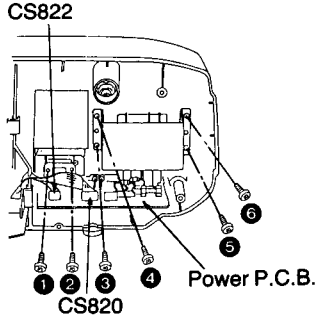
ADVARSEL. Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

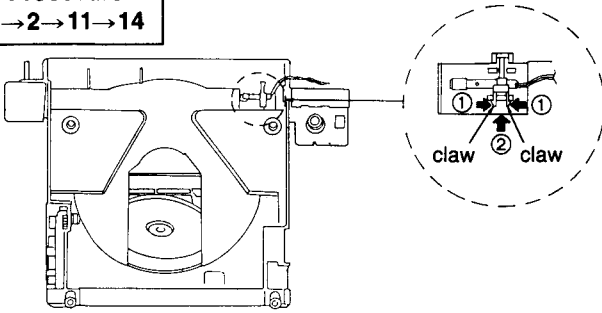
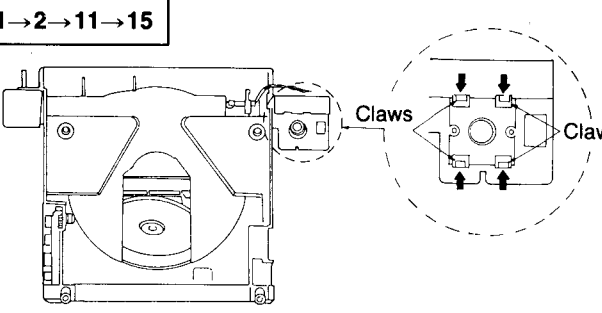
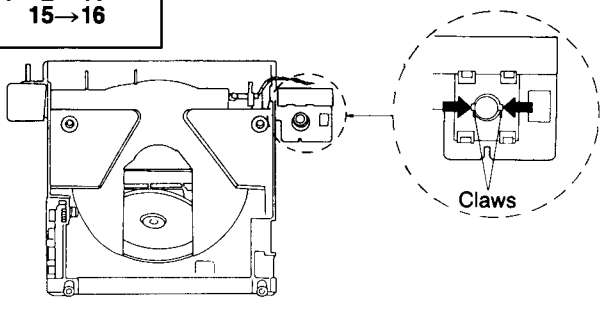
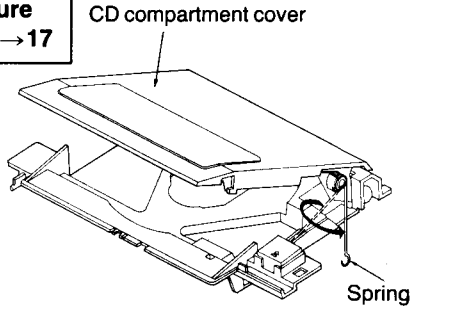
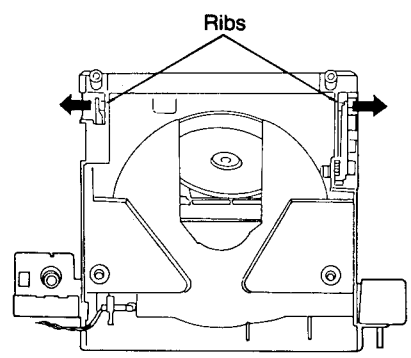
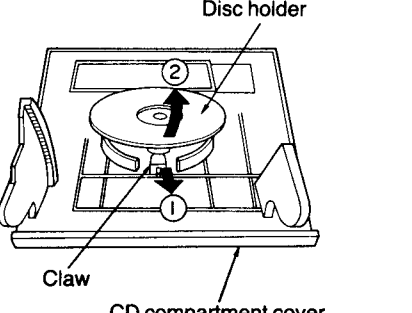
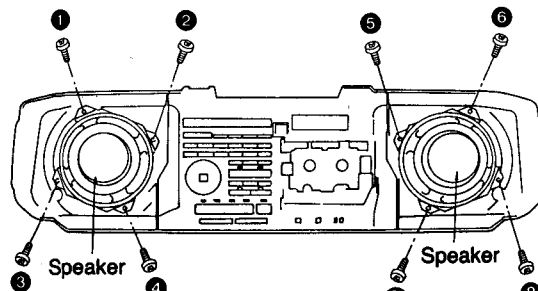
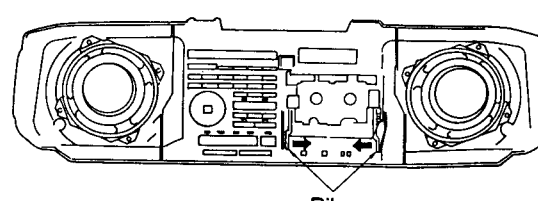
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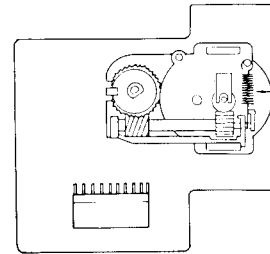
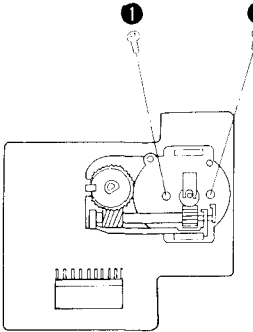
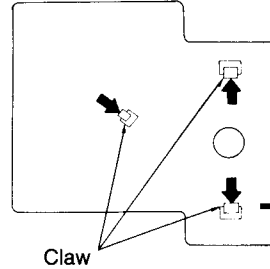
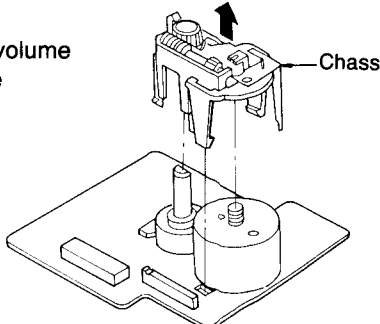
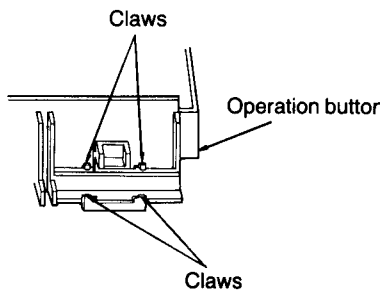
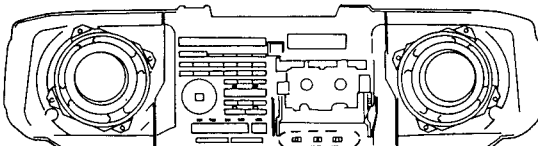
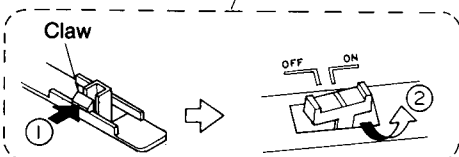
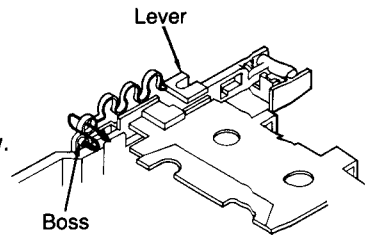
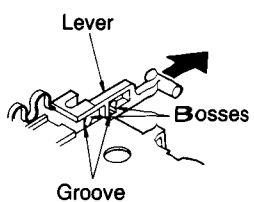
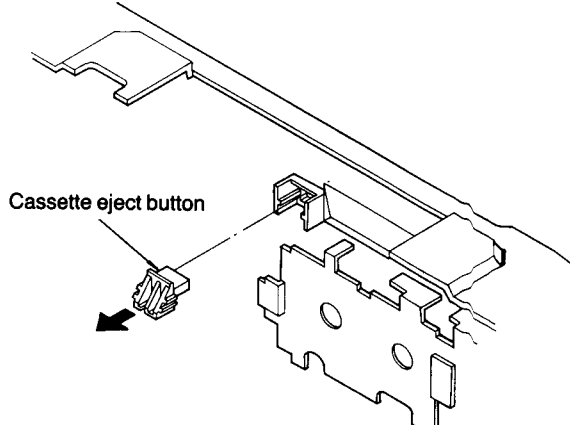
DISASSEMBLY INSTRUCTIONS

Ref. No.	1	Removal of the Handle
Procedure	1	
● Remove the 2 screws (1, 2).		

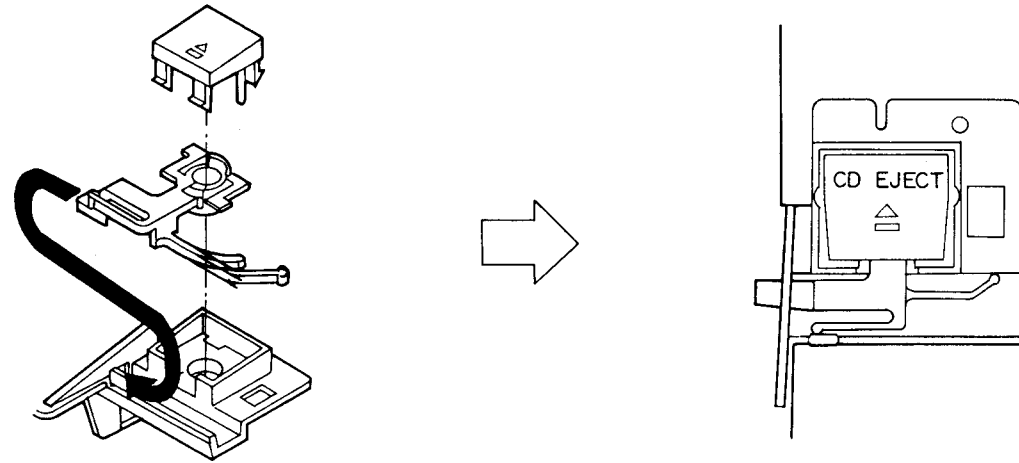
Ref. No.	2	Removal of the Front Cabinet
Procedure	1→2	
1. Remove the battery cover. 2. Remove the 8 screws (1~8). 3. Pull out the volume knob. 4. Press the eject button.		
5. Remove the front cabinet in the direction of the arrow.		
Ref. No.	3	Removal of the Operation/LCD P.C.B.
Procedure	1→2→3	
1. Remove the 4 screws (1~4).		
2. Remove the 6 connectors (CP1, CS702, CS703, CP803, CS804 and CS805).		
Ref. No.	4	Removal of the Chassis and Volume P.C.B.
Procedure	1→2→3→4	
1. Pull down the chassis in the direction of arrow 1 and then remove it in the direction of arrow 2.		
2. Remove the connector (CS850).		

Ref. No. 5	Removal of the Mechanism			Ref. No. 10	Removal of the Operation Button	Ref. No. 11	Removal of the Upper Cabinet
Procedure 1→2→3→4→5		1. Remove the 3 screws (1~3).		Procedure 1→2→3→10		Procedure 1→2→11	
		2. Remove the 3 connectors (CP303, CP310 and J971).			•Remove the 7 claws in the direction of the arrows.		1. Remove the 4 screws (1~4) and Operation/LCD P.C.B.
Ref. No. 6	Removal of the Main P.C.B.			Ref. No. 12	Removal of the CD Unit and CD P.C.B.		
Procedure 1→2→3→4→5→6		1. Remove the 3 connectors (CS2, CS701 and CS820). 2. Pull out the main P.C.B.		Procedure 1→2→11→12			
					1. Remove the 4 screws (1~4). 2. Remove the 3 connectors (CS701, CS702 and CS703).	2. Press the CD Eject button.	
Ref. No. 7	Removal of the Volume P.C.B.			Ref. No. 13	Removal of the CD P.C.B.		
Procedure 1→2→3→4→7		1. Remove the screw 1.		Procedure 1→2→11→12→13			
		2. Remove 3 claws in the direction of arrows.			1. Remove the 2 claws in the direction of the arrows.	3. Remove the 4 screws (1~4).	
Ref. No. 8	Removal of the Tuner P.C.B.	Ref. No. 9	Removal of the Power P.C.B.				
Procedure 1→2→8		Procedure 1→9					
	1. Remove the 2 connectors (CP1 and CS2). 2. Remove the 4 screws (1~4).		1. Remove the 6 screws (1~6). 2. Remove the 2 connectors (CS820 and CS822).				

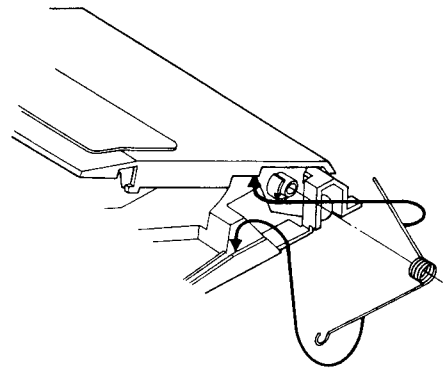
Ref. No. 14	Removal of the Open/Close Switch	Ref. No. 15	Removal of the CD Eject Button
Procedure 1→2→11→14	 •Remove 2 claws in the direction of arrow ① and remove the open/close switch in the direction of arrow ②.	Procedure 1→2→11→15	 •Remove the 4 claws in the direction of the arrows.
Ref. No. 16	Removal of the CD Eject Lever	Ref. No. 17	Removal of the CD Compartment Cover
Procedure 1→2→11→15→16	 •Remove the 2 claws in the direction of the arrows.	Procedure 1→2→11→17	 1. Remove the spring.
Ref. No. 18	Removal of the Disc Holder	 2. Remove the 2 ribs in the direction of the arrows.	
Procedure 1→2→11→17→18	 •Remove the claw in the direction of arrow ① and remove the disc holder in the direction of arrow ②.		
Ref. No. 19	Removal of the Speaker	Ref. No. 20	Removal of the Cassette Holder
Procedure 1→2→19	 •Remove the 8 screws (①~⑧).	Procedure 1→2→20	 •Remove the 2 ribs in the direction of the arrows.

Ref. No. 21	Removal of the Volume Chassis	
Procedure 1→2→3→4→7→21	 1. Remove the spring.  2. Remove 2 screws (①, ②).  3. Remove the solder. 4. Release 3 claws in the direction of arrows.  5. Remove the volume chassis in the direction of arrow.	
Ref. No. 22	Removal of the XBS Level and XBS Control Knob	Ref. No. 24
Procedure 1→2→3→22	 •Remove the 4 claws.	Procedure 1→2→24
Ref. No. 23	Removal of the Reverse Mode, Timer REC and FM Mode Knob	Removal of the Cassette Eject Button
Procedure 1→2→23	  •Remove the claw in the direction of arrow ① and then remove the knob in the direction of arrow ②.	 1. Remove the boss in the direction of arrow.  2. Slide the lever in the direction of arrow and then remove 2 bosses.  3. Remove the Cassette eject button in the direction of the arrow.

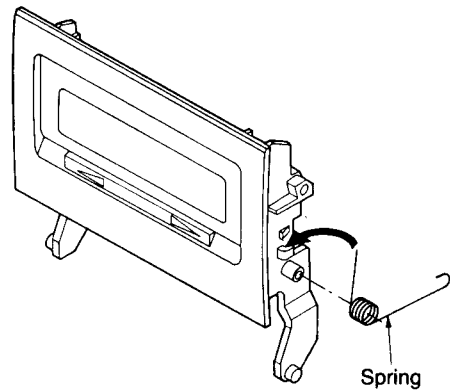
■ CD EJECT BUTTON ASSEMBLY



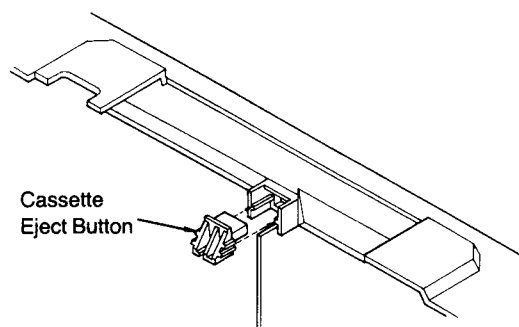
■ CD COMPARTMENT COVER ASSEMBLY



■ CASSETTE HOLDER ASSEMBLY

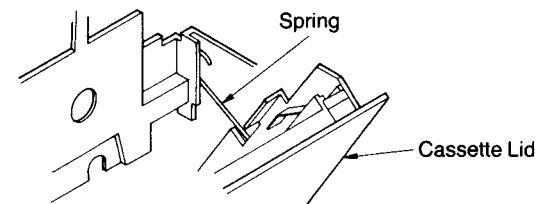
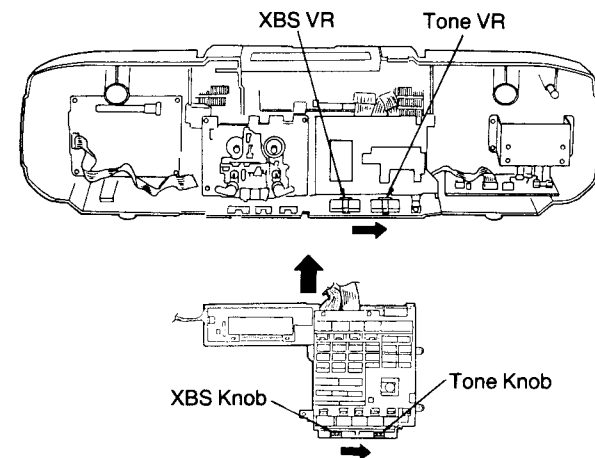


■ CASSETTE EJECT BUTTON ASSEMBLY



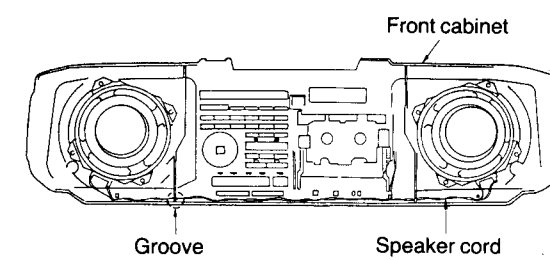
1. Insert the cassette eject button.

■ OPERATION BUTTON ASSEMBLY

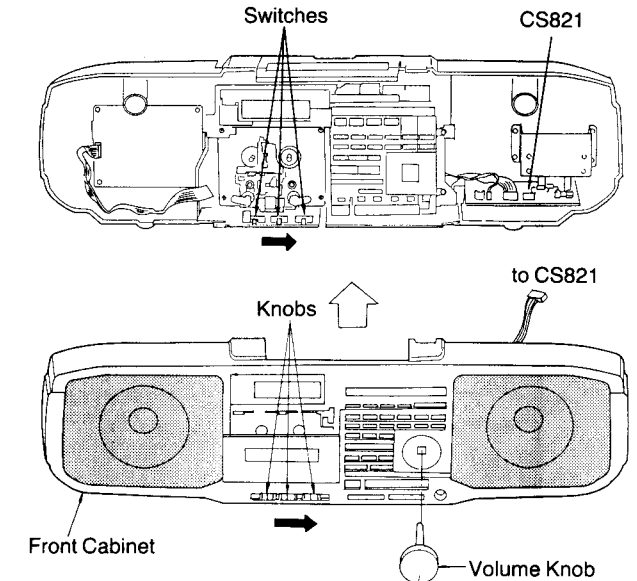


2. Replace the eject lever.

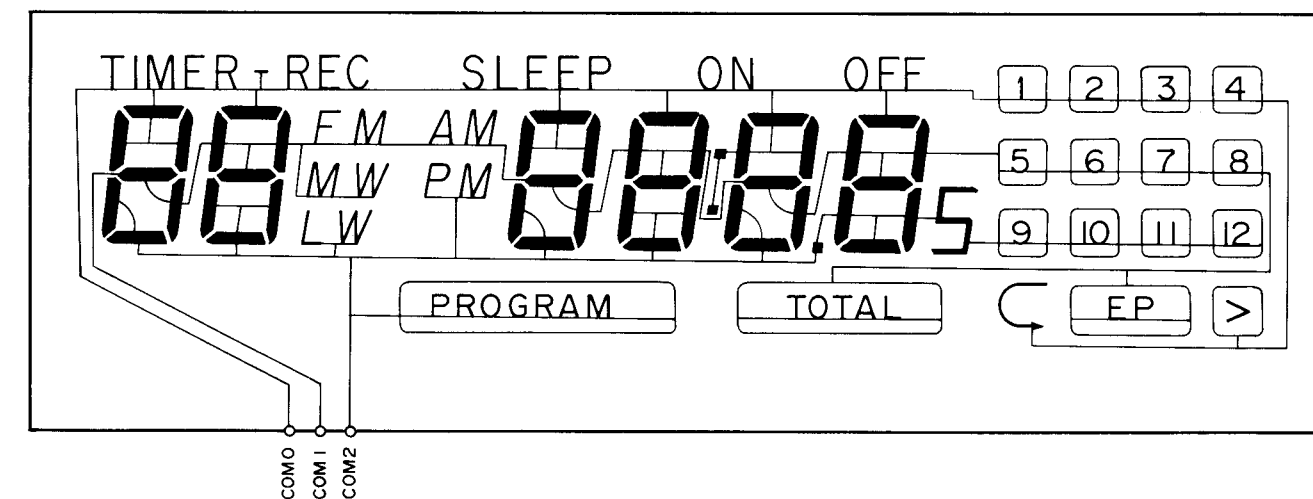
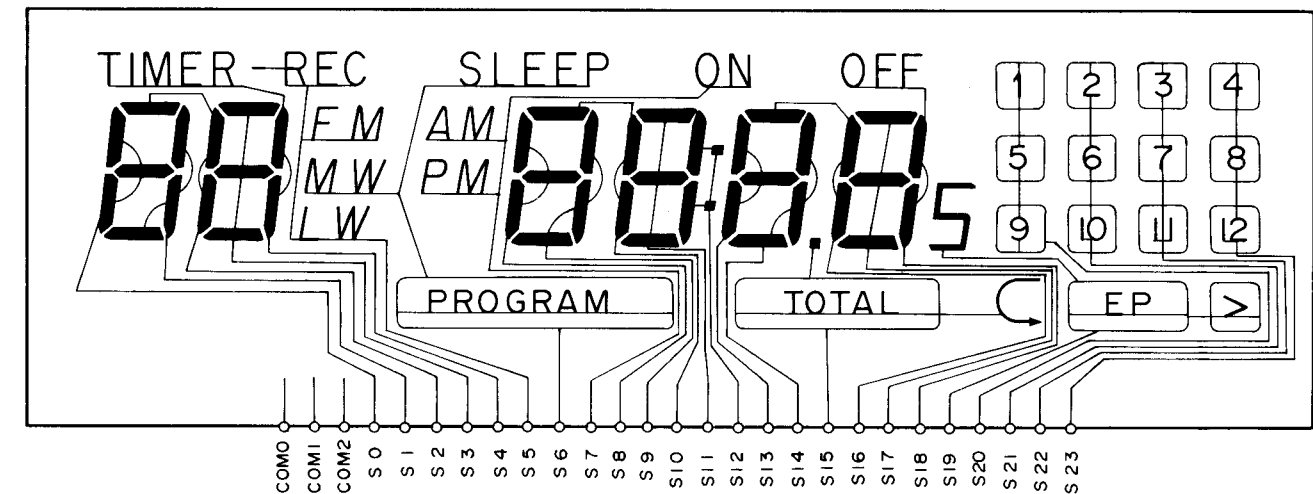
■ FRONT CABINET ASSEMBLY

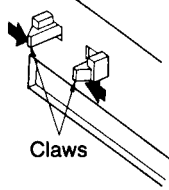
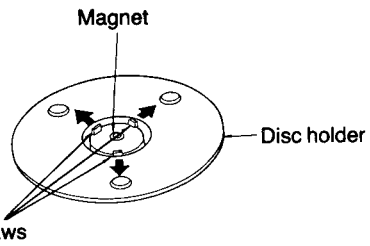
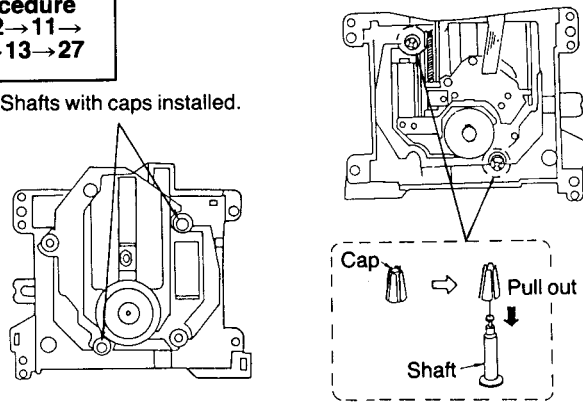
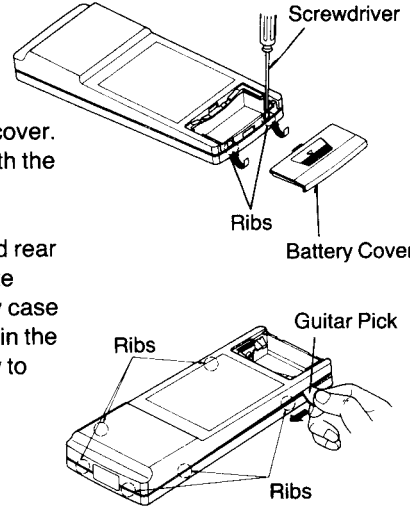


1. Insert the speaker cord in the groove.
2. Move the switch boss and rotate the knob in the direction of the arrows.
3. Connect connector CS821.
4. Reinstall the front cabinet.
5. Reinstall the volume knob.

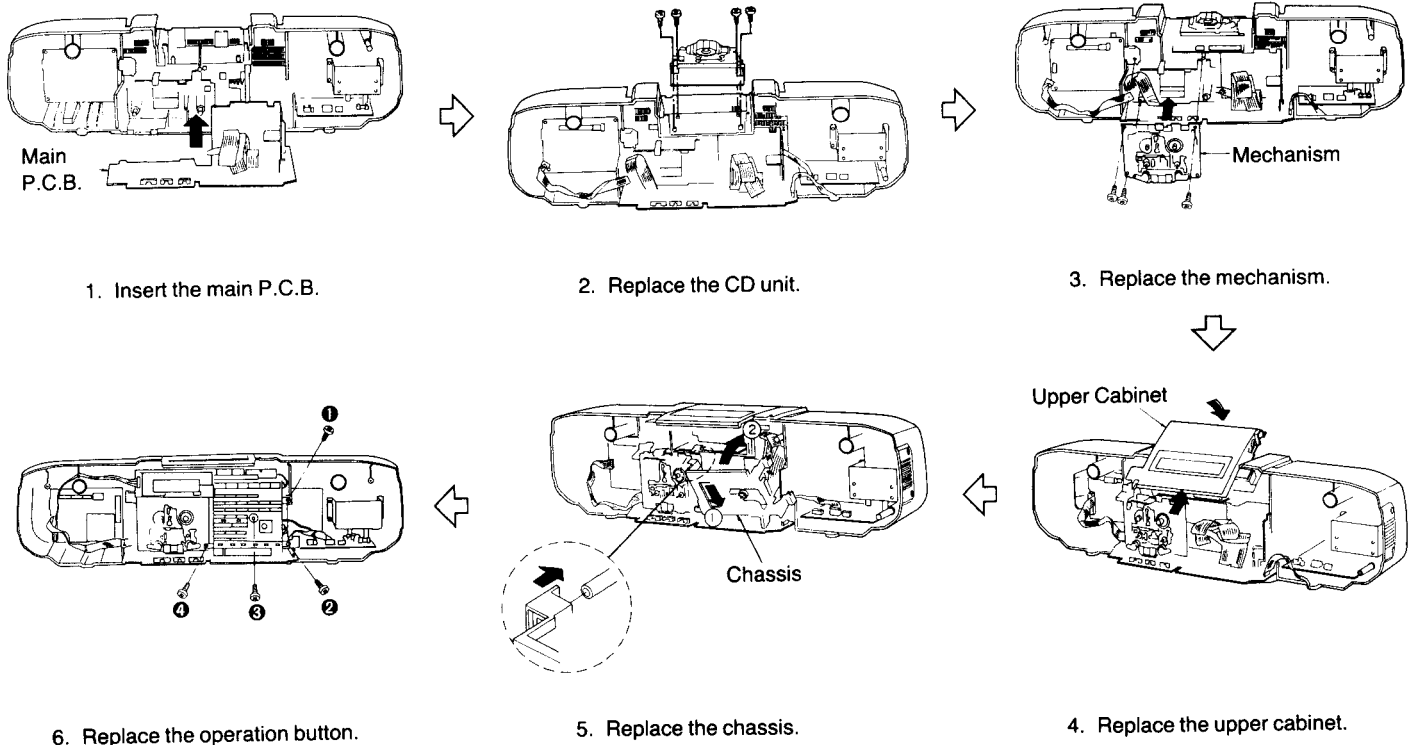


LIQUID CRYSTAL DISPLAY (LCD)



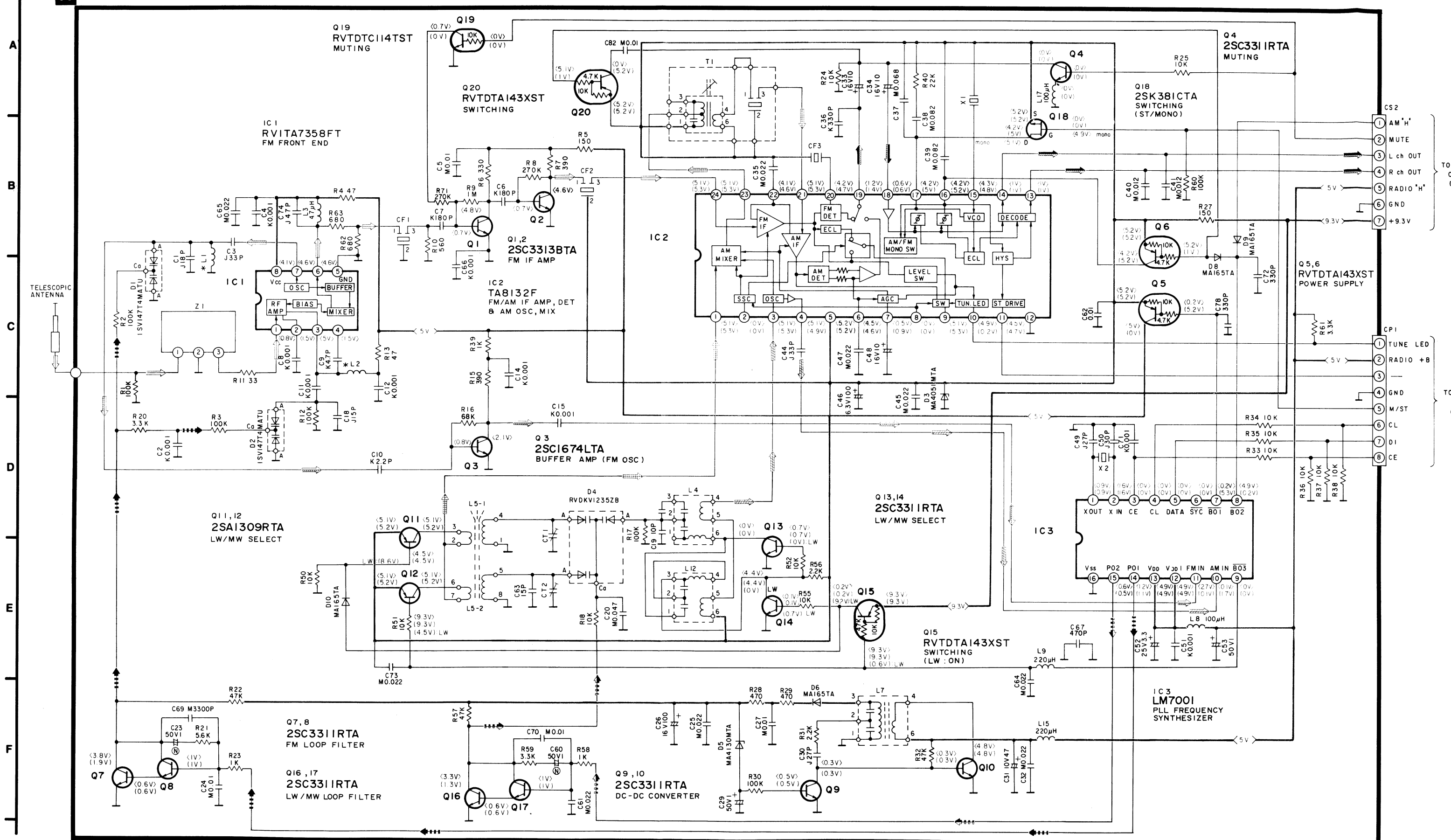
Ref. No. 25	Removal of the Panasonic Badge	Ref. No. 26	Removal of the Disc Magnet
Procedure 1→2→25	 Claws 1. Remove the 2 claws in the direction of the arrows.	Procedure 1→2→11→ 17→18→26	 Magnet Disc holder Claws ●Remove the 3 claws in the direction of the arrows.
Ref. No. 27	Removal of the CD Unit	Ref. No. 28	Disassemble the Remote Control
Procedure 1→2→11→ 12→13→27	 Shafts with caps installed. Cap Shaft Pull out ●Remove the adhesive off the caps installed in the shafts with a cutter or similar tool and then remove the caps. Remove the traverse unit and chassis. ●To reinstall the caps, use bonding adhesive.	Procedure 28	 Screwdriver Ribs Battery Cover Guitar Pick Ribs 1. Remove the battery cover. 2. Release the 2 ribs with the tip of a screwdriver. 3. Insert a guitar pick between the front and rear cabinets of the remote control on the battery case side and then slide it in the direction of the arrow to release the ribs.

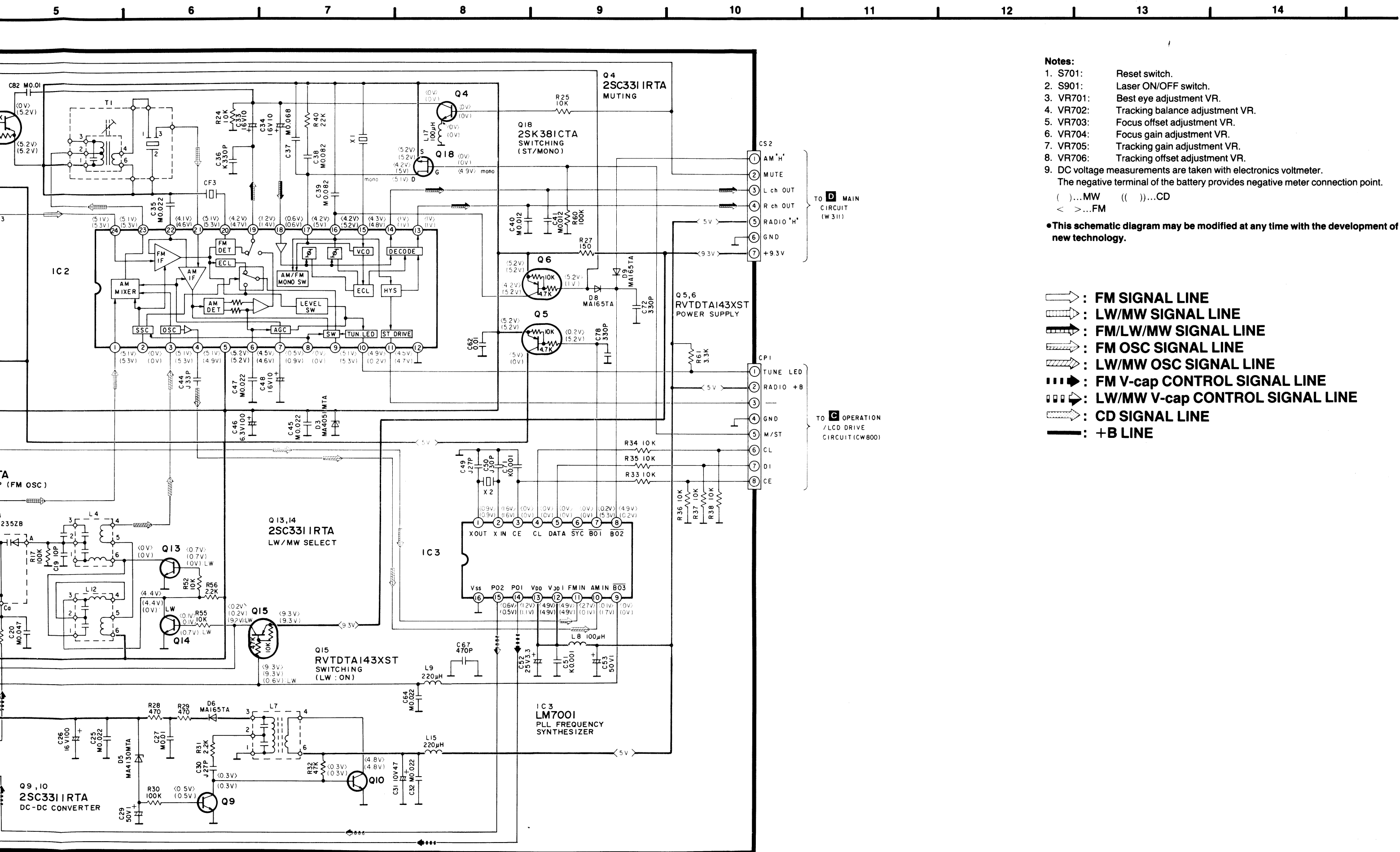
■ ASSEMBLY INSTRUCTION



SCHEMATIC DIAGRAM •for Tuner Circuit (Parts list on pages 55~60.)

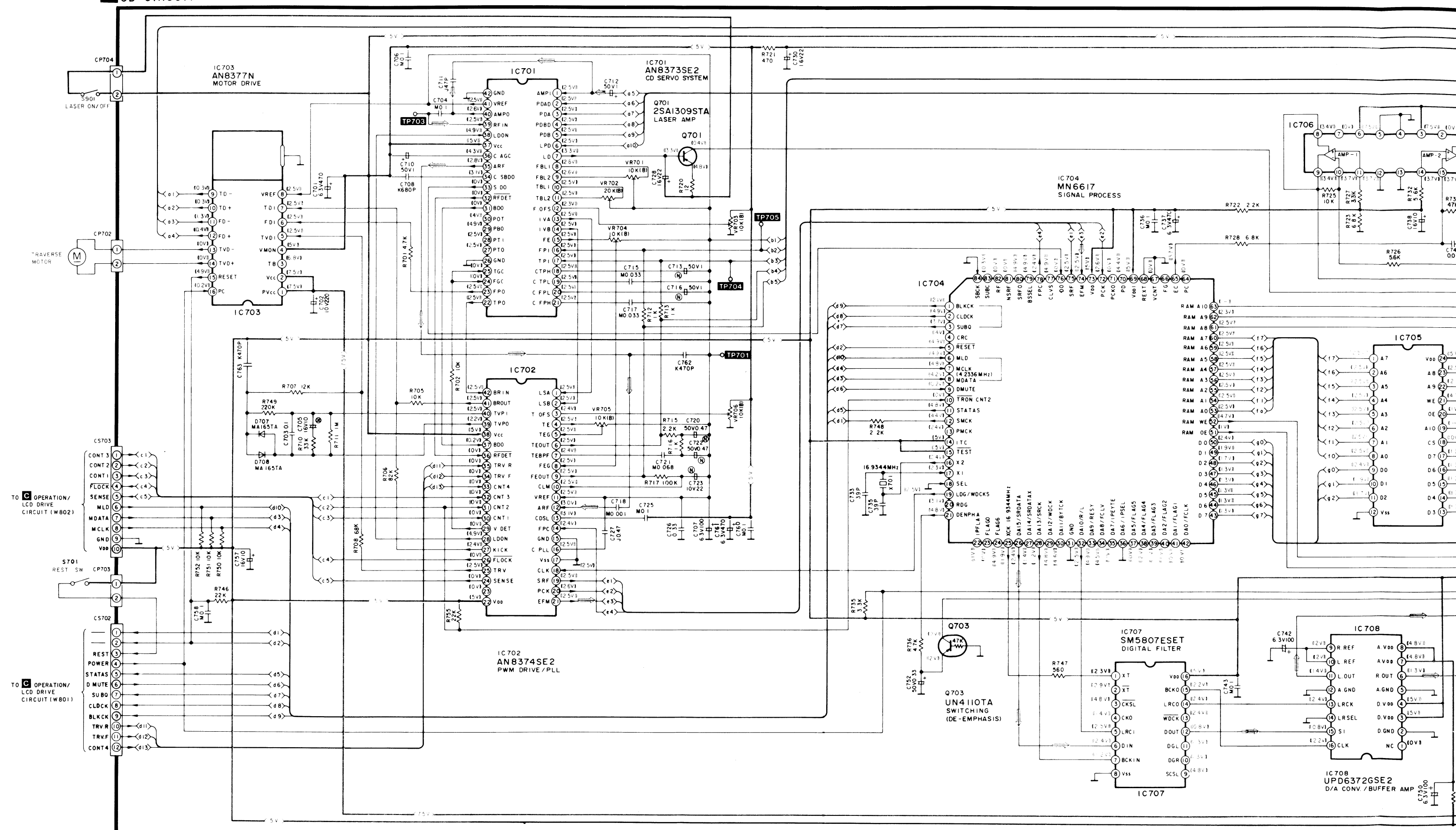
A TUNER CIRCUIT

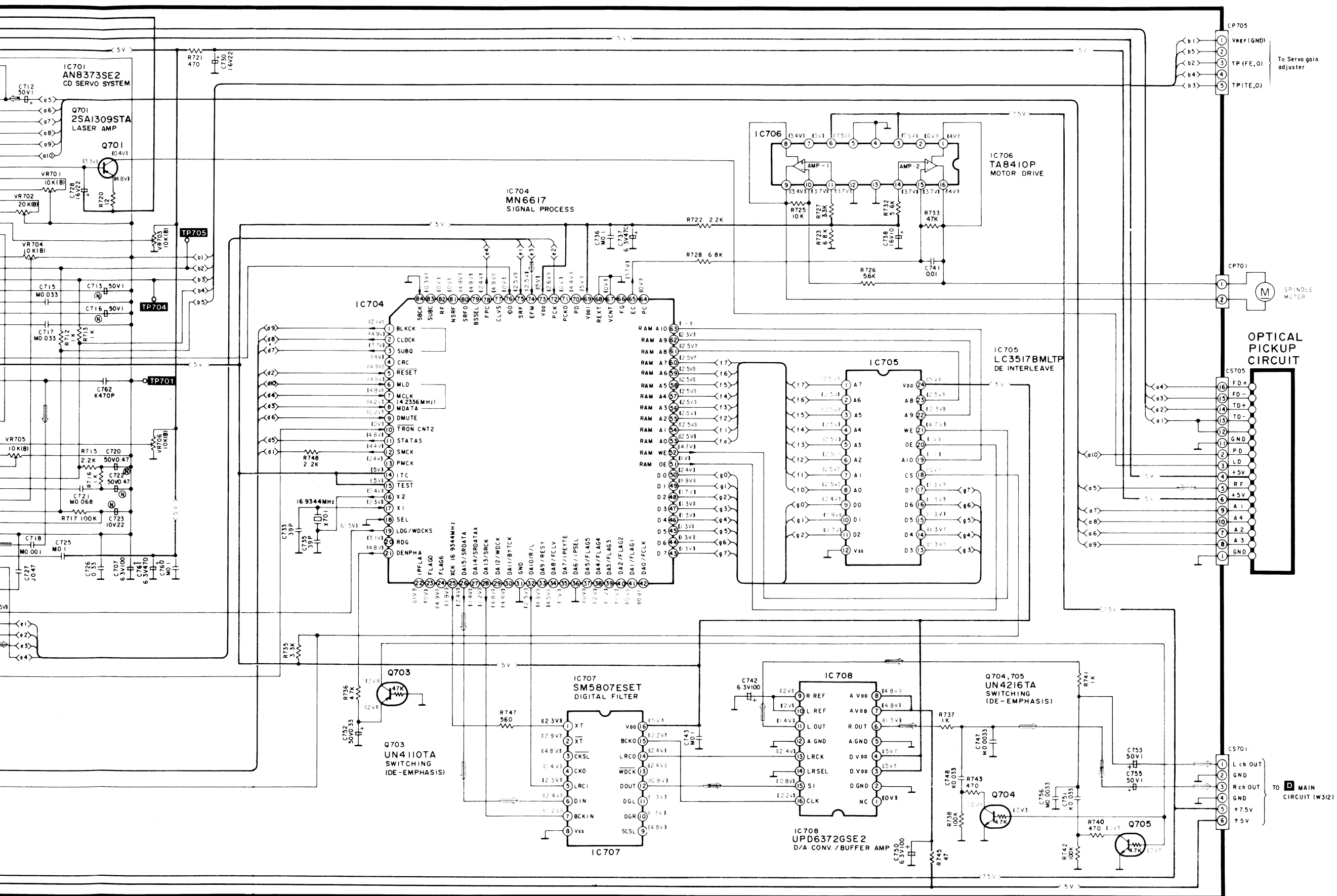


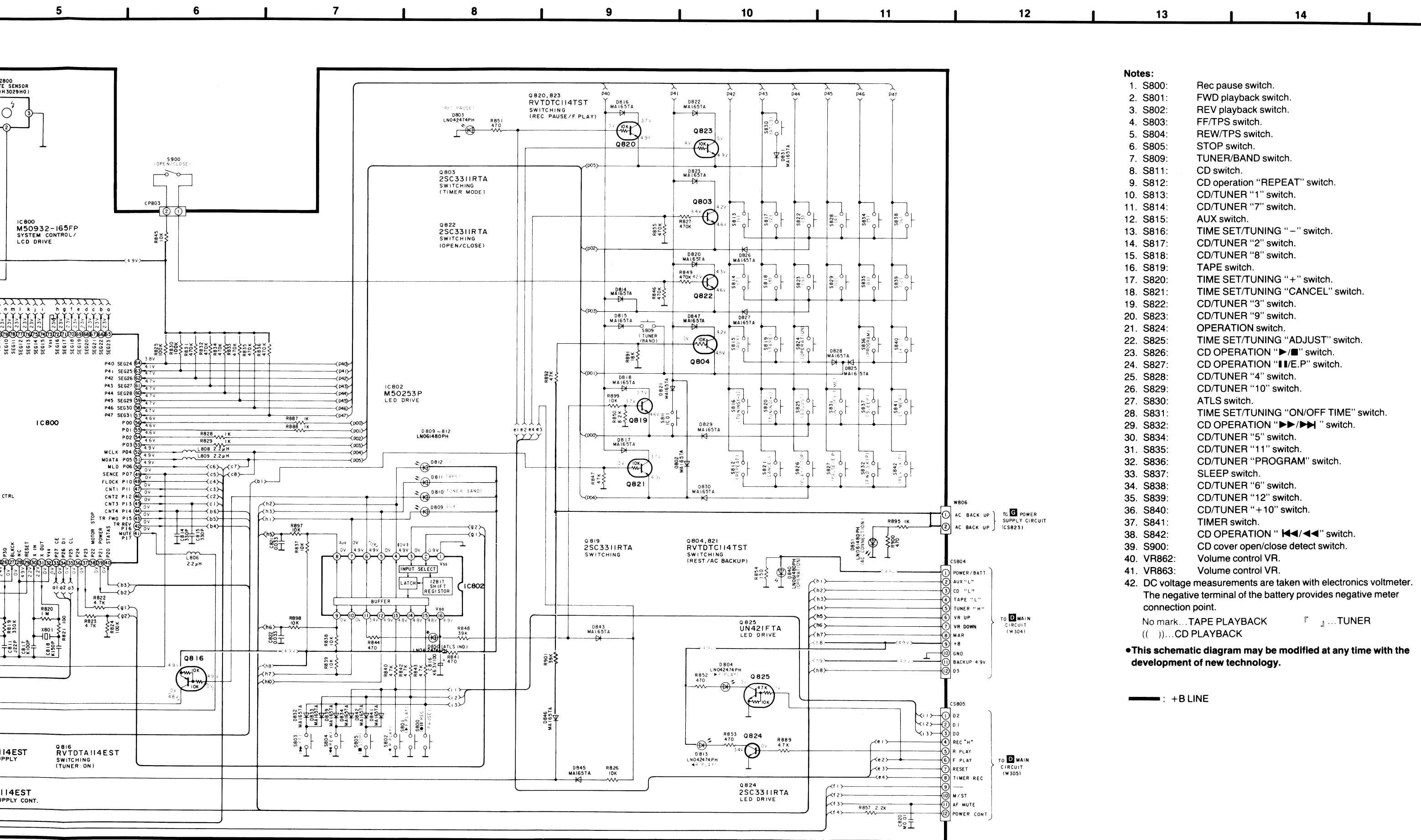


SCHEMATIC DIAGRAM •for CD Circuit (Parts list on pages 55~60.)

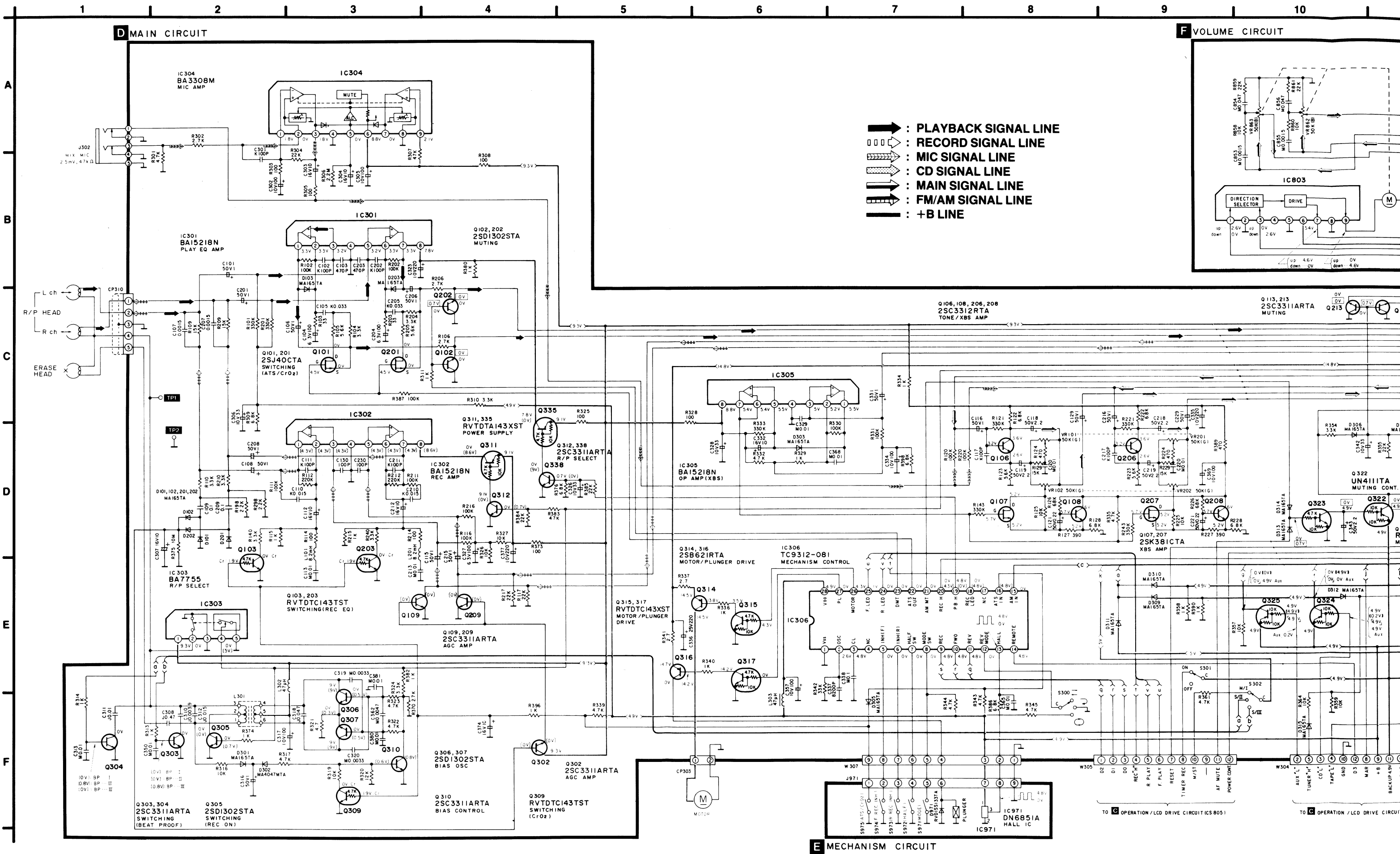
B CD CIRCUIT

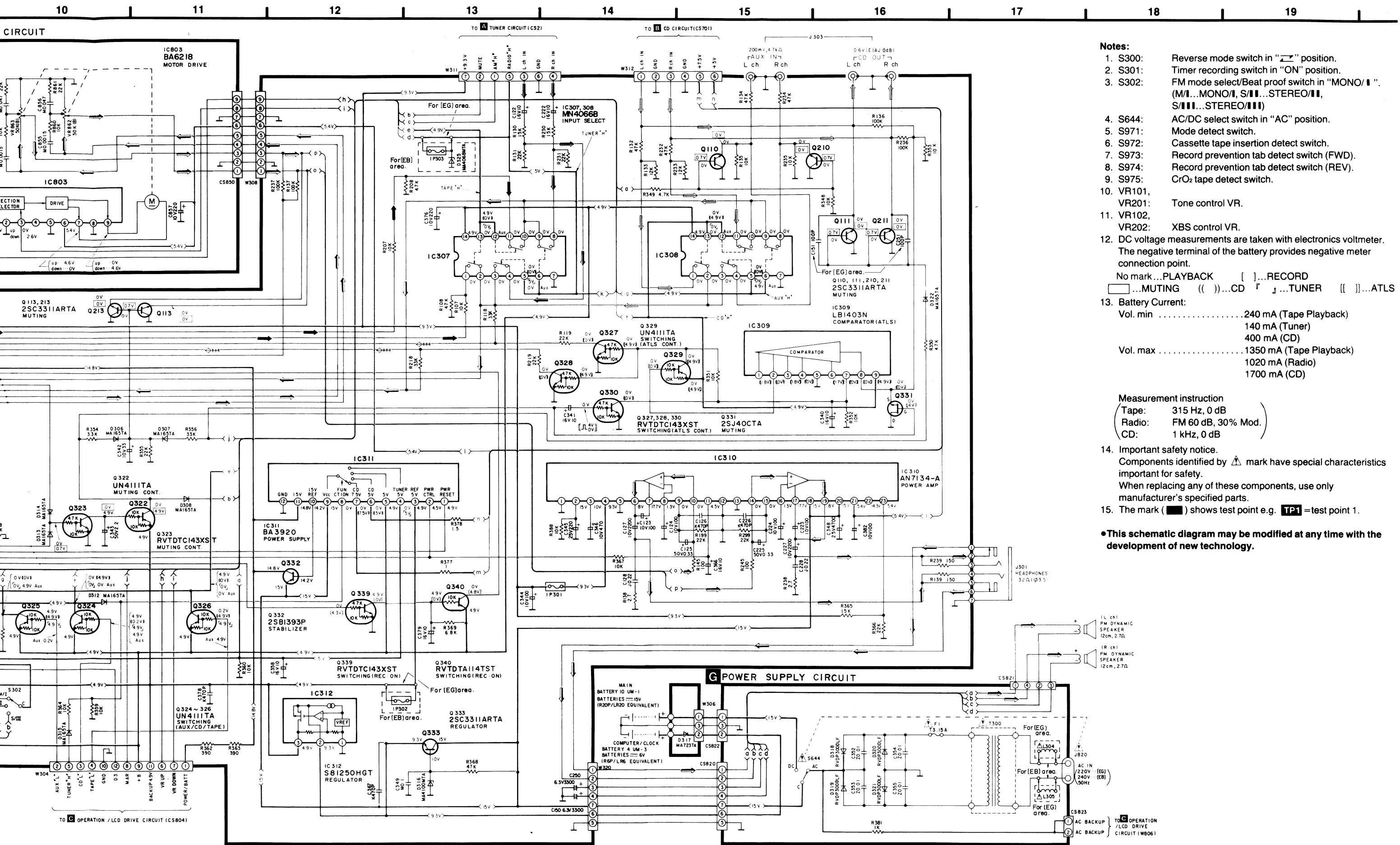




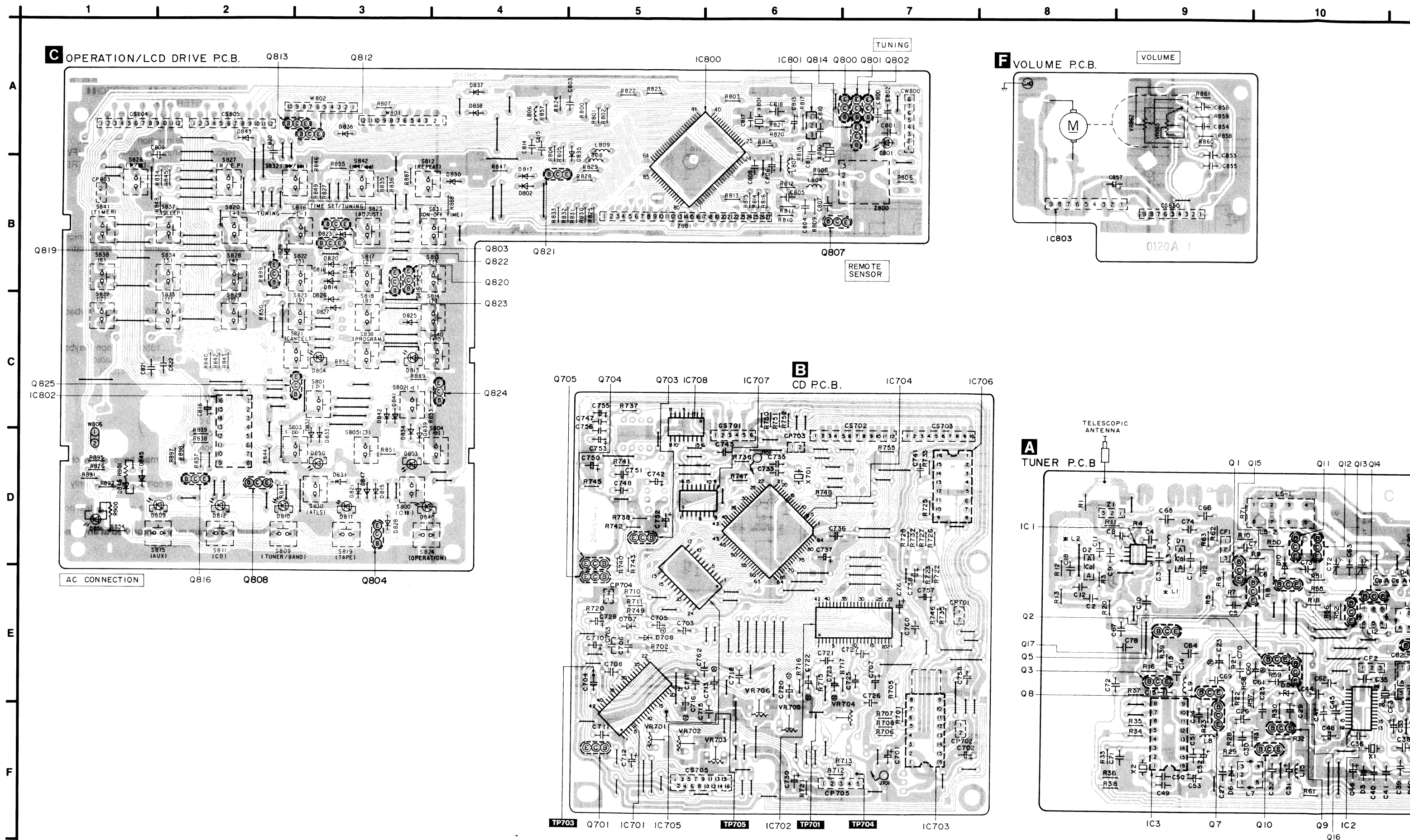


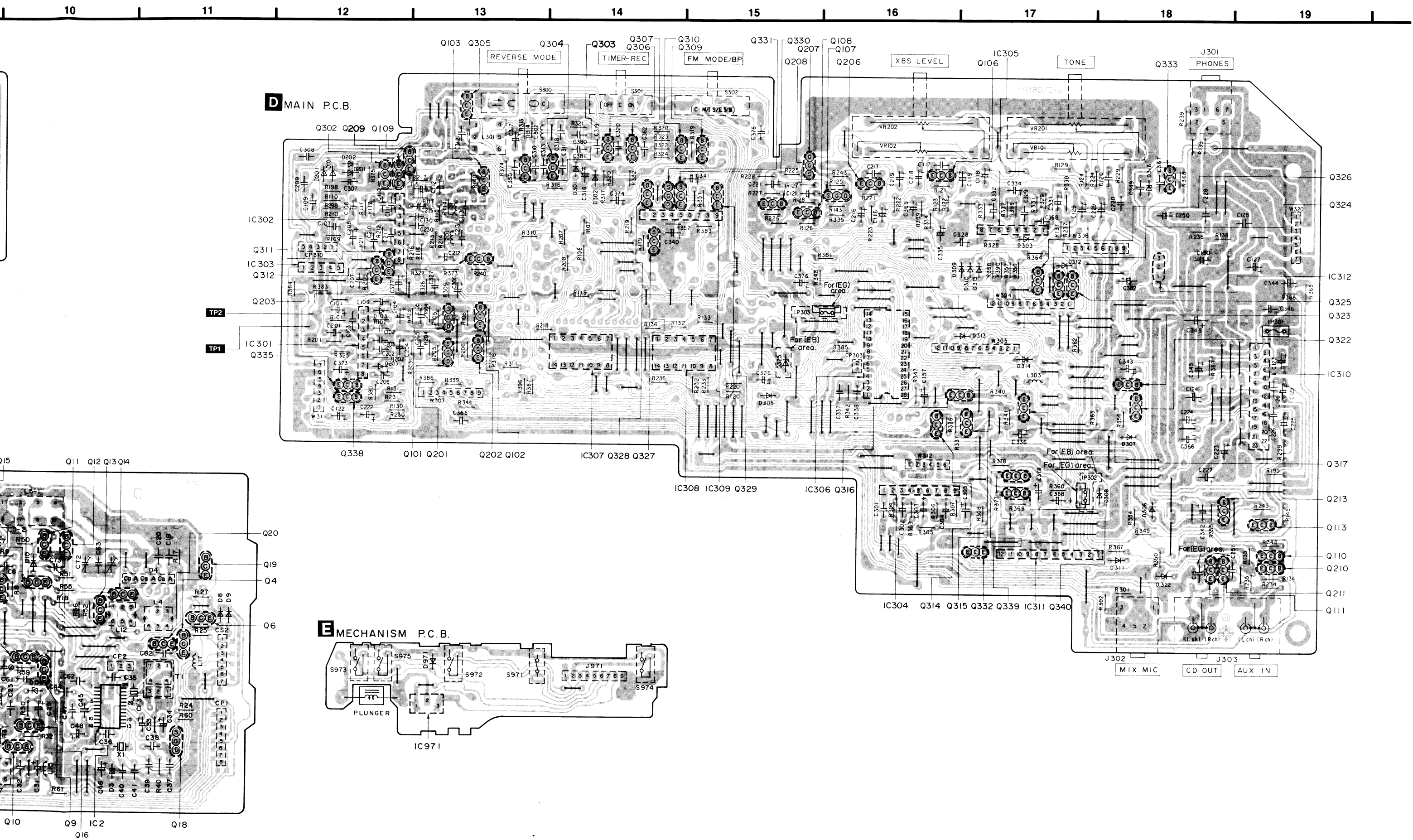
SCHEMATIC DIAGRAM



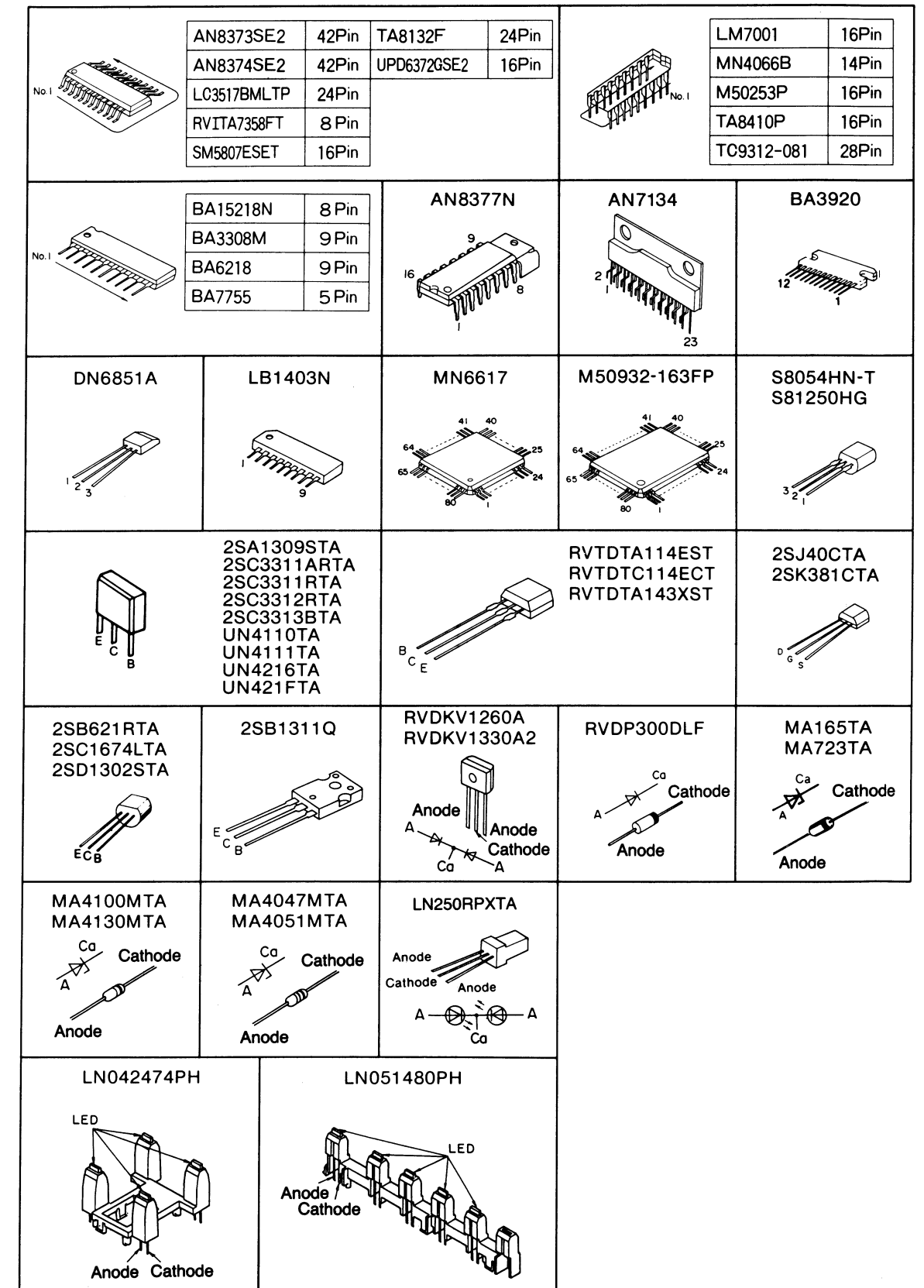
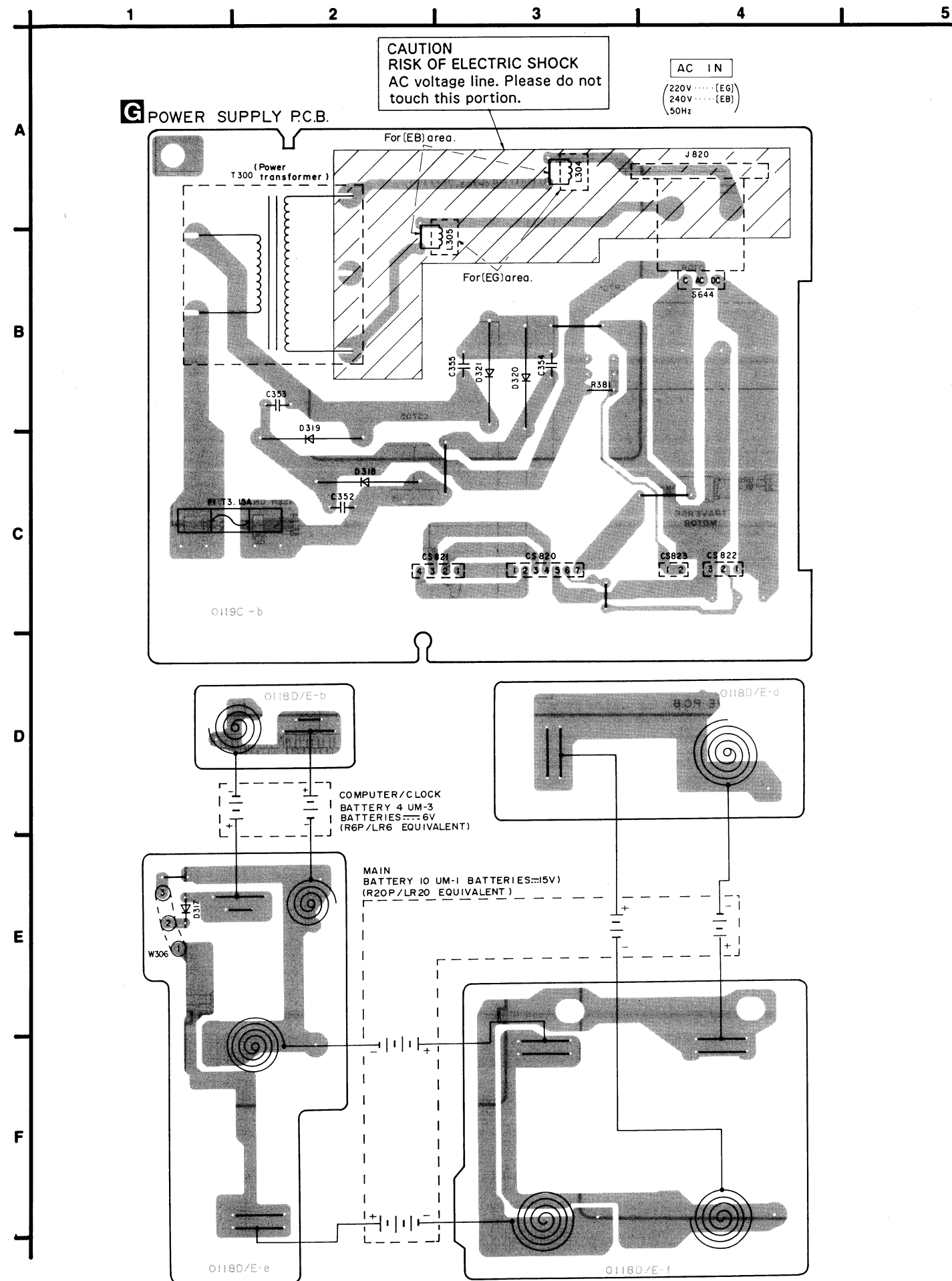


CIRCUIT BOARD DIAGRAM

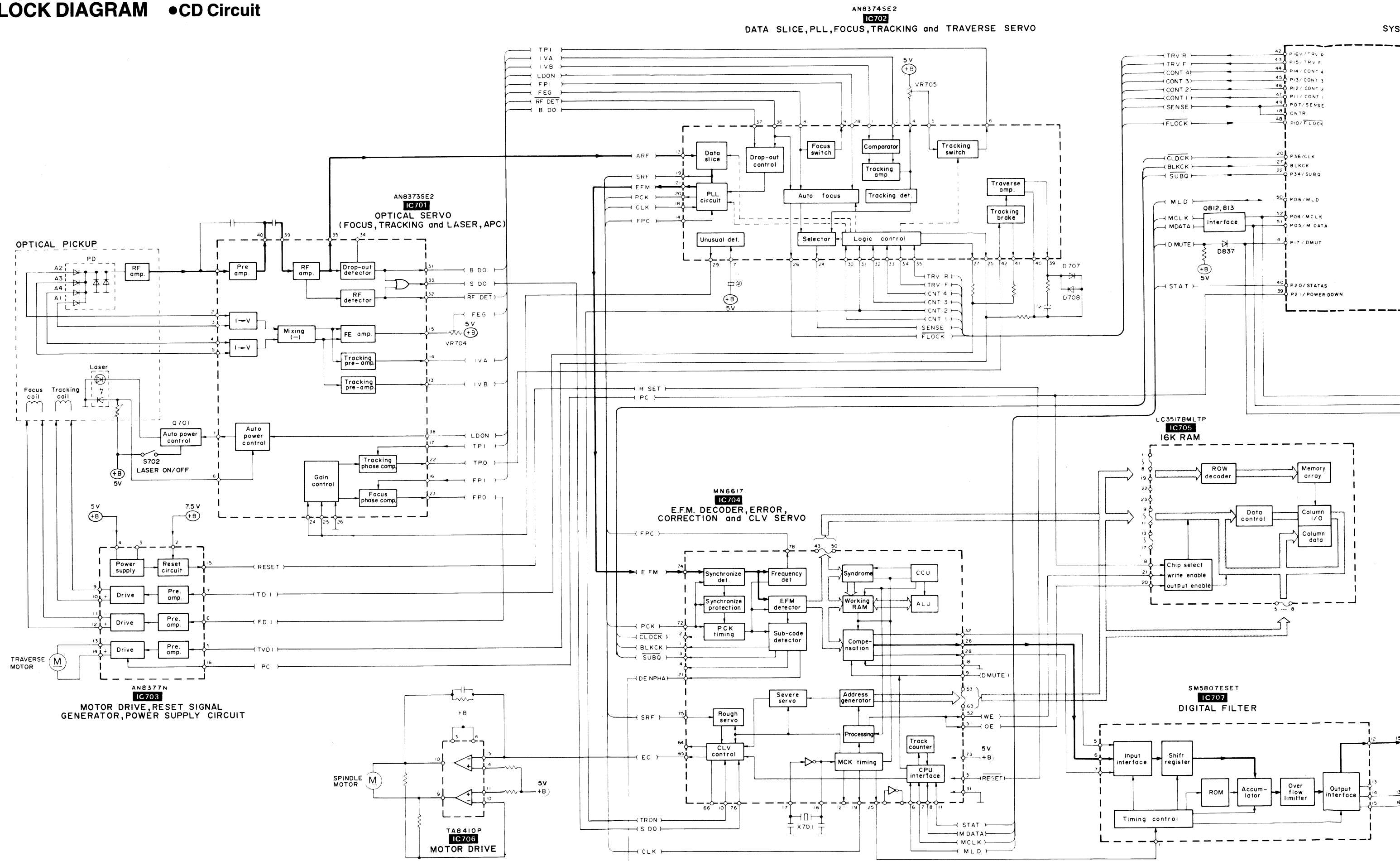


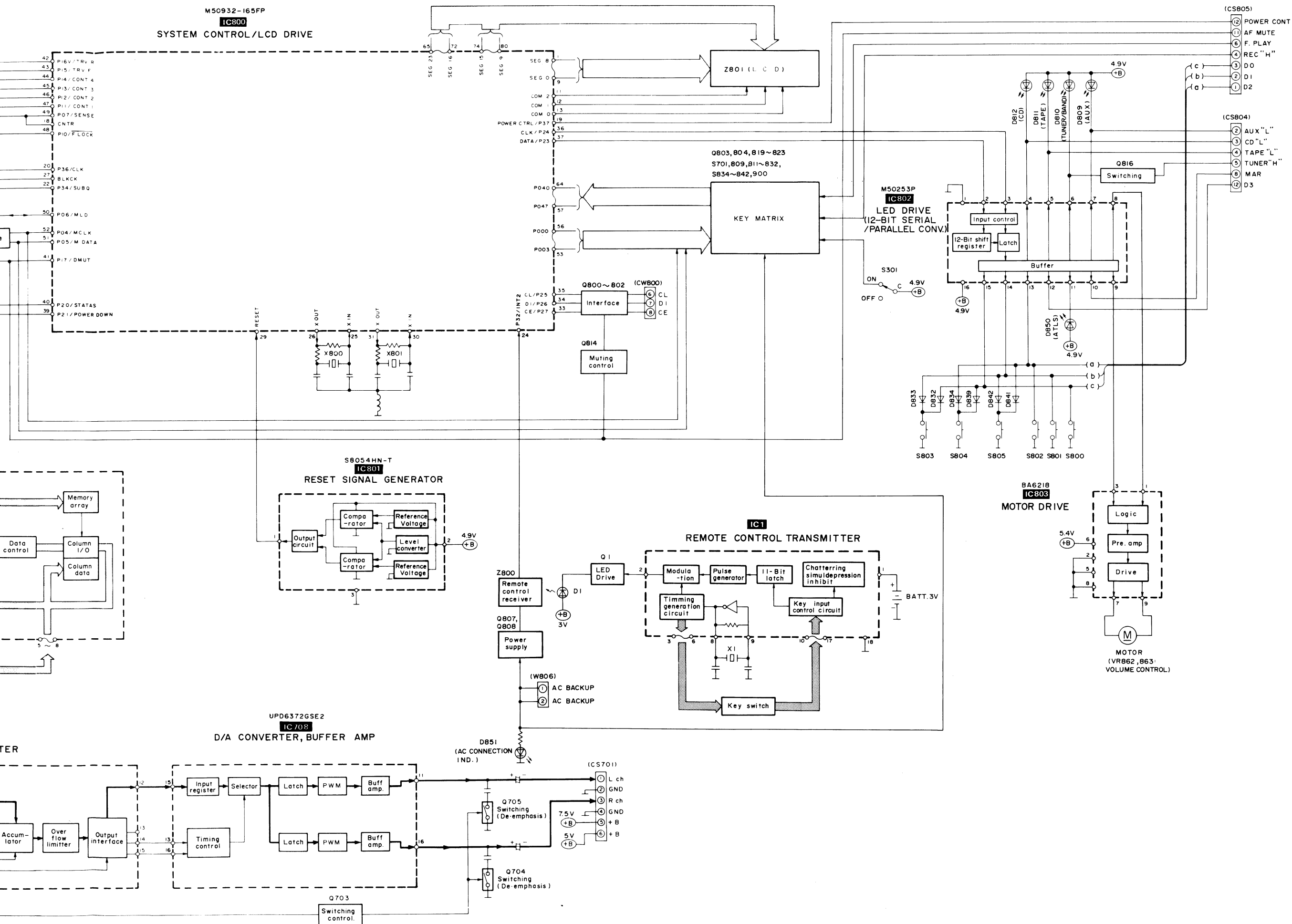


CIRCUIT BOARD DIAGRAM

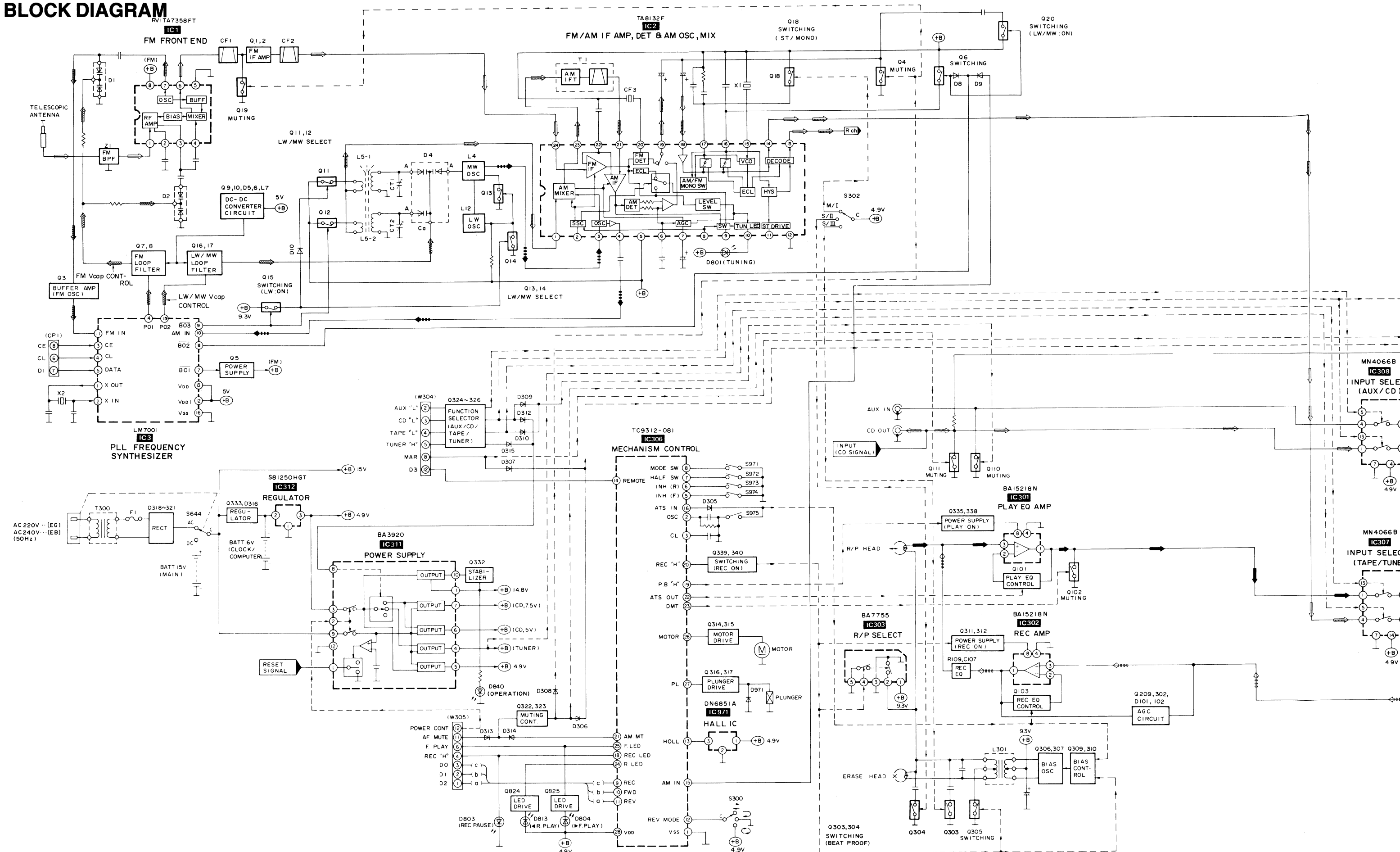


BLOCK DIAGRAM • CD Circuit





BLOCK DIAGRAM



MEASUREMENTS AND ADJUSTMENTS

<TUNER SECTION>

■ ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

- Set power source voltage to 15 V DC.
- Set timer rec switch to OFF.
- Set power switch to ON.
- Set function switch to TUNER/MW or LW.
- Set volume control to maximum.
- Set tone control to center.
- Set XBS control to minimum.
- Output of signal generator should be no higher than necessary to obtain an output reading.

■ MW-RF ALIGNMENT (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.)

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Refer to Fig. 2.)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	594 kHz	Tune to signal	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 1 and then connect the lead wires of the plug to the measuring instrument.)	(*1) L5-1 (MW ANT Coil)	Adjust for maximum output. Adjust L5-1 by moving coil along the ferrite core.
"	1,503 kHz	"	"	CT1 (AM ANT Trimmer)	Adjust for maximum output.

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

■ LW-RF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Refer to Fig. 2.)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	162 kHz	Tune to signal	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 1 and then connect the lead wires of the plug to the measuring instrument.)	(*1) L5-2 (AM ANT Coil)	Adjust for maximum output. Adjust L5-2 by moving coil along the ferrite core.
"	270 kHz	"	"	CT2 (AM ANT Trimmer)	Adjust for maximum output.

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

<CASSETTE DECK SECTION>

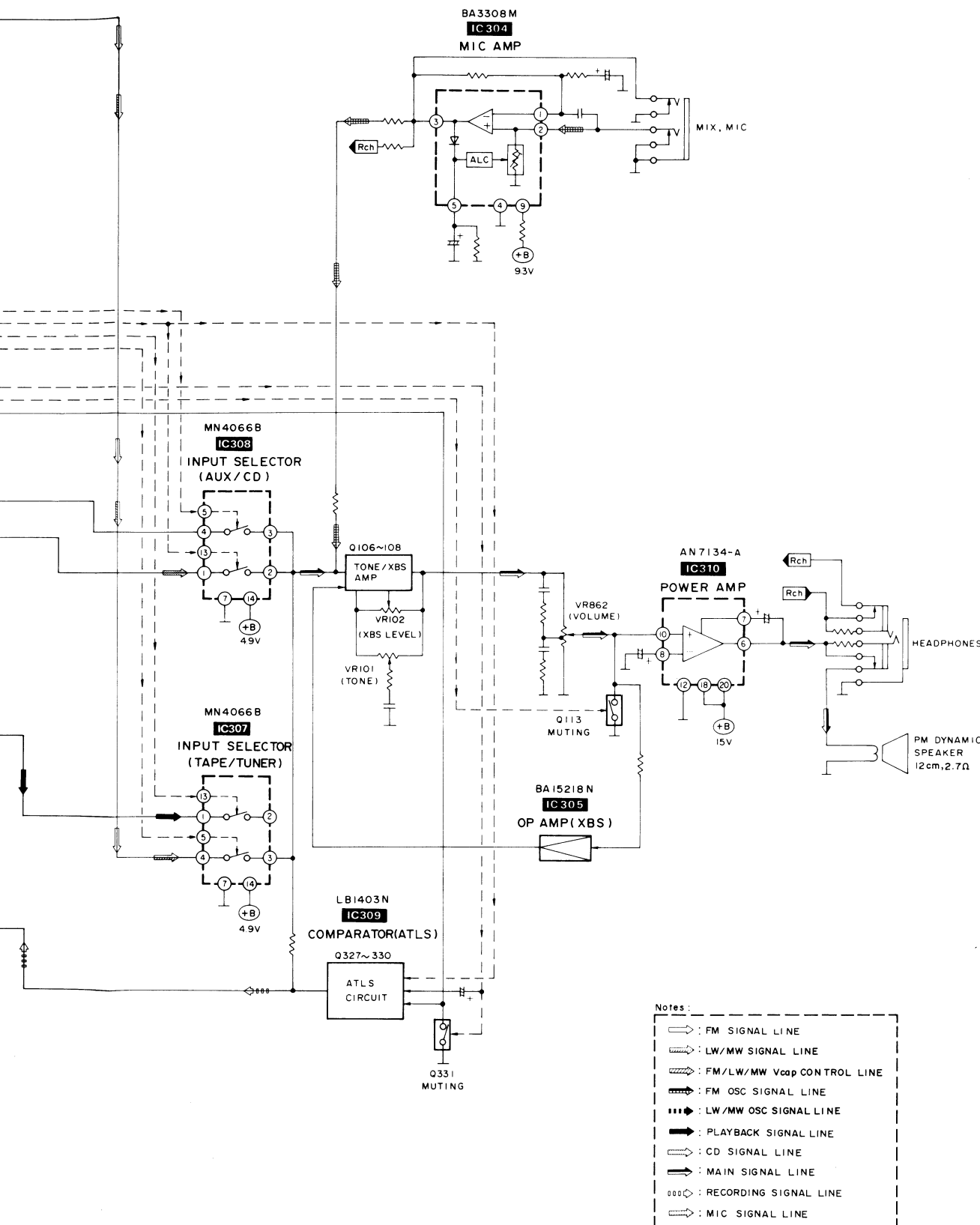
■ ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

- Set power source voltage to 15 V DC.
- Set timer rec switch to OFF.
- Set power switch to ON.
- Set function switch to TAPE.
- Set volume control to maximum.
- Set tone control to center.
- Set XBS control to minimum.
- Output of signal generator should be no higher than necessary to obtain an output reading.

■ HEAD AZIMUTH ALIGNMENT

TEST TAPE	INDICATOR ELECTRONIC VOLTMETER or OSCILLOSCOPE	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCFM (8 kHz, -20 dB)	Headphones Jack (32Ω) (Fabricate the plug shown in Fig. 1 and then connect the lead wires of the plug to the measuring instrument.)	Azimuth Screw (Refer to Fig. 3.)	maximum output.	1. Playback mode. 2. Adjust for maximum output.



RECORD BIAS ALIGNMENT

TEST TAPE	INDICATOR ELECTRONIC VOLTMETER or OSCILLOSCOPE	ADJUSTMENT	SPECIFICATION	REMARKS
Use CrO ₂ tape and Normal tape	TP1...(+) TP2...(-) (Refer to Fig. 5)	—	CrO ₂ ...12±1 mV Normal...9±1 mV	•Record mode

TAPE SPEED ADJUSTMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
QZZCWAT (3 kHz)	Headphones Jack (32Ω) (Fabricate the plug shown in Fig. 1 and then connect the lead wires of the plug to the measuring instrument.)	Motor VR (Shown in Fig. 4.)	3000±90 Hz	1. Playback mode. 2. Adjust motor VR, for 3000±90 Hz reading on frequency counter.

ALIGNMENT POINT

•Please refer to Circuit Board and Wiring Connection Diagram for test point locations.

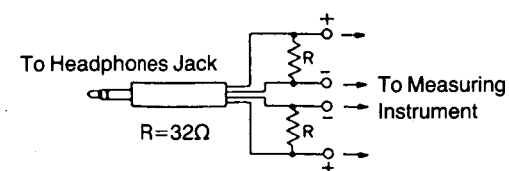


Fig. 1

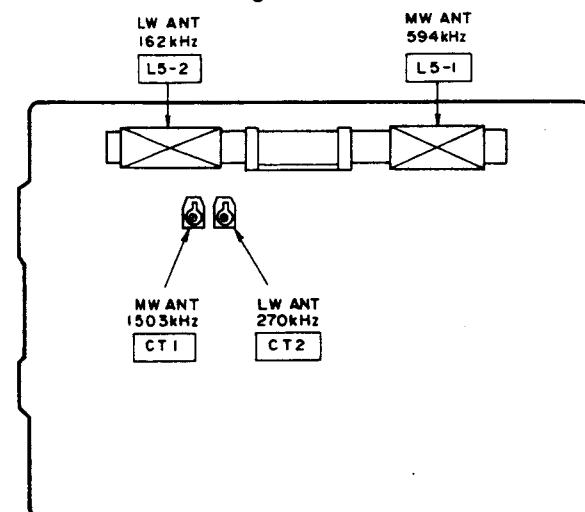


Fig. 2

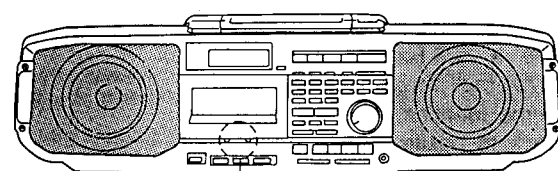


Fig. 3

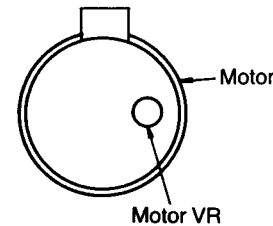


Fig. 4

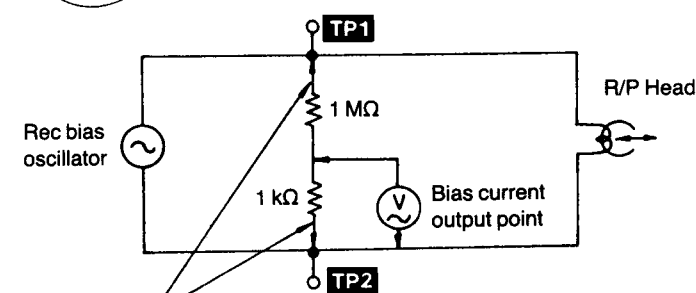


Fig. 5

•In order not to influence the bias oscillation, divide the voltage with 1 MΩ and 1 kΩ resistors, and measure the voltage across the 1 kΩ resistor.

<CD SECTION>

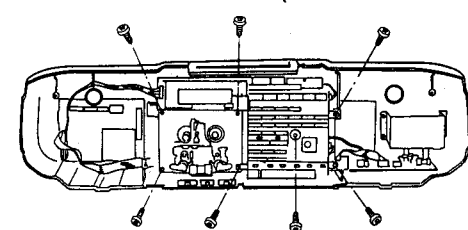
Caution:

- It is very dangerous to look at 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.

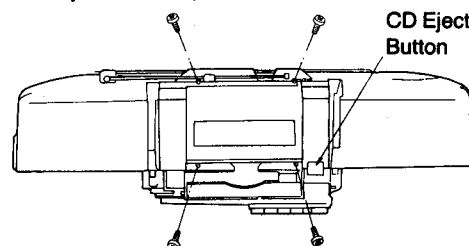
PREPARATION

The alignment procedure below is subject to change to improve servicing. The changes are informed through supplements.

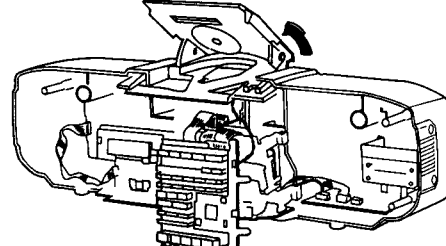
1. Remove the front cabinet (See Ref. No. 2 in disassembly instructions).



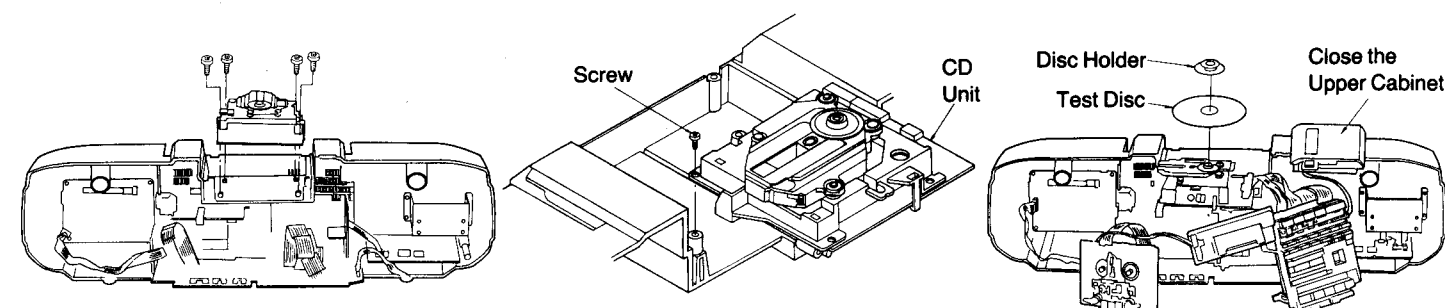
2. Remove 7 screws and then remove the switch P.C.B., mechanism and chassis.



3. Press the CD eject button and then open the disc cover.
4. Remove 4 screws.



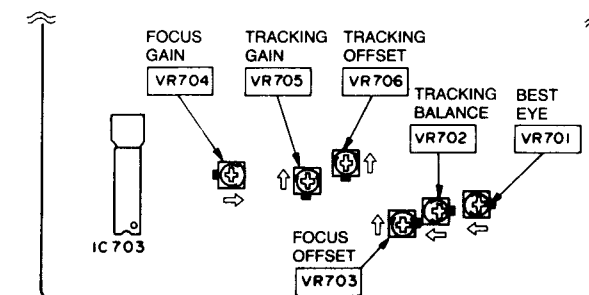
5. Remove the upper cabinet in the direction of arrow.



6. Remove 4 screws and remove the CD unit.

7. Assemble the CD unit.

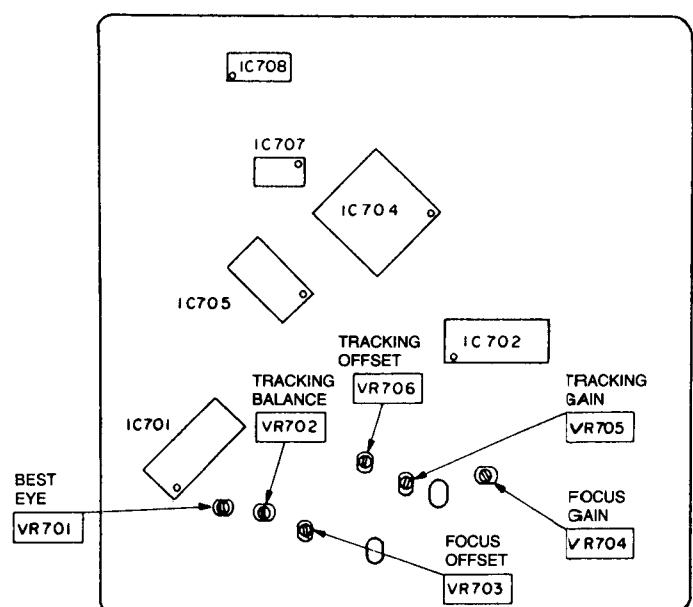
TEMPORARY SETTING OF EACH VR



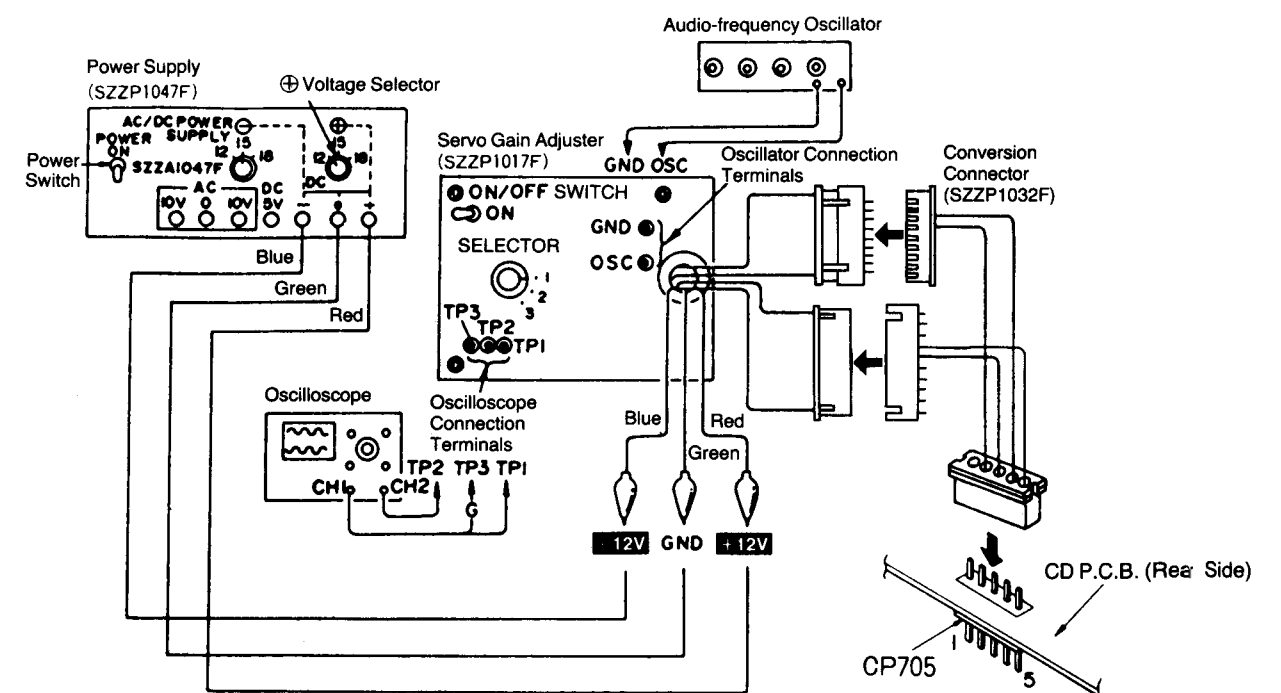
(Temporary VR setting if any of the trimmer VRs are replaced or require readjustment, temporarily set them to the following positions.)

ALIGNMENT POINT

•Please refer to Circuit Board and Wiring Connection Diagram for test point locations.



CONNECTION OF SERVO GAIN ADJUSTER



Measuring Instruments and Special Tools

• Servo gain adjuster (SZZP1017F or SZZP1094C)

• Test discs

1. Playability test disc (SZZP1054C or SZZP1014F)
2. Uneven test disc (SZZP1056C)
3. Black band test disc (SZZP1057C)

• Normal disc

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

• Audio frequency (AF) oscillator

• Conversion connector (SZZP1032F)

• Allen wrench (M2.0)

As to the replacement of the following parts, refer to the specified sections for adjustment.

• Optical pickup Sections (1) to (8)

(1) MECHANICAL ADJUSTMENT

1. Connect the oscilloscope's CH. 1 probe across **TJ101** (+) and **TJ102** (-) on the Servo P.C.B.

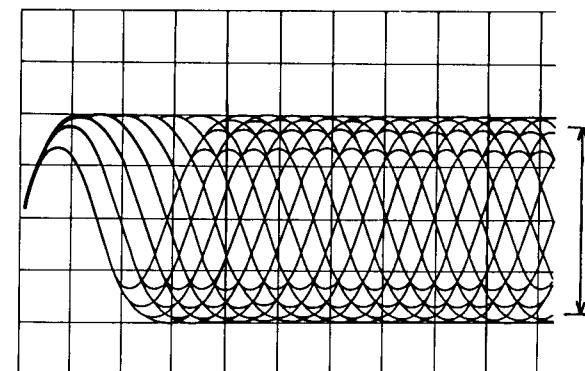
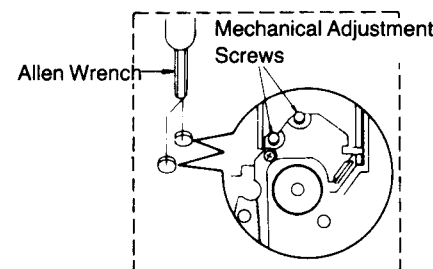
Oscilloscope setting:

VOLT 200 mV

SWEEP 0.2 μ s.

Input coupling AC

2. Switch the player power **ON**, and play track 9 on the test disc (SZZP1056C).
3. Leave the player in Play mode and place it as shown in the figure on the right.
4. Alternately adjust the two mechanical adjusting screws with the 2.0 mm allen wrench until the RF signal amplitude variation on the oscilloscope is minimized.
5. After completing the adjustment, lock the **mechanical adjustments** with lock paint (RZZOL01).



*Minimize the variation of amplitude.

(2) BEST EYE (PD BALANCE) ADJUSTMENT

1. Connect the oscilloscope's CH. 1 probe across **TP703** (+) and **TP701** (-) on the Servo P.C.B.

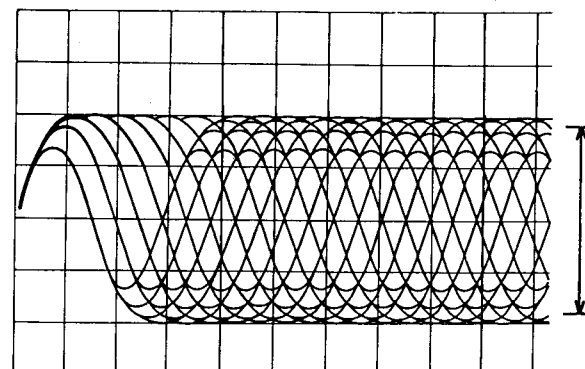
Oscilloscope setting:

VOLT 200 mV

SWEEP 0.2 μ s.

Input coupling AC

2. Switch the player power **ON**, and play the 0.5 mm black dot on the test disc (SZZP1014F or SZZP1054C).
3. Adjust **VR701** until the RF signal eye pattern amplitude is maximized.



*Maximize the amplitude.

(3) FOCUS GAIN ADJUSTMENT

1. Connect the servo gain adjuster to the player (see page 19).
2. Set the servo gain adjuster's gain switch to position "2" and the ON/OFF switch to **ON**.
3. Set up the AF oscillator output for 1 kHz, 150 mVp-p, and connect it across the OSC and GND terminals on the servo gain adjuster.
4. Connect oscilloscope's CH. 1 and CH. 2 probes to the servo gain adjuster's TP1 and TP2 terminals, respectively (TP3 is GND).

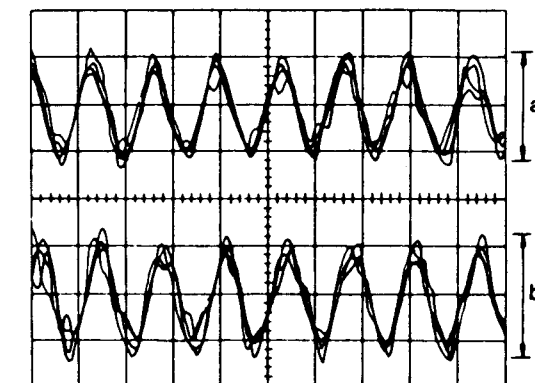
Oscilloscope setting:

VOLT 50 mV (both channels)

SWEEP 1 msec.

Input coupling AC

5. Play the test disc (SZZP1014F or SZZP1054C).
6. Set the servo gain adjuster's gain switch to position "3", and you will see a 825 Hz signal on the oscilloscope. Adjust **VR704** until the signal amplitudes on both channels become identical to each other.
7. Set the gain switch back to position "2".



*Adjust **VR704** until a equals b.

(4) TRACKING GAIN ADJUSTMENT

1. Set up the AF oscillator output for 1 kHz, 150 mVp-p, and connect it across the OSC and GND terminals on the servo gain adjuster.
2. Connect oscilloscope's CH. 1 and CH. 2 probes to the servo gain adjuster's TP1 and TP2 terminals, respectively (TP3 is GND).

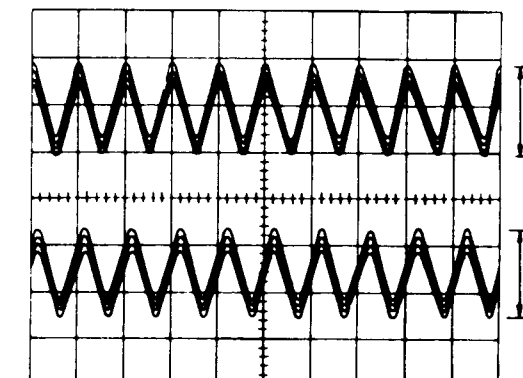
Oscilloscope setting:

VOLT 50 mV (both channels)

SWEEP 1 msec.

Input coupling AC

3. Switch the player power **ON**, and play the test disc (SZZP1014F or SZZP1054C).
4. Set the servo gain adjuster's gain switch to position "1", and you will see a 1 kHz signal on the oscilloscope. Adjust **VR705** until the signal amplitudes on both channels become identical to each other.
5. Set the gain switch back to position "2".



*Adjust **VR705** until a equals b.

(5) FOCUS OFFSET ADJUSTMENT

Note: Make sure that the servo gain adjuster's gain switch is set to position "2".

1. Connect the oscilloscope's CH. 1 probe across **TP703** (+) and **TP701** (-) on the Servo P.C.B. and CH. 2 probe across **TP705** (+) and **TP701** (-).

Oscilloscope setting:

VOLT 200 mV (CH. 1)

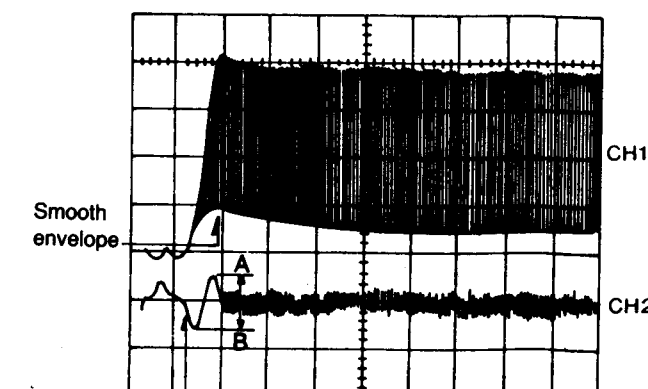
1 V (CH. 2)

SWEEP 1 ms.

Input coupling AC (both CH. 1 and 2)

Trigger mode NORM (trigger CH. 1)

2. Switch the player power **ON**, and play the 9 on the test disc (SZZP1057C).
3. Trigger the oscilloscope's CH. 1 so that the following waveforms are observed. Adjust **VR703** until the dip in the RF signal envelope on CH. 1 is smooth and the signal amplitude on CH. 2 is minimized, i.e. when amplitude A equals amplitude B.



Minimize the amplitude on make A=B.

Note: Make sure that the servo gain adjuster's gain switch is set to position "2".

1. Connect the oscilloscope's CH.1 probe across **TP703**(+) and **TP701**(-) on the Servo P.C.B. and CH. 2 probe across **TP704**(+) and **TP701**(-).

Oscilloscope setting:

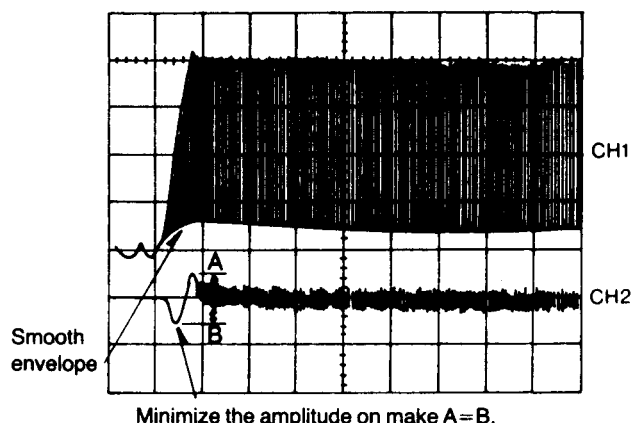
VOLT 200 mV (CH. 1)
1 V (CH. 2)

SWEEP 0.5 ms.

Input coupling AC (both CH. 1 and 2)

Trigger mode NORM (trigger CH. 1.)

2. Switch the player power **ON**, and play rack **9** on the test disc (SZZP1057C).
3. Trigger the oscilloscope's CH. 1 so that the following waveforms are observed. Adjust **VR706** until the dip in the RF signal envelope on CH. 1 is smooth and the signal amplitude on CH. 2 is minimized, i.e. when amplitude A equals amplitude B.



(7) TRACKING BALANCE ADJUSTMENT

1. Make sure that servo gain adjuster's gain switch is set to position "2".
2. Set up the AF oscillator output for 1 kHz, 150 mVp-p, and connect it across the OSC and GND terminals on the servo gain adjuster.
3. Connect oscilloscope's CH. 1 probe across TP703 (+) and TP701(-) on the Servo P.C.B. and CH. 2 probe (+) to the OSC terminal on the servo gain adjuster.

Oscilloscope setting:

VOLT 200 mV (CH. 1)

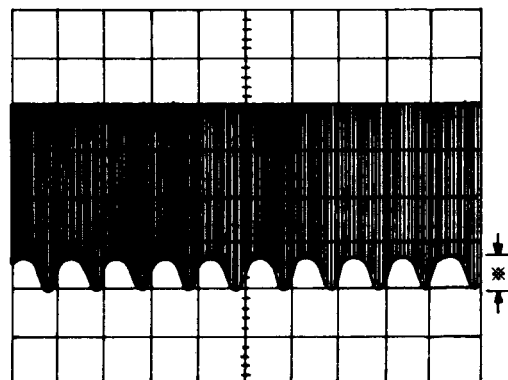
SWEEP 1 msec.

Input coupling AC (both CH. 1 and 2)

Trigger mode NORM (trigger CH. 2)

4. Switch the player power **ON**, and play the test disc (SZZP1014F or SZZP1054C).

5. Adjust the VR702 so that the section of the output of the waveform marked with * is balanced.
6. Disconnect the servo gain adjuster's leads from the player.



(8) 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 Using Defect Disc

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

■ NEW SERVO GAIN ADJUSTER (Servo Amp. Adjusting Fixture)

The following introduces the improved version of the current servo gain adjuster (SZZP1017F):

Part number: SZZP1094C

Features:

- (1) Contains all oscillation frequencies and output adjustments needed for focus servo gain, tracking servo gain, and tracking balance adjustment (requires no external oscillator).
- (2) Panel indicators indicate the best points of focus and tracking servo gains (no oscilloscope needed).
- (3) Internal power supply eliminates the need for power supply from the CD player.

FUNCTION OF IC TERMINALS

•IC306 (TC9312N-081): Mechanism Control

Terminal No.	Terminal Symbol	Terminal Name	Function
1	V _{ss}	Ground Terminal	For ground connection.
2	OSC	External Oscillator C/R Terminal	This terminal enables the oscillation of the standard frequency. The standard frequency (C337 8200p, R342 33k) is 64 kHz.
3	CL	Resetting System Input Terminal	At power off, the IC is reset when a "LOW" level signal is input to this terminal.
4	NC	—	—
5	INH (F)	Input Terminal for Erroneous Erasure Prevention	Either an ON or OFF signal is input to this terminal from S973 to enable or inhibit erasure on the FWD side. At a "HI" level FWD sound recording is not possible. (The circuit for erroneous erasure prevention is activated.) At a "LOW" level recording is possible.
6	INH (R)	Input Terminal for Erroneous Erasure Prevention	Either an ON or OFF signal is input to this terminal from S974 to enable or inhibit erasure on the REV side. At a "HI" level REV sound recording is not possible. (The circuit for erroneous erasure prevention is activated.) At a "LOW" level recording is possible.
7	HALF SW	Input Terminal for Cassette Tape Insertion Detection	When a cassette tape has been inserted in Deck, S972 becomes active and a "LOW" level signal is input to this terminal to set the deck on standby.
8	MODE SW	Input Terminal for Detection of Operation on Deck	This is the detection terminal for operation on Deck. A "LOW" level signal is input to this terminal when S971 is turned on during PLAY, FF or RWD operation on Deck.
9	REC	Input Terminals for Tape Operation	When a tape operation button is pressed, a "LOW" level signal is input.
10	FWD		
11	REV		
12	REV MODE	Reverse Mode Input Terminal	The reverse mode switching signal is input to this terminal from S604. At a "LOW" level  At "1/2 VDD" level  At "VDD" level 
13	HOLE	Auto-Stop Detection Input Terminal	Tape rotation is detected by IC971 which outputs a signal into this terminal. No signal input The unit is set to the STOP or AUTO REVERSE mode. Signal input (pulse) . . . tape runs.
14	REMOTE	CD sync. input Terminal	CD sync. signal is input to this terminal from IC802.
15	AM IN	Muting Input Signal	Mute signal is input to this terminal.
16	ATS IN	Input Terminals for Auto Tape Selection	Auto tape select signal is input to this terminal from S975. At a "LOW" level NORMAL At a "HI" level CrO ₂
17	NC	—	—
18	REC LED	Rec LED Output Terminal	This terminal outputs a "HI" level when unit is in recording operation. The LED for D803 light up.
19	PB H	PB Output Terminal	This terminal outputs a "HI" level when unit is in playback operation.
20	REC H	REC Output Terminal	This terminal outputs a "HI" level when unit is in recording operation.
21	AM MT	Muting Output Terminal	This terminal outputs a "HI" level when unit is in muting operation.
22	ATS OUT	Auto Tape Select Output Terminal	This terminal outputs a auto tape select signal. At a "LOW" level CrO ₂ At a "HI" level NORMAL

Terminal No.	Terminal Symbol	Terminal Name	Function
23	DMT	Muting Output Terminal	This terminal outputs a "HI" level when unit is in muting operation.
24	R LED	Reverse LED Output Terminal	This terminal outputs a "HI" level signal when the unit is in reverse operation. The LED for D813 lights up.
25	F LED	Forward LED Output Terminal	This terminal outputs a "HI" level signal when the unit is in forward operation. The LED for D804 lights up.
26	MOTOR	Motor Control Signal Output Terminal	This terminal outputs the ON/OFF motor signal to Q315. At a "HI" level the motor control system is activated. At a "LOW" level the motor control system is deactivated.
27	PL	ON/OFF Plunger Control Output Terminal	This terminal outputs the ON/OFF plunger control signal to Q317. At a "HI" level the plunger operates. At a "LOW" level the plunger does not operate. After this terminal outputs a "HI" level signal and sets Q317 and 316 to ON, the plunger starts operating.
28	Vpp	Power Connection Terminal	To be connected to a +5.5 V power supply.

●IC701 (AN8373S): Servo amp.

Pin No.	Mark	I/O Division	Function
1	AMP1	I	RF signal input (×30 amp.)
2	PDAD	I	Photo detector current input (A2)
3	PDA	I	Photo detector current input (A1)
4	PDBD	I	Photo detector current input (A4)
5	PDB	I	Photo detector current input (A3)
6	LPD	I	Non-inverting laser power input
7	LD	O	Laser power auto control output
8	FBL1	I	PD balance adjustment
9	FBL2	I	
10	TBL1	I	Tracking balance adjustment
11	TBL2	I	
12	FOOFS	I	Focus offset adjustment
13	IVA	O	Current/voltage conversion output (A)
14	IVB	O	Current/voltage conversion output (B)
15	FE	O	Focus gain adjustment output
16	FPI	I	Focus error signal input
17	TPI	I	Tracking error signal input
18	C. TPL	I	Tracking error filter capacitor input
19	C. TPH		
20	C. FPL	I	Focus error filter capacitor input
21	C. FPH		

Pin No.	Mark	I/O Division	Function
22	TPO	O	Tracking error signal output
23	FPO	O	Focus error signal output
24	FGC	I	Focus gain up signal input (Not used, connected to GND)
25	TGC	I	Tracking gain up signal input (Not used, connected to GND)
26	GD	I	Focus/tracking gain down signal input (Not used, connected to GND)
27	PTO	O	Position detecting amp. output
28	PTI	I	Position detecting amp. input
29	PBO	O	Position detecting buffer output
30	POT	I	Position detecting buffer input
31	BDO	O	Dropout detection output
32	RFDET	O	RF detections signal output
33	SDO	O	Dropout detection pulse output
34	C. SBDO	I	Dropout detecting capacitor input
35	ARF	O	RF signal output
36	C AGC	I	AGC detecting capacitor input
37	VCC	I	Power supply (+5 V input)
38	LDON	I	Laser power control input
39	RF IN	I	RF signal input
40	AMPO	O	RF signal output
41	VREF	O	Reference voltage output
42	GND	I	Ground terminal

●IC702 (AN8374S): Servo processor

Pin No.	Mark	I/O Division	Function
1	LSA	I	Phase difference input (A)
2	LSB	I	Phase difference input (B)
3	TEOFS	I	Tracking offset adjustment
4	TE	O	Tracking gain adjustment
5	TEG	I	
6	TE OUT	O	Tracking error signal output
7	TE BPF	I	Tracking error gain detecting filter (Not used, open)
8	FEG	I	Focus gain adjustment
9	FE OUT	O	Focus error signal output
10	CLW	O	Triangular wave oscillator capacitor input
11	VREF	I	Reference voltage input
12	ARF	I	RF signal input
13	CDSL	I	Data slice filter capacitor input
14	FPC	I	Frequency difference signal input
15	GND	I	Ground terminal
16	C. PLL	I	PLL loop filter constant
17	VSS	I	Ground terminal
18	CLK	I	Frequency pull-in clock signal (88.2 kHz) input
19	SRF	O	Sliced and digitized RF signal output
20	PCK	O	Clock output extracted from SRF
21	EFM	O	EFM signal output synchronous with PCK

●IC703 (AN8377): BTL drive

Pin No.	Mark	I/O Division	Function
1	PVCC	I	Driver power supply (+8.9 input)
2	VCC	I	Power supply (+8.9 V input)
3	TB	O	External transistor base driving output
4	VMON	O	Voltage output
5	TVDI	I	Traverse error signal input
6	FDI	I	Focus error signal input
7	TDI	I	Tracking error signal input
8	VREF	I	Reference voltage input

Pin No.	Mark	I/O Division	Function
22	VDD	I	Power supply (+5 V input)
23	SPCNT	O	Track crossing speed control output (Not used, open)
24	SENSE	O	Selector output (track crossing state)
25	TRV	O	Traverse servo control output
26	FLOCK	O	Focus lock signal output
27	KICK	O	Track kick signal output
28	LDON	O	Laser power control output
29	VDET	O	Focus/tracking gain up output (Not used, open)
30	CNT1	I	Control input (FOON: Focus servo ON signal)
31	CNT2	I	Control input (TRON: Tracking servo ON signal)
32	CNT3	I	Control input [KICKF: Kick direction (forward) command]
33	CNT4	I	Control input [KICKR: Kick direction (reverse) command]
34	TRVF	I	Traverse forward command signal
35	TRVR	I	Traverse backward command signal
36	RFDET	I	RF detection signal input
37	BDO	I	Dropout detection input
38	VCC	I	Power supply (+5 V input)
39	TVPO	O	Traverse position detecting resistor/capacitor inputs
40	TVPI	O	
41	BROUT	I	Tracking drive control output
42	BRIN	I	Tracking error signal input

Pin No.	Mark	I/O Division	Function
9	TD-	O	Inverting output of tracking driver
10	TD+	O	Non-inverting output of tracking driver
11	FD-	O	Inverting output of focus driver
12	FD+	O	Non-inverting output of focus driver
13	TVD-	O	Inverting output of traverse driver
14	TVD+	O	Non-inverting output of traverse driver
15	RESET	O	Reset signal output
16	PC	I	PC input (connect to GND)

●IC704 (MN6617): Signal Process

Terminal No.	Terminal Symbol	I/O	Function
1	BLKCK	O	This terminal outputs a 75 Hz Clock signal of sub-code block (data Q).
2	CLDCK	O	This terminal outputs a 7.35 kHz clock signal of sub-code block (data Q).
3	SUBQ	O	This terminal outputs a signal of sub-code block (data Q).
4	CRC	—	—
5	RST	I	This is the terminal for resetting the system, e.g. when the unit is powered OFF, the circuit is reset by LOW level signals.
6	MLD	I	MCLK and MDAT signals are input to the terminal.
7	MCLK	I	This terminal receives 8 bit data reading clock signal.
8	MDATA	I	This IC receives a data signal input (8 bit) IC.
9	DMUTE	I	This terminal receives a "HI" level muting signal.
10	TRON	I	This terminal receives a tracking servo control signal. At a "LOW" level, . . . the tracking servo is ON.
11	STAT	O	This terminal outputs data signals (CRL, STOP).
12	SMCK	O	This terminal outputs a clock signal of 4.2336 MHz.
13	PMCK	—	—
14	ITC	I	This is the track counter input terminal, but it is not used in this unit. It is connected to a +5 V power supply.
15	TEST	—	This is the test mode selection input terminal, but it is not used in this unit. It is connected to a +5 V power supply.
16	X2	O	These are the clock transmission terminals (16.9344 MHz).
17	X1	I	—
18	SEL	I	This is the data output selection input terminal. At a "HI" level, . . . parallel data output. At a "LOW" level, . . . serial data output. *When connected, this unit is at a "HI" level.
19	LOG/WDCKS	—	—
20	RDG	—	—
21	DEMPH	O	This is the de-emphasis control output terminal. At a "HI" level, . . . the de-emphasis control is set ON.
22	IPFLAG	—	—
23	FLAG0	—	—
24	FLAG6	—	—

●IC705 (LC3517BML): De Interleave

Pin No.	Mark	I/O Division	Function
1~8	A7~A0	I	Address input
9~11	D0~D2	I/O	Data in • out
12	VSS	—	Ground Connection
13~17	D3~D7	I/O	Data in • out

Terminal No.	Terminal Symbol	I/O	Function
25	XCK	O	This terminal outputs a clock signal of 16.93 MHz.
26	DA15	O	These terminals output L and R signals.
28	DA13		
31	GND	O	For ground connection.
32, 36	DA10	O	These terminals output L and R signals.
27	DA14	—	—
29	DA12		
30	DA11		
33~42	DA9~DA0		
43~50	D7~D0	I/O	These terminals output RAM data signals (16K).
51	RAMOE	O	This terminal outputs RAM OE control signals (16K).
52	RAMWE	O	This terminal outputs RAM WE control signals (16K).
53~63	RAMA0~RAMA10	O	These terminals output RAM address signals (16K).
64	PC	—	—
65	EC	O	This is the spindle motor control output terminal. The spindle motor operates at a "LOW" level.
66	FG	—	—
67	VCNT	—	For ground connection.
68	REXT		
69, 73	VDD	I	To be connected to a +5 V power supply.
70	PD	—	—
71	PCKO	—	—
72	PCK	I	This is the PLL extraction clock input terminal (f=4.2336 MHz).
74	EFM	I	This terminal receives EFM input signals (PLL).
75	SRF	I	This terminal receives EFM input signals (DSL).
76	DO	I	This terminal receives a drop-out input signal. At a "HI" level, . . . drop-out comes into effect.
77	CLVS	—	—
78	FPC	O	This terminal outputs a frequency comparison signal.
79~83	—	—	—
84	SBCK	—	For ground connection.

Pin No.	Mark	I/O Division	Function
18	CS	—	Ground connection
19	A10	I	Address input
20	OE	I	Output-enable input
21	WE	I	Read-wright control input
22	A9	I	Address input
23	A8		
24	V _{cc}	I	Power supply

●IC707 (SM5807ES): Digital Filter

Pin No.	Mark	I/O Division	Function
1	XT	I	Clock input
2	XT	—	—
3	CKSL	—	—
4	CKO	—	—
5	LRCL	I	Clock (44.1 kHz)
6	DIN	I	Serial data input
7	BCKIN	I	Serial input, Bit clock input
8	V _{ss}	—	Ground
9	SCSL	I	SCSL=H: System clock=192 fs SCSL=L: System clock=196 fs

●IC708 (UPD6372GSE2): D/A Converter

Pin No.	Mark	I/O Division	Function
1	NC	—	—
2	D. GND	—	Ground (DC)
3	D. V _{DD}	I	+B (DC)
4	D. V _{DD}		
5	A. GND	—	Ground (AC)
6	R. OUT	O	AF signal output (Rch)
7	A. V _{DD}	I	+B (AC)
8	A. V _{DD}		

●IC800 (M50932-144FP): System Control

Pin No.	Mark	I/O Division	Function
1~9	SEG8~SEG0	O	LCD segment signal output
10	COM3	—	—
11~13	COM2~COM0	O	LCD common signal output
14~16	VL1~VL3	I	LCD drive power supply
17	V _{cc}	I	+B
18	CNTR	I/O	Counter signal
19	P37	I/O	Power control
20	P36	I/O	Clock
21	P35	—	—
22	P34	I/O	Sub-code (Q data)
23	P33	I/O	Auto mute
24	P32	I/O	Remote control
25	P31	I/O	Clock
26	P30		
27	BLKCK	I	Sub-code (Q data) clock input
28	NC	—	—
29	RESET	I	Reset signal input (Reset at Low)
30	XIN	I	Clock signal input
31	XOUT	O	Clock signal output
32	V _{ss}	—	Ground
33	P27	O	PLL control
34	P26		
35	P25		

Pin No.	Mark	I/O Division	Function
10	DGR	O	Degrish signal (Rch) (176.4 kHz)
11	DGL	O	Degrish signal (Lch) (176.4 kHz)
12	DOUT	O	Serial data output
13	WDCK	O	Output control clock (352.8 kHz)
14	LRCO	O	Output control clock (176.4 kHz)
15	BCKO	O	Serial output, Bit clock (8.467 MHz or 8.6436 MHz)
16	V _{ss}	—	+B

Pin No.	Mark	I/O Division	Function
9	R. REF	I	Reference voltage input (Rch)
10	L. REF	I	Reference voltage input (Lch)
11	L. OUT	O	AF signal output (Lch)
12	A. GND	—	Ground (AC)
13	LRCK	I	Clock input
14	LRSEL	I	Ground
15	SI	I	Serial data input
16	CLK	I	Bit clock input

Pin No.	Mark	I/O Division	Function
36	P24	O	Input select
37	P23		
38	P22	—	—
39	P21	O	Power control output
40	P20	I	Status signal input
41	P17	O	AF mute signal output
42	P16	O	Traverse "Reverse" command signal output
43	P15	O	Traverse "Forward" command signal output
44	P14	O	Optical servo IC control signal [Kick direction (Reverse) control]
45	P13	O	Optical servo IC control signal [Kick direction (forward) control]
46	P12	O	Optical servo IC control signal (Tracking servo)
47	P11	O	Optical servo IC control signal (Focus servo)
48	P10	I	Focus clock signal input
49	P07	I	Selector input
50	P06	O	Data road signal
51~56	P05~P00	I	Key matrix
57~64	P47~P40	I	Key matrix
65~80	SEG23~SEG9	O	LCD drive signal output

REPLACEMENT PARTS LIST

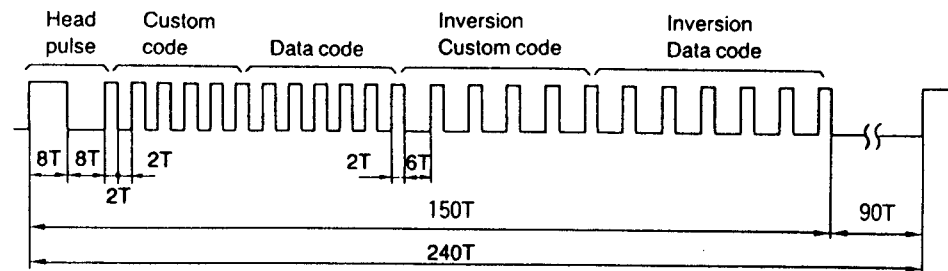
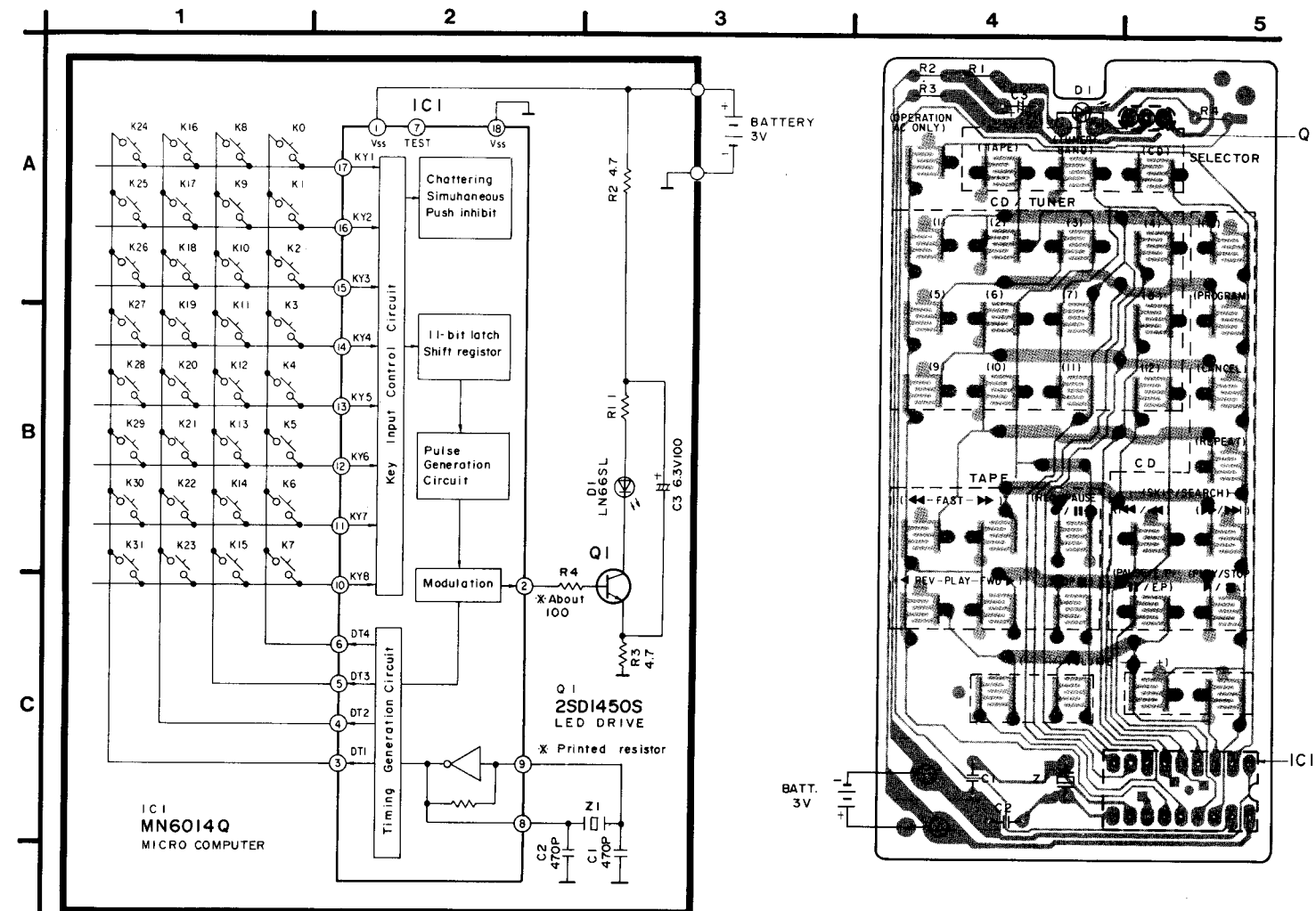
Notes : * Important safety notice:
 Components identified by Δ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
 * The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
 Parts without these indications can be used for all areas.
 * Remote Control Assy:
 Supply period for three years from termination of production.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)					
IC1	RVITA7358FT	I. C. FM FRONT END		Q102	2SD1302STA	TRANSISTOR	
IC2	TA8132F	I. C. FM/AM IF AMP		Q103	RVDTTC143TST	TRANSISTOR	
IC3	LM7001	I. C. PLL FREQUENCY		Q106	2SC3312RTA	TRANSISTOR	
IC301, 302	BA15218N	I. C. PLAY EQ REC AMP		Q107	2SK381CTA	TRANSISTOR	
IC303	BA7755	I. C. R/P SELECT		Q108	2SC3312RTA	TRANSISTOR	
IC304	BA3308M	I. C. MIC AMP		Q109-111	2SC3311ARTA	TRANSISTOR	
IC305	BA15218N	I. C. XBS AMP		Q113	2SC3311ARTA	TRANSISTOR	
IC306	TC9312-081	I. C. MECHANISM CONTROL		Q201	2SJ40CTA	TRANSISTOR	
IC307, 308	MV4066B	I. C. INPUT SELECT		Q202	2SD1302STA	TRANSISTOR	
IC309	LB1403N	I. C. COMPARATOR		Q203	RVDTTC143TST	TRANSISTOR	
IC310	AN7134-A	I. C. POWER AMP		Q206	2SC3312RTA	TRANSISTOR	
IC311	BA3920	I. C. POWER SUPPLY		Q207	2SK381CTA	TRANSISTOR	
IC312	S81250HGT	I. C. REGULATOR		Q208	2SC3312RTA	TRANSISTOR	
IC701	AN8373SE2	I. C. SERVO		Q209-211	2SC3311ARTA	TRANSISTOR	
IC702	AN8374SE2	I. C. SERVO		Q213	2SC3311ARTA	TRANSISTOR	
IC703	AN8377N	I. C. 3CH DRIVER		Q302-304	2SC3311ARTA	TRANSISTOR	
IC704	MN6617	I. C. SIGNAL PROCESS		Q305-307	2SD1302STA	TRANSISTOR	
IC705	LC3517BMLTP	I. C. S RAM		Q309	RVDTTC143TST	TRANSISTOR	
IC706	TA8410P	I. C. BTL DRIVER		Q310	2SC3311ARTA	TRANSISTOR	
IC707	SM5807ESET	I. C. DIGITAL FILTER		Q311	RVDTTA143XST	TRANSISTOR	
IC708	UPD6372GSE2	I. C. D/A CONVERTER		Q312	2SC3311ARTA	TRANSISTOR	
IC800	M50932-165FP	I. C. SYSTEM CONTROL		Q314	2SB621RTA	TRANSISTOR	
IC801	S8054HN-T	I. C. RESET SIGNAL		Q315	RVDTTC143XST	TRANSISTOR	
IC802	M50253P	I. C. LED DRIVE		Q316	2SB621RTA	TRANSISTOR	
IC803	BA6218	I. C. HALL		Q317	RVDTTC143XST	TRANSISTOR	
IC971	DN6851A	I. C. HALL		Q322	UN4111TA	TRANSISTOR	
		TRANSISTOR(S)		Q323	RVDTTC143XST	TRANSISTOR	
Q1, 2	2SC3313BTA	TRANSISTOR		Q324-326	UN4111TA	TRANSISTOR	
Q3	2SC1674LTA	TRANSISTOR		Q327, 328	RVDTTC143XST	TRANSISTOR	
Q4	2SC3311RTA	TRANSISTOR		Q329	UN4111TA	TRANSISTOR	
Q5, 6	RVDTTA143XST	TRANSISTOR		Q330	RVDTTC143XST	TRANSISTOR	
Q7-9	2SC3311RTA	TRANSISTOR		Q331	2SJ40CTA	TRANSISTOR	
Q10	2SC3311RTA	TRANSISTOR		Q332	2SB1393QVE	TRANSISTOR	
Q11, 12	2SA1309RTA	TRANSISTOR		Q333	2SC3311ARTA	TRANSISTOR	
Q13, 14	2SC3311RTA	TRANSISTOR		Q335	RVDTTA143XST	TRANSISTOR	
Q15	RVDTTA143XST	TRANSISTOR		Q338	2SC3311ARTA	TRANSISTOR	
Q16, 17	2SC3311RTA	TRANSISTOR		Q339	RVDTTC143XST	TRANSISTOR	
Q18	2SK381CTA	TRANSISTOR		Q340	RVDTTA143TST	TRANSISTOR	
Q19	RVDTTC114TST	TRANSISTOR		Q701	2SA1309STA	TRANSISTOR	
Q20	RVDTTA143XST	TRANSISTOR		Q703	UN4110TA	TRANSISTOR	
Q101	2SJ40CTA	TRANSISTOR		Q704, 705	UN4216TA	TRANSISTOR	
				Q800-802	RVDTTA143TST	TRANSISTOR	
				Q803	2SC3311RTA	TRANSISTOR	
				Q804	RVDTTC114TST	TRANSISTOR	
				Q807	RVDTTA143EST	TRANSISTOR	
				Q808	RVDTTC114EST	TRANSISTOR	

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
Q812, 813	RVDTTC114TST	TRANSISTOR		VR703-706	EVNDXAA00B14	V. R. FOCUS OFFSET etc.	
Q814	RVDTTC114EST	TRANSISTOR		VR862, 863	EWCO7A027B54	V. R. VOLUME	
Q816	RVDTTA114EST	TRANSISTOR				COMPONENT COMBINATION (S)	
Q819	2SC3311RTA	TRANSISTOR					
Q820, 821	RVDTTC114TST	TRANSISTOR		Z1	RXABPWB6AT	COMPONENT COMBINATION	
Q822	2SC3311RTA	TRANSISTOR		Z800	A1QH3029H0	REMOTE SENSOR	
Q823	RVDTTC114TST	TRANSISTOR		Z801	LD-BU9412AZ	LCD	
Q824	2SC3311RTA	TRANSISTOR				COIL (S)	
Q825	UN421FTA	TRANSISTOR					
		DIODE (S)		L3	RLQZP4R7KT-Y	COIL	
D1, 2	1SV147T4MATU	DIODE		L4	RL02B001-T	COIL	
D3	MA4051MTA	DIODE		L5	RLV6C001-0	COIL	
D4	RVDKV1235ZB	DIODE		L7	RL09B18-M	COIL	
D5	MA4130MTA	DIODE		L8, 9	RLQZP221KT-Y	COIL	
D6	MA165TA	DIODE		L12	RL01B001-T	COIL	
D8, 9	MA165TA	DIODE		L15	RLQZP221KT-Y	COIL	
D10	MA165TA	DIODE		L17	RLQZP4R7KT-Y	COIL	
D101-103	MA165TA	DIODE		L101	RLQZB822KT-D	COIL	
D201-203	MA165TA	DIODE		L201	RLQZB822KT-D	COIL	
D301	MA165TA	DIODE		L301	RL08C7-T	COIL	
D302	MA4047MTA	DIODE		L302, 303	RLQZB470KT-D	COIL	
D303	MA165TA	DIODE		L304, 305	RLQZR470KT-Y	COIL	Δ (EG)
D305-315	MA165TA	DIODE		L804	RLQZP2R2KT-Y	COIL	
D316	MA4100MTA	DIODE		L806-809	RLQZP2R2KT-Y	COIL	
D317	MA723TA	DIODE				TRANSFORMER (S)	
D318-321	RVDP300DLF	DIODE					
D322	MA165TA	DIODE		T1	RL12B001-T	TRANSFORMER	
D325	MA4068MTY	DIODE	(EB)	T300	RTP1U1E001-C	POWER TRANSFORMER	Δ
D707, 708	MA165TA	DIODE				FILTER (S)	
D801	LN250RPXTA	DIODE					
D802	MA165TA	DIODE		CF1, 2	RLFFETWLA02D	CERAMIC FILTER	
D803, 804	LN042474PH	DIODE		CF3	RLFDFTA01D	CERAMIC FILTER	
D809-812	LN061480PH	DIODE				OSCILLATOR (S)	
D813	LN042474PH	DIODE					
D814-818	MA165TA	DIODE		X1	RSX2456KM01	X TAL OSCILLATOR	
D820-823	MA165TA	DIODE		X2	RVCF7200NZN	X TAL OSCILLATOR	
D825-839	MA165TA	DIODE		X701	RSX216M9M01T	X TAL OSCILLATOR	
D840	LN061480PH	DIODE		X800	RSXD32K7F01	X TAL OSCILLATOR	
D841-843	MA165TA	DIODE		X801	RVBCSA4R0MGT	X TAL OSCILLATOR	
D845-847	MA165TA	DIODE				FUSE (S)	
D850	LN042474PH	DIODE		F1	XBA2C31TBOU	FUSE 250V T3.15 A	Δ
D851	LN061480PH	DIODE				SWITCH (ES)	
D971	RVDS133TA	DIODE					
		VARIABLE RESISTOR (S)					
VR101, 201	RRV20F01G54A	V. R. TONE					
VR102, 202	RRV20B02G54A	V. R. XBS					
VR701	EVNDXAA00B14	V. R. BEST EYE ADJ.					
VR702	EVNDXAA00B24	V. R. TRACKING BALANCE		S300	RSS3A002-H	SW. REVERSE	

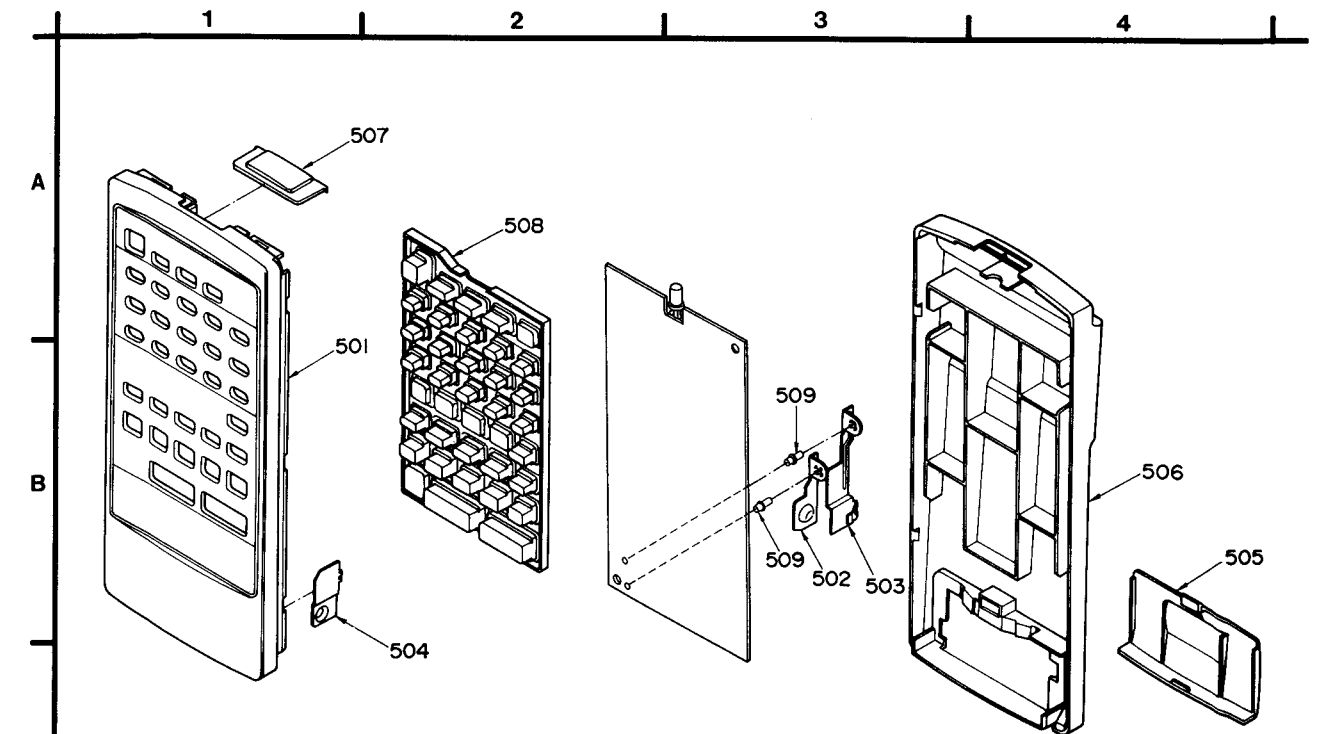
SCHEMATIC DIAGRAM AND CIRCUIT BOARD DIAGRAM

•for Remote Control



Key No.	Function	Key No.	Function	Key No.	Function	Key No.	Function
K0	POWER	K8	TAPE	K16	TUNER	K24	CD
K1	◀ PLAY (REW)	K9	VOLUME (-)	K17	PAUSE	K25	VOLUME (+)
K2	▶ PLAY (FWD)	K10	■ STOP	K18	◀◀/▶▶	K26	▶/■
K3	▶▶ FF/TIPS	K11	● REC PAUSE	K19	12	K27	▶▶/▶▶
K4	◀◀ REW/TPS	K12	10	K20	8	K28	REPEAT
K5	9	K13	6	K21	4	K29	CANCEL
K6	5	K14	3	K22	11	K30	PROGRAM
K7	1	K15	2	K23	7	K31	+10

CABINET PARTS LOCATION •for Remote Control



Ref. No.	Part No.	Part Name & Description	Remarks
		REMOTE CONTROL TRANSMITTER	
IC1	MN6014Q	I. C. CONTROL SIGNAL	
Q1	2SD1450RSTTA	TRANSISTOR	
D1	LN66SLTA	L. E. D.	
Z1	EF0A420K168A	OSCILLATOR	
R1	ERDS2TJ1R0T	C. RESISTOR 1/4W 1.0	
R2	ERDS2TJ4R7T	C. RESISTOR 1/4W 4.7	
R3	ERDS2TJ4R7T	C. RESISTOR 1/4W 4.7	
R4	ERDS2TJ101T	C. RESISTOR 1/4W 100	
C1	ECBT1H471KB5	C. CAPACITOR 50V 470P	
C2	ECBT1H471KB5	C. CAPACITOR 50V 470P	
C3	ECEA0JKS101B	E. CAPACITOR 6.3V 100U	
501	RFKGS30EG-K	UPPER CABINET ASS'Y	
502	RJC40001	BATTERY TERMINAL (+)	
503	RJC80001	BATTERY TERMINAL (-)	
504	RJC94001	BATTERY TERMINAL (+--)	
505	RKX0008	BATTERY COVER	
506	RFKHS30EG-K	LOWER CABINET ASS'Y	
507	RKWD033	SMOKE PLATE	
508	RMG0047	RUBBER SWITCH	
509	RJR0017	RIVET	

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
S301	RSS2A004-H	SW, TIMER REC					
S302	RSS3B452A-H	SW, FM MODE					
S701	SSH05-E	SW, CD RESET				I. C. PROTECTOR(S)	
S800-805	EVQ11405K	SW, OPERATION (DECK)					
S809	EVQ11405K	SW, TUNER/BAND		IP301	RAHICPN10TA	I. C. PROTECTOR	
S811-832	EVQ11405K	SW, OPERATION (CD etc.)		IP302	RAHICPN5TA	I. C. PROTECTOR	(EB)
S834-842	EVQ11405K	SW, CD/TUNER		IP303	RAHICPN5TA	I. C. PROTECTOR	(EB)
S900, 901	RSH1A672A-U	SW, CD OPEN/CLOSE					
S971	RSH1A892A-U	SW, MODE				JACK(S)	
S972-975	RSH1A902A-U	SW, HALF/TAPE etc.					
		TRIMMER CAPACITOR(S)		J301	RJJD7S22A-C	JACK, HEADPHONES	
				J302	RJJ1D252A-C	JACK, MIX MIC	
CT1	RCV10AF1T-S	TRIMMER CAPACITOR		J303	SJF3057N	JACK, CD OUT/AUX IN	
CT2	ECRLA020E53R	VARIABLE CAPACITOR		J820	RJJ1SE01-H	JACK, AC IN (S644)	△

Notes : * Capacity value are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
 * Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM) , 1M=1,000k (OHM)

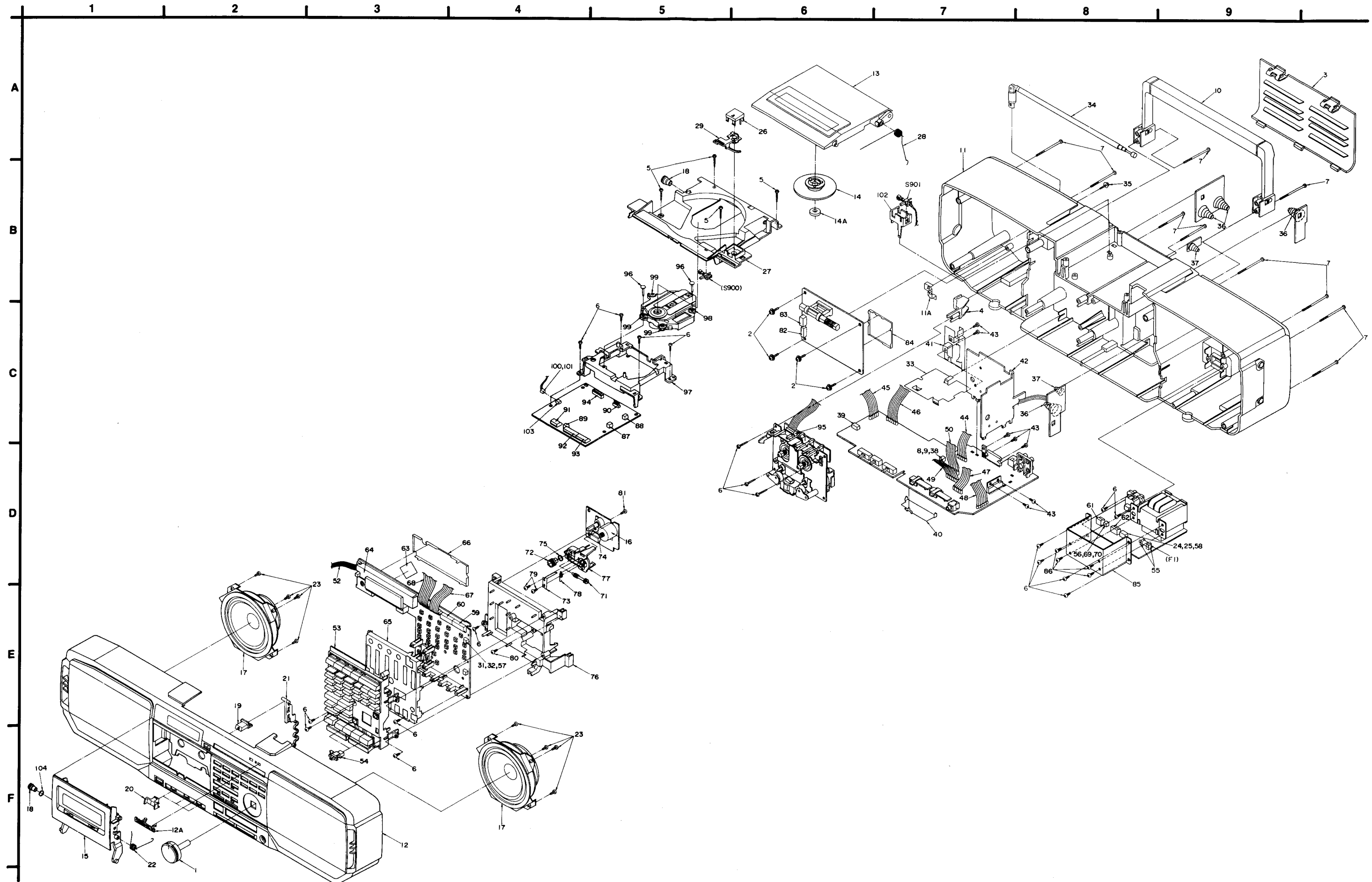
Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
		RESISTORS	R33-38	ERDS2TJ103T	1/4W 10K	R117	ERDS2TJ223T	1/4W 22K
			R39	ERDS2TJ102T	1/4W 1K	R118	ERDS2TJ333T	1/4W 33K
			R40	ERDS2TJ223T	1/4W 22K	R119	ERDS2TJ223T	1/4W 22K
R1-3	ERDS2TJ104T	1/4W 100K	R50-52	ERDS2TJ103T	1/4W 10K	R120	ERDS2TJ104T	1/4W 100K
R4	ERDS2TJ470T	1/4W 47	R55	ERDS2TJ103T	1/4W 10K	R121	ERDS2TJ334T	1/4W 330K
R5	ERDS2TJ151T	1/4W 150	R56	ERDS2TJ222T	1/4W 2.2K	R122	ERDS2TJ682T	1/4W 68K
R6	ERDS2TJ331T	1/4W 330	R57	ERDS2TJ473T	1/4W 47K	R123	ERDS2TJ562T	1/4W 56K
R7	ERDS2TJ391T	1/4W 390	R58	ERDS2TJ102T	1/4W 1K	R124	ERDS2TJ471T	1/4W 470
R8	ERDS2TJ274T	1/4W 270K	R59	ERDS2TJ332T	1/4W 3.3K	R125	ERDS2TJ103T	1/4W 10K
R9	ERDS2TJ105T	1/4W 1M	R60	ERDS2TJ104T	1/4W 100K	R126	ERDS2TJ683T	1/4W 68K
R10	ERDS2TJ561T	1/4W 560	R61	ERDS2TJ332T	1/4W 3.3K	R127	ERDS2TJ391T	1/4W 390
R11	ERDS2TJ330T	1/4W 33	R62, 63	ERDS2TJ681T	1/4W 680	R128	ERDS2TJ682T	1/4W 68K
R12	ERDS2TJ104T	1/4W 100K	R71	ERDS2TJ274T	1/4W 270K	R129	ERDS2TJ153T	1/4W 15K
R13	ERDS2TJ470T	1/4W 47	R101	ERDS2TJ334T	1/4W 330K	R130	ERDS2TJ103T	1/4W 10K
R15	ERDS2TJ391T	1/4W 390	R102	ERDS2TJ104T	1/4W 100K	R131	ERDS2TJ223T	1/4W 22K
R16	ERDS2TJ683T	1/4W 68K	R103	ERDS2TJ330T	1/4W 33	R132	ERDS2TJ473T	1/4W 47K
R17	ERDS2TJ104T	1/4W 100K	R104	ERDS2TJ332T	1/4W 3.3K	R133	ERDS2TJ123T	1/4W 12K
R18	ERDS2TJ103T	1/4W 10K	R105	ERDS2TJ562T	1/4W 5.6K	R134	ERDS2TJ473T	1/4W 47K
R20	ERDS2TJ332T	1/4W 3.3K	R106	ERDS2TJ272T	1/4W 2.7K	R135	ERDS2TJ103T	1/4W 10K
R21	ERDS2TJ562T	1/4W 5.6K	R107	ERDS2TJ103T	1/4W 10K	R136, 137	ERDS2TJ104T	1/4W 100K
R22	ERDS2TJ473T	1/4W 47K	R108	ERDS2TJ473T	1/4W 47K	R138	ERDS2TJ2R7T	1/4W 2.7
R23	ERDS2TJ102T	1/4W 1K	R109	ERDS2TJ153T	1/4W 15K	R139	ERDS2TJ151T	1/4W 150
R24, 25	ERDS2TJ103T	1/4W 10K	R110	ERDS2TJ332T	1/4W 3.3K	R140	ERDS2TJ332T	1/4W 33K
R27	ERDS2TJ151T	1/4W 150	R111	ERDS2TJ104T	1/4W 100K	R143	ERDS2TJ334T	1/4W 330K
R28, 29	ERDS2TJ471T	1/4W 470	R112	ERDS2TJ224T	1/4W 220K	R145	ERDS2TJ101T	1/4W 100
R30	ERDS2TJ104T	1/4W 100K	R114	ERDS2TJ101T	1/4W 100	R198	ERDS2TJ222T	1/4W 22K
R31	ERDS2TJ222T	1/4W 2.2K	R115	ERDS2TJ102T	1/4W 1K	R199	ERDS2TJ223T	1/4W 22K
R32	ERDS2TJ473T	1/4W 47K	R116	ERDS2TJ104T	1/4W 100K	R201	ERDS2TJ334T	1/4W 330K

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R202	ERDS2TJ104T	1/4W 100K	R313, 314	ERDS2TJ102T	1/4W 1K	R387	ERDS2TJ104T	1/4W 100K
R203	ERDS2TJ330T	1/4W 33	R316	ERDS2TJ103T	1/4W 10K	R388	ERDS2TJ103T	1/4W 10K
R204	ERDS2TJ332T	1/4W 3.3K	R317	ERDS2TJ472T	1/4W 4.7K	R389	ERDS2TJ471T	1/4W 470
R205	ERDS2TJ562T	1/4W 5.6K	R319	ERDS2TJ103T	1/4W 10K	R390	ERDS2TJ102T	1/4W 1K
R206	ERDS2TJ272T	1/4W 2.7K	R320	ERDS2TJ123T	1/4W 12K	R396	ERDS2TJ102T	1/4W 1K
R207	ERDS2TJ103T	1/4W 10K	R321	ERDS2TJ4R7T	1/4W 4.7	R398	ERDS2TJ682T	1/4W 6.8K
R208	ERDS2TJ473T	1/4W 47K	R322, 323	ERDS2TJ472T	1/4W 4.7K	R701	ERDS2TJ472T	1/4W 4.7K
R209	ERDS2TJ153T	1/4W 15K	R324	ERDS2TJ332T	1/4W 3.3K	R702	ERDS2TJ103T	1/4W 10K
R210	ERDS2TJ332T	1/4W 3.3K	R325	ERD25VJ101T	1/4W 100	R705	ERDS2TJ103T	1/4W 10K
R211	ERDS2TJ104T	1/4W 100K	R326, 327	ERDS2TJ103T	1/4W 10K	R706	ERDS2TJ823T	1/4W 82K
R212	ERDS2TJ224T	1/4W 220K	R328	ERD25VJ101T	1/4W 100	R707	ERDS2TJ123T	1/4W 12K
R214	ERDS2TJ101T	1/4W 100	R329	ERDS2TJ102T	1/4W 1K	R708	ERDS2TJ683T	1/4W 68K
R215	ERDS2TJ102T	1/4W 1K	R330, 331	ERDS2TJ104T	1/4W 100K	R710	ERDS2TJ333T	1/4W 33K
R216	ERDS2TJ104T	1/4W 100K	R332	ERDS2TJ472T	1/4W 4.7K	R711	ERDS2TJ105T	1/4W 1M
R217	ERDS2TJ223T	1/4W 22K	R333	ERDS2TJ334T	1/4W 330K	R712, 713	ERDS2TJ102T	1/4W 1K
R218	ERDS2TJ333T	1/4W 33K	R334	ERDS2TJ102T	1/4W 1K	R715	ERDS2TJ222T	1/4W 2.2K
R219	ERDS2TJ223T	1/4W 22K	R335	ERDS2TJ472T	1/4W 4.7K	R716	ERDS2TJ102T	1/4W 1K
R220	ERDS2TJ104T	1/4W 100K	R336	ERDS2TJ102T	1/4W 1K	R717	ERDS2TJ104T	1/4W 100K
R221	ERDS2TJ334T	1/4W 330K	R337	ERDS2TJ2R7T	1/4W 2.7	R720	ERDS2TJ120T	1/4W 12
R222	ERDS2TJ682T	1/4W 6.8K	R339	ERDS2TJ472T	1/4W 4.7K	R721	ERDS2TJ471T	1/4W 470
R223	ERDS2TJ562T	1/4W 5.6K	R340	ERDS2TJ102T	1/4W 1K	R722	ERDS2TJ222T	1/4W 2.2K
R224	ERDS2TJ471T	1/4W 470	R341	ERDS2TJ2R7T	1/4W 2.7	R723	ERDS2TJ682T	1/4W 6.8K
R225	ERDS2TJ103T	1/4W 10K	R342	ERDS2TJ333T	1/4W 33K	R725	ERDS2TJ103T	1/4W 10K
R226	ERDS2TJ683T	1/4W 68K	R343-345	ERDS2TJ472T	1/4W 4.7K	R726	ERDS2TJ562T	1/4W 5.6K
R227	ERDS2TJ391T	1/4W 390	R348	ERDS2TJ103T	1/4W 10K	R727	ERDS2TJ332T	1/4W 3.3K
R228	ERDS2TJ682T	1/4W 6.8K	R349, 350	ERDS2TJ472T	1/4W 4.7K	R728	ERDS2TJ682T	1/4W 6.8K
R229	ERDS2TJ153T	1/4W 15K	R351-353	ERDS2TJ103T	1/4W 10K	R732	ERDS2TJ562T	1/4W 5.6K
R230	ERDS2TJ103T	1/4W 10K	R354	ERDS2TJ332T	1/4W 3.3K	R733	ERDS2TJ473T	1/4W 47K
R231	ERDS2TJ223T	1/4W 22K	R355	ERDS2TJ223T	1/4W 22K	R735	ERDS2TJ332T	1/4W 3.3K
R232	ERDS2TJ473T	1/4W 47K	R356	ERDS2TJ333T	1/4W 33K	R736	ERDS2TJ472T	1/4W 4.7K
R233	ERDS2TJ123T	1/4W 12K	R357	ERDS2TJ103T	1/4W 10K	R737	ERDS2TJ102T	1/4W 1K
R234	ERDS2TJ473T	1/4W 47K	R358	ERDS2TJ102T	1/4W 1K	R738	ERDS2TJ104T	1/4W 100K
R235	ERDS2TJ103T	1/4W 10K	R359, 360	ERDS2TJ103T	1/4W 10K	R740	ERDS2TJ471T	1/4W 470
R236, 237	ERDS2TJ104T	1/4W 100K	R361	ERDS2TJ472T	1/4W 4.7K	R741	ERDS2TJ102T	1/4W 1K
R238	ERDS2TJ2R7T	1/4W 2.7	R362, 363	ERDS2TJ391T	1/4W 390	R742	ERDS2TJ104T	1/4W 100K
R239	ERDS2TJ151T	1/4W 150	R364	ERDS2TJ103T	1/4W 10K	R743	ERDS2TJ471T	1/4W 470
R240	ERDS2TJ332T	1/4W 3.3K	R365	ERDS2TJ153T	1/4W 15K	R745	ERDS2TJ470T	1/4W 47
R243	ERDS2TJ334T	1/4W 330K	R366	ERDS2TJ223T	1/4W 22K	R746	ERDS2TJ223T	1/4W 22K
R245	ERDS2TJ101T	1/4W 100	R367	ERDS2TJ103T	1/4W 10K	R747	ERDS2TJ561T	1/4W 560
R298	ERDS2TJ222T	1/4W 2.2K	R368	ERDS2TJ473T	1/4W 47K	R748	ERDS2TJ222T	1/4W 2.2K
R299	ERDS2TJ223T	1/4W 22K	R369	ERDS2TJ682T	1/4W 6.8K	R749	ERDS2TJ224T	1/4W 220K
R301	ERDS2TJ472T	1/4W 4.7K	R370	ERDS2TJ272T	1/4W 2.7K	R750-752	ERDS2TJ103T	1/4W 10K
R302	ERDS2TJ272T	1/4W 2.7K	R373	ERD25VJ101T	1/4W 100	R755	ERDS2TJ223T	1/4W 22K
R303	ERDS2TJ101T	1/4W 100	R374	ERDS2TJ102T	1/4W 1K	R800-805	ERDS2TJ103T	1/4W 10K
R304	ERDS2TJ223T	1/4W 22K	R375	ERDS2TJ106T	1/4W 10M	R806	ERDS2TJ331T	1/4W 330
R305	ERDS2TJ101T	1/4W 100	R376	ERDS2TJ682T	1/4W 6.8K	R807	ERDS2TJ223T	1/4W 22K
R306	ERDS2TJ225T	1/4W 2.2M	R377	ERDS2TJ1R0T	1/4W 1.0	R808	ERDS2TJ103T	1/4W 10K
R307	ERDS2TJ473T	1/4W 47K	R378	ERDS2TJ1R5T	1/4W 1.5	R809-811	ERDS2TJ104T	1/4W 100K
R308	ERD25VJ101T	1/4W 100	R380-382	ERDS2TJ102T	1/4W 1K	R812-816	ERDS2TJ103T	1/4W 10K
R309	ERDS2TJ682T	1/4W 6.8K	R383	ERDS2TJ473T	1/4W 47K	R817	ERDS2TJ124T	1/4W 120K
R310	ERDS2TJ332T	1/4W 3.3K	R384, 385	ERDS2TJ223T	1/4W 22K	R818	ERDS2TJ106T	1/4W 10M
R311	ERDS2TJ102T	1/4W 1K	R386	ERDS2TJ682T	1/4W 6.8K	R819	ERDS2TJ334T	1/4W 330K

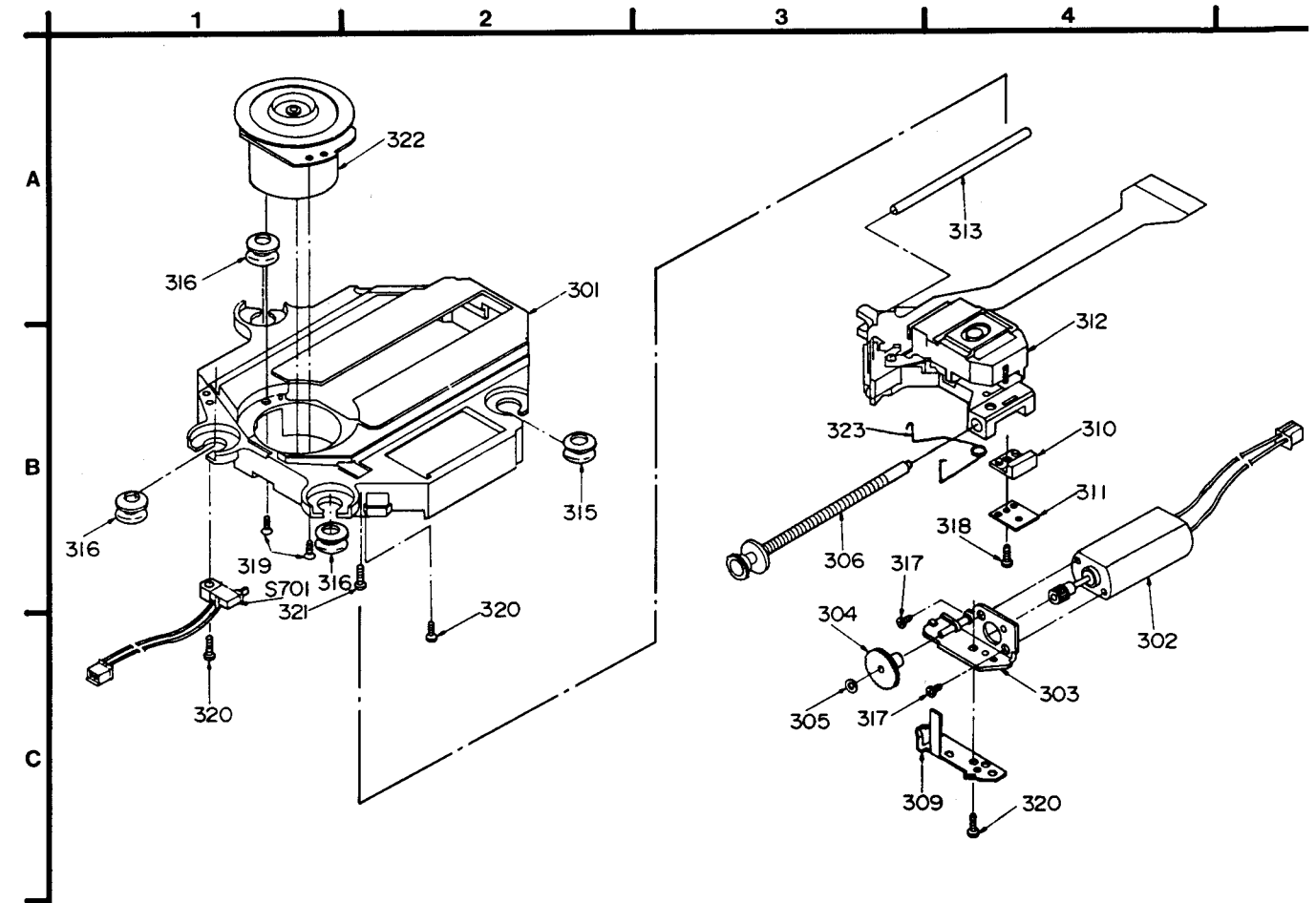
Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R820	ERDS2TJ105T	1/4W 1M	C20	ECFT1C473MDY	16V 0.047U	C112	ECEA1CK100B	16V 10U
R821	ERDS2TJ101T	1/4W 100	C23	ECEA1H010SB	50V 1U	C113	ECBT1C103MS5	16V 0.01U
R822, 823	ERDS2TJ472T	1/4W 4.7K	C24	ECBT1C103MS5	16V 0.01U	C115, 116	ECEA1H010B	50V 1U
R824, 825	ERDS2TJ104T	1/4W 100K	C25	ECFT1C223MDY	16V 0.022U	C117	ECBT1H101KB5	50V 100P
R826	ERDS2TJ103T	1/4W 10K	C26	ECEA1CU101B	16V 100U	C118, 119	ECEA1HK2R2B	50V 2.2U
R827	ERDS2TJ474T	1/4W 470K	C27	ECBT1C103MS5	16V 0.01U	C120	ECBT1C103MS5	16V 0.01U
R828, 829	ERDS2TJ102T	1/4W 1K	C29	ECEA1H010B	50V 1U	C121	ECEA1HKR22B	50V 0.22U
R830	ERDS2TJ104T	1/4W 100K	C30	ECBT1H270J5	50V 27P	C122	ECEA1CK100B	16V 10U
R831-836	ERDS2TJ474T	1/4W 470K	C31	ECEA1AU470B	10V 47U	C123, 124	ECEA1AU101B	10V 100U
R837-839	ERDS2TJ103T	1/4W 10K	C32	ECFT1C223MDY	16V 0.022U	C125	ECEA1HKR33B	50V 0.33U
R840	ERDS2TJ472T	1/4W 4.7K	C33, 34	ECEA1CU100B	16V 10U	C126	ECBT1H471KB5	50V 470P
R841	ERDS2TJ471T	1/4W 470	C35	ECFT1C223MDY	16V 0.022U	C127	ECEA1AU222E	10V 2200U
R842, 843	ERDS2TJ472T	1/4W 4.7K	C36	ECBT1H331KB5	50V 330P	C128	ECQV1H224JZ3	50V 0.22U
R844	ERDS2TJ471T	1/4W 470	C37	ECFT1C683MDY	16V 0.068U	C129	ECEA1H010B	50V 1U
R845	ERDS2TJ103T	1/4W 10K	C38, 39	ECFT1C823MDY	16V 0.082U	C130	ECBT1H101KB5	50V 100P
R846	ERDS2TJ474T	1/4W 470K	C40, 41	ECFT1C123MDY	16V 0.012U	C150	ECEA0JU332E	6.3V 3300U
R847	ERDS2TJ473T	1/4W 47K	C44	ECBT1H330J5	50V 33P	C151	ECBT1H101KB5	50V 100P
R848	ERDS2TJ393T	1/4W 39K	C45	ECFT1C223MDY	16V 0.022U	C201	ECEA50M1RB	50V 1U
R849	ERDS2TJ474T	1/4W 470K	C46	ECEA0JU101B	6.3V 100U	C202	ECBT1H101KB5	50V 100P
R850	ERDS2TJ822T	1/4W 8.2K	C47	ECFT1C473MDY	16V 0.047U	C203	ECBT1H471KB5	50V 470P
R851-853	ERDS2TJ471T	1/4W 470	C48	ECEA1CU100B	16V 10U	C204	ECEA0JK101B	6.3V 100U
R854	ERDS2TJ151T	1/4W 150	C49	ECBT1H270J5	50V 27P	C205	ECFT1C333KDY	16V 0.033U
R855	ERDS2TJ474T	1/4W 470K	C50	ECBT1H300J5	50V 30P	C206	ECEA1H010B	50V 1U
R857	ERDS2TJ222T	1/4W 2.2K	C51	ECBT1H102KB5	50V 1000P	C207	ECBT1C152MR5	16V 1500P
R858	ERDS2TJ103T	1/4W 10K	C52	ECEA1EU3R3B	25V 3.3U	C208	ECEA1H010B	50V 1U
R859	ERDS2TJ223T	1/4W 22K	C53	ECEA1H010B	50V 1U	C209	ECFT1C104MDY	16V 0.1U
R860	ERDS2TJ103T	1/4W 10K	C60	ECEA1H010SB	50V 1U	C210	ECFT1C153KDY	16V 0.015U
R861	ERDS2TJ223T	1/4W 22K	C61	ECFT1C223MDY	16V 0.022U	C211	ECBT1H101KB5	50V 100P
R887, 888	ERDS2TJ102T	1/4W 1K	C62	ECFT1C103MDY	16V 0.01U	C212	ECEA1CK100B	16V 10U
R889	ERDS2TJ472T	1/4W 4.7K	C63	ECBT1H150JC5	50V 15P	C213	ECBT1C103MS5	16V 0.01U
R891	ERDS2TJ103T	1/4W 10K	C64, 65	ECFT1C223MDY	16V 0.022U	C215, 216	ECEA1H010B	50V 1U
R892	ERDS2TJ683T	1/4W 68K	C66	ECBT1H102KB5	50V 1000P	C217	ECBT1H101KB5	50V 100P
R895	ERDS2TJ102T	1/4W 1K	C67	ECBT1H471KB5	50V 470P	C218, 219	ECEA1HK2R2B	50V 2.2U
R897-899	ERDS2TJ103T	1/4W 10K	C69	ECBT1C332MR5	16V 3300P	C220	ECBT1C103MS5	16V 0.01U
R900	ERDS2TJ471T	1/4W 470	C70	ECFT1C103MDY	16V 0.01U	C221	ECEA1HKR22B	50V 0.22U
R901	ERDS2TJ393T	1/4W 39K	C71	ECBT1H102KB5	50V 1000P	C222	ECEA1CK100B	16V 10U
			C72	ECBT1H331KB5	50V 330P	C223, 224	ECEA1AU101B	10V 100U
		CAPACITORS	C73	ECFT1C223MDY	16V 0.022U	C225	ECEA1HKR33B	50V 0.33U
			C74	ECBT1H470J5	50V 47P	C226	ECBT1H471KB5	50V 470P
C1	ECBT1H180JC5	50V 18P	C78	ECBT1H331KB5	50V 330P	C227	ECEA1AU222E	10V 2200U
C2	ECBT1H102KB5	50V 1000P	C82	ECBT1C103MS5	16V 0.01U	C228	ECQV1H224JZ3	50V 0.22U
C3	ECBT1H330J5	50V 33P	C101	ECEA50M1RB	50V 1U	C229	ECEA1H010B	50V 1U
C4	ECBT1H102KB5	50V 1000P	C102	ECBT1H101KB5	50V 100P	C230	ECBT1H101KB5	50V 100P
C5	ECBT1C103MS5	16V 0.01U	C103	ECBT1H471KB5	50V 470P	C250	ECEA0JU332E	6.3V 3300U
C6, 7	ECBT1H181KB5	50V 180P	C104	ECEA0JK101B	6.3V 100U	C251	ECBT1H101KB5	50V 100P
C8	ECBT1H102KB5	50V 1000P	C105	ECFT1C333KDY	16V 0.033U	C301	ECBT1H101KB5	50V 100P
C9	ECBT1H47K05	50V 4.7P	C106	ECEA1H010B	50V 1U	C302	ECEA1AU101B	10V 100U
C10	ECBT1H2R2K05	50V 2.2P	C107	ECBT1C152MR5	16V 1500P	C303, 304	ECEA1CK100B	16V 10U
C11, 12	ECBT1H102KB5	50V 1000P	C108	ECEA1H010B	50V 1U	C305	ECEA1AU101B	10V 100U
C14, 15	ECBT1H102KB5	50V 1000P	C109	ECFT1C104MDY	16V 0.1U	C306	ECEA1AK330B	10V 33U
C18	ECBT1H150JC5	50V 15P	C110	ECFT1C153KDY	16V 0.015U	C307	ECEA1CK100B	16V 10U
C19	ECBT1H100JC5	50V 10P	C111	ECBT1H101KB5	50V 100P	C308	ECQV1H474JZ3	50V 0.47U

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C310	ECQP2A392JZT	100V 3900P	C711	ECBT1H470J5	50V 47P	C855	ECBT1C152MR5	16V 1500P
C311	ECQP2A103JZT	100V 0.01U	C712	ECEA1H010B	50V 1U	C856	ECFT1C473MDY	16V 0.047U
C312	ECQP2A153JZT	100V 0.015U	C713	ECEA1H010SB	50V 1U	C857	ECEA1AU221B	10V 220U
C313	ECBT1C103MS5	16V 0.01U	C715	ECFT1C333KDY	16V 0.033U			
C316	ECEA1H010B	50V 1U	C716	ECEA1H010SB	50V 1U			
C317	ECEA1AU101B	10V 100U	C717	ECFT1C333KDY	16V 0.033U			
C318	ECQV1H473JZ3	50V 0.047U	C718	ECBT1H102KB5	50V 1000P			
C319, 320	ECBT1C332MR5	16V 3300P	C720	ECEA1HNR47SB	50V 0.47U			
C323	ECEA1AU221B	10V 220U	C721	ECFT1C683MDY	16V 0.068U			
C326	ECEA1AK330B	10V 33U	C722	ECEA1HNR47SB	50V 0.47U			
C327	ECEA0JK101B	6.3V 100U	C723	ECEA1AN220SB	10V 22U			
C328	ECEA1AK330B	10V 33U	C725	ECFT1C104MDY	16V 0.1U			
C329	ECBT1C103MS5	16V 0.01U	C726	ECQV1H334JZ3	50V 0.33U			
C331	ECEA1H010B	50V 1U	C727	ECQV1H474JZ3	50V 0.47U			
C332	ECEA1CK100B	16V 10U	C728	ECEA1CU220B	16V 22U			
C334	ECEA1AU101B	10V 100U	C730	ECEA1CU220B	16V 22U			
C335	ECEA1AU221B	10V 220U	C733	ECBT1H390J5	50V 39P			
C336	ECEA1EU221B	25V 220U	C735	ECBT1H390J5	50V 39P			
C337	ECQP2A822JZT	100V 8200P	C736	ECFT1C104MDY	16V 0.1U			
C338	ECFT1C104MDY	16V 0.1U	C737	ECEA0JU471B	6.3V 470U			
C340, 341	ECEA1CK100B	16V 10U	C738	ECEA1CU100B	16V 10U			
C342	ECEA1AK330B	10V 33U	C741	ECBT1C103MS5	16V 0.01U			
C343	ECEA1HK2R2B	50V 2.2U	C742	ECEA0JU101B	6.3V 100U			
C344	ECEA1AU101B	10V 100U	C743	ECBT1H104ZF5	50V 0.1U			
C345	ECEA1EU221B	25V 220U	C747	ECBT1C332MR5	16V 3300P			
C346	ECEA1AU471B	10V 470U	C748	ECFT1C333KDY	16V 0.033U			
C348	ECEA1EU472	25V 4700U	C750	ECEA0JU101B	6.3V 100U			
C349	ECFT1C104MDY	16V 0.1U	C751	ECFT1C333KDY	16V 0.033U			
C350	ECBT1C103MS5	16V 0.01U	C752	ECEA1HUR33B	50V 0.33U			
C352-355	ECCKT1H103ZF	50V 0.01U	C753	ECEA1HPS010B	50V 1U			
C357	ECEA1AU101B	10V 100U	C755	ECEA1HPS010B	50V 1U			
C358	ECEA1CK100B	16V 10U	C756	ECBT1C332MR5	16V 3300P			
C362	ECBT1C472MR5	16V 4700P	C757	ECEA1CU100B	16V 10U			
C365	ECBT1C103MS5	16V 0.01U	C758	ECBT1H104ZF5	50V 0.1U			
C366	ECEA1CK100B	16V 10U	C760	ECFT1C104MDY	16V 0.1U			
C367	ECBT1H471KB5	50V 470P	C761	ECEA0JU471B	6.3V 470U			
C368	ECBT1C103MS5	16V 0.01U	C762, 763	ECBT1H471KB5	50V 470P			
C369	ECEA1AU101B	10V 100U	C800-803	ECBT1H331KB5	50V 330P			
C374	ECEA1CK100B	16V 10U	C804, 805	ECBT1C103MS5	16V 0.01U			
C376, 377	ECEA1AU221B	10V 220U	C806	ECEA0JK101B	6.3V 100U			
C378	ECBT1H471KB5	50V 470P	C807, 808	ECBT1H102KB5	50V 1000P			
C379	ECEA1CK100B	16V 10U	C809	ECEA0JK101B	6.3V 100U			
C380, 381	ECBT1C103MS5	16V 0.01U	C810, 811	ECBT1H220JC5	50V 22P			
C382	ECEA1AU101B	10V 100U	C813	ECEA1CK100B	16V 10U			
C701	ECEA0JU471B	6.3V 470U	C814, 815	ECBT1H331KB5	50V 330P			
C702	ECEA1AU221B	10V 220U	C816	ECEA0JK101B	6.3V 100U			
C703, 704	ECFT1C104MDY	16V 0.1U	C817	ECBT1H101KB5	50V 100P			
C705	ECEA1CN100SB	16V 10U	C818	ECBT1H151KB5	50V 150P			
C706	ECFT1C104MDY	16V 0.1U	C820	ECBT1C103MS5	16V 0.01U			
C707	ECEA0JU101B	6.3V 100U	C821, 822	ECFT1C333KDY	16V 0.033U			
C708	ECBT1H681KB5	50V 680P	C853	ECBT1C152MR5	16V 1500P			
C710	ECEA1H010B	50V 1U	C854	ECFT1C473MDY	16V 0.047U			

CABINET PARTS LOCATION



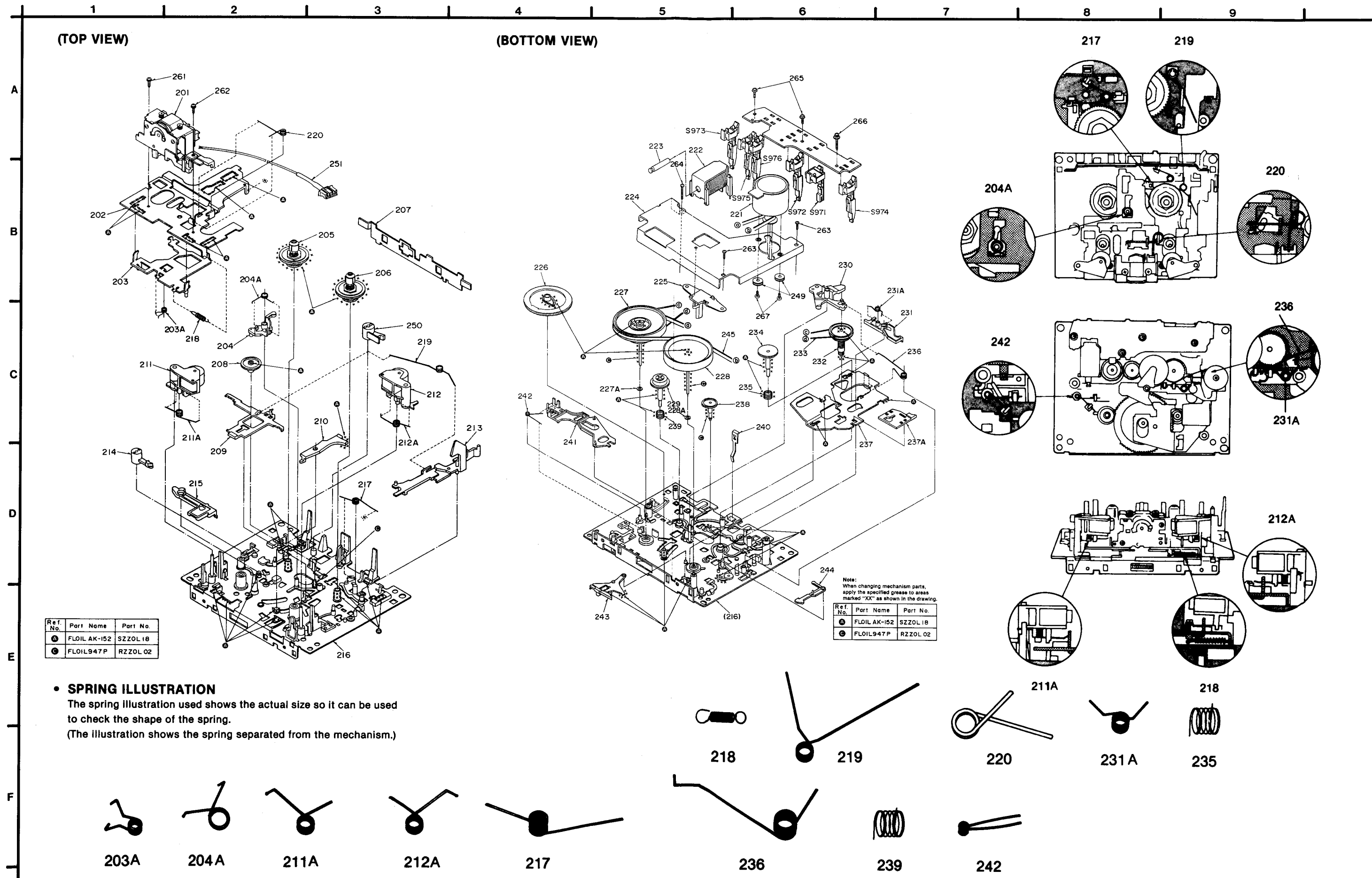
CD UNIT PARTS LOCATION



Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET PARTS					
1	RGW0023-K	KNOB, VOLUME		47	RWJ1109120QQ	FLAT CABLE	
2	RHD30006	SCREW		48	RWJ1107160QQ	FLAT CABLE	
3	RKM0003-K1	BATTERY COVER ASS'Y		49	RWJ0712220QQ	FLAT CABLE	
4	RMR0097	BOSS		50	RWJ1112220QQ	FLAT CABLE	
5	XTN3+12GFZ	SCREW		52	REX0032Y	LEAD WIRE ASS'Y	
6	XTV3+12G	SCREW		53	RGU0076A-K	BUTTON, OPERATION	
7	XTV3+60G	SCREW		54	RGV0012-K	KNOB, XBS/TONE	
8	RJS2L4ZA-X	SOCKET		55	RJF282A	FUSE HOLDER	△
9	RJT807ZA-X	CONTACT		56	RJP2G182A	CONNECTOR	
10	RKH0003	HANDLE ASS'Y		57	RJP2G9YA	CONNECTOR	
11	RKS0062	REAR CABINET ASS'Y	(EG)	58	RJP4G4YA	CONNECTOR	
11	RKS0063	REAR CABINET ASS'Y	(EB)	59	RJS12T7ZA	SOCKET	
11A	RJR0010	TERMINAL		60	RJS12T7ZA	SOCKET	
12	RKM0096	FRONT CABINET ASS'Y		61	RJS3T5ZA	SOCKET	
12A	RGB301YA-0	BADGE		62	RJS7T4ZA	SOCKET	
13	RKF0105	CD COVER ASS'Y		63	RMC1239ZA	SHIELD PLATE	
14	RYF0016	DISC HOLDER		64	RMN0013-1	HOLDER, LCD	
14A	RHM245ZA	MAGNET		65	RSC0028-1	SHIELD PLATE	
15	RKF0052	CASSETTE LID ASS'Y		66	RSC0030-1	SHIELD PLATE	
16	REM0006	VOLUME MOTOR ASS'Y		67	RWJ1110120QQ	FLAT CABLE	
17	EAS12P450A	SPEAKER		68	RWJ1112120QQ	FLAT CABLE	
18	RDG57822B	GEAR		69	RJS2L4ZA-X	SOCKET	
19	RGU0075-K	BUTTON, EJECT		70	RJT807ZA-X	CONTACT	
20	RGV0019-K	KNOB, REV MODE		71	RDG59532C	GEAR	
21	RML0045	LEVER, EJECT		72	RDG59542A	GEAR	
22	RJW1702B	SPRING		73	RJR0019	TERMINAL	
23	XTV3+10G	SCREW		74	RJS9T7ZA	SOCKET	
24	RJS4L3ZA-X	SOCKET		75	RMB0017-1	SPRING	
25	RJT707ZA-X	CONTACT		76	RMK0030	CHASSIS	
26	RGU0074-K1	BUTTON, CD EJECT		77	RJA8672B	CHASSIS	
27	RKQ0006-K	UPPER CABINET		78	RUD129YA	SPRING	
28	RMD0025-1	SPRING		79	XQN17+C33	SCREW	
29	RML0046	LEVER, CD EJECT		80	XTN26+6G	SCREW	
31	RJS2L3ZA-X	SOCKET		81	XTV3+12G	SCREW	
32	RJT707ZA-X	CONTACT		82	RJP8G182A	CONNECTOR	
33	RSC0029-1	SHIELD PLATE		83	RJS7T4ZA	SOCKET	
34	XEARR225DA-Y	TELESCOPIC ANTENNA		84	RMC1236ZA	SHIELD PLATE	
35	XYN3+F12FY	SCREW		85	RMA0069-1	COVER	
36	RJC5112B	BATTERY SPRING		86	XTV3+6F	SCREW	
37	RJC751ZA	BATTERY SPRING		87	RJP2G182A	CONNECTOR	
38	RJP2G182A	CONNECTOR		88	RJP2G182A	CONNECTOR	
39	RJP5G182A	CONNECTOR		89	RJP2G182A	CONNECTOR	
40	RSC0043-1	SHIELD PLATE		90	RJP5G35ZA	CONNECTOR	
41	RMA0125	HEAT SINK		91	RJS6T7ZA	SOCKET	
42	RMV0007-1	HEAT SINK		92	RJS12T7ZA	SOCKET	
43	XTV3+10F	SCREW		93	RJS10T7ZA	SOCKET	
44	RWJ1106240QQ	FLAT CABLE		94	RJS16Q11ZA	SOCKET	
45	RWJ1107290QQ	FLAT CABLE		95	RJS9T7ZA	SOCKET	
46	RWJ1109210QQ	FLAT CABLE		96	RHM281YA	PIN	
				97	RJA8492C	CHASSIS	
				98	SHGD112	RUBBER	
				99	SHGD113-1	RUBBER	

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
100	RJS2L4ZA-X	SOCKET				TRAVERSE UNIT	
101	RJT807ZA-X	CONTACT					
102	RMR0131	HOLDER					
103	RJP2G17ZA	CONNECTOR		301	SISD25-2	TRAVERSE BASE	
104	RMR0037	WASHER		302	SDGD67-E	MOTOR ASS'Y	
				303	SIWD110-E	MOTOR BASE ASS'Y	
				304	SDGD62	GEAR	
				305	SHWD35-1	STOPPER RING	
				306	SUXD126-E	SHAFT	
				309	SJWD120-3	SPRING	
P1	RPK0071	GIFT BOX		310	SIRD110-2	PLATE	
P2	RPN0166	PAD		311	SJWD121-1	SPRING PLATE	
				312	SOAD101A	OPTICAL PICK UP	△
				313	SUXD27-1	SHAFT	
				315	SHGD112	RUBBER	
A1	RJA20ZD-K	POWER CORD	△ (EG)	316	SHGD113-1	RUBBER	
A1	RJA86ZB-K	POWER CORD	△ (EB)	317	XQN2+A2	SCREW	
A2	RQT0186-E	INSTRUCTIONS MANUAL		318	XQN17+C3FZ	SCREW	
A3	RAK-RX3001E	REMOTE CONTROL TRANSMITTER		319	XQS2+A4FZT	SCREW	
				320	SNSD38	SCREW	
				321	XTS2+8J	SCREW	
				322	SJGD13-A	MOTOR	
				323	RJW183ZA	SPRING	

MECHANISM PARTS LOCATION



Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		CASSETTE DECK		242	RJW1472A	TORSION SPRING	
				243	RUB5152A	LEVER	
				244	RUB5092A	LEVER	
201	RXQ0007	HEAD BLOCK ASS'Y (R/P)		245	RDV1002A	BELT	
202	RJA7932D	CHASSIS		249	RHG3032ZA	RUBBER	
203	RZLAR300A	LEVER ASS'Y		250	RNL1802B	LEVER	
203A	RJW1432A	SPRING		251	REX0062	WIRE ASS'Y	
204	IUB00892A	ARM		261	XTW2+6L	SCREW	
204A	RJW1482A	SPRING		262	XTW2+8L	SCREW	
205	1DM00182A	REEL TABLE, REV		263	XTN26+7J	SCREW	
206	1DM00172A	REEL TABLE, FWD		264	RHE52032A	SCREW	
207	RUB5022C	LEVER		265	XTW2+8S	SCREW	
208	RDG57722B	GEAR		266	XYC2+JF16	SCREW	
209	RUB5082A	LEVER		267	QH1303	SCREW	
210	RUB5062B	LEVER					
211	IUB00882A	PINCH ROLLER, REV					
211A	RJW1412	SPRING					
212	IUB00872A	PINCH ROLLER, FWD					
212A	RJW1402B	SPRING					
213	RUB5072C	LEVER					
214	RNL12D	ARM					
215	RUB5032C	LEVER					
216	RZUAR300A	CHASSIS ASS'Y					
217	RJW1422A	SPRING					
218	RJD105Z	SPRING					
219	RJW1442A	SPRING					
220	RJW1392A	SPRING					
221	RFM1732A	MOTOR					
222	IUE00152A	SOLENOID ASS'Y					
223	RUB4282E	SHAFT					
224	RUL10302C	ANGLE					
225	RMD50142B	BRACKET					
226	RDG59272G	GEAR					
227	1DW00372B	WHEEL					
227A	RNW1392A	WASHER					
228	1DW00382B	WHEEL					
228A	RNW138Z	WASHER					
229	1DG00062A	GEAR ASS'Y					
230	RUB5132C	LEVER					
231	IUB00912A	LEVER					
231A	RJW1462A	TORSION SPRING					
232	1DR00112A	PULLEY ASS'Y					
233	RDV902B	BELT					
234	RDG57692A	GEAR					
235	RJQ1112A	SPRING					
236	RJW1452A	TORSION SPRING					
237	IUB00902A	ROD					
237A	RUB5122B	LEVER					
238	RDG57732A	GEAR					
239	RJQ1122A	SPRING					
240	RJS6092C	SPRING					
241	RUB5142B	LEVER					

HANDLING PRECAUTIONS FOR OPTICAL PICKUP

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

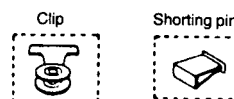
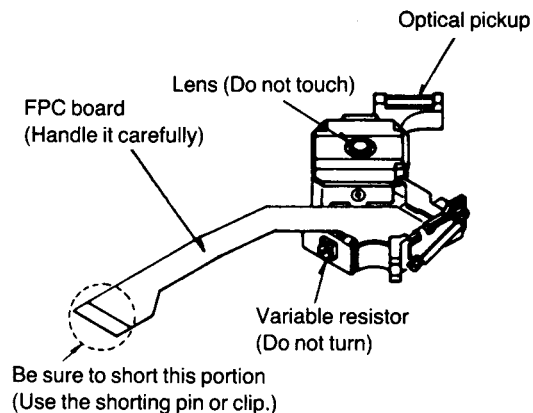
So, be careful of electrostatic breakdown during repair of the optical pickup.

• Handling of optical pickup

1. Do not give excessive shock to the optical pickup because it is of extremely precise structure.
2. To prevent the breakdown of the laser diode, an anti-static shorting pin is inserted into the flexible board. (FPC board)

When removing or connecting the short pin, finish the job in as short time as possible.

3. Take care not to apply excessive stress to the flexible board. (FPC board)
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.



• Grounding for electrostatic breakdown prevention

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

Caution:

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

