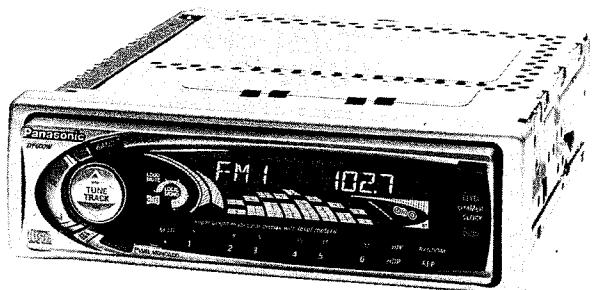


# Service Manual

## AUTOMOTIVE CONSUMER ELECTRONICS

**COMPACT**  
**DISC**  
DIGITAL AUDIO



&lt;CQ-DF600W&gt;

### CQ-DF600W CQ-DF200W

High-Power CD Player / Receiver with Changer Control

#### Specification\*

##### General

|                            |  |   |
|----------------------------|--|---|
| Power Supply               | DC 12V (11V - 16V),<br>Test Voltage 14.4V        | FM Stereo Radio                             |
| Tone Adjustment Range      | Negative Ground                                  | Frequency Range<br>Usable Sensitivity       |
|                            | Bass ; ±12dB at 100Hz<br>Treble ; ±12dB at 10kHz | 87.5 - 108.0MHz<br>6dB/ $\mu$ V (S/N 30dB)  |
| Current Consumption        | Less than 2.2A (CD play mode,<br>0.5Wx4)         | Stereo Separation<br>CD Player              |
| Maximum Power Output       |  | Sampling Frequency<br>Pick-Up Type          |
| <CQ-DF600W>                | 45W×4ch, at 400Hz, Vol. MAX                      | Light Source<br>Wavelength                  |
| <CQ-DF200W>                | 40W×4ch, at 400Hz, Vol. MAX                      | Frequency Response<br>Signal to Noise Ratio |
| Power Output               |  | Wow and Flutter<br>Channel Separation       |
| <CQ-DF600W>                | 22Wx4 (DIN45 324, at 4Ω)                         | 20Hz to 20,000Hz (±1dB)<br>96dB             |
| <CQ-DF200W>                | 20Wx4 (DIN45 324, at 4Ω)                         | Below measurable limits                     |
| Pre-AMP Output Voltage     | 2.0V (CD play mode ; 1kHz 0dB)                   | 75dB  |
| Sub-Woofer Output Voltage  |  |   |
| <Only for CQ-DF600W>       | 2.0V (CD play mode ; 1kHz, 0dB)                  | Dimensions**<br>Weight**                    |
| Output Impedance           | 200Ω   | 178x50x150mm<br>1.5kg                       |
| Suitable Speaker Impedance | 4-8Ω   |   |
| AM Radio                   |  |   |
| Frequency Range            | 531 - 1,602kHz                                   |   |
| Usable Sensitivity         | 28dB/ $\mu$ V (25μV, S/N 20dB)                   |   |

\* Specifications and the design are subject to possible modification without notice due to improvements.

\*\* Dimensions and Weight shown are approximate.

**Panasonic®**

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## ⚠ WARNING

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

## IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by  $\triangle$  in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

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## 1 FEATURES

- 32bit-times over sampling MASH 1bit 4-DAC system.
- Digital servo for reliable playback.
- PLL (Phase Locked Loop) synthesized tuning.
- 18-FM, 6-AM presets with preset scan

## 2 REPLACEING THE FUSE

Use fuses of the same specified rating (15amps). Using different substitutes or fuses with higher ratings, or connecting the unit directly without a fuse, could cause fire or damage to the stereo unit.

## 3 MAINTENANCE

Your products is designed and manufactured to ensure a minimum of maintenance. Use a soft cloth for routine exterior cleaning. Never use benzine, thinner or other solvents.

## 4 NOTES

### [RADIO BLOCK]

Do not align the AM and FM package blocks. When the package block is necessary, it will be supplied already aligned at the factory.

### [CD DECK BLOCK]

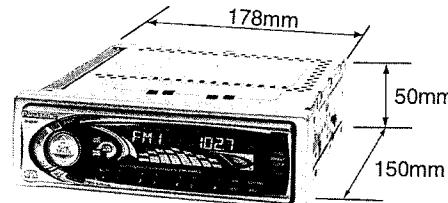
This model has no servo alignment points because microcomputer controls the servo circuit.

### [OTHER]

This operating instruction manual is for 2 models CQ-DF600W and DF200W. All illustrations throughout this manual represent model CQ-DF600W unless otherwise specified. The following table describes the differences between 2 models.

|                      | DF600W          | DF200W   |
|----------------------|-----------------|----------|
| Pre-Out              | Lead type       | Fix type |
| Sub Woofer-Out       | Yes             | None     |
| Sub Woofer-Out Level | 2V              | None     |
| Super HDB            | FLAT/BOOM/TIGHT | On/Off   |
| LCD Color            | 3 Colors        | Blue     |

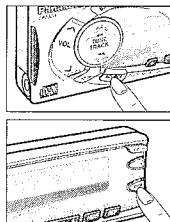
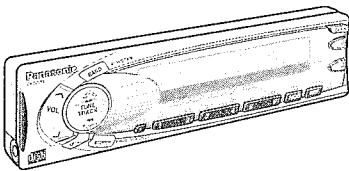
## 5 DIMENSIONS



# 6 OPERATING INSTRUCTIONS

## Power and Sound Controls

ENGLISH 1

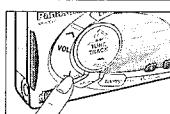


### Power

Turn the key in the ignition until the accessory indicator lights. Press [SOURCE](PWR) to switch on the power. Press and hold [SOURCE](PWR) again for more than 1 second to switch off the power. When the power is turned off while the time is displayed, the clock mode remains on. When [DISP] is pressed, the system is turned off completely.

#### Note:

When the power is switched on for the first time, a demonstration appears on the display. To cancel this display, press [DISP]. When a CD is inserted with all the power connections performed, the unit power will be automatically turned on, CD loading begins and the CD is played.

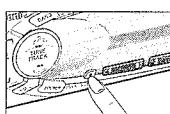


### Volume

- Press [ $\wedge$  VOL] or [ $\vee$  VOL] to increase or decrease the volume.

**VOL 20** — Volume Level (0 to 40)

- Press [ $\wedge$  VOL] or [ $\vee$  VOL] to change the numeric level in sequence.



### Mute

- Press [ $\bullet$ ](MUTE) to mute the sound completely. When MUTE is on, "MUTE" indicator will light, and "MUTE" will blink on the display.

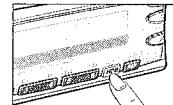
**MUTE** —

- Press [ $\bullet$ ](MUTE) again to cancel.

**Note:** This unit is equipped with an anti-volume-blast circuit which serves as an automatic volume level adjuster so that you will not be deafened by sudden loud volume level. This system operates as follows. When [SOURCE](PWR) is first pressed to switch the unit on, the volume level is low. After that, the volume level will gradually return to the same level as the one before the power was turned off last time. The anti-volume-blast circuit will not work when the volume level is set lower than position 20 on the display.

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CQ-DF600/DF200W



### S-HDB (Super High Definition Bass)

Especially for rock music, the bass-sound will be more powerful.

- Press [HDB] to change Super High-Definition Bass Mode.

For CQ-DF200W

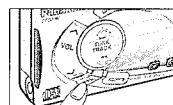
Regular Mode  $\longleftrightarrow$  S-HDB  
(S-HDB OFF)

**S-HDB**

For CQ-DF600W  
FLAT (Regular Mode, S-HDB OFF)  $\rightarrow$  BOOM (S-HDB ON)

$\longleftrightarrow$  TIGHT (S-HDB ON)  $\longleftrightarrow$   
BOOM: The bass sounds of the speakers are strongly emphasized.  
TIGHT: The bass sounds of the speakers are moderately emphasized. (The sounds of the sub-woofer can be heard clearly.)

**BOOM**  $\quad$  **TIGHT**

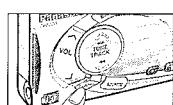


### Audio Mode

Press [SEL] to change the audio mode setting as follows.

Regular Mode  $\rightarrow$  VOLUME  $\rightarrow$  BASS  $\rightarrow$  TREBLE  $\rightarrow$  BALANCE  
 $\longleftarrow$  SUB-W  $\longleftarrow$  FADER  $\longleftarrow$

(\*Only for CQ-DF600W, SUB-W : SUB WOOFER)



### Bass and Treble

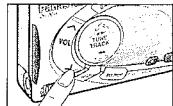
Press [SEL] to change to the bass (or treble) mode.

Press [ $\wedge$  VOL] or [ $\vee$  VOL] to increase or decrease the bass (or treble) level.

**BAS + 3dB**  $\quad$  **TRE - 3dB**

-12 to +12

-12 to +12



### Balance

Press [SEL] to change to the balance mode.

Press [ $\wedge$  VOL] or [ $\vee$  VOL] to shift the sound volume to the left (L) or right (R) speakers.

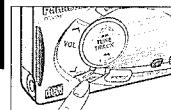
**BAL L 2**  $\quad$  **BAL CNT**

or R  $\longleftarrow$  1 to 15

Balance Center

## Power and Sound Controls (continued)

ENGLISH 3



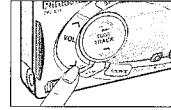
### Fader

Press [SEL] to change to the fader mode. Press [ $\wedge$  VOL] or [ $\vee$  VOL] to shift the sound volume to the front (F) or rear (R) speakers.

**FAD F 3**  $\quad$  **FAD CNT**

or R  $\longleftarrow$  1 to 15

Fader Center



### Sub-Woofers Volume

(Only for CQ-DF600W)  
Press [SEL] to change to the sub-woofer volume mode. Press [ $\wedge$  VOL] or [ $\vee$  VOL] to increase or decrease the sub-woofer volume.

#### Cut-off frequency control

The maximum lower frequency level can be adjusted to match your sub-woofer and the acoustics inside your car. When the sub-woofer is activated, press [ $\wedge$  TUNE] or [ $\vee$  TUNE] to change the cut-off frequency as follows. (default : 120 Hz)

120  $\longleftrightarrow$  80 (Hz)

Cut-off frequency

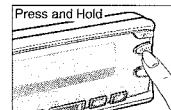
**SUB 120**

Sub-woofer volume level : From MUTE (0) to 8

**SUB MUTE**

Note: If no operation is performed in the audio mode for 5 seconds (or 2 seconds in the VOL mode), the display will return from the audio mode (BAS/TRE/BAL/FAD/SUB) to the regular operation mode.

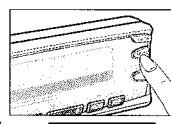
### Display Controls



### Dimmer

Press and Hold [LEVEL](DIMMER) for more than 2 seconds to change the dimmer level from one level to another through the cycle of 3 levels as follows. (default : Dimmer 1)

Dimmer 1  $\rightarrow$  Dimmer 2  $\rightarrow$  Dimmer 3  
(Bright)  $\uparrow$  (Medium)  $\downarrow$  (Dark)

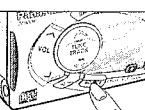
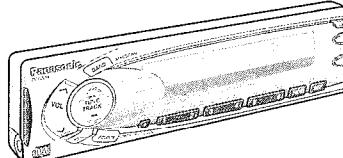


### Level Meter Display Switching

When power is ON, the level of sound sources, such as radio and CD, is displayed. Press [LEVEL](DIMMER) to change the Level Meter display from one level to another in a total of 6 kinds display mode. You can select your favorite display.

## Radio Basics

ENGLISH 4

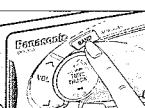


### Tuner Mode

Press [SOURCE] to change the operation mode setting as follows.

Tuner  $\rightarrow$  CD player  $\rightarrow$  CD changer control  
(When a disc is inserted) (When a CD changer is connected)

**FM 1 87.50**

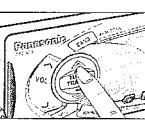


### Band

Press [BAND] to change the band setting as follows.

FM1  $\longleftrightarrow$  FM2  $\longleftrightarrow$  FM3  $\longleftrightarrow$  AM

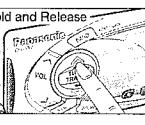
"ST" indicator lights during reception of a FM stereo broadcast.



### Manual Tuning

Press [ $\wedge$  TUNE] or [ $\vee$  TUNE] to tune in a higher or lower frequency.

**FM 1 88.90**



### Seek Tuning

Press and hold [ $\wedge$  TUNE] or [ $\vee$  TUNE] for more than 0.5 seconds, then release it. Tuning will automatically stop when the signals of the next broadcast station are received.

CQ-DF600/DF200W

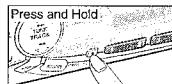
5

CQ-DF600/DF200W

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## Radio Basics (continued)

ENGLISH 5



### MONO/LOCAL Selection

- At the MONO setting, the amount of interference heard when weak signals are received from an FM broadcast station is significantly decreased.
- At the LOCAL setting, only strong signals of stations are searched in seek tuning, while at LOCAL OFF setting, relatively weak signals are also searched.

① FM broadcast

Press and hold [•](MONO/LOC) in the tuner mode for more than 2 seconds to switch between the MCNO and LOCAL modes. Each time [•](MONO/LOC) is pressed, the display changes as follows:

MONO OFF/LOCAL OFF → MONO ON/LOCAL OFF

MONO ON/LOCAL ON ← MONO ON/LOCAL ON

② AM broadcast

Press and hold [•](MONO/LOC) for more than 2 seconds to change the local mode as follows:

LOCAL OFF ↔ LOCAL ON

### Station Preset

FM1, FM2, FM3 and AM can save a maximum 6 stations each in their preset station memories.

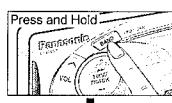
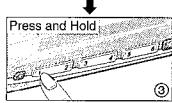
#### Manual Station Preset

- Press [BAND] to select a desired band.
- Use manual or seek tuning to find a station which is to be preset in the memory.
- Press and hold one of the preset buttons [1] to [6] for more than 2 seconds until the display blinks.

**FM2 - 9000**

Preset number

Note: You can change the memory presetting by repeating the above procedure.



### Tuning in a Preset Station

Press the corresponding preset button [1] to [6] to tune in a preset station.

#### Auto Station Preset

Select the band, press and hold [BAND](APM) for more than 2 seconds (Auto Preset Memory).

- The 6 strongest available stations will be automatically saved in the memory on preset buttons [1] to [6].
- Once set, the preset stations are sequentially scanned for 5 seconds each.
- Press the corresponding preset button for the broadcast you want to listen to.

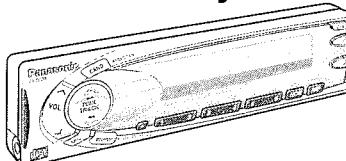
Caution: To ensure safety, never attempt to preset stations while you are driving.

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CQ-DF600/DF200W

## Compact Disc Player Basics

ENGLISH 6



### Loading a Disc

- Press [OPEN] to open the front panel.
- Insert a disc with its label side facing up.

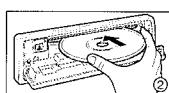
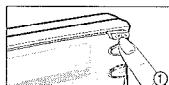
After the disc is inserted, close the front panel manually.

Notes:

- The mute is automatically turned on when a disc is inserted and the CD mode is selected.
- The mute is automatically turned off when the front panel is closed.

Caution:

Do not use irregularly-shaped CD (heart-shaped, octagon etc.). Failure to observe this may cause malfunction.



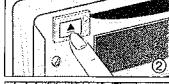
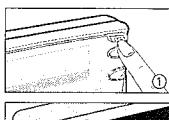
### Ejecting a Disc

- Press [OPEN] to open the front panel.
- Press [▲] to eject the disc. After the disc is removed, close the front panel manually. The previous operation mode will resume.

Note:

Always remove the disc from the unit when the CD player is not being used.

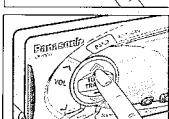
Note: You can eject the disc by pressing [▲], even when the power is off.



### Starting CD Play

Press [SOURCE] to change to the CD play mode as follows, after a disc has been inserted. Play will start automatically.

Tuner → CD player → CD changer control  
(When a disc is inserted)    (When a CD changer is connected)



### Track Selection

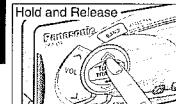
- Press [▶▶ TRACK] to advance to the next track.
- Press [◀◀ TRACK] to start play from the beginning of the track now playing.
- Press [▶▶ TRACK] or [◀◀ TRACK] repeatedly to skip the desired number of tracks.

CQ-DF600/DF200W

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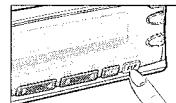
## Compact Disc Player Basics (continued)

ENGLISH 7



### Track Search

- Press and hold [▶▶ TRACK] or [◀◀ TRACK] for more than 0.5 seconds to advance or reverse through a track.
- Release [▶▶ TRACK] or [◀◀ TRACK] to resume regular CD play.

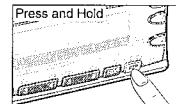


### Track Repeat

Press [REP] to repeat the current track.



Press [REP] again to cancel.



### Random Selection

Press and hold [REP](RANDOM) for more than 2 seconds. All the available tracks will be played in a random sequence.



Press and hold [REP](RANDOM) for more than 2 seconds again to cancel.

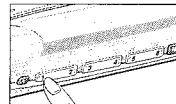


### Track Scan

Press [BAND](SCAN). The display blinks, and the first 10 seconds of each track on the CD are played in sequence.



Press [BAND](SCAN) again to cancel.



### Direct Selection by Track Number

- Press a track number button from [1] to [6]. The corresponding track starts playing.
- Press and hold a track number button from [7] to [12] ([1] to [6]) for more than 1 second. The corresponding track starts playing.

10

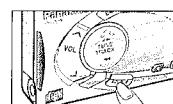
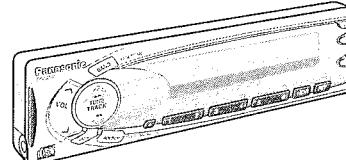
CQ-DF600/DF200W

ENGLISH 8

## CD Changer Basics

Note:

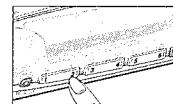
The CD changer functions are designed for an optional CD changer unit.



### Starting the CD Changer

Once the CD changer has been connected, press [SOURCE] to change to the CD changer mode as follows. When a disc magazine is inserted, CD play starts automatically.

Tuner → CD player → CD changer control  
(When a disc is inserted)    (When a CD changer is connected)

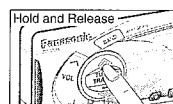


### Direct Disc Selection

- Press a disc number button from [1] to [6]. The corresponding disc starts playing.

- Press and hold a disc number button from [7] to [12] ([1] to [6]) for more than 1 second. The corresponding disc starts playing.

Note:  
The number of discs you can load the CD changer with is specific to each model.



### Track Selection

- Press [▶▶ TRACK] to advance to the next track.
- Press [◀◀ TRACK] to start play from the beginning of the track now playing.
- Press [▶▶ TRACK] or [◀◀ TRACK] repeatedly to skip the desired number of tracks.

### Track Search

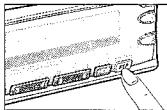
- Press and hold [▶▶ TRACK] or [◀◀ TRACK] for more than 0.5 seconds to advance or reverse through a track.
- Release [▶▶ TRACK] or [◀◀ TRACK] to resume regular CD play.

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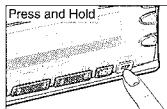
## CD Changer Basics (continued)

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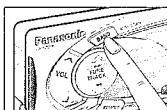
### Track Repeat

Press [REP] to repeat the current track.  
Press [REP] again to cancel.



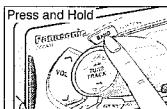
### Random Selection

Press and hold [REP](RANDOM) for more than 2 seconds. All the available tracks will be played in a random sequence.  
Press and hold [REP](RANDOM) for more than 2 seconds to cancel.  
When [REP] is pressed in the random mode, random play stops and repeat play resumes.



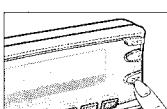
### Track Scan

Press [BAND](SCAN). The display blinks and the first 10 seconds of each track on the discs play in sequence.  
Press [BAND](SCAN) again to cancel.



### Disc Scan

Press and hold [BAND](SCAN) for more than 2 seconds. The 1st track of all the discs in the magazine is played for 10 seconds each.  
Press and hold [BAND](SCAN) for more than 2 seconds again to cancel.



### Changing the Display

Press [DISP] to change the display setting as follows.  
Disc/Track Number/Track Play Time → CLOCK

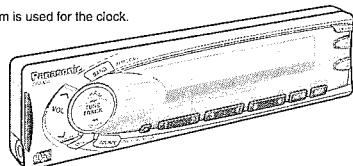
Note: You cannot change the current display while the CD player or CD changer is set to the scan play mode.

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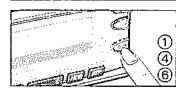
CQ-DF600/DF200W

## Clock Basics

The 12-hour system is used for the clock.

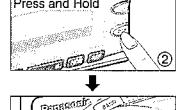


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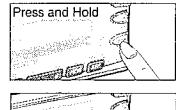
### Initial Time

- ① Press [DISP](CLOCK). "ADJUST" appears on the display.
  - ② Press and hold [DISP](CLOCK) again for more than 2 seconds. "12" blinks, and the time setting mode is activated.
  - ③ Press [ $\wedge$  TUNE] or [ $\wedge$  TUNE] to set the hour.
  - ④ Press [DISP](CLOCK) again to proceed with the minutes setting.
  - ⑤ Press [ $\wedge$  TUNE] or [ $\wedge$  TUNE] to set the minute.
  - Press [ $\wedge$  TUNE] or [ $\wedge$  TUNE] for more than 0.5 seconds to change numbers on the display in sequence.
  - Once the time has been set, press [DISP](CLOCK).
- Note:  
The [DISP](CLOCK) button will not work while the CD player or CD changer is set to the scan play mode. Cancel the scan play mode before pressing [DISP](CLOCK).



### Time Reset

Press and hold [DISP](CLOCK) for more than 2 seconds to activate the time setting mode to reset the time. Then, repeat steps ③ to ⑦ above.



### Clock Display

Press [DISP](CLOCK) to change to the clock display as follows.

|               |                           |
|---------------|---------------------------|
| In Tuner Mode | Current frequency → Clock |
| In CD Mode    | Playing time → Clock      |
| (CD changer)  |                           |

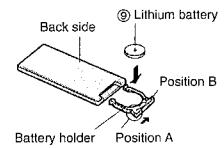
When the power is turned off while the time is displayed, the clock mode remains on. When [DISP] is pressed, the system is turned off completely.

Note: The power must be switched off before leaving the car if it does not have an accessory (ACC) off position.

## Remote Control Unit Basics

### Battery Installation

1. Remove the battery holder.  
Take hold of the holder at position B and pull it out to remove the battery by pushing position A in the direction shown by the arrow.
2. Install the battery.  
Set a new battery properly with its (+) side facing up as shown in the figure.
3. Insert the battery holder.  
Push the battery holder back into its original position.



### Battery Notes

Remove and dispose of an old battery immediately.

#### Battery Information:

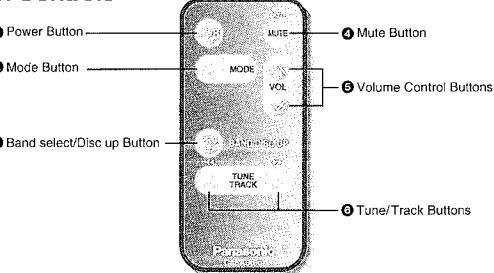
- Battery type: Panasonic lithium battery (CR2025)
- Battery life: 6 months with normal use (at room temperature)

#### Caution:

Improper use of the battery may cause overheating, an explosion or ignition, resulting in injury or a fire. Battery leakage may damage the unit.

- Do not disassemble or short the battery. Do not throw a battery into a fire.
- Keep batteries out of the reach of children to avoid the risk of accidents.
- Be careful to the local disposal rules when you dispose of batteries.

### Main Controls



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### How to Operate the Controls

Point the remote control unit at the main unit's sensor (REMOTE).

#### General

##### Power

- ① PWR (Power Button)  
Press [PWR] to switch on the power.  
Press [PWR] again to switch off the power.

##### Mute

- ② MUTE (Mute Button)  
• Press [MUTE] to mute the sound completely.  
• Press [MUTE] again to cancel.

##### Mode Selection

- ③ MODE (Mode Button)  
Press [MODE] to change the operation mode setting as follows.  
Tuner → CD player → (CD changer control)

##### Volume

- ④  $\wedge$   $\vee$  VOL (Volume Control Buttons)  
Press [ $\wedge$  VOL] or [ $\vee$  VOL] to increase or decrease the volume level.

#### Radio

##### Selecting a Band

- ⑤ BAND (Band Select Button)  
Press [BAND] to change the band setting as follows.  
FM1 → FM2 → FM3 → AM

##### Seek Tuning

- ⑥ < > TUNE (Seek Tuning Buttons)  
Press and hold [ $<$  TUNE] or [ $>$  TUNE] for more than 0.5 seconds, then release it.  
Tuning will automatically stop when the signals of the next broadcast station are received.

##### Manual Tuning

- ⑦ < > TUNE (Manual Tuning Buttons)  
Press [ $<$  TUNE] or [ $>$  TUNE] to tune in a higher or lower frequency.

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## Remote Control Unit Basics (continued)

### Compact Disc Player/CD Changer Control

(When a disc is inserted, play starts.)

#### Starting CD Play

##### ② MODE (Mode Button)

- Press [MODE] to change to the CD play mode after a disc has been inserted. Play will start automatically.
- When the unit is connected with the CD changer, press [MODE] repeatedly to change the mode setting as follows.

Tuner → CD player → (CD changer control)

Once a disc has been inserted, CD play will start automatically regardless of the existing mode setting.

#### Disc Selection

(Only for CD changer control)

##### ③ DISC UP (Disc Select Buttons)

(When the CD changer is connected)  
Press to sequentially advance to the next disc.

#### Track Selection

##### ④ ▶▶◀◀ TRACK (Track Select Buttons)

- Press [▶▶TRACK] to advance to the next track.
- Press [◀◀TRACK] to play from the beginning of the track now playing.
- Press [▶▶TRACK] or [◀◀TRACK] repeatedly to skip the desired number of tracks.

#### Track Search

##### ⑤ ▶▶◀◀ TRACK (Track Search Buttons)

- Press and hold [▶▶TRACK] or [◀◀TRACK] for more than 0.5 seconds to advance or reverse through a track.
- Release [▶▶TRACK] or [◀◀TRACK] to stop the rapid advance or rapid reverse.

## Installation Guide

### Preparation:

- Before installation, check the radio operation with antenna and speakers.
- Disconnect the cable from the negative (-) battery terminal (see caution below).

### Caution:

For installation to cars with trip or navigational computer, all electronic memory settings previously registered in the computer will be lost when the battery terminal is disconnected. For this type of car, battery could not be disconnected. Therefore, extra care should be taken to prevent short circuiting.

### In dash Installation

#### Installation Opening

In-dash installation can be done if the car's dashboard has an opening for this unit as shown in the figure. The car's dashboard should have a thickness of 4.5 mm–6 mm in order to make the installation of the unit.



### Installation Precautions

This product, if possible, should be installed by a professional installer.

In case of difficulty, please consult your nearest authorized Panasonic Service Center.

- This system is to be used only in a 12-volt, DC battery system (car) with negative ground.
- Follow the electrical connection (→ page 22, 23) carefully. Failure to do so may result in damage to the unit.
- Connect the power lead after other connections are made.
- Be sure to connect the YELLOW lead to positive terminal (+) of the battery to fuse block (BAT) terminal.
- Insulate all exposed wires to prevent short circuiting.
- Secure all loose wires after installing the unit.
- Please carefully read the operating and installation instructions of the respective equipment before connecting it to this unit.

### □ Installation Hardware

| No. | Item                          | Diagram | Qty | No. | Item                      | Diagram | Qty |
|-----|-------------------------------|---------|-----|-----|---------------------------|---------|-----|
| ①   | Mounting Collar               |         | 1   | ⑥   | Power Connector           |         | 1   |
| ②   | Hex. Nut (5 mmφ)              |         | 1   | ⑦   | Removable Face Plate Case |         | 1   |
| ③   | Rear Support Strap            |         | 1   | ⑧   | Remote Control Unit       |         | 1   |
| ④   | Tapping Screw (5 mmφ × 16 mm) |         | 1   | ⑨   | Lithium Battery (CR2025)  |         | 1   |
| ⑤   | Mounting Bolt (5 mmφ)         |         | 1   | ⑩   | Trim Plate                |         | 1   |

## Installation Guide (continued)

### □ Precautions

- When bending the mounting tab of the mounting collar with a screwdriver, be careful not to injure your hands and fingers.
- We strongly recommend you to wear gloves for installation work to protect yourself from injuries.

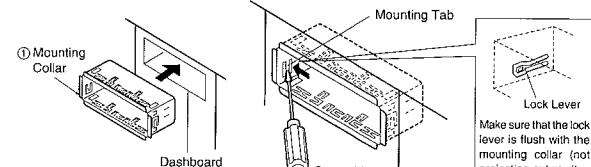
### □ Installation Procedures

Note:

- Disconnect the cable from the negative (-) battery terminal.

#### 1. Secure Mounting Collar ①.

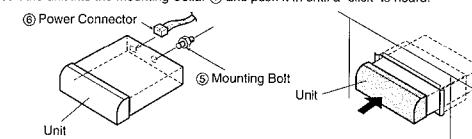
Insert Mounting Collar ① into the dashboard, and bend the mounting tabs out with a screwdriver.



#### 2. Secure the rear of the unit.

- Check the electrical connections by referring to this operating instructions. (→ Page 22, 23)
- Connect Mounting Bolt ⑤, using a suitable wrench.
- Insert Power Connector ⑥ to the unit.

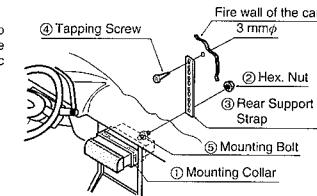
d) Insert the unit into the Mounting Collar ① and push it in until a "click" is heard.



e) Secure the rear of the unit to the car by one of the two recommended methods.

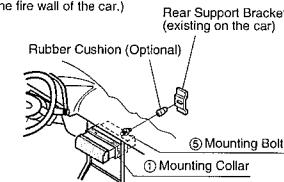
#### ■ Using Rear Support Strap ③.

Affix one end of Rear Support Strap ③ to the rear of the unit, and the other end to the fire wall of the car, or some other metallic area.

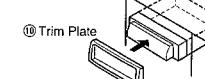


### ■ Using the Rubber Cushion (Optional)

(If there is an existing Rear Support Bracket on the fire wall of the car.) Cover the Mounting Bolt ⑤ on the rear of the unit with the Rubber Cushion (Optional), and mount it into the existing Rear Support Bracket.



### 3. Install Trim Plate ⑩.



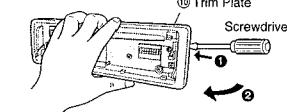
### 4. After installation, reconnect the negative (-) battery terminal.



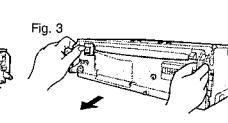
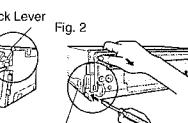
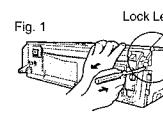
### To Remove the Unit

a) Remove the removable face plate. (→ Page 20)

b) Remove Trim Plate ⑩ with a screwdriver as shown in the figure.



- Pull out the unit while pushing the two lock levers using the screwdriver. (→ Fig. 1, 2)
- Remove the unit by pulling it with both hands. (→ Fig. 3)



# Installation Guide (continued)

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## Anti-Theft System

This unit is equipped with a removable face plate. By removing this face plate, the radio becomes totally inoperable. The security indicator will blink.

### To Remove the Removable Face Plate

- ① Switch off the power.
- ② Press [OPEN]. The removable face plate will be opened. (→ Fig. 4)
- ③ Push the face plate to either the right or left, then pull it out toward you. (→ Fig. 5)

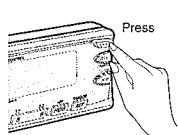


Fig. 4

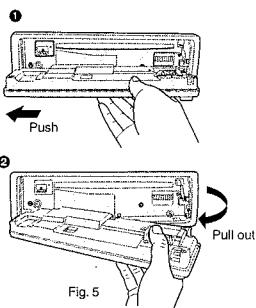


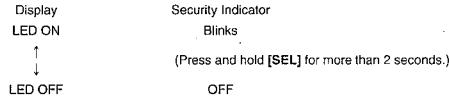
Fig. 5

### Security Indicator

The security indicator (→ Fig. 7) blinks when the removable face plate is removed from the unit.

### To Deactivate the Security Indicator

Press and hold [SEL] for more than 2 seconds when the power is on. "LED OFF" is displayed, and the security indicator turns off. (default: LED ON)


**Cautions:**

When you want to remove the unit, the security indicator functions can be cancelled by the following procedure.

- Install the removable face plate.
- Disconnect the power connector.

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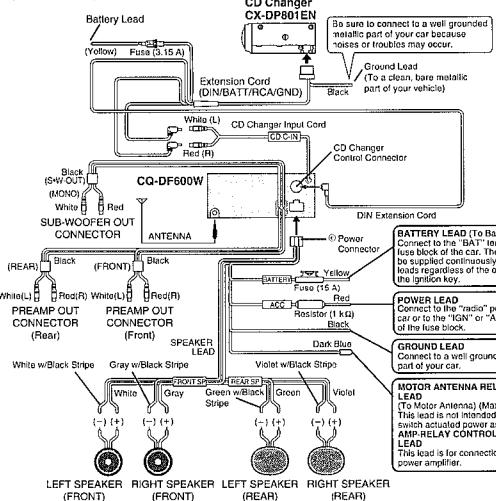
# Electrical Connections

**Cautions:**

- This product is designed to operate of a 12 volt, negative ground battery system.
- To prevent damage to the unit, be sure to follow the connection diagram below.
- Remove approx. 5 mm of protective covering from the ends of the leads before connecting.
- Do not insert the power connector into the unit until the wiring is completed.
- Be sure to insulate any exposed wires from a possible short-circuit from the car chassis.
- Bundle all cables and keep cable terminals free from touching any metal parts.

**Wiring diagram (Only for CQ-DF600W)**

- This unit can be connected to an optional CD changer (CX-DP801EN). For details consult your nearest Panasonic Service Center.
- For connection to the CD changer, refer to the operating instructions of the CD changer (CX-DP801EN).


**NOTE: RECOMMENDED EXTERNAL AMP COMBINATION (EXAMPLE)**

- Pre-Amp out (rear/front)
- Sub-Woofer out\*
- (\*Only for CQ-DF600W)

- = CY-M9054 (4 ch system)
- = CY-M9054 (2 ch system)
- or
- CY-M7052 (1 ch system)

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④ As shown in Fig. 6, gently push the lower side of the case and open its cover. Keep the removable face plate in the case. Then you can safely take the plate with you.

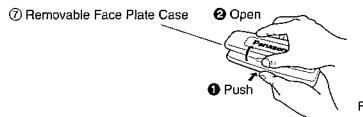


Fig. 6

### To install the Removable Face Plate

① Fit either the edge of the right or left hole in the face plate over the main unit's pins, and fit it over on the other side while pushing it.

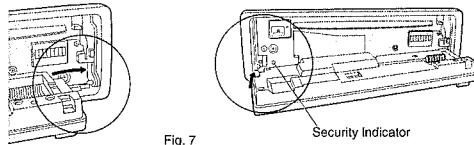


Fig. 7

② After fitting the face plate holes, try moving the face plate up and down a few times to make sure that it has been fitted securely.



Fig. 8

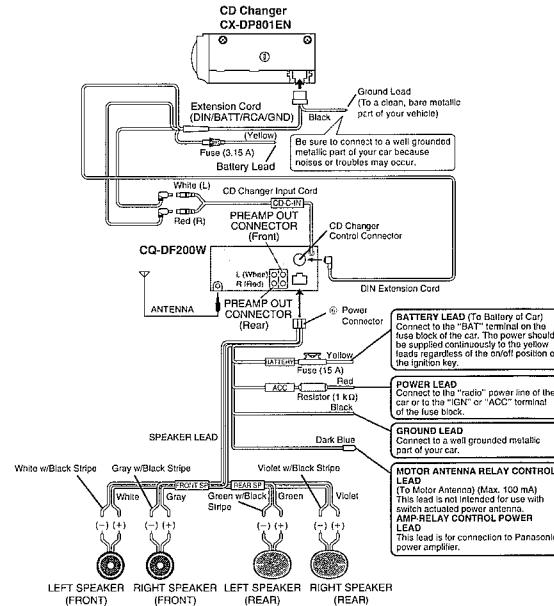
③ Close the front panel and press the right side of the face plate until a "click" is heard.

**Cautions:**

1. Before removing the removable face plate, make sure the power is off.
2. This removable face plate is not water-proof. Do not expose it to water or excessive moisture.
3. Do not remove the removable face plate, while driving your car.
4. Do not place the removable face plate on the dashboard or nearby areas where the temperature rises to high levels.
5. Do not touch the contacts on the removable face plate or on the main unit, since this may result in poor electrical contacts.
6. If dirt or other foreign substances get on the contacts, wipe them off with clean, dry cloth.
7. Do not apply a strong downward force onto the face plate and do not put anything on it while it is open, or it might be damaged.

**Wiring diagram (Only for CQ-DF200W)**

- This unit can be connected to an optional CD changer (CX-DP801EN). For details consult your nearest Panasonic Service Center.
- For connection to the CD changer, refer to the operating instructions of the CD changer (CX-DP801EN).



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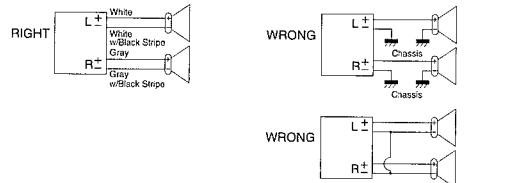
# Speaker Connections

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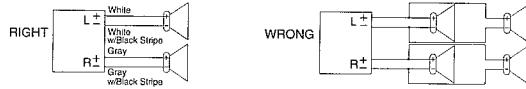
**Caution:**

1. Use ungrounded speakers only.
2. The speakers to be used with this unit should be able to handle more than 45 W (CQ-DF600W) or 40 W (CQ-DF200W) of audio power. If an optional amplifier is used, the speaker should be able to handle the maximum output power of the amplifier. Use of speakers with small input ratings can cause damage to the speakers.
3. The speaker impedance should be 4-8 ohms. If the impedance is too large or too small, it affects the output and may cause damage to the speakers or this unit.
4. Do not use 3-wire type speaker system having a common earth lead. Never connect the speaker cord to the body of the car. This unit uses the BTCL circuit, so each speaker should be connected separately using parallel vinyl insulated cords.
5. The speaker cords and the power amplifier unit should be kept away (about 30 cm apart) from the antenna and antenna extension cord.
6. Follow the connection diagram below carefully. Failure to do so may cause damage to both unit and speakers.

- Unit will be damaged if speakers (Front, Rear) are not connected properly.



- Do not connect more than one speaker to one set of speaker leads.



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# Error Display Messages

**CD**

|                 |   |
|-----------------|---|
| --E1--<br>*DISC | Appears on the display when the compact disc is dirty or upside down. Press [OPEN] to open the front panel, then press [ $\Delta$ ] to eject the disc.  |
| --E2--<br>*DISC | Appears on the display when compact disc is scratched. Press [OPEN] to open the front panel, then press [ $\Delta$ ] to eject the disc.   |
| --E3--<br>*DISC | Appears on the display when the compact disc stops operating for some reason. Turn off the car engine (accessory off) and remove the fuse from the yellow lead for 1 minute. Then reinstall the fuse. |

**CD Changer**

|             |   |
|-------------|---|
| E1<br>*DISC | Appears on the display when the compact disc is dirty or upside down. Selects the next available compact disc.    |
| E2<br>*DISC | Appears on the display when compact disc is scratched. Selects the next available compact disc.                   |
| E3<br>*DISC | Appears on the display when the unit stops operating for some reason. Press [RESET] on the CD changer (optional). |
| NO DISC     | Appears on the display when there is no disc in the magazine.   |

**Cautions:**

1. This product is not designed for any 8 cm CD.
2. If you insert an 8 cm CD and can not eject it, turn ACC of your car off once and turn it on again, then press EJECT.

# Disc Notes

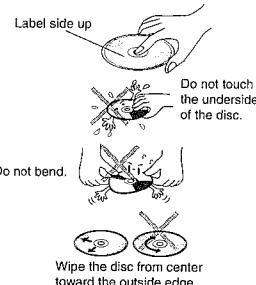
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**Handling and Cleaning**

ONLY USE DISCS CARRYING LABEL SHOWN ON THE RIGHT



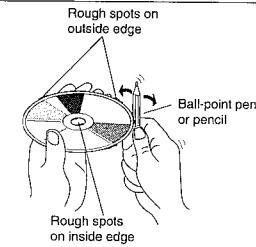
- Dirt, dust, scratches and warping discs will cause misoperation.
- Do not place stickers or make scratches on discs.
- Do not warp discs.
- A disc should always be kept in its case when not in use to prevent from damaging.
- Do not place discs in the following places:
  1. Direct sunlight.
  2. Dirty, dusty and damp areas.
  3. Near car heaters.
  4. On the seats or dashboard.

**Disc Cleaning**

Use a dry soft cloth to wipe the surface. If the disc is quite dirty, use a soft cloth slightly moistened with isopropyl (rubbing) alcohol. Never use solvents such as benzine, thinner or conventional record cleaners as they may mar the surface of the disc.

**Preparing New Discs with Rough Spots**

A new disc may have rough edges on its inside and outside edges. If a disc with rough edges is used, the proper setting will not be performed and the CD player will not play the disc. Therefore, remove the rough edges in advance by using a ball-point pen or pencil as shown on the right. To remove the rough edges, press the side of the pen or pencil against the inside and outside edges of the disc.

**Fuse**

Be sure to use a fuse of the specified rating (15 A) when replacing a blown fuse. Fuses with higher capacity ratings, use of any substitute, or connection without a fuse may result in a fire hazard or damage to the unit. If the replacement fuse fails, consult your nearest authorized Panasonic Service Center.

**Maintenance**

To clean the exterior of this unit, use a soft cloth to wipe the surface. Do not use benzine, thinner or any other type of solvents.

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# Specifications

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**General**

|                            |   |
|----------------------------|---|
| Power Supply               | : 12 V DC (11 V-16 V), test voltage 14.4 V, negative ground     |
| Maximum Power Output       | : 45 W×4 channels at 400 Hz, volume control maximum (CQ-DF600W) |
|                            | : 40 W×4 channels at 400 Hz, volume control maximum (CQ-DF200W) |
| Power Output               | : 22 W×4 (DIN 45 324, at 4Ω) (CQ-DF600W)                        |
| Tone Adjustment Range      | : 20 W×4 (DIN 45 324, at 4Ω) (CQ-DF200W)                        |
| Pre-Amp Output Voltage     | : Bass: ±12 dB at 100 Hz, Treble: ±12 dB at 10 kHz              |
| Sub-Woofer Output Voltage  | : 2.0 V (CD play mode; 1 kHz 0 dB)                              |
| Output Impedance           | : 2.0 V (CD play mode; 1 kHz 0 dB) (Only for CQ-DF600W)         |
| Suitable Speaker Impedance | : 200 Ω   |
| Current Consumption        | : 4-8 Ω   |
| Dimensions (W×H×D)         | : Less than 2.2 A (CD play mode; 0.5 W×4)                       |
| Weight                     | : 178×50×150 mm   |
|                            | : 1.5 kg  |

**AM Radio**

|                    |                               |
|--------------------|-------------------------------|
| Frequency Range    | : 531-1,602 kHz               |
| Usable Sensitivity | : 28 dB/uV (25 μV, S/N 20 dB) |

**FM Stereo Radio**

|                    |                       |
|--------------------|-----------------------|
| Frequency Range    | : 87.5-108.0 MHz      |
| Usable Sensitivity | : 6 dB/uV (S/N 30 dB) |
| Stereo Separation  | : 42 dB at 1,000 Hz   |

**CD Player**

|                           |                                      |
|---------------------------|--------------------------------------|
| Sampling Frequency        | : 32 times oversampling              |
| DA Converter              | : MASH 1 bit/DAC system              |
| Error Correction System   | : Panasonic super decoding algorithm |
| Pick-Up Type              | : Astigma 3-beam                     |
| Light Source              | : Semiconductor laser                |
| Wavelength                | : 780 nm                             |
| Frequency Response        | : 20 Hz-20,000 Hz, ±1 dB             |
| Signal/Noise Ratio        | : 96 dB                              |
| Total Harmonic Distortion | : 0.01% (1,000 Hz)                   |
| Wow and Flutter           | : Below measurable limits            |
| Channel Separation        | : 75 dB                              |

**Note:**

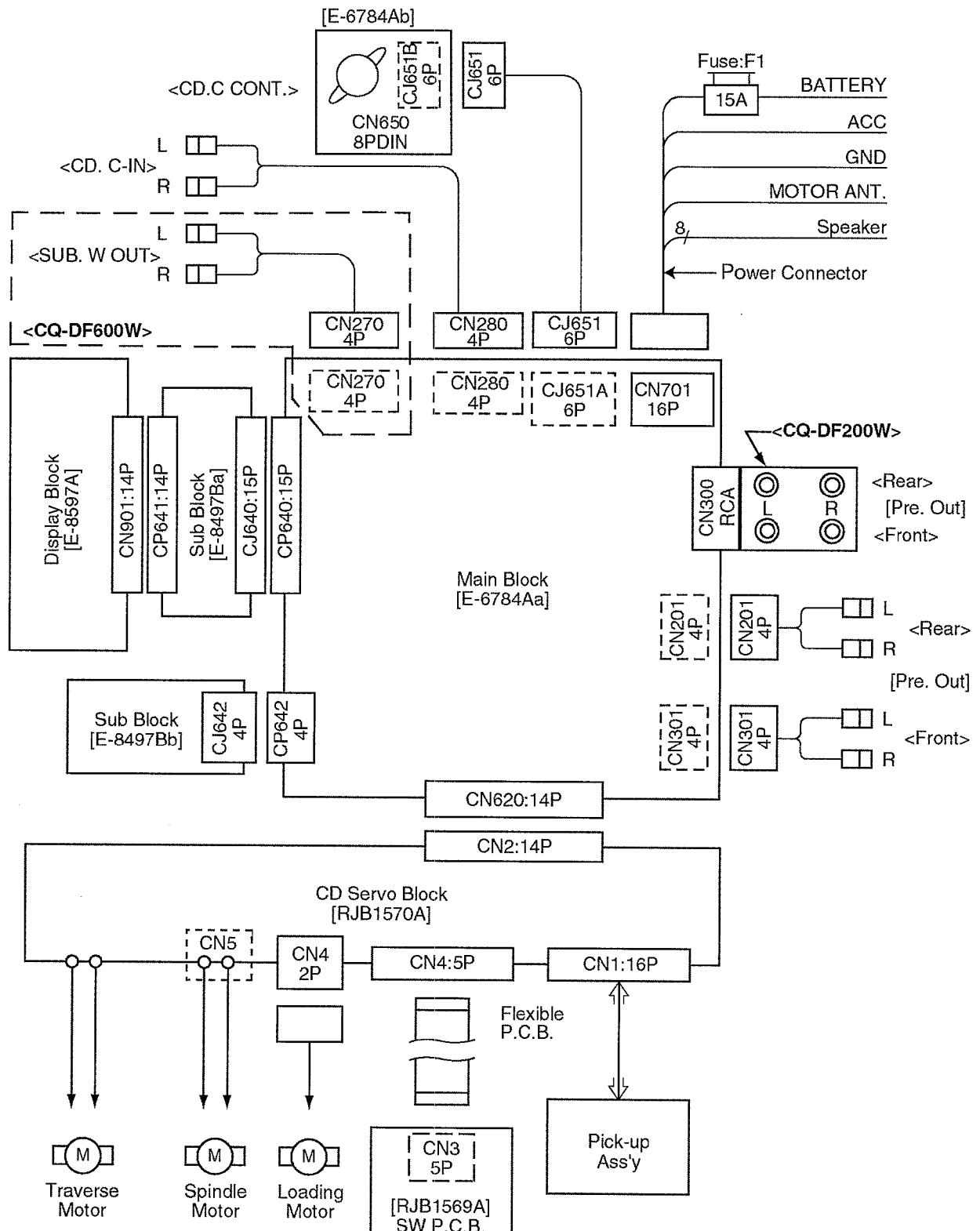
Specifications and design are subject to modification, without notice, due to improvements in technology.

25 CQ-DF600/DF200W

27

CQ-DF600/DF200W

## 7 WIRING CONNECTION

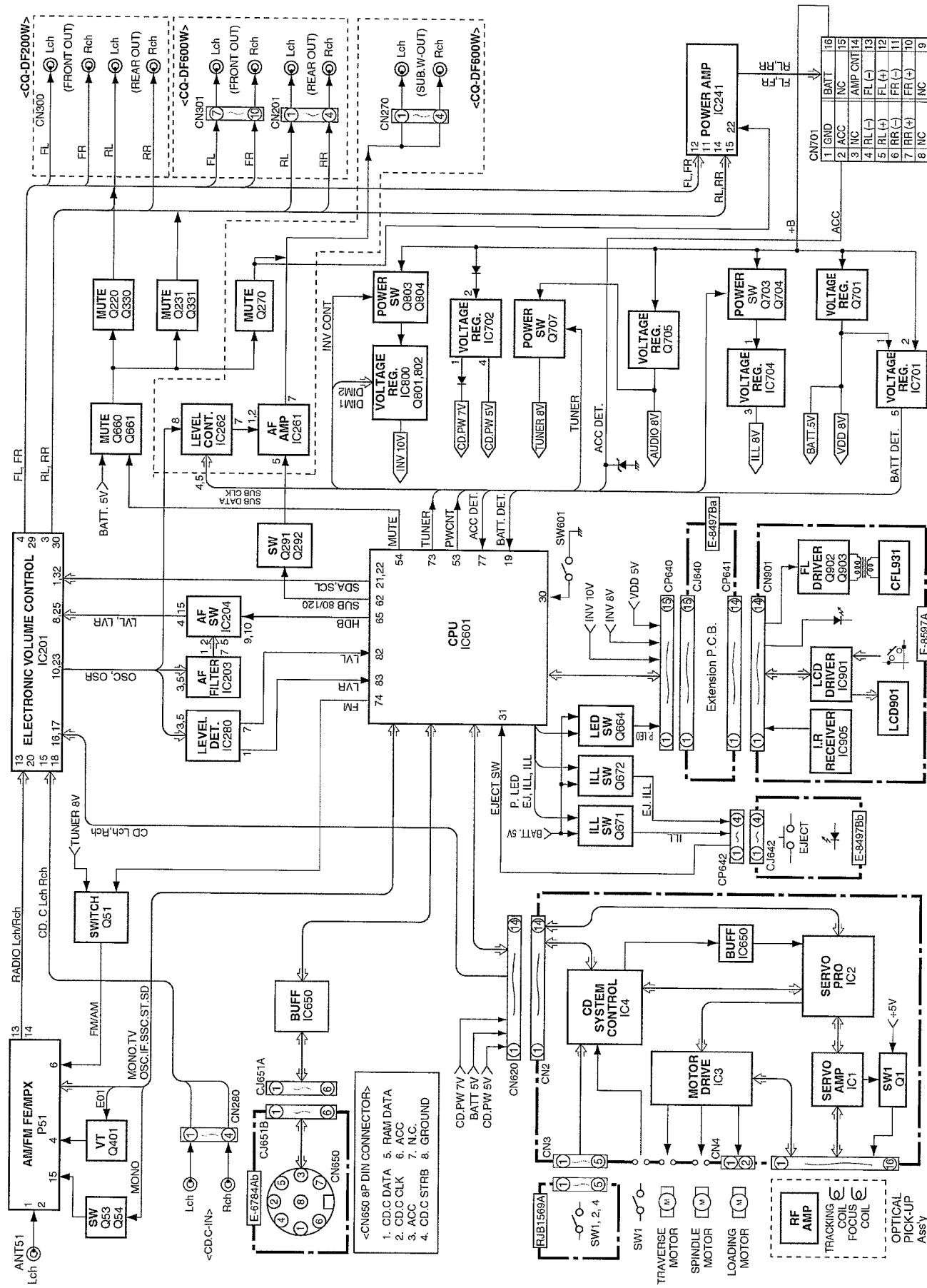


**<Note> :**

[ ] .....This mark shows a Ref. No. of connector

[---] .....This mark shows a mounting position of connector.

# 8 BLOCK DIAGRAM



# 9 TERMINALS DESCRIPTION

## 9.1. Main Block

IC601 : C2ABGF000015

| Pin No. | Port      | Description                 | I/O | (V)  |
|---------|-----------|-----------------------------|-----|------|
| 1       | XIN       | Crystal oscillator          | -   | 1.9  |
| 2       | TEST2     | (Connecting to ground)      | -   | 0    |
| 3       | VREG      | Voltage regulator capacitor | -   | 0    |
| 4       | VSS       | Ground                      | -   | 0    |
| 5       | CHC DATA  | CD changer data             | I   | 0    |
| 6       | N.C.      | No connection               | -   | -    |
| 7       | CHC CK    | CD changer clock            | I   | 0    |
| 8       | RM DATA   | Remocon data                | O   | 4.9  |
| 9-12    | N.C.      | No connection               | -   | -    |
| 13      | /LCD CE   | LCD chip enable             | O   | 0.6  |
| 14,15   | N.C.      | No connection               | -   | -    |
| 16      | LCD DI    | LCD data                    | O   | 4.6  |
| 17      | LCD CLK   | LCD clock                   | O   | 4.7  |
| 18      | N.C.      | No connection               | -   | -    |
| 19      | BATT      | Battery detection           | I   | 5.0  |
| 20      | LCD DO    | LCD data                    | I   | 4.9  |
| 21      | I2C CLK   | Electric volume cont. clock | O   | 5.2  |
| 22      | I2C DATA  | Electric volume cont. data  | I/O | 5.2  |
| 23      | /LED      | Security LED control        | O   | 3.7  |
| 24      | N.C.      | No connection               | -   | -    |
| 25      | /EJ ILL   | Eject illumi. Control       | O   | 5.0  |
| 26      | /ILL      | Illumi. Control             | O   | 5.0  |
| 27      | N.C.      | No connection               | -   | -    |
| 28      | /P. LED   | Panel LED control           | O   | 0.4  |
| 29      | FP CLOSE  | Front panel close SW        | I   | 5.2  |
| 30      | PANEL     | Panel detection SW          | I   | 5.2  |
| 31      | /EJ       | Eject SW                    | I   | 4.7  |
| 32-38   | N.C.      | (Connecting to VDD)         | -   | 5.0  |
| 39      | VDD       | +5V power supply            | -   | 5.0  |
| 40      | VSS       | Ground                      | -   | 0    |
| 41-48   | N.C.      | (Connecting to ground)      | -   | 0    |
| 49      | CD CNT    | CD power control            | O   | 4.9  |
| 50      | INV CNT   | Invertor control            | O   | 4.9  |
| 51      | DIM 2     | Dimmer control              | O   | 0    |
| 52      | DIM 1     | Dimmer control              | O   | 0    |
| 53      | PWR CNT   | Power control               | O   | 4.9  |
| 54      | /MUTE     | Mute control                | O   | 5.0  |
| 55      | CD DATA   | CD data                     | I/O | 4.7  |
| 56      | CD CLK1   | CD clock                    | O   | 5.0  |
| 57-61   | N.C.      | No connection               | -   | -    |
| 62      | SUB80/120 | Sub woofer cutoff freq.     | O   | 0    |
| 63      | SUB CLK   | Sub. woofer clock           | O   | 0    |
| 64      | SUB DATA  | Sub. woofer data            | O   | 0    |
| 65      | /HDB      | HDB control                 | O   | 4.9  |
| 66      | N.C.      | No connection               | -   | -    |
| 67      | /CD RST   | CD reset                    | O   | 5.0  |
| 68      | /CD ON    | CD power on                 | O   | 0    |
| 69      | CD CLK2   | CD clock                    | O   | 4.9  |
| 70      | CD MUTE   | CD mute                     | I   | 0    |
| 71      | REM IN    | Remocon data                | I   | 5.1  |
| 72      | CHC STB   | CD changer strobe           | O   | 0    |
| 73      | /TUNER    | Tunner power control        | O   | 0.3  |
| 74      | FM        | FM power control            | O   | 0.2  |
| 75      | /MONO     | Mono/Stereo selection       | O   | 8.0  |
| 76      | SSC       | Search stop clear           | O   | 0.2  |
| 77      | ACC SEN   | ACC detection               | I   | 3.9  |
| 78      | N.C.      | (Connecting to ground)      | -   | 0    |
| 79      | INIT A    | Initial value               | I   | 5.0  |
| 80      | INIT B    | Initial value (Note 2)      | I   | (#1) |
| 81      | ADC VSS   | ADC ground                  | -   | 0    |

|     |         |                        |   |     |
|-----|---------|------------------------|---|-----|
| 82  | LV L    | Lch level detection    | I | 1.4 |
| 83  | LV R    | Rch level detection    | I | 1.4 |
| 84  | N.C.    | (Connecting to ground) | - | 0   |
| 85  | SD      | B/S detection          | I | 0.6 |
| 86  | /RESET  | (Connecting to VDD)    | - | 5.0 |
| 87  | HOLD    | (Connecting to VDD)    | - | 5.0 |
| 88  | SNS     | (Connecting to VDD)    | - | 5.0 |
| 89  | LCTR    | (Connecting to ground) | - | 0   |
| 90  | IFC     | Radio IF control       | O | 2.6 |
| 91  | E03     | Not used               | - | -   |
| 92  | /ST     | FM stereo detection    | I | 4.5 |
| 93  | PLL VDD | +5V power supply       | - | 5.0 |
| 94  | AM IN   | (Connecting to ground) | - | 0   |
| 95  | OSC     | Radio oscillator       | I | 2.4 |
| 96  | PLL VSS | PLL ground             | - | 0   |
| 97  | E02     | Not used               | - | -   |
| 98  | E01     | PLL phase-comp. error  | O | 1.4 |
| 99  | TEST 1  | (Connecting to ground) | - | 0   |
| 100 | XOUT    | Crystal oscillator     | - | 2.6 |

### Note 1 :

Voltage measurements are with respect to ground, with a voltmeter (Internal resistance : 10M ohms).

### Note 2 (#1) :

- 2.2V <CQ-DF600W>
- 0V <CQ-DF200W>

## 9.2. Display Block

IC901 : YEAMLC75884W

| Pin No. | Port    | Description            | I/O | (V) |
|---------|---------|------------------------|-----|-----|
| 1-51    | S3-53   | LCD segment data       | O   | 2.4 |
| 52-55   | COM1-4  | LCD common             | O   | 2.4 |
| 56,57   | S54, 55 | LCD segment data       | O   | 2.4 |
| 58-61   | KS3-6   | Key strobe             | O   | 4.8 |
| 62-66   | KI1-5   | Key data               | I   | 0   |
| 67      | VDD     | +5V power supply       | -   | 5.0 |
| 68      | VLCD    | +5V power supply       | -   | 5.0 |
| 69      | VLCD1   | LCD angle              | -   | 3.2 |
| 70      | VLCD2   | LCD angle              | -   | 1.6 |
| 71      | VSS     | Ground                 | -   | 0   |
| 72      | TEST    | (Connecting to ground) | -   | 0   |
| 73      | OSC     | Oscillator terminal    | -   | 3.4 |
| 74      | /RESET  | (Connecting to VCC)    | -   | 5.0 |
| 75      | DO      | Key data output        | O   | 4.5 |
| 76      | CE      | LCD driver chip enable | I   | 0   |
| 77      | CLK     | LCD clock              | I   | 0   |
| 78      | DI      | LCD data               | I   | 0   |
| 79, 80  | S1,2    | LCD segment data       | O   | 2.4 |

### 9.3. CD Servo Block

IC2 : MN662741RPA

| Pin No. | Port   | Description              | I/O | (V) |
|---------|--------|--------------------------|-----|-----|
| 1       | BCLK   | Bit clock output         | O   | 2.5 |
| 2       | LRCK   | L/R select output        | O   | 2.5 |
| 3       | SRDATA | Serial data output       | O   | 2.5 |
| 4       | VDD    | +5V digital power supply | -   | 5.1 |
| 5       | DVSS1  | Digital ground           | -   | 0   |
| 6       | TX     | Not used                 | -   | -   |
| 7       | MCLK   | MPU command clock        | I   | 4.6 |
| 8       | MDATA  | MPU command data         | I   | 0.2 |
| 9       | MLD    | MPU command load         | I   | 4.8 |
| 10      | SENSE  | Not used                 | -   | -   |
| 11      | /FLOCK | Not used                 | -   | -   |
| 12      | /TLOCK | Not used                 | -   | -   |
| 13      | BLKCK  | Sub-code block clock     | O   | 0   |
| 14      | SQCK   | Q code external clock    | I   | 0   |
| 15      | SUBQ   | Q code output            | O   | 5.1 |
| 16      | DMUTE  | Mute input               | I   | 2.9 |
| 17      | STAT   | Status output            | O   | 0   |
| 18      | /RST   | Reset input              | I   | 5.0 |
| 19, 20  |        | Not used                 | -   | -   |
| 21      | TRV    | Forced traverse output   | -   | 2.5 |
| 22      | TVD    | Traverse drive output    | O   | 2.5 |
| 23      | PC     | Not used                 | -   | -   |
| 24      | ECM    | Spindle motor drive      | O   | 2.4 |
| 25      | ECS    | Spindle motor drive      | O   | 2.5 |
| 26      | KICK   | Kick pulse output        | O   | 2.4 |
| 27      | TRD    | Tracking drive           | O   | 2.5 |
| 28      | FOD    | Focus drive              | O   | 2.6 |
| 29      | VREF   | D/A reference voltage    | I   | 2.5 |
| 30      | FBAL   | Focus balance adjust     | O   | 2.5 |
| 31      | TBAL   | Tracking balance adjust  | O   | 2.5 |
| 32      | FE     | Focus error signal       | I   | 2.5 |
| 33      | TE     | Tracking error signal    | I   | 2.5 |
| 34      | RFENV  | RF envelope signal       | I   | 2.5 |
| 35      | VDET   | Vibration detection      | I   | 0   |
| 36      | OFTR   | Off track signal         | I   | 0   |
| 37      | TRCRS  | Track cross signal       | I   | 2.7 |
| 38      | /RFDET | RF detection signal      | I   | 0   |
| 39      | BDO    | Drop out signal          | I   | 0   |
| 40      | LDON   | Laser on/off control     | O   | 5.0 |
| 41      | TES    | Tracking error shunt     | O   | 0   |
| 42      | PLAY   | Not used                 | -   | -   |
| 43      | WVEL   | Not used                 | -   | -   |
| 44      | ARE    | RF signal                | I   | 2.5 |
| 45      | IREF   | Reference current input  | I   | 1.2 |
| 46      | DRF    | Connecting to ground     | -   | 0   |
| 47      | DSL    | DSL loop filter          | I/O | 2.5 |
| 48      | PLL    | PLL loop filter          | I/O | 2.3 |
| 49      | VCOF   | Connecting to VDD        | -   | 5.1 |
| 50      | AVDD2  | +5V analog power supply  | -   | 5.1 |
| 51      | AFSS2  | Analog ground            | -   | 0   |
| 52-55   |        | Not used                 | -   | -   |
| 56      | SBCK   | (Connecting to ground)   | -   | 0   |
| 57      | VSS    | Ground                   | -   | 0   |
| 58      | X1     | Crystal oscillator       | -   | 2.5 |
| 59      | X2     | Crystal oscillator       | -   | 2.9 |
| 60      | VDD    | +5V power supply         | -   | 5.1 |
| 61-69   |        | Not used                 | -   | -   |
| 70      | /RST2  | Connecting to ground     | -   | 0   |
| 71      | /TEST  | Connecting to VDD        | -   | 5.1 |
| 72      | AVDD1  | +5V analog power supply  | -   | 4.8 |
| 73      | OUTL   | Audio Lch output         | O   | 2.4 |
| 74      | AVSS1  | Analog ground            | -   | 0   |

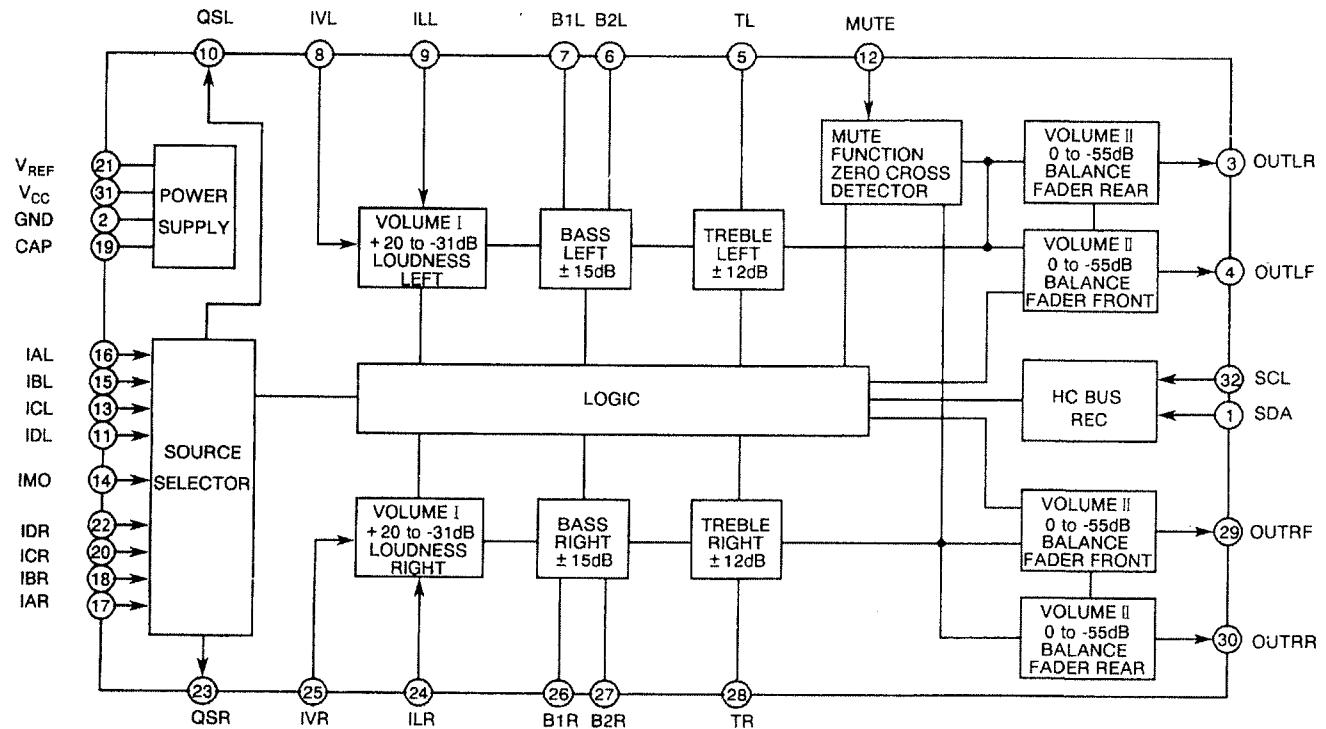
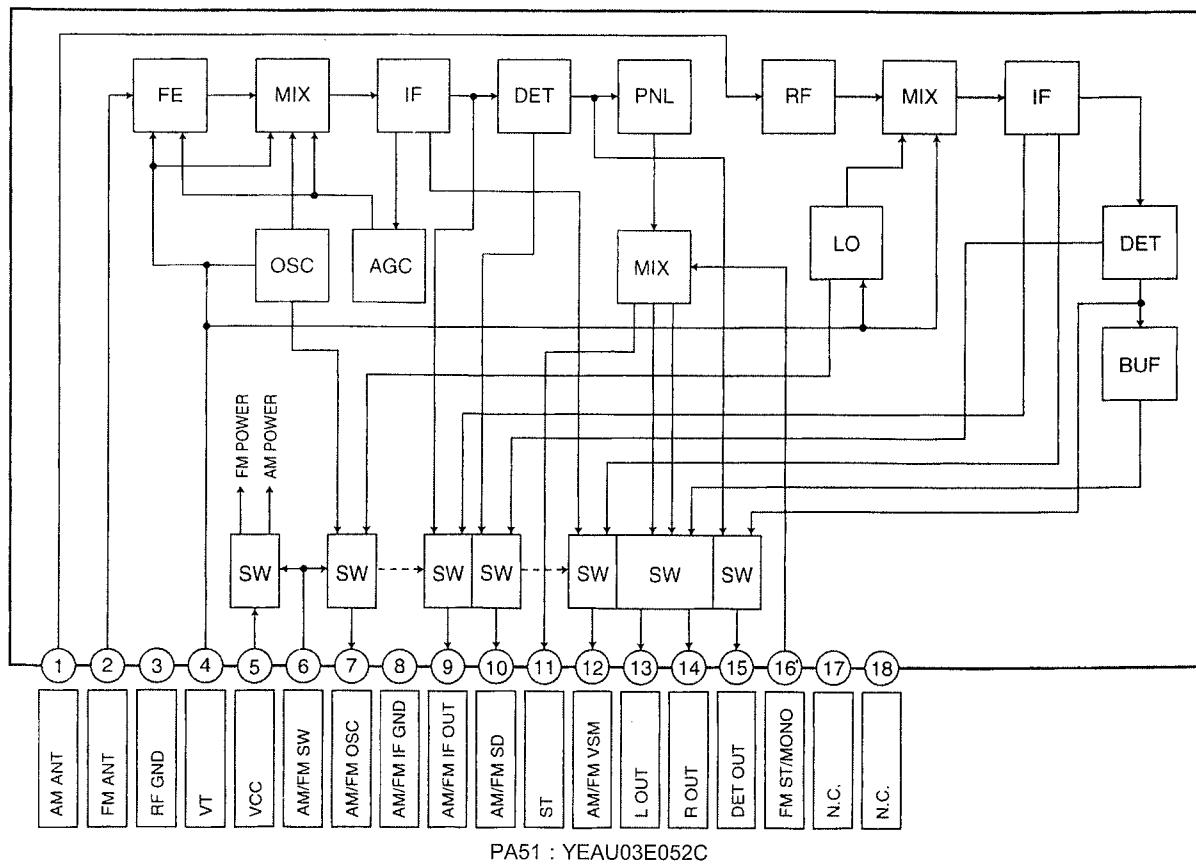
|    |        |                      |   |     |
|----|--------|----------------------|---|-----|
| 75 | OUTR   | Audio Rch output     | O | 2.4 |
| 76 | RSEL   | connecting to VDD    | I | 5.1 |
| 77 | CSEL   | Connecting to ground | - | 0   |
| 78 | ISRDAT | Serial data input    | I | 2.5 |
| 79 | ILRCK  | L/R select input     | I | 2.5 |
| 80 | IBCLK  | Bit clock input      | I | 2.5 |

IC4 : MB89193-233E

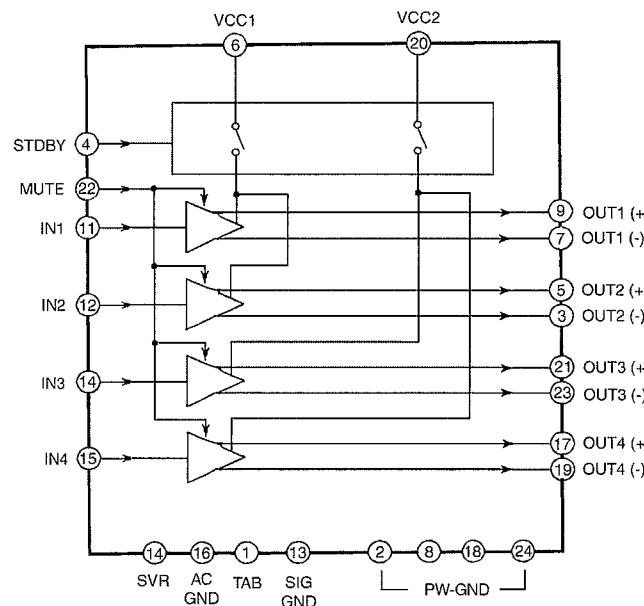
| Pin No. | Port     | Description            | I/O | (V) |
|---------|----------|------------------------|-----|-----|
| 1       | LMTR_FWD | Forward Limiter        | O   | 5.2 |
| 2       | LMTR_REV | Reverse Limiter        | O   | 5.2 |
| 3       | LO/SP    | Motor control          | O   | 0   |
| 4       | REST     | Reset                  | I   | 4.8 |
| 5       | TEST     | (Connecting to ground) | -   | 0   |
| 6       | /RST     | Reset                  | I   | 4.9 |
| 7       | X0       | Crystal oscillator     | -   | 2.1 |
| 8       | X1       | Crystal oscillator     | -   | 2.6 |
| 9       | VSS      | Ground                 | -   | 0   |
| 10      | SW4      | Switch input           | I   | 0   |
| 11      | BLKCK    | Sub-code block clock   | I   | 0   |
| 12      | SW1      | Switch input           | I   | 4.9 |
| 13      | SW2      | Switch input           | I   | 5.0 |
| 14      | SW3      | Switch input           | I   | 0   |
| 15      | SUBQ     | Q code input           | I   | 2.5 |
| 16      | STAT     | Status input           | I   | 5.0 |
| 17      | SQCK     | Q code external clock  | O   | 5.1 |
| 18      | SRST     | Reset output           | O   | 4.9 |
| 19      | DMUTE    | Mute output            | O   | 0   |
| 20      | MLD      | MPU command load       | O   | 4.8 |
| 21      | MDATA    | MPU command data       | O   | 0.2 |
| 22      | MCLK     | MPU command clock      | O   | 4.6 |
| 23      | POSC     | Oscillator control     | O   | 0   |
| 24      | ACC      | ACC input              | I   | 0.2 |
| 25      | C1       | CD clock               | I   | 4.9 |
| 26      | DATA     | CD data                | I/O | 0   |
| 27      | C2       | CD clock               | I   | 5.2 |
| 28      | VCC      | +5V power supply       | -   | 5.2 |

# 10 PACKAGE AND IC BLOCK DIAGRAM

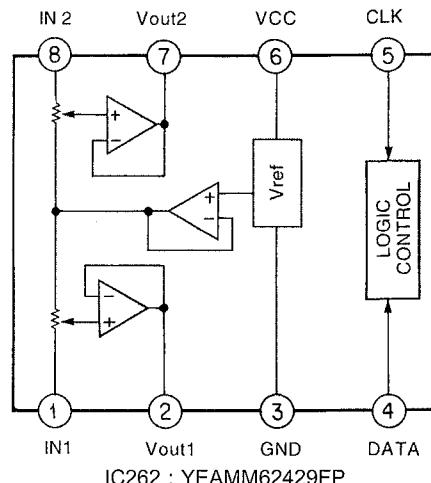
## 10.1. Main Block



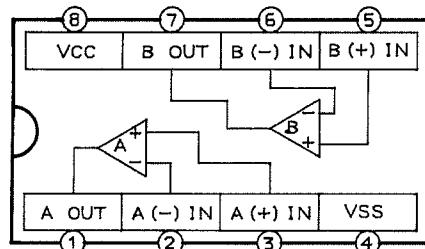
IC201 : YEAMEA6320TT



IC241 : C1EA00000021

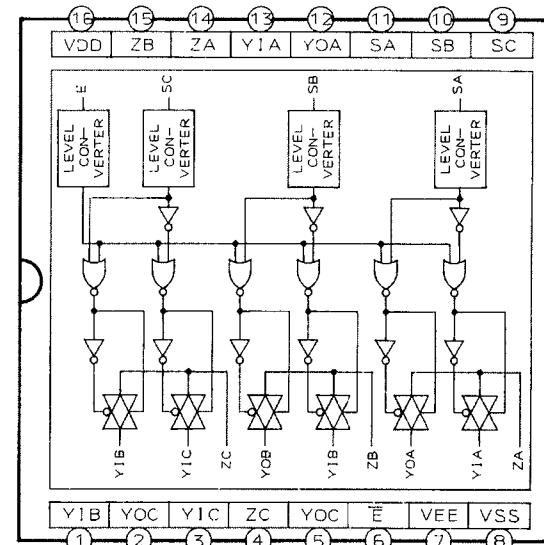


IC262 : YEAMM62429FP

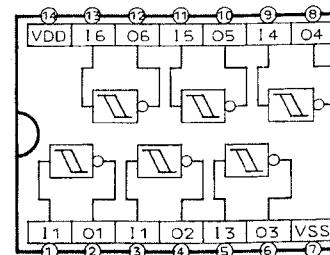


IC203 : YEAMPC4570T1

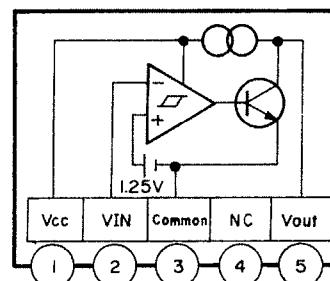
IC261,280 : YEAMM5218AFE



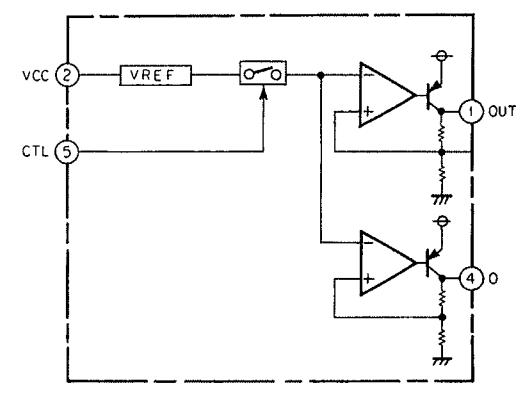
IC204 : YEAMPD4053BG



IC650 : YEAMC14584BE

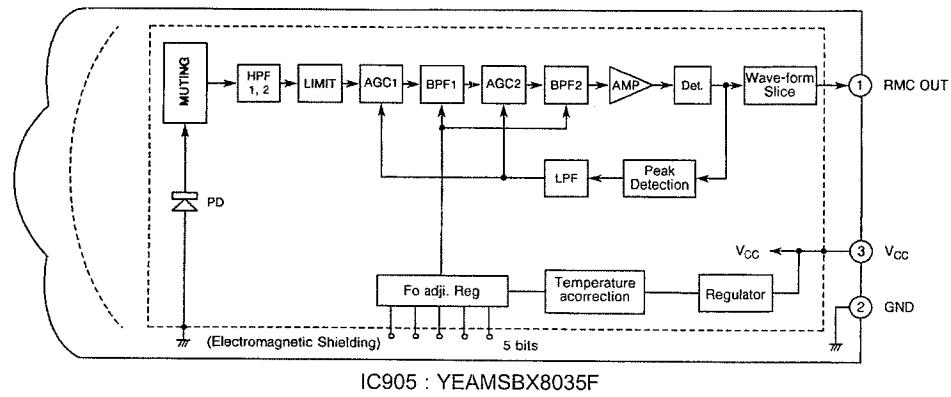


IC701 : YEAMM51945AL



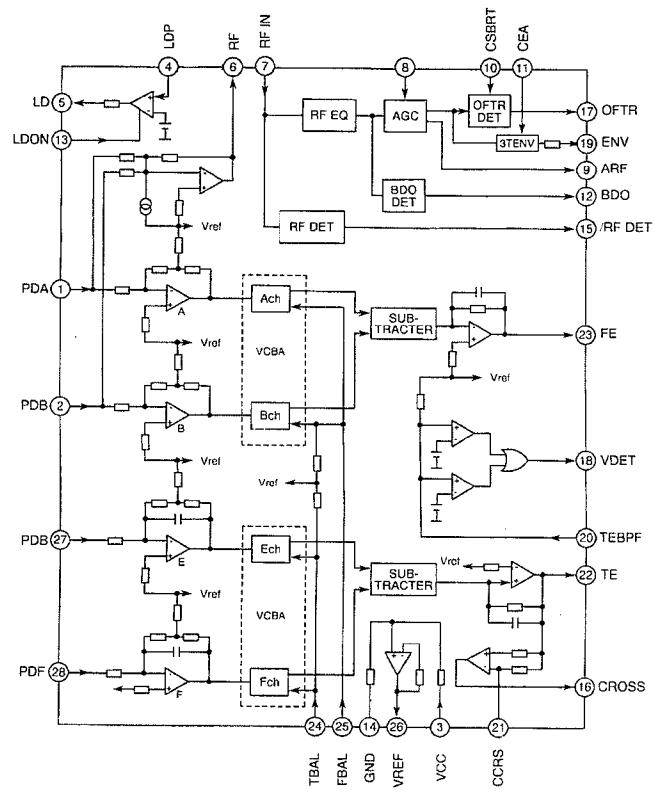
IC702 : YEAMA41W12ST

## 10.2. Display Block

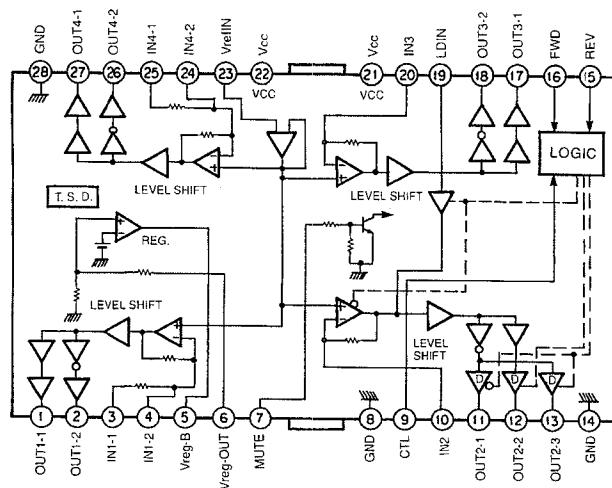


IC905 : YEAMSBX8035F

## 10.3. CD Servo Block



IC1 : AN8835SBE1



IC3 : BA6795FPE2

# 11 REPLACEMENT PARTS LIST

Notes :

1. Be sure to make your orders of replacement parts according to this list.
2. Important safety notice: Components, identified by  $\Delta$  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts
3. Location keys in the remarks column indicates the general location of the parts shown in the exploded drawing, as in a road map
4. The marking (RTL) indicates that Retention Time is limited for this item. After the discontinuation of assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.
5. "A" or "B" marks in remarks column are indicate as follows :
  - A : CQ-DF600W
  - B : CQ-DF200W

## 11.1. IC's and Transistors

MAIN BLOCK [E6784A]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| IC201    | YEAMEA6320TT | IC                      |         |
| IC203    | YEAMPC4570T1 | IC                      |         |
| IC204    | YEAMPD4053BG | IC                      |         |
| IC241    | C1EA00000021 | IC                      |         |
| IC261    | YEAMM5218AFE | IC                      | A       |
| IC262    | YEAMM62429FP | IC                      | A       |
| IC280    | YEAMM5218AFE | IC                      |         |
| IC601    | C2ABGF000015 | IC                      |         |
| IC650    | YEAMC14584BE | IC                      |         |
| IC701    | YEAMMS1945AL | IC                      |         |
| IC702    | YEAMA41W12ST | IC                      |         |
| IC704    | AN78N08      | IC                      |         |
| IC800    | AN7805F      | IC                      |         |
| PA51     | YEAAU03E052C | Electronic Tuner        |         |
| Q51      | YEANA114YKTX | Transistor              |         |
| Q53      | YEANA114YKTX | Transistor              |         |
| Q54      | B1GBCFNN0005 | Transistor              |         |
| Q230     | YEANC143TKT  | Transistor              |         |
| Q231     | YEANC143TKT  | Transistor              |         |
| Q270     | YEANC143TKT  | Transistor              | A       |
| Q291     | YEANA144EKTX | Transistor              | A       |
| Q292     | YEANC323TKT  | Transistor              | A       |
| Q330     | YEANC143TKT  | Transistor              |         |
| Q331     | YEANC143TKT  | Transistor              |         |
| Q401     | YEAN2SK536TB | Transistor              |         |
| Q660     | YEANA114EKTX | Transistor              |         |
| Q661     | YEANA114EKTX | Transistor              |         |
| Q664     | YEANA114YKTX | Transistor              |         |
| Q671     | YEANA114EKTX | Transistor              |         |
| Q672     | YEANA114EKTX | Transistor              |         |
| Q701     | YEAND1859T   | Transistor              |         |
| Q703     | YEANB1243QRT | Transistor              |         |
| Q704     | B1GBCFJN0005 | Transistor              |         |
| Q705     | 2SD2139TA    | Transistor              |         |
| Q707     | YEANFP1F3PT1 | Transistor              |         |
| Q801     | B1GBCFNN0005 | Transistor              |         |
| Q802     | B1GBCFNN0005 | Transistor              |         |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| Q803     | YEANB1236AT  | Transistor              |         |
| Q804     | B1GBCFJN0005 | Transistor              |         |

DISPLAY BLOCK [E8597A]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| IC901    | YEAMLC75884W | IC                      |         |
| IC905    | YEAMSBX8035F | IC                      |         |
| Q902     | YEANSSTA06T  | Transistor              |         |
| Q903     | YEANSSTA06T  | Transistor              |         |

## 11.2. Diodes

MAIN BLOCK [E6784A]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| D201     | MA151KTX     | Diode                   |         |
| D261     | YEADRD51M2T1 | Diode                   | A       |
| D611     | LN25RP       | LED                     |         |
| D640     | MA8056LMHTX  | Diode                   |         |
| D680     | MA151KTX     | Diode                   |         |
| D681     | YEADRD51M2T1 | Diode                   |         |
| D682     | MA151KTX     | Diode                   |         |
| D683     | YEADRD51M2T1 | Diode                   |         |
| D701     | YEADDSA3A2   | Diode                   |         |
| D702     | MA151KTX     | Diode                   |         |
| D703     | YEADRD56M3T1 | Diode                   |         |
| D704     | MA721TX      | Diode                   |         |
| D705     | MA704TW      | Diode                   |         |
| D706     | YEADRD51M2T1 | Diode                   |         |
| D707     | YEADRB100AT  | Diode                   |         |
| D708     | YEADRD91M1T2 | Diode                   |         |
| D709     | YEADRB100AT  | Diode                   |         |
| D710     | MA721TX      | Diode                   |         |
| D712     | MA1091LMTA   | Diode                   |         |
| D715     | YEADRB100AT  | Diode                   |         |
| D716     | YEADRB100AT  | Diode                   |         |
| D801     | MA153TX      | Diode                   |         |
| D802     | YEADRD27M2T1 | Diode                   |         |

DISPLAY BLOCK [E8597A]

| Ref. No. | Part No.    | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
| D900     | LN1271RAL   | LED                     |         |
| D926     | MA8056LMHTX | Diode                   |         |
| D927     | MA8056LMHTX | Diode                   |         |
| D928     | MA8056LMHTX | Diode                   |         |
| D929     | MA8056LMHTX | Diode                   |         |
| D930     | MA8047MTX   | Diode                   |         |

SUB BLOCK [E8497B]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| D642     | LNJ306G5TUWQ | LED                     |         |
| D643     | LNJ306G5TUWQ | LED                     |         |

## 11.3. Capacitors

MAIN BLOCK [E6784A]

| Ref. No. | Part No.     | Part Name & Description         | Remarks |
|----------|--------------|---------------------------------|---------|
| C51      | ECEA1CKA470I | Electrolytic, 47 $\mu$ F 16WV   |         |
| C52      | YECUS1H103KX | Ceramic, 0.01 $\mu$ F 50WV      |         |
| C53      | YECUS1H101JM | Ceramic, 100PF 50WV             |         |
| C54      | YECUS1H103KX | Ceramic, 0.01 $\mu$ F 50WV      |         |
| C57      | YECUS1E223KX | Ceramic, 0.022 $\mu$ F 25WV     |         |
| C58      | YECUS1E223KX | Ceramic, 0.022 $\mu$ F 25WV     |         |
| C60      | YECUS1E104ZF | Ceramic, 0.1 $\mu$ F 25WV       |         |
| C61      | YECUS1H103KX | Ceramic, 0.01 $\mu$ F 50WV      |         |
| C201     | YECUS1H101JM | Ceramic, 100PF 50WV             |         |
| C202     | YECUS1H820JM | Ceramic, 82PF 50WV              |         |
| C203     | ECEA1HKA3R3I | Electrolytic, 3.3 $\mu$ F 50WV  |         |
| C204     | ECEA1HKA3R3I | Electrolytic, 3.3 $\mu$ F 50WV  |         |
| C205     | ECEA1HKAR33I | Electrolytic, 0.33 $\mu$ F 50WV |         |
| C207     | YECUS1C224KX | Ceramic, 0.22 $\mu$ F 16WV      |         |

| Ref. No. | Part No.     | Part Name & Description   | Remarks |
|----------|--------------|---------------------------|---------|
| C208     | YECUS1E333KX | Ceramic, 0.033μF 25WV     |         |
| C209     | YECUS1H562KX | Ceramic, 0.0056μF 50WV    |         |
| C210     | ECEA1CKA470I | Electrolytic, 47μF 16WV   |         |
| C211     | F1K1E334A022 | Ceramic, 0.33μF 25WV      |         |
| C217     | YECUS1C104KX | Ceramic, 0.1μF 16WV       |         |
| C218     | YECUS1C104KX | Ceramic, 0.1μF 16WV       |         |
| C220     | YECUS1H123KX | Ceramic, 0.012μF 50WV     |         |
| C221     | ECEA1HKAR33I | Electrolytic, 0.33μF 50WV |         |
| C222     | YECUS1H103KX | Ceramic, 0.01μF 50WV      |         |
| C223     | ECEA0JKA470I | Electrolytic, 47μF 6.3WV  |         |
| C230     | ECEA1CKA100I | Electrolytic, 10μF 16WV   |         |
| C231     | ECEA1CKA100I | Electrolytic, 10μF 16WV   |         |
| C238     | YECUS1H221JM | Ceramic, 220PF 50WV       |         |
| C239     | YECUS1H221JM | Ceramic, 220PF 50WV       |         |
| C241     | ECEA1HKAR47I | Electrolytic, 0.47μF 50WV |         |
| C242     | YECUS1H122KX | Ceramic, 0.0012μF 50WV    |         |
| C244     | ECEA1HKAR47I | Electrolytic, 0.47μF 50WV |         |
| C245     | YECUS1H122KX | Ceramic, 0.0012μF 50WV    |         |
| C248     | ECA1CDT472Y  | Electrolytic, 4700μF 16WV |         |
| C260     | ECEA1CKA100I | Electrolytic, 10μF 16WV   | A       |
| C261     | ECEA0JKA470I | Electrolytic, 47μF 6.3WV  | A       |
| C262     | YECUS1C224KX | Ceramic, 0.22μF 16WV      | A       |
| C263     | YECUS1E223KX | Ceramic, 0.022μF 25WV     | A       |
| C264     | ECEA1HKA2R2I | Electrolytic, 2.2μF 50WV  | A       |
| C266     | ECEA0JKA470I | Electrolytic, 47μF 6.3WV  | A       |
| C270     | ECEA1CKA100I | Electrolytic, 10μF 16WV   | A       |
| C274     | YECUS1H221JM | Ceramic, 220PF 50WV       | A       |
| C275     | YECUS1H221JM | Ceramic, 220PF 50WV       | A       |
| C280     | YECUS1C104KX | Ceramic, 0.1μF 16WV       |         |
| C281     | YECUS1H102KX | Ceramic, 0.001μF 50WV     |         |
| C282     | ECEA1AKA220I | Electrolytic, 22μF 10WV   |         |
| C283     | YECUS1H103KX | Ceramic, 0.01μF 50WV      |         |
| C298     | YECUV1C224KX | Ceramic, 0.22μF 16WV      | A       |
| C299     | F1J1H102A034 | Ceramic, 0.001μF 50WV     | A       |
| C301     | YECUS1H101JM | Ceramic, 100PF 50WV       |         |
| C302     | YECUS1H820JM | Ceramic, 82PF 50WV        |         |
| C303     | ECEA1HKA3R3I | Electrolytic, 3.3μF 50WV  |         |
| C304     | ECEA1HKA3R3I | Electrolytic, 3.3μF 50WV  |         |
| C305     | ECEA1HKAR33I | Electrolytic, 0.33μF 50WV |         |
| C307     | YECUS1C224KX | Ceramic, 0.22μF 16WV      |         |
| C308     | YECUS1E333KX | Ceramic, 0.033μF 25WV     |         |
| C309     | YECUS1H562KX | Ceramic, 0.0056μF 50WV    |         |
| C310     | ECEA0JKA101I | Electrolytic, 100μF 6.3WV |         |
| C311     | ECEA1CKA470I | Electrolytic, 47μF 16WV   |         |
| C317     | YECUS1C104KX | Ceramic, 0.1μF 16WV       |         |
| C318     | YECUS1C104KX | Ceramic, 0.1μF 16WV       |         |
| C320     | YECUS1H123KX | Ceramic, 0.012μF 50WV     |         |
| C321     | ECEA1HKAR33I | Electrolytic, 0.33μF 50WV |         |
| C322     | YECUS1H103KX | Ceramic, 0.01μF 50WV      |         |
| C323     | ECEA0JKA470I | Electrolytic, 47μF 6.3WV  |         |
| C330     | ECEA1CKA100I | Electrolytic, 10μF 16WV   |         |
| C331     | ECEA1CKA100I | Electrolytic, 10μF 16WV   |         |
| C338     | YECUS1H221JM | Ceramic, 220PF 50WV       |         |
| C339     | YECUS1H221JM | Ceramic, 220PF 50WV       |         |
| C341     | ECEA1HKAR47I | Electrolytic, 0.47μF 50WV |         |
| C342     | YECUS1H122KX | Ceramic, 0.0012μF 50WV    |         |
| C344     | ECEA1HKAR47I | Electrolytic, 0.47μF 50WV |         |
| C345     | YECUS1H122KX | Ceramic, 0.0012μF 50WV    |         |
| C346     | ECEA1HKA010I | Electrolytic, 1μF 50WV    |         |
| C347     | ECEA1AKS101  | Electrolytic, 100μF 10WV  |         |
| C348     | ECEA1HKS2R2I | Electrolytic, 2.2μF 50WV  |         |
| C360     | YECUS1C104KX | Ceramic, 0.1μF 16WV       |         |
| C361     | YECUS1C104KX | Ceramic, 0.1μF 16WV       |         |
| C380     | YECUS1C104KX | Ceramic, 0.1μF 16WV       |         |
| C381     | YECUS1H102KX | Ceramic, 0.001μF 50WV     |         |
| C402     | ECEA1AKS221I | Electrolytic, 220μF 10WV  |         |
| C403     | ECEA1HKA4R7I | Electrolytic, 4.7μF 50WV  |         |
| C404     | YECUS1H103KX | Ceramic, 0.01μF 50WV      |         |
| C405     | YECUS1H102KX | Ceramic, 0.001μF 50WV     |         |
| C510     | YECUS1H103KX | Ceramic, 0.01μF 50WV      |         |
| C601     | YECUS1E104ZF | Ceramic, 0.1μF 25WV       | A       |
| C603     | YECUS1E104ZF | Ceramic, 0.1μF 25WV       |         |
| C604     | YECUS1H103KX | Ceramic, 0.01μF 50WV      |         |

| Ref. No. | Part No.     | Part Name & Description    | Remarks |
|----------|--------------|----------------------------|---------|
| C606     | YECUS1H220JM | Ceramic, 22PF 50WV         |         |
| C607     | YECUS1H220JM | Ceramic, 22PF 50WV         |         |
| C608     | ECEA0JKA331I | Electrolytic, 330μF 6.3WV  |         |
| C609     | EECS5R5H473  | Electrolytic, 0.047F 5.5WV |         |
| C613     | YECUV1A102KX | Ceramic, 0.001μF 100WV     |         |
| C619     | YECUS1E104ZF | Ceramic, 0.1μF 25WV        |         |
| C635     | YECUS1H680JM | Ceramic, 68PF 50WV         |         |
| C636     | YECUS1H101JM | Ceramic, 100PF 50WV        |         |
| C650     | YECUS1H103KX | Ceramic, 0.01μF 50WV       |         |
| C651     | ECEA0JKA470I | Electrolytic, 47μF 6.3WV   |         |
| C660     | ECEA0JKA470I | Electrolytic, 47μF 6.3WV   |         |
| C661     | YECUS1H103KX | Ceramic, 0.01μF 50WV       |         |
| C662     | ECEA1CKA100I | Electrolytic, 10μF 16WV    |         |
| C663     | YECUS1H103KX | Ceramic, 0.01μF 50WV       |         |
| C680     | ECSH1CY225CR | Tantalum, 2.2μF 16WV       |         |
| C681     | ECSH1CY225CR | Tantalum, 2.2μF 16WV       |         |
| C701     | ECEA1CKA101  | Electrolytic, 100μF 16WV   |         |
| C702     | ECEA1CKA100I | Electrolytic, 10μF 16WV    |         |
| C703     | ECEA1CKA101  | Electrolytic, 100μF 16WV   |         |
| C704     | ECEA0JKA470I | Electrolytic, 47μF 6.3WV   |         |
| C705     | ECEA1HKA010I | Electrolytic, 1μF 50WV     |         |
| C706     | ECEA1CKA101  | Electrolytic, 100μF 16WV   |         |
| C707     | ECEA1AKA101I | Electrolytic, 100μF 10WV   |         |
| C708     | ECEA1CKA101  | Electrolytic, 100μF 16WV   |         |
| C709     | ECEA1AKA221I | Electrolytic, 220μF 10WV   |         |
| C710     | ECA1CDT102BQ | Electrolytic, 1000μF 16WV  |         |
| C711     | F1K1E334A022 | Ceramic, 0.33μF 25WV       |         |
| C712     | EEAFC1A820H  | Electrolytic, 82μF 10WV    |         |
| C714     | ECEA0JKA101I | Electrolytic, 100μF 6.3WV  |         |
| C715     | F1K1E334A022 | Ceramic, 0.33μF 25WV       |         |
| C716     | ECSH1VC335PR | Tantalum, 3.3μF 35WV       |         |
| C717     | ECEA1CKA470I | Electrolytic, 47μF 16WV    |         |
| C719     | YECUS1H103KX | Ceramic, 0.01μF 50WV       |         |
| C800     | YECUV1H104ZF | Ceramic, 0.1μF 50WV        |         |
| C801     | ECEA1CKA101  | Electrolytic, 100μF 16WV   |         |
| C802     | F1K1E334A022 | Ceramic, 0.33μF 25WV       |         |
| C803     | ECEA1AKA221I | Electrolytic, 220μF 10WV   |         |
| C804     | YECUS1E104ZF | Ceramic, 0.1μF 25WV        |         |

## DISPLAY BLOCK [E8597A]

| Ref. No. | Part No.     | Part Name & Description     | Remarks |
|----------|--------------|-----------------------------|---------|
| C905     | YECUM2A683JN | Plastic Film, 0.068μF 100WV |         |
| C906     | YECUS1C104KX | Ceramic, 0.1μF 16WV         |         |
| C907     | ECEV1CA220SR | Electrolytic, 22μF 16WV     |         |
| C910     | YECUS1H102KX | Ceramic, 0.001μF 50WV       |         |
| C911     | YECUS1C104KX | Ceramic, 0.1μF 16WV         |         |
| C914     | YECUS1C104KX | Ceramic, 0.1μF 16WV         |         |
| C915     | YECUS1C104KX | Ceramic, 0.1μF 16WV         |         |
| C920     | YECUS1C104KX | Ceramic, 0.1μF 16WV         |         |
| C921     | YECUS1C104KX | Ceramic, 0.1μF 16WV         |         |
| C923     | YECUS1H681JM | Ceramic, 680PF 50WV         |         |

## 11.4. Resistors

## MAIN BLOCK [E6784A]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| J502     | ERJ6GEY0R00V | Chip, 0Ω 1/10W          |         |
| J503     | ERJ6GEY0R00V | Chip, 0Ω 1/10W          |         |
| J504     | ERJ6GEY0R00V | Chip, 0Ω 1/10W          |         |
| J505     | ERJ6GEY0R00V | Chip, 0Ω 1/10W          |         |
| J506     | ERJ6GEY0R00V | Chip, 0Ω 1/10W          |         |
| J507     | ERJ6GEY0R00V | Chip, 0Ω 1/10W          |         |
| J508     | ERJ6GEY0R00V | Chip, 0Ω 1/10W          |         |
| J509     | ERJ6GEY0R00V | Chip, 0Ω 1/10W          |         |
| J601     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J602     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J603     | ERJ8GX0R00V  | Chip, 0Ω 1/8W           |         |
| J604     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J605     | ERJ6GEY0R00V | Chip, 0Ω 1/10W          |         |
| J606     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J607     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J608     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| J609     | ERJ8GX0R00V  | Chip, 0Ω 1/8W           |         |
| J610     | ERJ8GX0R00V  | Chip, 0Ω 1/8W           |         |
| J611     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J612     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J613     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J614     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J615     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J616     | ERJ8GX0R00V  | Chip, 0Ω 1/8W           |         |
| J617     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J618     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J619     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J620     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J621     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J622     | ERJ8GX0R00V  | Chip, 0Ω 1/8W           |         |
| J623     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J624     | ERJ8GX0R00V  | Chip, 0Ω 1/8W           |         |
| J625     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J626     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J627     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J628     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J629     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J630     | ERJ8GX0R00V  | Chip, 0Ω 1/8W           |         |
| J631     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J632     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J633     | ERJ8GX0R00V  | Chip, 0Ω 1/8W           |         |
| J634     | ERJ8GX0R00V  | Chip, 0Ω 1/8W           |         |
| J635     | ERJ8GX0R00V  | Chip, 0Ω 1/8W           |         |
| J636     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J637     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J638     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J639     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J640     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J641     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J642     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J643     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J644     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| J645     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| R50      | ERJ6GEYJ5R6  | Chip, 5.6Ω 1/10W        |         |
| R51      | ERJ6GEYJ473  | Chip, 47kΩ 1/10W        |         |
| R52      | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        |         |
| R53      | ERJ6GEYJ391  | Chip, 390Ω 1/10W        |         |
| R54      | ERJ8GEYJ392V | Chip, 3.9kΩ 1/8W        |         |
| R56      | ERJ6GEYJ392  | Chip, 3.9kΩ 1/10W       |         |
| R57      | ERJ6GEYJ223  | Chip, 22kΩ 1/10W        |         |
| R59      | ERJ6GEYJ682  | Chip, 6.8kΩ 1/10W       |         |
| R60      | ERJ6GEYJ102  | Chip, 1kΩ 1/10W         |         |
| R201     | ERJ8GEYJ223V | Chip, 22kΩ 1/8W         |         |
| R202     | ERJ8GEYJ183V | Chip, 18kΩ 1/8W         |         |
| R204     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        |         |
| R205     | ERJ6GEYJ472  | Chip, 4.7kΩ 1/10W       |         |
| R211     | ERJ6GEYJ123  | Chip, 12kΩ 1/10W        |         |
| R212     | ERJ6GEYJ473  | Chip, 47kΩ 1/10W        |         |
| R213     | ERJ6GEYJ183  | Chip, 18kΩ 1/10W        |         |
| R214     | ERJ6GEYJ752  | Chip, 7.5kΩ 1/10W       |         |
| R215     | ERJ6GEYJ272  | Chip, 2.7kΩ 1/10W       |         |
| R216     | ERJ8GEYJ682V | Chip, 6.8kΩ 1/8W        |         |
| R217     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        |         |
| R218     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        |         |
| R225     | ERJ6GEYJ102  | Chip, 1kΩ 1/10W         |         |
| R226     | ERJ6GEYJ333  | Chip, 33kΩ 1/10W        |         |
| R230     | ERJ6GEYJ221  | Chip, 220Ω 1/10W        |         |
| R232     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        |         |
| R235     | ERJ6GEYJ221  | Chip, 220Ω 1/10W        |         |
| R237     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        |         |
| R240     | ERJ6GEYJ561  | Chip, 560Ω 1/10W        |         |
| R242     | ERJ6GEYJ561  | Chip, 560Ω 1/10W        |         |
| R255     | ERJ6GEYJ562  | Chip, 5.6kΩ 1/10W       | A       |
| R256     | ERJ8GEYJ472V | Chip, 4.7kΩ 1/8W        | A       |
| R257     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        | A       |
| R260     | ERJ6GEYJ104  | Chip, 100kΩ 1/10W       | A       |
| R261     | ERJ6GEYJ151  | Chip, 150Ω 1/10W        | A       |
| R262     | ERJ8GEYJ103V | Chip, 10kΩ 1/8W         | A       |
| R263     | ERJ8GEYJ822V | Chip, 8.2kΩ 1/8W        | A       |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R264     | ERJ8GEYJ433V | Chip, 43kΩ 1/8W         | A       |
| R267     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        | A       |
| R268     | ERJ6GEYJ223  | Chip, 22kΩ 1/10W        | A       |
| R270     | ERJ6GEYJ151  | Chip, 150Ω 1/10W        | A       |
| R271     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        | A       |
| R276     | ERJ6GEYJ470  | Chip, 47Ω 1/10W         | A       |
| R277     | ERJ6GEYJ470  | Chip, 47Ω 1/10W         | A       |
| R278     | ERJ6GEY0R00V | Chip, 0Ω 1/10W          | A       |
| R280     | ERJ6GEYJ104  | Chip, 100kΩ 1/10W       |         |
| R281     | ERJ6GEYJ473  | Chip, 47kΩ 1/10W        |         |
| R282     | ERJ6GEYJ472  | Chip, 4.7kΩ 1/10W       |         |
| R283     | ERJ6GEYJ123  | Chip, 12kΩ 1/10W        |         |
| R284     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        |         |
| R298     | ERJ6GEYJ224  | Chip, 220kΩ 1/10W       | A       |
| R299     | ERJ6GEYJ912  | Chip, 9.1kΩ 1/10W       | A       |
| R301     | ERJ8GEYJ223V | Chip, 22kΩ 1/8W         |         |
| R302     | ERJ6GEYJ183  | Chip, 18kΩ 1/10W        |         |
| R304     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        |         |
| R305     | ERJ6GEYJ472  | Chip, 4.7kΩ 1/10W       |         |
| R311     | ERJ6GEYJ123  | Chip, 12kΩ 1/10W        |         |
| R312     | ERJ6GEYJ473  | Chip, 47kΩ 1/10W        |         |
| R313     | ERJ6GEYJ183  | Chip, 18kΩ 1/10W        |         |
| R314     | ERJ6GEYJ752  | Chip, 7.5kΩ 1/10W       |         |
| R315     | ERJ6GEYJ272  | Chip, 2.7kΩ 1/10W       |         |
| R316     | ERJ6GEYJ682  | Chip, 6.8kΩ 1/10W       |         |
| R317     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        |         |
| R318     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        |         |
| R330     | ERJ6GEYJ221  | Chip, 220Ω 1/10W        |         |
| R332     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        |         |
| R335     | ERJ6GEYJ221  | Chip, 220Ω 1/10W        |         |
| R337     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        |         |
| R340     | ERJ6GEYJ561  | Chip, 560Ω 1/10W        |         |
| R342     | ERJ8GEYJ561V | Chip, 560Ω 1/8W         |         |
| R344     | ERJ6GEYJ223  | Chip, 22kΩ 1/10W        |         |
| R360     | ERJ6GEYJ104  | Chip, 100kΩ 1/10W       | A       |
| R380     | ERJ6GEYJ104  | Chip, 100kΩ 1/10W       |         |
| R381     | ERJ6GEYJ473  | Chip, 47kΩ 1/10W        |         |
| R382     | ERJ6GEYJ472  | Chip, 4.7kΩ 1/10W       |         |
| R383     | ERJ6GEYJ473  | Chip, 47kΩ 1/10W        |         |
| R384     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        |         |
| R401     | ERJ6GEYJ472  | Chip, 4.7kΩ 1/10W       |         |
| R402     | ERJ6GEYJ152  | Chip, 1.5kΩ 1/10W       |         |
| R403     | ERJ6GEYJ471  | Chip, 47Ω 1/10W         |         |
| R405     | ERJ6GEYJ152  | Chip, 1.5kΩ 1/10W       |         |
| R406     | ERJ6GEYJ152  | Chip, 1.5kΩ 1/10W       |         |
| R407     | ERJ8GEYJ100V | Chip, 10Ω 1/8W          |         |
| R501     | ERJ6GEY0R00V | Chip, 0Ω 1/10W          |         |
| R503     | ERJ6GEYJ102  | Chip, 1kΩ 1/10W         |         |
| R504     | ERJ8GEY0R00V | Chip, 0Ω 1/8W           |         |
| R604     | ERJ6GEYJ473  | Chip, 47kΩ 1/10W        |         |
| R605     | ERJ6GEYJ104  | Chip, 100kΩ 1/10W       |         |
| R611     | ERJ8GEYJ681V | Chip, 680Ω 1/8W         |         |
| R614     | ERJ8GEYJ563V | Chip, 56kΩ 1/8W         | A       |
| R615     | ERJ6GEYJ433  | Chip, 43kΩ 1/10W        |         |
| R618     | ERJ8GEYJ473V | Chip, 47kΩ 1/8W         |         |
| R625     | ERJ6GEYJ102  | Chip, 1kΩ 1/10W         |         |
| R626     | ERJ8GEYJ102V | Chip, 1kΩ 1/8W          |         |
| R627     | ERJ8GEYJ102V | Chip, 1kΩ 1/8W          |         |
| R628     | ERJ8GEYJ102V | Chip, 1kΩ 1/8W          |         |
| R629     | ERJ8GEYJ102V | Chip, 1kΩ 1/8W          |         |
| R634     | ERJ6GEYJ330  | Chip, 33Ω 1/10W         |         |
| R636     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        |         |
| R638     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        |         |
| R640     | ERJ6GEYJ102  | Chip, 1kΩ 1/10W         |         |
| R641     | ERJ14YJ1R0H  | Chip, 1Ω 1/4W           |         |
| R642     | ERJ6GEYJ102  | Chip, 1kΩ 1/10W         |         |
| R643     | ERJ8GEYJ102V | Chip, 1kΩ 1/8W          |         |
| R644     | ERJ6GEYJ102  | Chip, 1kΩ 1/10W         |         |
| R645     | ERJ6GEYJ102  | Chip, 1kΩ 1/10W         |         |
| R646     | ERJ6GEYJ102  | Chip, 1kΩ 1/10W         |         |
| R647     | ERJ6GEYJ184  | Chip, 180kΩ 1/10W       |         |
| R648     | ERJ6GEYJ184  | Chip, 180kΩ 1/10W       |         |
| R649     | ERJ6GEYJ102  | Chip, 1kΩ 1/10W         |         |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R650     | ERJ6GEYJ473  | Chip, 47kΩ 1/10W        |         |
| R651     | ERJ6GEYJ473  | Chip, 47kΩ 1/10W        |         |
| R652     | ERJ6GEYJ473  | Chip, 47kΩ 1/10W        |         |
| R660     | ERJ6GEYJ102  | Chip, 1kΩ 1/10W         |         |
| R661     | ERJ6GEYJ393  | Chip, 39kΩ 1/10W        |         |
| R662     | ERJ6GEYJ102  | Chip, 1kΩ 1/10W         |         |
| R663     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        |         |
| R671     | ERJ6GEYJ473  | Chip, 47kΩ 1/10W        |         |
| R672     | ERJ6GEYJ331  | Chip, 330Ω 1/10W        |         |
| R673     | ERJ6GEYJ331  | Chip, 330Ω 1/10W        |         |
| R674     | ERJ6GEYJ473  | Chip, 47kΩ 1/10W        |         |
| R675     | ERJ6GEYJ102  | Chip, 1kΩ 1/10W         |         |
| R676     | ERJ6GEYJ102  | Chip, 1kΩ 1/10W         |         |
| R680     | ERJ6GEYJ102  | Chip, 1kΩ 1/10W         |         |
| R681     | ERJ8GEYJ102V | Chip, 1kΩ 1/8W          |         |
| R682     | ERJ6GEYJ273  | Chip, 27kΩ 1/10W        |         |
| R683     | ERJ6GEYJ273  | Chip, 27kΩ 1/10W        |         |
| R684     | ERJ6GEYJ184  | Chip, 180kΩ 1/10W       |         |
| R701     | ERDS2FJ470   | Carbon, 47Ω 1/4W        |         |
| R703     | ERJ6GEYJ472  | Chip, 4.7kΩ 1/10W       |         |
| R704     | ERJ8GEYJ684V | Chip, 680kΩ 1/8W        |         |
| R705     | ERJ6GEYJ223  | Chip, 22kΩ 1/10W        |         |
| R706     | ERJ8GEYJ124V | Chip, 120kΩ 1/8W        |         |
| R707     | ERJ6GEYJ103  | Chip, 10kΩ 1/10W        |         |
| R708     | ERJ6GEYJ472  | Chip, 4.7kΩ 1/10W       |         |
| R709     | ERJ6GEYJ473  | Chip, 47kΩ 1/10W        |         |
| R710     | ERDS1FJ561   | Carbon, 560Ω 1/2W       |         |
| R712     | ERJ14YJ1R0H  | Chip, 1Ω 1/4W           |         |
| R713     | ERDS1FJ181   | Carbon, 180Ω 1/2W       |         |
| R714     | ERJ8GEYJ152V | Chip, 1.5kΩ 1/8W        |         |
| R801     | ERJ6GEYJ473  | Chip, 47kΩ 1/10W        |         |
| R802     | ERJ8GEYJ152V | Chip, 1.5kΩ 1/8W        |         |
| R804     | ERJ6GEYJ473  | Chip, 47kΩ 1/10W        |         |

## DISPLAY BLOCK [E8597A]

| Ref. No. | Part No.   | Part Name & Description | Remarks |
|----------|------------|-------------------------|---------|
| CN901    | YEAE012760 | Connector, 14P          |         |

## SUB BLOCK [E8497B]

| Ref. No. | Part No.    | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
| CJ640    | YEAE0115MPA | Connector, 15P          |         |
| CJ642    | YEAE0104MPA | Connector, 4P           |         |
| CP641    | YEAE012761  | Connector, 14P          |         |

## 11.6. Electric Parts

## SWITCHES

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| SW601    | YEAS08042    | Switch                  |         |
| SW610    | YEAS09267    | Switch                  |         |
| SW901    | YEAS09312    | Switch                  |         |
| SW902    | YEAS09312    | Switch                  |         |
| SW903    | KOH1BA000285 | Switch                  | A       |
| SW903    | YEAS09312    | Switch                  | B       |
| SW904    | KOH1BA000285 | Switch                  | A       |
| SW904    | YEAS09312    | Switch                  | B       |
| SW905    | YEAS09312    | Switch                  |         |
| SW906    | YEAS09312    | Switch                  |         |
| SW907    | YEAS09312    | Switch                  |         |
| SW908    | KOH1BA000285 | Switch                  | A       |
| SW908    | YEAS09312    | Switch                  | B       |
| SW909    | KOH1BA000285 | Switch                  | A       |
| SW909    | YEAS09312    | Switch                  | B       |
| SW910    | YEAS09312    | Switch                  |         |
| SW911    | YEAS09312    | Switch                  |         |
| SW912    | KOH1BA000285 | Switch                  | A       |
| SW912    | YEAS09312    | Switch                  | B       |
| SW913    | KOH1BA000285 | Switch                  | A       |
| SW913    | YEAS09312    | Switch                  | B       |
| SW914    | KOH1BA000285 | Switch                  | A       |
| SW914    | YEAS09312    | Switch                  | B       |
| SW915    | YEAS09312    | Switch                  |         |
| SW916    | YEAS09312    | Switch                  |         |
| SW917    | KOH1BA000285 | Switch                  | A       |
| SW917    | YEAS09312    | Switch                  | B       |
| SW918    | KOH1BA000285 | Switch                  | A       |
| SW918    | YEAS09312    | Switch                  | B       |

## CRYSTAL

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| XL601    | YEXL49U0450T | Crystal OSC             |         |

## COILS

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| L50      | YELT02M330KT | Coil                    |         |
| L620     | YELT02C101KT | Coil                    |         |
| L640     | YELTBLM32A06 | Coil                    |         |
| L641     | YELTBLM32A06 | Coil                    |         |
| L702     | YETQ026F143  | Coil                    |         |
| L800     | ELEH330KA    | Coil                    |         |
| L901     | YELT216825TG | Coil                    |         |
| L902     | YELTD75F101T | Coil                    |         |

## LCD

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| LCD901   | L5ACDLC00006 | LCD Display             | A       |
| LCD901   | L5ACBLC00002 | LCD Display             | B       |

## LAMPS

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| CFL931   | A2CA00000018 | Display Tube            | A       |
| CFL931   | A2CA00000019 | Display Tube            | B       |
| Z50      | JOLE00000002 | Neon Tube               |         |

## 11.5. Connectors

## MAIN BLOCK [E6784A]

| Ref. No. | Part No.    | Part Name & Description  | Remarks |
|----------|-------------|--------------------------|---------|
| CJ620    | YEAE14B140C | Connector, 14P FFC       |         |
| CJ651    | YEAE0616YAA | Connector, 6P            |         |
| CN201    | YEAE012504  | Connector, RCA REAR-OUT  | A       |
| CN270    | YEAE012647  | Connector, RCA S/W-OUT   | A       |
| CN280    | YEAE012503  | Connector, 1P RCA        |         |
| CN300    | YEAE02166   | Connector, RCA 4P        | B       |
| CN301    | YEAE012505  | Connector, RCA FRONT-OUT | A       |
| CN620    | YEAE012763  | Connector, 14P           |         |
| CN650    | YEAE012307  | Connector, 8P DIN        |         |
| CN701    | YEAE012748  | Connector, 16P           |         |
| CP640    | YEAE0115MX  | Connector, 15P           |         |
| CP642    | YEAE0104MX  | Connector, 4P            |         |

## THERMISTORS

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| PH720    | YERT7AR4R7MT | Thermistor              |         |

## 11.7. Accessories

## PRINTING

| Ref. No. | Part No.   | Part Name & Description | Remarks |
|----------|------------|-------------------------|---------|
|          | YEFM283484 | Operating Instructions  |         |

## INSTALLATION PARTS

| Ref. No. | Part No.    | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
|          | YEAJ02792   | Power Cord              |         |
|          | CR2025/1F   | Battery                 |         |
|          | YEFA131302  | Detachable Unit Cover   |         |
|          | YEFG04019   | Rear Support Strap      |         |
|          | YEFX0214198 | Mounting Collar         |         |
|          | YEFX9992013 | Remote Controller       |         |
|          | YEP9FZ2714  | Screws                  |         |

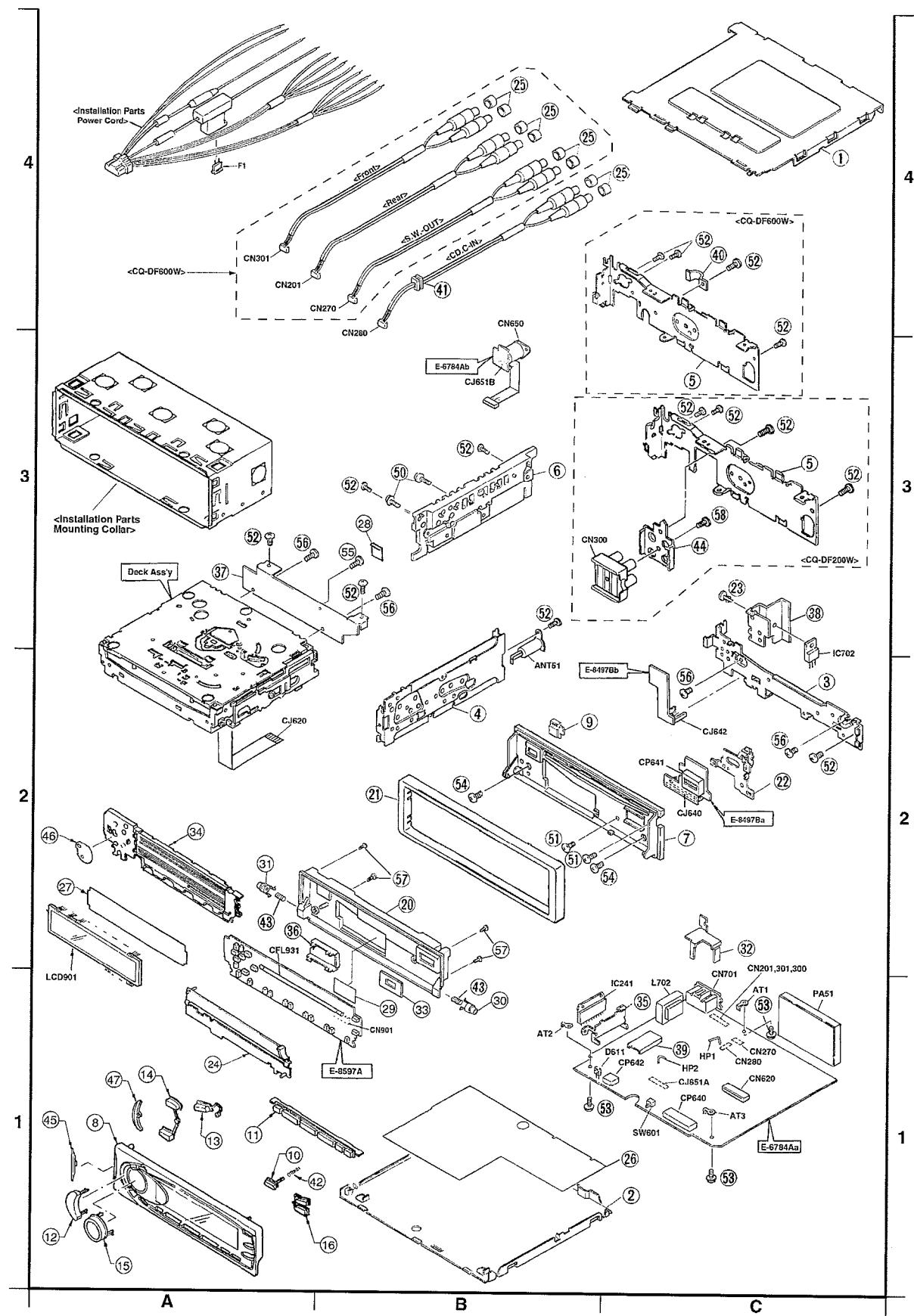
## 11.8. Mechanical Parts

## MISCELLANEOUS

| Ref. No. | Part No.     | Part Name & Description      | Remarks        |
|----------|--------------|------------------------------|----------------|
| F1       | YEAF02015    | Fuse, 15A                    | ▲              |
| ANT51    | YEAA10090    | Antenna Receptacle           |                |
| AT1-3    | YEAT03420    | Terminal                     |                |
| HP1,2    | YEAT03324    | Terminal                     |                |
| 1        | YEFA031359E  | Upper Cover                  | (4-C)          |
| 2        | YEFA05594B   | Bottom Cover                 | (1-B)          |
| 3        | YEP9FX068A   | Front Chassis Ass'y          | (2-C)          |
| 4        | YEFA09508    | Side Plate                   | (2-B)          |
| 5        | YEFA08461AK  | Rear Plate                   | A (4-C)        |
| 5        | YEFA08462AK  | Rear Plate                   | B (3-C)        |
| 6        | YEFF01921    | Heat Sink                    | (3-B)          |
| 7        | YEFC025658A  | Escutcheon Ass'y, Unit       | (2-B)          |
| 8        | YEFC026644   | Escutcheon Ass'y, Detachable | A (1-A)        |
| 8        | YEFC026651   | Escutcheon Ass'y, Detachable | B (1-A)        |
| 9        | YEFE135147   | Button, EJECT                | (2-B)          |
| 10       | YEFE135442   | Button, OPEN                 | (1-A)          |
| 11       | YEFE135941   | Button, PRESET               | A (1-A)        |
| 11       | YEFE135944   | Button, PRESET               | B (1-A)        |
| 12       | YEFE135435   | Button, VOL                  | (1-A)          |
| 13       | YEFE135436   | Button, SEL                  | (1-A)          |
| 14       | YEFE135713   | Button, BAND/SOURCE          | (1-A)          |
| 15       | YEFE135439   | Button, TUNE/TRACK           | (1-A)          |
| 16       | YEFE135940   | Button, LEVEL/DISP           | (1-A)          |
| 20       | YEFA131413   | Cover, Detachable            | (2-B)          |
| 21       | YEFC05570    | Trim Plate                   | (2-B)          |
| 22       | YEP9FX069    | Hock Bracket Ass'y           | (2-C)          |
| 23       | YEFJ05046    | Color Rivet                  | (3-C)          |
| 24       | YEFK06835    | Holder, LCD                  | (2-A)          |
| 25       | YEFR04187    | Lead Cap                     | (4-B)          |
| 26       | YEFV011813   | Insulator                    | (1-B)          |
| 27       | YEFV021596   | Optical Shade                | (2-A)          |
| 28       | YEFV011890   | Insulator                    | (3-B)          |
| 29       | YEFV03457    | Magnetic Shield              | (1-B)          |
| 30       | YEFW04156    | Shaft Collar                 | (1-B)          |
| 31       | YEFW04157    | Shaft Collar                 | (2-A)          |
| 32       | YEFX0214422  | Bracket, CN701               | (2-C)          |
| 33       | YEFV011928   | Insulator                    | (1-B)          |
| 34       | YEFX0011903  | Transparent Plate            | (2-A)          |
| 35       | YEFX0213945B | Bracket, IC241               | (1-C)          |
| 36       | YEFX0214625  | Bracket, Inverter            | (2-B)          |
| 37       | YEFX0214481  | Bracket, Deck                | (3-C)          |
| 38       | YEFX0214423  | Bracket, IC702               | (3-C)          |
| 39       | YEFX0214168  | Bracket, IC704               | (1-C)          |
| 40       | YEFX007082   | Cord Clamper                 | A (4-C)        |
| 41       | YEFX007380   | Cord Clamper                 | (4-B)          |
| 42       | YEFX0052396  | Spring                       | (1-A)          |
| 43       | YEFX0052253  | Spring                       | (2-A)<br>(1-B) |

| Ref. No. | Part No.    | Part Name & Description    | Remarks |
|----------|-------------|----------------------------|---------|
| 44       | YEFX0213650 | Bracket, RCA               | B (3-C) |
| 45       | YEFX0011904 | Transparent Plate          | (1-A)   |
| 46       | YEFX025137  | Color Screen               | (2-A)   |
| 47       | YEFX0011905 | Transparent Plate          | (1-A)   |
| 50       | YEJS06092   | Screw, 3mm * 10mm          |         |
| 51       | YEJS03020   | Screw, 2mm * 4mm           |         |
| 52       | XTB3+6FFX   | Tapping Screw, 3mm * 6mm   |         |
| 53       | YEJT03009   | Tapping Screw, 3mm * 8mm   |         |
| 54       | YEJT03156   | Tapping Screw, 2.6mm * 4mm |         |
| 55       | XTB2+5FFX   | Tapping Screw, 2mm * 5mm   |         |
| 56       | XTB26+6GFX  | Tapping Screw, 2.6mm * 6mm |         |
| 57       | XTN2+8GFZ   | Tapping Screw, 2mm * 8mm   |         |
| 58       | XTB3+8GFX   | Screw, 3mm * 8mm           | B       |

# 12 EXPLODED VIEW (Unit)



# 13 CD PLAYER PARTS

Note :

1. Be sure to make your orders of replacement parts according to this list.
2. Important safety notice: Components, identified by  $\Delta$  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. Location keys in the remarks column indicates the general location of the parts shown in the exploded drawing, as in a road map.
4. The marking (RTL) indicates that Retention Time is limited for this item. After the discontinuation of assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.
5. "A" marks in remarks column are indicated supply parts of Audio Division(AD) in Matsushita Electric Industrial Co., Ltd.(MEI)
6. "V" marks in remarks column are indicated supply parts of Video System Division(VSD) in Matsushita Electric Industrial Co., Ltd.(MEI)

## IC's and Transistors

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| IC1      | AN8835SBE1   | IC                      | V       |
| IC2      | MN662741RPA  | IC                      | A       |
| IC3      | BA6795FPE2   | IC                      | A       |
| IC4      | MB89193-233E | IC                      | A       |
| Q1       | 2SA1037AKTXR | Transistor              | V       |
| Q2       | DTC114TKT96  | Transistor              | V       |

## Diodes

| Ref. No. | Part No.  | Part Name & Description | Remarks |
|----------|-----------|-------------------------|---------|
| D1       | MA141WKTX | Diode                   | A       |

## Capacitors

| Ref. No. | Part No.     | Part Name & Description    | Remarks |
|----------|--------------|----------------------------|---------|
| C1       | RCSX0JX226LE | Tantalum, 22MFD 6.3WV      | V       |
| C3       | ECEAOJKA101I | Electrolytic, 100MFD 6.3WV |         |
| C4       | ECUV1E104ZFN | Chip, 0.1MFD 25WV          | V       |
| C5       | ECUV1E104ZFN | Chip, 0.1MFD 25WV          | V       |
| C6       | ECUV1E104MBN | Chip, 0.1MFD 25WV          | V       |
| C7       | ECUV1E104MBN | Chip, 0.1MFD 25WV          | V       |
| C8       | ECUV1H272KBN | Chip, 0.0027MFD 50WV       | V       |
| C9       | ECUV1E273KBN | Chip, 0.027MFD 25WV        | V       |
| C10      | ECUV1E104MBN | Chip, 0.1MFD 25WV          | V       |
| C11      | ECUV1E104MBN | Chip, 0.1MFD 25WV          | V       |
| C12      | ECUV1H222MBN | Chip, 0.0022MFD 50WV       | V       |
| C13      | ECUV1H182KBN | Chip, 0.0018MFD 50WV       | V       |
| C14      | ECUV1E104MBN | Chip, 0.1MFD 25WV          | V       |
| C15      | ECUV1C473KBN | Chip, 0.047MFD 16WV        | V       |
| C16      | ECUV1E223KBN | Chip, 0.022MFD 25WV        | V       |
| C17      | ECUV1E273KBN | Chip, 0.027MFD 25WV        | V       |
| C18      | ECUV1H471KBN | Chip, 470PF 50WV           | V       |
| C19      | ECUV1E104MBN | Chip, 0.1MFD 25WV          | V       |
| C20      | ECUV1E223KBN | Chip, 0.022MFD 25WV        | V       |
| C21      | ECUV1C224KBM | Chip, 0.22MFD 16WV         | V       |
| C22      | ECUV1C224KBM | Chip, 0.22MFD 16WV         | V       |
| C23      | ECUV1H070DCN | Chip, 7PF 50WV             | V       |
| C24      | ECUV1H220JCN | Chip, 22PF 50WV            | V       |
| C25      | ECUV1E104ZFN | Chip, 0.1MFD 25WV          | V       |
| C26      | ECUV1H102KBN | Chip, 0.001MFD 50WV        | V       |
| C27      | ECUV1H102KBN | Chip, 0.001MFD 50WV        | V       |

| Ref. No. | Part No.     | Part Name & Description    | Remarks |
|----------|--------------|----------------------------|---------|
| C28      | ECUV1E223ZFN | Chip, 0.022MFD 25WV        | V       |
| C29      | RCE0JPK221IG | Electrolytic, 220MFD 6.3WV | V       |
| C30      | ECUV1E154MBM | Chip, 0.15MFD 25WV         | V       |
| C33      | RCE0JPK221IG | Electrolytic, 220MFD 6.3WV | V       |
| C34      | ECUV1H561KBN | Chip, 560PF 50WV           | V       |
| C35      | ECEAOJKA101I | Electrolytic, 100MFD 6.3WV |         |
| C36      | ECEA1AKA221I | Electrolytic, 220MFD 10WV  |         |
| C37      | ECUV1E104ZFN | Chip, 0.1MFD 25WV          | V       |
| C38      | ECEAOJKA221I | Electrolytic, 220MFD 6.3WV |         |
| C39      | ECUV1E104ZFN | Chip, 0.1MFD 25WV          | V       |
| C40      | ECUV1H472MBN | Chip, 0.0047MFD 50WV       | V       |
| C42      | ECUV1E104ZFN | Chip, 0.1MFD 25WV          | V       |
| C44      | ECUV1H331KBN | Chip, 330PF 50WV           | V       |
| C45      | ECUV1E224ZFM | Chip, 0.22MFD 25WV         | V       |
| C56      | ECUV1H221KBN | Chip, 220PF 50WV           | A       |

## Resistors [RJB1570A]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R1       | ERJ6GEYJ150  | Chip, 15 OHMS 1/10W     |         |
| R2       | ERJ6GEYJ221  | Chip, 220 OHMS 1/10W    |         |
| R3       | ERJ6GEYJ150  | Chip, 15 OHMS 1/10W     |         |
| R5       | ERJ6GEYJ330  | Chip, 33 OHMS 1/10W     |         |
| R6       | ERJ6GEYJ224  | Chip, 220k OHMS 1/10W   |         |
| R7       | ERJ6GEYJ184  | Chip, 180k OHMS 1/10W   |         |
| R8       | ERJ6GEYJ102  | Chip, 1k OHMS 1/10W     |         |
| R9       | ERJ6GEYJ103  | Chip, 10k OHMS 1/10W    |         |
| R10      | ERJ6GEYJ102  | Chip, 1k OHMS 1/10W     |         |
| R11      | ERJ6GEYJ103  | Chip, 10k OHMS 1/10W    |         |
| R12      | ERJ6GEYJ393  | Chip, 39k OHMS 1/10W    |         |
| R13      | ERJ6GEYJ183  | Chip, 18k OHMS 1/10W    |         |
| R14      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R15      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R16      | ERJ6GEYJ154  | Chip, 150k OHMS 1/10W   |         |
| R17      | ERJ6GEYJ683  | Chip, 68k OHMS 1/10W    |         |
| R18      | ERJ6GEYJ471  | Chip, 470 OHMS 1/10W    |         |
| R20      | ERJ6GEYJ101  | Chip, 100OHMS 1/10W     |         |
| R21      | ERJ6GEYJ220  | Chip, 22 OHMS 1/10W     |         |
| R22      | ERJ6GEYJ220  | Chip, 22 OHMS 1/10W     |         |
| R23      | ERJ6GEYJ822  | Chip, 8.2k OHMS 1/10W   |         |
| R24      | ERJ6GEYJ682  | Chip, 6.8k OHMS 1/10W   |         |
| R25      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R26      | ERJ6GEYJ333  | Chip, 33k OHMS 1/10W    |         |
| R27      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R28      | ERJ6GEYJ102  | Chip, 1k OHMS 1/10W     |         |
| R29      | ERJ6GEYJ102  | Chip, 1k OHMS 1/10W     |         |
| R30      | ERJ6GEYJ103  | Chip, 10k OHMS 1/10W    |         |
| R31      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R32      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R33      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R34      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R35      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R36      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R37      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R39      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R40      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R41      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R42      | ERJ6GEYJ102  | Chip, 1k OHMS 1/10W     |         |
| R43      | ERJ6GEYJ102  | Chip, 1k OHMS 1/10W     |         |
| R44      | ERJ6GEYJ102  | Chip, 1k OHMS 1/10W     |         |
| R45      | ERJ6GEYJ102  | Chip, 1k OHMS 1/10W     |         |
| R46      | ERJ6GEYJ102  | Chip, 1k OHMS 1/10W     |         |
| R47      | ERJ6GEYJ121  | Chip, 120 OHMS 1/10W    |         |
| R49      | ERJ6GEYJ155V | Chip, 1.5M OHMS 1/10W   | V       |
| R50      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R51      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R52      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R53      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R54      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R55      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R56      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R57      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R58      | ERJ6GEYJ473  | Chip, 47k OHMS 1/10W    |         |
| R62      | ERJ6GEYJ272  | Chip, 2.7k OHMS 1/10W   |         |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| R63      | ERJ6GEYJ102  | Chip, 1k OHMS 1/10W     |         |
| RJ1      | ERJ8GEY0R00V | Chip, 0 OHM 1/8W        |         |
| RJ2      | ERJ8GEY0R00V | Chip, 0 OHM 1/8W        |         |
| RJ3      | ERJ8GEY0R00V | Chip, 0 OHM 1/8W        |         |
| RJ4      | ERJ8GEY0R00V | Chip, 0 OHM 1/8W        |         |
| RJ5      | ERJ6GEYJ1R8V | Chip, 1.8 OHMS 1/10W    | V       |
| RJ6      | ERJ6GEY0R00V | Chip, 0 OHM 1/10W       |         |
| RJ7      | ERJ8GEY0R00V | Chip, 0 OHM 1/8W        |         |

## Resistors [RJB1569A]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| SW3      | ERJ8GEY0R00V | Chip, 0 OHM 1/8W        |         |

## Oscillators

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| X1       | RVBCST4R00MT | Ceramic Oscillator      | V       |
| X2       | RSXC16M9S01T | Crystal Oscillator      | V       |

## Connectors

| Ref. No. | Part No.   | Part Name & Description | Remarks |
|----------|------------|-------------------------|---------|
| CN1      | RJS2A1816T | Connector, 16P          | V       |
| CN2      | RJS1A7114T | Connector, 14P          | V       |
| CN3      | RJS1A7105T | Connector, 5P           | V       |
| CN4      | RJP2G17ZA  | Connector, 2P           | V       |
| CN5      | RJS2A1405T | Connector, 5P           | V       |

## Switches

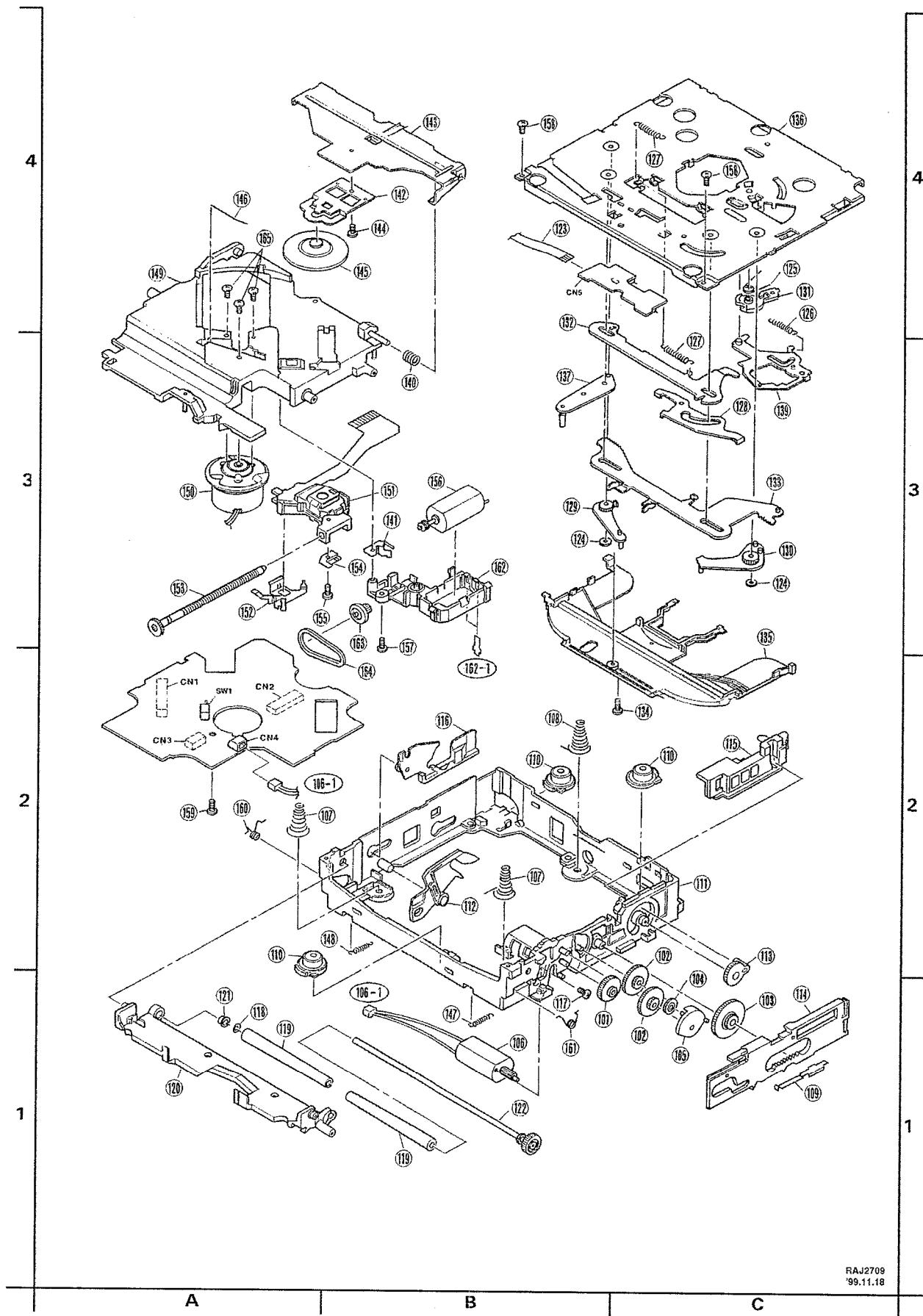
| Ref. No. | Part No.   | Part Name & Description | Remarks |
|----------|------------|-------------------------|---------|
| SW1      | ESE11SH2   | Switch                  | V       |
| SW2      | RSP1A015-A | Switch                  | V       |
| SW4      | RSP1A015-A | Switch                  | V       |
| SW5      | RSP1A015-A | Switch                  | V       |

## Miscellaneous

| Ref. No. | Part No.  | Part Name & Description | Remarks         |
|----------|-----------|-------------------------|-----------------|
| 101      | RDG0350   | Gear                    | V(1-B)          |
| 102      | RDG0351   | Gear N2                 | V(1-C)          |
| 103      | RDG0352-1 | Loading Gear            | V(1-C)          |
| 104      | RDG0353   | Roller Drive Gear       | V(1-C)          |
| 105      | RDG0354   | Roller Drive Arm        | V(1-C)          |
| 106      | REM0060   | Loading Motor           | V(1-B)          |
| 106-1    | REE0669   | Lead Wire               | V(2-A)<br>(1-B) |
| 107      | RMB0465   | Spring                  | V(2-A)<br>(2-B) |
| 108      | RMB0466   | Spring                  | V(2-A)          |
| 109      | RMC0292   | Main Slider Spring      | V(1-C)          |
| 110      | RMG0408-K | Insulator               | V(2-A)<br>(2-B) |
| 111      | RMK0309-2 | Mechanism Frame         | V(2-B)          |
| 112      | RML0432   | Lock Arm                | V(2-B)          |
| 113      | RML0433-1 | Drive Arm               | V(2-C)          |
| 114      | RMR0952-W | Main Slider             | V(1-C)          |
| 115      | RMR0953-W | Lift Slider             | V(2-C)          |
| 116      | RMR0954-W | Lock Slider             | V(2-B)          |
| 117      | XYN2+C5   | Screw, 2mm * 5mm        | V(1-B)          |
| 119      | RMG0382-H | Rubber Roller           | V(1-A)          |
| 120      | RML0434   | Roller Arm              | V(1-A)          |
| 121      | RMR0769-W | Roller Bering           | V(1-A)          |
| 122      | RXJ0017   | Roller Shaft            | V(1-B)          |
| 123      | REE0668   | Flexible PCB            | V(4-B)          |
| 124      | RHW27004  | Washer                  | V(3-C)          |
| 125      | RMB0461   | Spring                  | V(4-C)          |
| 126      | RMB0468   | Spring                  | V(4-C)          |
| 127      | RMB0489   | Spring                  | V(4-C)<br>(3-C) |
| 128      | RML0428   | Switch Lever            | V(3-C)          |
| 129      | RML0430   | Trigger Lever L         | V(3-C)          |
| 130      | RML0431   | Trigger Lever R         | V(3-C)          |
| 131      | RML0435   | Lock Lever              | V(4-C)          |
| 132      | RMM0155   | Slider A                | V(3-C)          |

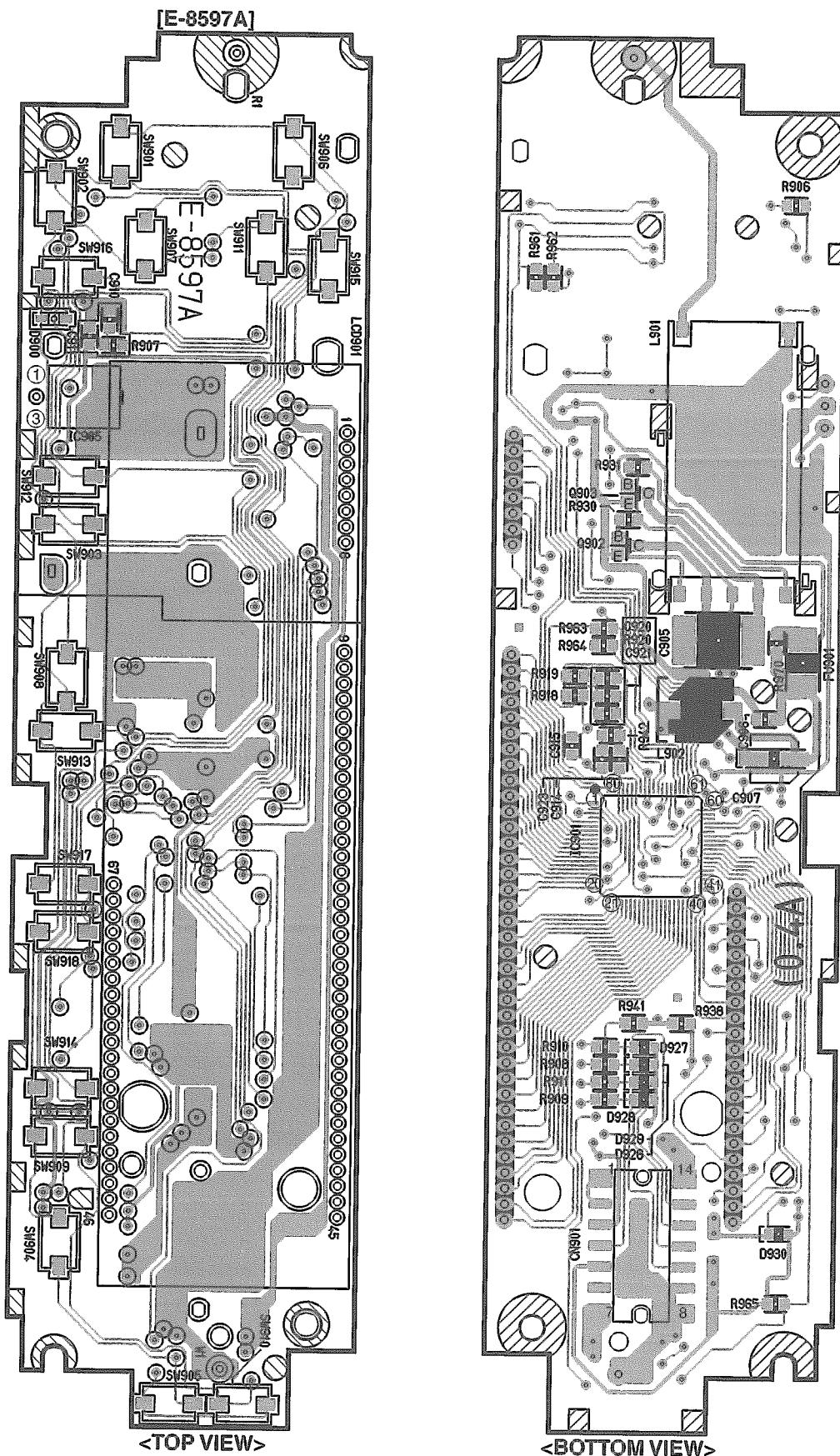
| Ref. No. | Part No.    | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
| 133      | RMM0156     | Slider B                | V(3-C)  |
| 134      | RMO0597     | Screw                   | V(2-C)  |
| 135      | RMR0951-W   | Disc Guide              | V(2-C)  |
| 136      | RXK0201     | Upper Chassis           | V(4-C)  |
| 137      | RXL0134     | CD Detect Lever L       | V(3-B)  |
| 139      | RXL0136     | Control Arm             | V(3-C)  |
| 140      | RMB0462     | Spring                  | V(3-B)  |
| 141      | RMC0295     | Drive Shaft Retainer    | V(3-B)  |
| 142      | RMC0293     | Clamper Retainer        | V(4-B)  |
| 143      | RML0429     | Clamp Arm               | V(4-B)  |
| 144      | RMQ0467     | Screw                   | V(4-B)  |
| 145      | RMR0956-W   | Clamper                 | V(4-B)  |
| 146      | RMB0345-2   | Spring                  | V(4-A)  |
| 147      | RMB0445     | Spring                  | V(1-B)  |
| 148      | RMB0467     | Spring                  | V(2-B)  |
| 149      | RXXK0199    | Traverse Chassis        | V(4-A)  |
| 150      | RFKPAJ2751K | Spindle Motor           | V(3-A)  |
| 151      | RAF0140A    | Optical Pickup          | V(3-B)  |
| 152      | RMC0294     | Optical Pickup Retainer | V(3-A)  |
| 153      | RXJ0018     | Drive Shaft             | V(3-A)  |
| 154      | RXQ0474     | Board Nut               | V(3-B)  |
| 155      | XQN17+BG45  | Screw                   | V(3-B)  |
| 156      | REM0061     | Traverse Motor          | V(3-B)  |
| 157      | XTW2+6S     | Screw, 2mm * 6mm        | V(3-B)  |
| 158      | XQN2+CJ8    | Screw, 2mm * 8mm        | V(4-C)  |
| 159      | XTW2+6S     | Screw, 2mm * 6mm        | V(2-A)  |
| 160      | RMB0463     | Spring                  | V(2-A)  |
| 161      | RMB0464     | Spring                  | V(1-B)  |
| 162      | RXQ0476     | Holder                  | V(3-B)  |
| 162-1    | RMA0921     | Terminal Board          | V(3-B)  |
| 163      | RDP0084     | Pulley                  | V(3-B)  |
| 164      | RDV0030     | Belt                    | V(2-B)  |
| 165      | RMQ0461     | Screw                   | V(4-A)  |

# 14 EXPLODED VIEW (CD Deck)

RAJ2709  
'99.11.18

## **15 WIRING DIAGRAM**

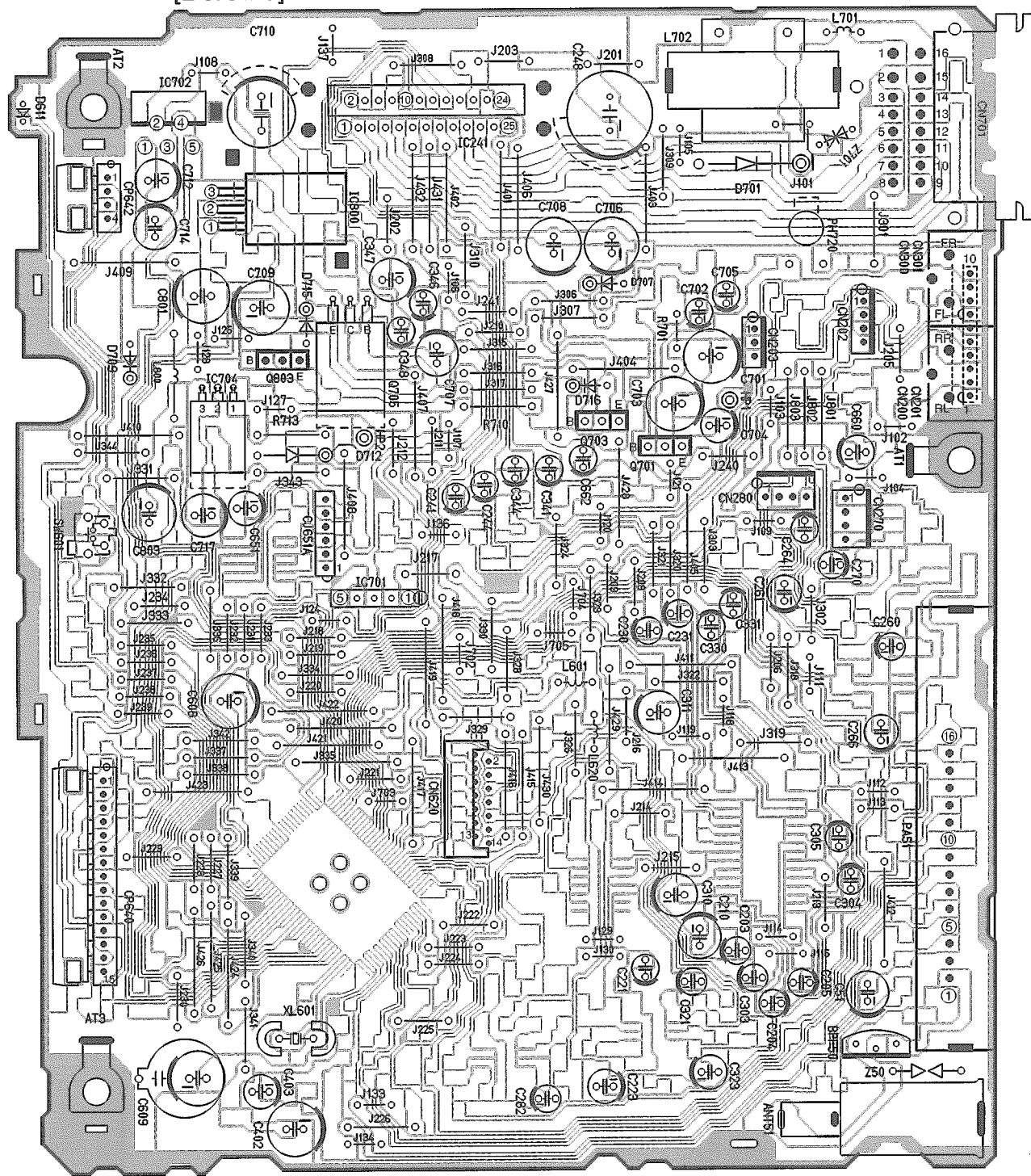
## 15.1. Display Block



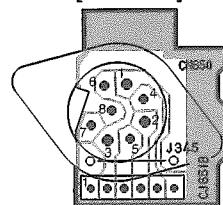
## 15.2. Main Block (Top View)

[E-6784Aa]

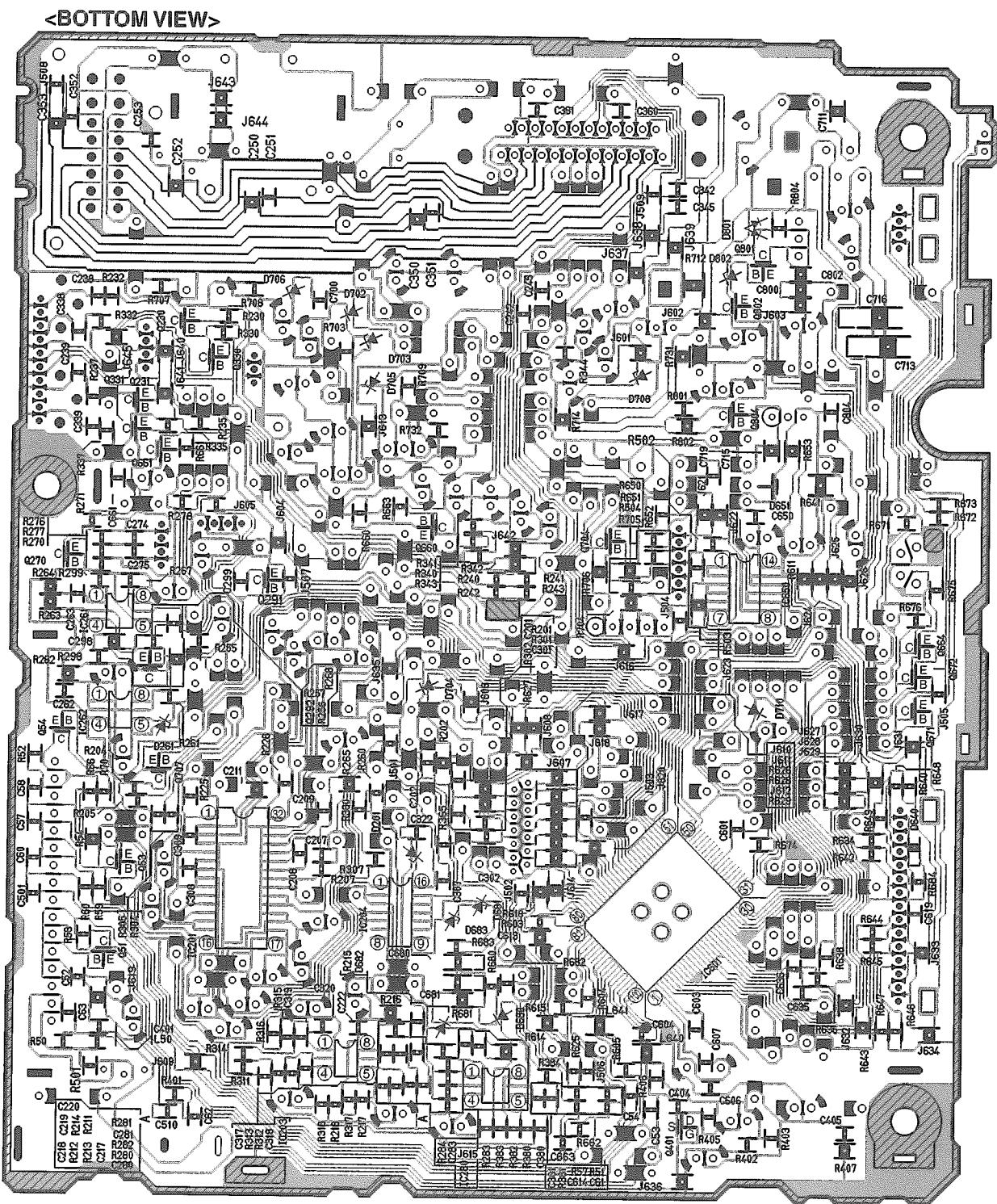
&lt;TOP VIEW&gt;



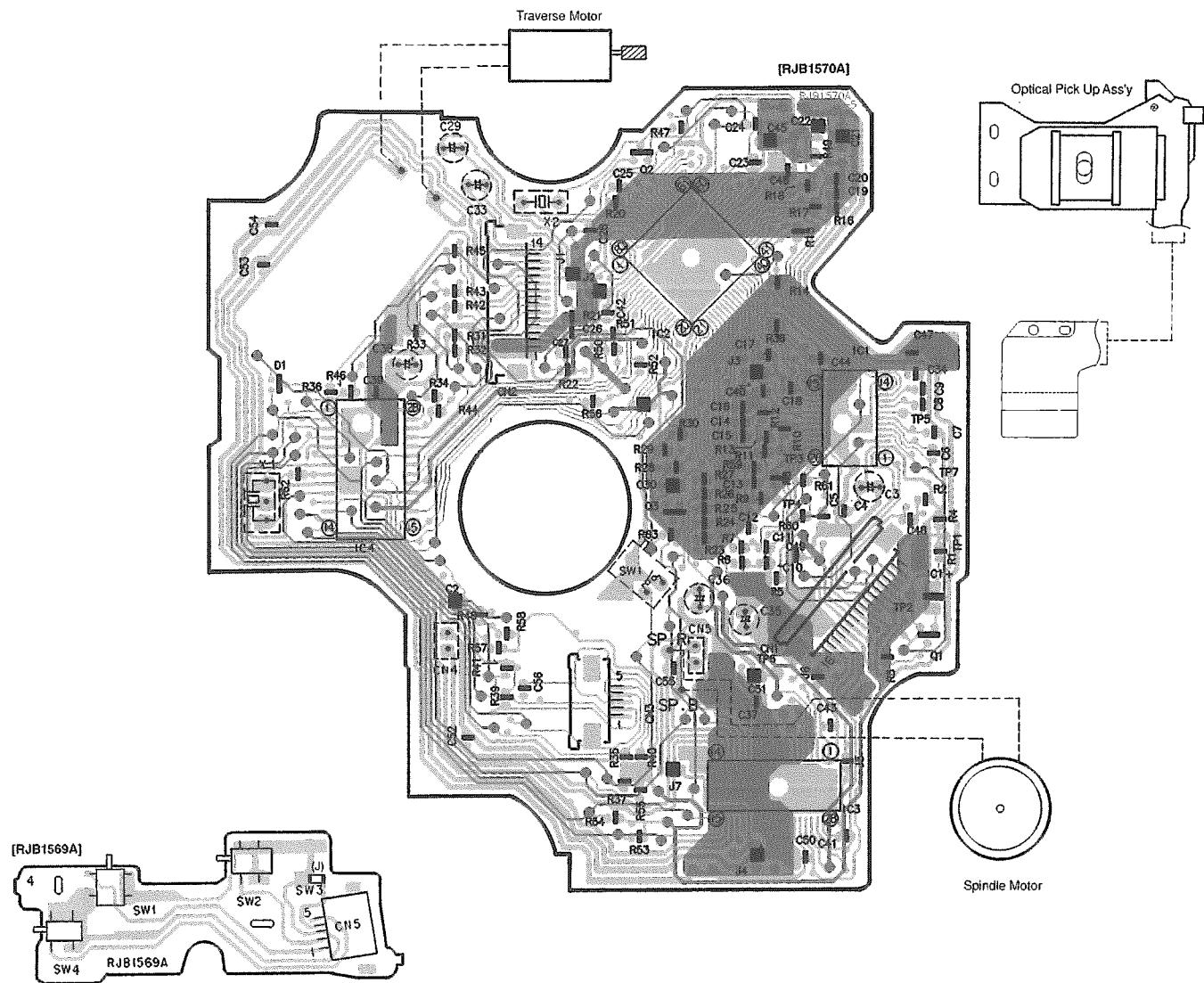
[E-6784Ab]



### 15.3. Main Block (Bottom View)

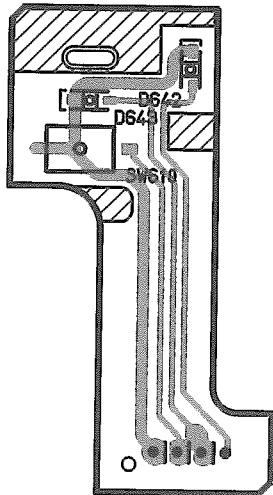


## 15.4. CD Servo Block

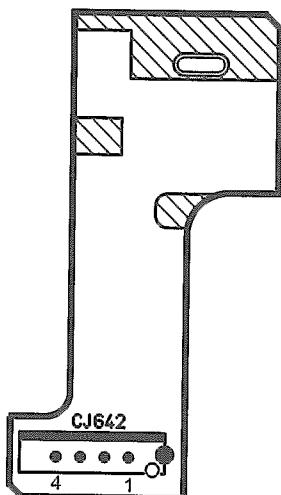


## 15.5. Sub. Block

[E-8497Bb]

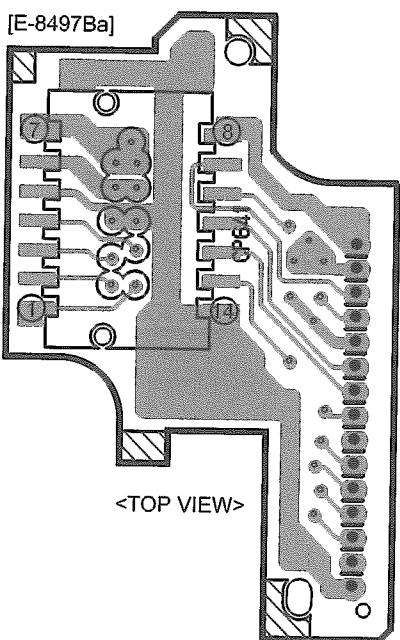


&lt;TOP VIEW&gt;

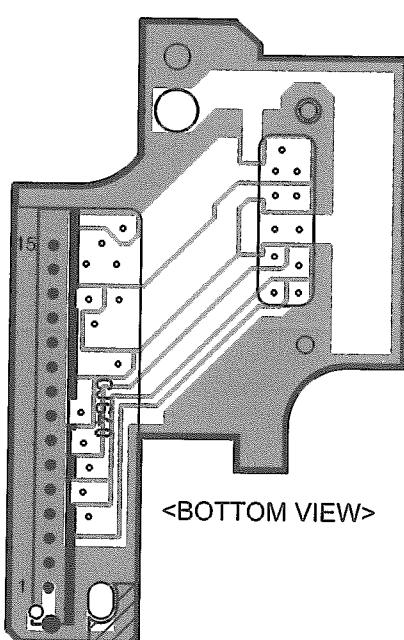


&lt;BOTTOM VIEW&gt;

[E-8497Ba]



&lt;TOP VIEW&gt;

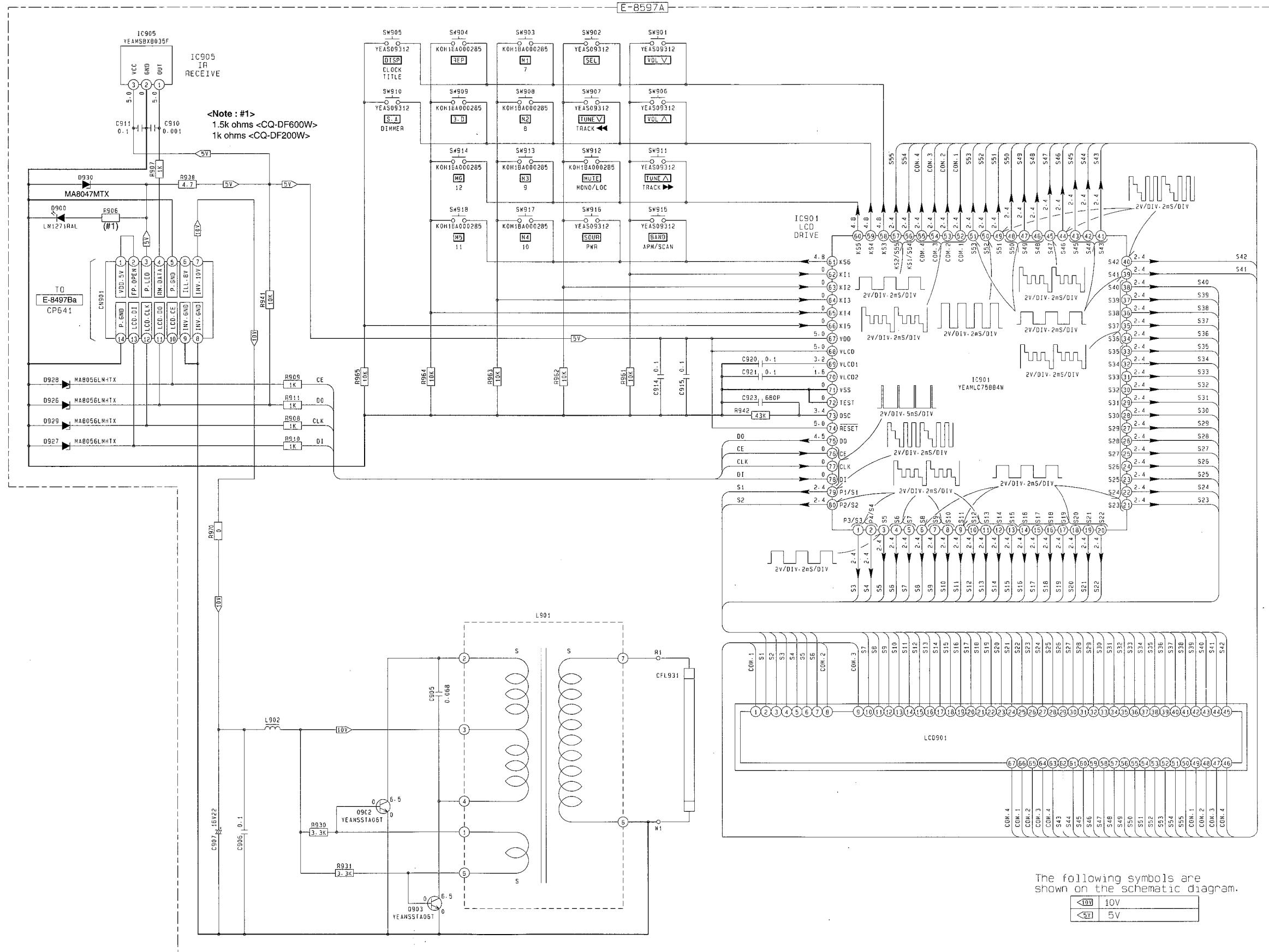


&lt;BOTTOM VIEW&gt;



## **16 SCHEMATIC DIAGRAM**

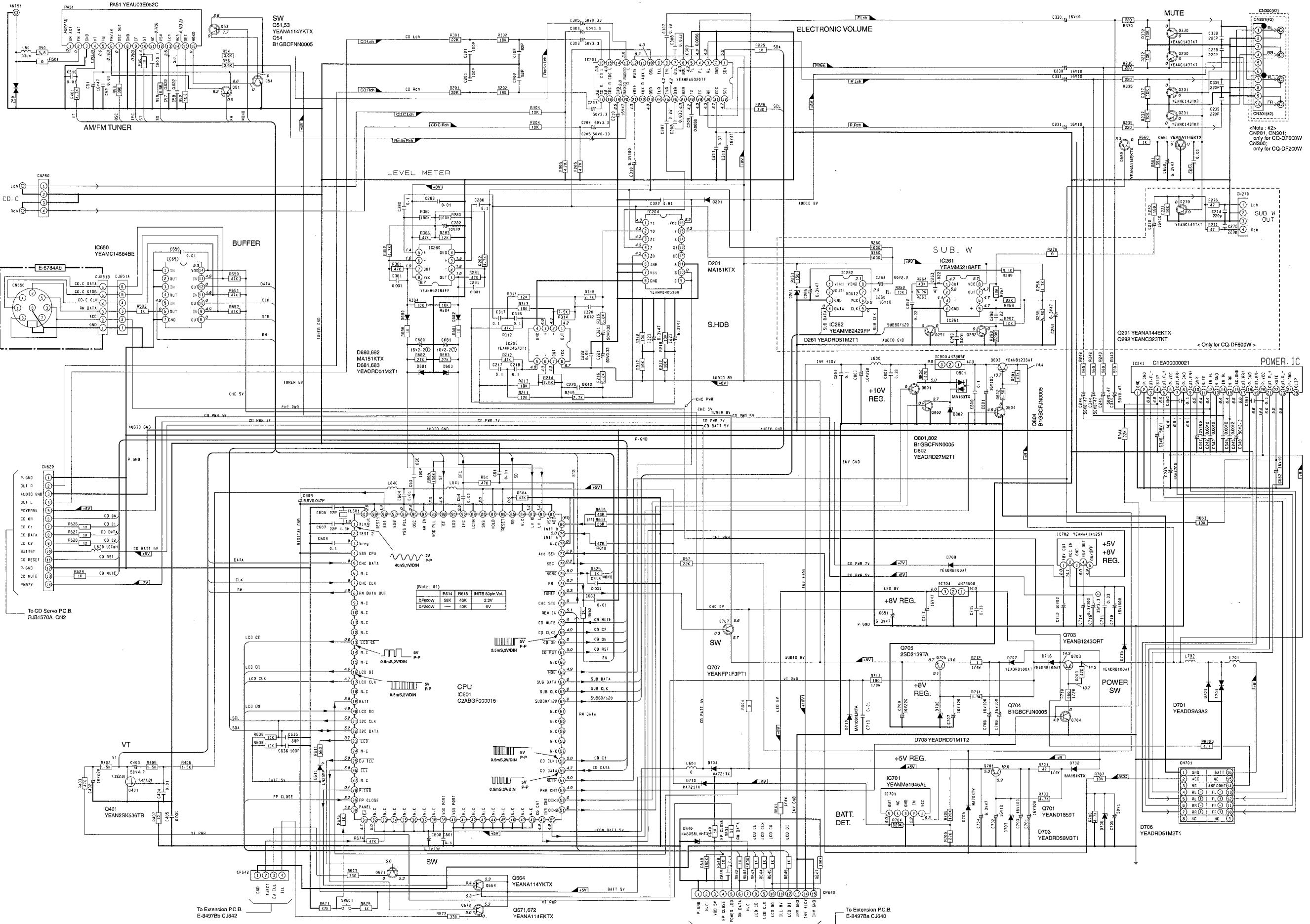
## 16.1. Display Block



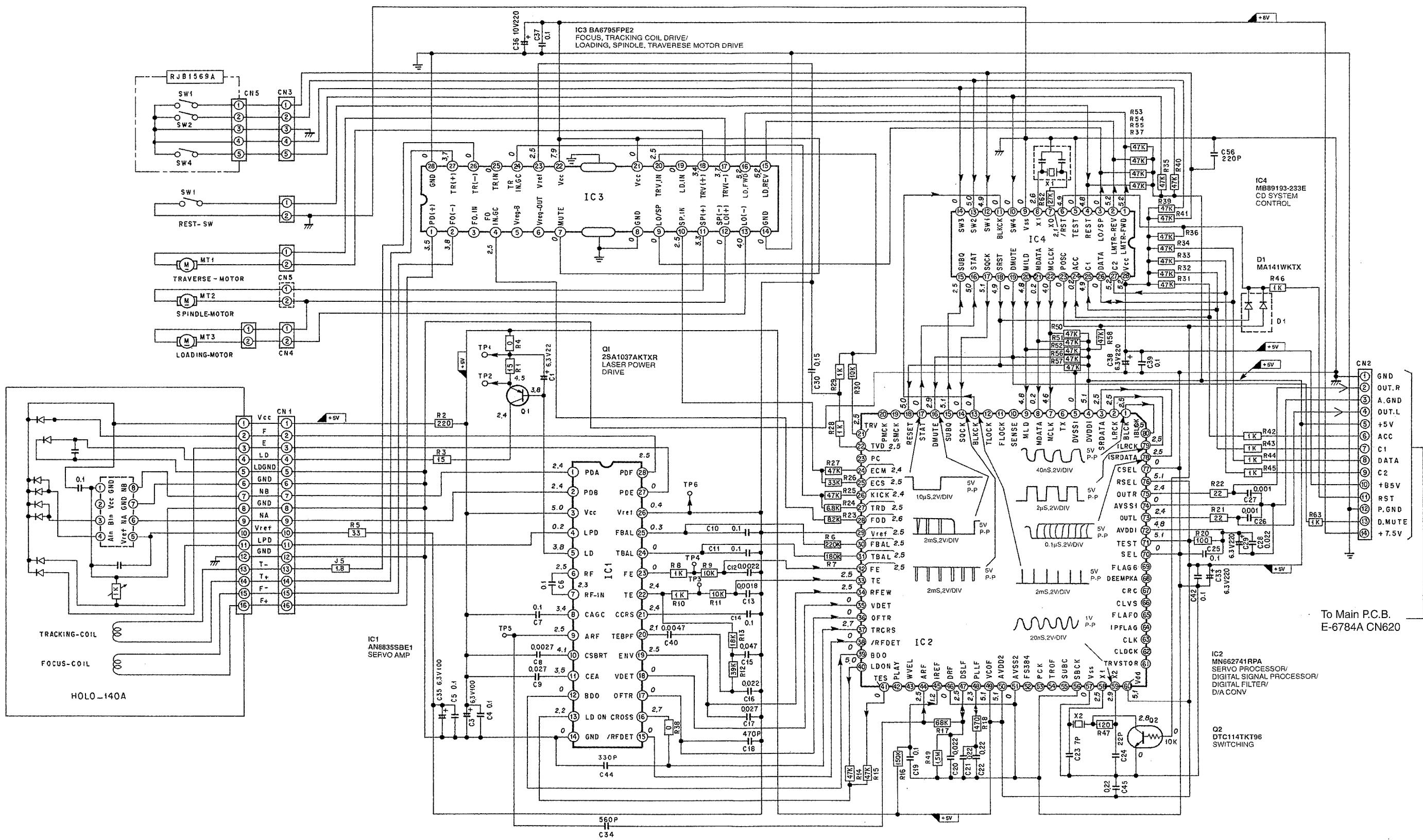
The following symbols are shown on the schematic diagram.

|   |
|---|
|  10V |
|  5V  |

## 16.2. Main Block



### 16.3. CD Servo Block



## 16.4. Sub. Block

