

Service Manual

AUTOMOTIVE CONSUMER ELECTRONICS

CQ-RD320/310LEN

Cassette Player / RDS Receiver



< CQ-RD320LEN >

Specifications*

General

Power Supply	: DC 12V(11V - 16V), Test Voltage 14.4V Negative Ground
Tone Controls	: Bass; ± 12 dB at 100Hz Treble; ± 12 dB at 10kHz
Current Consumption	: Less than 2.5A (Tape mode, 0.5W 4-Speaker)
Maximum Power Output	: 40W \times 4 (at 4 Ω)
Power Output	: 20W \times 4 (DIN45 324 at 4 Ω)
Speaker Impedance	: 4 - 8 Ω

FM Stereo Radio

Frequency Range	: 87.5 - 108MHz
Usable Sensitivity	: 6dB μ V (S/N 30dB)
Stereo Separation	: 35dB (at 1kHz)

MW Radio

Frequency Range	: 531 - 1,602kHz
Usable Sensitivity	: 28dB/ μ V (S/N 20dB)

LW Radio

Frequency Range	: 153 - 279kHz
Usable Sensitivity	: 32dB/ μ V (S/N 20dB)

Cassette Player

Reproduction System	: 4-track, 2-program stereo
Tape Speed	: 4.76cm/sec.
FF/REW Time	: Less than 110sec. (C-60)
Frequency Response	: 30 - 17,000Hz (Nomal) 30 - 18,000Hz (Metal)
Wow and Flutter	: 0.12% (WRMS)
Signal to Noise Ratio	: 52dB

Dimensions** : 178(W) \times 50(H) \times 150(D)mm

Weight** : 1.4kg

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

** Dimensions and Weight shown are approximate.

⚠ 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.

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Panasonic

(Recycled Paper)

CONTENTS

	Page
FUSE.....	1
MAINTENANCE.....	1
ALIGNMENT JIG.....	1
DIMENSIONS.....	1
< OPERATING INSTRUCTIONS >	
Power and Sound Controls.....	2
Radio Basics.....	2, 3
RDS Reception.....	3 ~ 5
Cassette Tape Player Basics.....	5
Remote Control Basics.....	6
Anti-Theft System.....	6
Installation.....	7
Electrical Connection.....	7
Speaker Connections.....	8
RE-ASSEMBLY PROCEDURE for REEL PWB ASS'Y.....	9
WIRING CONNECTION.....	10
BLOCK DIAGRAM.....	11
WIRING DIAGRAM (Display).....	12
WIRING DIAGRAM (Main).....	13
SCHEMATIC DIAGRAM (Main).....	14
SCHEMATIC DIAGRAM (Display).....	15
SCHEMATIC DIAGRAM (Tape).....	15
WIRING DIAGRAM (Tape).....	15
TERMINALS DESCRIPTION.....	16
PACKAGE AND IC BLOCK DIAGRAM.....	17, 18
REPLACEMENT PARTS LIST.....	19 ~ 22, 24
EXPLODED VIEW (UNIT).....	23
EXPLODED VIEW (TAPE).....	25

FEATURES

- 24-Stations Preset (18-FM, 6-AM).
- Radio Data System (PS, AF, CT, PI).
- Electronic Control of Volume, Bass, Treble, Balance and Fader.
- Detachable Face Plate Security.

FUSE

Be sure to use a fuse of the specified rating (15A) 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.

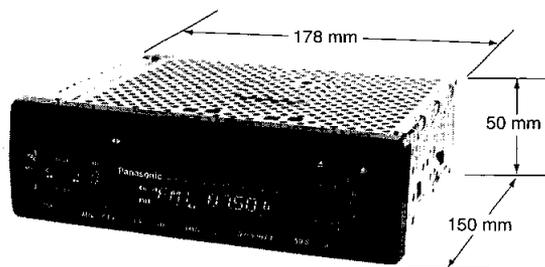
MAINTENANCE

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.

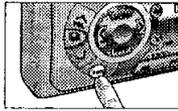
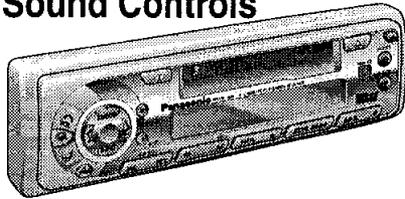
ALIGNMENT JIG

- DOLBY NR ALIGNMENT;
Test tape : RFKZ0038

DIMENSIONS

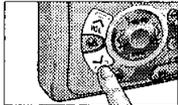


Power and Sound Controls



Power

If the car is not running yet, turn the key in the ignition until the accessory indicator lights.
 Press PWR to switch on the power.
 Press and hold PWR again to switch off the power.
 Note: When the power is switched on for the first time, demonstration is displayed. To cancel this display, press D(DISP/CT).

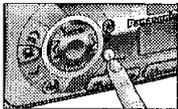


Volume

Press VOL \leftarrow or VOL \rightarrow to increase or decrease the volume.



Press VOL \leftarrow or VOL \rightarrow for more than 0.5 second to sequentially change numeric levels on the display.



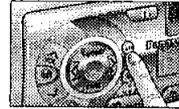
Tone Enhancement

• Press L(LOUD) to enhance bass and treble tones when listening at low or medium volume.



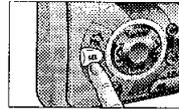
• Press L(LOUD) again to cancel.

Note: This unit is equipped with anti-volume-blast circuit which serves as an automatic volume level adjuster so that you will not be deafened with sudden loud sound. This system operates as follows. When PWR is first pressed to switch on, the volume level is low. After that, the volume level gradually returns to the level as the same as the one before turning off. Anti-volume-blast circuit is not effective when the volume level is lower than position 20 at the display.



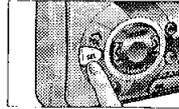
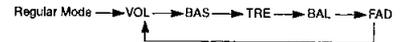
Attenuator

- Press ATT to decrease the volume to about 1/10 of the previous level.
- Press ATT again to cancel.



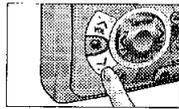
Changing Audio Modes

Press SEL to switch the audio mode as follows.



Bass and Treble

Press SEL to select the BASS (TREBLE) mode. Press VOL \leftarrow or VOL \rightarrow to increase or decrease the bass (treble) response.



Balance

Press SEL to select the BALANCE mode. Press VOL \leftarrow or VOL \rightarrow to shift the sound volume to the right or left speakers.



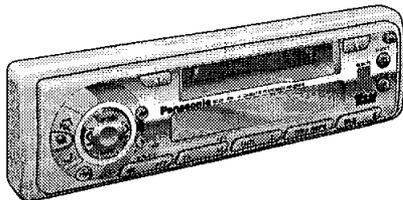
Fader

Press SEL to select the FADER mode. Press VOL \leftarrow or VOL \rightarrow to shift the sound volume to the front or rear speakers.



Note: When an audio mode (BAS/TRE/BAL/FAD) is selected but no operation is made within 5 seconds (2 seconds at VOL mode), the display will return to the normal operation (Radio, Tape) mode.

Radio Basics



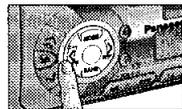
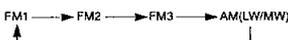
Changing to Tuner Mode

Press MODE to switch the operation mode as follows.



Selecting a Band

Press BAND to select the bands as follows.
 "STEREO" indicator lights if the station is broadcasting in stereo.



Manual Tuning

Press \leftarrow or \rightarrow to move to a lower or higher frequency.



Press and hold \leftarrow or \rightarrow to move to a lower or higher frequency rapidly.

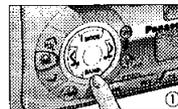


Seek Tuning

Press and hold \leftarrow or \rightarrow for more than 0.5 second, then release. The radio automatically stops at the next station.

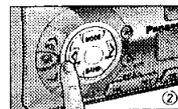
Preset Station Setting

FM1, FM2, FM3 and AM(LW/MW) can save maximum 6 stations each in their preset station memories.

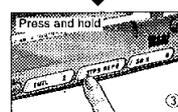


Manual Station Preset

- 1 Press BAND to select a desired band.
- 2 Use manual or seek tuning to find a station that you want to save into the memory.
- 3 Press and hold one of the station selector buttons 1 to 6 for more than 2 seconds until the display blinks. Repeat the process to set other stations to from the FM1 to AM bands.

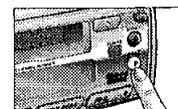


Note: You can change the memory setting by repeating the above procedure.



Tuning in a Preset Station

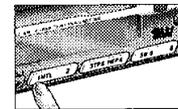
Press any of the buttons 1 to 6 to tune in the station preset.



Auto Station Preset

Select a band and press P(AUTO P).

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

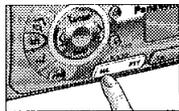


Caution: For safety reasons, do not attempt to program while driving.

Radio Basics continued

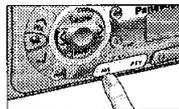
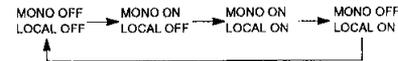
MONO/LOCAL Selection

- Much interference is reduced during weak FM stereo broadcasts when MONO is on. (Only for FM mode)
- Searching stops automatically at a strong wave station only when LOCAL is on.



① During FM broadcasts

Press M/L(MONO/LOC) to switch the mode as follows.



② During AM broadcasts

Press M/L(MONO/LOC) to switch on or off the LOC mode as follows.



RDS (Radio Data System) Reception

Many FM stations are broadcasting added data compatible with RDS. This radio set offers convenient functions using such data.

AF (Alternative Frequency)

When receiving condition becomes poor, an RDS station with the same program will be automatically selected.

EON (Enhanced Other Networks)

When EON data is received, the EON indicator lights and the TA and AF functions are expanded.

TA: Traffic information from not only the station now tuned in to but also other stations of the same network can be received.

AF: The frequency list of the RDS stations preset by received EON data is updated.

PS (Program Service Name)

When an RDS station is received, the RDS indicator lights and automatically displays the name of that station instead of the frequency. When D(DISP/CT) is pressed during PS display, the frequency is displayed for 3 seconds, then PS display resumes.

PI (Program Identification)

If a preset RDS station is poor in receiving condition when it is selected, the automatic seek (PI Seek) starts to seek the same program and tunes in to it.

PTY (Program Type)

Program type identification signal
Example : News, rock, classical music, etc.

TA (Traffic Announcement)

When an FM station that periodically provides the latest traffic information is received, the TP indicator lights. If TA ON is set, FM traffic information automatically interrupts your listening to a tape source until it ends, then you will listen again to whatever you have been listening to.

Best Station Research

If a preset RDS station is in poor condition of reception when you try to tune in to it, the best frequency is selected from the AF list of the station.

REG(Region)

The AF Best Station Research, PI Seek functions will be as follows:

REG ON : The frequency changes only with the same regional program. This function is mainly used while driving in the same area, for example, in a city.

REG OFF: The frequency changes even with a different regional program if the station is in the same network. The broadcast may be different depending on the case. This function is mainly used when driving far from one region to another.

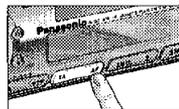
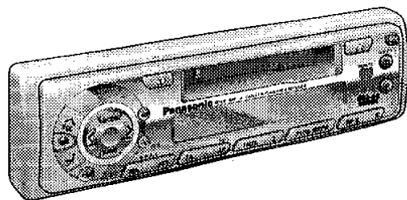
WHAT PROVIDES EON CAPABILITIES

EON lets the radio set take advantage of RDS information much more than before. It constantly updates the AF list of all presets, including the station currently tuned in to. So, even if you change preset far from home, you will be able to receive the same station at an alternative frequency, or another station serving the same program if any. EON also keeps track of locally available TP stations for quick reception.

Note: When you're in "AF ON" mode, auto preset memory only works for RDS station. When in "TA on" mode, it only works for TP stations. To make auto preset for ordinary stations, cancel AF mode and switch to TA off in advance.

RDS (Radio Data System) Reception continued

A. Basic Operation in RDS Reception (PS, AF, CT, PI)



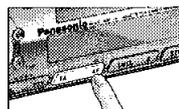
RDS Reception

Press AF when receiving a station in the FM1, FM2 or FM3 band.

- The operating mode changes to AF ON or AF OFF, respectively.



- Select AF ON if you wish to use the AF network of an RDS station. Best Station Research is activated at the same time.
- Select AF OFF if the AF network of an RDS station is not necessary.



Changing AF Mode

Press AF to change AF ON and activate Best Station Research at the same time. (3 seconds maximum)



..... AF 1 Mode



..... AF 2 Mode

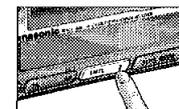


..... AF OFF Mode

Note:

1. Default mode is AF1.
2. AF1 has a low level of AF operating sensitivity in urban areas. Therefore, AF does not frequently operate even if sensitivity is temporarily lowered between skyscrapers, for example.
3. AF2 is for suburban areas with a higher level of sensitivity than AF1.

For Seek Tuning, RDS Station Preset, Tuning in a RDS preset station, and Auto RDS Station Preset, please refer to Radio Basics (Page 20 to 22).

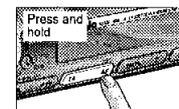


RDS Seek Tuning (PI seek)

The PI seek function may be used if an RDS station selected from the memory is poor in receiving condition. Press the preset button again for the station tuned in to.



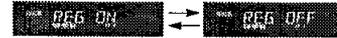
PI Seek: If Best Station Research fails in selecting the best station, the PI seek function operates to automatically tune in to the same program.



Press and hold

Region (REG) Switching

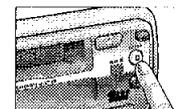
Press and hold AF(REG) for more than 2 seconds in AF mode to alternately select between REG ON and REG OFF.



Note:

If you wish to stay with the same program, keep REG ON. If you keep REG OFF, there is a higher possibility of returning in to an AF station in better receiving condition.

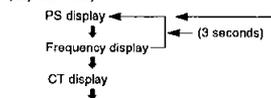
The relationship of the PI seek function with REG ON and REG OFF is as described above.



Changing Display

Press D(DISP/CT) to change the display as follows.

(Frequency display continues for only 3 seconds, returning to PS display after that.)



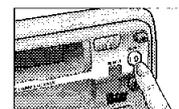
Clock Time (CT) System

The CT (24-hour) system may not properly operate in areas where RDS CT service is not available. Once CT service is received, the CT system keeps operating. "NO CT" is displayed in areas where no CT service is available.

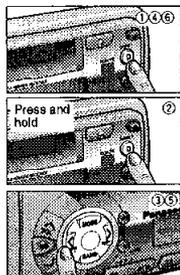


Clock Display

Press D(DISP/CT) to indicate the clock display.



RDS (Radio Data System) Reception continued

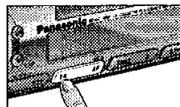


Initial Time Setting

- Press BAND to change to AM mode.
- Press D(DISP/CT). "NO CT" is displayed.
 - Press and hold D(DISP/CT) again for more than 2 seconds, "hours" blinks indicating the time setting mode is activated.
 - Press or to set the hours (24 hours).
 - Press D(DISP/CT) again for minutes setting.
 - Press or to set the minutes.
Hold or change numbers rapidly.
 - After setting the time, press D(DISP/CT).

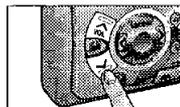
- Note:**
- If CT display is kept on, it remains on even if PWR and ACC are turned off and back on again.
 - In other modes, press D(DISP/CT) to get RDS CT-service.

B. TP Reception



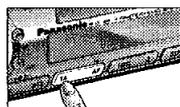
Selecting Traffic Information (TA on) Mode

Press TA to switch on and keep it there when you wish to listen to the traffic information. Press TA again to switch off.



Volume Setting (Only for Tape TA on mode)

Adjust the volume as desired using "VOL +" or "VOL -" while receiving traffic announcement. (TA)
After setting the volume for traffic announcement (TA), the difference between normal volume and TA volume is automatically saved in the memory (up to 5 levels) so that next traffic information will be received at the preceding TA volume which may be higher or lower than normal volume. Normal volume can be changed up to 5 levels upward or downward. If an adjusted volume level is over 40 or less than 0, any further change will not be made.



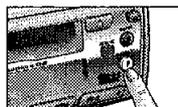
When Receiving a Station other than TP Station (including EON stations)

A traffic information station is automatically searched for and the radio automatically stops at the next available TP station. EON Capabilities: EON lets the radio take advantage of much more RDS information than before. It constantly updates the AF lists for all switch presets far from home, you will receive an alternative frequency for the same station, or another station carrying the same program, when such exists. EON also keeps track of locally available TP station.



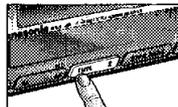
TP Seek Tuning

Press or for more than 0.5 second, then release. The radio automatically stops at the next available TP station.



Auto TP Station Preset

Press P(AUTO-P) until the display blinks in TA on. The six strongest available TP stations are automatically saved in the memory on the preset buttons 1 to 6.
Once saved, the preset stations are sequentially scanned for 5 seconds each.



Tuning in a TP Station Preset

Press any of the preset buttons 1 to 6 that you want to listen to. Best Station Research function is activated to automatically select the strongest available frequency for the TP station (through the built-in frequency lists, if reception is weak).



Muting TA on

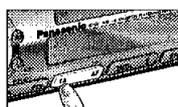
Press and hold TA for more than 2 seconds to light "TA on". Then Traffic Announcement (TA) function is activated to operate, allowing you to listen to only Traffic Program whenever it is available.

Muting TA on canceling (Muting TA on TA on)

Press TA again.
Press VOL +/- to increase the volume level.

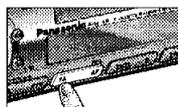
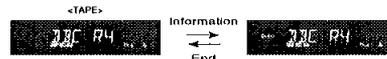
TP Auto Search

If receiving condition is poor when TA is on during muting and if there is no other alternative frequency in the same network, a traffic announcement station in good receiving condition is automatically searched for.



Tape TA on

Press TA during tape mode.
When TA on mode is selected while listening to the source in that mode, wait for Traffic Announcement to begin.



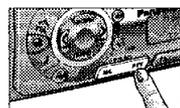
Switching to TA off Mode

- Select either one of the following steps.
- Press TA when TA is on.
 - Press and hold TA for more than 2 seconds when Muting TA is on.
 - Press TA when tape TA is on.

RDS (Radio Data System) Reception continued

C. PTY Reception

(There are some areas where PTY service may not be available.)

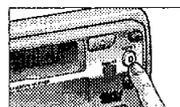


Switching to PTY Mode

Press PTY to select PTY display mode, and the PTY of the broadcast received is displayed.

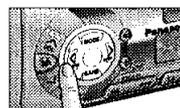
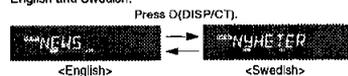


"NO PTY" is displayed if there is no corresponding program type.



Changing PTY Display Language

Press D(DISP/CT) in PTY mode to alternate the language between English and Swedish.



Program Type Selection

Press or to select the program type as follows.

- SPEECH - MUSIC - NEWS - AFFAIRS - INFO - SPORT - EDUCATE - DRAMA
- ROCK M - POP M - VARIED - SCIENCE - CULTURES
- M.O.R.M - LIGHT M - CLASSICS - OTHER M - WEATHER - FINANCE
- LEISURE - TRAVEL - PHONE IN - RELIGION - SOCIAL A - CHILDREN
- JAZZ - COUNTRY - NATIONAL - OLDIES - FOLK M - DOCUMENT

When the desired selection has been made, press BAND. Then automatic seek will start to tune in to the station broadcasting the selected program type.

- Note:**
- Seek tuning does not operate as long as "NO PTY" is displayed.

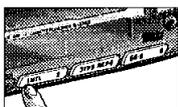
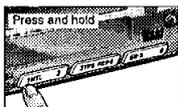


TABLE of PTY CODE and Program Type

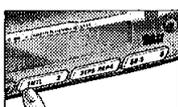
Press any of the preset buttons 1 to 6 that you want to desire the program type. Those buttons already have the program types as follows. (Default)

Presel NO.	1	2	3	4	5	6
Program Type	NEWS	SPEECH	SPORTS	POP. MUSIC	CLASSICS	MUSIC
Display	NEWS	SPEECH	SPORTS	POP. M	CLASSICS	MUSIC
	NEWS	AFFAIRS INFO EDUCATE DRAMA CULTURES SCIENCE VARIED WEATHER FINANCE CHILDREN SOCIAL A RELIGION PHONE IN TRAVEL LEISURE DOCUMENT	SPORTS	POP M	CLASSICS	ROCK M M.O.R.M LIGHT M OTHER M JAZZ COUNTRY NATIONAL OLDIES FOLK M



Program Type Preset

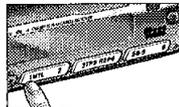
Press and hold one of the buttons 1 to 6 for more than 2 seconds to preset the desired program type selection in the button.



Tuning in a PTY Preset Station

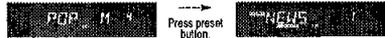
Press any of the preset buttons 1 to 6 that you want to listen to.

RDS (Radio Data System) Reception continued



Searching for PTY

① Select the desired station from preset number buttons 1 to 6. Then, the preset PTY and that preset number are displayed for 5 seconds.

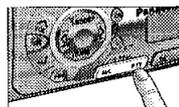


② While the desired type from 6 presets is displayed, take either of the following two steps.

- A) Press the same preset button again.
 - B) Press BAND.
- If the desired PTY station is available, it is directly received. If it is not, "NO PTY" blinks and the radio returns to the station that was received before the search.



Press the same button again to cancel.



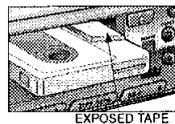
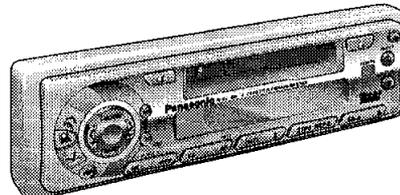
Canceling of PTY Mode

Press PTYP to cancel. The set returns to the state existing before PTY mode while the receiving frequency remains unchanged.

Emergency Announcement Reception

(Some areas are not covered by emergency announcement service.)
If an emergency announcement is broadcast in tape mode, the radio is automatically selected to receive the emergency announcement. "ALARM" blinks.

Cassette Tape Player Basics



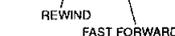
Loading a Cassette

Insert a cassette with the exposed tape side facing to the right. Gently push the cassette in until the mechanism captures it. Then the cassette is loaded in place and playback starts.



Rewind and Fast Forward

Press ◀ or ▶ to rewind or fast forward the tape.



Press ▶ to stop.

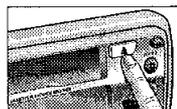


Changing Sides

Press ◀▶ to reverse.



Cassette Tape Player Basics continued

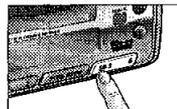


Ejecting a Tape

Press ▲ to eject a cassette tape, and the previous operation mode will resume.

Note:

- If power is switched off before ▲ is pressed, the cassette will not be ejected. Switch on the power again and press ▲ to eject the cassette.
- The cassette tape should be always removed from the cassette slot when not in use.



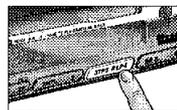
Blank Skip

- Press 5 (B-S) to skip long unrecorded portions on the tape.

- Press 5 (B-S) again to cancel.

Note:

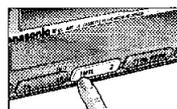
- "B SKIP" indicator lights. However, the blank skip operation will not work if REP is on. The repeat function has priority over the blank skip function.
- Also the blank skip operation will not work when the unrecorded portions of the tape is less than 15 seconds.



Repeat Play

- Press 4 (REP) to repeat the music you are listening to.

- Press 4 (REP) again to cancel.

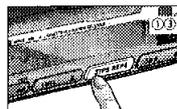


Metal Tape Mode

- Press 1 (MTL) when playing metal or chromium dioxide (CrO₂) tapes.

- Press 1 (MTL) again to cancel.

Note: Playing non-metal tapes in MTL mode causes high frequency imbalance, which affects tone quality.

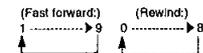


TPS Operation (Tape Program Search)

① Press 3 (TPS) to activate the Tape Program Search mode.



② From the current selection, decide which program you want to select. Now, press ▶ several times forward (up to 9 programs) or press ◀ several times backward (up to 8) to select the corresponding program number.



EX1. To select the current program again press 3 (TPS), and press ◀ once.



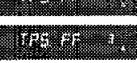
EX2. To select the 1st program backward of the current selection, press 3 (TPS) once, and press ◀ twice.



EX3. To select the next program, press 3 (TPS) and press ▶ once.



EX4. To select the 3rd program forward of the current selection, press 3 (TPS) once, and press ▶ three times.



③ Press 3 (TPS) again to cancel.

Note:
The TPS mode may not work correctly in the following cases. This, however, does not mean that the unit is defective.
• There is an interval less than 3 seconds or having a high level of noise or hum between programs.
• There is particularly low-level passage during the program.

Note: To maintain your cassette player in top condition, avoid using tapes that are longer than 90 minutes (C-90).

"For Inserting a Cassette Tape"

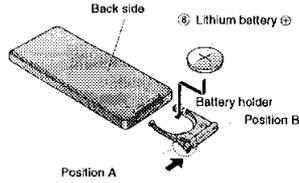
If you insert into the unit a cassette with a loose tape caused by forcing it into cassette with a finger or the like, the cassette may not be properly reproduced. In such a case, eject the cassette, make the tape tight, then insert it back into the deck.

Remote Control Basics

(Only for CQ-RD320LEN)

Battery Replacement:

- Remove the battery holder.**
Pull the holder by the Position B while pushing Position A in the direction indicated by the arrow.
- Replace the battery.**
Set a new battery properly with (+) side up as illustrated.
- Insert the battery holder.**
Push in the holder to the original position.



Note on Batteries:

Old batteries must be immediately removed and disposed.

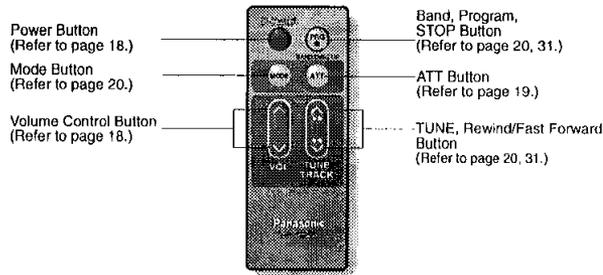
Battery Information:

- Designated Battery: Panasonic Lithium Battery (CR2025)
- Battery Life: 6 months with normal use (in normal room temperature)

Caution:
Improper use of batteries may cause overheating, explosion or ignition, resulting in injury or fire. Battery leakage may cause damage to the unit.

- Do not disassemble or short the batteries. Do not throw the batteries into a fire.
- To avoid the risk of accident, keep the batteries out of reach of children.

Names of Main Controls :

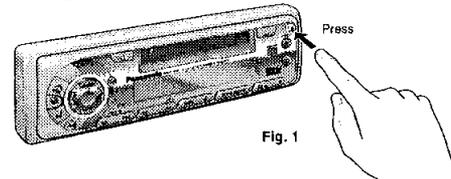


Anti-Theft System

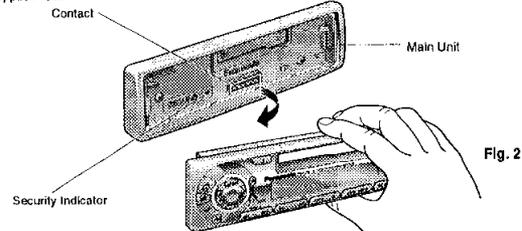
This unit is equipped with a removable face plate. By removing this face plate, the radio becomes totally inoperable. The security indicator will blink.

To Remove the Removable Face Plate

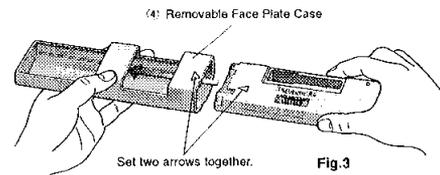
- Switch off the power.
- Press the release button (▲). The removable face plate will be released.



- Remove the removable face plate by pulling on the right side of the unit. Place the removable face plate in a supplied case.



- As shown in Fig. 3, insert the removable face plate with the arrow pointing toward the removable face plate case until you hear a "click". Keep the removable face plate in the case. Then, you can bring the plate safely.



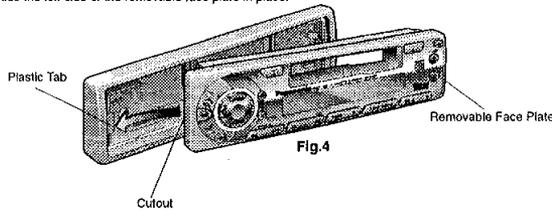
34

35

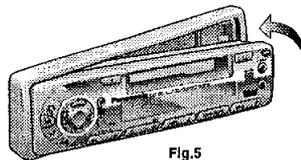
Anti-Theft System continued

To Install the Removable Face Plate

- Slide the left side of the removable face plate in place.



- Press the right end of the removable face plate until "click" is heard.



Caution:

- Before removing the removable face plate, make sure the power is off.
- This removable face plate is not water-proof. Do not expose it to water or excessive moisture.
- Do not remove the removable face plate while driving your car.
- Do not place the removable face plate on the dashboard or nearby areas where the temperature rises to high levels.
- Do not touch the contacts on the removable face plate or on the main unit because this may result in poor electrical contacts.
- If dirt or other foreign substances get on the contacts, wipe them with clean and dry cloth.

Security Indicator

The security indicator blinks when the removable face plate is removed from the unit.

Activate Security Indicator

- Press and hold SEL for more than 2 seconds when the power is on. "LED ON" is displayed, and the security indicator turns on.

(Default: The security indicator is off.)

- To check whether the unit is set in the LED ON mode, make sure that the security indicator blinks when the removable face plate is removed.

Display	Security Indicator	Panel Removal Alarm
LED ON	Blinks	ON
LED OFF	OFF	OFF

(Press and hold SEL for more than 2 seconds.)

Panel Removal Alarm

This alarm sounds to warn you not to forget to remove the panel before leaving your car. This function is activated when the security alarm is on.

36

37

Installation

Preparation

- Before installation, check the radio operation with antenna and speakers.
- Disconnect the cable from the negative (-) battery terminal (see caution below).
- The unit should be installed in a horizontal position with the front end up at a convenient angle, but not more than 30°.

Caution:

For installation to cars with trip or navigational computers, 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 Fig. 1. The car's dashboard should have a thickness of 4.5mm - 6mm in order to make the installation of the unit.

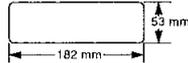


Fig. 1

Installation Precautions

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

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

1. This system is to be used only in a 12-volt, DC battery system (car) with negative ground.
2. Follow the electrical connection on page 41 carefully. Failure to do so may result in damage to the unit.
3. Connect the power lead after other connections are made.
4. Be sure to connect the YELLOW lead to the positive terminal (+) of the battery or fuse block (BAT) terminal.
5. Insulate all exposed wires to prevent short circuiting.
6. Secure all loose wires after installing the unit.
7. Please carefully read the operating and installation instructions of the respective equipment before connecting it to this unit.

Supplied Hardwares

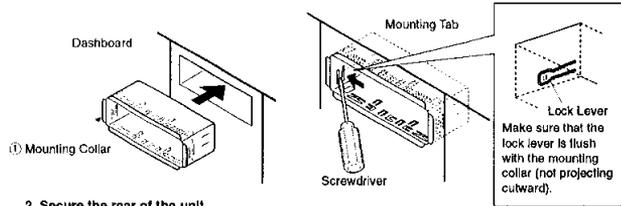
No.	Item	Diagram	Q'ty
(1)	Mounting Collar		1
(2)	Mounting Bolt (5 mm)		1
(3)	Power Connector		1
(4)	Removable Face Plate Case		1

No.	Item	Diagram	Q'ty
(5)	ISO Antenna Adaptor		1
(6)	Dismounting Plate		1
(7)	Remote Control (only for CQ-RD320LEN)		1
(8)	Lithium Battery (only for CQ-RD320LEN)		1

Installation Procedures

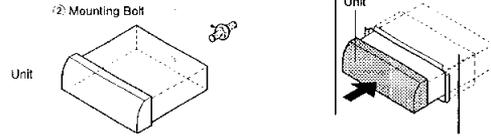
1. Secure the Mounting Collar (1).

Insert Mounting Collar (1) into the car's dashboard, and band mounting tabs out with a screwdriver.



2. Secure the rear of the unit.

- a) Check the electrical connection by referring to this operating instructions.
- b) Connect the Mounting Bolt (2) using a suitable wrench.



- c) Insert the unit into Mounting Collar (1) and push it in until "click" is heard.
- d) Secure the rear of the unit to the car by either of the two recommended methods.

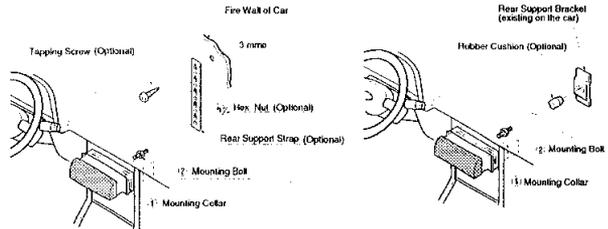
Using the Rear Support Strap (Optional)

Attach one end of the Rear Support Strap to the rear of the unit, and the other end to the Fire Wall of car, or some other metallic area.

Using the Rubber Cushion (Optional)

(If there is an existing Rear Support Bracket on the Fire Wall of car.)

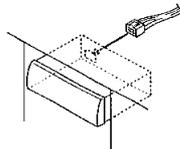
Cover Mounting Bolt (2) on the rear of the unit with Rubber Cushion (Optional), and mount it into the existing Rear Support Bracket.



Installation continued

3. Plug the Power Connector (3).

(3) Power Connector

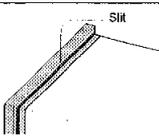


4. After installation reconnect the negative (-) battery terminal.

To remove the trim plate (for Japanese Cars)

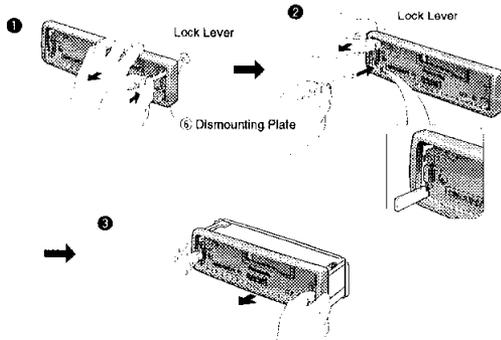
You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your dealer.

To mount this unit on a Japanese car, first cut the 9 slits in back of the trim plate with side-cut pliers, remove the trim plate, then mount this unit.



To Remove the Unit

- a) Remove the removable face plate. (See page 35.)
- b) Pull out the unit while pushing the lock lever using Dismounting Plate (6).
- c) Remove the unit pulling with both hands.

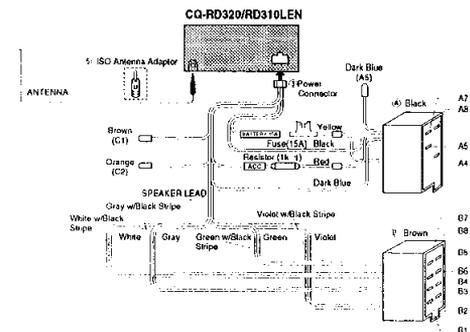


Note: Do not lose the Dismounting Plate. It will be needed to remove the unit from the car's dashboard.

Electrical Connection

Caution:

- Confirm the note on page 4, and make connections to the connectors on car side.
- To prevent damage to the unit, be sure to follow the connection diagram below.
- Remove the covering of the leads about 5 mm long from their end before connecting. (the cords except for ISO connector's cords).
- 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.



Loudspeakers (connector B)

	Left +	Left -	Right +	Right -
Front	B5 (White)	B6 (White w/Black Stripe)	B3 (Gray)	B4 (Gray w/Black Stripe)
Rear	B7 (Green)	B8 (Green w/Black Stripe)	B1 (Violet)	B2 (Violet w/Black Stripe)

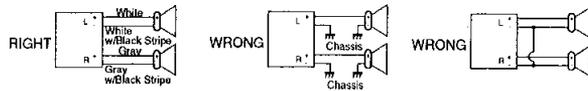
- A4 BATTERY LEAD (To Battery of Car) (Yellow)**
Connect to the "BAT" terminal on the fuse block of the car. The power should be supplied continuously to the yellow leads regardless of the on/off position of the ignition key.
- A5 MOTOR ANTENNA RELAY CONTROL LEAD (Dark Blue)**
(To Motor Antenna) (Max. 500mA)
This lead is not intended for use with switch actuated power antenna.
- AMP-RELAY CONTROL POWER LEAD**
This lead is for connection to Panasonic power amplifier.
- A7 POWER LEAD (Red)**
Connect to the "radio" power line of the car or to the "IGN" or "ACC" terminal of the fuse block.
- A8 GROUND LEAD (Black)**
Connect to a well grounded metallic part of your car.
- C1 Not Used**
- C2 TELEPHONE MUTE LEAD (Orange)**
(To car telephone mute line)
TELEPHONE MUTE
The telephone mute lead, if connected to the car telephone mute line, will activate the muting circuit and the sound from the speakers cannot be heard while the telephone conversation is in progress.
Note: This telephone mute lead is for connection only to the radio mute line. Be sure to ascertain this because it will not work with other type of output system.

Speaker Connections

Caution:

1. Use ungrounded speakers only.
2. The speakers to be used with this unit should be able to handle more than 40W of audio power. If an optional amplifier is used, the speakers 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 30cm 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.



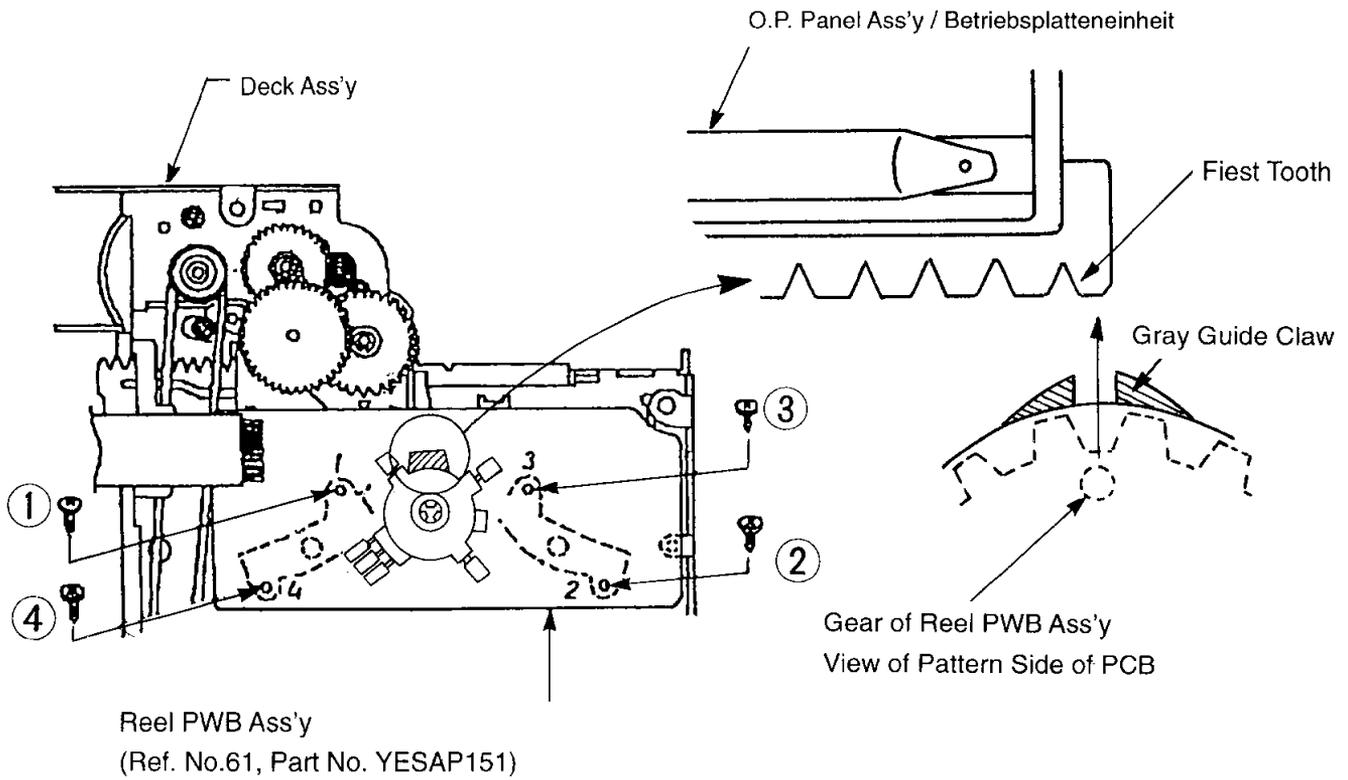
- Do not connect more than one speaker to one set of speaker leads.



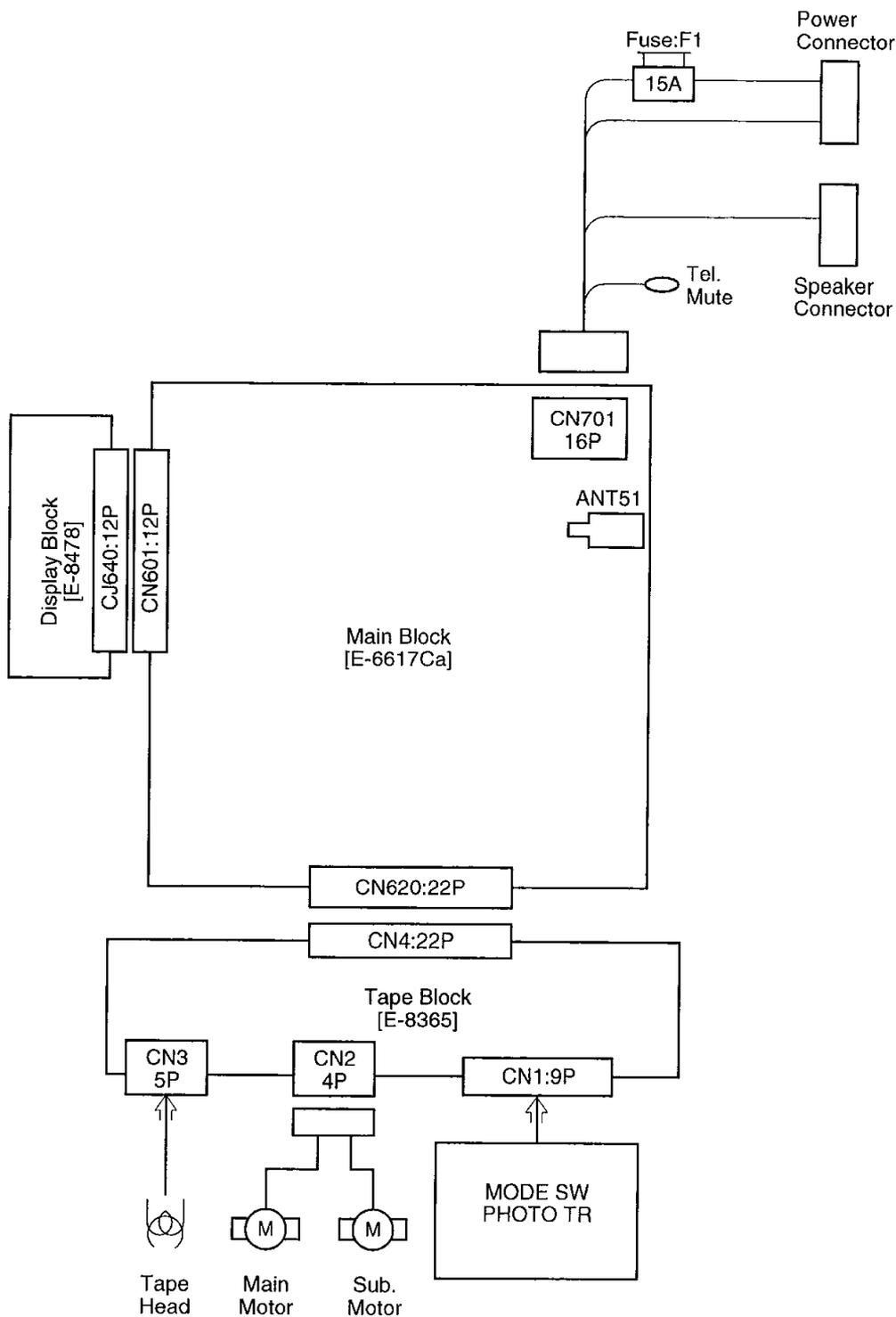
RE-ASSEMBLY PROCEDURE for REEL PWB ASS'Y

- When you re-assemble the REEL PWB Ass'y please refer to the following procedure.

1. Set the gear of Reel PWB Ass'y (Ref. No.61) into the first tooth of O.P. Plate Ass'y (Ref.No.20) as shown below.
2. Tighten the (1-4) screws of reel PWB Ass'y as shown in the figure.



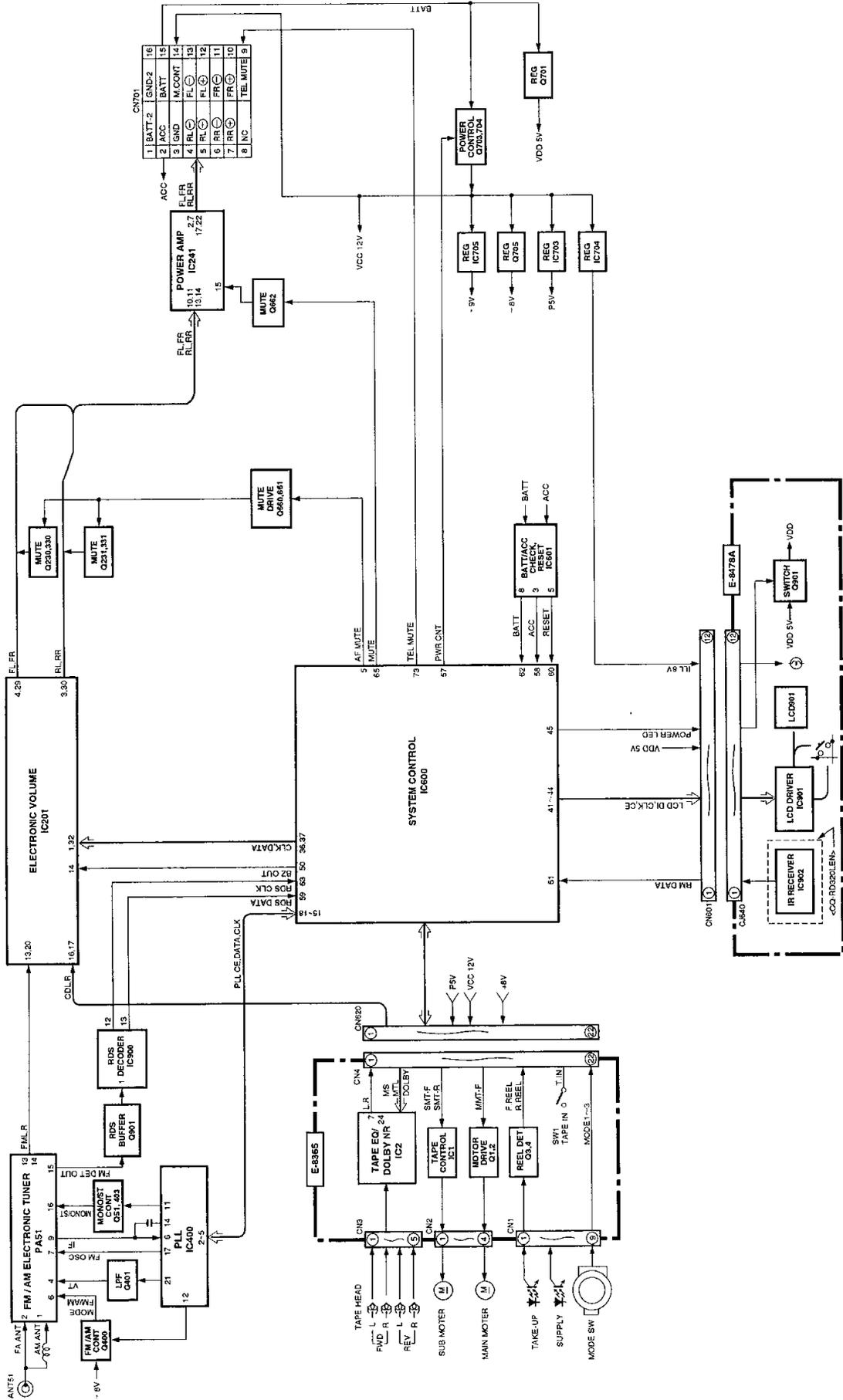
WIRING CONNECTION



<Note> :

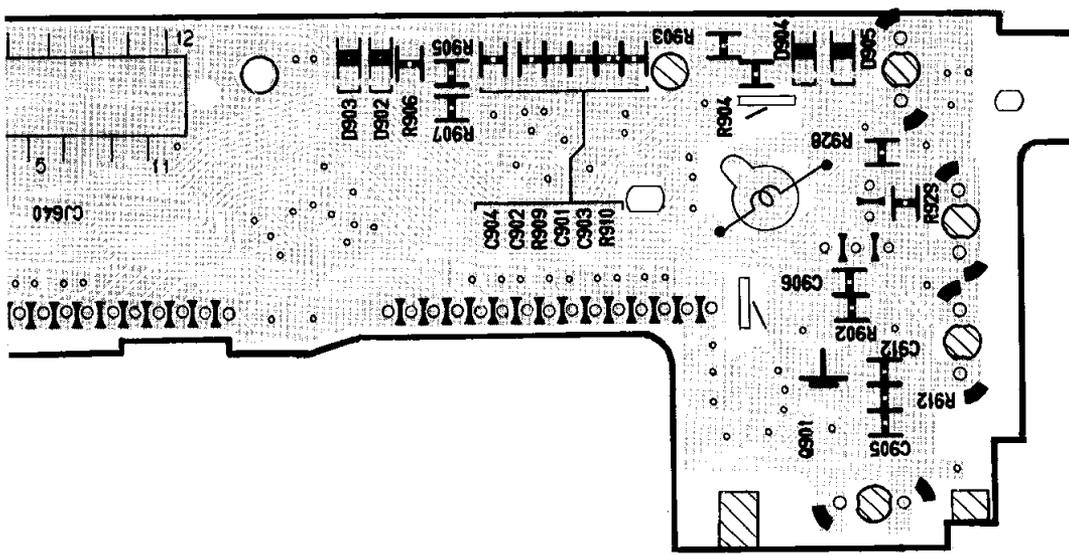
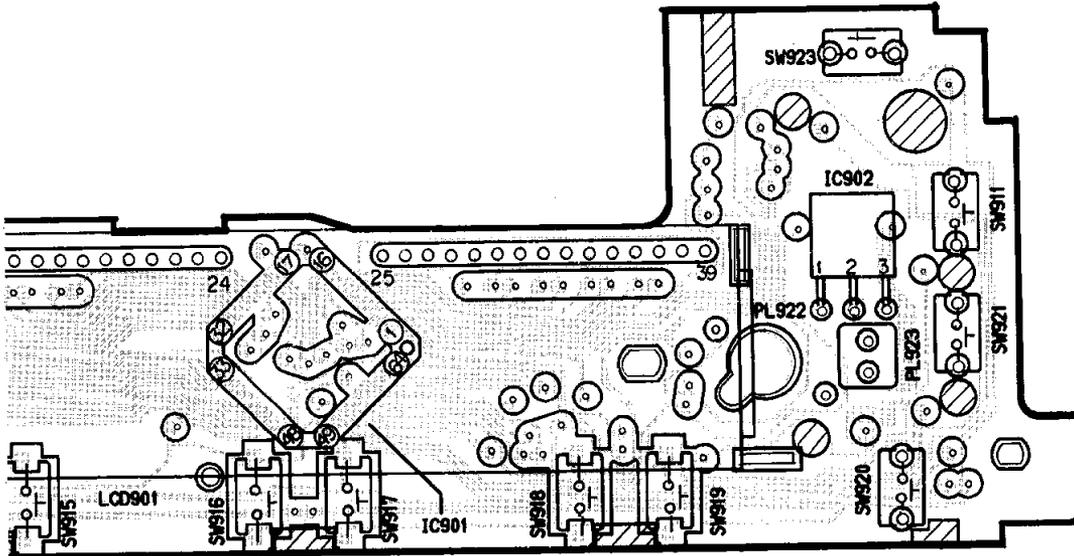
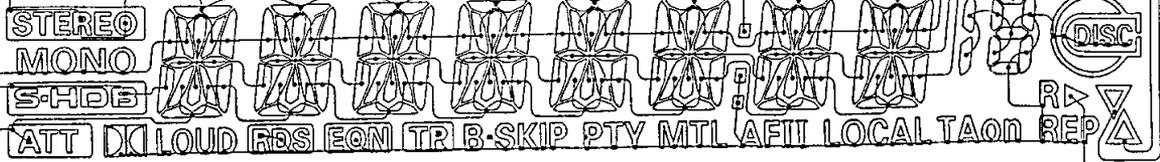
-This mark shows a Ref. No. of connector
- ┌───┐This mark shows a mounting position of connector.

BLOCK DIAGRAM MODELS CQ-RD320/310LEN



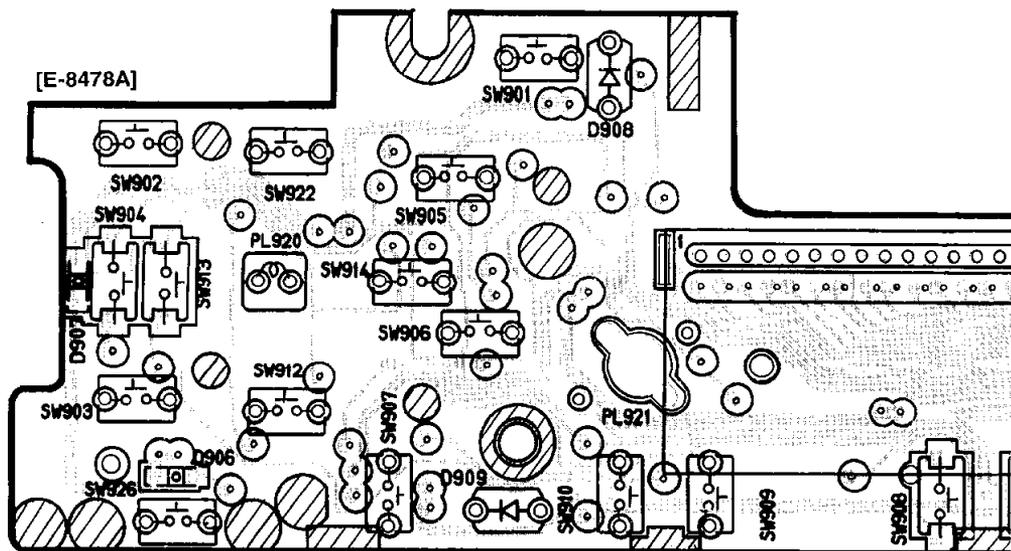
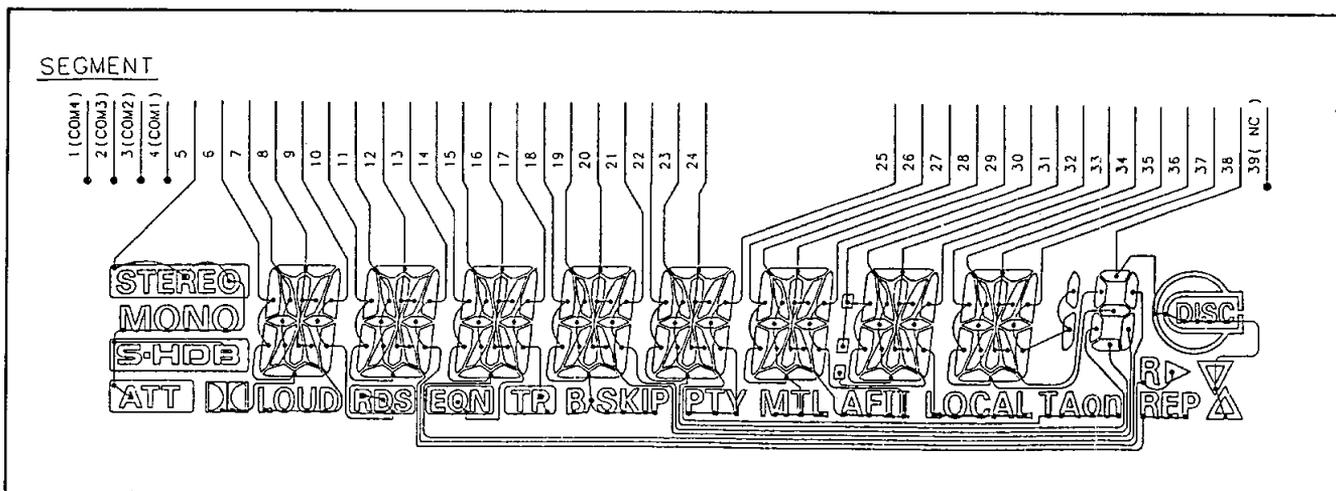
COMMON

- 1 (COM4)
- 2 (COM3)
- 3 (COM2)
- 4 (COM1)

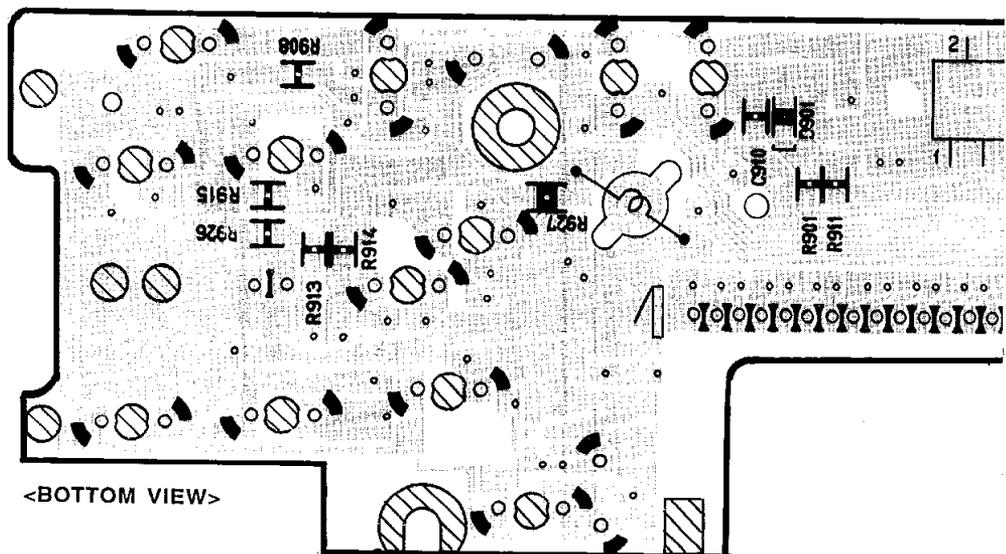


WIRING DIAGRAM (Display Block) MODELS CQ-RD320/310LEN

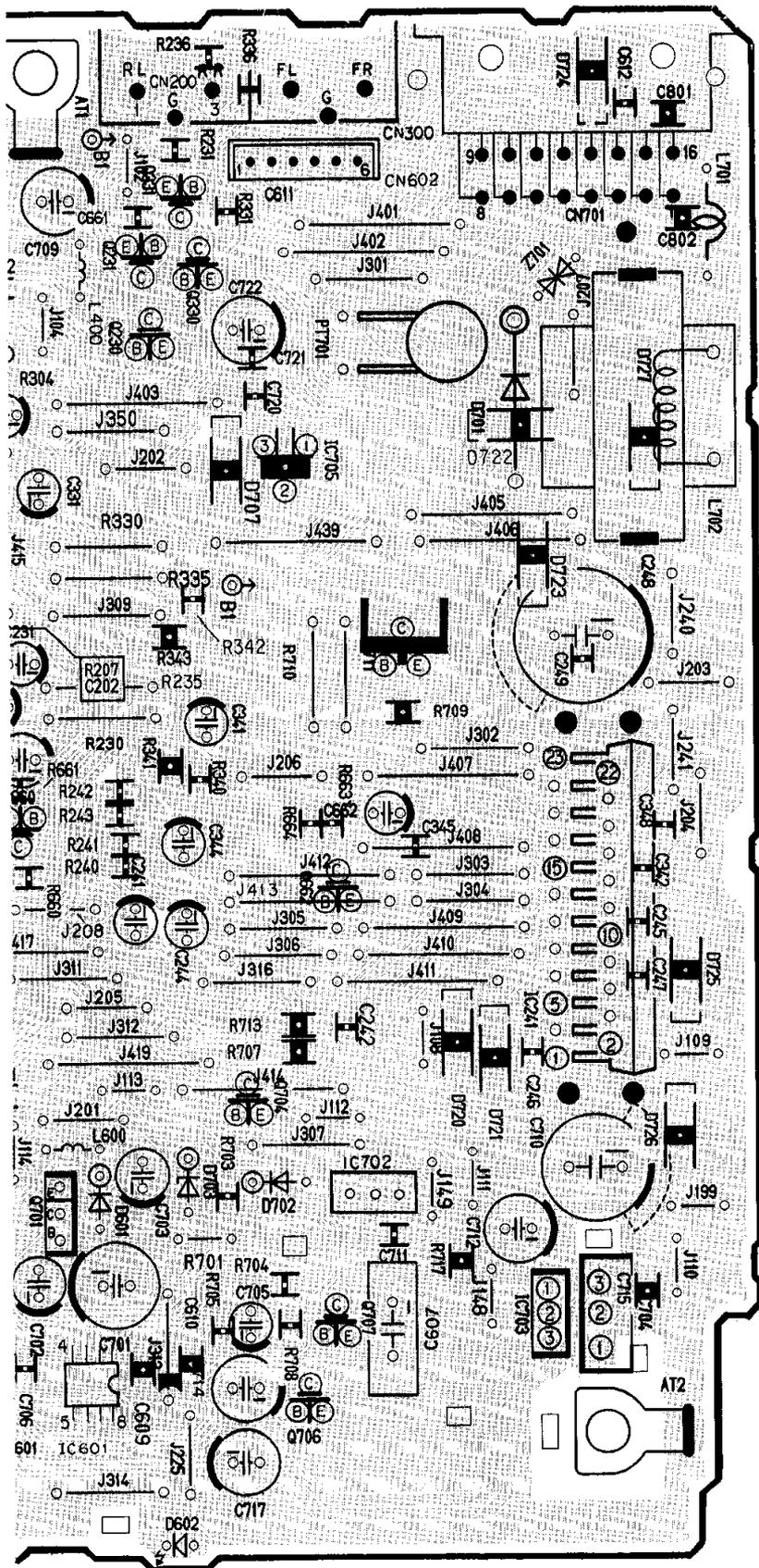
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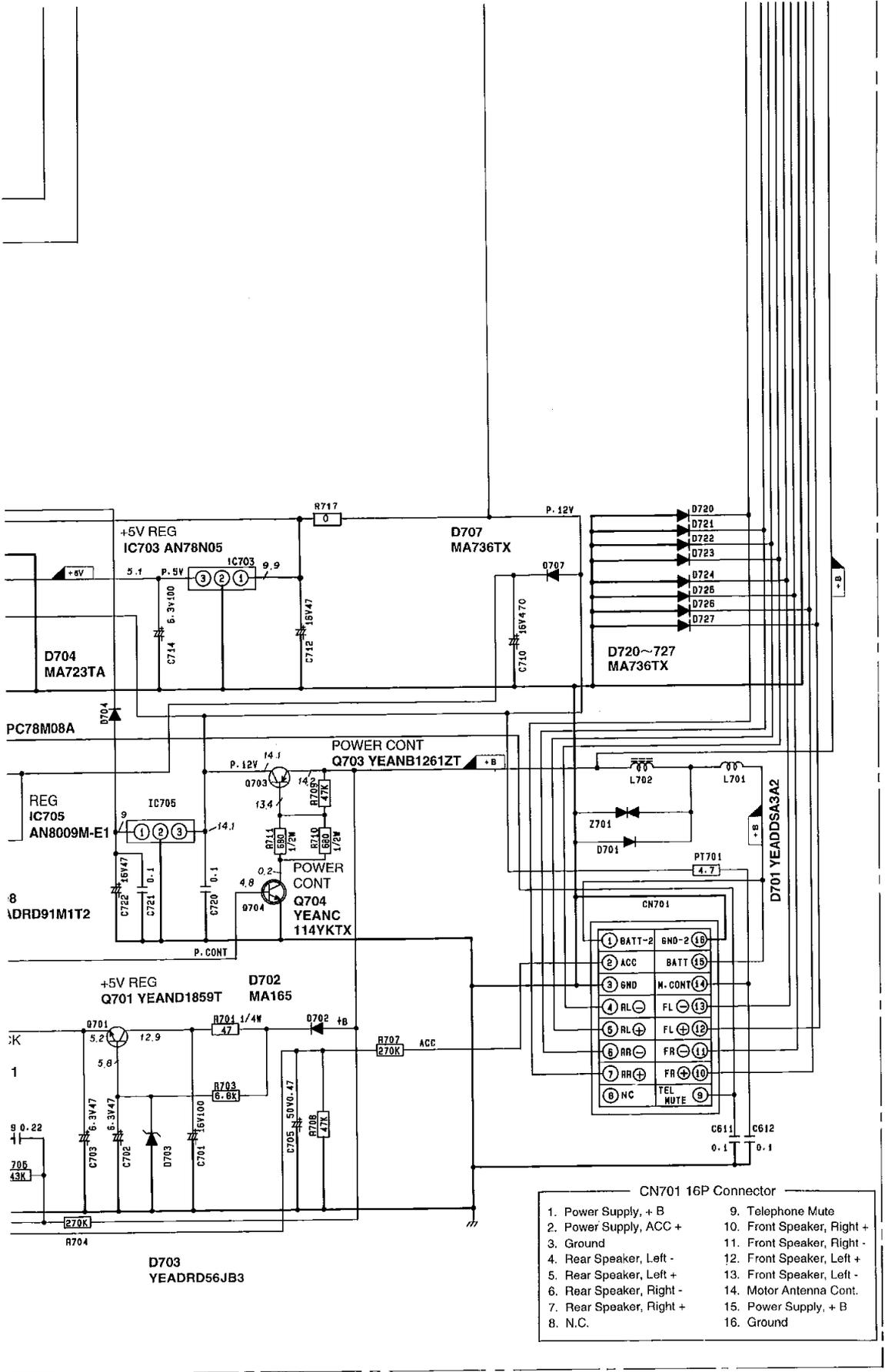


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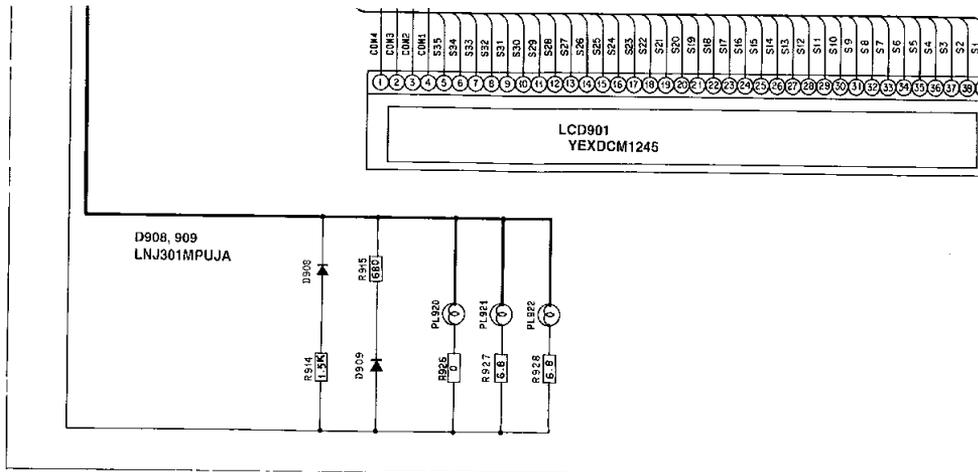


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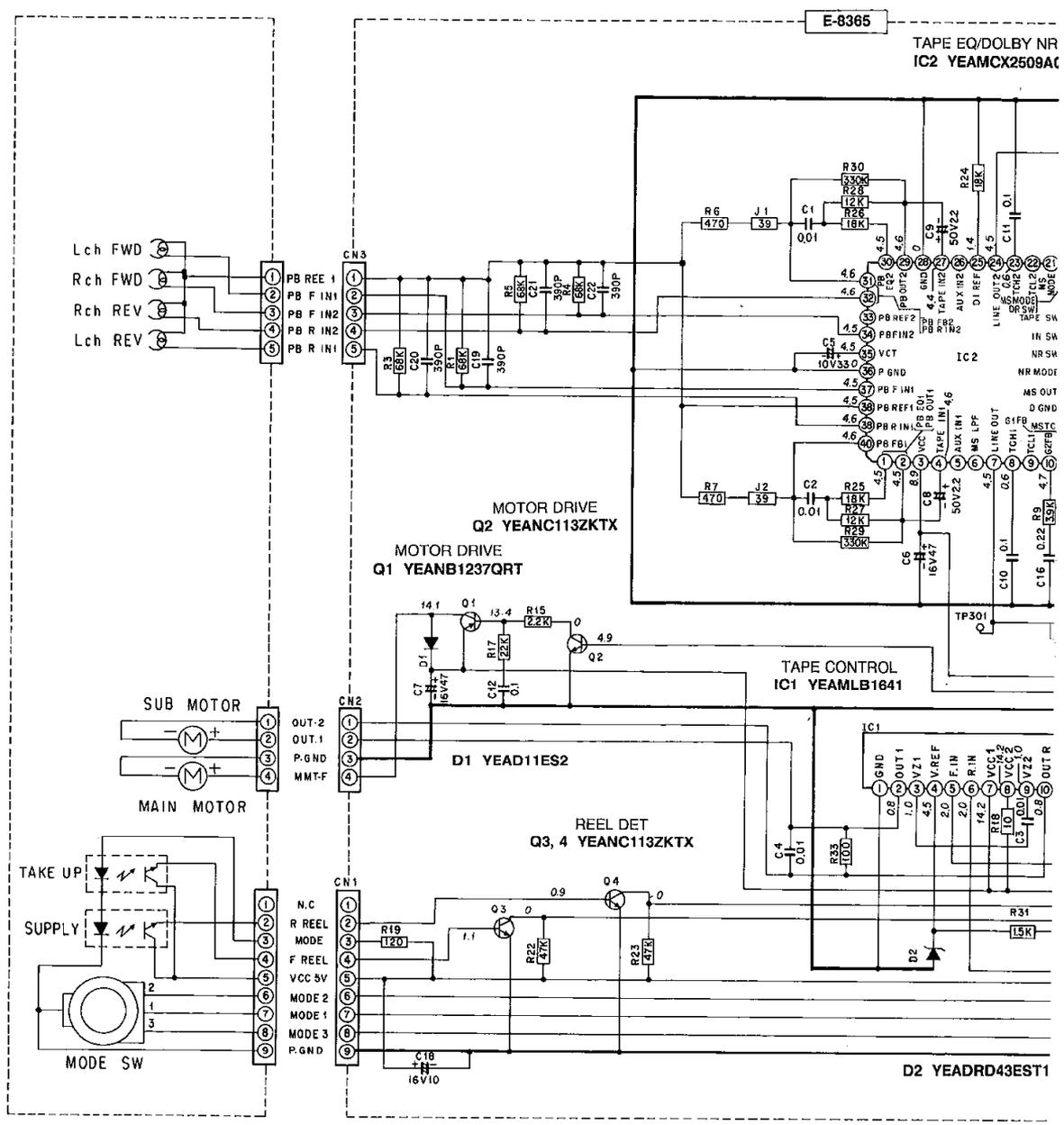




- CN701 16P Connector**
- | | |
|--------------------------|----------------------------|
| 1. Power Supply, + B | 9. Telephone Mute |
| 2. Power Supply, ACC + | 10. Front Speaker, Right + |
| 3. Ground | 11. Front Speaker, Right - |
| 4. Rear Speaker, Left - | 12. Front Speaker, Left + |
| 5. Rear Speaker, Left + | 13. Front Speaker, Left - |
| 6. Rear Speaker, Right - | 14. Motor Antenna Cont. |
| 7. Rear Speaker, Right + | 15. Power Supply, + B |
| 8. N.C. | 16. Ground |



SCHEMATIC DIAGRAM (Tape Block) MODELS CQ-RD320/310L

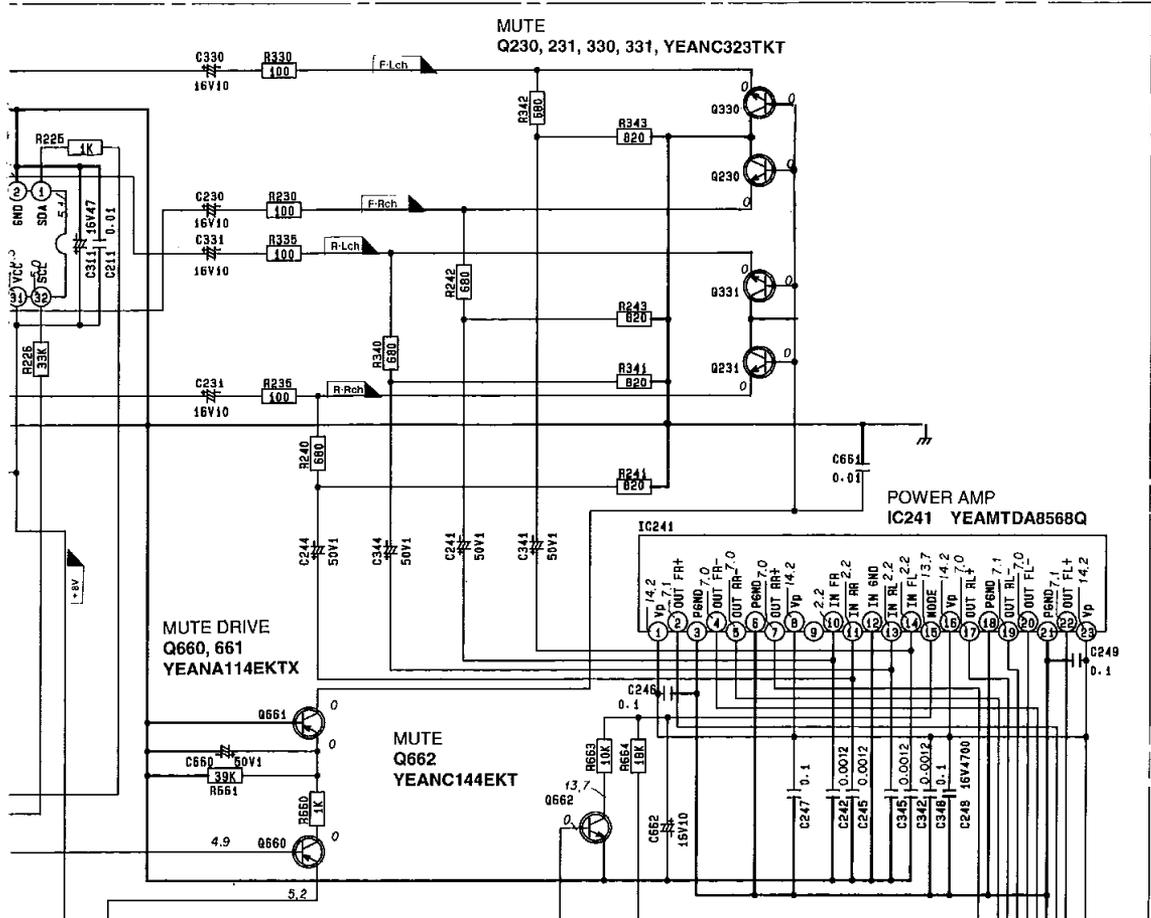


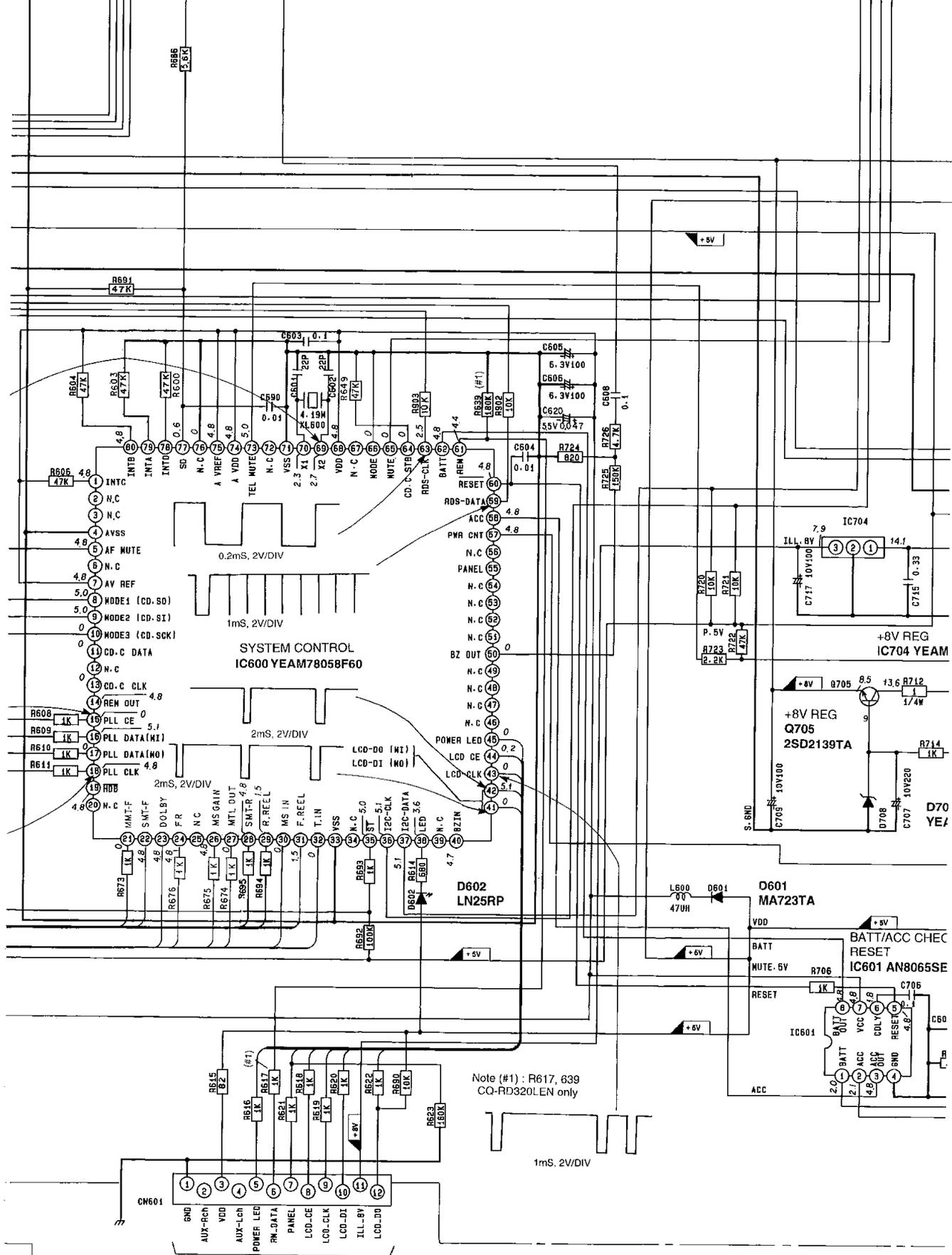
EN

WIRING DIAGRAM (Tape E

TP201

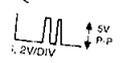
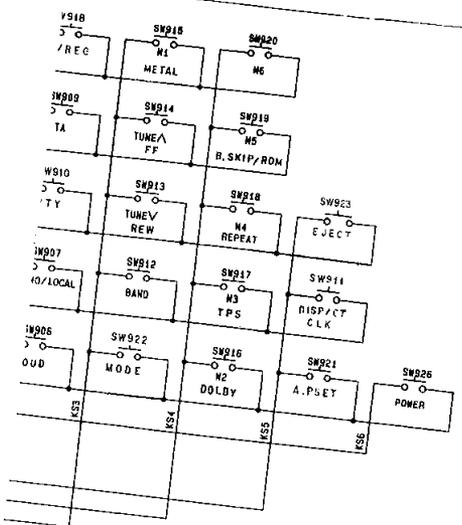
IE-83651





Note (#1) : R617, 639
CO-RD320LEN only

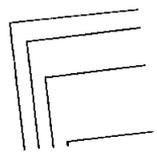
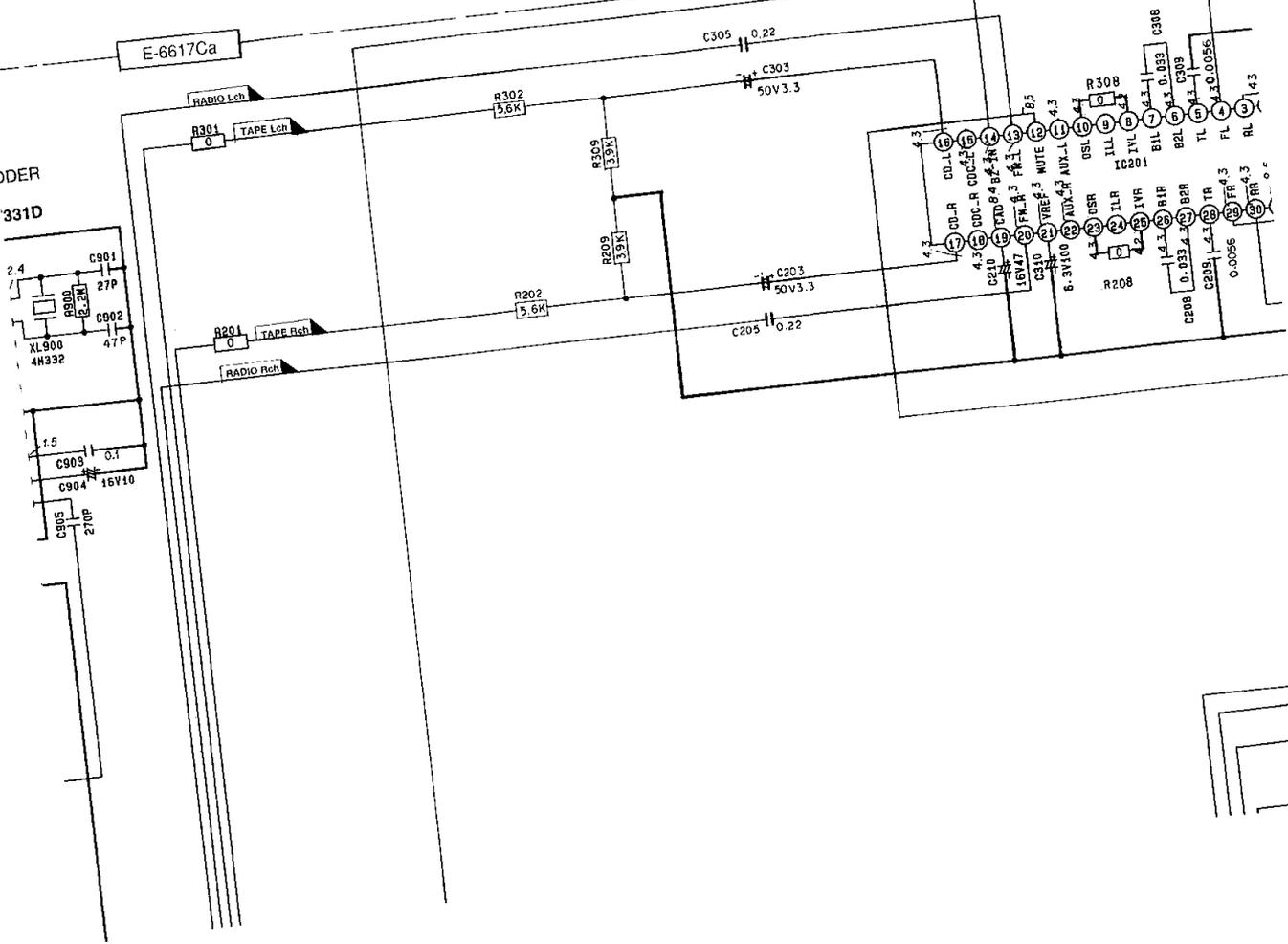
JLEN

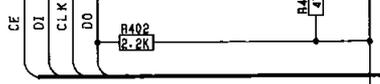


ORDER
331D

E-6617Ca

ELECTRONIC VOLUME
IC201 YEAMEA6320TT





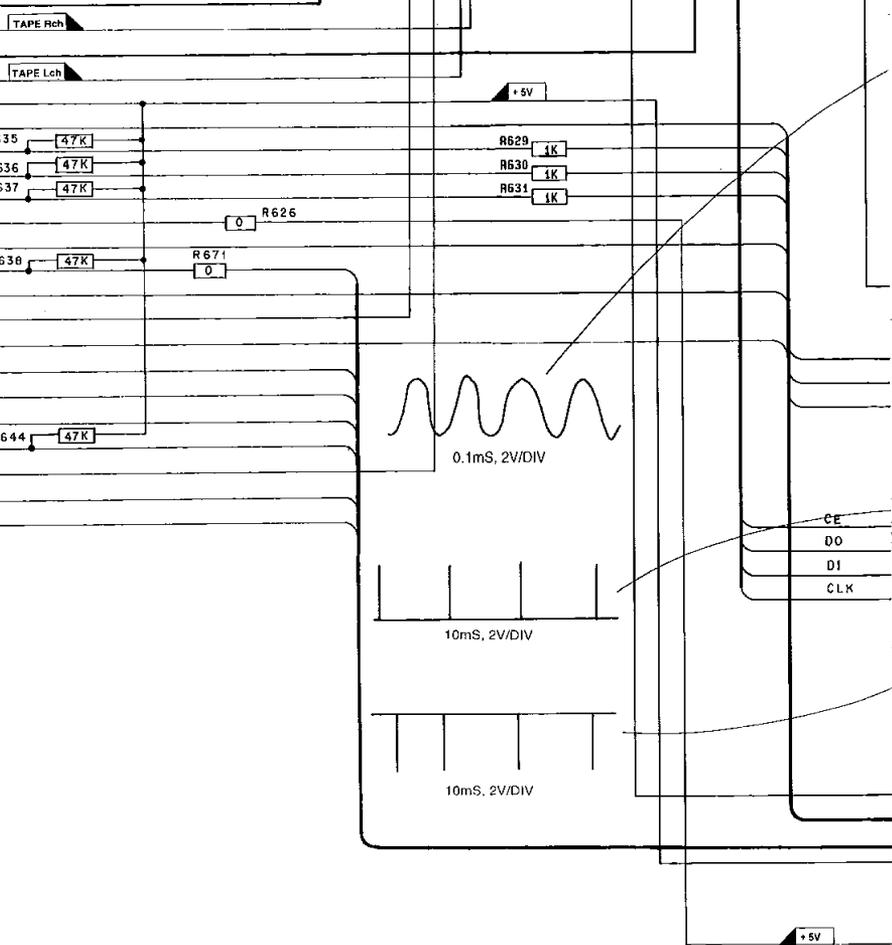
+5V

+8V

CN620

- 1 P-GND
- 2 R-CH
- 3 A-GND
- 4 L-CH
- 5 VCC 5V
- 6 SMT-R
- 7 MODE 3
- 8 MODE 1
- 9 MODE 2
- 10 FREEL
- 11 MMT-F
- 12 MS
- 13 RREEL
- 14 VCC 12V
- 15 SMT-F
- 16 MTL-OUT
- 17 DOLBY
- 18 MSGAIN
- 19 T-IN
- 20 TAPE 8V
- 21 F/R
- 22 N.C

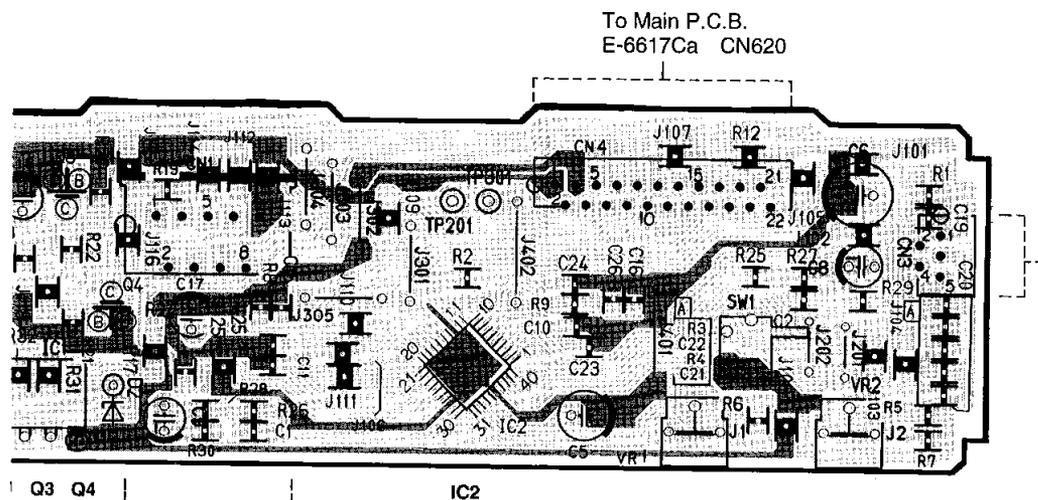
To Tape Deck P.C.B.
E-8365 CN4



CE
DO
DI
CLK

+5V

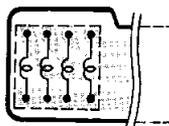
Block) MODELS CQ-RD320/310LEN



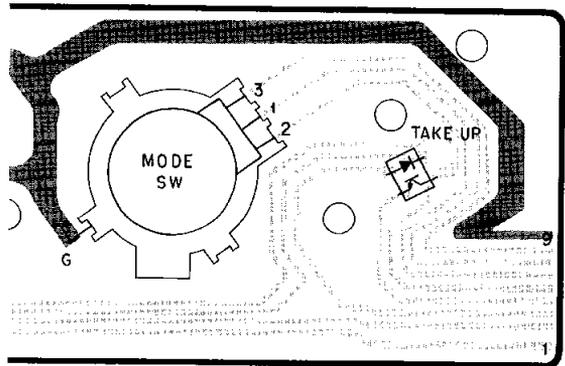
IC2			
1	4.25 V	21	—
2	4.5 V	22	0.7 V
3	8.9 V	23	0.6 V
4	4.6 V	24	4.5 V
5	—	25	1.4 V
6	—	26	—
7	4.5 V	27	4.4 V
8	0.6 V	28	0 V
9	0 V	29	4.6 V
10	4.7 V	30	4.5 V
11	4.6 V	31	4.6 V
12	0.8 V	32	4.6 V
13	0 V	33	—
14	5.1 V	34	4.5 V
15	0.8 V	35	4.5 V
16	0 V	36	0 V
17	—	37	4.5 V
18	0 V	38	4.5 V
19	5.1 V	39	4.6 V
20	5.1 V	40	4.6 V

Q3 Q4 IC2

Tape Head



	B	C	E
Q1	13.4	14.1	14.2
Q2	4.9	0	0
Q3	1.1	0	0
Q4	0.9	0	0



ICs & Transistors

Pin No1

IC2 40Pin

Pin No1

IC1 10Pin

• Q1

• Q2, 3, 4

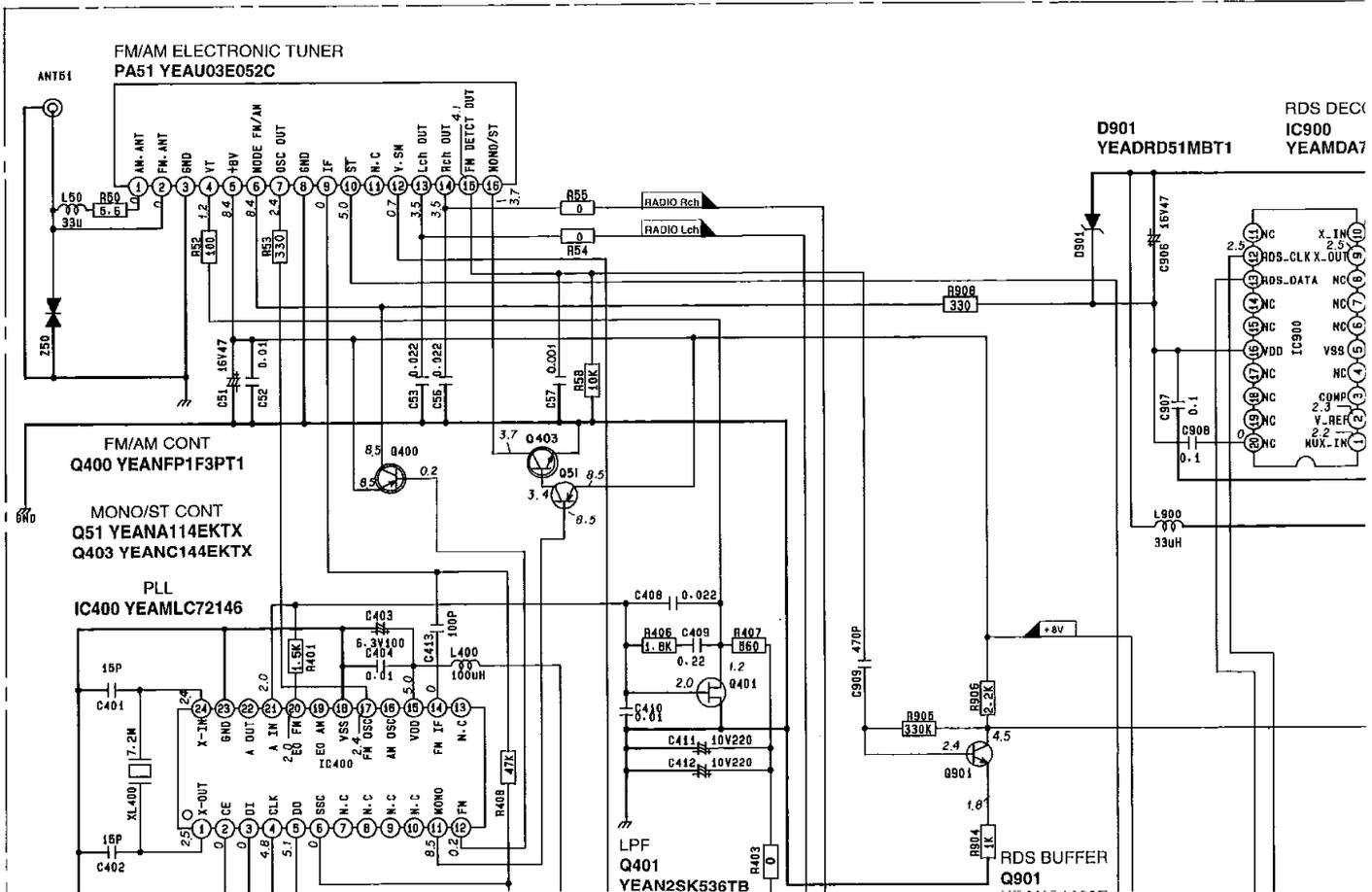
Pin	IC1
1	0
2	0.8
3	1.0
4	4.5
5	2.0
6	2.0
7	14.2
8	14.2
9	1.0
10	0.8

TERMINALS DESCRIPTION

■ IC600 : YEAM78058F60 < Main Block >

Pin No.	Port	Description	I/O	Vol.(V)	Pin No.	Port	Description	I/O	Vol.(V)
1	INIT C	Initial C	I	4.8	41	LCD-DI (MO)	LCD data input	O	0
2	NC	No connection	—	—	42	LCD-DO (MI)	LCD data output	I	5.1
3	NC	No connection	—	—	43	LCD-CLK	LCD clock	O	0
4	AV _{SS}	Analog ground	—	—	44	LCD-CE	LCD chip enable output	O	0.2
5	AF MUTE	AF mute	O	4.8	45	POWER LED	Pilot lamp on	O	0
6	NC	No connection	—	—	46	NC	No connection	—	—
7	AVREF	Reference voltage	—	4.8	47	NC	No connection	—	—
8	MODE1	Tape mode SW	I	5.0	48	NC	No connection	—	—
9	MODE2	Tape mode SW	I	5.0	49	NC	No connection	—	—
10	MODE3	Tape mode SW	I	0	50	BZOUT	BEEP output	O	0
11	NC	No connection	—	—	51	NC	No connection	—	—
12	NC	No connection	—	—	52	NC	No connection	—	—
13	NC	No connection	—	—	53	NC	No connection	—	—
14	NC	No connection	—	—	54	NC	No connection	—	—
15	PLL CE	PLL controller chip enable	O	0	55	PANEL	Panel detect	I	4.8
16	PLL DATA (MI)	Data from PLL	I	5.1	56	NC	No connection	—	—
17	PLL DATA (MO)	Data for PLL	O	0	57	PWR CNT	Power control	O	4.8
18	PLL CLK	Clock for PLL	O	4.8	58	ACC	ACC detection	I	4.8
19	NC	No connection	—	—	59	RDS DATA	RDS data input	I	4.8
20	NC	No connection	—	—	60	/RESET	Reset input	I	4.8
21	MMT-F	Main motor control	O	0	61	REM	Remocon data input (Note 2)	I	4.4

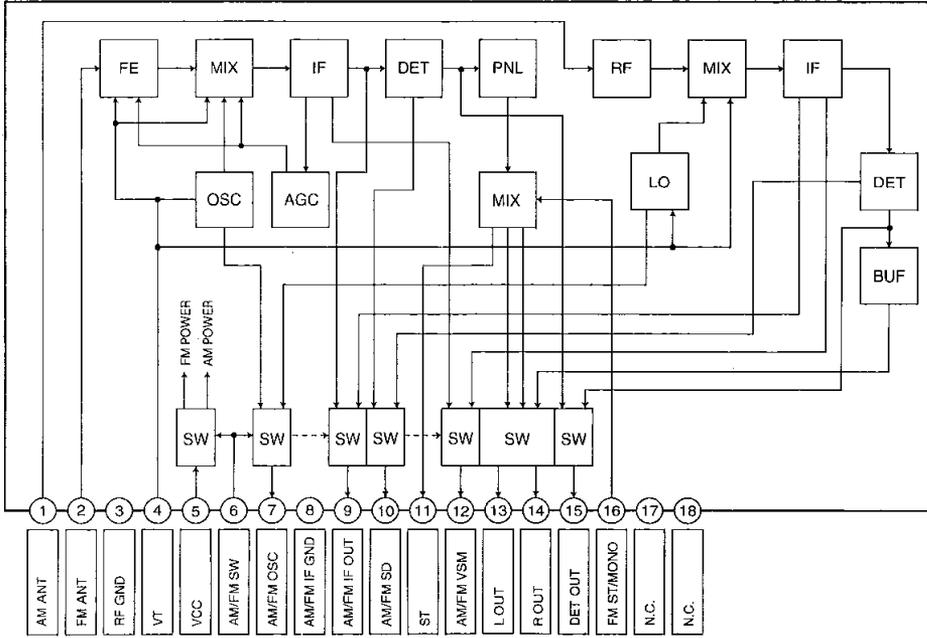
SCHEMATIC DIAGRAM (Main Block) MODELS CQ-RD320/310LEN



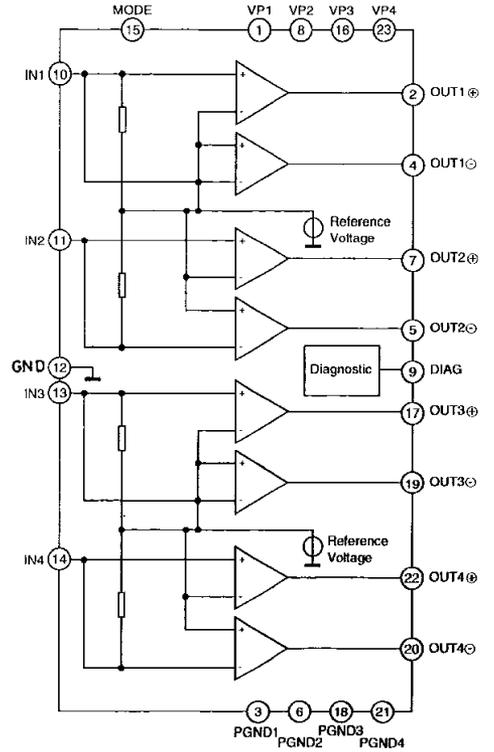
PACKAGE AND IC BLOCK DIAGRAM / PACKEN UND IC BLOCK DIAGRAM

<Main Block>

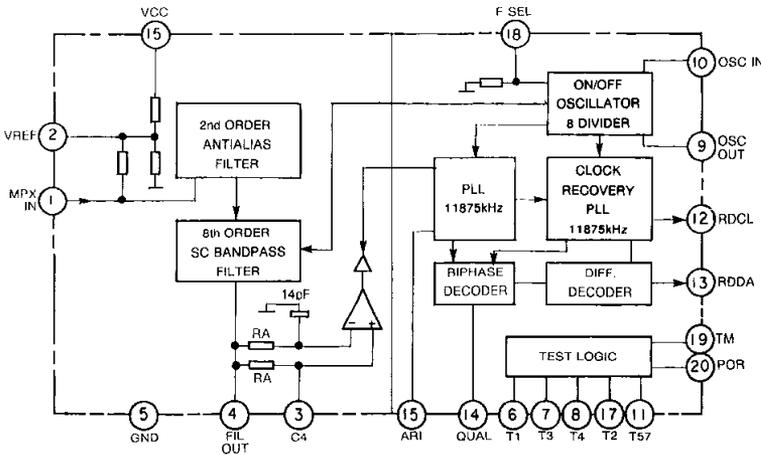
● PA51 YEAMTDA8568Q



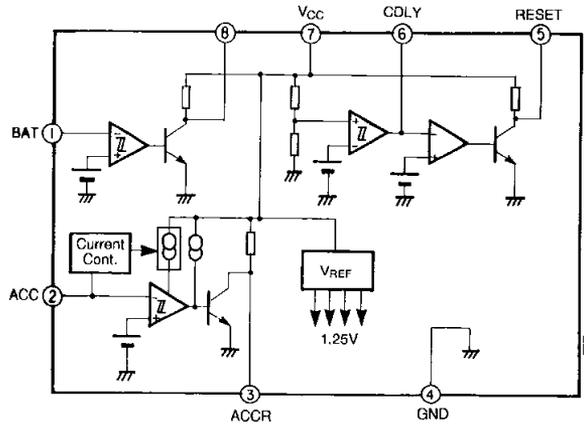
● IC241 YEAMTDA8568Q



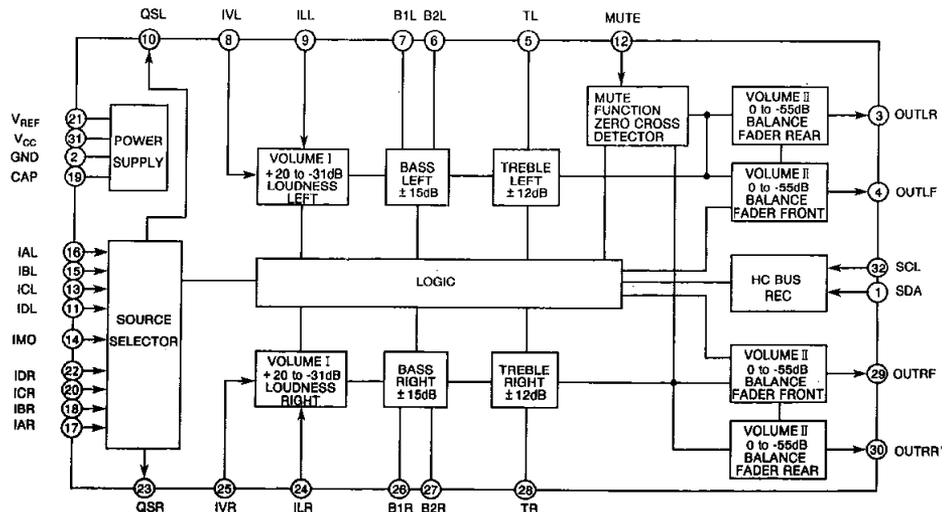
● IC900 YEAMDA7331D



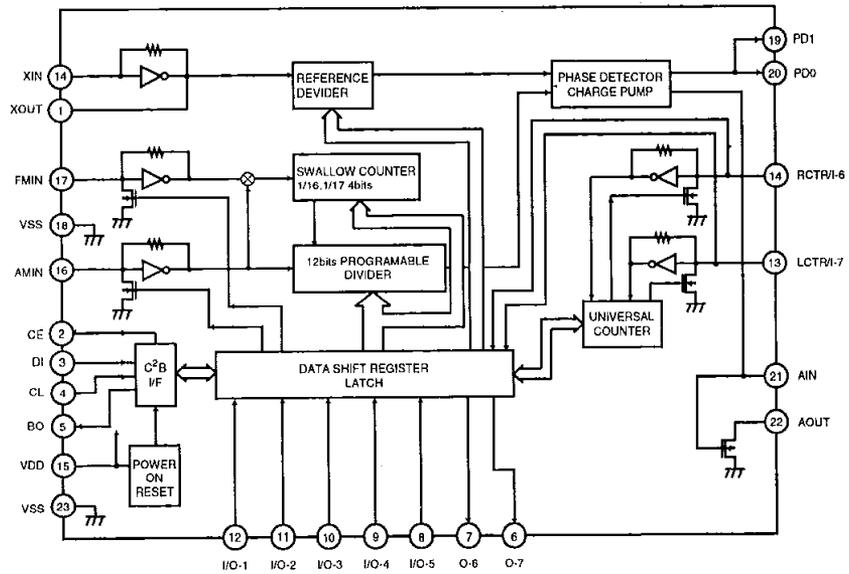
● IC601 AN8065SE1



● IC201 YEAMEA6320TT

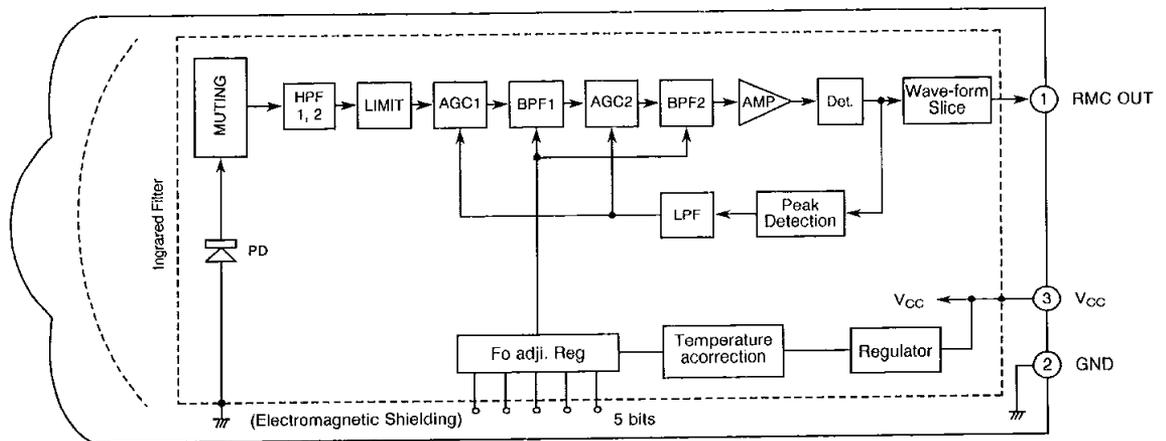


● IC400
YEAMLC72146



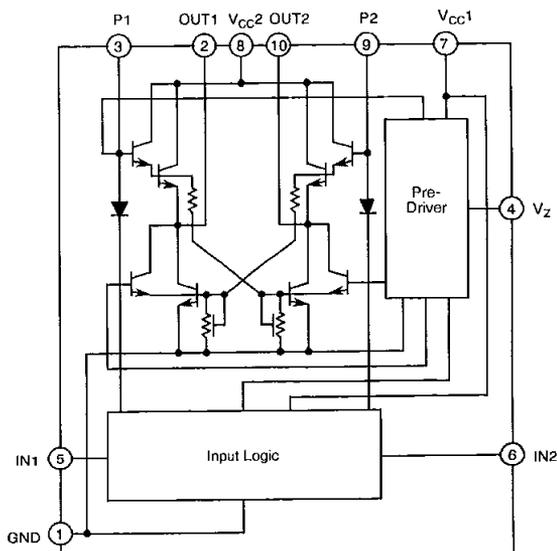
<Display Block>

● IC902 YEAMSBX8035F

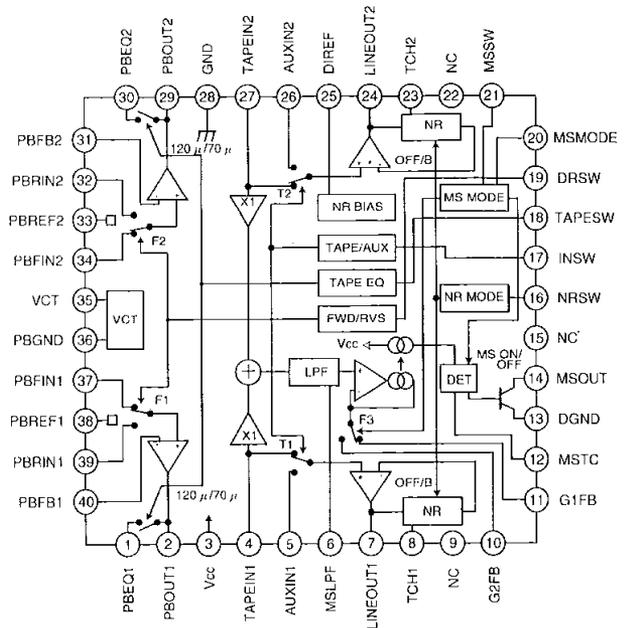


<Tape Block>

● IC1 YEAMLB1641



● IC2 YEAMCX2509AQ



1 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 Δ 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.

1.1. IC's and Transistors

MAIN BLOCK [E6617C]

Ref. No.	Part No.	Part Name & Description	Remarks
IC201	YEAMEA6320TT	IC	
IC241	YEAMTDA8568Q	IC	
IC400	YEAMLC72146	IC	
IC600	YEAM78058F60	IC	
IC601	AN8065SE1	IC	
IC703	AN78N05	IC	
IC704	YEAMPC78M08A	IC	
IC705	AN8009M-E1	IC	
IC900	YEAMDA7331D	IC	
PA51	YEAU03E052C	Electronic Tuner	
Q51	YEANA114EKT	Transistor	
Q230	YEANC323TKT	Transistor	
Q231	YEANC323TKT	Transistor	
Q330	YEANC323TKT	Transistor	
Q331	YEANC323TKT	Transistor	
Q400	YEANFP1F3PT1	Transistor	
Q401	YEAN2SK536TB	Transistor	
Q403	YEANCI144EKT	Transistor	
Q660	YEANA114EKT	Transistor	
Q661	YEANA114EKT	Transistor	
Q662	YEANCI144EKT	Transistor	
Q701	YEAND1859T	Transistor	
Q703	YEANB1261ZT	Transistor	
Q704	YEANC114YKT	Transistor	
Q705	2SD2139TA	Transistor	
Q901	YEANC1623	Transistor	

DISPLAY BLOCK [E8478A]

Ref. No.	Part No.	Part Name & Description	Remarks
IC901	YEAMLC75854T	IC	
IC902	YEAMSBX8035F	IC (CQ-RD320LEN)	
Q901	YEANA114EKT	Transistor	

TAPE BLOCK [E8365]

Ref. No.	Part No.	Part Name & Description	Remarks
IC1	YEAMLB1641	IC	
IC2	YEAMCX2509AQ	IC	
Q1	YEANB1237QRT	Transistor	
Q2	YEANC113ZKTX	Transistor	
Q3	YEANC113ZKTX	Transistor	
Q4	YEANC113ZKTX	Transistor	

1.2. Diodes

MAIN BLOCK [E6617C]

Ref. No.	Part No.	Part Name & Description	Remarks
D601	MA723TA	Diode	
D602	LN25RP	LED	
D701	YEADDSA3A2	Diode	
D702	MA165	Diode	
D703	YEARDR56JB3	Diode	
D704	MA723TA	Diode	
D707	MA736TX	Diode	
D708	YEARDR91M1T2	Diode	
D720	MA736TX	Diode	
D721	MA736TX	Diode	
D722	MA736TX	Diode	
D723	MA736TX	Diode	
D724	MA736TX	Diode	
D725	MA736TX	Diode	
D726	MA736TX	Diode	
D727	MA736TX	Diode	
D901	YEARDR51MBT1	Diode	
Z701	ERZC07DK470	ZNR	

DISPLAY BLOCK [E8478A]

Ref. No.	Part No.	Part Name & Description	Remarks
D901	MA8047MTW	Diode	
D902	MA8056LMHTX	Diode	
D903	MA8056LMHTX	Diode	
D904	MA8056LMHTX	Diode	
D905	MA8056LMHTX	Diode	
D906	LN1271RAL	LED	
D908	LNJ301MPUJA	LED	
D909	LNJ301MPUJA	LED	

TAPE BLOCK [E8365]

Ref. No.	Part No.	Part Name & Description	Remarks
D1	YEAD11ES2	Diode	
D2	YEARDR43EST1	Diode	

1.3. Capacitors

MAIN BLOCK [E6617C]

Ref. No.	Part No.	Part Name & Description	Remarks
C51	ECA1CKA470I	Electrolytic, 47 μ F 16WV	
C52	YECUS1H103KX	Ceramic, 0.01 μ F 50WV	
C53	YECUS1E223KX	Ceramic, 0.022 μ F 25WV	
C56	YECUS1E223KX	Ceramic, 0.022 μ F 25WV	
C57	YECUS1H102KX	Ceramic, 0.001 μ F 50WV	
C203	ECA1HSA3R3I	Electrolytic, 3.3 μ F 50WV	
C205	YECUV1C224KX	Ceramic, 0.22 μ F 16WV	
C208	YECUS1E333KX	Ceramic, 0.033 μ F 25WV	
C209	YECUS1H562KX	Ceramic, 0.0056 μ F 50WV	
C210	ECA1CSA470I	Electrolytic, 47 μ F 16WV	
C211	YECUS1H103KX	Ceramic, 0.01 μ F 50WV	
C230	ECA1CSA100I	Electrolytic, 10 μ F 16WV	
C231	ECA1CSA100I	Electrolytic, 10 μ F 16WV	
C241	ECA1HSA010I	Electrolytic, 1 μ F 50WV	
C242	YECUS1H122KX	Ceramic, 0.0012 μ F 50WV	
C244	ECA1HKA010I	Electrolytic, 1 μ F 50WV	
C245	YECUS1H122KX	Ceramic, 0.0012 μ F 50WV	
C246	YECUS1E104ZF	Ceramic, 0.1 μ F 25WV	
C247	YECUS1E104ZF	Ceramic, 0.1 μ F 25WV	
C248	ECA1CDT472Y	Electrolytic, 4700 μ F 16WV	
C249	YECUS1E104ZF	Ceramic, 0.1 μ F 25WV	
C303	ECA1HSA3R3I	Electrolytic, 3.3 μ F 50WV	
C305	YECUV1C224KX	Ceramic, 0.22 μ F 16WV	
C308	YECUS1E333KX	Ceramic, 0.033 μ F 25WV	
C309	YECUV2A562KX	Ceramic, 0.0056 μ F 100WV	
C310	ECA0JSA101I	Electrolytic, 100 μ F 6.3WV	
C311	ECA1CSA470I	Electrolytic, 47 μ F 16WV	
C330	ECA1CSA100I	Electrolytic, 10 μ F 16WV	
C331	ECA1CSA100I	Electrolytic, 10 μ F 16WV	

Ref. No.	Part No.	Part Name & Description	Remarks
C341	ECEA1HKA010I	Electrolytic, 1pF 50WV	
C342	YECUS1H122KX	Ceramic, 0.0012pF 50WV	
C344	ECEA1HKA010I	Electrolytic, 1pF 50WV	
C345	YECUS1H122KX	Ceramic, 0.0012pF 50WV	
C348	YECUS1E104ZF	Ceramic, 0.1pF 25WV	
C401	YECUS1H150JM	Ceramic, 15PF 50WV	
C402	YECUS1H150JM	Ceramic, 15PF 50WV	
C403	ECEA0JKA101I	Electrolytic, 100pF 6.3WV	
C404	YECUS1H103KX	Ceramic, 0.01pF 50WV	
C408	YECUS1E223KX	Ceramic, 0.022pF 25WV	
C409	ECQV1H224JL2	Plastic Film, 0.22pF 50WV	
C410	YECUS1H103KX	Ceramic, 0.01pF 50WV	
C411	ECEA1AKS221	Electrolytic, 220pF 10WV	
C412	ECEA1AKS221	Electrolytic, 220pF 10WV	
C413	YECUS1H101JM	Ceramic, 100PF 50WV	
C601	YECUS1H220JM	Ceramic, 22PF 50WV	
C602	YECUS1H220JM	Ceramic, 22PF 50WV	
C603	YECUS1C104KX	Ceramic, 0.1pF 16WV	
C604	YECUS1H103KX	Ceramic, 0.01pF 50WV	
C605	ECA0JSA101I	Electrolytic, 100pF 6.3WV	
C606	ECA0JSA101I	Electrolytic, 100pF 6.3WV	
C608	YECUV1C104KX	Ceramic, 0.1pF 16WV	
C609	YECUV1C224KX	Ceramic, 0.22pF 16WV	
C611	YECUV1H104ZF	Ceramic, 0.1pF 50WV	
C612	YECUS1E104ZF	Ceramic, 0.1pF 25WV	
C620	ECS5R5T473	Electrolytic, 0.047FD 5.5WV	
C660	ECA1HSA010I	Electrolytic, 1pF 50WV	
C661	YECUS1H103KX	Ceramic, 0.01pF 50WV	
C662	ECEA1CKA100I	Electrolytic, 10pF 16WV	
C690	YECUS1H103KX	Ceramic, 0.01pF 50WV	
C701	ECEA1CKS101	Electrolytic, 100pF 16WV	
C702	ECA0JSA470I	Electrolytic, 47pF 6.3WV	
C703	ECA0JSA470I	Electrolytic, 47pF 6.3WV	
C705	ECEA1HKAR47I	Electrolytic, 0.47pF 50WV	
C706	YECUS1C104KX	Ceramic, 0.1pF 16WV	
C707	ECA1AM221I	Electrolytic, 220pF 10WV	
C709	ECEA1AKS101	Electrolytic, 100pF 10WV	
C710	ECA1CM471B	Electrolytic, 470pF 16WV	
C712	ECEA1CKA470I	Electrolytic, 47pF 16WV	
C714	ECEA0JKA101I	Electrolytic, 100pF 6.3WV	
C715	YECUV1E334ZF	Ceramic, 0.33pF 25WV	
C717	ECEA1AKS101	Electrolytic, 100pF 10WV	
C720	YECUS1E104ZF	Ceramic, 0.1pF 25WV	
C721	YECUS1E104ZF	Ceramic, 0.1pF 25WV	
C722	ECA1CSA470I	Electrolytic, 47pF 16WV	
C901	YECUS1H270JM	Ceramic, 27PF 50WV	
C902	YECUS1H470JM	Ceramic, 47PF 50WV	
C903	YECUS1C104KX	Ceramic, 0.1pF 16WV	
C904	ECA1CSA100I	Electrolytic, 10pF 16WV	
C905	YECUV1H271JM	Ceramic, 270PF 50WV	
C906	ECA1CSA470I	Electrolytic, 47pF 16WV	
C907	YECUS1C104KX	Ceramic, 0.1pF 16WV	
C908	YECUS1C104KX	Ceramic, 0.1pF 16WV	
C909	YECUS1H471JM	Ceramic, 470PF 50WV	

DISPLAY BLOCK [E8478A]

Ref. No.	Part No.	Part Name & Description	Remarks
C901	YECUS1E104ZF	Ceramic, 0.1pF 25WV	
C902	YECUS1E104ZF	Ceramic, 0.1pF 25WV	
C903	YECUS1H681JM	Ceramic, 680PF 50WV	
C904	YECUS1E104ZF	Ceramic, 0.1pF 25WV	
C905	YECUS1E104ZF	(CQ-RD320LEN) 0.1pF 25WV	
C906	YECUS1H102KX	(CQ-RD320LEN) 0.001pF 50WV	
C912	YECUS1E104ZF	Ceramic, 0.1pF 25WV	

TAPE BLOCK [E8365]

Ref. No.	Part No.	Part Name & Description	Remarks
C1	YECUS1H103KX	Ceramic, 0.01pF 50WV	
C2	YECUS1H103KX	Ceramic, 0.01pF 50WV	
C3	YECUS1H103KX	Ceramic, 0.01pF 50WV	
C4	YECUS1H103KX	Ceramic, 0.01pF 50WV	
C5	ECEA1AKS330I	Electrolytic, 33pF 10WV	

Ref. No.	Part No.	Part Name & Description	Remarks
C6	ECEA1CKS470I	Electrolytic, 47pF 16WV	
C7	ECEA1CKS470I	Electrolytic, 47pF 16WV	
C8	ECEA1HKS2R2I	Electrolytic, 2.2pF 50WV	
C9	ECEA1HKS2R2I	Electrolytic, 2.2pF 50WV	
C10	YECUS1C104KX	Ceramic, 0.1pF 16WV	
C11	YECUS1C104KX	Ceramic, 0.1pF 16WV	
C12	YECUS1C104KX	Ceramic, 0.1pF 16WV	
C15	YECUS1E223KX	Ceramic, 0.022pF 25WV	
C16	YECUS1C224KX	Ceramic, 0.22pF 16WV	
C17	ECEA1CKS100I	Electrolytic, 10pF 16WV	
C18	ECEA1CKS100I	Electrolytic, 10pF 16WV	
C19	YECUS1H391JM	Ceramic, 390PF 50WV	
C20	YECUS1H391JM	Ceramic, 390PF 50WV	
C21	YECUS1H391JM	Ceramic, 390PF 50WV	
C22	YECUS1H391JM	Ceramic, 390PF 50WV	
C24	YECUS1H822KX	Ceramic, 0.0082pF 50WV	

1.4. Resistors

MAIN BLOCK [E6617C]

Ref. No.	Part No.	Part Name & Description	Remarks
J192	ERJ8GEYOR00V	Chip, 0Ω 1/8W	
J193	ERJ8GEYOR00V	Chip, 0Ω 1/8W	
J194	ERJ8GEYOR00V	Chip, 0Ω 1/8W	
R50	ERJ6GEYJ5R6	Chip, 5.6Ω 1/10W	
R52	ERJ8GEYJ101V	Chip, 100Ω 1/8W	
R53	ERJ6GEYJ331	Chip, 330Ω 1/10W	
R54	ERJ6GEYOR00V	Chip, 0Ω 1/10W	
R55	ERJ6GEYOR00V	Chip, 0Ω 1/10W	
R58	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R201	ERJ6GEYOR00V	Chip, 0Ω 1/10W	
R202	ERJ6GEYJ562	Chip, 5.6kΩ 1/10W	
R208	ERJ6GEYOR00V	Chip, 0Ω 1/10W	
R209	ERJ6GEYJ392	Chip, 3.9kΩ 1/10W	
R225	ERJ8GEYJ102V	Chip, 1kΩ 1/8W	
R226	ERJ8GEYJ333V	Chip, 33kΩ 1/8W	
R230	ERD25TJ101	Carbon, 100Ω 1/4W	
R235	ERD25TJ101	Carbon, 100Ω 1/4W	
R240	ERJ6GEYJ681	Chip, 680Ω 1/10W	
R241	ERJ6GEYJ821	Chip, 820Ω 1/10W	
R242	ERJ6GEYJ681	Chip, 680Ω 1/10W	
R243	ERJ6GEYJ821	Chip, 820Ω 1/10W	
R301	ERJ6GEYOR00V	Chip, 0Ω 1/10W	
R302	ERJ6GEYJ562	Chip, 5.6kΩ 1/10W	
R308	ERJ6GEYOR00V	Chip, 0Ω 1/10W	
R309	ERJ6GEYJ392	Chip, 3.9kΩ 1/10W	
R330	ERD25TJ101	Carbon, 100Ω 1/4W	
R335	ERD25TJ101	Carbon, 100Ω 1/4W	
R340	ERJ6GEYJ681	Chip, 680Ω 1/10W	
R341	ERJ8GEYJ821V	Chip, 820Ω 1/8W	
R342	ERJ6GEYJ681	Chip, 680Ω 1/10W	
R343	ERJ8GEYJ821V	Chip, 820Ω 1/8W	
R401	ERJ6GEYJ152	Chip, 1.5kΩ 1/10W	
R402	ERJ6GEYJ222	Chip, 2.2kΩ 1/10W	
R403	ERJ6GEYOR00V	Chip, 0Ω 1/10W	
R406	ERJ6GEYJ182	Chip, 1.8kΩ 1/10W	
R407	ERJ6GEYJ561	Chip, 560Ω 1/10W	
R408	ERJ8GEYJ473V	Chip, 47kΩ 1/8W	
R409	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R600	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R603	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R604	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R606	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R608	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R609	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R610	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R611	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R614	ERJ6GEYJ681	Chip, 680Ω 1/10W	
R615	ERJ8GEYJ820V	Chip, 82Ω 1/8W	
R616	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R617	ERJ8GEYJ102V	(CQ-RD320LEN) 1kΩ 1/8W	
R618	ERJ6GEYJ102	Chip, 1kΩ 1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R619	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R620	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R621	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R622	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R623	ERJ8GEYJ184V	Chip, 180kΩ 1/8W	
R626	ERJ6GEYR00V	Chip, 0Ω 1/10W	
R629	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R630	ERJ8GEYJ102V	Chip, 1kΩ 1/8W	
R631	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R635	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R636	ERJ8GEYJ473V	Chip, 47kΩ 1/8W	
R637	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R638	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R639	ERJ6GEYJ184	(CQ-RD320LEN) 180kΩ 1/10W	
R644	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R649	ERJ8GEYJ473V	Chip, 47kΩ 1/8W	
R660	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R661	ERJ6GEYJ393	Chip, 39kΩ 1/10W	
R663	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R664	ERJ6GEYJ183	Chip, 18kΩ 1/10W	
R671	ERJ6GEYR00V	Chip, 0Ω 1/10W	
R673	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R674	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R675	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R676	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R686	ERJ6GEYJ562	Chip, 5.6kΩ 1/10W	
R690	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R691	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R692	ERJ8GEYJ104V	Chip, 100kΩ 1/8W	
R693	ERJ8GEYJ102V	Chip, 1kΩ 1/8W	
R694	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R695	ERJ8GEYJ102V	Chip, 1kΩ 1/8W	
R701	ERDS2FJ470	Carbon, 47Ω 1/4W	
R703	ERJ6GEYJ682	Chip, 6.8kΩ 1/10W	
R704	ERJ6GEYJ274	Chip, 270kΩ 1/10W	
R705	ERJ6GEYJ433	Chip, 43kΩ 1/10W	
R706	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R707	ERJ8GEYJ274V	Chip, 270kΩ 1/8W	
R708	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R709	ERJ8GEYJ473V	Chip, 47kΩ 1/8W	
R710	ERDS1FJ681	Carbon, 680Ω 1/2W	
R711	ERDS1FJ681	Carbon, 680Ω 1/2W	
R712	ERDS2FJ1R0T	Carbon, 1.0Ω 1/4W	
R714	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R717	ERJ8GEYR00V	Chip, 0Ω 1/8W	
R720	ERJ8GEYJ103V	Chip, 10kΩ 1/8W	
R721	ERJ8GEYJ103V	Chip, 10kΩ 1/8W	
R722	ERJ8GEYJ473V	Chip, 47kΩ 1/8W	
R723	ERJ6GEYJ222	Chip, 2.2kΩ 1/10W	
R724	ERJ6GEYJ821	Chip, 820Ω 1/10W	
R725	ERJ6GEYJ154	Chip, 150kΩ 1/10W	
R726	ERJ8GEYJ472V	Chip, 4.7kΩ 1/8W	
R900	ERJ6GEYJ225V	Chip, 2.2MΩ 1/10W	
R902	ERJ8GEYJ103V	Chip, 10kΩ 1/8W	
R903	ERJ8GEYJ103V	Chip, 10kΩ 1/8W	
R904	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R905	ERJ6GEYJ334	Chip, 330kΩ 1/10W	
R906	ERJ6GEYJ222	Chip, 2.2kΩ 1/10W	
R908	ERJ8GEYJ331V	Chip, 330Ω 1/8W	

DISPLAY BLOCK [E8478A]

Ref. No.	Part No.	Part Name & Description	Remarks
R901	ERJ6GEYJ4R7	Chip, 4.7Ω 1/10W	
R902	ERJ6GEYJ102	(CQ-RD320LEN) 1kΩ 1/10W	
R903	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R904	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R905	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R906	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R908	ERJ6GEYJ182	Chip, 1.8kΩ 1/10W	
R909	ERJ6GEYJ4R7	Chip, 4.7Ω 1/10W	
R910	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R911	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R912	ERJ6GEYJ102	Chip, 1kΩ 1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R914	ERJ6GEYJ152	Chip, 1.5kΩ 1/10W	
R915	ERJ6GEYJ681	Chip, 680Ω 1/10W	
R926	ERJ6GEYR00V	Chip, 0Ω 1/10W	
R927	ERJ8GEYJ6R8V	Chip, 6.8Ω 1/8W	
R928	ERJ6GEYJ6R8V	Chip, 6.8Ω 1/10W	

TAPE BLOCK [E8365]

Ref. No.	Part No.	Part Name & Description	Remarks
J1	ERDS2TJ390	Carbon, 39Ω 1/4W	
J2	ERDS2TJ390	Carbon, 39Ω 1/4W	
J101	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J102	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J103	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J104	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J105	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J106	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J107	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J108	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J109	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J110	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J111	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J112	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J113	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J114	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J115	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J116	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J117	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J118	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J119	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J120	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J121	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J122	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J123	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J124	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J125	ERJ8GEYR00V	Chip, 0Ω 1/8W	
J126	ERJ8GEYR00V	Chip, 0Ω 1/8W	
R1	ERJ6GEYJ683	Chip, 68kΩ 1/10W	
R2	ERJ6GEYJ223	Chip, 22kΩ 1/10W	
R3	ERJ6GEYJ683	Chip, 68kΩ 1/10W	
R4	ERJ6GEYJ683	Chip, 68kΩ 1/10W	
R5	ERJ6GEYJ683	Chip, 68kΩ 1/10W	
R6	ERJ6GEYJ471	Chip, 470Ω 1/10W	
R7	ERJ6GEYJ471	Chip, 470Ω 1/10W	
R8	ERJ6GEYJ104	Chip, 100kΩ 1/10W	
R9	ERJ6GEYJ392	Chip, 3.9kΩ 1/10W	
R12	ERJ8GEYJ103V	Chip, 10kΩ 1/8W	
R13	ERJ8GEYJ103V	Chip, 10kΩ 1/8W	
R14	ERJ8GEYJ103V	Chip, 10kΩ 1/8W	
R15	ERJ8GEYJ222V	Chip, 2.2kΩ 1/8W	
R17	ERJ6GEYJ223	Chip, 22kΩ 1/10W	
R18	ERGLS1J100	Metal Oxid, 10Ω 1W	
R19	ERJ6GEYJ121	Chip, 120Ω 1/10W	
R22	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R23	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R24	ERJ6GEYJ183	Chip, 18kΩ 1/10W	
R25	ERJ6GEYJ183	Chip, 18kΩ 1/10W	
R26	ERJ6GEYJ183	Chip, 18kΩ 1/10W	
R27	ERJ6GEYJ123	Chip, 12kΩ 1/10W	
R28	ERJ6GEYJ123	Chip, 12kΩ 1/10W	
R29	ERJ6GEYJ334	Chip, 330kΩ 1/10W	
R30	ERJ6GEYJ334	Chip, 330kΩ 1/10W	
R31	ERJ8GEYJ152V	Chip, 1.5kΩ 1/8W	
R33	ERJ8GEYJ101V	Chip, 100Ω 1/8W	

1.5. Connectors

MAIN BLOCK [E6617C]

Ref. No.	Part No.	Part Name & Description	Remarks
CJ620	YEAES22B100B	Connector, 22P flexible	
CN601	YEAEO12475	Connector, 12P	
CN620	YEAEO12659	Connector, 22P	
CN701	YEAEO12194	Connector, 16P	

DISPLAY BLOCK [E8478A]

Ref. No.	Part No.	Part Name & Description	Remarks
CJ640	YEAE012476	Connector, 12P	

TAPE BLOCK [E8365]

Ref. No.	Part No.	Part Name & Description	Remarks
CN1	YEAE5597A09	Connector, 9P	
CN2	YEAE5325404	Connector, 4P	
CN3	YEAE012684	Connector, 5P	
CN4	YEAE012659	Connector, 22P	

1.6. Electric Parts

SWITCHES

Ref. No.	Part No.	Part Name & Description	Remarks
SW1	YEAS08031B62	Switch	
SW901	EVQPJH05K	Switch	
SW902	EVQPJH05K	Switch	
SW903	EVQPJH05K	Switch	
SW904	YEAS09312	Switch	
SW905	EVQPJH05K	Switch	
SW906	EVQPJH05K	Switch	
SW907	EVQPJH05K	Switch	
SW908	YEAS09312	Switch	
SW909	EVQPJH05K	Switch	
SW910	EVQPJH05K	Switch	
SW911	EVQPJH05K	Switch	
SW912	EVQPJH05K	Switch	
SW913	YEAS09312	Switch	
SW914	EVQPJH05K	Switch	
SW915	YEAS09312	Switch	
SW916	YEAS09312	Switch	
SW917	YEAS09312	Switch	
SW918	YEAS09312	Switch	
SW919	YEAS09312	Switch	
SW920	EVQPJH05K	Switch	
SW921	EVQPJH05K	Switch	
SW922	EVQPJH05K	Switch	
SW923	EVQPJH05K	Switch	
SW926	EVQPJH05K	Switch	

CRYSTALS

Ref. No.	Part No.	Part Name & Description	Remarks
XL400	YEXL49U07200	Crystal OSC	
XL600	YEXL49U0419	Crystal OSC	
XL900	YEXL49U0433T	Crystal OSC	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L50	YELT02C330KT	Coil	
L400	YELT02C101KT	Coil	
L600	YELT02C470KT	Coil	
L701	YELTBL01R1AT	Coil	
L702	YETQ026F143	Coil	
L900	YELT02C330KT	Coil	

LCD

Ref. No.	Part No.	Part Name & Description	Remarks
LCD901	YEXDCM1245	LCD	

LAMPS

Ref. No.	Part No.	Part Name & Description	Remarks
Z50	YEAL02007	Neon Lamp	
PL920	YEALHSKB001	Pilot Lamp	
PL921	YEALHSLG002	Pilot Lamp	
PL922	YEALHSLG002	Pilot Lamp	

THERMISTOR

Ref. No.	Part No.	Part Name & Description	Remarks
PT701	YERT7AR4R7MT	Thermistor	

1.7. Accessories

PRINTING

Ref. No.	Part No.	Part Name & Description	Remarks
	YGFM282973	Operating instructions	

INSTALLATION PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
	YEAJ02764	Power Cord	
	YEAA33144	Antenna Accessory	
	CR2025/1F	Battery (CQ-RD320LEN)	
	YEFX0214198	Mounting Collar	
	YEFAL31290	Removable Face plate Case	
	YEFX9991721	Unlock Key	
	YEFX9991526A	Remote Controller (CQ-RD320LEN)	
	YEJV01060	Bolt, 5mm * 8mm	

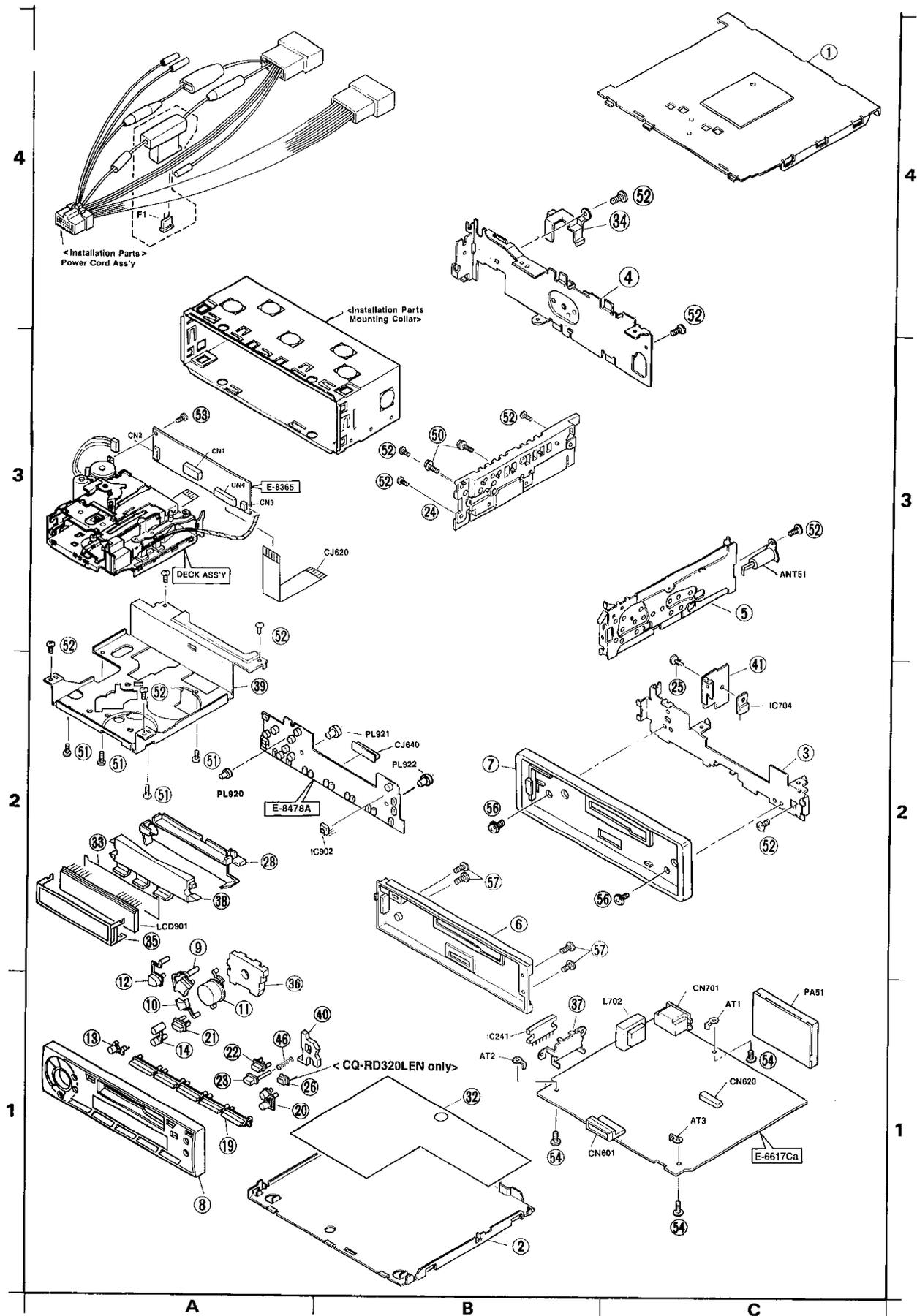
1.8. Mechanical Parts

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
F1	YEAFO2015	Fuse, 15A	
ANT51	YEAAL0090	Antenna Receptacle	
AT1-3	YEAT03420	Terminal	
1	YEFA031354D	Upper Cover	(4-C)
2	YEFA05594B	Bottom Cover	(1-B)
3	YEFA07394	Front Plate	(2-C)
4	YEFA08401AK	Rear Plate	(3-C)
5	YEFA09505	Side Plate	(3-C)
6	YEFAL31360	Cover, Detachable	(2-B)
7	YGFC025254A	Escutcheon Ass'y, Unit	(2-C)
8		Escutcheon Ass'y, Detachable	(1-A)
	YEF026238	(CQ-RD320LEN)	
	YEF026179	(CQ-RD310LEN)	
9	YEFE135150	Button, VOL UP	(1-A)
10	YEFE135151	Button, VOL DOWN	(1-A)
11	YEFE135152	Button, MODE/BAND	(1-A)
12	YEFE135155	Button, SEL	(1-A)
13	YEFE135156	Button, PWR	(1-A)
14	YEFE137746	Button, ATT/LOUD	(1-A)
19	YEFE135160	Button, PRESET	(1-A)
20	YEFE134705	Button, DISP/P	(1-A)
21	YEFE134683	Button, PROG	(1-A)
22	YEFE134684	Button, EJECT	(1-A)
23	YEFE134685	Button, RLSE	(1-A)
24	YEFF01832C	Heat Sink	(3-B)
25	YEFJ05030	Color Rivet	(2-C)
26	YGFJ011336	Ornament Plate (CQ-RD320LEN)	(1-A)
28	YGFK06748	Holder, LCD	(2-A)
32	YEFV011813	Insulator	(1-B)
33	YEFV021486	Optical Shade, LCD	(2-A)
34	YEFX0213649A	Bracket, CN701	(3-C)
35	YEFX0214173	Bracket, LCD	(2-A)
36	YEFX0011809	Transparent Plate	(1-A)
37	YEFX0213945B	Bracket, IC241	(1-B)
38	YGF0011734A	Transparent Plate	(2-A)
39	YEFX0214197B	Bracket, Deck	(2-A)
40	YGF0011736	Transparent Plate	(1-A)
41	YEFX0214167	Bracket	(2-C)
46	YEFX0052153	Spring	(1-A)
50	YEJS06092	Screw, 3mm * 10mm	
51	YEJS03022	Screw, 3mm * 3mm	
52	XTB3+6FFX	Tapping Screw, 3mm * 6mm	
53	YEJT03163	Tapping Screw, 2mm * 6mm	
54	YEJT03009	Tapping Screw, 3mm * 8mm	
56	YGJT03156	Tapping Screw, 2.6mm * 5mm	
57	XTN2+8GFZ	Tapping Screw, 2mm * 8mm	

EXPLODED VIEW (Unit)

■ Numbers in ○ are indicated REF.NO. in the REPLACEMENT PARTS LIST



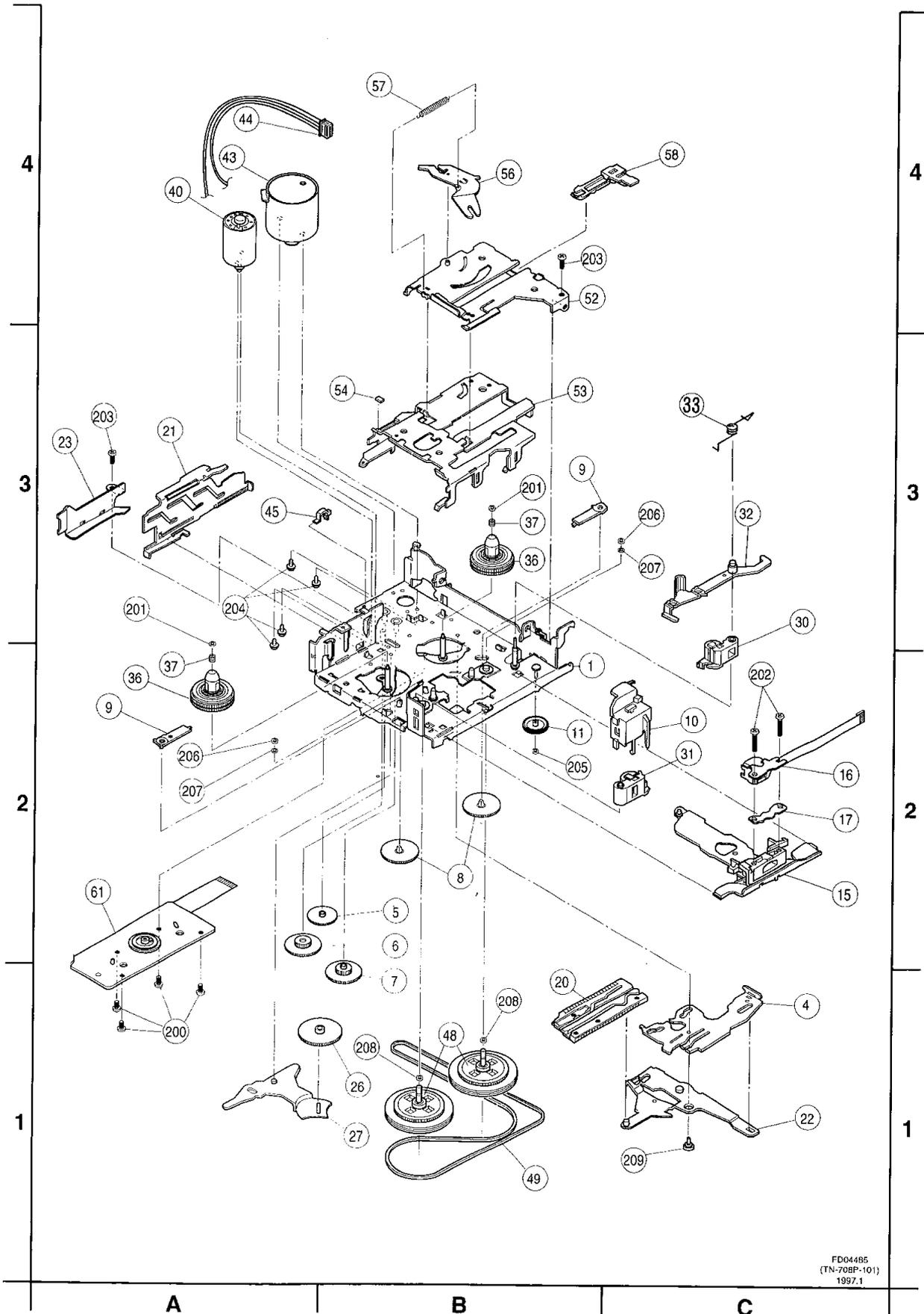
2 Tape Player Parts

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
1	YESFA01055	Chassis Rivet Ass'y	(2-B)
4	YESFX046056	Main Plate	(1-C)
5	YESFX003049	B Gear	(2-B)
6	YESFX003050	C Gear	(2-A)
7	YESFX003051	D Gear	(1-B)
8	YESFX003052	F Gear	(2-B)
9	YESFX003053	P.G Plate	(2-A) (3-B)
10	YESFG02021	Guide BKT	(2-C)
11	YESFX026013	Middle Pulley	(2-B)
15	YESFX046057	Head Panel Ass'y	(2-C)
16	YESAH006	P.Head P-5544SD-9949	(2-C)
17	YESFX046058	Head SP Plate	(2-C)
20	YESFX046059	O.P Plate Ass'y	(1-B)
21	YESFX215015	Eject Lever Rivet Ass'y	(3-A)
22	YESFX046060	S.B Plate Rivet Ass'y	(1-C)
23	YESFX046061	O.P Plate Holder	(3-A)
26	YESFX003054	FR Gear	(1-B)
27	YESFX046062	FR Plate	(1-A)
30	YESFX218011	Pinch Roller Arm (F) Ass'y	(3-C)
31	YESFX218012	Pinch Roller Arm (R) Ass'y	(2-C)
32	YESFX046063	SW Actuator B	(3-C)
33	YESFX005088	SA Spring M	(3-C)
36	YESFX209007	Reel Ass'y	(2-A) (3-B)
37	YESFX005074	B.Tension Spring (F)	(2-A) (3-B)
40	YESAK01013	Sub Motor Ass'y	(4-A)
43	YESAK01014	Main Motor Ass'y	(4-A)
44	YESAE283	M Conector Ass'y	(4-A)
45	YESFX006002	Wire Clamper	(3-A)
48	YESFX213004	FI. Capstan Ass'y	(1-B)
49	YEFFR03003	Main Belt	(1-B)
52	YESFX046064	Case Lifter	(4-B)
53	YESFX239006	Cassette Case	(3-B)
54	YESFS04007	Cusion Rubber	(3-B)
56	YESFX046065	P.S Actuator Plate	(4-B)
57	YESFX005075	P.S Spring	(4-B)
58	YESFX046066	Pack Slider	(4-B)
61	YESAP151	Reel PWB Ass'y	(2-A)
200	YESJS01090	Camera Screw (Tams) 2.0×2.2	(1-A)
201	YESJW01019	Lumilar Washer (Cut) 1.55× 3.5×0.5	(3-A) (3-B)
202	YEJS01070	Adjust Screw 2.0×13	(2-C)
203	YEFT03084	Camera Tapping Screw S 2.0× 3.0	(3-A) (4-B)
204	YEJS06130	Tams Screw 2.0×3.0	(3-A)
205	YEJW05130	P. Washer (Cut) 0.85×2.8× 0.25	(2-B)
206	YESJW01012	P.Washer (Cut) 1.55×3.5×0.5	(2-A) (3-C)
207	YESJW01013	P.Washer 2.1×3.5×0.2	(2-A) (3-C)
208	YESJW01014	Lumilar Washer 2.1×3.5×0.1	(1-B)
209	YESJS01091	PK Collar Screw A	(1-C)

EXPLODED VIEW (Tape Deck)

■ Numbers in ○ are indicated REF.NO. in the REPLACEMENT PARTS LIST



FD04485
(TN-708P-101)
1997.1