

Operating Instructions Manuale di istruzioni Manual de Instrucciones

Removable Face High-Power Cassette/Receiver with CD Changer Control
Riproduttore di nastri/sintoamplicatore di alta potenza con controllo cambiadischi CD e frontale rimovibile
Cassette de alta potencia con cara removible/Receptor con control de cambiadiscos de CD

CQ-R45EN



Panasonic

Before operating this set, please read these instructions completely.
Prima di adoperare l'apparecchio, vogliate leggere attentamente le istruzioni.
Antes de poner en marcha el aparato, sírvase leer atentamente estas instrucciones.

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Panasonic welcomes you to their constantly growing family of electronic products owners. We endeavor to give you the advantages of precise electronic and mechanical engineering, manufactured with carefully selected components, and assembled by people who are proud of the reputation their work has built for our company. We know this product will bring you many hours of enjoyment, and after you discover the quality, value, and reliability we have built into it, you too will be proud to be a member of our family.

Precautions

Volume Level

For your driving safety, keep the volume level low enough to be aware of road and traffic conditions.

Car Washing

To avoid electrical shorts which may cause fire, or other damage, do not expose this equipment (including the speakers and tape) to water or excessive moisture.

Car Ventilation

If your car is parked for several hours in direct sunlight, the temperature inside the car may become very high. It is advisable to drive the car and give the interior a chance to cool down before switching the unit on.

Power Supply

This equipment is designed to be used in a car having 12-Volt negative ground battery system.

Tape Mechanism

Keep magnets, screwdrivers and other metallic objects away from the tape mechanism and tape head.

Service

This unit is made of precision parts. Do not attempt to disassemble or adjust any parts. For repair, please consult your nearest authorized Panasonic Service Center.

Note:

The preset memory is cleared to return to the original factory setting when the power connector or battery is disconnected.

Panasonic Vi dà il benvenuto nella famiglia in costante aumento dei proprietari dei suoi prodotti elettronici. Noi cerchiamo sempre di offrirvi i vantaggi di una tecnica elettronica e di una meccanica perfetta nei nostri prodotti fabbricati con componenti altamente selezionati e lavorati da persone che godono di piena fiducia presso la nostra compagnia. Noi siamo sicuri che questo prodotto Vi offrirà molte ore piacevoli e che dopo averne scoperto la qualità, il valore e l'affidabilità, anche Voi sarete orgogliosi di essere un membro della nostra famiglia.

Precauzioni

Livello del volume

Per la vostra sicurezza quando portate l'automobile, tenete il volume su un livello abbastanza basso per poter sentire i suoni di avvertimento del traffico.

Lavaggio dell'automobile

Per evitare cortocircuiti, che potrebbero causare incendi o altri danni, non esponete quest'unità (inclusi gli altoparlanti, i nastri) all'acqua o ad eccessive quantità di umidità.

Ventilazione dell'automobile

Nel caso in cui lasciate l'automobile parcheggiata per parecchie ore nella luce diretta del sole, la temperatura all'interno dell'automobile può diventare molto alta. Per far ritornare la temperatura interna ad un livello normale, è consigliabile guidare l'automobile un po' di tempo prima di accendere l'unità.

Alimentazione

Quest'unità è stata disegnata per essere alimentata con 12 V di corrente continua, massa negativa.

Meccanismo del nastro

Tenere il meccanismo del nastro e la testina lontani da magneti, cacciaviti od altri oggetti metallici.

Servizio

Quest'unità è stata costruita con parti di precisione. Non cercate di smontare o aggiustare queste parti. Per lavori di servizio, consultate il più vicino centro assistenza della Panasonic.

Nota:

Quando si stacca il cablaggio o la batteria, la memoria di preselezione si cancella e torna la regolazione operata in fabbrica.

Panasonic le da la bienvenida a la familia constantemente en aumento de poseedores de productos electrónicos. Nos esforzamos en proporcionarle las ventajas de la ingeniería mecánica y electrónica de precisión, de una fabricación con componentes cuidadosamente seleccionados, y de un montaje realizado por personas orgullosas de la reputación que su trabajo ha cimentado para nuestra empresa. Estamos seguros de que este producto le proporcionará muchas horas de distracción y, una vez comprobada la calidad, el valor y la fiabilidad incorporados, usted también se sentirá orgulloso de pertenecer a nuestra familia.

Precauciones

Nivel de volumen

Para su seguridad en la conducción, mantenga el nivel de volumen suficientemente bajo para estar atento a la carretera y las condiciones del tráfico.

Lavado del automovil

Procure no exponer este equipo (incluidos los altavoces y la cinta) al agua o a excesiva humedad, a fin de evitar cortocircuitos que podrían causar un incendio u otros daños.

Ventilacion del automovil

Si su coche está estacionado durante varias horas a plena luz del sol, la temperatura interior del mismo puede aumentar considerablemente. Por ello, es recomendable poner el vehículo en marcha y dejar que se enfríe el interior antes de utilizar el aparato.

Alimentacion

Este equipo ha sido diseñado para su uso en automóviles con una tensión de 12 V mediante sistema de batería con negativo a tierra.

Mecanismo de la cinta

Mantenga alejados del mecanismo de la cinta y de su cabezal imanes, destornilladores y otros objetos metálicos.

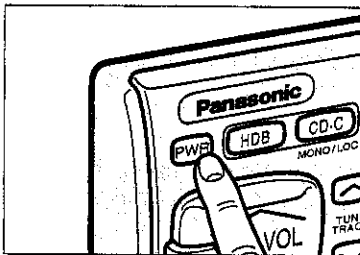
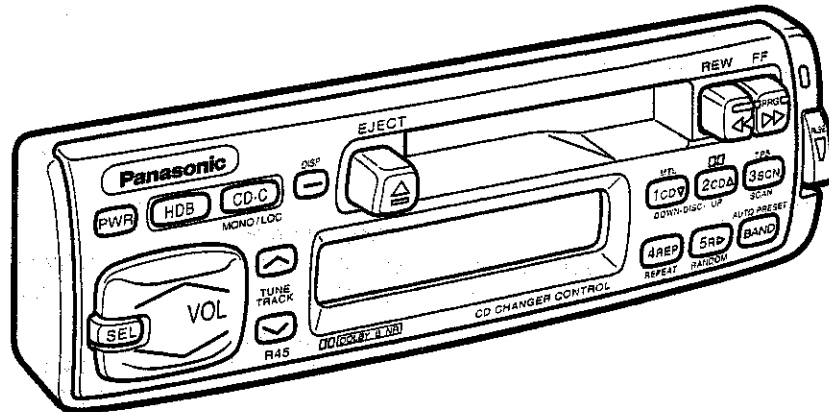
Servicio

Este aparato ha sido fabricado con piezas de alta precisión. No intente desmontarlo ni ajustar ninguna pieza. Para la reparación, consulte al Servicio Técnico de Panasonic más próximo.

Nota:

La memoria preajustada se apaga y vuelve al ajuste original de la fábrica cuando se desconecta el conector de alimentación o la batería.

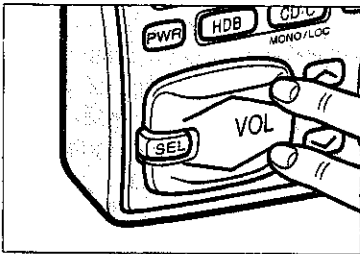
Power and Sound Controls



Power

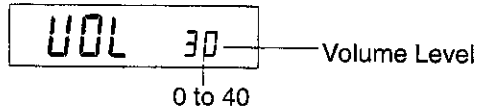
If the car is not already running, turn the key in the ignition until the accessory indicator lights.

Press PWR button to switch on the power.

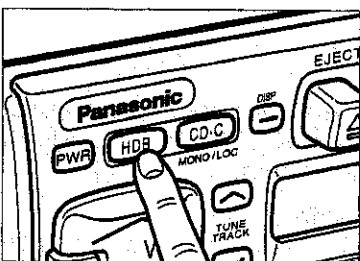


Volume

Press "∧" or "∨" to increase or decrease volume.



Press "∧" or "∨" for more than a half second to sequentially change numeric levels on the display.



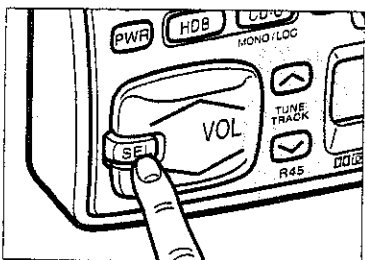
HDB (High Definition Bass)

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

- Press HDB to be able to listen to high-definition bass.
- Press HDB again to return to the normal tone.

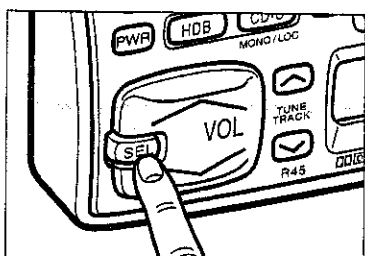
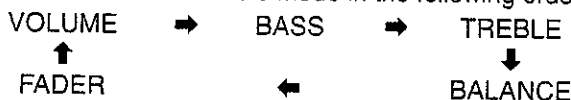


Note: This unit is equipped with anti-volume-blast circuit which serves as an automatic volume level adjuster so that you will not be deafened with sudden loud volume. This system operates as below. When PWR is first pressed to switch on, the volume level is low. After that, the volume level gradually returns to the level when the switch is turned off.



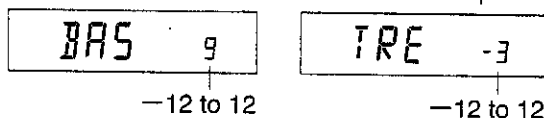
Changing Audio Modes

Press SEL to switch the audio mode in the following order.

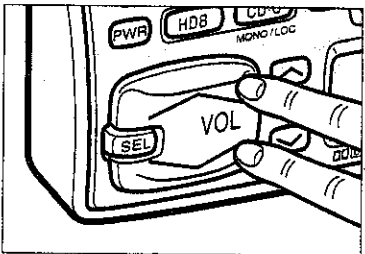


Bass and Treble

- Press SEL to select the BASS (TREBLE) mode. Press “^” or “v” to increase or decrease the bass/treble response.

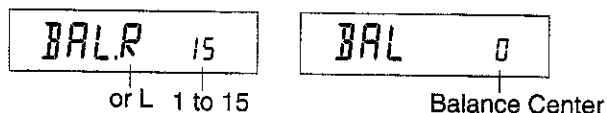


- Press “^” or “v” for more than a half second to sequentially change numeric levels on the display.



Balance

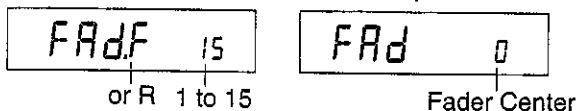
- Press SEL to select the BALANCE mode. Press “^” or “v” to shift the sound volume to the right or left speakers.



- Press “^” or “v” for more than a half second to sequentially change numeric levels on the display.

Fader

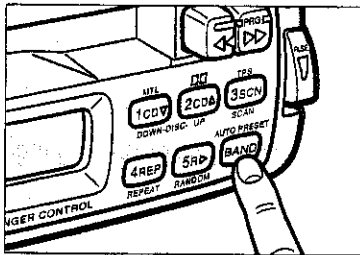
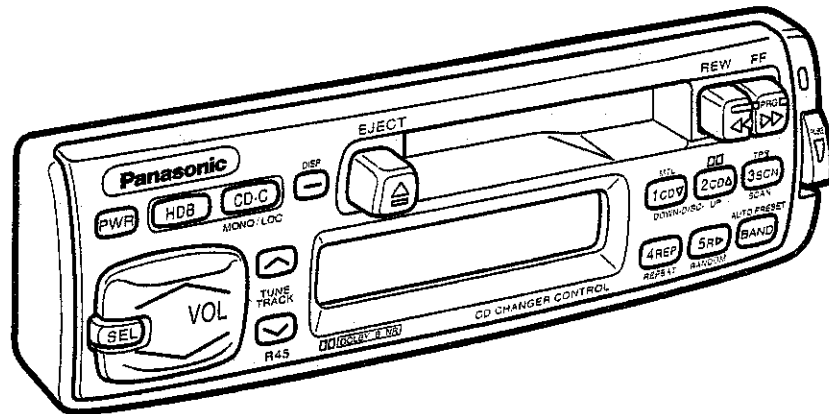
- Press SEL to select the FADER mode. Press “^” or “v” to shift the sound volume to the front or rear speakers.



- Press “^” or “v” for more than a half second to sequentially change numeric levels on the display.

Note: When a control mode (BAS/TRE/BAL/FAd) is selected but no operation is made within 5 seconds, the display will return to the normal operation (volume adjustment) mode. In such a case, press SEL again to select the next control mode.

Radio Basics

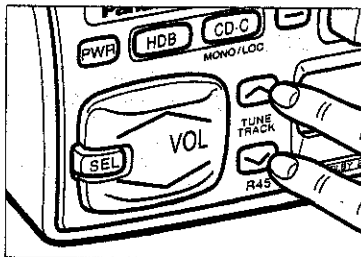
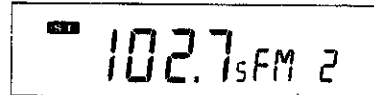


Selecting a Band

Press **BAND** to select the bands in the following order.

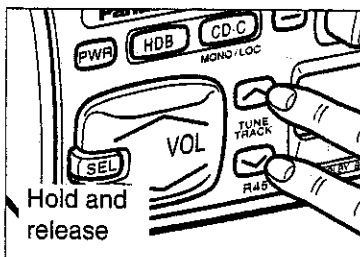
FM1 → FM2 → FM3 → AM

"ST" indicator lights if the station is broadcasting in stereo.



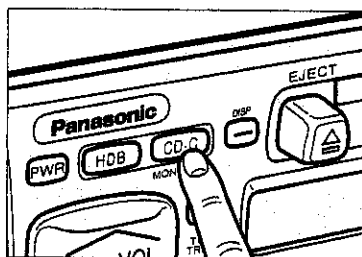
Manual Tuning

Press "∨ TUNE/TRACK" or "∧ TUNE/TRACK" to move to a lower or higher frequency.



Seek Tuning

Press and hold "∨ TUNE/TRACK" or "∧ TUNE/TRACK" for more than a half second, then release. The radio automatically stops on the next station.

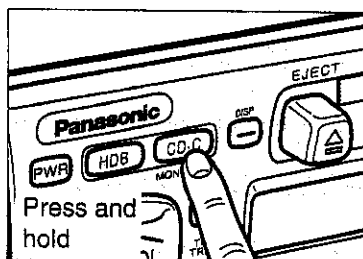
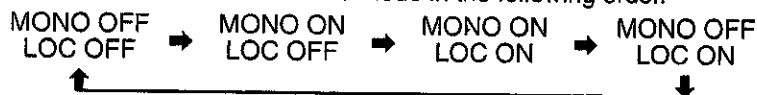


To reduce interference during FM stereo broadcasts

Press and hold the MONO/LOC for more than 2 seconds to switch monaural reception in case much interference is present in an FM stereo signal or to improve the listening quality of weak FM broadcasts.

MONO

Press MONO/LOC to switch the mode in the following order.



Switch from DX to LOC

Normally, searching stops even at a weak wave station. (DX mode)
 To stop searching at a strong wave station only, press and hold for more than 2 seconds MONO/LOC.

LOCAL

During the AM band reception, press and hold for more than 2 seconds to switch on or off the LOC mode as follows.

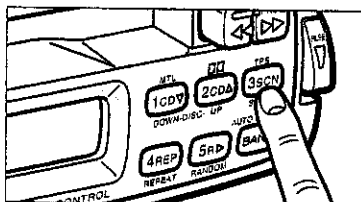
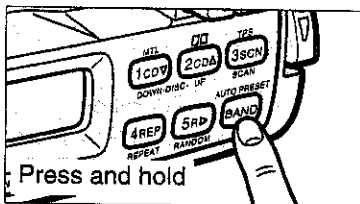
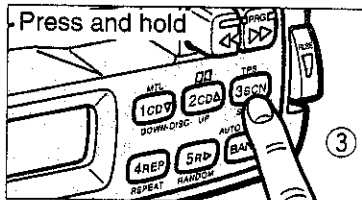
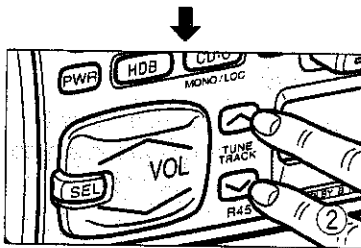
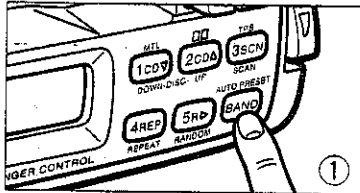
LOC OFF ↔ LOC ON

Radio Basics continued

Preset Station Setting

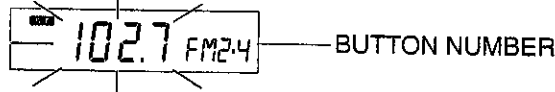
Up to 20 stations can be preset in the station memory as follows;

FM1	FM2	FM3	AM
5 stations	5 stations	5 stations	5 stations



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 program into memory.
 - ③ Press and hold one of the station selector buttons 1 through 5 until the display blinks.
- Repeat the process to set other stations for 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 through 5 to tune in the station-preset by the above steps ① to ③.

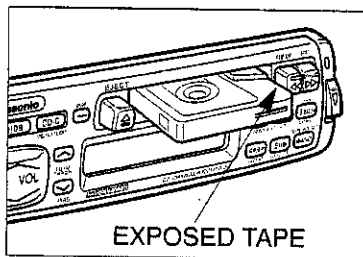
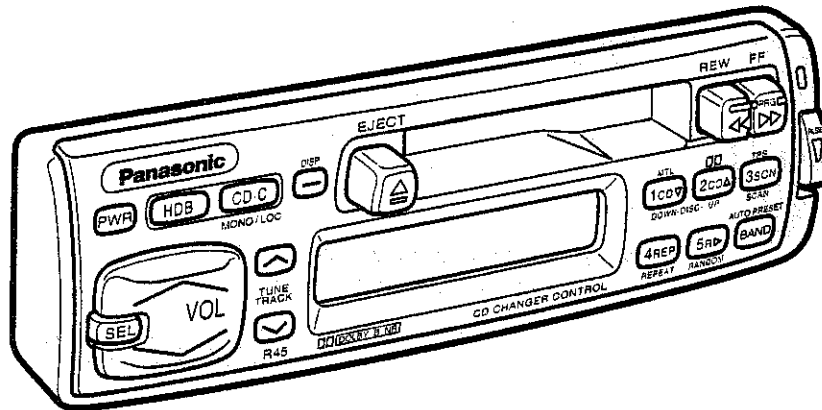
Auto Station Preset

Select a band and press and hold AUTO PRESET for more than 2 seconds.

- The five strongest available stations will be automatically set in memory on preset buttons 1 through 5.
- Once set, the preset stations are sequentially scanned for 5 seconds.
- Press the appropriate preset button for the station you want to hear.

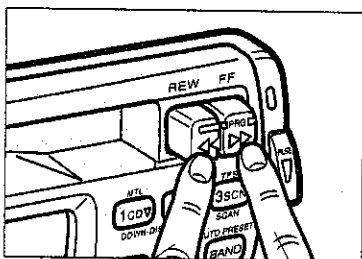
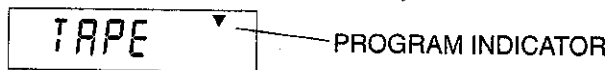
CAUTION: For safety reasons, do not attempt to program while driving.

Cassette Tape Player Basics



Loading a Cassette

Gently insert the cassette with the exposed tape facing to the right until the mechanism captures it, and playback starts.



REWIND FAST FORWARD

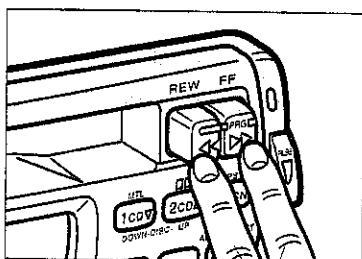
Rewind and Fast Forward

Press and engage either ◀◀ (REW) to rewind or ▶▶ (FF) to fast forward the tape.



To stop rewind or fast forward, gently press the button that is not in use. The tape will resume playing from that position.

If you rewind the tape fully, it will play on the same program side again. If you fast forward to the end, play will resume from the beginning of other side of the tape.



PRESS BOTH

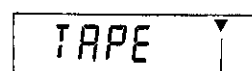
Changing Sides

Firmly press ◀◀ (REW) and ▶▶ (FF) at the same time to switch to the program on the other side of the tape.

The display changes to indicate which program is playing.

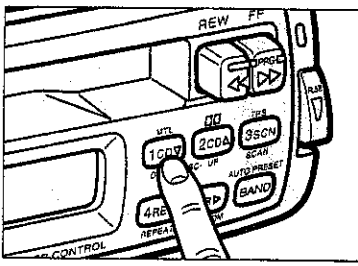


TOP SIDE PLAYING



BOTTOM SIDE PLAYING

Cassette Tape Player Basics continued

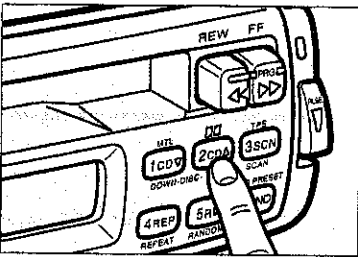


Metal Tape Mode

Press MTL when playing metal or chromium dioxide (CrO₂) tapes. To turn it off, press MTL again.

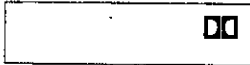


Note: Playing non-metal tapes in MTL mode causes high frequency imbalance, which affects tone quality.

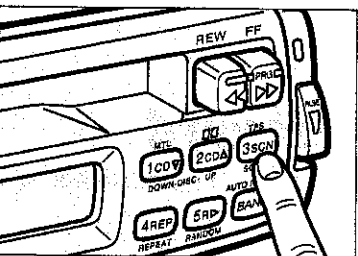


Dolby Noise Reduction

Press **DN** when playing Dolby B NR Recording tapes. To turn it off, press **DN** again.



Note: Playing non-Dolby NR tapes in Dolby NR mode causes the tape sound "dull" or muffled.



Selecting a Program

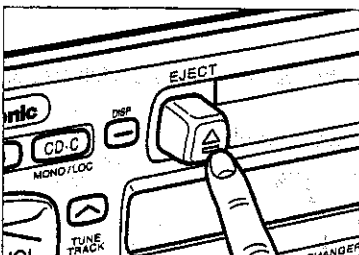
Press TPS to activate the tape program search mode. "TPS" indicator lights.



- Press and engage **FF** to search for the beginning of the next program.
- Press and engage **REW** to search for the beginning of the current program.

Note: The TPS mode may not work correctly in the following cases. This, however, does not mean that the set is faulty.

- There is an interval less than 4 seconds or having a high level of noise or hum between programs.
- There is a particularly low-level passage in the middle of a program.



Stopping and Ejecting the Tape

Once inserted into the unit, your tape will play continuously until you eject it.

If you press and engage EJECT, the unit clears the tape and returns to radio operation.

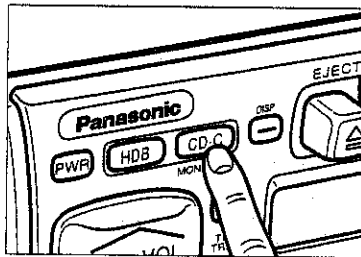
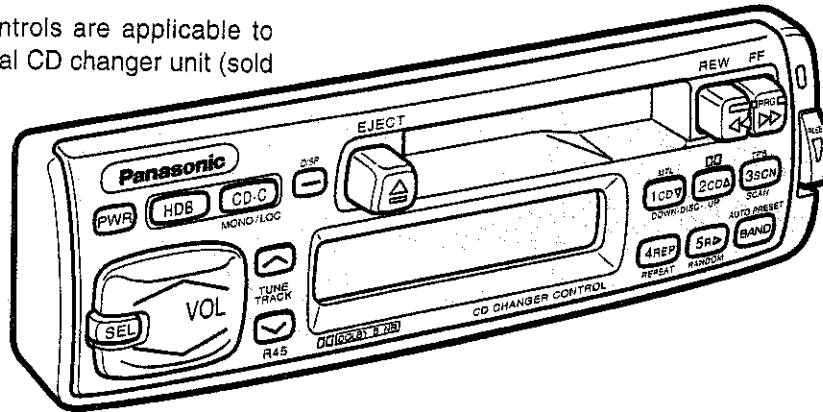
When you shut off the car engine, the tape will stop but not eject.

Note: Always remove the cassette when you are done using the cassette player. This will prolong the life of your tape.

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

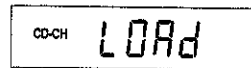
CD Changer Basics

Note:
CD changer controls are applicable to units with optional CD changer unit (sold separately).

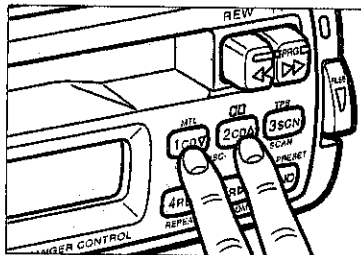


To start the CD Player

With a disc magazine inserted in the CD Changer, press CD-C. The disc then plays, starting with the first track.

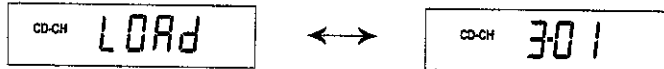


Note: The cassette, if loaded, should be removed. Otherwise, the CD play won't start.



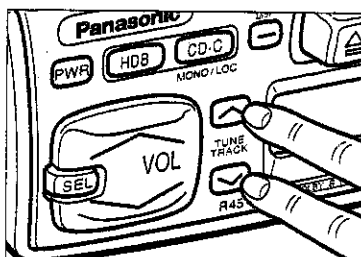
Selecting a Disc

Press "CD▼" or "CD▲" to select discs in descending or ascending order.



The disc/track number, and "LOAD" indicators are alternately blink until the selected disc is loaded. The disc then plays, starting at the first track.

Note: When using model CX-DP60EN · DP2000EN, the disc number indicator blinks and the track number indicator stays illuminated.

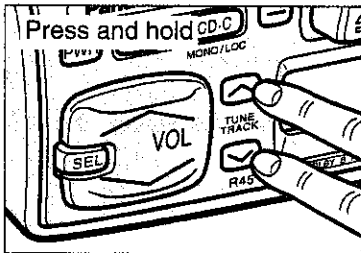
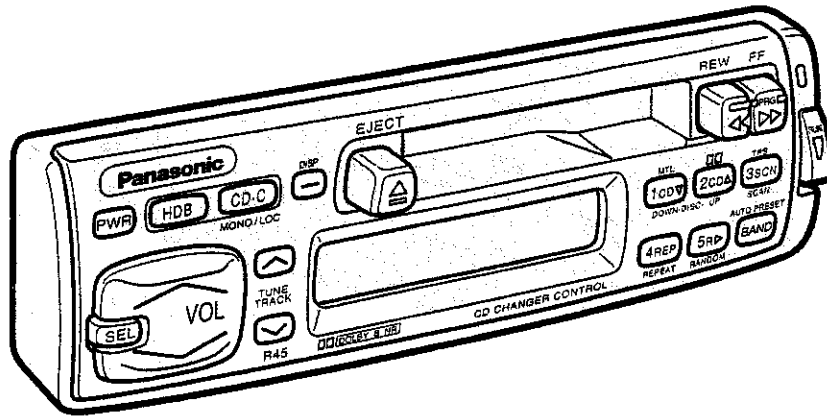


Selecting a Track

Press "TRACK▲" once to go to the next track. Press repeatedly to step forward through all the tracks.

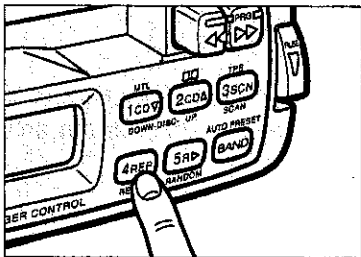
Press "▼TRACK" once to play from the beginning of the current track. Press twice to play the previous track. Press repeatedly to step backward through all the tracks.

CD Changer Basics continued



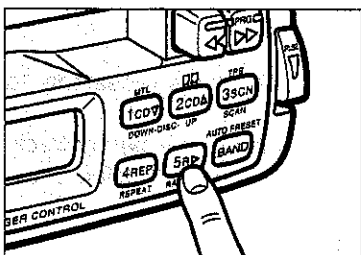
Searching a Track

Press and hold "TRACK ^" or "V TRACK" for more than a half second to activate fast forward or reverse through a track. Release "TRACK ^" or "V TRACK" to resume the normal CD play from that position.



Repeating a Track

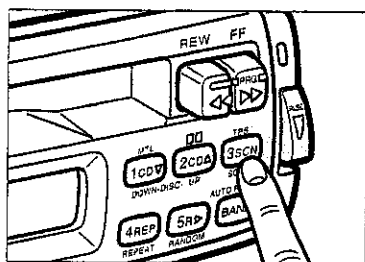
Press REP to repeat the current selection. "REPEAT" indicator lights. The current selection continues to repeat until you press REP again.



Random Selection

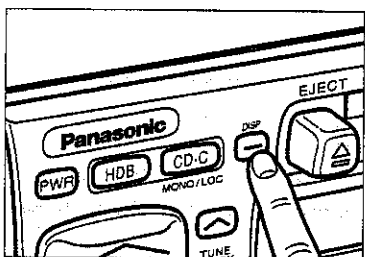
Press R ►. "RANDOM" indicator lights. A random selection of music is played from all available CDs. To turn it off, press R ► again.





Scanning Tracks

Press SCN. The display blinks and the first 10 seconds of each track on the discs play in sequence.
To stop scanning and continue with the current track, press SCN again.



Changing the Display

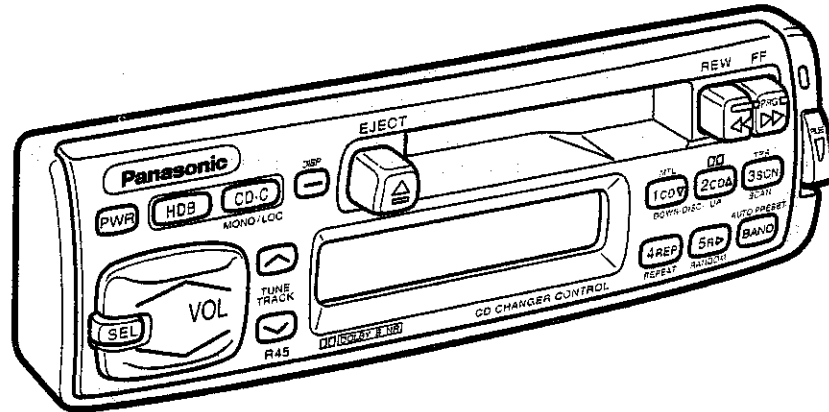
Press DISP to switch the display in sequence as follows.

Disc/Track Number
↑
↓
Track Play Time

Error Display Messages

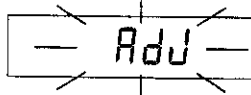
E1	Displays when the compact disc is dirty or upside down. Selects the next available compact disc.
E2	Displays when compact disc is scratched. Selects next available compact disc.
E3	Displays when the unit stops operating for some reason. Press RESET on the CD Changer (optional).
0000	Displays when there is no disc in the magazine.

Clock Basics (The clock system is 12-hours.)

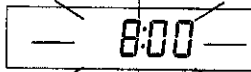


Initial Time Setting

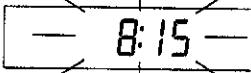
- Ⓐ Press and hold DISP for more than 2 seconds. "Adj" is displayed.
- Ⓑ Press and hold DISP again for more than 2 seconds. "Adj" blinks indicating the time setting mode is activated.



- Ⓒ To set hours, press "∧ TUNE/TRACK".

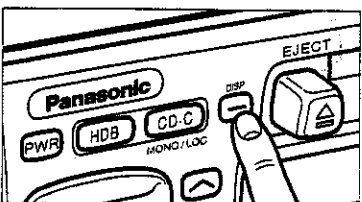
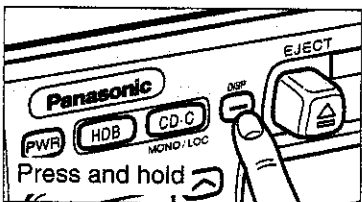
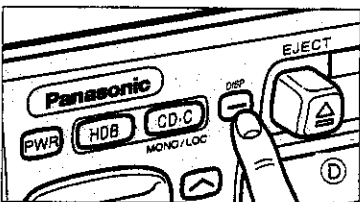
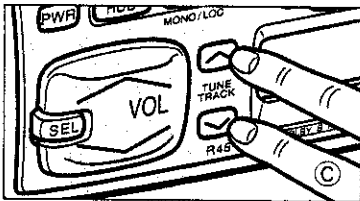
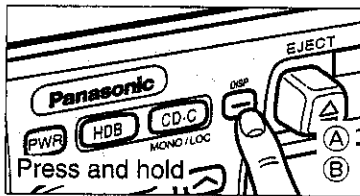


To set minutes, press "∨ TUNE/TRACK".



Hold "∧" or "∨" to change numbers rapidly.

- Ⓓ When you have set the time, press DISP.



Resetting the Time

When you want to reset the time, press and hold DISP for more than 2 seconds to activate the time setting mode. Then, repeat step Ⓒ and Ⓓ.

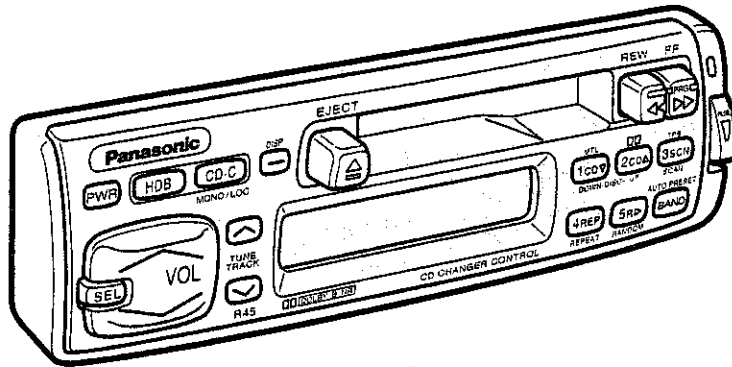
Selecting the Clock Display

Press DISP repeatedly to switch the display between each listening mode (Radio and Tape) and the clock.

Press and hold DISP for more than 2 seconds for clock display.

Anti-Theft System

This unit is equipped with a removable control unit. By removing this unit when the vehicle is unattended the radio becomes totally inoperable.



To Remove the Removable Face Plate

- ① Switch off the power.
- ② Slide down the release button (▽). The removable face plate will be released.

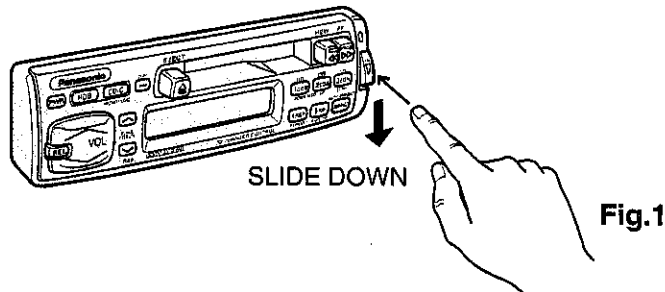


Fig.1

- ③ Remove the removable face plate by pulling on the right side of the unit. Place the removable face plate in a supplied case.

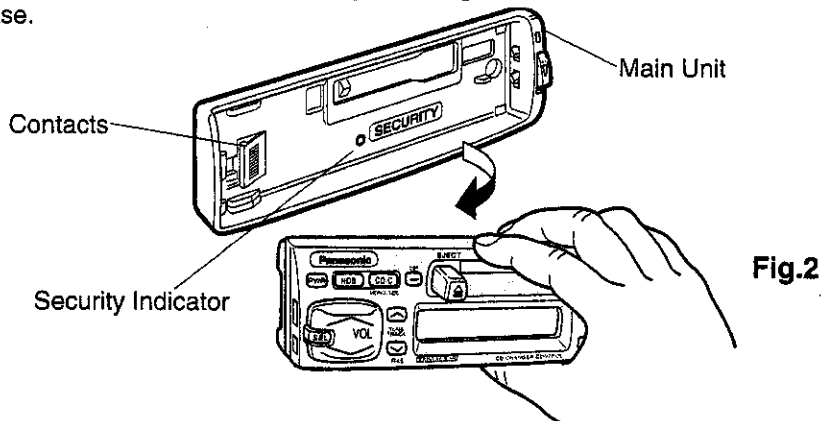
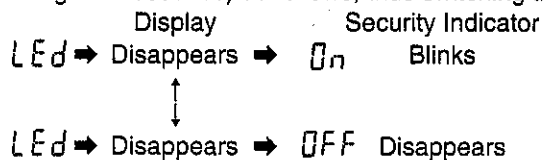


Fig.2

Switching Security Indicator:

When the removable face plate is removed from the unit, the security indicator will blink. With the car turned on, press and hold the SEL button for more than 2 seconds repeatedly to change the display (appearing for 2 seconds) as follows, thus switching the security indicator to on/off.



Anti-Theft System continued

- ④ As shown in Fig.3, gently push the lower side of the case and open its cover. Keep the removable face plate in the case. Then, you can bring the plate safely.

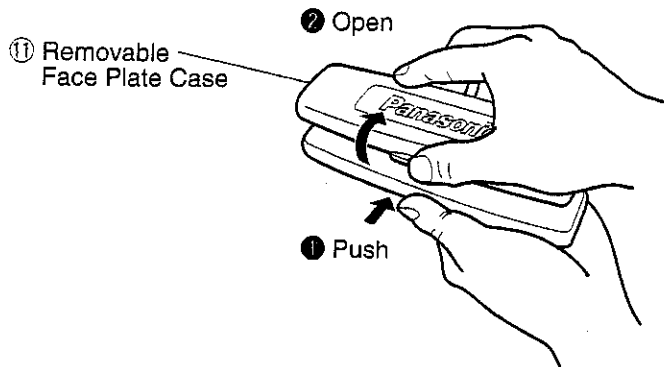


Fig.3

To install the Removable Face Plate

- ① Slide the left side of the removable face plate in place.

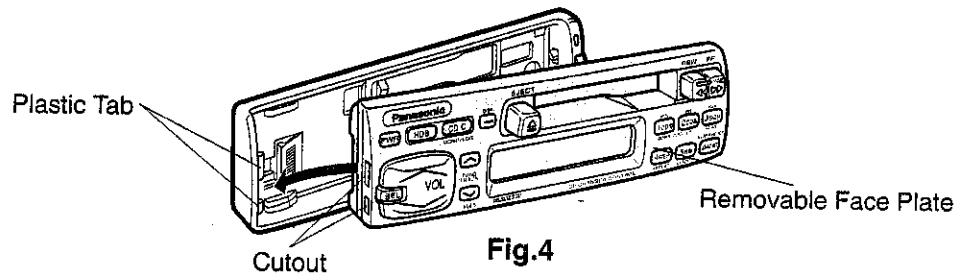


Fig.4

- ② Press the right end of removable face plate until it locks in place.

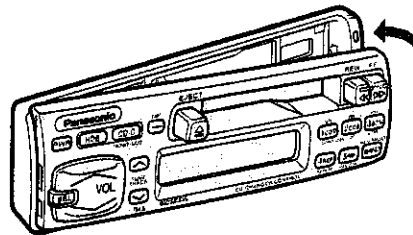


Fig.5

Caution:

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 with a clean, dry cloth.

Installation

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 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.

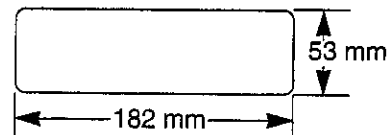


Fig. 1







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 21 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 Hardware

No.	Item	Diagram	Q'ty
①	Mounting Collar		1
②	Plain Washer (5 mmφ)		2
③	Spring Washer (5 mmφ)		2
④	Hex. Nut (5 mmφ)		2
⑤	Rear Support Strap		1
⑥	Hex. Bolt (5 mmφ x 25 mm)		1

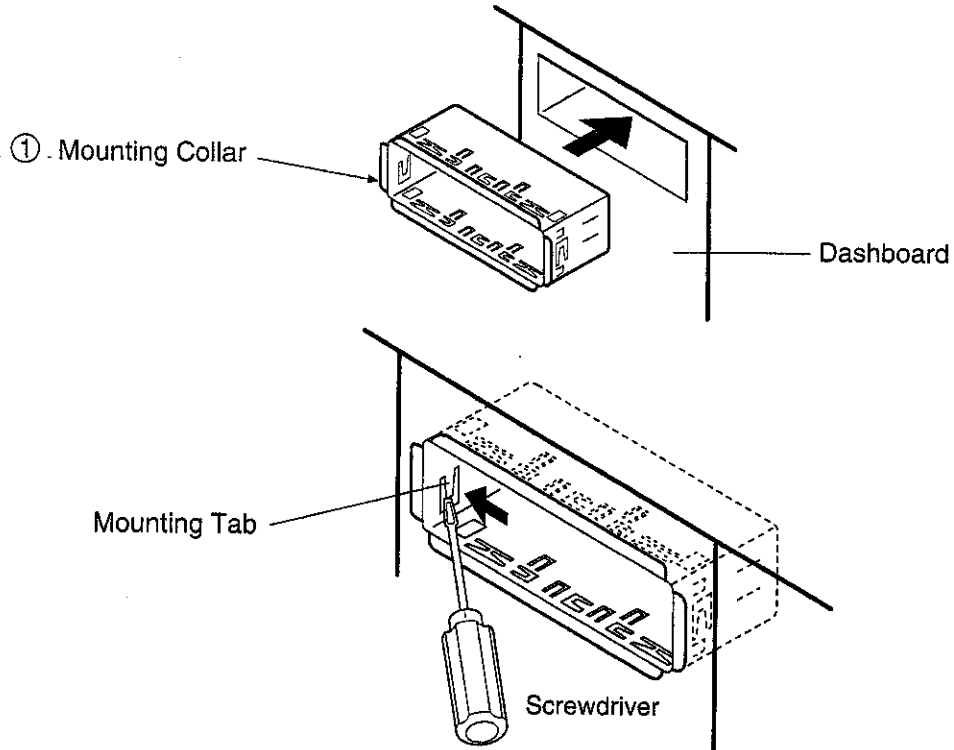
No.	Item	Diagram	Q'ty
⑦	Toothed Lock Washer (5 mmφ)		1
⑧	Mounting Bolt (5 mmφ)		1
⑨	Dismounting Pin		1
⑩	Power Connector		1
⑪	Removable Face Plate Case		1

Installation continued

Installation Procedures

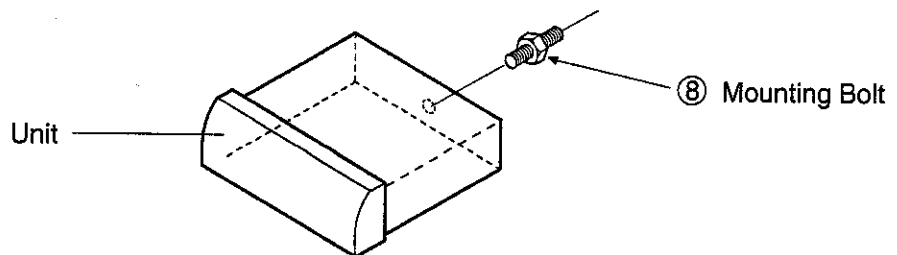
1. Secure the Mounting Collar ①.

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

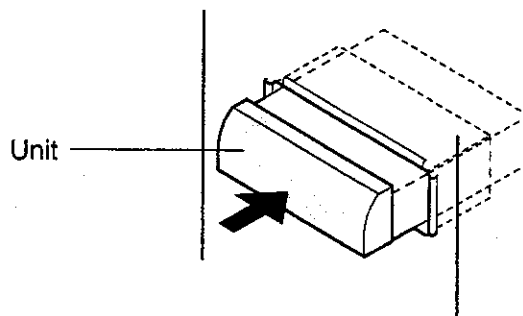


2. Secure the rear of the unit.

- a) Check the electrical connection by referring to this operating instructions.
- b) Connect the Mounting Bolt ⑧, using a suitable wrench.



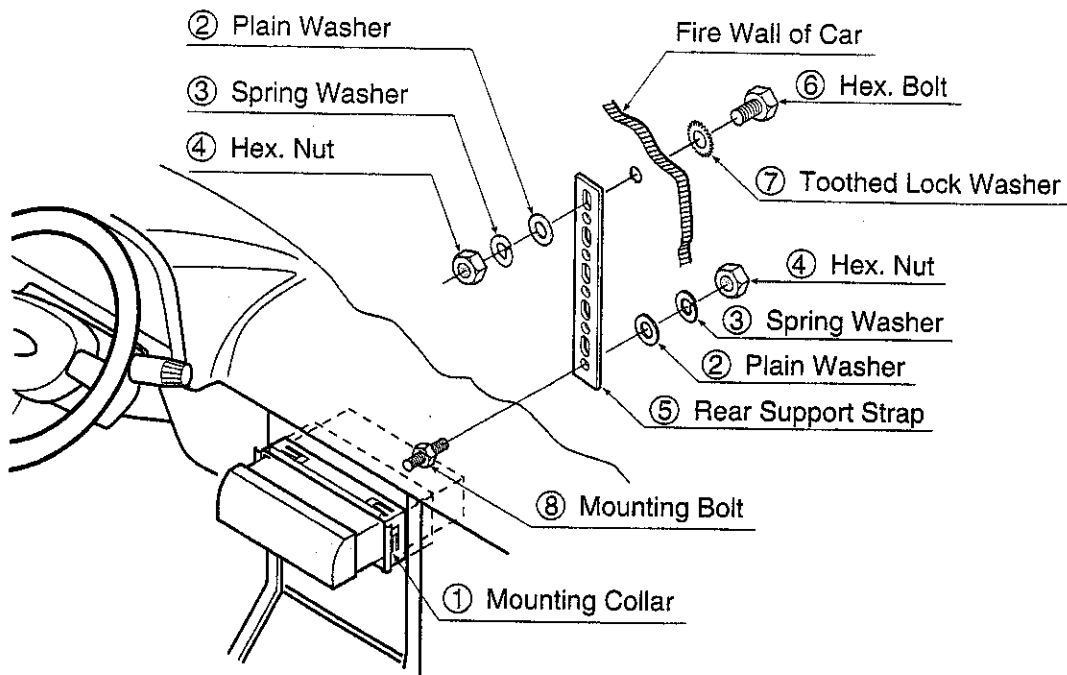
- c) Insert the unit into Mounting Collar ① and push it in until "click" is heard.



- d) Secure the rear of the unit to the car by either of the two recommended methods on the next page.

■ **Using the Rear Support Strap ⑤**

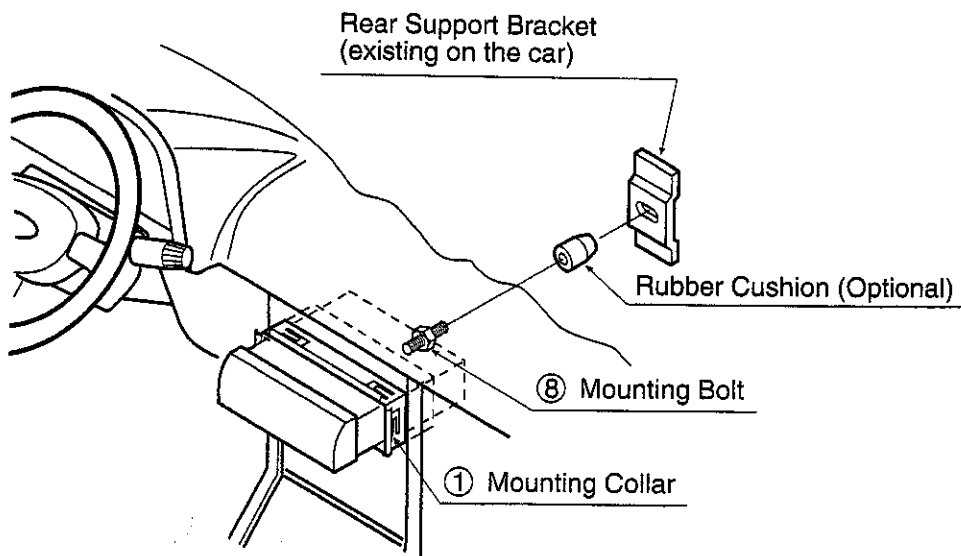
Affix one end of the Rear Support Strap ⑤ to the rear of the unit, and the other end to the Fire Wall of Car, or some other metallic area.



■ **Using the Rubber Cushion (Optional)**

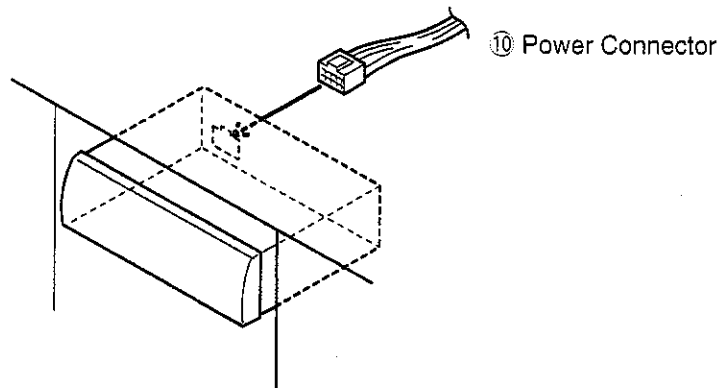
(If there is an existing Rear Support Bracket on the Fire Wall of Car.)

Cover Mounting Bolt ⑧ on the rear of the unit with Rubber Cushion (Optional), and mount it into the existing Rear Support Bracket.



Installation continued

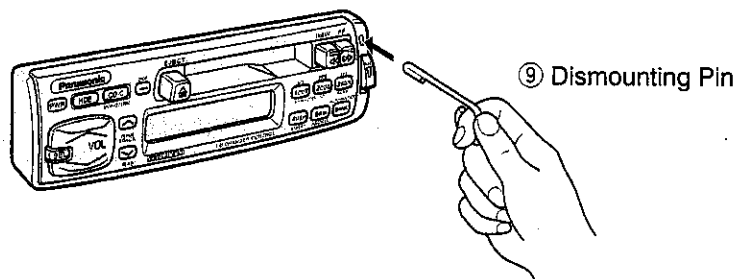
3. Plug the Power Connector ⑩.



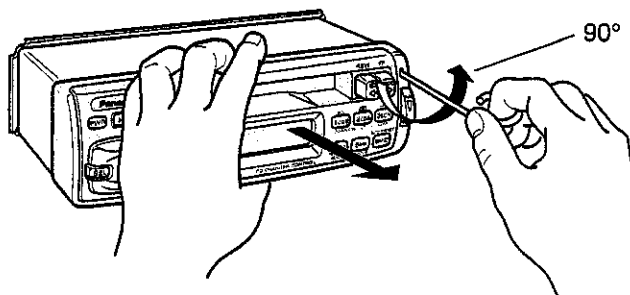
4. After installation reconnect the negative (–) battery terminal.

To Remove the Unit

a) Insert Dismounting Pin ⑨ into the right hole of the escutcheon. Push the Pin as far as possible.



b) Turn the Dismounting Pin ⑨ 90° outward.



c) Pull the Pin to remove the unit from the car's dashboard. Supporting the left end of the unit with your other hand, will facilitate its removal.

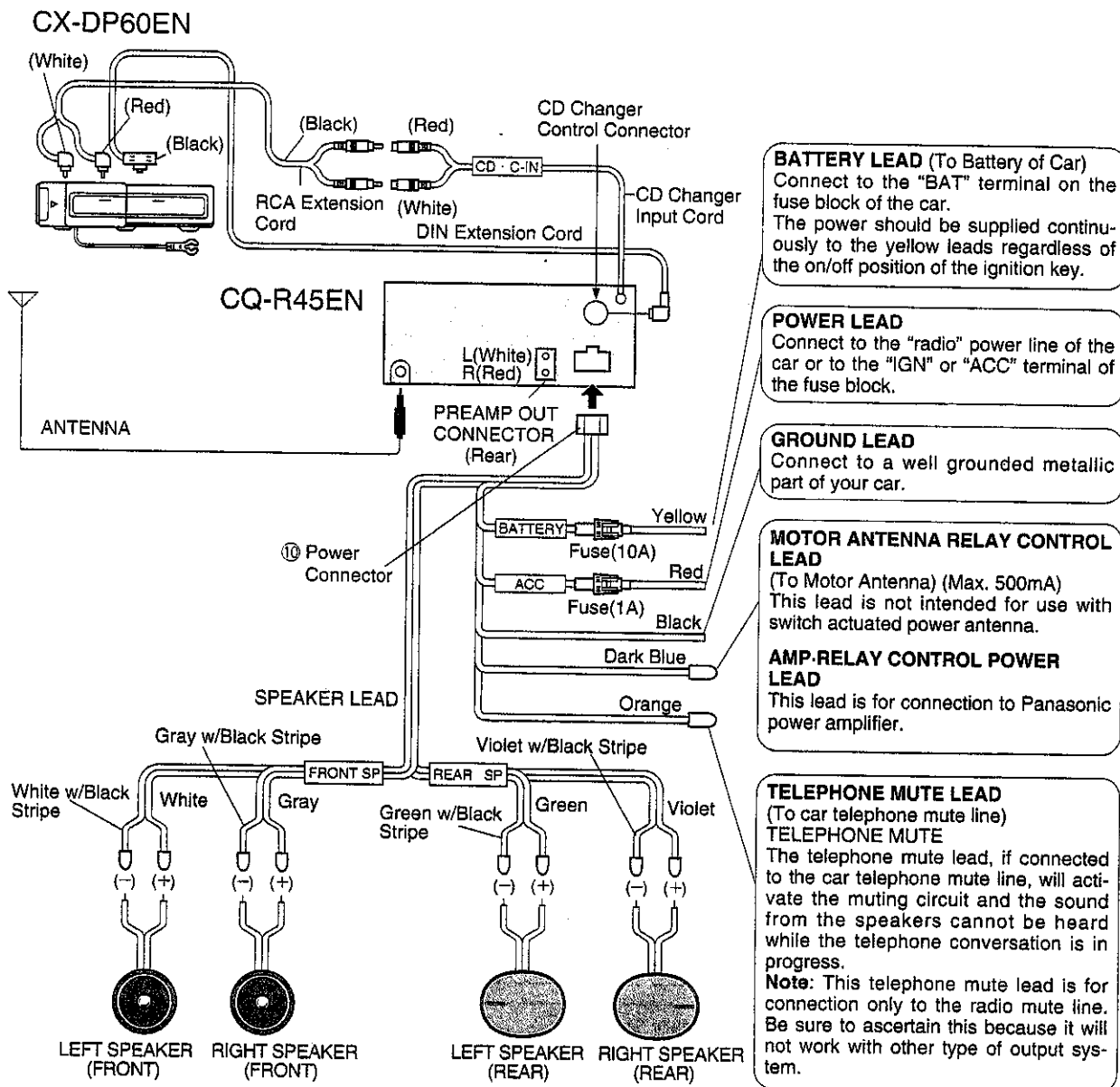
Note: Do not lose the Dismounting Pin. It will be needed to remove the unit from the car's dashboard.

Electrical Connection

- This unit can be connected to an optional CD Changer (CX-DP60EN). For details consult your nearest Panasonic dealers.
- For connection to a CD changer, refer to the operating instructions of the CD Changer (CX-DP60EN).

Caution:

- 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.
- Be sure to connect the ground lead (black) to the car chassis first before connecting the other leads to the specified wires of the car.
- 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.

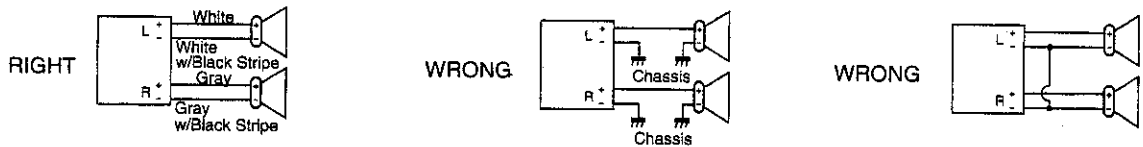


Speaker Connections

CAUTION:

1. Use ungrounded speakers only.
2. The speakers to be used with this unit should be able to handle more than 22W 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.



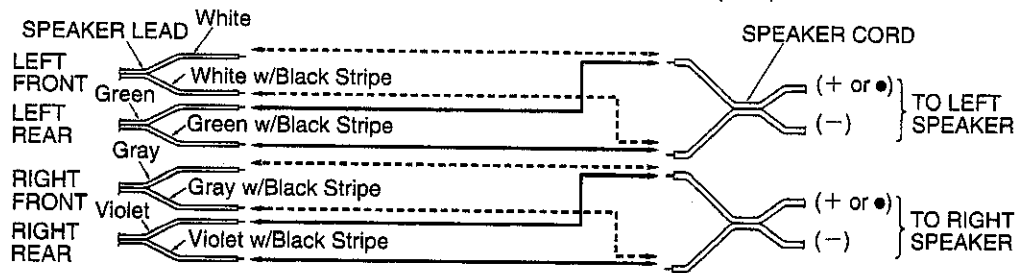
- Do not connect more than one speaker to one set of speaker leads.



2-SPEAKER SYSTEM

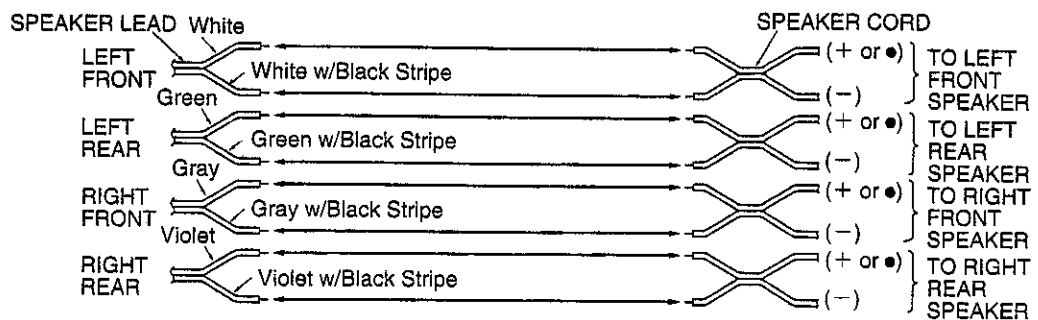
Use only front or rear speaker leads. Do not connect both (Front and Rear) together.

- When the front speakers are used, connect leads as illustrated in dotted lines (.....) below.
- When the rear speakers are used, connect leads as illustrated in actual lines (—) below.



※To prevent unused speaker leads from any short-circuiting, protect them with insulating caps.

4-SPEAKER SYSTEM



Fuse

Be sure to use a fuse of the specified rating (1A, 10A) 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.

Specifications

General

Power Supply	: DC 12V (11V - 16V), Test Voltage 14.4V, Negative Ground
Tone Controls	: Bass; ± 12dB at 100Hz Treble; ± 12dB at 10kHz
Current Consumption	: Less than 2.0A (Tape mode, 0.5W 4-Speaker)
Maximum Power Output	: 22W x 4 (at 4Ω)
Power Output	: 11W x 4 (DIN45 324, at 4Ω)
Speaker Impedance	: 4 - 8Ω
Dimensions (Main unit)	: 178(W) x 50(H) x 150(D) mm
Weight (Main unit)	: 1.6kg

FM Stereo Radio

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

AM Radio


Frequency Range	: 531 - 1,602kHz
Usable Sensitivity	: 26dB/μV (S/N 20dB)

Cassette Player

Reproduction System	: 4-track, 2-program stereo
Tape Speed	: 4.76cm/sec.
FF/REW Time	: Less than 110 sec. (C-60)
Frequency Response	: 35 - 14,000Hz (Normal) 35 - 17,000Hz (Metal)
Wow and Flutter	: 0.12% (WRMS)
Signal to Noise Ratio	: 52dB (Dolby B NR on ; 62dB)

Note:

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

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.