

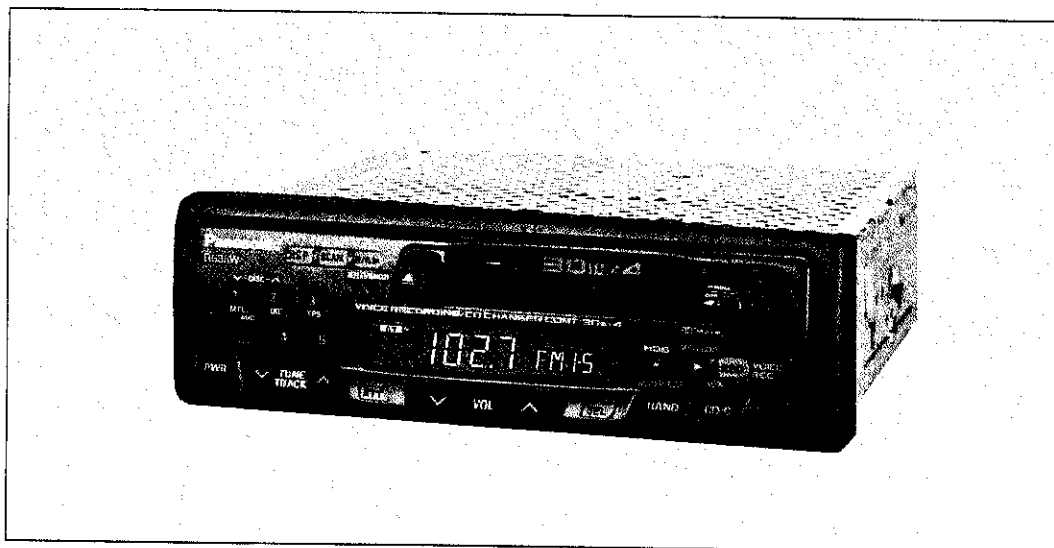
Operating Instructions

操作说明书

Removable Face High-Power Cassette/ Receiver with
Voice Recording and CD Changer Control

可拆卸面板、高功率、并附有声音录音及镭射唱片变换器控制的磁带放音/收音机。

CQ-R535EW



Panasonic[®]
松下电器

Before operating this set, please read these instructions completely.

操作本装置之前，请熟读这些说明。

Contents

	Page		Page
Precautions.....	3	Anti-Theft System.....	17
Power and Sound Controls.....	4	Installation.....	19
Voice Recording.....	7	Electrical Connection.....	24
Radio Basics.....	8	Speaker Connections.....	25
Cassette Tape Player Basics.....	11	Fuse.....	27
CD Changer Basics.....	13	Maintenance.....	27
Clock Basics.....	16	Specifications.....	27

目录

预防措施.....	3	防盗系统.....	41
电源与音量控制.....	28	安装.....	43
声音录音.....	31	电气连接.....	48
收音机基本操作.....	32	扬声器连接.....	49
卡式磁带放音机基本操作.....	35	保险丝.....	51
镭射唱片变换器的基本操作.....	37	维修.....	51
时钟的基本操作.....	40	规格.....	51

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欢迎您来到不断增加的电子产品拥有者的家族之中。我们力图为您提供精密的电子与机械工程的方便性，使用经过认真选择的零件进行生产，并由对他们的工作已为我公司树立信誉而感到自豪的人们进行组装。我们知道这个产品将为您带来更多享受的时光，当您发现我们的产品所拥有的质量、价值和可靠性之后，您会为自己成为我们家族的一员而感到自豪。

预防措施

音量

为了安全驾驶，请尽量保持低音量，以便注意交通和路面状况。

洗车时

为了避免电气短路而引起火灾或其它危害，请勿使本设备(包括扬声器与磁带)沾水或受潮。

汽车通风

如果您的汽车在直射阳光下停车几个小时之后，汽车内的温度会升很高。

在打开本机之前，最好开动汽车，降低车内温度。

供电

本设备的设计是用于备有12伏负极接地电池系统的汽车中。

磁带机构

切勿将磁铁，螺丝刀和其它金属物靠近磁带机构和磁头。

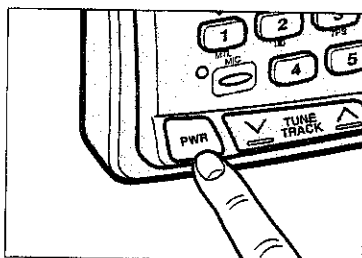
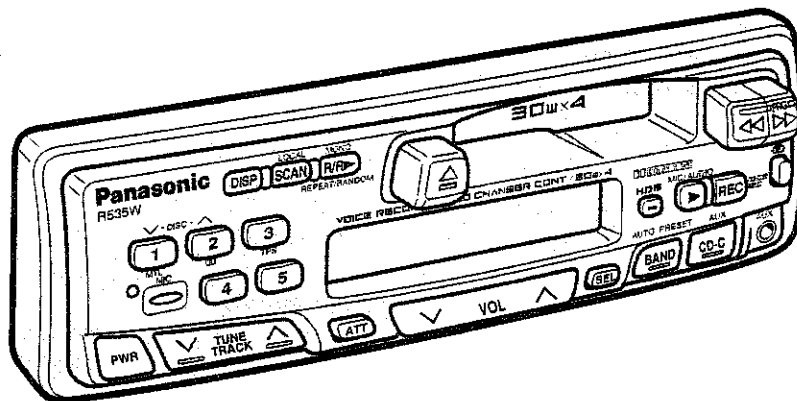
维修

本机由精密部件组成。请勿自行尝试拆卸或调节任何部件。如要维修，请到您附近的公认的Panasonic维修中心进行询问。

备注:

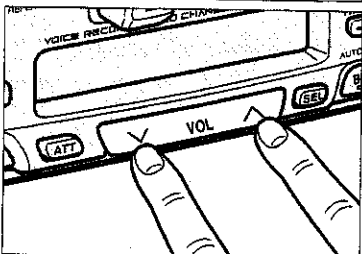
当电源接头或电池被切断之时，现存的记忆会被消除，并回复到厂家原始设定状态。

Power and Sound Controls



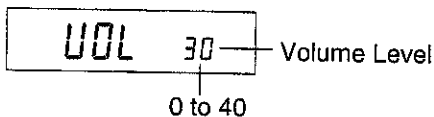
Power

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.

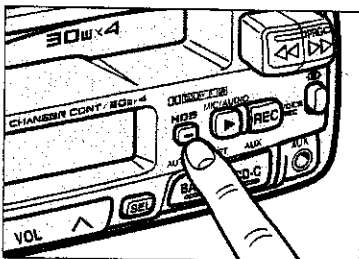


Volume

Press “^” or “v” to increase or decrease volume.



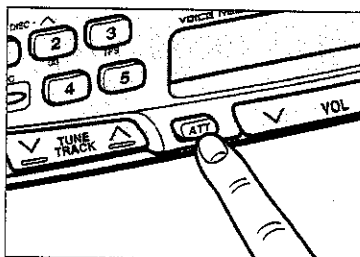
Press “^” or “v” for more than a half second to change numeric levels on the display rapidly.



HDB (High Definition Bass)

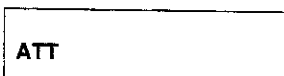
Especially for rock music, the bass-sound will be more powerful.

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



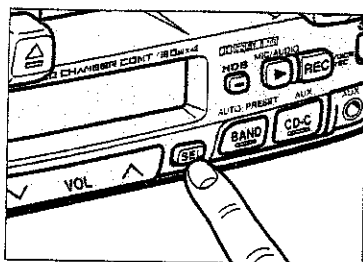
Attenuator

- Press ATT. Volume will decrease to about 1/10 of its previous level.
- Press ATT again to deactivate when listening at normal volume.



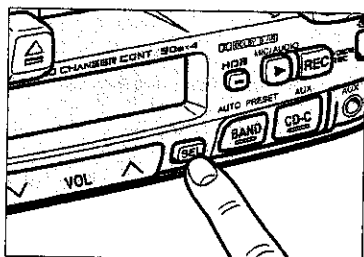
Note: This unit is equipped with an anti-volume-blast circuit which serves as an automatic volume level adjuster so that you will not be deafened with sudden loud volume.

This system operates as follows. When PWR is switched on, the volume level is low. After that, the volume level gradually returns to its previous level prior to switching off the unit.



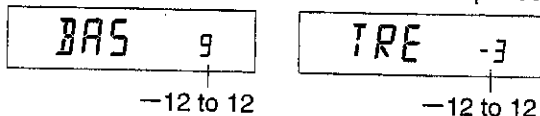
Changing Audio Modes

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

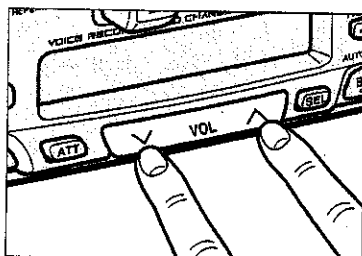


Bass and Treble

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

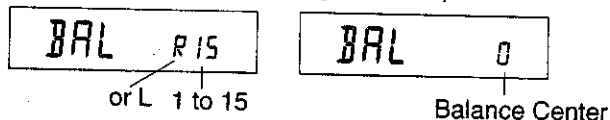


- Press “^” or “v” for more than a half second to change numeric levels on the display rapidly.



Balance

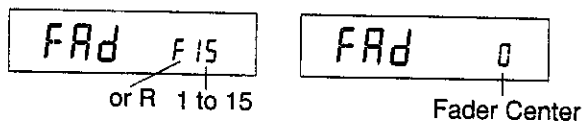
- Press SEL to select the BALANCE mode. Press “^” or “v” to shift the sound volume to the right or left speakers.



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

Fader

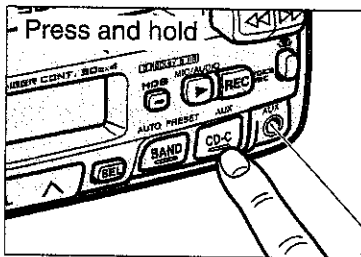
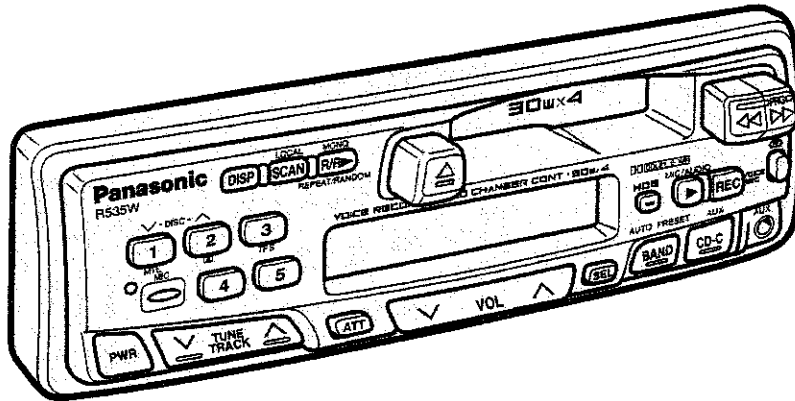
- Press SEL to select the FADER mode. Press “^” or “v” to shift the sound volume to the front or rear speakers.



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

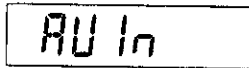
Note: When a control mode (BAS/TRE/BAL/FAd) is selected but no operation is made within 5 seconds, the display will return to the normal operation (volume adjustment) mode. In such a case, press SEL again to select the next control mode.

Power and Sound Controls continued



Selecting Auxiliary Source

- ① Press and hold AUX for more than 2 seconds to select AUX Input mode. (AUX Input mode can not be selected during tape play. If you want to select AUX Input mode, eject the tape.)



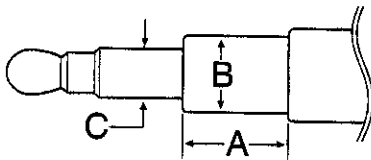
AUX Jack

- ② Connect the auxiliary equipment (an optional DCC player deck or any other appropriate equipment) to the AUX Jack.

Canceling AUX Input mode

(To change to another mode)

- To Radio mode → Press BAND.
- To Cassette mode → Insert a cassette.
- To CD changer mode → Press CD·C. (when connecting CD changer).

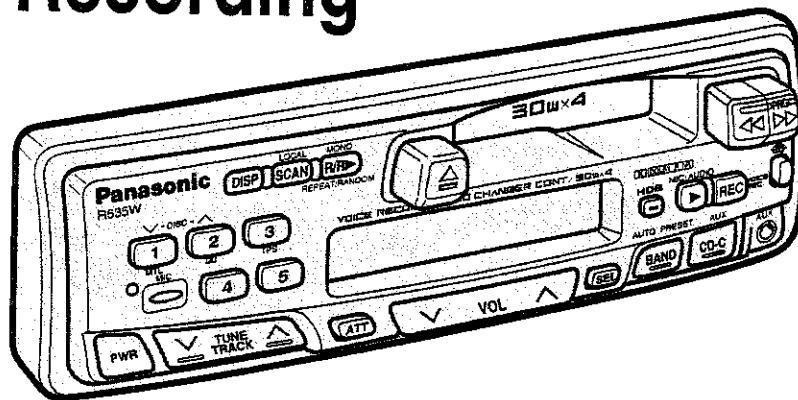


Caution:

In order to insert the plug into the "AUX" Jack properly, make sure to use the correct size of the stereo plug shown on the left.

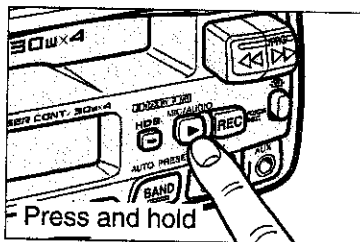
- A-MIN 1/2" LONG (12mm)
- B-MAX 2/5" DIA. (10mm)
- C-MIN 1/8" DIA. (3.5mm)

Voice Recording



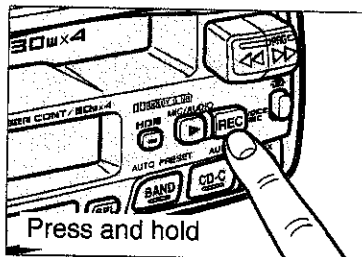
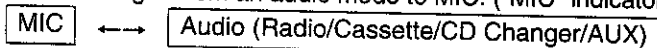
The voice recording function offers record/playback of program from the unit and external source from the built-in microphone for up to 20 seconds. It is mainly used as follows:

1. To record and playback important notes.
 2. To record and playback surprise messages to others.
 3. To record a simple direction for other drivers and use it as a road guide
- There are many other ways to enjoy this function as you like.



Changing Record Mode

- When ►(MIC/AUDIO) is pressed for more than 2 seconds, record mode changes from MIC to an audio mode(Radio/Cassette/CD Changer/AUX). ("MIC" indicator turns off from LCD display.)
- When ►(MIC/AUDIO) is pressed again for more than 2 seconds, record mode changes from an audio mode to MIC. ("MIC" indicator turns on.)

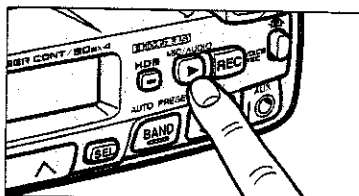


To Record

- When REC is pressed for more than 2 seconds during the MIC record mode, external sound is recorded through the built-in microphone.
- When REC is pressed for more than 2 seconds during the audio record mode (CD, Cassette, Radio, AUX), current program from the unit is recorded.
- When REC is pressed again for more than 2 seconds (before the 20 seconds end), record ends.
- When recording reaches at the end of 20 seconds, the recording light turns off.

Notes

1. Maximum recording time is 20 seconds.
2. In the audio mode, the recording from the microphone cannot be made.
3. If you want to erase the previous recorded message, please do.
 - ① Press REC for more than 2 seconds until the recording light is turned on.
 - ② As soon as the recording light turns on, press REC again for more than 2 seconds until the recording light is turned off.



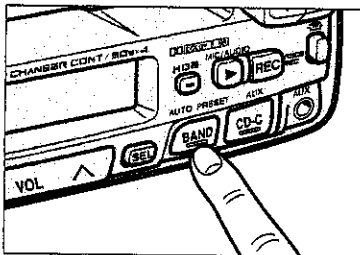
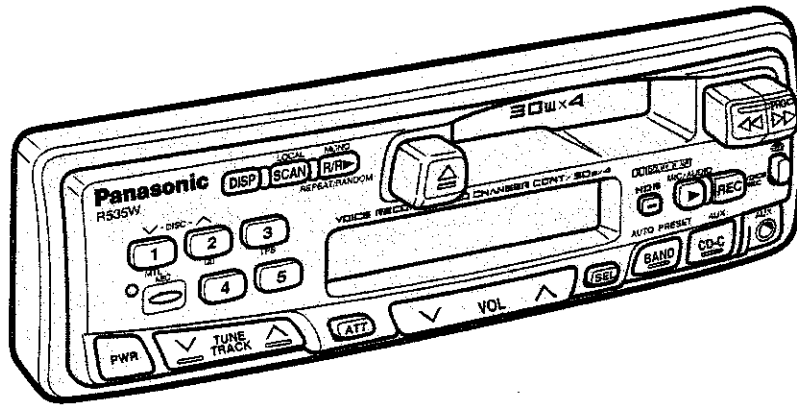
To Play

- Press ► to playback the previous recorded message.
- When playback ends, the previous audio mode is resumed.

CAUTION :

1. Do not make recording while the car in motion.
2. The previous message will be erased, as soon as you press the recording button.
3. Surrounding noise will be recorded, while the recording from microphone.

Radio Basics

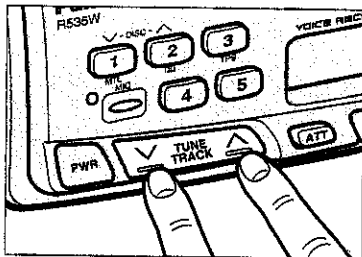
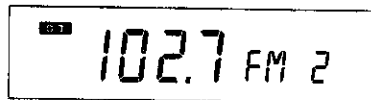


Selecting a Band

Press BAND to select the bands in the following order.

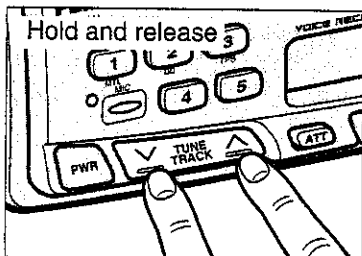
FM1 → FM2 → FM3 → AM

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



Manual Tuning

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



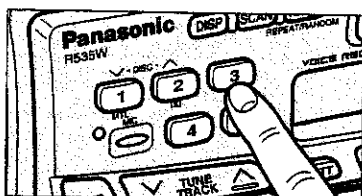
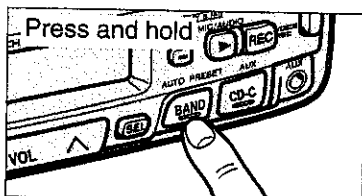
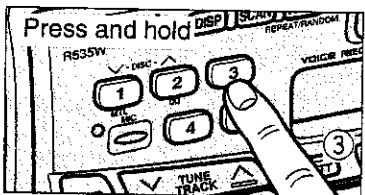
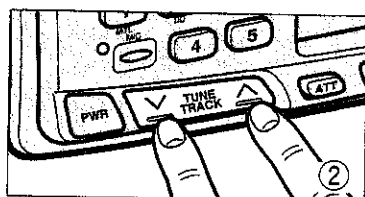
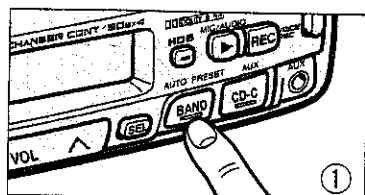
Seek Tuning

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

Preset Station Setting

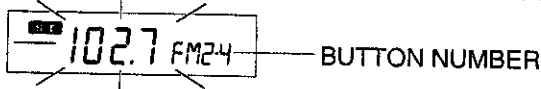
Up to 20 stations can be preset in the station memory as follows;

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. The memory is now set for that button on the band you have selected.
- 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.

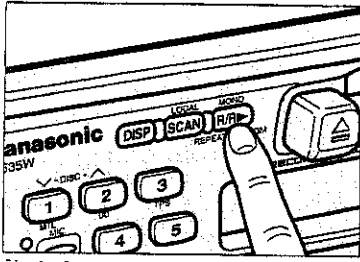
Auto Station Preset

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.

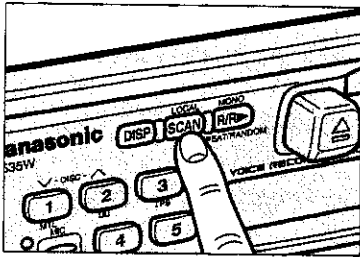
Radio Basics continued



To reduce interference during FM stereo broadcasts

Press the MONO 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. To turn it off, press the MONO again.

MONO

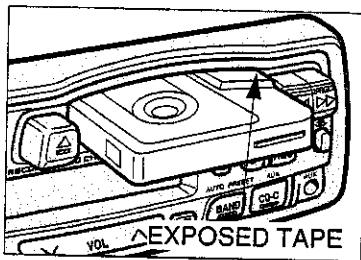
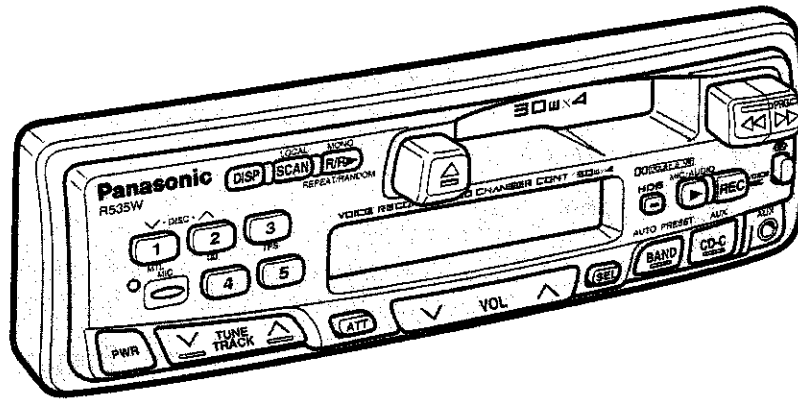


Switching from DX to LOC

Normally, searching stops even at a weak wave station. (DX mode)
To stop searching at a strong wave station only, press LOCAL.
To turn it off, press LOCAL again.

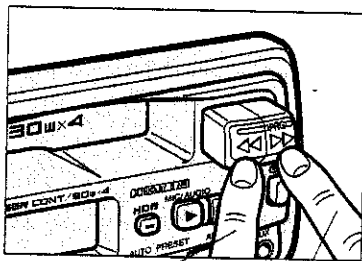
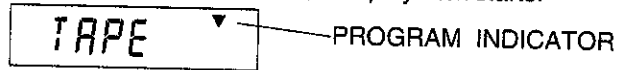
LOCAL

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

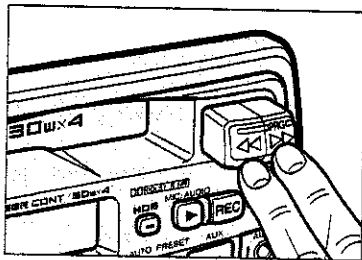
Rewind and Fast Forward

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.

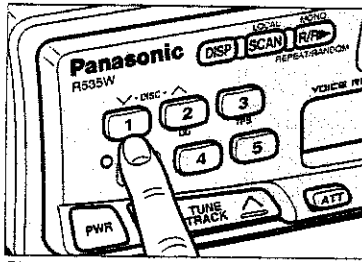


TOP SIDE PLAYING



BOTTOM SIDE PLAYING

Cassette Tape Player Basics continued

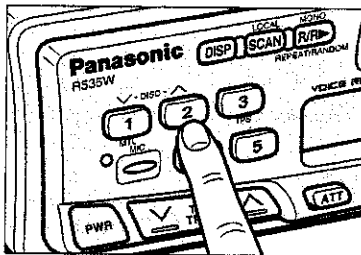


Metal Tape Mode



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

MTL

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

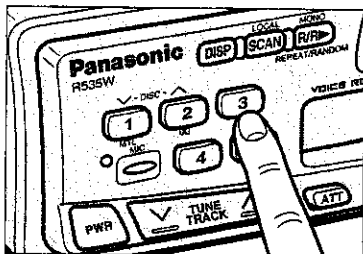


Dolby Noise Reduction

Press  when playing tapes recorded with Dolby B NR. To turn it off, press  again.





Note: Playing tapes recorded without Dolby NR with Dolby NR on may cause the tape to sound "dull" or muffled.



Selecting a Program

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

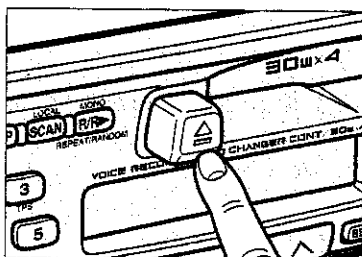
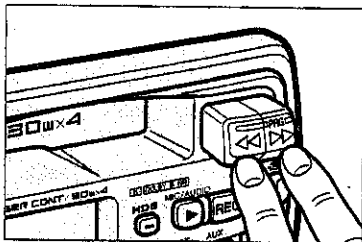
(To turn it off, press TPS again. "TPS" indicator will disappear.)

- 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.

TPS


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.

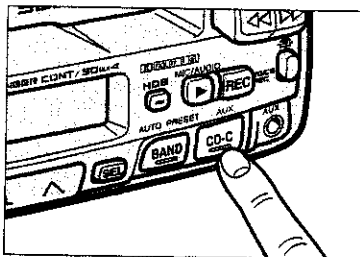
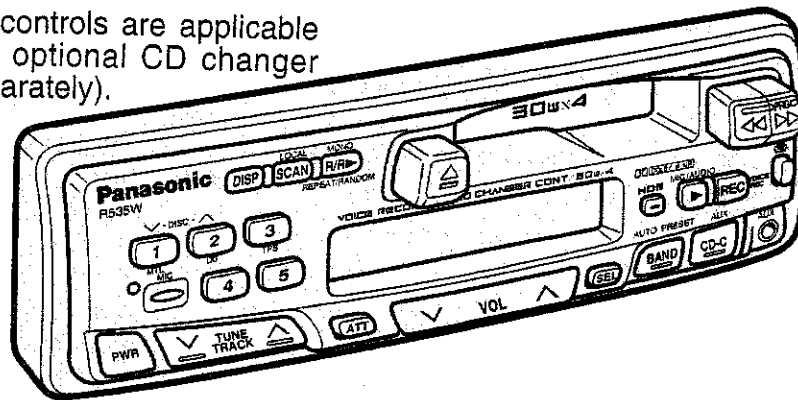
Note: Always remove the cassette when you are done using the cassette player. This will prolong the life of your tape.

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

CD Changer Basics

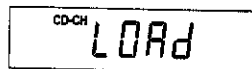
Note:

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



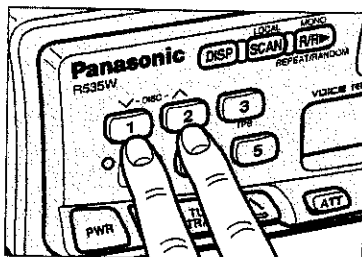
To start the CD Player

With a disc magazine inserted in the CD Changer, press CD-C. Play starts from first track.



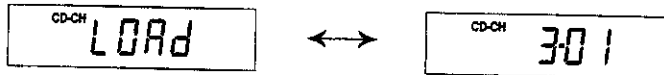
(Only for CX-DP15EN)

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



Selecting a Disc

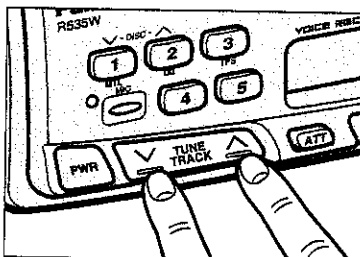
Press "DISC-^" or "V-DISC" to select discs in ascending or descending order.



(Only for CX-DP15EN)

The disc/track number, and "LOAD" indicators alternately blink until the selected disc is loaded. The disc then plays, starting at the first track.
(Only for CX-DP15EN)

Note: When using model CX-DP60EN-DP2000EN-DP600EN, the disc number indicator blinks and the track number indicator stays illuminated.

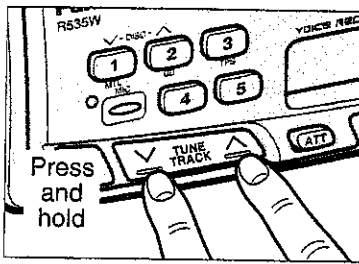


Selecting a Track

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

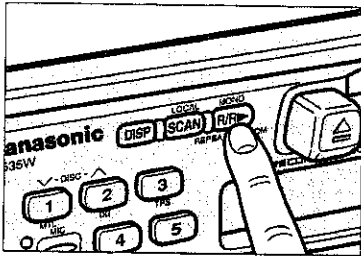
Press "V TRACK" once to play from the beginning of the current track. Press twice to play the previous track. Press repeatedly to step backward through all the tracks.

CD Changer Basics continued



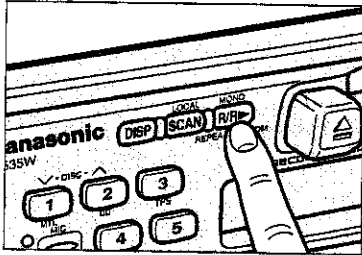
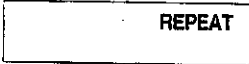
Searching a Track

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



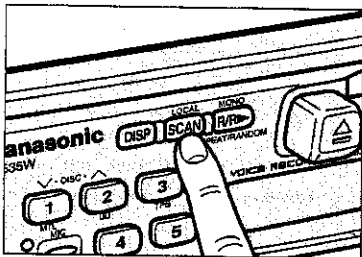
Repeating a Track

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



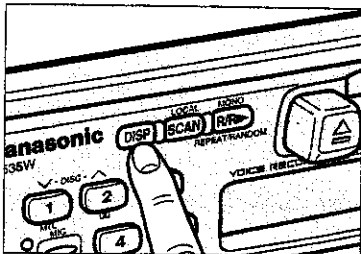
Random Selection

Press R/R▶ for more than 2 seconds to random selection of music is played from all available CDs. "RANDOM" indicator lights. To turn it off, press R/R▶ for more than 2 seconds again.



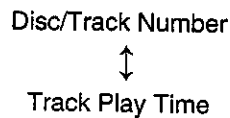
Scanning Tracks

Press SCAN. 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 SCAN again.



Changing the Display

Press DISP to switch the display in sequence as follows.
(Only for CX-DP15EN, CX-DP3000EN)

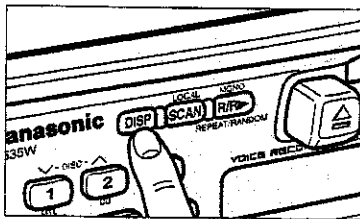
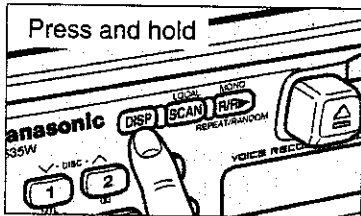
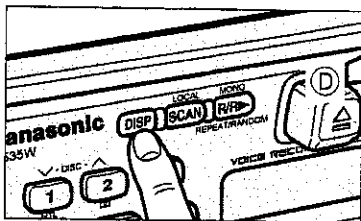
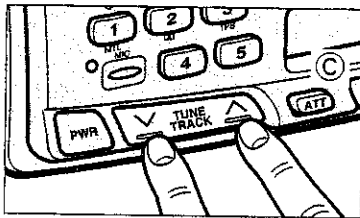
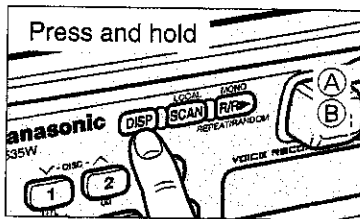
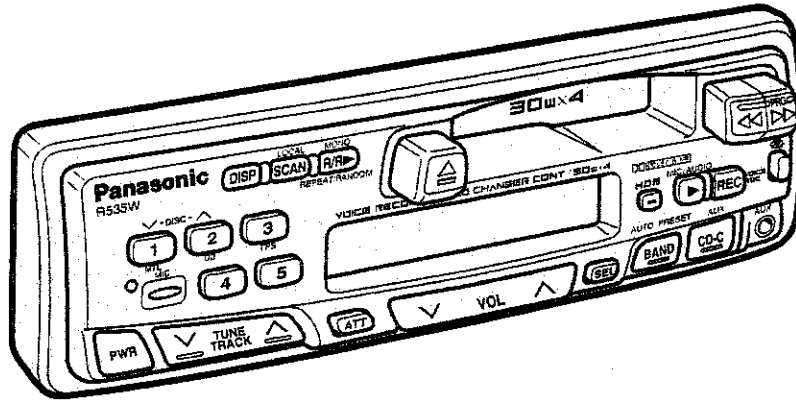


Note: To change to the Radio mode, press BAND.

Error Display Messages

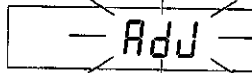
E1	Displays when the compact disc is dirty or upside down. Selects the next available compact disc.
E2	Displays when compact disc is scratched. Selects next available compact disc.
E3	Displays when the compact disc stops operating for some reason. Please turn off the car engine (ACC off) and remove the fuse from yellow lead for 1 minute. Then reinstall the fuse.
0000	Displays when there is no disc in the magazine.

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

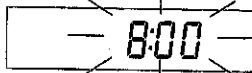


Initial Time Setting

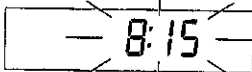
- Ⓐ Press and hold DISP for more than 2 seconds. "Adj" is displayed.
- Ⓑ Press and hold DISP again for more than 2 seconds. "Adj" blinks indicating the time setting mode is activated.



- Ⓒ To set hours, press "∨ TUNE".



To set minutes, press "TUNE ^".



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 DISP and hold it for more than 2 seconds for 2 times to activate the time setting mode (for 1 time when the time is displayed). On the time display, repeat step Ⓒ and Ⓓ above.


Selecting the Clock Display

Press and hold DISP for more than 2 seconds for clock display. Press DISP once again, the current audio display mode resumes.

Anti-Theft System

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

To Remove the Removable Face Plate

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

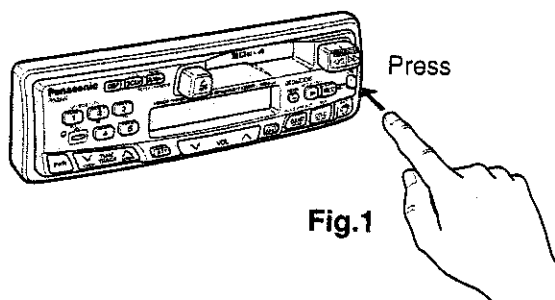
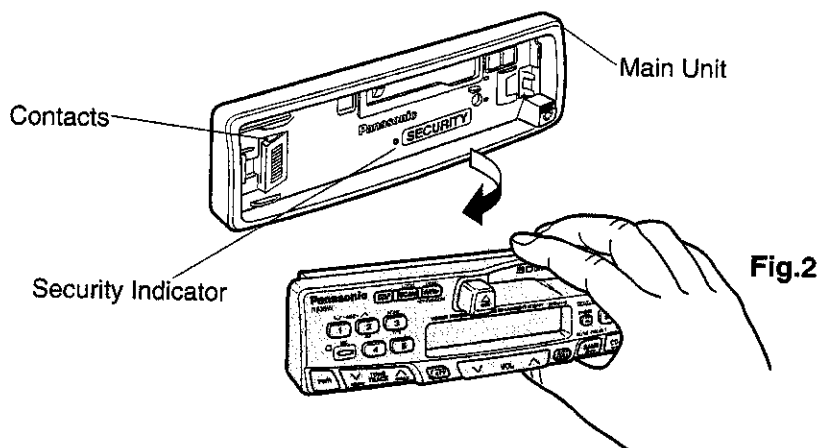


Fig.1

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



Warning Alarm and Security Indicator

The security indicator blinks when the removable face plate is removed from the unit. Furthermore, the alarm will set off for 1 minute then reset when an attempt is made to remove the unit from the mounting collar.

Activate Warning Alarm and Security Indicator

1. Press and hold SEL for more than 4 seconds when the power is ON. First "L E d" is displayed and then "0 n" is displayed, and the security indicator and Warning Alarm turn ON.

Note: The ALARM mode is inactivated when it is shipped.

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

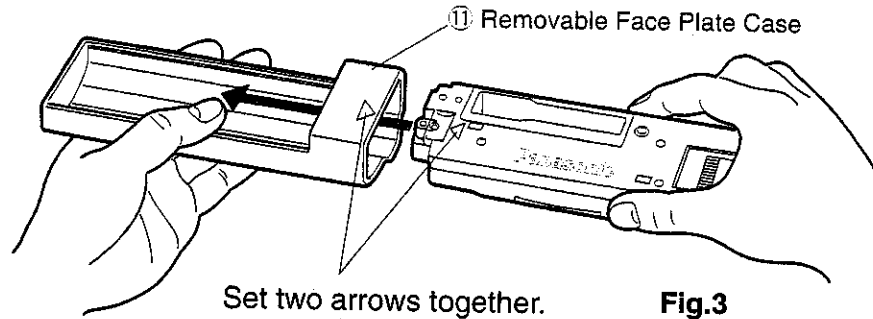
Display	Security Indicator	Warning Alarm
L E d → Disappears → 0 n	Blinks	ON
(Press SEL for more than 4 seconds.)		
L E d → Disappears → OFF	OFF	OFF

Caution :

1. Warning Alarm may not operate if the exclusive supplied mounting collar is not used. This mounting collar will set off the alarm when the unit is being removed.
2. When removing or installing the unit, make sure that it is in the ALARM OFF mode.
3. When the Warning Alarm is activated by mistake, or when you want to remove the unit, the Warning Alarm and the security indicator functions can be canceled by the following steps of procedure.
 - Install the removable face plate.
 - Disconnect the power connector.

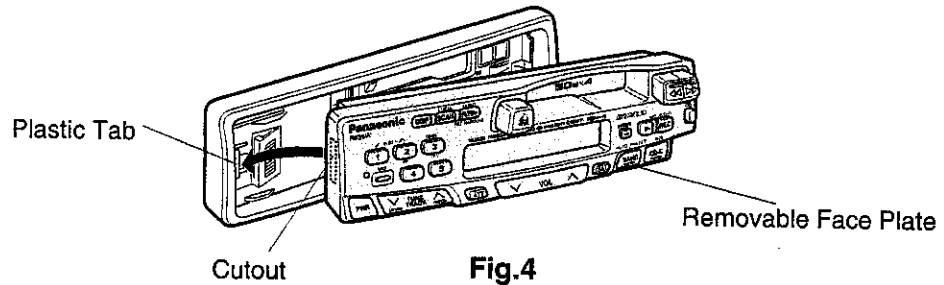
Anti-Theft System continued

- ④ 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.

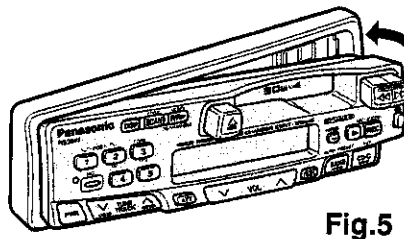


To install the Removable Face Plate

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



- ② Press the right end of removable face plate until "click" is heard.



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.

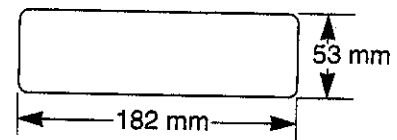


Fig. 1

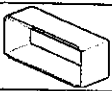





Installation Precautions






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 24 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

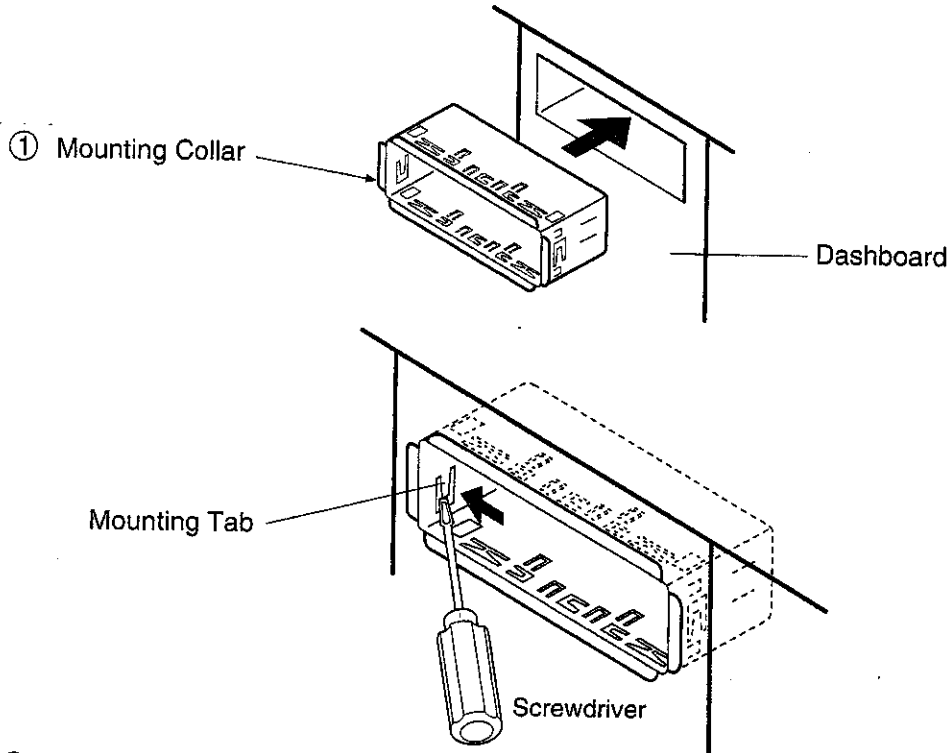
No.	Item	Diagram	Q'ty
⑦	Toothed Lock Washer (5 mmφ)		1
⑧	Mounting Bolt (5 mmφ)		1
⑨	Dismounting Pin		1
⑩	Power Connector		1
⑪	Removable Face Plate Case		1

Installation continued

Installation Procedures

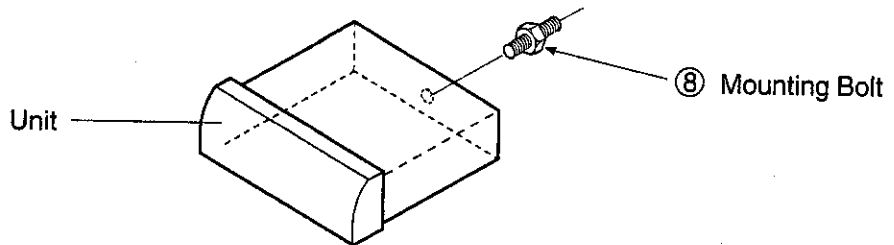
1. Secure the Mounting Collar ①.

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

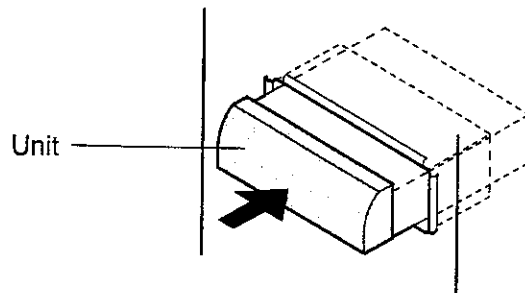


2. Secure the rear of the unit.

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



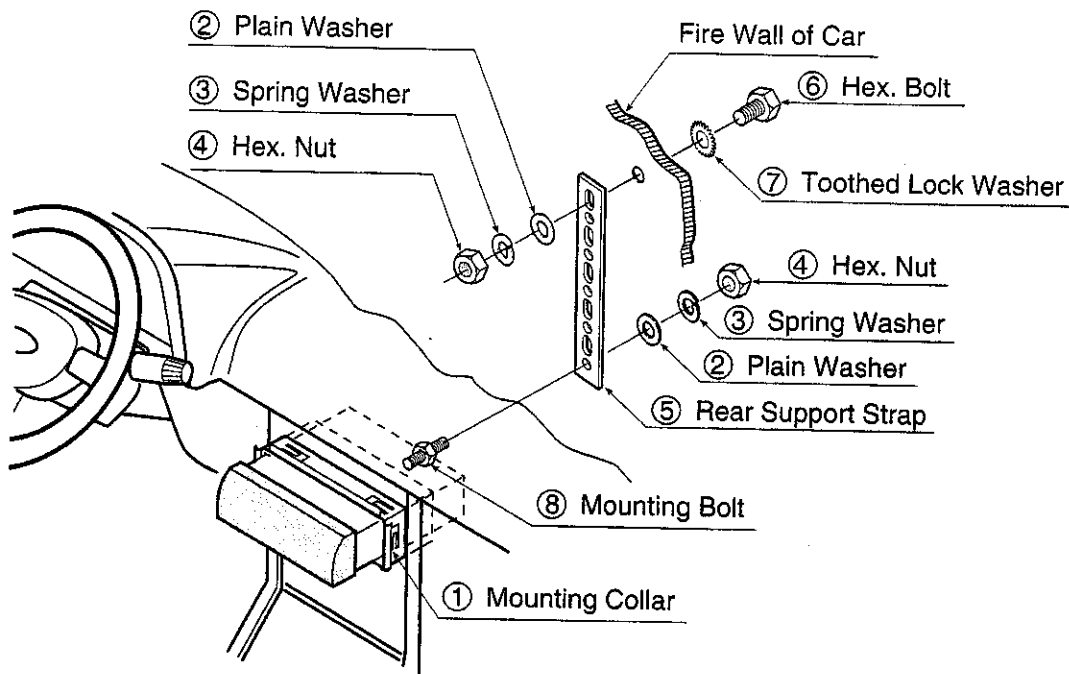
- c) Insert the unit into Mounting Collar ① and push it in until "click" is heard.



- 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**

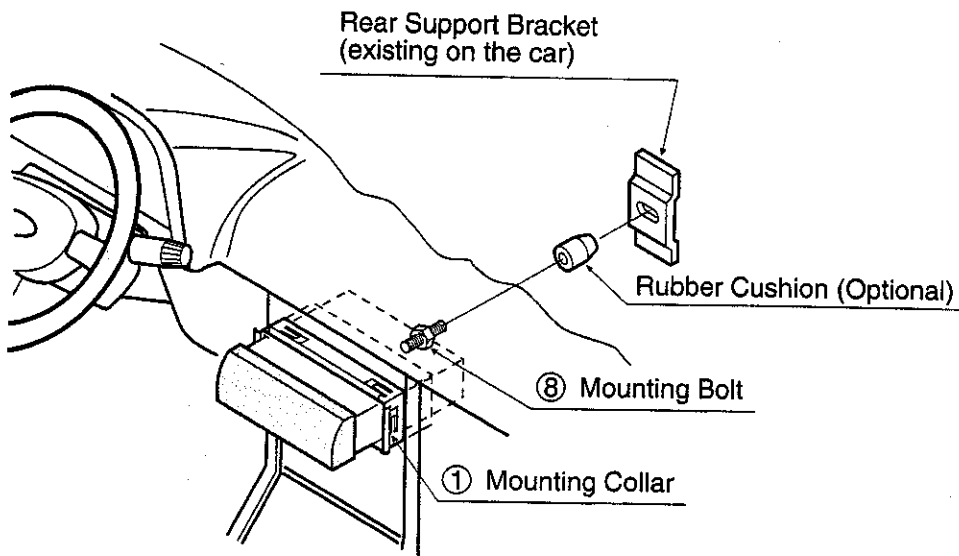
Affix one end of the Rear Support Strap ⑤ to the rear of the unit, and the other end to the Fire Wall of Car, or some other metallic area.



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

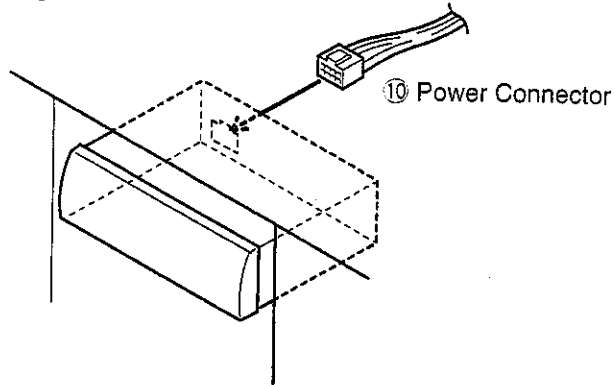
(If there is an existing Rear Support Bracket on the Fire Wall of Car.)

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.

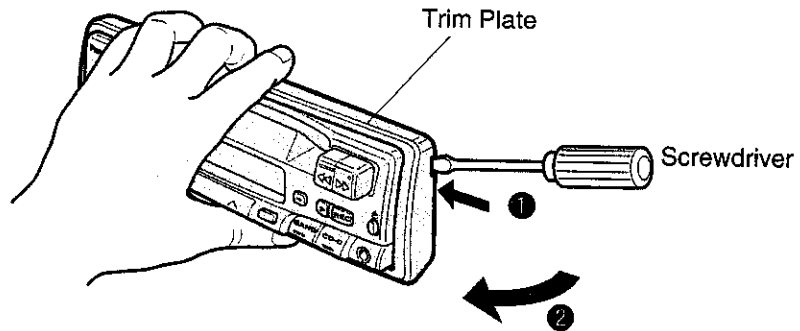


4. After installation reconnect the negative (–) battery terminal.

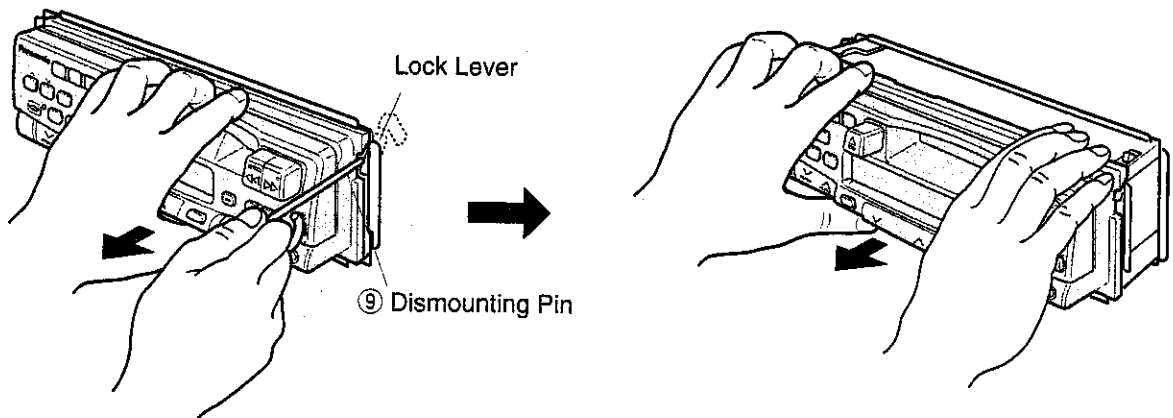
To Remove the Unit

When removing or installing the unit, make sure that it is in the ALARM OFF mode. (See page 17.)

a) Remove the trim plate with a screwdriver as shown in the figure.



b) Pull out the unit while pushing the lock lever using Dismounting Pin ⑨ .
c) Remove the unit pulling with both hands.



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

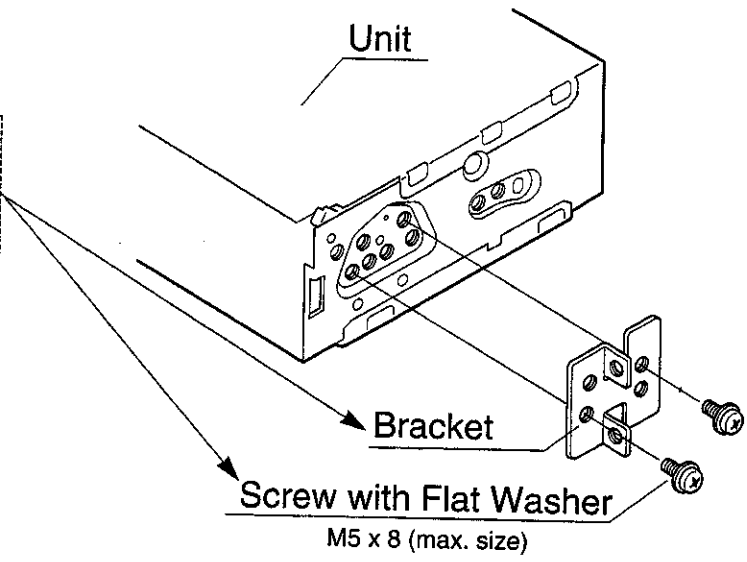
Mounting in a car equipped with a Factory Radio

If your factory radio has the mounting brackets like the one shown below, you can use it instead of supplied mounting collar.

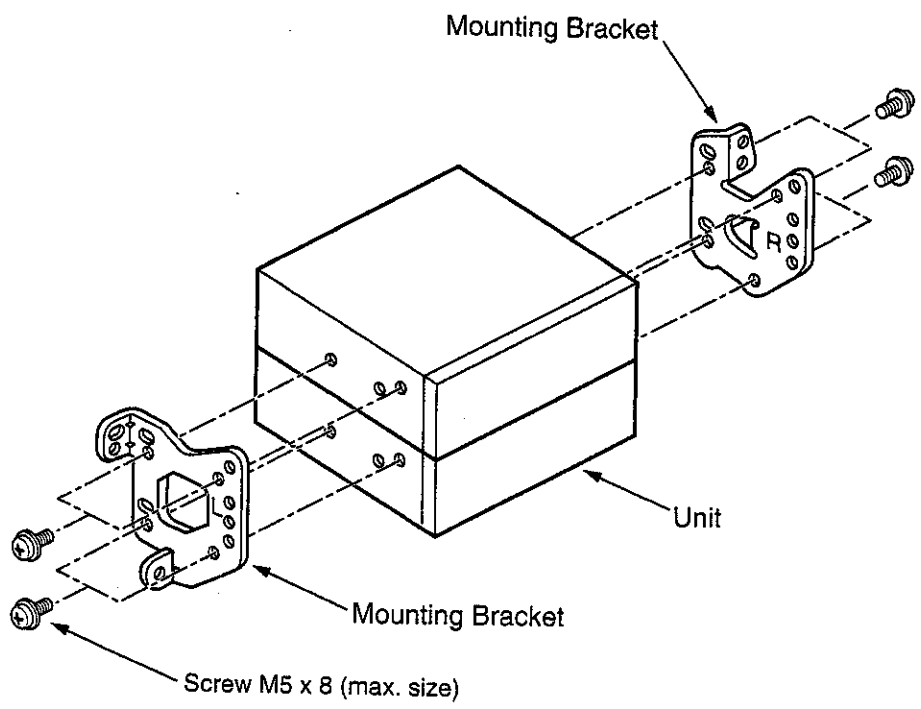
<Single unit type>

Use the existing mounting bracket and screws of your factory car radio.

Fasten the unit similarly on the other side.



<Double unit type> To dashboard/Center console



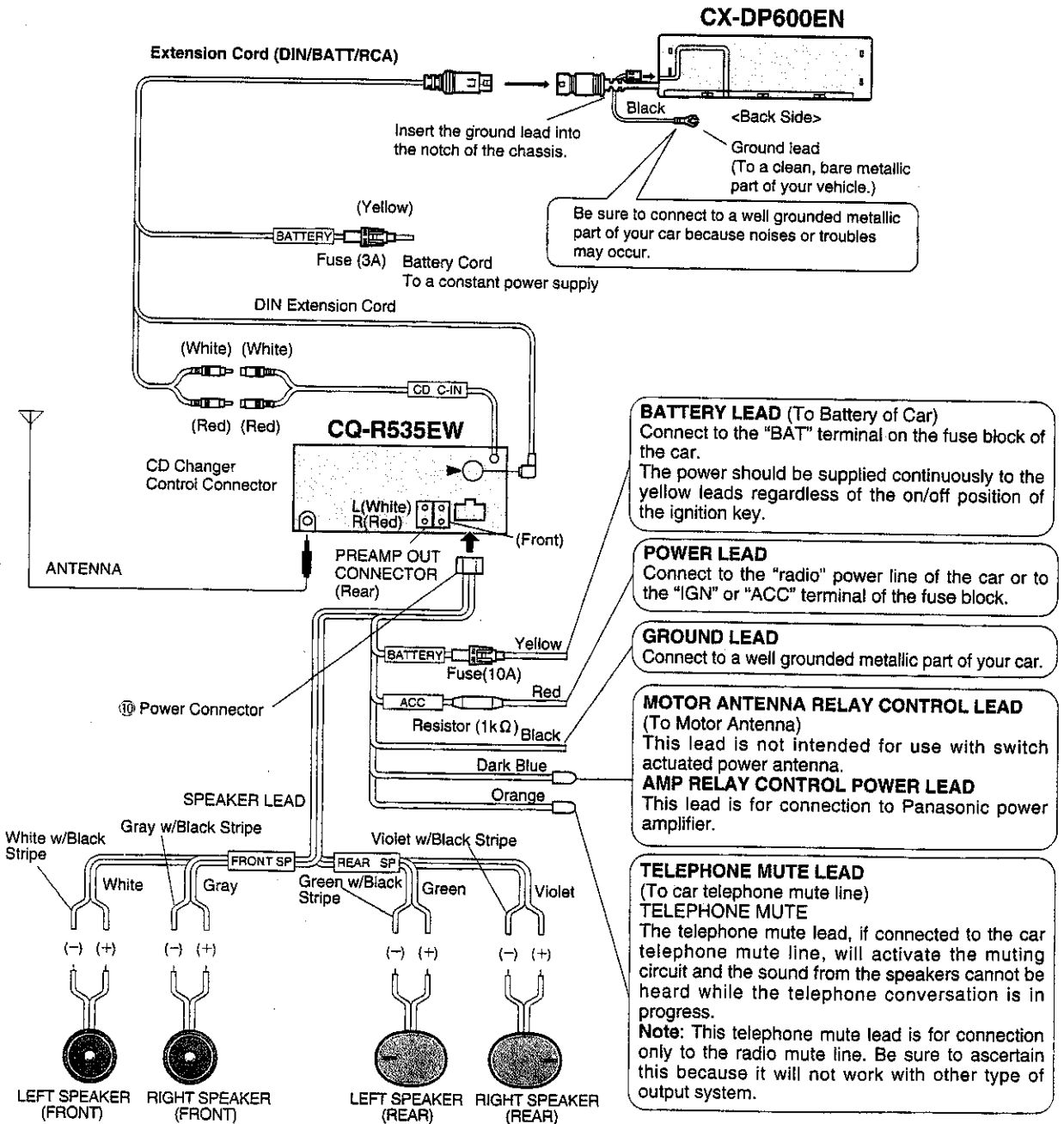
Note: Use the existing mounting bracket and screw of your factory car radio.

Electrical Connection

- This unit can be connected to an optional CD changer (CX-DP600EN or CX-DP1200EN). For details consult your nearest Panasonic dealers.
- For connection to a CD changer, refer to the operating instructions of the CD changer (CX-DP600EN or CX-DP1200EN).

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.

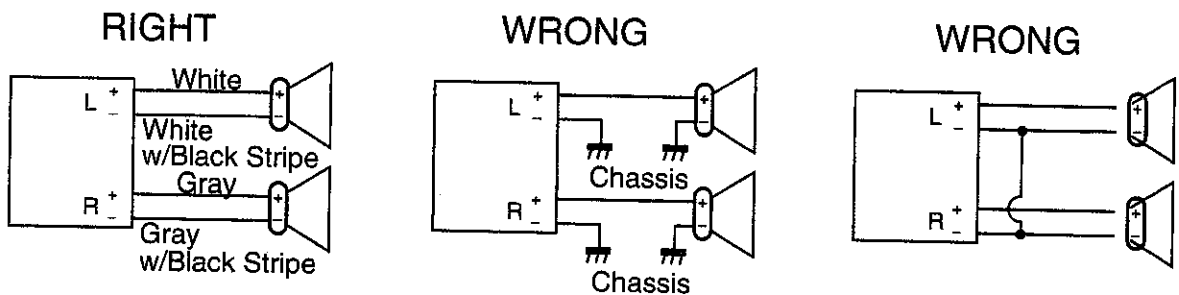


Speaker Connections

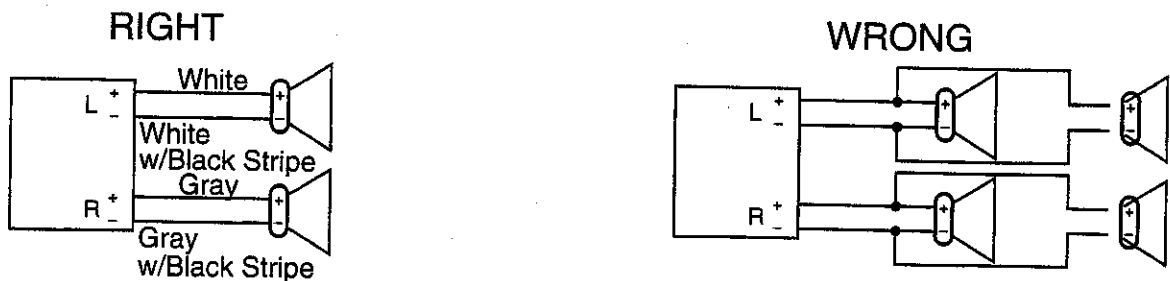
CAUTION:

1. Use ungrounded speakers only.
2. The speakers to be used with this unit should be able to handle more than 30W 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.

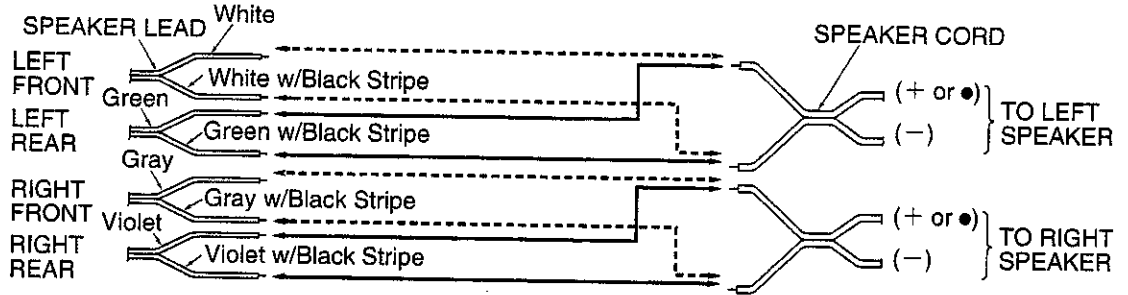


Speaker Connections continued

2-SPEAKER SYSTEM

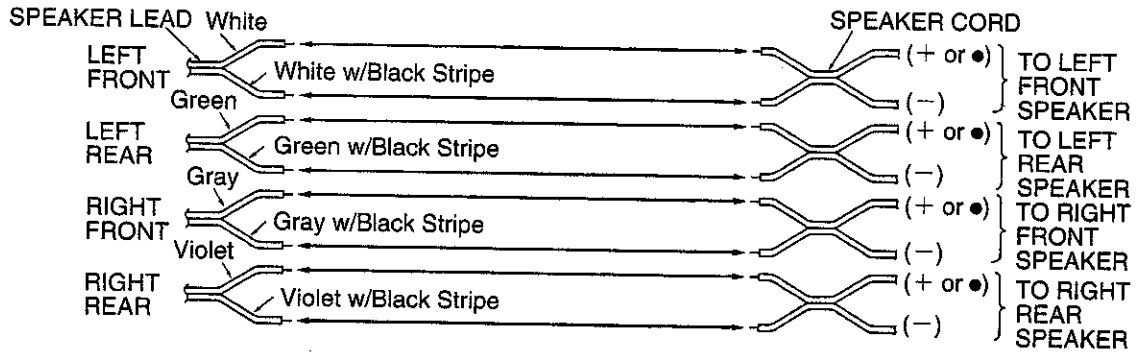
Use only front or rear speaker leads. Do not connect both (Front and Rear) together.

- 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 (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; ± 12 dB at 100Hz Treble; ± 12 dB at 10kHz
Current Consumption	: Less than 2.0A (Tape mode, 0.5W 4-Speaker)
Maximum Power Output	: 30W x 4 (at 4 Ω)
Power Output	: 15W x 4 (DIN45 324, at 4 Ω)
Speaker Impedance	: 4 - 8 Ω
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/ μ V(S/N 30dB)
Stereo Separation	: 35 dB(at 1kHz)

AM Radio


Frequency Range	: 531 - 1,602kHz
Usable Sensitivity	: 26dB/ μ V (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.