

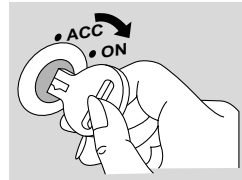
# Power and Sound Controls

## Power

Turn the key in the ignition until the accessory indicator lights.

**Power on:** Press [SOURCE] (PWR).

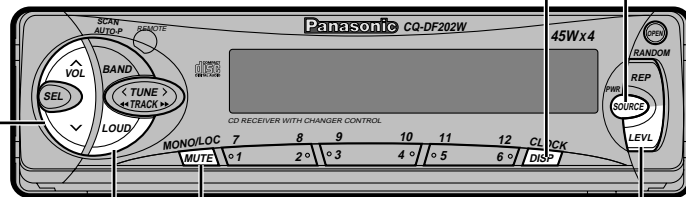
**Power off:** Press [SOURCE] (PWR) again and hold.



### Note:

- When the power is switched on for the first time, a demonstration message appears on the display.

To cancel this display, press [DISP] (display).



## Volume

[**"** VOL]: Up  
[**#** VOL]: Down  
Press and hold for rapid adjustment.



Volume level (0 to 40)

## Loudness

Press [LOUD] to enhance bass and treble tones at low or medium volume.



Press [LOUD] again to cancel.

## Mute

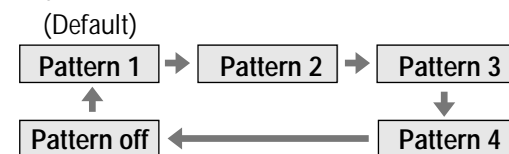
Press [MUTE] to mute the sound completely.



Press [MUTE] again to cancel.

## Level Meter

When the power is on, the level of sound sources, such as radio and CD, is displayed. Press [LEVL] (level) to change the level meter display.

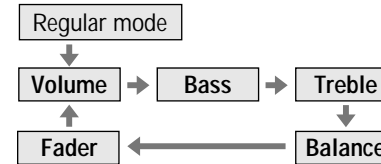


### Anti-volume-blast circuit:

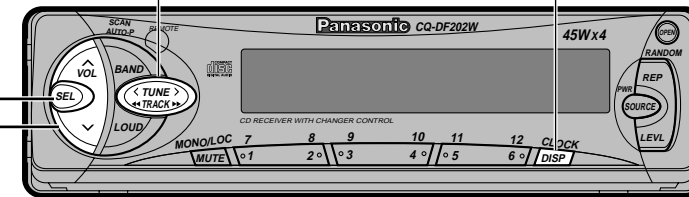
When the power is switched off and on again, the volume slowly rises to the previous level. The anti-volume-blast circuit will not work when the volume level is set lower than position 20 on the display.

## Audio Mode (Bass/Treble/Balance/Fader)

① Press [SEL] to select the audio mode.



[% TUNE], [\$ TUNE] (Hours, minutes) [DISP] (CLOCK)



② Press [**"** VOL] or [**#** VOL] to change each level.

### Bass:



Adjustable range: -12 dB to +12 dB (by 3 dB step)

### Treble:



Adjustable range: -12 dB to +12 dB (by 3 dB step)

### Balance:

R (right speaker) or L (left speaker)



Adjustable range: 1 to 15 (by 1 dB step) Balance center

### Fader:

F (front speaker) or R (rear speaker)



Adjustable range: 1 to 15 (by 1 dB step) Fader center

### Note:

- If no operation takes place for more than 5 seconds in audio mode (2 seconds in volume mode), the display returns to the regular mode.

# Clock Basics

The 12-hour system is used for the clock.

## Initial Time

① Press [DISP] (CLOCK).



### Hours

② Press and hold [DISP] (CLOCK) for more than 2 seconds.



③ Press [% TUNE] or [\$ TUNE].



### Minutes

④ Press [DISP] (CLOCK).



⑤ Press [% TUNE] or [\$ TUNE].



⑥ Press [DISP] (CLOCK).



### Note:

- Press and hold [% TUNE] or [\$ TUNE] for more than 2 seconds to change numbers rapidly.

## Time Reset

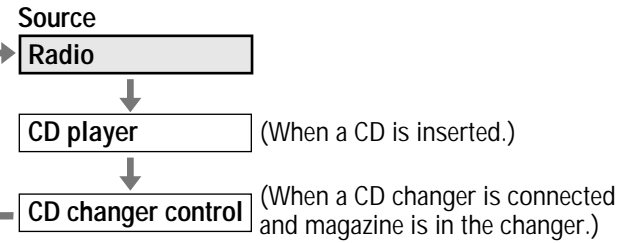
Press and hold [DISP] (CLOCK) for more than 2 seconds to activate the time setting mode to reset the time.

Then, repeat steps ③ to ⑥.

# Radio Basics

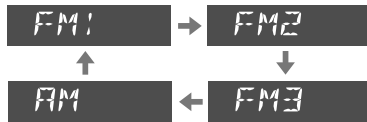
## 1 Radio Mode

Press [SOURCE] to change to the radio mode.

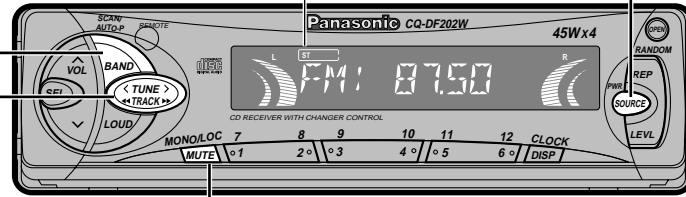


## 2 Band

Press [BAND] to change the band.



FM stereo indicator



## 3 Manual Tuning

[\$ TUNE]: Higher frequency  
[% TUNE]: Lower frequency

### Seek Tuning

Press and hold ...  
[\$ TUNE]: Higher frequency  
[% TUNE]: Lower frequency  
Tuning will automatically stop when the signals of the next broadcast station are received.

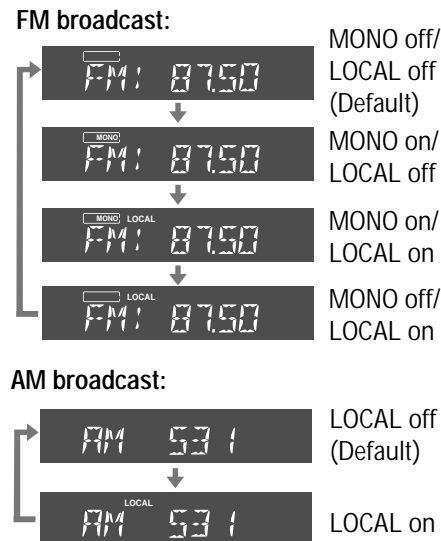
## 4 Mono/Local Selection

**MONO:** Noise is significantly decreased when weak signals are received from an FM broadcast station.

**LOCAL:** Only strong signals of stations are searched in seek tuning, while at the LOCAL OFF setting, relatively weak signals are also searched.

**FM broadcast:**  
Press and hold [MUTE] (MONO/LOC) for more than 2 seconds to change the mode.  
Release at the desired point.

**AM broadcast:**  
Press and hold [MUTE] (MONO/LOC) for more than 2 seconds to switch LOCAL mode on and off.



## Preset Station Setting

Up to 6 stations each can be saved in the FM1, FM2, FM3 and AM preset station memories.

**Note:**

- Existing saved stations are overwritten with new stations after following this procedure.

## Display Change

Press [DISP] (CLOCK) to switch to the clock display.

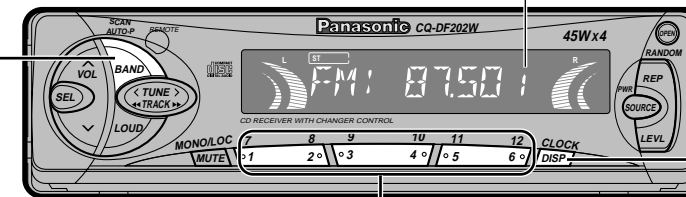


## 1 Band

Press [BAND] to select a desired band.  
(⇒ page 12)



Preset number



Preset buttons from [1] to [6]

## 2 Auto Preset Memory (AUTO-P)

Press and hold [BAND] (AUTO-P: auto preset memory) for more than 2 seconds.

- The 6 strongest available stations will be automatically saved in the memory under preset buttons from [1] to [6].
- Once set, the preset stations are sequentially scanned for 5 seconds each.

## Manual Preset Memory

- Use manual or seek tuning to find a station. (⇒ page 12)
- Press and hold one of the preset buttons from [1] to [6] until the display blinks once.



## Preset Station Calling

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

**Caution:**

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

# CD Player and CD Changer Control

**Note:**

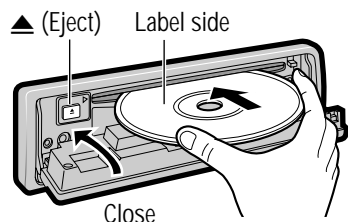
- The CD changer functions are designed for Panasonic CD changer unit (optional).
- Do not insert a disc when the indicator lights.



## Disc Insert and Playback

**1 Open the front panel**  
Press [OPEN] to open the front panel.

**2 Disc insert**  
Playback will start automatically after the player recognized the loaded disc as an ordinary music CD. (When a CD-R or CD-RW which has CD-DA formatted data as the same as an ordinary music CD is loaded, this player recognizes it as an ordinary music CD.)  
Close the front panel manually.

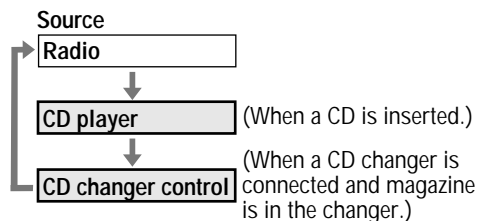


## Stop and Disc Eject

- 1 Press [OPEN] on the front panel.
- 2 Press [▲] (eject) to stop CD play and eject the disc.

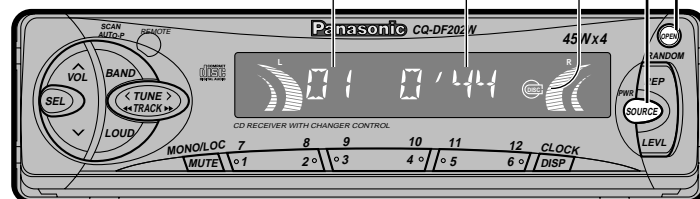
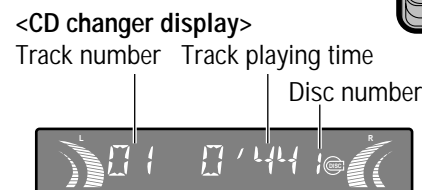
## Listening to a CD

**Mode Selection**  
Press [SOURCE] to change to the CD player or CD changer mode.  
Playback will start automatically.



- Do not insert a disc when the indicator lights.
- Lights when the disc is loaded.

<CD player display>  
Track number Track playing time



**Caution:**

- Only 12 cm CD, CD-DA data recorded CD-R and CD-RW discs are available for this unit.
- This unit does not support CD-ROM, CD-R or CD-RW playback through the CD changer. Use the CD changer to listen to normal music CD exclusively.
- This unit does not support CD text display.
- This unit does not support MP3 disc playback.
- Refer to page 21 about notes on CD-Rs/RWs.
- This unit is not designed for any 8 cm disc.
- If you insert an 8 cm disc and can not eject it, turn ACC of your car off once and turn it on again, then press [▲] (eject).
- Do not use irregular shaped discs.
- Do not use discs that have a seal or label attached.
- Do not insert foreign matter into the disc slot.

## Track Selection

- [▶▶TRACK]: Advance to the next track.
- [◀◀TRACK]: Back to the beginning of the current track.  
Back to the previous track. (Press twice.)

## Track Search

- Press and hold ...
- [▶▶TRACK]: Fast forward
  - [◀◀TRACK]: Fast backward
- Release to resume the regular play.

## Display Change

Press [DISP] (CLOCK) to switch to the clock display.

CD player:

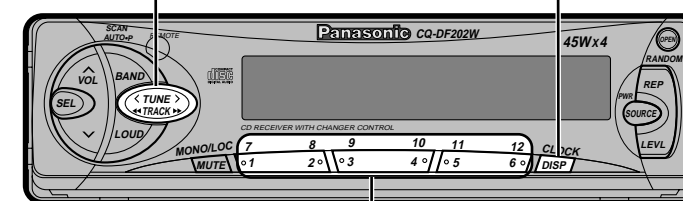


Track number/  
track playing time      Clock display

CD changer control:



Track number/track playing  
time/disc number      Clock display



## Direct Track Selection

CD player

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

## Direct Disc Selection

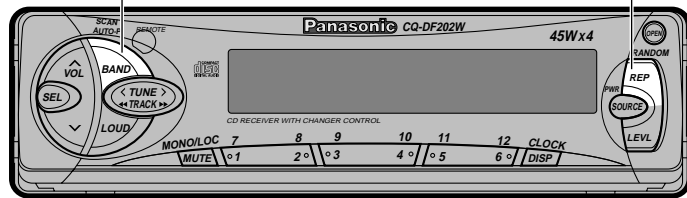
CD changer control

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

# CD Player and CD Changer Control (Continued)

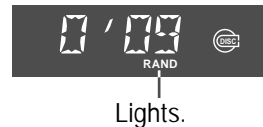
Trac scan play, disc scan play

Track random play, track repeat play



## Track random play

- Press and hold [REP] (RANDOM) for more than 2 seconds. All the tracks (on all discs in the magazine\*) are played in random order. (\*Only for CD changer)
- Press and hold [REP] (RANDOM) again to cancel.



## Track scan play

- Press [BAND] (SCAN). The first 10 seconds of each track on the disc are played in sequence.
- Press [BAND] (SCAN) again to cancel.



## Disc scan play

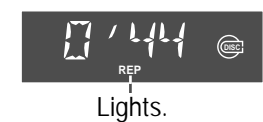
Only for CD changer control

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



## Track repeat play

- Press [REP]. The current track is repeated.
- Press [REP] again to cancel.



# Troubleshooting

## Preliminary Steps

Check and take steps as described in the tables below.

## If You Suspect Something Wrong

Immediately switch the power off.

Disconnect the power connector and check that there is neither smoke nor heat from the unit before asking for repairs. Never try to repair the unit by yourself because it is dangerous to do so.

### Caution:

- Do not use the unit if it malfunctions or if there is something wrong.
- Do not use the unit in abnormal condition, for example, without sound, or with smoke or foul smell, which can cause ignition or electric shock. Immediately stop using it and call the store where you purchased it.

## Troubleshooting Tips

### Common

Trouble	Cause/Step
No power.	Car's engine switch is not on. ➔Turn your car's ignition switch to ACC or ON.
	Cables are not correctly connected. ➔Connect cables correctly.
	Battery cable is not correctly connected. ➔Connect the battery cable to the terminal that is always active.
	Accessory cable is not correctly connected. ➔Connect the accessory cable to your car's ACC source.
	Grounding wire is not correctly connected. ➔Connect the grounding wire to a metal part of the car.
	Fuse is burnt out. ➔Call the store where you purchased the unit, or your nearest service station and ask for fuse replacement.
No sound.	Mute is set to ON. ➔Set it to OFF.
	Cables are not correctly connected. ➔Connect cables correctly.
Noise.	Condensation (dew). ➔Wait for a while before use.
	A mobile phone is used near the unit. ➔Keep the mobile phone away from the unit.
Audio sound is output but the display shows demonstration message.	Demonstration mode is ON. ➔Press [DISP] (display) to cancel demonstration mode.

# Troubleshooting (Continued)

## Radio

Trouble	Cause/Step
Much noise in FM stereo and monaural broadcasts.	Station is too far, or signals are too weak. ⇒ <b>Select other stations of higher signal level.</b>
	The motor antenna relay control lead is not connected correctly. ⇒ <b>If there is a motor antenna in the car, connect the motor antenna relay control lead to the motor antenna lead that is installed in the car correctly.</b>
Preset station is reset.	The radio antenna is not extended enough. ⇒ <b>Extend fully the radio antenna.</b>
	Battery cable is not correctly connected. ⇒ <b>Connect the battery cable to the terminal that is always active.</b>

## CD

Trouble	Cause/Step
Disc is in the CD compartment but no sound is made, or disc is ejected automatically.	Disc is upside down. ⇒ <b>Place disc in the correct direction with the label side up.</b>
	<ul style="list-style-type: none"> <li>• Disc is dirty.</li> <li>• Disc has scratches.</li> </ul> ⇒ <b>Clean disc, referring to the section on "Notes on CD/CD Media (CD-R, CD-RW)".</b>
	A disc that has data other than CD-DA type is loaded. ⇒ <b>Discs that have CD-DA type data should be used.</b>
Sound skips, bad sound quality. (e.g. caused by noise)	⇒ <b>The unit may not successfully play back a CD-R/RW that is made in combination of writing software, a CD recorder (CD-R/RW drive) and a disc which are incompatible one another. Refer to instructions for the concerned devices for details.</b>
	<ul style="list-style-type: none"> <li>• Disc is dirty.</li> <li>• Disc has scratches.</li> </ul> ⇒ <b>Clean disc, referring to the section on "Notes on CD/CD Media (CD-R, CD-RW)".</b>
	⇒ <b>The unit may not successfully play back a CD-R/RW that is made in combination of writing software, a CD recorder (CD-R/RW drive) and a disc which are incompatible one another. Refer to instructions for the concerned devices for details.</b>

## CD (Continued)

Trouble	Cause/Step
Sound skips due to vibration.	Mounting angle is over 30°. ⇒ <b>Adjust mounting angle to less than 30°.</b>
Disc is not ejected.	Instable mounting. ⇒ <b>Mount the unit securely with the mounting parts, referring to the section on installation.</b>
Time is counted but no sound comes out.	<ul style="list-style-type: none"> <li>• Disc is defective.</li> <li>• Mechanical trouble.</li> </ul> ⇒ <b>Press [OPEN] to open the panel and press [▲] (eject). If normal operation is not restored, call the store where you purchased the unit or the nearest service station to ask for repairs.</b>
	The first track of a mix mode disc was reproduced. (Mix mode is a format in which data except music is recorded on the first track and music data is recorded on other than the first track in a session.) ⇒ <b>Play back music data recorded on other than the first track.</b>

## Sound Setting

Trouble	Cause/Step
No sound from left, right, front or rear speakers.	Left and right balance, or front and rear balance is off on one side. ⇒ <b>Adjust balance/fader setting as appropriate.</b>
Left and right sounds are reversed in stereo listening.	Cables are not correctly connected. ⇒ <b>Connect the cables correctly.</b>
	The right speaker wire is connected to the left speaker and the left speaker wire to the right speaker. ⇒ <b>Connect the speaker wires to the correct ones.</b>

# Troubleshooting (Continued)

## Error Display Messages

### CD Player/CD Changer Control

Display	Cause/Step
E1	<ul style="list-style-type: none"> <li>• Disc is dirty, or is upside down.</li> <li>• A disc that has data other than CD-DA type is loaded.</li> </ul> <p>→The disc will be ejected automatically. Check disc.</p>
E2	<p>Disc has scratches.</p> <p>→The disc will be ejected automatically. Check disc.</p>
E3	<p>No operation by some cause.</p> <p>→If normal operation is not restored, call the store where you purchased the unit or the nearest service station to ask for repairs.</p>
0000	<p>No disc in the changer (magazine).</p> <p>→Insert discs into the changer (magazine).</p>

**Note:**

- There may be cases where the disc numbers affected by an error are designed before "E1" or "E2".
- Displays and the steps to be taken for errors vary in part from changer to changer. For details, refer to the operating instructions for the changer used.

## Maintenance

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

## Product Servicing

If the suggestions in the charts do not solve the problem, we recommend that you take it to your nearest authorized Panasonic service station. The product should be serviced only by a qualified technician.

## Replace the Fuse

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

**If the replacement fuse fails, contact your nearest Panasonic service station for service.**

# Maintenance

## Care of the Unit

### Cleaning this Unit

Use a dry, soft cloth to wipe.

### Caution on Cleaning

Never use solvents such as benzene, thinner as they may mar the surface of the unit.

## Notes on CD/CD Media (CD-R, CD-RW)

**Do not play any ordinary music CDs with labels other than this one.**



### How to hold the disc

- Do not touch the underside of the disc.
- Do not scratch the discs.
- Do not bend disc.
- When not in use, keep the disc in the case.

**Do not use irregular shaped discs.**

**Do not leave discs on the following places:**

- Direct sunlight
- Near car heaters
- Dirty, dusty and damp areas
- Seats and dashboards

### Disc cleaning

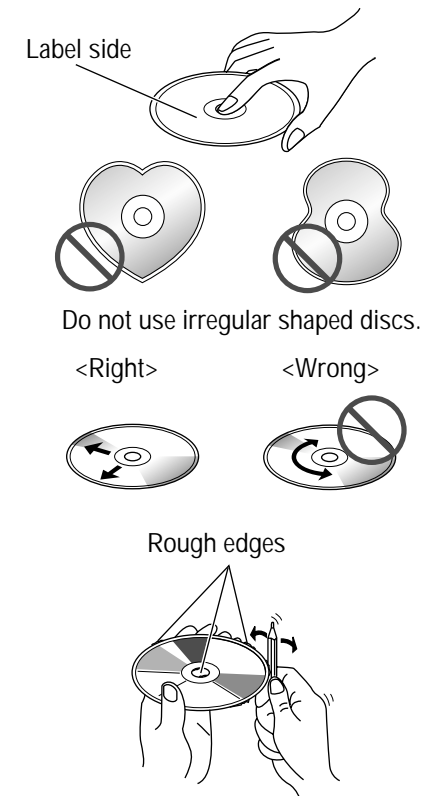
Use a dry, soft cloth to wipe from the center outward.

### Caution on new discs

A new disc may have rough edges on its inner and outer perimeter. These may cause malfunction. Remove the rough edges using a pencil, etc.

**Do not attach any seals or labels to your discs.**

**Do not write on the disc label in a heavy pen or ball-point pen stroke.**



## Notes on CD-Rs/RWs

- You may have trouble playing back some CD-R/RW discs recorded on CD recorders (CD-R/RW drives), either due to their recording characteristics or dirt, fingerprints, scratches, etc. on the disc surface.
- CD-R/RW discs are less resistant to high temperatures and high humidity than ordinary music CDs. Leaving them inside a car for extended periods may damage them and make playback impossible.
- The unit may not successfully play back a CD-R/RW that was made by the combination of writing software, a CD recorder (CD-R/RW drive) and a disc if they are incompatible one another.
- This player cannot play the CD-R/RW discs if the session is not closed.
- This player cannot play the CD-R/RW discs which contains other than CD-DA data.
- Be sure to observe the instructions of CD-R/RW disc for handling it.

# Installation Guide



This installation information is designed for experienced installers and is not intended for non-technical individuals. It does not contain warnings or cautions of potential dangers involved in attempting to install this product.

Any attempt to install this product in a motor car by anyone other than qualified installer could cause damage to the electrical system and could result in serious personal injury or death.

## Installation Hardware

No.	Item	Diagram	Q'ty
①	Mounting collar		1
②	Hex. nut (5 mmφ)		1
③	Rear support strap		1
④	Tapping screw (5 mmφ × 16 mm)		1
⑤	Mounting bolt (5 mmφ)		1
⑥	Power connector		1
⑦	Removable face plate case		1
⑧	Trim plate		1

## Overview

This product should be installed by a professional. However, if you plan to install this product yourself, your first step is to decide where to install it. The instructions in these pages will guide you through the remaining steps:

(Please refer to the "WARNING" statement above.)

- Identify and label the car wires.
- Connect the car wires to the wires of the power connector.
- Install the unit in the dashboard.
- Check the operation of the unit.

If you encounter problems, please consult your nearest professional installer.

### Caution:

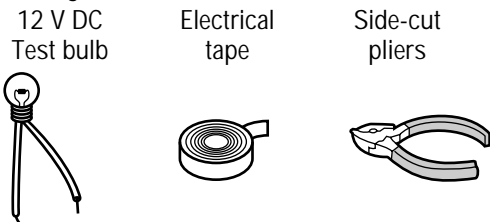
- This unit operates with a 12 V DC negative ground auto battery system only. Do not attempt to use it in any other system. Doing so could cause serious damage.

Before you begin installation, look for the items which are packed with your unit.

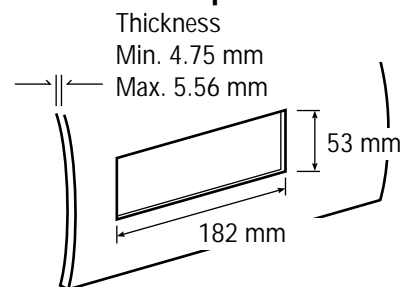
- **Panasonic Servicenter List for Service Directory** ...Keep for future reference in case the product needs servicing.
- **Installation Hardware**...Needed for in-dash installation.

## Required Tools

You'll need a screwdriver, a 1.5 V AA battery, and the following:



## Dashboard Specifications



## Identify All Leads

The first step in installation is to identify all the car wires you'll use when hooking up your sound system.

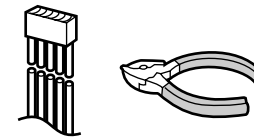
As you identify each wire, we suggest that you label it using masking tape and a permanent marker. This will help avoid confusion when making connections later.

### Note:

- Do not connect the power connector to the stereo unit until you have made all connections. If there are no plastic caps on the stereo hooking wires, insulate all exposed leads with electrical tape until you are ready to use them. Identify the leads in the following order.

### Power Lead

If your car has a radio or is pre-wired for one: Cut the connector wires one at a time from the plug (leaving the leads as long as possible) so that you can work with individual leads.



Turn the ignition on to the accessory position, and ground one lead of the test bulb to the chassis.

Touch the other lead of the test bulb to each of the exposed wires from the cut radio connector plug. Touch one wire at a time until you find the outlet that causes the test bulb to light.

Now turn the ignition off and then on. If the bulb also turns off and on, that outlet is the car power lead.

If your car is not wired for an audio unit:

Go to the fuse block and find the fuse port for radio (RADIO), accessory (ACC), or ignition (IGN).

### Battery Lead

If your stereo unit has a yellow lead, you will need to locate the car's battery lead. Otherwise you may ignore this procedure. (The yellow battery lead provides continuous power to maintain a clock, memory storage, or other function.)

If your car has a radio or is pre-wired for one: With the ignition and headlights off, identify the car battery lead by grounding one lead of the test bulb to the chassis and checking the remaining exposed wires from the cut radio connector plug.

If your car is not wired for an audio unit:

Go to the fuse block and find the fuse port for the battery, usually marked BAT.

### Speakers

Identify the car speaker leads. There are two leads for each speaker which are usually color coded. A handy way to identify the speaker leads and the speaker they are connected with is to test the leads using a 1.5 V AA battery as follows.

Hold one lead against one pole of the battery and stroke the other lead across the other pole. You will hear a scraping sound in one of the speakers if you are holding a speaker lead.

If not, keep testing different lead combinations until you have located all the speaker leads. When you label them, include the speaker location for each.

### Antenna Motor

If your car is equipped with an automatic power antenna, identify the car motor antenna lead by connecting one bulb tester lead to the car battery lead and touching the remaining exposed wires from the cut radio connector plug one at a time. You will hear the antenna motor activate when you touch the correct wire.

### Antenna

The antenna lead is a thick, black wire with a metal plug at the end.

## Connect All Leads

Now that you have identified all the wires in the car, you are ready to begin connecting them to the stereo unit wires. The wiring diagram (→ page 28) shows the proper connections and color coding of the leads.

We strongly recommend that you test the unit before making a final installation.

You can set the unit on the floor and make temporary connections to test the unit. Use electrical tape to cover all exposed wires.

### Important:

- Connect the red power lead last, after you have made and insulated all other connections.

### Ground

Connect the black ground lead of the power connector to the metal car chassis.

# Installation Guide (Continued)

## Speakers

Connect the speaker wires. See the wiring diagram (→ page 28) for the proper hookups. Follow the diagram carefully to avoid damaging the speakers and the stereo unit.

The speakers used must be able to handle more than 45 W of audio power. If using an optional audio amplifier, the speakers should be able to handle the maximum amplifier output power. Speakers with low input ratings can be damaged. Speaker impedance should measure 4–8 Ω, which is typically marked on most speakers. Lower or higher impedance speakers will affect output and can cause both speaker and stereo unit damage.

## Motor Antenna

Connect the car motor antenna lead to the dark blue motor antenna relay control lead.

## Battery

Connect the yellow battery lead to the correct radio wire or to the battery fuse port on the fuse block.

## Antenna

Connect the antenna by plugging the antenna lead into the antenna receptacle.

## Equipment

Connect any optional equipment such as an amplifier, according to the instructions furnished with the equipment. Leave about 30 cm of distance between the speaker leads/amplifier unit and the antenna/antenna extension cord. Read the operating and installation instructions of any equipment you will connect to this unit.

## Power

Connect the red power lead to the correct car radio wire or to the appropriate fuse port on the fuse block.

If the stereo unit functions properly with all these connections made, disconnect the wires and proceed to the final installation.

## Final Installation

### Lead Connections

Connect all wires, making sure that each connection is insulated and secure. Bundle all loose wires and fasten them with tape so they will not fall down later. Now insert the stereo unit into the mounting collar.

Congratulations! After making a few final checks, you're ready to enjoy your new auto stereo system.

## Final Checks

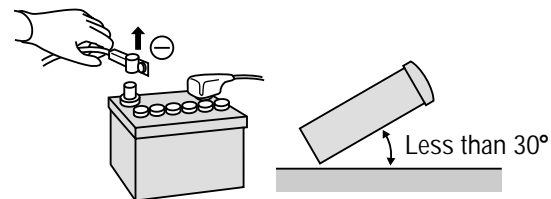
1. Make sure that all wires are properly connected and insulated.
2. Make sure that the stereo unit is securely held in the mounting collar.
3. Turn on the ignition to check the unit for proper operation.

If you have difficulties, consult your nearest authorized professional installer for assistance.

## Preparation

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

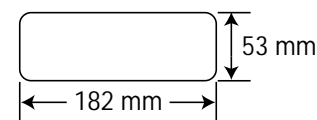
- Disconnect the cable from the negative ⊖ battery terminal (see cautions below).
- Unit should be installed in a horizontal position with the front end up at a convenient angle, but not more than 30°.



### Caution:

- Do not disconnect the battery terminals of a car with a trip or navigational computer since all user settings stored in memory will be lost. Instead take extra care with installing the unit to prevent shorts.

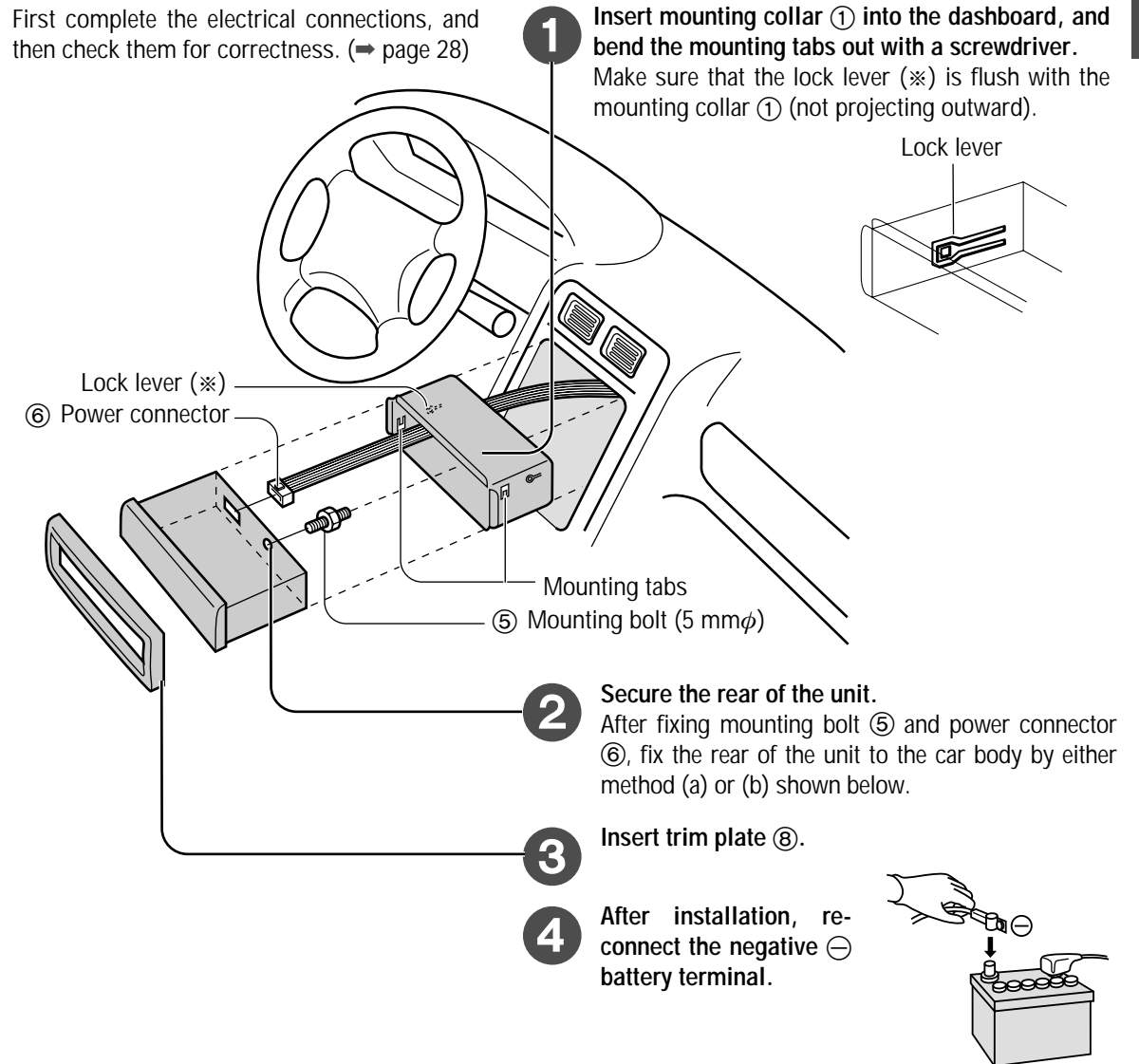
## Dashboard Installation Installation Opening



This unit can be installed in any dashboard having an opening as shown above. The dashboard should be 4.75 mm–5.56 mm thick in order to be able to support the unit.

## Installation Procedures

First complete the electrical connections, and then check them for correctness. (→ page 28)



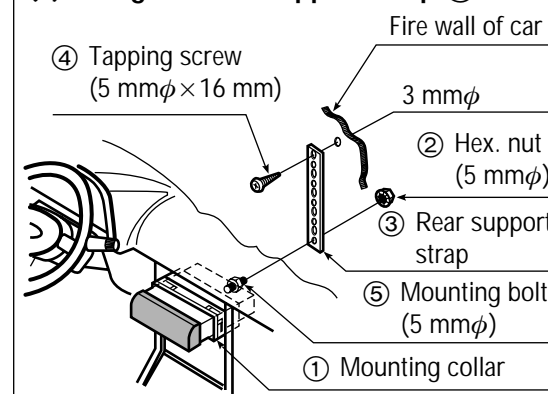
1. Insert mounting collar ① into the dashboard, and bend the mounting tabs out with a screwdriver. Make sure that the lock lever (※) is flush with the mounting collar ① (not projecting outward).

2. Secure the rear of the unit. After fixing mounting bolt ⑤ and power connector ⑥, fix the rear of the unit to the car body by either method (a) or (b) shown below.

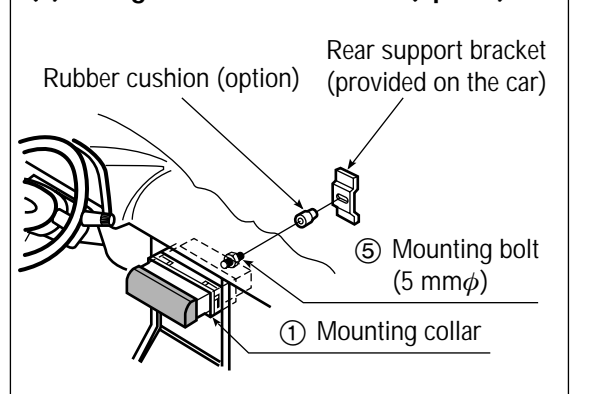
3. Insert trim plate ⑧.

4. After installation, re-connect the negative ⊖ battery terminal.

### (a) Using the rear support strap ③



### (b) Using the rubber cushion (option)



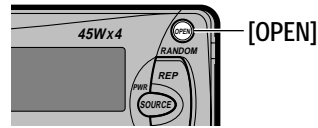


# Installation Guide (Continued)

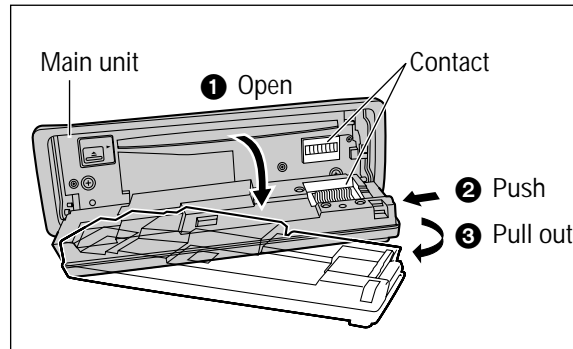
## Remove the Unit

Switch off the power of the unit.

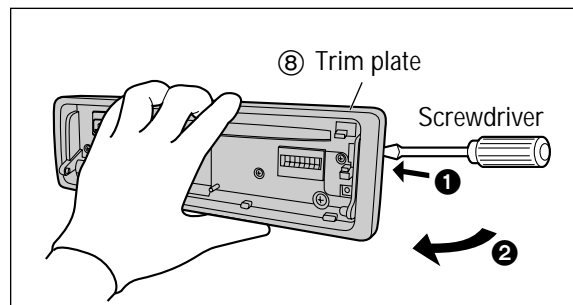
- 1 Remove the removable face plate.
  - 1 Press [OPEN]. The removable face plate will be opened.



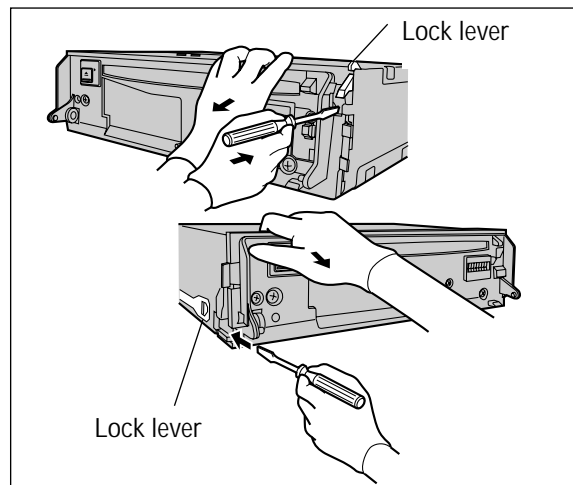
- 2 Push the face plate to the left.
- 3 Pull it out toward you.



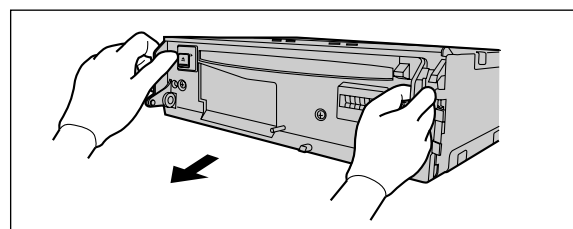
- 2 Remove the trim plate ⑧ with a screwdriver.



- 3 Pull out the unit while pushing down the lock lever with a screwdriver.



- 4 Remove the unit pulling with both hands.

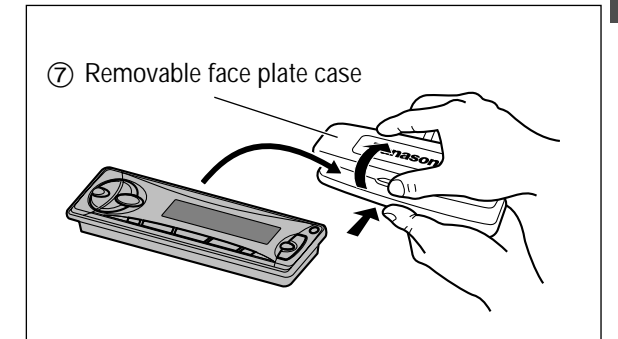


# Anti-Theft System

This unit is equipped with a removable face plate. Removing this face plate makes the radio totally inoperable.

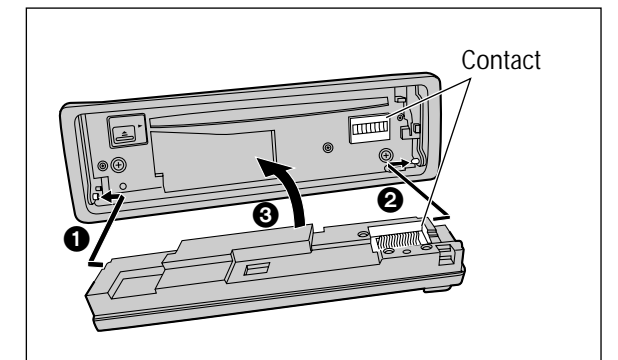
## Place the Removable Face Plate into Case

- 1 Switch off the power of the unit.
- 2 Remove the removable face plate. (→ page 26)
- 3 Gently press the bottom of the case and open the cover. Place the face plate into the case and take it with you when you leave the car.



## Install Removable Face Plate

- 1 Fit the face plate with its left hole on one of the pins provided on the main unit.
- 2 Fit the other hold on the other pin applying slight pressure.
- 3 Move the face plate up and down a few times to make sure it is secure. Then close the front panel and press down the right side of the face plate until it clicks into plate.



## Panel Removal Alarm

This alarm sounds to warn you not to forget to remove the panel before leaving your car.

Press and hold [SEL] to turn the panel removal alarm on or off. ("ALRM On" or "ALRM OFF")



**Caution:**

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

# Electrical Connections

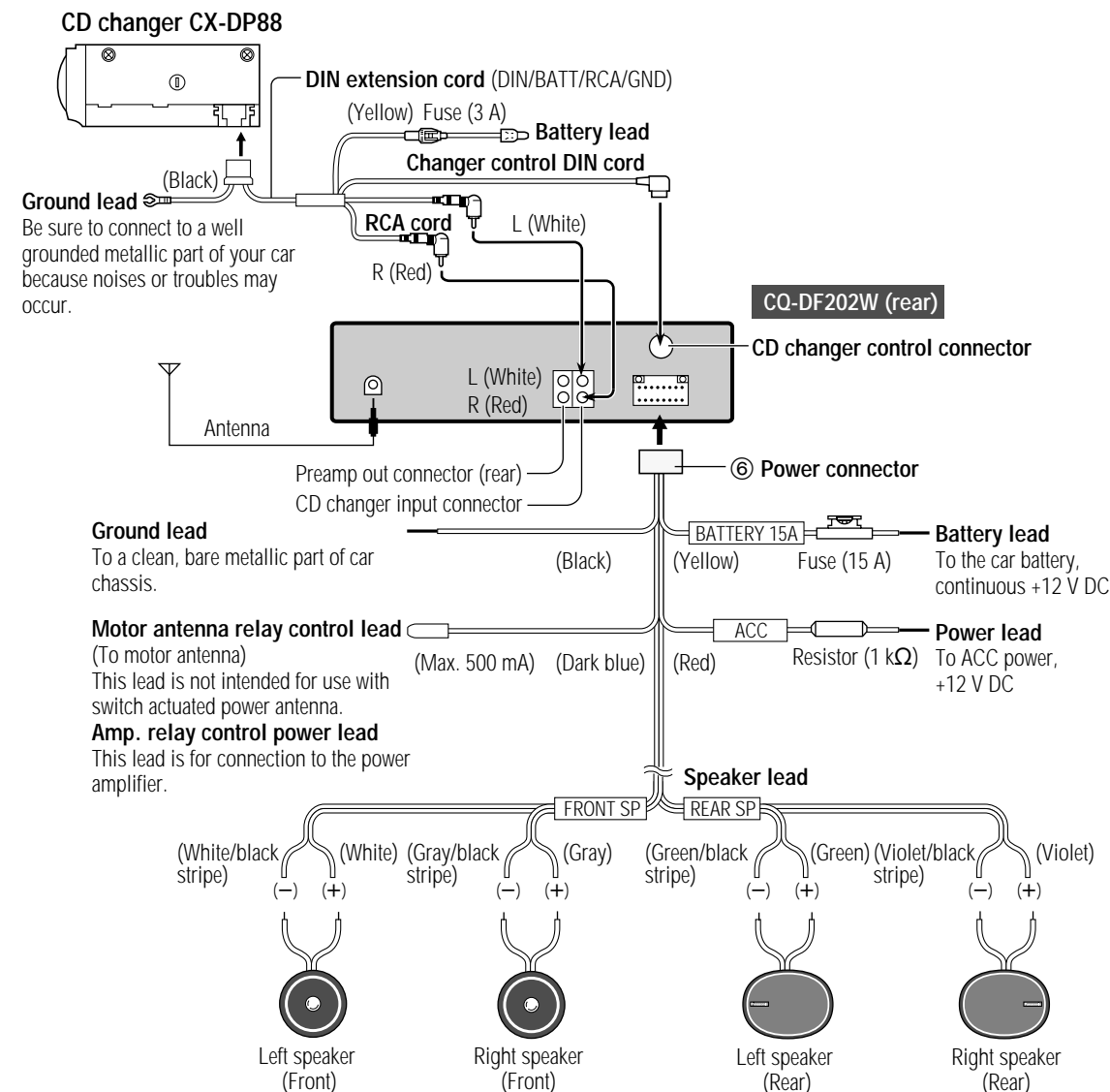
## Caution:

- This product is designed to operate with a 12 V DC, negative ground battery system.
- To prevent damage to the unit, be sure to follow the connection diagram below.
- Remove approximately 5 mm of protective covering from the ends of the leads before connecting.
- Do not insert the power connector into the unit until the wiring is completed.
- Be sure to insulate any exposed wires from a possible short-circuit from the car chassis. Bundle all cables and keep cable terminals free from touching any metal parts.
- Remember, if your car has a drive computer or a navigation computer, the data of its memory may be erased when the battery terminals are disconnected.

## Wiring Diagram

### Supplied hardware

No.	Item	Q'ty
⑥	Power connector	1



# Specifications

## General

Power supply:	12 V DC (11 V–16 V), test voltage 14.4 V, negative ground
Current consumption:	Less than 2.2 A (CD play mode; 0.5 W×4 channels)
Maximum power output:	45 W×4 channels at 400 Hz, volume control maximum
Tone adjustment range:	
Bass:	±12 dB at 100 Hz
Treble:	±12 dB at 10 kHz
Suitable speaker impedance:	4–8 Ω
Preamp output voltage:	2.0 V (CD play mode; 1 kHz, 0 dB)
Output impedance:	200 Ω
Dimensions (W×H×D):	178×50×150 mm
Weight:	1.4 kg

## FM Stereo Radio

Frequency range:	87.50 MHz–108.00 MHz
Usable sensitivity:	11.0 dBf. (1.25 μV, 75 Ω)
50 dB quieting sensitivity:	15.2 dBf. (1.6 μV, 75 Ω)
Frequency response:	30 Hz–15 kHz (±3 dB)
Alternate channel selectivity:	75 dB
Stereo separation:	42 dB (1 kHz)
Image response ratio:	75 dB
IF response ratio:	100 dB
Signal/noise ratio:	70 dB

## AM Radio

Frequency range:	531 kHz–1 602 kHz
Usable sensitivity:	28 dB/μV (25 μV, S/N 20 dB)

## CD Player

Sampling frequency:	32 times oversampling
DA converter:	MASH-1 bit/4 DAC system
Error correction system:	Panasonic super decoding algorithm
Pick-up type:	Astigma 3-beam
Light source:	Semiconductor laser
Wave length:	780 nm
Frequency response:	20 Hz–20 kHz (±1 dB)
Signal/noise ratio:	96 dB
Total harmonic distortion:	0.01 % (1 kHz)
Wow and flutter:	Below measurable limits
Channel separation:	75 dB

## Note:

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