



## ***Car CD Receiver***

### ***OWNER'S MANUAL*** ***MODEL : LAC-M8400R*** ***LAC-M8410R***



Before connecting, operating or adjusting this product,  
please read this instruction booklet carefully and completely.



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## Safety Precautions

### CAUTION

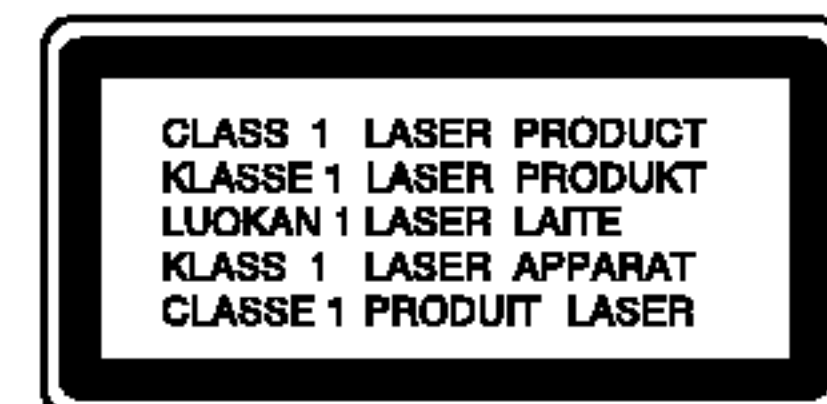
RISK OF ELECTRIC SHOCK DO NOT OPEN



Warning: To reduce the risk of electric shock, do not remove the cover or back of this product. There are no user-serviceable parts inside. Refer servicing to qualified service personnel.



Warning: To reduce the risk of fire or electric shock, do not expose this product to dripping or splashing water, rain, or moisture. Do not place objects filled with water such as vases, on the product.



Caution: Do not install this product in a confined space such as a book case or similar unit.



Caution: Protect this product from moisture.



Caution: If the battery is disconnected or discharged, the preset memory will be erased and must be reprogrammed.

### CAUTION:

This unit employs a Laser System.

To ensure proper use of this product, please read this owner's manual carefully and retain for future reference should the unit require maintenance, contact an authorized service location (see service procedure).

Use of controls, adjustments, or the performance of procedures other than those specified herein may result in hazardous radiation exposure.

To prevent direct exposure to laser beam, do not try to open the enclosure. Visible laser radiation when open. DO NOT STARE INTO BEAM.

## Before Use



To ensure proper use of this product, please read this owner's manual carefully and retain for future reference.

### Symbol Used in this Manual



The lightning flash symbol alerts you to the presence of dangerous voltage within the product enclosure that may constitute a risk of electric shock.



Indicates hazards likely to cause harm to the unit itself or other material damage.

### NOTE

Indicates special notes and operating features.

### TIP

Indicates tips and hints for making the task easier.

### Notes on Discs

#### Handling Discs

Do not touch the playback side of the disc. Hold the disc by the edges so that fingerprints do not get on the surface. Never stick paper or tape on the disc.

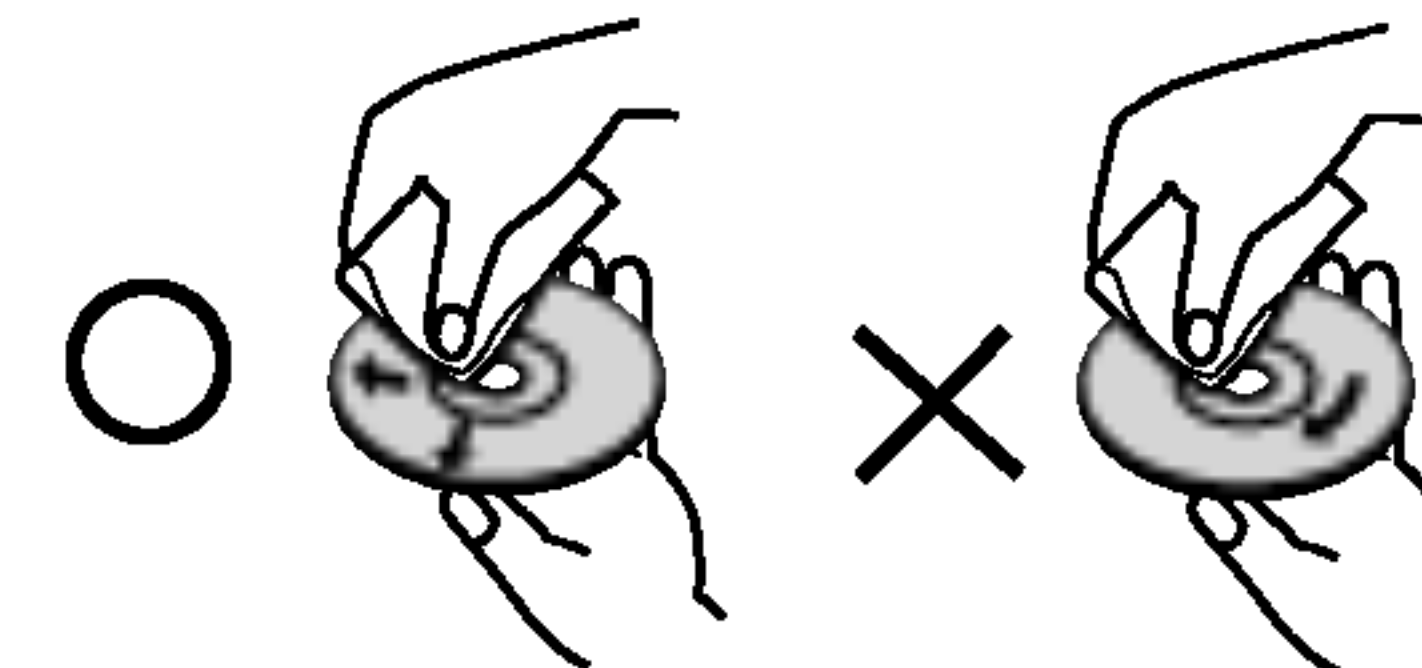


#### Storing Discs

After playing, store the disc in its case. Do not expose the disc to direct sunlight or sources of heat and never leave it in a parked car exposed to direct sunlight.

#### Cleaning Discs

Fingerprints and dust on the disc can cause poor picture quality and sound distortion. Before playing, clean the disc with a clean cloth. Wipe the disc from the center out.



Do not use strong solvents such as alcohol, benzine, thinner, commercially available cleaners, or anti-static spray intended for older vinyl records.



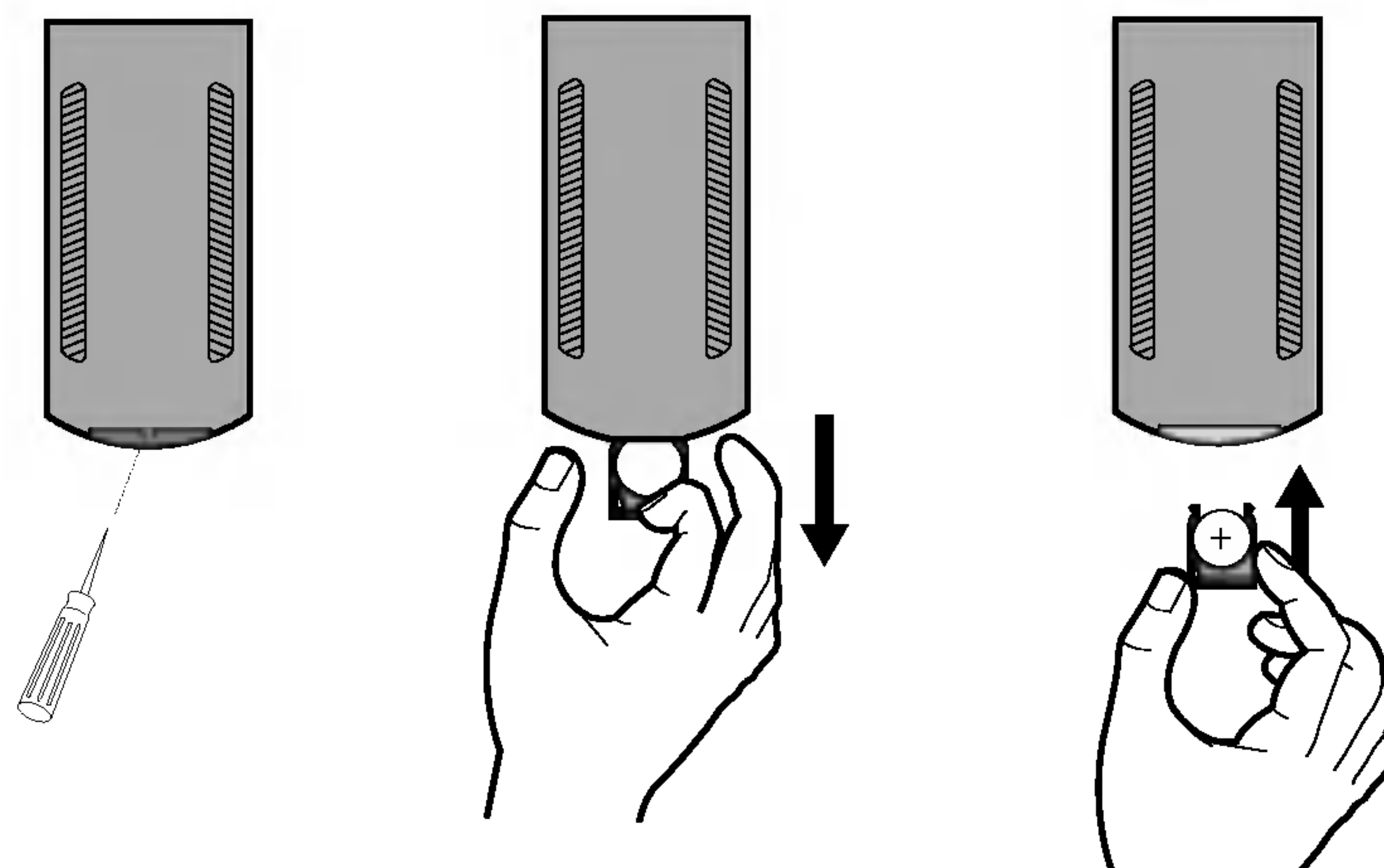


## Before Use

### Use and care of the remote control

#### Installing the battery

Pull the tray outward on the back of the remote control with a pencil or ball point pen and insert the battery with the plus (+) minus (-) poles pointing in the proper direction.



#### NOTES

- Use only one CR2025 (3V) lithium battery.
- Remove the battery if the remote control is not used for long.
- Do not recharge, disassemble, heat or dispose of the battery in fire.
- Do not handle the battery with metallic tools.
- Do not store the battery with metallic materials.
- In the event of battery leakage, wipe the remote control completely clean and install a new battery.

### Using the remote control

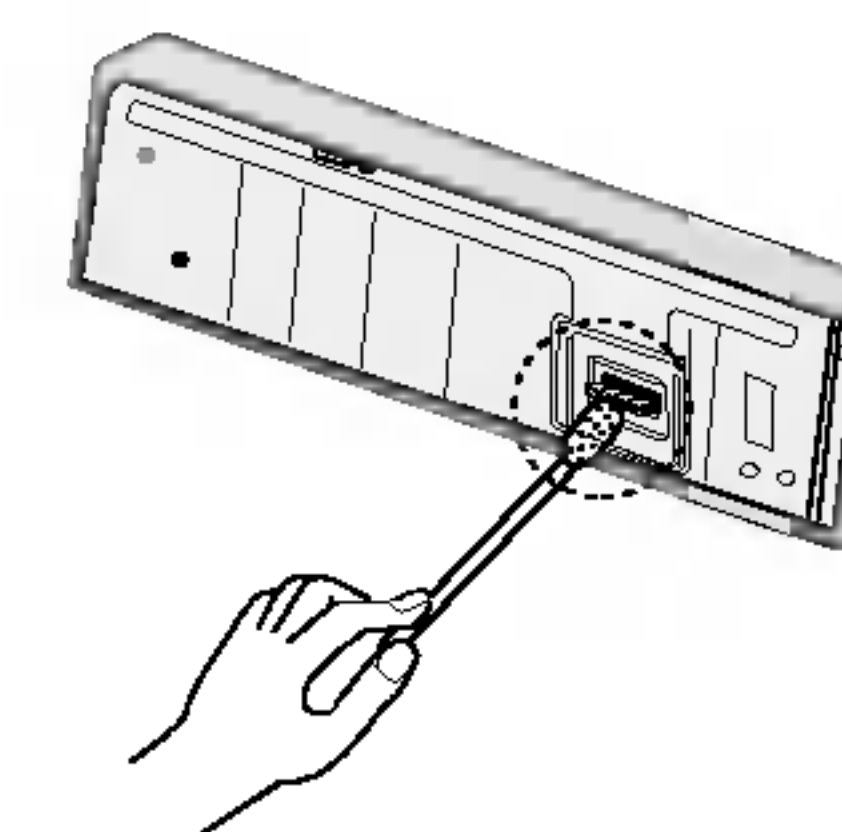
Point the remote control in the direction of the front panel to operate.

#### NOTES

- The remote control may not function properly in direct sunlight.
- Do not store the remote control in high temperatures or sunlight.
- Do not let the remote control fall onto the floor, where it may become jammed under the brake or accelerator pedal.

### Handling the Unit

- This unit is designed to be operated on a 12 volt DC negative ground electrical system only.
- When replacing the fuse, be sure to use the fuse whose amperage rating is identical. Use of a fuse with higher amperage may cause serious damage to the unit.
- Periodically wipe the contacts on the back of the front panel with a cotton swap moistened with alcohol.

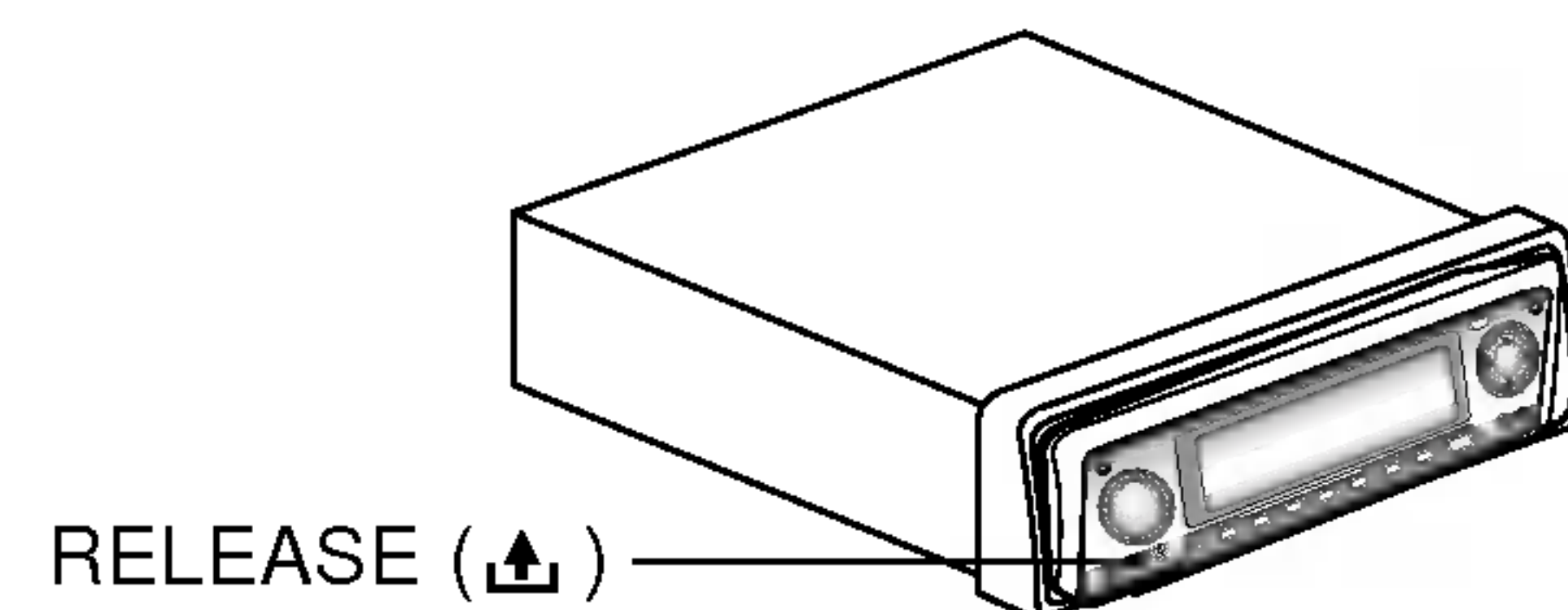




### Protecting your unit from theft

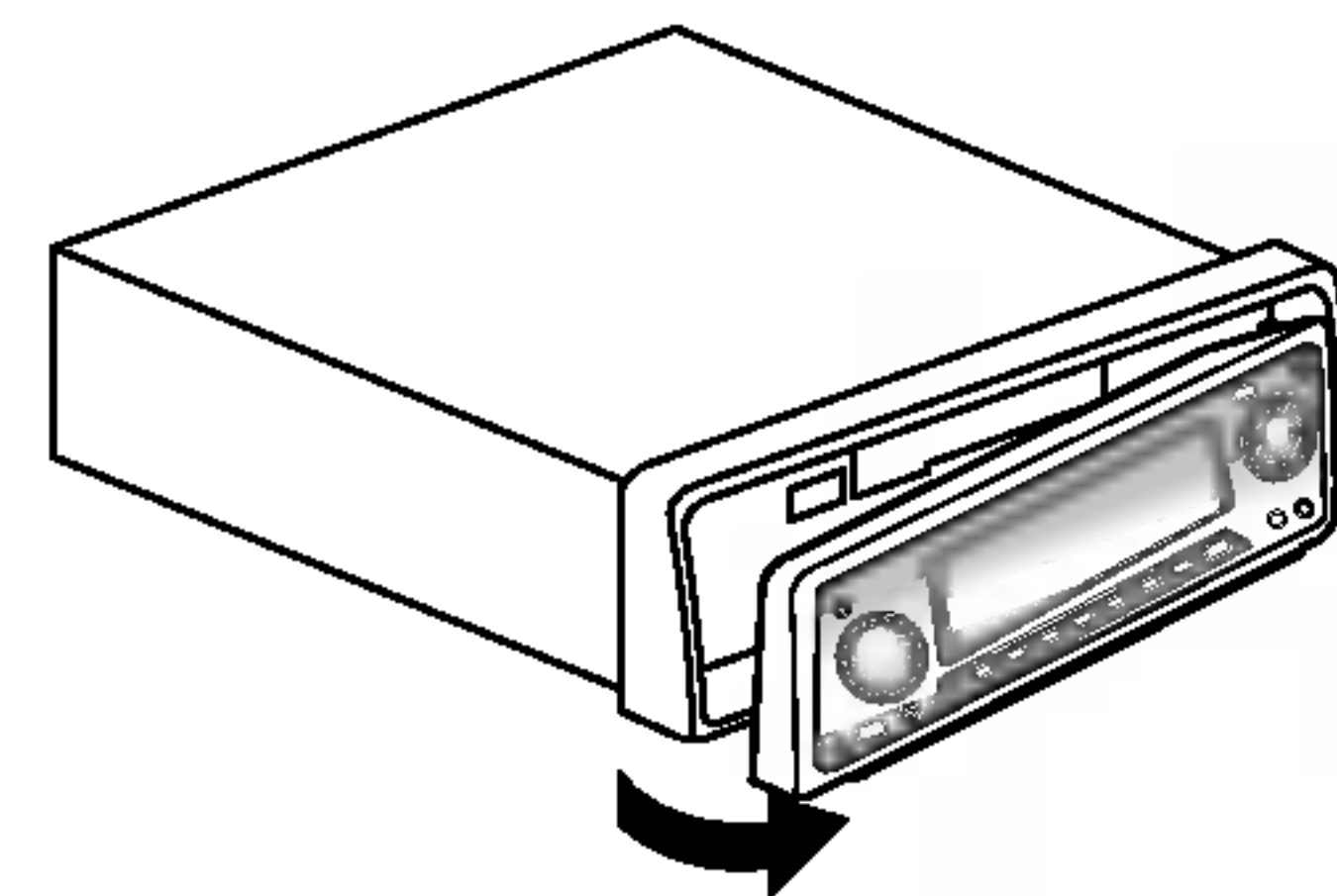
The front panel can be detached from the head unit and stored in the protective case provided to discourage theft.

1. Press **RELEASE**  to open the front panel.

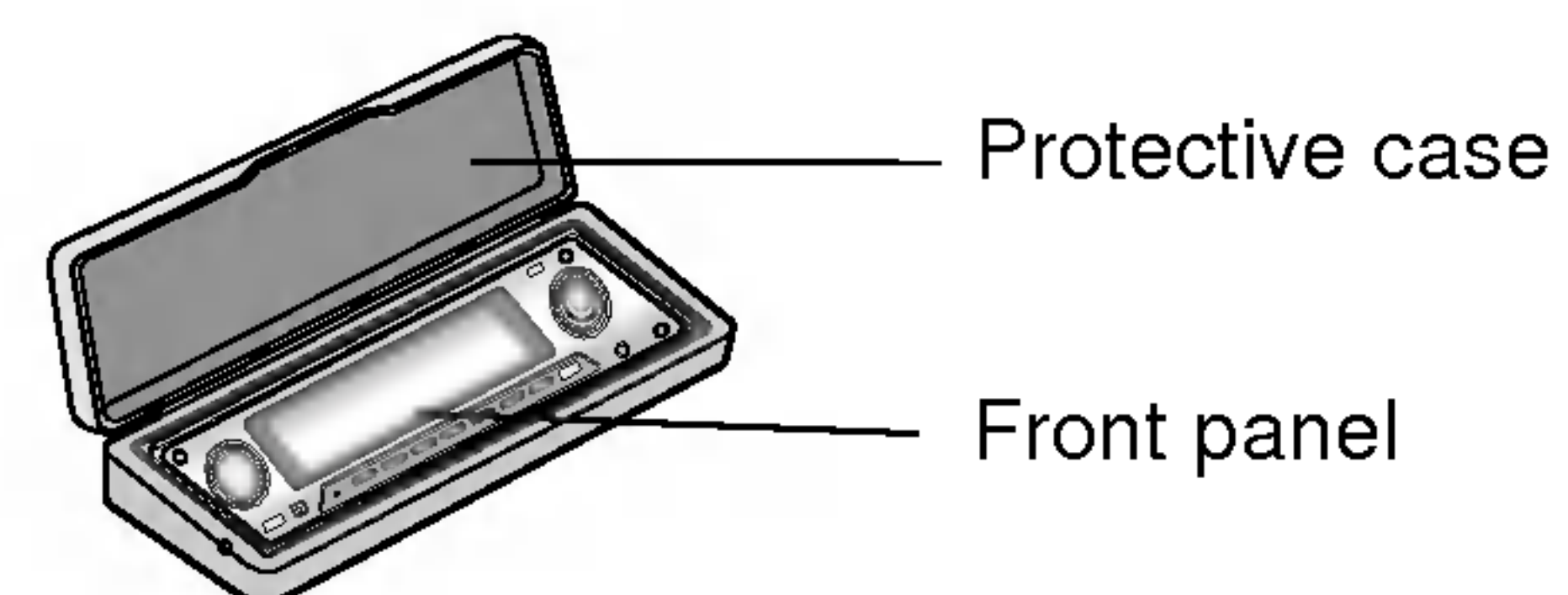


2. Grip the left side of the front panel and pull it gently outward.

Take care not to grip it tightly or to drop it.

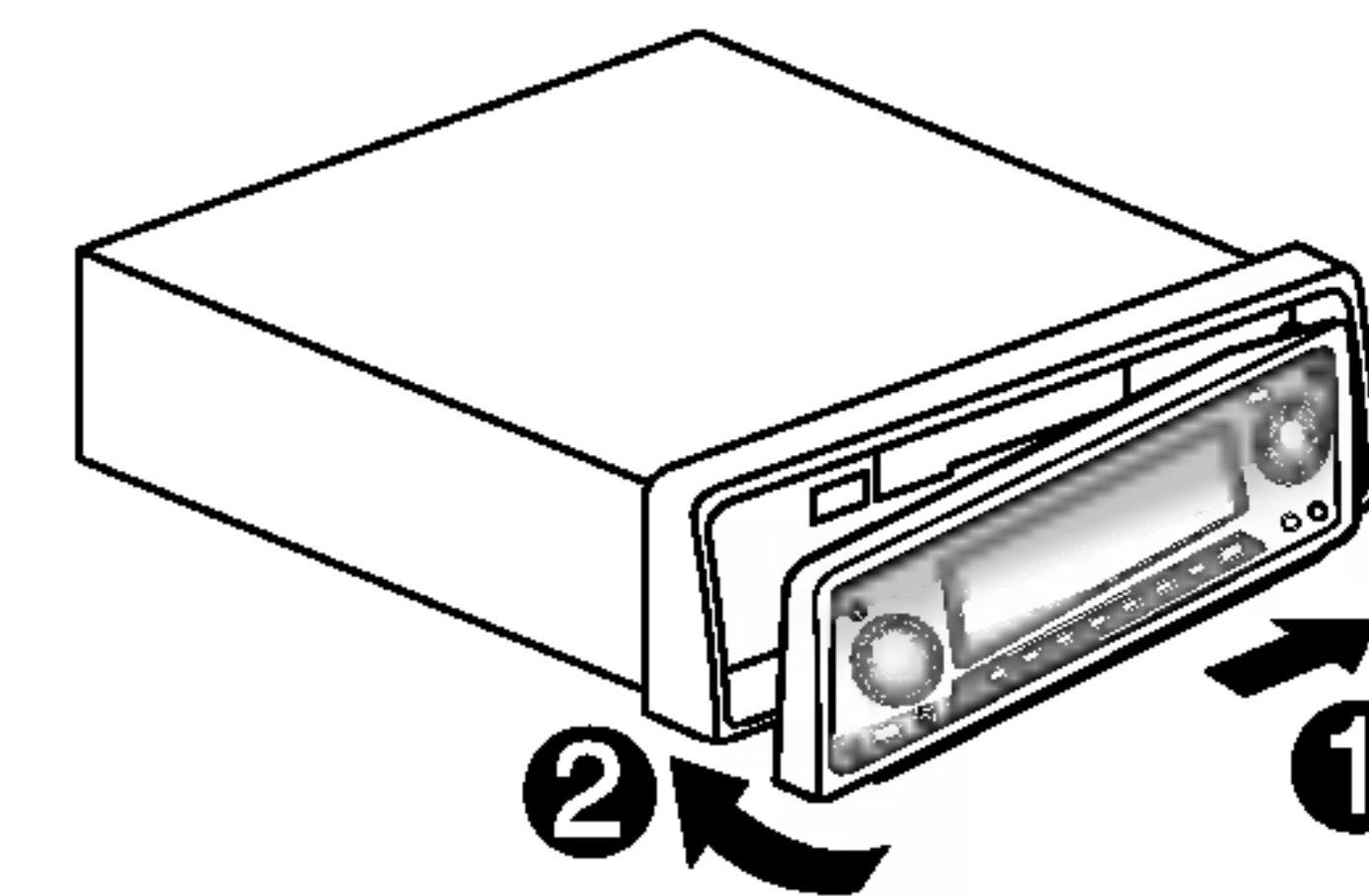


3. Put the front panel into the protective case provided for safe keeping.



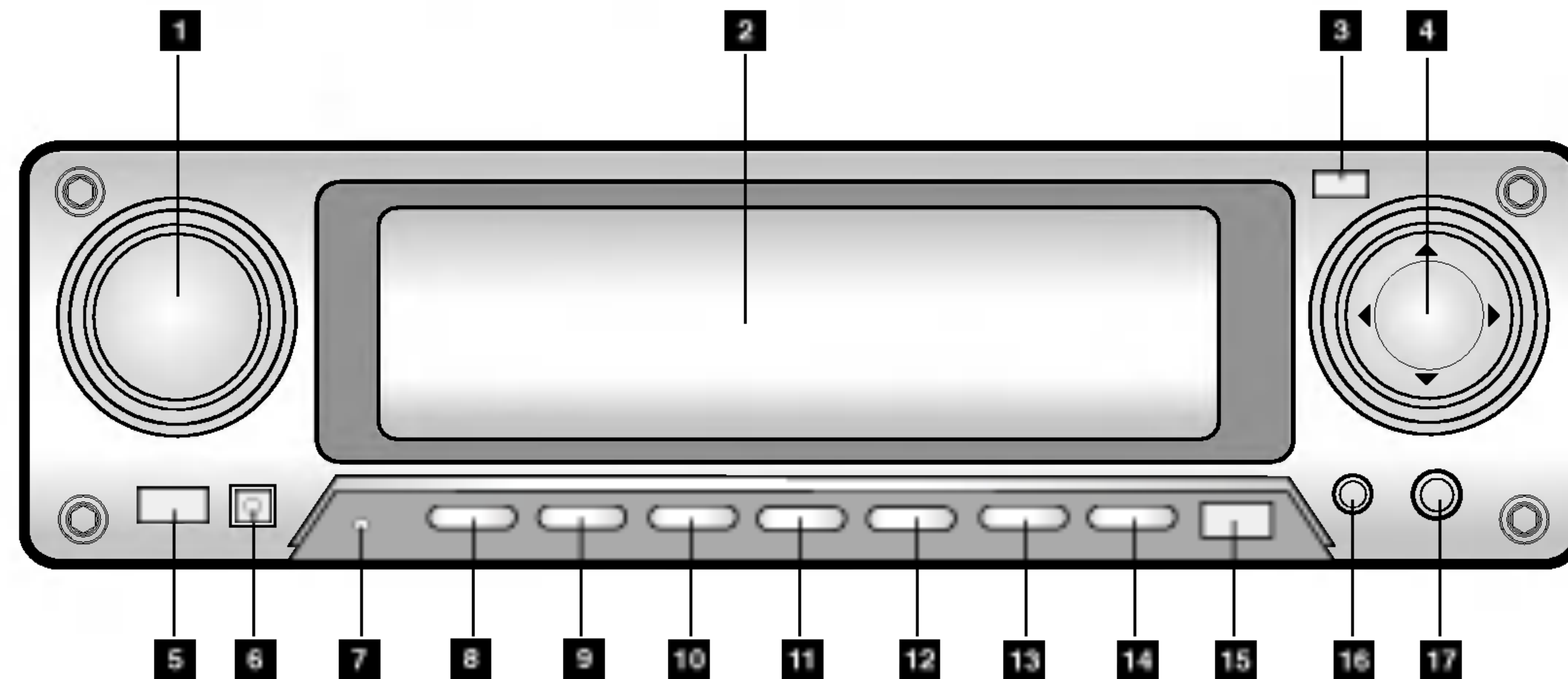
### Attaching the front panel

Align the right side of the panel with the stopper, and then push the left side of the panel into the unit until it clicks.





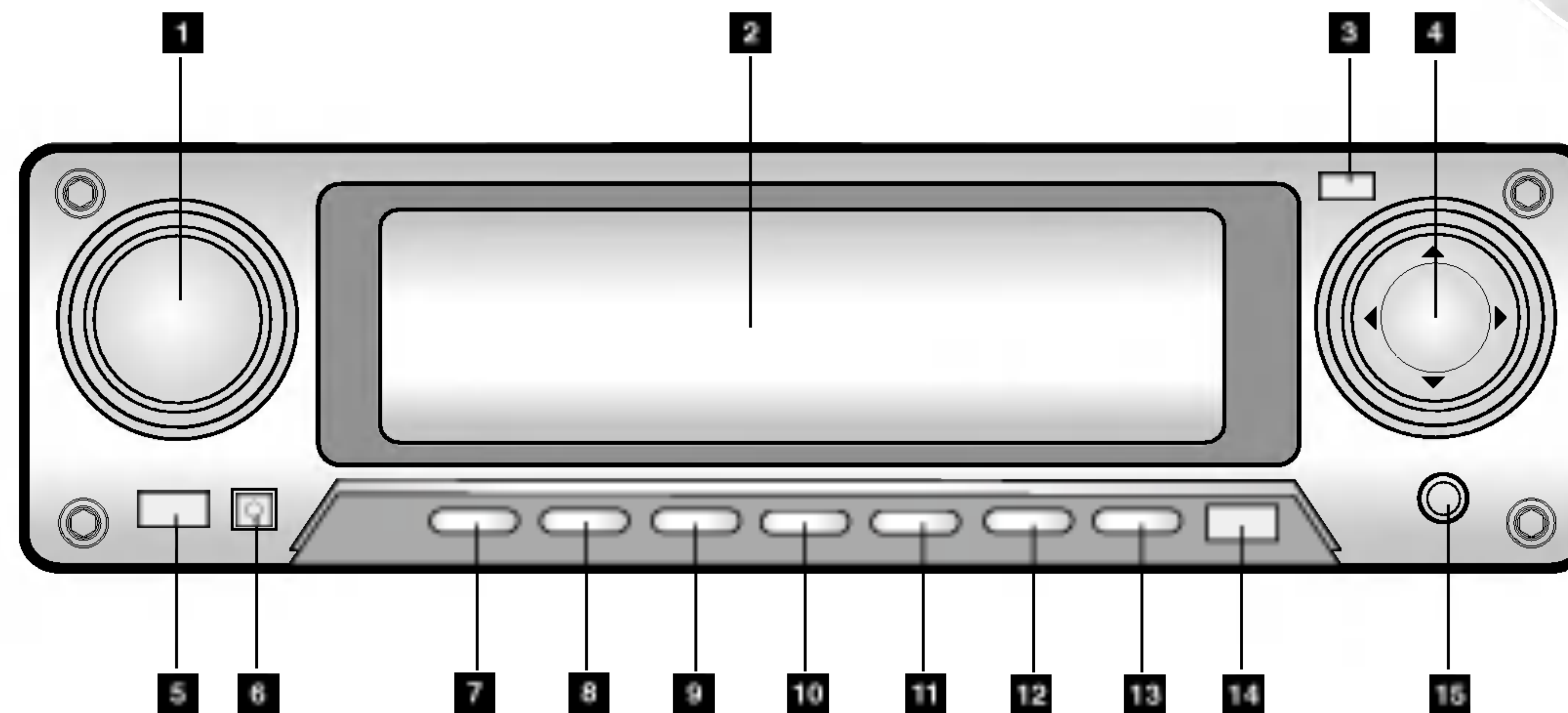
## Front Panel (LAC-M8400R model)



- |   |  |
|---|--|
| <p><b>1</b> • PWR/MUTE button<br/>• VOLUME KNOB</p> <p><b>2</b> DISPLAY WINDOW</p> <p><b>3</b> ▲ OPEN/CLOSE button</p> <p><b>4</b> ◀/▶/▲/▼ (left/right/up/down) buttons</p> <p><b>5</b> RELEASE (⏏) button</p> <p><b>6</b> REMOTE SENSOR</p> <p><b>7</b> MICROPHONE (MIC)</p> <p><b>8</b> SOURCE (SRC) button</p> <p><b>9</b> • EQUALIZER/SELECTION (EQ/SEL) button<br/>• BALANCE (BAL) button<br/>• FADER (FAD) button<br/>• RETURN button</p> | <p><b>10</b> • BAND/AS button<br/>• REPEAT/INTRO SCAN (RPT/SCN) button</p> <p><b>11</b> • TA/PTY button<br/>• TA button</p> <p><b>12</b> • MENU/RDS button<br/>• RETURN button</p> <p><b>13</b> • DISPLAY (DISP) button<br/>• ENTER button</p> <p><b>14</b> PHONE (☎) button</p> <p><b>15</b> TILT button</p> <p><b>16</b> EARPHONE (🎧) connector</p> <p><b>17</b> PHONE (📞) connector</p> |
|---|--|



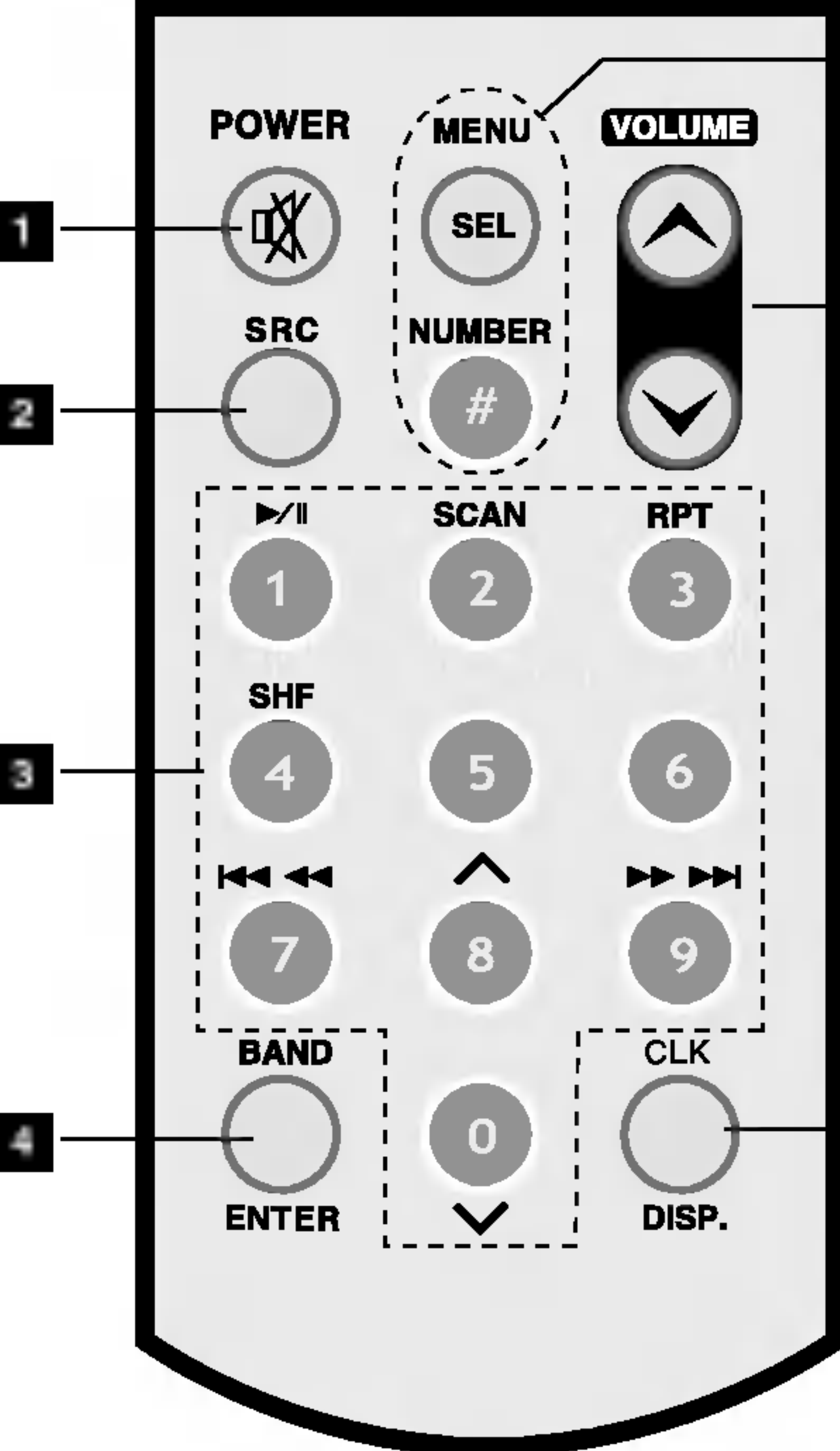
## Front Panel (LAC-M8410R model)



### INTRODUCTION

- |  |   |
|--|---|
| <p><b>1</b> • PWR/MUTE button<br/>• VOLUME KNOB</p> <p><b>2</b> DISPLAY WINDOW</p> <p><b>3</b> ▲ OPEN/CLOSE button</p> <p><b>4</b> ◀/▶/▲/▼ (left/right/up/down) buttons</p> <p><b>5</b> RELEASE (⏏) button</p> <p><b>6</b> REMOTE SENSOR</p> <p><b>7</b> SOURCE (SRC) button</p> <p><b>8</b> • EQUALIZER/SELECTION (EQ/SEL) button<br/>• BALANCE (BAL) button<br/>• FADER (FAD) button<br/>• RETURN button</p> | <p><b>9</b> • BAND button<br/>• REPEAT (RPT) button</p> <p><b>10</b> • PS/AS button<br/>• SHUFFLE/INTRO SCAN (SHF/SCN) button</p> <p><b>11</b> • TA/PTY button<br/>• TA button</p> <p><b>12</b> • MENU/RDS button<br/>• RETURN button</p> <p><b>13</b> • DISPLAY (DISP) button<br/>• ENTER button</p> <p><b>14</b> TILT button</p> <p><b>15</b> AUX connector</p> |
|--|---|

## Remote Control

- 
- 1** • **POWER/MUTE** (⏻)  
- Switches the unit ON and OFF.  
- Press to mute the sound from the speaker.
- 2** **SRC**  
Selects a source.
- 3** • **0-9 number buttons**  
- Selects numbered items in a menu.  
- Stores and recalls a frequency. (1-6)
- **PLAY/PAUSE** (▶/⏸)  
- Starts playback.  
- Pauses playback temporarily.
- **SCAN**  
Plays the first 10 seconds of all track.
- **REPEAT (RPT)**  
Plays tracks repeatedly.
- **SHF**  
Plays tracks in random order.
- 4** **BAND**  
Selects three FM and MW (AM) bands.
- 5** **MENU/SEL**  
- Enters the menu.  
- Enters the audio settings.
- 6** **VOLUME** (⬇️ / ⬆️)  
Adjusts the volume level.
- 7** **CLOCK (CLK)**  
Clock display.
- **DISPLAY (DISP.)**  
- Changes the display.  
- CD text display.

- **SKIP/SEARCH**  
(⏮️ ⏪ / ⏩ ⏭)  
- Backward or forward search playback.  
- Go to next track.  
Returns to beginning of current track or go to previous track.
- ⬆️ / ⬆️ (up/down)

- 4** • **BAND**  
Selects three FM and MW (AM) bands.
- **ENTER**  
Confirms menu selection.
- 5** • **MENU/SEL**  
- Enters the menu.  
- Enters the audio settings.
- **NUMBER (#)**
- 6** **VOLUME** (⬇️ / ⬆️)  
Adjusts the volume level.
- 7** • **CLOCK (CLK)**  
Clock display.
- **DISPLAY (DISP.)**  
- Changes the display.  
- CD text display.



## Basic Installation

Before installing, make sure that the ignition-switch is set to OFF and remove the terminal of the car battery to avoid short-circuiting.


1. Remove the existing receiver unit.
2. Make the necessary connections.
3. Install the installation sleeve.
4. Install the unit in to the installation sleeve.

### Removing existing receiver unit

If there is already an installation sleeve for the receiver unit in the dashboard, it must be removed.

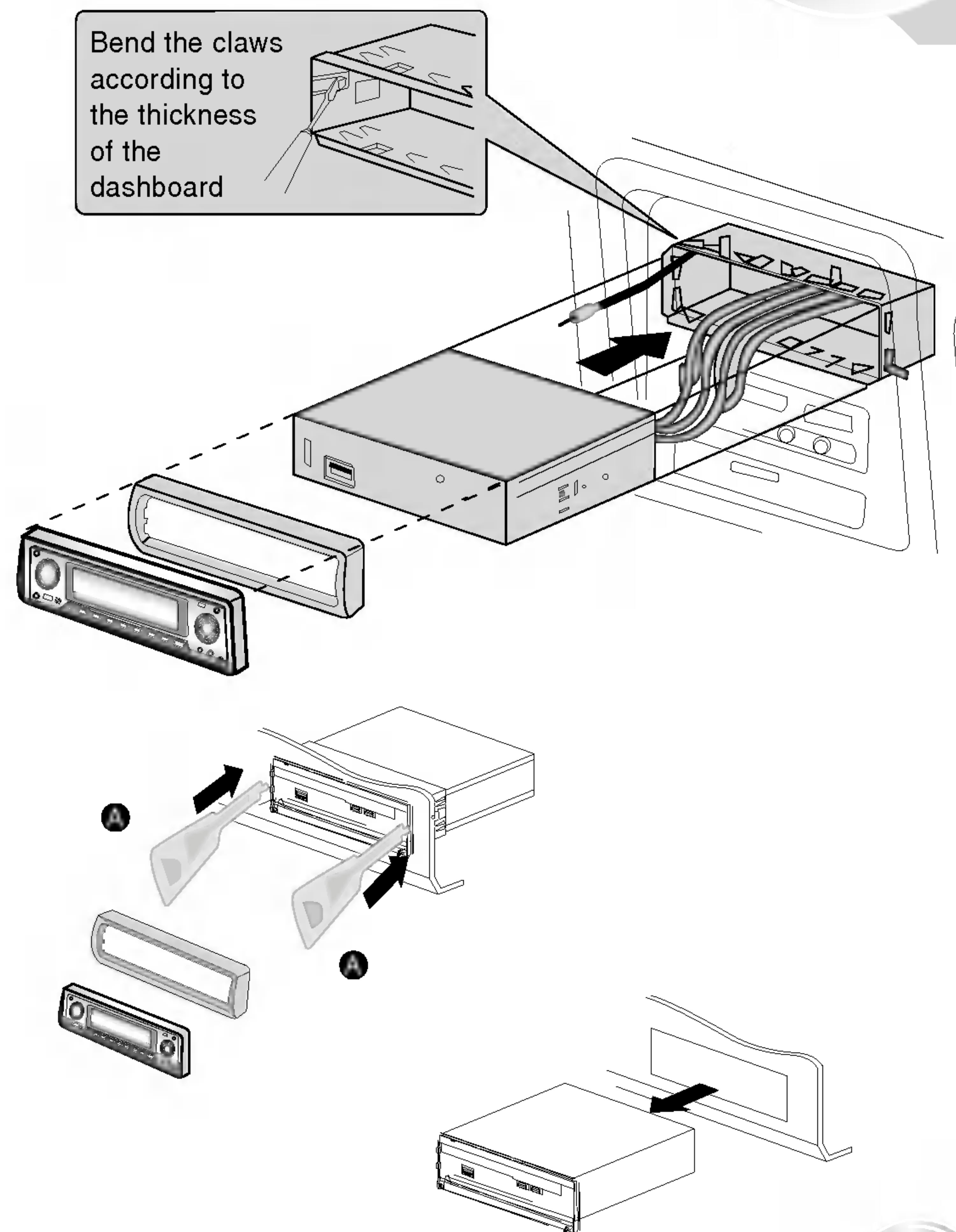
### When removing the unit from the installation sleeve

If you need to remove the unit from the installation sleeve, proceed as follows.

1. Remove the rear supporter from the unit.
2. Remove the front panel and trim ring from the unit.
3. Insert the lever  into the hole on one side of the unit. Do the same operation on the other side and pull out the unit from the installation sleeve.

Bend the claws according to the thickness of the dashboard

PREPARATION

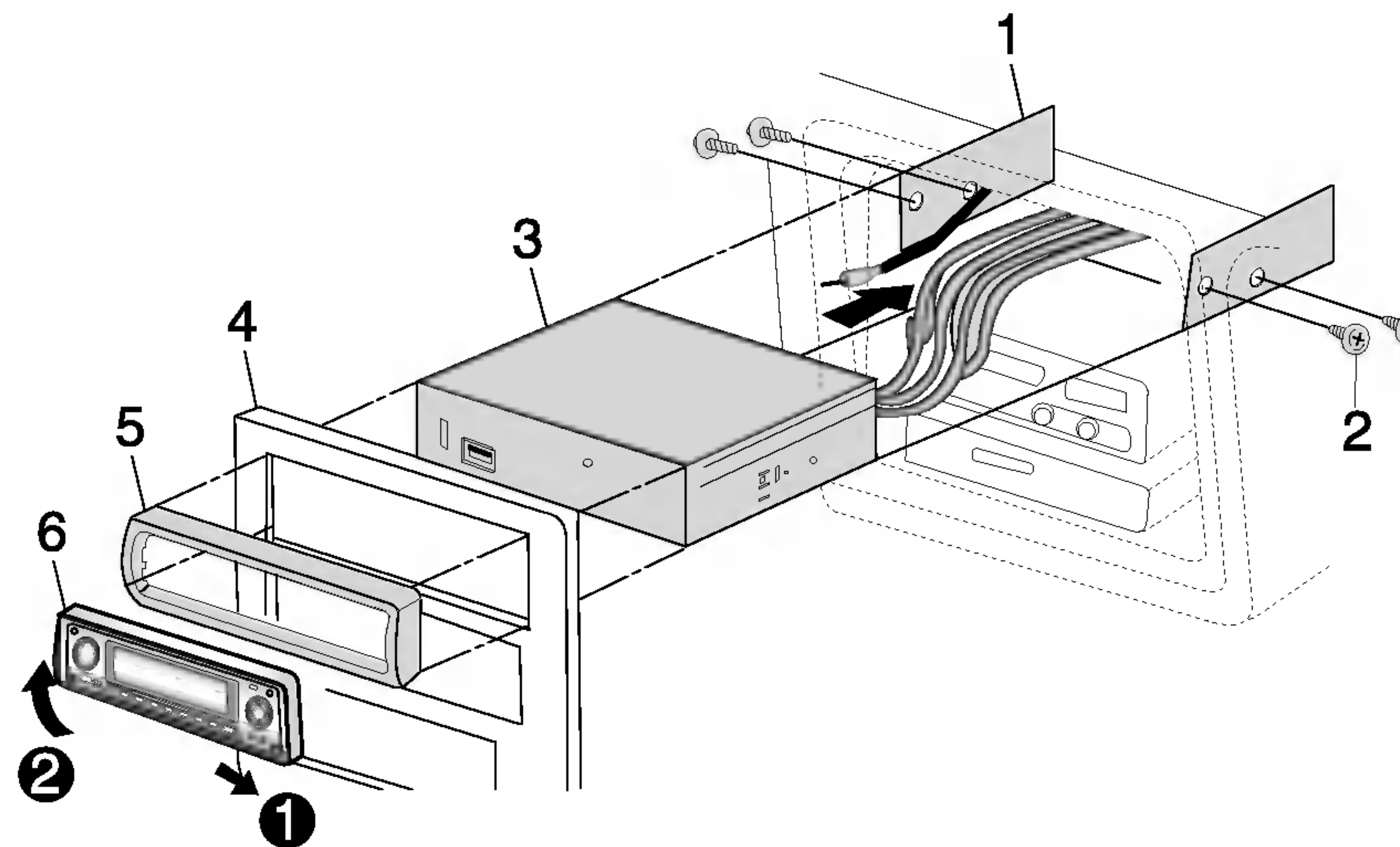




## Installation

### ISO-DIN Installation

1. Slide the unit into ISO-DIN frame.
2. Install screws removed from old unit.
3. Slide the unit and frame into dash opening.
4. Install dash panel or adapter plate.
5. Install trim ring to the unit.  
The notch on trim ring must be positioned at the bottom.
6. Install faceplate by fitting right edge into position then pushing left edge closed.

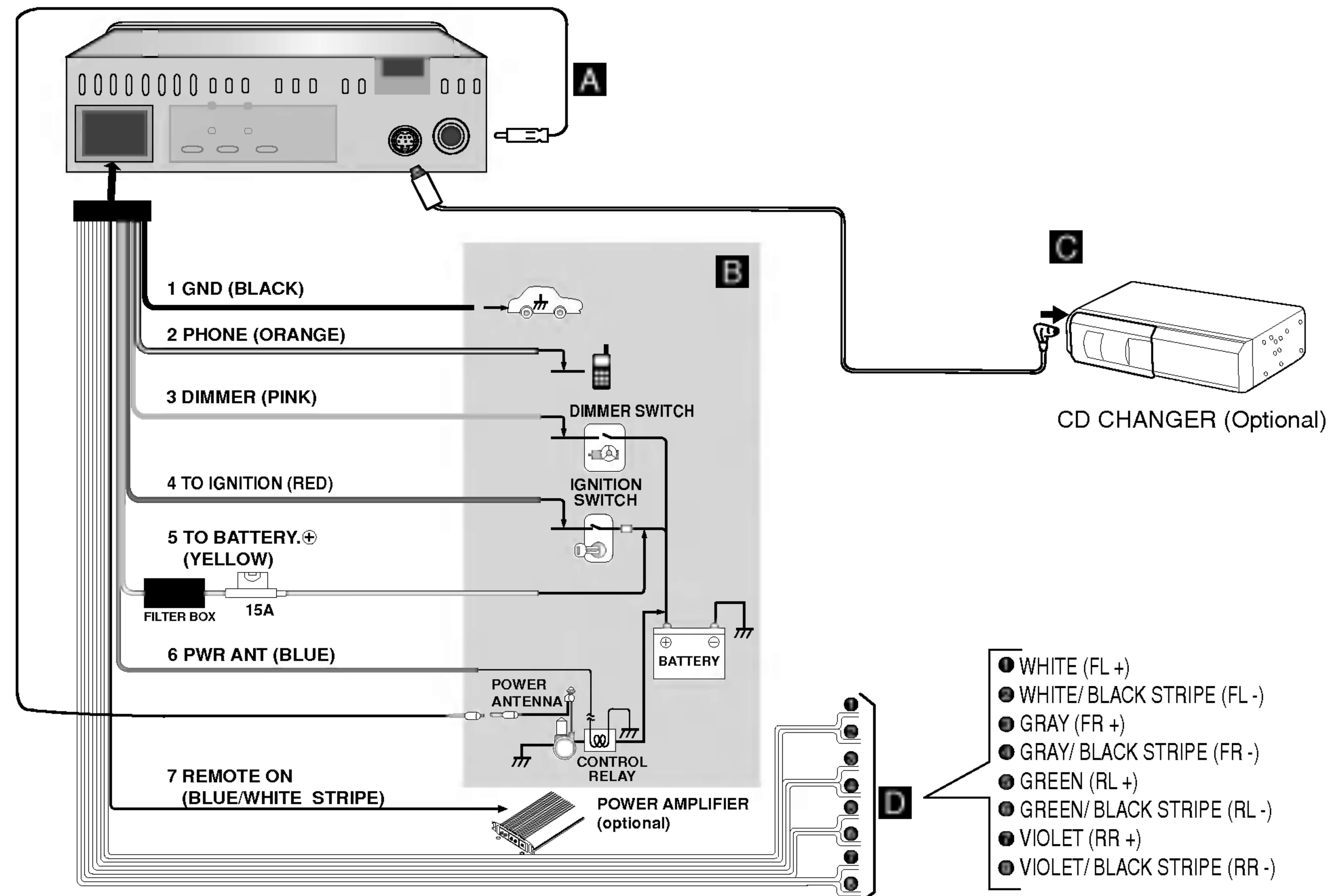




## Connecting to Car

Before connecting, make sure that ignition switch is set to OFF, and remove the  $\ominus$  terminal of the battery to avoid short circuits.

PREPARATION





## Connections

### Connecting to Car

#### **A** From antenna

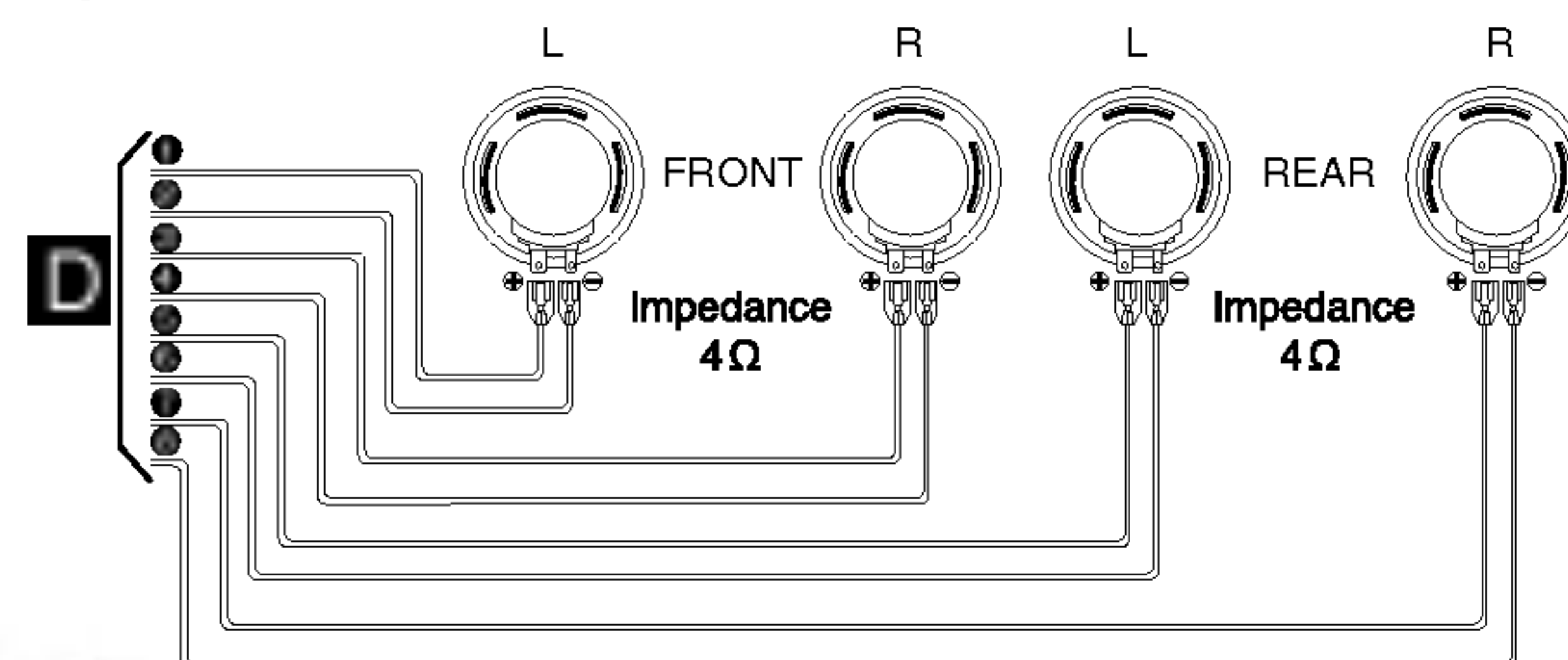
#### **B** To the wiring of vehicle Colors of leads

- 1 BLACK :** This lead is for connection to the Ground.
- 2 ORANGE :** This lead is for connection to the phone line.
- 3 PINK :** This lead is for connection to the Dimmer line
- 4 RED :** This lead is for connection to the terminal from which the power is supplied when the ignition switch is set to ACC.
- 5 YELLOW :** This lead is for connection to the Battery (back-up) terminal from which the power is always supplied.
- 6 BLUE :** This lead is for connection to the power antenna.
- 7 BLUE/WHITE STRIPE :** This lead is for connection to the amplifier remote on.

#### **C** Connect the CD changer

- Your car receiver works as control unit for a CD changer which you can buy, if not yet done, later.
- The suitable cord shown on the scheme will be provided together with the CD changer.

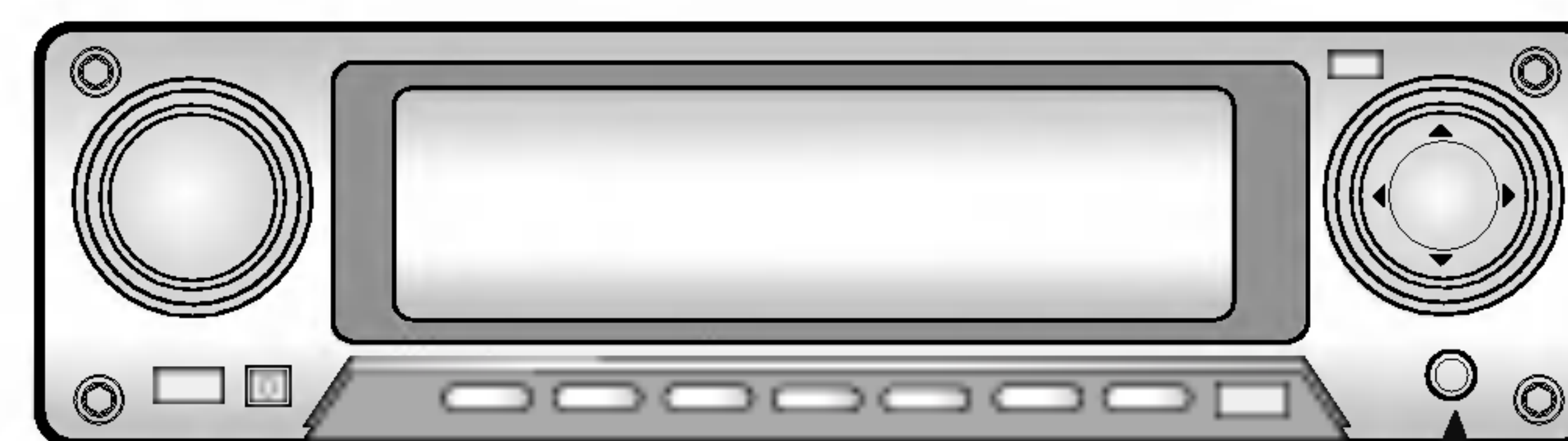
#### **D** Speaker Connections



### Connecting to Optional Equipment (LAC-M8410R model)

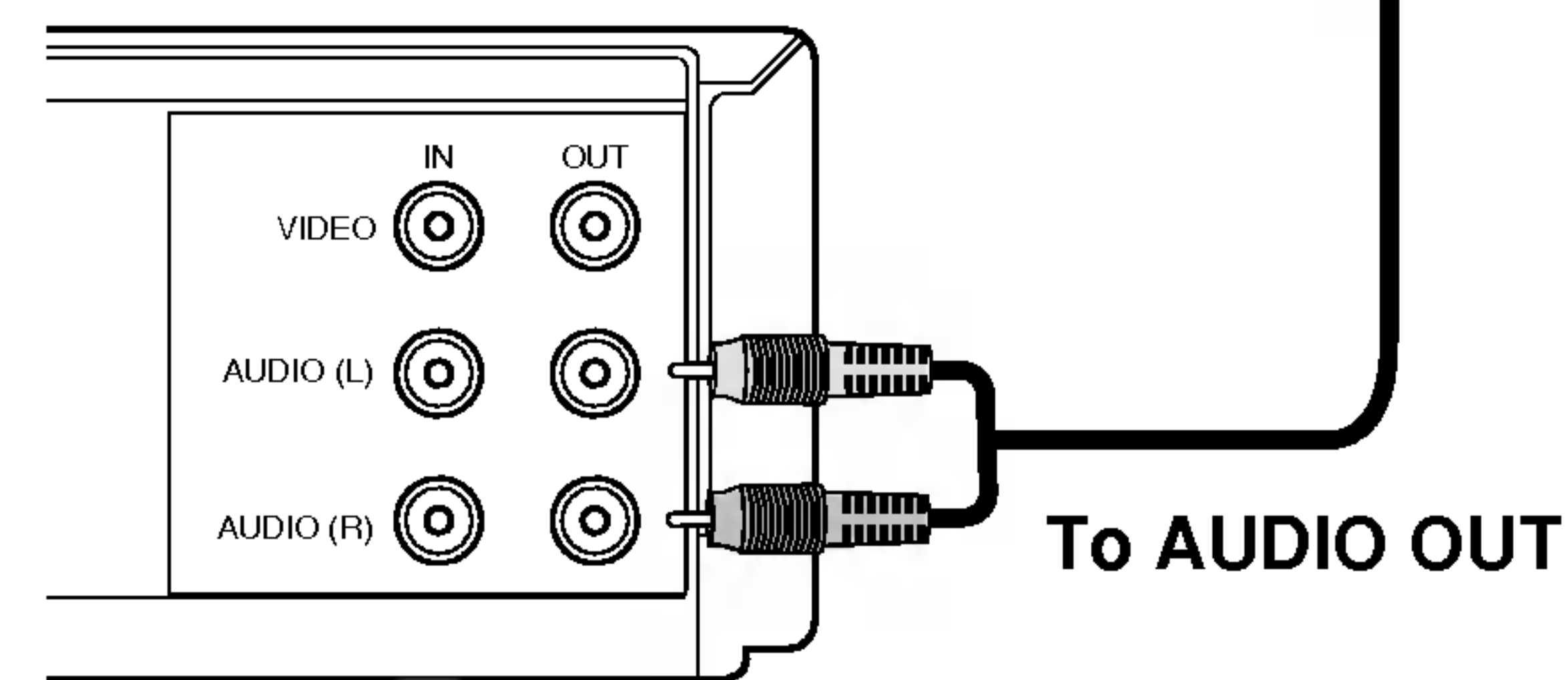
You can use VCR or other unit connected to the AUX connector.

1. Connect a VCR or auxiliary device, etc to the AUX connector.
2. Press **SRC** button to select the AUX.



To AUDIO IN

#### VCR (or Auxiliary Device, etc)

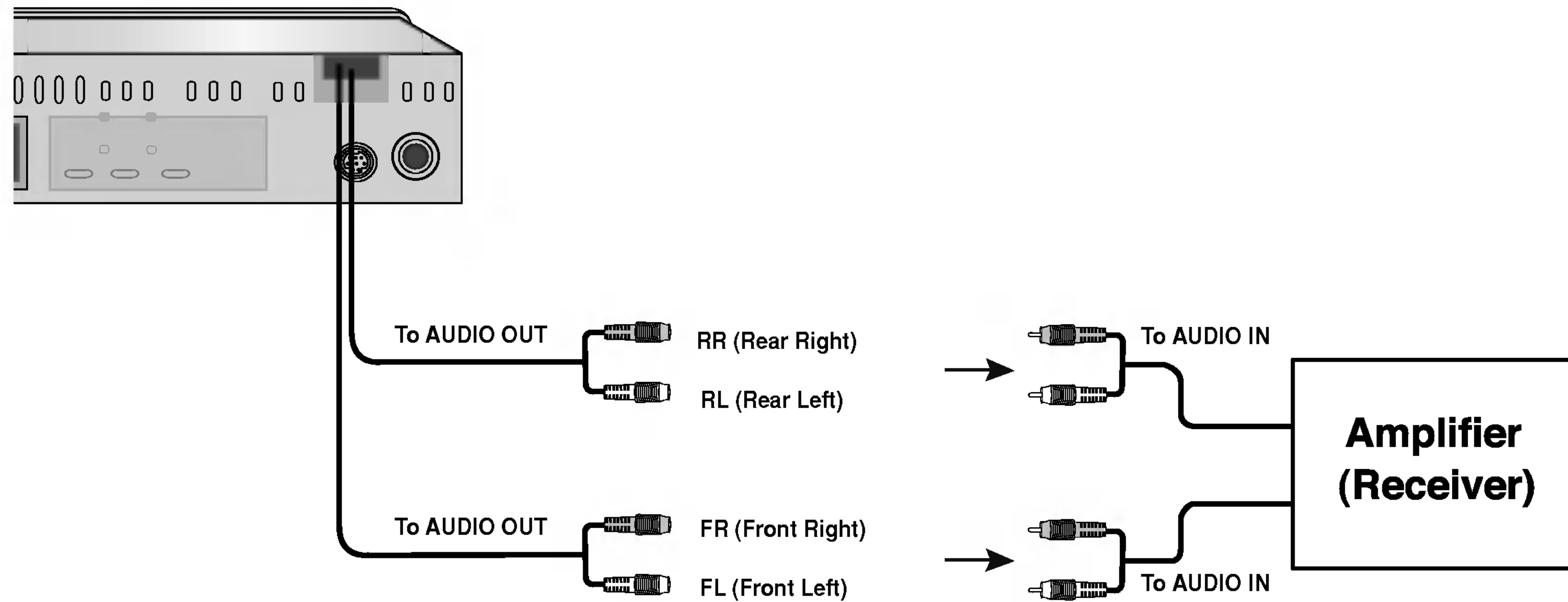


To AUDIO OUT



## Connecting to Auxiliary Equipment

- Connect the **AUDIO OUTPUT** connector of this unit to the **AUDIO INPUT** connector of Auxiliary Equipment.



PREPARATION



## Basic Operation

### Turning the unit on

Press **PWR/MUTE** or any other button on the front panel or **POWER/MUTE** (⏻) on the remote control to turn the unit on.

### Turning the unit off

- Press **PWR/MUTE** on the front panel for more than 1 second to turn the unit off.
- Press **POWER/MUTE** (⏻) on the remote control for more than 1.2 second to turn the unit off.

### Selecting a source

You can select a source you want to listen to.

Press **SRC** to select a source.

Press **SRC** repeatedly to switch between the following sources:  
Tuner → CD → CD Changer (optional) → AUX (LAC-M8410R model) → Tuner...



Tuner



CD



CD Changer  
(optional)



AUX

(LAC-M8410R model)

### **NOTES**

- When you turn off, the unit is memorized automatically the current volume level before you turn off. Whenever you turn on the unit, it will operate at the memorized volume level.
- When the front panel is opened, it is closed automatically after about 10-20 seconds.

### Adjusting the volume



Use **VOLUME** to adjust the sound level.

Rotate **VOLUME KNOB** on the front panel to increase or decrease the volume.

Press **VOLUME** (⏮ / ⏭) on the remote control to increase or decrease the volume.

### Adjusting the angle of the front panel

Press **TILT** repeatedly on the front panel.

- The angle of the front panel can be adjusted up to 3 steps.

### Checking the clock

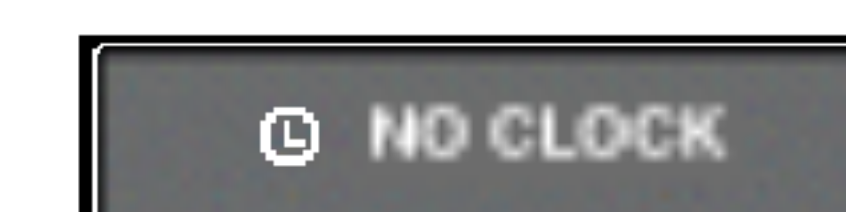
You can see the clock pressing **CLK** on the remote control for more than 1 second.

### **NOTE**

If the unit is received the RDS broadcasting with CT (Clock Time) information, the clock will be shown automatically in the display window.



Unless, "NO CLOCK" appears in the display window.







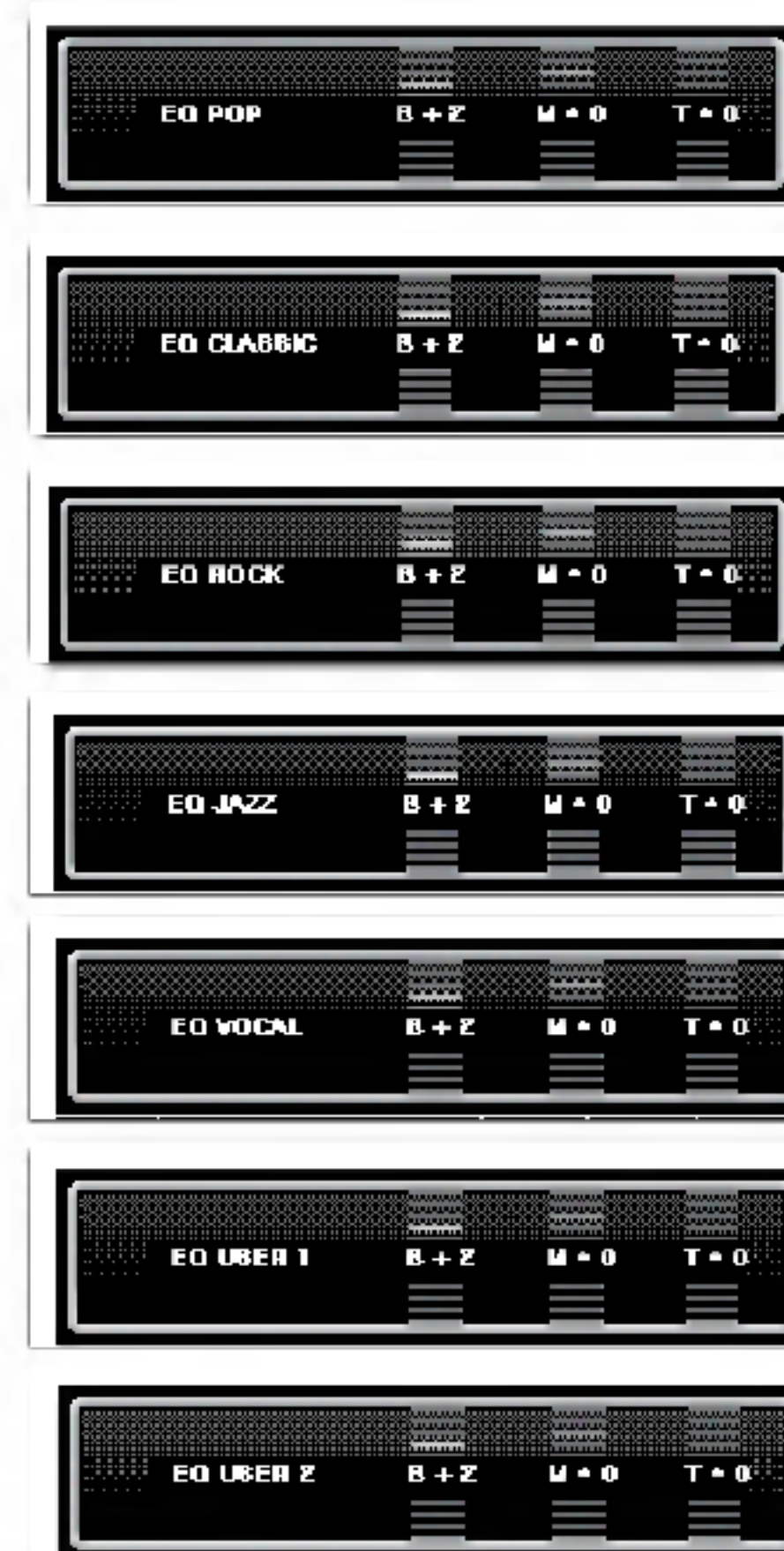
## SOUND Adjustment

### Using the EQ (Equalizer)

The equalizer lets you adjust the equalization to match car interior acoustic characteristics as desired.

There are seven stored equalizer curves which you can easily recall at any time.

Here is a list of the equalizer curves:

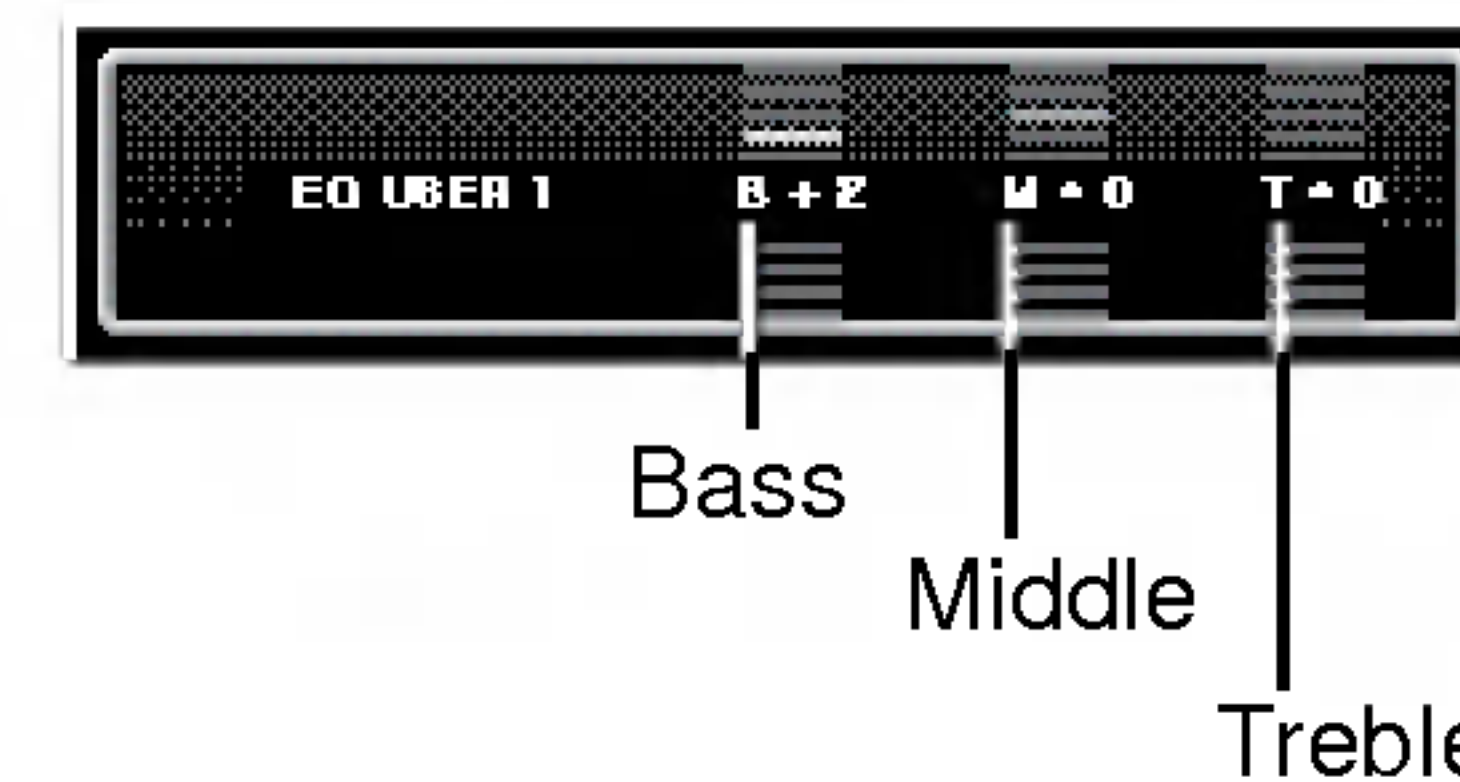


- EQ POP : Reproduces the acoustics of pop music.
- EQ CLASSIC : Reproduces the acoustics of orchestral music.
- EQ ROCK : Reproduces the acoustics of rock music.
- EQ JAZZ : Reproduces the acoustics of jazz music.
- EQ VOCAL: Reproduces the acoustics of vocal music.
- EQ USER 1 : Selects an initial user mode.
- EQ USER 2: Selects an initial user mode.

1. Press **EQ/SEL** on the front panel to select the equalizer.
2. Press **EQ/SEL** repeatedly to select among the following equalizer.  
POP → CLASSIC → ROCK → JAZZ → VOCAL → USER 1 → USER 2 → FLAT (NO display) → POP...

### Adjusting the Bass, Middle and Treble on the “USER 1” or “USER 2” EQ mode.

1. Press **EQ/SEL** for more than 1 second on the “USER 1” or “USER 2” EQ mode.
2. Adjust the Bass by pressing ▲/▼ on the front panel or ^ / v on the remote control.



3. After press ► on the front panel, adjust the Middle by pressing ▲/▼ on the front panel or ^ / v on the remote control.
4. After press ► on the front panel, adjust the Treble by pressing ▲/▼ on the front panel or ^ / v on the remote control.



## Basic Operation

### Adjusting the Balance and Fader of speaker

1. Press **EQ/SEL** on the front panel or **MENU/SEL** on the remote control for more than 1 second.



Balance of left and right speaker

2. Adjust the Balance of left and right speaker by pressing ◀▶ on the front panel or ◀◀ ▶▶ / ▶▶ ▶▶ on the remote control.
3. Adjust the Fader of front and rear speaker by pressing ▲▼ on the front panel or ▲ / ▼ on the remote control.



Fader of front and rear speaker

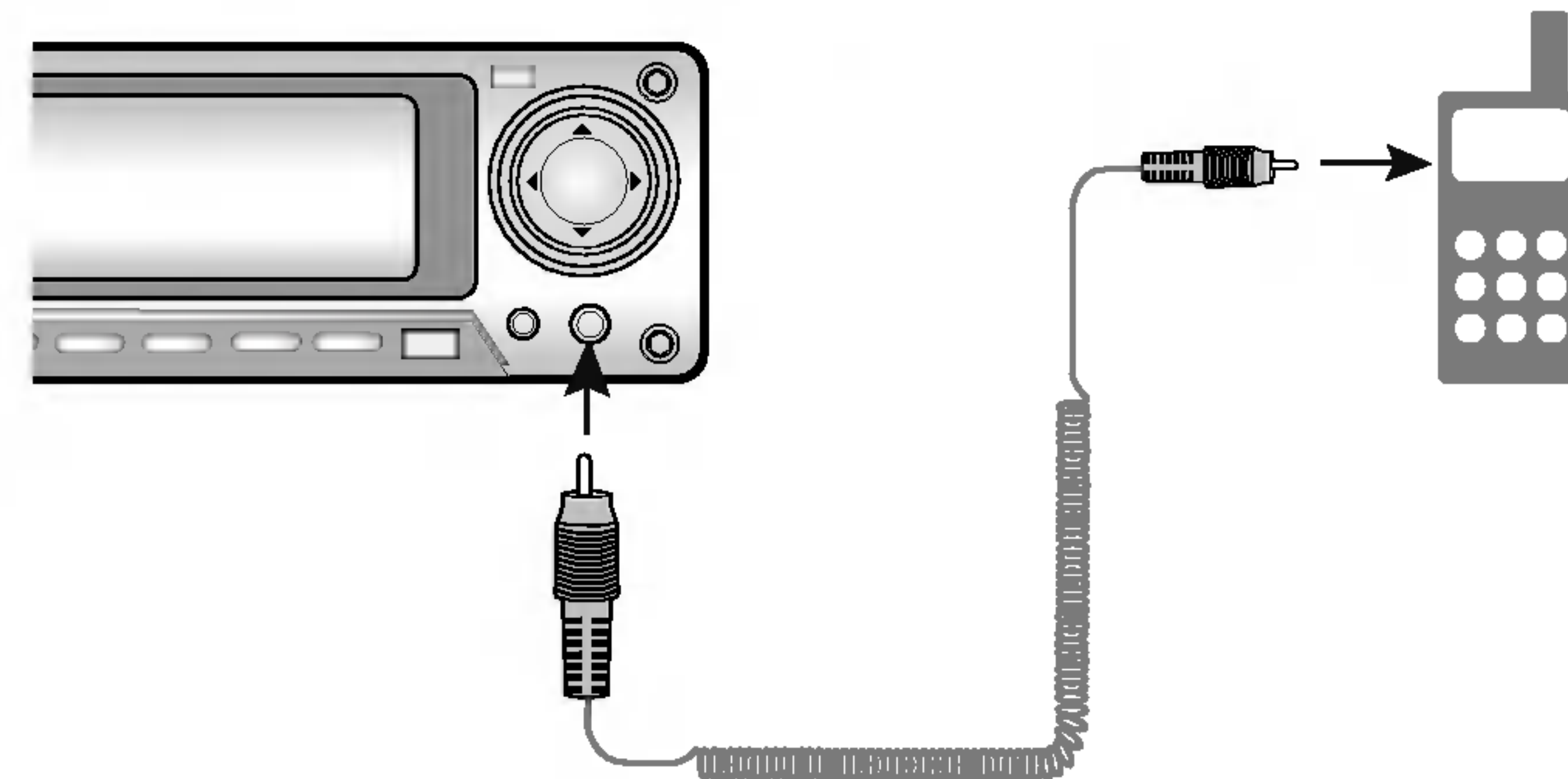
### MUTE



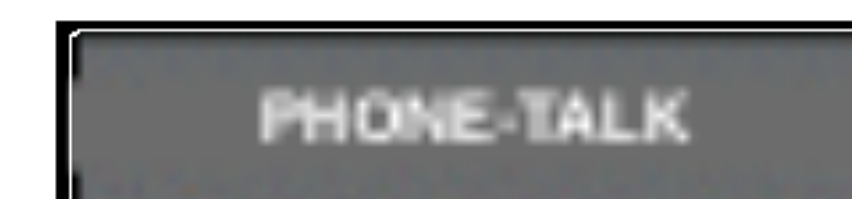
1. Press **PWR/MUTE [POWER/MUTE (OFF)]** to cut the sound.  
- "MUTE" indicator will be shown in the display window.
2. To cancel it press **PWR/MUTE [POWER/MUTE (OFF)]** again.

### Using the hands free (LAC-M8400R model)

1. Connect the PHONE connector of on the front panel and to the earphone connector of mobile phone with the phone cable.



2. If you call a phone, press **PHONE (PHONE)** button.  
- "PHONE-TALK" indicator will be shown in the display window.



3. Press the numbers of mobile phone and please call.
4. To cancel it, **PHONE (PHONE)** button again.  
- "PHONE-TALK" indicator will be disappeared in the display window.



## MENU Operation

### Initial Settings

By using the menu, you can make various adjustments.  
For details on each menu item, see pages 19 to 26.

#### To go to the next level:

Press ► on the front panel or ►► ►►I on the remote control.

#### To go back to the previous level:

Press ◀ on the front panel or I◀◀ ◀◀ on the remote control.

### General Operation

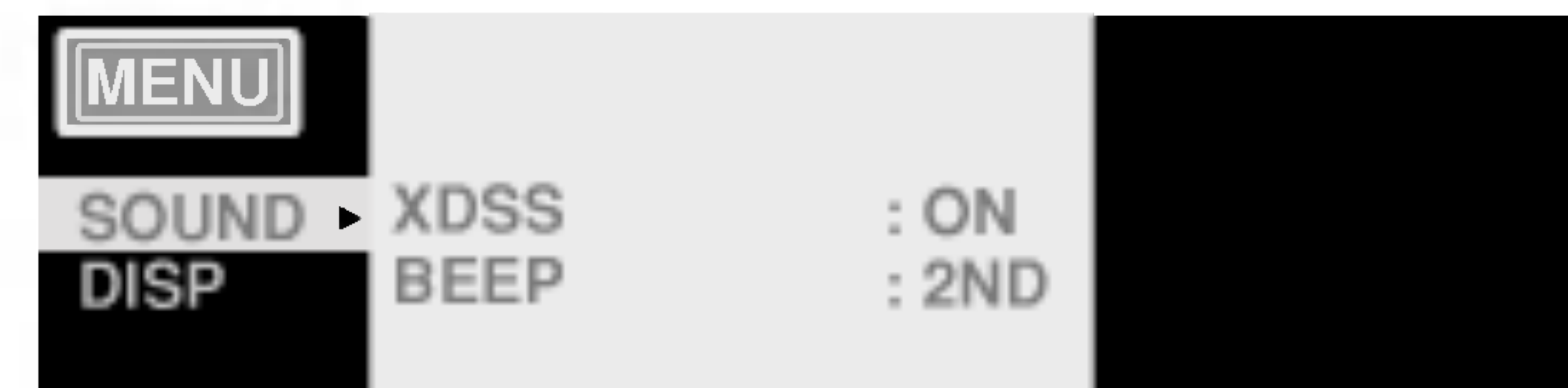
1. Press **MENU/SEL** on the remote control to operate the system menu. (See pages 19 to 20.)  
Press **MENU/RDS** on the front panel for more than 1 second to operate the RDS (Radio Data System) Menu. (See pages 21 to 26.)
2. Use the ▲/▼ or ^ / ∨ to select the desired option then press the ► or ►► ►►I to move to the second level. The screen shows the current setting for the selected item, as well as alternate setting(s).
3. Use the ▲/▼ or ^ / ∨ to select the second desired option then press the ► or ►► ►►I to move to the third level.
4. Use the ▲/▼ or ^ / ∨ to select the desired setting then press **ENTER** to confirm your selection. Some items require additional steps.
5. Press **MENU/SEL** on the remote control to exit the menu.

### System Menu Operation

#### To display and exit the system menu:

Press **MENU/SEL** on the remote control to display the menu. A second press of **MENU/SEL** will take you back to initial screen. (You can also display the menu pressing **MENU/SEL** button briefly on the front panel.)

### SOUND



#### XDSS

Reinforce the bass and create a more powerful sound.

ON : XDSS function is active.

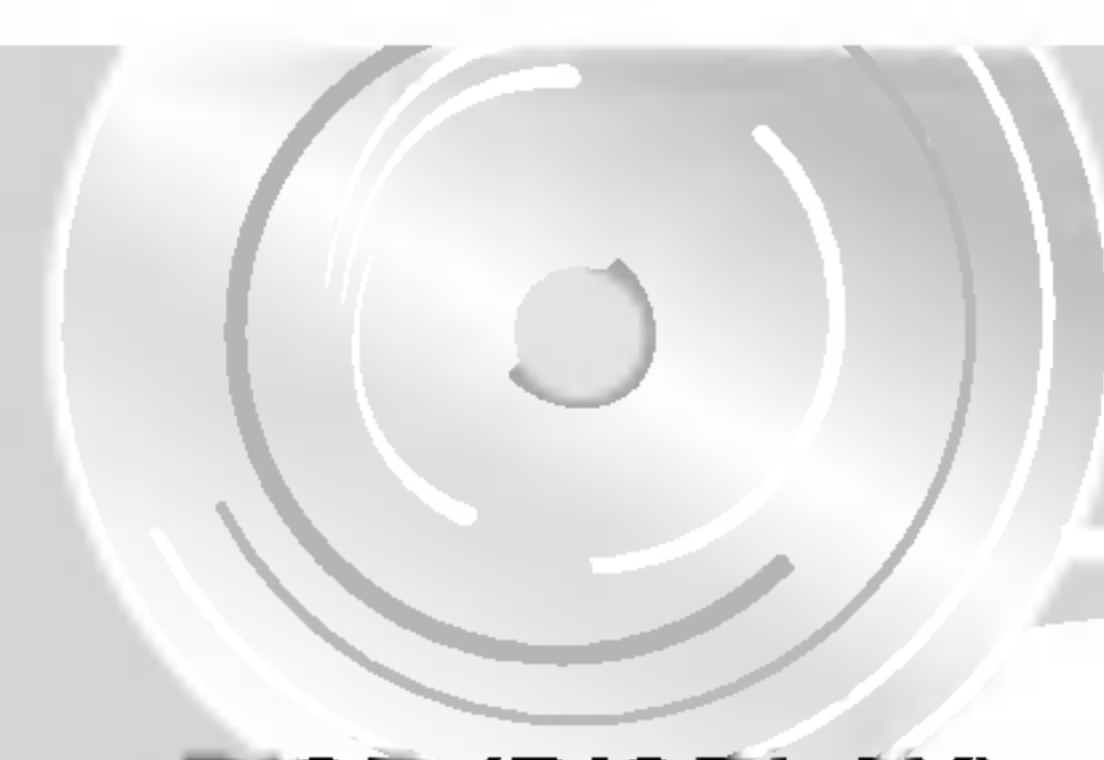
OFF : XDSS is not active.

#### BEEP

Each time any button is pressed, beep sounds.

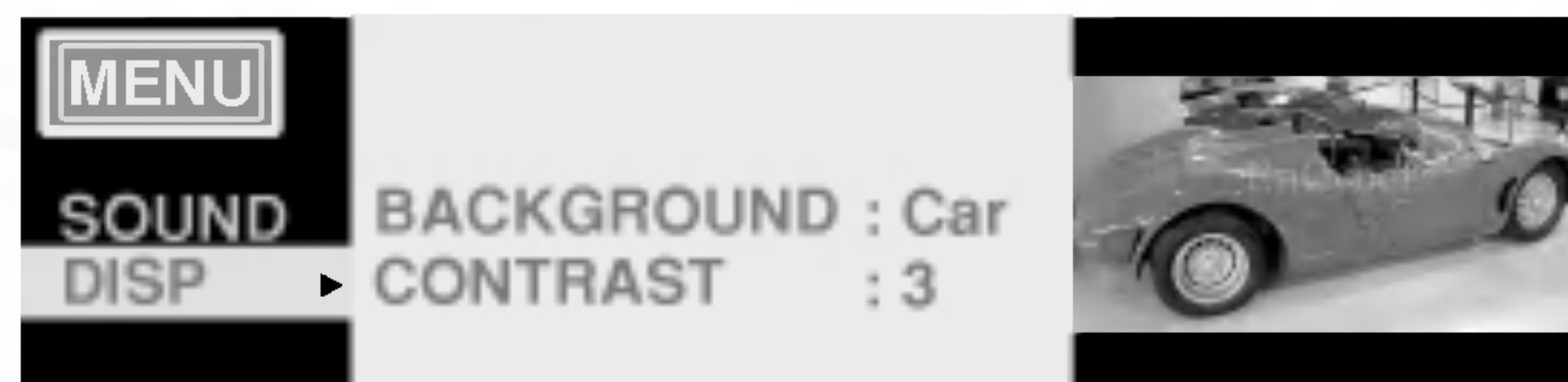
2ND : When the button with long key function is pressed for more than 1 seconds, beep sounds.

ALL : When any button is pressed, beep sounds.



## MENU Operation

DISP (DISPLAY)



### BACKGROUND

Selects the background you want in the display window.

### CONTRAST

Adjusts the shown letter/shape brightly or darkly in the display window. (1~3 steps)



## RDS (Radio Data System) Menu Operation

### To display and exit the RDS menu:

Press **MENU/RDS** on the front panel for more than 1 second to display the menu. A second press of **MENU/RDS** will take you back to initial screen.

RDS (Radio Data System) is a method for sending information signals together with the transmitter signals. Your tuner is capable of translating these signals and putting the information on the display. These codes contain the following information. Program Service Name (PS), A list of program Type (PTY), Traffic Announcement (TA), Clock Time (CT), Radio Text (RT)

### RDS Display Options

The RDS system is capable of transmitting a wide variety of information in addition to the initial call sign that appears when a station is first tuned. In normal RDS operation the display will indicate the station name, broadcast network or call letters. Pressing **CLK/DISP.** on the remote control enables you to cycle through the various data types in the sequence.

- **CT** (Time controlled by the channel): Enable the unit to receive the actual time and show it on the display window.
- **PTY** (Program type recognition): The program type is shown on the display window.
- **RT** (Radio text recognition): The radio station's information is displayed on the display window.
- **PS** (Program Service name): The program title is displayed on the display window.

### NOTE

Some RDS stations may not choose to include some of these additional features. If the data required for the selected mode is not being transmitted, the Display Window will show a **NO Clock, PTY None, RT None** message.

- **PI** (Program Identification) : contains additional information for regional program operation
- **AF** (Alternative Frequencies for the actual program)
- **TP** (Traffic Program Identification)
- **TA** (Traffic Announcement Identification)
- **EON** (Enhanced Other Networks): Information on other programs to use their services like traffic announcement etc

### NOTES

- RDS is only available for FM reception.
- The PS function allows station names to be displayed in clear letters.
- Network Tracking reception uses the PI and AF codes. The PI code identifies the country, area and broadcast system. AF lists up which frequencies at the area are broadcasting the same program and automatically changes to the best reception quality offering frequency without the need to interrupt the program by a seek function.
- Traffic programmes and announcements can be automatically received using the TP/TA features.
- EON-TA: With activated EON function traffic announcements can be heard when listening programs which do not broadcast such information by themselves. To do this, the tuner changes to another program only for announcements, returning automatically afterwards to the previous listened program.
- PTY program type selection enables to select the contents of programs who are supporting this service.

### STATION NAME DISPLAY

The station name is displayed automatically when a RDS station is received.





## MENU Operation

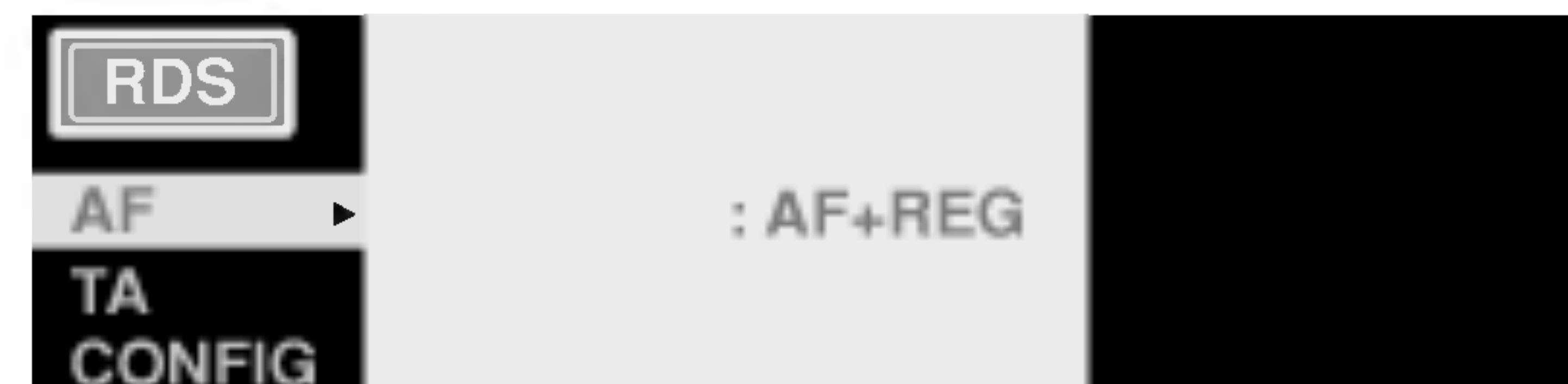
### AF (Alternative Frequencies)

- The list of alternative frequencies give information on the various transmitters broadcasting the same program in the same or adjacent reception areas, and enable receivers equipped with a memory to store the list, to reduce the time for switching to another transmitter.
- When the REG function is enabled, you can only hear regional programmes.
- When the REG function is enabled, you can also listen to various programmes by means of the alternative frequencies.
- The regional function covers restricted areas of transmission, hence it is advisable to use it only for short distances.

#### • **Network-Tracking reception**

When you are driving in an area where RDS data is broadcasted by stations in a network, following procedures are operated in Modes 1 and 2 if a RDS station is tuned:

A flashing of the AF indicator in the LCD display shows, the processor is still collecting the complete set of RDS data of this program. Whenever the flashing stops, all data are complete and the RDS functions can be used as far as they are supported by the program.



#### **AF+REG**

Network-Tracking is activated. Regional mode is engaged (AF function changes between stations broadcasting the same program at all times). Regional mode shall be selected only in case of driving in certain local areas.

#### **AF**

Network-Tracking is activated. AF function changes between stations belonging to the broadcast network being received.

#### **OFF**

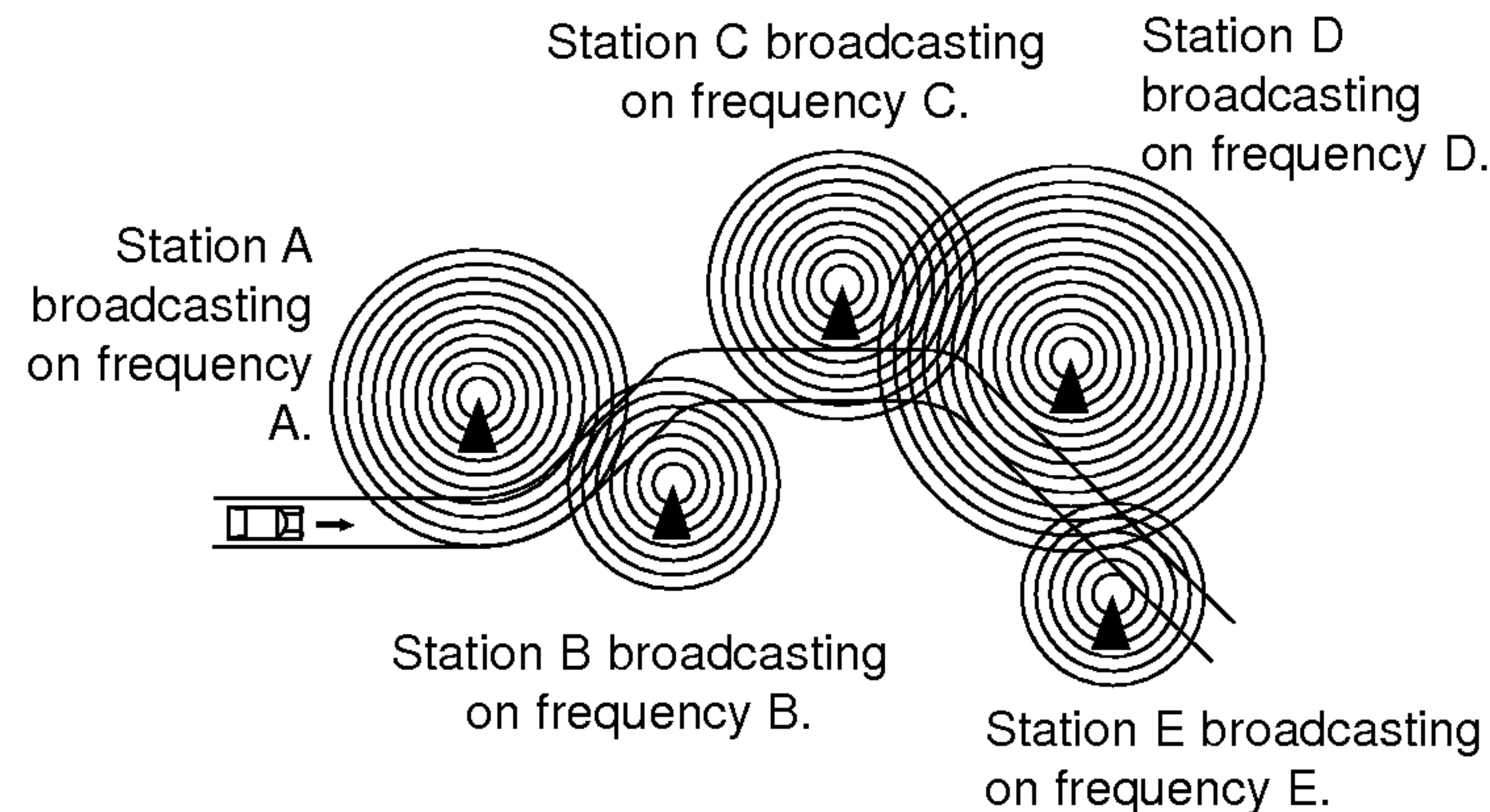
Network-Tracking is deactivated. Only station name will be displayed. In case of poor reception no alternative station can be used.





### If AF functions are activated:

When the reception quality drops, the tuner automatically changes to another station in the network, broadcasting a better reception quality, using the PI and AF codes. This means: wherever you drive, you can continue to listen to the same programme without interruptions. (Refer to figure.)



### NOTE

The same program can be received on different frequencies.

### PI SEEK procedure:

If the reception quality drops too much without finding a better quality alternative frequency from the AF list, after a while the PI SEEK function starts (Display: 'Seek-PI'). The tuner is searching a station of the same program not regarding the AF list, which has the same PI code.

If such station is not available even after PI SEEK has checked the whole FM band, PI SEEK stops.

### NOTES

- The AF function may not operate correctly in areas where no alternative station can be received.
- In reception borderland of a program chain normally no alternative stations can be found. In this case also a high advanced RDS function cannot help anymore, another program – of the driving area must be selected.
- Especially in regional mode such reception borderland can be often reached. Because of possible reduced reception quality, the regional function shall be used only for driving short distances.
- If the RDS station does not support AF data list or if the tuner cannot read AF data from reception, no network tracking is possible. Switching to alternative frequencies does not work.

### RDS data for preset buttons

When a preset button is pressed, if the station with that frequency is received with a sufficient quality, the receiver will tune to that frequency. When the reception quality is not sufficient for good reception, referring to its AF list, the receiver will change to a station of the same program which is broadcasting the best reception quality (a station broadcasting the same program contents may not be received when "REG OFF" is selected and a regional program is selected).

If a sufficient quality station cannot be found in the AF list, PI-seek tuning starts automatically.





## MENU Operation

### TA (Traffic Announcement Identification)



#### SEEK

When newly tuned station does not receive TP information for 5 sec, the radio retunes to next station which has not the same station(PI) as the last station, but has the TP information.

When TP information gets lost at the current station for retune time which is set by "Retune Short" (30 sec) or "Retune Long" (90 sec), the radio start to retune to next same PI station. When same PI station does not catch in 1 cyclic search, the radio retunes to next station with TP information.

*It must be noted that in TA Seek mode, the current station can be changed to the completely different station because the unit searches TP station when the field(signal) strength of the current station is very weak, or the current station has no "TP" signal. (The higher priority is TP rather than PI.)*

#### ALARM

When this mode is selected, any automatic retune mode is not activated. Only double beep sound (ALARM) is out-put.

*So, in this mode, unit keeps the current station anyhow. (The higher priority is PI rather than TP)*

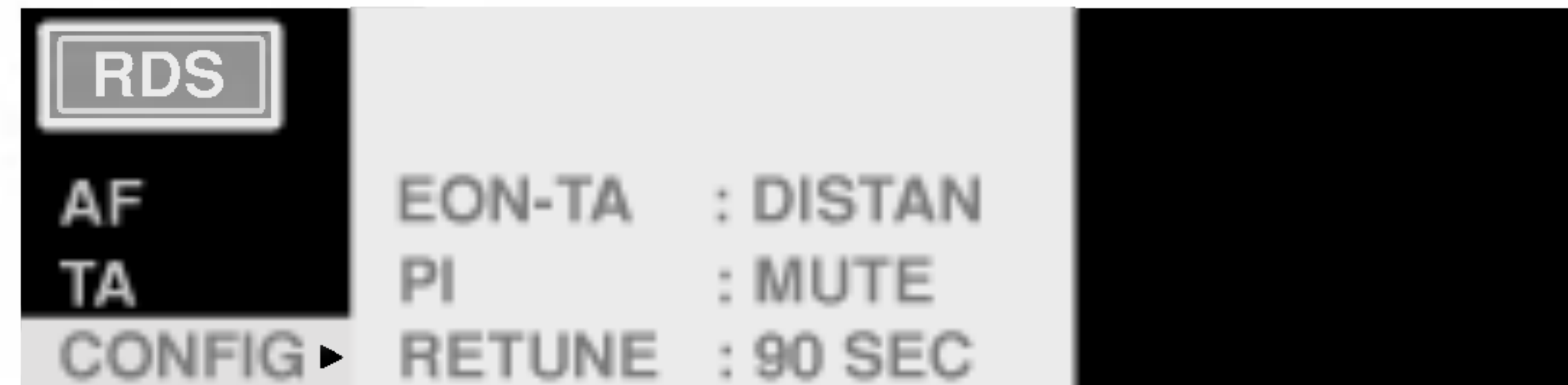
When newly tuned station does not have TP information for 5 sec, beeps come out. When TP information gets lost at the current station for retune time. The beep sound is out-putted.

When newly tuned station has not RDS signal, "PI Seek" is suppressed somewhat.



## MENU Operation

### CONFIG (CONFIGURATION)



#### EON-TA

The EONTA mode causes only local and strong stations to be received.

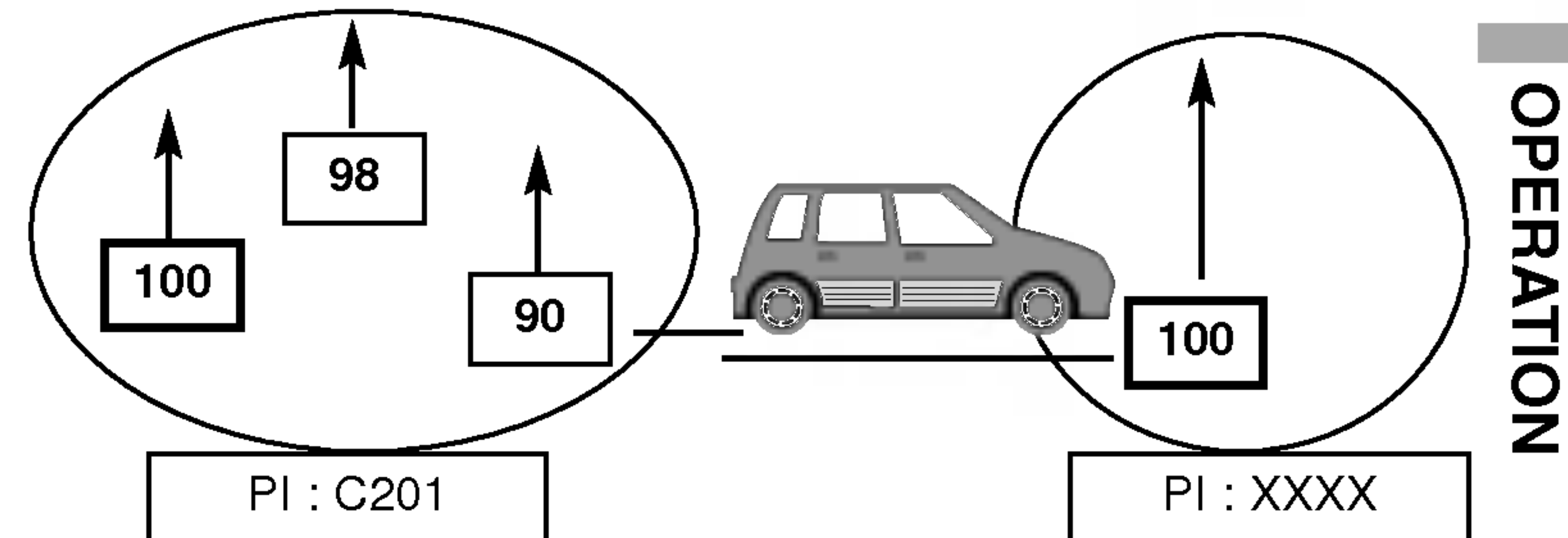
**LOCAL :** It is recommended to set the EONTA mode to the local position to receive local stations with good sound quality.

**DISTANCE :** It receives all stations, including distant and weak ones.

#### PI

While AF switching is implemented in C201 station, AF can switch to 100MHz, which is non genuine AF (where, Different PI with same AF) in short "DIP".

If a car cruises that critical area back and forth, an oscillation phenomenon can be occurred, because the different PI code can be received from 100MHz with "XXX" PI. This unit has special procedure to reduce even this kind of unavoidable situation however there is a limit to be escaped from this serious case perfectly. In that serious case, 2 mode is selectable as follows.



**SOUND :** When above different PI sound (DIP) is heard once in a while, the DIP's sound will be heard for less than 1 second.

**MUTE :** Under above same situation, a mute sound will be heard for less than 1 second.

#### RETUNE

The initial time of automatic TA search or PI Search mode is selected. When PI information is not caught for retune time, the radio start to retune to next same PI station.

When same PI station does not catch 1 cyclic search, the radio goes to last station and wait for 4-5 minute until PI code is received.

**30 SEC :** Selects as 30 seconds.

**90 SEC :** Selects as 90 seconds.

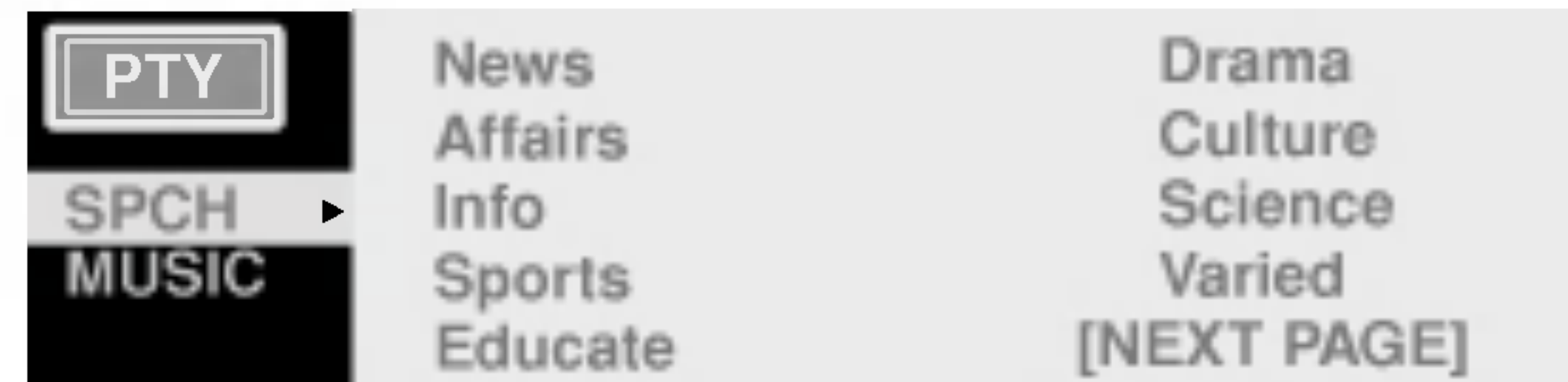


# MENU Operation

## PTY (Program Type) Menu Operation

**To display and exit the PTY menu:**  
 Press **TA/PTY** on the front panel for more than 1 second to display the menu. A second press of **RETURN** will take you back to initial screen.

### SPCH (SPEECH)



|                |                         |                    |                          |
|----------------|-------------------------|--------------------|--------------------------|
|                |                         | <b>[NEXT PAGE]</b> |                          |
| <b>News</b>    | News                    | <b>Weather</b>     | Weather Information      |
| <b>Affairs</b> | Current Affairs         | <b>Finance</b>     | Financial Programme      |
| <b>Info</b>    | Information             | <b>Children</b>    | Children Programme       |
| <b>Sports</b>  | Sports                  | <b>Social</b>      | Social Affairs Programme |
| <b>Educate</b> | Educational             | <b>Religion</b>    | Religious Broadcasts     |
| <b>Drama</b>   | Drama                   | <b>Phone In</b>    | Phone-In Programme       |
| <b>Culture</b> | Culture                 | <b>Travel</b>      | Travel and Touring       |
| <b>Science</b> | Science                 | <b>Leisure</b>     | Leisure and Hobby        |
| <b>Varied</b>  | Varied Speech Programme | <b>Document</b>    | Documentary Programme    |

## MUSIC



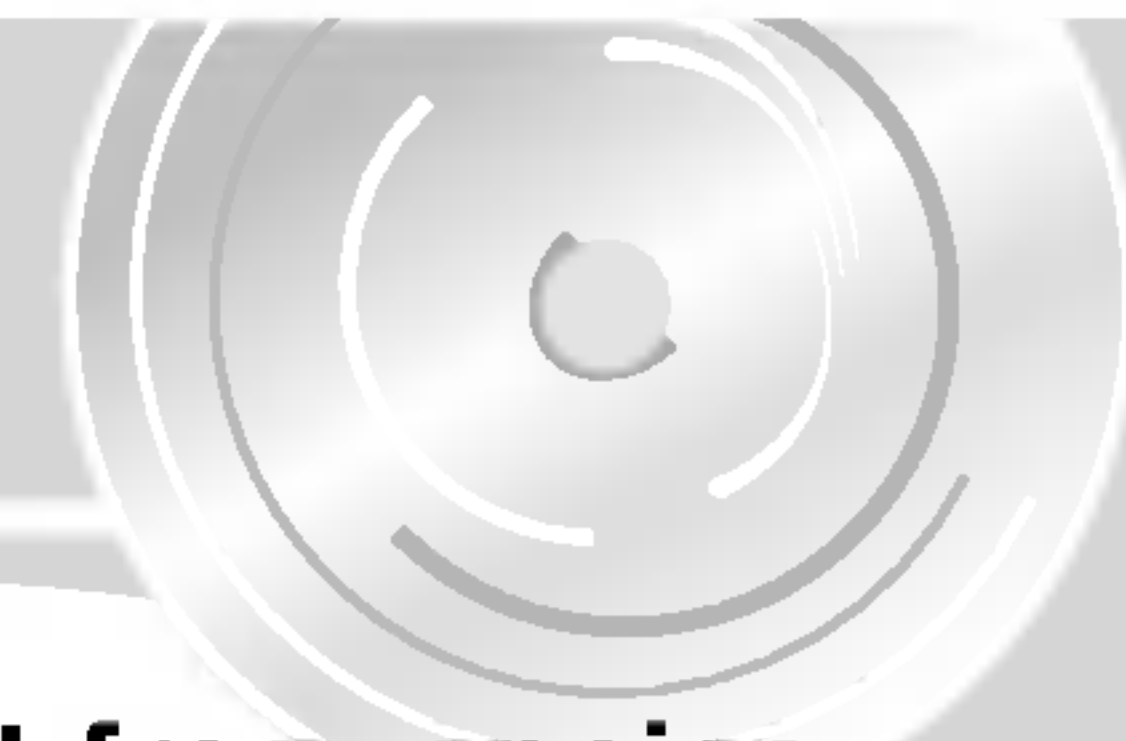
|                 |                         |
|-----------------|-------------------------|
| <b>Pop m</b>    | Popular Music           |
| <b>Rock m</b>   | Rock Music              |
| <b>Easy m</b>   | Easy Listening Music    |
| <b>Light m</b>  | Classical Music         |
| <b>Classics</b> | Serious Classical Music |
| <b>Other m</b>  | Other Music             |
| <b>Jazz</b>     | Jazz Music              |
| <b>Country</b>  | Country Music           |
| <b>Nation m</b> | National Music          |

|                    |              |
|--------------------|--------------|
| <b>[NEXT PAGE]</b> |              |
| <b>Oldies</b>      | Oldies Music |
| <b>Folk m</b>      | Folk Music   |





## Radio Operation



### Listening the radio stations

1. Press **POWER/MUTE** [**POWER/MUTE** (OFF)] button to turn the unit on.
  - When you select a source the unit is turned on.
2. Press **SRC** button to select the tuner.
  - Press **SRC** button until you see "A 103.1 MHz" displayed.
3. Press **BAND/AS** or **BAND** button to select a band.
  - Press **BAND/AS** or **BAND** button until the desired band is displayed, FM1, FM2, FM3, MW(AM).
4. To perform seek tuning, press the ◀▶ on the front panel or ◀◀ / ▶▶▶▶ on the remote control with quick presses.
  - The "SEARCH" is shown in the display window.  
The tuner will scan the frequencies until a broadcast strong enough for good reception is found.
  - You can cancel seek tuning by pressing either the ◀▶ or ◀◀ / ▶▶▶▶ with quick presses.
5. To perform manual tuning, press and hold the ◀▶ on the front panel for 1 second and release until you see "MANUAL" displayed. And then press the ◀▶ on the front panel or ◀◀ / ▶▶▶▶ on the remote control with quick presses.
  - The frequencies move up or down step by step.

#### **NOTES**

- During manual tuning, if the "AUTO" indicator is displayed and disappeared for about 0.5 second, it will be entered to the seek tuning mode.
- When the selected frequency is being broadcast in stereo, "((·))" indicator will light.

### Storing and recalling broadcast frequencies

You can easily store up to six broadcast frequencies for later recall with the touch of a button.

1. When you find a frequency that you want to store, press the ▲ button on the front panel for more than 1 second.
  - Preset number appears in the display window.
2. Select the preset number you want by using the ▲/▼ buttons.
  - Preset number will be flashed in the display window.
3. Press the ▲ button on the front panel for more than 1 second.
  - The selected radio station frequency has been stored in the selected preset number.
4. Follow steps 1-3 as above.
5. Press the ▲ button repeatedly or number buttons (1-6) on the remote control to recall the preset number.

#### **NOTES**

- Up to 18 FM stations, 6 for each of three FM bands and 6 MW(AM) stations can be stored in memory.
- When a station is stored on the preset station button which another frequency of the same band has already been stored, the previous preset station is erased automatically.
- If the unit is received the Non-RDS broadcast, set to off the AF (Alternative Frequency) on the RDS MENU mode.



## Radio Operation

### Auto Search Memory

This function lets you automatically store the six strongest broadcast frequencies.

1. Press **SRC** button to select the tuner.
2. In case of LAC-M8400R model, press **BAND/AS** button on the front panel for about 1 second.  
In case of LAC-M8410R model, press **PS/AS** button on the front panel for about 1 second.
  - The scanning starts from the currently displayed frequency to higher frequencies and stops when 6 stations have been preset or the receivable frequencies have been scanned once.

### **NOTES**

- The presetting is not performed if there is no station to be tuned in.
- When the automatic presetting is performed, the previous preset stations are automatically erased.
- To stop the automatic presetting, press **BAND/AS** or **PS/AS** button.

### **To scan the preset stations**

In case of LAC-M8400R model, press ▼ button on the front panel for about 1 second.

In case of LAC-M8410R model, press **PS/AS** button on the front panel.

To stop the scanning, press ▼ or **PS/AS** button.

### **To tune in the preset stations**

Press **BAND/AS** or **BAND** to select the desired band and press the desired number buttons (1-6) on the remote control.

The number of the preset station button is displayed and the preset station is received.



## Operation with Audio CD, MP3/WMA Disc and CD changer



### Playing an Audio CD and MP3/WMA Disc

**CD MP3 WMA**

The unit can play MP3/WMA formatted recordings on CD-ROM, CD-R or CD-RW discs.

Before playing MP3/WMA recordings, read the notes on MP3/WMA Recordings on page 31.

- Press **▲ OPEN/CLOSE** on the front panel and then Insert a disc in the unit.  
“**CD**” appears in the display window, and playback starts automatically.
- To play a file directly, press **NUMBER (#)** button and then press the track number with **0-9 number** buttons.

### Playing a CD changer (OPTIONAL) **CDC**

#### Playback Setup **CDC**

- Connect the CD Changer connector of this unit to connector of this CD Changer on page 13.
- Audio system: Turn on the audio system and select the input source connected to the unit.

1. Press **PWR/MUTE** or **POWER/MUTE (⏻)** to turn the unit on.
2. Select the CD changer function pressing **SRC** repeatedly.
3. Insert a disc you want to play into the magazine.  
Playback starts automatically.

#### Moving to another Disc **CDC**

Press **▲/▼** or **⏮ / ⏭** briefly during playback to go to the next disc or step back to the previous disc.

#### Pause **CD MP3 WMA CDC**

1. Press **PLAY/PAUSE (▶/⏸)** during playback.
2. To return to playback, press **PLAY/PAUSE (▶/⏸)** again.

#### Moving to another Track **CD MP3 WMA CDC**

- Press the **⏮/▶** on the front panel or **⏮⏮ / ▶▶▶▶** on the remote control briefly during playback to go to the next track or to return to the beginning of the current track.
- Press the **⏮** on the front panel or **⏮⏮ ⏮⏮** on the remote control twice briefly to step back to the previous track.

#### Moving to another Folder **MP3 WMA**

Press **▲/▼** on the front panel or **⏮ / ⏭** on the remote control briefly during playback to go to the next folder or to step back to the previous folder.

#### Search **CD MP3 WMA CDC**

Press and hold the **⏮/▶** on the front panel or **⏮⏮⏮⏮ / ▶▶▶▶▶▶** on the remote control for about 1 second during playback and then release at the point you want.





## Operation with Audio CD, MP3/WMA Disc and CD changer

### Repeat **CD** **MP3** **WMA** **CDC**

1. Press **RPT** during playback.  
The "1" with a right arrow appears in the display window.
2. Press **RPT** again.  
Audio CD : The "1" with a right arrow disappears in the display window.  
(The repeat mode is cancelled.)  
MP3/WMA : The "F" with a right arrow appears in the display window.  
(It is played repeatedly the whole file within the folder.)  
CDC : The "D" with a right arrow appears in the display window.  
(It is played repeatedly the whole file within the disc of CD changer.)
3. Press **RPT** one more time.  
MP3/WMA : The "F" with a right arrow disappears in the display window.  
CDC : The "D" with a right arrow disappears in the display window.

### Random **CD** **MP3** **WMA** **CDC**

1. Press **SHF** during playback.  
The "SHF" appears in the display window.
2. Press **SHF** again.  
Audio CD : The "SHF" disappears in the display window.  
(The random playback is cancelled.)  
MP3/WMA, CDC : The "SHF-A" appears in the display window.  
(It is played randomly the whole file within the folder.)
3. Press **SHF** one more time.  
MP3/WMA, CDC : The "SHF-A" disappears in the display window.

### Intro scan **CD** **MP3** **WMA** **CDC**

1. Press **SCAN** on the remote control.  
The "SCAN" appears in the display window.  
The first 10 seconds of all tracks on the disc are played in order.
2. Press **SCAN** on the remote control again.  
Audio CD : The "SCAN" disappears in the display window.  
(The intro scan is cancelled.)  
MP3/WMA, CDC : The "SCAN-A" appears in the display window.  
(It is played the first 10 seconds of the whole file within the folder.)

### CD TEXT/ID 3 TAG **CD** **MP3** **WMA**

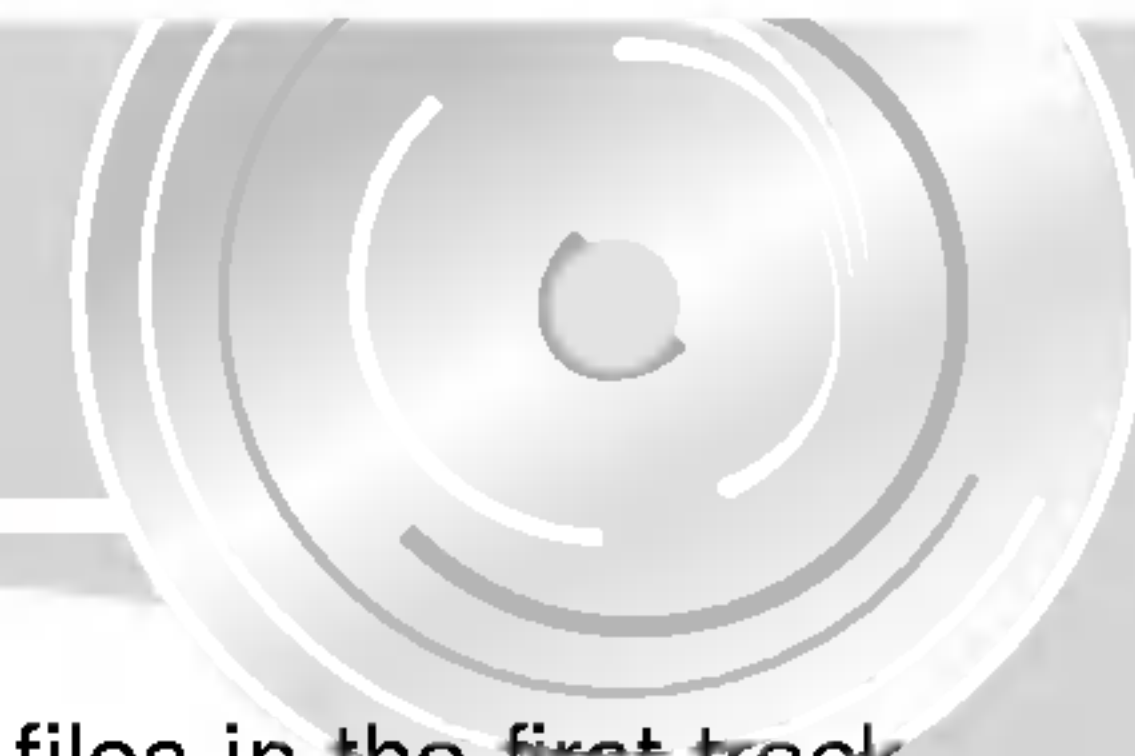
Some discs have certain information encoded on the disc during manufacture. These discs may contain such information as title, artist's name and album name and are called CD TEXT discs.

When playing a disc containing information, you can see the information (Folder name, File name, ID3 TAG, Title, Artist or Album) in the display window. If there is no information, "No Title, No Artist and No Album" or "No ID3 Tag" will be shown in the display window.

Press the **DISP.** on the remote control repeatedly to select the display mode (4 types).



## Operation with Audio CD, MP3/WMA Disc and CD changer



### Notes on MP3/WMA Recordings

#### About MP3

- An MP3 file is audio data compressed by using the MPEG1 audio layer-3 file-coding scheme. We call files that have the ".mp3" file extension "MP3 files".
- The unit can not read an MP3 file that has a file extension other than ".mp3".

#### About WMA (Window Media Audio)

- An WMA file is a Microsoft audio compression technology.
- WMA(Windows Media Audio) offers double the audio compression of the MP3 format.

#### **MP3/WMA Disc compatibility with this unit is limited as follows:**

1. Sampling Frequency / only at 44.1kHz (MP3), 22.05 - 44.1kHz (WMA)
2. Bit rate / within 32 - 320kbps (MP3), 32 - 128kbps (WMA)
3. CD-R/CD-RW physical format should be "ISO 9660"
4. If you record MP3/WMA files using the software which cannot create a FILE SYSTEM, for example "Direct-CD" etc., it is impossible to playback MP3/WMA files. We recommend that you use "Easy-CD Creator" which creates an ISO9660 file system.

5. A single session disc requires MP3/WMA files in the first track. If there is no MP3/WMA file in the 1st track, it cannot playback MP3/WMA files. If you wish to playback MP3/WMA files, format all the data in the disc or use a new one.
6. Folder or File names should have a maximum 22 letters or less.  
ID3 TAG: Title, Artist or Album names should have a maximum 30 letters or less.  
CD TEXT: Title, Artist or Album names should have a maximum 30 letters or less.  
The file must incorporate ".mp3" or ".wma" extension e.g. "\*\*\*\*\*.MP3" or "\*\*\*\*\*.WMA".

This unit requires discs/recordings to meet certain technical standards in order to achieve optimal playback quality. There are many different types of recordable disc formats (including CD-R/CD-RW containing MP3 or WMA files). That require certain pre-existing conditions (see above) to insure compatible playback.

**Customers should also note that permission is required in order to download MP3/WMA files and music from the Internet. Our company has no right to grant such permission. Permission should always be sought from the copyright owner.**



## Troubleshooting

| Symptom   | Cause   | Correction  |
|---|---|---|
| Power doesn't turn on.<br>The unit doesn't operate.   | <ul style="list-style-type: none"><li>• Leads and connector are incorrectly connected.</li><li>• The fuse is blown.</li><li>• Noise and other factors are causing the built-in microprocessor to operate incorrectly.</li></ul> | <ul style="list-style-type: none"><li>• Confirm once more that all connections are correct.</li><li>• Rectify the reason for the fuse blowing, then replace the fuse. Be very sure to install the correct fuse with the same rate.</li><li>• Turn the unit off and then on.</li></ul> |
| The unit does not operate correctly even when the appropriate remote control buttons are pressed. | <ul style="list-style-type: none"><li>• Battery power is low.</li><li>• Some operations are prohibited with certain discs.</li></ul>  | <ul style="list-style-type: none"><li>• Load new battery.</li><li>• Check using another disc.</li></ul>   |
| Playback is not possible.   | <ul style="list-style-type: none"><li>• The disc is dirty.</li><li>• The loaded disc is a type this unit cannot play.</li></ul>   | <ul style="list-style-type: none"><li>• Clean disc.</li><li>• Check what type the disc is.</li></ul>  |
| No sound are heard.<br>The volume level will not rise.  | <ul style="list-style-type: none"><li>• Cables are not connected correctly.</li></ul>   | <ul style="list-style-type: none"><li>• Connect the cables correctly.</li></ul>   |
| There's no sound.   | <ul style="list-style-type: none"><li>• The volume level is low.</li></ul>  | <ul style="list-style-type: none"><li>• Adjust the volume.</li></ul>  |
| There's audio skipping.   | <ul style="list-style-type: none"><li>• This unit is not firmly secured.</li></ul>  | <ul style="list-style-type: none"><li>• Secure this unit firmly.</li></ul>  |



# Specifications



REFERENCE

## General

|                        |   |
|------------------------|---|
| Output Power           | .50W x 4CH(Max.)                        |
| Power Source           | DC 12V                                  |
| Speaker impedance      | 4 Ω                                     |
| Ground System          | Negative type                           |
| Dimensions (W x H x D) | 185 x 50 x 170 mm (Without Front Panel) |
| Net Weight (approx.)   | 1.8 kg                                  |

## FM tuner

|                    |              |
|--------------------|--------------|
| Frequency Range    | 87.5-108 MHz |
| S/N Ratio          | 55 dB        |
| Distortion         | 1.0%         |
| Usable sensitivity | 12 dB        |

## MW(AM) tuner

|                    |                              |
|--------------------|------------------------------|
| Frequency Range    | 520-1720 kHz or 522-1620 kHz |
| S/N Ratio          | 45 dB                        |
| Distortion         | 1.0%                         |
| Usable sensitivity | 32 dB                        |

## CD

|                 |               |
|-----------------|---------------|
| Frequency Range | 42 - 20000 Hz |
| S/N Ratio       | 55 dB         |
| Distortion      | 0.5%          |

● Design and specifications are subject to change without notice.



P/NO : 3834RR0016M