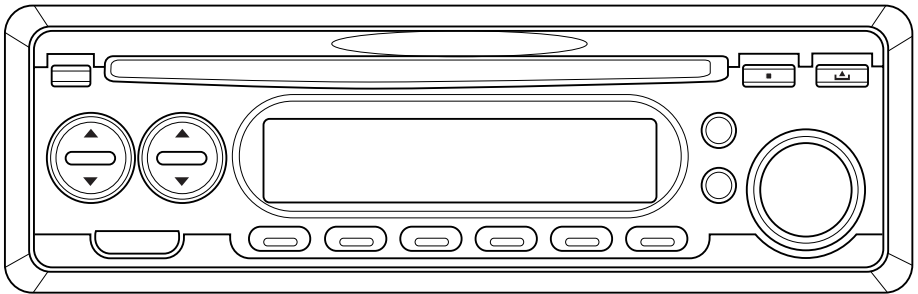


OWNER'S MANUAL

Mobile Audio System



- **Manually Tuned Synthesizer Stereo Radio**
- **Car CD Player/MP3 Player/WMA Player**
- **Digital Compact Disc Player**
- **Full Detachable Panel**

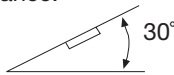
CONTENTS

- Installation.....3**
- DIN Front-Mount (Method A).....3
 - Installing the unit.....3
 - Removing the unit.....4
- DIN Rear-Mount (Method B).....5
- Using the detachable front panel.....6**
- Wiring Connection.....7**
- Operation8**
 - General Operation9
 - Radio Operation.....10
 - CD Operation.....10
 - MP3 Operation11
 - WMA Operation12
 - Disc Notes13
- Specification14**
- Trouble shooting.....15**

INSTALLATION

Notes:

- Choose the mounting location where the unit will not interfere with the normal driving function of the driver.
- Before finally installing the unit, connect the wiring temporarily and make sure it is all connected up properly and the unit and the system work properly.
- Use only the parts included with the unit to ensure proper installation. The use of unauthorized parts can cause malfunctions.
- Consult with your nearest dealer if installation requires the drilling of holes or other modifications of the vehicle.
- Install the unit where it does not get in the driver's way and cannot injure the passenger if there is a sudden stop, like an emergency stop.
- If installation angle exceeds 30° from horizontal, the unit might not give its optimum performance.



- Avoid installing the unit where it would be subject to high temperature, such as from direct sunlight, or from hot air, from the heater, or where it would be subject to dust, dirt or excessive vibration.

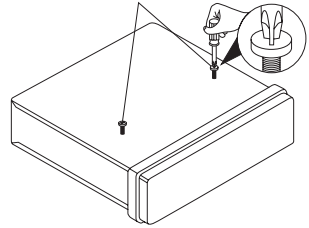
DIN FRONT/REAR-MOUNT

This unit can be properly installed either from "Front" (conventional DIN Front-mount) or "Rear" (DIN Rear-mount installation, utilizing threaded screw holes at the sides of the unit chassis). For details, refer to the following illustrated installation methods.

TAKE OUT SCREW BEFORE INSTALLATION

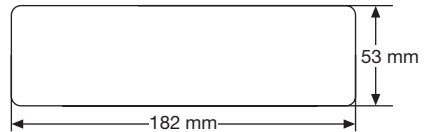
Before installing the unit, please remove the two screws.

Take out screw before installation



DIN FRONT-MOUNT (Method A) Installation Opening

This unit can be installed in any dashboard having an opening as shown below:

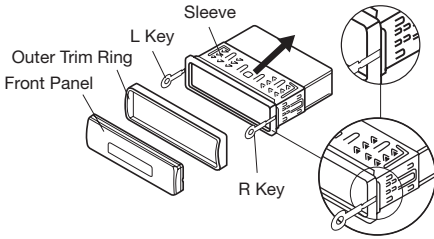


Installing the unit

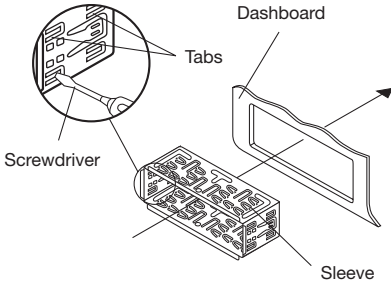
Be sure you test all connections first, and then follow these steps to install the unit.

1. Make sure the ignition is turned off, and then disconnect the cable from the vehicle battery's negative (-) terminal.
2. Disconnect the wire harness and the antenna.
3. Press the release button on the front panel and remove the control panel (see the steps of "remove the front panel").
4. Lift the top of the outer trim ring then pull it out to remove it.
5. The two supplied keys release tabs inside the unit's sleeve so you can remove it. One key is for the right side and the other is for the left side. Insert the keys as far as they will go (with the notches facing up) into the appropriate slots at the middle of the left and right sides of the unit. Then slide the sleeve off the back of the unit.

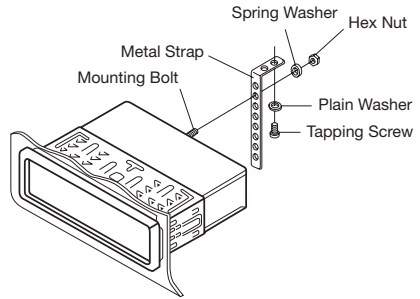
INSTALLATION



- Mount the sleeve by inserting the sleeve into the opening of the dashboard and bend open the tabs located around the sleeve with a screwdriver. Not all tabs will be able to make contact, so examine which ones will be most effective. Bending open the appropriate tabs behind the dashboard to secure the sleeve in place.



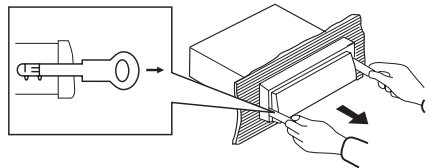
- Reconnect the wire harness and the antenna and be careful not to pinch any wires or cables.
- Slide the unit into the sleeve until it locks in place.
- To further secure the unit, use the supplied metal strap to secure the back of the unit in place. Use the supplied hardware (Hex Nut (M5mm) and Spring Washer) to attach one end of the strap to the mounting bolt on the back of the unit. If necessary, bend the metal strap to fit your vehicle's mounting area. Then use the supplied hardware (Tapping Screw (5x25mm) and Plain Washer) to attach the other end of metal strap to a solid metal part of the vehicle under the dashboard. This strap also helps ensure proper electrical grounding of the unit.



- Reconnect the cable to the vehicle battery's negative (-) terminal. Then replace the outer trim ring and install the unit's front panel. (see the steps of "install the front panel").

Removing the unit

- Make sure the ignition is turned off, then disconnect the cable from the vehicle battery's negative (-) terminal.
- Remove the metal strap attached the back of the unit (if attached).
- Press the release button to remove the front panel.
- Lift the outer trim ring then remove it.
- Insert the supplied keys into the slots at the middle left and right sides of the unit, then pull the unit out of the dashboard.

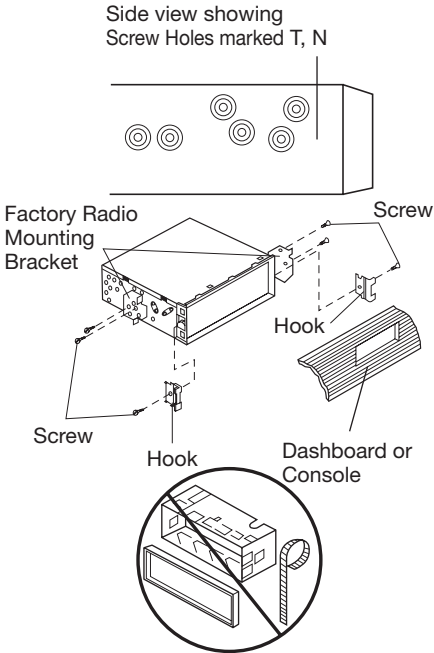


INSTALLATION

DIN REAR-MOUNT (Method B)

If your vehicle is a Nissan, Toyota, follow these mounting instructions.

Use the screw holes marked T (Toyota), N (Nissan) located on both sides of the unit to fasten the unit to the factory radio mounting brackets supplied with your vehicle.



To fasten the unit to the factory radio mounting brackets.

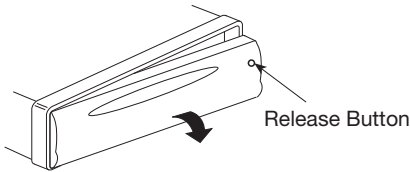
1. Use a screwdriver to loose the hook's screws on the front left and right sides of the unit and remove the hooks.
2. Align the screw holes on the bracket with the screw holes on the unit, and then tighten the screws (5x5mm) on each side.

Note: the outer trim ring, sleeve and the metal strap are not used for method B installation.

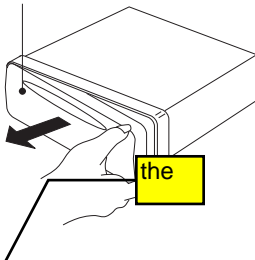
USING THE DETACHABLE FRONT PANEL

REMOVING THE FRONT PANEL

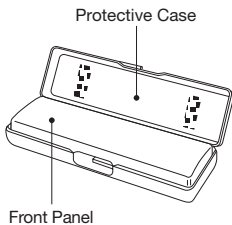
1. Press the **REL** button on the front panel and pull off the front panel.



Front Panel

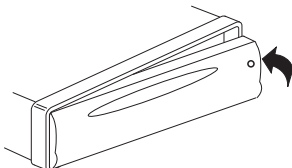


2. Place front panel into the case.



INSTALL THE FRONT PANEL

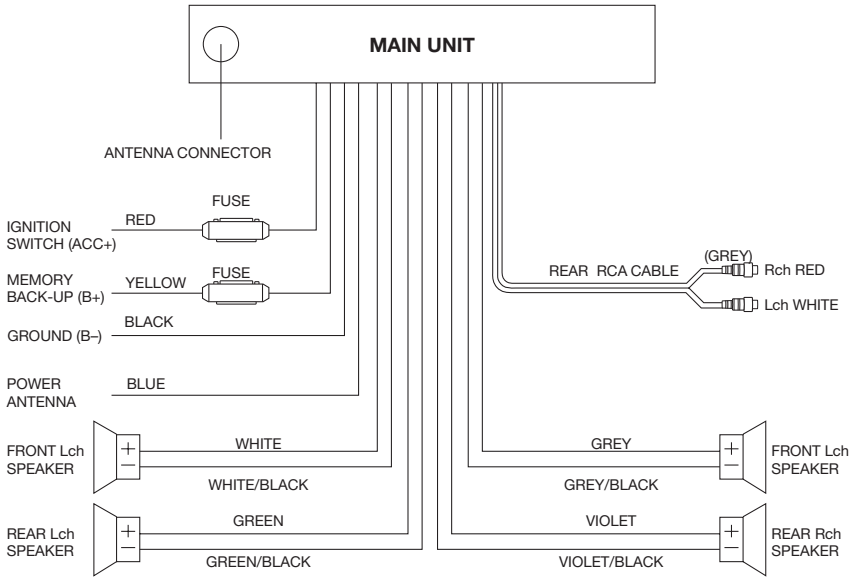
To install the front panel, insert the panel into the housing and make sure the panel is properly installed. Otherwise, abnormality occurs on the display or some keys will not function properly.



Precautions when Handling

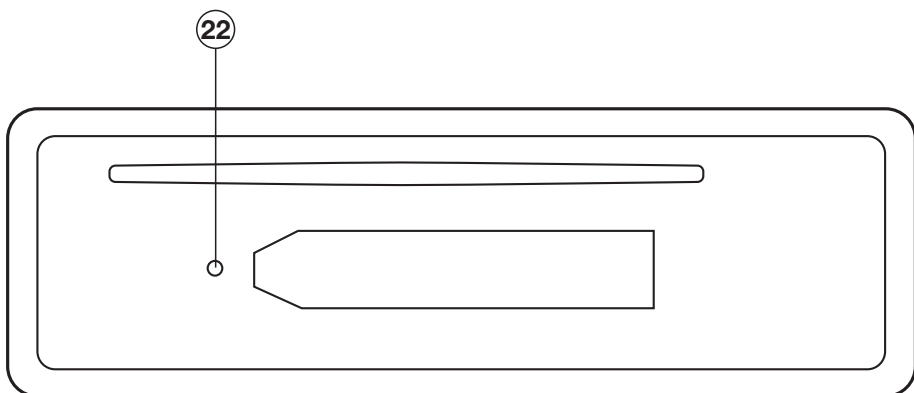
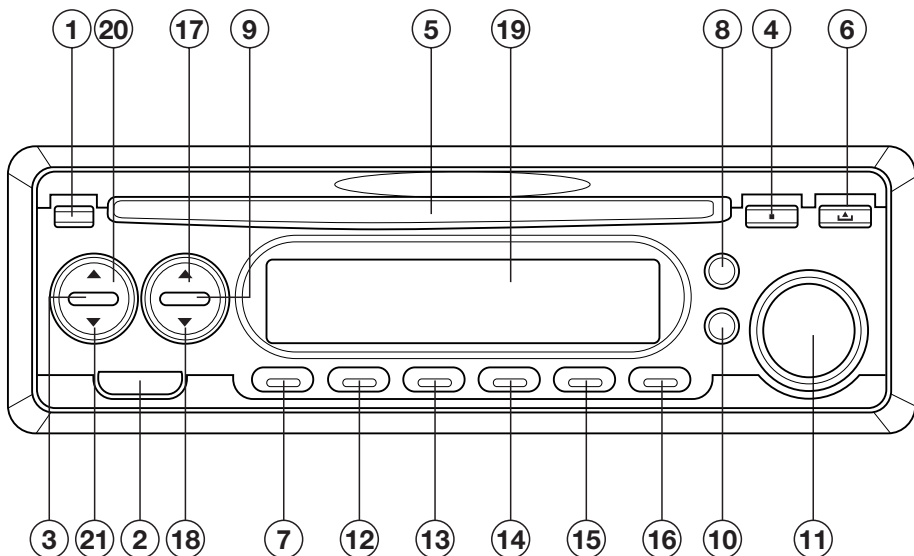
1. Do not drop the front panel.
2. Do not put pressure on the display or control buttons when detaching or reinstalling the front panel.
3. Do not touch the contacts on the front panel or on the main unit body. It may result in poor electrical contact.
4. If any dirt or foreign substances adhered on the contacts, they can be removed with a clean and dry cloth.
5. Do not expose the front panel to high temperatures or direct sunlight.
6. Keep away any volatile agents (e.g. benzene, thinner, or insecticides) from touching the surface of the front panel.
7. Do not attempt to disassemble the front panel.

WIRING CONNECTION



OPERATION

LOCATION OF KEYS



OPERATION

modes

GENERAL OPERATION

• ON/OFF

Switch on the unit by pressing any button (except **▲** button (6) and **▲** button (4)). When system is on, press **POWER** button (1) to turn off the unit.

• FACEPLATE RELEASE

Press **▲** button (6) to detach the removable faceplate.

• LOUDNESS

For the unit with two bands only:

Press and hold **BND(LOU)** button (8) for several seconds to show the loudness state. And shortly Press it again to turn on/off the bass output. In CD mode, press **BND (LOU)** button (8) shortly to show the loudness state. And shortly press it again to turn on/off the bass output.

• SET THE CLOCK

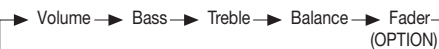
Press **DSP** button (9) shortly to switch display mode according to display priority set mode.

Press and hold **DSP** button (9) for several seconds until the clock is shown on the display and flashes, then press **VOL▲/▼** button (20/21) to change hours or the minutes.

• SELECT AUDIO MODE

Press **SEL/MENU** (3) shortly to change audio mode through volume, bass, treble, balance, and fader modes.

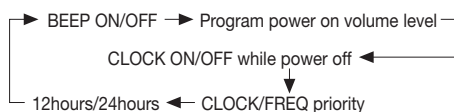
Press the **VOL▲/▼** button (20/21) to adjust the selected mode. When the currently displayed function has not been adjusted for several seconds, the mode shall return to volume position and display will return to normal radio, CD display.



• MENU SELECTION FUNCTION

Press and hold **SEL/MENU** (3) for several seconds to enter menu select function, then **step** shortly press

SEL/MENU (3) to select different set mode and then to Press the **VOL ▲/▼** button (20/21) to select your choice from the following order.



BEEP ON/OFF

- When beep on, the beep is generated when every button is pressed.
- When beep off, the beep is disabled when any button is pressed.

Program power on volume level

In this mode, you can set the desired volume level when the unit turns on.

CLOCK ON/OFF while power off

In this mode, you can select if the clock is to be displayed while power off.

NO PRI/CLOCK/FREQ priority

- When select No Priority:
When the frequency appears on the unit, pressing **DSP** button (9) will display clock and it will not return to frequency display until **DSP** button (9) pressed again. When the clock appears on the unit, pressing **DSP** button (9) will display frequency information.
- When select Clock Priority:
The clock will appear on the unit all the time. Pressing **DSP** button (9) while in Clock Priority will temporarily display selected station frequency (in **RADIO** mode) or track number (in **CD** mode) and then returns to clock display.
- When select Frequency Priority:
The frequency will appear on the unit all the while. Pressing **DSP** button (9) while in Frequency Priority will temporarily display clock and then returns to frequency display.

12hours/24hours

In this mode, you can set 24 hours mode or 12 hours mode.

When the currently displayed function has not been adjusted for several seconds, it will exit menu set mode.

• MUTE

In radio mode, press **▶/MUT** button

OPERATION

(2) shortly to mute down sound. Press it again to release this mode and recover previous volume level.

• EQUALIZATION

Press **EQ** button (10) shortly to turn on equalization function and to select desired audio mode. There are four kinds of mode as below:



In FLAT, CLASS, POP M, ROCK M mode, can't adjust the BASS and ~~treble~~ level.

Only in USER SET mode, you can adjust the BASS and ~~TREBLE~~ level.

• SELECT MODE

Press **MOD** button (7) repeatedly to select among the following sources:



If no CD is present, CD mode will be skipped.

• LIQUID CRYSTAL DISPLAY

The **LCD** (19) can show the current state of the unit.

• RESET FUNCTION

RESET button (22) must be activated with either a ballpoint pen or thin metal object. The **RESET** button is to be activated for the following reasons:

- Initial installation of the unit when all wiring is completed.
- All the function buttons do not operate.
- Error symbol on the display.

Note: If you press the **RESET** button (22) and, the unit still does not work ~~yet~~, please use a cotton swab soaked in isopropyl alcohol to clean the socket on the front panel.

RADIO OPERATION

• SWITCHING TO RADIO MODE

Press **MOD** button (7) to select radio mode, the radio mode appears in the display together with the memory band.

• BAND

TREBLE with two bands only, press button (8) shortly to change bands as below:



• SELECT STATION

Rotate **TUNE** knob (11) clockwise or counter-clockwise to adjust the frequency upward or downward.

• LOCAL/DISTANT

Press the **LOC** button (12) to select between local setting for reception of strong station and distant setting for reception of weak stations when tuning.

• MONO/STEREO

In **FM** band, press **MON** button (13) shortly to select mono or stereo reception for radio stations. You can sometimes improve reception of distant stations by selecting mono operation.

CD OPERATION

• SWITCHING TO CD MODE

If there is no CD inserted in the driver:

Gently insert the CD with the printed side uppermost into the disc slot (5) until you feel some resistance. The CD is drawn into the driver automatically. CD playback begins.

If a CD is already inserted in the driver:

Keep pressing **MOD** button (7) shortly until the CD mode display appears.

• EJECTING A DISC

Press **▲** button (4) to stop CD play and eject CD from slot. Receiver switches to radio operation.

OPERATION

• PAUSING CD

Press **▶||** button (2) shortly to pause CD player. Press it shortly again to resume playback.

• SELECTING TRACKS

Press **TRACK ▼** button (18) or **TRACK ▲** (17) to choose the previous track or the following track. Track numbers show on display.

Hold **TRACK ▼** button (18) or **TRACK ▲** button (17) for several seconds to fast reverse or fast forward. Release the button to stop fast playing.

• REPEATING THE SAME TRACK

Press **RPT** button (15) to continuously repeat playing the current track. Press it again to release this mode.

• PREVIEWING ALL TRACKS

Press **SCN** button (14) to play first several seconds of each track. Press it again to stop intro and listen to track.

• PLAYING ALL TRACKS IN RANDOM

Press **SHF** button (16) to play all tracks in random order. Press it again to cancel the function.

MP3 OPERATION

• SWITCHING TO CD (MP3) MODE

If there is no MP3 disc inserted in the driver:

Gently insert the MP3 disc with the printed side uppermost into the disc slot (5) until you feel some resistance. The MP3 disc is drawn into the driver automatically. The MP3 playback begins.

If a MP3 disc is already inserted in the driver:

Keep pressing **MOD** button (7) shortly until the CD (MP3) mode display appears.

• EJECTING A DISC

Press **▲** button (4) to stop MP3 play and eject MP3 from slot. Receiver switches to radio operation.

• PAUSING MP3

Press **▶||** button (2) shortly to pause the player. Press it shortly again to resume playback.

• SELECTING TRACKS

Press **TRACK ▼** button (18) or **TRACK ▲** button (17) to choose the previous track or the following track. Track numbers show on display.

Hold **TRACK ▼** button (18) or **TRACK ▲** button (17) for several seconds to fast reverse or fast forward. Release the button to stop fast playing.

• REPEATING THE SAME TRACK

Press **RPT** button (15) to continuously repeat playing the current track. Press it again to release this mode.

Press and hold **RPT** button (15) to repeat playing all tracks in current directory. Second press and hold it for several seconds to release this mode.

• PREVIEWING ALL TRACKS

Press **SCN** button (14) to play first several seconds of each track. Press it again to stop intro and listen to track.

• PLAYING ALL TRACKS IN RANDOM

Press **SHF** button (16) to play all tracks in random order. Press it again to cancel the function.

If the tracks is CD+MP3/WMA MIX CD, press and hold **SHF** (16) button for several seconds to change the playing from CD track to MP3/WMA file or reverse.

• SELECTING TRACKS BY MP3 BUTTON

BND/LOU/D-AUD button (8) is assigned as Digital Audio Mode selection button in MP3 operation. When pressed, it is activated as selecting each mode of MP3/WMA. "Searching track directly" => "Searching Directory or File Name" => "Navigation" from root by **VOL▲ / ▼** buttons (20/21) or **TRACK▲ / ▼** buttons (17/18) => "Navigation" from current directory by **VOL▲ / ▼** buttons (20/21)

OPERATION

or **TRACK▲ / ▼** button (17/18).

- **Searching Track Directly**

Press **BND/LOU/D-AUD** button (8) for one time. It enters into “Searching track directly” in MP3/WMA disc. Select desired track number by pressing **VOL▲ / ▼** buttons (20/21) or **TRACK▲ / ▼** buttons (17/18), then press **MOD (ENT)** button (7) shortly.

Note:

When you choose a track, the unit will play the track after few seconds, even if the **MOD (ENT)** button (7) is not pressed.

- **Searching Directory or File Name**

Press the **BND/LOU/D-AUD** button (8) for two times. It enters into “Searching Directory or File Name” in MP3/WMA CD. The unit searches files and directories by name which is designated by the user with the **VOL▲ / ▼** buttons (20/21) or **TRACK▲ / ▼** buttons (17/18).

Explain as follows:

- Use **VOL▲ / ▼** buttons to select the characters A to Z, blank, 0 to 9, **_**, **-**, **+**.

- Press **SEL** button (3) to confirm entry of each characters.

- Press **B-SPACE** button (13) to clear and modify the wrong characters.

Press **MOD (ENT)** button

- (7) to start to play the song.

- In case the selected title is a

- directory name, display will show (‘ ’), then

- Use the **VOL /** buttons (20/21) to list all songs under this directory and select the title.

- Press **MOD (ENT)** button (7) to confirm and start to play.

- Repeat the above steps if the newly selected title is again a directory.

- If the file can not be found “NO FOUND” will display on the front panel display.

- **Searching From Root Directory**

Press **BND/LOU/D-AUD** button (8) for three times. The unit searches file or directory from root by **VOL▲ / ▼** buttons or **TRACK▲ / ▼** buttons (17/18) (20/21). Display will list all

available directories and songs. Select the desired directory/songs by using **VOL▲ / ▼** buttons (20/21) and **MOD (ENT)** button (7) to confirm. If the selected title is a song, it starts to play. If the selected title is a directory name, display will show (‘ ’), then

- Use the **VOL▲ / ▼** buttons (20/21) to list all songs under this directory and select the title.

- Press **MOD (ENT)** button (7) to confirm and start the play.

- Repeat the above steps if the newly selected title is again a directory.

- **Searching From Current Directory**

Press **BND/LOU/D-AUD** button (8) for four times. The unit searches file or directory from current directory by **VOL▲ / ▼** buttons (20/21) or **TRACK▲ / ▼** buttons (17/18). The current directory name is displayed for a second and the currently playing file name is displayed (selected). The user can select the directory or file in the directory by **VOL▲ / ▼** buttons (20/21). The selected file can be played by pressing **MOD (ENT)** button (7).

NOTE:

Use **VOL▲ / ▼** buttons (20/21) can change the track one by one.

Use **TRACK▲ / ▼** buttons (17/18) can change the track ten by ten.

- **DISPLAY INFORMATION**

Press **DSP** button (9) to show the following information, such as the clock, ID3 TAG (if available: song title, directory name, artist name, other contents...) and other information.

WMA OPERATION

The unit that can play the WMA disc and the operation is the same with MP3 operation described above.

OPERATION

DISC NOTES:

A. Notes on discs:

1. Attempting to use nonstandard shape discs (e.g. square, star, heart) may damage the unit. Be sure to use round shape CD discs only for this unit.
2. Do not stick paper or tape etc., onto the label side or the recording side of any discs, as it may cause a malfunction.
3. Dirt, dust, scratches and warping discs will cause misoperation.

B. Notes on CD-Rs (recordable CDs)/CD-RWs (rewritable CDs):

1. Be sure to use discs with following marks only for the unit to play:



2. The unit cannot play a CD-R and CD-RW that is not finalized.
(Please refer to the manual of your CD-R/CD-RW recorder or CD-R/CD-RW software for more information on finalization process).

3. Depending on the recording status, conditions of the disc and the equipment used for the recording, some CD-Rs/CD-RWs may not be played on this unit. (See *1)

*1: To have more reliable play back, please see following recommendations:

- a. Use CD-RWs with speed 1x to 4x and write with speed 1x to 2x.
- b. Use CD-Rs with speed 1x to 8x and write with speed 1x to 2x.
- c. Do not play a CD-RW which has been written for more than 5 times.

SPECIFICATION

GENERAL

Power Supply Requirements : DC 12 Volts, Negative Ground
Chassis Dimensions : 178 (W) x 163 (D) x 50 (H)
Tone Controls
- Bass (at 100 Hz) : ± 7 dB
- Treble (at 10 KHz) : ± 7 dB
Maximum Output Power : 40W x 4 (ch) (max.)
Current Drain : 15 Ampere (max.)

CD PLAYER

Signal to Noise Ratio : More than 55 dB
Channel Separation : More than 40 dB
Frequency Response : 50 Hz - 15 KHz

RADIO

FM

Frequency Coverage : 88 to 108 MHz
IF : 10.7 MHz
Sensitivity (S/N = 30 dB) : 15 μ V
Stereo Separation : > 25 dB

AM

Frequency Coverage : 530 to 1710 KHz
IF : 450 KHz
Sensitivity (S/N = 20 dB) : 38 dBu

TROUBLE SHOOTING

Before going through the check list, check wiring connection. If any of the problems persist after check list has been made, consult your nearest service dealer.

Symptom	Cause	Solution
No power.	The car ignition switch is not on.	If the power supply is connected to the car accessory circuits, but the engine is not moving, switch the ignition key to "ACC".
	The fuse is blown.	Replace the fuse.
Disc cannot be loaded or ejected.	Presence of CD disc inside the player.	Remove the disc in the player, then put a new one.
	Inserting the disc in reverse direction.	Insert the compact disc with the label facing upward.
	Compact disc is extremely dirty or defective disc.	Clean the disc or try to play a new one.
	Temperature inside the car is too high.	Cool off or until the ambient temperature return to normal.
	Condensation.	Leave the player off for an hour or so, then try again.
No sound.	Volume is in minimum.	Adjust volume to a desired level.
	Wiring is not properly connected.	Check wiring connection.
Sound skips.	The installation angle is more than 30 degrees.	Adjust the installation angle to less than 30 degrees.
	The disc is extremely dirty or defective disc.	Clean the compact disc, then try to play a new one.
The operation keys do not work.	The built-in microcomputer is not operating properly due to noise.	Press the RESET button. Front panel is not properly fixed into its place.
The radio does not work. The radio station automatic selection does not work.	The antenna cable is not connected.	Insert the antenna cable firmly.
	The signals are too weak.	Select a station manually.