LG

Car CD/MP3/WMA Receiver

OWNER'S MANUAL
MODEL : LAC-M4510R

COMPACT
disc
DIGITAL AUDIO

MP3
CD-R/RW

Plays
Windows
Media™

R·D·S

Please read this instruction booklet carefully and completely before connecting, operating or adjusting this product.

Table of Contents

Disposal of your old appliance

1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.

2. All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.

3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.

4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product.

Safety Precautions
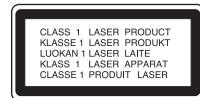
CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

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.

Warning: Due to high temperature outside of the unit, please use the unit only installed in a car.

CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT
LUOKAN 1 LASER LAITE
KLASS 1 LASER APPARAT
CLASSE 1 PRODUIT LASER

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 the laser beam, do not open the enclosure. Visible laser radiation when open. DO NOT STARE INTO BEAM.

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

Symbols 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.

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 fuseone with an identically rated amperage. Use of a fuse with a 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.
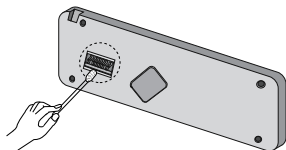
Notes on Discs

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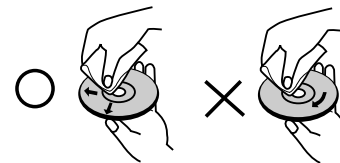
Do not use strong solvents such as alcohol, benzine, thinner, commercially available cleaners, or anti-static spray intended for older vinyl records.

This unit cannot be operated with 8cm disc (use 12cm discs only).

8 cm

Protecting your unit from theft

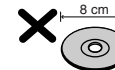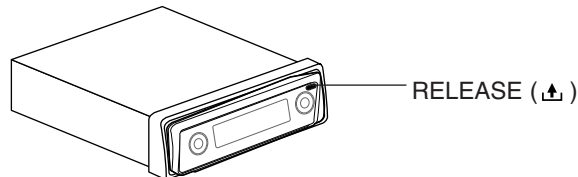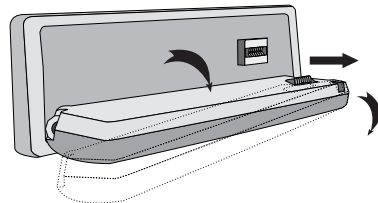The front panel can be detached from the main body and stored in the protective case provided to discourage theft.

1. Press **RELEASE (⏏)** to open the front panel.

RELEASE (⏏)

2. Push the front panel to the right.
3. Pull the front panel.

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

Protective case
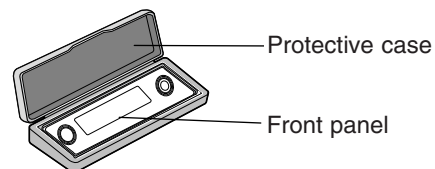
Front panel

Attaching the front panel
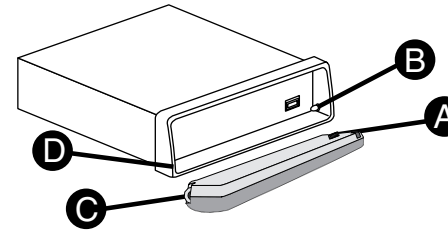
1. Place **A** on the front panel to **B** on the main unit.
2. Join **C** the front panel to **D** on the main unit by pushing it to the right.
3. Close the front panel

NOTES
• When detaching or attaching the front panel, do not press the display or control buttons.
• The control buttons may not work if the front panel is not attached properly. If this occurs, gently press the front panel.
• Do not leave the front panel in any area exposed to high temperatures or direct sunlight.
• Do not drop the front panel or otherwise subject it to severe impacts.
• Do not allow volatile agents such as benzine, thinner, or insecticides to come into contact with the surface of the front panel.
• Do not try to disassemble the front panel.

INTRODUCTION

Front Panel
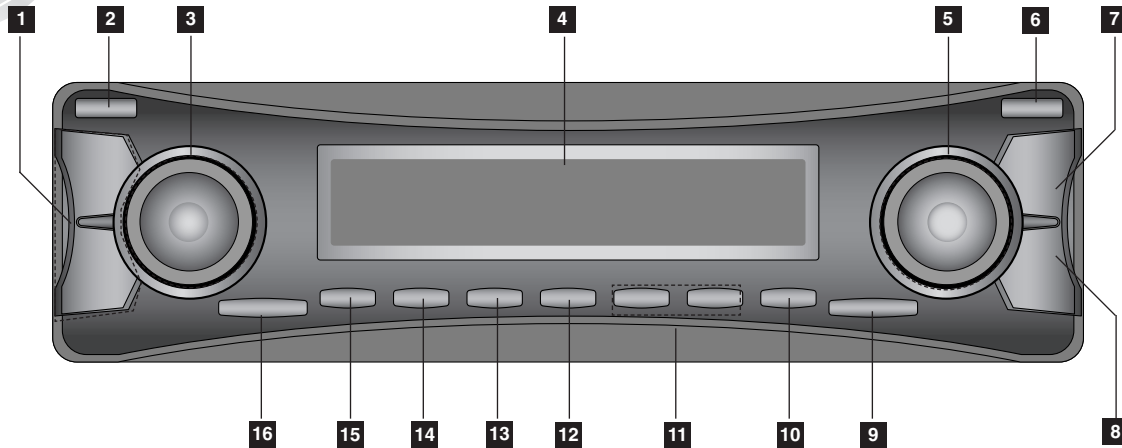
1. • VOLUME (VOL.-/+) button
   • CONTROL UP/DOWN button
2. PWR/MUTE button
3. • CD SKIP/SEARCH (|◀ / ▶|) button
   • SEEK/TUNE (-/+) button
4. DISPLAY WINDOW
5. • PTY/TA button
   • ALTERNATIVE FREQUENCIES/REGIONAL (AF/REG) button
   • DISPLAY (DISP) button
6. RELEASE (⏏) button
7. FUNCTION (FUNC) button

8. EQUALIZER/XDSS (EQ/XDSS) button
9. SELECTION (SEL.) button
10. AUTO STORE/PRESET SCAN (AS/PS) button
11. MP3/WMA TRACK -/+10 button
12. SHUFFLE (SHF) button
13. REPEAT (RPT) button
14. INTRO SCAN (SCAN) button
15. CD PLAY/PAUSE (▶/||) button
16. BAND button
11, 12, 13, 14, 15 Preset Station buttons. (1-6)

Basic Installation

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

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

Removing existing receiver unit
If there already is a mounting sleeve for the receiver unit in the dashboard, it must be removed.

When removing the unit from the mounting sleeve
If you need to remove the unit from the mounting sleeve, proceed as follows.

1. Remove the rear support 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. Perform the same operation on the other side and pull the unit out from the mounting sleeve.

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 the dash opening.
4. Mount the dash panel or adapter plate.
5. Mount the trim ring onto the unit.
6. Install the faceplate by sliding the right edge into position and then pushing the left edge closed.

Bend the claws according to the thickness of the dashboard
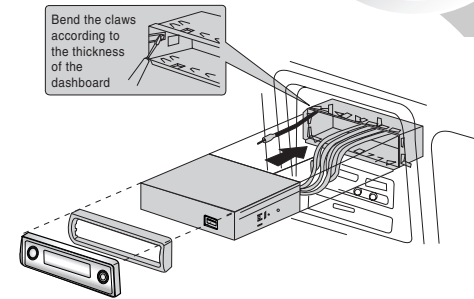
PREPARATION
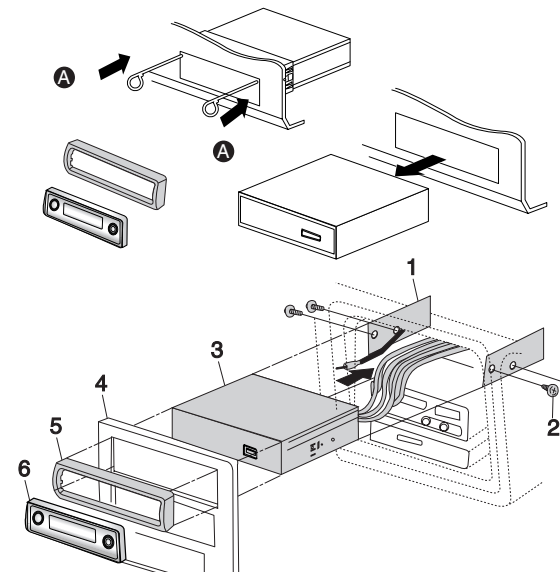
Connections

Connecting to the Car

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

A

B

1 GND (BLACK)

2 PHONE (ORANGE)

3 DIMMER (PINK)

DIMMER SWITCH

4 TO IGNITION (RED)

IGNITION SWITCH

5 TO BATTERY. $\oplus$ (YELLOW)

BATTERY

6 PWR ANT (BLUE)

POWER ANTENNA

CONTROL RELAY

7 REMOTE ON (BLUE/WHITE STRIPE)

POWER AMPLIFIER (optional)

C

❶ WHITE (FL +)
❷ WHITE/ BLACK STRIPE (FL -)
❸ GRAY (FR +)
❹ GRAY/ BLACK STRIPE (FR -)
❺ GREEN (RL +)
❻ GREEN/ BLACK STRIPE (RL -)
❼ VIOLET (RR +)
❽ VIOLET/ BLACK STRIPE (RR -)
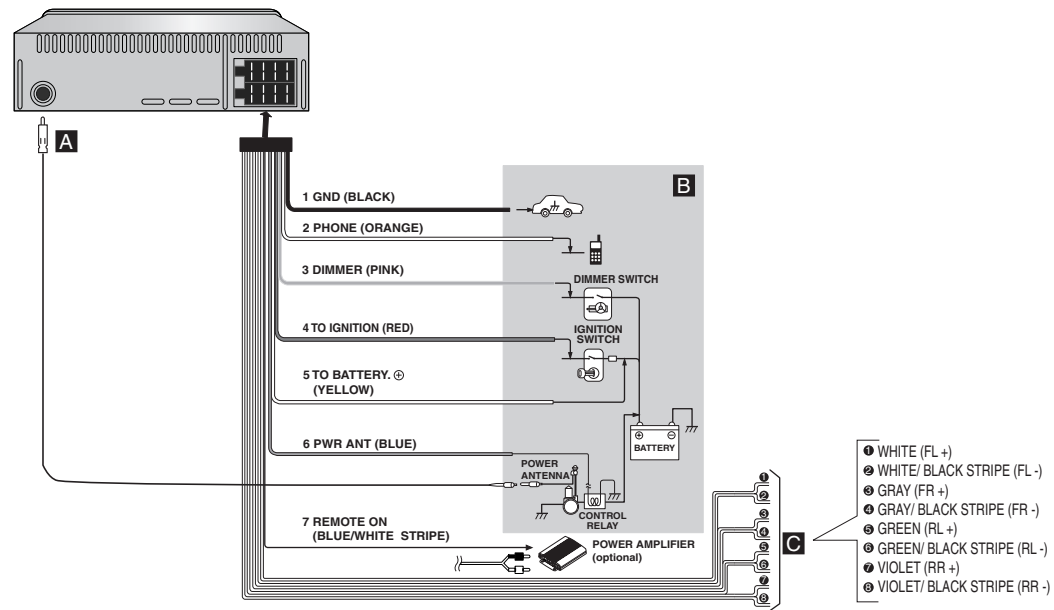
Connections

Connecting to the Car

A **From the antenna**

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

1 BLACK : This lead is for the Ground connection.

2 ORANGE : This lead is for the phone line connection.

3 PINK : This lead is for the Dimmer line connection.

4 RED : This lead is for connection to the power supply terminal when the ignition switch is set to ACC.

5 YELLOW : This lead is for connection to the Battery (back-up) terminal from which power is always supplied.

6 BLUE : This lead is for the power antenna connection.

7 BLUE/WHITE STRIPE : This lead is for the remote amplifier on connection.

C **Speaker Connections**

L R L R
FRONT   REAR
Impedance 4Ω   Impedance 4Ω

9
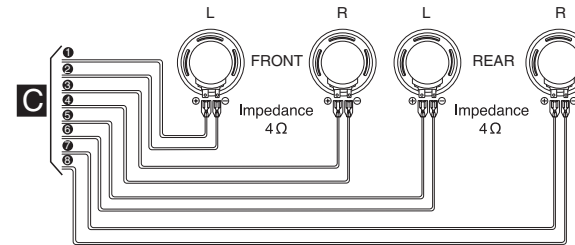
Turning the unit on

Press **PWR/MUTE** or any other button on the front panel.

Turning the unit off

Press **PWR/MUTE** on the front panel 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 **FUNC.** to select a source.
Press **FUNC.** repeatedly to switch between the following sources:
Tuner → CD → Tuner...

NOTE
• When you turn the unit off, the current volume level is automatically memorized. Whenever you turn the unit back on, it will operate at the memorized volume level.

Adjusting the volume

Use VOLUME to adjust the sound level.
Press **VOLUME (VOL+/-)** button on the front panel to increase or decrease the volume.

Checking the clock

You can see the clock pressing **DISP** for more than 1 second.

NOTES
• 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 the acoustic characteristics of the car's interior as desired.
There are 5 stored equalizer curves which you can easily recall at any time.

Here is a list of the equalizer curves:

- EQ POP : Reproduces pop music acoustics.
- EQ CLASSIC : Reproduces orchestral music acoustics.
- EQ ROCK : Reproduces rock music acoustics.
- EQ JAZZ : Reproduces jazz music acoustics.
- EQ VOCAL: Reproduces vocal music acoustics.

1. Press **EQ/XDSS** on the front panel to select the equalizer.
2. Press **EQ/XDSS** repeatedly to choose between the following Equalizer settings.
   POP → CLASSIC → ROCK → JAZZ → VOCAL
   → FLAT (NO display) → POP....

MUTE

1. Press **PWR/MUTE** to cut the sound.
2. To cancel it press **PWR/MUTE** again.

SELECTION (SEL) Button

1. Press the **SELECTION (SEL.)** button repeatedly to select the mode you want to adjust from volume, bass, treble, balance and fader. The mode indicator lights up in the following order.

$$\rightarrow VOL \rightarrow BAS \rightarrow TRB \rightarrow BAL \rightarrow FAD \rightarrow$$

2. Press CONTROL UP **(VOL+)** or DOWN **(VOL-)** to adjust the sound quality.

	Turn right	Turn left
VOL	Increase the volume level.	Decrease the volume level.
BAS	Increase the bass level.	Decrease the bass level.
TRB	Increase the Treble level.	Decrease the Treble level.
BAL	Decrease the level of the left speaker(s).	Decrease the level of the right speaker(s).
FAD	Decrease the level of the front speaker(s).	Decrease the level of the rear speaker(s).

NOTE
The unit cannot adjust the bass and treble in the **EQ/XDSS** on mode.

XDSS (Extreme Dynamic Sound System)

Press and hold the **EQ/XDSS** button to reinforce treble, bass and surround effect.

OPERATION

RDS Operation

RDS Display Options

In normal RDS operation the display will indicate the station name. Pressing **DISP** on the front panel enables you to cycle through the various data types in the sequence:

(CT→FREQUENCY→PTY→RT→PS)
- **CT** (Time controlled by the channel)
- **PTY** (Program type recognition)
- **RT** (Radio text recognition)
- **PS** (Program Service name)
- **PI** (Program Identification)
- **AF** (Alternative Frequencies for the actual program)
- **TP** (Traffic Program Identification)
- **TA** (Traffic Announcement Identification)
- **EON** (Enhanced Other Networks)

NOTES
- RDS is only available for FM reception.

RDS AF/REG FUNCTION

To switch on or off the AF function (Network-Tracking), shortly press the **'AF'** button. To switch on or off the REG function (Regional Network Tracking), long press the **'AF'** button more than 2 seconds).

LOCAL/DX selection in EON-TA mode
In the EON-TA mode, pressing the TA button for more than 2 seconds, causes only local and strong stations to be received. When the TA button is pressed for more than 2 seconds, it receives all stations, including distant and weak ones. It is recommended to set the TA button to the local position to receive local stations with good sound quality.

PROGRAM TYPE FUNCTION

To select a certain program type out of the reception band, the following procedure can be used.
1. Press **BAND** to select in FM mode.

2. After, press the **PTY** button repeatedly for selecting each mode.

   music group→speech group→search off

3. Short press one of the **PRESET (1-6)** buttons. Each time this button is pressed, the display mode changes as follows.

No	Music group
1.	Pop M, Rock M
2.	Easy M, Light M.
3.	Classics, Other M
4.	Jazz, Country
5.	Nation M, Oldies
6.	Folk M
No	Speech group
1.	News, Affairs, Info
2.	Sport, Educate, Drama
3.	Culture, Science, Varied
4.	Weather, Finance, Children
5.	Social, Religion, Phone In
6.	Travel, Leisure, Document

RDS MODE Adjustment

1. Pressing the **SEL** button for more than 2 seconds activats the selec mode.

2. After, pressing **SEL** button repeatedly for selecting.

3. Press CONTROL UP **(VOL+)** or DOWN **(VOL-)** to select the indicator.

TA SEEK mode

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

TA ALARM mode

When a newly tuned station has no TP information for 5 sec, a double beep sound is ouput.

PI SOUND mode

If the sound of a station with different PI is heard intermittently, the receiver mutes the sound after 1 second.

PI MUTE mode

If the situation described above is repeated, the receiver instantly mutes the sound.

RETUNE L mode

The waiting time for starting TA search or PI search is programmable. Retune time is set to 90 seconds.

RETUNE S mode

The waiting time for starting TA search or PI search is selectable.Retune time is set to 30 seconds.

BEEP 2ND mode

The beep is only generated when a key is long pressed (1 sec)

BEEP ALL mode

The beep is generated when any key is pressed.

Radio Operation

Listening to radio stations

1. Press the **PWR/MUTE** button to turn the unit on.

   - When you select a source the unit is turned on.

2. Press the **FUNC.** button to select the tuner.

3. Press the **BAND** button to select a band.

   - Press the **BAND** button until the desired band is displayed, FM1, FM2, FM3, MW(AM).

4. To perform seek tuning, press the ⏮ / ⏭ with quick presses.

   - The tuner will scan the frequencies until a broadcast with strong enough reception is found.

   - You can cancel seek tuning by pressing the ⏮ / ⏭ with quick presses.

5. To perform manual tuning, press and hold the ⏮ / ⏭ for 1 second. And then press the ⏮ / ⏭ with quick presses.

   - The frequencies move up or down step by step.

NOTES

- When the selected frequency is being broadcast in stereo, the "$\overset{ST}{((\cdot))}$" indicator will light.

Auto Search Memory

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

1. Press the **FUNC.** button to select the tuner.

2. Press the **AS/PS** button on the front panel for about 1 second.

   - 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 automatic presetting is performed, the previous preset stations are automatically erased.
- To stop the automatic presetting, press the BAND or the AS/PS button.

To scan the preset stations

Press **AS/PS** button on the front panel.
To stop the scanning, press **AS/PS** button.

To tune in the preset stations

Press BAND to select the desired band and press the desired number buttons (1-6).
The number of the preset station button is displayed and the preset station is received.

Storing and recalling broadcast frequencies

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

1. Select the desired frequency

2. Press one of the **preset station** buttons (1 - 6) for more than 1 seconds. The number of the pressed preset station button is displayed.

3. Repeat steps 1 and 2 to preset other stations.

NOTES

- As F1, F2, F3 have the same frequency range, up to 18 station can be preset for FM.
- When a station is preset on the preset station button on which another station of the same band has already been preset, the previously preset station is automatically erased.

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 18.

Pause `CD` `MP3` `WMA`

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

Moving to another Track `CD` `MP3` `WMA`

- Press the ⏮ / ⏭ briefly during playback to go to the next track or to return to the beginning of the current track.
- Press the ⏮ twice briefly to step back to the previous track. (If playing times is in less then 3 seconds and then this function is not operated.)

Search `CD`

Press and hold the ⏮ / ⏭ for about 1 second during playback and then release at the point you want.

OPERATION

Repeat

1. Press **RPT** during playback. `CD` `MP3` `WMA`
   The "RPT" appears in the display window.
   (All of the music on the disc is played repeatedly)

2. Press **RPT** again.
   The "RPT" disappears in the display window.
   (The repeat mode is cancelled.)

Random

1. Press **SHF** during playback. `CD` `MP3` `WMA`
   The "SHF" appears in the display window.
   (All of the music on the disc is played randomly)

2. Press **SHF** again.
   The "SHF" disappears in the display window.
   (The random playback is cancelled.)

NOTE

• During random playback, if you press ◄ button, you won't go back to the previous track.

MP3/WMA TRACK -10/+10

Durning playback, press the -10 button to go back to the previous 10th track, and press +10 button to go forward to the next 10th track.

Intro scan

1. Press **SCAN**. `CD` `MP3` `WMA`
   The "SCAN" appears in the display window.
   (The first 10 seconds of all of the songs on the disc is played)

2. Press **SCAN** again.
   The "SCAN" disappears in the display window.
   (The intro scan is cancelled.)

ID 3 TAG `MP3` `WMA`

When playing a disc containing information, you can see the information (ID3 TAG, Title, Artist and Album) in the display window. If there is no information "NO TEXT" will be shown in the display window.

Press the **DISP** button twice during MP3/WMA file playback.

Troubleshooting

Symptom	Cause	Correction
Power doesn't turn on. The unit doesn't operate.	• Leads and connectors are not properly connected. • The fuse is blown. • Noise and other factors are causing the built-in microprocessor to operate incorrectly.	• Confirm once more that all connections are correct. • Rectify the problem that caused the fuse to blow, and then replace it. Be very sure to install the correct fuse with the same rate. • Turn the unit off and then on.
Playback is not possible.	• The disc is dirty. • The loaded disc is of a type this unit cannot play.	• Clean disc. • Check what type the disc is.
No sound is heard. The volume level will not rise.	• Cables are not connected correctly.	• Connect the cables correctly.
There's no sound.	• The volume level is low.	• Adjust the volume.
There's audio skipping.	• This unit is not firmly secured.	• Secure this unit firmly.

Specifications

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

1. Sampling Frequency / 32 - 48kHz (MP3)
   22.05-48kHz (WMA)
2. Bit rate / within 32 - 320kbps (include VBR) (MP3)
   16-192kbps (WMA)
3. CD-R/CD-RW physical format should be "ISO 9660"
4. If you record MP3/WMA files using 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.

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.

General
Output Power . . . . .50W x 4CH(Max.)
Power Source . . . . .DC 12 V
Speaker impedance . . . . .4 Ω
Ground System . . . . .Negative type
Dimensions (W x H x D)182 x 51 x 173 mm (Without Front Panel)
Net Weight (approx.) . . . . .1.8 kg

FM tuner
Frequency Range . . . . .87.5-107.9MHz or
                    87.5-108 MHz or 65-74 MHz, 87.5-108 MHz
S/N Ratio . . . . .55 dB
Distortion 1.0%
Usable sensitivity . . . . .12 dBµV

MW(AM) tuner
Frequency Range . . . . .520-1720kHz or 522-1620 kHz
S/N Ratio . . . . .45 dB
Distortion 1.0%
Usable sensitivity . . . . .32 dBµV

CD
Frequency Response . . . . .40 - 20000 Hz
S/N Ratio . . . . .70 dB
Distortion 0.15%

● Design and specifications are subject to change without notice.