

Declaration of Conformity with regard to the R&TTE Directive 1999/5/EC
Déclaration de Conformité relative à la Directive 1999/5/CE
Konformitätserklärung nach der R&TTE Directive 1999/5/EC
Dichiarazione di conformità con la Direttiva R&TTE 1999/5/CE
Conformiteitsverklaring betreffende de R&TTE directief 1999/5/EC
Declaración de Conformidad en referencia a la Directiva R&TTE 1999/5/EC
Deklaration om Överensstämmelse med hänseende till R&TTE-direktivet 1999/5/EC
Declaração de Conformidade no que diz respeito à Directiva R&TTE 1999/5/EC

Manufacturer: Clarion (Malaysia) Sdn. Bhd. Phase 3, Free Industrial Zone, 11900 Bayan Lepas, Penang, Malaysia.	EU Representative's: Clarion Europa GmbH Hessering 19-21 64546 Mörfelden - Walldorf Germany.
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English:

Hereby, Clarion declares that this unit FB278RBT is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Français:

Clarion déclare par la présente que cet appareil, FB278RBT, est en conformité avec les exigences essentielles et autres dispositions pertinentes de la Directive 1999/5/CE.

Deutsch:

Hiermit erklärt Clarion, dass dieses Gerät FB278RBT die wesentlichen Anforderungen und sonstigen Vorschriften der Directive 1999/5/EC erfüllt.

Italiano:

Con la presente, Clarion dichiara che questa unità FB278RBT è conforme con i requisiti essenziali ed altre norme rilevanti della Direttiva 1999/5/CE.

Nederlands:

Hierbij verklaart Clarion dat deze unit FB278RBT overeenkomstig is met de essentiële vereisten en andere relevante bepalingen van directief 1999/5/EC.

Español:

Por la presente, Clarion declara que esta unidad FB278RBT cumple los requisitos esenciales y otras condiciones importantes de la Directiva 1999/5/EC.

Svenska:

Härmed förkunnar Clarion, att denna enhet FB278RBT uppfyller de nödvändiga kraven samt andra relevanta bestämmelser i Direktiv 1999/5/EC.

Português:

A Clarion declara por este meio que a unidade FB278RBT cumpre com os requisitos essenciais e outras provisões relevantes da Directiva 1999/5/EC.

Clarion Co., Ltd.

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clarion®

Owner's manual
Mode d'emploi
Bedienungsanleitung
Istruzioni per l'uso
Gebruiksaanwijzing
Manual de instrucciones
Bruksanvisning
Manual de instruções

FB278RBT

Bluetooth® SD/MP3 RECEIVER
ÉMETTEUR SD/MP3 Bluetooth®
Bluetooth® SD/MP3 RECEIVER
RICEVITORE Bluetooth® SD/MP3
Bluetooth® SD/MP3 RECEIVER
RECEPTOR Bluetooth® SD/MP3
Bluetooth® SD-/MP3-RECEIVER
RECEPTOR Bluetooth® SD/MP3

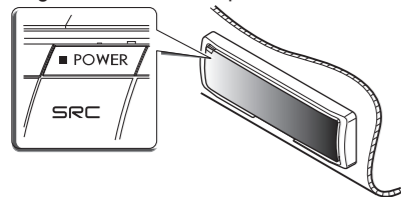
5. DCP (Detachable Control Panel)

The control panel can be detached to prevent theft. When detaching the control panel, store it in the DCP (Detachable Control Panel) case to prevent scratches.

We recommend taking the DCP with you when leaving the car.

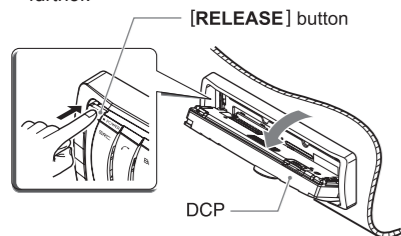
Removing the DCP

1. Press the [SRC] button for 1.5 seconds or longer to switch off the power.

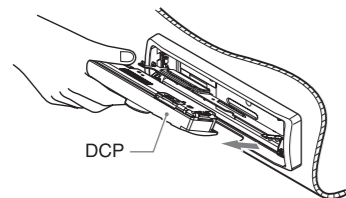


2. Press in the [RELEASE] button.

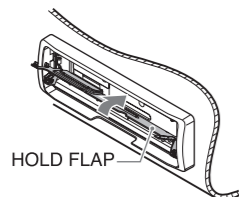
* The flip down panel can only be opened up to 65°, please do not forcibly push to open further.



3. Pull the DCP toward you and remove it.

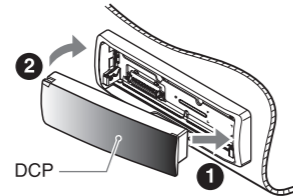


4. Close the HOLD FLAP.



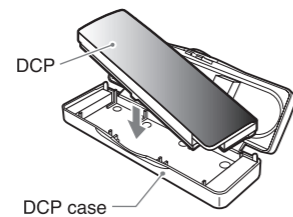
Attaching the DCP

1. Insert the right side of the DCP into the main unit.
2. Insert the left side of the DCP to attach into the main unit.



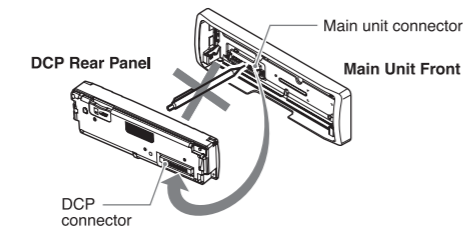
Storing the DCP in the DCP case

Hold the DCP, in the orientation as shown in the figure below, and put it into the supplied DCP case. (Ensure the DCP is in the correct orientation.)



CAUTION

- The DCP can easily be damaged by shock. After removing it, be careful not to drop it or subject it to strong shocks.
- The connector connecting the main unit and the DCP is an extremely important part. Be careful not to damage it by pressing on it with fingernails, pens, screwdrivers, etc.



Note:

- If the DCP is dirty, wipe off the dirt with a soft, dry cloth only.

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1. PRECAUTIONS

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to consult the dealer or an experienced radio/TV technician for help.

INFORMATION FOR USERS:

CHANGES OR MODIFICATIONS TO THIS PRODUCT NOT APPROVED BY THE MANUFACTURER WILL VOID THE WARRANTY.

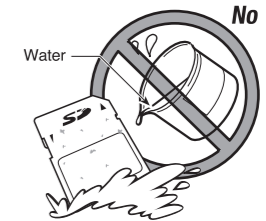
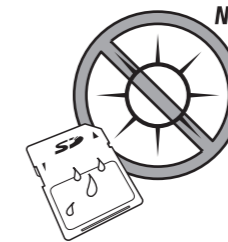
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2. HANDLING MEMORY CARD

SD/MMC Memory Card

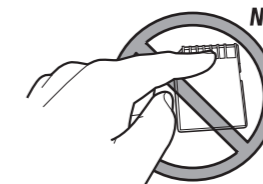
- Do not leave the card in vehicle where there is high temperature or direct sunlight or where electromagnetic waves or electrostatic are easily generated.



- Do not bend or drop the card. The card or the recorded content may be damaged.



- Do not touch the terminals on the back of the card with your fingers.

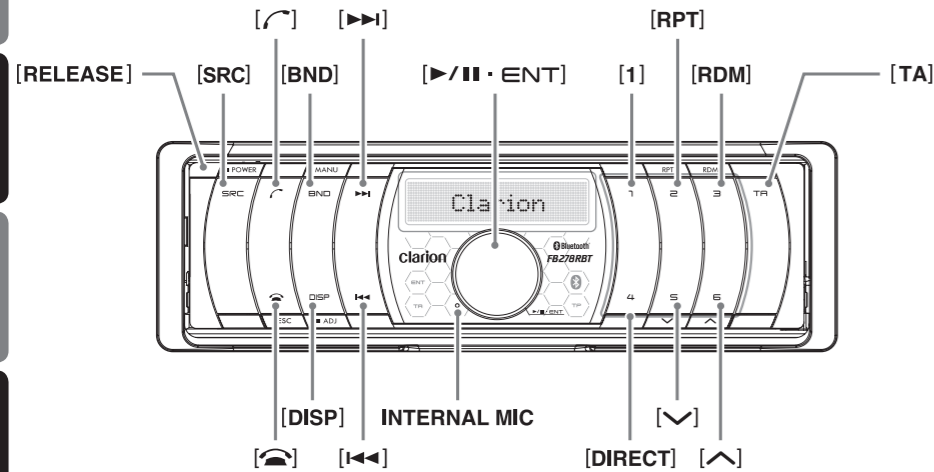


- Do not allow dirt, dust or water to enter it.

- When the card is being read, do not remove the card.
- After eject operation, always remove the memory card from the slot; otherwise, the flip down panel may not be closed properly.
- After usage, store the supplied memory card in the enclosed case.

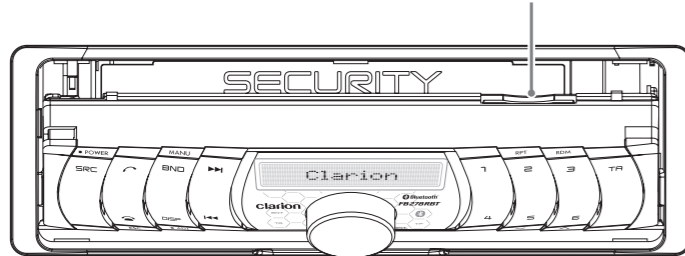
3. CONTROLS / LES COMMANDES / REGLER / CONTROLLI / REGELAARS / CONTROLES / KONTROLLER / CONTROLOS

MAIN UNIT / APPAREIL PRINCIPAL / HAUPTGERÄT / APPARECCHIO PRINCIPALE / HOOFDTOESTEL / UNIDAD PRINCIPAL / HUVUDENHET / UNIDADE PRINCIPAL



With the FLIP DOWN PANEL opened / Ouvrez le PANNEAU RABATTABLE
ÖFFNUNG DER KLAPPSCHALTAFEL / Apertura del PANNELLO APRIBILE
Met het NEERKLAPBARE PANEEL geopend / Apertura del PANEL ABATIBILE
DEN NEDFÄLLBARA PANELEN öppen / Abrindo o PAINEL RECLINÁVEL

SD/MMC MEMORY CARD SLOT / FENTE DE CARTE MÉMOIRE SD/MMC /
SD/MMC-SPEICHERKARTEN SCHLITZ / SLOT SCHEDA DI MEMORIA SD/MMC /
SLEUF VOOR SD/MMC-GEHEUGENKAART / RANURA PARA TARJETA DE MEMORIA SD/MMC /
SD-/MMC-MINNESKORTÖPPNING / SLOT DO CARTÃO DE MEMÓRIA SD/MMC



Note: Be sure to unfold this page and refer to the front diagrams as you read each chapter.

Remarque: Veuillez déplier cette page et vous référer aux schémas quand vous lisez chaque chapitre.

Hinweis: Bitte diese Seite ausfallen und beim Lesen der einzelnen Kapitel die Frontdiagramme beachten.

Nota: Assicurarsi di aprire questa pagina e fare riferimento a questi diagrammi quando si legge ciascun capitolo.

Opmerking: Vouw deze pagina uit en zie tevens de afbeeldingen van het voorpaneel tijdens het doorlezen van de volgende hoofdstukken.

Nota: Cuando lea los capítulos, despliegue esta página y consulte los diagramas.

Observera: Vik ut denna sida för att kunna se figurerna över bilstereons framsida medan du läser de olika kapitlen.

Nota: Certifique-se de abrir esta página e consulte os diagramas frontais conforme realiza a leitura de cada capítulo.

4. NOMENCLATURE

Notes:

- Be sure to read this chapter referring to the front diagrams of chapter "3. CONTROLS" on page 5.
- SD is the abbreviation of Secure Digital Card while MMC is the abbreviation of Multimedia card.

Names of the Buttons and Their Functions

SD/MMC MEMORY CARD SLOT

- SD/MMC memory card insertion slot.

[RELEASE] button

- Deeply push in the button to unlock the flip down panel.

[▶/||·ENT] knob

- Adjust the volume by turning the knob clockwise or counterclockwise.
- Press and hold the knob for 1.5 seconds or longer to perform auto store in the Radio mode.
- Play or pause a track while in the SD/BT Audio mode.
- Press and hold the knob for 1.5 seconds or longer to perform manual navigation in the SD mode.
- Perform next level adjustment or selection in the Adjustment mode.
- Perform various settings.

INTERNAL MIC

- Built-in internal microphone.

[SRC] button

- Press the button to turn on the power.
- Press and hold the button for 1.5 seconds or longer to turn off the power.
- Switch the Operation mode among the Radio mode, SD mode, BT Audio mode and AUX mode.

[^] button

- Accept an incoming call or make outgoing call.

[^] button

- Reject an incoming call or end a call.
- Cancel current operation.

[BND] button

- Switch the band while in the Radio mode.
- Press and hold the button for 1.5 seconds or longer to toggle seek/manual tuning.
- Play the first track in current folder while in the SD mode.
- Press and hold the button for 1.5 seconds or longer to play the first track in the memory card.

[DISP] button

- During Radio mode, switch the display indication in the following order:
Frequency → Station ID → Radio Text → Frequency...
- During SD mode, switch the display indication in the following order:
Track Name → Folder Name → Title Tag → Album Tag → Artist Tag → Track Name...
- Press and hold the button for 1.5 seconds or longer to enter the Adjustment mode.

[|◀◀, ▶▶|] buttons

- Seek a station while in the Radio mode or select a track when listening to a SD/BT Audio mode.
- These buttons are also being used to make various settings.

[1] button

- Restart current track in the SD mode.

[RPT] button

- Perform track repeat play while in the SD mode.
- Press and hold the button for 1.5 seconds or longer to perform folder repeat play while in the SD mode.

[RDM] button

- Perform track random play while in the SD mode.
- Press the button to toggle track random/folder random/card random/random off while in the SD mode.
- Press and hold the button for 1.5 seconds or longer to perform quick random folder play.

[v], [^] buttons

- Select the folder in the SD mode.

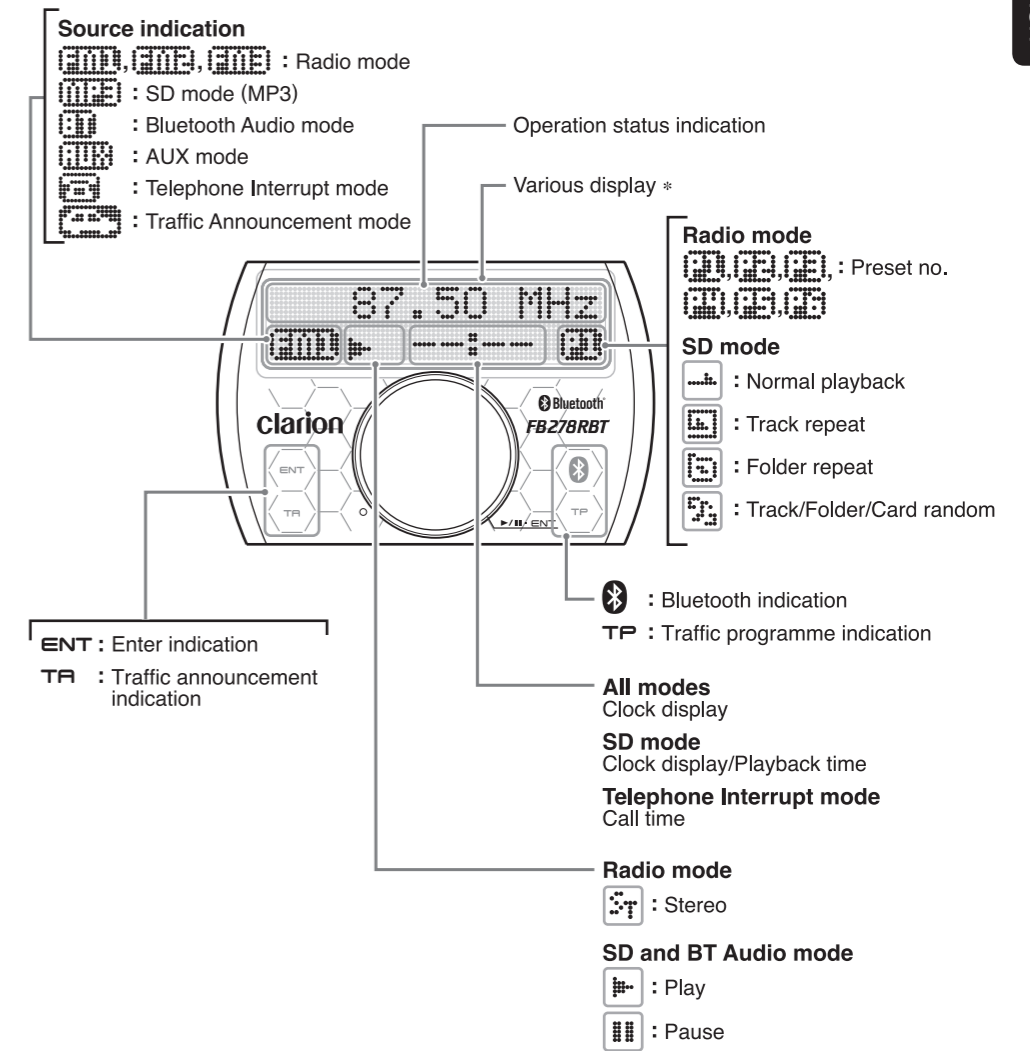
[DIRECT] buttons

- Store a station into memory or recall it directly while in the Radio mode.
- Store a telephone number into memory or recall it directly while in the Telephone mode.

[TA] button

- Use the button to set the TA (Traffic Announcement) standby mode.

Display Items



* Some of the modes will change the whole display such as volume, Adjustment mode and file navigation.

LCD Screen

In extreme cold, the screen movement may slow down and the screen may darken, but this is normal. The screen will recover when it returns to normal temperature.

Please take note that reflection of the screen cover may increase due to direct sunlight exposure, thus this might decrease the visibility of the LCD screen.

6. OPERATIONS

Basic Operations

Note: Be sure to read this chapter referring to the front diagrams of chapter "3. CONTROLS" on page 5.

⚠ CAUTION

Be sure to lower the volume before switching off the unit power or the ignition key. The unit remembers its last volume setting. If you switch the power off with the volume up, when you switch the power back on, the sudden loud volume may hurt your hearing and damage the unit.

Turning on/off the power

1. Press the [SRC] button.
2. The illumination and display on the unit light up. The unit automatically remembers its last Operation mode and will automatically switch to display that mode.
3. Press and hold the [SRC] button for 1.5 seconds or longer to turn off the power for the unit.

* A welcome animation will be displayed at the first time. This animation can be turned on or off in the Adjustment mode.

Notes:

- Be careful about using this unit for a long time without running the engine. If you drain the car's battery too much, you may not be able to start the engine and this can reduce the service life of the battery.
- The unit will automatically prevent from being turned on the power for a few seconds after power off for internal protection purposes.

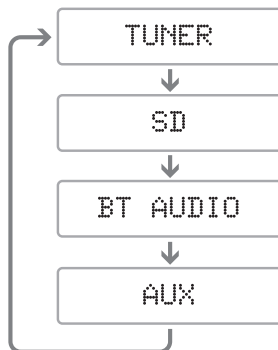
Selecting a mode

1. Press the [SRC] button to change the Operation mode.
2. Each time you press the [SRC] button, the Operation mode changes in the following order:

Radio mode → **SD mode** →
(BT Audio mode) → **(AUX mode)** →
Radio mode...

* AUX mode is only available if AUX is enabled in ADJ mode while BT Audio mode will only be available if there is A2DP connection.

And the following title will be displayed for a moment each time the mode changes.



Notes:

- There will be screen wipe transition in between if animation is enabled in Adjustment mode.
- If the SD mode is selected when no SD memory card is inserted, the display shows "NO CARD".

Switching the display

Press the [DISP] button to select the desired display.

When the [DISP] button is pressed at the first time, the current display type will be displayed. Further pressing the [DISP] button will switch the display in the following order:

● Radio mode

"FREQUENCY" → "STATION ID" →
"RADIO TEXT" → "FREQUENCY"...

* Please refer chapter "RDS Operations" on page 12 for more details.

● SD mode

"TRACK" → "FOLDER" → "TITLE" → "ALBUM"
→ "ARTIST" → "TRACK" ...

* Once selected, the preferred display becomes the display default. When a function adjustment such as volume is made, the screen will momentarily switch to that function's display, then revert back to the preferred display several seconds after the adjustment.

Basic Operations

Adjusting the volume

Turning the [▶/||·ENT] knob clockwise increases the volume; turning it counterclockwise decreases the volume.

“VOLUME 0” to “VOLUME 33” will be displayed depends on the volume level.

* Factory default setting for volume is “VOLUME 13”.

AUX function

This system has AUX RCA input in the rear panel where you can listen to sounds and music from external devices connected to this unit.

1. Connect the external music player to the AUX RCA input.
2. Enable the AUX function in Adjustment mode. Please refer “**Setting AUX function**” on page 26 for more details.
3. Press the [SRC] button to select the AUX mode to activate the AUX function.

Note:

- Volume can be adjusted through the unit.

Please refer chapter “**Common Operations**” on page 25 for more operation controls.

Radio Operations

Listening to the radio

1. Press the [SRC] button and select the Radio mode, then the radio will be on.
2. To select a preset band, press the [BND] button, then select one of the preset bands such as FM1, FM2 or FM3. Every time the [BND] button is pressed, the display will change as:
FM1 → FM2 → FM3 → FM1...
3. Press the [◀▶] button to tune in the desired station.
 - * Initial frequency display is “87.50MHz”.

Seek tuning

There are 2 types of seek tuning: DX SEEK and LOCAL SEEK.

DX SEEK can automatically tune in to receivable broadcast stations; LOCAL SEEK can tune in to only broadcast stations with a good reception sensitivity.

1. Press the [BND] button and select the desired FM band.
 - * Press and hold the [BND] button for 1.5 seconds or longer to switch to Auto Seek mode. Make sure “SEEK TUNE” is displayed briefly.
2. Press the [◀▶] button to start automatic station tuning.

When the [▶] button is pressed, search will be performing in the direction of higher frequencies. When the [◀] button is pressed, search will be performed in the direction of lower frequencies.

● DX SEEK

When the [▶] button is pressed, search will be performing in the direction of higher frequencies. When the [◀] button is pressed, search will be performed in the direction of lower frequencies.

* When seek tuning starts, “DX” appears in the display.

● LOCAL SEEK

If the button is pressed and held in position for 1.5 seconds or longer, local seek tuning will be enabled. Broadcast stations with good reception sensitivity are selected.

* When local seeking starts, “LO” appears in the display.

Radio Operations

Manual tuning

There are 2 ways available: Quick tuning and step tuning.

When you are in the step Tuning mode, the frequency changes one step at a time. In the Quick Tuning mode, you can quickly tune the desired frequency.

1. Press the **[BND]** button and select the desired FM band.

* Press and hold the **[BND]** button for 1.5 seconds or longer to switch to Manual Seek mode. Make sure "MANUAL TUNE" is displayed briefly.

2. Tune into a station.

● Quick tuning

Press and hold the **[◀◀, ▶▶]** button for 1.5 seconds or longer to begin station tuning.

● Step tuning

Press the **[◀◀, ▶▶]** button to perform manual tuning.

Preset memory function

Preset memory function can store up to 18 stations:

Six stations for each of FM1, FM2, and FM3.

* Factory default setting is empty for all channels.

Manual memory function

1. Press the **[BND]** button, to select a band you want to store in the memory.
2. Press the **[◀◀, ▶▶]** button to tune into a desired station.
3. Press and hold one of the **[DIRECT]** buttons for 1.5 seconds or longer to store the current station into preset memory and "SAVED" will be displayed briefly.

Note:

- Each preset channel stores the PS (Programme service) and AF (Alternate frequency) information. Please refer chapter "RDS Operations" on page 12 for more details.

Auto store

Auto store is a function for storing up to 6 strongest stations that are automatically tuned in sequentially. If 6 receivable stations cannot be received, a previously stored station remains un-overwritten at the memory position.

1. Push and hold the **[▶/III·ENT]** knob for 1.5 seconds or longer. The stations with good reception are stored automatically to the preset channels.

Notes:

- The stations are stored in FM3 even if FM1 or FM2 was chosen for storing stations.
- The auto store procedure may take up to 40 seconds to complete.

Recalling a preset station

A total of 18 preset positions (6-FM1, 6-FM2, 6-FM3) exists to store individual radio stations in memory. Pressing the corresponding **[DIRECT]** button recalls the stored radio frequency automatically.

1. Press the **[BND]** button and select the desired FM band.
2. Press the corresponding **[DIRECT]** button to recall the stored station.
 - * Press and hold one of the **[DIRECT]** buttons for 1.5 seconds or longer to store that station into preset memory.

Notes:

- If there is no preset channel stored, "- -EMPTY- -" is displayed briefly and reverts to previous frequency display.
- If a preset channel is selected, the previously stored station will be displayed. If no station can be found on the previous frequency, the unit will search the previously stored AF list.

CAUTION

When radio station is being received nearby a radio transmission tower, radio quality may be affected. As a result, you may encounter other radio station interference and RDS data may not be received correctly in this situation.

RDS Operations

RDS (Radio Data System)

This unit has a built-in RDS decoder system that supports broadcast stations transmitting RDS data.

This system can display the name of the broadcast station being received (PS) and can automatically switch to the broadcast station with the best reception as you move long distances (AF switching).

Also, if a traffic announcement is broadcast from an RDS station, no matter what mode you are in, this broadcast is received.

Additionally, if EON information is received, this information enables automatic switching of other preset stations on the same network and interruption of the station being received with traffic information from other stations (TP). This function is not available in some areas.

AF : Alternative Frequency

PS : Programme Service Name

EON : Enhanced Other Network

TP : Traffic Programme

* When set receives RDS signal, and can read PS data, PS appears in the display (if set to STATION ID display mode).

Note:

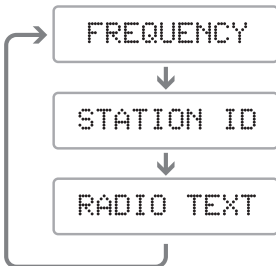
- This unit doesn't support Programme Type (PTY) and Regional Programme Function (REG).

RDS display information

There is several displays selection during listening to a station.

1. Press the [DISP] button to display current display type.
2. To select the next type, press the [DISP] button again.

The arrangement is shown below.



FREQUENCY : Current frequency, such as "87.50MHz"

STATION ID : Programme service name of current station

RADIO TEXT : Text Messages from current station

If there is no STATION ID information available, frequency will be displayed.

When RADIO TEXT is selected, the frequency will still be displayed until a complete message is received. The message will continue to be displayed until a new message is received. If there is no Radio Text data available after 45 seconds, frequency will be displayed again.

Note:

- Factory default setting is FREQUENCY display information type.

AF function

The AF function switches to a different frequency on the same network in order to maintain optimum reception.

* The factory default setting is "ON".

1. Press and hold the [DISP] button for 1.5 seconds or longer to enter adjustment mode.
2. Press the [◀▶] button to select "AF".
3. Turn the [▶/||·ENT] knob to select "ON" or "OFF".

• **ON** : AF function turns on.

• **OFF** : AF function turns off.

4. Press the [🔊] button to return to the previous mode.

* If the reception of the current broadcast station deteriorates, "AF XXX.XXMHz" appears in the display where XXX.XX is the frequency of the AF that is being tested. The radio searches for the same programme on another frequency.

TA (Traffic Announcement)

In the TA standby mode, when a traffic announcement broadcast starts, the traffic announcement broadcast is received as top priority regardless of the Function mode so you can listen to it. However, traffic announcement will not interrupt a call.

* This function can only be used when "TP" is lit in the display. When "TP" is lit, this means that the RDS broadcast station being received has traffic announcement programmes.

RDS Operations

Setting the TA standby mode

If you press the [TA] button when only "TP" is lit in the display, "TP" and "TA" light in the display and the unit is set into the TA standby mode until a traffic announcement is broadcast. When a traffic announcement broadcast starts, "TRAFFIC" appears briefly in the display, and then the relevant display is shown depends on the current display mode (Radio Text/ Frequency/Station ID). A car indicator will light up in the display. If you press the [TA] or [SRC] button while a traffic announcement broadcast is being received, the traffic announcement broadcast reception is cancelled and the unit goes into the TA standby mode.

Notes:

- Telephone interruption will not be affected by TA interruption.
- If the TA function is turned on in the middle of an active Traffic Announcement, the current TA interruption will be ignored. It will only valid for the next Traffic Announcement.

Cancelling the TA standby mode

As "TP" and "TA" indicators lights on, press the [TA] button. The "TA" indicator goes off and the TA standby mode is cancelled.

Volume setting of TA

The volume for TA interrupts can be set during TA interrupt. It is independent from main volume. During TA interrupts, the unit will select between TA and main volume whichever is higher as the new TA volume.

* The factory default setting for this volume is "15".

During a TA interrupt, turn the [▶/||·ENT] knob to set the volume to the desired level (0 to 33).

* When the TA interrupt ends, the volume returns to the level it had before the interrupt.

MP3 Operations

What is SD/MMC card?

The MultiMediaCard (MMC) and Secure Digital (SD) are flash memory (non-volatile) card format that are used to store large capacity of data in a compact and slim size of media. SD memory cards are based on the older MultiMediaCard (MMC) format with additional features such as write protection switch.

- Memory card that can be played are limited to those recognized as SD or MMC; operation is not guaranteed with all SD memory card from all manufacturers. For SD/MMC memory card compatibility, please consult your nearest Clarion dealer for more information.
- To prevent the accidental loss of data, always back up important data to your computer.
- Audio files playable on this unit are limited to MP3 files. AAC, WMA or other audio formats are not supported.
- This unit doesn't support SDHC (Secure Digital High Capacity) and SDIO (input/output) cards.
- This unit supports SD memory card up to 2GB based on SD Association standard.

What is MP3?

MP3 is an audio compression method and classified into audio layer 3 of MPEG standards. This audio compression method has penetrated into PC users and become a standard format. This MP3 features the original audio data compression to about 12 percent of its initial size with a high quality sound. This means that several music CDs can be recorded on a SD card to allow a long listening time*.

* Depends on the SD card storage capacity.

MP3 Operations

● Precautions when creating MP3 in SD/ MMC card

- Usable sampling rates and bit rates:

MP3	
Decode Format	MPEG 1 and 2 - Layer 3
Sampling Rate (kHz)	MPEG-1 : 32, 44.1, 48 MPEG-2 : 16, 22.05, 24
Bit-rate (kbps)	MPEG-1 : 32 - 320 MPEG-2 : 8 - 160 VBR
SD/MMC Format	FAT12 or FAT16

Folder Level limit : 8 Level

Max. Folder Support : 255

Max. Files Support : 255

Folder Name : Max. 30 Characters

File Name : Max. 30 Characters

● File extensions

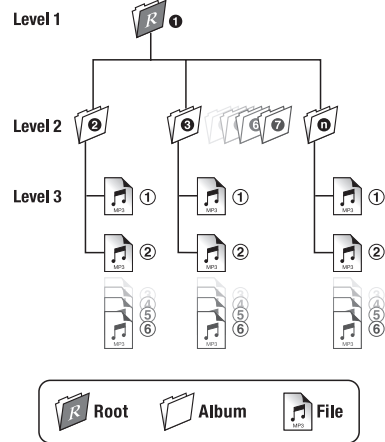
- Always add a file extension “.MP3” to MP3 file by using single byte letters. If you add a file extension other than specified or forget to add the file extension, the file cannot be played.
- Never simply change any file extension to “.MP3” as this will cause unexpected result and may damage the unit as well. Please use appropriate audio converter to change to valid mp3 files.

● Logical format (File system)

1. When writing MP3 file on a SD/MMC card, please select “**FAT12**” or “**FAT16**” as the system file format. Please be aware that the Windows XP will format any volume of 512MB or larger with FAT32 by default. Thus, if the disk is using “**FAT32**” system file format, please format the disk with “**FAT**” system file format which is “**FAT16**”. All the data will be erased during formatting. Thus, please backup your data accordingly.
2. The folder name and file name can be displayed as the title during MP3 play but the title must be within 30 single byte alphabetical letters and numerals (not including a file extension). Longer name will not be displayed.

● Folder structure

1. SD card with a folder having more than 8 hierarchical levels will be impossible. However, the following hierarchical structure is recommended.



Notes:

- “**1**” is a number of folders that are limited to “**Number of files or folders**” conditions.
- Please use subdirectory/subfolder as recommended and avoid placing all the audio files in the root directory.

● Number of files or folders

1. Up to at least 255* files can be recognized per folder.
Up to at least 255* files can be played.
* Entries includes sub-folders and MP3 files.
2. Tracks are always sorted alphabetically and played in that order. (Tracks might not always be played in the order displayed on the PC.)
3. Some noise may occur depending on the type of encoder software used while recording.

⚠ CAUTION

- **Never insert foreign objects into the SD/ MMC memory card slot as it may cause the unit to break down.**

MP3 Operations

- Do not insert memory card other than specify. It may be impossible to extract these cards from the unit and such damage will not be covered by the warranty on this product. If the memory card is not inserted easily, there may be another memory card in the slot or the unit may require service.
- This unit is designed for playing SD/MMC card only.
- Do not forcibly insert the memory card to the slot with incorrect direction (label side facing down or reverse direction) as this will damage the memory card as well as the SD/MMC MEMORY CARD SLOT.
- Do not leave a memory card unattended in an automobile. Exposure to direct sunlight or high temperatures may cause deformation or other malfunction of the memory card.
- When the memory card is subjected to electrostatic or electric noise, this may result in the loss of data.

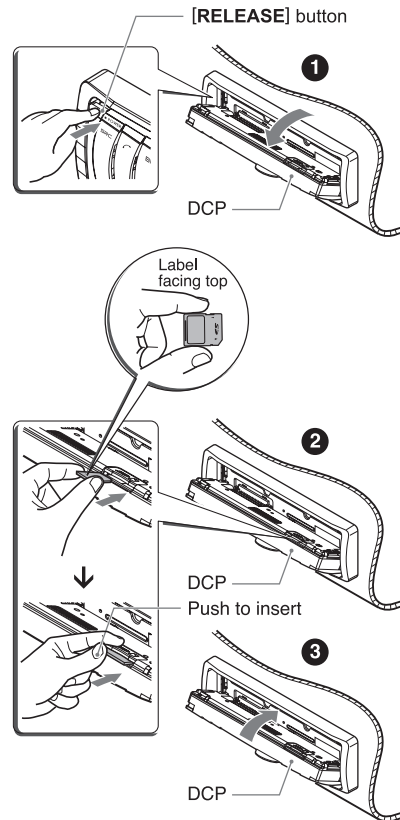
Loading a memory card

1. Press the **[RELEASE]** button to flip down the panel.
2. Insert a memory card into the SD/MMC MEMORY CARD SLOT with the label side facing up.
3. Close the flip down panel. "**Loading...**" appears in the display, the memory card plays automatically after loading.

Playback will begin from the first file recorded on the memory card.

Notes:

- Sound will be muted when panel is flipped. "**FLIPPED**" will be displayed.
- Always insert the memory card fully by pushing it into the slot. Incomplete insertion may cause the memory card not be recognized and flip down panel will not be able to close.
- Depending on the number of tracks and folder structure recorded, some amount of time may be required until all tracks are read into the unit. Thus, please refer chapter "**Folder structure**" on page 14 for recommended folder hierarchy and optimal performance. It is best to avoid folders without MP3 files in memory card as this will increase loading time.



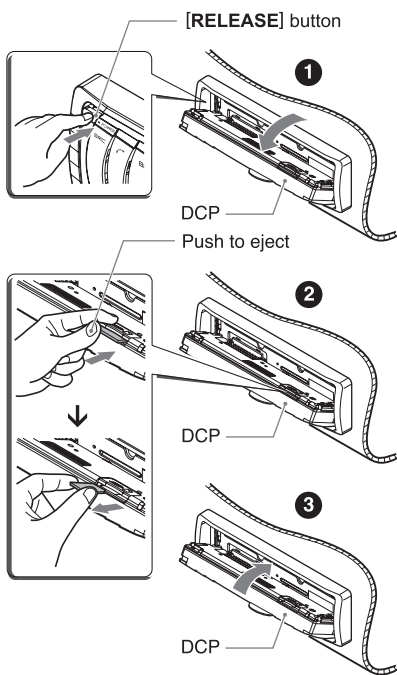
Eject function

1. Press the **[RELEASE]** button to flip down the panel.
2. Push the memory card slowly to eject and remove it when ejected.
3. Close the flip down panel after removing the memory card.

Notes:

- SD memory card may pop out during removal.
- If you remove a memory card such as Micro/Mini SD and leaving the SD memory card adaptor attached to the unit, it may be hard to remove the adaptor alone from the unit later. Thus, always remove both the memory card and adaptor together if you are using a memory card adaptor.

MP3 Operations



⚠ CAUTION

- Do not remove the memory card when the panel is not fully flipped as this may damage the memory card as well as the unit. Remove the card only when it is fully flipped.
- Do not drop the memory card into the space of the flipped down panel.

Listening to a memory card already loaded in the unit

Press the [SRC] button to select the SD mode. "SD" indicator will light on.

When the unit enters the SD mode, play starts automatically.

- * If there is no memory card loaded, the indication "NO CARD" appears in the display.
- * If there is no MP3 file is detected, the indication "NO MP3" appears in the display.
- * The mode changes each time the [SRC] button is pressed.

Pausing play

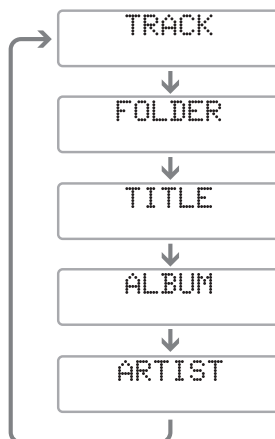
1. Push the [▶/||·ENT] knob to pause play. "⏸" appears in the display.
2. To resume track play, push the [▶/||·ENT] knob again. "▶" appears in the display.

Display titles

This unit can display title data for the memory card.

1. Press the [DISP] button to display current title type.
2. To select the next type, press the [DISP] button again.

The arrangement is shown below.



3. Relevant information will be displayed after showing the title type.

Notes:

- If no Artist information, "NO ARTIST" will be displayed.
- If a MP3 file encode with ID3 TAG header but not consist of any TAG information, "unknown" will be displayed and change according to the following display:
 - If no Album information, the folder name will be displayed.
 - If no Title information, the filename will be displayed.

MP3 Operations

- Supports ID3 Tags v2.3 and v2.4. Earlier ID3 tags version is ignored but the track is playable.
- Only ASCII characters can be displayed in Tags. UNICODE ID3 (Chinese, Japanese and etc) is not supported.
- If ID3 TAG has Japanese, Chinese or other non-supported characters, "*" will be displayed as substitution.
- The folder name will be displayed as "(Root)" which the file allocates in the root directory.

MP3 playing order

When selected for playing folder/track up down functions, files and folders are always accessed in alphabetical order. Due to this, the order in which they are expected to be played may not match the order in which they are actually played. If you do not want the tracks to play in alphabetical order, then you can prefix them with 00, 01, 02 etc. to force them to play in a certain order.

Please refer chapter "Folder structure" on page 14 for recommended folder/file hierarchy.

Selecting a track

● Track-up

1. Press the [▶▶] button to move ahead to the beginning of the next track.
2. Each time the [▶▶] button is pressed, the track advances ahead to the beginning of the next track.

● Track-down

1. Press the [◀◀] button to move to the beginning of the previous track.
2. Each time the [◀◀] button is pressed, playback proceeds to previous track in the reverse direction.

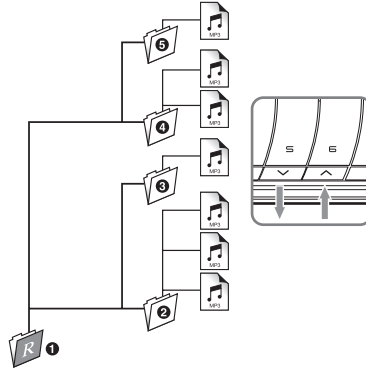
Notes:

- Previous track across multiple sub-folders may not be always return to the previous song you listen as it will return to the last valid MP3 files of the parent folder.
- Fast forward/fast backward is not supported in this unit.

Folder select

This function allows you to select a folder containing MP3 files and start playing from the first track in the folder.

1. Press the [^] or [v] button.
2. Press the [^] button to move the next folder. Press the [v] button to move the previous folder.



3. Press the [◀◀, ▶▶] button to select a track.

Notes:

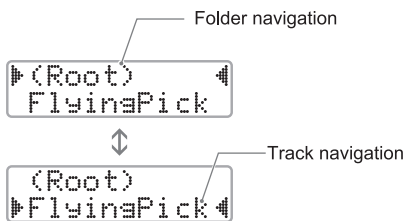
- Press the [^] button while in the final folder will shift to the first folder.
- Press the [v] button while in the first folder will shift to the last folder.
- Press the [v] button will always play the last track of previous folder.
- Folder without a MP3 file is not selectable.
- Press and hold the [◀◀, ▶▶] button for 1.5 seconds or longer will also perform as folder down/up.

Manual navigation

Alternatively, you can use the Manual Navigation mode to select folder and files. Track will be played directly when the specific track is selected.

1. Push and hold the [▶/||•ENT] knob for 1.5 seconds or longer in SD mode to enter Manual Navigation mode.
2. Press the [◀◀, ▶▶] button to select folder or track navigation.

MP3 Operations



- Turn the [▶/||·ENT] knob to select folder or track.

* The track play will take effect immediately.

- Push the [▶/||·ENT] knob again or press the [⏪] button to exit the mode.

Folder Navigation : Search the folders that contains tracks.

Track Navigation : Search tracks within the selected folder.

Notes:

- During searching next/previous folder in folder navigation, amount of time will be required depends on the complexity of folder structure. Animated dots “.....” may be appeared in folder navigation during complex folder searching. “Loading...” will be displayed if Manual Navigation mode is exit during this searching.
- If no operation is performed for more than 10 seconds, the Manual Navigation mode is cancelled and returns to the previous display.

Restarting current track

This function allows user to play the beginning of the current song again.

- Press the [1] button to move to the beginning of the current track.

⚠ CAUTION

Track will be automatically restarted after telephone interrupt, audio streaming, DCP flipped and power cycle.

Top function

Return to the first track of the memory card or the folder currently being played back, and start playing.

- Press the [BND] button to play from the first track of the current folder.
- Press and hold [BND] button for 1.5 seconds or longer to play the first track of the memory card.

Note:

- These operations will cancel Track Repeat play and all Random modes.

Special playback functions

By default, all special playback functions are turned off and “.....” will be displayed.

All the special playback functions will be memorized once activated (except Track repeat play) even after power off.

Repeat mode

● Track repeat play

This function allows you to play the current track repeatedly.

- Press the [RPT] button to perform track repeat play.
- Press the [RPT] button again to cancel track repeat play.

The “ ” indicator lights in the display when track repeat play is enabled.

Note:


- Any track/folder selection, card changing and power cycle will cancel track repeat play.

● Folder repeat play

This function allows you to play all tracks in the current folder repeatedly.

- Press and hold the [RPT] button for 1.5 seconds or longer to perform folder repeat play. “RPT FLDR ON” will be displayed briefly.
- Press and hold the [RPT] button for 1.5 seconds or longer to cancel folder repeat play. “RPT FLDR OFF” will be displayed briefly.

MP3 Operations

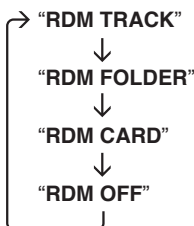
The “” indicator lights in the display when folder repeat play is enabled.


Note:

- This function will cancel other previous special playback functions such as track repeat and Random mode.

Random mode

There are 3 types of Random mode. When the [RDM] button is pressed at the first time, the current Random mode will be displayed. Further pressing the [RDM] button will switch the Random mode in the following order:



The “” indicator lights in the display.

● Track random play

This function allows you to play the tracks of current folder randomly.

1. Press the [RDM] button to select “RDM TRACK”.

Notes:

- It will go to next folder after all the tracks in that folder have been played. However, this will depend on folder repeat setting.
- Any track/folder selection will always perform as next random track/folder.

● Folder random play

This function allows you to play all the tracks alphabetically in a random folder.

1. Press the [RDM] button to select “RDM FOLDER”.

Note:

- This function will require some amount of time depends on the complexity of folder hierarchy. Always use the folder hierarchy as recommended in chapter “Folder structure” on page 14 for optimal performance.

● Card random play

This function allows you to play all the tracks of all the folders in a random order.

1. Press the [RDM] button to select “RDM CARD”.

Notes:

- This function will require some amount of time depends on the complexity of folder hierarchy. Always use the folder hierarchy as recommended in chapter “Folder structure” on page 14 for optimal performance.
- Any track/folder selection will always perform as next random track/folder.

● To cancel random play

1. Press the [RDM] button to select “RDM OFF”.

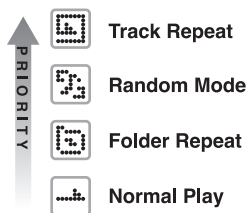
● Quick random folder play

This function will perform a single jump to a random folder but do not affect current Random or Folder Repeat settings.

1. Press and hold the [RDM] button for 1.5 seconds or longer to perform quick random folder play.

Special playback priority

The icon will be displayed according to the selected special playback with the following priorities. It will return to previous special playback setting after the current special playback function is turned off.



Introduction to Bluetooth® Wireless Technology

What is Bluetooth® wireless technology?

Bluetooth® wireless technology is a radio technology that connects devices, such as mobile phones and headsets, without wires or cords over a short distance of approximately 10 meters (approx. 33 feet). Get more information at www.bluetooth.com.

What is Bluetooth® wireless profiles?

Bluetooth® wireless profiles are the different ways that *Bluetooth*® devices communicate with other devices. *Bluetooth*® phones normally support the hands-free profile (HFP). In order to support a certain profile, a phone manufacturer must implement certain mandatory features within the phone's software. The followings are the currently supported profiles for the main unit:

● Hands-Free Profile (HFP)

This is commonly used to allow car hands-free kits to communicate with mobile phones in the car. The *Bluetooth*® car kits allow users with *Bluetooth*-equipped mobile phones to make use of some of the phone's features.

● Advanced Audio Distribution Profile (A2DP)

This allows you to send CD quality stereo music from external audio player to car stereo without wires. A2DP is able to provide crystal clear music without the hassle of plugging cables. *Bluetooth*® Wireless Technology with A2DP makes mobile phones, pda's and computers capable of streaming music.

● Audio Video Remote Control Profile (AVRCP)

This enables music from *Bluetooth*® audio player to be controlled remotely. AVRCP allows some basic playback control functions such as play/pause, volume up/down and next/previous track to a *Bluetooth*® audio player.

What is pairing?

With a mobile phone featuring *Bluetooth*® technology, you must 'pair' the main unit with the phone/*Bluetooth*® audio device before you use it for the first time.

Pairing creates a unique and encrypted link between two *Bluetooth*® devices and lets them communicate with each other eliminating the need to repeat the pairing process during future use. *Bluetooth*® devices will not work if the devices have not been paired. This car stereo is able to hold up to 8 devices of pairing information.

What is passkey?

Passkey or PIN is a code that you enter on your mobile phone to pair it with the main unit. This makes your phone/*Bluetooth*® audio device and the main unit recognizes each other and automatically works together. The default passkey for this unit is '0000'.

Pairing with a mobile phone

1. Enable pairing mode in the car stereo. Please refer "Adding a new device (Pairing mode)" on page 28 for more details.
2. Activate *Bluetooth*® on your mobile phone. Please check your mobile phone owner's manual for further details.
3. Search for new *Bluetooth*® device on the mobile phone. The car stereo's name is 'CLARION_FB275'.
4. When attempting to connect to the car stereo, the mobile phone will prompt for a passkey, enter the PIN: '0000'.
5. Device name will be displayed for editing after successful pairing. Please refer "Editing a device name" step 3 onwards on page 29 for more details.
6. The display returns to previous mode after a few seconds.
7. Any incoming call will be automatically diverted to the car stereo once connection is established.

Introduction to Bluetooth® Wireless Technology

Notes:

- Please make sure your mobile phone supports the HFP profile.
- Always make sure the *Bluetooth®* Operation mode in the phone is on when using this car handsfree.
- Any further connection attempts by other devices to connect as HFP partner are rejected until the current device is disconnected. Please refer your mobile phone owner's manual for disconnecting device.
- Up to the first 8 characters of device name can be supported. If device name is not obtained, *Bluetooth®* address of the device will be used as default.
- Please refer chapter "**Handsfree Operations**" on page 22 for telephone function.

Pairing with an external Bluetooth® audio player (A2DP support)

1. Enable pairing mode in the car stereo. Please refer "**Adding a new device (Pairing mode)**" on page 28 for more details.
2. Set the *Bluetooth®* audio player in Pairing mode. Please check your audio player owner's manual for further details.
3. The display automatically switches to BT Audio mode and start playing music upon successfully pairing and connection. Connection can be established in any source mode.

Notes:

- Please make sure your *Bluetooth®* audio player supports the A2DP and AVRCP profiles.
- Any further connection attempts by other devices to connect as A2DP/AVRCP partner are rejected until the current device is disconnected.
- You do not have to enter a dedicated pin code for pairing these two devices (Only applicable to Clarion products such as Aux *Bluetooth®* Transmitter), as you do with a mobile phone. However, for other A2DP devices, you may need to enter "0000" for the pin code in those devices.
- The same device may connect as both A2DP/AVRCP and HFP partner. This normally happens to mobile phone with wireless music streaming capability. However, using the same device will cause the A2DP/AVRCP to be disconnected when there is an incoming call or making a call. User may need to manually resume playback via audio player in phone depends on the type of phones. However, some phones will automatically resume to BT Audio mode after telephone interrupt.


- Please refer chapter "**Audio Streaming Operations**" on page 24 for music streaming functionality.

Please refer "**Bluetooth® adjustment**" on page 28 for other *Bluetooth®* related adjustment.

Connecting Bluetooth® device

Your device/phone will normally connect automatically to the unit after pairing. However, some phones will not allow automatic connection to the unit after pairing; please use the phone to manually connect to the unit.


If Automatic Connection is enabled in Adjustment mode, the unit will try to connect to the previously connected phone when entering Telephone mode or during power up. Connection can be established at any Source mode. If connection is unsuccessful, automatic connection will stop. Please refer "**Automatic connection**" on page 29 to enable this feature.

The "  " indicator will light on upon successful connection.

Notes:

- Auto connection only works for HFP. User may need to manually connect for A2DP. This will depend on the *Bluetooth®* audio player.
- Please connect HFP to unit before audio streaming. It is recommended to use one device at one time as using 2 different devices in the same time may affect the normal operation.

Disconnecting Bluetooth® device

1. Press and hold the [] button for 1.5 seconds or longer to disconnect all *Bluetooth®* devices.

"**CLOSING CONNECTIONS**" will be displayed and "  " indicator lights off.

Notes:

- Turning off the unit power and deleting any *Bluetooth®* device in Adjustment mode will also disconnect the current device.
- Alternatively, user can use the phone to manually disconnect the device. However some devices will automatically reconnect once disconnect. Please refer your device owner's manual for more details.

Please refer "**Compatible Devices**" on page 30 to make sure your device is compatible.

Handsfree Operations









Storing a preset telephone numbers

This function allows you to make direct call from the unit. There are 6 preset telephone numbers can be stored in the unit.



CAUTION

Please avoid performing this operation while you are driving as you may lose your concentration on the road. Always be sure to park your vehicle and apply the parking brake in order to perform this operation.



● Telephone numbers edit mode

1. Press the [] button to enter Telephone mode.
2. Press the [, , ] button to select "MEMORY 1" to "MEMORY 6".
3. Push the [] knob to edit the numbers. A blinking cursor on current digit will be displayed.
4. Turn the [] knob to select a number.
5. Push the [] knob to go to next number input.
6. Push the [] knob at a blank or the last 16th digit ("⦿" indicator will be displayed) will store the numbers into memory.

Notes:

- "⦿" can be allowed in the first digit only.
- Maximum digit range: 16 digits.
- Push and hold the [] knob for 1.5 seconds or longer at a non-blank digit will store the numbers into memory as well.
- Press the [] button at anytime will cancel current operation and exit the Edit mode without saving the numbers. If no operation is performed for more than 10 seconds, the Edit mode is cancelled and returns to the previous display.



● Clearing all digits

1. During Telephone Numbers Edit mode, turn the [] knob to select a blank digit.
2. Push and hold the [] knob for 1.5 seconds or longer to clear all digits on the right side.

Note:

- Digits on the left side will remain as it is. In order to clear all the digits, always select the first character and perform the above operation.

● Deleting a digit

1. During Telephone Numbers Edit mode, turn the [] knob to select a blank digit.
2. Push the [] knob to delete current digit.

Note:

- Digits on the right side (if there is any) will be shifted to the left.

Incoming call

Whenever your car stereo is operating, the car stereo is in standby mode awaiting the next call, when an incoming call arrives the car stereo will mute automatically and the ring tone is reproduced through your car's speaker.


The Car stereo will temporarily switch to Telephone Interrupt mode and caller ID will be displayed in the car stereo.

Notes:


- Car stereo will be automatically set as default speaker output everytime when there is an incoming call.
- Some phones choose to present the audio despite being told to route it to the car stereo. This duplication of audio is a device problem/feature but does not impair functionality.
- During incoming call, caller ID and "Calling..." will be displayed. Caller ID and CLIP (Calling Line Identification Presentation) is dependent on mobile phone and service provider. However, incoming call with private telephone numbers (CLIR- Calling Line Identification Restriction) will not be displayed.

● Answering a call

User can answer an incoming call directly from the car stereo.


1. Press the [] button to pick up an incoming call.
2. The display switch to Telephone Interrupt mode.

Notes:

- During conversation, " " and call time elapsed will be displayed.
- During an incoming call, some phones may automatically pick up the call when it connects to this unit.

● Rejecting a call


This function allows you to reject an incoming call directly from the car stereo.

1. Press the [] button to reject an incoming call.
2. The display returns to previous mode.

Handsfree Operations

● Ending a call

This function allows you to end a call conversation directly from the car stereo.

1. Press the [] button to end the call.
2. The display returns to previous mode.

Note:


- “**CALL END**” will be displayed when ending a conversation.

Alternatively, you may also answer/reject/end the call by using your phone's keypad. However, it is recommended to always perform those operations from the main unit.

Making a call

There are few ways to make outgoing call.

If no phone is connected, the car stereo will not be able to make an outgoing call. The car stereo will try to reconnect to the last connected device if Auto Connection is enabled in Adjustment mode. This is dependent on mobile phones.

Please make sure your phone is connected with the “” indicator light is on.





There are 2 display icons at the top row of display when entering Telephone mode.



: Call can be activated.



: Call cannot be activated. Please connect your phone.


1. Press the [] button to enter Telephone mode.
2. Press the [, ] to select the following
 “**VOICEDIAL**” ↔ “**LN REDIAL**” ↔
 “**MEMORY 1**” ↔ “**MEMORY 2**” ↔
 “**MEMORY 3**” ↔ “**MEMORY 4**” ↔
 “**MEMORY 5**” ↔ “**MEMORY 6**”
3. Press the [] button again to perform outgoing call.

Note:

- “**Dialing**” will be displayed when making a call. Telephone numbers will be displayed if using the preset telephone numbers dialing.

● Call via voice dialing

2-1. Select “**VOICEDIAL**”

- 3-1. Press the [] button again to activate voice dialing.
- 3-2. Speak the contact name clearly towards the internal/external microphone to perform voice dialing.


Notes:

- This is dependent on mobile phone. Please make sure your mobile phone supports voice dialing in order to use this feature. Please refer to your mobile phone owner's manual if this function is supported. “**CALL FAIL**” will be displayed if it is not supported or the call is unsuccessful.
- Please use an external microphone (optional) for better voice reception if necessary.

● Call via last dialed number (Redial)

A call can be made with the last number dialed. When the phone is connected, redial can be performed according to the phone last dialed number. Each phone has its own redial number. If there's no redial number, operation will not be performed.

2-1. Select “**LN REDIAL**”


- 3-1. Press the [] button again to redial the last dialed number.

● Call via preset telephone numbers

2-1. Select “**MEMORY 1**” to “**MEMORY 6**”.

- 3-1. Press the [] button again to make call.

Alternatively, user can make outgoing call directly by pressing the corresponding preset telephone numbers.

1. Press the [] button to enter Telephone mode.
2. Press the corresponding [**DIRECT**] button to make outgoing call.

Note:

- The preset telephone numbers will be the same for all paired devices.

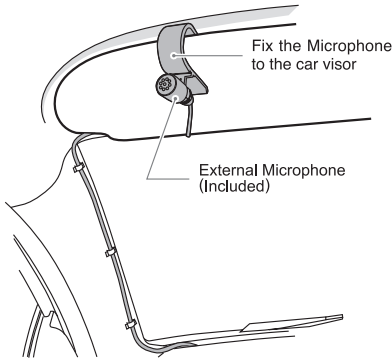
Alternatively, you may also make a call by using your phone's keypad. However, it is recommended to always make a call from the main unit as some phones may not work well using the phone's keypad with this unit.

Microphone

The unit is fitted with an internal microphone that should provide acceptable performance when fitted to vehicles with low levels of background noise. For optimum performance Clarion recommends the use of an external microphone fitted as near as possible to the driver.

Handsfree Operations

Please refer “**Selecting microphone input**” on page 29 for switching to internal/external the microphone.



Handfree volume

The unit implements an acoustic echo canceller to reduce the echo heard by the remote caller. Under normal circumstances the unit operates in full-duplex mode meaning that both parties can speak at the same time.

If the volume in the vehicle is set too high, the echo canceller will revert to half-duplex mode when only one party can talk at a time. The volume should be adjusted to be just loud enough. The unit also implements Noise Dependent Volume that increases the volume as the noise in the vehicle increases.

Adjusting the volume for handsfree

Turning the [▶/||·ENT] knob clockwise increases the volume; turning it counterclockwise decreases the volume.

“**VOLUME 1**” to “**VOLUME 16**” will be displayed depends on the volume level.

* Factory default setting for volume is “**VOLUME 8**”.

When the unit is connected to a mobile phone and a call is in progress, turning off the vehicle ignition key (“**ACC**” or **ACCESSORY**) switch will not end the call. The unit will remain active until the call has ended at which point the unit will power OFF. It is therefore safe to pull over and stop the engine during a call without the inconvenience of dropping the call.

Audio Streaming Operations

Note:

- Be sure to read the chapter “**Pairing with an external Bluetooth® audio player (A2DP support)**” before proceeding.

What is audio streaming?

Audio streaming is a technique for transferring audio data such that it can be processed as a steady and continuous stream.

Users can stream music from their external audio player to their car stereo wirelessly and listen to the tracks through the car’s speakers.

Please consult your nearest Clarion dealer for more information on the product of wireless audio streaming transmitter offered.

CAUTION

- **Please avoid operating your connected mobile phone while audio streaming as this may cause noise or sound choppy on the song playback.**
- **Audio streaming may or may not resume after telephone interrupt as this is dependent on mobile phone.**
- **System will always return to Radio mode if audio streaming is disconnected.**

Play/Pause a track

1. Push the [▶/||·ENT] knob to pause play. “⏸” appears in the display.
2. To resume track play, push the [▶/||·ENT] knob again. “▶” appears in the display.

Notes:

- During music streaming playback, “**STREAMING...**” will be shown on the display. Information about tracks (e.g. the elapsed playtime, song title, etc.) cannot be displayed on this unit.
- When A2DP device is disconnected, “**NO STREAM**” will be shown on the display and return to Radio mode.
- Some *Bluetooth®* audio players may not have play/pause synchronized with this unit. Please make sure both device and main unit are in the same play/pause status in BT AUDIO mode.

Audio Streaming Operations

Selecting a track

● Track-up

1. Press the [▶▶I] button to move to the beginning of the next track.
2. Each time the [▶▶I] button is pressed, playback proceeds to another track in the advancing direction.

● Track-down

1. Press the [I◀◀] button to move the to beginning of the previous track.
2. Each time the [I◀◀] button is pressed, playback proceeds to previous track in the reverse direction.

Notes:

- Playing order will depend on *Bluetooth*[®] audio player.
- When [I◀◀] button is pressed, some A2DP devices will restart the current track depends on the duration of playback.

Common Operations

Adjustment mode

There are 6 categories of Adjustment mode:

- Audio mode (Bass, Treble, Balance, Fader and Loudness)
- Additional Source mode (AUX Input)
- RDS Adjustment mode (Alternate Frequency)
- Clock* Adjustment mode
- Display* Adjustment mode
- *Bluetooth*[®]* Adjustment mode

* Item that has 2nd level adjustment

During Telephone/TA Interrupt mode, only Balance and Fader can be adjusted. Adjustment mode is unaccessible during Telephone mode and vice versa.

- ① Press and hold the [DISP] button for 1.5 seconds or longer to enter the adjustment selection display.
- ② Press the [I◀◀,▶▶I] button to select the "item name".
 "BASS" ↔ "TREBLE" ↔ "BALANCE" ↔
 "FADER" ↔ "LOUDNESS" ↔
 "AUX INPUT" ↔ "AF" ↔ "CLOCK" ↔
 "DISPLAY" ↔ "BLUETOOTH"
- ③ Push the [▶/||·ENT] knob to enter 2nd level adjustment or turn the [▶/||·ENT] knob to select the "desired setting value" depends on the selected item.

Notes:

- A "2/4" will be displayed and "ENT" will light on when an item has 2nd level adjustment.
- After completing settings, press and hold the [⏮] button for 1.5 seconds or longer to return to the previous mode.
- If no operation is performed for more than 10 seconds, the Adjustment mode is cancelled and returns to the previous display.

Audio mode

● Adjusting the bass

- ②-① Select "BASS".
- ③-① Turn the [▶/||·ENT] knob clockwise emphasizes the bass; turning it counterclockwise attenuates the bass.

Notes:

- The factory default setting is "0".
- The value range is -7 to +7.

Common Operations

● Adjusting the treble

- ②-① Select "TREBLE".
- ③-① Turn [▶/||·ENT] knob clockwise emphasizes the treble; turning it counterclockwise attenuates the treble.

Notes:

- The factory default setting is "0".
- The value range is -7 to +7.

● Adjusting the balance

- ②-① Select "BALANCE".
- ③-① Turn the [▶/||·ENT] knob clockwise emphasizes the sound from the right speaker; turning it counterclockwise emphasizes the sound from the left speaker.

The display changes as follows:
"RIGHT XX" will be displayed where "XX" is the value from 1 to 12.

"LEFT XX" will be displayed where "XX" is the value from 1 to 12.

Notes:

- When Balance is 0, "CENTRE" will be displayed instead.
- The factory default setting is "CENTRE".

● Adjusting the fader

- ②-① Select "FADER".
- ③-① Turn the [▶/||·ENT] knob clockwise emphasizes the sound from the front speakers; turning it counterclockwise emphasizes the sound from the rear speakers.

The display changes as follows:

"FRONT XX" will be displayed where "XX" is the value from 1 to 12.

"REAR XX" will be displayed where "XX" is the value from 1 to 12.

Notes:

- When Fader is 0, "CENTRE" will be displayed instead.
- The factory default setting is "CENTRE".

● Adjusting the loudness

The loudness effect does not adjust the low sound area like the normal sound adjustment function, but emphasizes the deep bass sound area to provide you with a dynamic sound.

- ②-① Select "LOUDNESS".

- ③-① Turn the [▶/||·ENT] knob to select "ON" or "OFF".

- **ON** : Loudness effect enabled.
- **OFF** : Loudness effect disabled.

Note:

- The factory default setting is "OFF".

Setting AUX function

This option allows user to enable or disable the AUX function. AUX function will be available in source mode selection if turned on. Otherwise, it will be hidden from the source mode selection.

- ②-① Select "AUX INPUT".

- ③-① Turn the [▶/||·ENT] knob to select "ON" or "OFF".

- **ON** : Aux function is turned on.
- **OFF** : Aux function is turned off.

Note:

- The factory default setting is "OFF".

AF function

The AF function switches to a different frequency on the same network in order to maintain optimum reception.

- ②-① Select "AF".

- ③-① Turn the [▶/||·ENT] knob to select "ON" or "OFF".

- **ON** : AF turns on.
- **OFF** : AF turns off.

Note:

- The factory default setting is "ON".

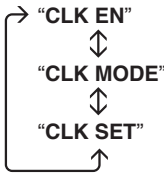
Clock adjustment

- ②-① Select "CLOCK".

- ③-① Push the [▶/||·ENT] knob.

- ③-② Press the [◀◀, ▶▶] button to select the "item name".

Common Operations



- ③-③ Push or turn the [▶/||•ENT] knob depends on selected item.

● Setting the clock enable

This setting allows the clock to be displayed at the bottom of display in all source modes.

1. Select "CLK EN".
2. Turn the [▶/||•ENT] knob to select the options.



- **OFF** : Clock is disabled.
- **ON** : Clock is enabled and manually set by user.
- **RDS** : Clock is enabled and will automatic synchronize to CT data from RDS station.

Notes:

- The factory default setting is "OFF".
- If a CT data is not being received, "--:--" appears at the bottom of the display.
- CT data is not transmitted in some countries and by some broadcast stations. Also, in some areas, the CT display may not accurate.

● Setting the clock mode

This setting allows user to select either 12 or 24 hour system.

1. Select "CLK MODE".
2. Turn the [▶/||•ENT] knob to select the options.



- **12 HR** : 12 hour mode.
- **24 HR** : 24 hour mode.

Note:

- The factory default setting is "24 HR".

● Adjusting the clock

This adjustment allows the clock to be set by user.

1. Select "CLK SET".
2. Push the [▶/||•ENT] knob.
3. Press the [I◀◀, ▶▶I] button to select the hour or the minute.
4. Turn the [▶/||•ENT] knob to set the correct time.
5. Press the [🏠] button to exit the setting.

Notes:

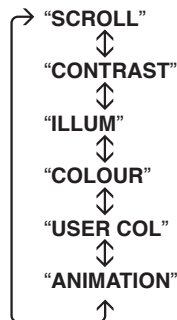
- The factory default setting is "00:00" for 24 hour mode.
- The clock is updated in realtime.

Display adjustment

- ②-① Press the [I◀◀, ▶▶I] button and select "DISPLAY".

- ③-① Push the [▶/||•ENT] knob to enter next level adjustment.

- ③-② Press the [I◀◀, ▶▶I] button to select the "item name".



- ③-③ Push or turn the [▶/||•ENT] knob depends on selected item.

● Setting the method for title scroll

Set how to scroll in MP3 title.

- * The factory default setting is "ON".

1. Select "SCROLL".
2. Turn the [▶/||•ENT] knob to select "ON" or "OFF".

- **ON** : To scroll continuously.
- **OFF** : Scroll function is disabled. It will only scroll for once.

Common Operations

● Adjusting the display contrast

You can adjust the display contrast to match the angle of installation of the unit.

* The factory default setting is "9".
(Adjustment level: 0 to 14)

1. Select "CONTRAST".
2. Turn the [▶/||·ENT] knob to adjust the contrast.

● Adjusting the display and line illumination

You can adjust the display illuminations (Display backlight intensity) at night (key illumination on). The adjustment level is from 1 to 9.

* The factory default setting for key illumination on is "3".

1. Select "ILLUM".
2. Turn the [▶/||·ENT] knob to adjust the illumination.

Notes:

- The new settings will be stored in memory.
- Display illumination is fixed at "9" for key illumination off (Daytime). "NA" will be displayed.

● Setting the colour line illumination

1. Select "COLOUR".
2. Turn the [▶/||·ENT] knob to select the colour, the type changes in the following orders:

COL. SCAN ↔ OFF ↔ BLUE ↔
SURF BLUE ↔ WHITE ↔ AQUA ↔
GREEN ↔ LIME ↔ ORANGE ↔ RED
↔ PINK ↔ PALE PINK ↔ VIOLET ↔
PURPLE ↔ COL. SCAN ...

● Setting user colour mode

1. Select "USER COL".
2. Turn the [▶/||·ENT] knob to enter the setting.
3. Press the [I◀◀, ▶▶I] button to move the cursor for adjusting the R, G or B value. The value of R is adjustable by default.
4. Turn the [▶/||·ENT] knob to select from 0 to 8. Adjustment will be updated in realtime.

Note:

- The factory default setting for user colour R, G and B (R: red, G: green, B: blue) are "8".

● Setting the animation effect

You can turn on or off the animation effect in this unit.

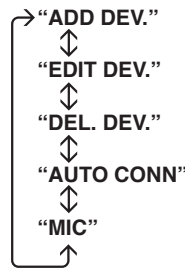
1. Select "ANIMATION".
 2. Turn the [▶/||·ENT] knob to select "ON" or "OFF".
- **ON** : Welcome animation and screen wipe transition at Source mode are enabled.
 - **OFF** : Animation effect is disabled.

Bluetooth® adjustment

②-① Press the [I◀◀, ▶▶I] button and select "BLUETOOTH".

③-① Push the [▶/||·ENT] knob.

③-② Press the [I◀◀, ▶▶I] button to select the "item name".



③-③ Push or turn the [▶/||·ENT] knob depends on selected item.

● Adding a new device (Pairing mode)

1. Select "ADD DEV.".
 - * The "Bluetooth" indicator will be blinking. The display shows "Pairing..." and the car stereo is currently in Pairing mode.
2. Push the [▶/||·ENT] knob.

Note:

- The pairing timeout is 3 minutes.

Common Operations

● Editing a device name

1. Select "EDIT DEV."
2. Turn the [▶/||·ENT] knob to select a device name to be edited.
3. Push the [▶/||·ENT] knob.

* The display shows the device name.



Device name

4. Turn the [▶/||·ENT] knob to edit a character.
5. Press the [▶▶] button or push [▶/||·ENT] knob to go to next character. Press the [◀◀] button to return to previous character.
6. Push the [▶/||·ENT] knob at the last blank character to store the name.

Notes:

- Push and hold the [▶/||·ENT] knob for 1.5 seconds or longer at any position will store the name as well.
- If there is no device connected, "(no devices)" will be shown in the display.

● Deleting a device

1. Select "DEL. DEV."
2. Turn the [▶/||·ENT] knob to select a device to be deleted.
3. Push the [▶/||·ENT] knob. A delete confirmation is prompted.
4. Turn the [▶/||·ENT] knob to select "YES" or "NO".
5. Push the [▶/||·ENT] knob to confirm the selection.

Notes:

- If there is no device connected, "(no devices)" will be shown in the display.
- "All" option will be available if there is more than one device connected.
- Deleting pairing information in the main unit only stops the unit from being connect to the other device. It does not stop the other device from trying to connect to main unit. Please delete the pairing information of the main unit from the phone/device as well. Always make sure pairing information on both device and main unit have been deleted before starting a new pairing activity.
- Deleting a device will disconnect any current Bluetooth® connection. User will need to manually re-connect if necessary.

● Automatic connection

This function allows the unit to be connected automatically with previously connected device during power up or entering Telephone mode. The Bluetooth® wireless function in your phone has to be turned on to establish automatic connection.

1. Select "AUTO CONN".
2. Turn the [▶/||·ENT] knob to select "ON" or "OFF".

● **ON** : Auto connection enabled.

● **OFF** : Auto connection disabled.

Notes:

- The factory default setting is "OFF".
- Please enable this feature only if your phone is supported.

● Selecting microphone input

1. Select "MIC".
2. Turn the [▶/||·ENT] knob to select one of the following:

● **INTERNAL** : Built-in microphone will be used.

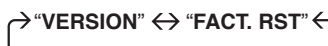
● **EXTERNAL** : An external microphone will be used.

Note:

- The factory default setting is "INTERNAL".

System Menu

1. Press and hold [☰] and [◀◀] buttons simultaneously for 1.5 seconds or longer.
2. Press the [◀◀, ▶▶] button to select an item.



3. Press the [☰] button to exit the menu.

● Checking the unit version

- 2-1. Select "VERSION".

Common Operations

● Restoring to factory default setting

This function allows user to restore the unit to the factory default setting.

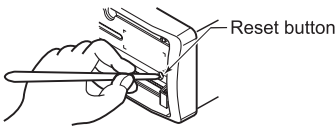
- 2-1. Select "**FACT. RST**".
- 2-2. Push the [▶/III • ENT] knob. A reset confirmation is prompted.
- 2-3. Turn the [▶/III • ENT] knob to select "**YES**" or "**NO**".
- 2-4. Push the [▶/III • ENT] knob to confirm the selection.

Notes:

- All pairing information and preset memories will be cleared. User will have to manually perform those setting again.
- Once reset, system will automatically turn off and re-power on.
- Clock time will not be reset with this operation.

The clock time reset is done with the following steps.

1. Turn off the power.
2. Press the [RELEASE] button and remove the DCP.
3. Press the reset button with a thin rod.



Compatible Devices

Supported phones with Bluetooth® wireless technology

Make sure your mobile phone supports the following *Bluetooth*® profile:

- HFP (Handsfree for mobile phone)

Optional profiles for audio streaming in mobile phone:

- A2DP (Stereo music streaming)
- AVRCP (Remote control function)

Please check your phone's specification for supported profiles. Features supported for each profile vary from product to product. To ensure your device will work correctly with this unit, please consult your nearest Clarion dealer for your phone compatibilities.

Supported external audio player with Bluetooth® wireless technology

This car stereo is compatible with Clarion *Bluetooth*® Audio Transmitter (DGL370/373) and Cradle for iPod (BC001N/BC002M/BC003V). Please consult your nearest Clarion dealer for the product offer.

Operation is not guaranteed with all the *Bluetooth*® audio players that supports A2DP/AVRCP from other manufacturers.

7. ADDITIONAL INFORMATION

Safe and efficient use

Note:

- Read this information before using your car stereo.

Changes or modifications to this product not expressly approved by Clarion may void the user's authority to operate the equipment.

Please check for any exceptions, due to national requirements or limitations, in usage of equipment with *Bluetooth*[®] wireless technology before using this product.

Product care

- Do not expose your product to liquid or moisture or to humidity.
- Do not expose your product to extreme high or low temperatures.
- Do not expose your product to lit candles, cigarettes, or cigars, or to open flames etc.
- Do not drop, throw or try to bend the product as rough treatment could damage it.
- Do not use any other accessories than Clarion originals intended for use with this product. Use of non-original accessories may result in loss of performance, damage to the product, fire, electric shock or injury. The warranty does not cover product failures which have been caused by use of non-original accessories.
- Do not attempt to disassemble your product. The product does not contain consumer serviceable or replaceable components. Only Clarion service partners should perform service.
- Do not keep the product in an area prone to dust and dirt. Only use a soft damp cloth to clean your product.
- If you will not be using the product for a while, store it in a place that is dry, free from damp, dust and extreme temperatures.
- To reduce risk of electric shock, unplug the unit from any power source before attempting to clean it.

Installation

Please note that only authorized personnel should install the car stereo. Please check with your car dealer for recommendations on professional installation engineers. Check with your car manufacturer's representative to be sure that all equipment for the car stereo, including additional accessories, is placed in a safe location. If your car is equipped with an air bag, check that the handsfree equipment does not interfere with its function.

The car stereo is made for use in cars with a 12 volt electrical system. Other supply voltages may cause damage to the equipment.

Radio frequency exposure

Your car stereo is a radio transmitter and receiver. When in operation, it communicates with a mobile device featuring *Bluetooth*[®] wireless technology by receiving and transmitting radio frequency (RF) electromagnetic fields (microwaves) in the frequency range 2400 to 2500 MHz. The output power of the radio transmitter is low, 0.001 watt.

Your car stereo is designed to operate in compliance with the RF exposure guidelines and limits set by national authorities and international health agencies when used with any compatible mobile phone with *Bluetooth*[®] wireless technology.

Driving

Check the laws and regulations on the use of mobile phones and handsfree equipment in the areas where you drive.

Always give full attention to driving and pull off the road and park before making or answering a call if driving conditions so require.

RF energy may affect some electronic systems in motor vehicles such as car stereo, safety equipment etc. Check with your vehicle manufacturer's representative to be sure that your mobile phone or car handsfree receiver will not affect the electronic systems in your vehicle.

Additional Information

Electronic equipment

Most modern electronic equipment is shielded from RF energy. However, certain electronic equipment is not, therefore:

Do not use your car stereo near medical equipment without requesting permission. If you are using any personal medical devices, e.g. a pacemaker or a hearing aid, please read in your mobile phone's User's Guide for further information.

Blasting areas

Turn off all your electronic devices when in a blasting area or in areas posted turn off two-way radio to avoid interfering with blasting operations. Construction crews often use remote control RF devices to set off explosives.

Potentially explosive atmospheres

Turn off your electronic device when in any area with a potentially explosive atmosphere. It is rare, but your electronic device could generate sparks. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death.

Areas with a potentially explosive atmosphere are often, but not always, clearly marked.

Emergency calls

IMPORTANT!

This car stereo, and the electronic device connected to the handsfree operate using radio signals, cellular, bluetooth wireless technology and landline networks as well as user-programmed functions, which cannot guarantee connection under all conditions. Therefore you should never rely solely upon any electronic device for essential communications (e.g. medical emergencies).

Remember, in order to make or receive calls, the car stereo and the electronic device connected to the handsfree must be switched on and in a service area with adequate cellular signal strength. Emergency calls may not be possible on all cellular phone networks or when certain network services and/or phone features are in use. Check with your local service provider.

8. TROUBLESHOOTING

	Problem	Cause	Measure
General	Power does not turn on. (No sound is produced)	Fuse is blown.	Replace with a fuse of the same amperage. If the fuse blows again, consult your store of purchase.
		Incorrect wiring.	Consult your store of purchase.
	No sound output when operating the unit with amplifiers or power antenna attached.	Power antenna lead is shorted to ground or excessive current is required for remote-on the amplifiers or power antenna.	<ol style="list-style-type: none"> 1. Turn the unit off. 2. Remove all wires attached to the power antenna lead. Check each wire for a possible short to ground using an ohm meter. 3. Turn the unit back on. 4. Reconnect each amplifier remote wire to the power antenna lead one by one. If the amplifiers turn off before all wires are attached, use an external relay to provide remote-on voltage (excessive current required).
	Nothing happens when button are pressed. Display is not accurate.	The microprocessor has malfunctioned due to noise, etc.	Perform factory restore. Please refer " Restoring to factory default setting " on page 30 for more details.
	No sound heard.	The speaker protection circuit is operating.	<ol style="list-style-type: none"> 1. Turn down sound volume. Function can also be restored by turning the power off and on again. (Speaker volume is reduced automatically when the speaker protection circuit operates). 2. If the sound is muted again, consult our service department.

	Problem	Cause	Measure
SD memory card	No sound heard.	MP3 files are absent in a SD memory card.	Write MP3 files onto the SD memory card properly.
		Files are not recognized as an MP3 file.	Use MP3 files encoded properly.
	Sound is cut or skipped. Noise is generated or noise is mixed with sound.	MP3 files are not encoded properly.	Use MP3 files encoded properly.
	SD/MMC memory card is not readable.	File system format is not correct.	Format SD memory card as FAT12 or FAT16.
		Incompatible SD/MMC.	Please make sure your SD/MMC is supported or consult your nearest Clarion dealer for SD/MMC compatibility.
MP3 files are unable to playback, display remains pause or loading.	Those MP3 files may be corrupted or do not encoded properly.	Use MP3 files encoded properly.	

TROUBLESHOOTING

	Problem	Cause	Measure
BT audio	Audio streaming is disconnected after telephone interrupt.	This is probably happen when audio streaming and telephone function are from the same device (mobile phone). Audio streaming may or may not resume after interruption as this is highly dependent on the device/phone.	Reconnect A2DP/AVRCP (Audio streaming profiles) from the phone again after telephone interrupt. Use Clarion recommends external audio player with <i>Bluetooth</i> [®] wireless technology.
	I cannot perform remote control for audio streaming.	AVRCP is not connected.	Disconnect and re-connect the device again. If problem persists, please delete pairing information on both device and main unit before re-pairing.
	Audio streaming becomes choppy when using your connected phone.	Due to excessive <i>Bluetooth</i> [®] activity on a low bandwidth link. Some phones will not handle this well.	If your phone is facing this problem, please avoid touching the phone's keypad while audio streaming. You may pause the audio streaming before operating your phone.
	Display is showing "STREAMING..." but there is no sound output.	Some <i>Bluetooth</i> [®] audio devices might not support AVRCP. Thus, play/pause is not synchronized.	Check whether both device and main unit are in play status. Change the status in the device if necessary. If problem persists, please power off and on the main unit or the device.
		There might be connection links broken between the devices.	Please delete pairing information on both device and main unit and start re-pairing.
	When I use 2 different devices at the same time, sometimes audio streaming or handsfree operations are not operating correctly.	Due to excessive <i>Bluetooth</i> [®] activity on a low bandwidth link. Some devices may affect other devices' normal operation if both are used at the same time.	Please disconnect the devices and connect either one of the devices only. If the problem persists, please consult you nearest Clarion dealer for your phone compatibility.

TROUBLESHOOTING

	Problem	Cause	Measure
Telephone	After pairing, car stereo is not able to receive and make calls.	<p><i>Bluetooth</i>[®] connection is not established yet. Normally it will take several seconds to establish the connection after pairing.</p> <p>Some phones will not automatic connect after pairing.</p>	Use your phone to manually connect or enter Telephone mode with Auto connection ON (Car stereo will try to reconnect).
			Power off and on the car stereo and perform pairing again. Always make sure pairing information on both device and main unit have been deleted before starting a new pairing activity.
			If the problem persists, please consult you nearest Clarion dealer for your phone compatibility.
		Car stereo is connected to other device.	Disconnect the previous device and reconnect current device.
	Unable to reconnect to car stereo using phone.	The device pairing information may have been deleted from the unit.	Please make sure the device is still in the device list of the unit and perform the above measure.
	Callers voice sounds distorted or is intermittent.	Volume is too loud (depends on the car environment, speakers and microphone) and half-duplex mode is automatically triggered.	Try reducing the telephone volume level.
	Caller reports poor voice quality at remote end.		Use external rather than internal microphone. Move external microphone closer to mouth. Try reducing the telephone volume level.
	Difficulties of pairing and connecting with phone during another <i>Bluetooth</i> [®] operation such as audio streaming.	Due to excessive <i>Bluetooth</i> [®] activity on a low bandwidth link, it may result hard to get paired and connected.	Disconnect all devices. Try pairing with phone first and connect A2DP device later.
	There is no sound output when incoming call is answered.	Incoming call was answered too quickly before you hear the ringing tone. This can cause the audio not properly transferred to the main unit by some phones.	<p>Please use your phone to transfer the audio back to the phone for the current ongoing call. Kindly answer the call only when you hear a ringing tone next time.</p> <p>If the problem persists, please reconnect the phone or create new pairing before the next incoming call.</p>
	There is no sound output during conversation.	<i>Bluetooth</i> [®] communication link is lost.	Please disconnect the phone and reconnect. If the problem persists, please create new pairing for both phone and main unit.
Unable to receive and make call in SD mode when another A2DP device is connected.	Due to excessive <i>Bluetooth</i> [®] activity on a low bandwidth link. Some A2DP devices still stream data to the unit.	<p>Disconnect the A2DP device and reconnect mobile phone (HFP). It is recommended to connect and use one device at a time.</p> <p>If the problem persists, please consult you nearest Clarion dealer for your phone compatibility.</p>	

9. ERROR DISPLAYS

If an error occurs, one of the following displays is displayed.

Take the measures described below to eliminate the problem.

Error Display	Cause	Measure
NO MP3	No audio file (MP3) is detected in the media. SD memory card format is not supported.	Replace with audio contents loaded SD/MMC card. If the error message persists, please check the SD memory card compatibility or format the memory card as FAT12 or FAT16.
SD ERROR	SD/MMC cannot be read, SD memory card format is corrupted or not supported.	Open the flip down panel, eject and reinsert the card. Close the panel and try again. If the error message persists, please check the SD memory card compatibility or format the memory card as FAT12 or FAT16.
CALL FAIL	Call is not made successfully.	Please try a few times or dial from phone if necessary.
	Voice dial feature is not supported by the phone. Voice dial cannot be activated. This is dependent on phone.	Please make sure your phone supports this feature or consult your nearest Clarion dealer for voice dial compatibility.
ERROR	Low level exception in <i>Bluetooth</i> [®] communications.	The user may need to re-connect the phone (if auto connect is off) and he will need to reconnect any A2DP stream/ HFP.
STREAM ERR	Low level exception when handling A2DP streams. It is due interoperability issues between the unit and the streaming source.	The user may need to re-connect the phone (if auto connect is off) and he will need to reconnect any A2DP stream/ HFP. If problem persists, the user will need to switch off or use an alternative A2DP source.

10. SPECIFICATIONS

FM tuner

Frequency Range: 87.5 MHz to 107.9 MHz

Usable Sensitivity: 11 dBf

50 dB Quieting Sensitivity: 17 dBf

Alternate Channel Selectivity: 75 dB

Stereo Separation (1 kHz): 35 dB

Frequency Response (± 3 dB): 30 Hz to 15 kHz

SD player

System: Multimedia audio system

Frequency Response: 10 Hz to 20 kHz (± 3 dB)

Dynamic Range: 80 dB (1 kHz)

Harmonic Distortion: 0.01%

Bluetooth® wireless technology

Compliance: Bluetooth® 1.2

Frequency Range: 2.40~2.4835 GHz, ISM band

RF Power: Class 2 (2.5mW)

Profiles: HFP, A2DP, AVRCP

Operating Temperature: $-20^{\circ}\text{C} \sim 60^{\circ}\text{C}$

Telephone Operation:

Noise reduction, echo cancellation, full duplex telephony

Mic Input (External): 2.2k ohm, 2V electret

Audio

Maximum Power Output: 200 W (50 W X 4 ch)

Bass Control Action (100 Hz): ± 14 dB

Treble Control Action (10 kHz): ± 14 dB

Line Output (with A/C 1 kHz, 10 k Ω): 1.8 V

General

Power Supply Voltage:

12 V DC (10.8 V to 15.6 V allowable), negative ground

Current Consumption: Less than 15 A

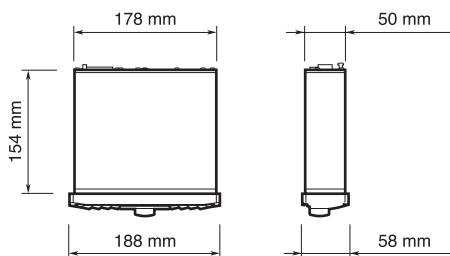
Speaker Impedance: 4 Ω (4 Ω to 8 Ω allowable)

Weight: 1.87 lb. (0.85 kg)

Dimensions:

178 mm Width X 50 mm Height X 154 mm

Depth



Notes:

- Specifications comply with JEITA Standards.
- Specifications and design are subject to change without notice for further improvement.
- Please make sure when connecting external power amplifier, that you properly, to the car chassis, ground the amplifier.
- If this is not done, severe damage to the source unit may happen.