

**Owner's manual & Installation manual** 

## FZ105BT

USB/MP3/WMA DIGITAL MEDIA RECEVIER

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# English 🛛 🗠

## 1. FEATURES

- Front USB Port
- MP3/WMA Compatible with ID3-TAG display
- Front 3.5mm AUX Input

- 50W x 4 Built-in Amplifier
- Bulit-in Bluetooth<sup>®</sup>
- Compatible with iPod<sup>®</sup> / iPhone<sup>®</sup>
- USB Bluetooth®





## 2. PRECAUTIONS

#### 

## For your safety, while boating, keep the volume to a level at which external sounds can be heard.

1. This unit has precision parts inside. Even in the event that trouble arises, never open the case, disassemble the unit, or lubricate the parts.

#### 2. FCC STATEMENT

- 2.1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
  - (1) This device may not cause harmful interference.
  - (2) This device must accept any interference received, including interference that may cause undesired operation.
- 2.2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

#### Note:

This quipment 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 try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

IC Caution.

- English:

This device complies with Industry Canada licenceexempt RSS standard(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

- French:

Le présentappareilestconforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitationestautorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareildoit accepter tout brouillageradioélectriquesubi, mêmesi le brouillageest susceptible d'encompromettre le fonctionnement.

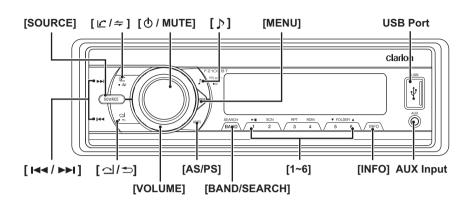
PIN	WIRE COLOR	FUNCTION/LABEL	U.S.A: AM 530-1710kHz.
64	YELLOW	BATTERY(+)	EM 87.9-107.9MHz
A4 A6	ORANGE/WHITE	DIMMER	Europe:
Δ7	RED	IGNITION(ACC)	AM 531-1602kHz.
48	BLACK	GROUND	EM 87.5-108.0MHz
B1	VIOLET	RIGHT REAR SPEAKER (+)	Aisa:
B2	VIOLET/BLACK	RIGHT REAR SPEAKER (-)	AM 531-1620kHz
B2 B3	GREY	RIGHT FRONT SPEAKER (+)	EM 87.5-108.0MHz
B4	GREY/BLACK	RIGHT FRONT SPEAKER (-)	Australia:
B5	WHITE	LEFT FRONT SPEAKER (+)	Australia: AM531-1620kHz
B6	WHITE/BLACK	LEFT FRONT SPEAKER (-)	EM 87.5-108.0MHz
B7	GREEN	LEFT REAR SPEAKER (+)	1
B8	GREEN/BLACK	LEFT REAR SPEAKER (-)	1 12V
	Wire Blue/White W	ire for Amplifier Turn-ON and sho	
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## 3. CAUTIONS ON HANDLING

 Protect from high temperature. Expose to direct sunlight for an extended period of time can produce very high temperature in your vehicle. Cool down the interior before starting the playback.

## 4. CONTROLS

## **Operational Panel**



## Name of Buttons and their Functions

#### [SOURCE] Button

• Press **SOURCE** button to toggle the audio source

#### [⊯/≑] Button

• Dial / Answer / Transfer call / Press and hold to Redial

#### [ 🖞 / MUTE] Button

- Press this button to turn power On or Off.
- Press this button to mute the audio output, press it again to unmute the audio output.
- Press to confirm the selection.

#### [ ] Button

 Press to adjust the sound effect setting: EQ -> XBS(iXBass) -> BAS(bass) -> MID (Middle) -> TRE(treble) -> BAL(balance) -> FAD(fader) -> SUBW(Subwoofer)

#### [MENU] Button

• Press access into the system menu mode.

#### [I◄◀/►►I] Button

- Use these buttons for tuning up and down in Tuner mode, USB mode.
- Press and hold momentarily to Fast Forward/ Backward in USB mode.

#### [ 스 / 🗂] Button

- Terminate call
- Press this button to quick return to previous menu or mode.

#### [VOLUME] Button

• Rotate to adjust the volume level.

#### [AS/PS] Button

- Scan play / Preset scan
- · Press and hold enter Auto memory store mode

#### [BAND/SEARCH] Button

- Press to select tuner band in Tuner mode.
- Press to activate the MP3 file searching mode, then use the volume to select / search by file number in USB mode.

#### [1~6] Buttons

- [1] Button: Play / Pause / Preset station 1
- [2] Button: Scan play / Preset station 2
- [3] Button: Repeat play / Preset station 3
- [4] Button: Random play / Preset station 4
- [5] Button: Previous folder / Preset station 5
- [6] Button: Next folder / Preset station 6

#### [INFO] Button

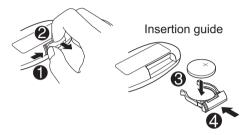
- Press to view the Clock
- Press to change the display indication.

## Notes for use of Optional Remote Control

- Aim the remote control at the remote sensor on the unit.
- 2. Remove the battery from the remote control or insert a battery insulator if the battery has not been used for a month or longer.
- 3. DO NOT store the remote control under direct sunlight or in high temperature environment, or it may not function properly.
- 4. Use "button shaped" lithium battery "CR2025" (3V) only.
- 5. DO NOT subject battery to recharge, disassemble, heat or dispose in fire or water.
- 6. Insert the battery in proper direction according to the (+) and (-) polarities.
- 7. Store the battery in a place where children can not reach to avoid the risk of accident.

#### Inserting the Battery

- 1. Slide remote control units rear cover in the direction shown.
- 2. Insert battery (Cr2025) into insertion guides with printed side (+) up.
- 3. Press battery into compartment as shown.
- 4. Replace and slide cover until it clicks into place.



## **Remote Control**

#### [ 🕅 ] Button

Mute or Unmute the audio output

#### [ + ] [ vol ] Button

- Press button to increase the volume.
- Press vol. button to decrease the volume.

## [I44 />>I] ButtonPreset station up/down

- Previous / next track
- Press and hold for Fast Forward / Backward

#### [SRC] Button

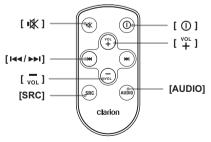
• Toggle the audio source

#### [ () ] Button

Press the button to turn power on or off.

#### [AUDIO] Button

 Press the button to enter the Audio Menu mode.



## **OPERATIONS**

## **Basic Operation**

Note: Be sure to read this chapter referring to the chapter "4.CONTROLS"

#### CAUTION

When the unit is turned on, starting and stopping the engine with its volume raised to the maximum level it may cause hearing damage. Be careful about adjusting the volume.

### Setting The Clock

- 1. Press [ MENU ] button to enter System Menu.
- 2. Press [ ] I or [ ] button to select the Clock.
- 3. Rotate the [ VOLUME ] knob to set clock, rotating the [ VOLUME ] clockwise to adjust the minutes and counterclockwise to adjust the hours.

#### Power On/Off

#### Note:

- Start the engine before using this unit.
- Be careful about using this unit for a long time without running the engine. If you drain the vehicle battery too far, you may not be able to start the engine and this can reduce the service life of the battery.
- 1. Start the engine. The power button / knob illumination on the unit will light up.



position

2. Press the [ () / MUTE ] button to turn the power On or Off.

#### Selecting a mode

- 1. Press the [SOURCE] button to display source menu.
  - \* External equipment not connected to this unit is not displayed.

#### Adjusting the volume

1. Rotating the [VOLUME] to increase/decrease the volume. The adjustable range of volume is o to 46.

### Mute

Press the [MUTE] button to turn the mute On and Off.

### Display System information

press the **[INFO]** button on the front panel to switch the display information, system time and playing source.

## System Menu

In any mode, press **[MENU]** button to enter System Menu. Press **[I** ◄ ] or **[ ▶ ]** button to select options, rotate the **[VOLUME]** knob to adjust a value / option.

## CLOCK

Rotate the **[VOLUME]** knob to set Clock, rotating the **[VOLUME]** clockwise to adjust the minutes and counterclockwise to adjust the hours.

#### ♦ 12/24H

Rotate the [ VOLUME ] knob to choose time format: 12 or 24 hours.

### ♦ BEEP ON/OFF

Rotate the **[VOLUME]** knob to choose button Beep sound On or Off.

### DIMMER

Rotate the [ VOLUME ] konb to choose the Dimmer On or Off.

- **ON:** LCD dimmer is active when small light of vehicle is turned ON.
- **OFF:** LCD always maximum brightness regardless of the vehicle small light.

### LOCAL SEEKING

Rotate the **[VOLUME]** knob to choose radio Local or distant at RADIO mode.

- LOCAL: Only stations with strong signal can be received.
- DX: Stations with strong and weak signals can be received.

## TUNE AREA

Rotate the **[VOLUME]** knob to select suitable country region:

- U.S.A (United States)
- LATIN (Latin America)
- EUROPE (Eastern/Western Europe)
- ASIA (Asia Pacific)
- AUST (Australia)

#### DIS-CON/RE-CON

Disconnect / Re-connect currently connected mobile phone. Press the [MUTE] button to disconnect / Re-connect.

## Audio Menu

Press [ ♪] button to enter sound effect setting mode. Press [ ↓ ] or [ ▶ ] button to select options, rotate the [ VOLUME ] knob to adjust a value / option.

#### EQ (Preset Equalizer Setting)

Rotate the [VOLUME] knob to change EQ: Flat->Jazz->Pop->Classic->Rock->News-> Urban->Rave->Movie->Techno->User

### XBS On/Off

Rotate the **[VOLUME]** knob to turn On or Off the X-BASS bosster function.

### BAS (Bass Level)

Rotate the **[VOLUME]** knob to adjust the desired Bass level range from -7 to +7.

#### 

Rotate the **[VOLUME]** knob to adjust the desired Middle level range from -7 to +7.

### TRE (Treble Level)

Rotate the **[VOLUME]** knob to adjust the desired Treble level range from -7 to +7.

## BAL (Balance)

Rotate the **[VOLUME]** knob to adjust adjust the Balance between the right and left speakers from 10R (full right) to 10L (full left).

## FAD (Fader)

Rotate the **[VOLUME]** knob to adjust adjust the Fader between the front and rear speakers from 10R (full rear) to 10F (full front).

## SUBW On/Off

Rotate the **[VOLUME]** knob to select subwoofer between ON and OFF



## Select Radio As Playing

Press the [SOURCE] button to select the RADIO mode.

### Selecting The Radio Band

Press the [ BAND / SEARCH ] button on the front panel to select one Radio band among F1, F2,F3 ,AM.

#### ▶ [ ▶▶I ] Tuning Up / [ I◄◀ ] **Tuning Down Buttons**

- 1. Press the [ >> ] / [ << ] button change intervals step by step.
- 2. Press and hold the [ >> 1/[ Idd ] button to seek to the next strongest station.

#### Auto Store

Only stations with sufficient signal strength will be detected and stored in the memory.

Press the [AS/PS] button to start automatically select six strong stations and store them into six presets. The new stations replace any stations already stored in the band.

### Manual Store

when one expected radio station has been detected, press and hold number button 1-6 to store it in the memory.

## Recall The Stored Stations

Press one numeric button among 1 to 6 on the front panel to select the corresponding stored stations.

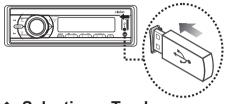
## Local Seeking

When LOCAL seeking is ON, only those radio stations with strong radio signal could be received.

To select LOCAL function, press the [ MENU ] button on the front panel, then press the [ bb] button repeatedly until LOCAL or DX display on the LCD, rotate the [VOLUME] knob to select local or distant mode

#### Connect

- 1. Slide the USB socket cover to right.
- Insert the USB device into the USB socket. The unit starts playing from the USB device.
- To remove the USB device, you should first select another source or turn off the power, in order to avoid damaging the USB device. Then take off the USB device.



### Selecting a Track

 Press the [ >>] button to advance to the next track/song.
 Press the [ | << ] button to go to previous</li>

track/song.

Press and Hold in the [ >> ] button to fast forward through the track/song.
 Press and Hold in the [ |<< ] button to fast backward through the track/song.</li>

## Play / Pause

Press the [ > ]] button to pause the track/song that is currently playing.

Press the [ ] button to resume playing the track/song that has been paused.

## AUX Mode Operation

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

Folder Select

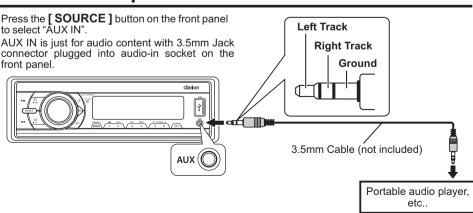
Press the  $[ \mathbf{\nabla} 5 / \mathbf{A} 6 ]$  button to select a folder.

### Search Function

- Press the [BAND / SEARCH] button on front panel access the MP3 / WMA file search mode.
- Rotate the [VOLUME] knob to search through all folders on the device then press [ (b) / MUTE ] to make your selection.
- Rotate the [VOLUME] knob to select the desired track within the previously selected folder and press [ () / MUTE] to start playing.

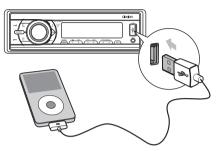
## Display Function

During playback, pressing the **[INFO]** button will automatically cycle through the following information on the file being played on the LCD: **FOLDER NAME->FILE NAME->ALBUM->TITLE** ->ARTIST



#### Connect

Connect an iPod/iPhone to the USB socket on front panel. When connecting a device, the unit will read the files automatically. The track information displays on the screen once playback start.



#### Compatible iPod/iPhone

You can connect the following iPod/iPhone:

- iPod nano (6G)
- iPod nano (7G)
- iPod touch (4G)
- iPod touch (5G)
- iPhone 3GS

- iPhone 4
- iPhone 4S
- iPhone 5
  iPhone 5C
- iPhone 5C
  iPhone 5S
- Minimum iOS 5.0 or higher

#### iPod/iPhone Control Music Playback Mode

Press and hold the [ ] button on front panel to switch between the two control modes:

- **iPod control mode:** Use the iPod/iPhone to operates the music control.
- Unit control mode: Use the head unit to operates the music control.

#### Note:

Please make sure the iPod/iPhone cable is connected correctly. And please only use original iPod/iPhone cable.

### Selecting a Track

- Press the [ ▶▶] ] button to advance to the next track/song.
   Press the [ I◄◀ ] button to go to previous track/song.
- Press and hold the [ ▶▶] ] button to fast forward through the track/song.
   Press and hold the [ I◄◀ ] button to fast backward through the track/song.

### Play / Pause

Press the [ > II ] button to pause the track/song that is currently playing.

Press the [ > II ] button to resume playing the track/song that has been paused.

## iPod Menu Search

- 1. Press the **[BA ND/SEARCH]** button on front panel access the iPod menu search mode.
- Rotate the [VOLUME] knob to switch between categories.
   PLAYLISTS->ARTIST-> ALBUMS->GENRES-> SONGS->COMPOSERS->AUDIOBOOK-> PODCASTS
- 3. Press [ ()/MUTE ] button to confirm the selecting.
- When display the desired Playlist or Artist or Album or Genres or Songs or Composers or Audiobook or Podcasts, press [①/MUTE] button then the music file will be displayed.
- 5. Rotate the [VOLUME] knob to select File.
- 6. Press [**()/MUTE**] button to confirm wanted file to play.

#### Display Function

During playback, pressing the **[INFO]** button will automatically cycle through the following information on the file being played on the LCD: **ALBUM -> SONGS -> ARTIST -> CLOCK** 

## **Bluetooth Operation**

#### Pairing the Bluetooth Device

- 1. From your Bluetooth enabled device, turn the Bluetooth ON and search for Bluetooth devices.
- When a list of available Bluetooth devices appear on your Bluetooth device, select "CLARION".
- 3. "CONNECTED" will appear on the display.
- The unit will automatically enter the BT Audio source and you can now start streaming audio from your Bluetooth enabled device.

**Note**: If the mobile phone doesn't support SSP (Simple Secure Pairing) Profile, please enter the pass code of "0000".

### Making a Call

You can dial number through the mobile phone.

- 1. Use the Mobile Phone to dial and make an outgoing call.
- 2. Once completed the dialing [CALLING] is displayed

#### Redial

You can call last dialed number.

- 1. Press the [ $|\underline{C}| \neq$ ] on front panel to redial.
- 2. Once completed the dialing [CALLING] is displayed

#### Answering a Call

- 1. You can answer an incoming call by pressing the [ I⊆/ ⇐] button.
- 2. Press the [-1/-5] button to reject an incoming call.

#### Call Transfer

You can switch Handsfree call and mobile phone call. Press the  $[1 \subseteq l \neq ]$  button during call.

#### Dis-connect / Re-Connect

- 1. Press and hold the [MENU] button to enter System menu.
- 2. Press the [I◄◀ / ►►I] button until "DIS-CON" or "RE-CON" is displayed.
- 3. Press [ () /MUTE] button to confirm the selection.

#### Audio Streaming Operations 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 audio system wirelessly and listen to the tracks through the boat's speakers. Please consult your nearest Clarion dealer for more information on the product of wireless audio streaming transmitter offered.

#### **A**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.

#### Search Function

- Press the [BA ND/SEARCH] button on front panel access the search mode.
- 2. Rotate the **[VOLUME]** knob to switch between categories.

PLAYLISTS->ARTIST-> ALBUMS->GENRES-> SONGS->COMPOSERS->AUDIOBOOK-> PODCASTS

- 3. Press [ ()/MUTE ] button to confirm the selecting.
- When display the desired Playlist or Artist or Album or Genres or Songs or Composers or Audiobook or Podcasts, press [①/MUTE] button then the music file will be displayed.
- 5. Rotate the **[VOLUME]** knob to select File.
- 6. Press [()/MUTE] button to confirm wanted file to play.

#### Note:

The search feature requires the paired and connected device that the minimum Bluetooth AVRCP1.4 be incorporated to function.

#### Play / Pause

Press the **[ I**] button to pause the track/song that is currently playing.

Press the [ ► II ] button to resume playing the track/song that has been paused.

#### Selecting a Track

- Press the [ ▶▶] button to advance to the next track/song.
   Press the [ I◄◀ ] button to go to previous track/song.
- 2. Press and hold the [ ▶▶] ] button to fast forward through the track/song. Press and hold the [ I◀◀ ] button to fast backward through the track/song.

#### Note:

Playing order will depend on Bluetooth audio player. When [ ] [] button is pressed, some A2DP devices will restart the current track depends on the duration of playback. During music streaming playback "A2DP" will be shown on the display. When A2DP and HFP device is disconnect, "BLUETOOTH DISCONNECT" will be shown on the display and return to previously selected audio source. 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 MUSIC mode.

#### ID3 Display

During music streaming playback, press **[INFO]** to view the ID3 display information:

ALBUM -> SONGS -> ARTIST -> CLOCK

## 6. TROUBLESHOOTING

### GENERAL

Problem	Cause	Measure
Unit can not power	Unit fuse blown.	Replace with new fuse of correct rating.
on.	Car battery fuse blown.	Replace with new fuse of correct rating.
No/low audio output.	Improper audio output connection.	Check wiring and correct.
	Volume set too low.	Increase volume level.
	Speakers damaged.	Replace speakers.
	Heavily biased volume balance.	Adjust the channel balance to center position.
	Speaker wiring is in contact with metal part of car.	Insulate all speaker wiring connections.
Poor sound quality or distortion.	Speaker power rating does not match unit.	Replace speakers.
	Wrong connections.	Check wiring and correct.
	Speaker is shorted.	Check wiring and correct.
Unit resets itself when engine is off.	Incorrect connection between ACC and Battery.	Check the wiring and correct.

#### USB

Problem	Cause	Measure	
USB device cannot be inserted.	The USB device has been inserted with wrong direction.	Reversing the connection direction of the USB device, try it again.	
	The USB connector is broken.	Replace with a new USB device.	
USB device is not recognized.	The USB device is damaged.	Disconnect the USB device and reconnect. If	
	Connectors are loose.	the device is still not recognized, try replacing with a different USB device.	
No sound heard with the display "No File" shown.	No MP3/WMA file is stored in the USB device.	Store these files properly in the USB device.	
Sound skips or is noisy.	MP3/WMA files are not encoded properly.	Use MP3/WMA files encoded properly.	

#### Bluetooth

Problem	Cause	Measure
Cannot pair the Bluetooth enabled device with the	The device does not support the profiles required for the system.	Use another device to connect.
audio system.		Refer to the user manual of the device for how to enable the function.
The audio quality is poor after connection with a Bluetooth- enabled device.	The Bluetooth reception is poor.	Move the device closer to the audio system or remove any obstacle between the device and the system.

## SPECIFICATIONS

#### FM Tuner

Frequency Range: 87.9 - 107.9MHz Stereo Separation: >30dB(1kHz) Signal/noise ratio:

Usable Sensitivity: Less than 10dB at S/N 30dB >55dB

#### Bluetooth

Specification: Bluetooth Version, 2 1+FDR (Enhanced Data Rate) Supported Profiles: A2DP (Advanced Audio Distribution Profile) AVRCP 1.4 (Audio/Video Remote Control Profile) SSP (Simple Secure Pairing) Send/Receive Sensitivity: Class 2

#### AM Tuner

Frequency Range: 530 -1710KHz Usable Sensitivity: Less than 40dB

#### **USB**

USB Host

Host 1.1 compatibles 2.0

#### MP3/WMA mode

MP3 sampling rate: MP3 bit rate:	32kHz, 44.1kHz, 48kHz 8~320kbps and varibale bit rate
WMA bit rate:	8~320kbps
Logical format:	ISO9660, Joliet
Number of file:	Maximum 999
Max directory depth:	10
Sorting Method:	Tree sorting
Max File/Directory	64Byte
Name: ID3 tag:	V2.0 or later

General

Power Supply Voltage:	12V DC (10.8 to 15.6V),
	Negative Ground
Fuse:	15A
Speaker Impedance:	4-8 ohms per channel
Power output:	50W x 4 channels
Aux-in level:	≥ 650mV

Note: Specifications and design are subject to change without notice for further improvement.

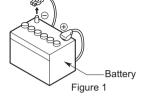
Power Output: 20W × 4 Channels at 4 Ω	iller Power Standard
and 1% THD+N	
Signal to Noise Ratio:	CEA P IN
74dB (reference: LPF 1 W into $4\Omega$ )	) CEA-2006 Const

# INSTALLATION AND WIRE CONNECTION

## 1. Before Starting

- 1. This set is exclusively for use in vehicles with a negative ground 12 V power supply.
- 2. Read these instructions carefully.
- Be sure to disconnect the battery " \_ " terminal before starting. This is to prevent short circuits during installation. (Figure 1)

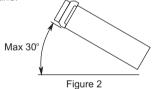
## 2. General Cautions



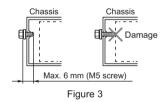
- Do not open the case. There are no user serviceable parts inside. If you drop anything into the unit during installation, consult your dealer or an authorized **Clarion** service center.
- Use a soft, dry cloth to clean the case. Never use a rough cloth, thinner, benzine, or alcohol etc. For tough dirt, apply a little cold or warm water to a soft cloth and wipe off the dirt gently.

## 3. Cautions on Installation

- 1. Prepare all articles necessary for installing the source unit before starting.
- Install the unit within 30° of the horizontal plane. (Figure 2)
- If you have to do any work on the car body, such as drilling holes, consult your car dealer beforehand.



4. Use the enclosed screws for installation. Using other screws can cause damage. (Figure 3)



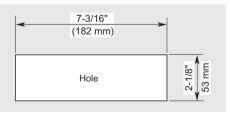
## 4. Installation the Source Unit

- 1. Place the mounting bracket into the instrument panel, use a crewdriver to bend each stopper of the mounting bracket inward, then secure the stopper.
- 2. Wire as shown in Section 7).
- 3. Insert the source unit into the mounting bracket until it locks.
- 4. Take care of the top and bottom of the trim ring and mount it so that all the hooks are locked.

**Note:** 1. Some car models require special mounting kits for proper installation. Consult your **Clarion** dealer for details.

2. Fasten the front stopper securely to prevent the source unit from coming loose.





#### Notes of installation:

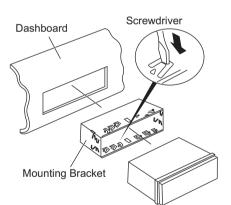
- Before installation, please make sure prope connections are conducted and the unit operates normally. Improper connection may result in damage to the unit.
- Use only accessories designed and manufactured for this unit and other unauthorized accessories may result in damage to the unit.
- Before installation, please fasten all power cables.
- DO NOT install the unit in the place where close to hot area to prevent damage to electrical components such as the laser head.
- Install the unit horizontally. Installing the unit more than 30 degree vertically may result in worse performance.
- To prevent electric spark, connect the positive pole first and then the negative pole.

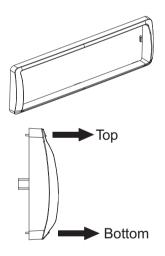
#### **Unit installation**

- Insert mounting bracket into dash board, choose appropriate mounting tab according to the gap width, bending the mounting tab outwards with a screwdriver to fix the mounting bracket in place.
- 2. Slide the unit into the bracket until you hear a click sound.

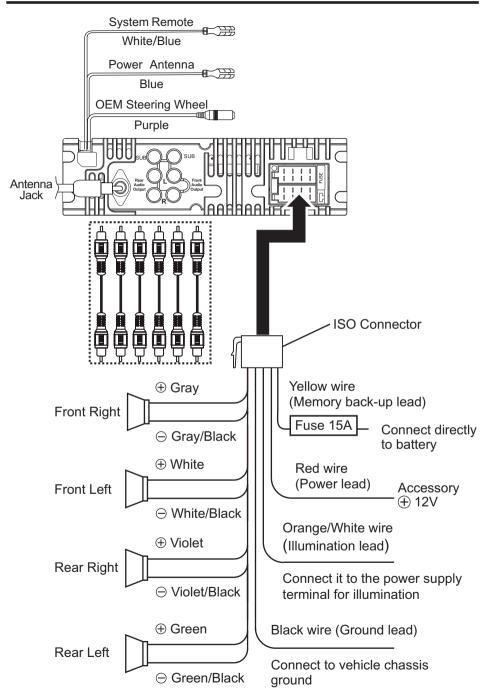
### **Trim ring installation**

Attach the trim ring around the front panel. Take care of the top and bottom of the trim ring and mount it so that all the hooks are locked.





## 5. Wiring and Connections



## Clarion Corporation of America

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