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# Notes on Installation

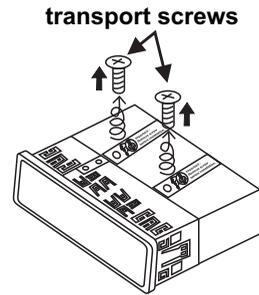
- Disconnect negative battery terminal before starting installation. Consult the vehicle's owner's manual for proper instruction.
- The unit is designed for a 12Volt DC negative ground operation system only. Before Installing the unit, make sure your vehicle is a 12Volt DC negative ground system.
- Be sure to connect the leads according to the diagram. Incorrect connections may cause the unit to malfunction or damage the vehicle's electrical system.
- Be sure to connect the negative (-) speaker leads to the negative (-) speaker terminal. Never connect negative (-) speaker leads to chassis ground.
- The unit is only designed for use with 4 speakers. Do not combine output for use with 2 speakers. Do not ground negative speaker leads to the chassis ground.
- Make sure all of the connections are completely correct before turning on your unit.
- When replacing the fuse(s), the replacement must be of the same amperage as shown on the fuse holder.
- Do not block vents or heater panels. Blocking them will cause heat to build up inside and may result in fire.
- After completing the installation and before operating the unit, reconnect the battery. Then press the (RESET) button with a pointed object, such as a ball-point pen to set the unit to its initial status.

## Before You Install

Automotive audio equipment installations can be troublesome at times, even to the most experienced of installation technicians. If you are not confident working with electrical wiring, removing and reinstalling interior panels, carpeting, dashboards or other components of your vehicle, please call your dealer in order to have the unit professionally installed.

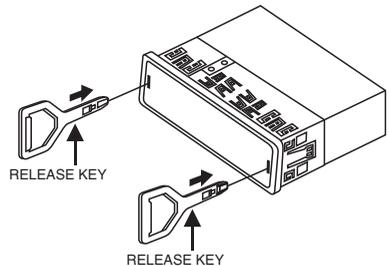
### IMPORTANT :

Due to protection of CD Mechanism, the two small transport screws on the top of the unit must be released before installing the unit. Otherwise, the CD Mechanism can not be working properly.



## Remove the Old Unit from the Dashboard

1. Remove front control panel.
2. Slightly insert release keys into the slot and gently to release.
3. Separate the holder from the unit.  
Keep release keys in a safe place as you may need for future removal of unit.



# Installation

## DIN FRONT DASH MOUNT

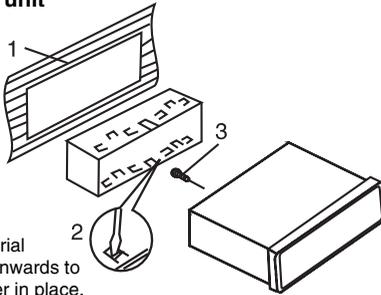
### Installation the unit

1. Dashboard.

2. Holder

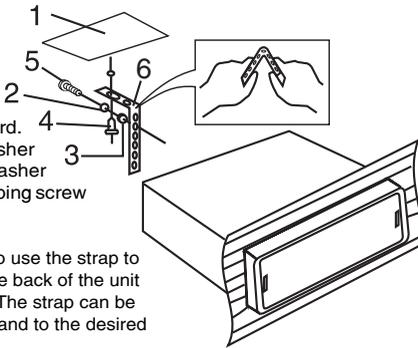
After inserting the holder into the dashboard, select the appropriate tab according to the thickness of the dashboard material and bend them inwards to secure the holder in place.

3. Screw



1. Dashboard.
2. Plain washer
3. Spring washer
4. Self-Tapping screw
5. Screw
6. Strap

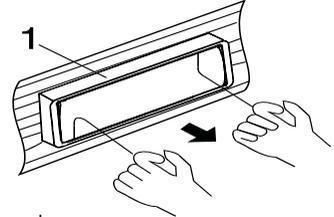
Be sure to use the strap to secure the back of the unit in place. The strap can be bent by hand to the desired angle.



### Removing the unit

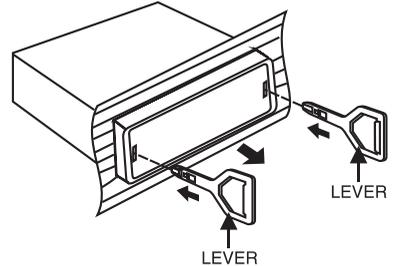
1. Frame

2. Insert fingers into the groove in the front of frame and pull out to remove the frame, (When re-attaching the frame, point the side with a groove downwards and attach it.)



3. Release keys

Insert the keys supplied with the unit into the grooves at both sides of the unit as shown in figure until they click. Pulling the keys make it possible to remove the unit from the dashboard.



## DIN REAR-MOUNT ISO (Remove facia and surround until fitting completed)

Installation using the screw holes on the sides of the unit. Fastening the unit to the factory radio mounting bracket.

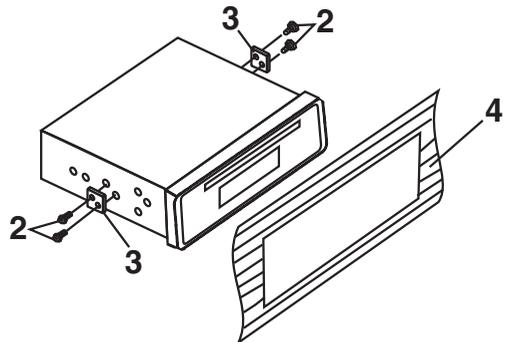
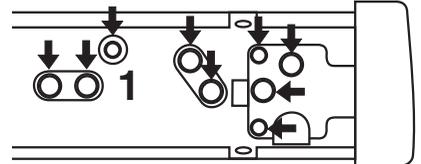
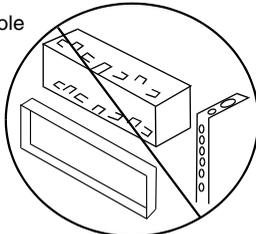
1. Select a position where the screw holes of the bracket and the screw holes of the main unit become aligned (are fitted), and tighten the screws at 2 places on each side.

Use either truss screws (5X6mm) or flush surface screws (4X6mm), depending on the shape of the screw holes in the bracket.

2. Screw

3. Radio mounting bracket (not provided with radio)

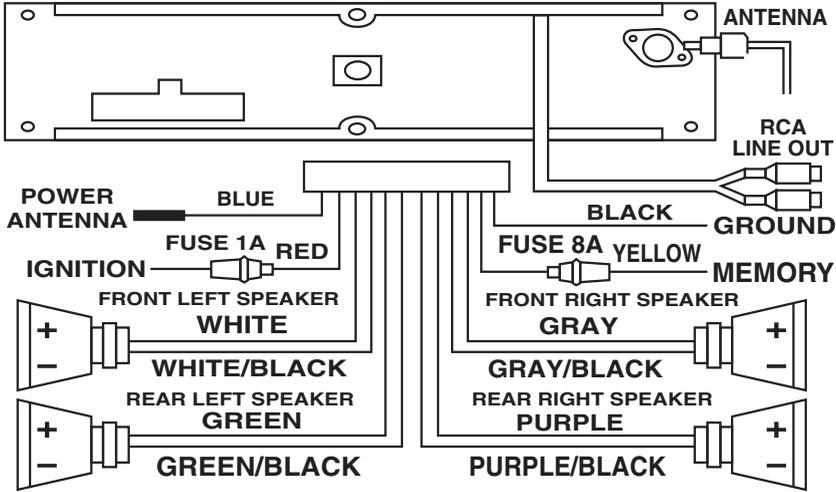
4. Dashboard or Console



**Note: The mounting box, outer trim ring, and half-sleeve are not used for ISO installation.**

# Wiring Connections

Make sure that you have a good chassis ground. Good ground connections will eliminate most electrical noise problems. A good chassis ground requires a tight connection to the vehicle's metal chassis. The area around the ground connection should be clean, bare metal without rust, paint, plastic, dust, or dirt for a good electrical connection.



## Speaker Wiring Notes

Follow the above wiring diagram to install the head unit with new or existing speakers.

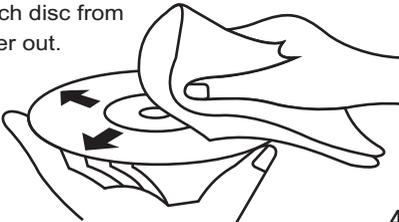
- This unit is designed for use with four (4) speakers with an impedance between 4 ohms to 8 ohms.
- An impedance load of less than 4 Ohms could damage the unit.
- Never bridge or combine the speaker wire outputs. When not using four speakers, use electrical tape to tape the ends of the unused speaker outputs to prevent a short circuit.
- Never ground the negative speaker terminals to chassis ground.

# Care of Discs

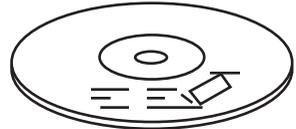
- Handle the disc by its edge to keep the disc clean. Do not touch the disc's surface.



- Clean the discs with an optional cleaning cloth. Wipe each disc from the center out.



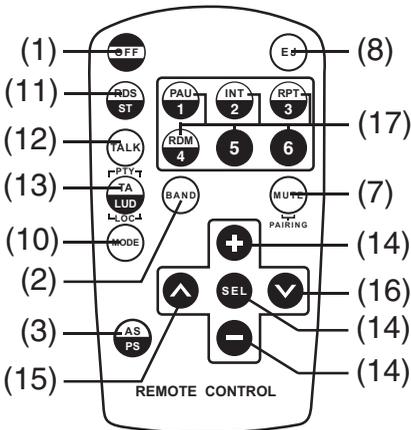
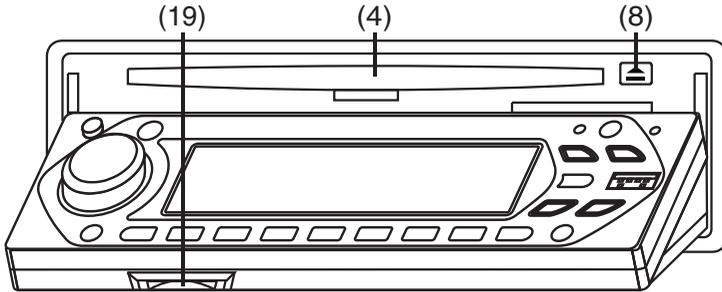
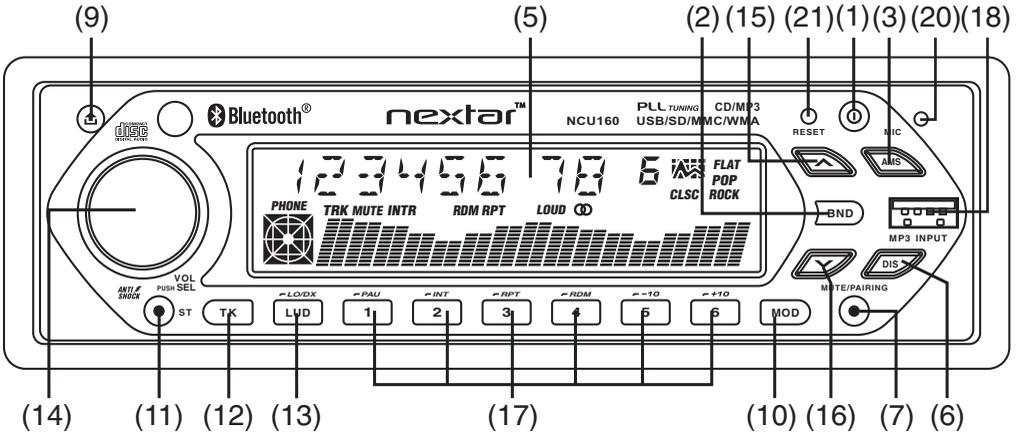
- Do not use CDs with labels or stickers attached. The label may leave a sticky residue when it begins to peel.



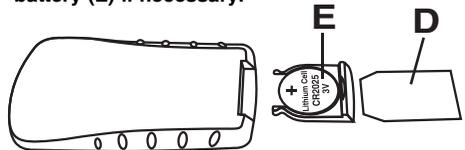
- Do not use a CD with paste or ink residue on it.



# Location of Controls



\*Remove the transparency plastic thin plate (D) before use and replace the CR2025(3V) lithium battery (E) if necessary.



# Operating Instructions

## 1. POWER ON/OFF CONTROL

Press the button to turn the power "ON" or "OFF".

Note : The unit can be turn on by pressing any keys on the panel (except panel release button & disc eject button). It will help the user who cannot find the power button in dark.

## 2. BAND SELECTOR

Each time this button is pressed, the radio band is changed. The indication "FM1", "FM2", "FM3", "AM1" or "AM2" will appear on the display according to your selection.

## 3. PRE-SCAN/AUTO-STORE BUTTON

This button allows you to enjoy "Preset Memory Scan" function by pushing it shortly, and "Auto-Store Memory" function by pushing it more than 2 seconds.

●PS (PRESET MEMORY SCAN) - It calls the memorized station frequencies (from 1-6) automatically every 5 seconds.

●AS (AUTO-STORE MEMORY) - It searches all station frequencies upward and memorize automatically 6 stations by catching the frequency which has scan-stop level, the memorized station is shown on LCD as "Channel 1 to 6". After memorizing, auto-store memory function will be changed to "Preset Memory Scan" function automatically.

## 4. DISC SLOT

Holding the disc and insert into the disc slot. The disc mechanism will automatically engage into CD/MP3/WMA play mode.

## 5. LCD DIGITAL DISPLAY

The unit utilizes a digital type display which shows numerical indication of station FREQUENCY and other FUNCTIONS.

## 6. DISPLAY BUTTON

This button serves to show available information as following:

- Time
- Track No. / Playing Time (during CD/MP3/WMA/USB-DRIV/MEM-CARD mode)
- Directory Name / File Name (during CD/MP3/WMA/USB-DRIV/MEM-CARD mode and the file must contain directories or files name written by the CD/MP3/WMA/USB/SD/MMC writer)

## SETTING CLOCK TIME MANUALLY

1. Press "DIS" button and hold it until the display flash and release.
2. Rotate "VOL/SEL" button clockwise to set HOUR and anti-clockwise to set MINUTE.

## 7. MUTE CONTROL / PAIRING MOBILE PHONE HANDFREE OPERATION BUTTON

### For Mute Function

Press the button to mute volume control and "MUTE ON" will appear on the display.

### For Pairing Function

Please refer to the "Pairing the Unit with Mobile Phone via Bluetooth Wireless Technology" for details.

## 8. EJECT BUTTON

Press the button to eject the disc inside disc slot.

## 9. OPEN/CLOSE BUTTON / DETACHING PANEL BUTTON

\* Press this button to show the disc slot in the main panel. Then, press once to close the disc slot.

\* To detach the front panel, press this button so that the panel slide down from vertical to horizontal position. Use thumb hold near the preset button between 3 and 4, and use other finger to hold the corrugated release button at the back of the front panel while pulling (see Figure A). After the panel is released, the slide down metal frame will automatically move backward until it locks to the original position.

\* To re-attach the panel, put the front panel to the slide down metal frame by clipping it into place.

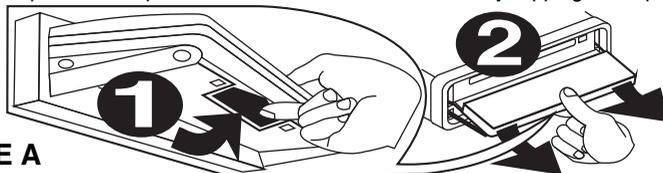


FIGURE A

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## 10. MODE SELECTION

Press this button to select Radio (TUNER), CD/MP3/WMA (S-CDP), USB (USB-DRIV) or SD/MMC (MEM-CARD) mode.

## 11. STEREO/MONO CONTROL

Press this button to select "FM STEREO" or "MONO" reception.

## 12. TALK BUTTON

Press this button for *Bluetooth* wireless technology operation (please refer to the "Handsfree Operation" for details).

## 13. LOUD CONTROL / LOCAL-DISTANT SELECTOR

### For Loud Function

Briefly press this button to activate the loudness circuitry which compensates for loss of high and low frequencies during low volume levels.

### For Local-Distant Function

When pressing the button for more than 2 seconds, it activates to prevent strong local stations from overlapping weaker stations. For normal operation, press this button again for distance.

## 14. VOLUME/SELECTION CONTROL

Rotate the button anti-clockwise to decrease, or clockwise to increase volume level.

### AUDIO LEVEL CONTROL (WHEN PUSHING ONE AFTER ANOTHER)

Press this button shortly one after another to show VOL/BAS/TRE/BAL/FAD control.

- VOLUME - Press this button once, then rotate anti-clockwise to decrease, or clockwise to increase volume level.
- BASS - Press this button once, then rotate anti-clockwise to decrease, or clockwise to increase bass level.
- TREBLE - Press this button once, then rotate anti-clockwise to decrease, or clockwise to increase treble level.
- BALANCE - Press this button once, then rotate anti-clockwise or clockwise to level balance of speaker right and left.
- FADER - Press this button once, then rotate anti-clockwise or clockwise to level fader of speaker front and rear.

### AUDIO/SETTING SELECT (HOLD MORE THAN 2 SECONDS)

When pressing the button for more than 2 seconds, it activates as unit setting selection in cyclical mode as following. The unit setting can be changed by rotating the button clockwise or anti-clockwise.

- DSP OFF / POP M / ROCK M / CLASS M / FLAT M
- ESP 12 / ESP 45 (setting 12 seconds or 45 seconds of electronic anti-shock time for audio CD)
- MULT OFF / MULT ON (not available for this model)
- BEEP ON / BEEP OFF (not available for this model)
- SEEK 1 (tune up/down buttons performs fast tune function) / SEEK 2 (tune up/down buttons performs auto tuning function when pressed more than 1 second)
- COLOR 1 / COLOR 2 (not available for this model)
- VOL LAST / VOL ADJ (preset volume level when unit turn on)

## 15/16. MANUAL UP/DOWN TUNING / TRACK SEEK UP/DOWN CONTROL

On radio mode, press the button will tune one frequency step higher or lower. Pressing the button more than 1 second can performs fast tuning function or auto tuning function.

On CD/MP3/WMA/USB-DRIV/MEM-CARD mode, press this button will locate the beginning of the track being played or will locate the beginning of the next track. When pressing more than 2 seconds, it will move fast forward or fast backward to a specific position.

## 17. STATION PRESET BUTTON (1-6)

The PRESET BUTTONS on the unit are used to store station frequencies which you may wish to recall. Each preset button can store FM1, FM2, FM3, AM1, AM2 band station frequency. Pressing the button momentarily recalls the station frequency which was memorized. There are 6 preset buttons, giving you capability of storing 18FM / 12AM.

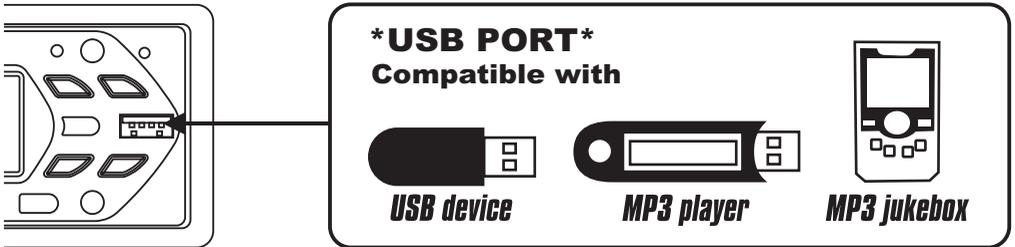
**NOTE:** When the preset button to be memorized is kept pressed for more than 2 seconds, the receiving station frequency will be stored in the button pressed. After this, the memorized station can be recalled by pressing the button once.

#### On CD / MP3 / WMA / USB-DRIV / MEM-CARD Mode

- Preset 1- press this button to pause the disc / file played.
- Preset 2- press this button to scan the first 10 seconds of all the tracks on the selected disc / USB drive / SD or MMC Card.
- Preset 3- press this button to repeat the current track of the disc / USB drive / SD or MMC Card.
- Preset 4- press this button to play disc / USB drive / SD or MMC Card at random order - disc/file shuffle play.
- Preset 5- press this button to search -10 track (for MP3 / WMA / USB-DRIV / MEM-CARD Mode only).
- Preset 6- press this button to search +10 track (for MP3 / WMA / USB-DRIV / MEM-CARD Mode only).

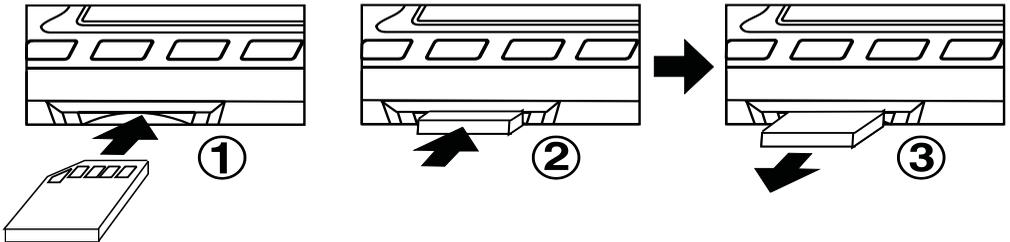
#### 18. USB PORT

The unit is ready to play MP3/WMA songs on an external USB device through the USB port directly on the front panel.



#### 19. SD/MMC CARD SLOT

Holding the SD or MMC card and insert into the slot until you hear the lock sound (Figure 1). The unit will automatically engage into MEM-CARD play mode. If you want to eject the SD or MMC card, just press the card inward (Figure 2) until you hear the unlock sound and then release the SD or MMC card (Figure 3).



#### 20. BUILT-IN MICROPHONE

#### 21. RESET BUTTON

The RESET button is located on the front of control panel. It is recessed in order to prevent accidental engagement, and can be activated with the tip of a ball-point pen or any similar pointed object. This reset circuitry is provided in order to protect the unit's microprocessor, and should only be activated under the following conditions :

- a) Initial installation after all wiring is completed.
- b) Abnormal operation is encountered such as numerical indication on display is erratic.
- c) Whenever the reset button is activated, all preset memory content will be erased and must be reprogrammed.

# Precautions

- This unit will only play the following discs.

Type of disc	Label on the disc	Recorded material	Size of disc
CD, MP3, WMA		Audio only	12 cm

## Instruction to play MP3/WMA Songs

### IMPORTANT NOTES

- The MP3/WMA file recording media acceptable to this unit are CD-R, CD-RW, USB flash memory, SD or MMC memory card.
- The MP3/WMA formats acceptable are limited.
- Do not attempt to play a media containing non-MP3/WMA files or non-MP3/WMA files with MP3/WMA extension. Otherwise, the CD Mechanism/USB Drive/MEM-CARD Drive will not be working properly. If "ERROR" is shown, it is suggested to reset the radio by pressing the reset button.

### PLAY ON MP3/WMA SONG

- Insert the media with MP3/WMA song in the disc slot / insert the USB flash memory / insert SD/MMC card. The unit will start playing and checks all the files and folder on the media.
- If MP3/WMA files and directories are recognized, the media will start playing.
- The MP3/WMA files and directories are accessed according to the order written by the CD / flash memory / SD or MMC card writer.

### TRACK SEARCH

- Press "AMS" button once and "TRK SCH" will be shown on the display.
- Press "VOL/SEL" control to enter track search mode and "TRK 0001" will appear on the display for you to enter track number.
- Rotate "VOL/SEL" control clockwise or anti-clockwise to shift number 0 – 9 in loop rotation.
- Press "VOL/SEL" control shortly to select the first digit.
- Repeat the same procedure to enter the other digits if required.
- After the track number is selected, press "VOL/SEL" control more than 2 seconds to start playing the selected track.
- If track number is not entered within 10 seconds, the unit will continue playing the current file.

### FILES SEARCH

- Press "AMS" button twice and "FILE SCH" will be shown on the display.
- Press "VOL/SEL" control to enter file search mode.
- Rotate "VOL/SEL" control clockwise or anti-clockwise to view the directories.
- After the selected directory is selected, rotate "VOL/SEL" control either clockwise or anti-clockwise to view the files.
- Press "VOL/SEL" control to play the selected file.
- If directories or files name is not entered within 10 seconds, the unit will continue playing the current file.

### CHARACTER SEARCH

- Press "AMS" button 3 times and "CHAR SCH" will be shown on the display.
- Press "VOL/SEL" control to enter into character search mode and "A" will appear on the display for you to enter first character.
- Enter whole name of files (maximum 8 characters) by rotating "VOL/SEL" control clockwise or anti-clockwise to shift "A-Z", "0-9" & "\*" (space) in loop rotation.
- Press "VOL/SEL" control shortly to select the first character.
- Repeat the same procedure to enter the other characters if required.
- After the whole name of file is entered, press "VOL/SEL" control more than 2 seconds to start playing the selected track.

### Remark :

- 1) The media must contain directories or files name written by the CD / USB flash memory / SD or MMC card writer in order to use in searching.
- 2) If only partial letters are entered for searching either in directories or files name, you may not get it correctly.

# Pairing the Unit with Mobile Phone via *Bluetooth* Wireless Technology

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**Attention!!** This car radio unit is compatible with the latest profile *Bluetooth*. It is inevitably possible that certain mobile telephones are not compatible concerning the communications as well as the identification numbers.

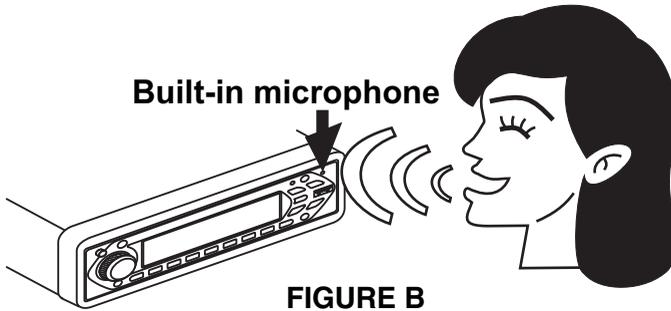
Ensure that your mobile phone is compatible with Bluetooth 1.2 or 2.0

- Press “MUTE” button about 5 seconds until “PAIRING” show on display.
- Turn ON connection via *Bluetooth* wireless technology from the mobile phone Menu, then search new paired device.
- Select “BHF101K” and entering password “0000” to start pairing. Once pairing is completed, “PHONE” indicator will show on display and it is ready to start mobile phone handsfree operation.
- If pairing cannot be completed in 2 minutes, press “MUTE” button once more to start “PAIRING” again and re-start the procedure again from above until “PHONE” indicator is appeared on display.

## Receive Call

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- When you receive a call from mobile phone, the LCD display will show the incoming telephone number (if this service available from telecom carrier) and the unit volume will mute.
- If you accept a call, press “TK” button to start conversation.
- The incoming call can be heard directly from car radio speaker. The driver can start to talk by through the built-in microphone on the panel. (See Figure B)



## Handsfree Operation

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- **Outgoing Call** – Dial the number on the phone and hear voice from car speakers.
- **answering Call** – Press “TK” button once to accept incoming call.
- **Hang Up** – Press “TK” button once to end communication.
- **Last Number Redial** – Shortly press “TK” button twice to dialing the last outgoing number.
- **Reject Call** – When there is incoming call, press “TK” button more than 2 seconds to reject the call.
- **Transfer Call to Phone** – When using handsfree for talking, press “TK” button more than 2 seconds to transfer listening of call from car speakers to phone.

# Simple Troubleshooting Guide

PROBLEM	CAUSE/SOLUTION
No Power	Check wiring connections. Check and make sure the fuse is not blown. Replace with the proper rating / size fuse.
Some errors occur in the LCD or nothing functions when buttons are pressed.	Press the RESET Button (21).
Unable to receive stations	Check and make sure the antenna is connected properly.
Poor radio reception	Check and make sure the antenna is the correct length. Make sure the antenna is not broken. If the antenna is broken, replace it. The antenna is poorly grounded. Check and make sure the antenna is grounded at mounting location.
CD's cannot be loaded	A CD is already loaded in the player. Eject CD.
Songs keep skipping	The CD is dirty or damaged.
File information shows in LCD but will not play.	Your file may be corrupt.

## Specifications

### GENERAL CHARACTERISTICS

Power supply .....	12V DC
Power consumption .....	8A max.
Max. output power .....	45 W x 4
Frame size .....	178 wide x 50 high x 185 deep (mm)

### CD PLAYER

System .....	CD audio system
Compatible disc type .....	Compact discs (CD)
Bandwidth .....	30 Hz to 18 kHz
Signal-to-noise ratio .....	Higher than 50 dB
Number of channels .....	2 channels (stereo)

### FM TUNER

Frequency range .....	87.5 MHz - 107.9 MHz
Usable sensitivity .....	Less than 20 dB
Intermediate frequency .....	10.7 MHz

### AM TUNER

Frequency range .....	530 KHz - 1,710 KHz
Usable sensitivity .....	Less than 44 dB
Intermediate frequency .....	450 KHz

### LINE OUTPUT

Output level .....	700 mV for 15% THD in FM
Impedance .....	600 ohms

Subject to change without further notice.