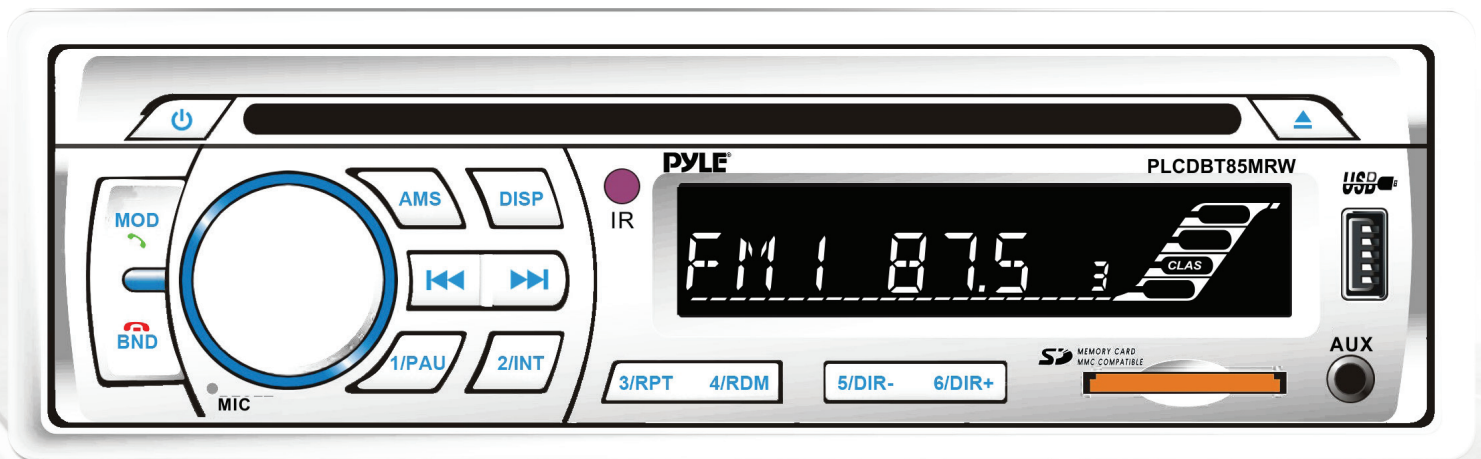


# MOBILE AUDIO SYSTEM

## PLCDBT85MRW



## USER MANUAL

- PLL Synthesizer Stereo Radio
- CD/MP3/WMA Player
- Automatic Memory Storing
- Fixed Panel
- Bluetooth function
- Preset Equalization
- Electronic Shockproof (ESP) Function
- USB/SD Interface

## CONTENTS

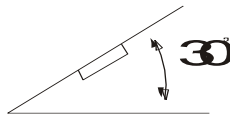
---

Installation.....	3	DISPLAY INFORMATION.....	9
Take out screw before installation .....	3	USB play operation .....	9
DIN Front-Mount .....	3	SD operation .....	9
Installing the unit .....	3	Disc notes.....	10
Removing the unit .....	4	Bluetooth Operation .....	11
Wiring Connection .....	5	Remote Control Handset.....	12
Operation .....	6	Specification .....	13
Location of keys .....	6	Trouble shooting.....	14
Switching on/off the unit.....	7		
Sound adjustment.....	7		
EQ function .....	7		
Display information .....	7		
Liquid crystal display.....	7		
Reset function.....	7		
Radio operation .....	7		
Switching to radio mode .....	7		
Selecting the frequency band.....	7		
Selecting station .....	7		
Automatic memory storing& program scanning.....	8		
Manually Store Station & Recall Preset Station.....	8		
CD/MP3/WMA operation .....	8		
Switching to CD mode.....	8		
Selecting tracks.....	8		
Pausing playing.....	8		
Previewing all tracks.....	8		
Repeating the same track .....	8		
Playing all tracks in random .....	8		
Ejecting a disc.....	8		
Selecting Directory Up/Down .....	8		
Selecting Tracks by AS/PS /SCH.....	8		

# INSTALLATION

## Notes:

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



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

## DIN FRONT-MOUNT

### Installation Opening

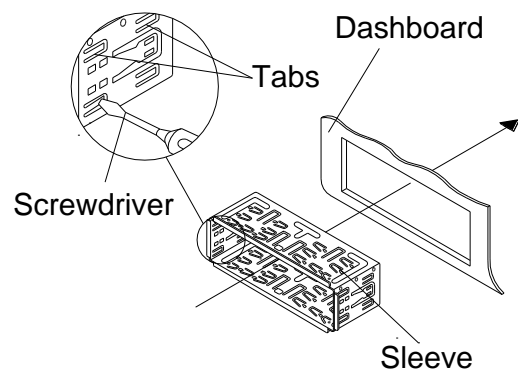
This unit can be installed in any dashboard having an opening as shown below:



### Installing the unit

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

- Make sure the ignition is turned off, and then disconnect the cable from the vehicle battery's negative (-) terminal.
- Disconnect the wire harness and the antenna.
- Mount the sleeve by inserting the sleeve into the opening of the dashboard and bend open the tabs located around the sleeve with a screwdriver. Not all tabs will be able to make contact, so examine which ones will be most effective. Bending open the appropriate tabs behind the dashboard to secure the sleeve in place.



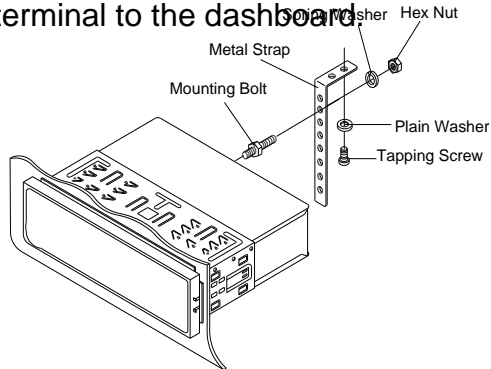
- Reconnect the wire harness and the antenna and be careful not to pinch any wires or cables.
- Slide the unit into the sleeve until it locks into place.
- To further secure the unit, use the supplied metal strap to secure the back of the unit in place. Use the supplied hardware (Hex Nut (M5mm) and Spring Washer) to attach one end of the strap to the mounting bolt on the back of the unit. If necessary, bend the metal strap to fit your vehicle's mounting area. Then use the supplied hardware (Tapping

## INSTALLATION

---

Screw (5x25mm) and Plain Washer) to attach the other end of metal strap to a solid metal part of the vehicle under the dashboard. This strap also helps ensure proper electrical grounding of the unit.

Note to install the short threading terminal of the mounting bolt to the back of the unit and the other long threading terminal to the dashboard.

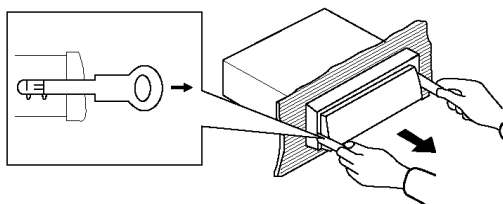


- Reconnect the cable to the vehicle battery's negative (-) terminal. Then replace the outer trim ring.

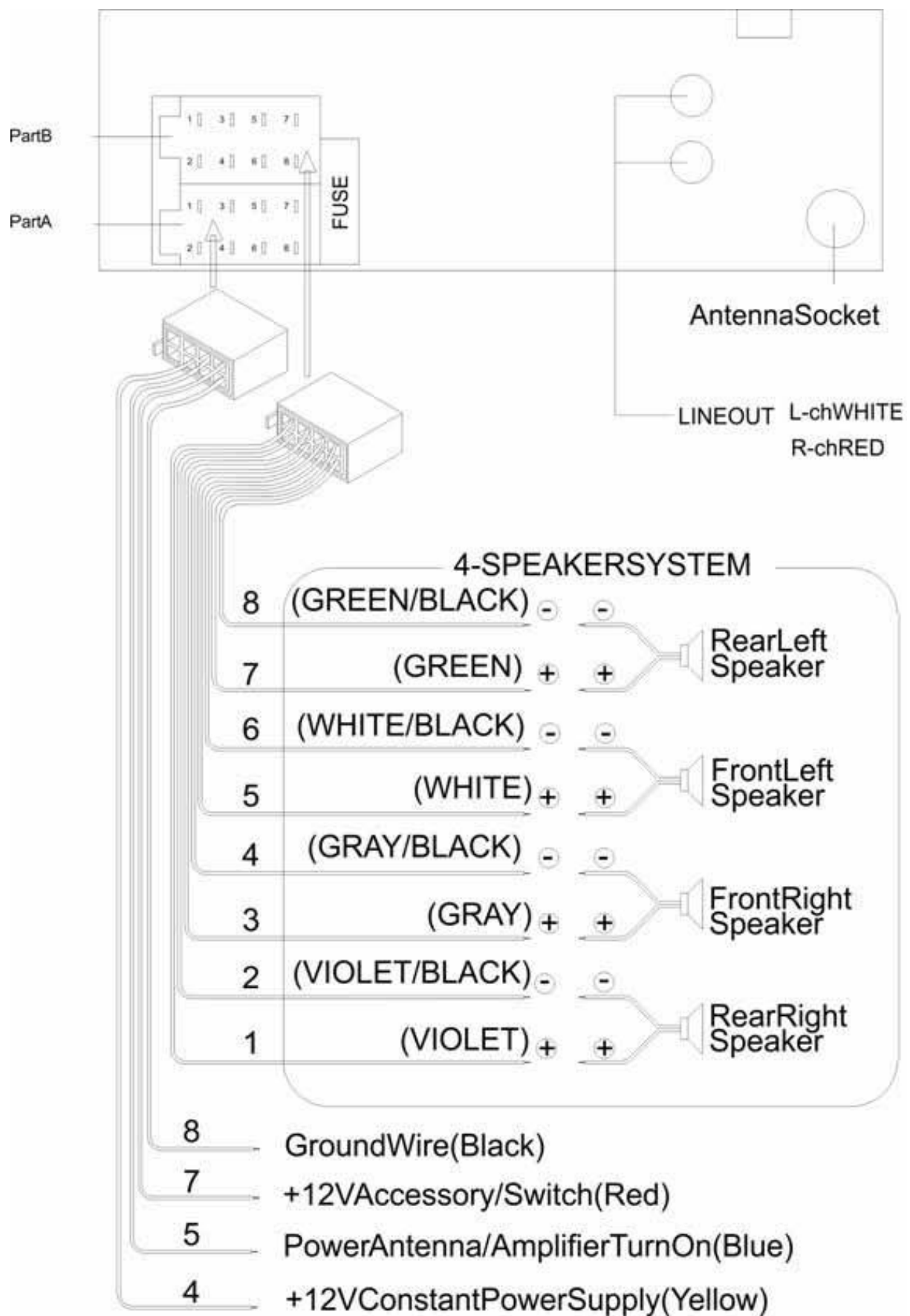
### Removing the unit

- Make sure the ignition is turned off, then disconnect the cable from the vehicle battery's negative (-) terminal.
- Remove the metal strap attached the back of the unit (if attached).
- Lift the top of the outer trim ring then pull it out to remove it.

Insert both of the supplied keys into the slots at the middle left and right sides of the unit, then pull the unit out of the dashboard.

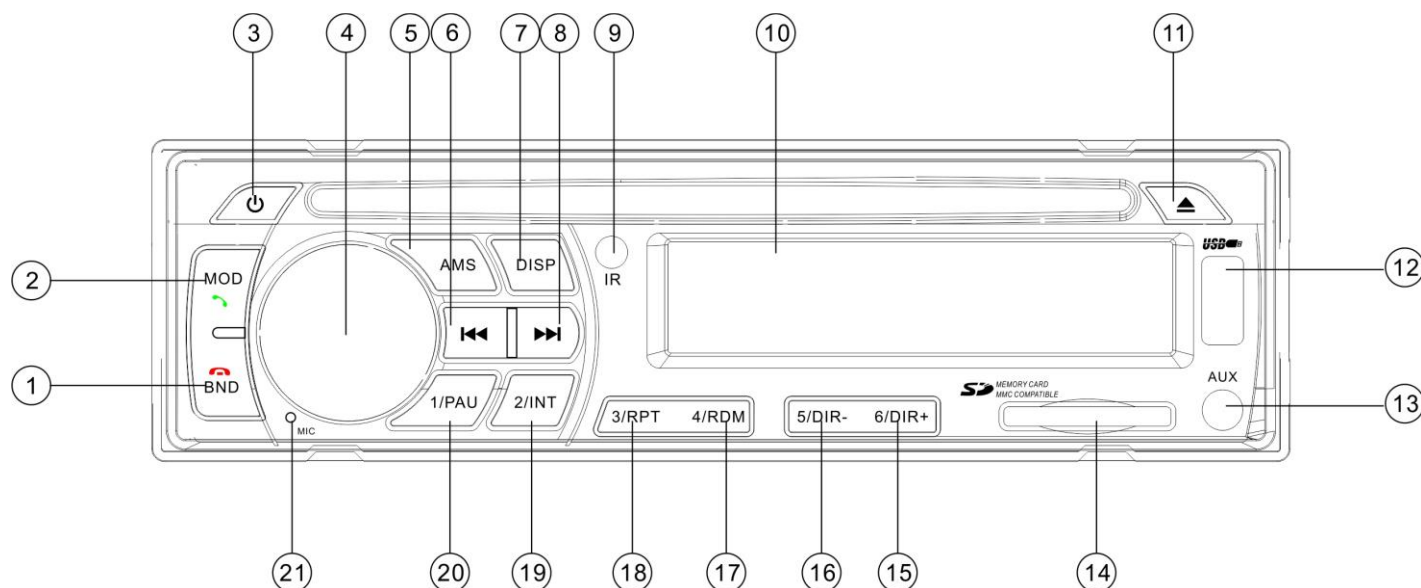


## WIRING CONNECTION



# OPERATION

## LOCATION OF KEYS



1. "BAND" / button.

2. "MODE"/ button.

3. "Power" button

4. "Vol /SEL" button

5. "AMS" button

6. "◀◀" Seek down button

7. "DISP" button.

8. "▶▶" Seek up button.

9. IR Sensor

10. LCD display

11. Eject button

12. USB port

13. AUX jack

14. SD slot

15. "6 DIR+" button.

16. "5 DIR-" button.

17. "4 RDM" button.

18. "3 RPT" button.

19. "2 INT" button.

20. "1/▶▶" button.

21. Microphone

# OPERATION

## TURN ON/OFF THE UNIT

Press **⏻** button (3) to turn on the unit.  
When the unit is on. Press and hold it for 2 seconds to turn off the unit.

## SOUND ADJUSTMENT

Press **SEL** button (4) shortly to select the desired adjustment mode. The adjustment mode will change in the following order:

BAS-TRE-BAL-FAD-LOUD-EQ-DX-STEREO-VOL

BAS: bass  
TRE: treble  
BAL: balance  
FAD: fader  
LOUD: loudness  
EQ: equalization  
DX: distance  
VOL: volume

By rotating the audio knob (4), it is possible to adjust the desired sound quality.  
Press and hold SEL for 2 seconds. You can choose the area between USA and EUROPE by rotating the knob (4).

## LOUDNESS FUNCTION

In LOUD item you can turn on/off loudness function by rotating the audio knob (4).

## EQ FUNCTION

In EQ item you can select the preset EQ mode by rotating the audio knob (4) as below:

→CLASS---POP---ROCK ---EQ OFF→

## DISPLAY INFORMATION

Press **DISP** button (7) to show the time for several seconds. After several seconds it will return to show the information.

## SET THE TIME

Press and hold **DISP** button (7) for 2 seconds. The "HH" will flash. Rotating the audio knob (4) to change the hour. After that press audio knob (4) the "MM" will flash.

Rotating the audio knob (4) to change the minute. Then press **DISP** button to confirm.

## LIQUID CRYSTAL DISPLAY

Exhibit current frequency and activated functions on the display.

## AUXILIARY INPUT

The unit can be connected to a portable audio player through the **AUX IN** jack (13).

## RESET FUNCTION

**RESET** button (21) must be activated with either a ballpoint pen or thin metal object. The **RESET** button is to be activated for the following reasons:

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

Note: if press **RESET** button (21), the unit can't work yet, please use a cotton swab soaked in isopropyl alcohol to clean the socket on the front panel.

## RADIO OPERATION

### • SWITCHING TO RADIO MODE

Press **MODE** button (2) to select radio mode, the radio mode appears in the display together with the memory band and frequency.

### • SELECTING THE FREQUENCY BAND

At radio mode, press **BND** button (1) shortly to select the desired band. The reception band will change in the following order:

→FM1→ FM2→ FM3 → AM1→ AM2

### • SELECTING STATION

Press button **▶▶** (8) or **◀◀** button (6)



## OPERATION

---

shortly to activate automatic seek function. It will search up/down a station automatically. Press for 2 seconds until “**MANUAL**” appears on the display, the manual tuning mode is selected. In this mode you can turn up/down a step frequency one by one till searched a station. If both buttons have not been pressed for 5 seconds, it will return to seek tuning mode and “**AUTO**” appears on the display.

- **AUTOMATIC MEMORY STORING & PROGRAM SCANNING**

- Automatic memory storing

Press **DISP** button (7) for 2 seconds, the radio searches from the current frequency and checks the signal strength until one cycle search is finished. And then some strong stations are stored into the corresponding preset number button.

- Program scanning

Press **DISP** button (7) shortly to scan preset station. The radio is holding at that preset number for several seconds with release mute, then searches again.

- **MANUALLY STORE STATION & RECALL PRESET STATION**

To received a station, Press one of the preset button (1~6) for 2 seconds. current station is stored into the number button. Shortly press the preset button (1~6) to directly listen the station that saved in the corresponding preset button.

### CD/MP3/WMA OPERATION

- **SWITCHING TO CD MODE**

If there is no CD inserted in the driver:

Gently insert the CD with the printed side uppermost into the CD compartment until you feel some resistance. The CD is drawn into the driver automatically. CD playback

begins.

If a CD is already inserted in the driver:

Keep pressing MODE button (2) shortly until the CD mode display appears.

- **SELECTING TRACKS**

Press **▶▶** (8) or **◀◀** button (6) to move to the previous track or the following track. Track number shows on display. Hold **▶▶** (8) or **◀◀** button (6) to fast reverse or fast forward. CD play starts from when you release the button.

- **PAUSING PLAYING**

Press **1▶||** button (20) to pause CD player. Press it again to resume play.

- **PREVIEWING ALL TRACKS**

Press **2 NT** button (19) to play first several seconds of each track on the current disc. Press again to stop intro and listen to track.

- **REPEATING THE SAME TRACK**

Press **3 RPT** button (18) to continuously repeat the same track. Press it again to Repeat all the tracks.

- **PLAYING ALL TRACKS IN RANDOM**

Press **4 RDM** button (17) to play all tracks on CD in random order. Press again to cancel the function.

- **EJECTING A DISC**

Press **▲** button (11) to stop CD playing and eject the disc from the disc slot (4).

- **SELECTING DIRECTORY UP/DOWN**

Press **DIR**-button (16) or **DIR +** button (15) to select previous directory or next directory. If the MP3 disc does not contain any directory, there is no function of pressing **DIR**- button (16) or **DIR +** button (15).

- **SELECTING TRACKS BY AS/PS /SCH BUTTON**



## OPERATION

**DISP** button (7) is assigned as selection button in MP3/WMA operation.

When pressed, it is activated as selecting each mode as below:

Search file number => Search File Name=>Search from folder.

### □ Searching Track Directly

Press **AS/PS** button for one time. It enters into "Searching file number" mode. Rotating knob (4) to select the file number then press knob (4) to confirm. The unit searches the selected file to play. You also can select the file by using the numeric buttons.

If the file number was selected. The unit wait for knob (4) for seconds. The unit searches the file after few seconds, even if the knob (4) button is not pressed.

### □ Searching File Name

- Press **DISP** button for two times. It enters into "Search File Name" mode. The unit searches files that have the same character which is inputted by the user pressing the corresponding buttons listed on the Table 1 below.

### □ Searching From Folder

Press **DISP** button for three times. It enter into "Searching from folder" mode. Rotating the VOL knob to select desired folder. After that press knob (4) to enter the folder. Rotating knob (4) to select desired file. And then press knob (4) again to play.

### • DISPLAY INFORMATION

Press **DISP** button (7) to show some information, such as the clock, FM frequency and other contents.

KEY Assigned IN Searching mode (Table 1)

AS/PS	Mode Select
SEL	ENTER
M1	A, B, C, 1
M2	D, E, F, 2
M3	G, H, I, 3
M4	J, K, L, 4
M5	M, N, O, 5
M6	P, Q, R, 6
AF	S, T, U, 7
TA/EQ	V, W, X, 8
PTY	Y, Z, SPACE,9
DSP	_, -, +, 0
AUDIO KNOB	CHARACTER SELECT All the CHARACTER above

AUDIO KNOB & TUNE /SEEK/TRACK

UP/DOWN buttons:

Searching file and directory during Navigation.

## USB PLAY OPERATION

In the front panel of the unit, there is an USB interface (12). You can connect an USB driver through this interface (12).

When you connect an USB driver through the interface, the unit will search the MP3/WMA files and start to play. If in other mode, you can also press **MODE** button to select USB mode.

When playing the MP3/WMA files in the device, the operation is the same with the MP3 operation described above.

### Note:

- The main unit can only support the standard USB-memory disc which is approved by Microsoft.
- USB MP3 player is not a standard which means different brand name or

## OPERATION

Different models have their own standards. So our product cannot support every MP3 player.

- When connecting an MP3 player and there has normal battery in the player (non rechargeable battery), you should remove the battery from the MP3 player then connect it to the USB interface. Otherwise, it may cause battery burst.

### SD OPERATION

There is a SD interface (14) on the front panel of the unit.

When you insert a SD card in the SD interface, the unit will search the MP3/WMA files and start to play. The operation is the same with the MP3 operation described above. If in other mode. You can also press **MOD** button to select SD mode.

### SUPPORTED MP3/WMA DECODING MODES

The main unit supports MP3/WMA (Windows Media Audio) decoding modes as below.

Standard	Bit Rate (kbps)	Supports Mode
MPEG1 Audio Layer 3 (44.1kHz)	32,48,64,96, 128,192,256, 320	Stereo
Windows Media Audio (44.1kHz)	64,96,128,192	Stereo

The USB solution can support:

1. Folder: 500 max.
2. File: 999 max.
3. Depth of folder: 8 layers
4. Size: 32 GB

### CAUTION

When there are important files in the USB/SD card, do not connect it to the main unit to play. And don't play the CD-R/RW

disc that has important files in it. Because any wrong operation may cause files loss. And our company assumes no responsibility for this.

### DISC NOTES

#### A. Notes on discs:

**Attempting to use non-standard shape discs (e.g. square, star, heart) may**

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

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

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



2. The unit cannot play a CD-R and CD-RW that is not finalized. (Please refer to the manual of your CD-R/CD-RW recorder or CD-R/CD-RW software for more information on finalization process).
3. Depending on the recording status, conditions of the disc and the equipment used for the recording, some CD-Rs/CD-RWs may not be played on

## OPERATION

---

this unit. (see \*1)

- \*1: To have more reliable play back, please see following recommendations:
- Use CD-RWs with speed 1x to 4x and write with speed 1x to 2x.
  - Use CD-Rs with speed 1x to 8x and write with speed 1x to 2x.
  - Do not play a CD-RW which has been written for more than 5 times.

### **C. Notes on MP3 files (MP3 Version Only):**

- The disc must be in the ISO9660 level 1 or level 2 format, or Joliet or Romeo in the expansion format.
- When naming a MP3 file, be sure the file name extension is ".MP3".
- For a non-MP3 file, even though the file name extension is ".MP3", the unit cannot recognize it.

## BLUETOOTH OPERATION

### **- PRE-PAIR FOR BLUETOOTH OPERATION**

- When use Bluetooth, please make sure the mobile phone supports Bluetooth function.
- For the different kind of mobile phone, Bluetooth emissive power has some difference. To get the best conversation quality, it is commended that the distance between the mobile phone and the unit is within 3m. And please don't put any metal object or any obstacle between the path of the mobile phone and the unit.



### **- PAIRING**

- On the mobile phone, select the Bluetooth set up. (Please refer to the


instruction manual of your mobile phone on how to operate Bluetooth.)

- "CAR BIT" should appear in the list on your mobile phone, please select "CAR BIT" and then input password "0000". If it needs a password.
- When successful paired, the BT mark will be displayed on LCD.




### **- Answering / rejecting an incoming call**

When there is a phone is coming in. Press  key to answer the call. Press  key to reject the call.

### **- Hang up a call**

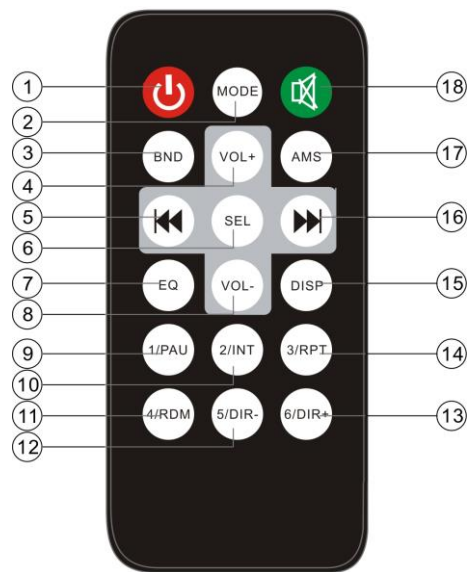
When finished a conversation press  key to hang up this call.

### **- Bluetooth audio (A2DP function)**

Press MOD button (2) it will show "BT" on the display. Then turn on the music player of your mobile phone and playing a song. The sound will come out from the speaker of the unit. Press  key of the front panel of the unit to pause/play the song. Press  button (8) or  button (6) to select next/previous song.

## REMOTE CONTROL HANDSET (OPTIONAL)

---



### FUNCTION KEY & CONTROL

- |               |   |
|---------------|---|
| 1. POWER      | Power ON/OFF Button                                     |
| 2. MODE       | Mode Button(S,T,U,7,For MP3/WMA Operation)              |
| 3. BND        | Band Select Button                                      |
| 4. VOL+       | Volume Up Button  |
| 5. TUNE/SKIP  | (Character Select (A, B~8, 9, 0) For MP3/WMA Operation) |
| 6. SEL        | Tune/SKIP Down Button(W,X,Y,8 For MP3/WMA)              |
| 7. EQ         | Sound Mode Select Button                                |
| 8. VOL-       | (Character Shift Right for MP3/WMA Operation)           |
| 9. 1/PAU      | EQ Select Button  |
| 10. 2/INT     | Volume Down Button                                      |
| 11. 4/RDM     | (Character Select (A, B~8, 9, 0) For MP3/WMA Operation) |
| 12. 5/DIR-    | Pause Button (A,B,C,1 For MP3/WMA Operation)            |
| 13. 6/DIR+    | Intro Button (D,E,F,2 For MP3/WMA Operation)            |
| 14. 3/RPT     | Random Button (J,K,L,4 For MP3/WMA Operation)           |
| 15. DISP      | Direct Previous Button                                  |
| 16. TUNE/SKIP | Direct Next Button                                      |
| 17. AMS       | Repeat Button(G,H,I,3 For MP3/WMA Operation)            |
| 18. MUTE      | Display Button(.,-,+,0 For MP3/WMA Operation)           |
|               | Tune/SKIP Up Button(Y,Z,SPACE,9 For MP3/WMA)            |
|               | Automatic Memory Storing Button                         |
|               | (Mode Select Button for MP3/WMA Operation)              |
|               | Mute Button   |

## **SPECIFICATION**

---

### **GENERAL**

Power Supply Requirements	: DC 12 Volts, Negative Ground
Chassis Dimensions	: 178 (W) x 160 (D) x 50 (H)
Tone Controls	
- Bass (at 100 Hz)	: $\pm 10$ dB
- Treble (at 10 kHz)	: $\pm 10$ dB
Maximum Output Power	: 4x40 watts
Current Drain	: 10 Ampere (max.) (For Normal Power Version)

### **CD PLAYER**

Signal to Noise Ratio	: More than 55 dB
Channel Separation	: More than 45 dB
Frequency Response	: 40Hz – 18 kHz

### **RADIO**

#### **FM**

Frequency Coverage	87.5 to 107.9 MHz
IF	10.7 MHz
Sensitivity (S/N=30dB)	4 $\mu$ V
Stereo Separation	>25dB

#### **AM**

Frequency Coverage	530 to 1710 kHz
IF	450 kHz
Sensitivity (S/N=20dB)	36 dBu

## TROUBLE SHOOTING

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

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