

MR45 OWNER'S MANUAL



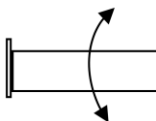
- **CD/MP3/WMA Player** *(for MR45S and MR45C only)*
- **Sirius Ready** *(for MR45S and MR45D only)*
- **AM/FM Stereo Radio**
- **Supports DMD (DMD - Digital Music Device like iPod[®], MP3 or Smartphone devices)**
- **Play USB Music**
- **Front and Back AUX-In**
- **Flip Down Front Panel System** *(for MR45S and MR45C only)*

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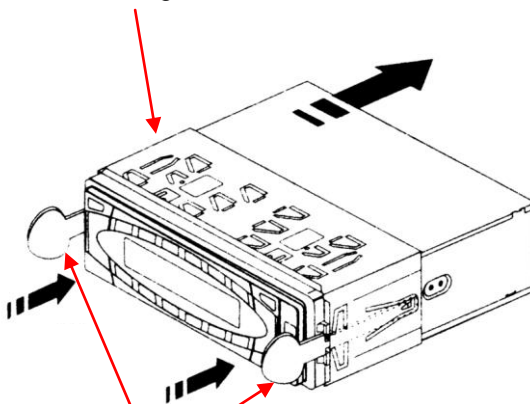
INSTALLATION

- **IMPORTANT!** Before mounting be sure there is sufficient room to accommodate the unit and that there is sufficient ventilation.
- Before installing the unit, connect the wiring temporarily making sure the system works properly.
- Only use the parts included with the unit to ensure proper installation.
- Receiver should be mounted within 30° (+ or— 15°) from Horizontal. If installation angle exceeds 30° from horizontal, the unit might not give its optimum performance.



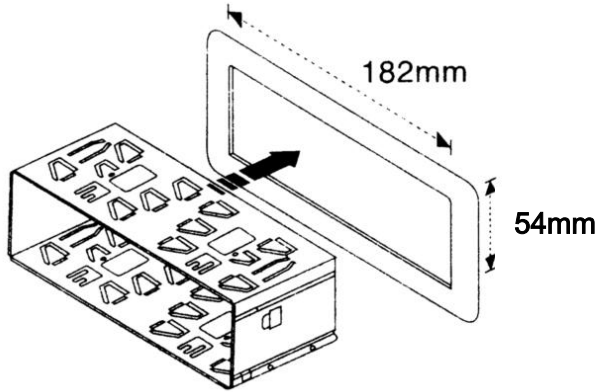
- Avoid installing the unit where it would be subject to high temperatures such as direct sunlight or hot air from heaters or the engine or where it would be subject to dust, dirt or excessive vibration.
- Use the template provided to make the cutout.
- Be sure to mount the unit to a strong, solid surface which will not give under the stress of waves pounding the hull.

Step 1) Remove the mounting sleeve

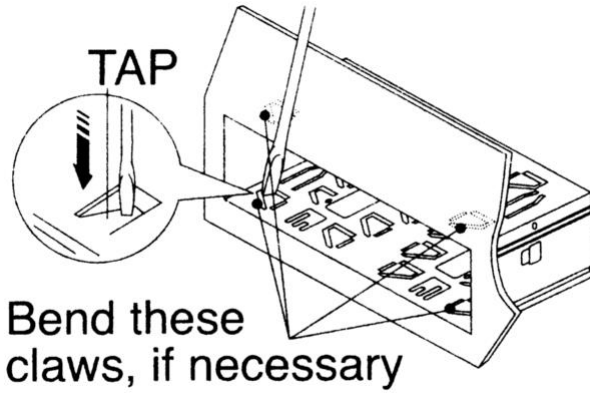


Note: Keep the release key in the safe place as you may need it in the future to remove the unit out

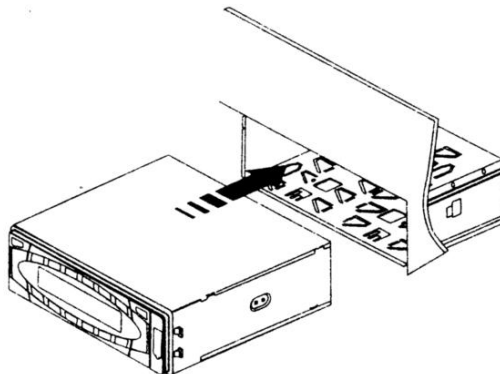
Step 2)



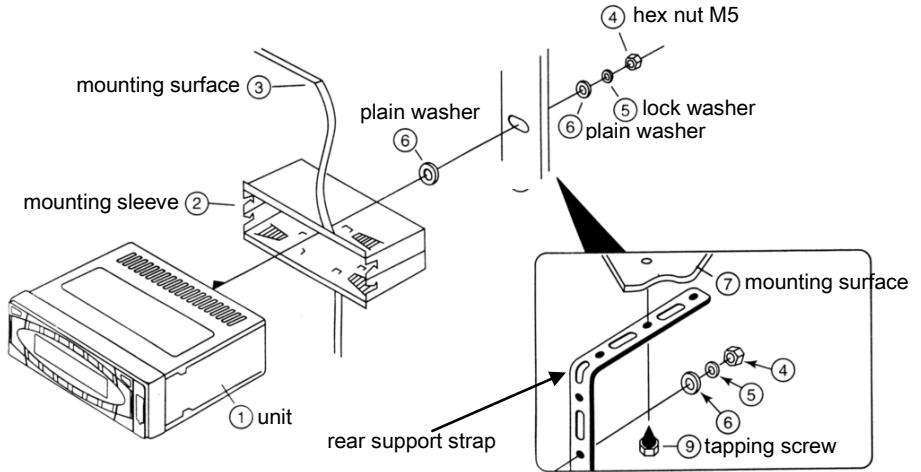
Step 3)



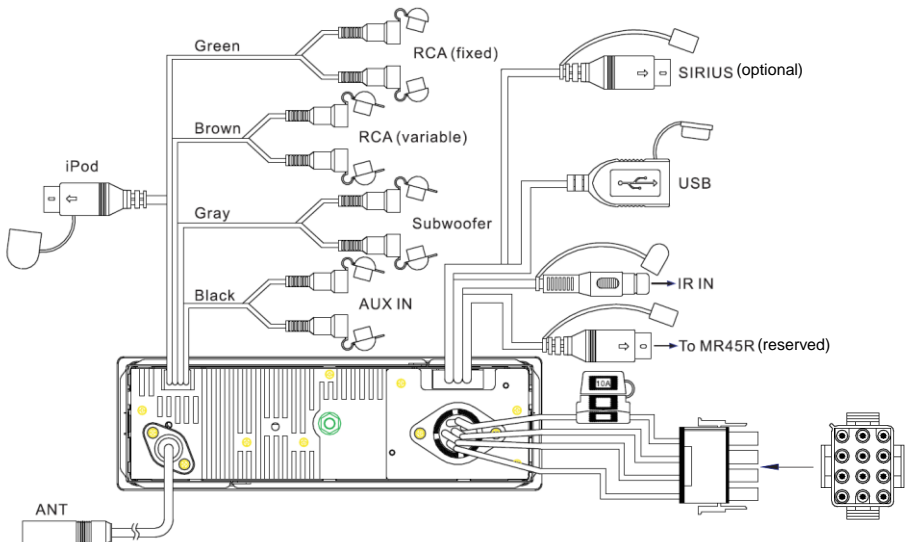
Step 4)



Step 5) To support the unit

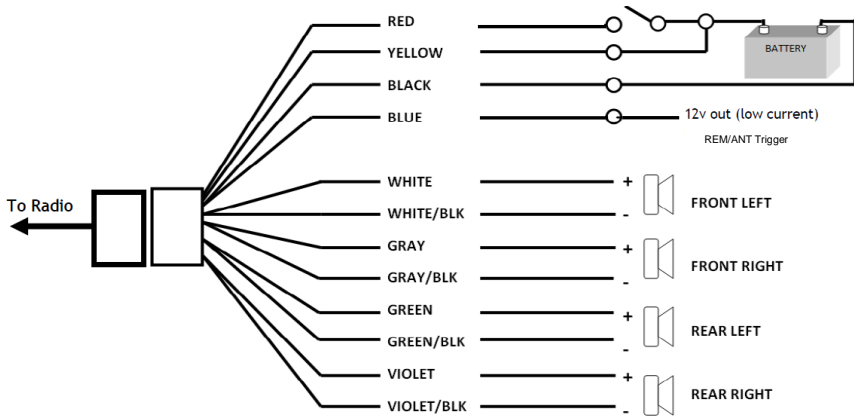


WIRING DIAGRAM

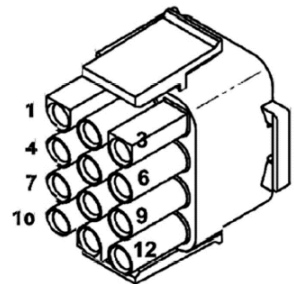


Wiring Details:

Use the wired plug end (Pigtail) provided to make power and speaker connections according to the diagram below. Using this connector will make it easy to disconnect the radio for adding additional features or service. **Removing the factory plug end will void warranty.**



Wire Color	Function
Yellow	1 B+ (+12VDC)
Green w/stripe	2 Rear Left Speaker-
Green	3 Rear Left Speaker+
Red	4 ACC (+12VDC)
White w/stripe	5 Front Left Speaker-
White	6 Front Left Speaker+
Blue	7 REM/ANT Trigger
Gray w/stripe	8 Front Right Speaker-
Gray	9 Front Right Speaker+
Black	10 Ground (Neg)
Violet w/stripe	11 Rear Right Speaker-
Violet	12 Rear Right Speaker+



Power Wire Specifications:

Yellow Wire - Connect this wire to a constant +12V source. This retains the system memory.

Red Wire - Connect this wire to a switched +12V source such as an ignition or accessory switch.

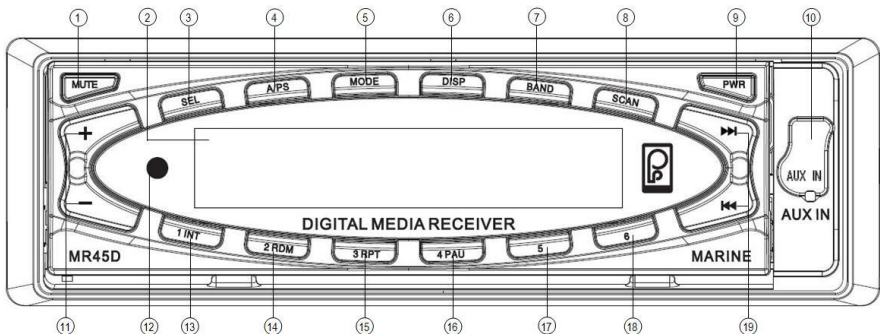
Black Wire - Connect this wire to the negative battery terminal or other good power ground.

Blue Wire - This wire outputs a 12V signal when the MR45 turns on. It is used to remotely turn on external amplifiers.

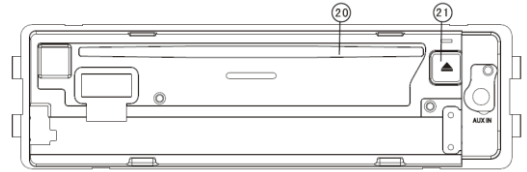
Notes:

- Use the included plug/wire bundle to connect to the power source and speakers.
- The Yellow, Red and Black power wires should be 14AWG or larger depending on the length to the battery. NEVER operate the unit without the proper power and ground wire.
- NEVER ground the speaker leads and NEVER allow the speaker leads to come in contact with each other. The speaker wire should be at least 16 gauge or larger. Be sure to observe the correct polarity on the speaker connections
- Use quality crimp connectors to connect wires together. Seal the connection well with electrical tape.
- NEVER operate the unit without proper fusing. Fuse holder must be located within 2 feet from the battery. This fuse is to protect the vessel, not the electronics. In case of a short, the fuse will blow instead of the wire burning up. Using other than the recommended fuse ratings at the battery and at the unit may cause damage to the unit and will void your warranty.
- Whenever possible, use cable ties, mounting clamps and similar wiring aids. Adding stress relief loop to wiring is also advisable to prevent straining or breakage.
- If after reading the directions you feel uncomfortable about installing the unit, or not equipped or competent to do so, you should have this installed by an authorized installer

BUTTON DESCRIPTION



1. MUTE/OPEN - Mute Button (for MR45Donly) / Open Button (for MR45S/MR45C only)
2. LCD Display
3. SEL - Function Select Button
4. A/PS - Auto Store and Preset Scan Button
5. MODE - Mode Button
6. DISP - Display Button
7. BAND - Band Button
8. SCAN – Scan Button
9. PWR - Power Button
10. AUX IN 2 Port
11. +/- - Volume UP/DOWN Button
12. Infrared Receiver
13. 1INT - Preset 1/Intro Button
14. 2RDM - Preset 2/Random Button
15. 3RPT - Preset 3/Repeat Button
16. 4PAU - Preset 4/Pause Button
17. 5 - Preset 5/Directory up (optional)
18. 6 - Preset 6/Directory down (optional)
19. ►►/◄◄ – Control Button
20. CD Slot (for MR45S and MR45C only)
21. ▲ - CD Eject Button (for MR45S and MR45C only)



BASIC OPERATION

SWITCHING ON/OFF THE UNIT

Press **PWR** button to turn on the unit. Press and hold **PWR** button for 4 sec to turn off the unit

OPENING THE DISC COVER (for MR45S and MR45C only)

Push **OPEN** button to open the disc cover.

BASS/TREBLE/BALANCE/FADER/SUB/DSP/ID3/DIMMER/CLOCK FUNCTION

Press **SEL** button to select Bass/Treble/Balance/Fader/Sub/DSP/ID3(for MP3 music file only)/Dimmer/Clock function then press **+** or **-** button to adjust desired setting. Press **SEL** button again to select different functions. Unit will return to normal previous display if left untouched for 5 seconds.

→ Bass → Treble → Balance → Fader → Sub → DSP → ID3 → Dimmer → Clock

ZONE/STEREO/MONO/P-VOL FUNCTION

Press and hold **SEL** button for 5 seconds to enter menu select function then press **+** or **-** button to adjust desired setting. Press **SEL** button again to select different functions. Unit will return to normal previous display if left untouched for 5 seconds.

→ SEL → ZONE → SEL → STEREO/MONO → SEL → P-VOL →

ZONE: AMERICA/EURO/CHINA frequency switch.
STEREO/MONO mode
P-VOL: Adjust Initial Volume level using this mode.

SETTING THE CLOCK

1. Press **DISP** button to display the clock
2. Press and hold **DISP** button until the hour digit starts flashing, then press the **▶▶/◀◀** buttons to adjust the hour.
3. Press **DISP** button again to switch to minute, then press the **▶▶/◀◀** buttons to adjust the minute.
4. Press **DISP** button again to save.

LOUD ON/OFF

Press and hold **BAND** button for 3 seconds to adjust the bass output.

MODE SELECTION

Press **MODE** button to choose desired listening mode. (e.g. radio mode to CD (MP3) mode to AUX IN mode)

MUTE *(for MR45D only)*

Press **MUTE** button to mute the sound. Press again to return to previous volume level.

RADIO OPERATION

SWITCHING TO RADIO MODE

Press **MODE** button to select radio mode.

SELECTING THE FREQUENCY BAND

In radio mode, press **BAND** button to locate the desired band. The reception band will change in the following order:

→ FM1 → FM2 → FM3 → AM1 → AM2 →

SELECTING A STATION

Press ►/◄ button to select a station. To use manual tuning, press and hold ► or ◄ button.

AUTOMATIC MEMORY STORING & PRESET SCAN (A/PS)

The **PRESET** buttons can be used to store 6 stations in each band (FM 1, FM 2, FM 3 and AM1, AM2) for convenient access to your favorite stations.

■ Automatic Storing

Press **A/PS** button for 5 seconds, the radio searches and checks the signal strength until one cycle search is finished then the strongest stations are stored into the corresponding preset number button automatically.

■ Manual Storing

1. Select the desired band.
2. Select the station you want to store in memory, then press and hold one of the preset buttons for 3 seconds until the corresponding preset button number appears.
3. Repeat steps 1 and 2 to program additional stations.

SCAN FUNCTION

Press **SCAN** button to scan a station. The unit will keep on scanning every 5 seconds until you press the **SCAN** button again to stop scan function.

SIRIUS OPERATION *(for MR45S and MR45D only)*

Please Note: You need **SIRIUS TUNER** (not included) and you must activate your **SIRIUS TUNER** before you can begin to receive the **SIRIUS** satellite radio service.

Until you subscribe and activate the **SIRIUS** service, you can only access channel 000 (the **SIRIUS ID** channel) and 184 (Preview Channel). Tune to Channel 000 to display your radio's unique 12-digit **SIRIUS ID** number (SID). This number is also available on the back of **SIRIUS Tuner SCC1**. Write down this number and call 1-888-539-SIRIUS (1-888-539-7474) with your credit card handy to activate **SIRIUS** service. Or, you may go to website <https://activate.siriusradio.com//> to activate the service. If you do not subscribe the full service, the unsubscribed channel will display "CALL 888-539-SIRIUS to subscribe."

If a SIRIUS TUNER is already connected:

Press **MODE** button to change to SIRIUS mode.

If there is no SIRIUS TUNER connected this mode will be skipped.

Please connect your SIRIUS Tuner to the SIRIUS port located at the back of the unit. Then press **MODE** button to change to SIRIUS mode.

SELECTING A CHANNEL

Press **▶▶/◀◀** button to select a channel.

SEARCHING CHANNEL NUMBER MANNUALLY

Press **A/PS** button “SR CH - - - ” will show on the display. Use the **PRESET 1, 2 and 3** buttons to select the desired channel number. When finished, press **SEL** button to confirm and play.

Explain as follows:

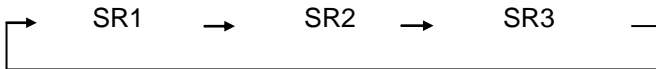
- If you want to search channel number 176, you have to press **1INT** button one time to get 1, then press **2RDM** button seven times to get 7, then press **3RPT** button six times to get 6.
- Press **SEL** button to confirm and play.

SELECT A CHANNEL BY CATEGORY

First, check if you see “CAT” icon in the LCD. “CAT” icon in the LCD will indicate the Category mode is on. If Category mode is not ON, press and hold **A/PS** button to turn ON Category mode. Once Category mode is ON, press and hold **▶▶** or **◀◀** button to navigate to all categories available such as POP, ROCK, CLASSICAL, etc. Pick a category then the unit will only show the selected category unless you press and hold **A/PS** button again to turn off category mode.

SELECTING THE FREQUENCY BAND

In SIRIUS mode, press **BAND** button to locate the desired band. The reception band will change in the following order:



AUTOMATIC MEMORY STORING

The **PRESET** buttons can be used to store 6 channels in each band (SR1, SR2 and SR3) for convenient access to your favorite channels.

1. Select the desired band.
2. Select the channel you want to store in memory, then press and hold one of the preset buttons for 3 seconds until the corresponding preset button number appears.

3. Repeat steps 1 and 2 to program additional channels.

PARENTAL CONTROL

You can lock any Sirius channels you do not want others to have access without your permission. The default code is "5220". In case you forget your code please disconnect the unit completely from the power.

- GUIDE ON HOW TO ENTER THE CODE USING THE PRESET BUTTONS

Press preset **1INT button** five times to enter 5, press preset **2RDM button** two times to enter 2 and press preset **3RPT button** twice to enter 2. Since the last number is zero you do not need to press preset **4PAU button**. When done, press **SEL button** to confirm.

- TO LOCK A CHANNEL

Select a channel that you wish to lock then press **SCAN button** "Lock CH" will show on the display. Enter the code then press **SEL button** to confirm "Locked" will show on the display

- TO UNLOCK A CHANNEL

Press **A/PS button** to manually enter the channel you wish to unlock then press **SEL button** then press **SCAN button** "Unlock CH" will show on the display. Enter the code then press **SEL button** to confirm "Unlocked" will show on the display

- TO CHANGE THE CODE

Press and hold **SCAN Button** "Old Code" will show on the display. Enter the old code then press **SEL button** to confirm "New Code" will show on the display. Enter your new code then press **SEL button** again to confirm "SetCode ok" will show on the display.

DISPLAY INFORMATION

Press **DISP button** to display information (i.e. song title, album name, artist, etc.) of the song that is currently playing (if available).

CD/MP3/WMA OPERATION (for MR45S and MR45C only)

SWITCHING TO CD MODE

If there is no CD inserted in the driver:

Open the disc cover and insert a CD into the slot with the CD label facing

up. The CD will be drawn inside and will play automatically once inserted.

If a CD is already inserted in the driver:

Press **MODE** button to change to CD mode.

SELECTING SONGS

Press **▶▶** or **◀◀** button to select a song. Press and Hold **▶▶** or **◀◀** button to fast forward or rewind a song.

SELECTING SONGS BY FOLDER

Note: Make sure RPT MODE is off before using this function

Press **5** button or **6** button to select directory downward or upward. If a directory does not exist or does not have music files, it will be skipped.

SEARCHING TRACK NUMBER DIRECTLY

Press the **A/PS** button “SCH000” will show on the display. The 0's indicates the track number. Use the **PRESET** buttons to select the desired track number. When finished, press **SEL** button to confirm and play.

Explain as follows:

- If you have 600 tracks saved in the CD, the display will show “SCH000”
- If you want to search track number 176, you have to press **1INT** button one time to get 1, then press **2RDM** seven times to get 7, then press **3RPT** six times to get 6.
- Press **SEL** button to confirm and play.

PREVIEWING ALL SONGS

Press **1INT** button to play all songs in scan mode. The unit will play the first 10 seconds of each track continuously until you press **1INT** button again to stop scan function.

PLAYING ALL SONGS IN RANDOM ORDER

Press **2RDM** button to play all songs in random order.

“RDM TRK” – to play all songs in random

“RDM OFF” – to cancel the random function.

REPEAT FUNCTION

Press **3RPT** button to repeat the same song.

“RPT ONE” – to repeat same song


“RPT ALL” – to repeat same album or to cancel repeat function

PAUSE FUNCTION

Press **4PAU** button to pause CD player. Press **4PAU** button again to

resume play.

EJECTING A DISC

To remove a disc, open the disc cover and press  button. Remove CD from the driver and close disc cover.

DISC NOTES

A. Notes on discs:

1. Attempting to use non-standard shape discs (e.g. square, heart) may damage the unit. Be sure to use round shape CD discs only in 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 or damage the unit.
3. Dirty, dusty, scratched and warped discs will cause misoperation of this unit.

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

1. Be sure to only use the following disc types:



2. Depending on the recording status, conditions of the disc and the equipment used for the recording, some CD-Rs/CD-RW may not be able to play on this unit. To have more reliable play back, please see following recommendations:
 - a. Use CD-RWs with speed 1x to 4x and write with speed 1x to 2x.
 - b. Use CD-Rs with speed 1x to 8x and write with speed 1x to 2x.
 - c. Do not play a CD-RW which has been written for more than 5 times.

C. Notes on MP3 files:

1. The disc must be in the ISO9660 level 1 or level 2 formats.
2. When naming an MP3 file, be sure the file name extension is “.MP3”.
3. Non-MP3 files with “.MP3” extension will not play on this unit.

IPOD® OPERATION

SWITCHING TO IPOD® MODE

Please Note: *You need iPC4580 cable (sold separately) before you can connect your iPod® to this unit.*

If an iPod® device is already connected:

Press **MODE** button to change to IPOD® mode.

If there is no iPod® device connected the display will show “NO IPOD®”

Turn on your iPod® device and connect to the iPC4580 Cable then connect this cable to the iPod® port located at the back of the unit. Then press **MODE** button to change to IPOD® mode.

PLAYING SONGS

Press **▶▶** button to advance to the next song. To go backward, press **◀◀** button. Press and Hold **▶▶/◀◀** button to fast forward or fast rewind.

PLAYING SONGS BY CATEGORY

Press **BAND** button to enter category then press **▶▶/◀◀** buttons to select a category: PLAYLIST/ARTIST/ALBUM/GENRE/SONG. Press **SEL** button to enter the selected category. Press **▶▶/◀◀** buttons again to navigate all the songs or album available based on the category you selected then when done selecting a song or album press **SEL** button once or twice to confirm and play. Press **BAND** button to return to the previous menu screen or to up one menu level.

PAUSING/PLAYING

Press **4PAU** button to pause the playing. Press **4PAU** button again to resume playing.

REPEAT PLAYING

Press **3RPT** button to repeat the same song or same album.

“RPT ONE” – to repeat same song

“RPT ALL” – to repeat same album

“RPT OFF” – to cancel repeat function

PLAYING ALL SONGS/ALBUM IN RANDOM ORDER

Press **2RDM** button to play all songs/album in random order.

“RDM TRK” – to play all tracks in random

“RDM ABM” – to play all album in random

“RDM OFF” – to cancel the random function.

AUX OPERATION

SWITCHING TO AUX MODE

This unit can be connected to any portable devices such as an iPod®, MP3 Players, TV or DVD through the AUX IN jack on the front or at the back of the unit.

Press **MODE** button to change the mode to “AUX 1” (back) or “AUX 2” (front) mode.

Please Note: In this mode, all controls and functions has to be controlled from your music device.

USB OPERATION

SWITCHING TO USB MODE

If there is no USB memory stick inserted in the driver:

Insert a USB memory stick through the USB port located at the back of the unit. Then press **MODE** button to change to USB mode.

If a USB memory stick is already inserted in the driver:

Press **MODE** button to change to USB mode.

Refer CD/MP3/WMA operation on pages 12-14 for further instructions.

IMPORTANT NOTE:

Some USB devices may not be compatible with the unit.

Some USB devices may take more than 45 seconds to initiate after plugging in. If this happen, try to remove the USB memory stick and insert it again.

CAUTION

If there are important files in the USB device, do not connect it to the main unit to play. Any wrong operation may cause file loss. Our company assumes no responsibility for lost files or directories.

Media type	USB (can support USB2.0 but the speed is USB1.1.)
Capacity	up to 999 songs

COMPATIBLE ACCESSORIES *(sold separately)*

MR45R Wired Remote Control – connect to the back of the unit labeled “TO MR45R”. You can add up to 2 MR45R in conjunction with CMR-Y7.

MRR21 IR Wireless Remote Control - the IR eye is located next to the volume button and must be in line of site for the remote to operate.

MRRF18 RF Wireless Remote Control with Receiver – simply connect the receiver to the IR port located at the back of the unit. This will give you the ability to control your stereo through walls and doors.

ACX-10 USB/AUX accessory extension cable - provides easy access to your USB input and Aux input

IC-3.5PM MP3 /iPod/ Satellite Radio Panel Mount Adapter - allows you to connect your MP3 player, iPod® or satellite radio to any audio device with RCA inputs

IR-4050 IR Sensor with 9'cable - connect this IR sensor to the IR port located at the back of the unit. This is an IR sensor, another way to point your MRR21 without going to the front of the stereo.

SCC1B1 - Sirius Tuner-without antenna

SRA-40 - Sirius Satellite Antenna with pedestal mount

TROUBLESHOOTING

PROBLEM	CAUSE	CORRECTIVE ACTION
No power	Blown fuse, power wires disconnected	Check the fuse and power wire or ground wire connection
No sound	Mute is on, Volume set at minimum, wiring is not properly connected	Turn Mute to off, adjust volume to a desired level, check the speaker wire

Unit not playing CD	CD is extremely dirty or damage CD, laser head is dirty, CD was inserted in reverse direction or the ambient is too high	Clean the CD or try to play a new one, clean the laser head, insert the CD with the label facing upward, allow to cool the unit to normal temperature
Sound skips when playing CD	The installation angle is more than 30 degrees or CD is extremely dirty or damage CD	Adjust the installation angle to less than 30 degrees or clean the CD or try to play a new one
Cannot read some USB devices	This unit is not 100% compatible with all USB devices or the USB devices has special format.	Try to format the USB device in FAT 16/32 standard
Unit powers off by itself	The battery may be too low (the unit operating voltage is 10.8v to 15.6v).	
Unit takes about 45 seconds to recognize some USB device	This is normal. The unit sometimes takes longer time to read all the files inside the USB device.	Try to remove the USB device and insert it again.
Operations keys does not work		Completely disconnect the power for 1 minute or 2 then plug it back in again
The unit picks up the engine noise.		Check the ground wire.
The PRESET Station memory is gone after battery change or discharge		This is normal. User has to re-program.
The radio does not work. The radio station automatic selection does not work	The antenna cable is not connected or the signals are too weak	Insert the antenna cable firmly or select a station manually

TECHNICAL SPECIFICATIONS

CD Player	SPECIFICATION
Signal to Noise Ratio	>80dB
Frequency response	20Hz-20KHz
Channel Separation	>65dB
A/D converter	16Bit
Electronic anti shocking	CD 20S/MP3 60S
TUNER(AM)	
Frequency Range	530-1710 KHz
Usable Sensitivity	32 dBuV
TUNER(FM)	
Frequency Range	87.5-107.9 MHz
Channel Step	200KHz
Sensitivity	8dB
Stereo Separation	30dB
Signal to Noise Ratio	60dB
LINE-OUT	
Output	5 Volt (max)
Impedance	33 Ohm
GENERAL	
Power Supply	13.8V DC (10.8-15.6V allowable)
Speaker Impedance	4 or 8 ohm
Output Power	45W x 4CH
Fuse	15A

NOTE: Specification & design subject to change without notice for improvements.

WARRANTY INFORMATION

This unit is warranted to be free of defects in material and workmanship for a period of one year. Warranty is subject to proper installation and operation within the published specifications. Except as provided below, Poly-Planar will repair or replace, at its discretion, any unit returned prepaid to our facility with proper documentation and determined to be defective in normal use. Poly-Planar is not liable for any consequential damages.

LIMITS OF LIABILITY

Proof of date of purchase is required for warranty service of this unit.

Poly-Planar will consider this warranty void if unit has been tampered or has had serial number altered, defaced or removed. Poly-Planar warranty does not cover damage occurred in transit, accident, abuse, misuse, negligence, fire, flood, lightning, or unauthorized service. This warranty assumes no responsibility for damages incurred during installation of this equipment. This warranty does not cover labor costs for removal of defective unit or reinstallation of replacement unit. This warranty covers normal consumer use only. In no event shall Poly-Planar be liable for special, incidental, or consequential damages.

To obtain service under this warranty, please call Poly-Planar for a **RETURN AUTHORIZATION NUMBER**. After a return authorization number is issued, return unit with proof of purchase and a letter stating your return address, daytime phone number and detail description of the problem or malfunction

poly-planar, inc.

Maryland USA

(410) 761-4000

www.polyplanar.com

detach here



WARRANTY REGISTRATION

In order to validate your Warranty please complete this Registration Card within 1 week of purchase. Detach and mail to Poly-Planar Group, LLC P.O. Box 409, Hanover, MD 21076
A copy of proof of purchase must accompany this registration

SERIAL NUMBER	MODEL NUMBER	DATE OF PURCHASE
LAST NAME	FIRST NAME	EMAIL (optional)
STREET ADDRESS		
CITY	STATE	ZIP
DEALER	CITY	STATE