



**MGR450B**  
**USER MANUAL**  
**QUICK INSTALLATION GUIDE**  
BLUETOOTH® (AUDIO STREAMING)  
MARINE GAUGE DIGITAL MEDIA AM/FM RECEIVER  
FEATURING BUILT-IN AMPLIFIER



BOSS Audio Systems  
3451 Lunar Court • Oxnard, CA 93030  
www.bossaudio.com  
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Tech Support: www.bossaudio.com/support



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Bluetooth

Thank you for purchasing this

**BOSS**  
AUDIO SYSTEMS

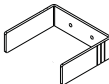
**MGR450B Bluetooth Marine Gauge**  
**Digital Media AM/FM Receiver**

Please read thorough these instructions carefully so you will know how to operate your model properly. After you have finished reading the instructions, keep this document in a safe place for future reference.

**THIS PACKAGE CONTAINS**



MGR450B  
(1pc)



Metal Bracket  
(1pc)



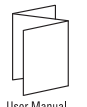
Hexagon  
Mounting Studs  
(2pcs)



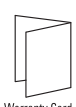
Machine Screws  
(4pcs)



M4 Secure Nuts  
(4pcs)



User Manual  
(1pc)



Warranty Card  
(1pc)

**INFORMATION TO THE USER**



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**FCC COMPLIANCE STATEMENT**

This device complies with part 15 of the FCC Rules. 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 this device.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter. The Bluetooth antenna cannot be removed (or replaced) by user. This equipment complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that it deemed to comply without maximum permissive exposure evaluation (MPE). But it is desirable that it should be installed and operated keeping the radiator at least 20 cm or more away from person's body (excluding extremities: hands, wrists, feet and ankles). Alteration or modifications carried out without appropriate authorization may invalidate the user's right to operate the equipment. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Relocate or reorient 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.

**!! WARNING !!**

**ADJUSTMENT OR ALTERATIONS OF THIS DEVICE MAY  
RESULT IN HAZARDOUS RADIATION EXPOSURE.**

**1**

**IMPORTANT SAFETY PRECAUTIONS**

**BE SURE TO OBSERVE THE FOLLOWING GUIDELINES:**

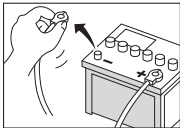
- Do not turn up the volume so high that you can't hear what's around you.
- Use caution or temporarily discontinue use in potentially hazardous situations.
- Do not operate mobile video equipment while driving a motorized vehicle – safe driving and safety consideration of others should always be your highest priority.
- Set your volume control at a low setting, then slowly increase the sound until you can hear it comfortably without distortion, or ear discomfort.
- In the event you should notice smoke, strange noises or odor from this product, or any other abnormal signs, immediately turn off the power and consult your dealer or the nearest authorized **BOSS AUDIO Service Center**. Using this product in this condition may result in permanent damage to the system.

**BEFORE YOU START**

**INSTALLATION PRECAUTIONS**

**Always consult with a professional installer**

- Do not attempt to install or service this product by yourself. Installation or servicing of this product by persons without professional training and experience in electronic equipment and motorized vehicle accessories may be dangerous and could expose you to the risk of electric shock, injury or other hazards
- Refer any repairs to a qualified **BOSS AUDIO SYSTEMS Service Center**
- The **MGR450B** should be wired directly to a vehicles battery
- When wiring directly to the vehicles battery, be sure to disconnect the batteries negative terminal wire before starting any wiring procedures, if extending the main power primary wire, it is suggested that an optional fuse and fuse holder (not included) with minimum rating of 20 Amperes be in-line with the positive battery terminal
- The ground cable length should be as short as possible, if extending from you battery, be sure to use a proper gauge rating for the length of the run, use only high quality copper primary type wire
- The **MGR450B** has a IPX6 weather resistant design, it should not be submerged in or under water under any circumstances
- Do not use abrasive cleaning materials on the lens or bezel
- Use only the installation parts provided with the **MGR450B**



To avoid potential shorts in the electrical system, be sure to disconnect the (-) battery cable before installation. Use this unit with a 12-Volt battery and negative grounding only. Failure to do so may result in a fire or malfunction.

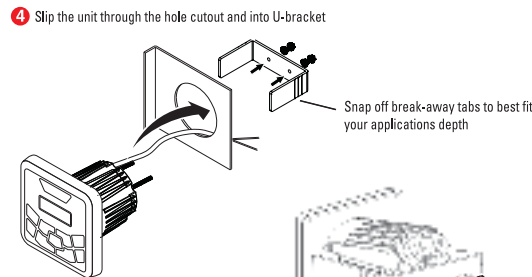
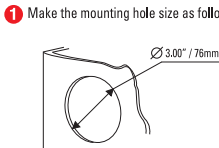


When replacing the fuse, be sure to only use a fuse of the rating specified on this product. To avoid short-circuiting, cover any disconnected leads with insulating tape. It is specially important to insulate any unused wires, which if left uncovered may cause a short circuit. When connecting other devices to this product, refer to the manual for the product to be connected. The black cable is ground, make sure to connect the ground wire first.

Ensure that the ground cable is properly connected to metal parts of the vehicles body frame or direct to the battery if your vehicle does not have a grounded chassis frame. The ground cable of this units power amp and a second powered system must be connected to the frame separately with different screws. If the screw for the ground wire loosens or falls out, it could result in fire or malfunction.

**2**

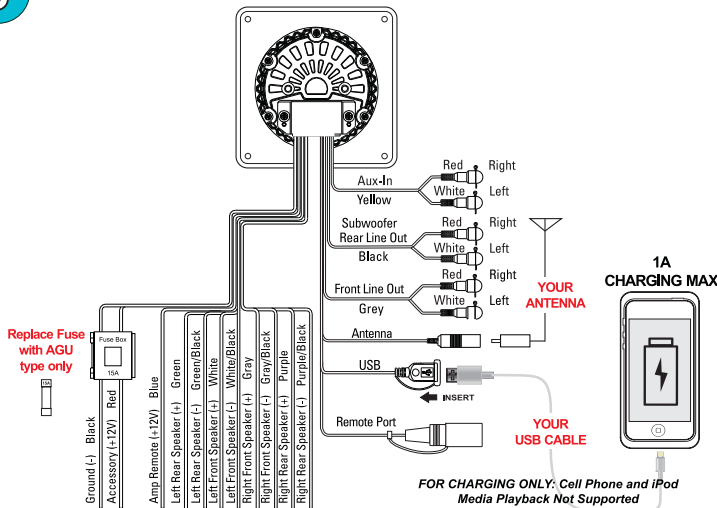
**SUGGESTED MOUNTING METHODS**



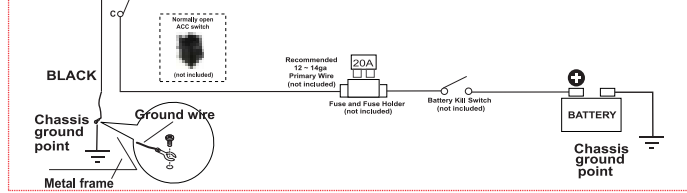
**CAUTION!!**  
Using other mounting methods may void this warranty

**3**

**WIRE DIAGRAM**



**OPTIONAL DIRECT BATTERY WIRING CIRCUIT**

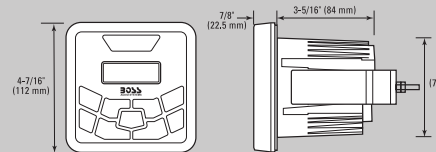


**CAUTION!!**  
Do not ground or short the speaker leads

TROUBLE	CAUSE	SOLUTION
Unit will not turn on	The fuse is blown	Check / replace the fuse
	Ignition not engaged	Turn ignition to on position
	Blown speaker	Replace faulty speaker
	Volume is low / muted	Press the volume level up
No sound is heard	Device is paused or muted	Check your devices playing / volume status
	The Bluetooth function of the device is not enabled	Refer to the user manual of the device for how to enable the Bluetooth function
Cannot pair Bluetooth	The MGR450B BT memory is full	Follow how to reconnect a device in section E
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 systems antenna
	Power glitch or interference	Disconnect power for 10 seconds to reset
	Low battery power	Charge battery, run the engine to recharge the battery
Unit has become unresponsive	Reset the main system	Follow steps in section B

**TECHNICAL SUPPORT**

1-805-751-4853  
www.bossaudio.com/support



**SPECIFICATIONS**

**FM TUNER FREQUENCY RANGE**

- USA 87.5-107.9MHz
- Europe 87.5-108MHz
- Asia 87.5-108MHz
- Australia 87.5-108MHz
- Usable Sensitivity: 12dB (S/N=30dB)
- Bands: 2

**AM TUNER FREQUENCY RANGE**

- USA 530-1710KHz
- Europe 522-1620KHz
- Asia 522-1620KHz
- Australia 522-1620KHz
- Usable Sensitivity: 40dB (S/N=20dB)
- Bands: 1

**WEATHER BAND SELECTION**

- CH.1 162.400MHz
- CH.2 162.425MHz
- CH.3 162.450MHz
- CH.4 162.475MHz
- CH.5 162.500MHz
- CH.6 162.525MHz
- CH.7 162.550MHz
- Bands: 1

**INTEGRATED AMPLIFIER**

- MOSFET
- MAX Continuous Output: 240W (All channels driven)
- PEAK Power Rating: 60W / channel
- Channels: 4
- Class: AB
- Frequency Response: 20-20kHz
- 4Ω stable

**CHASSIS**

- Button Backlight Illumination: BLUE LED
- F/R/S RCA Preamp Output: 2VRMS
- RCA Input Impedance: 10KΩ
- LCD: TN Type / Active Matrix

**GENERAL**

- Power Source: 14.4VDC (10.8V ~ 16V allowable)
- Grounding System: Negative type
- Maximum Current Consumption: 15A
- 3-way protection circuitry (thermal, overload, and speaker short protection)
- Unit Weight: 1.08lbs / 0.52kg
- Storage Temperature: -22°F to 176°F / -30°C to 80°C
- Operation Temperature: -4°F to 158°F / -20°C to 70°C
- Replacement Fuse: 15A

(Replace with AGU Fuse Type Only)

**BLUETOOTH**

- BT: 3.0
- BT Range: 33Ft / 10M (Class 2)
- BT Profiles: A2DP / AVRCP 1.3

**USB DRIVE MEDIA SUPPORTED**

- MP3
- WMA
- 65,000 Songs
- 32GB / FAT 32
- USB 2.0 High Speed
- USB Output Voltage: 5VDC @ 1A

Specifications subject to change without notice


**QUICK START GUIDE**

OPERATION QUICK START GUIDE

EN

A

GETTING STARTED



RADIO

P6 103.50

BT

MY SONGS

AUX-IN

USB

TITLE

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B

TUNER SETUP

PRESET RECALL

Short Press

PRESET Fn

FM1 / FM2 / AM1 / WB1

PRESET AUTO STORE 1 ~ 6

Long Press

PRESET Fn

A-STORE / M-STORE / LOCAL / AREA / RDS / AF / TA / PTY

MORE SETTINGS

Short Press

PRESET Fn

FM1 / FM2 / AM1 / WB1

1	Long Press for FUNCTION options
2	Navigate Main Menu Tree
3	Press ENTER to select option
4	To select through MENU options

Media Playback Mode	Selectable Settings
Repeat	* ALL: to repeat all tracks on the storage media * Song: the current track will be repeated * Folder: repeats all tracks in the current folder
Random On/Off	This function allows you to play track/songs from the current album, songs or artist in a random order
Tuner Mode	Selectable Settings
Auto Store	Press to access into A-STORE mode, the strongest stations of the selected band will be saved in FM 1 or FM 2, AM 1 BAND presets automatically
Manual Store	When a desired radio station is set, press M-STORE to save it in the memory, you can store a total of 12 FM or 6 AM
Local On/Off	* ON: only stations with strong signal can be broadcast The local indicator will light up * OFF: Stations of both strong and weak signals can be broadcast
Area	Select suitable country area for this unit: USA / EUROPE / ASIA / AUST
RDS On/Off	Turn On or Off the RDS function
AF On/Off	* ON: The unit will search for another station with stronger signal, but with the same program identification as the current station automatically * OFF: Turn off AF function
TA On/Off	* ON: When there is traffic announcement, unit will automatically switch to the tuner mode (regardless of the current mode) and begins to broadcast the announcement on traffic conditions. When the traffic announcement is over, unit will automatically return to the previous mode * OFF: Traffic announcement does not cut in
PTY	Once inside the PTY mode, press the get into program type item, and rotate encoder volume knob to selected category. * Available Program Type: POP M; ROCK M; EASY M; LIGHT M; CLASSICS; OTHER M; JAZZ M; COUNTRY; NATION M; OLDIES M; FOLK M; A-TEST; ALARM; NEWS; AFFAIRS; INFO; SPORT; EDUCATE; DRAMA; CULTURE; SCIENCE; VARIED; WEATHER; FINANCE; CHILDREN; SOCIAL; RELIGION; PHONE IN; TRAVEL; LEISURE; DOCUMENT

C

AUDIO and SYSTEM SETUP

AUDIO

Short Press

AUDIO MENU

EQ

EQ FLAT

EQ JAZZ

EQ POP

EQ CLASS

EQ ROCK

EQ TECHN

EQ VOCAL

EQ USER

xBass On/Off

XB5 ON

XB5 OFF

BASS Level

BASS 00

BASS -07

BASS +07

MID Level

MID 00

MID -07

MID +07

Treble Level

TRE 00

TRE -07

TRE +07

Balance Level

BAL L-R

BAL L 12

BAL R 12

Fader Level

FAD F-R

FAD F 12

FAD R 12

Subwoofer Settings

LINE OUT

SUBW OUT

SUBW ON

SUBW OFF

LPF 80H

LPF 120H

LPF 160H

LEVEL 00

LEVEL 12

SYSTEM

Long Press

AUDIO MENU

BT DISCO

BEEP ON

BEEP OFF

RESET

ABOUT

1	Long Press for MAIN MENU options
2	Navigate Main Menu Tree
3	Press ENTER to select option
4	To select through MENU options

Item	Selectable Settings
BT	This feature allows Reconnect or Disconnect to the paired mobile phone or Bluetooth device manually
BEEP	Turn On or Off beep sound
RESET	To restore the factory default settings
ABOUT	To view the device hardware and software versions

To avoid battery exhaustion be sure to run the vehicles engine while using this product. Using this product without running the engine can drain the battery.

D

RADIO OPERATION

RADIO

P6 103.50

1) Press the SRC button to select RADIO

2) Press ►/II to MUTE, press again to UNMUTE

3) To advance stations press ►

4) To skip previous stations press ◀

5) Press the button to display RADIO information

6) Press the PRESET button to recall PRESETS 1 ~ 6

E

BLUETOOTH OPERATION

SYSTEM

BT

PAIRING & DISCOVERING A NEW BLUETOOTH CONNECTION

Note: The mobile device must be within 33ft (10m) of the MGR450B for Bluetooth to function properly.

1) Power on the MGR450B by pressing and holding down the Power button for 1 second, the Bluetooth ICON will start to flash signalling that the MGR450B is now ready for Bluetooth pairing.

NOTE: You have 2 minutes before you must restart this procedure over again.

2) Now that the MGR450B is in pairing mode:

ANDROID users:

a. Go into the Settings Menu of your ANDROID device

b. Enter the Bluetooth Menu and press SCAN

c. "Boss Audio MGR450B" will now be display under AVAILABLE DEVICES

d. If prompted, enter passcode: "0000"

iOS users:

a. Go into the Settings Menu of your iOS device

b. Enter the Bluetooth Menu

c. "Boss Audio MGR450B" will now be displayed

d. If prompted, enter passcode: "0000"

3) If the MGR450B is not seen, repeat the above steps to refresh the "Device List"

4) When the BT connection is successful you will see BT CONNECTED message on the MGR450B LCD display, you are now ready to stream music from your devices favorite media player to the MGR450B

RECONNECTION

1) Power on the MGR450B and your last paired device Bluetooth

2) The unit will now automatically be reconnected

3) If your device was previously paired with the MGR450B, but it wasn't the last paired device:

a. Ensure no other devices are currently paired

b. Press and hold MENU button to manually connect / reconnect to the MGR450B

4) If the device is out of range from the MGR450B, it will disconnect automatically:

5)The MGR450B will reconnect to the device once in range, a confirmation message will be displayed on the LCD

F

BLUETOOTH STREAMING MUSIC

BT

MY SONGS

1) Press the SRC button to select BT AUDIO

2) Press ►/II to start PLAY, press again to PAUSE

3) To skip songs or advance tracks press ►, press and hold to FAST FORWARD

4) To select the previous track press the button ◀, press and hold to FAST REWIND

5) Press the button to display song ID3 information

G

USB OPERATION

USB

TITLE

1) Press the SRC button to select USB

2) Press ►/II to start PLAY, press again to PAUSE

3) To skip songs or advance tracks press ►, press and hold to FAST FORWARD

4) To select the previous track press ◀, press and hold to FAST REWIND

5) Press the button to display song ID3 information

H

AUX-INPUT

AUX-IN

1) Press the SRC button to select AUX IN

2) Press ►/II to MUTE, press again to UNMUTE

Tips:

Ensure to adjust the level of your devices master volume to 75%