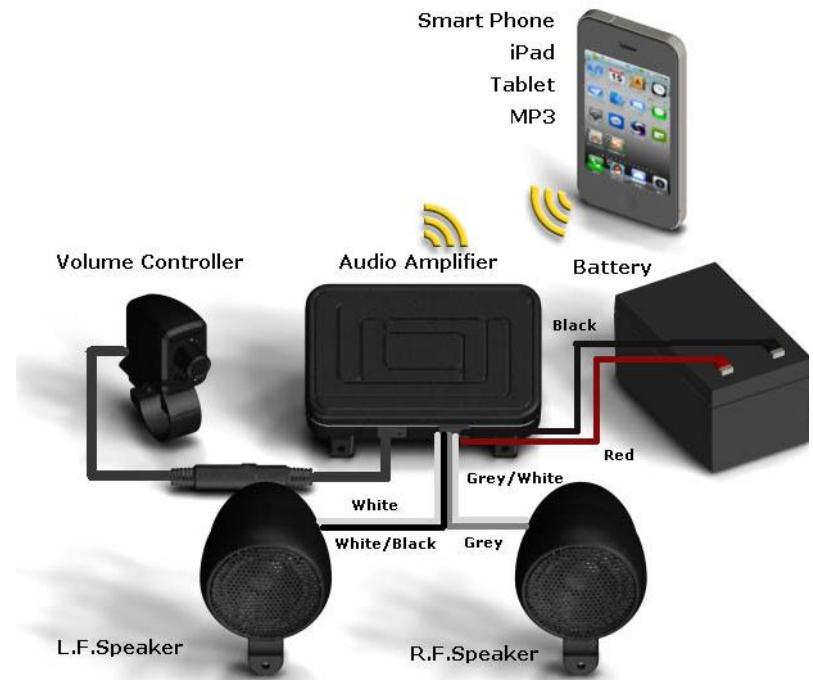


# Installation Manual



## Waterproof Bluetooth Audio System

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**BT-900 series motorcycle / ATV Specialized Outdoor Audio**

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## 1. Introduction

Thank you for choosing Sound Marine™ BT-900 series Bluetooth Audio System. The package provides everything you require to setup a complete audio system for motor vehicle. It is specially designed to provide the maximum outdoor music entertaining experience in humid environment. It offers user-friendly means of installation and high quality music experiences. This audio system can be installed on various vehicles, including motorcycles, ATV, UTV, RIBS, most watercraft and scooters.

BT-900 series operates on Bluetooth version 2.1 with Enhanced Data Rate (EDR) technology and it is compatible with Bluetooth audio device such as iPhone, iPad, PDA, GPS, MP3 player, tablets and smartphones. Bluetooth v2.1 + EDR together offers more efficient audio transmission with longer wireless operating range (operate up to 100 feet/33 meters). Alternative to wireless connection.

## 2. Applications

Our BT-900 series is built to withstand tough challenges in different outdoor / marine environments. They can be installed at locations with high humidity and high chance of water splashes. Vehicles suitable for installation include:

- Motorcycle
- All Terrain Vehicle (ATV)
- Personal Watercraft (PWC)
- Snowmobile
- Utility Task Vehicle (UTV)
- Golf Cart
- Recreational Vehicle (RV)

## 3. Safety Precaution

- Read the manual before installation. It contains important information for all users.
- Turn off the main electricity supply before beginning the installation.
- For electric drill, ensure it is connected to the ground properly and the area is free of any liquid.
- If any problem occurs during the installation, please contact your local dealer for advice before proceeding.

## 10. System operating guide

### Bluetooth operating guide:

1. Switch on the power by operating the volume control. Adjust the control knob so the indicator is at 10 o'clock position.
2. Turn on your smart phone and enter Bluetooth device search window.
3. "Bluetooth Audio" should appear in the list of Bluetooth devices. If it doesn't appear, repeat steps 1 and 2.
4. Select and connect to "Bluetooth Audio".
5. The audio system is now ready to play any music from your smart phone / MP-3 player.

## 11. Troubleshoot

1. If a password window pops up while attempting to connect to "Bluetooth Audio", enter the following three digits password: "8888".
2. Turning off the audio system will disconnect the Bluetooth device automatically. The procedures in the operating guide must be applied each time when re-connecting to the device.

## 9. Speaker Installation

### Handlebar installation:

1. Select mounting clamp E from the package.
2. Peel one side of twin adhesive stickers H and adhere it to the surface of speaker mount.
3. Place the speaker in the correct position so the screw hole of the speaker in line with the mounting hole of the clamp and secure the installation with a screw (4x15 mm) and a nut.
4. Clamp the speaker mount around the handle bar
5. For one-inch handle bar, fold the C-ring gasket H (see parts list) around the handle bar; for 7/8 inch handle bar, place an additional C-ring gasket G inside C-ring H to achieve a tight mounting.
6. Slide the C-ring into the speaker mount. This will absorb shockwave from motorcycle.
7. Tighten the clamp around the handle bar with a screw (4x25 mm), a nut and a nylon tube in between. The nylon spacer is designed to absorb vibration and shockwave. It reduces the chance of clamp breaking.
8. Adjust the projecting angle of the speaker and tighten any loose screws.

### Mirror side installation:

1. Select mounting bracket I and J from the package and dissemble the side mirror.
2. Select the appropriate mounting style of the bracket. To position the speakers at a higher level see diagram A; to position the speakers at a lower level see diagram B.
3. Hold the speaker in position and secure the mounting to the holder with a screw (4x15 mm) and a nut.
4. Screw the holder to the stainless steel bracket with a 4x6 mm screw and adjust the angle.
5. Reassemble the side mirror on the stainless steel bracket as shown.
6. Secure a tight mount to prevent detachment of the bracket or the mirror.
7. Adjust the final projecting angle of the speaker.
8. Check for any loose screws and nuts.

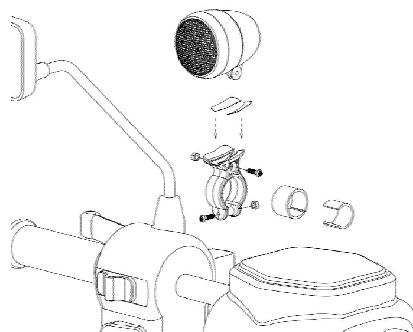


Figure 4. Overall demonstration of loudspeaker assembly process. The same installation is not limited to just handlebar.

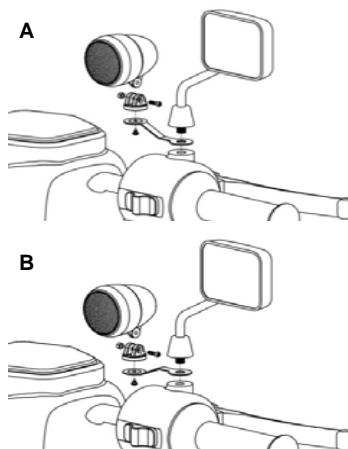


Figure 5. Overall demonstration of loudspeaker assembly process on a mirror mount.

## 4. BT-900 Waterproof Bluetooth Audio System features

- Class D amplifier
- Input Voltage : 10 ~ 26VDC
- Output Power : 20W/CH, RMS 12VDC  
30W/CH, RMS 24VDC
- Bluetooth : V2.1+ EDR Class 2
- Bluetooth range : 100 feet (33 meters)
- Protection : Thermal and short circuit protection with auto recovery feature.
- CE/FCC/RoHS certificated.

## 5. System specification

### Bluetooth amplifier

- Class D amplifier
- Input Voltage : 10V ~ 26VDC
- Output Voltage : 20W/CH, RMS 12VDC  
30W/CH, RMS 24VDC
- Power consumption : 4 ohms / 3A 12VDC  
4 ohms / 5A 24VDC
- SNR : 98 dB / 12VDC, 102 dB / 24VDC
- Low THD+N < 0.15%
- Operating temperature : -20°C ~ +100°C
- Bluetooth : V2.1+ EDR Class 2
- Bluetooth transmission range : 100 feet (33 meters)
- IP68 rating
- CE/FCC/RoHS certificated.

### Loudspeakers

- 2", 2.5", 3" waterproof loudspeaker
- Power handling : RMS 20W, MAX 40W
- Average sensitivity (1w/1m) : (2" speaker) 82 ± 2dB, (2.5" speaker) 83 ± 2dB, (3" speaker) 84 ± 2dB
- Maximum SPL 1m : (2" speaker) 98 ± 2dB/20W, (2.5" speaker) 103 ± 2dB/20W, (3" speaker) 108 ± 2dB/20W
- Frequency response : 270Hz ~ 18KHz
- Operating temperature : -20°C ~ +100°C
- Impedance : 4 ohms
- IP65 rating
- RoHS compliant

## 6. Parts List

Please check the parts and their quantity before installing your audio system. Contact your local dealer if anything is missing as soon as possible. The table below contains the list of all parts:

Item	Qty	Description	Item	Qty	Description
A	1	Amplifier	J	3	C-ring EPDM gasket, 82Lx15Wx1.5H mm
B	1	Volume control	K	2	Pan head, Phillips, type C, 4x15 mm
C	1	Volume control clamp	L	2	Pan head, Phillips, type C, 4x25 mm
D	2	High fidelity speakers	M	2	Truss head, Phillips, type C, M4x8 mm
E	2	Clamps (handle bar mount) 1" and 7/8"	N	2	Washer 4 x 9.5 x 0.8 mm
F	4	Twin adhesive sticker	O	4	Speaker nuts, 4x7mm
G	2	Speaker holders	P	4	Pan head, Phillips, type A, 4x12 mm
H	2	Stainless steel brackets	Q	2	Nylon spacer
I	3	C-ring EPDM gasket, 50Lx15Wx1.5H mm	R	2	Hook and Loop

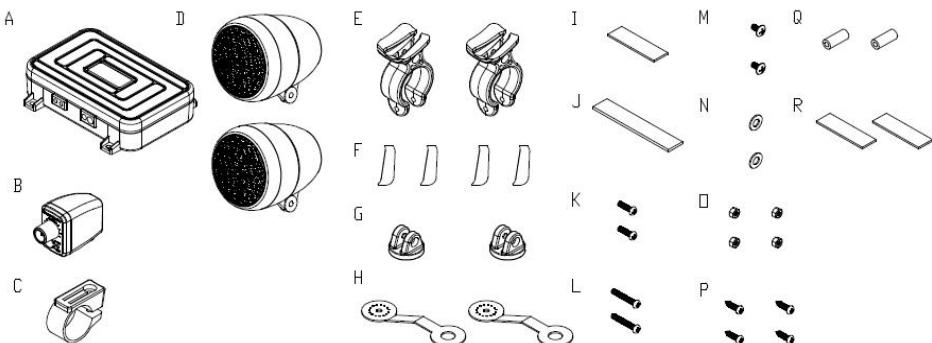


Figure 1. The figure shows all parts included in the package, including 2 waterproof loudspeakers for dual-channel setup.

## 7. Select the best location for mounting

Be aware that Moto series can adapt different mounting styles and each follows a separate set of installation instructions. The high fidelity speakers are designed to stand on top of a strong surface. All speakers are intended to be installed into a sturdy panel.

The surface/panel you select should have the appropriate strength to hold the unit firmly in place after installation. Apart from the strength, consider the effects of shock, vibration, shear pressure and movement in different directions have on the mounting surface/panel. If the surface is not sturdy enough, the housing may be dislocated from its original position and it may be damaged. If you are uncertain about the location of your choice, contact the local dealer for advice.

## 8. Amplifier Installation

Read the following instructions carefully before proceeding. If you are unfamiliar with wiring electronic devices, consult your local dealer or contract professionals. False wiring could damage the amplifier and the rest of audio system. Velcro has been included for occasions that the 'U' mount bracket does not give a good fit.

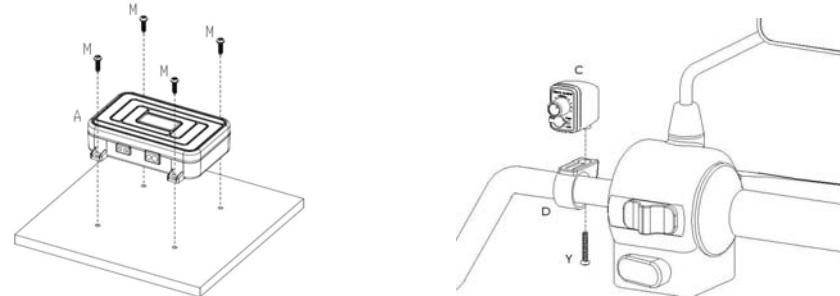


Figure 2. Amplifier and volume control installation quick guide.

Select a stable and sturdy surface before beginning the process. Mount the amplifier unit as illustrated in the diagram (left). For reference to volume control installation, please see right diagram. Ensure the right parts are used during installation. For the parts list, please see *Parts List* on page 3 and 6. Test the audio system by playing music from your audio device. If the green light comes on then rotate the volume control knob to adjust the volume. Contact your local dealer if the system fails to function.

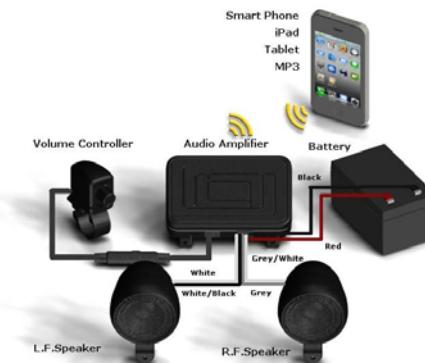


Figure 3. Wiring diagram for BT-900 system. Please note that the wiring plan is the same for both Bluetooth and 3.5mm cable users.

1. Red wire - Audio amplifier power (+). Connect the red wire directly to a positive (+) power source.
2. Black wire - Audio amplifier ground (-). Connect black wire to a negative (-) source.
3. Grey wire - Connect the grey wire to the positive (+) terminal of the right speaker.
4. Grey/White wire - Connect the grey/white wire to the negative (-) terminal of the right speaker.
5. White wire - Connect the white wire to the positive (+) terminal of the left speaker.
6. White/Black wire - Connect the white/black wire to the negative (-) terminal of the left speaker.
7. Black wire - Connect amplifier and volume control through a black waterproof wire.

## **Federal Communication Commission Interference Statement**

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 of the following measures:

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

**FCC Caution:** To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

## ***FCC Radiation Exposure Statement***

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

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