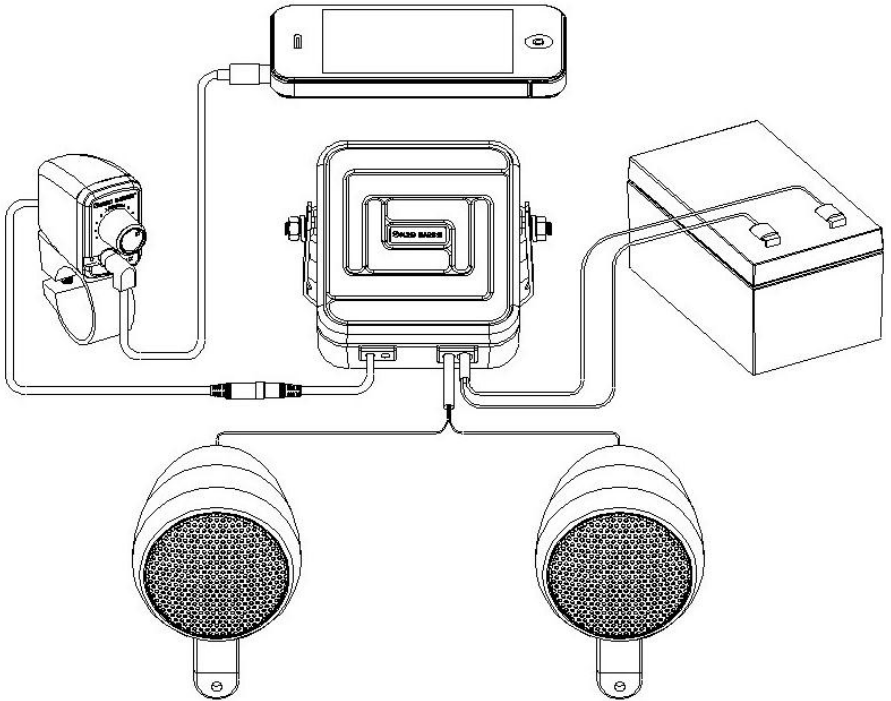


# Installation Manual



## Moto-series

## Waterproof Audio System

Motorcycle / ATV Specialized Outdoor Audio System

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## 1. Introduction

The Moto series provides everything you require to setup a complete audio system. It is specially designed to provide the maximum outdoor music entertaining experience to the users. It offers high quality music experiences and 4 different user-friendly means of installation. The audio system can be installed on a variety of mobile vehicles, including motorcycles, ATV, UTV, most of the watercrafts and scooters.

The amplifier has auto on/off system to help saving power and has a self protective thermal fuse device to protect both amplifier and loudspeakers from short circuiting. It is compatible with audio devices that have an AUX-IN 3.5mm jack and the system is highly adapted to condition changes in the environment, including humidity and temperature. Complete with waterproof accessories, the amplifier and loudspeakers carry IP 68 rating and IP 65 rating respectively.

## 2. Applications

Moto series are 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 car
- Recreational vehicle (RV)
- Boats / yachts

## 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. Contract professionals if necessary.

## 4. Specification

### Moto-620 / 625 / 630

- 2 Channel 40 watts waterproof outdoor Class D Amplifier for iPod / MP3 / portable CD players or any satellite radio system
- Two jet-engine speakers including (2"/ 2.5"/ 3"for selection) with 3 different available mounting styles
- Waterproof and corrosion-proof amplifier case with mounting bracket
- Waterproof volume control with 6ft cable and 3.5mm mini plug
- Protection :Thermal and short circuit protection and auto recovery feature
- AUX-IN 3.5 mm jack with rubber cover
- Automatically turn on power and automatically turn off power (30 - 50 seconds)
- Amplifier : IP68 rating / CE certificate / E-Mark / RoHS conformed
- Speaker : IP65 rating / IEC-268-5 (100 hrs tested) / RoHS conformed
- Frequency response : 20 Hz – 20000 Hz
- Impedance : 4 ohms
- Output power : 20W/Chennal 4 ohm load from 12V DC  
30W/Chennal 4 ohm load from 24V DC
- Power supply : From 10V - 26V DC
- SNR : 98 dB / 12V 102 dB / 24V

### Moto-820 / 825 / 830

- 4 Channel 80 watts waterproof outdoor Class D Amplifier for iPod / MP3 / portable CD players or any satellite radio system
- Four jet-engine speakers including (2"/ 2.5"/ 3"for selection) with 3 different available mounting styles
- Waterproof and corrosion-proof amplifier case with mounting bracket
- Waterproof volume control with 6ft cable and 3.5mm mini plug
- Protection :Thermal and short circuit protection and auto recovery feature
- AUX-IN 3.5 mm jack with rubber cover
- Automatically turn on power and automatically turn off power (30 - 50 seconds)
- Amplifier : IP68 rating / CE certificate / E-Mark / RoHS conformed
- Speaker: IP65 rating / IEC-268-5 (100 hrs tested) / RoHS conformed
- Frequency response : 20 Hz – 20000 Hz
- Impedance : 4 ohms
- Output power : 20W/Chennal 4 ohm load from 12V DC  
30W/Chennal 4 ohm load from 24V DC
- Power supply : From 10V - 26V DC
- SNR : 98 dB / 12V 102 dB / 24V

## 5. 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. For the list of all parts, please see page 6

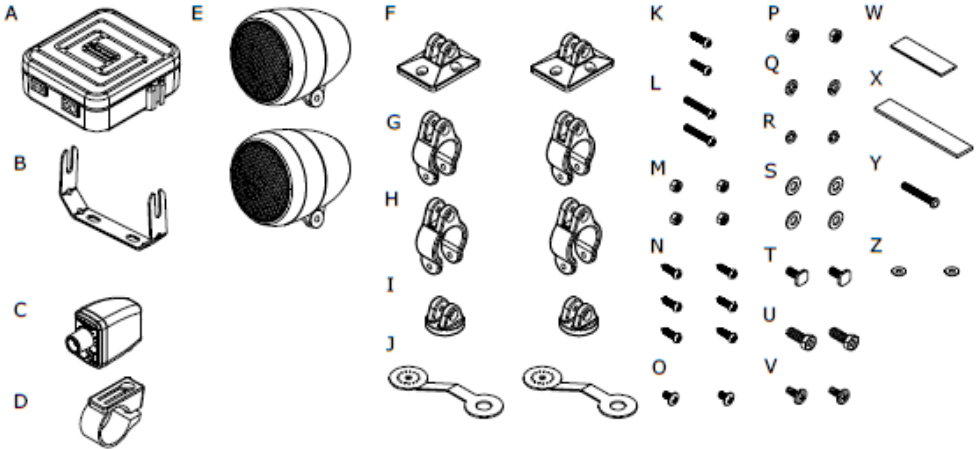


Figure 1. Parts of Moto-620 / 625 / 630. Contents of all the parts included in the 2 Channel Systems

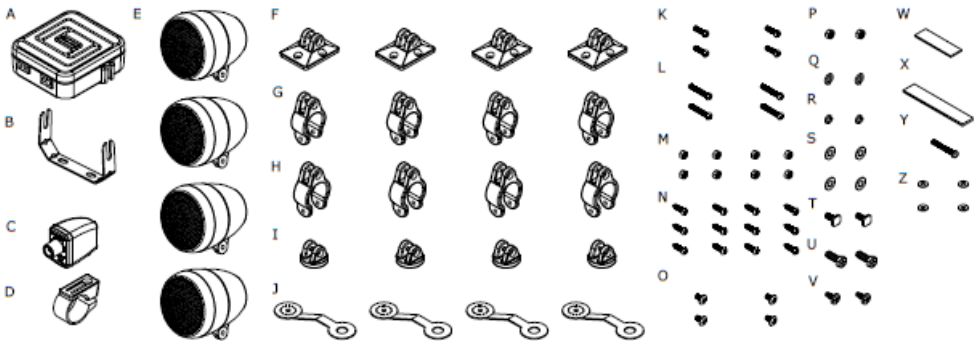


Figure 2. Parts of Moto-820 / 825 / 830. Contents of all the parts included in the 4 Channel Systems

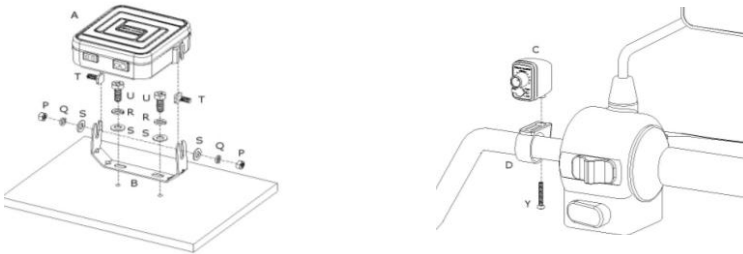
## 6. Select the best location for mounting

Be aware that Moto series can adapt different mounting styles and each follows a separate set of installation instructions. The high fidelity loudspeakers 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.

## 7. Amplifier Installation

Read the following installation manual 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.



**Figure 3. 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. Ensure the right parts are used during installation. For the parts list, please see *Parts List* on page 3 and 4. 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 4. Wiring diagram of Moto-620 / Moto-625 / Moto-630.**

1. Red wire - Audio amplifier power (+). Connect the red wire directly to the positive (+) terminal of the battery.
2. Black wire - Audio amplifier ground (-). Connect black wire to the negative (-) terminal of the battery.
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 3.5 mini plug waterproof wire and then you will need to connect an audio cord(not supplied) from the volume control to an iPod/MP3/CD player/Phone/ Satellite Radio System.

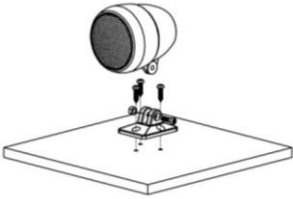
**Figure 5. Wiring diagram of Moto-820 / Moto-825 / Moto-830.**

1. Red wire - Audio amplifier power (+). Connect the red wire directly to the positive (+) terminal of the battery.
2. Black wire - Audio amplifier ground (-). Connect black wire to the negative (-) terminal of the battery.
3. Grey wire - Connect the grey wire to the positive (+) terminal of the right front speaker.
4. Grey/White wire - Connect the grey/white wire to the negative (-) terminal of the right front speaker.
5. White wire - Connect the white wire to the positive (+) terminal of the left front speaker.
6. White/Black wire - Connect the white/black wire to the negative (-) terminal of the left front speaker.
7. Purple wire - Connect the purple wire to the positive (+) terminal of the right rear speaker.
8. Purple/white wire - Connect the purple/white wire to the negative (-) terminal of the right rear speaker.



9. Green wire - Connect the green wire to the positive (+) terminal of the left rear speaker.
10. Green/white wire - Connect the green/white wire to the negative (-) terminal of the left rear speaker.
11. Black wire - Connect amplifier and volume control through a black 3.5 mini plug waterproof wire and then you will need to connect an audio cord(not supplied) from the volume control to an iPod/MP3/CD player/Phone/ Satellite Radio System.

## 8. Loudspeaker Installation

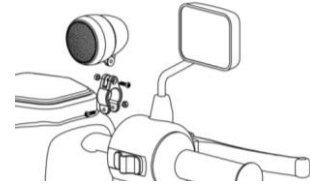


### 1) Standard Flat Surface:

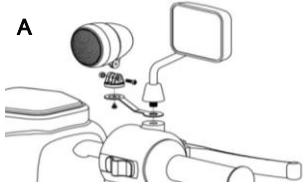
1. Mount the plastic bracket on the chosen flat surface with the screws (4×12 mm) provided in the package
2. Hold the jet-engine speaker in position and secure the mounting with a screw (4×15 mm) and a nut
3. Adjust the projecting angle of the speaker and tighten any loose screws

### 2) Handle bar:

1. Select the appropriate mounting clamp from the package
2. Hold the jet-engine speaker in position and secure the mounting to the clamp with a screw (4×15 mm) and a nut
3. clamp it around the handle bar
4. Adjust the angle of the clamp. Tighten the clamp with a screw (4×25 mm) and a nut.
5. Adjust the projecting angle of the speaker and tighten any loose screws



A



B



### 3) Mirror side:

1. Select the appropriate mounting bracket from the package and disassemble the side mirror
2. Select the appropriate mounting style of the bracket. To position the speakers at a higher level see depiction A; to position the speakers at a lower level see depiction B
3. Hold the jet-engine speaker in position and secure the mounting to the holder with a screw (4×15 mm) and a nut
4. Screw the holder to the stainless steel bracket with a 4×6 mm screw and adjust the angle
5. Reassemble the side mirror on the stainless steel bracket as shown
6. Secure a tight mounting 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

## 9. Amplifier functional test

It is advised to carry out the following product testing procedures to test the amplifier for the first time. The automatically on/off system could help to save electricity in various situations. The LED light indicates the status of the amplifier. It is only switched on if the amplifier is turned on.

### **The amplifier would be turned on automatically in the following situations:**

- 1) Connect the audio device (e.g. MP3 player) to the amplifier with the 3.5 mm Stereo Male to Male Cable. Turn the volume control towards 10 o'clock position and play any music. The LED light should be switched on and the amplifier should come to live immediately.
- 2) If the music device is already playing, connecting it to the amplifier should also turn on the amplifier automatically.

**The amplifier would be turned off automatically in the following situations:**

- 1) While the music is still playing and the volume is adjusted to the minimal for more than 40 seconds, the amplifier should turn off spontaneously.
- 2) If the music stops playing while the audio device is still connected to the amplifier, the amplifier would also turn off automatically after 40 seconds.
- 3) Disconnecting the audio device from the amplifier would turn off the amplifier after 40 seconds.

**Moto-620 / 625 / 630**

<i>Item</i>	<i>Qty</i>	<i>Description</i>
A	1	Amplifier
B	1	Amplifier bracket
C	1	Volume control
D	1	Volume control clamp
E	2	Jet-engine speakers
F	2	Brackets (surface mount)
G	2	Clamps (handle bar mount), 7/8"
H	2	Clamps (handle bar mount), 1"
I	2	Speaker holders
J	2	Stainless steel brackets
K	2	Pan head, Phillips, type C, 4x15 mm
L	2	Pan head, Phillips, type C, 4x25 mm
M	4	Speaker nuts, 4x7mm
N	6	Pan head, Phillips, type A, 4x12 mm
O	2	Truss head, Phillips, type C, M4x8 mm
P	2	Hex nuts 4.85x3.8 mm
Q	2	Lock washers 6.3x10 mm
R	2	Lock washers 5.8x10 mm
S	4	Flat washers 6.3x10 mm
T	2	Square head bolts, 4.85x10 mm
U	2	Hex point, type A, 6.3x19 mm
V	2	Truss head, Phillips, type B, 4x13 mm, spare for plastic mount.
W	1	EPDM gasket, 50Lx15Wx1.5H mm
X	1	EPDM gasket, 82Lx15Wx1.5H mm
Y	1	Volume control, Pan head, Phillips, type C, 4x25 mm
Z	2	Washer 4 x 9.5 x 0.8 mm

**Moto-820 / 825 / 830**

<i>Item</i>	<i>Qty</i>	<i>Description</i>
A	1	Amplifier
B	1	Amplifier bracket
C	1	Volume control
D	1	Volume control clamp
E	4	Jet-engine speakers
F	4	Brackets (surface mount)
G	4	Clamps (handle bar mount), 7/8"
H	4	Clamps (handle bar mount), 1"
I	4	Speaker holders
J	4	Stainless steel brackets
K	4	Pan head, Phillips, type C, 4x15 mm
L	4	Pan head, Phillips, type C, 4x25 mm
M	8	Speaker nuts, 4x7mm
N	12	Pan head, Phillips, type A, 4x12 mm
O	4	Truss head, Phillips, type C, M4x8 mm
P	2	Hex nuts 4.85x3.8 mm
Q	2	Lock washers 6.3x10 mm
R	2	Lock washers 5.8x10 mm
S	4	Flat washers 6.3x10 mm
T	2	Square head bolts, 4.85x10 mm
U	2	Hex point, type A, 6.3x19 mm
V	2	Truss head, Phillips, type B, 4x13 mm, spare for plastic mount.
W	1	EPDM gasket, 50Lx15Wx1.5H mm
X	1	EPDM gasket, 82Lx15Wx1.5H mm
Y	1	Volume control, Pan head, Phillips, type C, 4x25 mm
Z	4	Washer 4 x 9.5 x 0.8 mm

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