



**BY-WFM12**  
VHF Wireless Microphone System

## Introduction

Thanks for choosing BOYA!

The BOYA BY-WFM12 is a 12-Channel VHF Wireless Microphone System, capturing audio with Smartphones, Tablets, DSLRs, Camcorders, Audio Recorders, PCs and more.

The transmitter has two MIC sockets, allows to use two microphones at the same time, and is ideal for interviews, film making, and business presentations, or other applications that require portability.

Both the receiver and transmitter are lightweight and easy to use, offering flexibility without sacrificing high-quality audio.

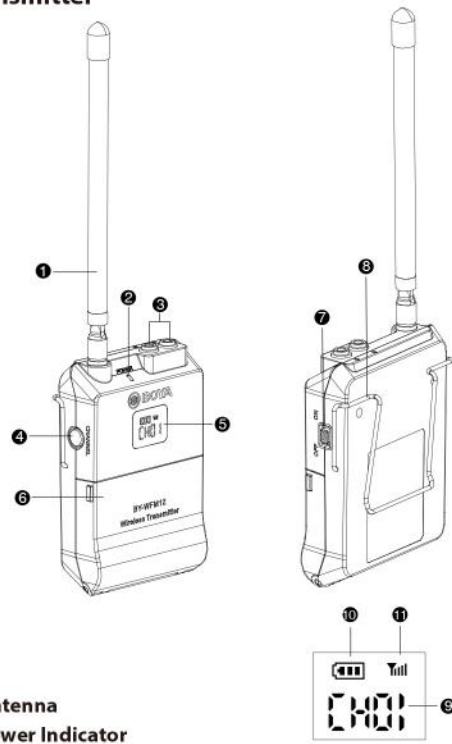
While operating at a range of up to 50m (164 feet) away without obstacles.

## Package contents

- One BY-WFM12 transmitter
- One BY-WFM12 receiver
- One 3.5mm to TRS audio output cable
- One 3.5mm to TRRS audio output cable
- One omnidirectional lavalier microphone
- One foam windscreen
- One microphone holder clip
- Two belt clips
- One cold shoe mount adapter
- Carrying case
- User manual

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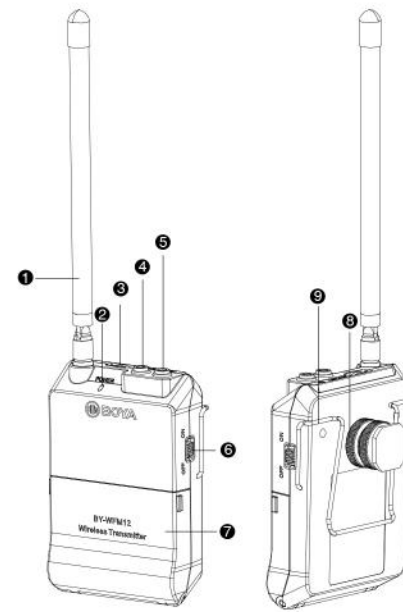
## Transmitter



1. Antenna
2. Power Indicator
3. Microphone Input Jack
4. Channel Selector Bottom
5. LCD Screen
6. Battery Compartment
7. Power Switch
8. Belt Clip
9. Channel indication
10. Battery indication
11. Signal indication

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## Receiver



1. Antenna
2. Power Indicator
3. Volume Control Wheel
4. Line Out Jack

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## 5. Monitor Connector (3.5mm diameter stereo mini jack)

- To monitor the receiver output, connect the headphones to this connector.



### NOTE

Do not connect headphone with a monaural mini jack. This may lead to short-circuiting of the headphone output, resulting in distorted sound output.

6. Power Switch
7. Battery Compartment
8. Cold Shoe Mount Adapter
9. Belt Clip

## What's difference?

- 1) 3.5 mm TRRS connector
- For smartphone, tablet or Mac



- 2) 3.5 mm TRS connector
- For camera, camcorder, audio recorder and other audio/video recording devices.



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## LED Indicator and Battery Indication Status

The transmitter and the receiver connects.	Transmitter Receiver	LED Indicator Stays blue
The transmitter and the receiver disconnects.	Transmitter Receiver	LED Indicator Stays blue LED Indicator Blinking blue
Receiver	Low battery	LED Indicator Stays red
Transmitter	Low battery	Battery icon on screen is empty and blinking.

## Setup Guide

### 1. Install antenna

Screw antenna completely and rotated it accordingly as per sound requirement.



### NOTE

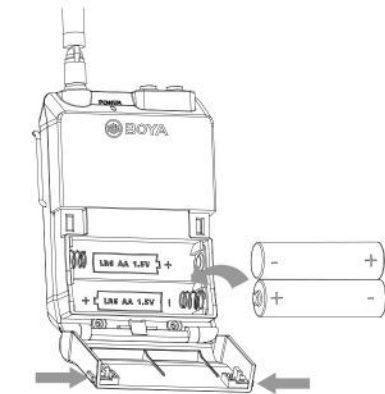
- Please try to keep two antennas be parallel for best sound.
- Please do not touch the antenna during recording.

### 2. Install battery

The transmitter and the receiver are each powered by two AA batteries.

- Push the two catches in the direction of the arrows and open the battery compartment cover.
- Insert two batteries in right polarity as shown.
- Close the battery compartment cover.

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### NOTE

- 1) When battery is low, you will need to change the batteries immediately.
- 2) When not using the components for a long period of time, remove the batteries to avoid leakage.

3. Screw the shoe mount adapter to receiver
4. Connecting the transmitter and receiver

## Using the microphone with smartphone, tablet or Mac

### Transmitter

1. If you need to shot two different subjects, please insert two microphones into transmitter "MIC".

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2. Slider the power ON/OFF switch to ON position ( the LED indicator will light in blue).
3. The belt clip on the back of the unit clips the transmitter onto a belt, or the transmitter simply can be put into a pocket.

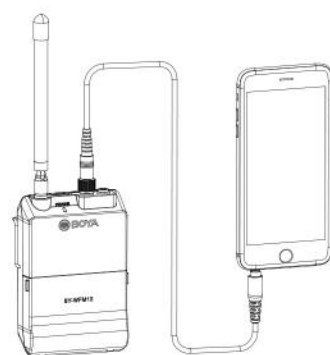
## Receiver

1. Mount receiver to smartphone, tablet or Mac.
2. Using TRRS cable, insert the locked plug of the connecting cable into the receiver "LINE OUT" jack.
3. Plug the other connector into the audio jack of your smartphone.
4. Insert earphone into receiver "PHONE" for monitoring sound.
5. Slider the power ON/OFF switch to ON position ( the LED indicator will light in blue)



### NOTE

Please do not mix up plug, for details, please refer to "What's difference" on page 4.



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## Transmitter and receiver pairing

Before leaving factory, the connection of both of transmitter and receiver is established.

However, If the selected channel is noisy, please follow below steps:

- 1) Press "CHANNEL" bottom of transmitter, the LED screen shows CH number.
- 2) The receiver will connect with transmitter automatically.
- 3) Choose channels until you could get a very clear sound.

## How to connect transmitter and receiver

If you lose or damage transmitter or receiver, and need to re-connect them, please follow below steps:

- 1) Turn the Power ON/OFF switch of transmitter to the ON position.
- 2) Long press "CHANNEL" bottom of transmitter till the screen is flashing.
- 3) Turn the Power ON/OFF switch of receiver to the ON position.
- 4) Wait for about 3-5 seconds till the light of receiver is off
- 5) Short press "CHANNEL" bottom of transmitter.

If the LED indicator of both transmitter and receiver stay blue, the system connects.  
Otherwise, try 1-5 steps again.

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## Using the microphone with camera, camcorder, audio recorder and other audio/video recording devices.

### Transmitter

For how to setup transmitter, please refer to "Transmitter" section on page 6.

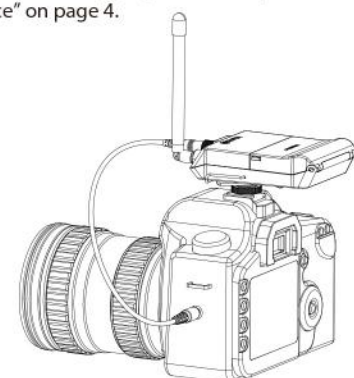
### Receiver

1. Mount receiver to camera, camcorder, audio recorder and other audio/video recording devices.
2. Using TRS cable, insert the other end of the connecting cable into the receiver "LINE OUT" jack.
3. Plug the 3.5 mm connector into the audio jack of your camera.
4. Insert earphone into receiver "PHONE" for monitoring sound.
5. Slider the power ON/OFF switch to ON position ( the LED indicator will light in blue).



### NOTE

Please do not mix up plug, for details, please refer to "What's difference" on page 4.



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## Features:

- Compatible for Smartphone, Tablet, DSLR, Camcorder, Audio Recorder, PC etc.
- High-band VHF operation for superior sound
- 12 switchable channels to keep you free from interference
- Detachable and flexible antenna with rotating 360° function
- Two MIC jacks for transmitter
- Automatically matched for receiver
- Volume control wheel
- Real-time monitoring
- Operation range up to 40m (131ft) away without obstacles
- Compact and easy-to-use
- Powered by two AA size alkaline batteries for both receiver and transmitter

## Operating Frequencies

CH-1	CH-2	CH-3	CH-4	CH-5	CH-6
204.0MHz	205.0MHz	206.0MHz	207.0MHz	208.0MHz	209.0MHz
CH-7	CH-8	CH-9	CH-10	CH-11	CH-12
210.0MHz	211.0MHz	212.0MHz	213.0MHz	214.0MHz	215.0MHz

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## Specifications

### System

Operating Frequencies: 204-215MHz  
Modulation Frequency: DQPSK  
Channels: 12

### Transmitter

Modulation Sensitivity: 6 mV input for full deviation  
Battery: LR6/AA size alkaline battery (not included)  
Current Consumption: 160 mA  
Dimensions 102 x 62.0 x 44.7 mm (4.0" x 2.4" x 1.8")  
Antenna Length: 142mm(5.6")  
Weight: 80 g (2.8 oz) without battery

### Receiver

Reception Sensitivity: 2 μV for 30 dB S/N  
Output Connector: 3.5 mm (1/8") TRS  
Battery: LR6/AA size alkaline battery (not included)  
Current Consumption: 140 mA  
Dimensions 102 x 62.0 x 44.7 mm (4.0" x 2.4" x 1.8")  
Antenna Length: 142mm(5.6")  
Weight: 80 g (2.8 oz) without battery

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## FCC 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 harmful interference.  
(2) This device must accept any interference received, including interference that may cause undesired operation.

**Warning:** Changes or modifications to this unit 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:

- 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.

### RF warning statement:

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

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