

**BY-WM4 PRO** 

Dual-Channel Digital Wireless Microphone

**Instruction Manual** 

Thank you for purchasing BOYA BY-WM4 PRO system! Designed for videographers on a limited budgetand video hobbyists, BY-WM4 PRO is a new generation 2.4GHz wireless microphone system, dual-Channel for capturing audio with dual subjects to your smartphones, tablets, DSLR cameras, consumer camcorders, PCs etc.

The BY-WM4 PRO system is suitable for a wide range of wireless applications such as interviews, mobile journalisms, reporting, vloggings, podcasts and more.

The BY-WM4 PRO system is a expandable evolution system that allows the user to mix and match different kinds of receivers while using with the ΓX4 Pro transmitter.

Transmitter(TX4 Pro)

Wind screen

following:

Receiver(RX4 Pro) 

Lavalier/lapel microphone 3.5mm to TRS audio output cable

BY-WM4 Pro consists of one body-pack

(RX4 Pro), and their accessories as

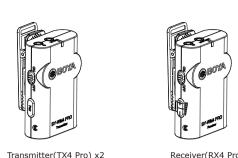
transmitter(TX4 Pro), a portable receiver

3.5mm to TRRS audio output cable

Microphone Holder clip

Wind screen (x2) Microphone Holder clip (x2)

BY-WM4 Pro-K2 consists of two body-pack transmitters(TX4 Pro), a portable receiver (RX4 Pro), and their accessories as

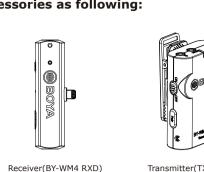


Receiver(RX4 Pro)

Lavalier/lapel microphone x2 3.5mm to TRS audio output cable

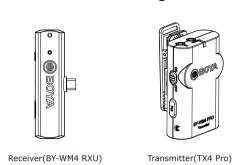
3.5mm to TRRS audio output cable

BY-WM4 Pro-K3 is specially designed for BY-WM4 Pro-K5 specially designed for Lightning iOS Devices. It consists of one body-pack transmitter (TX4 Pro), wireless receiver with a Lightning connector (BY-WM4 RXD), and their accessories as following:



Transmitter(TX4 Pro) 

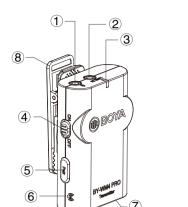
Microphone Holder clip Pairing Pin Andriod and other Type-C devices. It consists of one body-pack transmitter (TX4 Pro), wireless receiver with a USB Type-C connector (BY-WM4 RXU), and their accessories as following:



Microphone Holder clip

Pairing Pin

2. Line In 3. Power LED 1) The power LED flash blue when the unit is on. 2) The power LED glows red when low power.

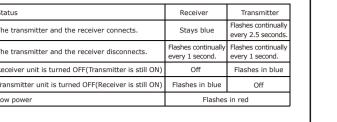


**Transmitter (TX4 Pro)** 

1. Microphone input - Connect the supplied lavalier microphone here - Fully insert the microphone's 3.5mm plug and make sure it clicks into place.

For more details, please see "Installing or uninstalling clip" on page 15.

For more details about LED indicator, please refer to Receiver (RX4 Pro)



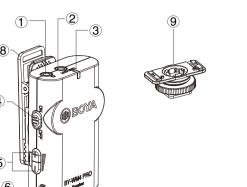
4. Power OFF/ON

This botton is for connecting signal. For details, please see "How to connect transmitter and receiver" on page 13.

Please don't touch here during using, otherwise, it will effect signal.

'. Battery compartment Accommodates two pieces of AAA batteries. For more details, please see "Installing batteries"

6. Antenna



1. Earphone Jack (3.5mm diameter stereo mini jack) To monitor the receiver output, connect the headphones to this connector.

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

2. LINE OUT (audio output) Jack

- For using smartphone, tablet or Mac Connect one end (90° plug) of the supplied TRRS stereo 3.5mm mini output cable here, and the other end (straight plug) to smartphone.

For cameras, camcorders, audio recorders and

other audio/Video recording devices. Connect one end of the supplied TRS stereo 3.5mm mini output cable here, and the other end to camera.

3. Power LED For more details, please see "Power LED" on page 7

4. Power OFF/ON 5. Volume +/-

Press these buttons to set the attenuation level of the input signal. 6. Antenna

Please don't touch here during using, otherwise, it will effect signal.

7. Battery compartment Accommodates two pieces of AAA batteries. For more details, please see "Installing batteries"

Connecting the transmitter and the Receiver

and receiver will be established.

Before leaving factory, the connection of transmitters

If transmitters and receiver disconnect, please follow

For more details, please see "Installing or uninstalling clip" on page 15.

9. Shoe mount adapter

What's difference?

3.5 mm TRRS connector - For Smartphone, tablet, Mac or laptop with combo headphone/Mic jack

Receiver "LINE OUT" Connect to Smartphone

23.5 mm TRS connector - For cameras, camcorders, audio recorders and other audio/video recording devices.

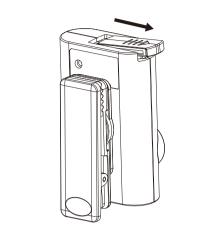
Installing batteries

compartment cover.

How to use it

1. Both transmitter and receiver requires two AAA size 2. Slide and remove the transmitter's battery

3. Insert two pieces of batteries. 4. Close the battery compartment cover. 5. Do the same ways as step 2 to 4 to insert battery into receiver.



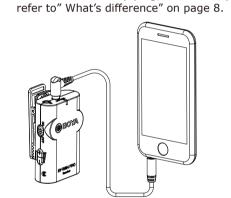
Receiver (BY-WM4 RXU)

## **Connecting the transmitter and receiver** Using the microphone with smartphone, tablet, Mac or laptop with combo headphone/Mic jack.

 Mount receiver to Smartphone, tablet, Mac or laptop. Using TRRS cable, plug the 3.5 mm connector(straight plug) into the audio jack of your smartphone. . Insert the 90° plug of the connecting cable into

the receiver "LINE OUT" jack 4. Insert earphone into receiver " ∩ " for monitoring Sound if you need.

. Slider the power ON/OFF switch to ON position ( the LED indicator will light in blue) Caution: Please do not mix up plug, for details, please



Not all Android devices support external microphone when taking video, and you may need to download a third-party app and set up sound source as external

## How to connect transmitter and receiver? Before leaving factory, the connection of transmitters and receiver will be established.

If transmitters and receiver disconnect, please follow below steps:

1. Turn on the receiver and the transmitters. 2. Press the button "+" and "-" for 3 seconds for

seconds at the same time. 3. When transmitter and receiver connects, the light of receiver will stay blue, the light of transmitters will flash every 2.5 seconds. 4. Repeat step 2 for the other transmitter.

flash continually every 1 second, then try 1-4 steps

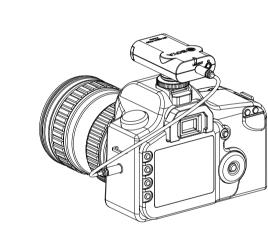
# Using the microphone with cameras, camcorders, audio recorders and other audio/video recording

1. Mount receiver to cameras, camcorders, audio recorders and other audio/video recording devices.

receiver and press "Pair" of one transmitter for 3

the receiver "LINE OUT" jack. Sound if you need. LED indicator will light in blue)

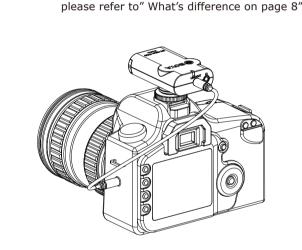
audio jack of your camera. 3. Insert the other end of the connecting cable into



2. Using TRS cable, plug the 3.5 mm connector into the

Otherwise, the light for receiver and transmitters will

4. Insert earphone into receiver "  $\Omega$  " for monitoring . Slider the power ON/OFF switch to ON position ( the Caution: Please do not mix up audio cable, for details,

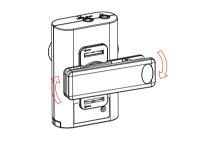


# Installing or uninstalling clip

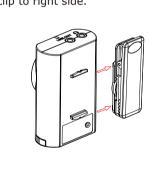
following:

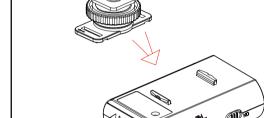
1. Clip is mounted on the microphone before leaving

2. Both transmitter and receiver include clip, that means you can mount them in any place you want. 3. Adjust the direction of the microphone to your mouth by rotating the Microphone.



If receiver need to be mounted onto camera hot/cold shoe, please follow below steps: 1. Push the clip to right side.





2. Push the cold shoe mount on the position. 3. Mounted receiver onto camera hot/cold shoe

When using an omnidirectional microphone like the one included with this system, the microphone may be picking up too much ambience.

Make sure the microphone is as close as to the subject as possible.

RF signal is weak.

Make sure there is an unobstructed

and the receiver. Keep in mind that your body, clothes, and onstage sets are possible obstructions.

Make sure the receiver and the transmitter are within 197' (60m) range. If there are obstructions, you may need to move closer.

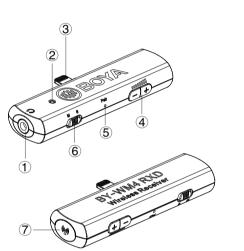


For iOS devices

# **BY-WM4 RXD** 2.4GHz Wireless Receiver

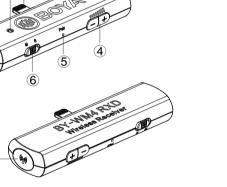


# Receiver (BY-WM4 RXD)



(3.5mm diameter stereo mini jack) To monitor the receiver output, connect the

output, resulting in distorted sound output.



Do not connect headphones with a monaural mini jack. This may lead to short-circuiting of the headphone

# 2. Power LED

For more details about LED indicator, please refer to

as following:			of smartphone.		
Status	Receiver	Transmitter	<ol><li>Open the audio/video app on mobile device, then the indicator of receiver should be light up.</li></ol>		
The transmitter and the receiver connects.	The indicator won't light up until you turn on the audio/video app.	Flashes continually every 2.5 seconds.	The Power LED flashes slowly waiting for connecting with the transmitter.		
The transmitter and the receiver disconnects.	Flashes continually every 1 second.	Flashes continually every 1 second.			
Receiver unit is turned OFF(Transmitter is still ON)	Off	Flashes in blue			
Transmitter unit is turned OFF(Receiver is still ON)	Flashes in blue	Off			
Low power	/	Flashes in red			
The transmitter and the receiver waits for pairing	Flashes quick	ly in blue light	I III		

3. Lightning Connector 4. Volume +/-

of the input signal. For more details, please see "Connecting the transmitter and the receiver" on page 21.

Press these buttons to set the attenuation level

7. Built-In Internal Antenna

### Set Up Guide 1. Plug the BY-WM4 RXD directly into the lightning port

of smartphone.

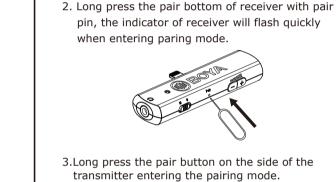
wing:		
	Receiver	Transmitter
litter and the receiver connects.	The indicator won't light up until you turn on the audio/video app.	Flashes continually every 2.5 seconds.
litter and the receiver disconnects.	Flashes continually every 1 second.	Flashes continually every 1 second.
nit is turned OFF(Transmitter is still ON)	Off	Flashes in blue
unit is turned OFF(Receiver is still ON)	Flashes in blue	Off
	/	Flashes in red
litter and the receiver waits for pairing	Flashes quickly in blue light	
·		

6. M/S Switch

### below steps: the indicator of receiver should be light up. 1. Turn on the transmitter and plug the receiver

3. The Power LED flashes slowly waiting for connecting with the transmitter.

• (III) BOYA

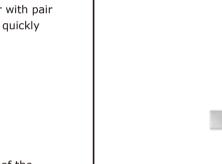


before recording.

4. When the transmitter and receiver connected, the light of receiver stays blue, and transmitter flashes Otherwise, the light of receiver and transmitter will flash continually every 1 second, then try 1-3 steps

1) Please adjust the monitoring audio volume of RXD

## **BY-WM4 RXU** 2.4GHz Wireless Receiver For Android and other Type-C devices



.. Headphone Jack (3.5mm diameter stereo mini jack) To monitor the receiver output, connect the

Do not connect headphones with a monaural mini jack.

This may lead to short-circuiting of the headphone output, resulting in distorted sound output.

2. Power LED For more details about LED indicator, please refer to

as following:		
Status	Receiver	Transmitter
The transmitter and the receiver connects.	Stays blue	Flashes continually every 2.5 seconds
The transmitter and the receiver disconnects.	Flashes continually every 1 second.	Flashes continually every 1 second.
Receiver unit is turned OFF(Transmitter is still ON)	Off	Flashes in blue
Transmitter unit is turned OFF(Receiver is still ON)	Flashes in blue	Off
Lew pewer	,	Electron in sed

# 3. USB Type-C Connector

5. Pair Bottom

6. M/S Switch

7. Built-In Internal Antenna

4. Volume +/-Press these buttons to set the attenuation level of the input signal.

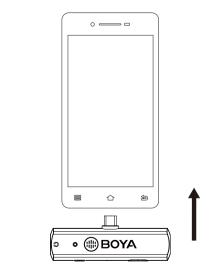
For more details, please see "Connecting the

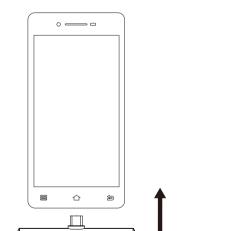
transmitter and the receiver" on page 26.

# Set Up Guide

with the transmitter.

1. Plug the BY-WM4 RXU directly into the lightning port 2. The Power LED flashes slowly waiting for connecting





Before leaving factory, the connection of transmitters and receiver will be established.

below steps: 1.Turn on the transmitter and plug the receiver into smartphone. 2. Long press the pair bottom of receiver with pair pin, the indicator of receiver will flash quickly when entering paring mode.

3.Long press the pair button on the side of the transmitter entering the pairing mode.

every 2.5 seconds. Otherwise, the light of receiver and transmitter will flash continually every 1 second, then try 1-3 steps

# Connecting the transmitter and the Receiver

If transmitters and receiver disconnect, please follow



4. When the transmitter and receiver connected, the light of receiver stays blue, and transmitter flashes

1) Please adjust the monitoring audio volume of RXU before recording.

e units does t turn on.	The batteries of BY-WM4 PRO TX exhausted.	Replace the batteries with new ones.
	The Power LED of BY-WM4 RXD doesn't light up while connecting with the iOS devices.	Open the audio/video app of mobile device, then the indi of receiver should be light u
	The Power LED of BY-WM4 RXU doesn't light up while connecting with the Android devices.	The receiver hasn't get a we connection with the devices Please try to reconnect it ag
batteries ome drained ckly.	The BY-WM4 Pro components is being used under extremely cold conditions.	The batteries drain quickly extremely cold conditions.
	The BY-WM4 Pro components is being used under extremely hot conditions.	The batteries drain quickly extremely hot conditions.
re is sound.	The transmitter and receiver are not in pairing mode.	Please refer to the Connecti the transmitter and the Rec
	There do not have a good connection with the lavalier.	Please try to reconnect it ag
	There do not have a good connection with the earphone.	Please try to reconnect it ag
sound veak.	The input level of the receiver is low.	The input level of the transi is low. Adjust the audio out level on the transmitter. Ket level as high as possible wit distortion to reach best Sou and Noise Ratio.
re is distortion he sound.	The input level of the receiver is inappropriate.	Adjust the audio output leve the transmitter. Keep this leas high as possible without distortion to reach best Sou and Noise Ratio.
55441	Headphones with a monaural mini jack is used.	Use the headphones with a stereo mini jack.

**Troubleshooting** If you have any problem using the BY-WM4 Pro components, use the following checklist. If any problem persist, please consult our local dealer, or contact us

Status	Cause	Measure
e units does t turn on.	The batteries of BY-WM4 PRO TX exhausted.	Replace the batteries with new ones.
	The Power LED of BY-WM4 RXD doesn't light up while connecting with the iOS devices.	Open the audio/video app o mobile device, then the indi of receiver should be light u
	The Power LED of BY-WM4 RXU doesn't light up while connecting with the Android devices.	The receiver hasn't get a we connection with the devices Please try to reconnect it ag
batteries ome drained ckly.	The BY-WM4 Pro components is being used under extremely cold conditions.	The batteries drain quickly extremely cold conditions.
	The BY-WM4 Pro components is being used under extremely hot conditions.	The batteries drain quickly extremely hot conditions.
re is sound.	The transmitter and receiver are not in pairing mode.	Please refer to the Connecti the transmitter and the Rec
	There do not have a good connection with the lavalier.	Please try to reconnect it ag
	There do not have a good connection with the earphone.	Please try to reconnect it ag
sound veak.	The input level of the receiver is low.	The input level of the transi is low. Adjust the audio out level on the transmitter. Ket level as high as possible wit distortion to reach best Sou and Noise Ratio.
ere is distortion he sound.	The input level of the receiver is inappropriate.	Adjust the audio output leve the transmitter. Keep this le as high as possible without distortion to reach best Sou and Noise Ratio.
	Headphones with a monaural mini jack is used.	Use the headphones with a stereo mini jack.

5	Cause	Measure	
	The batteries of BY-WM4 PRO TX exhausted.	Replace the batteries with new ones.	
does on.	The Power LED of BY-WM4 RXD doesn't light up while connecting with the iOS devices.	Open the audio/video app on mobile device, then the indicat of receiver should be light up.	
	The Power LED of BY-WM4 RXU doesn't light up while connecting with the Android devices.	The receiver hasn't get a well connection with the devices. Please try to reconnect it again	
ies ained	The BY-WM4 Pro components is being used under extremely cold conditions.	The batteries drain quickly und extremely cold conditions.	
amed	The BY-WM4 Pro components is being used under extremely hot conditions.	The batteries drain quickly und extremely hot conditions.	
	The transmitter and receiver are not in pairing mode.	Please refer to the Connecting the transmitter and the Receive	
	There do not have a good connection with the lavalier.	Please try to reconnect it again	
	There do not have a good connection with the earphone.	Please try to reconnect it again	
	The input level of the receiver is low.	The input level of the transmitt is low. Adjust the audio output level on the transmitter. Keep t level as high as possible without distortion to reach best Sound and Noise Ratio.	
stortion	The input level of the receiver is inappropriate.	Adjust the audio output level of the transmitter. Keep this level as high as possible without distortion to reach best Sound and Noise Ratio.	
	Headphones with a monaural mini jack is used.	Use the headphones with a stereo mini jack.	

# Feature:

Hard case included

BY-WM4 Pro System

mobile journalisms and more Digital 2.4 GHz frequency band

 Monitoring sound by 3.5mm headphone output Master volume control

• Ideal for Youtubes, vloggings, facebooks, podcasts,

 Dual-Channel wireless receiver • Ultracompact and miniature-size for receiver Super-clear recording sound • Up to 60m (197ft) operation range (without obstacle)

 Selectable stereo and mono mode (For BY-WM4 RXD/RXU only) Omnidirectional lavalier microphone • Standard camera shoe mount and clip included (For BY-WM4 PRO/BY-WM4 PRO-K2 only)

• Compatible with smartphones, DSLR cameras,

Compatible with smartphones, tablets, laptops

(For BY-WM4 PRO/BY-WM4 PRO-K2 only)

consumer camcorders, PCs etc

(For BY-WM4 PRO-K3/K5 only)

# **Specifications:**

**BY-WM4 Pro System** RF Modulation:

Frequency band: 2.4 GHz (2405-2478MHz) Frequency response: 35Hz-14KHz±3dB 84dB or more 0.05% or less (32Ω,1 KHz,65mW output) RF output level: 3mW Earphone output level: 32Ω,65mW Reception sensitivity: -90dB +/- 3dB / 0dB=1V/Pa, 1kHz Audio input connector: 3.5mm mini jack Operation range: 60m (197ft) (without obstacle Power requirements: TX4 Pro/RX4 Pro: 3V DC (Two AAA size batteries) BY-WM4 RXD: Supplied by iOS device BY-WM4 RXU: Supplied by USB Type-C device BY-WM4 RXD: Apple MFi Certified Lightning Connector BY-WM4 RXU: USB Type-C Connector Receiver: 3V/70mA Transmitter: 3V/70mA TX4 Pro/RX4 Pro: 45x70x35mm (1.8x2.8x1.4") BY-WM4 RXD: 82×30.7×12mm (3.2×1.2×0.5") BY-WM4 RXU: 82×30.7×12mm (3.2×1.2×0.5") TX4 Pro/RX4 Pro: 47g (1.7 oz) BY-WM4 RXD: 12g (0.4oz)

BY-WM4 RXU: 9.5g (0.3oz)

GFSK (Gauss frequency Shift Keying)

CAUTION 1.Please use our original audio signal cable which is

> transmitter and receiver. This distance will vary depending on metal objects, people and other obstructions and on the signal strength. B.Battery life may vary depending on the type of battery used.

cause noise to be recorded. Do not let the transmitter close to high-voltage equipment or to devices that emit strong electromagnetic fields, otherwise, it may cause the noise to

**WARNING** Keep the wireless microphone out of the reach of

Never use leaking batteries and never expose

batteries to excessive heat or fire.

equipped, it's more compatible with the wireless microphone, and make the sound better. 2. The figure given is only the approximate value that applies when there are no obstructions between the

Do not use or leave the transmitter and receiver in hot, humid places.

# MAINTENANCE

the instructions for use.

**IMPORTANT** • If you do not intend to use the wireless microphone for a long period time, please remove the batteries from both the transmitter and receiver. Do not touch the lavalier/lapel microphone, transmitter and receiver while recording, as this will

### Do not leave the receiver attached to the camera when storing the camera in a case. Do not mix up to use the transmitter and receiver.

 Do not operate the device with wet hands or feet. Clean the equipment only in the way described in

Should the equipment be damaged or defective, or if you notice a scorching smell: Interrupt the electric power supply immediately by removing the batteries.Do not operate the device with a damaged housing, do not repair the device yourself. Have the device only repaired by a skilled

before you switch it on again.

Take care to prevent the equipment from dropping

down. Make sure that the device is properly fastened

This device complies with Part 15 of the FCC Rules.

and reliably mounted. If the device has dropped down

on the floor have it inspected by a skilled electrician

### Always keep your device in good condition, as specified in these in-structions for use. Do not open the device.

be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply

with the limits for a Class B digital device, pursuant to

no guarantee that interference will not occur in a partic

ular installation. If this equipment does cause harmful

interference to radio or television reception, which can

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

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.

portable exposure condition without restriction

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# WARNING

FCC STATEMENT:

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.

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

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