

## BOYA S2

# BOYA BY-XM6-S2 Wireless Lavalier Microphone System User Manual

Model: BY-XM6 S2 | Brand: BOYA

## PRODUCT OVERVIEW

The BOYA BY-XM6-S2 is a 2.4GHz wireless lavalier microphone system designed for high-quality audio acquisition and transmission. It offers stable signal transmission up to 100 meters (328 feet) without obstacles, utilizing Adaptive Frequency Hopping (AFH) technology to avoid interference. This system is compatible with a wide range of devices including DSLRs, mirrorless cameras, camcorders, smartphones, and PCs, making it ideal for vlogging, live streaming, interviews, and video recording.



Image: The BOYA BY-XM6-S2 wireless microphone system, showing one receiver (RX) and two transmitters (TX) with furry windscreens attached.

## PRODUCT COMPONENTS

The BY-XM6-S2 system includes the following main components and accessories:

- 1x BY-XM6 RX Receiver
- 2x BY-XM6 TX Transmitters
- 2x Lavalier Microphone
- 2x Mic Clip for Lavalier Microphone
- 2x Fur Windshield for Built-in Microphone
- 2x Foam Windscreen for Lavalier Microphone
- 1x Pouch
- 3x USB-C Charging Cable
- 1x 3.5mm TRS to TRS Output Cable for Cameras
- 1x 3.5mm TRS to TRRS Output Cable for Smartphones

# Applied to Multiple Scenes

It is ideal for content creation, vlogging, mobile journalism, and more.

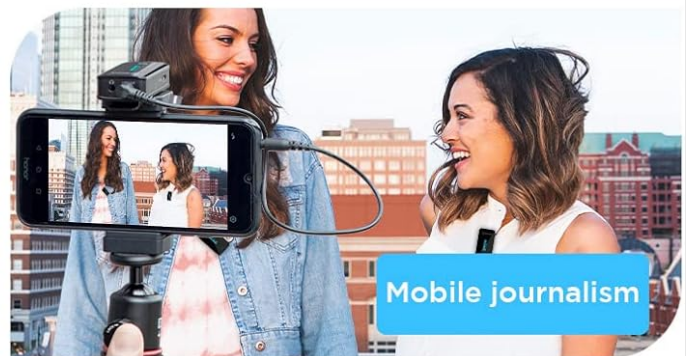
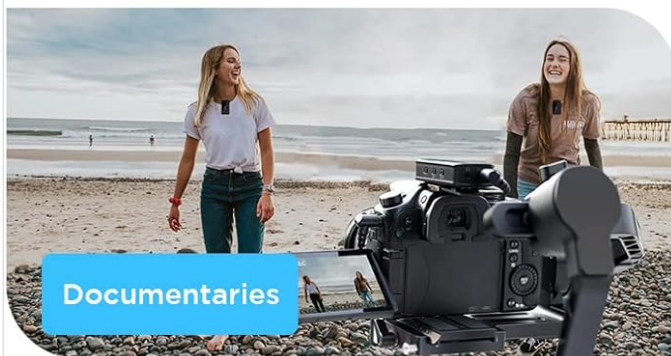


Image: A visual representation of all items included in the BOYA BY-XM6-S2 package, including the receiver, two transmitters, lavalier microphones, cables, and windscreens.

## Unit Structure and Controls

# Product Structure



Image: Detailed diagrams showing the structure of the BY-XM6 TX (transmitter) with its built-in microphone, MIC/LINE IN jack, OLED display, and USB-C charging port, and the BY-XM6 RX (receiver) with its LINE OUT jack, OLED display, 3.5mm headphone output, Power/Mute button, and +/- / SET buttons.

## OLED Display Information

The OLED display on both the transmitter and receiver provides essential information for operation:

- **Receiver (RX):** Pairing indicator, RXs output mode, Output volume & Mute indicator, RXs battery level indicator, Audio input level meter.
- **Transmitter (TX):** Pairing indicator, Input mode & Mute indicator, Mic gain, Audio input level meter, TXs battery level indicator.



# CLEARER OLED DISPLAY SCREENS



Image: Close-up views of the OLED display screens on both the receiver and transmitter, highlighting the various indicators such as pairing status, battery levels, audio input levels, and output modes.

## SETUP

### Charging the Units

Before first use, fully charge both the receiver (RX) and transmitters (TX) using the provided USB-C charging cables. A full charge provides approximately 7 hours of continuous operation for the transmitters and 6.5 hours for the receiver. The battery icon on the OLED display will flash when the battery is low.

# Powerful Batteries That Support Whole Day Use

RX:6.5 hours

TX:7 hours

Type-C  
charging  
for TX & RX

The battery  
icon flashes  
at a low  
battery state



Image: Illustration showing the BOYA BY-XM6 transmitter and receiver units being charged via USB-C, with text indicating RX: 6.5 hours and TX: 7 hours battery life.

## Connecting to Devices

The BY-XM6-S2 system offers broad compatibility with various devices. Use the appropriate cable for your setup:

- **For DSLR, Mirrorless Cameras, and Video Cameras:** Use the 3.5mm TRS to TRS output cable.
- **For Smartphones and Tablets:** Use the 3.5mm TRS to TRRS output cable.
- **For iPhone, iPad, iPod (with Lightning port):** An MFi-certified dongle (BY-K1, not included) is required.
- **For Smartphones, Tablets, Macbooks (with Type-C port):** A 3.5mm TRS to Type-C audio adapter cable (BY-K2, not included) is required.
- **For Computers (with USB port):** A USB to 3.5mm audio adapter (BY-EA2, not included) is required.

# Wide Compatible



3.5mm TRS to  
TRS output cable

3.5mm TRRS to  
TRS output cable

**For DSLR, mirrorless and video cameras, smartphones, tablets, computers, etc.**

These two wires are included in the package.



BY-K1(not included)  
(3.5mm TRS (Male) to Lightning (Male)  
Audio Adapter)

**For iPhone, iPad, iPod.**

MFi-certified dongle is compatible with any Apple device with a Lightning port.



BY-K2(not included)  
(3.5mm TRS (Male) to  
Type-C (Male) Audio Adapter Cable)

**For Smartphones, Tablets, Macbook, etc.**

Designed for connecting 3.5mm TRS microphone with your Android devices or others devices with Type-C connectors.



BY-EA2(not included)  
(USB to 3.5mm Audio & Mic Adapter)

**For Computers equipped with USB port.**

1\*3.5mm Output Jack, 1\*3.5mm Microphone Input Jack.



Image: A diagram illustrating the wide compatibility of the BOYA BY-XM6 system with different devices, showing the required cables and adapters for cameras, smartphones, tablets, and computers.

## OPERATING INSTRUCTIONS

### Powering On/Off and Pairing

To power on or off, press and hold the Power button on both the RX and TX units. The units will automatically attempt to pair when powered on. The pairing indicator on the OLED display will confirm connection.

### Adjusting Settings

Use the +/-/SET buttons on the receiver and transmitter to navigate menus and adjust settings such as:

- **Output Volume:** Adjust the audio output level on the receiver to match your recording device.
- **Mic Gain:** Control the input sensitivity of the microphone on the transmitter.
- **Output Mode:** Switch between Mono and Stereo output modes on the receiver. Mono combines both transmitter signals into one channel, while Stereo separates them into left and right channels.

- **Mute Function:** Briefly press the Mute button on the transmitter to mute the microphone. The mute indicator will appear on the OLED display.

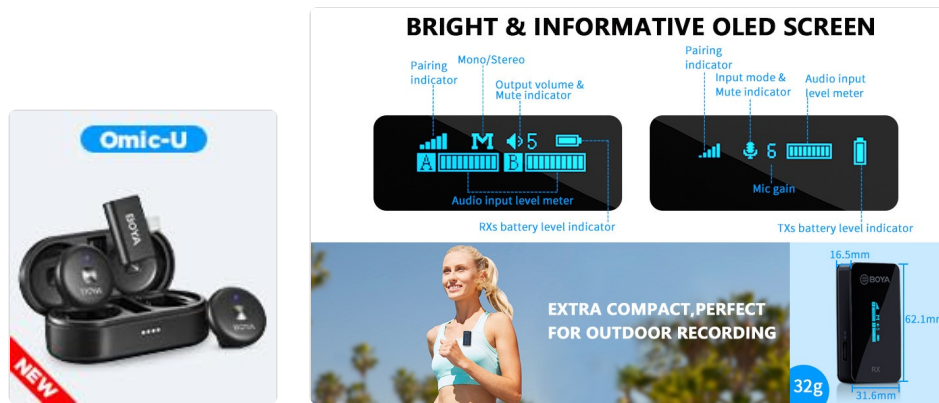


Image: Left: A hand adjusting the gain on the BOYA BY-XM6 transmitter. Right: A detailed view of the bright OLED screen, showing various indicators like pairing, mono/stereo mode, output volume, mute, and battery levels for both RX and TX units.

## Microphone Usage

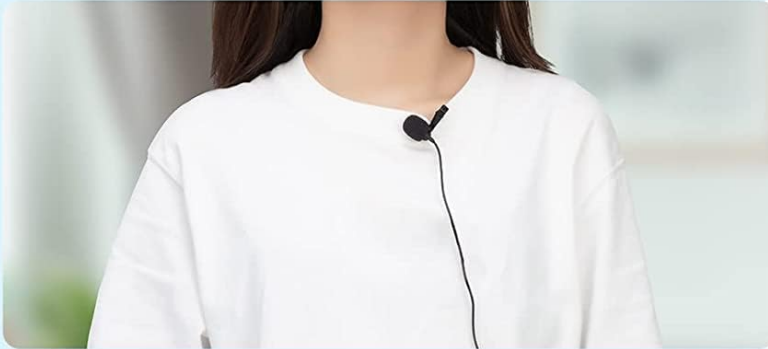
The BY-XM6 system offers flexibility in microphone input:

- **Built-in Microphone:** The transmitter has a built-in omnidirectional microphone for convenient clip-on use.
- **Lavalier Microphone:** For discreet placement and optimal sound capture, plug the included lavalier microphone into the MIC IN jack of the transmitter.



# Multiple Input Modes

Two microphone options are available for users, making it super convenient for many kinds of recording scenarios.



**With Lavalier Mic**



**Without Lavalier Mic**



Image: Examples of multiple input modes, showing the use of the system with an external lavalier microphone and using the transmitter's built-in microphone directly.

## Real-time Monitoring

The receiver features a 3.5mm headphone monitor jack, allowing you to monitor the audio in real-time during recording. This ensures optimal sound quality and helps prevent issues during live sessions.



Image: A person wearing headphones, monitoring audio while recording with the BOYA BY-XM6 system connected to a camera, demonstrating the real-time monitoring feature.

Application Scenarios

The BY-XM6-S2 is versatile and suitable for a variety of content creation and professional applications:

- Content Creation
- Business Presentations
- Documentaries
- Vlogging
- Live Streaming
- Mobile Journalism
- Interviews
- Recording Life
- YouTube, TikTok, Facebook videos



Image: A collage of images depicting different uses of the BOYA BY-XM6 system, including content creation, business presentations, documentaries, vlogging, live streaming, and mobile journalism.

## MAINTENANCE

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To ensure the longevity and optimal performance of your BOYA BY-XM6-S2 wireless microphone system, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the units. Avoid using harsh chemicals, cleaning solvents, or strong detergents, as these can damage the finish or internal components.
- **Storage:** Store the system in a cool, dry place away from direct sunlight, extreme temperatures, and high humidity. Use the provided pouch for protection during storage and transport.
- **Battery Care:** For long-term storage, ensure the batteries are partially charged (around 50-60%) to maintain battery health. Avoid fully discharging or overcharging the batteries for extended periods.
- **Handling:** Handle the units with care. Avoid dropping them or subjecting them to strong impacts, which can damage the internal circuitry or OLED displays.

## TROUBLESHOOTING

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If you encounter issues with your BOYA BY-XM6-S2 system, refer to the following common troubleshooting steps:

- **No Sound/Low Sound:**
  - Ensure both the transmitter(s) and receiver are powered on and properly paired. Check the pairing indicator on the OLED display.
  - Verify that the audio cables are securely connected to both the receiver and your recording device.
  - Adjust the output volume on the receiver and the mic gain on the transmitter.
  - Check the battery levels of all units. Recharge if necessary.
  - Ensure the microphone is not muted on the transmitter.
  - Test with both the built-in microphone and the lavalier microphone to isolate the issue.
- **Interference/Poor Signal:**
  - Ensure there are no major obstacles between the transmitter and receiver.
  - Move away from other 2.4GHz wireless devices (Wi-Fi routers, other wireless microphones) that might cause interference.
  - Reduce the distance between the transmitter and receiver. The optimal range is up to 100 meters (328 feet) in open areas.
- **Units Not Pairing:**
  - Power off and then power on both units to re-initiate the pairing process.
  - Ensure the units are within close proximity during pairing.

If the issue persists after trying these steps, please contact BOYA customer support for further assistance.

## SPECIFICATIONS

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Specifications	
Transmission Type	2.4GHz Digital Frequency
Modulation	GFSK
Operating Range	Up to 328ft (100m) (without obstacle)
RF Output Power	<10mW
Polar Pattern	Omnidirectional
Frequency Response	35Hz-18KHz
Maximum SPL	Built-in Microphone: 120dB SPL
	Lavalier Microphone: 110dB SPL
Sensitivity	Built-in & Lavalier Microphone: -39dB
SNR	> 84dB
Audio Output Connector	3.5mm Headphone Jack
	3.5mm TRS Output Jack
Audio Output Level	-60 dBV to -20dBV
Power Requirements	Built-in Li-ion Battery or USB-C DC 5V or Charging Contact
Built-in Battery Life	Approx.7 hours
Antenna	PIFA Antenna
Audio Inputs	3.5mm TRS MIC/LINE IN Jack or Built-in Microphone
Weight	TX / RX: Approx. 32g(1.13oz)
Dimensions	TX / RX: 62.1×31.6×16.5mm

Image: A table detailing the technical specifications of the BOYA BY-XM6-S2 wireless microphone system.

Feature	Detail
Transmission Type	2.4GHz Digital Frequency
Modulation	GFSK
Operating Range	Up to 328ft (100m) (without obstacle)
RF Output Power	<10mW
Polar Pattern	Omnidirectional
Frequency Response	35Hz-18KHz



Feature	Detail
Maximum SPL (Built-in Mic)	120dB SPL
Maximum SPL (Lavalier Mic)	110dB SPL
Sensitivity (Built-in & Lavalier Mic)	-39dB
SNR	> 84dB
Audio Output Connector	3.5mm Headphone Jack, 3.5mm TRS Output Jack
Audio Output Level	-60 dBV to -20dBV
Power Requirements	Built-in Li-ion Battery or USB-C DC 5V or Charging Contact
Built-in Battery Life	Approx. 7 hours
Antenna	PIFA Antenna
Audio Inputs	3.5mm TRS MIC/LINE IN Jack or Built-in Microphone
Weight (TX / RX)	Approx. 32g (1.13oz)
Dimensions (TX / RX)	62.1 × 31.6 × 16.5mm

## WARRANTY AND SUPPORT





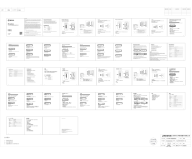

BOYA provides a **24 Months Warranty** for the BY-XM6-S2 wireless microphone system. This warranty covers defects in materials and workmanship under normal use.

If you experience any product failures or require technical assistance, please contact BOYA customer service. They are committed to providing complete after-sales solutions and support.

For the most up-to-date support information and contact details, please visit the official BOYA website or refer to the warranty card included with your product.

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### Related Documents - S2

	<p><a href="#">S2 Tri Screen Laptop Screen Extender User Manual</a></p> <p>Comprehensive user guide for the S2 Tri Screen Laptop Screen Extender, covering product introduction, installation, connection modes, audio and display settings for Windows and macOS, and safety information.</p>
	<p><a href="#">BOYA BY-XM6 Series: Ultracompact 2.4GHz Dual-Channel Wireless Microphone System User Manual</a></p> <p>User manual for the BOYA BY-XM6 series, an ultracompact and lightweight 2.4GHz dual-channel wireless microphone system. Learn about its features, available kits (S1-S6), and applications for content creation, vlogging, and mobile journalism.</p>
	<p><a href="#">BOYA BY-XM6 Series Ultracompact 2.4GHz Dual-Channel Wireless Microphone System User Manual</a></p> <p>User manual for the BOYA BY-XM6 series ultracompact 2.4GHz dual-channel wireless microphone systems. Covers models BY-XM6-S1 through S6, detailing product structure, operation, and available kits for content creators and mobile journalists.</p>
	<p><a href="#">BOYA BY-XM6 Wireless Microphone System User Manual</a></p> <p>Comprehensive user manual for the BOYA BY-XM6 wireless microphone system (models BY-XM6-S1, BY-XM6-S2), detailing setup, operation, features, and technical specifications for content creation and professional audio recording.</p>
	<p><a href="#">BOYA BY-XM6 Wireless Microphone System User Manual</a></p> <p>User manual for the BOYA BY-XM6, a 2.4GHz mini dual-channel wireless microphone system. This document provides general introduction, available kits, packing lists, product structure, operation guides for the receiver and transmitter, features, and specifications.</p>
	<p><a href="#">BOYA BY-XM6 Ultracompact 2.4GHz Dual-channel Wireless Microphone System User Manual</a></p> <p>Discover the BOYA BY-XM6 series, an ultracompact, lightweight, and easy-to-use 2.4GHz dual-channel wireless microphone system. Ideal for content creation, vlogging, and mobile journalism, it delivers broadcast-quality audio to cameras, smartphones, and computers. This manual details product structure, operation, specifications, and available kits.</p>