

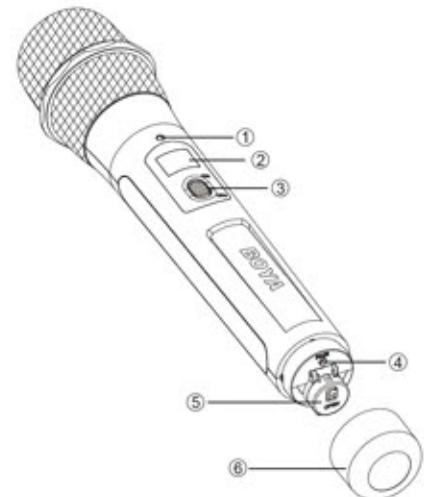
BY-WHM8

Wireless Handheld Microphone



30

Product Structure



1. Power LED

For more details, please refer to "LCD Display Operation Guide" on page 32

3. Power OFF/ON

31

4. PAIR

A. How to change Channel

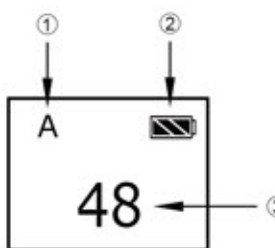
- 1) Short press "PAIR" button, the channel number blinks
- 2) Press "PAIR" button again to change channel.
- 3) Long press "PAIR" button to change channel continuously.

B. Long press "PAIR" button to change Channel "A" or "B".

5. Battery compartment

6. Battery cover

LCD Display Operation Guide



① Channel Group (A/B)

Long press "SET" button to change Channel "A" or "B"

② Channel number (1-48)

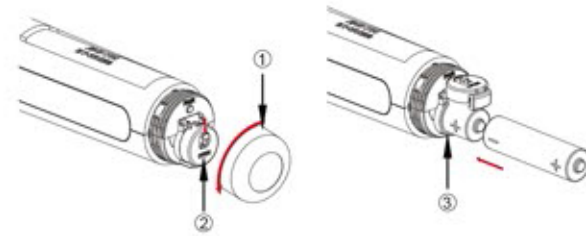
③ Battery indication

32

Installing Batteries

The transmitter is each powered by two AA batteries. To install batteries, please follow these steps:

1. Turn the battery cover anti-clockwise to unscrew.
2. Push the "OPEN" button down.
3. Insert the batteries in the right polarity as shown.
4. Close the battery cover and retighten it by screwing clockwise until it is reasonably tight.



NOTE:

1. Please make sure the units is turned OFF, because taking out the battery compartment during signal transmission may cause high noise.
2. Please remove the batteries from the microphone when the microphone is not in use as current is drawn whenever a battery is installed.

33

Connecting the Wireless Handheld Microphone and the Receiver

To connect the Wireless Handheld Microphone and the receiver, follow these steps:

1. Turn on the Wireless Handheld Microphone and the receiver.
2. Set the Wireless Handheld Microphone and the receiver to the same channel.
- If you are experiencing interference or noise on one channel, try a different channel.

Important Notes

Usage and storage

. Operating the BY-WM8 components near electrical equipment (motors, transformers, or dimmers) may cause it to be affected by electromagnetic induction.
Keep the BY-WM8 components as far as from such equipment as possible.

. The presence of the lighting equipment may produce electrical interference over the entire frequency range. Position the BY-WM8 components so that interference is minimized.
. To avoid degradation of the signal-to-noise ratio, DO NOT use the BY-WM8 components in noisy

Places or in locations subject to vibration, such as the following:

- Near electrical equipment, such as motors, transformers, or dimmers.
- Near air condition equipment or places subject to direct air flow from an air conditioner.
- Near public address loudspeaker.
- Where adjacent equipment might knock against the receiver.

34

Cleaning

Clean the surface and the connectors of the BY-WM8 components with a dry, soft cloth. Never use thinner, benzene, alcohol or any other chemicals, since these may mar the finish.

Troubleshooting

If you have any problem using the BY-WM8 components, use the following checklist.
If any problem persist, please consult our local dealer, or contact us directly.

Symptom	Meanings	Remedy
The units does not turn on	The polarity orientation of the batteries in the battery compartment is incorrect.	Insert the batteries with the correct polarity orientation.
	The batteries are exhausted.	Replace the batteries with new ones.
	The battery terminals in the transmitter are dirty	Clean the + and - terminals with cotton swab.
The batteries become drained quickly.	The batteries are exhausted.	Replace the batteries with new ones.
	Manganese batteries are being used.	Use alkaline batteries. The battery life of a manganese battery is less than half that of an alkaline battery.
	The BY-WM8 components is being used under cold conditions.	The batteries drain quickly under cold conditions.
The channel cannot be changed	An attempt was made to change the channel by pressing the SET button only.	Restart the unit, then change the channel with the + and - buttons.
There is no sound.	The channel setting on the transmitter is different from that on the receiver.	Use the same channel setting on both the transmitter and receiver.

35

The sound is weak.	The attenuation level on the transmitter is too high.	The input level of the transmitter is low. Press the - button on the transmitter in attenuation level setting mode to decrease the attenuation level.
	The line input is selected on the transmitter.	Pull the cable out from LINE IN.
There is distortion in the sound	The attenuation level on the transmitter is too low.	The input level of the receiver is extremely high. Press the + button on the transmitter in attenuation level setting mode to increase the attenuation level.
	The transmitter and the receiver are set to different channels.	Set the transmitter to the same channel.
There is distortion in the sound	Headphones with a mono-aural min jack is used.	Use the headphones with a stereo mini jack.
	RF interference	.Try a different channel. Make sure both units are on the same channel. .Try to position the antennas at a 45° angle in relation to each other. There can be a lot of RF interference outdoors. .Try moving indoors, where there is less RF interference. .Keep the units' antennas at least 2'(0.6m) away from conductive objects like metal and water. .Overhead telephone lines, fluorescent lighting, and metal fences can all cause interference. .Turn off all nearby computers and mobile phones.
The audio is noisy or distorted. This can include drop outs, white noise, bursts, pops and clicks.		

36

The audio is noisy or distorted. This can include drop outs, white noise, bursts, pops and clicks.	RF signal is weak.	Make sure there is an unobstructed line of sight between the transmitter's and the receiver's antennas. Keep in mind that your body, clothes, and onstage sets are possible obstructions. Make sure the receiver and the transmitter are within 328'(100m) range. If there are obstructions, you may need to move closer.
	The input level on the camera, recorder, or mixer is too high.	Turn down the audio input level on your camera or recording device. Lower the audio output level on the receiver. Turn down the gain on your mixer. If there is no adjustment on the device, and the level is still high, adjust the microphone level on the transmitter. Keep this level as high as possible without distortion.
Too much ambience is being picked up.	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.

37

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 harmfulinterference 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.

38

Specifications:

System

Oscillator type:	PLL Synthesized Control Oscillator
Carrier Frequency Range:	576.4 MHz-599.9 MHz (Transmitter A) 568.6 MHz-592.1 MHz (Transmitter B)
Channels:	48
Frequency response:	60Hz-15 KHz +/-3 dB
Operation range:	100m (300')(without obstacle)
Operating temperature:	14° F to 122° F (-10°C to +50°C)
Storage temperature:	14° F to 131° F (-10°C to +55°C)

BY-WM8T(Transmitter) , BY-WXL8, BY-WHM8

RF output power:	≤10 mW
Antenna:	Flexible
Spurious emission:	250 nW or less
Audio input connector:	3.5mm mini jack
Audio input level:	600 mV-2000 mV
Reference deviation:	±7KHz (-60 dBV, 1 KHz input)
Input frequency range:	20 Hz-20 KHz
Power supply:	Two AA batteries
Operation time:	6 hours
Dimensions:	BY-WM8T: 17.7 x 6.7 x 2.9 cm
	BY-WXL8: 5.7x4.55x11.69cm
	BY-WHM8: 5.3x5.3x25.6cm
Weight:	BY-WM8T: 95g (without batteries)
	BY-WXL8: 162g (without batteries)
	BY-WHM8: 252g (without batteries)

39

Receiver

Antenna:	Flexible
Audio input connector:	3.5mm mini jack
Signal-to-noise ratio:	80 dB
Distortion:	0.8% (-60 dBV, 1 KHz input)
Earphone output level:	60 mW, 32 Ohms/1KHz
Audio output level:	120 mV
Power supply:	Two AA batteries
Operation time:	6 hours
Dimensions:	(H x W x L) 7.7" x 3.1" x 1.1"(19.6 x 8.0 x 2.9cm)
Weight:	130g (4.6 oz) without batteries

Lavalier Microphone

Transducer:	Back electret Condenser
Polar pattern:	Omni-directional
Frequency Range:	35Hz ~ 18 KHz
Signal / Noise:	74dB SPL
Sensitivity:	-30dB +/-3dB / 0dB=1V/Pa, 1 kHz
Connector:	3.5mm locking mini plug
Length:	1.2m (4')

40

Frequency Chart

Transmitter A

Channel(CH)	Frequency(MHz)	Channel(CH)	Frequency(MHz)
1	576.4	25	588.4
2	576.9	26	588.9
3	577.4	27	589.4
4	577.9	28	589.9
5	578.4	29	590.4
6	578.9	30	590.9
7	579.4	31	591.4
8	579.9	32	591.9
9	580.4	33	592.4
10	580.9	34	592.9
11	581.4	35	593.4
12	581.9	36	593.9
13	582.4	37	594.4
14	582.9	38	594.9
15	583.4	39	595.4
16	583.9	40	595.9
17	584.4	41	596.4
18	584.9	42	596.9
19	585.4	43	597.4
20	585.9	44	597.9
21	586.4	45	598.4
22	586.9	46	598.9
23	587.4	47	599.4
24	587.9	48	599.9

41

Transmitter B

Channel(CH)	Frequency(MHz)	Channel(CH)	Frequency(MHz)
1	568.6	25	580.6
2	569.1	26	581.1
3	569.6	27	581.6
4	570.1	28	582.1
5	570.6	29	582.6
6	571.1	30	583.1
7	571.6	31	583.6
8	572.1	32	584.1
9	572.6	33	584.6
10	573.1	34	585.1
11	573.6	35	585.6
12	574.1	36	586.1
13	574.6	37	586.6
14	575.1	38	587.1
15	575.6	39	587.6
16	576.1	40	588.1
17	576.6	41	588.6
18	577.1	42	589.1
19	577.6	43	589.6
20	578.1	44	590.1
21	578.6	45	590.6
22	579.1	46	591.1
23	579.6	47	591.6
24	580.1	48	592.1

42

www.boya-mic.com

BOYA AUDIO EQUIPMENT (SHENZHEN) CO., LIMITED
Add: A16 building, New Material Industrial Park of Silicon Valley Power, Guanlan Town, Shenzhen, China
Tel: (86)0755-28435910
Email: sales@boya-mic.com