



CLA-2/4 channel WM400 Series

Professional Digital Wireless Microphone

Installation & Operating Manual

Safety Operation and Precautions

Please read this safety operation instruction carefully before installing and using the equipment. Please keep your safety The operation guide is convenient for future reference.

- Do not scratch, bend, twist, stretch or heat the power cord, otherwise the power cord may be damaged, resulting in fire or electric shock.
- Please do not open the housing of this device, otherwise it may cause electric shock. If overhaul, maintenance or repair is required, please contact the local agent.
- Do not touch the power plug with wet hands, otherwise it may cause fire or electric shock.
- If the power cord is damaged (such as broken wire or exposed core wire), please obtain a replacement from the agent. Continuing to use the device with the damaged power cord may cause fire or electric shock.
- To move the position of this device, please turn off the power first, pull out the power plug, and pull out all connecting cables, otherwise the cables may be damaged, resulting in fire or electric shock.
- Before cleaning the equipment, unplug the power plug and all connecting cables. Please use a dry soft cloth to clean.
- If the equipment is not used for a long time, please turn off the power and unplug the power plug.·For safe use and adequate ventilation of the equipment, the minimum clearance around the equipment shall be 5cm.
- The ventilation hole shall not be covered with plugs, such as newspaper/cloth/ curtain, which may hinder ventilation.
- Exposed fire sources, such as lighted candles, shall not be placed on the equipment.
- Do not litter the battery when it is discarded, please put it into the designated recycling box.
- The equipment can be used normally under tropical/temperate climate conditions.
 - The equipment shall not be placed, such as vases and other objects filled with liquid, to prevent the equipment from being subjected to water drops or splashes.
- Terminals marked with danger warning sign "  " on the equipment are warning of dangerous electrification. External wires connected to these terminals need to be installed or used by instructed personnel.

Product Introduction

Receiver Features:

- ❖ New concept of anti-electromagnetic interference circuit design to eliminate electromagnetic interference from mobile phones and other electronic products
- ❖ HD COG display, the menu is clear and easy to operate
- ❖ PLL phase-locked loop design, pure automatic signal selection receiving method.
- ❖ Adopting a digital pilot design, it has extremely strong anti-interference ability and effectively avoids crosstalk on the same frequency
- ❖ Designed with a light ring and shuttle knob, combined with a COG LCD display screen, it displays AF/Rf signal strength, frequency, volume, channel, transmission unit battery level and usage time
- ❖ Support switching between Chinese and English
- ❖ Adopting a frequency bandwidth of 50MHz, with 250KHz channel spacing, providing 200 channel options, easily avoiding various interferences
- ❖ Support custom frequency settings for easy use
- ❖ Using electronic volume control, the volume gain of each channel can be adjusted from 0- 31 through the front shuttle knob.
- ❖ AFS function, scans the entire frequency range according to the preset frequency, quickly and intelligently calculates clean frequency points, and automatically selects the optimal frequency channel
- ❖ Support sensitivity settings for reception, with a range of 00-60dB
- ❖ Support lock key function to avoid mistakes made by non-professional users. Equipped with feedback howling suppression and attenuation function,
- ❖ which can effectively reduce feedback howling
- ❖ Infrared data automatic synchronization function (SYNC): 2 independent infrared frequency matching buttons, one click automatic frequency matching, saving all complex operations.
- ❖ Use UHF512-562MHz frequency band carrier and can also change other frequency bands as needed.
- ❖ True diversity line receiving system, with four independent antennas for audio transmission, ensures more stable

- ❖ and reliable sound quality transmission, reduces blind spots in long-distance transmission, and enhances reception distance and stability
- ❖ Cooperating with the antenna distribution system can achieve full coverage of wireless signals in the venue, suitable for long-distance places such as large squares and campus playgrounds
- ❖ The standard cabinet design with a metal shell of 1U is easy to install.

Handheld Transmitter Features:

- ❖ Patent appearance design, high-end and solemn.
- ❖ With a high-brightness LCD display, the display content is clear, and it can display the microphone frequency, battery level and operating status
- ❖ The microphone is designed according to the principle of acoustic space, and with a dynamic coil microphone core, the conference sound quality can be realized with high fidelity.
- ❖ New concept of anti-electromagnetic interference circuit design to eliminate electromagnetic interference from mobile phones and other electronic products
- ❖ Operation distance up to 100 meters with the best condition, 60 meters in normal condition.
- ❖ Ultra-low power circuit design, continuous speaking time is not less than 8 hours, standby time is not less than 12 hours.

Bodypack Transmitter Features

- ❖ Patent appearance design, high-end and solemn.
- ❖ With a high-brightness LCD display, the display content is clear, and it can display the microphone frequency, battery level and operating status
- ❖ The microphone is designed according to the principle of acoustic space, and with the new anti-howling anti-single-point high-sensitivity condenser microphone core, the conference sound quality can be realized with high fidelity.
- ❖ New concept of anti-electromagnetic interference circuit design to eliminate electromagnetic interference from mobile phones and other electronic products
- ❖ Operation distance up to 100 meters with the best condition, 60 meters in normal condition.
- ❖ Ultra-low power circuit design, continuous speaking time is not less than 8 hours, standby time is not less than 12 hours.

Receiver Installation and Connection

Installation

- ❖ To ensure optimal performance, the receiver must be installed at a height of more than 1 meter above the ground and at least 1 meter away from wall surface.
- ❖ Keep the antennas away from sources of interference, such as computers, digital equipment, televisions, vehicles, etc., as well as large metal objects.
- ❖ Attach the two antennas to the antenna bases on the rear panel respectively and position them at a 45° angle to the vertical line.
- ❖ Minimize obstacles between the receiver and the operating area of the transmitters; line-of-sight placement is optimal.
- ❖ 5. When two transmitters are used simultaneously, maintain a distance of at least 2 meters between the transmitters and the receiver.

Connections

- ❖ Connect the power supply to the power input socket of the receiver.
- ❖ (Note: The input voltage of the AC power adapter must comply with the power specifications of the local area.)
- ❖ There are two types of audio output terminals on the rear panel of the receiver: XLR connectors and 6.3 mm connectors.
- ❖ Connect the mixer using shielded audio cables:
 - If the input terminal of the mixer is an XLR balanced input, connect the XLR balanced output on the rear panel of the receiver to the mixer using a shielded audio cable.
 - If the input terminal of the mixer is a 6.3 mm socket, connect the 6.3 mm output on the rear panel of the

receiver to the mixer using a shielded audio cable.

- ❖ These two sets of outputs can be used simultaneously.

Receiver Control and Functions

Receiver front panel



- ❖ Channel A Data Transfer Button (IRA): Press the corresponding button to transmit the frequency data of the receiver channel to the transmitter.
- ❖ Channel A LCD Screen: Liquid crystal display that shows channel status, module information, operating frequency, and volume.
- ❖ Channel A Illuminated Rotary Knob: Rotate to select and modify corresponding parameters.
- ❖ Channel B Data Transfer Button (IRB): Press the corresponding button to transmit the frequency data of the receiver channel to the transmitter.
- ❖ Channel B LCD Screen: Liquid crystal display that shows channel status, module information, operating frequency, and volume.
- ❖ Channel B Illuminated Rotary Knob: Rotate to select and modify corresponding parameters.
- ❖ Infrared Data Transmission Window (SYNC): Infrared sync window for transmitting receiver channel data to the transmitter to synchronize frequencies. Both Channel A and Channel B use this infrared window for synchronization.

- ❖ Power Switch: Press for 1 second to turn on the power; press and hold for 3 seconds to turn off the power.

Receiver Rear Panel



- ❖ DC Power Input Socket: 12V/1A, connect to the output port of the power adapter.
- ❖ Antenna B-2 Connector: For connecting the receiving antenna.
- ❖ Antenna A-2 Connector: For connecting the receiving antenna.
- ❖ Balanced Output Socket for Channel B: XLR socket, can be connected to the balanced microphone input of a mixer using a standard two-core shielded cable.
- ❖ Unbalanced Mixed Output Socket: 6.3mm socket, mixed output of Channel A and Channel B.
- ❖ Balanced Output Socket for Channel A: XLR socket, can be connected to the balanced microphone input of a mixer using a standard two-core shielded cable.
- ❖ Antenna B-1 Connector: For connecting the receiving antenna.
- ❖ Antenna A-1 Connector: For connecting the receiving antenna

Transmitter Control and Functions

Handheld Transmitter Unit



- ❖ 1. Microphone Power Switch
- ❖ 2. Infrared Data Reception Window: Infrared sync window (IR), receives frequency data transmitted from the receiver.
- ❖ 3. High-Brightness Display: LCD showing signal, battery level and status.

Bodypack Transmitter Unit



- ❖ 1. Infrared Data Reception Window: Infrared sync window (IR), receives frequency data transmitted from the receiver.
- ❖ 2. High-brightness Display: LCD showing signal, battery level and status.
- ❖ 3. Battery Compartment
- ❖ 4. Microphone Power Switch
- ❖ 5. MIC Input

Infrared Frequency Matching Operation

IR Frequency Matching between Conference Transmitter and Receiver

1. Power on one conference transmitter. Align its infrared receiving window with the infrared data transmission window on the receiver, then press the IRA button for Channel A on the receiver.
2. The transmitter will receive the same frequency data as the receiver, and the LCD will simultaneously display the frequency group and frequency used for Channel A.



Receiver Technical Specifications

Specifications of receiver

- ❖ Power supply: DC12V
- ❖ Consumption Rating: < 7.2W
- ❖ Size L×W×H: 483mm × 175mm × 45.3mm
- ❖ Weight: 2.75kg
- ❖ Carrier frequency band: UHF
- ❖ Frequency bandwidth: 50MHz
- ❖ Audio channel: 4CH
- ❖ Modulation: FM
- ❖ Oscillation: PLL
- ❖ Sensitivity: >60dB @25KHz, 6dBv
- ❖ Max Deviation Range: ±45KHz
- ❖ S/N: >105dB
- ❖ T.H.D: <0.7% @ 1KHz
- ❖ Frequency Response: 20Hz~20KHz ±3dB
- ❖ Working Distance: 60 meters (Visual distance)
- ❖ Audio output: Unbal: 6.35mm ×1; Bal: XLR ×2
- ❖ Audio signal receiving interface: BNC ×4

Transmitter Technical Specifications

Specifications of Handheld transmitter

- ❖ Working Voltage: DC 2V -- 3V
- ❖ Consumption: Stand by: $\leq 350\text{mW}$, Speaking: $\leq 620\text{mW}$
- ❖ Display: LCD
- ❖ Operating time: 10 hours
- ❖ Operating temperature range: -9°C -- 40°C
- ❖ Size (L×W×H): Length: 282mm, Maximum diameter: 52mm
- ❖ Weight: 0.35kg
- ❖ Carrier frequency band: UHF
- ❖ Oscillation: PLL
- ❖ Harmonic Radiation: $< -65\text{dBm}$
- ❖ Max Deviation: $\pm 45\text{KHz}$ Capsule: Dynamic
- ❖ RF Power: 15MW (Switchable)

Specification of Lavalier transmitter

- ❖ Working Voltage: DC 2V -- 3V
- ❖ Consumption Rating: Stand by: $\leq 350\text{mW}$, Speaking: $\leq 620\text{mW}$
- ❖ Display: LCD
- ❖ Operating time: 10 hours
- ❖ Operating temperature range: -9 - 40
- ❖ Size (L×W×H): 107x63x19.5mm

- ❖ Weight: 0.07kg
- ❖ Carrier frequency band: UHF
- ❖ Oscillation: PLL
- ❖ Harmonic Radiation: <-65dBm
- ❖ Max Deviation: +-45KHz
- ❖ Capsule: Condenser
- ❖ RF Power: 15MW (Switchable)



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