

CLOCKAUDIO®

CW200

606 – 670 MHz wireless system

Instruction Manual



CW200 INSTRUCTION MANUAL

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CW200 Introduction

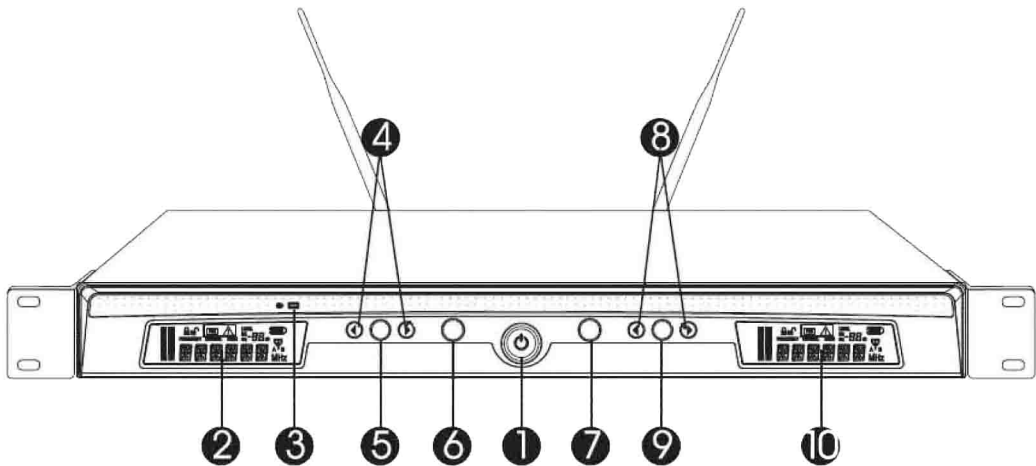
The CW200 radio microphone system has the following features:

- Dual receiver covering UHF frequencies 638 – 670 MHz subject to local enforcement laws for licence free transmission.
- EIA-standard metal 1U - rack mount receiver.
- Bright and easy-to-read multi-function LCD display shows RF/AF, diversity strengths; transmitter battery level. The display will also show setup of selected channel, frequency, mute and other working status.
- Auto-scan and lock on to an open interference free frequency.
- Infrared upload of function changes from the receiver frequency to the transmitter.
- PLL (Phase Lock Loop frequency control) design ensures transmission reliability, "Noise Lock" squelch effectively blocks stray RF noises
- Each receiver has 32 selectable channels. Total 64 channels,
- The table top boundary layer transmitter microphone has a cardioid polar pattern ensuring a good sound reproduction within the 120 Degrees acceptance angle.
- Battery life (Transmitting continuously) approx. 10 hours using good quality alkaline batteries
- Heavy die-cast case with non-slip silicone bottom pads to minimise coupling of surface and vibration pickup.

General Information

- Always make all other connections before plugging the DC power supply into an AC power outlet.
- Do not keep the devices in places of very high temperature or humidity.
- For optimum performance use devices at least 50cm away from know interference sources.
- For best pick up pattern grip the hand held microphone around the middle of its body.
- Remove the batteries when transmitters are not likely to be used for some time.
- When replacement batteries are needed always change both for new ones at the same time.

Controls and functions

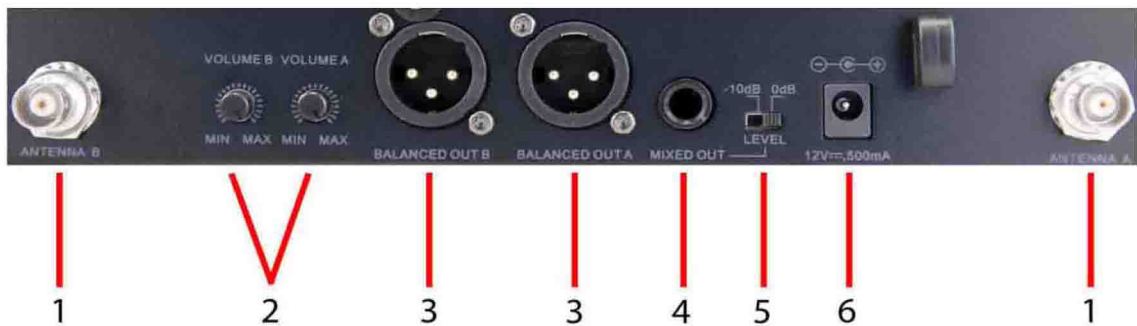


1. Power button. Press to power up. Press and hold for 4 seconds to power off.
2. Channel A multifunction display.
3. IR sensor window. Used to transfer frequency and settings to the transmitters.
4. Channel A < / > Use these buttons to navigate / change settings.
5. Channel A Set button. Used to change Functions and to confirm settings. Also used to quickly show Channel or Frequency when briefly pressed.
6. Channel A Synch button. Used to send commands to a transmitter such as change of frequency and showing frequency or channel number.

The function buttons for Receiver B are duplicated and have the same operation to that shown above for channel A receiver.

7. Channel B Synch button.
8. Channel B </> buttons.
9. Channel B Set button.
10. Channel B multifunction display.

Rear Panel connections



1. BNC Antenna connections to A / B receiver.
2. Audio output volume controls for A and B channels.
3. XLR balanced outputs A / B receiver.
4. Mixed audio output (mono). Output can be connected to an external amplifier, mixer or recorder by 1/4" Jack plug.
5. 2 position attenuation 0dB / 10dB. Used to limit audio output from the mixed output socket.
6. 12 Volt DC input socket. Connect the supplied AC adaptor to this socket.

1. The audio Volume / attenuation levels of channels A and B can be adjusted by rotating the 2 volume controls.



2 position attenuation switch _____

Mixed output 6.3mm jack socket. Connect to an external amplifier or recorder.

Powering up

1. Make sure your external equipment is connected and powered up
2. Press the power button on the CW200 Receiver. The two receiver displays will light up and show the receiving frequencies.
3. Briefly press the power button on the transmitters. The display will light up and the frequency will show in the display it should be the same as one of the receivers frequency display.
4. The transmitters are factory set to latching. Speak into the transmitter and audio should be heard. Briefly press the power button on the transmitter to mute the audio, press the power button again to restore the audio. Press and hold the power button for 3 – 4 seconds to turn of the transmitter.

Connecting the AC adaptor to the receiver.

The mains adaptor can be used on mains Voltages from 110 – 230VAC.

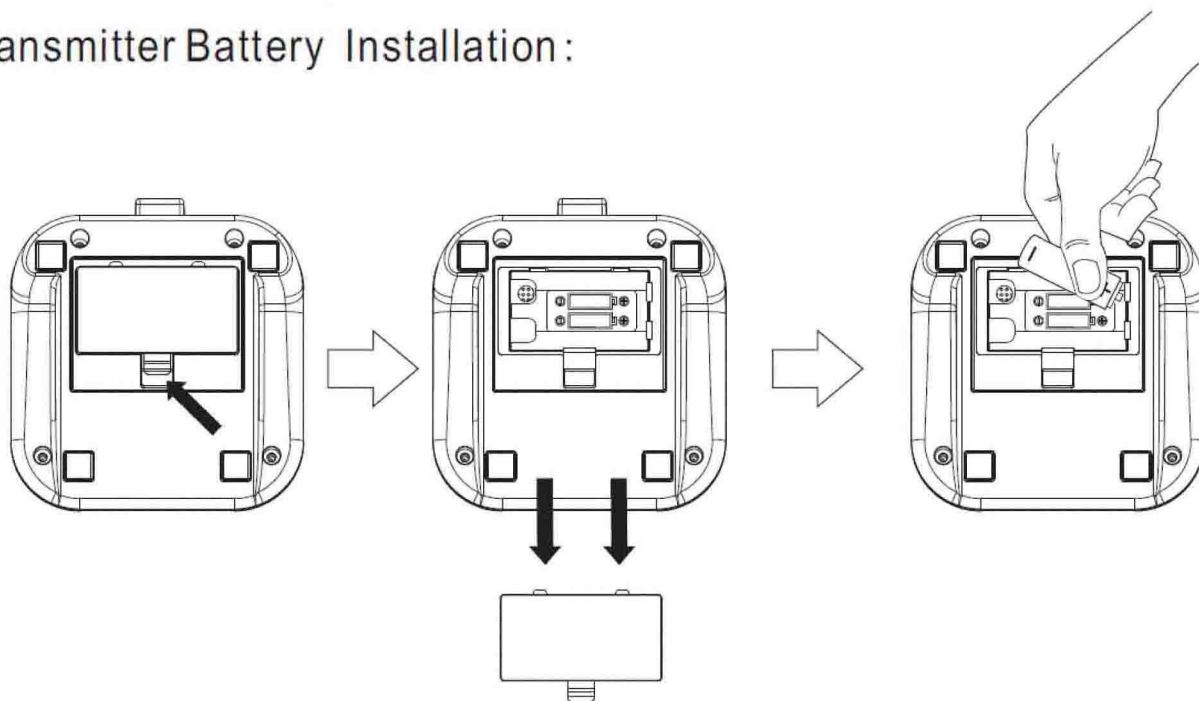
Insert the DC plug into the DC socket located at rear of unit. Connect the adaptor to your main supply / socket.



Connect the antennas as shown



Transmitter Battery Installation:



Remove battery cover and insert 2 x AA batteries ensuring correct polarity (both batteries face the same way).

Controls



1. Power button. Press to power up the transmitter. Press and hold for 3 seconds to power down the transmitter. This button is also used to mute / unmute the microphone audio.
2. Illuminated LCD display shows frequency / channel / mute and battery 4 segment level indicator. When only one bar shows it's time to change the battery.
3. IR sensor window. Make sure this is facing the receiver IR sensor window when transferring data changes from the receiver

Changing the transmitter frequency

The transmitter frequencies can only be adjusted by the receiver. The frequency is set on the receiver then sent by Infrared Frequency to the transmitter.

Note: When transferring a new frequency to the transmitter make sure that the transmitter is switched on and is placed in front of the left side of receiver as shown below.



To change the transmitter frequency.

Important: Each receiver (A and B) has its own independent setup buttons for changing frequency and other parameters on each of the transmitters. Make sure you use the correct setup buttons for setting up each respective transmitter. As the transmitters do not carry any identification and look identical, It may be useful to mark or apply an ID to each of the transmitters A and B to ensure that the correct transmitter / receiver is being operated, this will be especially useful if several systems are in operation.

a, Press the required CH A or CH B < / > button once on the receiver front panel to select a new frequency. The display will flash and after short time will remain stable.

b. Position the transmitter (powered up) as shown above and press the Sync button on the front panel and SYNC >>> will show that the new frequency is being transmitted to the transmitter. After a few seconds the display will return to normal and the old frequency on both receiver and transmitter will have been changed to the new frequency. If the ">>>>" arrows move continuously for more than 20 seconds then make sure the transmitter is powered up and its IR sensor is facing the receiver sensor as shown above.

In cases where there are other transmitters being used and causing interference Press and hold < / > button on the receiver for 3 seconds and the receiver will auto-scan and lock on to an open, interference-free frequency. Now press the SYNC button to transfer this new frequency to the transmitter.

Menu options



1. To enter the menu mode: Press and hold the Set button (CH A or CH B) on the receiver for 3 seconds until DISPLAY shows, press < / > each time the < / > button is pressed the options shown will change, LOCK or SQUELCH, DISPLAY modes.
2. DISPLAY option. This will allow the display to show either frequency or the Channel number. Enter the menu mode as described in point 1 above. With DISPLAY showing press the < button to select Frequency or > button to select the Channel number, Frequency or Channel will show flashing in the display. Press the SET button to confirm your choice. The display will then apply the changes and return to its normal operation. To transfer the new change to the transmitter, place the transmitter (powered up) in front of the receiver as shown in fig 1 under **Changing the transmitter frequency** then press the SYNC button. The moving ">>>" arrows will show whilst the new data / changes are being sent to the transmitter.
3. SQUELCH. To prevent unwanted noises occurring the receiver has 0 – 50dB squelch settings in 5dB steps (default is 0dB). To change the squelch level enter MENU mode as detailed in point 1 above and press > or < button until SQUELCH shows. Press SET button and a flashing dB level will show, press the < or > button until the desired new squelch setting shows. Press the SET button to confirm the changes.
4. LOCK. To prevent accidental powering off the receiver or changes of settings on the receiver. Select LOCK in the menu. Enter MENU mode as detailed in point 1 above and press > or < button until LOCK shows. Press SET button then press < or > buttons to change LOCK status to On or OFF. Press SET button to confirm the new changes. The display will return to normal operation. To power off the receiver LOCK must be OFF so it will be necessary to enter the MENU mode as described in point 1 above then follow above instructions to place LOCK OFF mode.

Troubleshooting Guide

No audio

- Is Transmitter powered up
- Check transmitter frequency shows in the receiver
- Replace transmitter batteries
- Is the receiver connections to external equipment correct
- Is the external equipment powered up
- Out of range / bring transmitter closer to the receiver

Noisy audio / poor reception / Distorted audio

- Replace transmitter batteries
- Check that transmitter / receiver Frequencies are the same.
- Co channel interference / external interference try changing transmitter frequency.
- Receiver antennas close to electrical interference. Move away from electrical items such as laptops, digital equipment, neon lights and motors.
- If using Mixed out socket try adjusting the volume controls or the 2 step attenuator on the back of the receiver.

Specifications

Receiver

Main frame size: EIA STANDARD 1U

Dual channel receiver

Frequency stability $\pm 0.005\%$, Phase Lock Loop frequency control

Carrier frequency range UHF 638-670 MHz (subject to local authorities enforcement laws)

Digital equalizer preset microphone capsule modelling

Modulation mode FM

Operating range 60 Metres typical (in open space)

Oscillation PLL synthesized

Sensitivity 5dB μ V, S/N>60dB at 25 deviation

Band width 32MHz

Max deviation Range ± 45 KHz

Frequency response 80Hz~18KHz ± 3 dB

Power Supply switched mode ac adaptor 100-240V AC50/60 Hz, 10W

Weight 4KG

Dimension 421(W) X 43(H) X 206(D)

Output connector XLR balanced & 6.3 ϕ phone jack unbalanced

Transmitter

Carrier Frequency Range: 606MHz~670 MHz (subject to local authorities enforcement laws)

Modulation mode: FM - UHF For reduced interference

Frequency Response: 50-17,000 Hz

Max deviation range : ± 45 KHz

Operating range: 60 Metres typical (in open space)

Current consumption: 90mA, typical

RF power output: 10mW

Dynamic range (Typical):> 90 dB,1kHz at Max SPL

Battery: AA X 2 Alkaline (each transmitter)

Battery life: Approximately 10 hours

Element: 2 x Fixed-charge back plate, permanently polarized condenser microphones.

Polar pattern: Half-cardioid (cardioid in hemisphere above mounting surface)

Product Guarantee

Thank you for purchasing a Clockaudio product. We are confident that this product will give you many years of trouble free operation and is backed up with a 2 year guarantee.

Important: Guided Tour systems, Mixers and RF products must have the guarantee activated by completing the registration details on Clockaudio web site. Look for the warranty tab under the Technical Library. Clockaudio will retain the details on their database for future reference.

This product is guaranteed for 24 months from the date of purchase. Any defect that arises due to faulty materials or workmanship will either be replaced, or repaired free of charge by the agent from whom you purchased the unit. Please note charges will be incurred on any products returned for service / repair not in warranty or has been subject to customer abuse or incorrect wiring.

The guarantee is subject to the following provisions:

- The guarantee does not cover accidental damage, misuse, cabinet parts, knobs, batteries or consumable items. Any product returned to Clockaudio failing to meet the terms listed will incur a repair and postage charge.
- The product must be correctly installed and operated in accordance with the instructions supplied with the product.
- Unauthorised modifications and alterations to the original specifications will render the guarantee void
- The product must be used for the sole purpose that it was designed for.
- The guarantee given is strictly with the original owner and becomes invalid if the product is resold or becomes damaged by inexperienced repair.
- Product purchased outside of the countries served by Clockaudio designated / approved Agents are not covered by the warranty.
- Specifications / improvements are subject to change without notice.
- Clockaudio disclaims any liability for incidental or consequential damages.
- The guarantee is in addition to and does not diminish your statutory legal rights.

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As part of a continuous product development program, we reserve the right to change specifications without notice.