CLOCKAUDIO®

CW-7000

UHF PLL WIRELESS MICROPHONES SYSTEM INSTRUCTION MANUAL

PROFESSIONAL
MICROPHONE
SYSTEMS

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1. Important Safety Precautions

- Make all connections before plugging the unit into an AC power outlet.
- Do not expose devices to high temperature or high humidity.
- Never handle the power cord with wet hands!
- Keep the devices away from fire and heat sources.

2. Features

- PLL synthesized technology allows upto 1441 selectable frequencies.
- 6 groups, maximum 23 channels in one group.
- The true diversity reception with 2 independent RF receivers ensures stable reception.
- Adjustable Pilot tone squelch control can effectively reduce the noise.
- Fitted with S.A.W. filter to reduce interference.
- Fitted with squelch circuitry & Mute function.
- Rugged metal housing.
- Balanced output via 3 Pin XLR or 6.3mm (1/4") Jack socket.
- Anti-interference design for computer compatability.
- Transmission power selectable between 10 and 50mW (dependent on local regulations).
- Low battery power indication.

3. Specifications

3-1 Receiver / CW-7000R

Frequency	UHF PLL Synthesized Control
Frequency Range	533~660 MHz (Subject to local regulation)
S/N Ratio	> 105dB
T.H.D	<0.6%@1KHz
Display	LCD / LED
Display Contents	Frequency, Antenna A/B, Mute Display, LED Meter , Battery Level Gauge
Controls	Power On/Off , Frequency Up/Down, Frequency Scan, Audio Level, Lock-on
Audio Output Level	-12dB
AF Output Impedance	600Ω
Squelch	Pilot Tone & Noise Mute
Operation Voltage	12-18VDC, 200mA
Output Connector	1 XLR Balanced Socket 1 Ø6.3mm un-balanced phone jack
Dimension(m/m)	W 212mm (8.35") H 38mm (1.50") D144mm (5.67")

3-2 Handheld Transmitter / CW-7000

Frequency	UHF PLL Synthesized Control
Frequency Range	533~660 MHz (Subject to local regulation)
RF Outputs	10mW / 50mW (Subject to local regulation)
Stability	±10KHz
Frequency Deviation	±48KHz
LCD Display	Frequency, Battery Level Gauge, Sensitivity
Controls	Power On/Off, Mode Setting, AF Level, Frequency Up/Down, Lock-on Mode
Spurious Emissions	<-50 dBC
Audio Frequency Response	50~16,000 Hz
Battery	2 x UM3, AA 1.5V
Battery Life	12 Hours at 10mW 7 Hours at 50mW

3-3 Body-pack Transmitter / CW-7001

Frequency	UHF PLL Synthesized Control
Frequency Range	533~660 MHz
RF Outputs	10mW / 50mW (Subject to local regulations)
Stability	±10KHz
Frequency Deviation	±48KHz
LCD Display	Frequency, Battery Level Gauge
Controls	Power On/Off, AF Level, Frequency Up/Down, Lock-on Mode
Output connector	4P mini XLR
Spurious Emissions	<-50 dBC
Audio Frequency Response	40~18,000 Hz
Battery	UM3, AA 1.5V*2
Battery life	12 Hours at 10mW. 7 Hours at 50mW

3-4 Lavalier Condenser Microphone

Model No	CL-6
Connector	4P Mini XLR
Frequency Response	100~15,000 Hz
Polar Pattern	Cardioid
Sensitivity (at 1000Hz)	-60±3 dB
Impedance	2.2kΩ
Max. SPL for 1% THD	130dB
Dimension(mm)	W 10mm (0.39") H 26.4mm (1.04")

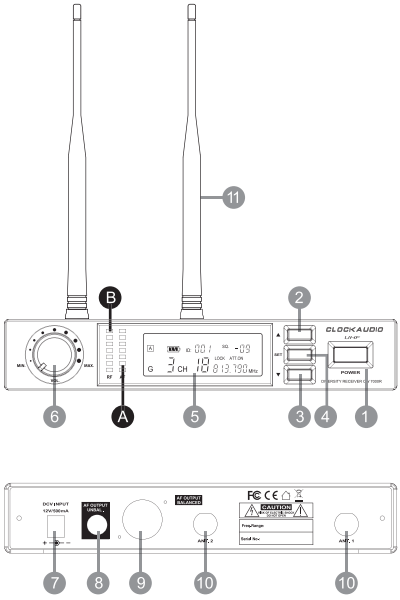
4. Parts Identification & Accessories

4-1 Receiver / CW-7000R

1. Power On/Off switch
2. Up button (frequency adjustment)
3. Down button (frequency adjustment)
4. Set button (frequency adjustment)
5. LCD Display
6. Volume control
7. DC socket for connection to supplied 12VDC power supply
8. AF output, jack socket (AF UNBAL)
9. Balanced XLR socket
10. Antenna input socket
11. Antenna

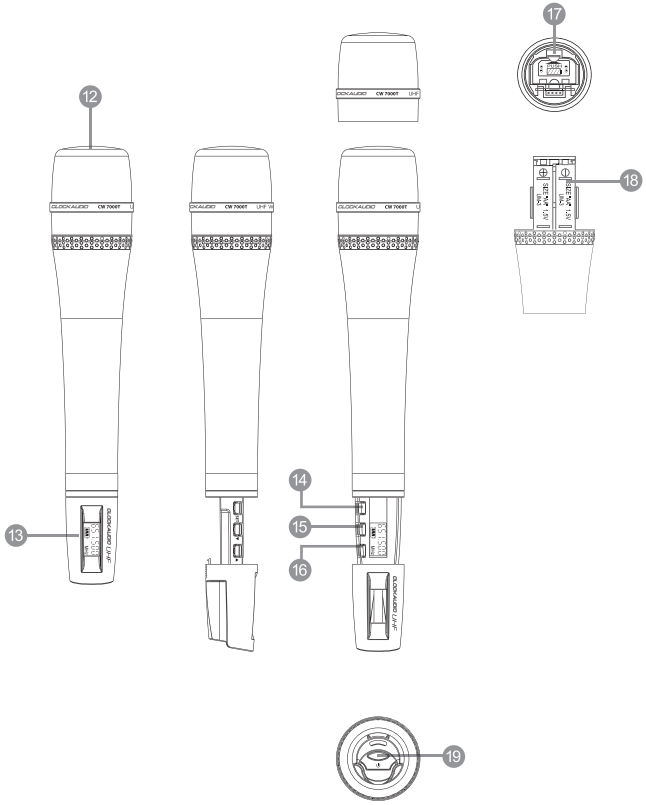
A. AF signal level

B. RF signal level



4-2 Handheld Transmitter / CW-7000

⑫ Interchangeable capsule
⑬ LCD display
⑭ Down button
⑮ UP button
⑯ Set button
⑰ Battery holder release button
⑱ Battery holder
⑲ Power On/Off switch

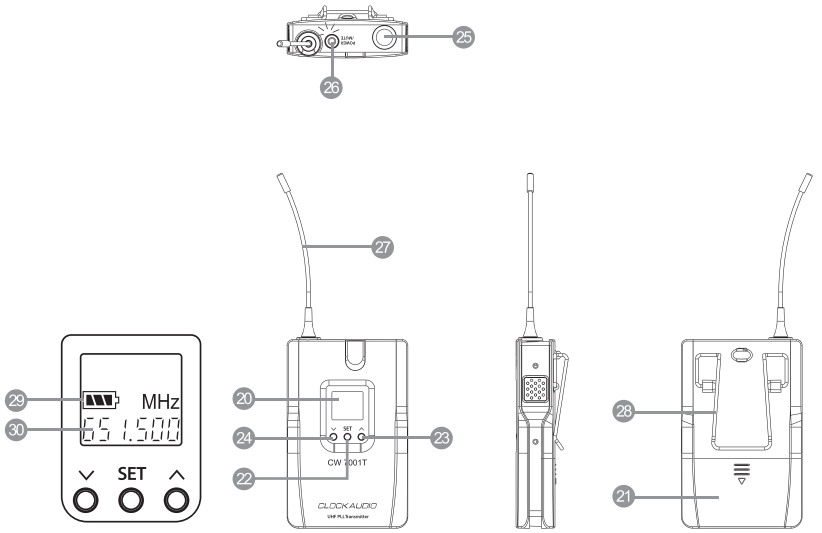


4-3 Body-pack Transmitter / CW-7001

20 LCD Display
21 Battery Tray
22 Set button: set the configuration of bodypack transmitter
23 Up button: select the settings of transmitter
24 Down button: select the settings of transmitter
25 4 Pin mini XLR mic. input
26 Power Switch / Mute
27 Antenna
28 Belt Clip

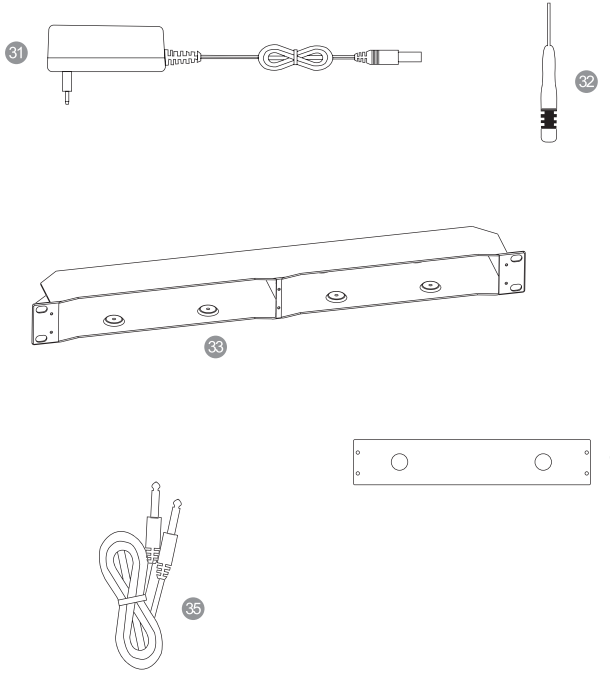
LCD Panel of the Body-Pack Transmitter

29 Battery status: Display battery level gauge
30 Group & Channel



4-4 Accessories

31 AC/DC power adapter:
Switching Power Supply (100V~240V , 50~60Hz)
32 Screwdriver
33 RRM-9000 Dual Rack Adaptor
34 RCP-9000 Panel Cover Option
35 AF output cable (with Ø6.3 plug at both ends)



5. Connections

Receiver / CW-7000R

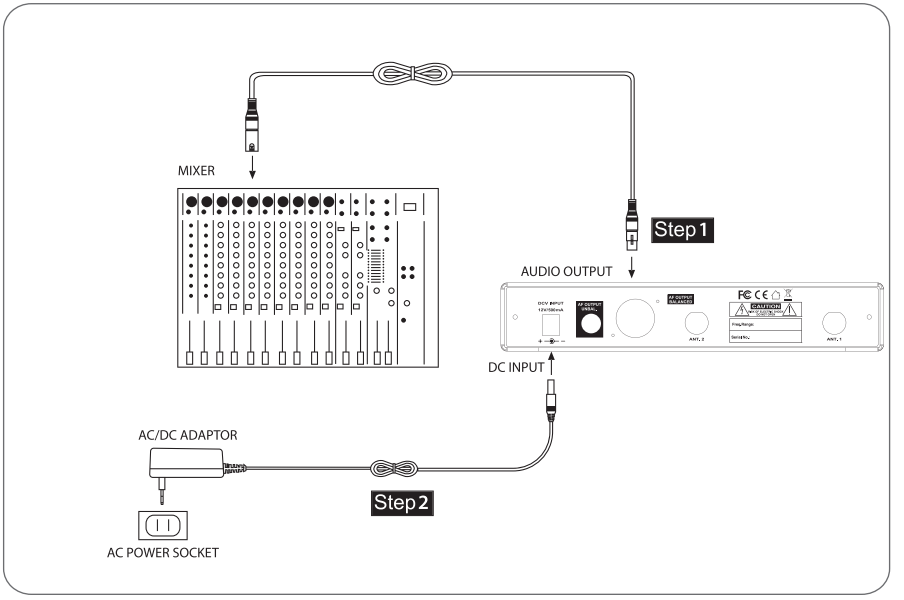
(1) Audio Output Connector

Connect one end of the AF output cable to the AF output socket in the rear panel, then plug the other end in to the "MIC IN" input socket of a mixer or amplifier. (Step 1)

The receiver is equipped with balanced XLR and unbalanced Ø6.3mm output, select the most appropriate for the application.

(2) Power output connector

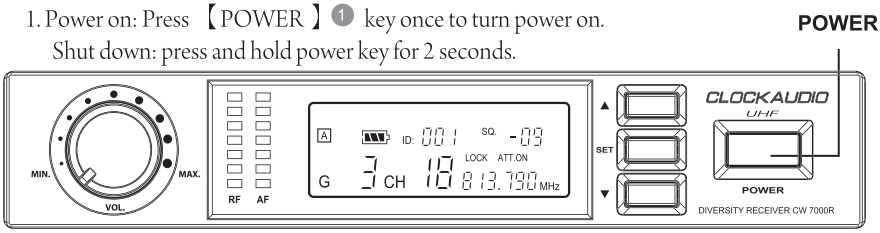
Plug in one end of AC/DC adaptor cable to DC input socket in the rear panel of receiver. Plug other end into an AC outlet. (Step 2)



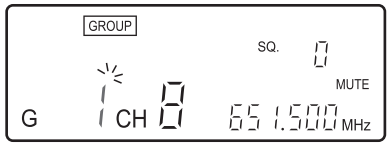
6. Basic Operation

6-1 Receiver / CW-7000R

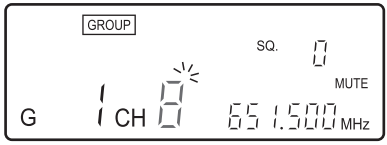
1. Power on: Press 【POWER】❶ key once to turn power on.
   Shut down: press and hold power key for 2 seconds.



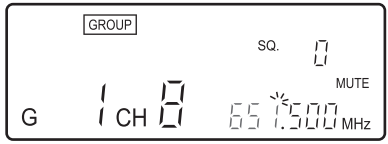
2. Group adjusting
   2-1 Press and hold the SET button for 3 seconds.
   2-2 The group (G) will flash.
   (1)Press ▲or ▼ button to select a desired group(1~6), Press SET key to set.



   (2)The channel will flash, press▲or ▼ button to select the desired channel, press SET button to set number of channels for each group.
   Group 1→ Channel 1~21 ； Group 2→ Channel 1~22
   Group 3→ Channel 1~18 ； Group 4→ Channel 1~21
   Group 5→ Channel 1~21 ； Group 6→ Channel 1~21

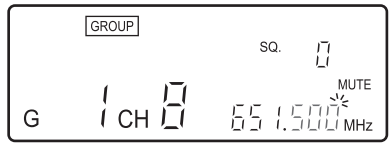


3. Frequency selection
   3-1 Press and hold the SET button for 3 seconds.
   3-2 Press SET button twice, the first 3 digits of the frequency will flash.



(1)Press ▲ or ▼ buttons to change the frequency at an increment of "+/-" 1 MHz. Press SET button to store.

(2)The 3 digits of the frequency after the decimal place will flash, press ▲ or ▼ buttons to change the frequency at an increment of "+/-" 0.025 MHz. Press SET button to store.



4. SCAN

4-1 Press and hold SET button for 3 seconds.

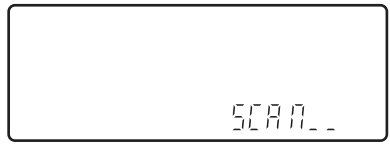
4-2 Press the SET button several times until the"Sc ON" or "Sc OFF" is displayed on screen.

(1)Press▲ : Sc ON - Turn on channel scan. The receiver will automatically scan the environment and identify the frequencies that have been occupied, and will skip to next available frequency.

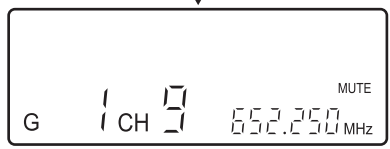
(2)Press▼ : Sc OFF - Turn off channel scan.

(3)When entering group and channel menu the receiver will start to scan. "SCAN" is displayed on LCD.

With "Sc ON":
When Entering group and channel menu the receiver will start to scan.
"SCAN" is displayed on LCD.



Receiver will scan every channel in the selected group.



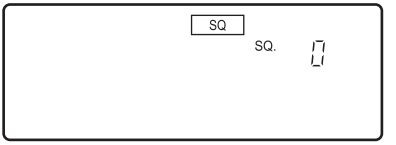
Scan function will stop at the first available channel.

If NOFREE is displayed: This indicates there is no available channel in this group, please select another group and scan again.

5. Squelch: Adjust receiving sensitivity

5-1 Press and hold SET button for 3 seconds.

5-2 Press the SET button several times until the "SQ" is displayed on screen.



(1)Press ▲ or ▼ button keys to adjust receiving sensitivity in the range of -5~10; higher value represents lower sensitivty; lower value represents higher sensitivity.

(2)Press SET key to save the setting.

6. Attenuate: Set audio output level

6-1 Press and hold SET button for 3 seconds.

6-2 Press the SET button several times until the " At ON " or " At OFF " is displayed on screen.

(1)Press ▲: At ON -- XLR MIC Output volume is lower than Ø6.3 mm output by -10dB.

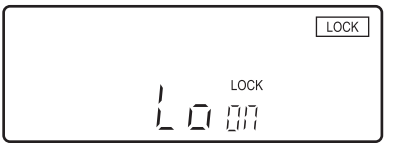
(2)Press ▼: At OFF -- XLR MIC Output and Ø6.3mm output volume level is same.

(3)Press SET key to save the setting.

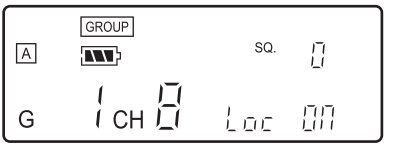
7. Setting key lock

7-1 Press and hold SET button for 3 seconds.

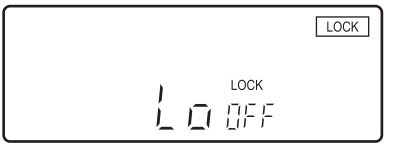
7-2 Press the SET button several times until the “Lo ON” or “Lo OFF” is displayed on screen.



(1)Press ▲: Lo ON -- the receiver panel key functions are locked. To unlock press and hold SET button for 3 seconds. (“Lo ON” is displayed on screen). Press ▼ to unlock.



(2)Press ▼: Lo OFF -- Unlock.



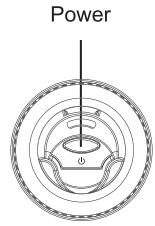
(3)Press SET key to save the setting.

8. Backlight indication

Blue : Normal operation or no connection to transmitter

Red : Low battery on transmitter

6-2 Handheld Transmitter / CW-7000



1. Power

1-1. Power On: Press the Power switch to turn on the power.
Shut down: Press and hold the power switch for 3 seconds.

2. Frequency selection

2-1 Press and hold SET button for 3 seconds.

2-2 When frequency is displayed on screen.

(1)The first 3 digits of the frequency will flash, press ▲or ▼ buttons to change the frequency at an increment of "+/-" 1 MHz. Press SET button to store.

(2)The digits after the decimal place will flash, press ▲or ▼ buttons to change the frequency at an increment of"+/-" 0.025MHz. Press SET button to store.
Note: Hold ▲or ▼ to scroll.

2-3 To set your desired frequency while a preset channel is displayed on screen:

(1)Press and hold SET button for 3 seconds.

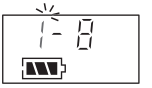
(2)The group on the left of the LCD will start to flash; press SET button twice to display frequency on LCD, adjust frequency following 2-2 above, steps (1) and (2).

3. Group Selection

3-1 Press and hold SET button for 3 seconds.

3-2 The group will flash.

(1)Press ▲or ▼ to select the desired group (1~6). Press SET button to store.



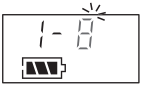
(2)The channel will flash, press ▲or ▼ button to select the desired channel. Press SET button to store.

Number of channels for each group :

Group 1→ Channel 1~21 ; Group 2→ Channel 1~22

Group 3→ Channel 1~18 ; Group 4→ Channel 1~21

Group 5→ Channel 1~21 ; Group 6→ Channel 1~21



3-3 When using a preset channel while the frequency is displayed on screen:

(1)Press and hold SET button for 3 seconds.

(2)The 3 digits on the left of the LCD will begin to flash; press SET button twice to display the channel on LCD, now adjust the channel by following 3-2 above, steps (1) and (2).

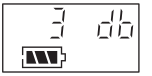
4. Sensitivity Adjustment

4-1 Press and hold SET button for 3 seconds. The 3 digits of the frequency or channel on the left of the LCD will begin to flash.

4-2 Press the SET button four times to enter the sensitivity adjustment screen.

(1)Press▲or ▼button keys to adjust the microphone sensitivity in the range of -18~+12dB at an increment of 3dB.

(2)Press SET button to store.



5. RF Output Power Adjustment

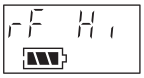
5-1 Press and hold SET button for 3 seconds. The 3 digits of the frequency or channel on the left of the LCD will begin to flash.

5-2 Press the SET button several times until "rF Hi" or "rF Lo" is displayed on screen.

(1)Press ▲: "rF Hi", high transmitting power

(2)Press ▼: "rF Lo", low transmitting power

(3)Press SET button to store.



6. Setting key lock

6-1 Press and hold SET button for 3 seconds. The 3 digits of the frequency or channel on the left of the LCD will begin to flash.

6-2 Press the SET button several times until "Loc On" or "Loc OFF" is displayed on screen.

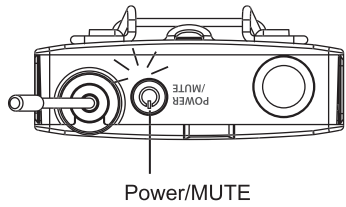
(1)Press ▲: "Loc On " = the handheld panel key functions are locked. To unlock press and hold SET button for 3 seconds until "Loc On" starts to flash, press ▼ to unlock.

(2)Press ▼:"Loc OFF".

(3)Press SET button to store.

6-3 Body-pack Transmitter / CW-7001

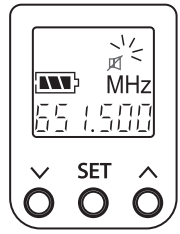
1. Power/MUTE



Power/MUTE

1-1 Power On: Press the Power switch to turn on the power to the transmitter.
Green light: Power on Red light: low battery
Shut down: Press and hold the Power button the unit will power off after 3 seconds.

1-2 MUTE: With the unit powered on press the Power/MUTE button momentarily to toggle between mute and unmute.



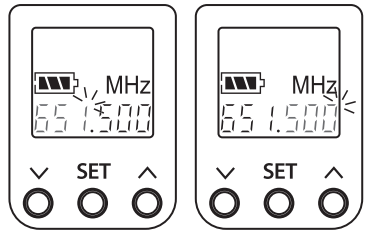
2. Frequency selection

2-1 Press and hold the SET button for 3 seconds.

2-2 When frequency is displayed on screen.

(1)The first 3 digits of the frequency will flash, press ▲or ▼ buttons to change the frequency at an increment of "+/-" 1 MHz. Press SET button to store.

(2)The digits after the decimal place will flash, press ▲or ▼buttons to change the frequency at an increment of "+/-" 0.025MHz. Press SET button to store.
Note: Hold ▲or ▼ to scroll.



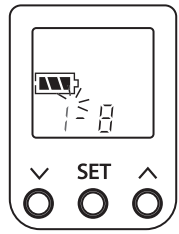
2-3 To set your desired frequency while a preset channel is displayed on screen:

(1) Press and hold SET button for 3 seconds.

(2) The 3 digits on the left of the LCD will begin to flash; press SET button twice to diplay the channel on LCD, now adjust the channel by following 2-2 above, steps (1) and (2).

3. Group Selection.

3-1 Press and hold SET button for 3 seconds.



3-2 The group will flash.

(1)Press ▲or ▼ to select the desired group (1~6). Press SET button to store.

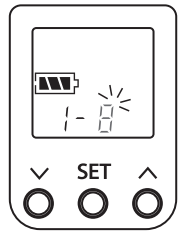
(2)The channel will flash, press ▲or ▼ button to select the desired channel. Press SET button to store.

Number of channels for each group:

Group 1→ Channel 1~21 ; Group 2→ Channel 1~22

Group 3→ Channel 1~18 ; Group 4→ Channel 1~21

Group 5→ Channel 1~21 ; Group 6→ Channel 1~21



3-3 When using a preset channel while the frequency is displayed on screen:

(1)Press and hold SET button for 3 seconds.

(2)The 3 digits on the left of the LCD will begin to flash; press SET button twice to display the channel on LCD, now adjust the channel by following 3-2 above, steps (1) and (2).

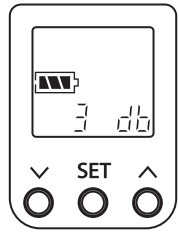
4. Sensitivity Adjustment.

4-1 Press and hold SET button for 3 seconds. The 3 digits of the frequency or channel on the left of the LCD will begin to flash.

4-2 Press the SET button four times to enter the sensitivity adjustment screen.

(1)Press ▲or ▼button keys to adjust the microphone sensitivity in the range of -18~+12dB at an increment of 3dB.

(2)Press SET button to store.



5. Microphone Attenuate

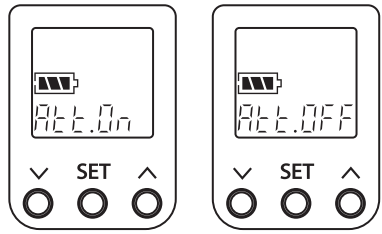
5-1 Press and hold SET button for 3 seconds. The 3 digits of the frequency or channel on the left of the LCD will begin to flash.

5-2 Press the SET button several times until "Att On" or "Att OFF" is displayed on screen.

(1)Press ▲: Att ON; -10dB attenuation.

(2)Press ▼: Att OFF; No attenuation.

(3)Press SET button to store.



6. RF Output Power Adjustment

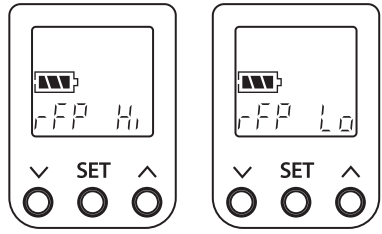
6-1 Press and hold SET button for 3 seconds. The 3 digits of the frequency or channel on the left of the LCD will begin to flash.

6-2 Press the SET button several times until "rF Hi" or "rF Lo" is displayed on screen.

(1)Press ▲: "rFP Hi", high transmitting power.

(2)Press ▼: "rFP Lo", low transmitting power.

(3)Press SET button to store.

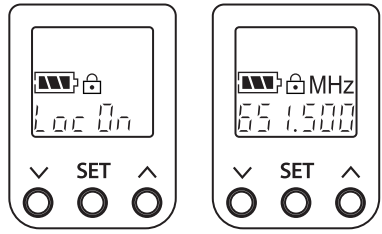


7. Setting key lock

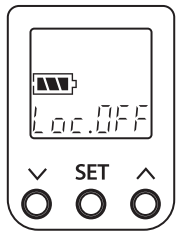
7-1 Press and hold SET button for 3 seconds. The 3 digits of the frequency or channel on the left of the LCD will begin to flash.

7-2 Press the SET button several times until "Loc On" or "Loc OFF" is displayed on screen.

(1)Press ▲: "Loc On" = the Body-pack panel key functions are locked. To unlock press and hold SET button for 3 seconds until "Loc On" starts to flash, press ▼ to unlock.



(2)Press ▼: “Loc OFF”.

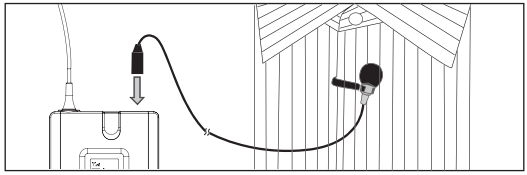


(3)Press SET button to store.

6-4 Installation of Condenser Microphones

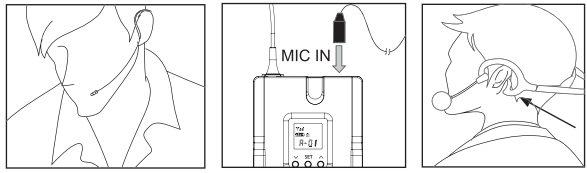
(1) Lavalier microphone

Attach the lavalier microphone to a tie, lapel or suitable postition for maximum sensitivity. Plug the connector into input socket on the body-pack transmitter.



(2) Headset microphone

Place the headband behind your head positioning the ear supports as shown below. Adjust the gooseneck for maximum microphone sensitivity. Plug the connector into the input socket on the body-pack transmitter.



7. Recommendations

(1) For optimum reception and maximum operating distance, please leave open space between the receiver and transmitter. E.g. Operation through walls will affect signal strength.
(2) Keep devices a minimum of 50cm away from large metal objects or souces of interference.
(3) To avoid feedback ensure the microphone is not aimed at loudspeakers.
(4) For best pick-up pattern, please hold the middle of the mic. body.
(5) Remove batteries from the battery compartment when the transmitter will not be used for a long time.
(6)When replacing the batteries, please replace both batteries at the same time with new ones.

8. Warranty

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 1 year warranty.

The product is guaranteed for 12 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 servicer/repair not in warranty or has been subject to customer abuse or incorrect wiring.

The guarantee is subject to the following provisions:

- The warranty does not cover accidental damage, misuse, cabinet part, 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 will the instructions supplied with the product.
- Unauthorised modifications and alterations to the original specifications will render the warranty void.
- The product must be used for the sole purpose that it was designed for.
- The warranty given is strictly with the original owner and becomes invalid if the product is resold or becomes damaged by inexpert repair.
- Product purchased outsides 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 warranty is in addition to and does not diminish your statutory legal rights.
- As part of a continuous product improvement programme we reserve the right to alter specifications without notice.

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As part of a continous product improvement programme, we reserve the right to alter specifications without prior notice.