JTS PROFESSIONAL CO., LTD.

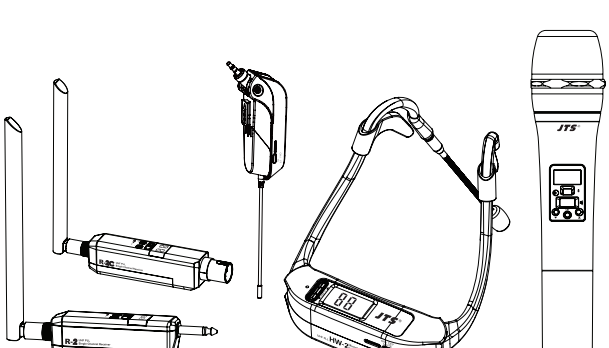
Instruction Manual

R-2/R-2C UHF PLL Miniature Wireless Receiver

TH-1D UHF PLL Handheld Transmitter

HW-2 UHF PLL Miniature Headworn Wireless Transmitter

UT-88G3 UHF PLL Guitar/Winds/Accordion/Acoustic guitar Transmitter



One year product warranty

Product Model		Equipment serial number	
Customer name		Contact number	
Address			
Purchase date			
Selling store stamp	Be sure to put store stamp and fill in purchase date for the warranty to be effective!		

Warranty description

1. Be sure to put the warranty label indicating purchase date on the bottom of equipment to ensure your interest in maintenance and service.
2. Product warranty, starting on the purchase date indicated on “warranty label”, will last for one year; if the equipment does not have “warranty label”, the warranty period is 15 months from the manufacturing date. If a microphone is broken but not sent back with the equipment, the warranty period is 15 months from the manufacturing date of the microphone.
3. Within the warranty period, if the equipment is broken under normal use as instructed in manual, please contact the original selling store for repair.
4. When the product is returned for repair, to facilitate proper determination of cause of malfunction and of whether repair fee is needed, please ship back the equipment and microphone together.
5. Within the warranty period, our company provides repair service at no cost except for the following conditions that parts and repair may be charged:
   a. Damages due to natural disaster or irresistible outside forces.
   b. Damages due to drop, water, moisture, corrosion, foreign objects, missing components.
   c. The warranty does not cover consumable parts. (such as microphone capsule, ball grille etc.)
   d. Those without “warranty label” on equipment or with “warranty label” being damaged and failing to identify warranty period.
6. Please keep the warranty properly. No replacement will be made if the warranty is missing.

INDEX

1. Notes for system operations 1
2. Features 1
3. Specifications 2
3-1 UHF PLL Miniature Wireless Receiver // R-2/R-2C 2
3-2 UHF PLL Miniature Headworn Wireless Transmitter // HW-2 3
3-3 UHF PLL Guitar/Winds/Accordion/Acoustic guitarTransmitter // UT-88G3 4
3-4 UHF PLL Handheld Transmitter // TH-1D 5
4. Description of parts 6
4-1 UHF PLL Miniature Wireless Receiver // R-2/R-2C 6
4-2 UHF PLL Miniature Headworn WirelessTransmitter // HW-2 7
4-3 UHF PLL Guitar/Winds/Accordion/Acoustic guitarTransmitter // UT-88G3 9
4-4 UHF PLL Handheld Transmitter // TH-1D 11
4-5 Accessories 12
5.Connecting 12
5-1 How to connect the receiver // R-2/R-2C 12
5-2 Install transmitter battery // UT-88G3 12
5-3 Install transemitter // UT-88G3 13
5-4 Transmitter installation // TH-1D 15
6. Instructions for use 16
6-1 How to use // R-2/R-2C 16
6-2 How to use // UT-88G3/HW-2 17
6-3 How to use // TH-1D 18
7. Notes for the product 20

1. Notes for system operations

- Before connecting the power, check that the power requirement shown on the unit is the same as the power output on the adaptor supplied.
- Do not leave the unit at where the humidity and temperature are high.
- Dry your hands before operating the system.
- Keep the unit away from fire and heat source.
- Turn the volume to minimum at both the mixer and amplifier before setting up the system.
- Caution : The suitable environment for this product is with a temperature between -10°C (14°F) and +50°C (122°F).

2. Features

- The frequency is in UHF band, which can avoid "frequency congestion" or signal interference.
- The system adopts UHF "Digital Locked Frequency Synthesis (DLS) System" for fast channel switching.
- The system provides up to 9 groups with up to 9 channels in each group, the number varies depending on different bandwidths.
- The most advanced receiver circuitry is adopted to avoid interruption or instability of signals.
- The built-in mute function and audio code lock loop function of the receiver can effectively suppress noise interference.
- With ergonomic design, it is easy to operate.

3. Specifications

3-1 UHF PLL Miniature Wireless Receiver // R-2/R-2C

Model	R-2	R-2C
Frequency Preparation	PLL Synthesized Control	
Carrier Frequency Range	470~960 MHz	
S/N Ratio	>100dB(A)	
T.H.D	<0.6%@1KHz	
Display	LED	
Display Contents	AF Status, Charge	
Controls	Power ON/OFF, Channel, Volume	
Audio Output Level	-15dB	
Audio Output Impedance	600Ω	
Squelch	Pilot Tone & Noise Mute	
Output Connector	Ø6.3mm Mono Plug	XLR balanced connector
Power Supply	5VDC/500mA	
Audio FR	50~17000Hz	
Battery	18650 li-ion	
Dimension(mm)	24.5(D)x33.2(H) x100(W)	24.5(D)x33.2(H) x120(W)

3-2 UHF PLL Miniature Headworn Wireless Transmitter // HW-2

Frequency Preparation	PLL Synthesized Control
Carrier Frequency Range	470~960 MHz
RF Outputs	MAX:10mW
Stability Frequency	±10KHz@Fc
Frequency Deviation	±48KHz
Display	LCD
Dual 7-Segment Display	Channel
Spurious Emissions	<-50dBc
Function	Power ON/OFF, Mute, Channel, Group, Sensitivity, Key Lock
Audio FR	50~17,000Hz
Controls	Power ON/OFF, Mute, Channel
Battery	AM4, AAA 1.5V Alkaline x1 or MiNH Rechargeable Battery x1
Dimension	30.5mm(W) x 28mm(H) x 95mm(D)
Selectable Frequencies	Group(MAX): 9 ; Channel(MAX): 9
Type	Condenser
Sensitivity (1KHz)	62±3 dB x (0.8mV) x 0dB=1V /µbar

3-3 UHF PLL Guitar/Winds/Accordion/Acoustic guitar Transmitter // UT-88G3

Frequency Preparation	PLL Synthesized Control
Carrier Frequency Range	470~960 MHz
RF Outputs	Maximum 10mW
Stability	<±10KHz@Fc
Frequency Deviation	±48KHz
Spurious Emissions	<-50dBc
Function	Power ON/OFF, Mute, Group, Channel, Sensitivity, Key Lock
Display	LCD
Input Connector	3.5mm Plug (6.35mm Adapter)
Battery	AM4, AAA 1.5V x1 alkaline or rechargeable battery x1
Note	Actual Product specifications may vary depending on model and region

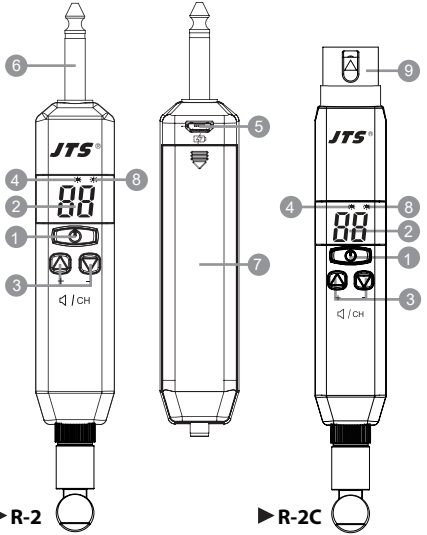
3-4 UHF PLL Handheld Transmitter // TH-1D

Frequency Preparation	PLL Synthesized Control
Carrier Frequency Range	470~960 MHz
RF output	3mW/10mW
Stability Frequency	<±10KHz@Fc
Deviation	±48KHz
Spurious Emissions	<-50dBc
Display Contents	Mute, Power ON/OFF, Group, Channel, Frequency, Auto Off, Battery Status
Display	LCD+LED
Controls	Power ON/OFF, Mute, Group, Channel, Frequency, RF power, Sensitivity, Auto Off, Key Lock
Battery	AM3, AA Alkaline x2 or rechargeable battery x2
Dimension(mm)	51mm(W)x269mm(H)

4. Description of parts

4-1 UHF PLL Miniature Wireless Receiver //R-2/R-2C

1. **Power ON/OFF**
2. **7-Segment LED Display**
3. **Volume/Channel**
4. **Power/AF indicator**
5. **DCV input (Charging hole)**
6. **6.3 GT plug**
7. **Battery cover**
8. **Charging indicator**
9. **XLR balanced connector (R-2C)**



▶R-2 ▶R-2C

4-2 UHF PLL Miniature Headworn Wireless Transmitter // HW-2

1. **Gooseneck**
2. **Left ear hook**
3. **Right ear hook**
4. **Battery cover**
5. **LCD display:** displaying the relevant content and parameters of the transmitter
6. **LED status indicator light:**
   (1) Green: full battery >1V
   (2) Green flash: transmitter in mute mode
   (3) Red: low battery ≦1V
   (4) Alternating flashing red and green: microphone in mute mode (low battery)
7. **Power button/mute button:**
   On: Press the button to turn on the power and press it again for the mute mode
   Off: Press the power button for 2 seconds until the screen shows power off
8. **Set key:** setting content parameters, including: group, channel, sensitivity, key lock
9. **Up/Down key:** Using the "SET" key to change parameter setting
10. **Adapter couplingx2:** Adjust the length of the goose tubes according to your personal situation. (Fig.1)

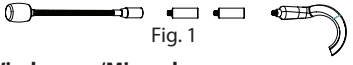
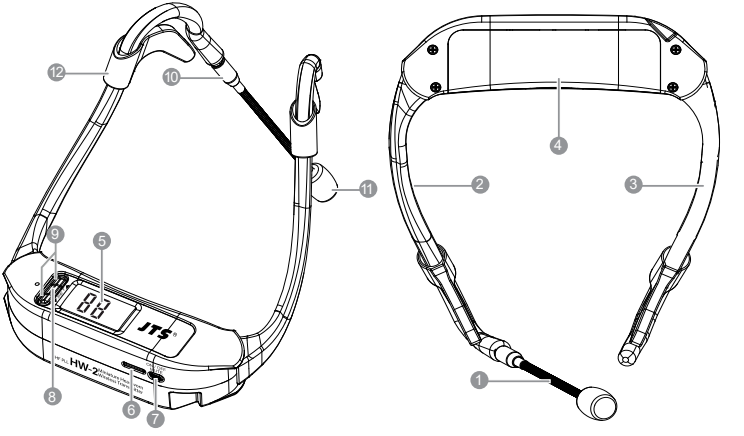


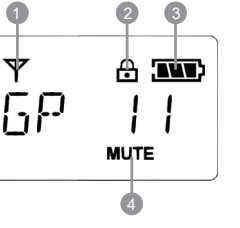
Fig. 1

11. **Windscreen/Microphone**
12. **Ear hookx2:** Adjust the ear hook distance according to your personal situation.



Display content in non-set mode // HW-2

1. : RF emission instruction
2. : Key Lock ON
3. : Battery indicator
4. MUTE : Mute ON



4-3 UHF PLL Guitar/Winds/Accordion/Acoustic guitar Transmitter // UT-88G3

1. **Power button/mute button:**

   On: Press the button to turn on the power and press it again for the mute mode

   Off: Press the power button for 2 seconds until the screen shows power off

2. **LED status indicator light:**

   (1) Green: full battery >1V

   (2) Green flash: transmitter in mute mode

   (3) Red: low battery ≦1V

   (4) Alternating flashing red and green: microphone in mute mode (low battery)

3. **LCD display:** displaying the relevant content and parameters of the transmitter

4. **Set key:** setting content parameters, including: group, channel, sensitivity, key lock

5. **Up/Down key:** Using the "SET" key to change parameter setting

6. **Audio plug:** Ø3.5mm (6.35mm Adapter)

7. **Battery cell:** supporting AM4, AAA 1.5V*1 alkaline or rechargeable battery

8. **Antenna:** RF antenna

9. **Battery cover (color) trim cover:** Blue/Gray/Almond

10. **6.3GT plug:** plug

11. **608G:** Acoustic guitar microphone module

12. **516GT:** accordion microphone module

13. **608S:** microphone module for wind instruments

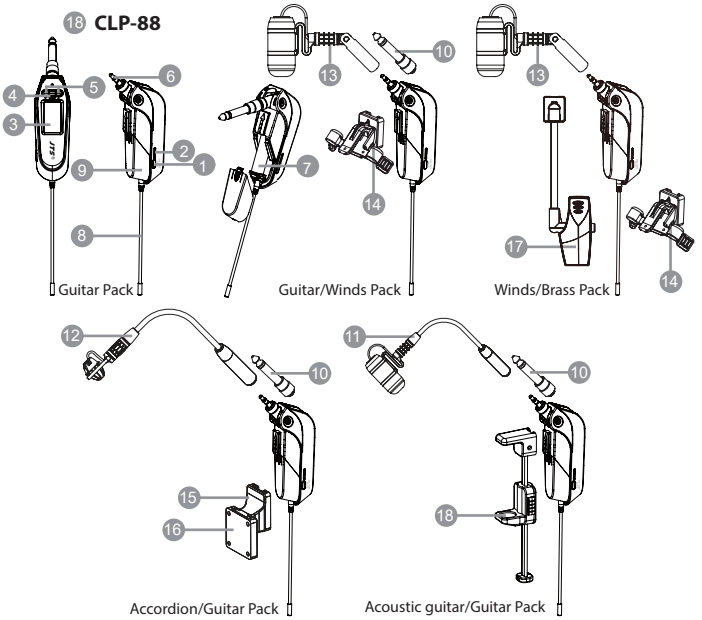
14 **608S Clip:** Wind instrument clamp

15 **16GT Adapter**

16 **516 Bracket**

17 **CLP-UT**

18 **CLP-88**



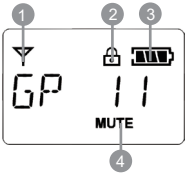
Display content in non-set mode // UT-88G3

1 : RF emission instruction

2 : Key Lock ON

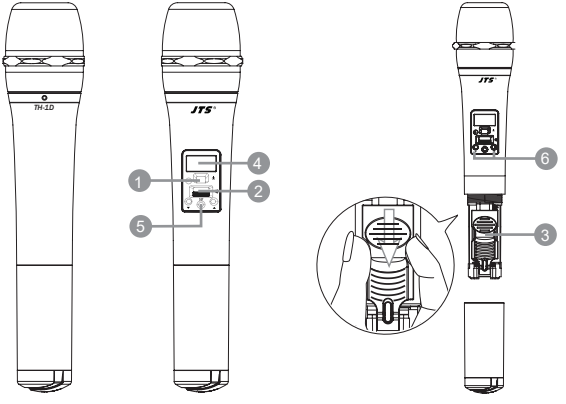
3 : Battery indicator

4 MUTE : Mute ON



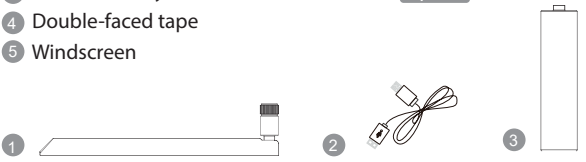
4-4 UHF PLL Handheld Transmitter // TH-1D

1. **Power:** push to turn the transmitter on. When the transmitter is on, push and hold for 2 seconds to turn it off.
2. **Mute:** while the transmitter is on, switch Mute up to talk and down to mute. If the transmitter is off, switch the Mute up to turn the unit on.
3. **Battery holder:** it holds AM3, AA 1.5V battery or rechargeable batteryx2.
4. **LCD display:** it shows the parameter settings in the transmitter.
5. **SET:** it allows parameter settings, including Power On/Off, Mute, Group, Channel, Frequency, RF power, Sensitivity, Auto Off, Key Lock.
6. **▲/▼:** these are used with "SET" to change the parameter settings. Press the ▲or▼ key frequency can be displayed.



4-5 Accessories

1. Antenna
2. Micro USB charging cable
3. lithium batteryx1(18650 li-ion/2400mAh) Option
4. Double-faced tape
5. Windscreen

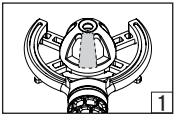


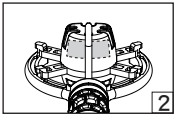
4

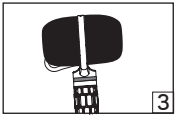
※ Apply double-faced tape to the upper and lower covers of the audio head to prevent the windshield from falling off easily. The fitting positions are shown in figures 1 and 2 below.

5

※Tear off the white non-adhesive surface of two pieces of double-faced tape and attach the windproof cover to the upper and lower covers of the audio head in the front-rear direction, as shown in Figure 3 below:



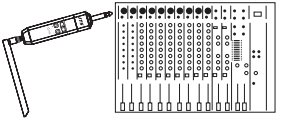




5. Connecting

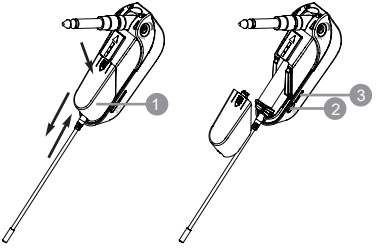
5-1 How to connect the receiver // R-2/R-2C

Plug the Ø6.3mm Mono plug of R-2 or the XLR balanced connector of R-2C into the audio input jack of the mixer or amplifier.



5-2 Install transmitter battery // UT-88G3

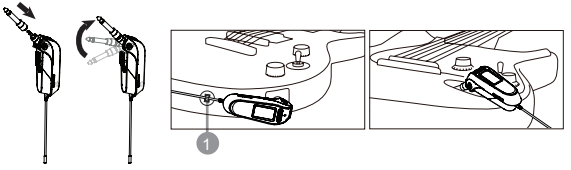
(1) Press the battery cover ❶ and slide out.
(2) Insert or replace a battery based on its polarity.
(3) Switch the power ❷ to ON. If the battery level is high, the LED indicator ❸ will emit green light. Once the battery is low, the LED indicator ❸ will turn red, and the remaining power will last only 30 minutes.
(4) Put back the battery cover.



5-3 Install transemitter // UT-88G3

(1) Use UT-88G3+6.3GT plug in electric guitar

1. Insert the 6.3GT plug into the transmitter and screw it to the end.
2. Insert the transmitter into the output hole of the electric guitar sound source.
3. When inserted into the output hole of the electric guitar sound source, the transmitter should be pushed to the end to fix it.
4. A chuck❶ is also used to fix the transmitter antenna to prevent the transmitter from shaking.



(2) Use 516GT/608S/608G for wind/accordions/Acoustic guitar/guitar.

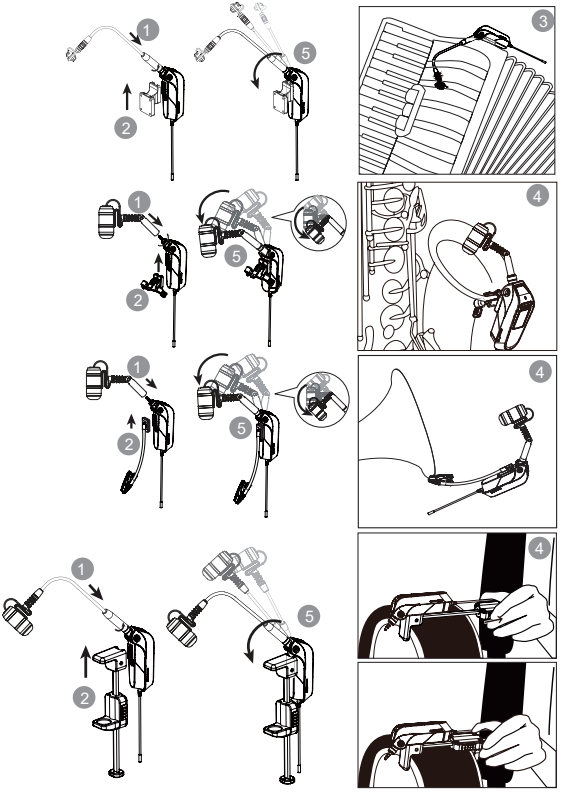
❶ Insert 516GT/608S/608G into the transmitter and screw it firmly to the bottom.

❷ Turn the screw on the 16GT Adapter/608S CLIP/ CLP-UT/ CLP-88 clock wise to attach the transmitter to the instrument.

❸ Fix 16GT Adapter + 516 Bracket on the accordion.

❹ Secure 608S CLIP/CLP-UT/CLP-88 to proper position.

❺ Adjust 516GT/608S/608G to appropriate position.



5-4 Transmitter installation // TH-1D

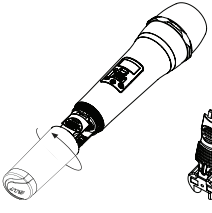
The Mute button on the hand-held unit also triggers the power-on. That's why the unit is on as soon as the batteries are replaced. Therefore, if you do not wish to turn on after changing the batteries, keep the Mute switch on mute.

1. Unscrew the outer tube of the transmitter (Figure 1).
2. Place AM3(AA) batteries in the battery holder while make sure they are in the correct polarities (Figure 2).
3. Screw the outer tube on (Figure 3).
4. To turn the unit on:

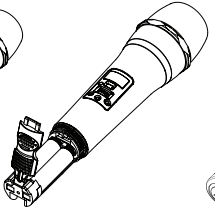
a. Push the power button to turn on (Figure 4a), or

b. Push the Mute switch up also to turn the unit on (Figure 4b).

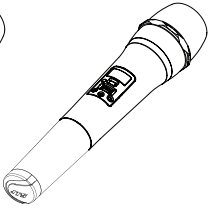
5. Set the transmitter parameters according to the instructions.



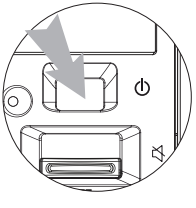
(Figure 1)



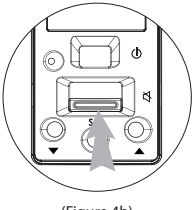
(Figure 2)



(Figure 3)



(Figure 4a)



(Figure 4b)

6. Instructions for use

6-1 How to use // R-2/R-2C

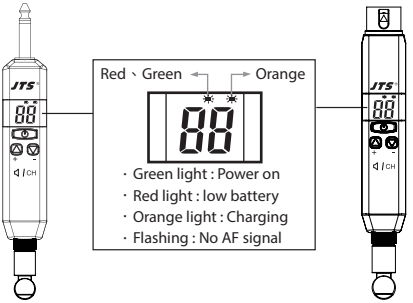
※To avoid damage to the amplifier, please turn on the power of the receiver and transmitter before turning on the amplifier.

(1) Turn on the power

1. First, turn off the power of the external amplifier or turn the volume down to the minimum.
2. Press and hold the power button for 3 seconds to turn on the power.
3. Then the 7-segment LED on the receiver will light up to indicate that the starting is normal.
4. Turn on the power with holding the wireless handheld microphone close to the receiver. Normally, the AF signal indicator light on the receiver will stop flashing.
5. Then turn the amplifier on and long press ▲ for 2 secs to adjust the volume to the appropriate level.

(2) Group Channel Switching

Long press ▼ for 2 secs till the dot flashes to enter setting mode. The first digit indicates the Group and the second digit is the Channel. The Group automatically +1 when the Channel reaches the maximum and vice versa. Wait for 10 secs till the dot stop flashing to complete the setting.



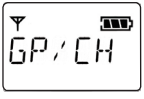
6-2 How to use // HW-2/UT-88G3

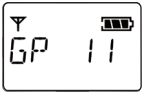
Parameter setting

Press SET button for 2 seconds to enter the set menu, press ▲ / ▼ to select the item to be set, and press SET for setting.

◎Group/Channel setting

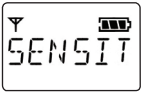
G	Select default groups 1 to 6
CH	Select the default channel, up to 22

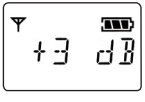




◎Microphone input sensitivity

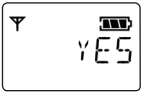
Normal sensitivity	GAIN：+15dB GAIN：+12dB GAIN：+9dB GAIN：+6dB GAIN：+3dB GAIN：0dB GAIN：-3dB GAIN：-6dB GAIN：-9dB GAIN：-12dB GAIN：-15dB

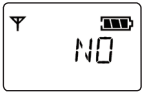




◎Reset

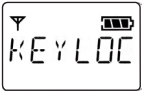
Yes	Reset to original manufacture settings
No	Cancel

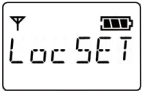




◎Key lock

Loc OFF	Lock OFF
Loc SET	Only lock the setting function; power and mute control are available
Loc ALL	Lock all keys, power and mute control are not available
Unlocking method	Press the SET key for 2 seconds to enter the setting page and select Lock OFF to unlock it.





◎Exit setting

6-3 How to use // TH-1D

Parameter setting

◎ LCD Backlight

●Backlight flashing: the microphone is muted.

●Red backlight: when battery power ≦2V and battery power <1.8V, the transmitter will be forced to enter the shutdown process.

●Red backlight flashing: the microphone is muted (low battery)

◎ channel setting

Figure 1	11 means it is currently set to Group 1, Channel 1
Figure 2	32 means it is currently set to Group 3, Channel 2

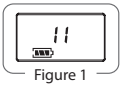


Figure 1

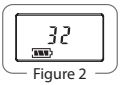


Figure 2

Press and hold "SET" button for 2 seconds to enter the setting mode, and then press ▲/▼ to select the parameter you want to set. The first digit means the group, and the second digit means the channel.

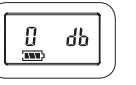
◎FREQ: frequency setting

In 1MHz	Select frequency with ▲ / ▼
In 0.025MHz	Select frequency with ▲ / ▼

Select the number of frequency first in 1MHz and then in 0.025MHz.

◎Microphone input sensitivity

Normal sensitivity	GAIN：+15dB GAIN：+14dB GAIN：～ GAIN：+2dB GAIN：+1dB GAIN：0dB (default) GAIN：-1dB GAIN：-2dB GAIN：～ GAIN：-14dB GAIN：-15dB



It shows the microphone input sensitivity is now at 0dB (default setting).

◎ RFP: RF microphone power

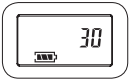
rFP Lo	3mW
rFP Hi	10mW

This shows that the RF output is LOW.

This shows that the RF output is HI.

◎ AUTO-OFF Automatic microphone off countdown under mute status

OFF	This function is deactivated
10	10 minute countdown to turn off
30	30 minute countdown to turn off



(The default setting is 10 minute.)

◎Key Lock

Loc OFF	Lock OFF
Loc ON	Loc ON

7. Notes for the product

(1) In order to achieve the optimum reception condition and also extend the operating distance, please leave on "open space" between the receiver and transmitter.
(2) Keep the devices away from the metal objects or any interference sources at least 50 cm.
(3) To avoid the feed-back effect, don't leave the mic. to aim at the speakers directly.
(4) Remove batteries from the battery compartment when the transmitter will not be used for a long time.

IMPORTANT NOTE

- The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- To comply with the FCC RF exposure compliance requirements, no change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.
- 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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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