JTS PROFESSIONAL CO., LTD.

UHF PLL

US-901D

WIRELESS SYSTEMS

Instruction Manual

Thank you for choosing the JTS wireless system. In order to obtain the best efficiency from the system, you are recommended to take few minutes to read this instruction manual carefully.

INDEX

1. Important Caution

- Always make all connections before plugging the unit into an AC power outlet.
- Do not leave the devices in a place neither with high temperature nor high humidity.
- Always do not handle the power cord with wet hands !
- Keep the devices away from fire and heat sources.

2. Features

- Operated in UHF band where there is less RF interference than the VHF band.
- Due to the PLL synthesized technology, the system can offer up to 961 selectable frequencies for choosing simultaneously.
- The true diversity reception with 2 independent RF receivers ensure the stable transmission and reception.
- Adjustable Pilot tone squelch control can effectively reduce the noise.
- Equipped with S.A.W. filter benefits the interference-resistant.
- Tuned antennas can benefit the stable RF reception.
- Built-in Noise Squelch circuity & Mute function are available to restrain the interference for signals.
- Compact half-rack receiver design is considerable for the space saving.
- Rugged metal housing can pass through the difficult environment.
- Equipped with balanced XLR and unbalanced output allow great convenience.
- Anti-interference design is available to work with every computer device.

3. Specification

3-1 Receiver // US-901D

Frequency Preparation.....	PLL Synthesized Control
Carrier Frequency Range	502~960 MHz
S/N Ratio.....	> 105dB
T.H.D.....	<0.6%@1KHz
Display.....	LCD
Display Contents.....	Frequency, Antenna A/B, Mute Display, RF/AF Level Meter, Battery Fuel 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.....	12-18 VDC, 200 mA
Output Connector.....	1 XLR Balanced Socket 1 Ø6.3mm Unbalanced phone jack
Dimension(m/m).....	211mm (W)* 40mm (H)* 125mm (D)

3-2 Handheld Transmitter // Mh-950 Mh-960

Frequency Preparation.....	PLL Synthesized Control
Carrier Frequency Range.....	502~960 MHz
RF Outputs.....	10mW
Stability.....	±10KHz
Frequency Deviation.....	±48KHz
LCD Display.....	Frequency, Battery Fuel 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.....	UM3, AA 1.5V*2

3-3 Body-pack Transmitter // PT-950B(mi)

Frequency Preparation	PLL Synthesized Control
Carrier Frequency Range	502~960 MHz
RF Outputs	10mW
Stability	±10KHz
Frequency Deviation	±48KHz
LCD Display	Frequency, Battery Fuel Gauge
Controls	Power On/Off, AF Level, Frequency Up/Down, Lock-on Mode
Spurious Emissions	<-50 dBC
Audio Frequency Response	40~18,000 Hz
Battery	UM3, AA 1.5V*2

3-4 Optional Condenser Microphone

Lavaliere Microphone // CM-501 CM-201 CM-125

Model No.	CM-501	CM-201	CM-125
Connector	4P Mini XLR	4P Mini XLR	4P Mini XLR
Frequency Response	100~15,000 Hz	60~15,000 Hz	50~18,000 Hz
Polar Pattern	Cardioid	Omni-directional	Omni-directional
Sensitivity (at 1000Hz)	-60±3 dB	-60±3 dB	-53±3 dB
Impedance	2.2kΩ	2.2kΩ	4.4kΩ
Max. SPL for 1% THD	130dB	130dB	130dB
Dimension(mm)	Ø10.1mm(W) * 26.4mm(H)	Ø5mm(W)* 9mm(H)	Ø4mm(W)* 11mm(H)
Net Weight	21.5g	20.7g	7g (cable excluded)

Headset Microphone // CM-204 CM-204U CM-204UL CM-225 CX-504

Model No.	CM-204	CM-204U	CM-204UL
Connector	4P Mini XLR	4P Mini XLR	801C3 (3 pin mini XLR) 801C4 (4 pin mini XLR) 801CS (3.5 stereo plug)
Frequency Response	60~15,000 Hz	30~18,000 Hz	100 ~ 18,000Hz
Polar Pattern	Omni-directional	Cardioid	Cardioid
Sensitivity (at 1000Hz)	-60±3 dB	-68±3 dB	-75±3 dB
Impedance	2.2kΩ	680Ω	1.5kΩ
Max. SPL for 1% THD	130dB	130dB	120dB
Dimension(mm)	125mm(W) * 134mm(H) * 157mm(D)	205mm(W) * 134mm(H) * 157mm(D)	125mm(W)* 134mm(H) * 157mm(D)
Net Weight	32.9g	38.4g	18g (cable excluded)

Model No.	CM-225	CX-504
Connector	4P Mini XLR	4P Mini XLR
Frequency Response	50~18,000 Hz	30~18,000 Hz
Polar Pattern	Omni-directional	Cardioid
Sensitivity (at 1000Hz)	-53±3 dB	-68±3 dB
Impedance	4.4kΩ	680Ω
Max. SPL for 1% THD	130dB	130dB
Dimension(mm)	155mm(W) * 134mm(H) * 157mm(D)	285mm(W) * 55mm(H) * 111.3mm(D)
Net Weight	17g (cable excluded)	56.3g

Ear-hook Microphone // CM-801 CM-804i CM-8015 CM-825i

Model No.	CM-801/CM-804i	CM-8015/CM-825i
Connector	801C3 (3 pin mini XLR)	801C3 (3 pin mini XLR)
	801C4 (4 pin mini XLR)	801C4 (4 pin mini XLR)
	801CS (3.5 stereo plug)	801CS (3.5 stereo plug)
Frequency Response	60 ~ 15,000Hz	50 ~ 18,000Hz
Polar Pattern	Omni-directional	Omni-directional
Sensitivity (at 1000Hz)	-64±3 dB	-53±3 dB
Impedance	1.8kΩ	1.2kΩ
Max. SPL for 1% THD	130dB	130dB

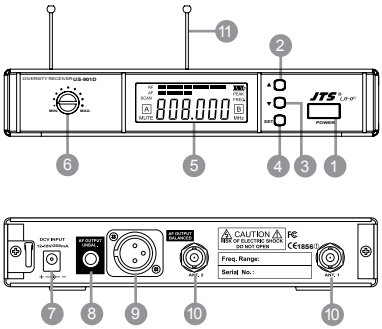
Instrument Microphone // CX-508W CX-516W

Model No.	CX-508W	CX-516W
Connector	4P Mini XLR	4P Mini XLR
Frequency Response	50~18,000 Hz	50~18,000 Hz
Polar Pattern	Cardioid	Cardioid
Sensitivity (at 1000Hz)	-67±3 dB	-67±3 dB
Impedance	220Ω	220Ω
Max. SPL for 1% THD	130 dB	130 dB

4. Parts Identification & Accessories

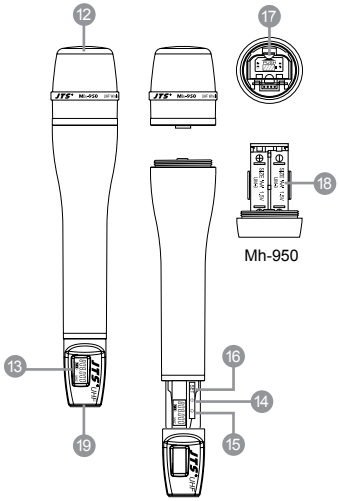
4-1 Receiver // US-901D

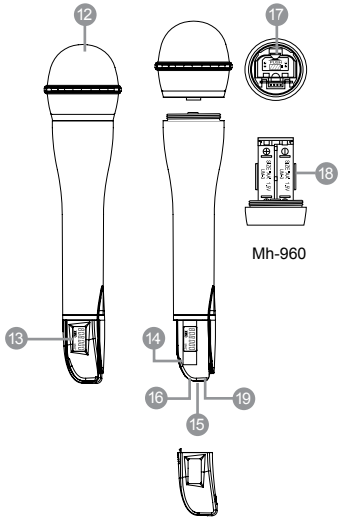
1. Power On/Off switch
2. Up button (frequency adjustment)
3. Down button (frequency adjustment)
4. Set button (frequency adjustment)
5. LCD Display
6. Volume control
7. DC socket for connection of main unit
8. AF output, jack socket (AF UNBAL)
9. Balanced XLR socket
10. Antenna input socket
11. Antenna



4-2 Handheld Transmitter // Mh-950 Mh-960

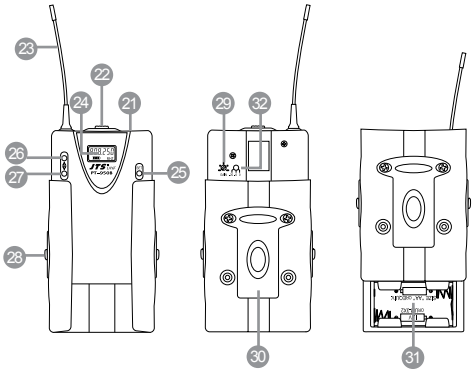
⑫ Interchangeable dynamic capsule
⑬ LCD display
⑭ Down button
⑮ UP button
⑯ Set button
⑰ Battery tray button
⑱ Battery tray
⑲ Power On/Off switch
⑳ Mute On/Off switch





4-3 Body-pack Transmitter // PT-950B(mi)

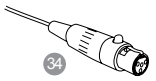
21 Mic. input
22 Power On/off switch
23 Antenna
24 LCD display
25 Set button
26 Up button
27 Down button
28 Battery tray button
29 AF level control
30 Belt clip
31 Battery tray
32 Attenuation pad

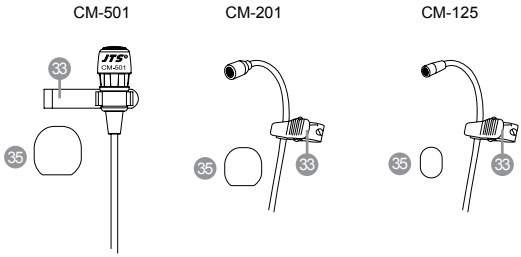


4-4 Optional Condenser Microphone

Lavaliere Microphone // CM-501 CM-201 CM-125

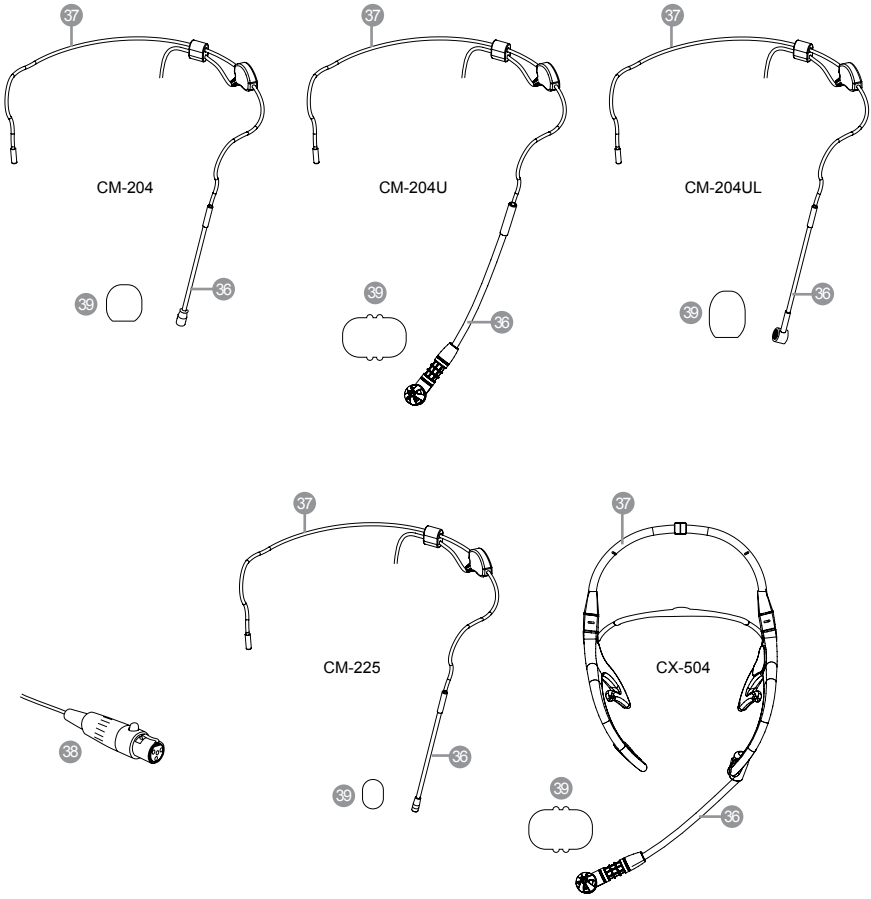
33 Clip
34 4 Pin Mini XLR
35 Windscreen





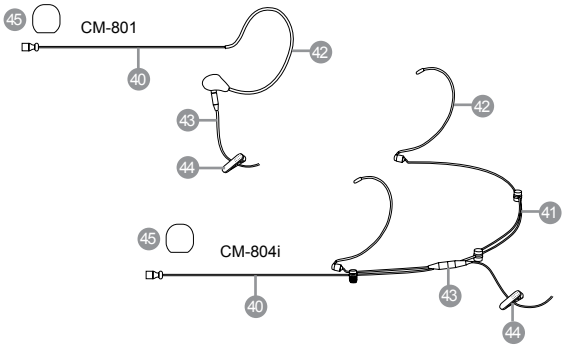
Headset Microphone // CM-204 CM-204U CM-204UL CM-225 CX-504

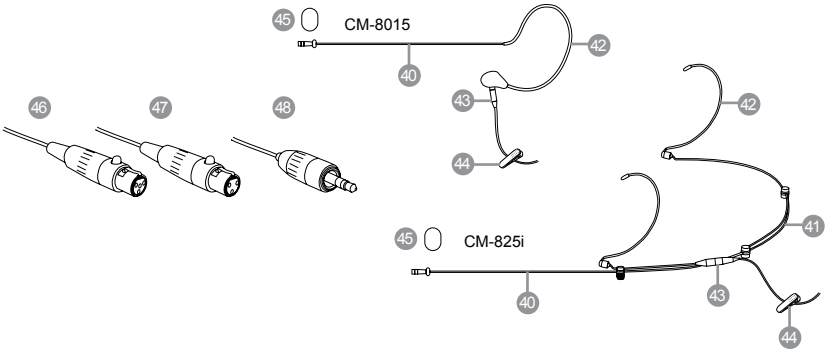
36 Gooseneck
37 Headband
38 4 Pin Mini XLR
39 Windscreen



Ear-hook Microphone // CM-801 CM-804i CM-8015 CM-825i

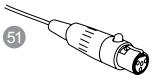
40 Boom
41 Adjustable Headband
42 Adjustable ear hook
43 Detchable Cable
44 Cable Clip
45 Windscreen
46 4 Pin Mini XLR
47 3 Pin Mini XLR
48 3.5 Stereo Plug

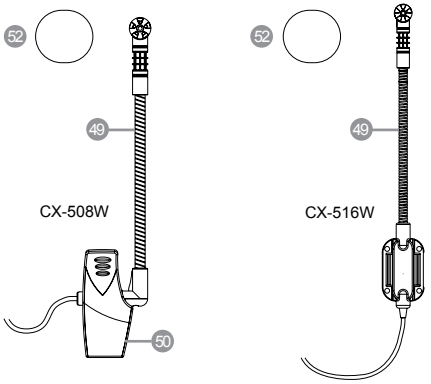




Instrument Microphone // CX-508W CX-516W

49 Gooseneck
50 Clip
51 4 Pin Mini XLR
52 Windscreen

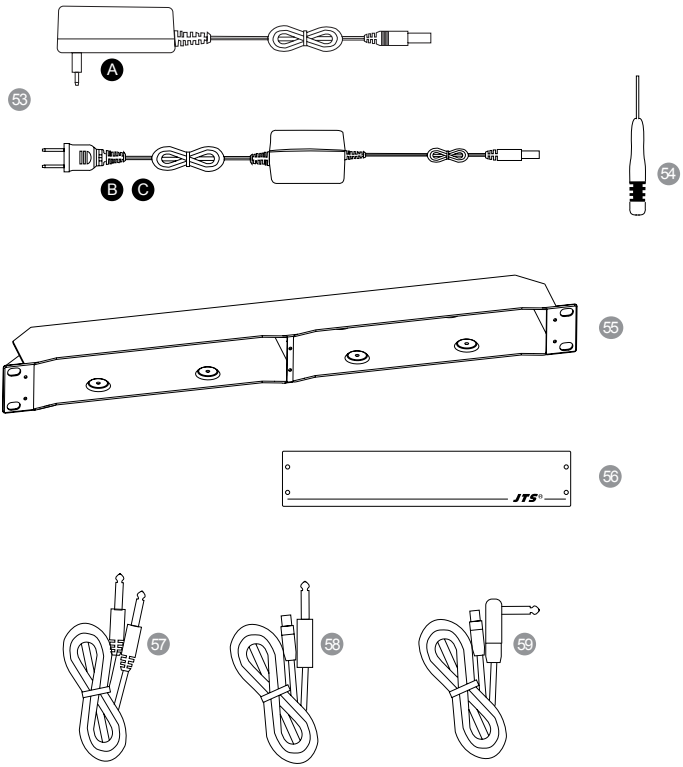




4-5 Accessories

53 AC/DC adaptor
- Ⓐ Switching Power Supply(100V~240V , 50~60Hz)
- Ⓑ Linear Power Supply (220V , 50Hz)
- Ⓒ Linear Power Supply (220V , 60Hz)

54 Screwdriver
55 DR-900 Dual Rack Adaptor Option
56 RP-900 Panel Cover Option
57 AF output cable (with Φ6.3 plug at both ends)
58 GC-80/GC-100 Guitar Cable Option
59 GC-80L/GC-100L Guitar Cable Option



5. Preparing Procedures & Basic Operation

5-1 Receiver // US-901D

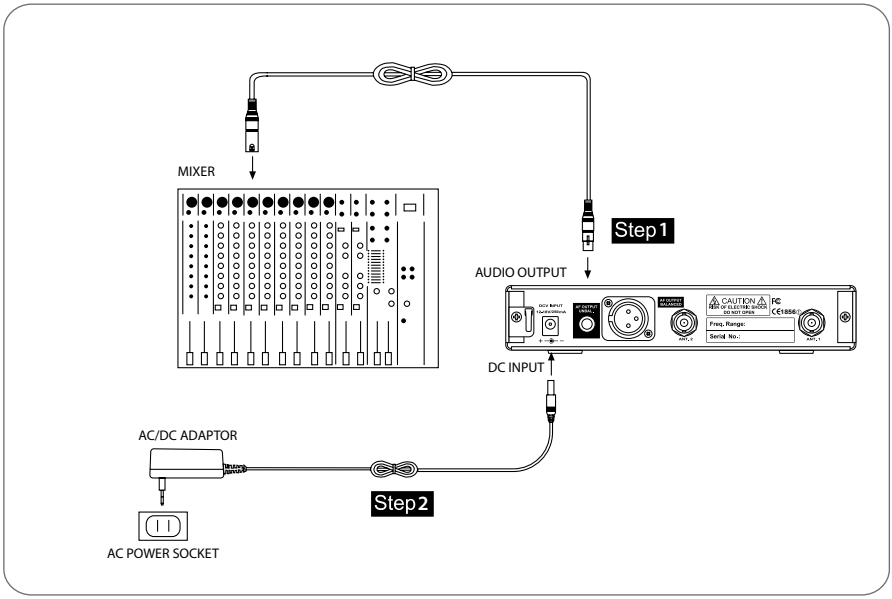
(1) Power output connector

Plug in one end of AC/DC adaptor cable to DC input socket in the rear panel of receiver, and plug another end into an AC outlet.(Step 1)

(2) Audio Output Connector

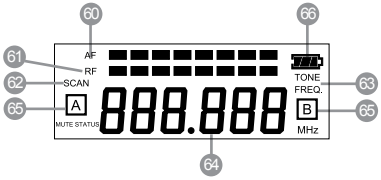
Connect one end of the AF output cable to the AF output socket in the rear panel, then plug another end to the "MIC IN" input socket of a mixer or amplifier.(Step 2)

Receiver equipped with balanced XLR output and Unbalanced φ6.3mm output, choose the proper way for use.



(3) LCD panel

60 AF signal
61 RF signal
62 Display for SCAN mode
63 Display for set FREQ. mode
64 Main display
65 Diversity display (A or B antenna)
66 Battery display for the transmitter



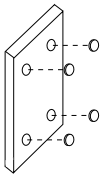
Basic operation

POWER Turning the receiver on and off by pressing the POWER button.

SET Press the SET button for 3 seconds to select frequency and scan.
Press the SET button again to store once you make any changes.
Press the UP or DOWN button to adjust the setting of a menu.

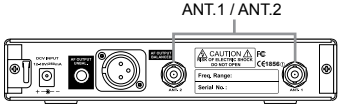
(4) Setting the rubber pad

Four self-adhesive rubber pads are provided to ensure the stability.
They are to be placed on the bottom side of the receiver.



(5) Connecting the antennas

The user-friendly receiver antenna comes with easy mount on socket for effortless connection. Connect two antennas on the back of the receiver and align them upward.

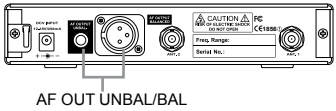


(6) Connecting the main unit

Plug in the DC connector on the back of the receiver (DCV INPUT).

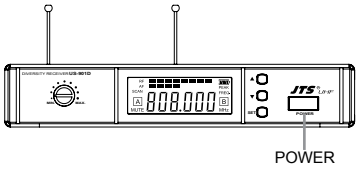
(7) Connecting the amplifier/mixer console

Plug in the amplifier/mixer console to the (AF OUT UNBAL / BAL) sockets.



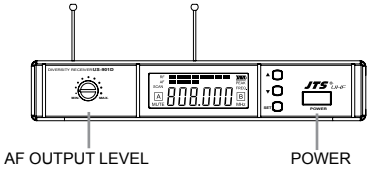
(8) Turning the receiver on/off

Turn the receiver on by pressing the (POWER) button.



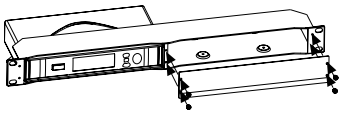
(9) Adjusting the AF output level

Use the AF output level control located on the front side of the receiver to adjustthe AF signal level that appears at output.



(10) Dual Rack Adaptor set

The dual rack adaptor is available to unify the half rack space into a standard EIA size with single or dual units.

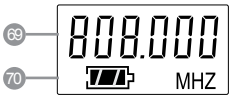


5-2 Handheld Transmitter // Mh-950 Mh-960

(1) Turning the transmitter on/off
The on/off switch is located on the bottom of the microphone.

(2) Inserting and changing the battery
1. Loosen the microphone head counter-clockwise. (Figure 1)
2. Hold on to both battery tray buttons to release it. (Figure 2)
3. Insert 2 pieces of UM-3 1. 5 V batteries, remember to match correct polarity. (step1 of Figure3)
4. Directly push the battery tray back. (step2 of Figure3)
5. Aim the connectors exactly for screwing on the microphone head clockwise. (Figure 4)

(3) LCDpanel
69 Main display
70 Battery indicator



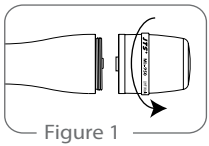


Figure 1

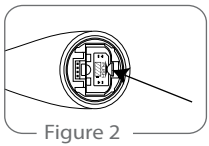


Figure 2

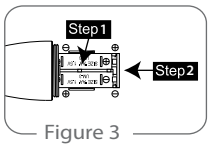


Figure 3

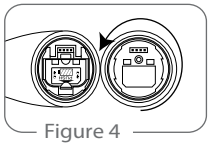
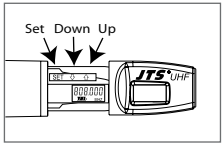


Figure 4

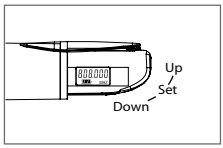
(4) Mh-950 Press the SET button to select between frequency and sensitivity.

1. Frequency adjusting
   Press the UP or DOWN button to adjust the setting of a menu.
   1-1 Hold SET button for 3 seconds to activate frequency.
   1-2 Once you see "MHz" blanking , you are ready to select your desired frequency by using UP and DOWN buttons.
   1-3 Press the SET button again to store your changes.
2. Sensitivity adjusting
   2-1 Press the SET button twice to select sensitivity. Lasting for 3 seconds at the first press, then 1 second for the second press, and the display appears SEnSit .
   2-2 Use UP and DOWN buttons to adjust changes.
   2-3 Finally press EET button again to store your changes.



(5) Mh-960 Press the SET button to select between frequency and sensitivity.

1. Frequency adjusting
   Press the UP or DOWN button to adjust the setting of a menu.
   1-1 Hold SET button for 3 seconds to activate frequency.
   1-2 Once you see "MHz" blanking , you are ready to select your desired frequency by using UP and DOWN buttons.
   1-3 Press the SET button again to store your changes.
2. Sensitivity adjusting
   2-1 Press the SET button twice to select sensitivity. Lasting for 3 seconds at the first press, then 1 second for the second press, and the display appears SEnSit.
   2-2 Use UP and DOWN buttons to adjust changes.
   2 -3 Finally press SET button again to store your changes.



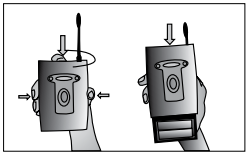
5-3 Body-pack Transmitter // PT-950B(mi)

(1) Turning the transmitter on/off

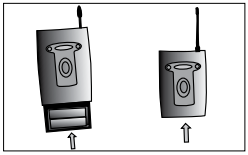
The on/off switch is located on the top of the transmitter.

(2) Inserting and changing the battery

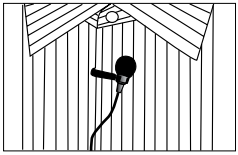
1. The battery tray is located on the back of the transmitter.
2. Hold on to both belt clip buttons to release it.



3. Insert 2 pieces of UM-3 1.5V batteries. Remember to match correct polarity.



4. Directly slide the belt clip back.

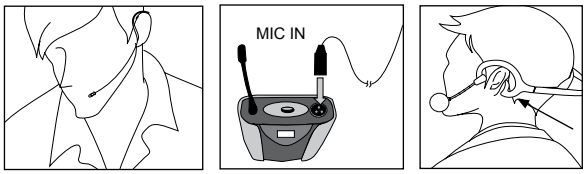


(3) With Lavalier microphone

Attach Lavalier microphone to clothing, tie, lapel, where is the suitable place of sound pick-up. Plug the mini XLR on the microphone cable into the "MIC. IN" on the body-pack transmitter.

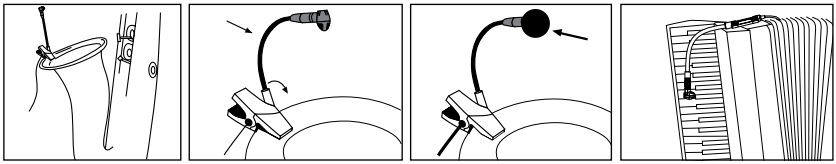
(4.) With Headset microphone

Put the neck-frame behind your neck meanwhile fix the temples on your ears. Adjust the gooseneck to aim the microphone toward the suitable sound source, which is about 1.5-2 inches distance from your mouth. Plug the mini XLR on the microphone cable into the "MIC. IN" on the body-pack transmitter.



(5) With Wind Microphone

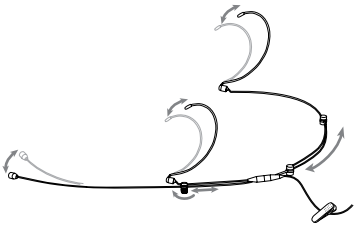
1. Outsanding for saxophone, brass, woodwind instruments.
2. Flesible gooseneck together with adjustable axis allow accurate sound source aiming.
3. Clamp with elastic grip ensures stable holding instrument without damaging.
4. Windscreen to prevent pop noise effectively.

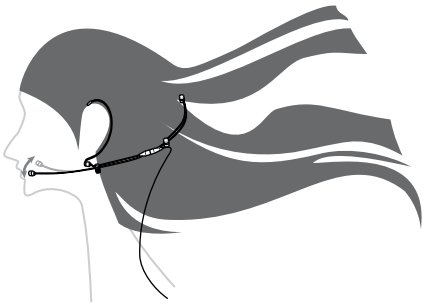


(6) Ear-hook Microphone

1. Lightweight Dual Ear Hook Microphone

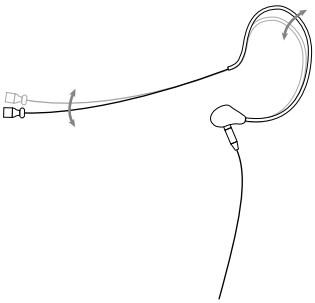
Try on whether the headset is fit.
Adjust the headband to a suitable width.
Tighten or loosen the curve of the ear-hook by twisting the loop or expanding it.
Curve and bend the boom to fit your face.
Attach the detachable cable to a suitable place by a cable clip.

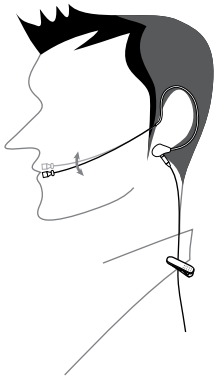




2. Lightweight Single Ear Hook Microphone

Try on whether the original curve is tight or loose.
Re-try and push the fixed curve against your earlobe.
Curve and Bend the boom to fit your face.
Attach the detachable cable to a suitable place by a cable clip.





(7) Basic operation

1. Frequency adjusting

1-1 Hold SET button for 3 seconds to activate frequency.

1-2 Once you see "MHz" blanking, you are ready to select your desired frequency by using UP and DOWN buttons.

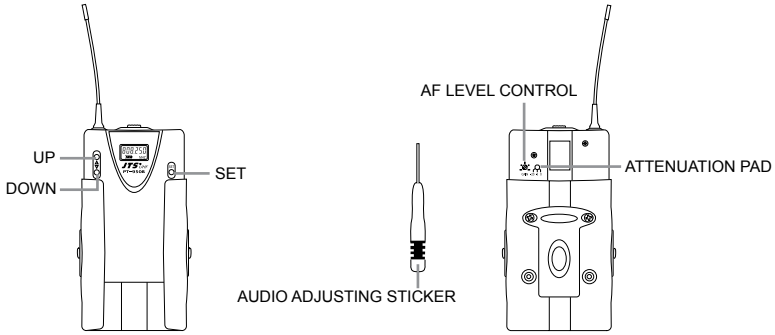
1-3 Press the SET button again to store your changes.

2. Sensitivity adjusting

The sensitivity control(AF level control) is in the up-left of the transmitter's back. Please use the adjusting sticker to adjust the proper level.

3. To activate "Lock mode"

Hold on to UP button for 3 seconds to activate "Lock mode", press again to unlock.(Prevent accidental programming or switching off)



6. Recommendation

(1) In order to achieve the optimum reception condition and also extend the operating distance, please leave a "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) 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 you need to replace the batteries, please replace both batteries at the same time with new ones.

7. Important notice

(1) JTS offers wireless systems in a selection of bands that conform to the different government regulations of specific nations or geographic regions. These regulations help limit radio frequency (RF) interference among different wireless devices and prevent interference with local public communications channels, such as television and emergency broadcasts.

(2) For information on bands available in your area, consult your local dealer or phone JTS. More information is also available at JTS's website (www.jts.com.tw).

(3) This Radio apparatus may be capable of operating on some frequencies not authorized in your region. Please contact your national authority to obtain information on authorized frequencies and RF power levels for wireless microphone products.

JTS®

US-901D/
Mh-950/Mh-960/PT-950B(mi)

RoHS conform FC CE 1856 !

59506-028-04