UHF PLL WIRELESS SYSTEMS

INSTRUCTION MANUAL

LICENSING REQUIREMENTS

This equipment complies with Part 74 of the FCC Rules.

A license is required for operation subjective device will be issued only to the following:

(1) A licensed of an AM, FM, TV or international broadcast station or low power TV station. Low power auxiliary stations will be licensed for used with a specific broadcast or low power TV station or combination of stations licensed to the same licensee within the same community.
(2) A broadcast network entity.
(3) A cable television system operator who operates a cable system that produces program material for origination or access cablecasting as defined in §76.5(r).
(4) Motion picture producers as defined in §74.801.
(5) Television program producers as defined in §74.801.
(6) Licensees an conditional licensees of stations in the Multipoint Distribution service and Multichannel Multipoint Distribution Service as defined in §21.2 of this chapter, or entities that hold an executed lease agreement with an MDS or MMDS licensee or conditional licensee or with an Instructional Television Fixed service licensee or permitted.

CAUTION

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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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.

1. Important Cautions

1-1 Always make all connections before plugging the unit into an AC power outlet.

1-2 Do not leave the devices in a place neither with high temperature nor high humidity.

1-3 Always do not handle the power cord with wet hands !

1-4 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 193 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

Model No.	US-9001D	US-901D
Frequency Preparation	PLL Synthesized Control	PLL Synthesized Control
Frequency Stability	±0.005%	±0.005%
S/N Ratio	> 100dB	> 100dB
Display	LCD	LCD
Display Contents	Frequency , Antenna A/B, Mute Status, RF/AF Level, Battery level	Frequency , Antenna A/B, Mute Status, RF/AF Level, Battery level
Controls	Power On/Off, Frequency Up/Down, Frequency Scan , Audio Level Volume	Power On/Off, Frequency Up/Down, Frequency Scan , Audio Level Volume
Audio Output Level	-12dB	-12dB
AF Output Impedance	600Ω	600Ω
Squelch	Pilot Tone & Noise Mute	Pilot Tone & Noise Mute
Operation Voltage	12VDC, 600mA	12VDC, 600mA
Output Connector	XLR Balanced/Unbalanced Φ6.3mm plug	XLR Balanced/Unbalanced Φ6.3mm plug
Dimension(m/m)	211mm(W) * 40mm(H) * 167mm(D)	211mm(W) * 40mm(H) * 152mm(D)

3-2 Transmitter

Model No.	Mh-950	Mh-960
Frequency Preparation	PLL Synthesized Control	PLL Synthesized Control
Carrier Frequency Range	494 ~ 870MHz	494 ~ 870MHz
RF Output	10mW	10mW
Stability	±0.005%	±0.005%
Frequency Deviation	± 48KHz	± 48KHz
S/N Ratio	> 102dB	> 102dB
LCD Display	Frequency, AF level, Battery level	Frequency, AF level, Battery level
Controls	Power On/Off, Frequency, AF level control	Power On/Off, Frequency, AF level control
Spurious Rejection	> -60 dBc	> -60 dBc
Dynamic Range	> +110 dB	> +110 dB
Audio Frequency Response	50Hz~15kHz	50Hz~15kHz
Battery	UM3,AA 1.5V * 2	UM3,AA 1.5V * 2

Model No.	Mh-8900	PT-950B
Frequency Preparation	PLL Synthesized Control	PLL Synthesized Control
Carrier Frequency Range	494 ~ 870MHz	494 ~ 870MHz
RF Output	10mW	10mW
Stability	±0.005%	±0.005%
Frequency Deviation	± 48KHz	± 48KHz
S/N Ratio	> 102dB	> 102dB
LCD Display	Frequency, AF level, Battery level	Frequency, Battery level.
Controls	Power On/Off, Frequency, AF level control	Power On/Off, Frequency, AF level control
Spurious Rejection	> -60 dBc	> -60 dBc
Dynamic Range	> +110 dB	> +110 dB
Audio Frequency Response	50Hz~15kHz	——
Battery	UM3,AA 1.5V * 2	UM3,AA.1.5V * 2

3-3 Condenser Microphone

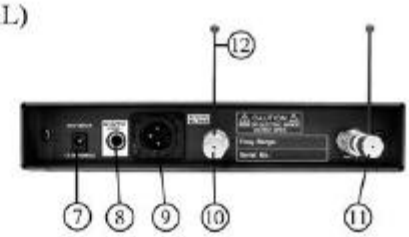
Model No.	CX-501	CX-504	CX-508W
Type	Lavalier	Headset	Wind Mic.
Frequency Range	100Hz~12,000Hz	50Hz~18,000Hz	50Hz~18,000Hz
Polar Pattern	Cardioid	Cardioid	Cardioid
sensitivty(at 1 kHz)	-70dB±3dB	-70dB±3dB	-67dB ± 30%
Impedance	2.2k Ω±30%	680 Ω±30%	220 Ω ±30%
Max SPL for 1%THD	130dB	130dB	130dB
Connector type	Mini XLR jack	Mini XLR jack	Mini XLR
Standard Accessories	Windscreen	Windscreen	Windscreen

4. Parts Identification & Accessories

4-1 True-Diversity Receiver

1.US-9001D

① Power On/Off switch
② Up button
③ Down button
④ Set button
⑤ LCD Display
⑥ Volume control
⑦ DC socket for connection of main unit
⑧ AF output, jack socket (AF UNBAL)
⑨ AF output, jack socket (AF BAL)
⑩ Antenna II input socket
⑪ Antenna I input socket
⑫ Antenna



2.US-901D

① Power On/Off switch
② Up button
③ Down button
④ Set button
⑤ LCD Display
⑥ Volume control
⑦ DC socket for connection of main unit
⑧ AF output, jack socket (AF UNBAL)
⑨ AF output, jack socket (AF BAL)
⑩ Antenna II input socket
⑪ Antenna I input socket
⑫ Antenna

4-2. Handheld Transmitter

1.Mh-950

① Interchangeable dynamic capsule
② Battery tray
③ Battery tray button
④ Power On/Off switch
⑤ Set button
⑥ Down button
⑦ Up button
⑧ LCD display

2. Mh-960

① Interchangeable dynamic capsule
② Battery tray
③ Battery tray button
④ Power On/Off switch
⑤ Set button
⑥ Down button
⑦ Up button
⑧ LCD display

3. Mh-8900

① Interchangeable dynamic capsule

② LCD display

③ Down button

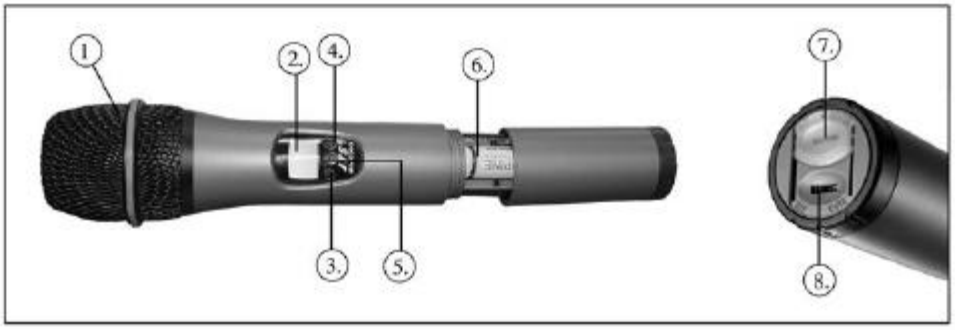
④ UP button

⑤ Set button

⑥ Battery tray

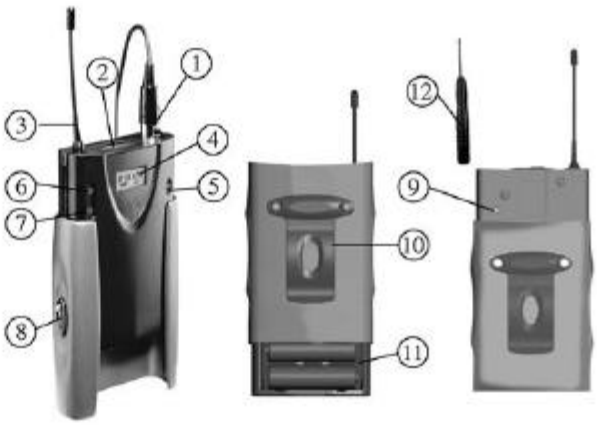
⑦ Power On/Off switch

⑧ Mute On/Off switch



4-3 **PT-950B** Body-pack Transmitter

① Mic. input
② Power On/off switch
③ Antenna
④ LCD display
⑤ Set button
⑥ Up button
⑦ Down button
⑧ Battery tray button
⑨ AF level control
⑩ Belt clip
⑪ Battery tray
⑫ Audio adjusting sticker



4-4 Condenser Microphone

(1) **CM-501** Lavalier Microphone

① Microphone
② Clip
③ Mini XLR
④ Windscreen

(2) **CX-504** Headset Microphone

① Microphone
② Gooseneck
③ Neck-Frame
④ Mini XLR
⑤ Windscreen

(3) **CX-508W** Wind Microphone

① Microphone
② Gooseneck
③ Neck-Frame
④ Mini XLR
⑤ Windscreen

4-5 Optional Accessories

(1) Dual Rack Adaptor Set

(2) Guitar Cable

5. Preparing procedures & basic operation

5-1 US-9001D/US-901D Receiver

(1.) Power output connector

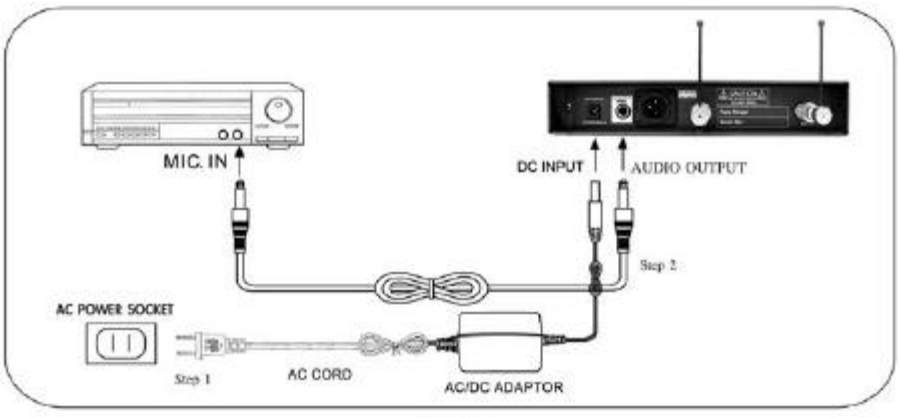
Plug in one end of AC/DC adaptor cable to DC input socket in the rear panel of receiver, and plug another end into an AC outlet

(Step 1 of Figure 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 of Figure 1).

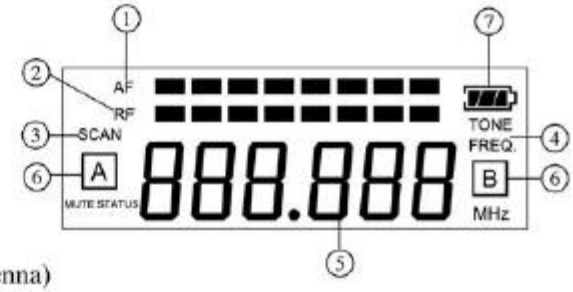
Receiver equipped with balanced XLR output and Unbalanced Φ 6.3mm output, choose the proper way for use.



(Figure 1)

(3.) LCD panel

1. AF signal
2. RF signal
3. Display for SCAN mode
4. Display for set FREQ. mode
5. Main display
6. Diversity display (A or B antenna)
7. 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.

5-2 Handheld Transmitter

1.Mh-950/Mh-960

(1) Turning the transmitter on/off

The on/off switch is located on the bottom of the microphone.

(Figure 2)

(2) Inserting and changing the battery

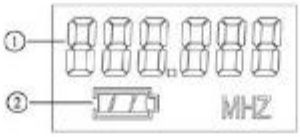
1. Loosen the microphone head counter-clockwise. (Step 1 of Figure 2)
2. Hold on to both battery tray buttons to release it. (Step 2 of Figure 2)
3. Insert 2 pieces of UM-3 1.5 V batteries, remember to match correct polarity. (Step 3 of Figure 3)
4. Directly push the battery tray back. (Step 4 of Figure 3)
5. Aim the connectors exactly for screwing on the microphone head clockwise. (Figure 4)

(Figure 3)

(Figure 4)

(3) LCD panel

1. Main display
2. Battery indicator



2.Mh-8900

1. Insert 2 pcs 1.5V batteries into the battery tray. (figure 1)
2. After putting into the battery, switch on the power on/off. (figure 2)

(figure 1)

(figure 2)

3. LCD operation
   (1.) Up button
   (2.) Down button
   (3.) SET button

(figure 3)

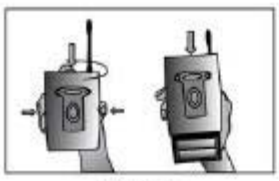
5-3 PT-950B Body-pack Transmitter

(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.



(Figure 5)

(Figure 6)

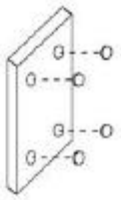
(Figure 7)

6. Preparing procedures

6-1 (US-9001D/US-901D Receiver)

(1.) Settling 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.



(2.) Connecting the antennas

The user-friendly **US-9001D/US-901D** antenna comes with easy mount on socket for effortless connection. Connect two antennas on the back of the receiver and align them upward.

(3.) Connecting the main unit

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

(4.) Connecting the amplifier/mixer console

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

(5.) Turning the receiver on/off

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

(6.) Adjusting the AF output level

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

6-2 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.

   -Hold SET button for 3 seconds to activate frequency.

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

   -Press the SET button again to store your changes.

2. Sensitivity adjusting

   -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".

   -Use UP and DOWN buttons to adjust changes.

   -Finally press SET button again to store your changes.

6-3 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.

   -Hold SET button for 3 seconds to activate frequency.

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

   -Press the SET button again to store your changes.

2. Sensitivity adjusting

   -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".

   -Use UP and DOWN buttons to adjust changes.

   -Finally press SET button again to store your changes.

6-4 Mh-8900 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.

-Hold SET button for 3 seconds to activate frequency.

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

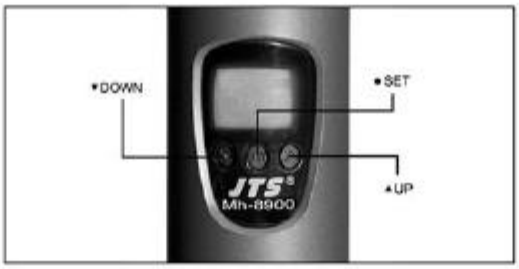
-Press the SET button again to store your changes.

2. Sensitivity adjusting

-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".

-Use UP and DOWN buttons to adjust changes.

-Finally press SET button again to store your changes.



UP button 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)

7. Preparing Procedures Of Condenser Microphone & Accesories

(1) With **CM-501** Lavalier microphone

Attach **CM-501** 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. (Figure 8)

(Figure 8)

(2) With **CM-504** 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. (Figure 9)

(Figure 9)

(3) 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.

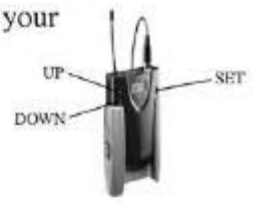
Basic operation

1. Frequency adjusting

-Hold SET button for 3 seconds to activate frequency.

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

-Press the SET button again to store your changes.



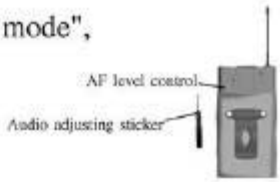
2. Sensitivity adjusting

-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"

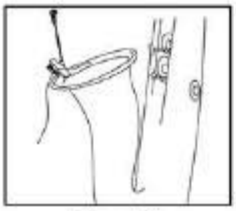
-Hold on to UP button for 3 seconds to activate "Lock mode", press again to unlock.

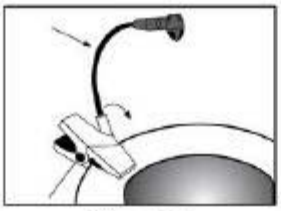
(Prevent accidental programming or switching off)

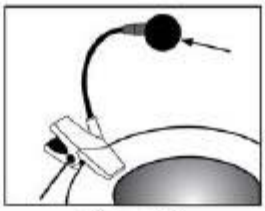


(4) With **CX-508W** Wind Microphone

1. Outsanding for saxophone, brass, woodwind instruments. (Figure 10)
2. Flesible gooseneck together with adjustable axis allow accurate sound source aiming. (Figure 11)
3. Clamp with elastic grip ensures stable holding instrument without damaging (Figure 12)
4. Windscreen to prevent pop noise effectively. (Figure 13)


(Figure 10)


(Figure 11)


(Figure 12)


(Figure 13)

8. 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.