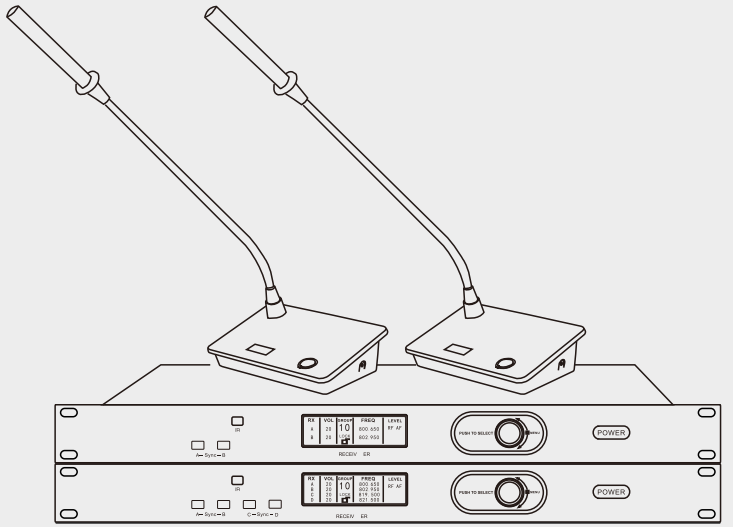
Symbols

Wireless Microphone System

- KM-2400 4-Channel
- KM-2200 2-Channel

Wireless Conferencing Microphone



【Operating Instructions】

PT-31 Wideband Body-pack Transmitter

Carrier Frequency Range	UHF 603-690 MHz
Oscillation	PLL synthesized
Harmonic radiation	＜-63dBm
Bandwidth	120MHz
Max. Deviation Range	±45KHz
Input Connector	4-pin mini-XLR connector
RF Power Output	15mW
Battery	AA X1
Current Consumption	90mA, typical
Battery Current / Life	Approximately 5 hours
Dimension	72(H) X68(W) X 21(D) (mm)
Weight	71g (w/o battery)

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Thank you for purchasing a professional wireless microphone system. Please carefully follow the instructions in this manual to ensure long, trouble-free use of your equipment.

1, Receiver Installation and Connections

Installation:

① For better operation the receiver should be at least 3ft. (1m) above the ground and at least 3ft. away from a wall or metal surface to minimize reflections.

② Attached a pair of UHF antennas to the antenna input jacks, the antenna are normally positioned in the shape of a “V” (both 45°from vertical) for best reception.

③ Keep antennas away from noise sources such as computer, digital equipment, motors, automobiles and neon lights, as well as away from large metal objects.

④ Keep open space between the receiver and transmitter for better reception.

⑤ The transmitter should be at least 3ft. from the receiver.

Connections:

① The switching power supply is designed to operate properly from any AC power source 100-240V, 50/60Hz without user adjustment. Simply connect the receiver to a standard AC power outlet, using only an IEC-type input cordset approved for the country use. Power to the unit is controlled by the front panel power switch.

② There are two audio outputs on the rear panel: an XLR microphone output and a 1/4” (6.3mm) phone jack instrument output. The two isolated audio outputs permit simultaneous feeds to two different inputs. Use the appropriate shielded audio cable for connections between the receiver and the input(s) of the mixer or other equipment.

TS-24 Conferencing Microphone

Carrier Frequency Range	UHF 603--666 MHz
Element	Fixed-charge back plate, permanently polarized condensers
Harmonic radiation	＜-65dBm
Bandwidth	60MHz
Max. Deviation Range	±45KHz
Input Connector	4-pin mini-XLR connector
RF Power Output	15mW
Battery	AAX2
Current Consumption	120mW, typical
Battery Current / Life	Approximately 7 hours

HT-31 Wideband Handheld Microphone

Carrier Frequency Range	UHF 603-690 MHz
Oscillation	PLL synthesized
Harmonic radiation	＜-65dBm
Bandwidth	120MHz
Max. Deviation Range	±45KHz
Microphone Element	Cardioid Dynamic
RF Power Output	15mW
Battery	AA X 2
Current Consumption	90mA, typical
Battery Current / Life	Approximately 10 hours
Dimension	54(Φ) X 257 (L) (mm)
Weight	315g (w/o battery)

5, Specifications

Receiver

Main Frame Size	EIA-Standard 19" 1U
Frequency Stability	±0.005%, Phase Lock Loop frequency control
Carrier Frequency Range	UHF 603-666 MHz
Preset Groups	10 preset groups
Operating Range	60M typical (in open space)
Oscillation	PLL synthesized
Sensitivity	6dBμV, S/N>60dB at 25 deviation
Band Width	30MHz
Max. Deviation Range	±45KHz
S/N	＞105dB
T.H.D.	＜0.7% @ 1KHz
Frequency response	45Hz～18KHz±3dB
Squelch	“PiloTone & NoiseLock” dual-squelch circuit
Power Supply	100-240V AC50/60 Hz, 10W
Output Connector	XLR balanced & 6.3φ phone jack unbalanced

2, Receiver Controls and Functions

Receiver Features:

① Rugged metal chassis with soft-touch controls.

② Total 300 selectable frequencies and preset 10 interference-free groups.

③ Up to 16 simultaneous transmitting units.

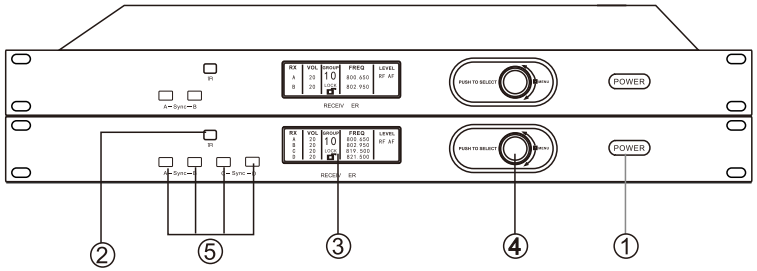
④ Transmitter Sync.

⑤ LCD Displays: RF Level, Audio Level, Battery Life, Antenna Status, Channel.

⑥ Equipped with both XLR balanced and Ø6.3mm unbalanced outputs.

⑦ Ideal for meetings, seminars, courtrooms, house of worship services, broadcast and conference applications.

Figure 1: Front Panel



① Power Switch.

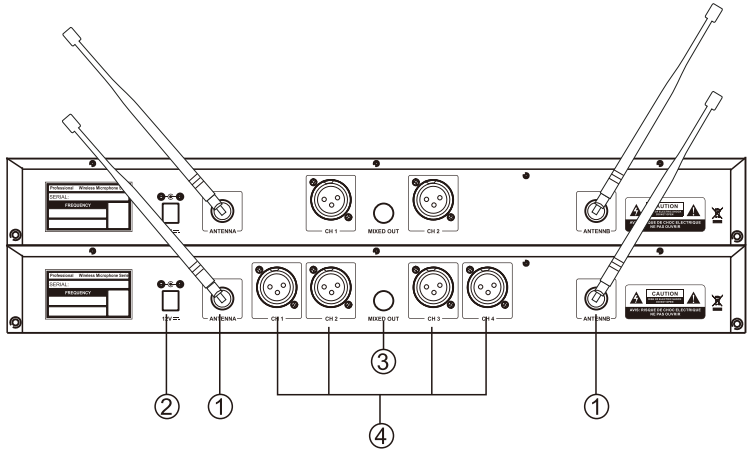
② Infrared Data Transfer Window (IR) for all 4 channels: Transmit receiver data to the transmitter.

③ LCD Window for all 4 channels: Liquid Crystal Display indicates control setting, and operational readings.

④ Smart menu-driven Control Knob: Rotate this knob to select function options and edit function choice.

⑤ Infrared Data Transfer Button (SYNC): Press this button to transmit data from receiver to transmitter. From Channel A to channel D buttons.

Figure 2: Rear Panel



① Antenna Input Jack: BNC type antenna connector, attached the antenna directly.
② DC Power Output Jack: 12V-16V / 1000mA.
③ Unbalanced Mixed Output Jack: Unbalanced Mixed Output Jack: 1/4" (6.3mm) phone jack. Can be connected to an aux-level input of a mixer, guitar amp or tape recorder.
④ Balanced Output Jack: XLR type connector. A standard 2 conductor shielded cable can be used to connect the receiver output to a balanced microphone level input on a mixer or integrated amplifier.

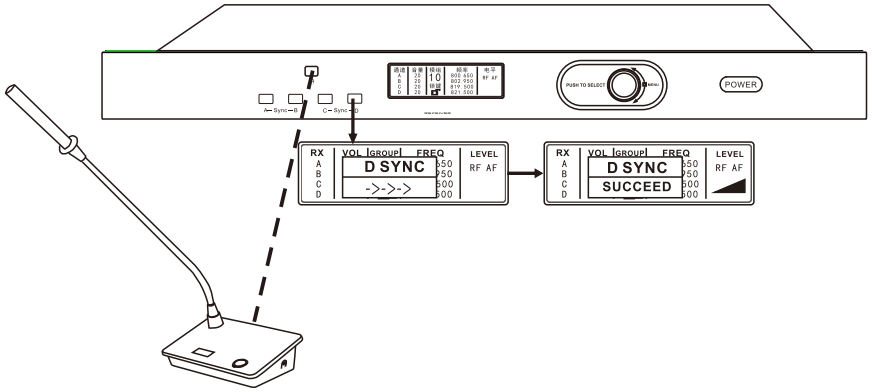
3, Option for the wireless transmitters

Wireless Conferencing Microphone :
Features:

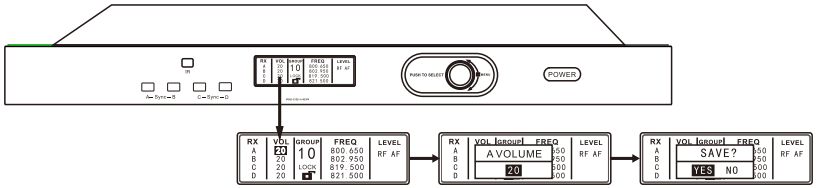
① Delicate and fashion design, easy to use.
② With illuminated ring.
③ Unidirectional condenser microphone for high quality sound pickup.
④ Infrared automatic transmitter sync.
⑤ 2 x AA batteries – up to7 hours continue use.

Transmitters Setup

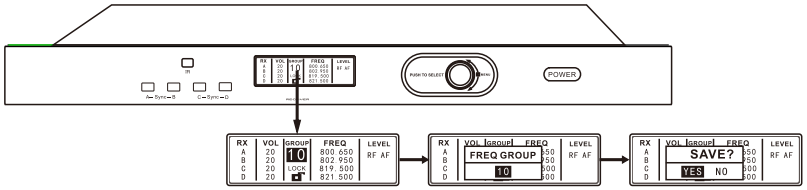
① Turn on one transmitter.
② Frequency setup: To let the transmitter IR receiving window face to the one of receiver IR data transfer windows, then press "SYNC" button, the transmitter will receive the frequency / channel dada from the receiver, simultaneously you can see RF signal from the LCD display. (Figure 6).
③ Turn on the other transmitters, then do the same setup.



a) VOL (volume): Selecting “VOL”(highlights), push the Control Knob once to enter the edit mode, rotate the knob to scroll through the available choice for the function. The volume level is providing a 20dB range. Then push the knob to save “YES' or “NO'.



b) GROUP: Selecting “GROUP” (highlights), push the Control Knob once to enter the edit mode, rotate the knob to change the group, there are 10 interference-free group channels available. Then push the knob to save “YES' or “NO'.



c) LOCK, Selecting “LOCK”(highlights), push the Control Knob once to enter the edit mode, rotate the knob to select “ON” or “OFF”. Then push the knob to save “YES' or “NO'.

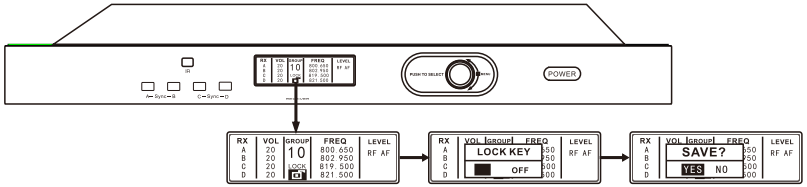
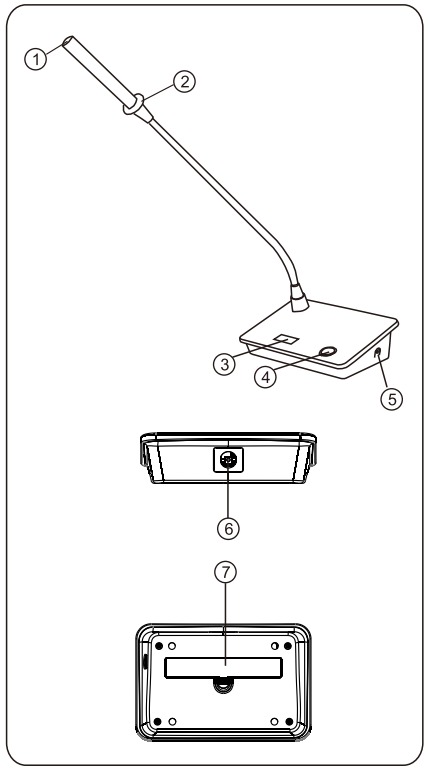


Figure 3:

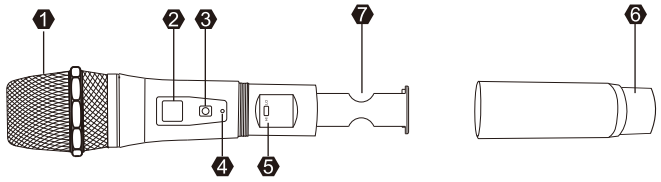


① Microphone: Pick up the sound.
② Microphone in-use indicator: Lights when the microphone is turned on (for speech) and flashes when the battery level is low.
③ LCD Window: Liquid Crystal Display indicates operational frequency and battery condition.
④ Talk key: When this key is pressed, the Microphone In-use indicator lights, and the microphone turns on. Pressing this key again extinguishes the indicator and turns off the microphone.
⑤ Power switch: Switch on / off the power.
⑥ Infrared Data Receiving Window (IR): Use to receive the data from receiver.
⑦ Battery Compartment: Insert 2 fresh 1.5V AA batteries. (Alkaline type is recommended, always replace both batteries.) Observe correct polarity as marked inside the battery compartment.

Handheld Microphone :
Features:

① All rugged metal die-cast construction.
② At ultra-wide bandwidth of 120MHz.
③ Extremely low handling noise.
④ Infrared automatic transmitter sync.
⑤ LCD display with channel and battery life indicator.
⑥ 2 x AA batteries – up to 10 hours continue use.

Figure 4:



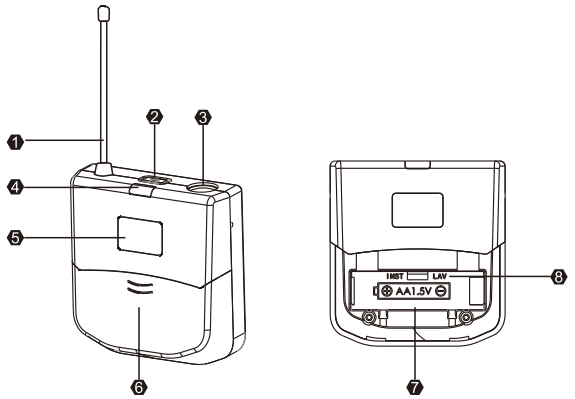
① Microphone Head.
② LCD Window: Liquid crystal display indicates operational frequency, channel and battery life.
＊ The transmitter's “fuel gauge” battery indicator displays a maximum of 3 bar segments. When it leaves 1 bar segment, the transmitter' batteries should be replaced immediately to ensure continued operation.
③ Infrared Data Receiving Window (IR): Use to receive the data from receiver.
④ Power Button.
⑤ RF switch for Low / High.
⑥ Battery Cover: Unscrew it can reveal the battery compartment.
⑦ Battery Compartment: Insert 2 fresh 1.5V AA batteries. (Alkaline type is recommended, always replace both batteries.) Observe correct polarity as marked inside the battery compartment.

Body-pack Transmitter：

Features:

① Rugged, ergonomically designed housing.
② LCD display with channel and frequency.
③ 120MHz bandwidth.
④ Equipped with 4 pin mini XLR connector.
⑤ Infrared automatic transmitter sync.
⑥ 1 x AA batteries – up to 5 hours continue use.

Figure 5:



① Antenna.
② Power Button.
③ Audio Input Jack: To connect 4-pin mini-XLR connector.
④ Infrared Data Receiving Window (IR): Use to receive the data from receiver.
⑤ OLED Window: OLED display indicates operational frequency, channel, battery life and audio input type.
⑥ Battery Door Switch: Open the battery door by sliding the switch.
⑦ Battery Compartment: Insert 1 fresh 1.5V AA batteries. (Alkaline type is recommended, always replace both batteries.) Observe correct polarity as marked inside the battery compartment.
⑧ INST / LAV Audio Input Switch: Connect an audio input device (lavalier microphone or instrument cable) to the audio input jack on the top of the body-pack transmitter. Choose LAV for microphone input, then INST for instrument cable to connect with guitar or other instruments.

4, System Setup

Receiver Setup:

① Turn down the AF level of the associated mixer or amplifier, and make sure that any transmitters are turned off.
② Turn on the receiver, the LCD displays the preset data. Per A, B, C ,D, total 4 channels.
③ Rotate the Control Knob once to select VOL (volume), GROUP, or LOCK.
④ The selected menu highlights.
⑤ To enter the edit mode: Push the Control Knob once to enter the edit mode.