

M PROFESSIONAL WIRELESS MICROPHONE

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OPERATION INSTRUCTION

M PROFESSIONAL WIRELESS
MICROPHONE

English

INTRODUCTION

This new Series system is designed to give you the best of both sound reinforcement worlds: the freedom of a wireless system, and the reliability of world-famous sound quality. This manual covers each of the Series systems: The Vocal Artist-VHF, The Presenter-VHF, The Headset-VHF, and The Guitarist-VHF.

SYSTEM FEATURES

All Series systems offer a variety of exceptional features, including:

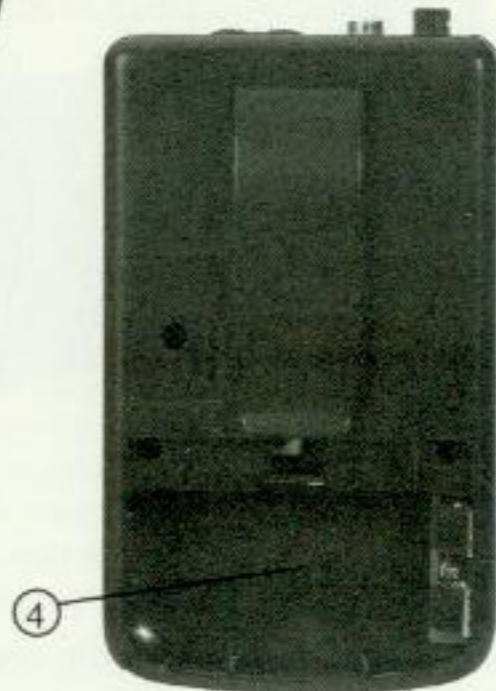
- **Diversity Receivers with Exclusive MARCAD Circuitry:** MARCAD (MAXimum Ratio Combining Audio Diversity) circuitry continuously processes the rf signal from each antenna and combines the audio outputs to produce one signal of optimum quality. The result is improved reception and exceptional freedom from dropouts.
- **Low-Traffic VHF Transmission:** systems use a VHF range between approximately 210 to 267 MHz (available frequencies depend on regulations in the country where the system is used).
- **Multiple System Use:** Up to multiple systems can be used in the same performance space. Each system must be set at a different frequency. If systems are set to the same frequency, contact an authorized dealer. **NOTE:** In multiple use situations, each transmitter must have a dedicated receiver.
- **Simultaneous Output Use:** Unbalanced 1/4 phone plug and balanced XLR output connectors may be used simultaneously to different external devices.
- **Stackable and Rack-Mountable Receivers:** If multiple systems are in use, receivers may either be stacked or rack-mounted, with two receivers fitting in the optional rack mount tray. In these situations, antennas should not touch or be crossed. (See Stacking and Rack-mounting Receivers.)
- **Range:** Series transmitters will work at a distance of up to 100 meters (about 300 ft.) from the receiver.
- **Noise Squelch:** The noise squelch circuit analyzes signal quality instead of signal strength, which allows the circuit to discriminate between noise and desired signal. This reduces the likelihood of noise burst due to environmental rf (radio frequency) noise.
- **Semi-Rigid Receiver Antennas:** Three-inch rubberized antennas offer performance equal to telescoping antennas with added durability.
- **Low Battery Warning Light:** A red light on the body-pack and hand-held transmitters warns the user that there is less than one hour of battery life left.

BODY-PACK TRANSMITTER FEATURES(FIGURE 3)

• LAVALIER MICROPHONE



BODY-PACK TRANSMITTER

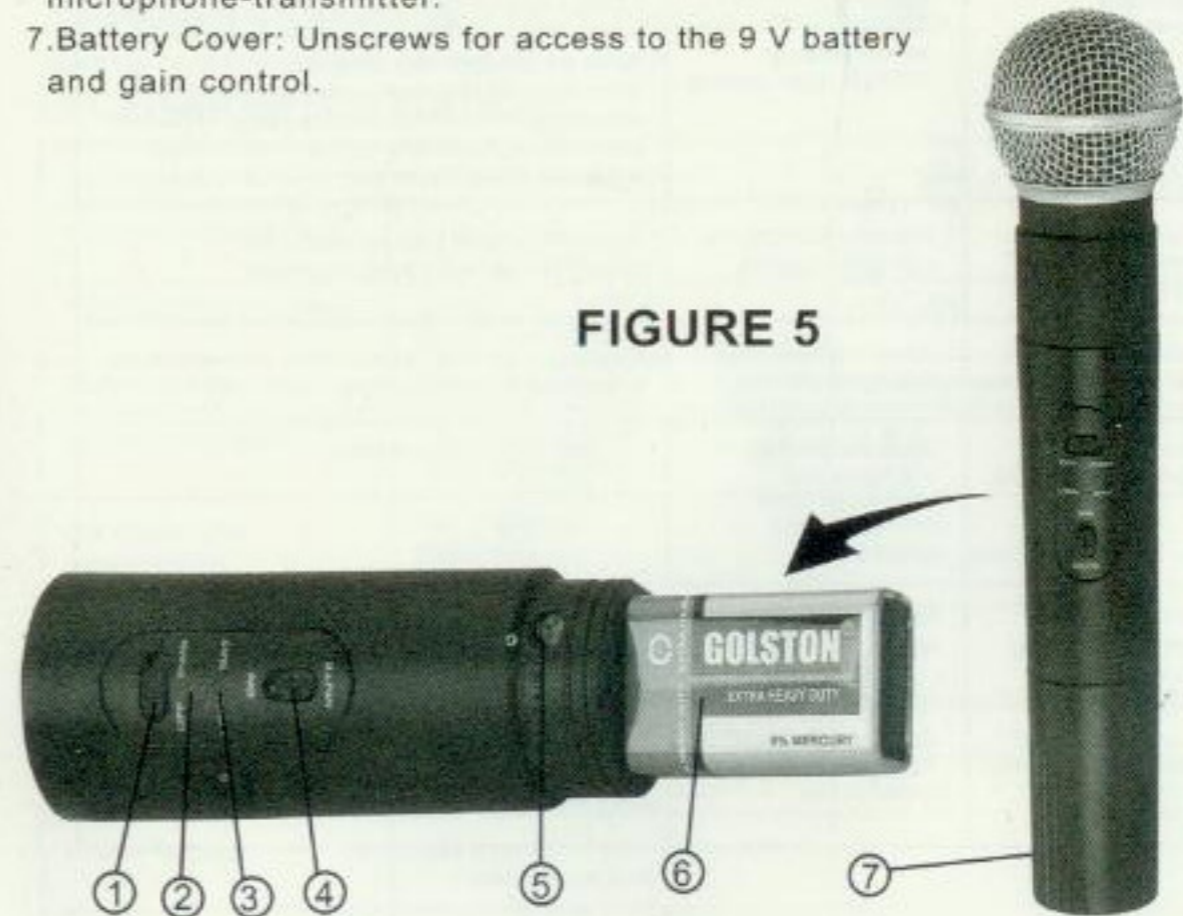


1. **Power/Off Switch:** Turns transmitter power on and off.
2. **Transmitter power indicator:** To indicate transmitter's inside battery power condition.
3. **Input hole of wireless microphone:** Wireless microphone input hole.
4. **Battery Compartment:** Holds one 9V battery. Hinged cover opens to provide access to the battery.
5. **Audio Gain Control:** Allows the level of vocals to be matched with the transmitter for better performance.

MICROPHONE-TRANSMITTER FEATURES(FIGURE 5)

1. **Power/Off Switch:** Turns the transmitter on and off. It is recessed to prevent it from being accidentally turned off.
2. **Power On Indicator:** Green light glows when the POWER/OFF switch is in the POWER position, as a reminder to turn the transmitter off when it is not in use.
3. **Low Battery Indicator:** A red light glows when there is one hour or less of useful operating time, allowing battery to be changed before power is depleted.
4. **ON/Mute Switch:** Allows muting of the microphone audio, avoiding the "thump" noise that can occur when turning the transmitter on and off.
5. **Audio Gain Control:** Allows the level of vocals to be matched with the transmitter for better performance.
6. **9 V Battery (shown installed):** Provides power to the microphone-transmitter.
7. **Battery Cover:** Unscrews for access to the 9 V battery and gain control.

FIGURE 5



TROUBLESHOOTING

PROBLEM	INDICATOR STATUS	SOLUTION
No sound.	Green transmitter POWER light off.	Slide transmitter POWER ON/OFF switch to ON position. Make sure battery is inserted properly observing battery polarity("+ / - "). If battery is inserted properly, replace with fresh battery.
No sound.	Green transmitter POWER light glowing.	Slide transmitter MUTE/ON switch to ON position.
No sound.	Green receiver POWER light off.	Make sure ac adapter is securely plugged into electrical outlet and into dc input connector. Make sure ac electrical outlet works and supplies proper voltage.
No sound.	Receiver DIVERSITY A/B lights glowing. PEAK light flickers during loud sounds.	Turn up receiver volume control. Confirm that the output connections from the receiver to the external equipment are secure.
ENGLISH No sound.	Receiver DIVERSITY A/B light off. Transmitter and receiver POWER lights glowing.	Confirm transmitter's and receiver's frequencies match. Point receiver antennas away from each other at a 45angle from vertical. Move receiver antennas away from any metal objects. Remove obstructions between transmitter and receiver. Make sure you can see receiver antennas. Move transmitter closer to receiver.
Sound level differs from level of a cabled instrument.	Receiver DIVERSITY A/B lights glowing	Adjust transmitter gain as necessary. adjust receiver volume as necessary.
Sound level differs with different guitars.	Receiver DIVERSITY A/B lights glowing.	Readjust transmitter gain level to compensate for differences in guitar outputs.
Distortion level increases gradually.	Receiver DIVERSITY A/B lights and transmitter LOW BATTERY light glowing.	replace transmitter battery.
Bursts of noise or other audible radio signals present.	DIVERSITY A/B lights on.	Identify potential sources of interference (other if sources) and turn off, remove or use a wireless system operating on a different frequency.
Momentary loss of sound as transmitter is moved around performing area.	Receiver DIVERSITY A/B lights off when sound is lost.	Reposition receiver and perform walk-through test again. If audio dropouts persist, mark "dead" spots and avoid them during performance.

SPECIFICATIONS

1. System ¹⁷⁴⁻²¹⁶
 Carrier frequency: VHF, 210-267MHz.
 Frequency stability: ± 0.002
 Maximum deviation: ± 40 Hz
 Dynamic range: $> 1\%$
 Frequency response: 50Hz-15KHz

2. Receiver
 Signal noise ratio: > 70 dB
 False image interference ratio: > 80 dB
 Neighboring channel interference ratio: > 80 dB
 Audio frequency output: mixed: 0-500mV
 Independent: 0-400mV

3. Transmitter

Power: 10mV
 Complementary harmonic wave: > 40 dB lower than master wave
 Source on/off noise: with perfect mute circuit

RECEIVER SPECIFICATIONS

Connector	3-Pin XLR(male)	1/4" phone plug(female)
Maximum Output Levels	Line Level: +10 dBV Mic Level: -22 dBV	+4 dBV
Nominal Output Levels	Line Level: -26 dBV Mic Level: -62 dBV	-32 dBV
Output Configuration	Active Balanced	Unbalanced
Actual Impedance	Line Level: 20 k Ω Mic Level: 500 Ω	1 K Ω
Connector Pin Assignments	Pin 1: ground Pin 2: hot Pin 3: cold	Tip: hot Sleeve: ground
Dimensions	41mmH x 197mmW x 138mmD (1.625" H x 7.77" W x 5.42" D)	
Net Weight	419.6g (14.8 oz.)	
Power Requirements	12-18 Vdc nominal, 200mA	
Power Supply	120 V or 230V ac adaptor with 2.1 mm female plug	
Voltage/Current/Phantom Power Protection	Yes	Yes