SONY

DWZ-M70

DWZ Series digital wireless microphone set for vocal/speech with handheld transmitter

Overview

Package features ZRX-HR70 digital wireless half-rack receiver and ZTX-M02RC digital wireless handheld transmitter

The vocal/speech set version of the DWZ digital wireless microphone system offers high quality 24-bit / 48KHz linear PCM digital transmission and is optimized for applications such as congress centers, universities, schools, community halls, hotels, board rooms and small theaters. The microphone's interchangeable capsule design supports a choice of capsules, including Sony's CU-C31, CU-F31 and CU-F32. The system also includes AES 128-bit encryption technology to ensure highly secure transmission.

Superb digital sound with intelligent feedback reducer

With 24-bit linear PCM digital, you get high sound quality with reliable RF transmission, utilizing unique transmission technology developed by Sony. Also, with support for two RF modes, your experiences can be shared over WiFi. The Intelligent Feedback Reducer function supresses unwanted feedback.

Features

Superb digital sound quality

High-quality 24-bit linear PCM digital transmission offers pristine audio and a wide frequency range of 10 Hz to 22 kHz. Audio

performance degradation that's typical of conventional analog wireless systems is avoided, as these packages are designed without the need for a compander.

Two RF modes for reliable transmission

The DWZ Series provides two selectable RF modes. Simply choose the one that makes best use of your actual 2.4 GHz RF environment:

Wide Band Hopping mode

This mode reduces interference to other wireless equipment used in the same environment such as WiFi. There's no need for advanced technical knowledge about radio frequency. Wide Band Hopping mode also supports additional error correction for more secure transmission*1.

Narrow Band Hopping mode

This mode helps to avoid interference from other devices – for example, 2.4 GHz wireless remote controllers that are commonly used for lighting control. This enables frequencies to be coordinated when using multiple wireless systems simultaneously*2.

*1 Audio delay: Approx. 6 ms

*2 Audio delay: Approx. 3 ms

Intelligent Feedback Reducer function

The Sony Intelligent Feedback Reducer can suppress unwanted feedback (howling) with high-performance DSP and Sony's unique algorithms designed to eliminate feedback before it becomes unbearable. Up to 1024-band suppression filters are continuously tuned automatically in real time, eliminating

feedback and avoiding deteriorating the original signal; this delivers the highest quality sound that can be enjoyed by presenters, vocalists and audiences. You can freely select the audio outputs to which you want this feedback reduction filter to apply – for example, you can output original audio to the main PA system, while processed audio is delivered to your monitor speakers.

Stable transmission

Interruptions in reception (signal dropout) can be a problem with wireless microphone transmission systems. With the DWZ Series, however, dropouts are reduced to a minimum. Utilizing a space diversity reception system, stable reception is achieved by using dual-antenna inputs / reception circuits. These receive signals over two different paths and automatically select the stronger RF signal for output.

Highly secure transmission

The ZTX-HR70 offers AES 128-bit standard encryption technology to secure transmitted signals and avoid being intercepted by others. By using this encryption feature, users can reduce the worry that confidential information could be intercepted.

Large color LCD

The ZRX-HR70 half-rack size receiver includes a large color LCD display to provide detailed visual status of your selected channel, signal, and five-band digital equalizer, along with audio level, and transmitter battery life.

Fast and easy setup

With its Clear Channel Scan and Best Channel Selection features, the half-rack ZRX-HR70 detects unoccupied channels and selects the most appropriate channel automatically, for fast and easy system setup.

Wired / wireless seamless operation

The ZRX-HR70 is equipped with a Cable Tone Generator feature

to simulate a wired tone when using wireless. There's no need to adjust the equalizer setting on your amplifier when switching between wired and wireless. Simply set the Cable Tone Generator menu on the ZRX-HR70 display to match the desired wired tone.

Five-band equalizer
With the five-band digital equalizer in the half- rack ZRX-HR70 receiver, you'll find it's easy to adjust the sound character of your handheld microphone as desired.

Tuner out interface
Tuner output is available for tuning. The ZRX-HR70 also has a transmitter-muting selector, which provides a choice of connectors that can be muted.

Rack-mountable 1U half-rack size with detachable whip antenna
The ZRX-HR70 is mountable with optional RMM-HRD1 rack mount kit.

Variety of interfaces
The ZRX-HR70 features 3-way parallel audio output, ¼" TS phone (x2), and balanced XLR (x1).

Interchangeable capsule design, with a flexible choice of capsules, including CU-C31, CU-F31 and CU-F32
With the handheld transmitter, you can use the supplied high-quality dynamic cardioid microphone capsule. Alternatively, you can select any of Sony's DWX Series capsules (the thread pitch is 1.25"/28 (31.3 mm/pitch 1.0 mm threading))*.

*Use of third-party capsules may cause RFI or EMF noise.

Robust metal body
The ZTX-M02RC is made of strong durable metal. Metal

construction supports reliable use in rough operating conditions.

Easy-to-use operation
The ZTX-M02RC features a latch switch for power on/off for conventional operation.

Two AA battery operation and contactless rechargeable function
The ZTX-M02RC is powered by AA batteries with a contactless rechargeable function (with optional BC-DWZ1 battery charger).

Specifications

Transmitting Section	
Transmitter Type	Handheld
Antenna Type	Internal monopole antenna
Type of Emission	F1D and F1E
Modulation Method	GFSK
Carrier Frequencies	2402.0 MHz to 2478.5 MHz Ch1: 2402/2478.5 MHz Ch2: 2421.5/2472.5 MHz Ch3: 2427.5/2475.5 MHz Ch4: 2424.5/2446.5 MHz Ch5: 2449.5/2469.5 MHz Ch6: 2405/2452.5 MHz Ch a: 2469.5/2474/2478.5 MHz Ch b: 2442.5/2447/2451.5 MHz Ch c: 2415.5/2420/2424.5 MHz

	Ch d: 2456/2460.5/2465 MHz Ch e: 2429/2433.5/2438 MHz Ch f: 2402/2406.5/2411 MHz
RF Power Output	10 mW (e.i.r.p.)
Occupied RF Bandwidth	2.5 MHz

Receiving Section

Receiver Type	Rackmount (Half / 1 channel)
Reception Type	Space diversity
Antenna Type	External whip antenna
Receiving Frequencies	2402.0 MHz to 2478.5 MHz Ch1: 2402/2478.5 MHz Ch2: 2421.5/2472.5 MHz Ch3: 2427.5/2475.5 MHz Ch4: 2424.5/2446.5 MHz Ch5: 2449.5/2469.5 MHz Ch6: 2405/2452.5 MHz Ch a: 2469.5/2474/2478.5 MHz Ch b: 2442.5/2447/2451.5 MHz Ch c: 2415.5/2420/2424.5 MHz Ch d: 2456/2460.5/2465 MHz Ch e: 2429/2433.5/2438 MHz

	Ch f: 2402/2406.5/2411 MHz
RF Sensitivity	24 dBµV or less

Antenna Section

Input Connector	BNC-R, 50 Ω (x2)

Audio Section

Capsule Type	Dynamic
Directivity	Uni-directional
Maximum Input Level	142 dBSPL (with 12 dB attenuator)
Audio Attenuator Adjustment Range	0 / 6 / 12 dB
Frequency Response	Transmission: 10 Hz to 22 kHz Microphone unit: 70 Hz to 16 kHz
Dynamic Range	102 dB (A-weighted)
Distortion (T.H.D)	0.03% or less (-38 dBu, 1 kHz input)
Audio Delay	Narrow band mode: Approx. 3 ms / Wide band mode: Approx. 6 ms (Transmitter + Receiver)
	XLR-3-32, balanced (x1)

Analog Output	Phone jack, unbalanced (x2) Maximum output level -Balanced Output MIC: -22 dBu LINE: +24 dBu -Unbalanced Output: +8 dBu Reference output level -Balanced Output MIC: -58 dBu LINE: -12 dBu -Unbalanced Output: -28 dBu

Other Equipment

Display	LCD

General

Power Requirements	ZTX-M02RC: 3.0 V DC (two LR6 (size AA) alkaline dry cell batteries) ZRX-HR70: External DC input: 12 V DC
Battery Operating Time	Approx. 10 hours of continuous use (25 °C (77 °F) ambient temperature, Sony LR6 (size AA) alkaline dry cell batteries)
Operating	0°C to 50°C

Temperature	32°F to 122°F
Storage/Transport Temperature	-20°C to +60°C -4°F to +140°F
Dimensions*	ZTX-M02RC: ϕ 48 × 258 mm (1 15/16 × 10 1/4 inches) (diameter/length) ZRX-HR70: 168 × 44 × 96 mm (6 5/8 × 1 3/4 ×3 7/8 inches) (w/h/d)
Mass	ZTX-M02RC: Approx. 308 g (11 oz.) (including batteries) ZRX-HR70: Approx. 510 g (1 lb. 2.0 oz.)
Supplied Accessories	Mic holder (1) Antenna (2) AC adapter (1) Quick Start Guide (1) Before Use (1) CD-ROM (1)
Optional Accessories	BC-DWZ1 RMM-HRD1

Notes

Note	* The values for dimensions are approximate.

Gallery