

DWM-02N

DWX series digital wireless microphone with interchangeable head mechanism



Overview

High quality flexible microphone system with three codec modes providing short audio latency and more reliable transmission

The DWM-02N digital wireless microphone forms part of the DWX series system offering high-quality full-digital operation shorter audio latency and more reliable RF transmission mode – ideal for a variety of high-quality applications, including broadcast studio, theatre and live sound.

Maximising flexibility for users, the DWM-02N is not supplied with a microphone capsule as the DWM-02N Interchangeable head mechanism supports Sony and other third party capsules. Sony offers three microphone heads – the CU-C31, CU-F31 and CU-F32 - and there are also a wide variety of third-party capsules to choose from – ensuring whatever your requirements, the DWM-02N wireless handheld microphone is an ideal choice.

The DWX series system delivers superb-quality wireless transmission of 24-bit digital audio. Thanks to its improved codec and new hardware, it can provide higher sound quality with lower audio latency.

The DWX series works with Sony control software Wireless Studio for PC and Wireless Studio Mobile for smartphones* to give users

flexible control of the system. Remote control of up to 82 transmitters can be achieved using the Cross Remote™ function combined with the RMU-01 remote control unit.

NOTE: This model is available in multiple versions to support the widest possible range of operating frequencies. Please refer to product specifications for more information.

* Wireless Studio Mobile supported OS: iOS Ver.8.0 or later and Android Ver.4.1 or later.

Operation is not guaranteed on all smartphones.

Low audio latency and high quality sound

MODE2 provides higher quality sound with a 96kHz sampling rate A/D converter and very low audio latency of 1.5 msec.**

Compatibility with DWX series

The DWM-02N has full compatibility with its predecessor DWX series equipment.

Smartphone control*

Wireless Studio Mobile software gives users remote control of the DWX series system via a smartphone.

Wide frequency coverage with choice of channels available

The extra wide switching bandwidth covers a wide area, with a wide choice of channels available across multiple models - please refer to product specifications for more information.

14UC: 470.125 MHz to 541.875 MHz (UHF-TV channels 14 to 25), 25 kHz steps

30A UC: 566.125MHz to 607.875MHz (UHF-TV channels 30-36) 25kHz steps

42LA: 638.125 MHz to 697.875 MHz (UHF-TV channels 42-51), 25 kHz steps (not available in US or Canada)

For customers in North America

The DWM-02N/30 and DWM-02N/42 models operates in portions of the 617-652 MHz or 663-698 MHz frequencies. As of 2017, these frequencies are being transitioned by the Federal Communications Commission (FCC) to the 600 MHz service to meet increasing demand for wireless broadband services. Users of these models must cease operating on these frequencies no later than July 13, 2020. In addition, users may be required to cease operations before that date if their operations could cause harmful interference to a 600 MHz service licensee's wireless operations on these frequencies. For more information, contact the FCC.

For customers in Canada, please consult ISED's Spectrum Advisory Bulletin for recent information related to the 600 MHz band transition.

Features

Three codec modes designed for wide variety of applications

MODE1 for compatibility with DWX series applications, MODE2 with higher quality sound and low latency ideal for theatre, tour and broadcast applications, and MODE3 with more reliable RF transmission ideal for speech applications.

Superb quality wireless transmission and reception

The digital wireless microphone system transmits and receives high-quality 24-bit digital audio in a specific frequency bandwidth that meets the Wireless Communication Regulations of each country. Utilising the Sony original codec based on Sony's years of experience in engineering audio products, the system delivers a wide dynamic range of more than 106 dB, a wide frequency response of 20 Hz to 22 kHz, and an excellent transient response.

Stable and secure transmission and reception

Incorporating the improved digital modulator, the digital wireless microphone system allows highly stable wireless transmission that is extremely tolerant to unwanted interference. In addition, the system transmits and receives digitally modulated and encrypted data to minimize the risk of interception, providing highly secure transmission and reception.

Simultaneous multi-channel operation

The digital wireless microphone system allows for large-scale multi-channel operations. Thanks to the digital modulator, the system realises an intermodulation-free, equally spaced channel allocation. The digital wireless transmission technology used in this system enables a significant increase in the number of simultaneous operations in comparison with current analogue wireless systems. For example, up to 16 channels of simultaneous operation is possible in an 8-MHz operating band.

Three interchangeable heads and third party support

The DWM-02N operates with three heads. The CU-F31 microphone head with dynamic capsule has a super cardioid pick-up and range from 60 Hz to 18 kHz. The CU-F32 microphone head with wide dynamic capsule has a wide cardioid pick-up and range from 70 Hz – 18 kHz. The CU-C31 microphone head with condenser capsule has a cardioid pick-up and range from 60 Hz to 20 kHz. The DWM-02N also supports a wide variety of third party heads.

Quick open/closed mechanism for microphone heads

A robust 31.3 mm/pitch 1.0 mm threading interchangeable mechanism allows microphone heads to be changed easily and quickly.

Selectable output power

Output power selectable between 1/10/50 mW. Choose the minimum power necessary for a venue, lengthening battery life, and reducing the already low possibility of interference. Allows the microphone to work effectively in a very wide range of venues.

Remote control of transmitter functions from the receiver

Input attenuation, RF frequency selection, RF power output, Audio low-cut frequency and transmitter Sleep Mode can all be controlled remotely from the digital wireless receiver. Remote control of up to 82 transmitters can be achieved using the Cross Remote™ function and RMU-01 remote control unit.

Smartphone control using Wireless Studio Mobile software

The DWX series works with Sony control software Wireless Studio 4.2 or later for PC and Wireless Studio Mobile for smartphones* to give users flexible control of the system.

* Wireless Studio Mobile supported OS: iOS Ver.8.0 or later and Android Ver.4.1 or later. Operation is not guaranteed on all smartphones.

Specifications

Important Note

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This product is available in a variety of different frequency range models to suit the regulatory requirements of individual countries. Please contact your Sony reseller for more information

on which product will best suit your specific needs.

Specifications

Wireless Interface

WiDIF-HP

Oscillator Type

Crystal-controlled PLL Synthesizer

Antenna Type

$\lambda/4$ flexible wire

Type of Emission

G1E or G1D

Carrier Frequencies - UC

14UC: 470.125 MHz to 541.875 MHz (UHF-TV channels 14 to 25), 25 kHz steps
 30A UC: 566.125MHz to 607.875MHz (UHF-TV channels 30-36) 25kHz steps
 42LA: 638.125 MHz to 697.875 MHz (UHF-TV channels 42-51), 25 kHz steps (not available in US or Canada)

Carrier Frequencies - CE7

CE21: 470.025 MHz to 542.000 MHz (TV-21 to TV-29 channels) 25 kHz steps
 CE33: 566.025 MHz to 630.000 MHz (TV-33 to TV-40 channels), 25 kHz steps
 CE42: 638.025 MHz to 710.000 MHz

	(TV-42 to TV-50 channels), 25 kHz steps
Carrier Frequencies - J	WL: 470.150 MHz to 542.000 MHz (TV-13 to TV-24 channels), 25 kHz steps WM: 566.025 MHz to 638.000 MHz (TV-29 to TV-40 channels), 25 kHz steps WH: 638.025 MHz to 713.850 MHz (TV-41 to TV-52 and 53 channels), 25 kHz steps G: 1240.150 MHz to 1251.825 MHz, 1253.175 MHz to 1259.850 MHz, 25 kHz steps
RF Power	1 mW/10 mW/50 mW (e.r.p) selectable
Maximum Input Level	-16 dBu (with 0 dB attenuator)
Audio Attenuator Adjustment Range	0 dB to 21 dB (in 3-dB steps)
Frequency Response	Transmission: 20Hz to 22kHz (typical)
Audio Delay	MODE1: 1.5 msec (total: 3.4msec) /MODE2: 1.0 msec (total: 1.5msec)/MODE3: 2.1 msec (total

	4.0msec)
Wireless Remote Control	Cross Remote (2.4-GHz IEEE802.15.4 compliant)
Display	OLED
Power Requirements	DC 3.0 V (with two AA-size alkaline (LR6) batteries)
Battery Operating Time	Approx. 5 hours with Sony's AA-size alkaline (LR6) batteries at 25°C(77°F) at 10-mW output (with the wireless remote control function off and DIMMER MODE set to AUTO OFF)
Operating Temperature	0°C to 50°C / 32°F to 122°F
Storage/Transport Temperature	-20°C to +60°C / -4°F to +140°F
Dimensions	Φ37.1 x 194 mm
Mass	Approx. 235 g (including batteries)
	Identification ring (1 set) Microphone holder (1) USB adapter cable (1) Carrying case (1) Stand adaptor (1)

Supplied Accessories

For the model available in the U.S.A.:

PF1/2 to W5/8 type

For the model available in Europe.:

PF1/2 to W3/8 type

CD-ROM (1)

Related products



DWR-S02D

Digital wireless receiver



DWR-R02D

Digital wireless receiver



DWR-R02DN

DWX series digital wireless receiver



DWR-S02DN

Digital wireless receiver



DWR-R03D

DWX Series 2-channel digital wireless receiver



DWR-S03D

DWX Gen3 2-channel digital wireless slot-in receiver



URX-S03D

UWP-D two-channel slot-in receiver

Gallery

