

DWR-R02DN

DWX series digital wireless receiver



Overview

High quality full digital wireless wide-band receiver with three new codec modes, providing best in class audio latency and RF transmission

The DWR-R02DN is a two-channel 19" rack-mountable (1U-size) receiver. It forms part of the DWX series digital wireless microphone system that offers 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.

The DWX series system, which consists of the DWT-B01N body-pack transmitter, DWM-02N microphone and DWR-R02DN receiver, 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 4.2 or later 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.

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.

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.**

More reliable RF transmissions expands the operation range

MODE3 operation optimised for reliable transmission by preventing drop out by interference with additional error correction

Compatibility with DWX series

MODE1 operation provides the same high quality, reliability and audio latency as the previous DWX series version.

Wide-band operation

The receiver operates with a wide bandwidth from 470 MHz to 710 MHz (depending on region).

Smartphone control*

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

Notes

* 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.

**Analogue out, 2.5 msec for digital out

Features

Three codec modes for more reliable RF transmissions and higher quality sound

The Sony codec has been improved to provide three codec modes optimised for a wider variety of applications. MODE1 provides compatibility with DWX series applications, with the same audio latency of 3.4 msec. MODE2 provides higher quality sound with a 96kHz sampling rate A/D converter and very low audio latency of 1.5 msec**. MODE3 provides more reliable RF transmission with an audio latency of 4.0 msec***

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 22kHz, 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.

Flexible power options

The 100V to 240V AC and 12V DC power enables users to operate in a global power environment.

Remote control of transmitter functions from the receiver

Input attenuation, RF frequency selection, RF power output, Audio Low-pass cutoff 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 for PC and Wireless Studio Mobile for smartphones* to give users flexible control of the system.

Notes

* 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.

** Analogue out. 2.5 msec for digital out.

*** Analogue out. 4.9 msec for digital out.

Specifications

Specifications

Wireless Interface

WiDIF-HP

Oscillator Type

Crystal-controlled PLL Synthesizer

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|---------------------------|---|
| Reception Type | True diversity |
| Circuit system | Double Superheterodyne |
| Antenna Type | Detachable |
| Antenna Input Connector | BNC-R, 50 Ω (x2) |
| Antenna Cascaded Output | BNC-R, 50 Ω (x2) |
| Carrier Frequencies - UC7 | 470.125 MHz to 541.875 MHz (TV-14 to TV-25 channels), 25 kHz steps 566.125 MHz to 637.875 MHz (TV-30 to TV-41 channels, except TV-37channel), 25 kHz steps 638.125 MHz to 697.875 MHz (TV-42 to TV-51 channels), 25 kHz steps |
| Carrier Frequencies - CEZ | 470.025 MHz to 542.000 MHz (TV-21 to TV-29 channels) 25 kHz steps 566.025 MHz to 630.000 MHz (TV-33 to TV-40 channels), 25 kHz steps 638.025 MHz to 710.000 MHz (TV-42 to TV-50 channels), 25 kHz steps |
| | 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 |

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|-------------------------|---|
| Carrier Frequencies - J | (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 |
| Frequency Response | 20Hz to 22kHz (typical) |
| Dynamic Range | 106 dB or more typical (A-weighted, T.H.D=1%) |
| Distortion (T.H.D) | MODE1, MODE2: 0.03% or less, MODE3: 0.3% or less |
| Audio Delay | MODE1; 1.9 msec (total: 3.4msec) (Analog output) , 1.9 msec (total: 3.4msec) (Digital output) MODE2: 0.5 msec (total: 1.5msec) (Analog output) , 1.5 msec (total: 2.5msec) (Digital output) MODE3: 1.9 msec (total: 4.0msec) (Analog output) , 2.8 msec (total: 4.9msec) (Digital output) |
| | BAL: XLR-3-32 (male), 47 Ω or less |

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| Analog Output | (×2), Output level (0 dBu = 0.775 Vrms) BAL: -22 dBu maximum/-58 dBu reference (when MIC output) BAL: +24 dBu maximum/-12 dBu reference (when LINE output) |
| Digital Output | XLR-3-32 (male), 110 Ω (×2) / BNC-R, 75 Ω (×2), Reference output level: -36 dBFs |
| Headphone Output | φ6.3 mm (1/4 inch) stereo jack |
| WORD SYNC IN/OUT connectors | Input connector: BNC-R with a 75 Ω termination switch, Output connector: BNC-R, External Word Sync: 32 kHz to 96 kHz |
| Wireless Remote Control | Cross Remote (2.4-GHz IEEE802.15.4 compliant) |
| LAN Connector | RJ-45 modular jack 100BASE-TX: IEEE802.3u compliant |
| Display | OLED |
| Power Requirements | AC: 100 to 240 V 0.4 A or less / DC: 12 V 1.6 A or less |
| Operating Temperature | 0°C to 50°C / 32°F to 122°F |

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|-------------------------------|--|
| Storage/Transport Temperature | -20°C to +60°C / -4°F to +140°F |
| Dimensions | 482 x 44 x 335 mm (W x H x D) |
| Mass | Approx. 3.6 kg (including the attached antenna) |
| Supplied Accessories | Whip antenna (2) AC power cord (1) Foot (4) Operating Instructions (CD-ROM) (1) PC control software (CD-ROM) (1) |

Related products



DWR-S02D

Digital wireless receiver



DWR-R02D

Digital wireless receiver



Wireless Studio



DWM-02N

DWX series digital wireless microphone with interchangeable head mechanism



DWT-B01N

DWX series digital wireless body-pack transmitter body-pack



AN-57

Ground plane antenna



DWT-B30

DWX Gen3 digital wireless bodypack transmitter



DWT-P30

DWT-P30 plug-on transmitter

Gallery

