



**WLL-CA50
WLL-RX50**

WIRELESS CAMERA SYSTEM

Whether gathering news in the field or covering live sporting events, camera operators know that mobility is essential if they're going to secure the best results.

The Sony Wireless Camera System delivers the solution, providing the extra mobility needed to cover these events with effortless efficiency. Based on 2.4-GHz wireless technology, this supplementary system offers stable and robust digital transmission between its camera and receiver components using COFDM transmission and powerful error-correction technologies.

Applications

Live Sports Events

During live sporting events, you can't afford to be tied down by cables connected to your camera. You need to catch every close-up, both during play and in post-game interviews with the star players. With the extra mobility of the Sony Wireless Camera System, you're free to move about, so you can catch all those important moments efficiently and effectively.

ENG

If you've ever encountered a barrier, such as a fence or railway tracks, when covering live news events, you'll know the difficulty of being first to air with a story in the field. With the flexible Wireless Camera System, you can get to the action and provide live coverage by transmitting high quality MPEG-2 video and audio to the news van.

COFDM (Coded Orthogonal Frequency Division Multiplexing)

Wireless transmission systems in general can be subject to interference and signal interruptions, but the WLL-CA50 minimises these interruptions. The Sony Wireless Link System makes use of COFDM, a signal-modulation technique optimised for the transmission of high data-rate streams such as MPEG-2 video. COFDM essentially splits a signal into a large number of RF channels – 1705, in the case of the WLL-CA50 – and sends each sub-signal over a separate subcarrier frequency. When compared to using just a single carrier signal, COFDM transmission is less susceptible to multipath errors, which may occur when the transmitted signals reflect off objects, causing signal cancellation. Combined with the powerful ECC (Error Correction Coding) capability of the receiver, this wireless system can recover the entire signal in virtually any environment.

Compatible Camcorders

The WLL-CA50 Wireless Camera Transmitter is compatible with Betacam SX™, Digital Betacam™ and MPEG IMX™ camcorders. It can be directly docked to the rear of the following camcorders without using awkward cables: DVW-700P, DVW-707P, DVW-709WSP, DVW-790WSP, DNW-7P, DNW-9WSP, DNW-90P/90WSP, and the MSW-900P*1. If you're using a Sony camcorder, your best choice is the WLL-CA50.

*1 The WLL-CA50 also includes an SDI input which can be used with external video signals.

CHANGING

THE WAY

BUSINESS

COMMUNICATES

Features and Benefits

High-Quality Transmission

The Sony Wireless Camera system enables you to take advantage of real-time MPEG-2 broadcast picture quality and MPEG-1 Layer I/II 48-kHz audio. You can choose from 525/60 or 625/50 video by selecting the desired format from the menu.

Stable Signal

- Diversity Reception

To provide a more stable transmission between the wireless receiver and transmitter, two or more WLL-R50 receivers, with their antennae in physically separate locations, can be combined together. This configuration is called a diversity reception system. Because of the separation, each receiver receives signals that have taken a different path, from which the better signal is chosen. Uniquely, in the Sony Wireless Camera System the error rate is monitored instead of the RF signal strength so that the most stable transmission is achieved.

- Time Interleave

Used in conjunction with error-correcting codes, a data communication technique called time interleaving adds another level of signal integrity by reducing the number of burst errors. Time interleaving shuffles the order of data bits before transmission, and then de-shuffles the data bits at the receiver, making the transmission more robust and resilient to burst errors. The Sony Wireless Camera System employs three modes of time interleaving.

Secure Encryption Key

One concern broadcasters have with wireless technology is that other broadcasters might inadvertently pick-up their transmissions. This concern can be set aside with the Sony Wireless Camera System, as it includes a secure encryption key that can be set so that only your own receivers can pick up your signal transmissions.

Ease Of Use

- Cable-Free Camcorder Connection

This WLL-CA50 Wireless Camera Transmitter is designed to dock easily onto the back of almost any standard definition camcorder with a standard V-shoe mechanical interface and a Sony 40-pin camcorder output, for a secure fit and a stable connection without the use of external cables or connectors.



- Flexible Channel Selector

Changing channels is easy with the RF-channel selector. Operated from the menu, it enables you to select up to 7 channels in 12-MHz steps. If fine-tuning is required, frequencies can also be adjusted in 1-MHz steps.

- User-Friendly Menu

The WLL-CA50 settings are menu driven, so it's very easy to set frequencies, secure encryption codes, or transmission streams as required. In addition, the LCD displays status information and alarm messages, so you can constantly monitor the unit's performance.



Versatile Antenna Unit

The antenna unit supplied with the WLL-RX50 is equipped with a bright green LED that, when lit, signals to the user that the antenna is functioning properly. Also, because the antenna unit is equipped with a standard N-type connector, the supplied antenna can be replaced with your choice of alternative antennae.



Low Power Consumption

The WLL-CA50 Wireless Camera Transmitter consumes just 9 watts of power. Actual camcorder operating time is therefore reduced by only a fraction when operating on battery power. In addition, an AC power adapter is available as an option.

SPECIFICATIONS

WLL-CA50

General

Power requirements	12 V DC
Power consumption	9 W
Operating temperature	0 °C to +40 °C (+32 °F to +104 °F)
Dimensions (W x H x D)	97 x 209 x 152 mm (3 7/8 x 8 1/4 x 6 inches)
Mass (excluding antenna)	1.2 kg (2 lb 10 oz)

RF block

TX center frequency range	2406 to 2470 MHz (UC)
	2406 to 2478 MHz (CE)
Modulation	16 QAM-COFDM, QPSK-COFDM
Occupied bandwidth	8 MHz
Channel spacing	12 MHz
RF power output	40 mW (UC), (EIRP = 100 mW)
	4 mW (CE), (EIRP = 10 mW)
Antenna gain	4.0 dBi

Input

Input signals	Digital component parallel
	40-pin (Sony camcorder)
	SDI (embedded audio)
	BNC (x1) (spare)
Ext. DC IN	11.3 to 17 V DC
	XLR 4-pin male (x1)

WLL-RX50

General

Power requirements	AC 100 V to 240 V, 50/60 Hz
Power consumption	40 W
Operating temperature	5 °C to +40 °C (+41 °F to +104 °F)
Operating humidity	20% to 90% (no condensation)
Dimensions (W x H x D)	482 x 52 x 439 mm (19 x 2 1/8 x 17 3/8 inches)
Mass	4.5 kg (10 lb)

Reception system

Receiving frequency range	2406 to 2478 MHz
Occupied bandwidth	8 MHz
Channel spacing	12 MHz
Antenna gain	9.0 dBi
Antenna directivity	60°
Modulation	16 QAM-COFDM, QPSK-COFDM
IF frequency	326 to 398 MHz
IF IN connector	N type (x1), 50 Ω
IF OUT connector	N type (x1), loop through

Bitstream Output

Data format	DVB-ASI, BNC (x2)
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Bitstream Input

Data format	DVB-ASI, BNC (x2)
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Supplied Accessories

WLL-CA50

- Transmission antenna

WLL-RX50

- Reception antenna unit (including down converter)
- Coaxial cable with N-type connectors (10 m)
- Mounting bracket
- Mounting screws (x6)
- Fastening belt (x5)

Optional Accessories



MSB-2000



BDX-D1000

- Booster Amplifier- For antenna extension (required every 100 m)^{*1}
- BP-L40A/IL75/M50/M100 Battery Packs
- AC-550/550CE – AC-DN2B AC Power Adapters

^{*1} Up to 3 booster amplifiers can be used in line for an additional 300 m extension.

SONY

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