

UWP Series

UHF Synthesized Wireless Microphone System

SONY

Pro Audio



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INTRODUCTION

Virtually interference-free, Affordable Operations - with the Sony UWP Series UHF Synthesized Wireless Microphone System

As the use of wireless microphone systems has increased dramatically for diverse applications, low-cost systems have become more popular, but transmission stability and noise problems have often been overlooked.

Sony presents the ideal solution for budget-conscious users seeking rock-steady wireless operations - the UWP Series UHF Synthesized Wireless Microphone System.

The UWP Series consists of six core elements - a bodypack transmitter, a wireless handheld microphone, a plug-on transmitter, a portable tuner, a half-rack-size tuner, and a tuner module. These are available in eight turnkey packages, each comprising a microphone, transmitter and tuner, for a ready-to-go system straight out of the box. Each package has been carefully compiled to address specific operational needs, meaning the UWP Series can virtually adapt to almost any application.

The UWP Series excels in transmission stability. Sophisticated wireless technologies, developed for top-of-the-line Sony wireless microphone systems, have been incorporated, including the UHF PLL-synthesized system, space-diversity reception and a tone squelch function. These capabilities are typically found only on high-end wireless systems.

Whether you use it with low-cost ENG, EFP or PA systems, the UWP Series delivers the convenience of non-compromised wireless microphone operation at a very affordable price.



UWP SERIES COMMON FEATURES

Stable Transmission and Reception

The UWP Series Wireless Microphone System uses three core technologies to provide stable transmission and reception:

PLL Synthesized System

Key to achieving stable transmission and reception is the use of a stable carrier signal to avoid interference with other frequency channels and to allow the selection of a preferred channel from multiple frequencies. The UWP Series achieves this by using a UHF PLL (Phase Locked Loop) frequency synthesized system, which provides accurate carrier signal frequencies. This system is used in both the transmitters and tuners, so that a stable carrier is generated at the transmitter, and accurately tuned in at the tuner. This PLL-controlled system provides highly stable, user-selectable frequencies in increments of 125 kHz.

Space Diversity Reception System

Typically, wireless microphone transmission systems can be subject to reception interruptions (signal dropout), but the UWP Series reduces this to a minimum. By utilizing a space-diversity reception system, it achieves stable reception by using dual-antenna inputs/reception circuits. These receive signals over two different paths and automatically select the stronger RF signal for output. The space diversity reception system is adopted in all UWP tuners – the portable tuner, half rack-size tuner and tuner module alike. What's more, the antennas of the portable and half-rack-size tuners each allow for angle adjustments, which help to further eliminate signal dropout.

Tone Squelch Circuitry

When operating a wireless microphone system, it is essential that the tuner not pick up carrier signals transmitted from other systems. In order to avoid this, the UWP Series transmitters transmit a 32 kHz pilot-tone signal along with the audio signal. The tuner's squelch circuit recognizes this tone signal, and outputs the audio signal only when this tone signal is received. This function helps to prevent the output of unwanted signals and noise from other signal transmissions in the air, as well as the RF noise and popping noise that occur when the transmitter is powered on or off.

Pre-programmed Operating Frequencies

The transmitters and tuners included in the UWP Series incorporate preprogrammed frequencies that meet the wireless-communication regulations of each country. The UWP Series operates within the following frequency ranges:

- U models: 758 MHz to 782 MHz or 782 MHz to 806 MHz (188 selectable frequencies)
- CE models: 798 MHz to 822 MHz or 838 MHz to 862 MHz (189 selectable frequencies)
- AU models: 792 MHz to 806 MHz (102 selectable frequencies)

Simultaneous Multi-channel Operation

The UWP Series allows simultaneous operation of up to 16 wireless microphones. Optimum combinations of practically tested, virtually interference-free frequencies are stored in the UWP tuners. By using the pre-programmed frequency groups, users can easily choose frequencies that are virtually interference-free for the transmitters and tuners, simplifying the task of system setup.

PACKAGE LINE-UP

UWP-C1



- Consists of an omni-directional lavalier microphone, bodypack transmitter and portable tuner.
- Suitable for a wide range of applications, from news gathering and interviews to talk shows and conferences.
- The lavalier microphone is supplied with a microphone windscreen and microphone-holder clip.
- The bodypack transmitter is supplied with a belt clip.
- The portable tuner is supplied with a microphone stand adaptor, shoe-mount adaptor and belt clip for mounting on a camcorder and output cables (3-pole locking mini plug/XLR-type, 3-pole locking mini plug/stereo mini plug).

UWP-C2



- Consists of a handheld microphone and portable tuner.
- Suitable for news gathering and for use in PA systems.
- The handheld microphone is supplied with a microphone holder.
- The portable tuner is supplied with a microphone stand adaptor, shoe-mount adaptor and belt clip for mounting on a camcorder and output cables (3-pole locking mini plug/XLR-type, 3-pole locking mini plug/stereo mini plug).

UWP-C3



- Consists of a plug-on transmitter and portable tuner.
- Suitable for a wide range of applications, from news gathering and interviews to field productions.
- The plug-on transmitter is supplied with a softcase.
- The portable tuner is supplied with a shoe-mount adaptor and belt clip for mounting on a camcorder and output cables (3-pole locking mini plug/XLR-type, 3-pole locking mini plug/stereo mini plug).

UWP-S1



U AU CE

- Consists of a uni-directional lavalier microphone, bodypack transmitter and half-rack-size tuner.
- Suitable for use in PA systems.
- The lavalier microphone is supplied with a microphone windscreen and microphone-holder clip.
- The bodypack transmitter is supplied with a belt clip.
- The half-rack-size tuner is supplied with an AC/DC adaptor.

UWP-S2



U AU CE

- Consists of a handheld microphone and half-rack-size tuner.
- Suitable for use in PA systems.
- The handheld microphone is supplied with a microphone holder.
- The half-rack-size tuner is supplied with an AC/DC adaptor.

UWP-X1



U AU CE



- Consists of a uni-directional lavalier microphone, bodypack transmitter and tuner module.
- Suitable for use in PA systems.
- The lavalier microphone is supplied with a microphone windscreen and microphone-holder clip.
- The bodypack transmitter is supplied with a belt clip.

UWP-X2



U AU CE

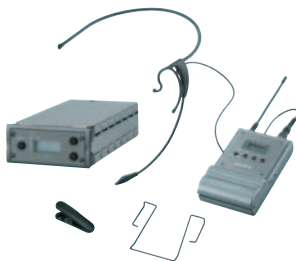


- Consists of a handheld microphone and tuner module.
- Suitable for use in PA systems.
- The handheld microphone is supplied with a microphone holder.

UWP-X5



U AU CE



- Consists of a omni-directional headset microphone, bodypack transmitter and tuner module.
- Suitable for use in PA systems.
- The headset microphone can be worn both the left and right ear.
- The headset microphone is supplied with a detachable headband and cable clip.
- The bodypack transmitter is supplied with a belt clip.

TRANSMITTER/TUNER FEATURES

Lavalier/Headset Microphone and Bodypack Transmitter Lavalier Microphones



- Omni-directional type for the UWP-C1 package
- Uni-directional type for the UWP-S1 and UWP-X1 packages
- 3.9 feet (1.2m) microphone cable
- Supplied with a microphone windscreen and microphone-holder clip

Headset Microphone



- Omni-directional type for the UWP-X5 package
- Ear-clip style design wearable on either the left or right ear
- 3.9 feet (1.2m) microphone cable
- Supplied with a detachable headband and cable clip

Bodypack Transmitter



- Compact and lightweight design
- Attenuator function allows adjustment of the microphone-input level to suit each user's voice
- Selectable RF-output level: 5 mW output is suitable for simultaneous multi-channel operation, while 30 mW output is intended for long-distance transmission
- Approximately six hours of continuous operation with two AA-size alkaline (LR6) batteries (not supplied)
- An LCD screen provides extensive information, including the operating channel number and its frequency in MHz, attenuator level, RF-output level setting (High/Low), audio-input status, RF-output status, transmitter-battery status, and accumulated operating time
- A 3-pole mini-jack input connector with lock mechanism accepts the output of any lavalier microphones equipped with a 3-pole locking mini plug, as well as the output of the supplied lavalier or headset microphone
- Supplied with a belt clip

Handheld Microphone



- Uni-directional, dynamic microphone capsule
- Internal antenna design
- Attenuator function allows adjustment of the audio-input level to suit each user's voice
- Selectable RF-output level: 5 mW output is suitable for simultaneous multi-channel operation, while 30 mW output is intended for long-distance transmission
- Approximately six hours of continuous operation with two AA-size alkaline (LR6) batteries (not supplied)
- An internal LCD screen provides extensive information, including the operating channel number and its frequency in MHz, attenuator level, RF-output level setting (High/Low), audio-input status, RF-output status, transmitter-battery status, and accumulated operating time
- Supplied with a microphone holder

Plug-on Transmitter



- Converts a wired microphone to a wireless microphone via an XLR connector
- Compact and lightweight body provides balanced handling
- Attenuator function allows adjustment of the microphone-input level
- Durable connecting mechanism with a microphone for dependable operation
- 50 mW RF power output for stable and long-distance transmission
- MIC/LINE input level switchable
- A backlit LCD provides extensive information, including the operating channel number and frequency in MHz, attenuator level, audio-input status, RF-output status, transmitter-battery status, and accumulated operating time
- An LED indicator for audio-input status
- Approximately six hours of continuous operation with two AA-size alkaline (LR6) batteries (not supplied)
- Supplied with a soft case

Portable Tuner



- Space diversity reception system for stable RF reception
- Angle-adjustable antennas to help eliminate signal dropout. This feature additionally provides mounting-position flexibility when the portable tuner is mounted on a camcorder
- RF squelch function virtually eliminates ambient noise and unwanted signals from other wireless microphone systems
- A channel search function automatically seeks and selects the same RF signal frequency as set on the UWP transmitter
- An LCD screen provides extensive information, including the operating channel number and its frequency in MHz, audio output status, RF-input level, tuner-battery status, and accumulated operating time
- A green LED indicator illuminates when RF-input signals are appropriately received
- Approximately six hours of continuous operation with two AA-size alkaline (LR6) batteries (not supplied)
- Stereo mini jack with monitor-volume control
- Supplied shoe-mount adaptor enables easy mounting on Sony camcorders
A microphone-stand adaptor*, belt clip and two output cables (3-pole locking mini plug/XLR-type, 3-pole locking mini plug/stereo mini plug) are also provided

*The microphone-stand adaptor is not included in the UWP-C3 package.



Photo shows portable tuner mounted on a microphone stand



Photo shows portable tuner mounted on a HVR-V1 HDV™ camcorder



Rear panel

Half 19-inch Rack-size Tuner

- Space diversity reception system for stable RF reception
- Angle-adjustable antennas to help eliminate signal dropout
- RF squelch function virtually eliminates ambient noise and unwanted signals from other wireless microphone systems
- Equipped with both XLR (balanced) and 1/4-inch phone (unbalanced) type output connectors. The output level on the XLR-type connector can be switched between MIC and LINE levels
- A channel search function automatically seeks and selects the same RF signal frequency as set on the UWP transmitter
- An LCD screen displays the operating channel number and its frequency in MHz, plus the audio-output status and RF-input level
- A green LED indicator illuminates when RF input signals are appropriately received
- Stereo headphone jack with monitor volume-control on the front panel
- Supplied with an AC/DC adaptor



Tuner Module

- Compact, plug-in diversity tuner module: up to two tuner modules can be installed into a Sony all-in-one type presentation mixer/amplifier (SRP-X700P or SRP-X500P), while a maximum of six modules can be installed in the Sony MB-X6 tuner base unit
- Space diversity reception system for stable RF reception
- RF squelch function virtually eliminates ambient noise and unwanted signals from other wireless microphone systems.
- An auto channel search function automatically selects unoccupied channels
- A backlit LCD screen displays the operating channel number and its frequency in MHz, plus the audio-output status and RF-input level
- A green LED indicator illuminates when RF-input signals are appropriately received



Photo shows tuner modules installed in the SRP-X500P

OPTIONAL ACCESSORIES

MB-X6 Tuner Base Unit

- Accommodates up to six tuner modules included in the UWP-X1/X2/X5 package, for up to six channels of simultaneous operation
- Addition of the WD-850 or WD-880A allows multi-channel operation with even more channels
- Easy mechanism for attaching and detaching tuner modules
- RF input attenuator switch (10 dB/0 dB)
- Balanced XLR output connector for each tuner and mix output
- Selectable output level: -58 dBu (for MIC) or -20 dBu (for LINE) at ± 5 kHz deviation at 1 kHz modulation
- Auto channel search function automatically selects unoccupied channels
- Supplied with passive antennas
- Modular, 1U high, 19-inch rack unit

MB-X6	
Receiving channels	6 channels when accommodating 6 tuner modules included in the UWP-X1/X2/X5 package
Receiving frequencies	792 MHz to 806 MHz (TV channels 66 to 67) when AU type tuner module installed 798 MHz to 822 MHz (TV channels 62 to 64) or 838 MHz to 862 MHz (TV channels 67 to 69) when CE type tuner module installed 758 MHz to 782 MHz (TV channels 62 to 65) or 782 MHz to 806 MHz (TV channels 66 to 69) when U type tuner module installed
Audio output connector	XLR-3-32 type (x7), balanced
Audio output level	-20 dBu (LINE level) or -58 dBu (MIC level)
Antenna attenuator level	0 dB or 10 dB
Antenna connectors	BNC-R type (x2), 50 Ω
Power requirements	U type: AC 120 V, 60 Hz CE type: AC 230 V, 50/60 Hz
Power consumption	30 W when accommodating six tuner modules included in the UWP-X1/X2/X5 package
Dimensions (W x H x D)	19 x 1 3/4 x 11 1/4 inches (482 x 44 x 285 mm)
Weight	Approx. 12 lb 2 oz (5.5kg)
Supplied accessories	Antennas (1 pair), AC power cord (x1), Operating instructions (x1)



Photo shows MB-X6 with six tuner modules installed



Rear panel

ECM-77BMP Lavalier Microphone



- High-performance, miniature, omni-directional electret condenser microphone
- Frequency response: 40 Hz to 20 kHz
- Sensitivity: -39.0 dB (11.2 mV) (0 dB = 1 V/Pa, at 1 kHz)
- Microphone head: 1/4 inch (5.6 mm) dia. x 1/2 inches (12.5 mm), approx. 0.05 oz (1.5 g)
- Cable length: 3.9 feet (1.2 m)
- Supplied with a 3-pole locking mini plug for use with the UWP series
- Supplied accessories: single/horizontal-type tie clip (x1), metal-mesh type windscreen (x1), operating instructions (x1)

ECM-44BMP Lavalier Microphone



- Omni-directional, electret condenser microphone
- Superb sound quality
- Frequency response: 40 Hz to 15 kHz
- Sensitivity: -40 dB (10 mV) (0 dB = 1 V/Pa, at 1 kHz)
- Microphone head: 11/32 inch (8.5 mm) dia. x 19/32 inches (14.5 mm), approx. 0.07 oz (2 g)
- Cable length: 3.9 feet (1.2 m)
- Supplied with a 3-pole locking mini plug for use with the UWP series
- Supplied accessories: single/horizontal-type tie clip (x1), urethane type windscreen (x1), operating instructions (x1)

ECM-166BMP Lavalier Microphone



















- Uni-directional, electret condenser microphone
- Resistant to howling by rejecting indirect sound
- Frequency response: 100 Hz to 10 kHz
- Sensitivity: -45 dB (5.6 mV) (0 dB = 1 V/Pa, at 1 kHz)
- Microphone head: 1/2 inch (12.5 mm) dia. x 15/16 inches (23.5 mm), approx. 0.12 oz (3.5 g)
- Cable length: 3.9 feet (1.2 m)
- Supplied with a 3-pole locking mini plug for use with the UWP series
- Supplied accessories: single/horizontal-type tie clip (x1), urethane type windscreen (x1), operating instructions (x1)

ECM-322BMP Headset Microphone



- Headset microphone for multimedia presentation applications
- Omni-directional microphone capsule for clear voice pickup from any direction
- Extra light weight of only 0.4 oz (10 g) excluding connector
- Can be worn on either the left or right ear
- Adjustable microphone position
- Secure and comfortable fit with the adjustable soft-texture ear hook and detachable headband
- Frequency response: 50 Hz to 18 kHz
- Sensitivity: -42 dB (7.94 mV) \pm 3 dB (0 dB = 1V/Pa, at 1 kHz)
- Cable length: 3.9 feet (1.2 m)
- Equipped with a 3-pole locking mini plug for use with the UWP series
- Supplied accessories: headband (x1), clip (x1), carrying case (x1), operating instructions (x1)

Portable Tuner and Camcorder Combination

	Camcorder/Tuner Interfaces		Applicable Wireless Microphone Packages		
	Mic Input Connector	Audio Input Connector	UWP-C1	UWP-C2	UWP-C3
HDV Camcorders					
HVR-Z1 Series 	—	XLR 3-pin (x2)			
HVR-V1 Series 	—	XLR 3-pin (x2)			
HVR-A1 Series 	Stereo mini-jack (x1)	XLR 3-pin (x2)			
DVCAM™ Camcorder					
DSR-PD170/PD170P 	—	XLR 3-pin (x2)			

SPECIFICATIONS

	Bodypack Transmitter	Handheld Microphone	Plug-on Transmitter
Oscillator	Crystal-controlled PLL synthesizer		
Type of emission F	F3E		
Carrier frequencies			–
AU model	792 MHz to 806 MHz (TV channels 66 to 67), Users may choose from 102 frequencies.		
CE model	798 MHz to 822 MHz (TV channels 62 to 64) or 838 MHz to 862 MHz (TV channels 67 to 69) Users may choose from 189 frequencies on each model.		
U model	758 MHz to 782 MHz (TV channels 62 to 65) or 782 MHz to 806 MHz (TV channels 66 to 69) Users may choose from 188 frequencies on each model.		
RF power output 30 mW or 5 mW (selectable)		30 mW or 5 mW (selectable)	50 mW
Antenna	1/4 λ wave length wire	1/4 λ wave length wire (internal)	Integral type
Pilot tone signal	32 kHz		
Frequency response	50 Hz to 18 kHz (typical)	100 Hz to 18 kHz (typical)	50 Hz to 18 kHz (typical)
Reference deviation	± 5 kHz (-60 dBV, 1kHz input)	± 5 kHz (94 dB SPL, 1kHz input)	± 10 kHz (-60 dBV, 1kHz input)
Signal-to-noise ratio	60 dB or more (± 5 kHz deviation at 1 kHz modulation, A-weighted)		60 dB or more (± 10 kHz deviation at 1 kHz modulation, A-weighted)
Microphone capsule	–	Dynamic capsule (uni-directional)	–
Audio attenuator adjustment range	0 to 21 dB (in 3 dB steps)		
Audio input level -60 dBV (at 0 dB attenuator level)		– attenuator level), LINE input position: +4 dBu	MIC input position: -60 dBV (at 0 dB)
Audio input connector	3-pole mini jack	–	XLR-3-11C type
Max. input sound pressure level	–	151 dB SPL (at 21 dB attenuator level)	–
Indicators			
LCD	Operating channel number/frequency, attenuator level, RF-output level (High/Low), audio input status transmitter battery status, and accumulated operating time		Operating channel number/frequency, attenuator- level, audio input status, RF-output status, transmitter battery status, and accumulated operating time
LED	Power status		Audio-input status
Power requirements	DC 3.0 V (with two AA-size alkaline (LR6) batteries)		
Battery life	Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 77 °F (25 °C) at 30 mW output		Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 77 °F (25 °C) at 50 mW output
Dimensions (W x H x D)	2 1/2 x 4 x 1 1/8 inches (63 x 100 x 27 mm)	$\phi 21/8$ x 9 1/2 inches ($\phi 52$ x 240 mm)	1 3/4 x 4 x 1 7/16 inches (44 x 99 x 36 mm)
Weight	Approx. 4.9 oz (140 g) including batteries	Approx. 10.6 oz (300 g) including batteries	Approx. 6.5 oz (185g) including batteries
Supplied accessories	UWP-C1: omni-directional lavalier microphone (x1), windscreen (x1), microphone-holder clip (x1), belt clip (x1) UWP-S1/X1: uni-directional lavalier microphone (x1), windscreen (x1), microphone-holder clip (x1), belt clip (x1) UWP-X5: omni-directional headset microphone (x1), headband (x1), clip (x1), belt clip (x1)	Microphone holder (x1)	Soft case (x1)

SPECIFICATIONS

	Portable Tuner	Half 19-inch Rack-size Tuner	Tuner Module
Oscillator	Crystal-controlled PLL synthesizer		
Type of reception	Space diversity		
Receiving frequencies			
AU model	792 MHz to 806 MHz (TV channels 66 to 67) Users may choose from 102 frequencies.		
CE model	798 MHz to 822 MHz (TV channels 62 to 64) or 838 MHz to 862 MHz (TV channels 67 to 69) Users may choose from 189 frequencies on each model.		
U model	758 MHz to 782 MHz (TV channels 62 to 65) or 782 MHz to 806 MHz (TV channels 66 to 69) Users may choose from 188 frequencies on each model.		
Antenna	1/4 λ wave length wire		
Pilot-tone signal	32 kHz		
RF squelch level	15 dB μ	25 dB μ	
Frequency response	50 Hz to 18 kHz (typical)		
Reference deviation	\pm 5 kHz (at 1kHz modulation)		
Signal-to-noise ratio	60 dB or more (\pm 5 kHz deviation at 1 kHz modulation, A-weighted)		
Audio output connector	3-pole mini jack, unbalanced	XLR-3-32 type (balanced) 1/4-inch phone jack (unbalanced)	–
Audio output level	-58 dBm	XLR-3-32: -28 dBm (LINE level) or -58 dBm (MIC level) 1/4-inch phone jack: -30 dBm	–
Monitor output connector	3.5 mm (5/32 inch) dia., stereo mini jack	1/4-inch stereo mini jack	–
Monitor output level	5 mW (at 16 Ω)		–
Indicators			
LCD	Operating channel number/frequency, audio-output status, RF-input level, tuner battery status, and accumulated operating time	Operating channel number/frequency, audio-output status, RF-input level	
LED	RF-input status		
Power requirements	DC 3.0 V (two AA-size alkaline (LR6) batteries)	DC 9.0 V	
Battery life	Approx. 6 hours (with Sony AA-size alkaline (LR6) batteries at 77 °F (25 °C))	–	
Dimensions (W x H x D)	2 1/2 x 4 x 1 3/16 inches (63 x 100 x 30 mm)	8 3/8 x 1 3/4 x 8 1/4 inches (212 x 44 x 209 mm)	2 1/2 x 1 1/16 x 4 7/8 inches (56.6 x 25.5 x 121.0 mm)
Weight	Approx. 6 oz (180 g) including batteries	Approx. 2 lb 14 oz (1.3 kg)	Approx. 5.3 oz (150 g)
Supplied accessories	Microphone stand adaptor (x1)*, shoe-mount adaptor (x1), belt clip (x1), output cable (x2, 3-pole locking mini plug/XLR-type, 3-pole locking mini plug/stereo mini plug)	AC/DC adaptor (x1)	–

*Microphone stand adaptor is not included in the UWP-C3 package.

Use of Sony wireless devices in the United States of America is regulated by the Federal Communications Commission as described in Parts 15 and 74 of the FCC regulations. Users authorized thereby are required to obtain an appropriate license.

SONY®

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