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## UWP Series

UHF Synthesized Wireless Microphone System

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# 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 five core elements — a lavalier/bodypack transmitter, a wireless handheld microphone, a portable tuner, a half-rack-size tuner, and a tuner module. These are available in six 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 helps 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 handheld microphone and portable transmitter 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 prevents 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 pre-programmed 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, interference-free frequencies are stored in the UWP tuners. By using the pre-programmed frequency groups, users can easily choose interference-free frequencies 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, screw adaptor, shoe-mount adaptor for mounting on a camcorder and output cables (3-pole mini-plug/XLR-type, 3-pole 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 and screw adaptor
- The portable tuner is supplied with a microphone stand adaptor, screw adaptor, shoe-mount adaptor for mounting on a camcorder, belt clip and output cables (3-pole mini-plug/XLR-type, 3-pole mini-plug/ stereo mini-plug)



### UWP-S1



- 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



- 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 and screw adaptor
- The half-rack-size tuner is supplied with an AC/DC adaptor



### UWP-X1



- 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



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

# Transmitter/Tuner Features

## Lavalier 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
- 1.2 m (3.9 feet) microphone cable
- Supplied with a microphone windscreen and microphone-holder 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
- 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 3.5-mm dia., 3-pole mini-jack input connector with lock mechanism accepts the output of any lavalier microphones equipped with a 3.5 mm dia. mini plug, as well as the output of the supplied lavalier 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

- 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 and a screw adaptor

## 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.

- 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

## 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
- 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
- Stereo mini jack with monitor-volume control
- Supplied shoe-mount adaptor enables easy mounting on Sony camcorders. A microphone-stand adaptor, screw adaptor, belt clip and two output cables (3-pole mini-plug/XLR-type, 3-pole mini-plug/stereo mini-plug) are also provided.



Photo shows portable tuner mounted on a microphone stand.


















Photo shows portable tuner mounted on a HVR-Z1 HDV™ camcorder.



Rear Panel



## Wireless Microphone Tuner and Camcorder Combinations

	Camcorder/Tuner Interfaces		Applicable Wireless Microphone Tuners	
	Mic Input Connector	Audio Input Connector	UWP-C1	UWP-C2
<b>HDV Camcorders</b>				
	—	XLR 3-pin (x2)	 	 
<b>DVCAM Camcorders</b>				
 <b>DSR-PD170P</b>	—	XLR 3-pin (x2)	 	 
 <b>DSR-PDX10P</b>	Stereo mini-jack (x1)	XLR 3-pin (x2)	 	 

## 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-806A 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
- A backlight 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
- An auto channel search function automatically selects unoccupied channels

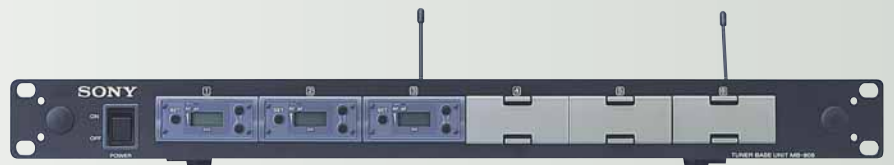


Photo shows tuner module installed in the MB-806A.



Photo shows tuner module installed in the SRP-X500P.

## Optional Accessories



**ECM-77BMP**

### Lavalier Microphone

- High-performance, miniature microphone
- 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: 5.6 mm (¼ inch) dia. x 12.5 mm (½ inches), approx. 1.5 g (0.05 oz)
- Cable length: 1.2 m (3.9 feet)
- Supplied with 3-pole mini-jack with a stable lock mechanism for use with the UWP series
- Supplied accessories: Single/horizontal-type tie clip (1), metal-mesh type windscreen (1), operating instructions (1)



**ECM-44BMP**

### Lavalier Microphone

- Omni-directional, electret condenser microphone
- Superior sound quality
- Frequency response: 40 Hz to 15 kHz
- Sensitivity: -40 dB (10 mV) (0 dB = 1 V/Pa, at 1 kHz)
- Microphone head: 8.5 mm (1½ inch) dia. x 14.5 mm (½ inches), approx. 2 g (0.07 oz)
- Cable length: 1.2 m (3.9 feet)
- Supplied with 3-pole mini-jack with a stable lock mechanism for use with the UWP series
- Supplied accessories: Single/horizontal-type tie clip (1), urethane type windscreen (1), operating instructions (1)



**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: 12.5 mm (½ inch) dia. x 23.5 mm (1⅝ inches), approx. 3.5 g (0.12 oz)
- Cable length: 1.2 m (3.9 feet)
- Supplied with 3-pole mini-jack with a stable lock mechanism for use with the UWP series
- Supplied accessories: Single/horizontal-type tie clip (1), urethane type windscreen (1), operating instructions (1)



**ECM-310BMP**

### Headset Microphone

- Lightweight, headset-style microphone
- Wide-cardioid, electret condenser microphone provides crisp and clear sound while isolating desired sound from surrounding ambience
- Adjustable hinge and goose-neck
- Frequency response: 70 Hz to 12 kHz
- Sensitivity: -44 dB (6.3 mV) ± 3 dB (0 dB = 1 V/Pa, at 1 kHz)
- Microphone head: 12.5 mm (½ inch) dia. x 23.5 mm (1⅝ inches), approx. 3.5 g (0.12 oz)
- Cable length: 1.2 m (3.9 feet)
- Supplied with 3-pole mini-jack with a stable lock mechanism for use with the UWP series
- Supplied accessories: Urethane type windscreen (1), operating instructions (1)

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# Specifications

0 dBV = 1 Vrms    0 dB SPL = 20µ Pa.

## Bodypack Transmitter

Oscillator	Crystal-controlled PLL synthesizer
Type of emission	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)
Antenna	1/4 λ wave length wire
Pilot tone signal	32 kHz
Frequency response	50 Hz to 18 kHz (typical)
Reference deviation	±5 kHz (-60 dBV, 1kHz input)
Signal-to-noise ratio	60 dB or more (±5 kHz deviation at 1 kHz modulation, A-weighted)
Audio attenuator adjustment range	0 to 21 dB (in 3 dB steps)
Audio input level	-60 dBV (at 0 dB attenuator level)
Audio input connector	3.5 mm (1/8 inch) dia., 3-pole mini jack
Indicators	
LCD	Operating channel number/frequency, attenuator level, RF-output level (High/Low), audio-input status, RF-output status, transmitter battery status, and accumulated operating time
LED	Power 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 25 °C (77 °F) at 30 mW output
Dimensions (W x H x D)	63 x 100 x 27 mm (2 1/2 x 4 x 1 1/8 inches)
Mass	Approx. 140 g (4.9 oz) including batteries
Supplied accessories	Omni-directional (UWP-C1)/Uni-directional (UWP-S1/X1) lavalier microphone (x 1), windscreen (x 1), microphone-holder clip (x 1), belt clip (x 1)

## Handheld Microphone

Oscillator	Crystal-controlled PLL synthesizer
Type of emission	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)
Antenna	1/4 λ wave length wire (internal)
Pilot tone signal	32 kHz
Frequency response	100 Hz to 18 kHz (typical)
Reference deviation	±5 kHz (94 dB SPL, 1 kHz input)
Signal-to-noise ratio	60 dB or more (±5 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)
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, RF-output status, transmitter battery status, and accumulated operating time
LED	Power status
Power requirements	DC 3.0 V (two AA-size alkaline (LR6) batteries)
Battery life	Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F) at 30 mW output
Dimensions	ø52 x 240 mm (ø2 1/8 x 9 1/2 inches)
Mass	Approx. 300 g (10.6 oz) including batteries
Supplied accessories	Microphone holder (x 1), screw adaptor (x 1)

## Portable Tuner

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 dBµ
Frequency response	50 Hz to 18 kHz (typical)
Reference deviation	±5 kHz (at 1kHz modulation)
Signal-to-noise ratio	60 dB or more (±5 kHz deviation at 1 kHz modulation, A-weighted)
Audio output connector	3.5 mm (1/8 inch) dia., 3-pole mini jack (x 1), unbalanced
Audio output level	-58 dBm
Monitor output connector	3.5 mm (1/8 inch) dia., stereo mini jack (x 1)
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
LED	RF-input status
Power requirements	DC 3.0 V (two AA-size alkaline (LR6) batteries)
Battery life	Approx. 6 hours with Sony AA-size alkaline (LR6) batteries at 25 °C (77 °F)
Dimensions (W x H x D)	63.0 x 100.0 x 30.0 mm (2 1/2 x 4 x 1 1/8 inches)
Mass	Approx. 180 g (6 oz) including batteries
Supplied accessories	Microphone stand adaptor (x 1), screw adaptor (x 1), shoe-mount adaptor (x 1), belt clip (x 1), output cable (x 2, 3-pole mini-plug/XLR-type, 3-pole mini-plug/stereo mini-plug)

## Half 19-Inch Rack-Size Tuner

Oscillator	Crystal-controlled PLL synthesizer
Type of reception	Space diversity
Receiving frequencies	
AU models	792 MHz to 806 MHz (TV channels 66 to 67) Users may choose from 102 frequencies.
CE models	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.
U models	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.
Antenna	1/4 λ wave length wire
Pilot-tone signal	32 kHz
RF squelch level	25 dBµ
Frequency response	50 Hz to 18 kHz (typical)
Reference deviation	±5 kHz (at 1kHz modulation)
Signal-to-noise ratio	60 dB or more (±5 kHz deviation at 1 kHz modulation, A-weighted)
Audio output connector	1/4-inch phone jack (unbalanced) or XLR-3-32 type (balanced)
Audio output level	XLR-3-32 -28 dBm (LINE level) or -58 dBm (MIC level) 1/4-inch phone jack -30 dBm
Monitor output connector	1/8-inch stereo mini jack (x 1)
Monitor output level	5 mW (at 16 Ω )
Indicators	
LCD	Operating channel number/frequency, audio-output status, RF-input level
LED	RF-input status
Power requirements	DC 9.0 V
Dimensions (W x H x D)	212.0 x 44.0 x 209.0 mm (8 3/8 x 1 3/8 x 8 1/4 inches)
Mass	Approx. 1.3 kg (2 lb 14 oz)
Supplied accessory	AC/DC adaptor (x 1)

## Tuner Module

Oscillator	Crystal-controlled PLL synthesizer
Type of reception	Space diversity
Receiving frequencies	
AU models	792 MHz to 806 MHz (TV channels 66 to 67) Users may choose from 102 frequencies.
CE models	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.
U models	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.
Antenna	1/4 λ wave length wire
Pilot tone signal	32 kHz
RF squelch level	25 dBµ
Frequency response	50 Hz to 18 kHz (typical)
Reference deviation	±5 kHz (at 1kHz modulation)
Signal-to-noise ratio	60 dB or more (±5 kHz deviation at 1 kHz modulation, A-weighted)
Indicators	
LCD	Operating channel number/frequency, audio-output status, RF-input level
LED	RF-input status
Power requirements	DC 9.0 V
Dimensions (W x H x D)	56.6 x 25.5 x 121.0 mm (2 1/8 x 1 1/8 x 4 3/4 inches)
Mass	Approx. 150 g (5.3 oz)
Supplied accessory	—

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