Professional Audio

Product Catalogue 2009/2010

SONY

Whether its role is to inform, influence, educate or entertain, audio touches the lives of billions of people every day.

Audio technology has given everyone – from musicians and broadcasters to producers of corporate presentations – the freedom to create and distribute high-quality audio more rapidly, more cost-effectively and with greater flexibility than ever before. For end-users, the impact of digital sound has been equally profound. From pocket-sized audio players that can store thousands of songs to multi-media PCs, DVDs and the latest generation of gaming consoles, digital audio is everywhere.

For more than 30 years, Sony has been synonymous with the production and distribution of high-quality audio. Sony is constantly redefining the creative and technical possibilities for live and recorded sound. Drawing on its deep understanding of film, television and music entertainment, as well as networked multi-media technologies, Sony is your perfect partner to provide not just individual audio products, but complete audio-visual systems. The result? Every time you choose a Sony professional audio product, you can be safe in the knowledge that it has been designed not only to perform superbly over years of daily use, but to integrate perfectly with the rest of your audio-visual systems – now and in the future.

Contents

/01

Wired Microphones

Recording engineers the world over are immensely protective of their own personal collection of microphones, regarding them as an essential part of their sonic signature. Building on decades of experience in audio acquisition, Sony offers a comprehensive choice of wired microphones that offers musicians, broadcasters and producers of audio-visual presentations uncompromised audio, as well as utterly dependable performance.

ECM-88 Series
ECM-88B / ECM-88BC / ECM-88BPT / ECM-88FPT
Lavalier Electret Condenser Microphone

Sony ECM-88 Series lavalier microphones are extremely miniature, omni-directional electret condenser microphones ideal for quality-critical applications in broadcasting, theatre and field productions. As well as offering a high-sensitivity, flat-and-wide frequency response and low-noise characteristics, these microphones also provide other significant enhancements.

A water-resistant architecture reduces the risk of water or perspiration entering the microphone capsule.

The capsule itself is just 3.5 x 3.5 x 16.8 mm, allowing for easy, natural-looking concealment in both television and stage productions. Whenever size, quality and reliability are of paramount importance, the Sony ECM-88 Series offers the perfect solution.
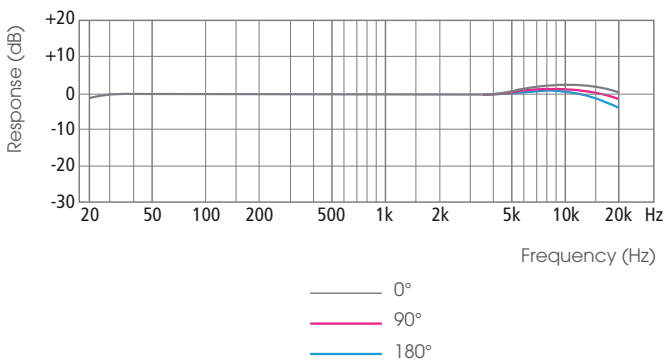
Features

> Ultra-miniature, omni-directional electret condenser microphone

> Designed for quality-critical applications in broadcasting, theatre and field productions

> Flat-and-wide frequency response provides natural sound reproduction to enable the addition of sound effects during the mixing process

> Water-resistant design maintains sound clarity in almost any application or environment

> Dual-diaphragm mechanism contributes to the high-sensitivity, wide dynamic range and low-noise characteristics

> Low cable noise characteristics

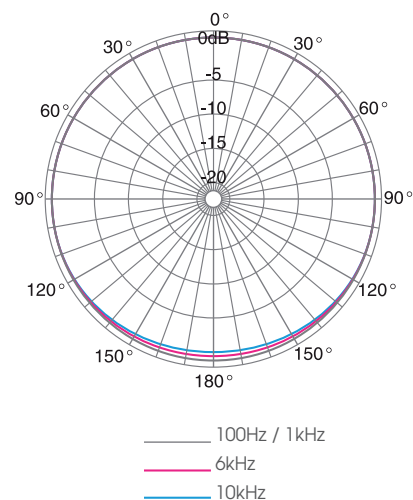> Miniature design makes it easy to conceal in a stage costume

Four models available:

> ECM-88B: Black-coloured model supplied with a DC-78 DC Power Supply Unit. Two-way powering possible - internal AA-size (LR6) alkaline battery operation or external DC (12 to 48 V) operation

> ECM-88BC: Black-coloured model supplied with a Sony 4-pin connector (SMC9-4P), for use with the WRT-8B/822B Sony bodypack transmitter

> ECM-88BPT: Black-coloured model supplied without a connector (pigtail), enabling users to choose connectors according to their transmitter

> ECM-88FPT: Beige-coloured model supplied without a connector (pigtail), enabling users to choose connectors according to their transmitter

Characteristics

Frequency Response Characteristics

Frequency (Hz)

—— 0°
—— 90°
—— 180°

Directivity Characteristics

—— 100Hz / 1kHz
—— 6kHz
—— 10kHz

ECM-77 Series
ECM-77B / ECM-77BC / ECM-77BMP / ECM-77BPT
Lavalier Electret Condenser Microphone

Features

> Miniature, omni-directional electret condenser microphone

> Worldwide acclaim for performance and reliability in studio, Electronic News Gathering (ENG) and Electronic Field Production (EFP) applications

> Wide frequency response, high-sensitivity and low-noise characteristics

> Miniature design makes it easy to conceal in a costume
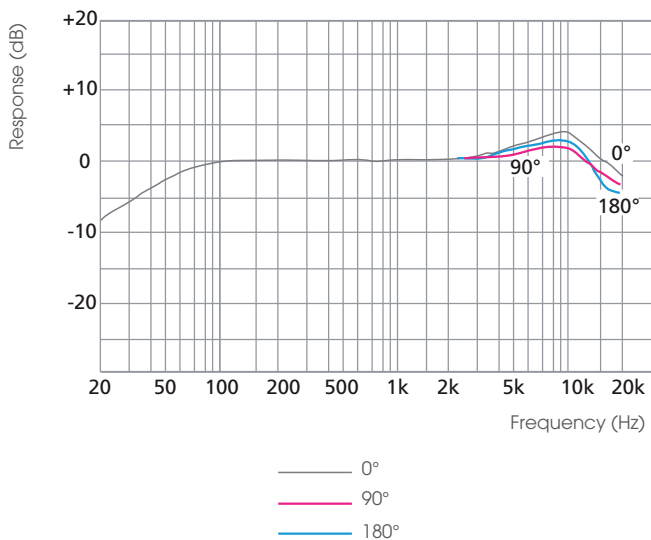
> Wide model variations to suit specific user requirements

Four models available:

> ECM-77B: Black-coloured model supplied with an in-line battery unit. Two-way powering possible – internal AA-size (LR6) alkaline battery operation or external DC (12 to 48 V) operation

> ECM-77BC: Black-coloured model supplied with a Sony 4-pin connector (SMC9-4P), for use with the WRT-8B/822B Sony bodypack transmitter

> ECM-77BMP: Black-coloured model supplied with a 3-pole locking mini-plug for use with the bodypack transmitter included in UWP series

> ECM-77BPT: Black-coloured model supplied without a connector (pigtail)

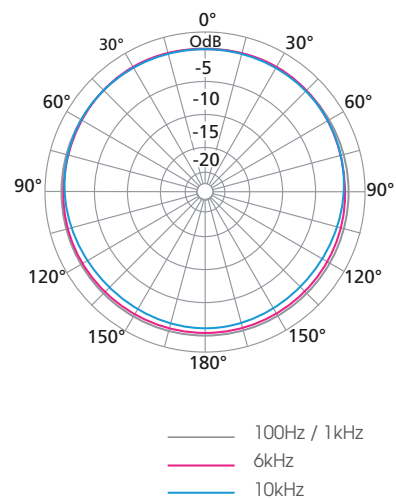## Characteristics

Frequency Response Characteristics

0°
90°
180°

Directivity Characteristics

100Hz / 1kHz
6kHz
10kHz

ECM-66 Series
ECM-66B / ECM-66BC
Lavalier Electret Condenser Microphone

Features

> Uni-directional, electret condenser microphone

> Resistant to howling by rejecting indirect sound

> Designed for a wide range of applications from voice to instrumental recording

> Wide dynamic range (101dB) and high maximum input sound-pressure level (130dB SPL)

> Low inherent noise characteristics

Two models available:

> ECM-66B: Black-coloured model supplied with an in-line battery unit. Two-way powering possible – internal AA-size (LR6) alkaline battery operation or external DC (24 to 48 V) operation

> ECM-66BC: Black-coloured model supplied with a Sony 4-pin connector (SMC9-4P), for use with the WRT-8B/822B Sony bodypack transmitter

Characteristics

Frequency Response Characteristics

— 0°
— 90°
— 180°

Directivity Characteristics

— 100Hz
— 1kHz
— 10kHz

ECM-55 Series
ECM-55B
Lavalier Electret Condenser Microphone

Features

> Omni-directional, electret condenser microphone

> Large microphone head of 10.6 mm (7/16 inch) diameter offers rich sound reproduction.

> High signal-to-noise ratio and low inherent noise characteristics

One model available:

> ECM-55B: Black-coloured model supplied with an in-line battery unit. Two-way powering possible – internal AA-size (LR6) alkaline battery operation or external DC (12 to 48 V) operation

Characteristics
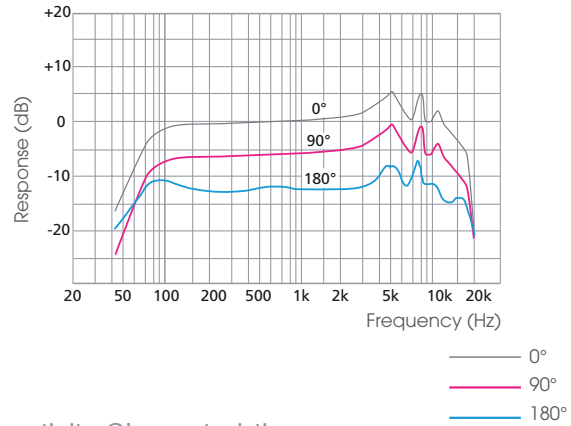
Frequency Response Characteristics

— 0°
— 90°
— 180°

Directivity Characteristics

— 100Hz / 1kHz
— 3kHz
— 10kHz
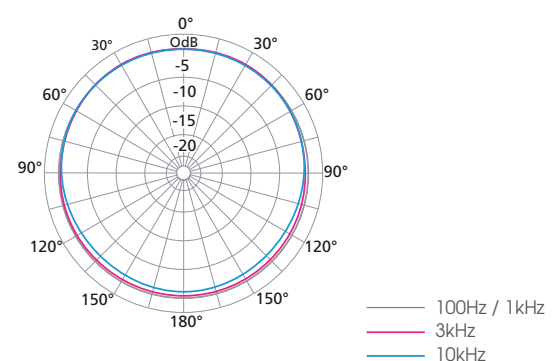
ECM-44 Series
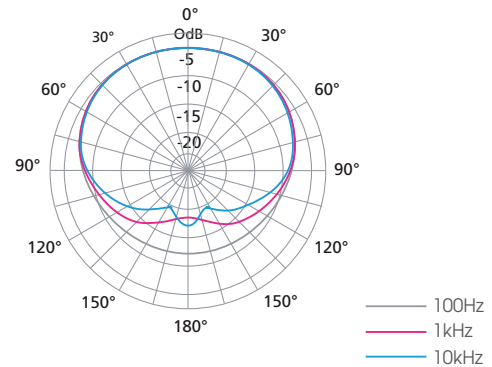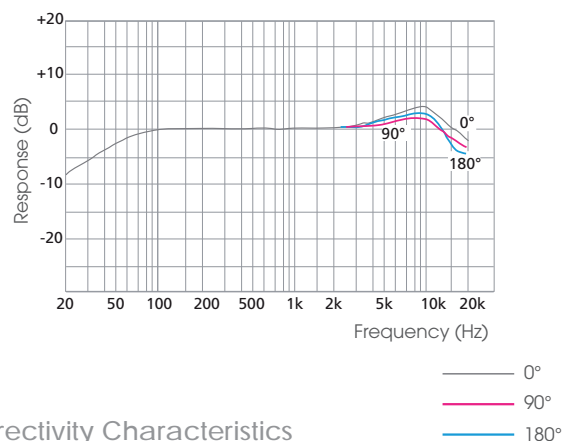## ECM-44B / ECM-44BC / ECM-44BMP / ECM-44BPT
Lavalier Electret Condenser Microphone

Features

> Omni-directional, electret condenser microphone

> Cost-effective miniature microphone provides superb sound quality

> Wide model variations to suit specific user requirements

Four models available:

> ECM-44B: Black-coloured model supplied with an in-line AA-size (LR6) alkaline battery unit

> ECM-44BC: Black-coloured model supplied with a Sony 4-pin connector (SMC9-4P), for use with the WRT-8B/822B Sony bodypack transmitter

> ECM-44BMP: Black-coloured model supplied with a 3-pole locking mini-plug for use with the bodypack transmitter included in UWP Series

> ECM-44BPT: Black-coloured model supplied without a connector (pigtail)

Characteristics

Frequency Response Characteristics

- —— 0°
- —— 90°
- —— 180°

Directivity Characteristics

- —— 100Hz / 1kHz
- —— 3kHz
- —— 10kHz
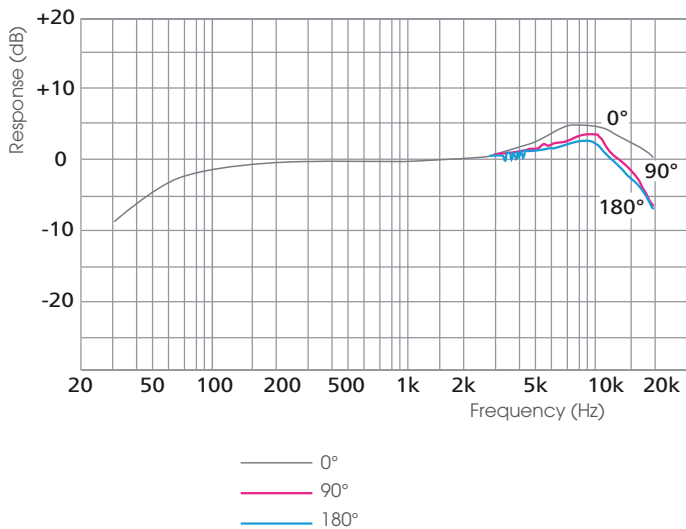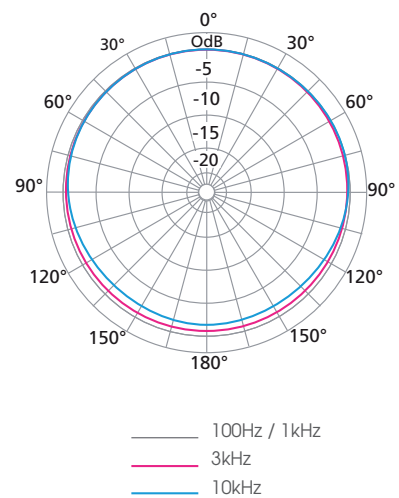
ECM-166 Series
ECM-166BC / ECM-166BMP
Lavalier Electret Condenser Microphone

ECM-V1BMP

Features

> Uni-directional, electret condenser microphone

> Resistant to howling by rejecting indirect sound

> Reasonably priced lavalier microphone ideal for institutional use and sound-contracting applications such as speeches, lectures and conferences

Two models available:

> ECM-166BC: Black-coloured model supplied with a Sony 4-pin connector (SMC9-4P), for use with the WRT-8B/822B Sony bodypack transmitter

> ECM-166BMP: Black-coloured model supplied with a 3-pole locking mini-plug for use with the bodypack transmitter included in UWP series

Features

> The lavalier microphone supplied with the UWP package is available as an individual microphone

> Omni-directional, electret condenser microphone

> Reasonably priced lavalier microphone, ideal for ENG and EFP uses

Characteristics
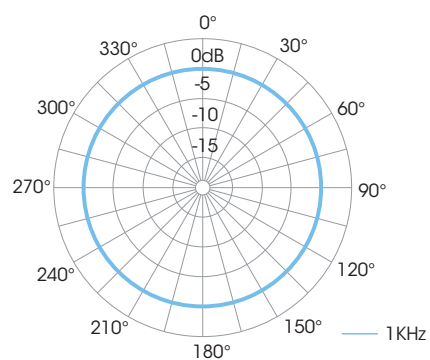
Frequency Response Characteristics

Directivity Characteristics

ECM-X7BMP

ECM-322 Series
ECM-322BC / ECM-322BMP
Lavalier Electret Condenser Microphone

Features

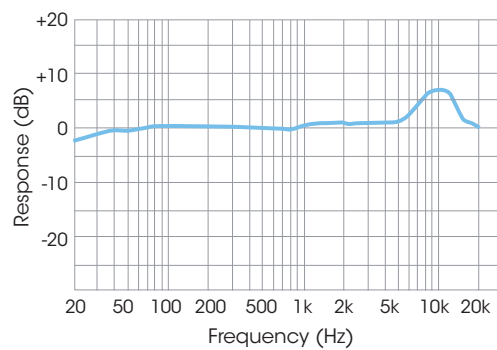> The lavalier microphone supplied with the UWP package is available as an individual microphone.
> Uni-directional, electret condenser microphone.
> Resistant to howling by rejecting indirect sound.
> Reasonably priced lavalier microphone, ideal for institutional use and sound-contracting applications such as speeches, lectures and conferences.

Characteristics

Frequency Response Characteristics

Directivity Characteristics

Features

> Omni-directional, electret condenser microphone
> Ear-clip style design wearable on either the left or right ear
> Secure and comfortable fit with the adjustable soft-texture ear hook and detachable headband
> Ideal for a variety of multi-media presentation applications ranging from seminars and conferences to lectures and workshops

Two models available:

> ECM-322BC: Black-coloured model supplied with a Sony 4-pin connector (SMC9-4P), for use with the WRT-8B/822B Sony bodypack transmitter
> ECM-322BMP: Black-coloured model supplied with a 3-pole locking mini-plug for use with the bodypack transmitter included in UWP Series

Lavalier Microphones
## Connector Type
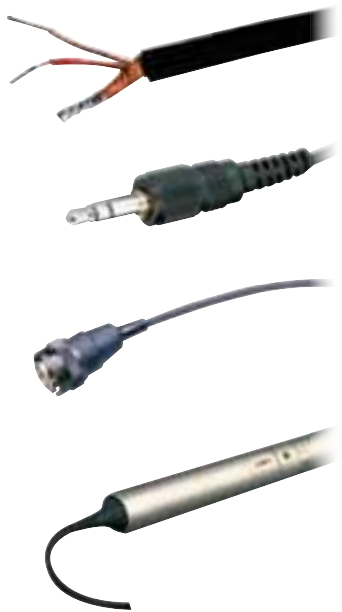
BPT
Pigtail version with pre-soldered wires (black cable and mic)

BMP
3.5 mm locking jack for connection to Sony UWP Series wireless transmitter (black cable and mic)

BC
Hirose 4-pin locking plug for connection to Sony wireless transmitters WRT-822B/WRT-8B (black cable and mic)

B
Power unit with internal battery and male XLR connector. This unit may also be used for 12 – 48 V phantom supply (black cable and mic)

ECM-530
Electret Condenser Table-top Microphone

The ECM-530 is a compact, high-quality table-top microphone for precise voice pick-up.

Features

> Extendable / flexible gooseneck
> Two-way powering (internal battery / 12-48 V phantom supply operation)

Characteristics

Frequency Response Characteristics

- 0°
- 90°
- 180°

Directivity Characteristics

- 100Hz
- 1kHz
- 8kHz
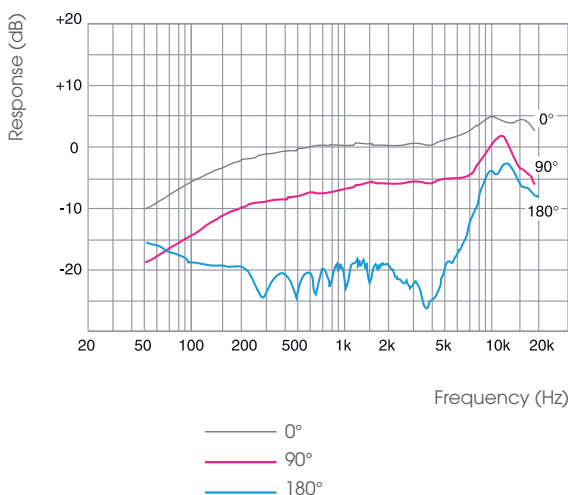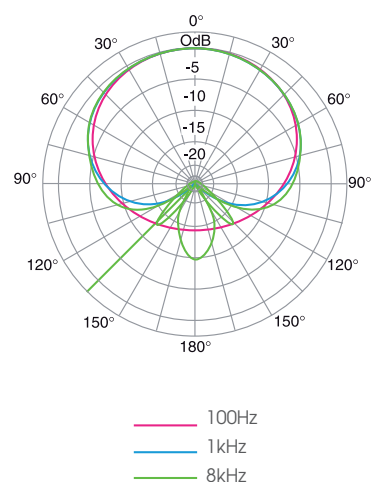
ECM-680S

Lavalier Electret Condenser Microphone

The Sony ECM-680S is an MS stereo*[1] shotgun, electret condenser-type microphone, ideal for a broad range of field production and broadcast studio applications. Incorporating newly developed microphone capsules, the ECM-680S offers excellent sensitivity, low inherent noise and a flat-and-wide frequency response. The most distinguished feature of the ECM-680S is its switchable operation between a highly directional monaural mode and stereo mode. Monaural mode provides highly directional sound pick-up, while stereo mode delivers natural and spatial sound.

*[1] MS microphone signal of the ECM-680S is internally decoded to L and R (stereo) outputs.

The ECM-680S is compact and lightweight, making it well-suited for use with a range of Sony professional camcorders. In addition, it can be mounted on a boom pole for more versatility. With its excellent quality and versatility, the ECM-680S is an ideal choice for quality-conscious sound-gathering applications.

Features

Excellent Sound Quality

The ECM-680S uses the Mid-Side (MS) technique that offers natural stereo sound and excellent localisation. Equipped with newly developed large diaphragm microphone capsules with bi-directional characteristics, the ECM-680S delivers superb sensitivity of -28dB*[2] (stereo)/-32dB*[2] (monaural) and extremely low inherent noise of less than 20dB SPL (stereo/monaural).

*[2] 0dB=1 V/Pa

Stereo and Monaural Switchable

The ECM-680S can operate in either stereo or monaural (uni-directional) mode, allowing it to be used in both EFP and ENG applications. Stereo mode is ideal for capturing environmental sound with natural sound quality, while monaural mode is ideal for clearly capturing voice and sound from a distance. These modes can be selected from the switch on the microphone or from compatible Sony professional camcorders*[3]. The LED on the microphone lights up when the ECM-680S is set to stereo mode, to easily notify the user that operating mode is currently selected.

*[3] Stereo and monaural modes can be switched from the Sony HDW-F900R and HDW-650P HDCAM Camcorders, the PDW-F355, PDW-F335 and the PDW-700 XDCAM HD Camcorders.

Flat-and-wide Frequency Response

The ECM-680S microphone has a flat-and-wide frequency response (50Hz to 20kHz (stereo)/40Hz to 20kHz (monaural)) in both stereo and monaural modes and will provide sound reproduction that is extremely smooth and natural.

Built-in Low-cut Filter

The built-in two-position (M, V) low-cut switch provides a simple method of reducing the effects of undesired ambient noise.

Compact and Lightweight Design

The ECM-680S has been designed to be a compact yet high-performance stereo shotgun microphone, ideal for camera-mounted use. It measures only 250 mm (9 7/8 inches) in length and weighs less than 140 g (4.9 oz), maintaining good balance and mobility when mounted on a range of Sony professional camcorders.

Characteristics

Frequency Response Characteristics (Stereo Mode)

Response (dB) vs Frequency (Hz)

— 0°
— 90°
— 180°

Directivity Characteristics (Stereo Mode)

— 500Hz
— 1kHz
— 2kHz
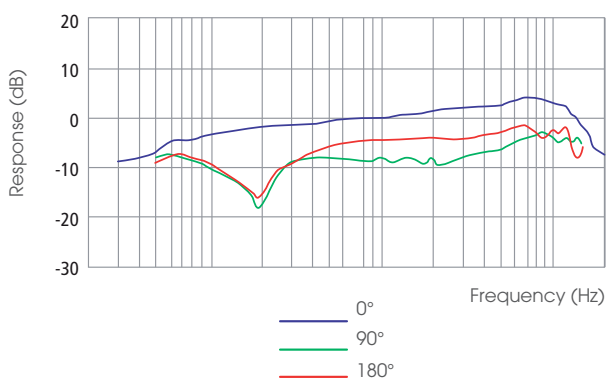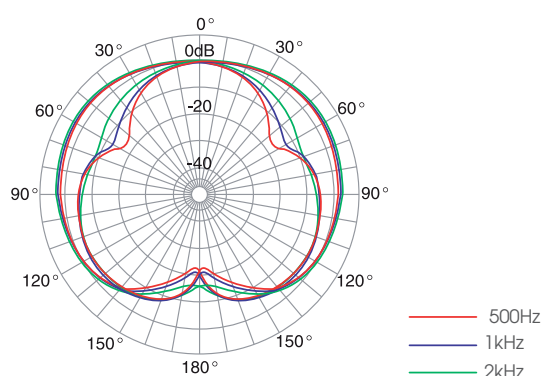
ECM-678

Electret Condenser Microphone

The Sony ECM-678 is a short shotgun, electret condenser-type microphone, which delivers outstanding sound performance in all field production and broadcast studio applications. It is also well-suited for use on Sony professional camcorders such as the HDV™, DVCAM™ and XDCAM™ Series. The ECM-678 offers excellent sensitivity, low inherent noise and extreme durability. Its highly directional response allows clear voice pick-up even in the most demanding of environments, while the built-in low-cut filter switch helps to reduce unwanted pop and wind noise encountered in the field. With its high-performance and durability, the ECM-678 microphone is the perfect choice for quality-critical sound acquisition applications.

Features

Superb Sound Quality

The ECM-678 is equipped with a newly developed microphone capsule, which delivers superb sensitivity of -28dB (0dB=1 V/Pa.) and an extremely low inherent noise of less than 16dB SPL. This provides the clearest pick-up of even the faintest sounds at long distances.

Flat-and-wide Frequency

The ECM-678 microphone has a flat-and-wide frequency response (40Hz to 20kHz) and will provide sound reproduction that is extremely smooth and natural.

Compact Design

The ECM-678 has been specially designed to meet the needs for a compact yet high-performance shotgun microphone. The result is a highly directional microphone that is only 250 mm in length.

High-durability and Reliability

The vibration-resistant mechanism of the ECM-678 offers high-durability and reliability, making it suitable for the harshest environments encountered in the most demanding of sound acquisition scenarios.

Built-in Low-cut Filter

The built-in two-position (M, V) low-cut switch provides users with a simple method of reducing the effects of undesired ambient noise.
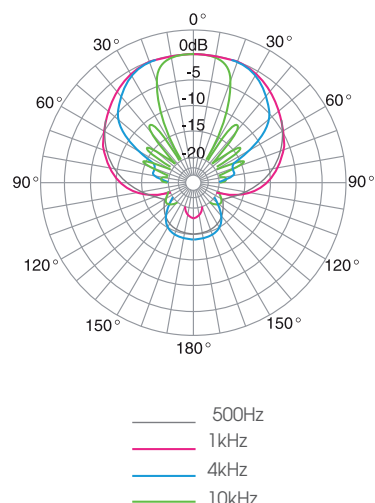
Characteristics

Frequency Response Characteristics
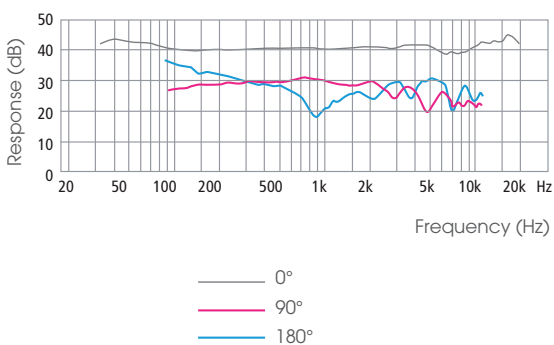
Directivity Characteristics

ECM-674

Electret Condenser Microphone

The Sony ECM-674 is an affordable shotgun-type electret condenser microphone, which delivers excellent sound performance in field and studio productions.

Offering high-sensitivity, low-noise characteristics and flat-and-wide frequency response in a compact and lightweight design, the ECM-674 is well-suited for use with Sony camcorders such as the HDV, DVCAM and XDCAM Series. In addition, its two-way powering feature allows for both microphone power operation and battery operation. With its high-performance, affordable price and great versatility, the ECM-674 microphone is an ideal choice for a range of sound acquisition applications.

Features

Superb Sound Quality

The ECM-674 offers excellent sensitivity of -36dB (0dB=1 V/Pa.) and low inherent noise level of less than 17dB SPL. This allows the microphone to be used for clear voice pick-up even in noisy environments.

Flat-and-wide Frequency

The ECM-674 microphone has a flat-and-wide frequency response (40Hz to 20kHz) and provides sound reproduction that is extremely smooth and natural.

Compact and Lightweight Design

The ECM-674 has been designed as a highly directional compact and lightweight shotgun microphone. It measures only 268 mm (10 5/8 inches) in length and weighs just 185 g (6.5 oz), maintaining good balance even when mounted on compact camcorders.

Two-way Powering

A two-way powering capability allows the ECM-674 to be driven by microphone power or batteries, making it suitable for both camcorder mounting and many other sound-gathering applications.
- Internal AA-size battery operation
- External DC (40 to 52 V) operation

Built-in Low-cut Filter

The built-in two-position (M, V) low-cut switch provides users with a simple method of reducing the effects of undesired ambient noise.

Built-in Battery Liquid Leakage Protection Circuit

In general, old batteries can leak and damage the equipment they are used in. The ECM-674 prevents this by continually detecting the output voltage of the battery and shutting off the power supplied to the electric circuit whenever the voltage drops beneath a certain threshold.

Characteristics

Frequency Response Characteristics

- 0°
- 90°
- 180°

Directivity Characteristics

- 500Hz
- 1kHz
- 4kHz
- 10kHz
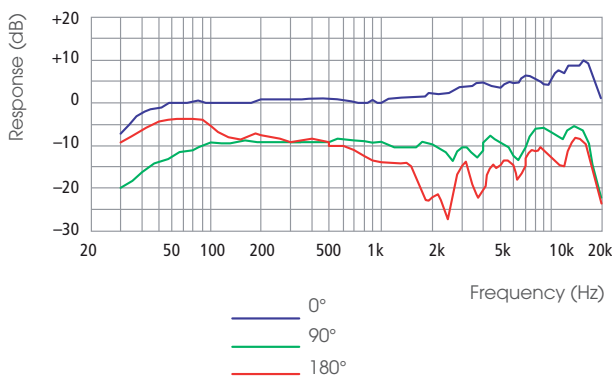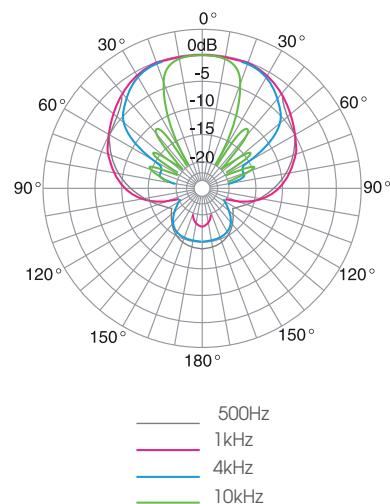
ECM-673

Electret Condenser Microphone

The Sony ECM-673 is a short shotgun, electret condenser-type microphone, which delivers excellent sound performance in field and studio production applications at an affordable price. Optimised for use with Sony compact camcorders such as the HDV and DVCAM Series, the ECM-673 offers high-sensitivity, low-noise characteristics and a flat-and-wide frequency response in a compact and lightweight body. In addition, its highly directional response and extreme durability allow clear voice pick-up, even in harsh operational environments. With its high-performance, compact design and high-durability, the ECM-673 microphone is an ideal choice for quality-critical sound acquisition applications.

Features

Superb Sound Quality

The ECM-673 offers excellent sensitivity of -36dB (0dB=1 V/Pa.) and a low inherent noise level of less than 17dB SPL. This allows the microphone to be used for clear voice pick-up, even in noisy environments.

Flat-and-wide Frequency Response

The ECM-673 microphone has a flat-and-wide frequency response (40Hz to 20kHz) and delivers extremely smooth and natural sound reproduction.

Compact and Lightweight Design

The ECM-673 has been designed as a highly directional, compact and lightweight short shotgun microphone. It measures only 200 mm (7 7/8 inches) in length and weighs just 135 g (4.76 oz), maintaining good balance even when mounted on compact camcorders.

High-durability and Reliability

The vibration-resistant mechanism of the ECM-673 offers high-durability and reliability, making it suitable for the harsh environments that can be encountered in field sound acquisition.

Built-in Low-cut Filter

The built-in two-position (M, V) low-cut switch on the ECM-673 provides a simple method of reducing the effects of unwanted ambient noise.

Characteristics
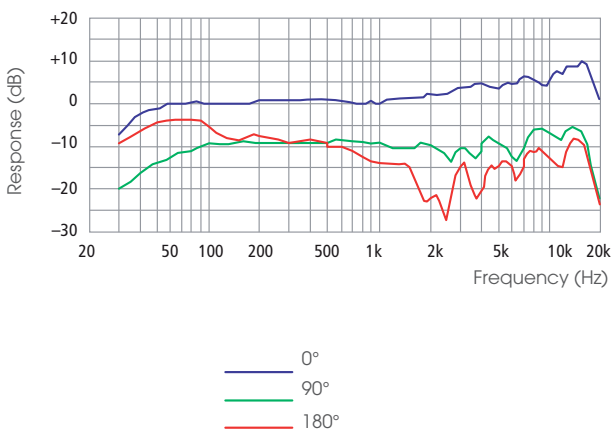
Frequency Response Characteristics

- 0°
- 90°
- 180°

Directivity Characteristics

- 500Hz
- 1kHz
- 4kHz
- 10kHz

F-115

Omni-directional Dynamic Microphone

Frequency Response Characteristics
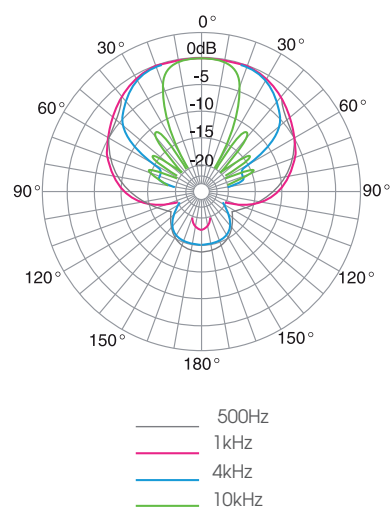
Features

> Ideal for sound pick-up, especially under adverse weather conditions such as rain or heavy wind thanks to its water-shedding, double-layered windscreen

> Newly developed omni-directional microphone capsule for clear sound pick-up from any direction

> Metal body offers a high level of durability to withstand severe conditions encountered in demanding sound pick-up environments and a special rubber at the core of the microphone reduces shocks and vibrations

> The directly connected microphone cable is water-resistant - limiting deterioration of internal parts

> Ideal for security and observation applications in various outdoor environments

F-115B, water-resistant dynamic microphone
(Microphone holder is an optional accessory)

Directivity Characteristics

—— 400 Hz, 1 kHz
— · — 5 kHz

F-112

Omni-directional Dynamic Microphone

Characteristics

Frequency Response Characteristics

—— 1kHz

Features

> Ideal for field production and news gathering applications, especially for interviews

> Newly developed omni-directional microphone capsule for clear voice pick-up from any direction

> Metal body offers a high level of durability to withstand severe conditions encountered in demanding sound pick-up environments.

> Robust brass connector for repeating cable connections

> Optimised balance when combined with the wireless plug-on transmitter included in the Sony UWP-C3 package (UTX-P1)
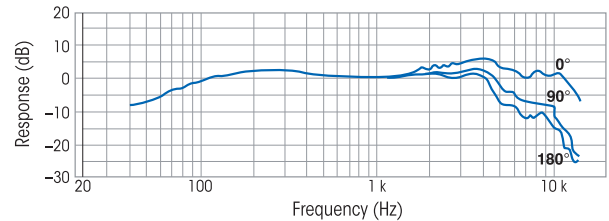
Directivity Characteristics

—— 200Hz
—— 1kHz
—— 5kHz
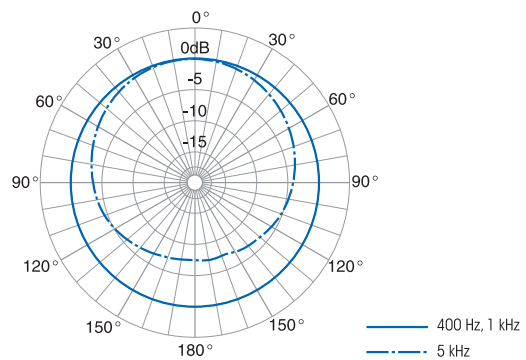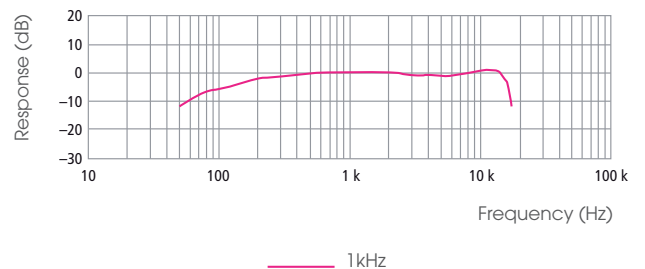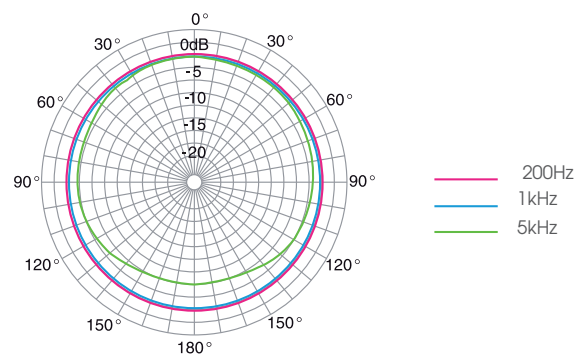
F-720

Uni-directional Dynamic Microphone

Features

> For general presentation and speech use in schools, halls, churches and other industrial applications

> Virtually impervious to handling noise and vibration because of efficient, one-piece capsule shock mount

> Convenient TALK switch to turn the microphone on and off

Characteristics

Frequency Response Characteristics

Response (dB) / Frequency (Hz)

— 0°
— 90°
— 180°

Directivity Characteristics

— 100Hz
— 1kHz
— 6kHz
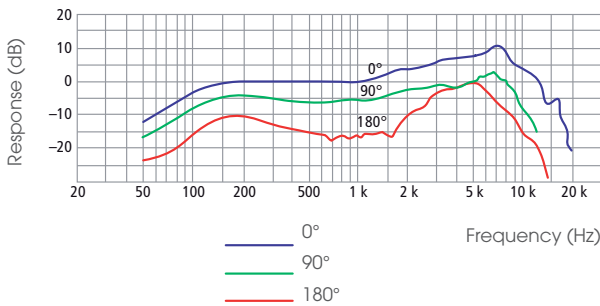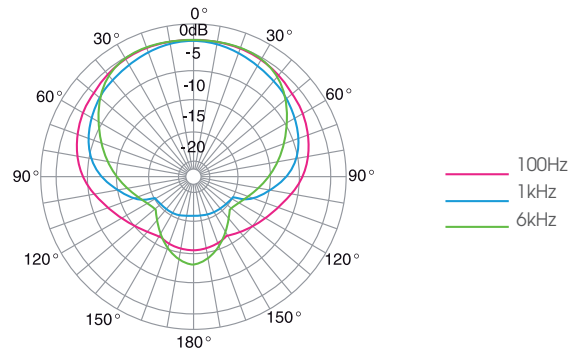
F-780

Uni-directional Dynamic Microphone

Features

> For critical vocal recording, professional sound reinforcement and broadcast production

> Rugged capsule in a resilient body structure

> Special AlNiCo magnet provides excellent sensitivity, powerful and accurate sound reproduction

> Edgewise winding voice coil with lightweight CCAW (Copper Clad Aluminum Wire) provides powerful, crisp, clean sound in the mid and high-frequency range

Characteristics

Frequency Response Characteristics

Response (dB) / Frequency (Hz)

— 0°
— 90°
— 180°

Directivity Characteristics

— 100Hz
— 1kHz
— 6kHz
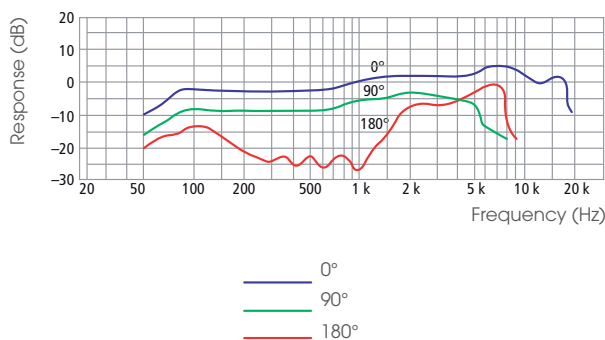
Optional Accessories
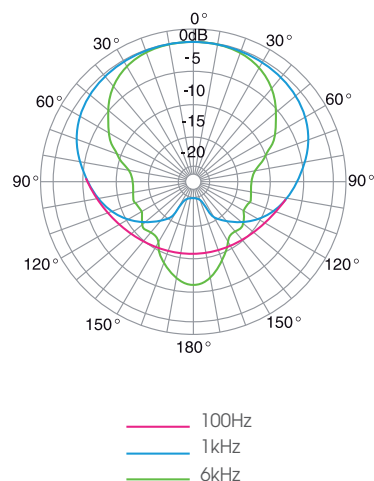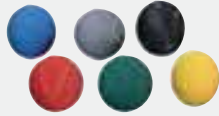
AD-C77
Colour windscreens
(for ECM-77 Series)

AD-C77B
Urethane windscreen
(for ECM-77 Series)

AD-C88
Colour windscreens
(for ECM-88 Series)

AD-KIT77
Microphone accessory kit
(for ECM-77 Series)

AD-KIT88B
Microphone accessory kit
(for ECM-88 Series)

AD-R44B
Urethane Windscreen
(for ECM-44 Series)

AD-R55B
Metal-mesh windscreen
(for ECM-55 Series)

AD-R66B
Urethane windscreen
(for ECM-66 Series)

AD-R77B
Metal-mesh windscreen
(for ECM-77 Series)

AD-R88B
Urethane windscreen
(for ECM-88 Series)

AD-RV1B
Windshield Pack x12

AD-RX7B
Windshield Pack x6

DC-78
DC power supply unit
(SMC9-4S to XLR 3-pin)
(for ECM-88 Series and
ECM-77 Series)

SAD-HV1B
Microphone Clip Pack x4

SAD-H44B
Single/Horizontal-type
tie clip (for ECM-44 Series)

SAD-H55B
Single/Horizontal-type
tie clip (for ECM-55 Series)

SAD-H77B
Single/Horizontal-type
tie clip (for ECM-77 Series)

SAD-H88B
Single/Horizontal-type
tie clip (for ECM-88 Series)

SAD-S77
Safety-pin type microphone
holder (for ECM-77 Series)

SAD-S88B
Safety-pin type microphone
holder (for ECM-88 Series)

SAD-V77B
Single/Vertical-type tie clip
(for ECM-77 Series)

SAD-V88B
Single/Vertical-type tie clip
(for ECM-88 Series)

SAD-W77B
Double/Horizontal-type
tie clip (for ECM-77 Series)

SAD-W88BL
Double/Horizontal-type
tie clip (for ECM-88 Series)

		ECM-88 Series	ECM-77 Series	ECM-66 Series	ECM-55 Series
Model Variations	XLR type (Supplied with a battery unit and XLR-3-12C type connector)	ECM-88B with supplied DC-78	ECM-77B	ECM-66B	ECM-55B
	Pigtail type (Supplied without a connector "pigtail")	ECM-88BPT ECM-88FPT	ECM-77BPT	—	—
	SMC type (Supplied with a Sony 4-pin "SMC9-4P" connector)	ECM-88BC	ECM-77BC	ECM-66BC	—
	BMP type (Supplied with a 3.5 mm diameter, 3-pole mini-plug)	—	ECM-77BMP	—	—
Capsule type		Electret Condenser			
Frequency response		20Hz to 20kHz	40Hz to 20kHz	70Hz to 14kHz	30Hz to 18kHz
Directivity		Omni-directional		Uni-directional	Omni-directional
Sensitivity (0dB=1 V/Pa. at 1kHz)	XLR type	-52.0dB ±2dB *1	-52.0dB ±2dB	-50.0dB ±2dB	-52.0dB ±2dB
	Pigtail/SMC/BMP type	-39.0dB (11.2 mV)		-36.5dB (15 mV)	—
Output impedance at 1kHz	XLR type	100 Ω ±20% (balanced) *1	150 Ω ±20% (balanced)	100 Ω ±20% (balanced)	
	Pigtail/SMC/BMP type	2.5 kΩ ±30% (unbalanced)			—
Dynamic range		99dB or more	90dB or more	101dB or more	98dB or more
Signal-to-noise ratio (A-weighted, 1kHz, 1 Pa.)		68dB or more	64dB or more	65dB or more	66dB or more
Inherent noise (0dB SPL = 2E-5 Pa.)		26dB SPL or less	30dB SPL or less	29dB SPL or less	28dB SPL or less
Wind noise (with windscreen, at 2 m/s) (0dB SPL = 2E-5 Pa.)		45dB SPL or less	40dB SPL or less	50dB SPL or less	40dB SPL or less
Induction noise from external magnetic field (dB SPL/1E-7 T, 0dB SPL = 2E-5 Pa.)		5dB SPL or less			
Maximum input sound pressure level (0dB SPL = 2E-5 Pa.)		125dB SPL	120dB SPL	130dB SPL	126dB SPL
Power supply (XLR type only)	Battery	IECR6 or LR6 *1		IECR6 or LR6	
	Battery life (LR6)	Approx. 6000 h *1	Approx. 6000 h	Approx. 400 h	Approx. 6000 h
	External power	DC 12 to 48 V *1	DC 12 to 48 V	DC 24 to 48 V	DC 12 to 48 V
Power requirements	XLR type	DC 1.5 V *1		DC 1.5 V	
	Pigtail/SMC/BMP type	DC 1.1 to 10.0 V			
Current drain	XLR type (internal battery)	0.3 mA or less *1	0.3 mA or less	3.5 mA or less	0.3 mA or less
	XLR type (external power)	2 mA or less *1		2 mA or less	
	Pigtail/SMC/BMP type	0.4 mA or less			—
Cable length	XLR type	2.5 m (8.2 feet)		3.0 m (9.8 feet)	
	Pigtail type	2.5 m (8.2 feet)	3.0 m (9.8 feet)	—	
	SMC/BMP type	1.2 m (3.9 feet)			—
Dimensions	Microphone head	3.5 x 3.5 x 16.8 mm (5/32 x 5/32 x 11/16 inch) Clip attachment area: Ø 3.9 mm (5/32 inch)	5.6 Ø x 12.5 mm (1/4 Ø x 1/2 inch)	10.6 Ø x 24.2 mm (7/16 Ø x 31/32 inch)	10.6 Ø x 21 mm (7/16 Ø x 27/32 inch)
	Power unit (XLR type only)	20.0 Ø x 144 mm (13/16 Ø x 5 3/4 inches)	20.0 Ø x 133 mm (13/16 Ø x 5 1/4 inches)	20.0 Ø x 163 mm (13/16 Ø x 6 2/1 inches)	20.0 Ø x 133 mm (13/16 Ø x 5 1/4 inches)
Mass	Microphone head only	0.6 g (0.02 oz)	1.5 g (0.05 oz)	7 g (0.25 oz)	6.5 g (0.23 oz)
	Total XLR type	162 g (5.7 oz)	122 g (4.3 oz)	167 g (5.9 oz)	127 g (4.5 oz)
	Pigtail type	20 g (0.7 oz)	26 g (0.9 oz)	—	
	SMC type	22 g (0.7 oz)	23 g (0.8 oz)	30 g (1.1 oz)	—
	BMP type	—	17 g (0.6 oz)	—	
Supplied accessories S: Single type, D: Double type, V: Vertical type, H: Horizontal type, M: Metal-mesh type, U: Urethane type		S.H. tie clip (x1) *2 S.V. tie clip (x1) *2 D.H. tie clip (x1) *3 U. windscreen (x1) *2 Microphone case (x1) *3 Operating instructions (x1) Ferrite clamp (x1)	S.H. tie clip (x1) S.V. tie clip (x1) *4 D.H. tie clip (x1) *4 M. windscreen (x1) Microphone case (x1) *4 Operating instructions (x1)	S.H. tie clip (x1) S.V. tie clip (x1) *5 U. windscreen (x1) Microphone case (x1) *5 Operating instructions (x1)	S.H. tie clip (x1) S.V. tie clip (x1) D.H. tie clip (x1) M. windscreen (x1) Microphone case (x1) Operating instructions (x1)

*1 ECM-88B used with the supplied DC-78 battery unit.
*2 ECM-88FPT is not supplied with mic accessories.
*3 D.H. tie clip and microphone case are supplied with ECM-88B only.
*4 S.V. tie clip, D.H. tie clip and microphone case are supplied with ECM-77B only.
*5 S.V. tie clip and microphone case are supplied with ECM-66B only.

		ECM-44 Series	ECM-166 Series	ECM-322 Series
Model Variations	XLR type (Supplied with a battery unit and XLR-3-12C type connector)	ECM-44B	—	—
	Pigtail type (Supplied without a connector "pigtail")	ECM-44BPT	—	—
	SMC type (Supplied with a Sony 4-pin "SMC9-4P" connector)	ECM-44BC	ECM-166BC	ECM-322BC
	BMP type (Supplied with a 3.5 mm Ø, 3-pole mini-plug)	ECM-44BMP	ECM-166BMP	ECM-322BMP
Capsule type		Electret Condenser		
Frequency response		40Hz to 15kHz	100Hz to 10kHz	50Hz to 18kHz
Directivity		Omni-directional	Uni-directional	Omni-directional
Sensitivity (0dB=1 V/Pa. at 1kHz)	XLR type	-53.0dB ±3dB	—	
	Pigtail/SMC/BMP type	-40.0dB (10 mV)	-45dB (5.6 mV)	-42dB (7.94 mV) ±3db
Output impedance at 1kHz	XLR type	250 Ω ±20% (balanced)	—	
	Pigtail/SMC/BMP type	2.5 kΩ ±30% (unbalanced)		1.4 kΩ ±30% (unbalanced)
Dynamic range		90dB or more	96dB or more	81dB or more
Signal-to-noise ratio (A-weighted, 1kHz, 1 Pa.)		62dB or more	60dB or more	
Inherent noise (0dB SPL = 2E-5 Pa.)		32dB SPL or less	34dB SPL or less	
Wind noise (0dB SPL = 2E-5 Pa.)		40dB SPL or less (with windscreen, at 2 m/s)	—	55dB SPL or less
Induction noise from external magnetic field (dB SPL/1E-7 T, 0dB SPL = 2E-5 Pa.)		5dB SPL or less	—	
Maximum input sound pressure level (0dB SPL = 2E-5 Pa.)		122dB SPL	130dB SPL	115dB SPL
Power supply (XLR type only)	Battery	IECR6 or LR6	—	
	Battery life (LR6)	Approx. 6000 h	—	
	External power	—		
Power requirements	XLR type	DC 1.5 V	—	
	Pigtail/SMC/BMP type	DC 1.1 to 10.0V		
Current drain	XLR type (internal battery)	0.3 mA or less	—	
	XLR type (external power)	—		
	Pigtail/SMC/BMP type	0.4 mA or less		1.3 mA or less
Cable length	XLR type	3.0 m (9.8 feet)	—	
	Pigtail type	3.0 m (9.8 feet)	—	
	SMC/BMP type	1.2 m (3.9 feet)		
Dimensions	Microphone head	8.5 Ø x 14.5 mm (11/32 Ø x 19/32 inch)	12.5 Ø x 23.5 mm (1/2 Ø X 15/16 inch)	8.4 Ø (capsule case) x 168 mm (11/32 Ø x 6 5/8 inch)
	Power unit (XLR type only)	20.0 Ø x 126 mm (13/16 Ø x 5 inches)	—	
Mass	Microphone head only	2 g (0.07 oz)	3.5 g (0.12 oz)	—
	Total — XLR type	121 g (4.3 oz)	—	
	Total — Pigtail type	29 g (1.0 oz)	—	
	Total — SMC type	24 g (0.8 oz)	25 g (1 oz)	10 g (0.4 oz) without connector
	Total — BMP type	18 g (0.6 oz)	19 g (0.7 oz)	10 g (0.4 oz) without connector
Supplied accessories S: Single type H: Horizontal type U: Urethane type		S.H. tie clip (x1) U. windscreen (x1) Microphone case (x1) *1 Operating instructions (x1)	U. windscreen (x1) Tie clip (x1) Operating instructions (x1)	Headband (x1), clip (x1) Carrying case (x1) Operating instructions (x1)

*1 The microphone case is supplied with only ECM-44B.

	ECM-530	ECM-680S	ECM-678	ECM-674	ECM-673
Capsule type	Electret Condenser	Electret Condenser	Electret Condenser	Electret Condenser	Electret Condenser
Stereo type	N/A	MS (Mid-side) stereo microphone	N/A	N/A	N/A
Directivity	Uni-directional	Uni-directional	Uni-directional (Super-cardioid)	Uni-directional (Super-cardioid)	Uni-directional (Super-cardioid)
Frequency response	70Hz - 18,000Hz	Stereo: 50Hz to 20kHz, Monaural: 40Hz to 20kHz	40Hz to 20kHz	40Hz to 20kHz	40Hz to 20kHz
Sensitivity (at 1kHz)	-49.0 ± 2.0(dB)	Stereo: -28dB[*1] ±3dB, Monaural: -32dB[*1] ±3dB	-28dB[*1] ±3dB	-36dB[*1] ±3dB	-36dB[*1] ±3dB
Output impedance (at 1kHz)	150 Ω	100 Ω ±20%	200 Ω ±20%	220 Ω ±20%	220 Ω ±20%
Dynamic Range	More than 95dB	Stereo: 104dB or more, Monaural: 106dB or more	111dB or more	Phantom: 107dB or more, Battery: 98dB or more	107dB or more
Signal-to-noise ratio	More than 63dB	Stereo: 74dB or more, Monaural: 76dB or more	78dB or more (IEC179 A-weighted, 1kHz, 1Pa.)	77dB or more (IEC179 A-weighted, 1kHz, 1Pa.)	77dB or more (IEC179 A-weighted, 1kHz, 1Pa.)
Inherent noise	Equal to or less than 31dB	20dB SPL[*2] or less	16dB SPL[*2] or less	17dB SPL[*2] or less	17dB SPL[*2] or less
Wind noise	55dB SPL	60dB SPL[*2] or less (with windscreen), 55dB SPL[*2] (without windscreen)	60dB SPL[*2] or less	50dB SPL[*2] or less (with windscreen)	45dB SPL[*2] or less (with windscreen), 50dB SPL[*2] (without windscreen)
Induction noise from external magnetic field	5dB	0dB SPL[*2] or less	0dB SPL[*2] or less	0dB SPL[*2] or less	0dB SPL[*2] or less
Maximum input sound pressure	126dB SPL	124dB SPL[*2]	127dB SPL[*2]	Phantom: 124dB SPL[*2], Battery: 115dB SPL[*2]	124dB SPL[*2]
Power requirements	DC 24 to 48 V	DC 40 to 52 V	External, DC 48 V ±4 V	External: DC 40 to 52 V, Battery: 1.5 V	DC 40 to 52 V
Dimensions	Ø12 x 326 mm (Ø1/2 x 12 7/8 inches)	Ø20 x 250 mm (Ø13/16 x 9 7/8 inches)	Ø20 x 250 mm (Ø13/16 x 9 7/8 inches)	Ø20 x 268 mm (Ø13/16 x 10 5/8 inches)	Ø20 x 200 mm (Ø13/16 x 7 7/8 inches)
Mass	325 g	Approx. 140 g	200 g	Approx. 185 g (6.5 oz) without battery, Approx. 208 g (7.3 oz) with battery	Approx. 135 g (4.76 oz)
Supplied accessories	Operation manual (x1), Windscreen (x1)	Windscreen (x1), Microphone holder (x1), Microphone spacer (x1), Microphone cable (XLR-5-pin to XLR-5-pin) (x1), Stand screw adaptor (PF1/2 thread – NS5/8 thread, PF1/2 thread – W3/8 thread) (x1 each), Carrying case (x1), Operating instructions (x1)	Windscreen (x1), Microphone holder (x1), Microphone spacer (x1), Carrying case (x1), Operating instructions (x1)	Windscreen (x1), Microphone holder (x1), Microphone spacer (x1), Microphone cable (x1), Operating instructions (x1)	Windscreen (x1), Microphone holder (x1), Microphone spacer (x1), Microphone cable (x1), Operating instructions (x1)

*1 0dB = 1 V/Pa. at 1kHz
*2 0dB = 20μ Pa.

	F-780	F-720	F-112
Capsule type	Dynamic		
Frequency response	50Hz to 18kHz	50Hz to 13kHz	60Hz to 18kHz
Directivity	Uni-directional		Omni-directional
Effective output level at 1 kH (0dBm=1 mW/Pa.)	-55dBm	-60dBm	-54dBm
Sensitivity (0dB=1 V/Pa. at 1kHz)	-53dB ±3dB	-57dB ±3dB	-52dB ±3dB
Output impedance	400 Ω ±20%	500 Ω ±20%	400 Ω ±20%
Induction noise from an external magnetic field	Less than 5dB SPL/1 x 10-7 T (1 mG)	Less than 10dB SPL/ 1 x 10-7 T (1 mG)	Less than 5dB SPL/ 1 x 10-7 T (1 mG)
Wind noise	Less than 50dB SPL	Less than 55dB SPL	Less than 50dB SPL
Connector	XLR-3-12C type		
Dimensions	Ø51 x 165 mm (Ø2 1/8 x 6 1/2 inches)	Ø37.6 x 160 mm (Ø1 1/2 x 6 3/8 inches)	Ø41.4 x 220 mm (Ø1 11/16 x 8 3/4 inches)
Mass	290 g (10.2 oz)	260 g (9.2 oz)	215 g (7.6 oz)
Supplied accessories	Microphone holder (PF 1/2) (x1), Stand adaptor (PF 1/2 to NS 5/8, PF 1/2 to W 3/8) (x1 each), Operating instructions (x1)		Operating instructions (x1)

*1 Pa. =1x10- bar
*2 0dB SPL = 2x10-5 Pa.

/02

Wireless Microphones

Since their first introduction in 1974, Sony has been continuously developing a wide range of wireless microphone systems to offer superb audio performance, highly stable transmission and flexible simultaneous multi-channel operation. Nowadays, it can be clearly seen that the industry is migrating from Standard Definition (SD) to High Definition (HD) for video production, as well as from analogue to digital for sound production. This trend naturally boosts the need for higher-quality digital technology in wireless microphone systems.

Digital Wireless Microphones Product Range

With the introduction of a new fully digital wireless microphone system, Sony has made a breakthrough in the history of wireless microphone technology. Comprising of the DWT-B01 bodypack transmitter, DWR-S01D slot-in type two-channel receiver and DWA-01D adapter, the system provides excellent quality digital wireless audio transmission, large-scale, multi-channel operation and enhanced system flexibility – a perfect match for high-quality ENG/EFP applications[1]. Transmission of excellent quality 24-bit/48kHz sampling digital audio signals is realised on the DWT-B01 transmitter. The audio codec used in the system was developed specifically for wireless audio transmission, enabling the low-latency, secure and reliable operation that is mandatory for quality-critical applications.

In addition, the system allows for an increase of up to 60%[2] in the number of simultaneous digital wireless systems in use compared to conventional analogue wireless systems, which gives users enhanced system flexibility. Furthermore, the system offers a metadata-handling capability that provides highly innovative full-wireless remote operations between the transmitter and receiver, dramatically improving operational efficiency. With its excellent audio quality, system flexibility and operational efficiency, the Sony digital wireless microphone system opens up a whole new world of professional audio applications.

[1] The digital wireless microphone system is not available in some countries.
[2] When operating on an 8MHz bandwidth TV channel in Europe.

System Features

Superb Quality Wireless Transmission

The digital wireless microphone system transmits high-quality 24-bit/48kHz sampling digital audio signals in a specific frequency bandwidth that meets the wireless communication regulations of each country. Utilising an original Sony codec, based on Sony's many years of experience in engineering audio products, the system delivers a wide dynamic range of more than 106dB, a wide frequency response of 20Hz to 20kHz and an excellent system latency of 3.6 ms.

Simultaneous Multi-channel Operation

The digital wireless microphone system allows for large-scale multi-channel operations. Thanks to the newly developed 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 digital wireless systems in comparison with current analogue wireless systems. For example, up to 16 channels of simultaneous operation is possible in an 8MHz bandwidth TV channel in Europe. This system also provides the option of using existing WL-800 Series channel plans. In this configuration, the digital wireless system reliably operates alongside the WL-800 Series analogue wireless systems, without concern for having analogue and digital wireless systems interfering with each other.

Stable and Secure Transmission

Incorporating a newly developed digital modulator, the digital wireless microphone system allows highly stable and secure wireless transmission that is extremely tolerant to RF interference. The system transmits digitally modulated and encrypted data to minimise the risk of interception, providing highly secure transmission. For secure and confidential communication, the system provides two communication modes: peer-to-peer mode and password mode.
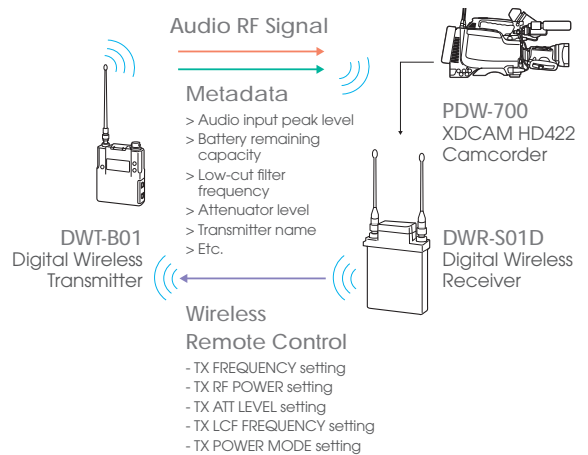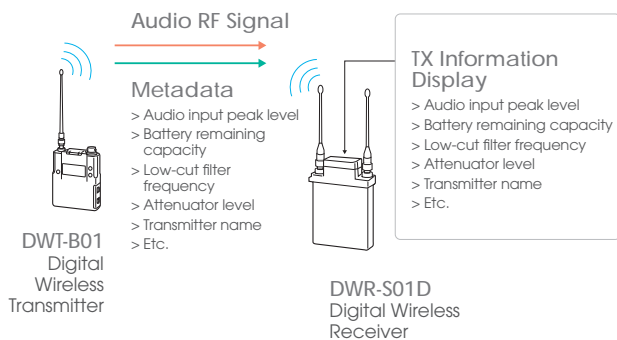
In peer-to-peer mode, wireless communication between a DWT-B01 transmitter and DWR-S01D receiver can be established by exchanging an encryption key that is generated by the transmitter. In password mode, multiple transmitters and receivers can be configured by setting all devices with the same user-designated password. In addition, this mode supports broadcast communication, which enables multiple receivers to receive audio signals from one transmitter.

Pre-programmed Frequency Groups

To make it easy to choose the correct frequencies for simultaneous multi-channel operation, the optimum intermodulation-free frequencies are stored on each DWR-S01D receiver. These frequencies – all of which have been calculated and tested – are arranged in groups, with each group pre-programmed to allow interference-free operation. The digital wireless microphone system operates within the following frequency ranges:

Frequency range		
DWT-B01 transmitter	CE6267	798 to 822MHz (TV 62 to 64 channels) 838 to 862MHz (TV 67 to 69 channels)
DWR-S01D receiver	CE62	798 to 822MHz (TV 62 to 64 channels)
	CE67	838 to 862MHz (TV 67 to 69 channels)

* The DWR-S01D receiver supports a 24MHz band RF carrier frequency range. When using the DWR-S01D receiver in either the 798 to 822MHz (TV 62 to 64 channels) or 838 to 862MHz (TV 67 to 69 channels) frequency range, please contact your nearest Sony office or authorised dealer.

Diagram (left)

Audio RF Signal

Metadata
> Audio input peak level
> Battery remaining capacity
> Low-cut filter frequency
> Attenuator level
> Transmitter name
> Etc.

DWT-B01
Digital Wireless Transmitter

TX Information Display
> Audio input peak level
> Battery remaining capacity
> Low-cut filter frequency
> Attenuator level
> Transmitter name
> Etc.

DWR-S01D
Digital Wireless Receiver

Diagram (right)

Audio RF Signal

Metadata
> Audio input peak level
> Battery remaining capacity
> Low-cut filter frequency
> Attenuator level
> Transmitter name
> Etc.

DWT-B01
Digital Wireless Transmitter

PDW-700
XDCAM HD422 Camcorder

DWR-S01D
Digital Wireless Receiver

Wireless Remote Control
- TX FREQUENCY setting
- TX RF POWER setting
- TX ATT LEVEL setting
- TX LCF FREQUENCY setting
- TX POWER MODE setting

Metadata Transmission

In addition to audio signals, a variety of information about the DWT-B01 transmitter – such as audio input peak level, remaining battery capacity, low-cut filter frequency and attenuator level – can be wirelessly transmitted to the DWR-S01 receiver as metadata. This allows users to monitor the status of the transmitter from the DWR-S01D receiver, offering high operational convenience.

Innovative Wireless Remote Control

Wireless remote control capability of the Sony digital wireless microphone system is one of the most distinctive user features that digital transmission technology has made possible.

A variety of DWT-B01 transmitter settings – such as power on/sleep, attenuator level, low-cut filter frequency and RF power output level – can be wirelessly controlled from the DWR-S01D receiver. This is highly convenient because setting changes can be made very easily even after the transmitters are attached to an actor or reporter.

Furthermore, when the DWR-S01 receiver is used with the PDW-700 XDCAM HD422 camcorder, users can monitor the status of the digital wireless microphone system through the camcorder's viewfinder. They can also wirelessly control the settings of the DWT-B01 transmitter via the camcorder menu. This wireless control makes use of 2.4GHz IEEE802.15.4 communication technology, which is commonly available worldwide. Communicating via this wireless remote technology in no way affects the audio or RF signals of either the digital or analogue wireless microphone systems. In addition, it is ideal for large-scale multi-channel system management and is effective for low-power consumption.

Easy-to-see, Full Dot-matrix OLED (Organic Light-Emitting Diode) Display

The DWT-B01 transmitter and DWR-S01D receiver have an easy-to-see OLED display, providing a variety of information such as operating channel/frequency, AF input level, RF output level and battery status. The quick response of the OLED display enables real-time operating conditions, such as the audio level-meter, to be displayed clearly and accurately. In addition, the OLED provides a high-level of visibility even in low-temperature or low-light environments.

USB Interface

The DWT-B01 transmitter and DWR-S01D receiver come equipped with a USB interface. This is used to connect a USB keyboard, from which users can easily change a variety of settings. In addition, by connecting the transmitter and receiver directly to each other via the supplied USB cable, the encryption keys required for confidential peer-to-peer communication can be exchanged manually or automatically.

DWT-B01/DWT-P01

Digital Wireless Transmitters

Features

Wide RF Carrier Frequency Range

The DWT-B01/DWT-P01 transmitters cover an extremely wide RF carrier frequency range; much wider than the 24MHz band of the analogue wireless microphone system. The CE6267 models can cover a 48MHz band*[1]. This remarkably wide coverage on a single model offers cost-efficiency and operational convenience because it allows one transmitter to be operated in many different countries.

*1 The DWR-S01D receiver supports a 24MHz band RF carrier frequency range. 798 to 822MHz (TV 62 to 64 channels) and 838 to 862MHz (TV 67 to 69 channels)

Selectable RF Output Power (1/10/50 mW)

The DWT-B01/DWT-P01 transmitters provide a choice of RF output powers. The 1 and 10 mW output is suitable for multi-channel operations such as theatre and studio productions, while the 50 mW output is intended for long distance transmissions such as sports and news coverage.

Power Sleep Mode

The DWT-B01/DWT-P01 transmitters are equipped with a power sleep/wake up mode that can be wirelessly controlled from the DWR-S01D receiver. Wherever they are attached – for example, inside an actor's costume – the operator can remotely control the transmitter's power on and sleep settings, increasing operational convenience and battery savings.

Digital Low-cut Filter

Equipped with a digital low-cut filter, the DWT-B01/DWT-P01 transmitters can reduce the effects of undesired ambient noise.

Accommodates Various Types of Battery

The DWT-B01/DWT-P01 transmitters can be operated with either alkaline, lithium, or nickel-metal hydride batteries. The transmitters will operate continuously for approximately four* hours when using two Sony AA-size alkaline batteries at 25 °C (77 °F) and 10 mW output power.

* The operating time may vary depending on the operational environment.

DWT-B01   DWT-P01

Lightweight and Rugged Design

The DWT-B01/DWT-P01 transmitters are designed to be extremely compact and lightweight, essential qualities for users in fast-moving TV and outdoor productions. The DWT-B01 measures 63 x 73 x 17 mm and weighs just 125 g including batteries. The DWT-P01 measures 44 x 78 x 44 mm (excluding XLR) and weighs 245 g (9 oz) including batteries. In addition, the robust die-cast magnesium body allows the DWT-B01/DWT-P01 transmitters to withstand even the harshest of operational environments.

Switchable Mic or Line Input Level and Adjustable Attenuator

The audio input level of the DWT-B01/DWT-P01 transmitters is selectable from either MIC or LINE. When MIC is selected, the attenuator can be adjusted in 3dB steps from 0dB to 48dB. The reference input level of the MIC and LINE is -58dBu (-60dBV) and +4dBu, respectively.

48 V Microphone Power
DWT-P01 (only) via XLR connector.

OLED Screen

USB Interface

DWR-S01D

Digital Wireless Receiver

Features

Industry-first Two-channel Slot-in Wireless Receiver

The DWR-S01D is an industry-first two-channel digital wireless receiver that offers an ideal solution for high-quality ENG and EFP applications. Despite its dual channel receiver capability, the DWR-S01D receiver is small enough to be mounted directly in the slot of the Sony PDW-700 XDCAM HD422 camcorder, maintaining the well-balanced design and compactness of the camcorder. Through the direct mount, high-quality digital audio transmitted from a DWT-B01 transmitter can be recorded directly to the camcorder via a D-sub 15-pin interface without the need for any signal conversions.

Rear Mounting to Camcorders

In addition to the slot-in capability for the PDW-700 XDCAM HD422 camcorder, the DWR-S01D receiver can be rear-mounted to a range of Sony professional camcorders – such as the HDCAM, XDCAM, XDCAM HD, Digital Betacam and MPEG IMX Series camcorders – using the DWA-01D adapter. When used with a camcorder that has AES/EBU inputs, full-digital audio recording is also possible.

Compact, Lightweight and Rugged Design

Despite having a number of stunning functionalities, such as its dual-channel receiver capability, the DWR-S01D is still highly compact and lightweight – just like the existing analogue, single-channel wireless receiver WRR-855S/855B. It measures only 88 x 117.8 x 31.3 mm and weighs just 280 g (9 oz), maintaining good balance even when mounted on a camcorder. In addition, the DWR-S01D is made of magnesium diecast and aluminium, making it extremely rugged and suitable for the harsh environments of even the most demanding ENG/EFP applications.

Auto-channel Scanning Functions

The DWR-S01D receiver comes with two auto-channel scanning functions that allow for fast, easy and safe frequency channel changes. Clear Scan mode auto-matically seeks unoccupied channels, from which operators can select the most appropriate channel to use. While Active Channel mode searches for channels that are currently in use, allowing operators to check whether the channel is used by a transmitter in the same operational group or by other equipment that may interfere with the digital wireless transmission signal.

Wireless Remote Control

The wireless remote control is an extremely efficient feature that enables the DWR-S01D receiver to control various settings of the DWT-B01 transmitter such as power on/off, attenuator level, low-cut filter frequency and RF power output level.

OLED Screen

USB Interface

DWA-01D
Digital Wireless Adapter

Features

Camcorder Rear-mount Operation*[1]

The DWA-01D adapter allows the DWR-S01D receiver to be rear-mounted on a range of Sony professional camcorders, such as HDCAM, XDCAM, XDCAM HD, Digital Betacam and MPEG IMX camcorders. In addition, the DWA-01D adapter can be used with the current analogue wireless receiver WRR-855S/855B.*[2]

*1 Requires an optional mount bracket (A-8278-057B).
*2 Output from the DWA-01D and WRR-855S/855B is one-channel analogue audio signal only.

Stand-alone Wireless Receiver Operation

In addition to camcorder mounting, the DWR-S01D receiver with DWA-01D adapter can also work as a stand-alone wireless receiver.*[1] This, in combination with a digital audio mixer such as the Sony DMX-P01, creates a compact, portable, EFP digital wireless microphone system.

*1 Requires DC power supply from a connected unit via a 4-pin connector.

Wide Array of Interfaces

The DWA-01D adapter comes equipped with a wide range of interfaces optimised for diverse operational needs:

> SMC9-4S (Sony 4-pin) (x2): Outputs either AES/EBU or analogue audio signals

> Word Sync input: Allows the digital wireless microphone system to synchronise with an external word sync signal

> Stereo headphone output: Offers easy monitoring of the output sound (switchable between Tuner 1/Tuner 2/Mixed)

Unique Lock-together Mechanism

The DWA-01D adapter is equipped with a connecting bracket that allows two DWA-01D adapters to be easily combined. This is particularly convenient for when two pairs of the DWR-S01D receiver and DWA-01D adapter are used at the same time as a stand-alone four-channel receiver system.

Optional Accessories / Specifications

ECM-88BC
Lavalier Microphone

ECM-322BC
Headset Microphone

ECM-77BC
Lavalier Microphone

F-112
Dynamic Microphone

ECM-66BC
Lavalier Microphone

DMX-P01
Digital Portable Mixer

ECM-44BC
Lavalier Microphone

A-8278-057-B
Mounting Bracket

System specifications

Sampling frequency		48 kHz
Quantisation bit length		24-bit
Reference input level (at 0dB audio)	MIC	-58 dBu, 1 kHz (-60 dBV, 1 kHz)
	LINE	+4 dBu, 1 kHz
Reference output level	Analogue output	-58 dBu
	AES/EBU output	-36 dBFs/-20 dBFS switchable
Maximum output level	Analogue output	-22 dBu
	AES/EBU output	0 dBFs
Frequency response		20 Hz to 20 kHz
Dynamic range		106 dB typical (A-weighted, T.H.D = 1%)
Distortion (T.H.D)		0.03% or less
Modulation method		p/4 Shift QPSK
Audio delay		3.6 ms
Remote control		2.4 GHz IEEE802.15.4 compliant
USB		USB 2.0 compliant

Specifications

DWT-B01

TRANSMITTING SECTION

Oscillator	Crystal controlled PLL synthesiser
Carrier frequency range CE6267	798 to 822MHz (TV 62 to 64 channels) 838 to 862MHz (TV 67 to 69 channels)
Channel step	25kHz
RF power output	1 mW/10 mW/50 mW (e.r.p.) selectable
Occupied RF bandwidth	192kHz
Audio delay	1.5 ms

AUDIO SECTION

Maximum input level	MIC	-22dBu (with 0dB attenuator)
	LINE	+24dBu
Audio attenuator adjustment range (pad)		0 to 48dB (3-dB steps, MIC input mode only)
Input connector		Sony 4-pin (SMC9-4S) (x1)
Input impedance		4 kΩ or more

GENERAL

Operating voltage	DC 3.0 V, (two LR6 AA-size alkaline batteries)
Battery life	Approx. 3.5 hours at 10 mW output (at 25 °C (77 °F)), with Sony LR6 AA-size alkaline batteries)
Dimensions (W x H x D)	Approx. 63 x 73 x 17 mm excluding projection
Mass	Approx. 125 g including batteries
Supplied accessories	Soft case (x1), Spare battery case (x1), Microphone cable (4-pin to XLR-3-pin) (x1), USB adapter cable (x1), USB cable (x1), Carrying case (x1), Frequency list (x1), Operating instructions (x1)

DWT-P01

TRANSMITTING SECTION

Oscillator	Crystal controlled PLL synthesiser
Carrier frequency range CE6267	798 to 822MHz (TV 62 to 64 channels) 838 to 862MHz (TV 67 to 69 channels)
Channel step	25kHz
RF power output	1 mW/10 mW/50 mW (e.r.p.) selectable
Occupied RF bandwidth	192kHz
Audio delay	1.5 ms

AUDIO SECTION

Maximum input level	MIC	-22dBu (with 0dB attenuator)
	LINE	+24dBu
Audio attenuator adjustment range (pad)		0 to 48dB (3-dB steps, MIC input mode only)
Input connector		XLR-3-11C (female) (x1)
Input impedance		4 kΩ or more

GENERAL

Operating voltage	DC 3.0 V, (two LR6 AA-size alkaline batteries)
Battery life	Approx. 3.5 hours at 10 mW output (at 25 °C (77 °F)), with Sony LR6 AA-size alkaline batteries)
Dimensions (W x H x D)	Approx. 44 x 78x 44 mm excluding projection
Mass	Approx. 245 g including batteries
Supplied accessories	Soft case (x1), Spare battery case (x1), USB adapter cable (x1), USB cable (x1), Operating instructions (x1)

DWR-S01D

TUNER SECTION

Type of reception		Space diversity
Circuit system		Dual conversion superheterodyne
Receiving frequency range*[1]	CE62	798 to 822 MHz (TV 62 to 64 channels)
	CE67	838 to 862 MHz (TV 67 to 69 channels)
Channel step	CE62/CE67	25 kHz
Local oscillators		PLL synthesiser
RF input terminal		BNC-R, 50
Sensitivity		20 dBμ or less (at bit error rate=1×10^{-5})
Audio delay		2.1 ms

AUDIO SECTION

Audio output connector	D-sub 15-pin (x1)

GENERAL

Dimensions (W x H x D) excluding projection	Approx. 88 x 117.8 x 31.3 mm
Mass	Approx. 280 g
Supplied accessories	Whip antenna (x2), USB cable adapter (x1), USB cable (x1), Frequency list (x1), Operating instructions (x1)

DWA-01D

AUDIO SECTION

Output connector	Sony 4-pin (SMC9-4S) (x2) (OUTPUT1, OUTPUT2)
Analogue audio output impedance	150 Ω or less
AES/EBU audio output impedance	150 Ω
Monitor output connector	Ø 3.5 mm stereo mini-jack
Monitor output level	5 mW (at 16 Ω load, T.H.D=1%)

GENERAL

Power requirements	DC 12 V
Operating voltage	DC 3.6 to 17 V
Dimensions (W x H x D)	Approx. 88 x 138 x 31.5 mm excluding projection
Mass	Approx. 250 g
Supplied accessories	Audio cable (x2), DC cable (x1), Mount plate kit (x1), Operating instructions (x1)

*1 The DWR-S01D receiver supports a 24MHz band RF carrier frequency range. When using the DWR-S01D receiver in either the 590.125 to 607.875MHz (TV 34 to 36 channels), 614.125 to 637.875MHz (TV 38 to 41 channels) or 662.125 to 697.875MHz (TV 46 to 51 channels) frequency range, please contact your nearest Sony office or authorised dealers.

Analogue Wireless Microphone Product Range

Since its introduction, the unique qualities of the Sony WL-800 Series UHF synthesised wireless microphone system have been proven in many different applications. It has been particularly successful in critical applications such as broadcasting and production, where its low-noise, wide audio dynamic range, stable RF transmission/reception and high reliability have been vital factors.

Sony has continually enhanced its WL-800 Series to fulfil the ever increasing needs for wireless operations.

Offering a broad range of choices, this family presents a solution to virtually any wireless microphone application from the very simple to the most sophisticated.

Such applications include ENG and EFP location, conference and entertainment, TV studio production, theatre and live performance to name just a few. A variety of options are also made available so that systems are established to suit different operational needs.

Sony Wireless Microphone Common Features

PLL Synthesised System

Phase Locked Loop (PLL) frequency synthesised systems are employed both in transmitters and receivers, assuring carrier stability and providing easy access to multiple frequencies. These PLL controlled systems provide highly stable, selectable frequencies to be generated in increments of 125kHz.

Space Diversity Reception System

A space diversity reception system is used to eliminate signal dropout. Dual antenna inputs and reception circuits incorporated in the diversity system receive signals over two different paths and select the stronger signal as the output. This switching operation is undetectable on the audio output of the receivers.

Pre-programmed Frequency Groups

Optimum combinations of calculated and practically tested intermodulation-free frequencies are stored in each receiver to make it easy to choose the correct frequencies for simultaneous multi-channel operation. These frequencies are arranged in groups, with each group pre-programmed to allow interference-free operation.

Advanced Filtering

The Sony wireless units all employ Helical, Ceramic and/or SAW (Surface Acoustic Wave) filters as appropriate. This offers stable reception and superb audio quality and also enables the unique miniaturisation seen in most Sony products.

Tone Squelch Circuitry

The wireless microphone transmitters also transmit a 32.768kHz pilot-tone signal along with the audio signal. In the receivers, a squelch circuit is present and the audio signal is only output when the tone signal has been correctly received. This squelch function is designed to virtually prevent the output of unwanted signals or 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.

Compander System for Wide Dynamic Range and Low-noise

A compander (compressor/expander) system is included for improved audio dynamic range, low-noise and interference. The time constants for attack and release times are carefully chosen in the various transmitters to match the application, ensuring minimised noise level while providing smooth and superior audio quality.

Multiple Information on Easy-to-read LCD and LED

Most receivers and transmitters feature easy-to-read LCD panel and LED indicators, which provide extensive information on the operating conditions. Most receivers will display the RF input level, audio output status, current channel number/frequency and battery status of the transmitter. Most transmitters do, in essence, have the same information available in the receivers, such as audio input and RF output status, current channel number/frequency, input attenuation setting and accumulated battery operating time.

Remote Battery Alarm on Receiver

For added assurance of continued operation, users can monitor the battery reserves of handheld, body pack and plug-on transmitters. Remaining battery life is indicated on both the transmitter and receiver, with additional indication approximate one hour[*1] before the battery goes dead. On the receiver, the battery indicator on the LCD and LED displays also flash, helping to avoid the chance of battery failure at a critical moment.

*1 This may vary depending on the operational environment.

Consistent RF Power Output

A DC-DC convert circuit built into the power supply section of microphones/transmitters assures consistent output power over the life of the batteries.

Channel Setting Back-up

Each unit has a convenient memory back-up for storing operating frequencies. When the power switch is turned on, the previous channel setting is automatically recalled and displayed.

WRT-8B
UHF Synthesised
Transmitter

Features

- > Ultra-compact and lightweight: 140 g including batteries
- > Selectable RF power output: 50 mW output for long distance transmission or 10 mW output for multi-channel simultaneous operation
- > Switchable input level (LINE or MIC level) and attenuator level control knob
- > SMA-J type, removable antenna
- > Approximately 13 hours of continuous operation with two AA-size alkaline (LR6) batteries at 10 mW output
- > Accepts the output of professional lavalier microphones equipped with a Sony 4-pin connector (SMC9-4P)

WRT-822B
UHF Synthesised
Transmitter

Features

- > Approximately six hours of continuous operation with two AA-size (LR6) alkaline batteries
- > Compact, lightweight, magnesium alloy body
- > 20 mW RF power output
- > Accepts the output of professional lavalier microphones equipped with a Sony 4-pin connector (SMC9-4P)

WRT-847B
UHF Synthesised
Transmitter Unit

Features

- > Five optional microphone capsules are available, providing a choice of characteristics that suit a range of different applications. Microphone capsules are available individually. (One head is required for the WRT-847B to function.)
- > Audio compander time constant is switchable to suit different capsules
- > Selectable RF output level: 10 mW for simultaneous multi-channel operation and 50 mW for long distance operation
- > Audio gain and attenuation setting from +9dB to -12dB in 3dB steps
- > Lockable external power switch (ON/OFF)
- > Two AA-size (LR6) alkaline batteries provide approximately eight hours of continuous operation

WRT-807B
UHF Synthesised
Transmitter Unit

Features

- > A high quality dynamic CCAW voice coil with AlNiCO magnet is used in the WRT-807B, providing a super cardioid response
- > The use of a precision synthesiser PLL provides the combination of reliable RF transmission with pre-programmed operating frequencies
- > The WRT-807B's LCD display and set-up switches provide a simple to use control interface. The display lockout mode and the locking on/off switch greatly reduces the risk of mis-operation
- > The WRT-807A offers 5 hours of operating life from a single AA battery. This is achieved by utilising a specialised DC to DC converter to provide stable performance throughout the active life of the batteries. This is especially important in maintaining good RF transmission

CU-F780
Capsule Unit

CU-E700
Capsule Unit

Features

> Dynamic microphone capsule with super cardioid polar pattern

> Uses the same high-quality edgewise winding CCAW voice coil that is employed in the acclaimed Sony F-780 wired microphone

> Designed for vocal applications including live music performance

> Frequency response: 50Hz to 18kHz

> Dimensions: Ø 51 x 90 mm (Ø 2 1/8 x 3 5/8 inches)

> Mass: 180 g (6.3 oz)

Features

> Electret condenser microphone capsule with super cardioid polar pattern

> Smooth frequency response for natural sound reproduction

> Suitable for critical vocal and speech applications

> Frequency response: 50Hz to 18kHz

> Max. SPL: 150dB

> Dimensions: Ø 51 x 98 mm (Ø 2 1/8 x 3 7/8 inches)

> Mass: 170 g (6.0 oz)

Characteristics

Characteristics

Directivity Characteristics

——— 100Hz
——— 1kHz
——— 6kHz

Directivity Characteristics

——— 200Hz
——— 1kHz
——— 5kHz

Frequency Response Characteristics

——— 0°
——— 90°
——— 180°

Frequency Response Characteristics

——— 0°
——— 90°
——— 180°
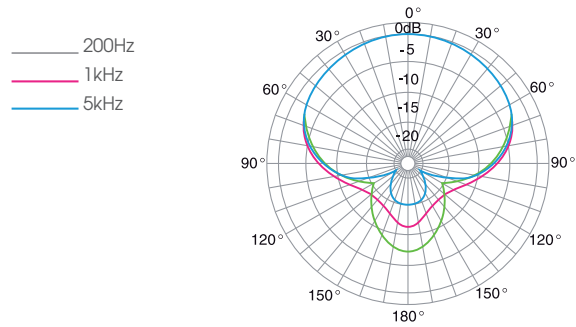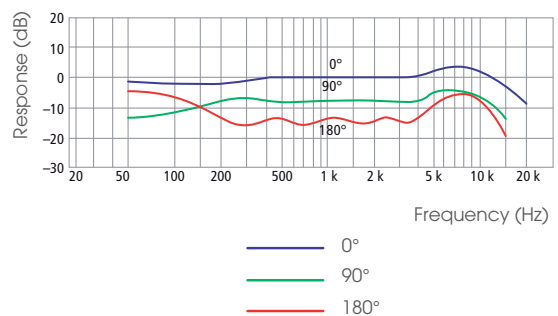
CU-E672
Capsule Unit

CU-F117
Capsule Unit

Features

> Electret condenser microphone capsule with hyper cardioid polar pattern

> A wide variety of applications in news gathering, sports events and interviews

> The supplied windscreen reduces wind noise and popping

> Frequency response: 50Hz to 16kHz

> Max. SPL: 120dB

> Dimensions: Ø 37 x 172 mm (Ø 1 1/2 x 6 7/8 inches)

> Mass: 150 g (5.3 oz)

> Supplied accessory: Urethane windscreen (1)

Features

> Dynamic microphone capsule with omni-directional polar pattern

> Superb rejection of wind noise and popping

> Designed for interview applications

> Frequency response: 50Hz to 15kHz

> Dimensions: Ø 44 x 105 mm (Ø 1 3/4 x 4 1/4 inches)

> Mass: 170 g (6.0 oz)

> Supplied accessory: Urethane windscreen (1)

Characteristics

Characteristics

Directivity Characteristics

Directivity Characteristics

Frequency Response Characteristics
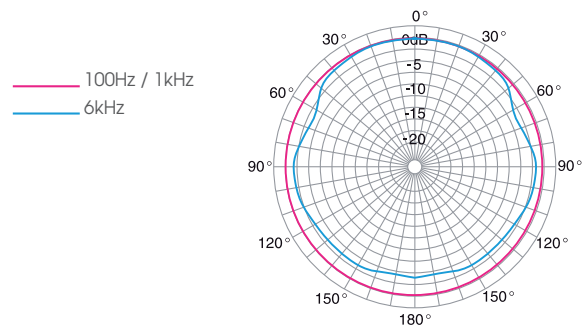
Frequency Response Characteristics
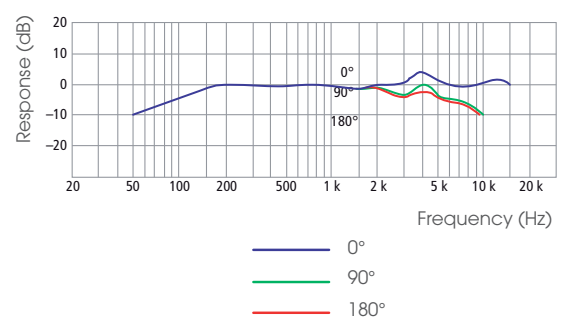
WRR-862B
UHF Synthesised Dual Diversity Tuner

WRR-855S
UHF Synthesised Diversity Tuner

Features

> Receives two independent RF signals simultaneously on two separate channels

> Compact and lightweight: 400 g (14.1 oz) including batteries

> Two way powering: Internal battery operation or operation on external power from Sony camcorders via the supplied cable

> A red LED starts flashing approximately one* hour before the transmitter's battery is exhausted

> Two Sony 4-pin (SMC9-4S) audio output connectors are provided on the top panel

> Switchable RF squelch levels: ON (5dBµ, 10dBµ, 15dBµ) or OFF

> Stereo mini-jack for monitoring the output sound (switchable: Tuner 1/Tuner 2/Mixed) with headphones

> Monitor volume control provided

*This time may vary depending on the operational environment.

Features

> Space Diversity Tuner for camcorder use

> Easily mounts onto Sony HDCAM/Digital Betacam/ XDCAM/MPEG IMX camcorders without need for audio/ power cables or a mounting adapter

> Compact and lightweight design: 280 g (11 oz)

> A D-sub 15-pin connector for audio output to a Sony professional camcorder and for receiving its power supply from the camcorder

> A LCD provides various information such as RF input level and audio output status

BTA-801
Portable Tuner Mount Adapter

A-8278-057-A
Mounting Bracket

Features

> Allows a WRR-855S/855B portable tuner to be mounted on a Sony professional camcorder

> External DC power input via the supplied 4-pin cable
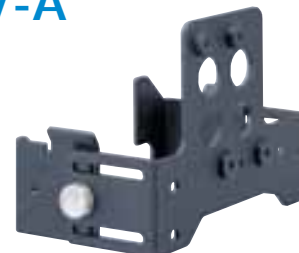
Features

> For mounting any Sony portable tuner to Sony professional camcorders which operate on Sony Lithium-Ion battery packs

MB-8N

Tuner Base Unit

Features

> Accommodates up to four WRU-8N tuner modules in a 1U high, rack-mountable chassis

> Built-in antenna-divider allows four MB-8Ns to be daisy-chained for up to 16-channel simultaneous operation without the need of an external divider.

> Control settings such as audio output levels, RF squelch levels, attenuator levels for the installed tuner modules and power supply setting (ON/OFF) for the connected AN-820A antennas are available from the front panel

> An auto-channel assignment function for extra receiver modules with self-detection and skipping of unusable channels

> A headphone monitor jack and level control knob are located on the front panel. The monitor output can be selected from individual WRU-8N tuner modules or mixed sound from all installed modules

> Computer-based remote control is also possible via a standard Ethernet (10BASE-T) connection. The supplied software allows full monitoring of the operating status and all control settings available on both the MB-8N and WRU-8N. Multi-channel settings can be stored as files

WRU-8N
UHF Synthesised Tuner Unit

Features

> Plug-in diversity tuner module for the MB-8N tuner base unit

> A jog dial allows operators to quickly choose the desired channel setting

> Pre-programmed groups for interference-free, multi-channel operation

> A red LED starts flashing approximately one* hour before the transmitter's battery is exhausted

> Precise RF squelch level setting: 10dBµ, 20dBµ, 30dBµ or OFF

> Space diversity reception for dependable RF reception

*This time may vary depending on the operational environment.

MB-X6
Tuner Base Unit

Features

> Accommodates up to six WRU-806B and UWP-X Series for up to six channels of simultaneous operation

> Addition of the WD-850A allows multi-channel operation with even more channels

> Easy mechanism for attaching and detaching tuner modules

> RF input attenuator switch (10dB/0dB)

> Balanced XLR output connector for each tuner and mix output

> Selectable output level: -58dBu (for MIC) or -20dBu (for LINE) at ±5kHz deviation at 1kHz modulation

> Auto-channel search function automatically selects unoccupied channels

> Supplied with passive antennas

> Modular, 1U high, 19 inch rack unit

WRU-806B

UHF Synthesised Tuner Unit

Features

- >Plug-in diversity receiver module for MB-X6 tuner base unit
- >Pre-programmed groups for interference-free, multi-channel operation
- >RF input status, audio output status and battery alarm indications by both LED and LCD to double check operating condition
- >Space diversity reception for dependable RF reception

WD-850A

UHF Antenna-divider

Features

- >Provides diversity output for up to four receivers/tuner base units
- >Multi-channel operation by combination with the MB-8N and WRU-8N or the MB-X6 and WRU-806B
- >Cascade output can be used for an additional antenna-divider or receiver/tuner base unit

- >Two pair of antenna input connectors for up to four AN-820A antennas to expand the operating area of a wireless microphone system

AN-820A

UHF Antenna

Features

- >Built-in RF amplifier (10dB gain)
- >Easy installation on a wall or on a microphone stand with the supplied stand adapter
- >Used in pairs for diversity reception
- >LED indication for installation check
- >External power supply provided from the MB-8N/X6 or the WD-850 via a coaxial cable

ECM-88BC
Lavalier Microphone
(for WRT-8B, WRT-822B)

ECM-77BC
Lavalier Microphone
(for WRT-8B, WRT-822B)

ECM-66BC
Lavalier Microphone
(for WRT-8B, WRT-822B)

ECM-44BC
Lavalier Microphone
(for WRT-8B, WRT-822B)

ECM-166BC
Lavalier Microphone
(for WRT-8B, WRT-822B)

ECM-322BC
Headset Microphone
(for WRT-8B, WRT-822B)

BTA-801
Portable Tuner Mount
Adapter (for WRR-855S,
WRR-855B)

DWA-O1D
Digital Wireless Adapter
(for WRR-855S, WRR-855B)

CA-WR855
Camera Adapter
(for WRR-855S, WRR-855B)

A-8278-057-B
Mounting Bracket
(for WRR-862B, WRR-855S)

EC-1.5CF
Microphone Cable
(for WRT-8B, WRR-822B)

DMX-P01
Digital Portable Mixer

Specifications

	WRT-8B	WRT-822B
Carrier frequency range	798 MHz to 822 MHz (62CE7) 838 MHz to 862 MHz (67CE7)	798 MHz to 822 MHz (62CE7) 838 MHz to 862 MHz (67CE7)
Circuit system		
Oscillator	Crystal controlled PLL synthesiser	Crystal controlled PLL synthesiser
Type of emission	F3E	F3E
RF power output	10 mW or 50 mW (e.r.p.) selectable	20 mW, (50 Ω load)
Antenna	1/4 wave length wire antenna (SMA-J type connector)	1/4 wave length wire antenna
Reference deviation	±5 kHz (-60 dBV, 1 kHz input, MIC position) ±5 kHz (-20 dBu, 1 kHz input, LINE position)	±5 kHz (-60dBV, 1kHz input)
Frequency response	40 Hz to 20 kHz (typical)	70 Hz to 15 kHz (typical)
Signal-to-noise ratio	60 dB or more (A-weighted, at reference deviation)	60 dB (A-weighted, at reference deviation)
Audio attenuator adjustment range (pad)	0 to 40 dB, continuous	0 to 21 dB, variable in 3 dB step
Max. input level	-2 dBV (1 kHz input, MIC position) +38 dBu (1 kHz input, LINE position)	-3 dBV (with 21 dB attenuator)
Input connectors	Sony 4-pin (SMC9-4S) (1)	Sony 4-pin (SMC9-4S) (1)
Operating voltage	DC 3.0 V (two LR6 AA-size alkaline batteries)	DC 3.0 V (two LR6 AA-size alkaline batteries)
Battery life (at 25 °C (77 °F), with Sony LR6 AA-size alkaline batteries)*	Approx. 6 hours at 50 mW output Approx. 13 hours at 10 mW output	DC 3.0 V (two LR6 AA-size alkaline batteries)
Dimensions (W x H x D)	63 x 83 x 17 mm (2 1/2 x 3 3/8 x 11/16 inches)	63 x 103 x 17 mm (2 1/2 x 4 1/8 x 11/16 inches)
Mass	Approx. 140 g (4.9 oz) including batteries	Approx. 145 g (5.1 oz) including batteries
Supplied accessories	Soft case (1), Spare battery case (1), Microphone cable (1), Operating instructions (1)	Leatherette case (1), Operating instructions (1)

* When not supplying power to the microphones.

	WRT-847B	WRT-807B
Carrier frequency range	798 MHz to 822MHz (62CE7) 838 MHz to 862MHz (67CE7)	798 MHz to 822 MHz (62CE7) 838 MHz to 862 MHz (67CE7)
Oscillator	Crystal controlled PLL synthesiser	Crystal controlled PLL synthesiser
Type of emission	F3E	F3E
RF power output	10 mW or 50 mW (e.r.p.) selectable (50 Ω load)	10 mW, (50 Ω load)
Antenna	1/4 wave length wire antenna	1/4 wave length wire antenna
Reference deviation	±5 kHz (94dB SPL, 1kHz)	±5 kHz (94dB SPL, 1kHz)
Frequency response	50 Hz to 18 kHz (typical)	50 Hz to 15kHz (typical)
Signal-to-noise ratio	60 dB or more (A-weighted, at reference deviation)	60 dB or more (A-weighted, at reference deviation)
Audio attenuator adjustment range (pad)	-12 dB to +9 dB variable in 3 dB steps	0 to 21 dB, variable in 3 dB steps
Max. input sound pressure level	142 dB SPL (with CU-F780/G780/E700/F117 at audio gain -12 dB) 120 dB SPL (with CU-E672)	151dB SPL (with 21dB attenuator)
Microphone capsule	Interchangeable (Optional)	Dynamic
Directivity		Uni-directional
Operating voltage	DC 3.0 V (two LR6 AA-size alkaline batteries)	DC 1.5 V (one LR6 AA-size alkaline battery)
Battery life (at 25 °C (77 °F), with Sony LR6 AA-size alkaline batteries)	Approx. 8 hours	Approx. 5 hours
Dimensions	Ø 37 x 150 mm (Ø 1 1/2 x 6 inches)	Ø 51 x 238 mm (Ø 2 1/8 x 9 3/8 inches)
Mass	Approx. 190 g (6.7 oz) including batteries	Approx. 440 g (15.5 oz) including battery
Supplied accessories	Microphone holder (1), Stand adapter (1), Channel colour seal (1), Softcase (1), Operating instructions (1)	Microphone holder (1), Channel colour seal (1), Operating instructions (1)

	WRR-862B	WRT-822B
Receiving channels	2 channels	1 channel
Receiving frequency range	2 frequencies within 798 MHz to 822 MHz (62CE7) 2 frequencies within 838 MHz to 862 MHz (67CE7)	798 MHz to 822 MHz (62CE7) 838 MHz to 862 MHz (67CE7)
Local oscillators	1st: PLL synthesiser,	1st: PLL synthesiser,
2nd: Crystal oscillator	2nd: Crystal oscillator	2nd: PLL synthesiser
De-emphasis	50 µs	50 µs
Reference deviation	±5 kHz deviation at 1 kHz modulation (Maximum deviation: ±40 kHz deviation at 1 kHz modulation)	±5 kHz deviation at 1 kHz modulation (Maximum deviation: ±40 kHz deviation at 1 kHz modulation)
Selectivity	60 dB or more at ±250 kHz	60 dB or more at ±250 kHz
Spurious rejection	70 dB or more	80 dB or more
Frequency range	40 Hz to 18 kHz (typical)	40 Hz to 18 kHz (typical)
Signal-to-noise ratio	60 dB or more (65 dB typical) at 60 dBµ RF input at reference deviation, A-weighted	60 dB or more at 60 dBµ RF input at reference deviation, A-weighted
RF muting (squelch) level	5 dBµ, 10 dBµ, 15 dBµ or OFF	10 dBµ or OFF
Audio output level	-58 dBm at reference deviation	-40 dBu at reference deviation
Audio output connector	SMC9-4S (Sony 4-pin) (2), balanced	D-sub 15-pin (1), unbalanced
Antenna connector	BNC-R type (2), 50 Ω (nominal)	BNC-R type (2), 50 Ω (nominal)
Monitor output connector	3.5 mm dia. mini-jack, 1, 5 mW (1) Tuner 1/2/Mixed selectable	
Operating voltage	Batteries: DC 6 V (four LR6 AA-size alkaline batteries) External: DC 12 V	External: DC 7 V
Battery life (at 25 °C (77 °F), with Sony LR6 AA-size alkaline batteries)	Approx. 5 hours	
Current (power) consumption	Batteries: approx. 230 mA at DC 6 V External: approx. 135 mA at DC 12 V	200 mA or less at external DC 7 V
Dimensions (W x H x D)	89.0 x 120.0 x 29.5 mm (3 5/8 x 4 3/4 x 1 3/16 inches)	88.0 x 119.0 x 31.3 mm (3 1/2 x 4 3/4 x 1 1/4 inches)
Mass	Approx. 400 g (14.1 oz) including batteries	Approx. 280 g (10.0 oz)
Supplied accessories	Attachment case (x1), Mounting plate for use with optional A-8278-057-B mounting bracket (x1), Antennas (1 pair), Output cables (x2), DC cable (x1), Operating instructions (x1)	Antennas (1 pair), Operating instructions (x1)

	MB-8N	MB-X6
Receiving channels	4 channels when accommodating 4 WRU-8N tuner modules	6 channels when accommodating 6 WRU-806B tuner modules
Receiving frequency range	566 MHz to 806 MHz (USA type) 758 MHz to 862 MHz (AU type)	798 MHz to 822 MHz
Audio output level deviation	-20 dBm (LINE)/-58 dBm (MIC) at reference deviation	-20 dBu (LINE)/-58dBu (MIC) at reference deviation
Audio output connector	XLR-3-32 type (4), balanced D-sub 15-pin (1) for sub output, female, unbalanced	XLR-3-32 (7), balanced
Antenna attenuator level	0 dB, 5 dB, 10 dB or 15 dB	0 dB or 10 dB
Antenna connector	Inputs: BNC-R type (x2), 50 Ω ((nominal) Outputs (for cascade connection): BNC-R type (2), 50 Ω (nominal)	Inputs: BNC-R type (2), 50 Ω (nominal)
Monitor output level	5 mW or more (24 to 45 µΩ load)	
Monitor output connector	6.3 mm dia, stereo mini-jack (1)	
Network connector	RJ-45 (1), 10BASE-T	
Operating voltage	AC 120 V, 50/60 Hz	AC 230 V, 50/60 Hz
Current (power) consumption	50 W when accommodating four WRU-8N tuner modules	30 W when accommodating six WRU-806B tuner modules
Dimensions (W x H x D)	482 x 44 x 300 mm (19 x 1 3/4 x 11 7/8 inches)	482 x 44 x 285 mm (19 x 1 3/4 x 11 7/8 inches)
Mass	Approx. 3.7 kg (8 lb 6 oz)	Approx. 5.5 kg (12 lb 2 oz)
Supplied accessories	AC power cord (x1), Antennas (1 pair), CD-ROM (contains operating instructions and MB-8N supplied software) (x1)	AC power cord (x1), Antennas (1 pair), Operating instructions (x1)

	WRU-8N	WRU-806B
Receiving channels	1 channel	1 channel
Receiving frequency range	798 MHz to 822 MHz (62CE7) 838 MHz to 862 MHz (67CE7)	798 MHz to 822 MHz (62CE7) 838 MHz to 862 MHz (67CE7)
Local oscillators	PLL synthesiser	1st: PLL synthesiser, 2nd: Crystal oscillator
De-emphasis	50 µs	50 µs
Reference deviation	±5 kHz deviation at 1 kHz modulation (Maximum deviation: ±40 kHz deviation at 1 kHz modulation)	±5 kHz deviation at 1 kHz modulation (Maximum deviation: ±40 kHz deviation at 1kHz modulation)
Selectivity	60 dB or more at ±250 kHz	60 dB or more at ±250 kHz
Frequency range	40Hz to 20kHz (typical)	70 Hz to 18 kHz (typical)
Signal-to-noise ratio	60 dB or more (65 dB typical) at 60 dBµ RF input at reference deviation, A-weighted	60 dB or more at 60 dBµ RF input at reference deviation, A-weighted
RF muting (squelch) level	10 dBµ, 20 dBµ,30 dBµ or off	30 dBµ
Operating voltage	DC 5 V (supplied from MB-8N)	DC 9 V (supplied from MB-X6)
Current (power) consumption	260 mA or less	225 mA or less
Dimensions (W x H x D)	56.0 x 30.7 x 149.0 mm (2 1/4 x 1 1/4 x 5 7/8 inches)	57 x 26 x 122 mm (2 1/4 x 1 1/16 x 4 7/8 inches)
Mass	Approx. 165 g (5.8 oz)	Approx. 160 g (5.7 oz)
Supplied accessories		Operating instructions (x1)

	WD-850A
Frequency range	758 MHz to 862 MHz
Channel distribution	Inputs: 2 pairs Outputs: 4 pairs
Input/output impedance	50 Ω
Cascade output	1 pair
Power supply for antenna booster (supplied from antenna input connectors)	DC 9 V/OFF switchable
Power consumption	16 W
Dimensions (W x H x D)	482 x 44 x 300 mm (19 x 1 3/4 x 11 7/8 inches)
Mass	Approx. 4.6 kg (10 lb 2 oz)
Supplied accessories	50 Ω BNC terminators (6)
RF muting (squelch) level	5 dBμ, 10 dBμ, 15 dBμ or OFF
Audio output level	-58 dBm at reference deviation
Audio output connector	SMC9-4S (Sony 4-pin) (2), balanced

	AN-820A
Frequency range	758 MHz to 862 MHz
Antenna gain	More than 10 dB
Output impedance	50 Ω
Voltage standing-wave ratio	Less than 3
Noise figure	Less than 6 dB
Third intermodulation	More than 60 dB (at 95 dBμ output)
Dimensions (W x H x D)	482 x 44 x 300 mm (19 x 1 3/4 x 11 7/8 inches)
Output connector	BNC-R type
Supply voltage	DC 9 V
Current consumption	Less than 35 mA
Dimensions (W x H x D)	70 x 117 x 132 mm (2 7/8 x 4 5/8 x 5 1/4 inches)
Mass	Approx. 250 g (9 oz)
Supplied accessories	Attachment A (1), Attachment B (1), Microphone stand screw (1), Microphone stand screw adapter (PF 1/2 to NS 5/8) (1), Fixing screws (1 set)

UWP Wireless Microphone Product Range

The Sony UWP Series UHF Wireless Microphone Package, introduced in 2003, set a milestone in the history of wireless microphone systems with its uncompromised ease-of-operation. It brought a number of significant benefits to wireless applications, including highly stable audio reception by utilising a space diversity reception system and proven interference-free multi-channel operation. Since its introduction, the UWP Series has been widely adopted around the world for a variety of applications such as news gathering, interviewing, professional video production, entertainment, live events and conferences to name just a few.

Now, Sony has further evolved the UWP Series by introducing five new packages – the UWP-V1, UWP-V2, UWP-V6, UWP-X7 and UWP-X8 – for a much higher level of stability, mobility, robustness and operational convenience. Each package comes with both a transmitter and a receiver, allowing you to get up and running straight from the box.

Common Features

Compact, Lightweight and Robust Design

All components of the UWP Series – the bodypack transmitter, handheld microphone, plug-on transmitter, portable receiver and tuner module – utilise an extremely robust metal chassis which is ideal for heavy-duty wireless operations. The metal body also allows for an extremely compact and lightweight design, providing the high level of mobility required for ENG and EFP operations. What's more, the black body complements Sony's professional camcorders extremely well.

Stable Transmission and Reception

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

>PLL Synthesised System

The UWP Series employs a UHF PLL (Phase Locked Loop) frequency synthesised system, which provides a stable carrier signal that helps to avoid interference with other frequency channels and allows for easy access to multiple frequencies. The PLL-controlled system provides highly stable, user-selectable frequencies in increments of 125kHz. Users can choose from 189 frequencies.

>Space Diversity Reception System

Typically, wireless microphone transmission systems can be subject to interruptions in reception (signal dropout), but the UWP Series reduces this to a minimum. Utilising 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 angle of the antennas on the portable receiver can also be adjusted, which helps to further eliminate signal dropout.

>Tone Squelch Circuitry

The UWP Series transmitters transmit a 32kHz pilot-tone signal along with the audio signal. The tuner's squelch circuit recognises this tone signal and outputs the audio signal only when this tone signal is received. This function virtually 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 groups of intermodulation-free pre-programmed frequencies that have been carefully calculated and practically tested. By selecting from these pre-programmed frequency groups, users can quickly and easily operate up to 16 wireless microphones simultaneously.

Auto-channel Scanning Function

The URX-P2 portable receiver and URX-M2 tuner module provide a convenient auto-channel scanning function that allows for fast, easy and safe frequency channel changes. These models automatically detect unoccupied channels, allowing operators easily to select the most appropriate channel to use.

UWP-V1

UHF Wireless Microphone Package

Consists of UTX-B2 bodypack transmitter
and URX-P2 portable receiver

UTX-B2 bodypack transmitter

> Extremely compact, lightweight and robust metal body
> Switchable MIC/LINE input level and adjustable attenuator (0 to 21dB, 3dB steps)
> Supplied omni-directional lavalier microphone utilises a newly developed miniature metal body

URX-P2 portable receiver

> Compact, lightweight and robust metal body – well-suited for use with Sony's professional camcorders
> Convenient auto-channel scanning function, allowing automatic search for unoccupied channels

Supplied accessories

> UTX-B2: Omni-directional lavalier microphone (x1), windscreen (x3), microphone holder clip (x1), belt clip (x1)
> URX-P2: Shoe-mount adapter (x1), belt clip (x1), cables (3-pole locking mini-plug/XLR type and 3-pole locking mini-plug/stereo mini-plug) (x1 each)

UWP-V2

UHF Wireless Microphone Package

Consists of UTX-H2 handheld microphone
and URX-P2 portable receiver

UTX-H2 handheld microphone

> Incorporates a uni-directional dynamic microphone capsule with minimised popping and wind noise

URX-P2 portable receiver

> Compact, lightweight and robust metal body – well-suited for use with Sony's professional camcorders
> Convenient auto-channel scanning function, allowing automatic search for unoccupied channels

Supplied accessories

> UTX-H2: Microphone holder (x1)
> URX-P2: Shoe-mount adapter (x1), belt clip (x1), cables (3-pole locking mini-plug/XLR type and 3-pole locking mini-plug/stereo mini-plug) (x1 each)

UWP-V6

UHF Wireless Microphone Package

Consists of UTX-B2 bodypack transmitter, UTX-P1 plug-on transmitter and URX-P2 portable receiver

UTX-B2 bodypack transmitter

> Extremely compact, lightweight and robust metal body

> Switchable MIC/LINE input level and adjustable attenuator (0 to 21dB, 3dB steps)

> Supplied omni-directional lavalier microphone utilises a newly developed miniature metal body

UTX-P1 plug-on transmitter

> Converts a wired microphone to a wireless microphone via an XLR-type connector

URX-P2 portable receiver

> Compact, lightweight and robust metal body – well-suited for use with Sony's professional camcorders

> Convenient auto-channel scanning function, allowing automatic search for unoccupied channels

Supplied accessories

> UTX-B2: Omni-directional lavalier microphone (x1), windscreen (x3), microphone holder clip (x1), belt clip (x1)

> UTX-P1: Soft case (x1)

> URX-P2: Shoe-mount adapter (x1), belt clip (x1), cables (3-pole locking mini-plug/XLR type and 3-pole locking mini-plug/stereo mini-plug) (x1 each)

PMW-EX1

UWP-X7

UHF Wireless Microphone Package

Consists of UTX-B2 bodypack transmitter and URX-M2 tuner module
- -

UTX-B2 bodypack transmitter

> Extremely compact, lightweight and robust metal body
> Switchable MIC/LINE input level and adjustable attenuator (0 to 21dB, 3dB steps)
> Comes with a uni-directional lavalier microphone

URX-M2 tuner module

> Installed into the MB-X6 tuner unit or the SRP-X500P/X700P all-in-one type presentation mixer/amplifier
> Convenient auto-channel scanning function, allowing automatic search for unoccupied channels

Supplied accessories

> UTX-B2: Uni-directional lavalier microphone (x1), windscreen (x1), microphone holder clip (x1), belt clip (x1)

UWP-X8

UHF Wireless Microphone Package

Consists of UTX-H2 handheld microphone and URX-M2 tuner module
- -

UTX-H2 handheld microphone

> Incorporates a uni-directional dynamic microphone capsule with minimised popping and wind noise

URX-M2 tuner module

> Installed into the MB-X6 tuner unit or the SRP-X500P/X700P all-in-one type presentation mixer/amplifier
> Convenient auto-channel scanning function, allowing automatic search for unoccupied channels

Supplied accessories

> UTX-H2 Microphone holder (x1)

UTX-P1

Plug-on Transmitter

> Converts a wired microphone to a wireless microphone via an XLR connector

> Compact, lightweight and robust metal body, providing great balance when handling

> Switchable MIC/LINE input level

> 50 mW RF output power for stable and long distance transmission

> Attenuator function allows adjustment of the microphone input level: 0 to 21dB, 3dB steps

> Durable connecting mechanism with a microphone for dependable operation

> Backlit LCD with an extensive information display: Operating channel number and its frequency in MHz, attenuator level, audio input status, RF output status, transmitter battery status and accumulated operating time

> Approximately six hours of continuous operation with two AA-size alkaline (LR6) batteries (at 25 °C (77 °F) at 50 mW output power)

> Supplied with a soft case

UTX-B2

Bodypack Transmitter

> Extremely compact, lightweight and robust metal body

> 63 x 82.5 x 18.7 mm (2 1/2 x 3 1/4 x 3/4 inches) excluding the antennas

> Approx. 145 g (5.1 oz) including batteries

> Switchable MIC/LINE input level and adjustable attenuator: 0 to 21dB, 3dB steps

> Selectable RF output power: 5 mW for multi-channel operations or 30 mW for long distance transmission

> Backlit LCD with an extensive information display. 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

> Approximately eight hours of continuous operation with two AA-size alkaline (LR6) batteries (at 25 °C (77 °F) at 30 mW output power)

> Equipped with a 3-pole mini-jack connector with lock mechanism

> UTX-B2V: Comes with a newly-developed miniature metal body omni-directional lavalier microphone (Ø 6.8 mm)

> Clear and crisp sound pick-up with minimised popping and wind noise

> 1.2 m (3.9 feet) microphone cable

> Supplied with a microphone windscreen (x3), microphone holder clip and belt clip

> UTX-B2X: Comes with a uni-directional lavalier microphone (Ø11.5 mm)

> 1.2 m (3.9 feet) microphone cable

> Supplied with a microphone windscreen (x1), microphone holder clip and belt clip

> Supplied battery cartridge is compatible with those of URX-P2 and Sony's WL-800 Series, allowing quick and easy battery exchange between these models

UTX-H2
Handheld Microphone

> Compact, lightweight and robust metal body
> Ø 49 x 253 mm (1 15/16 x 10 inches)
> Approx. 308 g (11 oz) including batteries
> Incorporates a uni-directional dynamic microphone capsule that minimises popping and wind noise
> Selectable RF output power: 5 mW for multi-channel operations or 30 mW for long distance transmission
> Attenuator function allows adjustment of audio input level to suit each user's voice: 0 to 21dB, 3dB steps
> Internal LCD with an extensive information display: 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
> Approximately eight hours of continuous operation with two AA-size alkaline (LR6) batteries (at 25 °C (77 °F) at 30 mW output power)
> Supplied with a microphone holder

Optional Accessories

MB-X6
Tuner Base Unit (for UWP-X Series and WRU-806B)

SRP-X100
Rack-mount Audio Mixer

SRP-X500P
Digital Powered Mixer (for UWP-X Series and WRU-806B)

SRP-X700P
Digital Powered Mixer (for UWP-X Series and WRU-806B)

ECM-77BMP
Lavalier Microphone
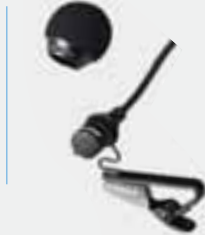
ECM-44BMP
Lavalier Microphone

ECM-166BMP
Lavalier Microphone

ECM-322BMP
Lavalier Microphone

AN-820A
UHF Antenna
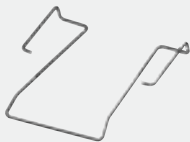
BLC-BP2
Spring Clip x2

SMAD-P2
Camera Mount Adaptor x1

BATC-2AA
Battery Carrier/Case x1

EC-0.46BX
Output Cable x1

EC-0.8BM
Output Cable x1

EC-1.5BX
Input Cable x1
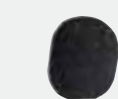
AD-RV1B
Windshield Pack x12

AD-RX7B
Windshield Pack x6

SAD-HV1B
Microphone Clip Pack x4

ECM-V1BMP
(Omni) x1

ECM-X7BMP
(Cardioid) x1
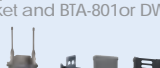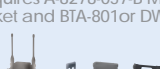
/ Wireless Microphone Tuner/Wired Microphone and Camcorder Combinations

CAMCORDERS					Applicable Shotgun Microphone (Stereo/Mono)	Applicable Shotgun Microphone (Mono)
MODEL NAME	Camcorder Interface for Microphone					
	Built-in Wireless Slot	DC Output for Wireless Tuner	Front	Rear		
			Mic Input Connector	Mic/Line Input Connector		
HDCAM Camcorders						
HDW-F900R HDW-790P	Yes	Yes	XLR-5-pin x1	XLR-3-pin x2*³	ECM-680S	ECM-678 Requires XLR-3P XLR-5P Cable(K-1502)
HDW-730S	Yes	Yes	XLR-3-pin x1	XLR-3-pin x2	ECM-680S Requires XLR-5P XLR-3P(2) Cable (K-1504)	ECM-678
HDW-650P	Yes	Yes	XLR-5-pin x1	XLR-3-pin x2	ECM-680S	ECM-678
Digital Betacam Camcorder						
DVW-970P	Yes	Yes	XLR-3-pin x1	XLR-3-pin x2	ECM-680S Requires XLR-5P XLR-3P(2) Cable (K-1504)	ECM-678
MPEG IMX Camcorder						
MSW-970P	Yes	Yes	XLR-3-pin x1	XLR-3-pin x2	ECM-680S Requires XLR-5P XLR-3P(2) Cable (K-1504)	ECM-678
XDCAM Camcorders						
PDW-510P PDW-530P	Yes	Yes	XLR-3-pin x1	XLR-3-pin x2*³	ECM-680S Requires XLR-5P XLR-3P(2) Cable (K-1504)	ECM-678 ECM-674*¹ ECM-673
XDCAM HD Camcorders						
PDW-F355L PDW-F335L/K	No	Yes	XLR-5-pin x1	XLR-3-pin x2	ECM-680S	ECM-678 ECM-674*¹ ECM-673 Requires XLR-3P - XLR-5P Cable(K-1502)
PDW-700	Yes	Yes	XLR-5-pin x1	XLR-3-pin x2*³	ECM-680S	ECM-678 ECM-674*¹ ECM-673 Requires XLR-3P - XLR-5P Cable(K-1502)
DVCAM Camcorders						
DSR-400P DSR-450WSP	No	Yes	XLR-3-pin x1	XLR-3-pin x2	ECM-680S Requires XLR-5P XLR-3P(2) Cable (K-1504)	ECM-674*¹ ECM-673
HDV Camcorder						
HVR-S270E	No	Yes	XLR-3-pin x2	XLR-3-pin x2	ECM-680S Requires XLR-5P XLR-3P(2) Cable (K-1504)	ECM-678 ECM-674*¹ ECM-673

*1 The ECM-674 can be driven by external DC power (40 to 52V) or battery (AA-size).
*2 Recommend to use the BTA-801 or DWA-01D when using with 3rd party battery.
*3 AES/EBU input can be selected for digital connection.

APPLICABLE ANALOGUE TUNER			APPLICABLE DIGITAL TUNER	
WRR-855S (1 ch) for Slot-in	WRR-855S (1 ch) for Mounting on Rear Position	WRR-862B (2 ch)	Digital (2 ch) for Slot-in	Digital (2 ch) for Mounting on Rear Position
Direct slot-in	Requires A-8278-057-B Mount Bracket and BTA-801or DWA-01D	Requires A-8278-057-B Mount Bracket		Requires A-8278-057-B Mount Bracket and DWA-01D: Max 1 unit
Direct slot-in	Requires A-8278-057-B Mount Bracket and BTA-801or DWA-01D	Requires A-8278-057-B Mount Bracket		Requires A-8278-057-B Mount Bracket and DWA-01D: Max 1 unit
Direct slot-in	Requires A-8278-057-B Mount Bracket and BTA-801or DWA-01D	Requires A-8278-057-B Mount Bracket	Direct slot-in	Requires A-8278-057-B Mount Bracket and DWA-01D: Max 1 unit
Direct slot-in	Requires A-8278-057-B Mount Bracket and BTA-801or DWA-01D	Requires A-8278-057-B Mount Bracket		Requires A-8278-057-B Mount Bracket and DWA-01D: Max 1 unit
Direct slot-in	Requires A-8278-057-B Mount Bracket and BTA-801or DWA-01D	Requires A-8278-057-B Mount Bracket		Requires A-8278-057-B Mount Bracket and DWA-01D: Max 1 unit
Direct slot-in	Requires A-8278-057-B Mount Bracket and BTA-801or DWA-01D	Requires A-8278-057-B Mount Bracket		Requires A-8278-057-B Mount Bracket and DWA-01D: Max 1 unit
Requires CA-WR855 Mount Adaptor *²	Requires A-8278-057-B Mount Bracket and BTA-801or DWA-01D	Requires A-8278-057-B Mount Bracket		Requires A-8278-057-B Mount Bracket and DWA-01D: Max 1 unit
Direct slot-in	Requires A-8278-057-B Mount Bracket and BTA-801or DWA-01D	Requires A-8278-057-B Mount Bracket	Direct slot-in	Requires A-8278-057-B Mount Bracket and DWA-01D: Max 1 unit
Requires CA-WR855 Mount Adaptor *²	Requires A-8278-057-B Mount Bracket and BTA-801or DWA-01D	Requires A-8278-057-B Mount Bracket		Requires A-8278-057-B Mount Bracket and DWA-01D: Max 1 unit
	Requires A-8278-057-B Mount Bracket and BTA-801or DWA-01D	Requires A-8278-057-B Mount Bracket		Requires A-8278-057-B Mount Bracket and DWA-01D: Max 1 unit

Wireless Microphones

/ Wireless Microphone Tuner/Wired Microphone and Camcorder Combinations (with Current UWP & New UWP)

CAMCORDERS					Applicable Shotgun Microphone (Stereo/Mono)	Applicable Shotgun Microphone (Mono)	APPLICABLE WIRELESS TUNER		
MODEL NAME	Camcorder Interface for Microphone						UWP-V1	UWP-V2	UWP-V6
	Built-in Wireless Slot	DC Output for Wireless Tuner	Front – Mic Input Connector	Rear – Mic/Line Input Connector					
XDCAM EX Camcorders									
PMW-EX1/EX3	No	No	XLR-3-pin x1		ECM-680S Requires XLR-5P XLR-3P(2) Cable	ECM-673 ECM-678			
HDV Camcorders									
HVR-S270E	No	Yes	XLR-3-pin x1	XLR-3-pin x2	ECM-680S Requires XLR-5P XLR-3P(2) Cable	ECM-673 ECM-674*1 ECM-678			
HVR-Z7E	No	No	XLR-3-pin x2		ECM-680S Requires XLR-5P XLR-3P(2) Cable	ECM-673 ECM-674*1 ECM-678			
HVR-Z5E	No	No	XLR-3-pin x2		ECM-680S Requires XLR-5P XLR-3P(2) Cable	ECM-673 ECM-674*1 ECM-678			
HVR-V1E	No	No	XLR-3-pin x2		ECM-680S Requires XLR-5P XLR-3P(2) Cable	ECM-673			
HVR-A1E	No	No	XLR-3-pin x2		ECM-680S Requires XLR-5P XLR-3P(2) Cable	ECM-673			
HVR-HD1000E	No	No	Stereo mini-jack x1						
DVCAM Camcorder									
DSR-PD170P	No	No	XLR-3-pin x1		ECM-680S Requires XLR-5P XLR-3P(2) Cable	ECM-673 ECM-674 *1			

*1 : The ECM-674 can be driven by external DC power (40 to 52V) or battery (AA-size).

Specifications

		UTX-B2	UTX-H2	UTX-P1
Oscillator		Crystal-controlled PLL Synthesiser		
Type of emission		F3E		
Carrier frequencies	CE62	798 MHz to 822 MHz (TV 62 to 64 channels), selectable from 189 frequencies (in 125 kHz steps)/960 frequencies (in 25 kHz steps)		
	CE67	838MHz to 862MHz (TV 67 to 69 channels), selectable from 189 frequencies (in 125 kHz steps)/960 frequencies (in 25 kHz steps)		
RF power output		30 mW/5 mW (selectable)		50 mW
Antenna		1/4 wave length wire	1/4 wave length wire (internal)	Integral type
Pilot-tone signal		32kHz		
Frequency response		40 Hz to 18 kHz (typical)	50 Hz to 18 kHz (typical)	
Reference deviation		±7 kHz (-60 dBV, 1 kHz input)	±7 kHz (94 dB SPL, 1 kHz input)	±10 kHz (-60 dBV, 1 kHz input)
Signal-to-noise ratio		60 dB or more (±7 kHz deviation at 1 kHz modulation, A-weighted)		60dB or more (±10 kHz deviation at 1 kHz modulation,
Microphone capsule		Electret condenser, omni-directional (UTX-B2V) Electret condenser, uni-directional (UTX-B2X)	Dynamic, uni-directional	
Audio attenuator adjustment range		0 dB to 21 dB (in 3 dB steps): Mic input	0 dB to 21 dB (in 3 dB steps)	0 dB to 21 dB (in 3 dB steps): Mic input
Audio input level		MIC: -60 dBV (at 0 dB attenuator level) LINE: +4 dBu		MIC: -60 dBV (at 0 dB attenuator level) LINE: +4 dBu
Audio input connector		3-pole mini-jack		XLR-3-11C type
Max. input sound pressure level			151dB SPL (at 21dB 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
	LCD	Audio input status	Power status	Audio input status
Power requirements		DC 3.0 V (with two AA-size alkaline (LR6) batteries)		
Battery life		Approx. eight hours with Sony's AA-size alkaline (LR6) batteries at 25 °C (77 °F) at 30 mW output		Approx. six hours with Sony's AA-size alkaline (LR6) batteries at 25 °C (77 °F) at 50 mW output
Dimensions (W x H x D)		63 × 82.5 × 18.7 mm (2 1/2 × 3 1/4 × 3/4 inches) excluding the antennas	Ø 49 x 253 mm (Ø 1 15/16 × 10 inches)	44 x 99 x 36 mm (1 3/4 x 4 x 1 7/16 inches)
Mass		Approx. 145 g (5.1 oz), including batteries	Approx. 308 g (11 oz), including batteries	Approx. 185 g (6.5 oz), including batteries
Supplied accessories		UTX-B2V: Omni-directional lavalier microphone, Wind-screen (x3), Microphone holder clip (x1), Belt clip (x1), Operating instructions (x1) UTX-B2X: Uni-directional Lavalier microphone (x1), Windscreen (x1), Micro-Phone holder clip (x1), Belt clip	Microphone holder (x1), Operating instructions (x1)	Soft case (x1), Operating instructions (x1)

		URX-P2	URX-M2
Oscillator		Crystal controlled PLL synthesiser	
Type of reception		Space diversity	
Receiving frequencies	CE62	798 MHz to 822 MHz (TV 62 to 64 channels), selectable from 189 frequencies (in 125 kHz steps)/960 frequencies (in 25kHz steps)	838 MHz to 862 MHz (TV 67 to 69 channels), selectable from 189 frequencies (in 125 kHz steps)/960 frequencies (in 25 kHz steps)
	CE67		
Antenna		1/4 wave length wire	
Pilot-tone signal		32 kHz	
RF squelch level		15 dBμ	25 dBμ
Frequency response		40 Hz to 18 kHz (typical)	
Reference deviation		±5 kHz (at 1 kHz modulation)	
Signal-to-noise ratio		60 dB or more (±5 kHz deviation at 1 kHz modulation, A-weighted)	
Audio output connector		3-pole mini-jack, unbalanced	
Audio output level		-58 dBm	
Monitor output connector		3.5 mm (5/32 inch) dia., stereo mini-jack	
Monitor output level Indicators		5 mW (at 16 Ω)	
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 (with two AA-size alkaline (LR6) batteries)	DC 9.0 V
Battery life		Approx. six hours with Sony's AA-size alkaline (LR6) batteries at 25 °C (77 °F)	
Dimensions (W x H x D)		63 x 104.5 x 22 mm (2 1/2 x 4 1/8 x 7/8 inches), excluding the antennas	57 x 26 x 121 mm (2 1/4 x 1 1/16 x 4 7/8 inches)
Mass		Approx. 205 g (7.2 oz), including batteries	Approx. 150 g (5.3 oz)
Supplied accessories		Shoe-mount adapter (x1), Belt clip (x1), Output cable (x1 each, 3-pole locking mini-plug/XLR-type, 3-pole locking mini-plug/stereo mini-plug), Operating instructions (x1)	Operating instructions (x1)

Mixers & AV Amplifiers

The challenges are similar, whether you're overseeing live sound for a television outside broadcast or making an album in your own private studio. Mixing – the most involved and creatively demanding part of the audio production process – demands a console with a host of interfacing, processing and control options that never detract from the purity of the audio source.

The synthesis of audio with the visual image, multi-media embraces a world of entertainment, business, educational, scientific and medical presentation applications. In this section of the catalogue, we present Sony's line-up of mixers and A/V amplifiers which enable you to make the most effective use of multi-media.

DMX-P01
Portable Portable Mixer

Effective audio quality is now more important than ever for ENG and EFP applications because, even with high-quality video, lacklustre audio performance will result in a mediocre production.

The DMX-P01 Digital Portable Mixer is Sony's answer to these high-quality audio requirements. Not only does the DMX-P01 offer outstanding audio quality, it is also one of the most user-friendly mixers in the ENG and EFP markets.

With full 24-bit processing and a sampling rate of either 48kHz or 96kHz, the DMX-P01 provides sound quality comparable to high-end production mixers.

Its front panel is human engineered to allow fast, easy and accurate setting adjustments – essential when working in the field. It also includes other useful features, such as Panel-lock and Parameter-lock functions, selectable meter scales, Camera-audio Return-level check, memory function, digital cascade capability and digital outputs.

All of this functionality and versatility is packaged into one sleek, compact and lightweight body that can be used effortlessly in field productions. Make the DMX-P01 your first step into the world of portable digital-audio mixing in the field.

Digital Benefits

Excellent Sound Quality/Full Digital Processing

In order to provide outstanding sound quality for ENG and EFP applications, the DMX-P01 offers full digital-audio processing. Its 24-bit A/D and D/A converters provide a high level of linearity for analogue inputs and outputs. Internally, the unit utilises 32-bit digital processing for maximum throughput. In addition, the DMX-P01 has a sampling rate that is selectable from either 48kHz or 96kHz.

High-quality Digital Limiters/Compressors

By using digital limiters and compressors, the DMX-P01 can provide extremely high-quality sound in one small package. Limiters are available at the input and both limiters and compressors are available at the output for maximum flexibility.

Full Parameter Controls from the Front Panel

The DMX-P01 puts all of its controls at your fingertips, with a cleanly organised and logical layout on the unit's front panel. The DMX-P01 processes audio digitally, so parameters that are used less frequently are stored internally and accessed only when needed. Using the front panel controls and easy-to-read LCD allows full control of every parameter without the need to remove the unit from its audio-organiser case. The LCD panel is also equipped with a backlight, so the unit can be used in low-light conditions too.

Panel-lock and Parameter-lock Features

One major concern for audio engineers in the field is the accidental bumping of controls, which can inadvertently change the sound settings. The DMX-P01 safeguards against this with its Panel-lock feature, which can be set to secure all of the control settings, or selected individual control settings. With the lock engaged, physical contact with the controls will not alter their settings. In addition, a Parameter-lock feature also avoids inadvertent parameter changes.

Flexible Meter Scales

Because the DMX-P01 is a digital mixer, the meter calibrations can be easily changed from one type to another without the need to replace the entire meter.

Six easy-to-change meter scale sheets are supplied: VU, PPM1 (BBC-type), PPM2 (DIN-type), PPM3 (NORDIC type), PPM4 (IEC-type1) and dBFS. Simply insert the desired scale sheet and select the appropriate meter type from the set-up menu. The DMX-P01 will display the audio level according to the scale selected.

Camera-audio Return-level Check

The DMX-P01 enables users to visually verify that the mixer's audio level matches the level recorded to the camcorder tape. This is done using the Camera Return-level mode, available in the set-up menu. Simply send a reference tone signal to the camcorder and the level difference between the mixer output and camcorder return signal will be displayed. Then adjust the marker to the central position and the level adjustment is complete.

Memory Function

The DMX-P01 processes audio digitally, so users can effortlessly store and recall parameters from the set-up menu. There are two memory functions: Power-on Memory Recall and Scene Memory Recall.

Power-on Memory Recall - When the DMX-P01 is powered on, the system is capable of recalling parameters in three different ways: with the default factory settings, with the same settings as the last time the unit was used, or with the parameters of one specific scene memory.

Scene Memory Recall - This feature allows users to recall up to ten different user-defined parameter settings or the factory default settings. In situations where a single unit is required to serve multiple users or multiple shooting scenarios, these features can prove invaluable.

Digital Cascade

For applications requiring additional inputs, DMX-P01 mixers can be cascaded using a digital connection between mixers. The benefit of cascading mixers digitally is that sound quality is not degraded, as it would be when cascading analogue mixers.

Digital Output

The DMX-P01 is equipped with a digital output, which can be used to send audio to digital peripheral equipment such as DAT recorders. AES/EBU and S/PDIF (IEC 60958) coaxial interfaces are available for master outputs.

Right Connector Panel

Left Connector Panel

DMX-P01 / Features

Inputs
> 4 microphone/line inputs with XLR-type balanced connectors
> +48 V power for each microphone input
> Digital cascade input with phono connector
> Microphone/line gain-level control
> Level control knobs with stereo-link facility
> Selectable sampling rate (48kHz or 96kHz) for A/D converters

Outputs
> 2 balanced outputs with XLR-type connectors
> Digital AES/EBU output (stereo) with XLR-type connector
> Coaxial output connector for mix-bus output (for cascade) or S/PDIF digital output (selectable)
> Stereo tape output with unbalanced 3.5 mm TRS jack
> Switchable output mode: stereo or monaural
> Selectable output level control for L/R master outputs and camera send
> Selectable sampling rate (48kHz or 96kHz) for D/A converters

Panning
> Variable pan controls

Low-cut Filters
> Adjustable cut-off frequencies for 2 user settings (A/B)
> Quick parameter-recall switch with OFF/A/B positions

Limiters/Compressors
> Digital limiters on both inputs and outputs
> Digital compressors on outputs
> Precise parameter control on threshold and ratio value, attack and release time
> Link function (ON/OFF switchable)
> LED indicators for output limiter/compressor operation

Link/M-S operation
> Links input levels, LCFs and PAN controls for channels 1/2 and 3/4
> Links output levels for master left/right outputs
> Decodes M-S microphone inputs and links the input levels of channels 1/2 and 3/4
> Phase reverse on channels 2 and 4 (M-S decode)

LCD Panel
> Various level-meter displays: VU, PPM1 (BBC-type), PPM2 (DIN-type), PPM3 (NORDIC-type), PPM4 (IEC-type1), dBFS
> Displays set-up menus and allows various parameter settings
> Ten user-scene memory settings (each including level meter, LCF, limiter/compressor and link status)
> Six scale sheets supplied for different level-meter calibrations
> Back light
> Heated LCD[1] for low-temperature conditions

Monitoring
> 2 outputs: 1/4 inch phone jack and 3.5 mm mini-jack
> Six monitoring modes: left output, right output, stereo output, left/right-mixed monaural, M/S decode and camera return
> Level control knob

Camera-audio Send/Return-level Control
> Stereo return from a camcorder via 12-pin balanced connector
> Precise level control on LCD with auto-evaluation function for return-level
> Monitoring capability with headphones

Oscillator/Talkback (selectable)
> Oscillator: 1kHz pilot-tone signal into all outputs
> Talkback: slate into all outputs
> Momentary and alternative modes for both oscillator and talkback

Power
> External DC 10 to 15 V input with 4-pin XLR connector
> External DC 10 to 15 V input with jack connector
> DC 10 to 15 V output[1] with 4-pin Hirose connector for a wireless microphone receiver
> 8 internal AA-size (LR6) batteries for approximately 5 hours of continuous operation
> Spare battery compartment for quick battery change

[1] When operated on alkaline batteries, power is not supplied to the wireless microphone receiver nor is the LCD panel heated.

SRP-X700P

Digital Powered Mixer

The SRP-X700P Digital Powered Mixer has been designed for modern presentation systems that are required to process material from a wide range of sources including microphones, video, audio, DVD players, audio tape recorders as well as PCs. This unit integrates the functionality of seven traditional presentation devices in a compact 3U high, 19 inch rack-mountable chassis.

By utilising digital processing and control technology, the SRP-X700P offers an impressive set of features, high-quality processing and ease-of-operation.

Features

Multi-media Switcher and Audio Mixer

The SRP-X700P combines a six input RGB/video switcher with a 14-channel audio mixer. The switcher matrix allows a variety of video and PC graphic sources to be routed to the presentation system, while the audio mixer processes audio input from wired and wireless microphones as well as audio playback devices.

The SRP-X700P supports the following signal inputs:

> Picture inputs: 3 RGB or component, 3 Composite or S-video

> High-quality component signals including 480p, 1080i and RGB signals with a 150MHz frequency response (1280 x 1024 pixels, SXGA)

> Audio inputs: 6 mic or line, 5 stereo and 2 surround sound (5.1 format)

Improved System Efficiency

The SRP-X700P is supplied with two PC application software programmes: the SRP-X700P Manager and the User Control Panel. The SRP-X700P Manager programme is a 'set and forget' application, which allows the unit to be fully configured during installation by providing a complete set of control GUIs. The User Control Panel programme is for simple GUI control during the presentation.

Additionally, the unit offers 20 internal scene memories, four of which can be recalled from the front panel buttons and the User Control Panel GUI. These scene memories allow instant reset of all control parameters to quickly change operating modes.

Control GUIs

SRP-X700P / Features

6-mono and 2-stereo Channel Audio Mixing with Comprehensive Processing to Maximise Sound Quality

The SRP-X700P can mix and process 6-mono (4 mic, 2 mic/line) and 2-stereo (a stereo line and the 5.1/stereo line input of the switcher) input signals to 10 outputs (8 general purpose outputs and a stereo record output). Its comprehensive audio processing, such as EQ, dynamics, routing and delay, allows the quality of the audio signals to be maximised and provides tools for correcting room acoustics.

> High-quality audio A/D and D/A conversion (24-bit, 48kHz sampling frequency)

Advanced Audio Processing Functions – 'Feedback Reducer' and 'Automixer'

Two special audio processing tools are included to allow 'professional quality audio' processing at the touch of a button. The 'Feedback Reducer' works by analysing and 'nulling out' potential annoying feedback. The 'Automix' function allows the SRP-X700P to analyse, in real-time, the incoming signals and make adjustments to maintain the quality of the output.

Multiple Operating Modes and On-board Stereo Power Amplifier

The SRP-X700P is equipped with a routing function which routes the input signals to its 10 outputs (8 line and 2 REC outputs). This routing function allows the SRP-X700P to offer many different operating modes to support surround sound matrix switching or 'Zoned' speaker configurations. In addition, there is an on-board 150 W stereo power amplifier that can be switched between high and low impedance modes.

> Power rating 200 W + 200 W (4 1/2), 150 W + 150 W (8 1/2), Max 150 W (70 V Line)

Integrated Machine Control Interfacing

The SRP-X700P provides extensive machine control capabilities through its four Control-S ports (for wired machine control to Sony CD players, MiniDisc players and VCRs). Additionally, parallel and serial RS-232C control ports provide extensive control for sophisticated presentations.

For Remote Control of the SRP-X700P:

> USB, RS-232C and parallel port for control from an external PC (or other control systems)

> For remote control of peripheral equipment/devices from the SRP-X700P

> RS-232C port for remote control of Sony projectors and Sony plasma display monitors

> Control-S ports for remote control of Sony VCRs, DVD players, CD players, MiniDisc recorders and projectors[1]

> Parallel output port for remote control of peripheral devices such as video screens (up/down), window curtains (open/close), projector (up/down), lighting (on/off), etc.[2]

[1] When controlling a projector with the Control-S port, the projector cannot be switched between RGB and Component input mode.

[2] Requires an interface box between the SRP-X700P and external device.

Integrated Wireless Tuner Unit Slots

Up to two Sony WRU-806 or UWP-X Series wireless tuner units (optional) can be directly installed in the SRP-X700P, making it simple to integrate a high-quality Sony wireless microphone system into the presentation system.

SRP-X500P

Digital Powered Mixer

The SRP-X500P is a cost-effective and ideal choice for use in small to mid-scale presentation systems - for conference rooms, corporate boardrooms and classrooms. Within its compact chassis, the SRP-X500P has seven major presentation devices - including an RGB/video switcher, audio mixer, wireless tuner slots, sound processor and digital power amplifier. For smooth control over presentations there is an easy-to-use front panel layout, providing instant access controls for compatible Sony VCRs, DVD players, projectors and PCs. Plus, the built-in digital mixer offers important DSP functions, including a feedback reducer and equaliser for high-quality audio.

Eliminating complicated operations, cumbersome installation procedures and complex adjustments of A/V parameters for optimised visuals and sound, the SRP-X500P is an efficient A/V presentation system for conveying your messages as effectively as possible.

Features

All-in-one Design

The SRP-X500P incorporates the functionality of seven presentation devices in a compact 3U high, 19 inch rack-mountable chassis, enabling modern presentations using a wide variety of A/V sources. Compared to purchasing these devices separately, the SRP-X500P presents a large reduction in system cost and eliminates time-consuming wiring and adjustments between such devices.

Nine System Presets

Setting up audio parameters of a presentation system can be a difficult task, especially to deliver high-clarity audio to all areas of the venue. The SRP-X500P offers nine factory default system settings in its memory, enabling more efficient audio adjustment. Speaker system configurations are also included in these settings, allowing quick set-up of the audio system by recalling the one best suited for the venue.

High-quality Digital Sound

The SRP-X500P is equipped with a number of digital signal sound processing functions including Auto Gain Control (AGC), equaliser, compressor and feedback reducer, helping to bring professional sound quality into multi-media presentations. Each microphone input channel integrates a digital feedback reduction function. At the touch of a button, the audio frequency in which howling is likely to occur, is detected and suppressed, reducing unwanted microphone feedback.* Consequently operators can raise the amplifier's volume without concern over microphone howling. The SRP-X500P also incorporates an A/D and D/A converter with a 24-bit, 48kHz sampling frequency for high-quality digital sound. The four-channel digital amplifier also maximises the sound quality of the SRP-X500P.

* When a microphone position is changed, the feedback reduction function has to be set again.

Integrated Wireless Tuner Unit Slots

The SRP-X500P can accommodate two optional wireless tuner units, selectable from the Sony UWP-X Series or the WRU-806B, making it simple to establish a high-quality wireless microphone system for the presentation.

Comprehensive Remote Control

For integrated control of the presentation system the SRP-X500P offers a variety of control interfaces - to control peripheral equipment or to be controlled from an external control system. These include RS-232C, Control-S and PARALLEL ports.

An optional RM-AV3000 Series Wireless Remote Commander also provides basic control functions for both the SRP-X500P and connected projector.

Remote Control of the SRP-X500P

RS-232C (REMOTE): Various settings of the SRP-X500P can be altered from a PC running the supplied SRP-X500P Manager. Third-party system controllers can also be connected to this port to control the SRP-X500P.

Features

Rear Connector Panel

Remote Control of Peripheral Equipment from the SRP-X500P

> RS-232C (PROJECTOR CONTROL): For remote control of Power ON/STANDBY and input selection of Sony projectors

> Control-S (PROJECTOR CONTROL): For remote control of Power ON/STANDBY and input selection of the Sony LCD Data Projector VPL-PX15

Remote Control of Peripheral Equipment from an External Parallel Interface Box

> PARALLEL (REMOTE): For remote control of peripheral devices such as video screens (up/down), window curtains (open/close) and lighting (on/off)

Wireless Control of the SRP-X500P or Peripheral Equipment

Using the optional RM-AV3000 Series Remote Commander, frequently accessed operations of the SRP-X500P and connected projector can be wirelessly controlled:

> AV/RGB selection
> Master volume adjustment
> Master volume muting projector
> Projector Power ON/STANDBY

Versatile Interfaces

The SRP-X500P offers an array of video, PC and audio I/Os. In addition to conventional composite and component video inputs, it supports computer RGB input and output, both of which accommodate up to SXGA resolution. As for audio, four microphone inputs and two stereo line inputs are available, each of which can be freely assigned to the four audio outputs.

Built-in Four-channel Digital Power Amplifier

The SRP-X500P is equipped with a four-channel digital power amplifier that can be switched between high and low impedance modes to suit various room types.

Low Impedance Mode

> 90 W + 90 W + 50 W + 50 W (4 Ω, 8 Ω)[*1]

High Impedance (70 V line) Mode

> 90 W + 90 W (4 Ω, 8 Ω)* + 60 W (82 Ω)

*1 The same power rating can be acquired for both 8 Ω and 4 Ω speaker impedance. Connect the speakers so the total speaker impedance is 4 Ω or higher.

PC Control With Easy-to-use GUI

For system set-up and operation from a PC, the SRP-X500P is supplied with the Windows-based SRP-X500P Manager software.[*2] From its easy-to-use GUI, operators can control detailed settings such as the equaliser, AGC and compressor before the presentation.

*2 System requirements:
OS: Microsoft® Windows® Me, 2000 Professional, XP Professional or XP Home Edition
CPU: Intel® Celeron® 400MHz or higher RAM: 128MB or greater
Available hard disk space: 20MB or higher

SRP-X100

Audio Mixer

The Sony SRP-X100 Audio Mixer is designed for use in business and educational applications. A total of nine stereo and monaural analogue input channels are provided, with flexible routing to Master, Sub and Record outputs. Contained in a compact 1U size body, the elegantly simple design of the SRP-X100 makes operation intuitive. Sony analogue audio technology provides excellent performance with high input headroom, extended frequency response and low-noise.

Rear Connector Panel

Features

Two mono mic inputs (MONO 1 to 2)

> +48 V supply powering
> 100Hz high-pass filter to reduce handling and wind noise
> XLR input connectors

Four mono inputs, Mic/Line switchable (MONO 3 to 6)

> +48 V supply powering and 100Hz high-pass filter in Mic mode
> XLR input connectors
> With Line Input mode selected, Channels 3 and 5 feed Left outputs, 4 and 6 feed Right outputs

Three stereo line inputs (STEREO 1 to 3)

> STEREO-3 configured to accept recorder output
> Phono input connectors

Wide, 30dB headroom on mic inputs for simple, easy operation

L/R Recorder bus output carries all inputs, except STEREO-3 line input to avoid feedback

Master L and R outputs, switchable to mono outputs

> XLR connectors

Record L and R outputs, pre-master fader

> Phono connectors

Two, mono sub outputs

Rear panel separate switch on

With the rear panel separate switch on, only mic signals are available from the sub output and only the line inputs are available from the master outputs

All inputs and outputs via rear-panel mounted connectors

Wide frequency range and excellent noise performance

19 inch rack mountable design

AN-820A
UHF Antenna
(for SRP-X700P & SRP-X500P)

WRU-806B
UHF Synthesised Tuner Unit
(for SRP-X700P & SRP-X500P)

UWP-X7/X8
Wireless Microphone Packages
(for SRP-X700 & SRP-X500)

	DMX-PO1
Inputs	
Crystal controlled PLL synthesiser	4 ch, XLR-3-31 (x 4), electrically balanced, microphone power; +48 V (on/off) Mic level; -70 to -30 dBu (max. -10 dBu), 2.2 kΩ or more Line level; -30 to +10 dBu (max. +30 dBu), 10 kΩ or more
Cascade input (digital)	2 busses (L/R), coaxial, 75 Ω
Outputs	
Master outputs (analogue)	2 ch (L/R), -60/-20/+4 dBu (max. +24 dBu), XLR-3-32 (x 2), balanced, 600 Ω load or more
Master outputs (digital)	2 ch (L/R), AES/EBU, XLR-3-32 (x 1), 110 Ω load 2 ch (L/R), IEC 60958 coaxial (x 1), 75 Ω load
Tape outputs (analogue)	2 ch (L/R), -10 dBu (max. +10 dBu), 3.5 mm dia. TRS jack, unbalanced, 10 kΩ load or more
Camera send/return (analogue)	2 ch (L/R), 12-pin, female, balanced, Send level; -60/-20/+4 dBu (max. +24 dBu), 600 Ω load or more Return level; 0 dBu (max. +20 dBu), 10 kΩ
A/D converter	24 bits
D/A converter	24 bits
Sampling frequency	48 kHz or 96 kHz
Internal signal processing	32 bits
Low cut filter	70 to 400 Hz (at 96 kHz sampling frequency), 12 dB/octave 50 to 400 Hz (at 48 kHz sampling frequency), 12 dB/octave
Input limiter	Threshold: 0 to +20 dB (in 2 dB steps)
Output limiter/compressor	Threshold: -20 to +10 dB (in 2 dB steps) Ratio: 2:1, 4:1, 6:1, or 10:1 Attack time: 0.5 ms, 10 ms, or 100 ms Release time: 0.1 s, 1.0 s, or 2.0 s
Frequency response	20 Hz to 40 kHz +0.5/-3.0 dB (at 96 kHz sampling frequency) 20 Hz to 20 kHz +0.5/-1.0 dB (at 48 kHz sampling frequency)
Total harmonic distortion	0.05% or less
Equivalent input noise	-130 dBu, 150 Ω terminated, IHF-A (mic input, typical)
Crosstalk	-90 dB (1kHz) or less
Delay time	1 ms or less at 96 kHz sampling frequency, including A/D D/A conversions 2 ms or less at 48 kHz sampling frequency, including A/D D/A conversions
Level meter calibration	VU, BBC-type DIN-type, NORDIC-type, IEC-type1, dBFS (selectable)
Headphone output	1/4-inch TRS jack (x 1) and 3.5-mm dia. TRS jack (x 1), 300 mW, 32 Ω load or more
Operating voltage	
Internal	DC 12 V (eight AA-size (LR6) alkaline batteries)
External	DC 10 to 15 V via XLR 4-pin connector and DC jack
Battery life (with Sony AA-size alkaline batteries (LR6SG) at 25 °C)	Approximately 5 hours (when the sampling frequency is 48 kHz and the LCD backlight and +48 V microphone power are not used.)
Power supply (to wireless microphone)	DC 10 to 15 V via 4-pin Hirose connector, female
Operating temperature	0 to +45 °C (+32 to +113 °F)
Storage temperature	-20 to +60 °C (-4 to +140 °F)
Dimensions (W x H x D)	266 x 68 x 206 mm (10 1/2 x 2 3/4 x 8 1/8 inches)
Mass	Approx. 2.2 kg (4 lb 13 oz)
Supplied accessories	Spare battery-compartment (x 1), 12-pin male connector (x 1), Meter scale sheets (x 1 set), Cascading belt (x 1), Operating instructions (x 1), Rubber foot (x 1 set)

	SRP-X500P
Electrical characteristics	
Composite video	
Colour system	NTSC/PAL/SECAM
Frequency response	50 Hz to 10 MHz
Level	1.0 Vp-p (75 Ω)
Component video	
Colour system	NTSC/PAL
Frequency response	50 Hz to 150 MHz
Level	Y: 1.0 Vp-p (75 Ω), R-Y/B-Y: 0.7 Vp-p (75 Ω)
RGB	
Frequency response	50 Hz to 150 MHz
Resolution	SXGA: 1280 x 1024 pixels, 60 Hz, supporting 480p/1080i
Level	R/G/B: 0.7 Vp-p (75 Ω), Sync/HD, VD: 1 to 5 Vp-p (47 kΩ) sync positive/negative
Audio (analogue)	
Frequency response (Line input to line output)	20 Hz to 20 kHz ±0.5 dB (1 kHz reference)
T.H.D. (Line input to line output)	Less than 0.01% (1 kHz)
Signal-to-noise ratio (Line input to line output)	More than 94 dB (IHF A)
Crosstalk (Line input to line output)	Less than -80 dB (1 kHz)
Others	
Antenna in (a/b)	BNC x2, DC +9 V out
Microphone power supply	DC +48 V, MIC 1 to 4 inputs
General	
Power requirements	AC 120 V, 60 Hz (for the U.S.A and Canada) AC 220 V, 50/60 Hz (for China) AC 230 V, 50/60 Hz (for other countries)
Power consumption	120 W
Operating temperature	0 to +40 °C (+32 to +104 °F)
Storage temperature	-20 to +60 °C (-4 to +140 °F)
Dimensions (W x H x D)	482 x 132 x 357 mm (19 x 5 1/4 x 14 inches)
Mass	Approx. 12 kg (26 lb 3 oz)
Supplied accessories	AC power cord (x1), Operation manual (x1), Foot (x4), SRP-X500P Manager Software CD-ROM (x1), Antenna (x2)

	SRP-X700P
Electrical characteristics	
Composite Video/S-video	
Colour system	NTSC/PAL/SECAM
Frequency response	50 Hz - 10 MHz
Level	1 Vp-p (75 Ω)
Component video	
Colour system	NTSC/PAL/SECAM
Frequency response	50 Hz - 150 MHz
Level	Y 1 Vp-p (75 Ω) R-Y 0.7 Vp-p (75 Ω) B-Y 0.7 Vp-p (75 Ω)
RGB	
Frequency response	50 Hz - 150 MHz
Resolution	1280 x 1024 pixels 60 Hz (SXGA)
Level	R 0.7 Vp-p (75 Ω) G 0.7 Vp-p (75 Ω) B 0.7 Vp-p (75 Ω) SYNC/HD, VD 1-5 V (47 kΩ) sync positive/negative
Audio (analogue)	
Frequency response (Line input to line output)	20 Hz - 20 kHz
T.H.D. (Line input to line output)	Less than 0.01 % (1 kHz)
Signal-to-noise ratio (Line input to line output)	More than 94 dB (IHF A)
Crosstalk (Line input to line output)	Less than -85 dB (1 kHz)
Others	
Antenna in (a/b)	BNC x 2, DC 9 V OUT
Microphone power supply	DC 48 V, MIC1-6 Inputs
General	
Power requirements	120/220/230 V AC 50/60 Hz
Power consumption	150 W
Operating temperature	0°C to +40°C (+32°F to +104°F)
Storage temperature	-20°C to +60°C (-4°F to +140°F)
Dimensions (W x H x D)	482 x 132 x 350 mm, 3U (19 x 5 1/4 x 13 7/8 inches)
Mass	Approx. 13 kg (28 lb 11 oz)
Supplied accessories	AC Power cord (x1), Operating manual (x1), IR Transmitter (x1), Foot (x4), Control software disk* (x1)
Optional Accessories	WRU-806B UHF Synthesised Tuner Unit, UWP-X7/X8 Wireless Microphone Packages and AN-820A UHF Active Antenna

* Requires Microsoft® Windows® 98SE/ME/2000/XP

Specifications

	SRP-X100
Electrical characteristics	
Frequency response	5 Hz to 100 kHz, +0.5/-2.0 dB 20 Hz to 20 kHz, +0.5/-1.0 dB
Total harmonic distortion	Less than 0.01 %, MONO IN to MASTER OUT 1 kHz, -44 dBu input Less than 0.005 %, MONO IN to MASTER OUT 1 kHz, -44 dBu input Less than 0.005 %, STEREO IN to MASTER OUT 1 kHz, -10 dBu input
Different input noise	Less than -126 dBu, IHF-A, 150 Ω terminated
Residual noise	Less than -83 dBu, Master Vol 0 position
Crosstalk	Less than -70 dB, 1 kHz, between L-R outputs Less than -80 dB, 1 kHz, between channel More than 90 dB, Channel Vol attenuation
General	
Signal Indicator	Green LED indicator illuminates at -20 dB of reference level
Operating temperature	0 to +40 °C (+32 to +104 °F)
Storage temperature	-20 to +60 °C (-4 to +140 °F)
Power requirements	AC 120/230 V switchable, 50/60 Hz (CED/UC2)
Power consumption	19 W
Dimensions	482 (W) x 44 (H) x 175 (D) mm (19 x 1 3/4 x 7 inches)
Mass	2.6 kg (5 lb 12 oz)
Supplied accessories	CED: Power cord (x 2, one each for 120 V and 230 V), Operating instructions (x 1)
0 dBu = 0.775 Vrms	

/04

Portable Digital Recorders

Sony's family of portable audio recorders combine rugged construction with cool design. Free of drive mechanisms, with built-in microphones and 96Hz/24-bit recording quality, they offer hours of professional quality recording for songwriters, musicians and journalists.

PCM-D1
Portable Linear PCM Recorder

The PCM-D1 Portable Linear PCM Recorder takes mobile recording beyond the boundaries of typical field recording, making it the ideal choice for capturing live musical or theatrical performances, for recording sound effects, or for journalists in the field.

With built-in, highly sensitive, electret condenser microphones, a circuit design that processes stereo sound with virtually no extraneous noise and 96kHz 24-bit recording quality, this recorder is capable of capturing even the most subtle performance nuances. Convenient features such as a 4GB internal Flash Memory, a slot for Memory Stick PRO™ (High-Speed) storage media, a USB port, four AA-size nickel metal hydride rechargeable batteries and a battery charger make this unit super-equipped for field recording. Free of drive mechanisms, this lightweight, portable and rugged recorder is audio refined – and cool redefined.

Highlights

> 96kHz/24-bit, virtually noise-free, recording quality
> Built-in, X-Y configuration electret condenser microphones for superb stereo sound
> 4GB internal Flash Memory, free of drive mechanisms
> Slot for removable Memory Stick PRO (High-Speed) storage

> Built-in USB 2.0 port, compatible with Macintosh® and Windows®/PC operating systems
> Four rechargeable nickel metal hydride AA batteries (battery charger included)
> Rugged titanium body with portable, lightweight design

Memory Stick Recording

Sample Rate and Quantisation	256MB MS Pro (HS)	512MB MS Pro (HS)	1GB MS Pro (HS)	2GB MS Pro (HS)	4GB MS Pro (HS)	4GB Int. Flash Memory
22.05kHz, 16-bit	45 min	1 hr 30 min	3 hr 5 min	6 hr 25 min	12 hr 45 min	13 hr 10 min
44.1kHz, 16-bit	20 min	45 min	1 hr 30 min	3 hr 10 min	6 hr 20 min	6 hr 20 min
44.1kHz, 24-bit	15 min	30 min	1 hr	2 hr 5 min	4 hr 15 min	4 hr 15 min
48kHz, 16-bit	20 min	40 min	1 hr 25 min	2 hr 55 min	5 hr 50 min	6 hr
48kHz, 24-bit	10 min	25 min	55 min	1 hr 55 min	3 hr 50 min	4 hr
96kHz, 16-bit	10 min	20 min	40 min	1 hr 25 min	2 hr 55 min	3 hr
96kHz, 24-bit	5 min	10 min	25 min	55 min	1 hr 55 min	2 hr

*Times noted are approximate.

Features and Benefits

Built-in Electret Condenser Microphones

The PCM-D1's electret condenser microphones have extraordinarily high-sensitivity and low-noise characteristics. All microphone casing parts fit together nearly seamlessly and are adjusted with 100-micron level precision. With a frequency response of nearly 30kHz, the microphones are positioned using an X-Y pattern and then angled toward each other with the left and right diaphragms close together, covering a wide sound range with reduced phase shifts. The result is rich audio with a natural sounding stereo image, good depth and perspective.

Superb Audio Signal Path

The microphone amplifier provided for each channel is the Analogue Devices, Inc. AD797, which boasts ultra-low-noise and distortion. A variable gain circuit is adopted for amplitude control, which enhances the actual signal-to-noise ratio. The line amplifier provided for each channel is the Analogue Devices AD8672. Analogue and digital circuits are mounted on separate circuit boards and also separately powered to help prevent interference between circuit blocks. The analogue circuit achieves superb linearity so that the recorded sound is output faithfully.

Outstanding Construction Quality

The circuitry of the PCM-D1 recorder is protected by a body made of 1 mm thick, pure titanium and covered with nitrate titanium, scratch-resistant coating – resulting in a finished titanium surface approximately ten times as hard as that of alumite-treated aluminum. In addition, a distinctive arch-shaped polished stainless steel frame is provided to protect the microphones from impact damage. This rugged exterior protects the PCM-D1's circuits and microphones and enhances the high sonic quality of the recorder.

Simple Uploading to Computer

The PCM-D1 recorder conforms to the USB 2.0 Mass Storage Device standard. Because the recorder's native recording file format is .WAV, recordings can be rapidly uploaded to a computer and used in conjunction with most common audio production software.

High-quality Signal Processing

The PCM-D1 recorder offers comprehensive signal processing features for location recording including a unique limiter function, a 200Hz high pass filter and SBM (Super Bit Mapping) noise shaping. The digital limiter uses an independent audio buffer that contains audio 20dB lower then the audio processed in the normal recording signal path. With the PCM-D1 limiter enabled, when a loud sound suddenly occurs during recording, the over level part of the sound is automatically set within the range of the maximum input level (from the alternative -20dB buffer) in order to help prevent distortion.

While this limiter function won't compensate for clipping of audio that is suddenly in excess of 20dB, the sonic purity of the recording is fully maintained without the need to apply conventional limiter signal processing techniques. With the High Pass Filter enabled, audio below 200Hz is filtered out and not recorded. This function can be used to reduce noise caused by external sources such as wind, the flow of air-conditioning equipment, etc. With the SBM function enabled (optionally used for 16-bit recording modes), Super Bit Mapping significantly increases the dynamic range acoustically by reducing noise that is particularly easy to hear within the human audible band.

To improve the audio quality when converting 20-bit data into 16-bit, the top bits of information within the lower data (usually discarded when recording in 16-bit mode) are integrated into the 16-bit data track by shifting audible noise up into an inaudible higher frequency range.

PCM-D50

Portable Linear PCM Recorder

The latest addition to Sony's family of portable audio recorders, the PCM-D50 recorder adopts many of its features and style from the highly acclaimed PCM-D1 model, including rugged construction and cool design. It's the ideal choice for making live musical, wild tracks and field recordings.

The PCM-D50 is a 96kHz/24-bit recorder fitted with two-position (X-Y or Wide) stereo microphones, 4GB of internal flash memory and a Memory Stick Pro-HG Duo™ Slot for additional storage. Operating on four AA alkaline batteries, it provides 14 hours of record operation at 44.1kHz 16-bit recording. Unique features such as a two-position stereo microphone, a pre-record buffer that records five seconds of audio before hitting the record button, digital pitch control and A/B segment/repeat offer great portable possibilities for songwriters, musicians and journalists.

To complement the PCM-D50 recorder, new optional accessories include a remote control, tripod stand and microphone windscreen.

Features

Superb Recording Quality

The PCM-D50 is a 96kHz/24-bit linear recorder that records in standard .WAV file format and surpasses standard DAT sound quality. A low signal-to-noise ratio provides virtually noise-free recording quality.

Expandable Memory

With a 4GB built-in memory, the PCM-D50 records up to six hours when recording in 44.1kHz 16-bit CD quality mode. The Memory Stick Pro-HG Duo Slot provides up to 4GB memory expandability.

Built-in Microphones

The PCM-D50 recorder comes equipped with a high-sensitivity, built-in, two-position electret condenser stereo microphone with flexible rotation for either X-Y or Wide stereo positions.

Versatile Recording Functions

The Dual Digital Limiter feature helps prevent distortion, a pre-record buffer records five seconds of audio before hitting the record button and Super Bit Mapping technology helps achieve wide, dynamic range.

Playback Functions

The PCM-D50 recorder provides MP3 playback, a special Digital Pitch Control feature that slows down playback without changing pitch and an A/B segment/repeat feature that allows you to mark and repeat segments.

PC/Macintosh Compatible

The PCM-D50 utilises a simple drag and drop file transfer via a high-speed USB connection.

Rugged Construction

Constructed of lightweight metal (aluminium), the PCM-D50 recorder is built to withstand the demands of professional applications.

XLR-1

Mic Adaptor Option for PCM-D1 and
PCM-D50 Recorders

The XLR-1 is ideal for portable recording applications with professional microphones requiring 48 V phantom power and XLR connections. The XLR-1 adapter has two balanced XLR inputs and switchable 48 V phantom power. It can be mounted onto the bottom of the PCM-D1 or PCM-D50 or on-the-side (using supplied mounting hardware).

Highlights

> The optional XLR-1 adapter has two balanced XLR inputs and switchable 48 V phantom power

Features

> Incorporates high-quality microphone balancing transformers
> Internal battery holder with four AA batteries
> Flexible mounting onto PCM-D1 and PCM-D50 recorders

Benefits

> The XLR-1 audio signal path is passive to ensure high sound quality
> Provides 48 V phantom powering for use with professional condenser microphones
> Supplied mounting accessories allow secure mounting

Optional Accessories

RMPCM1
Remote Commander® Unit
(for PCM-D1 and PCM-D50)

VCTPCM1
Tripod Stand
(for PCM-D1 and PCM-D50)

ADPCM1
Windscreen
(for PCM-D1 and PCM-D50)

Specifications

	PCM-D1
Built-in microphones	Electret condenser microphones mounted in X-Y configuration High-sensitivity (-32.0 dB /Pa. 1kHz); Maximum input level 130 dB SPL; Self noise level 20 dBSPL(A)
Recording media	Built-in flash memory 4GB, Memory Stick PRO (High-Speed) media (not supplied), Stereo Recording
Sampling rates	22.05 kHz, 44.1 kHz, 48kHz and 96kHz
Quantisation	16-bit linear, 24-bit linear
Frequency response (Line input to line output)	For Fs = 22.05 kHz: Frequency Response = 20Hz to 10 kHz; For Fs = 44.1 kHz: Frequency Response = 20Hz to 20 kHz; For Fs = 48 kHz: Frequency Response = 20Hz to 22 kHz; For Fs = 96 kHz: Frequency Response = 20 to 44 kHz
Signal-to-noise ratio (Line input to line output)	96dB or greater (1 kHz IHF-A) when set to 24-bit
Total harmonic distortion (Line input to line output)	0.008% or below (1 kHz, 22kHz LPF)
Wow and flutter	Below measurable limit (less than ±0.001% W.Peak)
Mic input (stereo mini-jack)	Input impedance: 22 kΩ, Rated input level: 2.5 mV; Minimum input level: 0.7 mV
Headphone output (stereo mini-jack)	Rated output level: 400 mV; Maximum output level: 30 mW + 30 mW or more; Load impedance: 16 Ωs
Line Input (stereo mini-jack)	Input impedance: 47 kΩs; Rated input level: 2.0V; Minimum input level: 570 mV
Line Out/Optical Digital Output (Combination stereo mini optical output jack)	For Line Output Use = Output impedance: 220 Ωs; Rated output level: 1.8V; Load impedance: 22 kΩ. For Optical Digital Output Use = Output level: -21 dBm to -15 dBm; Emission wavelength: 630 nm to 690 nm
USB connection	Hi-speed USB, Mass Storage Class; System requirements: Mac OS X Version 10.2.8 or later; Windows®/PC OS Windows XP Media Center Edition 2005 and 2004, Windows XP Professional, Windows XP Home Edition, Windows 2000 Professional (SP3 or later)
Memory Stick slot	Memory Stick PRO (High-Speed) media; NOTE: Standard Memory Stick media not supported
Power requirements	DC IN 6V (AC 120V, 60 Hz); Four AA-size nickel metal hydride rechargeable batteries NH-AA (supplied); or Four AA-size alkaline batteries (not supplied)
Power consumption	2.1W
Dimensions (W x H x D)	7.3 x 19.4 x 3.3 cm (2 7/8″ x 7 5/8″ x 1 5/16″) not including projecting parts and controls
Weight	576 g (18.52 oz) including batteries
Approximate battery life	Battery Type 96 kHz/24-bit 44.1 kHz/16-bit Nickel Metal Hydride 4.0 hrs 5.0 hrs Alkaline 2.0 hrs 2.0 hrs

	PCM-D50
Built-in microphones	Electret condenser microphones offering X-Y or Wide stereo positions. High-sensitivity (-35.0 dB /Pa. 1 kHz) (Typical) Maximum input level 120 dB SPL Noise level 20.0 dB SPL(A) (Typical)
Recording media	Built-in 4GB flash memory, Memory Stick Pro-HG Duo™ (optional), Memory Stick Pro Duo (High-Speed) (optional), Stereo Recording
Sampling rates	22.05 kHz, 44.1kHz, 48 kHz and 96 kHz
Quantisation	16-bit linear, 24-bit linear
Recording format	.WAV
Playback format	.WAV / MP3
Maximum record time using internal 4GB flash memory	22 kHz 16-bit Recording Mode: 12 hours and 55 minutes; 44.1 kHz 16-bit Recording Mode: 6 hours and 25 minutes; 44.1 kHz 24-bit Recording Mode: 4 hours and 15 minutes; 48kHz 16-bit Recording Mode: 5 hours and 55 minutes; 48kHz 24-bit Recording Mode: 3 hours and 55 minutes; 96 kHz 16-bit Recording Mode: 2 hours and 55 minutes; 96 kHz 24-bit Recording Mode: 1 hour and 55 minutes
Frequency response (Line input to line output)	For Fs = 22.05 kHz: Frequency Response = 20Hz to 10 kHz (0 to -2dB) For Fs = 44.1 kHz: Frequency Response = 20Hz to 20 kHz (0 to -2dB) For Fs = 48 kHz: Frequency Response = 20Hz to 22 kHz (0 to -2dB) For Fs = 96 kHz: Frequency Response = 20Hz to 40 kHz (0 to -2dB)
Signal-to-noise ratio (Line input to line output)	93dB or greater (1 kHz IHF-A) when set to 24-bit
Total harmonic distortion (Line input to line output)	0.01% or below (1 kHz, 22 kHz LPF)
Wow and flutter	Below measurable limit (less than ±0.001%W.Peak)
Microphone input (stereo mini-jack)	Input impedance: 22 kΩ, Rated input level: 2.5 mV; Minimum input level: 0.7 mV. Supports external mic plug-in power
Headphone output (stereo mini-jack)	Rated output level: 400 mV; Maximum output level: 25 mW + 25 mW or more; Load impedance: 16 Ωs
Line input (opt)	Analogue input: Input impedance: 40 kΩs; Rated input level: 2.0V; Minimum input level: 450 mV. Optical digital input: Input level -24.5dBm to -14.5dBm. Absorption wavelength: 630nm to 690nm
Line output (opt)	Analogue output: Output impedance: 220 Ωs, Rated output level: 1.7V load impedance: 22 kΩs. Optical digital output: Output level -21 dBm to -15 dBm. Emission wavelength: 630nm to 680nm
USB connection	High-speed USB, mass storage class
Memory Stick® slot	Memory Stick Pro-HG Duo™media, NOTE: Standard Memory Stick® media, not supported
Power requirements	DC in 6V. Four AA-size Alkaline batteries (supplied) or four AA NiMH Rechargable batteries (optional)
Power consumption	0.75W
Battery life	Approximately 14 Hours @44.1/16 recording or 12 Hours @ 96/24 recording
Dimensions (W x H x D)	Approximately 73 mm x 156 mm x 33 mm not including projecting parts and controls
Weight	Approximately 365.14 g (including batteries)
Supplied accessories	Sound Forge® Audio Studio LE Software CDROM, USB Cable, 4x Alkaline Batteries (AA-size), Operating Instructions

	XLR-1
Frequency range	20 to 50,000Hz (+0, -2dB)
Input connectors	XLR-31-11C type connector (3-pin) x 2
Input impedance	600 Ωs
Quantisation	16-bit linear, 24-bit linear
Rated input level	-50dBm
Maximum input level	+4dBm
Output connector	Stereo mini-jack
Output load impedance	600 Ωs
Phantom power supply	DC 48V ± 0.5V; 10 mA maximum
Battery requirements	Four AA alkaline batteries (supplied) or four AA NiMH Rechargable batteries (optional)
Battery life	Approximately 40 hours (when using 2 mA + 2 mA microphones and alkaline AA batteries)
Dimensions (W x H x D)	Approximately 71 mm x 38 mm x 132 mm not including projecting parts and controls
Weight	Approximately 524.48 g (for XLR-1 main unit, including 4 AA batteries); Approximately 184.28 g (for base plate and spacer plate)

/05

Headphones

Sony's range of professional headphones are engineered for a combination of strength, comfort and practicality and are used daily in broadcast and recording studios worldwide. Designed to accurately monitor the wide dynamic range and extended frequencies delivered by modern digital audio equipment, the MDR-7500 Series is precision manufactured using the highest grade materials.

MDR-7509HD
Professional Headphone

Designed for critical listening applications, the MDR-7509HD headphone features newly developed HD Driver units that deliver ultra-wide dynamic range and incredible power handling capabilities. With 3,000 mW power handling capacity and 80kHz ultra-high-frequency reproduction, the MDR-7509HD model precisely reproduces every nuance recorded using the latest generation of high-quality audio formats such as DSD or high sampling linear PCM. The 50 mm HD Driver units utilise 360kJ/m3 high power neodymium magnets to reproduce clear mid-range. Equally important to sound quality is wearing comfort. The MDR-7509HD headphone features an Auranomic circum aural design – where the driver units have been designed in accordance with the angle of the ear, thereby helping to eliminate pressure on the ear and to reproduce a natural, wide soundscape.

MDR-7506
Professional Headphone

The MDR-7506 is an extremely high-quality, unobtrusive reference headphone. This lightweight model has been engineered to be comfortable to wear for extended periods, making it ideal for use in broadcast and studio environments. A 40 mm PET diaphragm and neodymium magnet provide performance exceeding the requirements of digital sources such as CD, MD and DAT.

MDR-7505

Professional Headphone

Thanks to an acoustic design that positions the sound field very close to the ears, the MDR-7505 headphone makes detailed listening possible, even in noisy environments. An Auto-Swivel earpiece enables single-sided monitoring. The 40 mm PET driver & neodymium magnet provide excellent sound quality and extended frequency response. An adjustable, padded headband offers durability and comfort. Oxygen-free copper cable is used to preserve signal quality.

MDR-7502

Professional Headphone

The MDR-7502 is a cost-effective, general purpose headphone. The lightweight, closed design of this model allows long-term use without listening fatigue. The neodymium magnet (used in all Sony professional headphones) is virtually five times more powerful than standard ferrite magnets, delivering dynamic sound, high-sensitivity and deep bass response.

Specifications

	MDR-7509HD	MDR-7506	MDR-7505	MDR-7502
OFC Litz Cable	•	•	•	•
1 x 3m Coiled Cable	•	•	•	•
Gold-plated Unimatch Plug	•	•	•	•
Folding Design	•	•	•	—
Auto Swivel Housing	•	—	•	—
Carry Case	•	•	•	—
Amorphous Diamond Diaphragm	•	—	—	—
PET Diaphragm	—	•	•	•
Neodymium Magnet	•	•	•	•
Power (mW)	3000	1000	1000	500
Impedance (Ω)	24	63	40	24
Sensitivity (dB/mW)	107	106	106	102
Frequency Response (Hz)	5 – 80,000	10 – 20,000	10 – 25,000	60 – 18,000
Driver Diameter (mm)	50	40	40	30
Weight (g) (excluding cable)	300	230	220	150

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