

**SONY®**



**ECM-680S**

**ECM-678**

**ECM-674**

**ECM-673**

**Sony Shotgun Microphones**

# When You Need Superior Quality and Excellent Versatility in the Most Demanding Sound Gathering Applications

Since Sony introduced the ECM-678 Electret Condenser Shotgun Microphone in 2003, the shotgun microphone family having already been well-accepted for field production and broadcast studio applications.

Sony's expertise and knowledge, accumulated over decades as a world-leading supplier of broadcast equipment, are consolidated in these compact, lightweight microphones. Despite their slim body, Sony's shotgun microphones offer excellent sensitivity, low inherent noise, flat-and-wide frequency response, superb sound quality, and extreme durability.

The ECM-680S is the flagship model of Sony's shotgun microphones, and offers both a super-cardioid directional monaural mode and a stereo mode, with natural and spatial sound. The ECM-678 is another high-quality shotgun-type model offering super-cardioid directional monaural sound with high sensitivity and low inherent noise. The ECM-674 is a general-purpose shotgun microphone; its two-way powering capability allows it to be driven by microphone power or batteries. The ECM-673 is also a super-cardioid directional shotgun microphone with a compact body, well suited to small camcorders.

All four of these microphones are optimally designed for use with Sony's professional camcorders, which are globally playing active roles in video acquisition with their excellent video quality. As well as operating with camcorders, Sony's shotgun microphones are also suitable in other sound-gathering configurations; they can be used, for example, as boom microphones.

The versatile shotgun microphone family from Sony provides the ideal choice for virtually all quality-conscious sound gathering applications requiring extremely smooth and natural sound reproduction.

## HDCAM

### XDCAM HD

Professional Disc System



PDW-700



HDW-650



HVR-V1



PMW-EX3



HVR-Z7

## HDV



HVR-S270

### XDCAM EX



PMW-EX1

Stereo / Monaural switchable, with high sensitivity and excellent sound quality

## ECM-680S



The ECM-680S attached to a Sony PDW-700 XDCAM™ HD422 camcorder.

### Stereo and Monaural Switchable

The ECM-680S can operate in either stereo or monaural (super-cardioid 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\*. 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. Monaural mode provides super-cardioid directional sound pickup, while stereo mode delivers natural and spatial sound. The MS microphone signal of the ECM-680S is internally decoded and it provides L and R (stereo) outputs.

\* The modes can be switched from the Sony Professional Camcorders with XLR-5pin interface for front microphone.

### Excellent Sound Quality

The ECM-680S uses the Mid-Side (MS) technique that offers natural stereo sound and excellent localization. Equipped with newly developed large diaphragm microphone capsules with bidirectional characteristics, the ECM-680S delivers a superb sensitivity of -28 dB\* (stereo)/-32 dB\* (monaural), and extremely low inherent noise of less than 21 dB SPL (stereo)/20 dB SPL (monaural).

\*0 dB=1 V/Pa

### Flat-and-Wide Frequency Response

The ECM-680S microphone has a flat-and wide frequency response (50 Hz to 20 kHz (stereo)/40Hz to 20 kHz (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

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 105 g (3.7 oz), maintaining good balance and mobility when mounted on a range of Sony professional camcorder.

**Super-cardioid directional Shotgun with High Sensitivity and Low Inherent Noise**

## ECM-678



The ECM-678 attached to a Sony PDW-530 XDCAM camcorder.

### Excellent Sound Quality

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The ECM-678 is equipped with a newly developed microphone capsule, which delivers a superb sensitivity of -28 dB (0 dB=1 V/Pa.) and an extremely low inherent noise of less than 16 dB SPL. This provides the clearest pick-up of even the faintest sounds at long distances. Its super-cardioid directional response allows clear voice pick-up even in the most demanding of environments. With its high performance and durability, the ECM-678 microphone is the perfect choice for quality-critical sound-acquisition applications as well as shooting with Sony professional camcorders such as the HDCAM™ Series, XDCAM Series, and HDV™ Series.

### Compact and Lightweight Design

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

### Flat-and-Wide Frequency Response

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

### Built-in Low Cut Filter

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

### High Durability and Reliability

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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.

Compact, Lightweight and Affordable, Suitable for Compact Camcorder

# ECM-674 ECM-673



The ECM-673 attached to a Sony PMW-EX3 XDCAM EX™ camcorder.

## Compact and Lightweight Design

The ECM-674/673 has been designed as a super-cardioid directional compact and lightweight shotgun microphone. ECM-674 measures only 268 mm (10 5/8 inches) in length and weighs just 185 g (6.5 oz), and ECM-673 measures only 200 mm (7 7/8 inches) in length and weighs just 135 g (4.76 oz). Both are maintaining good balance even when mounted on compact camcorders such as the HDV series, DVCAM™ series and XDCAM EX series.

## 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.

## High Durability and Reliability

The vibration-resistant mechanism of the ECM-674/673 offers high durability and reliability, making it suitable for the harsh environments that can be encountered in field

## Excellent Sound Quality

The ECM-674/673 offers an excellent sensitivity of -36 dB (0 dB=1 V/Pa.) and low inherent-noise level of less than 17 dB SPL. This allows the microphone to be used for clear voice pick-up even in noisy environments.

## Flat-and-wide Frequency Response

The ECM-674/673 microphone has a flat-and- wide frequency response (40 Hz to 20 kHz) and provides sound reproduction that is extremely smooth and natural.

## Two-way Powering (ECM-674 only)

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 Battery Liquid Leakage Protection Circuit (ECM-674 only)

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.

# RECOMMENDED SHOTGUN MICROPHONE FOR CAMCORDERS

- Highly recommended
- Recommended
- Not recommended

			ECM-680S	ECM-678	ECM-674	ECM-673
			Stereo/Mono	Mono	Mono	Mono
						
HD	<b>HDCAM</b>					
	HDW-F900R HDW-750/750P		●	○*2	○	○
	HDW-730S		○*1*3	●	○	○
	HDW-650/650F/650P		●	○*2	○	○
	<b>XDCAM HD 422</b>					
	PDW-700		●	○*2	○*2	○*2
	<b>XDCAM HD</b>					
	PDW-F355/F335		●	○*2	○*2	○*2
	<b>XDCAM EX</b>					
	PMW-EX3/EX1		○*1	○	○	●
	<b>HDV</b>					
	HVR-S270		○*1	●	○	○
	HVR-Z7		○*1	●	○	○
	HVR-Z5		○*1	●	○	○
	HVR-V1		○*1	○	—*4	●
	HVR-A1		○*1	○	—*4	●
SD	<b>Digital Betacam™</b>					
	DVW-970/970P		○*1*3	●	○	○
	<b>XDCAM SD</b>					
	PDW-530/530P PDW-510/510P		○*1*3	●	○	○
	<b>MPEG IMX™</b>					
	MSW-970/970P		○*1*3	●	○	○
	<b>DVCAM</b>					
	DSR-400/400P DSR-450WS/450WSP		—*5	—*5	○	●

\*1 with K-1504, XLR-5P - XLR-3P (2) cable

\*2 with K-1502, XLR-3P - XLR-5P cable

\*3 Connect to rear panel

\*4 Since the ECM-674 is relatively long compared to compact camcorders such as the HVR-A1 or the HVR-V1, the microphone might encroach on the camera's field of view.

\*5 Due to the high sensitivity of the microphone and headroom of the recorder, sound recordings may become distorted when excessive audio is input.

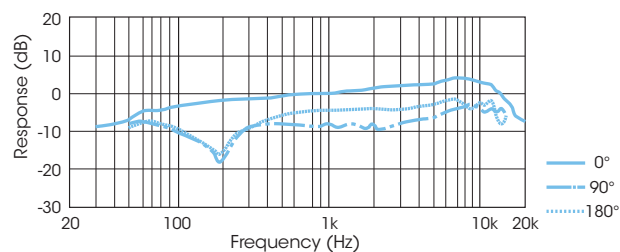
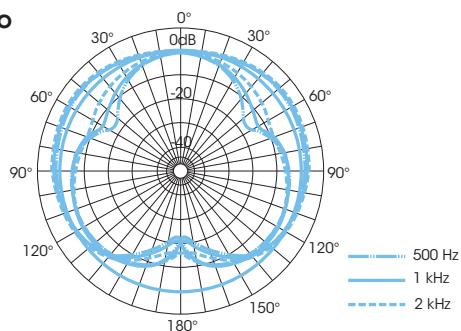


# SPECIFICATIONS

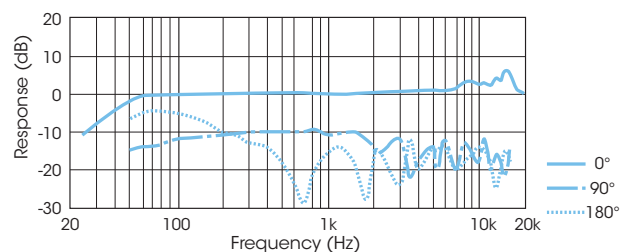
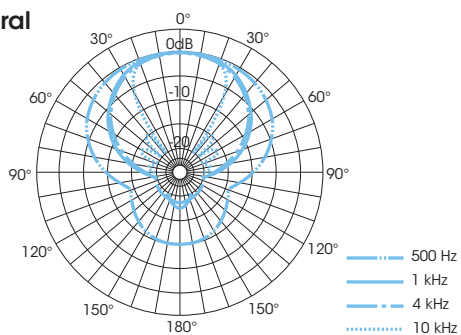
	ECM-680S		ECM-678	ECM-674	ECM-673
Mode	Stereo	Monaural	–	–	–
Capsule type	Electret condenser		Electret condenser	Electret condenser	Electret condenser
Stereo type	MS (Mid-Side) stereo microphone		–	–	–
Directivity	Uni-directional	Super-cardioid	Super-cardioid	Super-cardioid	Super-cardioid
Frequency response	50 Hz to 20 kHz	40 Hz to 20 kHz	40 Hz to 20 kHz	40 Hz to 20 kHz	40 Hz to 20 kHz
Sensitivity (at 1 kHz)	-28 dB*1 ±3 dB	-32 dB*1 ±3 dB	-28 dB*1 ±3 dB	-36 dB*1 ±3 dB	-36 dB*1 ±3 dB
Output impedance (at 1 kHz)	100 Ω ±20%		200 Ω ±20%	220 Ω ±20%	220 Ω ±20%
Dynamic range	103 dB or more	104 dB or more	111 dB or more	Phantom: 107 dB or more, Battery: 98 dB or more	107 dB or more
Signal-to-noise ratio (IEC179 A-weighted, 1 kHz, 1 Pa)	73 dB or more	74 dB or more	78 dB or more	77 dB or more	77 dB or more
Inherent noise	21 dB SPL*2 or less	20 dB SPL*2 or less	16 dB SPL*2 or less	17 dB SPL*2 or less	17 dB SPL*2 or less
Wind noise	55 dB SPL*2 or less (with windscreen) 60 dB SPL*2 (without windscreen)	60 dB SPL*2 or less (without windscreen)		45 dB SPL*2 or less (with windscreen), 50 dB SPL*2 (without windscreen)	45 dB SPL*2 or less (with windscreen), 50 dB SPL*2 (without windscreen)
Induction noise from external magnetic field	0 dB SPL*2 or less		0 dB SPL*2 or less	0 dB SPL*2 or less	0 dB SPL*2 or less
Maximum input sound pressure level	124 dB SPL*2		127 dB SPL*2	Phantom: 124 dB SPL*2, Battery: 115 dB SPL*2	124 dB SPL*2
Power requirements	DC 40 to 52 V		DC 40 to 52 V	External: DC 40 to 52 V, Battery: 1.5 V	DC 40 to 52 V
Dimensions	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	Approx. 105 g (3.7 oz)		200 g (7 oz)	Approx. 185 g (6.5 oz) without battery Approx. 208 g (7.3 oz) with battery	Approx. 135 g (4.8 oz)
Supplied Accessories	Windscreen (x1), Microphone holder (x1), Microphone spacer (x2), Microphone cable, XLR-5P - XLR-5P (x1), Stand Adaptor (x2), Carrying case (x1), Operating instructions (x1)		Windscreen (x1), Microphone holder (x1), Microphone spacer (x2), Microphone cable, XLR-3P - XLR-3P (x1), Stand Adaptor (x2), Carrying case (x1), Operating instructions (x1)	Windscreen (x1), Microphone holder (x1), Microphone spacer (x2), Microphone cable, XLR-3P - XLR-3P (x1), Stand Adaptor (x2), Operating instructions (x1)	Windscreen (x1), Microphone holder (x1), Microphone spacer (x2), Microphone cable, XLR-3P - XLR-3P (x1), Stand Adaptor (x2), Operating instructions (x1)

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

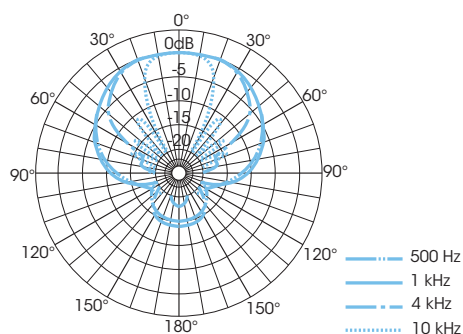
## ECM-680S Stereo



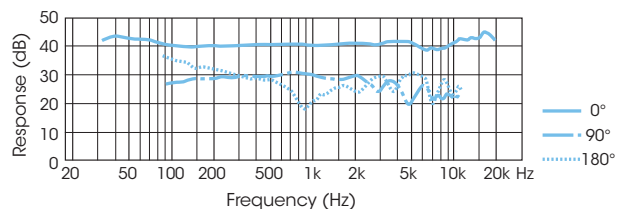
## ECM-680S Monoral



### ECM-678

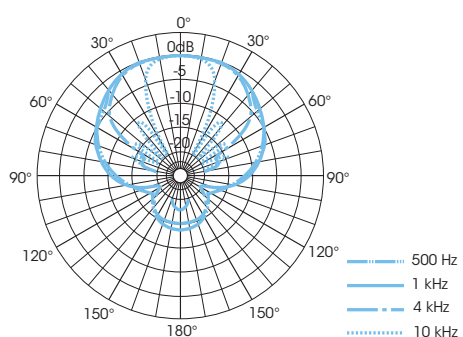


Directivity Characteristics

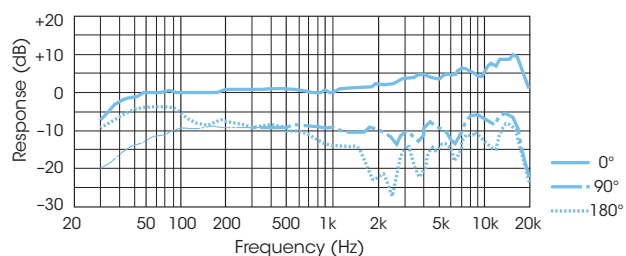


Frequency response Characteristics

### ECM-674

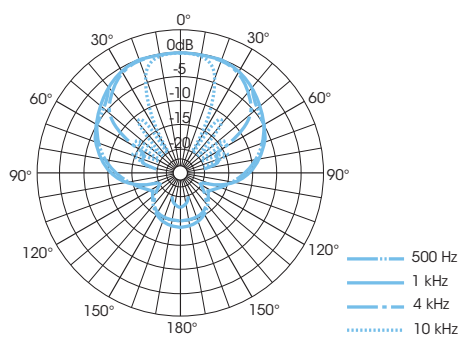


Directivity Characteristics

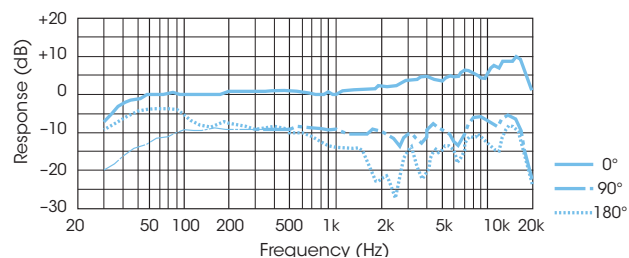


Frequency response Characteristics

### ECM-673



Directivity Characteristics



Frequency response Characteristics

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