ECM-88 Series

ECM-88FPT

ECM-77 Series

ECM-66 Series

ECM-55 Series

ECM-44 Series

ECM-166 Series

ECM-V1BMP

ECM-X7BMP

Actual size

Sony Lavalier Microphones

Sony is a leading provider of professional lavalier microphones.

The ECM-50, Sony's first lavalier microphone released in 1969, was an epoch-making product that achieved a perfect balance between compact size and excellent performance. The ECM-50 led to the development of the broadcast-standard ECM-30, a smaller and less expensive lavalier released a few years later.

More than four decades later, Sony is still a leader in the lavalier microphone market with nine models and 21 variations, including the ECM-55 which is the successor of the legendary ECM-50, and the ECM-44 which is the successor of the ECM-30.

Sony's ECM-88 is a series of ultra-miniature, omni-directional lavalier microphones, whose performance is highly acclaimed within broadcast, production, and theatrical circles. The ECM-77 is also very well regarded, especially by broadcasters. The ECM-66 is another top-of-the-line model with uni-directional directivity, which provides good isolation and resistance to feedback.

Sony is also a leading manufacturer of digital wireless microphone systems[1]. Recently, the ECM-66, ECM-55, and ECM-44 series have been qualified for use with digital wireless by enhancing the capsule shielding to reduce radio frequency interference susceptibility, as well as the ECM-77 series[2]. In addition to superb sound quality, digital systems offer a number of advantages such as stable transmission and a more flexible channel plan.

Lavalier microphones from Sony are an ideal choice for virtually all quality-conscious sound-gathering applications, including public address, ENG/EFP, studio, theater, and use with musical instruments.

[1] The digital wireless microphone system is not available in some countries.

[2] Digital wireless system requires use of the /9X version lavalier microphones.
The ECM-77, ECM-66, ECM-55, and ECM-44 series have already been switched to the /9X version.

VARIATION OF THE INTERFACE

B type [3]	BC type	BMP type
Supplied with an in-line battery unit, or 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.	Supplied with a Sony 4-pin connector (SMC9-4P), for use with the WRT-8B/822A/822B, UHF-synthesized transmitter, or DWT-B01 bodypack transmitter.	Supplied with a 3-pole locking mini plug for use with the bodypack transmitter included in the UWP series.

 B

 BC

 BMP

BPT type [4] [5]	FPT type	
Supplied without a connector (pigtail), enabling users to choose connectors according to their transmitter.	Beige-colored model supplied without a connector (pigtail), enabling users to choose connectors according to their transmitter.	

 BPT

 FPT

Note: /9X version shown (bottom microphone image in each box) includes a different color strain relief at the top of the connector.

Legend:

B	BC	BMP	BPT	FPT

Type of applicable interface.

/9X

Digital wireless model

[3] ECM-44B does not support external DC operation.

[4] There is no difference in appearance between the conventional BPT type and "/9X" BPT type.

[5] Radio-frequency interference from the digital wireless system may occur if the self-prepared connector has not been grounded sufficiently.

Product Description

ECM-88 series

B	BC	BMP	BPT	FPT

FEATURES

- Ultra-miniature, omni-directional electret condenser microphone.
- Designed for quality-critical applications in broadcasting, theater, and field productions.
- Choice of model variations to suit specific user requirements.
- Flat-and-wide frequency response provides natural sound reproduction.
- Water-resistant design maintains sound clarity in almost any application or environment.
- Dual-diaphragm mechanism contributes to high sensitivity, wide dynamic range, and low noise.
- Low cable-noise characteristics.
- Miniature design makes it easy to conceal in a stage costume.
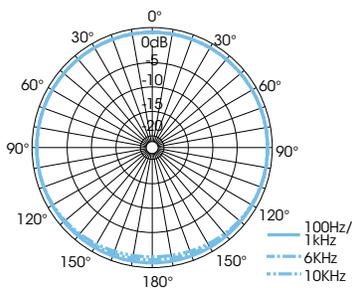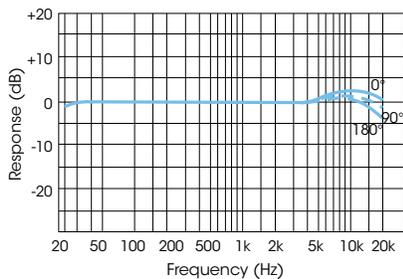
ECM-77 series /9X

B	BC	BMP	BPT	FPT

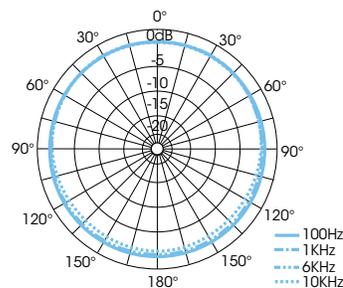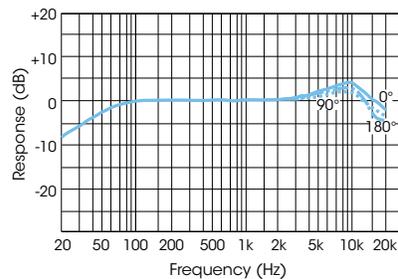### FEATURES

- Miniature, omni-directional electret condenser microphone.
- Performance and reliability in studio, ENG, and EFP applications.
- Choice of model variations to suit specific user requirements.
- Wide frequency response, high sensitivity, and low-noise characteristics.
- Miniature design makes it easy to conceal.
- Ideal for use with DWT-B01.

ECM-66 series /9X

B	BC	BMP	BPT	FPT

FEATURES

- Uni-directional, electret condenser microphone.
- Resistant to howling by rejecting indirect sound.
- Ideal for institutional use and sound-contracting applications such as speeches, lectures, and conferences.
- Designed for a wide range of applications from voice to instrumental recording.
- Wide dynamic range (101 dB), and high maximum input-sound-pressure level (130 dB SPL).
- Low inherent-noise characteristics.

Directivity Characteristics

Directivity Characteristics

Directivity Characteristics

Frequency Response Characteristics
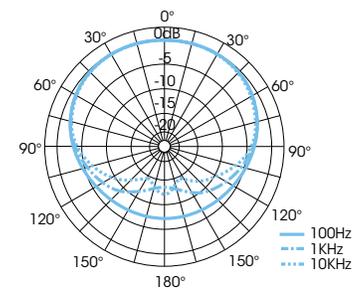
Frequency Response Characteristics
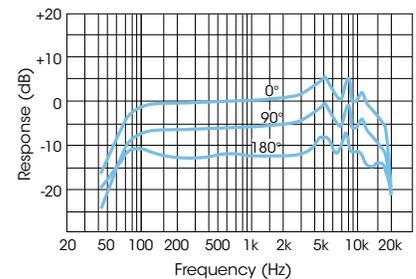
Frequency Response Characteristics

Product Description

ECM-55 series /9X

| **B** | BC | BMP | BPT | FPT |

FEATURES

- Omni-directional, electret condenser microphone.
- High signal-to-noise ratio and low inherent-noise characteristics.
- Large microphone head of 10.6 mm (7/16 inch) diameter offers rich sound reproduction.
- Successor to the ECM-50 microphone, the world's first electret condenser lavalier microphone.

ECM-44 series /9X

| **B** | **BC** | **BMP** | **BPT** | FPT |

FEATURES

- Omni-directional, electret condenser microphone.
- Choice of model variations to suit specific user requirements.
- Cost-effective miniature microphone provides superb sound quality.

ECM-44B does not support external DC operation.
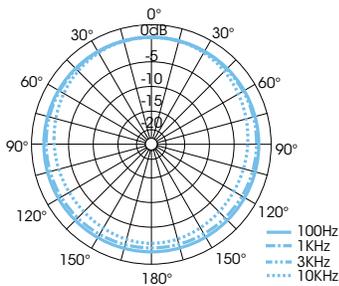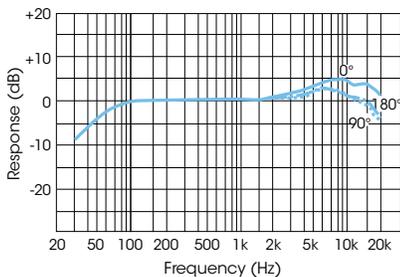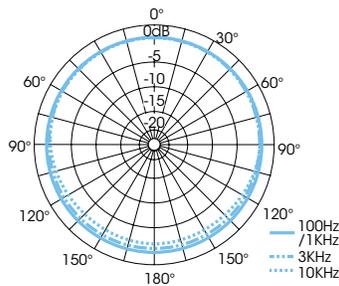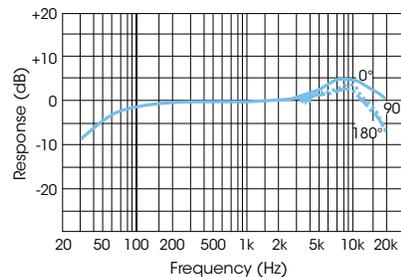
ECM-166 series

| B | **BC** | BMP | **BPT** | FPT |

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 presentations, lectures, and conferences.

Directivity Characteristics

Directivity Characteristics

Frequency Response Characteristics

Frequency Response Characteristics

ECM-V1BMP

| B | BC | BMP | BPT | FPT |

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.

Directivity Characteristics

Frequency Response Characteristics

* The characteristics are measured as UTX-B2V.

ECM-X7BMP

| B | BC | BMP | BPT | FPT |

FEATURES

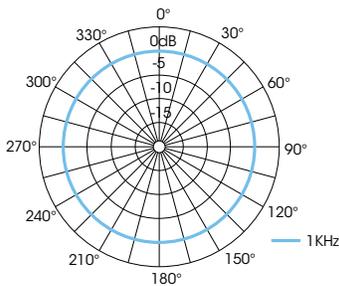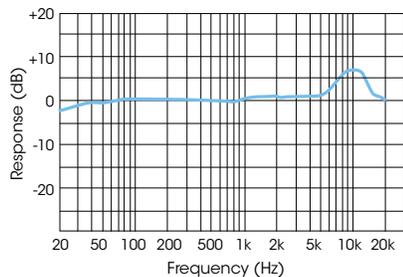- The lavalier microphone supplied with the UWP package is available as an individual microphone.
- Uni-directional, electret condenser microphone.
- Resistant to howling by rejecting indirect sound.
- Reasonably priced lavalier microphone, ideal for institutional use and sound-contracting applications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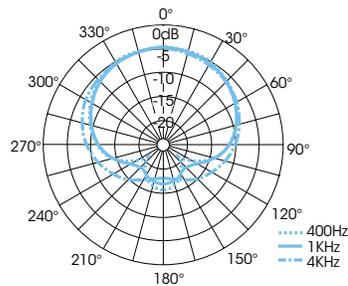
Directivity Characteristics
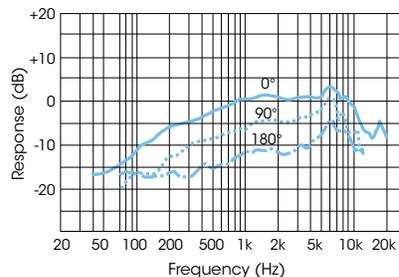
Frequency Response Characteristics

* The characteristics are measured as UTX-B2X.

ECM-322 series

| B | BC | BMP | BPT | FPT |

FEATURES

- Omni-directional, electret condenser microphone.
- Headset microphone, ideal for a variety of multimedia presentation applications ranging from seminars and conferences to lectures and workshops.
- Ear-clip-style design, wearable on either the left or right ear.
- The position of the microphone is adjustable.
- With the adjustable soft-texture ear hook and detachable headband, the headset microphone is comfortable to wear and fits stably on the ear, even during lengthy presentations.

SPECIFICATIONS

		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
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	—	—
Pigtail type (Supplied without a connector <pigtail>.)		ECM-88BPT ECM-88FPT	ECM-77BPT	—	—
Capsule type		Electret Condenser	Electret Condenser	Electret Condenser	Electret Condenser
Frequency response		20 Hz to 20 kHz	40 Hz to 20 kHz	70 Hz to 14 kHz	30 Hz to 18 kHz
Directivity		Omni-directional	Omni-directional	Uni-directional	Omni-directional
Sensitivity (0 dB=1 V/Pa, at 1 kHz)	XLR type	−52.0 dB ± 2 dB[1]	−52.0 dB ± 2 dB	−50.0 dB ± 2 dB	−52.0 dB ± 2 dB
	SMC/BMP/Pigtail type	−39.0 dB ± 2 dB	−39.0 dB ± 2 dB	−36.5 dB ± 2 dB	—
Output impedance at 1 kHz	XLR type	100 Ω ± 20% (balanced)[1]	150 Ω ± 20% (balanced)	100 Ω ± 20% (balanced)	100 Ω ± 20% (balanced)
	SMC/BMP/Pigtail type	2.5 kΩ ± 30% (unbalanced)	2.5 kΩ ± 30% (unbalanced)	2.5 kΩ ± 30% (unbalanced)	—
Dynamic Range		99 dB or more	90 dB or more	101 dB or more	98 dB or more
Signal-to-noise ratio (A-weighted, 1 kHz, 1 Pa.)		68 dB or more	64 dB or more	65 dB or more	66 dB or more
Inherent noise (0dB SPL = 2E-5 Pa.)		26 dB SPL or less	30 dB SPL or less	29 dB SPL or less	28 dB SPL or less
Wind noise (with windscreen, at 2m/s) (0 dB SPL = 2E-5 Pa.)		45 dB SPL or less	40 dB SPL or less	50 dB SPL or less	40 dB SPL or less
Induction noise from external magnetic field (dB SPL/1E-7 T, 0 dB SPL = 2E-5 Pa.)		5 dB SPL or less	5 dB SPL or less	5 dB SPL or less	5 dB SPL or less
Maximum input sound pressure level (0 dB SPL = 2E-5 Pa.)		125 dB SPL	120 dB SPL	130 dB SPL	126 dB SPL
Power supply (XLR type only)	Battery	IECR6 or LR6[1]	IECR6 or LR6	IECR6 or LR6	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	DC 1.5 V	DC 1.5 V
	SMC/BMP/Pigtail type	DC 1.1 to 10.0 V	DC 1.1 to 10.0 V	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 battery)	2 mA or less[1]	2 mA or less	2 mA or less	2 mA or less
	SMC/BMP/Pigtail type	0.4 mA or less	0.4 mA or less	0.4 mA or less	—
Cable length	XLR type	8.2 feet (2.5 m)	9.8 feet (3.0 m)	9.8 feet (3.0 m)	9.8 feet (3.0 m)
	SMC/BMP type	3.9 feet (1.2 m)	3.9 feet (1.2 m)	3.9 feet (1.2 m)	—
	Pigtail type	8.2 feet (2.5 m)	9.8 feet (3.0 m)	—	—
Dimensions	Microphone head	$5/32$ x $5/32$ x $11/16$ inch (3.5 x 3.5 x 16.8 mm) Clip attachment area: $5/32$ inch (3.9 mm) diameter	$1/4$ diameter x $1/2$ inch (5.6 diameter x 12.5 mm)	$7/16$ diameter x $31/32$ inch (10.6 diameter x 24.2 mm)	$7/16$ diameter x $27/32$ inch (10.6 diameter x 21 mm)
	Power unit (XLR type only)	$13/16$ diameter x 5 $3/4$ inches (20.0 diameter x 144 mm)	$13/16$ diameter x 5 $1/4$ inches (20.0 diameter x 133 mm)	$13/16$ diameter x 6 $1/2$ inches (20.0 diameter x 163 mm)	$13/16$ diameter x 5 $1/4$ inches (20.0 diameter x 133 mm)
Weight	Microphone head only	0.02 oz (.6 g)	0.05 oz (1.5 g)	0.25 oz (7 g)	0.23 oz (6.5 g)
	Total — XLR type	5.7 oz (162 g)	4.3 oz (122 g)	5.9 oz (167 g)	4.5 oz (127 g)
	SMC type	0.7 oz (22 g)	0.8 oz (23 g)	1.1 oz (30 g)	—
	BMP type	—	0.6 oz (17 g)	—	—
	Pigtail type	0.7 oz (20 g)	0.9 oz (26 g)	—	—
Supplied accessories		Single/Horizontal type tie clip (x1)[2], Single/Vertical type tie clip (x1)[2], Double/Horizontal type tie clip (x1)[3], Urethane type windscreen (x1)[2], Microphone case (x1)[3], Operating instructions (x1), Ferrite clamp (x1)	Single/Horizontal type tie clip (x1)[4], Single/Vertical type tie clip (x1)[4], Double/Horizontal type tie clip (x1), Metal-mesh type windscreen (x1), Microphone case (x1)[4], Operating instructions (x1)	Single/Horizontal type tie clip (x1), Single/Vertical type tie clip (x1)[5], Urethane type windscreen (x1), Microphone case (x1), Operating instructions (x1)	Single/Horizontal type tie clip (x1), Single/Vertical type tie clip (x1), Double/Horizontal type tie clip (x1), Metal-mesh type 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] Double / Horizontal type tie clip and microphone case are supplied with ECM-88B only.
[4] Single / Vertical type tie clip, Double / Horizontal type tie clip, and microphone case are supplied with ECM-77B only.
[5] Single / Vertical type tie clip and microphone case are supplied with ECM-66B only.

		ECM-44 Series	ECM-166 Series	ECM-V1 Series[*7]	ECM-X7 Series[*8]	ECM-322 Series
Model Variations						
	XLR type (Supplied with a battery unit and XLR-3-12C type connector.)	ECM-44B	—	—	—	—
	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 diameter, 3-pole mini plug.)	ECM-44BMP	ECM-166BMP	ECM-V1BMP	ECM-X7BMP	ECM-322BMP
	Pigtail type (Supplied without a connector <pigtail>.)	ECM-44BPT	—	—	—	—
Capsule type		Electret Condenser	Electret Condenser	Electret Condenser	Electret Condenser	Electret Condenser
Frequency response		40 Hz to 15 kHz	100 Hz to 10 kHz	40 Hz to 20 kHz	100 Hz to 15 kHz	50 Hz to 18 kHz
Directivity		Omni-directional	Uni-directional	Omni-directional	Uni-directional	Omni-directional
Sensitivity (0 dB=1 V/Pa, at 1 kHz)	XLR type	−53.0 dB ± 3 dB	—	—	—	—
	SMC/BMP/Pigtail type	−40.0 dB ± 3 dB	−45.0 dB ± 3 dB	−43.0 ± 3 dB	−44.0 ± 3 dB	−42 dB ± 3 dB
Output impedance at 1 kHz	XLR type	250 Ω ± 20% (balanced)	—	—	—	—
	SMC/BMP/Pigtail type	2.5 kΩ ± 30% (unbalanced)	2.5 kΩ ± 30% (unbalanced)	1.2 kΩ ± 30% (unbalanced)	1.2 kΩ ± 30% (unbalanced)	1.4 kΩ ± 30% (unbalanced)
Dynamic Range		90 dB or more	96 dB or more	86 dB or more	88 dB or more	81 dB or more
Signal-to-noise ratio (A-weighted, 1 kHz, 1 Pa.)		62 dB or more	60 dB or more	60 dB or more	62 dB or more	60 dB or more
Inherent noise (0dB SPL = 2E-5 Pa.)		32 dB SPL or less	34 dB SPL or less	34 dB SPL or less	32 dB SPL or less	34 dB SPL or less
Wind noise (with windscreen, at 2m/s) (0 dB SPL = 2E-5 Pa.)		40 dB SPL or less	—	—	—	55 dB SPL or less (without windscreen)
Induction noise from external magnetic field (dB SPL/1E-7 T, 0 dB SPL = 2E-5 Pa.)		5 dB SPL or less	—	—	—	—
Maximum input sound pressure level (0 dB SPL = 2E-5 Pa.)		122 dB SPL	130 dB SPL	120 dB SPL	120 dB SPL	115 dB 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	—	—	—	—
	SMC/BMP/Pigtail type	DC 1.1 to 10.0 V	DC 1.1 to 10.0 V	DC 5 V	DC 5 V	DC 1.1 to 10.0 V
Current drain	XLR type (internal battery)	0.3 mA or less	—	—	—	—
	XLR type (external battery)	—	—	—	—	—
	SMC/BMP/Pigtail type	0.4 mA or less	0.4 mA or less	0.2 mA or less	0.2 mA or less	1.3 mA or less
Cable length	XLR type	9.8 feet (3.0 m)	—	—	—	—
	SMC/BMP type	3.9 feet (1.2 m)	3.9 feet (1.2 m)	3.9 feet (1.2 m)	3.9 feet (1.2 m)	3.9 feet (1.2 m)
	Pigtail type	9.8 feet (3.0 m)	—	—	—	—
Dimensions	Microphone head	$^{11}/_{32}$ diameter x $^{19}/_{32}$ inch (8.5 diameter x 14.5 mm)	$^{1}/_{2}$ diameter x $^{15}/_{16}$ inch (12.5 diameter x 23.5 mm)	$^{9}/_{32}$ diameter x $^{25}/_{32}$ inch (6.8 diameter x 19.5 mm)	$^{15}/_{32}$ diameter x $^{13}/_{16}$ inch (11.5 diameter x 20.5 mm)	$^{11}/_{32}$ diameter (capsule case) x 6 $^{5}/_{6}$ inch (8.4 diameter x 168 mm)
	Power unit (XLR type only)	$^{13}/_{16}$ diameter x 5 inches (20.0 diameter x 126 mm)	—	—	—	—
Weight	Microphone head only	0.07 oz (2 g)	0.12 oz (3.5 g)	—	—	—
	Total XLR type	4.3 oz (121 g)	—	—	—	—
	SMC type	0.8 oz (24 g)	1.0 oz (25 g)	—	—	0.4 oz (10 g) without connector
	BMP type	0.6 oz (18 g)	0.7 oz (19 g)	0.57 oz (16.2 g)	0.63 oz (18.0 g)	0.4 oz (10 g) without connector
	Pigtail type	1.0 oz (29 g)	—	—	—	—
Supplied accessories		Single/Horizontal type tie clip (x1), Urethane type windscreen (x1), Microphone case (x1)*6, Operating instructions (x1)	Single/Horizontal type tie clip (x1), Urethane type windscreen (x1), Operating instructions (x1)	Single/Horizontal type tie clip (x1), Urethane type windscreen (x1)	Single/Horizontal type tie clip (x1), Urethane type windscreen (x1)	Headband (x1), clip (x1), Carrying case (x1), Operating instructions (x1)

*6 The microphone case is supplied with ECM-44B only.
*7 The characteristics are measured as UTX-B2V.
*8 The characteristics are measured as UTX-B2X.

	ECM-88	ECM-77	ECM-66	ECM-55	ECM-44	ECM-166	ECM-V1	ECM-X7
Single/Horizontal type tie clip	SAD-H88B (x 6)	SAD-H77B (x 10)	SAD-H55B (x 10)	SAD-H55B (x 10)	SAD-H44B (x 10)	—	SAD-HV1B2 (x 4)	SAD-HV1B (x 4)
Single/Vertical type tie clip	SAD-V88B (x 6)	SAD-V77B (x 10)	—	—	—	—	—	—
Double/Horizontal type tie clip	SAD-W88BL (x 6)	SAD-W77BL (x 6)	—	—	—	—	—	—
Safety-pin type microphone holder	SAD-S88B (x 6)	SAD-S77 (x 6)	—	—	—	—	—	—
Metal-mesh windscreen	—	AD-R77B (x 6)	—	AD-R55B (x 6)	—	—	—	—
Urethane windscreen	AD-R88B (x 12)	AD-C77B (x 12)	AD-R66B (x 12)	—	AD-R44B (x 12)	—	AD-RV1B2 (x 5)	AD-RX7 (x 6)
Color windscreens	AD-C88 (x 2 sets)	AD-C77 (x 2 sets)	—	—	—	—	—	—
DC power supply unit (SMC9-4S to XLR 3-pin)	DC-78 Supplied with ECM-88B	DC-78	DC-78	—	DC-78	DC-78	—	—
Microphone accessory kit	AD-KIT88B	AD-KIT77	—	—	—	—	—	—