



# evolution wireless G4

## ew 500 FILM G4 | Pro Camera Lavalier MKE 2 +



The professional's choice for broadcast quality sound

Providing the highest flexibility for your video sound and field recording applications. A robust wireless microphone system that offers ultimate sound quality, simple mounting and ease of use.

Covers all sorts of applications on the set: The 48V phantom-power equipped SKP 500 turns all wired mics into a wireless transmitter, the MKE 2 Gold is a state-of-the-art professional clip-on microphone offering the highest speech intelligibility.

### FEATURES

- Highly versatile solution for professional film sound: Rugged all-in-one wireless system for professional interviews and recording
- Professional sound and excellent construction quality
- Easy to use and fast setup time
- Easy and flexible wireless synchronisation between transmitter and receiver via infrared
- With 48 V phantom powering
- Up to 88 MHz bandwidth, up to 32 channels
- Range: up to 100 meters / 330 feet
- Increased RF output power (10/30/50 mW)
- Up to 8 hours of operation time

### DELIVERY INCLUDES

- EK 500 G4 camera receiver
- SK 500 G4 bodypack transmitter
- SKP 500 G4 pro plug-on transmitter
- MKE 2 clip-on microphone
- 4 AA batteries
- CL 1 3.5 mm jack cable
- CL 500 XLR to 3.5 mm jack adapter cable
- CA 2 camera adapter
- fur windscreen for MKE 2
- quick guide
- safety guide
- manufacturer declaration sheet



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### PRODUCT VARIANTS

#### Made in Germany

<b>ew 512 FILM G4-K+</b>	925 - 937.5 MHz	Art. no. 507806
<b>ew 512 FILM G4-GBw</b>	606 - 678 MHz	Art. no. 507807
<b>ew 512 FILM G4-Gw</b>	558 - 626 MHz	Art. no. 507808
<b>ew 512 FILM G4-Bw</b>	626 - 698 MHz	Art. no. 507809
<b>ew 512 FILM G4-Cw</b>	718 - 790 MHz	Art. no. 507810
<b>ew 512 FILM G4-Dw</b>	790 - 865 MHz	Art. no. 507811
<b>ew 512 FILM G4-Aw+</b>	470 - 558 MHz	Art. no. 508417

#### Assembled in USA

<b>ew 512 FILM G4-AS</b>	520 - 558 MHz	Art. no. 508145
<b>ew 512 FILM G4-JB</b>	806 - 810 MHz	Art. no. 508146
<b>ew 512 FILM G4-Gw</b>	558 - 626 MHz	Art. no. 508147
<b>ew 512 FILM G4-Bw</b>	626 - 698 MHz	Art. no. 508148
<b>ew 512 FILM G4-Cw</b>	718 - 790 MHz	Art. no. 508149
<b>ew 512 FILM G4-Dw</b>	790 - 865 MHz	Art. no. 508150
<b>ew 512 FILM G4-Aw+</b>	470 - 558 MHz	Art. no. 508438
<b>ew 512 FILM G4-Gw1</b>	558 - 608 MHz	Art. no. 508459

### SPECIFICATIONS

#### EK 500 G4

##### RF characteristics

Modulation	Wideband FM
Frequency ranges	Aw+: 470 - 558 MHz AS: 520 - 558 MHz Gw1: 558 - 608 MHz Gw: 558 - 626 MHz GBw: 606 - 678 MHz Bw: 526 - 698 MHz Cw: 718 - 790 MHz Dw: 790 - 865 MHz JB: 806 - 810 MHz K+: 925 - 937.5 MHz
Receiving frequencies	Max. 3520 receiving frequencies, adjustable in 25 kHz steps  20 frequency banks, each with up to 32 factory-preset channels, no intermodulation  6 frequency banks with up to 32 programmable channels
Switching bandwidth	up to 88 MHz
Nominal/peak deviation	±24 kHz / ±48 kHz
Receiver principle	Adaptive diversity
Sensitivity (with HDX, peak deviation)	< 1.6 µV for 52 dBA <sub>eff S/N</sub>
Adjacent channel selection	Typically ≥ 65 dB
Intermodulation attenuation	Typically ≥ 65 dB
Blocking	≥ 70 dB

Squelch	low: 5 dBµV middle: 15 dBµV high: 25 dBµV
Pilot tone squelch	Can be switched off

##### AF characteristics

Compander system	Sennheiser HDX
Signal-to-noise ratio (1 mV, peak deviation)	Line: ≥ 110 dBA Phones: approx. 90 dBA
Total harmonic distortion (THD)	≤ 0.9 %
AF output voltage (at peak deviation, 1 kHz AF)	3.5 mm jack socket: +17 dBu (mono, balanced)
Adjustment range of audio output level	42 dB, adjustable in steps of 6 dB

##### Overall device

Temperature range	-10 °C to +55 °C
Power supply	2 AA batteries, 1.5 V or BA 2015 accupack
Nominal voltage	3 V battery / 2.4 V rechargeable battery
Current consumption	at nominal voltage: typ. 140 mA with receiver switched off: ≤ 25 µA
Operating time	Typically 8 h
Dimensions	Approx. 82 x 64 x 24 mm
Weight (incl. batteries)	approx. 130 g



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### SPECIFICATIONS

#### SK 500 G4

RF characteristics	
Modulation	Wideband FM
Frequency ranges	Aw+: 470 - 558 MHz AS: 520 - 558 MHz Gw1: 558 - 608 MHz Gw: 558 - 626 MHz GBw: 606 - 678 MHz Bw: 526 - 698 MHz Cw: 718 - 790 MHz Dw: 790 - 865 MHz JB: 806 - 810 MHz K+: 925 - 937.5 MHz
Transmission frequencies	Max. 3520 frequencies, adjustable in 25 kHz steps  20 frequency banks, each with up to 32 factory-pre-set channels, no intermodulation  6 frequency banks with up to 32 programmable channels
Switching bandwidth	up to 88 MHz
Nominal/peak deviation	$\pm 24$ kHz / $\pm 48$ kHz
Frequency stability	$\leq \pm 15$ ppm
RF output power at 50 $\Omega$	switchable: Low: typ. 10 mW Standard: typ. 30 mW High: typ. 50 mW
Pilot tone squelch	Can be switched off

#### AF characteristics

Compander system	Sennheiser HDX
AF frequency response	Mic: 80 - 18,000 Hz Line: 25 - 18,000 Hz
Signal-to-noise ratio (1 mV, peak deviation)	$\geq 115$ dBA
Total harmonic distortion (THD)	$\leq 0.9$ %
Max. microphone/line input voltage	3 V <sub>eff</sub>
Microphone/line input impedance	40 k $\Omega$ , unbalanced / 1 M $\Omega$
Input capacitance	Switchable
Setting range for input sensitivity	60 dB, adjustable in 3 dB steps

#### Overall device

Temperature range	-10 °C to +55 °C
Power supply	2 AA batteries, 1.5 V or BA 2015 accupack
Nominal voltage	3 V battery / 2.4 V rechargeable battery
Current consumption	at nominal voltage: typ. 180 mA with transmitter switched off: $\leq 25$ $\mu$ A
Operating time	Typically 8 h
Dimensions	Approx. 82 x 64 x 24 mm
Weight (incl. batteries)	approx. 160 g

#### MKE 2

Transducer principle	pre-polarized condenser microphone
Pick-up pattern	omni-directional
Sensitivity (free field, no load) (1 kHz)	5 mV/Pa, $\pm 3$ dB
Max. SPL at 1 kHz	142 dB
Frequency response	20 to 20.000 Hz $\pm 3$ dB
"Equivalent noise level A-weighted (DIN IEC 651)"	26 dB
"Equivalent noise level CCIR-weighted (CCIR 468-1)"	39 dB
Connector	3.5 mm jack
Cable length	approx. 1.60 m



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### SPECIFICATIONS

#### SKP 500 G4

RF characteristics	
Modulation	Wideband FM
Frequency ranges	Aw+: 470 - 558 MHz AS: 520 - 558 MHz Gw1: 558 - 608 MHz Gw: 558 - 626 MHz GBw: 606 - 678 MHz Bw: 526 - 698 MHz Cw: 718 - 790 MHz Dw: 790 - 865 MHz JB: 806 - 810 MHz K+: 925 - 937.5 MHz
Transmission frequencies	Max. 3520 frequencies, adjustable in 25 kHz steps  20 frequency banks, each with up to 32 factory-pre- set channels, no intermo- dulation  6 frequency banks with up to 32 programmable channels
Switching bandwidth	up to 88 MHz
Nominal/peak deviation	$\pm 24$ kHz / $\pm 48$ kHz
Frequency stability	$\leq \pm 15$ ppm
RF output power at 50 $\Omega$	switchable: Low: typ. 10 mW Standard: typ. 30 mW High: typ. 50 mW
Pilot tone squelch	Can be switched off

#### AF characteristics

Compander system	Sennheiser HDX
AF frequency response	80 - 18,000 Hz
Signal-to-noise ratio (1 mV, peak deviation)	$\geq 120$ dBA
Total harmonic distortion (THD)	$\leq 0.9$ %
Max. input voltage	6 V <sub>eff</sub>
Input impedance	68 k $\Omega$ , unbalanced
Input capacitance	Switchable
Setting range for input sensitivity	48 dB, adjustable in 6 dB steps

#### Overall device

Temperature range	-10 °C to +55 °C
Power supply	2 AA batteries, 1.5 V or BA 2015 accupack
Nominal voltage	3 V battery / 2.4 V rechargeable battery
Current consumption	at nominal voltage: typ. 210 mA with transmitter switched off: $\leq 25$ $\mu$ A
Operating time	Typically 8 h
Dimensions	Approx. 105 x 43 x 43 mm
Weight (incl. batteries)	approx. 195 g

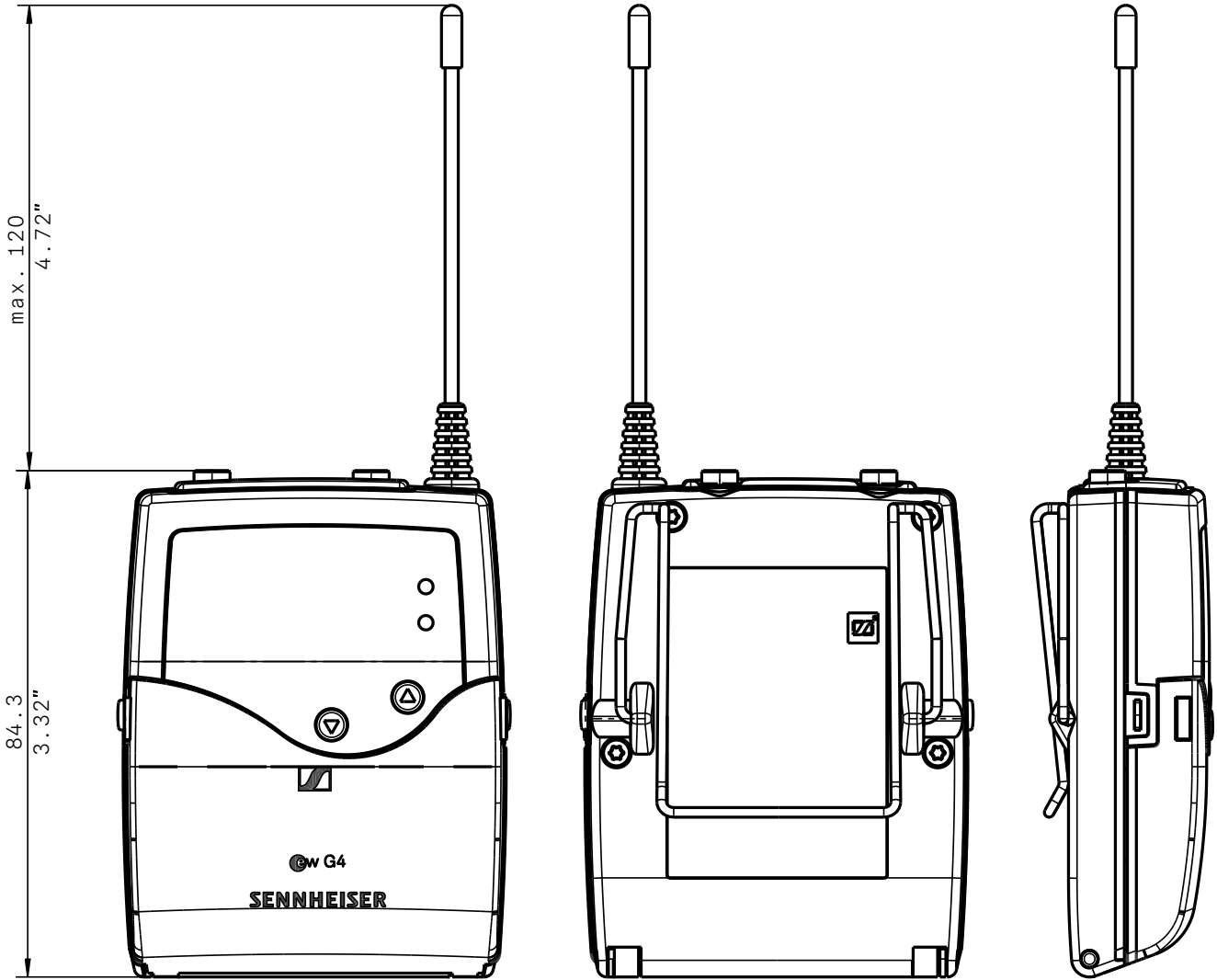


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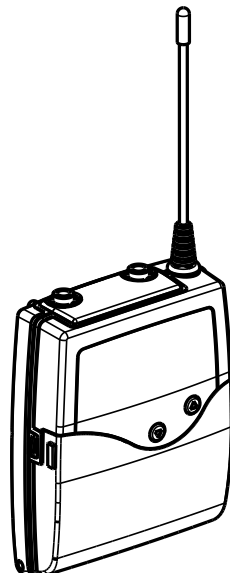
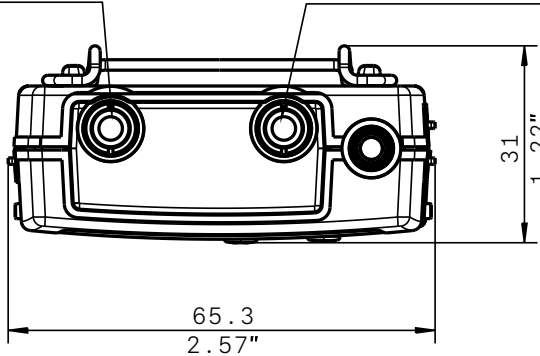
### DIMENSIONS

#### EK 500 G4



3,5mm Klinke  
3,5mm plug

3,5mm Klinke, symmetrisch  
3,5mm plug, symmetrical



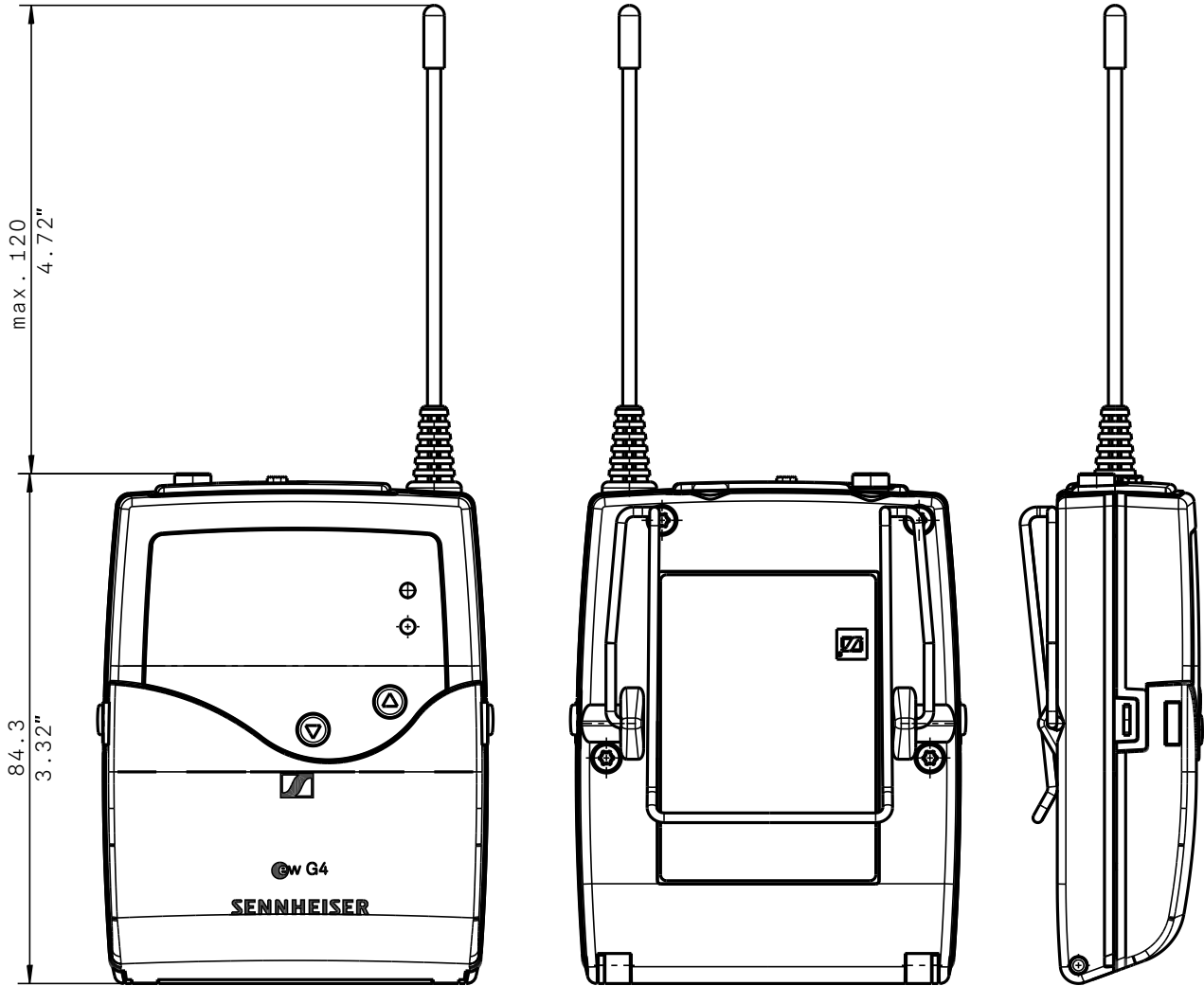


# evolution wireless G4

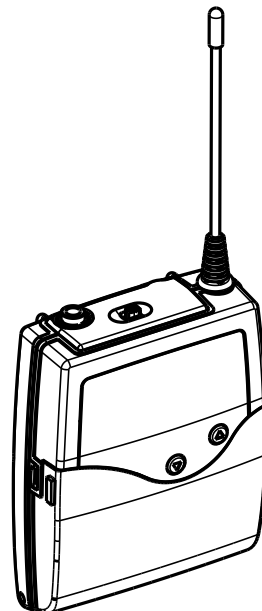
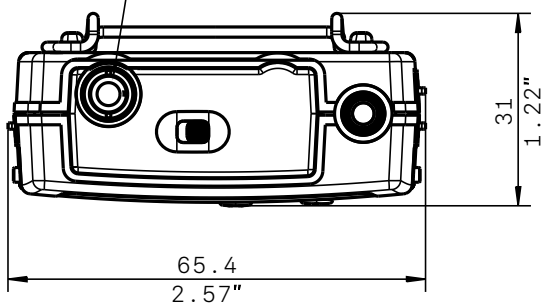
## ew 500 FILM G4 | Pro Camera Lavalier MKE 2 +

### DIMENSIONS

#### SK 500 G4



3,5mm Klinke  
3,5mm plug



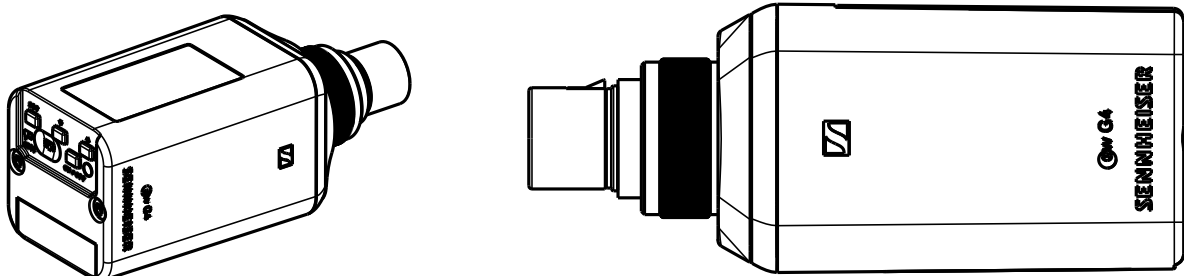
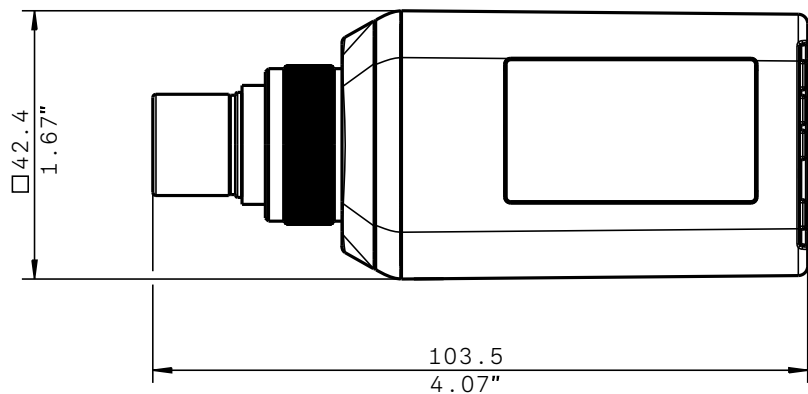
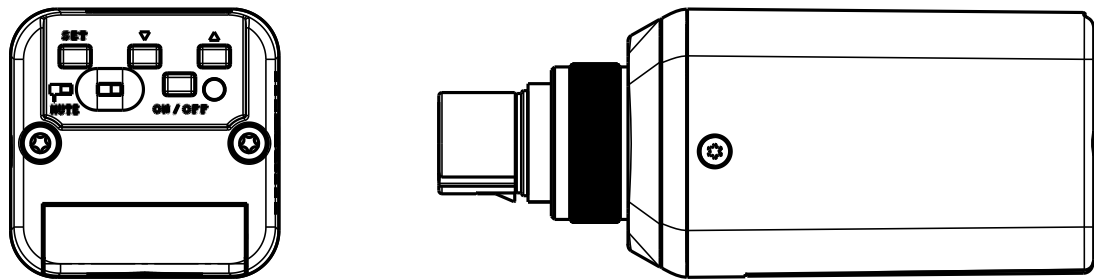
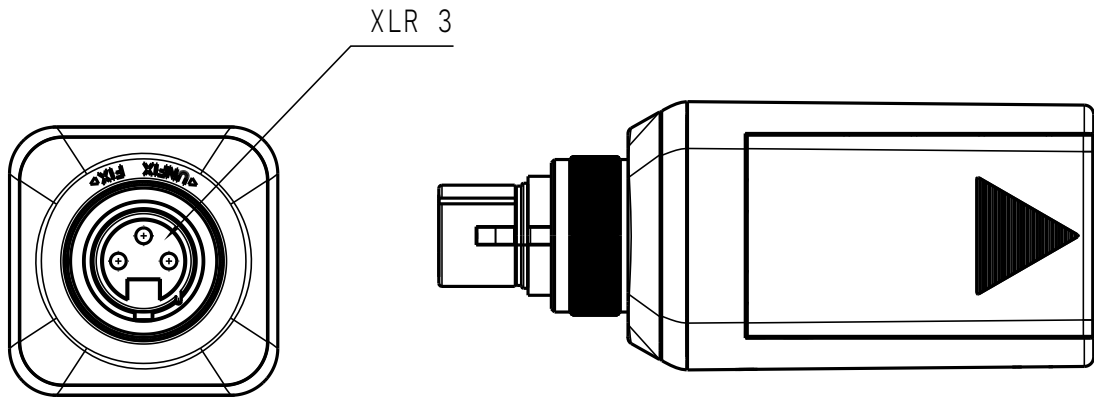


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## ew 500 FILM G4 | Pro Camera Lavalier MKE 2 +

### DIMENSIONS

SKP 500 G4





# evolution wireless G4

## ew 500 FILM G4 | Pro Camera Lavalier MKE 2 +

### ARCHITECT'S SPECIFICATION

A wireless RF transmission system consisting of a compact camera receiver, a bodypack transmitter with a condenser clip-on microphone and a plug-on transmitter

The system shall operate within ten UHF frequency ranges, with a switching bandwidth of up to 88 MHz: 470 – 558 MHz, 520 – 558 MHz, 558 – 608 MHz, 558 – 626 MHz, 606 – 678 MHz, 626 – 698 MHz, 718 – 790 MHz, 790 – 865 MHz, 806 – 810 MHz, 925 – 937.5 MHz; receiving frequencies shall be 3520 per range and shall be tunable in 25 kHz steps. The system shall feature 20 fixed frequency banks with up to 32 compatible frequency presets and 6 user banks with up to 32 user programmable frequencies.

The receiver shall be menu-driven with a backlit LC display showing the current frequency, frequency bank and channel number, metering of RF level, metering of AF level, lock status, battery status, muting function or line output level, and pilot tone evaluation. An auto-lock feature shall be provided to prevent settings from being accidentally altered.

The receiver parameters shall either be configurable in the associated transmitter's menu and synchronized with the receiver via an integrated infrared interface or shall be programmable in the receiver menu.

The receiver shall feature a 3.5 mm audio output with a maximum output of +17 dBu (mono, balanced) and a 3.5 mm phone output.

Nominal/peak deviation shall be  $\pm 24$  kHz/ $\pm 48$  kHz. Squelch threshold shall be defeatable (off) or adjustable to three levels: Low (5 dB $\mu$ V), Middle (15 dB $\mu$ V) and High (25 dB $\mu$ V).

The receiver shall incorporate the Sennheiser HDX compander system and a defeatable pilot tone squelch. Sensitivity shall be  $< 1.6$   $\mu$ V for 52 dBA eff S/N with HDX engaged at peak deviation. Adjacent channel rejection shall be  $\geq 65$  dB (typical). Intermodulation attenuation shall be  $\geq 65$  dB (typical); blocking shall be  $\geq 70$  dB. Signal-to-noise ratio at 1 mV and peak deviation shall be  $\geq 110$  dBA (line) or approximately 90 dbA (phones). Total harmonic distortion (THD) shall be  $\leq 0.9$  %. The audio output level shall be adjustable within a 42 dB range in steps of 6 dB.

Power shall be supplied to the receiver by two 1.5V AA size batteries or by one Sennheiser BA 2015 rechargeable accupack. Nominal voltage shall be 2.4 V, current consumption shall be typical 140 mA at nominal voltage;  $\leq 25$   $\mu$ A when receiver is switched off. Operating time shall be typical 8 hours. The receiver shall have a rugged metal housing; dimensions shall be approximately 82 x 64 x 24 mm (3.23" x 2.52" x 0.94"). Weight including the batteries shall be approximately 130 grams (0.29 lbs). Operating temperature shall range from  $-10$  °C to  $+55$  °C ( $+14$  °F to  $+131$  °F).

The receiver shall be the Sennheiser EK 500 G4.

The bodypack transmitter shall be menu-driven with a backlit LC display showing the current frequency, frequency bank and channel number, metering of AF level, transmission status, lock status, pilot tone transmission, muting function, and battery status. An auto-lock feature shall be provided to prevent settings from being accidentally altered. The bodypack transmitter parameters shall either be configurable in the associated receiver's menu and synchronized with the bodypack transmitter via an integrated infrared interface or shall be programmable in the bodypack transmitter menu.

The bodypack transmitter shall be equipped with a mute switch, which shall be switchable between "AF on/off", "RF on/off" and "Disabled" via the user interface.

Nominal/peak deviation shall be  $\pm 24$  kHz/ $\pm 48$  kHz. Frequency stability shall be  $\leq \pm 15$  ppm. RF output power at 50  $\Omega$  shall be switchable between 10 mW (typical, low) and 30 mW (typical, standard) and 50 mW (typical, high).

The bodypack transmitter shall incorporate the Sennheiser HDX compander system and a defeatable pilot tone squelch. Audio frequency response shall range from 80 – 18,000 Hz (microphone) or 25 - 18,000 Hz (line). Signal-to-noise ratio at 1 mV and peak deviation shall be  $\geq 115$  dBA. Total harmonic distortion (THD) shall be  $\leq 0.9$  %. Input sensitivity shall be adjustable within a 60 dB range in steps of 3 dB.

Power shall be supplied to the bodypack transmitter by two 1.5V AA size batteries or by one Sennheiser BA 2015 rechargeable accupack. Nominal voltage shall be 2.4 V, current consumption shall be typical 180 mA at nominal voltage;  $\leq 25$   $\mu$ A when bodypack transmitter is switched off. Operating time shall be typical 8 hours. The bodypack transmitter shall have a rugged metal housing; dimensions shall be approximately 82 x 64 x 24 mm (3.23" x 2.52" x 0.94"). Weight including the batteries shall be approximately 160 grams (0.35 lbs). Operating temperature shall range from  $-10$  °C to  $+55$  °C ( $+14$  °F to  $+131$  °F).

The bodypack transmitter shall be the Sennheiser SK 500 G4.





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The plug-on transmitter shall be menu-driven with a backlit LC display showing the current frequency, frequency bank and channel number, metering of AF level, lock status, pilot tone evaluation, muting function, and battery status. An auto-lock feature shall be provided to prevent settings from being accidentally altered.

Some plug-on transmitter parameters such as receiving frequency, plug-on transmitter name and pilot tone setting shall be synchronizable with the associated plug-on transmitter via an integrated infrared interface.

The plug-on transmitter shall be equipped with a mute switch, which shall be switchable between “AF on/off”, “RF on/off” and “Disabled” via the user interface. The plug-on transmitter shall feature an Audio-XLR-3F connector.

Via the “PhantomPower 48V” menu item, the 48 V phantom powering for condenser microphones shall be switchable between “Active” and “Inactive”.

Nominal/peak deviation shall be  $\pm 24$  kHz/ $\pm 48$  kHz. Frequency stability shall be  $\leq \pm 15$  ppm. RF output power at 50  $\Omega$  shall be switchable between 10 mW (typical, low) and 30 mW (typical, standard) and 50 mW (typical, high).

The plug-on transmitter shall incorporate the Sennheiser HDX compander system and a defeatable pilot tone squelch. Audio frequency response shall range from 80 – 18,000 Hz. Signal-to-noise ratio at 1 mV and peak deviation shall be  $\geq 120$  dBA. Total harmonic distortion (THD) shall be  $\leq 0.9$  %.

The plug-on transmitters max. input voltage shall be 6 Veff; the unbalanced input impedance shall be 6 k $\Omega$ ; the input capacitance shall be switchable. The input sensitivity shall be adjustable within a 48 dB range in steps of 6 dB.

Power shall be supplied to the plug-on transmitter by two 1.5V AA size batteries or by one Sennheiser BA 2015 rechargeable accupack. Nominal voltage shall be 2.4 V, current consumption shall be typical 210 mA at nominal voltage;  $\leq 25$   $\mu$ A when plug-on transmitter is switched off. Operating time shall be typical 8 hours. The plug-on transmitter shall have a rugged metal housing; dimensions shall be approximately 105 x 43 x 43 mm (4.13” x 1.69” x 1.69”). Weight including the batteries shall be approximately 195 grams (0.43 lbs). Operating temperature shall range from  $-10$  °C to  $+55$  °C ( $+14$  °F to  $+131$  °F).

The plug-on transmitter shall be the Sennheiser SKP 500 G4.