



## evolution wireless G4

ew 112 P G4 | Camera Lavalier ME 2 Set

ew 122 P G4 | Camera Lavalier ME 4 Set



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

Rugged all-in-one wireless system with high flexibility for broadcast quality sound, including the clip-on microphone ME 2-II (omni-directional) or ME 4 (cardioid) for excellent speech intelligibility and daily on-location use.

### FEATURES

- Rugged all-in-one wireless system with high flexibility for broadcast quality sound
- Excellent sound and construction quality
- Easy to use and fast setup time
- Powerful and reliable wireless transmission
- Range: up to 100 meters / 330 feet
- Up to 8 hours of operation time

### DELIVERY INCLUDES

- EK 100 G4 camera receiver
- SK 100 G4 bodypack transmitter
- ME 2 clip-on microphone (ew 112 P variants only)
- ME 4 clip-on microphone (ew 122 P variants only)
- 4 AA batteries
- CA 2 camera adapter
- CL 1 3.5 mm jack cable
- CL 100 XLR to 3.5 mm jack adapter cable
- quick guide
- safety guide
- manufacturer declaration sheet



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### SPECIFICATIONS

#### EK 100 G4

##### RF characteristics

|                                        |                                                                                                                                                                                                                                                         |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Modulation                             | Wideband FM                                                                                                                                                                                                                                             |
| Frequency ranges                       | A1: 470 - 516 MHz<br>A: 516 - 558 MHz<br>AS: 520 - 558 MHz<br>G: 566 - 608 MHz<br>GB: 606 - 648 MHz<br>B: 626 - 668 MHz<br>C: 734 - 776 MHz<br>D: 780 - 822 MHz<br>E: 823 - 865 MHz<br>JB: 806 - 810 MHz<br>K+: 925 - 937.5 MHz<br>1G8: 1785 - 1800 MHz |
| Receiving frequencies                  | Max. 1680 receiving frequencies, adjustable in 25 kHz steps<br><br>20 frequency banks, each with up to 12 factory-preset channels, no intermodulation<br><br>1 frequency bank with up to 12 programmable channels                                       |
| Switching bandwidth                    | up to 42 MHz                                                                                                                                                                                                                                            |
| Nominal/peak deviation                 | $\pm 24$ kHz / $\pm 48$ kHz                                                                                                                                                                                                                             |
| Receiver principle                     | Adaptive diversity                                                                                                                                                                                                                                      |
| Sensitivity (with HDX, peak deviation) | $< 1.6 \mu\text{V}$ for 52 dBA <sub>eff S/N</sub>                                                                                                                                                                                                       |
| Adjacent channel selection             | $\geq 65$ dB                                                                                                                                                                                                                                            |
| Intermodulation attenuation            | $\geq 65$ dB                                                                                                                                                                                                                                            |
| Blocking                               | $\geq 70$ dB                                                                                                                                                                                                                                            |

|                    |                                                                                     |
|--------------------|-------------------------------------------------------------------------------------|
| Squelch            | low: 5 dB $\mu\text{V}$<br>middle: 15 dB $\mu\text{V}$<br>high: 25 dB $\mu\text{V}$ |
| Pilot tone squelch | Can be switched off                                                                 |

##### AF characteristics

|                                                 |                                                      |
|-------------------------------------------------|------------------------------------------------------|
| Compander system                                | Sennheiser HDX                                       |
| Signal-to-noise ratio (1 mV, peak deviation)    | $\geq 110$ dBA                                       |
| Total harmonic distortion (THD)                 | $\leq 0.9$ %                                         |
| AF output voltage (at peak deviation, 1 kHz AF) | 3.5 mm jack socket:<br>+12 dBu<br>(mono, unbalanced) |
| Adjustment range of audio output level          | 42 dB,<br>adjustable in steps of 6 dB                |

##### Overall device

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



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### SPECIFICATIONS

#### SK 100 G4

| RF characteristics             |                                                                                                                                                                                                                                                         |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Modulation                     | Wideband FM                                                                                                                                                                                                                                             |
| Frequency ranges               | A1: 470 - 516 MHz<br>A: 516 - 558 MHz<br>AS: 520 - 558 MHz<br>G: 566 - 608 MHz<br>GB: 606 - 648 MHz<br>B: 626 - 668 MHz<br>C: 734 - 776 MHz<br>D: 780 - 822 MHz<br>E: 823 - 865 MHz<br>JB: 806 - 810 MHz<br>K+: 925 - 937.5 MHz<br>1G8: 1785 - 1800 MHz |
| Transmission frequencies       | Max. 1680 receiving frequencies, adjustable in 25 kHz steps<br><br>20 frequency banks, each with up to 12 factory-preset channels, no intermodulation<br><br>1 frequency bank with up to 12 programmable channels                                       |
| Switching bandwidth            | up to 42 MHz                                                                                                                                                                                                                                            |
| Nominal/peak deviation         | $\pm 24$ kHz / $\pm 48$ kHz                                                                                                                                                                                                                             |
| Frequency stability            | $\leq \pm 15$ ppm                                                                                                                                                                                                                                       |
| RF output power at 50 $\Omega$ | Max. 30 mW                                                                                                                                                                                                                                              |
| Pilot tone squelch             | Can be switched off                                                                                                                                                                                                                                     |

#### AF characteristics

|                                              |                                             |
|----------------------------------------------|---------------------------------------------|
| Compander system                             | Sennheiser HDX                              |
| AF frequency response                        | Mic: 80 - 18,000 Hz<br>Line: 25 - 18,000 Hz |
| Signal-to-noise ratio (1 mV, peak deviation) | $\geq 110$ 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:<br>typ. 180 mA<br>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                                                                          |

### SPECIFICATIONS

#### ME 2

|                                                 |                                    |
|-------------------------------------------------|------------------------------------|
| Transducer principle                            | pre-polarized condensor microphone |
| Pick-up pattern                                 | omni-directional                   |
| Sensitivity (free field, no load) (1 kHz)       | 20 mV/Pa                           |
| Max. SPL at 1 kHz                               | 130 dB                             |
| Frequency response                              | 50 to 18,000 Hz                    |
| Equivalent noise level A-weighted (DIN IEC 651) | 36 dB                              |
| Connector                                       | 3.5 mm jack                        |
| Cable length                                    | approx. 1.60 m                     |
| Supply voltage                                  | 7.5 V                              |

#### ME 4

|                                                 |                                    |
|-------------------------------------------------|------------------------------------|
| Transducer principle                            | pre-polarized condensor microphone |
| Pick-up pattern                                 | cardioid                           |
| Sensitivity (free field, no load) (1 kHz)       | 40 mV/Pa                           |
| Max. SPL at 1 kHz                               | 120 dB                             |
| Frequency response                              | 50 to 18,000 Hz                    |
| Equivalent noise level A-weighted (DIN IEC 651) | 31 dB                              |
| Connector                                       | 3.5 mm jack                        |
| Cable length                                    | approx. 1.60 m                     |
| Supply voltage                                  | 7.5 V                              |



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### PRODUCT VARIANTS

#### Made in Germany

|                       |                 |                 |
|-----------------------|-----------------|-----------------|
| <b>ew 112 P G4-A1</b> | 470 - 516 MHz   | Art. no. 507612 |
| <b>ew 112 P G4-A</b>  | 516 - 558 MHz   | Art. no. 507613 |
| <b>ew 112 P G4-GB</b> | 606 - 648 MHz   | Art. no. 507614 |
| <b>ew 112 P G4-G</b>  | 566 - 608 MHz   | Art. no. 507615 |
| <b>ew 112 P G4-B</b>  | 626 - 668 MHz   | Art. no. 507616 |
| <b>ew 112 P G4-C</b>  | 734 - 776 MHz   | Art. no. 507617 |
| <b>ew 112 P G4-E</b>  | 823 - 865 MHz   | Art. no. 507618 |
| <b>ew 112 P G4-K+</b> | 925 - 937.5 MHz | Art. no. 507619 |
| <b>ew 112 P G4-TH</b> | 794 - 806 MHz   | Art.-no. 508580 |

#### Assembled in USA

|                       |               |                 |
|-----------------------|---------------|-----------------|
| <b>ew 112 P G4-A1</b> | 470 - 516 MHz | Art. no. 507953 |
| <b>ew 112 P G4-A</b>  | 516 - 558 MHz | Art. no. 507954 |
| <b>ew 112 P G4-AS</b> | 520 - 558 MHz | Art. no. 507955 |
| <b>ew 112 P G4-G</b>  | 566 - 608 MHz | Art. no. 507956 |
| <b>ew 112 P G4-B</b>  | 626 - 668 MHz | Art. no. 507957 |
| <b>ew 112 P G4-C</b>  | 734 - 776 MHz | Art. no. 507958 |
| <b>ew 112 P G4-D</b>  | 780 - 822 MHz | Art. no. 507959 |
| <b>ew 112 P G4-JB</b> | 806 - 810 MHz | Art. no. 507960 |

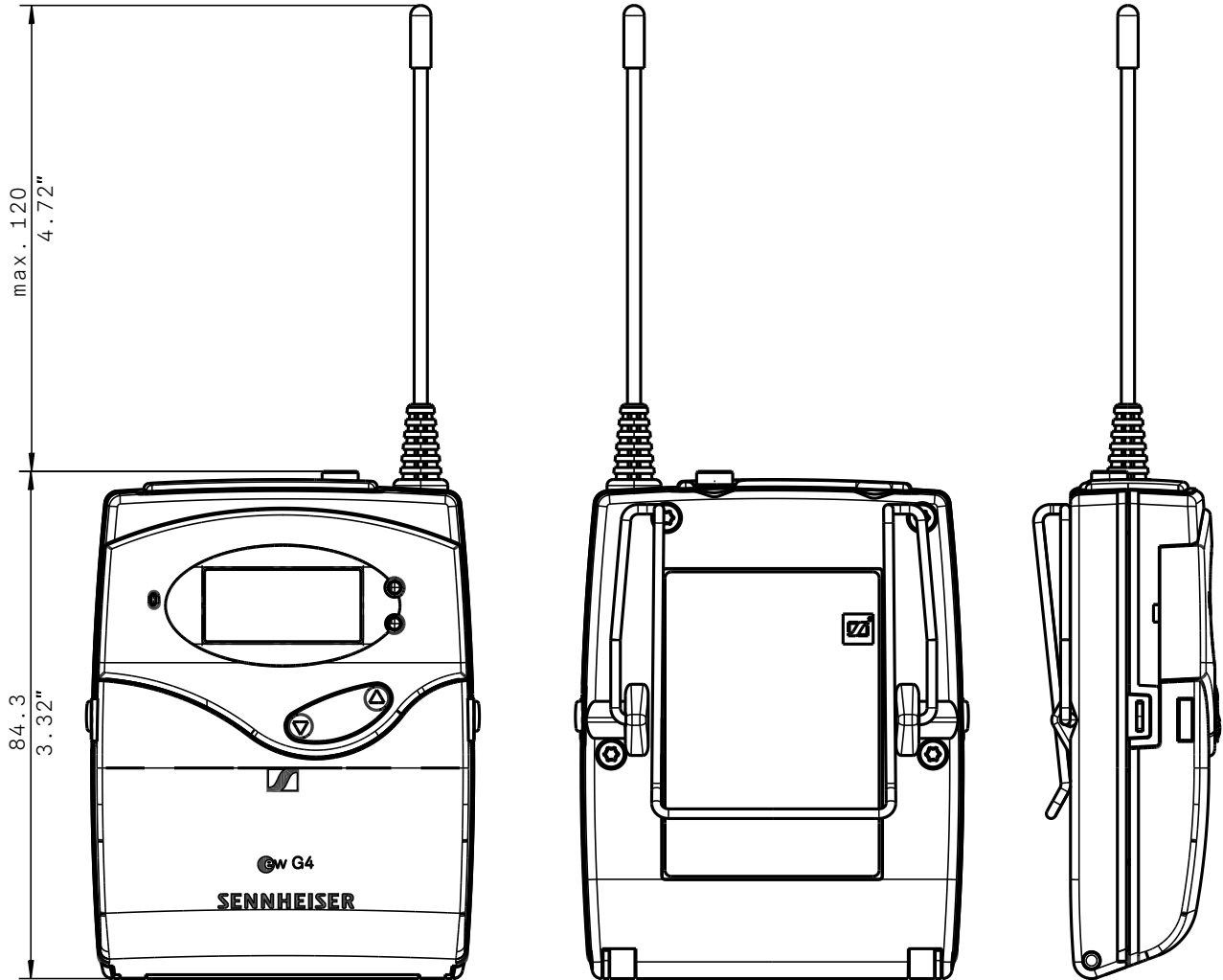
|                       |                 |                 |
|-----------------------|-----------------|-----------------|
| <b>ew 122 P G4-A1</b> | 470 - 516 MHz   | Art. no. 507620 |
| <b>ew 122 P G4-A</b>  | 516 - 558 MHz   | Art. no. 507621 |
| <b>ew 122 P G4-GB</b> | 606 - 648 MHz   | Art. no. 507622 |
| <b>ew 122 P G4-G</b>  | 566 - 608 MHz   | Art. no. 507623 |
| <b>ew 122 P G4-B</b>  | 626 - 668 MHz   | Art. no. 507624 |
| <b>ew 122 P G4-C</b>  | 734 - 776 MHz   | Art. no. 507625 |
| <b>ew 122 P G4-E</b>  | 823 - 865 MHz   | Art. no. 507626 |
| <b>ew 122 P G4-K+</b> | 925 - 937.5 MHz | Art. no. 507627 |

|                       |               |                 |
|-----------------------|---------------|-----------------|
| <b>ew 122 P G4-A1</b> | 470 - 516 MHz | Art. no. 507961 |
| <b>ew 122 P G4-A</b>  | 516 - 558 MHz | Art. no. 507962 |
| <b>ew 122 P G4-AS</b> | 520 - 558 MHz | Art. no. 507963 |
| <b>ew 122 P G4-G</b>  | 566 - 608 MHz | Art. no. 507964 |
| <b>ew 122 P G4-B</b>  | 626 - 668 MHz | Art. no. 507965 |
| <b>ew 122 P G4-C</b>  | 734 - 776 MHz | Art. no. 507966 |
| <b>ew 122 P G4-D</b>  | 780 - 822 MHz | Art. no. 507967 |
| <b>ew 122 P G4-JB</b> | 806 - 810 MHz | Art. no. 507968 |

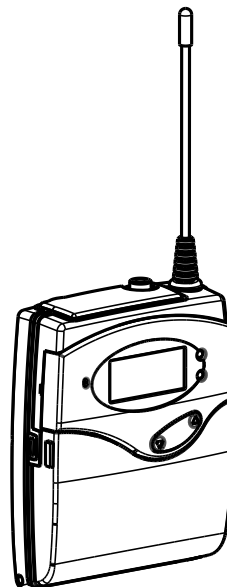
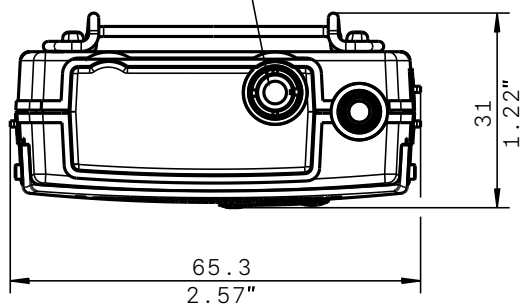
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**DIMENSIONS****EK 100 G4**

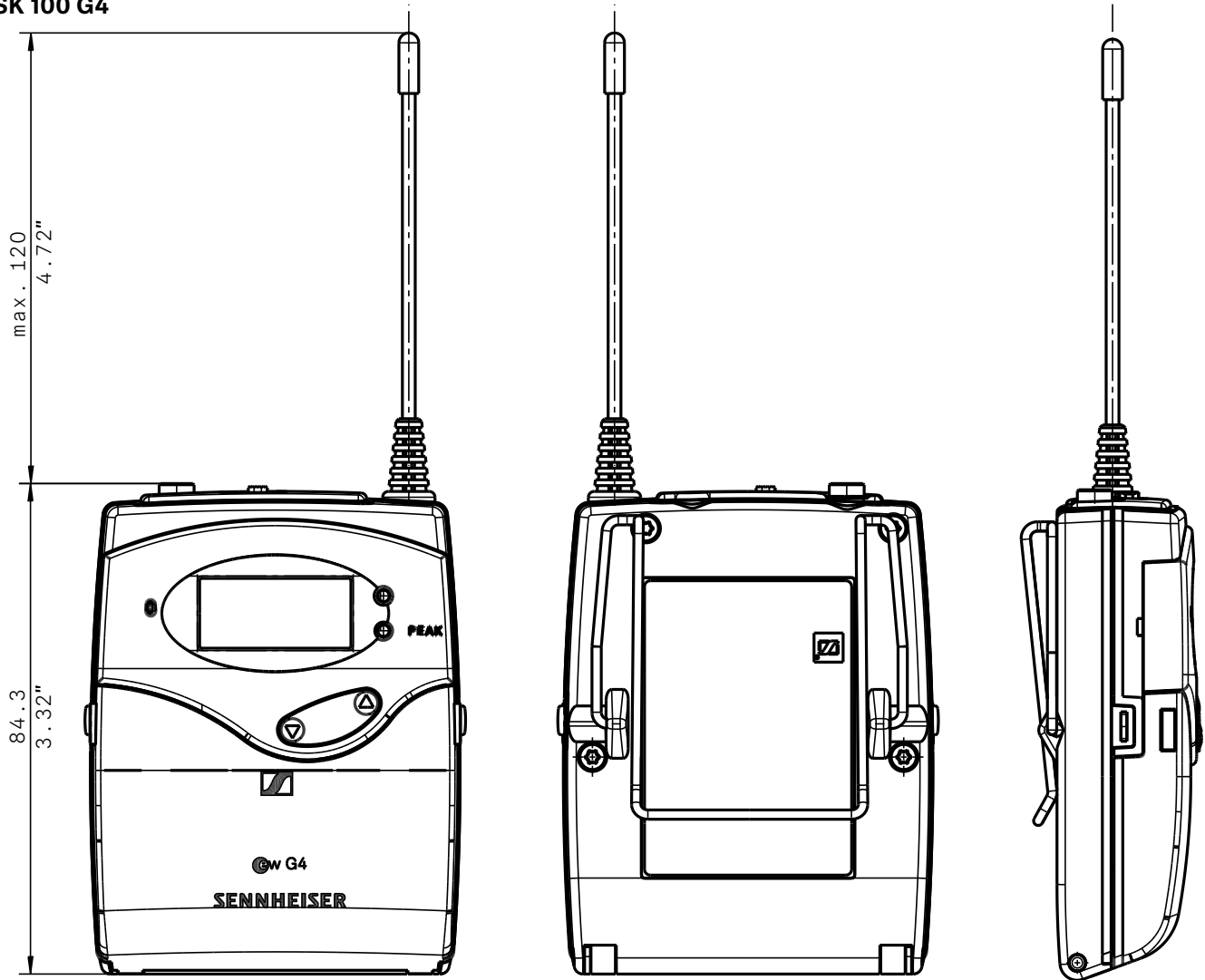
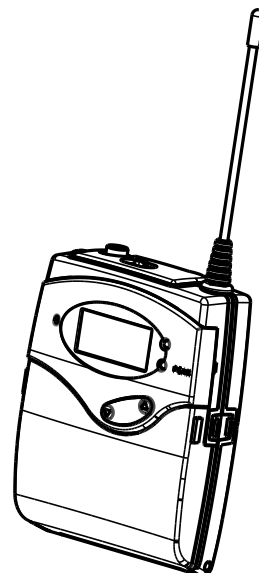
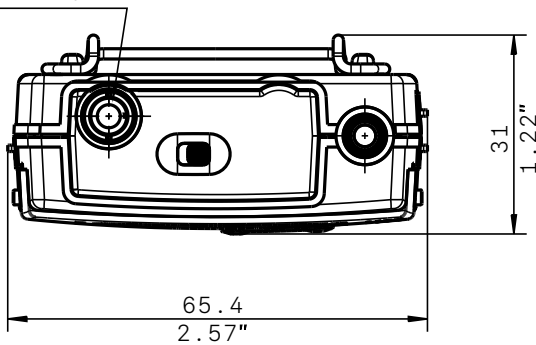
3,5mm Klinke, unsymmetrisch  
3,5mm plug, unsymmetrical



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**DIMENSIONS****SK 100 G4**3,5mm Klinke  
3,5mm plug



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### ARCHITECT'S SPECIFICATION

A wireless RF transmission system consisting of a camera receiver and a bodypack transmitter with a clip-on microphone.

The system shall operate within eleven UHF frequency ranges, with a switching bandwidth of up to 42 MHz: 470 – 516 MHz, 516 – 558 MHz, 520 – 558 MHz, 566 – 608 MHz, 606 – 648 MHz, 626 – 668 MHz, 734 – 776 MHz, 780 – 822 MHz, 823 – 865 MHz, 806 – 810 MHz, 925 – 937.5 MHz; transmission frequencies shall be 1,680 per range and shall be tunable in 25 kHz steps. The system shall feature 20 fixed frequency banks with up to 12 compatible frequency presets and 1 user bank with up to 12 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 be programmable in the receiver menu.

The receiver shall feature a 3.5 mm audio output with a maximum output of +11 dBu (mono, unbalanced).

Nominal/peak deviation shall be  $\pm 24$  kHz/ $\pm 48$  kHz. Squelch threshold shall be 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 (typical) 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. 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 1.5 V 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 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 160 grams (0.35 lbs). Operating temperature shall range from  $-10$  °C to  $+55$  °C ( $+14$  °F to  $+131$  °F).

The receiver shall be the Sennheiser EK 100 G4.

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

The 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 30 mW (typical).

The 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  $\geq 110$  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 transmitter by two 1.5 V AA size batteries or by one Sennheiser BA 2015 rechargeable accupack. Nominal voltage shall be 2.4 V for a rechargeable battery or 3 V for a battery, current consumption shall be typical 180 mA at nominal voltage;  $\leq 25$   $\mu$ A when transmitter is switched off. Operating time shall be typical 8 hours. The 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 transmitter shall be the Sennheiser SK 100 G4.