



## evolution wireless G4 ew 300 G4-865-S | Handheld Set



Best choice for your business, top of the class in education. The G4 300 Series uses the power of an increased switching bandwidth of up to 88 MHz. New frequency ranges allow to operate multi-channel setups with dozens of channels while securing reliable operation - despite digital dividend.

Moderators and presenters love working with G4. The aluminum housing of the handheld transmitter is not just robust but also lightweight for long speeches, whereas the noiseless mute switch ensures full control.

### FEATURES

- Easy to use, fast setup time
- Integrated network port allows control, monitoring and setup via Sennheiser Control Cockpit and WSM Software
- Broad range of products and existing accessories (such as microphones) allows usage in any kind of environment
- Up to 88 MHz bandwidth, up to 32 channels
- Increased RF output power (10/30/50 mW)
- Transmission Range: up to 100 meters / 330 feet
- Compatible with wireless speaker system LSP 500 PRO
- RC (remote control) switch available for the bodypack transmitter

### DELIVERY INCLUDES

- EM 300-500 G4 true diversity receiver
- SKM 300 G4-S handheld transmitter
- MME 865-1 microphone head
- GA 3 rackmount set
- MZQ 1 microphone clamp
- power supply
- 2 AA batteries
- 2 rod antennas
- quick guide
- safety guide
- manufacturer declaration sheet

### ACCESSORIES

|                |                                     |                 |
|----------------|-------------------------------------|-----------------|
| <b>BA 2015</b> | rechargeable battery                | Art. no. 009950 |
| <b>LA 2</b>    | charging adapter for L 2015 charger | Art. no. 503162 |
| <b>L 2015</b>  | charger                             | Art. no. 009828 |
| <b>KEN 2</b>   | identification rings                | Art. no. 530195 |



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### SPECIFICATIONS

#### EM 300-500 G4

##### RF characteristics

|                                        |                                                                                                                                                                                                                     |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Modulation                             | Wideband FM                                                                                                                                                                                                         |
| Frequency ranges                       | Aw+: 470 - 558 MHz<br>AS: 520 - 558 MHz<br>Gw1: 558 - 608 MHz<br>Gw: 558 - 626 MHz<br>GBw: 606 - 678 MHz<br>Bw: 526 - 698 MHz<br>Cw: 718 - 790 MHz<br>Dw: 790 - 865 MHz<br>JB: 806 - 810 MHz<br>K+: 925 - 937.5 MHz |
| Receiving frequencies                  | Max. 3520 receiving frequencies, adjustable in 25 kHz steps<br><br>20 frequency banks, each with up to 32 factory-pre-set channels, no intermodulation<br><br>6 frequency banks with up to 32 programmable channels |
| Switching bandwidth                    | up to 88 MHz                                                                                                                                                                                                        |
| Nominal/peak deviation                 | ±24 kHz / ±48 kHz                                                                                                                                                                                                   |
| Receiver principle                     | True diversity                                                                                                                                                                                                      |
| Sensitivity (with HDX, peak deviation) | < 2.5 µV for 52 dB <sub>A</sub> <small>eff S/N</small>                                                                                                                                                              |
| Adjacent channel selection             | Typically ≥ 75 dB                                                                                                                                                                                                   |
| Intermodulation attenuation            | Typically ≥ 70 dB                                                                                                                                                                                                   |
| Blocking                               | ≥ 75 dB                                                                                                                                                                                                             |

|                    |                               |
|--------------------|-------------------------------|
| Squelch            | 5 to 25 dBµV in steps of 2 dB |
| Pilot tone squelch | Can be switched off           |
| Antenna inputs     | 2 BNC sockets                 |

##### AF characteristics

|                                                          |                                                                                                                                                                    |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Compander system                                         | Sennheiser HDX                                                                                                                                                     |
| EQ presets (switchable, act on line and monitor outputs) | Preset 1: Flat<br>Preset 2: Low Cut (-3 dB at 180 Hz)<br>Preset 3: Low Cut/High Boost (-3 dB at 180 Hz, +6 dB at 10 kHz)<br>Preset 4: High Boost (+6 dB at 10 kHz) |
| Signal-to-noise ratio (1 mV, peak deviation)             | ≥ 115 dBA                                                                                                                                                          |
| Total harmonic distortion (THD)                          | ≤ 0.9 %                                                                                                                                                            |
| AF output voltage (at peak deviation, 1 kHz AF)          | 6.3 mm jack socket (unbalanced): +12 dBu<br>XLR socket (balanced): +18 dBu                                                                                         |
| Setting range "AF Out"                                   | 48 dB (3 dB steps)                                                                                                                                                 |

##### Overall device

|                     |                           |
|---------------------|---------------------------|
| Temperature range   | -10 °C to +55 °C          |
| Power supply        | 12 V DC                   |
| Current consumption | 350 mA                    |
| Dimensions          | Approx. 202 x 212 x 43 mm |
| Weight              | Approx. 980 g             |

### CONNECTIONS





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#### SPECIFICATIONS

##### SKM 300 G4-S

| RF characteristics             |                                                                                                                                                                                                                     |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Modulation                     | Wideband FM                                                                                                                                                                                                         |
| Frequency ranges               | Aw+: 470 - 558 MHz<br>AS: 520 - 558 MHz<br>Gw1: 558 - 608 MHz<br>Gw: 558 - 626 MHz<br>GBw: 606 - 678 MHz<br>Bw: 526 - 698 MHz<br>Cw: 718 - 790 MHz<br>Dw: 790 - 865 MHz<br>JB: 806 - 810 MHz<br>K+: 925 - 937.5 MHz |
| Transmission frequencies       | Max. 3520 frequencies, adjustable in 25 kHz steps<br><br>20 frequency banks, each with up to 32 factory-pre-set channels, no intermodulation<br><br>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:<br>Low: typ. 10 mW<br>Standard: typ. 30 mW<br>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) | $\geq 115$ dBA                  |
| Total harmonic distortion (THD)              | $\leq 0.9$ %                    |
| 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:<br>typ. 180 mA<br>with transmitter switched off: $\leq 25$ $\mu$ A |
| Operating time           | Typically 8 h                                                                          |
| Dimensions               | Approx. $\varnothing 50 \times 265$ mm                                                 |
| Weight (incl. batteries) | approx. 450 g                                                                          |

#### SPECIFICATIONS

##### MME 865-1

|                      |                                    |
|----------------------|------------------------------------|
| Transducer principle | pre-polarized condensor microphone |
| Sensitivity          | 1.6 mV/Pa                          |
| Sound pressure level | 152 dB SPL                         |
| Pick-up pattern      | supercardioid                      |

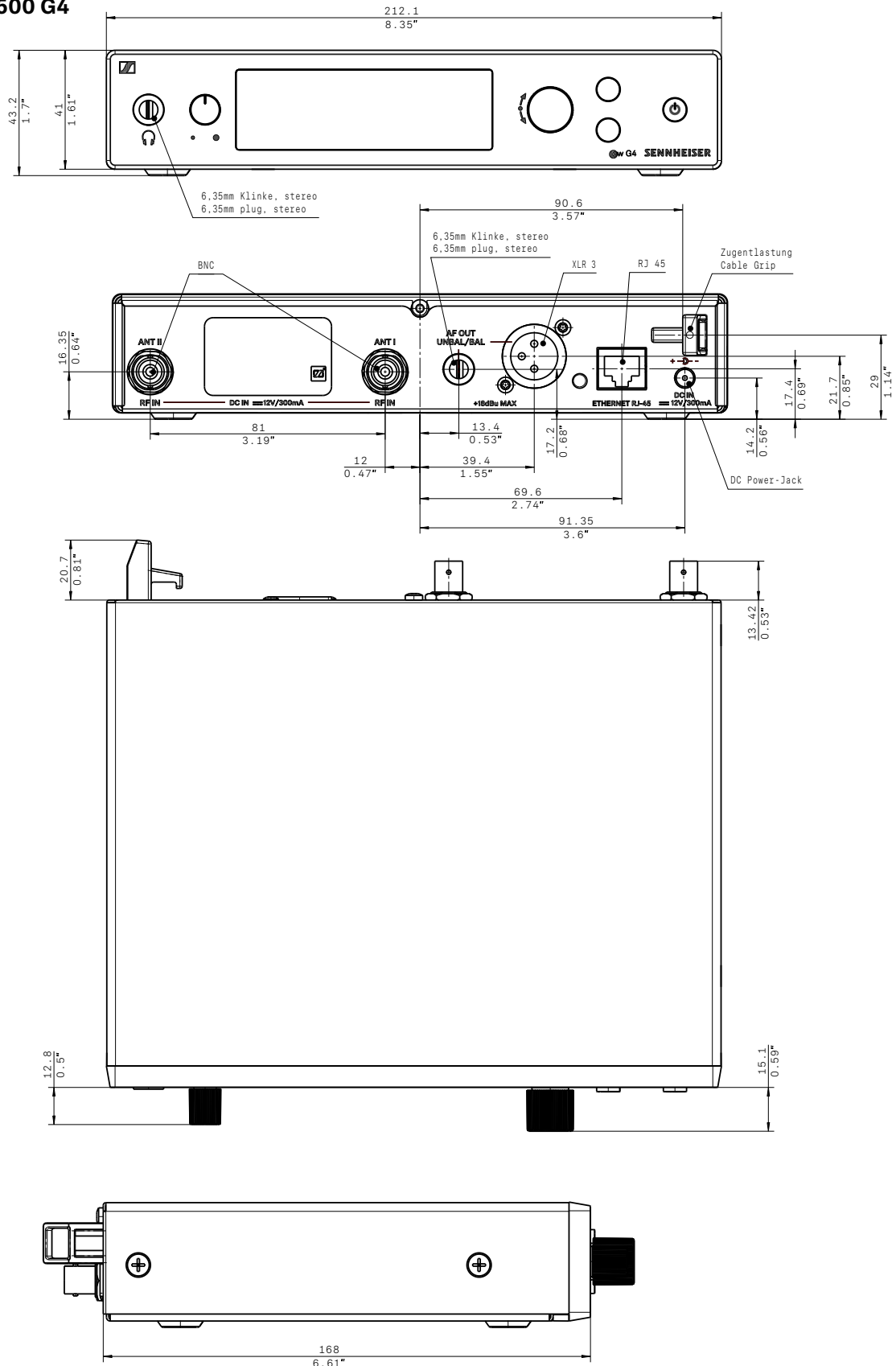


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### DIMENSIONS

#### EM 300-500 G4



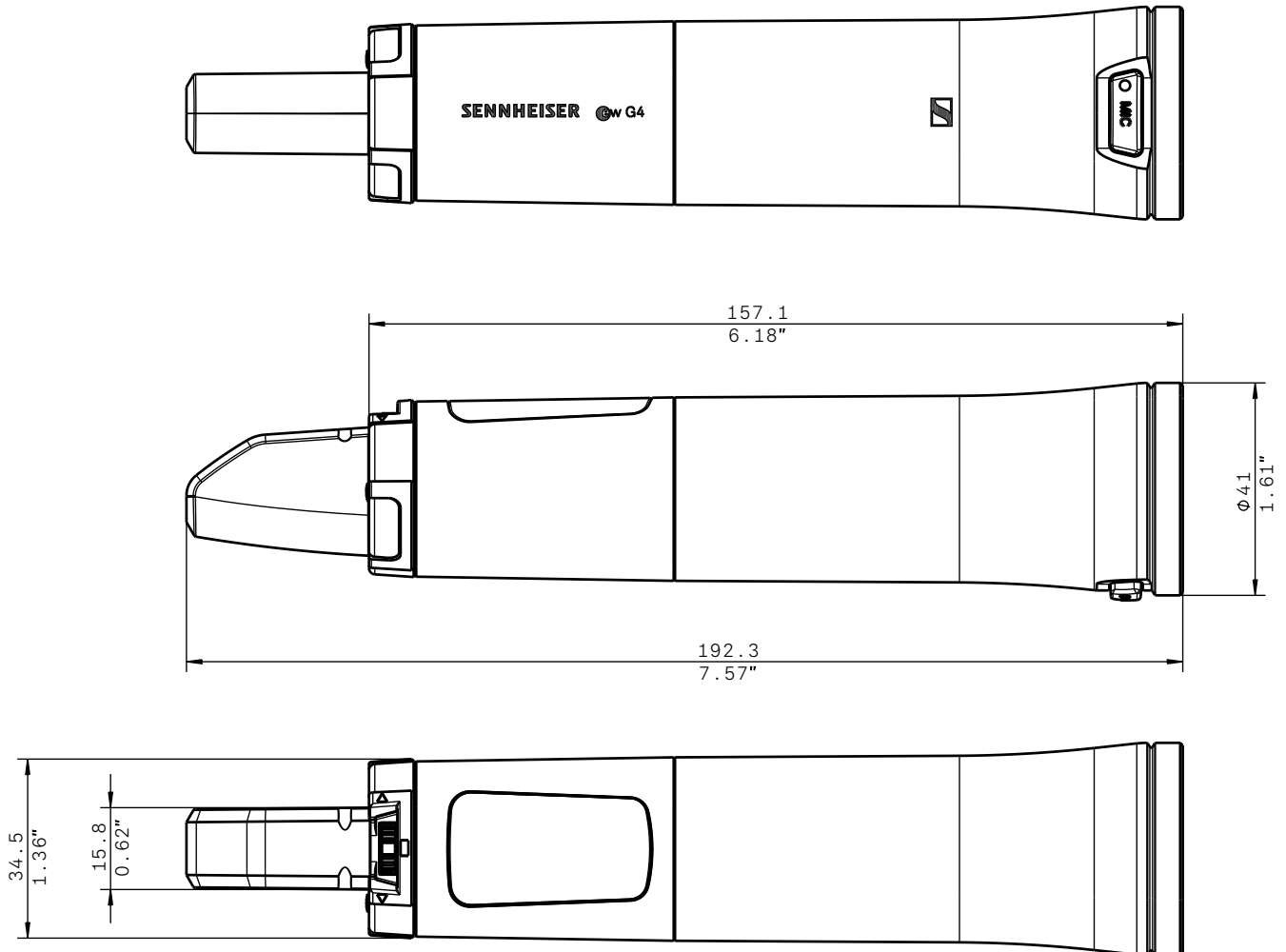


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## ew 300 G4-865-S | Handheld Set

### DIMENSIONS

#### SKM 300 G4-S





## evolution wireless G4

### ew 300 G4-865-S | Handheld Set

#### PRODUCT VARIANTS

##### Made in Germany

|                            |                 |                 |
|----------------------------|-----------------|-----------------|
| <b>ew 300 G4-865-S-K+</b>  | 925 - 937.5 MHz | Art. no. 507687 |
| <b>ew 300 G4-865-S-GBw</b> | 606 - 678 MHz   | Art. no. 507688 |
| <b>ew 300 G4-865-S-Gw</b>  | 558 - 626 MHz   | Art. no. 507689 |
| <b>ew 300 G4-865-S-Bw</b>  | 626 - 698 MHz   | Art. no. 507690 |
| <b>ew 300 G4-865-S-Cw</b>  | 718 - 790 MHz   | Art. no. 507691 |
| <b>ew 300 G4-865-S-Dw</b>  | 790 - 865 MHz   | Art. no. 507692 |
| <b>ew 300 G4-865-S-Aw+</b> | 470 - 558 MHz   | Art. no. 508402 |

##### Assembled in USA

|                            |               |                 |
|----------------------------|---------------|-----------------|
| <b>ew 300 G4-865-S-AS</b>  | 520 - 558 MHz | Art. no. 508027 |
| <b>ew 300 G4-865-S-JB</b>  | 806 - 810 MHz | Art. no. 508028 |
| <b>ew 300 G4-865-S-Gw</b>  | 558 - 626 MHz | Art. no. 508029 |
| <b>ew 300 G4-865-S-Bw</b>  | 626 - 698 MHz | Art. no. 508030 |
| <b>ew 300 G4-865-S-Cw</b>  | 718 - 790 MHz | Art. no. 508031 |
| <b>ew 300 G4-865-S-Dw</b>  | 790 - 865 MHz | Art. no. 508032 |
| <b>ew 300 G4-865-S-Aw+</b> | 470 - 558 MHz | Art. no. 508423 |
| <b>ew 300 G4-865-S-Gw1</b> | 558 - 608 MHz | Art. no. 508444 |

#### ARCHITECT'S SPECIFICATION

A wireless RF transmission system designed for presentation use and other applications where maximum speech intelligibility is required.

The system shall consist of a stationary receiver, a handheld transmitter and a condenser microphone head.

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 OLED display showing the current frequency, frequency bank and channel number, metering of RF level, metering of AF level, lock status, pilot tone evaluation, muting function, and battery status of the associated transmitter. An auto-lock feature shall be provided to prevent settings from being accidentally altered. The receiver shall provide a sound check mode.

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

The receiver shall feature a balanced XLR-3M audio output with a maximum output of +18 dBu along with an unbalanced ¼" (6.3 mm) audio output with a maximum output of +12 dBu. A headphone output with headphone volume control shall be provided and shall utilize a ¼" (6.3 mm) stereo jack socket. The receiver shall have an Ethernet port (RJ-45) for remote network-based monitoring and control using the Sennheiser Control Cockpit or the Sennheiser Wireless System Manager software. Two BNC-type input sockets shall be provided for connecting the antennas.

Nominal/peak deviation shall be  $\pm 24$  kHz/ $\pm 48$  kHz. Squelch threshold shall be defeatable (off) or adjustable from 5 - 25 dB $\mu$ V in steps of 2 dB.



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The receiver shall incorporate the Sennheiser HDX compander system and a defeatable pilot tone squelch. Sensitivity shall be  $< 2 \mu\text{V}$  for 52 dBA eff S/N with HDX engaged at peak deviation. Adjacent channel rejection shall be  $\geq 75 \text{ dB}$  (typical). Intermodulation attenuation shall be  $\geq 70 \text{ dB}$  (typical); blocking shall be  $\geq 75 \text{ dB}$ . Four selectable equalizer presets shall be provided: “Flat”, “Low Cut” ( $-3 \text{ dB}$  at 180 Hz), “Low Cut/High Boost” ( $-3 \text{ dB}$  at 180 Hz/ $+5.5 \text{ dB}$  at 10 kHz) and “High Boost” ( $+5.5 \text{ dB}$  at 10 kHz). Signal-to-noise ratio at 1 mV and peak deviation shall be  $\geq 115 \text{ dBA}$ . Total harmonic distortion (THD) shall be  $\leq 0.9 \%$ . The audio output level shall be adjustable within a 48 dB range in steps of 3 dB.

The receiver shall operate on 12 V power supplied from the NT 2-3 CW mains unit (for 100 – 240 V AC, 50/60 Hz). Power consumption shall be 350 mA. The receiver shall have a rugged metal housing; dimensions shall be approximately 202 x 212 x 43 mm (7.95" x 8.35" x 1.69"). Weight shall be approximately 980 grams (2.16 lbs). Operating temperature shall range from  $-10 \text{ }^{\circ}\text{C}$  to  $+55 \text{ }^{\circ}\text{C}$  ( $+14 \text{ }^{\circ}\text{F}$  to  $+131 \text{ }^{\circ}\text{F}$ ).

The receiver shall be the Sennheiser EM 300-500 G4.

The handheld 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 handheld transmitter parameters shall be programmable in the handheld transmitter menu. Receiver parameters such as receiving frequency, receiver name and pilot tone setting shall be synchronizable with the handheld transmitter via an integrated infrared interface.

The handheld transmitter shall be equipped with a mute switch, which shall be switchable between “AF on/off”, “RF on/off”, “Push to mute”, “Push to talk” and “Disabled” via the user interface.

Nominal/peak deviation shall be  $\pm 24 \text{ kHz}/\pm 48 \text{ kHz}$ . Frequency stability shall be  $\leq \pm 15 \text{ ppm}$ . 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 handheld 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  $\geq 115 \text{ dBA}$ . Total harmonic distortion (THD) shall be  $\leq 0.9 \%$ . Input sensitivity shall be adjustable within a 48 dB range in steps of 6 dB.

Power shall be supplied to the handheld 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;  $\leq 25 \mu\text{A}$  when handheld transmitter is switched off. Operating time shall be typical 8 hours. The handheld transmitter shall have a rugged metal housing; dimensions shall be approximately 50 mm (1.97") in diameter and 265 mm (10.43") in length. Weight including the batteries shall be approximately 450 grams (0.99 lbs). Operating temperature shall range from  $-10 \text{ }^{\circ}\text{C}$  to  $+55 \text{ }^{\circ}\text{C}$  ( $+14 \text{ }^{\circ}\text{F}$  to  $+131 \text{ }^{\circ}\text{F}$ ). A range of microphone heads shall be available for the handheld transmitter.

The handheld transmitter shall be the Sennheiser SKM 300 G4-S.