



evolution wireless G4

EM 100 G4 | True Diversity Receiver



True diversity half-rack receiver in a full-metal housing with intuitive LCD display for full control with evolution wireless G4 100 Series systems.

FEATURES

- True diversity half-rack receiver in a full-metal housing with intuitive LCD display for full control.
- Easy and flexible wireless synchronization between transmitter and receiver via infrared
- Fast frequency allocation for up to 12 receivers via new linking functionality
- Up to 20 compatible channels
- Up to 42 MHz bandwidth with 1680 selectable frequencies, fully tunable in a stable UHF range
- Transmission Range: up to 100 meters / 300 feet
- High RF output power (up to 30 mW) depending on country regulations

DELIVERY INCLUDES

- EM 100 G4 true diversity receiver
- 2 rod antennas
- power supply
- RJ 10 cable
- GA 3 rackmount set
- quick guide
- safety guide
- manufacturer declaration sheet
- frequency supplement sheet

PRODUCT VARIANTS

Made in Germany

EM 100 G4-A1	470 - 516 MHz	Art. no. 507603
EM 100 G4-A	516 - 558 MHz	Art. no. 507604
EM 100 G4-GB	606 - 648 MHz	Art. no. 507605
EM 100 G4-G	566 - 608 MHz	Art. no. 507606
EM 100 G4-B	626 - 668 MHz	Art. no. 507607
EM 100 G4-C	734 - 776 MHz	Art. no. 507608
EM 100 G4-E	823 - 865 MHz	Art. no. 507609
EM 100 G4-1G8	1785 - 1800 MHz	Art. no. 507610
EM 100 G4-K+	925 - 937.5 MHz	Art. no. 507611

Assembled in USA

EM 100 G4-A1	470 - 516 MHz	Art. no. 507945
EM 100 G4-A	516 - 558 MHz	Art. no. 507946
EM 100 G4-AS	520 - 558 MHz	Art. no. 507947
EM 100 G4-G	566 - 608 MHz	Art. no. 507948
EM 100 G4-B	626 - 668 MHz	Art. no. 507949
EM 100 G4-C	734 - 776 MHz	Art. no. 507950
EM 100 G4-D	780 - 822 MHz	Art. no. 507951
EM 100 G4-JB	806 - 810 MHz	Art. no. 507952



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SPECIFICATIONS

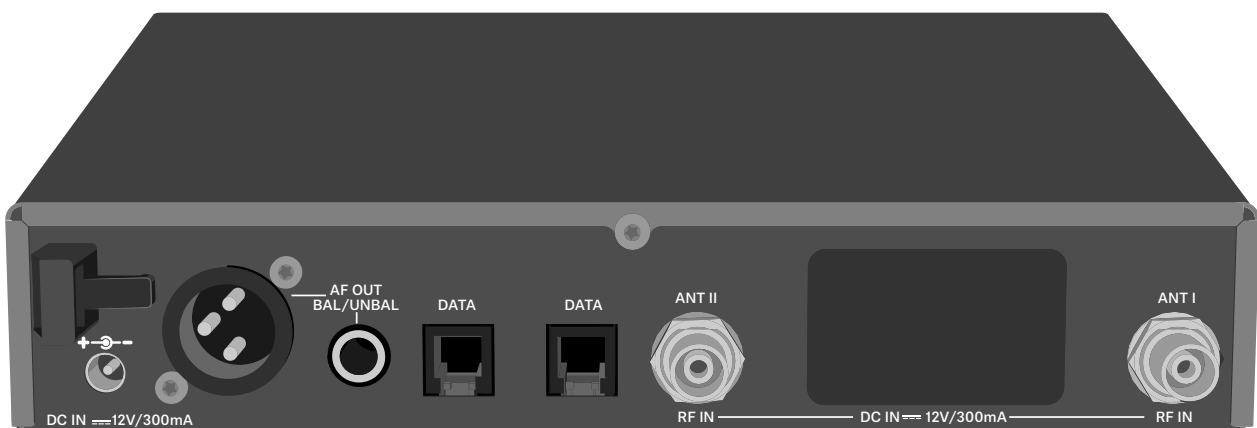
RF characteristics	
Modulation	Wideband FM
Frequency ranges	A1: 470 - 516 MHz A: 516 - 558 MHz AS: 520 - 558 MHz G: 566 - 608 MHz GB: 606 - 648 MHz B: 626 - 668 MHz C: 734 - 776 MHz D: 780 - 822 MHz E: 823 - 865 MHz JB: 806 - 810 MHz K+: 925 - 937.5 MHz 1G8: 1785 - 1800 MHz
Receiving frequencies	Max. 1680 receiving frequencies, adjustable in 25 kHz steps 20 frequency banks, each with up to 12 factory-preset channels, no intermodulation 1 frequency bank with up to 12 programmable channels
Switching bandwidth	up to 42 MHz
Nominal/peak deviation	± 24 kHz / ± 48 kHz
Receiver principle	True diversity
Sensitivity (with HDX, peak deviation)	$< 2.5 \mu\text{V}$ for 52 dBA _{eff S/N}
Adjacent channel selection	Typically ≥ 65 dB
Intermodulation attenuation	Typically ≥ 65 dB
Blocking	≥ 70 dB

Squelch	low: 5 dB μV middle: 15 dB μV high: 25 dB μV
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 Preset 2: Low Cut (-3 dB at 180 Hz) Preset 3: Low Cut/High Boost (-3 dB at 180 Hz, +6 dB at 10 kHz) Preset 4: High Boost (+6 dB at 10 kHz)
Signal-to-noise ratio (1 mV, peak deviation)	≥ 110 dBA
Total harmonic distortion (THD)	≤ 0.9 %
AF output voltage (at peak deviation, 1 kHz AF)	6.3 mm jack socket (unbalanced): +12 dBu 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	300 mA
Dimensions	Approx. 190 x 212 x 43 mm
Weight	Approx. 980 g

CONNECTIONS

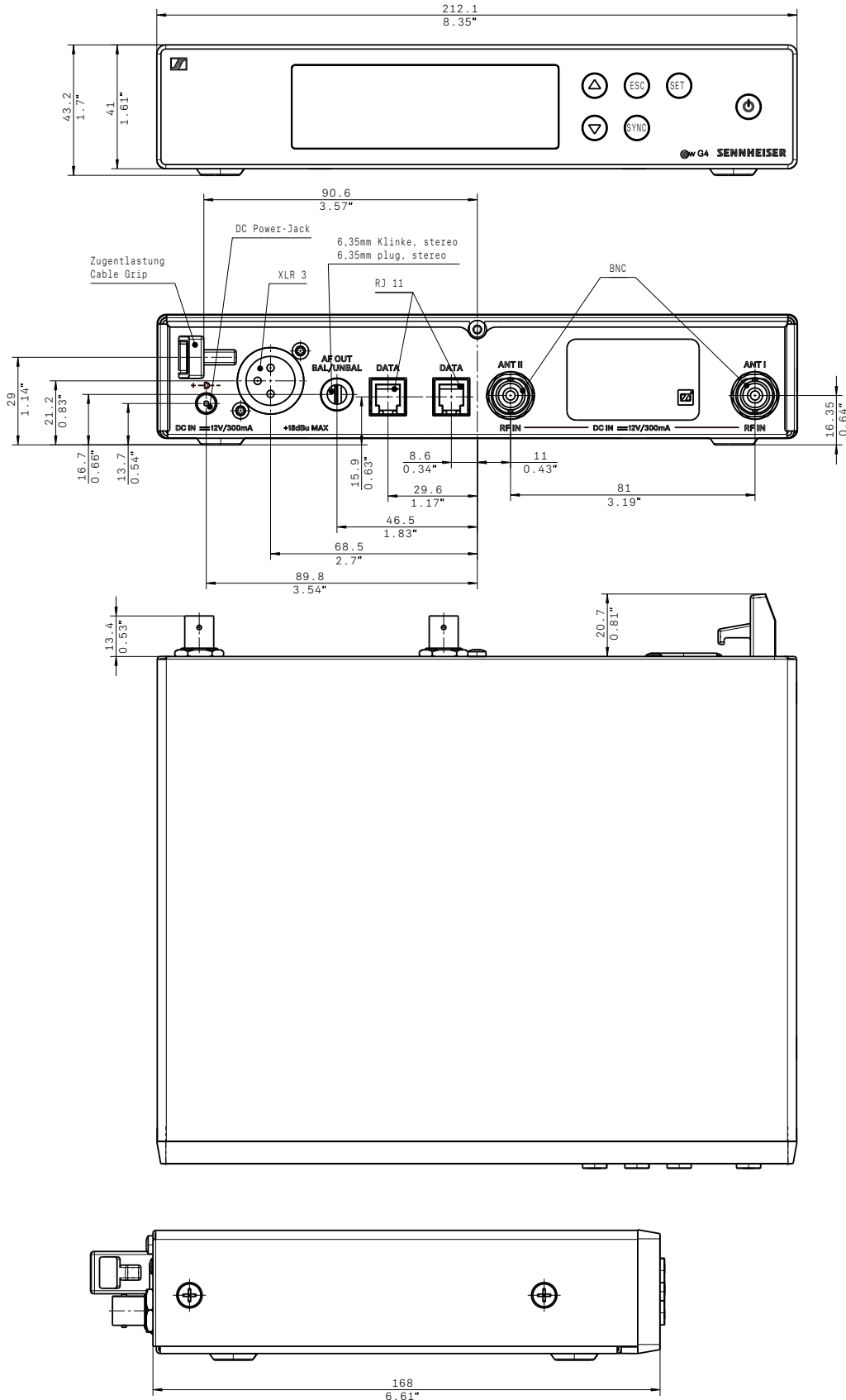




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DIMENSIONS





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ARCHITECT'S SPECIFICATION

The stationary receiver with true diversity technology shall be for use with a companion transmitter as part of a wireless RF transmission system.

The receiver shall operate within twelve 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, 1785 – 1800 MHz; receiving frequencies shall be 1,680 per range and shall be tunable in 25 kHz steps. The receiver 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, 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 feature an integrated guitar tuner and 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. The receiver shall have two DATA ports (RJ 10) to set up a multichannel system. Two BNC-type input sockets shall be provided for connecting the antennas.

Nominal/peak deviation shall be ± 24 kHz/ ± 48 kHz. Squelch threshold shall be adjustable to three levels: Low (5 dB μ V), Middle (15 dB μ V) and High (25 dB μ V).

The receiver shall incorporate the Sennheiser HDX compander system and a defeatable pilot tone squelch. Sensitivity shall be < 2 μ V for 52 dBA eff S/N with HDX engaged at peak deviation. Adjacent channel rejection shall be ≥ 65 dB (typical). Intermodulation attenuation shall be ≥ 65 dB (typical); blocking shall be ≥ 70 dB. Four selectable equalizer presets shall be provided: "Flat", "Low Cut" (-3 dB at 180 Hz), "Low Cut/High Boost" (-3 dB at 180 Hz/ $+6$ dB at 10 kHz) and "High Boost" ($+6$ dB at 10 kHz).

Signal-to-noise ratio at 1 mV and peak deviation shall be ≥ 110 dBA. Total harmonic distortion (THD) shall be ≤ 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 300 mA. The receiver shall have a rugged metal housing; dimensions shall be approximately 190 x 212 x 43 mm (7.48" x 8.35" x 1.69"). Weight shall be approximately 980 grams (2.16 lbs). Operating temperature shall range from -10 °C to $+55$ °C ($+14$ °F to $+131$ °F).

The receiver shall be the Sennheiser EM 100 G4.