

# EM 100 G3 Stationary receiver

## FEATURES

- Sturdy metal housing
- 42 MHz bandwidth: 1680 tunable UHF frequencies for interference-free reception
- Enhanced frequency bank system with up to 12 compatible frequencies
- High-quality true diversity reception
- Pilot tone squelch for eliminating RF interference when transmitter is turned off
- Automatic frequency scan feature searches for available frequencies
- Enhanced AF frequency range
- Wireless synchronization of transmitters via infrared interface
- User-friendly menu operation with more control options
- Illuminated graphic display
- Auto-Lock function avoids accidental changing of settings
- HDX compander for crystal-clear sound
- Receiver features transmitter battery indication in 4 steps
- Integrated Equalizer, Soundcheck mode and guitar tuner
- Wide range of accessories adapts the system to any requirement
- Optimized PLL synthesizer and microprocessor technology

With its improved design and new features, this rugged G3 rack receiver is ready for the road with its proven transmission reliability and inspiring flexibility. The sound check mode allows you to check the audio and RF signal at any time during setup. 20 frequency banks with 12 preset frequencies each, plus a user-programmable bank mean you can easily run multiple channels of G3 wireless simultaneously.



## TECHNICAL DATA

Modulation .....	wideband FM
Frequency ranges.....	516–558, 566–608, 626–668, 734–776, 780–822, 823–865 MHz
Receiving frequencies .....	1,680 frequencies, tuneable in steps of 25 kHz 20 frequency banks, each with up to 12 factory-preset channels, intermodulation-free 1 frequency bank with up to 12 user programmable channels
Switching bandwidth.....	42 MHz
Nominal/peak deviation .....	± 24 kHz/± 48 kHz
Receiver principle .....	true diversity
Sensitivity (with HDX, peak deviation) .....	< 2 µV for 52 dBa rms S/N
Adjacent channel rejection .....	typ. ≥ 65 dB
Intermodulation attenuation .....	typ. ≥ 65 dB
Blocking.....	≥ 70 dB
Squelch .....	Off, Low: 5 dBmV, Middle: 15 dBmV, High: 25 dBmV
Pilot tone squelch .....	can be switched off
Antenna inputs.....	2 BNC sockets
Compander system.....	Sennheiser HDX
EQ presets	
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

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## TECHNICAL DATA

Preset 4: "High Boost" .....+6 dB at 10 kHz  
S/N ratio (1 mV, peak deviation) .....≥110 dBA  
THD .....≤ 0.9%  
AF output voltage (at peak deviation, 1 kHz AF)  
1/4" (6.3 mm) jack socket (unbalanced) .....+12 dBu  
XLR socket (balanced) .....+18 dBu  
Adjustment range of audio output level.....48 dB, adjustable in steps of 3 dB  
+6 dB gain reserve  
Temperature range.....-10 °C to + 55 °C  
Power supply.....12 V  
Nominal voltage .....2.4 V DC  
Power consumption.....300 mA  
Dimensions .....approx. 190 mm x 212 mm x 43 mm  
Weight .....approx. 980 g

**DELIVERY INCLUDES**  
1 EM 100 G3 stationary receiver  
1 NT 2-3 or NT 2-1 mains unit with one country adapter  
2 Rod antennas  
2 Stacking elements  
1 Instruction manual  
1 Frequency information sheet  
4 Device feet

## ARCHITECT'S SPECIFICATIONS

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 six UHF frequency ranges, each with a 42 MHz switching bandwidth: 516–558 MHz, 566–608 MHz, 626–668 MHz, 734–776 MHz, 780–822 MHz, 823–865 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 feature a balanced XLR-3M audio output with a maximum output of +18 dBu along with an unbalanced 1/4" (6.3 mm) audio output with a maximum output of +12 dBu. Two BNC-type input sockets shall be provided for connecting the antennas.

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.

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

The receiver shall incorporate the Sennheiser HDX compander system and a defeatable pilot tone squelch. Sensitivity shall be < 2 µV for 52 dB Arms 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).

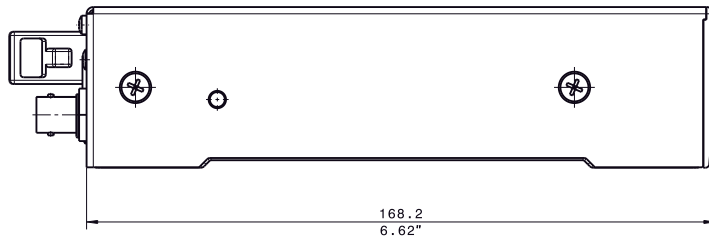
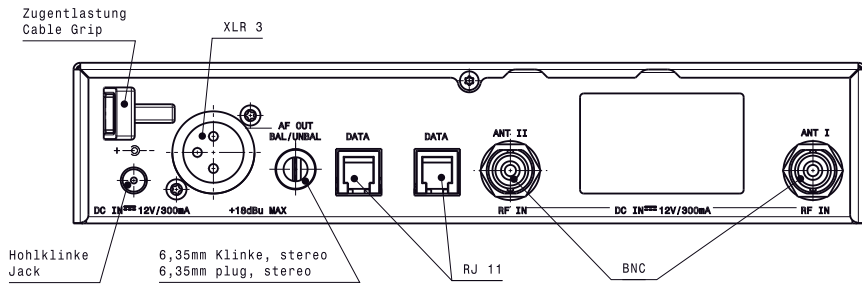
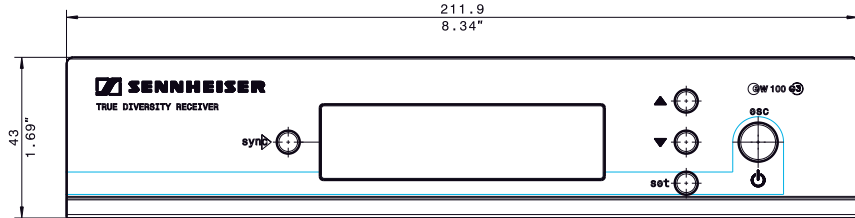
Signal-to-noise ratio at 1 mV and peak deviation shall be ≥ 110 dB. Total harmonic distortion (THD) shall be ≤ 0.9 %.

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 2-1 mains unit (for 110 V AC or 230 V AC, 50/60 Hz) or the NT 2-3 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 G3.

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## DIMENSIONS



## CONNECTIVITY



## EM 100 G3 Stationary receiver

### PRODUCT VARIANTS

EM 100 G3-A-EU – 516...558 MHz / Power supply unit EU	Cat. No. 503124
EM 100 G3-A-US – 516...558 MHz / Power supply unit US	Cat. No. 503512
EM 100 G3-A-UK – 516...558 MHz / Power supply unit UK	Cat. No. 503513
EM 100 G3-G-EU – 566...608 MHz / Power supply unit EU	Cat. No. 503514
EM 100 G3-G-US – 566...608 MHz / Power supply unit US	Cat. No. 503515
EM 100 G3-G-UK – 566...608 MHz / Power supply unit UK	Cat. No. 503516
EM 100 G3-B-EU – 626...668 MHz / Power supply unit EU	Cat. No. 503517
EM 100 G3-B-US – 626...668 MHz / Power supply unit US	Cat. No. 503518
EM 100 G3-B-UK – 626...668 MHz / Power supply unit UK	Cat. No. 503519
EM 100 G3-C-EU – 734...776 MHz / Power supply unit EU	Cat. No. 503520
EM 100 G3-C-US – 734...776 MHz / Power supply unit US	Cat. No. 503521
EM 100 G3-C-UK – 734...776 MHz / Power supply unit UK	Cat. No. 503522
EM 100 G3-D-EU – 780...822 MHz / Power supply unit EU	Cat. No. 503523
EM 100 G3-D-EU-X – 780...822 MHz / Power supply unit EU/Germany	Cat. No. 503524
EM 100 G3-D-UK – 780...822 MHz / Power supply unit UK	Cat. No. 503525
EM 100 G3-E-EU – 823...865 MHz / Power supply unit EU	Cat. No. 503526
EM 100 G3-E-EU-X – 823...865 MHz / Power supply unit EU/Germany	Cat. No. 503527
EM 100 G3-E-UK – 823...865 MHz / Power supply unit UK	Cat. No. 503528
EM 100 G3-1G8 – 1785 MHz...1800 MHz	Cat. No. 504909

### RECOMMENDED ACCESSORIES

AM 2 – Antenna Mount	Cat. No. 9912
CC 3 – Case	Cat. No. 503168
L 2015 – Charging Adapter	Cat. No. 9828
BA 2015 – Akku	Cat. No. 9950
AC 3 – Active antenna combiner	Cat. No. 503166
ASA 1 – Antenna spiltter	Cat. No. 503165
ASA 1-1G8 – Antenna spiltter	Cat. No. 504914
NT-1 – plug-in mains unit for ASA 1 & L 2015	Cat. No. 4786
CL 2 – Linecable	Cat. No. 4840
A 1031-U – Antenna	Cat. No. 4645
AD 1800 – Antenna	Cat. No. 504916
AB 3 – Antennabooster	Cat. No. 21822
AB 3 – 1G8 Antennebooster	Cat. No. 504915
GA 3 19" Rack Adapter	Cat. No. 503167
NT 2-3-US – Power supply for G3 EM rackmount receivers and transmitters	Cat. No. 503870
GA 3 19" Rack Adapter	Cat. No. 503167
AM 2 – Antenna Mount	Cat. No. 9912
ASA 1 – Antenna spiltter	Cat. No. 503165
NT 1-1 EU – Mains unit for powering the ASA 1 antenna splitter or the L 2015 charger, EU version	Cat. No. 503158
NT 1-1 US – Mains unit for powering the ASA 1 antenna splitter or the L 2015 charger, 120 V version	Cat. No. 503873
NT 1-1 UK – Mains unit for powering the ASA 1 antenna splitter or the L 2015 charger, UK version	Cat. No. 503874
NT 2-3 EU – Mains unit for powering the EM 100 G3 stationary receiver, EU version	Cat. No. 503157
NT 2-3 US – Mains unit for powering the EM 100 G3 stationary receiver, 120 V version	Cat. No. 503870
NT 2-3 UK – Mains unit for powering the EM 100 G3 stationary receiver, UK version	Cat. No. 503871