

EM 500 G3

Rack-mount 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 micro-processor technology

In every respect, this professional receiver from the new Sennheiser G3 line provides the most features and performance the evolution series has to offer. It begins with an especially high number of presets possible per frequency bank (32), making setup of many wireless systems a breeze. The built-in Ethernet port allows computer control and monitoring with a PC running Sennheiser's Wireless System Manager software. The large graphic display provides a great deal of additional information at a glance. One-touch sync function automatically links up a G3 transmitter with this receiver.

Lastly, the switching power supply is ideal for touring acts and rental companies who need a wireless that can be powered from worldwide sources.



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 32 factory-preset channels, intermodulation-free 6 frequency banks with up to 32 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. ≥ 75 dB
Intermodulation attenuation	typ. ≥ 70 dB
Blocking.....	≥ 75 dB
Squelch	Off, 5 to 25 dBµV, adjustable in steps of 2 dB
Pilot tone squelch	can be switched off
Antenna inputs.....	2 BNC sockets, 50 Ohm
Componder 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)≥ 115 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
Power consumption:.....350 mA
Dimensionsapprox. 202 mm x 212 mm x 43 mm
Weightapprox. 980 g

DELIVERY INCLUDES

1 EM 500 G3 rack-mount receiver
1 NT 2-3 mains unit with one country
adapter
2 Rod antennas
1 GA 3 rack adapter
1 Instruction manual
1 Frequency information sheet
4 Device feet

ARCHITECT'S SPECIFICATIONS

The rack-mount 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 32 compatible frequency presets and 6 user banks with up to 32 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. A headphone output with headphone volume control shall be provided and shall utilize a 1/4" (6.3 mm) stereo jack socket. The receiver shall have an Ethernet port (RJ45) for remote network-based monitoring and control using the Sennheiser Wireless System Manager software. Two 50 Ω 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, equalizer setting, output gain, muting function, transmitter type 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.

The parameters of associated transmitters shall be configurable in the receiver menu and synchronized with the transmitters via an integrated infrared interface.

Nominal/peak deviation shall be ±24 kHz/±48 kHz. Squelch threshold shall be defeatable (off) or adjustable adjustable from 5–25 dBμV in 2 dB steps.

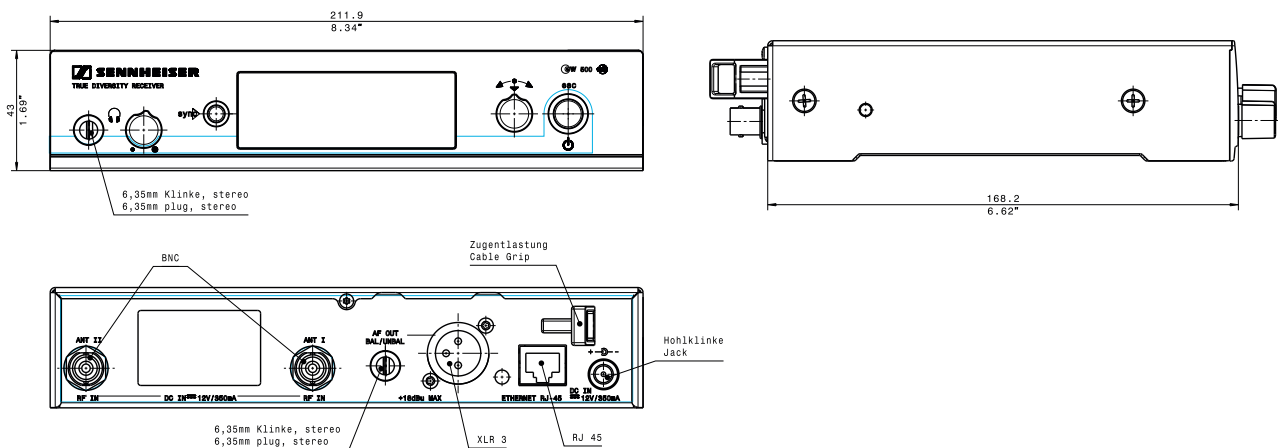
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ARCHITECT'S SPECIFICATIONS

The receiver shall incorporate the Sennheiser HDX compander system and a defeatable pilot tone squelch. Sensitivity shall be $< 2 \mu\text{V}$ for 52 dB Arms 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 dB at 180 Hz), "Low Cut/High Boost" (-3 dB at 180 Hz/ $+6 \text{ dB}$ at 10 kHz) and "High Boost" ($+6 \text{ dB}$ at 10 kHz). Signal-to-noise ratio at 1 mV and peak deviation shall be $\geq 115 \text{ dB}$. 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 mains unit. 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 500 G3.

DIMENSIONS



CONNECTIVITY



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PRODUCT VARIANTS

EM 500 G3-A-EU – 516...558 MHz / Power supply unit EU	Cat. No. 503138
EM 500 G3-A-US – 516...558 MHz / Power supply unit US	Cat. No. 503658
EM 500 G3-G-EU – 566...608 MHz / Power supply unit EU	Cat. No. 503659
EM 500 G3-G-US – 566...608 MHz / Power supply unit US	Cat. No. 503660
EM 500 G3-B-EU – 626...668 MHz / Power supply unit EU	Cat. No. 503661
EM 500 G3-B-US – 626...668 MHz / Power supply unit US	Cat. No. 503662
EM 500 G3-C-EU – 734...776 MHz / Power supply unit EU	Cat. No. 503663
EM 500 G3-C-US – 734...776 MHz / Power supply unit US	Cat. No. 503664
EM 500 G3-D-EU – 780...822 MHz / Power supply unit EU	Cat. No. 503665
EM 500 G3-D-EU-X – 780...822 MHz / Power supply unit EU / Germany	Cat. No. 503666
EM 500 G3-D-UK – 780...822 MHz / Power supply unit UK	Cat. No. 503667
EM 500 G3-E-EU – 823...865 MHz / Power supply unit EU	Cat. No. 503668
EM 500 G3-E-EU-X – 823...865 MHz / Power supply unit EU / Germany	Cat. No. 503669
EM 500 G3-E-UK – 823...865 MHz / Power supply unit UK	Cat. No. 503670

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 1 – Active antenna combiner	Cat. No. 503166
ASA 1 – Antenna spiltter	Cat. No. 503165
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
AB 3-A – Antenna booster module with +10 dB gain and 42 MHz bandwidth. (516-558 MHz)	Cat. No. 502567
AB 3-B – Antenna booster module with +10 dB gain and 42 MHz bandwidth. (626-668 MHz)	Cat. No. 502568
AB 3-G – Antenna booster module with +10 dB gain and 42 MHz bandwidth. (566-608 MHz)	Cat. No. 502572
NT 2-3-US – Power supply for G3 EM rackmount receivers and transmitters -	Cat. No. 503870
GA 3 19" Rack Adapter	Cat. No. 503167
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