

Versatile wireless systems for those who sing, speak or play instruments with up to 42 MHz tuning bandwidth in a stable UHF range and fast, simultaneous setup of up to 12 linked systems.

State-of-the-art live sound featuring Sennheiser's renowned e 835, e 845 and e 865 capsules on a lightweight aluminum transmitter with integrated mute switch.

FEATURES

- Engineered for professional live sound: Rugged all-in-one wireless system for singers and presenters.
- State-of-the-art live sound featuring Sennheiser's renowned e 835, e 845, e 865, e 935, e 945 capsules on a lightweight aluminium transmitter with integrated mute switch
- 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
- SKM 100 G4-S handheld transmitter
- MMD 835-1 microphone head (835-S variants only)
- MMD 845-1 microphone head (845-S variants only)
- MME 865-1 microphone head (865-S variants only)
- GA 3 rackmount set
- MZQ 1 microphone clamp
- power supply
- 2 AA batteries
- 2 rod antennas
- RJ 10 cable
- quick guide
- safety guide
- manufacturer declaration sheet
- frequency supplement sheet

Squelch

SPECIFICATIONS

EM 100 G4

RF characteristics			middle: 15 dBμV high: 25 dBμV	
Modulation	Wideband FM	Pilot tone squelch	Can be switched off	
Frequency ranges	A1: 470 - 516 MHz A: 516 - 558 MHz AS: 520 - 558 MHz G: 566 - 608 MHz GB: 606 - 648 MHz	Antenna inputs	2 BNC sockets	
		AF characteristics		
		Compander system	Sennheiser HDX	
	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	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)	
Receiving frequencies	Max. 1680 receiving frequencies, adjustable in 25 kHz steps		Preset 4: High Boost (+6 dB at 10 kHz)	
	20 frequency banks, each	Signal-to-noise ratio (1 mV, peak deviation)	≥ 110 dBA	
with up to 12 factory-pres channels, no intermodula tion		Total harmonic distortion (THD)	≤ 0.9 %	
	1 frequency bank with up to 12 programmable channels	AF output voltage (at peak deviation, 1 kHz AF)	6.3 mm jack socket (unbalanced): +12 dBu XLR socket	
Switching bandwidth	up to 42 MHz		(balanced): +18 dBu	
Nominal/peak deviation	±24 kHz / ±48 kHz	Setting range "AF Out"	48 dB (3 dB steps)	
Receiver principle	True diversity	Overall device		
Sensitivity (with HDX, peak deviation)	< 2.5 μV for 52 dBA $_{_{effS/N}}$	Temperature range	-10 °C to +55 °C	
Adjacent channel selection	Typically ≥ 65 dB	Power supply	12 V DC	
Intermodulation attenua-	Typically ≥ 65 dB	Current consumption	300 mA	
tion		Dimensions	Approx. 190 x 212 x 43 mm	
Blocking	≥ 70 dB	Weight	Approx. 980 g	

CONNECTIONS



low: 5 dBµV

SPECIFICATIONS

SKM 100 G4-S

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		
Transmission frequencies	Max. 1680 receiving frequencies, adjustable in 25 kHz steps 20 frequency banks, each with up to 12 factory-preset channels, no intermodula- tion 1 frequency bank with up to 12 programmable channels		
Switching bandwidth	up to 42 MHz		
Nominal/peak deviation	±24 kHz / ±48 kHz		
Frequency stability	≤ ±15 ppm		
RF output power at 50 Ω	Max. 30 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)	≥ 110 dBA		
Total harmonic distortion (THD)	≤ 0.9 %		
Max. input voltage	3 V _{eff}		
Input impedance	40 kΩ		
Input capacitance	Switchable		
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			
	BA 2015 accupack 3 V battery /		
Nominal voltage	BA 2015 accupack 3 V battery / 2.4 V rechargeable battery at nominal voltage: typ. 180 mA with transmitter switched		
Nominal voltage Current consumption	BA 2015 accupack 3 V battery / 2.4 V rechargeable battery at nominal voltage: typ. 180 mA with transmitter switched off: $\leq 25 \ \mu A$		

SPECIFICATIONS

MMD 835-1

Transducer principle	dynamic
Sensitivity	2.1 mV/Pa
Sound pressure level	154 dB SPL
Pick-up pattern	cardioid

MMD 845-1

Transducer principle	dynamic	
Sensitivity	1.6 mV/Pa	
Sound pressure level	154 dB SPL	
Pick-up pattern	supercardioid	

MME 865-1

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

PRODUCT VARIANTS

Made in Germany

Assem	bled	in l	JSA
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ew 100 G4-835-S-A1	470 - 516 MHz	Art. no. 507534	ew 100 G4-835-A1	470 - 516 MHz	Art. no. 507886
ew 100 G4-835-S-A	516 - 558 MHz	Art. no. 507535	ew 100 G4-835-A	516 - 558 MHz	Art. no. 507886
ew 100 G4-835-S-GB	606 - 648 MHz	Art. no. 507536	ew 100 G4-835-AS	520 - 558 MHz	Art. no. 507888
ew 100 G4-835-S-G	566 - 608 MHz	Art. no. 507537	ew 100 G4-835-G	566 - 608 MHz	Art. no. 507889
ew 100 G4-835-S-B	626 - 668 MHz	Art. no. 507538	ew 100 G4-835-B	626 - 668 MHz	Art. no. 507890
ew 100 G4-835-S-C	734 - 776 MHz	Art. no. 507539	ew 100 G4-835-C	734 - 776 MHz	Art. no. 507891
ew 100 G4-835-S-E	823 - 865 MHz	Art. no. 507540	ew 100 G4-835-D	780 - 822 MHz	Art. no. 507892
ew 100 G4-835-S-1G8	1785 - 1800 MHz	Art. no. 507541	ew 100 G4-835-JB	806 - 810 MHz	Art. no. 507893
ew 100 G4-835-S-K+	925 - 937.5 MHz	Art. no. 507542			
ew 100 G4-835-S-TH	794 - 806 MHz	Artno. 508578			
			ew 100 G4-845-A1	470 - 516 MHz	Art. no. 507894
ew 100 G4-845-S-A1	470 - 516 MHz	Art. no. 507543	ew 100 G4-845-A	516 - 558 MHz	Art. no. 507895
ew 100 G4-845-S-A	516 - 558 MHz	Art. no. 507544	ew 100 G4-845-AS	520 - 558 MHz	Art. no. 507896
ew 100 G4-845-S-GB	606 - 648 MHz	Art. no. 507545	ew 100 G4-845-G	566 - 608 MHz	Art. no. 507897
ew 100 G4-845-S-G	566 - 608 MHz	Art. no. 507546	ew 100 G4-845-B	626 - 668 MHz	Art. no. 507898
ew 100 G4-845-S-B	626 - 668 MHz	Art. no. 507547	ew 100 G4-845-C	734 - 776 MHz	Art. no. 507899
ew 100 G4-845-S-C	734 - 776 MHz	Art. no. 507548	ew 100 G4-845-D	780 - 822 MHz	Art. no. 507900
ew 100 G4-845-S-E	823 - 865 MHz	Art. no. 507549			
ew 100 G4-845-S-1G8	1785 - 1800 MHz	Art. no. 507552			
ew 100 G4-845-S-K+	925 - 937.5 MHz	Art. no. 507551			
ew 100 G4-845-S-TH	794 - 806 MHz	Artno. 508579	ew 100 G4-865-A1	470 - 516 MHz	Art. no. 507901
			ew 100 G4-865-A	516 - 558 MHz	Art. no. 507902
ew 100 G4-865-S-A1	470 - 516 MHz	Art. no. 507552	ew 100 G4-865-AS	520 - 558 MHz	Art. no. 507903
ew 100 G4-865-S-A	516 - 558 MHz	Art. no. 507553	ew 100 G4-865-G	566 - 608 MHz	Art. no. 507904
ew 100 G4-865-S-GB	606 - 648 MHz	Art. no. 507554	ew 100 G4-865-B	626 - 668 MHz	Art. no. 507905
ew 100 G4-865-S-G	566 - 608 MHz	Art. no. 507555	ew 100 G4-865-C	734 - 776 MHz	Art. no. 507906
ew 100 G4-865-S-B	626 - 668 MHz	Art. no. 507556	ew 100 G4-865-D	780 - 822 MHz	Art. no. 507907
ew 100 G4-865-S-C	734 - 776 MHz	Art. no. 507557			
ew 100 G4-865-S-E	823 - 865 MHz	Art. no. 507558			
ew 100 G4-865-S-1G8	1785 - 1800 MHz	Art. no. 507559			
ew 100 G4-865-S-K+	925 - 937.5 MHz	Art. no. 507560			

DIMENSIONS

EM 100 G4



DIMENSIONS

SKM 100 G4-S







ARCHITECT'S SPECIFICATION

A wireless RF transmission system consisting of a stationary receiver and a handheld transmitter includings a microphone head.

The system 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 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, 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 $\frac{1}{4}$ " (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 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 μ V 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. 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 \geq 110 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 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.

The radio microphone 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 radio microphone parameters shall either be configurable in the associated receiver's menu and synchronized with the radio microphone via an integrated infrared interface or shall be programmable in the radio microphone menu. Receiver parameters such as receiving frequency, receiver name and pilot tone setting shall be synchronizable with the radio microphone via an integrated infrared interface.

The handheld vocal radio microphone 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 ± 24 kHz/ ± 48 kHz. Frequency stability shall be $\leq \pm 15$ ppm. RF output power at 50 Ω shall be 30 mW (typical).

The radio microphone 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 110 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 radio microphone 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 radio microphone is switched off. Operating time shall be typical 8 hours. The radio microphone 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 °C to +55 °C (+14 °F to +131 °F).

A range of microphone heads shall be available for the radio microphone.

The radio microphone shall be the Sennheiser SKM 100-S G4.