evolution wireless G4
ew IEM G4 | Wireless Monitor Set

Full control over your performance – your direct link, everywhere, everyday. The G4 In-Ear Monitoring Sets make your gig an extraordinary experience – not just for your audience, but also for you.

Robust bodypack receiver and reliable in-ear monitoring IE 4 headphones delivering clarity along the whole frequency spectrum for daily use on stage.

FEATURES

- Engineered for professional live sound:
  Rugged all-in-one wireless monitoring system for in-ear applications.
- Robust bodypack receiver and reliable in-ear monitoring IE 4 headphones delivering clarity along the whole frequency spectrum for daily use on stage
- Half-rack stereo transmitter in a full-metal housing with OLED display for full control
- Easy and flexible wireless synchronization between transmitter and receiver via infrared
- Compatible with Sennheiser WSM control software for flexible frequency allocation
- Up to 16 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

- SR IEM G4 stereo transmitter
- EK IEM G4 stereo receiver
- IE 4 earphones
- 2 AA batteries
- rod antenna
- GA 3 rackmount set
- quick guide
- safety guide
- manufacturer declaration sheet

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SPECIFICATIONS

SR IEM G4

RF characteristics	
Modulation	Wideband FM stereo (MPX pilot tone)
Frequency ranges	A1: 470 - 516 MHz A: 516 - 558 MHz A30: 516 - 558 MHz AS: 520 - 558 MHz G: 566 - 608 MHz GB: 606 - 648 MHz B: 626 - 668 MHz B30: 626 - 668 MHz C: 734 - 776 MHz D: 780 - 822 MHz E: 823 - 865 MHz
Transmitting frequencies	Max. 1680 frequencies, adjustable in 25 kHz steps 20 frequency banks, each with up to 16 factory-preset channels, no intermodulation 6 frequency banks with up to 16 programmable channels
Switching bandwidth	up to 42 MHz
Nominal/peak deviation	±24 kHz / ±48 kHz
MPX pilot tone (frequency/deviation)	19 kHz/±5 kHz
Frequency stability	±10 ppm
Antenna output	BNC socket, 50 Ω
RF output power at 50 Ω	switchable: Low: typ. 10 mW Standard: typ. 30 mW High: typ. 50 mW

AF characteristics	
Compander system	Sennheiser HDX
AF frequency response	25 Hz to 15 kHz
AF input BAL AF IN L (I) + MONO/ BAL AF IN R (II)	2x XLR-3/¼" (6.3 mm) jack combo socket, electronically balanced
Max. input level	+22 dBu
Total harmonic distortion (THD)	<0.9 %
Signal-to-noise ratio (at nominal load and peak deviation)	>90 dB
AF output LOOP OUT BAL L (I)/ LOOP OUT BAL R (II)	¼" (6.3 mm) stereo jack socket, balanced

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

CONNECTIONS

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SPECIFICATIONS

EK IEM G4

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 C-TH: 748.2 - 757.8 MHz D: 780 - 822 MHz E: 823 - 865 MHz
Receiving frequencies	Max. 1680 frequencies, adjustable in 25 kHz steps 20 frequency banks, each with up to 16 factory-preset channels, no intermodulation 6 frequency banks with up to 16 programmable channels
Switching bandwidth	up to 42 MHz
Nominal/peak deviation	±24 kHz / ±48 kHz
Receiver principle	Adaptive diversity
Sensitivity (with HDX, peak deviation)	< 4 µV, typ. 1.6 µV for 52 dBA $_{\text{rms S/N}}$
Adjacent channel selection	Typically ≥ 65 dB
Intermodulation attenuation	Typically ≥ 70 dB
Blocking	≥ 80 dB
Squelch	5 to 25 dBµV, adjustable in steps of 2 dB
Pilot tone squelch	Can be switched off

AF characteristics	
Compander system	Sennheiser HDX
Signal-to-noise ratio (1 mV, peak deviation)	approx. 90 dBA
Total harmonic distortion (THD)	≤ 0.9 %
Output power at 2.4 V, 5 % THD, nominal deviation	2 x 100 mW at 32 Ω
High Boost	+8 dB at 8 kHz
Limiter	–18 dB to –6 dB, adjustable in steps of 6 dB, can be switched off

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: approx. 140 mA with transmitter switched off: ≤ 25 µA
Operating time	approx. 4 to 6 hours (depending on volume level)
Dimensions	Approx. 82 x 64 x 24 mm
Weight (incl. batteries)	approx. 125 g

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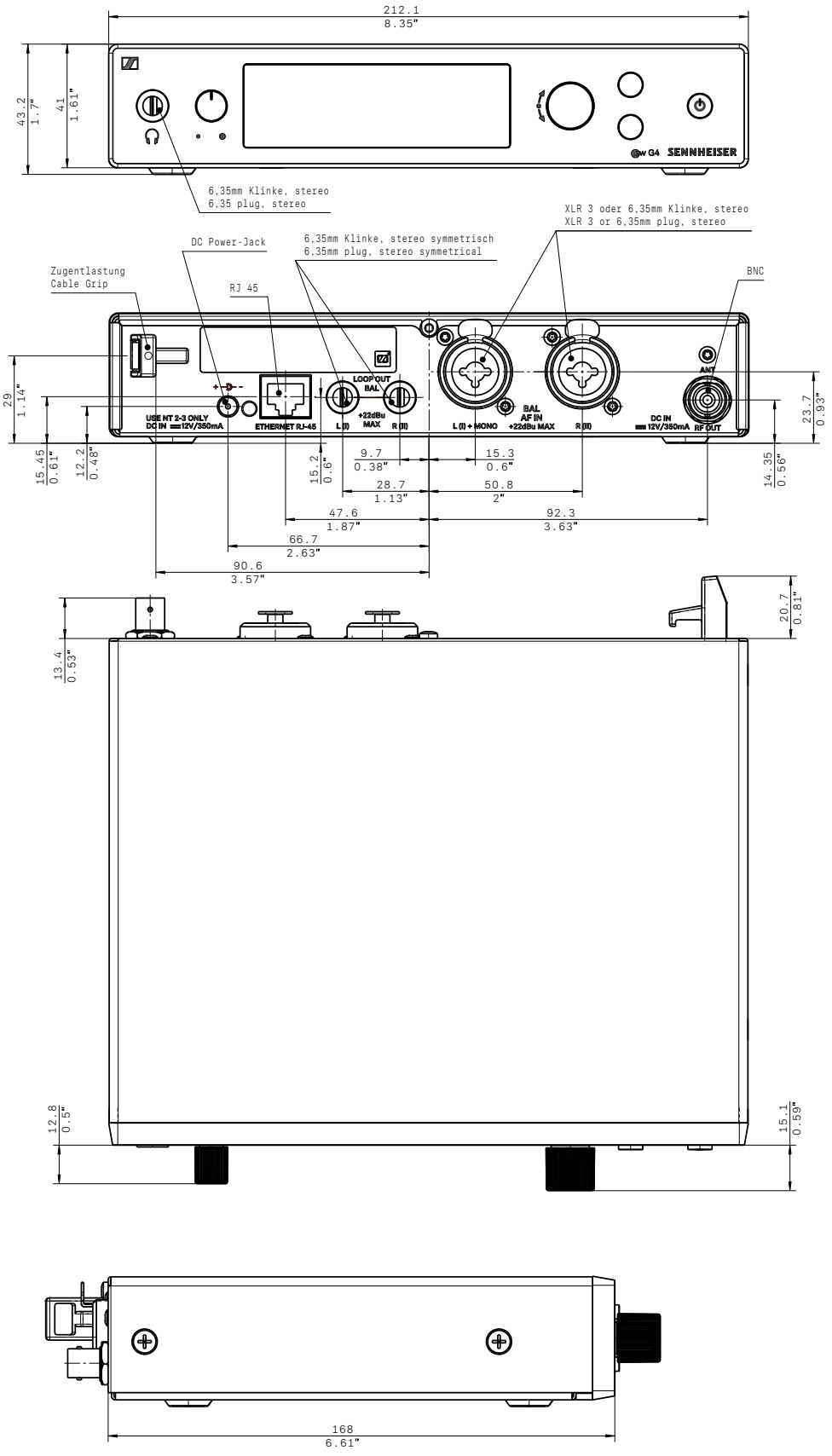
DIMENSIONS

SR IEM G4



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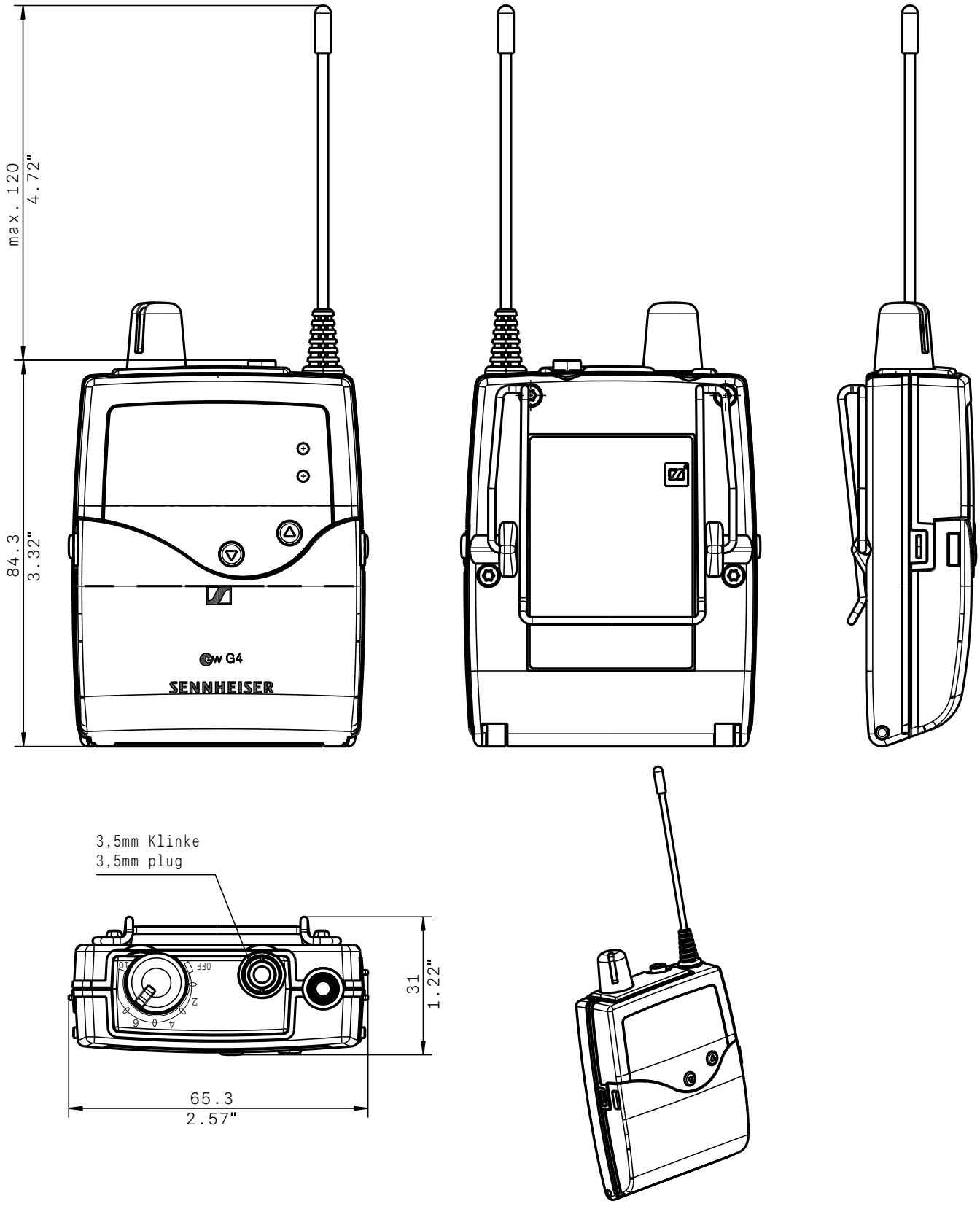
DIMENSIONS

EK IEM G4



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PRODUCT VARIANTS

ew IEM G4-A1	470 - 516 MHz	Art. no. 509608
ew IEM G4-A	516 - 558 MHz	Art. no. 509609
ew IEM G4-A30	516 - 558 MHz	Art. no. 509913
ew IEM G4-AS	520 - 558 MHz	Art. no. 509626
ew IEM G4-G	566 - 608 MHz	Art. no. 509610
ew IEM G4-GB	606 - 648 MHz	Art. no. 509908
ew IEM G4-B	626 - 668 MHz	Art. no. 509611
ew IEM G4-B30	626 - 668 MHz	Art. no. 509915
ew IEM G4-C	734 - 776 MHz	Art. no. 509612
ew IEM G4-TH	748.2 - 757.8 MHz	Art. Nr. 509917
ew IEM G4-D	780 - 822 MHz	Art. no. 509627
ew IEM G4-E	823 - 865 MHz	Art. no. 509919

ARCHITECT‘S SPECIFICATION

A wireless RF monitoring system consisting of a stereo rack-mount transmitter and a compact monitoring receiver.

The transmitter shall operate within ten UHF frequency ranges, with a switching bandwidth of up to 42 MHz: 470 – 516 MHz, 516 – 558 MHz, 520 – 558 MHz, 626 – 668 MHz, 734 – 776 MHz, 748.2 - 757.8 MHz, 780 – 822 MHz, 823 – 865 MHz, 566 – 608 MHz, 606 – 648 MHz; transmitting frequencies shall be 1,680 per range and hall be tunable in 25 kHz steps. The transmitter shall feature 20 fixed frequency banks with up to 16 compatible frequency presets and 6 user banks with up to 16 user programmable frequencies.

The transmitter shall be menu-driven with a backlit OLED display showing the current frequency, frequency bank and channel number, metering of AF level, transmission status, transmission power, equalizer setting, input sensitivity, and lock status. An auto-lock feature shall be provided to prevent settings from being accidentally altered.

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

Frequency stability shall be ±10 ppm. RF output power at 50 Ω shall be switchable between 10 mW (low), 30 mW (standard) and 50 mW (high).

The stereo audio input shall utilize two discrete (left/right) electronically balanced ¼“ (6.3 mm) jack/XLR-3F combo sockets; the audio output shall utilize a balanced ¼“ (6.3 mm) jack socket; an audio loop output shall be provided utilizing two balanced ¼“ (6.3 mm) jack sockets. A headphone output with headphone volume control shall be provided and shall utilize a ¼“ (6.3 mm) stereo jack socket. The transmitter shall have an Ethernet port (RJ-45) for remote network-based monitoring and control using the Sennheiser Wireless System Manager software. One 50 Ω BNC-type input socket shall be provided for connecting the antenna.

Nominal/peak deviation shall be ±24 kHz/±48 kHz. The transmitter shall incorporate the Sennheiser HDX compander system and shall include a 19-kHz MPX pilot tone with a ±5 kHz deviation. The audio frequency response shall range from 25 –15,000 Hz. Maximum input level shall be +22 dBu. Total harmonic distortion (THD) at 1 mV and nominal deviation shall be < 0.9 %. Signal-to-noise ratio at nominal load and peak deviation shall be > 90 dB.

The transmitter shall operate on 12 V power supplied from the NT 2-3 mains unit (for 100 – 240 V AC, 50/60 Hz). Power consumption shall be 350 mA. The transmitter 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 °C to +55 °C (+14 °F to +131 °F).

The transmitter shall be the Sennheiser SR IEM G4.

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The receiver shall operate within nine UHF frequency ranges, with a switching bandwidth of up to 42 MHz: 470 – 516 MHz, 516 – 558 MHz, 520 – 558 MHz, 626 – 668 MHz, 734 – 776 MHz, 780 – 822 MHz, 823 – 865 MHz, 566 – 608 MHz, 606 – 648 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 16 compatible frequency presets and 6 user banks with up to 16 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, battery status, muting function or audio channels, and pilot tone evaluation. An auto-lock feature shall be provided to prevent settings from being accidentally altered.

The receiver parameters shall either be configurable in the associated transmitter's menu and synchronized with the receiver via an integrated infrared interface or shall be programmable in the receiver menu.

The earphone output shall utilize a 3.5 mm stereo jack socket with an output level of 2.4 V with 5 % THD at nominal deviation and an output power of 2x 100 mW at 32 Ω.

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

The receiver shall incorporate the Sennheiser HDX compander system and a defeatable pilot tone squelch. Sensitivity shall be < 4 µV, 1.6 µV (typical) for 52 dBArms S/N with HDX engaged at peak deviation. Adjacent channel rejection shall be ≥ 65 dB (typical). Intermodulation attenuation shall be ≥ 70 dB (typical); blocking shall be ≥ 80 dB.

Signal-to-noise ratio at 1 mV and peak deviation shall be approx. 90 dB. Total harmonic distortion (THD) shall be ≤ 0.9 %. The earphone output shall utilize a 3.5 mm stereo jack socket with an output level of 2.4 V with 5 % THD at nominal deviation and an output power of 2x 100 mW at 32 Ω.

The receiver shall include a switchable High Boost and a multi-level limiter. The High Boost shall be +8 dB at 80 kHz. The limiter shall be adjustable from –18 dB to –6 dB in 6 dB steps or defeatable (off). The receiver shall provide two audio output modes, stereo or Focus, and an adjustable balance.

Power shall be supplied to the receiver 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 140 mA at nominal voltage; ≤ 25 µA when receiver is switched off. Operating time shall be approximately 4 to 6 hours (depending on volume level). The receiver shall have a rugged metal housing; dimensions shall be approximately 82 x 64 x 24 mm (3.23“ x 2.52“ x 0.94“). Weight including the batteries shall be approximately 125 grams (0.28 lbs). Operating temperature shall range from –10 °C to +55 °C (+14 °F to +131 °F).

The receiver shall be the Sennheiser EK IEM G4.