



# evolution wireless G4

## ew 512P G4 | Pro Camera Lavalier MKE 2 Set



The professional's choice for broadcast quality sound  
Providing the highest flexibility for your video sound and field recording applications. A robust wireless microphone system that offers ultimate sound quality, simple mounting and ease of use.

Impressive film sound was never that easily done. The legendary MKE 2 Gold professional clip-on microphone ensures best speech intelligibility, the portable transmitter and receiver are easily mounted and ensure 8 hours of mobile operation.

### FEATURES

- Highly versatile solution for professional film sound: Rugged all-in-one wireless system for professional interviews and recording
- Professional sound and excellent construction quality
- Easy to use and fast setup time
- Easy and flexible wireless synchronisation between transmitter and receiver via infrared
- Up to 88 MHz bandwidth, up to 32 channels
- Range: up to 100 meters / 330 feet
- Increased RF output power (10/30/50 mW)
- Up to 8 hours of operation time

### DELIVERY INCLUDES

- EK 500 G4 camera receiver
- SK 500 G4 bodypack transmitter
- MKE 2 clip-on microphone
- 4 AA batteries
- CL 1 3.5 mm jack cable
- CL 500 XLR to 3.5 mm jack adapter cable
- CA 2 camera adapter
- fur windscreen for MKE 2
- quick guide
- safety guide
- manufacturer declaration sheet



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### PRODUCT VARIANTS

<b>ew 512P G4-Aw+</b>	470 - 558 MHz	Art. no. 508437
<b>ew 512P G4-AS</b>	520 - 558 MHz	Art. no. 508137
<b>ew 512P G4-Gw1</b>	558 - 608 MHz	Art. no. 508458
<b>ew 512P G4-Gw</b>	558 - 626 MHz	Art. no. 507800
<b>ew 512P G4-GBw</b>	606 - 678 MHz	Art. no. 507799
<b>ew 512P G4-Bw</b>	626 - 698 MHz	Art. no. 508140
<b>ew 512P G4-Cw</b>	718 - 790 MHz	Art. no. 508141
<b>ew 512P G4-Dw</b>	790 - 865 MHz	Art. no. 508142
<b>ew 512P G4-JB</b>	806 - 810 MHz	Art. no. 508138
<b>ew 512P G4-K+</b>	925 - 937.5 MHz	Art. no. 507798

### SPECIFICATIONS

#### EK 500 G4

##### RF characteristics

Modulation	Wideband FM
Frequency ranges	Aw+: 470 - 558 MHz AS: 520 - 558 MHz Gw1: 558 - 608 MHz Gw: 558 - 626 MHz GBw: 606 - 678 MHz Bw: 626 - 698 MHz Cw: 718 - 790 MHz Dw: 790 - 865 MHz JB: 806 - 810 MHz K+: 925 - 937.5 MHz
Receiving frequencies	Max. 3520 receiving frequencies, adjustable in 25 kHz steps  20 frequency banks, each with up to 32 factory-preset channels, no intermodulation  6 frequency banks with up to 32 programmable channels
Switching bandwidth	up to 88 MHz
Nominal/peak deviation	±24 kHz / ±48 kHz
Receiver principle	Adaptive diversity
Sensitivity (with HDX, peak deviation)	< 1.6 µV for 52 dB <sub>eff S/N</sub>
Adjacent channel selection	Typically ≥ 65 dB
Intermodulation attenuation	Typically ≥ 65 dB
Blocking	≥ 70 dB

Squelch	low: 5 dBµV middle: 15 dBµV high: 25 dBµV
Pilot tone squelch	Can be switched off

##### AF characteristics

Compander system	Sennheiser HDX
Signal-to-noise ratio (1 mV, peak deviation)	Line: ≥ 110 dBA Phones: approx. 90 dBA
Total harmonic distortion (THD)	≤ 0.9 %
AF output voltage (at peak deviation, 1 kHz AF)	3.5 mm jack socket: +17 dBu (mono, balanced)
Adjustment range of audio output level	42 dB, adjustable in steps of 6 dB

##### 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: typ. 140 mA with receiver switched off: ≤ 25 µA
Operating time	Typically 8 h
Dimensions	Approx. 82 x 64 x 24 mm
Weight (incl. batteries)	approx. 130 g



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### SPECIFICATIONS

#### SK 500 G4

RF characteristics	
Modulation	Wideband FM
Frequency ranges	Aw+: 470 - 558 MHz AS: 520 - 558 MHz Gw1: 558 - 608 MHz Gw: 558 - 626 MHz GBw: 606 - 678 MHz Bw: 526 - 698 MHz Cw: 718 - 790 MHz Dw: 790 - 865 MHz JB: 806 - 810 MHz K+: 925 - 937.5 MHz
Transmission frequencies	Max. 3520 frequencies, adjustable in 25 kHz steps  20 frequency banks, each with up to 32 factory-pre-set channels, no intermodulation  6 frequency banks with up to 32 programmable channels
Switching bandwidth	up to 88 MHz
Nominal/peak deviation	$\pm 24$ kHz / $\pm 48$ kHz
Frequency stability	$\leq \pm 15$ ppm
RF output power at 50 $\Omega$	switchable: Low: typ. 10 mW Standard: typ. 30 mW High: typ. 50 mW
Pilot tone squelch	Can be switched off

#### MKE 2

Transducer principle	pre-polarized condenser microphone
Pick-up pattern	omni-directional
Sensitivity (free field, no load) (1 kHz)	5 mV/Pa, $\pm 3$ dB
Max. SPL at 1 kHz	142 dB
Frequency response	20 to 20.000 Hz $\pm 3$ dB
"Equivalent noise level A-weighted (DIN IEC 651)"	26 dB
"Equivalent noise level CCIR-weighted (CCIR 468-1)"	39 dB
Connector	3.5 mm jack
Cable length	approx. 1.60 m

#### AF characteristics

Compander system	Sennheiser HDX
AF frequency response	Mic: 80 - 18,000 Hz Line: 25 - 18,000 Hz
Signal-to-noise ratio (1 mV, peak deviation)	$\geq 115$ dBA
Total harmonic distortion (THD)	$\leq 0.9$ %
Max. microphone/line input voltage	3 V <sub>eff</sub>
Microphone/line input impedance	40 k $\Omega$ , unbalanced / 1 M $\Omega$
Input capacitance	Switchable
Setting range for input sensitivity	60 dB, adjustable in 3 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	3 V battery / 2.4 V rechargeable battery
Current consumption	at nominal voltage: typ. 180 mA with transmitter switched off: $\leq 25$ $\mu$ A
Operating time	Typically 8 h
Dimensions	Approx. 82 x 64 x 24 mm
Weight (incl. batteries)	approx. 160 g

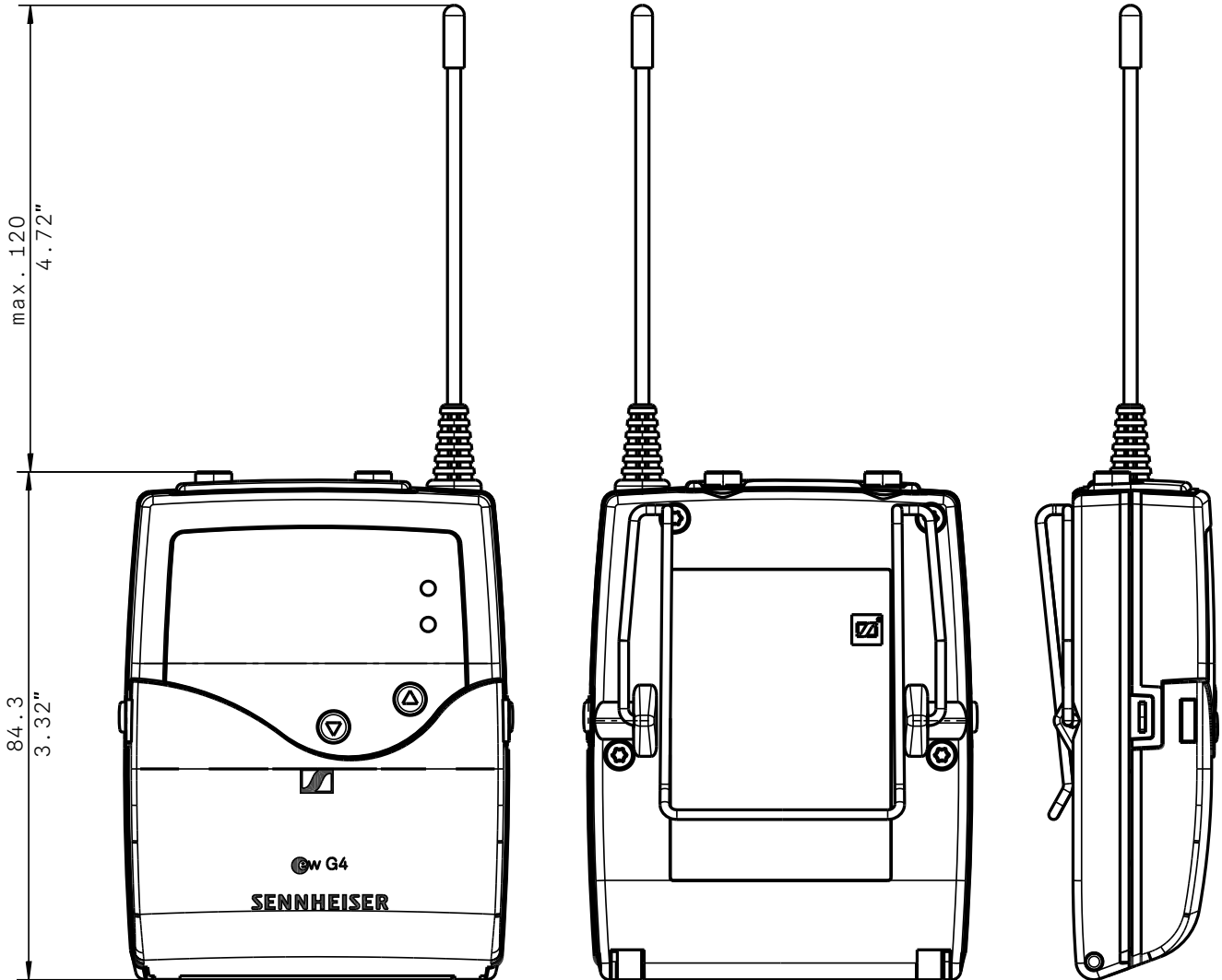


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## ew 512P G4 | Pro Camera Lavalier MKE 2 Set

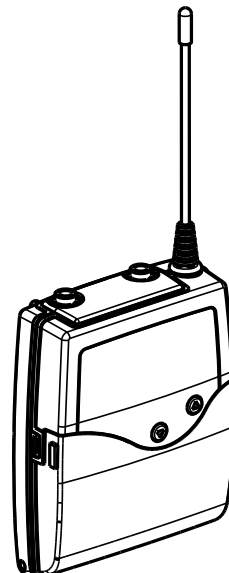
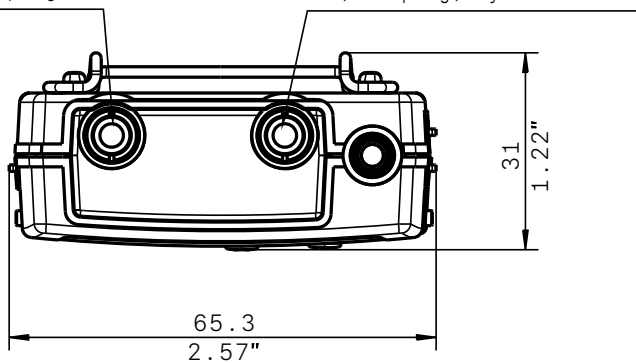
### DIMENSIONS

#### EK 500 G4



3,5mm Klinke  
3,5mm plug

3,5mm Klinke, symmetrisch  
3,5mm plug, symmetrical



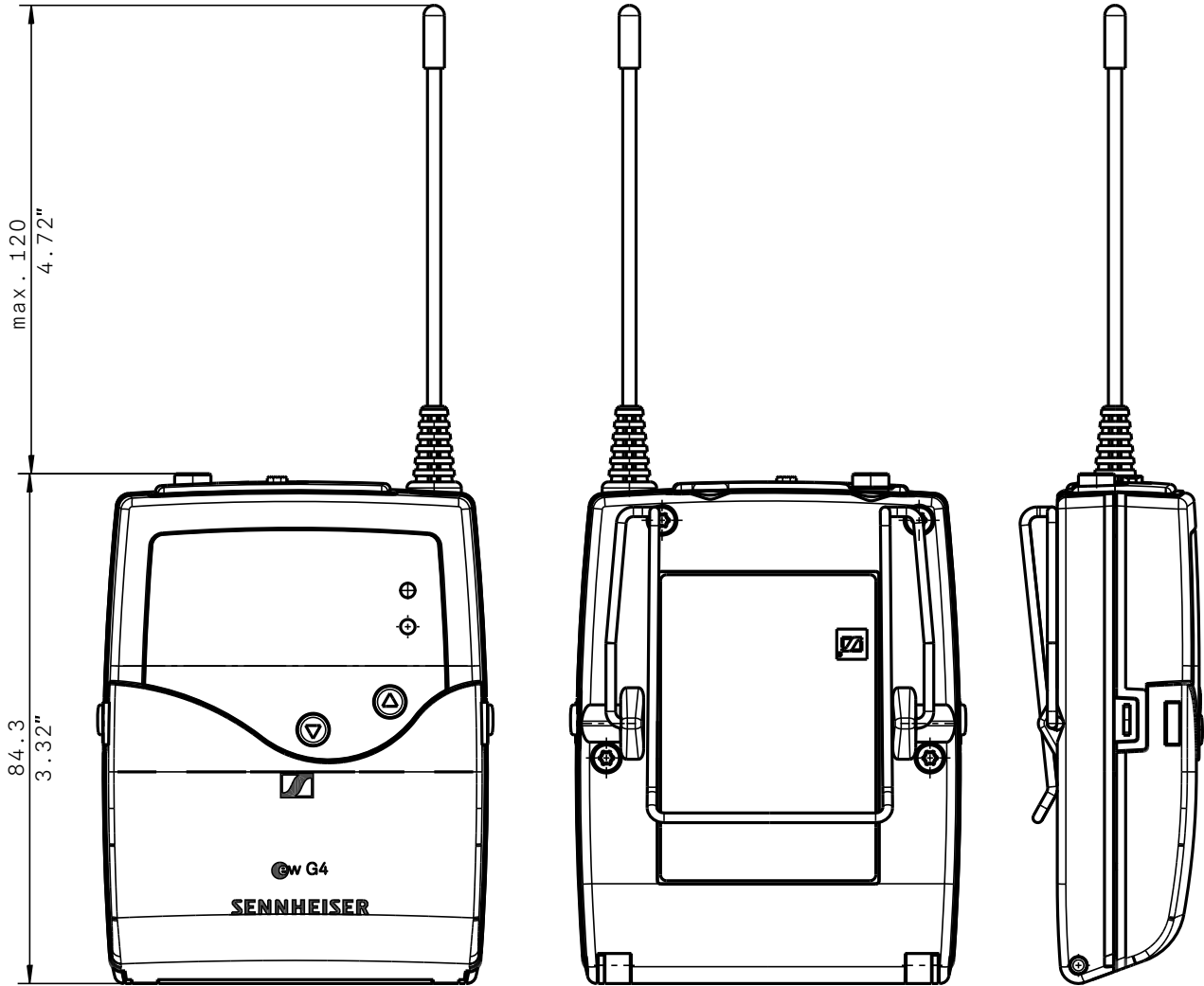


# evolution wireless G4

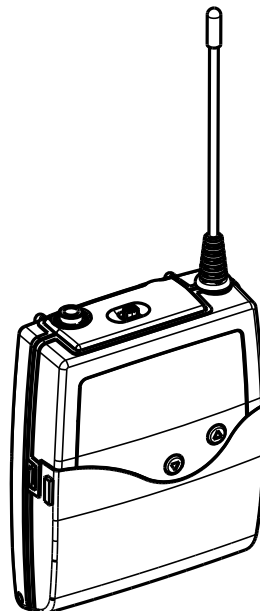
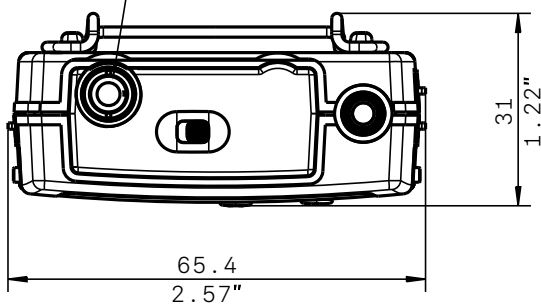
## ew 512P G4 | Pro Camera Lavalier MKE 2 Set

### DIMENSIONS

#### SK 500 G4



3,5mm Klinke  
3,5mm plug





# evolution wireless G4

## ew 512P G4 | Pro Camera Lavalier MKE 2 Set

### ARCHITECT'S SPECIFICATION

A wireless RF transmission system consisting of a compact camera receiver and a bodypack transmitter with a condenser clip-on microphone.

The system shall operate within ten UHF frequency ranges, with a switching bandwidth of up to 88 MHz: 470 – 558 MHz, 520 – 558 MHz, 558 – 608 MHz, 558 – 626 MHz, 606 – 678 MHz, 626 – 698 MHz, 718 – 790 MHz, 790 – 865 MHz, 806 – 810 MHz, 925 – 937.5 MHz; receiving frequencies shall be 3520 per range and shall be tunable in 25 kHz steps. The system 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 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 line output level, 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 receiver shall feature a 3.5 mm audio output with a maximum output of +17 dBu (mono, balanced) and a 3.5 mm phone output.

Nominal/peak deviation shall be  $\pm 24$  kHz/ $\pm 48$  kHz. Squelch threshold shall be defeatable (off) or adjustable to three levels: Low (5 dB $\mu$ V), Middle (15 dB $\mu$ V) and High (25 dB $\mu$ V).

The receiver shall incorporate the Sennheiser HDX compander system and a defeatable pilot tone squelch. Sensitivity shall be  $< 1.6$   $\mu$ 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. Signal-to-noise ratio at 1 mV and peak deviation shall be  $\geq 110$  dBA (line) or approximately 90 dBA (phones). Total harmonic distortion (THD) shall be  $\leq 0.9$  %. The audio output level shall be adjustable within a 42 dB range in steps of 6 dB.

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;  $\leq 25$   $\mu$ A when receiver is switched off. Operating time shall be typical 8 hours. 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 130 grams (0.29 lbs). Operating temperature shall range from  $-10$  °C to  $+55$  °C ( $+14$  °F to  $+131$  °F).

The receiver shall be the Sennheiser EK 500 G4.

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

The bodypack transmitter 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  $\pm 24$  kHz/ $\pm 48$  kHz. Frequency stability shall be  $\leq \pm 15$  ppm. RF output power at 50  $\Omega$  shall be switchable between 10 mW (typical, low) and 30 mW (typical, standard) and 50 mW (typical, high).

The bodypack transmitter shall incorporate the Sennheiser HDX compander system and a defeatable pilot tone squelch. Audio frequency response shall range from 80 – 18,000 Hz (microphone) or 25 - 18,000 Hz (line). Signal-to-noise ratio at 1 mV and peak deviation shall be  $\geq 115$  dBA. Total harmonic distortion (THD) shall be  $\leq 0.9$  %. Input sensitivity shall be adjustable within a 60 dB range in steps of 3 dB.

Power shall be supplied to the bodypack transmitter 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 180 mA at nominal voltage;  $\leq 25$   $\mu$ A when bodypack transmitter is switched off. Operating time shall be typical 8 hours. The bodypack transmitter 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 160 grams (0.35 lbs). Operating temperature shall range from  $-10$  °C to  $+55$  °C ( $+14$  °F to  $+131$  °F).

The bodypack transmitter shall be the Sennheiser SK 500 G4.



SENNHEISER

718 - 790 MHz

Frequenzbereich Cw / Frequency range Cw

Zusatzinformationen für Systeme der Serie  
evolution wireless 300-500 G4

Additional information for Sennheiser  
evolution wireless 300-500 G4 systems

DE

Für die Übertragung steht Ihnen folgender Frequenzbereich zur Verfügung:

Frequenzbereich	Bandbreite	Anzahl Frequenzen
718 - 790 MHz	72 MHz	max. 2880

Die Sender und Empfänger verfügen über jeweils 20 Kanalbänke, auf denen werksseitig Frequenz-Presets voreingestellt sind. Innerhalb einer Kanalbank sind die Frequenz-Presets untereinander intermodulationsfrei. Sie sind nicht veränderbar.

In den Kanalbänken **U1 bis U6** können Sie in 25-kHz-Schritten Frequenzen frei einstellen und abspeichern. Diese sind unter Umständen nicht intermodulationsfrei.

Die Frequenz-Presets in den Kanalbänken **1 bis 20** sind in den Tabellen auf den folgenden zwei Seiten dargestellt.

#### Rahmenbedingungen und Einschränkungen für die Nutzung von Frequenzen

In Ihrem Land gelten möglicherweise gesonderte Rahmenbedingungen und Einschränkungen für die Nutzung von Frequenzen.

Informieren Sie sich vor der Inbetriebnahme des Produktes unter folgender Adresse:

[www.sennheiser.com/frequency-information](http://www.sennheiser.com/frequency-information)

EN

Transmitters and receivers are available in the following frequency range:

Frequency range	Bandwidth	Number of frequencies
718 - 790 MHz	72 MHz	max. 2880

Transmitters and receivers have 20 frequency banks respectively. Each of the channels in the frequency banks has been factory-preset to a frequency. These frequency presets within one frequency bank are intermodulation-free. They cannot be changed.

The frequency banks **U1 to U6** allow the user to store individual frequencies which are freely selectable in 25-kHz steps. It might be that these frequencies are not intermodulation free.

The tables printed on the next two pages list the frequency presets in the frequency banks **1 to 20**.

#### Conditions and restrictions for using frequencies

There may be special conditions and restrictions for using frequencies in your country.

Before putting the product into operation, find the information for your country at the following address:

[www.sennheiser.com/frequency-information](http://www.sennheiser.com/frequency-information)

Sennheiser electronic GmbH & Co. KG

Am Labor 1, 30900 Wedemark, Germany, [www.sennheiser.com](http://www.sennheiser.com)  
Publ. 01/18, 578633/A01

## Frequenzbereich Cw / Frequency range Cw: 718 - 790 MHz

Channel	Bank 1	Bank 2	Bank 3	Bank 4	Bank 5	Bank 6	Bank 7	Bank 8	Bank 9	Bank 10
1	718.200	726.200	734.200	742.200	750.200	758.200	766.200	774.200	782.200	718.200
2	718.600	726.600	734.600	742.600	750.600	758.600	766.600	774.600	782.600	718.600
3	719.200	727.200	735.200	743.200	751.200	759.200	767.200	775.200	783.200	719.150
4	720.000	728.000	736.000	744.000	752.000	760.000	768.000	776.000	784.000	719.850
5	721.200	729.200	737.200	745.200	753.200	761.200	769.200	777.200	785.200	720.300
6	723.600	731.600	739.600	747.600	755.600	763.600	771.600	779.600	787.600	720.900
7	725.800	733.800	741.800	749.800	757.800	765.800	773.800	781.800	789.800	726.200
8	724.900	732.900	740.900	748.900	756.900	764.900	772.900	780.900	788.900	726.700
9	720.475	728.475	736.475	744.475	752.475	760.475	768.475	776.475	784.475	727.550
10	722.125	730.125	738.125	746.125	754.125	762.125	770.125	778.125	786.125	728.550
11	722.575	730.575	738.575	746.575	754.575	762.575	770.575	778.575	786.575	729.950
12	724.475	732.475	740.475	748.475	756.475	764.475	772.475	780.475	788.475	730.750
13	729.950	718.200	718.200	753.950	761.950	769.950	777.950	718.200	718.200	735.000
14	731.900	718.750	718.750	755.900	763.900	771.900	780.000	718.750	718.750	737.450
15	734.600	740.650	719.900	758.600	766.600	775.700	781.750	719.900	719.900	738.100
16	735.700	743.100	722.950	759.700	772.350	776.850	784.800	722.950	722.950	739.400
17	738.350	745.800	724.700	762.350	773.450	778.550	785.950	724.700	724.700	741.000
18	745.900	747.750	746.050	769.900	775.000	784.100	718.200	726.750	726.750	741.900
19	747.500	751.800	759.650	771.500	779.850	784.750	718.750	730.200	730.200	746.000
20	751.550	754.300	763.400	776.650	781.000	785.850	720.700	730.850	730.850	750.500
21	754.400	760.350	766.050	780.500	781.550	718.200	723.400	735.150	735.150	751.600
22	760.550	765.900	768.100	784.700	784.050	719.750	726.850	737.600	737.600	755.600
23	762.600	773.950	774.100	785.250	785.800	722.250	730.700	740.300	739.200	759.800
24	768.800	776.600	774.750	718.750	726.000	723.850	737.100	744.050	740.300	769.550
25	775.600	778.200	778.200	724.950	721.075	726.550	744.050	745.150	744.050	776.050
26	779.900	781.650	779.300	719.975	721.775	730.000	748.800	751.800	746.700	777.500
27	781.650	782.750	785.500	726.875	723.750	734.750	753.050	760.950	750.850	779.750
28	784.700	783.400	721.825	727.625	724.500	718.700	722.325	764.800	756.300	783.150
29	785.850	752.625	725.650	736.125	732.450	721.675	729.875	723.725	771.700	785.300
30	759.500	759.775	770.625	773.675	733.575	727.625	738.450	733.375	720.425	758.775
31	763.375	770.175	776.350	779.825	735.400	732.075	740.300	758.225	738.575	768.775
32	769.375	770.850	783.025	781.350		737.275	746.875	764.050	764.775	770.825



## Frequenzbereich Cw / Frequency range Cw: 718 - 790 MHz

Channel	Bank 11	Bank 12	Bank 13	Bank 14	Bank 15	Bank 16	Bank 17	Bank 18	Bank 19	Bank 20
1	742.200	766.200	718.200	726.200	734.200	742.200	750.200	718.200	726.200	734.200
2	742.600	766.600	718.600	726.600	734.600	742.600	750.600	718.600	726.600	734.600
3	743.150	767.150	719.150	727.150	735.150	743.150	751.150	719.200	727.200	735.200
4	743.850	767.850	719.850	727.850	735.850	743.850	751.850	720.000	728.000	736.000
5	744.300	768.300	720.300	728.300	736.300	744.300	752.300	721.200	729.200	737.200
6	744.900	768.900	720.900	728.900	736.900	744.900	752.900	723.600	731.600	739.600
7	750.200	774.200	734.200	742.200	750.200	758.200	766.200	742.200	750.200	758.200
8	750.700	774.700	734.700	742.700	750.700	758.700	766.700	742.650	750.650	758.650
9	751.550	775.550	735.500	743.500	751.500	759.500	767.500	743.300	751.300	759.300
10	752.550	776.550	736.150	744.150	752.150	760.150	768.150	744.150	752.150	760.150
11	753.950	777.950	737.050	745.050	753.050	761.050	769.050	745.400	753.400	761.400
12	754.750	778.750	738.400	746.400	754.400	762.400	770.400	746.350	754.350	762.350
13	759.000	783.000	750.450	758.450	766.450	774.450	782.450	766.450	774.450	782.450
14	761.450	785.450	751.550	759.550	767.550	775.550	783.550	766.950	774.950	782.950
15	762.100	786.100	752.950	760.950	768.950	776.950	784.950	769.900	777.900	785.900
16	763.400	787.400	754.800	762.800	770.800	778.800	786.800	771.200	779.200	787.200
17	765.000	788.950	756.800	764.800	772.800	780.800	788.800	773.050	781.050	789.050
18	765.900	782.525	757.800	765.800	773.800	781.800	789.800	773.750	781.750	789.750
19	770.550	718.200	724.250	718.200	722.100	721.000	718.250	728.150	719.850	718.200
20	775.050	718.950	725.450	718.950	722.850	726.000	720.300	735.650	721.000	718.750
21	780.050	720.450	728.850	720.750	724.750	730.100	721.800	754.200	738.100	719.650
22	781.250	721.550	761.300	738.150	725.600	732.300	723.600	760.450	743.550	721.550
23	784.050	723.450	763.500	769.750	731.150	749.700	726.350	778.550	760.250	722.300
24	785.550	724.350	771.900	771.350	763.150	771.150	729.400	781.800	761.300	723.850
25	767.525	733.500	774.500	773.550	776.400	783.950	730.150	782.850	763.750	730.250
26	771.875	739.250	776.000	777.550	777.900	719.375	742.950	784.300	771.600	743.400
27	777.225	744.000	783.450	779.450	784.650	723.625	757.050	720.425	720.525	753.500
28	783.175	746.000	785.850	783.600	719.225	727.225	762.450	728.825	730.175	765.850
29	719.775	747.450	724.675	719.925	726.825	733.625	779.100	736.925	759.425	771.400
30	720.700	722.175	753.525	722.875	741.925	772.725	719.375	740.675	764.775	720.325
31	722.525	725.575	767.225	729.675	757.725	777.425	722.975	761.525	775.825	726.825
32		730.225	767.975	755.175	769.425	783.325	728.425	772.025	784.925	742.875