

# SmartLink+

## Technical Data



### SmartLink+ features

- Dynamic FM
- Multiple microphone settings
- Latest Bluetooth version for simple cellphone and MP3 use
- SoftLanding technology
- Audio input for wireless TV and audio enjoyment
- Fast-charging battery
- Hearing instrument remote control
- GPS mode

### Product description

- A** Selectable microphone settings
- B** High quality microphone array
- C** Advanced signal processing:
  - Dynamic FM
  - SoftLanding technology
  - High resolution multi-channel noise cancellation
- D** Integrated invisible antenna
  - For operating ranges less than 10 feet (3 meters)
- E** Interface for the lavalier cord with external antenna
  - For operating ranges up to 50 feet (15 meters) indoors, and 170 feet (50 meters) outdoors
- F** Retention clip
- G** Easy to read LCD display
- H** Bluetooth control keys for cellphone use
- I** Keys for
  - Remote control of Phonak Hearing instruments
  - Frequency change and other features

Attachable interface with connections for:

- M** 3.5 mm socket for external audio sources (e.g. TV)
- N** mini-USB socket for power supply and programming cable
- O** 2.5 mm socket external microphone (MM8 and iBoom)



**SmartLink+** is the product for those who want nothing less than the very best: in meetings, when it is noisy, over distance, at home and at work, in the car and in the mall, on the cellphone face to face, even when watching TV or listening to music. In short: **SmartLink+ is the Rolls Royce of the hearing industry.**

### Microphone settings



#### SuperZoom

Use SuperZoom for all situations featuring high noise levels, such as:

- Noisy restaurants and parties
- In the car or on the train
- Making Bluetooth phone calls
- When the transmitter is worn lavalier style (neck-hung) by your communication partner



#### Zoom

Use Zoom for all medium noise situations, such as:

- Face-to-face conversations
- Walking
- Meetings and conferences
- And many other everyday situations ...



#### Omni

Use Omni in situations such as:

- Round-table discussions in quiet environments
- Playing cards with friends



# SmartLink+

## General data

Type:	Dynamic FM transmitter
Dimensions:	L x W x H: 98 x 35 x 18mm (3.8 x 1.4 x 0.7 inches) (without interface and lavalier cord)
Weight:	56 g
Operating temperature range:	-10°C to +60°C
Humidity:	20-75%

## HF characteristics

Frequency range:	169.4 - 176 MHz (Band HA) 214.0 - 220.0 MHz (Band NB)
Frequency switching:	Integrated digital frequency synthesizer, max. 40 programmable channels
Frequency stability:	Better than $\pm 1$ kHz
Modulation:	FM (narrow-band), maximum frequency deviation $\Delta f_{dev} < 6$ kHz
Antennas:	- Built-in concealed antenna for short-range operation (up to 10feet/3 m) - Plug-in lavalier cord antenna for maximum operating range (up to 170feet/50 m)
Signal-to-noise ratio:	$> 45$ dB at $\Delta f_{dev} \geq 4$ kHz and $f_{mod} = 1$ kHz (microphone setting: Omni)

SmartLink+ combined with ML9i, ML10i, ML11i, ML12i, MLxi or any other Dynamic FM receiver from Phonak leads to a significantly higher signal to noise ratio.

## Audio characteristics

Audio frequency range:	100-6000 Hz
Microphone sensitivity: (Omni mode)	97 dB SPL at $f_{mod} = 1$ kHz for $\Delta f_{dev} = 4.0$ kHz (100% modulation) 70 dB SPL at $f_{mod} = 1$ kHz for $\Delta f_{dev} = 3.0$ kHz
Distortion: (Omni mode)	THD $< 0.2$ % at 70 dB SPL with $f_{mod} = 1$ kHz for $\Delta f_{dev} = 3.0$ kHz

## Battery

Type:	Lithium Polymer 3.7 VDC
Dimensions:	Length: 37 mm Width: 27 mm Height: 6 mm
Capacity:	525 mAh
Operating time:	10 hours (depending on SmartLink+ setting)
Charging temperature range:	-10°C - +45°C
Charging time with charger:	100% in 2 hours, 80% in 1 hour

## Power supply

Type:	Dedicated SmartLink+ charger
Connector:	mini-USB
Secondary voltage:	5.0 VDC
Current (min.):	500 mA

Important notice:	It is recommended to use only the original Phonak charging unit.
Fast-charge:	80% charged within an hour Fully charged in two hours The battery cannot be over-charged The adapter may become warm during charging.

## Built-in remote control for Phonak hearing instruments

Frequency:	40.96 kHz
Modulation:	CPFSK
Operating range:	$< 50$ cm

## Bluetooth link

Profiles:	HSP "Headset Profile" HFP "Hands-free Profile" A2DP "Advanced Audio Distribution Profile" AVRCP "Audio/Video Remote Control Profile"
Core Version:	2.0/2.0+EDR
Operating range:	15-24 feet (5-8 meters) Mobile phone to SmartLink+

## Standards

Radiocom:	EN 300.422-1,-2 EN 300.330-1,-2 EN 300.328 CFR 47, part 95, part 15C
EMC:	EN 301.489-3, -9, 17
Electric Safety:	EN 60950-1

## Dynamic FM System data

Adaptive FM Advantage (AFMA), Ambient noise level  $\geq 73$  dB SPL

Dynamic FM advantage over hearing instrument:	25 dB
Dynamic FM advantage over traditional FM system:	15 dB
Wireless sub-audio data-link:	Frequency range: Above the audio band
Operating range:	As FM operating range

SuperZoom

Zoom

