

ML16i

for Phonak Bolero Q-P and Q-SP

Technical Data



ML16i is the design-integrated Dynamic FM receiver for Phonak Bolero Q-P and Q-SP. ML16i offers everything Dynamic FM encompasses. The hearing care professional can attach or remove an ML16i with just one pin.

ML16i together with a Phonak Bolero Q-P or a Q-SP forms a powerful communication system.

ML16i features

- Dynamic FM
- Durable
- Automatic Frequency Synchronization (AFS) with WallPilot
- Direct Frequency Synchronization (DFS) with the inspiro or any other Phonak FM transmitter
- Intelligent stand-by mode to save power when the transmitter is switched off
- Fully programmable with FM SuccessWare



Relevant internet pages

Your online comprehensive FM support tool for schools:	www.eSchoolDesk.com
Learn how to configure Phonak FM systems with different hearing instruments and/or cochlear implants:	www.phonak.com/FM_configurator
Your online FM knowledge base:	www.FMeLibrary.com
Your online FM counseling support tool:	www.FMCounselWare.com



General data

Type:	Dynamic FM receiver
Length:	11.8 mm
Width:	7.2 mm
Height (connected to HI):	8.4 mm
Weight:	0.9 g
Operating temperature range:	-10° C to +60° C

HF characteristics

Frequency range:	169.4 - 176 MHz (H-band) 214 - 220 MHz (N-band)
Frequency:	Multi-channel, quartz stabilized
Frequency stability:	Better than +/- 10 ppm
Modulation:	FM (narrow band)
Antenna:	Ear level FM antenna
Spurious emissions (EMC):	-57 dBm ERP
Sensitivity at E = 3 mV/m:	SINAD ≥ 15 dB
Selectivity at $\Delta f_{RX} = \pm 125$ kHz:	> 50 dB

Audio characteristics

Audio bandwidth:	100 - 6000 Hz
Distortion (THD):	< 2% Full quieting FM $f_{mod} = 1$ kHz $\Delta f = 5$ kHz
Audio signal output:	-40 to -70 dB(V) at $f_{mod} = 1$ kHz $\Delta f = 4$ kHz

Power management

Power supply:	Supplied by the HI battery
Voltage range (extreme):	0.9 to 1.5V
Current drain:	Active mode < 3 mA Sleep mode < 580 μ A

Standards

Radiocom:	EN 300.422
EMC:	EN 60601-1-2 FCC part 15b

Dynamic FM System data for inspiro and Dynamic FM receivers

Adaptive FM Advantage (AFMA): (Ambient noise level ≥ 73 dB SPL):

Dynamic FM advantage over the hearing instrument:	up to 25 dB
Dynamic FM advantage over a traditional FM system:	up to 15 dB

Voice Activity Detection (VAD):

Attack time:	5 ms
Hold-on time:	5 seconds
Release time:	2 seconds
Voice off attenuation:	-26 dB

Wireless Dynamic FM:

Frequency range:	Above the audio band
Operating range:	As FM operating range

Wireless programming, monitoring and setting of FM Advantage:

FSK Link:	Frequency 40.96 kHz/Data rate 1000-2000 Bit/s Link from the transmitters to the receivers
OOK Link:	Frequency 8.192 kHz/Data rate 1024 Bit/s Link from the receivers to the inspiro
Operating range	20 cm/8 inches

MultiTalker Network*:

Digital network for up to 10 transmitters	
Frequency: 2.4 GHz / Data rate 2 Mbits/s	
Operating range between the inspiro transmitters: 20 m	

*Also available if inspiro is used with traditional FM receivers