

# ML12i for micro BTEs

## Technical Data



### ML12i 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 4.3 or higher

**ML12i** is the tiny, design-integrated Dynamic FM receiver for all Phonak micro Behind-the-ear hearing instruments featuring a 13 battery. ML12i offers everything Dynamic FM encompasses. The hearing care professional can attach or remove an ML12i easily with just one pin.

ML12i for Exélia Art micro, Exélia micro, Nios micro, Versata micro, Certéna micro: together they form a powerful communication solution.



### Relevant internet pages

Your online comprehensive FM support tool for schools  
[www.eSchoolDesk.com](http://www.eSchoolDesk.com)

Latest set-up tips for FM systems in combination with hearing instruments and Cochlear implants.  
[www.phonak.com/FM\\_Configurator](http://www.phonak.com/FM_Configurator)

Your online FM knowledge base  
[www.FMELibrary.com](http://www.FMELibrary.com)

Your online FM counseling support tool  
[www.FMCounselWare.com](http://www.FMCounselWare.com)

## ML12i for micro BTEs

### General data

Type:	Dynamic FM receiver
Length:	12 mm
Width:	8 mm
Height (connected to HI):	8 mm
Weight:	1.1 g
Operating temperature range:	-10°C - +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 +/-10ppm
Modulation:	FM (narrow band)
Antenna:	Ear level FM antenna
Spurious emissions (EMC):	- 57 dBm ERP
Sensitivity at E = 3mV/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 dBV at $f_{mod} = 1$ kHz $\Delta f = 4$ kHz

### Power management

Power supply	Supplied by the HI battery	
Voltage range (extreme)	0.9 to 1.6 V	
Current drain:	Active mode	< 3 mA
	Sleep mode	< 510 $\mu$ A

### Standards

Radiocom:	EN 300.422
EMC:	EN 301.489
	FCC

### Dynamic FM System data for inspiro and Dynamic FM receivers

<b>Adaptive FM Advantage (AFMA):</b> (Ambient noise level $\geq 73$ 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 transmitter 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: 8 m

\* Also available if inspiro is used with traditional FM receivers