

# DynaMic

## Technical Data



### DynaMic features

- Excellent sound quality
- MultiTalker Network
- Easy user interface
- Durable
- Comfortable in the hand
- Fast charging battery
- Programmable with FM Successware 4.3
- DataLogging FM

### Product description



- 1 Reset button
- 2 Slider On/Mute/Off
- 3 Antenna feed through
- 4 USB interface
- 5 LED indicator

### 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)

**DynaMic** is the passaround microphone for use in classrooms. **DynaMic** is designed to work exclusively alongside **inspiro** in the MultiTalker Network.

**DynaMic** enables speakers, other than the main **inspiro**-wearing teacher, to wirelessly access the hearing impaired in the audience by simply talking into **DynaMic**.

**DynaMic** combines the flexibility of the MultiTalker Network with the sound performance benefits of Dynamic FM, integrating **inspiro** transmitter technology into a durable handheld microphone that acts as an additional Dynamic FM transmitter.

**DynaMic**'s algorithms are optimized to avoid picking up unwanted signals while at the same time not missing any useful speech signals.

### Typical MultiTalker Network situations

**inspiro** for the teacher and **DynaMic** as passaround microphone for the student



**inspiro** for the teacher and up to 9 **DynaMic** transmitters on desks



# DynaMic

## General data

Type:	Dynamic FM transmitter Operates only with <b>inspiro</b> in MTN
Length:	210 mm
Antenna length:	150 mm
Weight:	110 g
Operating temperature range:	-10°C - +60°C
Humidity:	20 ...75 %

## HF characteristics

Frequency range:	169 – 176 MHz (HA - band) 214 – 220 MHz (NB – band)
Frequency switching:	Integrated digital frequency synthesizer
Frequency stability:	Better than +/- 1kHz
Modulation:	FM (narrow band) Max. frequency dev $\Delta f < 6$ kHz
Antenna:	Fixed on the electronic plate slides into a flexible tube
FM operating range:	In MTN EMC: - 54 dBm ERP (EN 300.422)
Signal to noise ratio:	> 45 dB ( $\Delta f > 4$ kHz)
Power emission:	2mW

## Audio characteristics

Audio bandwidth:	100 - 6000 Hz
Microphone sensitivity:	74 dB SPL at $f_{mod} = 1$ kHz for $f_{dev} = 4.0$ kHz (100% modulation) 70 dB SPL at $f_{mod} = 1$ kHz for $f_{dev} = 3.0$ kHz
Distortion:	THD < 0.2% at 70 dB SPL with $f_{mod} = 1$ kHz $f_{dev} = 3$ kHz

## Directional microphone array

DynaMic has two microphones, forming an array. The microphones and the VAD determine which acoustic signals trigger the DynaMic. It is always best to speak into DynaMic at close range, 50 - 300 mm (2 - 12 inches).

## Accessories and replacement parts

Desk stand
Clamp
Microphone cap
Colored rings: red, blue, green
Charger: single and twin
USB cable
Packaging

## Battery

Type:	Lithium Polymer
Dimensions:	Length: 50 mm Width: 25.5 mm Height: 5.8 mm
Voltage:	3.7 V
Capacity:	750 mAh
Operating time:	up to 10 hours
Charging temperature range:	0 – 45°C
Charging time with charger:	80 % in 1 hour ; 100 % in 2 hours

## Power supply

Type:	Specific <b>inspiro</b> /DynaMic charger
Connector:	Mini USB

## Standards

Radiocom:	EN 300 422 - 1, - 2; 2001 EN 300 330 - 1, 2; 2006 EN 300 328; 2006
EMC:	EN 301 489 - 3, -9, 17; 2002
El. Safety:	EN 60950 - 1; 2006

## Dynamic FM System data

<b>Adaptive FM Advantage (AFMA):</b> (Ambient noise level $\geq 73$ dB SPL)	
Dynamic FM advantage over the hearing instrument:	25 dB
Dynamic FM advantage over a traditional FM system:	15 dB

### Voice Activity Detection (VAD):

Attack time:	5 ms
Hold-on time:	5 seconds
Release time:	2 seconds
Voice off attenuation:	-26 dB
VAD:	7 dB less sensitive than <b>inspiro</b>

### Wireless Dynamic FM:

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

## MultiTalker Network

DynaMic operates as a secondary transmitter in the MTN	
Digital Network :	up to max. 9 DynaMic and one <b>inspiro</b>
Paring time with <b>inspiro</b> :	8 sec.
Frequency :	2.4 GHz
Operating range to initiator <b>inspiro</b> :	at least 8 m

## Body noise

The electronics are separated from the acoustic section by two large O-rings. These act as a vibration barrier, which reduces the body noise.