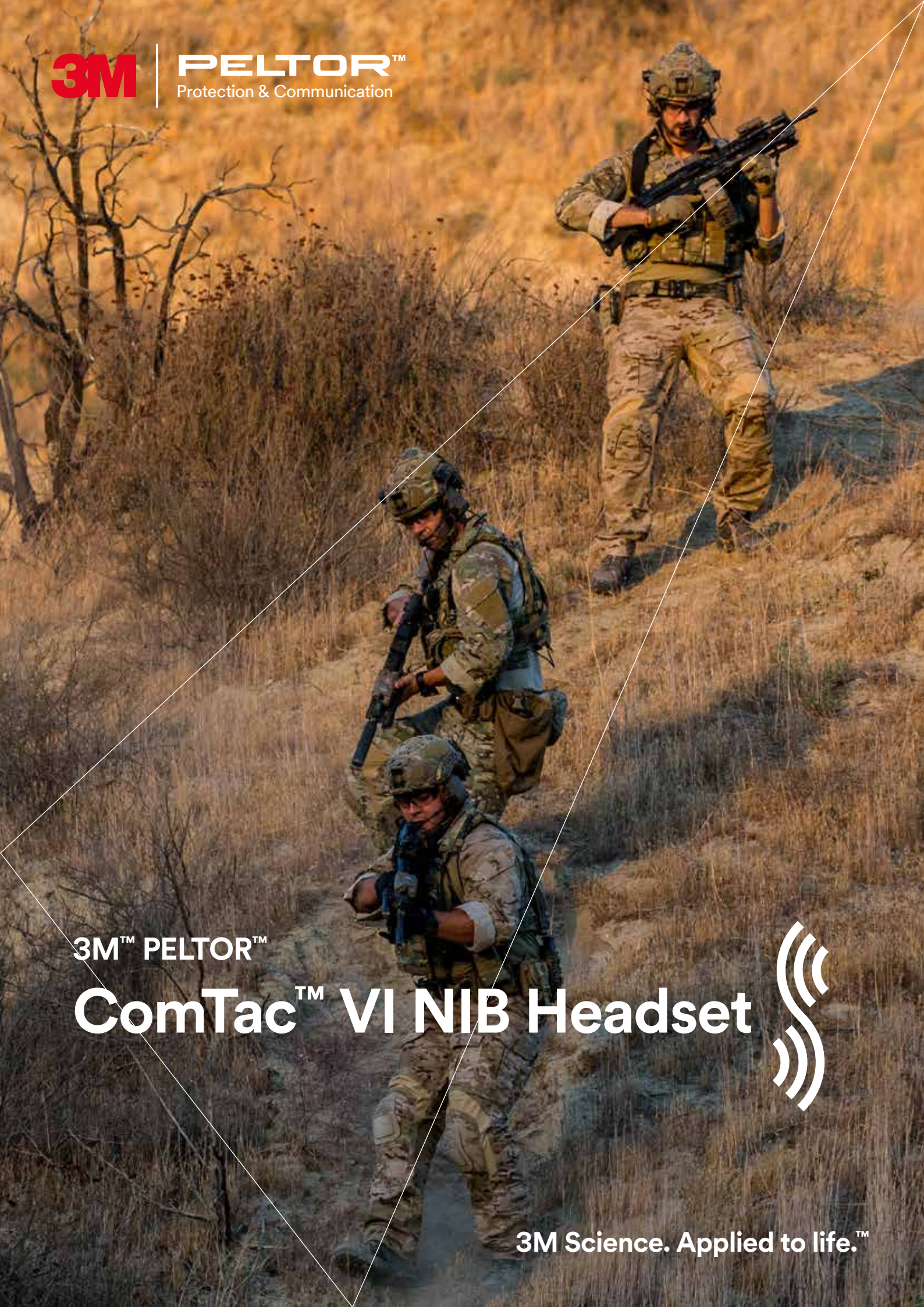

3M
PELTOR™
Protection & Communication
3M™ PELTOR™
ComTac™ VI NIB Headset
3M Science. Applied to life.™

3M PELTOR™ Protection & Communication

**We strive to set the standard for confidence and trust by providing rugged, reliable protective communication equipment.**

**3M™ PELTOR™ Solutions for today's modern warfighter have been worn for use in combat and combat support operations and are compatible with most firearms and ballistic helmets. The hearing protectors feature external microphones for environmental listening (aka *Talk-Through*) capability, so operators can maintain auditory situational awareness while protecting their hearing.**

**With more than 65 years of experience, the 3M™ PELTOR™ Brand promises quality communication solutions that help provide an excellent balance of performance and protection.**

**The advanced engineering and technology inherent with the 3M™ PELTOR™ Brand fits with the high standard of quality and innovation of a continuously evolving range of product solutions that you, our customers, come to expect from 3M.**

### 3M™ PELTOR™ ComTac™ VI NIB Headset

# Advanced hearing protection and close range communications in noise

The new **ComTac™ VI NIB** helps protect your hearing, improve situational awareness and communications in noisy environments.
With new technologies such as **NIB - Natural Interaction Behaviour** and **MAP - Mission Audio Profiles**, the **ComTac VI** is packed with new advanced features that helps improve soldier efficiency.

**NIB " Naturel Interaction Behavior" Headset (page.5)**

**Hearing Protection**
Noise attenuating ear cups help provide hearing protection in environments with potentially hazardous noise. (page.4)

**Slim shell design**
To be worn comfortably under a helmet and used with different kinds of weapons without interference

**2xAAA batteries (one on each cup)**
Lasting for approx. 50 hours of use. The headset will turn off after 4 hrs of non-use to save batteries. A message will be heard when the battery is low.

**Replaceable cushions and foam liners (hygiene kit). Approved with Gel rings (HY80-EU).**

**MAP - Mission Audio Profiles**
The digital level dependent function for ambient listening is set with five incremental steps including an advanced ambient mode.(page.5)

**Compatible with legacy PELTOR adapter**

**Noise canceling microphone**
Dynamic watherproof speech microphone. Tested according to IP68 (6m/30min)

**Wireless input via MI**
The Headset are fitted with a small antenna to allow one-way communication to be received from a neckloop accessory. (page.11)

# Hear and protect your hearing

With advanced hearing protection, there is no need to choose between hearing and hearing protection.

Exposure to hazardous noise is one of the most common causes of hearing impairment. How harmful the noise is depends on the exposure time in combination with the sound level. Many military operations are conducted in high levels of hazardous noise. Unprotected exposures often lead to life-long, noise induced hearing loss.

# Auditory situational awareness and level-dependent functionality

Environmental Listening is a means of allowing safe audio sounds to bypass the individual hearing protection while still helping protecting against harmful noises. This is accomplished with a proprietary digital audio circuit integrated into the headset.

A microphone receives the sounds outside the headset and transmits them to a speaker inside the headset. The Level-Dependent digital audio circuit senses noise levels above the desired threshhold and compresses them to a safe decibel level (82dB A) or amplifies softer sounds to an audible level.

# New advanced Level dependent function for ambient listening

Mission Audio Profiles

The environmental microphones allow the users to listen to ambient sounds and communicate in lower noise environments, all while benefiting from hearing protection for sudden loud sounds. The ComTac™ VI introduces the new 3M™ PELTOR™ **MAP - Mission Audio Profiles,** advanced settings for ambient listening, allowing you to adapt and optimize the environmental listening function to different scenarios.

**Advanced mode 1 - (Comfort)**
For comfort in a very noisy environment.

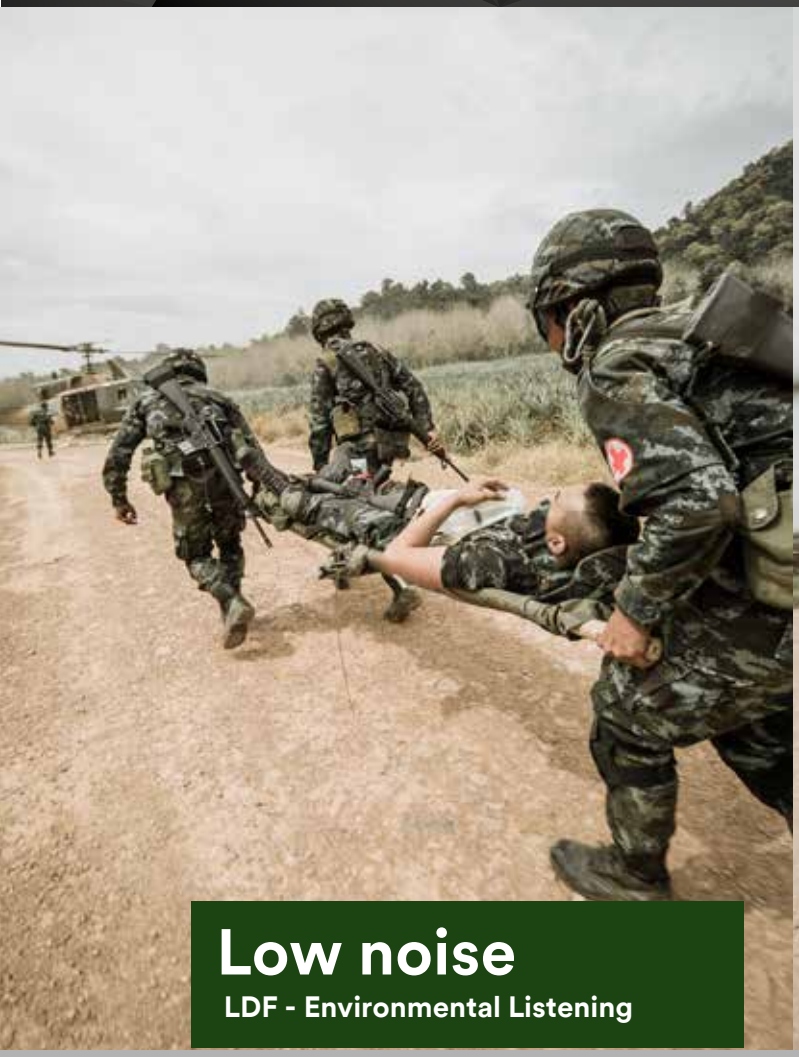
**Advanced mode 2 - (Conversation)**
For natural, face-to-face communications.

**Advanced mode 3 - (Patrol)**
For high situational awareness when walking in a low noise environment.

**Advanced mode 4 - (Observation)**
For powerful situational awareness in a quiet environment.

# NIB technology for close range communication in high noise environments.

The NIB enables natural face to face communication in noisy environments, without the use of an external communications radio, minimizing the effects of loud noise or hearing protection. This system is easy to use, just upproach to the person you wish to talk to. NIB allows the user to communicate with people who are in close range to each other.



## Low noise

**LDF - Environmental Listening**

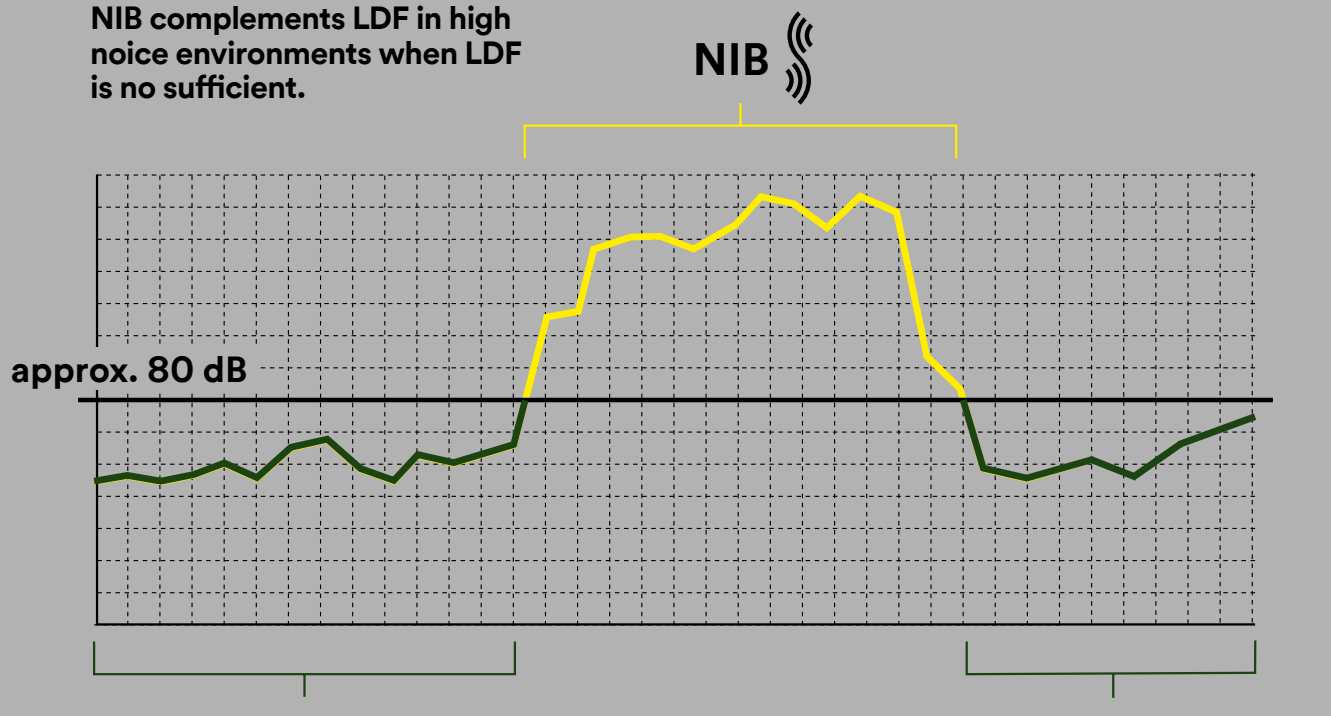
The environmental microphones allow the users to communicate in lower noise environments.

## High noise

**NIB – Natural Interaction Behaviour**

When the environmental noise increases and remain constant, the NIB communication activates.

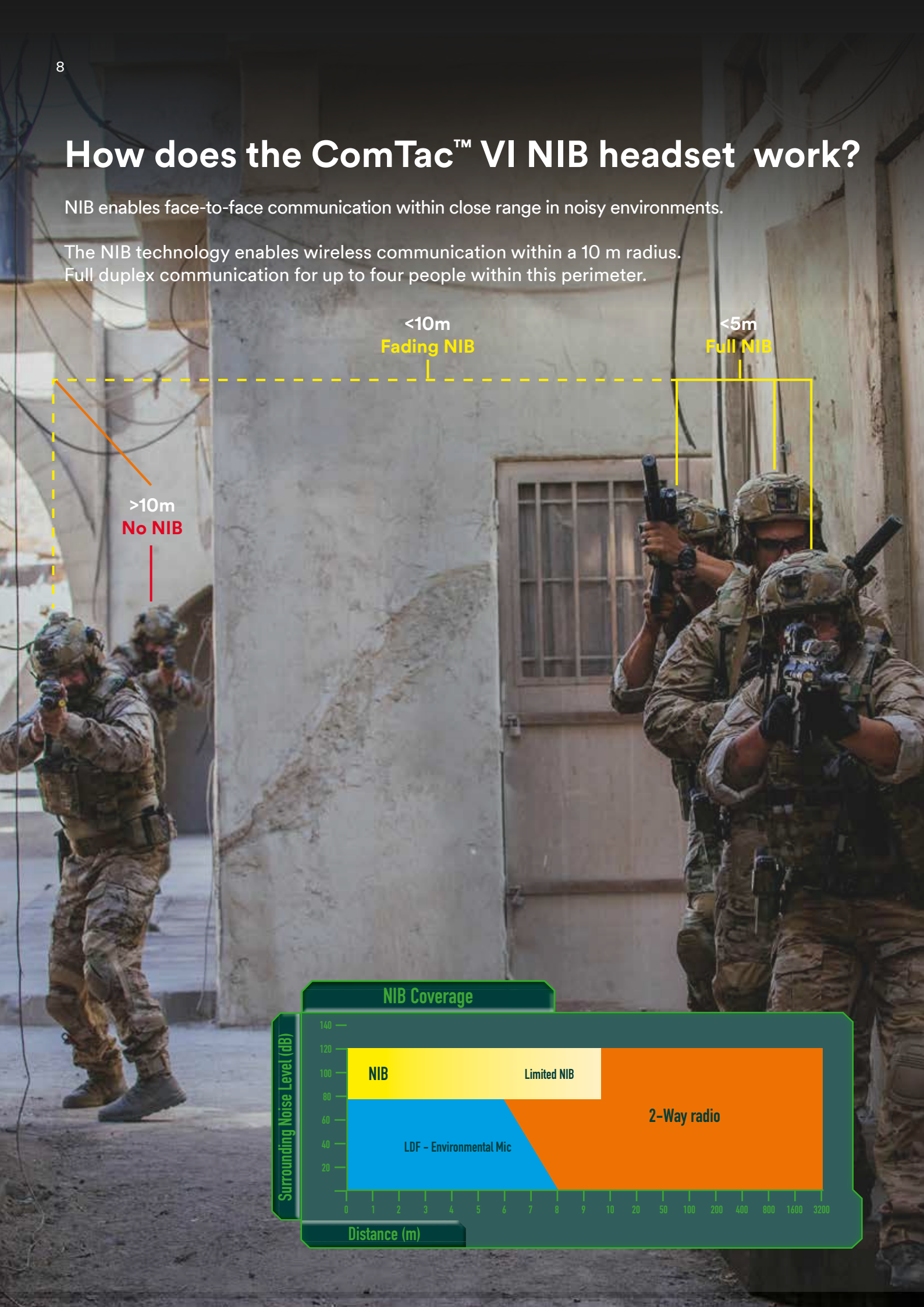
**NIB complements LDF in high noice environments when LDF is no sufficient.**



# How does the ComTac™ VI NIB headset work?

NIB enables face-to-face communication within close range in noisy environments.

The NIB technology enables wireless communication within a 10 m radius.
Full duplex communication for up to four people within this perimeter.

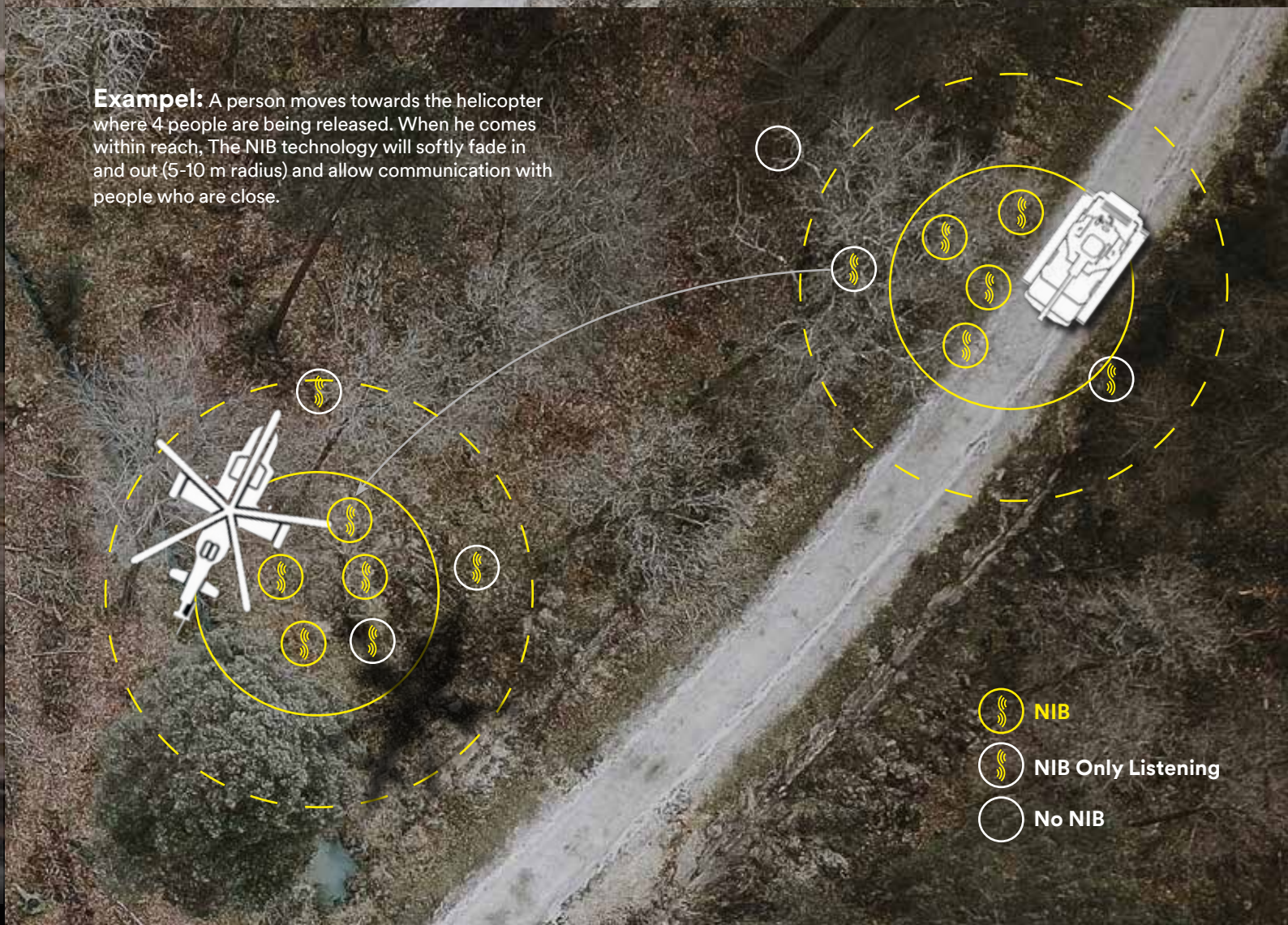


**Exampel:** In noisy environments, simply walk close to the person you wish to talk to. The NIB technology will softly fade in (5-10 m radius) and allow communication with people who are close. Stay within 3-5 m radius for optimal communication signal.

Up to four talkers can transmit simultaneously using four, full duplex transmitting channels. An unlimited number of listeners withing the 10M bubble can hear NIB communications.

NOTE: When more than four users attempt to transmit via NIB, the 5th user and beyond attempting to transmit will hear beeps, indicating that the outgoing communication did not transmit, until one of the four channels becomes free.

**Exampel:** A person moves towards the helicopter where 4 people are being released. When he comes within reach, The NIB technology will softly fade in and out (5-10 m radius) and allow communication with people who are close.



MT20H682FB-02N GN

MT20H682FB-86N GN

MT20H682FB-19BN GN

MT20H682BB-38N GN

## Headset matrix

| 3M ID / SAP ID | Product Description | Colour | Band Style | | Mik typ. | | Connector | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | F-Band | Neck-band | Standard | No Mic | PELTOR J11 | NATO J11 | Stereo J11 |
| UU009549500 / 7100168351 | MT20H682FB-02N GN | ● | ● | | ● | | | | |
| UU009554948 / 7100168384 | MT20H682FB-38N GN | ● | ● | | ● | | ● | | |
| UU009554476 / 7100168800 | MT20H682FB-86N GN | ● | ● | | ● | | | ● | |
| UU009554930 / 7100168383 | MT20H682FB-19BN GN | ● | ● | | ● | | | ● | |
| UU009554492 / 7100168803 | MT20H682FB-88N GN | ● | ● | | ● | | | | ● |
| UU009898063 / 7100191429 | MT20H682BB-38N GN | ● | | ● | ● | | ● | | |
| UU009873538 / 7100191318 | MT20H682BB-86N GN | ● | | ● | ● | | | ● | |
| UU009554922 / 7100168352 | MT20H682FB-02N SV | ● | ● | | ● | | | | |
| UU009554963 / 7100168802 | MT20H682FB-38N SV | ● | ● | | ● | | ● | | |
| UU009554484 / 7100168801 | MT20H682FB-86N SV | ● | ● | | ● | | | ● | |

## Laboratory Attenuation Values***

**MT20H682FB-**N****

| *f* (Hz) | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | SNR |
|---|---|---|---|---|---|---|---|---|
| $M_f$ (dB) | 11.5 | 17.9 | 27.8 | 30.0 | 32.1 | 36.2 | 40.3 | |
| $s_f$ (dB) | 2.5 | 2.7 | 1.8 | 2.3 | 3.0 | 2.0 | 3.1 | 28 |
| $APV_f$ (dB) | 9.0 | 15.3 | 25.9 | 27.7 | 29.1 | 34.2 | 37.2 | |

**H=31 dB M=25 dB L=16 dB**

**MT20H682BB-**N****

| *f* (Hz) | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | SNR |
|---|---|---|---|---|---|---|---|---|
| $M_f$ (dB) | 16.6 | 16.8 | 27.4 | 32.1 | 33.1 | 33.0 | 36.1 | |
| $s_f$ (dB) | 1.8 | 2.3 | 2.2 | 2.1 | 3.2 | 2.9 | 3.2 | 28 |
| $APV_f$ (dB) | 14.8 | 14.5 | 25.2 | 30.0 | 29.9 | 30.1 | 32.9 | |

**H=31 dB M=25 dB L=18 dB**

**MT20H682FB-**N** + Gel ring**

| *f* (Hz) | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | SNR |
|---|---|---|---|---|---|---|---|---|
| $M_f$ (dB) | 15.1 | 18.2 | 26.2 | 32.2 | 30.4 | 29,3 | 36.7 | |
| $s_f$ (dB) | 3.4 | 3.0 | 2.2 | 2.5 | 3.7 | 3.7 | 4.0 | 27 |
| $APV_f$ (dB) | 11.7 | 15.2 | 24.0 | 29.7 | 26.7 | 25.6 | 32.7 | |

**H=27 dB M=25 dB L=18 dB**

*** Research suggests that many users may receive less noise reduction than indicated by the attenuation value(s) on the packaging, due to variation in fit, fitting skill, and motivation of the user. Refer to your national regulations for guidance on how to adjust label values and estimate attenuation. In addition, 3M strongly recommends fit testing of hearing protectors.

Safety break away neck strap

Washable soft fabric tube

**TEP-LOOP-201**
Neckloop 3,5mm Mono connector.

**MT73**
Standard microphone

**MT90-02**
Throat microphone (Dynamic)

**HY80-EU**
**Gel Sealing Rings**

**HY68 SV**
**Hygiene Kit**

**HYM1000**
Micprotector

**M60/2**
Foam mic cover

**M171/2**
Wind shield for microphone for MT73 / MT33

**M42/1**
Windshield for dynamic microphone

**1079 SV/SP**
Battery lid

**P3ADG-F SV/2**
Rails attachment

**F09/SP**
Head pad for F-band

## Spare Parts and Accessories

| Description | 3M product code | Reference Id |
|---|---|---|
| 3M™ PELTOR™ Neckloop, 3.5mm plug, Mono | 70071730694 / | TEP-LOOP-201 |
| 3M™ PELTOR™ Standard microphone, 80mm cable | UU008163634 / 7100112094 | MT73/1 |
| 3M™ PELTOR™ Throat microphone (Dynamic) | XL001644068 / 7000040037 | MT90-02 |
| 3M™ PELTOR™ Gel Sealing Rings for ComTac™ | UU003133988 / 7100101182 | HY80-EU |
| 3M™ PELTOR™ Hygiene Kit standard for ComTac™ | XH001659461 / 7000108023 | HY68 SV |
| 3M™ PELTOR™ Micprotector, 5m, black | XH001651328 / 7100064281 | HYM1000 |
| 3M™ PELTOR™ Foam mic cover for ComTac 2pc | XH001652532 / 7000039650 | M60/2 |
| 3M™ PELTOR™ Windshield for MT73/1, MT33/1 microphone, 2pcs | UU008153483 / 7100112112 | M171/2 |
| 3M™ PELTOR™ Windshield MAXI for dynamic microphone, black | XH001659792 / 7000039687 | M42/1 |
| 3M™ PELTOR™ Battery cover for ComTac XP, XPI | UU004894315 / 7100088235 | 1079 SV/SP |
| 3M™ PELTOR™ Headset Rail attachments for Military helmets | XL001652723 / 7000108832 | P3ADG-F SV/2 |
| 3M™ PELTOR™ Head pad for F-band | UU004894547 / 7100088308 | F09/SP |

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