PHONAK life is on

Dynamic Speech Extractor: cleverly delivering automatic brilliance

The **Dynamic Speech Extractor** is the most important feature of Dynamic FM. It is a set of different features, all aimed at optimizing the audiological quality of the FM signal. After all, FM systems are about hearing and understanding speech. The **Dynamic Speech Extractor** is not about fine tuning a few hardly relevant parameters. With cleverly designed algorithms, Dynamic FM is able to improve the signal-to-noise ratio in very challenging situations by up to 15 dB over classic FM systems. During clinical testing in the USA, a first group of hearing-impaired FM users showed improvements in speech scores of up to more than 80 %. The average improvement in word score at 73 dBA surrounding noise was 50 % (HINT) (compared with classic FM).
So far, individual volume preferences for the FM signal could only be implemented by performing listening checks at a certain volume, reprogramming the volume in the receiver and repeating the listening check. In practice, this proved to be too cumbersome and was therefore rarely done. With **Dynamic Speech Extractor**, a simple and straightforward procedure is now available to adjust the volume of the FM signal to the individual's preferences. It is like bringing back the volume control to the miniaturized receiver, but the control is at the transmitter side.

Let's have a closer look at all these features and benefits.
Dynamic Speech Extractor comprises:

- AFMA, Adaptive FM Advantage, which works together with
- SNC, Surrounding Noise Compensation
- VAD, Voice Activity Detector
- EAFMA, Easy Adjustment of FM Advantage

AFMA: providing incredible speech understanding in the most challenging situations

In classic FM systems, the FM gain – the FM Advantage – is set to a fixed value. The ASHA guidelines recommend an FM Advantage of 10 dB. This is a compromise between optimal understanding of the FM signal and hearing one's own voice and other signals and voices close by through the hearing instrument microphones. For optimal understanding of the FM signal, a higher FM Advantage is desirable, but for a better perception of one's own and other voices, a lower FM advantage is desirable. 10 dB is widely accepted as the best compromise.
AFMA (Adaptive FM Advantage) automatically adjusts the FM Advantage depending on the surrounding noise level. Additional FM gain is added if the ambient noise level increases. In the FM+M mode, this will guarantee an optimal speech reception, even in the toughest of listening environments.
Figures 1 and 2 illustrate how the Surrounding Noise Compensation (SNC) works. In figure 1 the upper curve indicates the ambient noise level in a classroom over time. When a certain noise level is reached, additional FM gain is required to maintain speech understanding of the teacher's voice. This is clearly visible in the lower curve where the steps indicate where additional gain is required.

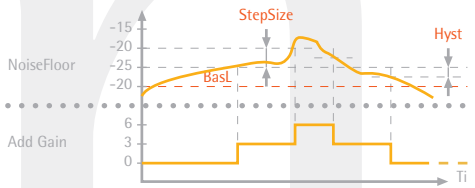


Figure 1

In figure 2, again the steps are visible in the lower curve. The upper curve shows the actual FM gain over time. A smooth transition between the different FM gain levels is applied, with proper attack and release times. The user will enjoy the benefit of optimal FM signal reception, without being confronted with abrupt level changes.

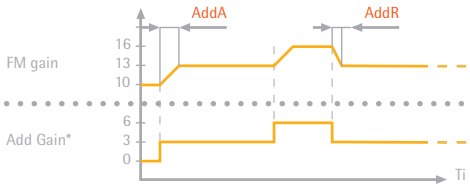


Figure 2

How is the Dynamic FM platform capable of adjusting the FM gain in receivers as a function of surrounding noise levels? The **inspiro** (the transmitter for teachers) constantly measures the sound input level at the microphone. During speech pauses, the Dynamic FM system is capable of estimating the ambient noise level. In most reverberant rooms like classrooms, the ambient noise is spread out more or less evenly across the room. The actual noise level can only be higher if one is very close to noise sources like ventilators. This background noise level in the classroom is the trigger to add FM gain. If there is need for additional gain, the **inspiro** "informs" the Dynamic FM receivers like MLxi and ML10i by means of a wireless sub-audio data link to provide more gain. If the ambient noise decreases, so will the FM gain.

In figure 3, the signal-to-noise ratio (SNR) at ear level as a function of surrounding noise level is depicted for different types of technologies. In this particular setup, the distance between talker and listener is 2 meters, the speech level without FM at 2 meters is 65 dB. The orange curve shows the SNR for hearing instruments. With FM in the FM+M mode (the yellow curve), the SNR is clearly better (as expected), the SNR benefit is 10 dB, regardless of the ambient noise level. The AFMA curve (in blue) shows how the SNR stays stable between 57 dB SPL and 73 dB SPL, regardless of the ambient noise level. At 73 dB SPL ambient noise level, the SNR benefit has increased from 10 dB to 25 dB! For those listeners who require a high signal-to-noise ratio (such as +15 dB) for comfortable and reliable communication, the maximum tolerable noise level has increased from 60 dB SPL to 75 dB SPL. This is a huge improvement. *The difference between AFMA and classic FM is larger than the difference between classic FM and hearing instruments!*

SNR Comparison HI, FM Classic, AFMA with surrounding noise
Distance=2 meters, speaker level=80dBSPL

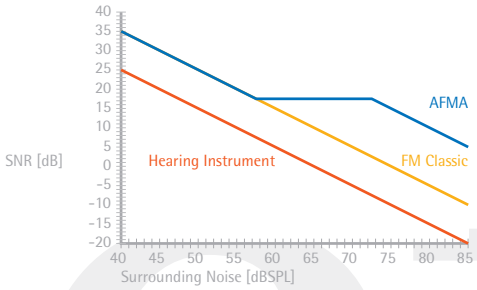


Figure 3

VAD: keeping the signal clean and comfortable

The Dynamic FM platform is continuously checking whether speech is present at the FM microphone. If there is no speech signal, there is no

need for the FM receivers to amplify the signal and the FM gain is reduced drastically. As soon as a speech signal is present again, the gain is restored virtually instantaneously. This has two major advantages. First, the ambient noise picked up by the FM microphone will not be audible. The ambient noise (if there is no speech present) is usually amplified by an FM system more than speech, as the speech levels are in the compression part of the gain model of the transmitter and the ambient noise is in the linear part. Second, any noise that arises in the FM channel between transmitter and receivers is also eliminated. This FM channel noise can sometimes be audible at larger distances between talker and listener.
Figure 4 shows the behavior of the Voice Activity Detector (VAD). As soon as speech is present, the FM gain is full on. When the person stops talking, a pause – the hold off time – is observed before the FM gain drops off. This is to avoid rapid switching of FM gains during short speech pauses.

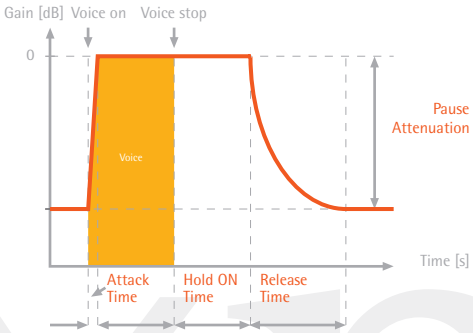


Figure 4

Easy Adjustment of FM Advantage: taking user preferences into account

In the past, individual volume preferences for the FM signal have rarely been taken into account in FM fittings. With **Dynamic Speech Extractor**, a simple and straightforward procedure lets professionals adjust the volume of the FM signal to the individual's preferences.

Figure 5

In the "Easy Adjustment of FM Advantage" mode, the **inspiro** controls the output volume of the FM receivers of an individual child. The audiologist talks into the FM microphone, and depending on the child's feedback, the volume can be increased or decreased until the desired level is reached. This level is saved in the receivers and acts as the new starting point for the Adaptive FM Advantage (AFMA).

In short: **Dynamic Speech Extractor** defines the new benchmark of speech understanding in noise. It gives users an *automatic brilliance* never experienced before.

AutoConnect:
always right on target!

When fitting FM systems, one of the most crucial factors to be considered is the different ways audio inputs are hardwired in hearing instruments. In some hearing instruments, the FM signal is simply fed in parallel with the hearing instrument microphone signal to the amplifier. Other hearing instruments have a so-called Designated Programmable Audio Input (DPAI). These instruments are called "DPAI-no" and "DPAI-yes" hearing instruments respectively (see figure 6).

"DPAI-no" hearing instruments have an average audio input impedance of 4.4 kW, but values may vary from less than 2 to more than 10 kW. In "DPAI-yes" hearing instruments the input impedance is much higher, tens of kW. The difference in input impedance for "DPAI-yes" and "DPAI-no" hearing instruments is very large and, without exception, FM receivers need to be programmed correctly for "DPAI-no" or "yes". Otherwise, either the FM signal may become too

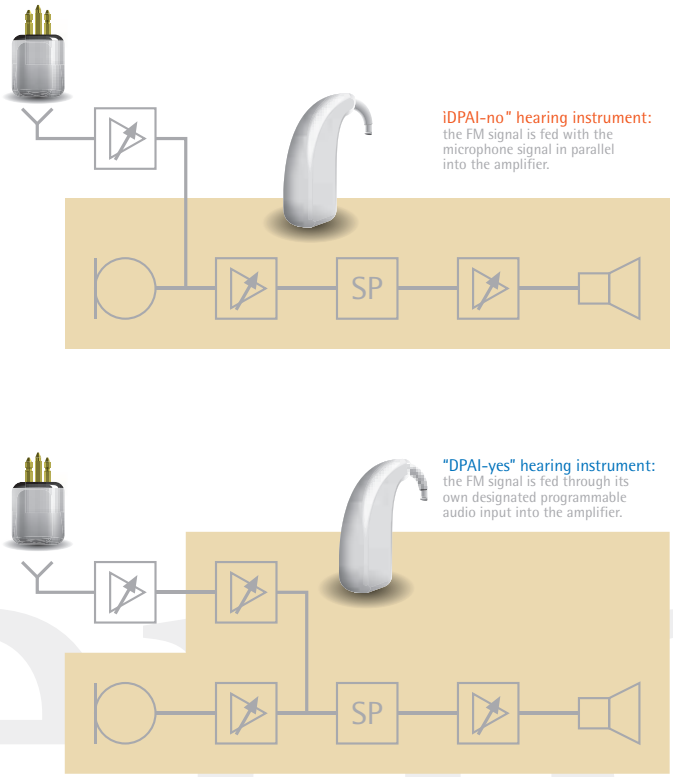


Figure 6

loud or even distorted, or the ear level microphone signal may disappear.
In "DPAI-no" hearing instruments the switching between FM only and FM+M takes place by moving a small switch on the receiver. In "DPAI-yes" hearing instruments the different FM programs are selected in the hearing instrument itself. To see which hearing instruments are "DPAI-no" and which "DPAI-yes" see **www.phonak.com/mlx**.

The output of an FM receiver is fed into the hearing instrument and the impedance is the electrical parameter of the audio input that directly influences the experienced FM level. Today, impedance mismatch is the key reason why FM signal levels may be off target. Connecting an FM receiver that is programmed for a "DPAI-no" hearing instrument to a "DPAI-yes" hearing instrument may lead to too loud FM levels or even distortion, because the impedances are mismatched. Connecting an FM receiver that is programmed for a "DPAI-yes" hearing instrument to a "DPAI-no" hearing instrument may lead to the impossibility to get the FM+M mode, FM only is the only mode available.

AutoConnect takes care of this and reshapes the practice of FM fittings. **AutoConnect** automatically detects whether the FM receiver is attached to a "DPAI yes" or "no" hearing instrument and corrects its output impedance. There is no longer any need for programming receivers for this.

But **AutoConnect** goes even further than just detecting "DPAI-yes" or "DPAI-no". Within the classes of "DPAI-yes" and "DPAI-no" hearing instruments, impedances vary between different brands and types of hearing instruments, resulting in considerably different FM Advantages, if no correction is applied. For a precise fitting of the FM Advantage, an electro acoustic verification in a test box is necessary, and the result (the FM off-set) needs to be compensated for in the FM gain, which can be programmed in a receiver. FM off-sets can easily be as large as 10 dB.

AutoConnect in universal Dynamic FM receivers like MLxi measures very precisely the impedance of the audio input and automatically corrects for the required off-set. This ensures an optimal FM level for different hearing instruments, without the need for electroacoustic verification and reprogramming of receivers. FM levels that were off target are a thing of the past.

Thanks to **AutoConnect**, audiologists will appreciate the absolutely hassle-free automatic accuracy of the fitting and the fact that time-consuming verification and programming of output levels is a thing of the past. FM users will appreciate FM levels that are always on target!

DataLogging FM: offering a comprehensive insight

DataLogging in hearing instruments has been a big success. It provides professionals with a vital insight into the daily use of hearing instruments. Nothing is more logical than taking this concept to FM. Dynamic FM is the world's first FM platform that features **DataLogging FM**. **DataLogging FM** provides hearing care professionals with important information, collected during the use of the **inspiro** (the transmitter for schools). This information will help the audiologist understand the use of the system in practice. **DataLogging FM** automatically tracks all errors in the transmitter. Events such as a low battery, the microphone being muted for more than 15 minutes or booting errors are stored in the transmitter's memory with a time stamp and require the teacher to do nothing.

Monitoring information is stored as well, including detailed results. There is no need for the teacher to take notes for the audiologist about each child: where **Monitoring** has signaled a problem, the **inspiro** saves it all by itself.

One of the most useful parameters **DataLogging FM** saves is the average ambient noise level in classrooms over time. With a resolution of 15-minute time frames, noise levels can be inspected. All **DataLogging FM** data can be easily accessed by hooking up the transmitter to a PC with the FM SuccessWare 4.0 or above. It will provide the educational audiologist with a comprehensive insight, giving him vital information to understand how the Dynamic FM system has performed in class. Teachers do not need to worry about reporting technological details. **DataLogging FM** will enable teachers and audiologists to keep FM benefits at the highest possible level.

MultiTalker Network: a major breakthrough to replace TeamTeaching

Many educational settings nowadays imply that two or more professionals – e.g. two teachers, or a teacher and a therapist – interact (almost) simultaneously with the hearing-impaired child or children. As hearing-impaired students need to understand all professionals equally well, they should all wear an FM transmitter. In a traditional TeamTeaching set-up, each additional (secondary) transmitter needs to be programmed to a different frequency. The primary transmitter contains one or more FM receivers to capture all these frequencies, adding all signals from all transmitters together and transmitting the mixed signal to the receivers.

Traditional TeamTeaching clearly provides benefits when compared with single teaching mode. Without TeamTeaching, all additional professionals can only be heard through the hearing instrument microphones at a different output level from the FM level, depending on the distance between student and professional. Nevertheless, traditional TeamTeaching can be improved substantially in four different ways. After talking to many school audiologists, acousticians and teachers, Phonak has defined and developed a new approach to TeamTeaching which sets new standards in terms of ease of use, flexibility and signal-to-noise ratio, and which eliminates all the hassles of traditional TeamTeaching systems: **MultiTalker Network**. TeamTeaching as we know it today will disappear.

1. Ease of use, no more frequency planning challenges

Traditional TeamTeaching requires the use of at least two – sometimes many more – often scarce FM frequencies. In many cases, this means that additional frequency planning is required in schools, or that special allowances need to be sought to use the otherwise illegal frequencies. **MultiTalker Network** uses only one FM frequency. This frequency can be the same as the one that is used without **MultiTalker Network** (the usual class room frequency) or any other frequency. No additional or exotic FM frequencies, in the same or other bands, are required. No additional frequency planning is required. Only one **inspiro** (the school transmitter) is "live" at any given moment, there is no chance that different **inspiros** transmitting at the same time and frequency will cause interference.

2. Any inspiro can provide MultiTalker Network

Traditional TeamTeaching requires the use of special transmitters with integrated or attached FM receivers. These increase the cost, but without them, traditional TeamTeaching is not possible.
With **MultiTalker Network**, any **inspiro** – once programmed as an "extended version" by the audiologist – can be used in **MultiTalker Network** mode. No additional hardware is required. So at any given time, an **inspiro** can be used in **MultiTalker Network** mode. Educational flexibility at its best!

3. Improvement in signal-to-noise ratio

With traditional TeamTeaching, all the microphones of every FM transmitter in the chain are open. Each additional transmitter adds noise to the signal. This noise is unfortunately much higher than the audible background noise of an FM transmitter when students are listening to a teacher talking into the FM microphone in non-TeamTeaching mode. In this mode, compression in the transmitter reduces the amplification of the ambient noise picked up by the FM transmitter microphone. But if a teacher is not talking into the FM transmitter microphone, the gain automatically increases and the ambient noise is transmitted at a much higher level than usual. This higher level of ambient noise is mixed with the voice of an additional teacher, talking into another FM transmitter microphone. The non-compressed ambient noise plus the compressed speech sounds relatively noisy. The improvement in signal-to-noise ratio is heavily compromised by this phenomenon and losses of 10 dB can occur quite easily.

With **MultiTalker Network**, no additional noise enters the system. The **inspiro** in control of the network ensures that only one microphone is "live" at any given moment. There is no chance of a transmitter sending out uncompressed ambient noise picked up by the microphone and interfering with the voice of another professional. The result is a marked improvement in sound quality with noticeably less background noise.

4. Maximizing speech understanding by preventing interruption

Traditional TeamTeaching cannot ensure that two or more professionals are not heard simultaneously. Listening to two voices at the same time is difficult enough for adults. In a listening environment where spoken language also carries important information and where the students have a hearing loss, it virtually eliminates the chance of effective communication. For a hearing-impaired child, coping simultaneously with several voices – as may happen in traditional TeamTeaching – is a nearly impossible task.

MultiTalker Network permits only one voice to be transmitted to the receivers at any given moment. No matter how many professionals talk at the same time, the child will hear one voice only, clear and noise-free. It is very useful for the other voice or voices to be blocked out. They would have only a small chance of being understood at all and, worse still, interfere with the primary speaker. Hearing-impaired children should hear only one voice at a time. **MultiTalker Network** guarantees precisely that, even if professionals happen to talk at the same time. Only when one teacher stops talking can the voice of another take over the microphone and be heard by the children. The "master" in the network – i.e. the teacher with the **inspiro** that has set up **MultiTalker Network** and controls it – can take over the microphone from any other teacher or professional talking at any time. This **inspiro**, therefore, should be used by the main person in the classroom.

How is it possible for **inspiro** to eliminate all the drawbacks of traditional TeamTeaching in this very elegant way?

In **MultiTalker Network** mode, a smart wireless data link is established between all transmitters that participate in a TeamTeaching activity (see illustrations below). Up to ten transmitters can be part of the team, or network. The principle teacher's **inspiro** manages the network automatically and activates the transmitter of the person speaking first, idling all the others. It will hold this configuration until the person finishes talking. Any person speaking after this will be given exclusive use of the channel and the data link will ensure that all other transmitters are idled.

Effectively, this means that all transmitters emit on the same FM channel, but not concurrently. As the non-transmitting FM microphones do not add undesired noise, there is a dramatic improvement in signal-to-noise ratio compared with traditional TeamTeaching solutions. In addition, the **inspiro** automatically managing the network ensures that only one voice is transmitted to the hearing-impaired child at any one time.

MultiTalker Network mode is an easy, one-time setup. The **inspiro** display shows which professionals are involved in the **MultiTalker Network** teaching activity, guarantees correct operation and indicates anomalies such as being outside the range of the wireless data link.

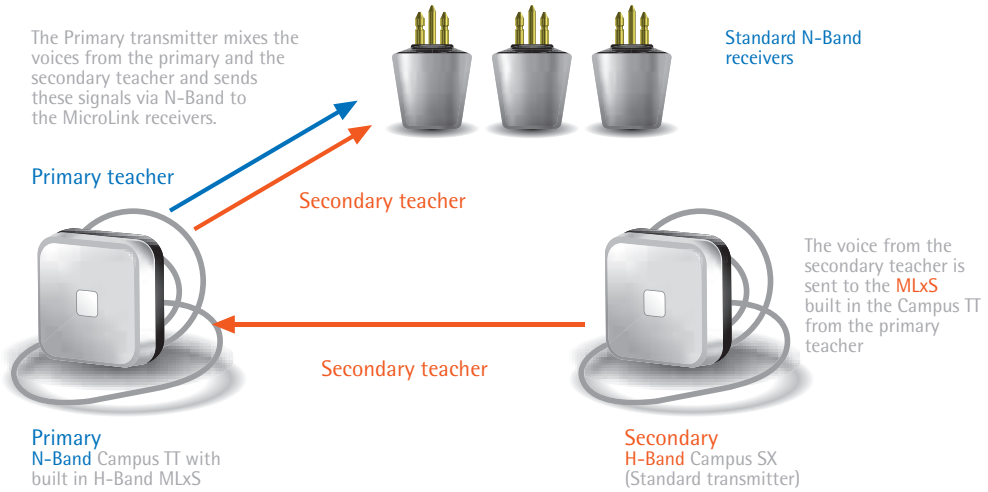
In summary:

Speakers will appreciate
- The easy, guided **MultiTalker Network**, free of frequency hassles
- Automatic network management via the the main teacher's **inspiro**
- The freedom to include up to ten speakers in the network
- The fact that every **inspiro** programmed as an "extended version" is ready for **MultiTalker Network**

Children will benefit from
- The significantly improved signal-to-noise ratio
- The maximum speech understanding

MultiTalker Network is really clean: it has an extremely low noise floor while delivering clean speech signals, with spectacular user-friendliness. It will substantially increase educational flexibility for hearing-impaired children, students and their teachers worldwide.

TeamTeaching with Campus TT



MultiTalker Network with inspiro

Figure 7

Monitoring: daily reassurance that teachers can rely on

It is important that everyone working with hearing-impaired students knows how to use an FM system, and a daily systems check is recommended to identify first signs indicating that the system might not be functioning properly. If the FM system is not working, the children cannot follow in class. The Phonak **inspiro** transmitter for schools has been designed for practicality, so that teachers can fully concentrate on their students.

In several previous FM systems, teachers sometimes had to rely on an LED to indicate whether children could hear the teacher; however, with the introduction of modern, fully digital hearing instruments that include several listening programs and special programs for reception of transmission (FM) from the teacher microphone, the LED indication on the FM system cannot provide the teacher with reliable feedback. The hearing instrument can actually be in a hearing program in which no FM signal can be received, and the student cannot hear the teacher talking. The new unique **Monitoring** feature of the Dynamic FM platform is therefore going several steps further than a crude LED indicator. It gives the teacher reliable *visual* (see figures 8 and 9) information in the **inspiro** display about the battery status, audio shoe connection integrity, the FM signal quality, the channel in use and receiver settings. The system uses an *acoustic* indicator for a real confirmation that the student can hear the teacher's microphone. Only if the child confirms that he or she can hear the beeps is a full system check complete.

Figure 8

Figure 9

Monitoring a child's FM system with **inspiro** is easy. All it takes is a button press and the **Monitoring** of all important functions is activated. A green light signals proper functioning, a red light a problem. If anything is not working properly, the system will provide tips in the display on how to make corrections.

But **Monitoring** goes even further. Every time an **inspiro** is switched on, the transmitter monitors itself: **Monitoring** checks the buttons, the battery, the audio input connection and the charging circuitry. In case of a malfunction, a vibra alarm will alert the teacher. Also during use, a low battery will be signaled by the vibra alarm.

Monitoring takes the checking of FM systems to the next level: it is easy to implement every morning. **Monitoring** gives detailed advice in case of malfunctioning and visual and acoustic indicators complement each other. Only this package can guarantee the daily reassurance necessary for effective classroom teaching.

SoundCheck:
providing acoustic awareness

inspiro is the world's first FM transmitter with a **SoundCheck** system on board. This **SoundCheck** offers more than just the actual dB SPL level in a room. It simultaneously measures both the speech level and the level of the background noise. The display indicates the measurements in an easy-to-understand format (see figure 10). In that context, **SoundCheck** functions as a background noise warning system and at the same time helps optimize the transmitter microphone position. Thanks to this support, based on actual measurements, a teacher can do a good job – even in noise.

Figure 10

Ensuring a favorable acoustic environment is fundamental to the classroom learning process. The ability to hear and understand the teacher is the basis of our entire educational system. The acoustics of all learning environments – whether they are traditional classrooms or not – should therefore be taken into account during the fitting of hearing instruments and the rehabilitation of hearing loss. The negative impact of the usually rather poor classroom acoustics are however not self-evident to teachers, administrators, parents or the public. Unless brought to their attention, acoustic barriers to listening and learning in the classroom are typically ignored.

The new **SoundCheck** in the **inspiro** (the transmitter for teachers) provides the teacher with a good estimate of the background levels and is a good start for identifying problem areas. The teacher's microphone optimization system informs teachers when the level of the speech signal being picked up by the microphone is too low. This could be the result of improper placement of the microphone. The positioning of the microphone has a direct influence on the improvement in signal-to-noise ratio through the FM system, the SNR *advantage*. Basic laws of physics exclude the existence of any effective algorithm that can compensate for poor microphone positioning. For the directional MM10, it is best when the directionality is aimed at the mouth of the speaker. The new and very comfortable boom microphone iBoom should be positioned as closely to the mouth as possible.

SoundCheck can also be used as a screening tool to identify classrooms that are too noisy for teaching.

inspiro's SoundCheck provides *acoustic awareness* to help teachers optimize the learning environment.

ChannelFinder: providing clean reception

Convenient channel selection in any teaching situation

The **inspiro** transmitter for schools provides the teacher with an unmatched flexibility in channel selection and ease of operation. Teachers can fully concentrate on their students and on teaching because the **inspiro** handles even dynamic situations, such as switching between group and one-on-one teaching.

Figure 11

The unique new **ChannelFinder** provides the teacher with an easy way to ensure that the student's receiver is on the right channel, and at a mere touch of a button, the teacher can search or scan for an interference free channel (see figure 11). The **ChannelFinder** command is sent from the **inspiro** to a Dynamic FM receiver like MLxi or ML10i, which will scan for interference-free channels. The result is communicated back from the receiver to the **inspiro** and visible in the color display.

Thanks to customizable channel presets, users can switch freely between teaching environments, for instance when switching from group teaching to individual teaching or vice versa.

When an FM system is being delivered to a school, the hearing care professional has previously set up and pre-programmed the system so that there is no need for the teacher to make any further adjustments. The hearing care professional has analyzed the use of all channels at the school and strives to ensure optimum FM reception in all classrooms. Should interference from another FM user in the area occur, the teacher can use the new **ChannelFinder** feature to easily scan and find an alternative interference free channel.

To find an interference free channel, the teacher selects **ChannelFinder** in the **inspiro** menu, and a step-by-step instruction guides the teacher through the **ChannelFinder** process.

When an interference-free channel has been found, the teacher can either decide to synchronize the student to the new frequency or to set the receiver back to the initial frequency.

In recent years, there has been a proliferation of new FM users – radio and TV stations, beepers, police radio, paging systems, other personal FM systems – and the result is an increasing risk of interference. In the past, FM transmission was restricted to relatively few channels, which varied from country to country. Following a request from Phonak, now more than 65 countries worldwide have agreed to allocate frequencies in a new interference-free frequency band.

With its **ChannelFinder** feature, Phonak has taken FM technology to the next level of innovation. The interference-free frequency band ensures that FM systems used by hearing impaired children and adults are not disturbed by competing transmission systems. If a channel is occupied by another FM user, the Dynamic FM system recommends a new interference-free channel. It's as simple as that: crystal-clear reception allows the teacher to concentrate on his main task: teaching.

Products in the spotlight
inspiro

Easy
On/Off slide, showing a very clear, green mark when switched on

Brilliant
High-resolution color display

Intuitive
Menu navigation with Up, Down, Return and Escape

Fast
Direct access to the three main functions

Protective
The cable retraction protects the microphone cable, considerably prolonging microphone life

Robust
The housing is extremely robust and the buttons well protected

Universal
Mini USB for charging and programming and a 3.5 mm standard jack for audio input

Flexible
A sturdy button to attach the belt clip or lavaliere cord

iLapel

Effective
Clip for attaching
securely to clothing

Unique
Multimicrophone
directionality for
optimal voice pick-up

iBoom

Comfortable
Ultra lightweight
and very comfortable
fixation

Cool
Have you ever seen
a cooler microphone
design?

Crystal clear
iBoom provides
by far the best
signal-to-noise-ratio

Universal
Can be worn on left or
right ear, adjustable to
all ear and head sizes

MLxi

Universal
MLxi is compatible with all brands of hearing instruments, cochlear implants, and all Phonak transmitters

Automatic
Just switch it on, everything else is automatic

Miniaturized
The symmetric and miniaturized design goes well with hearing instruments

MLxi Baha

Baha compatible
The MLxi with Baha compatible plug for Intenso, Divino and Compact from Cochlear

ML10i for Naída

Waterproof
ML10i is the world's first waterproof FM receiver

Smooth
ML10i is perfectly integrated

Quick
The hearing care professional can attach or remove an ML10i in seconds, simply by removing one pin

Compatibility overview

inspiro and the new MLxi and ML10i receivers are compatible with all existing Phonak FM transmitters and receivers. Different Phonak FM products can be combined with no problem. Phonak FM products are not compatible with non-Phonak FM products.

For maximum benefit it is recommended that **inspiro** is always used with the new MLxi or ML10i receivers. The overview shows the main features available for each combination of transmitter and receiver.

	inspiro transmitter / MLxi / ML10i receiver	inspiro transmitter / Traditional receiver	Traditional transmitter / MLxi / ML10i receiver	Traditional transmitter / Traditional receiver
				
Basic FM features	■	■	■	■
Dynamic Speech Extractor	■			
AutoConnect	■		■	
Monitoring	■			
DataLogging FM	■	■		
Channel Finder	■			
SoundCheck	■	■		
MultiTalker Network	■	■		

inspiro – for all hearing-impaired children in normal and special schools

Normal schools usually need only a limited set of FM features. Special schools often appreciate special features such as MultiTalker Network. One thing, however, is clear: *all schools* need the best-possible sound quality for their children. **inspiro** has been designed with exactly these considerations in mind!

inspiro will be delivered in the Standard Level version, where the basic FM features are available, plus Dynamic Speech Extractor, AutoConnect, Monitoring, DataLogging FM, ChannelFinder and SoundCheck. This version offers everything most teachers need in daily life.
Hearing care professionals can easily upgrade an **inspiro** transmitter to Extended Level. This comes with special features which can all be found in the user-friendly menu. **inspiro** can be upgraded to Extended Level at any time and at no extra cost. This means **inspiro** will always be the right choice. Teachers are not bothered by menu options that are not applicable, but if and when the need arises, the Extended Level can always be activated.

In the overview, the differences between Standard and Extended Level are indicated.

	Standard Level	Extended Level
Basic FM features	■	■
Dynamic Speech Extractor	■	■
AutoConnect	■	■
Monitoring	■	■
DataLogging FM	■	■
Channel Finder	■	■
SoundCheck	■	■
MultiTalker Network		■
Easy Adjustment of FM Advantage		■
Wireless MLxi button lock		■
Wireless receiver identification		■
Scan		■

Life is on

We are sensitive to the needs of everyone who depends on our knowledge, ideas and care. And by creatively challenging the limits of technology, we develop innovations that help people hear, understand and experience more of life's rich soundscapes.

Interact freely. Communicate with confidence.
Live without limit. Life is on.

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