

# People first



We believe that it takes more than technology and audiology to create the best hearing instruments. That's why we put the individual needs and wishes of people with hearing loss first in our development of new hearing care solutions.

# Oticon ♦ Amigo



child  
friendly  
hearing  
care

For parents  
and teachers

FM made friendly  
– at school and at home

**oticon**  
PEOPLE FIRST

# Using FM to help your child develop

As a caregiver of a child with hearing loss, one of your greatest desires is to see them grow up to be knowledgeable, cheerful, self-sufficient individuals. And like their teachers at school, you want them to hear as much as possible, and learn as much as they can.

## **Speech is the goal**

Learning a language is vital because speech is our primary form of communication. It is also the key to getting a good education and forming strong social ties. And since learning starts with listening, the earlier the hearing loss is treated, the easier things will be. The idea is to provide as much speech stimulation as possible, with little or no interference from noise. For children with a hearing loss this can be achieved with advanced hearing aids and top quality FM systems.

## **FM is the key**

Where FM systems are concerned, schools can contribute by ensuring that their FM solutions are 100% reliable. And parents can contribute by getting easy-to-use devices for the home. Every child deserves to excel both academically and socially, and using a FM system offers them this chance.

## **Amigo is the ultimate FM solution**

This guide tells you how Oticon's Amigo FM solutions work – and how YOU can help children take advantage of every learning opportunity.





# Contents

> Why FM technology?	4
> How can Amigo FM help?	6
> Amigo FM for schools	8
> Knowing Amigo will last and last	10
> Always putting speech first	12
> Making classrooms listener friendly	13
> Amigo FM for home use	14
> Making communication in classrooms easier	15
> Troubleshooting tips	17
> Amigo at a glance	18



## Why **FM** technology?

In noisy situations children can have difficulty hearing because the speech may be covered over by the noise. For them to hear properly, the speech signal must be much louder than the noise – an important balance that is often hard to achieve with hearing aids alone.

FM solutions help the child hear better by removing the most common barriers to speech understanding. These are:

### **Distance**

If the distance between teacher and child is too great – which may be even just 12-15 feet away – the teacher's voice will lose its intensity and become too weak for the child to learn and understand.



### **Noise**

In noisy situations, the loudness level of the voice the child is trying to hear – in class, the teacher – might actually be lower than the level of the background noise.

### **Reverberation**

Acoustically, classrooms are not particularly friendly places. Noise bounces off the hard walls, floors and ceilings and interferes with the teacher's voice.

### **Proven results**

FM helps children to keep up with their classmates. Research shows that by providing consistent access to the speech signal these solutions help to reduce delays in language development so often associated with hearing impairment.



## How can **Amigo** help?

Amigo helps by conquering noise, overcoming echoes, eliminating distance and delivering the speech signal at exactly the right volume, directly to the child's ear.

### **How Amigo works**

Oticon's Amigo FM solution has three components: a microphone, a transmitter and a receiver (the T10 model is combined transmitter and microphone). The microphone clips onto the speaker's clothing near the neckline and then feeds directly into the body-worn FM transmitter. The small, lightweight FM receiver attaches to the child's hearing aid. When active, the transmitter sends the voice of the speaker directly to the receiver, for amplification in the child's hearing instrument or cochlear implant processor.

### **Overcoming distance**

Research has shown that the ideal distance for speech understanding is between 3-6 feet from the speaker. This is due to the fact that the loudness of the speech drops as distance increases. But with Amigo, there is no critical listening distance, because the signal is sent directly to the child's ear. This makes it seem as though the speaker is standing only inches away.



### **Beating bouncy echoes**

Classrooms are plagued by echoes which bounce off walls, ceilings and floors. These can interfere with the original speech signal so much that important details might be lost. Amigo comes to the rescue by transmitting the voice directly from the source – the speaker’s mouth – with no loss of signal clarity from echoes.

So the child can concentrate on **WHAT** they want to hear, rather than **HOW** to hear at all.

### **Learning through experience**

Amigo offers many advantages: children become less tired and more attentive. And they have an opportunity to learn through experience and interaction, as opposed to having to be explicitly taught. Teachers and parents also benefit: they have the freedom to move around while talking – and they don’t have to shout to be heard. And small children feel more secure when they can hear their parent’s voice.





## Amigo FM for Schools

If the FM system is owned by the school, it will typically stay in the classroom at the end of the school day. But parents can continue to provide FM benefits at home. (Read more about Amigo home solutions on page 14).

### **The Amigo Educational solution**

Amigo T20/T21 transmitters are popular because they give teachers the freedom to focus on what they do best: TEACH! The transmitter is lightweight and easy to wear, allowing full freedom of movement. So teachers remain in constant contact with students without having to modify their teaching style. This applies both inside the classroom and outside, during field trips and special events.

### **Less worry – fewer hassles**

Teachers are often concerned that FM devices might be complicated to use. But with Amigo they don't have to worry about technical and programming problems. Nor do they have to move equipment from room to room. This is because the transmitter actually also works as a hand-held programmer, with navigational menus that make the entire solution straightforward to use.



### **Seeing that Amigo is working**

With Amigo, the link between teacher and child remains active – and the teacher KNOWS it. A special light on the child's Amigo receiver clearly confirms that, no matter where they are sitting, they are hearing clearly.

### **Time-saving and easy to use**

Teachers shouldn't have to waste time searching for the right channels to use, and with Amigo they don't have to. All channels are pre-programmed, and the transmitter will automatically find one that is interference-free. Also, the transmitter can be synchronized with the receiver while on the child's ear – another time-saving benefit.



## Knowing **Amigo** will last and last

Classrooms really put FM solutions to the test. To be of any real use in the short term or long term, these solutions must be well protected both internally and externally. In Amigo, attention has been paid to three areas in particular: durability, reliability and longevity.

### **Accident proof**

Amigo devices can fall on the floor again and again without suffering permanent damage. The Amigo receiver has been ultrasonically welded together making it amazingly resilient to accidental dropping. The Amigo transmitter is designed around a rigid centre frame encased in a protective, silicone rubber molding.

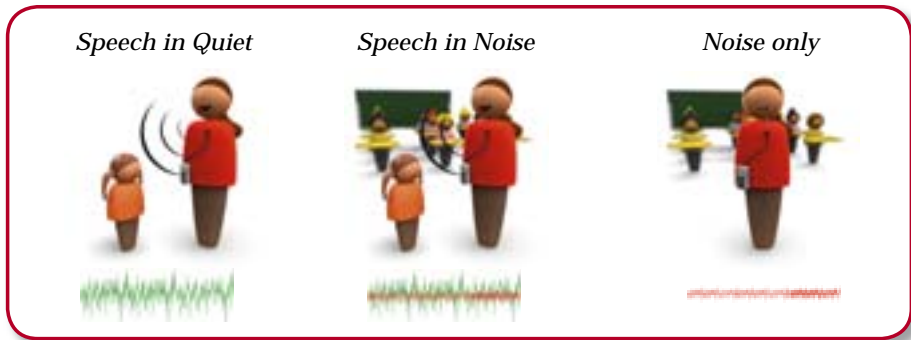


### **Moisture resistant**

To prevent moisture-related accidents the buttons of the transmitter have also been sealed with silicone rubber, making the device both water resistant and safe to clean. The receiver is equally robust: the casing has been welded shut, and the few apertures it does possess are very tightly sealed.

### **Completely reliable**

Amigo receivers have an automatic sleep-mode function which conserves precious battery power. Whenever more than 60 seconds elapse between voice signals, the receiver quietly mutes itself. And the instant the signal returns, all systems are reactivated. Also, the Amigo transmitter uses rechargeable or standard disposable batteries that provide constant support throughout the school day.



## Always putting **speech first**

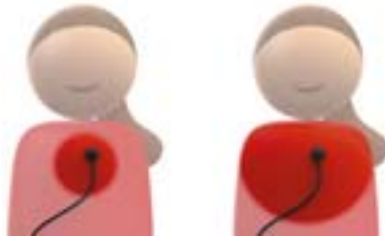
When a child has a hearing loss they can have difficulty separating the voices they want to hear from the noises they don't. But with Amigo, they don't have to fight to make this distinction because Amigo automatically puts speech first.

### **Adjusting to the child's needs**

Amigo continuously shapes the signal to fit the child's personal requirements. If the teacher's voice is dynamic and booming, Amigo makes it more comfortable to listen to. If their voice is calm and quiet, Amigo gives it just enough extra boost to make the voice easier to hear. And no matter how the teacher wears the microphone, the signal will always remain clear.

### **Giving the child a break**

Whenever the teacher is silent Amigo's microphone goes quiet too. So it avoids picking up irrelevant sounds (like the shuffling of papers or the rustling of clothes), which can be a source of irritation and distraction. And with quiet breaks, children can focus their energy on more important things.



*Enlarged microphone “ideal-spot”*

## Making **classrooms** listener **friendly**

At times, all children can be inattentive, have difficulty learning and expressing themselves, and be tired and irritable. For the hearing impaired child it becomes even more difficult to concentrate if the classroom is not acoustically friendly.

Teachers can help by providing a “friendly” favorable listening environment and by communicating clearly at all times. There are two ways to make classrooms more user-friendly for children with hearing instruments:

> **Reduce external noise**

Try to find a quiet classroom, away from traffic, noisy areas and places where groups of children congregate.

> **Reduce internal noise**

Try to get the classroom walls and ceilings acoustically treated. Well-fitted doors, carpeting, pillows, curtains, cork bulletin boards, and felt pads under chair legs all help to absorb noise.

# Amigo FM for home use

Life outside school offers countless opportunities for learning, provided that background noise is kept to a minimum and communication occurs within close distance. With a clearer and more direct signal there will be fewer misunderstandings and repetitions. And as communication becomes easier, the whole family will feel more relaxed.

## **Amigo Home solution**

The Amigo T10 is a portable, lightweight solution consisting of a digital, hand-held transmitting microphone plus a receiver that clips onto the child's hearing instrument. This device can be used virtually anywhere – both inside and outside the home.

## **Clear communication – anywhere**

The T10 can be taken absolutely anywhere. It can help children hear and understand directions and requests in the grocery store, the car or the local playground. And the T10 is easy for coaches and instructors to wear and use, making it perfect for athletics, team sports, music lessons, dance, and other activities.

## **A multi-purpose device**

The T10 can be used in a multitude of ways. The child can hold it and point it at the person they want to hear. Or a parent or caregiver can wear it around their neck to give their voice a boost. It can even be placed on a table or connected to a CD player, TV or computer. So the child can invite friends over and be able to keep the volume at a level everyone can enjoy.



**Hear one or several people**

Amigo T10 deals with different situations in different ways: one-to-one, it can be used in SuperFocus Mode, where it uses four directional microphones to focus on one person and reject background noise. In groups, it can be used in Omni (surround sound) mode, mode, where it uses a single microphone to capture the voices of several people simultaneously. Either way, it is versatile to meet the changing needs of the child.

**Happy and secure – everywhere**

With Amigo as a companion, children feel calmer, happier and more confident. Daily outings, family gatherings and vacations become more enjoyable and less tiring. And the consistent signal means that even when children are temporarily out of sight, they will always feel secure. Because Amigo will always keep them within earshot.





# Making **communication** **easier** in the classroom

There are lots of ways to enhance communication – many of which you have probably already discovered. But these are some of the most useful:

- > If you don't use an FM system, seat the child at the front of the class.
- > Request in-service instruction to learn how to check your student's hearing aids.
- > Keep extra hearing aid and transmitter batteries at hand.
- > Remember to check that the Amigo transmitter is fully charged and that the child's receiver is turned on.
- > Ensure that the microphone is approx 9 inches from your mouth, and that it isn't bouncing about on shirt buttons or jewellery.
- > Speak clearly, in an ordinary tone of voice and at a normal pace.
- > Face the class as much as possible when speaking.
- > If the child is highly reliant on lip-reading, always make this possible i.e. refrain from chewing while talking.
- > Make it very clear whenever you are about to move on to a new topic.
- > Pass out a written copy of the day's assignment – or write it on the board.

## Troubleshooting tips

FM equipment should be checked every day. If you suspect a problem, refer to the troubleshooting tips listed below.

As you will see, most problems can be solved quite easily.



*FM+M setting*

### 1) The child is receiving no sound:

Questions to ask yourself:

- > Is the child's instrument switched onto the proper setting for FM?
- > Is the child's hearing instrument battery functioning? Change if necessary.
- > Is the adaptor boot connected securely?
- > Is the receiver switch set to the proper FM setting? (typically FM+M)
- > Are the receiver and the transmitter on the same channel?  
Re-synchronize them if necessary.
- > Are the transmitter batteries functioning and properly charged?
- > Is the transmitter turned on and the mute button off?

### 2) Poor FM reception or static:

If you have checked the above items, take the following steps:

- > Connect the antenna cord (if using T10).
- > The microphone cord is plugged securely into the Amigo transmitter (T20/21).
- > Change the channel of both the FM transmitter and receiver.
- > Move the student to a different location in the room

### 3) The LED on the child's receiver is not lit:

- > Is the hearing instrument battery working? Change if necessary.
- > Is the hearing instrument turned on?
- > Is the FM receiver switch on a proper FM setting?
- > Are the transmitter and receiver on the same channel?
- > Is the transmitter turned on?
- > Re-synchronize the receiver using the T20/21 or the WRP, at a distance of no more than 2 feet.



# Amigo at a GLANCE

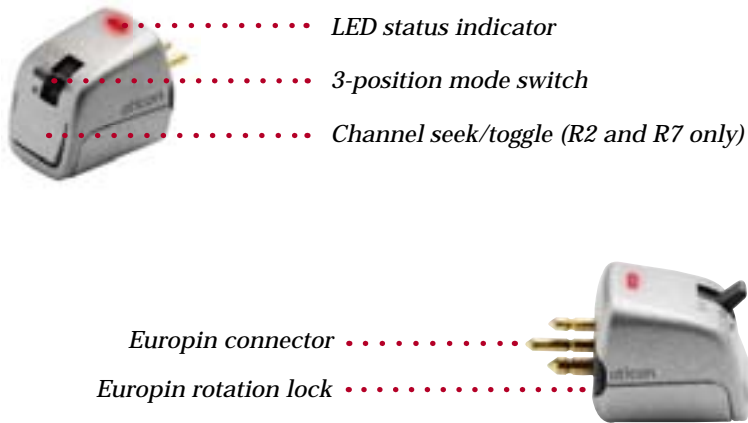
## Amigo T20/T21 TRANSMITTERS

The Amigo educational transmitter.



## Amigo R2 RECEIVER

The Amigo multi-channel receiver can be used with most BTE hearing instruments and Cochlear Implants.



Note: Since Amigo receivers draw their power from the hearing aid battery, there is no reason to try to open the receiver casing. Never attempt to do this.

## Amigo T10 TRANSMITTER

The Amigo multi-purpose transmitter.

