most successful
middle ear
implant system
on the market
Implanted since 1996 the Vibrant Soundbridge® is the most successful middle ear implant system on the market. Its direct drive technology is used to treat individuals with mild to severe sensorineural hearing loss as well as conductive and mixed hearing losses.

The Vibrant Soundbridge offers a wide range of benefits including:
• High quality of speech and sound
• Intelligent signal processing
• Easy to use and comfortable to wear

To suit the needs of the patient in the best way, MED-EL now offers a new generation of the Vibrant Soundbridge combining enhanced features with proven and reliable technology.
Unique Middle Ear Implant System

The Vibrant Soundbridge opens up new ways to make sound audible. It is implanted in the middle ear and mechanically causes the middle ear structures to vibrate. The amplified vibrations can be adjusted to optimally compensate different kinds of hearing losses.

This partially implantable hearing system is for persons who cannot use conventional hearing aids (e.g. for medical reasons), or who do not achieve sufficient benefit from them. The Vibrant Soundbridge is an alternative to conventional hearing devices or bone conduction devices.

Components
The implanted part of the Vibrant Soundbridge is called the VORP (Vibrating Ossicular Prosthesis) and consists of an internal coil, a magnet to hold the Amadé audio processor over the implant, a demodulator, the conductor link and the innovative technology of the Floating Mass Transducer™ (FMT™).

The externally worn audio processor contains the battery, the microphone and high-quality, fully digital signal processing. The signal from the audio processor is transmitted to the VORP and transformed into mechanical vibrations by the FMT.
Excellent Sound Quality

The audio processor converts sounds into electrical signals, which are transferred to the implant. The implanted part sends the signal to the FMT, which, via a single point attachment, mechanically vibrates a middle ear structure. This "direct drive" stimulation enables excellent sound quality without blocking the ear canal.

The VORP is implanted during a surgical procedure in which the FMT is attached to a vibratory structure of the middle ear. When activated, the FMT vibrates in a controlled manner, specific to each patient’s hearing needs, causing the structure of the ear to vibrate. It conducts a wide frequency range up to 8000 Hz.

Benefits of the Vibrant Soundbridge:
- more natural quality of speech and sound
- improved speech understanding, particularly in noisy surroundings
- no feedback or irritating whistling
- high wearing comfort that leaves the ear canal completely free
- transmission of high amplification in the high pitches (particularly relevant for listening to or playing music)
- bypassing the outer and middle ear in case of a conductive component in hearing loss
Reliable & Flexible

Single Point Attachment of the FMT

A feature unique to the Vibrant Soundbridge is the single point attachment of the FMT. This means that the FMT is only attached to the structure of the middle ear which it is stimulating. It is not fixed to the mastoid.

Several studies\textsuperscript{1,2,3,4} verify that “direct drive” leads to improved hearing quality and improved speech understanding. This is also one of the main experiences which Vibrant Soundbridge users often report.

The innovative patented technology of the FMT is a tiny magnet that consists of five components. This simplicity makes it a reliable device that can be used in a very flexible way to optimally compensate different kinds of hearing loss.

The Vibrant Soundbridge is the only middle ear implant system that features a single point attachment which makes it independent of skull growth and therefore suitable for implantation in children.

\textsuperscript{1}Truy E, Philibert B, Vesson JF, Labassi S, Collet L, Vibrant Soundbridge Versus Conventional Hearing Aid in Sensorineural High-Frequency Hearing Loss: A Prospective Study Otology & Neurotology, 2008

\textsuperscript{2}Böheim K, Nahler M, Schlögel M, Rehabilitation der Hochtontinnennahrungsschwerhörigkeit Springer Medizin Verlag, 55:690-695, HNO 2007


Vibroplasty

The success of the Vibrant Soundbridge in treating middle ear disorders is due to its unique design. Surgical applications, called Vibroplasty, have demonstrated to be highly successful.

Vibroplasty is the treatment of hearing loss via vibratory stimulation in the middle ear.

When the Floating Mass Transducer (FMT) is attached to a vibratory structure of the middle ear, it vibrates the structure and stimulates the auditory system.

The versatility of the FMT has lead to different types of Vibroplasty allowing the successful treatment of various complicated middle ear conditions. Vibroplasty treatments using the Vibrant Soundbridge have proven to be safe, effective and reliable.

The FMT can be used in a very flexible way, which makes a vast number of different types of Vibroplasty possible. Also Oval Window, PORP, TORP Vibroplasty are possible with the Vibrant Soundbridge.
MED-EL has continually set standards in the field of technologically advanced hearing implants since its founding in 1989. Today, MED-EL offers the broadest spectrum of hearing implant systems on the market worldwide to treat various types and degrees of hearing loss.

The first implantation of the Vibrant Soundbridge took place in 1996 shortly before Geoffrey Ball, the inventor of the Vibrant Soundbridge, was himself implanted bilaterally with the system. Since MED-EL took over the responsibility of this unique middle ear implant system in June 2003, thousands of patients have received a Vibrant Soundbridge. Today the Soundbridge is available in over 70 countries worldwide.

Technical reliability goes hand-in-hand with positive long-term clinical experience and high user satisfaction.

Results from a large study\(^5\), which analysed the long-term performance of Vibrant Soundbridge users, show that the functional gain remained unchanged and the system offered good stable speech comprehension over time.

The Vibrant Soundbridge is the first and only middle ear implant system for which reliability data is available. The CSR (Cumulative Survival Rate) reliability data shows that the Vibrant Soundbridge is a very reliable hearing implant system.

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To suit the needs of the patient, MED-EL offers the latest hearing technology and enhanced features which are all incorporated within the Amadé audio processor. The Amadé is available for both new users and existing users.

**Directional Microphone**

The feature of dual microphone technology with directional mode gives the comfort of reducing interference from the back and from the side. This feature is of benefit in noisy situations, such as at parties or in restaurants and allows the user to understand the immediate conversation more clearly and distinctly.

The Vibrant Soundbridge is a semi-implantable state-of-the-art design. The ability to upgrade the technology by only having to upgrade the external audio processor of the Soundbridge is a significant benefit of the semi-implantable system. Even years after implantation, the patient can undergo a simple fitting and return home benefiting from the latest technology available.
A New Way of Hearing

Different Programs
The Amadé allows the user to be in control of each situation. It offers the choice of three different programs which can be adapted for different personal preferences. Whether in a restaurant, out with friends or in a meeting, the Amadé supports the right program to hear everything in a comfortable way.

The Amadé is easy to handle. By simply using the push button, the user can switch between programs effortlessly.

More Variants To Choose
The Amadé offers the choice of three variants with different output gain. Depending on the patient’s need the Amadé supports a high, low and standard variant to reach the best hearing benefit.

The Amadé features a whole new ergonomic housing design which is available in four different colours, providing the best option to match the hair colour of the patient. The sleek design of the Amadé together with the various colour options, gives the patient confidence to wear it discreetly and comfortably.
Clarity of Sound

Wind Noise Reduction
Amadé users have the freedom of being outside or in the city, whilst still having the ability to hear sounds clearly. This intelligent technology constantly monitors the environment for wind noise, which, when detected, is automatically softened and allows for improved hearing.

Speech and Noise Management
The Amadé distinguishes between speech and background noise. It focuses on speech and automatically identifies and reduces background noise, without affecting important speech signals.

Sound Smoothing
Even when loud or unexpected sounds occur, the Amadé isolates impromptu noises and reduces them without interfering with speech signals. This new technology softens annoying noises and gives the user the independence to enjoy daily life.
Best Fitting

The Amadé audio processor is programmed with CONNEXX Software, equipped with the SYMFIT database.

Advanced Fine Tuning
The SYMFIT Fitting Software provides 8 compression channels to optimally fit the patient’s hearing loss. The 16-band equalizer allows perfect adjustment of the gain in the respective channel. With the eyeglass control a more precise tuning of the individual channels can be selected.

Wide Frequency Range
Not only does the audio processor support frequencies up to 8000 Hertz but the Soundbridge is also able to deliver them in high amplifications. Because of this wide frequency range, a patient can benefit from up to 40dB more gain at the high frequencies than from conventional hearing aids.

Program Settings
For different listening situations a patient can switch between three individual programs. While fitting the audio processor, the audiologist can choose from six different templates to support different listening situations (e.g. television / music, outdoor / sports, noisy environment). Each template can be modified and individually adjusted to always provide the best hearing sensation for the user.

Microphone System
The microphone system in the Amadé audio processor can be set to omnidirectional or directional. The user is free to focus on sound differently according to each listening situation.

Progressive Instrument Settings
The Amadé audio processor lets the user know when a setting changes. Each time the push button is pressed, a beep informs the user about a program setting change. A low battery beep indicates that the battery has to be replaced. The tone of the battery beep is different from the tone of the program change beep. The volume of both alert tones can be set individually according to the patient’s preferences.

Magnet Strengths
The AP Fitting Kit provides four different magnet strengths to select the proper magnet for each patient. To change the magnet is easy and no tools are necessary.
Data Sheet

Dimensions Amadé
Diameter: 29.1 mm
Height: 8.8mm
Weight: ≤ 8g

Dimensions VORP
Length: 129mm, Width: 29mm, Thickness: 4.5mm

Dimensions FMT
Length: 2.3mm
Diameter: 1.8mm
Weight: 25mg

Product category: Amadé [Audio Processor]

- **Signal Processing**: 8 AGC Channels, 16 Frequency Bands
- **Frequency Range**: 250 – 8000 Hz
- **Variants (Gain)**: Amadé (45dB), Amadé Hi (54dB), Amadé Lo (36dB)
- **Styles available**: Left and Right
- **Power Supply**: Zinc-Air #675 or equivalent, Low battery warning
- **Magnets**: Four Magnet Strengths
- **Material**: PC, Polyester
- **Fitting Software**: Connexx Software with Symfit database
- **Colour Palette**: Dark Chocolate, Terra Brown, Golden Sand, Silver Grey
- **Enhanced Features**: Three Different Programs, Directional Microphone, Wind Noise Reduction, Sound Smoothing, Speech and Noise Management

Product category: VORP [Implant]

- **Styles available**: Left and Right
- **Materials**: Titanium, Silicone, Epoxy
- **Parts**: Coil, Magnet, Demodulator, Conductor link, Floating Mass Transducer (FMT)

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**Maximum Gain (Amadé)**

- Gain (equiv. dB)
- Frequency [Hz]

**Maximum Output (OSPL90, Amadé)**

- Output [equiv. dB SPL]
- Frequency [Hz]
User Testimonial

With the new audio processor I can hear even more tones, sounds and voices. Music perception is much clearer. The option of three programs offers me a whole range of new opportunities. Using it is very simple and the Amadé’s wearing comfort is even better than that of the previous model because it is lighter on the head. I must admit, I often forget that I’m wearing an audio processor at all.

(Ramona H.)

I like the option of having the right program for any situation particularly when I am riding a bike or during other outdoor activities. Even wind noise hardly occurs any more. Program selection is easy. Wearing comfort, natural sound and no interferences make me forget that I even wear the Amadé.

(Gerald S.)

The Amadé felt immediately familiar to me.
The directional mode is excellent in situations where noise comes from behind.
Speech understanding is very good, e.g. when driving a car, talking in bars or watching TV with a lot of noise around. My music program is a particularly nice addition.

(Ulrich S.)

The Amadé offers improved gain while simultaneously reducing noise.
Its sound is natural which is particularly noticeable when listening to music. I rarely change programs because my setting is suitable for all situations; I change programs only when listening to music. All in all, the Amadé is a clear improvement compared to the previous model.

(Friedrich P.)