

# SYNCHRONY EAS System

In Sync with Natural Hearing



hearLIFE











For more natural hearing  
in any listening environment

# SONNET EAS

## Audio Processor

Delivering exceptional hearing in any listening environment for a more natural hearing experience, SONNET EAS minimizes the need to manually adjust settings or change programs.



-  Adaptable EAS/CI audio processor
-  6-channel acoustic amplification with gain of up to 48 dB and an MPO of 118 dB SPL
-  Water-resistant and tamper-proof
-  Automatic Sound Management actively adapts to changing listening environments
-  Integrated datalogging provides detailed information on usage behavior
-  Fully waterproof with WaterWear accessory
-  Fully compatible with the last 20 years of previous MED-EL implants
-  Integrated link-check coil function with LED indicator





# SYNCHRONY EAS System

## Electric Acoustic Stimulation

The SYNCHRONY EAS System combines the SONNET® EAS Audio Processor with the SYNCHRONY Cochlear Implant to deliver electric stimulation in the high frequencies and dedicated acoustic amplification across the low frequencies.

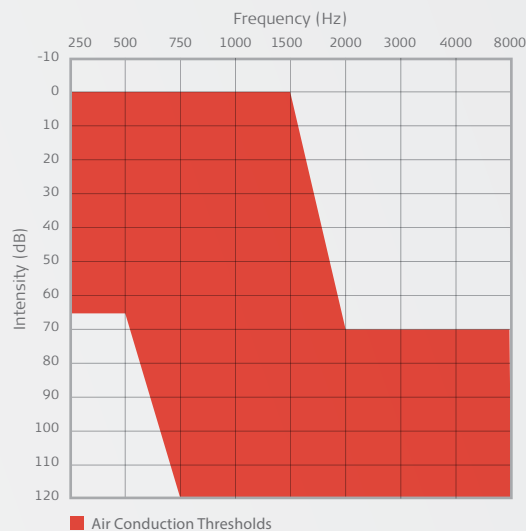
With 6-channel acoustic amplification of up to 48 dB across the low frequencies, SONNET EAS is the ideal solution for candidates with partial deafness.



## EAS Candidacy

Electric Acoustic Stimulation is intended for candidates with partial deafness, also known as high-frequency hearing loss (HFHL). EAS candidates are adults (18+) with normal hearing up to a moderate sensorineural hearing loss in the low frequencies that becomes a severe-to-profound hearing loss in the high frequencies.

By providing acoustic amplification in the low frequencies and electric stimulation in higher frequencies, EAS can provide effective stimulation to the whole cochlea. This technology enables recipients to experience restored hearing in the high frequencies while benefiting from their residual natural hearing.





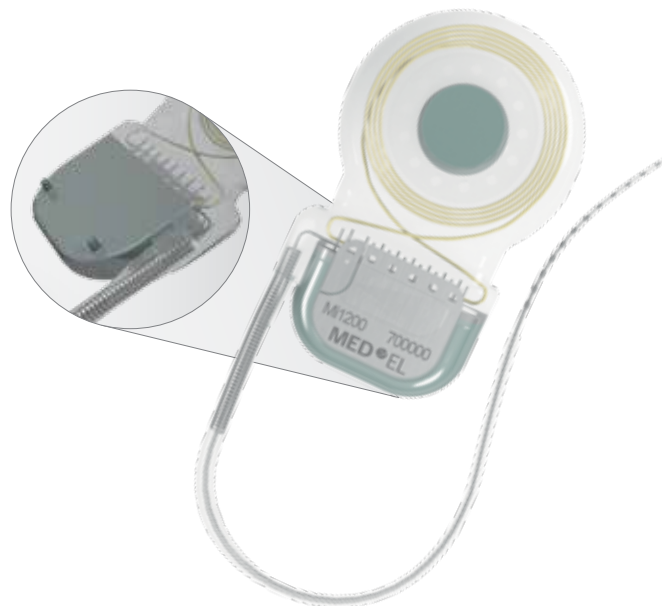


# SYNCHRONY Cochlear Implant

## 3.0 Tesla MRI—Without Magnet Removal<sup>\*\*</sup>

Combining 3.0 Tesla MRI with proven performance, reliability, and a comprehensive portfolio of atraumatic electrodes.

- Conditionally MRI Safe at 1.5 and 3.0 T without the need for magnet removal.
- Rotatable, self-aligning magnet greatly reduces torque for increased patient comfort during MRI scans.
- If necessary, the magnet can be removed to minimize image distortion on MRI head scans.
- The magnet can only be removed from the bottom side of the implant, making dislocation of the magnet due to trauma almost impossible.
- The SYNCHRONY PIN implant features titanium fixation pins to secure the placement of the implant for outstanding stability.

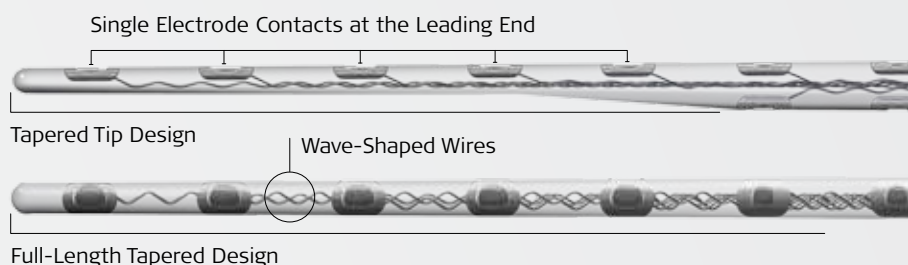


## FLEX Electrode Design

### for Structure Preservation

For EAS candidates, it is especially vital to protect the delicate structures of the cochlea. Specifically engineered to ensure cochlear integrity, the FLEX24 electrode is the most atraumatic electrode array available for EAS.

Unique FLEX-Tip Technology features single contacts at the leading end, ultra-flexible wave-shaped wires, and a tapered tip for increased mechanical flexibility.





# MAESTRO System Software 6.0

## Fittings Made Quick & Easy

The MAESTRO System Software 6.0 with the MAX Programming Interface is the quickest and easiest way to program the SYNCHRONY Cochlear Implant System.

- MAX with new bilateral single-unit design is more compact than previous MED-EL programming interfaces.
- Switchless design allows all changes to be made through the computer interface.
- SONNET audio processor can be programmed with 4 specific maps to ensure optimal hearing performance in any listening environment.
- Features datalogging for SONNET, including usage time and volume range of each selectable program.
- Supports all currently available MED-EL multi-channel cochlear implants and audio processors.



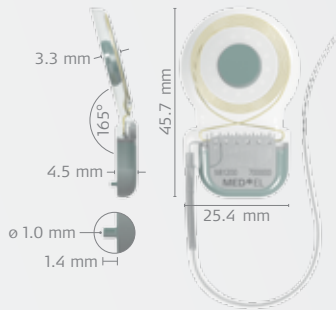


# Technical Data

## SYNCHRONY EAS System

### Stimulation Features

- Sequential non-overlapping stimulation on 12 electrode channels
- Simultaneous (parallel) stimulation on 2 to 12 electrode channels
- 24 independent current sources
- Stimulation rates of up to 50,704 pulses per second
- Range of pulse phase duration: 2.1–425.0  $\mu$ s/phase
- Time resolution (nominal values): 1.67  $\mu$ s
- Current range (nominal value): 0–1200  $\mu$ A per pulse phase



### SYNCHRONY Cochlear Implant

#### Housing Design

- Impact resistance > 2.5 Joule
- Unique PIN variant with fixation pins for additional stability
- Recommended flattening depth for the stimulator: 0.9 mm
- Stimulator: 17.3 mm x 25.4 mm x 4.5 mm (typical)
- Coil: 29.0 mm diameter x 3.3 mm thick (typical)
- Weight: 7.6 g

#### Safety Features

- Output capacitors for each channel
- Unique Implant ID (IRIS)

#### MRI Conditions\*\*

- MR Conditional at 1.5 and 3.0 Tesla
- No magnet removal required, even at 3.0 Tesla

#### Removable Magnet

- Magnet removable for minimized image distortion
- Rotatable magnet within hermetic titanium housing
- Self-aligning to external magnetic field
- Conical shape for secure placement

### Electrode Arrays

#### FLEX Series

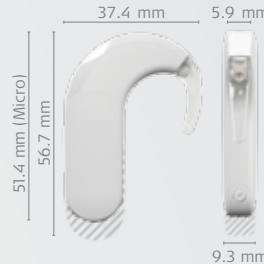
- FLEX 24
- 20.9 mm stimulation range
- Diameter at basal end: 0.8 mm
- Dimensions at apical end: 0.5 x 0.3 mm

### Pulse Shapes

- Biphasic, symmetric triphasic and triphasic precision pulses

### Comprehensive Diagnostic Toolkit

- Status Telemetry
- Impedance and Field Telemetry (IFT)
- Auditory Nerve Response Telemetry (ART™)
- Electrically Evoked Auditory Brainstem Response (EABR)
- Electrically Evoked Stapedius Reflex Threshold (ESRT)



### SONNET EAS Audio Processor

#### Product Features

- Acoustic stimulation up to 2 kHz
- 48 dB acoustic gain
- 118 dB SPL maximum power output (MPO)
- Fully digital hearing aid signal processing
- 6-channel acoustic fitting
- Splash-proof design with IP54 rating
- Datalogging
- Automatic Sound Management with Dual-Loop AGC
- Tamper-proof design with integrated child safety features
- Link-check coil function with LED indicator
- Dual Microphones ready for future front-end processing applications

#### Battery Life

- Up to 60 hours (4 days) of use with a set of 2 zinc-air batteries
- Up to 10 hours with SONNET Rechargeable Battery
- Up to 7 hours with SONNET Rechargeable Battery Micro

#### Connectivity

- Wireless ready for future 2.4 GHz applications
- Integrated telecoil
- Direct connection with FM battery cover (standardized Euro-Audio 3-pin connection)

### MAESTRO System Software 6.0

#### System Requirements

- PC or laptop/notebook with supported Microsoft Windows® operating system\*\*\*
- Dual-core processor of 1.6 GHz or higher
- 2 GB RAM
- 2 GB free disk space
- Display with a minimum resolution of 1024 x 768 (1280 x 1024 recommended)
- High-power USB port 2.0 or higher
- Connection to printer for hard-copy reports
- CD ROM drive for software installation

\* Fine structure coding strategies are not indicated for prelingual children in the USA.

\*\* Patients with a SYNCHRONY Cochlear Implant may be safely scanned with 1.5T and 3.0T MRI under the conditions detailed in the instructions for use.

\*\*\* Supported Microsoft Windows® operating systems: Microsoft Windows® XP, Service Pack 3 or higher, Microsoft Windows Vista™, Service Pack 2 or higher, Microsoft Windows® 7, Service Pack 1 or higher, Microsoft Windows® 8 or higher

2.4 GHz wireless connectivity of the SONNET is currently in development and will be available upon regulatory approval.

For information on potential risks and contraindications relating to implantation, please visit [www.medel.com/us/isi-cochlear-implant-systems](http://www.medel.com/us/isi-cochlear-implant-systems)