Technical Data MB 11

MB 11 Box

Dimensions / Weight	120 mm x 93 mm x 30 mm / 142 g
PC interface	USB
Power supply	5V DC max. 400 mA via USB

ABR

Stimuli	CE-Chirp®
Stimulus rate	~90 /s
Stimulus level	35 dB nHL
Level range	25 dB nHL to 45 dB nHL
Impedance test	Automatic pre-test
Test duration	16 s to 180 s
Artifact rejection level	80 µV to 120 µV

MB 11 Software

Display	Test result (Pass, Refer or Incomplete), test diagram with line towards Pass, signal quality and EEG, electrode positions and impedance
Languages	English, Chinese, French, German, Hungarian, Japanese, Polish, Russian, Spanish, Turkish

Standards

ABR	IEC 60645-7, Type 2
Safety	IEC 60601-1, Type BF
EMC	IEC 60601-1-2
CE 0123	according to Medical Device Regulation (EU) 2017/745, Class IIa

Computer Requirements

CPU	Intel Core i5, i7 or equivalent
RAM	Minimum 8 GB
Hard Disk	Minimum 10 GB free disk space
Interface	1 free USB port
Display	Minimum resolution 1360 x 786
Operating System	Windows 11 32/64 bit
	Windows 10 Pro, Enterprise 32/64-bit (no 'N' Edition)

Classic Preamplifier

Test mode	monaural/binaural
One Channel	3 electrode cables (black, yellow and white)
Gain	69.8 dB
CMR Ratio	>110 dB at 80 Hz
Dimensions / Weight	100 mm x 100 mm x 22 mm / 100 g
Transducer	IP30 with EarCup™ adapter

BERAphone®

Test mode	monaural
One Channel	3 reusable stainless-steel electrodes
Gain	69.3 dB
CMR Ratio	>110 dB at 80 Hz
Transducer	Integrated dynamic speaker
Dimensions / Weight	160 mm x 87 mm x 60 mm / 285 g

Cradle

Dimensions / Weight	119 mm x 160 mm x 74 mm / 270 g

Standard Components

MB 11 BERAphone®

MB 11 Box

BERAphone® with cradle

Electrode gel

- Carrying case
- Set of electrodes
- PC software
- USB cable

MB 11 Classic

MB 11 Box

Preamplifier

IP30 Insert phone

Set of Electrodes and Infant EarCup™

- Electrode cables
- Set of electrodes and Infant EarCup™
- Nuprep® preparation gel
- Carrying case
- PC software
- USB cable

Optional Component

- Label printer
- Cart solution

Sanibel

We highly recommend to use Sanibel disposables in order to guarantee optimal test results.

MAICO ♡ Sanibel
Only Sanibel disposables are designed to ensure reliable test results with MAICO products.

MB 11
PC based AABR Screening

MB 11 BERAphone® / MB 11 Classic

An Auditory Brainstem Response (ABR) test measures the neural activity of a large portion of the auditory pathway. ABR recording can be applied to identify hearing problems which can be related to inner ear or subcortical auditory structures. Electrodes pick up the electrical activity from surface of the skin, including the activity of the brain, muscle activities (myogenic noise) and electromagnetic interferences. Screening ABR devices analyze these activities automatically by looking for specific patterns, which indicate a normal transduction of sounds into electrical activity and its processing by the auditory brainstem. An automated response detection algorithm provides a simple Pass/Refer outcome.

Newborn Hearing Screening

The two methods considered suitable for newborn hearing screening are OAE (otoacoustic emissions) and AABR (automated auditory brainstem response).

AABR testing is acknowledged as the superior technique because of a typically higher specificity, meaning that fewer babies with normal hearing will be referred for further evaluation. It can detect hearing problems caused by conditions in the auditory nervous system whereas OAE only can detect cochlear hearing loss. AABR is particularly recommended for babies with higher risk for hearing loss.

Powerful Automated ABR for Accurate Results

The MB 11 makes use of our unique CE-Chirp® stimulus and a powerful detection algorithm. Together, they achieve accurate "pass" and "refer" results within seconds. The patented CE-Chirp® stimulates all regions of the cochlea at the same time and thus generates a much larger response – for faster results than a standard click. This leads to very reliable results under normal nursery conditions.

CE-Chirp® inside

Eco-friendly and more comfortable for the baby — without adhesive disposables
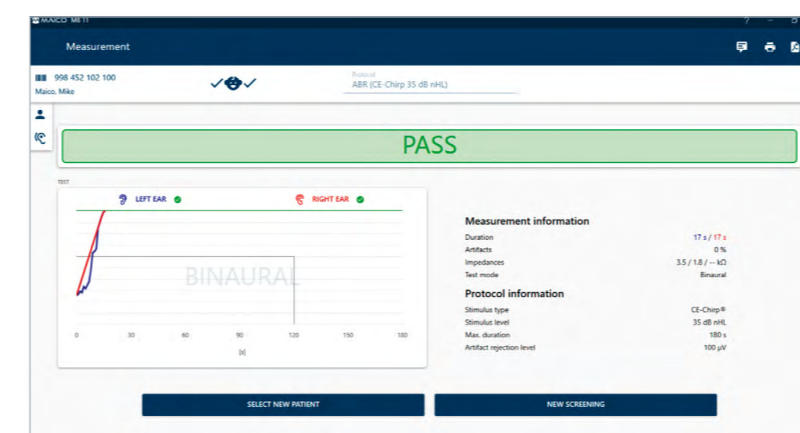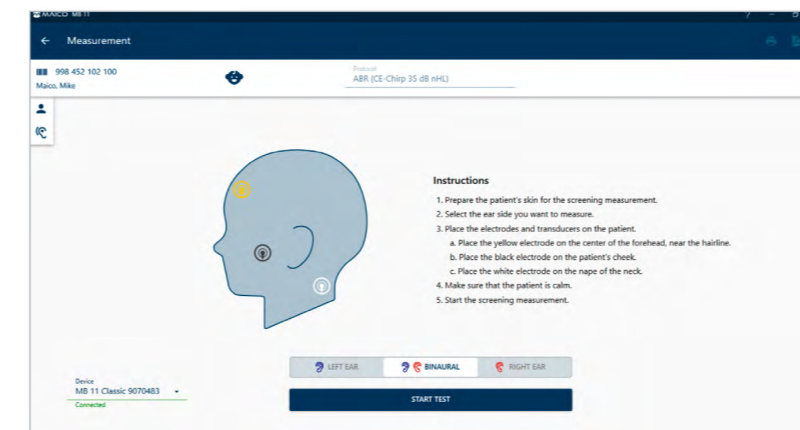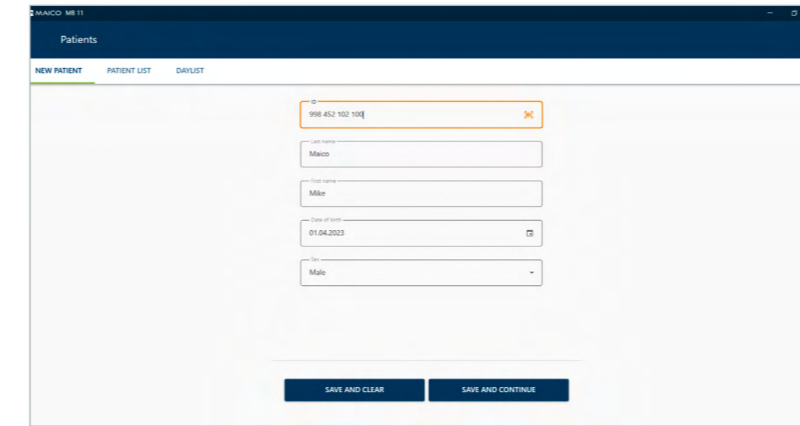
NEW Intuitive PC Software

With the MB 11 software, you play it safe. It guides you through the entire screening process and provides you with all the information you need.

The dedicated preparation screen shows you what needs to be considered for a successful hearing screening. The EEG signal and noise level is displayed all through the test. Whenever an electrode loses contact to skin you get informed.

After the quick screening test, the result is immediately displayed as a clearly interpretable "pass" or "refer" result. You can then save the test report as a PDF or print it. The software offers various exporting options for tracking and reporting purposes.

Meet the new MB 11 software. For a more efficient screening process, less work and more reliable test results.

MB 11 Versions

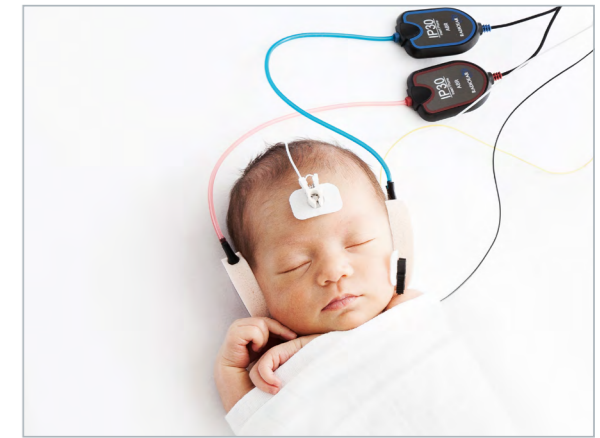### Choose between our Unique MB 11 BERAphone® or MB 11 Classic with EarCup™

The MB 11 BERAphone® stands for innovation in Newborn Hearing Screening — the unique, patented ABR system offers a fast and automated hearing test for newborns without the use of adhesive disposables. To grant babies the comfort of disposable-free ABR screening, our BERAphone® comes with integrated electrodes and a speaker in a single unit.

Automated ABR tests with the MAICO MB 11 can also be conducted using Infant EarCup™ and Snap Electrodes. The Sanibel Infant EarCup™ is a high quality, low cost over-the-ear disposable, ideal for testing both ears at the same time. The design helps to reduce the effects of ambient noise during testing.

AABR with Reusable Electrodes
- Integrated electrodes and transducer to save costs for disposables
- Eco friendly
- Comfortable hearing screening for the baby

AABR with EarCup™
- Self-adhesive electrodes
- Binaural ABR screening
- High quality Sanibel Infant EarCup™ and electrodes

MB 11 Features & Benefits

The MB 11 is a PC based ABR screening device, which can be fully controlled by the dedicated user-friendly MB 11 software. It allows you to contol the measurement, view results and manage patient data in one application. You always have the patients' test history available and can print results directly.

Features at a glance
- Fast and automated ABR screening with CE-Chirp® stimulus
- Easy to use PC software
- Automatic impedance test to ensure good test conditions
- Powerful response detection algorithms for short test duration
- ABR transducer choices
- Unique eco friendly BERAphone® which eliminates the need for disposables
- Simple Pass/Refer outcome