



Celesta

CLINICAL AUDITORY AND VESTIBULAR EVOKED POTENTIAL

DESCRIPTION

Celesta is a pc-based, scalable auditory evoked potential testing system. It can be configured according to user needs with various available modules. It is capable of testing all standard short, medium, and long latency responses. Additionally, Celesta offers a VEMP module.

PRODUCT CONFIGURATION:

Celesta is available in different configurations, scaled through the activation of software licenses. The complete exam set includes:

- ABR
- eABR
- EcochG
- MLR
- LLR
- VEMP(cervical and ocular)

AVAILABLE SIGNALS

Stimulus Types: Click, Chirp, NB Chirp, LS-Chirp, NB LS-Chirp, Tone Burst, White noise (masking)

Click Duration: 100 μ s default (adjustable)

Tone Burst Duration: Up to 50 ms (adjustable)

Tone Burst Window Types: Linear, Rectangular, Hann, Blackman, Gaussian, Hamming, Barlett

Tone burst frequencies: 250, 500, 750, 1000, 1500, 2000, 3000, 4000

NB-chirp frequencies: 500, 1000, 2000 and 4000Hz

SIGNALS PRESENTATION

Rate: 1 to 100 Hz

Polarity: Rarefaction, Condensation, Alternating

Maximum Output: 135.5 dB peSPL

Maximum Output masking: 95dB SPL

AVAILABLE OUTPUTS AND TRANSDUCERS

AC: Supra-aural headphones (DD45)

Insert earphones (IP-30)

BC: Bone vibrator (B-71)

CALIBRATION

Validity: 12 months.

RECORDING CHANNELS SPECIFICATIONS

Number of channels: 2

Gain: 56 – 96dB

Bandwidth: 0.05-16000 Hz

CMRR: >110dB, typical 120dB @ 50Hz

Input impedance: 10M Ω

Sampling frequency: 48000Hz

A/D: 24bit

Software high pass filter: 10 – 100Hz (adjustable)

Software low pass filter: 100 – 10000Hz (adjustable)

Artifact rejection: adjustable in $\pm 1\mu$ V, $\pm 400\mu$ V, suspendable

Notch filter: 50 or 60Hz

Recording window: max. from -150ms to 1 s (exam dependent)

MECHANICS (MAIN UNIT - BIOAMPLIFIER)

Size (WxDxH): 33x22.5x4.6cm/13x8.9x1.8in-7.4x17.9x2.8cm/2.9x7x1.1in

Weight: 1.2 kg / 2.6 lbs – 0.25 kg / 0.55 lbs

COMPUTER INTERFACE

Connection: USB (driverless)

Compatible software: Inventis Maestro

CPU: Intel® i5, 13th generation or above, 16GB RAM

Operating System: Windows 10-64 bits and Windows 11

POWER SUPPLY

Celesta can be powered via USB-C or by means of an external medical grade power supply (Input: 100-240Vac, 47-63 Hz, 0.9-0.34A, Output: 6Vdc, 4.16A max).

APPLICABLE STANDARDS

Auditory evoked potentials: IEC 60645-7, Type 1

Stimuli: IEC 60645-3

Electrical safety: IEC 60601-1, IEC 60601-2-40

EMC: IEC 60601-1-2, IEC 60601-2-40

Calibration: ISO 389-6

MDR CLASSIFICATION

MDR 2017/745/EU Classification: Class IIa

Classification rule (Annex VIII, 2017/745): 10

INCLUDED PARTS (code 12380)

- Celesta main unit and bioamplifier
- DD45 supra-aural headphones
- Medical grade power supply
- USB connection cable
- eABR trigger cables
- Consumables (electrode cables, snap electrodes, prep gel)
- User manual
- Inventis Software Suite

OPTIONAL PARTS (with order code)

- 11748: IP-30 insert earphones
- 10245: B-71 bone vibrator
- 12405: VEMP Handheld Patient Monitor

PRODUCT CODES

12380: Celesta – Evoked Potential System (hardware only)

12381: AEP Basic license (includes ABR, eABR)

12382: AEP Plus license (includes Basic license, EcochG, MLR, LLR)

12383: VEMP license (includes cVEMP and oVEMP)

12384: Two-channel enable license

12385: Upgrade from AEP Basic license to AEP Plus

Celesta is manufactured by:

INVENTIS S.r.l.

CORSO STATI UNITI, 1/3

35127 PADOVA - ITALIA

PHONE: +39.049.8962 844

FAX: +39.049.8966 343

info@inventis.it

www.inventis.it

Follow us on LinkedIn:

<https://www.linkedin.com/company/inventis-srl>

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