Bio-logic Hearing Diagnostic Products
Navigator Pro AEP Lock Out Specifications

AEP
- System must be able to collect one or two amplifier channels of data.
- System must support the following stimulus types:
  - Click
  - Tone burst (250, 500, 750, 1000, 1500, 2000, 3000, 4000, 6000, 8000 Hz)
  - Custom .wav files (Sample custom .wav files [CHIRP and /da/] must be included in the software.)
- System must support alternating, condensation and rarefaction polarity stimulus
- System must be capable of separating ABR data collected with alternating polarity stimulation into its separate rarefaction and condensation waveform components.
- System must support creation of user-defined custom protocols.
- System must be able to support the collection of the following evoked responses with the default system or with additional optional hardware or software components:
  - Electrocochleography (ECochG)
  - Auditory brainstem response (ABR)
  - Middle latency response (MLR)
  - 40 Hz response
  - P100
  - P300
  - Auditory late response (ALR)
  - Cortical auditory evoked potential (CAEP)
  - Vestibular evoked myogenic potential (VEMP)* (not supported in the US)
  - Electrical auditory brainstem response (EABR)
  - Electroneuronography (ENoG)
  - Auditory Steady State responses (MASTER II SW module)
  - Otoacoustic emissions (Scout SW module)
  - Screening ABR and OAE (ABaer SW module)
- System must support acoustic stimulation with insert earphones, headphones, bone conduction oscillator and sound field speakers.
- Software must be compatible with Windows XP Pro and Windows 7 operating systems, 32 and 64 bit.
- System must support simultaneous review of data from multiple test sessions for the patient in the same on-screen display and report to facilitate monitoring for changes over time.
- Software must save electrode impedance values for post hoc review.
- Software must support construction of automated test protocol sequences such that a latency-intensity function can be performed by initiating a single test sequence.
- Click stimulus duration should be user-selectable from choices of 50, 100, 150 and 200 usec.
- System must support automatic electrode switching for single channel data collection such that manual movement of electrodes in the electrode cable is not required for collection of ipsilateral data when changing the stimulus ear.
- System must support data collection with analysis windows ranging from 5.33 ms up to and 1066 ms.

- System must support termination of ABR data collection based on a user-defined residual noise level stopping rule.
- System must support termination of ABR data collection based on a user-defined Fsp value stopping rule.
- System must support acoustic stimulation up to 132 dB SPL.
- System must support both pink and white noise as a contralateral masker.
- System must be capable of reviewing latency versus intensity ABR waveform response parameters compared to age-specific norms.
- System must be capable of calculating a numeric correlation of two selected waveforms to objectively define similarity between the collected waveforms.
- System must be capable of performing weighted and unweighted addition and subtraction of selected waveforms.
- System must allow the user to calculate both SP:AP amplitude ratios and Area Curve Ratios for Electrocochleography protocols
- System must be capable of applying user specified post hoc digital filters during data analysis.
- System must provide a means of password protecting the transducer calibration values to prevent inadvertent editing by unauthorized personnel.
- System must have a means of providing an amplifier integrity check within the application.
- System must have a test cable to test the integrity of the patient electrode cable.
- System must provide a means of outputting a continuous pure tone for the purpose of system calibration checking.
- System must be capable of supporting trigger in and trigger out.
- System must provide the choice of linear, Hanning, Blackman or Gaussian stimulus ramps for tone burst stimuli.
- System must support 256, 512 and 1024 data points.
- System must be upgradeable to support Transient, Distortion Product and Spontaneous OAEs and screening ABR and OAE tests for use in a newborn hearing screening program, using the same hardware and sharing the same database.
- System must be upgradeable to support Auditory Steady State Evoked Responses using the same hardware and sharing the same AEP database.
- System must provide multiple report template options, which can be customized by the user, or utilized in their original form.