

Nicolet™ VikingQuest Portable

Specifications



General Specifications

Power Supply 100/120 V, 230 V \pm 10%, 50 Hz or 60 Hz

Power Consumption Approximately 50-80 W, depending on model of notebook

Dimensions Approx. 5"H x 13"W x 13"D (12.7 x 33 x 33 cm)

Weight Approximately 6.5 lbs (3 kg) base unit without notebook computer

Environmental Limits

Operating (in use)

Temperature: 60 to 90° F (15.6 to 32.2° C)

Relative Humidity: 20-80%, non-condensing

Altitude: 0-10,000 ft (0-3 km)

Non-operating (in storage)

Temperature: 0 to 132° F (17.7 to 55° C)

Relative Humidity: 10-90%, non-condensing

Altitude: 0-40,000 ft (0-12 km)

Features

System's base unit includes built-in medical power supply for full system including notebook computer

Computer

The VikingQuest Portable system uses a laptop computer. Please see your Nicolet representative for the latest computer specifications that are shipped with the system. Below are minimum specifications.

Processor Core 2 Duo with minimum speed of 1.6 GHz

Hard Drive Minimum of 80 GB

RAM Minimum of 2 GB

Display Resolution 14" LCD (1366 x 768)

Operating System Microsoft Windows 7 32-bit or Windows XP (SP3)

Features

Variable screen formats, depending on recording mode. Simultaneous display of waveforms, graphs and alphanumeric data. Multiple latency and amplitude cursor and trigger levels under computer and manual control, with on-screen read-out

Averager Capabilities

Number of Channels 4 Channels

Display Modes Normal, odd and even, normal and plus/minus, and plus/minus

Mode Normalized dual buffer averaging with choice of display modes

Artifact Reject Fixed or variable threshold with adjustable delay of reject start time, or off, depending on test

Averager Display Sensitivities 0.001 μ V/division to 10 mV/division in 22 steps depending on test

Waveform Acquisition, Display and Storage

Timebase Range 0.2 ms/division to 5 sec./division in 23 steps depending on test

Timebase Type Single, dual and individual, independently-selectable in specific tests

Waveform Trigger Computer and manual control, selectable for positive and negative slope and input channel

Waveform Delay 0 to 10 divisions in 1 division steps depending on test

Waveform Storage Number of waveforms that can be stored permanently varies depending on the specific test

Free Run Storage Store multiple records of free run EMG data and sound for up to 120 seconds each. 40 recordings/muscle

Resolution 16-bit A/D converter with 1 μ s effective time resolution

Features Roll and zoom capability in specific tests

External Stimulus Control

External Stimulus Output Standard TTL logic levels

External Stimulus Input Standard TTL logic levels

Input for Reflex Hammer

Amplifiers

Number of Channels 2, 4

Sensitivity 1 μ V/division to 10 mV/division in 13 steps, 2V peak-peak max., full scale output

Input Impedance >100 M Ω

Common Mode Rejection Ratio

110 dB, typical; >105 dB at 50 to 60 Hz, typical

Low Filter Settings 1 or 2 pole type with 6 or 12 db/Octave roll-off, software selectable settings of 1, 2, 5, 10, 20, 30, 150, 500, 1K, 2K, 5K (Hz)

High Filter Settings 2 pole type with 12 db/Octave roll-off; settings of 15, 30, 100, 250, 1.5K, 2K, 3K, 10K (Hz)

Notch Filter 50 Hz, 60 Hz, On or Off, in all tests

Noise <1 μ V RMS from 1 Hz - 10 kHz with input shorted

Safety Isolation Fully optically isolated European isolation of type BF

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Temperature Meter

Built-in temperature meter with optional temperature probes

Isolated Electrical Stimulator

Independent Outputs 1 or 2 channel

Stimulus Intensity 0 to 100 mA or 0 to 400 V continuously adjustable intensity within user selectable maximum range into a 4 kW load

Stimulus Duration 0.01 - 1 ms

Stimulus Modes Single, train, recurrent and non-recurrent operation

Stimulus Rate 0.1 - 100 per second, depending on test

Isolation Features Fully isolated outputs

Level Control Console/Remote mode for adjusting stimulus intensity either from console or remotely from electrical stimulator probe

Stimulus Type Choice of stimulus type: selectable constant current or constant voltage

Stimulator Probe (Handpiece) Electrical stimulator probe with reversible polarity and optional stimulus intensity control

Level Readouts Separate current (or voltage) readout on screen for each waveform

Features

"Impedance limit" indicator in constant-current mode when stimulus electrode impedance is too high to allow delivery of requested current. Removable isolated electrical stimulus unit for placement close to patient

2015 Visual Stimulator (optional)

Refer to separate product specifications

LED Goggles Visual Stimulator (optional)

LED Stimulus

High efficiency red LEDs (635 nm) in 3 x 5 array in each eyepiece

LED Flash Rate 0.1 to 100 per second

LED Flash Duration .01 to 1 msec in .05 steps under software control

System Interface Single 15' cable

Photoc Stimulator (optional)

Manual auto flash presentation. Auto stimulation is user definable

Flash rates available 1 - 60 Hz in 1 Hz steps

Auditory Stimulator (optional)

Signal Types Click, tone pip or tone burst

Stimulus Rates 0.1 - 91.1 per second in 20 steps

Stimulus Intensity 0 to 139 dB pSPL or -31 to 109 dB nHL, depending on stimulus type and frequency and transducer type

Stimulus Attenuators Keyboard controlled, separate units for right and left signal channels, each with 140 dB dynamic range selectable in programmable step size

Click Polarity Condensation, rarefaction and alternating

Click Duration 100 µsec

Tone Frequencies 250, 500, 750, 1K, 1.5K, 2K, 3K, 4K, 6K, 8K (Hz)

Tone Pip Ramp 2 cycles

Tone Pip Plateau 0 cycles

Tone Pip Envelope Blackman

Tone Burst Ramp 10 ms

Tone Burst Plateau 200 ms

Tone Burst Envelope Linear

Noise Masking Broadband, 0 to 140 dB in 1 dB steps, differential

Transducers (300Ω)

TDH-39 Headphones; TIP 300 Insert Phones; Bone Vibrator

NicVue™ Patient Administrator Software (optional)

Manage Nicolet EMG, EP, EEG and Monitoring data through a centralized interface

Integrated to Microsoft Access™ database

Quality Standards

Manufactured, designed, developed and marketed under ISO 13485 certified quality system

Compliance/Regulatory Standards

Designed, tested, manufactured and certified to meet the following domestic (USA), Canadian, European and International Standards:

UL 60601-1 Medical Electrical Safety Standard (USA)

CAN/CSA-C22.2 no. 601.1-M90 Medical Electrical Safety Standard (Canada)

EN/IEC 60601-1 Medical Electrical Safety of Medical Equipment (International and Europe)

IEC 60601-2-26 Particular Safety of electroencephalographs equipment

IEC 60601-2-40 Particular Safety of electromyography and evoked response equipment

EN 60601-1-2 Collateral safety standard for EMC

European Community (CE Mark)

Class 2B, Medical Device Directive (MDD) product



Specifications, design options and terms quoted are subject to change without notice
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Nicolet™

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