

## 2/4 CHANNEL PORTABLE EMG.NCV.EP

*Built with over 35 years of experience...*

- Compact and light weight
- Data communication through single USB
- Battery operated machine
- On-Screen Impedance check
- In-built speaker for EMG test
- Suitable for use in bedside recording
- Reports can be e-mailed or transferred across a network

**RMS Salus Series** is clinically customized for quick and flexible operation. Its Software & Hardware is particularly designed with the consideration of actual tests being done in the field. Machine can be totally customized for various tests, nerves, muscles and sites with complete choice of amplifier, filter & sweep settings and also analytical settings like markers, their normative values for auto searching on one time basis.

Hardware is fully controlled by Software allowing complete settings to be implemented for each test automatically without bothering the user. This makes the machine fastest of its kind without compromising the flexibility to perform large variety of tests with extremely detailed customization. All this is achieved by highly organized back-end database and actual understanding of the clinical use of the machine.

## Salus 2 / 4 Channel EMG



Keypad (Optional)



High Quality Headphone (optional)



PDF



MS WORD



MS EXCEL



E-MAIL



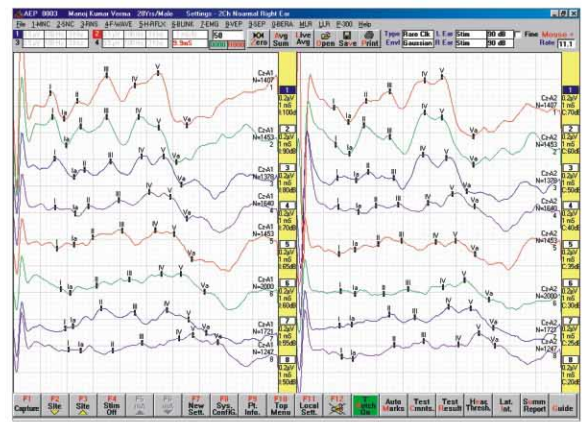
AUTO-RUN CD/DVD



NETWORK STORAGE

## EPs (Evoked Potentials)

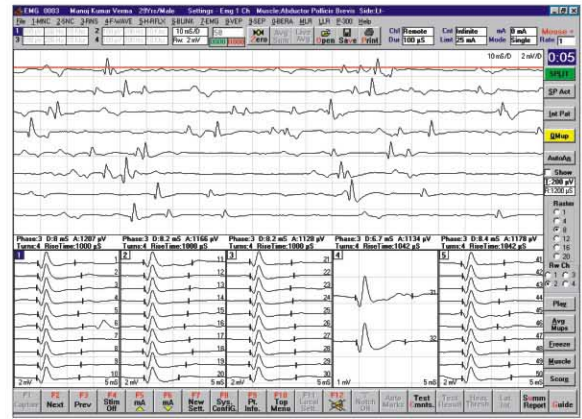
- Up to 16 waves can be recorded
- Left/Right sides can be compared on single screen
- Double buffered (odd/even) averaging technique. Both odd/even or normalized average can be viewed
- User definable marks which gets auto marked on the wave
- SEP, VEP, BERA, MLR, LLR, P-300
- Auto Protocol with user defined intensities is provided for fast Hearing Threshold measurements along with Latency-Intensity graph
- Guide detailed for showing various electrode placements in all EPs along with expected waveforms



AEP

## EMG (Electromyography)

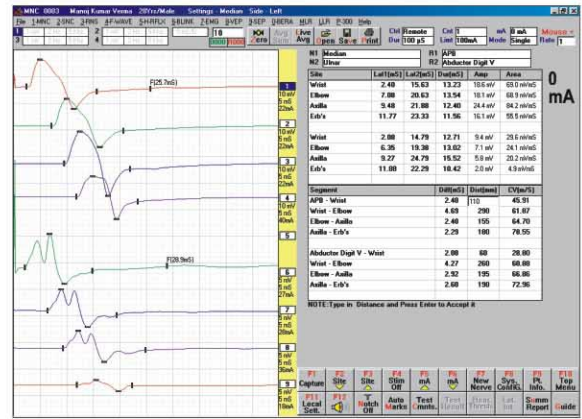
- Two / Four channel acquisition
- Large amount of data storage which can be replayed with audio
- Easy to choose muscle from a well organized list for testing and scoring. Scoring options are user definable
- Continuous/Rasterized display.
- Surface EMG, SP Activity, Interference Pattern, Triggered EMG, Single Motor Unit Potential, Turn/Amplitude analysis can be done on a single screen
- Advanced quantitative EMG for classifying MUPs into different bins depending upon morphology
- Manual/ Auto MUPs selection for analysis
- Transfer data in MS-EXCEL, TXT OR CSV file (optional)
- Guide for commonly used muscles describing its location and needle insertion positions



EMG

## NCS (Nerve Conduction Studies)

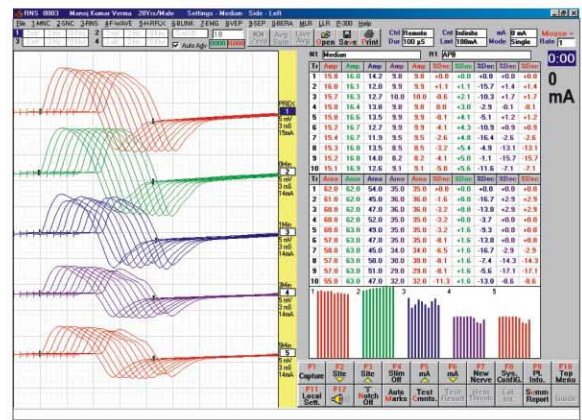
- Auto Latency/Amplitude marking with user definable measurements
- Separate test customization for each Nerve
- More than one nerve can be tested on a single screen
- Individual sweep and sensitivity for each trace which is adjustable even after acquisition
- Direct dragging of markers and traces with mouse
- Motor and sensory tests can be done on the same screen. F latencies can be marked while doing MNC test its self
- Multiple sets for recording RNS/Decrement waves
- Definable number of traces in all tests
- Split Screen for viewing Ipsi and Contra recordings in Blink Reflex test
- Built in wizard for help on electrode placements and stimulus sites for various nerves
- Fully isolated shock stimulator and amplifiers for patient safety



NCS

## Optional Tests

- **SSR:** (Sympathetic Skin Response)
- **VEMP:** (Vestibular Evoked Myogenic Potential)
- **RR (HRV):** (RR Interval or Heart Rate Variability)



RNS

# TECHNICAL SPECIFICATIONS

## MODELS

RMS Salus 2C : 2 channels  
RMS Salus 4C : 4 channels

## TECHNICAL SPECIFICATIONS

Channels : 2 or 4.  
Sensitivity : 0.1, 0.2, 0.5, 1, 2, 5, 10, 20, 50, 100, 200, 500  $\mu$ V/div; 1, 2, 5, 10, 20 mV/div.  
Highcut : 2 pole (12 dB/octave) filter. 100, 200, 500 Hz; 1, 2, 3, 5, 10 kHz.  
Lowcut : 0.2, 2, 20, 30, 100, 200, 500 Hz.  
Sweep speeds : 1 to 1000ms/div in 19 steps (1, 1.5, 2, 3, 5, (NCS & EP) 7.5, 10, 15, 20, 30, 50, 75, 100, 150, 200, 300, 500, 750, 1000).  
Sweep speeds : 2 to 500 ms/div in 13 steps (2, 4, 6, 10, 20, (EMG) 30, 50, 75, 100, 150, 200, 300, 500).  
CMRR : > 100 dB.  
Input Impedance : > 100 M Ohms (common mode).  
Noise : < 0.5  $\mu$ V rms (1 Hz to 10 kHz).

## A/D CONVERTOR

16 bit analog-digital conversion.

## AVERAGER

Number of averages per channel upto 9999.

## ELECTRICAL STIMULATOR

Type : Hand held, constant current electrical stimulator with stimulus intensity dial and stimulus trigger on handle. Save and Start/Stop switches are provided on Stimhandle.  
Duration : 0.02, 0.05, 0.10, 0.20, 0.50, 1.0 ms.  
Repetition rates : 0.5, 1, 3, 5, 7, 10, 15, 20, 25, 30 PPS standard or any user definable value.  
Isolation : Electrically isolated stimulator with independent controls.  
Electrical range : 0-100 mA with adjustable duration, intensity and repetitive rate.

## START UP KIT

EMG/NCV Disc Electrodes, Sensory Ring Electrodes, EMG Needle Electrodes, Stimulating Electrodes, Ground Electrode, Bar Electrode, EP Electrode, Jumper Cable, Conductive Gel & EP Paste, Measuring Tape & Marker

## MINIMUM PC/LAPTOP CONFIGURATION

OS: Windows XP Pro/Windows7 Professional 32bit, Processor: Core2Duo or higher, RAM: 2GB or higher, 40 GB harddisk or higher, CD/DVD Optical Drive, Screen Resolution 1024x768 or higher

## REMOTE SERVICE PROGRAM

Online technical support is available from RMS Head office. Customer has to provide Internet connection.

## AUDITORY STIMULATOR

Type : Headphone.  
Stimulus : Click(Rare, Comp., Alt), Pips.  
Frequency : 0.5 Hz to 8000 Hz.  
Intensity : 0-110 dB nHL or 30-140 dB SPL.  
Presentation : Left, right or both ears.  
Click duration : 100  $\mu$ s square wave clicks. Rarefaction, condensation or alternating polarity.  
Envelopes : Linear, Gaussian, Black man, Hanning  
White Noise : Contra lateral masking from 0 dB to 80 dB nHL.  
Rate : User definable.

## VISUAL STIMULATOR

VIDEO MONITOR : monochrome VEP monitor for black and white or color with user programmable colors, pattern reversal check board stimulation, vertical bars, horizontal bars. Features center fixation target, independent quadrant and half field stimulation.  
Square sizes : 2, 3, 4, 5, 7, 8, 9, 11, 13, 16, 21, 32, 64.  
Flash mode : Available.  
Rate : User definable.

## LED GOGGLES (OPTIONAL)

Flash/ Pattern stimulus selectable for right, left or both eyes.

## PHOTIC FLASH STIMULATOR (OPTIONAL)

## KEYPAD (OPTIONAL)

## HIGH QUALITY HEADPHONE (OPTIONAL)

## POWER SUPPLY

Power supply :  $\text{---}$  19V DC, 3.4A through Adaptor

## EMG CART\*

Two tier, heavy duty cart made of pre-laminated 18 mm thick board with -

Dimensions : 745 (H) x 765 (W) x 465 (D) in mm

- Castors having locking arrangement
- One pull out shelf for computer keyboard
- One pull out shelf for accessories etc
- Bottom shelves for printer, PC tower
- Mounting bracket for flexible arm EMG stand

\*Optional

Since R&D is a continuous process, features & specifications are subject to change without notice.

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Certifications: ISO 9001:2008, EN ISO 13485:2003, 

Represented by: