

# Allengers

*Passion for excellence*



## VIRGO

EEG (Traveler / Portable)



# Virgo - ELECTROENCEPHALOGRAPH

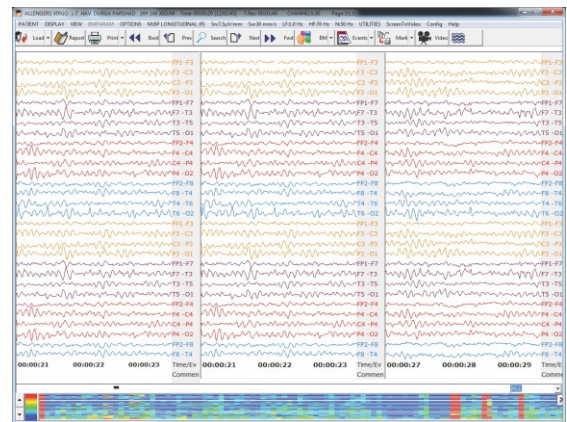
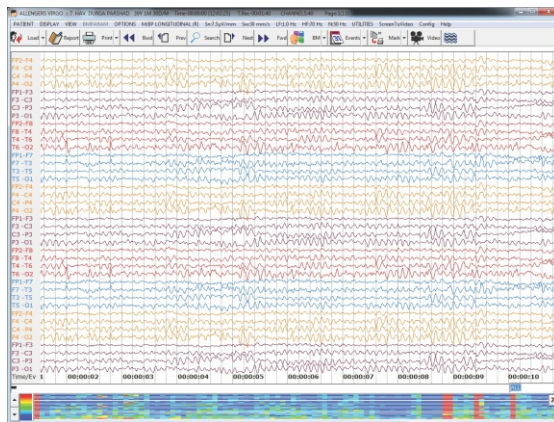
Welcome to the world of Allengers, a world that understands your needs, a world that actually cares. Allengers, an Indian MNC, National Award Winner - Quality Products from the Prime Minister of India, is a leading manufacturer covering a wide spectrum of medical diagnostic equipments.

Allengers Virgo Series of EEG test systems are designed using state-of-the-art technology and more than 30 years experience in design and manufacturing of medical equipments. Advanced digital signal processing and brain mapping techniques are highlights of Allengers EEG.

Innovation of using computer technology to record the EEG has brought diagnostic neurology to the edge of the 21st century. Digital EEG is providing the technologist and physician with greater flexibility in the recording and interpretation of the EEG.

## ACCURATE AND RELIABLE EEG RECORDING

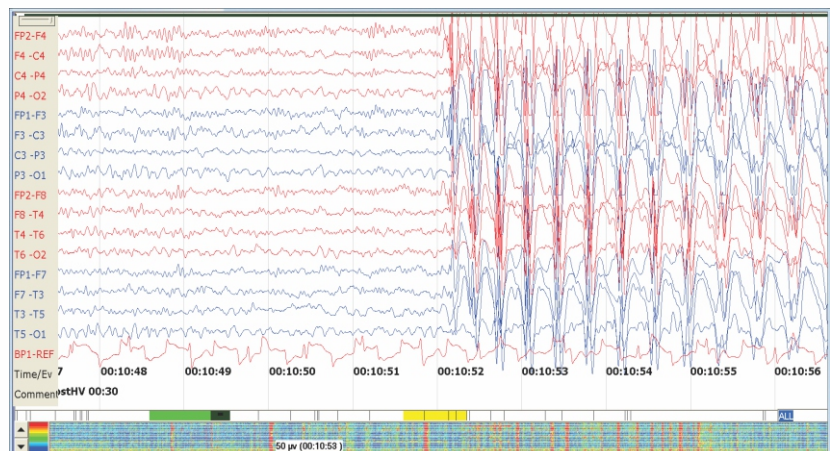
Comparison Mode: Split screen function lets you look back into and review EEG in different montage settings like amplitude, filters, time duration etc in comparison with 2 or 3 split windows. One side of split screen shows complete independent EEG from the other side of EEG.



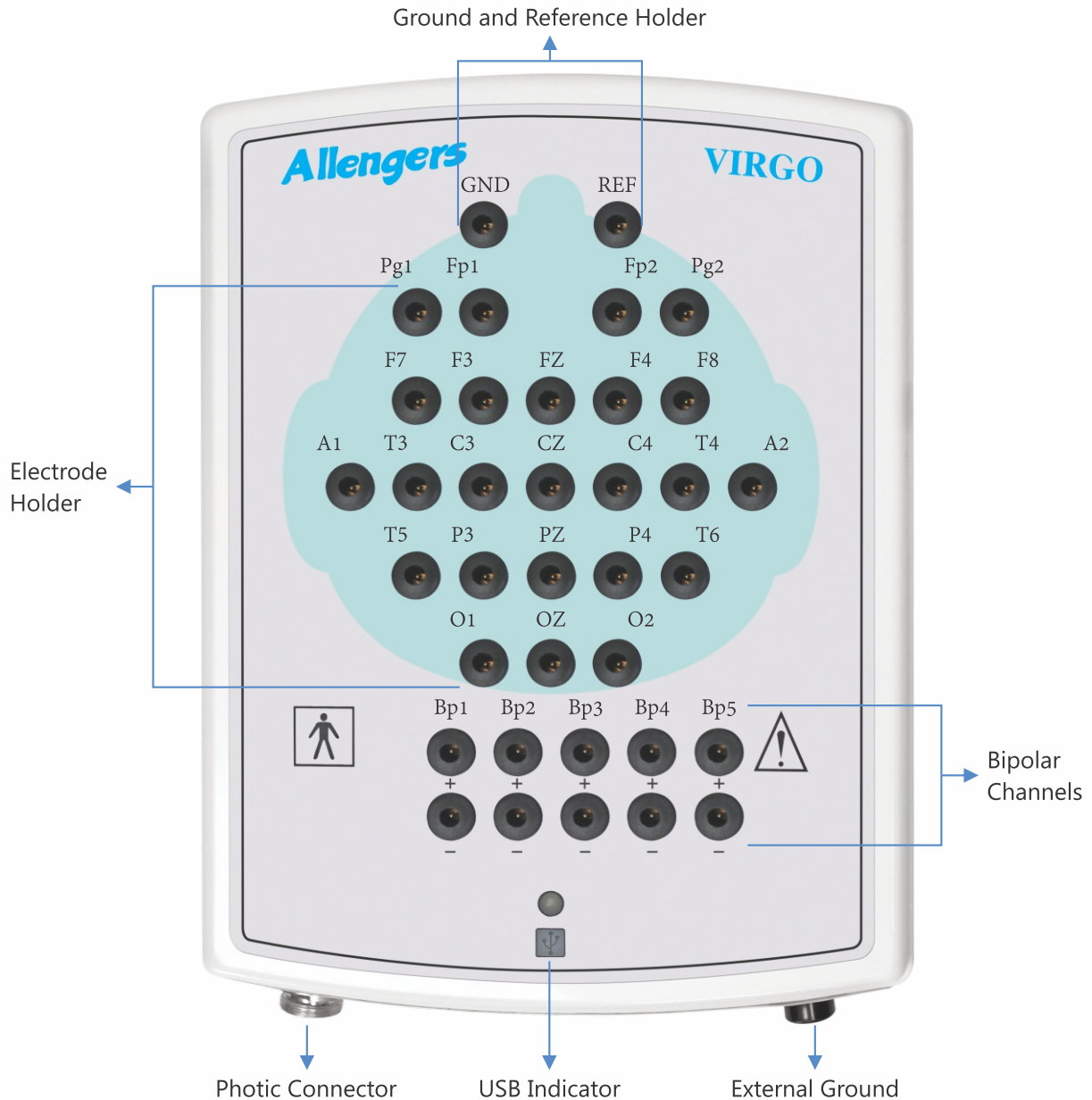
## EFFICIENT USER-INTERFACE FOR ANY EEG TESTING

Frequency components of EEG and the amplitudes of each frequency are displayed as a DDA (Dot Density Array) trend graph on the review screen and EEG scope. The DDA lets you find epileptic seizures of a specific EEG frequency band and amplitude over a long period of time at a glance. Entire record of any duration be it 3 minutes, 30 minutes, 3 hours or 3 days or even more ! can be displayed in this DDA.

A mark indicates where the frequency component and amplitude of the waveform suddenly changes to high seizure region. Red shows the highest while blue shows the lowest.



# Virgo - EEG Head Box



## SALIENT FEATURES

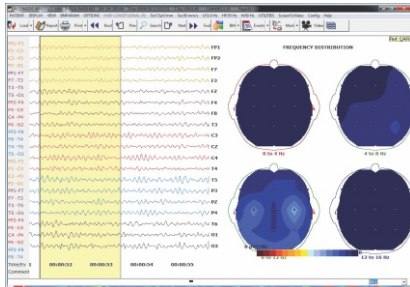
- Integrated Impedance check for electrode connectivity.
- Optional - synchronized high-resolution MPEG-4 video with EEG recording.
- User editable unlimited number of montages.
- Free lifetime online support & software up gradation.
- Fully portable & easy to use in ICU/ Bed side.
- Flexible photic stimulator based on high intensity LEDs.
- Easy to use & user friendly with many other features.
- Optional SPO2,HR & Pleth recording facility.

# ADVANCED VOLTAGE MAPPING

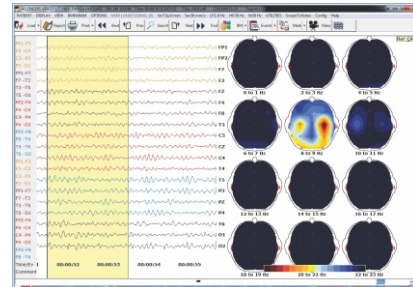
## Fast review and advanced EEG analysis

Whole head maps provide a complete overview and a better interpretation of the topography of EEG abnormalities. Just select the region to obtain the head maps. Click on a particular view to obtain a series of maps showing the change over time.

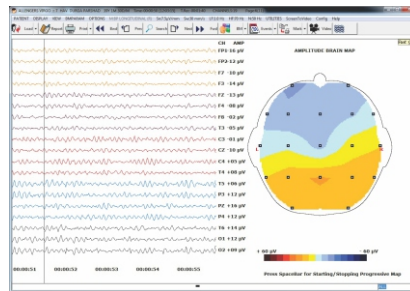
- Hemispherical comparison with left view, right view, top view.
- Frequency spectra with Peak Power Frequency (PPF), Spectral Edge Frequency (SEF), Median Power Frequency (MPF).
- Successive amplitude brain maps with different views with 8 mSec interval.



Frequency distribution showing delta, theta, alpha and beta activities



Frequency progressive with 12 brain maps covering various frequencies



Amplitude Brain Map

## ANALYSIS SOFTWARE

Review, mapping, remontaging, filtering and FFT

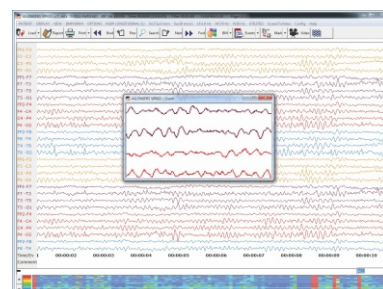
- Voltage and current source density mapping.
- FFT frequency analysis and frequency and phase mapping.
- Spike and seizure detection.

## EEG AUTORUN CD

- Review EEG data and patient files anywhere without special software.
- Re-format and re-filter EEG data on your PC.

## APPROPRIATE AND EFFICIENT REVIEW

- Customizable 64 trace display - upto 64 traces, time & comments can be displayed for easier recognition and comparison.
- Zoom window - you can easily magnify the waveform by moving the mouse cursor and zoomed image will be shown in zoom window.



## SALIENT FEATURES

- Facility to send EEG data through e-mail.
- Light weight and compact amplifier comfortable for adults and children.
- USB interface enables PC or Laptop based acquisition stations.
- Synchronized high-resolution MPEG-4 video.
- Flexible Photic Stimulator based on high intensity LED's.
- Integrated impedance check for electrode connectivity.
- Unlimited number of montages.
- Unlimited continuous recording along with video (optional).
- Facility to reformat of gain, filter and sweep speed acquire / analysis.
- Record and review EEG simultaneously and can write comments during review.
- Split screen facility for viewing channels simultaneously comprising three different montages at the same time.
- Facility to write the data on Autorun CD/DVD.
- Facility of Auto spike detection.
- Facility to measure amplitude and frequency at any portion of EEG.
- Amplitude integrated EEG (aEEG).
- Facility to record EEG in media player format for presentations.
- Work on all MS Windows platforms 32 bit & 64 bit.
- Inbuilt European Date Format (EDF) converter.
- Online support/Online update/Print to PDF/Email PDF through software only.
- Optional SpO2, HR and Pleth recording facility.
- Digitally Certified software and drivers from Microsoft Authorized Certifying Authority to ensure reliability and security.
- Facility to study Heart Rate Variability (HRV).
- Facility to send EEG data in DICOM format to PACS Server.
- Facility to export data to MATLAB/LAB View or compatible software.
- Dot Density Array (Amplitude based DSA bar) in color coded format for fast data retrieval.
- Print preview of pages marked for printing.

## TECHNICAL SPECIFICATIONS

### DATA ACQUISITION

- Number of Channels : 24/32/40
- Input Impedance : >100M  $\Omega$
- Internal Noise Level : <1 $\mu$ V P-P (0.53 Hz to 120 Hz)
- CMRR : >100dB
- Sampling Rate : 1024 / 256 Hz at ADC (256 Hz for storage)
- ADC : 16 bit
- High-Cut Filter : 100 Hz
- Low-Cut Filter : 0.05 Hz
- Interface : USB

### DATA PROCESSING

- Sensitivity : 1, 2, 3, 5, 7.5, 10, 15, 20, 30, 50, 75, 100, 150, 200, 300, 500, 750, 1000  $\mu$ V/mm
- Low-Cut Filter : 1.6 (0.1), 0.53 (0.3), 0.32 (0.5), 0.16 (1.0), 0.053 (3.0), 0.032 (5.0) Hz and user define filter
- High-Cut Filter : 10, 15, 35, 70, 100 Hz and user define filter
- Notch Filter : 50 or 60 Hz, ON/OFF facility
- Calibration Waveform
  - a) Calibration Level : 2 to 1000  $\mu$ V
  - b) Calibration Rate : 1 to 10 Hz
- Impedance Check : Indication on screen : All electrodes are displayed on the screen in electrode position layout. Electrodes with impedance higher than the preset impedance threshold are highlighted automatically.
- Montages : Unlimited no. of display montages
- Marking Signals : Photic Stimulation, Hyperventilation, External Event Mark
- Sweep Speed : 7.5, 15, 30, 60 mm/Sec
- Hyperventilation : Stimulation period 1, 2, 3, 4, or 5 minutes

### PHOTIC STIMULATION

- Stimulation Mode : 2 Modes (25 steps programmable, 1 single)
- Mode of operation : Continuous operation with pause time
- Stimulation Rate : 1 to 60 Hz
- Stimulation Period : 1 to 60 seconds
- Light Source : High intensity white LED's

### DISPLAY

- Graphic Signal Resolution : Any resolution  $\geq$ 1024 x 768
- No. of Display Channels : Upto 64 channels
- Display Modes : Overwrite and page-by-page
- Waveform Display Color : Any
- Waveform Display On/Off : Yes
- Waveform Freeze : Yes
- Video : Optional
- Sweep Speed : 5, 10, 20, 40 seconds data/page
- Event Marking : Yes

## ACCESSORIES



Photoc Flash



Conductive Paste



EEG Electrodes



Photic Charger



Event Marker



Nuprep Jelly (optional)



Camera (optional)



TV Tuner Card (optional)

### ALLENGERS OTHER PRODUCTS

- **CARDIOLOGY** : - Tread Mill Test (TMT) - Multipara Monitor (MPM) - Electrocardiogram (ECG 3, 6 & 12 CH)  
- Cathlab Fixed/Mobile
- **NEUROLOGY** : - Electromyograph (EMG) - Polysomnograph (PSG) - Neuroplot (EEG)
- **UROLOGY** : - Holmium Laser System - Lithotripter (E.S.W.L.)
- **RADIOLOGY** ■ **ORTHO, GASTRO, NEURO SURGERY & INTERVENTIONAL** ■ **IT SOLUTIONS**

MANUFACTURED & MARKETED DOMESTICALLY BY :

**ALLENGERS GLOBAL HEALTHCARE (P) LTD.**

Ph : +91 172 6618000-99, 2621913 Fax : +91 172 2621912 E-mail : sales.enquiry@allengers.net

MARKETED INTERNATIONALLY BY :

**ALLENGERS MEDICAL SYSTEMS LTD.**

Ph : +91 172 6618081, 6618082 Fax : +91 172 2621912 E-mail : exports@allengers.net

**CORPORATE OFFICE** : S.C.O. 212-213-214, Sector 34-A, Chandigarh-U.T. 160 022 (India)

Please visit [www.allengers.com](http://www.allengers.com) for more information Toll Free No. 1800-266-8800 (India)

For detailed technical specifications, please refer to the respective product data sheets / quotation.

Due to continuous product improvements, specifications and appearance are subject to change without prior notice.

