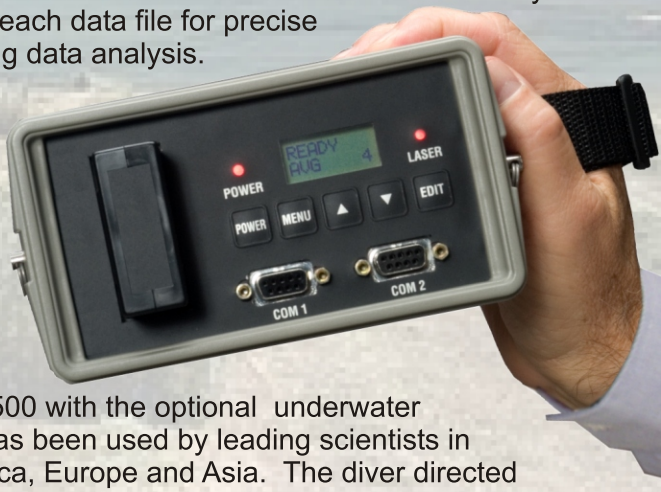
SVC GER 1500

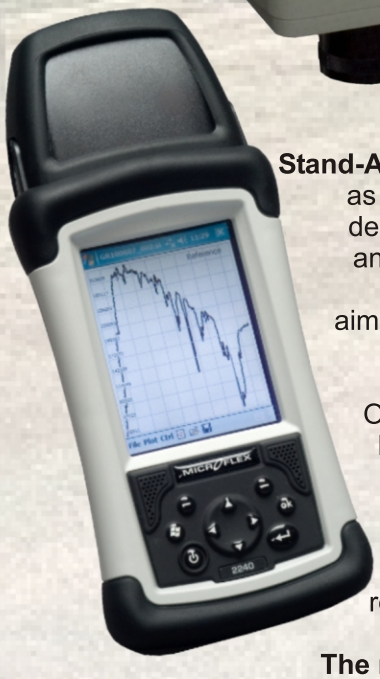
On Land or Under the Sea

LIGHT WEIGHT • STAND-ALONE

Field Portable Spectroradiometer
With Wireless Bluetooth® Communications
Rugged PDA Option with Internal GPS

The GER 1500 is the proven choice of scientists around the world when acquiring VNIR spectral data for remote sensing research. The GER 1500 provides fast and accurate data acquisition on land, in or above water. This self-contained instrument integrates the spectroradiometer with an internal CPU and battery so that measurements can be made using only one hand. The unitary design eliminates the need for computers and cables to be connected during data acquisition. This makes acquiring data much easier and speeds up collection. When operating the GER 1500 using the optional PDA outfitted with wireless Bluetooth ®, scientists can take data from an instrument elevated far above the tree canopy while standing firmly on the ground. In this mode, the data can be quickly viewed on the PDA before moving to the next target location. The GPS coordinates are automatically appended to each data file for precise location during data analysis.





Stand-Alone operation is as easy as powering up, selecting the desired foreoptic, integration, and measurement type, then pressing the actuator and aiming the laser. Easing up on the actuator initiates the measurement. Outdoor measurements can be made as quickly as one second in stand-alone mode, reducing the potential for change in solar illumination between reference and target scans.

The rugged PDA option allows measurements to be remotely acquired up to 30 meters from the instrument via wireless Bluetooth ®. Real-time data is easily viewed on the sunlight readable color TFT touch screen display. The PDA can withstand: drops from 4 ft., accidental immersion, exposure to sand/dust, vibration and temperatures from -30º C to 60 º C. The 3800 mAh battery provides power for up to 15 Hours of operation.

The GER 1500 with the optional underwater enclosure has been used by leading scientists in North America, Europe and Asia. The diver directed spectroradiometer with enclosure allows for accurate target selection and provides a robust tool for demanding marine and aquatic research.

SVC **Spectra Vista Corporation**
www.spectravista.com

SVC GER 1500

LIGHT WEIGHT • STAND-ALONE
Field Portable Spectroradiometer

Instrument Specifications CE

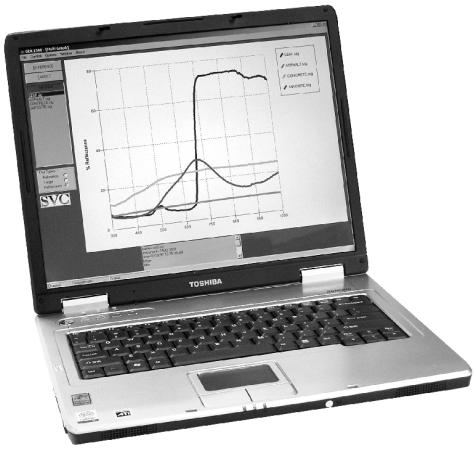
Spectral Range	350 nm to 1050 nm
Internal Memory	470 scans
Spectral Channels	512
Linear Array	Si Photo Diode
Bandwidth (nominal)	1.5 nm
Resolution FWHM	3.2 nm
Integration	5 ms & up
FOV	4º std., 8 º optional
Head Size	8.3 cm x 15.2 cm x 19.7 cm 3.25” x 6” x 7.75”
Weight	2 kg, 4.5 lbs.
Battery	6 volt NiMH
Battery Life	4 hours
Digitization	16 bit
Wavelength Repeatability	±0.1 nm

Noise Equivalent Radiance
Based on 1 sec. integration
400nm: 1.10 x 10^{-9} W cm^{-2} nm^{-1} sr^{-1}
700nm: 0.50 x 10^{-9} W cm^{-2} nm^{-1} sr^{-1}
900nm: 2.00 x 10^{-9} W cm^{-2} nm^{-1} sr^{-1}

Maximum Radiance Levels
Based on 5ms integration
700nm: 1.5 x 10^{-4} W cm^{-2} nm^{-1} sr^{-1}

Radiometric Calibration Accuracy
(Traceable to NIST): 5%

Dark Current Correction: automatic
Spectrum Averaging: selectable
Humidity: to 90% (non-condensing)
Temperature: -10 º to 50 º C
Sighting: Laser



GER 1500 software runs under current Windows® operating systems for PCs and notebook computers; an optional version is available for use with the rugged PDA.
The software allows multiple data sets to be viewed simultaneously with selectable radiance or reflectance allowing data to be analyzed in the laboratory or in the field.

The GER 1500 system is pictured in the sturdy watertight field case with high density foam. The system includes the instrument with two (2) batteries, a dual battery charger, standard foreoptic, communication cable, software and instruction manual. The optional rugged PDA with GPS, Bluetooth ® and charger are also shown.

The GER 1500 system offers the user the greatest possible ease of operation for hand-held, tripod, above canopy or underwater applications. Simple menu-driven programs control the setup, acquisition, and data manipulation functions, allowing the user to be effective within a short time following introduction to the instrument. Generated real-time data is displayed on-screen for immediate interpretation and evaluation. Data is stored in ASCII format for easy transfer to other software programs. The SVC technical team is ready to assist in evaluating your requirements to determine the best instrument and options for your application. Following delivery of an instrument, SVC continues to provide product support. We are proud to service the instruments we produce.

Applications

Vegetative Stress Analysis
Crop Analysis and Management
Forestry
Wetlands Assessment
Environmental Testing
Ocean Color
Coral Health Assessment
Ground Truthing
Surface Color Measurements

Options

Fiber Optic Light Guides
Foreoptics
Calibration Light Sources
Leaf Measurement Probe
Reflectance Panels
Underwater Enclosure
Notebook Computer
PDA
Tripods

Underwater spectral measurements are acquired using the standard GER 1500 instrument outfitted with the submersible enclosure. Instrument setup is accomplished using the external rotary dial. The laser sight provides targeting guidance. The internal memory can store a day’s worth of data and is quickly downloaded without opening the enclosure. The internal battery is designed to provide power for two full days of operation.

SVC **Spectra Vista Corporation**
29 Firemen's Way Poughkeepsie, NY 12603 USA Ph: 845-471-7007 Fax: 845-471-7020 e-mail: spectravista@aol.com www.spectravista.com