

SVC *HR-512i*

On Land or Under the Sea

LIGHT WEIGHT - STAND ALONE

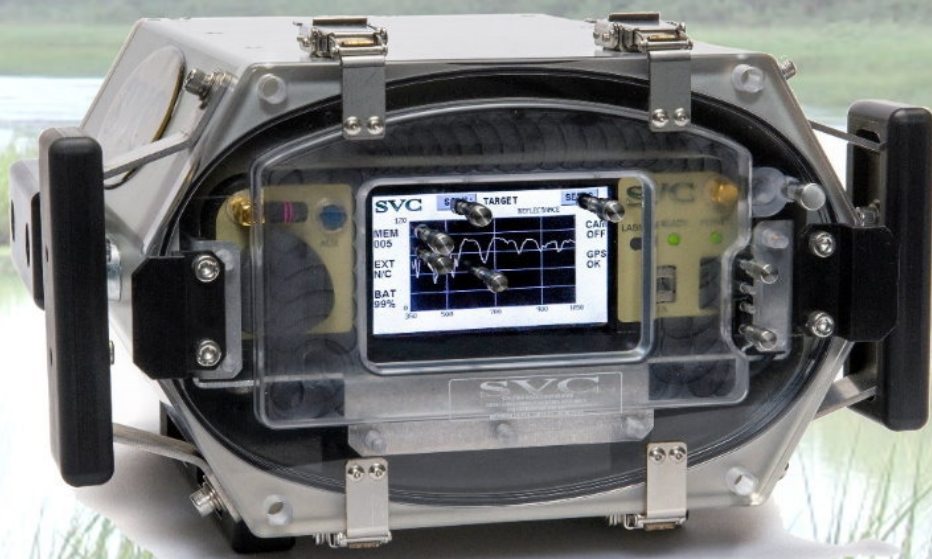
Field Portable Spectroradiometer With Graphic Data Display, Internal Camera, Onboard GPS and Bluetooth® Wireless Communications

Operating in the VNIR spectral range, the SVC HR-512i takes field measurements to an exciting new level. The SVC HR-512i excels in terrestrial and marine applications due to its superior data quality, expert optical and electronic design, robust construction, ease of use and integrated information functions. Measurements are acquired in seconds, as the internal CPU sets the appropriate integration, based on current lighting conditions, while dark current is automatically measured and subtracted. The internal computer applies the selected radiometric calibration and the graphic data is promptly displayed on the sunlight readable LCD touchpad. No external computer is required to acquire, view and store high quality spectral measurements accompanied with time and positional coordinates from the GPS, and digital image from the camera. The Built-in inclinometer helps direct the user to proper instrument position and writes the instrument angular information to file. The SVC HR-512 also includes a second Bluetooth® radio for communication with up to 8 external sensors.



The Underwater Enclosure

The underwater enclosure for the SVC HR-512i allows the instrument to be taken to depths of up to 40 meters. The instrument is installed into the enclosure and taken to the area of interest, where the diver directs the scan. SVC instruments have been supporting scientific marine research in North America, Europe, Asia and South America for over 20 years. Research associated with ocean color, coral reef assessment, sea grass and water column studies have often been conducted using the HR-512i installed in the rugged underwater enclosure.



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SVC *HR-512i* TM

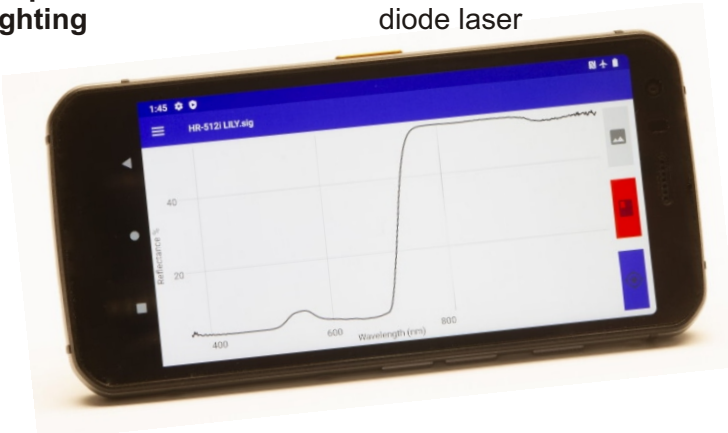
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|-----------------------------------|--|
| Spectral Range | 350-1050 nm standard 325-1075 nm optional |
| Internal Memory | 1000 scans |
| Channels | 512 |
| Linear Array | (1) 512 Si, 350-1050 nm |
| Spectral Resolution (FWHM) | 3.2 nm, 700 nm |
| Bandwidth (nominal) | 1.5 nm, 350-1050 nm |
| Minimum Integration | 10 millisecond |
| FOV | 4° standard, 8° optional 25° optional armored fiber optic |
| Head Size | 8.75" x 6.5" x 3.0" 22 cm x 17 cm x 8 cm |
| Instrument Weight | 5.2 lbs., 2.4 kg |
| Battery Type | 7.4 V lithium ion |
| Battery Life | 10 hours approx. |
| Digitization | 16 bit |
| Wavelength Repeatability | 0.1 nm |
| Noise Equivalent Radiance | 0.8 x10 ⁹ W/cm ² /nm/sr@700nm |
| Radiometric Calibration | ± 5% @ 400 nm |
| Accuracy | ± 4% @ 700 nm |
| (NIST Traceable) | |
| Dark Current Correction | automatic |
| Spectrum Averaging | automatic/selectable |
| Operating Environment | |
| Humidity | to 90% RH, non-condensing |
| Temperature | -10° to +40° C |
| Sighting | diode laser |



STAND-ALONE INSTRUMENT CONTROL PANEL

Features

- Small, light weight field spectroradiometer
- Full spectral measurements can be acquired in 1 second
- Internal digital camera captures scene of target area
- Internal GPS provides time and location coordinates for each data file
- QVGA sunlight readable touch screen provides graphic data display
- Dedicated Bluetooth can receive data from 16 channel using optional sensor suite
- Provides good spectral resolution across the full spectral region
- Incorporates 100% linear array technology
- State of the art linear array provides low noise (improved data) across the 350 nm to 1050 nm range
- Fixed foreoptics ensure a reliable optical path
- Critical optical components are hard mounted to the spectrometer platform
- Provides fast, full spectral measurements with no moving gratings
- Internal 32-bit CPU allows measurements to be acquired and viewed without an external computer
- Designed for minimal set-up & warm-up time
- Internal memory stores 1000 measurements
- Optional rugged smartphone and Bluetooth for wireless operation
- Field-changeable fiber optic light guide options available
- Integral, removable Lithium Ion battery enhances mobility (no power cord)
- Optional Foreoptics, Fiber Optic Light Guides, Reflectance Probe, Cosine Receptors, Back Pack, Reflectance Panels, Spheres, and Computers are available



Rugged Android Smartphone

The SVC HR-512i can be ordered with an optional rugged Smartphone with Bluetooth® radio, enabling wireless remote measurements at distances up to 70 meters. Real time data is quickly reviewed on the sunlight readable touchscreen display, enabling the operator to make quick data assessments.

The rugged smartphone will survive a 1.8-meter drop onto a hard surface and a 35-minute water immersion to 1.5 meters, ensuring that a slip in the field will not put this method of data collections on the sideline. Temperatures down to -30° C or up to 50° C do not hamper the rugged smartphone operation.

Applications

- Vegetative Stress Analysis
- Forestry Analysis
- Land and Crop Management
- Marine and Wetland Studies
- Environmental Monitoring
- Ocean Color Analysis
- Ground Truthing
- Surface Color Measurements