RS-8800 Specifications

RS-8800 Spectroradiometer Specifications	
Spectral Range	350–2500nm
Spectral Resolution—FWHM (Full Width at Half Maximum)	2.8nm @ 700nm 8nm @ 1500nm 6nm @ 2100nm
Si Detector	512 element Si photodiode array (350–1000nm)
InGaAs Detectors (cooled)	256 element extended wavelength photodiode array (1000–1900nm) 256 element extended wavelength photodiode array (1900-2500nm)
Fiber Mount Options	1, 2, 3, 4, 5, 8 and 10° FOV Lenses, irradiance diffuser
Noise Equivalence Radiance (1.2m fiber)	$0.8x10^{-9}$ W/cm²/nm/sr @400nm $1.2x10^{-9}$ W/cm²/nm/sr @1500nm $1.8x10^{-9}$ W/cm²/nm/sr @2100nm
Max Radiance @ 700nm (1.2m fiber)	$2.0x10^{-4}$ W/cm²/nm/sr
Minimum Scan Speed	100 milliseconds
Wavelength Reproducibility	0.1nm
Wavelength Accuracy	±0.5 bandwidth
Communications Interface	USB or WiFi– communicate with iPhone or Android
Size	31.5 x 22.9 x 38.7 cm
Weight	Less than 5kg
Batteries	Lithium ion; 7.4V—rechargeable
Angle measurement range & accuracy	0.15 degree accuracy on both axis of Tilt sensor
Distance measurement range & accuracy	Resolution of 1 inch or 2 cm on the range finder
Solar angle accuracy	Within 1°
GPS positioning accuracy	±3 meters accuracy
Camera parameters	VGA with resolution of 640x480 pixels
Bluetooth /WiFi working distances	Class 1, 100m range

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SPECTRAL EVOLUTION

RS-8800 Spectroradiometer Bundle Includes *Sensaprobe* grip with Camera for Real Time FOV Viewing

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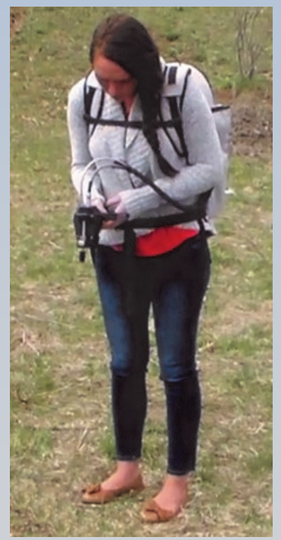
Field Portable Spectroradiometer with *Sensaprobe grip*—Capture Real Time Field of View

The RS-8800 portable spectroradiometer bundle provides high resolution/high sensitivity measurements for applications in remote sensing where real-time accurate measurements of scan angle, distance from target and real-time target viewing— are all available from your Android device, tablet or iPhone.

The RS-8800 is designed to allow for a user to capture *in situ* scans with a consistent scan angle and record exactly what was scanned, the angle the scan was taken at, the solar elevation angle and other key data. The system runs an Internet of Things (IoT) operating system—the first available in a spectroradiometer—to capture and store all data associated with each scan.

The system is set up to allow for control of the SR-8800 spectroradiometer via a smartphone or tablet—iPhone or Android based. This includes easy downloading of data from the spectroradiometer. Access by smartphone and tablet is accomplished via WiFi connection.

The RS-8800 with the *Sensaprobe*^{TM} grip allows for consistent measurements by any user at any experience level to ensure that measurements are taken correctly in the field for research applications. See exactly what you are scanning with the embedded camera. It can also be used for vicarious calibration to validate satellite or flyover hyperspectral and multispectral data being used in research.



The RS-8800 goes in a backpack and can be equipped with a unique, custom pistol grip to take all the measurements required for field work.

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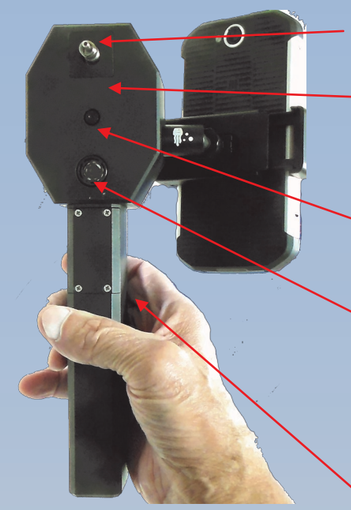
Spectral Evolution's Exclusive *Sensaprobe*^{TM} grip Makes Measurements Consistent



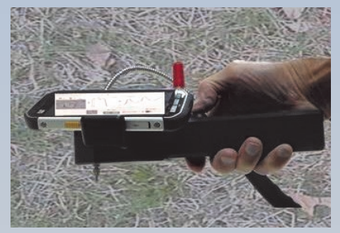
Quick release fiber optic mount

A built-in angle sensor allows the user to monitor scan angle and notifies the user when they are at nadir so they know it's OK to scan. Tags scans with exact tilt angle

A built-in camera for real-time targeting and capturing what is being scanned

Ultrasonic distance sensor measures the distance from the target and automatically shows the viewer the exact target area, accounting for Field-of-View. The camera image is adjusted to automatically represent exactly what is being scanned

Trigger activation to start a scan

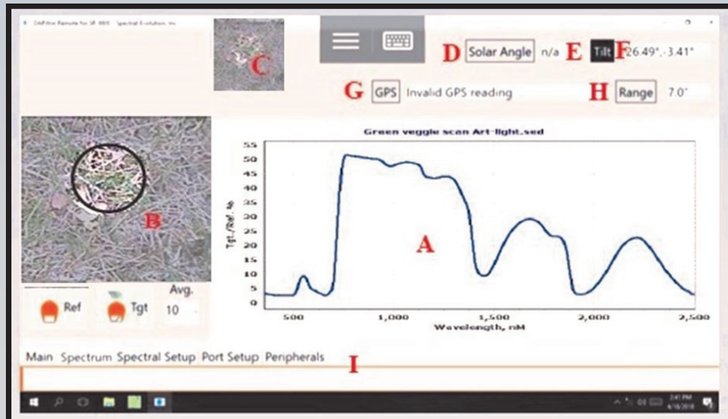


The RS-8800 can be controlled by any smartphone or tablet—iPhone or Android—with its IoT operating system.

The built-in computer drives the processing of the required sensors including:

- ***GPS***
- ***Pistol grip angle sensor***
- ***Camera***
- ***Solar elevation angle calculation***

In addition the computer controls the spectroradiometer, stores all data and facilitates easy remote downloading of data.



A—Spectrum displayed
B—Large picture of target
C—Small image of target
D—Solar angle reading
E—Tilt indicator—shows correct angle of the lens
F—X and Y axis for tilt
G—Up-to-date GPS reading
H—Range (distance) from target in inches or centimeters
I—Tabs for additional screens and functions