



CRYSTAL
INSTRUMENTS

DYNAMIC SIGNAL ANALYSIS & DATA ACQUISITION

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Spider-20 Handheld Wireless Dynamic Signal Analyzer Handheld Field Testing Solution

Spider-20 is a compact yet powerful dynamic signal analyzer and digital data recorder. It provides four 24-bit precise high-fidelity input channels, and a unique software-selectable tachometer-input/signal-source output channel (all using conventional BNC connectors). Each input is individually programmable to accept AC or DC voltage or output from an IEPE (ICP) sensor with built-in electronics.

Spider-20 is a diminutive 5.3 x 4.3 x 1 inch tool weighing only 18 ounces. It has only three push-button controls and five LED status indicators. This little powerhouse can run over 6 hours on its internal rechargeable battery which can be replaced in field with a backup battery. It can also record data on its built-in 4GB flash memory at the simple push of a button.

Spider-20 communicates with the world through its built-in Wi-Fi interface. Use your iPad to setup and view or record time histories as well as perform spectrum analysis or measure Frequency Response and Coherence functions. Link the Spider-20 to your laptop or tablet running Windows and enjoy the full repertoire of functionality provided by our EDM (Engineering Data Management) software including 1/nth Octave acoustic functions, Order Tracking for rotating machinery, Shock Response Spectra for drop testing, or Digital Filtering for special purpose analysis.

A secondary version, Spider-20E, replaces Wi-Fi with a wired Ethernet connection. The Spider-20E has the same form factor as the standard wireless version.

Transfer measured data to truly massive storage space using the EDM Cloud server. EDM can be used to program your Spider-20 to perform a custom measurement or measurement sequence at the touch of its START button, making it an unimposing and user-friendly tool. No computer, tablet or phone is required; just use your thumb and your Spider-20 operating in Black Box mode. Use our flexible Automated Schedule and Limiting software to turn this Spider into an intelligent unattended monitor capable of responding to data conditions or networked instructions, notifying you of significant conditions via e-mail.



SPIDER-20 & SPIDER-20E

Features:

- Weighs only 18 ounces
- Built-in Wi-Fi (Spider-20)
- Built-in Ethernet (Spider-20E)
- 4 GB Flash Memory
- 4 Input Channels
- 1 Tachometer Channel
- PC Independent
- iPad Compatible
- 6 Hour Battery Life

Industry and Product Applications

Machinery Diagnosis

Four inputs and a tachometer channel are the perfect size for many machinery monitoring tasks. Simultaneously measure two perpendicular proximity probes or horizontal and vertical bearing cap accelerations at both ends of a machine. Record this along with a 1/rev tachometer during startups and shutdowns to plot waterfalls and Campbell diagrams identifying resonances, critical speeds and unusual forcing functions. Use the same signal inputs to balance the machine. Place accelerometers on either side of a coupling to aid alignment.

Machine/Process Monitoring

Load a custom monitoring program employing our Automated Schedule and Limiting software and leave your Spider-20 to monitor speed and four dynamic inputs. Upon detecting an alarm-level limit (in the time or frequency domain), it can send you an email reporting the finding and make an immediate recording for more detailed analysis. For longer stays, leave the accessory AC power unit plugged in. This allows Spider-20 to draw power (6 Watts, maximum) from any 100 to 240 VAC (50/60 Hz) power line. Alternatively, you can provide a battery backup of 15 VDC ($\pm 10\%$) for more remote applications.