



Advancing medical technology to help you, help others.



Experience The Cadwell Difference – Since 1979

The benefits of owning a Cadwell system are numerous. Our development team understands and delivers what you need. Everyone at Cadwell stands behind our products, and we all have the same goal - to keep you as a loyal, devoted customer long into the future.

Innovative Neurodiagnostic Instruments

John Cadwell, BSEE, MD designed the first microprocessor-controlled EMG instrument. In 1979, he and his brother Carl, DDS, formed Cadwell Laboratories, Inc. and began selling their device. Since then, Cadwell has been a leader in the development and manufacture of innovative and reliable instruments for neurophysiology. Many of these instruments have been providing decades of service to their owners.

Numerous patents are held by Cadwell, including those for magnetic stimulators, cable shielding designs, neural network analysis of EEG, and database designs. Today, still located in Kennewick, Washington, John and Carl continue ownership of the company and come to work everyday to develop and market products ranging from EMG to EEG to PSG to IONM instrumentation and more. Cadwell has a firm hold of its identity and a dedicated focus on neurophysiology.

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Advanced Features in an Entry-Level EMG System

The Sierra® Ascent™ is a 2-channel, entry-level EMG system that includes numerous features found on our top-of-the-line Sierra® Summit™ system. The Ascent is offered with a 2-channel amplifier and single electrical stimulator and can be configured as a portable or desktop system. The portable version comes with a laptop computer and soft-sided carrying case. An optional wheeled carrying case is also available. The desktop version comes with a mini-tower and an LCD monitor, or an all-in-one PC. Both lightweight and hospital grade equipment carts are available to complete the system.

The Ascent is proudly designed and manufactured at our Kennewick, Washington facility and is built with the same lasting quality and reliability customers have come to expect from Cadwell.



Standard Features of the Sierra Ascent

- Base Unit with dedicated keypad and knob controls (requires a computer)
- Dual high-power speakers with software equalizer
- Handheld electrical stimulator (intensity adjust, single stim)
- 2 Channel Amplifier
- USB Footswitch
- EMG protocols (free run and capture mode) - Buffer Playback with audio (up to 10 minutes) - Unlimited Buffer Storage - Programmable Muscle Scoring - EMG snapshots within the published reports
- QEMG
 - MUP Tool
 - Single Motor Unit Analysis
 - Multi-Motor Unit Analysis
 - Interference Pattern Analysis
- NCV (motor, sensory, mixed, inching)
- F Wave / H Reflex
- Side-to-Side Comparisons (NCV, F, H, SEP)
- Blink Reflex
- RNS (1 or 2 channel acquisition)
- SEP (upper, lower, dermatomes)
- Programmable Study Lists
- Tabular Data Summary View
- QuickReport™ MS Word® based report generator
- ASCII Output Utility (all test protocols)
- Internal Calibration Signals
- Hardware Diagnostics Suite (diagnostic routines for the amplifier, electrical stimulator and keypad)
- Network Ready
- Multiple User Support
- Comprehensive Application Help Topics
- Free Technical Phone Support
- Lifetime Software Upgrades
- Soft-sided Carrying Case
- Starter Electrode Kit
- Reader Software

Optional Hardware

- Skin Temperature Probe
- Reflex Hammer
- Trigger Out/In Interface Cable
- Cart with articulated arm



Amplifier/Stimulator

Cadwell has long been recognized as producing some of the world's finest neurophysiologic amplifiers; and the Sierra Ascent amplifier is no exception. The Ascent amplifier features fast artifact recovery and very low noise. Analog to digital conversion is done inside the amplifier, eliminating the amplifier cable as a potential noise source. Each amplifier has superb RF immunity and excellent signal quality. Temperature measurement, impedance, on/off switch and calibration signals are built-in.



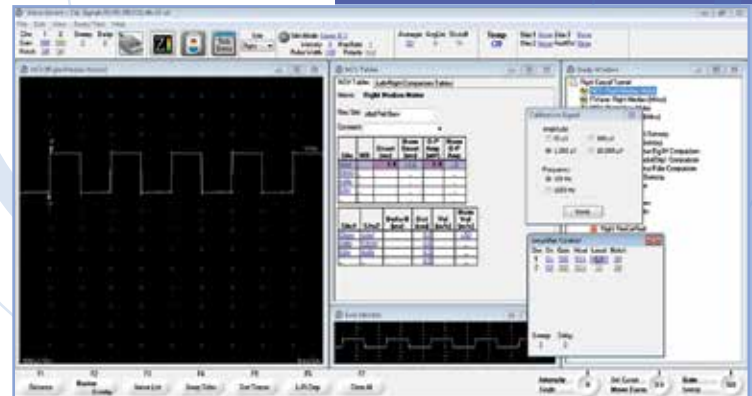
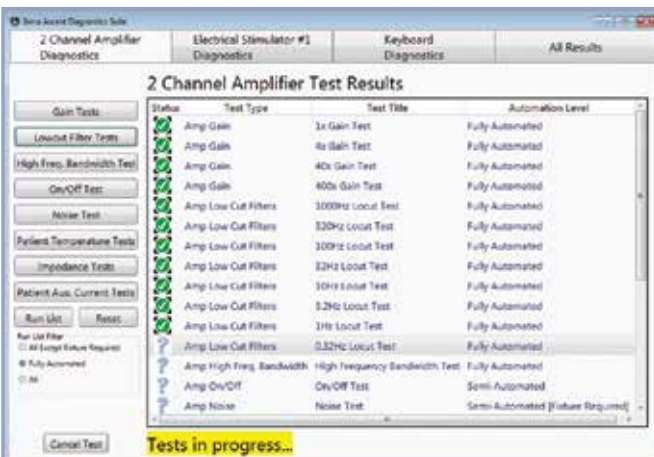
2-channel Ascent amplifier



The hand-held electrical stimulator includes a central knob for intensity adjustment and stimulus delivery. Rotate the knob to change the intensity level and then pull back on the knob to stimulate. Changing polarity is as simple as turning the stimulator over. Stimulus probes are removable to allow connection of other stimulating electrodes, or leave the probes in and use our Quick Connect Adapter. The stimulator comes with a high flex-life cable for added durability.

Hardware Diagnostics

The Sierra Ascent includes a comprehensive hardware diagnostic suite. Reduce troubleshooting time by easily verifying the proper performance of the amplifier, electrical stimulator and base unit keypad. You can save or print the test results for your maintenance notebook. Calibration signals, with four voltages and two frequency settings, are also available in all test protocols.



NCV Test Protocol

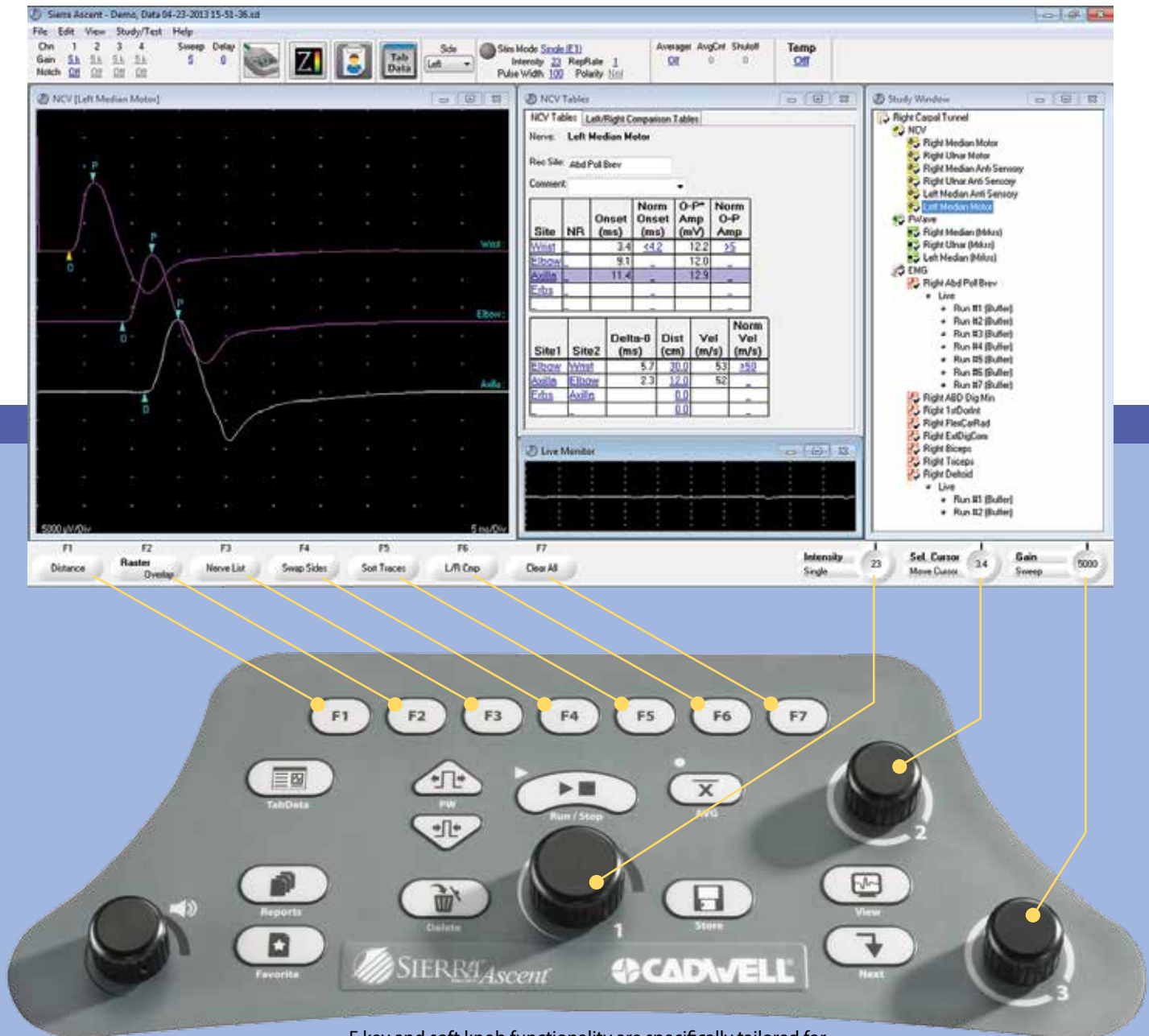


EMG Test Protocol

User Interface

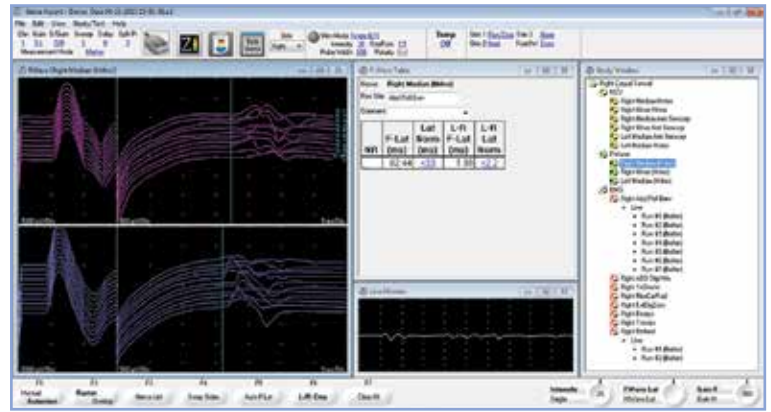
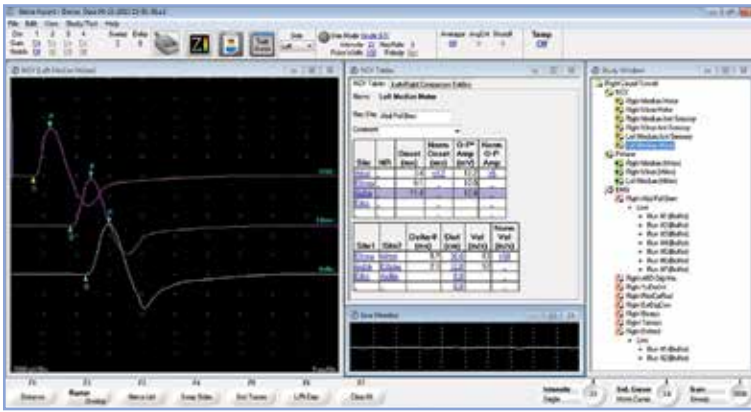
Clean, reliable and fast best describe the Sierra Ascent user interface. Use either the custom keypad with its function keys and soft knobs, or use the mouse - whichever is most convenient for you. Combined with the hand-held electrical stimulator and programmable footswitch, you have all the controls you need without having to drill down through seemingly endless menus.

Advanced features are available from the pull-down menus at the top of the screen or by accessing the context menu (mouse right-click) over each window. A plug-and-play USB communication interface to the Ascent base unit provides compatibility and upgradeability in a rapidly changing PC environment.

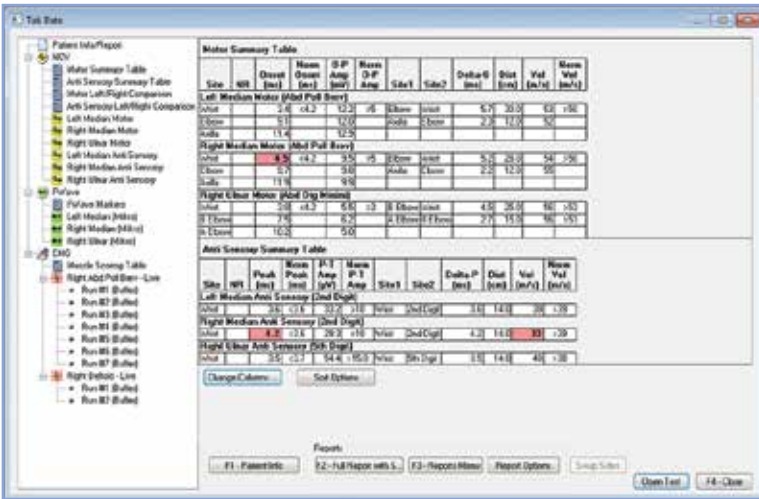


F key and soft knob functionality are specifically tailored for each test protocol to maximize ease of use and facilitate rapid data acquisition

Software



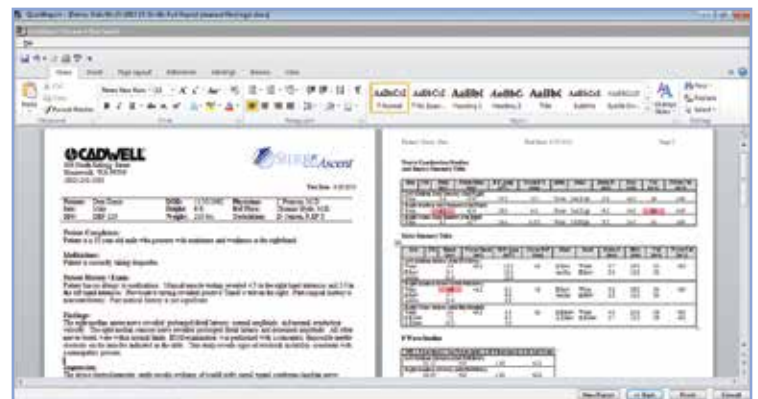
Automatic cursor placement and **Left vs. Right comparisons** in NCV, F and H test protocols. Live Monitor window facilitates identification of artifacts or poor electrode connections. On-line comparison to reference data and identification of abnormal values. Unlimited number of traces displayed per test protocol.



Unique **Tab Data Summary View** provides quick and convenient review on all acquired traces and tabular results. Adjust cursor positions, change distance measurements, and playback of stored EMG without having to return to the specific test protocol. Create your report using one of the programmable report buttons at the bottom of the window.

Standard EMG protocol includes both Live and Capture data acquisition modes with easily accessible muscle scoring table and audio equalizer controls, allowing you to fine tune the audio signal to your listening preference. Up to 10 minute Live EMG Buffer with unlimited storage and playback. Full-screen or raster displays. Comprehensive Motor Unit and Interference Pattern Analysis are included.

Cadwell's industry leading **Report Generator** utilizes Microsoft Word® and includes customizable modules for entry of patient history, physical exam, findings, impressions, and more, without having to type at the keyboard. Reports include tabulated data and waveforms. Templates can be customized to suit your individual needs.



Cadwell Customer Support



REMOTE ASSISTANCE

Cadwell is focused on making you a satisfied, loyal customer for years to come. Our telephone support is second to none. We answer every call during business hours with a real person. Our in-house employee technicians are trained professionals. Our web-based support program allows our technicians to troubleshoot real-time – as if they were in your office. Our flexible service contracts will meet your specific needs. Just ask.

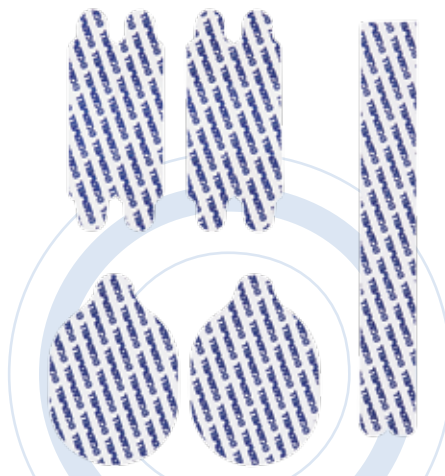


Supplies and Accessories - www.estore.cadwell.com

Cadwell has a complete range of quality, reliable supplies as well. From Monopolar and Concentric to Injectable and Single Fiber needles; disposable and reusable surface electrodes for NCV, EMG and EP. We are your one-stop source for everything neurophysiology related.



Quick Connect Adapter



Cadwell Disposable Patient Pak Refills and Starter Kits (Improved Hydrogel)



Shielded Interconnect Cable



Ambu® Neuroline Disposable Monopolar Needle Electrodes With Detached Lead Wire



Stim Probe Extension



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