

# The Line Monitor

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## New WinchDAC software debuts

### ...and it's awesome!

Measurement Technology NW's new WinchDAC software is an exciting addition to the LCI winch line control family of products.

With WinchDAC, LCI users can view the real-time line speed, tension, and payout status of any winch in one to eight-winch systems, all from a central PC computer display. Cast data can be logged and exported for

are captured and converted into engineering units by an LCI processor, and the resulting data is communicated through a serial interface to a central PC with an optional touch-screen display. There, WinchDAC software generates a user-friendly graphical interface showing speed, tension, and payout alarm status.

WinchDAC has the ability to log and summarize cast data, replay the time history plot for line payout, speed, and tension from past casts on a second screen, calibrate winch tension and count sensors directly from the

Laboratories, have given WinchDAC high marks for functionality, data accuracy, and ease of use. Its outstanding performance in the high-stakes world of oceanographic research (where only stable, robust, well-designed systems survive) proves the LCI/WinchDAC system should be considered for your next winch instrumentation purchase.

For more details, log onto (add web link). Your MTNW team is also available to answer any questions you may have. We can be reached by dialing 206-634-1308 or by emailing us at [lcim@mtnw-usa.com](mailto:lcim@mtnw-usa.com).

*"Measurement Technology NW stood out as the only qualified group who could assist us with our needs."*

- Richard Muller, Moss Landing Marine Laboratories

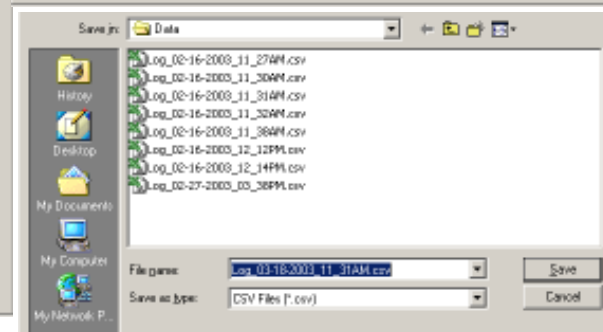
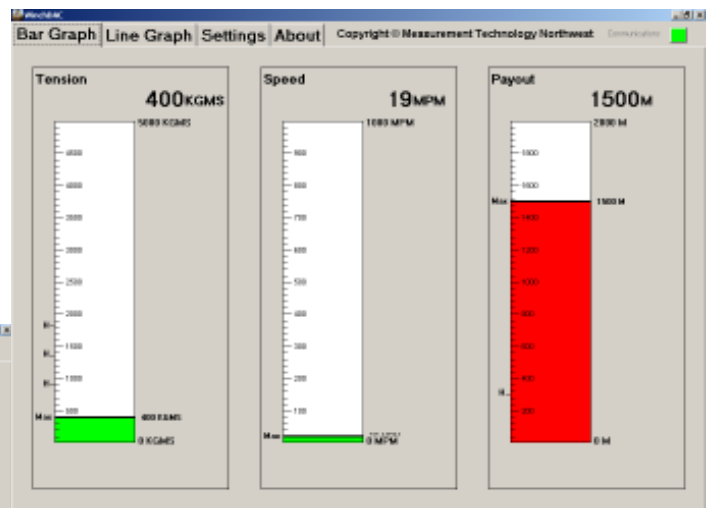
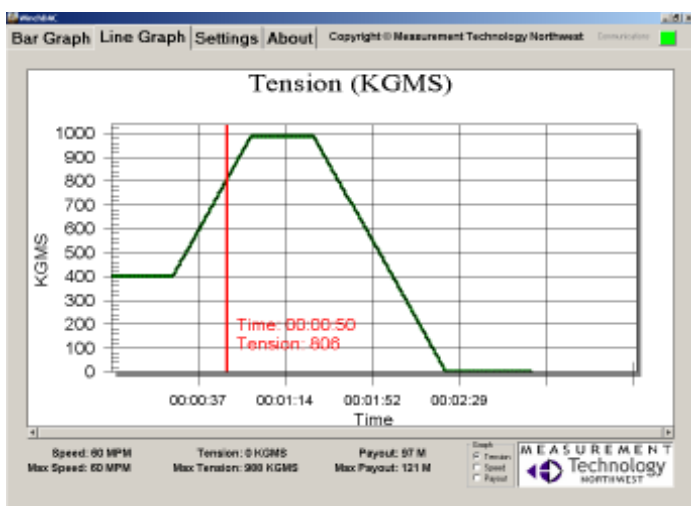
later analysis, and the user-friendly graphical interface provides access to an unprecedented amount of custom features.

This exclusive winch monitoring system is a highly versatile platform that displays line tension, payout, and speed for multi-winch installations through a central operator computer interface. Signals from count and force sensors mounted on each winch

central computer (multi-winch version only), and allows operators to customize the display to their specific requirements.

Current WinchDAC users, including Moss Landing Marine

*Three sample WinchDAC user screens*



LM-2000



## As comparisons go, this one's no contest.

The LCI-90 and LCI-90R have been designed as drop-in replacements for existing winch monitors like the now-defunct LM-2000.

Check out this product comparison to see if it's time to consider upgrading all your old LM-2000 displays to new LCI-90 monitors.

### Standard Features

- Operating Temperature
- Front Panel Construction
- Panel Window
- Pushbutton Construction
- Input Voltage Range
- Display Viewing Angle
- Display Pixel Density
- Input Modes
- Menu Structure
- Hardware/Software
  - Units of Measure
  - Serial Ports
  - Serial Protocols
  - Diagnostics
  - Calibration

### LM-2000 Monitor

- Temperature range is -20 °C to 55 °C
- Molded plastic
- Lexan film attached with doublestick tape
- Plastic membrane switches
- Either 12 or 24VDC
- LCD, less than 90°
- LCD pixel density 240x128
- One analog input channel
- Complex, non-intuitive navigation
- Dual-axis load pin operation optional
- Switching units requires recalibration
- Serial communication is optional
- Single serial protocol available
- Diagnostic functions poorly supported
- Tension input values are in A/D counts

### LCI-90 Monitor

- Temperature range is -40 °C to 75 °C
- Stainless steel
- Glass coated Lexan, epoxy potted to panel
- Fully sealed stainless steel pushbuttons
- 18 to 36VDC
- Electroluminescent, over 160°
- Electroluminescent pixel density 320x240
- Up to 4 analog inputs, 4-20mA or 0-5VDC
- Easy-to-use English language menus
- Dual-axis load pin operation standard
- Switch between Lbs/Kg at any time
- RS-485 and RS-232 comm is standard
- Multiple serial protocols supported
- 1 button push brings up diagnostic screen
- Calibration units are actual sensor outputs

Here at Measurement Technology NW we've lost count of the number of clients who limped along with their old winch line monitors for years, not realizing how much of an impediment they were to fast, accurate, safe winch operation - until they upgraded to an new LCI-90 line control display.

Their reaction? "Wow." No more daytime visibility problems. No more issues with screen flickering, fadeout, or failure. No more frustration from new winch operators learning the quirks of a patched-together software system. No more EEPROM failures or serial communication errors. No more downtime because of panel failure and slow service response times.

Best of all, no more babying a device that was never designed to endure the kinds of conditions faced every day by oceanographic researchers, tugboat operators, offshore oil rigs, commercial and military ships, and fishing vessel crews around the world.

## "Wish I had chucked the old stuff years ago"

The LCI-90 can interface with up to 32 LCI-90R remote displays via an RS-485 or RS-232 serial network.



Enclosure size:  
H5.7" x W7.6" x D4.7"  
(7.15" x 5.25" cutout).  
Watertight rear enclosure with bracket mount also available.



because we know that every LCI-90, LCI-90R, and LCI-100 winch display we've built over the years, every *single one*, is still hard at work out in the field monitoring line speed, tension, and payout.



Underwriters Laboratories (UL) is an independent product safety testing and certification organization.

Founded in 1894, UL has become one of the most recognized and reputable conformity assessment providers in the world. Every year, more than 17 billion UL certification marks are applied to products worldwide.

## Underwriters Laboratories approves the LCI

*Gaining UL certification for a product is no easy task, but Measurement Technology NW's rugged LCI winch line control instruments have all earned the coveted UL mark.*

Underwriters Laboratory testing procedures take product scrutiny to the smallest detail - and the rigorous evaluations UL subjected the LCI product line to was no exception.

UL's product investigation included an analysis of the complete LCI parts list, engineering schematics, construction details, product manuals, options, and assembly procedures.

After completion of this initial review, three units of each LCI model were sent to UL for inspection and testing. There, the displays were subjected to vibration, temperature, humidity, corrosion,

voltage, rigidity, and impact hammer testing over an intensive four month period. As we expected, every LCI-90, LCI-90R, and LCI-100 unit passed with flying colors and now proudly bear the UL mark as strong, safe, dependable, UL-listed products that meet or exceed all industry standards for marine electronic instrumentation.

As an added assurance of ongoing quality, UL conducts random sampling tests to verify that tested parameters continue to meet high UL standards.

Measurement Technology NW's LCI displays have passed every one of these tests, and will continue to do so as long as we're building them.

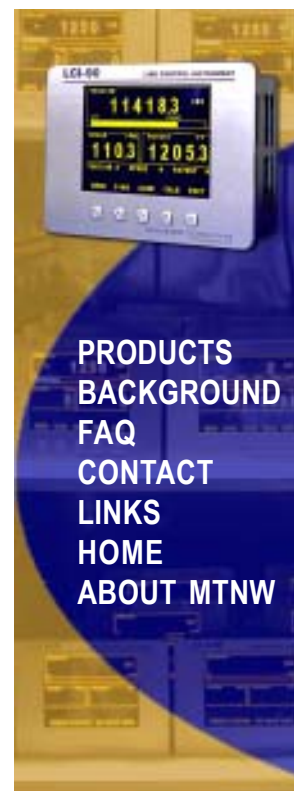
UL certification is one more indication of the high quality and exceptional performance that users can expect from an LCI-90, LCI-90R, or LCI-100 display. The UL mark also means that an LCI display can be added to existing UL certified ship electrical systems without worry or the need for panel recertification. Installation of an LCI monitor can be as easy as plug-in, drop-in, and calibrate - many clients upgrading to an LCI monitor have been up and running in just a few hours time!

Years of field experience proves UL's confidence in the LCI product

line is well-deserved. For example, Measurement Technology NW recently received LCI-100 unit #2 in for an RS 485 serial communications upgrade, and our technicians found the display was still working perfectly despite years of constant use in very challenging on-deck environments. We were pleased but not surprised,

***"Every LCI unit we've built over the years, every single one, is still working out in the field."***

**All new website!**  
**[www.mtnw-usa.com](http://www.mtnw-usa.com)**



Measurement Technology NW has an all-new website!

Our new site contains more details on MTNW products, including updated photos, product features, an improved FAQ section, client case studies, downloadable product flyers, specifications, and more.

Log on today!



Don't miss hearing what our customers have had to say about the LCI system and the after-the-sale service provided by Measurement Technology NW. As of this newsletter's publication date, three MTNW Project Profile stories have been posted for your review on our website, under the section titled "Background". Use this direct

link (<http://www.mtnw-usa.com/linesystems/casestudies.html>) to access all three: Profile #1 - Moss Landing Marine Laboratory, Profile #2 - Washington State Ferries, and Profile #3 - Oregon State University/UNOLS. A new project profile story is added every month, so check back regularly for the latest MTNW customer feedback.



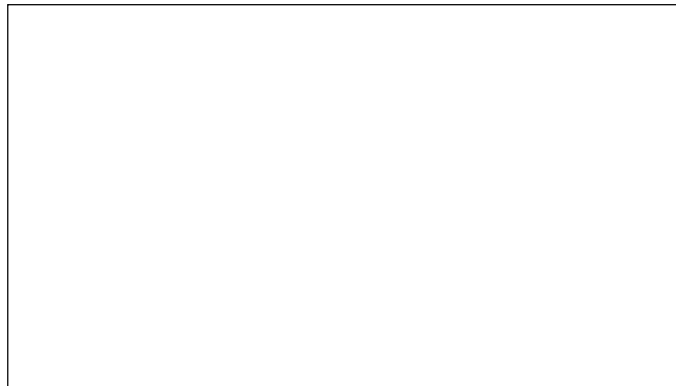
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Measurement Technology NW designs and manufactures rugged, multi-channel winch line control instruments used to monitor speed, payout, and tension (both cable and chain) in single or multi-winch systems used for ROV/equipment deployment, barge and platform positioning, fixed-place mooring, drawbridge controls, helicopter or ship towed arrays, mining and oilfield drilling, and wherever accurate and reliable line control is required.



## Washington State's 520 floating bridge - revisited

In 1999, the Washington State Department of Transportation teamed with Measurement Technology NW and Washington State University's Mechanical Engineering department to create an instrumentation system for the 520 floating bridge that would monitor bridge stresses - particularly storm loading conditions - and help DOT and WSU engineers determine the upgrades necessary to extend the service life of this vital bridge linking the cities of Seattle and Bellevue.

Measurement Technology NW developed a network of 40+ sensors leading back to two data nodes equipped with spread-spectrum RF modems that transmitted real-time



information back to MTNW's Seattle headquarters. There, a custom PC software program managed the data flow and made it web-accessible to WSU and DOT engineers for detailed analysis on a 24/7 basis.

Today, thanks to information gleaned from MTNW's data network, the 520 bridge is in better shape than ever, and sensor data is still flowing 24/7 - helping make this 1962 bridge safer, more reliable, and able to serve the driving public for many years to come.