

## 2012 Technical Symposiums

Join NovaTech at a regional symposium near you for Bitronics and Orion product updates, hands-on training and industry-shared solutions. Last year, our series of eight symposiums drew 220 Utility personnel; 16 of which presented application papers. Please visit [novatechweb.com/events](http://novatechweb.com/events) for the latest agenda, and registration form, for the April 11th symposium in Little Rock, AR and the May 23rd symposium in the Los Angeles area.

- |                     |  |
|---------------------|--|
| <b>April 11</b>     | Little Rock, Arkansas                    |
| <b>May 23</b>       | Anaheim, California                      |
| <b>June 7</b>       | Austin, Texas                            |
| <b>June 26-27</b>   | Peak Measure Symposium, Portland, Oregon |
| <b>July 11</b>      | Chattanooga, Tennessee                   |
| <b>July 26</b>      | Overland Park, Kansas                    |
| <b>Aug 8-9</b>      | Wisconsin Dells, Wisconsin               |
| <b>August 29</b>    | Owings Mills, Maryland                   |
| <b>September 20</b> | Northeast Symposium, Massachusetts       |
| <b>October 4</b>    | PPL Symposium, Allentown, Pennsylvania   |

## Training Courses

Lenexa, Kansas

**OrionLX Automation Platform**  
June 12 & 13 Full Course (1½ days)  
**Ethernet for Utility Professionals  
& Intro to OrionLX Security**  
June 13 & 14 (1½ days)

Contact BJ Weil at (913) 451-1880 or [bj.weil@novatechweb.com](mailto:bj.weil@novatechweb.com) for more information, or visit our website at [Utility > Training > Events](#)

## LATEST SOFTWARE

**Orion5/5r Firmware Version 1.41.0**  
**OrionLX Firmware Version 1.42.12**  
**Orion NCD3 Version 3.22**  
**Bitronics 70 Series Firmware and Configurator 3.07**  
**Bitronics 50 Series Firmware 3.05**  
**BiView 3.02**



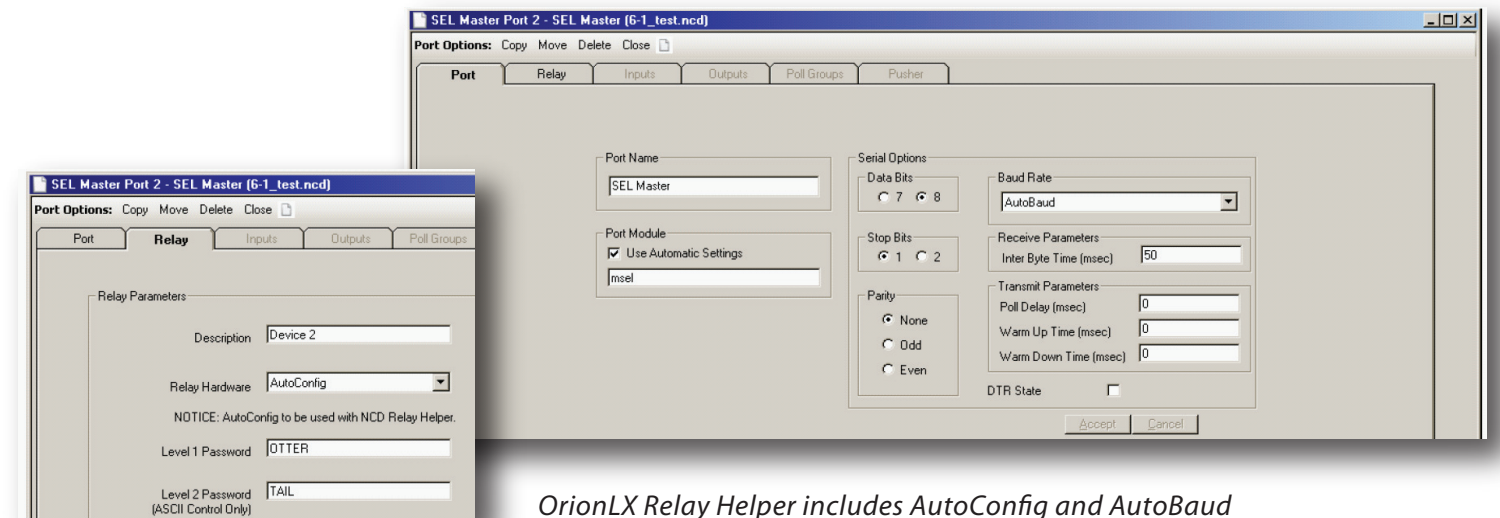
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NovaTech, LLC  
Volume 8  
Spring 2012

## OrionLX Relay Helper™ Simplify Relay Integration



*OrionLX Relay Helper includes AutoConfig and AutoBaud*

NovaTech currently provides over 200 pre-engineered SEL® “point pick lists” (or “Default Files”) to simplify the process of selecting points from SEL® relays. When new SEL® relay models are introduced, NovaTech Engineering, or the user, creates a new Default File for that specific new relay model. OrionLX Relay Helper simplifies the Default File creation process by automating the extraction of SEL® relay “ID” and “DNA” from the new relay model. Using these data, Relay Helper automatically creates the new complete and accurate Default File. The entire process only takes a few minutes.

Relay Helper includes four software wizards. Each wizard addresses a different connection scenario for Default File creation:

- **Wizards 1 and 2** are used when the user PC is connected to the OrionLX and the OrionLX is connected to the relay. Relay ID and DNA are automatically extracted from the relays. Wizard #1 creates a new NCD file and Default Files with “found” relays; Wizard #2 adds “found” relays and Default Files to an existing NCD file.
- **Wizard 3** is used when the user PC is connected directly to the relay. Relay ID and DNA are automatically extracted from the relay and a Default File for the connected relay is created and added to NCD.

- **Wizard 4** is used when the PC is offline and has a copy of the relay ID and DNA. A Default File for the relay is created and added to NCD.

### Guidelines for Application of Relay Helper

- 1) The SEL® relay must support Fast Meter and the “ID” command
- 2) Wizard 1 and 2 are not designed to work with Cascaded OrionLX configurations
- 3) For a new Default File to be created, a Default File for a relay of that “family” must already exist in NCD

### Ordering Relay Helper

Relay Helper is included in the SEL® Master protocol (order code #14).

New Datasheet

“OrionLX Relay Helper”  
is available in the  
Documentation section  
[www.novatechweb.com](http://www.novatechweb.com)

## See Us in Orlando, Florida at 2012 IEEE



NovaTech demonstrated Bitronics and Orion products at the January 2012 DistribuTECH Expo in San Antonio

Join us May 8 - 10 in Booth 1181 at the IEEE PES Transmission and Distribution Conference and Expo. NovaTech products on display include:

**OrionLX Direct VGA Video**  
Eliminate the HMI PC from your design

**OrionLX IEC 61131-3**  
Add "PLC" Math and Logic to Orion

**OrionLX Renewable**  
An OrionLX tailored for renewable energy projects

## New Ten-Year Warranty on Bitronics® Products

Starting with all products shipped in 2012, the warranty for all Bitronics products under Bitronics LLC Standard Terms and Conditions of Sale is extended from 36 months to 120 months. This ten-year warranty reflects Bitronics continued commitment to providing our customers with the highest level of product quality and service on everything we make.

### Coming Soon to 50 Series

- The Fiber Ethernet option will change from the MT-RJ fiber connector to the more popular LC connector. The order option number will remain unchanged.
- The default password will be changed from aaaa to blank in the next release, meaning that the unit ships without a password.



The new M653

**Bitronics 50 Series Split-Core CTs**  
Reduce installation time while maintaining accuracy

**Bitronics M653 Triple Display**  
More information at a glance

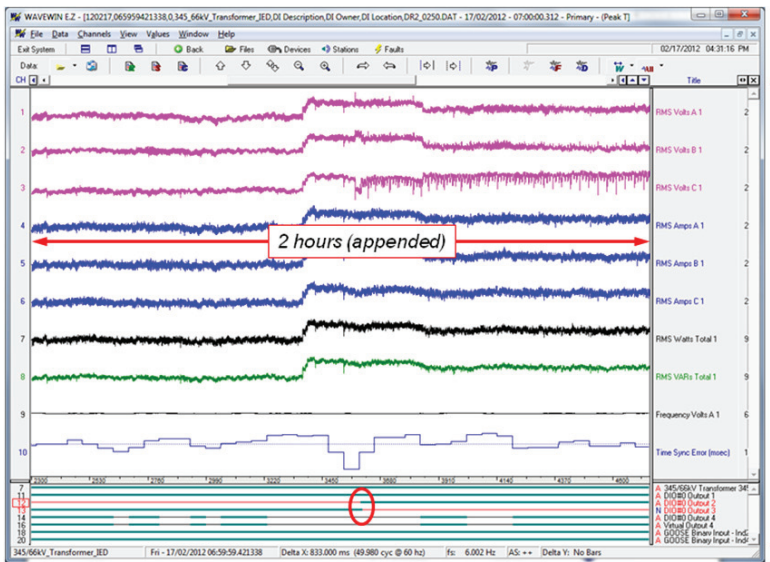
**Bitronics 70 Series Solution for NERC PRC-002**  
Compliance at a fraction of the cost of a station recorder

- Our engineers will be on-hand for **live demonstrations**:
- Bitronics 50 Series web-based configuration
  - Bitronics 70 Series recorder configuration and record analysis
  - OrionLX IED point selection and SCADA set-up
  - OrionLX IEC 61131-3 configuration
  - Orion WEBserver page creation
  - OrionLX Security configuration: users, firewall, encryption

Also learn about NovaTech **Systems and Services** capabilities, including how we built and delivered eight RTU cabinets in eight weeks. Read the complete story, visit [novatechweb.com/8weeks/](http://novatechweb.com/8weeks/).

For complete details on shows and symposiums  
[www.novatechweb.com/events](http://www.novatechweb.com/events)

## Requirements for Complying with NERC Standard PRC-002-2



One record, running from 07:00 to 09:00

The North American Reliability Council (NERC) has defined a number of standards for disturbance monitoring and reporting requirements for transmission and generation systems. The primary standards are PRC-002-1 and PRC-018-1 which are to be replaced by PRC-002-2 when approved. These standards, or versions from the eight regional reliability councils that are charged with compliance enforcement of the NERC standard, establish requirements for installation of Disturbance Monitoring Equipment (DME).

### Key Elements of the Standard

NERC PRC-002-2 is attempting to standardize the regional reliability requirements concerning DME. The differences are minimal compared to the already approved PRC-002-1 and PRC-018-1.

PRC-002 requires DME on nearly all lines of 200kV and up, as well as generation connected to the grid at 200kV and above. Prior standards generally required DME only on EHV lines (345kV and up) and the nature of

the recordings also differed. PRC-002 describes three recording functions in detail:

- Sequence of Events (SOE) logging
  - Fault Recording (FR)
  - Dynamic Disturbance Recording (DDR)
- While the first two are more widely available, DDR function is comparatively novel, more demanding, and generally only available from newer Digital Fault Recorders (DFRs).

Focusing on DDR, PRC-002 requires utilities to:

- Capture a continuous recording of up to nine measurements per line (per-phase volts and amps, total MW and MVARs, and frequency) with high resolution and make it available in Comtrade (C37.111) format using the "long file naming convention" (C37.232).
- Preserve a continuous record for ten days.
- Archive disturbances identified as being of interest for three years.

While the existing requirements are for 200kV and above, NERC has provided a draft definition of the Bulk

Electrical System (BES) under Project 2010-17 that defines applicability and exceptions at the **100kV level and above**. So while not a certainty, there exists the possibility that the PRC-002-2 could be extended below 200kV, and in fact Northeast Power Coordinating Council (NPCC) for one is looking to apply PRC-002 to BES levels.

### Why This Matters Now

Being able to comply with the NERC and various regional reliability council requirements is becoming increasingly important for transmission and generation operators as the time to comply in some areas is already at hand. Because the standards require DME in some cases where no or minimal recording capabilities existed (installations starting as low as 100kV) operators are in need now of cost-effective solutions that meet the current and coming standards.

### Bitronics Solution

Bitronics 70 Series IEDs are compliant with existing and impending PRC-002 standards in all three recording areas. With memory option up to 512MB there is more than adequate storage to meet the required number of recordings. They offer the ability to record both the time sync status as well as the time sync error for the DDR. The biggest advantage for a 70 Series recorder is as a one-unit-per-line device, it can be retrofitted into existing substations much more easily and cost effectively than adding a full-size DFR. The addition of a split-core CT option for the 70 Series later this year will make installation even easier.