

# Model 2150

## Automated Test System



Accuracy and efficiency are the cornerstones for any successful meter shop or production facility. Watthour Engineering, a Radian Research company, offers a line of meter testing hardware and software products that combine over thirty years of meter testing experience and customer dedication with the insight into today's technologies to bring you industry leading test solutions.

WECO's Model 2150 automated test system is a fully ANSI compliant testboard that uses a single voltage and three independently controlled isolated current sources to test all electromechanical and solid state meters up to 50 Amps. The internal NIST traceable Radian Research RD-20 series reference standard brings unparalleled accuracy.

Utilizing a precision laser optics system, the Model 2150 can test meters through the most grime-coated covers with unflinching accuracy. This same laser technology makes it possible to test using the disk's edge without wasting time with the tricky optics adjustments found with other test systems.

Convenience, functionality, and reliability are at the heart of the Model 2150's design. Smart Socket™ technology combines extra long socket life, minimal insertion force, and ultra-quiet operation. With the OPTOCOM™ option, you can snap the optic coupler head in place to both test and program meters. Minimal power consumption, weight, and footprint make this testboard ideal for van mounted testing using a power inverter. Test meters using KYZ through cables or directly off the meter stabs, and use the built-in speaker to hear each pulse.

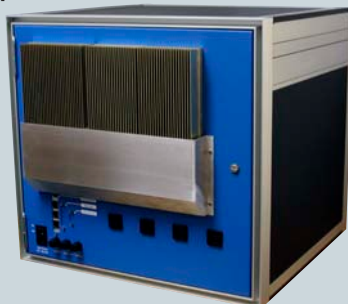
### Specifications:

- **Input voltage:**  
120 or 240VAC (3 wire), 50 or 60Hz single-phase
- **Input power:**  
650VA Maximum
- **System accuracy:**  
For current ranges 0.2A–50.0A  
>>KWH +/- 0.04% at 1.0 P.F. (+/- 0.01% typical)  
>>KWH +/- 0.04% at 0.5 P.F. (+/- 0.01% typical)  
>>KW +/- 0.075%  
>>System accuracy is based upon the high accuracy of the NIST traceable Radian RD-20 series reference standard.
- **Voltage and current accuracy:**  
0.50% true RMS
- **Phase angle accuracy:** +/- 0.5°
- **Test frequency:** 50 or 60Hz
- **Voltage harmonic distortion:**  
Less than 1.0% THD (less than 0.5% typical)
- **Current harmonic distortion:**  
Less than 1.0% THD (less than 0.3% typical)
- **Meter forms tested:**  
>>15-6S, 8S-17S, 19S, 21S, 24S, 26S, 29S, 35S, 36S, 45S, 46S, 56S, 66S  
>>New meter forms can be added using the testboard utility included in the software package.
- **Dimensions & Weight:**  
21"W x 20"H x 21"D, 125 LBS
- **Warranty:**  
Two (2) year limited warranty (all parts and labor).  
Manufacturer warranty on computer.



Unlock the power and flexibility of your WECO testboard with Winboard™ meter testing software.

- Winboard utilizes software wizards to simplify even the most complicated tasks.
- A strikingly user-friendly interface makes it easy to select test sequences, elements, and service types.
- The powerful combination of file/graph, test time, and Hyper Sequence™ features gives you total control over all test parameters.
- Customizable security options and WECO's dedicated customer support team round out this robust software package.



Watthour Engineering Company, Inc.  
www.watthour.com

333 Cross Park Drive  
Pearl, Mississippi 39208

Phone 601-933-0900  
Fax 601-933-0901



# Model 2150

## Automated Test System



### Laser Optics

WECO's advanced laser optics has revolutionized meter testing. This innovative system employs a high intensity light beam that safely delivers highly accurate test results even through meter covers coated in dirt and grime. Whether testing off the black mark or through the creep holes, trust the WECO laser optics system to give you the precision that you demand with the ease you deserve.

#### Testboard Options:

- Additional meter test stations:  
*Three (3) stations maximum per cabinet.  
Six (6) stations maximum operated by one computer.*
- OPTOCOM™:  
*Optics coupler allows pulse testing and meter programming through the optical port of many solid state meters without changing optics coupler.*
- Barcode printer with software
- Barcode reader with software
- Multi-function testing capability
- Higher accuracy reference standard available
- Computer memory and storage upgrades
- Bottom connected single stator adapter
- Bottom connected multi stator adapter
- Custom adapter design available
- Automated standards compare adapter for RM or RD standards

### Smart Socket™

Low insertion force Smart Socket™ technology, fitted with high conduction silver and gold connections, and an electronic socket control, provide an excellent connection and extended hardware life-span. A quiet, cutting-edge solenoid motor results in reliable and quiet operation.

### Bar Code Option

Attach an optional barcode scanner and printer to your testboard to cut meter processing and data entry time. Scan AEP barcodes on meters with a wave of the barcode

scanner to automate the data entry process, or print custom barcodes to automate customer information entry during testing. Either way, the optional barcode scanner and printer will save your shop time and money.

### OPTOCOM™

With this optional OPTOCOM™ interface, you can test and program meters without changing heads. Just clamp the head on for testing and forget worrying about aligning optics or detecting creep holes. When the test is complete, you can program the meter without replacing heads. The OPTOCOM™ option takes the error and effort out of meter testing and programming.

#### Testboard Features:

- Test voltage:  
*>>60-600V; programmable in 0.01V steps*
- Test current:  
*>>0.25-50A; programmable in 0.001A steps*
- Power factor test angle:  
*>>0-359.9°  
>>Selectable in 0.1° increments*
- Test revolutions:  
*>>1-65,534*
- Test time:  
*>>Selectable from 1-9999 seconds  
(minimum of at least one energy pulse)*
- Demand (KW) testing:  
*>>Standard revolutions  
(1-99999 revolutions)  
>>Time run (up to 99 HRS, 59 MIN, 59 SEC)*
- Contact device testing:  
*Form "A" or "C" capability*
- Hyper Sequence™:  
*Four quadrant automated meter testing*
- File/graph testing
- Solid state voltage and current loading
- Voltage and current electronically ramped between tests
- Automatic slew between tests to minimize test time
- Potential clips closed for testing
- Smart Socket™ with minimal insertion force
- Front panel controls allow fast, easy test selection
- Modulated laser optics for through hole and reflect disk sensing
- Three optical pickups:  
*Top, bottom, and middle/center*
- Visual and audible (volume controlled) pulse indication for aid in aligning optical sensor
- LED bar graph for signal strength
- No sensitivity adjustment necessary for optics
- Easily removable reference standard for recertification
- PC Minimum System:  
*>>Dell™ standard business class  
Mini Tower PC  
>>17" flat screen monitor  
>>Microsoft Windows® 7  
Professional operating system*
- Windows® compatible Winboard™ software
- WATT-Net™ data management software