Magnetrol®

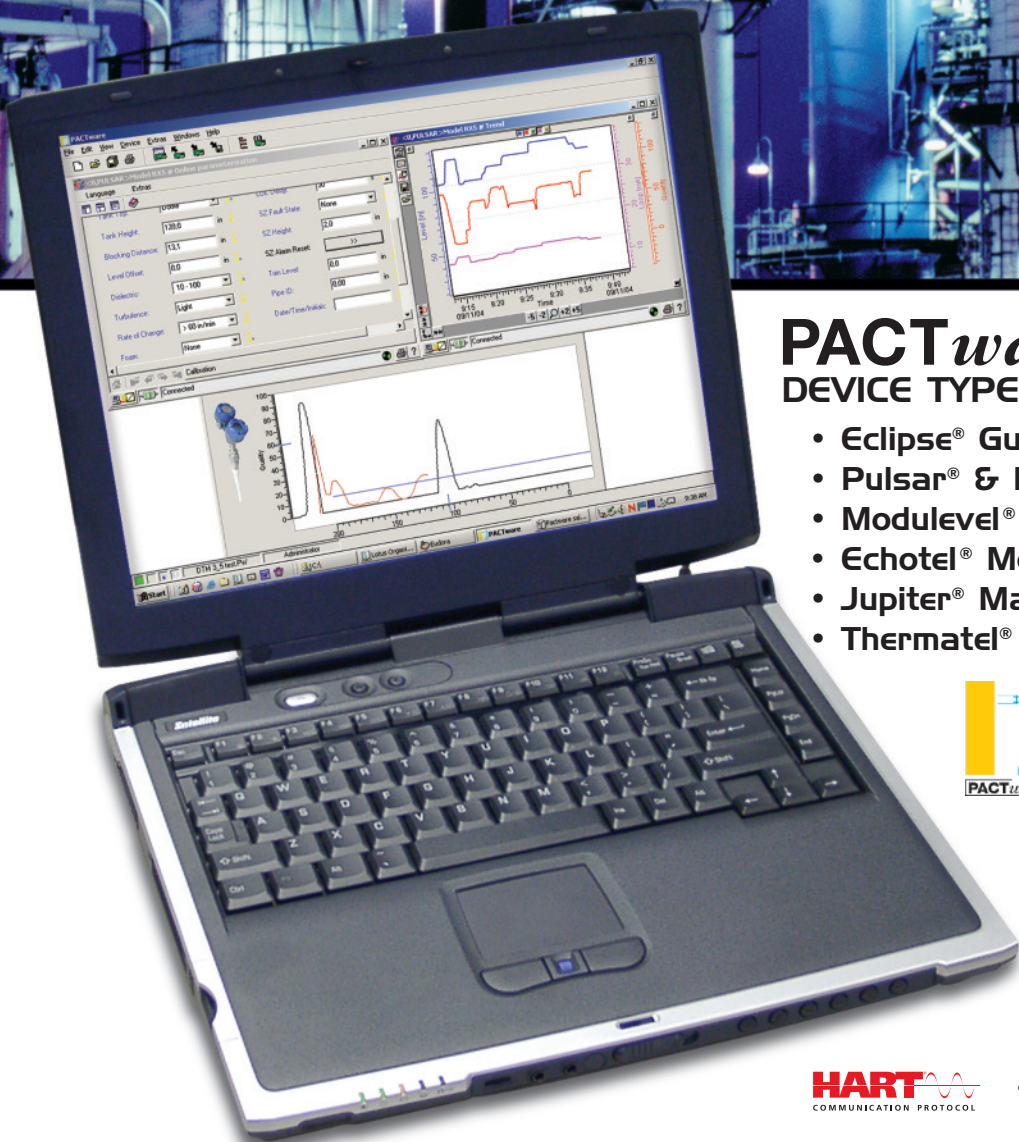# PACT*ware*™ PC Software

DEVICE TYPE MANAGERS (DTMs) for

- **Eclipse® Guided Wave Radar**
- **Pulsar® & Model R82 Pulse Burst Radar**
- **Modulevel® Electronic Displacer**
- **Echotel® Model 355 Ultrasonic Non-Contact**
- **Jupiter® Magnetostrictive**
- **Thermatel® Model TA2 Mass Flow Meter**

PACT*ware*™

- Convenient Level Monitoring
- View, Configure, Save and Transfer All Parameters
- View Echo Wave Form
- Capture False Target Rejection Profile
- Trend Data Including: Level, Quality, Loop, and %Output
- View Diagnostic Conditions
- DTMs are compatible with any frame program that meets the FDT standard

HART COMMUNICATION PROTOCOL

FOUNDATION

ECLIPSE® GUIDED WAVE RADAR

pulsar PULSE BURST RADAR

MODEL **R82** PULSE BURST RADAR

MODEL **355** NON-CONTACT ULTRASOUND

Modulevel® BUOYANCY

ENHANCED **Jupiter®** MAGNETOSTRICTION

MODEL **TA2** THERMAL DISPERSION

Eclipse, Pulsar, Modulevel E3, Echotel 355, Jupiter & Thermatel TA2—the world's easiest transmitters to configure—just got easier. Using HART® communications, every parameter can be modified remotely anywhere on a two-wire loop using the PACT*ware* PC software. Configuration and troubleshooting can now be done within the convenience and safety of a control room.

DESCRIPTION

PACT*ware*™ PC software using the Field Device Tool (FDT) standard takes radar level measurement to a new level of setup efficiency and user-friendliness. Magnetrol products have always been easy to use. PACT*ware* builds on that ease of use by adding a graphical software interface. Simply connect your PC through a serial interface to the HART® loop (or FOUNDATION fieldbus segment) and all functionality can be accessed quickly, conveniently, and safely.

PACT*ware* offers a broad range of monitoring, configuration and troubleshooting capabilities:

- Level and Flow Monitoring
- Viewing, Configuration and Saving of all parameters
- Viewing Echo Wave Form
- Capturing False Target Rejection profile
- Trending data including Level, Signal Quality, Loop and %Output
- Viewing of Diagnostic conditions

LEVEL MONITORING
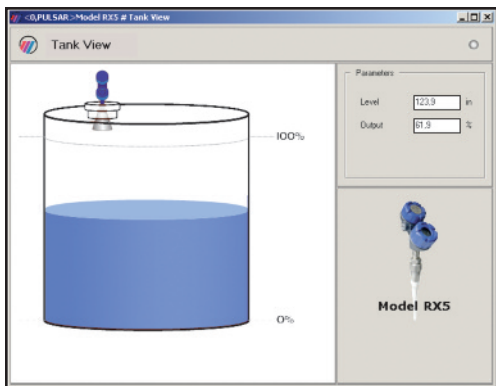
Level Monitoring Screen

Continuously viewing the level in a tank is the starting point for this new software. Position of liquid level can be viewed in a simple graphical format. Level and Output values are shown numerically as well. This screen can be left open to show the relative position of the liquid level.

VIEW AND CONFIGURE ALL PARAMETERS

Every parameter in the transmitters can be monitored and modified remotely with a few clicks of the mouse. From units of measure to settings for dielectric, each parameter can be viewed or changed to suit application conditions.
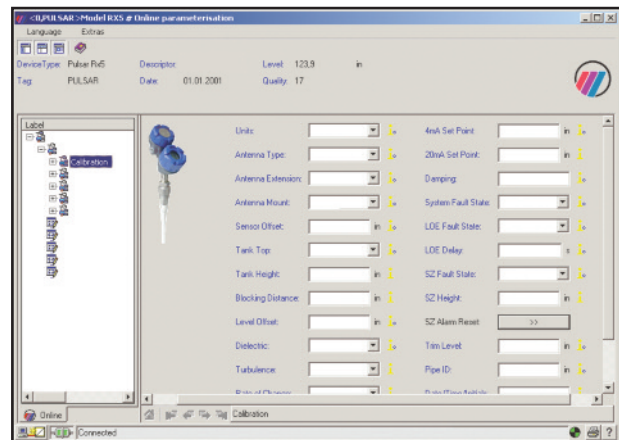

Parameters Screen

Parameters can be developed offline or saved from one transmitter and loaded to another. The menu tree shows the major DEVICE SETUP categories of CALIBRATION, BASIC SETUP, ADVANCED SETUP, DIAGNOSTICS, and REVIEW. Once chosen, the corresponding information is presented on the right side of the screen.

TRENDING

The ability to trend data over a period of time allows insight into overall operation of a device. For example, trending the LEVEL, QUALITY (Pulsar only), and LOOP values is invaluable when attempting advanced configuration or troubleshooting. The PACT*ware* PC software has the ability to track all parameters including DISTANCE (Pulsar only), %OUTPUT, and Temperature (TA2 only).
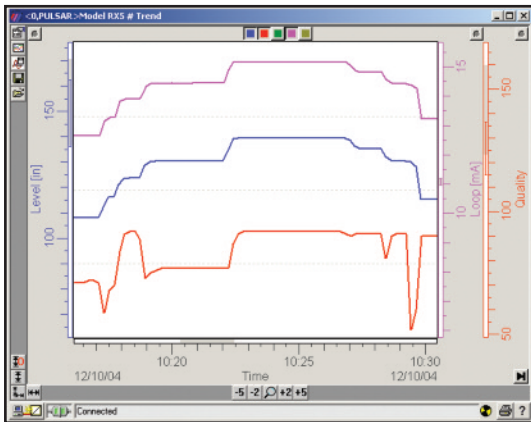

Process Trend Screen

The vertical and horizontal scales can be manipulated to show as much or as little data as necessary. The data can also be saved as a picture (*.bmp) or data (*.txt) file. The data file can be reopened from within the Trend window and manipulated as if live.

ECHO WAVE FORM

Instruments using "time of flight" for level measurement (Pulsar, R82, Eclipse, 355) will benefit by using the Echo Wave Form to profile the tank.
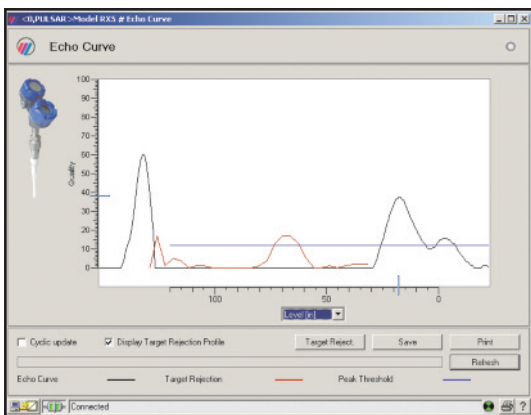

Echo Wave Form Screen

Now, any operator can see into the vessel through the eyes of the transmitter.

The Echo Curve screen yields a wealth of useful information.

- Level is shown along the X-axis and signal quality along Y-axis.
- The black line shows the actual echo curve.
- The red line shows the false target profile.
- The blue line shows the minimum threshold.
- The blue hash marks show the location and signal quality of the target currently detected as liquid level.
- False Target Rejection can be accessed from this screen.

False target rejection is a common issue among all non-contact, transit-time (ultrasonic, radar) devices. For many years this was one of the most cumbersome aspects of radar setup. With PACT*ware*, the inside of the tank can be seen as the transmitter sees it.

CONNECTIONS

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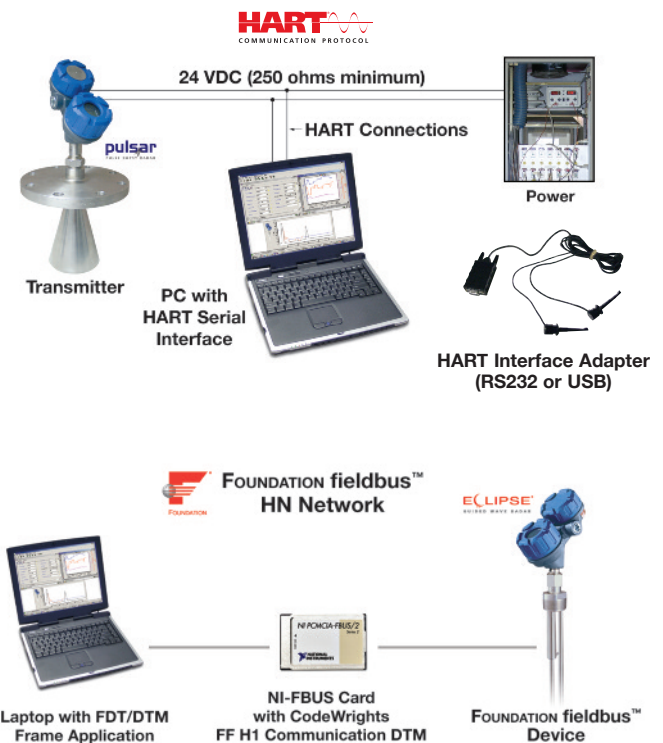
TROUBLESHOOTING AND DIAGNOSTICS

Troubleshooting field problems starts as an investigation into separating transmitter from application issues. The **PACT*ware*** PC software tool offers effective troubleshooting and diagnostic capability that is crucial in problem determination. The key goal is getting your level transmitter running properly as fast as possible. The Trend and Echo Curve screens (on previous page) will be used frequently. There are numerous other tools that are effective in isolating and resolving problems.
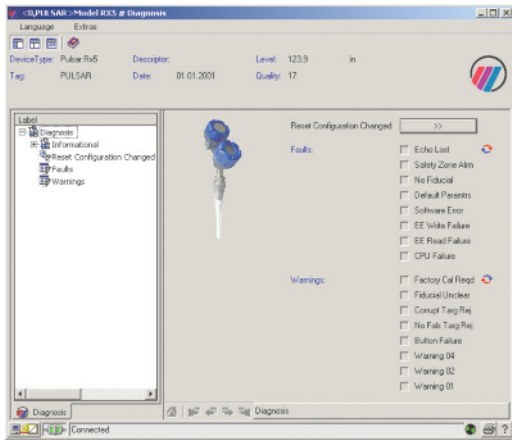
Diagnosis Screen

The Diagnosis screen gives a status overview of all Faults and Warnings.

FDT/PACT*ware*

What are FDT, PACT*ware* and DTM?

FDT (Field Device Tool) is an interface code that describes the standardization between frame programs (e.g., PACT*ware*) and DTMs. Its promise is achievement of the elusive ideal of interoperability—any host system working via any communication protocol (e.g., HART, FOUNDATION fieldbus™, PROFIBUS®) to any field transmitter.

PACT*ware* (Process Automation Configuration Tool) is a frame program that operates on a PC or control system. It is a device-independent software program that communicates with all approved DTMs.

DTM (Device Type Manager) is not a stand-alone program but a device-specific software driver designed to operate within a frame program such as PACT*ware*. It includes all special information needed to communicate with a specific device (e.g., Pulsar RX5). There are two basic categories of DTMs— Communication (e.g., HART, FOUNDATION fieldbus, PROFIBUS) and Field Device (e.g., Pulsar Radar transmitter).

MINIMUM SYSTEM REQUIREMENTS

- Pentium® II 500 MHz processor
- 128 MB RAM
- 120 MB free hard disk space
- Windows® XP/2000 (Service Pack 1)/NT 4.0 (Service Pack 6)
- Graphic Resolution: 1024x768 (16-bit color)
- Internet Explorer 5.0 or later
- RS232 serial or USB interface
- RS232–HART or USB–HART interface
- HART Communications DTM
- Transmitter with proper HART or FOUNDATION fieldbus revision

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