

Water Level Logger

YSI Level Scout

The Level Scout instrument is designed to measure and log pressure/level and temperature accurately and record the readings (along with time stamp) at user-selectable rates. Internal batteries provide power and provide years of data logging capabilities. The batteries are field-replaceable with a quick-disconnect cable assembly. Data Scout software can be used to set up tests, view live data, download logged data, and configure alarms. Data Scout software is compatible with Windows® 7, Vista, XP and other common PC operating systems.

FEATURES

- Vented gauge corrects each data point for barometric pressure, increasing the accuracy of your level measurements without the need to post-process your data
- Maintenance-free vented field cables for worry-free deployments
- Fastest sample rate available (up to 8 readings per second)
- High accuracy, $\pm 0.05\%$ FS (level ranges > 10 ft)
- Two year warranty on instrument and cable
- All software included with the instrument and free for download
- Small diameter (0.75 in/1.9 cm) housing, titanium
- Built in sampling modes - linear, linear average, logarithmic and event-based
- User-replaceable batteries, 3-year life at 15 minute sampling intervals
- Field-upgradeable firmware
- 393,120 data set memory

APPLICATIONS INCLUDE:

- Groundwater monitoring – long-term studies, resource management
- Well monitoring, aquifer testing – pump, slug, step, and recovery tests
- Soil Vapor Extraction tests (SVE)
- Open channel monitoring
- Gaging stations – rivers, streams, lakes
- Tank level measurement
- Watershed management

Vented Level Instrument
Titanium, 4 Mb



ACCESSORIES

Vented Field Cable

Has unique in-line, life-time vent filter that allows for worry-free and maintenance-free deployments. The field cable allows for atmospheric compensation, direct data readout and communication to any Level Scout. A waterproof patch keeps water out of the vent tube while internal desiccant absorbs any condensation. All of the vent tubing is internal to the cable so you'll never need to worry about accidentally crimping it and adversely affecting your data! Includes cable hanger for easy deployment and a drain wire for grounding.

Model 785

4-inch vented, locking well cap. Includes carabiner for attaching equipment. Model 782 for 2 inch wells.

Model 778

All-in-one communications adapter connects to any field cable and provides RS-232, RS-485 and USB output.

CALL GEOTECH TODAY (800) 833-7958

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DATA SCOUT ADVANCED DESKTOP SOFTWARE

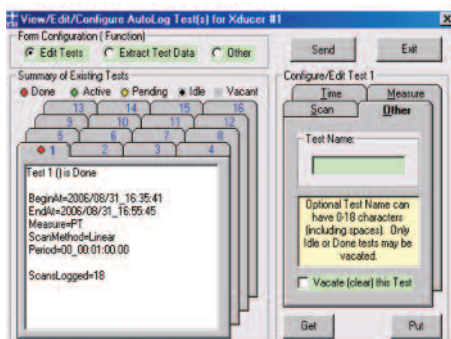
The easy-to-use desktop software makes operating the Level Scout simple and convenient. Data Scout Advanced is included with the purchase of the level instrument and allows you to complete both simple and complex tasks. Data Scout Advanced runs on PCs with Windows® 98, ME, NT, 2000, or XP.

Capabilities

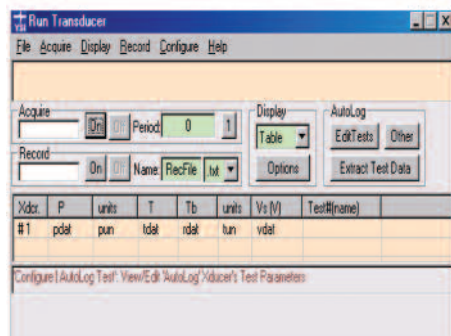
- Run and monitor from one to sixteen transducers, communicating over a serial
- Run and monitor from one to sixteen transducers, communicating over a serial interface or multi-drop network
- Operate Level Scout instruments without custom software
- Collect and display data in real-time or at future settings with simple setups
- View both tabular and graphical data displays simultaneously
- Easily export data to spreadsheets such as Excel®
- Download new versions of Data Scout Advanced as needed
- Correlate data from an absolute Level Scout with data from a Baro Scout barometric pressure logger
- Configure AutoLog tests to create up to sixteen independent logging profile for downloading to your transducers

Data Scout Advanced allows you to use default configurations or define your own site net parameters. Use the form to run each individual transducer or a collection of selected transducers for acquisition of both live and AutoLog data. Real-time data may be displayed both numerically or graphically or logged to a file on your PC.

Data Scout, a simplified version of software, and Data Scout Mobile, a pocket PC version, are also included.



Create up to 16 independent logging profiles to download to your Level Scouts.



Use the Data Scout Advanced home page to find and communicate with any Level Scout in your network.

COMMUNICATIONS

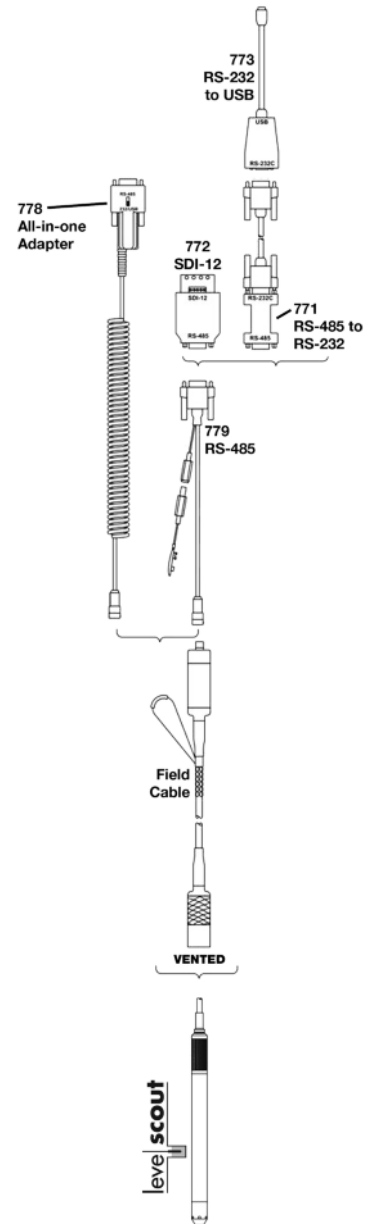
The universal cable assembly provides continuous readouts and atmospheric pressure compensation for vented units.

The cable is polyurethane jacketed and available with a stainless steel connector or Teflon® jacketed with Titanium connector, depending on which transducer you select. It also comes with a desiccant filter for vented systems, cable hanger, DC power connector with detachable battery connection, RS-485 communication connector, and drain wire for cable shield grounding. This connector works directly with YSI communications adapters.

The communications adapters provide electrical conversion between the Level Scout's native RS-485 interface and other standard electrical interfaces, such as RS-232 for connecting to PCs or SDI-12 for connecting to any SDI-12 compatible equipment. Model 771 converts RS-485 to RS-232 and comes with a 6 foot (3 m) serial cable. The 772 converts RS-485 to SDI-12. The 773 converts RS-232 to USB.

The new 778 all-in-one adapter provides RS485, RS232 and USB outputs and connects directly to the field cable.

The new 779 adapter connects field cable to a 772 SDI-12 adapter.



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SPECIFICATIONS

PERFORMANCE

Level Ranges¹:	
Full Scale Level Range	
Vented Gauge Reference	10, 50, 75, 250 ft. H ₂ O (3, 15, 23, 76 m H ₂ O)
Proof Pressure	2.0 x FS
Burst Pressure	3.0 x FS
Measurement Accuracy:	
for Level Ranges >10 ft. (3 m) H ₂ O	±0.05%FS TEB ^{2,3}
for Level Ranges ≤10 ft. (3 m) H ₂ O	±0.10%FS TEB ^{2,3}
Temperature	±0.2°C

DATA LOGGING

Modes of Sampling:	Linear, Linear Avg, Event, Logarithmic (user selectable)
Pressure Units:	psi, ft. H ₂ O, mm H ₂ O, cm H ₂ O, m H ₂ O, kPa (user-specified or by slope and offset)
Sampling Rate⁴:	Programmable (8 readings per second max)
Internal Non-Volatile Memory:	4 Mbyte
Maximum Pressure Logs:	393,120 with time stamp
Maximum Pressure and Temperature Logs:	
Models VT4, VT4, AS4, AT4	288,288 with time stamp
Time Stamp Accuracy:	±2 min/year (over compensated temp range)
Data Upload Time:	100 data sets/sec (pressure and temp with time stamp per second @ 19200 baud rate)

GENERAL

Compensated Temperature Range:	14° to 104°F (-10° to 40°C)
Temperature Coefficient:	0.001 to 0.01 %/°C
Operating Temperature Range:	-4° to 122°F (-20° to 50°C) All level ranges with polyurethane cables and level ranges ≤100 ft w/ETFE cables 32° to 122°F (0° to 50°C) Level ranges >100 ft with ETFE cables
Storage Temperature Range:	
without Batteries	-40° to 176°F (-40° to 80°C)
with Batteries	-4° to 122°F (-20° to 50°C)
Protection Rating:	IP68, NEMA 6P, On-board surge protection, RoHS, CE
Internal Battery:	2 each 1.5V AA (alkaline recommended)
Battery Life:	3 years (15 minute sampling intervals w/alkalines)
External Excitation:	6 to 16V DC
External Input Current:	
Average Current During Measurement	13.0 mA
15 mS Peak Current During Page Writes	25.0 mA
Quiescent	0.25 mA
Communication Interface:	RS-485, networkable (3 volt p-p differential w/selectable baud rates from 1200 to 19200)
Communication Protocol:	SDI-12 (ver. 1.3 compliant)
Software Compatibility:	Windows® XP, Vista, 7 Data Scout, Data Scout Advanced Windows Mobile 5, 6 (requires master serial or USB port) Data Scout Mobile
Approximate Weights:	
Transducer with Batteries	0.70 lbs. (318g)
Cable Assembly – Less Cable	0.15 lbs. (57g)
Cable	0.05 lbs./ft. (79g/m)
Suspension Wire	0.005 lbs./ft. (8g/m)
Dimensions:	
Diameter	0.75 in. (19.0mm)
Length	12.44 in. (316.00mm)
Measurement Resolution:	24 bit AD convertor
Display Time Resolution:	1 second
Sensor Response Time:	<1 millisecond

¹ Special measurement ranges available upon request.

² Total Error Band (TEB) includes the combined errors due to non-linearity, hysteresis, non-repeatability, and thermal effects over the compensated temperature range per ISA S51.1

³ Additional error up to ±2% FS/year may be incurred due to offset drift

⁴ For sampling rates greater than 3 Hz, the pressure/temperature averaging must be reduced as required