

DEXGREEN HT1000/2 Series Copper Wire Analyser



Key Features

- Vectored DSL testing for VDSL2 lines
- Noise finder via a 30 MHz spectrum analyzer
- 7 user selectable auto tests
- Incremental pair test program
- 200 pair pre-post test storage
- AC or DC power
- USB Port downloads updates and uploads test results

Description

OVERVIEW

The HT1000/2 series of instruments are high performance, full feature, hand held instrument designed to provide copper wire provisioning and maintenance technicians with the most critical tests at the touch of a button.

Durable and water resistant, the HT1000/2 series is equipped with a highly effective 1/4 VGA LCD screen and a powerful backlight designed to make testing and troubleshooting easier in all work environments.

The on-screen menu launches most tests with a single keystroke.

Super Stress™ reaches beyond standard longitudinal balance testing, identifying even hard to find short loop unbalances.

Dual trace TDR is standard, with 12 trace storage and intermittent fault location.

The HT1000/2 has user selectable auto tests with an incremental pair testing process.

Test for DC and AC volts at the same time, no need to switch between separate screens.

Download updates and upload test results quickly and easily via the integrated USB port.

VECTORED DSL (models with a V in their suffix only)

Vectored DSL employs line signal coordination and noise cancellation to reduce crosstalk levels and improve line performance. The use of a vectored DSL test instrument is essential if the installed network has vectored DSL switch and routing gear.

BONDING (models with a B in their suffix only)

Bonded xDSL combines two xDSL lines in order to increase bandwidth potential over a given distance.

HT1000/2 offers bonding on selected models as a function for all DSL services from ADSL through to Vectored VDSL2.

FEATURES AND BENEFITS

- Easy to navigate and launch testing: Many of the standard 26 tests begin with the push of a single button: either from the numeric keypad, or the soft key navigation pad.
- Direct access to tests: no cumbersome menus. Adds to ease of training new technicians.
- Fast boot time. Unit ready to test within 9 seconds of switch on.
- Voltage, resistance and all standard telecom testing is accessed through the same simple menu layout.
- Super Stress™ - this test is ten times more sensitive than other technologies available today. What that means is imbalances in twisted pairs can be seen below the 0dB threshold, zeroing in on those imbalances hiding in short- wire loops.
- Automatic Super Stress™ mode - aids technicians in finding invisible faults on short wire loops.
- All transmission and noise tests for voice band are included.
- Open meter which is pinpoint accurate, even in the presence of shunt resistance (dirty open) is included.
- TDR - the built-in TDR locates shorts, crosses and opens at distances ranging from the end of the test leads to 16 km (49,000 ft). It can trace two pairs simultaneously with pair comparison mode to identify potential cable trouble spots.
- Dual trace TDR allows technician to compare good pair to questionable pair – reads accurately to open or shorted pair. TDR traces can be saved and uploaded to PC for review.
- Auto test / incremental pair test - user can configure up to 8 series of tests to run automatically. (Used in conjunction with the incremental pair test and bulk pair recovery.)
- Built in pair recovery program allows technician to gather data on defective pairs and troubleshoot faults.
- The HT1000/2 stores test results data in a comma-delimited format which can be uploaded via the integrated USB port to a customer-driven database.
- Download firmware updates - via the integrated USB port.
- Wideband spectrum analyzer - loss readings up through the VDSL range test protocols.



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- Send and receive frequency spectrum through VDSL range.
- Spectrum analyzer assists the technician in finding interrupters that cause disruptions to DSL service - will read to VDSL band.
- ADSL through to VDSL2 - with optional card installed, xDSL cards allow technicians to interface with the CO (DSLAM) and measure communication protocols, such as speed - upstream and downstream, signal to noise ratios and percent utilization.
- The built in modem uses the latest technology to provide full test capabilities for xDSL and Vectored DSL without the need for separate instruments.
- RFL uses three or four wire setup and pinpoints fault size and location with simple temperature and cable gage adjustments
- The innovative Notch Filter built into current models of HT1000/2 makes open meter measurements less susceptible to power influence noise.
- Model specific functionality allows the user to tailor their purchase to meet their exact needs

SPECIFICATION

Function	Accuracy, whichever is greater
AC voltage	300 V AC/DC
DC voltage	300 V AC/DC
Resistance range	0 Ω to 1000 KΩ (±2%, ±1 Ω)
Leakage	1 Ω to 999 MΩ (±3%), 150 V open circuit output
Longitudinal balance	+30 dBrn to +80 dBrn (±2 dBrn)
Super stress	-20 dBrn to +80 dBrn (±2 dBrn)
Load coil detection	0 coil to 4 coils (±1 coil)
Loop current	0 mA to ±100 mA (±2%, ±1 mA)
Power influence	+40 dBrnC to +100 dBrnC (±2 dBrnC)
Loss (Voiceband)	-40 dBm to +10 dBm (±1 dBm)
Open meter	0 m (0 ft) to 900 m (3,000 ft) ±2%, ±1.5 m (5ft) 900 m (3,000 ft) to 15 km (50,000 ft) (±3%)
Auto test	7 user-selectable auto test scripts, 200 pair storage, retest capability, Incremental pair testing program
ID tone	FED ID tone Frequency: 577.5 Hz (±1%) Amplitude: 0 dBm, 600 Ω (±1 dBm) ID Tone Frequency: Alternating 800 Hz and 1230 Hz (± 1%) Amplitude: 0 dBm, 600 Ω (± 1dBm)

Caller ID	Yes
Wideband tone sent	Frequency: 20 KHz to 9 MHz (±1%) Amplitude: 0 dBm, 135 Ω (±1 dBm)
Wideband tone receive	Frequency: 20 KHz to 33 MHz Amplitude: -90 dBm, +2 dBm (±2 dBm)
Wideband loss	Frequency: 20 KHz to 33 MHz Amplitude: -90 dBm, +2 dBm (±2 dBm)
Resistive fault location	Distance to fault: 0 - 3,000 m (10,000 ft) ±0.5%, ±1 m (3 ft) Maximum measurable fault resistance: 100 MΩ Maximum locatable fault resistance: 20 MΩ <u>3 Wire Measurements:</u> Distance to strap (Length of good wire) Distance to fault Distance from fault to strap calculated <u>4 Wire Measurements:</u> Distance to strap (length of faulted wire independent of good wire) Distance to fault Distance from fault to strap measured Gauge pick list: 0.91mm (19 gauge) 0.64mm (22 gauge) 0.51mm (24 gauge) 0.41mm (26 gauge) Ohms Known distance to strap Temperature adjustment: 0°C to 40°C (30°F to 110°F)
TDR	Dual trace, 12 trace memory storage Automatic pulse width selection Pair comparison mode Split/crosstalk mode Intermittent fault location, Closest range 0 - 8 m (25 ft) Longest range 0 - 16,000 m (49,000 ft) (@VOP = 0.7) Zoom
Wideband spectrum analyser	Frequency: 20 KHz to 33 MHz Amplitude: -90 dBm to +10 dBm (±2 dBm) -130 dBm/Hz to -30 dBm/Hz (±2 dBm/Hz)
Impulse noise	Amplitude: -45 dBm to +10 dBm (±2 dBm) Filters: F, G, J, None (30 MHz)



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Voice band spectrum analyser	Frequency: 50 Hz to 4,100 Hz Amplitude: -64 dBm to 0 dBm (±2 dBm) -76 dBm/Hz to -12 dBm/Hz (±2 dBm/Hz)	Link stats	Modem status Connection type (ADSL, ADSL2, ADSL2+, VDSL, VDSL2) Actual Data Rate Upstream and Downstream Attainable Data Rate Upstream and Downstream % Capacity Upstream and Downstream S/N Ratio Upstream and Downstream Line Attenuation Upstream and Downstream Signal Attenuation Upstream and Downstream Transmit Power Upstream and Downstream
Display	High resolution, 1/4 VGA graphics with LED backlight		
Battery	Rechargeable nickel-metal hydride		
Battery life	Approximately 30 hours typical usage		
Weight	0.8 kg (28 oz)		
Dimensions	254 mm x 114.3 mm x 63.5 mm (10" x 4.5" x 2.5")		
Safety	Weather and drop resistant in accordance with MIL-STD-810F IEC61010-1	Chart/graphic	S/N Ratio in each bin Bits in each bin
EMC	EN61326-3-1 (2008)	Protocols	Bridge PPPoE PPPoA DHCP
Operating temperature range and humidity	-10°C to +55°C 95%	Ping test	IP address assigned Packet echo statistics Transmitted % successfully echoed
Storage temperature range and humidity	-20°C to +65°C 95%		Round trip time (max, min, and average)
HT1000/2 "C" designation model specifications In addition to features of HT1000/2 "A" designation models		Output connections	POTS, ADSL - VDSL2, RT
Standards compliance	ADSL G.dmt G.992.1/2 Annex A,B ADSL2 G.992.3 Annex A, B, L, M, J ADSL2+ G.992.5 Annex A, B, L, M, J ADSL2+ G992.5 Amendment 1 ADSL2+ G.998.4 Retransmission-G.INP VDSL G.993.2 VDSL2 G.993.2 ITU-T G.vector (G.993.5) VDSL2 Vectored DSL compatible Bandplans: 8, 12, 17, 30 MHz Profiles: 8a, 8b, 8c, 8d, 12a, 12b, 17a, 30a Plan 997, Plan 998 Attainable Data Rate Upstream and Downstream % Capacity Upstream and Downstream Downstream Transmit Power Upstream and Downstream	Compliance	ITU-T G.vector (G.993.5) VDSL2 Vectored DSL compatible
HT1000/2 "V" designation model specifications In addition to features of HT1000/2 "C" designation models		HT1000/2 "B" designation model specifications In addition to features of HT1000/2 base models specifications ADSL through to vectored VDSL2 G.bond G.998.1 DSL pair bonding	

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Selection Guide

HT1000/2	AX	CX	VX	CB	VB
Physical layer testing	✓	✓	✓	✓	✓
Caller ID	✓	✓	✓	✓	✓
Auto test	✓	✓	✓	✓	✓
TDR - Dual trace	✓	✓	✓	✓	✓
RFL - 20 MΩ	✓	✓	✓	✓	✓
Impulse noise	✓	✓	✓	✓	✓
Noise	✓	✓	✓	✓	✓
Longitudinal balance (stress test)	✓	✓	✓	✓	✓
Super stress, -20db to +30db	✓	✓	✓	✓	✓
Ground resistance	✓	✓	✓	✓	✓
Incremental pair test	✓	✓	✓	✓	✓
200 pair storage, pre-post test	✓	✓	✓	✓	✓
Voiceband spectrum analyzer	✓	✓	✓	✓	✓
Wideband spectrum analyzer	✓	✓	✓	✓	✓
FED control tones	✓	✓	✓	✓	✓
Wideband tone send	✓	✓	✓	✓	✓
Wideband tone receive	✓	✓	✓	✓	✓
Wideband loss	✓	✓	✓	✓	✓
ADSL		✓	✓	✓	✓
VDSL		✓	✓	✓	✓
IP ping		✓	✓	✓	✓
Vectoring			✓		✓
Bonding				✓	✓

DexGreen Ltd, Unit 2, Pinnacle Business Park, Ballytrasna, Little Island, Co. Cork, Ireland

Tel: +353 21 4317955

Email: sales@dexgreen.com

Fax: +353 21 4316269

Internet: www.dexgreen.com