

HT1000/2

Copper Wire Analyser



- **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

The HT1000/2 is a 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 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.

FEATURES

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 8 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 voiceband 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 14.7 km (45,000 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.
Store test results - 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.

- Spectrum analyzer - loss readings up through the VDSL range test protocols.
- Send and receive frequency spectrum through VDSL band.
- Spectrum analyzer assists the technician in finding interrupters that cause disruptions to DSL service - will read to VDSL band
- ADSL2+ and 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 VDSL card also allows for CO emulation
- Techmate® RFL uses three or four wire setup and pinpoints fault size and location with simple temperature and cable gage adjustments.
- HPNA option is includes HPNA 3.1 chipset.

SPECIFICATIONS

(Model HT1000/2-A unless otherwise noted)

Feature	Range/Accuracy: (whichever is greater)
ACV	0 V to 200 V ($\pm 2\%$, ± 1 V)
DCV	0 V to ± 200 V ($\pm 2\%$, ± 1 V)
Resistance	0 Ω to 1,000 K Ω ($\pm 2\%$, ± 1 Ω)
Leakage	1 M Ω to 999 M Ω ($\pm 3\%$), 150 V open circuit output
Longitudinal balance	+30 dBrn to +80 dBrn (± 2 dBrn)
Super Stress™	-10 dBrn to +30 dBrn (± 2 dBrn)
Load coil detection	0 coil to 4 coils (± 1 coil)
Loop current	0 mA to ± 100 mA ($\pm 2\%$, ± 1 mA)
Power influence	+40 dBrnC to +100 dBrnC (± 2 dBrnC)
Noise (Voice Band)	0 dBrnC to +60 dBrnC (± 2 dBrnC)
Loss (Voice Band)	-40 dBm to +10 dBm (± 1 dBm)
Open meter	0 m (0 ft) to 900 m (3,000 ft) $\pm 2\%$, ± 1.5 m (5ft) 900 m (3,000 ft) to 15 km (50,000 ft) ($\pm 3\%$)
Auto test	7 user-selectable auto test scripts, 200 pair storage, retest capability, Incremental pair testing program
ID tone	Frequency: 577.5 Hz ($\pm 1\%$) Amplitude: 0 dBm, 600 Ω (± 1 dBm)
Caller ID	Yes
Wideband tone send	Frequency: 20 KHz to 9 MHz ($\pm 1\%$) 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)
RFL	Distance to fault: 0 – 3.000 m (10,000 ft) $\pm 0.5\%$, ± 1 m (3 ft) Maximum measurable fault resistance: 100 M Ω

TDR

Maximum locatable fault resistance:
2 M Ω

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 mode

Wideband spectrum analyzer

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)

Voiceband spectrum analyzer

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)

Display

High resolution, ¼ VGA graphics with LED backlight

Batteries

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")

Environmental

Weather and drop resistant in accordance with MIL-STD-810F

HT1000/2-C (ADSL/VDSL2) Specifications

In addition to features of HT1000/2-A

Feature	Description
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
Link statistics	VDSL2 G.993.2 Bandplans: 8, 12, 17, 30 MHz Profiles: 8a, 8b, 8c, 8d, 12a, 12b, 17a, 30a Plan 997, Plan 998 Capable of emulating a CO/DSLAM Connection Type (VDSL2, RT, CO)

HT1000/2-CH Specifications
HPNA Specifications

In addition to features of HT1000/2-C

Feature	Description
Standards compliance	ITU G.9954 (Home PNA 3.1)
Parameters measured	Phy - Physical connection rate PER - Packet error rate SNR - Signal to noise ratio Attn - Attenuation

ORDERING INFORMATION

Item (Qty)	Cat. No.	Item (Qty)	Cat. No.
HT1000/2-A Standard - English	1002-803	HT1000/2-A Standard - Latin Spanish	1002-815
HT1000/2-C VDSL - English	1002-804	HT1000/2-C VDSL - Latin Spanish	1002-816
HT1000/2-CH VDSL with HPNA - English	1002-805	HT1000/2-CH VDSL with HPNA - Latin Spanish	1002-817
HT1000/2-A Standard - French	1002-809	Included accessories	
HT1000/2-C VDSL - French	1002-810	Test lead pair - red/black	1004-180
HT1000/2-A Standard - German	1002-806	Test lead pair - yellow/green	1004-181
HT1000/2-C VDSL - German	1002-807	AC charger	2001-697
HT1000/2-A Standard - Italian	1002-812	Soft carrying case	1004-182
HT1000/2-C VDSL - Italian	1002-813	DC charger	1004-183
HT1000/2-A Standard - European Spanish	1002-818	USB cord	1001-2015
HT1000/2-C VDSL - European Spanish	1002-819		

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CERTIFICATION ISO
 Registered to ISO 9001:2008 Cert. no. Q 09250
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