

## Product Description



The **MT4000 Tester** is a sophisticated bit error rate tester in a compact, hand held package. It can test a wide variety of communications facilities and equipment including T-1, fractional T-1, E-1, fractional E-1, modems, multiplexers, CSU/DSUs, T-1 ESF CSUs, DU, NTUs and TIUs. It is supplied complete with V.35, RS232, RS422/RS530, X.21, DS1 (T-1, 1.544 Mbps) and G.703 (E-1, 2.048 Mbps) interfaces. The Tester is supplied with a wall-mounted AC transformer. A battery option is also available for complete portable operation. With the option, a nickel metal hydride battery and a recharger are built into the Tester.

### T-1 and E-1 Testing

The user can choose from four operating modes: T-1, E-1, asynchronous and synchronous. A variety of test patterns can be inserted in all or selected time slots/DSOs, continuous or non-contiguous, making the Tester ideal for fractional T-1 and E-1 testing.

In the T-1 and E-1 modes, the WAN Tester counts and displays bit errors, transmit and receive frequency, test seconds, bit error rate, and G.821 performance measurements (errored seconds, severely errored seconds, degraded minutes and available and unavailable times). In the T-1 mode it also displays receive level.

## Multi-Test Multi-Interface Tester

- Speeds from 50bps – 8,192Mbps
- E1 and T1, Fractional T1 and E1
- V35, V24, RS422/ RS530, X21 Interfaces
- Displays G821 measurements
- Front panel or VT100 console control
- Multiple test patterns
- 16 LED indicators plus 2 line LCD display
- Both Battery and/or mains power

### Asynchronous and Synchronous Testing

In addition to T-1 and E-1, the WAN Tester provides asynchronous and synchronous test modes. It generates test data in a choice of patterns and formats. The user can choose from a selection of twenty-eight asynchronous and seventy-five synchronous test speeds.

The Tester counts and displays bit errors, bit error rate, and total test seconds. In the asynchronous mode, it also counts and displays characters received, character errors and errored seconds. In the synchronous mode, it also displays transmit frequency, receive frequency, clear to send delay and G.821 performance measurements.

### Easy to use

The WAN Tester can be controlled from the front panel or from a local or remote VT100 terminal. It includes a two-line LCD display and sixteen indicator lights that show selected mode, test and operating parameters. Parameters are selected by scrolling through values stored in the Tester. All operations can be performed using only ten keys.

## Specifications

Mode	Asynchronous	Synchronous	T-1	E-1
Speeds	50 bps to 115000 bps	1200 bps to 2048000 bps	1544000 bps	2048000 bps
Displays	Bit Errors Character Error Total Test Seconds Errored Second Characters Received	Bit Errors Bit Error Rate Total Test Seconds Errored Seconds Severely Errored Secs Degraded Minutes Available Unavailable Transmit Frequency Receive Frequency Clear To Send Delay Bits Received	Bit Errors Bit Error Rate Total Test Seconds Errored Seconds Severely Errored Secs Degraded Minutes Available Unavailable Transmit Frequency Receive Frequency RX Level Frame Errors CRC Errors BiPolar Violations	Bit Errors Bit Error Rate Total Test Seconds Errored Seconds Severely Errored Secs Degraded Minutes Available Unavailable Transmit Frequency Receive Frequency
LEDs	Pattern Lock Pattern Recovered Transmit Data Received Data Request To Send Clear To Send Data Set Ready Carrier Detect Data Terminal Ready	Pattern Lock Pattern Recovered Transmit Data Received Data Request To Send (C) Clear To Send Data Set Ready Carrier Detect (I) Data Terminal Ready Transmit Clock Receive Clock (S) External Transmit Clock	Pattern Lock Pattern Recovered Frame Lock All 1s All 0s CRC Error BiPolar Violation D4 ESF AMI B8ZS Yellow Alarm	Pattern Lock Pattern Recovered Frame Lock All 1s All 0s CRC Error BiPolar Violation Distant Multiframe Alarm Receive Remote Alarm
Patterns	2 <sup>6</sup> (63) 2 <sup>9</sup> (511) 2 <sup>11</sup> (2047) Binary Fox Test Marks Spaces	2 <sup>9</sup> (511) 2 <sup>11</sup> (2047) 2 <sup>15</sup> (32767) QRSS 2 <sup>20</sup> (1048575) 2 <sup>23</sup> (8388607) Marks Spaces 1 of 8	2 <sup>9</sup> (511) 2 <sup>11</sup> (2047) 2 <sup>15</sup> (32767) QRSS 2 <sup>20</sup> (1048575) 2 <sup>23</sup> (8388607) Marks Spaces 1 of 8 3 of 24	2 <sup>9</sup> (511) 2 <sup>11</sup> (2047) 2 <sup>15</sup> (32767) QRSS 2 <sup>20</sup> (1048575) 2 <sup>23</sup> (8388607) Marks Spaces 1 of 8 3 of 24
Loops	Self-Test	Self-Test V.54	Self-Test V.54 Loop Up/Down Smart Jack 1 Framed Smart Jack 1 Unframed Smart Jack 2 Framed Smart Jack 2 Unframed	Self-Test V.54
Interfaces	RS232 RS422 RS530 V.35	RS232 RS422 RS530 V.35 X.21	DS1 BiPolar AMI/B8ZS	CCITT G.703 CCITT G.704 HDB3 Coding

**Mechanical** : The ET4000 measures 5" (12.7cm) x 7" (17.8 cm) x 2" (5.1cm) and weighs 1lb (0.45kg)