

*This handheld E1 BER tester supports extensive error and alarm generation, detection, indication and histogram analysis of alarm and error events.*

## Overview

This E1 BER (Bit Error Rate) tester is a compact, multi-functional, handheld E1 line test instrument, specially designed for R&D, production, installation and maintenance of SDH, PDH, PCM, and DATA protocol conversion. It features self-check and keyboard testing, extensive error and alarm generation, detection and indication. This tester provides smart menu navigation and has a large color LCD screen allowing test results to be displayed clearly. Test results can be downloaded or printed via included software. It is an ideal device for fast problem resolution, E1 PCM line access, maintenance and acceptance testing.



## Features

- ✓ Easy-to-use, handheld design
- ✓ Full-featured measurements of E1, Datacom and Protocol Converter
- ✓ High resolution backlight LCD
- ✓ Smart menu navigation
- ✓ Extensive error and alarm generation, detection and indication
- ✓ Histogram analysis of alarm and error events
- ✓ Save/Recall of up to 10 user-defined setups and 10 sets of results
- ✓ More than 6 hours operation with a single battery charge
- ✓ Built-in Ni-MH rechargeable batteries and smart charger circuitry (automobile adaptor included)
- ✓ Upgradable embedded software via an integrated RS232C interface
- ✓ Test results could be uploaded and analyzed with software provided

## **Basic Functions**

- 120  $\Omega$  and 75  $\Omega$  line interfaces
- HDB3 and AMI line codes
- Out-of-service framed and unframed testing
- 2 Mb/s, N $\times$ 64 Kb/s BER testing
- Frame data and alarm monitoring
- Clock slip measurement
- Frequency and level measurement
- Testing pattern: PRBS, Fix Code, 16-BIT User Word
- Error injection: Single and Fixed Rate
- Real-time transmit circuit open/short indication
- Manual and auto-timer measurement
- ITU-T G.821, G.826, and M.2100 performance analysis

## Technical Specifications

Internal Clock	2048 kb/s ± 10 ppm
Line Interfaces	75 Ω (Unbalanced), 120 Ω (Balanced); *High Input Impedance >2 KΩ
Line Code	HDB3, AMI
Framing	Unframed, PCM30, PCM30CRC, PCM31, PCM31CRC
Level Measurement	-43 dB to -2.5 dB
Tx Clock Source	Internal, Interface
Frequency Measurement	Accuracy: ± 1 Hz
Offset Measuremen	Accuracy: ± 1 ppm; Range: -999 ppm to 999 ppm
Test Patterns	PRBS: 2 <sup>23</sup> -1, 2 <sup>15</sup> -1, 2 <sup>11</sup> -1, 2 <sup>9</sup> -1 Fixed Code: 1111, 0000, 1010 16BIT: Fully programmable 16-bit word
Alarm Indications	Signal Loss, AIS, Frame Loss, MFrame loss, Pattern Loss, Remote Alarm, Errors, Low Battery
Error Injection	Type: BIT, FAS, CODE, CRC4, E-BIT Single, OFF, Fixed Rate: 10 <sup>-2</sup> , 10 <sup>-3</sup> , 10 <sup>-4</sup> , 10 <sup>-5</sup> , 10 <sup>-6</sup> , 10 <sup>-7</sup>
Performance Analysis	ITU -T G.821, G.826 and M.2100
I/O	USB
Rechargeable Batteries	7.4 V Li battery, continuous working for 8 hours
Recharge Time	Approx. 2 hours
AC Power Adapter	Input: 100 V to 240 VAC, 50/60 Hz; Output: 12 VDC /1.5 A
Dimensions	230 mm × 72/11 mm × 33 mm
Weight	Approx. 500 g



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