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TELECOMMUNICATIONS TEST EQUIPMENT

Digital Transmission Analyzers HP 3784A, 3764A

- G.821 error analysis at 704 kb/s, 2, 8 and 34 Mb/s
- Optional jitter generation and measurement at 2, 8 and 34 Mb/s
- · Clock synthesizer for rates between 1 kb/s and 50 Mb/s
- Optional V.11 interfaces for testing X.21 leased circuits



HP 3784A



HP 3784A Digital Transmission Analyzer

The HP 3784A is a portable error performance/jitter test set, offering standard telecom interfaces at 704 kb/s, 2, 8 and 34 Mb/s, with the option of codirectional interfaces at 64 kb/s and V.11 interfaces for testing X.21 leased circuits. In addition, it has binary TTL/ECL interfaces for measurements up to 50 Mb/s, using the internal clock synthesizer.

The HP 3784A is easy to use with measurement presets, automatic receiver setup and error performance pass/fail thresholds. Automatic jitter tolerance and transfer plotting routines are provided for fast accurate testing up to and beyond CCITT limits. Through-data mode allows jitter to be added to a structured signal for jitter tolerance testing of demultiplexers.

Applications

- Automated production test of transmission line and terminal equipment
- Development and test of digital circuits that transport or store
- · Long-term monitoring of digital transmission equipment in the field

Measurement Summary

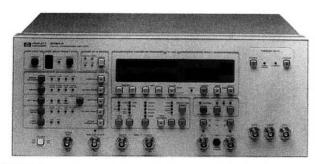
Error Analysis: Error count, error ratio, error and error-free intervals (seconds and deciseconds), percent unavailability, percent errored and percent severely-errored seconds, percent degraded minutes. All measurement are made simultaneously.

Jitter Analysis: Peak-to-peak amplitude, jitter-hit count, jitter-hit and hit-free seconds or deciseconds.

Ordering Information	Price
HP 3784A digital transmission analyzer	\$11,100
Opt 002 Jitter measurements	+\$6,300
Opt 006 64 kb/s measurement and V.11 interfaces	+\$1,150
Opt 008 Error and jitter measurements at DS1,	+\$7,200
DS1C DS2 and DS3	

Note: Options 002 and 006 cannot be ordered together.

- Error and jitter measurements at 140 Mb/s or error measurements at 704 kb/s, 2, 8, 34 and 140 Mb/s
- Internal synthesizer for measurements from 1 kb/s to 170 Mb/s at binary interfaces
- · Powerful data logging to internal or external printer
- · Fast, easy measurement setup using stored presets



HP 3764A Option 007



HP 3764A Digital Transmission Analyzer

HP 3764A digital transmission analyzer is available in a number of different versions to cover a wide range of telecom and generalpurpose test applications. Each one offers pattern generation and error detection at coded and binary interfaces, and an HP-IB port for remote control operation.

A version of the HP 3764A with combined error and jitter performance measurements at 140 Mb/s is ideal for production test of telecom equipment. It can be enhanced further with a through-data mode to allow jitter to be added to any 140 Mb/s signal passing through the instrument.

Versions of the instrument with CEPT rates from 704 kb/s to 140 Mb/s offer a test solution for manufacturing and installation of digital network equipment. Other versions, including a clock synthesizer, offer data generation and error detection at binary interfaces at rates up to 170 Mb/s.

Applications

Production testing of digital transmission equipment

· Installation and maintenance of digital networks

- Demultiplexer testing using through-data mode to add jitter to a structured signal
- Long-term unattended monitoring with error performance analysis based on CCITT Recommendation G.821

Measurement Summary
Error analysis: Error count, error ratio, error seconds, error-free seconds, percent unavailability, percent errored seconds, percent severely-errored seconds, percent degraded minutes. All measurements are made simultaneously and in accordance with CCITT Recommendation G.821.

Jitter analysis: Peak-to-peak amplitude, jitter-hit count, jitter-hit seconds, jitter-hit-free seconds. Internal filters to CCITT Recommendation 0.171 are available for performing selective jitter measurements. Where a greater degree of selectivity is required, a demodulated jitter output allows connection of external equipment such as a spectrum analyzer.

Ordering Information	Price
HP 3764A digital transmission analyzer	\$12,500
Opt 002 Jitter generation and measurement at	+\$3,400
140 Mb/s	
Opt 006 Error performance at 704 kb/s, 2, 8, 34, and	+\$2,900
140 Mb/s plus clock synthesizer	
Opt 007 Jitter generation and measurement at	+\$7,600
140 Mb/s with through-data mode plus clock synthesizer	