

# TELECOMMUNICATIONS TEST EQUIPMENT

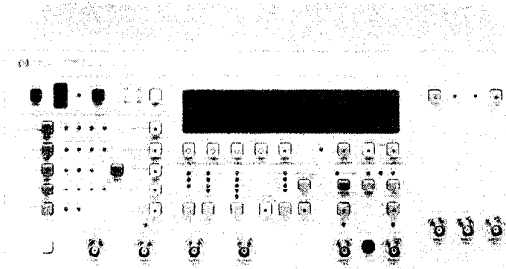
## Digital Transmission Analyzers

HP 3764A, 37721A

549

### HP 3764A

- Error & jitter measurements at 140 Mbit/s or error measurements at 704 kbit/s, 2, 8, 34 & 140 Mbit/s
- Internal synthesizer for measurements from 1 kbit/s to 170 Mbit/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

The HP 3764A digital transmission analyzer is available in a number of different versions to cover a wide range of telecom and general-purpose 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 Mbit/s is ideal for production test of telecom equipment. It can be further enhanced with a through-data mode to allow jitter to be added to any 140 Mbit/s signal passing through the instrument.

Versions of the instrument with CEPT rates from 704 kbit/s to 140 Mbit/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 Mbit/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, % unavailability, % errored seconds, % severely-errored seconds, % degraded minutes. All measurements are made simultaneously and in accordance with CCITT Recommendation G.821.

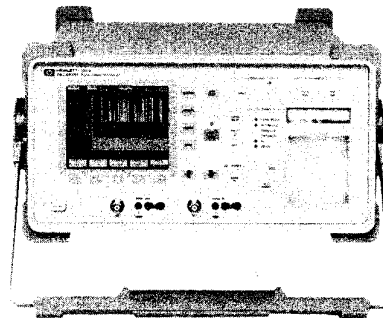
**Jitter analysis:** Peak-to-peak amplitude, jitter hit count, jitter hit seconds, jitter hit-free seconds. Internal filters to CCITT Recommendation O.171 are available for performing selective jitter measurements. Where a greater degree of selectivity is required, a demodulated jitter output allows connection of external equipment such as a spectrum analyzer.

#### Ordering Information

	Price
HP 3764A digital transmission analyzer	\$11,610
Opt 002 Jitter generation and measurement at 140 Mbit/s	+\$3,115
Opt 007 Jitter generation and measurement at 140 Mbit/s with through-data mode plus clock synthesizer	+\$7,070
Opt 006 Error performance at 704 kbit/s, 2, 8, 34 & 140 Mbit/s plus clock synthesizer	+\$2,730

### HP 37721A

- Bit & code error testing at 704 kbit/s, 2, 8, 34 & 140 Mbit/s
- Portable, lightweight & rugged
- Text & graphic results on large display
- Stored setups & autoselection for ease of use
- Remote control, frequency offset & measurement, multiple outputs



HP 37721A



### HP 37721A Digital Transmission Analyzer

The HP 37721A digital transmission analyzer is a portable, lightweight, rugged test set providing bit and code error testing at the European CEPT rates of 704 kbit/s, 2, 8, 34 and 140 Mbit/s. It measures error performance to CCITT Recommendation G.821, with interfaces to G.703.

A key feature of the HP 37721A is its ease of use: the autoselection facility automatically configures the test set to the incoming data; nine stored setups ensure that required test parameters are instantly available; graphic display of results shows error counts, error seconds and alarms at a glance; and a range of logging options to an internal or external printer provides customized hard-copy proof of results.

Option 001 provides remote control via RS-232-C and HP-IB interfaces and adds the ability to log results to an HP ThinkJet. Multiple outputs in Option 002 enable simultaneous loading of four channels of a multiplexer or digital radio with only one test set. With Option 003, up to 100 ppm of frequency offset is provided at all rates to evaluate clock-recovery circuits.

#### Applications

- Maintenance of digital networks (PTTs, other network operators)
- Installation of digital networks (PTTs, network operators, manufacturers)
- Long-term unattended monitoring with error performance analysis based on CCITT Recommendation G.821

#### Measurement Summary

**Error analysis:** As CCITT Recommendation G.821.

**Results displayed:** Elapsed time in test period; errored seconds, % errored seconds, error-free seconds, % error-free seconds, severely-errored seconds, % severely-errored seconds; unavailability, % unavailability; degraded minutes, % degraded minutes; code-error seconds; bit error count, bit error ratio; code error count, code error ratio; frequency, frequency offset; and alarms.

#### Ordering Information

	Price
HP 37721A digital transmission analyzer	\$7,670
Opt 001 Remote control	+\$645
Opt 002 Multiple outputs	+\$1,720
Opt 003 Frequency offset	+\$1,075