HP 3784A

- G.821 error analysis at 704 kb/s, 2, 8 and 34 Mb/s
- Optional jitter at 2, 8 and 34 Mb/s
- Optional 64 kb/s measurements
- Clock synthesizer from 1 kb/s to 50 Mb/s
- Single key measurement setup using preset memory

HP 3788A

- Low cost, lightweight and robust for field use
- Error measurement at 2048, 704 and 64 kb/s CEPT rates
- Basic measurements and G.821 error analysis
- Long-term internal logging of results
- Internal rechargeable battery or ac operation
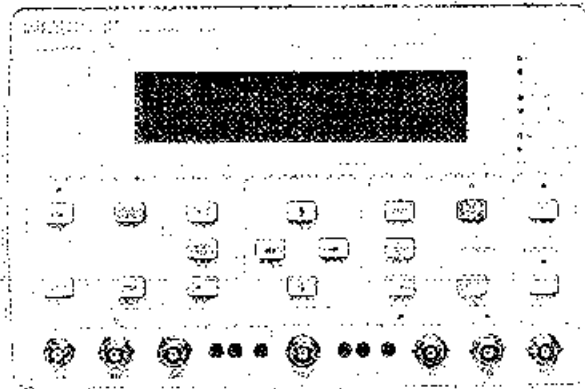
HP 3784A

HP 3788A

HP 3784A Digital Transmission Analyzer

The HP 3784A is a BER and jitter test set for manufacturing, commissioning, and maintaining network equipment operating at CEPT telecom interface rates of 704 kb/s, 2, 8 and 34 Mb/s. It has a clock synthesizer and TTL/ECL interfaces for general-purpose BER testing at any rate between 1 kb/s and 50 Mb/s and has optional jitter or 64 kb/s codirectional interfaces.

For network operators, the HP 3784A performs error performance analysis during the installation and maintenance of digital transmission networks and monitors in-service error performance using line code error detection. Long-term measurements can be made unattended and the results logged to an external printer. Several ease-of-use features include measurement presets, automatic receiver set-up and pass/fail thresholds.

For digital equipment manufacturers, the HP 3784A synthesized clock source and binary interfaces allow general-purpose error performance testing of any design that transports or stores digital data. For production test, the HP 3784A can be rack-mounted and automated with HP-IB or RS-232-C remote control.
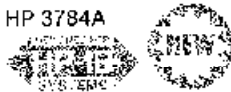
For manufacturers of telecommunications equipment, the HP 3784A provides a wide range of test patterns and enables flexible frequency offset tests and testing at non-standard rates. The HP 3784A provides fully automated jitter tolerance and transfer function measurements for testing up to and beyond CCITT limits. The jitter analysis facility enables the correlation of jitter hits with error bursts. Through-data jitter modulation allows jitter to be added to a fully-framed test signal passing through the HP 3784A for jitter tolerance testing of demultiplexers. The HP 3784A with option 002 can be paired with the HP 3764A digital transmission analyzer with option 002 or 007, to provide complete error and jitter test capability for manufacturing applications up to 139 Mb/s.
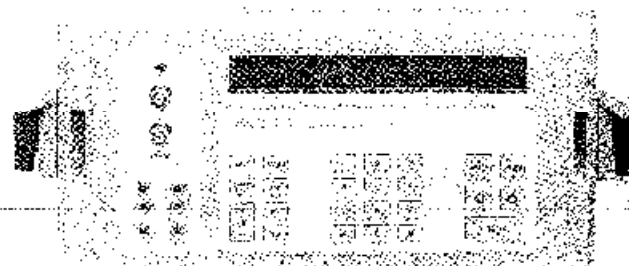
Measurement Summary

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

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

Ordering Information

HP 3784A Digital Transmission Analyzer
 Opt 002 Jitter measurements
 Opt 006 64 kb/s measurements
 Note: options 002 and 006 are mutually exclusive.

HP 3788A Error Performance Analyzer

The HP 3788A error performance analyzer is a low-cost, portable, bit-error-rate test set for installation and maintenance of digital transmission equipment designed to CEPT standards. It uses unframed test patterns to measure binary errors at 2048, 704 kb/s and 64 kb/s (codirectional interface) and code errors at 2048 and 704 kb/s, in digital data circuits, lines and multiplexers.

The HP 3788A is lightweight, portable, and robust for use in harsh field conditions. It operates from an internal battery, with a typical operation time of 10 hours, or a charger/ac adapter. With simple keystroke operation and only four control keys, the HP 3788A is easy to use.

The HP 3788A performs basic measurements for fast circuit testing, and powerful G.821 error performance analysis for long-term monitoring. CCITT Rec. G.821 analysis provides standard quality-of-service measurements, while user-definable analysis allows G.821 type thresholds to be set appropriately for the transmission medium, for example radio or fiber. Long-term measurement analysis results can be stored internally and then either logged to an RS-232-C compatible printer or viewed on the display.

Measurement Summary

Error analysis: error count (EC), error ratio (ER)

G.821 Analysis

Maximum and average error rate, error seconds (ES, %ES), severely errored seconds (SES, %SES), degraded minutes (DM, %DM), and available seconds (US, %US), alarm seconds (ALMS, %ALMS). All measurements are made simultaneously.

User-defined G.821 Analysis

As above but with selectable analysis interval and error thresholds.

Threshold Analysis:

Provides selectable analysis interval, error count, and error rate logging thresholds. Results: EC, Max ER, Av ER, EI, %EI, SEI, %SEI.

Ordering Information

HP 3788A Error Performance Analyzer