Test Equipment Solutions Datasheet

Test Equipment Solutions Ltd specialise in the second user sale, rental and distribution of quality test & measurement (T&M) equipment. We stock all major equipment types such as spectrum analyzers, signal generators, oscilloscopes, power meters, logic analysers etc from all the major suppliers such as Agilent, Tektronix, Anritsu and Rohde & Schwarz.

We are focused at the professional end of the marketplace, primarily working with customers for whom high performance, quality and service are key, whilst realising the cost savings that second user equipment offers. As such, we fully test & refurbish equipment in our in-house, traceable Lab. Items are supplied with manuals, accessories and typically a full no-quibble 2 year warranty. Our staff have extensive backgrounds in T&M, totalling over 150 years of combined experience, which enables us to deliver industry-leading service and support. We endeavour to be customer focused in every way right down to the detail, such as offering free delivery on sales, covering the cost of warranty returns BOTH ways (plus supplying a loan unit, if available) and supplying a free business tool with every order.

As well as the headline benefit of cost saving, second user offers shorter lead times, higher reliability and multivendor solutions. Rental, of course, is ideal for shorter term needs and offers fast delivery, flexibility, try-before-you-buy, zero capital expenditure, lower risk and off balance sheet accounting. Both second user and rental improve the key business measure of Return On Capital Employed.

We are based near Heathrow Airport in the UK from where we supply test equipment worldwide. Our facility incorporates Sales, Support, Admin, Logistics and our own in-house Lab.

All products supplied by Test Equipment Solutions include:

- No-quibble parts & labour warranty (we provide transport for UK mainland addresses).
- Free loan equipment during warranty repair, if available.
- Full electrical, mechanical and safety refurbishment in our in-house Lab.
- Certificate of Conformance (calibration available on request).
- Manuals and accessories required for normal operation.
- Free insured delivery to your UK mainland address (sales).
- Support from our team of seasoned Test & Measurement engineers.
- ISO9001 quality assurance.

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SIGNAL ANALYZERS

Spectrum Analyzer, 10 kHz to 1.8 GHz
Model 8590A

- Lightweight and portable
- Accessory for battery operation
- Programmable via HP-IB, HP-IL, or RS232C
- Optional CATV functions and 75-Ω input
- Direct printer and plotter output
- Optional EMC functions

HP 8590A Portable RF Spectrum Analyzer

This compact, portable RF spectrum analyzer offers many features of a high-performance model for a low, affordable price. With a wide frequency range (10 kHz to 1.5 GHz or optional 1.8 GHz), large amplitude range (−115 dBm to +30 dBm), and 50- or optional 75-Ω input, the HP 8590A has the versatility to make most RF signal measurements. Over 100 functions can be programmed from an optional computer interface, and many accessories are available to expand basic spectrum analyzer capabilities.

Automatic Control

Three computer-interface options are available to automate the spectrum analyzer's many functions: HP-IB, HP-IL, and RS232C. Even without a computer, the interface will send display data to a printer or plotter.

Portability and Performance

With this analyzer you can get the same quality test results in the field that you get in the factory. The analyzer weighs only 30 pounds and has a "briefcase" handle to make carrying easy. When no AC power is available, the analyzer can be run for about two hours from the HP 85901A Portable AC Power Source (see page 136).

Add-on Features

The portable spectrum analyzer is compatible with accessories such as computers, multi-pen plotters, a video monitor, and more. The HP 8444A Tracking Generator turns the HP 8590A into a stimulus-response system that makes frequency-response and insertion-loss measurements on RF components. The HP 10855A Preamplifier improves the analyzer's noise performance when low-level signals are measured, and a family of close-field probes is available for EMI testing. The HP ThinkJet Printer makes permanent records of test results displayed by the analyzer.

HP 8590A Option H18 1790 MHz Operation

Option H18 extends the upper limit of the HP 8590A's frequency range to 1790 MHz.

HP 8590A Option H50 CATV Functions

This option adds a set of nine functions to simplify cable TV testing: channel selection, carrier level, carrier-to-noise, power line hum, crossmodulation, composite triple beat, modulation depth, system frequency response, and save/recall traces. A 75-Ω input (no-cost Option 001) minimizes mismatch loss in cable testing. All of the spectrum analysis capability of the standard HP 8590A is retained.

HP 8590A Option H51 EMC Functions

Find EMI "hot spots" in your new-product designs quickly and easily by using the HP 8590A Option H51 Close-Field EMC Analyzer and HP 11945A Close-Field Probe Set. The field strength is measured directly at the probe tip in dBA/m, and antenna factors for the probe are automatically applied. A special function accessed with a key helps you to discriminate between narrowband and broadband signals. For more information, see page 133.

HP-IB is Hewlett-Packard's hardware, software, documentation, and support for IEEE-488 and IEC-625 worldwide standards for interfacing instruments.

HP-IL is the Hewlett-Packard Interface Loop for serial-interfacing instrument systems.
**Input/Output Characteristics**

- **Front-panel connectors**
  - RF input: 50-Ω BNC (standard); 75-Ω BNC (Opt. 001)
  - Probe power output: +15 V, −12.6 V, GND, 150 mA max.
  - Cal output
    - 50-Ω BNC (standard): −20 dBm, 299.9 MHz
    - 75-Ω BNC (Opt. 001): 28.75 dBmV, 299.9 MHz
  - 1st LO output: 50-Ω BNC, +10 dBm, 2.05 to 3.55 GHz

- **Rear-panel connectors**
  - Aux video output: 50-Ω BNC, 0 to 1 V
  - Monitor output: 50-Ω BNC, NTSC format, 19.2 kHz horiz. sync.
  - High sweep in/out: BNC, high TTL = sweep, low TTL = retrace
  - Sweep output: BNC, 5 kΩ, 0 to +10 V ramp
  - Aux IF output: 50-Ω BNC, −10 to −60 dBm, 21.4 MHz
  - Ext. trigger input: BNC, TTL levels, positive edge trigger

**Interface connector**
- HP-IB (Opt. 021), HP-IL (Opt. 022), or RS232C (Opt. 023)

- **HP-IB codes**
  - SHI, AHI, T6, L4, SR1, RL1, PP0, DC1, DT1, C1, C2, C3, C8

- **Recommended Accessories**
  - HP 2225A/B/D ThinkJet Printer
  - HP 7440A ColorPro Plotter
  - HP 8444A Opt. 059 Tracking Generator
  - HP 82913A Monitor
  - HP 85901A AC Power Source
  - HP 10855A Broadband Preamplifier
  - HP 11945A Close-Field Probe Set
  - HP 11867A RF Limiter
  - HP 11694A 50-75Ω Matching Transformer
  - HP 52257A ColorPro Plotter
  - HP 2125A/B/D ThinkJet Printer

**Ordering Information**
- HP 8591A Portable RF Spectrum Analyzer
  - Option 001: 75-Ω Input Impedance
  - Option 021: HP-IB Interface
  - Option 022: HP-IL Interface
  - Option 023: RS232C Interface
  - Option 040: Front Panel Cover
  - Option 088: Rack Mount Without Handles
  - Option 089: Rack Mount With Handles
  - Option 910: Extra Operating and Installation Manuals
  - Option 915: Support Manual and Extra Operating and Installation Manuals

**Additional Two Years of HP Service**
- Option W30: Additional Two Years of HP Service

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1. Refer to Installation Manual (08590-90000) and Operation Manual (08590-90005) for more information.