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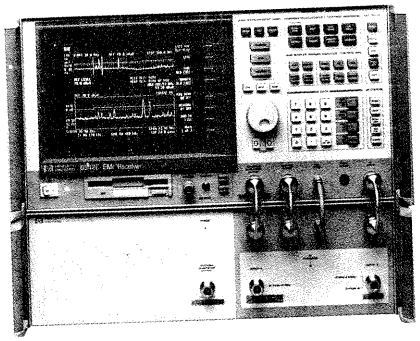
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# EMI/EMC Test Systems

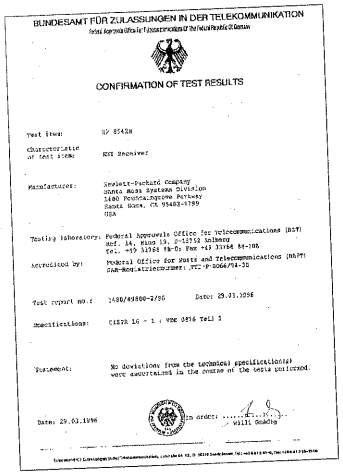
## EMI Receivers

HP 8542E
HP 8546A

- ±2 dB absolute amplitude accuracy
- Built-in PC/DOS disk drive
- Certified compliant to all CISPR Publication 16-1 recommendations by the BZT**



HP 8542E 2.9 GHz


BUNDESAMT FÜR ZULASSUNGEN IN DER TELEKOMMUNIKATION

CONFIRMATION OF TEST RESULTS

Test Item: HP 8542E

Characteristic of test item: EMI Receiver

Manufacturer: Hewlett-Packard Company
Santa Rosa Systems Division
1400 Fountaingrove Parkway
Santa Rosa, CA 95403-1799
USA

Testing laboratory: Federal Approvals Office for Telecommunications (BZT)
Ref. 14, Ring 19, D-12713 Salbeng
Tel.: +49 32768 84-0; Fax +49 32768 84-7001

Accredited by: Federal Office for Posts and Telecommunications (BAPT)
DAR-Accreditierung: PTC-P-5006/94-50

Test report no.: 1430/49800-2/96 Date: 29.03.1996

Specifications: CISPR 16 - 1 : VDE 0876 Teil 1

Statement: No deviations from the technical specifications were ascertained in the course of the tests performed.

Date: 29.03.1996 By order: Willi Stadie

## Fully CISPR 16-1 Compliant

HP-IB

The HP 8542E and HP 8546A EMI receivers make CISPR-based EMI measurements with unprecedented accuracy, speed, and ease of use. These EMI test receivers can be used to check conformance to standards such as CISPR, EN, FCC, VCCI, and VDE.

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### Most Requested Features

Both receivers incorporate the features most often requested by EMI test engineers:

- Specifications that meet CISPR Publication 16-1* recommendations for making compliance measurements to any civilian EMI measurements standard worldwide
- ±2 dB absolute amplitude accuracy, specified
- Extended frequency coverage to test the newest high-speed ITE equipment
- Traditional receiver features, including automatic overload detection and auto-ranging
- Three tuning modes: manual, stepped, and scanning
- Large, color CRT
- Onscreen limit lines
- Automatic antenna and cable correction for direct comparison of measurement data to limits
- Automatic measurement routines
- Parallel detectors: peak, quasi-peak, and average

### Upgrade from Precompliance to Full Compliance Capability

Both the HP 8542E and the HP 8546A consist of two separate sections. The receiver RF section can be purchased as a standalone precompliance tester. The RF filter section can be added later to make the complete EMI compliance receiver.

### Flexible Storage of Data and Test Setups

A built-in, PC-formatted floppy disk drive allows test and data files to be stored and recalled. Stored tests can include system configurations, antenna, transducer factors, and cable losses.

The receiver CRT has a powerful dual-window capability. A broad spectrum can be captured in the upper window, and the lower window can be used to examine signals of interest in greater detail.

### Report Generation Software is Free

The HP 85878A Report Generator Software is included free with the purchase of an HP 8542E or a HP 8546A. The HP 85878A software can retrieve internal data from the HP 8542E or HP 8546A such as limit lines, stored lists of signals, and external device correction factors (e.g. cables and antennas) and place them into a word processing package. The HP 85878A Report Generator Software also has customizable templates to automatically generate reports for submission to regulatory bodies of countries where the tested product is to be sold.

** BZT is the German federal approvals office for telecommunications.

### Measurement Automation

Both receivers work with new PC-based EMI measurement software—the HP 85876B and HP 85875A—to create the most powerful, easiest to use automated solution available for commercial radiated and conducted emission testing.

### Specification Summary

**Frequency Range:** HP 8542E: 9 kHz to 2.9 GHz; HP 8546A: 9 kHz to 6.5 GHz
**Frequency Reference**
**Aging:** $<\pm 1 \times 10^{-7}$/year
**Temperature Stability:** $< \pm 1 \times 10^{-8}$
**Frequency Readout Accuracy:** ± (freq. readout x freq. reference error + 20% of IF bandwidth + 100 Hz) conforms to CISPR 16-1
**Displayed Average Noise Level** (with CISPR bandwidths, 0 dB attenuation) (characteristic)

| | Preamp Off | Preamp On |
|---|---|---|
| **CISPR Band A (200 Hz BW)** 9 kHz to 150 kHz | 3 to – 27 dBμV | – 9 to – 31 dBμV |
| **CISPR Band B (9 kHz BW)** 150 kHz to 30 MHz | – 18 dBμV | – 21 dBμV |
| **CISPR Band C/D (120 kHz BW)** 30 MHz to 1 GHz | – 5 dBμV | –10 dBμV |
| **Noise Figure Characteristic** 9 kHz to 2.9 GHz<br>1 GHz to 6 GHz | 14 dB<br>24 dB | 10 dB<br>8 dB |
| **Gain Compression, 1dB** (characteristic) | 89 dBμV | 77 dBμV |

**Absolute Amplitude Accuracy:** 9 kHz to 2.9 GHz: ±2 dB (typical ±1 dB); 2.9 to 6.5 GHz (characteristic): ± 3.0 dB (HP 8546A)
**IF Bandwidths**
**Measurement:** 200 Hz, 9 kHz, 120 kHz, 1 MHz, (6 dB, conform to CISPR Publication 16-1)
**Diagnostic:** 30 Hz to 3 MHz (3 dB) in a 1-3-10 sequence
**IF Detectors**
**Measurement:** Peak, quasi-peak, average
**Overload:** RF, IF
**Demodulation:** AM, FM
**Temperature Range:** 0° to +55° C, operating; – 40° to +75° C, storage
**Size:** 457 mm W x 365 mm H x 645 mm D (18 in x 14.38 in x 25.38 in)
**Weight:** 48.6 kg (108 lb)

### Key Literature

HP 8546A EMI Receiver Technical Data, p/n 5091-8314E
HP 8542E EMI Receiver Technical Data, p/n 5963-0081E

### Ordering Information

**HP 8542E** EMI Receiver (9 kHz to 2.9 GHz)
**HP 8546A** EMI Receiver (9 kHz to 6.5 GHz)

*CISPR Publication 16 is the Comité International Spécial des Perturbations Radioélectriques specification for radio interface measuring apparatus and measurement methods.

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