

HP 8712ET  
HP 8712ES  
HP 8714ET  
HP 8714ES  
HP 87050E  
HP 87075C

NEW



HP 87050E Option 12 and HP 8714ES

## HP 87050E and HP 87075C Multiport Test Sets

The HP 87050E (50 ohm) and the HP 87075C (75 ohm) multiport test sets are designed to work with the HP 8712E family of RF vector network analyzers to provide complete multiport measurement systems. The HP 87050E has specified performance from 3 MHz to 2.2 GHz, with typical performance to 3 GHz. The 50 ohm test set is offered in 4, 8 and 12-port options. The HP 87075C has a frequency range of 3 MHz to 1.3 GHz and is offered in 6 and 12-port options.

These systems dramatically increase measurement throughput by minimizing RF connections. Connect your device one time to measure all signal paths and ports. Reduce operator fatigue, misconnection rates, and the wear on cables, fixtures, and connectors as well. In addition, the HP 8712E family of network analyzers provide many productivity features that speed tune and test times, increase throughput, and simplify automation.

An HP 87050E or an HP 87075C coupled with an HP 8712E series network analyzer is the only low-cost, multiport test system with fully specified performance at the actual test ports, whether you measure in a fixture or at the end of test cables. Specified performances means you get the same measurement results on any test station, reduce measurement uncertainty to tighten your product specifications, and increase customer confidence in your products.

### Innovative new calibration techniques save time and increase accuracy

Test Set Cal is an advanced calibration technique that eliminates the redundant connection of standards during a system calibration. Calibrating a multiport test set using two-port error correction and a traditional network analyzer requires a unique instrument state for each measurement path, forcing many redundant connections of calibration standards. As the number of ports increases, so does the number of connections required to calibrate all possible measurement paths. Full calibration of the HP 87050E and HP 87075C multiport test systems is quick and simple when performing a Test Set Cal:

- Connect short, open, and load standards only once to each measurement port
- Minimize the number of through standards required during calibration

In between Test Set Cals, the system can quickly re-calibrate itself by using SelfCal. SelfCal is an internally automated calibration technique that uses solid-state switches to measure calibration standards located inside the test set. The network analyzer's firmware automatically controls the SelfCal process at an interval you define. SelfCal re-calibrates your multiport system to the same measurement accuracy achieved immediately after performing a Test Set Cal, thus reducing the effects of test-system drift and improving overall measurement accuracy between Test Set Cals. Using Test Set Cal and SelfCal, you can:

- Easily reduce your overall calibration times by a factor of twenty or more
- Increase the amount of time a test station can be used for measuring devices — typically, by three days per month!

## Key Literature

HP 8712ET/ES and 8714ET/ES Brochure, p/n 5967-6316E  
HP 8712ET/ES and 8714ET/ES Technical Specifications, p/n 5967-6314E  
HP 8712ET/ES and 8714ET/ES Configuration Guide, p/n 5967-6315E  
HP 87050E Brochure, p/n 5968-4763E  
HP 87050E Technical Specifications, p/n 5968-4764E  
HP 87050E Configuration Guide, p/n 5968-4765E  
HP 87075C Brochure, p/n 5968-4766E  
HP 87075C Technical Specifications, p/n 5968-4767E  
HP 87075C Configuration Guide, p/n 5968-4768E

For more information, visit our web site: <http://www.hp.com/go/ena>

## Calibration Kits

Accuracy enhancement removes systematic errors by measuring known devices (standards) over the frequency range of interest. Kits for the HP 8712E family contain standards to characterize these errors.

### HP 85032 50 Ω Type-N Family

The HP 85032B 50 Ω type-N calibration kit contains male and female open circuit, short circuit, and fixed termination standards. Order Option 001 to delete the 7-mm to type-N adapters. The HP 85032E is a more economical version of this kit which contains only male standards.

### HP 85033D Option 002 3.5mm Calibration Kit

The HP 85033D Option 002 50 Ω 3.5-mm calibration kit contains male and female open circuit, short circuit, and fixed termination standards. The HP 85033D Option 002 also contains four type-N to 3.5 mm adapters.

### HP 85038 7-16 Family

The HP 85038A 7-16 calibration kit contains male and female open circuit, short circuit, and fixed termination standards. More economical versions of this kit are available: the HP 85038M contains only male standards, and the HP 85038F provides only female standards. Each kit contains a floppy disk with the calibration kit definition for use with the HP 8712, 8714, 8753, 8719, 8720, 8722, and 8510C network analyzers. The HP 11906B 7-16 to 50 Ω type-N adapter kit is recommended.

### HP 85036 75 Ω Type-N Family

The HP 85036B 75 Ω type-N calibration kit contains both male and female open circuit, short circuit, and fixed termination standards. The HP 85036E is a more economical version of this kit which contains only male standards.

### HP 85039 Type-F Family

The HP 85039B 75 Ω type-F calibration kit contains both male and female open circuit, short circuit, and fixed termination standards. The following adapters are also included: type-F (f-f), type-F (m-m), type-N (f) to type-F (m), and type-N (m) to type-F (f). A complete male set of standards (fixed-load, open, short) and (m-m) adapter can be ordered as HP 85039B Option 00M, and a complete female set as HP 85039B Option 00F.

Additional type-F adapters available: type-F (m) to type-N (m) (85039-60010), type-F (m) to type-F (f) (85039-60012), and type-F (f) to type-N (f) (85039-60014).