Errata

Title & Document Type: **35660A Dynamic Signal Analyzer Operating Manual Set**

Manual Part Number: **35660-90000**

Revision Date: **July 1988**

About this Manual

We've added this manual to the Agilent website in an effort to help you support your product. This manual provides the best information we could find. It may be incomplete or contain dated information, and the scan quality may not be ideal. If we find a better copy in the future, we will add it to the Agilent website.

HP References in this Manual

This manual may contain references to HP or Hewlett-Packard. Please note that Hewlett-Packard's former test and measurement, life sciences, and chemical analysis businesses are now part of Agilent Technologies. The HP XXXX referred to in this document is now the Agilent XXXX. For example, model number HP8648A is now model number Agilent 8648A. We have made no changes to this manual copy.

Support for Your Product

Agilent no longer sells or supports this product. You will find any other available product information on the Agilent Test & Measurement website:

www.agilent.com

Search for the model number of this product, and the resulting product page will guide you to any available information. Our service centers may be able to perform calibration if no repair parts are needed, but no other support from Agilent is available.

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HEWLETT PACKARD

HP 35660A Operating Manual Set

Includes:
Installation Guide
Getting Started Guide
Front-Panel Reference

Manual Part No. 35660-90000
Microfiche Part No. 35660-90200

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5. Record the "A Marker Y:" measurement as V1 on the test record.
6. Remove the 50Ω termination from the signal path and connect the output directly to channel 1.
7. Press

   < Start >

8. Record the "A Marker Y:" measurement as V2 on the test record.

$$Rs = R1 \left(\frac{V2 - V1}{V1}\right)$$

9. Use the following formula to calculate the source output resistance:

If This Test Fails

If this test fails, contact your local Hewlett-Packard sales and service office or have a qualified service technician see the following sections in the *HP 35660A Service Manual*:

Section III – Adjustments
None

Section VII – Service: Assembly Level
One or more of the following is the most likely cause of the analyzer's failure:

A1 Digital Processor

Chapter 4
HP 35660A Installation

Getting Ready

Incoming Inspection

The HP 35660A Dynamic Signal Analyzer was carefully inspected both mechanically and electrically before shipment. It should be free of marks or scratches and in perfect electrical order upon receipt. Shipped with the analyzer is the power cord and the plastic transportation disc, part number HP 1150-1787 (unless disc drive is deleted, see options).

Inspect the analyzer for physical damage incurred in transit. If the analyzer was damaged in transit, save all packing materials, file a claim with the carrier, and call your Hewlett-Packard sales and service office.

CAUTION *If the analyzer is mechanically damaged, the integrity of the protective earth ground may be interrupted. Do not connect the analyzer to power if it is damaged.*

Incoming Tests

WARNING **Before applying line power to the analyzer or testing its electrical performance, see Chapter 4, "Installation."**

Finish incoming inspection by testing the electrical performance of the analyzer using the operational verification or the performance tests in chapter 3 of this installation guide – "Operation Verification Tests and Performance Tests." The operation verification tests verify the basic operating integrity of the analyzer; these tests take about two hours to complete. The performance tests verify that the analyzer meets all the performance specifications; these tests take about four hours to complete.

Dimensions and Weight

Weight and dimension specifications are listed in Chapter 2, "Specifications."

Power Requirements

The analyzer can operate from a single-phase ac power source supplying voltages as shown in Table 4-1. With all options installed, power consumption is less than 280VA.

The line-voltage selector switch is set at the factory to match the most commonly used line voltage of the country of destination; the appropriate fuse is also installed. To check or change either the line-voltage selector switch or the fuse see Figure 4-1, Table 4-1, and the following procedures.

WARNING **Only a qualified service person, aware of the hazards involved, should measure the line voltage.**

CAUTION *Before applying ac line power to the analyzer, ensure the line-voltage selector switch (on the rear panel) is set for the proper line voltage and the correct line fuse is installed in the fuse holder.*

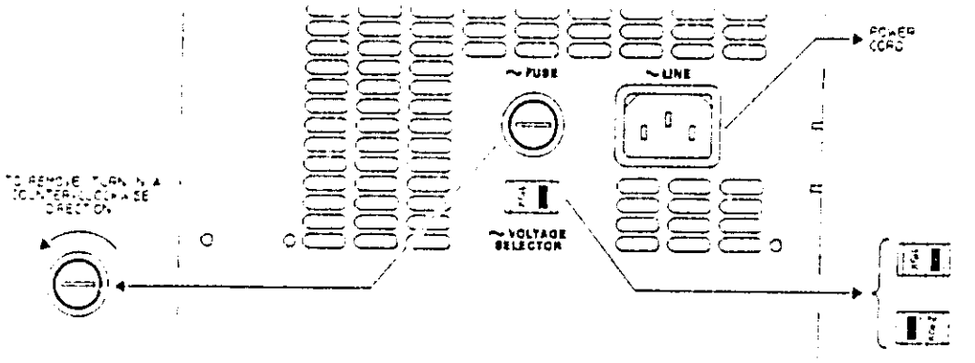


Figure 4-1 Voltage Selection and Fuse Replacement

Table 4-1 Line Voltage Ranges and Fuse Selection

AC Line Voltage Range	AC Line Voltage Frequency	Selector Switch	Fuse HP Part Number	Fuse Type
90-132Vac	48-440	115	2110-0056	6A 250V Fast Acting
180-264Vac	48-66	230	2110-0003	3A 250V Fast Acting

To change the line voltage selector switch:

See Figure 4-1 and Table 4-1

1. Unplug the power cord from the analyzer.
2. Slide the Line Voltage Selector switch to the proper voltage.

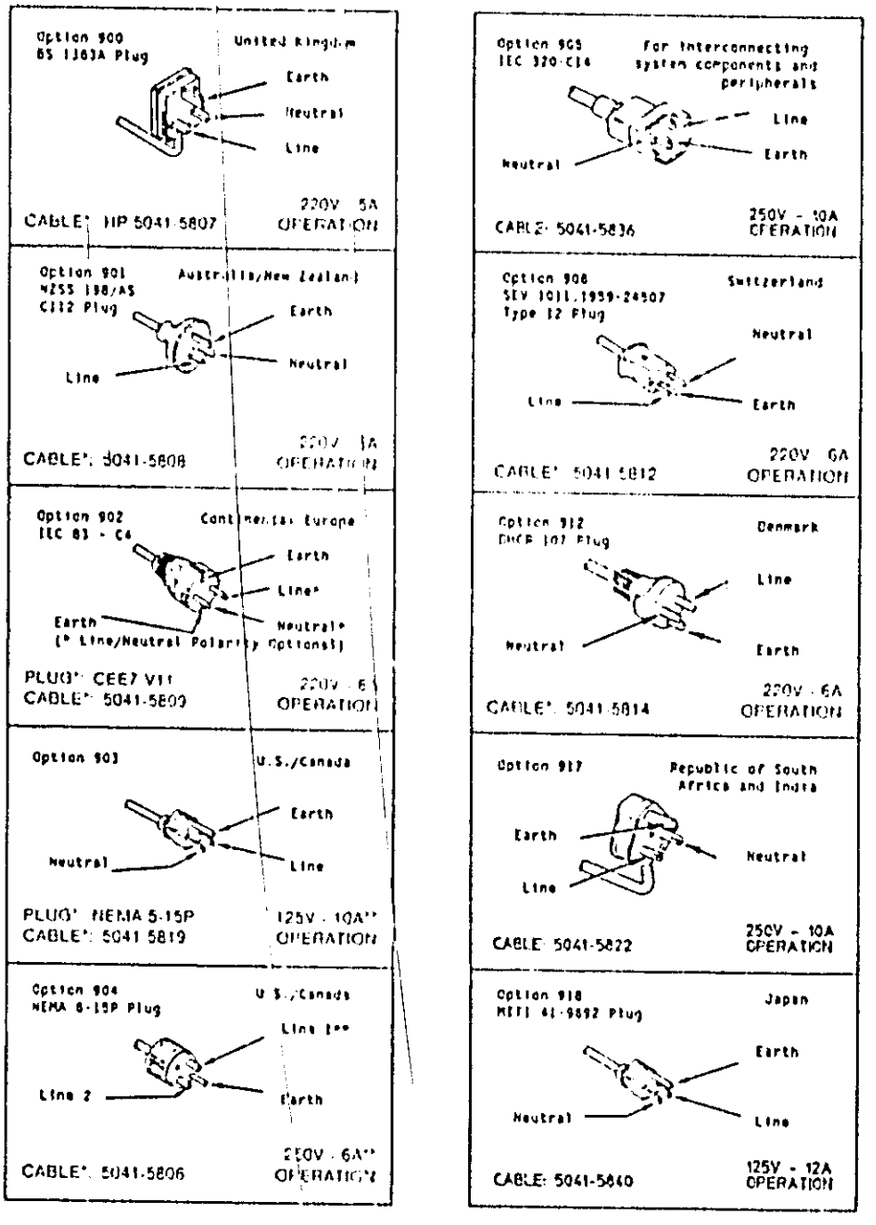
To change the fuse

See Figure 4-1 and Table 4-1

1. Unplug the power cord from the analyzer.
2. Using a small screw driver, turn the fuse holder cap to the left and remove, (counter-clockwise). When the fuse cap is free from the housing.
3. Pull the fuse from the fuse holder cap.
4. To reinstall, select the proper fuse and reverse the removal procedure.

Power Cable and Grounding Requirements

The analyzer is equipped with a three-conductor power cord which grounds the analyzer when plugged into an appropriate receptacle. The type of power cable plug shipped with each analyzer depends on the country of destination. See Figure 4-2 for the available power cables and plug configurations.



*The number shown for the plug is the industry identifier for the plug only. The number shown for the cable is an HP part number for a complete cable including the plug.
**UL listed for use in the United States of America

WARNING **The power cable plug must be inserted into an outlet provided with a protective earth terminal. Defeating the protection of the grounded analyzer cabinet can subject the operator to lethal voltages.**

Screen (CRT) Cleaning

The analyzer screen is covered with a mesh (this is not removable by the operator). Under normal operating conditions the only cleaning required will be an occasional dusting with a soft brush. A household-type tack cloth, or other type of lint remover, may also be used.

However, if a foreign material adheres itself to the screen, dampen a soft, lint-free cloth, with a mild detergent mixed in water, and carefully wipe the screen.

WARNING **Do not apply any water mixture directly to the screen or allow moisture to go behind the front panel. Moisture behind the front panel will severely damage the instrument.**

To prevent damage to the screen, do not use cleaning solutions other than the above.

Analyzer Cooling

Cooling air enters the analyzer through the left side and exhausts through the rear panel. Install the analyzer to allow free circulation of cooling air.

Installation

The analyzer is shipped with plastic feet in place, ready for use as a portable bench analyzer. The plastic feet are shaped to make full-width modular instruments self-align when they are stacked.

To install the analyzer in an equipment cabinet, follow the instructions shipped with the rack mount kit, option 908.

Turning on the HP 35660A

First, apply proper line power to the analyzer, then press the rocker-switch in the lower left-hand corner of the analyzer to ON (|). The analyzer requires a few minutes to warm up and self-calibrate before any message appears on the display.

When turning on the analyzer for the first time, run the analyzer self test to ensure proper operation, see Chapter 3, "Operation Verification Tests and Performance Tests."

For measurement specific information, or other operating information, see the *HP 35660A Getting Started Guide*, or other appropriate manual, see the documentation map included with the analyzer.

HP-IB System Interface Connections

The analyzer is compatible with the Hewlett-Packard Interface Bus (HP-IB). The HP-IB is Hewlett-Packard's implementation of IEEE Standard 488.2. The analyzer is connected to the HP-IB by connecting an HP-IB interface cable to the connector located on the rear panel. Total allowable transmission path length is 2 meters times the number of devices or 20 meters, whichever is less. Operating distances can be extended using an HP-IB Extender.

For additional HP-IB programming information, see the *HP 35660A HP-IB Programming Reference.*

CAUTION *The analyzer contains metric threaded HP-IB cable mounting studs as opposed to English threads. Use only metric threaded HP-IB cable lockscrews to secure the cable to the analyzer. Metric threaded fasteners are black, while English threaded fasteners are silver.*

Operating Environment

The operating and storage environment specifications for the analyzer, with and without the disc drive, are listed in this guide in Chapter 2, "Specifications."

WARNING **To prevent potential fire or shock hazard, do not expose the analyzer to rain or other excessive moisture.**

Protect the analyzer from moisture and temperatures or temperature changes which cause condensation within the analyzer.

NOTE The disc drive is designed for operation in a typical office environment. Use of the equipment in an environment containing dirt, dust, or corrosive substances will drastically reduce the life of the disc drive and the flexible discs. The discs should be stored in a dry, static-free environment.

Storage and Shipment

Storage

Store the analyzer in a clean, dry, and static free environment. For other requirements, see environmental specifications in Chapter 2, "Specifications."

Shipment

CAUTION *When transporting the analyzer (with disc drive), insert the plastic disc protector, part number HP1150-1787, into the disc drive to prevent damage.*

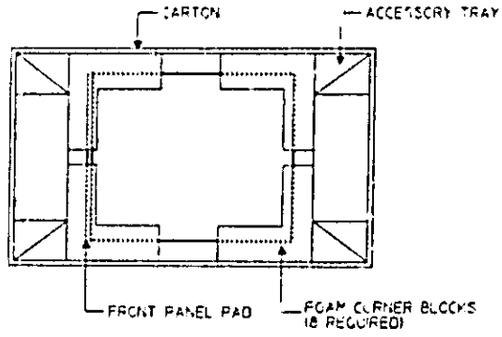


Figure 4-3 Repackaging for Shipment

Containers and materials identical to those used in factory packaging are available through Hewlett-Packard offices, see Figure 4-3. If the analyzer is being returned to Hewlett-Packard for service, attach a tag describing the type of service required, the return address, model number, and full serial number. Also, mark the container FRAGILE to ensure careful handling. In any correspondence, refer to the analyzer by model number and full serial number.

If it is necessary to package the analyzer in a container other than original packaging observe the following (use of other packaging is not recommended):

- Protect the front panel with cardboard and wrap the analyzer in heavy paper or anti-static plastic.
- Use a double-wall carton made of at least 350-pound test material and cushion the analyzer to prevent damage.
- Identify the shipment as above and mark FRAGILE.

CAUTION *Do not use styrene pellets in any shape as packing material for the analyzer. The pellets do not adequately cushion the analyzer and do not prevent the analyzer from shifting in the carton. In addition, the pellets create static electricity which can damage electronic components.*

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Hewlett-Packard Sales and Service Offices

To obtain Servicing information or to order replacement parts, contact the nearest Hewlett-Packard Sales and Service Office listed in HP Catalog, or contact the nearest regional office listed below:

In the United States

California
P.O. Box 4230
1421 South Manhattan Avenue
Fullerton 92631

Georgia
P.O. Box 105005
2000 South Park Place
Atlanta 30339

Illinois
5201 Tollview Drive
Rolling Meadows

New Jersey
W. 120 Century Road
Paramus 07652

In Canada
Hewlett-Packard (Canada) Ltd.
17500 South Service Road
Trans-Canada Highway
Kirkland, Quebec H9J 2M5

In France
Hewlett-Packard France
F-91947 Les Ulis Cedex
Orsay

In German Federal Republic
Hewlett-Packard GmbH
Vertriebszentrale Frankfurt
Berner Strasse 117
Postfach 560 140
D-6000 Frankfurt 56

In Great Britain
Hewlett-Packard Ltd.
King Street Lane
Winnersh, Wokingham
Berkshire RG11 5AR

In Other European Countries
Switzerland
Hewlett-Packard (Schweiz) AG
7, rue du Bois-du-Lan
Case Postale 365
CH-1217 Meyrin

In All Other Locations
Hewlett-Packard Inter-Americas
3155 Porter Drive
Palo Alto, California 94304