Installation Guide

For Safety Information, Warranties, and Regulatory information, see the pages at the back of this book.

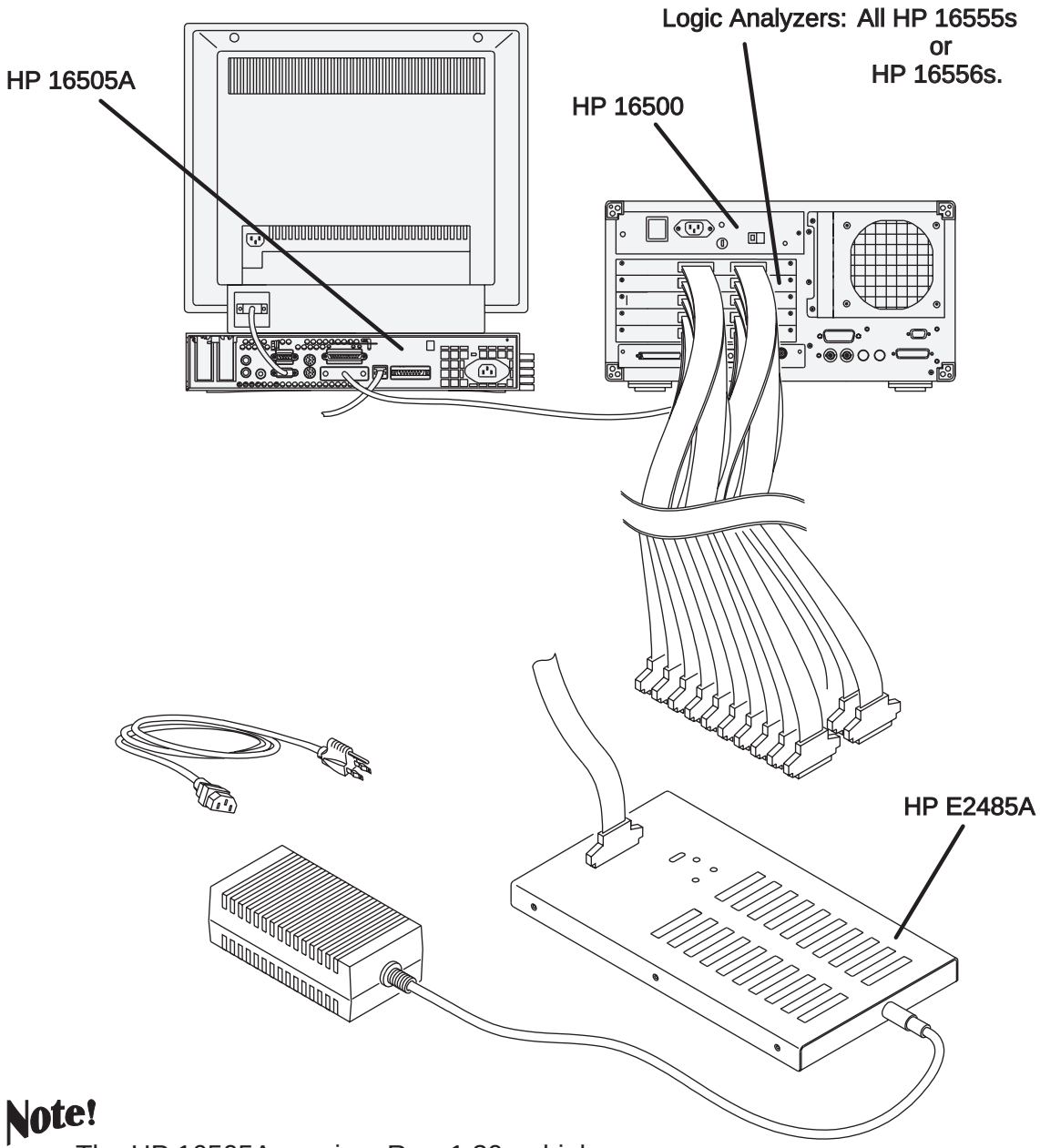
HP E2485A
Memory Expansion Interface

Publication Number E2485-97000

HEWLETT PACKARD

Table of Contents

System Overview

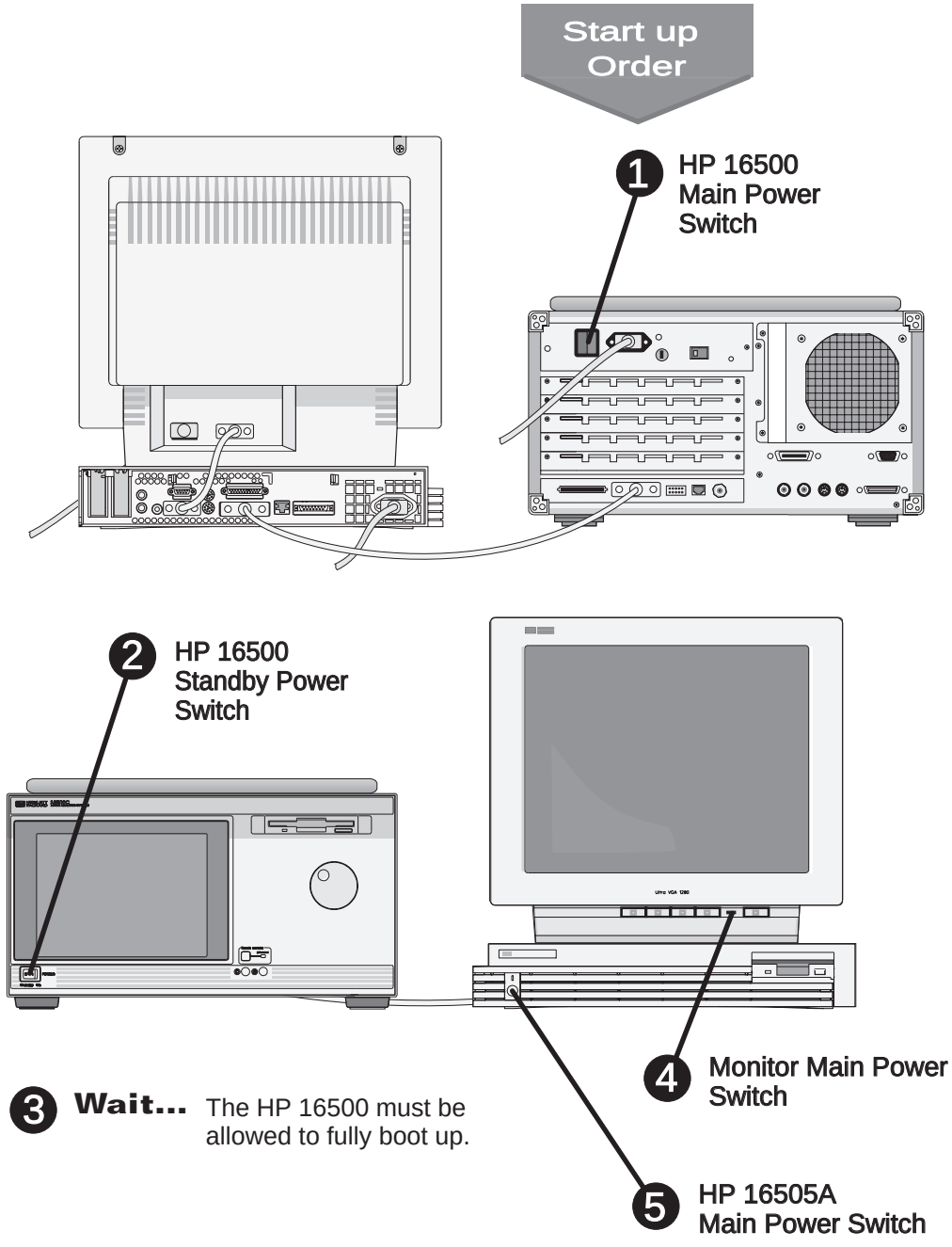


Note!

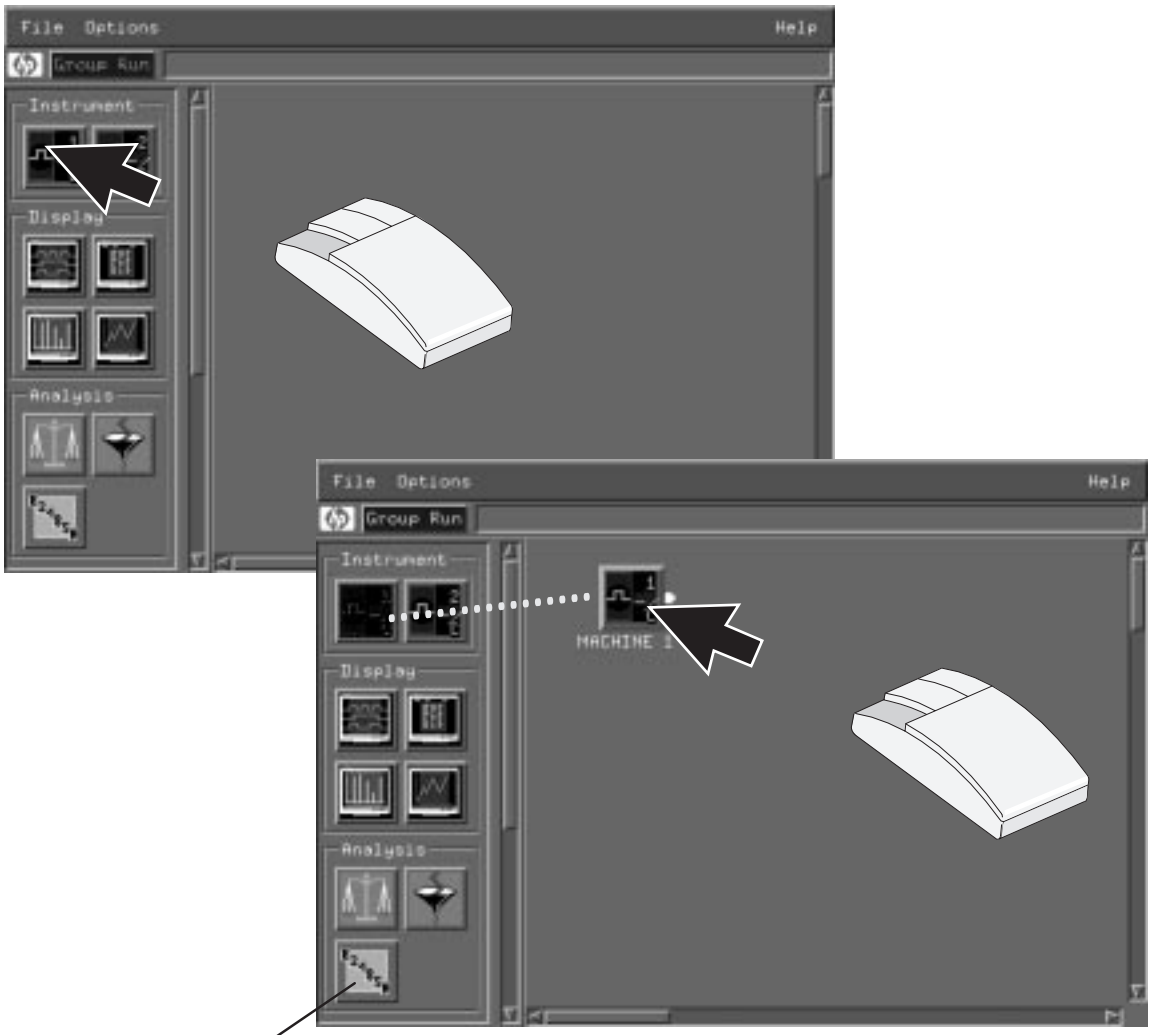
The HP 16505A requires Rev. 1.30 or higher (not included) and E2485A software installed.

Power up the HP 16505A.

Connecting the System

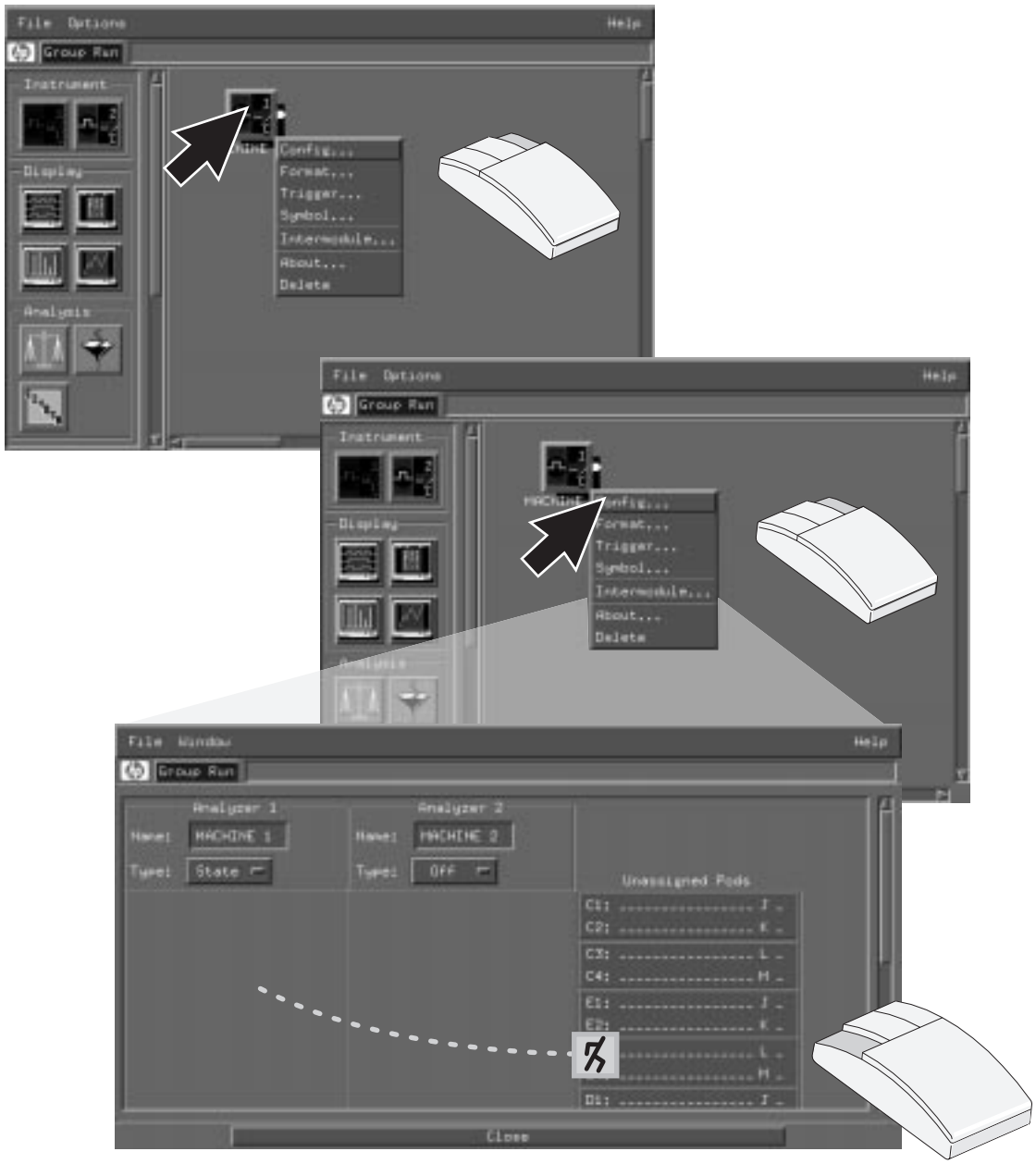


Drag the instrument icon that you intend to connect to onto the workspace.

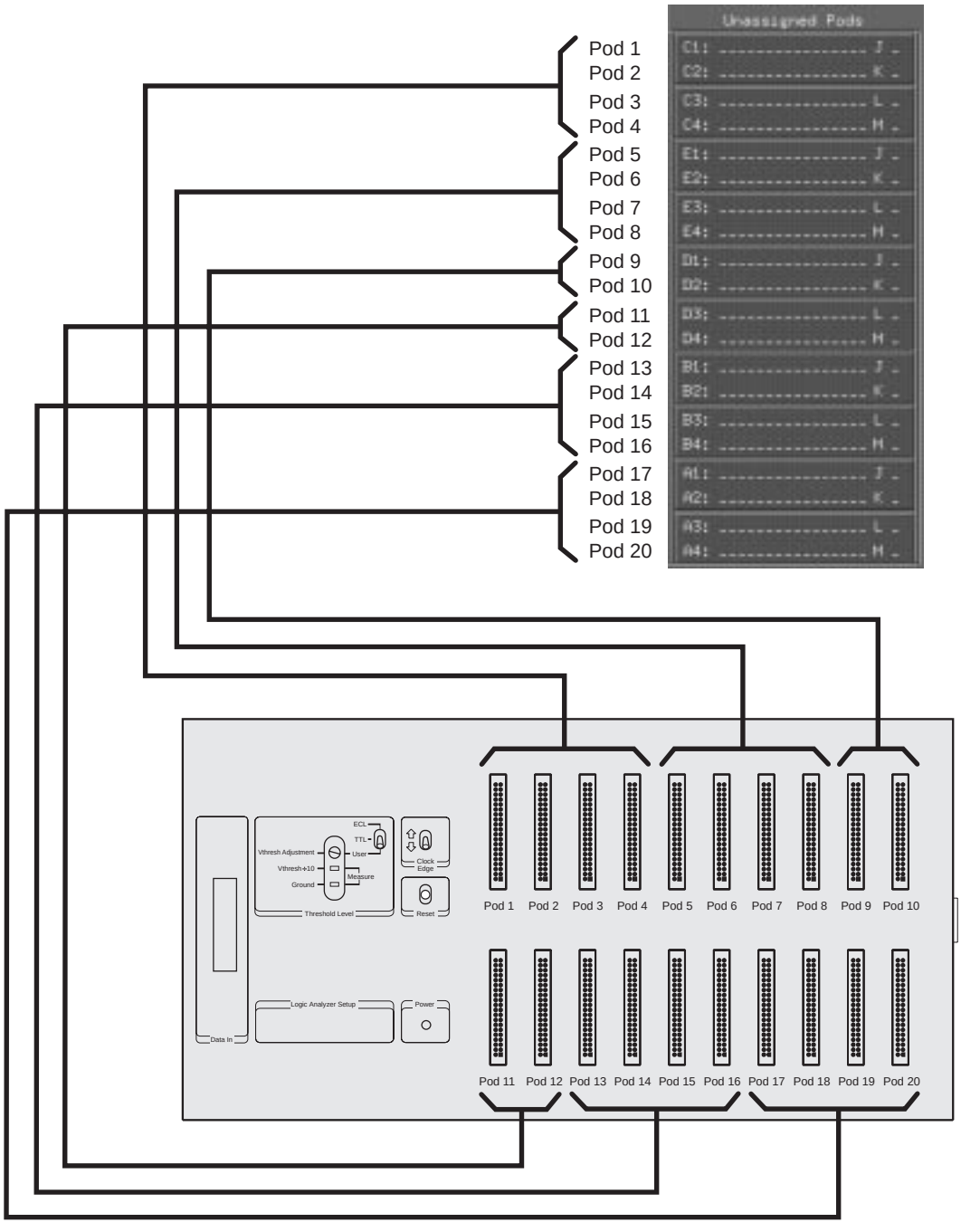


Note! If this icon does not appear in the toolbox, install the HP E2485A software now. See the installation instructions on pages 13-14.

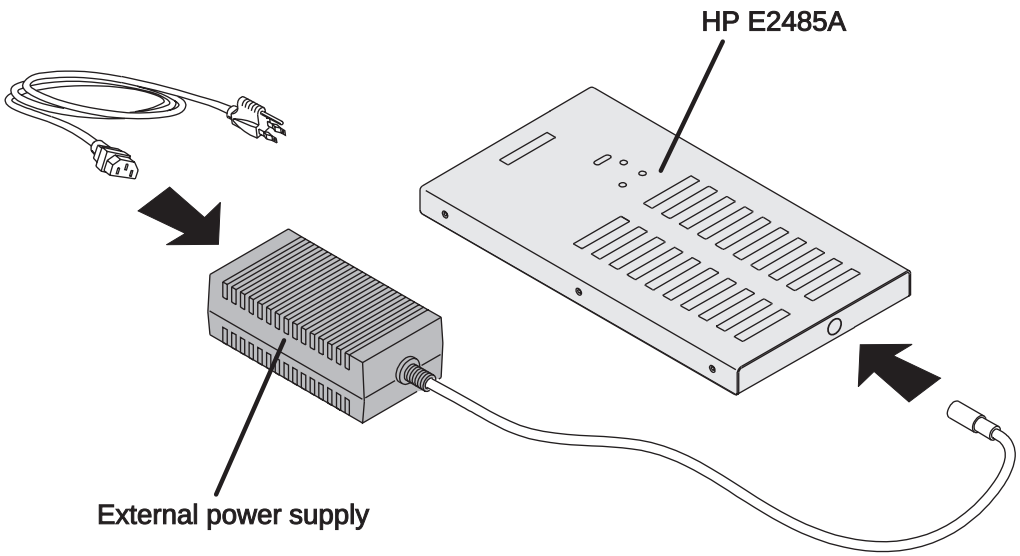
Open the Config menu and move all pods to the Unassigned Pods column.

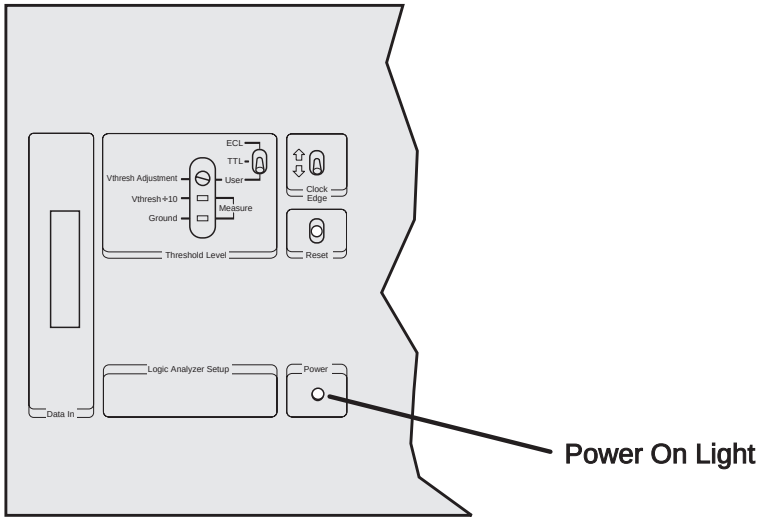


Connect the pods of a logic analyzer module.

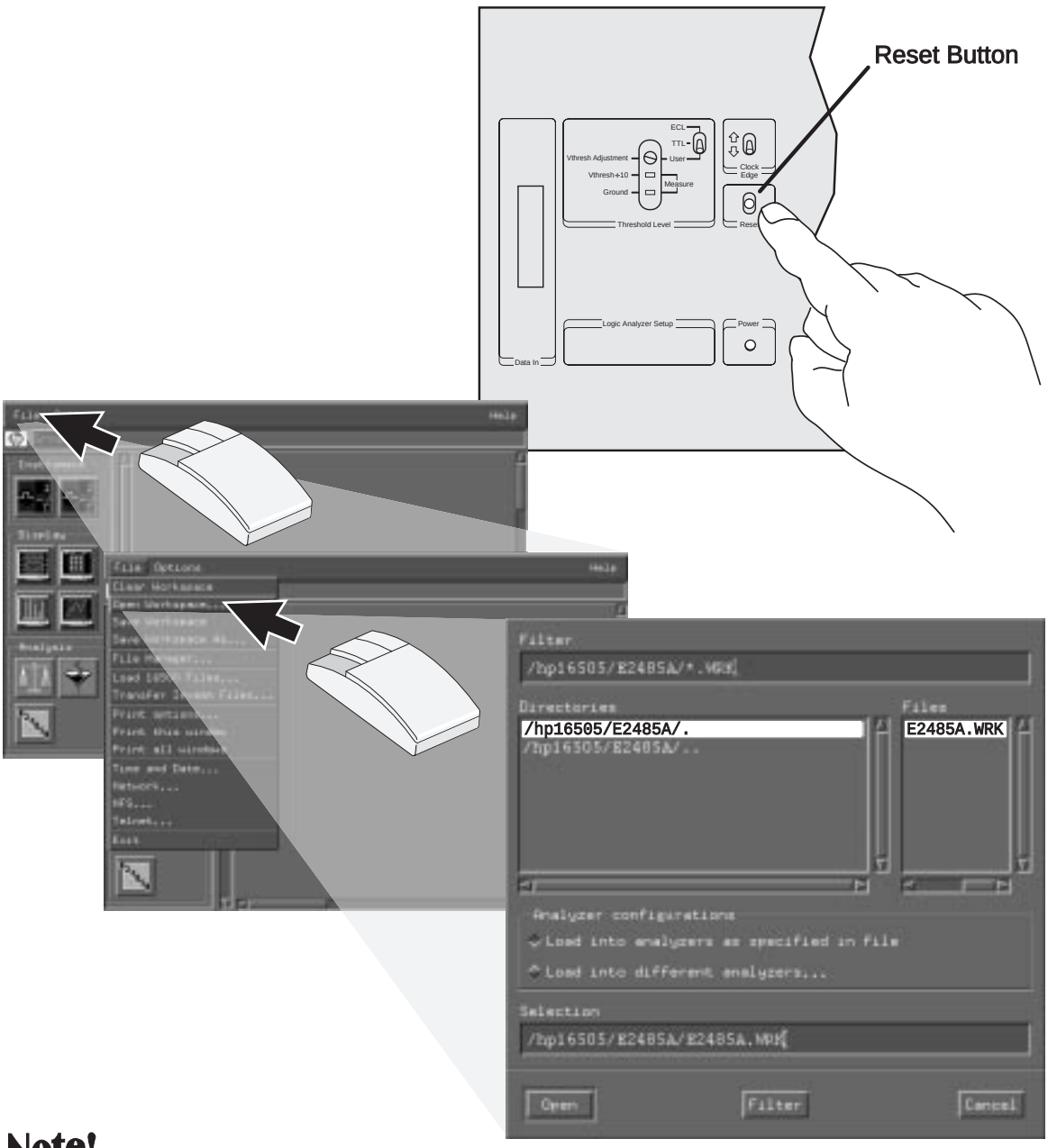


Connect the power supply.

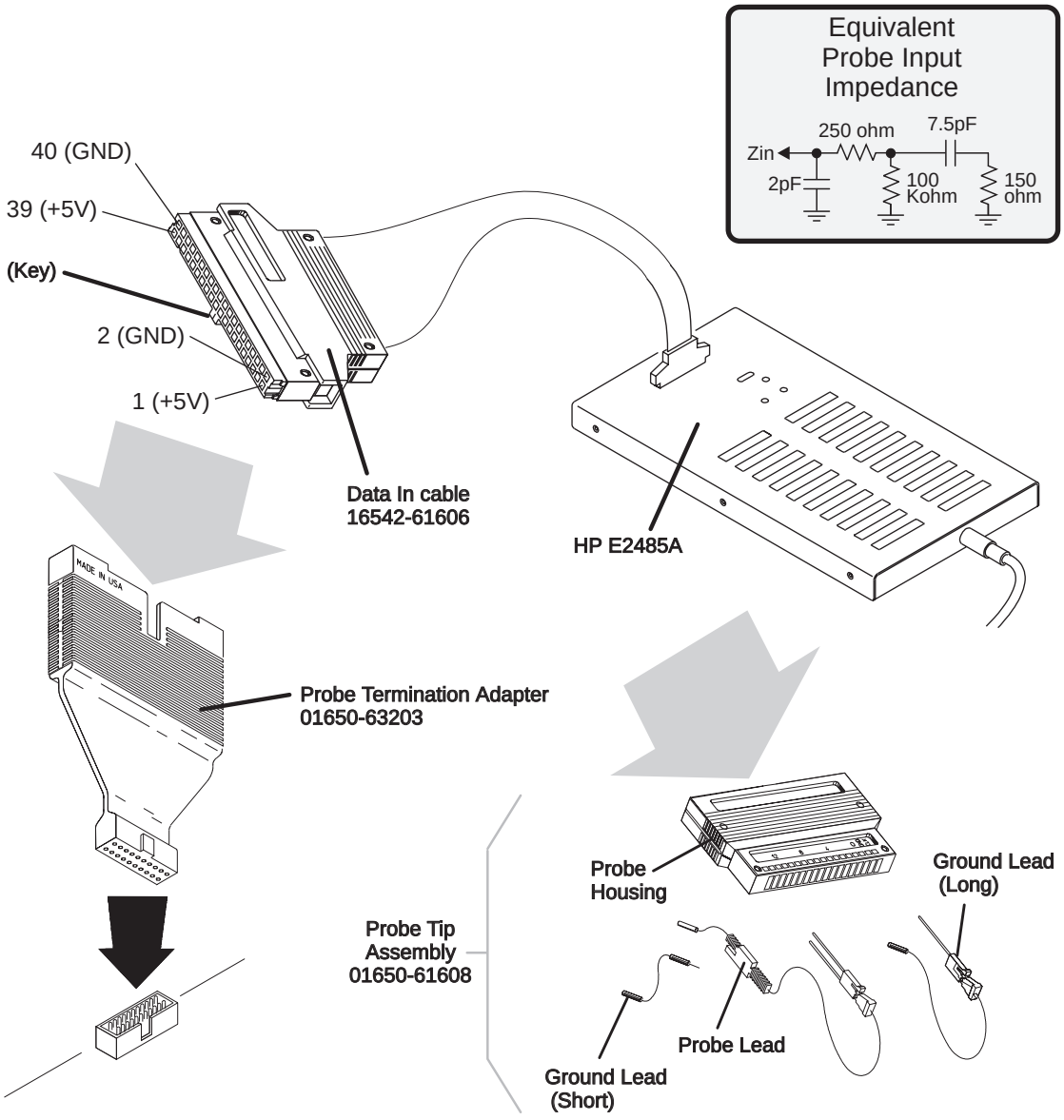




Press RESET to set the number of active pods and load a configuration file.



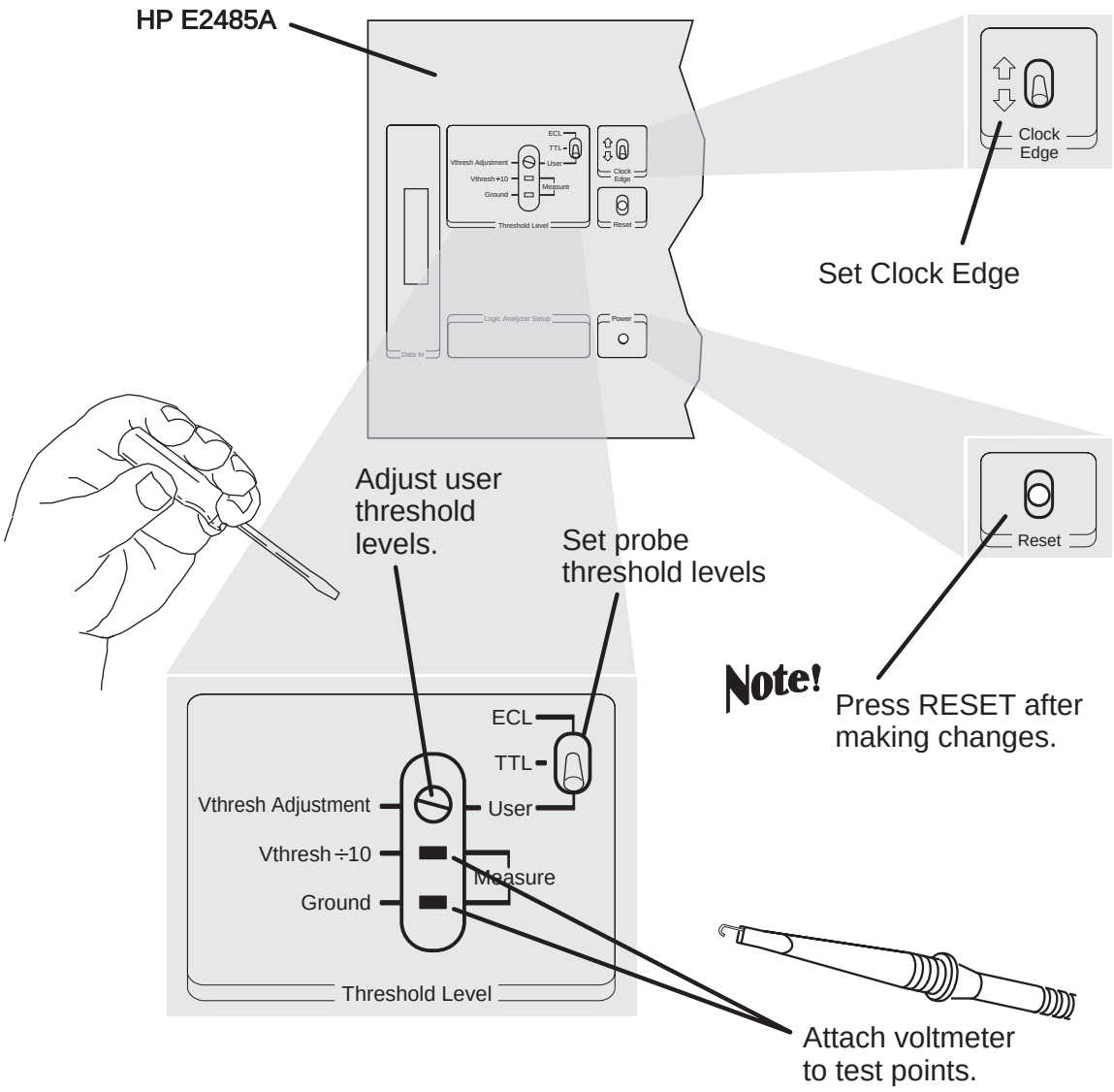
Note! See online help for information on complex measurement setups.



Note!

The HP E2485A uses the same probing equipment as the logic analyzer. For more information, see chapter 2, "Probing" in your logic analyzer's User's Reference.

Customizing Measurement Setup



Note! Vthresh is the threshold voltage of your target system. Data sent from the HP E2485A to the logic analyzer use TTL logic levels.

Note! The HP E2485A cannot sample on both clock edges.

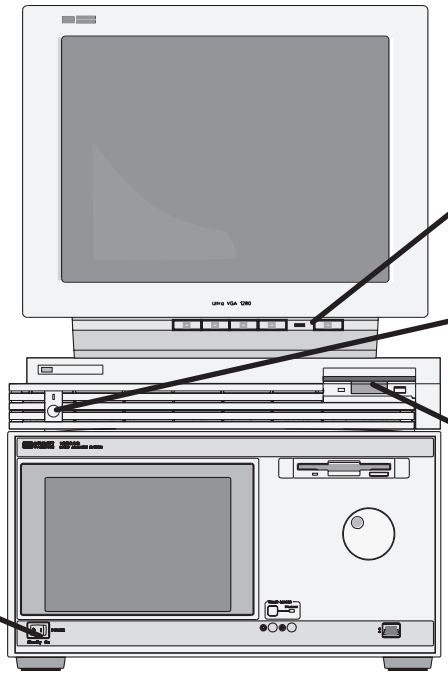
Installing the HP E2485A Software

Start up Order

1. Turn on the HP 16500 Standby Power Switch

2. **Wait...**

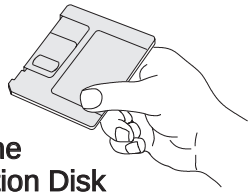
   The HP 16500 must be allowed to fully boot up.



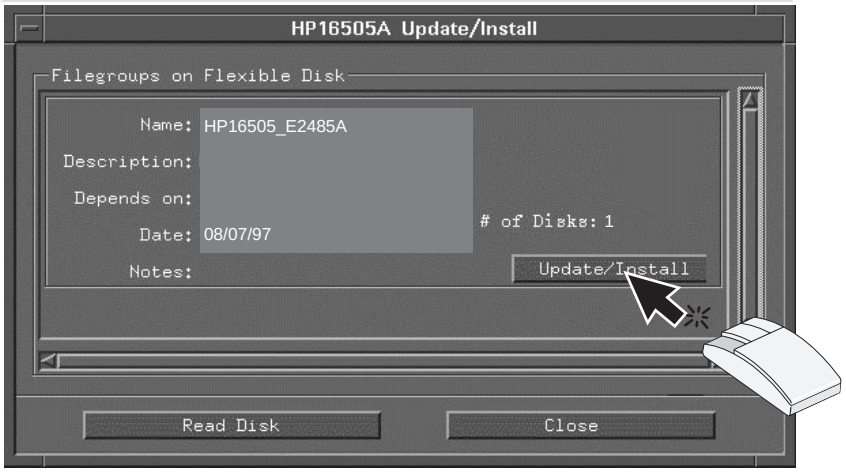
3. Monitor Main Power Switch

4. Prototype Analyzer Main Power Switch

5. Insert the Installation Disk



Click on the appropriate fields to begin the file installation.



Installation Complete

Running Without an HP 16505A

The HP E2485 Memory Expansion Interface hardware can be used without an HP 16505A. However, you will have to process the data to re-serialize it.

1. In the Config menu set the type of Analyzer 1 to State.

2. Set up labels for each pod connected to the HP E2485A. Each label should have 16 bits.

3. Set up a label called "StrPul" with bit 17 of pod 2 of the master card assigned to it.

4. In the Trigger menu, set up a term "Store" that is true when "StrPul" is 1.

5. Store only on "Store".

6. To re-serialize your data, download your preferred format. Re-integrate starting with the highest numbered pod.

For example, with one card (4 pods) counting from 0 to B :

Label	Pod 1	Pod 2	Pod 3	Pod 4
Sample 1	3	2	1	0
Sample 2	7	6	5	4
Sample 3	B	A	9	8

Specifications, Characteristics & Maintenance

Specifications

Specifications are the performance standards against which the instrument is tested. Characteristics are not specifications, but are included as additional information. This instrument has no specifications.

Characteristics

Maximum Memory Depth	40 M
Memory Depth Per Card	
HP 16555/6A	4 M
HP 16555/6D	8 M
Channel Count	16
Max. State Clock	100 MHz
Setup/Hold time	3.5 ns / 0 ns
Min. Clock Pulse Width	5 ns
Clocking	1 edge, rising or falling
Input Resistance	100 Kohm ±2%
Input Capacitance	approx. 8 pF
Operating Enviroment	0-50°C

Cleaning the State Analyzer

With the E2485A unplugged, use mild soap and water to clean the cabinet of the instrument. Harsh soap might damage the water-based paint. Do not immerse the instrument in water.

DECLARATION OF CONFORMITY

according to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name: Hewlett-Packard Company

Manufacturer's Address: Colorado Springs Division
1900 Garden of the Gods Road
Colorado Springs, CO 80907 USA

declares, that the product

Product Name: Logic Analyzer Memory Expansion

Model Number(s): HP E2485A

Product Options(s): All

conforms to the following Product Specifications:

Safety: IEC 1010-1:1990+A1 / EN 61010-1:1993
UL 3111
CSA-C22.2 No. 1010.1:1993

EMC: CISPR 11:1990 / EN 55011:1991 Group 1, Class A
IEC 555-2:1982 +A1:1985 / EN 60555-2:1987
IEC 555-3:1982 +A1:1990 / EN 60555-3:1987 + A1:1991
IEC 801-2:1991 / EN 50082-1:1992 4 kV CD, 8 kV AD
IEC 801-3:1984 / EN 50082-1:1992 3 V/m,{1kHz 80% AM, 27-1000 MHz}
IEC 801-4:1988 / EN 50082-1:1992 0.5 kV Sig. Lines, 1kV Power Lines

Supplementary Information:

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC and carries the CE marking accordingly.

This product was tested in a typical configuration with Hewlett-Packard test systems.

Colorado Springs, 06/11/97.

John Strathman, Quality Manager

European Contact: Your local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department ZQ / Standards Europe, Herrenberger Strasse 130, D-71034 Böblingen Germany (FAX: +49-7031-14-3143)

Product Regulations

Safety

IEC 1010-1:1990+A1 / EN 61010-1:1993
UL 3111
CSA-C22.2 No.1010.1:1993

EMC

This Product meets the requirement of the European Communities (EC) EMC Directive 89/336/EEC.

CE
ISM 1-A
N279

Emissions

EN55011/CISPR 11 (ISM, Group 1, Class A equipment)
IEC 555-2 and IEC 555-3

Immunity

EN50082-1	Code	Notes
IEC 801-2 (ESD) 8kV AD	3	
IEC 801-3 (Rad.) 3 V/m	3	
IEC 801-4 (EFT) 1kV	3	

Performance Codes:

1 PASS - Normal operation, no effect.
2 PASS - Temporary degradation, self recoverable.
3 PASS - Temporary degradation, operator intervention required.
4 FAIL - Not recoverable, component damage.

Sound Pressure Level

N/A

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Palo Alto, California 94304
U.S.A.

Document Warranty

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Hewlett-Packard makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability or fitness for a particular purpose.

Hewlett-Packard shall not be liable for errors contained herein or for damages in connection with the furnishing, performance, or use of this material.

Safety

This apparatus has been designed and tested in accordance with IEC Publication 1010, Safety Requirements for Measuring Apparatus, and has been supplied in a safe condition. This is a Safety Class I instrument (provided with terminal for protective earthing). Before applying power, verify that the correct safety precautions are taken (see the following warnings). In addition, note the external markings on the instrument that are described under "Safety Symbols."

Warning

- Before turning on the instrument, you must connect the protective earth terminal of the instrument to the protective conductor of the (mains) power cord. The mains plug shall only be inserted in a socket outlet provided with a protective earth contact. You must not negate the protective action by using an extension cord (power cable) without a protective conductor (grounding). Grounding one conductor of a two-conductor outlet is not sufficient protection.
- Only fuses with the required rated current, voltage, and specified type (normal blow, time delay, etc.) should be used. Do not use repaired fuses or short-circuited fuseholders. To do so could cause a shock or fire hazard.
- Service instructions are for trained service personnel. To avoid dangerous electric shock, do not perform any service unless qualified to do so. Do not attempt internal service or adjustment unless another person, capable of rendering first aid and resuscitation, is present.
- If you energize this instrument by an auto transformer (for voltage reduction), make sure the common terminal is connected to the earth terminal of the power source.
- Whenever it is likely that the ground protection is impaired, you must make the instrument inoperative and secure it against any unintended operation.
- Do not operate the instrument in the presence of flammable gasses or fumes. Operation of any electrical instrument in such an environment constitutes a definite safety hazard.
- Do not install substitute parts or perform any unauthorized modification to the instrument.
- Capacitors inside the instrument may retain a charge even if the instrument is disconnected from its source of supply.
- Use caution when exposing or handling the CRT. Handling or replacing the CRT shall be done only by qualified maintenance personnel.

Safety Symbols

Instruction manual symbol: the product is marked with this symbol when it is necessary for you to refer to the instruction manual in order to protect against damage to the product.

Hazardous voltage symbol.

Earth terminal symbol: Used to indicate a circuit common connected to grounded chassis.

WARNING

The Warning sign denotes a hazard. It calls attention to a procedure, practice, or the like, which, if not correctly performed or adhered to, could result in personal injury. Do not proceed beyond a Warning sign until the indicated conditions are fully understood and met.

CAUTION

The Caution sign denotes a hazard. It calls attention to an operating procedure, practice, or the like, which, if not correctly performed or adhered to, could result in damage to or destruction of part or all of the product. Do not proceed beyond a Caution symbol until the indicated conditions are fully understood or met.

Hewlett-Packard
P.O. Box 2197
1900 Garden of the Gods Road
Colorado Springs, CO. 80901

Product Warranty

This Hewlett-Packard product has a warranty against defects in material and workmanship for a period of one year from date of shipment. During the warranty period, Hewlett-Packard Company will, at its option, either repair or replace products that prove to be defective.

For warranty service or repair, this product must be returned to a service facility designated by Hewlett-Packard.

For products returned to Hewlett-Packard for warranty service, the Buyer shall prepay shipping charges to Hewlett-Packard and Hewlett-Packard shall pay shipping charges to return the product to the Buyer. However, the Buyer shall pay all shipping charges, duties, and taxes for products returned to Hewlett-Packard from another country.

Hewlett-Packard warrants that its software and firmware designated by Hewlett-Packard for use with an instrument will execute its programming instructions when properly installed on that instrument. Hewlett-Packard does not warrant that the operation of the instrument software, or firmware will be uninterrupted or error free.

Limitation of Warranty

The foregoing warranty shall not apply to defects resulting from improper or inadequate maintenance by the Buyer, Buyer-supplied software or interfacing, unauthorized modification or misuse, operation outside of the environmental specifications for the product, or improper site preparation or maintenance.

No other warranty is expressed or implied. Hewlett-Packard specifically disclaims the implied warranties of merchantability or fitness for

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The remedies provided herein are the buyer's sole and exclusive remedies. Hewlett-Packard shall not be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory.

Assistance

Product maintenance agreements and other customer assistance agreements are available for Hewlett-Packard products. For any assistance, contact your nearest Hewlett-Packard Sales Office.

Certification

Hewlett-Packard Company certifies that this product met its published specifications at the time of shipment from the factory. Hewlett-Packard further certifies that its calibration measurements are traceable to the United States National Institute of Standards and Technology, to the extent allowed by the Institute's calibration facility, and to the calibration facilities of other International Standards Organization members.

About this edition

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New editions are complete revisions of the manual. Update packages, which are issued between editions, contain additional and replacement pages to be merged into the manual by you. The dates on the title page change only when a new edition is published. A software or firmware code may be printed before the date. This code indicates the version level of the software or firmware of this product at the time the manual or update was issued. Many product updates do not require manual changes; and, conversely, manual corrections may be done without accompanying product changes. Therefore, do not expect a one-to-one correspondence between product updates and manual updates.