

Keysight Technologies 85043A System Rack

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WARNING

A **WARNING** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a **WARNING** notice until the indicated conditions are fully understood and met.

HP 85043A System Rack
Installation Manual

For use with

HP 8510 Vector Network Analyzers

SERIAL NUMBERS

This manual applies to HP 85043A system racks with serial number prefix 3044A. For a rack with an *earlier* (or no) serial number prefix, see appendix A. A rack with a *later* prefix requires a manual change supplement (copies are available from Hewlett-Packard upon request).



HP Part No. 85043-90001
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Edition 2

Warranty

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

For warranty service or repair, this product must be returned to a service facility designated by HP. Buyer shall prepay shipping charges to HP and HP shall pay shipping charges to return the product to Buyer. However, Buyer shall pay all shipping charges, duties, and taxes for products returned to HP from another country.

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For any assistance, contact your nearest Hewlett-Packard Sales and Service Office. Addresses are provided at the back of this manual.

Safety Considerations

General

This product and related documentation must be reviewed for familiarization with safety markings and instructions before operation. This product has been designed and tested in accordance with international standards.

Safety Symbols



Instruction manual symbol: the product will be marked with this symbol when it is necessary for the user to refer to the instruction manual (refer to Table of Contents).



Indicates hazardous voltages.



Indicates earth (ground) terminal.

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** sign until the indicated conditions are fully understood and met.

Safety Earth Ground

This is a Safety Class I product (provided with a protective earthing terminal). An uninterruptible safety earth ground must be provided from the main power source to the product input wiring terminals, power cord, or supplied power cord set. Whenever it is likely that the protection has been impaired, the product must be made inoperative and secured against any unintended operation.

Before Applying Power

Verify that the product is configured to match the available main power source per the input power configuration instructions provided in this manual.

If this product is to be energized via an autotransformer make sure the common terminal is connected to the neutral (grounded side of the mains supply).

Servicing

Any servicing, adjustment, maintenance, or repair of this product must be performed only by qualified personnel.

Adjustments described in this manual may be performed with power supplied to the product while protective covers are removed. Energy available at many points may, if contacted, result in personal injury.

Capacitors inside this product may still be charged even when disconnected from their power source.

To avoid a fire hazard, only fuses with the required current rating and of the specified type (normal blow, time delay, etc.) are to be used for replacement.

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General Information

The HP 85043A system rack is designed to rack-mount an HP 8510 network analyzer system. Use the procedures in this manual to:

1. Install instruments in the rack.
2. Finish the mechanical assembly of the rack.
3. Make the electrical connections in and to the rack.

Serial Number

Each system rack has a serial number label attached inside the cabinet door. The first four numbers and a letter comprise the serial number prefix; the last five digits are the serial number unique to each rack. Give both parts of the serial number in any reference to your rack.

System Racks Documented in this Manual

This manual applies to any HP 85043A system rack whose serial prefix is listed on the title page. A rack with an unlisted serial prefix is different from those documented, and the manual for that rack is supplied with a manual changes supplement that documents the difference(s).

Power Capability

Table 1-1 lists the power handling capability of the system rack. For the power requirements of your system, refer to the HP 8510 documentation. Be sure that the rack can handle the power required by your system *before* you connect the rack to line power.

Table 1-1. System Rack Power Capability

Power Strip Maximum Rating (VA)	Circuit Breaker (A)
1200	10

Incoming Inspection

Uncrate the system rack cabinet as shown in the installation section of the HP 8510 system documentation, or the HP 8510 on-site service manual. The cabinet is shipped with the instrument support rails, blank front panels, drawer, air baffle, and 3-conductor main power cable installed. Use Table 1-2 to verify the completeness of your shipment.

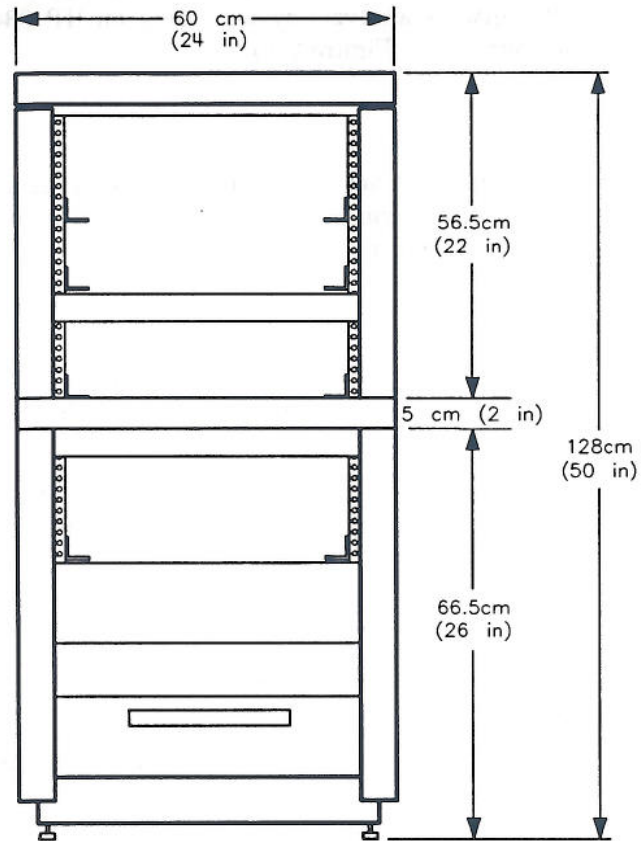
If the shipment is damaged or incomplete, save all packing material and contact the nearest Hewlett-Packard office (listed at the end of this manual). Hewlett-Packard will arrange for repair or replacement of damaged or incomplete shipments without waiting for a settlement from the transportation company.

Table 1-2. Shipment Verification List

Description	Qty	HP Part Number
Cabinet Assembly (With instrument support rails, blank front panels, drawer, air baffle, and main power cable installed.)	1	85043-60013
Work Surface	1	85043-00030
Support Rail	2	85043-00031
Filler Panels		
Right Filler Panel	1	85043-00028
Left Filler Panel	1	85043-00029
Antistatic Mat Kit	1	85043-80003
Extra Blank Front Panel 3.5 in (88.9 mm)	2	85043-00047
Rack Mounting Kits		
3.5 in Mounting Kit	1	5060-8739
5.25 in Flange Kit	4	5062-4071
7 in Flange Kit	2	5062-4072
Foam Pads		
T-shaped 3.75 x 17.5 x 2 in	1	85043-80010
Rectangle 2 x 17.5 x 2 in	2	85043-80011
U-shaped 5.25 x 21.75 x 4 in	1	85043-80012
Cables and Power Cords		
HP-IB Cable 1m (3.3 ft)	2	8120-3445
Instrument Power Cord 3-conductor 905-0	4	8120-1396
Instrument Power Cord 3-conductor 905-8	1	8120-1860
Dress Screw 10/32 pan head Phillips 0.625-in-il (Most of these screws are already installed.)	24	0570-1366
HP 85043A Manual	1	85043-90001

Dimensions and Required Clearances

Figure 1-1 specifies both the dimensions of the system rack and the clearances required for proper ventilation.



WORK SURFACE

Width = 60 cm (24 in)
Depth = 35 cm (14 in)

ADDITIONAL INFORMATION

Depth of cabinet = 80 cm (32 in)
Depth including work surface = 115 cm (45 in)
Total depth with rear door open = 175 cm (69 in)

REQUIRED CLEARANCES

Minimum rear clearance required for ventilation = 15 cm (6 in)
Minimum side clearance required for ventilation, each side = 15 cm (6 in)

Figure 1-1. System Rack Dimensions and Required Clearances

Instrument Configurations

Basic Configuration

The instrument support rails and the blank front panels of the system rack are shipped configured for an HP 8510C network analyzer system using an HP 8340, 8341, or 836xx synthesized sweeper as the source (see Figure 2-1).

Modified Configurations

If you are installing an HP 8510A or B network analyzer system, or are using an HP 8350 sweep oscillator as the system source, you must add blank front panels. These changes are documented in the installation procedure.

Other Configurations

The system rack was designed for one configuration of the HP 8510 network analyzer system; other configurations of the system in this rack can result in overheating, which adversely affects electrical and mechanical specifications.

You can also use the system rack to hold instruments other than those in an HP 8510 network analyzer system, but be aware that you should *first* make careful temperature and air-flow tests of the proposed configuration.

Periodic Maintenance

Regularly inspect the air filter on the cabinet door. Replace it at least once a year, more often as needed (see Table 5-1 for the replacement part number).

Installing Instruments

Introduction

Caution

The instruments you will install are large and heavy. To prevent damage to the instruments or injury to yourself, have someone help you put the instruments into the rack.

Also note that, unlike some rack systems, the HP 85043A rack must be in its normal, upright position when you install the instruments. *Do not* install instruments when the rack is on its side or back; this can damage both the instruments and the rack.

Tools Required

You will need the following tools to install the instruments:

- One medium-size Pozidriv screwdriver.
- One medium-size Phillips screwdriver.
- One small flat-blade screwdriver.
- The installation section of the HP 8510 documentation.

Instrument Preparation

Before you can install the instruments in the rack, you must do the following:

1. Remove all instrument feet and lock feet.
2. If the source is an HP 8350, remove the instruction card assembly attached to the bottom of the instrument.
3. Install rack mount flanges. An instruction sheet is packed with each rack mount flange kit.

If space is limited, you can install the rack mount flanges on each instrument as you place it on the support rails in the rack.

Procedure

1. To prevent the rack cabinet from rolling, fully extend the four lock feet (see Figure 2-1).
2. Install the source in the rack above the 5-inch blank panel.
3. If the source is an HP 8350 sweep oscillator, install a 1.75-inch blank panel above the source.
4. Using 10/32 dress screws, securely attach the source.
5. Install the following instruments, beginning at the *top* of the rack (see Figure 2-1):
 - a. If the analyzer is an HP 8510A or B, install a 1.75-inch blank panel at the top of the rack.
 - b. Install the display/processor below the blank panel (HP 8510A or B), or at the top of the rack (HP 8510C).
 - c. Install the IF detector below the display/processor.
 - d. Install the test set below the IF detector.
 - e. Using 10/32 dress screws, securely attach the instruments.
6. From the rear, install the foam baffling pads:
 - a. If the source is an HP 8340 or 836xx:
 - i. Insert a rectangular pad above the test set.
 - ii. Insert the T-shaped pad above the source.
 - iii. Push both pads forward so that the back of the pads line up with the back of the instruments. Slots cut into the sides of the T-shaped pad let it fit over the instrument support rails.
 - b. If the source is an HP 8350:
 - i. Insert the rectangular pad above the test set.
 - ii. Insert the U-shaped pad above the source. The side pieces of this pad fit between the sides of the cabinet and the instrument.
 - iii. Push both pads forward so that the back of the pads line up with the back of the instruments.
 - iv. Insert the T-shaped pad above the U-shaped pad. Slots cut into the sides of the this pad let it fit over the instrument support rails. Push the pad forward so that it lines up with the back of the instruments.
 - c. If the analyzer is an HP 8510A or B, install the remaining rectangular pad above the display/processor.
7. Continue with Chapter 3.

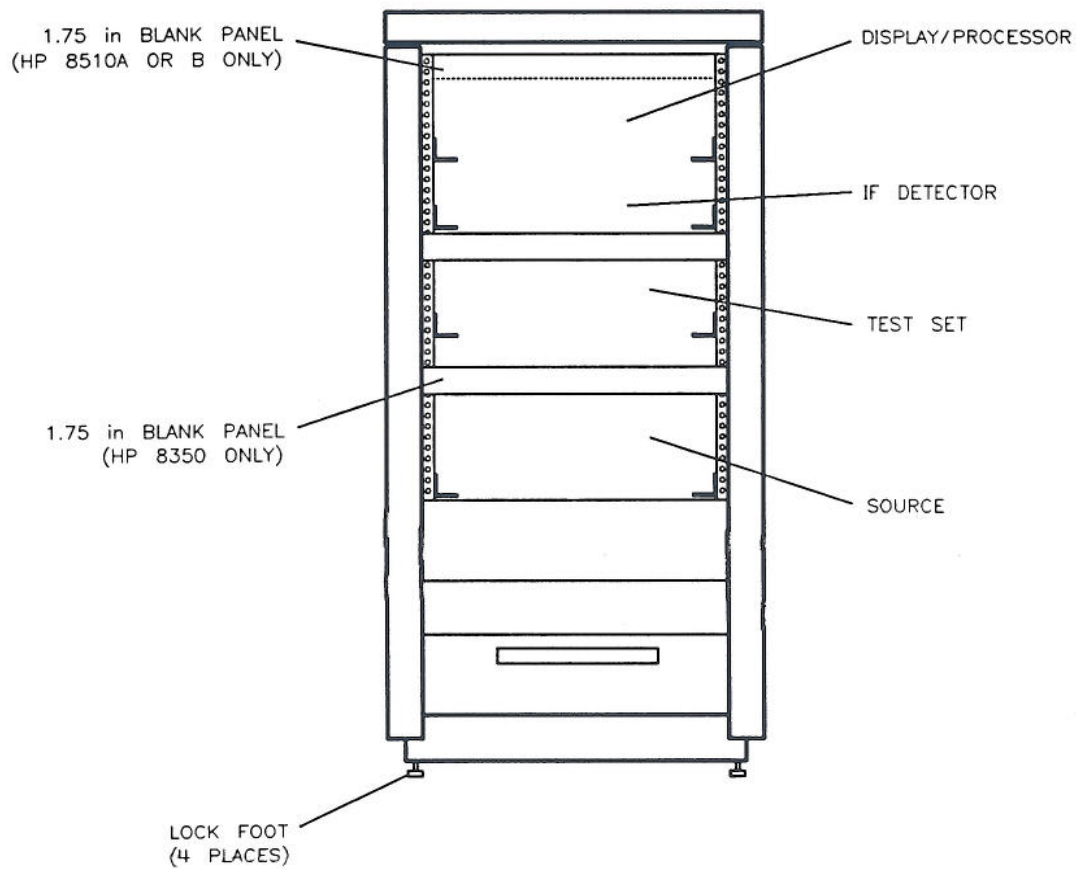


Figure 2-1. Installing Instruments

Mechanical Assembly

Introduction

The system rack is shipped almost completely assembled. Use the following procedure to complete the assembly.

Tools Required

You will need the following tools to complete the rack assembly:

- One medium-size Pozidriv screwdriver.
- One medium-size Phillips screwdriver.

Procedure

Note



The hardware required to attach the work surface rails is shipped in the box with the work surface.

1. Attach the right and left filler panels to the outside of the support rails (see Figure 3-1):
 - a. Lay the rails down in the position they will have when they are installed on the rack:
 - i. Face the rails inward, toward each other.
 - ii. Place each rail so that the end with a row of holes is toward the front, and the end with a keyhole-shaped cutout is toward the rear.
 - b. Position each filler panel (right and left) so that the small end of the panel is toward the rear of the support rail.
 - c. Attach each filler panel to the rail with two 0.5-inch long, 10/32 Pozidriv screws, and two external-tooth lock washers.
2. Attach the work surface support rails to the inside of the cabinet:
 - a. Pass the large end of the keyhole-shaped cutout in one rail over the shoulder screw mounted inside the cabinet.
 - b. Slide the rail fully toward the rear of the cabinet.
 - c. Using one 0.5-inch long, 10/32 Pozidriv screw, one split lock washer, and one flat washer, *loosely* attach the rail to the cabinet.
 - d. Repeat the previous three steps for the second support rail.

- e. Make sure that the rails are level.
 - f. Tighten the screws (you may need to hold each rail in place as you tighten the screws).
3. Attach the work surface:
- a. Slide the work surface onto the support rails: hold out the two spring-loaded pins underneath the sides of the work surface, and slide the work surface all the way back onto the rails. The work surface should come to rest against the front of the rack.
 - b. From under the work surface, attach the shoulder screws to the support rails, one on each side at the front. These screws stop the forward travel of the work surface to prevent it from sliding off the support rails as you adjust it.
 - c. Check that the work surface is steady and level. As required, adjust and retighten the support rail attaching screws.
4. Adjust the depth of the work surface:
- a. Reach underneath each side of the work surface, near the front edge.
 - b. Locate the spring-loaded pin on each side.
 - c. Pull both pins out, toward the outside edges of the work surface.
 - d. Slide the work surface in or out as desired.
 - e. When the work surface is the desired depth, release the pins and slide the work surface in or out slightly until the pins engage in the holes in the support rails.
5. Install the anti-static mat:
- a. Lay the mat flat on the work surface.
 - b. Connect the ground wire to the 10/32 ground stud located below the work surface, on the left-hand side of the cabinet.
6. Continue with Chapter 4.

Note

A procedure to attach an equipment table to the work surface is documented later in this chapter (see “Attaching an Equipment Table”). It is easiest, however, to fully install the test equipment, then attach the larger work area.

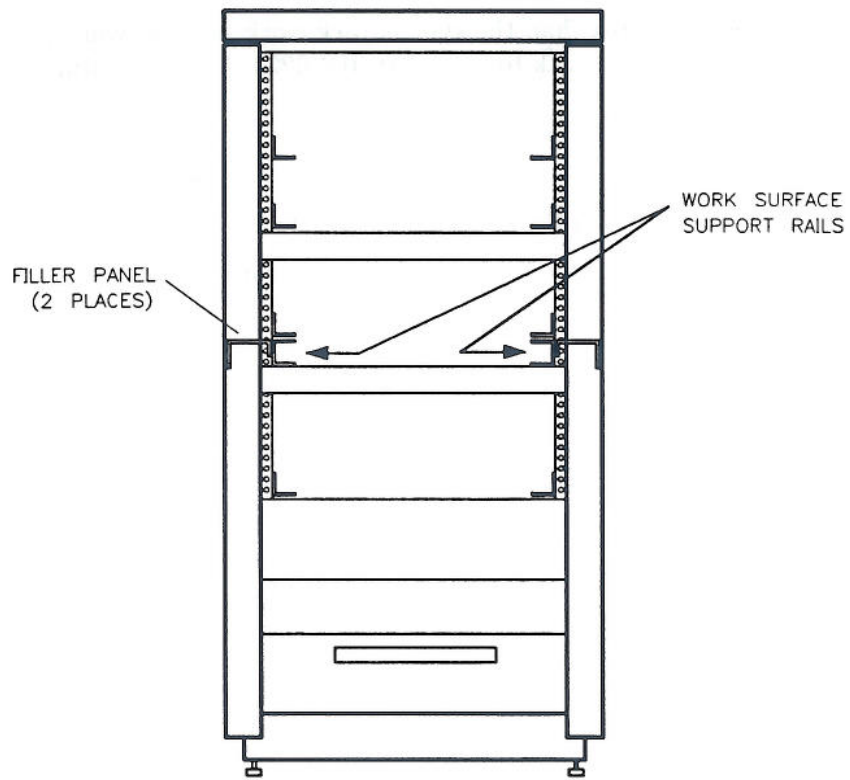


Figure 3-1. Mechanical Assembly

Attaching an Equipment Table

If you require a larger work area than the system rack work surface, you can use the U-shaped attaching clip provided with the rack to secure an HP 92214A/B/C equipment table to either side of the work surface.

Procedure

1. Decide whether you will attach the equipment table to the work surface:
 - a. If you wish to attach the table in the side-by-side position (see Figure 3-2), go to step 3.

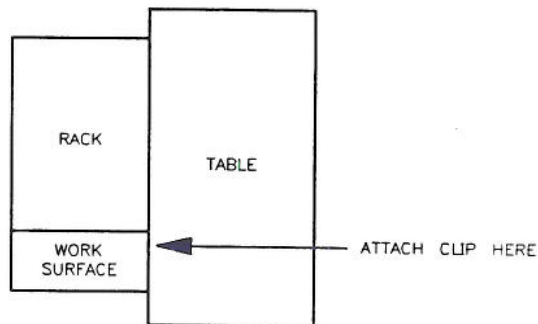


Figure 3-2. Side-By-Side-Position Table Attachment

- b. If you wish to attach the table in the L-shaped position (see Figure 3-3), continue with step 2.

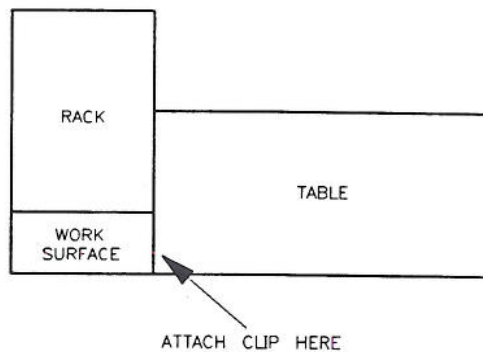


Figure 3-3. L-Shaped-Position Table Attachment

2. If you want to attach the equipment table in the L-shaped position, engage the *uncoated* end of the table attaching clip over the indentation toward the *front* of the work surface (see Figure 3-4). Continue with step 4.

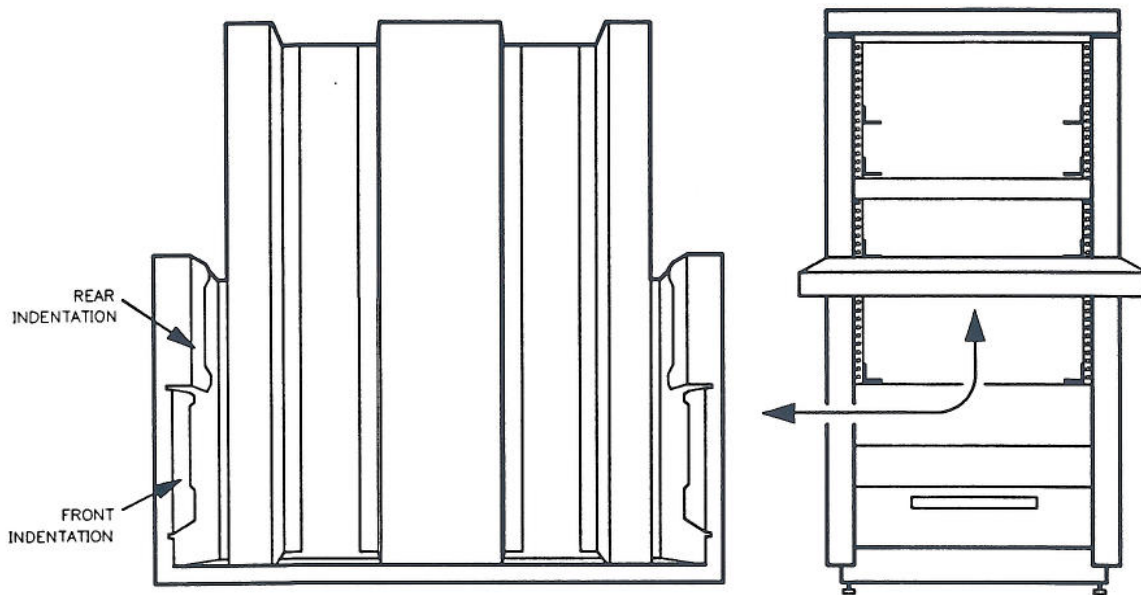


Figure 3-4. Work Surface Indentations; Table Clip Attachment Points

3. If you want to attach the equipment table in the side-by-side position, engage the *uncoated* end of the table attaching clip over the indentation toward the *rear* of the work surface (see Figure 3-4). Continue with step 4.
4. Ensure that the open part of the clip faces outward, and the vinyl-coated handle is on the side of the work surface that you want the table to be attached to. The clip fits into the indentation on the work surface and hangs straight down underneath the work surface.
5. Push the table flush against the work surface in the desired position.
6. From under the table, grasp the attaching clip handle and push it upward, over the underside edge of the table. The attaching clip should snap into place, securely attaching the table to the work surface.

Electrical Connections

Instrument Interconnections

Refer to the instrument interconnections described in the installation section of the HP 8510 documentation. Rack mounting and bench configurations use the same interconnection cables and instrument interconnection sequences, but different ac power cables are used in rack mounting.

The following procedure lists the steps to follow in applying ac power to the instruments in the system rack. For more detailed information regarding ac power connections, refer to the HP 8510 documentation.

Please read this *entire* section before you connect *any* instrument to line power.

Procedure

1. Check that the ac power outlet to be used is properly grounded and able to supply the maximum power required for the system (refer to Table 1-1).
2. Check that the appropriate 3-conductor, grounded plug is attached to the rack's external ac power cable. If not, attach the required plug.
3. Check that all instruments in the system rack are connected to the rack power strip.

Caution



Use the 3-conductor grounded cables supplied with the system rack, rather than the ones supplied with the instruments. Make instrument power connections inside the system rack cabinet, directly to the power strip. Regardless of the line voltage or the power plug used for the external power connection, *do not* modify either the instrument cables, or the power strip.

Connect the system rack to a power outlet through a protective earth ground contact (grounding one conductor of a 2-conductor outlet does not provide adequate protection). Do not use extension cords or adapters.

Failure to observe these precautions can result in personal injury, instrument damage, or both.

-
4. Check that the line switch on the rear panel of the display/processor is set to SYSTEM CONTROLLED.
 5. At all instrument (and peripheral) front panels, set the power switch off.
 6. At all instrument (and peripheral) rear panels, check that the correct ac line voltage is set, and the correct fuse is installed.
 7. At the rear of the system rack cabinet, set the circuit breaker switch off.

8. Plug the system rack main power cable into the grounded ac power outlet.
9. Plug any peripherals into grounded ac power outlets.
10. Turn on the system rack circuit breaker switch.
11. Turn on the network analyzer system in the following order:
 - a. Source.
 - b. Test set.
 - c. System peripherals (if used):
 - i. Plotter.
 - ii. Printer.
 - d. Network Analyzer (one switch, on the IF detector, turns on both the HP 85101 and the 85102).

The network analyzer is turned on *after* the source and the test set so that the analyzer can gain control of the instruments connected to the 8510 system bus.

12. If used, turn on peripherals and the controller in the following order:
 - a. Disk drive(s).
 - b. Plotter.
 - c. Printer.
 - d. Power meter.
 - e. Noise figure meter.
 - f. Controller (computer).
13. If used, turn on any other system elements.

You can now perform system checks or a system verification (refer to performance tests in the HP 8510 documentation).

Note

If you wish to attach an equipment table to the work surface, see “Attaching an Equipment Table” in Chapter 3.

Replaceable Parts

Introduction

Ordering Parts

Table 5-1 lists the system rack replacement part numbers. To order a listed part, note the description, HP part number, and the quantity desired. Telephone or send your order to the nearest Hewlett-Packard office (see inside the back cover of this manual).

Documentation Replacement

A manual part number and microfiche part number are listed in Table 5-1. Use either to order extra copies of this manual. Microfiche are 10 by 15 cm (4 by 6 in) microfilm transparencies. Each microfiche contains reduced photocopies of the manual pages.

Upgrading

You can upgrade a system rack with a serial prefix 2445A or below to match a serial prefix 3044A rack; see Appendix A for the upgrade kit part number. The upgrade kit provides larger casters and a cabinet skirt to raise the height of the cabinet, along with the hardware and instructions needed to move the instrument support rails and work surface down to accommodate a larger HP 85101.

Table 5-1. Replaceable Parts

Description	Qty Per System	HP Replacement Part Number
Cabinet Assembly; includes:	1	85043-60013
Lock Feet	4	0403-0525
Screw M5x0.8 10-mm-lg pan head Pozidriv (6)		0515-1546
Hex Nut w/ext-lkwr M5x0.8 3.3-mm-thk (6)		0535-0081
Metal Locking Hex Nut 5/16-18-thd 0.266-in-thk (16)		0590-1267
Swivel Castor 3.0-in-id	4	1492-0086
Right Side Panel	1	85043-00069
Left Side Panel	1	85043-00070
<i>Frame Assembly</i> includes:	1	85043-00071
<i>Base Assembly</i> ; includes:	1	85043-00072
Press-in Stud 10/32 0.5-in-lg unf-2A SST (5)		0570-1039
Threaded Insert Nut M8x1.25 STL (8)		0590-1589
Stiffner Bracket	1	85043-00073
Leveling Nut (4)		85043-20004
Side Panel Bracket	4	85043-00040
Left Column	2	85043-00074
Right Column	2	85043-00075
Top Frame	1	85043-00043
<i>Top Cap Assembly</i> ; includes:	1	85043-00044
Threaded Insert Nut M5x0.8 16-mm-lg (2)		0590-1303
Hold Down Bracket	1	85043-00045
Stiffener	1	85043-00058
<i>Hinge Kit</i> ; includes:	2	85043-00060
Hex Nut w/ext-lkwr M5x0.8 3.3-mm-thk (2)		0535-0081
Hinge Pin 6.19 mm	1	3110-0166
Hinge	1	85043-00059
Left Front Panel	1	85043-00076
Right Front Panel	1	85043-00077
Cabinet Door Assembly; includes:	1	85043-00078
TP Polyu 0.375 inches	9.7 ft	0460-1204
Velcro Fastener 2L x 1W	9	0510-1209
Lock and Keys	1	1390-0344
Hinge	2	29400-00014
Cam	1	85043-00010
Air Filter PF10PPI	1	85043-80021
Drawer Assembly; includes:	1	85043-00022
Lockwasher 0.195-in-id internal tooth #10 (2)		2190-0011
Screw 10/32 pan head Pozidriv 0.312-in-lg (2)		2680-0129
Drawer Body	1	85043-00050
Finger Grip Cover	1	85043-00055
Finger Grip	1	85043-40001

Table 5-1. Replaceable Parts (continued)

Description	Qty Per System	HP Replacement Part Number
Work Surface Replacement Kit; includes:		85043-60001
Lockwasher 0.194-in-id helical #10 (4)		2190-0034
Right Filler Panel	1	85043-00028
Left Filler Panel	1	85043-00029
Work Surface	1	85043-00030
Support Rail	2	85043-00031
Sholder Screw (4)		85043-20002
Locking Clip	1	85043-20003
Ground Cord	1	85043-60002
Blank Front Panels		
1.75 in (44.45 mm) Panel	4	85043-00046
3.5 in (88.9 mm) Panel	1	85043-00047
5.0 in (133.3 mm) Panel	1	85043-00048
Rack Mount Flange Kits		
3.5 in Flange	1	5060-8739
5.25 in Flange	4	5062-4071
7 in Flange	1	5062-4072
Foam Pads		
T-shaped 3.75 x 17.5 x 2 in	1	85043-80010
Rectangle 2 x 17.5 x 2 in	2	85043-80011
U-shaped 5.25 x 21.75 x 4 in	1	85043-80012
Cables and Power Cords		
HP-IB Cable 1m (3.3 ft)	2	8120-3445
Instrument Power Cord 3-conductor 905-0	4	8120-1396
Instrument Power Cord 3-conductor 905-8	1	8120-1860
Main Power Cable		
3-conductor Cable 14 AWG 8 ft	1	8120-4822
Cable Connector	1	81251-4218
Power Strip		
Power Strip 6-outlet	1	81251-3670
Mounting Clip	2	81251-2492
Mounting Bracket	2	85043-00001
Circuit Breaker		
Bushing	1	0100-81237
Terminal Block End Cap	1	0360-1094
Terminal Block Section	2	0360-1570
Cable Connector Strain Relief	1	81252-0045
Circuit Breaker 10A 240V	1	3105-0092
Switch Cover	1	85043-00018
Switch Mounting Box	1	85043-00019
Switch Box Panel (rear panel)	1	85043-00020
Nut Plate (rear panel)	2	85043-00023
Documentation		
HP 85043A Manual	1	85043-90001
Microfiche		85043-90002

Table 5-1. Replaceable Parts (continued)

Description	Qty Per System	HP Replacement Part Number
Labels		
Ground Label	2	7120-6153
Instrument Caution Label	1	7121-2527
HP 8510 ID Label	1	85043-80007
Bezel Retainer	2	0510-81267
Bezel 23 x 125 mm	1	5040-8887
85043A ID Label	1	85043-80016
Misc. Items		
Ty Wrap		1400-0493
Conductive Table Mat	1	9300-0797
Grounding Wrist Strap		9300-1367
Strap-to-Mat Grounding Cord		9300-1980
Chassis Slide	2	85043-00021
Aluminum Air Baffle	1	85043-00007
Door Strike Latch	1	85043-00009
Instrument Support Rail	12	85043-00049
Ground Stud	1	85043-20001
Diaphragm	2	85043-40002
Misc. Hardware		
Locknut for 1/2 in conduit	1	0100-0433
Crimped Ground Terminal #10 12-10-AWG	4	0362-0541
Crimped Terminal fer 12-AWG gry	8	0362-0930
Screw M4x0.7 10-mm-lg pan head Pozidriv	17	0515-0926
Screw M5x0.8 10-mm-lg pan head Pozidriv	6	0515-1546
Hex Nut w/ext-lkwr M5x0.8 3.3-mm-thk	8	0535-0081
Press-in Stud 10/32 0.5-in-lg unf-2A SST	5	0570-1039
Dress Screw 10/32 pan head Phillips 0.625 IL	46	0570-1366
Sheet Metal Nut 10/32 0.5-wd STL	75	0590-0804
Metal Locking Hex Nut 5/16-18-thd 0.266-in-thk	16	0590-81267
Threaded Insert Nut M5x0.8 16-mm-lg	2	0590-1303
Threaded Insert Nut M8x1.25 STL	8	0590-1589
Lockwasher 0.195-in-id internal tooth #10	2	2190-0011
Lockwasher 0.195-in-id external tooth #10	38	2190-00812
Lockwasher 0.256-in-id external tooth 1/4 in	1	2190-0013
Lockwasher 0.194-in-id helical #10	4	2190-0034
Lockwasher 4.0 helical 4.1-mm-id 7.6-mm-od	17	2190-0586
Screw 6/32 flat head Pozidriv 0.312-in-lg	2	2360-0194
Screw 10/32 pan head Pozidriv 0.5-in-lg	36	2680-0103
Screw 10/32 pan head Pozidriv 0.312-in-lg	2	2680-0129
Hex Nut w/lkwr 10/32 0.125-in-thk	7	2740-0003
Double-Chamfer Hex Nut 1/4-20-thd 0.188-in-thk	1	2950-0004
Flat Washer 4.0 4.4-mm-id 8.85-mm-od	2	3050-0893
Sholder Screw	4	85043-20002
Leveling Nut	4	85043-20004

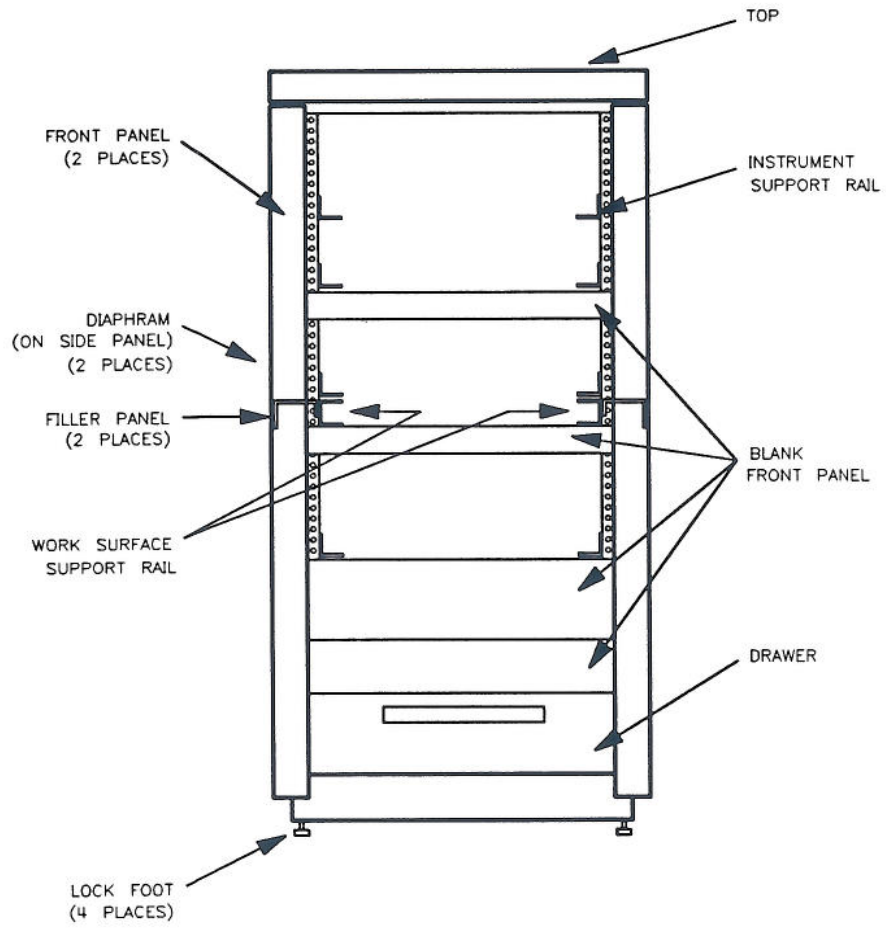


Figure 5-1. Replaceable Parts

Backdating

Introduction

System racks that have a serial prefix lower than the one listed on the title page of this manual were manufactured before those documented in this manual. Older racks are slightly different, and while all differences are not documented in this appendix, Table A-1 provides replacement parts.

Serial Prefixes Documented in this Appendix

This appendix documents system racks with serial prefix 2445A or 2349A, and system racks that were shipped without a serial number label.

Racks with Serial Prefix 2445A or 2349A

Six parts are different between these two versions, but only three are not interchangeable. Both part numbers for the unique parts are provided in Table A-1.

Racks Without a Serial Number Label

To order parts for a system rack without a serial number label, use serial prefix 2349A. While some parts may differ slightly from the originals, they are completely interchangeable.

Upgrading

You can upgrade a system rack with a serial prefix 2445A or below to match a serial prefix 3044A rack; see Table A-1 for the upgrade kit part number.

Table A-1. Replaceable Parts

Description	Qty Per System	HP Replacement Part Number
Cabinet Assembly; includes:	1	85043-60003
Lock Feet	4	0403-0525
Screw M5x0.8 10-mm-lg pan head Pozidriv (6)		0515-1546
Hex Nut w/ext-lkwr M5x0.8 3.3-mm-thk (6)		0535-0081
Metal Locking Hex Nut 5/16-18-thd 0.266-in-thk (16)		0590-1267
Swivel Castor 2.5 ID	4	1492-0095
Right Side Panel	1	85043-00026
Left Side Panel	1	85043-00027
<i>Frame Assembly</i> includes:	1	85043-00037
<i>Base Assembly</i> ; includes:	1	85043-00038
Press-in Stud 10/32 0.5-in-lg unf-2A SST (5)		0570-1039
Threaded Insert Nut M8x1.25 STL (8)		0590-1589
Caster Bracket	2	85043-00039
Leveling Nut (4)		85043-20004
Side Panel Bracket	4	85043-00040
Left Column	2	85043-00041
Right Column	2	85043-00042
Top Frame	1	85043-00043
<i>Top Cap Assembly</i> ; includes:	1	85043-00044
Threaded Insert Nut M5x0.8 16-mm-lg (2)		0590-1303
Hold Down Bracket	1	85043-00045
Stiffener	1	85043-00058
<i>Hinge Kit</i> ; includes:	2	85043-00060
Hex Nut w/ext-lkwr M5x0.8 3.3-mm-thk (2)		0535-0081
Hinge Pin 6.19 mm	1	3110-0166
Hinge	1	85043-00059
Left Front Panel	1	85043-00061
Right Front Panel	1	85043-00062
Cabinet Door Assembly; includes:	1	85043-00024
TP Polyu 0.375 inches	9.3 ft	0460-1204
Velcro Fastener 2L x 1W	9	0510-1209
Lock and Keys	1	1390-0344
Hinge	2	29400-00014
Cam	1	85043-00010
Air Filter PF10PPI	1	85043-80018
Drawer Assembly; includes:	1	85043-00022
Lockwasher 0.195-in-id internal tooth #10 (2)		2190-0011
Screw 10/32 pan head Pozidriv 0.312-in-lg (2)		2680-0129
Drawer Body	1	85043-00050
Finger Grip Cover	1	85043-00055
Finger Grip	1	85043-40001

Table A-1. Replaceable Parts (continued)

Description	Qty Per System	HP Replacement Part Number
Work Surface Replacement Kit; includes: 	85043-60001	
Lockwasher 0.194-in-id helical #10 (4)		2190-0034
Right Filler Panel	1	85043-00028
Left Filler Panel	1	85043-00029
Work Surface	1	85043-00030
Support Rail	2	85043-00031
Sholder Screw (4)		85043-20002
Locking Clip	1	85043-20003
Ground Cord	1	85043-60002
Blank Front Panels		
1.75 in (44.45 mm) Panel	3	85043-00046
3.5 in (88.9 mm) Panel	1	85043-00047
5.0 in (133.3 mm) Panel	1	85043-00048
Rack Mount Flange Kits		
3.5 in Flange	1	5060-8739
5.25 in Flange	4	5062-4071
7 in Flange	1	5062-4072
Foam Pads		
T-shaped 3.75 x 17.5 x 2 in	1	85043-80010
Rectangle 2 x 17.5 x 2 in	1	85043-80011
U-shaped 5.25 x 21.75 x 4 in	1	85043-80012
Cables and Power Cords		
HP-IB Cable 1m (3.3 ft)	2	8120-3445
Instrument Power Cord 3-conductor 905-0	4	8120-1396
Instrument Power Cord 3-conductor 905-8	1	8120-1860
Main Power Cable		
3-conductor Cable 14 AWG 8 ft	1	8120-4822
Cable Connector	1	1251-4218
Power Strip		
Power Strip 6-outlet	1	1251-3670
Mounting Clip	2	1251-2492
Mounting Bracket	2	85043-00001
Circuit Breaker		
Bushing	1	0100-1237
Terminal Block End Cap	1	0360-1094
Terminal Block Section	2	0360-1570
Cable Connector Strain Relief	1	1252-0045
Circuit Breaker 10A 240V	1	3105-0092
Switch Cover (serial prefix 2349A)	1	85043-00004
Switch Cover (serial prefix 2445A)	1	85043-00018
Switch Mounting Box (serial prefix 2349A)	1	85043-00003
Switch Mounting Box (serial prefix 2445A)	1	85043-00019
Switch Box Panel (rear panel) (serial prefix 2349A)	1	85043-00014
Switch Box Panel (rear panel) (serial prefix 2445A)	1	85043-00020
Nut Plate (rear panel)	2	85043-00023

Table A-1. Replaceable Parts (continued)

Description	Qty Per System	HP Replacement Part Number
Labels		
Ground Label	2	7120-6153
Instrument Caution Label	1	7121-2527
HP 8510 ID Label	1	85043-80007
Bezel Retainer	2	0510-1267
Bezel 23 x 125 mm	1	5040-8887
85043A ID Label	1	85043-80016
Misc. Items		
Ty Wrap		1400-0493
Conductive Table Mat	1	9300-0797
Grounding Wrist Strap		9300-1367
Strap-to-Mat Grounding Cord		9300-1980
Chassis Slide	2	85043-00021
Aluminum Air Baffle	1	85043-00007
Door Strike Latch	1	85043-00009
Instrument Support Rail	12	85043-00049
Ground Stud	1	85043-20001
Diaphragm	2	85043-40002
Misc. Hardware		
Locknut for 1/2 in conduit	1	0100-0433
Crimped Ground Terminal #10 12-10-AWG	4	0362-0541
Crimped Terminal fer 12-AWG gry	8	0362-0930
Screw M4x0.7 10-mm-lg pan head Pozidriv	17	0515-0926
Screw M5x0.8 10-mm-lg pan head Pozidriv	6	0515-1546
Hex Nut w/ext-lkwr M5x0.8 3.3-mm-thk	8	0535-0081
Press-in Stud 10/32 0.5-in-lg unf-2A SST	5	0570-1039
Dress Screw 10/32 pan head Phillips 0.625 IL	46	0570-1366
Sheet Metal Nut 10/32 0.5-wd STL	75	0590-0804
Metal Locking Hex Nut 5/16-18-thd 0.266-in-thk	16	0590-1267
Threaded Insert Nut M5x0.8 16-mm-lg	2	0590-1303
Threaded Insert Nut M8x1.25 STL	8	0590-1589
Lockwasher 0.195-in-id internal tooth #10	2	2190-0011
Lockwasher 0.195-in-id external tooth #10	38	2190-0012
Lockwasher 0.256-in-id external tooth 1/4 in	1	2190-0013
Lockwasher 0.194-in-id helical #10	4	2190-0034
Lockwasher 4.0 helical 4.1-mm-id 7.6-mm-od	17	2190-0586
Screw 6/32 flat head Pozidriv 0.312-in-lg	2	2360-0194
Screw 10/32 pan head Pozidriv 0.5-in-lg	36	2680-0103
Screw 10/32 pan head Pozidriv 0.312-in-lg	2	2680-0129
Hex Nut w/lkwr 10/32 0.125-in-thk	7	2740-0003
Double-Chamfer Hex Nut 1/4-20-thd 0.188-in-thk	1	2950-0004
Flat Washer 4.0 4.4-mm-id 8.85-mm-od	2	3050-0893
Sholder Screw	4	85043-20002
Leveling Nut	4	85043-20004

Table A-1. Replaceable Parts (continued)

Description	Qty Per System	HP Replacement Part Number
Documentation		
HP 85043A Manual	1	85043-90001
Microfiche		85043-90002
Not Included with Rack		
System Rack Upgrade Kit		85043-60012

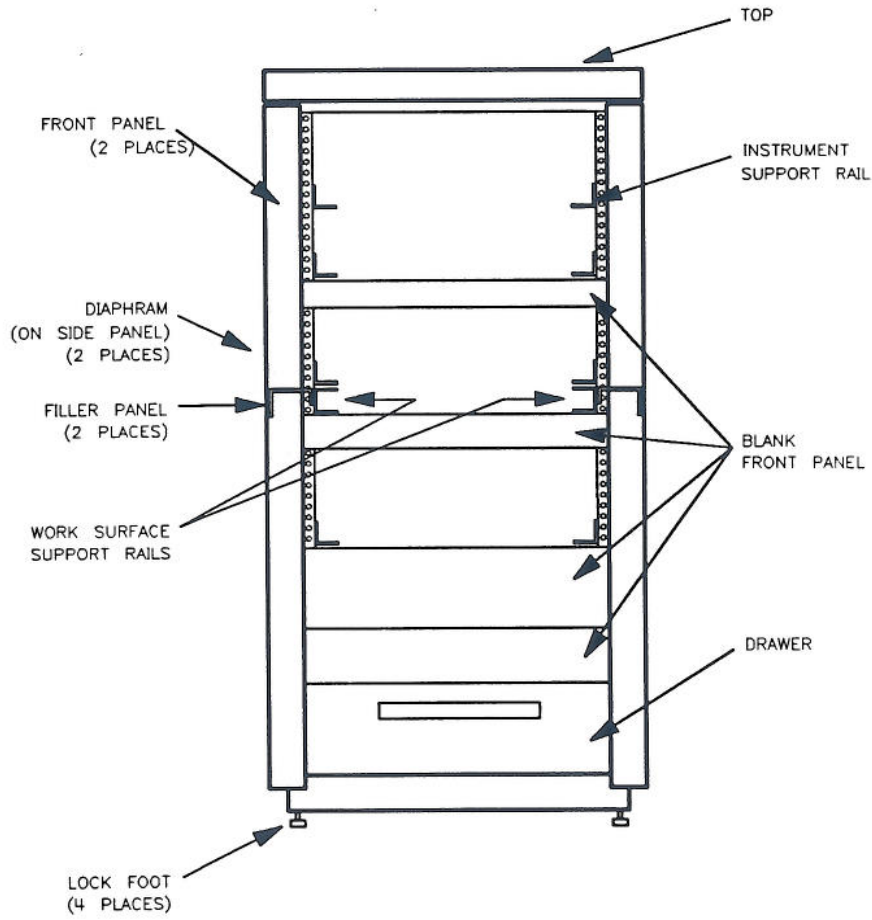


Figure A-1. Replaceable Parts

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