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HP AdvanceStack 10Base-T Hub-8E

HP J3128A AdvanceStack 10Base-T Hub-8E
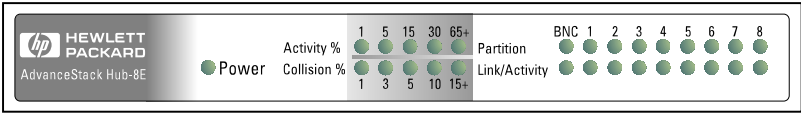
Installation and Reference Guide

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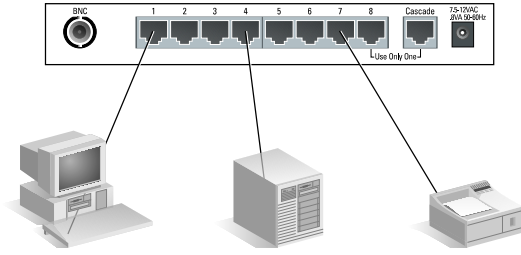
HP J3128A AdvanceStack 10Base-T Hub-8E

Use the Hub-8E to connect computers, printers, and servers together to allow users to share resources and data.

The steps to set up your network are:
1. Verify included parts
2. Verify that the hub works
3. Mount the hub
4. Connect devices to the hub

1. Verify Included Parts

Your package includes the following items:

- one 8-port hub
- AC adapter
- this guide
- warranty booklet

2. Verify That the Hub Works

To verify that the hub works, follow these steps:

1. **Plug the AC adapter's power cord into the hub's AC receptacle.**

AC adapter power cord
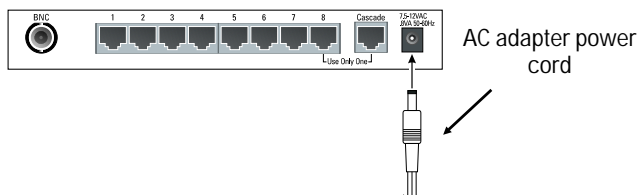
Your hub is shipped with one of these AC adapters:

Australia/New Zealand/China/Argentina	(9100-5509)
Europe/Russia	(9100-5511)
Israel	(9100-5514)
Japan	(9100-5508)
Korea	(9100-5513)
South Africa/India	(9100-5512)
United Kingdom/Hong Kong	(9100-5510)
U.S./Canada/Mexico/Taiwan/Brazil/Colombia	(9100-5507)

Note If your installation requires a different AC adapter than the one supplied with the hub, contact your HP-authorized LAN dealer or your local HP sales office.

2. **Plug the AC adapter into an AC power source.** When installing the Hub-8E, note that the AC outlet must be located near the equipment and should be easily accessible.

Note: The hub does not have a power switch; it is powered on when the power cord is plugged in.

3. **Check the LEDs on the hub's front panel.**

When the hub is powered on, it performs a 10 second self-diagnostic test. During the test, each LED is lit momentarily.

When the self-test completes successfully, the following events occur:
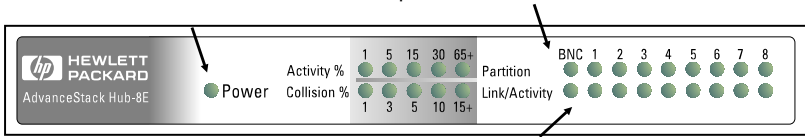
The BNC Partition LED will remain lit unless a properly terminated thin coax segment is attached. This LED does not affect the operation of the other ports.

Power LED stays on

A Link/Activity LED stays on if a signal has been detected through a cable connected to the corresponding port. A Link/Activity LED turns off a signal is not detected.

Before self-test completes, all of the LEDs light momentarily. The following table describes the meaning of the LEDs:

LED	Meaning
Activity%	Reflects the amount of traffic on the network as a percentage.
Collision%	Identifies the percentage of collisions which shows network saturation.
Partition	Displays whether a port experienced excessive collisions or the BNC port is not properly terminated.
Link/Activity	Displays the amount of network traffic for this port.

Note that the bottom of the hub also provides information about the meaning of the LEDs for this hub.

4. **Before mounting the hub, unplug it.** After the hub has passed its self-test, you are ready to mount the hub.

3. Mount the Hub

The Hub-8E can be placed on a desk or mounted on any vertical or horizontal surface, for example on a wall or under a desk.

To locate the hub on a table or other horizontal surface, no special tools are necessary. Be certain to pick a sturdy table in an uncluttered area. You may want to secure the hub's cables to the leg of the table to prevent people from tripping over them. If you are placing the hub on a table, skip the mounting instructions below and continue the installation procedure starting on page 5.

Equipment Required to Mount the Hub

To mount the hub on a wall or under a desk, you will need the following equipment:
- two number 6 by half-inch or M3 by 12 mm pan head wood screws (not included)
- a Phillips (cross-head) screwdriver (not included)

Before mounting the hub, follow these mounting precautions:

- Plan the hub's location and orientation relative to other devices and equipment. Also consider the cabling that will be attached to the hub and ports that will be used. In the back of the hub, leave 3 inches (76 mm) of space for twisted-pair cables and the AC adapter.

- *Ensure that the HP AdvanceStack hub(s) do not overload the power circuits, wiring, and over-current protection.* To determine the possibility of overloading the supply circuits, add together the amperage ratings from the nameplates of all your hubs (and other equipment) installed on the same circuits and compare the total with the rating limits for the supply circuits.

- Do not install the HP AdvanceStack hub in an environment where the operating ambient temperature might exceed 40°C (104°F).

- Make sure the air flow around the sides of the hub is not restricted.

Marking the Location

Important	**A hub should be mounted only to a wall or wood surface that is at least 1/2-inch (12.7 mm) plywood or its equivalent.**

1. Mark the screw hole locations 5 11/16 inches (14.5 cm) apart on the mounting surface. Make sure you allow enough room to make the cable connections to the hub and to access the cables if they have to be moved.
2. Using a Phillips (cross-head) screwdriver, screw in the two pan head wood screws leaving 1/8-inch (3 mm) between the screw head and the mounting surface. (You may need to pre-drill the surface first with a 3/32-inch bit.)

4. Connect Devices to the Hub

RJ-45 Ports

You can connect printers, servers, personal computers, and other Ethernet devices to these ports. Each computer must have a LAN adapter card.

To connect a device to the hub, follow these steps:

1. Push the twisted-pair RJ-45 plug into the RJ-45 jack until the tab on the plug clicks into place. Use up to 100 meters of cable between the hub and an end node.
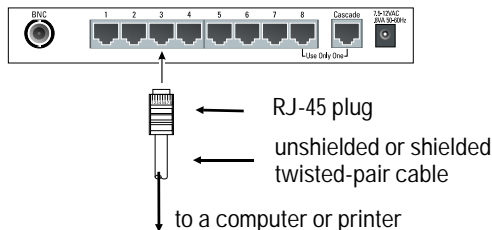
2. Connect the other end of the cable to a computer's LAN adapter card, printer interface card, server or other device.

Adding More Users To Your Network

You can add more users to your network by joining two or more hubs together using either thin coaxial cable or twisted-pair cable.

Using Thin Coaxial Cable

You can connect up to 30 hubs together on a common thin coax segment. The following illustration shows you how to attach a BNC "T" connector and a required terminator to a hub.
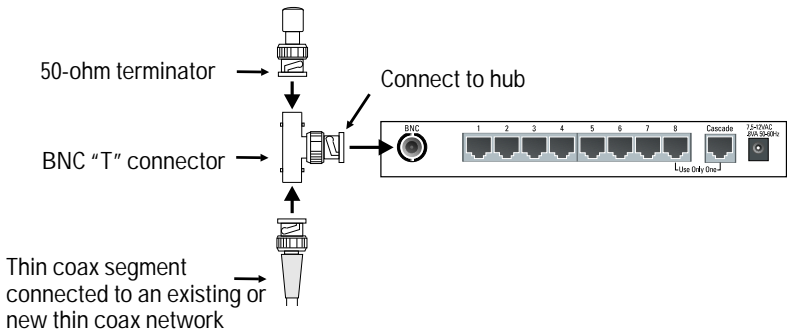
The following illustration shows two hubs connected together with a thin coax segment:
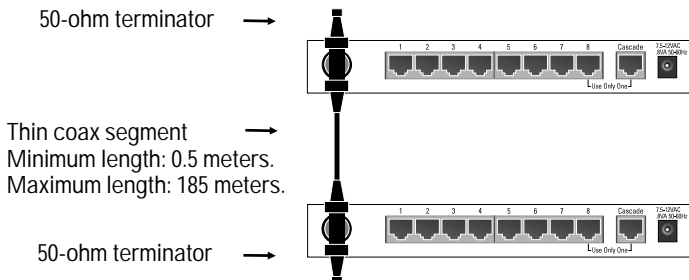
Note	Each thin coaxial segment must be terminated using a 50-ohm terminator at each end or the devices will not be able to communicate together.

Using Twisted-Pair Cable

To expand your network, the hub can be cascaded to another hub by using the Cascade port. You can connect up to 4 hubs together by using this port. The following illustration shows two hubs chained together.

Standard twisted-pair cable.
No mimimum cable length.
Maximum length: 100 meters.
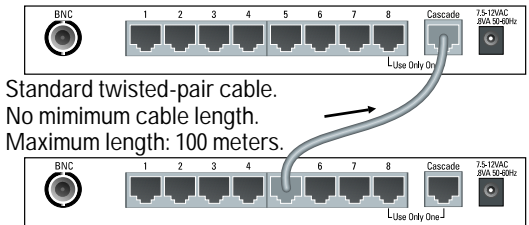
(This type of connection is also called "MDI/MDI-X" where MDI is the hub-to-hub connection and MDI-X is the hub-to-a-device connection. A device is a printer, computer, or other Ethernet product.)

Caution	If you connect cable to both the Cascade port and port **8**, the connections will not work. The two ports cannot be used simultaneously.
	Use "straight-through" cable *not* "cross-over cable" between the hubs when using the Cascade port.

Troubleshooting

The bottom of the Hub-8E has a troubleshooting key for the LEDs. Use the table on the bottom of the hub to try to solve the problem first. Most problems are because of the wrong type of cable, improper termination of thin coax cable, bad cable, or exceeding the maximum allowable cable lengths. Use the table below to troubleshoot your hub.

Problem	Solution
One of the users on the network can't communicate with another network device through the Hub-8E.	There are a variety of possible solutions to this problem: 1) Find the port that the user is currently connected to. Check that the Link/Activity LED is on. If it is not, remove the cable from the port and connect it to another port. If the LED is still not on, use the "Test Link" option in the user's LAN adapter test program to verify the communication path between two PCs (connected to the hub) is working. 2) Connect a different cable from the end user to the hub. 3) Perform a self-test on the LAN adapter in the user's computer and/or the device that cannot be reached. 4) Verify cable lengths do not exceed 100 meters.
I have coax cable connected to the hub but the Partition LED stays orange.	Verify the cable is connected and terminated properly. See the illustration on page 6.
I've tried everything in this table but the hub still doesn't appear to be working.	The hub or power supply may have failed. Try removing the AC adapter and reinserting it to see if the LEDs begin normal operation. Try a different electrical outlet. If the problem persists, return the hub and AC adapter to your HP-authorized dealer or reseller following the instructions in the warranty booklet.

If you are replacing your hub, remove the cables connected to the hub before returning it to Hewlett-Packard. For instructions on how to return the Hub-8E to Hewlett-Packard, see the warranty booklet included with the hub.

Customer Support Services

Hewlett-Packard offers a range of customer support services including the World Wide Web, fax, and Network Phone-In Support.

World Wide Web
http://www.hp.com/go/network_city

Do you have questions about designing your expanding network? From this web site, you can also download the *Designing HP AdvanceStack Workgroup Networks Guide* which addresses capacity planning or dial 1-800-752-0900 to receive a copy by mail.

HP FIRST Fax Retrieval Service

HP FIRST is an automated fax retrieval service that is available 24 hours a day, seven days a week. HP FIRST provides information on the following topics:

- Product information
- Troubleshooting instructions
- Technical reviews and articles
- Configuration information

To access HP FIRST, dial one of the following phone numbers:

Location	Phone Number
U.S. and Canada Only	Dial 1 (800) 333-1917 with your fax machine or touch-tone phone and press 1.
Outside the U.S. and Canada	Dial 1 (208) 344-4809 from your fax machine and press 9.

To receive a list of currently available documents, enter document number 19941. The information you requested will be sent to you by return fax.

HP Network Phone-In Support (NPS)

Call your HP Authorized Dealer or the nearest HP Sales and Support Office. In addition, the HP Network Phone-In Support (NPS) service provides expert technical assistance for U.S. customers through an NPS contract or at an *hourly* rate (1-800-790-5544) Monday through Friday, 5 am to 6 pm.

Specifications

Physical

Dimensions:	19 cm by 13.2 cm by 2.6 cm (7.5 in by 5.25 inches by 1 inch)
Weight:	635 grams (1.40 pounds)

Electrical

AC voltage:	100–250 volts (Voltage tolerance of +/- 10%)
Hub maximum current:	0.8 A max
Frequency range:	50/60 Hz

(The above specifications are AC adapter specific.)

Environmental

	Operating	Non-Operating
Temperature:	5°C to 40°C (41°F to 104°F)	-40°C to 70°C (-40°F to 158°F)
Relative humidity: (non-condensing)	15% to 80% at 40°C (104°F)	90% at 65°C (149°F)
Maximum altitude:	3.1 km (10,000 ft)	4.6 km (15,000 ft)

Connectors

- The RJ-45 twisted-pair ports are compatible with the IEEE 802.3 Type 10Base-T standard. Use Category 3, 4, or 5 cabling.

- The BNC thin coax port is compatible with the IEEE 802.3 Type 10Base2 standard.

Safety

Complies with
IEC 950: (1991)+A1,A2/.EN60950 I(1992)+A1,A2
UL1950
CSA 950
NOM-019-SCFI-1993
NOM-001-SCFI-1993

Electromagnetic

Emissions

FCC part 15 Class A
EN 55022 Class A / CISPR-22 Class A
VCCI Level I
Complies with Canadian EMC Class A requirements.

Immunity
See the Declaration of Conformity for details at the end of the Regulatory
Statements.

Acoustic Noise
Not applicable

Safety and Regulatory Statements

Safety Information

There are no user-serviceable parts inside these products. Any servicing, adjustment,
maintenance, or repair must be performed only by service-trained personnel.

These products do not have a power switch; they are powered on when the power
cord is plugged in.

Informations concernant la sécurité

Aucune pièce contenue à l'intérieur de ce produit ne peut être réparée par l'utili-
sateur. Tout dépannage, réglage, entretien ou réparation devra être confié exclusive-
ment à un personnel qualifié.

Cet appareil ne comporte pas de commutateur principal ; la mise sous tension est ef-
fectuée par branchement du cordon d'alimentation.

Hinweise zur Sicherheit

Dieses Gerät enthält innen keine durch den Benutzer zu wartenden Teile. Wartungs-,
Anpassungs-, Instandhaltungs- oder Reparaturarbeiten dürfen nur von geschultem
Bedienungspersonal durchgeführt werden.

Dieses Gerät hat keinen Netzschalter; es wird beim Anschließen des Netzkabels
eingeschaltet.

Considerazioni sulla sicurezza

Nessun componente di questo prodotto può essere riparato dall'utente. Qualsiasi lavoro di riparazione, messa a punto, manutenzione o assistenza va effettuato esclusivamente da personale specializzato.

Questo apparato non possiede un commutatore principale; si mette scotto tensione all'inserirsi il cavo d'alimentazione.

本製品の内部にはユーザーが修理できる部品はありません。サービス、調整、保守および修理はサービス訓練を受けた専門家におまかせください。

本製品には電源スイッチがありません。電源コードを接続したとき電源入となります。

Consideraciones sobre seguridad

Este aparato no contiene pieza alguna susceptible de reparación por parte del usuario. Todas las reparaciones, ajustes o servicio de mantenimiento debe realizarlos solamente el técnico.

Este producto no tiene interruptor de potencia; se activa cuando se enchufa el cable de alimentación.

Regulatory Statements

FCC Statement (For U.S.A. Only)
Federal Communications Commission Radio Frequency Interference Statement

Warning: This equipment generates, uses, and can radiate radio frequency energy. If it is not installed and used in accordance with the instruction manual, it may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

If this equipment causes interference to radio reception (which can be determined by unplugging the power cord from the equipment) try these measures: Re-orient the receiving antenna. Relocate the equipment with respect to the receiver. Plug the equipment and receiver into different branch circuits. Consult your dealer or an experienced technician for additional suggestions.

VCCI Class 1 (For Japan Only)

この装置は，第一種情報装置（商工業地域において使用されるべき情報装置）で商工業地域での電波障害防止を目的とした情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）基準に適合しております。

従って，住宅地域またはその隣接した地域で使用すると，ラジオ，テレビジョン受信機等に受信障害を与えることがあります。

取扱説明書に従って正しい取り扱いをして下さい。

Note

This is a class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

Declaration of Conformity

The following Declaration of Conformity for the HP AdvanceStack 10Base-T Hub-8E complies with ISO/IEC Guide 22 and EN 45014. The declaration identifies the product, the manufacturer's name and address, and the applicable specifications that are recognized in the European community.

DECLARATION OF CONFORMITY
according to ISO/IEC Guide 22 and EN45014

Manufacturer's Name: Hewlett-Packard Company

Manufacturer's Address: 8000 Foothills Blvd.
Roseville, CA 95747-5502
U.S.A.

declares that the product:

    Product Name: HP AdvanceStack 10Base-T Hub-8E

    Model Number: HP J3128A

conforms to the following Product Specifications:

    Safety: IEC 950:1991+A1,A2/EN60950 (1992)+A1,A2

    EMC: EN 55022 (1994) / CISPR-22 (1993) class A
EN50082-1 (1992)
prEN 55024-2 (1992) / IEC 801-2 (1991) 4 kV CD, 8 kV AD
prEN 55024-3 (1991) / IEC 801-3 (1984), 3 V/m
prEN 55024-4 (1992) / IEC 801-4 (1988): 1 kV-(power line)
0.5 kV-(signal line)

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.

Tested with Hewlett-Packard Co. products only.

Roseville, January 4, 1996

Sandra L. Sheehan
Sandra L. Sheehan, Quality Manager

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

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