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Installation Instructions For the HP 82904A Bus Expander

Unpacking and Inspection

When you unpack the bus expander, be careful not to damage any exposed printed-circuit assembly.

The 82904-69902 Expansion Interface is shipped in an antistatic bag to protect it against electrostatic discharge (ESD) damage.

Caution



Observe the following precautions whenever handling, installing, or removing the Expansion Interface:

- Always handle the expansion interface by its metal back panel, not by the exposed circuit board.
- Whenever you disconnect and remove your expansion interface from the computer, store it in the original antistatic bag.

Failure to observe these precautions may result in mechanical damage and/or electrostatic discharge (ESD) damage to the expansion interface.

Inspect the bus expander carefully for any signs of shipping damage. Notify your dealer or sales representative immediately if it is damaged or if anything is missing. Along with these instructions, you should find these items in the shipping container:

- Bus expander cabinet (the metal box).
- 82904-69902 Expansion Interface.
- Data cable (to connect the expansion interface to the cabinet).

- Power cord (to connect the cabinet to an ac outlet).
- Two fuse packs (one for 115V and one for 230V).

Setting the Bus Expander for the Proper Voltage

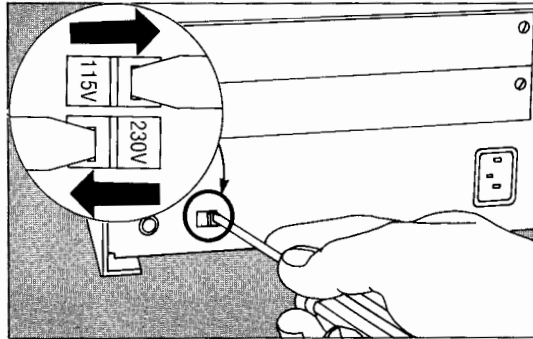
Before you connect your bus expander, you must set its voltage selector switch and fuse to correspond with the ac power source in your area. Here's the procedure:

Warning

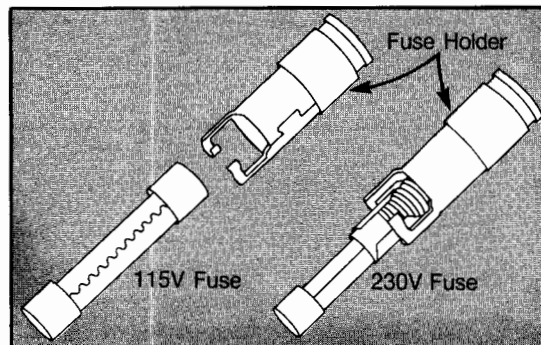


To avoid electrical shock, make sure that the bus expander is unplugged before you install or change a fuse or change the voltage setting.

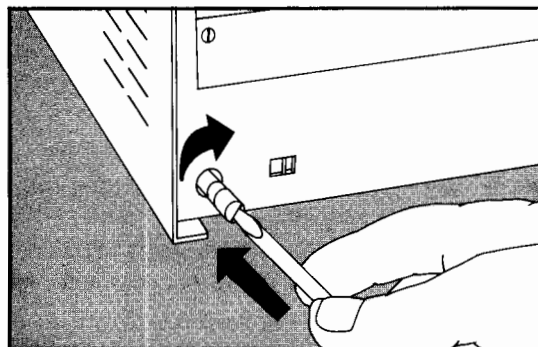
1. Find the voltage selector switch on the back of your bus expander.
2. Does the switch label show the correct line voltage for your area: "115V" for 110-120V, "230V" for 220-240V? If not, change it to the correct voltage by inserting the tip of a small screwdriver into the slot in the switch and sliding the switch sideways until the correct label shows.



3. Find the fuse that matches the line voltage in your area. Your bus expander comes with two fuse packs: one for 115V and one for 230V. The 115V fuse is larger in diameter and longer than the 230V fuse. Be sure you choose the right one.



4. Insert either end of the fuse into its fuse holder.
5. Insert the fuse and fuse holder into the fuse receptacle, and use a screwdriver to press the holder inward and turn it clockwise until it locks in place.



Note

You can always adapt your bus expander for use in another country. Simply set the voltage selector switch and the fuse to match the voltage in that country. Then buy an HP power cord to match the receptacles in that country. In that way, you can use your bus expander wherever you travel.

Connecting the Bus Expander

Note the following precautions before you connect the bus expander.

Warning

Do not place fingers, tools, or other foreign objects into the plug-in ports of your computer or bus expander. Such actions may result in minor electrical shock hazard and interference with pacemaker devices worn by some persons. Damage to the connectors and internal circuitry of the computer may also result.

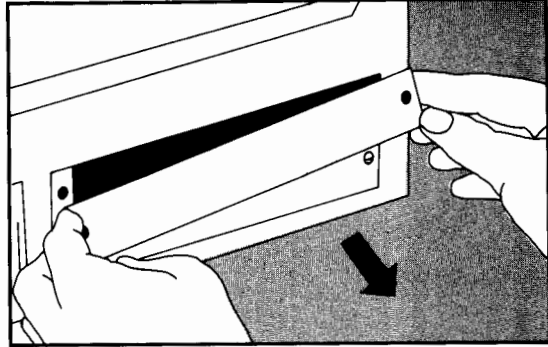
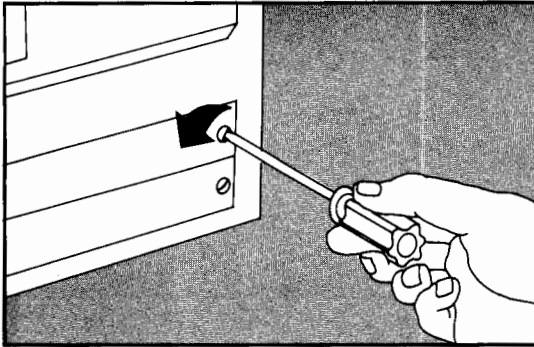
To further avoid any electrical shock hazard, make sure that both your computer and the bus expander are plugged into grounded (three-wire) ac outlets in the same receptacle.

Caution

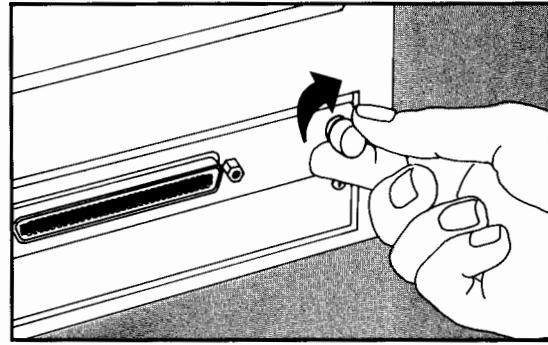
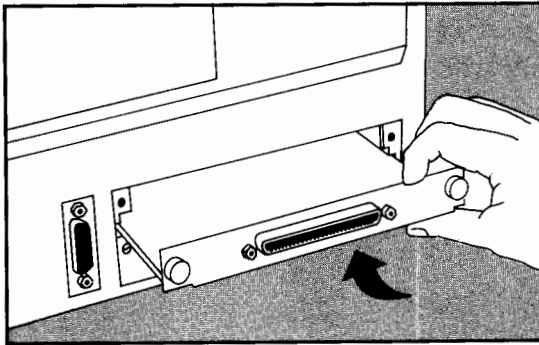
Always make sure the computer, the bus expander, and any connected peripherals are turned off before you connect or disconnect the bus expander. Failure to do this may result in damage to the computer, the bus expander, or both.

To connect the bus expander, follow these steps:

1. Turn off the computer.
2. Uncover an I/O port on back of the computer.



3. Insert the expansion interface into the empty port and tighten the fasteners.

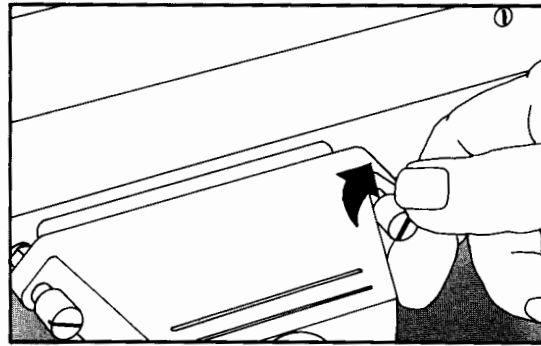
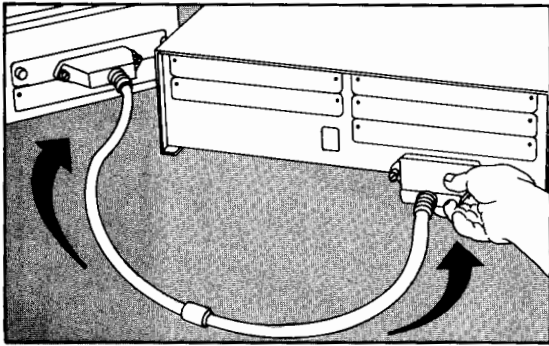


Note



Leaving the expansion interface in place when the data cable is not connected will not interfere with the use of your computer. However, if you do this, avoid touching the exposed metal pins where the data cable attaches to the module.

4. Connect the data cable to the panel connectors on both the expansion interface and the bus expander cabinet; tighten all captive screws.

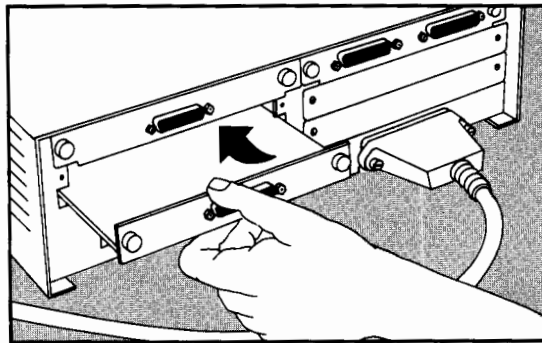


Caution



To protect the data cable from damage, do not sharply bend it or twist it.

5. Install all desired interfaces and memory modules in the remaining computer I/O port and in the bus expander ports. Refer to the specific instructions that come with those interfaces and memory modules.



Note

If you intend to install a memory module, your computer will operate faster if the module is installed in the remaining computer I/O port instead of in the bus expander.

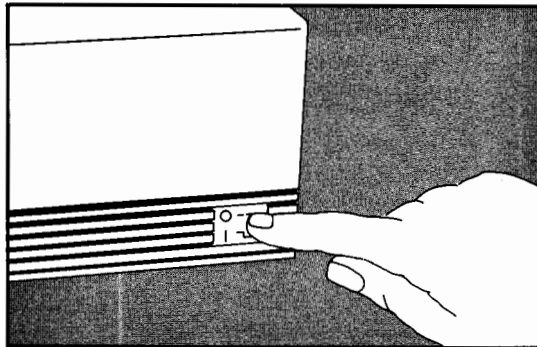
6. Attach the power cord to the power cord receptacle on the back of your bus expander, and plug it into the ac receptacle.

Warning

To avoid electrical shock to yourself and damage to the bus expander, use only the cord that comes with the bus expander.

If you ever need to replace the power cord, use only the one specified by Hewlett-Packard for your area. The replacement cord must have the same polarity as the original.

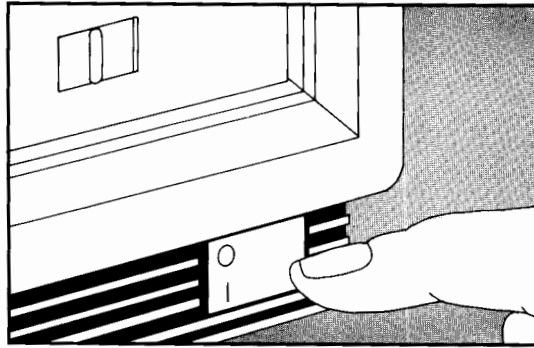
7. Turn on the HP 82904A Bus Expander (and any other peripherals.) *To be included in the system configuration, the bus expander must be turned on before the computer.*



Note

When the bus expander is on, avoid blocking the air vents on the front and both sides of the cabinet.

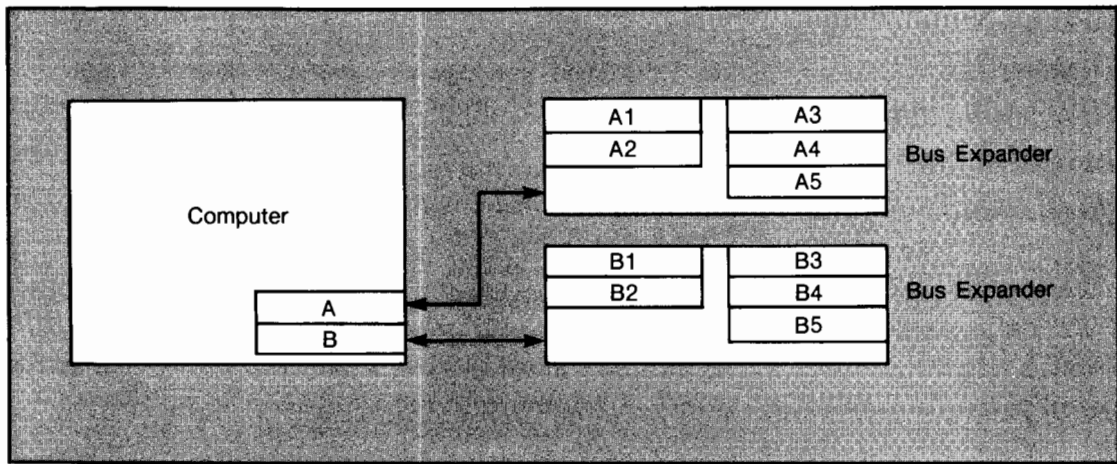
8. Turn on your computer.



Expansion Port Names

Your computer can support up to two bus expanders, allowing expansion to 10 I/O ports. The names of those ports depend on which computer port you use to connect your bus expander.

The bus expander ports are numbered port 1 through port 5. The ports on your computer are lettered, with port A on the top. Therefore, if you connect the expansion interface in port A, for example, the bus expander ports are called ports A1, A2, ... A5.



When your computer searches the I/O ports, it first searches the computer ports; then it checks the ports in the first bus expander ports and finally the ports in the second bus expander.



Potential for Radio/Television Interference (U.S. Only)

The HP 82904A Bus Expander generates and uses radio frequency energy and, if not installed and used properly—that is, in strict accordance with these installation instructions—may cause interference to radio and television reception. It has been tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. In the unlikely event that your product does cause interference to radio or television reception (which can be determined by turning off the computer and bus expander, removing the expansion interface, then turning the computer back on), you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the bus expander with respect to the receiver.
- Move the computer and bus expander away from the receiver.
- Plug the computer into a different ac outlet so that the computer and the receiver are on different branch circuits.

If necessary, you should consult your dealer or an experienced radio/television technician for additional suggestions. You may find the following booklet, prepared by the Federal Communications Commission, helpful: *How to Identify and Resolve Radio-TV Interference Problems*. This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock Number 004-000-00345-4.

If You Experience Problems

If you're having trouble using I/O interfaces or memory modules in your bus expander, first verify that you followed the bus expander installation instructions correctly—including the correct sequence for turning on your equipment (bus expander and peripherals first, computer last). If problems persist, use these “troubleshooting” steps:

1. Turn off the computer and bus expander.
2. Remove the expansion interface from the computer.
3. Remove any plug-in module (interface or memory module) from the computer.
4. Remove all plug-in modules from the bus expander.
5. Test each plug-in module separately in a computer I/O port by using the diagnostic program supplied with the computer or module.
6. If each plug-in module passes its diagnostic test, disconnect the data cable from both the bus expander and the expansion interface and then reconnect it. (This will “wipe” the connector contacts and ensure proper connection.)
7. Reconnect the bus expander to your computer, closely following the installation instructions. (Be sure to tighten the fasteners securely.)
8. Test each plug-in module again as you did in step 5, except this time in a bus expander I/O port.
9. If each plug-in module passes its diagnostic test again, re-install all of them and try your application again. If the problem still persists, your bus expander may require service. Refer to the Support Guide that came with your computer for the location of your nearest authorized Hewlett-Packard service facility.



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