

# Portable PLUS

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## HP 24510A 1200 BPS Modem Installation Instructions

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Manual Part No.  
5958-3459



# Installation Instructions

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These instructions describe how to install the HP 24510A 1200 BPS Modem in an HP Portable PLUS computer. Observe the following precautions to avoid damage to the modem and computer.

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**Warning**     **A fully charged battery has an enormous short-circuit current capacity. Be careful not to short its terminals. A short circuit can cause sparks and melt metal, leading to burns or other injury.**

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**Caution**     **Wear a grounded wrist strap and ensure that your workbench is electrostatically protected. Many components (especially the display) are susceptible to damage by electrostatic discharge.**

**Keep the modem printed-circuit board in its antistatic bag until you're ready to install it.**

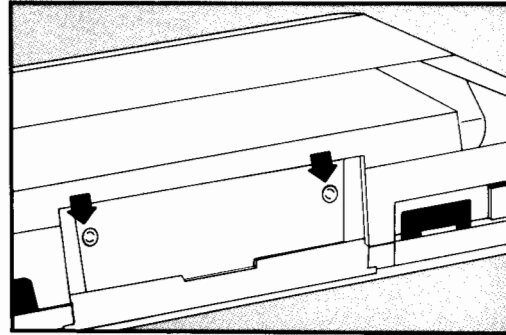
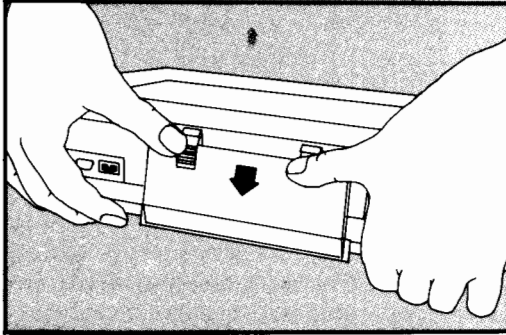
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Note that memory is lost when the modem is installed. To avoid losing data, you may want to copy files stored in the Edisc (Electronic Disc) to an external disc, then copy them back to the Edisc after the installation.

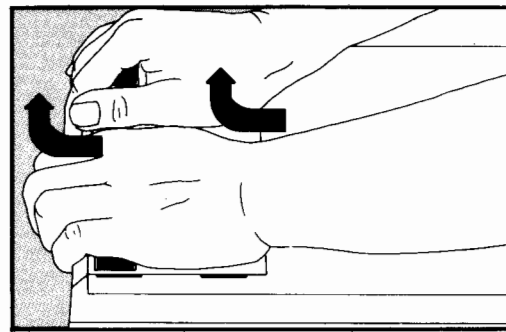
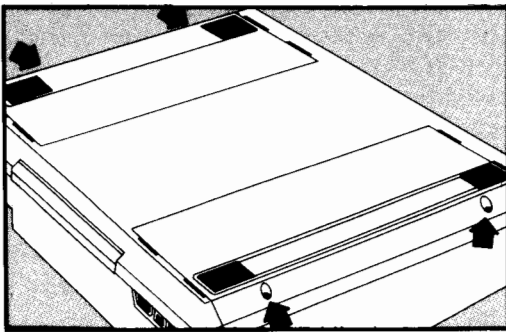
**Installation**     To install the modem, you'll need a T-8 Torx™ driver and a 5.5-mm hex driver. Install the modem according to the following steps.

- 1. Turn off the computer.** Disconnect the recharger, if connected.

- 2. Uncover the battery and unplug the battery connector.** Do this by unlatching and sliding off the battery cover, removing the two screws from the battery retainer, and removing the retainer. Unplug the connector by pulling the plastic tab.



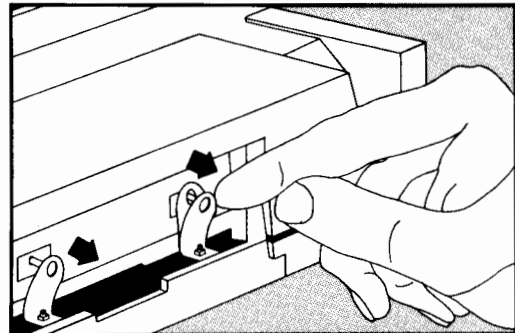
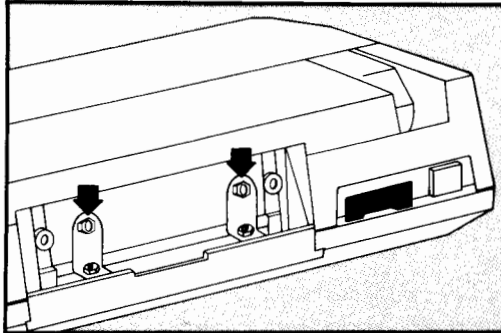
- 3. Remove the two screws from each drawer. Remove both drawers. Note that disengaging a 62-pin connector requires a firm push.**



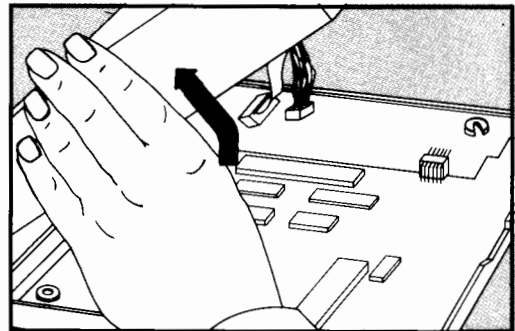
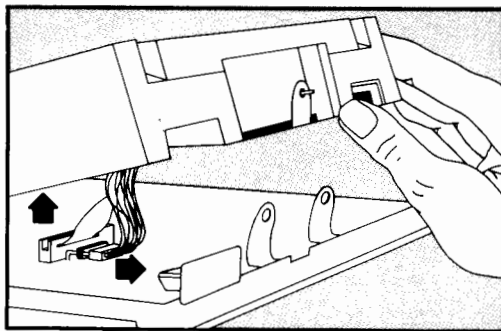
- 4. Remove the 12 screws from the bottom case, then turn the unit right-side-up.**



- 5. Remove the two nuts** on the battery terminals. Pull back the two battery straps that connect to the bottom case. *Don't pull them farther than necessary to open the case. Don't remove the battery.*

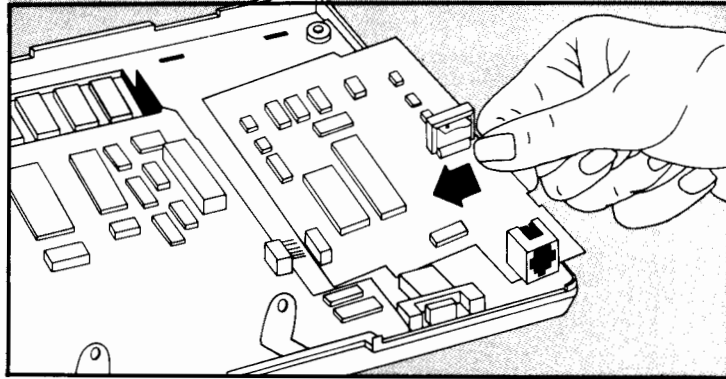


- 6. Partly open the case, unplug the keyboard and display cables, then separate the cases.** To do this, hold back the two battery straps while opening the cases at the rear edge. Note that the front edge doesn't separate until the cases swing apart.

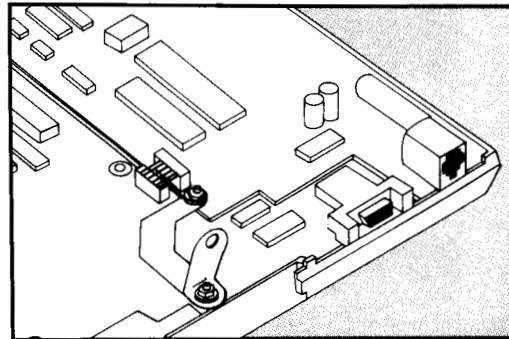
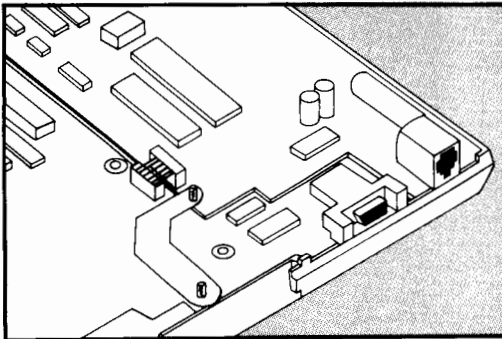


- 7. Remove and discard the two plastic spacers (washers)** in the modem area of the bottom case.
- 8. Remove the blank plug** from the opening in the top case where the modem receptacle will go.

- 9. Insert the connector on the modem board into the connector on the system board. The two holes in the modem board should fit onto the studs in the bottom case.**



- 10. Install the modem ground strap onto the stud on the modem board *and* under the battery strap on the main board. Do this by removing the nut and lifting off the battery strap. While tightening the nut, be sure the battery strap is square to the main board. Fasten the modem strap to the modem stud using the nut provided.**



11. **Reassemble the unit and install the drawers** by reversing the previous procedure. You'll have to hinge the top and bottom cases together at the front before connecting the internal cables. *Be sure the connectors for the two internal cables are properly aligned.*
12. **Install the battery connector and press the reset button.** Then install the battery cover. If you're going to operate the computer, you must install the connector on the two pins closest to the center of the battery opening. The reset button is at the corner of the battery opening.
13. **Turn on the computer** by pressing **[⏻]**. The message "Warning! Memory lost!" should appear. Press **[F1]** to reformat the Edisc, then reset the date and time. You can also copy files back to the Edisc.



## Loop Back Test

After reassembling the computer and pressing the reset button, you can test the modem connection using the built-in diagnostic test. Follow this procedure to test the modem connection:

1. Press **[F5]** to select *Datacom Configuration*. Check that there is a fourth column marked Modem. If this column is missing, it means that the computer has not detected the modem card. The card is either incorrectly installed, or faulty. Go back and check the connections of the card, and try again.
2. Press **[F8]** to exit from the *Datacom Configuration*. Then press **[F6]** to select *System Configuration*. Press **[Tab]** to move the window to the field next to the bottom line "Datacom Interface" and, using **[F3]** or **[F4]** select "modem" in the field. Press **[F8]** to exit from *System Configuration*.
3. Select DOS commands.
4. At the DOS prompt type: TERM
5. Type: AT S16=1. This puts the modem in loopback mode. The modem responds:

CONNECT 1200

Note that two or three spurious characters may be displayed.

6. Check that any character typed on the keyboard is echoed by the modem and displayed on the screen.
7. To exit the loopback mode type "+++" (without a carriage return). The modem responds:

OK



# HP24510 INSTALLATION Instructions Addendum

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## Important

The HP24510 (AF, AH or AU) Modem was designed to be compatible with the latest revision of the HP Portable Plus Personal Computer. Consequently, the modem assembly is equipped with rubber spacers that fit into the Portable Plus' new metallized bottom case. These rubber spacers are, however, too thick to allow the modem assembly to be installed in an earlier revision of the Portable Plus (serial number prefix less than 2624A.)



When the modem is installed in a Portable Plus Personal Computer with a serial number prefix less than 2624A:

1. If the serial number prefix is less than 2612A, the rubber spacers should be removed from the modem assembly before installation.
2. If the serial number prefix is in the range 2612A to 2623A, the bottom case of the Portable Plus must be replaced by a new one and the Mylar shields must be re-installed on the new bottom case. The following parts are required:
  - a. Bottom case: 45711-40015.
  - b. Bottom case label: 45711-80077.

Refer to Service Notes: 24510A-01 and 45711-12A, and HP24510A installation instructions (5958-3459.)

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