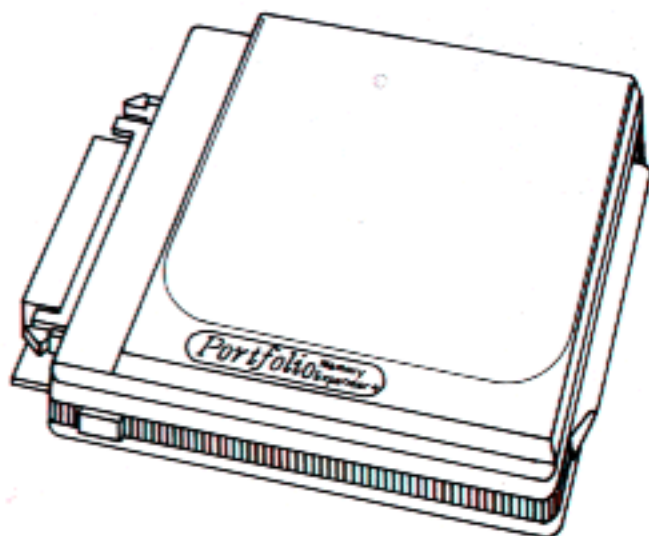




Portfolio Memory Expander Plus



Owner's Manual

Warning: To avoid possible data loss, read this owner's manual carefully before using your Memory Expander Plus.

TABLE OF CONTENTS

INTRODUCTION.....	1
INSTALLING THE MEMORY EXPANDER	2
MAKING EXPANDED MEMORY AVAILABLE	4
DE-INSTALLING THE MEMORY EXPANDER	6
USING THE MEMORY EXPANDER	7
APPENDIX A: TROUBLE SHOOTING	8
CUSTOMER SUPPORT	10

INTRODUCTION

The Portfolio Memory Expander Plus is an optional peripheral that plugs into the bus expansion connector on the right side of the Portfolio. It adds 256K of memory to the Portfolio's standard 128K, giving you a total of 384K. Use two Memory Expander Pluses to increase your Portfolio's RAM to 640K. The additional memory enables Portfolio's software to build larger data files, allows the FDISK command to configure a larger internal RAM disk (the C: drive), and permits the use of a wider range of external programs.

Note: The Portfolio's built in applications software can create files up to 64K. Adding a Memory Expander Plus does not increase this limit.

The Portfolio is designed to run specially adapted PC-DOS and MS-DOS programs and not their desktop versions. Very often, the desktop versions cannot be run in Portfolio even though its memory has been expanded to 640K.

The memory in the Memory Expander Plus is used differently than the memory in a Memory Card. Memory Cards are primarily a form of file storage and are addressed as drive A: or B: like floppy disks. The Memory Expander Plus' memory, on the other hand, extends the computer's main working memory that is used to load programs and manipulate data. However, like the built-in 128K main memory, a portion of the Memory Expander Plus's memory is allocated to the built in RAM disk, drive C:.

The Memory Expander Plus also contains a card drive like the built-in card drive on the left side of the Portfolio. The Memory Expander Plus' card drive is designated as DOS drive B:. The second card drive allows you to use both a Memory Card and a Program Card at the same time, or to copy files from one Memory Card to another without swapping cards using a single card drive. When you connect two expanders, only the first of the two extra card drives is active. The second card drive is

inactive. If a card is inserted into the second card drive, no harm is done, but there is no way to access the data on the card.

The Memory Expander Plus does not have its own battery, obtaining its power from the Portfolio. Because the Memory Expander Plus receives its power from the Portfolio, it needs no battery. The Memory Expander Plus's memory content is preserved even when the Portfolio is off, just like the memory in the Portfolio itself. However, the Memory Expander Plus retains its memory contents only as long as it remains connected to the Portfolio.

Warning: Detaching the Memory Expander Plus from the Portfolio destroys the memory content of the expander.

INSTALLING THE MEMORY EXPANDER

The directions listed in this section explain how to connect a Memory Expander Plus to your Portfolio. Follow the instructions carefully for trouble-free installation.

Warning: Installation and de-installation of a Memory Expander Plus causes the entire content of the Portfolio's memory and the built-in RAM disk (drive C:), and requires a cold boot. You must save anything in your Portfolio's memory that you wish to keep before proceeding:

1. Save any files you wish to keep. Copy the files to a Memory Card or upload them to a desktop personal computer using the Smart Parallel Interface.
2. Write down any unique SETUP parameters that you may want to recreate after installation.
3. Switch off the Portfolio by typing OFF and pressing [] or by holding down [Fn] and pressing [O].

4. Turn the Memory Expander Plus on its back. Set the switch according to whether you are using one or two expanders:

If installing a single Memory Expander Plus, or the first of two expanders, set the switch position to 1

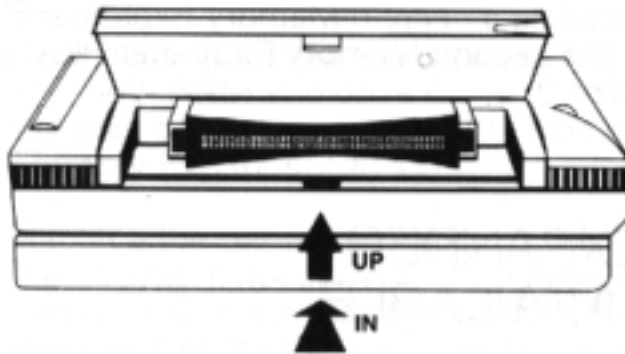


OR

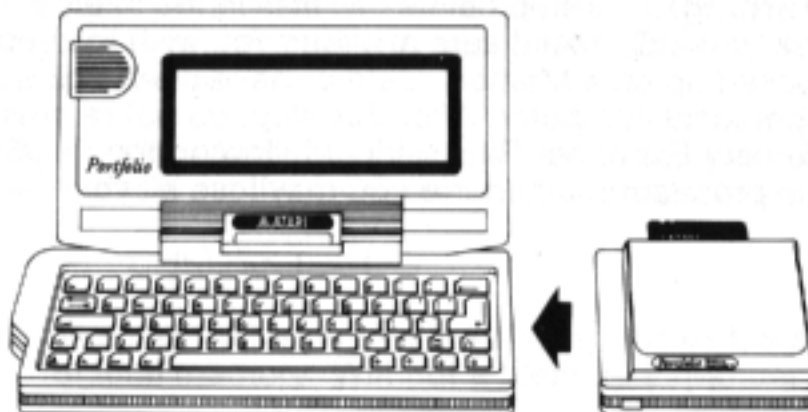
If installing the second of two expanders, set the switch position to 2



5. Turn the Portfolio on its back. Press the outer edge of the expansion bus cover in and push up as shown in the diagram below.



6. Turn the Portfolio and the Memory Expander Plus right side up. Slide the Memory Expander Plus into the bus connector as shown below until there is an audible click from the retaining clips.



Warning: At this point, the Portfolio will not recognize the memory in the Memory Expander Plus. Complete the additional installation steps below before using Portfolio.

7. Skip this step if the Memory Expander Plus is the only peripheral you will be using.

The expansion bus connector on the right end of the Memory Expander Plus can be used to connect other peripherals to the Portfolio. The bus cover may be removed in the same way as the bus cover on the Portfolio. Note that a maximum of two expanders can be connected to the Portfolio at any one time, plus one additional peripheral other than a Memory Expander Plus.

Note: If installing a second Memory Expander Plus, make sure the second Memory Expander Plus' switch is set to position 2.

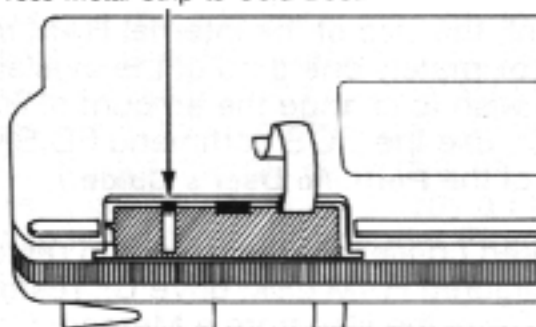
MAKING EXPANDER MEMORY AVAILABLE

You now must let the Portfolio software know that additional memory is available. To configure the Portfolio software to recognize the additional memory, follow the procedure below:

Warning: This step deletes all files in the internal RAM disk, drive C:. Make sure any files you wish to keep are backed up on a Memory Card or have been uploaded to a personal computer. After this step, do not remove the Memory Expander Plus without following the de-installation procedure, otherwise you may lose all your files.

1. Turn the Portfolio on its back. Remove the first battery. Under the battery is a slot through which you can see a strip of shiny metal. Using a small screwdriver, firmly press the strip towards the inside of the Portfolio. Press the strip for two seconds to cold boot the Portfolio.

Press Metal Strip to Cold Boot.



Cold booting erases the contents of Portfolio's memory, both RAM and drive C:. As Portfolio restarts from the cold boot, it recognizes the new memory in the Memory Expander Plus(s).

2. Replace the battery. Portfolio's screen should display the copyright notice. With the copyright notice displayed, follow the instructions in **Switching On, Chapter 1** of the **Portfolio Owner's Manual**.

If the copyright notice does not appear, remove the battery and try cold booting your Portfolio again. If this still does not correct the problem, it is possible that the strip of metal may be bent. Leaving the battery out of the Portfolio for about one hour will cause your Portfolio to cold boot without pressing the metal strip.

3. To check that your Portfolio recognizes the additional memory, at the DOS command prompt, type:

```
CHKDSK [ ]
```

The next to last line of the display shows the amount of total memory. Without a Memory Expander Plus,

the amount of total memory is about 126,976. (Some of the Portfolio's 128K physical memory is reserved.) With one or two expanders, total memory should be higher.

Note: Chapter 2 of the **Portfolio User's Guide** describes this DOS command.

4. At this point, the size of the internal RAM disk, drive C:, is approximately one third of the available memory. If you wish to change the amount of RAM used for drive C:, use the DOS command FDISK. (See **Chapter 2** of the **Portfolio User's Guide**.)
5. If you backed up files that you want to restore to the newly configured RAM disk, drive C:, restore those files now. Copy the files from a Memory Card or download them from a PC. If you recorded your original SETUP settings, recreate those settings now.

DE-INSTALLING THE MEMORY EXPANDER

Follow the directions in this section if you wish to disconnect one or two Memory Expander Pluses from your Portfolio for any reason.

Warning: De-installation loses all memory content and files, just as installation does.

1. Save any files you wish to keep. Copy the files from drive C: to a Memory Card or upload them to a PC using the Smart Parallel Interface.
2. Turn off the Portfolio. Press **[Fn] [O]** or type OFF and press **[]**.
3. Disconnect the Memory Expander Plus(s). Press the two release buttons on the front and back of the Memory Expander Plus near the bus connector. Pull the Memory Expander Plus from the Portfolio.

4. Cold boot Portfolio. Restore any backed up files following steps 5 and 6 above.

USING THE MEMORY EXPANDER

You can use the additional memory in the Memory Expander Plus(s) for a variety of purposes, such as increased capacity in the internal RAM disk, drive C:. Just use the FDISK command to set the new size of drive C:. If your internal RAM disk has been set to 128K or more, it is now possible to copy a full 128K Memory Card into it. A Memory Expander Plus also provides additional RAM needed by some external programs.

Note: Portfolio becomes less portable when Memory Expander Plus(s) are attached, particularly along with other peripherals. Unless handled carefully, there is a danger that the Memory Expander Plus may accidentally detach and the files lost. With several peripherals attached to your Portfolio, support the Portfolio with a firm flat surface such as a desktop when in use. We do not recommend attaching the Memory Expander Plus while using Portfolio as a portable computer.

The card drive in the Memory Expander Plus is designated as drive B: and can be used with any cards that work with Portfolio. The Memory Expander Plus's drive can access any card with commands or filenames that include B: in the path description. With two card drives it is easy to copy all files from a Memory card in drive A: to a Memory Card in drive B:. If you are using a Program Card in one drive, you can put a Memory Card in the other drive so that the program can access data files on the Memory Card without having to switch cards as you would with a single card drive.

APPENDIX A: TROUBLESHOOTING

- Q:** My MS-DOS desktop program does not run when downloaded to the Portfolio.
- A:** Check the program's licensing agreement to make sure such usage is permitted. Many popular programs are not well-behaved, that is they address hardware directly (in violation of IBM's guidelines) and cannot be used on Portfolio. Desktop software is usually designed for a screen of 80 characters by 25 lines. Study the documentation on the SETUP functions in your **Portfolio Owner's Manual** to determine which display menu settings you should try.
- Q:** When I try to format a Memory Card in drive B:, I get the message "Second drive not installed."
- A:** The Portfolio is not recognizing the presence of the Expander. Cold boot the Portfolio as described in the instructions in **Installing The Memory Expander**. If you are using two memory expanders, make sure the first is switched to position 1 and the second to 2.
- Q:** The CHKDSK utility recognizes the Memory Expander Plus' memory but my built in Portfolio application program does not.
- A:** The applications can create individual files of up to 64K only, whether memory has been expanded or not.

- Q:** Copying files to Drive B: copies them to the Memory Card in the Portfolio's drive, not the Memory Expander Plus'.
- A:** The Portfolio is not recognizing the presence of the Memory Expander Plus. Cold boot the Portfolio as described in the instructions under **Installing The Memory Expander**. If you are using two expanders make sure the first is switched to position 1 and the second to 2.
- Q:** I can use the Memory Expander Plus' card drive, but not its memory.
- A:** The Portfolio is not recognizing the presence of the memory Memory Expander Plus. Cold boot the Portfolio as described in the instructions under **Installing The Memory Expander**. If you are using two memory expanders, make sure the first is switched to position 1 and the second to 2.
- Q:** After cold booting, the copyright screen does not appear, just the DATE prompt.
- A:** The metal strip may be bent. Remove a battery and leave it out for one hour. This will cause the Portfolio to cold boot without having to press the metal strip.
- Q:** My Memory Expander Plus was accidentally detached from the Portfolio and I have not touched the keyboard since it happened. Can I reattach it and keep working?
- A:** No, you have lost the memory content of the Memory Expander Plus. Neither the Portfolio's main memory nor the Memory Expander Plus's memory will work correctly until you cold boot the Portfolio. It is a good idea to frequently back up your Portfolio's memory contents to prevent data loss.

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Customer Relations
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Sunnyvale, CA 94089

In Canada, write to:

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90 Gough Road
Markham, Ontario
Canada L3R 5V5

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