

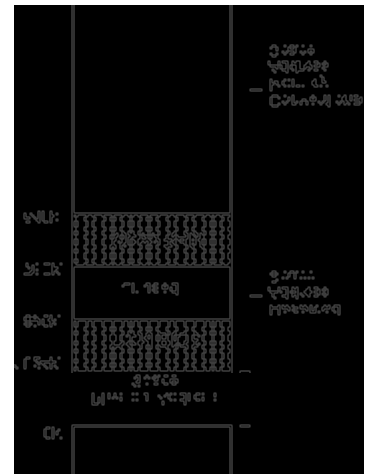
Windows and PageMaker are large, sophisticated programs that severely tax the resources of the PC. The better your PC performs, the faster Windows and PageMaker operate, allowing you to be more productive. There are five areas of the PC that significantly affect the performance of Windows and PageMaker. In order of importance, these are:

- Amount and type of memory in the PC
- Hard disk access speed
- Central processing unit (CPU) performance
- Printer performance
- Graphics adapter performance

The following sections explain each of these five areas and how you can improve their operation to maximize PageMaker's performance. First, however, is an introduction to the different types of memory and the software used to access it.

## Introduction to memory

In the current MS-DOS environment, 640K is the maximum amount of random access memory (RAM) that can be made available to standard application software. This limit originated with the Intel 8086 and 8088 processors that were used in the original IBM PCs. These processors have a maximum address limit of 1 megabyte (1024 K). IBM elected to reserve the top 384K of the address space for use by system firmware and video RAM. That leaves 640K--known as conventional memory--for use by the operating system (MS-DOS), installable device drivers, RAM-resident programs, and user programs such as PageMaker. Although later Intel processors--the 80286 and 80386--can address more than 1 megabyte of memory, MS-DOS through version 3.3 cannot. MS-DOS is restricted to the address limit of the earlier processors, the 8086 and 8088.



**Expanded memory** To allow programs to access additional memory beyond the 640K address limit,