Your computer has three areas of memory: base RAM, shadow RAM, and extended memory.

```
┌─────────────────────┐  Up to 10MB
│ Extended            │  (10,240KB)
│ Memory              │
│ (Up to 9MB)         │
│                     │
├─────────────────────┤  1,024KB
│ Shadow RAM          │  (1MB)
│ (384KB)             │
│                     │
├─────────────────────┤  640KB
│ Base RAM            │
│ (640KB)             │
│                     │
│                     │
│                     │  0KB
└─────────────────────┘
```

Base Ram:

Base RAM is memory below 640KB. This area, also called conventional memory, and is used by MS-DOS and all MS-DOS applications.

Shadow Ram:

Shadow RAM, or the upper memory area, comprises memory from 640KB to 1024KB (1MB). Shadow RAM is used by the system BIOS, and other BIOS extensions. The Remap Shadow RAM option in the setup utility enables you to remap the 384KB of shadow RAM as extended memory.

Extended Memory:

Extended memory is continuous memory above 1MB. This area can be addressed directly by 80286, 386, and 486 microprocessors and is often used for software disk caches, RAM disks, and software print spoolers.

An extended memory manager, such as MS-DOS's HIMEM.SYS, can help your applications use extended memory more efficiently. Installing HIMEM.SYS also prevents different programs from using the same part of extended memory at the same time. Refer to an MS-DOS 5.0 manual for instructions on installing and using HIMEM.SYS.

Expanded Memory:

Memory that is provided on an expanded-memory adapter is called expanded, or EMS, memory. Many of today's MS-DOS applications use this type of memory.

With the aid of an expanded memory emulator, your computer can make extended memory emulate expanded memory. In doing this, it enables you to run programs that use expanded memory but not extended memory.

Emulating expanded memory increases your system's efficiency. When a program

requests information that is in expanded memory, the expanded memory
emulator maps the necessary page of memory (16KB) to a page frame below the
1MB boundary.

EMM386.EXE is one expanded memory emulator you can install. Note that you
must install HIMEM.SYS before you install EMM386.EXE. Refer to an MS-DOS
reference manual for instructions on installing and using EMM386.EXE.