# Performance Rating Tests

The Performance Rating Tests are intended to generate a value for the performance of your machine which approximates its "real-world" behavior. The four tests are run in sequence and the results are displayed. The value displayed for each test is a ratio of the performance of your machine vs. that of a Mac Classic. A Classic should score approximately 1.0 on all four tests. When all the tests are done, a weighted result is generated to come up with the PR (Performance Rating) for your system. The higher the numbers generated, the better.

## The CPU Test

The CPU test is simply a calisthenic workout for the basic operations of the processor. The test is written in assembly language so I can be sure of exactly what is happening at the processor level. The first part of the test is a simple Bubble Sort of a 1024 element array. That array is then copied and manipulated in several ways using various adds, subs, ands, and ors.

## The Graphics Test

The Graphics test is very similar to the monochrome section of the Color Quickdraw tests. The only real difference is that the scrolling is done in larger steps. The test draws a series of empty and filled shapes, copies those shapes around the window, and then scrolls the whole mess out of the window. If you are running on a color machine, the screen will be temporarily set to monochrome mode during this test and will be reset afterwards.

## The Disk Test

The Disk test is designed to help spot potential problems with hard disk performance. The test creates a 1 megabyte file and proceeds to read and write to it in various-sized blocks. All disk access is done through the File Manager and thus is similar to that performed by a normal application.

This test is particularly good at pointing up fragmentation problems due to the large size of the file. If the file has to be created across several distant parts of the disk, then the performance will be slow. If you get surprisingly slow results from this test, you should consider using a disk optimizer program such as Speed Disk or Disk Express.

## The Math Test

The Math test tests both floating point and integer math speed. The ratio is roughly 75% integer to 25% floating point operations in the test. In addition, the floating point operations do not include any transcendental functions.

## The Performance Rating

The values from each of the four tests are combined using a formula to give a Performance Rating which represents a ratio of the performance between your machine

and a Mac Classic. The formula is as follows:

PR = (0.4*CPU)+(0.3*Graphics)+(0.2*Disk)+(0.1*Math)

In other words, CPU is 40%, Graphics is 30%, Disk is 20%, and Math is 10%. If you disagree with this formula, or if you find it does not represent the reality of your work with the Mac, the values for each test are displayed and saved along with the average, so you can do your own unique calculations if you wish.