

PC Enterprises' QuickSilver Cartridge

Installation and Operation Manual



QuickSilver

Makes Your PCjr Start Swiftly & Silently

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The QuickSilver Cartridge is designed to make your PCjr power up quickly and silently and run more PC programs than ever before!

This carton should contain the following:

- * QuickSilver Cartridge
- * QuickSilver Manual

Please inspect this package to determine whether any item appears missing or damaged. If any item is missing or damaged report the missing or damaged item to the place of purchase as soon as possible.

Introduction

Each time the PCjr is powered on the computer performs a Power On Self Test. This test is known as the POST.

At the conclusion of the POST the PCjr sounds a single beep when the system passes the POST - and two beeps if a problem is detected.

While most people will agree that running the POST each time the computer is started is a good idea, the POST can at times be rather annoying. The main reason the POST can be annoying is that it takes a long time for the memory test to complete - especially so if you have expanded the PCjr's memory and must therefore wait for the system to count up to 640K.

In addition, many people also complain about the single beep heard at the conclusion of the POST. They suggest the computer only beeps when a problem is found.

As a result, it has been suggested that we design a product which eliminates running the POST when the PCjr is first started. We believe a better approach is to replace the usual time consuming memory test with a faster abbreviated test. And that's exactly what the QuickSilver Cartridge does.

With the QuickSilver Cartridge installed the PCjr runs the POST exactly as it did before - with two exceptions. First, the usual memory test is replaced with the QuickSilver memory test, and second, the annoying beep normally sounded at the conclusion of the test is eliminated.

Compatibility

The QuickSilver Cartridge actually replaces a portion of the PCjr's BIOS and therefore does not use any of the normal PCjr cartridge select lines.

As a result, the QuickSilver Cartridge does not use any additional program memory and should not interfere with other PCjr cartridges.

The QuickSilver Memory Test

The usual memory test performed by the POST consists of two parts. In the first part the PCjr writes all 256 possible patterns to the first word in each block of memory tested. The second part of the test is the time consuming part. In this part, the PCjr normally writes five different patterns to each and every memory address.

The first part of the QuickSilver memory test is essentially identical to the usual test performed by the POST. It is the second part of the QuickSilver test which is different. In the second part of the QuickSilver test only one pattern is used to test the memory.

It is believed that the QuickSilver memory test will adequately expose a problem at least 99% of the time. If for any reason you ever wish to run the usual POST you can still do so by simply removing the QuickSilver Cartridge and restarting the system.

Eliminating that Annoying Beep

With the QuickSilver Cartridge installed the PCjr will not beep at all to indicate that the

system has successfully passed the memory test. If a problem is detected two beeps will be sounded, in exactly the same manner as with the usual memory test.

Keyboard Compatibility Problems

Just plug the QuickSilver Cartridge into the computer and an important compatibility problem between the PCjr and the PC is eliminated.

The eliminated problem concerns the PCjr's interrupt 9 routine. The interrupt 9 routine is the routine that converts scan codes (which are produced by the keyboard) to characters.

In the case of an IBM PC interrupt 9 gets keyboard scan codes from a port located at 60h.

In the case of a PCjr interrupt 9 gets scan codes from the AL register - and it is assumed that the AL register contains the same information as the port at 60h.

While for the most part this assumption is valid it is not the case when the program you are running changes the AL register before interrupt 9 is executed.

With the QuickSilver Cartridge installed the PCjr's interrupt 9 routine is modified so the PCjr does not rely on the contents of the AL register. Instead, the PCjr's interrupt 9 routine gets keyboard information from the port at 60h - exactly the same place as the IBM PC.

The QuickSilver Cartridge therefore permits you to run many programs on your PCjr which will not run without the cartridge because of a keyboard input problem.