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Serial Switch: Using with Quadra 900 and 950 (5/95)

Article Created: 29 June 1992

Article Reviewed/Updated: 18 May 1995

TOPIC -----

I found that some third-party MIDI software requires running Serial Switch for the Quadra to work correctly. The switch is in the MIDI Manager Tools Diskette from APDA.

What is this serial switch, and how does it differ from the IIfx serial switch?

DISCUSSION -----

As you surmise, the Macintosh IIfx, Quadra 900, and 950 all have intelligent I/O processors (IOPs) on the ports for the floppy disk, ADB, and serial I/O. These ASICs feature a built-in microprocessor, DMA controller, timer, and external Static RAM (SRAM), used to off-load floppy disk, ADB, modem, and printer port interrupts.

Those programs that don't use the I/O ToolBox routines, but instead directly address the I/O hardware (contrary to our programming recommendations) will have compatibility problems with these IOP-equipped systems. However, Apple wrote a utility called the Serial Switch that overrides the IOP controlling the serial ports, to help make compatible those applications that write directly to the serial hardware.

The first utility was called the Macintosh IIfx Serial Switch 1.0, which was revised and renamed to Serial Switch, to better reflect that it may also be used on the Quadra 900 and 950.

This newer version of the Serial Switch hasn't been as widely distributed as the previous version because most of the third-party incompatibilities have long since been corrected. But since there are still third parties who wish to use their own serial drivers, most notably MIDI developers, Apple provides the switch to developers to distribute with their applications should their applications require it.

NOTE: The latest version of the Serial Switch is 1.1. After launching it, you will read ver 1.1a1 in the top right corner of the switch's window.

The CDEV has two modes:

- Faster - When using the IOP.
- Compatible - Enables third-party developer's code to address the SCC hardware directly, bypassing the IOP.

NOTE: You will have to restart your computer after choosing a different mode for the change to take affect.

Since there's no way to bypass the IOP that controls the SWIM and ADB, applications that address that hardware must be modified to work on the Macintosh IIfx, Quadra 900, or Quadra 950.

You can obtain the Serial Switch from the MIDI Manager Tools Disk as you mention, as well as from:

- The E.T.O. CD (sent to developers on a subscription basis)
- Software Licensing
- AppleLink in Software Sampler

Note the Serial Switch is still sometimes referred to as the "Macintosh IIfx Serial Switch"; however, regardless of the name, version 1.1 will work on Quadras too.

Article Change History:

- 18 May 1995 - Made correction for clarity and updated format.
- 19 Jan 1994 - Reviewed for technical accuracy.

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Keywords: <None>

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19960215 11:05:19.00

Tech Info Library Article Number: 10391