Macintosh Plus: Serial Driver Differences Of The 128K ROM

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TOPIC ---

This article describes issues with RAM and ROM based serial drivers when the Macintosh Plus was introduced.

DISCUSSION --

When connected to third party printers, the newer ROM-based Macintosh Plus serial driver occasionally doesn't work, possibly because of differences between the old RAM and ROM drivers and the newer ROM driver.

If you have recently upgraded your system to a Macintosh Plus and your printer no longer works with some of your applications, you may have to change from Xon/Xoff (Software) to DTR (hardware) type handshaking, if your printer has this option.

There were originally three different serial drivers, two RAM serial drivers and a ROM serial driver. The RAM drivers had features that the ROM driver didn't. One version of the RAM driver was for use with the 128K and 512K Macintosh and one version was for use with the Macintosh XL. All serial drivers default to 9600 baud, 8 bits data, no parity, and two stop bits with the ROM serial driver supporting CTS hardware handshake and the RAM driver supporting Xon/Xoff software handshake. The ROM driver would terminate input requests when an error occurred. The RAM driver would not terminate with errors. It can be seen that, depending on which driver was used by an application, a user could access certain built-in functions.

The newer serial driver in the Macintosh Plus 128K ROM has some differences from all the previous drivers. The new driver verifies that the serial port is correctly configured and free; if not, an error is returned. When opened, the new driver defaults to hardware handshake ON (as did the old ROM driver). When opened, the new driver also asserts the DTR line and negates that line when closed. There have been new control calls implemented that let the application control the input data flow from an external device, as well as set control options, and modify the translation of parity default characters.

Further information on the old RAM and ROM serial drivers can be obtained from

Inside Macintosh Vol. II, Page 245-255. Further information on the newer ROM
serial driver can be obtained from Inside Macintosh Vol. IV, Page 225-228.
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