



## SLC 5/03™ and SLC 5/04™ Operating Systems (Catalog Numbers 1747-OS302 and 1747-OS401)

Read this document prior to using the SLC 5/03 OS302 or the SLC 5/04 OS401 processors. This release note contains information about:

- new features
- using this release

Keep this document with the *SLC 500™ Modular Hardware Style Installation and Operation Manual*, Catalog Number 1747-6.2.

### New Features

The SLC 5/03 OS302 and SLC 5/04 OS401 processors offer the following new features:

Feature	Benefit
indirect addressing	Allows for simplified programming.
trigonometric and exponential math functions	Includes SIN, COS, TAN, ASN, ACS, ATN, LN, LOG, ABS, DEG, RAD, and XPY.
compute (CPT) instruction	Allows for complex math computations.
swap (SWP) instruction	Allows for the exchange of the high and low bytes of a 16-bit word, providing easier manipulation of ASCII data within the SLC processors.
scale with parameters (SCP) instruction	Simplifies scaling of analog parameters.
remote I/O (RIO) passthru via a 1747-SN scanner module	Allows an SLC 5/04 processor to act as a bridge between DH+ and RIO. Remote I/O passthru also supports uploads/downloads of applications to RIO devices.
global status flags on DH+™	Provides for high-speed broadcast to all processors.
DF1 half-duplex master protocol	Allows the SLC 5/03 and SLC 5/04 processors to support SCADA master RTU applications.
DF1 to DH+ passthru	Allows you to connect the SLC 5/04 processor's serial port with your computer and then access any node on the DH+ network, regardless of the baud rate of the DH+ network.
multi-point list	Allows for monitoring of any 32 bits from one screen.
SLC 5/04 program memory of 12K, 28K, or 60K words and 4K of additional data words	Offers a variety of modular processors that fit a variety of memory requirements.

## Using This Release

While using the SLC 5/03 OS302 or SLC 5/04 OS401 processors, keep the following in mind:

### Using the SLC 5/03 OS302 Processor

If an SLC 5/03 processor is running the new OS302 operating system, that SLC 5/03 processor has 321 instruction words less memory available for the user program than a processor running the OS300 or OS301 operating systems. Therefore, if you have a program for an OS300 or OS301 operating system that is near maximum capacity, saving the program as an OS302 program may result in an error. Save the program as an OS300 or OS301 program instead.

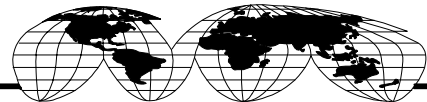
### Communicating via DF1 Full-Duplex to an SLC 5/04 Processor with DF1 to DH+ Passthru Enabled

DF1 to DH+ passthru allows a device connected to channel 0 of an SLC 5/04 processor communicating with DF1 full-duplex protocol, to communicate with nodes on the DH+ network that the SLC 5/04 processor is connected to. Care must be taken when using this feature. You could inadvertently access devices on the DH+ network instead of channel 0 on the SLC 5/04 processor. Refer to the *Instruction Set Reference Manual* for more details.

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