Using the 1775-SR Scanner

The 1775-SR scanner is a required module for the PLC-3/10 programmable controller. When you are setting up your PLC-3/10 system, you must insert a 1775-SR scanner into the PLC-3/10 Processor Chassis (Cat. No. 1775-A3) and set its thumbwheel switch to one. This number one 1775-SR scanner communicates between the PLC-3/10 programmable controller and:

- the industrial terminal for programming interface
- 1771 I/O chassis for I/O scanning interface
- a backup PLC-3/10 processor that takes control over the outputs if the primary PLC-3/10 processor faults
- up to six PLC-3 or PLC-3/10 processors for peer-to-peer communication

WARNING: Remove system power before removing or inserting the 1775-SR scanner in the PLC-3/10 chassis. Failure to observe this warning could result in damage to PLC-3/10 components and/or undesired operation with injury to personnel.

Important: Do not insert the 1775-SR scanner into the PLC-3 Main Processor Chassis (Cat. No. 1775-A1, -A2). The 1775-SR scanner is not compatible with the PLC-3 programmable controller.

Programming Interface

The 1775-SR scanner provides an RS-232-C compatible channel (channel 5) that can communicate with the industrial terminal. You can use the industrial terminal to:

- enter and monitor ladder diagram program instructions
- enter and monitor data table values
- operate the PLC-3/10 LIST function
- load and record ladder diagram programs with a Data Cartridge Recorder (Cat. No. 1770-SB) or Data Cassette Recorder (Cat. No. 1770-SA)
- print out ladder diagram program through channel C interface to a compatible printer

The number one 1775-SR scanner supports operation of channel 0 on the PLC-3/10 front panel. If you are using channel 5 on the number one 1775-SR scanner, you must make I/O channel 4 inactive through the PLC-3/10 LIST function.

Additionally, through LIST selections for the number on 1775-SR scanner, you can configure channel 0 on the PLC-3/10 front panel for communication with the industrial terminal or an RS-232-C compatible device.

I/O Scanning Interface

The 1775-SR scanner provides terminals for four separate I/O communication channels. These channels can communicate with I/O adapter modules in I/O chassis. In scanning these I/O channels, the 1775-SR scanner:

- reads the status of output image table words from the data table and transmits this data to update the status of the terminals on the corresponding output module groups.
- receives the status from the terminals on the input module groups and writes this data into the corresponding input image table word in the data table.

You can connect up to 16 I/O chassis on a single I/O channel. Through the PLC-3/10 LIST function, you can select the sequence that the 1775-SR scanner scans the I/O chassis. If an I/O chassis requires a faster update time, you can list the chassis more than once in the sequence.

Backup Communication

Through LIST selections for the 1775-SR scanner, you can configure an I/O channel for a backup communication function. In operating this function, an I/O channel on a 1775-SR scanner in the primary PLC-3/10 processor is connected to an I/O channel on a 1775-SR in the backup PLC-3/10 processor. An output file sends data to the backup processor.

By cabling between the connectors labeled BACK UP on a number one 1775-SR scanner in the primary PLC-3/10 processor chassis and a number one 1775-SR scanner in the backup PLC-3/10 processor chassis, you can set up a PLC-3/10 backup system. In this system, if a fault disables the primary PLC-3/10 processor, the backup PLC-3/10 processor can take control of the outputs.

Peer-to-Peer Communication

Through LIST selections for the 1775-SR scanner, you can configure an I/O channel for peer-to peer communication. In this function, you connect the I/O channel of a 1775-SR scanner in one PLC-3/10 processor to the same channel of a I/O scanner module in each of up to six PLC-3 or PLC-3/10 processors. If you are connecting to a PLC-3 programmable controller, you connect to an I/O channel on an I/O Scanner-Programmer Interface (Cat. No. 1775-S4A). You must designate one processor as the