How Do I Use an AMCI Block Transfer Module in a ControlNet Remote Rack?
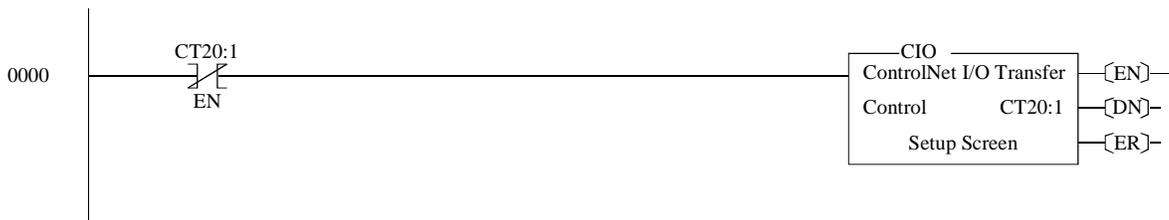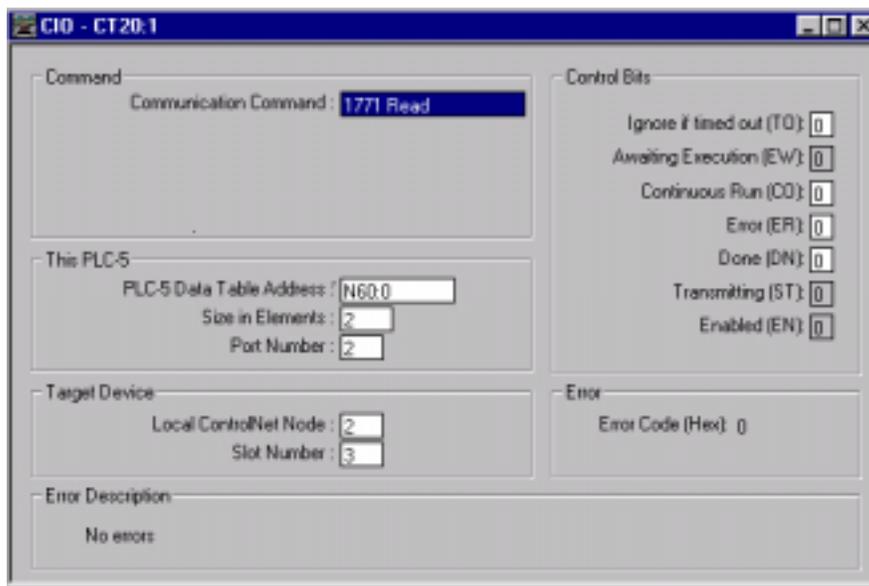
Most AMCI 1771 I/O modules are block transfer modules. That is, it is necessary to place Block Transfer instructions in the ladder logic program in order to communicate with these modules. However, if the AMCI modules reside in a remote rack that is communicating through a ControlNet adapter, then Control-Net I/O Transfer or CIO instructions will replace the Block Transfer instructions in the ladder logic.

The following is a description of how a CIO instruction is programmed to communicate with an AMCI module.

1) If it does not already exist, create a data file with the CT data type. This data type is used as the control block of the CIO instructions. Each CIO instruction will require one address in this table.

2) Add a CIO instruction to your ladder logic program. The setup of the CIO instruction is similar to that of the Block Transfer instruction. The following is an example of the CIO instruction in a rung.

3) Before accepting or verifying the rung, double click on Setup Screen in the CIO instruction. The following window should appear.

4) Configure the CIO instruction to communicate with the AMCI module.

   Communication Command: Set to either 1771 Read or 1771 Write.

   PLC-5 Data Table Address: The address where the module's data is placed in a read operation, or the address that holds the data that is sent to the module during a write operation.

   Size in Elements: The number of words that is sent to or from the AMCI module.

   Port Number: Must be set to 2.

   Local ControlNet Node: Set to match the node number of the ACNR adapter.

   Slot Number: Set to the AMCI module's location in 1771 rack. If it is a two slot module, than it is the right slot of the two.

5) Set the Control Bits to match you application. If continuous operations are desired for your CIO read operations, set the Continuous Run (CO) bit to 1. The continuous bit must not be set to 1 if CIO write operations are being performed.

6) Once all of the CIO parameters have been configured, close the setup box and accept the rung edits.