

## Establish the Communication Link

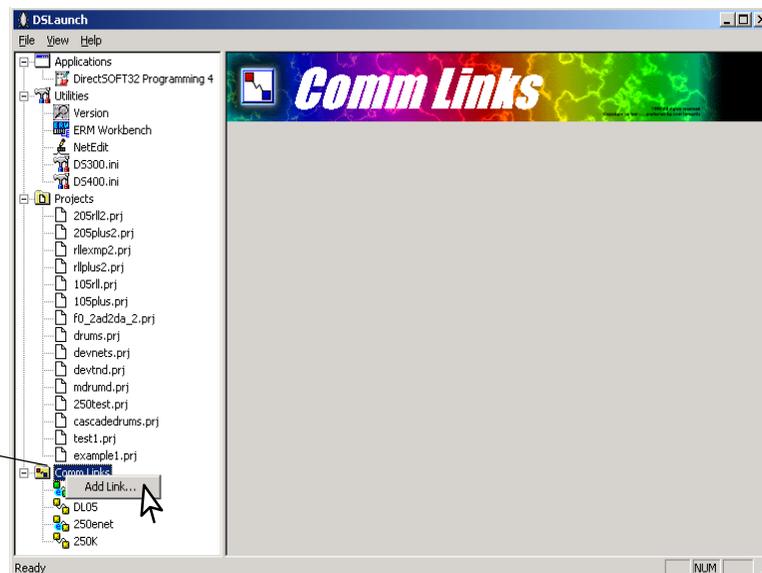
### Setup the Communication Link

This section will discuss the configuration of a standard communication link which will use the serial port of your PC. If you are creating a serial Link that will connect through a modem, or an ethernet link, refer to the *DirectSOFT32 Programming Software Users Manual*, Chapter 9. This example will step you through the setup using the **Link Wizard**.

### Use the Link Wizard

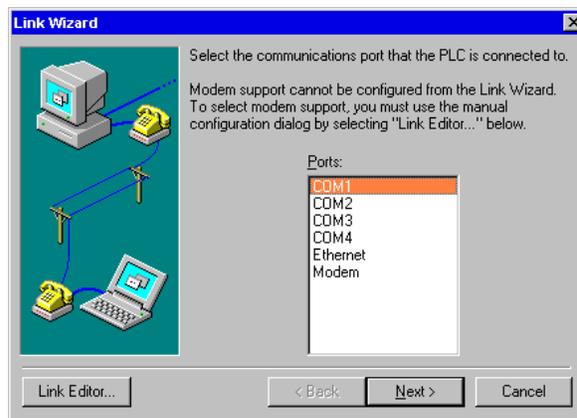
To use the **Link Wizard** connect the programming cable from the serial port of the PC to the serial port of the PLC. Also, be sure that the **RUN/TERM/STOP** switch on the PLC is in the **TERM** position. The Link Wizard can automatically determine the majority of communication settings for the PLCs. To establish a new link, activate the Link Wizard in the Launch Window by right-clicking on the **Comm Links** icon then click on **Add Link**.

Right-click **Comm Links** to add a new link



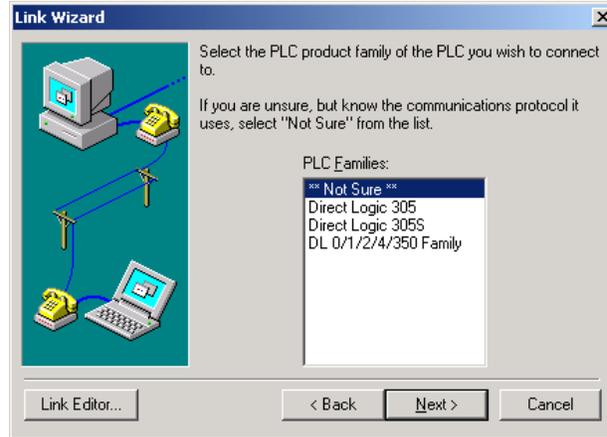
### Step 1: Select the Port

The following window will appear showing a list of **Ports**. Select the port you will use and click **Next >**.



### Step 2: Select the Port

The next window will show a list of **PLC Families**. Select the PLC family by clicking once with the mouse on the appropriate choice. If you are unsure of the PLC family but know which communications protocol it uses, select the “**Not Sure**” choice. If you are using a **DirectLogic** compatible PLC the Link Wizard will try and detect the PLC type automatically. Click on **Next** when you are finished.



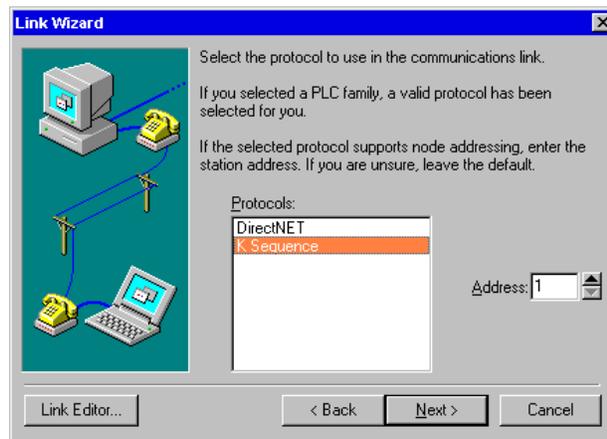
### Step 3: Choose the Protocol and Node Address

Select either **DirectNET** or **K-sequence** protocol. If during the previous step you selected one of the families listed, the highlight bar will be on a valid protocol for that family. The choice of protocol to use will depend on two factors:

Whether or not the PLC supports the protocol on the port where you are connecting. See **DirectSOFT32 Programming Software Manual, Appendix A** for a list of protocols available for ports on **DirectLogic** and compatible CPUs.

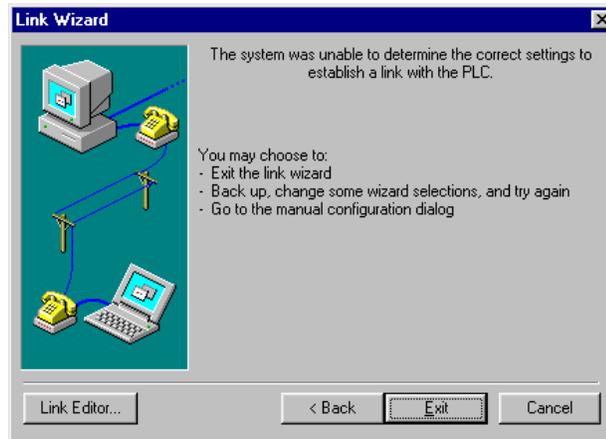
- If you need to perform write operations to individual Discrete I/O points or control relays. In this case you must select the K-sequence protocol. **DirectNET** protocol cannot write to individual bit locations.

If the PLC has been configured with a node Address other than 1, enter that address now. Click **Next** when finished.



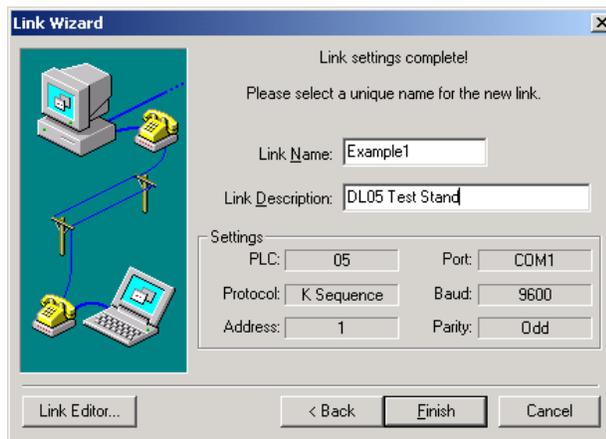
#### Step 4: Cannot Make a Link

The Link Wizard will attempt to establish a communication Link with the PLC using the node address and protocol you have selected. It will try the combination of 9600 Baud, and Odd Parity. If this combination is unsuccessful, an 'auto-baud' sequence will be used to try and determine the correct baud rate and parity combination. If these attempts are unsuccessful, the following dialog is displayed. You can click the **Link Editor** button, and manually attempt to adjust the port configuration, or you can consult the *DirectSOFT32 Programming Software Manual*, Appendix B.



#### Step 5: Name the Link

If the Link Wizard is successful in communicating with the PLC, you will be prompted to enter a unique name and description for the Link. Each Link must have a unique name. The name can be up to 16 characters and can contain space characters. The description field allows 32 characters. Enter the name for the link and description then click **Finish** to return to the DSLaunch window.



## Link Status

After creating a link, the name of the link will be displayed in the menu tree under the **Comm Links** icon. When you click on the link all of the configuration information will be displayed on the DSLaunch window. The status field is color-coded to help easily identify the link status.

**Green** — link is already enabled (means it is active and you can use it).

**Yellow** — paused (you are currently changing the link parameters).

**Red** — link is disabled (inactive). This does not indicate a problem with the PLC, but that you cannot communicate until the link is active. If a link becomes disabled, *DirectSOFT32* will automatically attempt to enable the link when you double-click on the link project.

