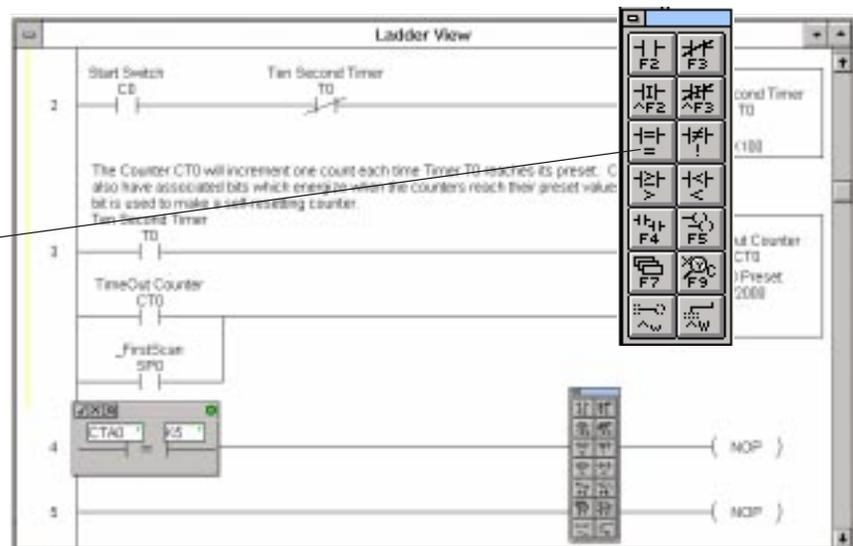


Step 26: Adding a Comparative Boolean Instruction

You are now ready to start a new rung. The next rung of logic will turn ON an output when the counter reaches a count of 5. Use the Tool palette to open the **Equal To** (Comparative Boolean) dialog. Type in **CTA0**, which is the *DirectSOFT* name for the accumulated value of counter **CT0**. Tab to the right side of the input window to enter **K5**. Select the check mark when you have entered the constant value, **K5**.

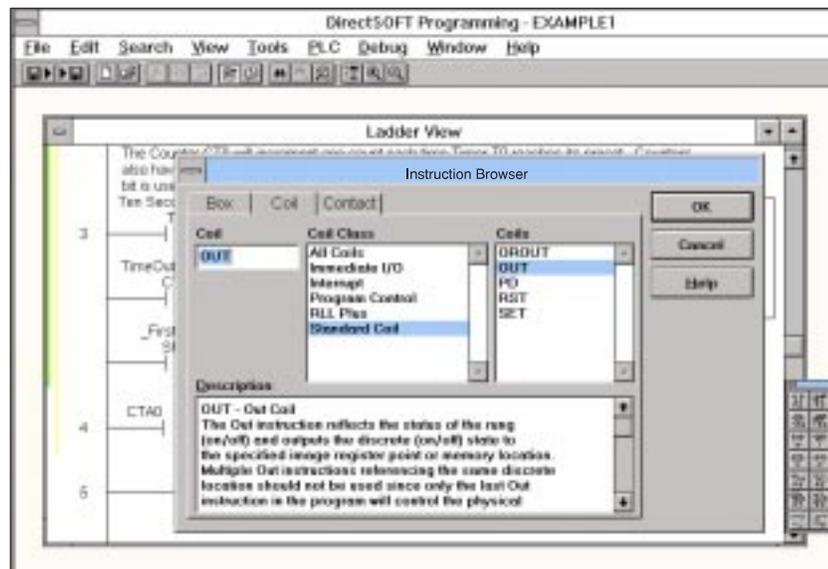
Click on this icon to open "equal to" dialog.



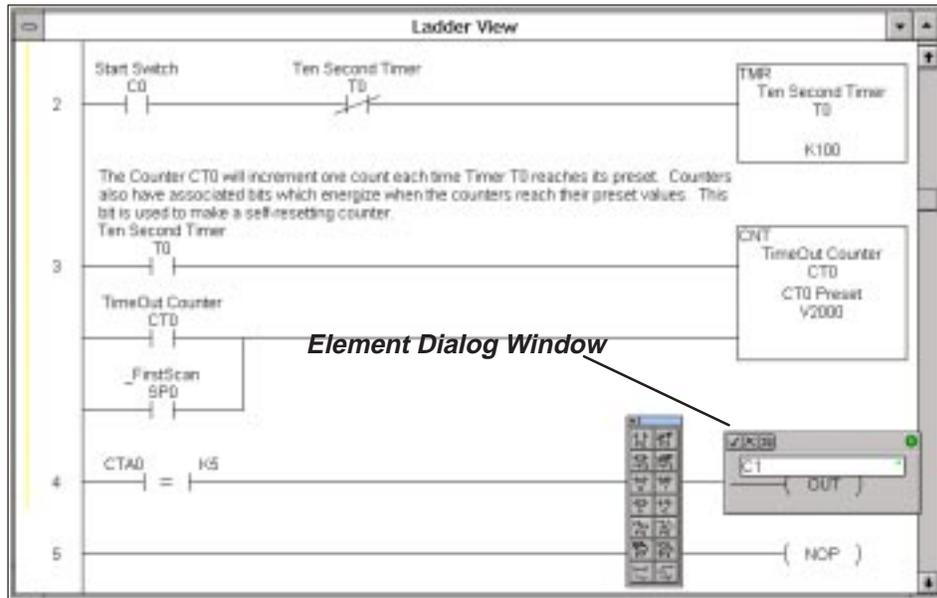
Step 27: Adding a Conditional Output

In this example, you will use **C1** as a test output coil. You will be able to see if C1 turns ON by viewing the screen during the running of this program. As an output turns from OFF to ON, there is a color change on the screen for that particular element.

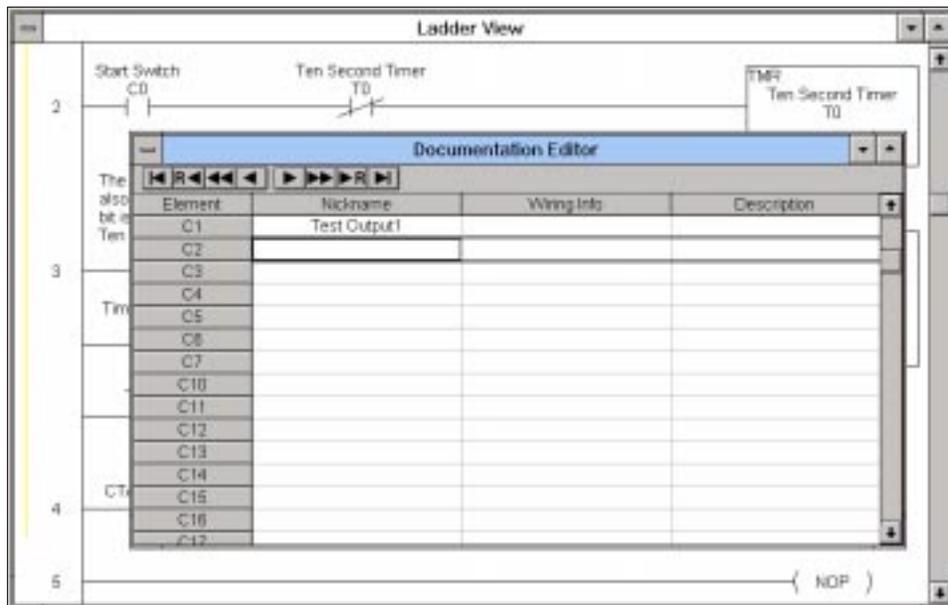
Add **C1** to the rung at this time by moving your cursor to the end of the rung and pressing **F5** to open the **Coil Tab of the Instruction Browser**. Select **Standard Coil** and **OUT** from the available choices. Select **OK** when finished.



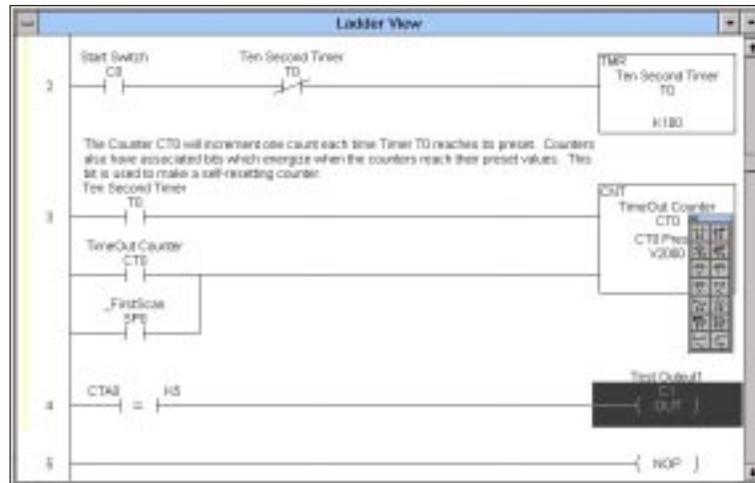
After selecting OK in the Instruction Browser, the Element Dialog box appears. You will be prompted for the output relay designation. In this case, type in **C1**.



You can now enter the nickname "Test Output1" for **C1**, using the same procedure used earlier. Press the key combination **CTRL + D** to bring up the **Documentation Editor** and enter "Test Output1" into the **Nickname** window.



Close the **Documentation Editor** and return to the rung. Notice the Nickname **Test Output1** is now above the element. You are now finished with these rungs. **Accept** them by using the hot key **F8** or by selecting **Edit/Accept** from the upper menu bar.

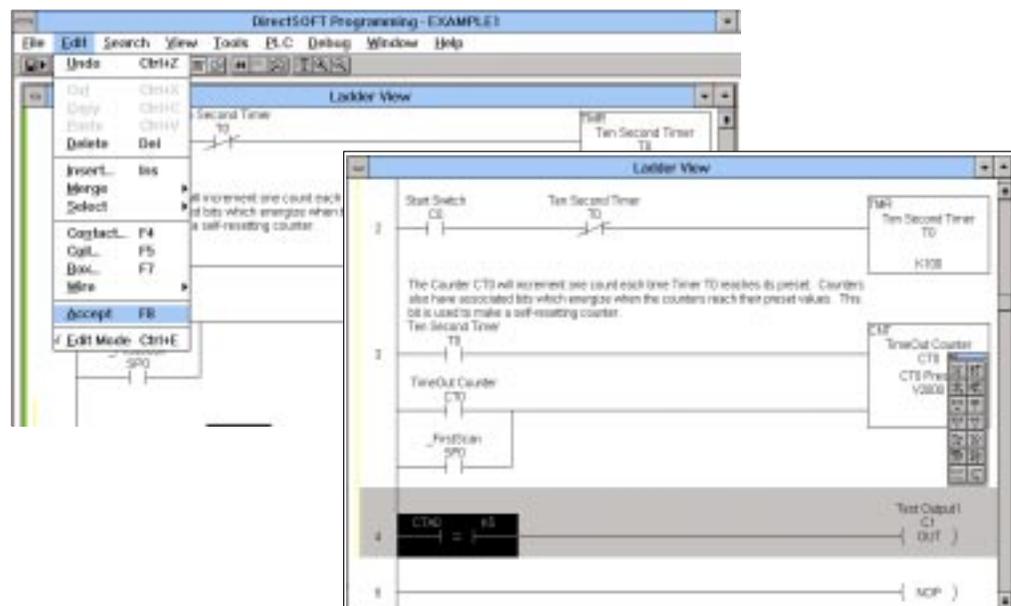


Step 28: Copying to the Clipboard

The following example illustrates the use of the **Copy and Paste** features of **DirectSOFT**. You will copy a rung and paste it to the next. Then, change the count value to **K6** and use output relay **C2** to test it.

To copy a rung, first select the rung. **Rungs cannot be selected and copied unless you have accepted the rung.** Accept the rung by selecting **Edit** and **Accept**. You will see a green vertical bar by the rung when it is accepted.

Now you can select the rung for copying. This is accomplished by placing your cursor on the rung and using the **SHIFT + Arrow** key combination. With the rung selected, select **Edit** then select **Copy** to send a copy of the rung to the Windows clipboard.



Step 29: Pasting to your Program

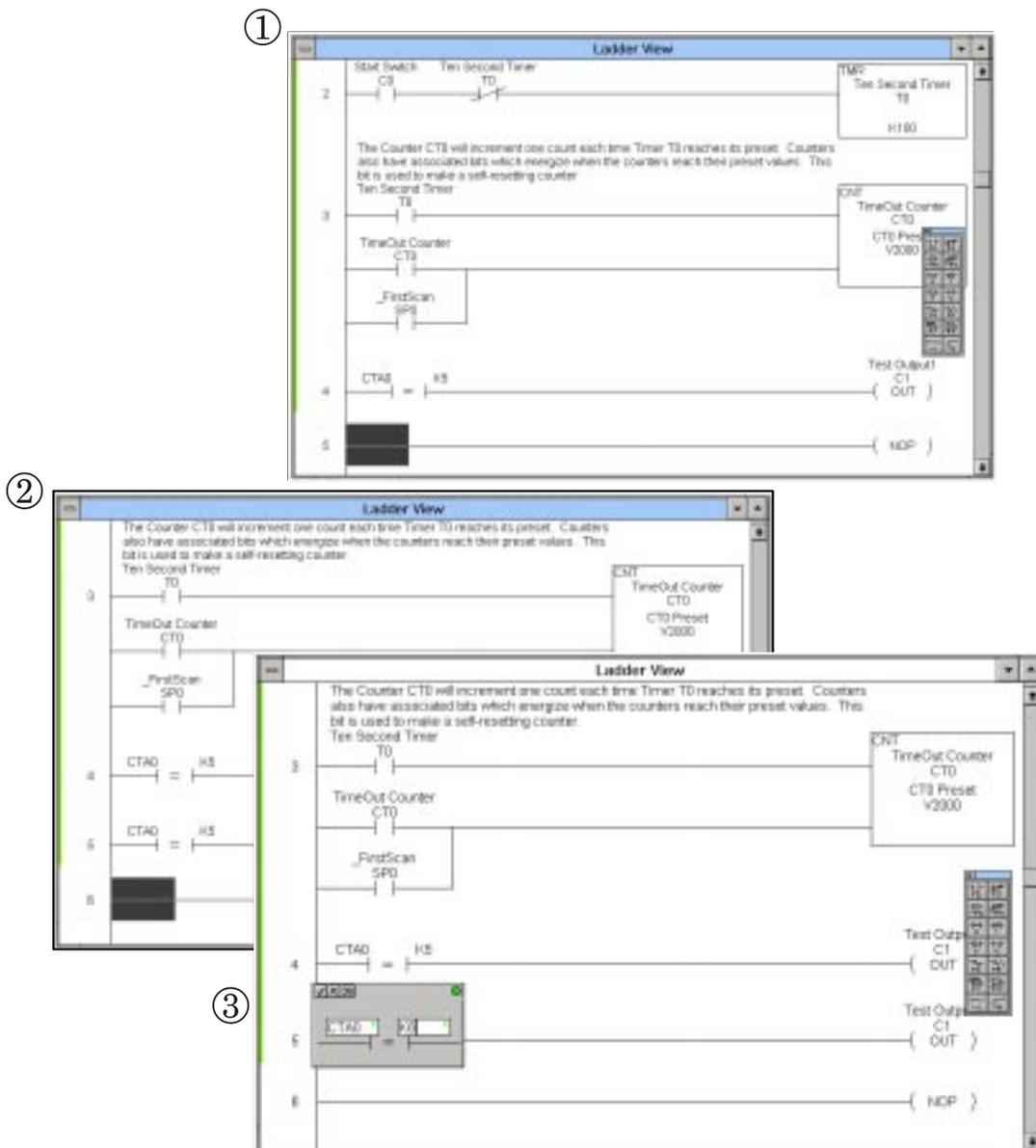
Once you have selected the rung and copied it to the clipboard,

① move the cursor down to the next rung in order to paste. The position of the paste will always be one rung above the current cursor position.

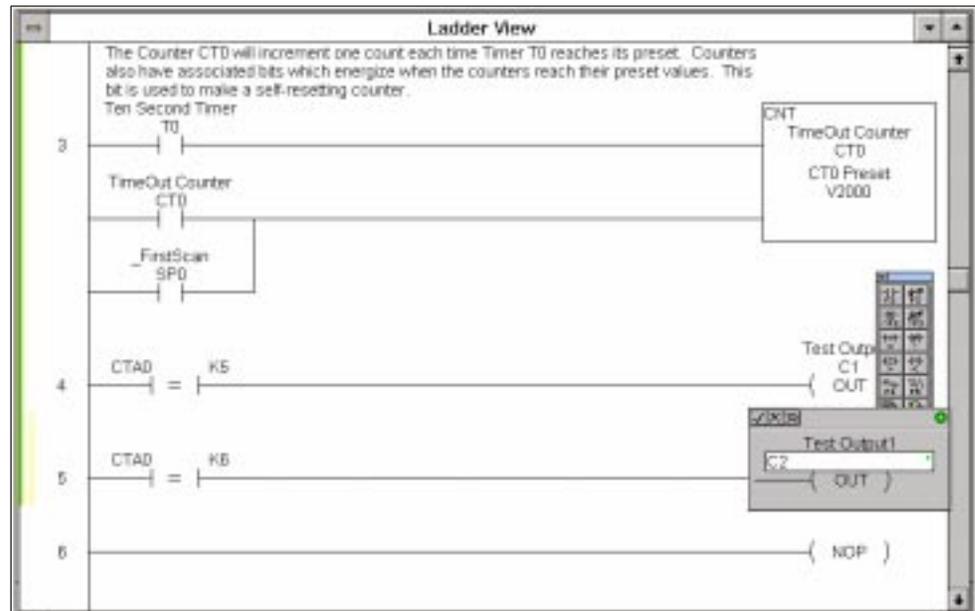
② To paste, select the **Clipboard Icon**, select **Paste** from the **Edit** menu, or use the key combination **CTRL + V**. Step 2 below shows the pasted rung in position.

Move the cursor up to the pasted rung and start changing the elements. Start by editing the conditional contact so it shows **K6**.

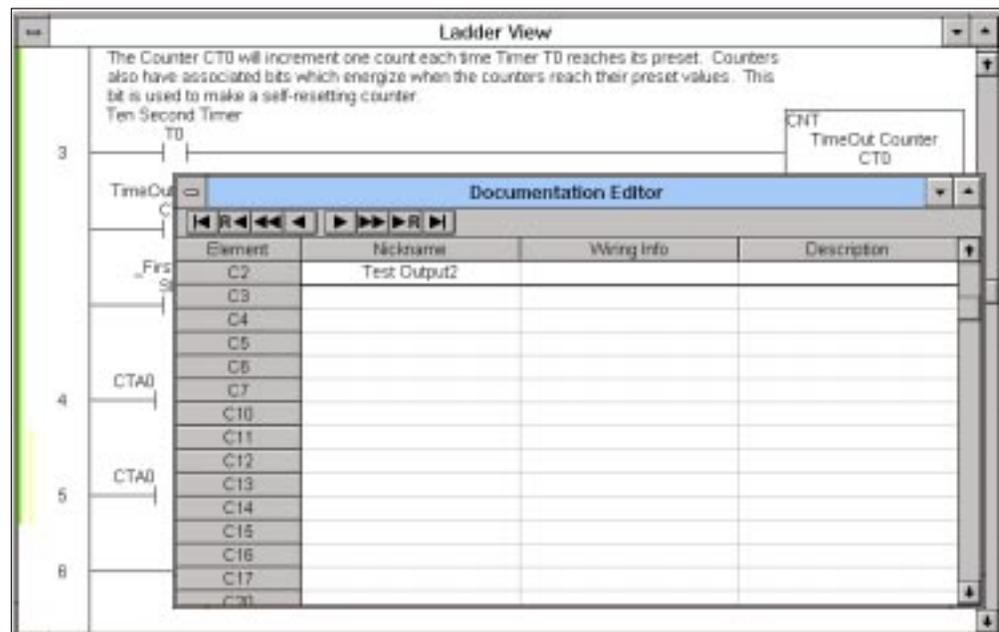
③ When the cursor is on the conditional contact, you can press the **Enter** key and the input window will be opened. Press the tab key to move the cursor to the right. Type in **K6** in place of **K5** and then select the check mark ✓.



Next, move the cursor to the end of the pasted rung. With the cursor over the **C1** output element, double click with your mouse. This opens the window for editing the output coil. Change it to **C2**.



You will also want to assign the nickname C2 to "Test Output2". Use the key combination **CTRL + D** to bring up the **Documentation Editor**. Follow the steps discussed previously for changing and entering the nickname. When your finished the dialog will show the information given below.



Step 30: Ending the Program

Every program must have a rung with the **END** command. Move your cursor to the far right of the next rung. Press the **F5** key to bring up the **Coil Tab of the Instruction Browser**. Select **Program Control** under **Coil Class** and **END** under **Coils**.



Click on **OK** when you are finished. With the final rung showing the **END** statement, you have now completed the program. Press **F8** to accept the rungs. Finally, click on the **Save to Disk** icon of the toolbar. You are now ready to connect and communicate with your PLC. Move to the next page and see how to download the program to the PLCs memory and test it.

