

PLC210 Lab 4: Move and File Instructions

Upon completion of this lab, the student should be able to:

1. Explain the function and operation of the MOV & MVM instructions
2. Explain the function and operation of the FLL & COP instructions
3. Navigate to a Tag to change the value
4. Change the data style setting in a Tag

Download the project Compact_Module_3_EX1.ACD, go Online and put the CompactLogix into the Run mode to do the following lab.

The I/O tag names in this lab may need to be changed to match the addresses on your hardware trainer.

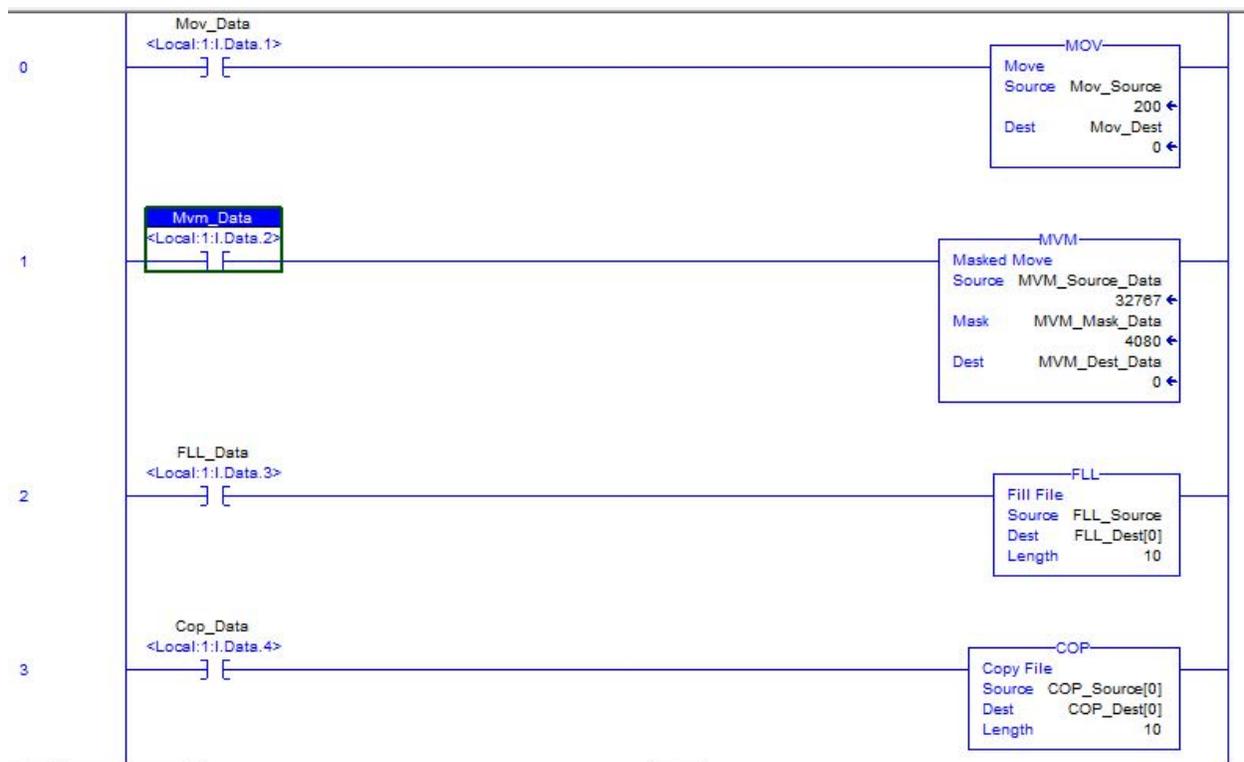


Figure 1. Multiple Move type instructions.

1. MOV Instruction - Move

Verify that there is a value in tag MOV_Source. If there is not, put a value into this tag.

Now go to tag MOV_Dest and monitor the data.

Press PB1 – MOV_Data tag - the “MOV_DATA” input.

Does the data in the tag MOV_Source transfer to tag MOV_Dest?

Release the PB1 pushbutton.

What value is in the Source tag? _____

What value is in the Dest tag? _____

What type of tag is MOV_Data? _____

Hint: Monitor tag's Properties

What is the base tag for MOV_Data? _____

2. MVM Instruction – Masked Move

Monitor the value in tag MVM_Source. Verify that the value of 32767 is in the tag. If it is not, enter it in.

Press PB2 – MVM_Data tag - the “MVM_DATA” input.

Monitor the value in tag MVM_Dest.

What value is displayed? _____

What is the default Style for the MVM instruction's tags

Change Source, Mask and Dest tags to Style - Binary.

Did all 16 bits transfer from tag MVM_Source to MVM_Dest? Explain!

3. FLL – File Fill

Go to tag FLL_Source in Controller Tags. Verify that there is data in the tag. If there is not, put a value in such as 1234.

Monitor tag FLL_Dest [0] , and the next 9 memory locations of the array as well.

Press PB3 – FLL_Data tag - the “FLL_DATA” input.

Does the data transfer? _____

What value will transfer into each location in the array? _____

The index value of the array range from ___ to _____.

How many array locations received the data? _____

Go to tag FLL_Source tag in Controller Tags.

Enter a value of 0 (zero)

Press PB3 – FLL_Data tag - the “FLL_DATA” input.

What value will transfer into each location in the array? _____

4. COP Instruction – Copy File

In Controller Tags - Monitor the 10 tag memory array locations starting at tag name COP_Source[0].

Verify that there is unique data in each tag.

Enter data for tags if not already there.

In Controller Tags - Monitor the 10 tag memory array locations starting at tag name COP_Dest[0].

Toggle SW4 input – COP_Data tag - the “COP_Data” input.

Does the data transfer?

What type of tag is COP_Data? _____

Hint: Monitor tag’s Properties

What is the base tag for COP_Data? _____

The index value of the array range from ___ to _____.

How many array locations received the data? _____

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