

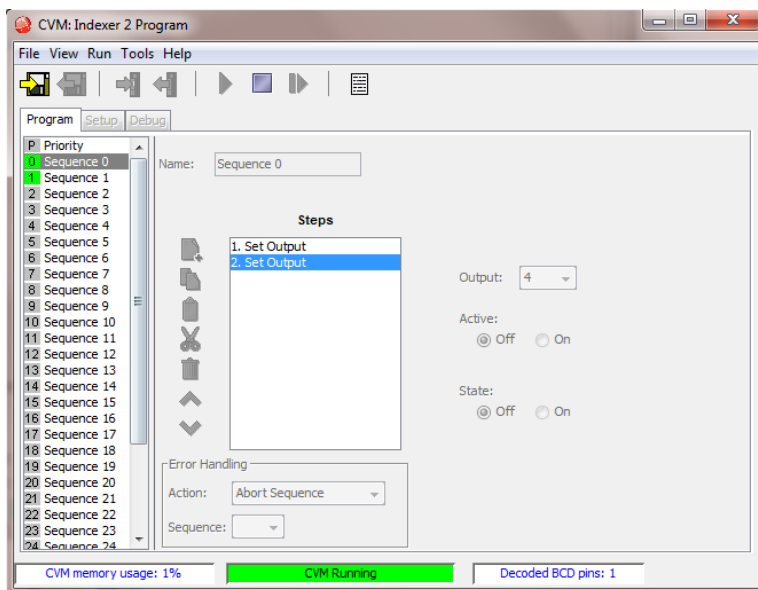
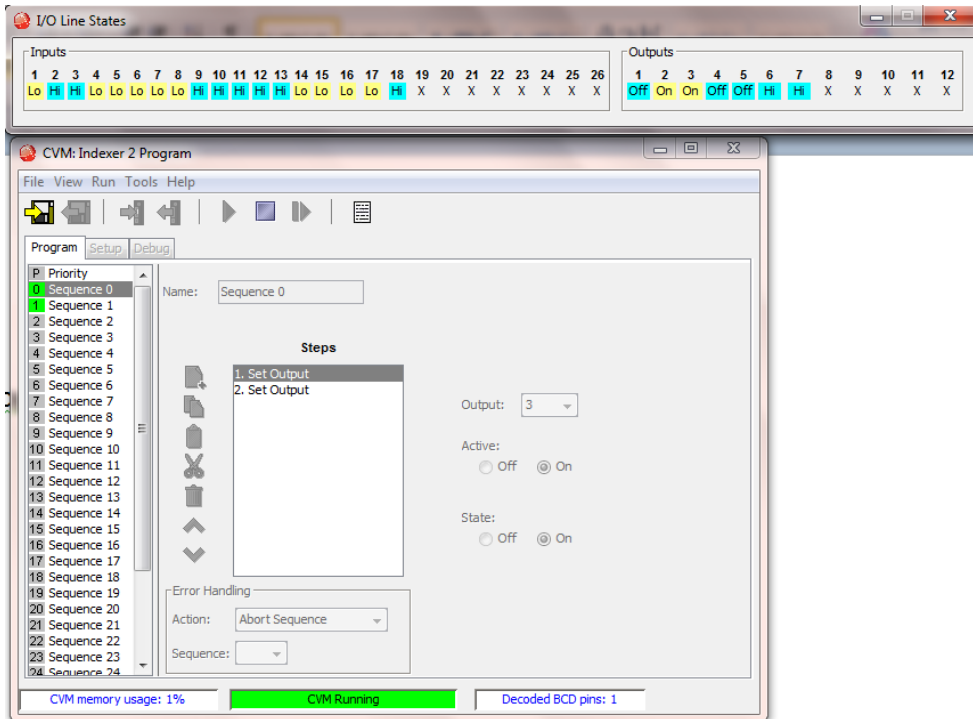
# Copley Program Selection – via hardware

Method of selecting programs in a Copley Drive using digital inputs.

Assume we have two programs. Sequence 1 and Sequence 2.

For the purposes of this demonstration, since we cannot see any motion we will use the digital outputs to show which program has run.

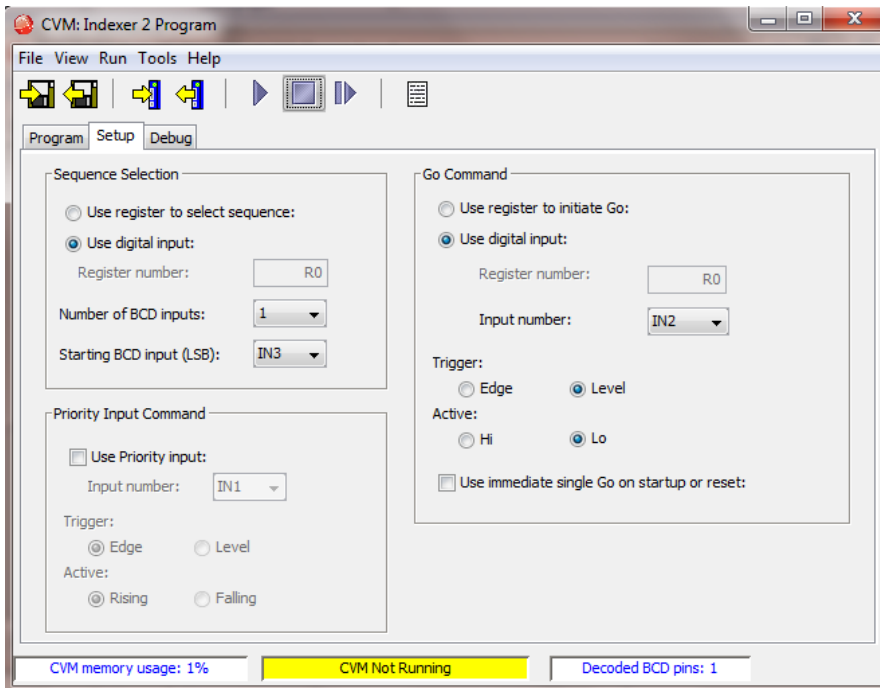
Sequence 0 turns output 3 off and output 4 on, whilst sequence 1 turns Output 3 on and output 4 off, as shown below.



The above screens show the last program to run was sequence 0 because output 3 is ON.

Selection of the program is achieved by using a digital input to select sequence selection...

## Copley Program Selection – via hardware



The SETUP page above shows that Digital input IN2 , one BCD input to select the sequence number and IN3 to run the selected sequence.

The program selection could in fact be more than one input, by changing the number of BCD inputs from 1 to 4 for example, we could select up to 16 programs, in a binary fashion.

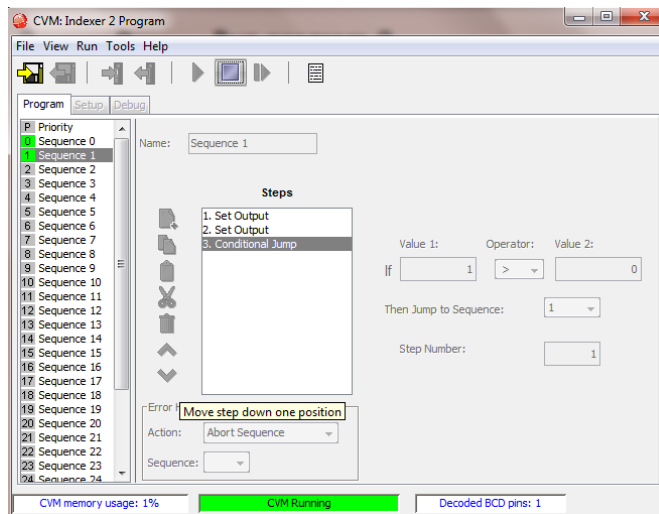
Ex.

Input	2	3	4	5	
States	0	0	0	0	Run sequence 0
	1	0	0	0	Run sequence 1
	0	1	0	0	Run sequence 2
	1	1	0	0	Run sequence 3
	0	0	1	0	Run sequence 4
	1	0	1	0	Run sequence 5
.....					
	1	1	1	1	Run sequence 16

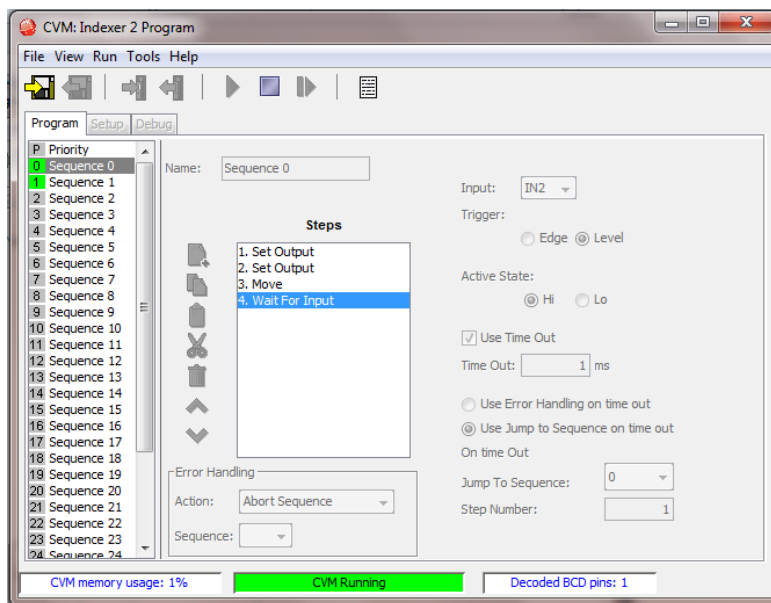
Without a conditional loop the sequence will run once, and then wait for another

# Copley Program Selection – via hardware

If we add a conditional jump in the sequence to loop around, then we need to stop the program from running.



Disabling the drive, and auto start the CVM on enable would be one solution. The other would be to change the conditional jump for a wait for input. This can programmed to perform a conditional jump based on an input state.



The program will loop all the time input 2 is LOW.

To break out of the loop we set the Use Time out box, and set the time to 1mS, then if the input state is not active in the 1mS in this case the program will end.

# Copley Program Selection – via hardware

For this example the inputs are set as shown:-

The screenshot shows the 'Input/Output' configuration window with the following settings:

Channel	Configuration	Data	Axis	Debounce	State
[IN1]	Amp Enable-LO Enables With Clear Faults	0	Axis A	0 ms	Lo
[IN2]	Not Configured	0	Axis A	0 ms	Hi
[IN3]	Not Configured	0	Axis B	0 ms	Hi
[IN4]	Not Configured	0	Axis A	0 ms	Hi
[IN5]	Not Configured	0	Axis B	0 ms	Lo
[IN6]	Not Configured	0	Axis A	0 ms	Lo
[IN7]	Not Configured	0	Axis A	0 ms	Lo
[IN8]	Not Configured	0	Axis A	0 ms	Lo
[IN9]	Not Configured	0	Axis A	0 ms	Hi

Additional options at the bottom of the window:

- \*Hold position when limit switch is active
- Restore Defaults
- Close