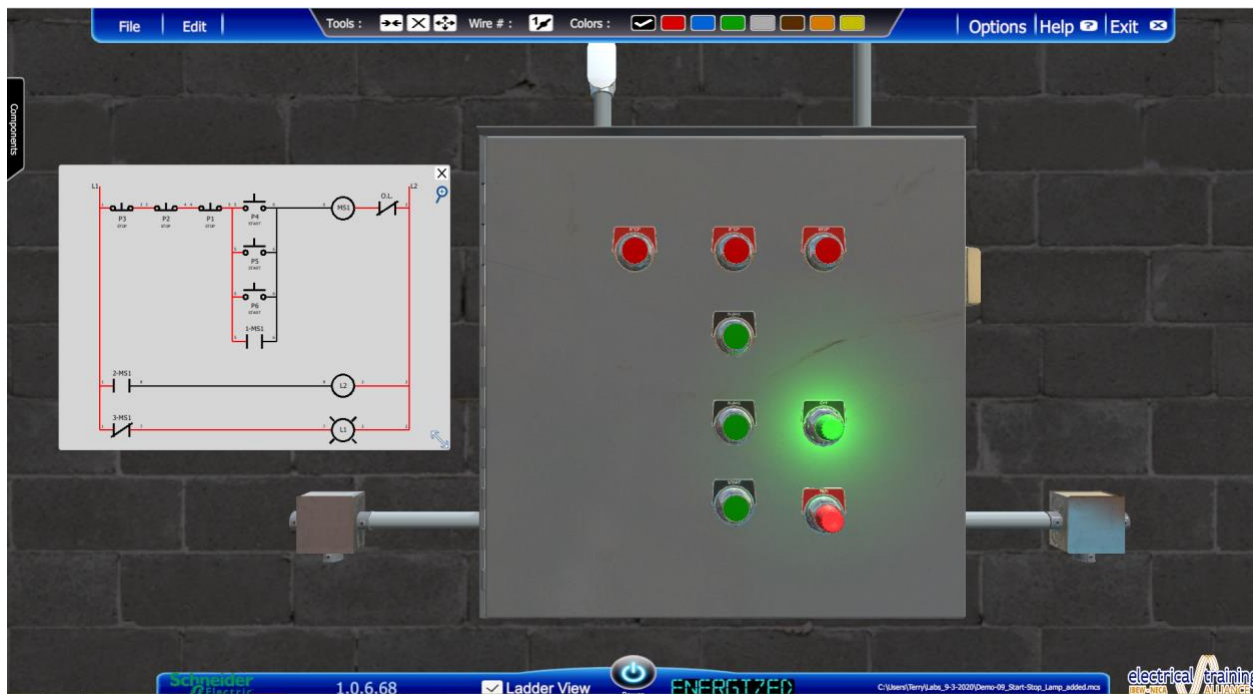


Square D Motor Control Simulator Release



The electrical training ALLIANCE is please to announce the release of the Square D Motor Control Simulator (MCS) for immediate use.

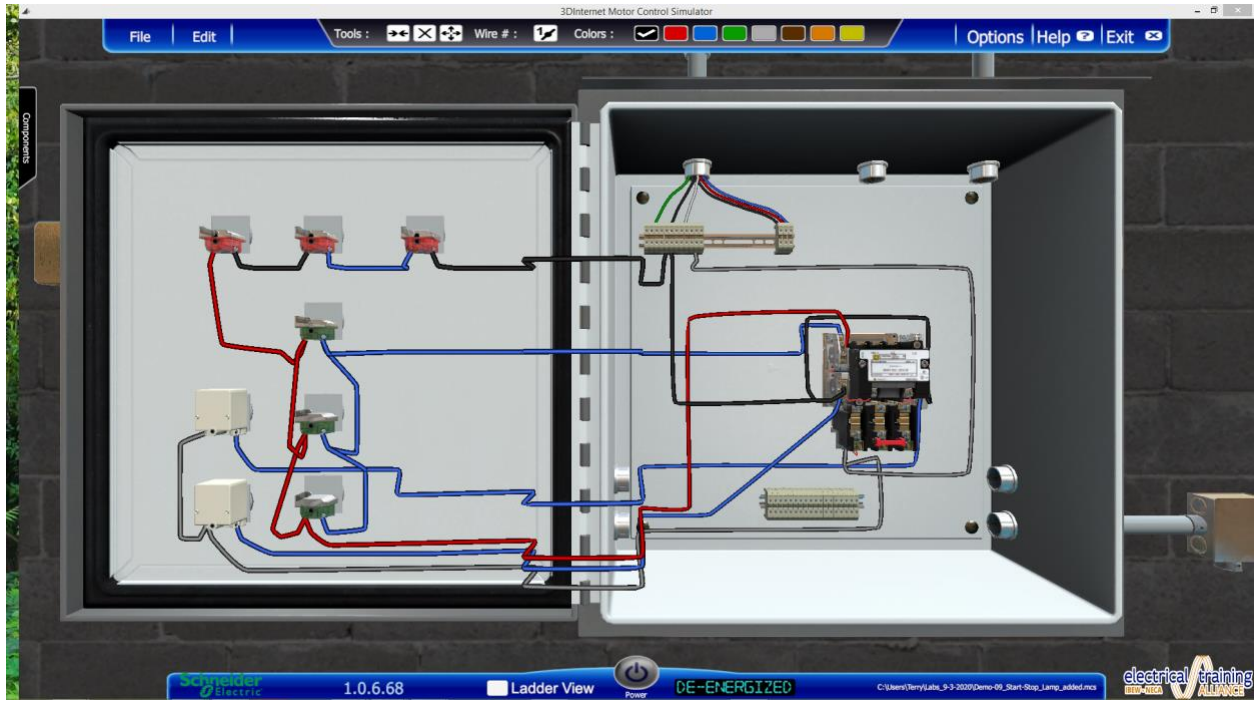
The new MCS is deigned to give the user a real-world experience wiring up motor control devices



The design of the MCS is based on the way many of our JATCs train apprentices and journeymen in their own hands-on motor control labs. Obviously, a central theme at these JATCs was that the students “actually” wire devices and make connections for some sort of control logic. Most JATCs give the student a Ladder Diagram as the basis for building the required control circuit(s). The MCS Labs are based on instructors giving Ladder Diagrams to their students to build motor control circuits.

We know not all JATCs have a Motor Control Labs. The MCS mimics real-world control wiring in a virtual setting. This tool can help individuals understand motor control devices and device wiring. The Simulator can assist individuals who want to work on motor control systems but have not had the opportunity of a classroom or an on-the-job motor control training experience. The simulator uses full 3D representation on motor control devices and their functionality.

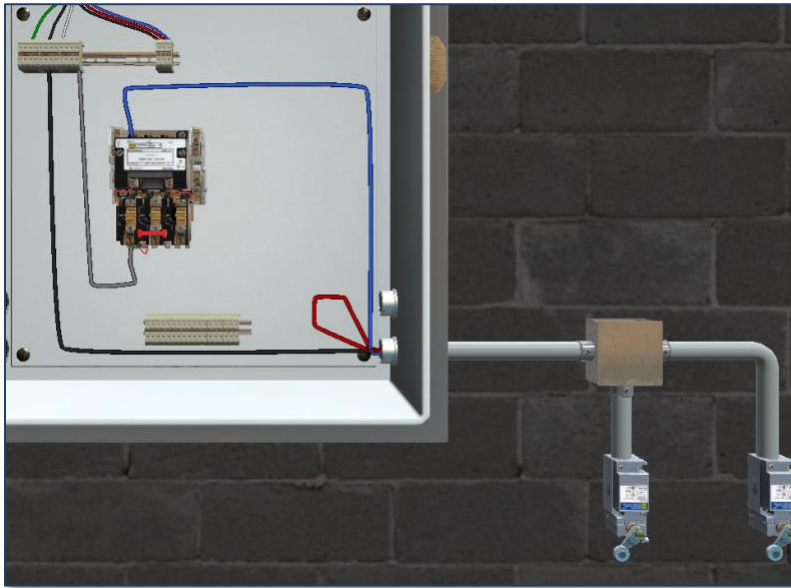




## Using the Motor Control Simulator

This is a standalone simulation tool for understanding basic concepts of motor control devices and wiring. It can be used in all years of apprenticeship; as a tool for Journeymen to practice their skills; as a refresher regarding motor control wiring; to prove basic circuit wiring theory (DC Theory); Logic Functions; for fun; etc.. Do not limit its use to just the Motor Control, Level I through Level III Courses – Be creative!

Here is a circuit example in the MCS and a couple of suggested uses:



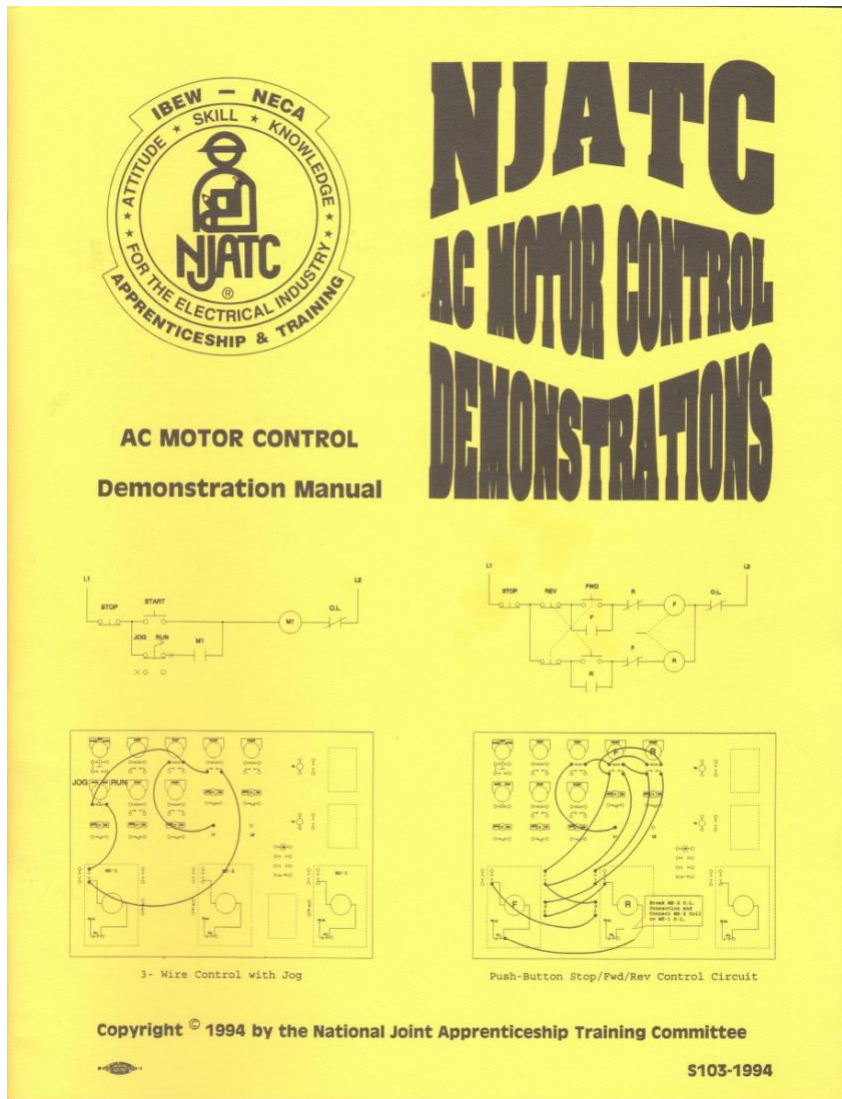
This ladder diagram represents two limit switch devices wired in “series”. It also represents a AND circuit.

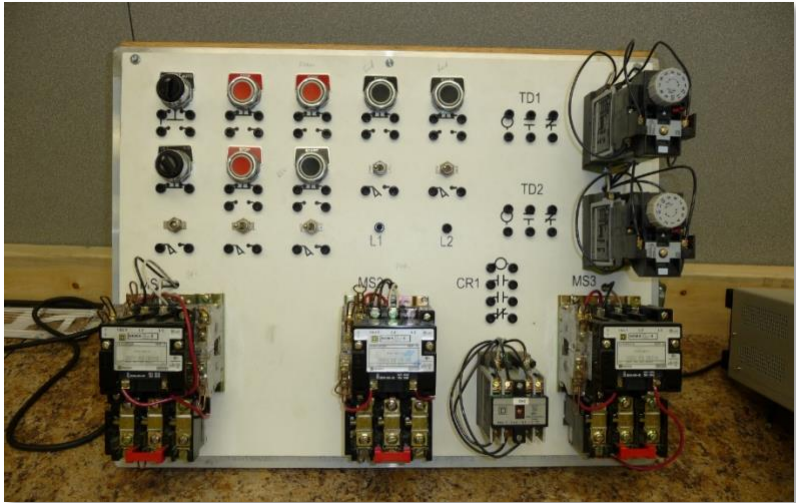


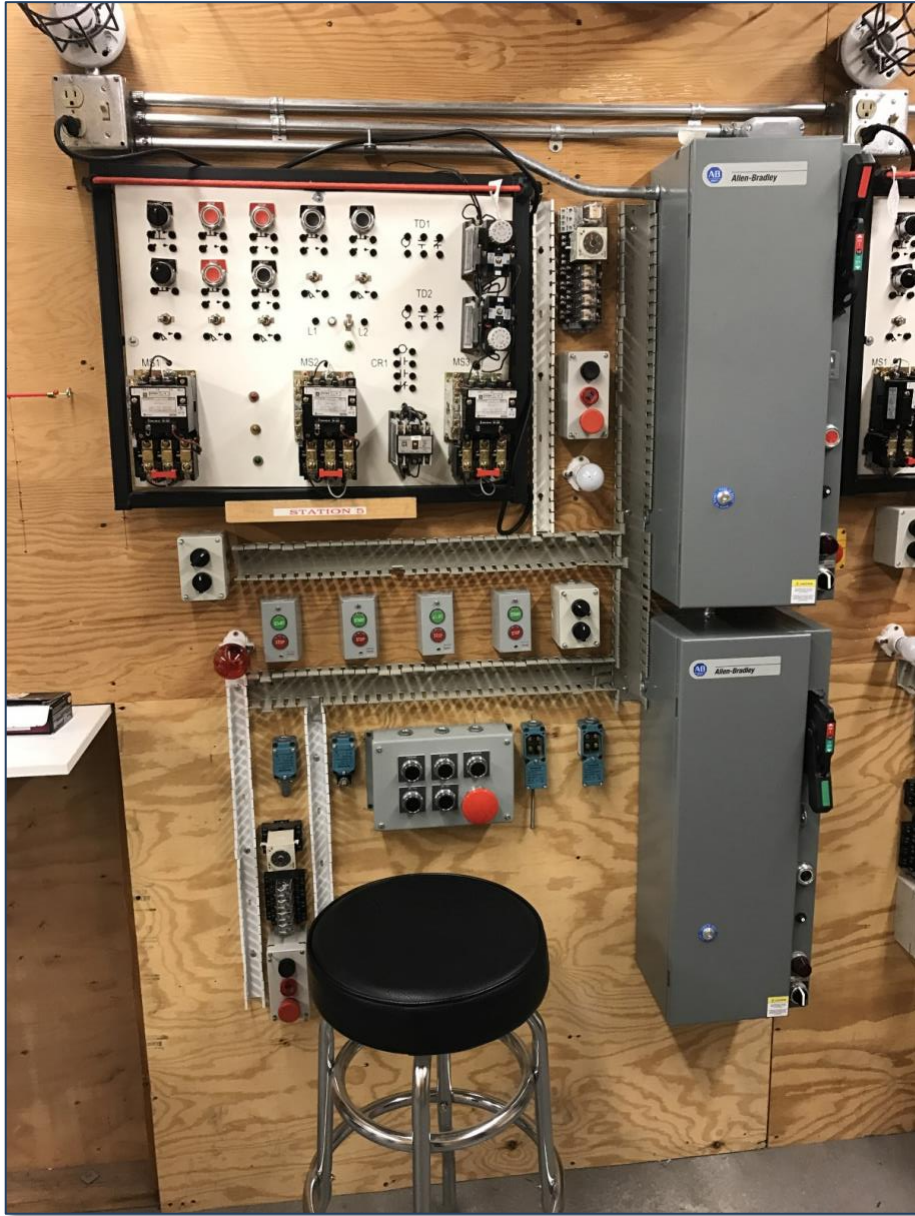
This ladder diagram represents two limit switch devices in “parallel”. It also represents a OR circuit.

### Labs

The instructor has access to 35 prebuilt motor control lab circuits. These circuits are, for the most part, based on the “NJATC AC Motor Control Demonstrations Manual”. A lot of you are no doubt familiar with the old “Square D Trainer” of the past and the circuits the student would build. The MCS can be used to support these trainers that are still out there in use. Be assured that the MCS is not limited to the lab circuits in this manual or to the lab circuits that accompany the instructor’s version of the MCS. This is a freeform tool that allows for a lot of creativity.












































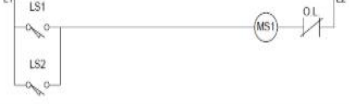







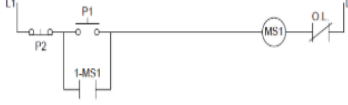

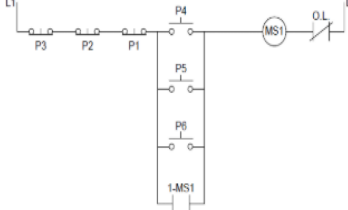
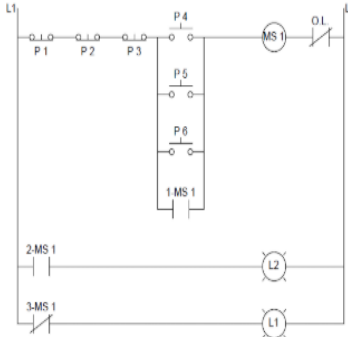



Here is a list of the labs that are included with the instructor's version of the MCS:

-  Demo-01.mcs
-  Demo-02\_2Limit.mcs
-  Demo-03\_Limits.mcs
-  Demo-04\_3Starters.mcs
-  Demo-05\_3PositionSW.mcs
-  Demo-05\_3PositionSW\_With\_Motor.mcs
-  Demo-06\_Timer.mcs
-  Demo-06\_Timer\_WithLamp.mcs
-  Demo-07-Start-Stop.mcs
-  Demo-08\_CR-Limit.mcs
-  Demo-09\_3\_Start-Stop.mcs
-  Demo-09\_Start-Stop\_Lamp\_added.mcs
-  Demo-10A\_TempSW.mcs
-  Demo-10B\_Temp-CR-Lighted\_PB.mcs
-  Demo-10C\_Temp-CR-Lighted\_PB.mcs
-  Demo-11\_Timer.mcs
-  Demo-12\_FWD-REV-BP-Interlock.mcs
-  Demo-13a\_FWD-REV\_Electric.mcs
-  Demo-13b\_FWD-REV\_Electric\_OLs.mcs
-  Demo-13c\_FWD-REV\_Starter.mcs
-  Demo-14a\_FWD-REV\_With\_PB\_Interlock.mcs
-  Demo-14b\_FWD-REV\_With\_PB\_Interlock\_OLs.mcs
-  Demo-15.mcs
-  Demo-16.mcs
-  Demo-17.mcs
-  Demo-17B\_ODPT.mcs
-  Demo-18\_JOG.mcs
-  Demo-19\_JOG.mcs
-  Demo-20\_JOG.mcs
-  Demo-21\_JOG.mcs
-  Demo-22\_JOG.mcs
-  Demo-23.mcs
-  Demo-24\_FWD-REV.mcs
-  Demo-25\_SSR.mcs
-  Demo-26\_SSR-Fun-Lamps.mcs

When an instructor accesses the labs to download from the LMS here is a sample of what they will see:

## Motor Control Simulator Labs

- [Demo 1](#) 
- [Demo 2: 2-Limit](#) 
- [Demo 3: Limits](#) 
- [Demo 4: 3 Starters](#) 
- [Demo 5: 3-Position SW](#) 
- [Demo 6: 3-Position SW with Motor](#) 
- [Demo 9: Timer](#) 
- [Demo 8: Timer with Lamp](#) 

- [Demo 7: Start Stop](#) 
- [Demo 8: CR Limit](#) 
- [Demo 9: 3 Start Stop](#) 
- [Demo 9: Start Stop Lamp Added](#) 
- [Demo 10a: Temp SW](#) 
- [Demo 10b: Temp CR Lighted PB](#) 
- [Demo 10c: Temp CR Lighted PB](#) 

A link to an MCS presentation and “how to” use video is available on the LMS Motor Control Simulator page. This link is available to instructors and students.

## Accessing the Motor Control Simulator:

As mentioned above, the Motor Control Simulator is a standalone simulator and not directly linked to any one course. Starting in next year's Catalog, the MCS will be available again as a standalone product and will also be packaged with the Motor Control Level I and Level II courses. For now, the MCS is a separate purchase. The current Session price for the simulator is \$25.00 and the student fee is \$50.00.

After purchasing: To access the Motor Control Simulator in the LMS, go to "My Courses" and type in "motor control"



### Motor Control Simulator

Last Accessed: 09/10/2020

The *electrical training ALLIANCE*, along with Square D and 3D Internet, have assembled a Motor Control Simulator (MCS) that mimics real-world classroom lab applications. An Instructor can assign Motor Control Projects to students that they can build online from anywhere there is internet access. They can test their projects, save them to their computer, and email a copy of the completed project file(s) to the instructor for evaluation. The Instructor Version of the MCS has 25 prebuilt labs and 10 variations of these labs that make up a total of 35 different Ladder Logic Circuits. These labs can be used by the instructor as assignments or for demonstrations. This is a completely freeform tool to build projects around. The simulation will work (or not) just like projects built on your lab walls. The MCS can be used for more than just motor control simulation. It can be used for journeyman training, for example, to augment DC theory and Digital logic. Or, just for fun!

Go

Move course to... ▾ →