APPLICATION NOTE

Product Family: Think & Do, Do-more PLC

Subject: How the Do-more PLC supports flowchart-like logic using Programs and Stage instructions.

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Among PLCs offered by AutomationDirect, Do-more has features that allow the programmer to continue solving many control problems using logic that behaves a lot like a flow chart.

This application note describes how the mindset used in flow chart programming can be applied to a Do-more PLC using Program code blocks and Stage programming instructions. Undertaking the task of converting a flow chart program into Do-more will of course require a thorough working knowledge of the Do-more system and how it solves ladder logic. But with that understanding, especially an understanding of Program code blocks and Stage instructions, it is possible to solve control algorithms with flowchart-like logic in a Do-more PLC.

The example that follows shows a high level comparison between a flow chart and logic in Do-more that will execute in a very similar fashion.

The top block in the flow chart on the left determines whether the rest of the code in the chart should execute or be skipped. If the top block determines that the chart should execute, the decision block below it determines which of the two paths of logic will be solved. The other path is not solved.

Do-more allows similar functionality. The code of a Do-more project can be divided up into many code blocks (tasks or programs) that can be programmatically enabled and disabled. This mimics a chart being turned on or off.

Within Do-more programs, Stage can be used to selectively enable different sections of ladder logic. This mimics different paths of logic being enabled (solved) and disabled (not solved).
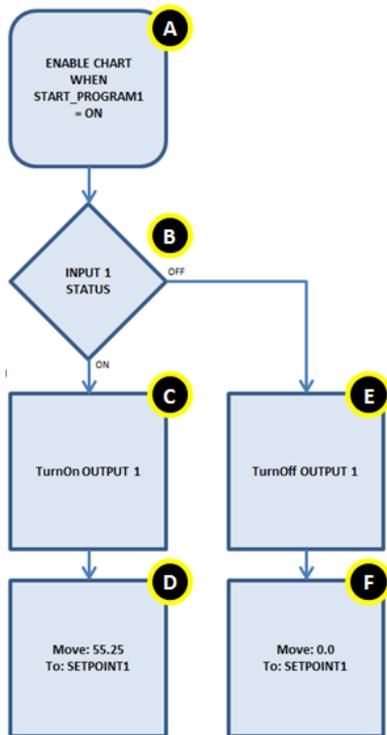
A   The state of START_PROGRAM1 determines whether to run Program1. This top portion of code will be evaluated on every scan.

B   If Program1 runs, the state of Input 1 determines which subsequent logic will execute and which will remain dormant.

C   Turn on OUTPUT1.

D   Adjust SETPOINT1.

E   Turn off OUTPUT1.

F   Adjust SETPOINT1.
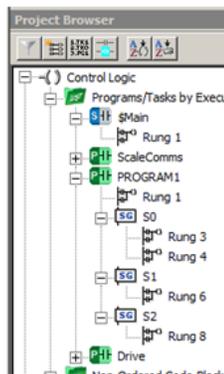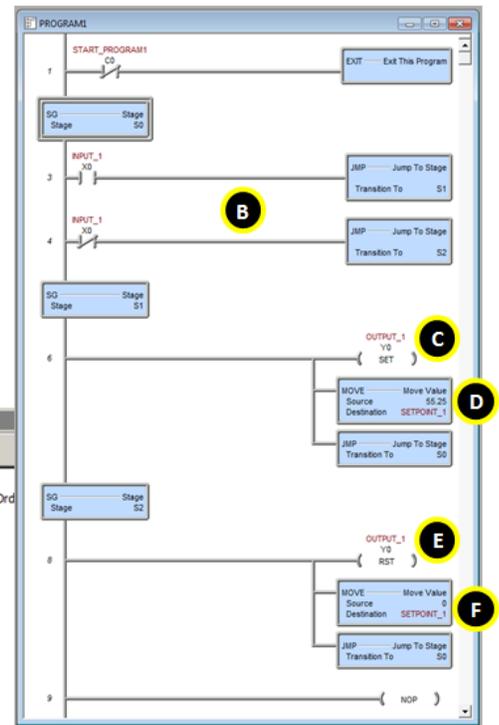
Technical Assistance: If you have questions regarding this Application Note, please contact us at 770-844-4200 for further assistance.