

How is the Sequence Table Executed on SigmaLogic?

SigmaLogic provides the ability to define 200 sequences in the LogicWorks configuration software that can then be executed and even changed from the Add On Instructions inside of the Rockwell 5000 software (version 17 or higher).

The sequences are first defined in the free LogicWorks software, available at www.yaskawa.com/sigmalogic :

Then they are downloaded to the SigmaLogic either on the “Send” page under the “Connection” tab or either the “Sequence Test” page under the “Test Run” tab.

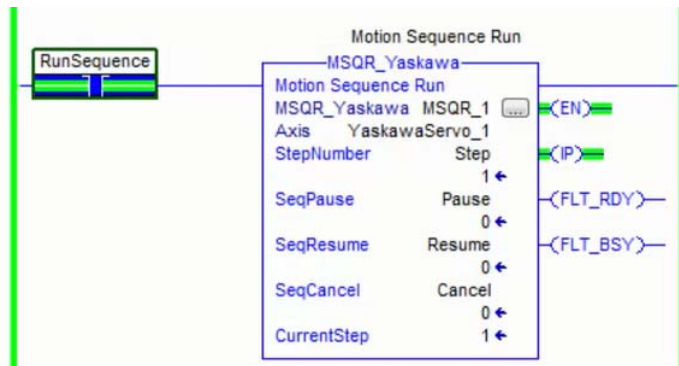
One can then exercise the sequences by running them in the Test Mode from the SigmaLogic software.

The screenshot displays the software interface with a menu bar (File, Connection, Configure, Sequence, Test Run, Monitor) and two main tabs: Motor Test and Sequence Test. The Sequence Test tab is active, showing a table with columns for Step, Before The Move, The Move, and After The Move. The table contains 17 rows of sequence data.

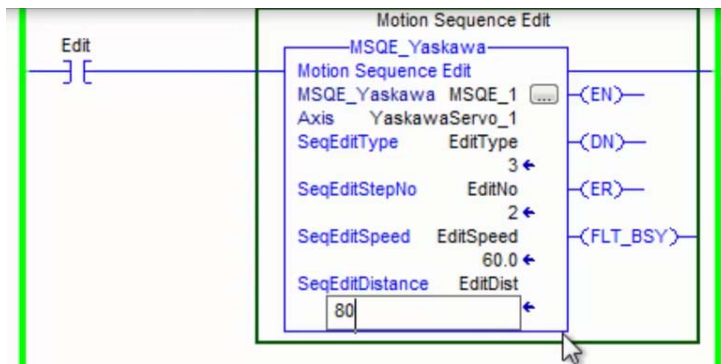
Step	Before The Move		The Move							After The Move									
	Wait		Set		Move Type	Position	Accel.	Decel.	Speed	Direction	Registration Data		Wait		Time Delay	Branch		Wait	
	Flag	State	Flag	State							Reg. Distance	Reg. Speed	Flag	State		Flag	State	Milliseconds	Flag
1			Relative	5	30	30	16	Positive										END	END
2			Relative	-3.6	40	50	8	Positive										END	END
3			Absolute	0	50	50	20	Positive										END	END
4			No Move	0				Positive										END	END
5			No Move	0				Positive										END	END
6			No Move	0				Positive										END	END
7			No Move	0				Positive										END	END
8			No Move	0				Positive										END	END
9			No Move	0				Positive										END	END
10			No Move	0				Positive										END	END
11			No Move	0				Positive										END	END
12			No Move	0				Positive										END	END
13			No Move	0				Positive										END	END
14			No Move	0				Positive										END	END
15			No Move	0				Positive										END	END
16			No Move	0				Positive										END	END
17			No Move	0				Positive										END	END

Below the table, there are control elements: Test Mode Enabled, Servo Enable button, Send to SigmaLogic Axis button, Starting Step: 3, Active Step: 3, State: DuringMove, and status indicators for Pos OverTravel (P-OT), Neg OverTravel (N-OT), Main Power, and E-Stop (HBB).

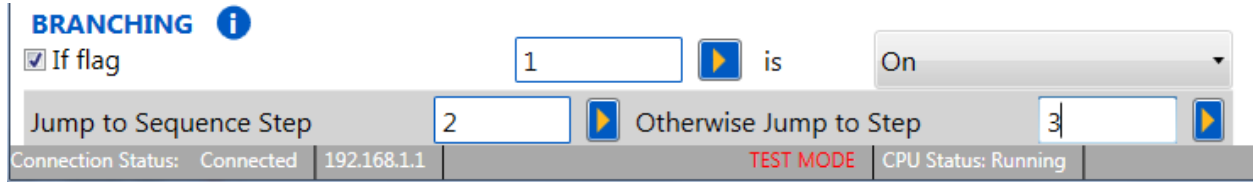
Once the sequences are working properly in the Test Mode then they can be executed them from the PLC with the Motion Sequence Run (MSQR_Yaskawa) AOI:



The Sequence Table entries can be edited with the Motion Sequence Edit (MSQE_Yaskawa) AOI.



If the communication delay in selecting the sequence number between moves becomes an issue, a sequence can automatically call another sequence once it ends. This is a feature of the Sequence table and is defined under the “Branching” section of each sequence definition.



BRANCHING ⓘ

If flag 1 is On

Jump to Sequence Step 2 Otherwise Jump to Step 3

Connection Status: Connected 192.168.1.1 TEST MODE CPU Status: Running

Please check out the SigmaLogic Sequence Table video for further details:

<https://www.yaskawa.com/pycprd/lookup/getfile/workspace&SpacesStore&24c3ba66-28a5-4a23-b30a-87074c2c889a&eLV.SigmaLogic.05.SequenceTable.mp4>

And the rest of the SigmaLogic eLMs are available on You Tube here:

<https://www.youtube.com/playlist?list=PLNAENlyEDCkwyKty6WKOekdBmELwBniQ9>