

Cyclical Control of Outputs to Aid Cylinder Speed Setup

Description of built in feature of IO screen to allow a maintenance operative to quickly and accurately adjust speed rates of cylinders

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Problem


Setting the speed of a cylinder requires two people to do it effectively. One to operate the IO screen and one to adjust the speed


Resolution

The IO Service screens on winMulti have a Cycle Timer located at the bottom



- If an output is set to on, then the cycle timer increased to a value, the output will cycle on and off at the rate indicated in seconds. This is really useful to accurately set the speed of a cylinder.
- Multiple outputs can be set initially, and then all cylinders will fire simultaneously - really useful for setting popup cylinders and checking for air starvation

 ...Output cycling is only available in setup mode

 ...Reduce the cycle control back to zero to disable cycling

Solenoid / Solenoid Valves

- Some systems (eg Stuertz Infeed table) have "solenoid / solenoid" operated valves instead of the "standard" solenoid / spring" valves. This setup requires two signals / outputs for each valve, one for "out" and one for "home". These valves need a pulsed output to switch one way, then a separate output to fire back again. Unlike a sol / spring valve, the state is maintained on power off
- This situation makes testing and setting up more fiddly and complicated, and the need for the cycle control even more acute. Therefore this has been built in to versions front end 6.5.13.0 , back end 6.6001.
- This involves an update to the IODef file to define "Complimentary" outputs. See Mul File Specification - ioDef
- The cycle is activated in the same way - first select the output(s) to cycle and then increase the cycle timer

The screenshot shows the 'frmService' application window with the 'IO-Inf feed' control panel. The panel is titled 'Infeed Control' and contains a grid of output signals. The signals are organized into columns and rows, with each signal represented by a colored box. The colors indicate the signal's status: green for active/available, red for inactive/unavailable, and yellow for a specific state. The signals are arranged in a grid that is roughly 10 columns wide and 15 rows high. The top row includes signals like Y251/Z01G, X251/Z01G, Y252/Z01G, X252/Z01G, Y013/Z01A, X389/Z01A, Y333/Z01A, and X44. The bottom row includes Y109, Y110, Y382, X388, X33, and X166. The interface also shows a menu bar with options like 'Clear Blockages', 'Bar Data', 'Tests', 'IO', 'IO-Inf feed', 'Spindle IO', 'Outfeed IO', 'Drives', 'Profiles And Operations', 'Programming Information', and 'Output Tim'.

Signal ID	Signal Name	Signal ID	Signal Name	Signal ID	Signal Name	Signal ID	Signal Name	Signal ID	Signal Name
Y251/Z01G	OuA_VorBack	X251/Z01G	InA_VorBack	Y252/Z01G	OuA_VorFwd	X252/Z01G	InA_VorFwd	Y013/Z01A	OuA_P2BfOn1
X389/Z01A	InA_PtB1Hm	Y333/Z01A	OuA_P2BfOff1	X44	InA_Grip	Y253/Z02G	OuA_VorUp	X253/Z02G	InA_VorUp
Y254/Z02G	OuA_VorDn	X254/Z02G	InA_VorDn	Y014/Z02A	OuA_P2BfOn2	X390/Z02A	InA_PtB2Hm	Y334/Z02A	OuA_P2BfOff2
X271	InA_MatPos1B	Y256/Z04G	OuA_GLOff	X256/Z04G	InA_GLOff	Y255/Z04G	OuA_GLGrip	X255/Z04G	InA_GLGrip
Y015/Z03A	OuA_P2BfOn3	X391/Z03A	InA_PtB3Hm	Y335/Z03A	OuA_P2BfOff3	X272	InA_MatPos7A	Y257/Z05G	OuA_GSOff
X001/Z05G	InA_GSOff	Y001/Z05G	OuA_GSGrip	X257/Z05G	InA_GSGrip	Y016/Z04A	OuA_P2BfOn4	X392/Z04A	InA_PtB4Hm
Y336/Z04A	OuA_P2BfOff4	X273	InA_MatPos7B	Y258/Z06G	OuA_Turn0	X258/Z06G	InA_Turn0	Y021/Z06G	OuA_Turn90
X267/Z06G	InA_Turn90	Y017/Z05A	OuA_P2BfOn5	X393/Z05A	InA_PtB5Hm	Y337/Z05A	OuA_P2BfOff5	X274	InA_MatPos8A
Y259/Z08A	OuA_LiftUp	X396/Z08A	InA_LiftUp	Y260/Z08A	OuA_LiftDn	X397/Z08A	InA_LiftDn	Y018/Z06A	OuA_P2BfOn6
X394/Z06A	InA_PtB6Hm	Y338/Z06A	OuA_P2BfOff6	X275	InA_MatPos8B	Y262/Z10A	OuA_StopDn	X398/Z10A	InA_StopDn
Y261/Z10A	OuA_StopUp	X165/Z10A	InA_StopUp	Y019/Z07A	OuA_P2BfOn7	X395/Z06A	InA_PtB7Hm	Y339/Z06A	OuA_P2BfOff7
X2	InA_Measure1	Y264/Z11A	OuA_GRTOpen	X264/Z11A	InA_GRTOpen	Y263/Z11A	OuA_GTRota	X263/Z11A	InA_GTRotat
X3	InA_Measure2	Y266/Z12A	OuA_GRVOpen	X266/Z12A	InA_GRVOpen	Y265/Z12A	OuA_GRVClam	X265/Z12A	InA_GRVClamp
Y3	OuA_GripBlow	Y109	OuA_IMotFwd	Y110	OuA_IMotRev	Y382	OuA_IMotBrak	X388	InA_CnvBrk
Y331	OuA_LoadBlow	X33	InA_Index	X166	InA_ButLoad				