Title: DC2-STN Digital Input Latching
Products(s): DC2-STN
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Summary
Beginning with revision 1.2a of the DC2-STN Controller Firmware events of one millisecond or greater duration may be latched at any of its eight digital inputs. This feature may be used to capture short duration events states that the program loop might otherwise miss.

More Information
The digital I/O command "LC" (Latch Channel) is used to enable and arm one or all of the eight digital inputs to latch the TRUE (ON) state. Issue the CI (Channel In) command to disable latching. Latch inputs may be enabled, disabled and cleared individually or all at once.

LC	Latch Channel
syntax:	**LC**x where x is the specified input
parameter range:	1 ≤ x ≤ 8 where x is any individual input
	x = 0 specifies all 8 inputs
explanation:	Clears the parameter specified input(s) of the latch and re-arms the latch to record the next occurrence of input TRUE. The minimum hold time for input TRUE is one millisecond.
CI	Channel In
syntax:	**CI**x where x is the specified input
parameter range:	1 ≤ x ≤ 8 where x is any individual input
	x = 0 specifies all 8 inputs
explanation:	Disables and clears the parameter specified bit(s) of the latch.

The TC (Tell Channel) command reports the latch status for those channels that are latch enabled. The conditional sequence commands of DF (Do If Channel Off), DN (Do If Channel On), IF (If Channel Off) and IN (If Channel On) can be used to query the state of individual latch channels and direct program flow accordingly.

Example
A conveyor system has a light beam driving a photocell. The photocell's logical state is being monitored by a latch-enabled input. A part arrives at that location and breaks the beam creating a TRUE condition, which is latched. The part then travels past the light beam, removing the TRUE condition at the input. During this event the program loop has been performing tasks such as updating servos. The program returns and polls the input and the latched value of TRUE is read. The program at that point could then issue the LC command to clear latch and prepare for the arrival of the next part.

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