PULSE BURST POSITIONING

Available on
MCPV

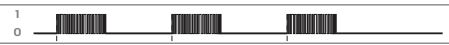
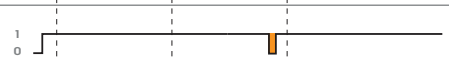
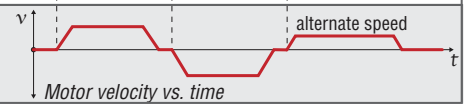
MODE DESCRIPTION

ClearPath will move a distance proportional to the number of pulses sent to Input B. This mode offers much of the flexibility of a "step-and-direction" system, without the need for an expensive indexer to create smooth move trajectories (that function is handled by ClearPath's internal trajectory generator). This mode is limited to two speeds and one acceleration/deceleration rate set by the user.

Note: A fairly simple PLC counter or a software loop can be used to generate pulses for use with this mode.

Assert the Enable Input to energize the motor. (Note: ClearPath can be configured to perform a homing routine upon enable.) To execute positioning moves, send a high speed stream of pulses to Input B, where each pulse represents an incremental unit of distance. Total move distance is determined by the number of pulses sent to Input B.

Pulse Positioning **Pulse Burst Positioning**

Signal	Function	Input Type	Example Timing
Input A	Direction Select	Logic: High=CW Low=CCW	
Input B	Pulse Input	Pulse: High-Speed Pulse Burst	
Enable Trigger	Enable Speed Select	Logic: High=Enable Low=Disable Pulse low to select alternate speed	
Notes: ClearPath requires a **minimum pulse width = 1uS**. Pulses less than < 1uS will be filtered out as noise by ClearPath.			

cc_mcsd

Trigger pulse

I/O FUNCTIONS

Enable Input - Asserting this input energizes the motor shaft. A short pulse (user-definable) on this input tells ClearPath to use the alternate speed limit setting for the next move.

Input A - This input selects the direction of rotation.

Input B - This input is connected to the pulse source.

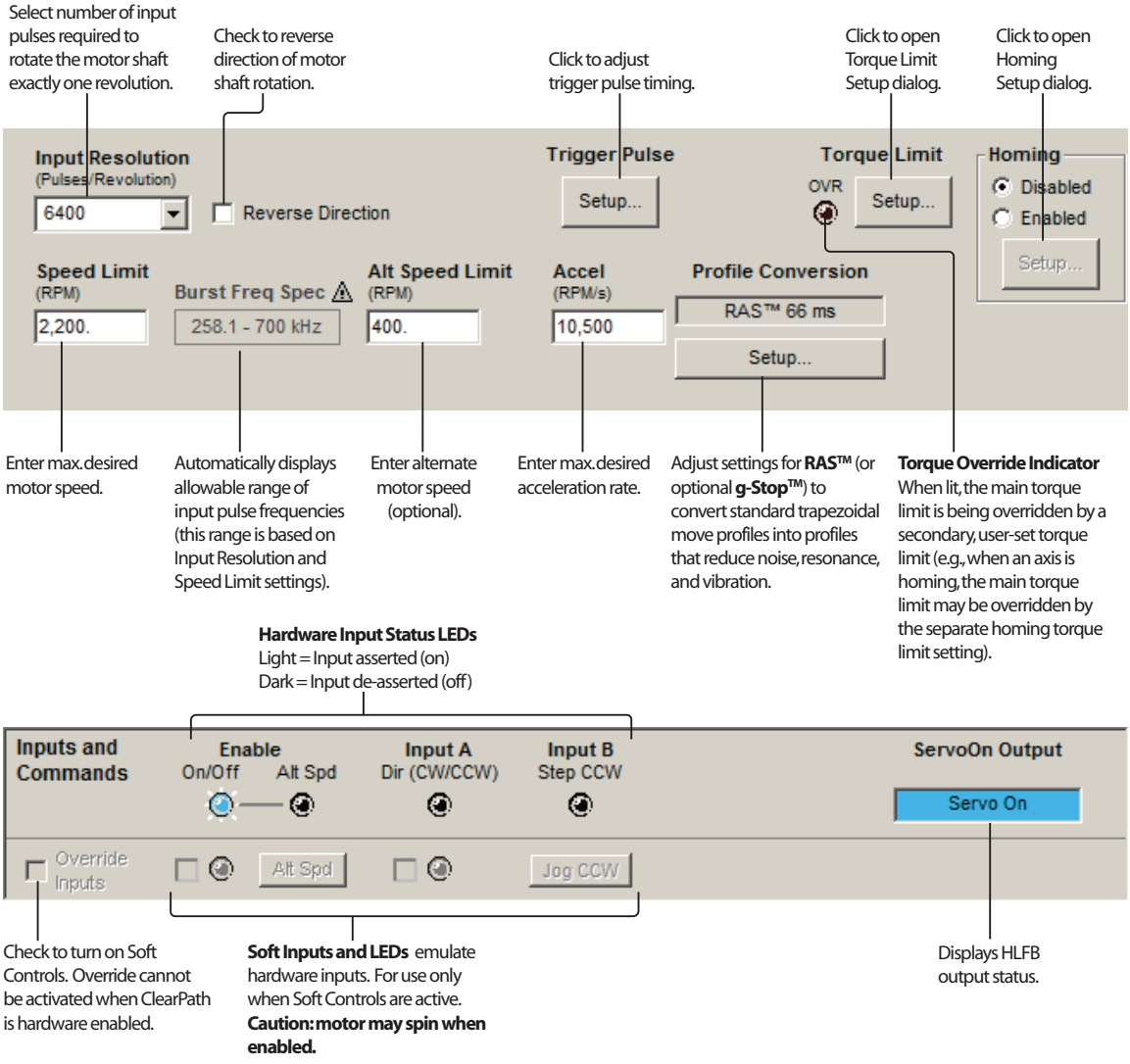
Output (HLFB) - See HLFB section for available modes.

Notes:

- The frequency of the pulse train applied to Input B must always be higher than the specified speed limit(s). This ensures that the motor's pulse buffer is never empty. See the "Burst Frequency Spec" (circled in red on the figure below) for the range of allowable pulse input frequencies.
- Sending pulses at a fixed frequency is OK; in fact, this is one of the reasons why this mode was developed. Just send a burst of

pulses and ClearPath creates a smooth motion profile for you automatically.

MODE CONTROLS



Note: Input Resolution (see upper left of mode controls screen capture above) is defined as the number of pulses that must be sent to the motor's input (Input B in this mode) to make the shaft rotate exactly one revolution. Please see the Resolution appendix for a detailed discussion of this topic.