



Automated Manufacturing Systems

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10-25-20

Updated: October 2022 with notes for Automation Direct HMI

Winder Quick Start Guide

Powering Up the Unit and Basic Operation

- 1) Make sure the E-Stop is pressed and the dancer position board can float freely.
- 2) Turn on the Main Breaker
- 3) For Lead Technicians Only: Open the main cabinet and check the red LCD on the VFD's, one of them should show a hertz reading between 0-60 hz. This is when the MAX speed pot can be adjusted on the Signal Isolation Board to trim down the maximum speed. The signal is sent to the VFD even when they are not rotating. To view the changes in signal, the dancer board can be moved up and down, showing a change on the red LCD on the drive.
- 4) Once the HMI is powered up, select the page from the left hand side. It is a touch screen.
- 5) Select the WINDER button to cycle between 'Winder' page and 'Re-Winder' page. Press WINDER to flip between the two.
- 6) Turquoise information fields (numbers, values, etc) are meant to be changed. To change the value, touch the number and a keypad will appear. Press enter to finalize the selection, or press X to cancel.
- 7) White values are read only and cannot be changed, they are read only.
- 8) To turn on the toggle buttons, press the upper half with the red dot. To turn off the toggle switch, touch the bottom half below the red dot (Red Lion HMI models). New models will have a RED or GREEN start button (Automation Direct HMI)
- 9) Alarm Page is Read Only. In the event of an alarm, the drive has to be reset in the main cabinet. Alarms are not common but when they occur typically it is OL1 or OL2. Data Page also read only.
- 10) Advanced Page username: User1 password: 092612.

Use this page to adjust electronic gains for the traverse. Set to 500% from factory. Keep speed limits and torque limits at 100% if you have a Red Lion HMI with Torque Control.

If you have a Automation Direct HMI, disregard the speed limit and torque limit on the advanced page unless your machine is Torque Control.

Red Lion Footage Counter

- 1) F2 will reset the count
- 2) Check the electrical cabinet for the Red Lion Manual
- 3) S1 is programmed in by AMS to turn on the warning light at 1,000 feet and automatically turn it off after a couple seconds (t-out = 2).
- 4) S2 is programmed in by AMS to turn on the audible alarm at 1,010 feet and automatically turn off at (t-out) 5 seconds. Then restart the count automatically with out interrupting operation.
- 5) S3 and S4 are not used and can be used for additional contact closure.

Stop Contact - Optional

- 1) If this needs to be added in the field, simply tie in one of the contacts on the Red Lion with S3 on each spindle VFD.
- 2) The stop circuit has a deceleration programmed in C1-09. Depending on Pay Off speed and time to stop, this make have to be increased slightly so the defect can be seen by the laser, trigger the stop and then finally stop the Rewinding so the operator can locate the defect.
- 3) Each spindle VFD will have to be programmed for digital input 3 to allow NO Fast Stop (15)

Dancer Wiring & Dancer Operation

- 1) The dancer wires (black, brown, blue, white, gray) are to be connected to the colored terminal blocks on the bottom DIN rail in the main cabinet. The wires were simply cut upon decommission for easily identification during install.
- 2) The dancer will call for full signal (10V) to the Winder when it is in the down (low) position, its natural state. When the clear target plate is about 50-60% of the way to the yellow Banner sonic head at the top of the dancer frame, signal begins to approach 0V. When the target is down low, calling for more winding, the ma

chine will start aggressively when winding. The electronics are designed to respond fast enough this situation, but User's need to be aware and ready for sudden movements. To prevent this, the machine can be strung up with tension such that the dancer target is closer to 50% the distance away from the floor.

Spindles and Arbor Installation

- 1) The machine is shipped without flats on the spindles. Depending on where the Customer wants to install the arbors is up to them to then add the necessary flat spot for the grub screws in the aluminum assemblies. This can be done with a manual file or a small dremel/grinder. This will be required for heavier spools to insure the aluminum hips do not come loose.
- 2) Other Customers may utilize a flat plate or a drive pin of some sort.

Re-Winder Mode

- 1) The top spindle will Pay off. The bottom spindle will take up and wind.
- 2) Make sure the top center of the page says 'Re-Winder'
- 3) Pay Off Speed should be set to 3 or 4 Hz for initial string up.
- 4) Pay Off spindle does not go through the traverse arm. The traverse arm is for the lower take up spindle which is winding.
- 5) The unit was tested and run for several thousand feet with many starts and stops. Pay Off speed was set to and successfully run at 60 hZ.

If you need more speed during Re-Winding:

Bottom Spindle can be setup for maximum speed 90 hZ to keep up with larger diameter pay off. E1-04 sets and changes the maximum drive frequency in the Yaskawa V1000. Settings between 60 - 90 hz recommended.