

Xtreme™ Series

Touchscreen Manual

Software version 4.2.XX



Have this information ready when calling in about your equipment:

Model: _____ Serial #: _____

PLC firmware version: _____ HMI firmware version: _____

Warranty Start Date: _____

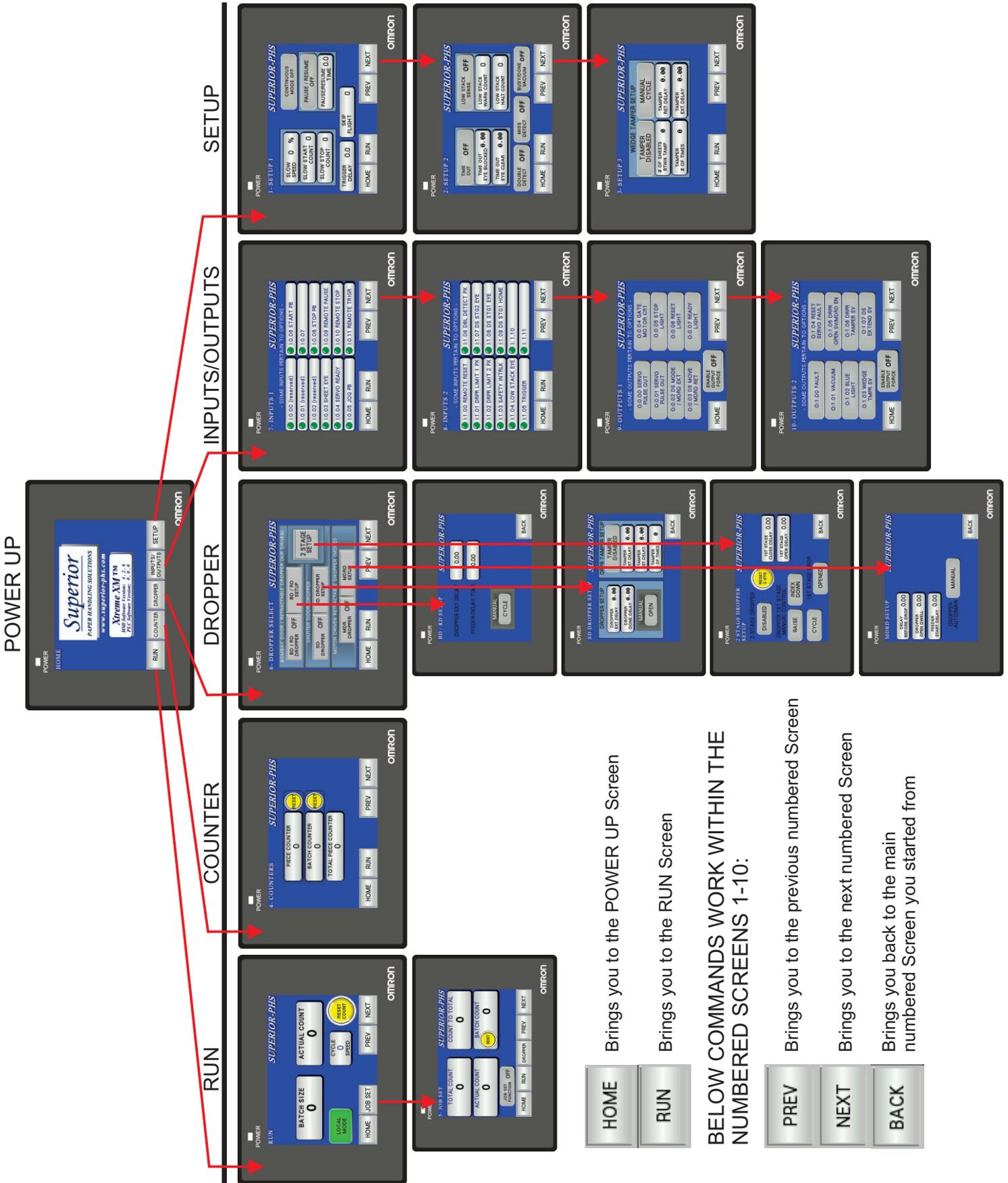
© Superior Paper Handling Solutions, Inc. All rights reserved.

Illustrations in this guide are for reference only and may depict optional features that are available at additional costs.

Superior Paper Handling Solutions, Inc.
14414 21st Avenue North
Plymouth, Minnesota 55447 – USA

Tel. 763-546-9140
Fax. 763-546-8883
Email. info@Superior-PHS.com
Web. www.Superior-PHS.com

Why Would You Go Anywhere Else?



MECHANICAL FRONT PANEL PUSH BUTTONS



Jog Button The feeder will advanced when the Jog button is pressed. The feeder will continuously run when the jog button is activated. This option is typically used when setting up product in the feeder or clearing any product under the Separator. While holding down the Jog button, you can adjust the Separator and feed product until the product feeds consistently.



Cycle Button If the feeder is Ready than this push button will illuminate. From here pressing the button will command a start cycle.



Stop/Reset Button If an error occurs this push button will illuminate. It will also light when the stop is used to stop the feeder. Clear all errors if present and push this button to move the feeder to a Ready stage.

HOME [POWER UP SCREEN]

NOTE: All settings from previous power down will be retained



RUN: Takes operator directly to Run Screen

COUNTER: Takes operator directly to 4-Counters Screen

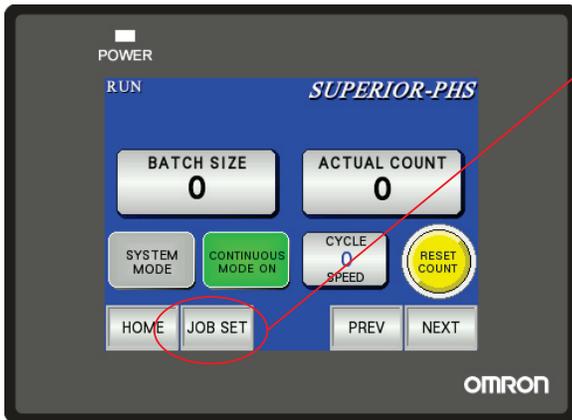
DROPPER: Takes operator directly to 6-Dropper Select Screen

INPUTS/OUTPUTS: Takes operator directly to 7-Inputs 1 Screen

SETUP: Takes operator directly to 1-Setup 1 Screen

HMI and PLC firmware versions

RUN



JOB SET: Takes operator directly to 5-Job Set Screen
MODE [LOCAL or SYSTEM]: Local Mode is the standard setting. Push to toggle between System and Local Mode. To run the feeder in a stand alone operation this must show Local Mode. (Green displayed)
CONTINUOUS MODE: Display only. If the feeder is in Continuous Mode this display will appear. (Green displayed)
CYCLE SPEED: Allows user to set feeder speed. 100 is equal to maximum speed.

RESET COUNT: Pressing this button will reset the Actual Count display. If the feeder has stopped in the middle of completing a Batch, pressing this reset will start the batch count over.

BATCH SIZE: Pressing this button will allow a user to set the batch size.

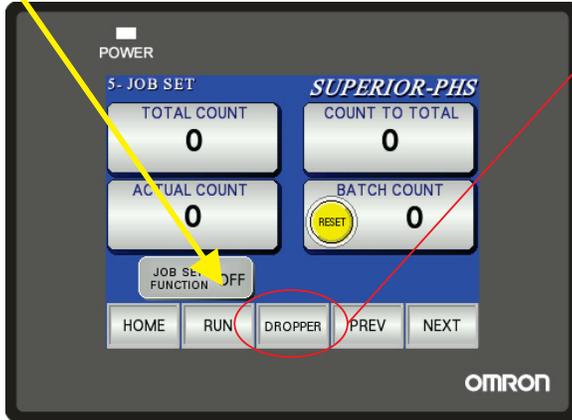
[KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY]

ACTUAL COUNT: Display only. Displays the count as the feeder is running. It will count up to your batch size and reset to zero when the batch is complete. If the feeder errors or stops before the batch cycle completes, this number will reflect what has been counted. Starting the feeder again will finish the batch.

NOTE: If using the EXT I/O to remotely STOP, RESET and CYCLE the feeder; Upon an error or remote stop, the Actual Count will always reset to zero and not retain the partial batch. If required to retain the partial batch, then remotely PAUSE/RESUME the feeder through the EXT I/O.

5 - JOB SET

NOTE: When the Job Set is turned on and the Total Count reaches zero a display will appear stating the Job Set is complete. In order to initiate another batch cycle you must turn the Job Set off.



DROPPER: Takes operator directly to 6-Dropper Select Screen

TOTAL COUNT: Enter the Job size. [KEYBOARD ENTRY -MIN/MAX WITHIN KEYBOARD DISPLAY]

JOB SET ON/OFF: When using the Job Set function, you will be able to set a Total Count that will stop the feeder when reached (i.e. while batching 50 piece sets, you only 5000 sheets batched out)

NOTE: If Total Count is at zero when Job Set is turned on it will display Job Complete. Enter count first

ACTUAL COUNT: Display only. Does not function in Continuous Mode. This will display the Actual Count where the feeder is at within a batch. Mirrored display to the Actual Count from the Run Screen.

BATCH COUNT: Display Only. Does not function in Continuous Mode. This will display the number of batches completed by the feeder. The Reset button allows this field to clear to zero when pressed.

NOTE: The Run Screen does not display accumulation of Batch Counts. Because this field doesn't require the Job Set to be turned on, acquiring Batch Counts can be retrieved in this 5 - Job Set Screen even when the Job Set function is not being used. The 4 - Counters Screen also displays the Batch Count field. They are also mirrored displays and the Reset buttons from either screen will zero it.

COUNT to TOTAL : Display only. Displays the quantity left until the Job Set is complete.S

1 - SETUP 1



TRIGGER DELAY: Enter the delay time in seconds [KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY] Used only with trigger sensor or external CYCLE input.

SKIP FLIGHT: Enter the number of skips per trigger. [KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY] Used to skip the feeder from firing every on every trigger. (i.e every third pocket)

SLOW START or STOP function: *The next three functions control the settings with regards to setting a slower speed when starting or stopping the feeder. At high speeds this will assist controlling product to stop consistently and also limit the possible skewing of product as the feeder advances at startup to a high speed.*

SLOW SPEED : Set the speed of the feeder when either the Slow Start or Slow Stop is activated. [KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY] Recommended to be less than half the speed recorded in Cycle Speed from the Run Screen.

SLOW STOP COUNT: Set how many pieces at the end of a batch will run at the slow speed.

[KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY]

SLOW START COUNT: Set how many pieces at the beginning of a batch will run at the slow speed.

[KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY]

NOTE: The slow function is turned ON when a value of 1 or greater is recorded at either two of the count buttons above. In order to not use the slow function, a value of zero must be recorded in those settings.

CONTINUOUS MODE: Set ON/OFF from here. The Run Screen has a display and this button will illuminate green when the condition is ON.

PAUSE RESUME: Set ON/OFF from here. The Pause/Resume function is used to automatically keep cycling the feeder with a period of time between batches. This button will illuminate green when the condition is ON.

PAUSE RESUME TIME: Enter the time value in seconds. This represents the time between the batch cycles. [KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY]

2 - SETUP 2



DOUBLE DETECT: Allows user to turn ON/OFF the Double Detect. Green illumination when ON.

MISS DETECT: Allows user to turn ON/OFF the Miss Detect. This function monitors that the batch cycle has completed before receiving another trigger or remote START. Green illumination when ON

BUSY/DONE VACUUM: Allows user to turn ON/OFF the Busy/Done or Vacuum function. Read below for explanation of functions. Green illumination when ON

BUSY/DONE or VACUUM function: *There is a particular I/O point in the Ext Interface that will change its state with regards to whether the motor on the feeder is running or not. Thus a system controller could monitor the feeder and know when it has completed its batch cycle. The Vacuum application is considered when an optional venturi vacuum setup is purchased with the feeder. This allows the vacuum to only operate when the feeder is running. EITHER one condition or the other is used as a scenario. Both situations use the same I/O point.*

TIME OUT function: *The next three functions control the settings with regards to setting the Time Out function. This is used to monitor the sheet sensor for clear and block conditions. (Feeder empty or Jammed conditions)*

TIME OUT: Allows the user to turn ON/OFF the Time Out function. Green illumination when ON

TIME OUT EYE CLEAR: Enter the time in seconds. An error will occur if the sheet sensor stays open the duration of time set. [KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY]

TIME OUT EYE BLOCKED: Enter the time in seconds. An error will occur if the sheet sensor stays blocked the duration of time set. [KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY]

NOTE: The time set for blocked has to be large enough to allow one piece to advance completely through the sheet sensor. This may have to set bigger for large product running at slow cycle speeds.

LOW STACK function: *The next three functions control the settings with regards to setting the Low Stack function. This function is only used if the feeder was purchased with a Low Stack eye.*

LOW STACK : Allows the user to turn ON/OFF the Low Stack function. Green illumination when ON

LOW STACK WARN: Set how many pieces once the Low Stack eye clears to when the warning amber light will flash (Requires purchase of light tower with feeder) [KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY]

LOW STACK HALT: Set how many pieces once the Low Stack eye clears to when the feeder will stop. Product must be filled again to cycle the feeder. [KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY]

3 - SETUP 3

NOTE: If you did not purchase a Wedge Tamper, disregard this setup page and leave it disabled.



MANUAL CYCLE: Manually activates the wedge tamper and cycles at the speeds programmed below.

TAMPER RETURN DELAY: Enter the return time in seconds for the actuator arm. [KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY]

TAMPER EXTEND DELAY: Enter the extend time in seconds for the actuator arm. [KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY]

NOTE: General settings will have these extending and returning times around .2-.5 seconds, dependent on the air volume and tamping speed requirements.

WEDGE TAMPING function: *This function along with the mechanical assembly will tap the product while stacked in the hopper. This assists in funneling the product down into the separator assembly for better performance.*

TAMPER DISABLED : Turn the Tamper ON/OFF. Green illuminate when the function is enabled.

OF SHEETS BETWEEN TAMPS: Set how many pieces will run between tamping cycles.

[KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY]

TAMPS # OF TIMES : Set how many times the tamper will extend and return during its tamping cycle.

[KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY]

4 - COUNTERS



PIECE COUNTER: Display only. Counts the number of products through the sheet counter. RESET button sets to zero

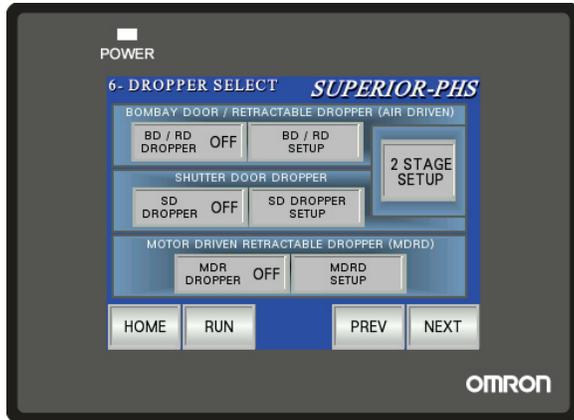
BATCH COUNTER: Display only. Counts the number of batches completed through the sheet counter. RESET button sets to zero

TOTAL PIECE COUNTER: Display only. Counts the number of products through the sheet counter.

NOTE: This Display is not resettable. It will reflect the number of pieces through the feeder at any given time

6 - DROPPER SELECT

NOTE: If you did not purchase a dropper, disregard this setup page and leave all OFF.



BD/RD DROPPER: Allows user to turn ON/OFF. Green illumination when ON.

BD/RD DROPPER SETUP: Takes you to Setup page.

SD DROPPER: Allows user to turn ON/OFF. Green illumination when ON.

SD DROPPER SETUP: Takes you to Setup page.

MDRD DROPPER: Allows user to turn ON/OFF. Green illumination when ON.

MDRD SETUP: Takes you to Setup page.

2 STAGE SETUP: Takes you to Setup page.

NOTE: Only one Dropper can be ON at one time.

BD/RD SETUP



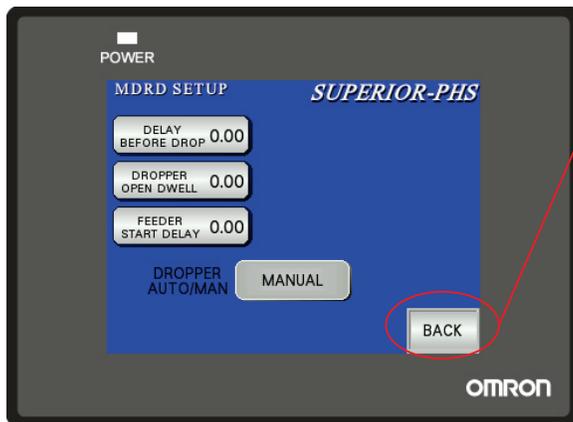
BACK: Takes user back to 6 - Dropper Select Screen

DROPPER EXTEND DELAY: Sets the time in seconds the period the dropper stays open. [KEYBOARD ENTRY -MIN/MAX WITHIN KEYBOARD DISPLAY]

FEEDER DELAY: Sets the time in seconds the feeder will delay before feeding the next batch. [KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY]

MANUAL CYCLE: Cycles the dropper once.

MDRD SETUP



BACK: Takes user back to 6 - Dropper Select Screen

Delay Before Drop: This timing feature allows the operator to create a delay between when the dropper receives a signal and when the dropper retracts. This delay allows the operator to guide where they want the stack to fall into a pocket of a lugged conveyor.

Dropper Open Dwell: This setting will depend on the stack height in the dropper. Smaller stacks need less time to finish exiting the dropper, while taller stacks may need the dropper to stay open longer to complete the drop. Increase this delay to keep the dropper open longer.

Feeder Start Delay: This delay allows the feeder to pause between receiving a signal and cycling. This allows the dropper time to return to a closed or near-closed position before feeding into the dropper.

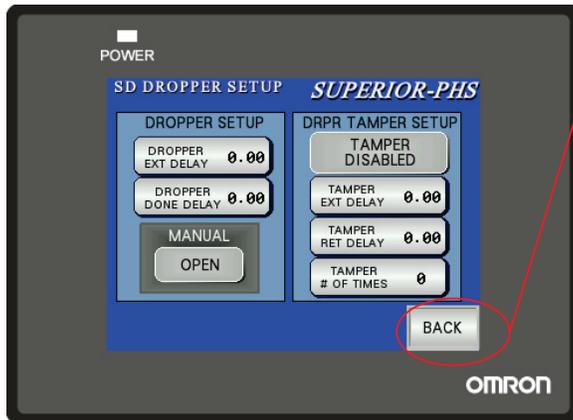
Note: When dropper is "on" and "manual" is selected, the "Extend, Retract, and Cycle" buttons are shown.

Dropper Auto/Manual Button: Press Auto/Manual button to toggle between dropper being in Auto Mode and Manual Mode. When in the Auto Mode, when Feeder Cycle Button is pressed or a Trigger Signal is received, the dropper will retract, then extend, then feeder will feed next batch. When in the Manual Mode and Dropper is ON, system will not cycle as in Auto Mode. System will ONLY allow operator to press Dropper Cycle Button. See Section below.

Dropper Cycle and Open/Close Button: When Dropper is ON and Dropper is in Manual Mode, this button will manually cycle the dropper forks one half of a cycle. If the button is pressed when dropper forks are fully extended, forks will fully retract into the base. If the button pressed with forks fully retracted into the base, forks will fully extend out. If the button pressed with forks in between fully retracted and fully extended, dropper forks will fully retract into base. This button will only activate the dropper forks and it will not activate the feeder. Note: This feature is active with the cover open if it's in manual mode.

SD DROPPER SETUP

NOTE: If you did not purchase a dropper tamper with your SD dropper, disregard the tamper setup controls on this setup page. Leave Tamper Disabled.



BACK: Takes user back to 6 - Dropper Select Screen

MANUAL CYCLE: Manually activates the dropper sides to open. If the button is held the sides stay open.

DROPPER EXTEND DELAY: Sets the time in seconds the period the dropper stays open. [KEYBOARD ENTRY -MIN/MAX WITHIN KEYBOARD DISPLAY]

DROPPER DONE DELAY: Sets the time in seconds the feeder will delay before feeding the next batch. If using the 2 stage Dropper, this signal is the delay before the 2nd stage begins. [KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY]

DROPPER TAMPING function: *This function along with the mechanical assembly will tap the product while stacked in the dropper. This assists in jogging the product and squaring the counted stack before dropping it onto a conveyor line.*

TAMPER RETURN DELAY: Enter the return time in seconds for the actuator arm. [KEYBOARD ENTRY -MIN/MAX WITHIN KEYBOARD DISPLAY]

TAMPER EXTEND DELAY: Enter the extend time in seconds for the actuator arm. [KEYBOARD ENTRY -MIN/MAX WITHIN KEYBOARD DISPLAY]

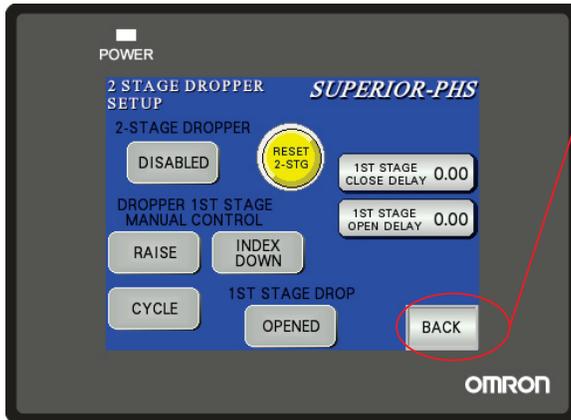
NOTE: General settings will have these extending and returning times around .2-.5 seconds, dependent on the air volume and tamping speed requirements.

TAMPS # OF TIMES : Set how many times the tamper will extend and return during its tamping cycle. [KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY]

TAMPER DISABLED : Turn the Tamper ON/OFF. Green illuminate when the function is enabled.

2nd STAGE DROPPER SETUP

NOTE: If you did not purchase a 2nd Stage Dropper with your SD dropper, disregard this setup page. Leave the 2nd Stage Dropper Disabled.



BACK: Takes user back to 6 - Dropper Select Screen

2ND STAGE DROPPER DISABLED: Turn the Dropper ON/OFF. Green illuminate when the function is enabled.

RESET 2-STAGE: Resets the 2nd Stage Dropper to its home position.

1ST STAGE CLOSE DELAY: Sets the time in seconds the dropper plate is needed to close before receiving the next feeder batch. If using the 2 stage Dropper, this signal is now the trigger delay.

[KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY]

1ST STAGE OPEN DELAY: Sets the time in seconds the period the dropper plate stays open.

[KEYBOARD ENTRY-MIN/MAX WITHIN KEYBOARD DISPLAY]

TESTING functions: *The following functions are used to test the 2nd Stage Dropper. Some of the testing features require the the dropper to be enabled and some will not.*

1ST STAGE DROP OPENED: This function ONLY works when the 2nd Stage Dropper is disabled. This button will toggle the Dropper plate from open to closed

RAISE: This function ONLY works when the 2nd Stage Dropper is disabled.

Pressing the RAISE button. This will raise the dropper plate location to it's highest position. This is considered home.

INDEX DOWN: This function ONLY works when the 2nd Stage Dropper is disabled.

Press the INDEX DOWN button. This will step the dropper plate location ½" from the home position. Pressing the INDEX HOLD again will move it another ½". A total of five moves can be stepped manually. Then the RAISE function must be used to bring it home.

CYCLE: This function ONLY works when the 2nd Stage Dropper is enabled. From the home position the 2nd Stage dropper will perform 5 INDEX DOWN steps and then RAISE and return Home. It will place the feeder in a stopped mode while this test runs

7 - INPUTS 1/8 - INPUTS 2



INPUTS screens: Screens 7 and 8 are used by maintenance to troubleshoot the PLC inputs. Each line item represents an input on the controller. A positive read is when the indicator light on screen illuminates next to the item you are troubleshooting. For assistance please contact the manufacturer.

9 - OUTPUTS 1/10 - OUTPUTS 2



OUTPUTS screens: Screens 9 and 10 are used by maintenance to troubleshoot the PLC outputs. Each line item represents an output on the controller. To activate, you must turn ENABLE OUTPUT FORCE ON. The button will illuminate green when on. Here you can test certain indicator lights and motor commands within the feeder and droppers. For assistance please contact the manufacturer. *WARNING***do not leave the ENABLE OUTPUT FORCE ON for it will affect the feeder performance.**

MESSAGE DISPLAYS

STARTUP. PRESS RESET TO GO READY	- Press the Red STOP/RESET mechanical push button
FEEDER STOPPED. RESET FEEDER	- Press the Red STOP/RESET mechanical push button
CYCLING	- Feeder is running.
READY. WAITING FOR CYCLE START	- Waiting for a trigger
FEEDING SHEET TO STAGED POSITION	- Feeder must always have one piece first under the sheet sensor. If not the feeder will first stage a piece on its first trigger, then perform a cycle on the next trigger
WAITING FOR DROPPER TO CLEAR	- Feeder is waiting for the dropper to drop its stack before it can initiate another cycle
CYCLE PAUSED. WAITING FOR DROP	- Used within the Dual Stage Dropper. When Dropper is full it will pause feeder and complete the stack on the next trigger
SERVO FAULT. RESET MACHINE	- Servo has faulted. refer to error displays to correct
LOW STACK. CYCLE PAUSED	- Low stack Halt, refer to error displays to correct
WARNING. LOW STACK	- Low Stack has approached its warning stage

ERROR DISPLAYS

DROPPER ON & JOB SET ON CHOOSE ONE OR THE OTHER	- The Job Set will not work with a dropper attached to the feeder. Turn one off
JOB SET DONE TURN JOB SET OFF TO CLEAR	- You have completed a Job Set, turn it off in Screen #5
MISS DETECT	- A second trigger was received before the current cycle could finish. Slow down what is triggering the feeder or turn your feeder up to complete the batch cycle sooner
DOUBLE DETECT	- The Double Detect determined a Fault. Reset your mechanical setup to pull only one piece
TIME OUT	- A Time Out has occurred. Verify your settings in #2 Screen or setup your feeder better so overlaps and skipped feeds are eliminated
LOW STACK, FILL THEN PRESS CYCLE TO RESUME	- Low Stack error. Fill the hopper so that the Low Stack eye is covered
DROPPER IN MANUAL MODE	- The Dropper was left in manual mode. Correct and enable it to Auto
DROPPER COVER OPEN	- Close the Cover on the Dropper
DROPPER RETRACT FAULT	- Within the dropper, the Retract function has faulted. Check mechanically
DROPPER EXTEND FAULT	- Within the dropper, the Extend function has faulted. Check mechanically
DROPPER FAULT	- Within the dropper, a fault has occurred. Check mechanically
SERVO DRIVE FAULT ALLOW 10 SEC, THEN RESET	- The Feeder Servo has faulted. Allow ten seconds and then hit the red reset. Check mechanically the feeder to verify all moving mechanics are good
HOPPER FULL, BATCH NOT COMPLETE BATCH SIZE TOO LARGE FOR HOPPER	- The Batch count request is too large for the dropper to handle
MULTIPLE DROPPERS SELECTED SELECT ONLY ONE	- Only one Dropper can be turned on in #6 Screen. With the error on screen you will have to turn one off. There is no reset