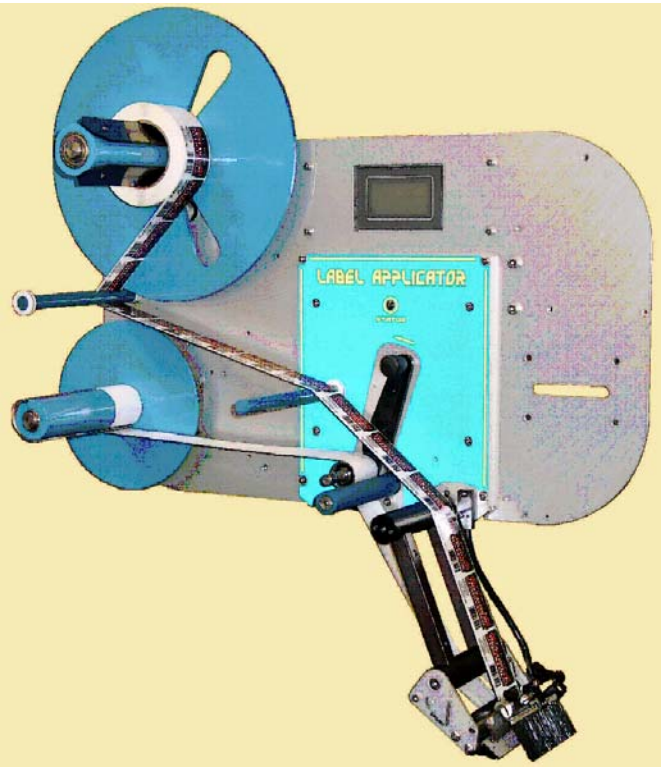
LS4700

Label Applicator



4700-010F
Revision B

Foxjet, an ITW company, continually improves its products, and reserves the right to change or discontinue specifications and designs shown in this manual without notice and without incurring obligation. Foxjet has made every effort to verify the information contained in this manual, but reserves the right to correct any error at the time of the manual's next revision.

Printed in the United States of America

1.0 Introduction

1.1 The LS4700 Label Applicators

The LS4700 is a second generation, next label out, labeling system designed for modularity, continuous labeling, self-diagnostics, and ease of use. Modularity of design provides the basis for ease of installation, setup, and maintenance. The electronics system employs a hardware-specific design, thus increasing reliability and throughput. The hardware was developed to simplify construction, and increase longevity by using durable materials. This unit will perform 24/7 operation in harsh environments and operate trouble-free, given that the appropriate preventative maintenance is performed on regular service intervals.

1.2 Product Safety

Safety awareness is critical when working with equipment that contains moving parts and extending pneumatic cylinders. Please read all warnings and cautions thoroughly before operating this device.

This product meets the requirements of CAN/CSA-22.2 NO.60950-00 * UL 60950 using Foxjet, an ITW Company, approved items. Units are only tested and qualified with Foxjet an ITW Company approved parts and accessories. Use of other parts or accessories may introduce potential risks that Foxjet, an ITW Company, can assume no liability for.

WARNINGS

- **WARNING - Moving parts of this machine can present hazards. Components that cannot be guarded because of loss of functionality are marked with a warning symbol.**
- **Be aware of the tamp cylinder extension distance, and avoid accidental triggering of the photosensor.**
- **When servicing the unit's electronic assemblies, always remove the power cord from the unit to prevent accidental shock.**
- **When running for extended periods of time, use caution when accessing the drive module circuitry. The motor drive power transistors, motor case, and motor heatsink can become hot under constant use.**
- **Always close the air inlet valve shutoff when removing or servicing pneumatic module or tamp cylinder.**
- **Wear personal protective equipment, as instructed by your supervisor, when operating or working near this device.**

COMPLIANCE

- **CAUTION: Not for use in a computer room as defined in the Standard for the Protection of Electronic Computer/ Data Processing Equipment, ANSI/ NFPA 75.**

- **ATTENTION: Ne peut être utilissé dans une salle d'ordinateurs telle que définie dans las norme. ANSI/NFPA 75 Standard for the Protection of Electronic Computer/ Data Processing Equipment**
- **This unit has been tested and found to comply with the limits for a Class A device, pursuant to part 15 of the FCC Rules.**
- **This unit has been tested to comply with CE Standards.**
- **This unit is equipped with an Emergency Stop switch. Depressing this switch will cause all machine operations to cease.**
- **This unit was tested and it was determined that a potential for tipping exists in certain orientations. In compliance with UL safety standards, the stand must be secured to the surface where it is located. Additionally, this type of securing will result in greater product application accuracy.**

1.3 Document Conventions

Formatting conventions are used throughout this manual as a method of providing consistency for notes and warnings.

Goal: This indicates a particular objective for the section.

Note: This indicates that there is more information available for the in-depth reader.

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WARNING This symbol indicates a danger of injury to the user. Hazards are identified by the exclamation mark in a triangle and bold italics text.

1.4 Warranty Information

The LS4700 systems, including all components unless otherwise specified, carry a limited warranty.

For all warranty terms and conditions, contact Foxjet, an ITW Company, for a complete copy of the Limited Warranty Statement.

1.5 Specifications

General Specifications

Category	Parameter
Dimensions (with Yoke)	31 in. (79 cm) L x 23 in. (58.5 cm) H x 25 in. (63.5 cm) D
Weight	85 lbs (38.5 kg) (includes yoke, no stand)
Accuracy	±0.06 in. (±1.6 mm) (Under consistent product presentation)
Certifications	TUV, meets requirements of UL 60960, CAN/CSA 22.2 No. 60950, EN 60950
Supply Roll Capacity LS4700	14 in. (355.6 mm)
Dispense Speed	15 to 300 Feet Per Minute (76 to 1500 cm/s)
Label Length	0.5 in. (12.7 mm) Min. to 22.0 in. (558.8 mm) Max.
Label Width Narrow Web (5 in.) Wide Web (9 in.)	 0.5 in. (12.7 mm) Min. to 4.0 in. (101.6 mm) Max. 0.5 in. (12.7 mm) Min. to 9.0 in. (228.6 mm) Max.
Product Rate LS4700	800 PPM Max.
Temperature	41°F - 104°F (5°C - 40°C)
Humidity	10 to 85% RH, Non-Condensing

Electrical Specifications

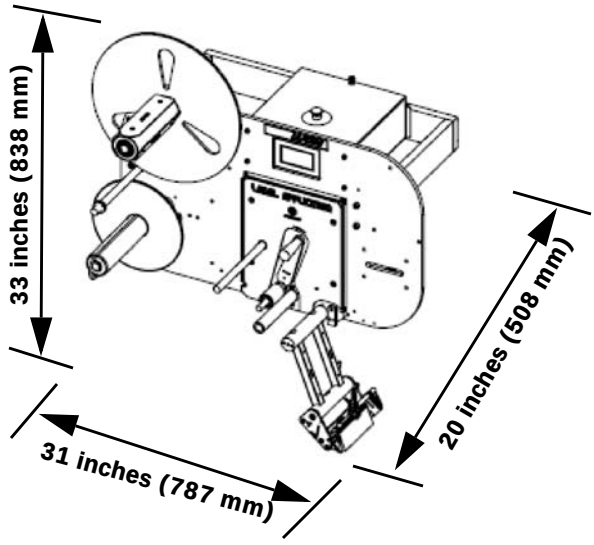
Category	Nominal	Minimum	Maximum
AC Voltage Supply	100 - 240 VAC, 1.6A 50/60 Hz	90 VAC 47 Hz	264 VAC 63 Hz
Product Detector	Low: 0 to 3 VDC High: 3 to 5 VDC Supplies 24VDC	0 VDC	24 VDC
Product Detector Pulse Width	10 mS	1 mS	Infinite
Auxiliary Output Warning Tower	0 and 24 VDC 1 Amp sinking	0 VDC 0 mA	24 VDC 1.5 Amps sinking
Discrete Inputs (Optional)	Low: 0 to 10 VDC High: 10 to 24 VDC	0 VDC	26 VDC
Discrete Input Pulse Width Detection	10 mS	3 mS	Infinite
Discrete Outputs (Optional)	0 - 24 V AC/DC at 150 mA	0 V AC/DC, 13 ohms	30 V AC/DC at 170 mA

Mechanical Specifications - Pneumatic Systems

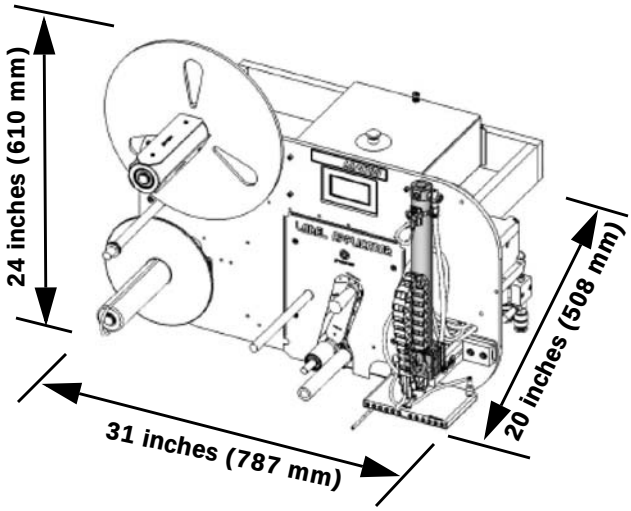
Category	Nominal	Minimum	Maximum
Incoming Air Pressure	60 - 100 PSI	40 PSI	125 PSI
Tamp Cylinder Pressure	30 - 50 PSI	20 PSI	80 PSI
Vacuum/Blow Pressure	30 - 60 PSI	20 PSI	80 PSI
Tamp Stroke (10 in. cylinder)	3 - 9 in. 76 -228 mm.	3 in. 76 mm.	9.5 in. 241.3 mm.
Tamp Stroke (20 in. cylinder)	3 - 19 in. 76-482 mm.	3 in. 76 mm.	19.5 in. 495.3 mm.
Air Consumption while running	2.5 CFM at 80 PSI	2.0 CFM at 80 PSI	5 CFM at 80 PSI
Tamp-Blow Distance (Pad to product blow distance)	0.5 in. 12.7 mm.	0 in. 0 mm.	1.0 in. 25.4 mm.

1.6 System Dimensions

WIPE



TAMP



2.0 System Modules

2.1 Drive Module

Drive Module P/N: 4700-800 (W/T)(5/9)(R/L)

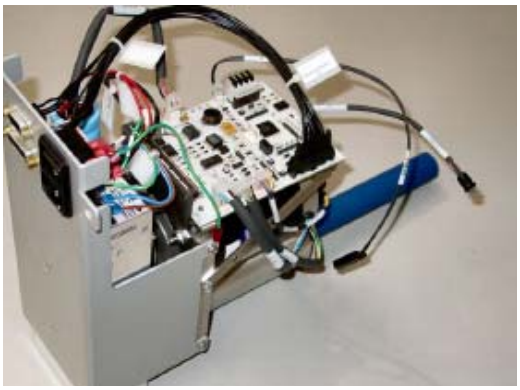
The drive module contains all of the necessary equipment to perform the feeding and peeling of the label. The module is available in eight (8) different configurations listed below:

P/N: 4700-800W5L Narrow Web WIPE -Left Hand	P/N: 4700-800W5R Narrow Web WIPE -Right Hand
P/N: 4700-800W9L Wide Web WIPE -Left Hand	P/N: 4700-800W9R Wide Web WIPE -Right Hand
P/N: 4700-800T5L Narrow Web TAMP - Left Hand	P/N: 4700-800T5R Narrow Web TAMP -Right Hand
P/N: 4700-800T9L Wide Web TAMP - Left Hand	P/N: 4700-800T9R Wide Web TAMP - Right Hand

Servo Assembly P/N: 4700-500 (W)

The servo assembly is comprised of these components:

- BLDC Motor
- Pulleys and belts
- Servo Controller Board
- Status LED
- Nip Switch
- Drive Roller
- Power Supply
- Bracketry



This assembly is at the core of the Drive Module, and is common to all modes of application (wipe, tamp, etc.) and system configurations (right or left).

- 5 inch shaft P/N: 4700-500
- 9 inch shaft P/N: 4700-500W

Drive Roller P/N: 4700-630 (W)

The drive roller is a subcomponent of the Servo Assembly. This roller is made of polyurethane and is responsible for advancing the label liner through the applicator. This is a wear item that can be obtained individually. There are two versions of this component:

- 5 inch shaft P/N: 4700-630
- 9 inch shaft P/N: 4700-630W

Nip Assembly Kit P/N: 4700-952 (W)

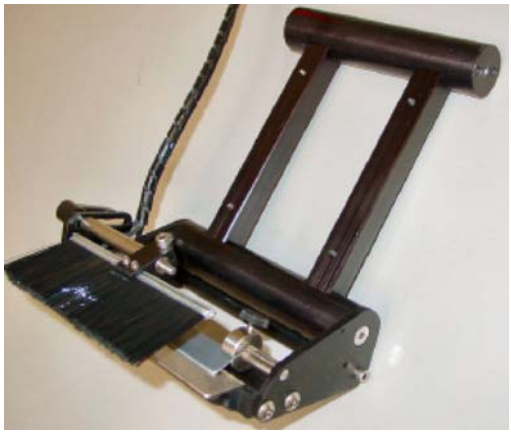
The nip assembly holds the label liner in constant contact with the drive roller. It uses a non-stick coating to avoid label build-up. This assembly includes the nip lever arm, knob, pivot block, and nip roller.

- 5 inch shaft P/N: 4700-952
- 9 inch shaft P/N: 4700-952W

Snorkel Assembly Kit P/N: 4700-950 (W)(RH/LH)

The snorkel assembly is used for wipe-on applications. It contains the label gap sensor, support arms and brackets, peel blade support, and peel blade. There are four versions of this assembly:

- 5 inch wide, right-hand P/N: 4700-950-RH
- 5 inch wide, left-hand P/N:4700-950-LH
- 9 inch wide, right-hand P/N: 4700-950W-RH
- 9 inch wide, left-hand P/N: 4700-950W-LH



Tamp Peel Blade Assembly P/N: 4700-951 (W)

The tamp peel blade assembly is used for tamp-on, blow-on, WASA, and FASA applications. It contains the label gap sensor, peel blade support, and peel blade. There are two versions of this assembly:

- 5 inch wide, P/N: 4700-951
- 9 inch wide, P/N: 4700-951W

Optional Photo Speed Encoder P/N: 4700-907 [kit]

The Photo Speed Encoder or "Photocoder" is an optional device that allows the feed speed and label placement to be synchronized with changing linespeeds. The Photocoder uses two photosensors that are spaced a fixed distance apart. By measuring the time between each photosensor trigger, the system can accurately determine the linespeed. This is a cost effective alternative to a rotary encoder, with a simplified mounting scheme.

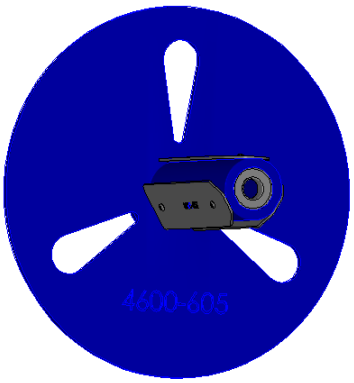
Optional Clear Label Sensor P/N: 4700-908 [kit]

The Clear Label Sensor is used when the standard label gap sensor is unable to detect the label gaps. This sensor uses changes to capacitive field to sense the label gap and avoid detection problems due to color, reflectivity, and liner thickness. This option can be installed in the field as conditions determine the need.

2.2 Mechanical SubSystem

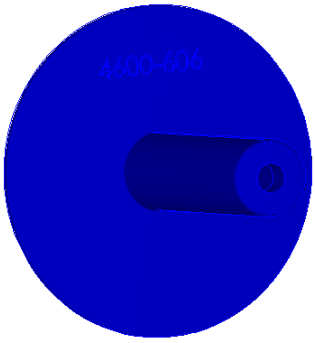
Unwind P/N: 4600-605

The unwind is designed to capture supply rolls up to 12 inches in diameter, with 3 inch cores. This subsystem uses a hub-based fin design to capture the supply roll without need for an outer disk. This reduces downtime in performing supply roll changeouts, and allows small variations in core diameters.



Rewind P/N: 4600-606

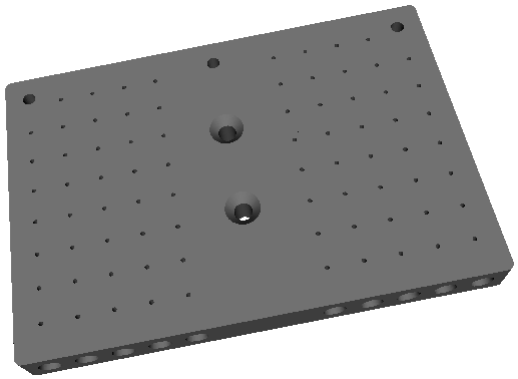
The rewind is driven by a brushless DC motor, which greatly increases the life of the rewind system. This subsystem requires no adjustments. There is no clutch on the rewind, it uses the motor's magnetic field to develop holding torque. The rewind is belt driven, using an automatic tensioner. This belt should be inspected for wear at the recommended service intervals.



Tamp Pad P/N: 4600-610-W.WWxLL.LL [W and L in inches]

The tamp pad captures the label from the drive module, and holds it under vacuum until the time when the label is to be applied to the product. There are several sizes of tamp pads, to accommodate a wide variety of label dimensions. Each pad can be ported, typically once, for a particular label size. The pad vacuum holes are arranged into columns, which are not punched through. When a pad is ported, the proper columns are punched out so that vacuum can draw the label onto the pad. For most applications, the column closest to the peel blade and the column on the furthest end of the label (from the peel blade) are ported.

The tamp pad has provisions for mounting the label present and auto retract sensors. These sensors must be mounted flush to the bottom of the pad, for optimum sensing.



Stand P/N: 6160-329

The stand holds the yoke assembly of the LS4700 and allows the system to be orientated in a variety of positions to suit application requirements. The stand employs a hand crank to set vertical position, and a series of mounting points for items such as: warning tower, remote user interface, and inlet filter/regulator. The stand contains three lockable casters that prevent rolling movement, as well as rotational movement. The column of the stand is designed to be rotated, which can help installations where the front leg of the t-base interferes with existing equipment.

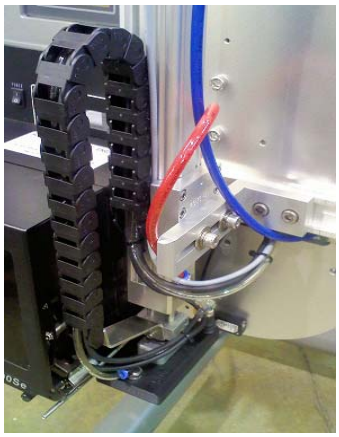
2.3 Pneumatics SubSystem

PAM (Pneumatic Air Manifold) P/N: 4600-701

The air manifold controls the operation of the tamp cylinder and the delivery of the label from the drive module to the product. The manifold has two pressure regulators, one for tamp pressure and the other controls both vacuum and blow. Two flow controls limit the volume of air going to the air assist and blow valves. There are two pressure gauges that monitor the pressure set by the regulators. A pressure sensor monitors the incoming air level and displays it on a digital readout and bargraph. An error is triggered if the incoming pressure drops below the set point value.

Tamp Cylinder P/N: 4600-743 (10 inch), 4600-745 (20 inch)

The tamp cylinder employs a dual-rod design to achieve very high speed extension and retraction, without rotation. The tamp cylinder extension and retraction speed is controlled by means of the tamp pressure setting on the air manifold and the flow controls on the cylinder body. An adjustable air cushion on the top of the cylinder dampens the return energy. A magnetic reed switch, attached to the top of the cylinder, detects the immediate return of the cylinder to its home position.



Inlet Filter/Regulator/Shutoff P/N: 4600-705

The inlet air filtration provides an OSHA-approved shutoff, with lock-out, and a pressure regulator. It uses a 5 micron filter element and automatically purges condensation trapped in the filter bowl. The regulator ensures that fluctuations in the supply air will not cause the operation of the cylinder, air assist, or vacuum to change.

2.4 Electrical SubSystem

MCA III P/N: 4600-500

The Main Controller Assembly III is a third generation of Foxjet-designed micro-controller coupled with an interface board. The Microcontroller Unit (MCU) is designed to execute real-time applicator functions, with accuracy down to a fraction of a millisecond. This board is easily removed for replacement or testing. The Interface Board acts as an interconnection point for the cabling. This board enables the MCU to be very modular, thus enabling a single, simple connection. The MCA III, as a system, is fully protected against short-circuits, ESD, and over-voltages. This design gives superiority over generic, polled-input PLC's.

Rewind Motor P/N: 4600-503

The rewind is designed around a brushless DC motor which uses three coils activated in sequence, according to three Hall-effect sensors. This is an inherently closed-loop motor control since the motor's magnetic field is controlled by reading the rotor position via the Hall-effect sensors. Using this type of motor, versus less expensive motors such as stepper or AC, has the distinct advantages of increased durability, elimination of any clutch or dancer arm, and limit switch. The control current set by the system, in accordance to the state of operation, directly controls the rewind's tension. The system eliminates up to 50% of the components used compared to other conventional rewind designs.

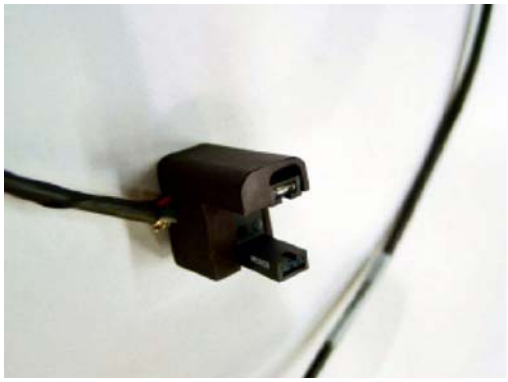
Power Supply P/N: 4600-522

The power supply is auto-ranging, so that an AC voltage input between 100V and 240V will provide a steady 24 volt DC output. The supply has a green LED to indicate active operation.

Label Gap Sensor P/N: 6146-615(R/L) or 6146-527

The label gap sensor is used to detect the transition from one label to the next and allows the accurate positioning of the label onto the product. The sensor is mounted into a housing to protect and shield it. There are three versions:

- Snorkel, right-hand P/N: 6146-615R
- Snorkel, left-hand P/N:6146-615L
- Tamp Peel Blade P/N: 6146-527



Product Sensor P/N: 4600-900

The product sensor is an infrared, diffused light model, capable of sensing objects at distances up to 3 ft. (900 mm). The sensor has two LED's, one is a yellow detection indicator and the other serves two purposes. If no object is currently detected, the green LED acts as a power on indicator. If the sensor is detecting an object, the green LED turns into a signal strength indicator. The green LED will become brighter with a strong return signal and dimmer with a weak detection. The sensor can be mounted on the baseplate, snorkel (wipe system), or remotely on a mounting bracket. If a different sensor is required, ensure it is a 24 VDC, NPN type.

Tamp Pad and Label Low Sensors P/N: 6000-903 [kit]

The tamp pad sensors, auto-retract and label present, and the label low sensor are diffuse light sensors. All three sensors are identical with a quick disconnect M8 threaded coupling. When the sensor is used for label present, it is capable of detecting a wide range of materials, colors (including clear), and textures. When used for auto-retract, the sensor can detect object presence up to 3 inches (for white opaque, 2 inch for brown corrugate) away from the tamp pad. As a label low sensor, the presence of material remaining on the roll at a fixed diameter can be determined.

6000-903 as shown

4600-903 is the older style with a flat lens

Warning Tower P/N: 6150-828

The warning tower incorporates three incandescent bulbs, with three colored lenses. These bulbs are 24 volt, 5 watt, and can be changed to LED bulbs (6145-503) for longer life. The green segment indicates a warning and error-free, online condition. The yellow segment indicates a warning or offline condition. The red segment indicates an error condition where the unit is placed offline.

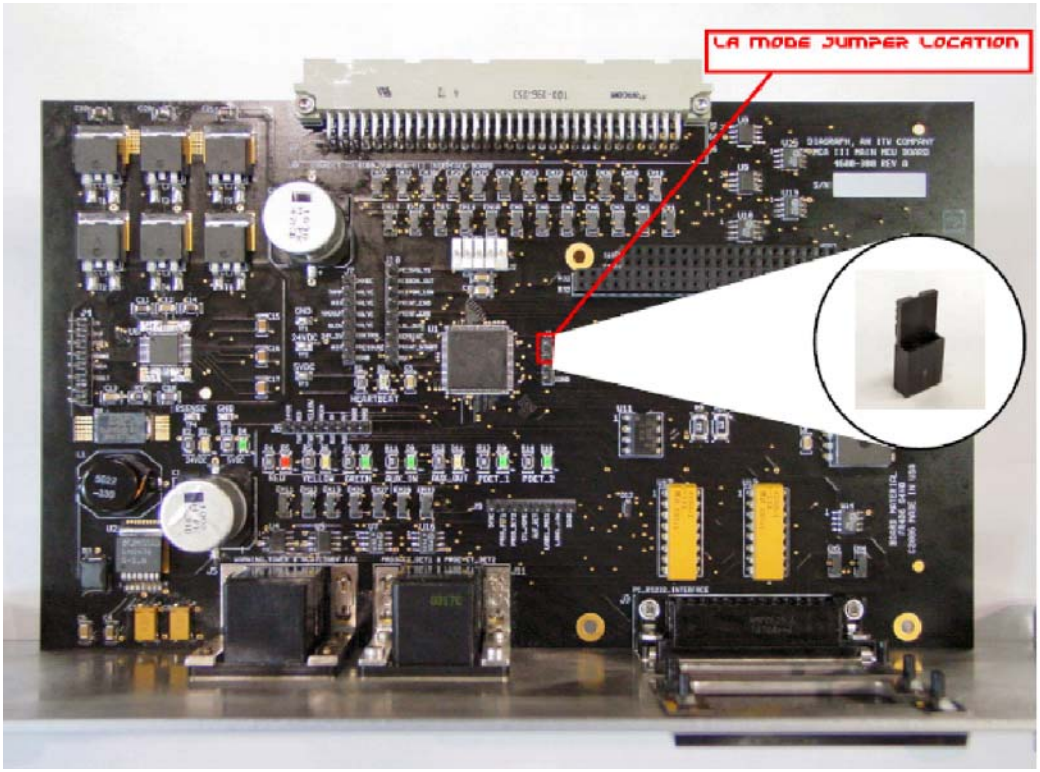
Pressure Sensor P/N: 4600-905

The pressure sensor has several great features, and still maintains a simplicity in design. The sensor should not require adjustments since the threshold levels are set at the factory. The sensor constantly monitors pressure and triggers an error on the system if the air pressure drops below the predetermined level. Digitally, the pressure is updated three (3) times a second. In conjunction to the digital readout, the bargraph displays the pressure and fluctuations.

3.0 Configuration Identity

The LS4700 shares the same platform as the other Labeling Series units. This allows systems in the Labeling Series to share optional modules, applicator modules, and features which adds a great deal of diversity to the product line. In this simplification, the same MCU firmware and GUI memory run both the Printer-Applicators (LS4600, LS6000) and the Label-Applicator (LS4700). For the system to distinguish between these two different modes, a jumper must be in position to have the system run in Label-Applicator mode.

To have the system run as a Label-Applicator, with the correct screens, a jumper block must be in place across J1 pin 1 and pin 2.



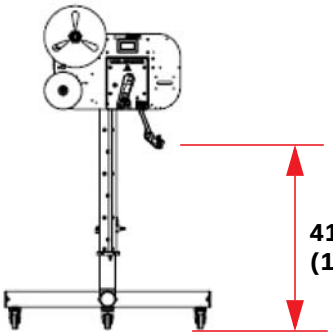
4.0 Setup

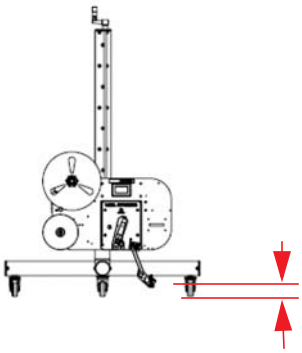
Step 1 - Determine the System Orientation

WIPE WASA

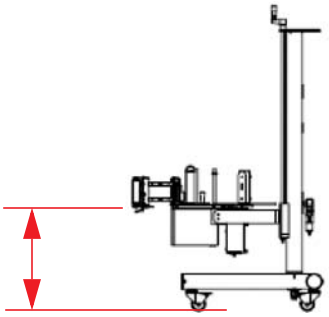
Goal: Determine the best machine orientation for application. The LS4700 is capable of rotating and pitching about various axes to accommodate a wide range of label placement opportunities. Select the best orientation from the given measurements and desired label locations.

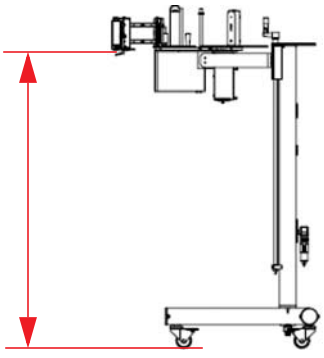
Top-Down





Side-Apply



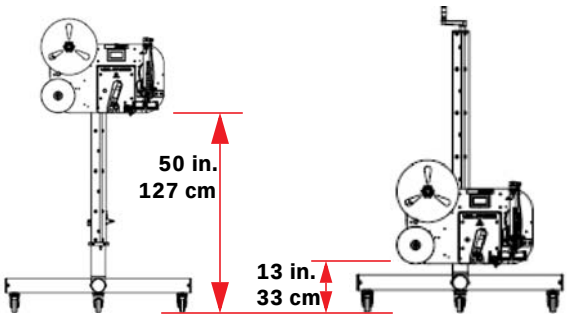


Step 1 - Determine the System Orientation

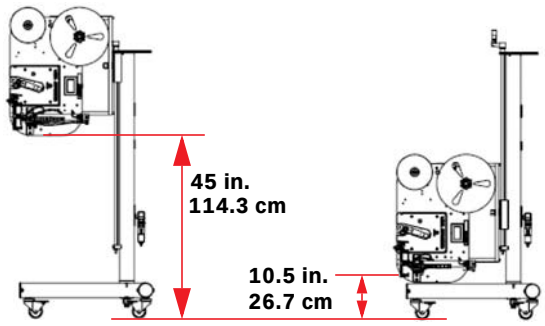
TAMP
FASA

Goal: Determine the best machine orientation for application. The LS4700 are capable of rotating and pitching about various axes to accommodate a wide range of label placement opportunities. Select the best orientation from the given measurements and desired label locations.

Top-Down



Nose-Down



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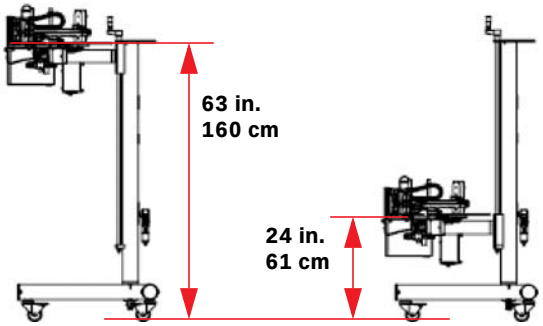
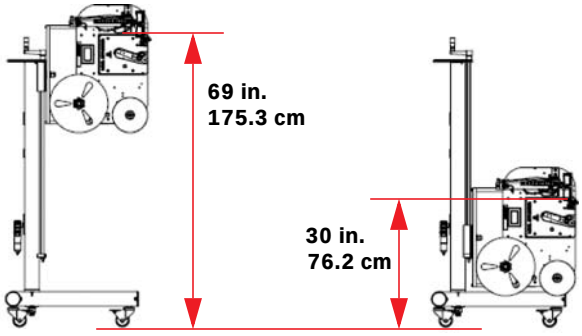


Nose-Up



Step 2 - Connect AC Power

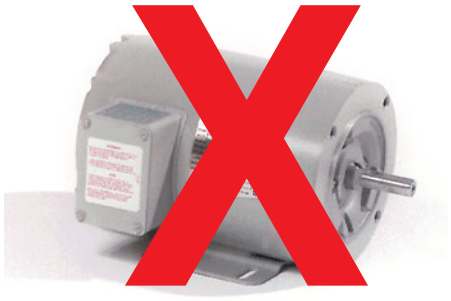
Goal: Connect the power supply to a noise-free AC power line.

Note: When connecting the AC power outlet, do not use extension cords to power the unit. Extension cords can reduce the amount of current supplied to the unit and introduce electrical noise. A dedicated AC line drop is preferred. This eliminates problems caused by other AC loads on the same line, such as motors, which create back EMF. Disturbances such as these can cause erratic behavior, system resets, and other anomalies.

Connect the AC line to a dedicated line drop supplying noise-free power. The unit will turn on automatically.

Electrical

Do Not Use Extension Cords



Do Not Share Circuit Line

** Step 3 - Connect Compressed Air

TAMP
FASA

Goal: Provide the unit with **clean, dry compressed air** (Tamp and FASA applicator modules only) and connect the power supply to a noise-free AC power line.

Note: The system employs an automatic drain air filter, which will remove most of the condensation in the incoming pneumatic line. Since the purged water will exit from the bottom of the filter bowl, it may be desirable to add a short hose to the drain valve to route the water to a nearby floor drain.

Connect the **clean, dry compressed** air line supplying 60 psi or greater at 2.5 CFM or better to the inlet air filter/regulator of the system with the OSHA valve closed. The air should be free of oil, lubricants and water, since the pneumatics are lubricated with internal grease, and contaminants will greatly decrease the life of the unit and void the warranty. Turn on the air valve to the system by pressing down and turning the valve clockwise, be aware that the cylinder will move to the home position once air is supplied.

Compressed Air

Do Not Use Inline Oilers

OSHA Valve Closed

OSHA Valve Open

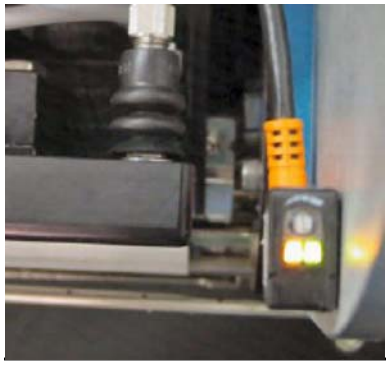
Step 4 - Mount and Adjust the Product Detector

Goal: Determine which mounting location is ideal, either on the baseplate, on the snorkel, or on the conveyor system.

Goal: Adjust the sensor to detect just the product, and ignore background objects, such as forklift trucks, personnel, or other objects that may pass in front of the sensor's view.

•••• Sub-Step (a) ••••

Determine if a product detector mounting location on the baseplate or snorkel (wipe-on) will work for this application. Typically, the location on the baseplate or snorkel is ideal for mounting ease and mobility. This location works best if the products are approaching from the side of the sensor, in relation to the tamp pad. If this location cannot apply the label in the desired position due to timing, mount the sensor in an alternate location (such as the conveyor) using the supplied mounting bracket.

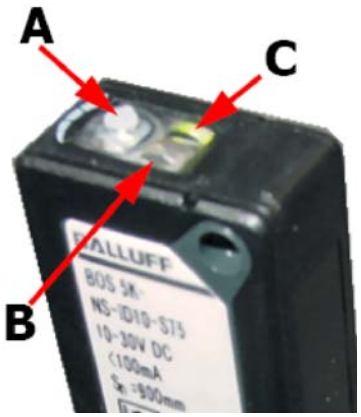


Baseplate mount shown

•••• Sub-Step (b) ••••

Adjust the sensor's sensitivity to detect just the product, and ignore the background. This can be done by placing the actual product in the path of the sensor's view. Adjust the sensitivity setscrew (A) until the yellow light (B) illuminates, and the green light (C) is steady and bright. The yellow light shows that the output is active. The green light shows the relative signal strength in the presence of the product. When the sensor is not detecting a product, the green light is on to show that the sensor is powered on. This can be useful for troubleshooting and calibration. Remove the product and verify that the yellow light is off. If not, adjust the setscrew counter-clockwise to reduce sensitivity. Once the background is eliminated from triggering the sensor, place the product under the sensor again to verify output.

Snorkel mount shown



Step 5 - Configure the One Time Settings (OTS)

Goal: Enter the One Time Settings screens and select the configuration of this particular system.

Note: Most of these items were determined when the unit was assembled; so only configurations that have changed require this adjustment.

Note: These selections can only be accessed when the unit is first powered up. This can be done when the power is first applied, or when the unit is taken out of **StandBy**.

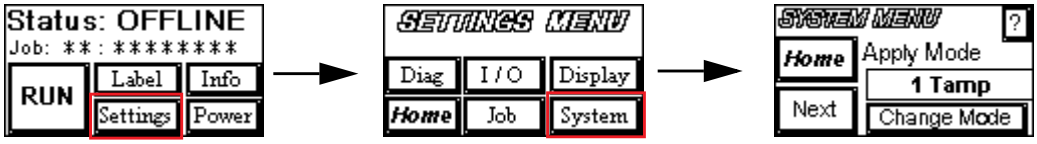
Map:

Once the first OTS screen is entered, follow the setup steps outlined in the One Time Setting (OTS) Screens on page 33.

Step 6 - Enter Values for the System Settings

Goal: Enter System information pertaining to Application Mode, Serial Baud Rate, and Passcode.

Map:



Beginning in the Offline mode, press the Settings button. From the Settings Menu, which can be passcode protected (default passcode from the factory is 9999), select the System button choice. This enters the System Menu selections. See section System Settings Screens on page 35 for information on how to make these selections.

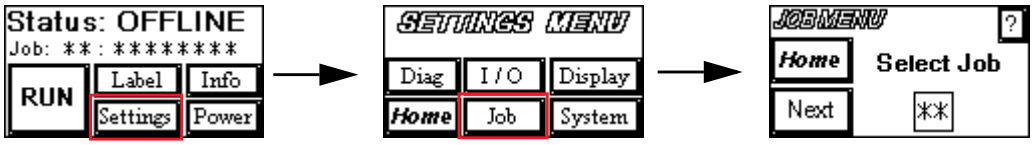
For a typical one wipe application, the following settings provide a good start:

- Apply Mode — 1 Wipe
- Passcode — 0000 (0000 disables the passcode)
- Photo Speed Encoder — Disabled

Step 7 - Enter Values for the Job Settings

Goal: Enter Job setting values to control specific aspects of the product label application

Map:



Beginning in the Offline mode, press the Settings button. From the Settings Menu, which can be passcode protected (default passcode from the factory is 9999), select the Job button choice. This enters the Job Menu selections. See section Job Settings Screens on page 36 for information on how to make these selections.

Wipe or WASA System

For a typical one wipe application, the following settings provide a good start:

- Product Delay 100 mS
- Dispense Position 0.50 inches
- Feed Speed 50 FPM

Tamp or FASA System

For a typical one tamp application, the following settings provide a good start:

- Product Delay 100 mS
- Tamp Duration 250 mS
- Home Delay 50 mS
- Auto Retract † 25 mS
- Repeat Label ‡ 3
- Repeat Tamp ‡ 3
- Feed Activation Tamp Return

† = Only visible if Auto-Retract is installed
‡ = Only visible if Label Present is installed

** Step 8 - Adjust the Inlet Filter / Regulator

TAMP
FASA

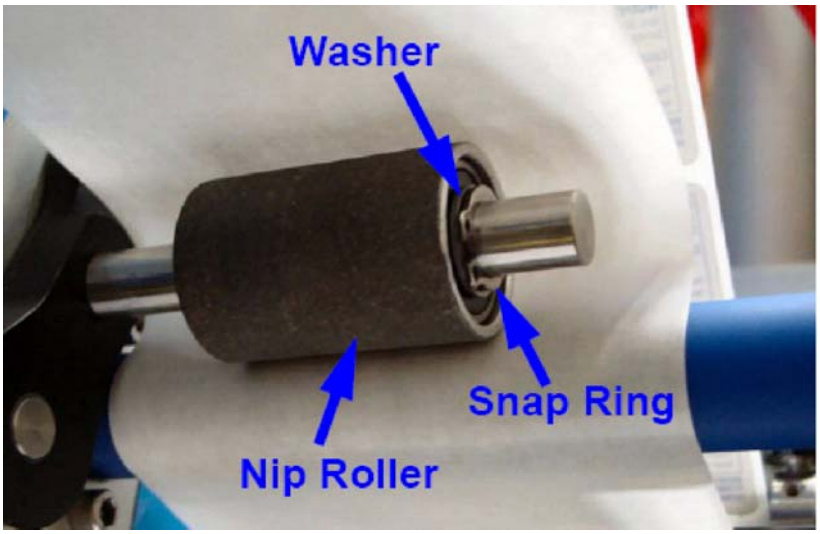
Goal: Apply air to the system, adjust the incoming regulator, and verify air quality

Be certain that nothing is going to interfere with the cylinder extending or retracting, and apply air line pressure to the system by switching on the OSHA-approved shutoff switch on the inlet filter/regulator. Adjust the regulator by lifting up on the knob and rotate clockwise to increase the system air pressure. View the pressure setting on the pressure sensor digital display, located on the air manifold. Set the pressure between 60 and 100 psi. Once the correct pressure is set, press down on the knob to lock it in position. Remove the knob entirely by lifting it up past the unlock point, if there is concern about system tampering.

Step 9 - Position the Nip Roller

Goal: Set the nip roller to the mid-point of the label width.

To ensure that the liner tracks straight through the system, position the nip roller on the mid-point of the liner. This is accomplished by using a set of snap ring pliers. First, remove the outer snap ring and washer. Remove the nip roller. Position the inner snap ring and washer to allow the nip roller to be placed in the center of the liner. Re-install the roller, followed by the washer and then snap ring. Seat the ring snug.



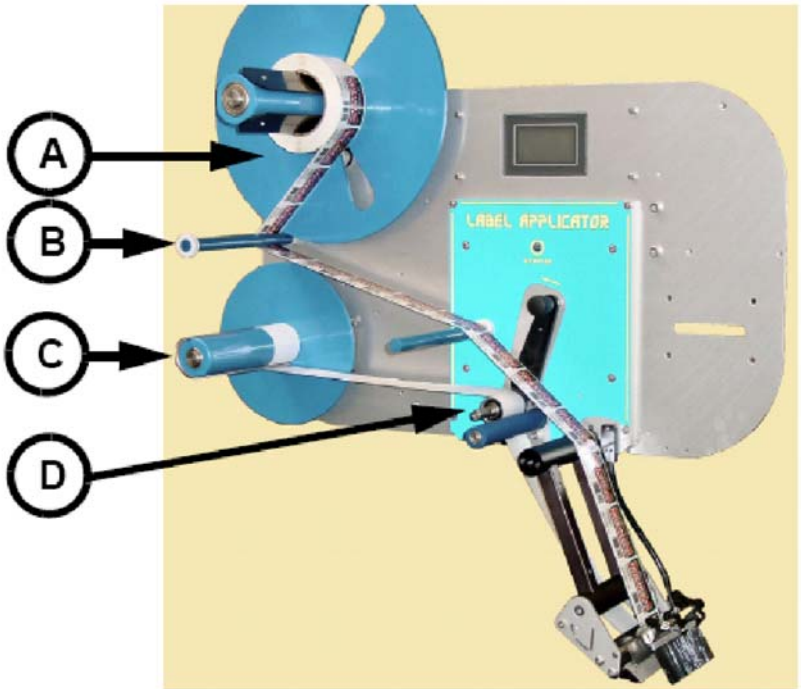
** Step 10 - Load the Media

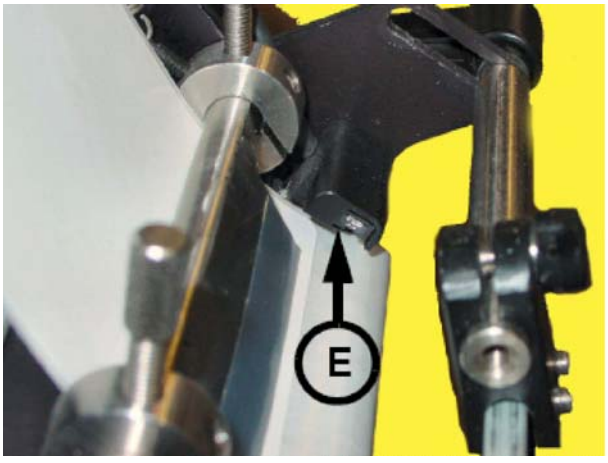
WIPE

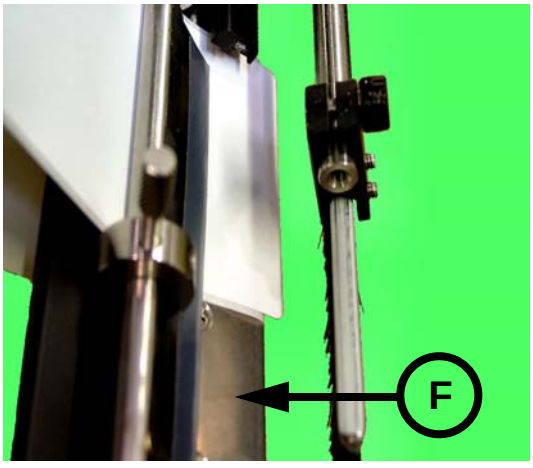
Goal: Correctly load the label supply and web the applicator.

LABEL SUPPLY CHANGEOUT

Begin by removing the last supply roll core and remaining label liner from the system. Insert the new roll over the unwind fins and press roll firmly against the unwind disk (A). Remove 2 feet of labels from the liner to create a leader. Route the liner around the dancer arm (B) and feed into the drive module. Feed the liner under the gap sensor (E), and around the peel blade (F). Open the nip roller arm lever (D) and thread the liner in an "S" wrap between the drive roller and nip roller. Wrap the liner around the rewind hub (C) and replace the clasp. The label change out can be accomplished in less than 30 seconds by an experienced user.







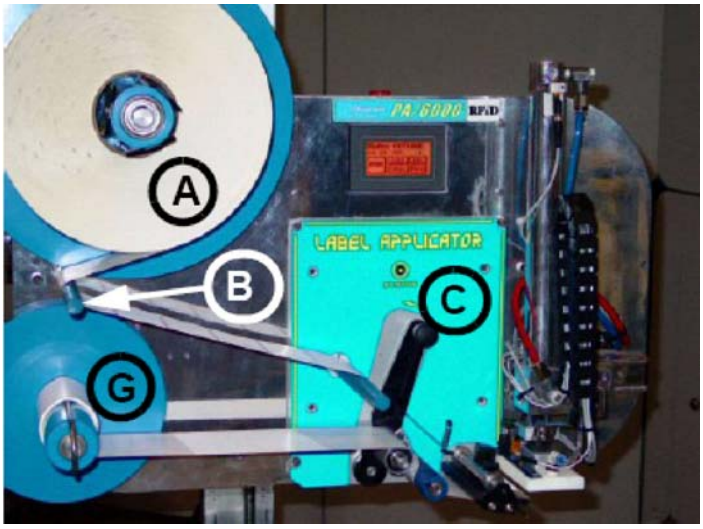
** Step 10 - Load the Media

TAMP
FASA
WASA

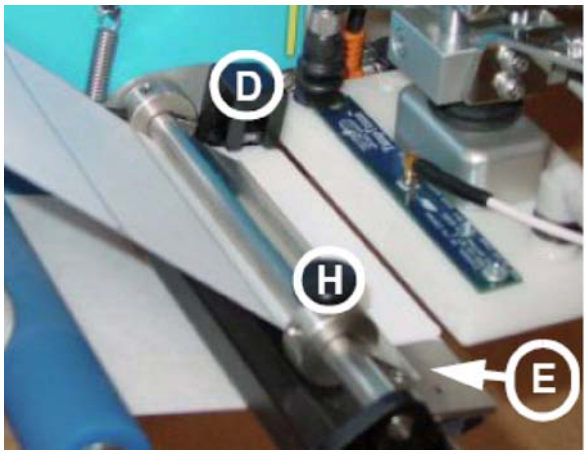
Goal: Correctly load the label supply and web the applicator.

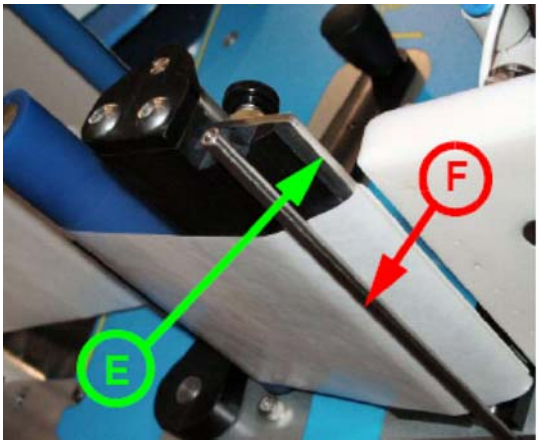
LABEL SUPPLY CHANGEOUT

Begin by removing the last supply roll core and remaining label liner from the system. Insert the new roll over the unwind fins and press roll firmly against the unwind disk (A). Remove 2 feet of labels from the liner to create a leader. Route the liner around the dancer arm (B) and feed into the drive module. Feed the liner through the gap sensor (D), and around the peel blade (E). ***Be sure to avoid webbing over the air assist tube (F)***. Open the nip roller arm lever (C). Take the liner to the rewind (G), and use the clasp to retain it. Once the liner is tracking straight, side the outer web guide collar (H) against the liner to keep it from walking out of the gap sensor path.



The label change out can be accomplished in less than a minute by an experienced user.





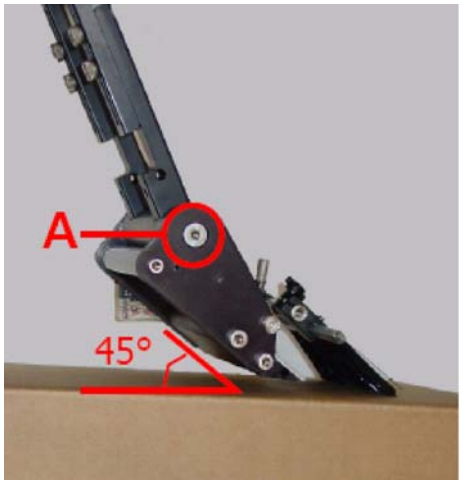
** Step 11 - Adjust the Wipe-On Snorkel

WIPE

Goal: Adjust the wipe-on angle of the label and set the optimum brush position.

• • • • Sub-Step (a) • • • •

[1] Use a $^{5}/_{32}$ inch Allen wrench to adjust the two (2) screws (**one shown in A and one on opposite side**) to change the peel blade angle
[2] Set the peel blade to a 45° angle to the product. Tighten the Allen screws

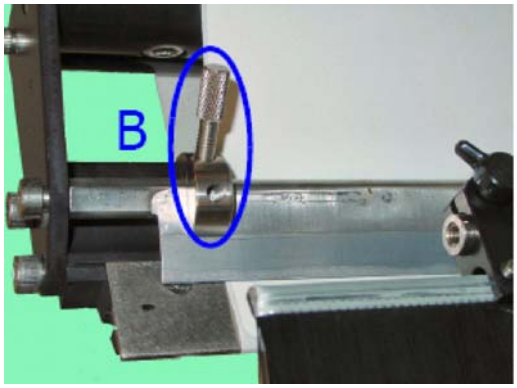


• • • • Sub-Step (b) • • • •

[1] Loosen the outer guide collar with the knurled screw (**shown in B**)
[2] Position the liner close to the inner guide and slide the outer guide (B) to the edge of the liner and tighten the knurled screw

• • • • Sub-Step (c) • • • •

[1] Loosen knob [C] and adjust the brush clamp across the label width to the mid position. Tighten the knob
[2] Loosen knob [D] and adjust the angle and forward position of the brush. For shorter length labels, position the brush closer to the peel edge, 90° to the product's surface. For longer labels, position the brush away from the edge, 45° to the product's edge
[3] Tighten the knob and re-position the handle out of the way of the application



** Step 11 - Adjust the Tamp Pad Position

TAMP
FASA

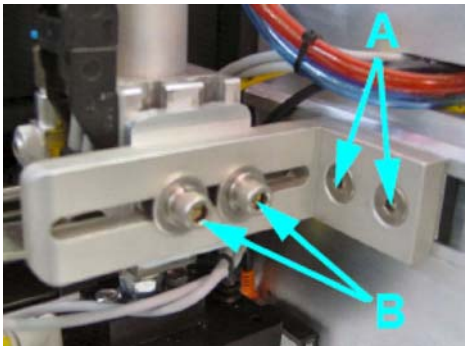
Goal: Slide the tamp cylinder module across the dovetail track to the correct position in front of the drive module, this will be approximately 1/8th of an inch from the peel blade edge.

Goal: Align the tamp pad height to the peel blade feed position; this should be close to 1/8th of an inch below the peel blade edge.

Goal: Adjust the tamp pad closer to or further away from the baseplate to align the label to the pad. This position should allow a column of vacuum holes to be covered, while triggering the label present sensor.

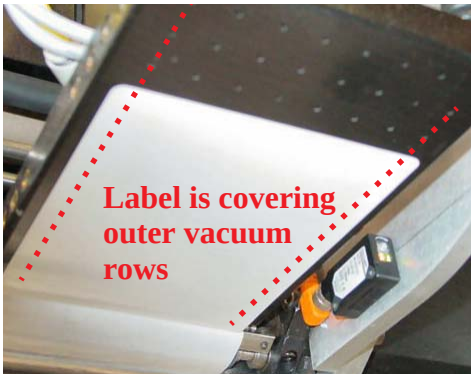
•••• Sub-Step (a) ••••

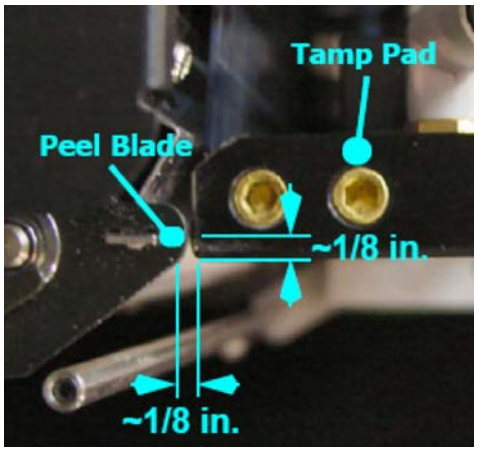
[1] Loosen the two dovetail track screws [A] (5/16 inch socket-head cap screws) and slide the tamp cylinder assembly into a position that gives approximately 1/8 inch gap between the peel blade edge and the tamp pad.
[2] Once in position, tighten the dovetail track screws firmly.



•••• Sub-Step (b) ••••

[1] Loosen the tamp cylinder mounting screws [B] (5/16 inch socket-head cap screws) and slide the tamp cylinder in and out from the baseplate to align the label with the pad. It is important that the label dispensed covers the ported vacuum holes and covers the label present sensor (if equipped). These screws adjust the tamp pad height in relation to the peel blade edge.
[2] Before locking the screws in place from adjusting the in-and-out position, set the height. The labels are optimally transferred to the tamp pad when the pad is 1/8th inch below the peel blade edge. This keeps any label curl at the end of the label from landing back on the peel blade edge. As the label's adhesive is exposed to air, the tendency is to shrink, or curl away from the tamp pad. Some curl at the end is expected, and by keeping the pad below the peel blade edge, labels curling back to the liner will be avoided.
[3] Once the pad has been adjusted, tighten the screws and apply air pressure to the system and re-check the tamp pad position. The adjustment of the tamp cylinder's air cushion will effect the resting height at home of the cylinder, and thus the tamp pad. Be sure to check this height again, after all pressures and adjustments to the tamp system are complete.
[4] If the position looks correct, tighten the mounting screws firmly.





Setup

** Step 12 - Set the Tamp Pneumatic Controls

TAMP
FASA

Goal: Adjust the optimum tamp pad travel to ensure label transfer to the product

These adjustments will require an initial setup and a final adjustment, as other parameters are changed. The pneumatic adjustments will determine how fast the system will deliver the label to the product, and how well it will be applied. Since application requirements vary, the pneumatic adjustments allow a wide range of control to best optimize the system's performance.

• • • • Sub-Step (a) • • • •

Begin by setting a tamp pressure, seen below as regulator knob (A). Start with a mid-range value of 45 psi by rotating the knob clockwise to increase the pressure and counter-clockwise to decrease it.

A - Tamp Pressure
(bottom view)

For applications requiring higher throughput, increase the pressure to a value between 50 - 70 psi. For light touch applications, reduce the pressure to a value between 30 - 40 psi.

• • • • Sub-Step (b) • • • •

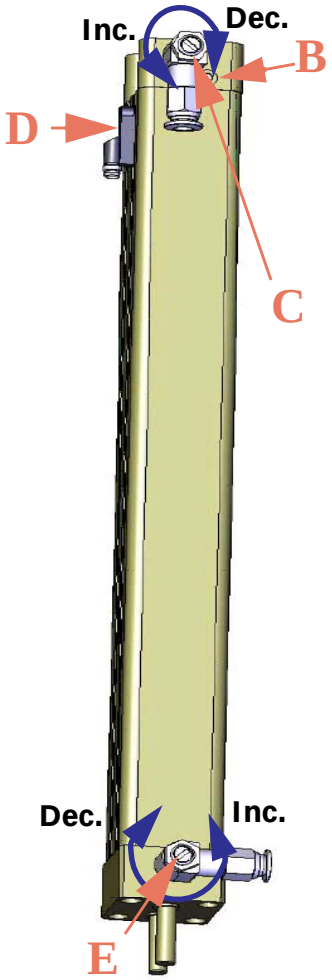
Adjust the tamp cylinder flow controls, identified as (C) and (E) on the figure to the right. These controls vary the speed of the cylinder, on retraction (C) and extension (E). Turning the setscrew clockwise decreases speed. Conversely, turning the setscrew counter-clockwise increases the speed.

• • • • Sub-Step (c) • • • •

The air cushion absorbs the shock of the tamp returning to the fully retracted, or home position. To increase the amount of cushion, turn setscrew (B) clockwise, to decrease it, turn it counter-clockwise. Too much air cushion can delay the tamp return to home, thus reducing throughput and possibly causing a label to feed into the edge of the tamp pad.

• • • • Sub-Step (d) • • • •

The cylinder home sensor monitors the final retraction of the tamp cylinder and signals the system when it is safe to feed the next label. This position on the cylinder is set at the factory and should not need adjustment. If adjustment is required, loosen the screw that holds the sensor clamp in place. With the line pressure on and the power on, slide the sensor up from the opposite end until the light on the sensor illuminates.Tighten the screw and re-verify this position is correct by disengaging the line pressure and manual extend and retract the cylinder, noting clean on and off of the sensor's light.



B - Air Cushion Adjust
C - Return Flow Control
D - Cylinder Home Sensor
E - Extend Flow Control

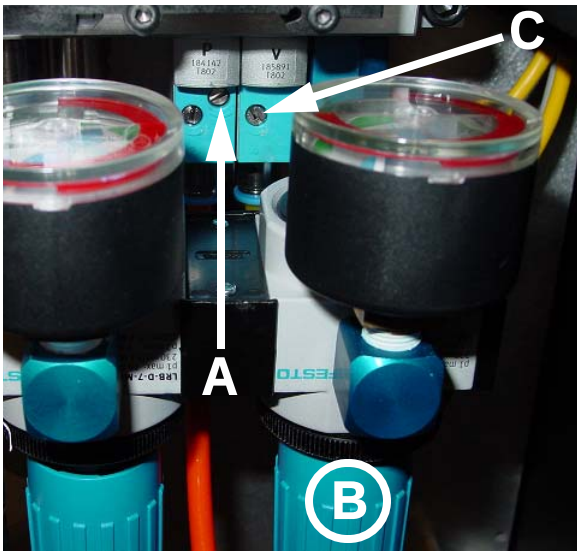
** Step 13 - Set the Vacuum, Air, and Blow Values

TAMP
FASA

Goal: Set the air assist flow control, vacuum and blow pressure, and blow flow control.

• • • • Sub-Step (a) • • • •

The air assist is used to guide the label toward the tamp pad while being dispensed from the drive module. The air assist uses a portion of the incoming line pressure; the adjustment of screw (A) controls the amount of air used to guide the label. Clockwise adjustment decreases the air flow and counter-clockwise will increase it. Use the Pneumatic Diagnostic Screen (page 40) to test the air assist once the adjustment is made. Too little air assist will result in labels curling away from the pad during feed; too much assist will cause the label to fly off of the pad.



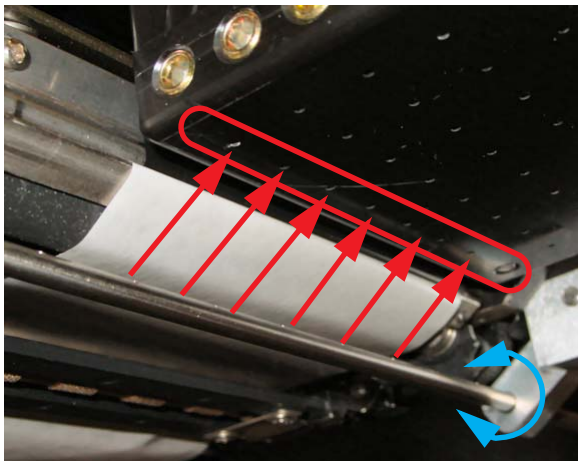
A - Air Assist Flow Control
B - Vacuum / Blow Pressure
C - Blow Flow Control

• • • • Sub-Step (b) • • • •

The vacuum generator and blow valve are controlled by the same pressure regulator, knob (B). To adjust this pressure, first unlock the knob by extending it. Once it is unlocked, rotate the knob clockwise to reduce pressure and counter-clockwise to increase it. Since the blow valve has an additional trim of a dedicated flow control, set the pressure as high as necessary for vacuum. Typically, a pressure range between 30 and 60 psi will be acceptable, with the possibility of making this higher if this is a blow or tamp/blow application. Too much pressure will make the label buckle as it is fed to the pad; too little vacuum will not hold the label in place.

• • • • Sub-Step (c) • • • •

The blow flow control will limit the amount of air force that the blow cycle exerts, which is useful to combat the problem of too much blow. While a strong amount of air will transfer the label through the air to the product, too much blow will actually work to hold the label in place (Bernoulli Effect). Use this screw adjustment (C), to decrease the blow force by turning in the clockwise direction, and counter-clockwise to increase it. Again, use the diagnostic screen to test this setting as adjustments are made.

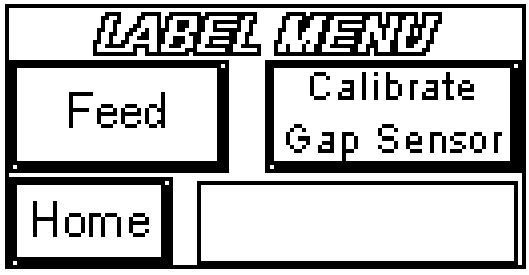


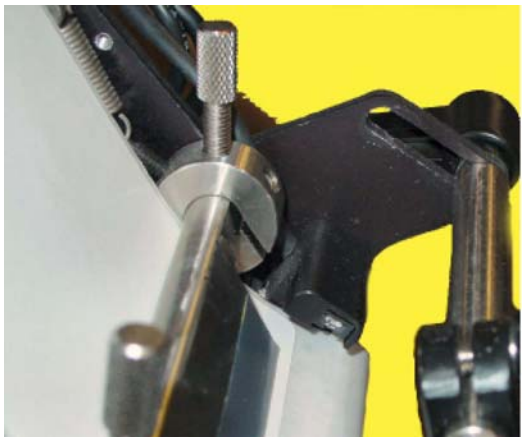
Step 14 - Calibrate Label and Test Cycle

Goal: Calibrate the label gap sensor for the material used and test cycle the system.

• • • • Sub-Step (a) • • • •

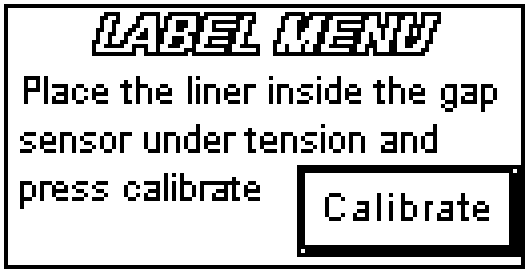
[1] Press the “Label” menu from the Offline Home Screen.
[2] Press the “Calibrate Gap Sensor” button shown in the top right image.
[3] Thread a section of liner only (labels removed) under the label gap sensor and place under tension, see middle right image.
[4] Press the “Calibrate” button to set the material for operation. During the calibrate process, the Status LED will flash green while calibrating.
[5] When calibration is complete, the Status LED will either be green if the process was successful or red if it failed. The user interface will also show this information in text.





• • • • Sub-Step (b) • • • •

Press the “Feed” button to advance a label. If this is a pneumatic system, make sure there is not already a label on the tamp pad prior to pressing the feed button. Adjust the label dispense position and speed for the best presentation.



Step 15 - Test Tamp

TAMP
FASA

Goal: Make fine adjustments to optimize the performance of the system once running.

•••• Sub-Step (a) ••••

Tamp Duration (2nd Tamp Duration)
The tamp duration, and 2nd tamp duration (if the Apply Mode is a dual action type), can be adjusted through the user interface menus located on page 37. Set the duration and test the stroke by entering the diagnostic menu of pneumatics on page 40, and press the "Tamp" button. The Auto-Retract function will not be enabled, so that the stroke will represent the time setting. This setting is effected by the tamp pressure of the system and the flow controls on the cylinder, so re-adjustment will be necessary if these values change.

•••• Sub-Step (b) ••••

Tamp Pressure
The tamp pressure sets the force that the cylinder will exert on the product's surface, and can limit the speed of the cylinder travel. It is better to control the cylinder speed through the flow controls, than through the cylinder tamp pressure. Adjust the tamp pressure to maximize the transfer of the label to the product, without undue stress to the product or its packaging. Use the Pneumatics menu in Diagnostics to test the Tamp after changes are made (page 40).

•••• Sub-Step (c) ••••

Air Cushion
The air cushion can be adjusted from the instructions on page 28. The air cushion can help reduce tamp pad bounce when returning home, but can impact the final return time of the tamp pad to the home position. Increase the air cushion adjustment so that no metallic 'clank' is heard when the cylinder retracts, but not so much that the final half inch of return is belabored. This adjustment is impacted by changes to the tamp pressure setting, so re-adjustments may be required. Use the Pneumatics menu in Diagnostics to test the Tamp after changes are made (page 40).

•••• Sub-Step (d) ••••

Tamp Cylinder Flow Controls
The tamp cylinder flow controls limit the rate of cylinder movement on extension and retraction. Once the tamp pressure has been set, use the flow controls to limit the rate of extension by utilizing the control closest to the tamp pad. The rate of retraction is adjusted by the control closest to the home sensor. The adjustment instructions are located on page 28. Use the Pneumatics menu in Diagnostics to test the Tamp after changes are made (page 40).

•••• Sub-Step (e) ••••

Home Delay
As the rate of return is decreased, the air cushion is increased, or the tamp pad length is larger than 6 inches, more time is required to let the tamp pad settle before the next label can be fed. To avoid feeding the next label too soon, the Home Delay (page 37) can be adjusted to wait a user-defined amount of time after the cylinder is detected home, and before the next label is fed. This value can be as low as zero for high-speed, smaller tamp pads, or up to several seconds.

Step 16 - Make Final Adjustments

Goal: Make fine adjustments to optimize the performance of the system once running

• • • • Sub-Step (a) • • • •

Product Delay (Second Product Delay)

The product delay controls the time between the product detector trigger and start of the application cycle. To get a good starting value, use the following equation:

$$\text{Product Delay (mS)} = \frac{5000}{\text{Linespeed (FPM)}} \text{ X Product Detect to Peel Blade Distance (inches)}$$

This would place the label on the leading edge of the product, so extra time must be added to place the label further down the product.

• • • • Sub-Step (b) • • • •

Air Assist - Tamp/FASA Only

As other changes are made to the system, including tamp cylinder mount adjustments, air cushion settings, and label adjustments, it may be necessary to re-adjust the air assist tube position and/or air assist flow control to have a strong air current driving the label up toward the pad. Keep in mind that labels closest to the core of the roll will have more “memory” or curl, than labels located away from the core. An air assist flow that works well for the majority of the roll in the beginning may not be enough for the last labels near the core. After the first full roll has been run through, the air assist may need to be slightly increased to overcome the label curl.

• • • • Sub-Step (c) • • • •

Vacuum- Tamp/FASA Only

Similar to the adjustment above for the near roll-end labels, the memory curl of the labels closest to the core may require a greater vacuum setting then the labels on the beginning of the roll. Increase the vacuum to a level that works well for the beginning 80% of the roll, but equally as well for the remaining 20%. If the vacuum is too high, it will be most notable when the transfer to the product suffers. It will also be noticeable over time in the frequency of filter cleaning required.

• • • • Sub-Step (d) • • • •

Auto Retract (if equipped)- Tamp/FASA Only

The auto retract delay time can be adjusted to suit the needs of the particular application. By setting the correct time value, the sensor can detect the product and reverse direction of cylinder travel to provide the lightest contact possible. Since the sensor can detect brown corrugate up to 2 inches away, it is possible to use the maximum cylinder speed and the lowest contacting force, simply by adjusting this value. This means that variable height (or width if side apply) products will be contacted with the same force, regardless of tamp duration time.

• • • • Sub-Step (e) • • • •

Repeat Label / Repeat Tamp (if label present is installed)- Tamp/FASA Only

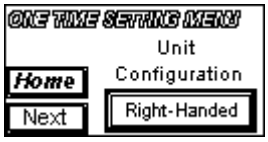
Once the system is operating to satisfaction, the repeat label and repeat tamp settings can be activated to detect any feeding anomalies. By setting the repeat label to a value greater than zero, the unit will go offline with an error if the system attempts to feed more labels than the specified value without tamping. Likewise, the repeat tamp will prevent multiple applications of the same label to multiple products. These two controls prevent label jams, mis-labeled products, labels stuck to the tamp pad face, and out of sequence labeling.

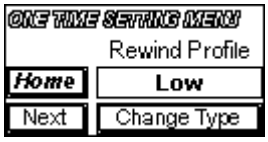
5.0 User Interface

5.1 One Time Setting (OTS) Screens

Map:

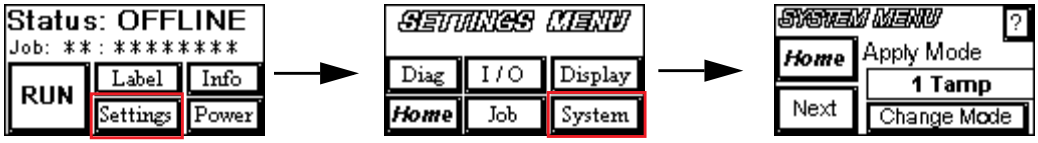
Note: Can only be entered from power on transition

Screen	Functionality
	If the Label Present sensor is installed on the unit, press the button below the text until it displays “Yes”.
	If the Auto Retract sensor is installed on the unit, press the button below the text until it displays “Yes”.
	If the Label Low sensor is installed on the unit, press the button below the text until it displays “Yes”.
	The choices are left and right handed, based on the direction of the drive module on the baseplate. This is determined by facing in the direction of the feed of the labels. If the drive module is right of the baseplate, then the configuration is Right-Handed. If the drive module is left of the baseplate, then select Left-Handed.
	The system detects a missing label on the liner roll after each label feed. The system can allow the missing label, and advance to the next position when Missing Label is set to warning. This will display on the user interface and light the warning tower yellow. If Error is selected, the system will halt operation on a missing label.

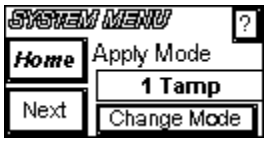
Screen	Functionality
	The Label Shape has two choices of Normal and Irregular. Normal should be used for rectangular opaque labels and Irregular should be used for round or non-rectangular shaped labels or when a registry mark (black mark) is used for clear labels. Irregular mode allows the system to end on a blank area of liner without interpreting this as a missing label.
	***** GUI Version 1.29 and higher only** The rewind profile changes the speed and tension to match the application requirement. In five increments, the rewind can be adjusted to match the speed and throughput of the label dispense rate.
	The selections are leading or trailing edge. By selecting leading edge, the label placement on the product is justified to the front or leading edge of the product. By selecting trailing edge, the label placement is justified to the back or trailing edge of the product.

5.2 System Settings Screens

Map:

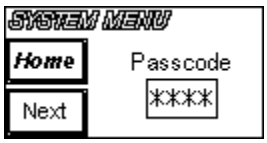


Screen	Functionality

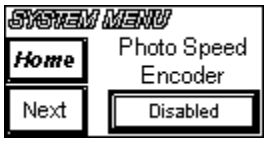


The system can be selected to Tamp, Tamp/Blow, or Blow. In addition, there are selections for having a double apply for applications such as Front Apply Swing Arms (FASA) or two labels per product. The choices are:

- 1 Tamp — Typical, 1 product trigger to 1 tamp
- 1 Tamp/Blow — 1 product trigger to 1 tamp, with blow on the retraction
- 2 Tamps — 1 product trigger to 2 cycles of tamp, each controlled by a separate product delay distance
- 2 Tamp/Blows — 1 product trigger to 2 cycles of tamp/blow, each controlled by a separate product delay distance
- 1 Blow — 1 product trigger to 1 blow on a blow box application
- 2 Blows — 1 product trigger to 2 blows on a blow box application
- 1 Wipe — 1 product trigger to 1 label feed (Wipe or WASA)
- 2 Wipes — 1 product trigger to 2 label feeds (Wipe or WASA)



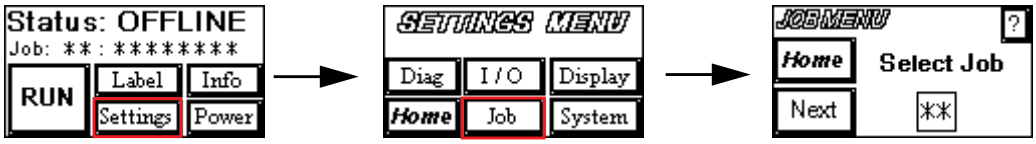
This is requested if the system is locked when a user attempts to enter the Settings Menu. If the Passcode is set to “0000”, the Passcode is disabled



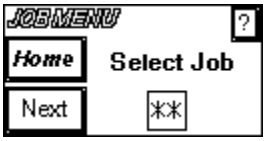
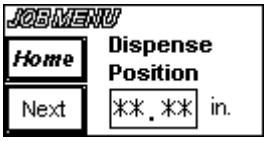
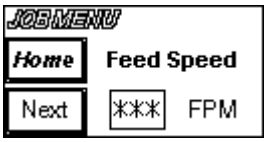
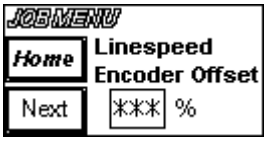
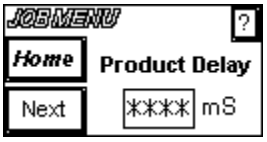
The Photo Speed Encoder is an optional device to measure the exact speed of the product as it passes the photosensors to provide the best match of label speed to the product speed. This results in better accuracy of label placement. Select Enabled if the Photo Speed Encoder is installed. By enabling this mode of operation, the Feed Speed Job Menu selection is replaced by Linespeed Encoder Offset.

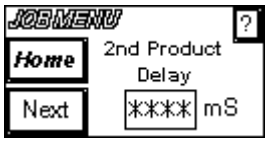
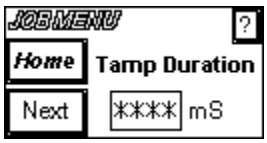
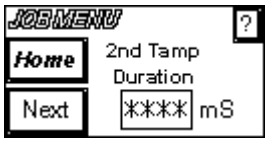
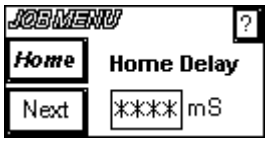
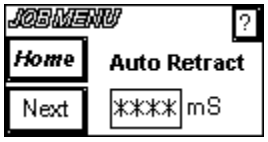
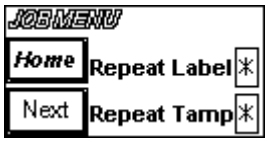
5.3 Job Settings Screens

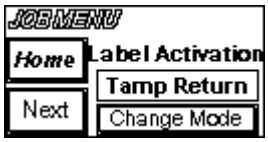
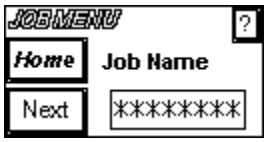
Map:



Note: Can only be entered from an offline state

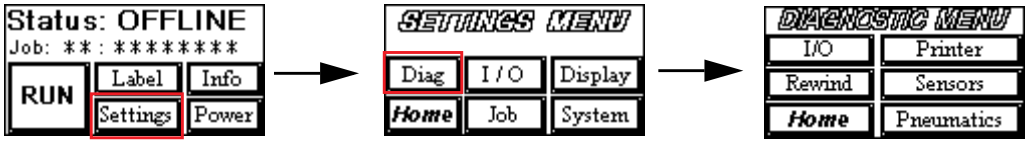
Screen	Functionality
	**ALL APPLY MODES** From this screen the user can switch jobs, thus recalling multiple job settings at once. The system stores up to 60 jobs in non-volatile memory.
	**ALL APPLY MODES** This determines the distance the label is fed out from the peel blade and is referenced from the mid-point of the gap sensor. A typical value is 0.5 inches, which will feed a rectangular label completely off of the end of the peel blade edge.
	**ALL APPLY MODES - PHOTO SPEED ENCODER DISABLED** Enter the linespeed of the conveyance system as accurately as possible. The lower the linespeed, the more important the exact setting is entered.
	**ALL APPLY MODES - PHOTO SPEED ENCODER ENABLED** When the system is running with the Photo Speed Encoder enabled, the product speed is automatically calculated. To influence the calculated speed, the Linespeed Encoder Offset percentage can be used to increase or decrease the label feed speed. A setting of 100% indicates no change from the calculated speed, while a setting less than 100 decreases the speed and above 100 increases the feed speed.
	**ALL APPLY MODES** From the Product Delay screen the time delay between product detector trigger and application cycle can be adjusted. This delay can be calculated by taking (5000 / linespeed in FPM) * the distance from the product detector to peel blade edge in inches. This will yield the delay in milliseconds to be entered on the screen. Some adjustment of this value will be required to position the label on the product at the desired location.

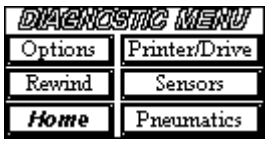
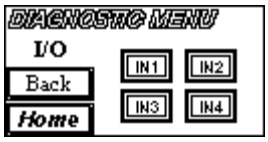
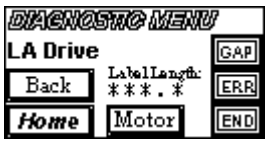
Screen	Functionality
	**DUAL APPLY MODES** Only displayed if the system Apply Mode (page 35) is set to 2 Tamps, 2 Tamp/Blows, or 2 Blows. Calculated the same as above, but with extra time to allow the second label to feed and be ready for the second application. If the second label is not ready in time, a **Timing Violation** warning will be given.
	**ONLY TAMP MODES** This setting controls the extension stroke time. If the auto-retract sensor is not used, this is the only setting that controls the retract of the tamp cylinder. If the Apply Mode (page 35) is set for Blow, this will be the duration of the blow cycle.
	**ONLY DUAL APPLY TAMP MODES** Only displayed if the system Apply Mode (page 35) is set to 2 Tamps, 2 Tamp/Blows, or 2 Blows. This controls the second application extension time.
	**ONLY TAMP MODES** In this screen, a waiting period between the cylinder returning home and the next label fed can be adjusted. This delay can be useful for allowing the tamp pad to settle, before a label is advanced from the drive module.
	**ONLY TAMP MODES WITH AUTO-RETRACT SENSOR** If the optional auto-retract sensor is installed (OTS screens, page 33), this screen will be visible for adjustments. The auto-retract sensor will detect the product surface before contact. This allows the lightest touch of the label to the product, which can accomplish nearly the same effect as a tamp/blow on many products and have the benefit of positive contact to ensure label transfer onto the product surface. Since the speed of the cylinder can vary, based on the pressure and flow control settings, the auto-retract employs an adjustable delay. This delay is started when the sensor first “sees” the product, and allows additional time to contact the product. If the delay is set too short, the tamp pad may never hit the product. If set too long, it will hit the product too hard. If it is set to zero, the auto-retract will be disabled, and the system will solely use the tamp duration timer to cause retract.
	**ONLY TAMP MODES WITH LABEL PRESENT SENSOR** If the optional Label Present sensor is installed (OTS screens, page 33), this screen will be visible. The Repeat screen allows a safe guard to be set to prevent multiple labels to be fed for a single tamp, and/or prevent multiple application attempts of the same label. The repeat feed function can set a limit to the number of labels fed to the tamp pad for a single application cycle. Likewise, the repeat tamp function can prevent applying the wrong label to the next product. In applications where each label contains unique information for the product this setting can stop the system from continuing if the label returns with the tamp pad after an application cycle.

Screen	Functionality
	**ALL APPLY MODES** In this screen, the trigger for feeding the next label is selected. For batch applications requiring the fastest throughput, the choice of Tamp Return works best. This will dispense a label each time the tamp pad returns home. A choice of Product Sensor 1 allows feed to follow the trigger of the product sensor. This requires the product detector to be placed far enough away from the system to allow for the label feeding to finish in time for application. This works well for applications where each label is unique. A final choice of Product Sensor 2 allows feeding to start on a separate trigger than the application delay sensor. Again, this is good for unique label format or varying information, with the added benefit of better control of timing, and label placement.
	**ALL APPLY MODES** To make recognition of the current job easier, an 8 character name can be assigned to the job. This is accomplished via the Job Name screen. The name can be a combination of numbers, letters, and some special characters.

5.4 Diagnostic Screens

Map:



Screen	Functionality
	From the main Diagnostics screen, the individual categories of Options, Rewind, Drive Module, Sensors, and Pneumatics can be tested. Once the Diagnostic menu is entered, the warning tower and discrete outputs will begin to toggle automatically to test these outputs.
	The I/O Diagnostic screen will test the inputs and outputs of the optional Discrete I/O card. If the card is installed, the inputs IN1 through IN4 will display a black background if the signal is active, and a white background if no signal is present.
	The Rewind Diagnostic screen will allow the user to test the motor by pressing the TEST button. This will activate the motor briefly, to verify operation and correct direction. The motor's RPM will be displayed to verify that the motor's feedback sensors are working as well.
	The Label Applicator Module Diagnostic screen tests the drive motor, motor shaft encoder, and the gap sensor. With the system webbed and calibrated, slide the label gap in and out of the gap sensor. View the gap signal on the display. Press the Motor button and the label will advance to the gap. At the end of the run, the approximate label length will be displayed. If the length displayed is incorrect or doesn't update, there could be a problem with the motor shaft encoder.

Screen	Functionality

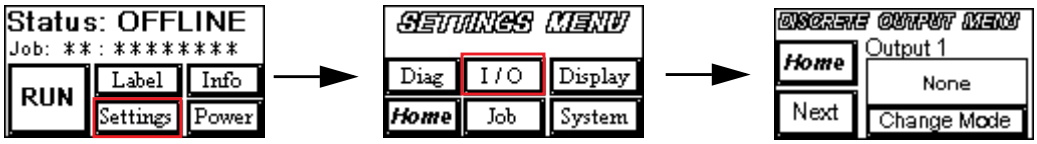
The Sensor Diagnostic screen shows all of the main system sensors on one screen. An indicator with a black background is active, while a white background indicates inactive. The sensor names are limited to three characters, with the meanings listed here:

- RET — Auto **Ret**ract
- LBL — **L**a**b**e**l** Present
- LOW — Label **Low**
- AUX — **Aux**iliary Input
- PD1 — **P**roduct **D**etector **1**
- AIR — **Air** Pressure Low
- RL/G — **R**ibbon **L**ow (PA Unit) / **G**ap Sensor (LA Unit)
- PD2 — **P**roduct **D**etector **2**
- CYL — **Cyl**inder Home

The Pneumatics Diagnostic screen permits testing of the various valves on the module, and displays useful information captured during tests. The Tamp button will extend the tamp cylinder for a fixed time of 1 second. The Vac button will turn on the vacuum valve for 1 second, same as the Blow button does for the blow valve and Air button does for the air assist valve. The indicators of Auto Retract (RET) and the Cylinder Home (CYL) are displayed for troubleshooting purposes.

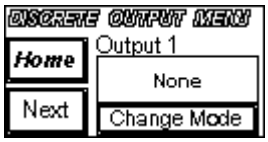
5.5 Discrete I/O

Map:



Note: This only applies to units equipped with the optional 6145-405 Discrete I/O Kit

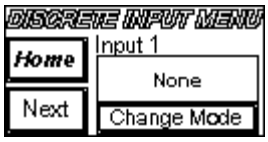
Screen	Functionality



Use this menu to map the desired output event to the output port number. The selection choices are identical for each of the outputs 1 through 6 (Output 1 shown at left). The outputs events will result in either a toggle of state or a momentary 20 mS pulse, dependent on event selected. The below table outlines the events, meaning, and duration of output event:

Output Event	Description	Output
• None	No output event selected	None
• Media Out	Label and/or Ribbon supply is exhausted	Steady
• Media Low	Label and/or Ribbon supply is low	Steady
• Online	Unit is online (ready to dispense and apply)	Steady
• No Format	Unused for Label Applicator Mode	Steady
• Error	Unit is offline, due to error. This includes: Media Out, Air Pressure Out, Drive Errors, Repeat Label or Tamp Threshold Exceeded, etc.	Steady
• Warning	Unit has experienced a condition that requires attention, but it is still able to run online.	Steady or intermittent, depending on event
• Cycle Complete	The apply cycle is finished	Momentary, 20 mS
• Cycle Start	The apply cycle is beginning	Dependent on extension stroke time
• Label Present	The label is on the tamp	Dependent on the time label is on the pad
• Label Reject	The system is requesting the label on the pad to be rejected	Dependent on system reject time
• RFID/Scan Good	The system has determined the barcode scan or RFID tag encode was successful	Momentary, 20 mS
• RFID/Scan Bad	The system has determined the barcode scan or RFID tag encode was unsuccessful	Momentary, 20 mS
• RFID Verify	The system has verified the tag was encoded properly, on product	Momentary, 20 mS
• RFID No Verify	The system could not verify the tag on product	Momentary, 20 mS
• Reject Plate Full	The system detects there are too many tags on the reject plate	Steady

Screen	Functionality

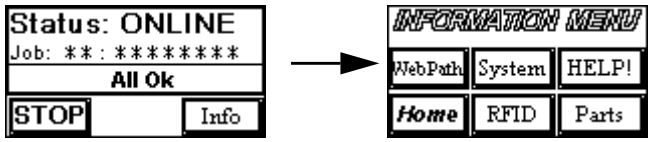


Use this menu to map the desired input event to the input port number. The selection choices are identical for each of the inputs 1 through 4 (Input 1 shown at left). Multiple inputs can be assigned to a single event, thus logically 'ANDing' the inputs, with isolation from each other. The below table outlines the events and meaning of each input event:

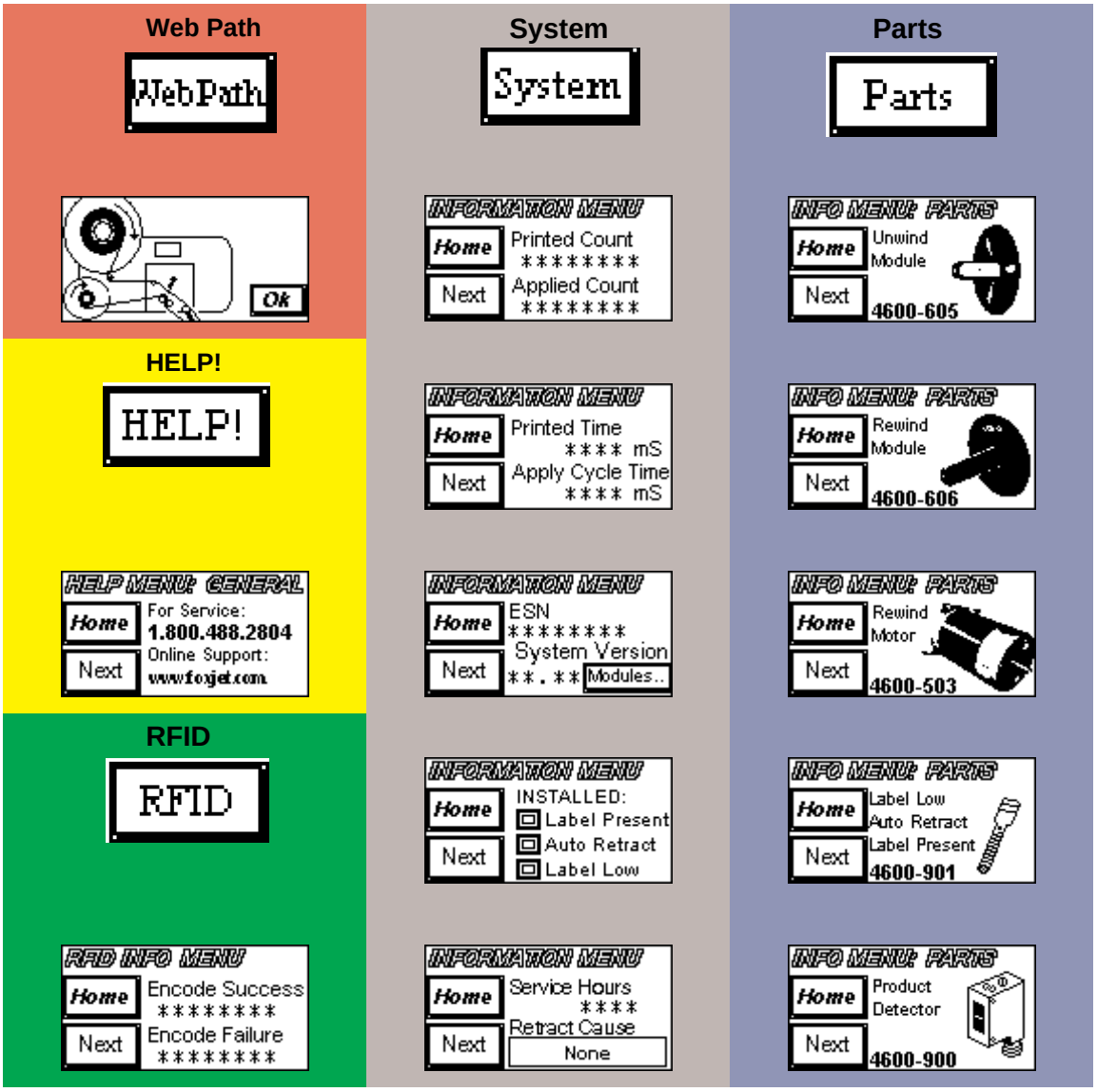
Input Event	Description
• None	No input event assigned
• Online	Enter online mode. Level activated. Cannot enter online mode if there is an error. Deactivate signal for offline mode
• Product Detector 1	Trigger product detector 1 signal. This can start the dispense cycle (if label activation is set for Prod Sens 1), and start the apply cycle. Pulse activated.
• Product Detector 2	Trigger product detector 2 signal. This can start the dispense cycle (if label activation is set for Prod Sens 2). Pulse activated.
• Error	This input allows an external device to halt operation, resulting in an error. Pulse activated.

5.6 Information Screens

Map:

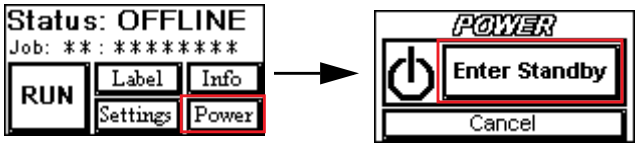


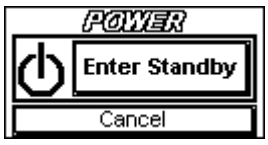
Note: Information screens can be entered while running (online) or offline. The below columns indicate the menu structure for the given information area:



5.7 Power On/Off Screens

Map:

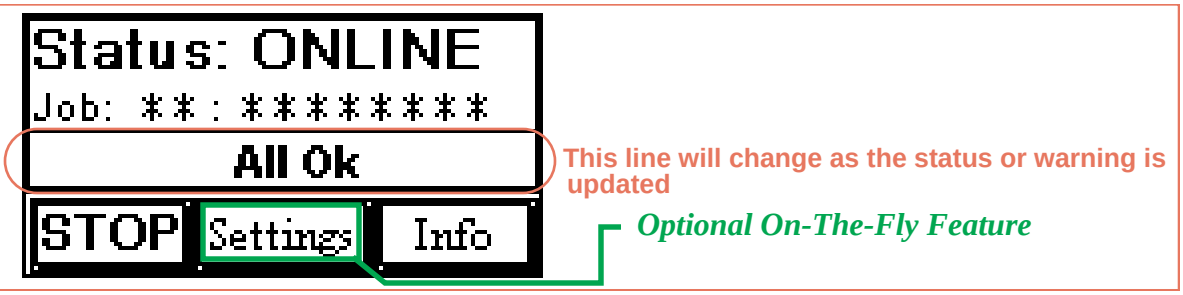


Screen	Functionality
	By pressing the Enter Standby button the unit goes offline and devices on the switched 24 VDC supply are turned off. Once off, the screen will transition to the next following screen for turning it back on. If this screen is entered, but no selection is made within 10 seconds, the screen will transition back to the offline home screen.
	In this screen, the unit can be turned on by pressing the Power On button. This resets the unit, and returns it to the offline state.

6.0 Troubleshooting

6.1 System Warnings

Note: Any of the following warnings will be displayed on the screen, and the system will continue operation.

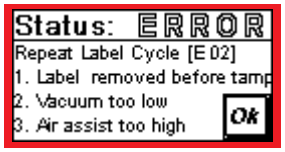
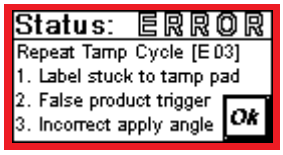
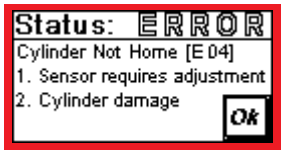
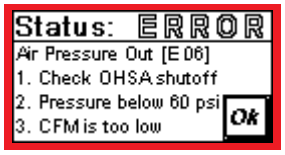
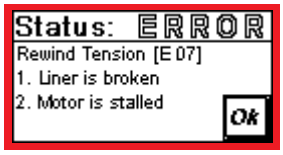
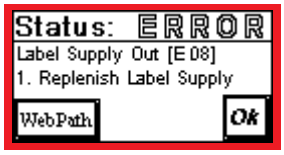
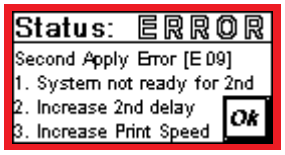
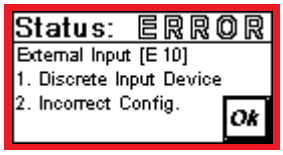
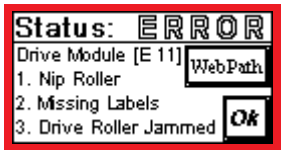


System Warnings

Warning on Display	Meaning
All Ok	System operation normal; no warnings or errors
Label Low (W02)	System reports label low through optional Label Low sensor
RFID Tag Bad (W04)	System has detected a bad RFID tag during encoding process
RFID Verify Error (W05)	System could not verify encoded tag information once applied to product
Serial Cmd Error (W06)	System received data that did not match any known commands
Timing Violation (W07)	System received a product detection trigger but could not start timing sequence, since the apply cycle was not complete. On a FASA system, this could mean that the second apply cycle has a product delay that is too short.
Label on Detector 1	System is waiting for Product Detector 1 to trigger before feeding the next label
Label on Detector 2	System is waiting for Product Detector 2 to trigger before feeding the next label
Retract Sensor (W08)	The system detected the optional auto-retract sensor was covered during the extension cycle, prior to product contact. This could indicate a label fed beyond the pad, and covered the auto-retract sensor, thus forcing the system to return from time-out only.
Reject Plate Full (W09)	The RFID Tag reject plate is full and should be cleared to avoid jamming.
Missing Label (W10)	A missing label was detected during this run cycle.

6.2 System Errors

Note: Any of the following errors will place the unit in offline, thus stopping operation

Screen	Screen	Screen
E02 - Repeat Label Cycle	E03 - Repeat Tamp Cycle	E04 - Cylinder Not Home
		
E06 - Air Pressure Out	E07 - Rewind Tension	E08 - Label Supply Out
		
E09 - Second Apply Error	E10 - External Input	E11 - Drive Module
		

6.3 Electrical Test Points

Power Supply Terminals

Measure these tests with a VOLT-METER and the cables **disconnected** from the pc board

Test	Expected Result
• +V to -V	48 VDC +/- 0.5 VDC
• N to L	100-240 VAC

Servo Controller Board (4700-350) Test Points

WARNING These measurements must be taken with the top cover removed, where High-Current DC voltages are present. Please use caution when measuring test point voltages and never attempt to disconnect cabling while the unit is powered on.

Test Point	Expected Signal	How to Fix
Servo Controller Board 4700-350		
TP 1 BLDC Hall Sensor Power	**6.2 VDC +/- 0.5 VDC**	**Check TP5 for correct voltage. If TP5 is correct, replace board due to driver IC failure.**
TP 2 Power Supply Ground	**0 VDC**	
TP 3 5 VDC Logic Supply	**5 VDC +/- 0.25 VDC**	**Check TP5 for correct voltage. If TP5 is correct, replace board due to 5 VDC regulator failure.**
TP 4, 6 Chassis Ground	**0 VDC**	
TP 5 VBUS Regulated	**35 VDC +/- 0.5 VDC**	**Check TP7 for correct voltage. If TP7 is correct, replace board for VBUS regulator failure.**
TP 7 VBUS	**48 VDC +/- 0.5 VDC**	**With power off, check ohms across D2. If 0 ohms, replace board due to transzorb high voltage damage. If D2 ok, check power supply cable and power supply voltage at terminals.**
TP 8 RSENSE MONITOR	**< 200 mVDC RMS when running servo**	**If voltages are measured above 200 mVDC RMS, replace board due to current control failure.**

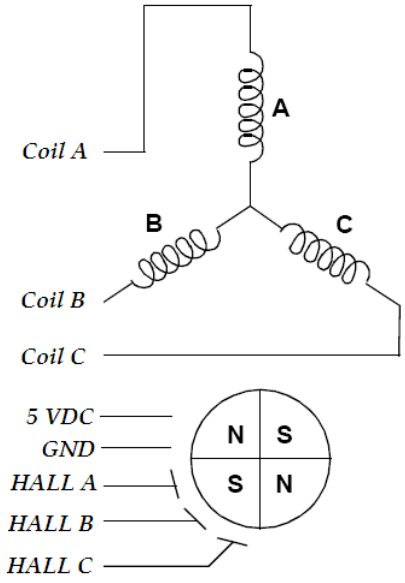
Rewind & Servo Motor

Measure these tests with an OHM-METER and the cables **disconnected** from the pc board.

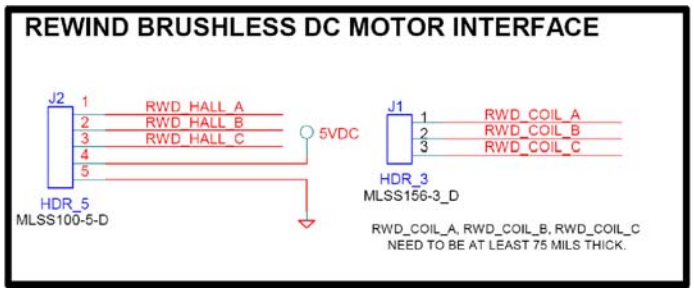
Test	Expected Result
• Coil A to Coil B	Less than 2 Ω
• Coil B to Coil C	Less than 2 Ω
• Coil C to Coil A	Less than 2 Ω

Measure these tests with a VOLT-METER and the cables **connected** from the pc board.

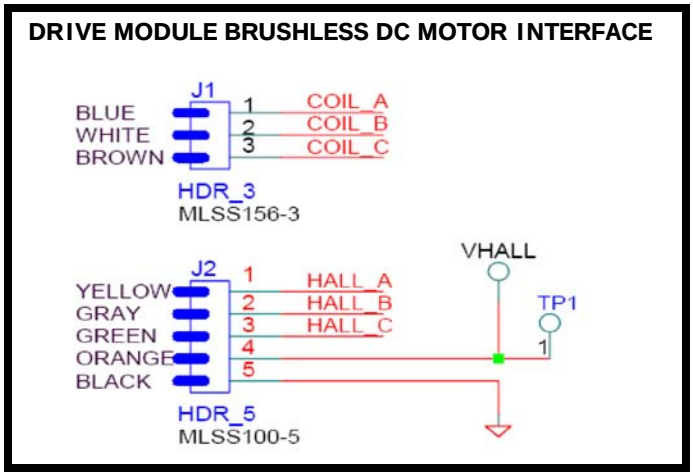
Test	Expected Result
• HALL A and Ground	0 and 5 VDC as motor is turned
• HALL B and Ground	0 and 5 VDC as motor is turned
• HALL C and Ground	0 and 5 VDC as motor is turned



4600-300 MCA III MCU Board



4700-350 Servo Controller Board



6.4 Problem - Solution Matrix

COMMON TO ALL SYSTEMS ***(Check these first before proceeding to specific system type)***

Problem	Cause	Correction
Multiple labels are fed, without a pause between labels	Label gap sensor is not calibrated	Perform the calibration procedure for setting the label gap sensor level. See page 30
	Label liner is not positioned inside label gap sensor	Set the web guides so that the liner passes through the label gap sensor
	Label is not within 3/8 of an inch of the liner edge	Change material which has the label's edge to the liner's edge less than 3/8 of an inch.
Drive roller is turning backwards, liner is pulled from rewind	Unit is incorrectly webbed	Re-web the label liner as seen on page 24
	Unit is not correctly configured for left-hand or right-hand	Confirm that the unit configuration is correct. (page 35)
Supply roll is signalling label low too soon	Label Low Sensor position incorrect	Unscrew the Label Low sensor and move it to a position farther away from the unwind supply roll core and screw into position.
	Label Low Sensor malfunction	Check sensor functionality in diagnostics and replace if necessary.
Calibration of Label Gap results in failure	Liner is too thick	This material may not be compatible with the unit's standard sensor
	Sensor is dirty	Clean sensor with isopropyl alcohol once removed from peel blade support
	Sensor connection is faulty	Check connector J6 on Motor Controller Board 4700-350
	Sensor is damaged	Replace sensor

WIPE SYSTEMS

Problem	Cause	Correction
Unit will not dispense a label when product detector is triggered	Unit is offline or has an error condition	Press run button to place unit online, if no errors exist. If errors exist, determine error type from the display and clear error condition. Attempt to go online by pressing the run button (this will also check for remaining errors).
	Cabling problem	Test product detection through diagnostics on page 40
Labels are wrinkled (or crumpled) on the product	Dispense speed too high	Reduce Dispense Speed (page 36)
	Peel blade angle is not correct	Set angle to product to approximately 45 degrees. Shorter labels require a steeper angle to the product surface. (page 26)
	Wipe-on brush position is too close to peel edge	For labels longer than 2 inches (50.8 mm), move the brush away from the peel blade edge and angle to 45°
Liner tracking into the inner or outer guide, web travel is not straight, or excessive paper dust created	Web guides not set properly	Adjust inner guides away from the baseplate, starting with the plastic guides.
	Nip roller position not optimal	For wider liner material, move nip roller away from baseplate. Nip roller should be positioned to midpoint of liner. Remove roller by removing outer snap ring and roller. Move inner snap ring to desired position and re-install roller and outer ring.
	Snorkel arms are bent	If snorkel arms are damaged due to contact with product, they should be replaced. Running with damaged arms increases drag on the motor, which will eventually damage the motor and drive roller bearings.

TAMP SYSTEMS

Problem	Cause	Correction
Label is on the tamp pad, but tamp cylinder does not fire	Product detector not triggered by product	Verify in Diagnostics (page 40) that the product detector can repeatedly detect the product. Adjust sensor as necessary
	Apply trigger occurred before label was on tamp pad	Increase distance of product detector from tamp pad to allow feeding to complete
Tamp pad is contacting product with too much force or for too long a duration	Auto-Retract delay time is too long	Decrease the Auto-Retract delay time to start the cylinder return sooner.
Label buckles on the tamp pad.	Vacuum set too high	Decrease vacuum in 5 psi increments until label lays flat on the pad.
	Tamp pad vacuum channels are incorrectly ported	Open pad and check. First column of holes should be open, matching the width of the label. Last column of holes (matching the label's length) should be open, but only those matching the width of the label. "Helper" holes should be left un-blocked, and all remaining holes should be blocked.
Multiple labels are fed to the tamp pad.	Vacuum setting too low	Increase vacuum generator pressure to 30 PSI or greater
	Clogged tamp pad orifices Vacuum Filter dirty	Clean tamp pads with isopropyl alcohol and compressed air. Clean or replace vacuum filter.
	Uncovered vacuum orifices when label is on pad	Align tamp pad position to match open vacuum orifices
	Dispense position incorrect. Next label over-extending during end of feeding. Next label dislodges label on pad.	Decrease dispense position
	Dispense position incorrect. Label not extending out of drive module far enough to seat on tamp pad.	Increase dispense position
	Label liner is incorrectly threaded	Check liner path is between the gap sensor prongs and web guides are positioned correctly.

Problem	Cause	Correction
Labels are feeding into the edge of the tamp pad.	Tamp pad position too low	Set tamp pad to a distance just below the peel blade. See Tamp Cylinder Adjustments on page 27.
	Cylinder home sensor position too low	Move the cylinder home sensor to a position where the cylinder is detected home later.
	Air cushion set too slow	The air cushion slows cylinder travel at the return position. Too much cushion cause reduce speed at the home position. Set cushion at optimal position between slow return and end of travel contact. See page 28.

6.5 Catch Problems Before They Cause Downtime

Air Volume (CFM) Problems

Air pressure is the main consideration when connecting a machine requiring compressed air, but air volume (measured in cubic feet per minute) is just as important for regular operation. An electrical analogy would be: the air pressure can be thought of as voltage and the air volume can be thought of as electrical current. If the voltage is too low, the light bulb will glow dimly. If the current is too low, the same problem will occur. The same is true for air pressure and volume.

To determine if the line pressure is adequate, view the pressure reading on the sensor located on the air manifold. Measuring the air volume is slightly more difficult, but can be measured indirectly by viewing the bargraph on the pressure regulator while exercising the vacuum and tamp together. Using the electrical analogy, if the current (air volume) is too low, it will begin to effect the voltage (air pressure), which is seen as a drop. The air pressure sensor's bargraph can be used as a fairly good indicator of a system "starving" for air. During operation, if the bargraph height fluctuates widely, around 30 psi or more than the set value, there could be an air volume problem. Identifying a low CFM problem early will avoid an unexpected shutdown of the system. Small air line diameters, kinked hoses, and undersized storage tank volume can be the culprit of air pressure problems due to low CFM.

Label Supply Problems

As fundamentally simple as a roll of labels would appear, there are a few key areas that can cause problems and these problems are sometimes falsely associated with the equipment and not the label. The typical symptoms may include labels not peeling, labels falling off of the tamp pad, and labels jamming on the drive roller. The respective possible causes are: the diecut is too deep, the label adhesive is too aggressive, or the label roll has expired due to age. There are several simple tests to determine if any of these problems exist on a questionable roll of labels.

Test for Incorrect Diecut:

Using a felt-tipped permanent marker, color in the outline of the removed label, on the top (shiny, almost waxy) side of the liner. The marker will not easily transfer onto the liner, but use a circular drawing pattern along the edge to color it in. Turn over the liner and see if the marker bled through to the other side. If so, the diecut is too deep, and the adhesive from the label is bonding to the liner where there is no release silicone. This will make the label difficult to peel and could result in random labels not peeling with each dispense cycle. Test several labels as this may be a random issue; for example, every fourth or fifth label could exhibit the problem.

Test for Adhesive Problems:

Manually remove the label from the liner, and set it adhesive-side up on a flat surface. Ideally, the room temperature should be around 70 degrees fahrenheit, at a 50% relative humidity. Wait 10 minutes, and measure the end of the label curl to the surface. If the curl vertical height is more than 10% of label length, the adhesive is shrinking upon exposure to air, and it is forcing the label to curl beyond the point where the vacuum on the tamp pad can adequately hold the label in place.

7.0 Maintenance

7.1 Maintenance Schedule

Maintenance Schedule Chart

	Daily	Monthly	Every Year
Clean Drive Module Feed Rollers		√	
Replace Drive Module Feed Rollers			√
Replace Peel Blade			√
Clean Label Present and Auto-Retract Sensors (if present)	√		
Clean Label Low Sensor (if present)		√	
Clean Product Detector Sensor(s)		√	
Inspect Drive Module Belt		√	
Replace Drive Module Belt			√
Inspect Rewind Belt		√	
Replace Rewind Belt			√
Replace Unwind Dancer Spring			√
Clean Tamp Pad (if pneumatic system)	√		
Inspect Air Inlet Filter (if pneumatic system)		√	
Replace Air Inlet Filter (if pneumatic system)			√
Inspect Vacuum Generator Filter and Muffler (if pneumatic system)		√	
Replace Vacuum Generator Filter and Muffler (if pneumatic system)			√
Replace Unwind Dancer Arm Spindle			√

7.2 Updating the System Firmware

From time to time, improvements to system performance, corrections to errors, or additional features and options may necessitate an upgrade to the system firmware. This is a simple process of using a software application named MTool2. This can be located on the Foxjet web site, under downloads. To perform a firmware upgrade, download the MTool2 and fill out the form to request an access license. Once the MTool2 application is installed, change the system baud rate to 115.2k, if the serial port is used. Start the MTool2 program and once the system's parameters are read, select the tab to download new firmware. This takes approximately one minute, and concludes by re-reading the parameters.

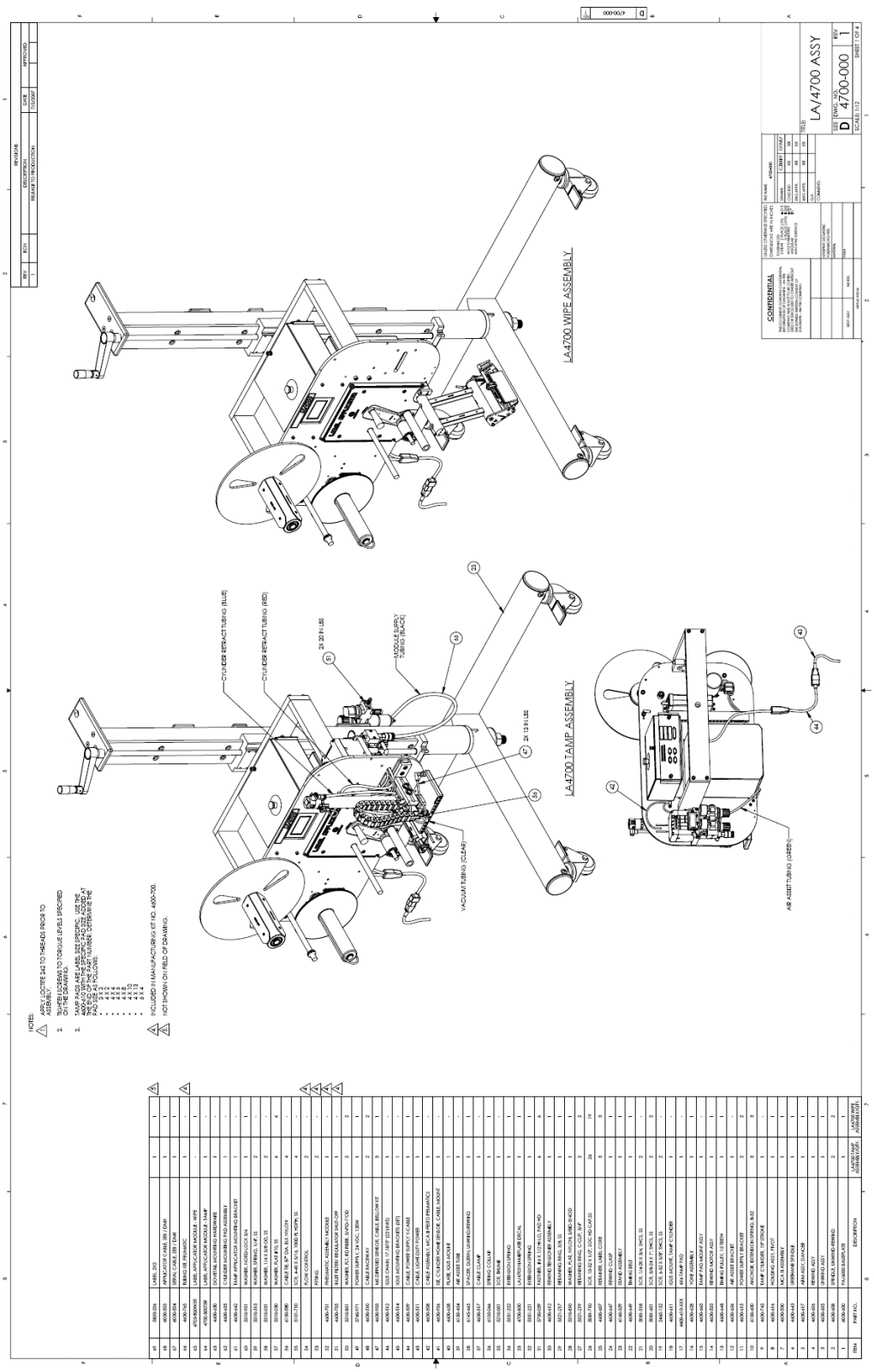
7.3 Parts List

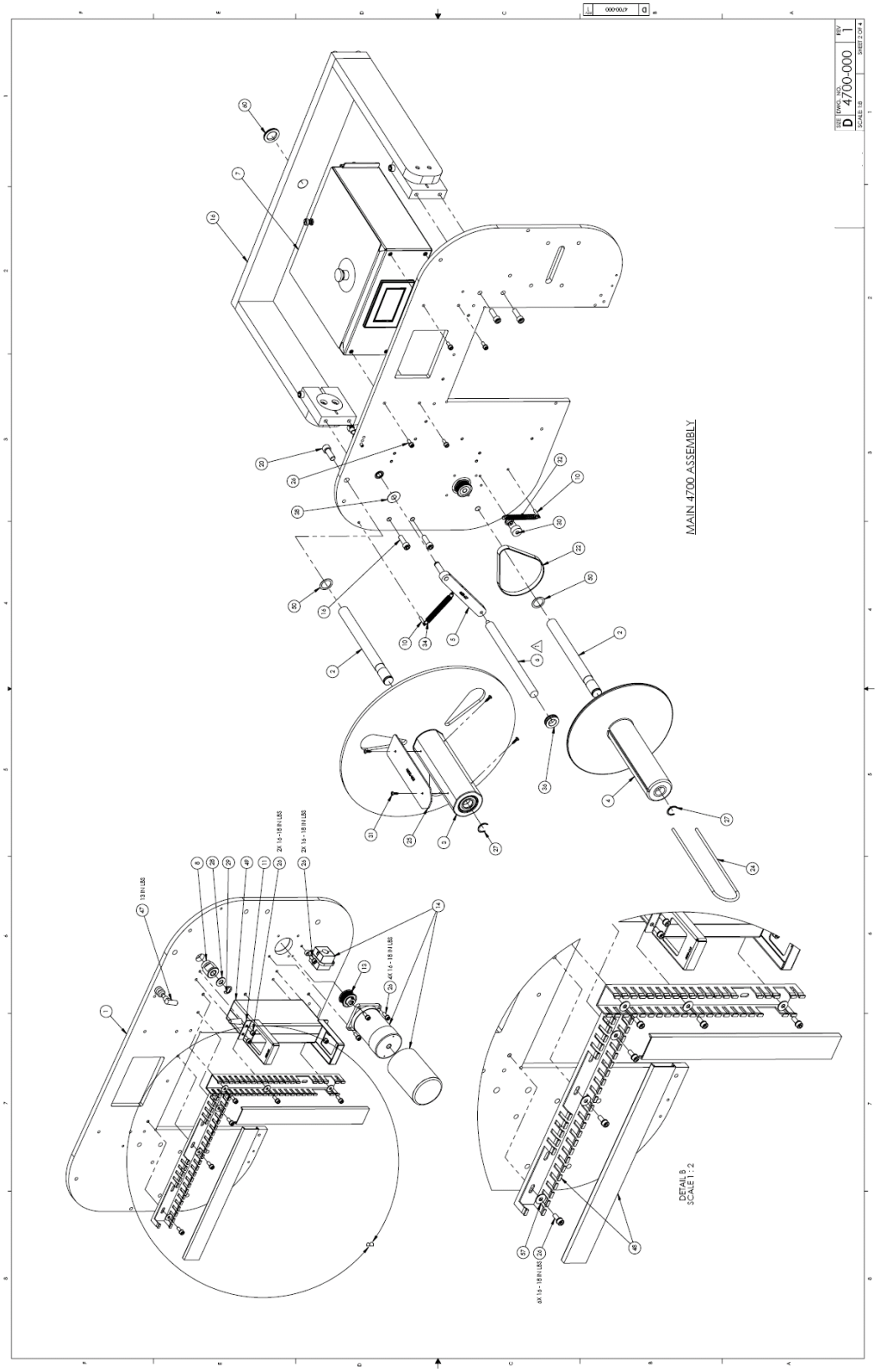
Part Number	Recommended Spare Part	Description
DOCUMENTATION		
4700-010F		LS4700 User Manual
4600-015		Service Tool Software
LS4700 DRIVE MODULE		
4700-500		Servo Assembly Narrow Web (Either Handed (R & L)
4700-500W		Servo Assembly Wide Web (Either Handed (R & L)
4700-630	YES	Narrow Web (5 in.) Drive Roller
4700-630W	YES	Wide Web (9 in.) Drive Roller
4700-520		Brushless DC Servo Motor
4700-510		Drive Module Power Supply
4700-505		Drive Module Power Capacitor
6146-617	YES	Peel Blade Narrow Web
6146-617W	YES	Peel Blade Wide Web
NIP ROLLER ASSEMBLIES		Narrow and Wide Versions Contain: • Nip Roller • Nip Roller Shaft • Nip Lever • Nip Pivot Housing
4700-952		Nip Roller Assembly Kit Narrow Web (5 in.)
4700-952W		Nip Roller Assembly Kit Narrow Web (9 in.)
SNORKEL ASSEMBLIES		Narrow and Wide, Left and Right Versions Contain: • Support Ends • Snorkel Arms • Peel Blade • Peel Blade Support • Gap Sensor • Hold-down Plate
4700-950-RH		Snorkel Assembly - Right Hand - Narrow Web (5 in.)
4700-950-LH		Snorkel Assembly - Left Hand - Narrow Web (5 in.)
4700-950W-RH		Snorkel Assembly - Right Hand - Wide Web (9 in.)
4700-950W-LH		Snorkel Assembly - Left Hand - Wide Web (9 in.)

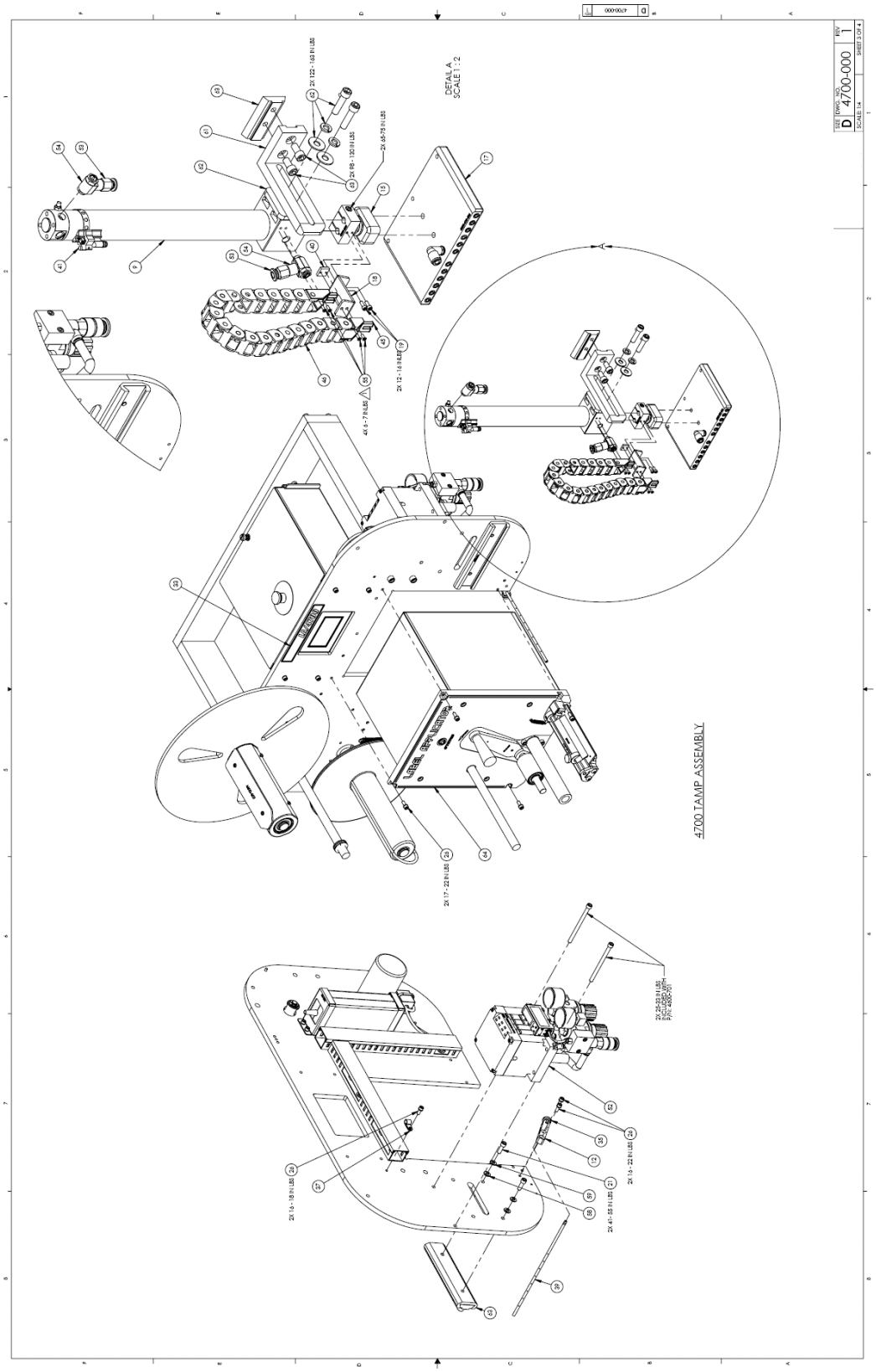
Part Number	Recommended Spare Part	Description
TAMP PEEL BLADE ASSY.		Narrow and Wide Versions Contain: • Peel Blade Support • Peel Blade • Hold-Down Plate • End Plate • Gap Sensor
4700-951		Tamp Peel Blade Assembly - Narrow Web (L&R)
4700-951W		Tamp Peel Blade Assembly - Wide Web (L&R)
LS4700 SYSTEM		
4700-950	YES	LS4700 Wear-Items Maintenance Kit
4600-522		Power Supply
4600-643	YES	Unwind Dancer Arm Spindle
4600-200	YES	MCA User Interface Touch Screen LCD
4600-951	YES	Main MCU Board Assembly
4600-500		Main Controller Assembly III (MCA III) Includes: MCU Board, Interface Board, User Interface, Enclosure
4600-503		Rewind BLDC Motor
4600-950	YES	MAINTENANCE KIT: Wear Items Set Includes: (2) Rewind Belts, (3) Spindles, (2/ea.) Springs, (3) Unwind Fins, (3) Web guides
4600-720	YES	MAINTENANCE KIT: Replacement Filter Set Includes: Vacuum, Inlet Filter/Regulator, Mufflers
4600-701		Pneumatic Air Manifold
4600-743		Tamp Cylinder, 10 inch stroke
4600-745		Tamp Cylinder, 20 inch stroke
4600-765		Pneumatic hose kit
4600-900		Product Detector
OPTIONS		
6150-828		Warning Tower Assembly
6145-501	YES	Warning Tower Bulb Kit (Incandescent)
6145-503		Warning Tower Bulb Kit (LED)
6000-828AUD		Warning Tower Audible Assembly
6145-405		Discrete I/O Board (Optional Device)

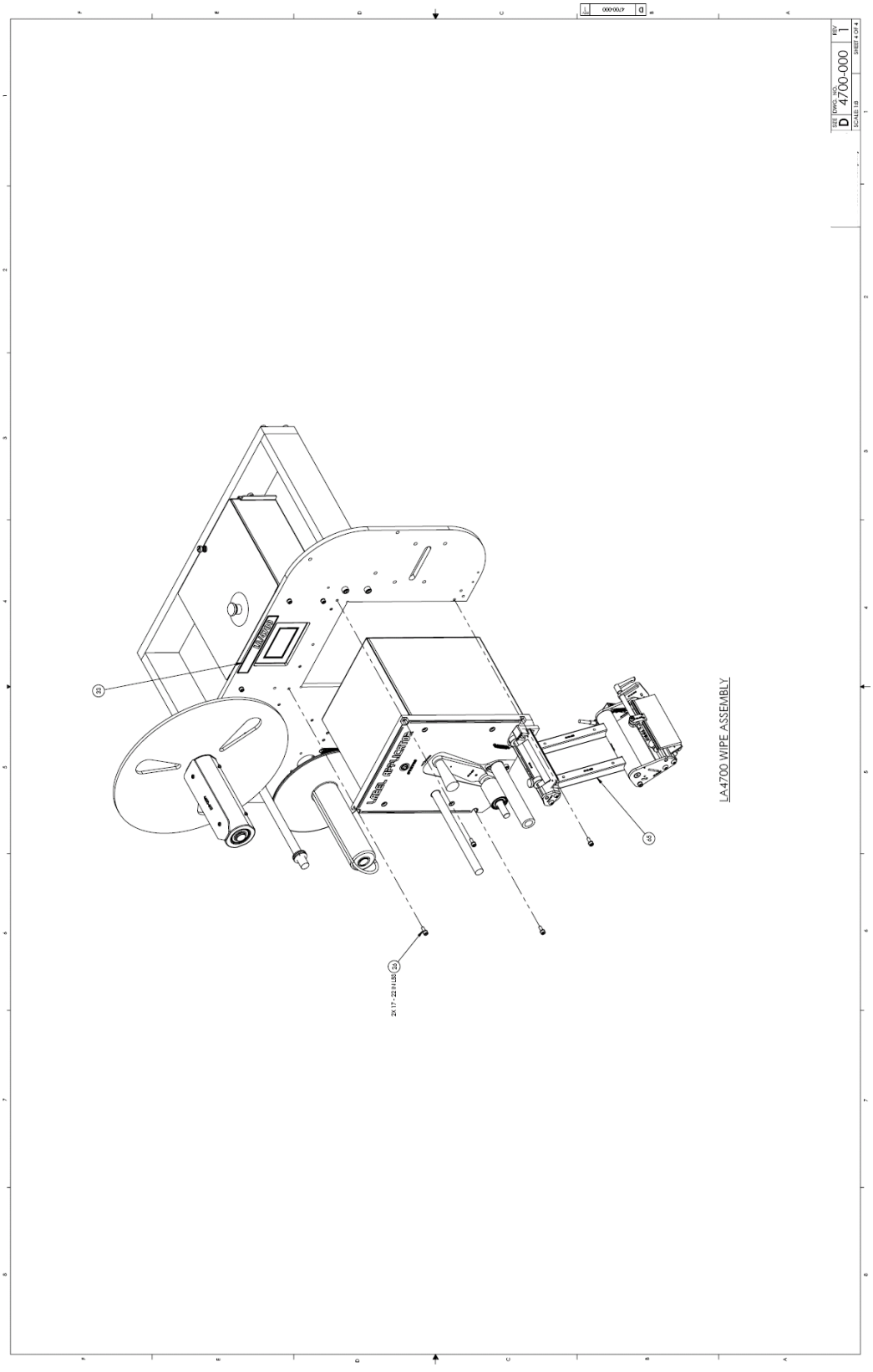
Part Number	Recommended Spare Part	Description
4600-903 (old-style flat window) 6000-903 (new-style sphere window)	YES	Auto-retract, Label low, or Label present sensor and PUR cable (1 sensor/cable/cover per kit)
6000-420		Ethernet Module (Wired and Wireless)
4700-907		Photo Speed Encoder Linespeed Sensing Kit
4700-908		Clear Label Sensing Kit

7.4 Assembly Views and Part Numbers




MAIN 4700 ASSEMBLY
DETAIL B
SCALE 1 : 2
D 4700-000


DETAIL A
SCALE 1 : 2
4700 TAMP ASSEMBLY


4700-000
SIZE
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DWG. NO.
4700-000
REV
1
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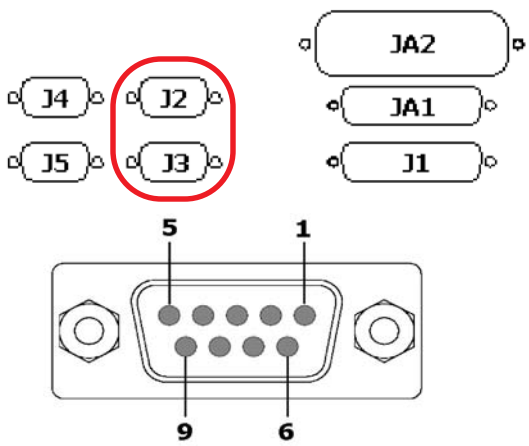
LA4700 WIPE ASSEMBLY
ZX17-22 N13S

8.0 Connection Port Information

8.1 Product Detector

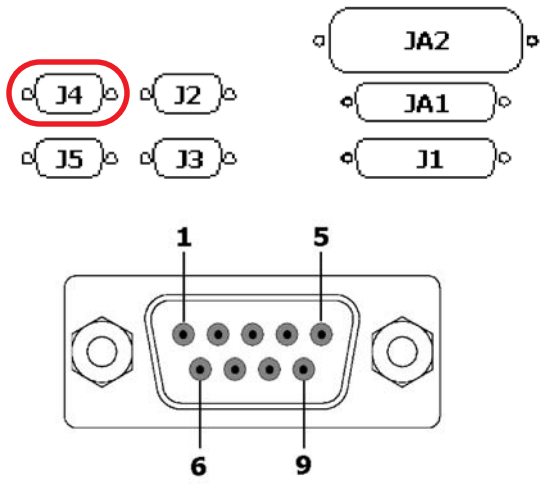
J2, J3 DB9 Female



PIN	Pin Description
Pins 1, 2	N/C
Pin 3	Ground
Pins 4, 5	N/C
Pin 6	+24 VDC Supply
Pin 7	N/C
Pin 8	Product Detector Input
Pin 9	N/C

8.2 Auxiliary Port Pin-Out

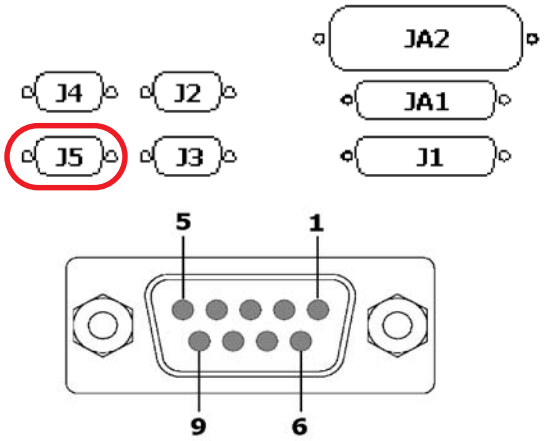
J4 DB9 Male



PIN	Pin Description
Pin 1,2	N/C
Pin 3	Ground
Pin 4	Aux Input
Pin 5	N/C
Pin 6	+24 VDC
Pin 7	N/C
Pin 8	Aux Output (Active Low)
Pin 9	N/C

8.3 Warning Tower Pin-Out

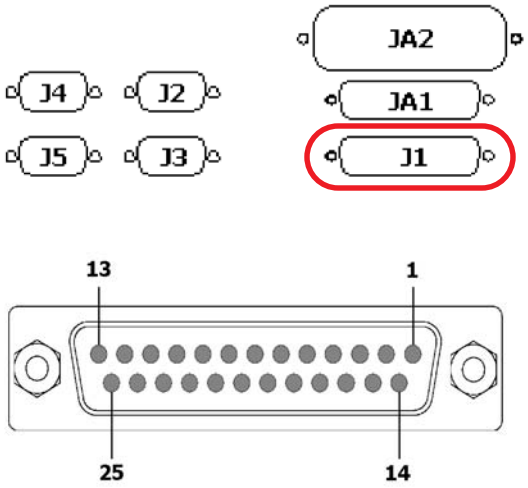
J4 DB9 Female



PIN	Pin Description
Pin 1, 2, 3	N/C
Pin 4	Red (Ground Switched)
Pin 5	Yellow (Ground Switched)
Pin 6	+ 24 VDC Supply
Pin 7	Green (Ground Switched)
Pin 8,9	N/C

8.4 Serial Communication Pin-Out

J1 DB25 Female

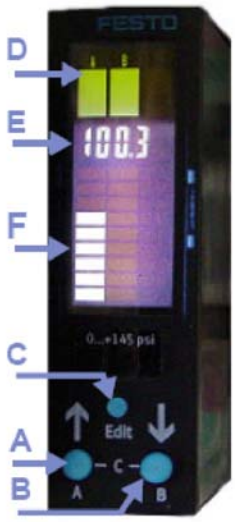


PIN	Pin Description
Pin 1	Shield Ground
Pin 2	Receive
Pin 3	Transmit
Pin 4	RTS
Pin 5	CTS
Pin 6	DSR
Pin 7	Signal Ground
Pin 8	DCD
Pins 9 - 17	N/C
Pin 18	Switched +24 VDC Supply
Pin 19	N/C
Pin 20	DTR
Pin 21 - 25	N/C

9.0 Pressure Sensor Adjustment

9.1 Pressure Sensor Setup

The Festo pressure sensor should be set at the factory, but it may be necessary to change settings on occasion.
The sensor is used in a normally open mode, where the absence of proper air pressure opens the sensor's contacts, and triggers the system. Begin by pressing (and releasing) the Edit button (C), until a small "SP" is flashing on the screen near area (F) on the sensor. This is the Set-Point for triggering an air pressure out condition. Use arrow buttons (A) for increasing and (B) for decreasing the set-point. The default setting should be 60 PSI for operation with the LS4700 unit. Press the Edit button until the sensor returns to the main screen.



Other settings found in this sequence are: trigger edge, normally open or closed operation, setpoint, and hysteresis. These should be left as rising edge, normally open, 60 PSI, and 0.7 PSI, respectively.

When pressure is above the set-point, the light block with the "A" above it will be illuminated (D). When pressure is below the set-point, this light will be off. During normal operation, the display will show pressure digitally in area (E), and a bargraph will show the same pressure in an analog fashion (F). This display can be used for diagnostics, as well as capturing the pressure's highs and lows during operation.

9.2 Checking Minimum and Maximum Pressures Detected

In troubleshooting an application, it may be desirable to determine if the supplied compressed air has caused an intermittent error condition. Once the system detects that the pressure is too low to reliably run, it will trigger an error and go offline. If the pressure is restored, it may appear that the unit falsely triggered an error. The sensor maintains a record of the minimum and maximum pressures experienced, but only as long as the power remains on. The first step is to clear the min and max values captured, to avoid detecting a minimum pressure due to the air pressure being shutoff. With OSHA shutoff in the open position, cycle power to the system by using the screens on page 44. The values are now cleared and ready to capture the new highs and lows. To view the values captured, press the Up button (A) on the sensor until the "min" flashes on the display. This shows the minimum pressure captured on the digital display area (E). Press the Edit button (C) momentarily; this will clear the value. Press the Up button again until the "max" flashes on the display. This shows the maximum pressure captured. Press the Edit button (C) momentarily; this will clear the value.

9.3 Defaulting the Sensor to Factory Settings

During the process of setting new values or making changes, mistakes can be made resulting in improper operation of the sensor. To reset the sensor back to default settings, power off the system by using the procedure on page 44. Turn the system back on while simultaneously holding down the Up, Down, and Edit buttons (A, B, and C). This will reset the settings, but all of the values specified in Pressure Sensor Setup on page 65 must be entered.

10.0 Declaration of Conformity

DECLARATION OF CONFORMITY

Foxjet, an ITW Company, hereby declares that the equipment specified below has been tested and found compliant to the following directives and standards-

Directives:

- EMC 89/336/ECC
- Low Voltage 73/23/EEC

Standards:

- Conducted Emissions (EN55 011)
- Harmonics (EN 61000-3-2)
- Flicker (EN 61000-3-3)
- Radiated Emissions (EN55 011)
- Electrostatic Discharge (ESD) (EN 61000-4-2)
- Radiated Immunity (EN 61000-4-3)
- Fast Transient Burst (EN 61000-4-4)
- Surges (EN 61000-4-5)
- Conducted Immunity (EN 61000-4-6)
- Power Frequency Magnetic Field (EN 61000-4-8)
- Voltage Dips and Interrupts (EN 61000-4-11)
- Information Technology (EN60950:2000)

Equipment Type: Label Applicator

Model Number: LS4700

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Quality/Safety Manager

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CE

11.0 System Configuration Notes

Setting	Value	
Model		
Application Method	❑Wipe ❑Tamp ❑FASA ❑WASA ❑Other	
OTS (One Time Settings)		
Label Present Installed	❑ Yes	❑ No
Auto Retract Installed	❑ Yes	❑ No
Label Low Installed	❑ Yes	❑ No
Unit Configuration	❑ Left-Hand	❑ Right-Hand
Missing Label	❑ Warning	❑ Error
Label Shape	❑ Normal	❑ Irregular
Product Detector	❑ Trailing	❑ Leading
SYSTEM		
Apply Mode	❑ 1 Tamp ❑ 1 Tamp/Blow ❑ 1 Blow ❑ 1 Wipe	❑ 2 Tamps ❑ 2 Tamp/Blows ❑ 2 Blows ❑ 2 Wipes
Passcode	__ __ __ __	
Photo Speed Encoder	❑ Enabled	❑ Disabled
JOB SETTINGS		
Dispense Position	__ . __	
Feed Speed	_____	
Linespeed Encoder Offset	_____	
Product Delay	_____	
2nd Product Delay	_____	
Tamp Duration	_____	
2nd Tamp Duration	_____	
Home Delay	_____	
Auto Retract Delay	_____	
Repeat Label / Repeat Tamp	____ / ____	
Label Activation	❑ Tamp Return ❑ Prod Sens 1 ❑ Prod Sens 2	
Job Name	__ __ __ __ __ __ __ __	

Setting	Value
DISCRETE I/O	
Input 1	❑ None ❑ Online ❑ Prod Det 1 ❑ Prod Det 2 ❑ Error
Input 2	❑ None ❑ Online ❑ Prod Det 1 ❑ Prod Det 2 ❑ Error
Input 3	❑ None ❑ Online ❑ Prod Det 1 ❑ Prod Det 2 ❑ Error
Input 4	❑ None ❑ Online ❑ Prod Det 1 ❑ Prod Det 2 ❑ Error
Output 1	_____
Output 2	_____
Output 3	_____
Output 4	_____
Output 5	_____
Output 6	_____
WIRED / WIRELESS ETHERNET	
Mode	❑ Wireless Infra ❑ Wireless AdHoc ❑ Wired 100BaseT ❑ Serial Com
IP Address	___ . ___ . ___ . ___
Net Mask	___ . ___ . ___ . ___
Gateway	___ . ___ . ___ . ___
SSID	_____
RFID	
Power Profile	❑ Low ❑ Medium-Low ❑ Medium ❑ Medium-High ❑ High
Reject	_____
Retries	___