



# LM3612CTT

## COLOR PRINT & APPLY

### OPERATIONS MANUAL



Manufactured in USA by:

**LabelMill, Inc.**

2416 Jackson St.

Savanna, IL 61074

(800) 273-4707

[info@labelmill.com](mailto:info@labelmill.com)

[www.labelmill.com](http://www.labelmill.com)

Click here for more information!



**INTEGRATED  
PRODUCTIVITY  
SYSTEMS**

(844) 477-4911 | [www.ipsiscan.com](http://www.ipsiscan.com)

# TABLE OF CONTENTS

| <b>SECTION</b>                       | <b>PAGE</b> |
|--------------------------------------|-------------|
| <b>1. APPLICATOR OVERVIEW</b>        |             |
| Introduction                         | 4           |
| General System Specifications        | 5           |
| Inventory List                       | 6           |
| Print & Apply Component Description  | 7           |
| User Responsibility                  | 10          |
| Safety                               | 10          |
| <b>2. SETUP AND OPERATION</b>        |             |
| Web Routing                          | 12          |
| Take Up Unit Assembly                | 14          |
| Clutch Adjustment                    | 15          |
| Operator Interface (HLI-200)         | 17          |
| Accessory Connections Panel          | 18          |
| Remote Start Trigger Options         | 19          |
| Air Assist & Adjustment              | 20          |
| Tamp Unit Operation                  | 21          |
| Valve Pack / Regulator Adjustments   | 22          |
| <b>3. CONTROL BOX</b>                |             |
| Programming                          | 24          |
| System Editor                        | 25          |
| System Programming                   | 26          |
| Quick Start & General Setup          | 28          |
| Standard Tamp System Operation       | 28          |
| Logic Board / Description of I/O     | 29          |
| <b>4. CLEANING &amp; MAINTENANCE</b> |             |
| Troubleshooting Guide                | 34          |
| Fault Messages                       | 35          |
| Replacing the Main Power Fuse        | 36          |

## SECTION 1

# APPLICATOR OVERVIEW

|                                     |    |
|-------------------------------------|----|
| Introduction                        | 4  |
| System Specifications               | 5  |
| Inventory List                      | 6  |
| Print & Apply Component Description | 7  |
| User Responsibility                 | 10 |
| Safety                              | 10 |

# LABELMILL LM3612CTT

## COLOR INK-JET PRINTER/APPLICATOR SYSTEM

### INTRODUCTION

The **LabelMill LM3612CTT** is a semi-automatic, on-demand full color ink-jet applicator system when paired with a Epson CW-C6000P series printer. The unit will print and apply high quality labels to your product at print speeds up to 5"/sec. and apply at speeds up to 20 labels/min.

#### OPERATION

The standard configuration is External Computer Mode. This configuration allows label formats to be sent to the standard Interface Port on the ColorWorks Printer. Once the format is downloaded to the Printer Job Buffer, the LM3612CTT system can print and apply as normal. Standard industry label software packages or Epson printer drivers can be used in conjunction with a PC to design and load label designs.

## SYSTEM SPECIFICATIONS

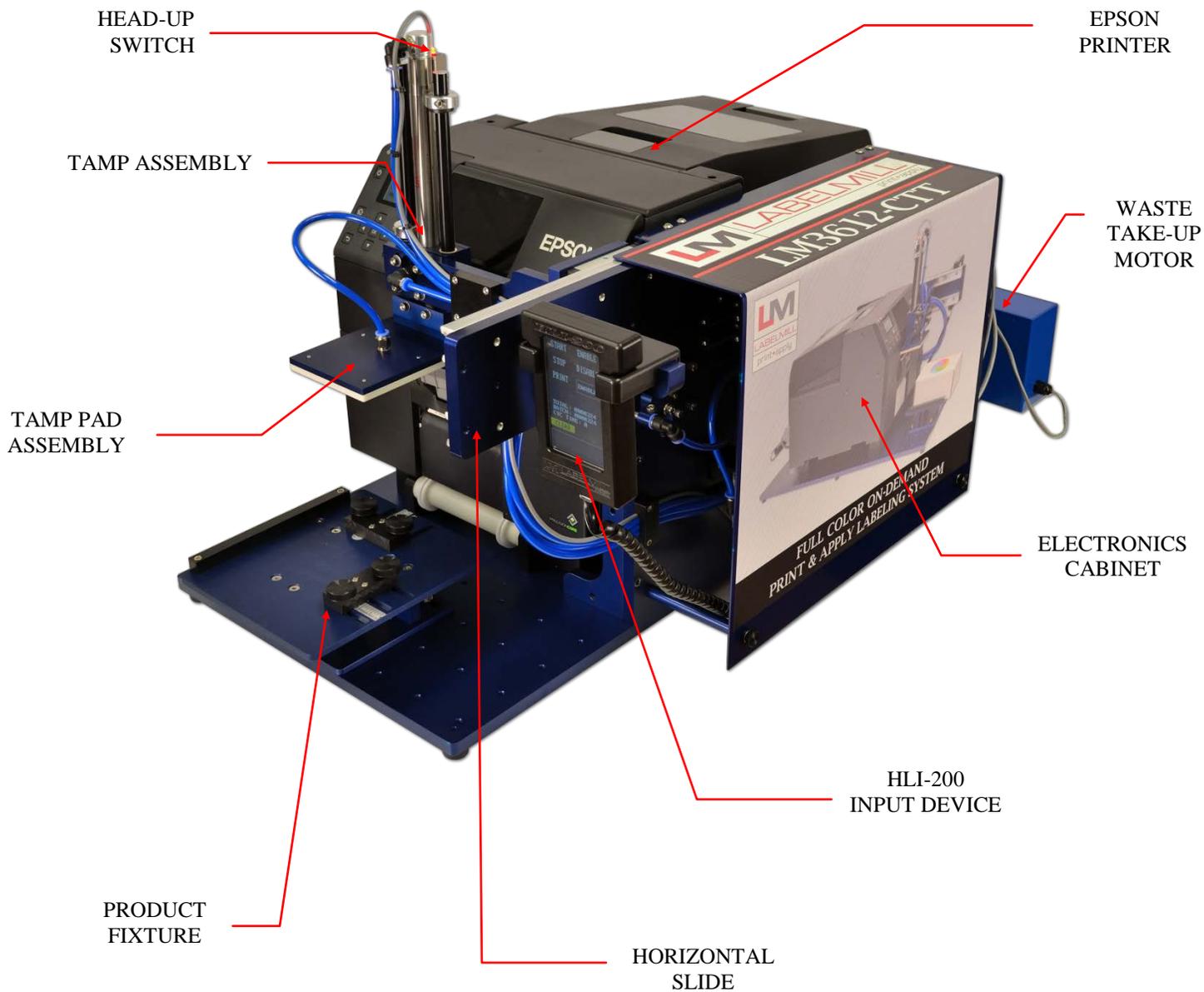
|                                 |  |
|---------------------------------|--|
| <b>PRINT SPEED</b>              | Up to 5"/second and approx. 20 labels/minute maximum.<br>(Varies depending on label and product size.)   |
| <b>PRINT RESOLUTION</b>         | Up to 1200x1200 dpi resolution   |
| <b>LABEL ROLL CAPACITY</b>      | 8" Max. outside diameter wound on a 3" diameter core. Die cut waste removed with a minimum of 1/8" separation between labels in running direction. |
| <b>LABEL SIZE</b>               | Minimum: 1.0" wide x 1.0" long<br>Maximum: 8.5" wide x 24" long  |
| <b>MAXIMUM PRINT AREA</b>       | 8.5" wide x 24" long<br>(Varies dependent upon system configuration)   |
| <b>LABEL PLACEMENT ACCURACY</b> | Up to + or - 1/32" (1mm) when labels are produced to specifications and product handling is controlled.  |
| <b>INTERFACE</b>                | Ethernet 1000BASE-T/100BASE-TX/<br>10BASE-T USB 2.0  |
| <b>ELECTRICAL</b>               | 110VAC/60 Hz-250 W idle, 600 W running.  |
| <b>AIR REQUIREMENT</b>          | 80 psi/3 cfm   |
| <b>SIZE</b>                     | 20" W x 36" D x 24" T  |
| <b>ENVIRONMENT</b>              | Operating Temp. 50-95 F (10-35 C)<br>15-85% RH. non-condensing   |
| <b>WEIGHT</b>                   | 100 lbs, with 4" Printer   |

\*Options available

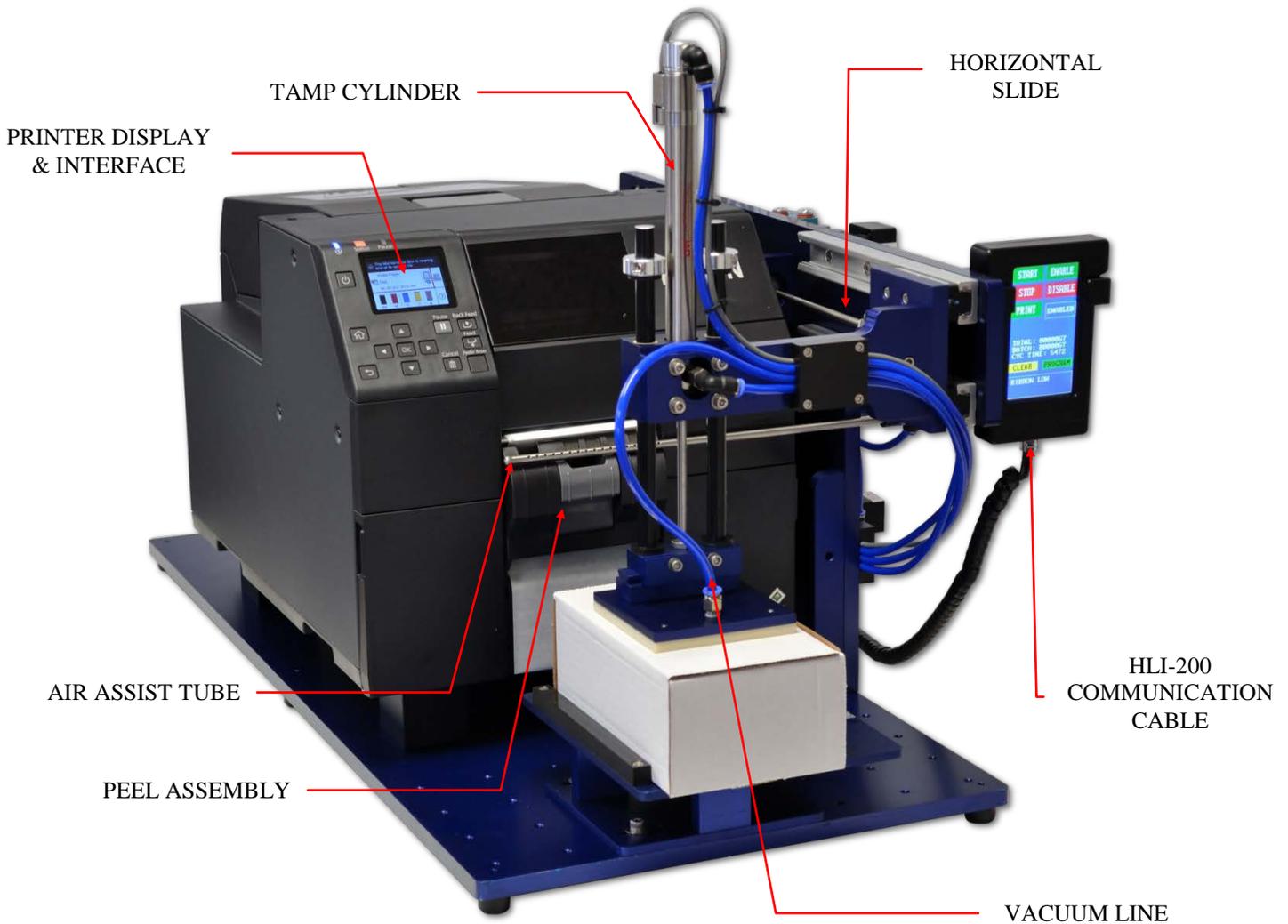
**INVENTORY LIST**

| <b>QTY.</b> | <b>Description</b>  |
|-------------|---|
| 1           | Print & Apply System Assembly   |
| 1           | Quick Disconnect System Control   |
| 1           | HLI-200 Touch Screen System Interface   |
| 1           | Pneumatic Horizontal Slide  |
| 1           | Pneumatic Tamp Module   |
| 1           | Quick Change Tamp Pad Assembly  |
| 1           | Waste Liner Take-Up   |
| 1           | Model 3612CTT Operations Manual (USB)   |
| 1           | Product Switch (specified) <ul style="list-style-type: none"><li>a. Manual Limit Switch (optional)</li><li>b. Photo Switch (optional)</li></ul> |
| 1           | Adjustable Product Fixture (Optional)   |

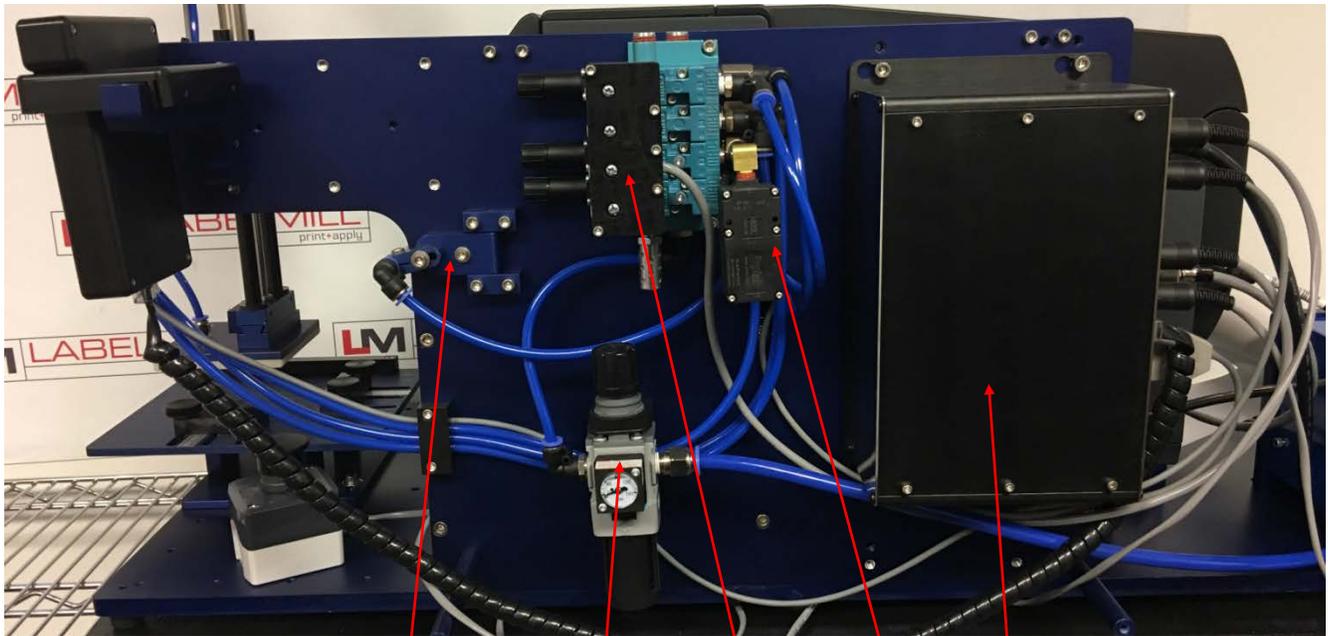
## COMPONENT DESCRIPTION / LOCATION



## COMPONENT DESCRIPTION / LOCATION



## COMPONENT DESCRIPTION / LOCATION (INSIDE CONTROL CABINET)



AIR ASSIST  
MOUNT

FILTER/REGULATOR

CONTROL BOX

VACUUM PUMP

VALVE PACK

## USER RESPONSIBILITY

This equipment will perform in conformity with the description thereof contained in this manual and accompanying labels and / or inserts when installed, operated, maintained, and repaired in accordance with the instructions provided. This equipment must be checked periodically. Defective equipment should not be used. Parts that are broken, missing, plainly worn, distorted, or contaminated should be replaced immediately. Should such repair or replacement become necessary, we recommend that a request for service advice be made.

This equipment or any of its parts should not be altered without the prior written approval of LabelMill. The user of this equipment shall have the sole responsibility for any malfunctions which results from improper use, faulty maintenance, damage, improper repair or alteration by anyone other than LabelMill. or a service facility designated by LabelMill.

## SAFETY

Only qualified personnel should use this equipment.

Before installing, inspecting or servicing equipment, turn OFF all power and air controls at the source and lock out in accordance with OSHA Standards.

Be sure all external electrically conductive parts are connected to a good electrical ground.

Never handle live electrical equipment with bare hands while standing in water, or while hands and feet are wet.

Dangerous electrical shock can result.

Whenever the equipment is unattended, turn off all control and power supply switches.

Keep equipment clean and in good operating condition. Promptly repair or replace all worn or damaged hoses, cables or parts.

Do not make any repairs to equipment unless you are fully qualified.

This equipment contains fast moving parts, which may move without warning. Keep hands, loose hair and clothes clear of machines at all times.

Never place hands or any other body parts under the label platen at any time.

This equipment uses compressed air. Proper care and maintenance must be taken when handling compressed air and its components.

These precautions are further detailed and explained where specifically required in this manual.



## **WARNING**

### **READ AND UNDERSTAND THESE INSTRUCTIONS**

Protect yourself and others. Be sure this information is read and understood by all operators.

#### **ELECTRICAL SHOCK CAN KILL!**

Do not touch live electrical parts with bare skin or work with gloves or wet clothing.

#### **NOISE CAN DAMAGE HEARING!**

Wear proper ear protection.

---

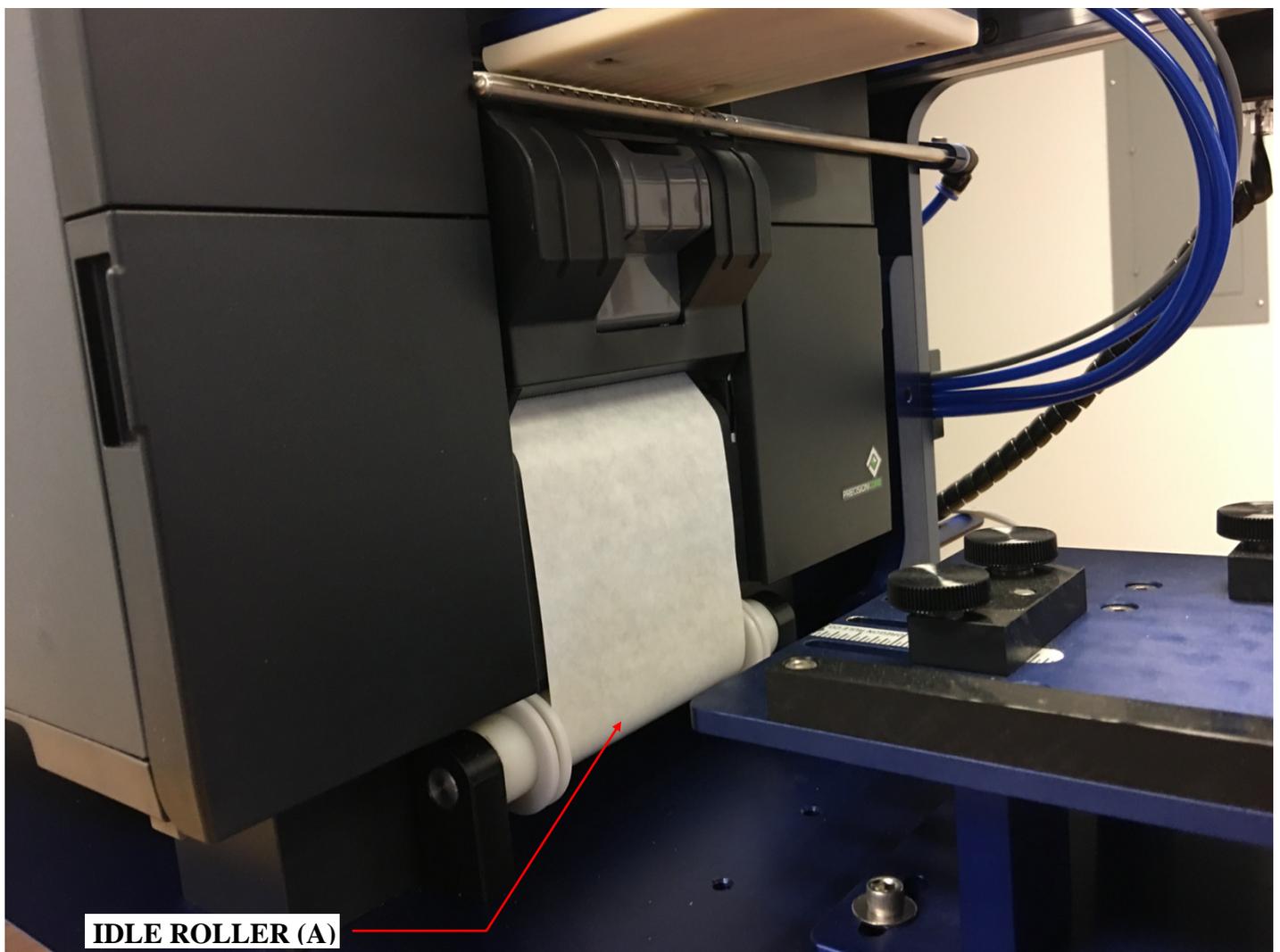
## SECTION 2

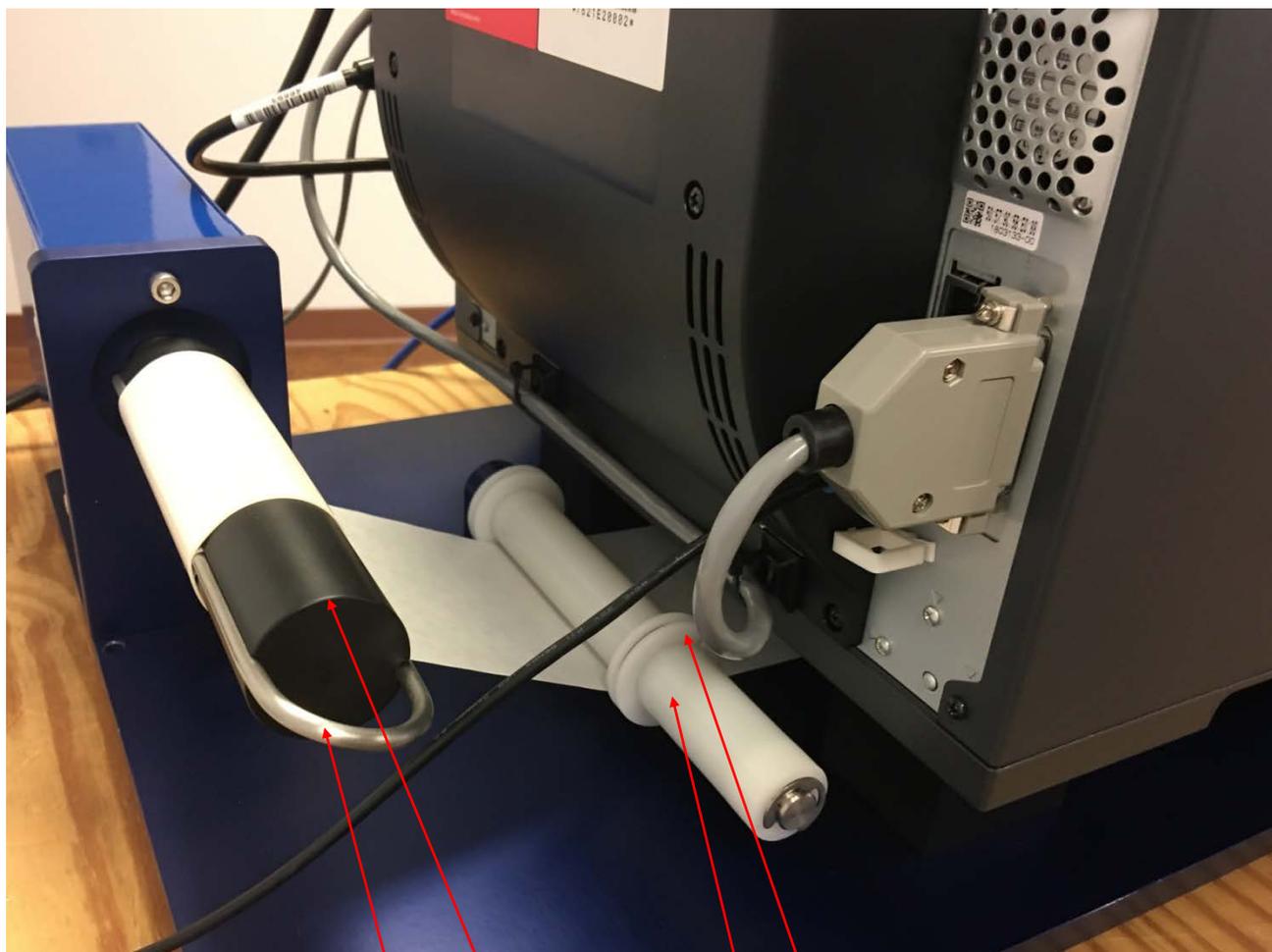
# SETUP AND OPERATION

|                                    |    |
|------------------------------------|----|
| Web Routing                        | 12 |
| Take Up Unit Assembly              | 14 |
| Clutch Adjustment                  | 15 |
| Operator Interface (HLI-200)       | 17 |
| Accessory Connections Panel        | 18 |
| Remote Start Trigger Options       | 19 |
| Air Assist & Adjustment            | 20 |
| Tamp Unit Operation                | 21 |
| Valve Pack / Regulator Adjustments | 22 |

## WEB ROUTING

| Step | Operation  |
|------|--|
| 1    | Refer to Epson ColorWorks CW6000P manual for loading media into printer.   |
| 2    | Feed label liner through Epson peeler assembly and down through idle roller A.   |
| 3    | Use the FEED key on the Epson interface to peel labels and provide more waste liner.   |
| 4    | Feed label liner under printer, and under second idle roller B assembly  |
| 5    | Load the waste backing paper onto the web take up spool using the spool clip. The take up spool rotates in a clockwise direction.        |
| 6    | Adjust the (2) plastic web guide clips at both idle rollers so the web is guided straight and even. Make sure clips do not bind the web. |





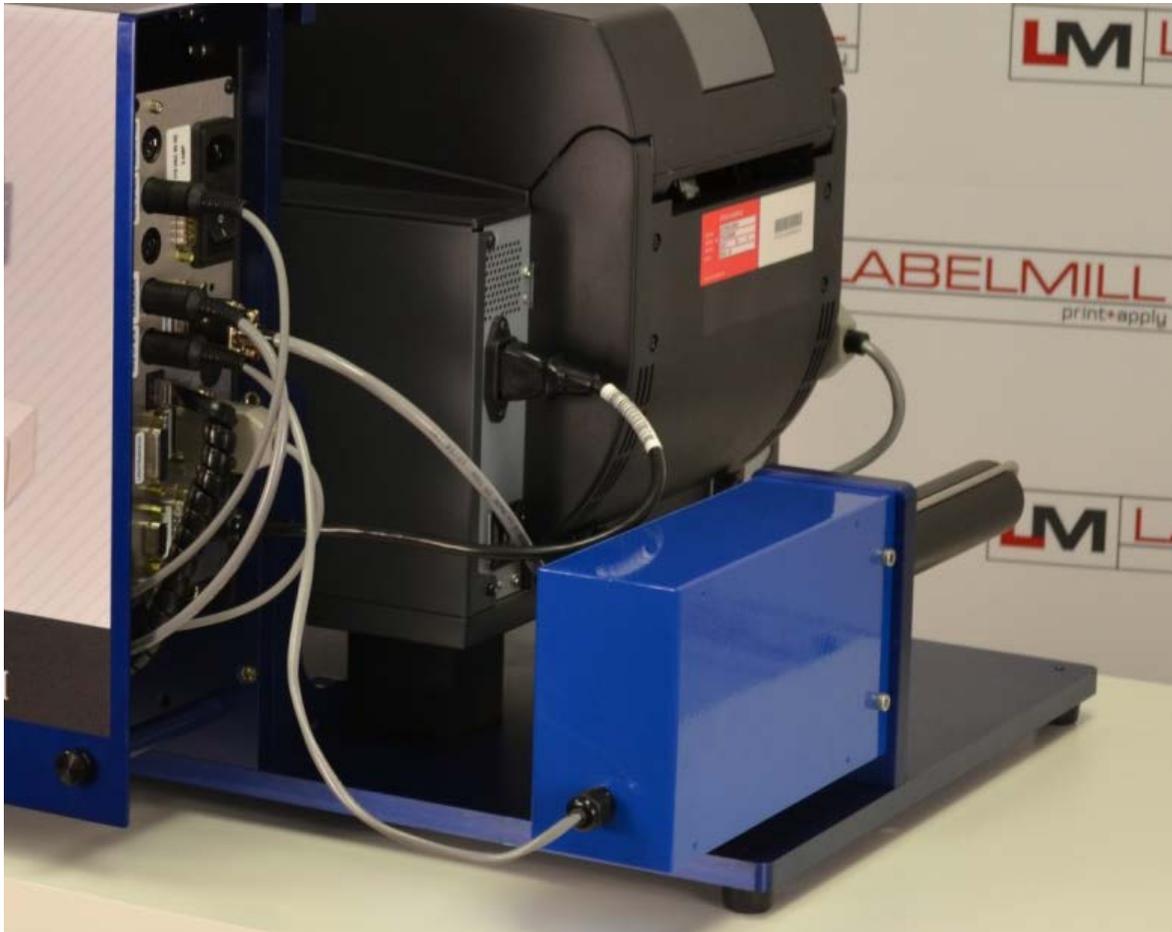
**ADJUSTABLE  
GUIDE**

**IDLE ROLLER (B)**

**WASTE TAKE-UP  
ROLLER**

**SPOOL CLIP**

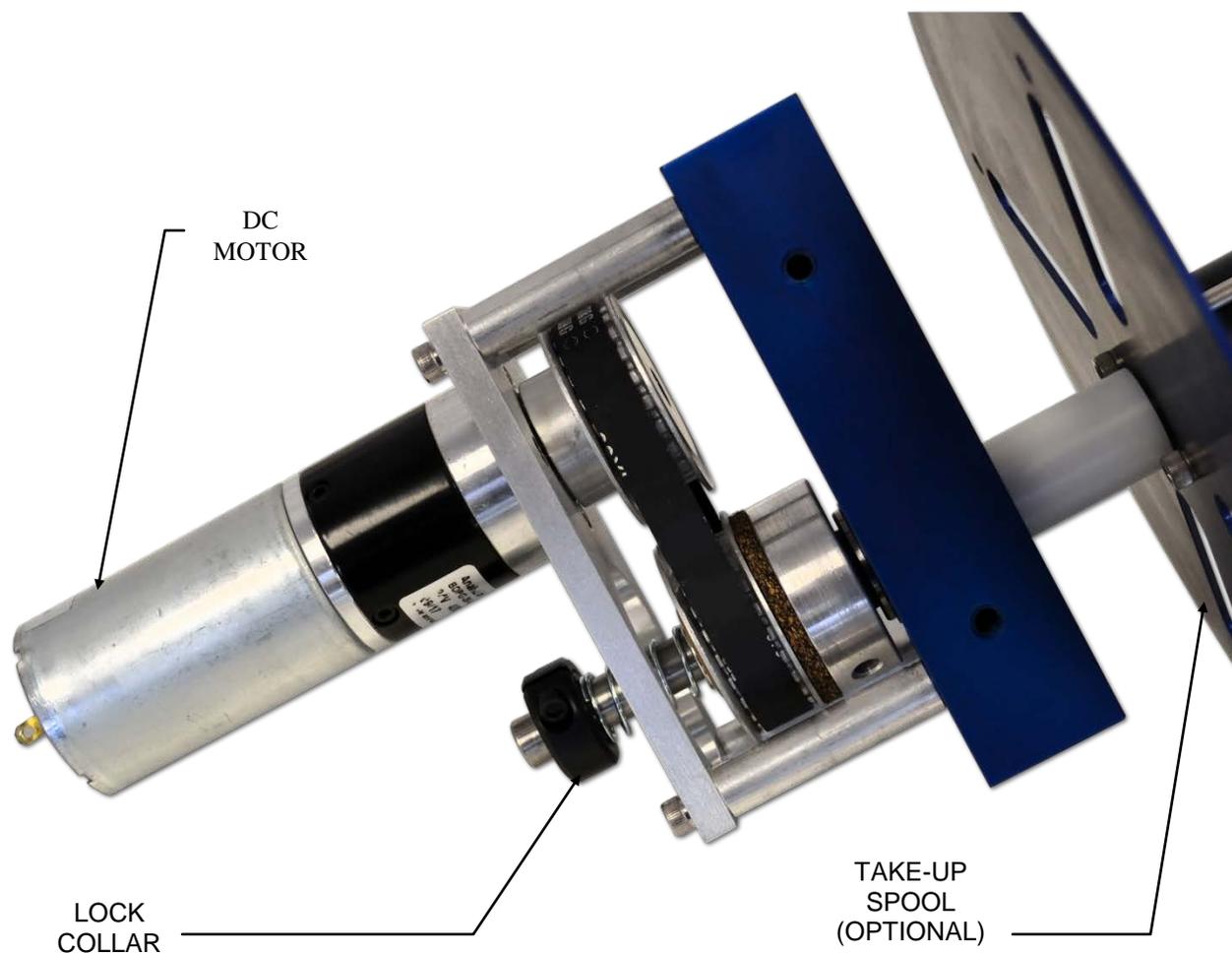
## WASTE TAKE-UP ASSEMBLY



The Take-Up Assembly is located on the back of the main plate. To adjust the clutch, the cover must be removed to gain access. The cover is mounted with (4) cap head bolts. To remove the cover, first unplug the cable from the main control, and loosen the strain relief. Then, remove the cap head bolts and carefully slide the cover off, feeding the cable through the cover.

 **WARNING!!!** Be sure power is off before performing any service.

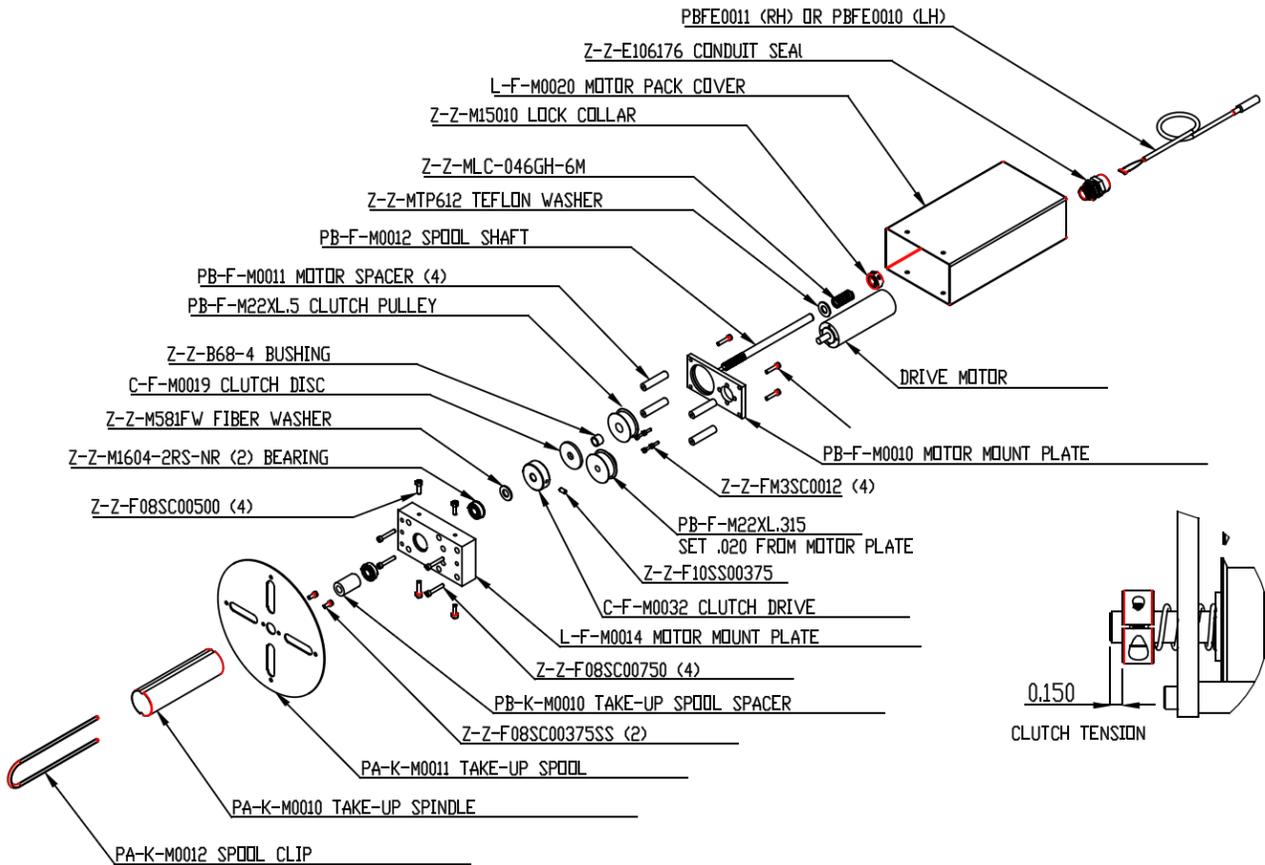
## CLUTCH ADJUSTMENT



To reduce waste web tension, move the lock collar 1/32" away from the take-up spool. To increase web tension, move the lock collar 1/32" toward the take-up spool.

**CAUTION!** Too much web tension may cause web breakage, label drifting, or premature failure of the take-up spool assembly.

# TAKE-UP ASSEMBLY EXPLODED VIEW



## HAND HELD LABELER INTERFACE HLI-200

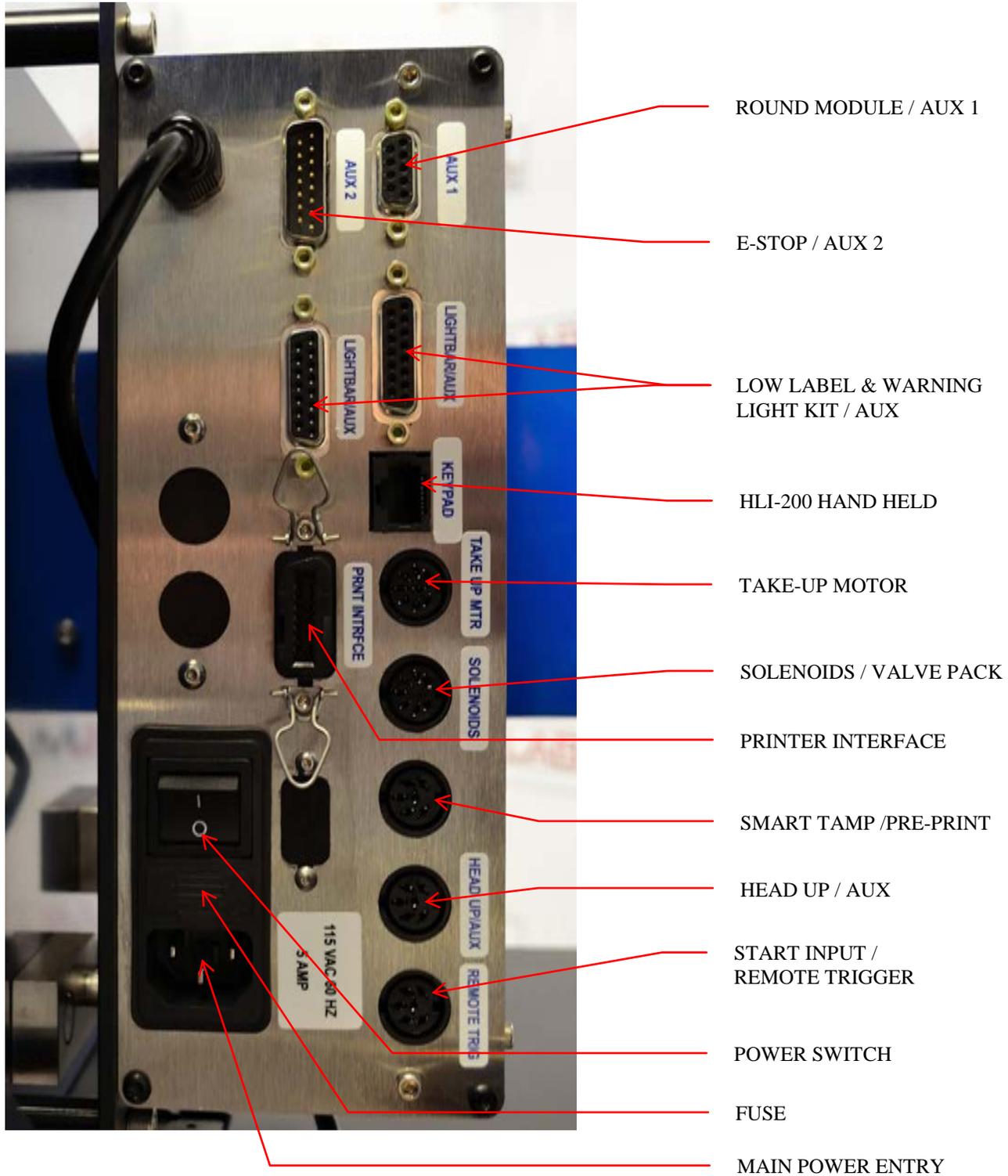


TOUCH-SCREEN  
DISPLAY

INTERFACE  
PORT

# ACCESSORY CONNECTIONS

LOCATED ON BACK OF LABELER CONTROL ENCLOSURE



## Remote Start Module

The Remote Start Modules shown below can be connected to the LM3612CTT Remote Trigger port.



**PB-32**  
**Push Button**  
**(Remote start trigger)**



**FS-42**  
**Foot Switch**  
**(Remote start trigger)**

### ACTIONS TO INSTALL REMOTE START MODULE

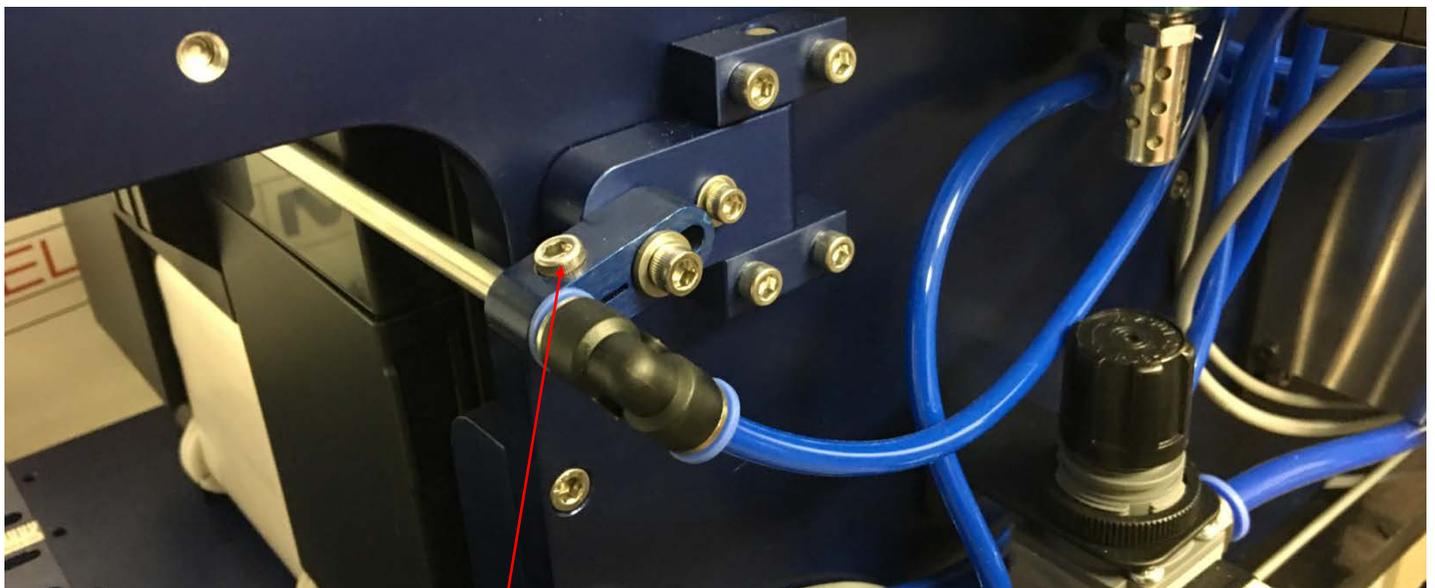
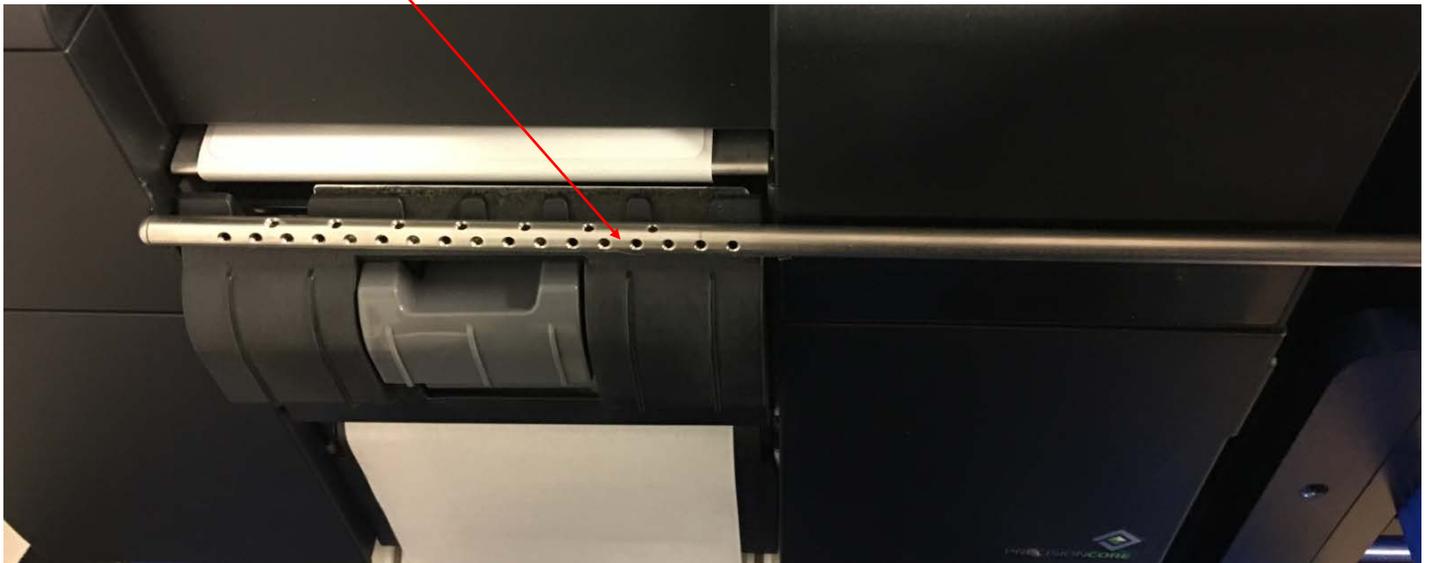
1. Set the main power switch to the OFF position.
2. Disconnect the AC power cable from the rear of the accessory connector panel.
3. Install the cable from the remote start module into the connector on the accessory connector panel tagged "Remote Trigger".
4. Connect the power cable and turn the unit on.

\*\*\*Refer to Section 3 for I/O details\*\*\*

## AIR ASSIST TUBE

The Air Assist Tube must be adjusted to assist in feeding the printed label onto the Label Platen (Tamp Pad Assembly). The position of the air assist can be changed by loosening the clamp assembly, and rotating the tube. The tube must be locked into place with the clamp bolt when the adjustment is complete.

AIR ASSIST  
TUBE



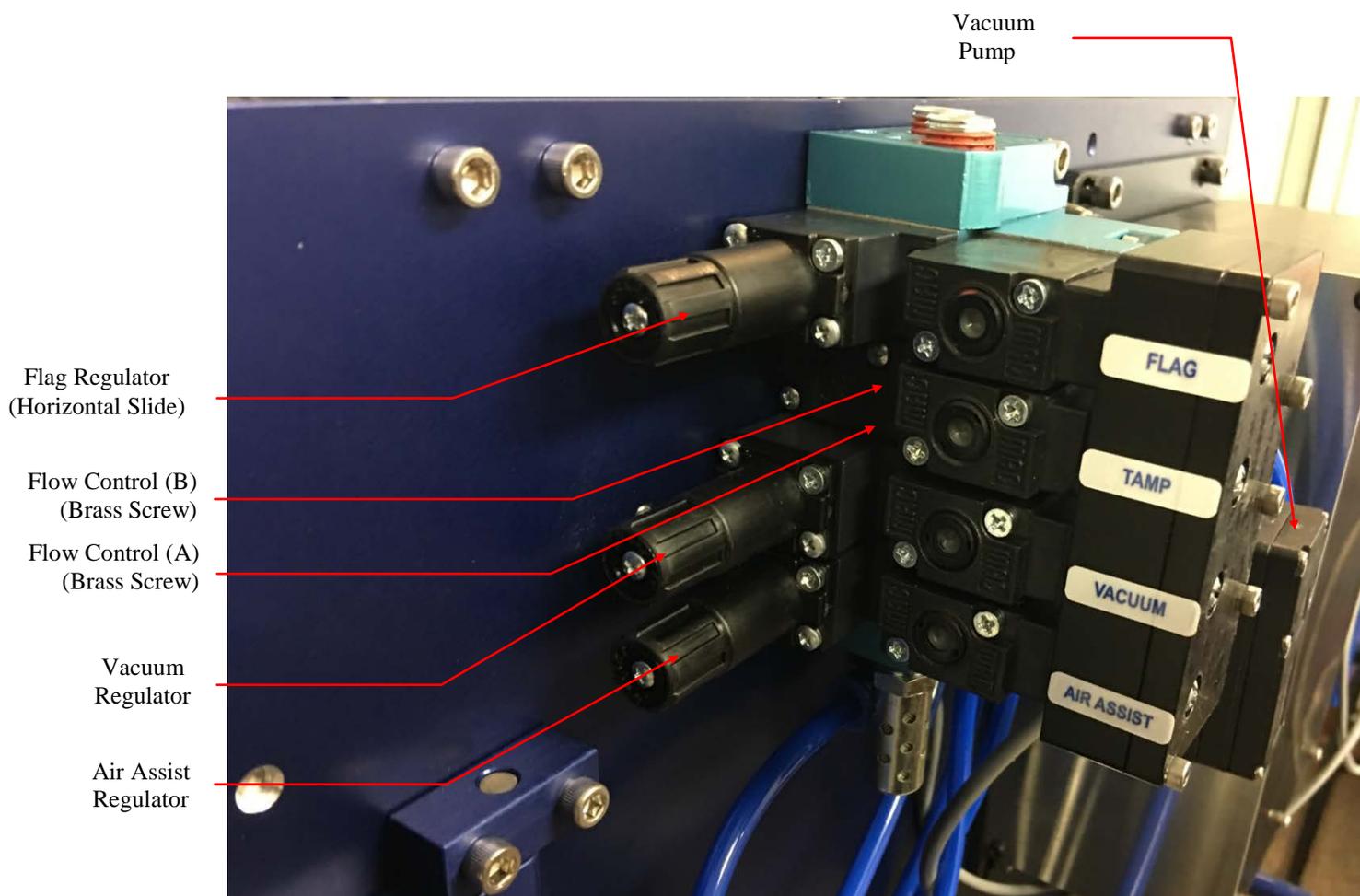
CLAMP BOLT

## TAMP UNIT OPERATION

### Tamp Duration

Tamp duration is used to provide an on timer for the solenoid valve on the main tamp cylinder. The delay on standard versions can be programmed from 0 to 30.000 seconds in 1/1000 of a second accuracy. This allows for easy change over from one product height to another without physically changing the height of the unit. It also allows for precise adjustments of how close the tamp head comes to the product. The tamp duration can be adjusted in the programming menu.

There are flow control adjustments for each of the valves. It may be necessary to adjust the flow rate on the valves for optimum performance after installation. The adjustment is performed as shown below. They are set at the factory. The regulators knobs on the vacuum, air assist, and flag valves are for increasing or decreasing the air pressure as necessary for proper operation.



## VALVE PACK ADJUSTMENTS

Regulator Knob Adjustment:

**Clockwise** - Increase pressure    **Counterclockwise** - Decrease pressure

### Valve Pack Regulators

#### **MAIN AIR REGULATOR**

Controls maximum air pressure available to entire applicator. Should be set between 40 and 80 PSI.

#### **FLAG REGULATOR**

The flag regulator is used to adjust the speed of the horizontal pneumatic slide.

#### **VACUUM REGULATOR**

The vacuum regulator is used to control the vacuum that is used to hold the label to the flag jaws or the tamp pad.

#### **AIR ASSIST REGULATOR**

The air assist regulator is used to change the pressure that is applied to the blow tube. The blow tube is below the front edge of the peeler plate and is used to help “push” the label onto the bottom of the tamp pad or the flag jaws.

#### **FLOW CONTROLS (Tamp & Flag Valves - Brass Flat-Head Screws)**

Control A: This is used to adjust the pressure that controls the tamp cylinder in the upward direction.

Control B: Controls the tamp cylinder in the downward direction.

**Clockwise** - Decrease Speed    **Counterclockwise** - Increase Speed

## SECTION 3

### SYSTEM CONTROLS

|                                  |    |
|----------------------------------|----|
| Programming                      | 24 |
| System Editor                    | 25 |
| System Programming               | 26 |
| Quick Start & General Setup      | 28 |
| Standard Tamp System Operation   | 28 |
| Logic Board / Description of I/O | 29 |

## PROGRAMMING

All programming is performed via the **HLI-200** keypad and display. All programmed settings are backed in nonvolatile memory and are not lost when the unit is powered off.

Upon power up of the control, the screen will display *MODEL NUMBER & REVISION* of the HLI-200 and then the *MODEL NUMBER & REVISION* of the labeler control. After this, the screen will now display the "Total" counter, "Batch" counter, and Cycle time in the center of the screen. Error messages or warning will be displayed in the box at the bottom of the screen. The top of the screen allows you to Start, Stop, Enable, or Disable the system, and also shows the current state of the system.

### KEY FUNCTIONS:

#### START:

- Start key will initialize the application cycle.

#### STOP:

- Stop key will abort the cycle only when not in the program menu.

#### PRINT:

- Print key will signal the connected printer to print and dispense (1) label.
- (Print files must be loaded into Print Buffer)

#### ENABLE:

- Enable key will "Enable" the system after it has been disabled.

#### DISABLE:

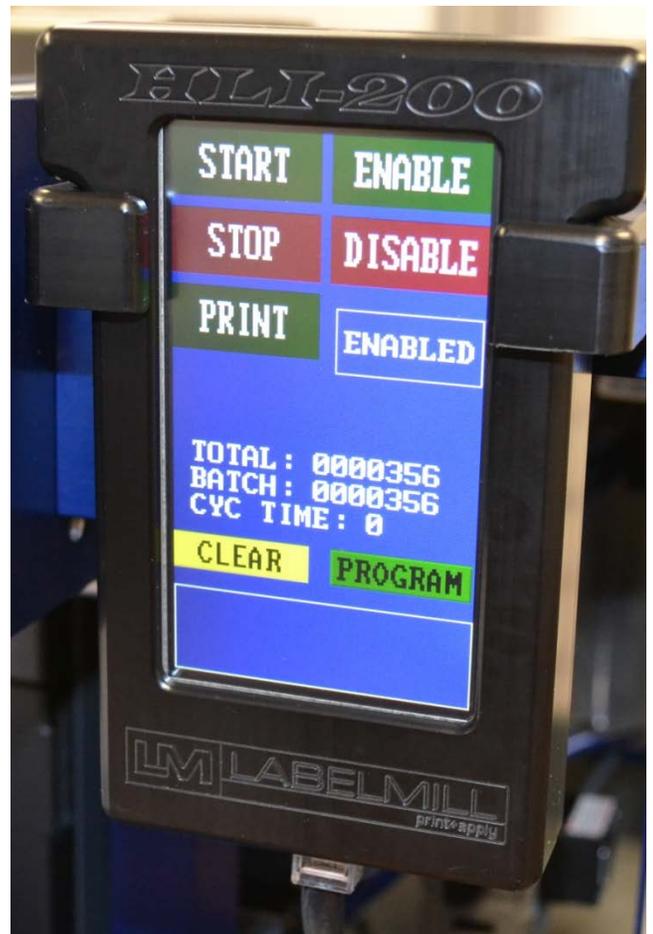
- Disable key will prevent the system from accepting trigger inputs.

#### CLEAR:

- Clear key will clear an error status

#### PROGRAM:

- Program key will enter the system editor.



## SYSTEM EDITOR

Press the "Program" button to enter the system editor. Here you will find the following options:

**I/O Panel**

**Product Sensor**

**Takeup**

**Tamp Setup**

**Counters**

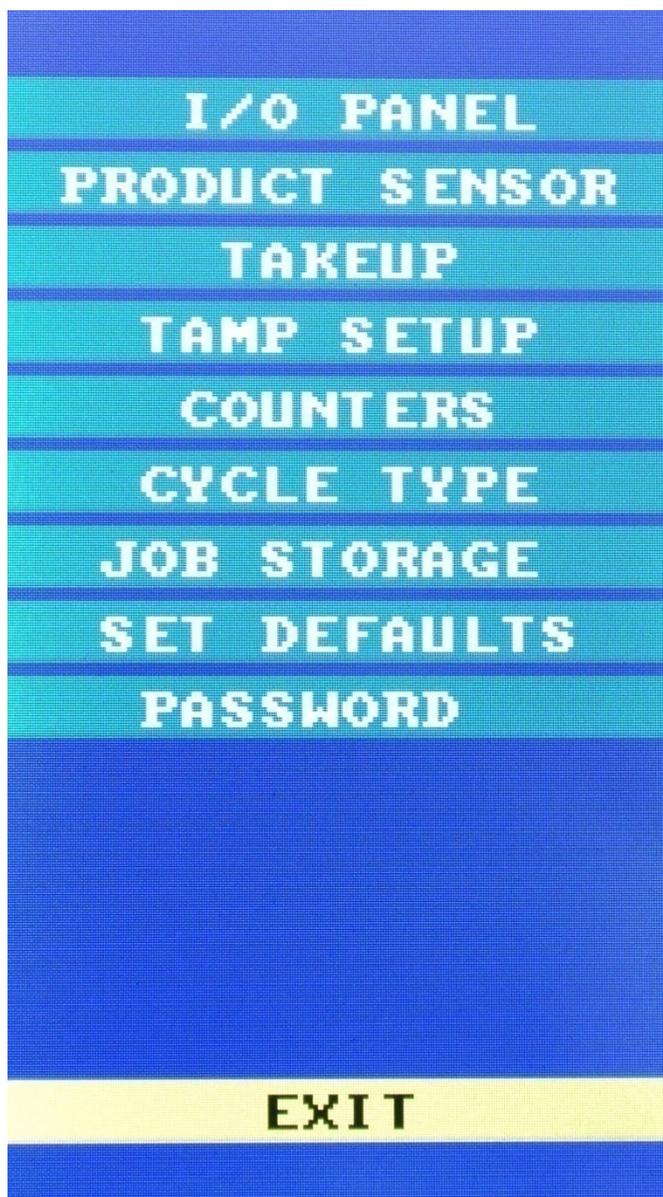
**Cycle Type**

**Job Storage**

**Set Defaults**

**Password**

**EXIT**



Use the "Exit" key to save any changes and return to Run Mode.

## SYSTEM PROGRAMMING

### • I/O PANEL

Displays the status of the inputs and outputs. X = On    0 = Off

### • PRODUCT SENSOR

This is an external device that when “activated” starts the application cycle.

#### PROGRAMMABLE BLOCKS:

Product Delay – Delays the application of the label (x) seconds after the sensor has been activated.

Trigger Edge – Designates whether product sensor is activated at the leading or trailing edge of the product.

Trig On Debounce – Programmable time that a trigger signal must be held for a start cycle to activate.

Trig Off Debounce – Programmable time that input triggers will be ignored for after a completed cycle.

No. of Multiple Feed – How many labels are applied to one product with one signal.

Interval Delay – Amount of time in seconds between multiple fed labels.

**Note:** Only active if Multiple Feed quantity is 2 or higher.

Multiple Feed List - Programmable delay between each programmed multiple feed.

### • TAKE UP

This is used to delay the start and stop of the take up motor.

#### PROGRAMMABLE BLOCKS:

On Delay – Delays (x) seconds after start print before starting take up motor.

Off Delay – Take up runs (x) seconds after end print signal is received from printer.

Jog Takeup – Press the JOG TAKEUP button to jog the motor.

### • TAMP SET UP

This is used to adjust the different variables related to the tamp cycle.

#### PROGRAMMABLE BLOCKS:

Tamp Duration – Used to adjust the time that the tamp cylinder valve is actuated. (0.000 to 10.000)

Flag Duration – Used to adjust the time the horizontal slide is actuated. (00.00 to 30.000)

Head Up Switch Type – type: **normally open**-standard, none

Head Up Debounce – Debounce is used to allow time for the tamp cylinder to settle on return. (0 to 0.500)

Vacuum Release – Used to release label when tamping on light products. (0.000 to 10.000)

Vacuum Delay On – Used to reduce label flutter when feeding large labels while tamping. (0.000 to 6.000)

Tamp Sync Logic – Used to reverse tamp sync outputs.

Air Assist Delay -- Used to delay the Air Assist Off output (0.000 to 1.000 seconds)

### • COUNTER

Used to reset the internal counter of the control.

#### PROGRAMMABLE BLOCKS:

Batch Preset - Used to set Batch Counter. Once reached, the applicator will Inhibit.

Clear Batch Counter - Used to clear the programmed batch counter.

Clear Total Counter - Clears the system Total Counter

**• CYCLE TYPE**

Cycle Type determines the application type and sequence in relation to the label feed. Use the "Up" or "Down" button to select the appropriate cycle type. "Tamp Before Feed" is the default setting.

**PROGRAMMABLE BLOCKS:**

Print Repeat - Activates the "Print Repeat" signal to the printer (Printer must also be enabled, if possible)

Printer Ready - Activates the "Printer Ready" signal.

Printer Fault Timer - Programmable fault timer for "Printer Ready" signal. (0.000 to 9.000)

- Available Cycle Types
  - Feed Only
  - Tamp Before Label Feed
  - Tamp After Label Feed
  - Blow On Before Label Feed
  - Blow On After Label Feed
  - 1st Trigger Feed, Product Switch Tamp
  - 1st Trigger Feed, Product Switch Blow
  - Clam Shell Module Before Feed
  - Clam Shell Module After Feed

**• ENCODER - NOT USED WITH A STANDARD LM3612CTT CONFIGURATION****• JOB STORAGE**

Used to store frequently used settings pertaining to different labeling jobs. Up to (6) jobs can be stored.

**PROGRAMMABLE BLOCKS:**

Restore A Job – Recalls settings of a saved job.

Save A Job – Stores settings for the active job.

Delete A Job – Deletes a saved job.

**•SET DEFAULTS**

This setting will return the controller to the default settings.

**• PASSWORD**

The PASSWORD is used to lock the menus of the control. This option is used to prevent unauthorized access to variable data. When shipped from the factory, the password is 7074 and NO MENUS are locked. The password cannot be changed.

## QUICK START & GENERAL SETUP (TAMP APPLICATION)

1. Inspect applicator system and verify all cables are installed properly.
2. Load printer with labels.
3. Turn power switch on.
4. Turn printer on & load label files.
5. Feed labels to attach waste liner to take-up assembly
6. Press "PROGRAM"
7. Enter Defaults.
8. Press "TAMP SETUP"
9. Set tamp duration to .500 and set Head-Up switch to "N.O."
10. Set flag duration to .500
11. Press "CYCLE TYPE"
12. Set cycle type to "Tamp Before Feed"
13. Press "EXIT"
14. System is now ready for set up of advanced features and options.

## STANDARD TAMP SYSTEM OPERATION

1. Print job is sent to Epson printer via external PC / Network.
2. Printer display changes to "Printing".
3. Operator inserts product into adjustable product fixture.
4. Operator activates remote trigger (Foot Pedal or Push Button).
5. Printer prints and feeds label onto tamp pad assembly (If configured in Tamp After Feed Cycle Type).
6. Horizontal slide extends until Flag Duration timer expires.
7. Tamp slide extends down to apply label to product.
8. Tamp slide returns "up" when Tamp Duration timer expires.
9. Horizontal Slide returns to "home" position.
10. Cycle Complete.

# LOGIC BOARD

## DESCRIPTION OF I/O

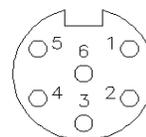
### LEGEND

24V OPT: 24V OPTO INPUT WITH INTERNAL 24V COMMON  
 OH: HIGH CURRENT OUTPUT Rated @ 500ma

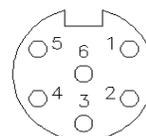
All user inputs and outputs are “**SINKING**” type.

Example: In order for a status light to illuminate for “Run Status Ok” the light should be wired between pins #1 & #8 on the “**Light Bar/Aux**” Connector.

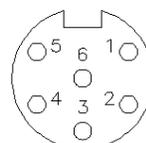
| REMOTE TRIGGER CONNECTOR (PRODUCT SWITCH) | P7 PIN # | I/O   | I/O Monitor ADDRESS |
|---|----------|-------|---------------------|
| +24vdc                                    | 1        |       |                     |
| +24vdc                                    | 2        |       |                     |
| Trigger Input #1                          | 3        | Input | X0.0                |
| Pr-Print Input / AUX1                     | 4        | Input | X0.1                |
| 24v Common                                | 5        |       |                     |
| 24v Common                                | 6        |       |                     |
| Shield                                    |          |       |                     |
|   |          |       |                     |
|   |          |       |                     |



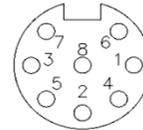
| HEAD-UP / AUX IN | P8 PIN # | I/O   | I/O Monitor ADDRESS |
|------------------|----------|-------|---------------------|
| +24vdc           | 1        |       |                     |
| +24vdc           | 2        |       |                     |
| Head – Up        | 3        | Input | X0.2                |
| Smart Tamp       | 4        | Input | X0.3                |
| 24v Common       | 5        |       |                     |
| 24v Common       | 6        |       |                     |
| Shield           |          |       |                     |
|                  |          |       |                     |
|                  |          |       |                     |



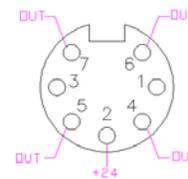
| SMART TAMP             | P2 PIN # | I/O   | ADDRESS |
|------------------------|----------|-------|---------|
| +24vdc                 | 1        |       |         |
| +24vdc                 | 2        |       |         |
| Pre-Print Input / AUX1 | 3        | Input | X0.1    |
| Smart Tamp             | 4        | Input | X0.3    |
| 24v Common             | 5        |       |         |
| 24v Common             | 6        |       |         |
| SHIELD                 |          |       |         |
|                        |          |       |         |
|                        |          |       |         |



| Take-Up        | P4 PIN # | I/O    | I/O Monitor ADDRESS |
|----------------|----------|--------|---------------------|
| Input          | 1        | Input  | X0.4                |
| 24v Common     | 2        |        |                     |
| N.C.           | 3        |        |                     |
| Take up output | 4        | Output | Y1.3                |
| N.C.           | 5        |        |                     |
| N.C.           | 6        |        |                     |
| N.C.           | 7        |        |                     |
| +24vdc         | 8        |        |                     |
| Shield         |          |        |                     |



| TAMP SOLENOIDS             | P6 PIN # | I/O    | I/O Monitor ADDRESS |
|----------------------------|----------|--------|---------------------|
| Aux Output #2 / Tamp Slide | 1        | Output | Y1.7                |
| +24 Volt                   | 2        |        |                     |
| No connection              | 3        |        |                     |
| Air Assist Sol 24vdc       | 4        | Output | Y0.0                |
| Vacuum Sol 24vdc           | 5        | Output | Y0.2                |
| Tamp Sol 24vdc             | 6        | Output | Y0.3                |
| Flag Sol 24vdc             | 7        | Output | Y0.1                |
| Shield                     |          |        |                     |



| HMI RJ Conn  | P3 PIN # | Jumpers |
|--------------|----------|---------|
| 422RX+ (TXB) | 1        |         |
| 422RX- (RXB) | 2        |         |
|              | 3        |         |
|              | 4        |         |
| 24V Common   | 5        |         |
| +24vdc       | 6        |         |
| 422TX+       | 7        |         |
| 422TX-       | 8        |         |

| LIGHT BAR/AUXILIARY CONNECTOR<br>DB-15 FEMALE | P10 PIN # | INPUT/<br>OUTPUT | ADDRESS |                  |
|---|-----------|------------------|---------|------------------|
| +24VDC  | 1         |                  |         |                  |
| +24VDC  | 2         |                  |         |                  |
| 24 COM  | 3         |                  |         |                  |
| 24 COM  | 4         |                  |         |                  |
| LOW LABEL IN                                  | 5         | I                | X0.5    |                  |
| ERROR LITE (Red light)                        | 6         | O                | Y0.6    | On=GREEN Off=RED |
| LOW LABEL (Yellow light)                      | 7         | O                | Y0.7    |                  |
| RUN STATUS OK (Green Light)                   | 8         | O                |         | Green = /Red     |
| TAMP SYNC OUT                                 | 9         | O                | Y1.1    |                  |
| INHIBIT IN                                    | 10        | I                | X0.6    |                  |
| REPRINT / Aux Input #2                        | 11        | I                | X0.7    |                  |
| Aux Input #3 / Slide Home Input               | 12        | I                | X1.1    |                  |
| Aux Input #4 / Feed Error Input               | 13        | I                | X1.2    |                  |
| Applicator in cycle output (Applicator Busy)  | 14        | O                | Y1.2    |                  |
| Batch Done Aux Output #1                      | 15        | O                | Y1.6    |                  |

| <b>LIGHT BAR/AUXILIARY CONNECTOR<br/>DB-15 FEMALE</b> | P10<br>PIN # | INPUT/<br>OUTPUT | ADDRESS |                  |
|---|--------------|------------------|---------|------------------|
| +24VDC  | 1            |                  |         |                  |
| +24VDC  | 2            |                  |         |                  |
| 24 COM  | 3            |                  |         |                  |
| 24 COM  | 4            |                  |         |                  |
| LOW LABEL IN  | 5            | I                | X0.5    |                  |
| ERROR LITE (Red light)                                | 6            | O                | Y0.6    | On=GREEN Off=RED |
| LOW LABEL (Yellow light)                              | 7            | O                | Y0.7    |                  |
| RUN STATUS OK (Green Light)                           | 8            | O                |         | Green = /Red     |
| TAMP SYNC OUT   | 9            | O                | Y1.1    |                  |
| INHIBIT IN  | 10           | I                | X0.6    |                  |
| REPRINT / Aux Input #2                                | 11           | I                | X0.7    |                  |
| Aux Input #3 / Slide Home Input                       | 12           | I                | X1.1    |                  |
| Aux Input #4 / Feed Error Input                       | 13           | I                | X1.2    |                  |
| Applicator in cycle output (Applicator Busy)          | 14           | O                | Y1.2    |                  |
| Batch Done Aux Output #1                              | 15           | O                | Y1.6    |                  |

| <b>AUXILIARY CONNECTOR (Optional)<br/>3rd DB-15 MALE</b> | DB15<br>PIN # | INPUT/<br>OUTPUT | ADDRESS |                             |
|--|---------------|------------------|---------|-----------------------------|
| AUX 232 TXC Port C                                       | 1             | O                |         | RS232 Output                |
| GND  | 2             |                  |         |                             |
| GND  | 3             |                  |         |                             |
| Batch Done Aux Output #1                                 | 4             | O                | Y1.6    |                             |
| REPRINT / Aux Input #2                                   | 5             | I                | X0.7    |                             |
| Aux Input #4 / Feed Error Input                          | 6             | I                | X1.2    |                             |
| +24V   | 7             |                  |         |                             |
| +24V   | 8             |                  |         |                             |
| AUX 232 RXC Port C                                       | 9             | I                |         | RS232 Input                 |
| 24MCR  | 10            |                  |         | 24 Volts when not in E-Stop |
| 24MCR  | 11            |                  |         | 24 Volts when not in E-Stop |
| Estop relay  | 12            | relay            |         | Used to seal E-Stop         |
| Aux Input #3   | 13            | I                | X1.1    |                             |
| Tamp / Aux Output #2 High current                        | 14            | O                | Y1.7    |                             |
| +24V   | 15            |                  |         |                             |

| <b>COMM. 2 RS- 232 (Optional)<br/>DB9 Female</b> | P11<br>PIN # | INPUT/<br>OUTPUT | ADDRESS |  |
|--|--------------|------------------|---------|--|
| <b>Serial Plus Port</b>                          |              |                  |         |  |
| SHIELD   | 1            |                  |         |  |
| +485 RS232 XMIT (port D) to motor                | 2            |                  |         |  |
| -485 RS232 RECV (port D) to motor                | 3            |                  |         |  |
| 24C  | 4            |                  |         |  |
| 24C  | 5            |                  |         |  |
| Aux Output #2 High current                       | 6            | O                | Y1.7    |  |
| Aux Input #2                                     | 7            | I                | X0.7    |  |
| +24  | 8            |                  |         |  |
| +24  | 9            |                  |         |  |

| <b>PRINT AND APPLY INTERFACE<br/>14 pin Centronix</b> | <b>P9<br/>PIN #</b> | <b>I/O</b> | <b>I/O Monitor<br/>ADDRESS</b> |
|---|---------------------|------------|--------------------------------|
| Paper End   | 1                   | Input      | X1.3                           |
| Printer Ground  | 2                   |            |                                |
| Ribbon End  | 3                   | Input      | X1.4                           |
| Printer Error   | 4                   | Input      | X1.5                           |
| Print Start   | 5                   | Output     | Y0.4                           |
| Print End   | 6                   | Input      | X1.6                           |
| Reprint   | 7                   | Output     | Y0.5                           |
|   | 8                   |            |                                |
| ONLINE (Sato Only) (Zebra Data Ready)                 | 9                   | Input      | X1.7                           |
| Ribbon Near End                                       | 10                  | Input      | X1.0                           |
|   | 11                  |            |                                |
|   | 12                  |            |                                |
| +5vdc From Printer                                    | 13                  |            |                                |
|   | 14                  |            |                                |
|   |                     |            |                                |
| Shield  |                     |            |                                |

## SECTION 4

# CLEANING & MAINTENANCE

|                               |    |
|-------------------------------|----|
| Troubleshooting Guide         | 34 |
| Fault Messages                | 35 |
| Replacing the Main Power Fuse | 36 |

## TROUBLESHOOTING GUIDE

If the system malfunctions, it is necessary to determine where the problem exists in a normal sequence of operation. The procedure of the unit is outlined in the left hand column of the table below to provide a systematic approach to troubleshooting.

| <b>Problem</b>                                | <b>Possible Cause</b>   | <b>Corrective Action</b>  |
|---|---|---|
| Unit will not turn on.                        | A. Blown Main Fuse  | Check main power fuse and replace if necessary<br>Check printer fuse  |
| Tamp will not operate.                        | A. Cable<br>B. No tamp duration<br>C. Sticky cylinder   | Check connection<br>Reference to Tamp Setup<br>Consult factory  |
| Unit will not print or tamp                   | A. Unit off line<br>B. Incorrect label configuration<br>C. No label format downloaded<br>D. Wrong interface selected<br>E. Interface cable<br>F. Error on printer | Check printer for pause / ready<br>Check software / driver setup<br>Check software / driver setup<br>Check driver setup<br>Check connection<br>Check printer manual |
| Take-up unit does not turn.                   | A. Motor not running<br>B. Friction plate failure in clutch<br>C. Mechanical failure in clutch  | Consult factory<br>Adjust clutch / consult factory<br>Consult factory   |
| Waste web tension too loose.                  | A. Clutch tension too low.  | Adjust clutch   |
| Waste web breaks or printing drifts on labels | A. Clutch adjusted to tight.<br>B. Machine Webbed wrong.<br>C. Low quality webbing.<br>D. Friction plate failure in clutch.<br>E. Mechanical failure in clutch.   | Adjust clutch<br>Re-web system<br>Consult label manufacturer<br>Adjust clutch / consult factory<br>Consult factory  |

## FAULT MESSAGES

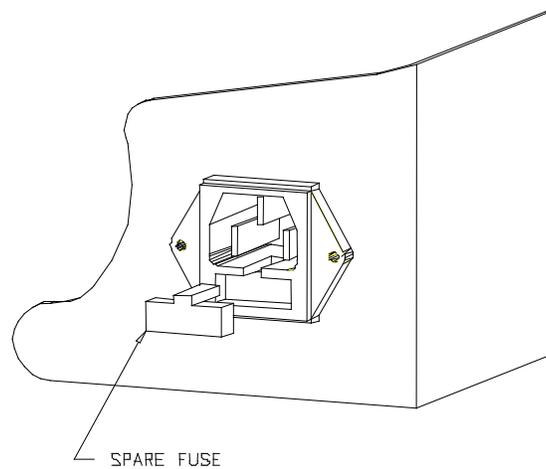
| DISPLAYED FAULT | FAULT  | CORRECTIVE ACTION  |
|-----------------|--|--|
| Memory Checksum | Data lost in serial EEPROM   | Consult factory or service provider  |
| Print Time Out  | Printer failed to print or Control failed to receive a "End Print Signal"                              | <ul style="list-style-type: none"> <li>A. Printer paused / running maintenance</li> <li>B. No label formats loaded</li> <li>C. Check printer interface cable</li> </ul>  |
| Tamp Down FLT   | Head up limit switch failed to switch during the tamp cycle. Cylinder did not move off of reed switch. | <ul style="list-style-type: none"> <li>A. Tamp cylinder is not up</li> <li>B. Check air pressure setting &amp; connection</li> <li>C. Misadjusted reed switch</li> <li>D. Faulty reed switch</li> <li>E. Tamp duration too small</li> <li>F. Check programming of tamp setup</li> </ul> <p>NOTE: Light on reed switch should be on when cylinder is up</p> |
| Head Down       | Head up limit switch failed to switch during the tamp cycle. Cylinder did not return up.               | <ul style="list-style-type: none"> <li>G. Tamp cylinder is not up</li> <li>H. Check air pressure setting &amp; connection</li> <li>I. Misadjusted reed switch</li> <li>J. Faulty reed switch</li> <li>K. Tamp duration too small</li> <li>L. Check programming of tamp setup</li> </ul> <p>NOTE: Light on reed switch should be on when cylinder is up</p> |
| Ribbon Out      | Printer ink cartridge is empty   | Replace ink cartridge  |
| Low Ribbon      | Printer is low on ink  | Replace ink cartridge  |
| Label Out       | Printer is out of labels   | Replace label stock  |

## REPLACING THE MAIN POWER FUSE

The circuitry is protected from a current overload by GMA 10A a fast blow fuse. Should the applier fail to operate, the condition of this fuse should be checked. If the fuse is open, the cause of the overload condition must be determined and corrected prior to replacing the fuse. NEVER replace the fuse with one of a greater AMP rating. The specified rating has been selected to prevent damage and/or injury.

### ACTIONS TO REPLACE THE MAIN FUSE

1. Set the main power switch to the OFF position.
2. Disconnect the AC power cable from the rear of the console.
3. Locate the fuse holder / power cord assembly.
4. Gently press down the fuse holder cover while pulling away from the console.
5. Replace with the spare fuse provided in the holder.



# LM3612CTT

## COLOR PRINT & APPLY

# OPERATIONS MANUAL



## Copyright and Trademarks

Copyright ©2022  
All rights reserved. All trademarks and brand names  
are the property of their respective owners.

LabelMill  
2416 Jackson St.  
Savanna, IL 61074

Phone: (800) 273-4707; Fax (815) 273-7074  
[www.labelmill.com](http://www.labelmill.com)  
[info@labelmill.com](mailto:info@labelmill.com)