



# Videojet 9550

## Operator Manual

P/N 462469-01

Revision: AC, April 2020

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# Compliance Information

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## For Customers in the U.S.A.

**Safety:** The equipment complies to UL 60950-1. NRTL accredited certification.

**Emissions:** The equipment complies with USA Part 15 of the FCC Rules, subpart B, Class A. Operation of the equipment is subject to the following two conditions:

- 1) This equipment may not cause harmful interference, and
- 2) This equipment must accept any interference received, including interference that may cause undesired operation.



### Warning

PERSONAL INJURY. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

---

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules, subpart B. These limits are designed to provide responsible protection against harmful interference when the equipment is operated in a industrial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference. In such cases, the users will be required to correct the interference at their own expense.

Shielded cables must be used with this unit to ensure compliance with Class A FCC limits.

The user may find the following booklet prepared by the Federal Communications Commission helpful: [How to Identify and Resolve Radio-TV Interference Problems](#). This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-00-00345-4.

This equipment has been tested and certified for compliance with U.S. regulations regarding safety by TÜV SÜD America.

## For Customers in Canada

**Emissions:** The equipment complies with the Canada ICES-003 04, Class A.

**Safety:** The equipment complies with Canadian standard C22.2 No. 60950-1.

This equipment has been tested and certified for compliance with Canadian regulations regarding safety by TÜV SÜD America.

## For Customers in the European Union

This equipment displays the CE mark to indicate conformance to the following legislation:

### EMC Directive 2014/30/EU

Essential health and safety requirements relating to electromagnetic compatibility.

IEC 61000-6-2	Immunity for industrial environments
IEC 61000-6-4	Generic Emissions Standard for Heavy Industrial Environments
IEC 61000-3-2	Limits for harmonic current emissions (equipment input current $\leq 16A$ per phase)
IEC 61000-3-3	Limitation of voltage changes, voltage fluctuations and flicker in public low voltage supply systems for equipment with rated current $\leq 16A$ per phase and not subject to conditional connection

### Low Voltage Directive 2014/35/EU

Essential health and safety requirements relating to electrical equipment designed for use within certain voltage limits.

EN 60950-1	Information Technology Equipment - Safety - Part 1: General requirements
IEC 60950-1	

### Machinery Directive 2006/42/EC

EN 60204-1	Safety of machinery - Electrical equipment of machines
IEC 60204-1	
EN ISO 12100	Safety standard for machinery.

### RoHS Directive 2011/65/EC

EN 50581	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances
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# Support and Training

## Contact Information

If you have any questions or need assistance, contact Videojet Technologies Inc. at 1-800-843-3610 (for all customers within the United States). Outside the U.S., customers should contact their Videojet Technologies Inc. distributor or subsidiary for assistance.

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## Service Program

### **About Total Source Commitment**

Total Source<sup>®</sup> TOTAL SERVICE PLUS RELIABILITY, is the Videojet Technologies Inc. commitment to provide you - our customer - the complete service you deserve.

### **The Total Source Commitment**

The Videojet Total Source<sup>®</sup> Service Program is an integral part of our business in providing marks, codes, and images where, when, and how often customers specify for packages, products, or printed materials. Our commitment includes:

- Applications support
- Installation services
- Maintenance training
- Customer response center
- Technical support
- Field service
- Extended hours phone assistance
- Parts and supplies
- Repair service

## Customer Training

If you wish to perform your own service and maintenance on the LPA, Videojet Technologies Inc. highly recommends you complete a Customer Training Course on the LPA.

***Note:** The manuals are intended to be supplements to (and not replacements for) Videojet Technologies Inc. Customer Training.*

For more information on Videojet Technologies Inc. Customer Training Courses, call 1-800-843-3610 (within the United States only). Outside the U.S., customer should contact a Videojet subsidiary office or their local Videojet distributor for more information.

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*Glossary*

This chapter contains the following topics:

- Equipment description
- About the manual
- Related publications
- Content presentation
- Abbreviations and acronyms
- Chapters in the manual

## Equipment Description

The Videojet 9550 is a smarter print and apply labeler that eliminates unscheduled downtime and reduces costs and errors in case coding operations. The labeler is a simple, reliable system with a minimum number of wear parts, and zero manual adjustments. Applying Intelligent Motion™ technology ensures automatic and precise control of the entire system. In addition, Direct Apply provides accurate placement of on-demand labels at high speed without the need for an applicator (top or side applications only), enabling it to never miss a pack even during build-back.

Videojet 9550 maximizes uptime, increase productivity and remove the risk of mislabelled packages by using the most intelligent and user friendly labelling system.

## About the Manual

This Operator Manual is written for the every day user of the LPA. The Operator Manual helps the user to understand the different parts and different printing and labelling operations of the LPA.

## Related Publications

The following manuals are available for reference:

Videojet 9550 Service Manual, Part Number: 462470.

300T Tamp Applicator Addendum, Part Number: 462475-01.

Rear Corner Wrap Applicator Addendum, Part Number: 462571-01.

Front of Pack Applicator Addendum, Part Number: 462554-01.

### Language Codes

When you order this manual, make sure to add the 2-digit language code at the end of the part number. For example, the Danish version of the operator manual is part number 462469-18. Table 1-1 shows the list of language codes that you can use to identify the translated versions of this manual.

For more information, contact the Videojet distributor or subsidiary.

**Note:** The availability of the Operator Manual is indicated by an asterisk (\*). Availability of the Service Manual is indicated by a plus sign (+). For more information, contact the Videojet distributor or subsidiary.

Code	Language	Availability (see note)	
01	English (US)	*	+
02	French	*	
03	German	*	
04	Spanish	*	
05	Portuguese Brazilian	*	
06	Japanese	*	
07	Russian	*	
08	Italian	*	
09	Dutch	*	
10	Chinese (Simplified)	*	
11	Arabic	*	
12	Korean	*	
13	Thai	*	
15	Norwegian	*	

Table 1-1: List of Language Codes



Code	Language	Availability (see note)	
16	Finnish	*	
17	Swedish	*	
18	Danish	*	
19	Greek	*	
20	Hebrew	*	
21	English (UK)	*	+
23	Polish	*	
24	Turkish	*	
25	Czech	*	
26	Hungarian	*	
33	Vietnamese	*	
34	Bulgarian	*	
36	Chinese (Traditional)	*	
55	Romanian	*	
57	Serbian	*	

Table 1-1: List of Language Codes (Continued)

## Content Presentation

This Operator Manual contains different types of information like safety guidelines, additional notes, user interface (UI) terminology and so on. To help you identify the different types of information, different writing styles are used in this manual.

### Positional References

Positions and directions like left, right, front, rear, to the right and to the left are with respect to the CLARiTY display when you see it from the front.

### Units of Measurement

This manual uses metric units of measurement. The equivalent English measures are included in parenthesis. For example, 240 mm (9.44 inches).

## Safety Information

Specific safety information is listed throughout this manual in the form of Warning and Caution statements. Pay close attention to these statements as they contain important information that help in avoiding potential hazards to yourself or to the equipment.

### Warning

- The warning statements indicate hazards or unsafe practices that can cause severe personal injury or death.
- They have a triangular symbol with an exclamation mark to the immediate left of the text
- They are always preceded by the word “Warning”
- They are always found before the step or information referring to the hazard

For example:



### Warning

PERSONAL INJURY. All electrical wiring and connections must comply with applicable local codes. Consult the appropriate regulatory agency for further information.

---

### Caution

- The caution statements indicate hazards or unsafe practices that result in equipment or property damage
- They have a triangular symbol with an exclamation mark to the immediate left of the text
- They are always preceded by the word “Caution”
- They are always found before the step or information referring to the hazard

For example:



### Caution

EQUIPMENT DAMAGE. Read this chapter thoroughly before attempting to install, operate, service, or maintain this equipment.

---

## Notes

Notes provide additional information about a particular topic.

For example:

*Note:* You can set the password protection for some functions to prevent any access that is not authorised.

## Abbreviations and Acronyms

Abbreviation	Expansion
AC	Alternating Current
I/O	Input/Output
LCD	Liquid Crystal Display
LED	Light Emitting Diode
LH	Left Hand
LPA	Print and Apply Labeler
POE	Power Over Ethernet
RH	Right Hand
SELV	Safety Extra Low Voltage
UI	User Interface
USB	Universal Serial Bus
WYSIWYG	What You See Is What You Get

Table 1-2: Abbreviations and Acronyms

## Chapters in the Manual

This manual is divided into twelve chapters. An introduction to the topics that each chapter covers is shown in Table 1-3.

Chapter No.	Chapter Name	Description
1.	Introduction	Contains the information about this manual, the related publications, and writing styles used in this manual.
2.	Safety	Contains the safety and hazard information.
3.	Main Parts	Describes the main parts of the LPA.
4.	CLARiTY Operating System	Contains the information about CLARiTY operating system and updating CLARiTY operating system.
5.	Startup	Describes the basic startup operations of the LPA.
6.	Labeler Operations	Describes the operations of the labeler unit of the LPA.
7.	Maintenance	Contains the information on service and maintenance.
8.	Troubleshooting	Contains the operator level diagnostic and troubleshooting procedures.
9.	Specifications	Contains LPA specifications.
10.	Menu Structure	Contains the menu structure of the CLARiTY user interface.
11.	Installation Wizard	Describes how to configure the LPA installation.
12.	Availability	Contains information about availability tools.

Table 1-3: List of Chapters

This chapter contains the following topics:

- Introduction
- Equipment Safety Guidelines
- Print Ribbon Safety Guidelines
- Placement of Equipment
- Other Important Guidelines



## Caution

**EQUIPMENT DAMAGE.** Read this chapter thoroughly before attempting to install, operate, service, or maintain this equipment. All available safety information should be observed and practised to operate the LPA safely and efficiently.

---



## Warning

**PERSONAL INJURY.** Observe all safety and warning labels on the device for the safe operation of the system.

---



## Warning

**PERSONAL INJURY.** Follow the installation and operating instructions at all times. Only trained personnel should carry out maintenance or repair. Adjustments should only be made as per instructions and training given. Use of this equipment for any other purposes may lead to serious personal injury.

---

## Introduction

The policy of Videojet Technologies Inc. is to manufacture printing/coding systems and supplies that meet high standards of performance and reliability. Therefore, we employ strict quality control measures to eliminate the potential for defects and hazards in our products.

The intended use of this printer is to print information directly onto a product. Use of this equipment for any other purpose may lead to serious personal injury.

The safety guidelines provided in this chapter are intended to educate the operator on all safety issues so that the operator can operate the printer safely.

## Equipment Safety Guidelines

This section contains important safety guidelines pertaining to the operation and handling of the equipment.



### Warning

PERSONAL INJURY. Only trained service or maintenance personnel should perform the installation or replacement procedures. Qualified personnel are those who have successfully completed the training courses, have sufficient experience with this equipment, and are aware of the potential hazards to which they will be exposed.

---



### Warning

PERSONAL INJURY. The LPA should be operated by an authorized personnel who can use the machine independently and without causing damage to the equipment or a personal injury. The operating personnel should be trained and informed regularly about safety and environmental hazards.

---

**Warning**

PERSONAL INJURY. While performing maintenance or repair work, disconnect the mains supply unless it is absolutely necessary to leave the supply on while carrying out adjustments.

**Warning**

PERSONAL INJURY. Before beginning any maintenance work or working close to the tamp application module, ensure that the equipment is switched off and the air pressure is exhausted.

**Warning**

PERSONAL INJURY. The LPA has exposed rotating parts. Keep hands, long hair, ties, loose clothing and so on away from the machine at all times, when it is switched on. Do not wear jewelry, e.g. ear or finger rings, while working with the equipment.

**Caution**

EQUIPMENT DAMAGE. Operate the LPA in an area where the environmental conditions outlined in Appendix A, “Specifications” of this manual are met. The LPA should be installed and operated on a stable, solid base.

**Caution**

EQUIPMENT DAMAGE. The LPA should not be modified. Only add accessories that are approved for the specific use by your supplier. Ensure that no fluids enter the LPA unit.

## Comply with Electrical Codes



### Warning

PERSONAL INJURY. All electrical wiring and connections must comply with applicable local codes. Consult the appropriate regulatory agency for further information.

---

## Electrical Power



### Warning

PERSONAL INJURY. Ensure that all external energy sources, mains power leads are isolated from equipment. This should be done before attempting any maintenance or repair on any part of the product or before opening or removing any equipment covers.

---



### Warning

PERSONAL INJURY. Ensure that any cables from the equipment and compressed air hoses (if applicable) are secured to avoid chance of movement into walkways and becoming a trip hazard. Route or protect all cables to prevent damage.

---



### Warning

PERSONAL INJURY. There will be sections of the printer control board that will be permanently powered via the on-board lithium battery - therefore it is essential that the board should never be placed onto, nor stored in or on any conductive surface (including conductive, plastic bags etc.) as this would flatten the battery and/or potentially result in battery overheating. The battery is not to be replaced by the operator.

---



**Caution**

EQUIPMENT DAMAGE. Do not unplug any connector on the equipment when the mains power is on (except USB and ethernet cables).

---

**Caution**

EQUIPMENT DAMAGE. Operate the LPA within the voltage range specified on the rating label affixed to the unit. This information is also repeated in Appendix A, "Specifications" of this manual.

---

**Caution**

EQUIPMENT DAMAGE. The LPA must be connected to a power socket fitted with an earth connection that complies with applicable local codes. Devices connected to the interfaces at the LPA must fulfil SELV (Safety Extra Low Voltage) circuit requirements according to IEC 60950.

---

## Do Not Remove Warning Label

**Warning**

PERSONAL INJURY. Do not, under any circumstances, remove or obstruct any warning, caution, or instruction labels present on the equipment. If any part of these labels become damaged, worn or removed they must be immediately replaced.

---

## Grounding and Bonding



### Caution

EQUIPMENT DAMAGE. Always prevent static discharge from occurring. Use proper Grounding and Bonding methods. Always bond conductive equipment together with approved cables to maintain them at the same potential and minimize static discharge.

---

## Printhead



### Caution

EQUIPMENT DAMAGE. The device must be switched off when the printheads are being installed, connected or disconnected.

---



### Caution

EQUIPMENT DAMAGE. The printhead may become hot during normal operation. Observe necessary precautions before attempting to touch the printhead.

---



### Warning

PERSONAL INJURY. Do not place your fingers under the printhead when the equipment is operating.

---

## Print Ribbon Safety Guidelines



### Warning

PERSONAL INJURY. Do not use a sharp object (such as a knife or blade) to remove the waste ribbon core due to the risk of personal injury or equipment damage. Use the pullout shaft in the ribbon waste mandrel to remove the core with ease.

---

**Caution**

EQUIPMENT DAMAGE. Print ribbons should be stored at a temperature range of 5 °C to 40 °C, and at a non-condensing humidity range of 20% to 85%.

**Caution**

EQUIPMENT DAMAGE. The use of incompatible ribbon can seriously damage your equipment and such damage will not be covered by your equipment warranty. Use only the ribbon approved by your dealer.

## Placement of the Equipment

**Warning**

PERSONAL INJURY. Do not place the equipment in a hazardous location. Hazardous locations might create an explosion, leading to personal injury.

Hazardous locations, as defined in the United States, are those areas that may contain hazardous materials in a quantity sufficient to create an explosion. These are defined in Article 500 of the National Electrical Code ANSI/NFPA 70-1993.

Outside United States, you must ensure compliance with all local regulations regarding the equipment placement in potentially hazardous locations.

### Using Accessories

To maintain regulatory approval for the equipment, use only Videojet approved accessories when attaching any device to the equipment.

## Other Important Guidelines



### Warning

PERSONAL INJURY. Before disconnecting any air component ensure that the equipment is switched off and the air pressure is exhausted.

---



### Caution

EQUIPMENT DAMAGE. Do not run the equipment with the air pressure supply above the recommended level.

---



### Warning

PERSONAL INJURY. In an emergency, push the E-Stop button to stop the LPA. For information, refer to “Emergency Stop (E-Stop)” on page 3-9.

---

## Cleaning Safety Guidelines



### Caution

EQUIPMENT DAMAGE. Do not apply excessive force to the printhead while cleaning, as this can cause damage and can void the warranty.

---



### Caution

EQUIPMENT DAMAGE. Use approved dealer cleaning supplies for cleaning. Do not use high pressure air or cotton.

---

---

## Equipment Handling Safety Guidelines



### Warning

PERSONAL INJURY. Follow manual handling guidelines when moving equipment and loading labels.

---



### Caution

EQUIPMENT DAMAGE. Take precautions to prevent the LPA from tipping over when anchoring or moving the equipment.

---

This chapter contains information about the integral parts and accessories of the Print and Apply Labeler.

## Equipment Description

The main parts of the Videojet 9550 LPA are shown in Figure 3-1.

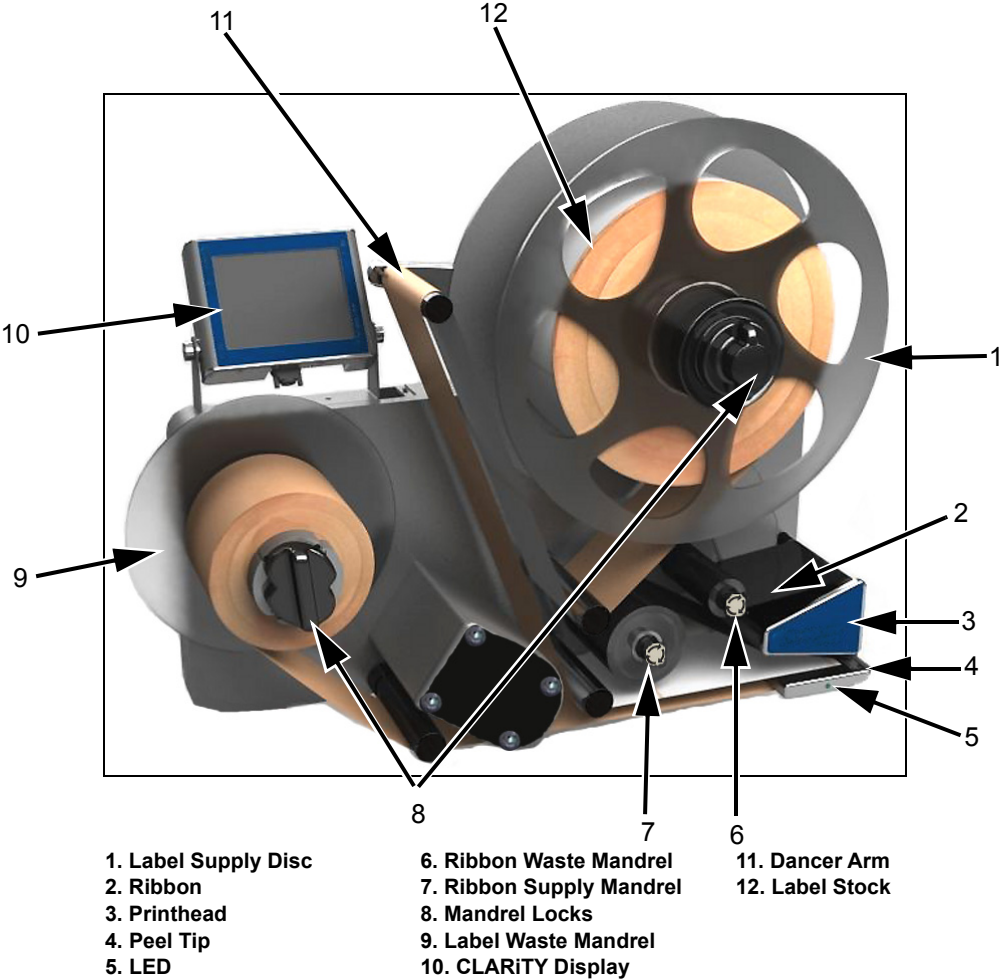
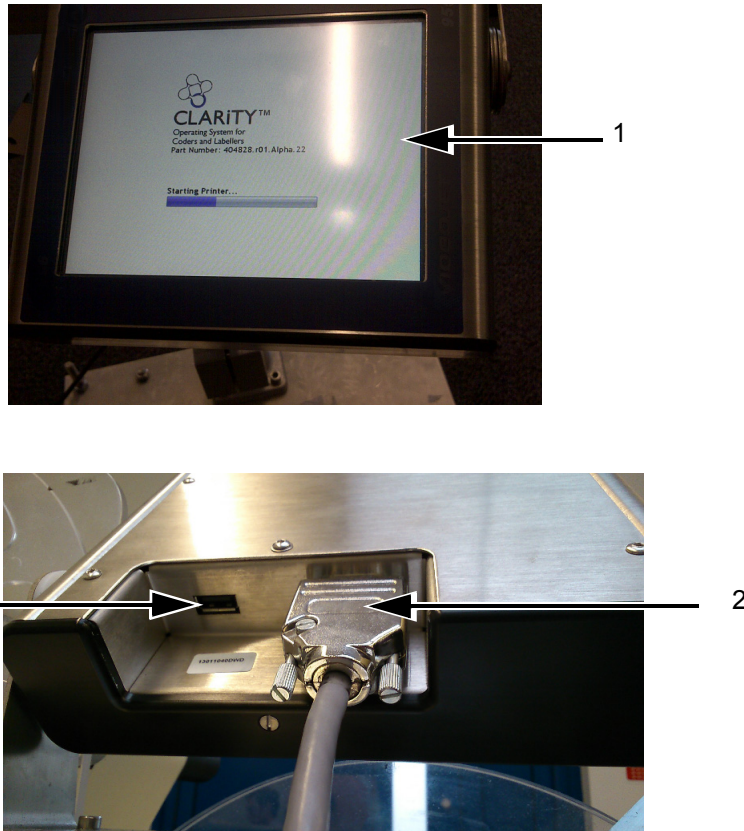


Figure 3-1: Videojet 9550 LPA (Left Hand Machine)

## CLARITY Display

The display is a touch screen user interface which is easy to use and allows the user to control different functions of the labeler.

There is a communication/power cable connected directly to the display.



1. Touch UI
2. Interconnecting Cable (Communications Cable)
3. USB

Figure 3-2: Display Connections

### Caution

EQUIPMENT DAMAGE. Ensure that the interconnecting cable is fitted correctly before power on.

### Warning

PERSONAL INJURY. The CLARITY display should be mounted in a convenient location to eliminate the potential entanglement with the exposed rotating parts.

Ports	Description
Interconnecting Cable	Connects the CLARITY Display to the main control board. Provides power and communication between the main control board and the CLARITY display.
USB	USB Port allows the connection of a USB memory stick for functions such as system software updates, transferring Jobs and backup/restore of system archive or clone files. <b>Note:</b> Real Time Data communications not supported.

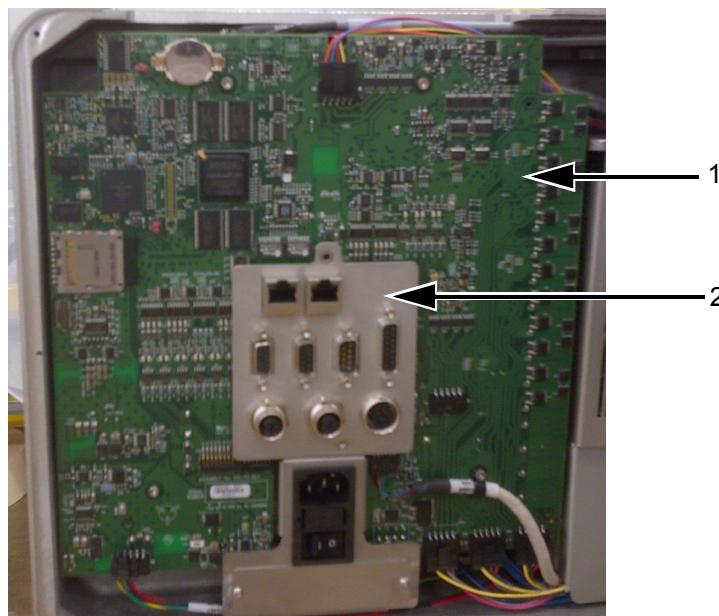
Table 3-1: Display Connections

## Labeler

The labeler consists of the following main parts:

### Main Controller Board for the LPA

The main controller board controls the different functions of the LPA. The interconnecting cable communicates with the CLARITY display and provides power to it.



- 1. Main Controller Board
- 2. Main Controller Board - Connectors

Figure 3-3: Main Controller Board



### Connectors

The controller board provides the following connections.

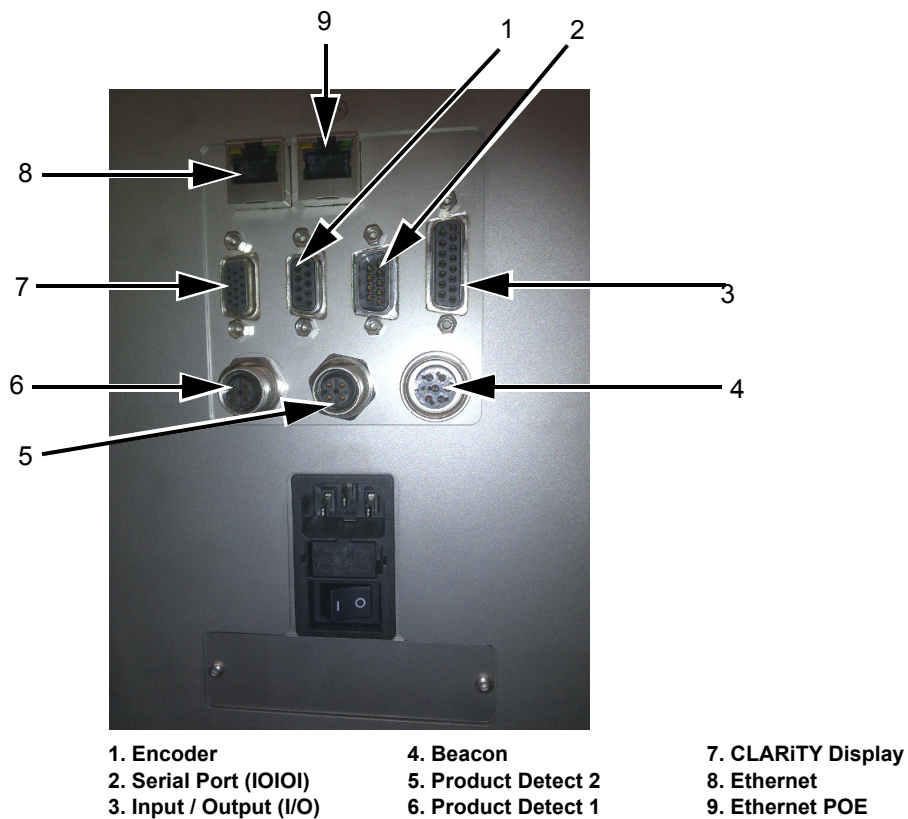


Figure 3-4: Connector

	Connectors	Description
1	Encoder	Port for connecting a shaft encoder to the controller to tell the software how fast the substrate is traveling.
2	Serial Port (IOIOI)	RS-232 Serial Port for connecting to PC, PLC or other capable device.
3	Input/Output (I/O)	Port for connecting external devices to the LPA's hardware inputs and outputs.
4	Beacon	Port for connecting external beacon. For more details, refer to the IPL chapter of Service Manual.
5	Product Detect 2	Second product detector connector is used for bi-directional, reverse print or barcode scanning.
6	Product Detect 1	The product detector connector detects the product and informs the LPA when to print and apply the label on the product.

Table 3-2: Controller Connections

	Connectors	Description
7	CLARiTY Display	Port for Communicating with the CLARiTY Display and provides power to it.
8	Ethernet	RJ-45 port for connecting the printer to a TCP/IP network
9	Ethernet POE (Power Over Ethernet)	RJ-45 port for connecting the printer to a TCP/IP network device that requires Power Over Ethernet (POE) support.

Table 3-2: Controller Connections (Continued)

**Note:** When an applicator is purchased then additional connector(s) are provided as required.

### Ribbon Web

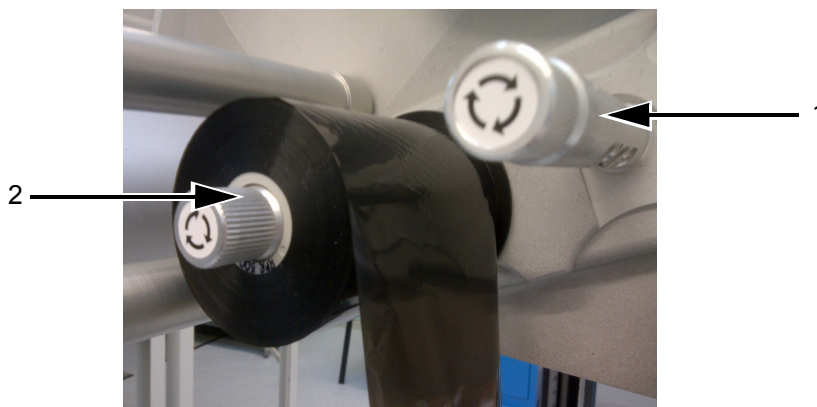
**Note:** In Direct Thermal applications, the ribbon web is not required.

The ribbon is routed from the ribbon supply mandrel, through the printhead to the ribbon waste mandrel. This forms the ribbon web.

### Ribbon Supply Mandrel (Black disc)

The ribbon supply mandrel (with black disc) holds the ribbon, that is pre-coated with ink. During printing, the ribbon is supplied to the thermal printhead where the ink is applied onto the labels.

**Note:** The ribbon supply mandrel for 160mm version has a pullout shaft and does not include the black disc.



- 1. Ribbon Waste Mandrel
- 2. Ribbon Supply Mandrel

Figure 3-5: Ribbon Mandrels

## Ribbon Waste Mandrel

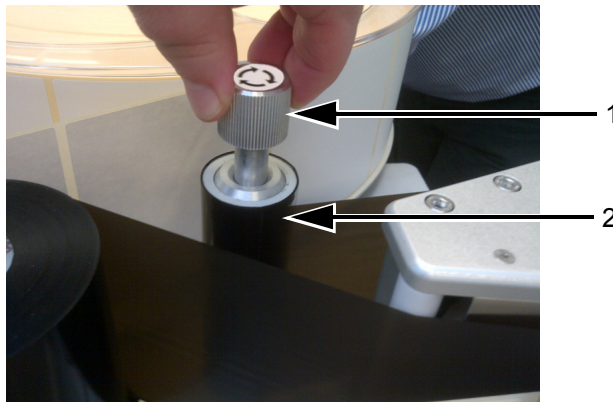
 **Warning**

PERSONAL INJURY. Do not use a sharp object (such as a knife or blade) to remove the waste ribbon core due to the risk of personal injury or equipment damage. Use the pullout shaft in the ribbon waste mandrel to remove the core with ease.

---

The ribbon waste mandrel collects the waste ribbon that remains after the label has been printed.

The waste ribbon can be easily removed by using the pullout shaft in the ribbon waste mandrel which allows the core to be easily removed.



- 1. Pullout Shaft
- 2. Ribbon Waste Mandrel

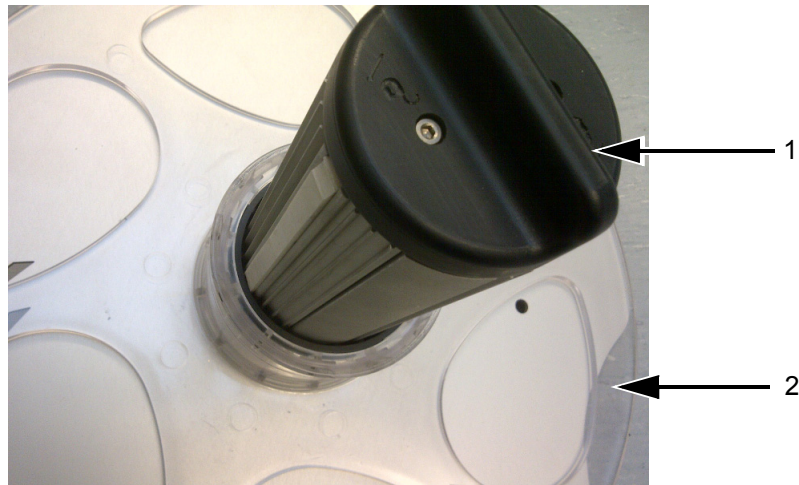
Figure 3-6: Ribbon Mandrels

## Label Web

The labels are routed from the label supply mandrel, through the printhead assembly to the label waste mandrel. This forms the label web.

## Label Supply Mandrel

The label supply disc holds the label roll in place on the mandrel. The mandrel lock is used to retain the roll in place. The mandrel lock indicates the locking and unlocking directions.



1. Mandrel Lock
2. Label Supply Disc

Figure 3-7: Label Supply Mandrel

## Dancer Arm

The dancer arm is designed to absorb the change in tension of the label web, during its movement through the LPA.

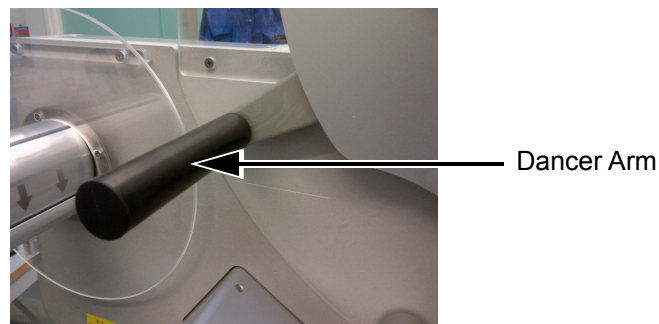


Figure 3-8: Dancer Arm

### Idler rollers

The idler rollers are free-spinning rollers that support and guide the label web through the LPA. The position of the rollers is set for optimum feeding of the label web.

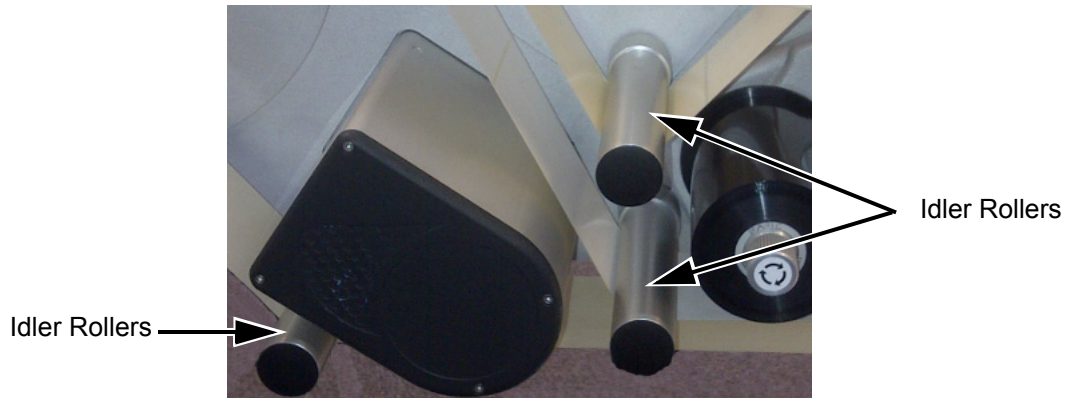


Figure 3-9: Idler Rollers

### Label Waste Mandrel

The label waste mandrel winds the empty label backing (waste) that remains after the label has been printed and applied on the product. The mandrel lock is used to hold and retain the roll in place and allows easy removal of the waste roll. The mandrel lock indicates the locking and unlocking directions.

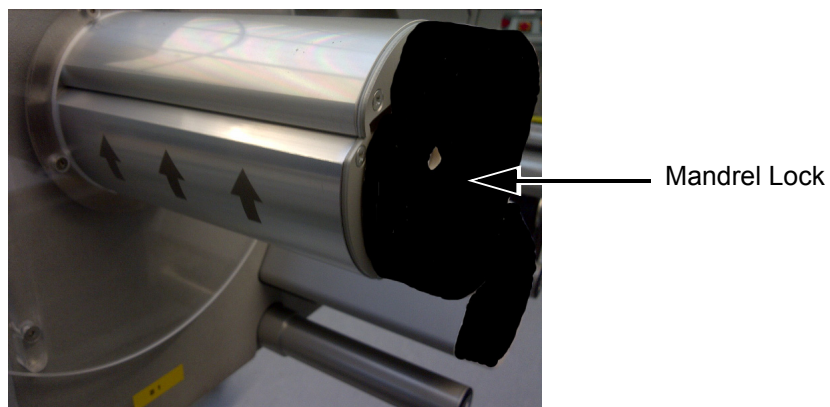


Figure 3-10: Label Waste Mandrel

## Emergency Stop (E-Stop)

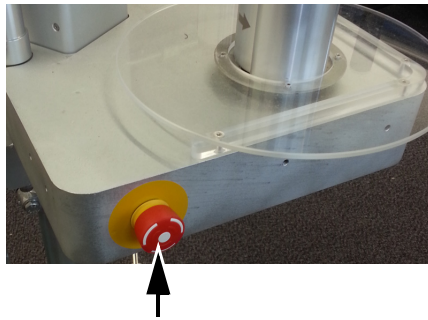


### Warning

PERSONAL INJURY. The LPA has exposed rotating parts. Keep hands, long hair, ties, loose clothing and so on away from the machine at all times, when it is switched on. Do not wear jewelry, e.g. ear or finger rings, while working with the equipment.

In case of emergency, the LPA can be stopped immediately by pressing the E-Stop button. When the E-Stop button is pressed, power to the label drive is removed and the LPA is stopped. A fault message is displayed.

The E-Stop button is fitted on the side wall of the machine (see Figure 3-11).



E-Stop Button

*Figure 3-11: Emergency Stop Button Position*

The E-Stop is reset by pulling out the E-Stop button. However, the LPA will remain in fault mode until the fault message is cleared.



The warning label for moving parts is attached on the face of the baseplate of the machine.



Figure 3-12: Moving Parts Warning Label

 **Warning**

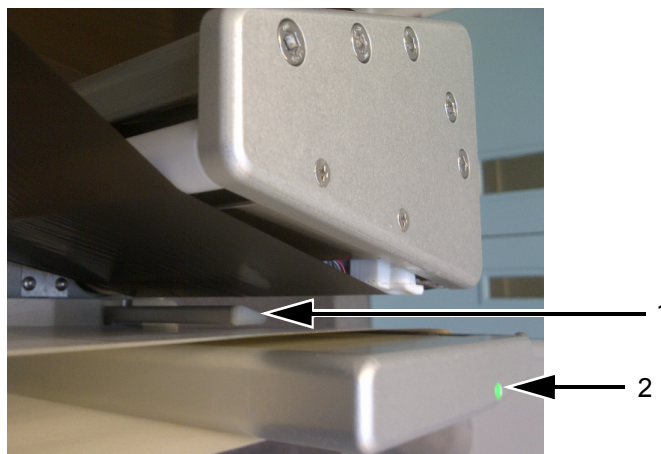
**PERSONAL INJURY.** Do not, under any circumstances, remove or obstruct any warning, caution, or instruction labels present on the equipment. If any part of these labels become damaged, worn or removed they must be immediately replaced.

## Sensors

The LPA is equipped with the following sensors to ensure correct operation of the system without manual intervention.

### Label Gap Sensor

The label gap sensor detects the gap between each label. The LED (item 2, Figure 3-13) displays the status of the sensor as given below.



- 1. Label Gap Sensor
- 2. LED

Figure 3-13: Label Gap Sensor




LED Color	Status	Action Required
<p data-bbox="251 331 381 363">Bright Red</p> 	<p data-bbox="706 331 1052 363">No Label material is detected</p>	<p data-bbox="1138 331 1377 394">Route the label web correctly</p>
<p data-bbox="251 751 414 783">Flashing Red</p> 	<p data-bbox="706 751 1096 877">Ribbon and Label detected indicating that the ribbon is threaded incorrectly and is detected by the label gap sensor</p>	<p data-bbox="1138 751 1393 814">Route the ribbon web correctly</p>
<p data-bbox="251 1165 332 1197">Green</p> 	<p data-bbox="706 1165 909 1197">Label is detected</p>	<p data-bbox="1138 1165 1360 1228">No operator action required</p>

Table 3-3: LED Status



LED Color	Status	Action Required
Bright Green 	Label gap is detected	No operator action required

Table 3-3: LED Status (Continued)

## Printhead

The printhead is equipped with a series of very small, densely clustered heating elements (dots) mounted on a ceramic substrate. When electrical current is supplied to the dots, they get heated rapidly.

Thermal Transfer Print melts the ink on the ribbon. The ink deposits on the label, and quickly dries after the label leaves the printhead.

In Direct Thermal, the color change of the label is directly caused by the heating elements without ribbon.

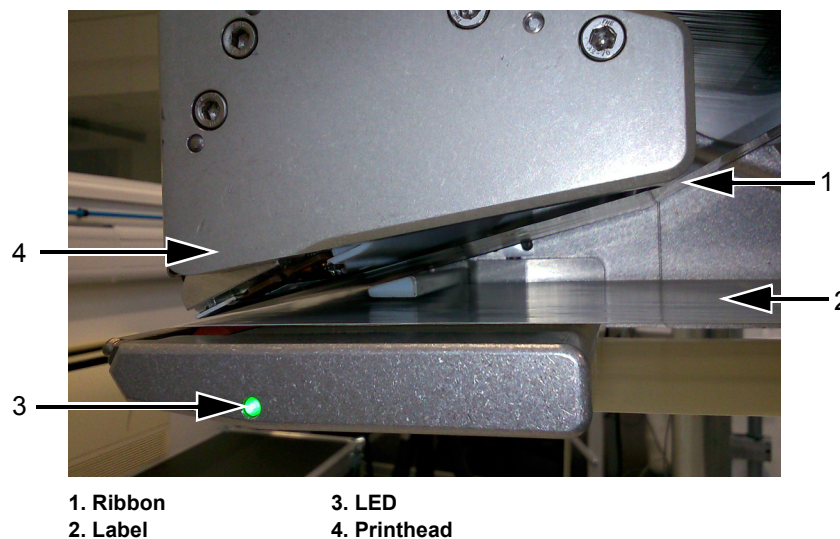


Figure 3-14: Printhead

## Latch

The 160mm LPA has a latch connecting the printhead and the print roller support plate.

For optimum print performance, the latch needs to be closed during printing and opened to allow label and ribbon changes.

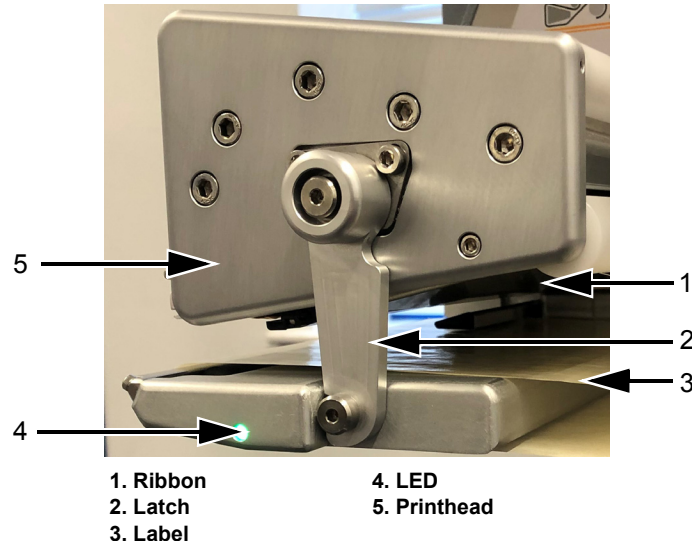


Figure 3-15: Printhead - Latch

## Applicator

The LPA with 53mm, 76mm, 107mm printhead options, supports the following varieties of applicators:

- As standard, the LPA is supplied with a wipe down roller for direct apply to the product.
- Telescopic Tamp applicator.
- Rear Corner Wrap Applicator
- Front of Pack Applicator

For more details on the applicator functions, refer to the appropriate addendum.

- 300T Tamp Applicator Addendum (P/N 462475)
- Rear Corner Wrap Applicator Addendum (P/N 462571)
- Front of Pack Applicator Addendum (P/N 462554)

# CLARiTY Operating System

# 4

This chapter contains the following topics:

- Getting started with the CLARiTY operating system
- Using the Home page
- Using the Tools page
- Password Protection

## Getting started with the CLARiTY

CLARiTY is an icon-based operator control system. It has an easy-to-use touch screen and most areas of the display are active, that is, touching an area on the screen is like pressing a button on a traditional control panel. All technical aspects of the LPA setup and control are accessed through the *Tools* button.

Figure 4-1 on page 4-2 shows the home page of the CLARiTY operator control system.

**Note:** *If password protection is enabled, the options available may be restricted dependent on user level. Refer to “Password Protection” on page 4-38 for more information.*

## Using the Home Page

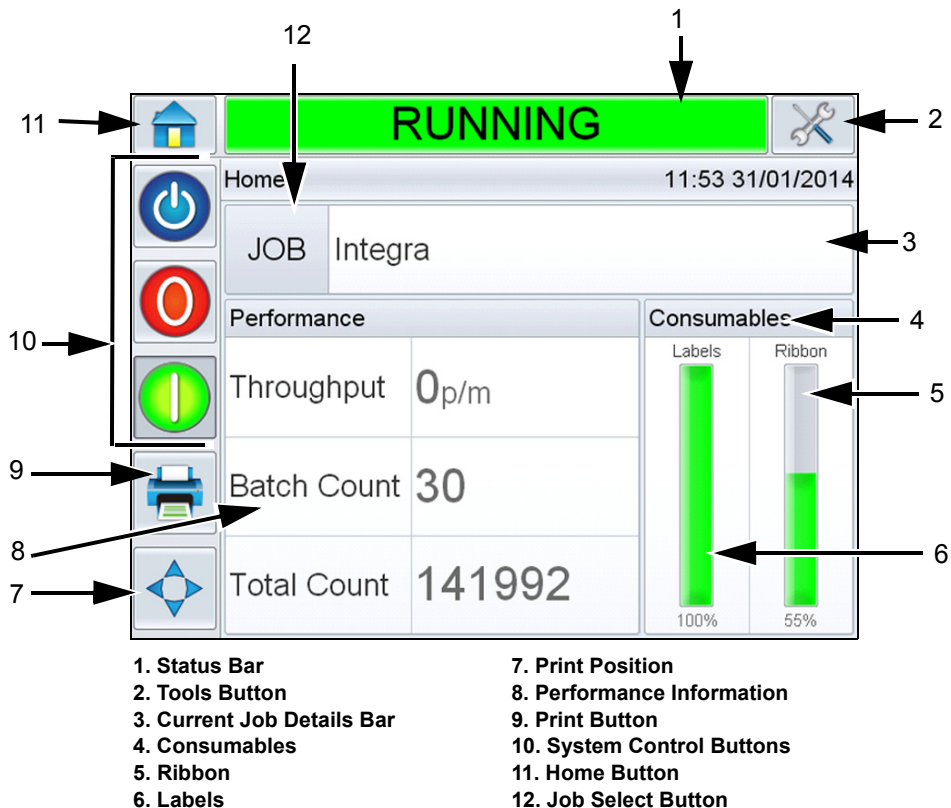


Figure 4-1: CLARiTY Home Page

### Warning

PERSONAL INJURY. The LPA starts printing if you touch the status bar when the LPA is in *OFFLINE* mode. Make sure that you do not touch the status bar if the LPA is not required to run.

Buttons	Description
Status Bar	<p>Provides information about the status of the LPA.</p> <ul style="list-style-type: none"> <li>• <b>Running:</b> LPA is on and ready to print when the proper print trigger is received.</li> <li>• <b>Offline:</b> LPA is on and not printing.</li> <li>• <b>Shutdown:</b> Power to the printhead is disabled and not printing.</li> <li>• <b>Warning:</b> Conditions exist that the Operator should be aware of, but do not keep the system from printing.</li> <li>• <b>Fault:</b> Conditions exist to keep the system from printing.</li> <li>• Allows the user to toggle between offline and running mode, enabling or disabling printing.</li> <li>• Allows the user to access the current warning and fault screens if any present.</li> </ul>
Tools Button	Opens the Tools menu when selected.
Current Job Details Page	Displays the information about the current job and when selected, opens the current job details screen.
Consumables	<p>Displays the <i>Consumables</i> page showing labels and ribbon information.</p> <p>The screenshot shows a window titled 'Consumables' with a left-pointing arrow. It contains two rows of progress indicators: 'Labels' with a full green bar and '100%' to its right, and 'Ribbon' with a partially filled green bar and '55%' to its right. Both rows have a right-pointing arrow. Below these is a large light blue rectangular area.</p>

Table 4-1: Home Page


Buttons	Description										
Labels	<p>Displays the following label information (user can also access <i>Labels</i> page by navigating to <i>Consumables &gt; Labels</i>):</p> <ul style="list-style-type: none"> <li>• <b>Percentage:</b> Percentage of label available</li> <li>• <b>Estimated Empty Time:</b> Estimated time by when the label will empty based on the current job and the production rate.</li> <li>• <b>Estimated Time Remaining:</b> Estimated time remaining based on the current job and the production rate.</li> <li>• <b>Last Changed:</b> Date and time when the label was last changed.</li> </ul>  <table border="1" data-bbox="771 682 1339 1123"> <thead> <tr> <th colspan="2">Consumables → Labels</th> </tr> </thead> <tbody> <tr> <td>Percentage</td> <td>100%</td> </tr> <tr> <td>Estimated Empty Time</td> <td>N/A</td> </tr> <tr> <td>Estimated Time Remaining</td> <td>N/A</td> </tr> <tr> <td>Last Changed</td> <td>16:22 30/01/2014</td> </tr> </tbody> </table>	Consumables → Labels		Percentage	100%	Estimated Empty Time	N/A	Estimated Time Remaining	N/A	Last Changed	16:22 30/01/2014
Consumables → Labels											
Percentage	100%										
Estimated Empty Time	N/A										
Estimated Time Remaining	N/A										
Last Changed	16:22 30/01/2014										

Table 4-1: Home Page (Continued)


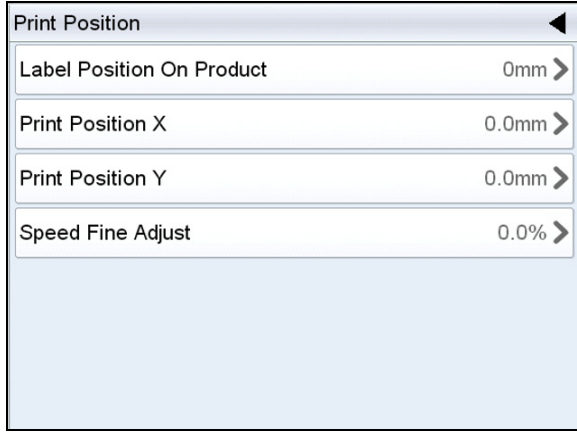
Buttons	Description
Ribbon	<p>Displays the following ribbon information (user can also access <i>Ribbon</i> page by navigating to <i>Consumables &gt; Ribbon</i>):</p> <ul style="list-style-type: none"> <li>• <b>Percentage:</b> Percentage of ribbon available.</li> <li>• <b>Estimated Empty Time:</b> Estimated time by when the ribbon will empty based on the current job and the production rate.</li> <li>• <b>Estimated Time Remaining:</b> Estimated time remaining based on the current job and the production rate.</li> <li>• <b>Last Changed:</b> Date and time when the ribbon was last changed.</li> </ul> 
Print Position	<p>Opens the <i>Print Position</i> menu when selected. Permits the user to set the label position on the product, print position X, and print position Y on the label. Small label speed adjustments can also be made. For more information, refer “Adjust Label Print Position” on page 6-2.</p> 

Table 4-1: Home Page (Continued)

Buttons	Description
Performance Information	<p>Displays the following printer performance information:</p> <ul style="list-style-type: none"> <li>• <b>Throughput:</b> Throughput of the LPA in prints per minute since the current Job was loaded.</li> <li>• <b>Batch Count:</b> Number of prints since the current Job was loaded.</li> <li>• <b>Total Count:</b> Number of prints over the life of the LPA.</li> </ul> <p>Selecting this area opens the performance page showing additional statistical information on the printer throughput. For more information, refer “Performance Page” on page 4-7.</p>
Print Button	<p>Permits the user to print a test image on selection.</p> <p><b>Note:</b> <i>This option is only present if option is enabled on the printer using CLARiTY Configuration Manager.</i></p>
System Control Buttons	<p>Permits the user to switch off or switch on the LPA. It also allows the user to change the LPA between <i>RUNNING</i> and <i>OFFLINE</i> modes.</p>
Home Button	<p>Returns the user to the <i>Home</i> screen as shown in Figure 4-1 on page 4-2.</p>
Job Select Button	<p>Permits the user to select the required job from the list. Refer to “Selecting a Job” on page 5-11.</p>

Table 4-1: Home Page (Continued)



## Performance Page

Touch *Performance* on the home page to access the performance page (Figure 4-2).

Performance	
Throughput	0
Batch Count	30
Total Count	141992
Availability	
Ignored Print Signals	89799
Short Term Speed	0
Short Term Efficiency	0

Figure 4-2: Performance Page

Buttons	Description
Throughput	Shows the throughput of the LPA in prints per minute since the current Job was loaded.
Batch Count	Shows the number of prints since the current Job was loaded.
Total Count	Shows the number of prints over the life of the LPA.
Availability	Shows the printer availability and operational availability information. For more information, refer "Availability Page" on page 6-37.
Ignored Print Signals	Shows the number of ignored print signals.
Short Term Speed	Shows the average speed over 5 minutes of operation.
Short term Efficiency	Shows the efficiency of actual prints per minute over the nominated prints per minute which is given as an input for a period of 5 minutes.
Long Term Speed	Shows the average speed over 10 minutes of operation.
Long term Efficiency	Shows the efficiency of actual prints per minute over the nominated prints per minute which is given as an input for a period of 10 minutes.

Table 4-2: Performance Page

Buttons	Description
Trend Speed	Shows the trend speed value.
Trend Efficiency	Shows the trend efficiency value.
Nominal Speed	Allows the user to enter required packs per minute speed.

Table 4-2: Performance Page (Continued)

## Using the Tools Page

Touch the *Tools* icon on the home page to access the tools page (Figure 4-3).

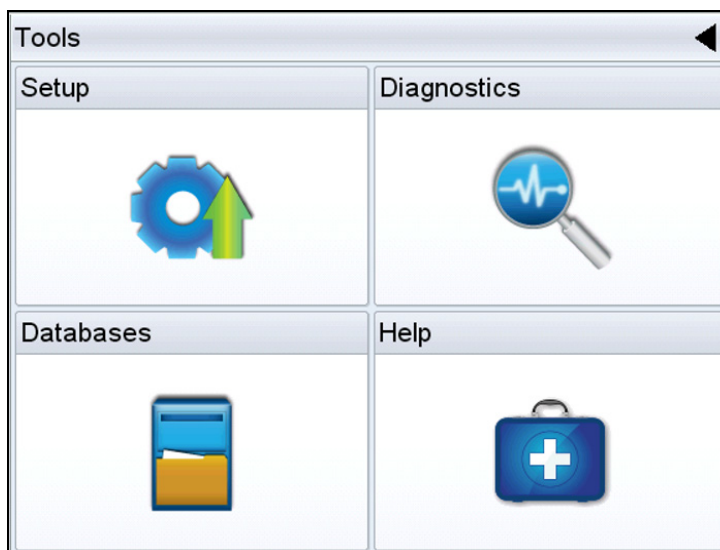


Figure 4-3: Tools Page

Buttons	Description
Setup	Permits the user to modify a small subset of the LPA setup parameters.
Diagnostics	Provides on-line fault finding routines and diagnostic functions.
Databases	Provides control over the jobs database of the LPA.
Help	Allows the user to view <i>Tutorial Videos</i> for specific tasks and basic troubleshooting.

Table 4-3: Tools Page

## Working with Setup Page

Navigate to *Tools > Setup* (Figure 4-4).

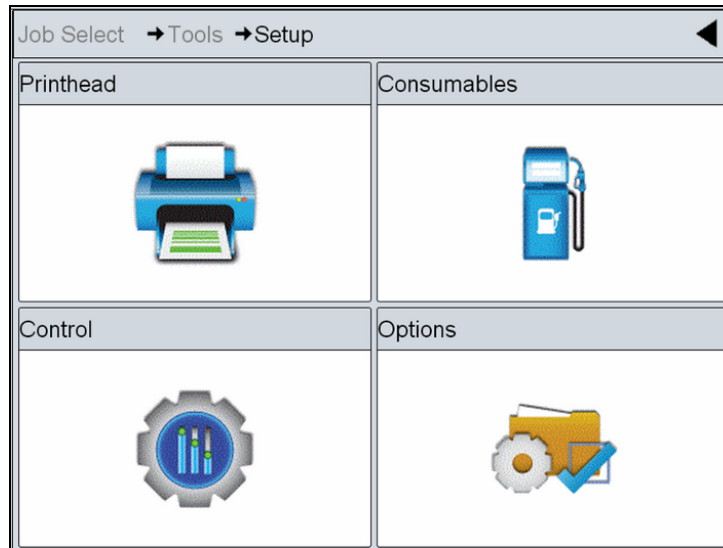


Figure 4-4: Setup Page

The *Setup* page allows the user to access the following parameters:

Buttons	Description
Printhead	Allows the user to setup print position, print darkness, print force etc. Refer to “Working with Printhead Setup Page” on page 4-10.
Consumables	Allows the user to set printer ribbon width. Refer to “Working with Consumables Setup Page” on page 4-12.
Control	Allows the user to setup user interface, screen orientation, communications etc. Refer to “Working with the Control Setup Page” on page 4-13.
Options	Allows the user to setup barcode scanner. Also user can setup applicator when attached. Refer to “Working with the Options Setup Page” on page 4-15.

Table 4-4: Setup Page

## Working with Printhead Setup Page

Navigate to *Tools > Setup > Printhead* (see Figure 4-5).

Tools → Setup → Printhead	
Print Darkness	80% >
Print Force	100% >
Label Feed Speed	200mm/s >
Label Position On Product	0mm >
Print Position X	0.0mm >
Print Position Y	0.0mm >
Label Stopping Position	0.0mm >

Figure 4-5: Printhead Setting

Buttons	Description
Print Darkness	Allows the user to set/adjust the print darkness between 50% and 100% in 1% increments.
Print Force	Allows the user to set/adjust the force to be applied while printing on the label.
Label Feed Speed	Allows the user to set/adjust the speed at which label is fed for printing in millimeter per second. <b>Note:</b> Label feed speed is set during the installation wizard setup. In encoder mode, this value cannot be adjusted. When not using an encoder, this value can be set/adjusted to ensure that it matches line speed.
Label Position on Product	Allows the user to set/adjust the position of the label on the product.

Table 4-5: Printhead Page

Buttons	Description
Print Position X	Allows the user to set/adjust the print position on the label in X axis. X is the distance from the label front to the print position in millimeter (mm). For more information refer to "Adjust Label Print Position" on page 6-2.
Print Position Y	Allows the user to set/adjust the print position on the label in Y axis. Y axis is the axis running across the label width in millimeter (mm). For more information refer to "Adjust Label Print Position" on page 6-2.
Label Stopping Position	Allows the user to setup/modify the distance (mm) of the label stopping position with respect to the peel tip. <b>Note:</b> 0 mm setting will stop the front of the label at the peel tip.
Print Orientation	Allows the user to set/adjust the print orientation to 0 or 180 degrees depending on requirements.
Speed Fine Adjust	Allows the user to fine adjust the label speed to ensure label is correctly placed on the product.

Table 4-5: Printhead Page (Continued)

## Working with Consumables Setup Page

Navigate to *Tools > Setup > Consumables* (see Figure 4-6).

*Consumables* page enables the user to set the width of the printer ribbon.

**Note:** *It is important that the ribbon width fitted matches the print roller fitted. The printhead can be damaged if it strikes the plate.*



Figure 4-6: Consumables

Buttons	Description
Ribbon Width	Allows the user to set printer ribbon width
Recalibrate Label Sensor	Allows the user to view and change the type of label sensor.
Label Finish	Allows the user to view and change the type of label finish. For example, Standard.

Table 4-6: Consumables Page

### Working with the Control Setup Page

Navigate to *Tools > Setup > Control* (see Figure 4-7).

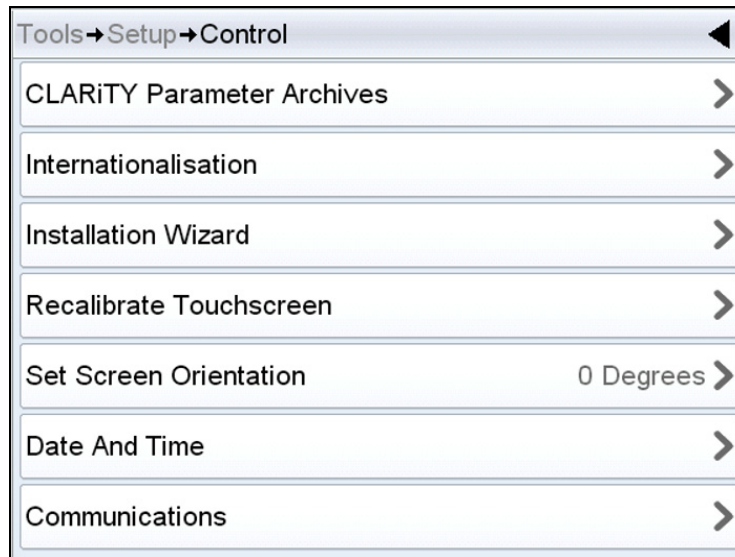


Figure 4-7: Control Page

Buttons	Description
CLARiTY Parameters Archives	Allows the user to save current printer configurations and to restore previously saved printer configurations. <b>Note:</b> When a USB memory stick is connected to the printer, archives can also be saved or restored to and from the USB drive as well. For more information, refer to Service Manual.
CLARiTY Printer Clones	Allows the user to create or restore a Clone file to and from the USB memory stick. A Clone file contains all of the printer settings and Job files. <b>Note:</b> Only present when a USB memory stick is inserted. For more information, refer to Service Manual.
CLARiTY Update	Allows the user to select from a list of available updates. Update files must be saved in <i>clarityupdate</i> folder on the root of the USB memory stick to be recognized. <b>Note:</b> Only present when a USB memory stick containing update files is inserted. For more information, refer to Service Manual.

Table 4-7: Control Page

Buttons	Description
Internationalisation	Allows the user to set the language of the CLARiTY screen, the international region/country which control the date/time formats and measurement units displayed within CLARiTY.
Installation Wizard	Allows the user to configure the printer for installation. For more information refer "Installation Wizard" on page 5-10.
Recalibrate Touchscreen	Allows the user to recalibrate the touchscreen, if touching the screen does not accurately locate the correct CLARiTY button or Icon. The printer requests the user to touch several crosses which are displayed on the screen, one after the other. The screen is recalibrated when the automated process is complete. <b>Note:</b> <i>If the calibration of the machine has too many errors and does not allow a user to navigate to this screen via the CLARiTY panel, the same functionality can be triggered from within CLARiTY Configuration manager (for more information, refer to Service Manual).</i>
Set Screen Orientation	Allows the user to rotate the entire display through 180 degrees in the event that the CLARiTY panel is installed in an inverted orientation
Date and Time	Allows the user to set the system date and time of the printer.
Communications	Allows the user to reset the printer's serial port to factory default settings. These default settings configure the printer to communicate with CLARiSOFT and CLARiTY Configuration Manager.

Table 4-7: Control Page (Continued)



### Working with the Options Setup Page

Navigate to *Tools > Setup > Options* (see Figure 4-8).

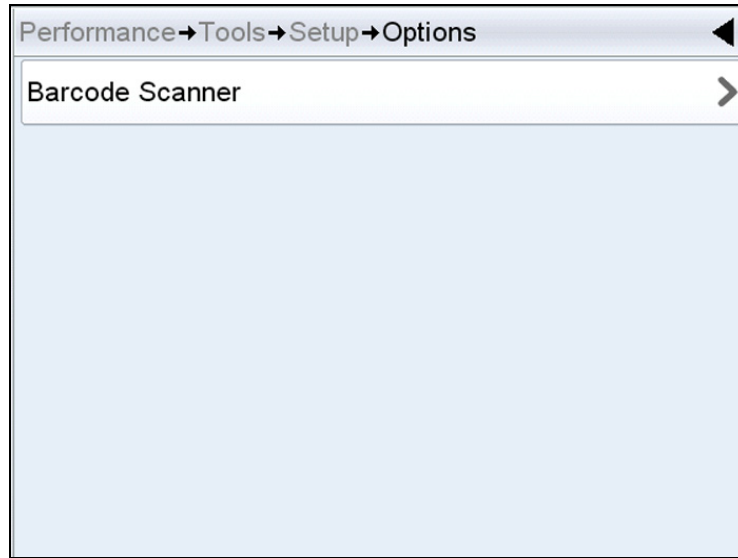


Figure 4-8: Options Page

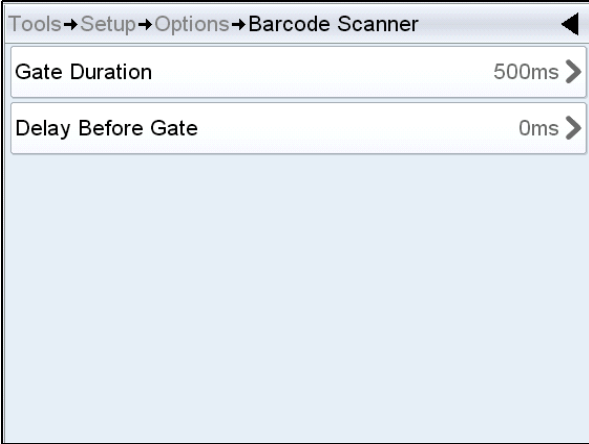
Buttons	Description
Barcode Scanner	<p>Allows the user to setup the barcode scanner for barcode validation of the label after it has been applied on the product. Barcode validation is confirmation that the barcode can be read and the data content is correct.</p>  <p>The screenshot shows the navigation path: Tools → Setup → Options → Barcode Scanner. Below this, there are two settings: 'Gate Duration' set to 500ms and 'Delay Before Gate' set to 0ms. Both settings have right-pointing arrows indicating they are adjustable.</p>
Applicator	<p>Allows the user to setup the applicator.  <b>Note:</b> This menu is available only when an applicator is attached to the LPA.</p>

Table 4-8: Control Page

## Working with Diagnostics

Navigate to *Tools > Diagnostics* (see Figure 4-9).

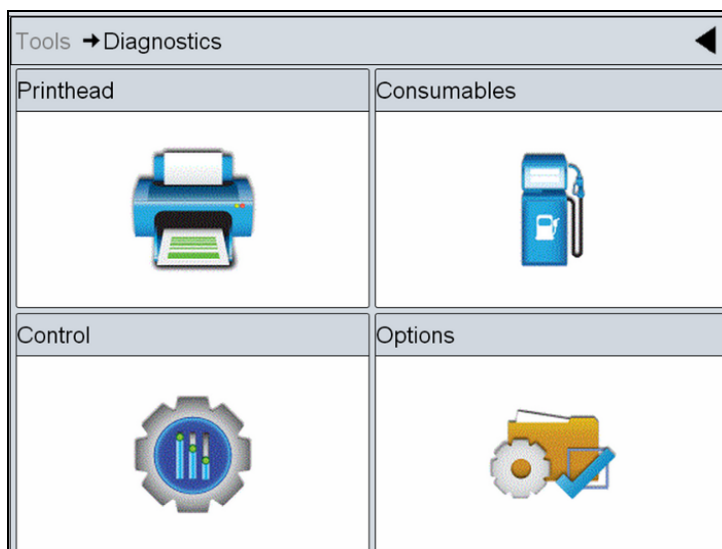


Figure 4-9: Diagnostics Page

The diagnostics page allows the user to view the following pages:

Buttons	Description
Printhead	Shows the event log, inputs, outputs, speed profiles, printhead health etc. Refer to “Working with Printhead Diagnostics” on page 4-17.
Consumables	Shows the current value of ribbon and label parameters. Refer to “Working with Consumables Diagnostics” on page 4-30.
Control	Shows the software versions, system information, contact information, communication port, production audit log and all Jobs currently in the printer's queue. Refer to “Working with Control Diagnostics” on page 4-31.
Options	Shows the type of applicator and barcode scanner used. Refer to “Working with Options Diagnostics” on page 4-34.

Table 4-9: Diagnostics Page

## Working with Printhead Diagnostics

Navigate to *Tools > Diagnostics > Printhead* (see Figure 4-10).

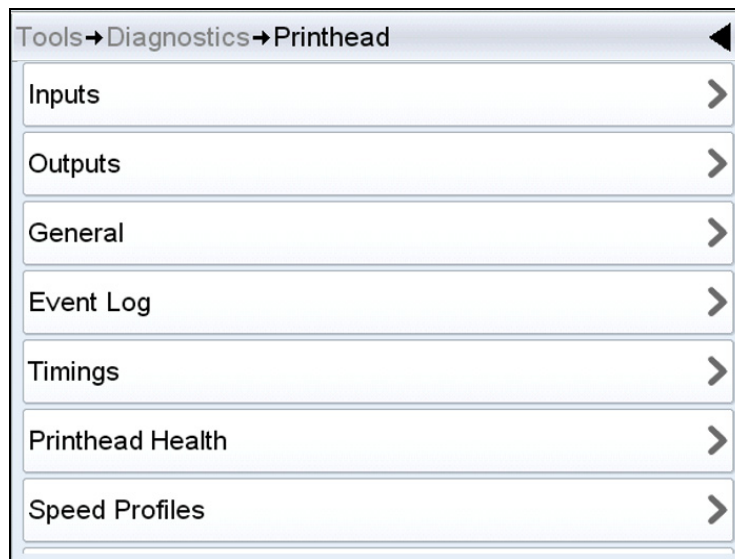


Figure 4-10: Printhead Diagnostics Page

The *Printhead* diagnostics page allows the user to view the following parameters:

- Inputs
- Outputs
- General
- Event Log
- Timings
- Printhead Health
- Speed Profiles
- Troubleshooting

## Inputs

Navigate to *Tools > Diagnostics > Printhead > Inputs* (see Figure 4-11).

Tools → Diagnostics → Printhead → Inputs	
Encoder	>
Line Select	>
Applicator	>
Product Sensor 1	Off
Product Sensor 2	Off
Ignore Product	Off
Line Encoder Present	No

Figure 4-11: Diagnostics Printhead Inputs 1 Page

Buttons	Description
Encoder	Allows the user to view the encoder parameters. For information, refer Encoder on page 4-20.
Line Select	Allows the user to view the current status of the inputs being used for the Line Select feature of the printer. For information, refer Line select on page 4-21.

Table 4-10: Inputs Diagnostics Page

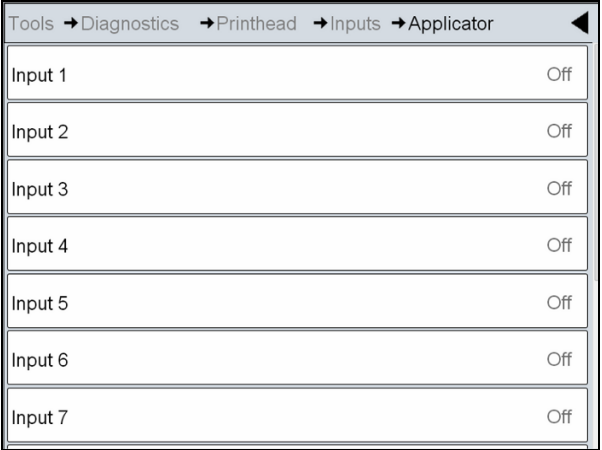
Buttons	Description														
Applicator	<p>Allows the user to view the status of the various inputs to applicator. For more information refer to the relevant Applicator Addendum.</p>  <p>The screenshot shows a navigation path: Tools → Diagnostics → Printhead → Inputs → Applicator. Below this path is a list of seven input status indicators:</p> <table border="1" data-bbox="784 422 1382 848"> <tr><td>Input 1</td><td>Off</td></tr> <tr><td>Input 2</td><td>Off</td></tr> <tr><td>Input 3</td><td>Off</td></tr> <tr><td>Input 4</td><td>Off</td></tr> <tr><td>Input 5</td><td>Off</td></tr> <tr><td>Input 6</td><td>Off</td></tr> <tr><td>Input 7</td><td>Off</td></tr> </table>	Input 1	Off	Input 2	Off	Input 3	Off	Input 4	Off	Input 5	Off	Input 6	Off	Input 7	Off
Input 1	Off														
Input 2	Off														
Input 3	Off														
Input 4	Off														
Input 5	Off														
Input 6	Off														
Input 7	Off														
Product Sensor 1	Shows the status of the product sensor 1.														
Product Sensor 2	Shows the status of the product sensor 2.														
Ignore Product	Shows if the <i>Ignore Product</i> option is activated or not. If activated, controller sends signal to disable the print.														
Line Encoder Present	Shows the status of the line encoder.														
Dancer Arm Limit Sensor	Shows the status of the sensor.														
Dancer Arm Position	Shows the operation of the dancer arm.														
Ribbon Sensor	Shows the operation of the sensor.														
Printhead Position Sensor	Shows the operation of the sensor.														
Label Position Sensor	Shows the operation of the sensor.														
Label Supply Reel Sensor	Shows the status of the sensor.														
Label Gap Sensor	Shows the status of the sensor.														
Label Gap Sensor Input	Shows the operation of label gap sensor input.														
Motor Volts	Displays the motor voltage.														
Printhead Volts	Displays the printhead voltage.														

Table 4-10: Inputs Diagnostics Page (Continued)

Buttons	Description
24 Volts Supply	Displays the voltage of the 24 V supply.
5 Volts Supply	Displays the voltage of the 5 V supply.
Printhead Temperature	Displays the Printhead temperature information.
Controller PCB Temperature	Displays the PCB temperature information.

Table 4-10: Inputs Diagnostics Page (Continued)

The *Inputs Diagnostics* page allows the user to view the following parameters:

- Encoder: Touch the *Encoder* button to view the *Encoder* diagnostics page. The *Encoder* diagnostics page allows the user to view the following encoder parameters (see Figure 4-12).

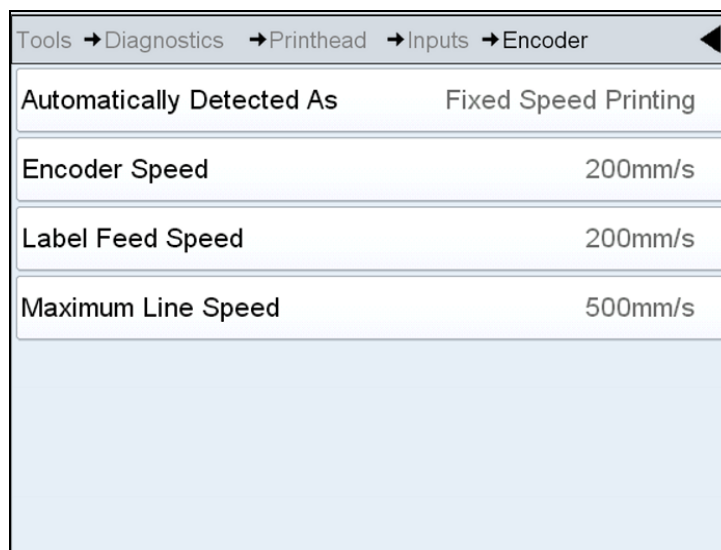


Figure 4-12: Encoder Diagnostics Page

**Note:** When the encoder is fitted, the label feed speed will match the encoder speed.

Buttons	Description
Automatically Detected As	Shows automatically selected printing process.
Encoder Speed	Shows the actual real-time speed of the object being measured by the encoder that is line speed.
Label Feed Speed	Shows the speed at which the label is fed for printing in millimeter per second.

Table 4-11: Encoder Diagnostics Page

Buttons	Description
Maximum Line Speed	Shows the maximum line speed in millimeter per second.

Table 4-11: Encoder Diagnostics Page (Continued)

- Line Select: If the *Line Select* is enabled on the controller, the user can assign a job to the required line. Line Select allows the user to view the current status of the inputs being used for the *Line Select* (see Figure 4-13). For more information, refer “Line Select Mode” on page 6-23.

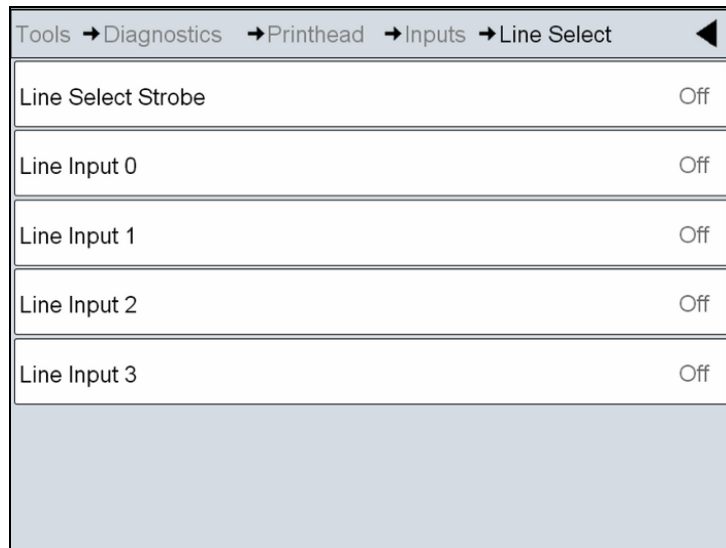


Figure 4-13: Input Line Select Page

## Outputs

Navigate to *Tools > Diagnostics > Printhead > Outputs* (see Figure 4-14). Each button shows the status of a physical output on the printer. Touching the Toggle button allows the user to force the state of an output, Open/Closed or On/Off, which can be useful for diagnostic purposes.

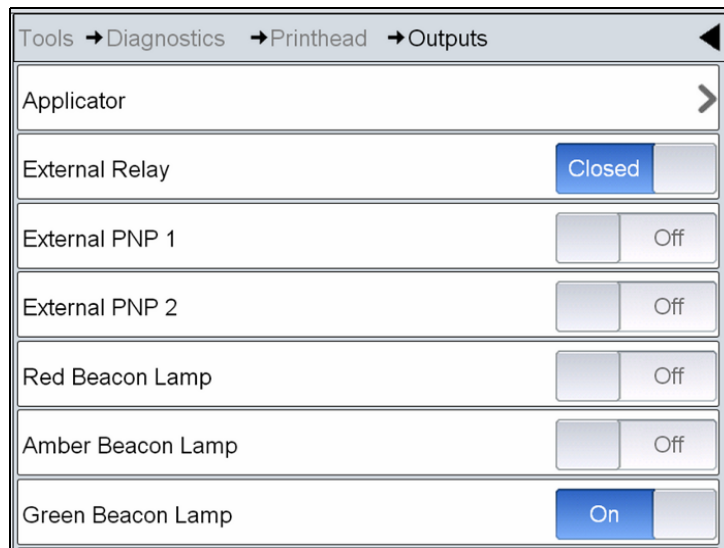


Figure 4-14: Printhead Outputs Diagnostics Page

Buttons	Description
Applicator	Shows the status of the various outputs of the applicator when selected.
External Relay	Shows the status of the configurable relay output.
External PNP 1	Shows the status of the configurable PNP 24V output.
External PNP 2	Shows the status of the configurable PNP 24V output.
Red Beacon Lamp	Indicates that a fault has occurred.
Amber Beacon Lamp	Indicates that a warning message is present.
Green Beacon Lamp	Indicates that LPA is running.
Printhead Position	Shows the information on printhead position.

Table 4-12: Output Diagnostics Page



## General

This screen shows the current value of some basic parameters. Navigate to *Tools > Diagnostics > Printhead > General* (see Figure 4-15). The user can view the different printhead settings like machine hand, printing mode, print roller width, gap sensor type and print test image.

Tools → Diagnostics → Printhead → General	
Machine Hand	Left
Machine Orientation	Horizontal
Printing Mode	Thermal Transfer
Printhead	160mm Thermal
Print Roller Width	162mm
Backfeed	No
Gap Sensor Type	

Figure 4-15: Printhead General Diagnostics Page

Buttons	Description
Machine Hand	Shows the configuration of the machine, left hand or right hand.
Machine Orientation	Shows the orientation of the machine, horizontal or vertical.
Printing Mode	Shows the printing mode, thermal transfer or direct transfer.
Printhead	Shows the current printhead fitted (53mm, 107mm or 160mm).
Print Roller Width	Shows the current print roller width fitted (55mm, 76mm, 110mm, 162mm).
Backfeed	Shows if backfeed is enabled.
Gap Sensor Type	Shows the gap sensor type (point, array or auxiliary).
Label Web Encoder Type	Shows the label web encoder type (eg. AS5145A).

Table 4-13: Printhead General Diagnostics Page

### Event Log

Shows the log of events responsible for applicator downtime. For more information, refer “Overall Equipment Effectiveness - Availability Tools” on page D-1.






Tools → Diagnostics → Printhead → Event Log				
	Event	Date	Time	Duration (mmm:ss)
	<a href="#">(E5050) No Labels Detected</a>	28/02/2020	13:08	12:50 >
	<a href="#">(E5016) Printer Ribbon Break</a>	28/02/2020	12:54	26:58 >
	<a href="#">(E5016) Printer Ribbon Break</a>	28/02/2020	12:54	0:06 >
	<a href="#">(E5016) Printer Ribbon Break</a>	28/02/2020	12:51	2:10 >
	System time has changed	28/02/2020	10:54	
Hide Faults		Hide Warnings		Hide Status
				Export to USB

Figure 4-16: Event Log Page

### Timings

Navigate to *Tools > Diagnostics > Printhead > Timings* (see Figure 4-17).

It is useful in high throughput applications to understand how quickly the printer is able to perform certain functions.

Tools → Diagnostics → Printhead → Timings	
Label Print and Dispense Time	450ms
Label Print and Apply Time	451ms
Job Selection Time	241ms
Job Data Update Time	0ms
Counter Update Time	0ms
Time/Date Update Time	2ms

Figure 4-17: Timings

Buttons	Description
Label Print and Dispense Time	Indicates the time taken from printing to dispensing
Label Print and Apply Time	Indicates the time taken from printing to applying on product
Job Selection Time (ms)	Indicates the time taken in selecting the last job from the moment the image was confirmed, to being ready to print
Job Data Update Time (ms)	Indicates the total time taken to update all the dynamic variables in the image (time, date, counters)
Counter Update Time (ms)	Indicates the time taken to update all the counter fields in the image
Time/Date Update Time (ms)	Indicates the time taken to update all the time/date fields in the image

Table 4-14: Timings Page

## Printhead Health

Navigate to *Tools > Diagnostics > Printhead > Printhead Health* (see Figure 4-18). The user can view the performance of the LPA by checking the health graph.

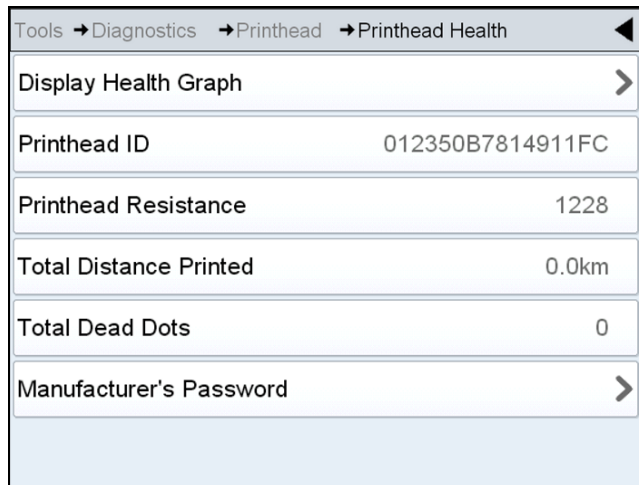


Figure 4-18: Printhead Health

Buttons	Description
<p>Display Health Graph</p>	<p>Display Health Graph displays a multi colored graph indicating the health of each printhead element. For example, a red line in the graph indicates that the individual printhead element resistance is not at its optimal value, indicating that the printhead may need to be changed if the print quality is affected.</p> <div data-bbox="724 1360 1235 1745" style="border: 1px solid black; padding: 5px;"> </div> <p><b>Note:</b> Above example shows that the printhead is in operation and shows signs of wear. In this example, the printhead is in operation without affecting the print quality.</p>

Table 4-15: Printhead Health Page

Buttons	Description
Printhead ID	Allows the user to view the printhead ID.
Printhead Resistance	Allows the user to view the printhead resistance value.
Total Distance Printed	Allows the user to view the total ribbon distance printed.
Total Dead Dots	Allows the user to view the total number of printhead dead dots.
Manufacturer's Password	Provides access to the manufacturer's level.

Table 4-15: Printhead Health Page (Continued)

### Speed Profiles

Navigate to *Tools > Diagnostics > Printhead > Speed profiles* (see Figure 4-19).

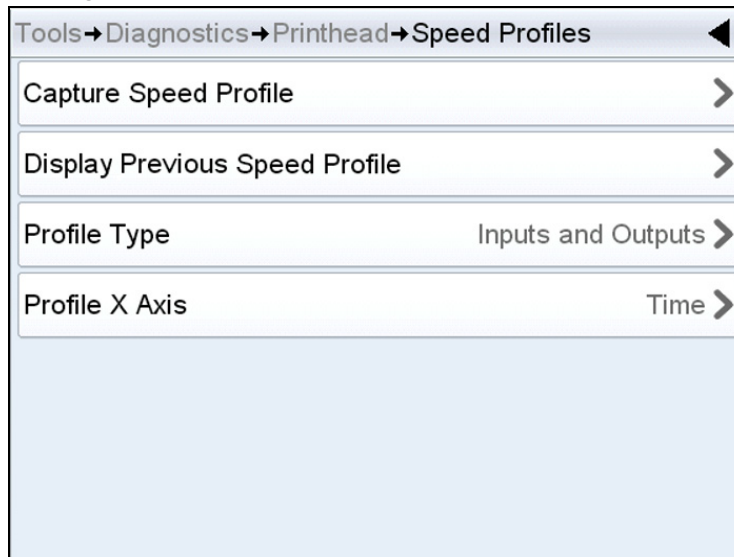


Figure 4-19: Speed Profiles



Buttons	Description
<p>Capture Speed Profile</p>	<p>Allows the user to capture the speed profile. When selected displays a confirmation page. Once confirmed, displays the speed profile graph.</p> <div data-bbox="760 449 1338 884" data-label="Figure"> </div> <p>In the above graph</p> <ul style="list-style-type: none"> <li>• The printer icon  indicates the print cycle.</li> <li>• The pulse icon  indicates the print signal.</li> </ul>
<p>Display Previous Speed Profile</p>	<p>Displays the previous speed profile if available.</p>
<p>Profile Type</p>	<p>Allows the user to select the required type of speed profile from the following:</p> <ul style="list-style-type: none"> <li>• Standard</li> <li>• Printer Performance</li> <li>• Inputs and outputs</li> </ul>
<p>Profile X axis</p>	<p>Allows the user to set the X Axis of the chart to be either time or distance.</p> <p><b>Note:</b> For more information refer Service Manual.</p>

Table 4-16: Timings Page

## Troubleshooting

Navigate to *Tools > Diagnostics > Printhead > Troubleshooting* (see Figure 4-20).



Figure 4-20: Troubleshooting

Buttons	Description
Print Roller Diameter	Allows the user to view and adjust print roller diameter.
Ribbon Roller Diameter	Allows the user to view and adjust ribbon roller diameter.
Ribbon Delay	Allows the user to view and adjust ribbon delay.
Label Finish	Allows the user to view and change the type of label finish.
Print Force	Allows the user to view and change print force.

Table 4-17: Troubleshooting Page

## Working with Consumables Diagnostics

Navigate to *Tools > Diagnostics > Consumables* (see Figure 4-21).

Tools → Diagnostics → Consumables	
Label Supply Diameter	191.5mm
Label Waste Diameter	87.6mm
Label Length	198.6mm
Label Gap Length	2.7mm
Label Stock Type	Blank Labels Only
Ribbon Supply Diameter	32.00mm
Ribbon Waste Diameter	32.00mm

Figure 4-21: Consumables

The Consumables diagnostics page shows the current value of ribbon and label parameters to help you understand the status of the ribbon and the label.

Buttons	Description
Label Supply Diameter	Displays the current diameter of the label on supply mandrel in millimeters.
Label Waste Diameter	Displays the current diameter of the label on waste mandrel in millimeters.
Label Length	Displays the length of the label in millimeters.
Label Gap Length	Displays the amount of gap between the labels in millimeters.
Label Stock Type	Displays the label type used for printing.
Ribbon Supply Diameter	Displays the current diameter of the ribbon on supply mandrel in millimeters.
Ribbon Waste Diameter	Displays the current diameter of the ribbon on waste mandrel in millimeters.
Ribbon Tension	Displays the tension of the ribbon.
Printing Mode	Displays the printing process used.

Table 4-18: Consumables Page



## Working with Control Diagnostics

Navigate to *Tools > Diagnostics > Control* (Figure 4-22).

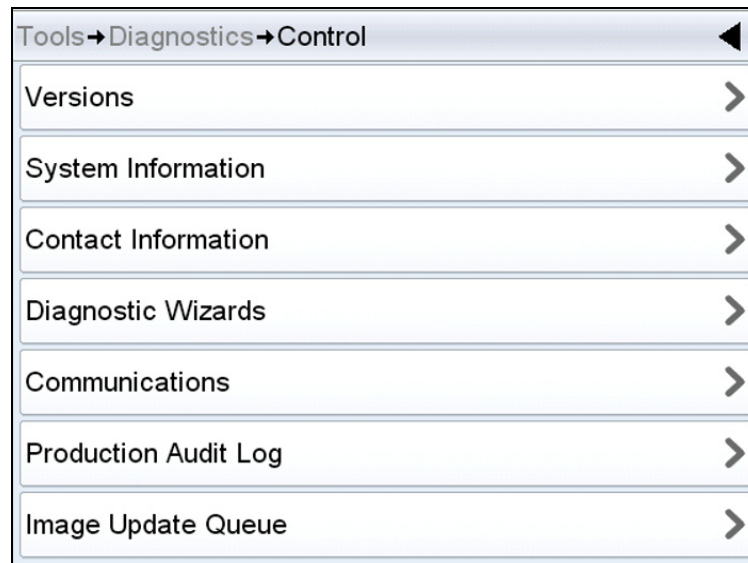


Figure 4-22: Control Parameters

The following parameters can be accessed in Control page:

Buttons	Description
Versions	Displays the software versions of the various software components installed in the LPA. The most important number displayed is the <i>Software Part Number</i> . This is the master version number and all the other data displayed is of secondary importance. <b>Note:</b> <i>If there is any inconsistency among the software components that are installed in the printer, the Software Part Number displays the message 'Incompatible Software Versions'. If this is seen, a CLARiTY software update must be performed, otherwise the printer may perform in an unpredictable manner.</i>
System Information	Displays the serial number and revision number of Printed Circuit Board (PCB), CPU speed and equipment reference information.
Contact Information	Displays the contact information.
Diagnostics Wizards	Allows the user to run machine tests. Refer to service manual for further information.

Table 4-19: Control Parameters

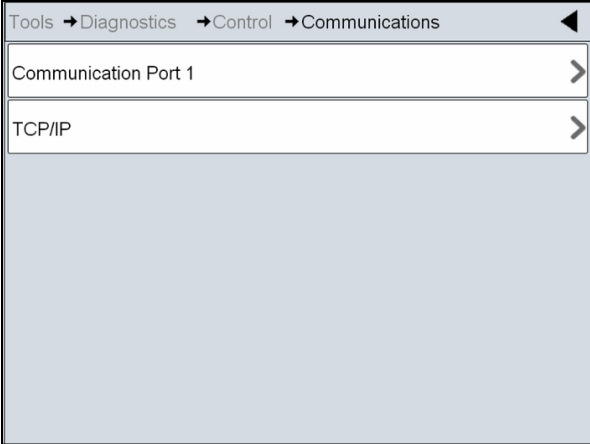

Buttons	Description
<p>Communications</p>	<p>Touch <i>Communications</i> on the <i>Control</i> dialog box. <i>Communications</i> dialog box appears. The following parameters appears in the dialog box:</p>  <ul style="list-style-type: none"> <li>• <b>Communication Port 1:</b> Displays the status of serial port, including the baud rate and usage</li> <li>• <b>TCP/IP:</b> Displays the configuration and status of the printer's network port. For more information see "TCP/IP" on page 4-33</li> </ul>
<p>Production Audit Log</p>	<p>Shows the log of machine changes and user changes made.</p> <p><b>Note:</b> <i>This option is only present if logging is enabled on the printer using CLARiTY Configuration Manager.</i></p> <p><b>Note:</b> <i>Logs can also be backed up to a USB memory stick if one is inserted into the printer</i></p> 
<p>Image Update Queue</p>	<p>Displays all Jobs currently in the printer's queue, and the number of times each Job has been allocated to print. "No Print Limit" indicates that the currently loaded Job will continue to print until a new Job is loaded.</p>

Table 4-19: Control Parameters (Continued)

## TCP/IP

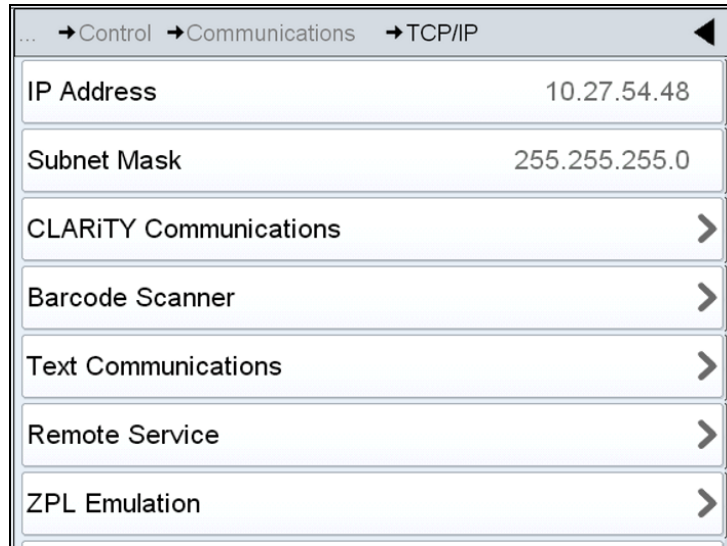


Figure 4-23: TCP/IP Parameters

Buttons	Description
IP Address	Displays the IP Address of the controller
Subnet Mask	Displays the Subnet Mask number
CLARiTY Communications	Displays the TCP/IP port number and CLARiTY network status
Barcode Scanner	Displays the protocol information for the barcode scanner
Text Communications	Displays the TCP/IP port number assigned for Text Communications
Remote Service	Displays status of remote service connection
ZPL Emulation	Displays the TCP/IP port number assigned for ZPL Emulation commands
SATO Emulation	Displays the communication protocol status, assigned TCP/IP port number, port response, network status for SATO Emulation commands
CimComms Communications	Displays the TCP/IP port number assigned for CimComms Communications
Wolke Communications	Displays the TCP/IP port number assigned for Wolke Communications

Table 4-20: TCP/IP Parameters

### Working with Options Diagnostics

Navigate to *Tools > Diagnostics > Options* (Figure 4-24).

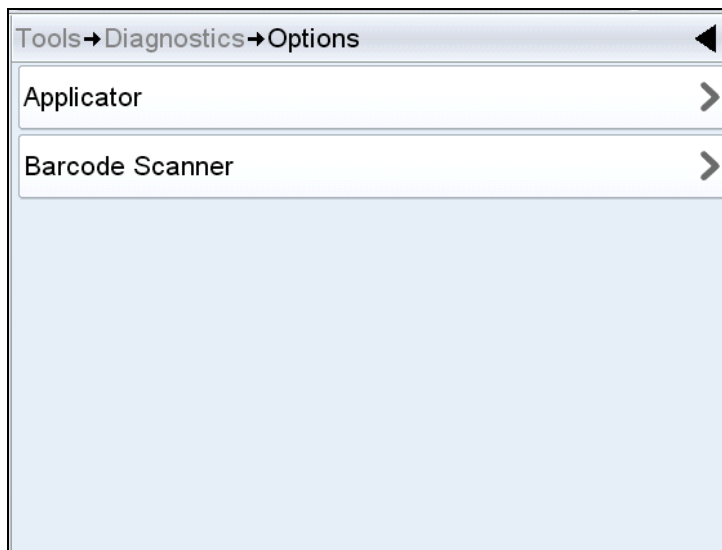


Figure 4-24: Options Parameters


Buttons	Description
Applicator	<p>Shows the type of applicator used and its operations. When touched, shows the direct applicator menu. If a tamp applicator is attached, shows the tamp applicator menu.</p> 

Table 4-21: Control Parameters

Buttons	Description								
Barcode Scanner	<p data-bbox="755 268 1230 296">Shows the barcode scanner information.</p> <div data-bbox="755 331 1393 814" style="border: 1px solid black; padding: 5px;"> <p data-bbox="760 342 1388 373">Tools → Diagnostics → Options → Barcode Scanner ◀</p> <table border="1" data-bbox="760 384 1388 619"> <tr> <td data-bbox="764 394 1274 426">Connection Type</td> <td data-bbox="1274 394 1383 426">RS232</td> </tr> <tr> <td data-bbox="764 457 1274 489">Next Expected Barcode(s)</td> <td data-bbox="1274 457 1383 489">NULL</td> </tr> <tr> <td data-bbox="764 520 1063 552">Last Expected Barcode(s)</td> <td data-bbox="1063 510 1383 562">0105012345123455101234 0105012345123455101234</td> </tr> <tr> <td data-bbox="764 583 885 615">Last Scan</td> <td data-bbox="1274 583 1383 615">NoRead</td> </tr> </table> </div>	Connection Type	RS232	Next Expected Barcode(s)	NULL	Last Expected Barcode(s)	0105012345123455101234 0105012345123455101234	Last Scan	NoRead
Connection Type	RS232								
Next Expected Barcode(s)	NULL								
Last Expected Barcode(s)	0105012345123455101234 0105012345123455101234								
Last Scan	NoRead								

Table 4-21: Control Parameters (Continued)

## Working with Database

Navigate to *Tools > Databases* (see Figure 4-25).

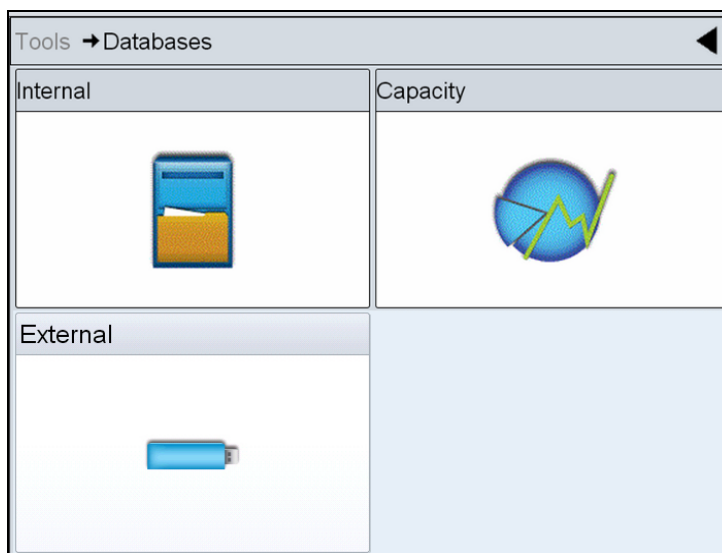


Figure 4-25: Database Page

Buttons	Description
Internal	Shows the job(s) stored in the printer and allows the user to transfer Jobs to the USB memory stick (if available). The user is also able to delete Jobs from the Internal database.
Capacity	Shows the estimated number of Job files that could be stored on the printer, based on the size of existing Job files, and the number of bytes of available Job storage remaining.
External	Shows the Jobs stored on the inserted USB memory stick, and allows the user to transfer Jobs to the Internal database. The user is also able to delete Jobs from the USB memory stick. <b>Note:</b> Option only available when USB memory stick is inserted in printer.

Table 4-22: Database Page

## Working with Help

Navigate to *Tools > Help* (see Figure 4-26). Allows the user to view Tutorial Videos and Documentation for specific tasks and basic troubleshooting. Also allows the user to contact Videojet Technologies Technical Support for help and troubleshooting.

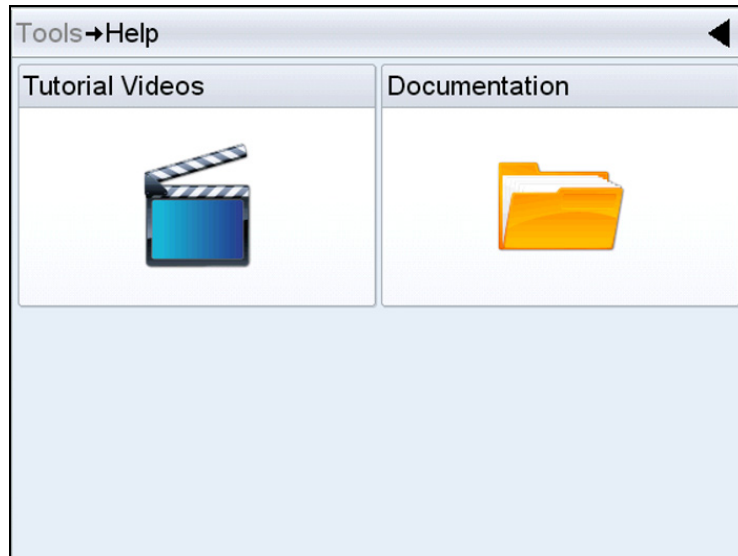


Figure 4-26: Help Page

Touch *Tutorial Videos*, displays the screen with list of Videos. Select the required video for specific task and basic troubleshooting.

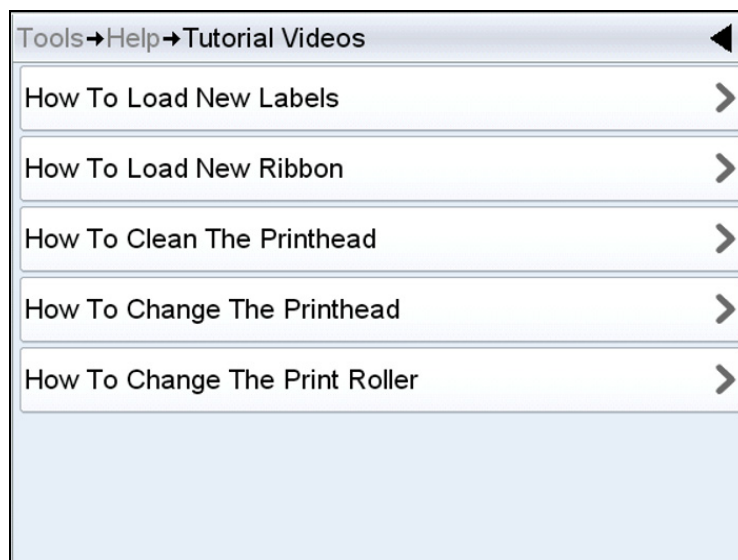


Figure 4-27: Tutorial Videos

**Note:** For information on “How to Change the Printhead” and “How to Change the Print Roller”, refer to Service Manual.

## Password Protection

Password protection on the user interface allows different protected access levels for the various operational features. During installation, you can set the standard or advanced password selection using CLARiTY Config Manager. Refer to Videojet 9550 Service Manual (Part Number: 462470).

**Note:** If you do not want to have password protection, you can select “None” option.

Password control can be set up as per the user requirement. When the user tries to access a function that is password protected the user interface prompts the user to enter the password.

When the correct password is entered, that function or menu becomes available. The password level remains active until logged out by the user or timed out.

- Standard Passwords: For example, if the *Diagnostics* function is password protected, when the user accesses the *Diagnostics* Menu by navigating to *Tools > Diagnostics*, CLARiTY prompts the user to enter the password.
- Advanced Passwords: The user is prompted to select the required username and enter the associated password.



Figure 4-28: Password Screen



This chapter contains the following topics:

- Turning On the Machine
- Loading the Web
- Set Screen Orientation
- Installation Wizard
- Selecting Job
- Printing Job
- Stopping Labeler

## Turning On the Machine

Do the following tasks to turn on the machine:

- 1 Switch on the power switch on the rear of the unit.

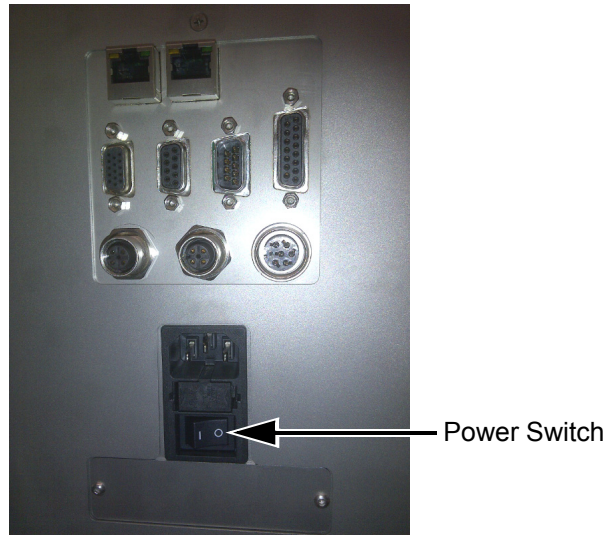


Figure 5-1: Power Switch

- 2 CLARiTY Display will power on.

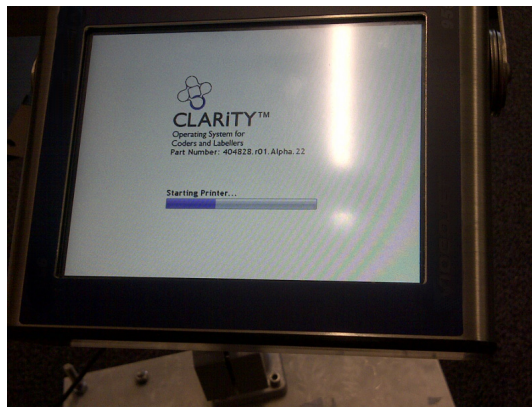


Figure 5-2: CLARiTY Display Power On

### **Caution**

Before starting the procedure, make sure that the printer is in offline mode. Note that power is available to the mandrels and care should be taken when loading the web.

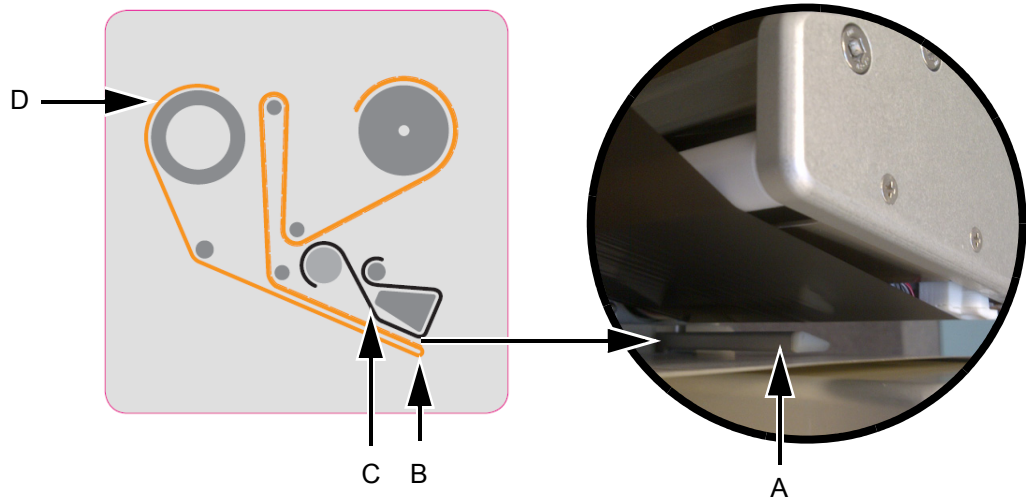
---

## Loading the Web

Loading the web involves following procedures:

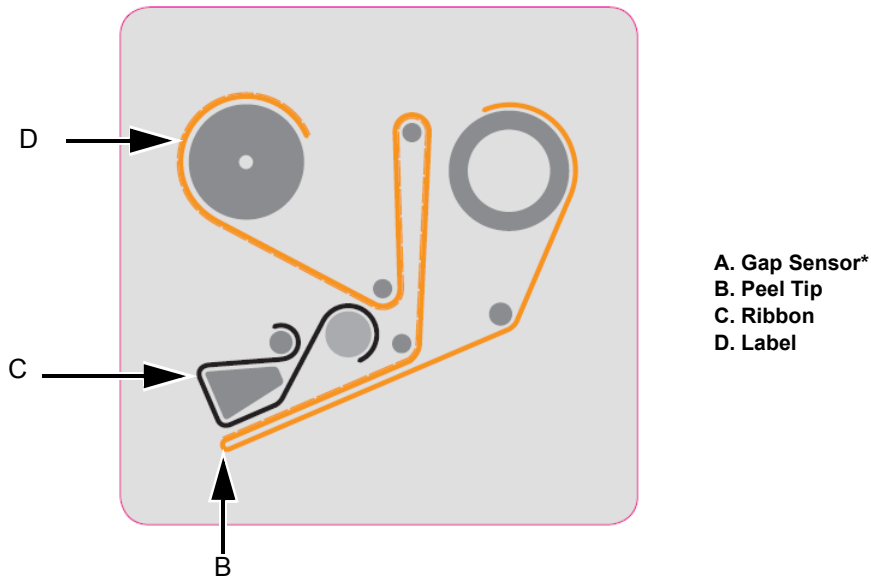
- Loading a label roll on to the label supply disc mandrel
- Loading a ribbon roll on to the ribbon supply mandrel

The 160mm LPA has a latch connecting the printhead and the print roller support plate (Figure 3-15 on page 3-13).



- A. Gap Sensor
- B. Peel Tip
- C. Ribbon
- D. Label

Figure 5-3: Left Hand Webbing Diagram



- A. Gap Sensor\*
- B. Peel Tip
- C. Ribbon
- D. Label

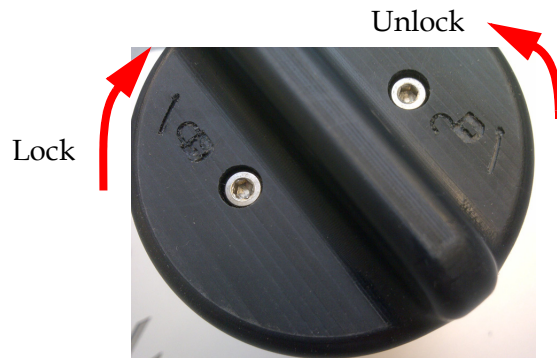
\*- Items not shown in picture

Figure 5-4: Right Hand Webbing Diagram

## Loading a Label Roll on to the Label Supply Disc Mandrel

Do the following tasks to load a label roll:

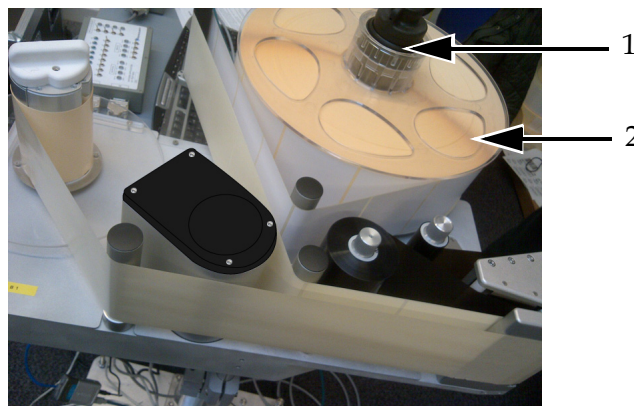
- 1 Unlock the mandrel lock in the direction indicated on the lock on the supply mandrel (see Figure 5-5). Remove the label supply disc.



**Note:** Left Hand unit shown

*Figure 5-5: Mandrel Lock*

- 2 Fit the label roll to the label supply mandrel. Ensure that the label supply is placed onto the mandrel so that the labels feed in the direction indicated on the supply disc.



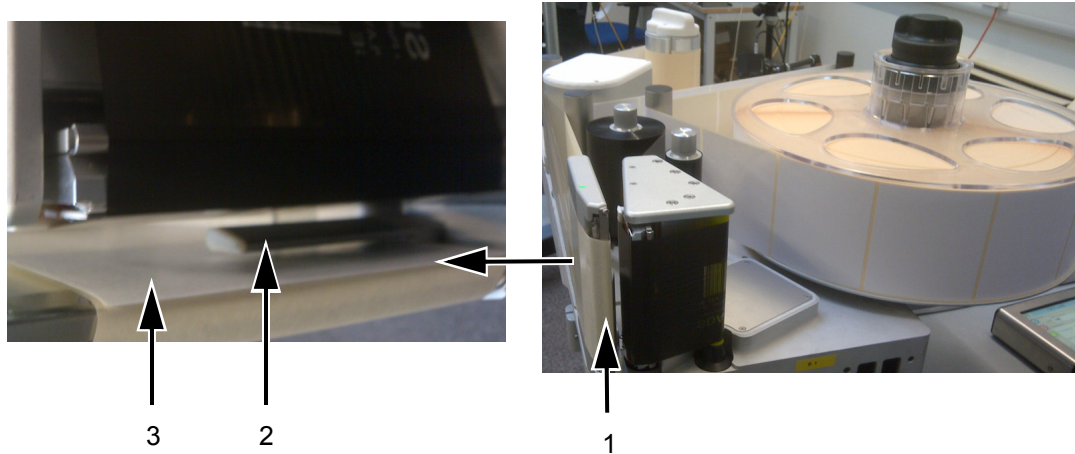
1. Label Supply Mandrel
2. Label Supply

*Figure 5-6: Label Web Path*

- 3 If the unit is vertical, replace the label supply disc and secure it with the label supply mandrel lock by turning the lock to the locked position as indicated on the mandrel lock (see Figure 5-5).
- 4 Where fitted, open the latch.

- 5 Remove a number of labels from the beginning of the roll to support the label routing. Thread the label web as shown in Figure 5-3 on page 5-3 and Figure 5-4 on page 5-3 (i.e, route the labels around each of the rollers in turn as shown on the webbing diagram).

Ensure that the labels are threaded through the label gap sensor and around the peel tip.



1. Label Around Peel Tip
2. Label Gap Sensor
3. Label

Figure 5-7: Label Around Peel Tip

**Note:** The label gap sensor detects the gap between the labels. Refer to “Label Gap Sensor” on page 3-10 for more information. When the labels are correctly routed, the LED will turn green.

- 6 Unlock the waste mandrel by rotating it in the direction indicated on the mandrel lock. (see Figure 5-8).



**Note:** Left Hand unit shown

Figure 5-8: Waste Mandrel Lock

- 7 Secure the waste label backing to the waste mandrel by slotting the backing into the slot as indicated by the arrows on the waste mandrel.



**Note:** Right Hand unit shown

Figure 5-9: Mandrel Slot

- 8 Secure with the mandrel lock (a click sound is audible when secured) and wind the label web around the mandrel two or three times until the label web is secure.

*Note:* If the mandrel lock is not secured, the label speed will not be accurate.

- 9 Place the supply disc on the supply mandrel and lock it if not already completed.
- 10 Where fitted, secure the latch in position to the print roller support plate.

For information on removing the ribbon and labels from the LPA, refer to “How to Replace Label and Ribbon Web” on page 6-28.

### Loading a Ribbon Roll on to the Ribbon Supply Mandrel

Do the following tasks to load a new ribbon roll:

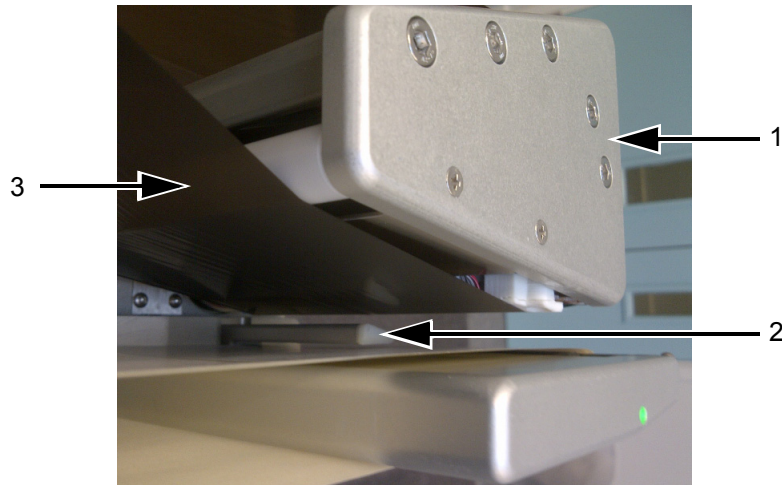
- 1 Remove the new ribbon from its packaging.
- 2 Unwind approximately 300 mm of ribbon from the reel (an initial length of the ribbon is ink free and is termed 'leader').
- 3 Fit the new ribbon to the supply mandrel, and ensure that the reel is pushed fully onto the mandrel.

*Note:* Make sure that where available, the pullout shaft is in required position.

- 4 Where fitted, open the latch.



- 5 Thread the ribbon around the printhead, ensuring that the ribbon is not routed below the gap sensor (see Figure 5-10).



1. Printhead
2. Gap Sensor
3. Ribbon Supply (Ink Side Down)

Figure 5-10: Loading Ribbon Around Printhead

**Note:** Ensure that the ink side of the ribbon is facing the label after the ribbon is routed through the printhead.

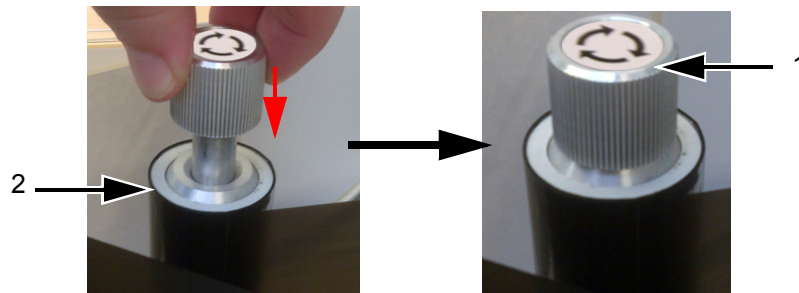
Refer to the webbing diagram for the correct web path (see Figure 5-3 on page 5-3 and Figure 5-4 on page 5-3).

**Note:** If the ribbon is detected in the incorrect position by the gap sensor the LED will turn red.

- 6 Load the fresh waste core onto the waste mandrel and ensure that the ribbon runs in the direction of the mandrel arrow.

- 7 Secure the ribbon to the waste mandrel with an adhesive tape to prevent from slipping.

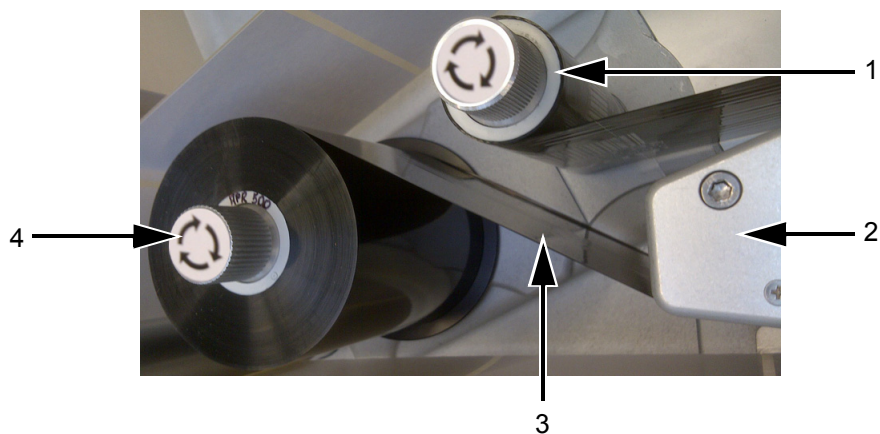
*Note: Make sure that the pullout shaft is in required position.*



- 1. Pullout Shaft
- 2. Waste Ribbon Mandrel

Figure 5-11: Pullout Shaft

- 8 Wind excess ribbon onto the waste mandrel, ensuring that the ribbon is not torn or wrinkled.



- 1. Ribbon Waste Mandrel
- 2. Printhead
- 3. Ribbon Supply (Ink Side Down)
- 4. Ribbon Supply Mandrel

Figure 5-12: Loading Ribbon Around Printhead



- 9 Where fitted, secure the latch in position to the print roller support plate.

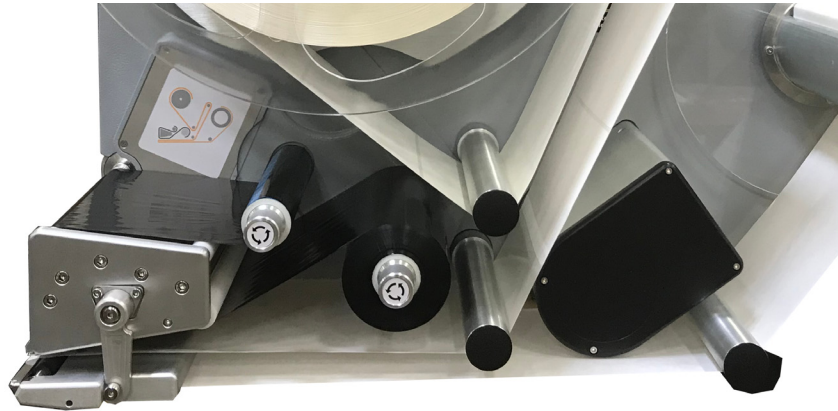


Figure 5-13: Latch Closed



**Caution**

EQUIPMENT DAMAGE. Turn the waste mandrel only to provide tension in the ribbon.

## Set Screen Orientation

Depending on the position in which the CLARiTY display is mounted, it may be necessary to rotate the screen image by 180 degrees.

To change the screen orientation, proceed as follows:

- 1 Navigate to *Tools > Setup > Control > Set Screen Orientation*. *Set Screen Orientation* page appears (see Figure 5-14).

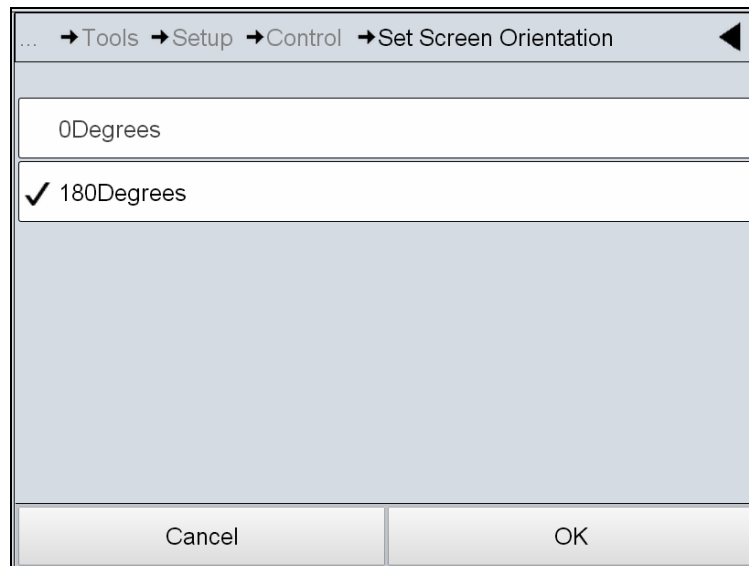


Figure 5-14: Set Screen Orientation

- 2 Select 0 or 180 degrees depending on your requirement and select *OK*. The screen orientation changes.
- 3 Touch the *Home* icon to return to the home page.

## Installation Wizard

The installation wizard takes the user through the required steps to setup the LPA unit. For the installation steps, refer to “Installation Wizard” on page C-1.

## Selecting a Job

Do the following tasks to select a job:

- 1 Touch the *JOB* Icon in the home page. The list of existing jobs are displayed (see Figure 5-15).

*Note:* As you touch each Job name a preview of the Job is displayed on the right hand side of the screen.



Figure 5-15: Job Select

- 2 Select the test job from the list and touch *OK*. The job print preview appears (see Figure 5-16).



Figure 5-16: Job Preview

- 3 Touch *OK*, and the Home screen displays the newly loaded Job name. The job is now ready for print.

## Printing Job

Do the following tasks to print a job:

- 1 Make sure that the current job displayed in the *Current Job Details Bar* is the job you want to print.



Figure 5-17: Current Job

- 2 Ensure that the machine is loaded with ribbon and labels.
- 3 Ensure that the E-Stop is not activated.
- 4 Ensure that the Label Gap Sensor LED is green in color.



- 5 Touch the *Start* button to place the LPA online.


**Note:** Once the LPA is online, a Warning may appear on initial start up in order to feed labels to ensure correct location. Follow the on-screen instructions as required. This action ensures that the label position is correct.



- 6 Touch the *Print* button. The current job will be printed.

## Stopping Labeler



- 1 Touch the *Stop* button  in the CLARiTY display. The status bar changes to *OFFLINE*.
- 2 Turn OFF the power switch beside the power cable on the rear of the unit.

**Note:** During an emergency, press the E-Stop button to stop the LPA from printing.

This chapter contains the following information on operations of the labeler unit of the LPA.

- Adjust label print position
- Change label position on product
- Print darkness setup
- Print force setup
- How to print a test job
- How to create a job
- How to download a job file
- Viewing the current job or image
- Selecting a new job
- User editable fields
- How to delete a job from the jobs database
- Line select mode
- Master/Slave mode
- How to replace label and ribbon web
- Production audit log
- How to update controller software
- Availability Page

## Adjust Label Print Position

The following procedure explains how to adjust the Label Print Position.

- 1 Navigate to *Tools > Setup > Printhead* and select *Print Position X* (see Figure 6-1).

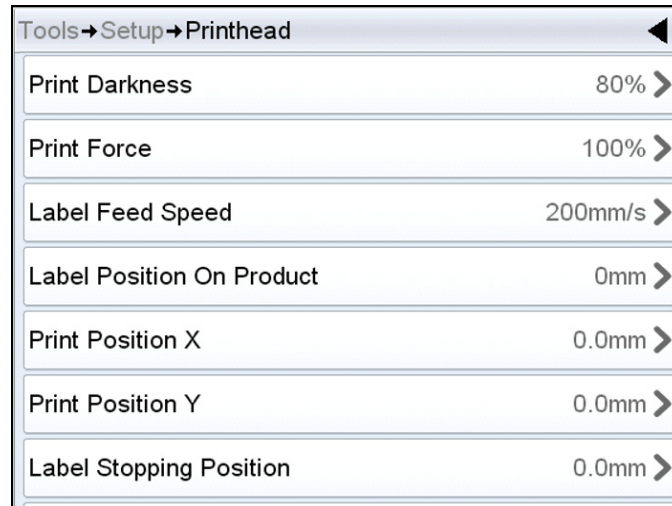


Figure 6-1: Tools - Setup - Printhead

Alternately, this menu can be accessed from the *Print Position* button in the home screen (see Figure 6-2).

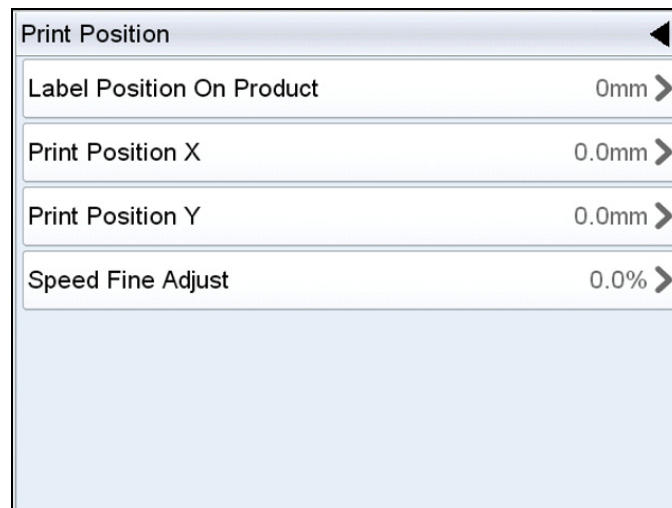
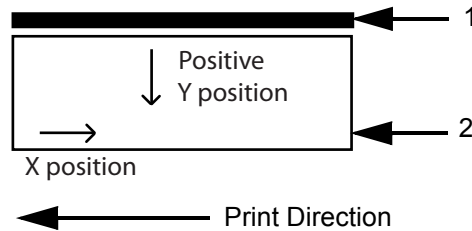


Figure 6-2: Print Position from Home Screen

*Print Position X* is the distance from the label stop position to the print position where the printing starts (see Figure 6-3). If X is set to zero, the printing starts at the label stop position.

**Note:** If you print on the edge of the label (i.e. off the end), the printhead can be damaged.



1. Baseplate (Rear of LPA)
2. Label

Figure 6-3: Print Position X and Y

- 2 Enter the value of X as required (see Figure 6-4).

Figure 6-4: Print Position X

- 3 Touch *OK*.
- 4 Touch *Print Position Y* and enter the value of Y position as required. A negative value will move the print start position towards the baseplate, a positive value will move the print start position away from the baseplate.
- 5 Touch *OK*.
- 6 Touch the *Home* button to return to the home page.



## Change Label Position on the Product

The following procedure explains how to change the Label Position on the product.

- 1 Navigate to *Tools > Setup > Printhead > Label Position on Product* (alternately, this menu can be accessed from the *Print Position* button in the home screen).

A value of 0 mm (zero mm) indicates the label will be applied starting from the leading edge of the product (see Figure 6-5). This is dependent on the product sensor to beak/peel tip distance being set accurately.

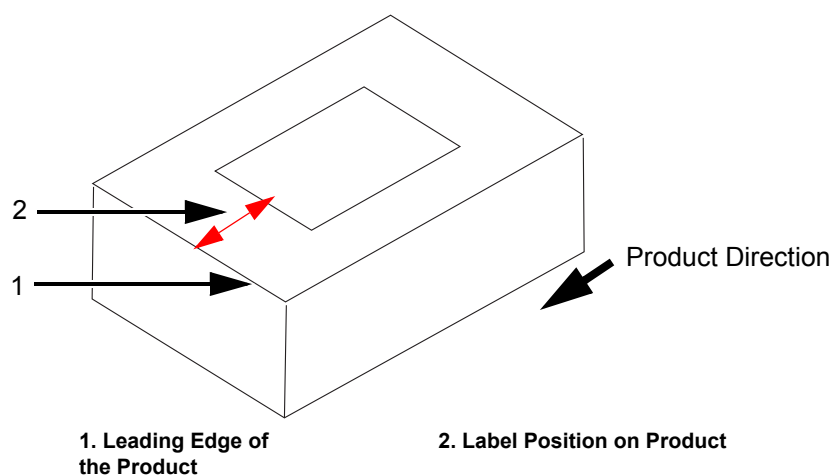


Figure 6-5: Label Position on Product

- 2 Enter the distance necessary to adjust the label placement on the product.



Figure 6-6: Label Position on Product

- 3 Touch *OK*.
- 4 Touch the *Home* button to return to the home page.

## Print Darkness Setup

The following procedure explains how to change the Print Darkness.

If the print darkness setting is too low, it causes the printed image to appear faded.

If the print darkness is set too high, the edges of the printed image appears blurred. This will also overdrive the printhead and shorten its lifetime. Choose the lowest value of darkness that achieves a satisfactory quality print.

- 1 Navigate to *Tools > Setup > Printhead > Print Darkness*.
- 2 Enter the required value of print darkness between 50% and 100%. The default value is 75%.

Tools->Setup->Printhead->Print Darkness			
◀ 80%		✕	▶
Min	50%	1	2
		3	
Max	100%	4	5
		6	
Default	75%	7	8
		9	
		0	⬅
Cancel		OK	

Figure 6-7: Print Darkness

- 3 Touch *OK*.
- 4 Touch the *Home* button to return to the home page.

**Note:** Print darkness is also related to the accurate input of printhead resistance.

## Print Force Setup

The following procedure explains how to change the value for *Print Force*. Print Force is the force exerted on the label by the printhead during printing.

If the print force setting is too low, it causes the printed image to appear faded.

If the print force is set too high, the edges of the printed image appears blurred. This will also overdrive the printhead and shorten its lifetime. Choose the lowest value of print force that achieves a satisfactory quality print.

- 1 Navigate to *Tools > Setup > Printhead > Print Force*.
- 2 Enter the required value of print force between 0% and 100%. The default value is 50%.

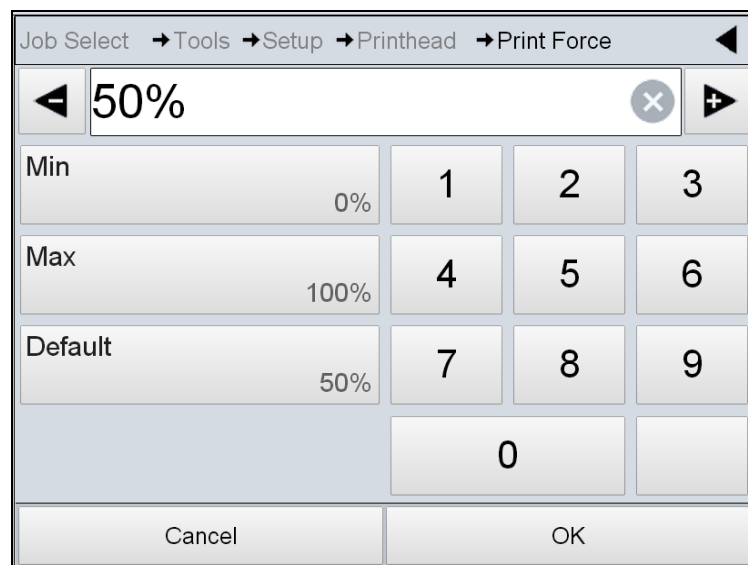


Figure 6-8: Print Force

- 3 Touch *OK*.
- 4 Touch the *Home* button to return to the home page.

## How to Create a Job

Jobs can be created offline on a PC using CLARiSOFT software or any other image creation software and then downloaded to the LPA.

Refer to CLARiSOFT Operator manual (P/N 462458) for more information on creating new jobs.

### How to create a job in CLARiSOFT

*Note: All dimensions in CLARiSOFT are in millimeters (mm).*

- 1 Select *File > New* from the CLARiSOFT menu.
- 2 Select Videojet 9550 from the list of Coders under *Select the Coder you wish to design for* column.
- 3 From the *Select Format* drop down list, select the required font height. Select the appropriate template for the application.
- 4 Enter the desired image width and height. Typically this value should be the width and height of the product being printed on so that placement of fields in CLARiSOFT will correspond to the placement of the fields on the product.
- 5 Select *OK*.
- 6 Use the *CLARiSOFT Toolbox* options on the left hand side of the screen to create the Job.

## How to Download a job file

A job file can be downloaded from the PC to the LPA using the following methods:

- Direct cable connection (serial port or TCP/IP)
- USB memory stick

## Download Job File using TCP/IP or Serial Connection

- 1 Connect the communications cable (serial or ethernet) between the PC and the corresponding port of the LPA.

*Note:* The LPA must be turned on to download job files.

*Note:* For details on configuration of printer's communication ports for use with CLARiSOFT, refer to Service Manual.

- 2 Click the Printer icon from the tool bar in CLARiSOFT. The Print window appears (see Figure 6-9).
- 3 Ensure that *Real-Time Coder* is selected.
- 4 Ensure that the correct printer is displayed in the *Select Output Device* menu.
- 5 Select *Download* under *Image Options*.

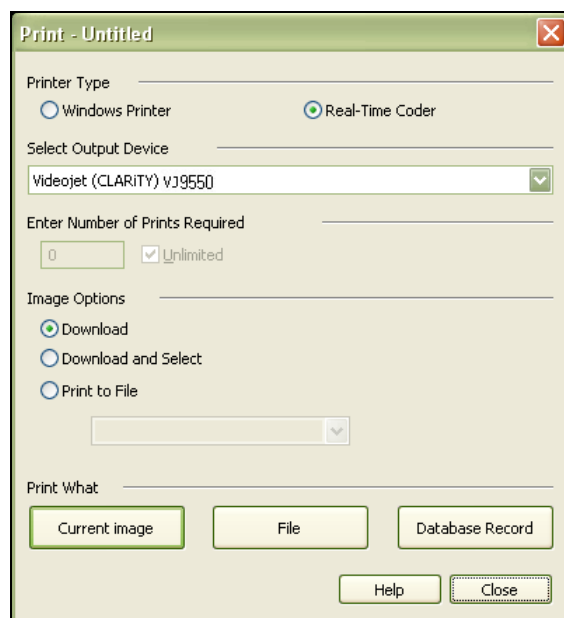


Figure 6-9: Select Output Device

- 6 To download only the currently opened Job file, select the *Current Image* button.

To download multiple Job files that have been saved to the PC, select the *File* button and navigate to the location on the PC where the files are saved. Highlight all of the Jobs you wish to transfer and select *Open*.

A preview or list of the selected job(s) appears (see Figure 6-10).

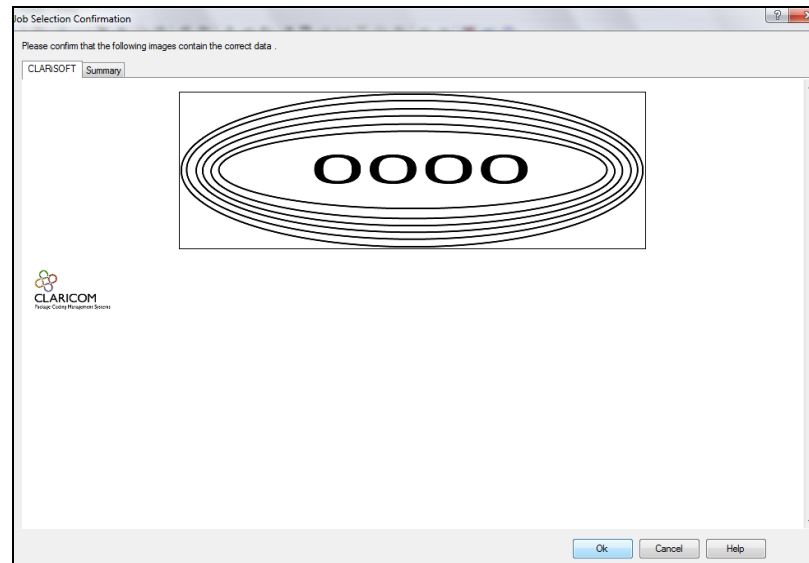


Figure 6-10: Print Preview of Job

- 7 Click the OK button.

The *Progress* window which displays the status bar appears. The status bar indicates the status of the job downloading process (see Figure 6-11).



Figure 6-11: Progress Window

Ensure the Job now exists in the printer's database.

- 8 Disconnect the communications cable between the PC and the printer if no longer needed.

## Download a Job File using USB Memory Stick

Do the following tasks to download a job file from the PC to the LPA using a USB memory stick:

- 1 Insert the USB memory stick into the PC.
- 2 On the *File* menu, click *Job Download* (see Figure 6-12).

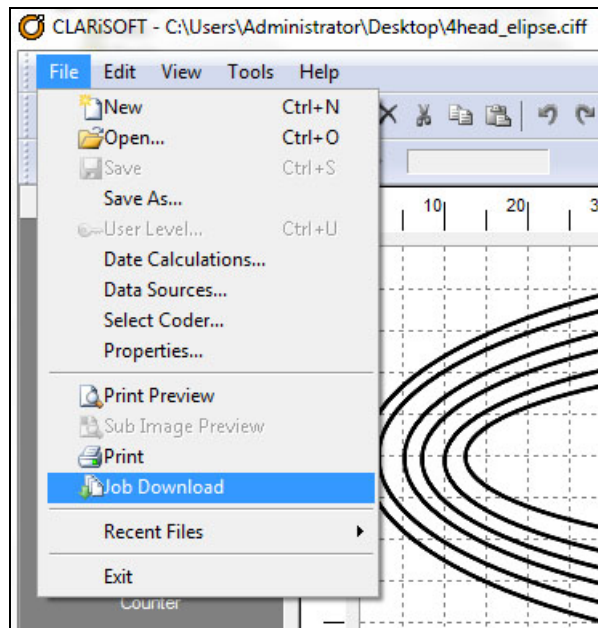


Figure 6-12: Job Download Command

The *Download* window appears (see Figure 6-13).

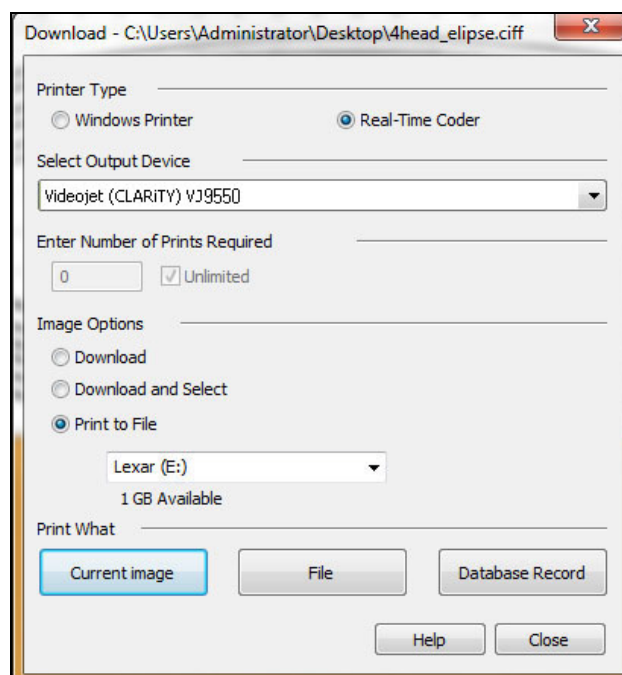


Figure 6-13: Job Download Command

- 3 Ensure that the *Real-Time Coder* is selected.
- 4 Ensure that the correct printer is displayed in the *Select Output Device* menu.

*Note:* If you do not select the correct output device, the image will not be correct for the printer.

- 5 Select *Print to File* from Image Options.
- 6 Select the USB memory device to use from the drop-down menu.

*Note:* The *Print What* options will not display until a suitable memory device is selected.

- 7 To download only the currently opened Job file, select the *Current Image* button.

To download multiple Job files that have been saved to the PC, select the *File* button and navigate to the location on the PC where the files are saved. Highlight all of the Jobs you wish to transfer and select *Open*.

- 8 The confirmation window appears (see Figure 6-14).

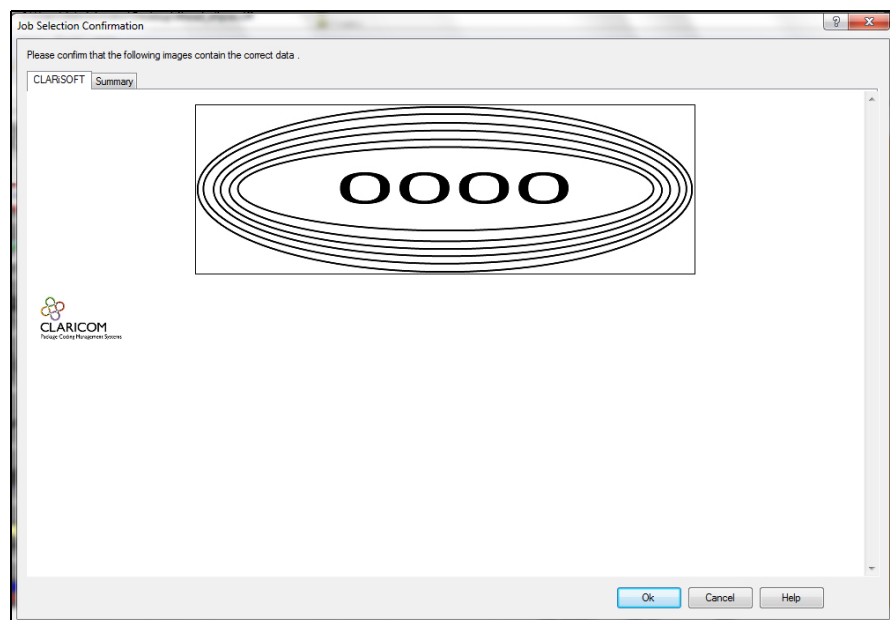


Figure 6-14: Confirmation Window



- 9 Click the *OK* button to continue.

After the files are downloaded, the message shown in Figure 6-15 appears.

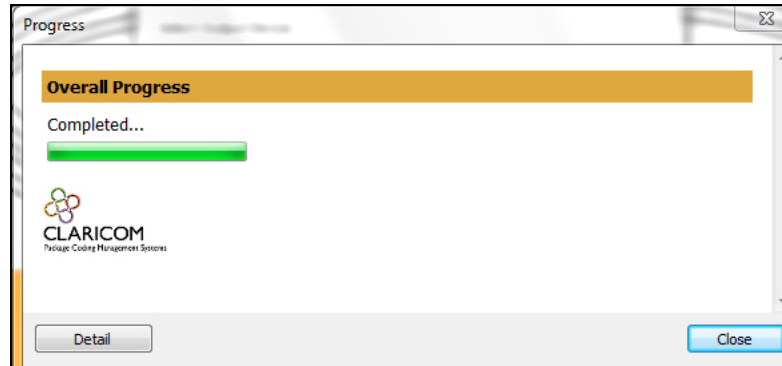


Figure 6-15: Download Complete

 **Caution**

Failure to use the *Print to File* procedure will result in errors and rotated images.

---

- 10 Remove the USB Memory stick from the PC.

### Connecting the External USB Database

- 11 Insert the USB memory device into the USB port of the controller (see Figure 6-16).

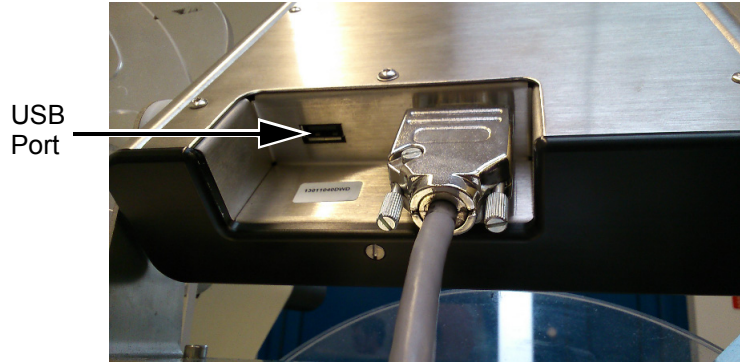


Figure 6-16: USB Port

- 12 Navigate to *Tools > Databases*. The database page displays the *External Database* (see Figure 6-17).

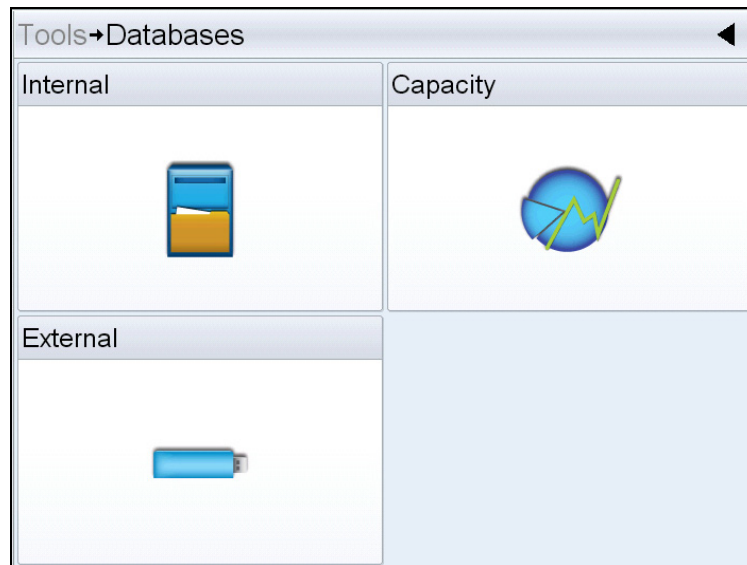


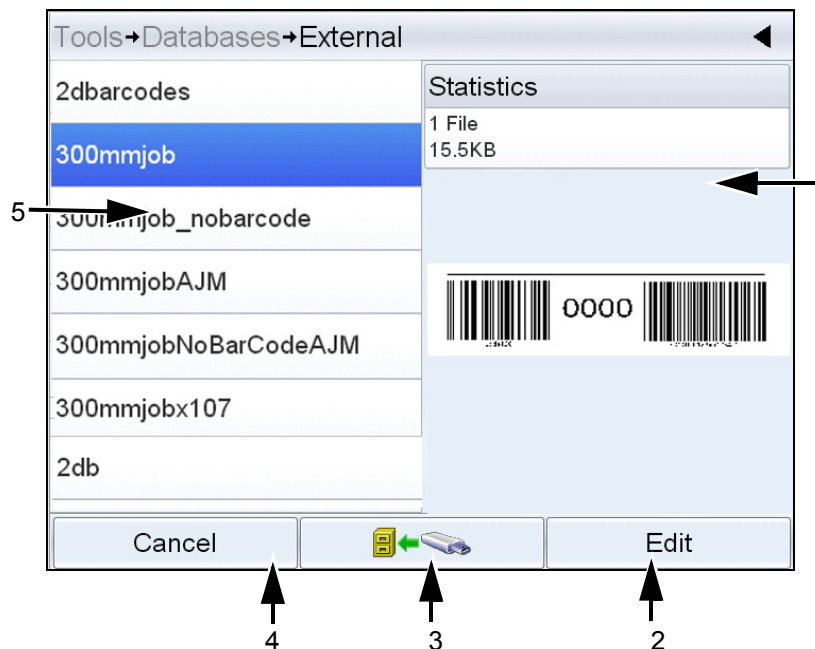
Figure 6-17: External Database

- 13 Touch *External* to view all the jobs in the USB device (see Figure 6-18).

**Note:** To restore all Jobs from the USB Memory Stick at one time, do not select a Job name from the list and touch the Transfer button



- 14 To transfer one job at a time, touch on the job you require, the preview is displayed.




- 1. File Size
- 2. Edit Button
- 3. Transfer Button
- 4. Cancel Button
- 5. Selected Job

Figure 6-18: Jobs List on USB Device

The buttons at the bottom of the page have the following functions:

Buttons	Functions
Cancel	Exits the current operation and takes you back to the previous screen.
Transfer Button	Restores the currently selected Job.
Edit	Edits the currently selected Job.

Table 6-1: Bottom Buttons

- 15 Touch  to restore a job. A confirmation appears (Figure 6-19). Touch Yes to confirm.

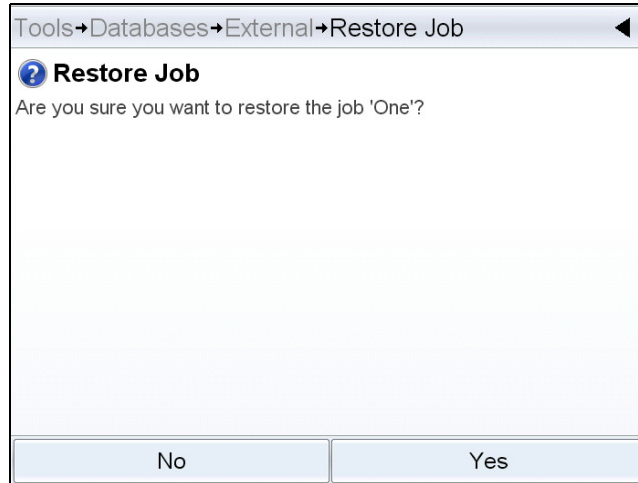


Figure 6-19: Confirmation Screen

## Viewing the Current Job or Image

The name of the current job is displayed on the CLARiTY home page (see Figure 6-20). Before starting the production line, make sure that the current job is the job that you want to print.

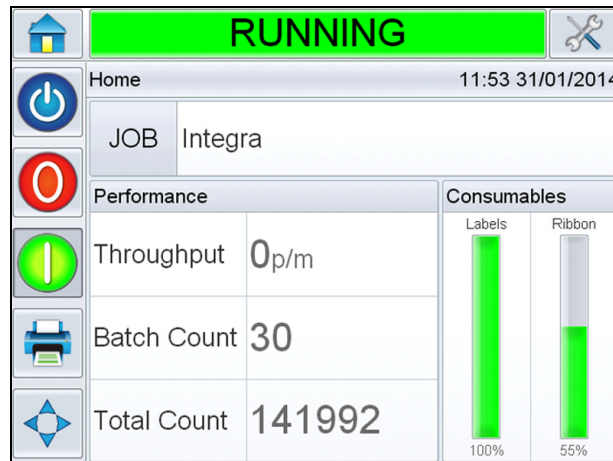


Figure 6-20: CLARiTY Home Page

To view more details of the current job, proceed as follows:

- 1 Touch the name of the JOB on the home page.

- 2 This will display a preview of the job (see Figure 6-21).



Figure 6-21: Current Job Details Display

- 3 To magnify the image on the screen, double touch on the image to zoom in and zoom out.

If you are satisfied that the job is displayed correctly, you can start the labeler, as described in “Printing Job” on page 5-12. If the current job is not the job that you want to print, refer to the instructions in “Selecting a New Job” on page 6-16.

- 4 Touch the Back button on the navigation bar, or the Home button to return to the home page.

## Selecting a New Job

If you want to print a job that is not the current job, you can select a different one. For selecting a job, refer to “Selecting a Job” on page 5-11.

You can modify the information before printing the job if user editable fields are contained within the job. Refer “User Editable Fields” on page 6-17 for information on how to change it.

To exit the job selection menu at any stage without making any changes, touch the *Cancel* button.

## User Editable Fields

Some jobs contain user editable fields. These fields are part of the job that can be changed. There are three types of user editable fields:

- Variable TEXT fields.  
For example, they are used for batch codes, product names, and other text jobs.
- Variable DATE fields.  
For example, they are used for sell by dates.
- Variable COUNTER fields.  
Allows the user to modify the starting value for a counter.

If the selected job has a user editable field, the interface prompts the user to review this field and edit if required.

*Note: Each field has a check box. The check box is unchecked initially. As you enter the data and touch OK, the user interface automatically checks the box. You can proceed to the next step only when all the boxes are checked.*

### How to Change the Text and Date Fields

To edit the user field, proceed as follows:

- 1 When a job is selected, the list of user editable fields in the job are displayed.
- 2 Touch the required field from the list to select it (the first one in the list is automatically selected). The default data for that field appears in the preview window (Figure 6-22).

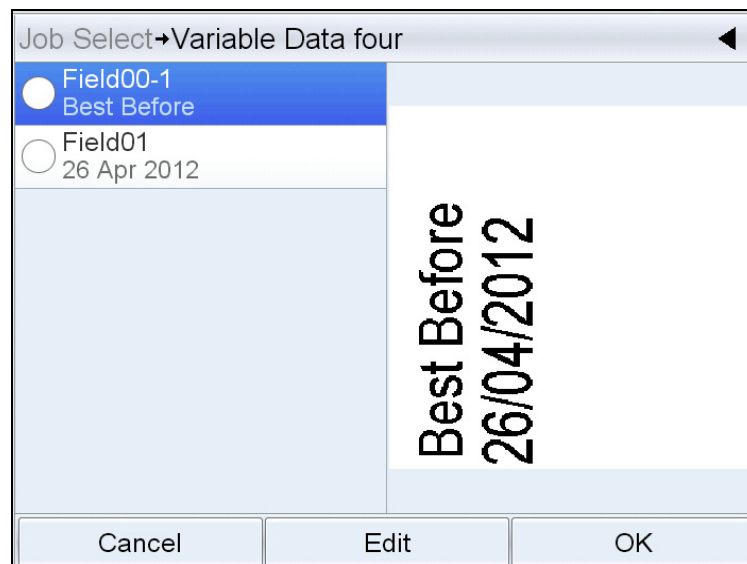


Figure 6-22: Default Data Window

3 If the information in the preview window is the information that you want to print, go to step 5. If you want to change the information, perform step 4.

4 Touch *Edit* to modify the information.

For text fields, do the following tasks:

a. Use the alpha key pad to enter the data.

The CLARiTY Operating system supports a number of standard languages for use with 'User Entered' text information.

b. Touch the 'Language Selection Key', to access the available language selections (see Figure 6-23).

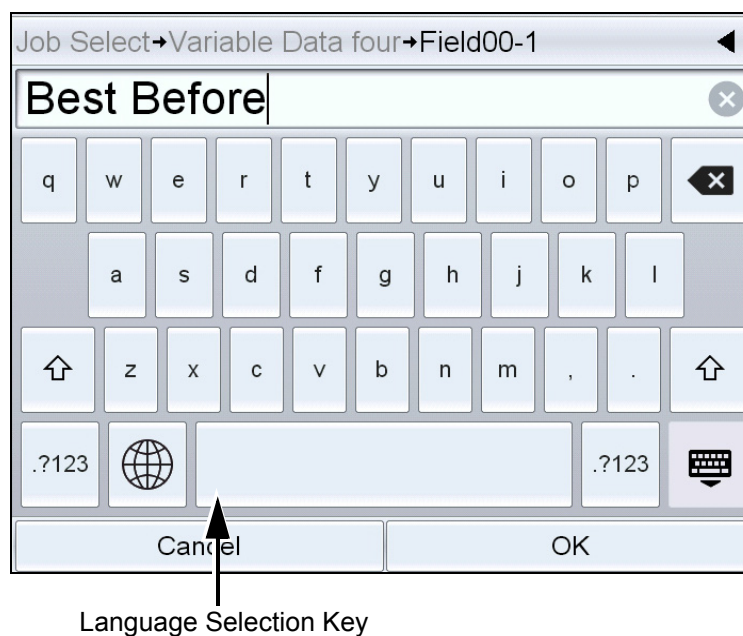


Figure 6-23: Default Keypad

c. The keypad functions the same way as the keypad on a computer. Make necessary changes to the information.

For date fields, do the following tasks:

- d. Touch the data window to display the Calendar page (see Figure 6-24).

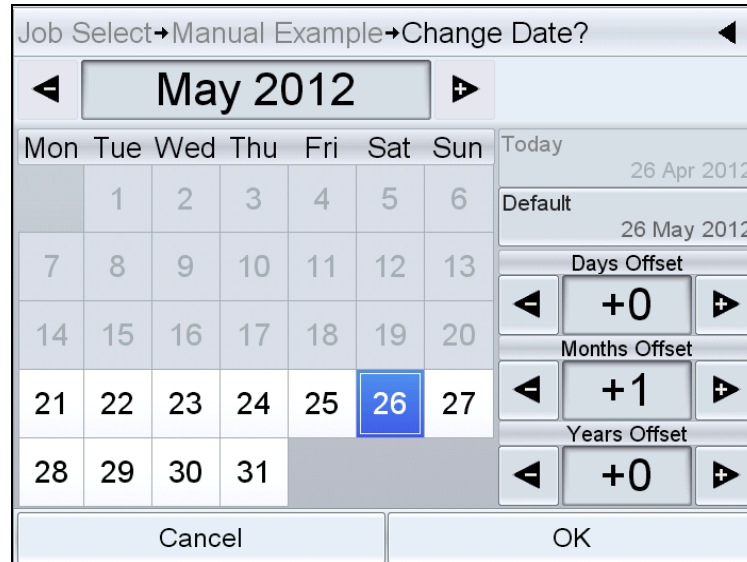


Figure 6-24: Calendar Page


- e. Touch the + or - button to change the month and year.
- f. Touch the date on the calendar to choose the date of the month, and touch OK.

**Note:** Any dates that are not available for selection because of pre-defined rules that may have been set in CLARiSOFT are dimmed.

- 5 Touch OK when you are satisfied that the information in the data window is correct. The user interface checks the check box. If there are only two user editable fields in the job, the user interface automatically displays the second field. If there are three or more fields, it displays the list of user editable fields, so that you can select one.

When you touch OK at the final field for this job (and all the check boxes are checked) the user interface shows you the preview of the image.



- 6 At the preview, perform one of the following:
- If you are satisfied with the image and you want to run the new job, touch *OK*. Products will be printed with the new image until you make further changes or select a new job.
  - If you are not ready to print the job, you can leave this screen as it is. You can touch *OK* at a later stage, to select the job at that time.
  - If you want to step back through the job select screens to make alterations to the variable data, touch *Cancel*.
  - To cancel the job selection altogether, touch *Home*  button.

## How to Delete a Job from the Jobs Database

To remove jobs that are no longer required, proceed as follows:

- 1 Touch the *Tools* icon on the home page.
- 2 Touch the *Database* icon on the tools page to open the database page.
- 3 Select the required database (internal or external) and touch *Edit* to go to the deletion screen (see Figure 6-25). This page contains a list of all the available print jobs along with details of number and size of the selected Jobs.

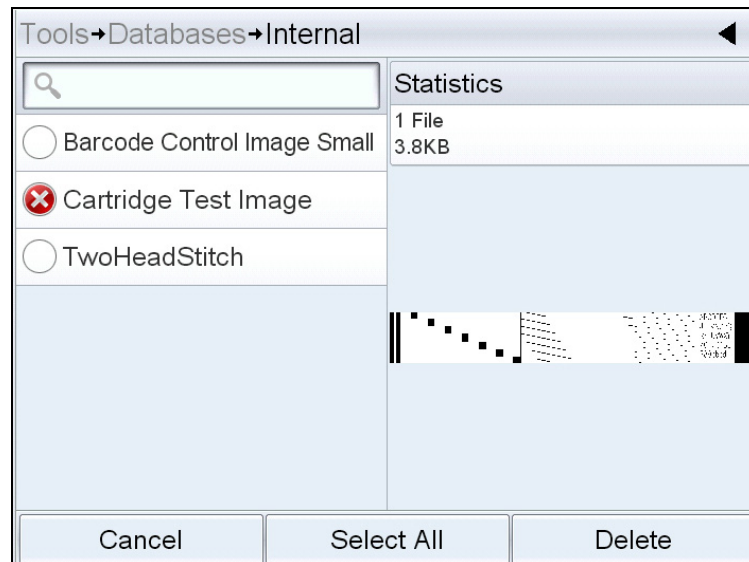


Figure 6-25: Database Delete Window

- 4 Touch the name of the job(s) that you want to remove from the database. The job image appears in the preview window. Ensure that you want to delete the selected job(s).

- 5 Touch *Delete* to delete the job.
- 6 Confirm the job to be removed (see Figure 6-26).

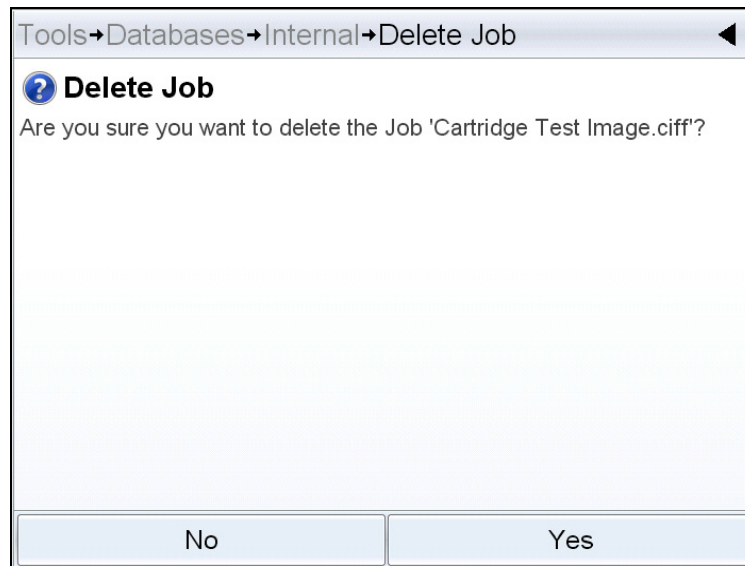


Figure 6-26: Confirmation Screen

- 7 Touch *Yes* to remove the job.
- 8 Repeat steps 4 to 7 to remove other jobs that are not required.

**Note:** You can touch *Select All* to remove all the jobs from the list. The job preview will display the last job selected if multiple, or all, jobs are selected.

- 9 Touch the Home icon to return to the home page.

## Line Select Mode

Line Selection Mode allows an external device (such as a PLC) to remotely switch between pre-defined jobs.

**Note:** Line Selection mode is disabled by default and must be enabled using CLARiTY Configuration Manager. Refer to Service Manual for more details.

When Line Selection mode is enabled, the desired jobs can be assigned to the correct lines by doing the following tasks:

- 1 Select JOB from the *Home* page (see Figure 6-27).



Figure 6-27: Select Job

- 2 To assign a particular job to *Line 1*:
  - a. Select *Line 1* (see Figure 6-28).

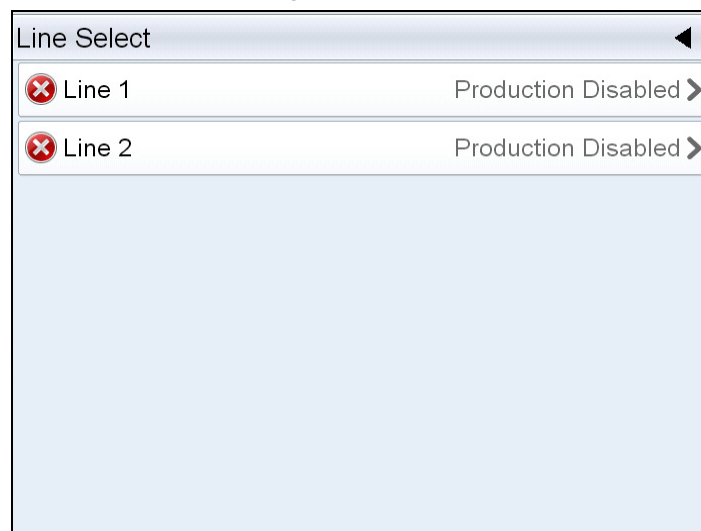


Figure 6-28: Line Select

- b. Select the correct job from the job list and touch *OK*.
- c. You can preview the assigned job (see Figure 6-29).
- d. Touch *OK* and *Home Page* appears.

The job selected is shown on the *Line Select* page.

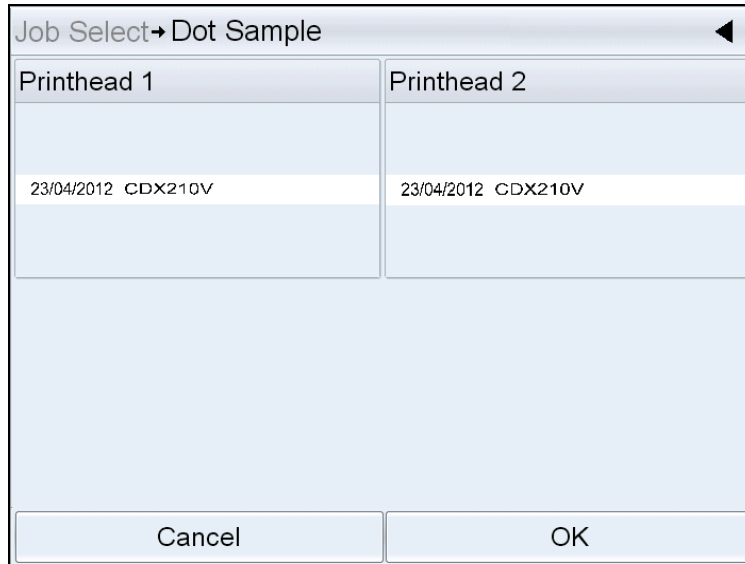


Figure 6-29: Job Select Preview

**3 To Remove the line assignment:**

- a. Touch  on the *Line Select* page (see Figure 6-30).

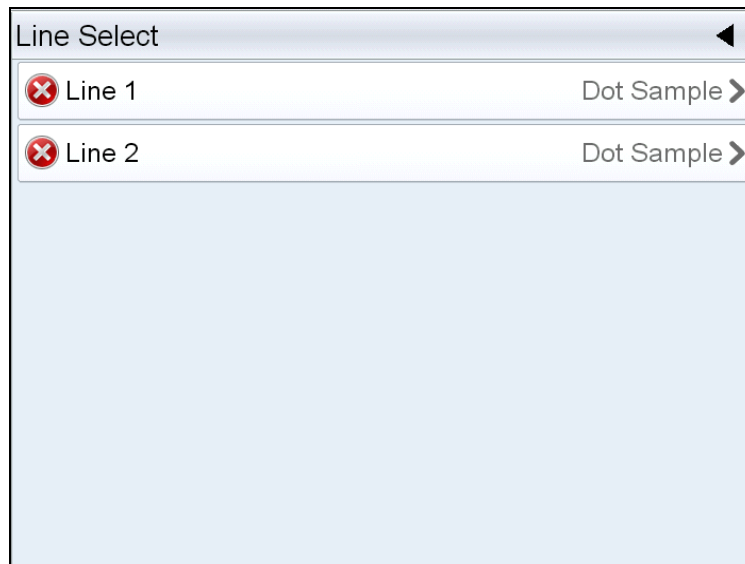


Figure 6-30: Line Select Page

- b. *Remove Line Assignment* page appears with the following choices (see Figure 6-31):
- *Disable*: Selecting this option will cause the printer to go Offline when particular line is selected.
  - *No Print*: Selecting this option will cause the printer to remain in the Running state when particular line is selected, but not print.

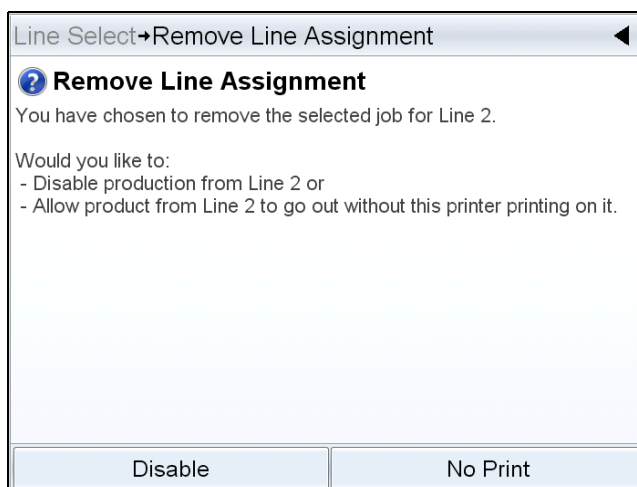


Figure 6-31: Remove Line Assignment

- 4 *Line Select* page appears again (see Figure 6-32).
- If you have selected *Disable*, then the message *Production Disabled* appears.
  - If you have selected *No Print*, then the message *Non Printing Job* appears.

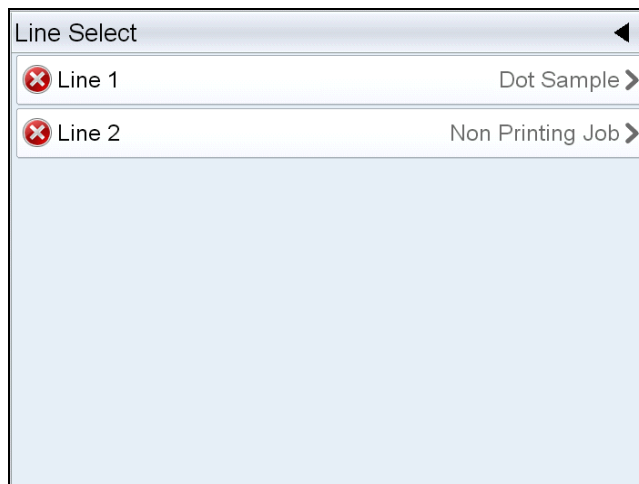


Figure 6-32: Line Select Page

## Master / Slave Mode

CLARiTY Master/Slave mode allows up to four printers to be connected together and to be used as a group (the group can have only one master). This chapter describes the use of Master/Slave mode at:

- Level 1-Group Job Select
- Level 2-Group Control
- Auto Changeover

For more information on Master / Slave mode, refer to the Videojet 9550 Service Manual.

### Group Job Select

Use Group Job Select to make sure that all the printers in the group are printing the same job. You can select jobs only on the master printer. The master printer tells the slaves which job to print.

When you use Group Job Select, the master printer shows additional information, as described below:

- It displays a fault message for any slave printer that does not respond to the master.
- Navigate to *Tools > Diagnostics > Printhead* to view a list of the printers in the group. Touch the name of a printer to display information about the chosen printer, as given

Printer	Content of Page
Master	The standard set of buttons enable you to view diagnostic information about the printer and information about the Master/ Slave level that is being used
Slave	Enables you to view information about the connection between the slave and the master

Table 6-2: Master / Slave Diagnostics

- Navigate to *Tools, Setup and printhead* to exclude one or more slaves from the group. This is useful if a slave develops a fault and you want the other printers to continue to print the job. When the fault has been cleared, the printer can be assigned to the group again.

## Group Control

This level of operation (level 2) allows the user to control the slave printers from the master. As with Group Job Select, you can select jobs only on the master printer. The master printer tells the slaves which job to print. The slaves can be assigned and excluded from the group, as described in “Group Job Select” on page 6-25.

You can use the master printer to change setup parameters for any printer in the group.

The user interface on the master printer also displays the following additional information:

- The Consumables information for each printer in the group.
- The Batch Count and Total Count values for the group as a whole. Total Count values for each printer in the group are also available.
- The fault or warning messages for both the master and slave printers (the slaves will show only their own faults or warnings).
- The diagnostics information about each printer in the group.

## Auto Changeover

This mode of operation allows the user to minimize downtime and missed packs on the production line.

Two printers are setup in auto changeover mode, one operating as the master (A), the other as the slave (B).

The standard master/slave functionality will be retained with the added features below:

- Master unit User Interface will display the status of the slave unit in the status bar.
- Master unit can place the slave unit in *SHUTDOWN/OFFLINE/ONLINE* mode.
- If Slave unit is in *ONLINE* mode, the slave unit will automatically start if Master unit goes into *OFFLINE* mode (either it is placed in offline or is in a *FAULT* condition).

In auto changeover mode, pressing either the Startup/Shutdown, Stop, Start or Print buttons will expand two buttons to the side which will be the same as the button pressed but with a number on each (see Figure 6-33). Pressing button number 1 will trigger the corresponding button press on machine 1 (the Master, A).

Pressing button number 2 will trigger the corresponding button press on machine 2 (the Slave, B).



Figure 6-33: Master Slave Buttons

A typical scenario is explained below where machine A is the Master and machine B is the Slave.

- 1 If A runs out of consumables (labels, ribbon or both), it will now display a *WARNING* that will contain the corresponding consumable fault(s).
- 2 B will start labelling immediately after A stops.
- 3 User replenishes consumables for A, and clears the fault(s). It can now be put back online into a *RUNNING* state (but it will not be labelling, unless B falls into a *FAULT* state).
- 4 When B runs out of consumables, displays a *FAULT* and stops, A will immediately start again.

For more information on auto changeover mode, refer to service manual.



## How to Replace Label and Ribbon Web

It is necessary to ensure that there is always an adequate stock of labels and ribbons for LPA operation. If the discs are empty or the stock is very low, reload the LPA with labels and ribbons as described below.

### Warning

PERSONAL INJURY. Ensure that the LPA is not printing when changing the ribbon or label web.

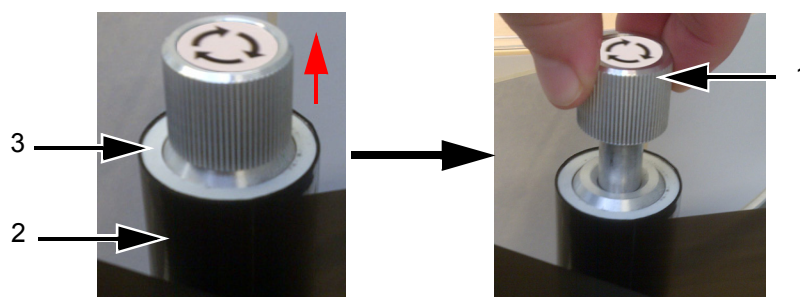
### Removing the Ribbon Roll

### Warning

PERSONAL INJURY. Do not use a sharp object (such as a knife or blade) to remove the waste ribbon core due to the risk of personal injury or equipment damage. Use the pullout shaft in the ribbon waste mandrel to remove the core with ease.

For removing the waste ribbon roll, perform the following task:

- 1 Where fitted, open the latch.
- 2 Remove the waste ribbon by using the pullout shaft in the ribbon waste mandrel which allows the core to be easily removed.



1. Pullout Shaft
2. Waste Ribbon Mandrel
3. Waste Core

Figure 6-34: Pullout Shaft

- 3 Remove the waste core from the mandrel.
- 4 Dispose the waste ribbon in accordance with the local regulations.

- 5 Remove the empty core from the supply ribbon mandrel.

*Note:* Where fitted, use the pullout shaft in the ribbon supply mandrel.

*Note:* A fresh waste core is provided with each new ribbon. It is not recommended to use previously used cores.

*Note:* For additional instructions, navigate to Tools > Help > Tutorial Videos > How to Load New Ribbon.

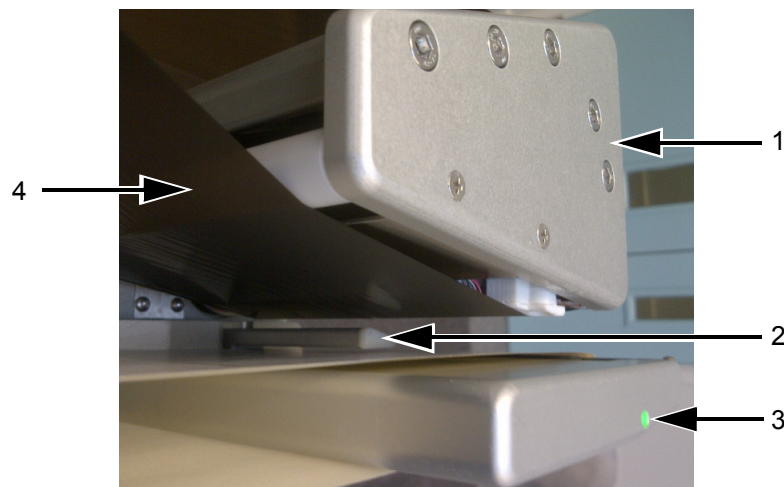
## Loading the Ribbon Roll

Do the following tasks to load a new ribbon roll:

- 1 Remove the new ribbon from its packaging.
- 2 Unwind approximately 300 mm of ribbon from the reel (an initial length of the ribbon is ink free and is termed 'leader').
- 3 Fit the new ribbon to the supply mandrel, and ensure that the reel is pushed fully onto the mandrel.

*Note:* Where fitted, push down the pullout shaft until it locks in the slot.

- 4 Thread the ribbon around the printhead, ensuring that the ribbon is not routed below the gap sensor (see Figure 6-35).



1. Printhead  
2. Gap Sensor  
3. LED  
4. Ribbon Supply (Ink Side Down)

Figure 6-35: Loading Ribbon Around Printhead

*Note:* Ensure that the ink side of the ribbon is facing the label after the ribbon is routed through the printhead.

Refer to the webbing diagram for the correct web path (see Figure 5-3 on page 5-3 and Figure 5-4 on page 5-3).

**Note:** If the ribbon is detected in the incorrect position by the gap sensor the LED will turn red.

- 5 Load the fresh waste core onto the waste mandrel and ensure that the ribbon runs in the direction of the mandrel arrow.
- 6 Push down the pullout shaft until it locks in the slot.

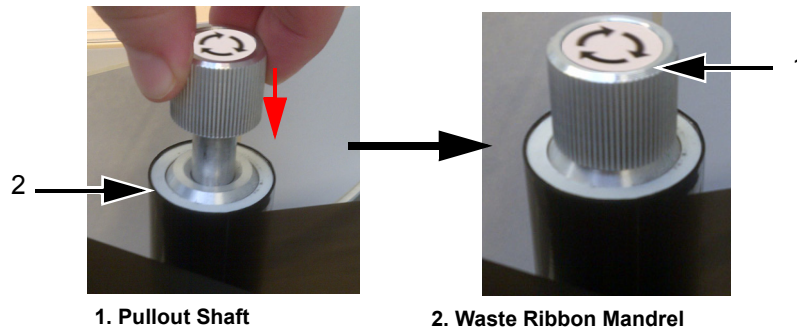


Figure 6-36: Pullout Shaft

- 7 Secure the ribbon to the waste mandrel with an adhesive tape to prevent from slipping.
- 8 Wind excess ribbon onto the waste mandrel, ensuring that the ribbon is not torn or wrinkled.

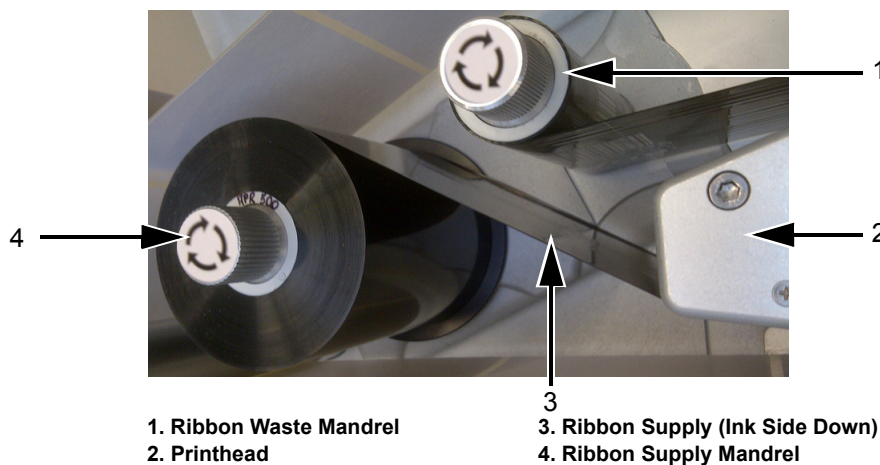


Figure 6-37: Loading Ribbon Around Printhead

- 9 Where fitted, secure the latch in position to the print roller support plate.

 **Caution**

EQUIPMENT DAMAGE. Turn the waste mandrel only to provide tension in the ribbon.

## Removing the Label Roll

For removing the waste label roll, perform the following task:

- 1 Break the liner/backing close to the waste mandrel.
- 2 Unlock the mandrel lock by rotating it in the direction indicated on the lock on the waste mandrel (see Figure 6-38).



**Note:** Left Hand unit shown

*Figure 6-38: Waste Mandrel Lock*

- 3 Remove the label waste from the waste mandrel.
- 4 Unlock the mandrel lock by rotating it in the direction indicated on the lock on the supply mandrel (see Figure 6-38). Remove the label supply disc.
- 5 Remove the empty label roll.
- 6 Ensure that the web is removed from the rollers. Remove the label supply core from the supply mandrel.

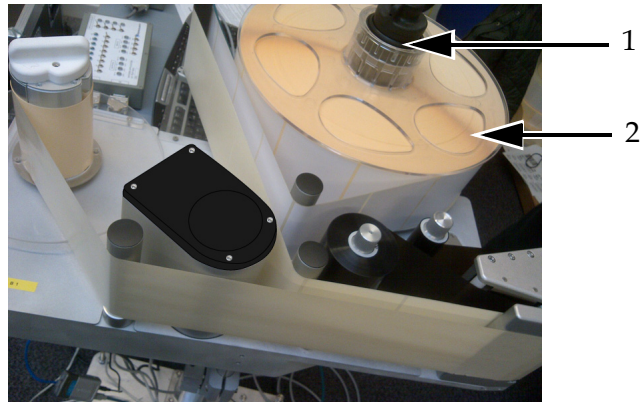
**Note:** Some labels may remain on the web, please remove and discard in accordance with the local regulations.

- 7 Where fitted, open the latch.

## Loading a Label Roll

Do the following tasks to load a label roll:

- 1 Fit the label roll to the label supply mandrel. Ensure that the label supply is placed onto the mandrel such that the labels feed in the direction indicated on the supply disc.

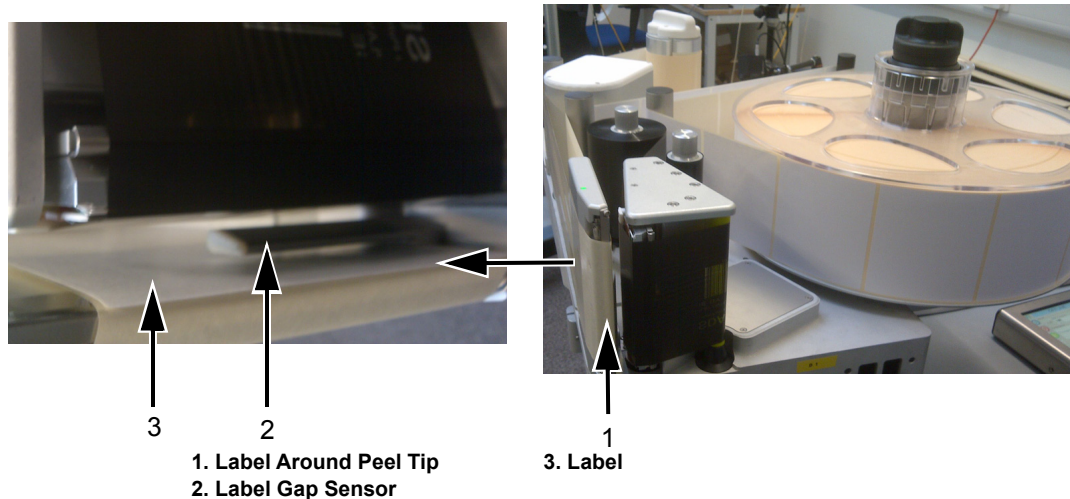


1. Label Supply Mandrel
2. Label Roll

Figure 6-39: Label Web Path

- 2 If the unit is vertical, replace the label supply disc and secure it with the label supply mandrel lock by turning the lock to the locked position as indicated on the mandrel lock.
- 3 Remove a number of labels from the beginning of the roll to support the label routing. Thread the label web as shown in Figure 5-3 on page 5-3 and Figure 5-4 on page 5-3 (i.e, route the labels around each of the rollers in turn as shown on the webbing diagram).

Ensure that the labels are threaded through the label gap sensor and around the peel tip.



1. Label Around Peel Tip
2. Label Gap Sensor
3. Label

Figure 6-40: Label Around Peel Tip

**Note:** The label gap sensor detects the gap between the labels. Refer to “Label Gap Sensor” on page 3-10 for more information. When the labels are correctly routed, the LED will turn green.

- 4 Make sure that the waste mandrel is still unlocked.
- 5 Secure the waste label backing to the waste mandrel by slotting the backing into the slot as indicated by the arrows on the waste mandrel.



**Note:** Right Hand unit shown

Figure 6-41: Mandrel Slot

- 6 Secure with the mandrel lock (a click sound is audible when secured) and wind the label web around the mandrel two or three times until the label web is secure.

**Note:** If the mandrel lock is not secured, the label speed will not be accurate.

- 7 Place the supply disc on the supply mandrel and lock it.
- 8 Where fitted, secure the latch in position to the print roller support plate.



## Production Audit Log

The production audit log shows the log of machine changes and user changes made.

**Note:** Production Audit Log is turned off by default and needs to be activated in Clarity Configuration Manager. The logging mode can be set to “None”, “Normal” or “Advanced”.

Navigate to *Tools > Diagnostics > Control*.

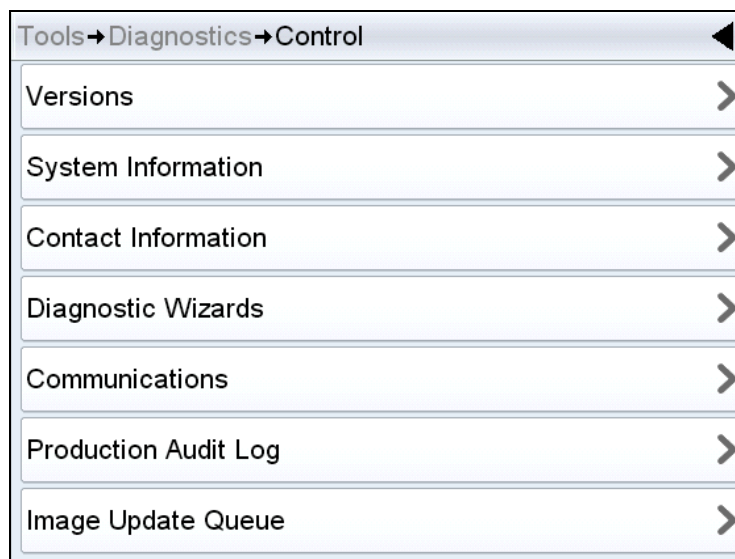


Figure 6-42: Production Audit Log

**Note:** ‘Production Audit Log’ appears in the menu when the logging mode is set to either ‘Normal’ or ‘Advanced’.

In Normal logging mode, the log entries are deleted if there are over 500 log entries and older than 90 days.

In Advanced logging mode, entries must be archived to a USB stick before logs will be deleted.

Figure 6-43 shows the audit log for both machine events and user events. The user can also filter results to show either user events only or machine events only (see Table 6-3).



Figure 6-43: Production Audit Log






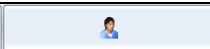
Button	Function
 	Lists both machine and user events
 	Lists only user events
 	Lists only machine events

Table 6-3: Buttons to Filter the Log

The following machine events are logged.

Machine Events
CLARiTY Started – [s/w version, PCB serial no]
CLARiTY Exit
Power Failure detected
Fault/Warning raised – [Fault Name]
Fault/Warning cleared – [Fault Name]

Table 6-4: Logged Machine Event



Machine Events
Parameters download (CLARiTY Configuration Manager)

Table 6-4: Logged Machine Event (Continued)

The following user events are logged. Each user event is also labelled with name of the user performing the change when advanced passwords are turned on.

User Events	Name of the User
Parameter change	Parameter name, old and new value
CLARiTY Clone restored	File name
CLARiTY Archive restored	File name
CLARiTY Update started	Update name

Table 6-5: Logged User Event

Touch on any event log to view the details of the log (Figure 6-44).

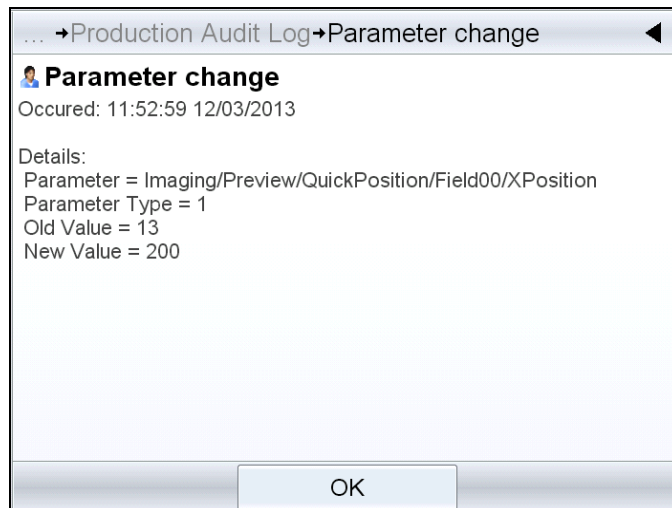


Figure 6-44: Parameter Change

## How to Update Controller Software

You can update the controller software by following methods:

- USB key
- CLARiTY Configuration Manager

*Note:* For updating the controller software, refer to Service Manual.

## Availability Page

This section explains on how to access the availability page. For information on availability calculation, equipment and operational availability, refer to “Overall Equipment Effectiveness - Availability Tools” on page D-1.

Touch *Performance* on the *Home* page.

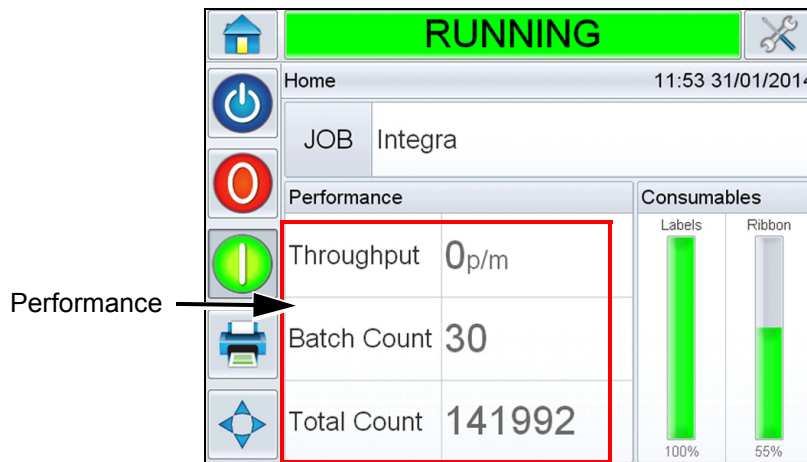


Figure 6-45: Home Page

Displays the *Performance Page*. Touch *Availability* to access the availability page.

Performance	
Throughput	0
Batch Count	30
Total Count	141992
Availability	>
Ignored Print Signals	89799
Short Term Speed	0
Short Term Efficiency	0

Figure 6-46: Performance Page

Displays the *Availability page* (see Figure 6-47). The user can view simultaneously the equipment availability and operational availability data against the time frame. The history of the availability data in the *Timeframe* column enables the user to correlate seasonal changes affecting availability.

Performance → Availability		
Timeframe	Printer Availability	Operational Availability "Running" time
Last 30 days	100.0% >	91.0% >
Last 90 days	96.0% >	79.3% >
Current Month	100.0% >	92.8% >
March 2014	100.0% >	91.0% >
February 2014	92.2% >	83.6% >

Operational Availability column

Figure 6-47: Availability

**Note:** Arrows shown in the availability cells indicates the presence of data for drilling down. Select the cell to view the specific data for detailed analysis.


Option	Description
Timeframe	Allows the user to view equipment and operational availability values for different available time frames. The history of the availability data enables the user to correlate seasonal changes affecting availability.
Equipment Availability	Shows the equipment availability data.
Operational Availability	Shows the operational availability data based on the proxy in use for the calculation, that is "Power On" time or "Running" time
Production Time Proxy	Allows the user to change equipment availability calculation between user selected operating modes that is either 'running' or 'power on' mode. Proxy choice ensures the calculation of availability matches the operating mode of user. The operational availability column in the <i>Availability</i> page (see Figure 6-47) shows the proxy selected by the user.
Export to USB	Allows the user to export the event log to USB stick. The UI will take the user through the steps required to download to USB.
	Shows that further information is available. Touch the cell to view the <i>Fault Pareto</i> page for the selected availability data. The page displays the fault type, downtime and fault frequency.

Table 6-6: Availability Page options

Performance → Availability → Fault Pareto		
March 2014, Operational Availability (Running): 91.0%		
Fault Type	Downtime (mmm:ss)	Frequency
<a href="#">(E5027) No Ribbon</a>	17:36	3 >
<a href="#">(E5016) Printer Ribbon Break</a>	13:25	1 >
<a href="#">(E5025) Ribbon Feed Fault</a>	6:04	7 >
<a href="#">(E5037) Out of Labels</a>	3:41	0 >
<div style="display: flex; justify-content: space-between;"> <span>Sort By</span> <span>Change Timeframe</span> <span>Printer/Operational Availability</span> </div>		

Figure 6-48: Fault Pareto for Operational Availability

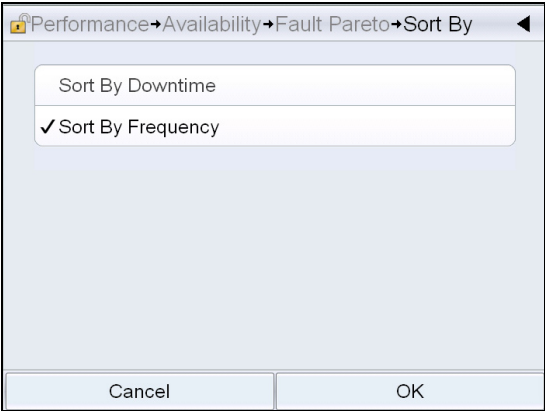
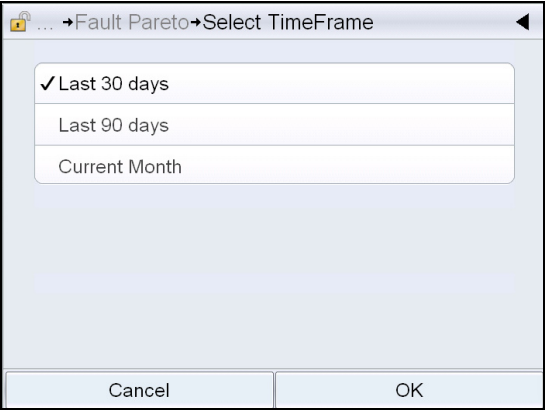
Option	Description
Fault type	Description of the error code and fault. Touch the fault type to view the detailed description of the fault and possible solutions.
Downtime	The total duration of time the equipment was in this fault state.
Frequency	The number of times the equipment had this fault in the time frame.
Sort By	<p>Allows the user to sort the list based on equipment downtime or fault frequency.</p> 
Change Timeframe	<p>Allows the user to view fault pareto page for different available time frames.</p> 

Table 6-7: Fault Pareto

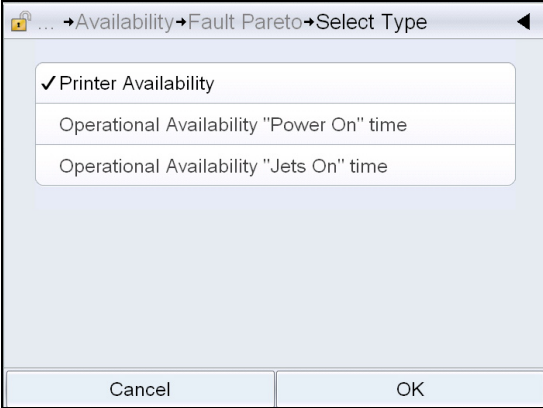

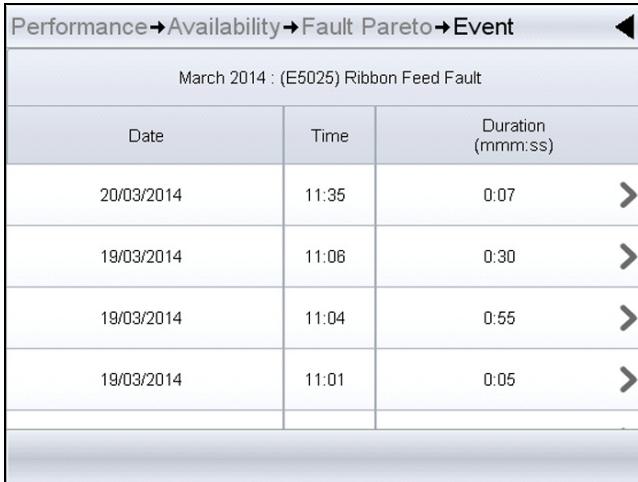
Option	Description
Printer/ Operational Availability	<p>Allows the user to toggle between equipment and operational availability fault pareto page.</p> 

Table 6-7: Fault Pareto (Continued)

Touch  to view the *Event* page (see Figure 6-49). Event page displays the date, time and duration of each occurrence of that specific fault. This page can be used to correlate the occurrence of a fault with other events in the production facility.








Performance→Availability→Fault Pareto→Event		
March 2014 : (E5025) Ribbon Feed Fault		
Date	Time	Duration (mmm:ss)
20/03/2014	11:35	0:07 
19/03/2014	11:06	0:30 
19/03/2014	11:04	0:55 
19/03/2014	11:01	0:05 

Figure 6-49: Event

Touch  to view the *Parameter* page (see Figure 6-50). Parameter page displays the detailed equipment health parameters logged when the specific fault occurred.

... →Availability→Fault Pareto→Event→Parameters ◀			
March 2014 : (E5025) Ribbon Feed Fault: 19/03/2014: 11:04			
Parameter	Event Time	1 min before	5 min before
Encoder Speed	200mm/s	200mm/s	200mm/s
Printhead Temperature	28.5°C	28.6°C	28.7°C
Throughput	33	0	0
Label Supply Diameter	276.7mm	276.7mm	276.7mm
			Go to Event Log

Figure 6-50: Parameters

Option	Description
Event Time	Time when the fault occurred
1 min before 5 min before	Data is shown for 1 minute and 5 minutes prior to the event to illustrate data trends. The equipment highlights the parameters which are out of range. Combining this information to all noted symptoms can expedite root cause analysis.
Go to Event Log	When selected, displays the <i>Event log</i> page (see Figure 6-51 on page 6-43). You can also view this page by navigating through <i>Tools &gt; Diagnostics &gt; Printhead</i> . The Event log retains all activities happening for 180 days period. It can be useful to check other equipment activities occurring at the same time as a fault to understand the fault context.

Table 6-8: Parameters

You can filter to remove status, warnings, faults as required.

... → Fault Pareto → Event → Parameters → Event Log				
	Event	Date	Time	Duration (mmm:ss)
	OverallState	19/03/2014	11:04	
	<a href="#">(E5025) Ribbon Feed Fault</a>	19/03/2014	11:04	0:55 
	OverallState	19/03/2014	11:04	
	OverallState	19/03/2014	11:01	
	<a href="#">(E5025) Ribbon Feed Fault</a>	19/03/2014	11:01	0:05 
Hide Faults		Hide Warnings		Hide Status
				Export to USB

Figure 6-51: Event log





Symbol	Type
	Faults event
	Warning events
	Status - An equipment event where no warnings or faults are raised

Table 6-9: Event Log symbols

**Note:** If an event has caused downtime then the symbol  will be present

along with the Fault, Warning or Status symbols indicating that you can view the equipment parameters at the time of that event.



Option	Description
Hide Faults	Allows the user to Show/Hide any fault events from the event log list.
Hide Warnings	Allows the user to Show/Hide any warning events from the event log list.
Hide Status	Allows the user to Show/Hide any status events from the event log list.
Export to USB	Allows the user to export the event log and associated parameter snapshots to USB stick. The UI will take the user through the steps required to download to USB.

Table 6-10: Event Log Page Options

Touch on the event message for detailed description of the fault or warning event. The user interface displays a detailed description, likely cause and resolution.

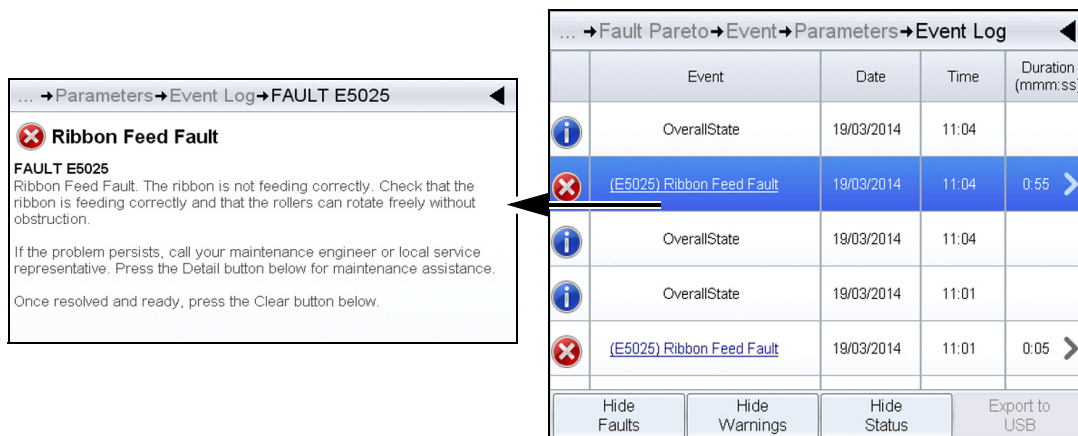


Figure 6-52: Event log diagnostics

Event ID	Date	Time	Event Type	Event	Duration (minutes)
4	4/1/2014	12:07:00	INFO	Message Select	
3	4/1/2014	12:05:10	WARNING	(E5000) Label Feed Required	1.5
2	4/1/2014	12:00:10	FAULT	(E5004) Label Web Break	5.1
1	4/1/2014	12:00:01	INFO	Power On	

Figure 6-53: Exported Data

For more information on the exported data, refer to Service Manual.

This chapter describes the general maintenance of the LPA.

## General Maintenance

Videojet 9550 LPA requires minimum ongoing maintenance.



### Caution

**EQUIPMENT DAMAGE.** The use of an incompatible cleaning kit can seriously damage your printer. Such damage will not be covered by your printer warranty. Use only cleaning kits approved by your dealer.

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*Note: Harsh or dirty environments may require shorter intervals between preventive maintenance routines.*

Do the following inspections and perform the measures as per the scheduled frequency.

Inspection Check Point	Frequency	Measures
<b>CLARiTY Display</b>		
Check if the touch screen is clean	As Required	Clean the touch screen by wiping with a dry soft cloth or cotton pad.
Check if the CLARiTY display surface is clean	As Required	Clean the CLARiTY display surface by wiping with a dry soft cloth or cotton pad.
<b>Printhead</b>		
Printhead	With every ribbon change (minimum frequency) <i>Note: Harsh or dirty environments may require shorter intervals between cleaning</i>	Clean with pre-soaked swabs or wipes that are available from the approved cleaning kits. For more information on cleaning the printhead, refer to "Cleaning the Printhead" on page 7-3.
Print Roller	As required (for example, when ink has transferred to the roller)	Clean with pre-soaked swabs or wipes that are available from the approved cleaning kits.
<b>Labeler</b>		
Examine the rollers, the tamp pad (if fitted) for adhesive build-up, or excessive dust	After every two to three rolls of labels, or more often if required	Clean to remove dust and adhesive build-up.
Clean external surfaces	Monthly or as required	Clean with low pressure air, or wipe with a soft cloth.
Examine the product sensor	Weekly	Clean the lens with a soft cloth.
Inspect the electrical connections	Monthly or as required	Visual inspection
Verify if all modules and accessories are fastened securely	Monthly	Visual inspection
<b>Cable</b>		
Check all screw-fastened plug-and-socket connectors for tight fit.	As Required	If necessary, re-tighten them.


Table 7-1: General Maintenance Schedule

## Cleaning the Printhead

To maintain maximum print quality, you should clean the printhead every time the ribbon is changed.

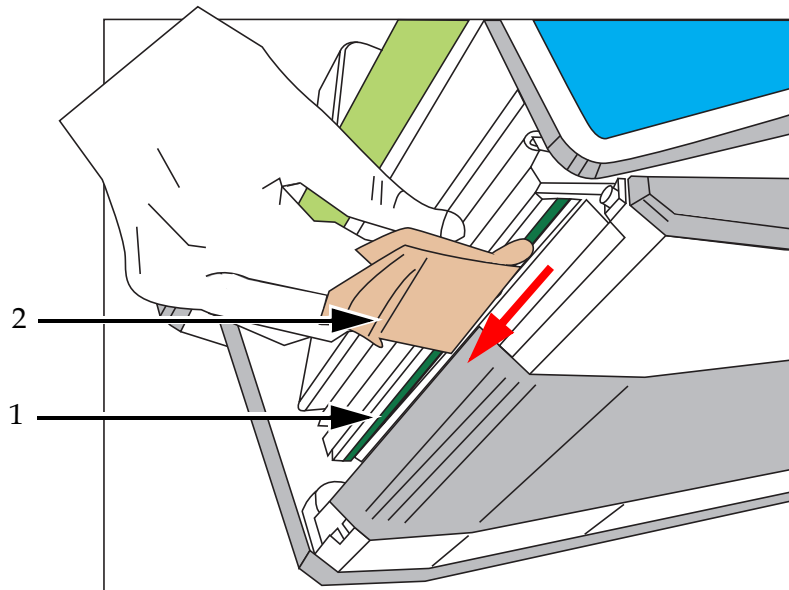
**Note:** Harsh or dirty environments may require shorter intervals between cleaning.

To clean the printhead, proceed as follows:

- 1 Touch the *Stop* button  on the CLARiTY display. The status bar changes to *OFFLINE*.
- 2 If cleaning between ribbon changes, rotate the ribbon supply mandrel to allow the ribbon to loosen.
- 3 Gently pull the ribbon outwards until it is not in contact with the printhead. Move the ribbon upwards.

**Note:** Perform Step 2 and Step 3 only if cleaning between ribbon changes. Normally, the ribbon will be removed.

- 4 Clean the printhead pixel line (see Figure 7-1) from top to bottom carefully using the cleaning swabs or wipes provided with the printer. The cleaning kit will contain Videojet approved pre-soaked cleaning wipes or swabs.



1. Pixel Line
2. Cleaning Wipe

Figure 7-1: Printhead Cleaning

**Note:** Use only swabs or wipes that are available from the approved cleaning kits to clean the printhead.

**Note:** Do not touch the printhead with sharp objects.

**Note:** Allow one minute for the excess isopropanol to evaporate. Failure to allow this interval can result in damage to the printhead by thermal shock.

- 5 Place the ribbon back carefully around the printhead.
- 6 Rotate the ribbon waste mandrel to tighten the ribbon. Check for tension in the ribbon.

**Note:** Perform Step 5 and Step 6 only if cleaning between ribbon changes.

- 7 Touch the *Start* button  on the CLARiTY display. The status bar changes to *RUNNING*.

Cleaning of printhead is complete.

This chapter contains the following topics:

- Printing Faults
- CLARiTY Display Faults
- Label web Faults
- I/O Faults
- CLARiTY Error Messages
- Barcode Scanner Faults and Warnings
- Job File Faults and Warnings
- Diagnostics

## Printing Faults

Fault	Possible Cause	Solution
No information is printed	No Print Signal	Go to <i>Tools &gt; Diagnostics &gt; Printhead &gt; Inputs</i> and check the presence of incoming print signal
	Low Darkness level	Go to <i>Tools &gt; Setup &gt; Printhead &gt; Print Darkness</i> and increase the Darkness setting
	Incorrect or No Encoder signal (where encoder used)	Go to <i>Tools &gt; Diagnostics &gt; Printhead &gt; Inputs &gt; Encoder</i> and check for encoder speed
	Incorrect positioning of image on label	Go to <i>Tools &gt; Setup &gt; Printhead</i> and check print position parameters
	Printhead not contacting the label	Check and correct any obstructions
	Faulty Printhead	Replace the printhead
	Ribbon incorrectly webbed or incorrect ribbon stock (should be inside inked)	Check and correct ribbon
	Printhead cables not fully inserted or missing	Check and correct

Table 8-1: Printing Faults

Fault	Possible Cause	Solution
Poor print quality	Low Darkness level (printed image appears faded)	Go to <i>Tools &gt; Setup &gt; Printhead &gt; Print Darkness</i> and increase the Darkness setting. Choose the highest value of darkness that achieves a satisfactory quality print.
	Too high darkness level (the edges of the printed image appears blurred)	Go to <i>Tools &gt; Setup &gt; Printhead &gt; Print Darkness</i> and decrease the Darkness setting. Choose the lowest value of darkness that achieves a satisfactory quality print.
	Insufficient printhead force (printed image appears faded)	Navigate to <i>Tools &gt; Setup &gt; Printhead &gt; Print Force</i> . Adjust the printhead force value to the optimum value.
	Too much printhead force (the edges of the printed image appears blurred)	Navigate to <i>Tools &gt; Setup &gt; Printhead &gt; Print Force</i> . Adjust the printhead force value to optimum value.
	Dirty Printhead	Allow the printhead to cool and then clean (see "Cleaning the Printhead" on page 7-3).
	Dirty or worn label	Check, clean, reposition or replace labels if necessary.
	Ribbon slipping on either supply or waste ribbon mandrels	Check shaft is secured on the waste ribbon mandrel. If necessary, replace ribbon leaf springs. Call your maintenance engineer or local service representative.
	Incorrect ribbon stock	Replace with correct ribbon.
	Ribbon width set incorrectly	Check and enter correct ribbon width.
	Non-approved consumables not suitable for print speed and quality required	Replace consumables with appropriate grade.
Ribbon creasing due to ribbon not fully pushed onto supply mandrel	Push ribbon supply onto mandrel fully.	

Table 8-1: Printing Faults (Continued)



Fault	Possible Cause	Solution
Top or bottom of print is missing or ragged	Image off the side of the label	Check position Y and adjust. Check image size is not too big for the label.
		Set the backfeed feature ON and properly set the backfeed distance in the installation wizard.
	Image off the top or bottom of the label	Check print position X and adjust. Check image size is not too big for the label.
One or more pixels missing	Printhead pixel not operating correctly	Clean printhead (refer to “Cleaning the Printhead” on page 7-3). Review the health graph to check resistance. If the problem persists, replace the printhead (refer to Service Manual for printhead replacement instructions).

Table 8-1: Printing Faults (Continued)

## CLARiTY Display Faults

Fault	Cause	Solution
CLARiTY Display is switched OFF	CLARiTY display connectors not inserted correctly	Power off and insert the cable correctly
	Power save enabled	Press screen to enable display
	Faulty CLARiTY display unit.	Check unit and replace the components as required. Call your maintenance engineer or local service representative.
CLARiTY fails to respond to touch	Software not responding	Power on/off
	Faulty CLARiTY display unit	Check unit and replace the components as required. Call your maintenance engineer or local service representative.

Table 8-2: CLARiTY Display Faults

## Label Web Faults

Fault	Cause	Solution
Dancer Arm hits end stops	Label Web Broken	Check label web and if required, remove waste and reload web
		Label web incorrectly routed. Check route and reload as required.
	Hardware (Label supply)	Review error message for further detail and call your maintenance engineer or local service representative
Label position tracking issues	Label supply mandrel not locked	Lock label supply mandrel
Label not feeding correctly	Label waste mandrel not locked	Lock label waste mandrel

Table 8-3: Label Web Faults

## I/O Faults

Fault	Cause	Solution
Machine does not respond to print signal	Product detect sensor obscured	Check sensor and remove obstruction
	Cabling detached	Reattach cable
	Cabling damaged	Visually inspect, replace as necessary (consult maintenance engineer or local service representative if replacement is needed)
	Product detect sensor not in position	Check sensor and put into correct position
	LPA in offline state	Place the LPA Online. Check faults and warnings and follow the on-screen instruction to remove the warning(s) as needed.

Table 8-4: I/O Faults

**Note:** Inputs/outputs can be reviewed in the diagnostics screen (by navigating to **Tools > Diagnostics > Printhead > Inputs / Outputs**) to check status and/or function.

## CLARiTY Error Messages

If CLARiTY displays a fault or warning, perform the following:

- Read the fault or warning message.



Figure 8-1: Fault Status



Figure 8-2: Warning Status

- Perform the task as per the message.
- Clear the message from the display (sometimes the message clears automatically when the fault is corrected, and sometimes you have to clear it by touching the *Clear* button).

### Reading a Fault Message or Warning

When a fault or warning occurs, CLARiTY displays the fault message in the status window at the top of all pages.

When a fault occurs, the LPA's fault output relay will open. If this relay is wired into the packaging machine's stop circuit, it can be used to ensure that the packaging machine is stopped in the event of an error. This prevents the uncoded product from being produced when the LPA has a fault.

For example, when the entire reel of ribbon has been used, CLARiTY will display the red FAULT banner with the message *Label Web Break*, as shown in Figure 8-3.

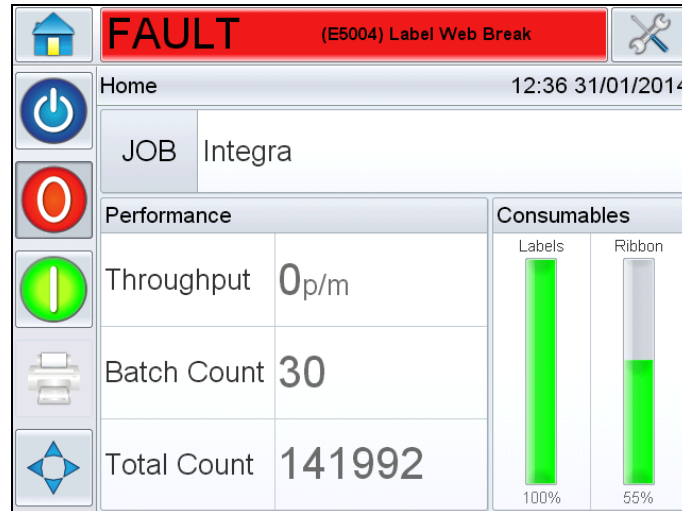


Figure 8-3: Fault Display

Several faults and warnings may occur at the same time. Faults will always be displayed first.

To view the faults/warnings in more detail and to view instructions on what to do about them, touch the red or yellow area in the status window at the top of the CLARiTY display.

## Clearing a Fault Message or Warning

The instructions in this section provides information on how to clear a fault message. A similar procedure is used to clear warnings.

To view the details of the fault list, proceed as follows:

- 1 Touch the red FAULT message to view the list of faults (see Figure 8-4).



Figure 8-4: Fault Selection

- 2 Touch the fault name in the list.
- 3 The details of the fault is displayed. Follow the on screen instruction for correcting the fault.

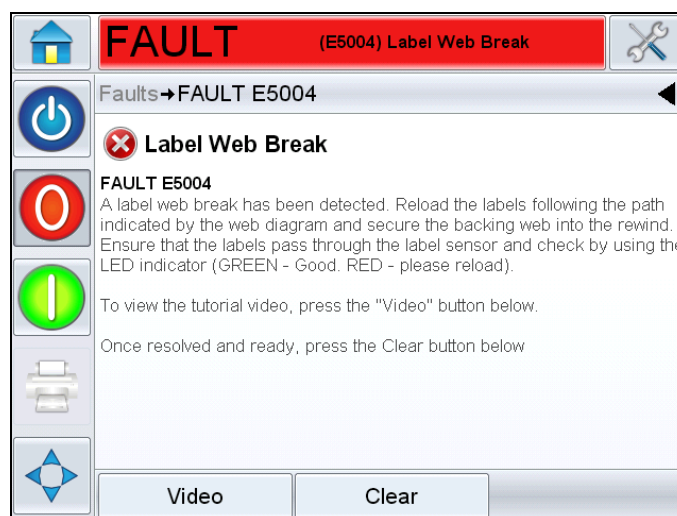


Figure 8-5: Fault Details Display

- 4 When you have corrected the fault, the Clear button is activated. Touch *Clear* to remove the fault message.

Table 8-5 provides the CLARiTY faults and Warnings.

Error No.	Description	Status
E1000	'Job Update Failure' - The printer was unable to update the current Job before the next print was required. This usually occurs because products are too close together. Press the 'Clear' button to enable printing to be restarted.	Fault
E1001	'Count Limit Reached' - One or more of the counters in the image has reached the end value set in the image design. Please select a new Job and press the 'Clear' button to enable printing to be restarted.	Fault
E1002	'Operation Aborted' - The operation of the printer was intentionally aborted by a host control system. When ready to do so, the host control system will clear this abort condition, and then this fault message will automatically clear and the printer will resume operation.	Fault
E1003	'Realtime Clock Fault' - There is a problem with the Real time Clock which is required for the system to operate correctly.	Fault
E1004	'Backup battery is flat' - The battery which powers the printer's clock is flat. This means that the date and time, the currently selected Job and some performance data will be lost when the printer is switched off.	Fault
E1005	'Print Limit Exceeded' - The current Job was selected with a print limit (i.e. a limit on the number of times the Job can be printed). This limit has been reached but the printer has received a further print signal that would have exceeded the limit. This error will become clearable after selecting a new job. Alternatively, a Job selection command or variable data update from an external source will also make this error clearable.	Fault
E1006	'Image Update Failure' - CLARiTY was unable to update the image that will be printed next. This usually occurs because products are too close together. Press the 'Clear' button to enable printing to be restarted.	Fault
E1007	'Image Update Failure' - CLARiTY was unable to update the image that will be printed next. This usually occurs because products are too close together. Press the 'Clear' button to enable printing to be restarted.	Fault
E1008	'Power Failure Detected' - A serious drop in the mains power has been detected. In order to protect the printer from damage, the high voltage circuits have been switched off. You must now repower the printer in order to resume printing. If the problem persists, contact your maintenance engineer or local service representative.	Fault
E1009	'Corrupt MAC Address' - The MAC address of this printer is corrupt and the printer cannot function without a valid MAC address. Contact your maintenance engineer or local service representative who will be able to correct this problem.	Fault

Table 8-5: CLARiTY Error Messages

Error No.	Description	Status
E1010	'Invalid Line' - The line selection inputs have requested a line that is not configured. Use CLARiTY Configuration Manager to check that the correct number of lines have been setup for this system. Also check that the line selection inputs are connected properly. Press the 'Clear' button below, to clear this warning message.	Fault
E1011	'Production Disabled' - A request to print a product has been received for a line that production has been disabled on. Please press the Job button on the home screen and check that the line configuration is correct. Press the 'Clear' button below, to clear this fault message.	Fault
E1012	'No Line Selected' - A print signal has been received for a product without any line selection. Please check that the line selection system is functioning correctly. Press the 'Clear' button below, to clear this fault message.	Fault
E1013	'BETA Expired' - The beta period for the release has expired. Contact your maintenance engineer or local service representative to correct this problem.	Fault
E1014	'Time and Date may be incorrect' - The printers time and date may not be correct. The most common cause for this is that the battery used to backup the printers clock is flat. If this problem returns the next time the printer is power on then the battery should be replaced. If the battery is flat the date and time, the currently selected job and some performance data will be lost when the printer is switched off. Press the 'Clear' button below, to clear this warning message.	Warning
E1239	'CLARiTY Data File Complete' - All data has been printed in the current CLARiTY Data File. Please select a new Job to resume printing. Note you will have to install a new CLARiTY Data file before selecting the Job if that job uses a CLARiTY Data file. Press the 'Clear' button below, to clear this fault message.	Fault
E1240	'Missing CLARiTY Data File' - There is no CLARiTY Data File installed in this printer and the selected Job uses a CLARiTY Data file to lookup the data it prints. Please select a new Job or install a CLARiTY Data file to resume printing. Press the 'Clear' button below, to clear this fault message.	Fault
E1241	'CLARiTY Data File Failed' - There is a problem with the installed CLARiTY Data file. Please select a new Job or install a new CLARiTY Data file to resume printing. Press the 'Clear' button below, to clear this fault message.	Fault
E1242	'Invalid Job File - Barcode data too long' - The Job file is invalid and needs to be corrected using CLARiSOFT. A QR Barcode field in the job file contains too many data characters for the selected dimensions. Press the 'Clear' button below, to clear this fault message.	Fault

Table 8-5: CLARiTY Error Messages (Continued)

Error No.	Description	Status
E1243	'Invalid Job File - Avoidance Date' - The Job file contains a calculated date that is an avoidance date. Use CLARiSOFT to check and correct the calculated dates in the job. Then, download the corrected file to the printer. Select a valid Job and then press 'Clear' button below, to clear this fault message.	Fault
E1300	'Slave Printer Absent' - This printer is configured as the Master to a group of Slave printers, Slave printer %1 is assigned to this Master, but it is not responding. Please check the wiring connections between this Master printer and Slave %1 printer, then power both this Master and Slave %1 off then on, to try and clear this fault. If the problem persists, call your maintenance engineer or local service representative. If you want to continue production without Slave %1, please go to <i>Tools &gt; Setup &gt; Printheads &gt; Slave%1</i> and un-assign Slave%1.	Fault
E1301	'Master Printer Absent' - This printer is configured as a Slave printer to a Master printer in a group of printers, The Master printer is not responding to this Slave printer. Please check the wiring between this printer and the Master printer, then power both printers off then on, to try and clear this fault. If the problem persists, contact your maintenance engineer or local service representative.	Fault
E1302	'Slave Job Select Failed' - Slave Printer %1 failed to select the current job. Please check the wiring between this printer and the Master printer, then power both printers off then on, to try and clear this fault. If the problem persists, call your maintenance engineer or local service representative.	Fault
E1303	'Slave Database Full' - Slave Printer %1 has failed to receive a file because it has run of space. This usually occurs when a slave printer has a smaller database capacity than the master, if this is the case then it is recommended that the slave database is upgraded. To ensure trouble free operation, delete some jobs out of the master printer database and then repower the master printer. This will cause the master and slave databases to be resynchronised. Press the 'Clear' button below, to clear this fault message.	Fault
E1304	'Slave Software Version' - Slave Printer %1 has failed to communicate with the Master Printer because its software is too old. Please perform a CLARiTY Update to the latest revision of software to resolve this problem.	Fault
E1305	'Slave Job Update Failed' - Slave Printer %1 failed to update the printing data for the current job. Please check the wiring between this printer and the Master printer, then power both printers off then on, to try and clear this fault. If the problem persists, contact your maintenance engineer or local service representative.	Fault
E1500	'Log File Corruption' - Corruption has been detected in the log file. Please navigate to <i>Tools &gt; Diagnostics &gt; Control &gt; Log Files</i> for more details. Press the 'Clear' button below, to clear this warning message.	Warning

Table 8-5: CLARiTY Error Messages (Continued)



Error No.	Description	Status
E1501	'Log File Space Critical' - The available space for logging has reached a critical level. Please archive the log file or delete unnecessary files from the Job database to free up some space. This fault message will clear automatically when the free space is increased.	Fault
E1502	'Log File Space Limited' - The available space for logging becoming limited. Please archive the log file or delete unnecessary files from the Job database to free up some space. Press the 'Clear' button below, to clear this warning message	Warning
E1503	'Logging Space Exhausted' - The available space for logging is exhausted. Please archive the log file to free up some space. Press the 'Clear' button below, to clear this fault message	Fault
E1504	'Log File Save Failed' - Failed to save log file information. Some log file information has been lost. Press the 'Clear' button below, to clear this fault message.	Fault
E1505	'Logging Job Events Disabled' - Logging of Job events has been disabled. This is because Job selections and Job updates are happening too frequently. The printer can only log Job events once every 10 seconds. Logging of Job events can be re-enabled via the IncludeJobEvents parameter in CLARiTY Configuration manager if the frequency of Job events is reduced. Press the 'Clear' button below, to clear this warning message.	Warning
E4040	'Allowed Login Attempts Exceeded' - A user enter an incorrect password repeatedly and has been disabled.	Fault
E5000	'Label Feed Required' - A small number of labels will now feed to complete the auto-setup. Please collect these and discard. Press 'OK' to proceed.	Warning
E5001	'Applicator Configuration' - There is an error in the applicator configuration file. Note that as a result of this error the machine will not function correctly. Press the 'Clear' button below to continue.	Fault
E5002	'Applicator Configuration' - There is an error in the applicator configuration file. Note that as a result of this error the machine will not function correctly. Press the 'Clear' button below to continue.	Fault
E5004	'Label Web Break' - A label web break has been detected. Reload the labels following the path indicated by the web diagram and secure the backing web into the rewind. Ensure that the labels pass through the label sensor and check by using the LED indicator (GREEN - Good. RED - please reload). To view the tutorial video, press the Video button below. Once resolved and ready, press the 'Clear' button below.	Fault
E5005	'Dancer Arm Fault' - Call your maintenance engineer or local service representative. Press 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.	Fault

Table 8-5: CLARiTY Error Messages (Continued)

Error No.	Description	Status
E5006	<p>'Ribbon Drive Setup Failed' - The printer ribbon auto setup procedure has not completed successfully. This will occur if the ribbon cores are slipping on their mandrels, or could be caused by a faulty ribbon measurement roller.</p> <ol style="list-style-type: none"> <li>1. Check that the ribbon is routed correctly between the supply reel (black backing disc) and waste reel, ensuring that it passes under the printhead and around the ribbon sensor roller. Ensure that the ribbon does not pass through the label sensor near the printhead (the LED will flash red if the ribbon is detected underneath the label sensor).</li> <li>2. Check that the ribbon cores are firmly gripped on their mandrels. If they are slipping, call your maintenance engineer or local service representative.</li> </ol> <p>To see a video of the ribbon loading procedure and ribbon path, press the Video button below.</p> <p>Once resolved and ready, press the 'Clear' button below and the machine will re-try the auto setup procedure.</p> <p>If the problem persists, call your maintenance engineer or local service representative.</p>	Fault
E5008	'Label Drive Fault' - Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance.	Fault
E5009	'Printhead Power Fault' - Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance.	Fault
E5010	'Printhead Sensor Fault' - Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance.	Fault
E5011	'Printhead Over Temperature' - Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.	Fault
E5012	'Dancer Arm Fault' - Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.	Fault
E5013	'Label Drive Fault' - Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance.	Fault
E5014	'Machine Hand Not Set' - The Machine Hand parameter has not been set. To clear this fault press the Configure button below or run the system configuration option in <i>Tools &gt; Setup &gt; Control</i> . This fault will automatically clear when this is complete.	Fault
E5015	'Motor Characterization Required' - The ribbon motors have not been characterized. To characterize the ribbon motors, ensure that the ribbon mandrels have no ribbon fitted to them. Press the Characterize Ribbon Motors button below. Once the characterization completes, this fault will clear automatically.	Fault

Table 8-5: CLARiTY Error Messages (Continued)

Error No.	Description	Status
E5016	<p>'Printer Ribbon Break' - If the ribbon is not broken, press the 'Clear' button below and attempt to resume printing. If the ribbon is broken, reload the ribbon between the supply reel (black backing disc) and take-up reel (silver backing disc), ensuring that it passes under the printhead and around the ribbon measurement roller. Also ensure that the ribbon does not pass through the label sensor near the printhead. To view the tutorial video, press the 'Video' button below. Once resolved and ready, press the 'Clear' button below.</p>	Fault
E5017	<p>'Out of Printer Ribbon' - The printer ribbon has run out (or there is very little remaining). Replenish the machine with a new roll of ribbon. Reload the ribbon between the supply reel (black backing disc) and take-up reel (silver backing disc), ensuring that it passes under the printhead and around the ribbon measurement roller. Also ensure that the ribbon does not pass through the label sensor near the printhead. To view the tutorial video, press the 'Video' button below. Once resolved and ready, press the 'Clear' button below.</p>	Fault
E5018	<p>'Printer Ribbon Low' - The printer ribbon is close to running out. There are less than 50 metres of ribbon remaining. You can view the Consumables Details by pressing the Consumables panel on the Home screen. This information will indicate the estimated time when the ribbon will completely run out if production continues at the current rate.</p>	Warning
E5019	<p>'Printer Ribbon Setup Failure' - The printer ribbon auto setup procedure has not completed successfully. This will occur if the ribbon has not been fitted correctly, the ribbon cores are slipping on their mandrels, or could be caused by a faulty ribbon measurement roller.</p> <ol style="list-style-type: none"> <li>1. Check that the ribbon sensor roller is free to rotate. You can check the reading from the ribbon sensor at <i>Tools &gt; Diagnostics &gt; Printhead &gt; Inputs</i>. If it is not, call your maintenance engineer or local service representative.</li> <li>2. Check that the ribbon is routed correctly between the supply reel (black backing disc) and waste reel, ensuring that it passes under the printhead and around the ribbon sensor roller. Ensure that the ribbon does not pass through the label sensor near the printhead (the LED will flash red if the ribbon is detected underneath the label sensor).</li> <li>3. Check that the ribbon cores are firmly gripped on their mandrels. If they are slipping, call your maintenance engineer or local service representative.</li> </ol> <p>To see a video of the ribbon loading procedure and ribbon path, press the Video button below. Once resolved and ready, press the 'Clear' button below and the machine will re-try the auto setup procedure.</p> <p>If the problem persists, call your maintenance engineer or local service representative.</p>	Fault

Table 8-5: CLARiTY Error Messages (Continued)

Error No.	Description	Status
E5020	<p>'Label Feed Fault' - The label feed assurance system has detected a label feed error. This can occur if the label web does not pass through the label sensor or if the label sensor is faulty.</p> <p>If the label sensor indicator LED is RED, please reload the labels through the sensor and make sure the LED turns GREEN.</p> <p>To view the video of loading labels on this machine, press the Video button below. Once resolved and ready, press the 'Clear' button below.</p> <p>The fault can also be caused by an obstructed or faulty label sensor. If the fault persists, call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance.</p>	Fault
E5021	<p>'Ribbon Drive Fault' - Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.</p>	Fault
E5023	<p>'Ribbon Drive Fault' - Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.</p>	Fault
E5024	<p>'Ribbon Drive Fault' - Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.</p>	Fault
E5025	<p>'Ribbon Feed Fault' - The ribbon is not feeding correctly. Check that the ribbon is feeding correctly and that the rollers can rotate freely without obstruction. If the problem persists, call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.</p>	Fault
E5026	<p>'Ribbon Feed Fault' - The ribbon is not feeding correctly. Check that the ribbon is feeding correctly and that the rollers can rotate freely without obstruction. If the problem persists, call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.</p>	Fault
E5027	<p>'No Ribbon' - Please add ribbon. When ready, press 'Clear' button. If ribbon has been fitted and the fault persists, call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance.</p>	Fault
E5028	<p>'Printhead Force Fault' - Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance.</p>	Fault
E5030	<p>'Printhead Force Fault' - Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance.</p>	Fault
E5031	<p>'Printhead Force Fault' - Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance.</p>	Fault

Table 8-5: CLARiTY Error Messages (Continued)

Error No.	Description	Status
E5032	'Printhead Position Fault' - The printhead is not in the correct position to print. Check for obstructions between the printhead and print roller. If the problem persists, call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.	Fault
E5033	'Label Supply Low' - The label supply is close to running out. You can view the Consumables Details by pressing the Consumables panel on the home screen. This information will indicate the estimated time when the label supply will completely run out if production continues at the current rate.	Warning
E5034	'Unlabelled Product' - Products are being sensed as too close together - some of the last few products may not have been labelled. Ensure products are adequately spaced and that the product sensor is not obstructed. If the problem persists, call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.	Fault
E5035	'Print Resolution Mismatch' - The printer attempted to print an image that has a different print resolution to the current printer configuration. The print has been aborted. Press the 'Clear' button below to dismiss this error.	Fault
E5036	'Printer Configuration Error' - Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance.	Fault
E5037	'Out of Labels' - Replenish label supply and reload the labels following the path indicated by the web diagram and secure the backing web into the rewind. Ensure that the labels pass through the label sensor and check by using the LED indicator (GREEN - Good. RED - please reload). To view the tutorial video, press the 'Video' button below. Once resolved and ready, press the 'Clear' button below.	Fault
E5038	'Dancer Arm Fault' - The dancer arm is not moving freely. This fault may be caused by an obstructed dancer arm or label web. Check the dancer arm is free to move and that the machine is webbed correctly. If the problem persists, call your maintenance engineering or local service representative. Press 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below	Fault
E5039	'Label Supply Sensor Fault' - Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance.	Fault
E5040	'Printhead Positioning Error' - Printhead cannot find its required operating position. Check there is no obstruction preventing the printhead moving to its endstop or the print roller and remove if present. If there is no obstruction and the problem persists, call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.	Fault

Table 8-5: CLARiTY Error Messages (Continued)

Error No.	Description	Status
E5041	'Label Drive Fault' - Label Drive Fault. Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.	Fault
E5042	'Label Supply Brake Fault'- Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance	Fault
E5043	'Label Supply Brake Fault'- Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance.	Fault
E5044	'Label Supply Brake Fault'- Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance	Fault
E5045	'Label Feed Fault'- The label feed assurance system has detected a label feed error. This can occur if the label web does not pass through the label sensor or if the label sensor is faulty. If the label sensor indicator LED is red, please reload the labels through the sensor and make sure the LED turns green. To view the video of loading labels on this machine, press the Video button below. Once resolved and ready, press the 'Clear' button below. The fault can also be caused by an obstructed or faulty label sensor. If the fault persists, call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance.	Fault
E5046	'Label Feed Fault' - The label feed assurance system has detected a label feed error. This can occur if there is a speed mismatch between the product and the label stock during print and apply. Ensure the label feed speed is correctly set if in fixed speed mode, and that the print roller and line encoder wheel (if present) are clean. Once resolved and ready, press the 'Clear' button below. The fault can also be caused by a faulty print roller sensor. If the fault persists, call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance.	Fault
E5048	'Applicator Configuration' - There is an error in the applicator configuration file. No applicator configuration file has been loaded by the machine. Note that as a result of this error the machine will not function correctly. Press the 'Clear' button below to continue.	Fault
E5049	'Gap Sensor Initialisation Required' - Ensure there is no label stock in the gap sensor and then press the 'OK' button below. The machine will not run until this fault is resolved. Once calibration has been performed this fault will automatically clear.	Fault

Table 8-5: CLARiTY Error Messages (Continued)

Error No.	Description	Status
E5050	<p>'No Labels Detected' - The label feed assurance system has detected no labels present. This can occur if the label web does not pass through the label sensor or if the label sensor is faulty.</p> <p>If the label sensor indicator LED is RED, please reload the labels through the sensor and make sure the LED turns GREEN.</p> <p>To view the video of loading labels on this machine, press the Video button below. Once resolved and ready, press the 'Clear' button below. The fault can also be caused by a faulty label sensor. If the fault persists, call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance.</p>	Fault
E5051	<p>'Incompatible Printhead'- An incompatible printhead has been detected. Press the 'Detail' button below for maintenance assistance.</p>	Fault
E5052	<p>'Print Roller Width Not Set'- The Print Roller Width parameter has not been set. To clear this fault press the Configure button below or run the installation wizard option in <i>Tools &gt; Setup &gt; Control</i>. This fault will automatically clear when this is complete</p>	Fault
E5053	<p>'Incompatible Printhead'- An incompatible printhead has been detected. Press the 'Detail' button below for maintenance assistance.</p>	Fault
E5054	<p>'Incompatible Printhead'- An incompatible printhead has been detected. Press the 'Detail' button below for maintenance assistance.</p>	Fault
E5055	<p>'Label Waste Mandrel Not Locked'- The label waste mandrel has not been locked. Please re-web the label web waste mandrel and ensure the mandrel is locked, by turning the knob fully in the direction indicated by the - &gt; symbol. To view the tutorial video, press the 'Video' button below.</p> <p>Once resolved and ready, press the 'Clear' button below.</p> <p>Press the 'Detail' button below for maintenance assistance.</p>	Fault
E5100	<p>'No Product Detected' - The applicator has reached the end of its stroke without detecting a product. This can be caused by false triggering of the product sensor, check for obstructions to the product sensor. If the problem persists, call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.</p>	Fault
E5101	<p>'Applicator Obstruction' - The applicator sensor has been triggered too soon, possibly by some form of obstruction. Check for obvious obstructions and clear. If problem persists, call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.</p>	Fault
E5102	<p>'Applicator Cylinder Fault' - The telescopic applicator cylinder is not operating correctly. Check for obvious obstructions and clear. If problem persists, call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.</p>	Fault

Table 8-5: CLARiTY Error Messages (Continued)

## Barcode Scanner Faults and Warnings

Table 8-6 provides the Barcode Scanner Faults and Warnings.

Error No.	Description	Status
E1601	'Barcode Fault' - The barcode scanner cannot read the barcodes printed onto the labels. Check printhead is clean and printing clear barcodes onto the labels. Check that labels are applying properly to the products, and that they are not wrinkled. Check that the barcode scanner is not obstructed from scanning the barcodes. If the problem persists, call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.	Fault
E1602	'Barcode Fault' - The barcode scanner has read a different barcode than the one printed onto the label. The barcode scanner may not be mounted correctly. Call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.	Fault
E1603	'Miss-read Reported' - The Barcode scanner has reported a Miss-Read. Consider recalibrating the scanner. Press the 'Clear' button below, to clear this fault message.	Fault
E1604	'No-read Reported' - The Barcode scanner has reported a No-Read. Consider recalibrating the scanner. Press the 'Clear' button below, to clear this warning message.	Warning
E1605	'Barcode Verify Queue Empty' - The scanner has been gated when there was no barcode to verify. Press the 'Clear' button below, to clear this fault message.	Fault
E5047	'Barcode Scanner Communications Fault'- Reliable communications with the Barcode Scanner have been lost. Check that the cable between the Scanner and the printer is properly connected at each end. The clear button will appear when reliable communications are found. If the problem persists, call your maintenance engineer or local service representative. Press the 'Detail' button below for maintenance assistance. Once resolved and ready, press the 'Clear' button below.	Fault

Table 8-6: Barcode Scanner Faults and Warnings



## Job File Faults and Warnings

Table 8-7 provides the faults and warnings related to job design.

Error No.	Description	Status
E1100	'Invalid Job File - bad field reference' - The Job file is invalid and needs to be corrected using CLARISOFT. There is a circular reference between fields in the Job file. Use CLARISOFT to check and correct the relationships between fields in this Job file. Then, download the corrected file. Press the 'Clear' button below, to clear this fault message.	Fault
E1101	'Invalid Job File - missing data source field' - The Job file is invalid and needs to be corrected using CLARISOFT. A field in the Job file refers to another field for its source of data, but that field is missing from the job file. Use CLARISOFT to ensure that all data source fields used in the Job file are present and correct in the Job file. Then, download the corrected file. Press the 'Clear' button below, to clear this fault message.	Fault
E1102	'Invalid Job File - duplicate named fields' - The Job file is invalid and needs to be corrected using CLARISOFT. Duplicate field names were found in the Job file. Use CLARISOFT to remove or rename fields so that there are no duplicates. Then, download the corrected file. Press the 'Clear' button below, to clear this fault message.	Fault
E1103	'Invalid Job File - invalid graphic' - The Job file is invalid and needs to be corrected using CLARISOFT. The Job file refers to a missing or invalid graphic bitmap file. Use CLARISOFT to check and ensure that all bitmap files, used by this Job file, display properly in CLARISOFT. Then, download the corrected file. Press the 'Clear' button below, to clear this fault message.	Fault
E1104	'Invalid Job File - invalid date field' - The Job file is invalid and needs to be corrected using CLARISOFT. The Job file you are trying to select contains an incorrectly specified Date Calculation. The Default Offset for the date falls outside of the date range specified by the Minimum and Maximum user concession. Use CLARISOFT to correct this error in the Job file. Then, download the corrected file. Press the 'Clear' button below, to clear this fault message.	Fault
E1105	'Invalid Job File - Multiple Transmitted Fields' - The Job file is invalid and needs to be corrected using CLARISOFT. A Transmitted Field attribute was found on more than one field. Only one field can be tagged as the transmitted field. Use CLARISOFT to correct this error in the Job file. Then, download the corrected file to Clarity Press the 'Clear' button below, to clear this fault message.	Fault

Table 8-7: Job File Faults and Warnings

Error No.	Description	Status
E1200	<p>'Invalid Job File - invalid barcode character' - The Job file is invalid and needs to be corrected using CLARiSOFT. A barcode in the Job file contains characters which are not in the character set of the barcode type being used. Use CLARiSOFT to check and correct the barcode fields in the Job file. Then, download the corrected file.</p> <p>Press the 'Clear' button below to clear this fault message.</p>	Fault
E1201	<p>'Invalid Job File - invalid barcode check digit'</p> <p>The Job file is invalid and needs to be corrected using CLARiSOFT. The check digit supplied for a barcode in the Job file is invalid. Use CLARiSOFT to check and correct the barcode fields in the Job file. Then, download the corrected file.</p> <p>Press the 'Clear' button below, to clear this fault message.</p>	Fault
E1202	<p>'Invalid Job File - EAN barcode out of specification' - The Job file is invalid and needs to be corrected using CLARiSOFT. An EAN barcode in the Job file contains more than 48 characters, which is the maximum length for this type of barcode. Use CLARiSOFT to check and correct the EAN barcode fields in the Job file. Then, download the corrected file.</p> <p>Press the 'Clear' button below, to clear this fault message</p>	Fault
E1203	<p>'Invalid Job File - EAN barcode out of specification' - The Job file is invalid and needs to be corrected using CLARiSOFT. The field for an EAN128 barcode does not contain enough data to form a valid Application Identifier. Use CLARiSOFT to check and correct the EAN128 barcode fields in the Job file. Then, download the corrected file.</p> <p>Press the 'Clear' button below, to clear this fault message.</p>	Fault
E1204	<p>'Invalid Job File - EAN barcode out of specification' - The Job file is invalid and needs to be corrected using CLARiSOFT. An EAN128 barcode field contains an application identifier containing non-numeric data, but EAN128 application identifiers must be numeric. Use CLARiSOFT to check and correct the EAN128 barcode fields in the Job file. Then, download the corrected file.</p> <p>Press the 'Clear' button below, to clear this fault message.</p>	Fault
E1205	<p>'Invalid Job File - EAN barcode out of specification' - The Job file is invalid and needs to be corrected using CLARiSOFT. EAN128 barcode fields with an application identifier of 23 should contain a length digit following the application identifier. Use CLARiSOFT to check and correct the EAN128 barcode fields in the Job file. Then, download the corrected file.</p> <p>Press the 'Clear' button below, to clear this fault message.</p>	Fault

Table 8-7: Job File Faults and Warnings (Continued)

Error No.	Description	Status
E1206	<p>'Invalid Job File - EAN barcode out of specification' - The Job file is invalid and needs to be corrected using CLARiSOFT. An EAN128 barcode field in the Job file does not have the number of characters that are specified by its application identifier. Use CLARiSOFT to check and correct the EAN128 barcode fields in the Job file. Then, download the corrected file.</p> <p>Press the 'Clear' button below, to clear this fault message.</p>	Fault
E1207	<p>'Invalid Job File - EAN barcode out of specification' - The Job file is invalid and needs to be corrected using CLARiSOFT. An EAN128 barcode field in the Job file contains variable length data followed by a separator character; separator characters should not be used to terminate data in an EAN128 barcode. Use CLARiSOFT to check and correct the EAN128 barcode fields in the Job file. Then, download the corrected file.</p> <p>Press the 'Clear' button below, to clear this fault message.</p>	Fault
E1208	<p>'Invalid Job File - EAN barcode out of specification' - The Job file is invalid and needs to be corrected using CLARiSOFT. An EAN128 barcode field in the Job file contains data that is out of range (e.g. an hour field set to 25 or a month field set to 13). Use CLARiSOFT to check and correct the EAN128 barcode fields in the Job file. Then, download the corrected file.</p> <p>Press the 'Clear' button below, to clear this fault message.</p>	Fault
E1209	<p>'Invalid Job File - EAN barcode out of specification' - The Job file is invalid and needs to be corrected using CLARiSOFT. An EAN128 barcode field in the Job file contains an application identifier that requires a digit to specify the position of the decimal point, but this digit is not present. Use CLARiSOFT to check and correct the EAN128 barcode fields in the Job file. Then, download the corrected file.</p> <p>Press the 'Clear' button below, to clear this fault message.</p>	Fault
E1210	<p>'Invalid Job File - EAN barcode out of specification' - The Job file is invalid and needs to be corrected using CLARiSOFT. An EAN128 barcode field in the Job file contains an application identifier that requires a check digit, but this check digit was either missing or invalid. Use CLARiSOFT to check and correct the EAN128 barcode fields in the Job file. Then, download the corrected file.</p> <p>Press the 'Clear' button below, to clear this fault message.</p>	Fault
E1211	<p>'Invalid Job File - EAN barcode out of specification'</p> <p>The Job file is invalid and needs to be corrected using CLARiSOFT. An EAN128 barcode could not be rendered at a size of 165 mm or less which is the maximum length for this type of barcode. Use CLARiSOFT to check and correct the EAN128 barcode fields in the Job file. Then, download the corrected file.</p> <p>Press the 'Clear' button below, to clear this fault message.</p>	Fault

Table 8-7: Job File Faults and Warnings (Continued)

Error No.	Description	Status
E1212	<p>'Invalid Job File - barcode length incorrect' - The Job file is invalid and needs to be corrected using CLARiSOFT. A barcode field in the Job file does not have the expected number of characters. Use CLARiSOFT to check and correct the barcode fields in the Job file. Then, download the corrected file.</p> <p>Press the 'Clear' button below, to clear this fault message.</p>	Fault
E1213	<p>'Invalid Job File - barcode out of limits' - The Job file is invalid and needs to be corrected using CLARiSOFT.</p> <p>A barcode field in the Job file overruns the edge of the image and it is not possible to extend the image area to accommodate the barcode. Use CLARiSOFT to check and correct the barcode fields in the Job file. Then, download the corrected file.</p> <p>Press the 'Clear' button below, to clear this fault message.</p>	Fault
E1214	<p>'Invalid Job File - Invalid Checksum Data' - The Job file is invalid and needs to be corrected using CLARiSOFT. A field in the Job file uses a checksum (e.g. an EAN13 barcode with a price verifier digit) but the data supplied to calculate the checksum were not valid. Use CLARiSOFT to check and correct fields using checksums in the Job file. Then, download the corrected file.</p> <p>Press the 'Clear' button below, to clear this fault message.</p>	Fault
E1215	<p>'Invalid Job File - invalid barcode height' - The Job file is invalid and needs to be corrected using CLARiSOFT. The height supplied for a barcode in the Job file is smaller than the minimum allowed by the barcode specification. Use CLARiSOFT to check and correct the barcode fields in the Job file. Then, download the corrected file.</p> <p>Press the 'Clear' button below, to clear this fault message.</p>	Fault
E1216	<p>'Invalid Job File - Barcode Symbology Not Installed' - The Job file contains a barcode symbology that is not installed in this printer. Use CLARiSOFT to remove the barcode from the Job file. Then, download the corrected file to the printer.</p> <p>Press the 'Clear' button below, to clear this fault message.</p>	Fault
E1217	<p>'Invalid Job File - Undefined Format Identifier' - The Job file is invalid and needs to be corrected using CLARiSOFT. A Data Matrix Barcode field in the Job file uses a Public Format ID which is not currently defined.</p> <p>Press the 'Clear' button below, to clear this fault message.</p>	Fault
E1218	<p>'Invalid Job File - Data too long' - The Job file is invalid and needs to be corrected using CLARiSOFT. A Data Matrix Barcode field in the Job file contains too many data characters for the selected dimensions.</p> <p>Press the 'Clear' button below, to clear this fault message.</p>	Fault
E1219	<p>'Invalid Job File - Invalid Barcode Size' - The Job file is invalid and needs to be corrected using CLARiSOFT. A Data Matrix Barcode field in the Job file has invalid dimensions.</p> <p>Press the 'Clear' button below to clear this fault message.</p>	Fault

Table 8-7: Job File Faults and Warnings (Continued)

Error No.	Description	Status
E1220	'Invalid Job File - Invalid Barcode ECC Type' - The Job file is invalid and needs to be corrected using CLARISOFT. A Data Matrix Barcode field in the Job file has an unsupported ECC type. Only ECC 200 is currently supported. Press the 'Clear' button below to clear this fault message.	Fault
E1221	'Invalid Job File - Barcode uses unsupported coding' - The Job file is invalid and needs to be corrected using CLARISOFT. A Data Matrix Barcode field in the Job file uses a form of data compression not currently supported by CLARITY. Press the 'Clear' button below to clear this fault message.	Fault
E1222	'Invalid Job File - Barcode encoding failed' - The Job file is invalid and needs to be corrected using CLARISOFT. A Data Matrix Barcode field in the Job file failed to encode into a valid image. Press the 'Clear' button below to clear this fault message.	Fault
E1223	'Invalid Job File - Invalid Date Reference' - The Job file contains a date reference not supported by this printer. Use CLARISOFT to set the 'Reference Date' for all Calculated Dates to 'Current Date'. Then, download the corrected file to the printer. Press the 'Clear' button below, to clear this fault message.	Fault
E1224	'Invalid Job File - Invalid Date Rounding' - The Job file contains a date with a rounding calculation that is not supported by this printer. Use CLARISOFT to remove the Rounding for all Calculated Dates. Then, download the corrected file to the printer. Press the 'Clear' button below, to clear this fault message.	Fault
E1225	'Invalid Job File - Invalid Counter' - The Job file contains a counter that is not supported by this printer. Use CLARISOFT to remove all counters from the job. Then, download the corrected file to the printer. Press the 'Clear' button below, to clear this fault message.	Fault
E1226	'Invalid Job File - Invalid Price' - The Job file contains a price field that is not supported by this printer. Use CLARISOFT to remove all price fields from the job. Then, download the corrected file to the printer. Press the 'Clear' button below, to clear this fault message.	Fault
E1227	'Invalid Job File - Invalid Transmitted Field' - The Job file contains a transmitted field that is not supported by this printer. Use CLARISOFT to disable the 'Transmitted Field' option for all fields in the job. Then, download the corrected file to the printer. Press the 'Clear' button below, to clear this fault message.	Fault
E1228	'Invalid Job File - Invalid Graphic Field' - The Job file contains a graphic field that is not supported by this printer. Use CLARISOFT to remove all Logo and Drawing fields in the job. Then, download the corrected file to the printer. Press the 'Clear' button below, to clear this fault message.	Fault

Table 8-7: Job File Faults and Warnings (Continued)

Error No.	Description	Status
E1229	'Invalid Job File - Invalid Graphic' - The Job file contains a graphic field that is not supported by this printer. Use CLARiSOFT to remove all Logo fields in the job. Then, download the corrected file to the printer. Press the 'Clear' button below, to clear this fault message.	Fault
E1230	'Invalid Job File - Invalid Drawing' - The Job file contains a Drawing field that is not supported by this printer. Use CLARiSOFT to remove all Drawing fields in the job. Then, download the corrected file to the printer. Press the 'Clear' button below, to clear this fault message.	Fault
E1231	'Invalid Job File - Invalid Paragraph Field' - The Job file contains a Paragraph field that is not supported by this printer. Use CLARiSOFT to remove all Paragraph fields in the job. Then, download the corrected file to the printer. Press the 'Clear' button below, to clear this fault message.	Fault
E1232	'Invalid Job File - PDF417 Barcode out of Specification' - The Job file is invalid and needs to be corrected using CLARiSOFT. A PDF417 or Micro-PDF417 barcode field in the Job file contains more columns than the barcode symbology supports. Use CLARiSOFT to check and correct the PDF417 and Micro-PDF417 barcode fields in the Job file. Then, download the corrected file. Press the 'Clear' button below, to clear this fault message.	Fault
E1233	'Invalid Job File - PDF417 Barcode out of Specification' - The Job file is invalid and needs to be corrected using CLARiSOFT. A PDF417 or Micro-PDF417 barcode field in the Job file contains more rows than the barcode symbology supports. Use CLARiSOFT to check and correct the PDF417 and Micro-PDF417 barcode fields in the Job file. Then, download the corrected file. Press the 'Clear' button below, to clear this fault message.	Fault
E1234	'Invalid Job File - PDF417 Barcode out of Specification' - The Job file is invalid and needs to be corrected using CLARiSOFT. A PDF417 or Micro-PDF417 barcode field in the Job file contains more characters than can be encoded with the specified column and maximum row sizes. Use CLARiSOFT to increase the number of columns or rows in the PDF417 and Micro-PDF417 barcode fields in the Job file. Then, download the corrected file. Press the 'Clear' button below, to clear this fault message.	Fault
E1235	'Invalid Job File - EAN13 Price Too Large' - The Job file is invalid and needs to be corrected using CLARiSOFT. The EAN13 barcode contains a price that is too large to be encoded within the barcode. Use CLARiSOFT to check and correct the maximum price value for price field that is referenced by the barcode. Press the 'Clear' button below to clear this warning message.	Warning

Table 8-7: Job File Faults and Warnings (Continued)

Error No.	Description	Status
E1236	<p>'Invalid Job File - Invalid Font' - The Job file contains a bitmap font field that is not supported by this printer. Use CLARiSOFT to remove all bitmap font fields in the job. Then, download the corrected file to the printer.</p> <p>Press the 'Clear' button below, to clear this warning message.</p>	Warning
E1237	<p>'Invalid Job File - Invalid Font' - The Job file refers to a missing or invalid bitmap font file. Use CLARiSOFT to check and ensure that all text fields used by this Job file, display properly in CLARiSOFT. Then, download the corrected file to the printer.</p> <p>Press the 'Clear' button below, to clear this warning message.</p>	Warning
E1238	<p>'Invalid Job File - Invalid Global Count Value' - The Job file uses a global counter that is not compatible with the current global count value. The current global count value is either too long for the counter specified in the job or contains characters that are not valid. The global count value will be reset when this job is selected. Use CLARiSOFT to ensure that all jobs contain the same configuration for this global counter.</p> <p>Press the 'Clear' button below, to clear this warning message.</p>	Warning

Table 8-7: Job File Faults and Warnings (Continued)

## Diagnostics

The diagnostic screens show the current value of different parameters which help you in troubleshooting the LPA. To access the diagnostics screen, navigate to *Tools > Diagnostics* (see Figure 8-6). For more information, refer “Working with Diagnostics” on page 4-16.

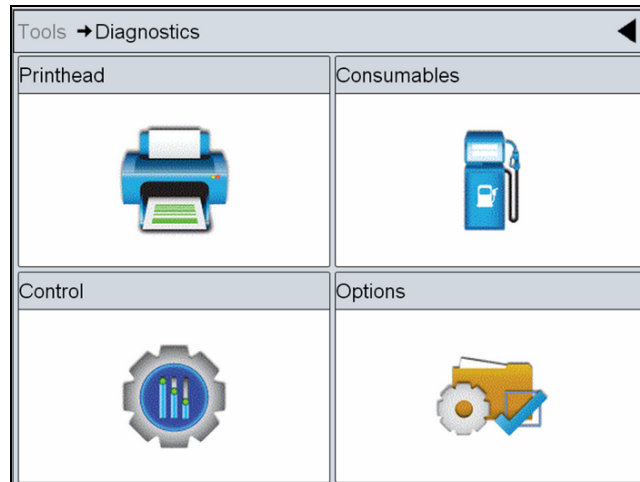


Figure 8-6: Diagnostics Page



# Specifications

# A

This chapter contains the following topics:

- Technical Drawings
- Technical specification
- System specification
- Networking and external communications
- Terminals

## Technical Drawings

### CLARiTY Display

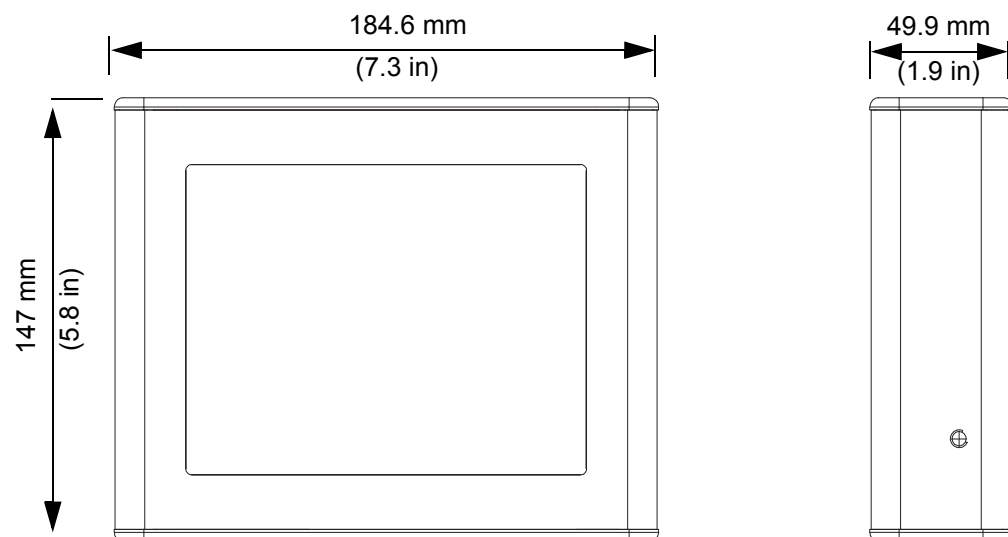


Figure A-1. CLARiTY Display Dimensions

## Labeler

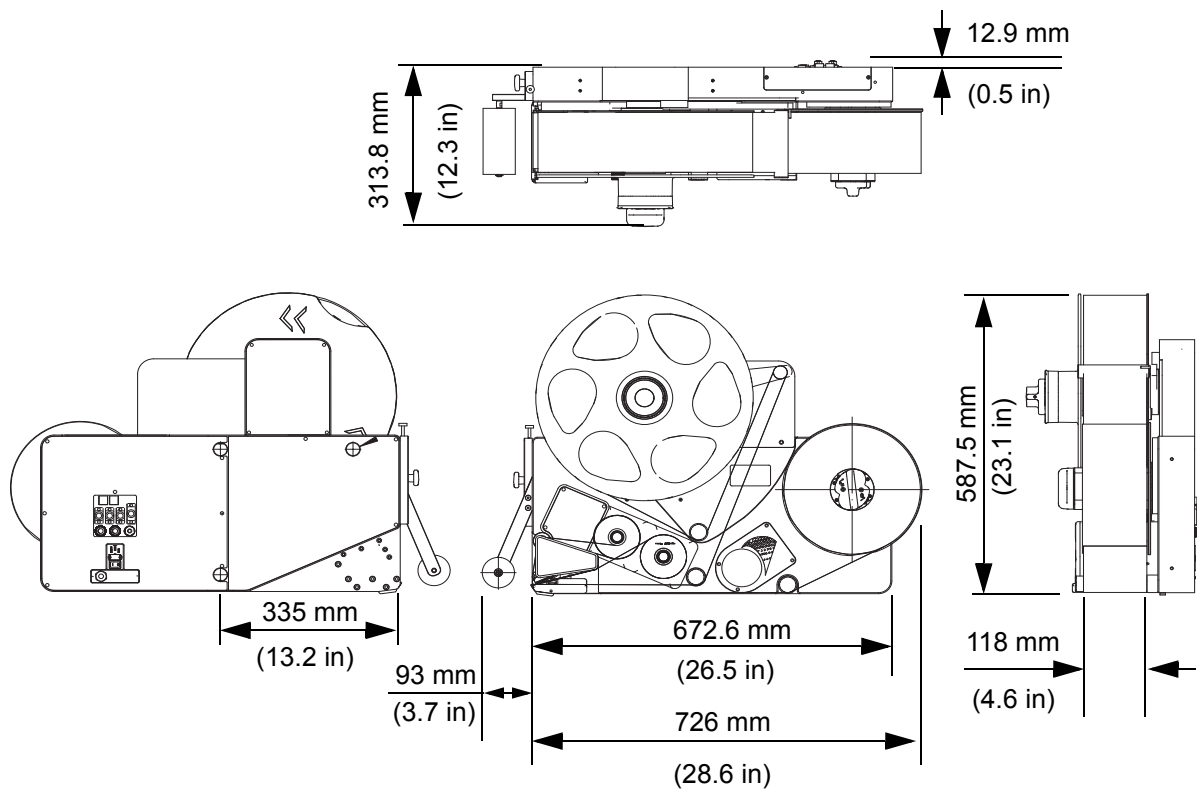


Figure A-2. LPA (RH) with Direct Apply

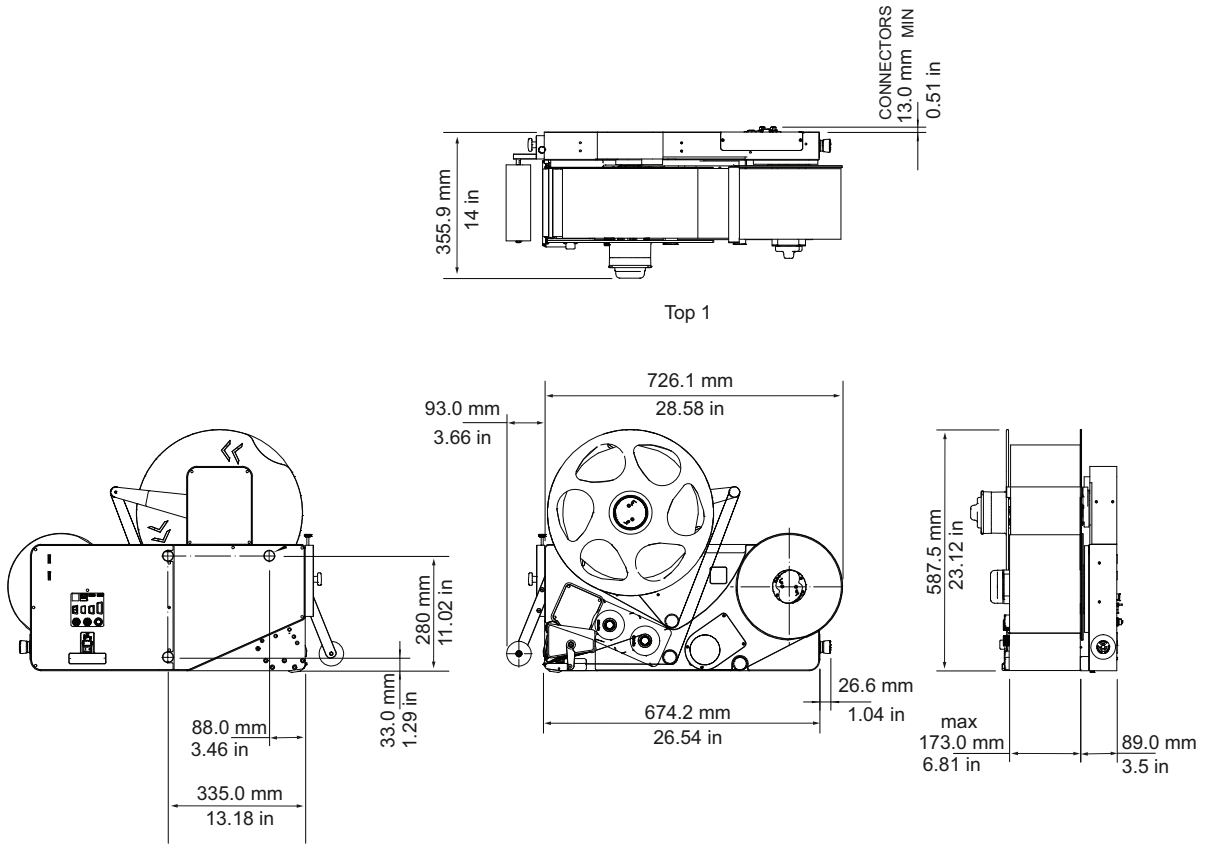


Figure A-3. LPA (RH) 160mm with Direct Apply

## Technical Specification

Product	User Interface	Length (L) in mm	Width (W) in mm	Height (H) in mm	Weight	Screen
CLARiTY Display	CLARiTY Operating System	184.6	49.9	147	1 kg	8.4" TFT SVGA
LPA with Direct Apply	-	819	313.8	587.5	40 kg (with a roll of labels)	-
LPA 160mm, with Direct Apply	-	819	355.9	587.5	40 kg (with a roll of labels)	-

Table A-1: Technical Specification

## System Specification

System Specifications	Description
Operator Interface	Full color LCD touch-panel CLARiTY Interface
	Job selection and database support as standard. WYSIWYG print preview.
Operator Interface Languages	Operator Interface is available in the languages listed in Table 1-1 on page 1-2.
Password protection	Three user-levels
Remote Printer Configuration Software	CLARiTY configuration manager
	Offline set up and parameter storage available as standard
Diagnostics	On-board diagnostics as standard
On-board Memory	SD Card
Varieties	Left Hand and Right Hand
Application method	Direct and Indirect - feed on to product or applicator pad
Throughput	Up to 350 packs per minute depending upon line speed and pack size.
Label height	50 - 115 mm 130-165 mm (LPA 160mm)
Label length	50 - 300 mm
Max label roll Diameter	400 mm 330 mm (LPA 160mm)
Max Ribbon Reel	830 m 500 m (LPA 160mm)
Max Ribbon Height	110 mm 165 mm (LPA 160mm)

Table A-2: System Specifications

## Networking and External Communications

Networking and External Communications	Component
External Data Communication  Network Control Software	RS232 point-to-point communications
	Ethernet 10/100 base TX network communications
	Ethernet with PoE
	Input/Output
	Host PC mode (Remote database) using CLARiNET
	USB Port on CLARiTY display
	Beacon Output
	CLARiCOM CLARiNET printer independent network management software

Table A-3: Networking and External Communications

## Terminals

### Power Supply

Attribute	Range
Supply Power Requirements	100 - 240 VAC (90 – 264 V max.), 50-60 Hz

Table A-4: Power Supply

## Temperature and Humidity

Attribute	Range
Temperature Range	5 °C - 40 °C
Humidity	20 to 85% relative, non condensing

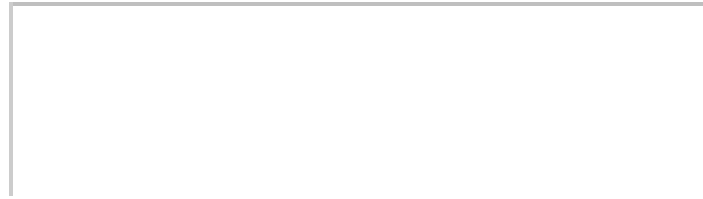
*Table A-5: Temperature and Humidity*

## Environment

The Labeler is provided with IP 40 rating.

The A-weighted emission sound pressure level at the workstation on this machine does not exceed 70 dB (A).

# Menu Structure



## Introduction

Menu Structure lists the various options available in the LPA User Interface.

## Menu Structure

Menu					Value	Min	Max	
Setup	Printhead	Print Darkness			75%	50%	100%	
		Print Force			50%	0%	100%	
		Label Print Speed			500 mm/s	10 mm/s	500 mm/s	
		Label Position on Product			0 mm	0 mm	3000 mm	
		Print Position X			0.0 mm	-100.0 mm	300.0 mm	
		Printer Position Y			0.0 mm	-150.0 mm	150.0 mm	
		Label Stopping Position			0.0 mm	-11.0 mm	25.0 mm	
		Print Orientation			0°			
					180°			
		Speed Fine Adjust			0%	-5%	5%	
		Multi Label Mode*	Label Repeat Count					
	Label Repeat Distance							
	Consumables	Ribbon Width				76 mm	20 mm	162 mm
		Recalibrate Label Sensor	Blank Labels Only					
			Some Preprinted Labels					
		Label Finish	Rough					
			Standard					
	Smooth							
	Control	CLARiTY Parameter Archives						
		Internationalisation	Language	Arabic...				
			Region/Country	Australia... (Language dependent)				
			Measurement Units	Metric				
		Inches						
		Installation Wizard						
		Recalibrate Touch Screen	Wizard					
		Set Screen Orientation				0°		
						180°		
Date and Time		Date						
	Time							
Communications	Reset Serial Ports							
Options	Barcode Scanner	Gate Duration			500 ms	0 ms	5000 ms	
		Delay Before Gate			0 ms	0 ms	10000 ms	
	Applicator	Direct Apply						
		Tamp						
		Adjacent Side						
	Front of Pack							

Table B-1: Menu Structure

\*if Label Repeat Mode is Yes.



Menu				Value	Min	Max
Diagnostics	Printhead	Inputs	Encoder	Automatically Detected As		
				Encoder Speed		
				Label Feed Speed		
				Maximum Line Speed		
				Encoder Type		
				Encoder Direction		
				Wheel Diameter		
				Number of Lines		
			Line Select	Active Line		
				Line Select Strobe		
				Line Input 0		
				Line Input 1		
				Line Input 2		
				Line Input 3		
			Applicator	Input 1		
				Input 2		
				.....		
				Input 12		
			Product Sensor 1			
			Product Sensor 2			
			Ignore Product			
			Line Encoder Present			
			Dancer Arm Limit Sensor			
			Dancer Arm Position			
			Ribbon Sensor			
			Printhead Position Sensor			
			Label Position Sensor			
			Label Supply Reel Sensor			
			Label Gap Sensor			
			Label Gap Sensor Input			
			Motor Volts			
			Printhead Volts			
			24 Volts Supply			
		5 Volts Supply				
		Printhead Temperature				
		Controller PCB Temperature				

Table B-1: Menu Structure (Continued)

Menu				Value	Min	Max	
	Outputs	Applicator	Output 1				
			Output 2				
			.....				
			Output 12				
		External Relay					
		External PNP 1					
		External PNP 2					
		Red Beacon Lamp					
		Amber Beacon Lamp					
		Green Beacon Lamp					
	Printhead Position						
	General	Machine Hand					
		Machine Orientation					
		Printing Mode					
		Printhead					
		Print Roller Width					
		Backfeed					
		Gap Sensor Type	Built In Multi				
			Auxiliary				
	Built In Single						
	Label Web Encoder Type						
	Event Log						
	Timings	Label Print and Dispense Time					
		Label Print and Apply Time					
		Job Selection Time					
		Job Data Update Time					
		Counter Update Time					
		Time/Date Update Time					
	Printhead Health	Display Health Graph					
		Printhead ID					
Printhead Resistance							
Total Distance Printed							
Total Dead Dots							
Manufacturer's Password							

Table B-1: Menu Structure (Continued)

Menu					Value	Min	Max		
	Speed Profiles	Capture Speed Profile (and text)							
		Display Previous Speed Profile							
		Profile Type	Standard						
			Printer Performance						
			Inputs and Outputs						
		Profile X Axis	Distance						
			Time						
		Export Printer Logs							
		Consumables	Label Supply Diameter						
			Label Waste Diameter						
	Label Length								
	Label Gap Length								
	Label Stock Type								
	Ribbon Supply Diameter								
	Ribbon Waste Diameter								
	Ribbon Tension								
	Printing Mode								
	Control	Versions	Software Part Number						
			CLARiTY						
			CLARiTY Boot Loader						
			Printhead 1 Firmware						
			Printhead 1 Firmware Date						
			Printhead 1 Co-processor						
			Operating System Version						
			Operating System Build Date						
			CLARiTY Build Date						
		System Information	PCB Serial Number						
PCB Revision									
CPU Speed									
Equipment Reference									

Table B-1: Menu Structure (Continued)

Menu					Value	Min	Max		
	Contact Information	Printer Location							
		Name							
		Address Line 1							
		Address Line 2							
		Address Line 3							
		Address Line 4							
		Serial Number							
		Telephone Number							
		Email							
	Diagnostic Wizards	Machine Test Wizard							
	Communications	Communication Port 1	Usage		(6 states=ScannerUsage)				
			Baud Rate						
			CLARiTY Comms on ComPort						
		TCP/IP	IP Address						
				Subnet Mask					
			CLARiTY Communications	Port 1	Port				
					CLARiTY Network Status				
					CLARiTY Network Client				
				Port 2	Port				
					CLARiTY Network Status				
			Barcode Scanner	Communication Protocol					
			Text Communications	Port					
		Remote Service	Network Status						
		ZPL Emulation	Port						
		SATO Emulation	Communication Protocol						
		CimComms Communications	Port						
			Network Status						
		Wolke Communication	Port						
	Network Status								
	Product Audit Log	Production Audit Log (actual log)							
Image Update Queue	(No job selected) or Job List								

Table B-1: Menu Structure (Continued)

Menu					Value	Min	Max
	Options	Applicator	Applicator Type	Direct Apply			
				Tamp			
				Adjacent Side			
				Front of Pack			
			Operations	Dispense Label			
		Cycle Label Dispense					
		Barcode Scanner	Connection Type				
			Next Expected Barcode(s)				
			Last Expected Barcode(s)				
			Last Scan				
Database	Internal						
	Capacity						
	External (when USB attached)						
Help	Tutorial Videos	How to Load New labels					
		How to Load New Ribbon					
		How to Clean the Printhead					
		How to Change the Printhead					
		How to Change the Print Roller					
	Documentation						
Consumables	Labels	Percentage					
		Estimated Empty Time					
		Estimated Time Remaining					
		Last Changed					
	Ribbon	Percentage					
		Estimated Empty Time					
		Estimated Time Remaining					
		Last Changed					
Print Position	Label Position on Product				0 mm	0 mm	3000 mm
	Print Position X				0.0 mm	-100.0 mm	300.0 mm
	Print Position Y				0.0 mm	-150.0 mm	150.0 mm
	Speed Fine Adjust				0	-5%	5%

Table B-1: Menu Structure (Continued)

Menu					Value	Min	Max	
Performance	Throughput							
	Batch Count							
	Total Count							
	Availability	Time Frame						
		Printer Availability						
		Operation Availability	"Running" Time					
	"Power On" Time							
	Ignored Print Signals							
	Short Term Speed							
	Short Term Efficiency							
	Long Term Speed							
	Long Term Efficiency							
	Trend Speed							
	Trend Efficiency							
Nominal Speed					0	0	5000	

Table B-1: Menu Structure (Continued)

# Installation Wizard

# C

This chapter describes the installation wizard.

To set up the printer, do the following tasks:

- 1 Navigate to *Tools > Setup > Control > Installation Wizard*. The *Installation Wizard* dialog box appears.

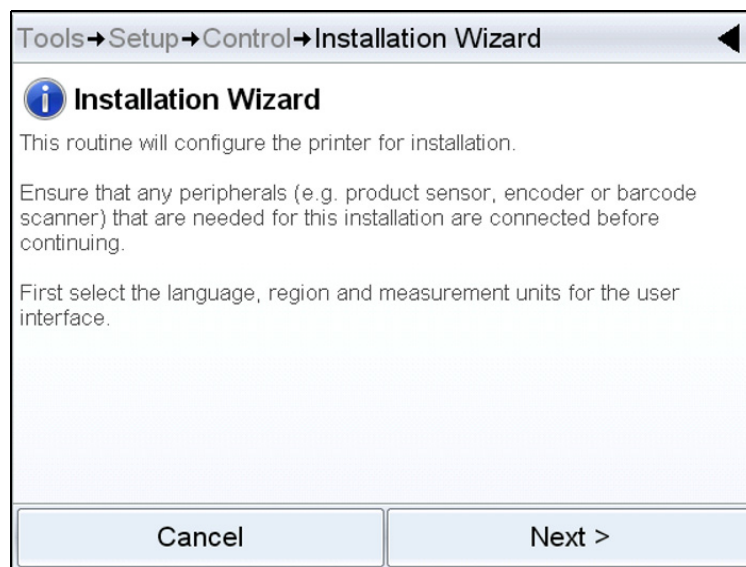


Figure C-1: Installation Wizard

Follow the instructions provided by the *Installation Wizard* and touch *Next* when ready to progress.

In case of an error, touch *Back* to return to the previous screen and correct the error. Touch *Cancel* to exit from the wizard.

**Note:** Parameters altered when running through the installation wizard are saved on selection. Selecting 'Cancel' will exit the user from the wizard, it will not reset any parameter to the previous value.

**Note:** Scroll up and down to see the complete message displayed within a dialog box.

- 2 Follow the instructions displayed on the screen to configure the Language, Region/Country, Measurement Units and touch *Next* as required.

*Note: The Region/Country setting will determine the units of measure that will be displayed by the software initially.*

- 3 Follow the instructions displayed on the screen to configure the Date and Time and touch *Next*.

## Printer Configuration

*Note: LPA printer configuration, such as machine hand, print roller width, print roller diameter is setup during manufacture and only needs confirmation during installation.*

- 4 Follow the instructions displayed on the screen to confirm the machine hand and touch *Next*.
- 5 Select the required machine orientation based on line installation and touch *Next*.

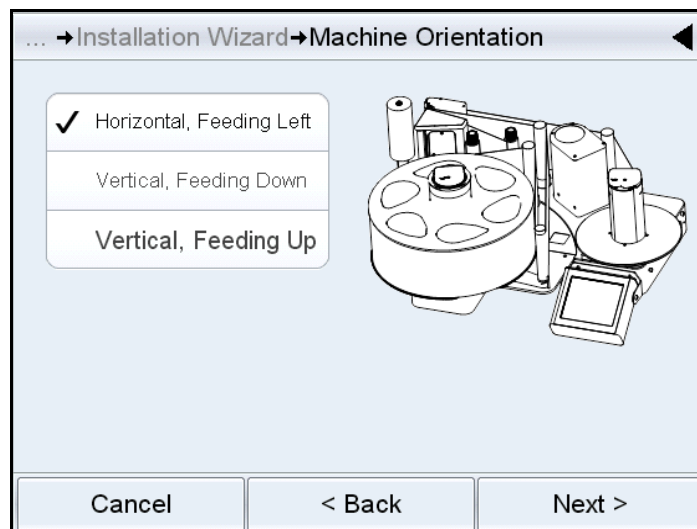


Figure C-2: Machine Orientation



- 6 Follow the instructions displayed on the screen to confirm print roller width, print roller diameter and ribbon roller diameter and touch *Next* as required.

**Note:** The print roller diameter and ribbon roller diameter are noted on the inside of the access plate.

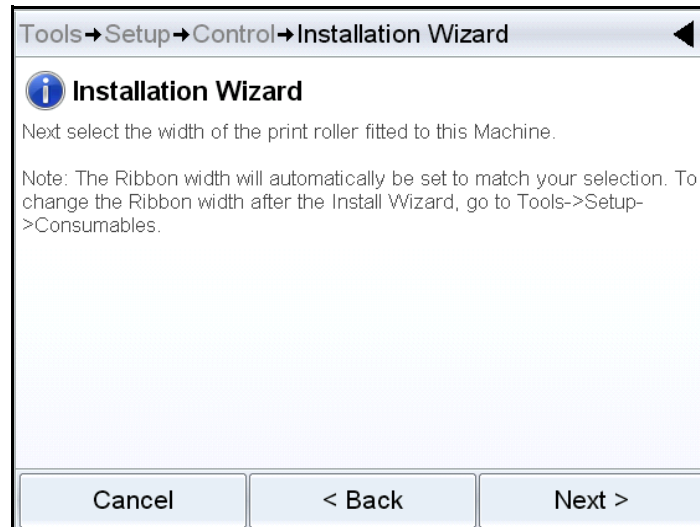


Figure C-3: Select Ribbon Width

- 7 Follow the instructions displayed on the screen to confirm gap sensor calibration, printhead position characterization, ribbon motor characterization are complete and touch *Next* as required.

**Note:** Where characterization has been completed, it is not normally necessary to rerun, unless the motors have changed.

## Set the Label Types

- 8 The screen to set the label type appears. The user can select either Blank Labels only or Some Preprinted Labels based on the requirement/setup. Touch *Next*.

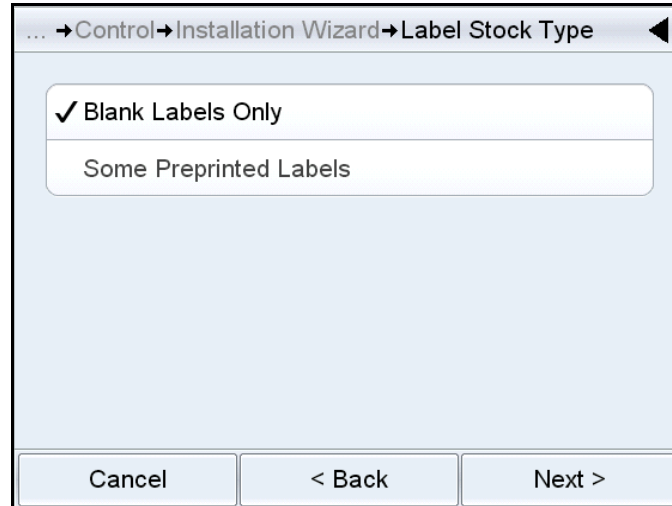


Figure C-4: Label Stock Type

## Setup of External Print Sensor

- 9 The screen to configure the external product sensor appears.



Figure C-5: Print Trigger Mode

## Setup Maximum Speed of Production Line

- 10 The screen to configure the maximum speed of the production line appears and touch *Next*.



Figure C-6: Print Speed Input

- 11 Select how the line speed will be determined and touch *Next*.

If Fixed Speed Printing is selected, the wizard goes to Step 12 on page C-6.

If External Encoder is selected, the wizard goes to Step 16 on page C-7.

If Automatically detected is selected, wizard will take the user to the required next step.

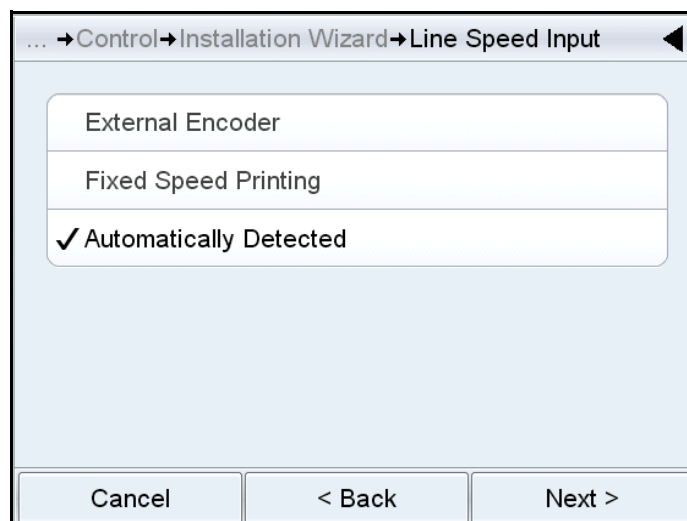


Figure C-7: Print Speed Input

## Fixed Speed Printing

- 12** The screen to configure the print speed entry appears.

Select between the two print speed entry options and touch *Next*.

If *Measure the Print Speed* is selected, the wizard goes to Step 13.

If *Type in the Print Speed* is selected, the wizard goes to Step 15 on page C-7.

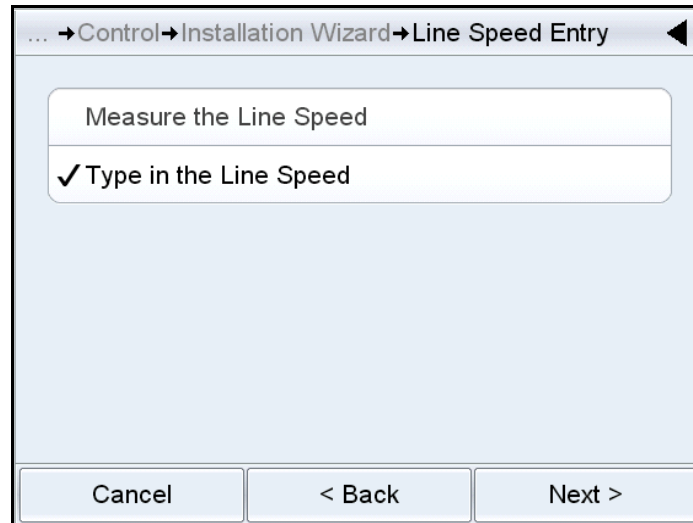


Figure C-8: Print Speed Entry

- 13** Measure the side of the product that the product sensor is sensing, and enter the product size in the screen. Touch *Next*.

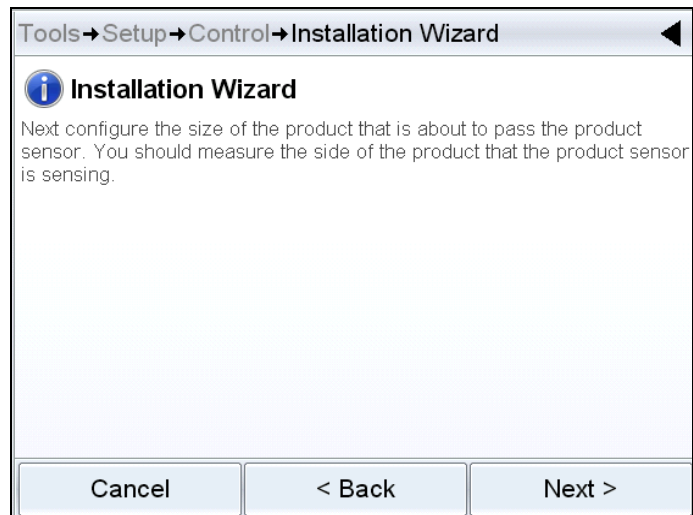


Figure C-9: Measure the Side

- 14 The screen to measure the product speed appears.

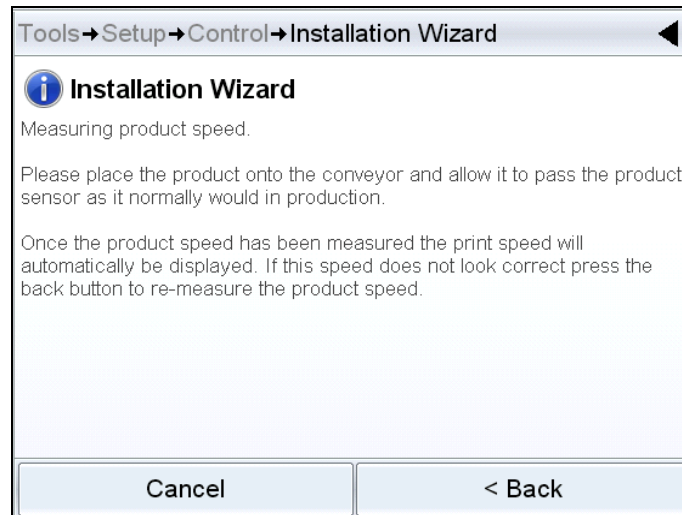


Figure C-10: Measure the Speed

Follow the instructions displayed on the screen to measure the product speed.

- 15 Once the product speed has been measured, the product speed will be displayed. If required, go back and repeat the process. Enter the product speed and touch *Next* to continue. The wizard goes to Step 17.

#### External Encoder

- 16 The printer will automatically detect the product speed using the encoder. If the encoder is not connected, the printer will fall back to fixed speed.

Once the product speed is measured automatically touch *Next*. The wizard goes to Step 17.

#### Product Sensor to Beak Distance

- 17 The screen to enter the distance between the product sensor and the label beak (peel tip) appears. Peel tip is the point on the Labeler where labels peel from the label backing. Touch *Next*.

- 18 Enter the distance (in mm) between the product sensor and the label peel bar (beak). Touch *Next*.

... →Product Sensor To Beak Distance

◀ 0mm × ▶

Min 0mm 1 2 3

Max 3000mm 4 5 6

Default 100mm 7 8 9

0 ✕

Cancel < Back Next >

Figure C-11: Product Sensor to Beak Distance

- 19 The screen to configure the use of backfeed appears. Backfeed rewinds the label web once printing is completed. This allows the LPA to print on the leading edge of the label. Follow the onscreen instructions and touch *Next*.
- 20 Select the required *Backfeed* option and Touch *Next*.

... →Setup→Control→Installation Wizard→Backfeed

No Backfeed

Backfeed

Cancel < Back Next >

Figure C-12: Backfeed

- 21 Enter the backfeed distance (in mm) if backfeed labels after printing is selected. Touch *Next*.

## Barcode Scanner

**22** The screen to configure the use of a barcode scanner appears. Touch *Next*.

**23** Select the required barcode scanner connection and touch *Next*.

Select *No Barcode Scanner* if barcode scanners are not to be connected.

If *Connected via Serial Comms* is selected, the wizard goes to Step 24.

If *Connected via Ethernet* is selected, the wizard goes to Step 29 on page C-10.

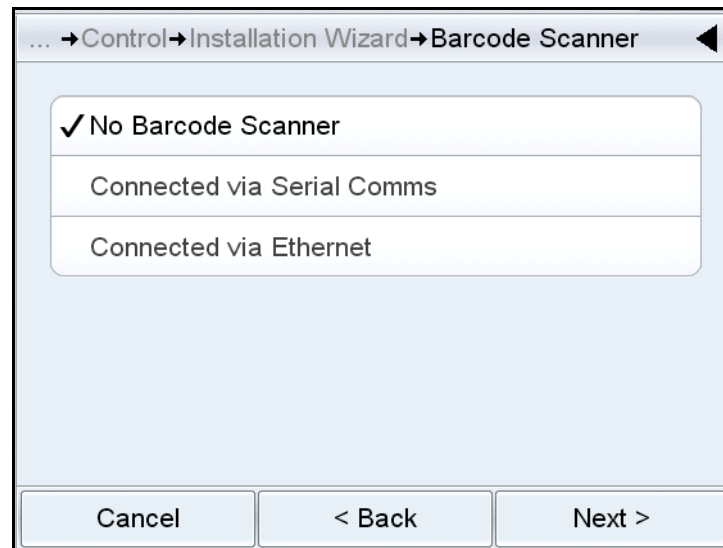


Figure C-13: Barcode Scanner

**Connected via Serial Comms**

**24** The screen to configure the connection via the serial comms appears. Follow the on-screen instructions and touch *Next*.

**25** Select the required configuration for scanner triggering.

If *Automatically* is selected, the triggering will be configured automatically. Touch *Next*. The wizard goes to Step 33 on page C-11.

If *Product Sensor 2* is selected, the wizard goes to Step 26.

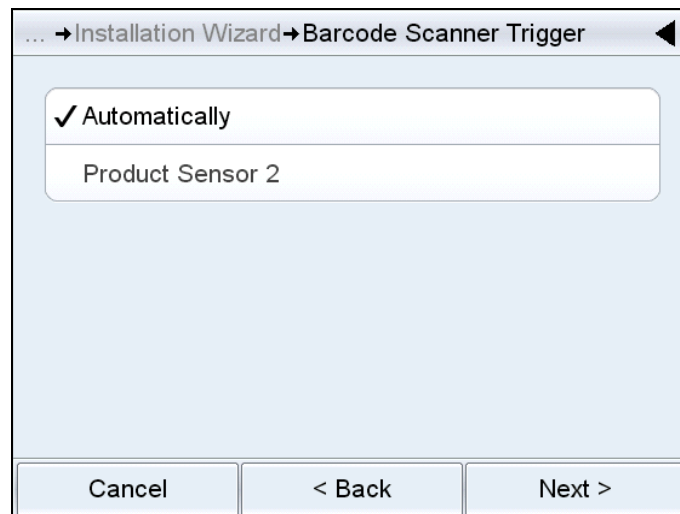


Figure C-14: Barcode Scanner Trigger

**26** Follow the instructions displayed and touch *Next*.

**27** Enter the Barcode Trigger Distance in mm. This is the distance between the product sensor connected to the Product Sensor 2 input and the barcode scanner.

**28** Touch *Next*.

**Connected via Ethernet**

**29** The screen to configure the connection via ethernet appears. Follow the instructions displayed and touch *Next*.

**30** Select the required configuration for scanner triggering.

If *Automatically* is selected, the triggering will be configured automatically. Touch *Next*. The wizard goes to Step 33.

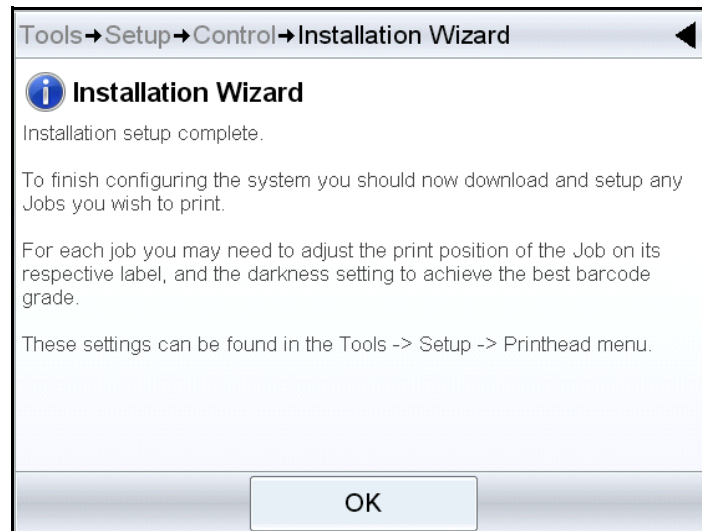
If *Product Sensor 2* is selected, the wizard goes to Step 31.

**31** Follow the instructions displayed and touch *Next*.

**32** Enter the Barcode Trigger Distance in mm. This is the distance between the peel tip and the barcode scanner. Touch *Next*.



- 33 The installation setup is complete. Follow the on-screen instructions and click *OK*.



*Figure C-15: Installation Wizard - Complete*

## Overall Equipment Effectiveness - Availability Tools

### Introduction

Availability is a measurement of equipment uptime. It is the amount of time that the equipment is ready to run when required by production. This is one of the three key metrics of OEE and is available for Videojet 9550.

The 'Availability' tool helps to isolate operational versus equipment issues and allows the user to track the printer downtime and view the downtime statistics. The pareto of faults that allows the analysis of runtime measurement data helps the user to understand and eliminate the more frequent causes of both equipment and operational downtime.

The availability shows two basic availability metrics simultaneously:

- Printer Availability
- Operational Availability

*Note: Operational Availability can be changed between two separate production time proxies as required by the user: "power on" and "running" mode. For more information, refer "Operational Availability" on page D-2.*

$$\text{Availability}\% = \frac{\text{Operating Time}}{\text{Planned Production Time}}$$

Where

- Operating Time is Total Printer Uptime
- Planned Production Time is the Actual Line Run Time Expected\*.

\*Based on proxy selected 'power on' or 'running'.

### Equipment Availability

Equipment Availability tracks the downtime directly related to an internal error (fault).

Equipment Availability is defined as

$$\text{Equipment Availability} = 1 - \frac{\text{Equipment Downtime}}{\text{Equipment Total Time}}$$

'Equipment Total Time' is the total amount of time for which the Equipment is turned on (has power applied). If the equipment is powered down when a fault is active, the amount of time that the equipment is off is also included in this equipment total time.

'Equipment Downtime' is the amount of 'Equipment Total Time' the printer has spent in a 'Equipment Fault State'. 'Equipment Fault state' is defined as the period where the equipment is not available due to a fault identified as a equipment fault. For more information, refer Service Manual.

### Operational Availability

This is a broader measure to reflect the full impact of the down time to production line. Operational Availability tracks the downtime related to faults that might be classed as "Procedural".

The impact may be due to equipment issues, operator related issues, shift changeovers and so on.

Operational Availability is defined as

$$\text{Operational Availability} = 1 - \frac{\text{Operation Downtime}}{\text{Production Time}}$$

The Production Time Proxy allows the availability calculation to change between customer selected operating modes, 'running' or 'power on'. The production time is defined based on the production time proxy chosen:

- Running: If both equipment and printer are switched ON.
- Power On: If the equipment is switched ON irrespective of the status of the printer.

If the equipment is powered down when a fault is active, the amount of time that the equipment is off is also included in the production time.

'Operation Downtime' is the amount of 'Production Time' the printer has spent in an 'Operation Fault State'. 'Operational Fault state' is defined as the period where the equipment is not available due to a fault identified as a operational fault.

***Note:** Refer Service Manual for further information on equipment and operation fault states.*

# Glossary

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## **Availability**

The amount of time that an equipment is ready to run when required for production.

## **Dancer Arm**

The dancer arm is designed to absorb the change in tension of the label web, during its movement through the LPA.

## **Drive Roller**

The roller provides the force for advancing the label liner. It is a part of the print engine and is electronically controlled by the control card inside the back cover.

## **Idler Roller**

These are the rollers that guide the label liner along its thread path.

## **Job or Image**

Job is the set of characters, that is required to be printed on the product label.

## **Label Length**

This is the overall length of the label from leading edge to trailing edge.

## **Label Peel Tip**

This peel tip is designed and positioned to separate labels (peel off) from the label liner when the label liner is pulled around it. Labels can be applied only after they are peeled. Label peel tip is a part of the print engine.

## **Labeler**

Any device designed to print information on a label, and later, apply the label to an object.

## **Label Sensor**

This infra-red, thru-beam detector senses the opacity of the label liner before the label is removed. In doing so, it also senses the spaces between the labels and provides label stop control. The sensitivity of this sensor is adjustable, and the stopping position of the label, which is relative to the peel edge, is adjusted electronically.

## **Label Size**

This is the dimension of the label (width x length).

## **LCD**

LCD is a thin, flat display device made up of any number of color or monochrome pixels arrayed in front of a light source or reflector.

**Line Select**

Line Select mode allows the controller to hold multiple jobs in RAM, which in turn allows the user to select the jobs for printing.

**Refresh the Print Memory**

The print memory is updated automatically within CLARiTY.

**Rewind Roll**

This is the mandrel provided to store the spent label web.