Performance Series
The most user friendly
industrial thermal printers

datamax · o'neil
by Honeywell

WHY DATAMAX-O'NEIL BY HONEYWELL

Datamax-O'Neil is the global provider of stationary and portable thermal printers, and the quality supplies and parts that keep them optimized. We have a history of working closely with our customers to develop solutions that improve their business – innovations like the Performance Series.

With an unwavering commitment to unparalleled customer care, Datamax-O'Neil maintains key facilities in Florida, California, Illinois and France, as well as sales, service technical support and channel partner offices around the world.

Since 1977, Datamax-O'Neil has earned a reputation for consistent reliability, fueled by dependable printers, dependable people and high-quality printer supplies.

Honeywell Scanning & Mobility is a leading manufacturer of high-performance image-and laser- based data collection hardware, including rugged mobile computers and bar code scanners. Our product portfolio is one of the broadest in the AIDC industry, providing you with solutions for vertical markets such as retail; healthcare; and transportation and logistics. We complement our innovative products with advanced software, service and professional solutions that enable customers to effectively manage data and assets. Honeywell products are sold worldwide through a network of distributor and reseller partners.

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PERFORMANCE SERIES

Datamax-O'Neil Performance Series is a new, innovative family of printers that has been designed to resolve a number of operational issues that users had been having with their thermal printers for many years. The result is a printer family that is the easiest to load, easiest to use and easiest to integrate of any thermal printers available anywhere. The Performance Series printers offer superior print quality, auto-load capabilities, user-friendly color touchscreen, unparalleled print registration and an industry-standard printer language, PCL. PCL is standardized to run on a variety of operating systems, so its operation is independent of any application software that may be running on a computer. This ensures faster and easier plug-and-play integration, which gets the printer systems up and running sooner.

The Performance Series printers are manufactured to the highest standards and feature a die-cast frame and metal covers that are ideal for industrial environments. Available in 4" (4.16 in./105.7 mm) or 6" (6.83 in./173.5 mm) label-printing capabilities, Performance Series printers can print at speeds from 6 inches per second (ips)/152 milimeters per second (mmps) to 10 ips/254 mmps and from 300 dpi to 600 dpi to meet the most diverse requirements.

The Performance Series family consists of five printers: the P1115 300 dpi; P1115s 600 dpi; P1125 300 dpi; P1725 300 dpi; and the near-edge P1120n 300 dpi.

The Datamax-O'Neil P1120n Near Edge Performance Printer offers a unique near-edge printhead that allows full use of the label, giving users the ability to design and code barcodes that support detailed information. The flexible multimedia printing allows labels to be printed on synthetics, tags, self-adhesives and plastics. With a media thickness more than twice that of flathead printheads (0.0025" - 0.025"/0.0635 mm - 0.635 mm), the near-edge printhead gives users the ability to integrate barcode printing across a wide variety of applications.

■ What if a printer…

- Could be loaded without wasting a single label? **Calculate your label savings!**

- Was auto-loading? **Ease of operation!**

- Could use an existing HP laser driver to print? **Easier to install!**

- Could be managed online with the same software that IT groups use to manage their laser and multi-function printers? **Ease of management!**

- Could tell you how much label and ribbon was left? **Easier to operate!**

- Was so advanced it would automatically adjust the printhead for width of media so print quality was never compromised with increased printhead life? **Better quality and lower maintenance cost!**

- Warned you when the cover is opened? **Safety and quality!**

- Had a Linux® operating system? **Easier to integrate and update!**

- Had an intuitive touchscreen display? **Ease of use!**

It would be the most revolutionary thermal printer on the market and give you the best total cost of ownership.

We bring you the Performance Series printers.

24/7 HIGH-VOLUME PRODUCTIVITY AND PERFORMANCE
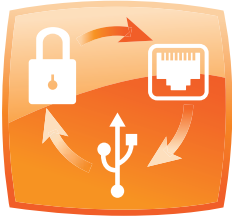
- **High Volume** – The Performance Series printers are designed for high-volume applications and are capable of printing thousands of labels a day….every day. We believe that 24/7 is not just a catchphrase, but a requirement for a robust printer.

- **Fast Print Speed** – The Performance Series will boost productivity with high print speed and reliable, accurate print quality. A variety of print speeds and resolutions from 300 dpi to 600 dpi are available to cover all applications. With no waiting time for the first label out compared to laser printers, it will improve workflow and efficiencies.

- **Increase Productivity** – The Performance Series' advanced monitoring system informs you when the printhead needs cleaning. The built-in printhead cleaning routine ensures proper cleaning, which prolongs the life of the printhead and reduces the downtime associated with routine printhead replacement. This also results in better barcode and print quality.

RELIABILITY

- **Total Cost of Ownership** – When calculating total cost of ownership, it is important to factor in a printer's reliability. The Performance Series offers everything you need to keep productivity high and cost of ownership low, including quick-change printheads and platen rollers with exceptional reliability.

- **Built to Last** – If a printer is going to work 24/7, it has to be built to last. The Performance Series has a solid die-cast aluminum frame with durable metal cover cabinet. The frame receives a powdered-coat paint finish. The galvanized metal cover has a polyester epoxy hybrid paint that is used in the home-appliance industry for products like hot-water heaters, stoves and refrigerators.

- **Gear Driven** – Forget about replacing broken belts or adjusting belt tension – the Performance Series is gear driven for rigorous duty cycles and uninterrupted productivity.

- **Field Installable Upgrades** – No need to send the printer in for service, options such as cutters and peel-and-present sensors can be easily added in the field.

EASY TO INTEGRATE

- **Communication Ports** – Integrating the Performance Series printers couldn't be easier. Included are the industry's two most widely used interfaces as standard Ethernet and USB. Optional ports include W-LAN, GPIO & Serial, and a USB Host port.

- **Popular Security Protocols** – The Performance Series includes all of the wireless security protocols that will likely be needed, including WEP, WPA and WPA2.

- **Manage an Entire Network** – Since the Performance Series is about standards, users are able to use standard network-management tools from IBM, HP and others.

- **Printer Language** – The Performance Series is an HP-compatible license PCL printer and contains PCL5e and PCL6, which is the most widely used printer language in the world. The actual PCL language is licensed for the printer, just like laser and ink printers.

- **Graphic Color Touchscreen display** – A large 320 by 240 color touchscreen display equipped with intuitive menu flow and international icons make the user interface and navigation seamless.

- **Automatic Media Loading** – It takes no skill or special instructions to load labels …just place the label in the green colored tracks and the printer will load and calibrate the label with **zero resulting label waste**.

- **PCI Macros** – PCL macros can be stored in the printer's flash memory to save time and to make the printing process easier.

- **Large Flash Memory** – To store label formats and PCL macros.

FEED IT AND FORGET IT- WITHOUT WASTE

When Datamax-O'Neil set out to bring the next-generation thermal printer to the market, it started the effort by identifying the most common challenges faced by the end-user. We wanted to make that experience the best it could possibly be. We realized that we needed to eliminate the waste and lost productivity associated with the most common printer interaction – loading the media – and that it had to become priority number one. The company determined that it would bring to market a device that would minimize or altogether eliminate wasted consumables at the loading stage.

This cost can be considerable when added up over the number of printers and labels run every year. Why throw good blank labels in the trash every time you load the printer? Why accept this as normal?

The average user wastes four to six labels when loading a printer, plus a corresponding amount of wasted ribbon on printers that use ribbon. This is a cost that can be saved by using the right printer. **NO company wants to waste money!** Only the Performance Series line of printers can stop the label waste.

Various proprietary design features were developed by Datamax-O'Neil for the Performance Series to alleviate this financial burden. Performance Series printers are equipped with a loading roller and sensors that immediately sense the media edge and position the first label perfectly every time it's loaded. This removes the need for constant adjustments that must be made to the media guide when loading. The loading roller and flat paper path reduces media slippage, resulting in perfect registration from the load of the very first label. This savings of label costs is further compounded by the labor productivity gains achieved when the printer loads and operates without the need for user intervention and adjustments.

Every application can take advantage of the Performance Series' innovative and proprietary design features, which have been designed to make the user experience easy, cost-saving and productive.

We have highlighted a few of the applications where Performance Series printers will provide the best label solution and years of durability. It has a Linux® operating system that is built for today and tomorrow's world.
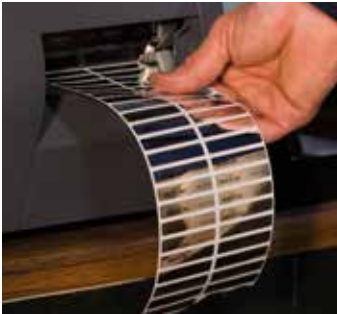
LASER REPLACEMENT
Now you can use the same PCL formats you used with laser printers and use them to print with a thermal printer. Still use your valuable MPS software and standard print-management tools. We have removed the thermal proprietary language stumbling block.

Cleaner Printing – Thermal printing is the cleanest type of printing when compared to laser, ink jet and dot-matrix impact printing. With those forms of printing, toner can escape or leak, contaminating the printer, label, tags, documents, user and the work environment. Toner also has an electrostatic charge and is designed to be attracted to the substrate, making it hard to clean if spilled in the work environment. Other areas can get contaminated with the toner particles, dust and residue. Users also need to wash their hands once they have been soiled by the toner before touching paper, boxes or product. Clean printing is a benefit for industries where workplace cleanliness is a major concern, such as healthcare, pharmaceutical and electronics.

Other thermal-printing advantages over laser: four to five times more energy efficient, lower maintenance costs, faster and higher label output, more diverse face stocks, and more adhesive choices.

HEALTHCARE & PHARMACEUTICAL
Safety, privacy and accuracy are critical to success in the healthcare and pharmaceutical industry. The Performance Series is one of only a few thermal printers with AES-256 data encryption on the Ethernet and USB ports to comply with HIPPA and FIPS 170.210 and FIPS 140-02 encryptions requirements. It also provides the best accuracy on print registration with its print mechanism, which is critical for reading label information quickly and correctly for patient care. The printer is the easiest printer to load with zero label/wristband waste. This keeps the staff focused on the patient instead of the printer. In the pharmaceutical industry, with hologram and anti-counterfeiting labels, every label, printed or not, is tracked and you never want to waste a single label.

PRECISION SMALL-LABEL PRINTING (ELECTRONICS)
Small labels for circuit boards, chips and cable wiring can be very difficult to print accurately. Any small label for any industry can have this problem. They also tend to be printed on a very expensive material like polyimide. The auto-loading and calibration design of the Performance Series printer allows loading without wasting expensive labels. The flat label path and dual-roller design holds the label in place for accurate printing, which makes it the perfect printer for printing small labels

ERP/SAP INTEGRATION

When the thermal printer speaks the same language as HP PCL laser printers it is easy to install and print with them. The Performance Series runs on a Linux operating system. Besides having the standard Windows® drivers, it also has CUPs drivers, MAC drivers and SAP-device types. Many ERP systems use Managed Print Service (MPS) to manage their printers. The Performance Series is ready for use in these MPS systems. It has very strong Management Information Base (MIB)-reporting capability for the information that controls supplies and service. Additionally, the auto-loading design with zero label waste can save companies thousands of dollars in wasted labels every year.

RETAIL

Retailers operate on some of the smallest margins in business and at peak times use a temporary work force. Therefore, they need the most user-friendly design and cost-efficient solution. The auto-loading design with zero label waste eliminates the normal waste of thermal printing and makes it the easy for anyone to use. Reducing cost and increasing profits. It also offers security that is needed with AES-256 data encryption on all of the ports. Another retail-friendly feature is the dual-sided media sensor. This sensor allows the black bar to be on top of the tag or label, which is a request that was heard from many customers. This is now a standard feature in all Performance Series printers. Safety is always a front-of-mind concern in retail, so we made standard the cover-open warning because long hair, loose clothes, smocks and jewelry can be caught when the label and ribbon are moving. These standard features separate the Performance Series from the competition.

HORTICULTURAL/THICK TAGS STOCK

The Performance Series P1120n near-edge printer model has been designed to meet the needs of this difficult market. The P1120n printhead allows for better contact and longer printhead life when printing on thick plant stakes, tree wraps and tag stock. The P1120n can print on plant stakes up to 4.65" (118 mm) wide and any color. The proprietary print-mechanism design handles the different plastics used for these stake with ease. It is great for hang tags and even with long-neck labels. The near-edge head allows for faster printing of the plant stakes to get the long runs done quickly with easily readable barcodes that can be scanned the first time. It also contains all of the standard features of the Performance Series family.

FEATURES AND BENEFITS:

Performance Series printers can be used in a wide variety of industries, such as Pharmaceutical, Healthcare, Manufacturing and Retail, in applications that require a range of media compatibility, connectivity and standard features. Key features are listed below:

- **Connectivity:** Standard with Ethernet and USB device the two most popular connections, giving users integration flexibility.

- **Rugged:** Gear-driven design with precision die-cast aluminum frame, provides durability and is lightweight. A steel corrosion-resistant cover offers protection in industrial environments.

- **Auto-Loading of Labels:** A proprietary solution for loading labels into the printer. With zero label waste when the label is more than 0.50"/12.5mm long, this cost-saving solution is standard on all Performance Series printers.

- **Auto-Calibration of the Label:** The Performance Series innovative design allows auto-calibration of labels (when the label is more than 0.50"/12.5 mm long) and uses only one label to calibrate, which is far less labels than competitive models require.

- **Automatic Printhead Pressure Adjustment:** This is a proprietary solution to the most commonly overlooked adjustment in thermal printing and is standard on all Performance Series printers, except the P1115 model. Printhead pressure is important to print quality, ribbon tracking and printhead life and the operation of competitive printers make this adjustment hard to do or is ignored. The P1115 informs the operator via screen display of the correct pressure, making adjustments easy to complete.

- **Media-Low Sensor:** Unlike many competitive models, the Performance Series printers are capable of warning when the label supply is low, not only when the labels have run out.

- **Print Resolution:** The Performance Series printers (P1115, P1120n, P1125 and P1725) use a high-density 300-dpi/ 11.8-dpmm printhead for high-quality graphic printing and great-looking fonts. The P1115s is capable of 600-dpi/ 23.6-dpmm print resolution for the highest quality graphics and smallest fonts.

- **Large 320 x 240 Color Touchscreen Graphic Display:** A multi-language menu is available in English, Spanish, German, Italian, French and Portuguese, while many other languages can be loaded into the display. Two-byte languages like Chinese and others can be downloaded off the Datamax-O'Neil website and loaded into the printer. Easy-to-identify international icons are also used in the display.

- Display warnings and errors change screen color to yellow or red to alert operator to changes in status conditions

- Instructions appear in order of severity to correct conditions

- Operator prompts are used for MPS software needs

- **Printer Cover Warning:** Performance Series printers include as standard the cover-open warning feature.

Labels and ribbons by nature attract dust and dirt that can cause voids and poor print quality. Keeping the cover closed eliminates this problem. Operators who have long hair, jewelry and loose-fitting clothes can have their safety compromised when the printer is operating with the cover open. The cover-open warning can be disabled if the preference is to run the printer with the cover open.
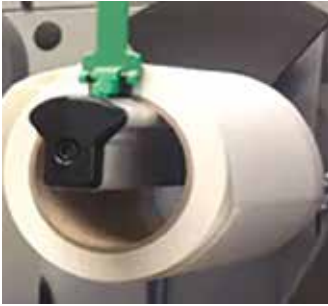
■ **Options** such as cutters, peel-and-present sensors, internal rewinder and optional thermal transfer can be added to upgrade the standard printer.

■ **Connectivity options:** Serial with General Purpose I/O, Wifi 802.11 and USB Host.

■ **Security Protocols for 802.11**
  • WEP WPA WPA2
  • Modes PSK/Enterprise
  • Security/ Encryption 64/128 TKIP/RC4 CCMP/AES Authentication LEAP, EAP-PEAP, EAP-FAST, EAP-TTLS, EAP-LEAP, IPV4

■ **Media compatibility:** Support of either coated-side-in or coated-side-out ribbons is standard with the thermal-transfer option. The Performance Series printer is capable of handling a 600-meter ribbon so it does not need to be replaced as often, which increases productivity and cost-effectiveness.

■ **Real-Time Clock:** This standard feature produces a time stamp with print capability, as well as time and date battery backup.

■ **Encryption:** AES-256 for True Data Security even on Ethernet and USB lines, which makes the Performance Series maybe the only thermal printer on the market to include this capability on direct-connect lines.

The Performance Series imbeds the USA-government-suggested security protocol for Data Transmission and conforms to the standards of the Advanced Encryption Standard (AES FIPS Pub 197) protocol. Performance Series printers also utilize the 256 standard for the highest level of Security Cryptography.

Meets all HIPPA and FIPS 170.210 and 140-02 encryption requirements.

■ **Built-in Printhead Cleaning:** The printer reminds the user when the printhead needs to be cleaned. D-O has developed this built-in printhead-cleaning routine to make cleaning simple and predictable, resulting in a properly clean printhead for longer life. A dirty printhead causes premature printhead failure and poor reproduction of barcodes, graphics and text.

■ **Memory:** The Performance Series offers 64 MB of Flash and 64 MB of SDRAM (P1115s and P1725 models), and 32 MB Flash and 64 SDRAM (P1115, P1120n and P1125 models) for its printers. Being able to use a large amount of Flash and Ram speeds up the printer and allows plenty of memory for use with large file formats.

■ **400-MHZ Processor:** Believed to be fastest processor used with a thermal printer, which increases print speeds and helps handle large graphic files.

■ **Easy-to-Replace Parts:** The two most common parts that need to be replaced on the printer, the printhead and platen roller, have been designed to be replaced in a few minutes by the user, eliminating downtime and maintenance costs.

■ **Media Supply:** The Performance Series offers the user the choice of hanger or hub-style media supply in the 4"/100-mm models. Either option is user-selectable as standard, the P1725 model offers the media hanger only.

■ **Printhead Cooling Fan:** The Performance Series' standard printhead cooling fan enables the printer to consistently deliver the highest high-speed print quality without ever needing to go into thermal pause mode. As competitive printheads heat up during high-volume printing, barcode scan errors can occur but the Performance Series printers have been tested at high-speed and high-density label printing and have shown to maintain the integrity of Grade A barcodes. (The P1115 model does not include this feature.)

■ **Dual-Sided Top-of-Form Sensor:** For years there has been a need for black bar sensing on top of the media. So we made a dual side top of form sensor standard. So if you want to sensor on top or bottom of the label it is up to you. No need to get locked in to one side or the other. Run both labels on one printer. We give you flexibility you deserve as a customer.
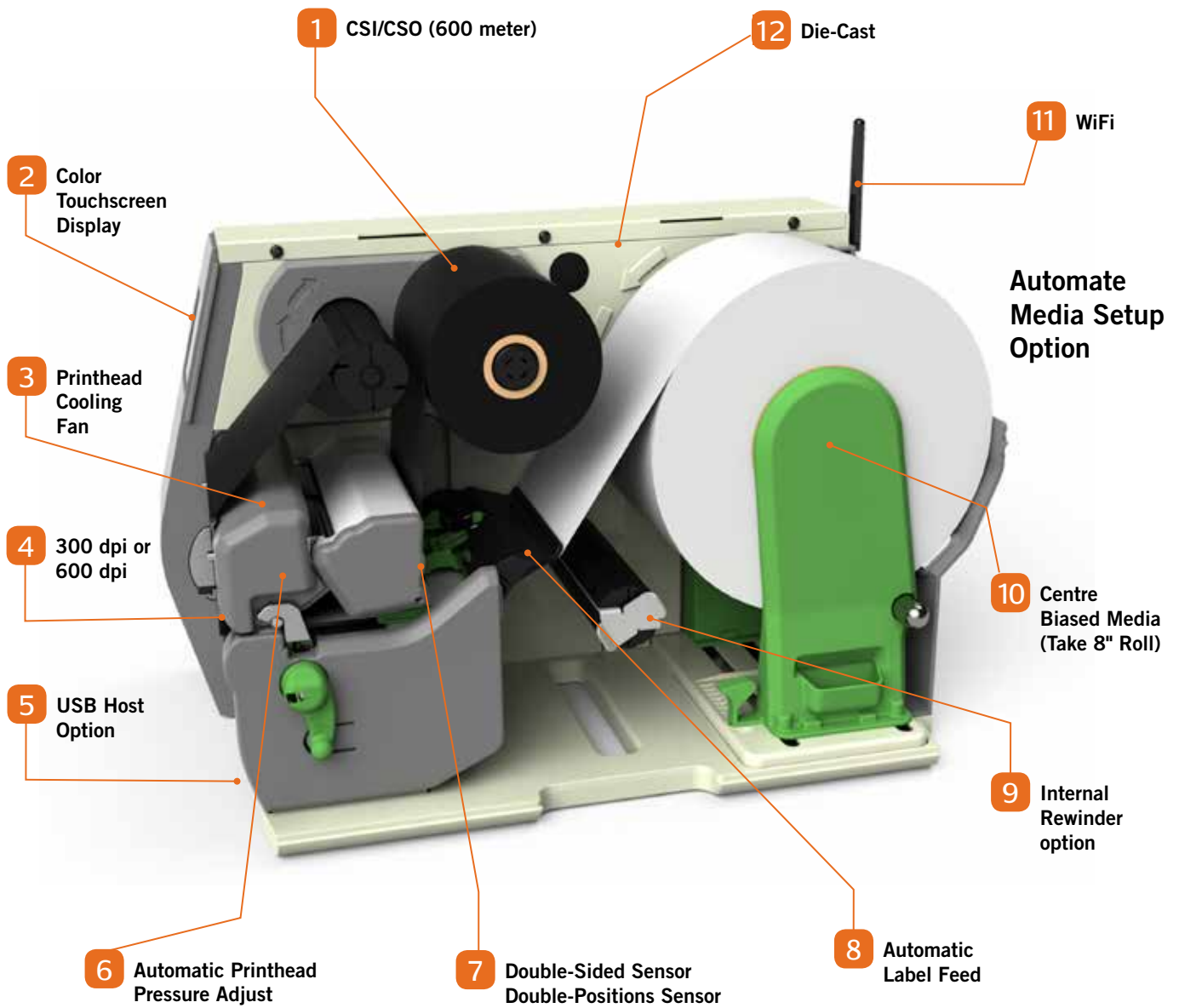
■ **Public and Private MIBs:** The Performance Series' robust MIBs make integration into MPS software easy and advantageous with all errors and warning conditions reported to MPS software. The MIBs also monitor ribbon and paper levels for accurate usage reporting. Reports media ID back for reordering of supplies.

Sensor	Value
Head Temperature	25.0° C
Head Voltage	26.8 V
Head Pressure	7 (7)
Paper Level	97 %
Ribbon Level	3.36 in (100%)
Rewinder Level	0.00 in (0%)
TOF Sensor	144
Auto Load Sensor	197
Session Label Count	16

1	2	3	4	5	

−	600	+	Ribbon Length (m)
−	4.00	+	Form Length
−	300	+	Number of Forms

1 CSI/CSO (600 meter)

12 Die-Cast

11 WiFi

2 Color Touchscreen Display

Automate Media Setup Option

3 Printhead Cooling Fan

4 300 dpi or 600 dpi

5 USB Host Option

10 Centre Biased Media (Take 8" Roll)

9 Internal Rewinder option

6 Automatic Printhead Pressure Adjust

7 Double-Sided Sensor Double-Positions Sensor

8 Automatic Label Feed

Physical Dimensions ■ ■ ■

Printer Model	p1115	p1115s	P1120n	p1125	p1725
Max Print Speed	6ips/152mmps	6ips/152mmps	8 ips/203mmps	10ips/254mmps	10ips/254mmps
Resolution	300dpi/11.8dpmm	600dpi/23.6dpmm	300dpi/11.8dpmm near edge	300dpi/11.8dpmm	300dpi/11.8dpmm
Max Print Width	4.16"/105.7mm	4.16"/105.7mm	4.27"/108.5mm	4.27"/108.5mm	6.83"/173.5mm
Label Width	1"-4.65" (25.4-118.1mm)	1"-4.65" (25.4-118.1mm)	1"-4.65" (25.4-118.1mm)	1"-4.65" (25.4-118.1mm)	2"-7.1" (50.8mm-180.3mm)
Dimensions	35.7lbs/16.2kg WxDxHin 10.8x18.7x11.9 WxDxHmm 274x475x302	36.5lbs/16.56kg WxDxHin 10.8x18.7x11.9 WxDxHmm 274x475x302	36.5lbs/16.56kg WxDxHin 10.8x18.7x11.9 WxDxHmm 274x475x302	36.5lbs/16.56kg WxDxHin 10.8x18.7x11.9 WxDxHmm 274x475x302	42.75lbs/19.3kg WxDxHin 13.4x18.7x11.9 WxDxHmm 339x475x302

physical characteristics ■ ■ ■

- Printhead Technology
  - » Flat head
  - » Patent-Pending Automatic Printhead pressure adjustment (increases printhead life)
  - » Printhead cooling fan
- Operating temperature
  - » Operating: 32°F (0°C) to 104°F (40°C)
  - » Storage: -4°F (-20°C) to 140°F (60°C)
- Power source
  - » Universal (PFC-compliant) power supply 90-264 VAC; 47-63 Hz
- Construction
  - » Solid Aluminum Die-Cast Powder-coated Frame, with metal side opening cover to load media with a large clear media window
- Safety
  - » Media Cover open warning
- Control Panel
  - » Graphic 320 x 240 Color touch Screen Display with wallpaper
- Memory
  - » (1725 & p1115s)   (p1115 & p1125)
    64 MB Flash/64 MB SDRAM   32MB Flash/64 MB SDRAM
- Real-Time Clock
  - » Real-Time Clock (RTC) with user replaceable 3 year battery
  - » Paper-Low Sensor and Ribbon-Low Sensor
  - » Capable of paper-low notification, reducing downtime
- Printer Type
  - » Direct Thermal (Optional Thermal Transfer)

integration ■ ■ ■

- Communication Interfaces
  - » USB 2.0 Device   Standard
  - » 10/100 Base-T Ethernet   Standard
  - » Wireless Module- 802.11 b/g   Optional
  - » Applicator GP I/O & Serial (RS-232C) Port   Optional
  - » USB Host connection   Optional
- Security Protocols:
  - » WEP WPA WPA2
  - » Modes PSK/Enterprise
  - » Security
  - » Encryption 64/128 TKIP/RC4 CCMP/AES
  - » Encryption Protocol: **Wired and wireless connections**
    - » AES-256 for secure data transmission for healthcare, pharmaceutical, USA government and retail applications. Meets HIPPA and FIPS 170.210 and 140-02 encryptions requirements
  - » Authentication LEAP, EAP-PEAP, EAP-FAST, EAP-TTLS, EAP-LEAP, IPV4
- Network/Software support:
  - » DHCP, TCP/IP, UDP, DNS, BOOTP,NTP, SSH
  - » SNMP Robust MIB
  - » Embedded Configurator: Resident printer configuration tool
  - » Embedded Network web pages

- » Drivers: Windows® XP, Windows® 7 and Windows® 8 & 8.1
- » Network Management is done with your standard HP Compatible network management tools. Works with HP Openview,® Tivoli® and others.
- » Network Time Protocol Rev 4 for Computer Security Log Management SP800-92
- Apple®
  - » Works in MACBook Pro® with the HP Laserjet® Series PCL4/5 driver, Apple and Cups drivers
- SAP®
  - » SAP® Printer Vendor Program (device type YDM1120)
- DocOrigin Certified

accessories ■ ■ ■

External rewinder
Media catch tray*

barcodes/fonts/graphics ■ ■ ■

- Bar Codes
  - » Aztec, Codabar, Code 128 Autoswitch, Code 128 Code Set A, Code 128 Code Set B, Code 128 Code Set C, Code 3 of 9, Code 93, DataMatrix, EAN-13, EAN-8, Extended Code 3 of 9, FIM, GS1 Databar (RSS), GS1-128(UCC/EAN Code 128), HIBC, Interleaved 2 of 5 with a module 10 checksum, & shipping bearer bars, MicroPDF417, PDF-417, Planet, Plessey, Postnet, QR Code – Auto format, Telepen, UPC-A, UPC-E, UPS MaxiCode
- Fonts
  - » 50 Standard resident Scalable fonts: Albertus Medium, Albertus Extra Bold, Antique Olive, Antique Olive Italic, Antique Olive Bold, Arial, Arial Italic, Arial Bold, Arial Bold Italic, Clarendon Condensed Bold, Coronet, Courier, Courier Italic, Courier Bold, Courier Bold Italic, Garamond Antiqua, Garamond Kursiv, Garamond Halbfett, Garamond Kursiv Halbfett, Letter Gothic, Letter Gothic Italic, Letter Gothic Bold, Marigold, CG Omega, CG Omega Italic, CG Omega Bold, CG Omega Bold Italic, CG Times, CG Times Italic, CG Times Bold, CG Times Bold Italic, CG Triumvirate Bold, CG Triumvirate Bold Condensed, Times New Roman, Times New Roman Italic, Times New Roman Bold, Times New Roman Bold Italic, Univers Medium, Univers Medium Italic, Univers Bold, Univers Bold Italic, Univers Condensed Medium, Univers Condensed Medium Italic, Univers Condensed Bold, Univers Condensed Bold Italic, Symbol, Wingdings, OCR-B, OCR-A
- Downloadable Font Types
  - » True-Type, PCL Bitmap (300dpi), or (600psi on the p1115s)
- PCL macros
  - » Multiple PCL macros can be store in flash
  - » Overlay Macros can be used and store in flash

- Graphics
  - » Full support of PCL5e and GL/2 graphics capability is provided. (Support of various host based file formats such as PCX, BMP are not part of the PCL5e standard but are supported and converted by standard applications). Industry standard printer language HP PJL, HP PCL 5e, HP GL/2 and HP XL, printer languages with auto language select in addition to extensions for barcode. Also provides standard bi-directional communications capabilities.

    [not available on p1115], **Not available on p1725

warranty ■ ■ ■

- Printer*: 1 year (including platen roller and installed options)
- Printhead*: 1 year or 1,000,000" whichever comes first
- Contact sales representative for extended warranty options

*when used with approved supplies

media supply ■ ■ ■

- Media types:
  - » Roll-fed, die-cut, continuous labels: perforated or continuous tag/ticket stock 8-inch/203mm roll max diameter on 3-inch/76mm core wound out
  - » Fan fold stock accepted
- Media thickness range:
  - » 0.003" - 0.01" (0.076mm - 0.254mm)
- Top-Of-Form Sensor/Media Sensing
  - » Double-sided adjustable position for label gap, notch and reflective black mark on bottom or top of form
- Label backfeed:
  - » For use with optional cutter and peel and present
- Ribbon
  - » Core: 1.0" (25.4mm)
  - » Length: 1968' (600m)
  - » Coated side in and coated side out
- Reference model above for width

options ■ ■ ■

- Thermal Transfer
- Internal Powered Rewind with adjustable tension
- Peel and Present
- Cutter
- Cutter Tray
- Audio Alarm
- 1" or 1.5" Media Hub Adapters
- Expanded 64 MB Flash Memory

agency approval ■ ■ ■

CE, UL, C/UL, UL Mexico CoC and other approvals. Contact sales representative for the most current approval list.

ISO 9001: 2008 CERTIFIED

1. WHY PCL5E AND PCL6?

Datamax-O'Neil decided to use PCL, the most recognized printer language in the world, and selected the PCL5e version since it supports bi-directional communication and Windows® fonts. It is also backwards compatible to earlier versions of PCL. PCL printing is also supported in most software application around the world, making it a plug-and-play solution.

PCL6 is the next generation of the Hewlett-Packard® LaserJet PCL. PCL6 has three main components, one of which is referred to as PCL6 Enhanced and has been optimized for printing from graphical user interfaces (GUIs) like Microsoft Windows® and OS/2. The second component is referred to as PCL6 Standard and provides complete backward compatibility with HP LaserJet printers. The third component is referred to as Font Synthesis.

PCL OVERVIEW

Unlike most technology solutions, thermal printers have not used an open-standard programming language for communication and print control. Printer manufacturers developed their own proprietary language because it was easy to develop, required minimal investment to enter the market and there were no incentives to standardize a printer language in the thermal-printing industry.

Over the years, the lack of a standard printer language in the thermal-printing industry created numerous problems for system integrators, including:

- Keeping administrators locked into one printer manufacturer for their printing needs

- Preventing companies' IT infrastructure from evolving due to slower advances in thermal-printing technology

- Requiring staff to learn many different proprietary languages

- Incurring higher costs to maintain existing applications

- Having no portability of label template libraries

- Having limited or no support for international labels

2. WHY ARE YOU CENTER-BIASED?

By having a center-biased printer it is easier to have even pressure across the width of the printhead, no matter the width of the media. This drastically reduces ribbon-wrinkle issues, and by having even pressure, label registration and tracking is improved.

3. WHAT IS AUTOMATIC PRINTHEAD-PRESSURE ADJUSTMENT?

Thermal industrial printers have the capability for printhead-pressure adjustments built into them. This automatic adjustment sets the amount of pressure that is placed on the printhead when it creates the printed image on the label or tag. Usually these adjustments tend to be hard to do or are mostly ignored by the user. Since proper printhead pressure leads to BETTER print quality and longer printhead life, it made sense to design the Performance Series printers with this capability, which makes it easier for the user.

4. WHY DO YOU HAVE A FAN IN THE PRINTHEAD MECHANISM?

To cool the printhead while printing. This allows the printer to keep printing at high speeds with high printing density and quality while simultaneously maintaining proper barcode widths when batch printing without the need to go into a thermal pause. This also means that the first label printed will look the same as the last label. Many other thermal printers may go into thermal pause during high-volume printing tasks, which will stop the printing operation, while others may ignore the elevated level of printhead heat, which will negatively effect print quality and overall printer performance.

5. INTERNAL REWIND HAS ADJUSTABLE TORQUE, HOW DOES THAT WORK?

The printer's torque can be adjusted from the front display, configuration utility or web browser. The printer is shipped from the factory with a mid-range torque setting, allowing for the peeling of standard labels. When printing with media that has a very aggressive adhesive the torque can be increased to allow better label separation.

6. WHY DO YOU ALLOW FOR BLACK-MARK SENSING ON THE TOP OR BOTTOM OF THE LABEL WHILE OTHER PRINTERS USUALLY JUST SENSE THE LABEL'S BOTTOM?

The printing industry is moving toward allowing users to place the black bar on the print side of tag stock for various reasons, including:

- Allows the full back side of the stock to contain preprinted information

- Lower setup charge for printing of the label/tag when preprinted black image or graphic are already being placed on the print side

- Making it simple and easy for all customers to change their label and stock designs without the need to worry about the sensor

7. WHAT NETWORK-MANAGEMENT TOOLS CAN I USE WITH THE PERFORMANCE SERIES?

Any printer-management tool, such as IBM Tivoli® and HP Openview,® that can be used with standard laser and ink printers can be used with Performance Series printers. Datamax-O'Neil does not use a proprietery print-management tool like most other thermal printers on the market today, which allows users to choose the best option for their operations.

Datamax-O'Neil p1115 vs. Zebra ZT220

DATAMAX-O'NEIL p1115	ZEBRA ZT220
PERFORMANCE (AT 300 DPI)	
50 standard scalable fonts	1 scalable font/7 bitmap fonts
600-meter ribbon: Reduces cost and downtime	300-meter ribbon: Ribbon is changed more often
Max print width – 4.16" (105.7mm)	Max print width – 4.09" (104mm)
6 ips/152 mm/s	6 ips/152 mm/s
All direct-drive motor driven	Belt-driven, produces wear-causing issues
When opening and closing the printhead motor takes up slack ribbon eliminating wasted labels and ribbon wrinkle	Label wasted when printhead is open
EASE OF USE	
Large color graphics Touch Screen (320x240 display)	No display. 3 buttons only. Flashing LED provides feedback.
Double-sided top-of-form sensor	One-sided top-of-form sensor
Easier-to-load labels with auto loading (zero label waste)	Manual loading (produces wasted labels)
Automatic media setup	Does not offer
Automatic media calibration (without multiple label waste)	Does not offer
PCL5e industry-standard printer language	ZPL proprietary
Rewinder option adjustable torque motor	No rewinder option
Two feed rollers provide better registration during printing	Only one feed roller provided
Paper-low warning indicator	No paper-low warning
Ribbon-low warning indicator	No ribbon-low warning
Cover-open warning indicator	No cover-open warning
Audio alarm option	No audio alarm offered
COST-SAVINGS STANDARD FEATURES	
Standard Real-Time Clock (RTC)	RTC additional option
Standard LAN	LAN additional
Easier-to-load labels with auto loading (zero label waste)	Manual loading (produces wasted labels)
MAINTENANCE	
Solid aluminum die-cast frame with metal cover	Sheet-metal frame with plastic cover
Easy platen roller replacement	Yes
Built-in printhead-cleaning routine correctly cleans printhead for increased life and print quality	No printhead-cleaning routine
Replacement printhead	Replacement printhead
Built-in Diagnostics Screens	No

Datamax-O'Neil p1115 vs. Sato CL412e

DATAMAX-O'NEIL p1115	SATO CL412e
PERFORMANCE (AT 300 DPI)	
50 standard scalable fonts	2 Scalable 12 bitmap
600-meter ribbon: Reduces cost and downtime	450-meter ribbon: Ribbon is changed more often
Max print width – 4.16" (105.7mm)	Max print width – 4.1" (104mm)
32 MB Flash & 64 MB SDRAM	2 MB Flash & 16 MB RAM
6 ips/152 mm/s	6 ips/152 mm/s
All direct-drive motor driven	Belt-driven, produces wear-causing issues
When opening and closing the printhead motor takes up slack ribbon eliminating wasted labels and ribbon wrinkle	Label wasted when printhead is opened. Ribbon goes limp must feed label to take up slack.
EASE OF USE	
Large color graphics Touch Screen (320 x240 display)	Small monochrome display. Buttons below display.
Double-sided top-of-form sensor	One-sided top-of-form sensor
Easier-to-load labels with auto loading (zero label waste)	Manual loading (produces wasted labels)
Automatic media setup	Does not offer
Automatic media calibration (without multiple label waste)	Does not offer
PCL5e & PCL6 industry-standard printer language	Sato proprietary language
Rewinder option adjustable torque motor for the best peel option	Belt-run rewinder one torque setting
Two feed rollers provide better registration during printing	Only one feed roller provided
Paper-low warning indicator, reports % of labels used for Managed Print Software	No paper-low warning. No report on labels used.
Ribbon-low warning indicator	No ribbon-low warning or % used
Cover-open warning indicator	No cover-open warning
Audio alarm option	No audio alarm offered
COST-SAVINGS STANDARD FEATURES	
Standard Real-Time Clock (RTC)	RTC additional option
Standard LAN	LAN additional
Easier-to-load labels with auto loading (zero label waste)	Manual loading (produces wasted labels)
MAINTENANCE	
Fully MPS ready	No
Easy platen roller replacement	Not stated
Built-in printhead-cleaning routine correctly cleans printhead for increased life and print quality	No printhead- cleaning routine
Replacement printhead	Replacement printhead
Built-in Diagnostics Screens	No

Datamax-O'Neil p1115s vs. Tec B-EX42T2 600

DATAMAX-O'NEIL p1115s	TEC B-EX4T2 600 DPI
PERFORMANCE (AT 600 DPI)	
50 standard scalable fonts	Bitmap and outline
600-meter ribbon: Reduces cost and downtime	600-meter ribbon
Max print width – 4.16" (105.7mm)	Max print width – 4.09" (104mm)
6 ips/152 mmps	6 ips/152 mmps
Automatic printhead-pressure adjustment	Manual complicated printhead-pressure adjustment
64 MB Flash 64 SDRAM	16 MB Flash 32 MB of RAM
All direct-drive motor driven	Belt-driven, produces wear-causing issues
When opening and closing the printhead motor takes up slack ribbon eliminating wasted labels and ribbon wrinkle	Cantilever head design that wrinkles the ribbon when printhead open
EASE OF USE	
Large color graphics Touch Screen (320 x240 display)	Small Monochrome Display. Buttons below display.
Double-sided top-of-form sensor	One-sided top-of-form sensor
Easier-to-load labels with auto loading (zero label waste)	Manual loading (produces wasted labels)
Automatic media setup	Does not offer
Automatic media calibration (without multiple label waste)	Waste labels when calibrating
PCL5e & PCL6 industry-standard printer languages	Proprietary language
Rewinder option adjustable torque motor	Belt-driven rewinder option
Two feed rollers provide better registration during printing	Only one feed roller provided
Monitors ribbon and paper levels and reports by % used	No
Color-changing display to indicate errors and warnings	No
Cover-open warning indicator	No cover-open warning
Audio alarm option	No audio alarm offered
COST-SAVINGS STANDARD FEATURES	
More Standard Memory 64 MB Flash standard	Cannot upgrade memory
Ethernet Standard	Ethernet Standard
Easier-to-load labels with auto loading (zero label waste)	Manual loading (produces wasted labels)
MAINTENANCE	
Robust printer MIB with error reporting for MPS software	Not Stated
Easy platen roller replacement	Yes
Built-in printhead-cleaning routine correctly cleans printhead for increased life and print quality	No printhead-cleaning routine
Replacement printhead	Replacement printhead
Built-in Diagnostics Screens	No

Datamax-O'Neil p1115s vs. Zebra ZM400

DATAMAX-O'NEIL p1115s	ZEBRA ZM400 600 DPI
PERFORMANCE (AT 600 DPI)	
50 standard scalable fonts	7 bitmapped 1 smooth font
600-meter ribbon: Reduces cost and downtime	450-meter ribbon: Ribbon is changed more often
Max print width – 4.16" (105.7mm)	Max print width – 4.09" (104mm)
6 ips/152 mmps faster printing	4 ips/100 mmps
Automatic printhead-pressure adjustment	Manual complicated printhead-pressure adjustment
64 MB Flash 64 SDRAM	8 MB Flash 16 MB of RAM
All direct-drive motor driven	Belt-driven, produces wear-causing issues
When opening and closing the printhead motor takes up slack ribbon eliminating wasted labels and ribbon wrinkle	Cantilever head design that wrinkles the ribbon when printhead open
EASE OF USE	
Large color graphics Touch Screen (320 x240 display)	Small 240 x 128 Monochrome Display. Buttons below display.
Double-sided top-of-form sensor	One-sided top-of-form sensor
Easier-to-load labels with auto loading (zero label waste)	Manual loading (produces wasted labels)
Automatic media setup	Does not offer
Automatic media calibration (without multiple label waste)	Waste labels when calibrating
PCL5e & PCL6 industry-standard printer languages	ZPL proprietary
Rewinder option adjustable torque motor	Belt-driven rewinder option
Two feed rollers provide better registration during printing	Only one feed roller provided
Monitors ribbon and paper levels and reports by % used	No
Color-changing display to indicate errors and warnings	No
Cover-open warning indicator	No cover-open warning
Audio alarm option	No audio alarm offered
COST-SAVINGS STANDARD FEATURES	
More Standard Memory 64 MB Flash standard	64 MB Flash
Ethernet Standard	Ethernet options
Easier-to-load labels with auto loading (zero label waste)	Manual loading (produces wasted labels)
MAINTENANCE	
Robust printer MIB with error reporting for MPS software	Not Stated
Easy platen roller replacement	Yes
Built-in printhead-cleaning routine correctly cleans printhead for increased life and print quality	No printhead-cleaning routine
Replacement printhead	Replacement printhead
Built-in Diagnostics Screens	No

Near Edge Printers
Datamax-O'Neil p1120n vs. Avery 64-04

DATAMAX-O'NEIL p1120n	AVERY 64-04
PERFORMANCE (AT 300 DPI)	
50 standard scalable fonts	17 Bitmapped
600-meter ribbon: Reduces cost and downtime	600-meter ribbon
Max print width – 4.16" (105.7mm)	Max print width – 4.09" (104mm)
Solid Aluminum Die-Cast frame	Sheet-metal construction
32 MB Flash 64 MB Ram	4 MB Flash 64 MB Ram
400-MHz Processor	400 MHz
Media thickness 0.0025" - 0.025" (0.0635mm - 0.635mm)	Media thickness 4 mills (0.1mm) to 15 mills (0.6mm)
Operating temperature 32°F (0°C) to 104°F (40°C)	Operating temperature 41°F (5°C) to 95°F (35°C)
EASE OF USE	
Large color graphics Touch Screen (320 x240 display)	Small monochrome display. Buttons below display.
Double-sided top-of-form sensor	One-sided top-of-form sensor
Easier-to-load labels with auto loading (zero label waste)	
Automatic media setup	Does not offer
Automatic media calibration (without multiple label waste)	Waste labels when calibrating
PCL5e & PCL6 industry-standard printer languages	Proprietary
Rewinder option adjustable torque motor	Belt-driven rewinder option
Automatic printhead pressure adjustment	Manual printhead pressure adjustment
Monitors ribbon and paper levels and reports by % used	No
Color-changing display to indicate errors and warnings	No
Cover-open warning indicator	No cover-open warning
Audio alarm option	No audio alarm offered
COST-SAVINGS STANDARD FEATURES	
More Standard Flash	You can upgrade flash at a cost
Real-Time Clock Standard	Real-Time Clock Standard
Easier-to-load labels with auto loading (zero label waste)	Loading waste labels
MAINTENANCE	
Robust printer MIB with error reporting for MPS software	No
Easy platen roller replacement	Not stated
Built-in printhead-cleaning routine correctly cleans printhead for increased life and print quality	No printhead-cleaning routine
Replacement printhead	Replacement printhead
Built-in Diagnostics Screens	Limited Diagnostics Screens

Near Edge Printers
Datamax-O'Neil p1120n vs. Tec B EX41

DATAMAX-O'NEIL p1120n	TEC B EX4T1
PERFORMANCE (AT 300 DPI)	
50 standard scalable fonts	Bitmap and outline
600-meter ribbon: Reduces cost and downtime	600-meter ribbon
Max print width – 4.16" (105.7mm)	Max print width – 4.09" (104mm)
Solid Aluminum Die-Cast frame	Sheet-metal construction
32 MB Flash 64 MB Ram	16 MB Flash 32 MB Ram
400 MHz Processor	Not stated
Media thickness 0.0025" - 0.025" (0.0635mm - 0.635mm)	Not stated
When opening and closing the printhead motor takes up slack ribbon eliminating wasted labels and ribbon wrinkle	Cantilever head design that wrinkles the ribbon when printhead open
EASE OF USE	
Large color graphics Touch Screen (320 x240 display)	Small monochrome display. Buttons below display.
Double-sided top-of-form sensor	One-sided top-of-form sensor
Easier-to-load labels with auto loading (zero label waste)	
Automatic media setup	Does not offer
Automatic media calibration (without multiple label waste)	Waste labels when calibrating
PCL5e & PCL6 industry-standard printer languages	Proprietary
Rewinder option adjustable torque motor	Belt-driven rewinder option
Automatic printhead-pressure adjustment	Manual printhead-pressure adjustment
Monitors ribbon and paper levels and reports by % used	No
Color-changing display to indicate errors and warnings	No
Cover-open warning indicator	No cover-open warning
Audio alarm option	No audio alarm offered
COST-SAVINGS STANDARD FEATURES	
More Standard Flash	Cannot upgrade
Real-Time Clock Standard	Real-Time Clock
Easier-to-load labels with auto loading (zero label waste)	Loading waste labels
MAINTENANCE	
Robust printer MIB with error reporting for MPS software	Not Stated
Easy platen roller replacement	Yes
Built-in printhead-cleaning routine correctly cleans printhead for increased life and print quality	No printhead-cleaning routine
Replacement printhead	Replacement printhead
Built-in Diagnostics Screens	Limited Diagnostics Screens

Datamax-O'Neil p1125 vs. ZT400

DATAMAX-O'NEIL p1125	ZEBRA ZT400
PERFORMANCE (AT 300 DPI)	
50 standard scalable fonts	18 total 2 scalable
600-meter ribbon: Reduces cost and downtime	450-meter ribbon: Ribbon is changed more often
Max print width – 4.27" (108.5mm)	Max print width – 4.09" (104mm)
10 ips/254 mmps	12 ips/305 mmps
400 MHz Processor	Not Published
Real Time Clock Standard	Real-Time Clock Standard
All direct-drive motor driven	Belt driven, produces wear causing issues
Solid Aluminum Die-Cast frame	Sheet-metal frame
EASE OF USE	
Large color graphics Touch Screen (320 x240 display)	Small 240 x 128 Monochrome Display. Buttons below display.
Double-sided top-of-form sensor	One-sided top-of-form sensor
Easier-to-load labels with auto loading (zero label waste)	Manual loading (produces wasted labels)
Automatic media setup	Does not offer
Automatic media calibration (without multiple label waste)	Waste labels when calibrating
PCL5e & PCL6 industry-standard printer languages	ZPL proprietary
Automatic printhead-pressure adjustment	Manual complicated printhead adjustment
Rewinder option adjustable torque motor	Belt-driven rewinder option
Two feed rollers provide better registration during printing	Only one feed roller provided
Monitors ribbon and paper levels reports them by % used	No
Color-changing display to indicate errors and warnings	No
Cover-open warning indicator	No cover-open warning
Audio alarm option	No audio alarm offered
COST-SAVINGS STANDARD FEATURES	
Calibrates without wasting multiple labels	Wastes multiple labels when calibrating
Automatically load labels (zero label waste)	Manual loading (produces wasted labels)
Many automatic features saves uses time which is money	Manual adjustment takes time costing money
MAINTENANCE	
Robust printer MIB with error reporting for MPS software	Not Stated
Easy platen roller replacement	Yes
Built-in printhead-cleaning routine correctly cleans printhead for increased life and print quality	No printhead-cleaning routine
Replacement printhead	Replacement printhead
Built-in Diagnostics Screens	No

Datamax-O'Neil p1125 vs. Sato CL4NX

DATAMAX-O'NEIL p1125	SATO CL4NX
PERFORMANCE (AT 300 DPI)	
50 standard scalable fonts	25 total fonts only 15 scalable ones
600-meter ribbon: Reduces cost and downtime	600-meter ribbon
Max print width – 4.27" (108.5mm)	Max print width – 4.09" (104mm)
10 ips/254 mmps	8ips/203 mmps
400 MHz Processor	Not published
Real-Time Clock Standard	Real-Time Clock Standard
Unicode Support	Yes
Solid Aluminum Die-Cast Frame	Aluminum Die-Cast Frame
EASE OF USE	
Large color graphics Touch Screen (320 x240 display)	Color display. Buttons below display.
Double-sided top-of-form sensor	One-sided top-of-form sensor
Easier-to-load labels with auto loading (zero label waste)	Manual loading (produces wasted labels)
Automatic media setup	Does not offer
Automatic media calibration (without multiple label waste)	Waste labels when calibrating
PCL5e & PCL6 industry standard printer languages	Proprietary
Automatic printhead-pressure adjustment	Manual complicated Printhead Adjustment
Rewinder option adjustable torque motor	Belt-driven rewinder option
Two feed rollers provide better registration during printing	Only one feed roller provided
Monitors ribbon and paper levels reports them by % used	No
Color-changing display to indicate errors and warnings	Yes
Cover-open warning indicator	No cover-open warning
Audio alarm option	No audio alarm offered
COST-SAVINGS STANDARD FEATURES	
Calibrates without wasting multiple labels	Wastes multiple labels when calibrating
Automatically load labels (zero label waste)	Manual loading (produces wasted labels)
Many automatic features save time and money	Manual adjustment takes time costing money
MAINTENANCE	
Robust printer MIB with error reporting for MPS software	Not stated
Easy platen roller replacement	Yes
Built-in printhead-cleaning routine correctly cleans printhead for increased life and print quality	No printhead-cleaning routine
Replacement printhead	Replacement printhead
Built-in Diagnostics Screens	Limited Diagnostics

Datamax-O'Neil p1725 vs. Zebra ZM600

DATAMAX-O'NEIL p1725	ZEBRA ZM600
PERFORMANCE (AT 300 DPI)	
50 standard scalable fonts	7 bitmapped 1 scalable
600-meter ribbon: Reduces cost and downtime	450-meter ribbon: Ribbon is changed more often
Max print width – 6.83" (173.5mm)	Max print width – 6.6" (168mm)
10 ips/254 mmps Faster printing	8ips/203 mmps
Automatic print head pressure adjustment	Manual complicated printhead-pressure adjustment
64 MB Flash 64 SDRAM	8 MB Flash 16 MB of RAM
All direct-drive motor driven	Belt-driven, produces wear causing issues
When opening and closing the printhead motor takes up slack ribbon eliminating wasted labels and ribbon wrinkle	Cantilever head design that wrinkles the ribbon when printhead opened
EASE OF USE	
Large color graphics Touch Screen (320 x240 display)	Small 240 x 128 Monochrome Display. Buttons below display.
Double-sided top-of-form sensor	One-sided top-of-form sensor
Easier-to-load labels with auto loading (zero label waste)	Manual loading (produces wasted labels)
Automatic media setup	Does not offer
Automatic media calibration (without multiple label waste)	Waste labels when calibrating
PCL5e & PCL6 industry standard printer languages	ZPL proprietary
Automatic printhead-pressure adjustment	Belt-driven rewinder option
Rewinder option adjustable torque motor	Only one feed roller provided
Two feed rollers provide better registration during printing	No
Monitors ribbon and paper levels reports them by % used	No
Color-changing display to indicate errors and warnings	No cover-open warning
Cover-open warning indicator	Not stated
Audio alarm option	No audio alarm offered
COST-SAVINGS STANDARD FEATURES	
Calibrates without wasting multiple labels	64 MB Flash
Automatically load labels (zero label waste)	Ethernet options
Many automatic features save time and money	Manual loading (produces wasted labels)
MAINTENANCE	
Robust printer MIB with error reporting for MPS software	No
Easy platen roller replacement	Yes
Built-in printhead-cleaning routine correctly cleans printhead for increased life and print quality	No printhead-cleaning routine
Replacement printhead	Replacement printhead
Built-in Diagnostics Screens	No

Datamax-O'Neil p1725 vs. Sato CL612e

DATAMAX-O'NEIL p1725	SATO CL612e
PERFORMANCE (AT 300 DPI)	
50 standard scalable fonts	14 fonts only 2 scalable
600-meter ribbon: Reduces cost and downtime	410-meter ribbon: Ribbon is changed more often
Max print width – 6.83" (173.5mm)	Max print width – 6.5" (164mm)
10 ips/254 mmps faster printing	8ips/203 mmps
Automatic printhead pressure adjustment	Manual complicated printhead-pressure adjustment
64 MB Flash 64 SDRAM	2 MB Flash 16 MB of RAM
All direct-drive motor driven	Belt-driven, produces wear-causing issues
Solid Aluminum Die-Cast Frame	Sheet-Metal Frame
EASE OF USE	
Large color graphics Touch Screen (320 x240 display)	Small 240 x 128 Monochrome Display. Buttons below display.
Double-sided top-of-form sensor	One-sided top-of-form sensor
Easier-to-load labels with auto loading (zero label waste)	Manual loading (produces wasted labels)
Automatic media setup	Does not offer
Automatic media calibration (without multiple label waste)	Waste labels when calibrating
PCL5e & PCL6 industry-standard printer languages	ZPL proprietary
Automatic printhead-pressure adjustment	Belt-driven rewinder option
Rewinder option adjustable torque motor	Only one feed roller provided
Two feed rollers provide better registration during printing	No
Monitors ribbon and paper levels reports them by % used	No
Color-changing display to indicate errors and warnings	No cover-open warning
Cover-open warning indicator	Not stated
Audio alarm option	No audio alarm offered
COST-SAVINGS STANDARD FEATURES	
More Standard Memory 64 MB Flash standard	64 MB Flash
Ethernet Standard	Ethernet options
Easier-to-load labels with auto loading (zero label waste)	Manual loading (produces wasted labels)
MAINTENANCE	
Robust printer MIB with error reporting for MPS software	No
Easy platen roller replacement	Yes
Built-in printhead-cleaning routine correctly cleans printhead for increased life and print quality	No printhead-cleaning routine
Replacement printhead	Replacement printhead
Built-in Diagnostics Screens	No

MANAGED PRINT SERVICE (MPS) WHAT IS IT?

Managed Print Services is the active management and optimization of document-output devices and related business processes. It is a type of service that is offered to effectively monitor and manage network and local devices for meters, supplies and service. Most commonly dealers that offer MPS to their customers use a remote-management software tool to provide valuable data to build and maintain the program. The definition of MPS is the same from dealer to dealer, but the level of detail and administration varies. Some people think of it as the pay-per-print model, but it is much more than that.

It is a tool to manage the use and productivity of a company's output devices. MPS helps manage costs and reduce downtime and waste.

A significant number of large and medium-size companies worldwide have migrated to this software to manage their device fleets. Regardless of the size of an organization, there is a large demand for all companies to adopt this model of management to control costs and increase productivity.

Datamax-O'Neil has worked with a number of data-collection companies to make the Performance Series printers easy to use and ready to integrate into the complete MPS solution.

The Performance Series printers have the most robust public and private Management Information Base (MIB) in the thermal-printing world. This allows the printer to be managed similarly to laser devices. Beyond meter collection, users also have the ability to track service and supplies utilized by the device and review any activity data via a user Interface or reporting tools. Typical report information that is available includes:

- Percent of ribbon used and remaining

- Percent of labels used and remaining

- Type of media being used for reordering

- Printer alerts, like amount of stock left in the printer

- Warnings for low ribbon

- Service and printing errors

- Preventative-maintenance alerts

- Device details indicating when supplies were replaced and when maintenance completed

WHAT DOES THAT MEAN FOR MY COMPANY?

You can resell this software and increase your label and ribbon sales and get recurring monthly revenue for the services you provide, all at the same time. Using an MPS methodology allows use of a consultant-selling approach that allows the accumulation of knowledge about the user that helps D-O become a solution provider, truly focused on the user's ultimate printer needs.

Additional information about MPS, including a list of partners offering these types of software, is contained in the following pages. These companies fully support the Performance Series printers and the H-8308p MIB by integrating D-O technology into their software applications. They are looking forward to working with new resellers in the automatic identification and data capture (AIDC) market.

ECi fmaudit™
Collect. Manage. Profit

THE TOTAL MANAGED PRINT SOLUTION

WHAT CAN YOU DO WITH FMAUDIT?

FMAudit is a complete suite of solutions for remote meter collection and managed print services. While most of our clients initially look to us for remote meter-reading solutions or print-management assessment tools, many are pleased to learn about the unique solutions we offer to help a dealership reduce overhead, automate service and increase sales.

■ WEBAUDITS: Gather Meters Without Installing Software

Other solutions require you to install software on your clients' networks. While we do offer this option, WebAudit gives you the flexibility to capture meter readings through an innovative Web application—perfect when your client won't let you install software.

■ TCO REPORTING: Quickly Discover Total Cost of Ownership

The foundation of selling managed print services contracts is understanding TCO. FMAudit makes this easy with TCO reporting that cross references fleets with a database of more than 10,000 devices and their operation costs.

■ SUPPLY TRIGGERED MARKETING: Automatically Market Supplies for Machines Not Under Contract

Imagine having a supplies sales rep sitting next to each non-managed printer in your clients' offices. When the toner cartridge is almost empty, Supplies Triggered Marketing sends an email to your client with a link to your toner store. (Don't have a store? No problem. We can set one up for you.)

USING FMAUDIT MANAGED PRINT SOLUTIONS WILL:

- Remotely install, maintain and update software with limited IT staff involvement
- Maintain 100% control of your data – no third party has access to your data
- Reduce overhead, automate processes and increase sales

■ SUPPLY TRIGGERED DELIVERY: Manage Deliveries and Supply Inventory

Shipping too much toner to your clients leads to bloated inventories and higher costs. Supply Triggered Delivery lets you control when toner is shipped based on the average usage of each device. This means clients get toner just in time, lowering your inventory and boosting profits.

■ LOCAL AGENT: Capture Meters for Non-networked Devices

With up to 40% of printers not connected to networks, the ability to capture local printer meters is critical. Local Agent allows you to collect meters from local printers, enabling you to deliver (and bill for) a total managed print solution.

■ BI-DIRECTIONAL ERP SYNCHRONIZATION: Integrate Dynamically with Accounting/Dispatch Software

Other solutions only push meters to your billing system leaving you to spend countless hours reconciling devices. FMAudit features two-way communication with your billing and service dispatch systems, reducing your administrative costs and hassles.

ECi® Software Solutions | Inc. 500

PRINT AUDIT® PREMIER

When you sell print management your customers win and your software vendor wins, but you get left out. Finally you are invited to join the party with Print Audit Premier.

Print Audit Premier is a new subscription plan that gives you access to all of Print Audit's products for one low monthly price.

PREMIER SUBSCRIPTION PRODUCTS INCLUDE:

Print Audit Facilities Manager
· Remote meter reading
· Supplies and service management
· TCO analysis

Print Audit 6
· User and workflow analysis
· Printing rules
· Cost recovery

Print Audit Assessor
· In-depth print assessment, including job-level detail

Print Audit Secure
· Secure release printing
· "Follow me" pull-printing

Print Audit Embedded
· Copy, scan and fax tracking directly from the panel of supported MFPs

Print Audit Rapid Assessment Key
· USB-based rapid assessment

THE 3 PRINT AUDIT Premier PROMISES

Premier members receive exclusive access to a new web portal that details how Print Audit® has helped your company:

1. Win New Customers

80% of MPS and equipment deals are won using user and device-assessment tools. Premier includes unlimited, in-depth assessments.

2. KEEP CURRENT CUSTOMERS

With Premier, your customer doesn't own the software, you do. This makes it more difficult for them to leave your program.

3. BUILD RECURRING REVENUE

Premier members charge customers for user-management software while paying a fixed cost, which means their profits go up with every customer.

Plus exclusive benefits from Print Audit partners such Photizo, P4P Hotel, Newfield IT, GreatAmerica, Focus MPS, IDC and more!

DATAMAX-O'NEIL CERTIFIED SUPPLIES

To achieve optimum print quality and maximum printhead life, Datamax-O'Neil specifies the use of certified labels, receipt paper and ribbons. These supplies are specifically formulated for use in D-O printers; use of non-Datamax-O'Neil supplies may affect the print quality, performance and life of the printer or its components. Datamax-O'Neil offers a wide variety of world-class quality supplies for the transportation and logistics, food and beverage, chemical drum-labeling and manufacturing industries. Datamax-O'Neil supplies are engineered and tested with Datamax-O'Neil printers to provide optimal performance with maximum output through any Datamax-O'Neil Printer – guaranteed.

Datamax-O'Neil labels, tags, receipt paper and ribbons support a broad range of barcode-printing applications in mild to harsh environments. A wide variety of these types of materials are stock products and available for fast delivery from D-O's three warehouse locations. (California, Florida and Illinois). Datamax-O'Neil can also customize the label material, configuration, size or any other feature to meet the requirements of even the most challenging printing environment. Datamax-O'Neil's supply experts and engineers can also help develop custom solutions to meet unique requirements.

■ Healthcare

Safety, privacy and accuracy are critical to success in the healthcare industry. Datamax-O'Neil has been a trusted name in barcode-printing and labeling technology for more than 30 years. D-O works hard to ensure that all standards for excellence are met – every day, with every patient. D-O's full line of printing products seamlessly supports barcode technology, which helps reduce errors, ensures privacy and improves patient safety for admissions, laboratories and pharmacies. Strict attention to detail assures that the best solutions are provided for every specific need within healthcare applications.

Admissions:
Protect the five rights of patient safety with the Datamax-O'Neil SafeD-Band™ available in pediatric, children and adult sizes.

Laboratories:
HIT (Healthcare Information Technology) products. Cerner® and MEDITECH®-compatible labels

- Sterilization labels
- Test-tube labels
- Slide labels
- Blood-bag labels

Pharmacies:
Prescription Labels • HIPAA-complaint, FDA-approved IV bag labels that meet the standards of 21 CFR 175.105

■ Retail

Datamax-O'Neil provides a full range of labels/receipts for any retail application, including:

- High-volume retail
- Material handling
- Seasonal markdowns
- Merchandising
- Distribution centers
- Shelf labeling
- Point-of-sale
- Transportation

Datamax-O'Neil has printer supplies that enable the achievement of maximum profitability and the highest productivity of assets.

D-O can custom design labels to fit all printing needs – colored labels, custom sizes and custom imprinting on the entire line of D-O linered labels.

■ Electronic Component Labels

Labeling in the electronics industry is a challenge – small labels for placement on chips, printed circuit boards or cable wires often need to withstand harsh manufacturing processes and must perform for the entire lifespan of the product. With a wide variety of facestocks and adhesives, Datamax-O'Neil printer supplies has dominated the electronic-component labeling market for years, by offering hundreds of quick-ship products available for immediate shipment. If a unique size if needed, D-O offers several hundred additional custom materials and more than 1,000 unique die sizes.

Glossy White Polyester:

Thermal-transfer labels ideal for nameplates or serial identification labels on finished products. Other applications include rating plates, property identification and electronic-component marking. Glossy white polyester is a first-class 2-mil polyester that is used on the topside of a circuit board where heat exposure is limited, offering excellent solvent and scratch resistance.

Self Laminating Wire and Cable ID Film:

Blank thermal-transfer printable labels ideal for marking cables, wires and other surfaces that require conformability benefit from D-O's unique "site-hole" technology allowing virtually any printer to print the self-lam labels accurately with minimal waste.

Semi-Gloss White Anti-Static Polyimide:

These thermal-transfer labels are ideal for marking electronic components and the top/bottom side of printed circuit boards. The material is designed to withstand high temperatures and harsh chemicals along with throughhole and surface-mount circuit-board processes. This high-performance material is designed for applications requiring excellent solvent and scratch resistance, and is also an excellent material suited for circuit-board applications requiring an ESD material.

Matte Tan Polyimide:

These thermal printable labels are ideal for marking electronic components and the top/bottom side of printed circuit boards. This material is designed to withstand high temperatures and harsh chemicals and to withstand throughhole and surface-mount circuit-board processes. Matte tan polyimide is the most durable material for industrial barcode applications where there may be exposure to many different solvents.

■ The Right Ribbon For Your Application

Datamax-O'Neil knows how important it is to choose the right thermal-transfer ribbon formula for labels and the right format for a label printer. The right label and ribbon combination is critical in any application. With the right ribbon and printer settings, ensuring the best print quality and durability becomes much easier.

Datamax-O'Neil offers a full line of printer ribbons in numerous sizes, colors and ink formulas for a wide range of applications. With wax, wax/resin and resin thermal-transfer ribbons available, Datamax-O'Neil has the solution for any requirement among its on-hand stock of hundreds of ribbon varieties.

Choose from all formulas: Wax, Wax/Resin, Resin and Near-Edge ribbons.

SOFTWARE

Windows® Drivers

The Performance Series has drivers for use on the latest Windows operating systems, Windows 7 and 8. The drivers allow the user to view and change printer settings from any Windows software application, simplifying the print process. Windows drivers are available on the CD included with the printer.

■ Datamax-O'Neil PW Series Configuration Utility

The PW Series Configuration Utility is a Windows® software application that allows for easy access to and set up of the printers. It can be used with both the USB and Ethernet communication ports available on the printer and allows settings to be stored and applied to a different printer. This is ideal when replacing or adding printers to an application. The PW Series Configuration Utility is available on the CD included with the printer.

■ Embedded Browser Configurator

The Performance Series has a resident web page embedded into the firmware that is accessible via a web browser. The web page allows full access to the printer's settings and allows complete configuration. Accessing the printer via the Embedded Browser Configurator is easy: simply connect the printer to the network, start the browser program and enter the printer's IP address. The resident web page will pop up enabling the printer to begin running without additional software or a specific operating system needing to be installed.

■ Firmware

Performance Series uses an advanced Linux-based Firmware system. Running Linux for the operating system allows greater flexibility and integration paths. The open nature of Linux allows the Performance Series to be compatible with most current operating technologies, as well as being able to adapt as printing needs and operating systems change with time.

■ HP Laser-Compatible Thermal Printer

PCL was first introduced in HP's LaserJet Series printers and quickly became the standard protocol language for desktop, commercial laser printers and ink jet printers for more than two decades. Datamax-O'Neil has now brought this language to the thermal printing world and supports a full range of PJL commands as well. We use a licensed version of PCL5e and PCL6.

■ PCL Macros

A macro is a group of PCL commands created by the user, downloaded and stored in the printer. Once stored, a macro can be recalled using a single command. The macro can contain fonts, barcodes or graphics and is useful for storing logos, letterhead forms or other repetitive printer-command sequences. Macros eliminate the need to download static data repeatedly, thus improving throughput time.

■ Store Label formats

You can store label formats in the internal flash memory and print from the touchscreen display of Performance Series printers.

■ International Language Printing

Supports localization of dozens of languages, including Hebrew, Arabic, Chinese, Japanese and Korean. With the flexibility of PCL, the Performance Series printer can be customized to include a Unicode data stream capable of producing more than 65,000 characters. Being able to immediately print international pallet and package barcode labels and pick lists, with no custom coding required, greatly increases global inventory and traceability responsiveness.

■ **Software Package Support**

It would take pages of documents to list all the software that supports the PCL based Performance Series of printer.

■ **Tech Support**

At Datamax-O'Neil, customer satisfaction is our number one priority. We strive to provide the industry's finest service and support for our customers worldwide.

When you call in with a question, we're ready to respond quickly and effectively. Likewise, our support professionals are here to make sure your development and implementation projects run smoothly and without incident.

Got a question? Check out our FAQs on page 15 of this Product Guide where we answer some of the most common questions about our Performance Series.

■ **LINUX®/UNIX®**

Yes. You may use standard Gutenprint PCL drivers.

■ **Apple®**

Yes. Use standard generic PCL5e or PCL6 drivers.

■ **SAP®**

Yes. Performance Series printers are compliant with all requirements for device types as outlined in the SAP® Printer- Vendor Program.

1898463 - Printer Vendor Wizard Note: Datamax-O'Neil

Version	4	**Type**	SAP Note
Release Status	Released for Customer	**Language**	English
Responsible	Ricky Bain (C5179339)	**Masterlanguage**	English
Processor	Parvathy S (I061455)	**Last Changed On**	29.04.2014 01:57:43
Component	BC CCM PRN DVM (Printer Administration)	**Created On**	09.08.2013 02:39:22

Solution

Supported Printer model/ device type combinations:

```
Consecuti e Number   Printer Model   dev ce type
001 p1120n YDM1120
002 p1125 YDM1120
003 p1115 YDM1120
004 p1115s YDM1120
005 p1725 YDM1120
006 w1110 YDM1120
007 H 8308p YDM1120
```

DATAMAX-O'NEIL RECEIVES SILVER LEVEL STATUS OF THE SAP® PRINTER VENDOR PROGRAM

Datamax-O'Neil is a silver-level member of SAP Printer Vendor program enabling customers to print documents from within their SAP applications.

The new Datamax-O'Neil Workstation and Performance Series are the only true manufactured PCL thermal barcode printers available today and are compliant with all requirements for device types as defined in the SAP Printer Vendor program.

The Workstation and Performance Series printers are the newest generation of printers from Datamax-O'Neil, and offer superior print quality, easy media auto-load, user-friendly color touchscreen and PCL, an industry-standard printer language. Using PCL ensures users fast and easy integration into SAP applications.

HOW TO ORDER

Printers are offered with a variety of features and options that define the final product. There are hundreds of part number possibilities when configuring to a specific product. Accessories are not as complex as printers, but compatibility should always be considered. The sections below describe the process of getting the final part number you need to order for a printer or accessory.

PRINTERS AND OPTIONS

To order a printer, you must generate the configuration identification number (CID) using the table below. Simply fill in the digits with the base printer and options desired. Submit your order according to your CID and description.

Performance Series p1115	P	AA	-	00	-					0		0	

Printer Model	
p1115 4" - 300DPI / 6 PS Printer, USB & Ethernet	AA

Custom Kit	
Datamax Standard Kit	00
China Kit	07

Direct Thermal/Thermal Transfer	
Direct Thermal	0
Bi-Directional Thermal Transfer	4

A/C Power (Autorange Supply) Configuration and Cord	
US Power Cord	8
UK & European Power Cord	6
Continental Europe Power Cord	3
UK & Ireland Power Cord	4
Denmark Power Cord	2
Switzerland Power Cord	F
220v: Black Power Cord With Straight-In Australian Plug	N
Italy Power Cord	P
India Power Cord	9
220V: Black Power Cord With Straight-In Chinese Plug	Y

Present Sensor/Rewinder Options	
Do Not Include This Option	0
Present Sensor (Downward Looking)	1
Internal Rewinder	4
Internal Rewinder and Present Sensor (Downward Looking)	F
Internal Rewinder and Present Sensor (Upward Looking)	9

Cutter Option	
Do Not Include This Option	0
Cutter	4

Font Expansion Option	
Do Not Include This Option	0

Interface Option	
Do Not Include This Option	0
GPIO & Serial Port	A

Scanner/RFID Options	
Do Not Include This Option	0

Misc. Options	
Synchronized Media Hanger	4
3.0" Media Hub	0
1.0" Media Hub Kit	1
1.5" Media Hub Kit	2

Performance Series p1115s

| P | AD | - | 00 | - | | | | | 0 | | 0 | |

Printer Model

p1115s 4" - 600DPI / 6IPS Printer, USB & Ethernet	AD

Custom Kit

Datamax Standard Kit	00
China Kit	07

Direct Thermal/Thermal Transfer

Direct Thermal	0
Bi-Directional Thermal Transfer	4

A/C Power (Autorange Supply) Configuration and Cord

US Power Cord	8
UK & European Power Cord	6
Continental Europe Power Cord	3
UK & Ireland Power Cord	4
Denmark Power Cord	2
Switzerland Power Cord	F
220v: Black Power Cord With Straight-In Australian Plug	N
Italy Power Cord	P
India Power Cord	9
220V: Black Power Cord With Straight-In Chinese Plug	Y

Present Sensor/Rewinder Options

Do Not Include This Option	0
Present Sensor (Downward Looking)	1
Internal Rewinder	4
Internal Rewinder and Present Sensor (Downward Looking)	F
Internal Rewinder and Present Sensor (Upward Looking)	9

Cutter Option

Do Not Include This Option	0
Cutter	4

Font Expansion Option

Do Not Include This Option	0

Interface Option

GP I/O & Serial Port and 64MB Flash	C
GP I/O & Serial Port and 802.11b/g Wireless and 64MB Flash	D
GP I/O & Serial Port and USB Host and 64MB Flash	G
GP /O & Serial Port and USB Host and 802.11b/g Wireless and 64MB Flash	H
USB Host and 64MB Flash	K
USB Host and 802.11b/g Wireless and 64MB Flash	L
64MB Flash	N
802.11b/g Wireless and 64MB Flash	P

Scanner/RFID Options

Do Not Include This Option	0

Misc. Options

Synchronized Media Hanger	4
3 0" Media Hub	0
1 0" Media Hub Kit	1
1 5" Media Hub Kit	2
3 0" Media Hub and Audio Alarm	5
1 0" Media Hub Kit and Audio Alarm	6
1 5" Media Hub Kit and Audio Alarm	7
Synchronized Media Hanger and Audio Alarm	8

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Performance Series p1120n

| | | | | | | | P | AB | - | 00 | - | | | | | 0 | | 0 | |

Printer Model
p1120n 4" - 300DPI Near Edge / 8 PS Printer, USB & Ethernet	AB

Custom Kit
Datamax Standard Kit	00
China Kit	07

Direct Thermal/Thermal Transfer
Direct Thermal	0
Bi-Directional Thermal Transfer	4

A/C Power (Autorange Supply) Configuration and Cord
US Power Cord	8
UK & European Power Cord	6
Continental Europe Power Cord	3
UK & Ireland Power Cord	4
Denmark Power Cord	2
Switzerland Power Cord	F
220v: Black Power Cord With Straight-In Australian Plug	N
Italy Power Cord	P
India Power Cord	9
220V: Black Power Cord With Straight-In Chinese Plug	Y

Present Sensor/Rewinder Options
Do Not Include This Option	0
Present Sensor (Downward Looking)	1
Internal Rewinder	4
Internal Rewinder and Present Sensor (Downward Looking)	F
Internal Rewinder and Present Sensor (Upward Looking)	9

Cutter Option
Do Not Include This Option	0
Cutter	4

Font Expansion Option
Do Not Include This Option	0

Interface Option
Do Not Include This Option	0
GP I/O & Serial Port	A
GP I/O & Serial Port and 802.11b/g Wireless	B
GP I/O & Serial Port and 64MB Flash	C
GP I/O & Serial Port and 802.11b/g Wireless and 64MB Flash	D
GP I/O & Serial Port and USB Host	E
GP I/O & Serial Port and USB Host and 802.11b/g Wireless	F
GP I/O & Serial Port and USB Host and 64MB Flash	G
GP I/O & Serial Port and USB Host and 802.11b/g Wireless and 64MB Flash	H
USB Host	I
USB Host and 802.11b/g Wireless	J
USB Host and 64MB Flash	K
USB Host and 802.11b/g Wireless and 64MB Flash	L
802.11b/g Wireless	M
64MB Flash	N
802.11b/g Wireless and 64MB Flash	P

Scanner/RFID Options
Do Not Include This Option	0

Misc. Options
Synchronized Media Hanger	4
3 0" Media Hub	0
1 0" Media Hub Kit	1
1 5" Media Hub Kit	2
3 0" Media Hub and Audio Alarm	5
1 0" Media Hub Kit and Audio Alarm	6
1 5" Media Hub Kit and Audio Alarm	7
Synchronized Media Hanger and Audio Alarm	8

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Performance Series p1125

| | P | AC | - | 00 | - | | | | | 0 | | 0 | |

Printer Model

p1125 4" - 300DPI / 10IPS Printer, USB & Ethernet	AC

Custom Kit

Datamax Standard Kit	00
China Kit	07

Direct Thermal/Thermal Transfer

Direct Thermal	0
Bi-Directional Thermal Transfer	4

A/C Power (Autorange Supply) Configuration and Cord

US Power Cord	8
UK & European Power Cord	6
Continental Europe Power Cord	3
UK & Ireland Power Cord	4
Denmark Power Cord	2
Switzerland Power Cord	F
220v: Black Power Cord With Straight-In Australian Plug	N
Italy Power Cord	P
India Power Cord	9
220V: Black Power Cord With Straight-In Chinese Plug	Y

Present Sensor/Rewinder Options

Do Not Include This Option	0
Present Sensor (Downward Looking)	1
Internal Rewinder	4
Internal Rewinder and Present Sensor (Downward Looking)	F
Internal Rewinder and Present Sensor (Upward Looking)	9

Cutter Option

Do Not Include This Option	0
Cutter	4

Font Expansion Option

Do Not Include This Option	0

Interface Option

Do Not Include This Option	0
GP I/O & Serial Port	A
GP I/O & Serial Port and 802.11b/g Wireless	B
GP I/O & Serial Port and 64MB Flash	C
GP I/O & Serial Port and 802.11b/g Wireless and 64MB Flash	D
GP I/O & Serial Port and USB Host	E
GP I/O & Serial Port and USB Host and 802.11b/g Wireless	F
GP I/O & Serial Port and USB Host and 64MB Flash	G
GP I/O & Serial Port and USB Host and 802.11b/g Wireless and 64MB Flash	H
USB Host	I
USB Host and 802.11b/g Wireless	J
USB Host and 64MB Flash	K
USB Host and 802.11b/g Wireless and 64MB Flash	L
802.11b/g Wireless	M
64MB Flash	N
802.11b/g Wireless and 64MB Flash	P

Scanner/RFID Options

Do Not Include This Option	0

Misc. Options

Synchronized Media Hanger	4
3 0" Media Hub	0
1 0" Media Hub Kit	1
1 5" Media Hub Kit	2
3 0" Media Hub and Audio Alarm	5
1 0" Media Hub Kit and Audio Alarm	6
1 5" Media Hub Kit and Audio Alarm	7
Synchronized Media Hanger and Audio Alarm	8

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Performance Series p1725

| | P | BA | - | 00 | - | | | | | 0 | | 0 | |

Printer Model

p1725 6" - 300DPI / 10IPS Printer, USB & Ethernet	BA

Custom Kit

Datamax Standard Kit	00
China Kit	07

Direct Thermal/Thermal Transfer

Direct Thermal	0
Bi-Directional Thermal Transfer	4

A/C Power (Autorange Supply) Configuration and Cord

US Power Cord	8
UK & European Power Cord	6
Continental Europe Power Cord	3
UK & Ireland Power Cord	4
Denmark Power Cord	2
Switzerland Power Cord	F
220v: Black Power Cord With Straight-In Australian Plug	N
Italy Power Cord	P
India Power Cord	9
220V: Black Power Cord With Straight-In Chinese Plug	Y

Present Sensor/Rewinder Options

Do Not Include This Option	0
Internal Rewinder	4
Internal Rewinder with Peel and Present (Upward Looking)	9

Cutter Option

Do Not Include This Option	0
Cutter maxium cut width 6.5 in/165.1mm	4

Font Expansion Option

Do Not Include This Option	0

Interface Option

GP I/O & Serial Port and 64MB Flash	C
GP I/O & Serial Port and 802.11b/g Wireless and 64MB Flash	D
GP I/O & Serial Port and USB Host and 64MB Flash	G
GP I/O & Serial Port and USB Host and 802.11b/g Wireless and 64MB Flash	H
USB Host and 64MB Flash	K
USB Host and 802.11b/g Wireless and 64MB Flash	L
64MB Flash	N
802.11b/g Wireless and 64MB Flash	P

Scanner/RFID Options

Do Not Include This Option	0

Misc. Options

Synchronized Media Hanger	4
Synchronized Media Hanger and Audio Alarm	8

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Performance Series

p1115 Options

Part#	Description
SP-105039-001	Thermal Transfer - 3.72in/94.48mm max OD on 1in/25mm core, Up to 1968ft/600m length
SP-105040-004	Rewinder, Internal - Accepts a full roll of 8in liner only, or 3.5in roll of media
SP-105554-001	Present Sensor (downward looking) - Detects removal of center justified media from the tear bar
SP-106150-001	Present Sensor (upward looking) - Detects removal of center justified media from the tear bar
SP-105361-001	Cutter - Capable of cutting.003 to .010 thick media for 500,000 cuts
SP-105481-001	Cutter Tray, Catches cut media, capacity 100 (2" to 6" long)
OPT104822-001	GP I/O & Serial Port Assembly

p1115s Options

Part#	Description
SP-105039-001	Thermal Transfer - 3.72in/94.48mm max OD on 1in/25mm core, Up to 1968ft/600m length
SP-105040-004	Rewinder, Internal - Accepts a full roll of 8in liner only, or 3.5in roll of media
OPT105532-001	USB Host - USB 2.0 Host port on front of printer (Type A connector)
SP-105554-001	Present Sensor (downward looking) - Detects removal of center justified media from the tear bar
SP-106150-001	Present Sensor (upward looking) - Detects removal of center justified media from the tear bar
SP-105361-001	Cutter - Capable of cutting.003 to .010 thick media for 500,000 cuts
SP-105481-001	Cutter Tray, Catches cut media, capacity 100 (2" to 6" long)
OPT104822-001	GP I/O & Serial Port Assembly
OPT105778-001	Standard 802.11b/g Wireless Assembly
OPT105784-001	Audio Alarm - Used to elevate error or warning conditions

p1120n Options

Part#	Description
SP-105039-001	Thermal Transfer - 3.72in/94.48mm max OD on 1in/25mm core, Up to 1968ft/600m length
SP-105040-004	Rewinder, Internal - Accepts a full roll of 8in liner only, or 3.5in roll of media
OPT105532-001	USB Host - USB 2.0 Host port on front of printer (Type A connector)
SP-105554-001	Present Sensor (downward looking) - Detects removal of center justified media from the tear bar
SP-106150-001	Present Sensor (upward looking) - Detects removal of center justified media from the tear bar
SP-105361-001	Cutter - Capable of cutting.003 to .010 thick media for 500,000 cuts
SP-105481-001	Cutter Tray, Catches cut media, capacity 100 (2" to 6" long)
OPT104822-001	GP I/O & Serial Port Assembly
OPT105778-001	Wireless 802.11b/g *(requires Flash Expanded Memory SP105960-003)*
SP-105960-003	64MB DRAM/64MB Flash Expanded Memory (for use with additional fonts)
OPT105784-001	Audio Alarm - Used to elevate error or warning conditions

p1125 Options

Part#	Description
SP-105039-001	Thermal Transfer - 3.72in/94.48mm max OD on 1in/25mm core, Up to 1968ft/600m length
SP-105040-004	Rewinder, Internal - Accepts a full roll of 8in liner only, or 3.5in roll of media
OPT105532-001	USB Host - USB 2.0 Host port on front of printer (Type A connector)
SP-105554-001	Present Sensor (downward looking) - Detects removal of center justified media from the tear bar
SP-106150-00	Present Sensor (upward looking) - Detects removal of center justified media from the tear bar
SP-105361-001	Cutter - Capable of cutting.003 to .010 thick media for 500,000 cuts
SP-105481-001	Cutter Tray, Catches cut media, capacity 100 (2" to 6" long)
OPT104822-001	GP I/O & Serial Port Assembly
OPT105778-001	Wireless 802.11b/g (requires Flash Expanded Memory SP105960-003)
SP-105960-003	64MB DRAM/64MB Flash Expanded Memory (for use with additional fonts)
OPT105784-001	Audio Alarm - Used to elevate error or warning conditions

p1725 Options

Part#	Description
SP-105039-101	Thermal Transfer - 3.72in/94.48mm max OD on 1in/25mm core, Up to 1968ft/600m length
SP-105040-102	Rewinder, Internal - Accepts a full roll of 8in liner only, or 3.5in roll of media
OPT105532-001	USB Host - USB 2.0 Host port on front of printer (Type A connector)
OPT104822-001	GP I/O & Serial Port Assembly
OPT105778-001	Wireless 802.11b/g
OPT105784-001	Audio Alarm - Used to elevate error or warning conditions
OPT105361-101	P1725 cutter maxium cut width 6.5in/165,1mm
OPT15-3261-01	Peel and Present mechanism only need rewinder in printer to work.

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Performance Series

User's Guide ■ ■ ■

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Agency Compliance

This product complies to the following:

FC	CFR 47 Part 15, Class A Digital Device This device complies with Part 15, Subpart B of the FCC Rules. Operation is subject to the following two conditions: 1) This device may not cause harmful interference, and 2) this device must accept any interference received, including interference that may cause undesired operation. This Class A digital apparatus complies with Industry Canada ICS-003 Class A requirements.
c (UL) us LISTED	UL 60950-1, 2nd Edition. Safety of Information Technology Equipment Including Electrical Business Equipment CAN/CSA-C22.2 No.60950-1, 2nd Edition. Safety of Information Technology Equipment Including Electrical Business Equipment
CE	European Council Directive 2004/108/EC "EMC Directive" EN55022, Emissions, Class A EN55011, Emissions, Class A (p1120n only) EN55024, Immunity EN61000-3-2, Harmonics EN61000-3-3, Voltage Fluctuations and Flicker European Council Directive 2006/95/EC "Low Voltage Directive" IEC 60950-1, 2nd Edition (CB Scheme) Directive 2011/65/EU RoHS2 [EN50581 (2012)]
EAC	Customs Union – Russia, Kazakhstan, Belarus
⚠	CISPR 22 Class A Warning Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

	ACMA – Australian Communications and Media Authority EN55022; 2010 +AC:2011 Class A
CoC-MEX	Certificate of Compliance - Mexico CoC-Mex-00588-UL; UL 60950-1, 2nd Edition, 2011-12-19
	GB4943.1-2011; GB9254-2008 (Class A); GB17625.1-2012

Table of Contents

1 Safety

Warnings and Cautions

The following Warnings and Cautions are used throughout this manual:

Warning: Warnings alert you to possible safety risks.

Caution: Cautions alert you to the potential for equipment damage.

General Safety Information

Caution: This product is intended for indoor use only.

All service procedures should be done by properly trained and qualified service personnel.

Any on-site assembly required during the installation process must be performed by properly trained and qualified service personnel.

The product must be connected to a properly grounded and appropriately rated AC receptacle using the supplied cord set.

Caution: This product contains sensitive electronic components that could be damaged if exposed to excessive force.

Caution: Use only factory-approved consumables and cleaning kits. Use of any non-approved supplies could damage the product and void the warranty.

Caution: Do not connect the wireless antenna connection to any outside plant connection.

Figure: 1 - 1   Caution - Hot

The printhead heats during printing. Do not touch.

About the Printer

Product Tour

The following illustrations show some of the features and available options for the printer.

Figure: 2 - 1   Front View
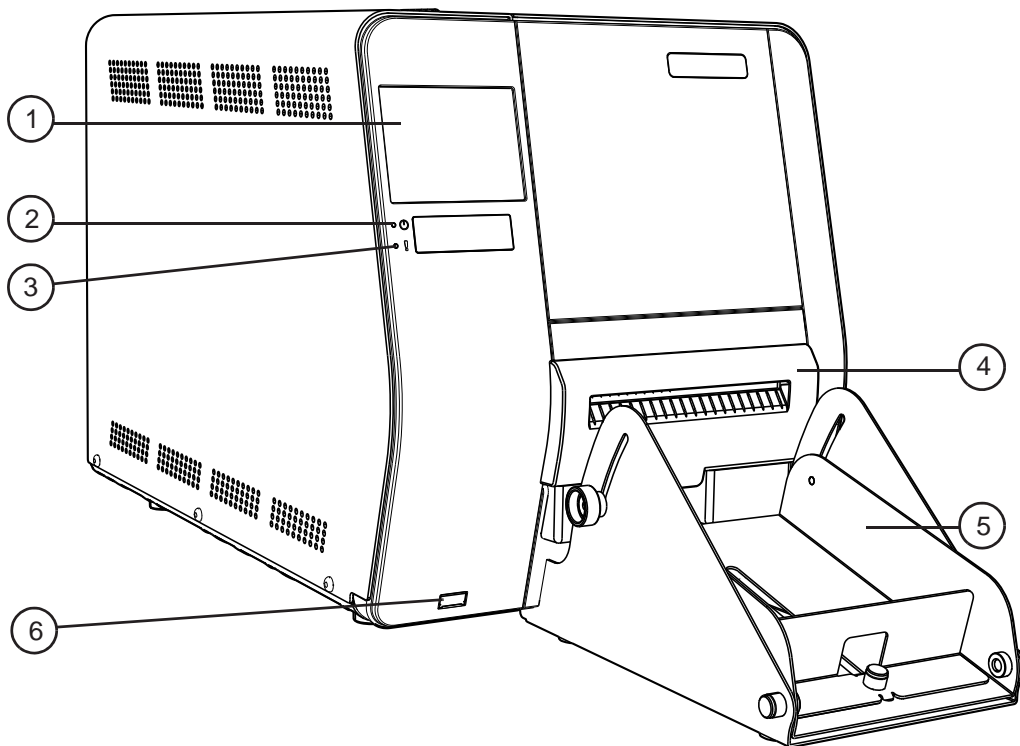
1. Touchscreen Control Panel

2. Power LED

3. Error LED

4. Cutter (Optional)

5. Cutter Tray (Optional)

6. USB Host (Optional)

Some features and options are not available on all models.

Figure: 2 - 2   Rear View
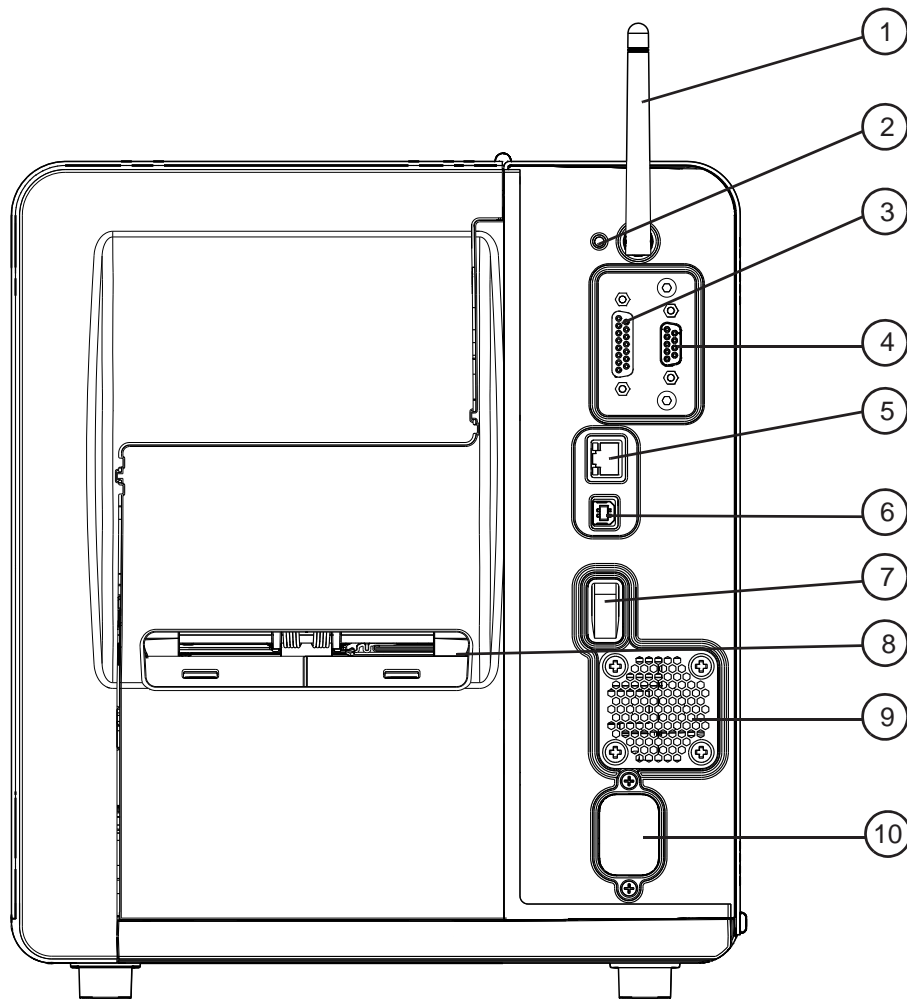
1. Wireless Antenna (Optional)   6. USB Port

2. Reset Switch   7. Power Switch

3. GPIO Port (Optional)   8. Fanfold Media Slot

4. Serial Port (Optional)   9. Rear Compartment Vent

5. Ethernet/Network Port   10. AC Power Inlet

Some features and options are not available on all models.

Figure: 2 - 3   Media Area
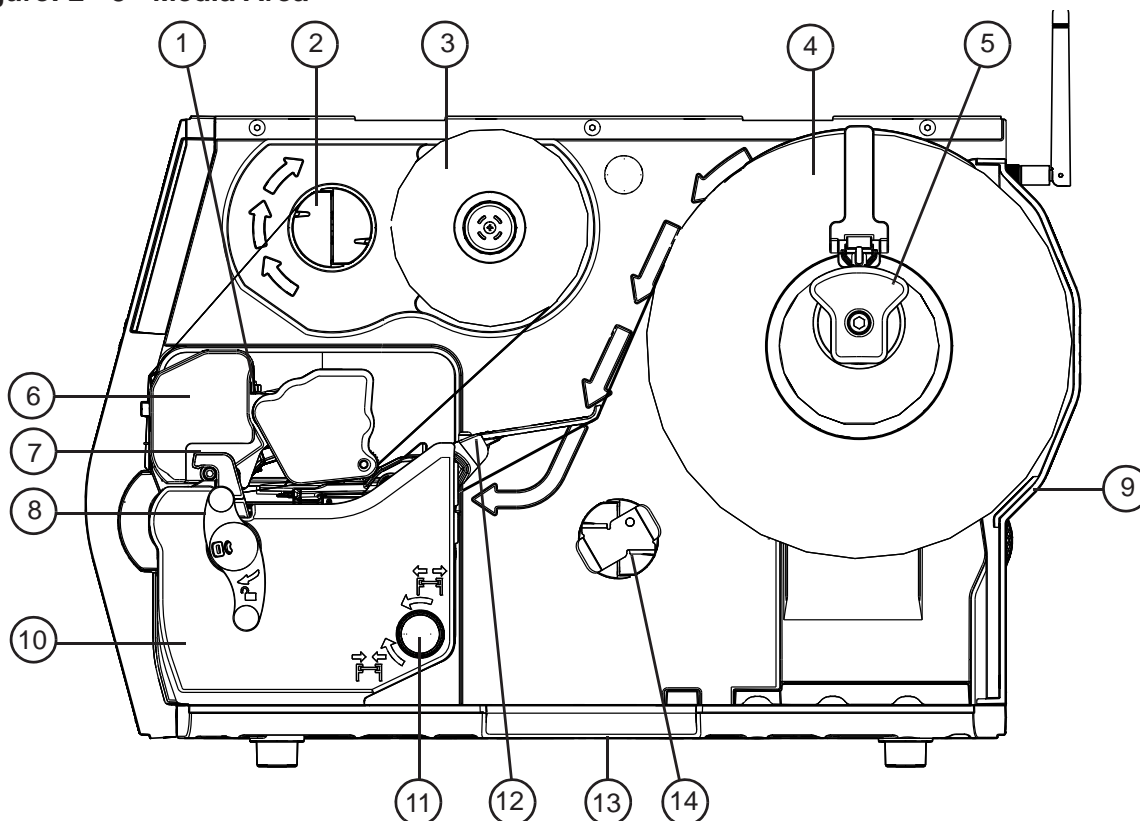
1. Head Pressure Adjustment Wheel (p1115 Only)

2. Power Ribbon Transport Assembly (Optional)

3. Ribbon

4. Media

5. Media Hanger

6. Printhead Carriage Assembly

7. Printhead Latch

8. Printhead Latch Lever

9. Rear Fanfold Media Access Slot

10. Platen Carriage Assembly

11. Media Width Guide Adjustment Knob

12. Bouncer

13. Lower Fanfold Media Access Slot

14. Power Media Rewinder Assembly (Optional)

Some features and options are not available on all models.

p1115 Standard Features

The p1115 thermal printer has the following standard features:

Table 1: p1115 Standard Features

Features	Descriptions
Power Supply	110V to 230V
Max Print Speed	6 IPS / 152 mmps
Resolution	300 dpi / 11.8 dpmm
Memory	32 MB Flash (4MB User Space) / 64 MB DDR2 SDRAM
Printer Type	• Direct Thermal • Thermal Transfer (Optional)
Media Supply	• Fan fold • Roll-fed • Die-cut • Continuous Labels: perforated or continuous tag/ticket stock (8" [203mm] roll max diameter.
Double-sided Top-of-Form Sensor	Adjustable position for center-biased stock: • Label Gap • Notch • Reflective black mark on the bottom or the top of the form
Tear Bar	Removable bar for tearing off gapped or continuous media.
Media Back Feed	Capable of backing up at least 1.0".
Control panel	LED backlit color QVGA LCD with touchscreen.
Reset Button	Inset on the rear of the unit for recovery or the resetting of the screen calibration.
LEDs	Two LEDs on the front panel for Power and Error.
Power Switch	Positioned on the rear of the unit.
Chassis / Media Cover	Die cast construction with a clear side window.
Bar Codes	See Appendix A
Fonts	See Appendix A
Downloadable Font Types	• True-Type Scalable • PCL Bitmap
Graphics	Full support of PCL5e and GL/2 graphics capability. (Support for various host-based file formats [PCX, BMP] are not part of the PCL5e standard but are supported and converted by standard applications)

Features	Descriptions
Industry Standard Printer Language	HP PJL, HP PCL5e, HP GL/2 and HP XL, printer languages with auto-language select and extensions for barcode capabilities. Bi-directional communications capability is also supported.
Interfaces	• USB 2.0 Device • LAN 10/100
Real Time Clock	User replaceable battery
Printer Driver Supported Operating Systems	• Windows XP • Windows Vista • Windows 7 • Windows 8
Operating Temperature	32°F (0°C) to 104°F (40°C)
Supported Languages in the Display	Front panel languages are configurable via translation files which may be loaded on the printer. Check with your sales representative for the most recent list of available translations.

Print Characteristics

Table 2: Print Characteristics

Variable	Specifications
Print Resolution	300 dpi (11.8 dpmm)
Max Print Width	4.16" (105.7 mm)
Max Print Speed	6 IPS (152 mmps)
Max Feed Speed	8 IPS (152 mmps)
Max Back-up Speed	5 IPS (127 mmps)
Media Width Range*	1" - 4.65" (25.44 mm - 118.1 mm)
Media Thickness Range*	0.003" - 0.010" (0.076 mm - 0.254 mm)
Ribbon Width Range**	1" - 4.65" (25.44 mm - 118.1 mm)
Print Length	0.25" - 36" (6.35 mm - 915 mm)

*Media wound out.

**Coated side in (CSI) or coated side out (CSO).

p1115s Standard Features

The p1115s thermal printer has the following standard features:

Table 3: p1115s Standard Features

Features	Descriptions
Max Print Speed	6 IPS / 152 mmps
Resolution	600 dpi / 23.6 dpmm
Memory	64MB Flash (32MB User Space) / 64MB DDR2 SDRAM
Printer Type	• Direct Thermal • Thermal Transfer (Optional)
Media Supply	• Fan fold • Roll-fed • Die-cut • Continuous Labels: perforated or continuous tag/ticket stock (8" [203 mm] roll max diameter on 1.0", 1.5" or 3" [25 mm, 38 mm or 76 mm] core).
Double-sided Top-of-Form Sensor	Adjustable position for center-biased stock: • Label Gap • Notch • Reflective black mark on the bottom or the top of the form
Tear Bar	Removable bar for tearing off gapped or continuous media.
Media Back Feed	Capable of backing up at least 1.0".
Control panel	LED backlit color QVGA LCD with touchscreen.
Reset Button	Inset on the rear of the unit for recovery or the resetting of the screen calibration.
LEDs	Two LEDs on the front panel for Power and Error.
Power Switch	Positioned on the rear of the unit.
Chassis / Media Cover	Die-cast construction with a clear side window.
Bar Codes	See Appendix A
Fonts	See Appendix A
Downloadable Font Types	• True-Type Scalable • PCL Bitmap
Graphics	Full support of PCL5e and GL/2 graphics capability. (Support for various host-based file formats [PCX, BMP] are not part of the PCL5e standard but are supported and converted by standard applications)

Features	Descriptions
Industry Standard Printer Language	HP PJL, HP PCL5e, HP GL/2 and HP XL, printer languages with auto-language select and extensions for barcode capabilities. Bi-directional communications capability is also supported.
Interfaces	• USB 2.0 Device • LAN 10/100
Real Time Clock	User replaceable battery
Printer Driver Supported Operating Systems	• Windows XP • Windows Vista • Windows 7 • Windows 8
Operating Temperature	32°F (0°C) to 104°F (40°C)
Supported Languages in the Display	Front panel languages are configurable via translation files which may be loaded on the printer. Check with your sales representative for the most recent list of available translations.

Print Characteristics

Table 4: Print Characteristics

Variable	Specifications
Print Resolution	600 dpi (23.6 dpmm)
Max Print Width	4.16" (105.6 mm)
Max Print Speed	6 IPS (152 mmps)
Max Feed Speed	8 IPS (152 mmps)
Max Back-up Speed	5 IPS (127 mmps)
Media Width Range*	1" - 4.65" (25.44 mm - 118.1 mm)
Media Thickness Range*	0.003" - 0.010" (0.076 mm - 0.254 mm)
Ribbon Width Range**	1" - 4.65" (25.44 mm - 118.1 mm)
Print Length	0.25" - 36" (6.35 mm - 915 mm)

*Media wound out.

**Coated side in (CSI) or coated side out (CSO).

p1120n Standard Features

The p1120n thermal printer has the following standard features:

Table 5: p1120n Standard Features

Features	Descriptions
Max Print Speed	8 IPS / 203 mmps
Resolution	300 dpi / 11.8 dpmm
Memory	32MB Flash (4MB User Space) / 64MB DDR2 SDRAM
Printer Type	• Direct Thermal • Thermal Transfer (Optional)
Media Supply	• Fan fold • Roll-fed • Die-cut • Continuous Labels: perforated or continuous tag/ticket stock (8" [203 mm] roll max diameter on 1.0", 1.5" or 3" [25 mm, 38 mm or 76 mm] core).
Double-sided Top-of-Form Sensor	Adjustable position for center-biased stock: • Label Gap • Notch • Reflective black mark on the bottom or the top of the form
Tear Bar	Removable bar for tearing off gapped or continuous media.
Media Back Feed	Capable of backing up at least 1.0" (for near edge printhead).
Control panel	LED backlit color QVGA LCD with touchscreen.
Reset Button	Inset on the rear of the unit for recovery or the resetting of the screen calibration.
LEDs	Two LEDs on the front panel for Power and Error.
Power Switch	Positioned on the rear of the unit.
Chassis / Media Cover	Die-cast construction with a clear side window.
Bar Codes	See Appendix A
Fonts	See Appendix A
Downloadable Font Types	• True-Type Scalable • PCL Bitmap
Graphics	Full support of PCL5e and GL/2 graphics capability. (Support for various host-based file formats [PCX, BMP] are not part of the PCL5e standard but are supported and converted by standard applications)

Features	Descriptions
Industry Standard Printer Language	HP PJL, HP PCL5e, HP GL/2 and HP XL, printer languages with auto-language select and extensions for barcode capabilities. Bi-directional communications capability is also supported.
Interfaces	• USB 2.0 Device • LAN 10/100
Real Time Clock	User replaceable battery
Printer Driver Supported Operating Systems	• Windows XP • Windows Vista • Windows 7 • Windows 8
Operating Temperature	32°F (0°C) to 104°F (40°C)
Supported Languages in the Display	Front panel languages are configurable via translation files which may be loaded on the printer. Check with your sales representative for the most recent list of available translations.

Print Characteristics

Table 6: Print Characteristics

	4" Near Edge
Print Resolution	300 dpi (11.8 dpmm)
Max Print Width	4.27" (108.5 mm)
Max Print Speed	8 IPS (203 mmps)
Max Feed Speed	10 IPS (254 mmps)
Max Back-up Speed	5 IPS (127 mmps)
Media Width Range*	1" - 4.65" (25.44 mm - 118.1 mm)
Media Thickness Range*	0.003" - 0.020" (0.076 mm - 0.508 mm)
Ribbon Width Range**	1" - 4.65" (25.44 mm - 118.1 mm)
Print Length	0.2" - 99" (5.08 mm - 2475.6 mm)

*Media wound out.

**Coated side in (CSI) or coated side out (CSO).

p1125 Standard Features

The p1125 thermal printer has the following standard features:

Table 7: p1125 Standard Features

Features	Descriptions
Max Print Speed	10 IPS / 254 mmps
Resolution	300 dpi / 11.8 dpmm
Memory	32 MB Flash (4 MB User Space) / 64 MB DDR2 SDRAM
Printer Type	• Direct Thermal • Thermal Transfer (Optional)
Media Supply	• Fan fold • Roll-fed • Die-cut • Continuous Labels: perforated or continuous tag/ticket stock (8" [203 mm] roll max diameter on 1.0", 1.5" or 3" [25 mm, 38 mm or 76 mm] core).
Double-sided Top-of-Form Sensor	Adjustable position for center-biased stock: • Label Gap • Notch • Reflective black mark on the bottom or the top of the form
Tear Bar	Removable bar for tearing off gapped or continuous media.
Media Back Feed	Capable of backing up at least 1.0".
Control panel	LED backlit color QVGA LCD with touchscreen.
Reset Button	Inset on the rear of the unit for recovery or the resetting of the screen calibration.
LEDs	Two LEDs on the front panel for Power and Error.
Power Switch	Positioned on the rear of the unit.
Chassis / Media Cover	Die-cast construction with a clear side window.
Bar Codes	See Appendix A
Fonts	See Appendix A
Downloadable Font Types	• True-Type Scalable • PCL Bitmap
Graphics	Full support of PCL5e and GL/2 graphics capability. (Support for various host-based file formats [PCX, BMP] are not part of the PCL5e standard but are supported and converted by standard applications)

Features	Descriptions
Industry Standard Printer Language	HP PJL, HP PCL5e, HP GL/2 and HP XL, printer languages with auto-language select and extensions for barcode capabilities. Bi-directional communications capability is also supported.
Interfaces	• USB 2.0 Device • LAN 10/100
Real Time Clock	User replaceable battery
Printer Driver Supported Operating Systems	• Windows XP • Windows Vista • Windows 7 • Windows 8
Operating Temperature	32°F (0°C) to 104°F (40°C)
Supported Languages in the Display	Front panel languages are configurable via translation files which may be loaded on the printer. Check with your sales representative for the most recent list of available translations.

Print Characteristics

Table 8: Print Characteristics

Variable	Specifications
Print Resolution	300 dpi (11.8 dpmm)
Max Print Width	4.27" (108.5 mm)
Max Print Speed	10 IPS (254 mmps)
Max Feed Speed	12 IPS (254 mmps)
Max Back-up Speed	5 IPS (127 mmps)
Media Width Range*	1" - 4.65" (25.44 mm - 118.1 mm)
Media Thickness Range*	0.003" - 0.010" (0.076 mm - 0.254 mm)
Ribbon Width Range**	1" - 4.65" (25.44 mm - 118.1 mm)
Print Length	0.10" - 99" (5.08 mm - 2475.6 mm)

*Media wound out.

**Coated side in (CSI) or coated side out (CSO).

p1725 Standard Features

The p1725 thermal printer has the following standard features:

Table 9: p1725 Standard Features

Features	Descriptions
Max Print Speed	10 IPS / 254 mmps
Resolution	300 dpi / 11.8 dpmm
Memory	64 MB Flash (32 MB User Space) / 64 MB DDR2 SDRAM
Printer Type	• Direct Thermal • Thermal Transfer (Optional)
Media Supply	• Fan fold • Roll-fed • Die-cut • Continuous Labels: perforated or continuous tag/ticket stock (8" [203 mm] roll max diameter on 1.0", 1.5" or 3" [25 mm, 38 mm or 76 mm] core).
Double-sided Top-of-Form Sensor	Adjustable position for center-biased stock: • Label Gap • Notch • Reflective black mark on the bottom or the top of the form
Tear Bar	Removable bar for tearing off gapped or continuous media.
Media Back Feed	Capable of backing up at least 1.0".
Control panel	LED backlit color QVGA LCD with touchscreen.
Reset Button	Inset on the rear of the unit for recovery or the resetting of the screen calibration.
LEDs	Two LEDs on the front panel for Power and Error.
Power Switch	Positioned on the rear of the unit.
Chassis / Media Cover	Die-cast construction with a clear side window.
Bar Codes	See Appendix A
Fonts	See Appendix A
Downloadable Font Types	• True-Type Scalable • Intellifont Scalable • PCL Bitmap
Graphics	Full support of PCL5e and GL/2 graphics capability. (Support for various host-based file formats [PCX, BMP] are not part of the PCL5e standard but are supported and converted by standard applications)

Features	Descriptions
Industry Standard Printer Language	HP PJL, HP PCL5e, HP GL/2 and HP XL, printer languages with auto-language select and extensions for barcode capabilities. Bi-directional communications capability is also supported.
Interfaces	• USB 2.0 Device • LAN 10/100
Real Time Clock	User replaceable battery
Printer Driver Supported Operating Systems	• Windows XP • Windows Vista • Windows 7 • Windows 8
Operating Temperature	32°F (0°C) to 104°F (40°C)
Supported Languages in the Display	Front panel languages are configurable via translation files which may be loaded on the printer. Check with your sales representative for the most recent list of available translations.

Print Characteristics

Table 10: Print Characteristics

Variable	Specifications
Print Resolution	300 dpi (11.8 dpmm)
Max Print Width	6.83" (173.5 mm)
Max Print Speed	10 IPS (254 mmps)
Max Feed Speed	12 IPS (254 mmps)
Max Back-up Speed	5 IPS (127 mmps)
Media Width Range*	2" - 7.1" (50.8 mm - 180.3 mm)
Media Thickness Range*	0.003" - 0.010" (0.076 mm - 0.254 mm)
Ribbon Width Range**	2" - 7.1" (50.8 mm - 180.3 mm)
Print Length	0.25" - 36" (6.35 mm - 915 mm)

*Media wound out.

**Coated side in (CSI) or coated side out (CSO).

Options

The following options are available:

- Thermal Transfer (Ribbon)
- Internal Power Rewind with Batch Rewind
- Media Present Sensor (Future option for the p1725)
- Peel and Present (Future option for the p1725)
- Media Cutter (Future option for the p1725)
- Media Cutter Tray (Future option for the p1725)
- Applicator Port (General Purpose I/O) and Serial Port (RS-232C)
- Wireless Module (not an available option for the p1115)
- USB Host Port (not an available option for the p1115)
- Audio Indicator (not an available option for the p1115)
- Media Hub with 1.0",1.5" or 3" media hub adapters (not an available option for the p1725)
- Non-US Power Cords

Unpacking the Printer

Upon receiving the printer, verify the box is undamaged. Carefully unpack the printer from its packaging and visually check for any physical damage that may have occurred during shipment.

Checking the Contents

The contents may vary depending on your configuration. It is recommended that all packaging materials be saved if the printer is to be shipped again. If the packaging material is discarded, new packaging material may be available from your reseller.

- Printer
- Power Cord
- Driver CD
- Product documentation not included on the CD
- Accessories/Options

Additional items that may be required include the following:

- All applicable communication cables
- Media
- Ribbon

Specifications

Dimensions and Weight

Table 11: Dimensions and Specifications (p1115, p1115s, p1120n, p1125)

Height	Width	Depth	Weight
11.9 in (30.3 cm)	10.8 in (27.4 cm)	18.7 in (47.5 cm)	41 lbs. (19 kg)

Table 12: Dimensions and Specifications (p1725)

Height	Width	Depth	Weight
11.9 in (30.3 cm)	13.4 in (34 cm)	18.7 in (47.5 cm)	52 lbs. (24 kg)

Environmental

Table 13: Temperatures

	Temperature	Humidity
Operating	32°F to 104°F (0°C to 40°C)	<=20% to 80%
Storage	-4°F to 140°F (-20°C to 60°C)	<=35%

Print Driver Requirements

Table 14: Print Driver Minimum System Requirements

Minimum System Requirements	
Processor / Speed	500 MHz processor
RAM	512 MB
Hard Drive Space	6 MB
Supported Operating Systems	Windows XP - x86 & x64 Windows Vista - x86 & x64 Windows 7 - x86 & x64 Windows 8

Configuration Utility

Table 15: Configuration Utility Minimum System Requirements

Minimum System Requirements	
Processor / Speed	500 MHz processor

Minimum System Requirements	
Supported Operating Systems	Windows XP - x86 & x64
	Windows Vista - x86 & x64
	Windows 7 - x86 & x64
	Windows 8
RAM	256 MB
Hard Drive Space	5 MB
Minimum Screen Resolution	800 x 600
.NET Framework	2.0

3 Connections and Setup

Connections

Power

To connect the printer to a viable power source, please follow the steps below.

Caution: Ensure the printer power switch is off before connecting the AC power and data/network connectivity cables to the printer.

Caution: Adhere to all environmental requirements when installing and using the printer. Use of the product in an unsuitable environment may affect print quality and the durability of the printer and may void the manufacturer's warranty.

1. Place the printer on a suitable level surface capable of securely supporting 60lbs.

2. Connect the AC power cord to the AC power inlet on the back of the printer.

3. Connect the AC power cord to AC utility power.

Data

Printer data connectivity can be accomplished by the following standard or optional interfaces:

- USB
- Ethernet/Network
- Serial (Optional)
- GPIO (Optional)
- Wireless (Optional)

Connect the appropriate interface cables for your network configuration.

Media Loading

The printer is designed to print on media that is center-aligned on the media hanger. There are two different media mounts available for most models.

The standard self-centering media hanger synchronizes the adjustment to facilitate the centering of the media. The optional self-centering media hub* allows for the use of 1", 1.5" and 3" roll cores.(*Not available for all printer models.)

Please consult your sales representative to obtain the appropriate media.

Note: The printer should be connected to AC power and running during media loading.

Media Hanger Overview

Figure: 3 - 1   Self-Centering Media Hanger
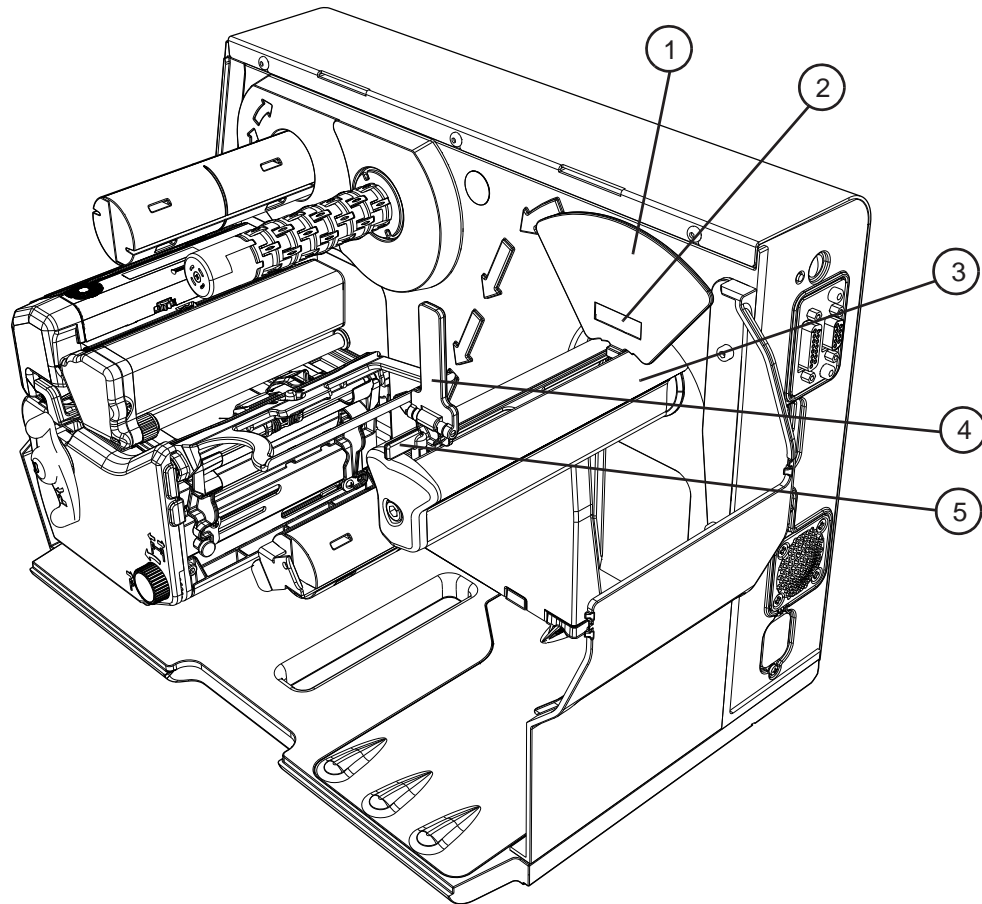
1. Inside media adjustment lever

2. Paper low sensor (Optional)

3. Self-centering media hanger

4. Outside media adjustment lever

5. Media adjuster knob

Media Specifications

Media core size:

- 3" (76.199 mm)

Media roll diameter:

- Maximum -- 8"

Media roll width:

- Please refer to the model feature charts in the Overview section.

Media thickness:

- 0.003" to 0.01" (the p1120n can accept media thickness of up to 0.020")

Media dimensions:

- Please refer to the model feature charts in the Overview section.

Note: Ensure there is no tape or adhesive residue on the media roll.

Installing Media on the Media Hanger

1. Open the media cover.

2. Unlock the printhead mechanism by turning the printhead latch lever clockwise about 190°.

Note: Do not unlatch the printhead mechanism.

Figure: 3 - 2   Unlock the Printhead Mechanism
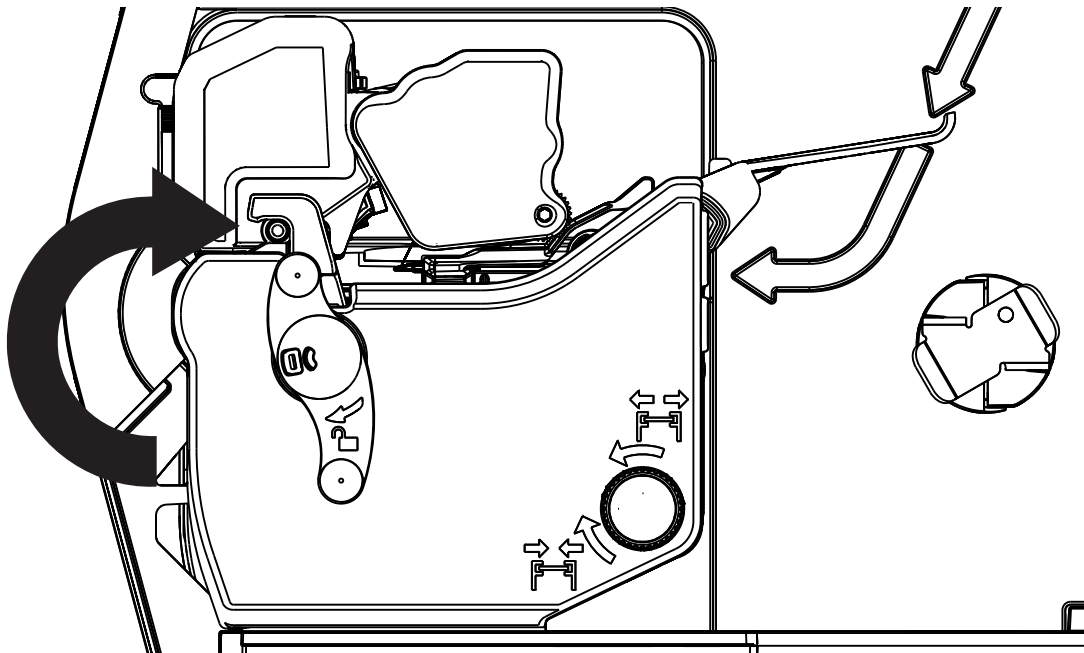
3. Center the media adjuster knob and pull it to widen the gap between the two media adjustment levers.

Figure: 3 - 3   Self-Centering Media Hanger from Top
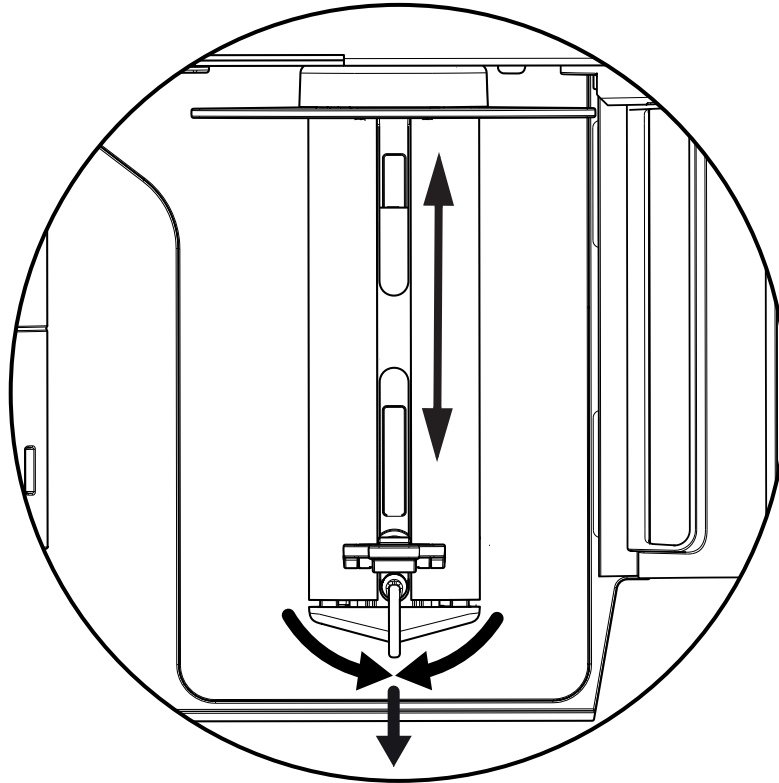
4. Rotate the outside media adjustment lever downward.

Figure: 3 - 4   Outside Media Adjustment Lever
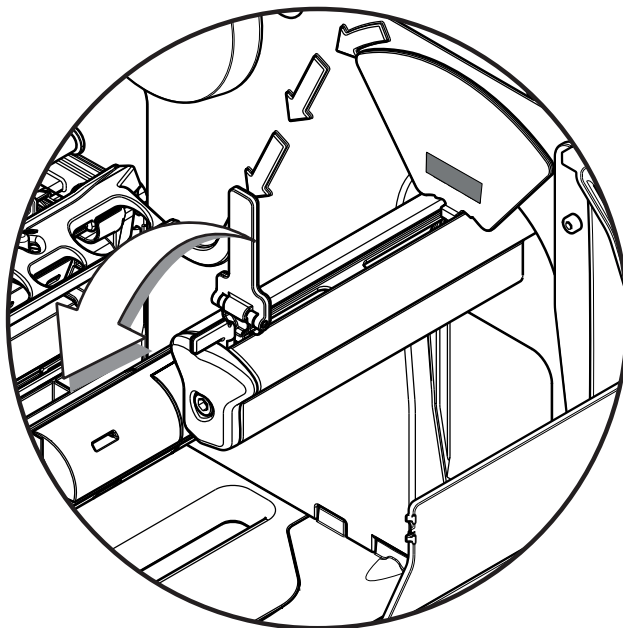
5. Gently route the media core over the outside media adjustment lever onto the media hanger.

Caution: Be careful not to damage the outside media adjustment lever.

Figure: 3 - 5   Media Installation
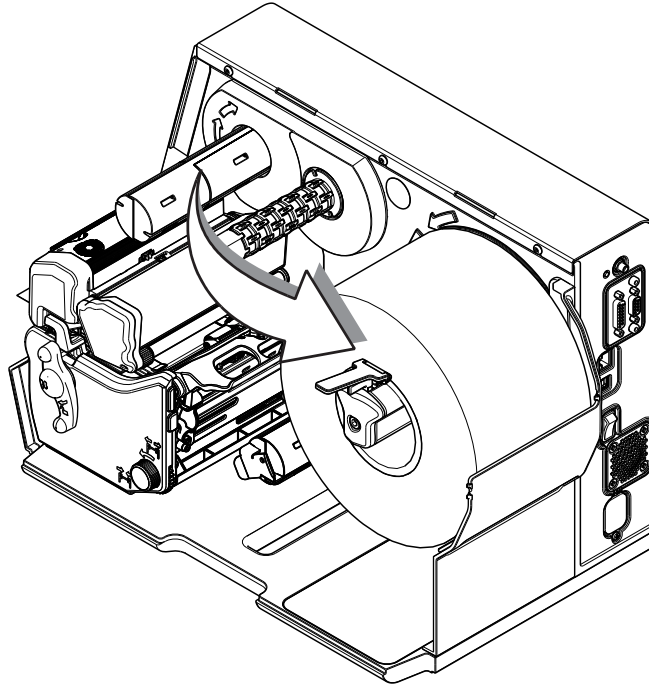
6. Rotate the outside media adjustment lever upward.

Figure: 3 - 6   Outside Media Adjustment Lever
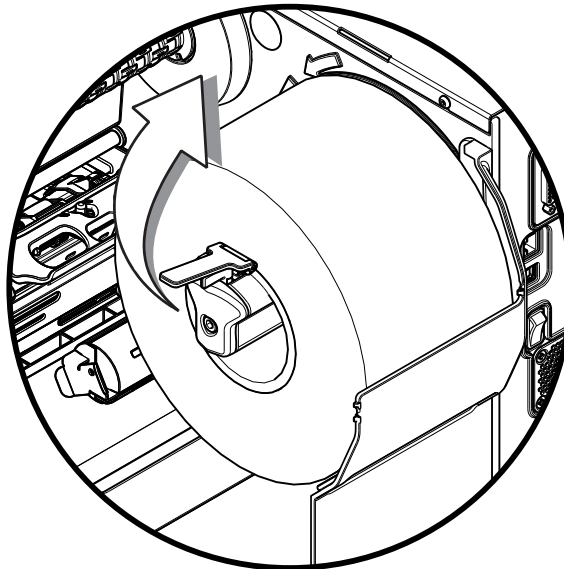
7. Slide the media adjuster knob inward to center the media roll on the media hanger.

Note: Ensure the media roll turns freely. There should be 0.8 mm to 1.5 mm clearance between the media adjustment levers and the media roll.

8. Rotate the media guide adjustment knob counter clockwise to widen the guides until they are set slightly wider than the width of the media.

Figure: 3 - 7   Media Guide Adjustment Knob
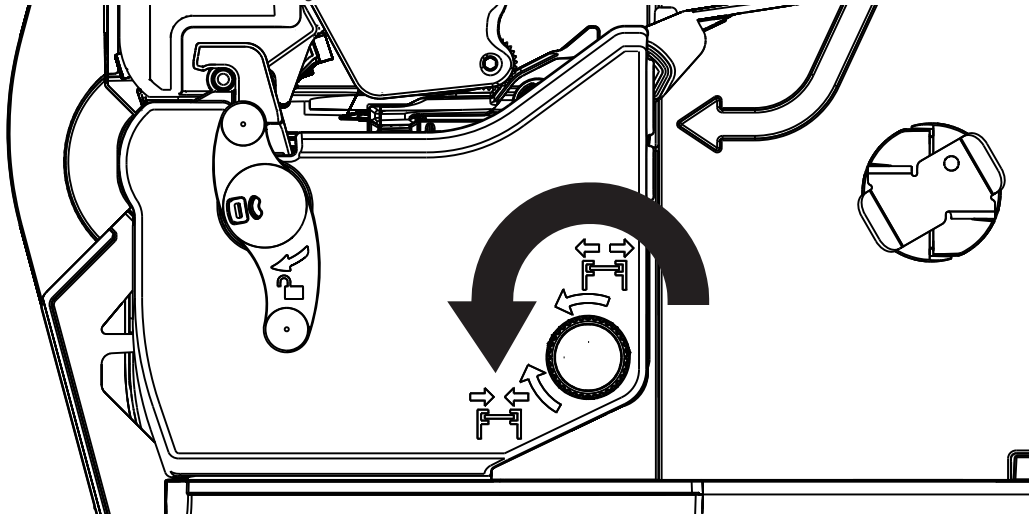
9. Route the media under the bouncer and into the media guides.

Figure: 3 - 8   Media Guides
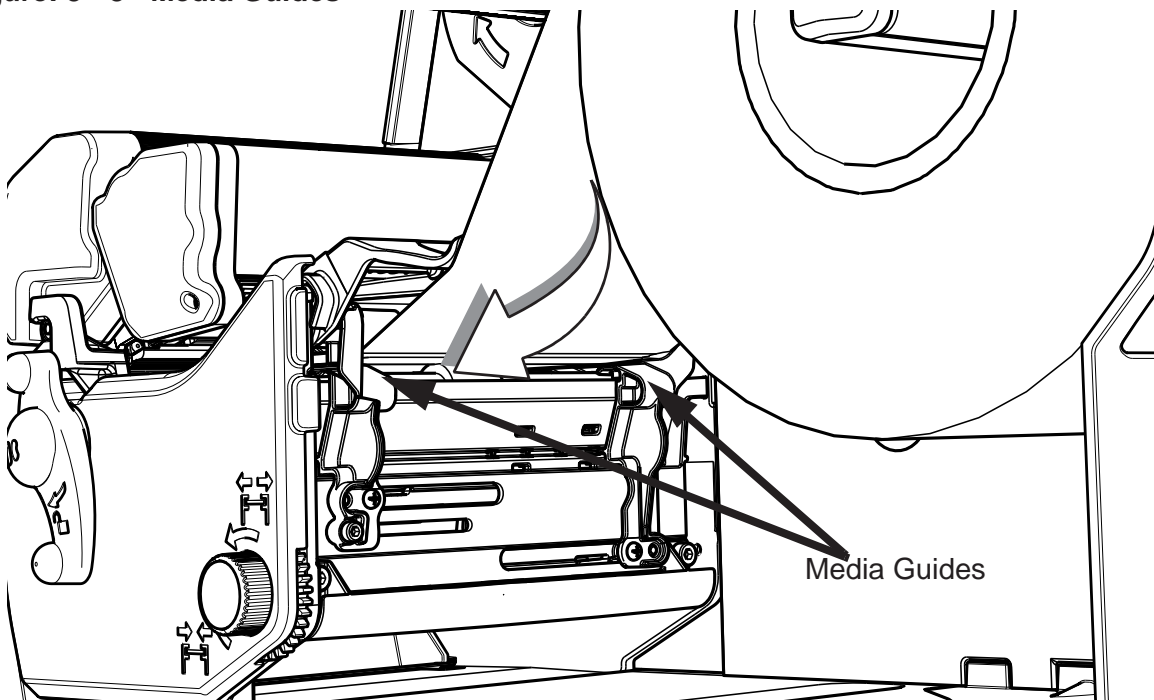
Media Guides

10. Press the pinch roller knob and slide the media 0.25 inches beyond the pinch roller.

Figure: 3 - 9   Pinch Roller

Pinch Roller Knob   Pinch Roller
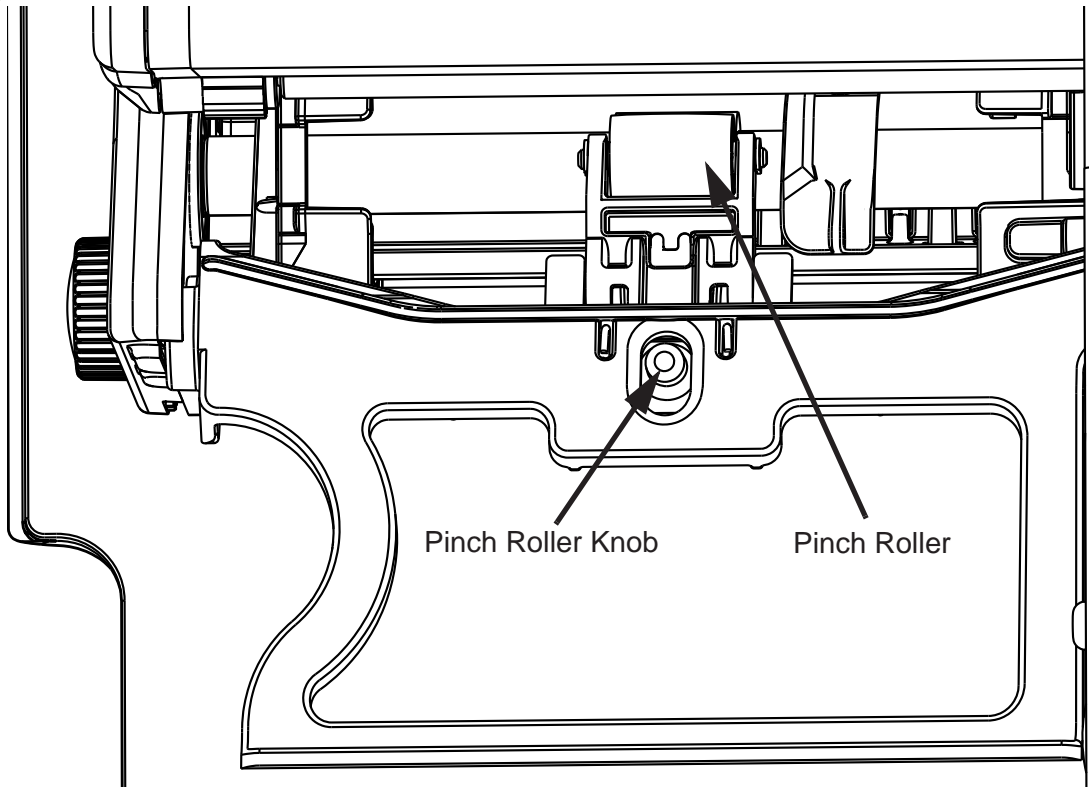
11. Rotate the media guide adjustment knob clockwise to tighten the guides.

Note: Ensure the guides are neither too tight nor too loose on the media or print quality will be affected.

Figure: 3 - 10 Tighten Media Guide Adjustment Knob
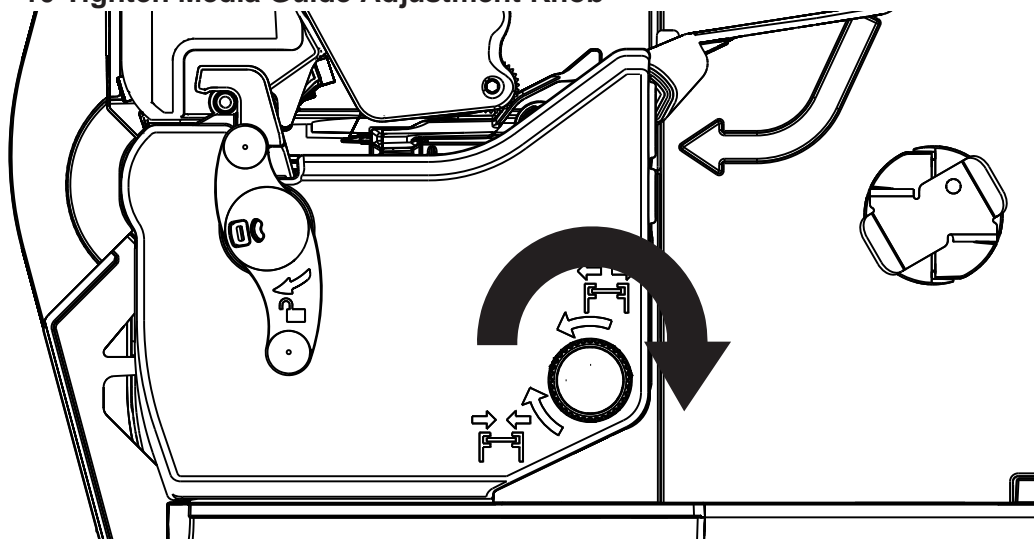
12. Rotate the latch lever counter-clockwise until the printhead mechanism is locked.

Figure: 3 - 11 Lock the Printhead Mechanism
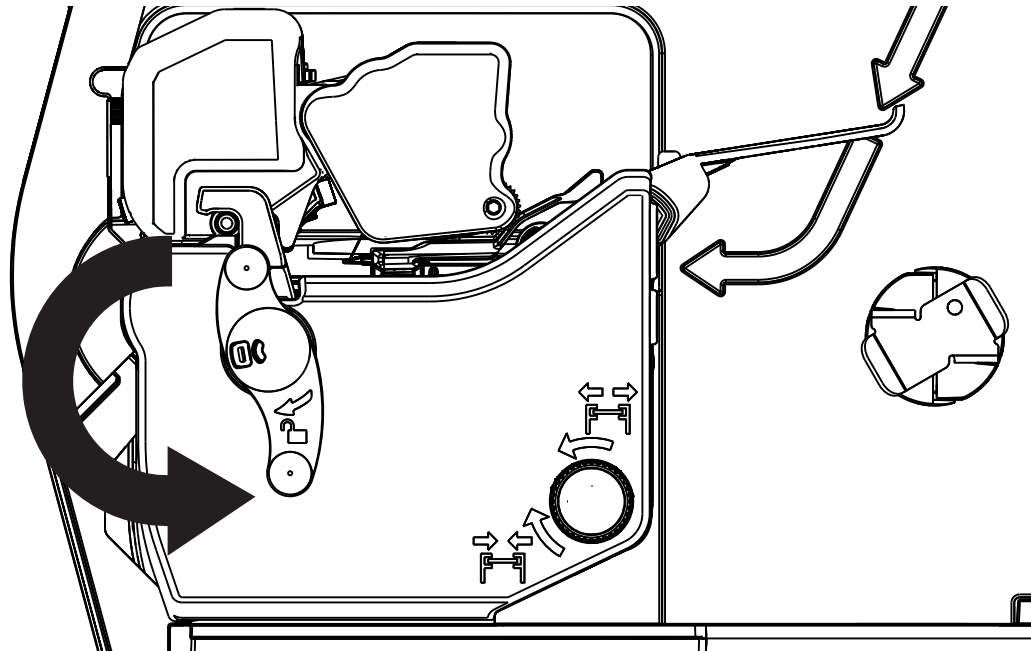
Note: If the media has been installed properly and read by the autoloading sensor, it should automatically feed under the printhead once the printhead carriage assembly has been latched and locked. If the media does not automatically load, unlatch the printhead assembly and manually feed the media under the printhead. Upon locking the printhead, it would be beneficial to both feed the media by selecting the Feed button on the main menu to properly set the next label and perform a Paper Calibration.

13. Set the Top-of-Form sensor

Note: Refer to the section called "Top-of-Form Sensor." Setting the top-of-form sensor to read specific media characteristics is done in the control panel.

Optional Media Hub Overview

Figure: 3 - 12 Media Hub Layout from Top
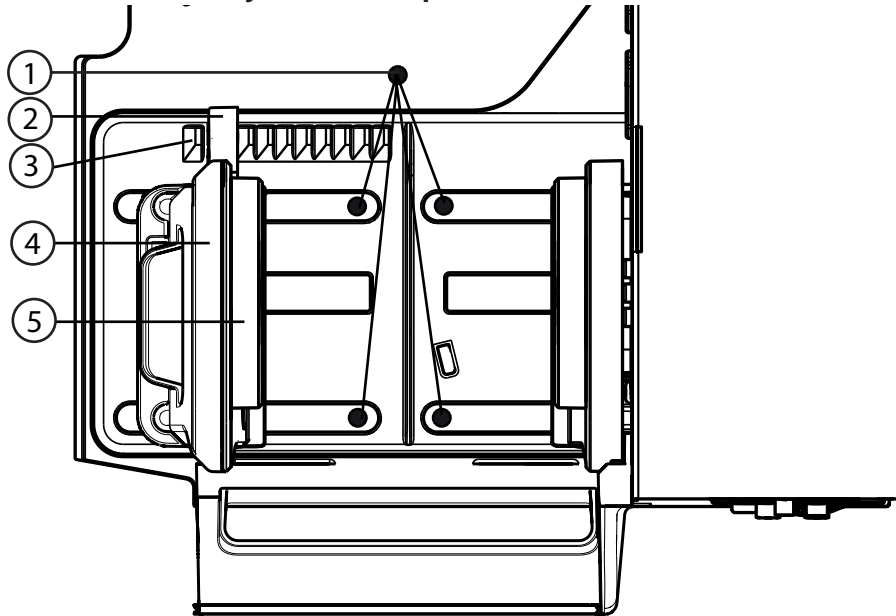
1. Media hub adjustment channels

2. Media hub adjustment lever

3. Hub adjustment slots

4. Media hub

5. Core holders

Media Specifications

Media core size:

- 3" (76.199 mm) standard
- 1" (25.4 mm) optional
- 1.5" (38.099 mm) optional

Media roll diameter:

- Maximum - 8"

Media roll width:

- Maximum - 4.65"

Media thickness:

- 0.003" to 0.01" (the p1120n can accept media thickness of up to 0.020")
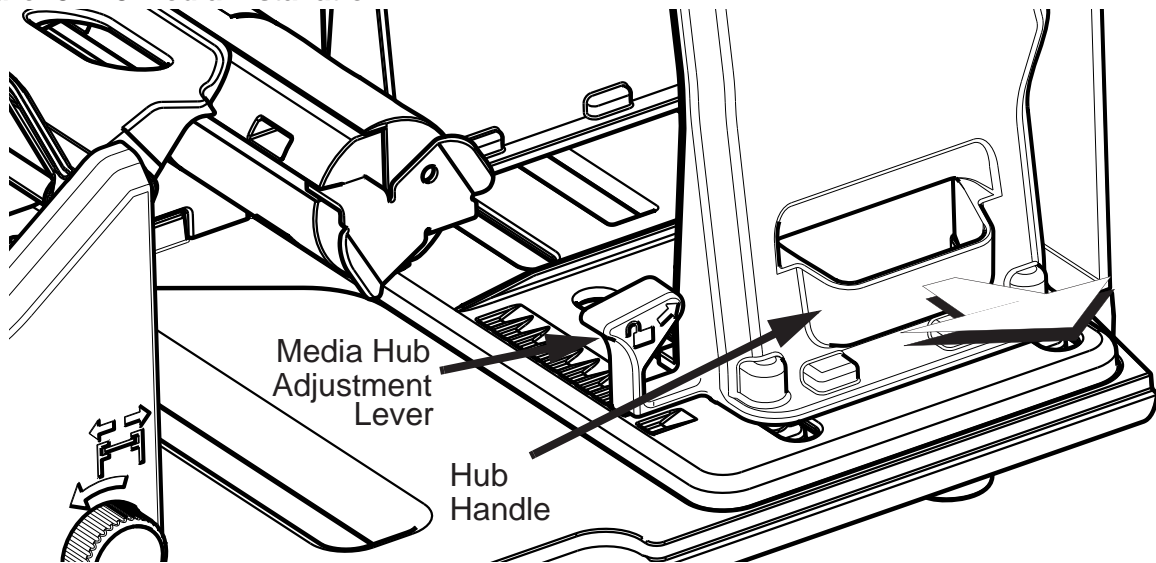
Media dimensions:

- Minimum specifications - 0.5" H x 1" W

Note: Ensure there is no tape or adhesive residue on the media roll.

Installing Media on the Media Hub

1. Open the media cover.

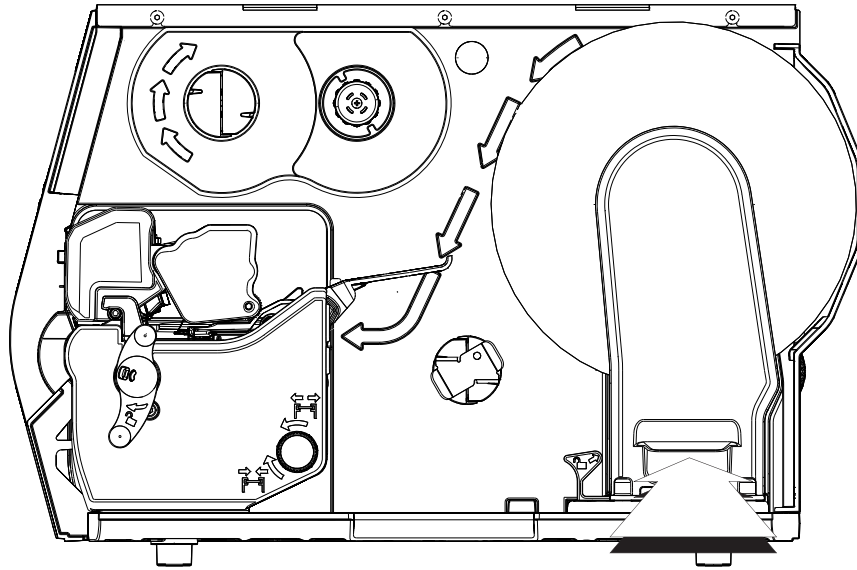2. Press the media hub adjustment lever and pull the media hanger outward using the handle.

Figure: 3 - 13 Media installation

3. Hold the media hub adjustment lever and place the media core on the core holders.
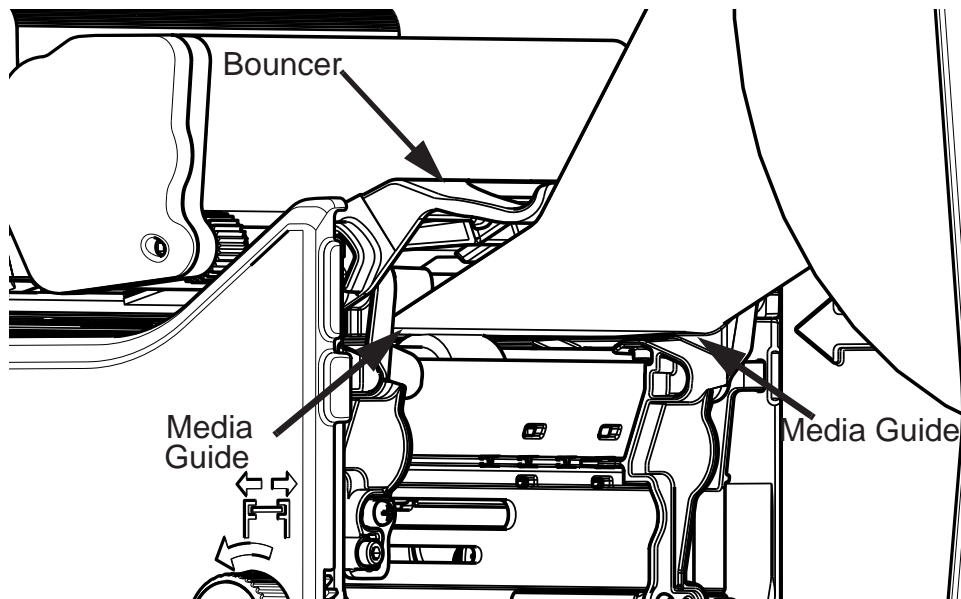
4. Slide the media hub inward using the handle and release the hub adjustment lever once the media is supported.
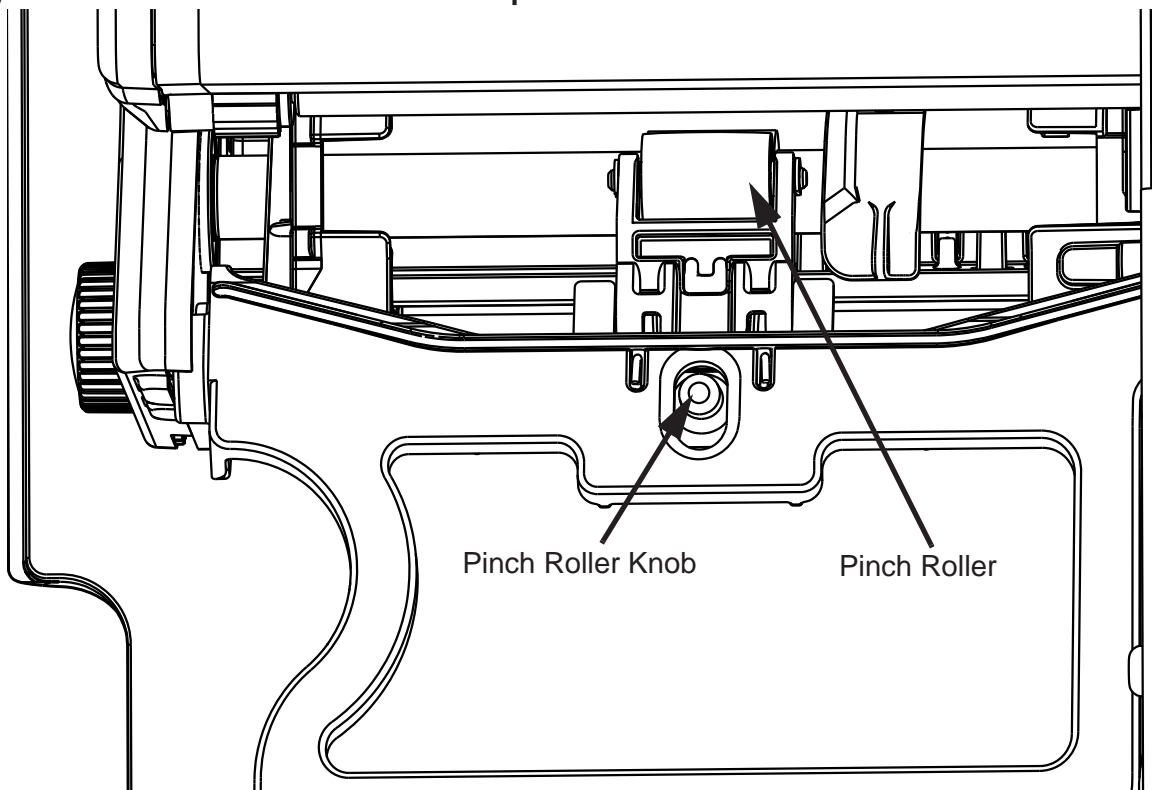
Figure: 3 - 14 Media Installation

5. Route the media under the bouncer and into the media guides.

Figure: 3 - 15 Media Guide

6. Press the pinch roller knob and slide the media 0.25 inches beyond the pinch roller.

Figure: 3 - 16 Pinch Roller View from Top

Pinch Roller Knob   Pinch Roller

7. While pressing the pinch roller knob, rotate the media guide adjustment wheel until the media guide touches the media on both sides.

Caution: Ensure the media guides are neither too tight nor too loose or print quality will be affected and feed issues may develop.

Note: To loosen the media guides, rotate the media guide adjustment wheel counter-clockwise. To tighten, rotate the adjustment wheel clockwise.

**Figure: 3 - 17 Media Guide Adjustment Wheel**
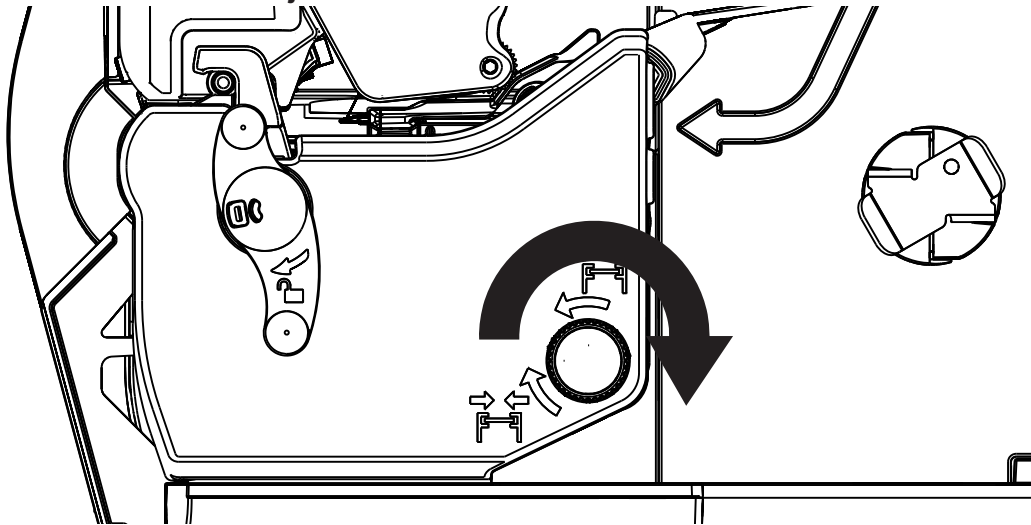
Note: The factory default media width is set to 4 inches.

Installing Ribbon

For thermal transfer printing, ribbon must be installed. The ribbon should be slightly wider than the print media being used to ensure proper coverage.

1. Open the media cover.

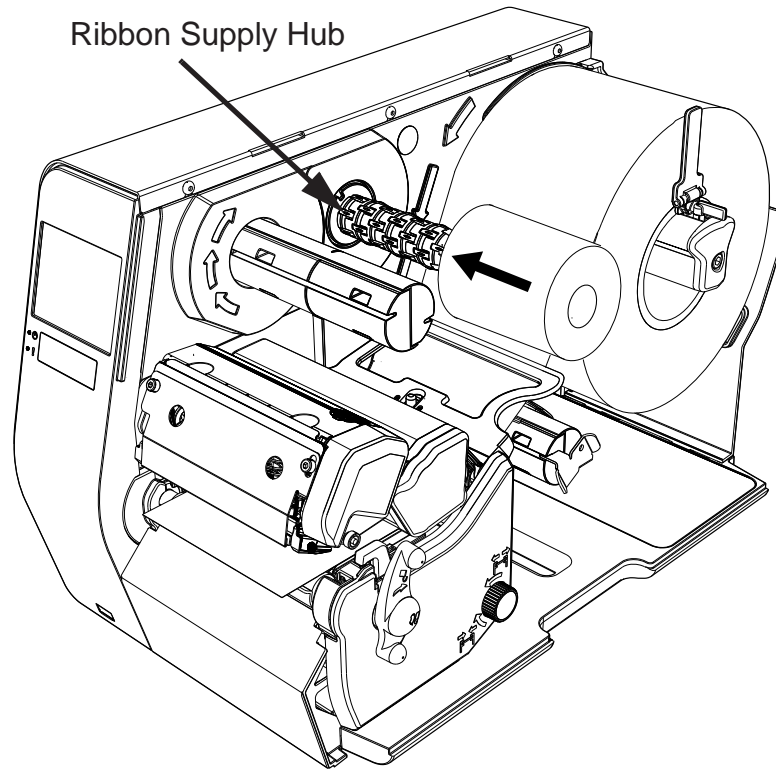2. Rotate the printhead latch lever clockwise to unlock and raise the printhead carriage assembly.

Figure: 3 - 18 Printhead Latch Lever
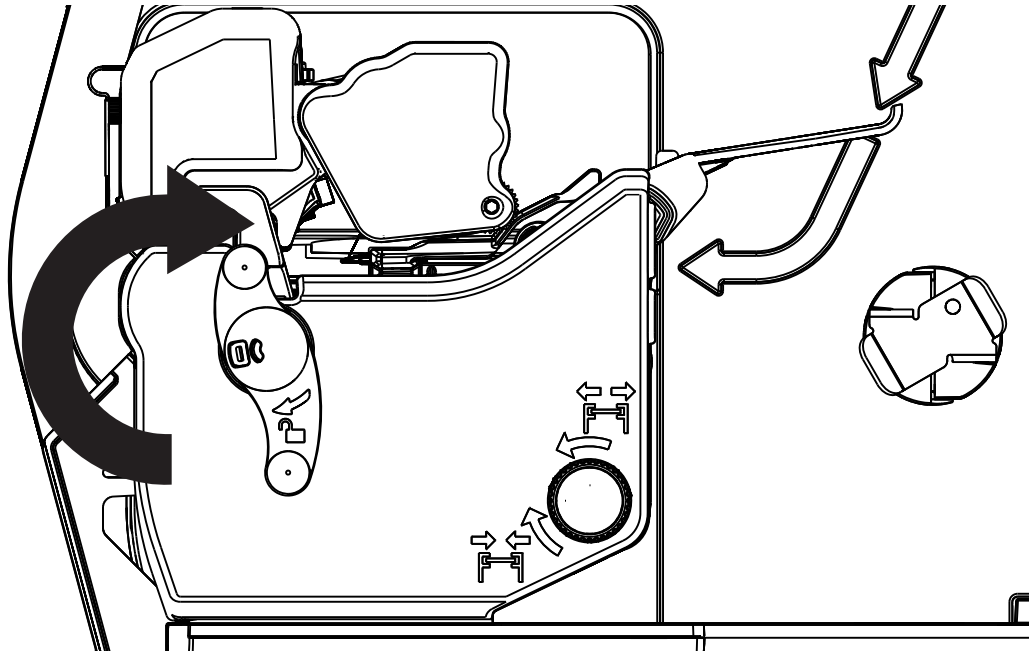
3. Slide the ribbon core over the ribbon supply hub until the core is centered on the hub.

Note: Only use ribbon with a 1" diameter core.

Figure: 3 - 19 Install Ribbon

Ribbon Supply Hub

4. Route the ribbon between the ribbon cam roller and the green top-of-form adjustment lever.

Note: The printer supports both coated side in (CSI) and coated side out (CSO). Ensure the ink side faces the media.

Note: See the Menu section for information on setting the printer to run inside or outside ink.

Caution: Do not route the ribbon under the top-of-form sensor.

Figure: 3 - 20 Route Ribbon (Inside ink ribbon is shown)

Cam Roller

Top-of-Form
Sensor Adjustment
Lever

Inside Ink Shown

---
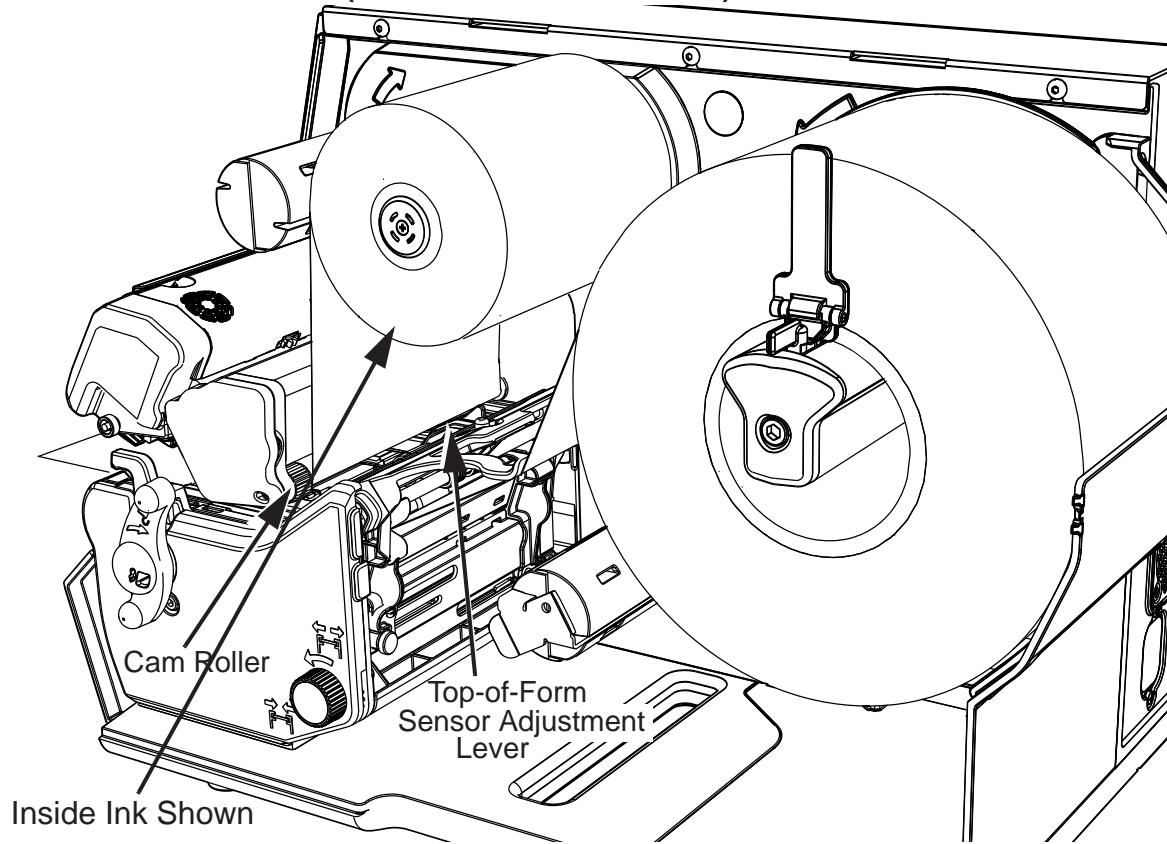
5. Route the ribbon under the printhead, over the ribbon shield and clockwise around the ribbon rewinder hub.

Figure: 3 - 21 Route to Ribbon Rewinder Hub
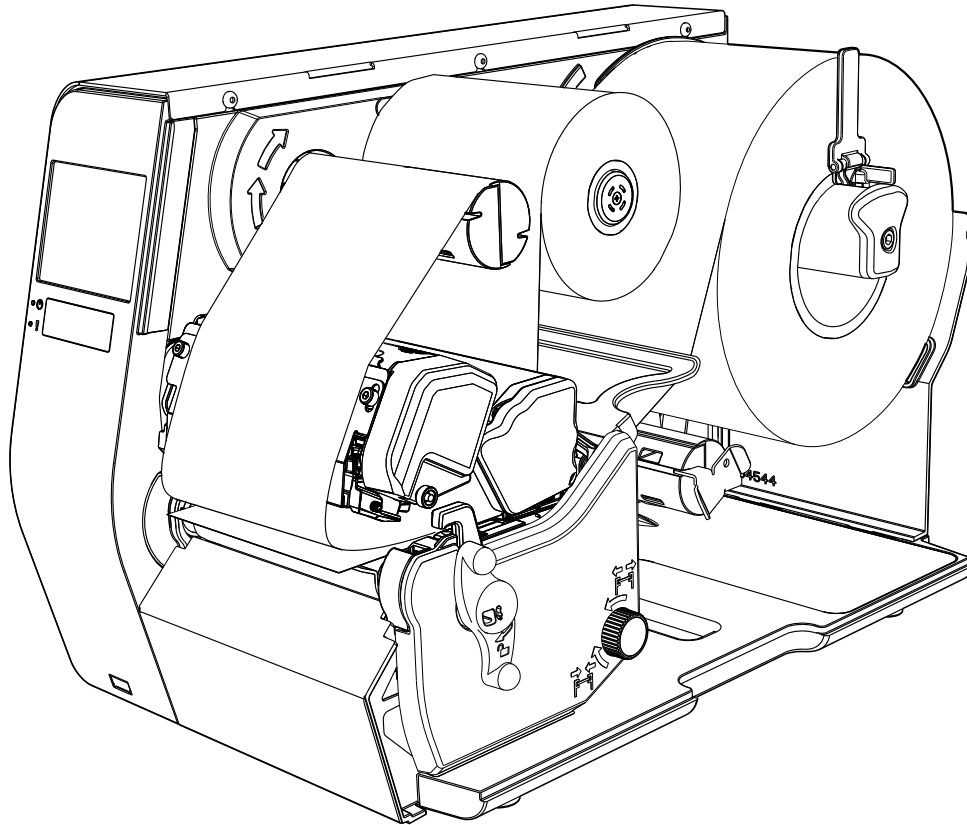
Note: Roll the ribbon around the ribbon rewinder hub at least five (5) times to ensure it will stay in position.

6. Ensure the thermal transfer option is selected in the control panel.

7. Set the thermal transfer option to CSI or CSO depending on the ribbon type.

Note: See the menu section for more information about the printer settings.

8. Rotate the printhead carriage assembly counter-clockwise until it latches.

Figure: 3 - 22 Latch the Printhead Carriage Assembly

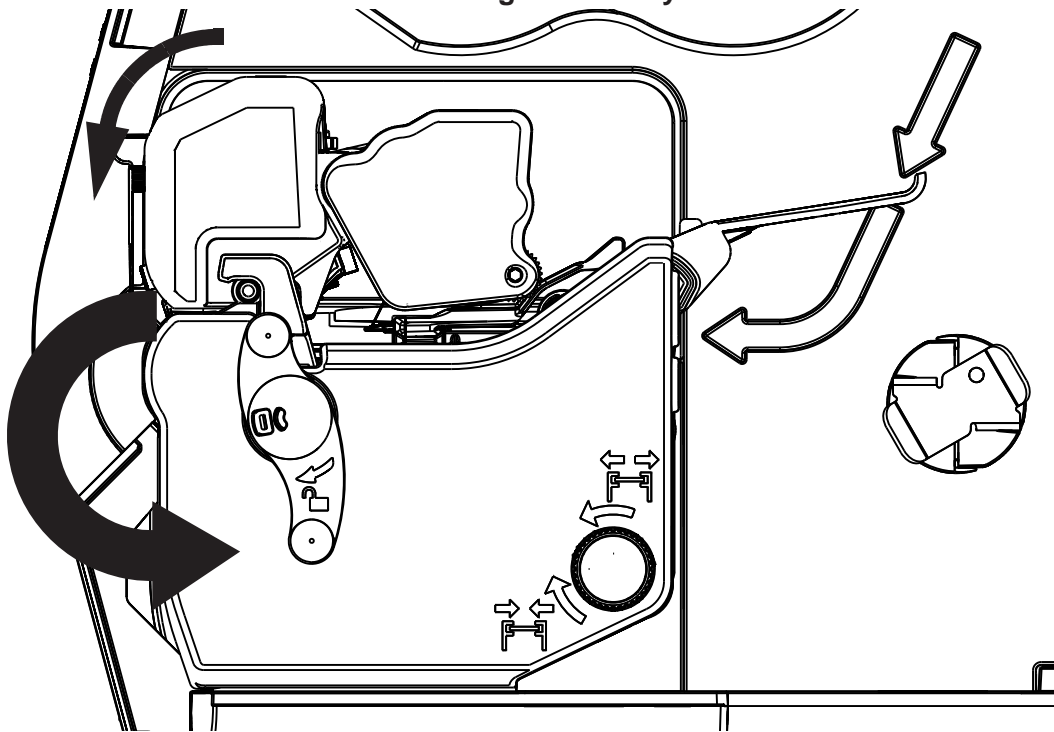
9. Rotate the printhead latch lever counter-clockwise to lock the printhead carriage.

Note: Ensure the printhead latch lever has locked the printhead mechanism before printing or the printer will enter a no-print condition.

Note: When removing the ribbon from the ribbon rewinder hub, grasp the center of the ribbon, squeeze tightly and pull outward away from the rewinder hub. The rewinder hub will collapse slightly allowing the used ribbon to slide off.

Configuring Media and Ribbon Settings

Once the media and ribbon have been loaded, the print parameters should be set to match the type of media and ribbon being used. This will ensure optimal print quality. Once set, the parameters will not need to be set again unless the media or ribbon types are changed.

Using Media and Ribbon IDs

Media and ribbons supplied by Datamax-O'Neil and other vendors may have up to an eight (8) digit media ID and ribbon ID assigned. Additional codes may be created in the Utility menu and then selected from Media menu via the printer's front panel. All relevant print parameters will be automatically configured.

1. Select **Menu > Basic > Media > Media ID**.

2. Using the up and down arrows, select the appropriate Paper ID.

3. To select the Ribbon ID, navigate to tab 2 and use the scroll arrows to highlight and select the appropriate Ribbon ID.

4. Select the Home button.

5. After selecting the Home button, select the green Accept button to again confirm your selection or the red Reject button to cancel the changes.

Note: Although using media and ribbon IDs usually produce very good results, minor adjustments may be required. Refer to the section titled **Adjusting Media and Ribbon Settings**.

Selecting Media and Ribbon Types

If media and ribbon IDs are not known, the media and ribbon types may be selected manually.

1. Select **Menu > Basic > Media > Select Type**.

2. Using the up and down arrows, select your paper type.

Note: If the paper type is not known, either select Coated Direct Thermal for direct thermal printing or select Coated Thermal Transfer for printing with a ribbon.

3. Tab to the **Ribbon** screen.

4. Using the up and down arrow, select your ribbon type.

Note: If the ribbon type is not known, select **Wax** to start. This selection can always be changed if required.

5. Tab to the **Settings** screen.

6. Select the **Paper Sensor Type** button until your paper type appears. The options are as follows:

   - Gap
   - Mark on Top
   - Mark on Bottom
   - Notch
   - Continuous

Note: For more information, refer to the section "**Top-of-Form Sensor**."

7. Select the **Paper Sensor Side** button until the correct option appears. The options are as follows:

   - Outside
   - Inside

Note: For more information, refer to the section "**Top-of-Form Sensor**."

8. Select the **Ribbon Mode** button until the correct option appears. The options are as follows:

   - None
   - Coated In (CSI)
   - Coated Out (CSO)

Note: For more information, refer to the section "**Top-of-Form Sensor**."

Note: CSI ribbon (shiny side facing outward) should be installed where the ribbon unwinds in a counter-clockwise direction. CSO ribbon (dull side facing outward) should be installed where the ribbon unwinds in a clockwise direction. If these settings do not match the ribbon type being used, the ribbon supply hub will turn in the wrong direction.

Setting the Media and Ribbon Parameters Manually (Advanced)

There are times when all print parameters must be set manually. This can happen when a new or specialized media or ribbon are being used.

Note: Some values may be grayed-out, meaning they are automatically set by default. To change these values, select the Auto button next to the value field and then select the green Accept button to confirm your choice to change to manual mode.

Note: Please see the **Menu** section for more information.

1. Select **Menu > Advanced > Media**.

2. Select the **Paper Sensor Type** field until the correct paper type appears. The options are as follows:

   - Gap

- Mark on Top
- Mark on Bottom
- Notch
- Continuous

3. Select the **Paper Sensor Side** field until the correct option appears. The options are as follows:

- Outside
- Inside

4. Select the **Ribbon Mode** field until the correct option appears. The options are as follows:

- None - for direct thermal printing
- Coated In - for thermal transfer printing
- Coated Out - for thermal transfer printing

5. Tab to the next screen and enter values for **Heat** and **Heat Balance**.

6. Tab to the next screen and enter values for **Head Pressure** and **Rewinder Tension**.

7. Tab to the next screen and enter values for **Ribbon Tension Front** and **Ribbon Tension Rear**.

8. Tab to the next screen and enter values for **Ribbon Low Diameter**, **Gap/Mark Offset** and **Gap/Mark Noise**.

9. If media levels are to be tracked, tab to the next screen and enter values for **Ribbon Length**, **Form Length** and **Number of Forms**. These parameters are used for media tracking when **Paper Change Warning** is enabled.

10. Select the **Home** button and select the green Accept button to confirm the settings.

Load a Saved Media File

For media and ribbon settings that are frequently used, media setup files can be saved to the printer's internal memory for easy access. For more information on saving the user setup files, refer to the section titled **Setups** from the **Tools > User Files** menu section. To select an internally saved media setup file, perform the following steps:

1. Select **Menu > Basic > Media > User Media**.

2. Using the up and down arrows, select the appropriate Internal Media Setup File.

3. Select the green Accept button and confirm the settings.

Optional Rewinder

The rewinder is designed to rewind in either direction but the direction must be set through the menu.

Note: Either the peel plate or the rewinder plate must be installed.

Installation of Media

1. Route the media through the platen carriage assembly.

Note: Follow the instructions for the installed media hanger.

2. Route the media under the platen carriage and around the rewinder shaft.

3. Remove the metal clasp and wind the media around the rewinder shaft in the desired direction.

Figure: 3 - 23 Rewinder
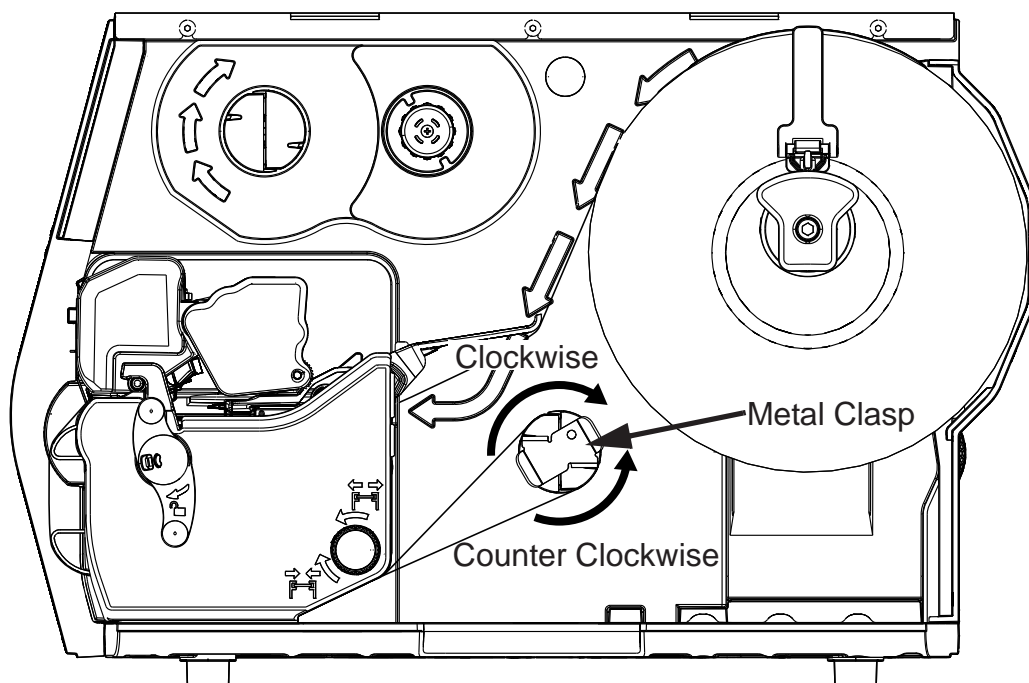
4. Insert the edge of the media into one of the two grooves on the rewinder shaft.

Note: For thicker labels, remove the label from the backing and insert the backing into the groove.

Figure: 3 - 24 Media Rewinder
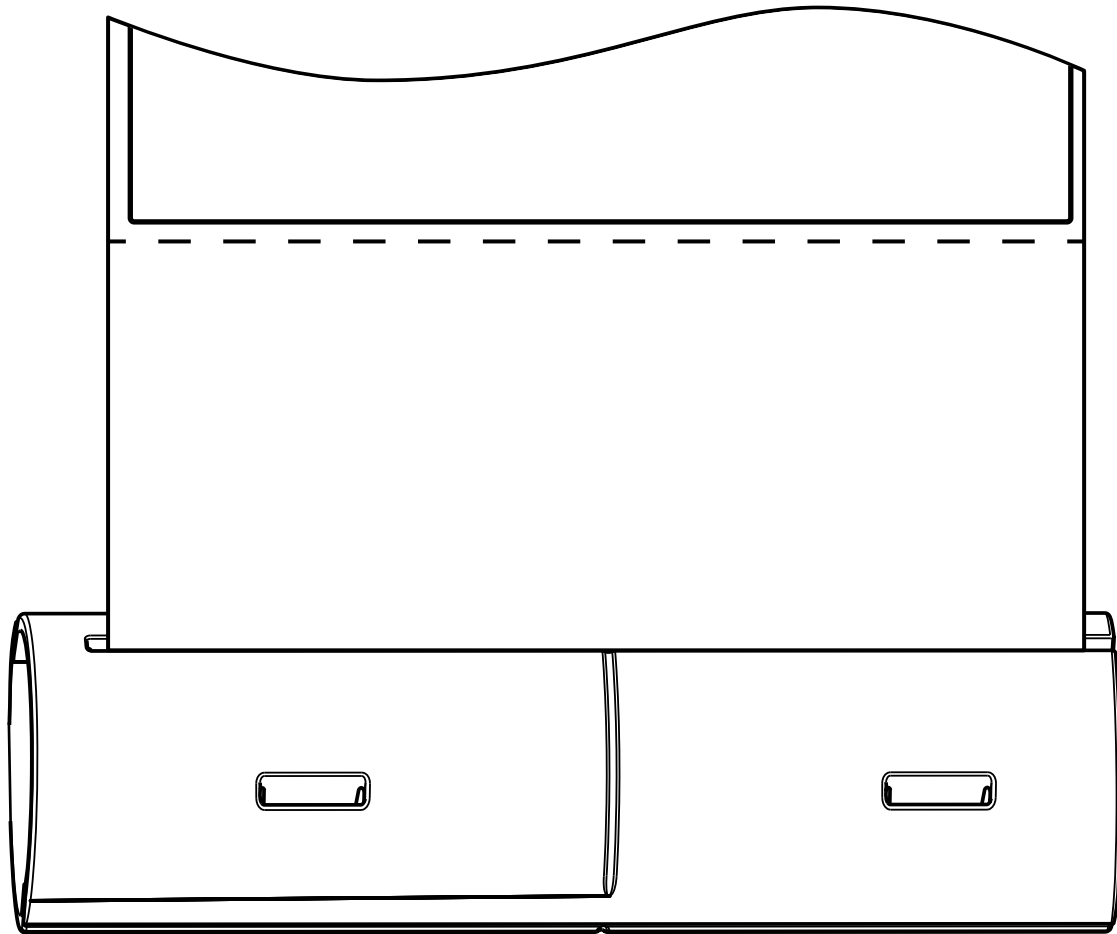
Note: Be sure to center align the paper on the rewinder shaft. Otherwise, the paper will not rewind tightly.

   5. Reinstall the metal clasp into the grooves.

Perform the following steps to set the rewinder direction:

   1. Select **Menu > Basic > Printer Mode**.

   2. Select the rewinder direction.

Note: Upon exiting the utility, a prompt will ask the user to accept the changes or reject them.

Note: If the rewinder is enabled and the Auto Present Distance is set, then the printer present distance will be set to zero (0) to avoid unnecessary backing up.

Note: If the rewinder is enabled, the Auto Present Distance set, and the printer in Prompt or Applicator mode, then the actual printer present distance will be set to work with the peel mechanism.

Top-of-Form Sensor

This printer is designed to use several types of media. The top-of-form sensor can read media characteristics from the center to the left inside edge (viewing from the front of the printer). Setting the top-of-form sensor to read specific media characteristics is done in the control panel.

Media Types Supported

There are five paper types that are supported. These include gap, mark on top, mark on bottom, notch and continuous.

The following are illustrations of the types of supported media but not every supported media is illustrated. Please contact your reseller for assistance in selecting the appropriate media for the printer.

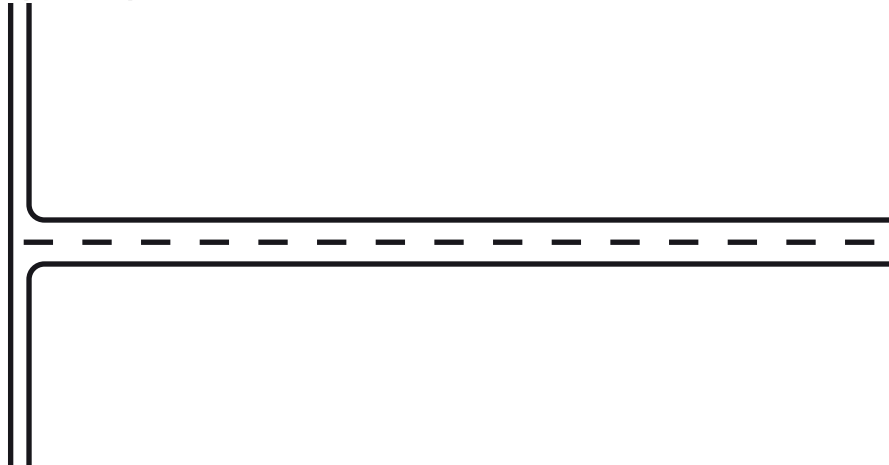**Figure: 3 - 25 Gap Example**

Figure: 3 - 26 Notch Example
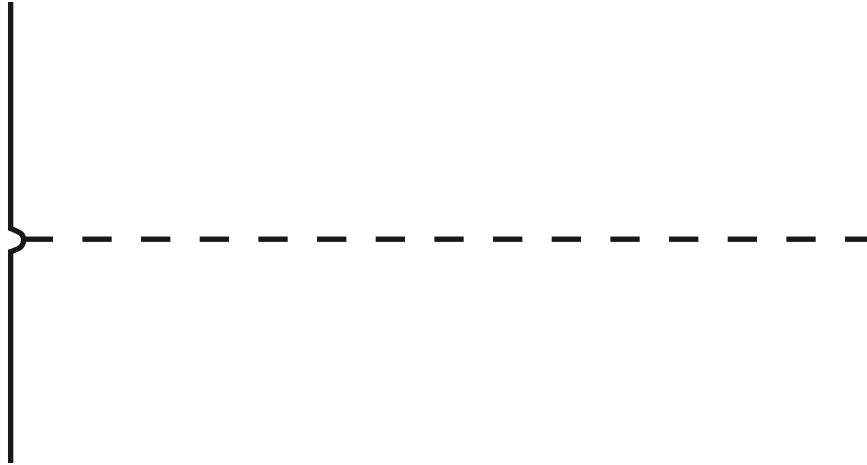
Note: The use of Notch paper disables the Out of Paper warning.

Figure: 3 - 27 Mark on Top Example

Figure: 3 - 28 Mark on Bottom Example

Figure: 3 - 29 None

Note: For continuous paper, excessive vertical adjustment may push the print into the next label. This mode will create labels with a 1/8" gap between them.

Setting the Top of Form Sensor

The top of form sensor enables the printer to determine where the print should begin and end. Once the appropriate media has been loaded, the media type can be entered manually into the control panel.

1. Select **Menu > Basic > Media** from the control panel.

2. Select **Select Type**.

3. Select the paper and ribbon type.

4. Select **Paper Sensor Type**.

5. Select the paper sensor side, either inside or outside, that correlates with the type of media being used.

Note: For example, media types with marks in the middle of the media, select Outside.

Note: The LED of the selected sensor will illuminate.

6. Unlock and release the printhead carriage assembly allowing it to open.

7. Using the adjustment lever, slide the top-of-form sensor so the appropriate LED-lit sensor pod is centered over the mark, notch or gap that was selected.

Figure: 3 - 30 Example of Top-of-Form Sensor Adjustment on "Mark on Top" media
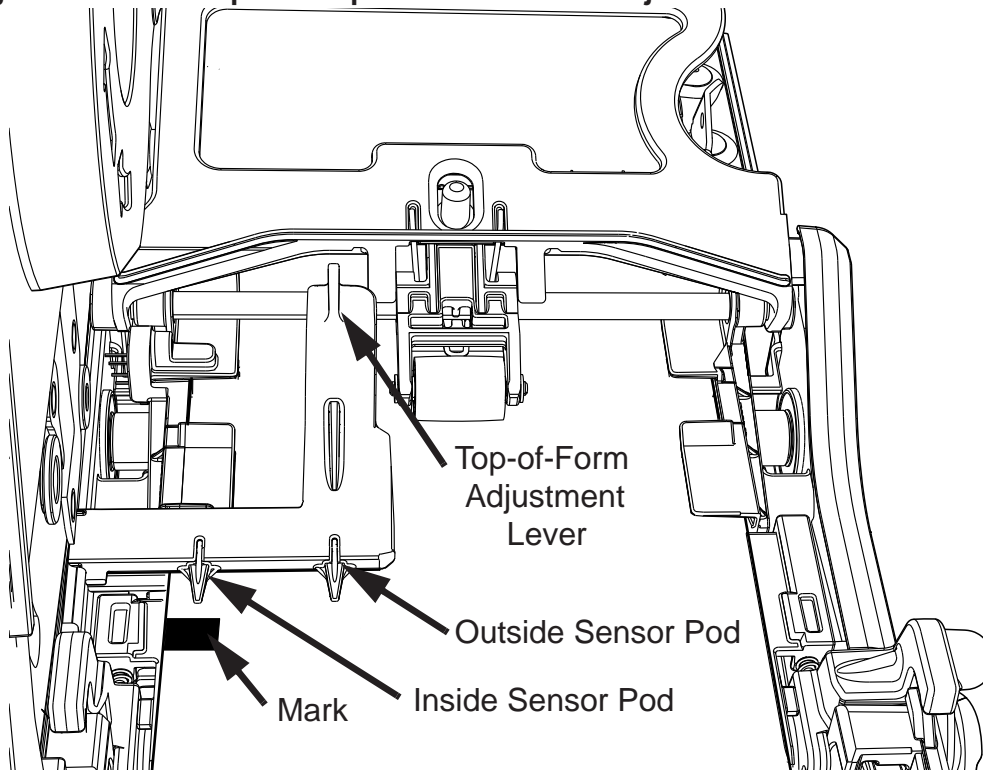
Note: For illustration purposes, the image of the printhead carriage assembly was removed in the image above. The LED sensor pods can be viewed from the front of the printer, under the printhead carriage assembly. The active sensor pod is lit by an LED.

Note: If the wrong pod is active for your media type, check your settings.

8. Close and lock the printhead carriage assembly.

Removing Ribbon Wrinkle

1. Center the supply ribbon core so the ribbon overlaps the media equally on both sides.

2. Verify there are no folds or creases in the ribbon.

3. Adjust the front ribbon shield to the middle position of the mounting slot.

Figure: 3 - 31 Ribbon Shield
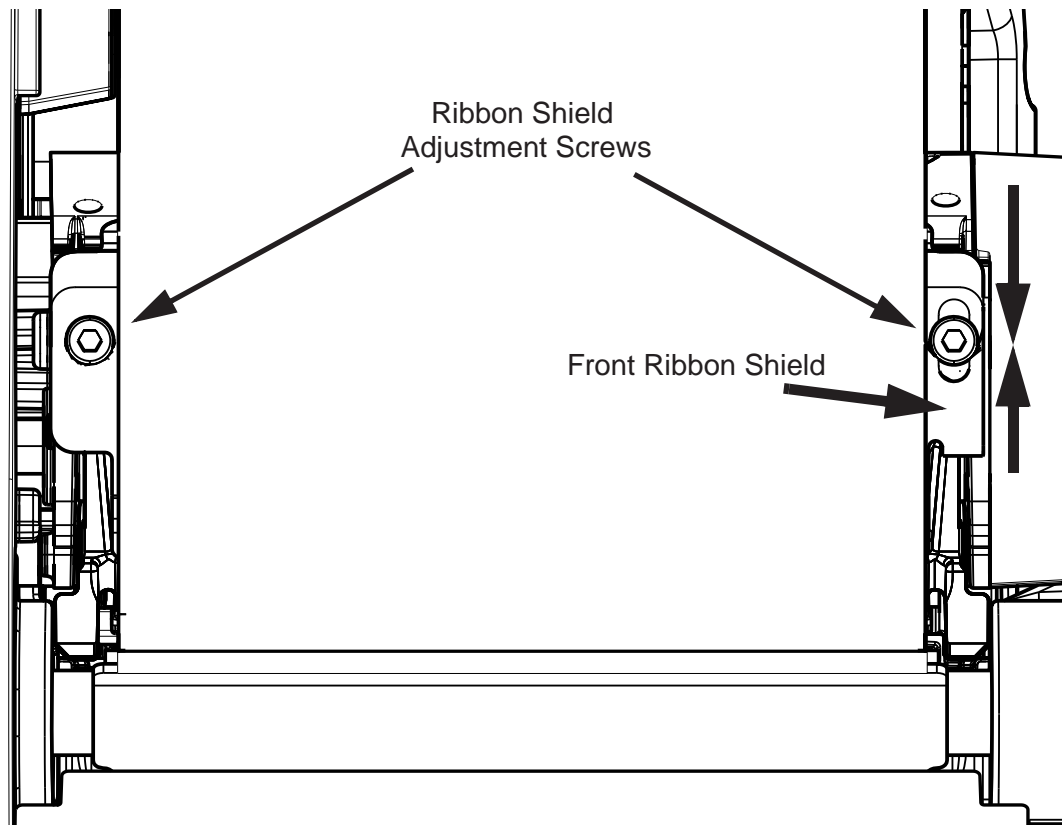
4. Set the printer to print ten (10) consecutive Quality Labels from the Test menu.
    a. Select **Menu > Test > Test Labels**.
    b. Enter 10 in the Select Count field.

5. Print the labels.

6. Check for ripples drifting left or right in the ribbon between the ribbon supply and the cam roller.

Note: If the ripples are vertically straight, advance to step 12 to adjust the ribbon shield.

Figure: 3 - 32 Supply Side Inspection
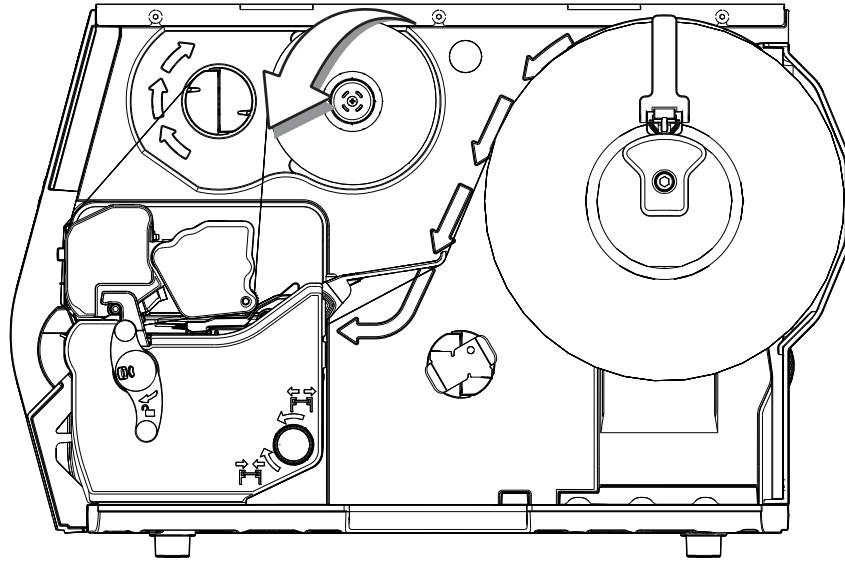
7. If excessive ripples exist, loosen the 3 mm cam roller hex head screw enough to allow the cam roller to spin.

Figure: 3 - 33 Cam Roller

Cam Roller Screw

Cam Roller Adjuster
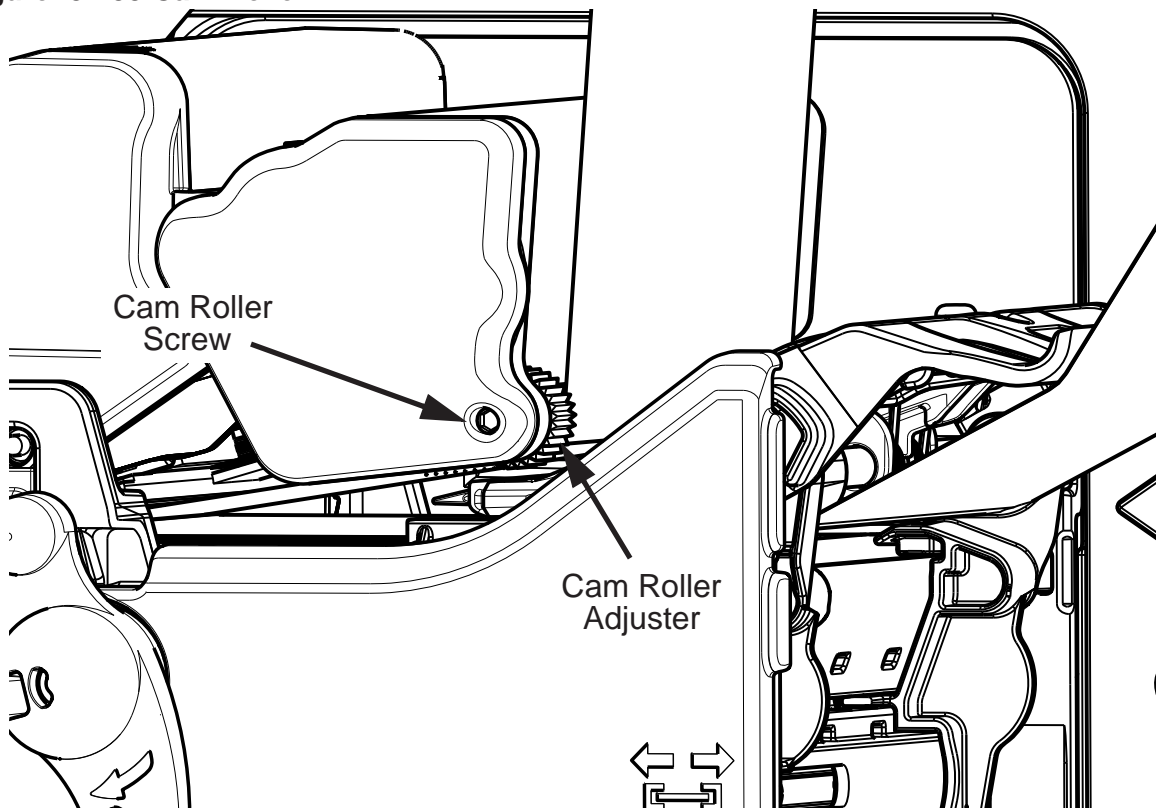
8. Turn the cam roller adjuster until the ripples are either gone or are vertical.

Note: The ripples must never drift left or right.

9. Tighten the cam roller screw.

10. Print ten (10) Quality Labels from the test menu.

Note: If wrinkles still appear continue with the adjustment procedure.

11. Loosen the ribbon shield adjustment screws.

12. While printing test labels, slowly adjust the lower shield until the ribbon tension is constant from left to right and the wrinkles disappear.

Note: Adjust the ribbon shield by adding tension to the side with wrinkling or light print.

Note: Adjustment should eliminate side-to-side wrinkles.

Manual Head Pressure Adjustment (p1115 only)

The printer calculates the ribbon and media settings and then suggests the optimal printhead pressure. If the current printhead pressure setting is different from the suggested setting, a prompt will appear on the menu screen suggesting that the head pressure should be adjusted.

1. Select **Info > Extended Status** from the home screen.

2. Rotate the printhead latch lever clockwise to unlock the printhead carriage assembly.

Note: The printhead carriage assembly should be unlocked but not released.

Figure: 3 - 34 Unlock the Printhead Carriage Assembly
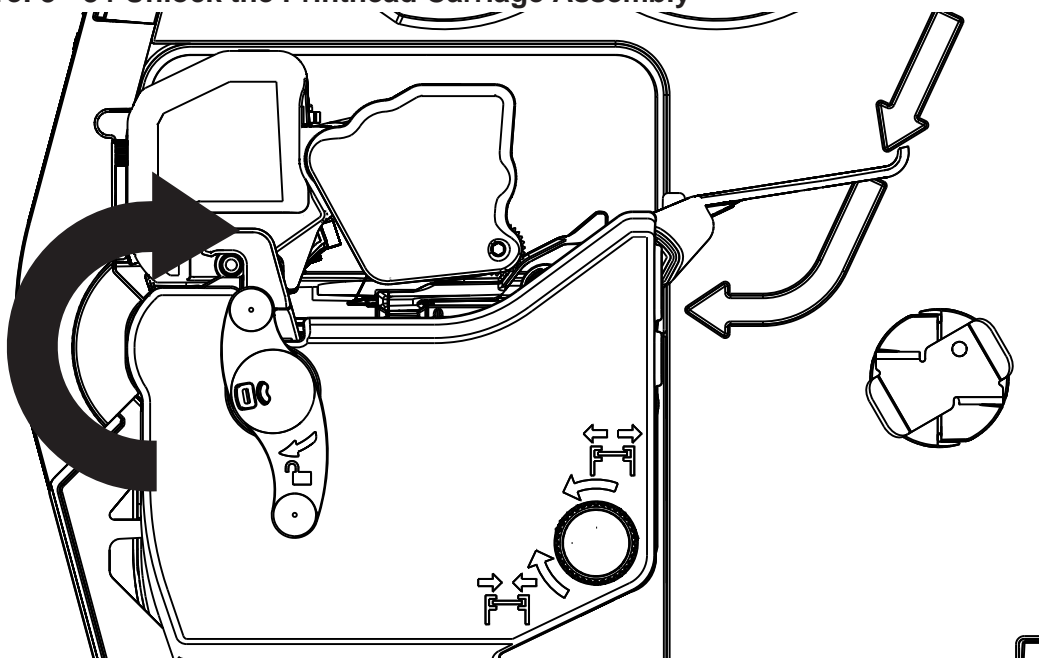
3. Rotate the printhead pressure adjustment wheel until the head pressure is set to the appropriate setting.

Note: Rotating the wheel clockwise increases the pressure while rotating the wheel counter-clockwise decreases the pressure.

Figure: 3 - 35 Printhead Pressure Adjustment Wheel - View from Top
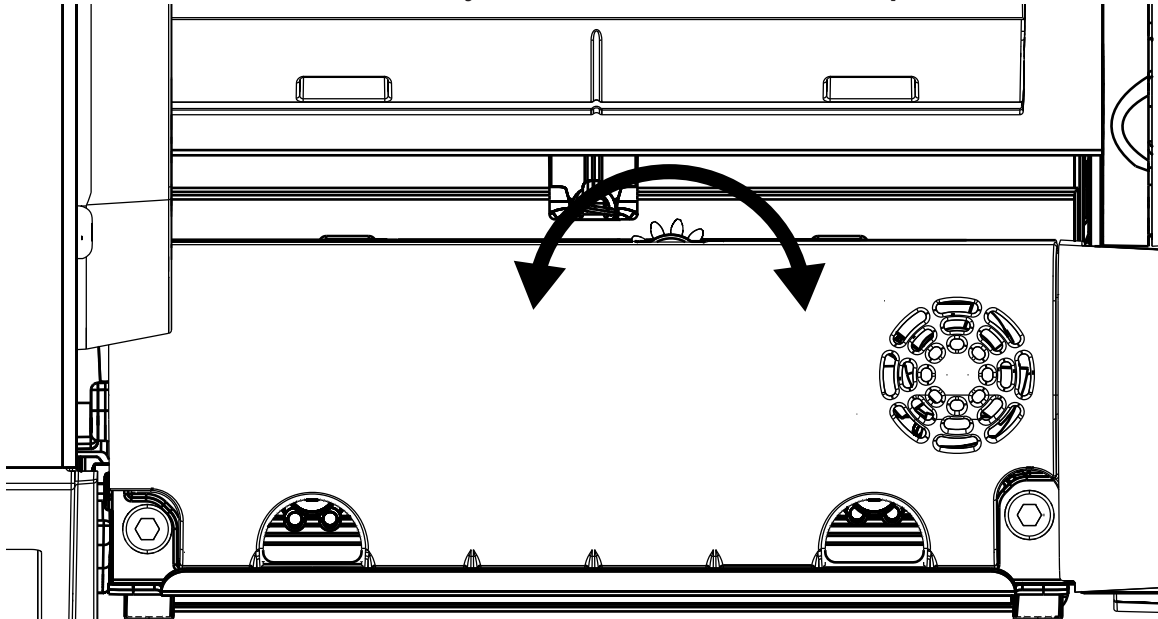
4. Rotate the printhead carriage assembly counter-clockwise until it latches.

Figure: 3 - 36 Latch the Printhead Carriage Assembly
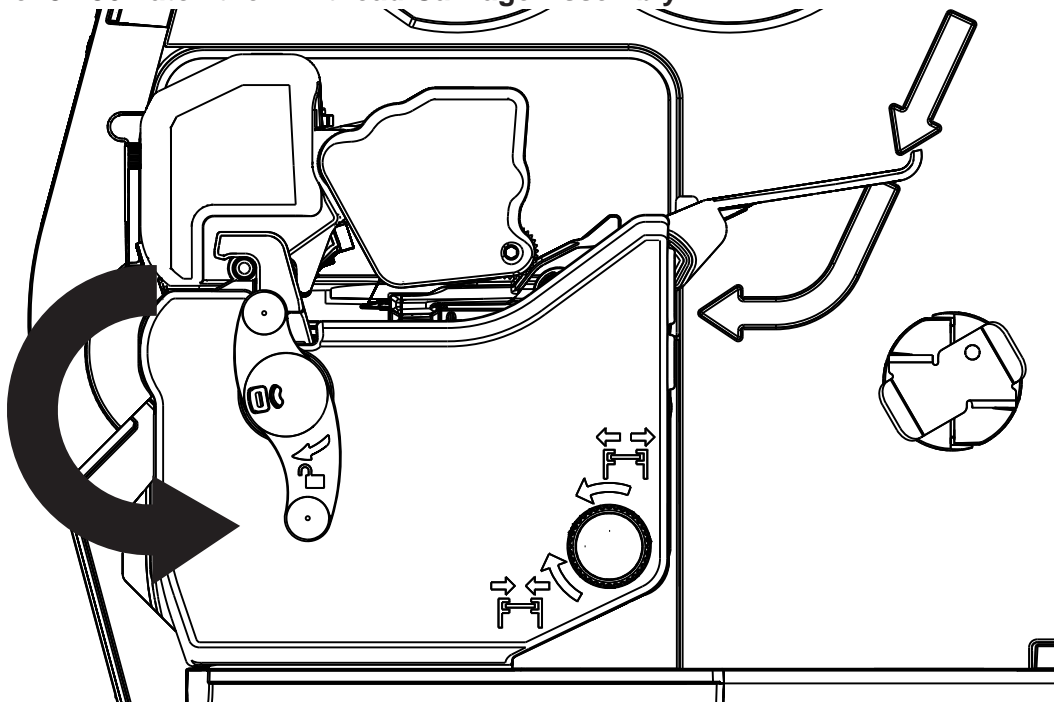
Installing Cutter and Tray

Warning: To prevent serious injury, never place a finger or object other than media near the cutter mechanism.

Caution: Never cut paper or media in an area where adhesives exist. Doing so will damage the cutter and void the manufacturer's warranty.

Caution: The media cover will not close with both the cutter and present sensor installed at the same time for those printers with a present sensor installed in the cover..

Caution: The printer must be powered off and disconnected from AC utility power prior to the cutter installation.

The cutter and cutting tray are available options that must be installed after receiving the printer.

Cutter

Perform the following procedure to install the cutter.

Note: The printer and the cutter tray must be on the same level surface.

1. Power off the printer and disconnect it from utility power.

2. Remove the lower cover from the printer.

Figure: 3 - 37 Lower Cover
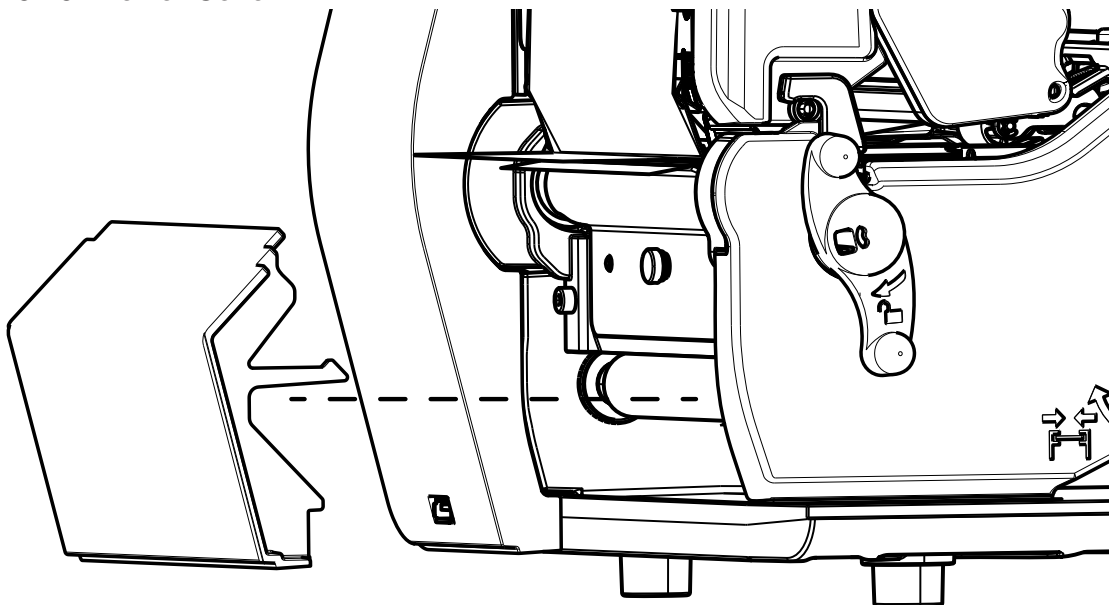
Note: The printer cover can be removed by carefully pulling the bottom of the cover.

3. Loosen and remove the media plate thumbscrew and the media plate.

Figure: 3 - 38 Remove Media Plate

Power/Data
Connector
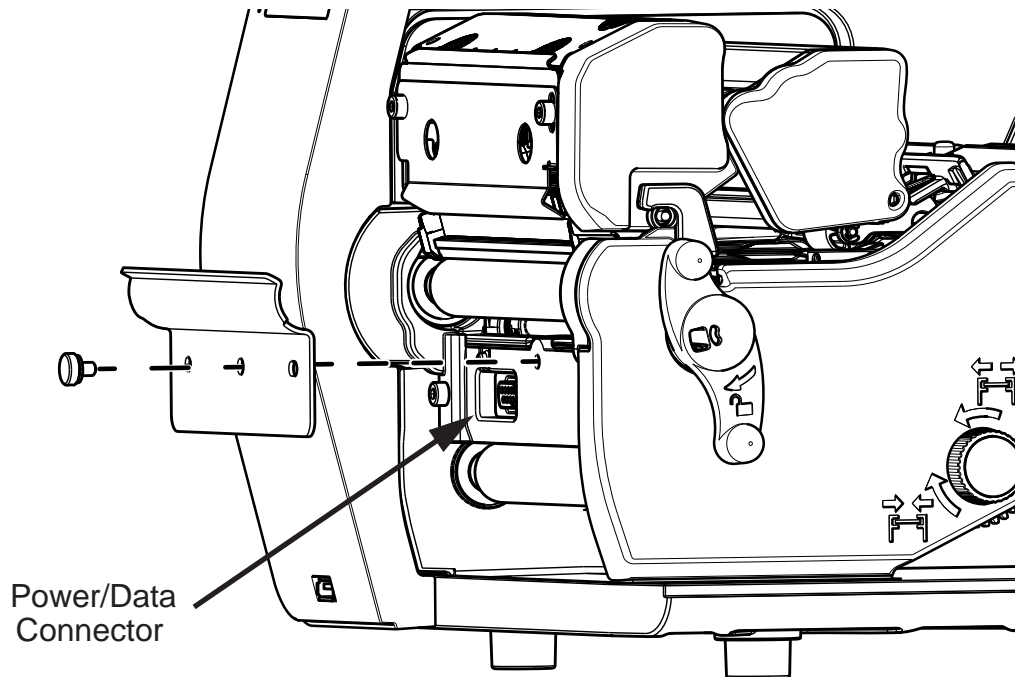
Note: Retain the thumbscrew for cutter installation.

4. Align the cutter with the power/data connector and install the thumbscrew to secure
    it to the platen carriage assembly.

Figure: 3 - 39 Cutter Installation
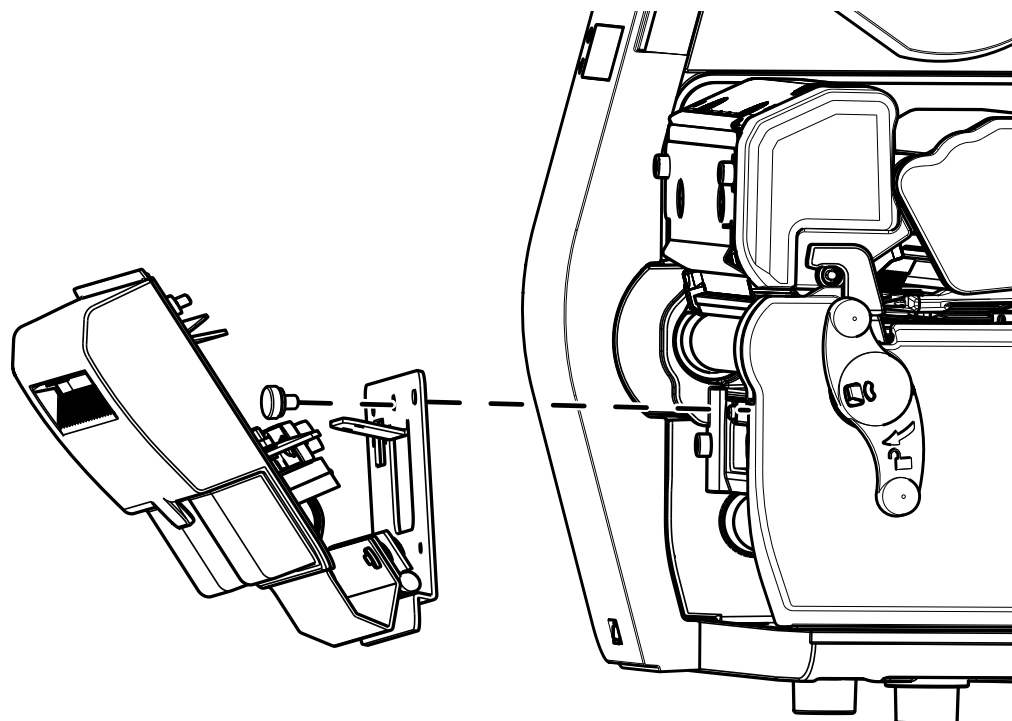
5. Rotate the cutter until it magnetically locks into place.

6. Activate the cutter option in the Options menu by selecting **Menu > Advanced > Printer > Options > Cutter**.

Note: Feed a label through the printer and observe the cut distance to ensure it cuts on the gap. If it cuts on the label, adjust your Cut Distance Adjust settings in the Adjustments menu. Select **Menu > Advanced > Adjustments > Cut Distance Adjust**.

Note: A negative value moves the cut line toward the current label being printed. A positive value moves the cut line toward the next label to be printed.

Cutter Tray

The cutter tray collects labels and media after they have been cut. The tray may be installed before or after the installation of the cutter.

1. Place the tray mounting hooks into the baseplate slots.

Note: For a clearer illustration, the cutter has been removed from the illustration below.

Figure: 3 - 40 Cutter Tray Installation
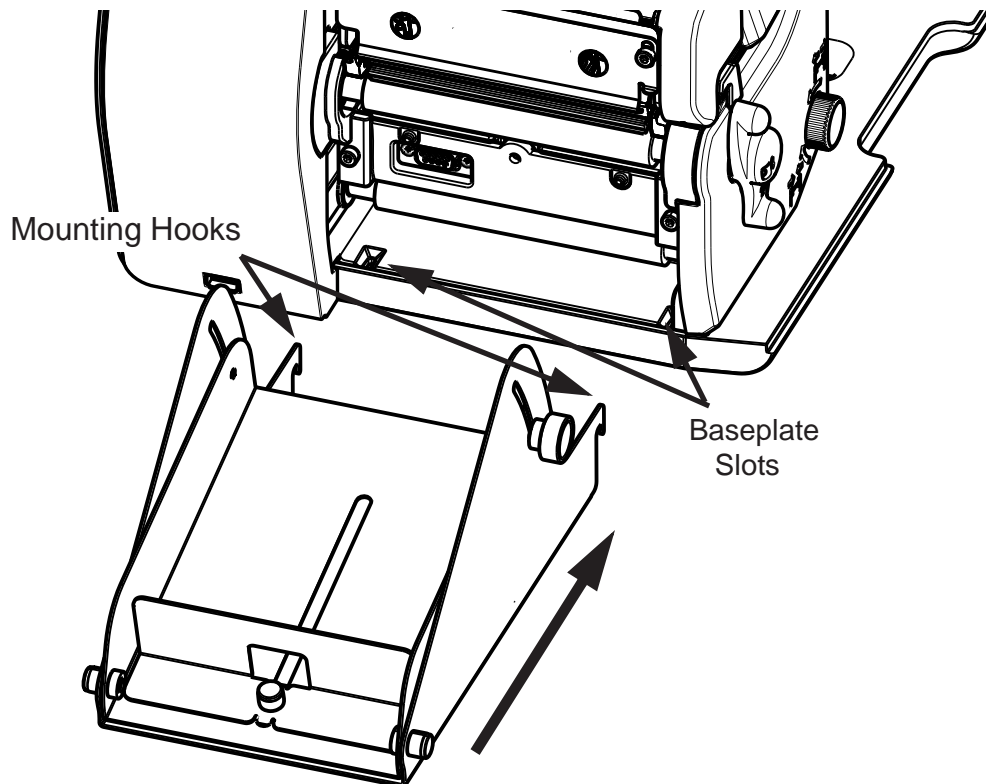
Setting Up the Cutter Tray

The cutter tray assembly is adjustable to fit various label lengths from 2" (50.8 mm) to 6" (152.4 mm) and widths up to 4.65" (118.1 mm) for the p1115, p1115s, p1120 and p1125. The maximum label width for the p1725 is 7.1" (180.34 mm).

1. Loosen the tray lock thumbscrews.

Figure: 3 - 41 Tray Lock Thumbscrews
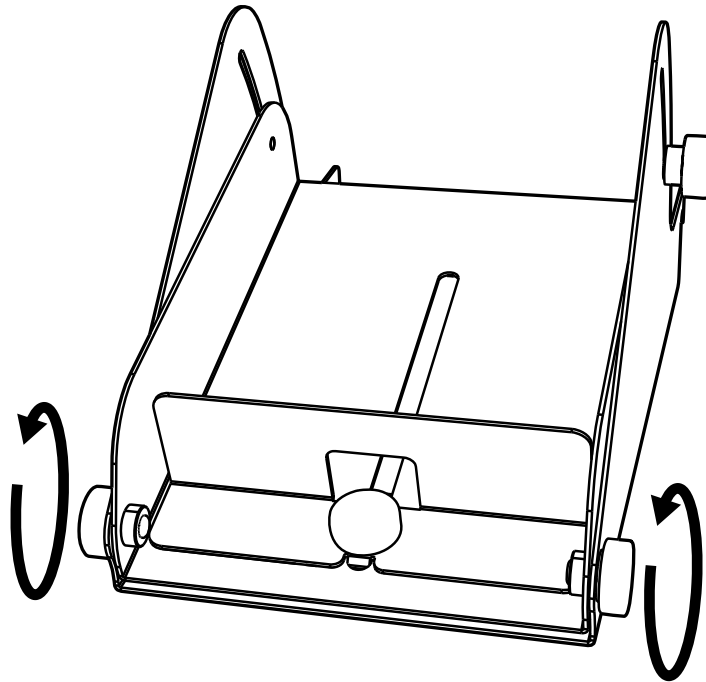
2. Loosen the height adjustment thumbscrews.

Figure: 3 - 42 Height Adjustment Thumbscrews
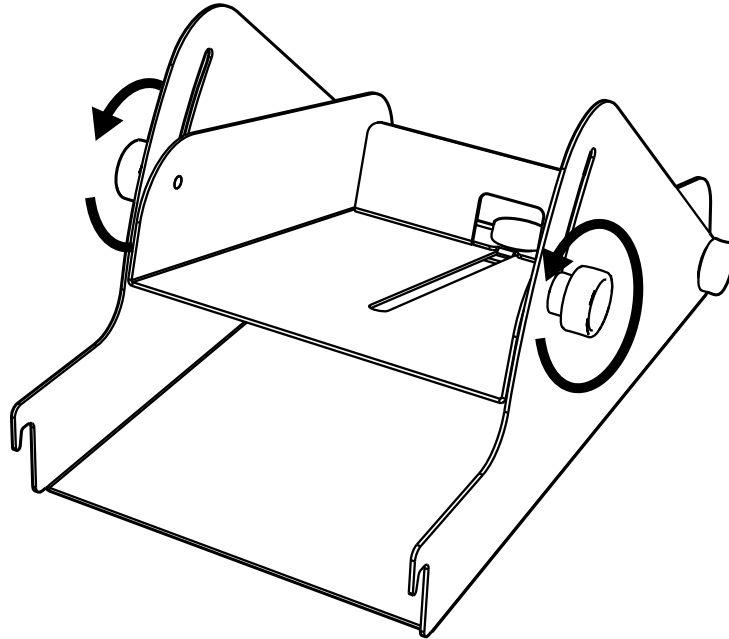
3. Rotate the tray shelf to the desired position and secure all four thumbscrews that were previously loosened.

Figure: 3 - 43 Tray Shelf Adjustment
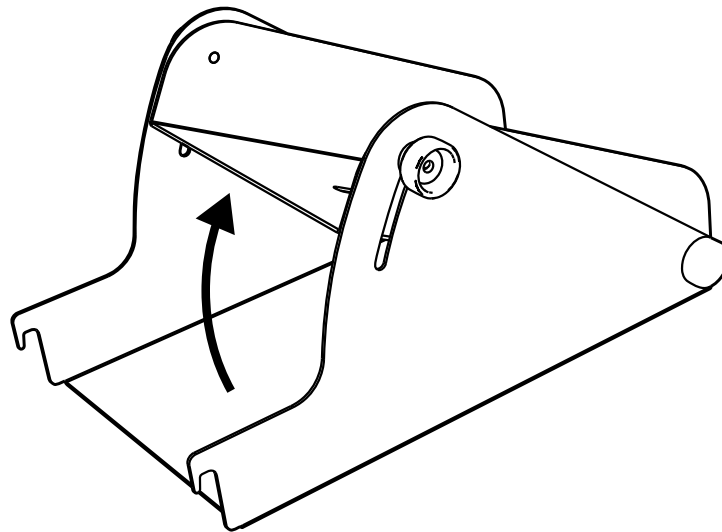
4. Loosen the length guide thumbscrew.

Figure: 3 - 44 Length Guide
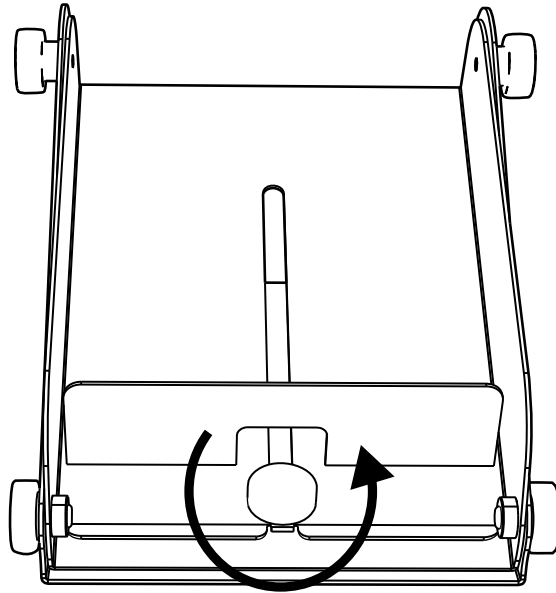
5. Adjust the length guide to the desired position and then secure the thumbscrew.

Figure: 3 - 45 Length Guide Adjustment
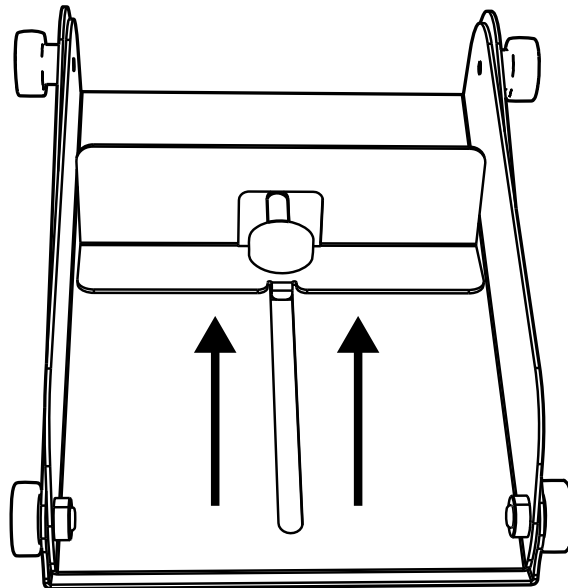
Upward-Facing Present Sensor

Note: The upward-facing present sensor is not an available option for the p1725

Perform the following procedure for installing the upward-facing present sensor.

1. Power off the printer and disconnect it from utility power.

2. Remove the lower cover from the printer.

Figure: 3 - 46 Lower Cover
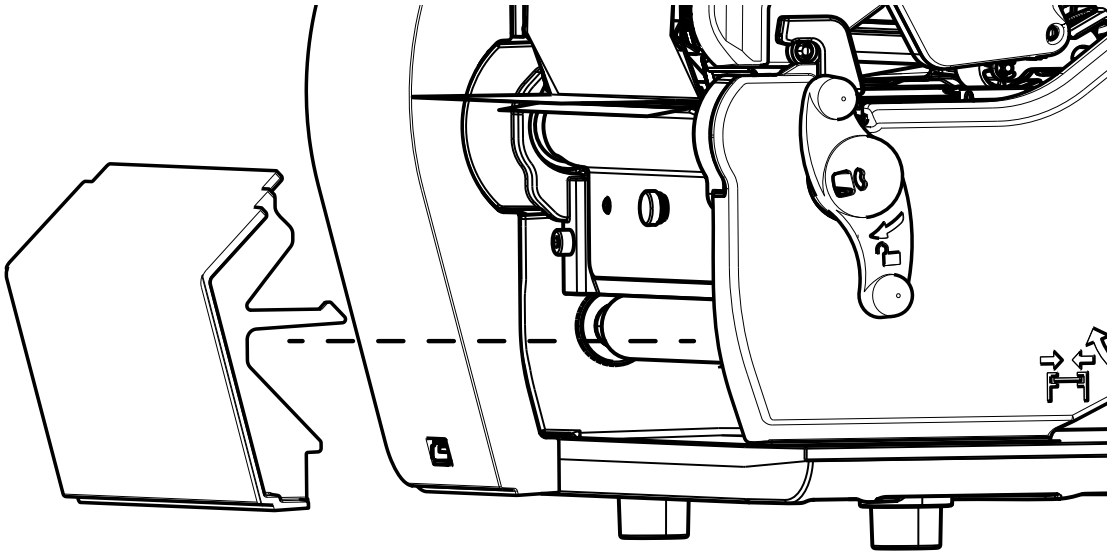
Note: The printer cover can be removed by carefully pulling the bottom of the cover.

3. Loosen and remove the media plate thumbscrew and the media plate.

Figure: 3 - 47 Remove Media Plate
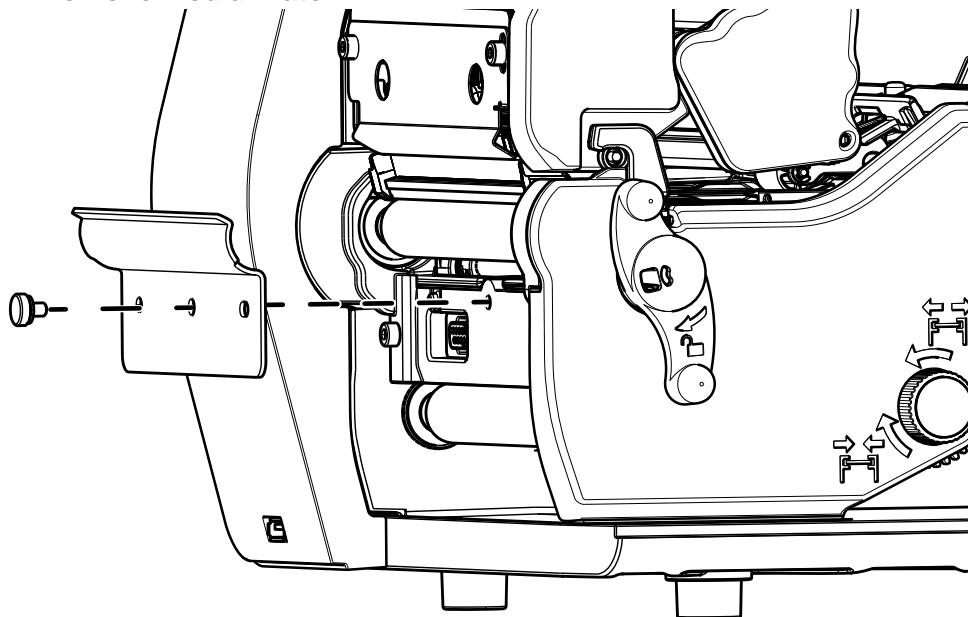
Note: Retain the thumbscrew for future re-installation of the media plate.

4. Align the present sensor with the power/data connector and tighten the captive screw to secure it to the platen carriage assembly.

Figure: 3 - 48 Present Sensor Installation

Captive Screw
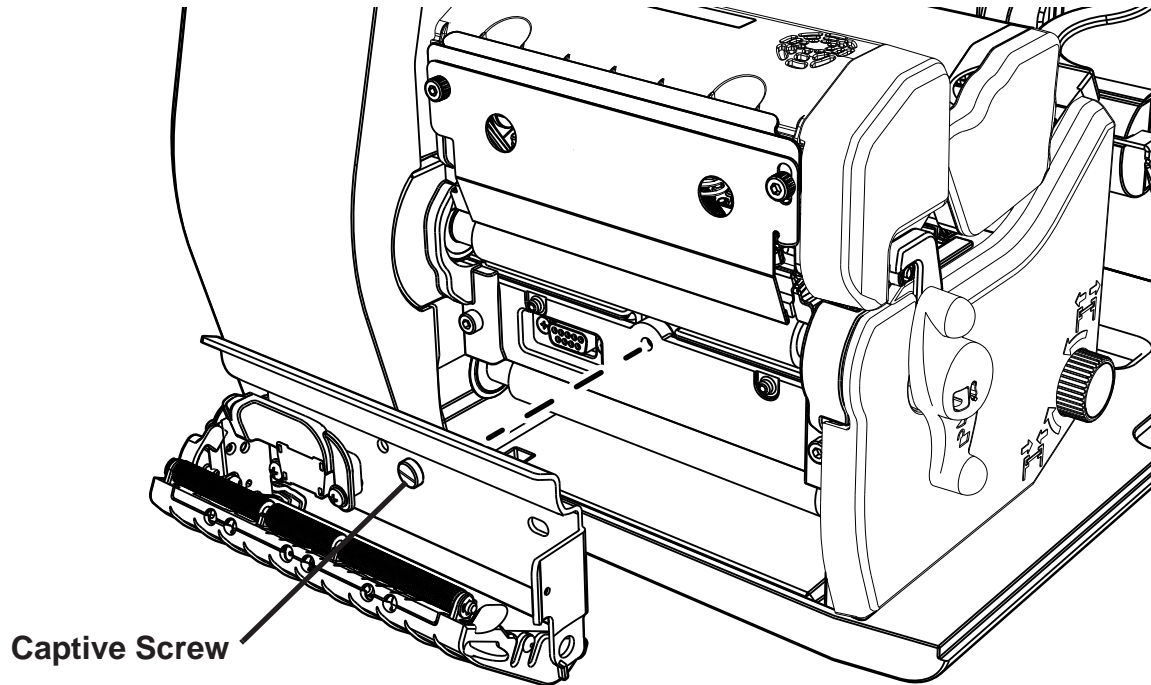
5. Close the present sensor until it magnetically locks into place.

6. Activate the present sensor option in the Options menu by selecting **Menu > Basic > Printer Mode > Present Sensor Enable**.

Print Driver Installation

Overview

This installation should be executed only on a computer where a pw Series printer driver is not currently installed or one that the driver have been completely removed.

The Windows driver is located on the Accessories CD-ROM included with the printer.

Installing the Windows Driver:

1. Place the Accessories CD-ROM included with the printer into the computers CD-ROM drive. Once the CD-ROM starts select your printer model then "Install Driver" from the menu. Follow the instructions on the screen to install.

   If the driver was downloaded from our website, simply double click the downloaded ".exe" file to launch the installation.

2. Check the "Remove printer drivers" radio button then click 'Next'. If this option is not available skip to Step 6.

3. On the next screen check the "Remove printers" radio button then click 'Next'.

4. Browse the list of installed printers, if any "Workstation" or "Performance" printers are listed check the corresponding check boxes and click 'Next' to remove the installed printers.

5. The next screen will show a summary of items to be removed, click 'Finish' to complete the removal process. Once complete return to the main screen to install the new driver.

6. Check the "Install printer drivers" radio button then click 'Next' and follow the on-screen instructions to install the driver.

7. When prompted, select your printer from the list, (i.e., Datamax-O'Neil p1xxx). Continue to follow the on-screen instructions to install the driver.
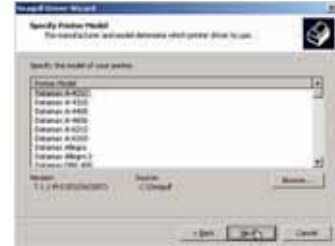
Important Notes:

The Windows driver functions the same as any other Windows printer. While built-in help files provide information on all settings, there are some important setting parameters that should be observed for trouble free printing:

Page Setup Tab: Stock

It is important that the Stock setting matches the size of the label you are using. If you cannot find a match for your label click New and enter the dimensions of your label.
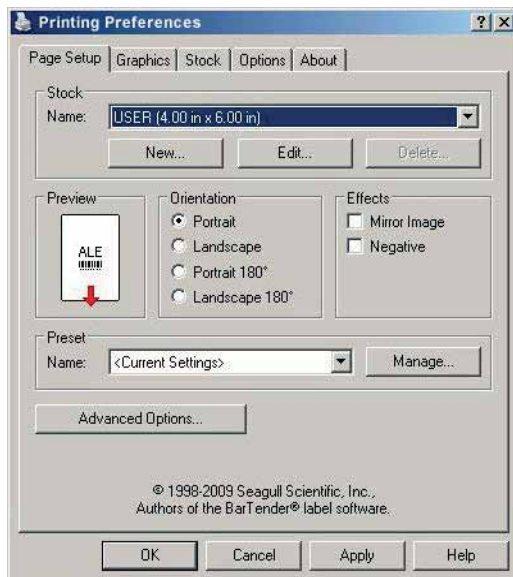
Options Tab: Print Speed & Printhead Temperature

These two settings will have the greatest effect on print quality. Some label stocks will require more heat and slower print speeds to generate a quality image.
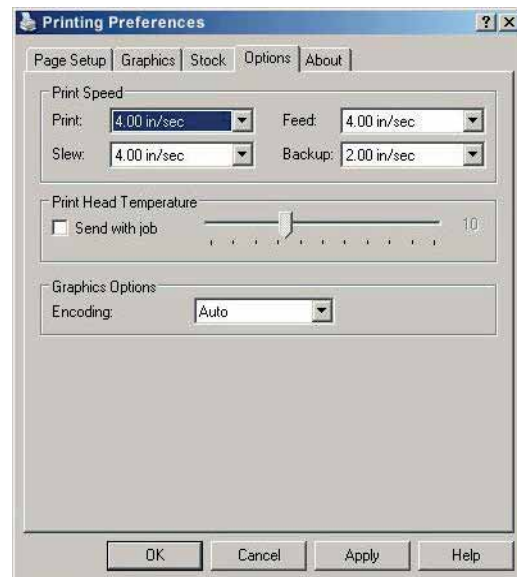
The Windows application software used to create the label format will likely have a "Page Setup" screen. This will also need to match the size of the label you are using

Menu Overview

The printer is designed with a touchscreen display. Functions can be enabled and disabled and settings can be changed through the on-screen menu. Press the buttons on the screen with the light touch of a finger. Some items may be grayed out or not visible depending on the printer model and available options.

Caution: Do not touch the screen with excessive force or by using sharp objects. Doing so will damage the touchscreen and may void the manufacturer's warranty.

Layout of the Display

Navigation
The menu screens have buttons for advancing or returning to screens.

Back Button
The Back button provides the user with the option to return to a previous menu screen.

Home Button
Selecting the Home button sends the user to the main screen.

Tabbed Browsing
Blue left and right arrow buttons are provided at the bottom right of the screen to navigate tabbed menus. Select the right arrow to advance to the next tab or the left arrow to return to the previous tab.

Scrolling
Some menu screens allow for scrolling. Select the appropriate up or down arrow.

Changing Values
Numeric values can be entered or changed by selecting the field and entering the values using the numeric keypad. They can also be increased or decreased using the subsequent plus or minus buttons.
Other menu options are changed by pressing the button until the appropriate selection appears.

Page Return Button
The Page Return button allows the user to return to the last setup screen that was exited after selecting the Home button.

Three Button Panel

The printer may be placed in 3-button security mode which restricts the operator from changing any settings or printing test labels. An administrator can access the printer menu by pressing on the "Model ID" in the taskbar and entering the appropriate security password. Once the password has been entered and accepted, the user will be allowed access to the full home screen.

To return the menu to the 3-button security mode, select the "Model ID" again.

Home Screen

The home screen presents several options to the user.

Printer Status

Operator Action Area

Date / Time

Fault Information Area

Model ID

Connected Devices and Mode Indicators

Buttons
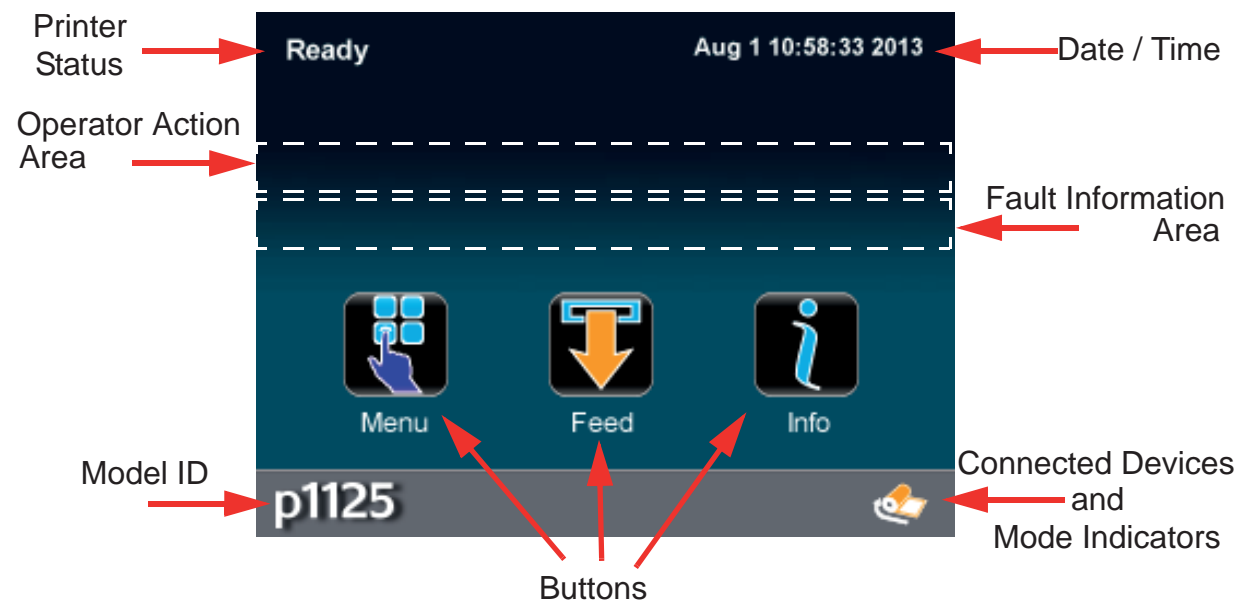
Printer Status

The printer status area displays the state of the printer. These states include the following:

- **Ready** - The printer is idle and ready to accept internal or external commands.
- **Busy** - Appears when printing or feeding paper.
- **Fault** - The printer has paused due to a fault condition.
- **Warning** - The printer has paused due to a warning indicator.
- **Cooling Down** - The printer has paused while it is cooling down.
- **Waiting** - The printer is blocked by the optional Applicator or Present Sensor.
- **Configuration** - The printer is connected to the Configuration Utility.
- **Canceling** - The printer is currently canceling a print job.

Operator Action Area

Information about the current printer action will be displayed in this area. For example, "Printing 1 of 3" might be displayed when printing the first of three labels for a print job.

Date / Time

The time and date may be toggled on by pressing the upper right corner of the display. After pressing the blank area, the current date and time will be displayed on the screen. Once the home button is pressed, a screen will appear asking the user if the date and time will be displayed. Select the green Accept button to display the time or the red Reject button to cancel.

Fault Information Area

Warnings and faults will be displayed in this area. Once the fault has been corrected, the message will disappear.

Connected Devices

The symbol for devices connected to the USB host will be presented in this area.

Mode Indicators

The printer will display modes that have been activated. If options have been installed but not enabled, they will not appear in this area of the display.

Information Button

By selecting the information button from the task bar, the following information can be accessed. Select the Print button in the taskbar to print the information. Not all of the information listed below is available for every printer.

- System Info
- Settings Report
- Network Report
- Extended Status
- Serial Report
- GPIO Report
- Printhead Info
- Fonts Report

Note: Selecting the up or down arrow will display additional information.

1. System Information

The following will be displayed upon selection of the System Info button:

- Printer Model
- Printhead Model
- Firmware Version
- FPGA Version
- Ribbon Version
- Boot Version
- Board ID
- RAM Size
- Flash Size
- Printer Key
- Absolute Counter
- Printhead Counter
- Setup File
- Paper
- Ribbon
- Detected Options

2. Settings Report

The settings report provides information on the printer settings.

Media Settings

- Paper Sensor Type
- Paper Sensor Side
- Ribbon Mode
- Heat
- Heat Balance
- Head Pressure
- Rewinder Tension
- Ribbon Tension Front
- Ribbon Tension Rear
- Ribbon Low Diameter

- Gap/Mark Offset
- Gap/Mark Noise
- Number of Forms
- Form Length
- Ribbon Length

Printer Settings

- Cutter Mode
- Cut by Count
- Rewinder Mode
- Present Sensor
- Print Speed
- Feed Speed
- Reverse Speed
- Present Distance
- Error Sound
- Warning Sound
- Paper Low Warning
- Paper Out Warning
- Cover Open Warning
- Paper Change Warning
- Rewinder Full Warning
- Reprint on Error
- Present Timeout
- Pause Mode

Page Defaults Settings

- Print Length
- Print Width
- Vertical Offset
- Horizontal Offset
- Orientation
- Raster Mode
- Font Name (Number)

- Point Size
- Pitch Size
- Symbol Set
- Print Truncation
- Print on Gap/Mark

Auto Settings

- Auto Load
- Auto Option Detect
- Auto Calibrate
- Auto Present Distance
- Auto Tension
- Auto Pressure
- Auto Speed Adjust
- Suggested Pressure (p1115)

Adjustment Settings

- Present Distance Adjust
- Cut Distance Adjust
- Cutter Rotation Adjust
- Vertical Adjust
- Horizontal Adjust
- Head Pressure Adjust
- Rewinder Tension Adjust
- Ribbon Tension Front Adjust
- Ribbon Tension Rear Adjust
- Darkness
- Contrast

Calibration Settings

- Paper Threshold (for non-continuous sensor type)
- Gap/Mark Threshold (for non-continuous sensor type)
- TOF Gain (for non-continuous sensor type)
- Autoload Empty

- Autoload Current

3. Network Report

The Network Report option provides information about the network on which the printer resides. The following information is available:

- Ethernet IP
- Ethernet Subnet Mask
- Ethernet Gateway
- Ethernet MAC
- Ethernet DHCP
- Wireless IP*
- Wireless Subnet Mask*
- Wireless Gateway*
- Wireless SSID*
- Wireless MAC*
- Wireless DHCP*
- Hostname
- Network Time Protocol
- Webpages
- SSH
- SNMP
- SNMP Trap IP
- LPD

*Available only if the wireless option is installed.

4. Extended Status

The Extended Status option provides sensor information including:

- Head Temperature
- Head Voltage
- Head Pressure
- Paper Level
- Ribbon Level
- Rewinder Level

- TOF Sensor
- Auto Load Sensor
- Session Label Count

  Extended Status is also available when printing by pressing the icon in the mode indicator area.

Note: With "Paper Change Warning" enabled, levels will be shown as percentages.

5. Serial Report

The serial report provides serial connectivity information including:

- Baud Rate
- Data Bits
- Stop Bits
- Parity
- Flow Control

6. GPIO Report

The GPIO Report provides the following information:

- GPIO Mode
- Slew Speed
- Pulse Width
- Signal 1 - I/O, Function, Type
- Signal 2 - I/O, Function, Type
- Signal 3 - I/O, Function, Type
- Signal 4 - I/O, Function, Type
- Signal 5 - I/O, Function, Type
- Signal 6 - I/O, Function, Type
- Signal 7 - I/O, Function, Type
- Signal 8 - I/O, Function, Type

7. Printhead Info

The Printhead Info report provides the following information:

- Printhead Serial Number
- Printhead Model

- Printer Serial Number
- Current Firmware
- Printhead Inches
- Installation Date (Initial)
- Installation Date (Current)
- Clean Schedule
- Clean Procedures
- Clean Counter Resets
- Number of Inches

8. Fonts Report

The Fonts Report provides the font name and the font number. This includes both the resident and user downloaded or imported fonts. It will also show a sample PCL sequence for addressing the font using the appropriate typeface number.

Note: The resident fonts are listed in the Appendix of this manual.

Note: It is the user's responsibility to obtain the appropriate licenses for downloaded or imported fonts.

Feed Button

Selecting the feed button will feed the media through the print mechanism one label at a time.

Menu

The Menu button provides the user with access to the system settings and also allows for the enabling of options. The Menu screen displays the following options:

- Basic
- User
- Advanced
- Tools
- Language
- Test

1. Basic

Selecting the Basic button allows for access to the basic settings. These include the following:

- Printer Mode
- Media
- Print Adjust

Printer Mode

The printer is available with several options which are enabled or disabled via the Printer screen. Three of the modes cannot happen concurrently so the highest priority mode will take precedence. The order is as follows:

1. Pause Mode (High)
2. Present Sensor (Medium)
3. GPIO Mode (Low)

a. *Cutter Mode*

The cutter supports the cutting of media into separate labels.

For printers with a print media cutter installed, select from the following Cutter Mode options:

- Off
- Cut By Label
- Cut By Job
- Cut By Count

Cut By Count enables the user to specify the number of labels printed prior to being cut. Select the Cut By Count field and enter the number of labels to be printed.

b. _Rewinder Mode_

Rewinder Mode controls the operation of the powered internal label rewinder.

For printers with a print media rewinder installed, select from the following Rewinder Mode options:

- Off
- Clockwise
- Counter Clockwise

c. _Present Sensor_

The Present Sensor option controls the on-demand dispensing of labels.

To enable or disable the installed Present Sensor option, select or deselect the corresponding checkbox.

d. _GPIO Mode_

The GPIO Mode enables or disables the applicator function from the printer. For printers with an applicator connected, select from the following settings:

- Off
- Custom

d. _Pause Mode_

The Pause Mode option allows the user to prompt for the next label.

To enable or disable the Pause Mode, select or deselect the corresponding checkbox.

Media

Selecting the media button allows the user to change the print media and ribbon settings. The printer may automatically set up certain parameters once the paper and ribbon types have been inputted either using the Media ID or manual entry.

a. _Media ID_

The user can qualify various media and ribbon types and has assign an ID value to them. After pressing the **Media ID** button, ID values can be selected which will configure the printer to the optimum print settings.

1. Using the up and down arrows, select the appropriate **Paper ID**.

2. If applicable, tab to the **Ribbon ID** page and use the up and down arrows to highlight the appropriate value.

3. Select the Home button and select either the green Accept button or the Red reject button.

b. *User Media*

If media setup files have been stored internally or on a USB mass storage device connected to the USB host, the files can be selected from this interface.

Using the up and down buttons, highlight the file and then select the green check button.

Note: The first tab displays files that have been saved internally. The second tab displays files from the mass storage device attached to the USB host. User files may be printed by selecting the print button in the taskbar.

Note: Further details are available in the Advanced section of the menu. Please refer to the Advanced section of the manual for more information.

c. *Select Type*

For print media types that have not been qualified by the printer manufacturer, the Select Type option allows the user to manually enter the media and ribbon types. This will configure the printer to the approximate print settings.

The interface has three tabs:

- Paper - Using the up and down arrows, highlight the appropriate paper to be used.
- Ribbon - Using the up and down arrows, highlight the appropriate ribbon to be used.
- Settings - Choose the appropriate settings for your media and ribbon types.

Note: Fine adjustments to print settings may be required to improve print quality. The Select Type utility is designed to approximate the print settings.

Paper Sensor Type

Print media contains distinctive characteristics and those characteristics must be accounted for in the settings to ensure finding Top-of-Form.

Paper Sensor Side

The Top-of-Form Sensor has two sensor pods that can sense the distinguishing characteristics of paper types. The pods are mounted on a slider; the inside sensor can read characteristics on the right edge of the media while the outside sensor can read characteristics in the center of the media. Please refer to the Top-of-Form adjustment settings in the media installation section of the manual for more information on selecting the appropriate settings.

Select from the following options:

Table 1: Paper Sensor Options

Paper Sensor Type	Paper Sensor Side
Gap	Inside
	Outside
Mark on Top	Inside
	Outside
Mark on Bottom	Inside
	Outside
Notch	Inside
	Outside
Continuous	Inside
	Outside

Ribbon Mode

The Ribbon Mode option allows the user to enable and disable Ribbon Mode and notes the type of ribbon being used.

Ribbon Mode has three settings:

- Coated In (CSI) - for thermal transfer printing
- Coated Out (CSO) - for thermal transfer printing
- None - for direct thermal printing

Print Adjust

The Print Adjust selection allows for the adjustments of both the darkness and the contrast of print quality as well as horizontal and vertical adjustments.

Selecting the plus or minus buttons respectively increases or decreases the values.

Changes to the values may also be made by selecting the field and entering the appropriate values using the numeric keypad. During printing the print adjust screen will be available via an icon in the mode indicator area of the front display. When paused the icon will be accessible via the home screen icon.

Note: Settings that use the word "Adjust" should be considered fine adjustments and are not main settings.

a. *Darkness*

The darkness adjustment is set within the range of -20 to +20. To increase darkness, adjust the settings in a positive (+) direction.

1. Enter the appropriate value in the field.

2. Upon exiting the Print Adjust panel, either select the green Accept button or the red Reject button.

b. *Contrast*

The contrast adjustment is set within the range of -10 to +10. To increase contrast, adjust the settings in a positive (+) direction.

1. Enter the appropriate value in the field.

2. Upon exiting the Print Adjust panel, either select the green Accept button or the red Reject Button.

c. *Vertical Adjust*

The vertical adjustment is set within the range of -100 to +100 dots. To move the image down, adjust the settings in a positive (+) direction.

1. Enter the appropriate value in the field.

2. Upon exiting the Print Adjust panel, either select the green Accept button or the red Reject button.

d. *Horizontal Adjust*

The horizontal adjustment is set within the range of -100 to +100 dots. To move the image to the right, adjust the settings in a positive (+) direction.

1. Enter the appropriate value in the field.

2. Upon exiting the Print Adjust panel, either select the green Accept button or the red Reject button.

2. User

The user button allows for the usage of custom labels and custom printer configurations that are saved internally or saved to a memory stick inserted in the USB host.

User Labels

Custom user labels that have been saved internally or in a mass storage device may be printed.

1. Select User Labels.

2. Select the file to be printed (internally or USB hosted).

3. Select the green Accept button.

4. Select the Print button to print the label.

Note: Further details are available in the Advanced section of the menu. Please refer to the Advanced section of the manual for more information.

User Setups

Printer configurations that have been saved internally or on a mass storage device attached to the USB host may be accessed and implemented from this utility.

1. Select User Setups.

2. Select the internally hosted user setup file.

3. Select the green Accept button.

Note: Further details are available in the Advanced section of the menu. Please refer to the Advanced section of the manual for more information.

3. Advanced

The Advanced button provides access to the advanced settings of the printer. These settings include the following:

- Page Defaults
- Printer
- Media
- Comm (communications)
- Adjustments
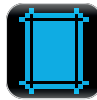
Page Defaults

The following page parameters can be modified. These settings are used only if they are not specified in the label format settings. They are typically controlled by the application software or the printer driver.

Table 2: Page Format Adjustments

Settings	Values	Ranges	Default
Print Length		0.10 to 99.00 in	4.00 in
Print Width		Refer to the Overview section to find your specific model	4.00 in
Vertical Offset		0.00 to 10.00 in	0.00 in
Horizontal Offset		0.00 to 4.00 in	0.00 in

Settings	Values	Ranges	Default
Orientation	Portrait Landscape Reverse Portrait Reverse Landscape		Portrait
Raster Mode	Transparent Opaque		Opaque
Default Font Number	(Please see Appendix A for the appropriate values)	0 to 52	23 (Courier)
Default Symbol Set	(Please see Appendix A for the appropriate values)		[0] PC-8
Default Point Size		4.00 to 999.75	12.00
Default Pitch Size		0.44 to 99.99	10.00
Print Truncation	Enabled Disabled		Enabled
Print on Gap	Enabled Disabled		Disabled

Note: The default settings will be used if the print job does not directly specify the settings.

Note: Most of these settings will affect the internal Quality Label from the Test menu.

Note: Rotating oversized images with Print Truncation enabled may result in truncating the printout entirely.

Note: Setting the raster mode to transparent will allow for texts, barcodes and images that support transparency to be copied onto the destination without the white regions generally associated with images. Setting the raster mode to opaque allows for texts, barcodes and images to be applied onto the destination with the white pixels from the source. Generally, this is only notices when text, barcodes or images are placed on top of each other.

Note: Print on Gap when enabled in Continuous paper mode eliminates simulated gap between labels. In this mode, vertical adjustment can be used to control the skip space size for different TOF types.

Note: Print Truncation takes precedence over Print on Gap.

Printer

The following settings may be adjusted:

- Presentation
- Auto
- Speeds
- Alarms
- Options
- Set Defaults

a. *Presentation*

The following settings can be adjusted.

Table 3: Presentation Settings

Presentation	Values	Ranges	Default
Pause Mode	Enable Disable		Disable
Present Time Out		0 - 1000 s	0 (never)
Present Distance		0.00 - 4.00	Auto

Note: To manually change the Present Distance settings, select the Auto button to the left of the value field and follow the instructions to enter and save the changes.

b. <u>Auto</u>

The printer has several Auto settings that can be enabled or disabled.

Table 4: Auto Settings

Selection	Values	Default
Auto Load	Enable Disable	Enable
Auto Option Detect	Enable Disable	Enable
Auto Calibrate	Enable Disable	Enable
Auto Present Distance	Enable Disable	Enable
Auto Tension	Enable Disable	Enable
Auto Pressure	Enable Disable	Enable
Auto Speed Adjust	Enable Disable	Enable

c. <u>Speeds</u>

The following settings may be adjusted:

- Print Speed
- Feed Speed
- Reverse Speed

Table 5: Speed Settings

Speed Settings	Speed Range (IPS)
Print Speed	2.0 - max speed; model dependent (Increments of 0.5)
Feed Speed	2.0 - max speed; model dependent (Increments of 0.5) or Auto
Reverse Speed	2.0 - max speed; model dependent (Increments of 0.5) or Auto

d. <u>Alarms</u>

The following alarm settings may be adjusted.

- Error Sound (depending on option installed)
- Warning Sound (depending on option installed)

Table 6: Alarm Settings

Adjustments	Options	Default
Paper Low Warning	True False	False
Paper Out Warning	True False	True
Cover Open Warning	True False	True
Paper Change Warning	True False	False
Rewinder Full Warning	True False	True
Reprint on Error	True False	True

e. *Options*

The following settings may be adjusted:

- Cutter - Controls the cutting action of the media.
- GPIO - Controls the application of labels.
- Present Sensor - Controls the "on-demand" dispensing of labels.
- Rewinder - Controls the operation of the powered internal label rewinder.

Cutter

The following settings may be adjusted for printers with the cutter option installed:

Table 7: Cutter Settings

Adjustments	Options	Ranges	Default
Cutter Mode	Off Cut By Label Cut By Job Cut By Count		Off
Cut By Count			1
Cut Distance Adjust		-100 to 100 dots	0
Cut Rotation Adjust		-10 to 10*	0

Note: *A positive value rotates the blade further.

GPIO

The following settings may be adjusted for printers with the GPIO option installed:

Table 8: GPIO Settings

Adjustments	Values	Ranges	Default
GPIO Mode	Off Custom		Off
Slew Speed		2 - 10 IPS	8 IPS
Pulse Width		1 - 2000µs	1000µs

Adjustments	Values	Ranges	Default
I/O Configuration			
Sig 1/2	Input		Input
	Output		
Sig 3/4	Input		Input
	Output		
Sig 5/6	Input		Output
	Output		
Sig 7/8	Input		Output
	Output		
Select Signal			
Sig 1	None		Start of Print 2
	Start of Print		
	Reprint		
	Slew		
	Pause		
	Start of Print 2		
Sig 2	None		Slew
	Start of Print		
	Reprint		
	Slew		
	Pause		
	Start of Print 2		
Sig 3	None		Pause
	Start of Print		
	Reprint		
	Slew		
	Pause		
	Start of Print 2		

Adjustments	Values	Ranges	Default
Sig 4	None		Reprint
	Start of Print		
	Reprint		
	Slew		
	Pause		
	Start of Print 2		
Sig 5	End of Print		Media Low
	Data Ready		
	Media Low		
	Service		
Sig 6	End of Print		Service
	Data Ready		
	Media Low		
	Service		
Sig 7	End of Print		End of Print
	Data Ready		
	Media Low		
	Service		
Sig 8	End of Print		Data Ready
	Data Ready		
	Media Low		
	Service		
Signal Type			
Sig 1	Low		High
	High		
	Low Pulse		
	Hi Pulse		
Sig 2	Low		Low
	High		
	Low Pulse		
	Hi Pulse		

Adjustments	Values	Ranges	Default
Sig 3	Low		Low
	High		
	Low Pulse		
	Hi Pulse		
Sig 4	Low		Low
	High		
	Low Pulse		
	Hi Pulse		
Sig 5	Low		Low
	High		
	Low Pulse		
	Hi Pulse		
Sig 6	Low		Low
	High		
	Low Pulse		
	Hi Pulse		
Sig 7	Low		Low Pulse
	High		
	Low Pulse		
	Hi Pulse		
Sig 8	Low		Low
	High		
	Low Pulse		
	Hi Pulse		

Present Sensor

The following settings may be adjusted for printers with the present sensor option installed:

Table 9: Present Sensor Settings

Present Sensor Settings	Values	Ranges	Default
Present Sensor	Enable		Disable
	Disable		
Present Distance Adjust		-100 to 100 dots	0

Note: For small labels, present distance must be set to 0 to avoid becoming stuck during backup.

Rewinder
The following settings may be adjusted for printers with the rewinder option installed.

Table 10: Rewinder Settings

Rewinder Settings	Values	Ranges	Default
Rewinder Mode	Off Clockwise Counter Clockwise		Off
Rewinder Tension Adjust		-10 to 10	0

f. Set Defaults

The factory default settings for the printer setup can be reset. To reset to the default settings, select Set Defaults. Confirm your selection by selecting the green Accept button.

Note: If the current custom settings have not been saved but will be needed again, be sure to save them with the User Setup from the Tools menu before resetting to defaults.

Media

Select Media to change the print media settings.

Table 11: Media Settings

Media Settings	Values	Ranges	Default
Paper Sensor Type	Gap Mark on Top Mark on Bottom Notch Continuous		Gap
Paper Sensor Side	Outside Inside		Outside
Ribbon Mode	Coated In Coated Out None		Coated In
Heat		1 to 30	5*
Heat Balance		1 to 10	8*

Media Settings	Values	Ranges	Default
Head Pressure (Suggested)		1 to 10	7*
Rewinder Tension		1 to 20	12*
Ribbon Tension Front		1 to 30	20*
Ribbon Tension Rear		1 to 20	15*
Ribbon Low Diameter		1.0 to 2.0 in.	1.5 in.
Gap/Mark Offset		-2.23 to 6.0 in.*	0
Gap/Mark Noise		0 to 600 dots	0
Ribbon Length		0 to 1,000 m	0
Form Length		0 to 99 in.	4 in.
Number of Forms		0 to 10,000	0

Note: *These values may vary depending on the printer model.

Communications

Select Communications to change the communications settings.

a. Ethernet

The following Ethernet communications settings may be adjusted:

Table 12: Ethernet Communications Settings

Functions	Values	Actions	Default
DHCP	Enabled Disabled		Enabled
IP Address		If DHCP is disabled, enter the appropriate value	0.0.0.0
Subnet Mask		If DHCP is disabled, enter the appropriate value	0.0.0.0
Gateway		If DHCP is disabled, enter the appropriate value	0.0.0.0

Once the data has been entered, select the Home button and then select the green Accept button to save the changes which will require a printer reboot.

If necessary, the user may return to the default settings by selecting **General > Reset Defaults > Ethernet**.

b. Wireless

The following wireless settings may be set for printers with the wireless option installed:

Table 13: Wireless Settings

Functions	Values	Actions	Default
Wireless Enable	Enabled Disabled		Enabled
SSID		Enter the appropriate SSID value	0.0.0.0
Wireless DHCP	Enabled Disabled		Enabled
IP Address		Enter the appropriate value	0.0.0.0
Subnet Mask		Enter the appropriate value	0.0.0.0
Gateway		Enter the appropriate value	0.0.0.0
Security	None WEP WPA WPA2		None
Password		Enter the appropriate value	
Show Password	Enabled Disabled		Disabled

To return to the default settings, select **General > Reset Defaults > Wireless**.

c. Serial

The following tabbed option settings may be adjusted for printers with the Serial Interface option installed:

- **Baud Rate** - Sets the serial communications rate in bits per second

- **Data Bits** - Sets the word length

- **Stop Bits** - Sets the number of stop bits

- **Parity** - Sets the word parity

- **Protocol** - Sets the serial communications handshaking mechanism, software, hardware or none

Table 14: Serial Settings

Functions	Values	Ranges	Default
Baud Rate	9600 19200 38400 57600 115200		115200 BPS
Databits	7 8		8
Stopbits	1 2		1
Parity	None Even Odd		None
Protocol	None Hardware Software Both		None

To return to the default settings, select **General > Reset Defaults > Serial**.

d. *General*

Select from the following to change the General communications settings:

Services
The following services may be enabled or disabled:

- Enable Network Time Protocol

- Enable Webpages

- Enable SSH (SSH-2 is supported)

- Enable SNMP

- SNMP Trap IP

- Enable LPD
  To print using the LPD service, connect from a host using the LPR port and the queue name "lp".

Table 15: Services

Services	Default
Enable Network Time Protocol	Disabled
Enable Webpages	Enabled
Enable SSH	Enabled
Enable SNMP	Disabled
SNMP Trap IP	127.0.0.1
Enable LPD	Enabled

To return to the default settings, select **General > Reset Defaults > Services**.

Webpages provide a printer configuration interface for the user. Users can view the printer status, set printer parameters, print test labels and perform simple actions like printer calibration and setting defaults.

To access the printer Webpages from a computer where the printer has been installed, type the printer's IP address into the Web browser URL field.

Note: The printer must be connected to the Ethernet.

To find the IP address, select **Info > Network Report** and record the value for Ethernet IP.

Note: The following Web browsers are supported:

- Internet Explorer (version 8 and higher)
- Firefox (version 13 and higher)
- Google Chrome (version 23 and higher)

Host Timeout
The Host Timeout refers to the print job timeout in seconds before moving on to monitor other ports.

Table 16: Host Timeout

Function	Range	Default
Host Timeout	1 to 300 seconds	1
Port Number	0 to 65535	9100
Host Name	Any String	Printer model number followed by the last 6 digits of the MAC address, e.g., p1115_208CB7
Hex Transfer	True/False	False

Reset Defaults
The Reset Defaults function allows the user to reset the communications to the default settings.

To reset the communication settings to the factory default settings, select one of the options and select the green Accept button to make the change.

- Ethernet
- Wireless
- Serial
- Services

Adjustments

Adjustments are considered fine adjustments and should not be considered main settings. Select from the following settings to change the values:

Table 17: Adjustment Settings

Adjustment Settings	Ranges	Default
Darkness	-20 to 20	0
Contrast	-10 to 10	0
Vertical Adjust	-100 to 100	0
Horizontal Adjust	-100 to 100	0
Head Pressure Adjust	-5 to 5	0
Rewinder Tension Adjust	-10 to 10	0
Ribbon Tension Front Adjust	-10 to 10	0
Ribbon Tension Rear Adjust	-10 to 10	0
Present Distance Adjust	-100 to 100	0
Cut Distance Adjust	-100 to 100	0

Note: Narrow labels may slip during backup if the head pressure is set too high.

4. Tools

Select from the following options to adjust the appropriate settings:

- Calibrate
- Security
- Maintenance
- User Files
- Date/Time

Calibrate

The Calibrate settings include:

- Calibrate Sensors

- Calibrate Paper
- Calibrate Manually
- Calibrate Display

a. *Calibrate Sensors*

Select Calibrate Sensors to automatically calibrate the printer without print media. Calibration includes changes to the following settings:

- Head Pressure (not applicable for the p1115)
- Auto Load Sensor
- Top-of-Form Sensor

Note: The print media must be removed and the printhead mechanism must be unlatched for the Calibrate Sensors to properly calibrate the printer.

b. *Calibrate Paper*

When selecting Calibrate Paper, the paper is scanned to determine the top-of-form media and top-of-form gap settings.

Upon selection, the printer will move the paper forward and backward over the gap or mark. It may be helpful to place the identifying mark or notch just behind the TOF sensor so that the sensor will go over the mark as the media progresses through the printer.

Calibrate Paper is intended to sample paper with the default size of 4" x 4". If a 4" x 6" label is used for calibration and the TOF sensor is placed just after the identifying mark or notch, it may not calibrate properly because it is designed to move the paper only 4".

Note: Print media must be properly installed in the printer for the Calibrate Paper function.

Note: Manually selecting Calibrate Paper is not necessary if Auto Calibration is enabled. However, it may help in calibrating more difficult media.

c. *Calibrate Manually*

Intended for advanced users, the calibrate manually section allows the user to manually adjust the top-of-form sensor for specialized media.The TOF ADC Reading field displays the current top-of-form sensor reading for the currently selected paper type and sensor side.

The values for gain, paper threshold and gap/mark threshold are shown for the currently selected paper type and sensor side as well. These values are typically set when auto calibration is performed using the Calibrate Paper utility.

The capture feature allows the user to lift the printhead, and using the LED as a guide place the paper under the sensor and capture the value. Then, moving the gap (media backing) or mark under the sensor, the value can be captured.

When saving changes to a threshold, auto calibration is disabled to prevent over-writing the new values when auto-loading. Performing Calibrate Paper will overwrite the threshold values.

Select Calibrate Manually to change the following settings:

- Top-of-Form Gain
- Paper Threshold
- Gap/Mark Threshold

Table 18: Calibrate Manually Settings

Adjustment Settings	Ranges
TOF Gain	1 to 31
Paper Threshold	0 to 255
Gap/Mark Threshold	0 to 255

d. *Calibrate Display*

Select Calibrate Display and then select either the green Accept button to continue or the red Reject button. Upon selecting to continue, follow the on-screen directions to properly calibrate the touchscreen display.

If the touchscreen display becomes unusable, the printer can be calibrated during power-up as well. To calibrate during power-up, perform the following procedure beginning with the printer powered off.

1. Press and hold the Reset button on the back of the printer.

2. Toggle the power switch to power-on the printer.

3. Continue to hold the Reset button for ten (10) seconds.

4. Follow the on-screen instructions to calibrate the display.

Note: Allow a few minutes for power-up to complete.

Security

The Security menu settings may be adjusted. These adjustments include changing the password as well as changing the security level.

To change the password, perform the following steps:

1. Select Change Password.

2. Enter the old password using the on-screen keyboard.

3. Select the green Accept button to accept the entry or the red Cancel button to reject the entry.

4. Enter the new password and select either the green Accept button or the red Cancel button.

5. Re-enter the new password and select either the green Accept button or the red cancel button.

To change the security level, choose from the following options:

Table 19: Security Settings

Functions	Options
Security Level	Off
	Secure
	Secure All
	3 Button Display

Security Descriptions

- Secure - When the "Secure" option is selected, changes to the advanced settings and user tools will require a password.

- Secure All - When the "Secure All" option is selected, changes to any settings will require a password.

- 3 Button Display - When this option is selected, the three button display will be enabled on the main panel. A password will be needed to access the menu again.

Note: The factory default password is the number "0."

Note: By default, security should be disabled.

Note: If password is forgotten, Datamax-O'neil Technical Support will provide assistance to rest the password.

Remove Security

To remove security, select the lock icon to the right of the Change Password utility. Type your password and then select the green Accept button. To confirm, select the green Accept button.

Maintenance

To adjust the following Maintenance settings, select the Maintenance button. The maintenance settings include:

- Cleaning
- Upgrade
- Odometers

a. *Cleaning*

Cleaning should be routinely performed. The maintenance alarm is set by the user in thousands of inches.

Enter the desired maintenance reminder interval. Once a fault appears directing the user to clean the printhead, insert a factory approved cleaning card under the printhead and select Clean Now, or clean the printhead manually and reset the counter.

The Elapsed field displays the number of inches, in thousands, since the last cleaning.

Table 20: Maintenance Settings

Maintenance Settings	Ranges	Actions	Default
Maintenance	0k to 1000k in.		0 (never)
Clean Now		Select Clean Now	
Reset Counter		Reset Clean Counter	

b. *Upgrade*

The Upgrade function allows the user to upgrade the printer software. Insert a mass storage device into the USB host with the appropriate file to be uploaded and then select Upgrade.

Do not turn off the printer during the process. Once the printer has been updated, it will reboot. When the printer is back online, be sure to power-cycle the printer once more by turning it off and then back on.

Note: Save all user files, labels and setups to a mass storage device connected to the USB host prior to updating your printer. Files that are not saved may be lost during the upgrade process.

Note: Upgrades may also be performed using the Configuration Utility.

c. *Counters*

The following Counter readings are viewed:

- Absolute
- Printhead
- User
- Session

Note: Printhead odometer can be viewed in Printhead Info screen. Session Label Count is viewed in Extend Status Screen.

Note: To reset the user odometer, select the Reset User button.

User Files

The User Files utility allows the user to access files that are saved internally or saved to a mass storage device.

a. *Labels*

Labels can be saved either internally or to a mass storage device. These labels can also be printed from this utility. Labels stored on a mass storage device must be placed in a directory called **user_labels** at the root (top) level of the storage device (e.g., E:\user_labels).

Note: Label names cannot contain a space character.

Print

The user can print label files that have been saved internally or saved to a mass storage device attached to the USB host.

1. Select Print.

2. Using the scroll arrows, highlight the file to be printed.

Note: The first tab displayed in the interface reveals the files that have been saved internally. Tab 2 displays the available files from the attached mass storage device.

3. Select the green Accept button.

4. Select the printer icon in the taskbar.

Organize

User labels may be copied from a mass storage device to the internal memory or from the internal memory to a mass storage device. They may also be deleted or renamed from this utility.

a. Copy

1. Select Organize.

2. Using the scroll arrows, highlight the appropriate file.

3. Select the green Accept button to continue.

4. Select Copy.

5. Select the green accept button to copy the files between internal storage and the USB mass storage device.

b. Delete

1. Select Organize.

---

2. Using the scroll arrows, highlight the appropriate file.

3. Select the green Accept button to continue.

4. Select Delete.

c. Rename

1. Select Organize.

2. Using the scroll arrows, highlight the appropriate file.

3. Select the green Accept button to continue.

4. Select Rename.

5. Confirm your selection by selecting the green Accept button.

6. Using the alpha-numeric keypad, enter a new name for the selected file.

7. Select the green Accept button to continue.

b. Media

The Media utility allows the user to copy, delete and rename media configuration files. It also provides access to setup files stored internally or on a mass storage device connected to the USB host. The user can also save the current media configuration setup. Media configuration files that are stored on a mass storage device must be placed in a directory called **user_media** at the root *(top)* level of the storage device (e.g., E:\user_media).

Note: Media names cannot contain a space character.

The settings include the following:

- Paper ID
- Ribbon ID
- Paper Sensor Side
- Paper Sensor Type
- Ribbon Mode
- Heat
- Heat Balance
- Head Pressure
- Rewinder Tension
- Ribbon Tension Front
- Ribbon Tension Rear
- Auto Tension

- Auto Pressure
- Print Speed
- Gap/Mark Offset
- Gap/Mark Noise
- Number of Forms
- Form Length
- Ribbon Length
- Auto Media Global

Organize
To copy, delete or rename a file to or from a mass storage device connected to the USB host, perform the following steps:

a. Copy

1. Select Organize*.*

2. Using the scroll arrows, highlight the appropriate media configuration file.

3. Select the green Accept button to continue.

4. Select Copy.

5. Select the green Accept button to confirm.

b. Delete

1. Select Organize.

2. Using the scroll arrows, highlight the appropriate media configuration file.

3. Select the green Accept button to continue.

4. Select Delete.

5. Select the green Accept button to confirm.

c. Rename

1. Select Organize.

2. Using the scroll arrows, highlight the appropriate media configuration file.

3. Select the green Accept button to continue.

4. Select Rename.

5. Using the alpha-numeric keypad, enter a new name for the selected file.

6. Select the green Accept button to confirm.

Load
The Load utility allows the user to change the media configuration settings to a setup that was previously saved internally or to a mass storage device.
Note: Media setup files must be copied from USB to internal drive before loading.

1. Select Load.

2. Using the scroll arrows, highlight the appropriate media setup file.

3. Select the green Accept button.

4. Select the green Accept button to confirm.

Save Media Settings
The Media Setup utility allows the user to save the current media configuration settings internally.

1. Select Media Setup.

2. Select the green Accept button.

3. Using the alpha-numeric keypad, type a name for the setup file.

4. Select the green Accept button to confirm.

Save Media IDs
The Media Setup utility allows the user to save current media ID settings internally.

1. Select Media ID.

2. Using the alpha-numeric keypad, type the desired Paper ID.

3. Using the alpha-numeric keypad, type the desired Ribbon ID.

4. Select the green Accept button to confirm.

Note: Media ID files use and equal (=) sign to seperate between paperID and ribbonID.

c. _Setups_

The User Setup utility allows for the user to copy, delete and rename printer settings. The user can also save the current setup and load a saved setup. User setup files stored on a mass storage device must be placed in a directory called ***user_configs*** at the root (top) level of the storage device (e.g., E:\user_configs).

These settings include the ones listed in the Setting Report from the Info menu.

Note: User Setups names cannot contain a space character.

Note: User Setup files will contain adjustment (fine adjustment) values. However, if transferred to another printer, these values will not take affect unless the Security parameter in the PJL Job header matches the printer key.

Organize
To copy, delete or rename a printer configuration setup file to or from a mass storage device connected to the USB host, perform the following steps:

a. Copy

1. Select Organize.

2. Using the scroll arrows, highlight the appropriate user setup file.

3. Select the green Accept button to continue.

4. Select Copy.

5. Select the green Accept button to confirm.

b. Delete

1. Select Organize.

2. Using the scroll arrows, highlight the appropriate user setup file.

3. Select the green Accept button to continue.

4. Select Delete.

5. Select the green Accept button to confirm.

c. Rename

1. Select Organize.

2. Using the scroll arrows, highlight the appropriate user setup file.

3. Select the green Accept button to continue.

4. Select Rename.

5. To confirm, select the green Accept button.

6. Using the alpha-numeric keypad, type a name in the entry field.

7. Select the green Accept button to confirm.

Load
The Load utility allows the printer settings to be changed to a previously saved setup.
Note: User Setup files must be copied from USB to internal drive before loading.

1. Select Load.

2. Using the scroll arrows, highlight the appropriate user setup file.

3. Select the green Accept button to continue.

4. Select the green Accept button to confirm.

Save
The Save utility allows the user to save the current printer settings internally.

1. Select Save Setup.

2. Using the alpha-numeric keypad, enter a name for the setup to be saved.

3. Select the green Accept button.

4. Select the green Accept button to confirm.

d. *Languages*

The Languages utility allows the user to load additional language files to the printer. Translation files can be created using QTLinguist. The language files created in "qm" format can be imported from the "**user_languages**" directory at the root (top) level of the mass storage device.

Organize
To copy, delete or rename a printer language file to or from a mass storage device connected to the USB host, perform the following steps:

a. Copy

1. Select Organize.

2. Using the scroll arrows, highlight the appropriate user language file.

3. Select the green Accept button to continue.

4. Select Copy.

5. Select the green Accept button to confirm.

b. Delete

1. Select Organize.

2. Using the scroll arrows, highlight the appropriate user language file.

3. Select the green Accept button to continue.

4. Select Delete.

5. Select the green Accept button to confirm.

c. Rename

1. Select Organize.

2. Using the scroll arrows, highlight the appropriate user language file.

3. Select the green Accept button to continue.

4. Select Rename.

5. To confirm, select the green Accept button.

6. Using the alpha-numeric keypad, type a name in the entry field.

7. Select the green Accept button to confirm.

Select
The Select Languages utility allows the user to enable a different language that is installed in the printer.
Note: Language files must be copied from USB to internal drive before loading.

1. Select "**Select**" languages.

2. Using the scroll arrows, highlight the desired language file.

3. Select the green Accept button to continue.

4. To confirm, select the green Accept button.

e. Wallpaper

The wallpaper utility enables the user to change the main screen background to another image. The image must be a 72 dpi JPEG and must be 320 pixels wide and 240 pixels high.

Note: Some colors may cause the buttons to blend into the menu and reduce their contrast.

Note: User images can contain graphic files such as wallpapers (.jpg format) or printer logos and imported from the "**user_images**" directory at the root (top) level of the mass storage device.

Organize
To copy, delete or rename a printer wallpaper file to or from a mass storage device connected to the USB host, perform the following steps:

a. Copy

1. Select Organize.

2. Using the scroll arrows, highlight the appropriate user wallpaper file.

3. Select the green Accept button to continue.

4. Select Copy.

5. Select the green Accept button to confirm.

b. Delete

1. Select Organize.

2. Using the scroll arrows, highlight the appropriate user wallpaper file.

3. Select the green Accept button to continue.

4. Select Delete.

5. Select the green Accept button to confirm.

c. Rename

1. Select Organize.

2. Using the scroll arrows, highlight the appropriate user wallpaper file.

3. Select the green Accept button to continue.

4. Select Rename.

5. To confirm, select the green Accept button.

6. Using the alpha-numeric keypad, type a name in the entry field.

7. Select the green Accept button to confirm.

Select
The Select Wallpaper utility allows the user to change the wallpaper background that has been previously installed in the printer.
Note: Wallpaper files must be copied from USB to internal drive before loading.

1. Select "**Select**" wallpaper.

2. Using the scroll arrows, highlight the desired wallpaper file.

3. Select the green Accept button to continue.

4. To confirm, select the green Accept button.

f. Fonts

The Fonts utility enables the user to change the fonts being used in the printer.

Note: It is the user's responsibility to obtain the appropriate licenses for downloaded or imported fonts.

Note: Typeface ID is shown in the file name after the font name and is separated by an equal (=) sign.

Note: The Font Report shows the Font Number in parentheses after the font name.

Note: User fonts can contain true type font files (ttf format) and imported from the "**user_fonts**" directory at the root (top) level of the mass storage device. The desired font ID must be entered from the organize menu.

Organize

To copy, delete or rename a font to or from a mass storage device connected to the USB host, perform the following steps:

a. Copy

This function allows for the importing and exporting of fonts from and to a USB mass storage device. When copying the font from the USB host to internal memory, the operator will be prompted to enter the desired Typeface ID by which the font is selected in label format. Internal Font IDs are assigned automatically.

1. Select Organize.

2. Using the scroll arrows, highlight the appropriate user font file.

3. Select the green Accept button to continue.

4. Select Copy.

5. Select the green Accept button to confirm.

b. Delete

1. Select Organize.

2. Using the scroll arrows, highlight the appropriate user font file.

3. Select the green Accept button to continue.

4. Select Delete.

5. Select the green Accept button to confirm.

c. Renumber

1. Select Organize.

2. Using the scroll arrows, highlight the appropriate user font file.

3. Select the green Accept button to continue.

4. Select Renumber.

5. To confirm, select the green Accept button.

6. Using the numeric keypad, type a value in the entry field.

7. Select the green Accept button to confirm.

Date/Time

To set the date and time, select the Date/Time button from the Tools menu.

If the message "Network Time Protocol Enabled!" appears, select the green Accept button.

To adjust the settings, select the following buttons and input the appropriate information.

- Month
- Day
- Year
- Hour
- Minutes
- AM/PM

Note: Upon exit, the user can enable the displaying of the date and time on the main screen.

5. Language

Select from the localization settings and display units.

Language Files

- English
- *Other Loaded Languages*

Display Units

- Imperial
- Metric

Display Font

- Standard
- CJKT (necessary for Asian languages)

Once the unit has been chosen, select the green Accept button to continue and then select the next green Accept button to confirm.

Note: When switching to Asian display languages it is recommended to set CJKT first for Display Font, then select the Asian language file and "Accept." The menu will reset at this point.

6. Test

The following options are available from the Test menu:

- Test labels
- Diagnostics
- Test Options
- Test Applicator

Test Labels

The Test Labels feature allows the user to select and print test labels.

1. Select the appropriate test label from the menu using the up and down arrows:

Note: You may also select the label name to move to the next one in the list.

2. Select the number of labels to be printed using the Select Count option.

3. Select the printer icon in the taskbar to print the test label.

Table 21: Test Labels

Selections	Values	Ranges	Default
Select Test Label	Quality Label 10% Block Pattern 20% Block Pattern		Quality Label
Select Count		1 to 9999	1

Select the printer icon in the taskbar to begin printing the test label(s) entered into the Select Count field.

Diagnostics

To enter the Diagnostics panel, select the Diagnostics button from the Test menu.

a. *Sensor Readings*

The Sensor Readings function allows the user to view the values of various printer sensors. The Sensor Readings menu has four (4) tabs that can be navigated by selecting the next and previous buttons in the taskbar.

b. *General*

Select General to enable or disable the appropriate settings:

- **Page Format Shading** - Used for diagnosing label format issues, enabling this options puts a shade over white areas of the image on a label.

- **File Capture** - Used for capturing print data for diagnostics. Print files will be generated using a time stamp for the name. These files will be placed in the user labels internal directory. If a USB memory stick is inserted, the files will be saved to :/users_labels.

Test Options

The Test Options function of the Diagnostics menu allows the user to test the options currently installed on the printer. Select Test Options and navigate through the tabbed interface to select the option to be tested. The tabs are navigated using the next and previous arrows in the taskbar.

Table 22: Test Options

Test Options	Values	Ranges	Default
Cycle Cutter		1 to 999	1
Test Present Sensor		N/A	
Test Rewinder		N/A	
Test Ribbon Assembly • Select Spindle	 Front Rear	N/A	

Once the selections have been made, select the Start button to begin the test.

Test GPIO

The Test GPIO function allows the user to test a connected applicator.

Table 23: Test GPIO

Selections	Values	Ranges	Default
Enable Wrap Around	Enabled Disabled		Disabled
Pulse Width		1 to 2000	1000
I/O Configuration			
Sig 1/2	Input Output		Input
Sig 3/4	Input Output		Input
Sig 5/6	Input Output		Output

Selections	Values	Ranges	Default
Sig 7/8	Input Output		Output
Select Test	Write Mode Read Mode Pulse Mode		Write Mode

<u>Write Mode</u>

Enter the appropriate settings and select the green Start button.

Table 24: Select Test - Write Mode

Write Mode	Values	Ranges	Default
Sig 1	N/A		
Sig 2	N/A		
Sig 3	N/A		1
Sig 4	N/A		1
Sig 5	0 1		1
Sig 6	0 1		1
Sig 7	0 1		1
Sig 8	0 1		1

<u>Read Mode</u>

Enter the appropriate settings and select the green Start button.

Table 25: Select Test - Read Mode

Read Mode	Values	Ranges	Default
Sig 1	0 1		1
Sig 2	0 1		1
Sig 3	0 1		1

Read Mode	Values	Ranges	Default
Sig 4	0 1		1
Sig 5	N/A		
Sig 6	N/A		
Sig 7	N/A		
Sig 8	N/A		

Pulse Mode

Enter the appropriate settings and select the green Start button.

Table 26: Select Test - Pulse Mode

Read Mode	Values	Ranges	Default
Sig 1	N/A		
Sig 2	N/A		
Sig 3	N/A		
Sig 4	N/A		
Sig 5	0 1		1
Sig 6	0 1		1
Sig 7	0 1		1
Sig 8	0 1		1

5 Cleaning and Maintenance

Overview

To maintain good print quality and increase printhead life, proper cleaning should be routinely performed using factory-approved cleaning supplies.

Caution: A contaminated printhead can cause premature printhead failure.

Caution: Failure to clean the printhead as detailed in this manual could void the printhead manufacturer's warranty.

Intervals

For direct thermal printing, the printhead should be cleaned whenever a roll of labels is replaced or every 6,500 inches printed. For users printing via thermal transfer, the printhead should be cleaned every time a roll of ribbon is replaced. For higher coverage printing, printhead cleaning may need to be performed more frequently.

Supplies

Caution: Cleaning should only be performed using factory-approved and authorized cleaning supplies. Any use of non-authorized cleaning supplies can void the printhead and platen roller warranties.

- Cleaning Pens
- Cleaning Cards/Film
- Can of Compressed Air
- Clean, lint-free cloth
- Isopropyl Alcohol

Cleaning the Automatic Loading Sensor

The automatic loading sensor should be cleaned whenever necessary.

1. Remove the labels.

2. With a can of compressed air, spray the sensor to remove dust and debris.

3. Repeat as necessary.

Cleaning the Top-of-Form Sensor

The Top of Form sensor should be cleaned whenever necessary.

1. Remove the media and ribbon.

2. With a can of compressed air, spray both (2) sensors to remove dust and debris.

3. Repeat as necessary.

Cleaning the Paper Low Sensor

The Paper Low Sensor should be cleaned whenever necessary.

1. Remove the media and ribbon.

2. Wipe the sensor with the clean, lint-free cloth.

3. Repeat as necessary.

Cleaning the Printhead

For optimum performance, the printhead should be routinely cleaned with factory-approved cleaning supplies. When using the cleaning pen, follow the instructions located on the packaging.

Cleaning Cards

Cleaning cards are effective at removing many common adhesives and contaminants from printheads.

1. Remove the media and ribbon.

2. Insert the cleaning card under the printhead.

3. Select Menu / Tools / Maintenance / Cleaning and then select Clean Now.

4. Slide the cleaning card in and out to scrub the printhead.

5. Repeat as necessary.

Cleaning the Cutter

The cutter should be routinely cleaned to prevent jams.

1. Release the cutter mechanism from its magnetic hold.

2. Using a can of compressed air, gently blow out the debris from the cutter area.

Warning: To prevent injury, the cutter should never be disassembled for any reason.

Safety Overview

Caution: ESD protection is required when performing these steps.

Warning: The printer must be powered off and disconnected from utility power prior to performing any steps of this procedure. Failure to heed this warning may result in personal injury or damage to internal components.

- Maintain complete ESD protection in a safe, clean environment at all times while servicing this equipment.
- When handling the printhead, grasp it by its edges.
- Avoid contact between the printhead and clothing.

Tools Needed
- 3 mm Hex Head Wrench

Replacing the Printhead

1. Open the media cover.

2. Rotate the printhead latch lever clockwise to release the printhead mechanism.

Figure: 6 - 1   Release the Printhead Mechanism
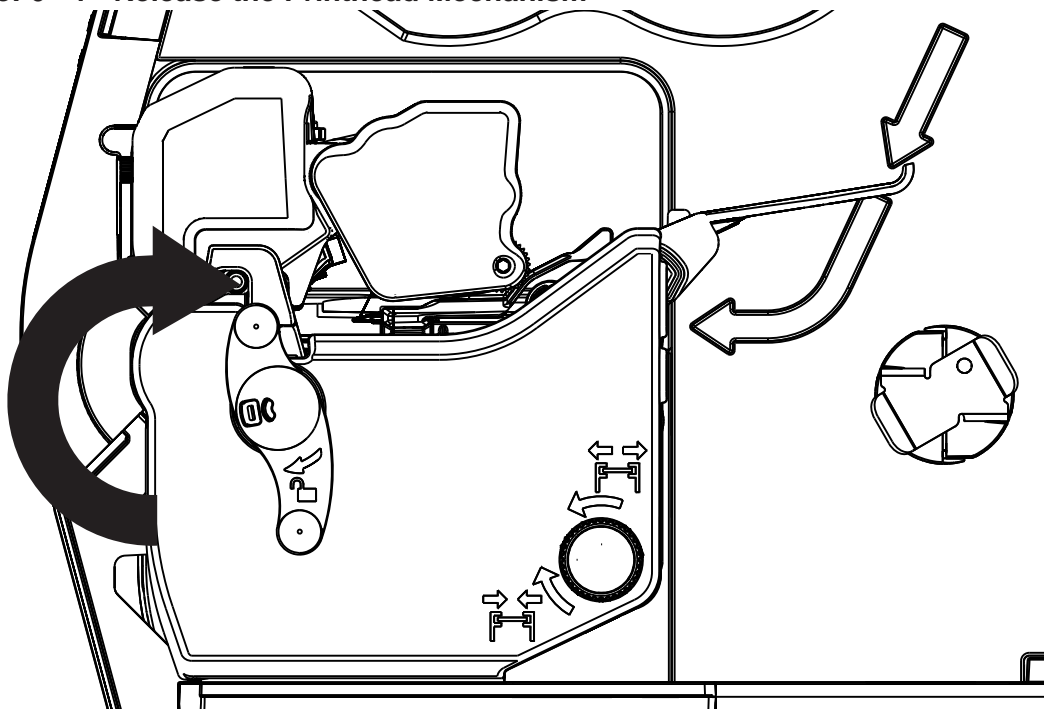
3. Insert a 3 mm hex head wrench into the openings and loosen both (2) screws securing the printhead to the printhead mechanism.

Note: Both screws are spring-loaded and captured eliminating the need to remove them.

Note: The printhead will drop down enabling access to both wiring connectors. The p1115 has a single connector.

Figure: 6 - 2   Printhead Screws
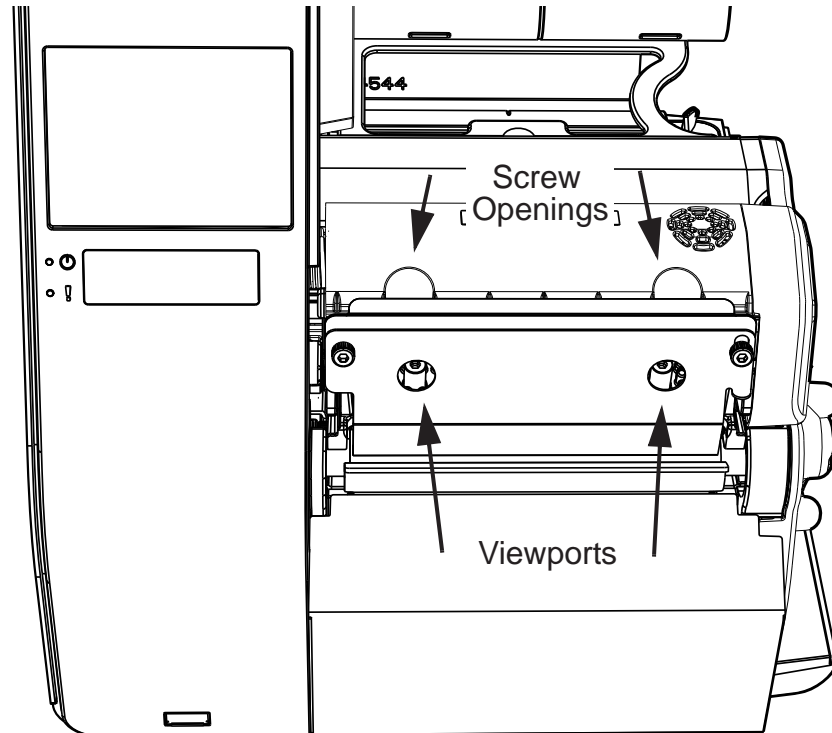
Note: There are two (2) view ports on the ribbon plate that enable the screws to be seen.

4. Carefully disconnect both connectors from the printhead.

Caution: Always grasp the printhead from the sides to avoid damaging sensitive electrical components.

Caution: Exercise caution when disconnecting the printhead connections to avoid damaging the printhead or the connectors.

Figure: 6 - 3   Printhead Connectors (p1115s, p1120n, p1125 & p1725) Top
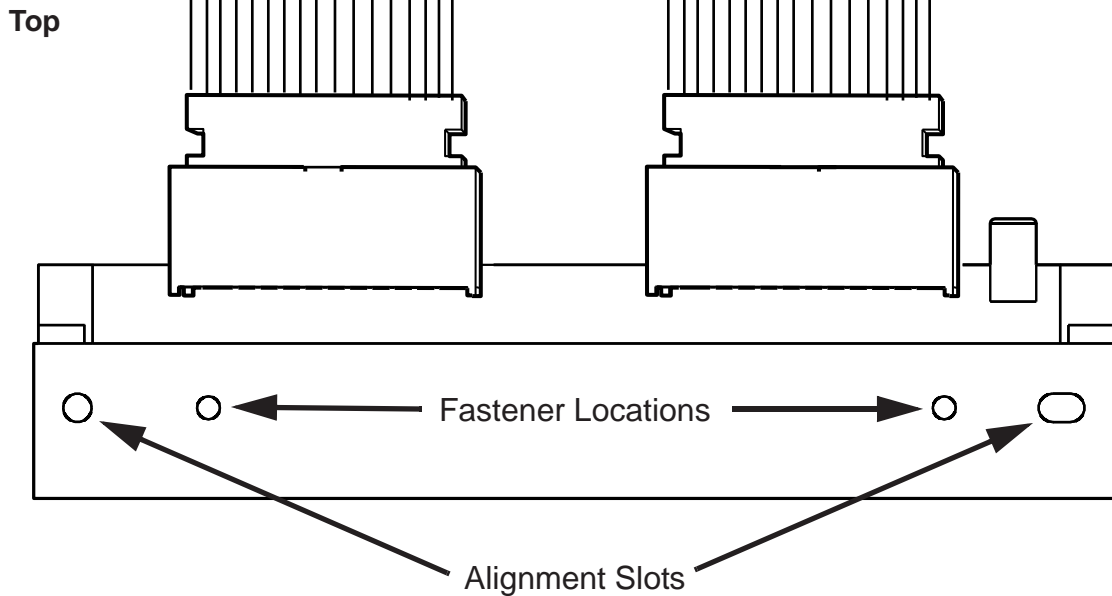
5. Install the new printhead in the reverse order as it was disassembled from the printer and tighten the hex head screws using a torque of 2.0 to 3.0 in-lbs (2.3 - 3.4 kgf/cm).

Caution: Do not over-tighten the printhead fasteners.

Note: Ensure the alignment pins are centered in the alignment slots on the printhead.

Replacing the Upper Platen Roller

1. Open the media cover.

2. Remove the roller cover panel.

Figure: 6 - 4   Roller Cover Panel
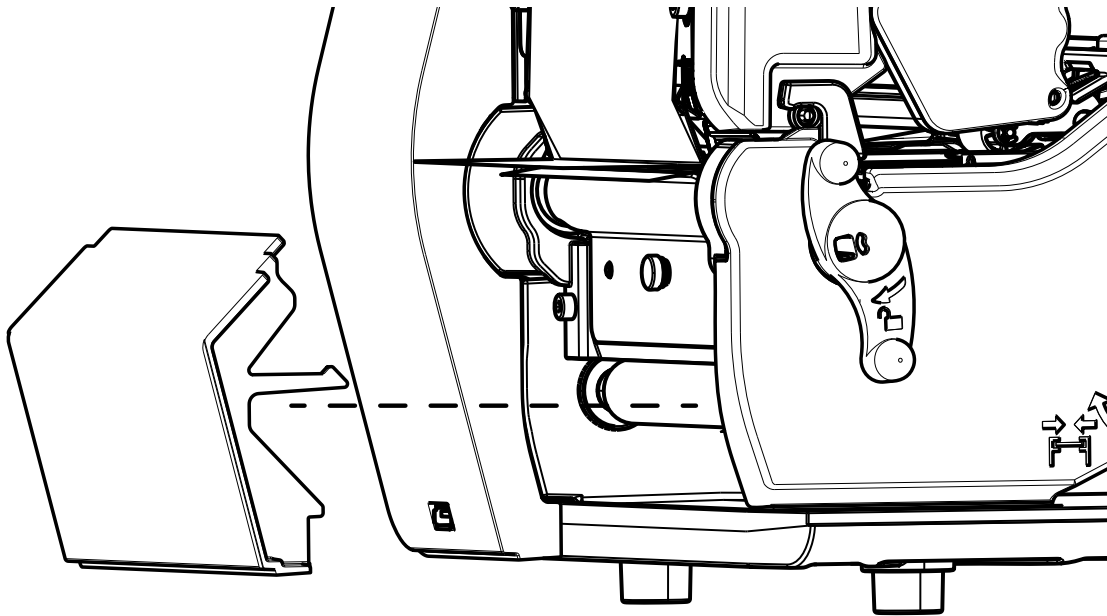
3. Rotate the printhead latch lever clockwise to release the printhead mechanism.

Figure: 6 - 5   Release the Printhead Mechanism
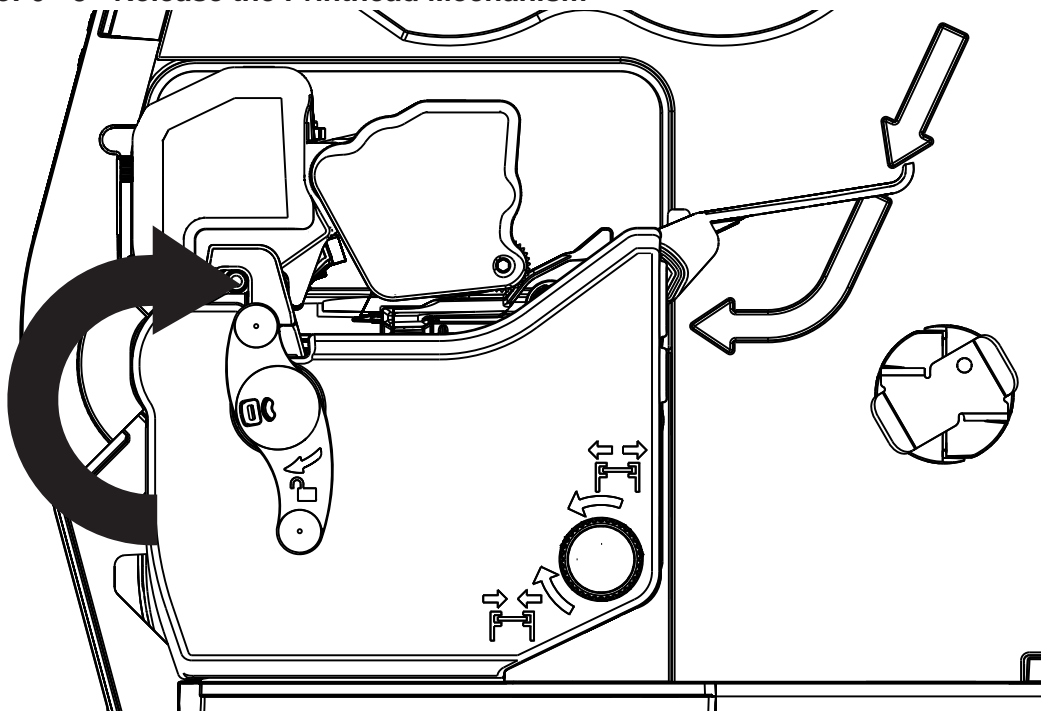
4. Loosen and remove the thumbscrew securing the tear plate or other front mounted option to the print mechanism and remove.

Figure: 6 - 6   Thumbscrew and Tear Plate
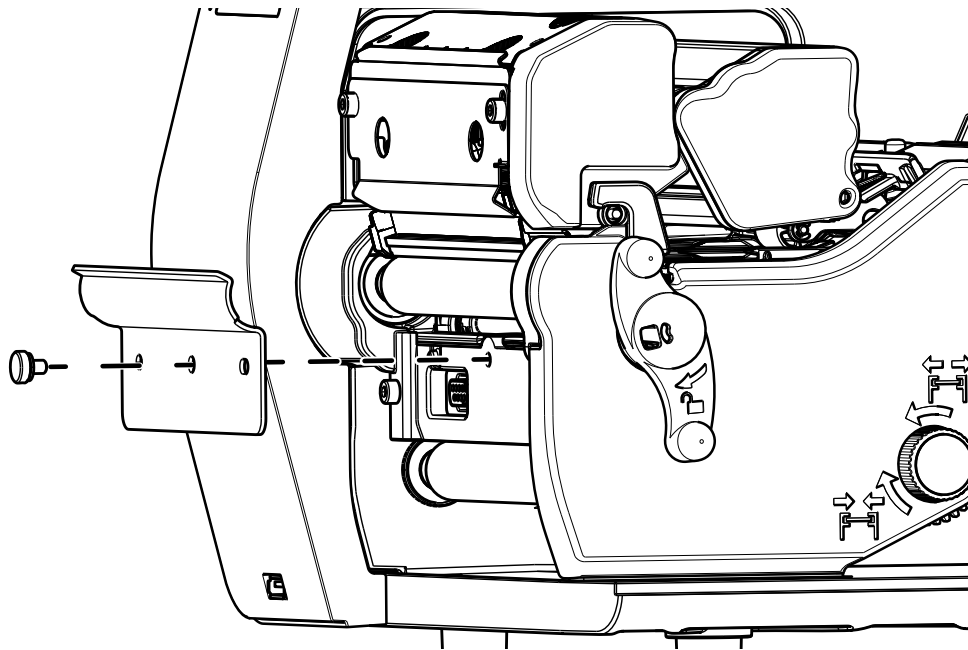
5. Loosen and remove both (2) hex head screws securing the platen roller plate to the print mechanism.

Figure: 6 - 7   Platen Roller Plate Fasteners
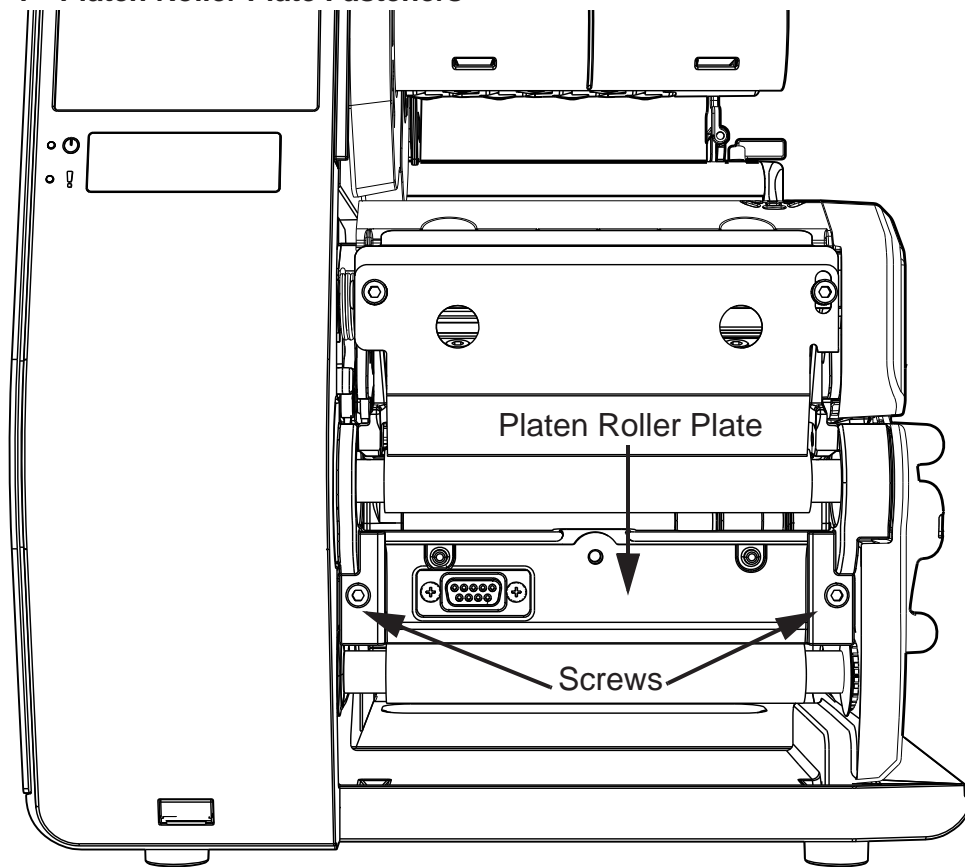
6. Slide the platen roller plate towards the front of the printer and rotate clockwise (view from top) and remove from printer.

Figure: 6 - 8   Platen Roller Plate
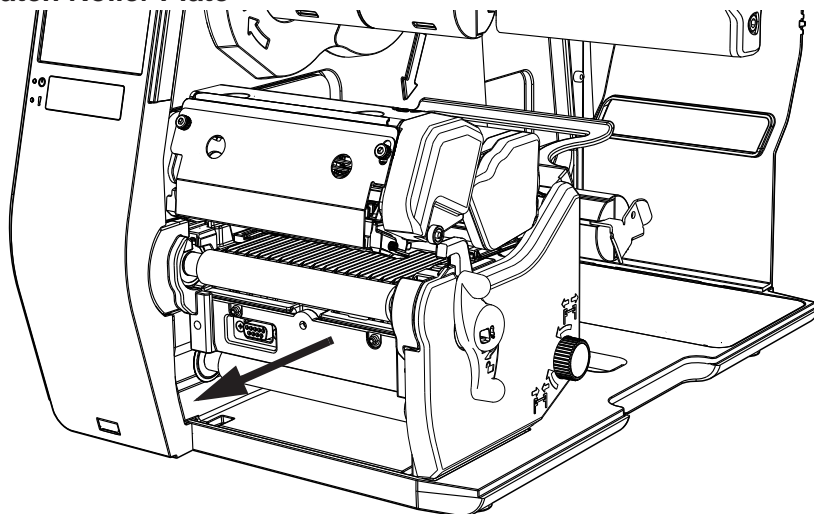
Note: The right side of the plate (left side when looking at the front of the printer) will slide behind the front printer bezel.

Figure: 6 - 9   View from Top
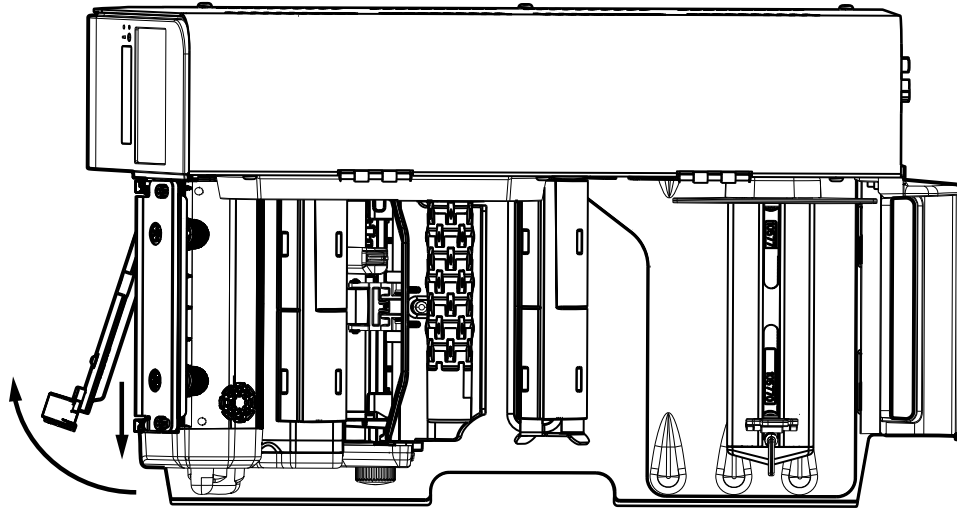
7. Slide the platen roller towards the front of the printer and rotate clockwise and remove it from the printer.

Note: The removal of the platen roller is the same operation as the removal of the platen roller plate.

Note: The tolerances are tight and will require some effort (not force) to remove the platen roller.

Figure: 6 - 10 Platen Roller Removal
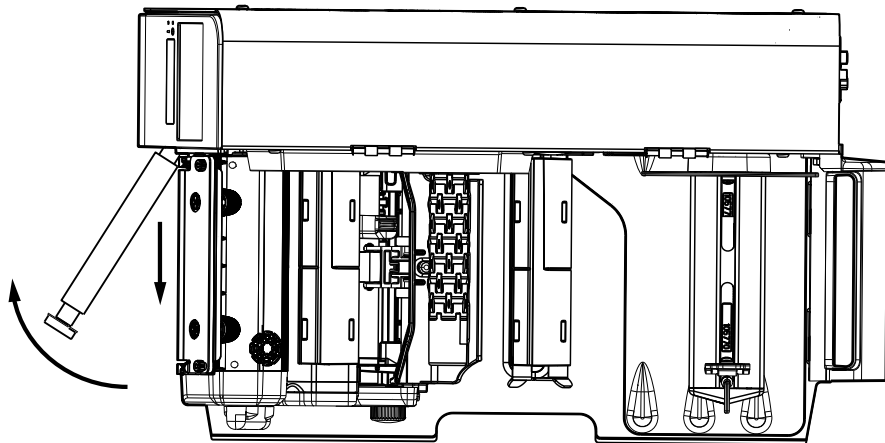
8. Reinstall the platen roller in the reverse order as it was removed.

Note: Ensure the bearings are installed correctly on the ends of the platen roller.

7 | Troubleshooting

Errors

The following errors may be displayed:

Errors	Description
SYSTEM ERROR	Illegal label format or communications error
OUT OF RIBBON	Out of ribbon
OUT OF PAPER	Out of paper
CUTTER JAMMED	Cutter is jammed
REWINDER FULL	Rewinder is full
PRINTHEAD UNLATCHED	Printhead is unlatched
PRINTHEAD HOT	Printhead is critically hot
FPGA HARDWARE	Analog to digital converter hardware fault
NV RAM HARDWARE	Non-volatile memory hardware fault
PAPER SENSOR BLOCKED	Top-of-form sensor blocked or hardware fault
PAPER CALIBRATION	Could not calibrate media
NO TOP OF FORM FOUND	Could not find a gap or mark
RIBBON HARDWARE	Ribbon controller hardware fault
PRESENT SENSOR	Present Sensor hardware fault or label not seen when expected.
AUTOLOAD SENSOR BLOCKED	Auto load sensor hardware fault
GPIO HARDWARE	GPIO hardware fault
MOTOR HOT	Motor is critically hot

Note: System errors are not caused by media mismatches but can be caused by a poor label format.

Warnings

Warnings	Description
RIBBON LOW	Ribbon level low
MAINTENANCE REMINDER	Maintenance timer has expired
POWER SUPPLY HARDWARE	Printhead voltage above maximum specifications
POWER SUPPLY LOW	Printhead voltage below minimum specifications
UNRECOGNIZED PRINTHEAD	Unidentified printhead installed
PRINTHEAD COOLING	Printhead is cooling down
PAPER CALIBRATION MARGINAL	Paper sensor calibration marginal
PERFORM CALIBRATE SENSORS	There is a need to run Calibrate Sensors
UNLATCH THE PRINTHEAD	Printhead needs to be unlatched
LOAD PAPER	No paper while idle
LATCH THE PRINTHEAD	Printhead unlatched while in idle
PAPER LOW	The paper media is low
DOT FAILURE*	*Future feature
CUTTER NOT INSTALLED	The cutter is enabled but not installed
GPIO NOT INSTALLED	The GPIO is enabled but not installed
PRESENT SENSOR NOT INSTALLED	The present sensor is enabled but not installed
RIBBON NOT INSTALLED	The ribbon controller is enabled but not installed
REWINDER NOT INSTALLED	The rewinder is enabled but not installed
CLOSE THE PRINTER COVER	The printer cover is open
CLOSE THE CUTTER COVER	The cutter cover is not magnetically closed
HEAD PRESSURE HARWARE	The head pressure mechanism is malfunction
MODEL MISMATCH	The printer has received settings intended for a different printer model
PAPER WIDTH HARDWARE	The paper width sensor is malfunctioning
REWINDER NEAR FULL	The rewinder take up is close to capacity

Troubleshooting

The following chart provides basic troubleshooting steps for diagnosing problems with the printer. If the symptoms remain after troubleshooting, contact your technical support representative.

Warning: Do not open the right side panel that covers the internal electronic components. Due to the high voltage and the sensitivity of the components, opening the panel can lead to injury and may void the manufacturer's warranty.

Symptom	Causes	Solutions
System Error	Label delivery too slow or invalid/complex label format.	1. Redesign the label using another method 2. Use a different communications channel. 3. Contact your Technical Support representative.
Out of Ribbon	Printer may be out of ribbon.	Install a new ribbon
	A fault may have occurred with the ribbon controller hardware or software.	1. Ensure the latest software has been installed.
Out of Paper	The printer may be out of media.	Install a new media roll.
	The media guides may not be adjusted correctly.	1. Correct the media guide settings. 2. Perform "Calibrate Sensors.""
	The media is too transparent to be detected.	1. Perform "Calibrate Sensors." 2. Check the "Auto Load Sensor" reading in the "Extended Status" utility.
Cutter Jammed	The cutter may have a jam or cutter cover is open.	1. Remove the jam from the cutter. 2. Test the cutter.
	Cutter Home sensor may be dirty.	1. Clean the Cutter Home sensor. 2. Test the cutter.
	Cutter hardware has failed.	1. Ensure the cutter is properly installed. 2. Test the cutter.
Rewinder Full	The rewinder may be full.	1. Remove the media from the rewinder. 2. Test the rewinder function.
	The rewinder may be obstructed and turning slowly.	1. Check for obstructions that hinder the rewinder from turning. 2. Test the rewinder function.
Printhead Unlatched	The printhead may be unlatched.	1. Close and latch the printhead mechanism.
	The printhead latch sensor may be faulty.	Contact your technical support representative.

Symptom	Causes	Solutions
Printhead Hot	The printhead too hot or is faulty.	Allow to cool or contact your technical support representative.
	There may be a poor cable connection.	Contact your technical support representative.
FPGA Hardware	The main controller board may be faulty.	Ensure the latest software update has been performed.
NV RAM Hardware	The main controller board may be faulty.	Contact your technical support representative.
PAPER Sensor Blocked	Adhesive, dirt or remnants of a label may be covering the sensor.	1. Clean the debris from the sensor. 2. Perform "Calibrate Sensors" calibration.
	The main controller board may be faulty.	Contact your technical support representative.
	The Top-of-Form sensor failed the "Calibrate Sensors" calibration due to a faulty sensor.	Contact your technical support representative.
Paper Calibration	The wrong Top-of-Form sensor side may have been selected and not able to read media characteristics.	1. Ensure the Top-of-Form has been set correctly.
	The characteristics of the media may not be sensed by the printer. (Ex. gap, notch, mark)	1. Set the paper mode to continuous. 2. Install different media.
No Top-of-Form Found	The gap or mark was not found.	1. Ensure the Top-of-Form has been set correctly. 2. Install different media.
	The label image size exceeded the maximum of 99 inches.	1. Check the print mechanism for a paper jam. 2. Calibrate the printer for the media being used.
	There may be dirt or debris obstructing the Top-of-Form sensor.	1. Clean the debris from the sensors. 2. Perform "Calibrate Sensors" calibration.
GPIO Hardware	There may be a poor connection to the GPIO logic board.	Contact your technical support representative.
	The GPIO logic board may be faulty.	Contact your technical support representative.
Present Sensor Hardware	There may be a poor connection.	Perform the Present Sensor test.
	The Present Sensor module may be faulty.	Perform the Present Sensor test.

Symptom	Causes	Solutions
Ribbon Hardware	The Ribbon Version may need to be upgraded.	Ensure the latest software has been installed.
	There may be a poor connection.	Contact your technical support representative.
	The Ribbon Controller module may be faulty.	Contact your technical support representative.
Autoload Hardware	The Autoload Sensor may have failed the "Calibrate Sensors" calibration.	Contact your technical support representative.

Troubleshooting Print Quality

Tools

- Datamax-O'Neil approved media
- Datamax-O'Neil approved matching ribbon (for printers with the thermal transfer option)
- 3 mm hex head wrench
- 1.5 mm hex head wrench
- Magnifying lens
- Barcode verifier and grading system
- Printhead cleaning card
- Printhead cleaning pen

Preliminary Instructions

1. Ensure the latest software has been loaded.
2. Load the media and ribbon according to the instructions in the Setup section.

Note: Verify that the ribbon is tightly wound on the supply roll with no wrinkles.

Note: Verify that the paper is properly exiting the printer.

3. Specify the appropriate media and ribbon in the menu.
4. Print a Quality Label from the Test menu.
5. Examine the print quality.

Note: Some imperfections can be caused by a contaminated printhead. Clean the printhead and reprint the label.

Symptom	Possible Solutions
No Print or Poor Print Quality	Verify the proper media and ribbon are being used.
	Verify the printhead connections are fully seated.
Light Print on One Side	Adjust the ribbon cam and ribbon shield to add tension to the light print side.
	Verify the printhead connections are fully seated.
	Replace the printhead.
	Contact your technical support representative.
Print Quality Defect	Clean the printhead and platen roller with factory-approved cleaning supplies.
	Verify there are no ribbon folds or wrinkles under the printhead.
	Replace the printhead if there is a missing dot.
Print Quality gets worse over time	Printhead is at the end of life and should be replaced.
	Contact your technical support representative.
Diminished print quality on the Quality Label	Incomplete horizontal lines requires an increase in the sharpness setting and/or more tension applied to the lighter print side of the ribbon shield.
	For higher-grade barcodes, lighten the print by reducing the darkness setting.
	For white specks inside dark boxes, increase the darkness setting and clean the printhead and platen roller.
	If the small font is not readable, increase the darkness setting.
	When dithering increments are not equal, adjust the darkness setting.
	If graphics are not displayed properly, adjust the sharpness setting.
Ladder barcode quality is diminished	Examine the media adjustment levers and ensure there is a .8mm to 1.5mm gap between the levers and the media.
Loud popping noise when printing	Increase darkness and sharpness settings.
	Increase the front tension from the ribbon shield
Image size is out of the print area (off the side or top or truncated from the next label	Turn off print truncation.
	Ensure the image width is the same as the print width.

Processing State

Terms	Definitions
Online	The printer is ready to process jobs.
Offline	The printer has suspended job processing although the menu selection is available.

Printer State

Terms	Definitions
Ready	The printer is idle and ready to accept internal or external commands.
Busy	The printer is busy processing or executing a command.

Media Setup

Terms	Definitions
Paper ID	The user-entered data identifying media code.
Ribbon ID	The user-entered data identifying ribbon code.
Paper Type	The user-entered data identifying the paper material type.
Ribbon Type	The user-entered data identifying the ribbon material type.

Basic

Basic > Printer Mode

Terms	Definitions
Cutter Mode	Controls the cutting of media into separate labels.
Rewinder Mode	Enables or disables the rewinder function and directional state.
Present Sensor Enable	Enables or disables the present sensor.
Pause Mode	Enables or disables the ability of the user to prompt for the next label.

Basic > Print Adjust

Terms	Definitions
Darkness	This provides the user with a fine adjustment of the darkness of the printed image due to printhead and printer thermal variations.

Terms	Definitions
Contrast	This provides the user with the fine adjustment of the leading edges of the printed images to improve print quality and barcode readability.
Vertical Adjust	User-entered value allowing for the vertical adjustment of the start of the image relative to the horizontal leading label edge due to mechanical variations.
Horizontal Adjust	User-entered value allowing for the horizontal adjustment of the image relative to the printhead center.

Advanced

Advanced > Page Defaults

Terms	Definitions
Print Truncation	Specifically for gap or mark paper, print truncation prohibits print overflow.
Print on Gap	Enables the printing on the gap or mark between labels.
Print Length	Sets the length of the print area.
Print Width	Sets the width of the print area.
Vertical Offset	Shifts the vertical start of the print position on the labels.
Horizontal Offset	Shifts the horizontal start of the print position on the labels.
Orientation	Controls the page orientation.
Raster Mode	Controls the raster image operation.
Font Number	Controls the font selection.
Point Size	Controls the font size selection.
Pitch Size	Controls the font pitch selection.
Select Symbol Set	Controls the symbol set selection.

Advanced > Printer

Advanced > Printer > Presentation

Terms	Definitions
Pause Mode	Allows the user to prompt for the next label via the menu.
Present Time Out	Specifies how long the label will be presented before retracting back.
Present Distance	Allows for the override of the default distance.

Advanced > Printer > Auto

Terms	Definitions
Auto Load	The media loads automatically when detected in the media guides and the head is closed and latched.
Auto Option Detect	Automatically generates a warning if an option is enabled yet not detected.
Auto Calibrate	Calibrate paper sensors while auto-loading the media.
Auto Present Distance	Automatically sets the present distance based on the detected hardware.
Auto Tension	Automatically selects the tension based on the media width guides, paper and ribbon type or ID selected.
Auto Pressure	Automatically selects the head pressure based on the selected Paper/Ribbon ID.
Auto Speed Adjust	For labels less then 0.5" in length, the printer will automatically lower the print speed to prevent pausing on print batches.

Advanced > Printer > Speeds

Terms	Definitions
Print Speed	Controls the rate of the label movement during printing.
Feed Speed	Controls the rate of the label movement during feed.
Reverse Speed	Controls the rate of the label movement during backup positioning.

Advanced > Printer > Alarms

Terms	Definitions
Error Sound	Controls the enabling and signal of the error buzzer.
Warning Sound	Controls the enabling and signal of the warning buzzer.
Paper Low Warning	Enables or disables the paper low warning.
Paper Out Warning	Enables or disables the paper out warning.
Cover Open Warning	Enables or disables the cover open warning.
Paper Change Warning	Enables media tracking features. When head is lifted or closed, user will be prompted to confirm media has changed. Media levels can be seen under Extended Status.
Rewinder Full Warning	Enables or disables a warning when rewinder is near full.
Reprint on Error	Enables or disables the automatic reprint on error.

Advanced > Printer > Options

Advanced > Printer > Options > Cutter

Terms	Definitions
Cut By Count	Sets the label increment to cut.
Cut Distance Adjust	Allows for the adjustment of the cut position due to mechanical tolerances.
Cut Rotation Adjust	Allows for the fine tuning of the cutter blade rotation.

Advanced > Printer > Options > Present Sensor

Terms	Definitions
Present Sensor Enable	Controls the on-demand dispensing of labels.
Present Distance Adjust	Sets the label stop position past the start of print position.

Advanced > Printer > Options > Rewinder

Terms	Definitions
Rewinder Mode	Sets the rewinder direction for the paper.
Rewinder Tension Adjust	Allows for the fine adjustment of the rewinder motor.

Advanced > Media

Terms	Definitions
Paper Sensor Type	Select the top-of-form identification method for the media.
Paper Sensor Side	Determines which sensor is to be used for top-of-form or an out-of-paper condition.
Ribbon Mode	Enables the operation of the ribbon.
Heat	The adjustment of the energy required for printing with a specific paper and ribbon.
Heat Balance	The adjustment of the energy distribution required for printing with a specific paper and ribbon.
Head Pressure (Suggested for p1115)	Controls the amount of pressure the printhead mechanism exerts.
Rewinder Tension	Provides for the fine adjustment of the rewinder motor.
Ribbon Tension Front	Provides for the fine adjustment of the front ribbon motor.
Ribbon Tension Rear	Provides for the fine adjustment of the rear ribbon motor.
Ribbon Low Diameter	Sets the threshold for a low ribbon warning.
Gap/Mark Offset	Sets the offset from the top-of-form mark. Useful for ticket stock.
Gap/Offset Noise	Sets the distance of the top-of-form mark to be ignored.
Ribbon Length	Sets length of ribbon roll. Used for media tracking.
Form Length	Sets length of each label on a roll. Used for media tracking.
Number of Forms	Sets number of labels on a roll. Used for media tracking.

Advanced > Communications

Advanced > Communications > Ethernet

Terms	Definitions
DHCP	Enables or disables DHCP auto addressing for a static setting.
IP Address	The user-entered value that sets the static IP of the interface.
Subnet Mask	The user-entered value setting the static sublet assigned to the interface.
Gateway	The user-entered value that specifies the network gateway address with which the interface should connect.

Advanced > Communications > Serial

Terms	Definitions
Baud Rate	Sets the serial communications rate in bits per second.
Data Bits	Sets the word length.

Terms	Definitions
Stop Bits	Sets the number of stop bits.
Parity	Sets the word parity.
Protocol	Serial communications handshaking mechanism.

Advanced > Communications > General

Advanced > Communications > General > Services

Term	Definition
Enable NTP (Network Time Protocol)	Enables the Network Time Protocol for synchronizing the clock.
Enable SSH	Enables the Secure Shell network protocol.
Enable Webpages	Enables the Webpages utility. If enabled, Webpages are served by the printer to provide printer status and other information, and also allow the user to configure the printer.
Enable SNMP	Enables Simple Network Management Protocol.
SNMP Trap IP	Sets the IP address to send SNMP alerts.
Enable LPD	Enables LPD network protocol on port 515; using queue name "lp"

Advanced > Communications > General > Host Settings

Terms	Definitions
Host Timeout	Print job input timeout in seconds before moving on to monitor other ports.
Port Number	Sets TCP parameter. Default is 9100.
Host Name	Sets network host name.
Hex Transfer	Enables or disables passing of hexadecimal data.

Advanced > Adjustments

Terms	Definitions
Present Distance Adjust	User-entered value allowing for the adjustment of the tear bar position due to mechanical variations.
Cut Distance Adjust	User-entered value allowing for the adjustment of the cut position due to mechanical variations.
Vertical Adjust	User-entered value allowing for the vertical adjustment of the start of the image relative to the horizontal leading label edge due to mechanical variations.
Horizontal Adjust	User-entered value allowing for the horizontal adjustment of the image relative to the printhead center.

Terms	Definitions
Head Pressure Adjust	User-entered value allowing for the adjustment of the pressure the head exerts on the media.
Rewinder Tension Adjust	User-entered value providing for the adjustment of the rewinder motor.
Ribbon Tension Front Adjust	User-entered value providing for the adjustment of the front ribbon motor.
Ribbon Tension Rear Adjust	User-entered value providing for the adjustment of the rear ribbon motor.
Darkness	User-entered value allowing for the fine adjustment of the darkness of the printed image due to printhead and printer thermal variations.
Contrast	User-entered value allowing for the fine adjustment of the leading edges of the printed images to improve print quality and barcode readability.

Tools

Tools > Calibrate

Terms	Definitions
Calibrate Paper	The automatic scanning of the paper to determine top-of-form media and top-of-form gap settings.
Calibrate Sensors	The automatic calculation of the best setting for the autoload sensor and the top-of-form sensor when no paper is present.
Calibrate Display	The calibration utility for the touch position on the display.
Calibrate Manually	Allows manual calibration for paper/mark/gap values.

Tools > Maintenance

Tools > Maintenance > Upgrade

Terms	Definitions
Upgrade	The utility for upgrading the printer software, firmware, ribbon controller and bootloader.

Tools > Security

Security Levels	Descriptions
None	No security level is enabled.
Secure	Advanced settings require a password.
Secure All	All settings require a password.
3-Button Panel	A password is required to access the main menu.

Tools > Date/Time

Terms	Definitions
Date/Time	User-entered values of the date and time of day.

Test

Test > Diagnostics

Terms	Definitions
Page Format Shading	Provides shading over white space on the label image.
File Capture	Enables capturing of print data to a file.
Sensor Readings	Displays current real-time values of all analog sensors.

9 Appendix A

Symbol Sets

The following Symbol Sets are available from the Page Format section of the Advanced menu:

Table 1: Symbol Sets

Number	Symbol Sets
0	PC-8
1	Roman-8
2	Roman-9
3	ISO-L1
4	ISO-L2
5	ISO-L4
6	ISO-L5
7	ISO-L6
8	ISO-L9
9	PC-775
10	PS MATH
11	MATH-8
12	PI FONT
13	MS PUBL
14	PC-8 DN
15	PC-850
16	PC-852
17	PC-858
18	PC-8 TK
19	PC-1004
20	WIN L1
21	WIN L2
22	WIN L5
23	WINBALT
24	DESKTOP
25	PS TEXT
26	LEGAL

Number	Symbol Sets
27	ISO-4
28	ISO-6
29	ISO-11
30	ISO-15
31	ISO-17
32	ISO-21
33	ISO-60
34	ISO-69
35	WIN 3.0
36	MC TEXT
37	UCS-2
38	RomanExt
39	Wingdings
40	ZapDingBats
41	Symbol

Fonts

The following Fonts are supported:

Table 2: Fonts

Font	Escape Sequence
CG Times	<ESC>(<symset><ESC>(s1p<ptsize>v0s0b4101T
CG Times Italic	<ESC>(<symset><ESC>(s1p<ptsize>v1s0b4101T
CG Times Bold	<ESC>(<symset><ESC>(s1p<ptsize>v0s3b4101T
CG Times Bold Italic	<ESC>(<symset><ESC>(s1p<ptsize>v1s3b4101T
Univers Medium	<ESC>(<symset><ESC>(s1p<ptsize>v0s0b4148T
Univers Medium Italic	<ESC>(<symset><ESC>(s1p<ptsize>v1s0b4148T
Univers Bold	<ESC>(<symset><ESC>(s1p<ptsize>v0s3b4148T
Univers Bold Italic	<ESC>(<symset><ESC>(s1p<ptsize>v1s3b4148T
Univers Condensed Medium	<ESC>(<symset><ESC>(s1p<ptsize>v4s0b4148T
Univers Condensed Medium Italic	<ESC>(<symset><ESC>(s1p<ptsize>v5s0b4148T
Univers Condensed Bold	<ESC>(<symset><ESC>(s1p<ptsize>v4s3b4148T
Univers Condensed Bold Italic	<ESC>(<symset><ESC>(s1p<ptsize>v5s3b4148T
Antique Olive	<ESC>(<symset><ESC>(s1p<ptsize>v0s0b4168T
Antique Olive Italic	<ESC>(<symset><ESC>(s1p<ptsize>v1s0b4168T

Font	Escape Sequence
Antique Olive Bold	<ESC>(<symset><ESC>(s1p<ptsize>v0s3b4168T
CG Omega	<ESC>(<symset><ESC>(s1p<ptsize>v0s0b4113T
CG Omega Italic	<ESC>(<symset><ESC>(s1p<ptsize>v1s0b4113T
CG Omega Bold	<ESC>(<symset><ESC>(s1p<ptsize>v0s3b4113T
CG Omega Bold Italic	<ESC>(<symset><ESC>(s1p<ptsize>v1s3b4113T
Garamond Antiqua	<ESC>(<symset><ESC>(s1p<ptsize>v0s0b4197T
Garamond Kursiv	<ESC>(<symset><ESC>(s1p<ptsize>v1s0b4197T
Garamond Halbfett	<ESC>(<symset><ESC>(s1p<ptsize>v0s3b4197T
Garamond Kursiv Halbfett	<ESC>(<symset><ESC>(s1p<ptsize>v1s3b4197T
Courier	<ESC>(<symset><ESC>(s0p<pitch>h0s0b4099T
Courier Italic	<ESC>(<symset><ESC>(s0p<pitch>h1s0b4099T
Courier Bold	<ESC>(<symset><ESC>(s0p<pitch>h0s3b4099T
Courier Bold Italic	<ESC>(<symset><ESC>(s0p<pitch>h1s3b4099T
Letter Gothic	<ESC>(<symset><ESC>(s0p<pitch>h0s0b4102T
Letter Gothic Bold	<ESC>(<symset><ESC>(s0p<pitch>h0s3b4102T
Letter Gothic Italic	<ESC>(<symset><ESC>(s0p<pitch>h1s0b4102T
Albertus Medium	<ESC>(<symset><ESC>(s1p<ptsize>v0s1b4362T
Albertus Extra Bold	<ESC>(<symset><ESC>(s1p<ptsize>v0s4b4362T
Clarendon Condensed Bold	<ESC>(<symset><ESC>(s1p<ptsize>v4s3b4140T
Coronet	<ESC>(<symset><ESC>(s1p<ptsize>v1s0b4116T
Marigold	<ESC>(<symset><ESC>(s1p<ptsize>v0s0b4297T
Arial	<ESC>(<symset><ESC>(s1p<ptsize>v0s0b16602T
Arial Italic	<ESC>(<symset><ESC>(s1p<ptsize>v1s0b16602T
Arial Bold	<ESC>(<symset><ESC>(s1p<ptsize>v0s3b16602T
Arial Bold Italic	<ESC>(<symset><ESC>(s1p<ptsize>v1s3b16602T
Times New Roman	<ESC>(<symset><ESC>(s1p<ptsize>v0s0b16901T
Times New Roman Italic	<ESC>(<symset><ESC>(s1p<ptsize>v1s0b16901T
Times New Roman Bold	<ESC>(<symset><ESC>(s1p<ptsize>v0s3b16901T
Times New Roman Bold Italic	<ESC>(<symset><ESC>(s1p<ptsize>v1s3b16901T
Symbol	<ESC>(19M<ESC>(s1p<ptsize>v0s0b16686T
Wingdings	<ESC>(579L<ESC>(s1p<ptsize>v0s0b31402T
OCR-A Fixed	<Esc>(s0p10h0s0b23584T
OCR-B Fixed	<Esc>(s0p10h0s0b23590T
Vera Regular Mono	<Esc>(s1p__v0s0b23410T

Font	Escape Sequence
OCR-A Mono	<Esc>(s1p__v0s0b23584T
OCR-B Mono	<Esc>(s1p__v0s0b23590T
CG Triumvirate	<Esc>(s1p__v0s0b26708T
CG Triumvirate Condensed Bold	<Esc>(s1p__v0s0b26714T
LinePrinter	<Esc>(10U<Esc>(s0p16.67h8.5v0s0b0T

Barcodes

The following barcodes are supported:

Table 3: Barcodes

Barcode ID	Type	Length	Valid ASCII Characters, decimal value representation
1000	Code 3 of 9	1-75	0-9, A-Z, $,%,+,-,.,/,space[1]
1001	Extended Code 3 of 9	1-66	ASCII 0-0x7F
1010	UPC-A	1-11	0-9 [2, 3]
1020	UPC-E	1-7	0-9 [2, 3]
1021	UPC/EANAdd-On	2 or 5	0-9
1030	Code 128 Autoselect	1-79	ASCII 0-0x7F
1031	Code 128 Code Set A	1-79	A-Z
1032	Code 128 Code Set B	1-79	ASCII 0-0x7F
1033	Code 128 Code Set C	1-79	0-9
1040	EAN-8	1-7	0-9 [2]
1050	EAN-13	1-12	0-9 [2]
1060	Interleaved 2 of 5 mod 10	1-89	0-9
1061	Interleaved 2 of 5 bearer bars	1-89	0-9
1062	Interleaved 2 of 5	1-89	0-9
1070	GS1-128	1-79	ASCII 0x20-0x7F The leading AI value must be placed in square brackets and a trailing checksum must be included.
1080	Codabar	1-60	0-9, A-D [1]
1090	UK Plessey	1-65	48-57, 0-9, A-DF
1091	MSI Plessey Mod 10	1-55	0-9

Barcode ID	Type	Length	Valid ASCII Characters, decimal value representation
1100	Code 93	1-107	0-9, A-Z, $,%,+,-,.,/,space, "a" for Shift 1, "b" for Shift 2, "c" for Shift 3, "d" for Shift 4
1110	HIBC Code 93	1-36	0-9, A-Z, $,%,+,-,.,/,space
1111	HIBC Code 128	1-36	0-9, A-Z, $,%,+,-,.,/,space
1120	Telepen	1-30	ASCII 0x20-0x7F
1130	GS1 Databar (RSS); linear only	1-13	
1131	GS1 Databar Expanded; linear only	1-45	ASCII 0x20-0x7F
1500	Postnet	1-38	0-9
1510	Planet	1-38	0-9
1520	FIM	1	A, B, C, D
1530	UPS Intelligent Mail (OneCode)	20	0-9
2000	QR Code - Auto Format	1-256	ASCII 0x20-0x7F
2010	PDF-417	1-256	Full ASCII (0 – 0xFF)
2020	MicroPDF417	1-256	Full ASCII (0 – 0xFF)
2030	DataMatrix	1-256	Full ASCII (0 – 0xFF)
2040	UPS MaxiCode	1-138	Alphanumeric, ASCII 0x1E, 0x1D,0x04,[,),>
2050	Aztec	1-256	Full ASCII (0 – 0xFF)

[1] Lower-case alpha characters will be converted to upper-case.

[2] Checksum will be recalculated regardless if supplied.

[3] The "+" character can be used to separate UPC data and addendum data.

Performance & Workstation Series

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datamax·o'neil

Contents

1   Upgrade Utility and Printer Firmware Requirements

1. pw Thermal Printer Upgrade Utility

    a. Download the pw Series Firmware Upgrade Utility.

- If you have connected your Performance Series printer via USB you will also need the pw Series Intermediate Upgrade Utility, if firmware version is prior to 13.03.08, but after 12.08.20.
- *NOTE:* **This is not required for the Workstation Series or H-8308p.**

    b. Once the download is complete, unzip the file and then double click the .msi file. Follow the on-screen setup to install the pw Series Firmware Upgrade Utility. If you downloaded the Intermediate Upgrade Utility, do the same for it.

    NOTE: **The pw Series Firmware Upgrade Utility does not require the installation or use of a Windows printer driver. The same applies for the Intermediate Upgrade Utility.**

2. Printer Firmware

    a. Access the latest printer firmware download for the given printer model.

        Performance Series Firmware

        Workstation Series Firmware

        H-8308p Firmware

    b. Extract the files from the download .zip file to a convenient folder location on the host computer.

    NOTE: **The resulting folder will also contain the following subdirectory: "upgrade."**

3. Initial Preparation

    a. **IMPORTANT! For LAN connections record the printer IP address before starting the upgrade process.** This will facilitate recovery should an error occur.

- **Performance Series/H-8308p:** via front panel of the printer; **Select Info > Network Info > Ethernet IP**.

- **Workstation Series:** print a System Report by simultaneously pressing the rear button and the right button.

    c. Wireless upgrades are not supported.

    d. Serial upgrades are not supported.

2 Upgrading Firmware via Optional USB Host Port

This process is only applicable to Performance Series printers equipped with the USB Host Option and is the recommended way to upgrade printers with software versions previous to 12.08.20. This method is not preferred for later versions. The Performance Series/H-8308p printer's Firmware can be updated using a USB flash drive (thumb drive) but the subsequent Boot Loader upgrade will require pw Series Firmware Upgrade Utility.

> *NOTE:* **The following are not needed for H-8308p.**

1. Upgrade via USB Flash Drive

    a. Requirements

- USB Host option on the printer (USB port located on the front of the printer, in the bottom left corner)
- USB Flash Drive formatted to FAT32

> *NOTE*: **Most, but not all, flash drives are supported.**

    b. Connect the USB flash drive to your computer.

    c. After extracting the files from the printer firmware .zip file, copy the "upgrade" subdirectory onto the USB flash drive ensuring that the "upgrade" folder is at the root of the flash drive.

    d. Properly disconnect the USB flash drive from the computer.

    e. Connect the USB Flash Drive to the USB Host port on the printer.

    f. Select **Menu > Tools > Maintenance > Upgrade** on the printer's front panel.

    g. Select the green **Accept** button to start the firmware upgrade process.

> **CAUTION! DO NOT POWER PRINTER OFF.**

> *NOTE:* **The upgrade process can take up to 10 minutes.**

> *NOTE:* **Be patient as the printer performs the firmware upgrade process. Upon completion it will return to the main menu.**

    h. After the front panel display returns (showing the main menu), verify that the new version of firmware was properly installed by selecting **Info > System Info** and scrolling down through the list to check the Firmware Version and the Boot Version.

> *NOTE:* **If the upgrade fails or does not complete then go to the Recovery Mode section of this document.**

    i. After the upgrade of the firmware, proceed to the next section and perform only the Boot Loader portion since the firmware portion is already done.

3   Upgrading Firmware via the pw Series Firmware Upgrade Utility

CAUTION! Do not attempt a USB upgrade using the Upgrade Utility if the printer running firmware and boot loader released prior to 13.03.08, use Ethernet instead (or the Intermediate Upgrade Utility).

1. **Upgrade via USB Connection**

   a. Requirements

      - USB Connected Printer

      - pw Series Intermediate Upgrade Utility (for firmware released prior to version 13.03.08)

      - pw Series Firmware Upgrade Utility

   b. Download the latest firmware files.

      - Extract the files from the downloaded zip file to a location on the local computer that you will be running the pw Series Firmware Upgrade Utility from. Note the location of the file.

        NOTE: **It is not recommended that the firmware files be saved to a network location.**

   c. If the current version of firmware is prior to 13.03.08, start the pw Series Intermediate Upgrade Utility application and select the USB option in the Connectivity frame.

      - Select the printer from the dropdown list.

      - Select the **Get Printer Info** button to verify connectivity to the printer as well as confirm the printer model, current boot version and current firmware version.

      - Select the **Select Folder** button and browse to the location where you extracted the firmware files in step c.

      - Select the upgrade folder and click **Open**.

      - Select the **Send to Printer** button to start the upgrade process.

      - When the upgrade completes, restart the printer and continue on with the next step.
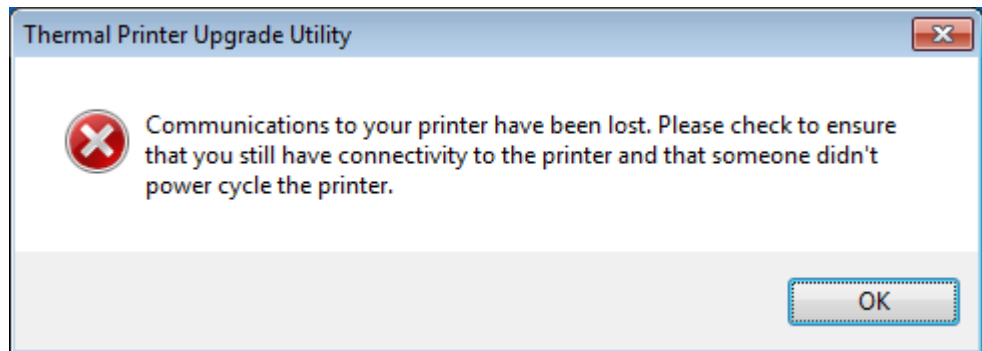
        NOTE: **If the upgrade fails or does not complete then go to the Recovery Mode section of this document.**

d. If the current version of firmware is 13.03.08 or later, start the pw Series Firmware Upgrade Utility application and select the USB option in the Connectivity frame.

- Select the printer from the dropdown list.

- Select the **Get Printer Info** button to verify connectivity to the printer as well as confirm the printer model, current boot version and current firmware version.

- Select the Boot Loader file (BLxxxxxx_BLnn.nn.nn.bin) located in the downloaded folder and select **Open**.

  ➢ xxxxxx = printer's board ID information (ex. – 104584)

  a. 104584 = Performance Series Printers

  b. 106085 = Workstation Series Printers

  c. 512506 = H-8308p Printers

  ➢ nn.nn.nn = date code of the release as year, month, day (12.11.28)

  NOTE: **This file is normally located outside the upgrade folder.**

- Select the **Send to Printer** button to start the upgrade process.

  CAUTION! DO NOT POWER THE PRINTER OFF.

  NOTE: **The Boot Loader upgrade process typically completes in less than 10 minutes. The printer will restart once the upgrade has completed.**

  NOTE: **When working with Windows 7 Professional 64-bit, a timing issue may cause the message box shown below and the status message "Boot Loader Upgrade NOT SUCCESSFUL to appear**

Click **OK** to clear the message box. The "Transferring Upgrade to Printer" progress bar may cycle through again. After a short wait (up to 15 minutes) the "Upgrading Flash…" progress bar should cycle through as the actual upgrade occurs.

- Boot Loader upgrade status:
    - **Successful: "Boot Loader Upgrade COMPLETE"** message will be displayed along with a message box stating that the printer should have rebooted. Select **OK** to clear the message box. Select the **Get Printer Info** button to review the printer's version information and verify that the Boot Loader version information is the same as the file that was sent.
    - **Unsuccessful:** "**Boot Loader Upgrade NOT SUCCESSFUL**" message will be displayed. Leave the printer powered up (**CAUTION! DO NOT POWER PRINTER OFF**) and attempt the Boot Loader upgrade again. If still unsuccessful, contact Technical Support.
- Select the printer from the dropdown list again.
- Select the **Select File** button and browse to the location where the firmware files were extracted.
- Select the Firmware file (SWSTx.xxxx_SWnn.nn.nn.bin) and select **Open**.

NOTE: **This file is normally located outside the upgrade folder.**

- x.xxxx = printer's series and model information (e.g., p1120n)
- nn.nn.nn = date code of the release as year, month, day (e.g., 12.11.28)
- Select the **Send to Printer** button to start the Upgrade process.

CAUTION! DO NOT POWER PRINTER OFF.

NOTE: **The Firmware upgrade process can take up to 8-10 minutes.**

- Firmware upgrade status:
    - **Successful:** "**Firmware Upgrade COMPLETE**" message will be displayed along with a message box stating that the printer should have rebooted. Select **OK** to clear the message box. Select the **Get Printer Info** button to review the printer's version information and verify that the Firmware version information is the same as the file that was sent.
    - **Unsuccessful:** "**Firmware Upgrade NOT SUCCESSFUL**" message will be displayed. Attempt a recovery using the **Recovery Mode** (see below).

2. Upgrade via Wired Ethernet Connection

CAUTION! Wireless upgrade is not supported.

a. Requirements

- Network Connected Printer
- pw Series Firmware Upgrade Utility

b. Download the latest firmware files.

c. Extract the files from the downloaded zip file to a location you can easily find on the local computer that will run the pw Series Firmware Upgrade Utility.

NOTE: **It is not recommended that the firmware files be saved to a network location.**

d. Start the pw Series Firmware Upgrade Utility application and select the TCP/IP option in the Connectivity frame.

e. Select the appropriate printer from the dropdown list or enter the IP Address.

- If the printer IP Address is unknown, it may be found through the front panel of the printer by selecting **Info > Network Report > Ethernet IP** (Performance Series printer) or by simultaneously selecting the rear button and the right button (Workstation Series printer).

- Shared printers will not display the IP address of the printer unless you are on the primary computer for that print driver.

f. Select the **Get Printer Info** button to verify connectivity to the printer as well as confirm the printer model, current boot version and current firmware version.

NOTE: **Be sure the printer model matches the firmware file being sent.**

NOTE: **If upgrading the Boot Loader and Firmware, proceed to the next step. If upgrading only the Firmware, proceed to step k.**

CAUTION! Make sure the Boot Loader is rev BL13.11.07 or newer, before upgrading the Firmware. If not, you must upgrade the Boot Loader.
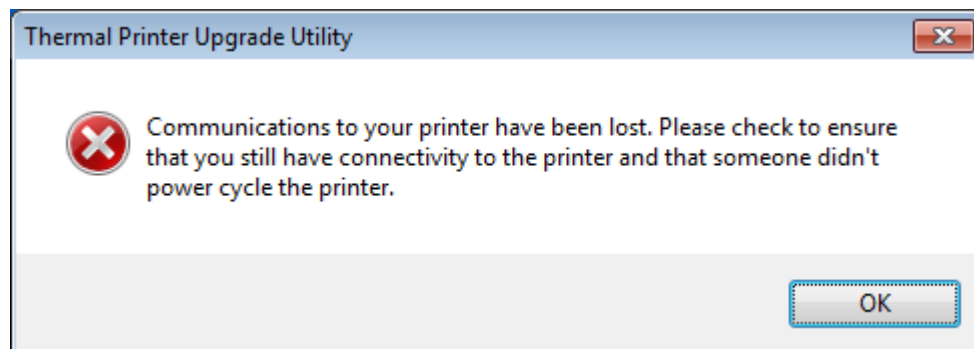
g. Select the **Select File** button and browse to the location where the firmware files were extracted.

h. Select the Boot Loader file (BLxxxxxx_BLnn.nn.nn.bin) located in the upgrade folder and select **Open**.

- xxxxxx = printer's board ID information (e.g., 104584)
  - ➤ 104584 = Performance Series Printers
  - ➤ 106085 = Workstation Series Printers
  - ➤ 512506 = H-8308p Printers
- nn.nn.nn = date code of the release as year, month, day (e.g., 12.11.28)

i. Select the **Send to Printer** button to start the upgrade process.

CAUTION! DO NOT POWER THE PRINTER OFF.

NOTE: **The Boot Loader upgrade process typically completes in less than 10 minutes. The printer will restart once the upgrade has completed.**

NOTE: **When working with Windows 7 Professional 64-bit, a timing issue may cause the message box shown below and the status message "Boot Loader Upgrade NOT SUCCESSFUL to appear.**

Thermal Printer Upgrade Utility

Communications to your printer have been lost. Please check to ensure that you still have connectivity to the printer and that someone didn't power cycle the printer.

OK

Click **OK** to clear the message box. The "Transferring Upgrade to Printer" progress bar may cycle through again. After a short wait (up to 15 minutes) the "Upgrading Flash…" progress bar should cycle through as the actual upgrade occurs.

j. Boot Loader upgrade status:

- **Successful: "Boot Loader Upgrade COMPLETE"** message will be displayed along with a message box stating that the printer should have rebooted. Select **OK** to clear the message box. Select the **Get Printer Info** button to review the printer's version information and verify that the Boot Loader version information is the same as the file that was sent.

- **Unsuccessful:** "**Boot Loader Upgrade NOT SUCCESSFUL**" message will be displayed. Leave the printer powered up (**DO NOT POWER PRINTER OFF**) and attempt the Boot Loader upgrade again. If still unsuccessful, contact Technical Support.

k. Select the **Select File** button and browse to the location where the firmware files were extracted.

l. Select the Firmware file (SWSTx.xxxx_SWnn.nn.nn.bin) and select **Open**.

NOTE: **This file is normally located outside the upgrade folder.**

- x.xxxx = printer's series and model information (e.g., p1120n)

- nn.nn.nn = date code of the release as year, month, day (e.g., 12.11.28)

m. Select the **Send to Printer** button to start the Upgrade process.

CAUTION! DO NOT POWER PRINTER OFF.

NOTE: **The Firmware upgrade process can take up to 8-10 minutes.**

n. Firmware upgrade status:

- **Successful:** "**Firmware Upgrade COMPLETE**" message will be displayed along with a message box stating that the printer should have rebooted. Select **OK** to clear the message box. Select the **Get Printer Info** button to review the printer's version information and verify that the Firmware version information is the same as the file that was sent.

- **Unsuccessful:** "**Firmware Upgrade NOT SUCCESSFUL**" message will be displayed. Attempt a recovery using the **Recovery Mode** (see below).

3. USB Recovery Mode

a. Power the printer off and connect the USB cable to the rear of the printer.

b. Power the printer for 5 seconds, shut down again for 5 seconds.

c. Repeat step b.

d. While holding the "set defaults" recessed button, power up the printer again. Hold for 3 seconds and then wait for "ready" mode.

    ▪ **Display printers:** The display should show a red recovery screen indicating it is in Recovery Mode.

    ▪ **Non-Display printers:** The LEDs will show a fast alternating flash sequence indicating the printer is in Recovery Mode, waiting for the file to upload.

NOTE: **This takes around 2 minutes for the "ready" mode unless there is a network connection. With a network connection, the printer will enter "ready" mode in a few seconds.**

e. Select the USB option in the Connectivity frame.

f. Select the printer from the dropdown list.

g. Select the **Select File** button and browse to the location where the firmware files were extracted.

h. Select the Firmware file (SWSTx.xxxx_SWnn.nn.nn.bin) and select **Open**.

    ▪ x.xxxx = printer's series and model information (e.g., p1120n)

    ▪ nn.nn.nn = date code of the release as year, month, day (e.g., 12.11.28)

On the menu bar, select **Utility** and then select **Send Recovery CMD.**

NOTE: **During Recovery Mode, for models with displays, observe that the screen brightness will change. For non-display models, observe a slow, alternating, flashing LED pattern.**

i. Wait for the printer to restart and boot up (it could take up to 10 minutes).

j. Recovery Mode Upgrade Status:

    ▪ **Successful:** A "**Firmware Upgrade COMPLETE**" message will be displayed. Click the **Get Printer Info** button to review the printer's version information to verify it is correct.

    ▪ **Unsuccessful:** "**Firmware Upgrade NOT SUCCESSFUL**" message will be displayed. Try recovery again. If still unsuccessful, contact Technical Support.

4. TCP/IP Recovery Mode (requires connection to network via Ethernet cable)

NOTES:

- ➢ Wireless upgrade is not supported.
- ➢ If IP recovery then the user will know or be able to find out the IP Address of the printer.
- ➢ Recovery Mode only works on the firmware file (SWSTx.xxxx_SWnn.nn.nn.bin).
- ➢ IP Recovery Mode requires Boot Loader rev BL12.11.14 or newer.
- ➢ If issues develop with the Boot Loader file (BLxxxxxx_BLnn.nn.nn.bin), contact Technical Support.

a. Insure that the USB port (rear of printer) is disconnected. Power the printer off and connect it to the network via an Ethernet cable.

b. Select the TCP/IP option in the Connectivity frame of the Upgrade Utility.

c. Previous upgrade attempt via:

- ▪ **TCP/IP:** Requires use of IP address used during initial upgrade attempt above.

- ▪ **USB:** You will need access to the network (i.e., router or location where the IP address of the printer can be found,if not known).

d. Once the IP address of the printer is obtained, enter it into the IP address field of the Upgrade Utility.

e. Select the **Select File** button and browse to the location of the extracted firmware files.

f. Select the Firmware file (SWSTx.xxxx_SWnn.nn.nn.bin) and select **Open**.

- ▪ x.xxxx = printer's series and model information (e.g., p1120n)

- ▪ nn.nn.nn = date code of the release as year, month, day (e.g., 12.11.28)

g. On the menu bar, select **Utility** and then select **Send Recovery CMD**.

h. Follow the instructions in the popup windows to prepare the printer for recovery mode.

NOTE: **This will be indicated by one of the display results below:**

- ▪ **Display printers:** The display should show a red recovery screen indicating it is in Recovery Mode.

- ▪ **Non-Display printers:** The LEDs will show a rapid alternating flash sequence indicating the printer is in Recovery Mode.

NOTE: **During Recovery Mode, for models with displays, observe that the screen brightness will change. For non-display models, observe a slow, alternating, flashing LED pattern.**

i. Wait for the printer to restart and boot up (it could take up to 10 minutes).

j. Recovery Mode Upgrade Status:

- ▪ **Successful:** A "**Firmware Upgrade COMPLETE**" message will be displayed. Click the **Get Printer Info** button to review the printer's version information to verify it is correct.

- ▪ **Unsuccessful:** "**Firmware Upgrade NOT SUCCESSFUL**" message will be displayed. Try recovery again. If still unsuccessful, contact Technical Support.

4   FAQs

1. USB Flash Drive

a.   What is the flash drive formatting requirement?
  i.   The flash drive must be formatted to FAT32.
b.   What should I do if the printer stays on one screen for more than 10 minutes?
  i.   Leave the USB Flash Drive connected to the printer and power cycle the printer. The upgrade process should continue.

2. pw Series Firmware Upgrade Utility

a.   Do we have to upgrade the Boot Loader (BL) first or can we perform the Firmware (SW) upgrade first?

- If there is no change in the Boot Loader (BL file) version, then there is no need for the Boot Loader to be updated.

- If there is a new Boot Loader (BL file) version, then it is highly recommend you upgrade the printer with the new Boot Loader file before upgrading to the new Firmware. The Firmware is closely tied to the Boot Loader version it is distributed with.

b.   Do we need to have the print driver installed?

- No. The print driver is not used for any part of the pw Series Firmware Upgrade Utility process.