FARGO® HDP5000, HDP5600, and HDPii Plus
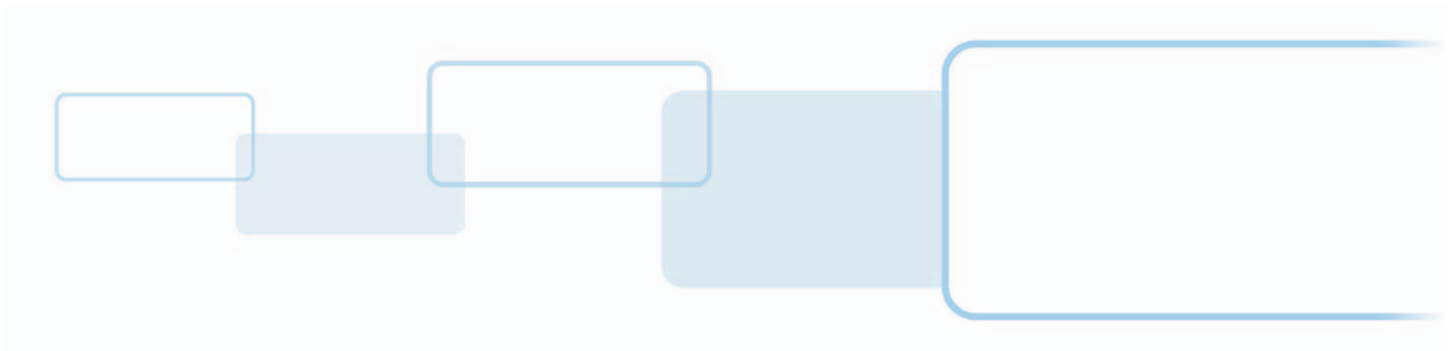
HIGH DEFINITION CARD PRINTER/ENCODER

USER GUIDE

L000950

Version: 4.1

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Chapter **1**

Specifications

1.1 Regulatory Compliance

The purpose of this section is to provide specific information on the Regulatory Compliances, Agency Listings, Technical Specifications and Functional Specifications for the HDP5000, HDP5600, and HDPii Plus Card Printer/Encoders.

Agency	Regulatory Compliance
UL	The Card Printer is listed under UL 60950-1 (2nd edition) Information Technology Equipment **File Number:** E145118 **Note:** This product is intended to be supplied by a Listed Power Unit marked Class 2 and rated for 24Vdc, 3.3A minimum.
CSA	The printer manufacturer has been authorized by UL to represent the Card Printer as CSA Certified under CSA Standard C22.2 No. 60950-1-07 2nd edition **File Number:** E145118
FCC	The Card Printer complies with the requirements in Part 15 of the FCC rules for a Class A digital device.
CE	The Card Printer has been tested and complies with EN55022, EN55024, EN6000-3-2, EN6000-3-3, EN300-330-1, EN300-330-2, EN301-498, EN60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013. **Note**: Based on the above testing, the printer manufacturer declares that the card printer complies with the following European Directives and has placed the CE mark on the Card Printer. LVD 2014/35/EU, EMC 2014/30/EU, R&TTE 2014/53/EU, ROHS 2011/65/EU
Additional Agency Listing	CCC, BIS, BSMI, EAC, KC
Environmental	Power supply Efficiency level VI minimum, RoHS, China RoHS

1.1.1 United States

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference; in which case, correction of the interference is at the users expense.

IMPORTANT: Changes or modifications to an intentional or unintentional radiator not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

1.1.2 Canada

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

1.1.3 Taiwan

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

1.1.4　Japan

この装置は総務省の型式指定を受けています。"
（総務省指定番号は第 AC-12056 号です）
本製品は電波を使用した RFID 機器の読み取り?書き込み装置です。
そのため使用する用途?場所によっては、医療機器に影響を与える恐れがあります

1.1.5　Korea

이 기기는 업무용 (A 급) 전자파 적합기기로서 판매자 또는 사용자는 이 점을 주의하시길 바라며 , 가정 외의 지역에서 사용하는 것을 목적으로 .

1.2　Safety Messages

1.2.1　Safety Messages - United States

Symbol	Critical Instructions for Safety Purposes
Danger:	Failure to follow these guidelines results in personal injury or death. To prevent personal injury or death: • Reference the following safety messages before performing an operation. • Always remove the power cord prior to performing repair procedures, unless otherwise specified. • Ensure only qualified personnel perform these procedures.
ESD:	This device is electro statically sensitive. Damage to the device may occur if exposing it to static electricity discharges. To prevent damage: • Reference the following safety messages before performing an operation. • Observe all established Electrostatic Discharge (ESD) procedures while handling cables in or near the circuit board and printhead assemblies. • Always wear an appropriate personal grounding device. • Always remove the ribbon and cards from the printer before making any repairs, unless otherwise specified. • Remove jewelry and thoroughly clean hands before working on the printer.
Caution:	This symbol warns of an electrical hazard that could result in personal injury or death.
Caution:	For safety purposes, do not use Ethernet for a direct connection outside of the building.

1.2.2   Safety Messages - French Canada

Symbole	Instructions critiques visant la Sécurité
Danger:	Si ces directives ne sont pas suivies les résultats peuvent être des lésions corporelles ou la mort. Pour éviter des lésions corporelles ou la mort: • Rapportez-vous aux avis suivants de sécurité avant de procéder à une opération. • Retirez toujours le câble d'alimentation avant d'effectuer des procédures de réparation, sauf spécification contraire. • Assurez-vous qu'uniquement des personnes qualifiées réalisent des procédures.
ESD:	Ce dispositif est sensible à l'électricité statique. Il peut souffrir des dommages s'il est exposé à des décharges électrostatiques. Pour éviter des dommages: • Rapportez-vous aux messages suivants avant de procéder à une opération. • Suivez toutes les procédures de Décharges Electrostatiques (ESD) en vigueur durant le maniement des câbles dans ou à proximité des Ensembles de Cartes de Circuit Imprimé et Tête d'Impression. • Portez toujours un dispositif de mise à la terre personnelle appropriée. • Retirez toujours le ruban et les Cartes de l'Imprimante avant d'effectuer toute réparation, sauf spécification contraire. • Retirez tous bijoux et lavez soigneusement vos mains avant de travailler à l'Imprimante.
Attention:	Ce symbole est un avis de péril électrique passible de résulter en lésion corporelle ou mort.
Attention:	Pour des motifs de sécurité, n'utilisez pas Ethernet pour une connexion directe hors du bâtiment.

1.2.3　Safety Messages - Taiwan

繁體中文 射頻發射及安全指令 安全訊息（小心檢查）

標記	重要的安全事項說明
危險： 	未按照說明安裝可能造成人員傷亡。 在可能產生潛在安全問題的地方有警示標記。 （如左圖所示）。 為了避免人員傷害，在進行有此警示標記的操作前，請先參考安全資訊提示。 為了避免人員傷害，在沒有特別說明的情況下，修理前請關掉電源開關。
小心： 	此設備對靜電很敏感。如果受到靜電放電，設備會損壞。 在可能產生潛在靜電安全問題的地方有警示標記。 （如左圖所示）。 為了避免損壞設備，在進行有此警示標記的操作前，請先參考安全資訊提示。 為了避免損壞設備，在排放電路板和印刷頭聯合裝置裡面或附近的電線時，請注意觀察所有的靜電放電設備。 為了避免損壞設備，請隨時佩戴合適的接地裝置（比如：手腕上戴一個高品質的接地手腕帶以免受到可能的傷害）。 為了避免損壞設備，如果沒有特殊說明，在做任何修理前，請取下印表機上的色帶和卡。 為了避免損壞設備，在使用印表機之前，請摘下戒指和手上飾品，並仔細清洗手上的油脂。

1.2.4   Safety Messages - China

安全消息 （请仔细阅读）

符号	涉及安全的重要过程
危险：	如果不遵循这些安装指南进行操作，可能会导致重伤，甚至死亡。 可能引发安全问题的信息由警告符号 （如左图所示）来表示。 为了确保人身安全，在执行前面带有此符号的操作之前，请先阅读下面的安全消息。 为了确保人身安全，除非另有规定，否则在执行维修过程前，始终应断开电源。
小心：	此设备为静电敏感设备。如果暴露在静电电流下，可能会损坏设备。 可能引发静电安全问题的信息由警告符号 （如左图所示）来表示。 为了防止设备或介质受损，在执行前面带有此符号的操作之前，请先阅读下面的安全消息。 为了防止设备或介质受损，请在处理电路板和打印头部件中或附近的电缆时，遵守所有规定的静电放电 （ESD）过程。 为了防止设备或介质受损，请始终佩带适当的个人接地设备 （例如，已接地避免出现潜在损坏的高质量腕带）。 为了防止设备或介质受损，除非另有规定，否则在执行任何维修过程前，始终应将色带和证卡与打印机分离。 为了防止设备或介质受损，在操作打印机前，请取下手指和手上的珠宝饰物，并将手上的油渍和污渍彻底清洗干净。
	仅适用于海拔 2000m 以下地区安全使用 Use only at altitudes not more than 2000m above sea level.
	仅适用于非热带气候条件下安全使用
	环境保护（中国 –RoHS) 环保使用期是基于本产品用于办公环境。 Environmental Protection Use Period is based on the product being used in an office environment.

1.3 Technical Specifications

Component	Description
Card Cleaning	Replaceable cleaning roller (included with each print Ribbon)
Card Materials and Types	• ABS • Laminated PVC • Mag Stripe cards • Optical Memory cards • PET • PETG • 100% Polycarbonate • Smart Cards Able to accept HDP retransfer.
Card Sizes Supported	These Card Printers accept standard CR80 sized cards (3.370L x 2.125W / 85.6mmL x 54mmW) with a thickness of 30-50 mil (.030/.762mm). The Laminator will accept card thickness of 30-50 mil. Dual Hopper limited to 30-40 mil.
Dimensions	**Printer:** 11.50″ H x 12.25″ W x 9.25″ D / 292mm H x 313mm W x 235mm D **Printer + Dual-Sided Module:** 11.50″ H x 17.50″ W x 9.25″ D / 292mm H x 445mm W x 235mm D **Printer + Single-Sided Lam Module:** 12.75″ H x 25″ W x 9.25″ D / 324mm H x 635mm W x 235mm D **Printer + Dual-Sided Module + Dual-Sided Lam Module:** 12.75″ H x 30″ W x 9.25″ D / 324mm H x 762mmW x 235mm D **Lam Module:** 12.75″ H x 12.25″ W x 9.25″ D / 324mm H x 313mm W x 235mm D **Dual Input Hopper:** 12″ H x 5″ W x 5.5″ D
Display	OLED Graphical Display
Encoding Options	• Single-wire encoding options (USB or Ethernet) – "field technician upgradeable" • ISO compliant magnetic stripe encoding, dual high- low-coercivity, Tracks 1, 2 and 3 • JIS 2 Mag Encoding • Custom & Raw Encoding • Contact and contactless smart card (OMNIKEY 5121 and 5125)
FARGO Certified Supplies	**Important! Fargo Card Printers require highly specialized print Ribbons to function properly. To maximize Printer life, reliability, printed card quality and durability, you must use only Fargo Certified Supplies. For this reason, your Fargo warranty is void, where not prohibited by law, if you use non-Fargo Certified Supplies. To order additional materials, please contact your authorized reseller.**
Hopper Capacity - Input	• 100 cards, 30 mil cards-standard hopper • 200 cards, 30-40 mil cards- dual-input hopper optional
Hopper Capacity - Output	• 200 card Output Hopper capacity, 30–40 mil • Reject hopper 5 cards minimum, 30 mil (with flipper module)

Component	Description
Interface	USB 2.0 (high speed) Ethernet with internal print server Interfacing information for E-card Options
InTM Film Options	Clear Film, 1,500 prints Standard Holographic (500 prints) Custom Holographic, special order (500 prints) High Durable Clear Film (1,000 prints)
InTM Film Storage Temperature	77 °F (25 °C) or lower for no longer than 1.5 years.
Locks	Hardware locks are a optional feature. • Mechanical and key locks are used to secure the doors on the input card cartridges, the access door to the printer, the access door to the Laminator and the output card Hopper. • The input card cartridges are manually secured to the printer mechanism through the toggle latch located inside the access door of the printer. • The Printer and Laminator include a compatible hole with a Kensington lock.
Memory	16 MB RAM 64MB (HDP5600 only)
MS Windows Compatibility	• Windows XP • Server 2003 • Vista (32 & 64 bit) • Windows Server 2008 (32 & 64 bit) • Windows 7 & 8, 8.1, 10 (32 & 64 bit) • Windows Server 2008 R1, 2008 R2 • Windows Server 2012 R2
Operating Conditions	Operating Temperature: 65° to 90° F (18° to 32° C) Humidity: 20 - 80% non-condensing
Options	• Card Lamination Module – single-sided or double sided • Flipper Module • Magnetic stripe encoding • Dual Input hopper • Smart card encoding (contact/contactless) • Contactless 13.56MHz encoding option • Contact chip encoding option • Door and cartridge locks • Printer cleaning kit
Overlaminate Options	All overlaminate options are available in either clear, holographic globe design or custom holographic design. They can also be optimized for use with smart cards and Magnetic Stripes. Here are the options: • Thermal Transfer Overlaminate, .25 mil thick, 500 prints • PolyGuard® Overlaminate, 1.0 mil and .6 mil thick, 250 prints, (clear, standard holographic and custom holographic)

Component	Description
Print Area	Over-the-edge on CR-80 cards.
Print Colors	Up to 16.7 million and 56 shades per pixel
Print Method	HDP Dye-Sublimation/ Resin Thermal Transfer
Print Modes	Print Head options: Note: Both **Normal** and **Performance** are 300 DPI in both the short and long dimensions of the card • **Normal** print mode (default) • **Performance** print mode is faster with lower image quality and is most suitable for minimal color with mostly resin text. HDP5600/600 DPI print head only: • **Normal** mode is 600 DPI in the short dimension, but effectively 300 DPI in the long dimension (default) • **Premium** mode is a full 600 DPI in both the short and the long dimensions of the card.
Print Resolution	300 dpi (11.8 dots per mm) continuous tone 600 dpi (HDP5600 only)
Print Ribbon Options	Prints or Images: • YMC, 750 prints • YMCK* 500 prints • YMCKK* 500 prints • YMCKH* 500 prints • YMCFK, 500 prints • YMCKI, 500 prints • YMCIKH, 375 prints • YMCKIKI, 375 prints • YMCK Half panel, 1000 prints • YMCKK Half Panel, 750 prints • Premium Black Resin (K) 3000 prints *Indicates the Ribbon type and the number of Ribbon panels printed where Y=Yellow, M=Magenta, C=Cyan, K=Resin Black, H=Heat Seal, I=Inhibit, and F=Fluorescing
Print Speed in Normal Mode	• YMC - 29 seconds per card/ 124 cards per hour • YMCK - 35 seconds per card/ 103 cards per hour • YMCKK - 49 seconds per card/ 73 cards per hour • YMCK+Lam - 40 seconds per card/ 90 cards per hour • YMCKK+Lam - 55 seconds per card/ 65 cards per hour
Print Speed in Performance Print Mode	**Note:** Performance is most suitable for minimal color and mostly resin text. • YMC - 24 seconds per card/ 150 cards per hour • YMCK - 29 seconds per card/ 124 cards per hour • YMCKK - 40 seconds per card/ 90 cards per hour • YMCK+Lam - 34 seconds per card/ 106 cards per hour • YMCKK+Lam - 48 seconds per card/ 75 cards per hour

Component	Description
Power Source Voltage, Amp & Frequency	Supply Voltage/Amp: 100-240 VAC, 3.5 A Max Supply Frequency: 50 Hz and 60 Hz
Resin Scramble Option	The system can hide any information printed with the resin panel.
Ship Weight	**Printer:** 16 lbs. / 7.3 kg **Printer + Dual-Sided Module:** 22 lbs. / 10 kg **Printer + Single-Sided Lam Module:** 28 lbs. / 12.7 kg **Printer + Dual-Sided Module + Dual-Sided Lam Module:** 6 lbs. / 16.4 kg
Single Wire Encryption Options	• Contactless Smart Card Encoder (HID iCLASS and MIFARE) • Contact Smart Card Encoder reads from and writes to all ISO7816-1 and 2 and 3 and 4 memory and microprocessor smart cards (T=0, T=1) as well as synchronous cards • Prox Card Reader (HID read-only)
Supply Frequency	50 Hz / 60 Hz
Supply Voltage	120-240 VAC
System Requirements	x86 based PC or compatible • 500MHz computer with 256MB of RAM or higher • 500MB free hard disk space or higher x64 based PC or compatible • 1GHz computer with 512MB of RAM or higher • 32GB hard disk drive
Warranty	**Printer:** Three year (One year On-Call Express, U.S. only). • Three (3) Year Factory Warranty • Covers parts and depot repair • First year On-Call-Express (loaner printer U.S. only) • 2nd year On-Call-Express available for a fee. This must be purchased before the first year On-Call-Express expires. **Printhead:** Lifetime; unlimited pass with Fargo-certified Cards

Chapter 2

Setup and Installation Procedures

2.1 Inspection – Card Printer

- While unpacking your Printer, inspect the carton to ensure that no damage has occurred during shipping. Make sure that all supplied accessories are included with your unit.
- Reference the Card Printer Quick Start Guide for information on how to load the Print Ribbon, Transfer InTM Film, Overlaminates and Card stock.
- See the Quick Start Guide for connecting the Power to the Printer and Lamination Module.

IMPORTANT: Do not plug in the USB cable until prompted to do so during the installation of the Printer Driver. Follow the prompts to install the driver.

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Printer Driver Operations

3.1 Card Tab

Use the **Card** tab to select options for the card as well as diagnostics and calibration.

Field	Definition
Card Size	Select the appropriate card option (CR-80 or Custom): • **CR-80:** This selection is the default size for the printer. These card printers accept standard CR80 sized cards 3.452 x 2.204 inch (87.7 x 56 mm). • **Custom:** This selection is used to create a custom card size from 1.0 x 3.0 inch to 2.204 x 3.452 inch (25.4 X 76.2 mm to 56 X 87.7 mm). **Inches/mm:** Select how to display the card dimensions. **Print Width/Print Length:** The dimensions of the total print area for each card size will appear in the **Print Width** and **Print Length** fields. **Note:** These print area dimensions are .04 in (1 mm) larger than the actual card size. This is so the printer can overprint images to ensure they will appear edge-to-edge when transferred to the card. When designing a card format, always set the card size within the card design program to the exact print length and width dimensions of the card.
Card Type	The following Card Type options are available: • Fargo UltraCard III (Default Card Type) • Fargo UltraCard Premium • Fargo Ultracard • HID Tech Card Composite • HID Tech Card PVC • Indala FlexISO – Standard (FPISO) • Indala FLexISO XT-Composite (FPIXT) • Custom 1 • Custom 2 **Defaults:** The Printer Driver software has default Transfer Temperature and Dwell Time settings that deliver the best transfer for these card types. These defaults automatically configure based on the card type, Ribbon type and whether printing single- or dual-sided. **Card Type Selection:** Before printing, if using these standard Fargo card types, ensure selecting the appropriate card type from the Card tab of the Printer Driver. **Proper Settings:** Not all card types are accommodated by these default settings. In some cases, experimentation is required to find the proper settings. **IMPORTANT: If you select the wrong option, the wrong Dwell Time and temperature may be used during the image transfer process resulting in poor adhesion of the InTM Film or card warping.** If using a card stock other than listed, use the **Custom 1** options to save custom Dwell Time and Dwell Temperature controls on the **Image Transfer** tab. • Click **Custom** options and enter a name for the card stock. • Click **Image Transfer** tab to adjust the Dwell Time and temperature sliders to the appropriate settings. **Custom Card Stock:** To determine the proper settings for custom card stock, apply the Tape Adhesion Test.
Card Hopper Selection	Specifies which hopper the printer feeds a card. **Hopper Top:** Allows the printer to feed from the top hopper. **Hopper Bottom:** Allows the printer to feed from the bottom hopper. **First Available:** Feeds a card from the last successful hopper location first, and then switches to the other hopper.

Field	Definition
Orientation	Set the card orientation: **Portrait:** Sets the card to print in a vertical orientation. **Landscape:** Sets the card to print in a horizontal orientation.
Copies	Specifies the number of copies to be printed. Range is 10000 - 1.
Diagnostics	Click **Diagnostics** to launch the Workbench Printer Utility. See *Chapter 7: Workbench Printer Utility* for detailed information.
ToolBox	Select **Toolbox** to access the Toolbox configuration options. See See *Chapter 4: ToolBox* for detailed information.
Test	Click **Test Print** to test the printer.
About	Select **About** to display the Printer Driver information.
OK	Closes the window and saves the driver configuration changes.
Cancel	Closes the window. Any changes made with the ToolBox, will be lost.
Apply	When enabled, applies the recent action selected or completed.
Help	Launches Help specific to the active tab.

3.1.1 General Card Information

3.1.1.1 Card Design

The printer will print onto any card with a clean, level, and polished PVC surface.
Important: Composite PVC is recommended over straight PVC for the best results and for ISO card specification compliance. Single side straight PVC does not conform to ISO compliance at this time.

3.1.1.2 Card Surface

Suitable cards must have a polished PVC surface free of fingerprints, dust, or any other types of embedded contaminants.

In addition, cards must have a completely smooth, level surface in order for the printer to achieve consistent color.

3.1.1.3 Card Coverage

Some types of Proximity cards, for example, have an uneven surface which will inhibit consistent color transfer.

Likewise, some smart card chips are raised slightly above the cards surface, which also results in poor color transfer.

3.1.1.4 UltraCard Stock

Due to the importance of using high-quality blank cards, a factory-approved card stock called UltraCard™ is available and recommended for best results.

UltraCard stock has a glossy PVC laminate on top and bottom and is optically inspected to provide the cleanest, most scratch and debris-reduced cards possible.

Two types of these cards are available: UltraCard and UltraCard Premium.

- UltraCard stock has a PVC core and offers medium card durability.
- **Recommended:** UltraCard Premium stock has a 40% polyester core and offers high durability.

Both types of UltraCards produce printed images with a glossy, photo-quality finish.

3.1.1.5 Custom

If using a card stock other than listed, use the custom options to save custom dwell time and temperature controls.

1. Select **Custom 1** or **Custom 2** as a *Card Type*.
2. Select the **Image Transfer** tab to adjust the Dwell Time and Temperature sliders to the appropriate settings. **Note:** These settings will be saved for the custom card type when the printer driver setup window is closed.
3. For additional information on the **Image Transfer** screen, see *Section 3.4: Image Transfer Tab*.
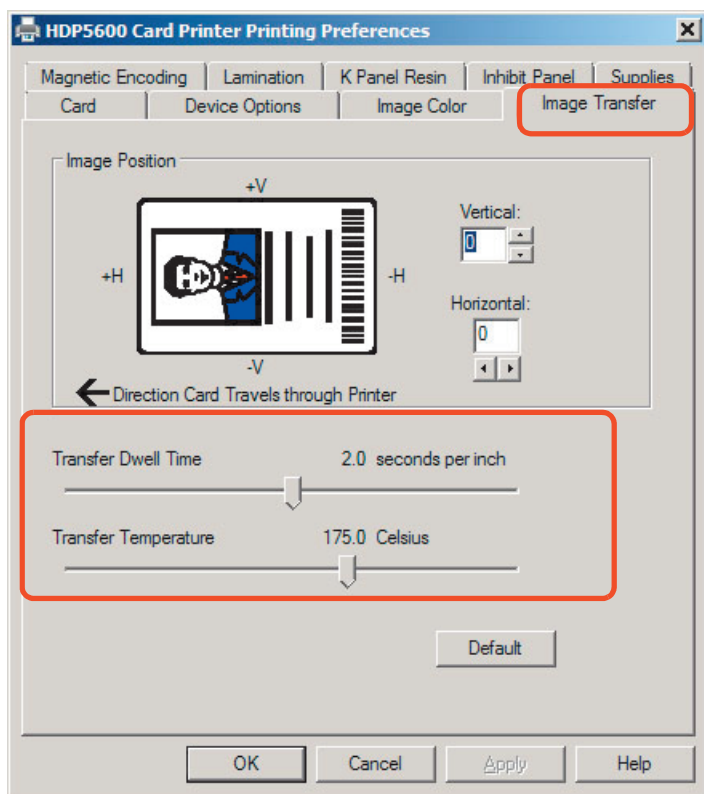
Custom Card Stock: To determine the proper settings for custom card stock, conduct the **Tape Adhesion Test**.

3.1.1.6 Conducting the Tape Adhesion Test

Since it can not be certain which transfer temperature and dwell times will work best with cards other than the recommended ones, it is important to conduct tape adhesion tests. The optimal transfer settings may vary from card type to card type.

Important: Inadequate time and temperature could produce cards that are more vulnerable to accelerated wear and dye migration. Use sufficient time and temperature for transferring film to the card to ensure a long lasting, durable card.

Test the adhesion quality of the film to the card by printing sample cards and completing an adhesive tape test.

1. Select the UltraCard IIIs-Glossy PVC if the card is glossy, and print a test card.
    a. Apply a strip of 1/2 in (12 mm) wide Scotch-type clear adhesive tape (such as 3M brand 600), at least 2 inches (50 mm) long, firmly across the surface of the card, pressing out all air bubbles with a fingertip.
    b. Remove the tape by smoothly and rapidly, approximately 2 in (50mm) /second, pulling it up at a perpendicular (90 degree) angle to the card.
        Note: The IPC recommends a minimum of three tests for each card type evaluation.
2. Visually examine the card and the strip of tape pulled from the card, to see if any portion of the film was removed.
    a. If any residue (e.g. oil or grease from fingertips) is present on the card surface, the evaluation results may be affected.
    b. If the printed, transferred film particles (1) pull away from the card and (2) adhere to the tape, this indicates that inadequate adhesion of the film to the card. Increased heat and dwell times are necessary to resolve this problem.

Samples 1, 2 and 3 show a representation of the expected adhesion level.

Result 1: Shows a significant transfer to the tape and is an absolute failure.

Result 2: Shows that very slight transfer to the tape can be acceptable without sacrificing overall image durability on matte finish cards.

Result 3: Shows no transfer to the tape and is an absolute pass.

1	2	3
FAIL: Significant transfer to tape.	**Pass:** Very slight transfer to tape.	**Pass:** Absolutely no transfer to tape.

3. If the tape test indicates inadequate adhesion, increase the heat setting by 5 degrees, print another card and try the tape test again.

- Once the temperature has been increased 4 times (20 degrees), reset temperature to default and increase the dwell time by 0.5 second.

- If necessary, repeat this process until adequate adhesion is achieved.

- Ensure that the cards in use have a surface roughness (Ra) of 60 micro inch or less. This information should be available from the card manufacturer.

3.1.1.7 Printing on Alternate Card Stocks

In order to optimize the card printer's capabilities for cards with hard-to-print surfaces, it is recommended evaluating the card stock selection before installation of the printer. The variability in cards based on:

- Different surface textures and different sources of raw materials
  This may require different film transfer parameters.

- Varied methods of assembling IC smart cards and proximity cards.
  These particular adhesives used to glue a smart chip to a plastic card may react differently to a transfer roller's pressure and temperature.

- Cleanliness of card stock
  The process does not eliminate the need to use clean card stock.
  The best-looking card always starts with the cleanest card surface.
  Dirt and debris on a card can show up as blemishes on the card surface and may reduce the life of the image itself.

3.2　Device Options Tab

Use the Device Options tab to set the printing options.

Field	Description
Supplies	**Automatically detect the installed Ribbon and Film for every print job** This option will auto detect the consumables, which are the ribbon and film. **Ribbon Type:** Allows the selection of the ribbon type that is loaded in the printer. • YMC-Full Color • YMCK - Full Color/Resin Black • YMCKK - Full Color/2 Resin Black • YMCKH - Full Color/Resin Black/Heat Seal • K-Premium Resin • YMCFK - Full Color/UV Fluorescing/Resin Black • YMCKI - Full Color/Resin Black Inhibit • YMCK - Full Color/Resin Black-Half Panel • YMCKK - Full Color/2 Resin Black-Half Panel • YMCKIKI - Full Color/2 Resin Black/2 Inhibit • YMCIKH - Full Color/Inhibit/Resin Black/Heat Seal **Film Type:** Allows selection of film type for the film currently loaded in the printer. • **Clear:** Automatically adjusts the transfer time and temperature to pre-determined defaults on non-custom card type selected on **Card** tab. • **Holographic:** Modifies the internal printer settings needed to make the holographic film work on non-custom Card Type s. **Note**: It will adjust the Transfer Temperature and the Dwell settings in the driver to provide the optimal holographic InTM performance. • **High Durable Clear:** Adjusts the Transfer Time and Temperature to pre-determined defaults on non-custom Card Type chosen on **Card** tab.

| Field	Description
Dual Sided	**Note:** The Dual Sided options will be grayed out if: • No **Flipper** is found. • The **Print Both Sides** option is unchecked. **Print Both Sides:** This option is used for cards printed on both sides. (A program with the ability to send 2 card images within the same document is required.) • Side 1 will be printed on the front side of the card. • Side 2 will be printed on the backside of the card. **Split 1 Set of Ribbon Panels:** This option becomes active when **Print Both Sides** is checked. Select this option to automatically print full-color on the front of a card and resin black on the back of a card (using YMCKK type print ribbons). Use this option to provide the most economical means of printing a dual-sided card since a single set of ribbon panels will be split to print both the front and backside. **Print Back Image on Front of Card:** Select this option: - If printing the first page of a two page card layout on the backside of the card OR - If printing the resin black on the chip-side of the smart card. The second page of the card layout will be printed on the front side of the card. **Print Back Side Only:** Select this option to print only onto the backside of preprinted cards that must have their magnetic stripe or smart card chip encoded. **Note:** Load the cards into the hopper in the usual way. • When this option is selected, the print both sides option is automatically disabled. • When attempting to print a two page card layout, the first page of the card will print on the backside of the card. • The second page of the layout will then be printed on the back of a second card.
Options	**Rotate Front 180 Degrees:** Rotates the image on the card front 180 degrees when printed. **Rotate Back 180 Degrees:** Rotates the image on the card back 180 degrees when printed. **Disable Printing:** No print data will be sent to the printer when magnetic encoding is sent. Note: This option allows the use of laminate without printing. **Dual Pass:** This refers to fluorescing dye being applied to a separate panel of the film. **Note:** First, the YMC ink is applied to a panel of film; then the F and possibly K are applied to a separate panel. If this is not done, the fluorescent ink tends to mix with the YMC colors and lose its fluorescent qualities; it also tends to become visible. It is recommended that the default **Dual Pass** option is used if the fluorescent image is used where other dye is used or if the **Invert F-panel Image** option is selected. For additional information See *Chapter 8: Fluorescent Panel Usage*. **Invert F-panel Image:** This refers to the ability to cause light or white areas of the image to fluoresce and dark colors to remain dark on the printed card when exposed to a UV light. Note: This was requested because the fluorescent dye color is bright when black light is applied to it. By default, the dark areas of the image will fluoresce on the card and the lighter or white areas will have no dye applied. The user can select the **Invert F-Panel Image** option to cause the black in the design to show as dark on the card. This option is recommended if the user is printing a photo. For additional information See *Chapter 8: Fluorescent Panel Usage*.

Field	Description
Options	**Enable Resin Scramble:** Only ribbons with the K panel have this option available in the driver. This eliminates the personal data traceability on used ribbon panels and lowers the risk of identity theft. **Encrypt Job Data:** AES256 encryption protects the data passed from the computer to the printer. **Use Substitute Panel Data:** Only ribbons with the "F" or "I" panel have this option available in the driver. **When Split 1 Set of Ribbon Panels is selected in the driver AND the Flipper Module is present:** • The first card layout is printed to the front of the card with the YMC ribbon panel. • The second layout is printed on the front of the card with the "F" ribbon panel. • The third layout is printed on the back with the "K" ribbon panel. **When "split mode" is NOT selected AND the Flipper Module is present:** • The card layout is printed to the front of the card with the YMC ribbon panel. • The second layout is printed on the front of the card with the "F" ribbon panel. • The third layout is printed on the back of the card with the YMC ribbon panel • The fourth layout is printed on the back of the card with the "F" ribbon panel. **Print Mode:** There are two print modes: • **Normal** (default) • **Performance** This mode is faster with lower image quality and is suitable for minimal color with mostly resin text. HDP5600/600 DPI only • **Normal** (default) - Standard 600 dpi printing mode. Suitable for printing color rich cards and also fine detailed text. • **Premium** Enhanced 600 DPI printing mode. Offers extra ability for printing the smallest detailed images but will reduce the print speed throughput.

In the firmware, the values of the installed ribbon and transfer film are updated on initialization (including each time the cover is closed).

The firmware compares the ribbon and, film values in the PRN file to the values it holds regarding the currently installed consumables.

If the values do not match, the LCD displays **Wrong Ribbon Error** or **Wrong Film Error** and the driver returns the corresponding error message.

If the values match, a message pertaining to this displays.
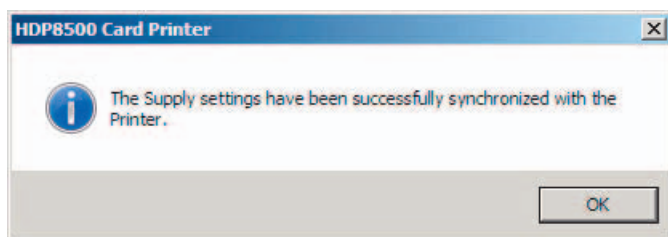
Activating the Device Options tab automatically populates the ribbon and film types.
Note: An error message will display if no printer is found when activating the Device Options tab.

When the **Supplies** option is selected, the following takes place:

Ribbon Type and **Film Type** drop-down menus are inactivated and populated with values of installed supplies. **Dual Sided** and **Options** are set to defaults for detected supplies.

If no printer is found or no ribbon is installed, the option is enabled.
Note: The previously selected ribbon and film values will remain. An error message will display. When the **Supplies** option is not selected or it is cleared from a selected state, the ribbon and film drop-down menu become active and auto selected ribbon and film types remain until manually changed.

3.3   Image Color Tab

Use the **Image Color** tab to control the sharpness, contrast, and gamma of the printed image, as well as the individual color balance of yellow, magenta and cyan.

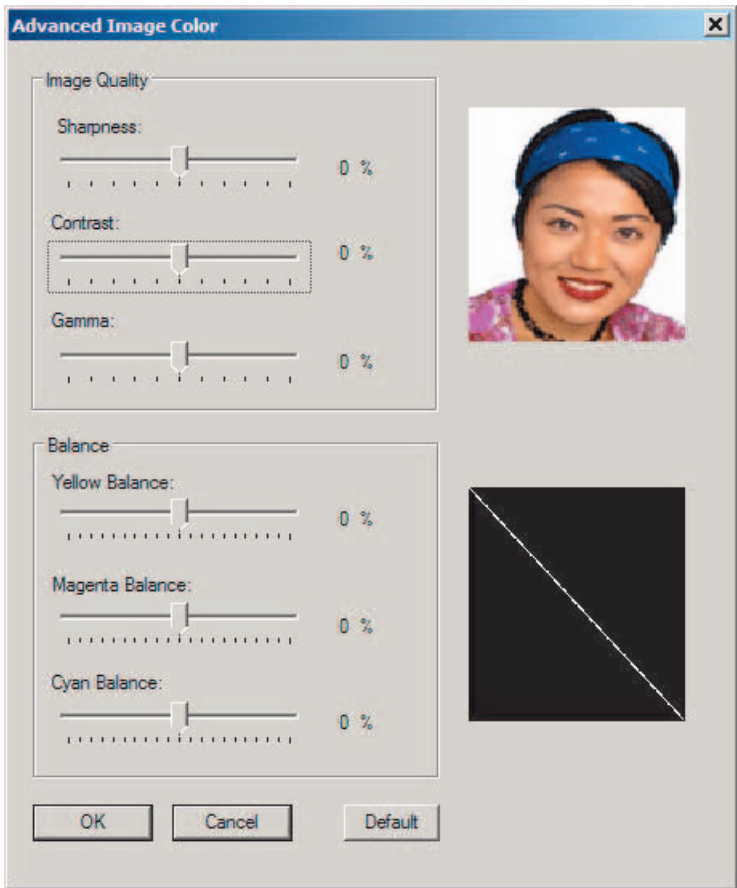| Field	Description
Image Quality	**Color Matching:** There are two selections for color matching in the drop-down list. • **None**: Select this option if color correcting the image for printing has already been done or if using third party color matching software. • **System Color Management**: Select this option to allow the printer driver to make color corrections similar to the Algebraic option but through a more complex color matching algorithm. **Note**: This option shifts colors more radically so the colors in the image will more closely match how they appear on screen. This option only affects those objects printed on the backside of a card with any of the following ribbons selected on the **Device Options** tab: • YMCK • YMCKK • YMCFK • YMCKI **Resin Dither:** Resin dither is enabled when: • Using at least one K Panel. • Selecting both **Print Both Sides** and **Splitting 1 Set Of Ribbon Panels**. • Premium Resin can be used without any additional options required. Select the appropriate dither method according to the type of image to be printed • **Optimized for Graphics**: Select this option when printing lower quality images (e.g., clip-art, logos, etc.) with resin. • **Optimized for Photo**: Select this option when printing photo quality images with resin.
Heat	**Dye-Sub Intensity (YMC):** This slide controls the overall darkness and lightness of the dye-sub printed image. This slide only affects those images printed with dye-sublimation (YMC-type) ribbon panels. • Moving the slide to the left causes less heat to be used; the prints are lighter. • Moving the slide to the right cause more heat to be used; the prints are darker. **Resin Heat, Front (K):** The heat is controlled for both front and back of cards. This control can be helpful for fine-tuning the sharpness of resin text and bar codes. This slide controls amount of heat the printer uses when printing with the resin black panel. • Moving the slide to the left causes less heat to be used; the resin images are lighter or less saturated. • Moving the slide to the left causes more heat to be used; the resin images are darker or more saturated. **Resin Heat, Back (K):** The heat is controlled for both front and back of cards. This control can be helpful for fine-tuning the sharpness of resin text and bar codes. This slide controls amount of heat the printer uses when printing with the resin black panel. • Moving the slide to the left causes less heat to be used; the resin images are lighter or less saturated. • Moving the slide to the left causes more heat to be used; the resin images are darker or more saturated. **Default:** Clicking the will return the **Heat** options to factory settings.
Advanced Settings	See *Section 3.3.1: Advanced Image Color*.

3.3.1 Advanced Image Color

Select **Advanced Settings** on the *Image Color* tab.

Field	Description
Image Quality	**Sharpness:** Default is 0%. Move the slider to the left for (-) for less, or move the slider to the right (+) for more sharpness of the printed image. **Contrast:** Default is 0%. Move the slider to the left for (-) for less or move the slider to the right (+) for more contrast of the printed image. **Gamma:** Default is 0%. Move the slider to the left for (-) for less or move the slider to the right (+) for more gamma of the printed image. Gamma changes will also display in the black box below the image.
Balance	**Yellow Balance:** Default is 0%. Move the slider to the left for (-) for less, or move the slider to the right (+) for more yellow as an individual color balance. **Magenta Balance:** Default is 0%. Move the slider to the left for (-) for less or move the slider to the right (+) for more magenta as an individual color balance. **Cyan Balance:** Default is 0%. Move the slider to the left for (-) for less or move the slider to the right (+) for more cyan as an individual color balance.
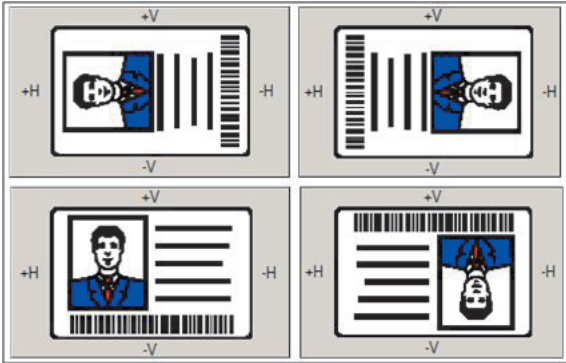
The graphic to the right displays the results of the new settings.
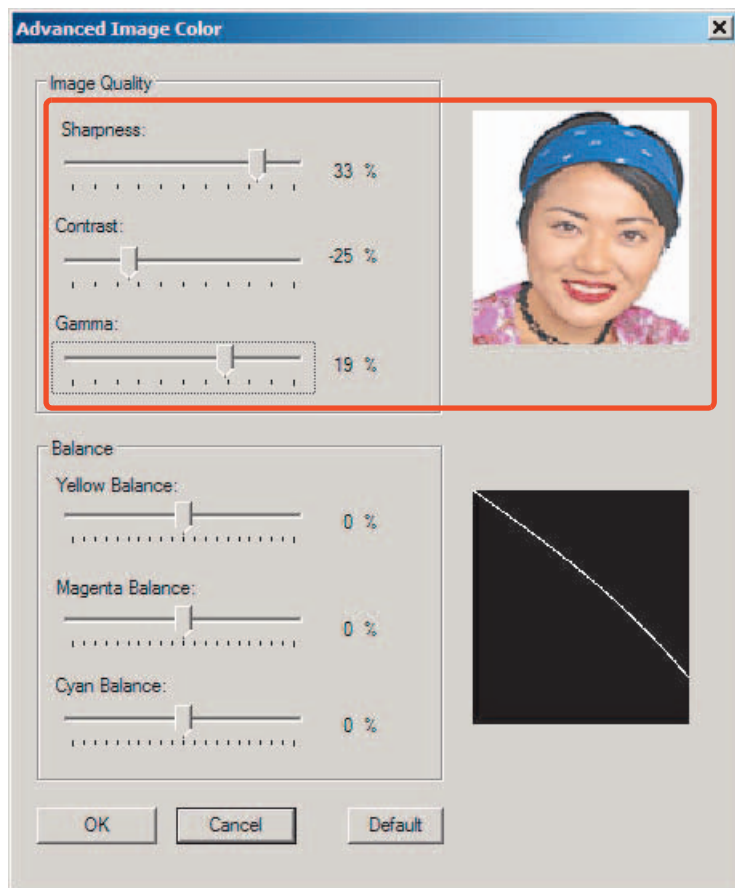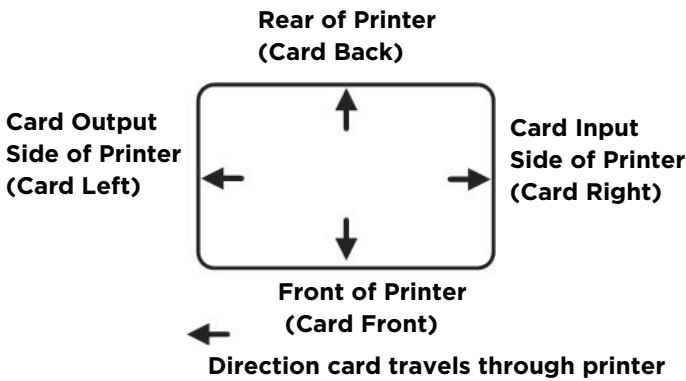
3.4   Image Transfer Tab

Use this tab to adjust the **Image Position**, **Transfer Dwell Time**, and **Transfer Temperature**.

Field	Description
Image Position	Use the **Image Position** controls to position the image on a card. Adjust the image position values by clicking on the **Vertical** and **Horizontal** adjustment arrows. The image position will flip and rotate according to the selection of portrait, landscape, or rotate 180 degrees on previous screens

Field	Description
	The following graphic represents how the printed image will move in relation to the fixed card position as positive and negative image values are entered.
	The maximum value for the vertical and horizontal adjustments is ±100 Pixels (10 Pixels = 0.03 [0.8mm]).
	Rear of Printer (Card Back) **Card Output Side of Printer (Card Left)** ← → **Card Input Side of Printer (Card Right)** **Front of Printer (Card Front)** ← **Direction card travels through printer**
Transfer Parameters	These settings control the speed and temperature at which printed images are transferred from the film to the card. These settings may vary depending on the card type. The printer driver automatically optimizes these settings according to the card type and film type previously selected. Changes made to the dwell time and temperature settings are saved for the selected card type option upon exiting the printer driver setup. **Transfer Dwell Time:** Transfer Dwell Time sets dwell time for InTM transfer in seconds per inch. • Lower limit = 1.0 seconds per inch • Upper limit = 3.0 seconds per inch Transfer Dwell Time defaults: • UltraCard III - Premium: Default = 2.0 seconds per inch • UltraCard - PVC: Default = 2.0 seconds per inch • Custom: Default = 2.0 seconds per inch **Transfer Temperature:** Transfer Temperature Sets temperature for InTM transfer in Celsius. • Lower limit = 150°C • Upper limit = 190°C • UltraCard - Premium: Default = 185°C • UltraCard- PVC: Default = 175°C • Custom: Default = 175°C
Default	This option will return the settings to the factory default settings for the selected card type.

3.5 Magnetic Encoding Tab

The Magnetic Encoding tab contains options for controlling the magnetic stripe encoding process.

| Field	Description
Encoding Mode	Set the Encoding Mode and Coercivity or modify the ISO standards for Tracks 1, 2 and 3. • **ISO Encoding:** With this option a formatted set of characters is sent. The magnetic track tabs are inactive and display ISO defaults for each track. See *Section 3.5.1: ISO Track Locations* • **Custom Encoding:** With this option all magnetic track options are active. The default is ISO Encoding, however all options are changeable. • **Raw Binary Encoding:** With this option a raw binary string rather than a formatted set of characters is sent. Some magnetic track options are enabled. • **JIS II Encoding:** With this option specific standards are used. The magnetic track tabs are inactive and display JIS II defaults for each track. **Coercivity:** Select the Coercivity option (Oersted [Oe]) for the Magnetic Stripe type for the Card Type. • Super High Coercivity =4000 Oe • High Coercivity = 2750 Oe (FARGO's High Coercivity UltraCard IIIs are 2750 Oe) • Medium Coercivity = 600 Oe • Low Coercivity = 300 Oe **Shift Data Left:** This option shifts the recorded magnetic data to the left-hand side of the card's magnetic stripe. This is used when cards require insert type readers
Magnetic Track Options	If these options are enabled, the user can specify how tracks are to be configured. All tracks display the same options. **Encoding Mode:** Displays the encoding mode selected. **Character Size:** Sets the character data size (bits per character) used to encode the magnetic data on the currently selected track. Note: This character size includes the parity bit (if enabled). When the drop-down list is enabled, selections vary for the selected encoding mode. • Custom Encoding: 7, and 5 Bits • Raw Binary Encoding: 4, and 8 Bits **ASCII Offset:** Sets the character ASCII offset used to encode the magnetic data on the currently selected track. Note: This character-offset value is subtracted from the ASCII value of each magnetic stripe data character prior to encoding on the track. • Options are: NULL, SPACE, and ZERO **Bit Density:** Sets the bit recording density (bits per inch) used to encode the magnetic data on the currently selected track. • Options are: 75, and 210 BPI **LRC Generation:** Sets the LRC generation mode used to encode the magnetic data on the currently selected track. • Options are: No LRC, Even Parity, and Odd Parity **Character Parity:** Sets the encoding mode used to encode the magnetic data on the currently selected track. • Options are: No Parity, Even Parity, and Odd Parity **Reverse Bit Order:** This option is used to reverse the character bits for the encryption of data in specific programs. **Add Leading Zeros:** This option is used to add a set number of leading zeros to the magnetic string in order to move the starting point of the encoded data in specific programs for encryption of data. **Default:** Resets defaults for the current track.

3.5.1 ISO Track Locations

The magnetic Encoding Module encodes onto tracks in accordance with an ISO 7811-2 Magnetic Stripe.
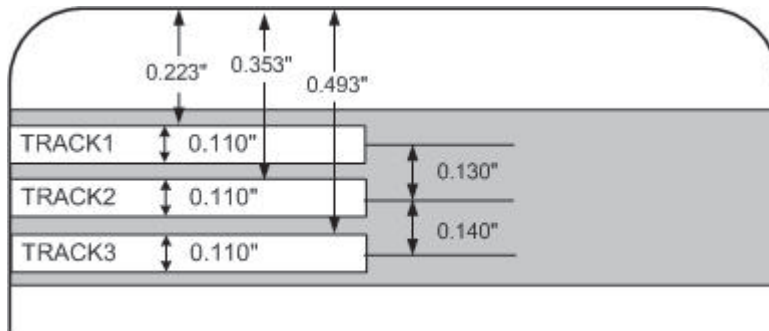
3.5.1.1 *Sending the Track Information*

Magnetic track data is sent in the form of text strings from the application software to the printer driver.

In order for the printer driver to differentiate between magnetic track data and the rest of the printable objects, specific characters must be added to encode the magnetic data. These specify the data that is to be encoded, the tracks to encode, and mark the start and stop of the data string.

In some cases, these specific characters are automatically added to the string of track data by ID software applications.

In most cases, the user must carefully add these characters to the string of data. If these characters are not added to the track data, the text intended for the magnetic track will appear as printed text on the card.

To avoid this, track information must be entered as described below.

When entering track data, the ~ (tilde) character is entered first, followed by the track number (1, 2 or 3) on which the data should encode. This is followed by the data to be encoded

The first character of this data string must be the track's specific Start Sentinel (SS) and the last character must be the specific End Sentinel (ES).

The characters or data in between the SS and ES can include all of the valid characters specific to each track.

- The number of these characters, however, is limited by each track's maximum character capacity.
- When segmenting track data, the appropriate Field Separator (FS) must be used.
  The **ASCII Code and Character Table** shows the SS, ES, FS and the valid characters defined for each track

Reviewing the Sample String

Track 1: ~1%JULIEANDERSON^1234567890?

Track 2: ~2;1234567890987654321?

Track 3: ~3;1234567890987654321?

Track	Start Sentinel	End Sentinel	Field Separator	Valid Characters	Maximum Number of Characters
Track 1	%	?	^	ASCII 32-95 (See the table)	78
Track 2	;	?	=	ASCII 48-63 (See the table)	39
Track 3	;	?	=	ASCII 48-63 (See the table)	106

ASCII Code and Character Table

ASCII Code	Character	ASCII Code	Character	ASCII Code	Character
32	space	54	6	76	L
33	!	55	7	77	M
34		56	8	78	N
35	#	57	9	79	O
36	$	58	:	80	P
37	%	59	;	81	Q
38	and	60	<	82	R
39	'	61	=	83	S
40	(	62	>	84	T
41	)	63	?	85	U
42	*	64	@	86	V
43	+	65	A	87	W
44	'	66	B	88	X
45	-	67	C	89	Y
46	.	68	D	90	Z
47	/	69	E	91	[
48	0	70	F	92	\
49	1	71	G	93	]
50	2	72	H	94	^
51	3	73	I	95	_
52	4	74	J		
53	5	75	K		

3.6   Lamination Tab

Note: When no laminator is detected, the Lamination tab is active but all functions are disabled.

The card lamination module will accept either of the following:

- **Thermal Transfer Film:** The thermal transfer film overlaminate is a relatively thin material which covers a card edge-to-edge and provides a medium level of card durability and security.

- **PolyGuard Overlaminate:** PolyGuard is a much thicker material which does not cover edge-to-edge, but provides an extremely high level of card durability and security.
  Note: PolyGuard is available in either a 1.0 or 0.6 mil thickness and should always be used for those applications requiring the highest degree of card durability and security. Available in clear or holographic patch.

Group or Field	Description
Lamination Position	Use this option to adjust the horizontal position of the laminate. To adjust the position, click on the horizontal adjustment arrows. • To move the overlaminate toward the printer output side, enter a positive number. • To move the overlaminate toward the printer input side of the printer, enter a negative number. Maximum value for the horizontal adjustments is 100 Pixels (10 Pixels = 0.03 [0.8mm]).

Group or Field	Description
Lamination Speed	**Transfer Dwell Time:** Adjust this control for the through-put speed of a card in seconds per inch. Range is 5.5 to 0.8 seconds, with a default of 2 seconds.
Lamination Side	To specify the side(s) of the card to laminate select: • No Lamination (if the laminator is not to be used) • Laminate Front Side • Laminate Back Side • Laminate Both Sides • Laminate Opposite Sides
Lamination Type	**Cartridge 1 & 2:** Select one of the lamination type options, according to which type of lamination media is currently installed. Two types of overlaminates, film and PolyGuard, are supported by the driver. Custom versions of each type are also available. Selections are: • **Film Lamination**: Select if the thermal transfer film overlaminate type is installed in the lamination module. • **0.6 PolyGuard Lamination**: 0.6 is the patch thickness. • **1.0 PolyGuard Lamination**: 1.0 is the patch thickness. **Note:** The two PolyGuard Lamination patches require different heat settings and lamination speeds. Select the appropriate option according to the thickness of the PolyGuard material in use. • **Registered Film Lamination** • **Holographic Film Lamination** **Transfer Temperature:** If the checkbox to auto detect is selected, the temperature will be automatically set. The slider can change the temperature if a different one is required.
Automatically Detect Installed Laminate for Every Print Job	Select this option for auto detection of the laminate installed. Default is enabled. In the firmware, the values are updated on initialization and cover closing. If values in the PRN file do not match the selected ones, the LCD displays a laminate error.
Default	Returns the transfer dwell time and temperature to the default settings for the lamination type in use.

3.7 K-Panel Resin Tab

Use this tab to control where the resin black (K) panel of a full-color ribbon is printed. If printing with a ribbon type that does not have a K-Panel, such as the YMC ribbon type, all K-Panel Resin options will be disabled.

Resin black text is desirable due to its sharp, saturated color (good for printing barcodes).
Note: The pixel is considered black if the intensity on all three YMC panels are at or above 98%.

By default, the printer driver will automatically print all True-type black text and True-type barcodes only with the resin black (K) panel of the print ribbon.

If printing black text or barcodes that are not True-type, select one of the three options listed under **Print All Black with K Panel**.

The printer driver will print areas of the image where it finds black coloring with the print ribbon's resin black (k) panel as specified by selected options.
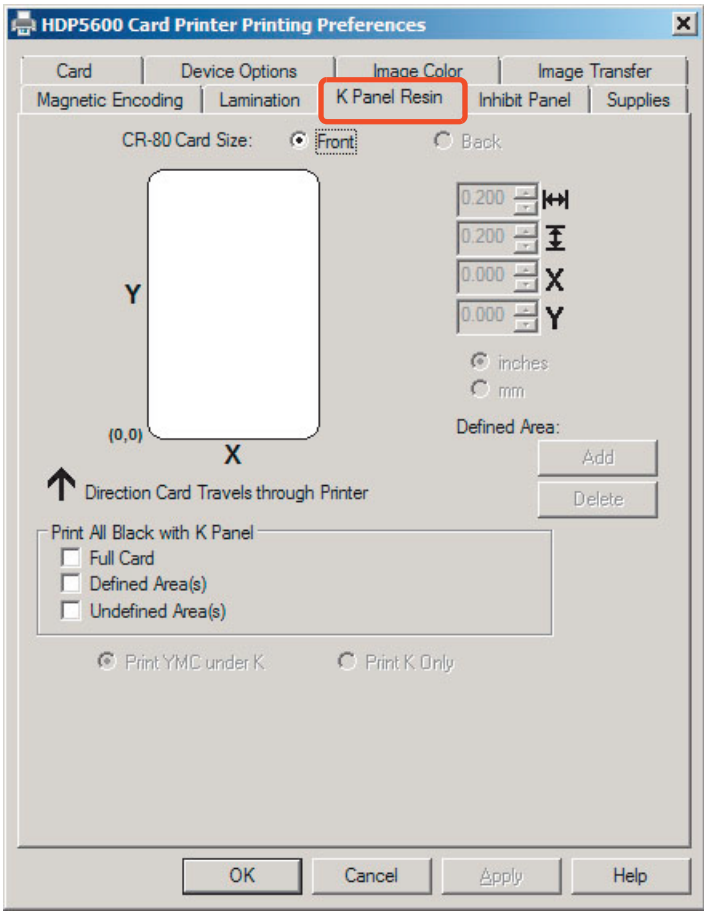
Field	Description
Displayed information at the top of window	Displays the current settings.

| Field	Description
Print All Black with K Panel	**Full Card:** Select this option to print the resin black for all black found within all areas of the image. **Defined Area(s):** Select this option to print the resin black for all black found only in an area or areas defined. When the card grid is first activated, default is a small black square 0.2 x 0.2 inch (5mm x 5mm) in the lower left-hand corner (0,0). This is the first defined area. Up to five areas can be defined. See *Section 3.7.1: Click and Drag Capability* and *Section 3.7.2: Five Areas Added Example.* **Undefined Area(s):** Select this option to print the resin black for all black found only in the space outside the areas defined. When the card grid is first activated, default is a small white square 0.2 x 0.2 inch (5mm x 5mm) in the lower left-hand corner (0,0). This is the first undefined area. Up to five areas can be undefined. See *Section 3.7.1: Click and Drag Capability* and *Section 3.7.2: Five Areas Added Example.*
Add	The **Add** button allows the user to add up to five defined or undefined areas on the card. Each area can then be sized and moved to the required location. If areas meet or overlap, they are considered a joined area (not canceling each other). When five areas have been selected, the add button is disabled. The horizontal, vertical and X, Y coordinates display the area currently selected. See *Section 3.7.1: Click and Drag Capability* and *Section 3.7.2: Five Areas Added Example*
Delete	Deletes the last area specified. If all areas are deleted, the tab reverts to the default state.
Print YMC Under K	This options prints all black in the designated defined/undefined areas, with the Yellow (Y), Magenta (M) and Cyan (C) ribbon panels directly beneath the resin black (K) Panel. Select this option if printing resin black text or barcodes onto a colored background to provide a more gradual transition between the two.
Print K Only	This options prints all black in the designated defined/undefined areas only with resin black, or to print resin black onto a white background to maximize the sharpness of printed text and barcodes.

3.7.1 Click and Drag Capability

Click and drag the corners and the sides of an area to change size and location of area. The horizontal, vertical, and X, Y coordinates update accordingly.
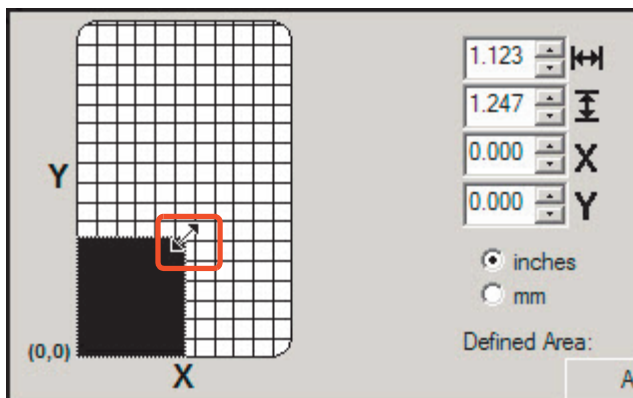
3.7.2 Five Areas Added Example

Up to five areas can be added for the K-Panel.
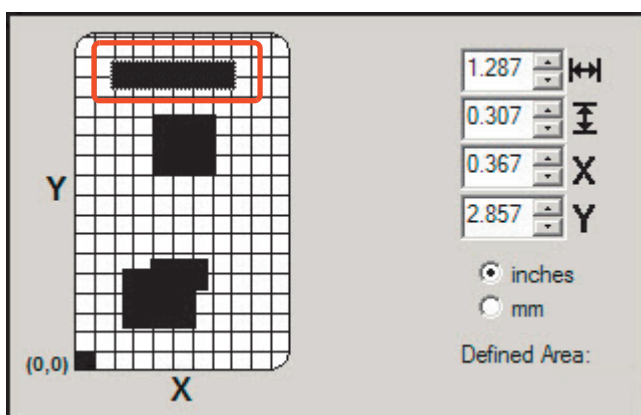
3.8 Inhibit Panel Tab

This panel is used with ribbons that have the "I" designation (YMCKI, YMCKIKI and YMCIKH) to define areas on the surface of the card, where the transfer of InTM Film to the card surface is prevented.

Examples of where this panel has potential use are to ensure signature panels, security holograms or pre-printed graphics are not covered or obscured by print images or transfer of InTM Film.

Field	Description
Displayed information at the top of window	Displays the current settings.
Inhibit Area	There are six selections to indicate which areas are inhibit areas: • None • Defined Area(s) • Undefined Area(s) • Omit Smart Chip Area • Omit Mag Stripe Area • Omit Signature Area

All default areas displayed can be changed by the click and drag method.
See **Click and Drag Capability**.
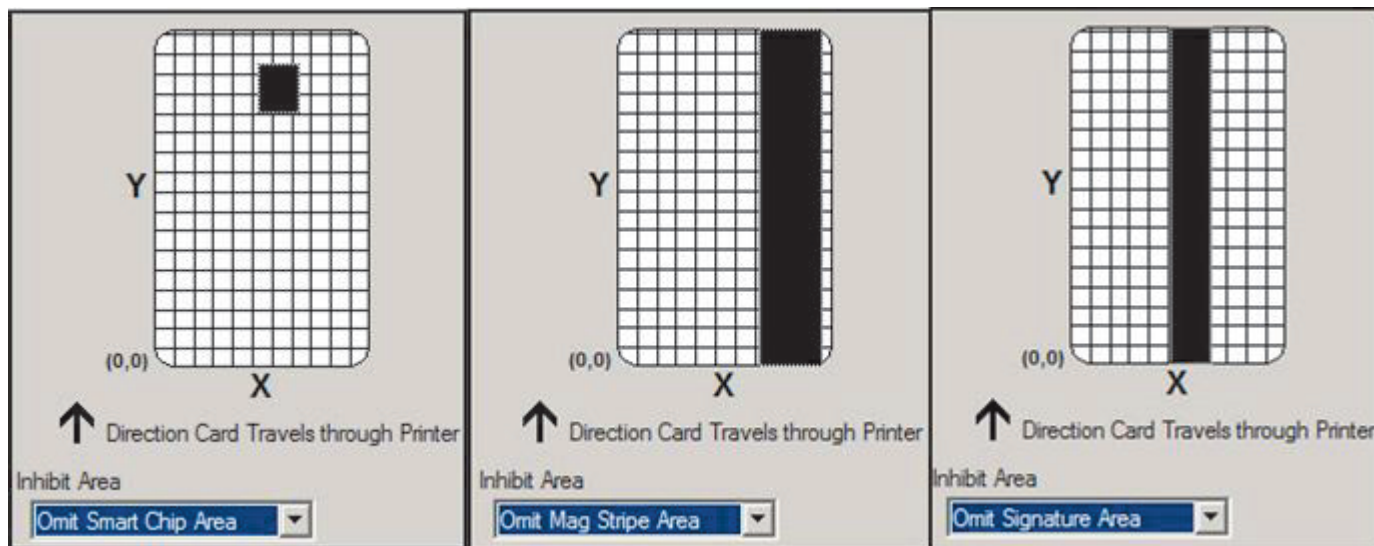
For additional information see *Chapter 9: Inhibit Panel Usage*.

3.9　Supplies Tab

Use the options on this tab to view information about the printer Ribbon, Film, Laminate (Cartridge 1), and Laminate (Cartridge 2).
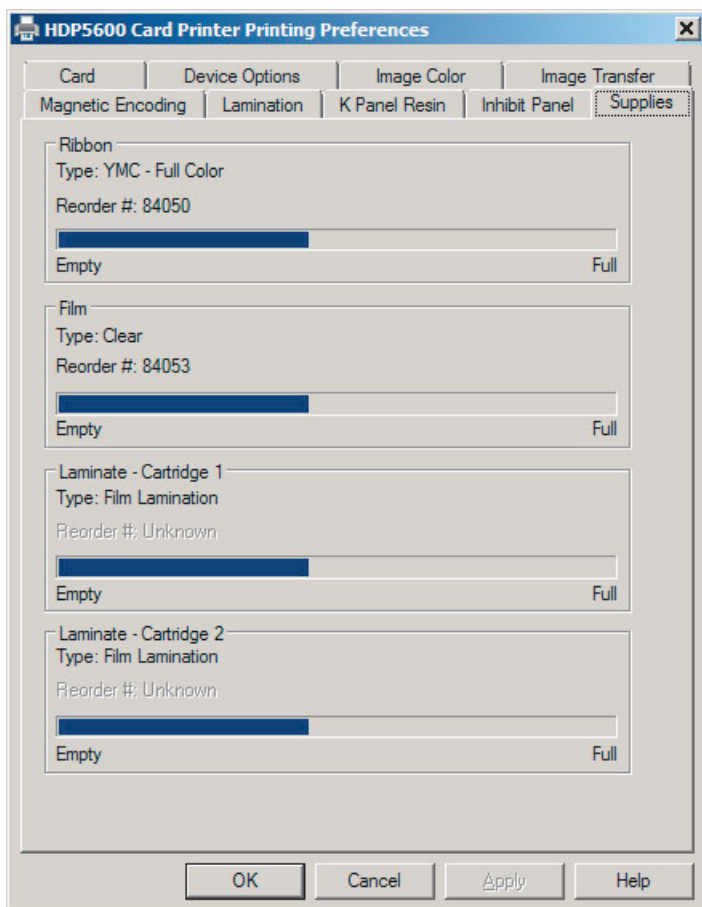
Field	Description
Ribbon	Indicates the Type, Reorder Number and remaining level.
Film	Indicates the Type, Reorder Number and remaining level.
Laminate - Cartridge 1	Indicates the Type, Reorder Number and remaining level of cartridge 1. **Note:** Lamination is only visible if detected by the driver.
Laminate - Cartridge 2	Indicates the Type, Reorder Number and remaining level of cartridge 2. **Note:** Lamination is only activated if detected by the driver.

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ToolBox

4.1 Overview

The ToolBox options are accessed from the **Card Printer Printing Preferences > Card** tab **> ToolBox**.
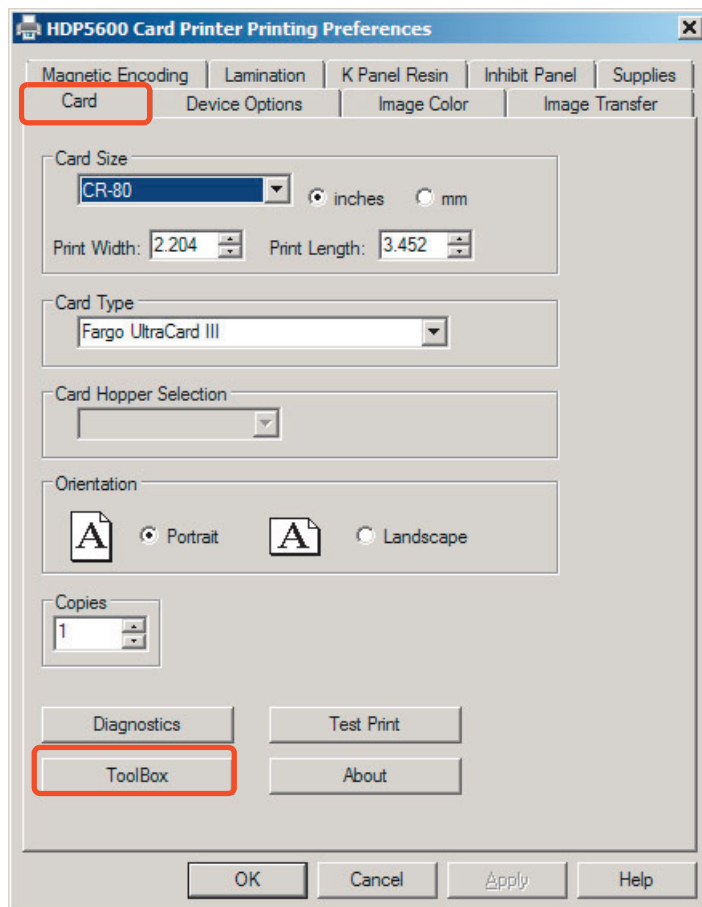
4.2 Configuration Tab

The Configuration tab allows the user to set the following options.

Field	Description
Optional Printer Features	**Automatically Detect Features that are Installed in your Printer.** If selected the driver retrieves the installed printer features information from the firmware and automatically checks the appropriate options. The features are read-only and cannot be updated. If selected and no printer or modules are found, an error message is displayed. By not selecting, the user manually selects the options included in the printer.
Event Monitoring	This box displays the low supplies (ribbon, laminate and film). The default setting is checked for supplies. The "supply" low message box is displayed with every print job when printer reports to the driver the indicated supply is low.

Field	Description
Set Language	If additional languages are available, the user can select the language the printer will display on the LCD. Selections are: • Arabic • Indonesian • Chinese • Italian • English • Japanese • French • Portuguese • German • Spanish

4.3 Calibrate Laminator Tab

The **Calibrate Laminator** tab is active when the laminator is automatically detected or when the laminator is manually checked as a feature on the **Configuration** tab.

The Calibrate Laminator option sends the calibrate laminator command to printer. Follow the instructions on the page for calibration of the lamination sensor.

The lamination module must be warm before sending the calibrate option. If not an error will occur and will trigger the module to start warm-up. Retry the calibration again after several minutes

Calibration may also be performed from the printer LCD.
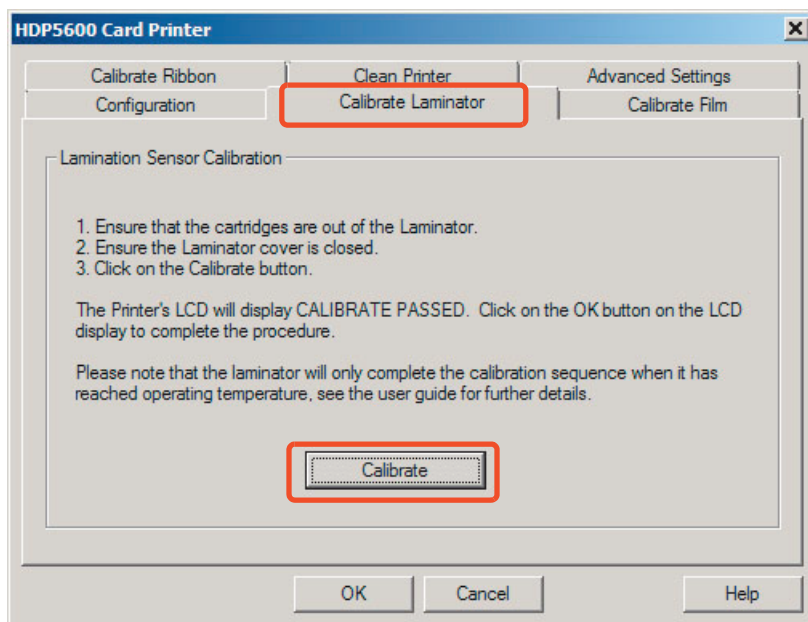
4.4   Calibrate Film Tab

The Calibrate Film option sends the calibrate film command to printer. Follow the instructions on the page for calibration of the film sensor.
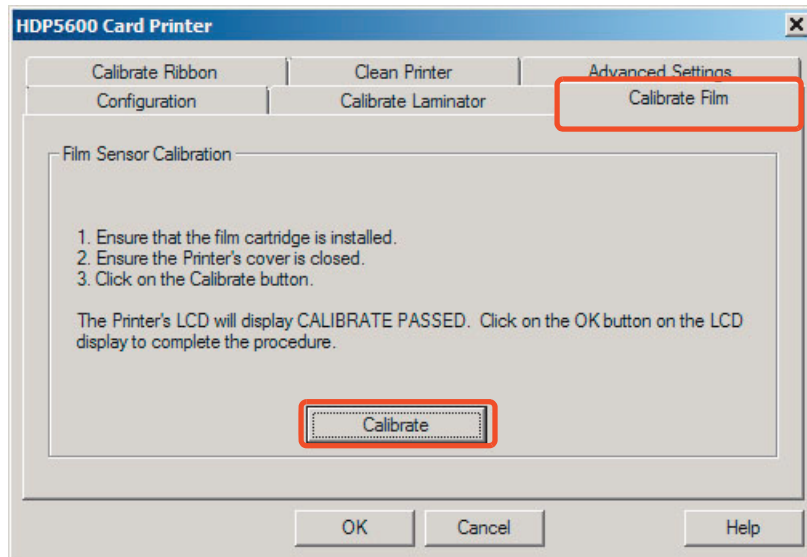
4.5   Calibrate Ribbon Tab

The Calibrate Ribbon options sends the calibrate ribbon command to printer. Follow the instructions on the page for calibration of the ribbon sensor.
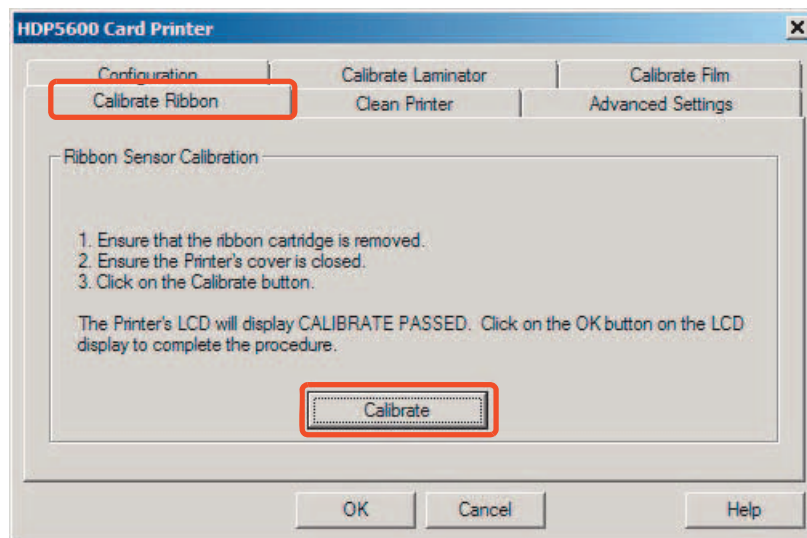
4.6   Clean Printer Tab

Follow the instructions on the page for cleaning the printer. The cleaning routine will begin after all current print jobs have completed.
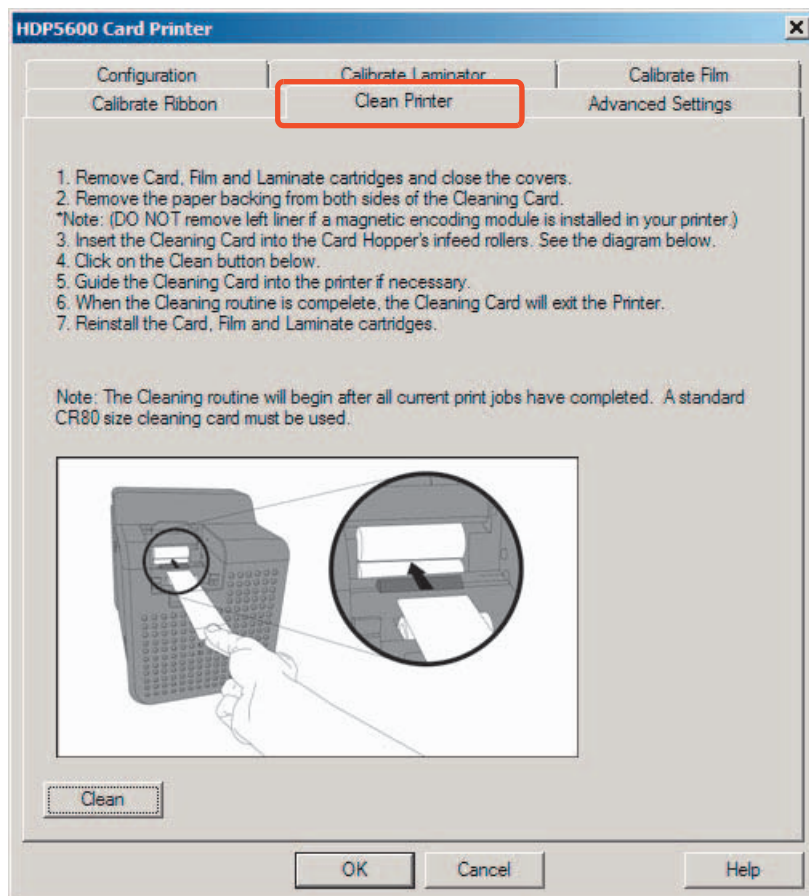
4.7   Advanced Settings Tab

Use the **Advanced Settings** tab for adjusting the internal printer settings. These settings have been customized for every printer at the factory.

Note: Any changes affect settings for the firmware.
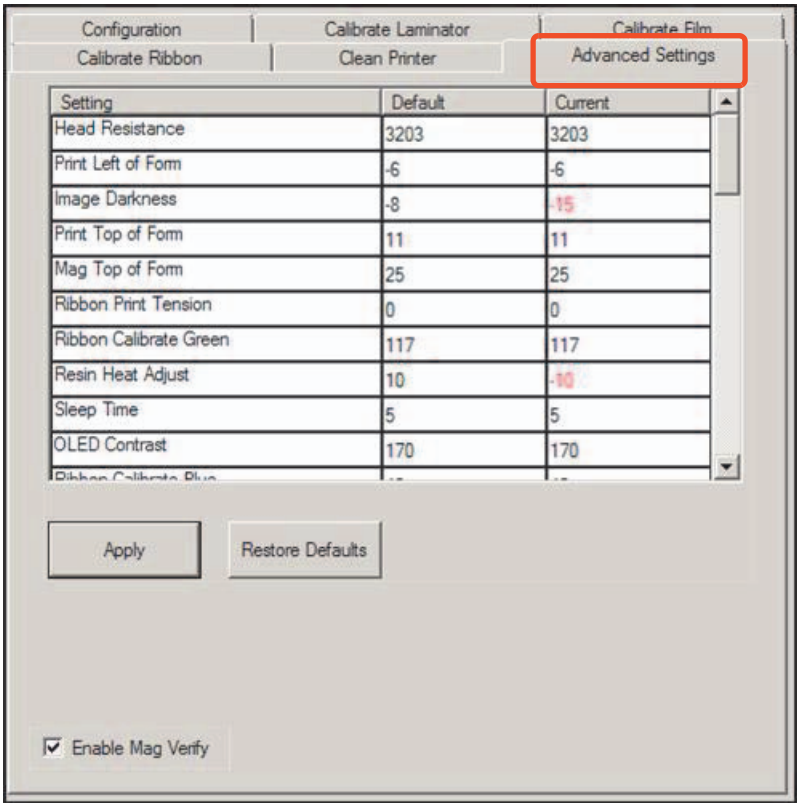
Field	Description
Setting	This column displays label for each setting.
Default	This column displays default value for setting.
Current	This column displays current value for setting.
Apply button	Applies changed values.
Restore Defaults button	Restores default values.

To change a setting, click on the numeric value in the column, which opens a control where the value can be changed. Typing will also work to change values.
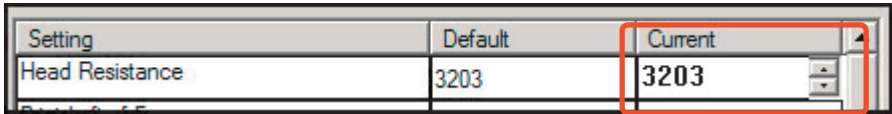
4.7.1   Settings Information

Setting	Description
Head Resistance	This is factory set. If the main board or the printhead is replaced then adjust this number. Locate the Printhead Setting Number on the bottom of the printhead. The number reads R=XXXX.
Print Left of Form (LOF)	Print the alignment card self-test. Adjust the **Print LOF** up or down until the border of the LOF zero line is showing on the edge of the card. Measure the density square. Adjust the image density to 65% ± 1%. **Note**: The 500 Series Densitometer is to be used for this measurement.

LOF Zero Line

Density square set to 65% +/- 1%
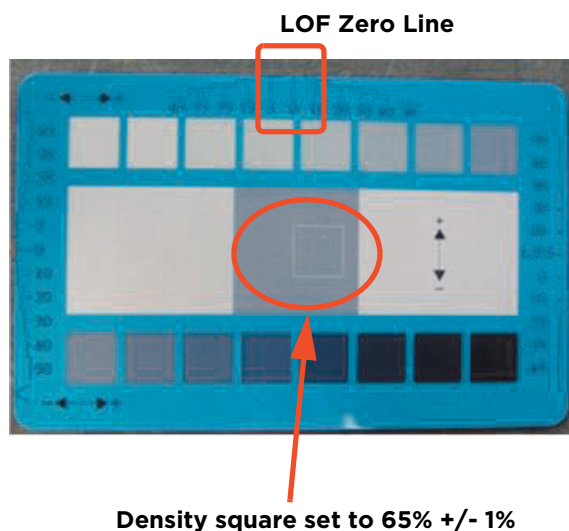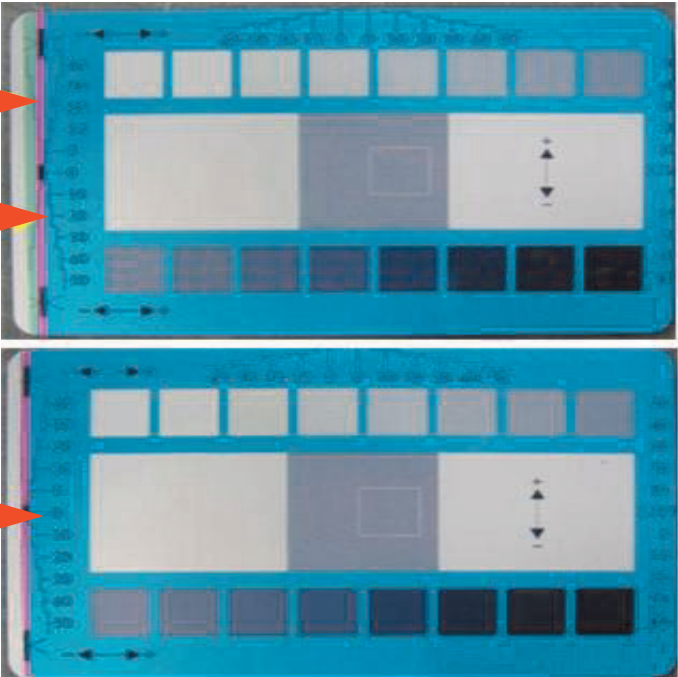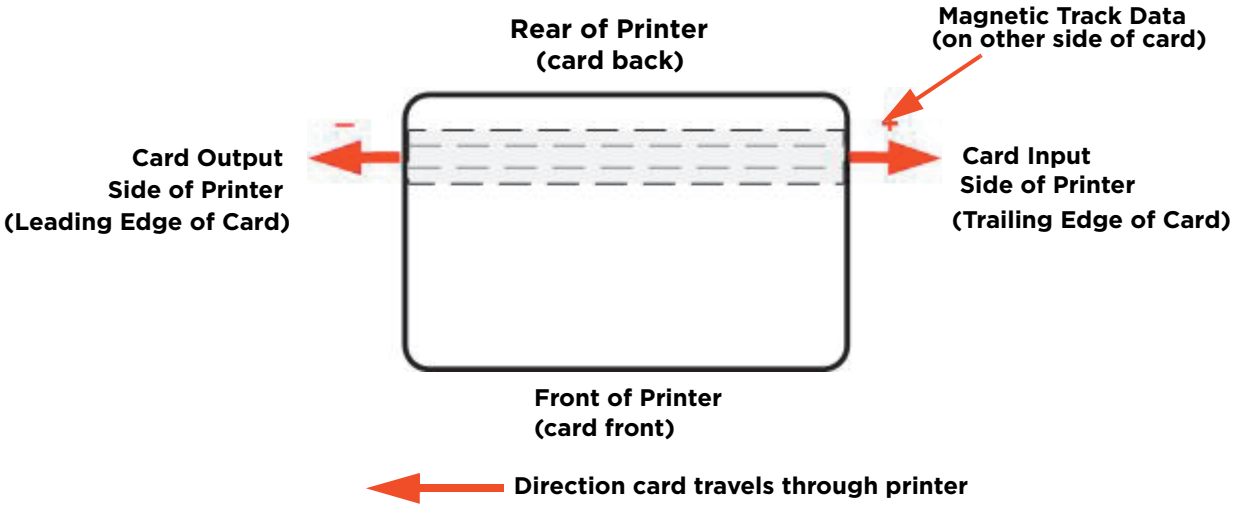
Setting	Description
Image Darkness	Use this option to set the overall darkness of the printed image by increasing or decreasing the amount of heat the printhead uses while printing. Use the up/down arrows to increase or decrease the amount of heat. **Important: If the value is set too high, the ribbon may jam or break**
Print Top of Form (TOF)	Print the alignment card self-test. Adjust the **Print TOF** until the green border is eliminated and the entire transfer alignment block is as shown in the bottom graphic. **Note:** Due to variation in roller alignment, the green border may appear at a slight angle on the top of the card.
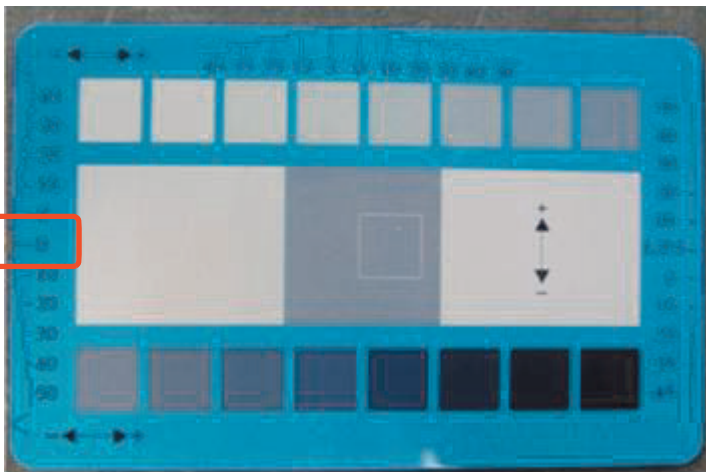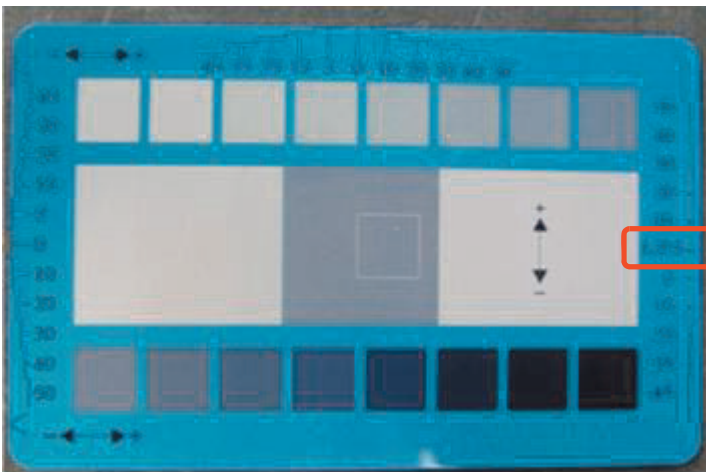
Edge of Transfer (Green Border) →

Transfer Alignment Block →
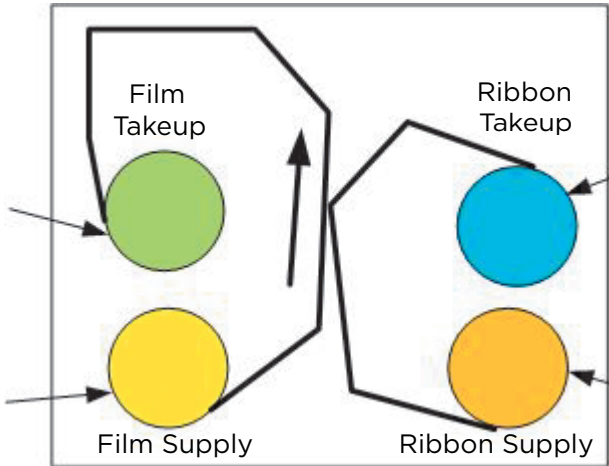
Image Once Adjusted →

Field	Description
Mag Top of Form	This option is only for the built-in magnetic stripe encoder. Use this option to shift the starting point of where the printer will begin encoding the magnetic track data on a card's magnetic stripe. When adjusting this value, keep in mind that a card and its magnetic stripe will always remain in the same relative position as the card travels through the printer. **Magnetic Data Direction** The arrows on these buttons indicate the direction the magnetic data will move on the card's magnetic stripe. Enter a positive value to move the start of the magnetic data toward the trailing edge of the card or the card input side of the printer. **Maximum Adjustment Range** The maximum adjustment range is 0 - 120. As a rule, 20 equals about.030 in (0.8mm). **Note:** If the negative value is set too high, the printer may start encoding before the card's magnetic stripe reaches the encoding head.

Rear of Printer
(card back)

Magnetic Track Data
(on other side of card)

Card Output
Side of Printer
(Leading Edge of Card)

Card Input
Side of Printer
(Trailing Edge of Card)

Front of Printer
(card front)

Direction card travels through printer

Setting	Description
Transfer Top of Form (TOF)	Print the alignment card self-test. Adjust the **Transfer TOF** until the TOF zero line is located on the edge of the card.
Transfer TOF Zero Line	
Transfer End of Form (EOF)	Print the alignment card self-test. Setting the **Transfer EOF** to a positive number will cause the image length to grow. Setting the **Transfer EOF** to a negative number will cause the image length to shorten.
	Transfer EOF

Setting	Description
Transfer Temp Offset	Both the printer itself and the printer's software driver control the built-in transfer roller.
	To change the temperature of the transfer roller, adjust its temperature through the image transfer tab within the printer driver setup window.
	Once adjusted, the new temperature settings will be sent down with the next print job along with the rest of the printer driver information.
	Before printing begins, the transfer roller will automatically adjust itself to the new temperature setting. This new temperature setting will remain programmed within the printer until it is once again changed within the printer driver or until the printer is turned off.
	Whenever the printer is turned **OFF**, the transfer roller will automatically reset itself and return to its default temperature the next time the printer is turned **ON**.
	Disconnect the printer's power supply.
	Technician Note: Cycling the printer's power supply serves to reset the transfer roller to its default temperature. The temperature setting within the printer driver, however, will stay the same until it is changed.
	Danger: The printer's transfer roller can reach temperatures exceeding 350° F (175° C). Use extreme caution when operating the transfer roller. Never touch the transfer roller unless the printer power has been turned off for at least 20 minutes.
	Danger: Le rouleau de transfert de l'imprimante peut atteindre des températures supérieures à 350 ° F (175 ° C). Soyez extrêmement prudent lorsque vous utilisez le rouleau de transfert. Ne touchez jamais le rouleau de transfert à moins que l'alimentation de l'imprimante a été éteint pendant au moins 20 minutes.
Encoder Flip Angle	Use the **Encoder Flip Angle** option to fine tune the position of the flipper. **ONLY used if encoder is present**
Print Flip Angle	Use the **Print Flip Angle** option to set the position of the flipper so it is level with the card path after a flip operation.
Ribbon Print Take-up Tension	This procedure controls the tension of the color ribbon during printing. Adjust the ribbon tension if ribbon wrinkle is appearing on the card. **Note:** Adjustments moderately change the image length.

Setting	Description
Film Print Take-up Tension	**Important:** The film drive sets the baseline for the film tension and should not be adjusted by the reseller or the end user. **Note:** Adjustments moderately change the image length.
Increased Setting= High Tension Decreased Setting = Low Tension Increased Setting= Low Back Tension Decreased Setting = High Back Tension Film Takeup / Ribbon Takeup / Film Supply / Ribbon Supply Increased Setting= High Tension Decreased Setting = Low Tension Increased Setting= Low Back Tension Decreased Setting = High Back Tension	
Resin Heat Adjust	Use this adjustment for black resin text and barcodes that appear faded or too light/dark.
Sleep Time	Use this adjustment to set the time the printer stops energizing the transfer roller. This will conserve energy. A setting of "0" will disable. **Note:** The counter for this setting starts after standby time has elapsed.
Blush Point	The blush point is compensation during printing: • There is no dye transfer • There is no light gray line on a portion of the card • It should be white
LCD Contrast	Use this setting to adjust the brightness of the LCD panel.
Film Supply Transfer Tension	• Adjustments significantly change image length. • Because of sensitivity, only small adjustments are recommended. **Note:** Adjustments affect flash and smudge.

Setting	Description
Film Take-up Transfer Tension	• Negative adjustments can cause card jams. • Positive adjustments can help stop jamming. **Note:** Adjustments affect flash and smudge.

Transfer Direction

Increased Setting=
High Tension
Decreased Setting =
Low Tension

Film Takeup

Increased Setting=
High Back Tension
Decreased Setting =
Low Back Tension

Film Supply

Film Print Supply Tension	**Important: The film drive sets the baseline for the film tension and should not be adjusted by the reseller or the end user.** **Note:** Adjustments moderately change the image length.

Film Takeup

Ribbon Takeup

Increased Setting=
High Tension
Decreased Setting =
Low Tension

Increased Setting=
High Tension
Decreased Setting =
Low Tension

Increased Setting=
Low Back Tension
Decreased Setting =
High Back Tension

Film Supply

Ribbon Supply

Increased Setting=
Low Back Tension
Decreased Setting =
High Back Tension

Setting	Description
Cleaning Rate	This adjustment changes the cleaning rate from 3000 to whatever the new setting is.
Film Print Cooling Level	This controls the speed of the transfer roller cooling fan during the printing process. This setting should normally be off, but can be turned on to help with splotchy color areas on the image. **Note:** Too high of a fan speed can cause smudge.
Film Transfer Cooling Level	This controls the default speed of the cooling fan for the transfer process. Adjustments can be made to both fan speeds and on-times during transferring. **Note:** This setting affects both flash and smudge.
Environmentally Adaptive Transfer (EAT) Disable	Environmentally Adaptive Transfer automatically adjusts the transfer temperature based on the ambient air conditions within the printer. This is an **ON** (1) or **OFF** (0) switch. Default is **ON.** **Note:** Settings can increase or decrease the transfer roller temp by as much as 68° F (20° C) in extreme conditions.
Enable Ribbon Wrinkle Compensation	This is an **ON** (1) or **OFF** (0) switch. Default is **ON.** When this is enabled, it will turn on extra pixels on the printhead to help with ribbon wrinkle during the print process.
Standby Time	This option changes the time until the printer enters standby mode.
BEEP Disable	This setting will disable the beep the printer generates after an EE setting gets updated.
I-Panel Heat Offset	This option adjusts the heat used during the removal of unwanted film. **Note:** Use minimal adjustments, or print ribbon and film breaks may occur.
Holo Transfer Offset	This option changes the hologram overlaminate offset placement parameters.
Standby Temp	This option changes the temperature used when the printer is in standby mode.
Mag Hi-Co Voltage Offset	This option changes the voltage going to the magnetic head. **Note:** This is factory set and should only be changed by a technician.
Mag Lo-Co Voltage Offset	This option changes the voltage going to the magnetic head. **Note:** This is factory set and should only be changed by a technician.
Mag Flipper Angle Offset	This option changes the angle of the flipper table. Increasing the flipper angle will rotate the flipper table clockwise. **Note:** This is factory set and should only be changed by a technician.
Fluorescent (F) Panel Heat Offset	This setting adjusts how dark or light the fluorescent panel is printed. The range is +/- 20.
Lamination End of Form	This option changes head lift at end of card.
Lamination Bottom Takeup	This option changes tension of laminate roller 1.
Lamination Top Takeup	This option changes tension of laminate roller 2.

Setting	Description
Lamination Card Backup	This option changes the distance a card backs up after lamination pressure is first applied.
Lamination Card Length	This option dictates card length and should not be adjusted.
Lamination Fan Speed	This option adjust the fan speed level to replicate printer fan speed control. • **0 = 100%** • **1 = 75%** • **2 =50%** • **3 = 25%**
Lamination Peel Off Delay	This option adjust the delay between lamination stage and peel off stage.
Warming Time Delay	The setting adjusts how many additional minutes the printer will wait after the transfer roller reaches temperature before beginning transfer. The range is 0 to 20 minutes.
Enable Ribbon and Film Saving	This setting enables power up ribbon/film savings. When enabled, the ribbon and film will not skip to a new set of panels after a power up. Cover open/close behavior is unaffected, so upon a cover close, the ribbon and film will skip a set of panels. Settings are: • **Disabled (0)** (default) • **Enabled (1)**
Input Hopper Home Offset	This setting adjusts the position of the shuttle when in the home position. The range is 0 to 30. The larger the number the closer to the front of the printer the shuttle will be placed. The printer must be rebooted for this setting to take effect.
Input Hopper Mag Offset	This setting adjusts the position of the shuttle when in the mag position. The range is -20 to 20. The larger then number the closer to the front of the printer the shuttle will be placed. The printer must be rebooted for this setting to take effect.
Transfer Image Length	This setting adjusts the length of the image on the card during transfer. The range is -10 to +10. The larger the number, the longer the image.
Transfer Cooling Delay	This setting adjusts the delay (in seconds) before transferring to the second side of the card. The range is 0 to 180. The larger the number, the longer the delay in seconds.
Ribbon Factory Take-up	This setting corrects motor speed variation of the ribbon take-up motor. The range is -20 to +20. The larger the value the faster the motor goes. **Note:** This is a factory setting, the user should never adjust this.
Ribbon Factory Supply	This setting corrects for motor speed variation of the ribbon supply motor. The range is -20 to +20. The larger the value the faster the motor goes. **Note:** This is a factory setting, the user should never adjust this.

Setting	Description
Film Factory Take-up	This setting corrects for motor speed variation of the film take-up motor. The range is -20 to +20. The larger the value the faster the motor goes. **Note:** This is a factory setting, the user should never adjust this.
Film Factory Supply	This setting corrects for motor speed variation of the film take-up motor. The range is -20 to +20. The larger the value the faster the motor goes. **Note:** This is a factory setting, the user should never adjust this.
Transfer Delay	This option adds a delay (in millisecond) between when the card is queued for transfer and the start of transfer. This setting can be set between 0 and 1500, with each unit adding a 1 millisecond delay
Durable Cooling Delay	This setting adjusts the delay (in seconds) before transferring the second side of the card when Clear High Durable HDP Film is installed. This setting can be set between 0 and 600, with each unit adding a 1 second delay.
Durable Film Print Cooling Level	This option adds an offset to the transfer roller temperature when Clear High Durable HDP film is installed.
Durable Film Trans Cooling Level	This option controls the fan speed and on-times of the transfer cooling fan during transfer when Clear High Durable HDP Film is installed.

4.7.2 Value outside the range error message

If typing a value outside the range, an error message will display specific to the setting.
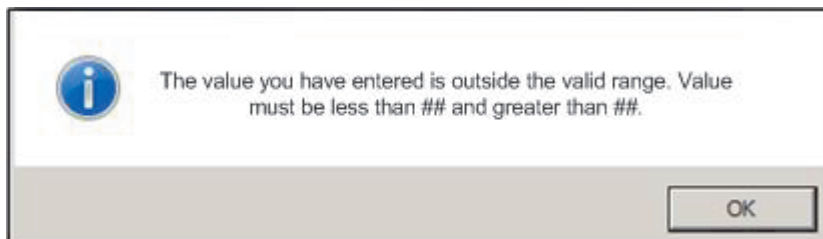
Note: The ## will correspond to the correct number per the setting.

Chapter **5**

Troubleshooting

The purpose of this section is to provide the User with specific procedures relating to the LCD Messages, Communication Errors, Card Feeding Errors, Encoding Errors, Printing Process Errors, Transfer Process Errors and Diagnosing the Image Problems for the Printer.

5.1 Troubleshooting - LCD and Printer Error Message Tables

The LCD display shows the current status of the Printer. Refer to the cause and solution tables in this section for all possible LCD messages.

This section provides two troubleshooting tables for the LCD error messages and the Printer error messages. Each table uses a 3-column presentation to present a specific LCD or Printer error message, its cause and its solution.

- This allows the troubleshooter to identify the error and its cause, and then perform the procedure (provided in the solution column).

- This standard mode of identifying the problem and its solution should provide an efficient method of troubleshooting this printer.

- If you encounter problems beyond the capabilities of these two error message tables, visit the HID Global website.

5.1.1 How to use the LCD Error Message Table

The PC Error Message in Column 1 (LCD Error Message) provides the Lower Left Corner Number. This number identifies the PC Error Message screenshot with its respective LCD Error Message.

- Note the correlation between Column 1 and the PC Error Message window.
- This allows you to correlate the LCD Error Message with the PC Error Message (identifying number), then troubleshoot your Printer as needed.

LCD Error Message	Cause	Solution
Unable to Feed Card (PC Error Message Nos. 14 and 81) Matches the following screenshot.	The Printer is unable to feed a card from the Card Cartridge.	Verify there are cards in the cartridge. Verify cards are not stuck together or jammed, and they are the correct thickness.
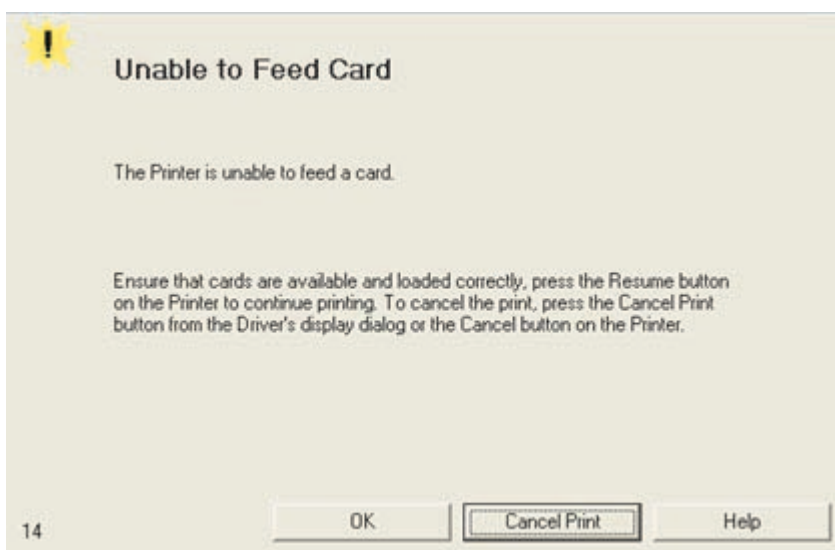
5.2 Troubleshooting - LCD and Printer Error Message Tables

The LCD display shows the current status of the printer. Refer to the cause and solution tables in this section for all possible LCD messages.

If problems are encounter beyond the capabilities of these two error message tables, contact

http://www.hidglobal.com/customer-service

5.2.1 Troubleshooting with the LCD Error Message Table

LCD Error Message	Cause	Solution
Calibrate Failed (PC Error Message No. 155, 170)	Film or Ribbon calibration has failed.	Verify the film is installed correctly and there is not a Ribbon installed. If this problem persists, call for technical assistance.
Calibrate Film (PC Error Message No. 159)	Film Sensors need to be calibrated.	Select Cancel and then perform the Film calibration procedure.
Calibrate Ribbon (PC Error Message No. 128, 170)	The print Ribbon Sensor is out of calibration.	Select Cancel and then perform the Ribbon calibration procedure.
Card Feed Stop (PC Error Message No. 137)	The Front Cover was opened. This caused the card transfer to stop OR the pause button was selected.	Press Resume or Cancel.
Card Jam (PC Error Message No. 82, 112, 200)	A card is jammed in the Print Station or card flipping area of the Printer.	Clear the jam.
Card Jam: Prox (PC Error Message No. 86)	A card is jammed in the PROX card encoding area of the Printer.	Clear the jam.
Card Jam: Smart (PC Error Message No. 85)	A card is jammed in the smart card encoding area of the Printer.	Clear the jam.
Card Jam: Trans (PC Error Message No. 83)	Card became jammed in the Printer during transfer.	Clear the jam.
Card Not Found (PC Error Message No. 69)	Card cannot be found in the Printer.	Verify card not jammed in Printer and select Cancel.
Check Film (PC Error Message No. 244)	The film is not able to move correctly. Check for jams/breaks.	Check for obstruction. If the problem persists, call for technical assistance.
Check Laminate 1 (PC Error Message No. 213, 231)	The Laminator was unable to find the mark on the material in Cartridge 1.	Make sure there are no obstructions to the Sensor, and recalibrate the Laminator Sensor.
Check Laminate 2 (PC Error Message No. 232)	The Laminator was unable to find the mark on the material in Cartridge 2.	Make sure there are no obstructions to the Sensor, and recalibrate the Laminator Sensor.
Clean Printer (PC Error Message No. 71)	For best Printer performance, replace the Cleaning Roller Tape and clean the Printer's Feed Rollers and Printhead at this time.	Review the Cleaning Section
Cover is Open (PC Error Message No. 46)	The Cover was left open.	Ensure that the Cover is properly closed.

LCD Error Message	Cause	Solution
E-Card Startup Error (PC Error Message No. 141)	A problem was detected during Printer start-up.	Reset the Printer and try again. If this problem persists, call for technical assistance.
EEPROM Corrupt (PC Error Message No. 38, 39, 40, 144)	EEPROM restored with factory default values.	If changes were made, then go into the setting values and reset these numbers.
Ejecting Card (PC Error Message No. 72)	The card has been ejected already.	Click OK to clear the message. The User might want to know that a card has been sent to the reject bin, or out of the printer, and is either incomplete or posses a security risk if not disposed of properly.
Empty Reject Bin (PC Error Message No. 265)	The reject bin is full.	Remove the large number of rejected cards from the reject bin. Click OK to clear the notification message. (Note: In some cases, rejected cards are incomplete or pose a security risk, and should be disposed of properly.)
Failed To Initialize (PC Error Message No. 141)	A problem was detected during Printer start-up.	Reset the Printer and try again. If this problem persists, call for technical assistance.
Film Align Error (PC Error Message No. 26, 176)	The film is not able to move correctly. Check for jams/breaks.	Check for obstruction. If the problem persists, call for technical assistance.
Film Break/Jam (PC Error Message No. 158)	The film is not able to move correctly. Check for jams/breaks.	Check for obstruction. If the problem persists, call for technical assistance.
Film Low (PC Error Message No. 156)	The HDP film will soon run out.	If printing a large number of cards, replace the Film now or monitor the Printer until the Film is gone and install a new Film.
Film Out (PC Error Message No. 156, 157)	The HDP film has run out.	Install a new roll of film and press Resume to continue or Cancel to reset.
Film: Wrong Material (PC Error Message No. 173)	The HDP Film is not installed properly or has been damaged.	Verify the correct film is installed in the film Cartridge.

LCD Error Message	Cause	Solution
Flipper Jam **(PC Error Message No. 74, 199)**	A card is jammed in the card flipping area of the Printer.	Open the Printer's Flipping Module Cover. Clear any cards in the Flipping Module by opening the Printers Cover and using the Forward and/or Back buttons located on the Printer's Front Cover. Ensure that the Flipper Module can rotate freely. Close the Printer's Flipping Module Cover. Select Resume on the Printer's Front Cover to continue printing. To cancel the print, click Cancel Print from the Driver's display dialog.
Head Loading **(PC Error Message No. 111)**	An unrecoverable error has occurred during printing.	Reset the Printer and try again. If this problem persists, call for technical assistance.
Head Resistance **(PC Error Message No. 6)**	The EE setting in Driver for head resistance is out of range.	Enter a value for head resistance in the EE settings in the Driver. Reset the correct value according to the steps in the Troubleshooting Section. If this problem persists, call for technical assistance.
Head Sensor Error **(PC Error Message No. 8)**	The Printhead Temperature Sensor is not functioning or is not connected properly. OR The Printhead is not cooling properly.	If the problem persists, call for technical assistance.
Head Voltage Err **(PC Error Message No. 103, 105)**	A hardware fault has prevented setting the correct Printhead voltage.	Reset the Printer and try again. If this problem persists, call for technical assistance.
Headlift Error **(PC Error Message No. 102, 103, 104, 105)**	This is a problem with the Printhead Lift or Transfer Roller Headlift.	Reset the Printer and try again. If this problem persists, call for technical assistance.
Heater Error **(PC Error Message No. 161)**	The Transfer Heater Roller is too hot.	Reset the Printer and try again. If this problem persists, call for technical assistance.
Invalid Film **(PC Error Message No. 94, 95, 96, 164, 165, 166)**	An unauthorized film is installed in the Printer.	Get the correct Film from your dealer.
Invalid Password **(PC Error Message No. 136)**	Printing disabled at this time.	Press Cancel to abort this print job and then check security settings at host computer.
Invalid Ribbon **(PC Error Message No. 93)**	An unauthorized Ribbon is installed in the Printer.	Get the correct Ribbon from your dealer.

LCD Error Message	Cause	Solution
Job Data Error **(PC Error Message No. 106)**	The print data sent to the Printer is corrupt or has been interrupted.	Reset the Printer and try again. If this problem persists, call for technical assistance.
Lam 1 Tag Err **(PC Error Message No. 259)**	A RFID read or write error occurred on Cartridge 1.	Retry, and if it fails again the material cannot be used.
Lam 2 Tag Err **(PC Error Message No. 260)**	A RFID read or write error occurred on Cartridge 2.	Retry, and if it fails again the material cannot be used.
Lam Async Error **(PC Error Message No. 245)**	The Printer timed out waiting for communication from the Laminator.	Check Lam power/connections and restart the Printer.
Lam Card Jam **(PC Error Message No. 53, 212, 214, and 215)**	A jam occurred somewhere between the Printer and the Laminator.	Open covers and clear the obstruction/jam.
Lam Check Card **(PC Error Message No. 213)**	A jam occurred inside the Laminator.	Open Lam cover and clear the obstruction.
Lam Com Error **(PC Error Message No. 246)**	There was a communication failure between the Printer and Laminator.	Check Lam power/connections and restart the Printer.
Lam Error **(PC Error Message No. 237, 238)**	A generic unknown error as occurred.	Reset the Printer and try again. If this problem persists, call for technical assistance.
Lam Card Not Ejected **(PC Error Message No. 216)**	The card is not ejected from the Laminator.	The Lamination material is stuck to the card.
Lam Handler Startup Error **(PC Error Message No. 66)**	A problem was detected during Printer start-up.	Reset the Printer and try again. If this problem persists, call for technical assistance.
Lam Handler Startup Error **(PC Error Message No. 141)**	After powering up the Printer, the Laminator was detected, but an error occurred which would prevent its use.	Check Laminator power and connections and restart the Printer.
Lam Internal Error **(PC Error Message No. 48)**	A generic unknown error as occurred in the Laminator.	Check Laminator power and connections and restart the Printer.
Lam No Film **(PC Error Message No. 157)**	There is no material loaded in the Laminator.	Load Laminator material.
Lam Timeout **(PC Error Message No. 247)**	The Printer timed out while processing information related to the Laminator.	Check Lam power/connections and restart the Printer.
Lam1 Wrong Film **(PC Error Message No. 233)**	Material in Cartridge 1 of the Laminator does not match the material type specified by the job.	Make sure Driver material matches what is actually in the Laminator.
Lam2 Wrong Film **(PC Error Message No. 234)**	Material in Cartridge 2 of the Laminator does not match the material type specified by the job.	Make sure Driver material matches what is actually in the Laminator.
Laminate 1 Bad **(PC Error Message No. 259, 261)**	The Lamination material in Cartridge 1 is not valid for this Laminator.	Install valid material.

LCD Error Message	Cause	Solution
Laminate 1 Jam (PC Error Message No. 229)	A Jam occurred with the Laminator material in Cartridge 1.	Open Lam cover and clear the obstruction
Laminate 1 Low (PC Error Message No. 239)	The material is getting low in Lamination Cartridge 1.	Make sure more is on hand for when it runs out.
Laminate 1 Out (PC Error Message No. 208)	The Laminate in Cartridge 1 has run out.	Replace it with a new roll of material.
Laminate 2 Bad (PC Error Message No. 260, 262)	The Lamination material in Cartridge 2 is not valid for this Laminator.	Install valid material.
Laminate 2 Jam (PC Error Message No. 230)	A Jam occurred with the Laminator material in Cartridge 2.	Open Lam cover and clear the obstruction.
Laminate 2 Low (PC Error Message No. 240)	The material is getting low in Lamination Cartridge 2.	Make sure more is on hand for when it runs out.
Laminate 2 Out (PC Error Message No. 209)	The Laminate in Cartridge 2 has run out.	Replace it with a new roll of material.
Lm1 Headlift Err (PC Error Message No. 217)	The Laminator failed to move or sense the lower (Lam module 1) head.	Check head connections and call for service/repair.
Lm2 Headlift Err (PC Error Message No. 218)	The Laminator failed to move or sense the upper (Lam Module 2) head.	Check head connections, call for service/repair.
Mag Encoder Paused (PC Error Message No. 143)	The Magnetic Encoder is in a pause state.	Reset the Printer and try again. If this problem persists, call for technical assistance.
Mag Encoder Startup Error (PC Error Message No. 63 and 141)	A problem was detected during Printer start-up.	Reset the Printer and try again. If this problem persists, call for technical assistance.
Mag Verify Error (PC Error Message No. 30)	Print could not verify MAG write. OR The magnetic stripe was not encoded properly.	Check the Cards and click Cancel Print.
Multiple Feed (PC Error Message No. 70)	Multiple cards were fed into the Printer.	Remove all cards and try again.
No E-card Encoder (PC Error Message No. 202)	You are trying to send encoding data, but the Printer is not configured with this Encoder type.	To cancel, click Cancel Print.
No Film (PC Error Message No. 28)	Film is not installed in the Printer. OR Film RFID tag is bad.	Install the Film and press Resume. To cancel the print, press the Cancel Print button or the Cancel button located on the Printer.

LCD Error Message	Cause	Solution
No Flip Module **(PC Error Message No. 201)**	Two-sided job sent to a one-sided Printer.	Verify the Printer has flipper capabilities through the LCD Menu. If Flipper capabilities are present, ensure that the Print Both Sides option in the Driver is set correctly. Press Resume on the Printer's Front Cover to continue printing. To cancel the print, press Cancel Print from the Driver's display dialog.
No Flip Module **(PC Error Message No. 45, 201)**	The desired lamination requires a Flipper Module.	Change the Cartridge location of the Lamination material (if it is dual sided), or buy a Flipper Module.
No iCLASS Encoder **(PC Error Message No. 177)**	You are trying to send encoding data, but the Printer is not configured with this Encoder type.	To cancel, click Cancel Print.
No Mag Module **(PC Error Message No. 31)**	MAG encoding job sent to Printer without a MAG Encoder. You are trying to send encoding data, but the Printer is not configured with this Encoder type.	To cancel, click Cancel Print.
No MIFARE Encoder **(PC Error Message No. 203)**	You are trying to send encoding data, but the Printer is not configured with this Encoder type.	To cancel, click Cancel Print.
No Prox Encoder **(PC Error Message No. 32)**	You are trying to send encoding data, but the Printer is not configured with this Encoder type.	To cancel, click Cancel Print.
No Ribbon **(PC Error Message No. 25)**	No Ribbon is installed in the Printer. OR The Ribbon RFID tag is bad.	Install the correct Ribbon and press Resume located o the Printer's LCD display. To cancel the print, press the Cancel Print button from the Driver's display dialog and the Cancel button located on the Printer's LCD display.
No Smart Encoder **(PC Error Message No. 33)**	You are trying to send encoding data, but the Printer is not configured with this Encoder type.	To cancel, click Cancel Print.
Printing Error **(PC Error Message No. 107)**	An error was detected during printing.	Reset the Printer and try again. If this problem persists, call for technical assistance.
Reboot Required **(PC Error Message No. 9, 65, 67, 163)**	Unspecified system error detected by the Printer Firmware.	Reset the Printer and try again. If this problem persists, call for technical assistance.
Reinsert Ribbon **(PC Error Message No. 141)**	The Ribbon must be reinserted for proper functioning of the Printer.	Reinsert the Ribbon or press Resume.
Remove Card **(PC Error Message No. 68)**	A card is jammed in the Print Station or card flipping area of the Printer.	Clear the jam and press Cancel.

LCD Error Message	Cause	Solution
Remove Ribbon **(PC Error Message No. 139)**	The print Ribbon is not installed properly or has been damaged.	Verify the correct Ribbon is installed in the Ribbon Cartridge. Remove it and replace it with the correct Ribbon.
Remove Lam Material **(PC Error Message No. 210)**	Single Sided Lam job specified but the material is loaded in both Modules.	Remove either Lamination Cartridge.
Remove Lam1 Mtl **(PC Error Message No. 204)**	Single sided lamination on the back side is specified but material is loaded in the Lam 1 Module.	Remove Cartridge 1.
Remove Lam2 Mtl **(PC Error Message No. 205)**	Single sided lamination on the front side is specified but material is loaded in the Lam 2 Module.	Remove Cartridge 2.
Ribbon Break/Jam **(PC Error Message No. 99, 108, 109)**	The Ribbon is not able to find the next panel correctly. Check for jams/breaks.	If jammed, clear the jam. If broken, repair by taping the Ribbon back on to the take-up core. Press Resume to continue or Cancel to abort.
Ribbon Low **(PC Error Message No. 92)**	The print Ribbon will soon run out.	If printing a large number of cards, replace the Ribbon now or monitor the Printer until the Ribbon is gone and install a new Ribbon.
Ribbon Miscue **(PC Error Message No. 97)**	The Ribbon is not able to find the next panel correctly. Check for jams/breaks.	If jammed, clear the jam. If broken repair by taping the Ribbon back on to the take-up core. Press Resume to continue or Cancel to abort.
Ribbon Out **(PC Error Message No. 91, 100, 101)**	The print Ribbon has run out.	Install a new Ribbon and press Resume to continue.
Ribbon Tension **(PC Error Message No. 98)**	The Ribbon tensions may be out of range.	Check and adjust the setting through the TOOLBOX under the Advanced Settings tab. If this problem persists, call for technical assistance. Press Resume to continue or Cancel to abort.
Ribbon: Wrong Material **(PC Error Message No. 93, 122, 172)**	The print Ribbon is not installed properly or has been damaged.	Verify the correct Ribbon is installed in the Ribbon Cartridge.
System Fault **(PC Error Message No. 164)**	Unspecified system error is detected by the Printer Firmware.	Reset the Printer and try again. If this problem persists, call for technical assistance.
Unable to Feed **(PC Error Message No. 14, 81)**	The Printer is unable to feed a card from the Card Cartridge	Verify there are cards in the Card Cartridge. Verify cards are not stuck together or jammed, and they are the correct thickness.

LCD Error Message	Cause	Solution
Utility Error **(PC Error Message No. 129)**	Command resulted in an error.	See the Communication Errors section.
Waiting for Data **(PC Error Message No. 147)**	The Printer has stopped receiving data from the PC.	Reset the Printer and try again. If this problem persists, call for technical assistance.
Wrong Film **(PC Error Message No. 162, 163)**	The print film installed in the Printer does not match the film type selected in the Printer Driver. OR A Self-test job cannot be printed with the print media installed.	Replace film in Printer with type specified in the Driver. A reboot is required.
Wrong Ribbon **(PC Error Message No. 93)**	The print Ribbon installed in the Printer does not match the Ribbon type selected in the Printer Driver. OR A Self-test job cannot be printed with the print media installed.	Replace Ribbon in Printer with type specified in the Driver.
Wrong Job DPI Menu **(PC Error Message No. 590)**	The Print job data does not match the printhead capability (for example, a 600 DPI print job is being sent to a 300 DPI printhead).	Verify the printhead resolution through the LCD. Then verify the print.
Invalid Print Head **(PC Error Message No. 591)**	The printhead configuration setup on the main PCB does not match the installed printhead (for example, a 600 DPI printhead has been installed into a 300 DPI a 600 PDI printhead has been installed into a 300 DPI configured printer).	Install the correct resolution printhead into the printer.

5.3   Troubleshooting the Printer Error Message Table

Printer Error Message	Cause	Solution
General Error	A general Printer error has occurred.	Press Cancel on the printer or click Cancel Print.
Card Not Found	The Printer is unable to find the card.	Check Printer for a card or other obstruction, remove the card and cancel the print by pressing the Cancel Print button from the Driver's display dialog or the Cancel button, located on the Printer.
Cover Open	The Printer cannot start printing because the Cover is open.	Close the Cover to continue printing.
Unable to Feed Card	The Printer is unable to feed a card from the Card Cartridge.	Ensure that cards are available and loaded correctly, press the Resume button located on the Printer's LCD display to continue printing. To cancel the print, press the Cancel Print button from the Driver's display dialog and the Cancel button located on the Printer's LCD display.
Card Jam	A Card has become jammed in the Printer.	Open the Printer's Front Cover and remove the Print Ribbon and Film Cartridges. Clear any cards in the printer by using the Forward and/or Back Buttons located on the printer's LCD display. Re-insert the Ribbon and close the Printer's Front Cover. Press the Resume button located on the Printer's LCD display to continue printing. To Cancel the print, press the Cancel Print button from the Driver's display dialog and the Cancel button located on the Printer's LCD display.
Card Jam (Encoder)	A Card has become jammed in the Printer's Encoding station.	Open the Printer's Front Cover and remove the Print Ribbon. Open the Printer's Flipping Module Cover. Clear any cards in the Encoding Module by using the Forward and/or Back buttons located on the Printer's LCD display. Re-insert the Print Ribbon and close the Printer's Front Cover. Press the Resume button located on the Printer's LCD display to continue printing. To cancel the print, press the Cancel Print button from the Driver's display dialog or the Cancel button located on the Printer's LCD display.

Printer Error Message	Cause	Solution
Card Jam (Flipper)	A Card has become jammed in the Printer's Flipper Table.	Open the Printer's Front Cover and the Flipper Module Cover. Clear any cards in the Flipper Table by using the Forward and/or Back buttons located on the Printer's LCD display. Close the Printer's Front Cover. Press the Resume button located on the Printer's LCD display to continue printing. To cancel the print, press the Cancel Print button from the Driver's display dialog or the Cancel button on the Printer's LCD display.
Card Jam (Laminator)	A Card has become jammed in the Printer's Lamination Module.	Open the Printer's Module's Front Cover and remove the Overlaminates. Clear any cards in the Lamination Module by using the Forward Arrow and/or Back Arrow buttons located on the Printer's LCD display. The Printer's Front Cover must be open for use of the Forward and Back buttons. Re-insert the Overlaminate(s) and close the Lam Module's Front Cover. Press the Resume button located on the Printer's LCD display to continue printing. To cancel the print, press the Cancel Print button from the Driver's display dialog or the Cancel button on the Printer's LCD display.
Card Eject Error	The Printer is unable to eject a card.	Check Printer for a card jam or other obstruction and press the Resume button located on the Printer's LCD display to continue printing. To cancel the print, press the Cancel Print button from the Driver's display dialog or the Cancel button located on the Printer's LCD display.
Flipper Jam	The Flipper Table has jammed while either aligning itself or flipping a card.	Open the Printer's Flipper Module Cover. Clear any cards in the Flipper Module by using the Forward and/or Back buttons located on the Printer's Front Cover. Ensure that the Flipper Table can rotate freely. Close the Printer's Flipper Module Cover. Press the Resume button on the Printer's Front Cover to continue printing. To cancel the print, press the Cancel Print button from the Driver's display dialog.

Printer Error Message	Cause	Solution
No Flipper	The Printer does not have flipping capabilities.	Verify the Printer has flipper capabilities by way of the LCD Menu. If Flipper capabilities are present, ensure that the Print Both Sides option in the driver is set correctly. Press the Resume button on the Printer's Front Cover to continue printing. To cancel the print, press the Cancel Print button from the Driver's display dialog or press the Cancel button located on the Printer's LCD display.
Ribbon RFID Error	The ribbon tag information is corrupted or incorrect.	Check that the Ribbon is installed properly. Cancel is the only option. Press the Cancel Print button from the Driver's display dialog, or the Cancel button located on the Printer's LCD display.
Wrong Ribbon Installed	An incorrect ribbon has been installed, or a driver setting is incorrect.	Check that the ribbon is correct for the printer and job. Press the Resume button located on the Printer's LCD display to continue printing. To cancel the print, press the Cancel Print button from the Driver's display dialog, or the Cancel button located on the Printer's LCD display.
No Ribbon Installed	No Print Ribbon is installed in the Printer.	Install the correct Ribbon and press Resume on the LCD display.
Ribbon Out	The Print Ribbon installed in the printer is empty.	Install a new Ribbon and press Resume on the LCD display.
Ribbon Break/Jam	A Ribbon break/jam has been detected inside the Printer.	The printer has determined that the installed ribbon has either jammed or broken. Open the Printer Cover and remove the Print Ribbon. If ribbon is jammed, remove jam and tighten ribbon. Clear any cards in the printer by using the Forward and/or Back buttons located on the Printer's LCD display. Tape the ends of the Ribbon together and wind any excess onto the Take-up Spool of the Print Ribbon. Re-install the Print Ribbon, close the Printer Cover and press the Resume button located on the Printer's LCD display to continue printing. To cancel the print, press the Cancel Print button from the Driver's display dialog and the Cancel button located on the Printer's LCD display.

Printer Error Message	Cause	Solution
Ribbon Miscue	A Ribbon Miscue has been detected inside the Printer.	Open the Printer's Cover and remove the Print Ribbon. Check the Ribbon and see if it is broken. If the Print Ribbon is not broken, re-install the Print Ribbon, close the Printer's Cover and press the Resume button on the Printer to continue printing. If the Print Ribbon is broken, tape the ends of the Print Ribbon together and wind any excess onto the Take-up Spool. Re-install the Print Ribbon, close the Printer's Cover and press the Resume button on the Printer to continue printing. To cancel the print, press the Cancel Print button on the Driver's display dialog or the Cancel button on the printer.
Ribbon Sensor Error	The Printer cannot find the next panel on the Print Ribbon.	Recalibrate the Ribbon Sensor using the Calibrate Ribbon tab within the Toolbox. To cancel the print, press the Cancel Print button from the Driver's display dialog and the Cancel button on the Printer's LCD display.
Invalid Ribbon	An incorrect Print Ribbon has been installed in the Printer. (This is if you are using a SecureMark Ribbon).	A non-SecureMark Ribbon is installed in a SecureMark Printer. Replace with the appropriate SecureMark Ribbon and press the Resume button located on the Printer's LCD display to continue printing. To cancel the print, press the Cancel Print button from the Driver's display dialog and the Cancel button located on the Printer's LCD display. Install a Certified Print Ribbon and press the Resume button located on the Printer's LCD display to continue printing. To cancel the print, press the Cancel Print button from the Driver's display dialog and the Cancel button located on the Printer's LCD display.
Ribbon Error	The Print Ribbon caused a general error.	Press the Resume button located on the Printer to continue. To cancel, press the Cancel Print button or the Cancel button located on the Printer.
No Magnetic Encoder Installed	A print job with Magnetic encoding was sent with no Magnetic Encoder installed in the printer.	Ensure that no encoding data is being sent with the print job and reprint the card.
Mag Verify Error	The printer is unable to verify encoded data.	Check the Cards and click Cancel Print.
No Mag Strip Present	The Printer is unable to find a Magnetic stripe on the card.	Check the Cards and click Cancel Print.
No Smart Card Encoder	No Smart Card Encoder is installed in the printer.	To cancel, click Cancel Print.
No Prox Card Encoder	No Proximity Card Encoder is installed in the printer.	To cancel, click Cancel Print.

HID

Printer Error Message	Cause	Solution
Headlift Error	The Headlift Sensor is not detecting movement from the Headlift Cam.	Reboot the Printer by cycling power. To cancel, press the Cancel Print button.
Invalid Password	The Password entered is not a valid password.	Press OK to enter another password. To cancel, press the Cancel Print button.
Laminator (General Error)	The Laminator has reported a general fault.	Press the Resume button located on the Printer to continue. To cancel, press the Cancel Print button or the Cancel button located on the Printer.
Laminator (Check Power)	The Laminator's power is OFF.	Ensure that the laminator's power cord is properly connected, cycle power and press the Resume button to continue. To cancel, press the Cancel Print button or the Cancel button located on the Printer.
Laminator (Heater Off)	The Laminator's Heater is OFF.	Press the Resume button to continue. To cancel, press the Cancel Print button or the Cancel button located on the Printer.
Laminator (Heater Timed Out)	The Laminator cannot reach the desired operating temperature.	Reboot the Printer by cycling power. Check the Laminator settings in the Printer Driver. Click Default located on the Lamination tab of the driver to set the Laminator settings to the factory default. Resend the print job. To cancel, press the Cancel Print button or the Cancel button located on the Printer.
No Laminator Film Installed	No laminator Film is installed in the laminator unit.	Ensure that the appropriate Laminator Film is installed. To cancel the print, press the Cancel Print button or the Cancel button located on the Printer.
Wrong Laminator Film Installed	An incorrect laminator film has been installed, or a driver setting is incorrect.	Ensure that the appropriate Laminator Film is installed and press the Resume button located on the Printer to continue printing. To cancel, press the Cancel Print button or the Cancel button located on the Printer.
Laminator Film Out	The Film installed in the laminator is empty.	Install the Film and press Resume.

Printer Error Message	Cause	Solution
Laminator Film Break/Jam	A Film break/jam has been detected inside the Laminator.	The printer has determined that one or both overlaminate films have either jammed or broken. Open the Laminator Cover and remove the Laminator Cartridge(s). If overlaminate is jammed, remove jam and tighten the material. Clear any cards in the printer by using the Forward and/or Back buttons located on the Printer's LCD display. Tape the ends of the overlaminate together and wind any excess onto the Take-up Spool of the Overlaminate. Re-install the Laminator Cartridge(s), close the Laminator Cover and press the Resume button located on the Printer's LCD display to continue printing. To cancel the print, press the Cancel Print button from the Driver's display dialog and the Cancel button located on the Printer's LCD display.
Laminator Film Sensor Error	The Laminator cannot find the next panel on the Film.	Check that the Film is installed properly and press Resume. To cancel, press the Cancel Print button or the Cancel button located on the Printer.
Remove Laminator Film	To continue, remove the laminator's film.	Open the Laminator's Front Cover. Remove the film and close the Laminator's Front Cover.
Laminator Film Out	The film installed in the printer is empty.	Install new Film and press the Resume button to continue printing. To cancel the print, press the Cancel Print button or the Cancel button located on the Printer.
Laminator Film is not Installed	No film is installed in the Printer.	Install the Film and press Resume. To cancel the print, press the Cancel Print button or the Cancel button located on the Printer.
Laminator Film Sensor Error	The Printer cannot find the next panel on the Print Film.	Check that the Print Film is installed properly and press Resume. To cancel the print, press the Cancel Print button or the Cancel button located on the Printer.
Wrong Laminator Film Installed	An incorrect Print Film has been installed, or a driver setting is incorrect.	Ensure that the appropriate Print Film is installed and press the Resume button located on the Printer to continue printing. To cancel, press the Cancel Print button or the Cancel button located on the Printer.

Printer Error Message	Cause	Solution
Invalid Laminator Film Installed	The Print Film installed does not match the SecureMark configuration of the printer.	A non-SecureMark Film is installed in a SecureMark Printer. Replace with the appropriate SecureMark Film and press the Resume button on the Printer to continue printing. To cancel, press the Cancel Print button or the Cancel button on the Printer.
Laminator Film Error	The Print Film caused a general error.	Ensure that the appropriate Print Film is installed and press the Resume button located on the Printer to continue printing. To cancel, press the Cancel Print button or the Cancel button.

5.4   Resolving Communication Errors

Symptom(s) include incorrect output, communications error on PC or printer, stalling, no response from printer, no job printed, "paper out" error.

Confirm that the system meets the minimum requirements:

- IBM-PC or compatible
- Windows XP, Windows Vista, Windows 7, Windows 2008, Pentium™ class 500 MHz computer with 256 MB of RAM or higher
- 500 MB free hard disk space or higher
- USB Port (Optional Ethernet connection)

Confirm the correct installation of the printer driver.

- Close the software program and check the printer driver.
- Reboot the computer.
- Ensure the printer driver is installed correctly. **Note**: This especially pertains if an obsolete driver was recently removed.

Ensure the correct setup options within the printer driver are selected. Confirm that the Driver is current by checking at: http://www.hidglobal.com/drivers

Confirm the correct installation of the flipper table module assembly.

1. Reboot the computer.
2. Ensure that the print both sides option in the printer driver is set correctly.
3. Verify the flipper table module assembly is functioning properly by printing out cards in a test run.

Determine the problem with printing from the application.

1. Print a self-test from the printer by pressing **Options> Menu> Select> Print** on the printer's LCD to ensure that the printer is functioning properly.
2. Print the Windows test page that is located in the general tab of the driver.
3. Using WordPad, go to the file menu and select page setup.
4. Click on the printer button and select the HDP Card Printer.
5. Click **OK** and reset all four margins to zero. **Note:** WordPad will automatically replace the values with its minimum margins.
6. Open the program and type: "This is a Test." then, go to file on the menu bar and select **Print**.

Determine whether there is adequate hard drive space. **Note**: A large volume of temporary files on the computer can cause communications errors.

Delete the temporary files.

Chapter **6**

Card Lamination Module

The Printer supports the attachment of an optional Card Lamination Module. Select Printer Models Support for the attachment of an optional Card Lamination Module. This Module can be ordered pre-installed or separate as a field upgradeable Module.

Once attached, the Card Lamination Module allows you to apply certified overlaminates for more secure, tamper-resistant cards. This section explains all aspects of the Card Lamination Module's operation and the overlaminate materials available.

6.1 Printer Unit: Reviewing the Card Lamination Module

⚠️ **WARNING: The Printer's Transfer Roller reaches temperatures exceeding 350° F (175° C). Use extreme caution when operating the Laminator. Never touch the Transfer Roller unless the Printer has been turned off for at least 20 minutes.**

6.2 Adjusting the Lamination Placement on the Card

The Card Lamination Module provides an adjustable Lamination Placement knob that allows you to fine-tune where the lamination is being placed on the card.
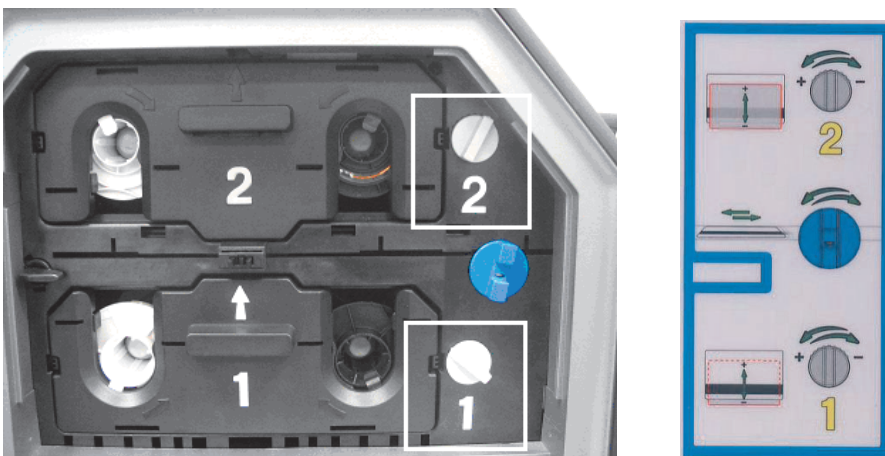
1. The Lamination Placement Adjustment Knob is the light gray knob to the right of the Lamination Cartridges. The printer will have one or two film cartridges loaded (depending on whether this is a Single or Dual-Side Lamination Module).

2. Print a test card to see if the Lamination needs to be adjusted.

- Turn the knob to the right (the negative sign) to move the patch toward the front edge of the Lamination Module. Turn the knob to the left (the positive sign) to move the patch toward the back edge of the lamination module.

- Refer to the instruction diagram label located on the open front cover to make this adjustment.

Workbench Printer Utility

See the **Workbench Printer Utility Help** for additional information.

7.1   Access the Workbench Printer Utility

To access the Workbench Printer Utility, click the **Diagnostics** button to access the Workbench Printer Utility.
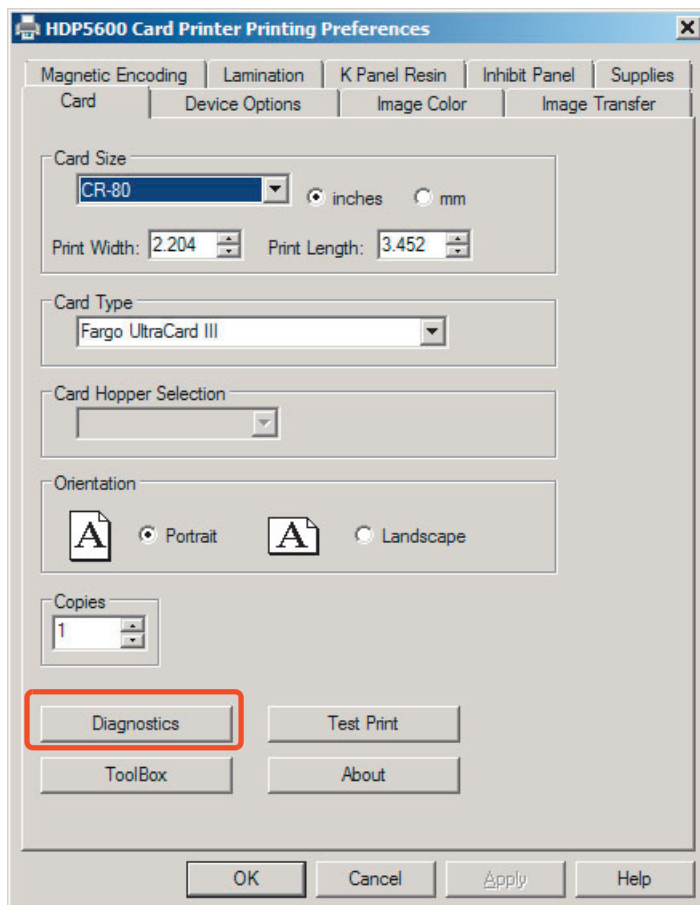
The Workbench Printer Utility opens. This document does not cover the Workbench utility, for detailed information locate the *Workbench Printer Utility User Guide* on CD provided with your printer.
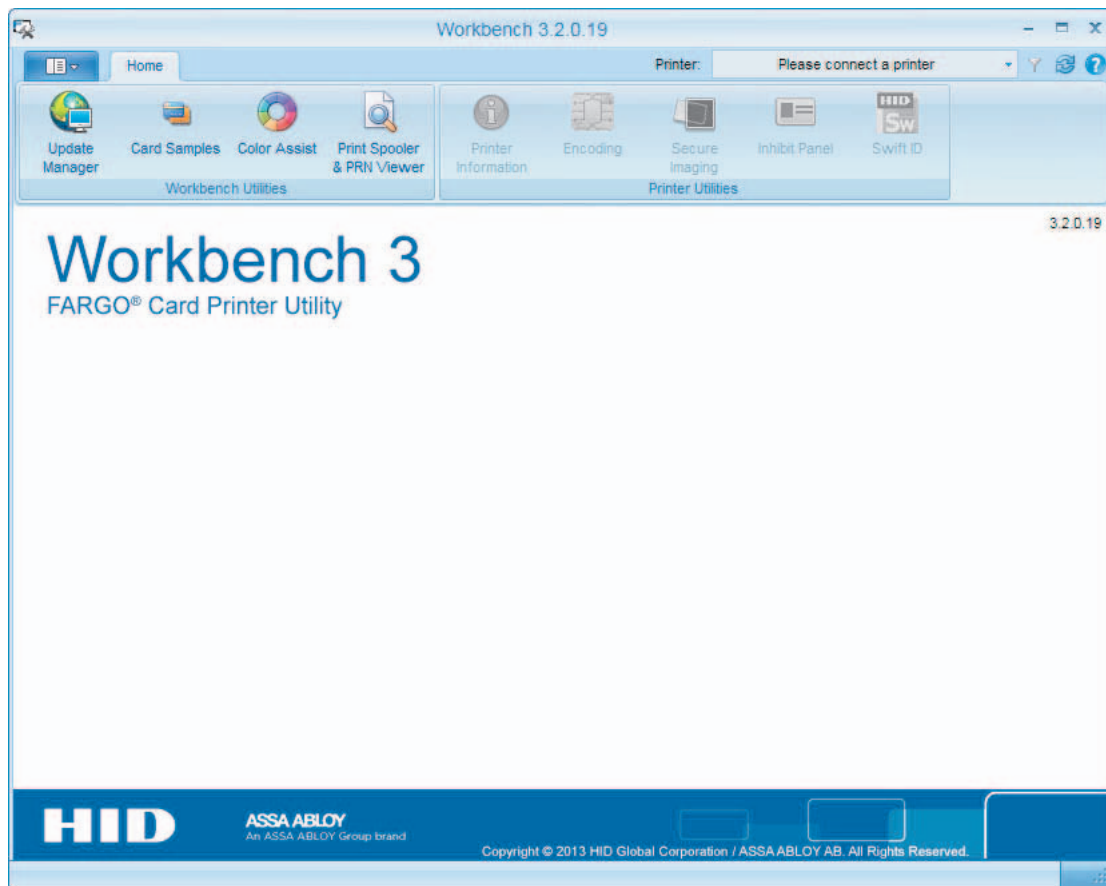
Fluorescent Panel Usage

The YMCFK ribbon is an economical way to add a fully customizable, incremental level of security to photo identification cards. This process allows the user to configure the data that is printed with the fluorescent panel of an YMCFK Ribbon.

Any software program may be used to print the special florescent panel of the ribbon to a card once the driver and Workbench are set up correctly.

These ribbons contain a yellow (Y), magenta (M), cyan (C), and resin black (K) panels to create a full color over-the-edge printing identification card. In addition, the ribbon contains a dye-based fluorescing panel (F) which will allow printing a standard or one-to-one personalized gray-scale fluorescing image that is completely invisible until exposed to ultraviolet light.

There are two (2) methods used to accomplish the creation of a custom fluorescent image when using the YMCFK ribbon.

- The first method uses the Workbench to create a static image that will be applied automatically to each card sent to the printer.
- The second method allows the creation of the fluorescent panel image directly from the badge application software. This enables the user to print a unique fluorescent image, such as the card holder's picture, on each card.
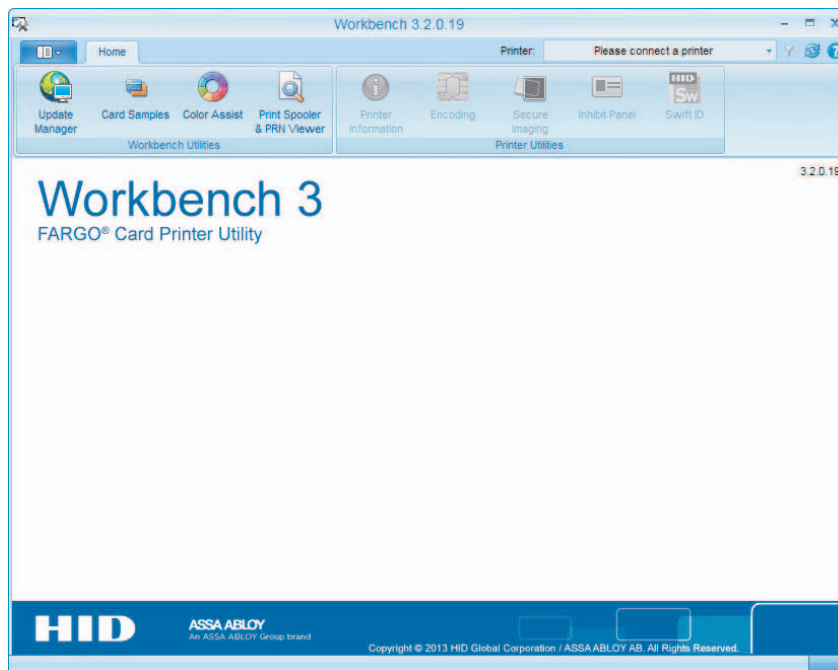
8.1 Configuring Fluorescent Data (F-Panel for YMCFK Ribbon) using Workbench

1. Verify that the latest version of Workbench is installed.
2. To access Workbench click on **Diagnostics** on the **Card** tab of the printing preferences to bring up the **FARGO Workbench Printer Utility.**
3. Select the printer from the drop-down list.
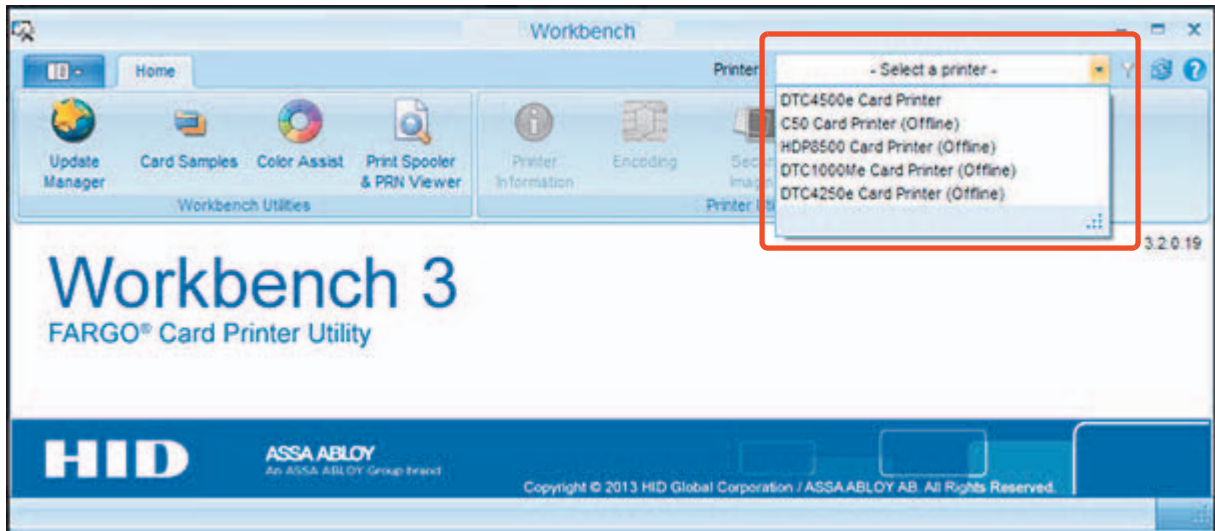
4. Select **Secure Imaging** in the **Printer Utilities** group. Note the message pertaining to the use of the correct ribbon (Must have a fluorescent panel).

5. Select the option for whichever side, or both, the secure image should be on.

6. Click **Secure ID**.
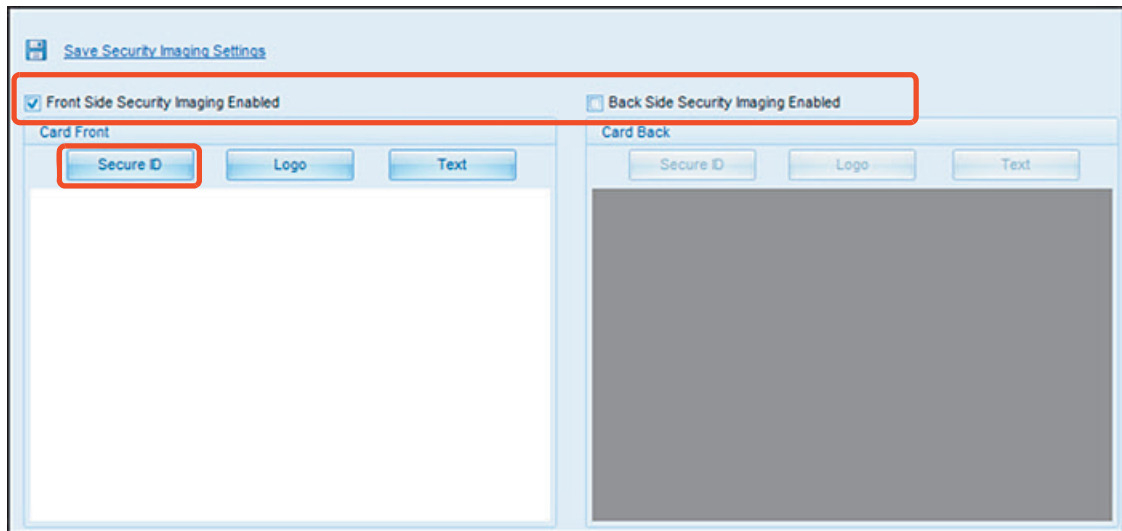
7. Click the template, and drag a box onto it. The text **Secure ID** will display where the box was drawn.

8. Move and size as needed. **Note**: For the placement procedures, the graphic will show only the active template side.

9. Selecting **Logo** or **Text** will allow the user to place either of these on the card front or back.

Logo Image
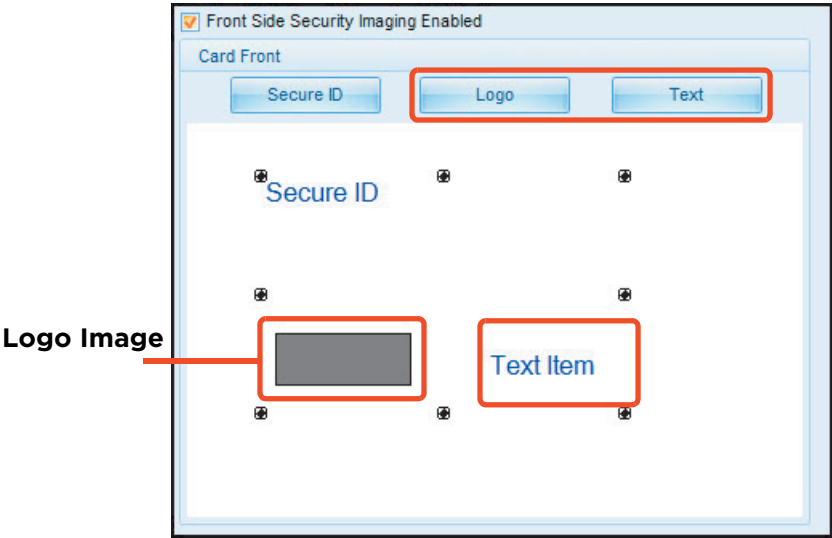
10. Right-click on any of these noted items to display the related options.
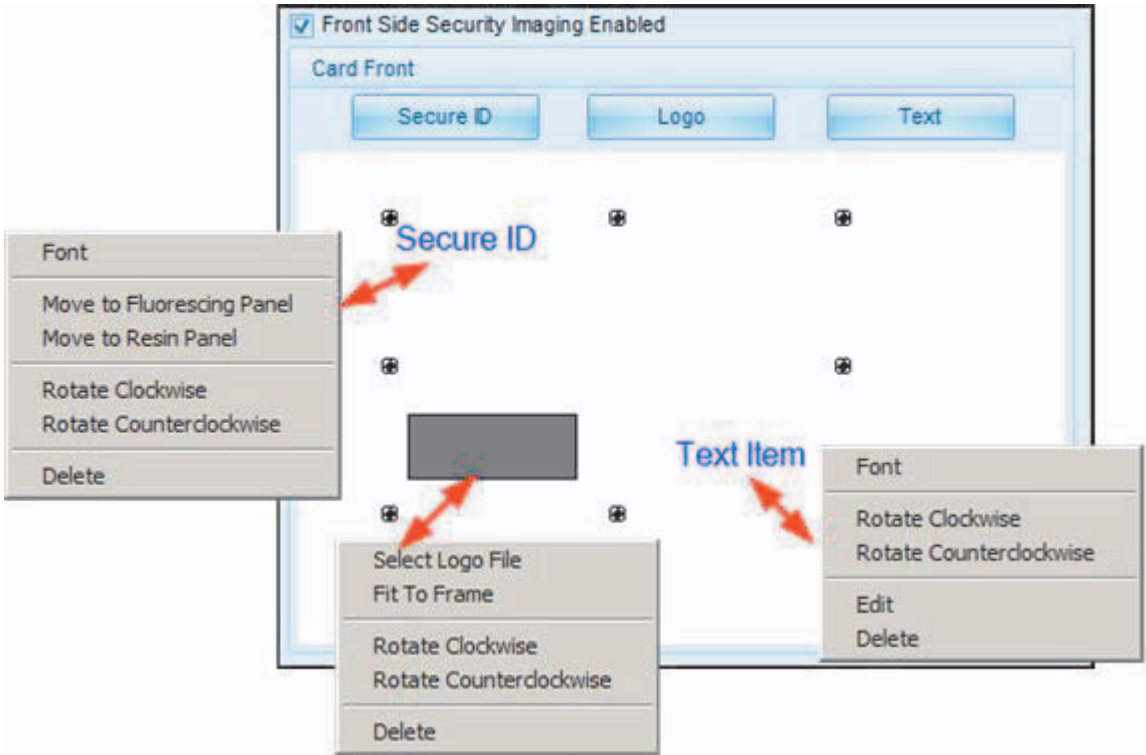
11. To select a logo:

    a. Right-click on the logo square.

    b. From the popup menu, **Select Logo File**.
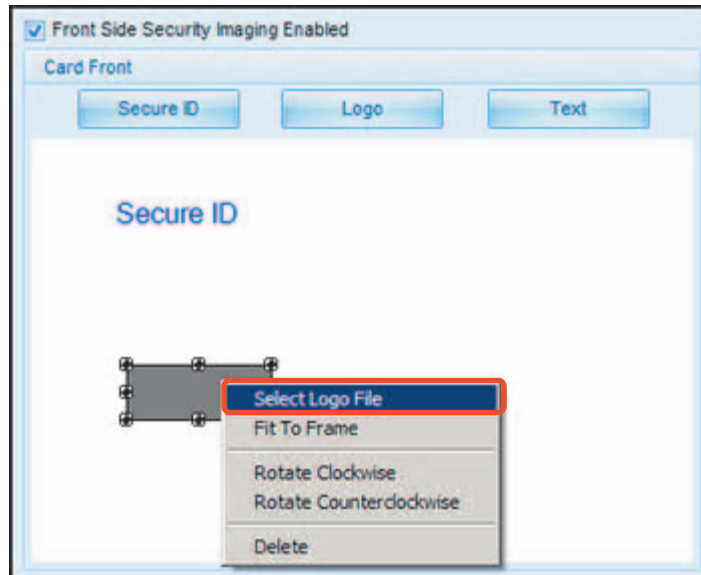
    c. Browse to the logo file, and select the file to place on the card.

    d. Select **Fit to Frame** to size the image to fit the logo box.
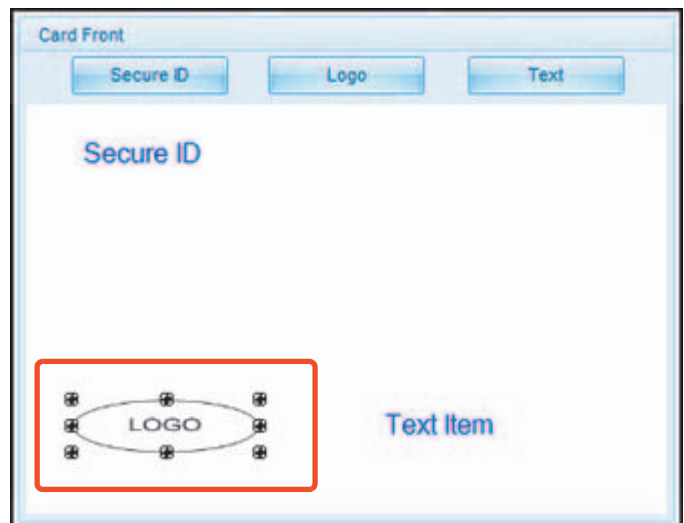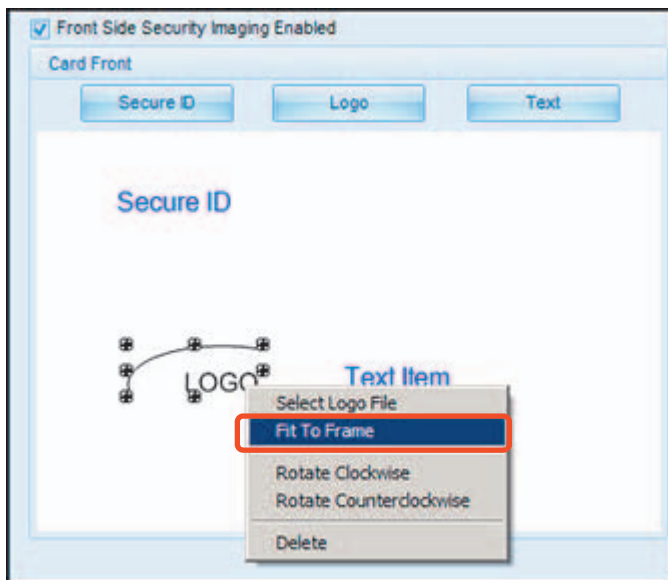
Logo fitted into logo frame.

12. To insert text:

    a. Double-click on **Text Item**.
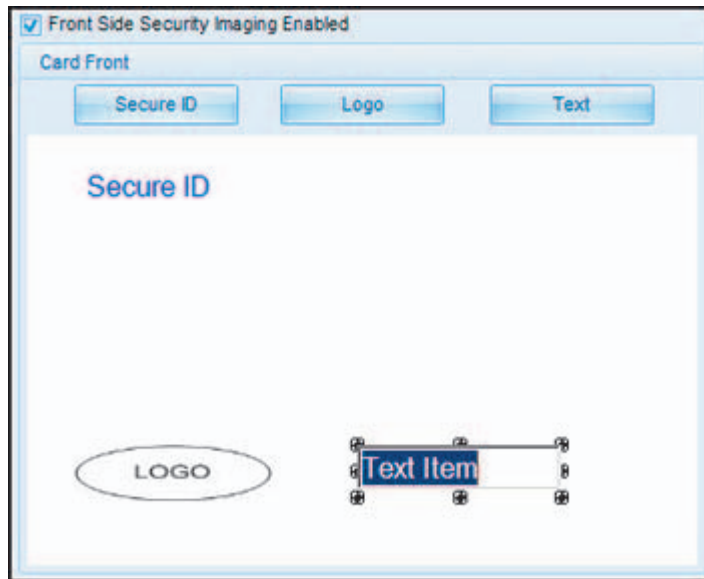
    b. Type the required text.
       If, at this point the user right-clicks the text, a popup menu with options will display.
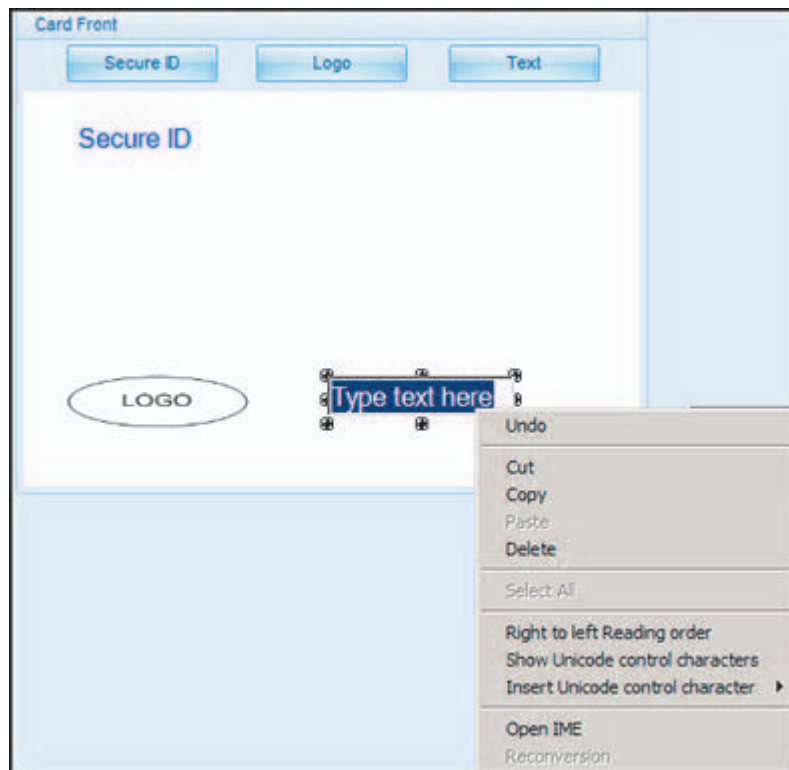
c. If the text has been placed on the template, and the user right-clicks the text, other options, including the ability to change the font, will display.
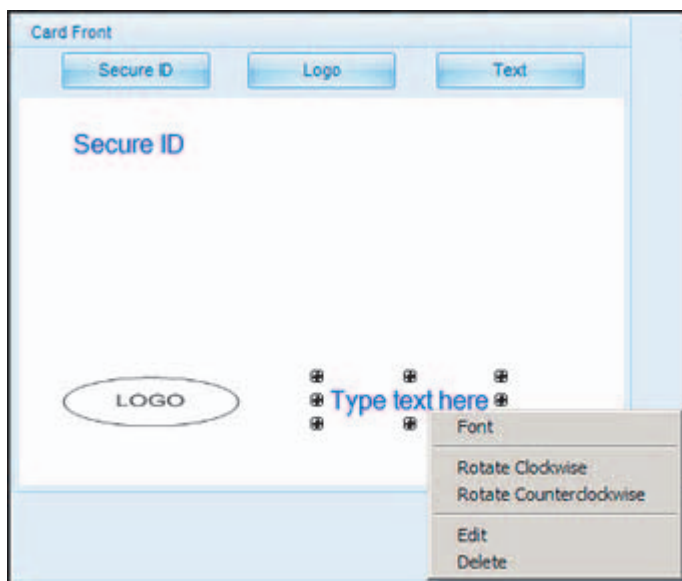
13. When completed with the template layout, click the **Save Security Imaging Settings** option.
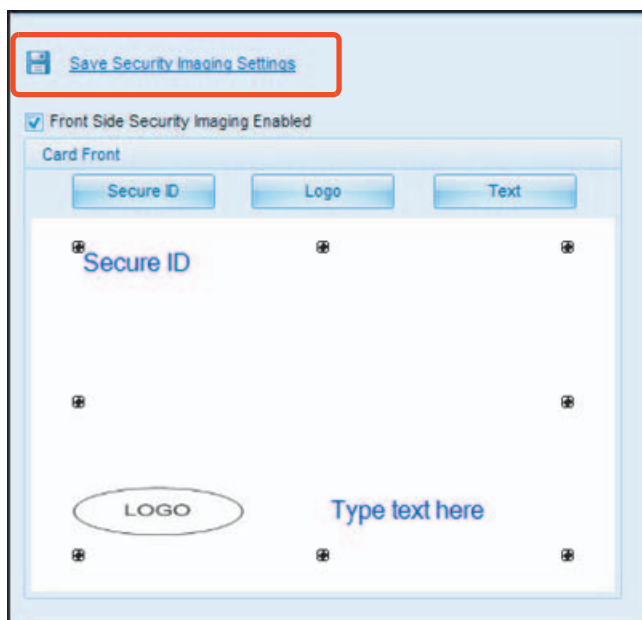
14. Close Workbench.
    Note: Any software program file printed with the YMCFK ribbon installed into the printer will print this design with the F-panel of the ribbon. It will print the same file each time unless a new template is recreated.

15. Set the ribbon for **YMCFK** on the **Device Options** tab of the Printing Preferences window.
    Note: The auto detect button may also be used if the F-panel ribbon is currently installed.

16. In this same tab, check **Dual Pass** if the F-panel should be printed on a separate panel of film from the YMC image.
    Note: It is recommended the default dual pass option be used if the fluorescent image is used in places where other dye is or any time the invert f panel image option is selected.)

17. Check **Invert F-Panel Image** to create a negative of the fluorescent image. This may improve the look of a person's image.
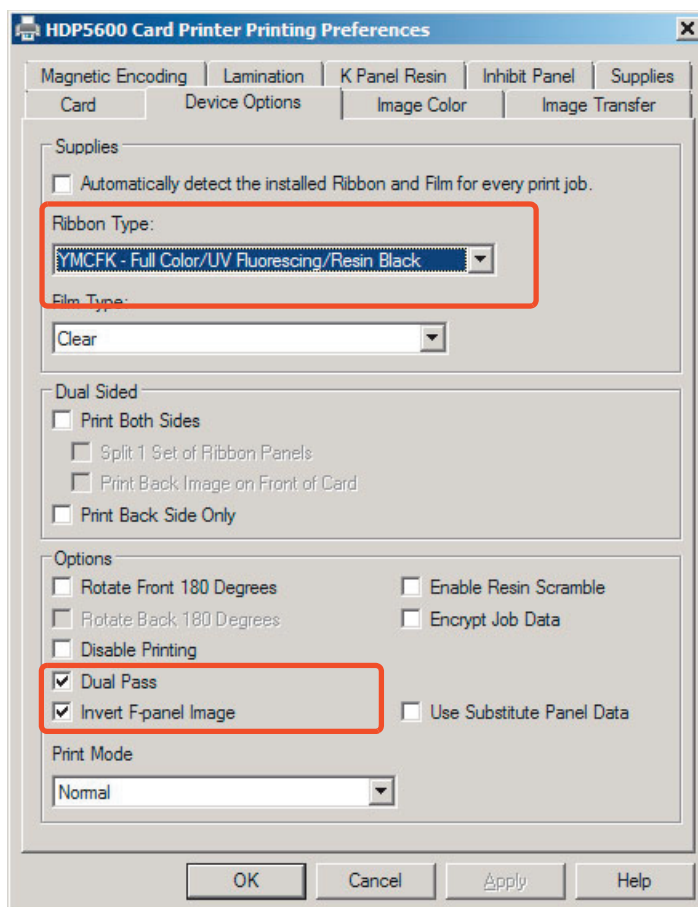
## 8.2 Configuring Fluorescent Data (F-Panel for YMCFK Ribbon) using the Application

This process creates a fluorescent image on the card using a simple text string command in the badge application.

8.2.1 Creating Fluorescent Text

1. Create a new text box in the badge application.

2. Type the text that should appear as fluorescent and put a **~T** before the start of the text, with no space after the ~T. The text will start on the card where the ~T begins.
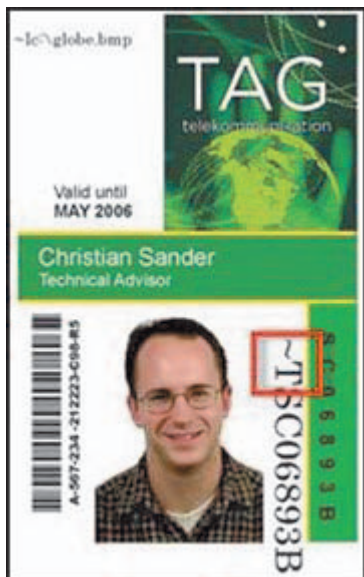
3. Create the image (actual size) that should fluoresce in a separate drawing program and save it as a "Grayscale" or "1-bit" bmp file.

4. Create a new text box in the badge application, and type **~I** followed by the address of the image. When implemented on the card, the top left of the image will start at the top left of the text box.
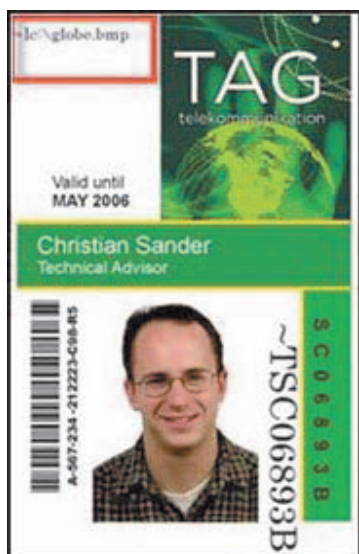
5. Set up the printer driver preferences. For instructions on this, see *Chapter 3: Printer Driver Operations*.

6. Set the ribbon for YMCFK on the **Device Options** tab of the printing preferences.
   Note: The auto detect button may also be used if the F-panel ribbon is currently installed.

7. In this same tab, check **Dual Pass** if the F-panel should print on a separate panel of film from the YMC image.
   Note: It is recommended the default dual pass option be used if the fluorescent image is used in places where other dye is or any time the invert f panel image option is selected.

8. Check **Invert F-Panel Image** to create a negative of the fluorescent image. This may improve the look of a person's image

9. Printer will print the fluorescent bmp image at the ~I position on the card.

10. Printer will print the fluorescent text at the ~T position on the card.
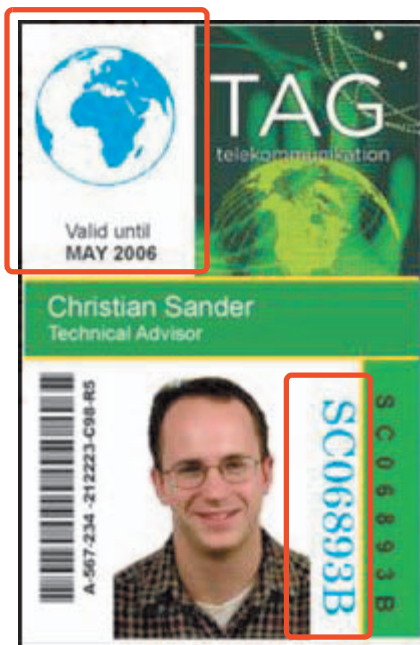
Inhibit Panel Usage

With Workbench, an area can be configure that will not have ink or film applied to, when using the YMCKI ribbon (the I in the ribbon stands for inhibit). In addition, writing only to a specific area on the card, such as an existing signature area, can be completed.

These ribbons contain a yellow (Y), magenta (M), cyan (C), resin black (K), and Inhibit (I) panels to create a full color over-the-edge printing identification card.

There are two (2) methods used to accomplish the creation of a custom fluorescent image when using the YMCFK ribbon.

- The first method uses the utility to create a static image that will be applied automatically to each card sent to the printer.
- The second method allows the creation of the inhibit panel image directly from the badge application software.
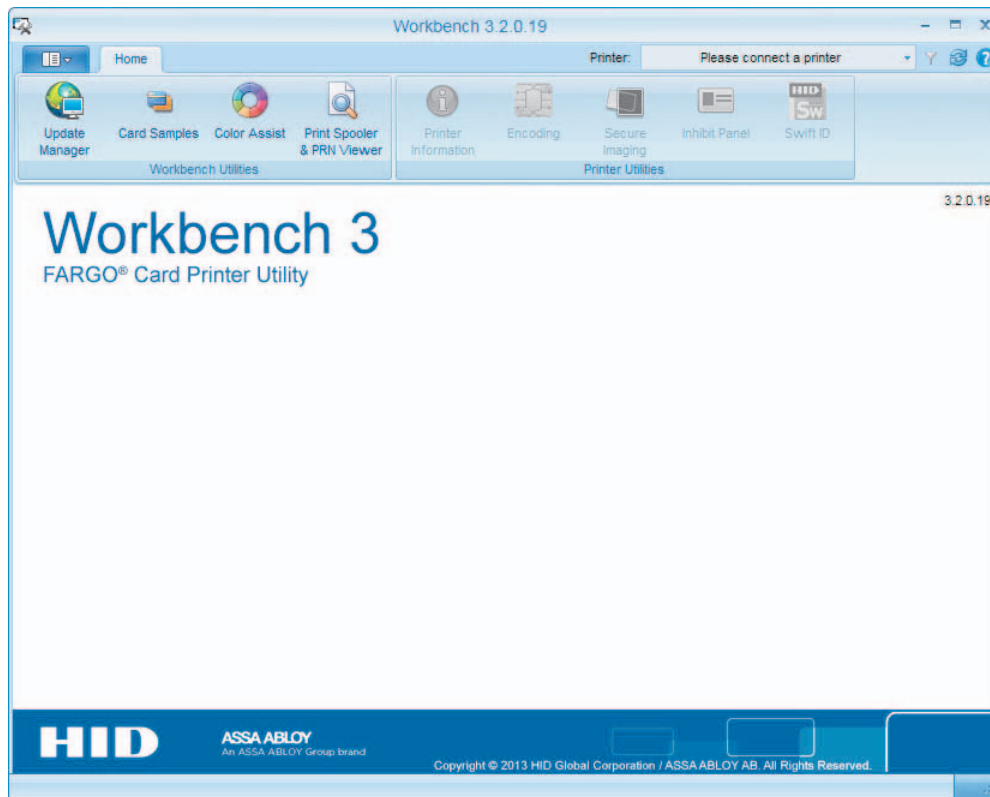
9.1 Configuring Inhibit Panel (I-Panel for YMCKI Ribbon) using Workbench

1. Verify that the latest version of Workbench is installed.
2. To access Workbench click on **Diagnostics** on the **Card** tab of the printing preferences to bring up Workbench.
3. Select the printer, then select **Inhibit Panel**.

4. Select the check box for whichever side, or both, the inhibit area should be on.
5. Click **Rectangle** or **Logo**.
6. Click and drag a box onto the template. Notice the logo box is shaded gray.
7. Move and size as needed.
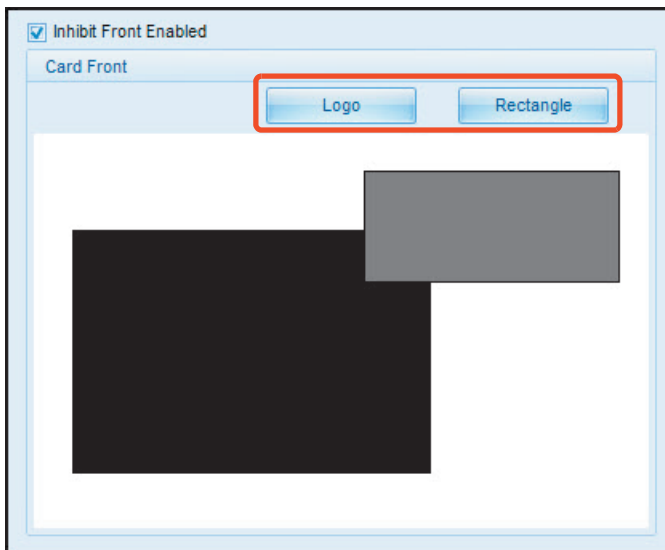
8. Right-click on the logo rectangle to bring up additional options.
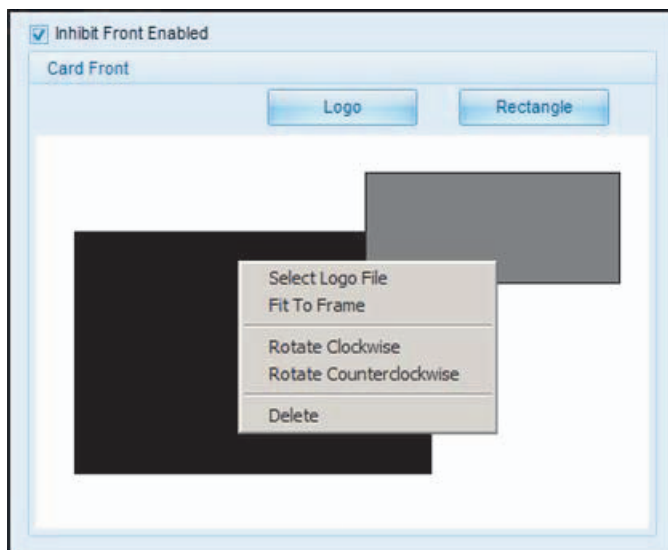
9. To select a logo:
   a. Select logo file.
   b. Find the source of the logo to place on the card. **Note:** Fit to Frame will size the image to fit the box. Once this is set up, this logo will print from the software program. This is set up in the background.
10. When completed with the template layout, save this template using **Save Inhibit Panel Settings.**
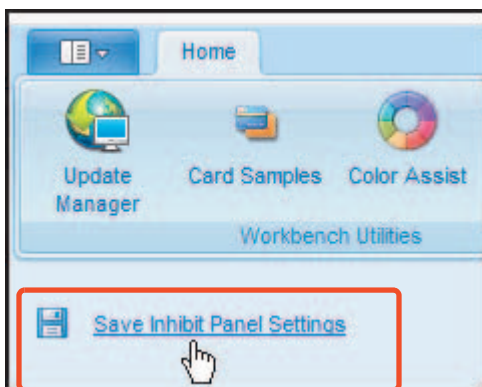
11. Set the ribbon for YMCKI on the **Device Options** tab of the printing preferences. **Note:** The auto detect button may also be used if the I-panel ribbon is currently installed.

9.2   Using Inhibit Panel with an Application

Some applications can utilize the inhibit panel by using text objects containing a **~i** within the print job itself. The **~i** is followed by the file path and file name of a bitmap file, which is merged when the job is printed.

The black areas of the bitmap are the areas that will correspond to where the inhibit material will prevent the transfer of film or dye on to the card.

9.2.1   Generating Text Objects

Incompatible applications (which do not print text as objects): Some Windows applications create print jobs, but do not generate text objects within the print job output.

These types of application are not compatible with the inhibit panel and will not generate the correct print output. If an application saves its files as a single bitmap the text will not be sent to the printer to be handled correctly.

In this case the **~i** string may appear printed on the card instead of being substituted with the inhibit bitmap.

Examples of applications (which are incompatible with inhibit printing) are Notepad and Microsoft Paint. Microsoft Paint can be used for creation of the inhibit bmp.

Compatible applications (which utilize text objects compatible with the Inhibit Panel): Windows applications which generate text objects to Windows GDI are compatible with inhibit panel operation. These compatible applications allow editing text strings after saving the file. Examples of compatible applications are Corel Draw, Microsoft Word, and Microsoft WordPad.

9.2.2   Create Bitmap Image

Create the image (actual size) to inhibit in a separate drawing program and save it as a "Grayscale" or "1-bit" bmp file.

Create the inhibit area in the badge application, and type **~i** followed by the address of the image.

9.2.3   Print Size

If the inhibit bitmap is larger than the card print size, it is trimmed to fit it. The normal print size for a CR-80 card is 2.204 inches by 3.452 inches.

With that print size, the maximum size of the inhibit bitmap area would be 661 pixels by 1035 pixels.

If the inhibit bitmap is smaller than the card print size, it will still be used by the driver and be referenced to the upper left hand corner of the **~i** text object.

9.2.4   Troubleshooting the Inhibit Panel

If there is trouble getting the inhibit panel to produce the expected results, verify the following information.

- A lower case is used ('~i', instead of an upper case '~I'). Some applications have an auto-correct feature that will change the case on the small 'i'.

- The bitmap file is monochrome (for example, black and white).

- The size of the bitmap image is large enough to cover the space to inhibit. **Note**: The printer resolution is 300 dpi on both the horizontal and vertical axis, which will aid in placement of the image. Oversize images will be truncated at the size of the card.

- The bitmap image should be created in the same orientation as the application image (for example, landscape or portrait).

- Some Windows applications have a mode where prints are converted to a bitmap before printing which will prevent proper inhibit panel operation.

- In some applications, such as Microsoft WordPad, the **'~'** must be left justified or it may print on the card and the inhibit functionality will not work.

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Firmware Upgrades

10.1 Upgrade Information

To upgrade the printer's firmware, perform the following steps:

1. Run the FARGO Workbench Card Printer Utility.
2. **If running FARGO Workbench Version 3 or greater:**
   a. Select the **Update Manager** utility.
   b. Select the printer(s) to update.
   c. Select desired radio button.
   d. Click **Begin Updating Firmware** to send the file to the printer(s).
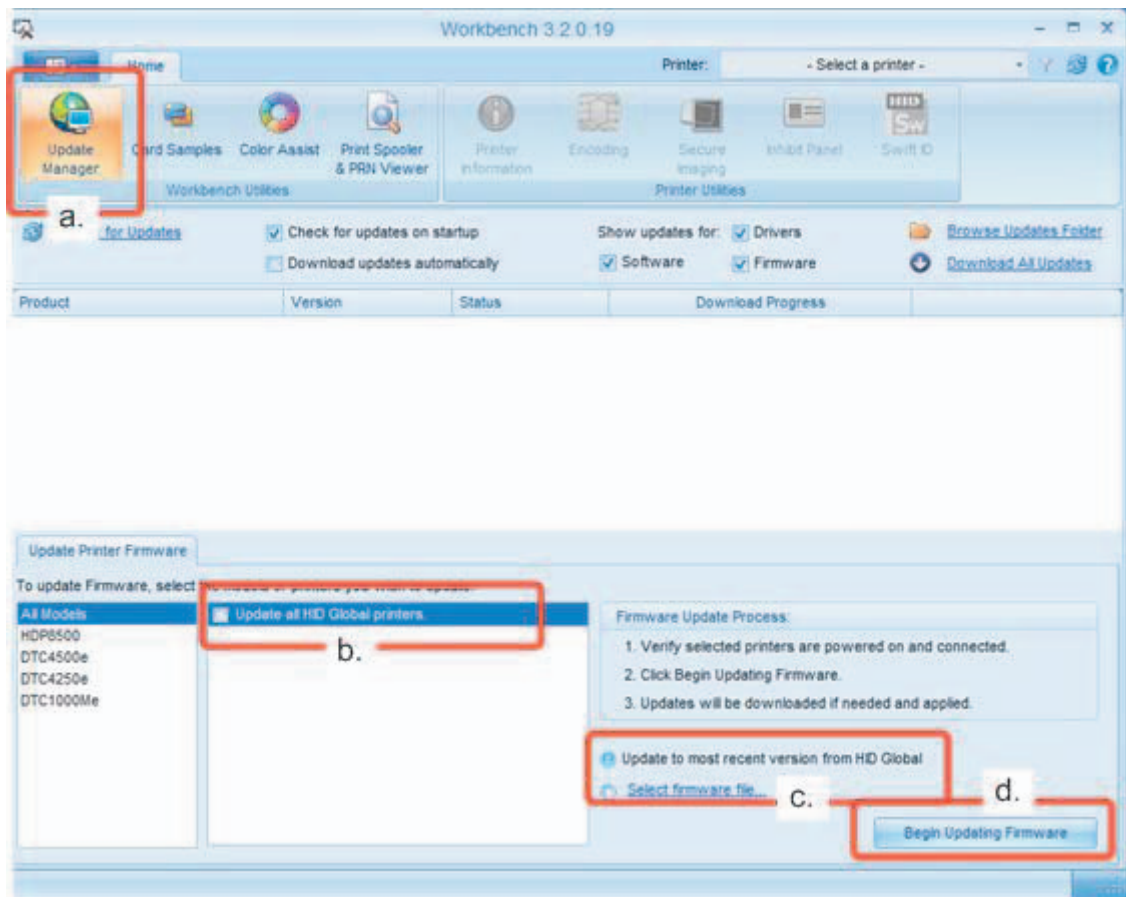
3. **If running a FARGO Workbench release prior to Version 3:**

   a. Select the **Application Menu** at the upper left and select **Upgrade Firmware**.

   b. Enter the firmware file name or click **Browse** to find and select the latest firmware file (FRW-00373_DTC100_v2.3.3.20.frm).

   c. Click **OK** to send the file to the printer(s).

4. Restart the printer if it does not restart automatically.

HDPii Plus

This section is specific to the HDPii Plus printer only.

Dimensions:

- **HDPii Plus:** 11.50″H x 12.25″W x 9.25″D / 292mmH x 313mmW x 235mmD
- **HDPii Plus + Dual-Sided Module:** 11.50″H x 25.00″W x 9.25″D / 292mmH x 626mmW x 235mmD

A.1 Accessory Procedures: Using the Security Lock Slot

Important: Compatible locks are not sold by HID Global; however, they are readily available from computer stores.
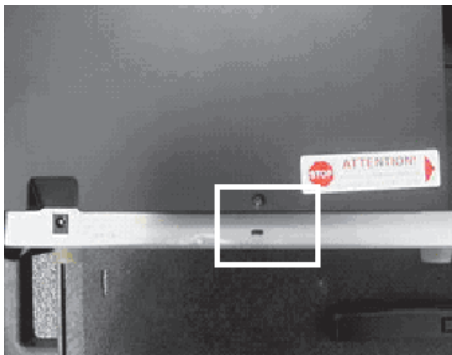
The HDPii Printer has a Security Lock Slot located in the back lip of the metal chassis to accommodate a standard laptop security lock.

To prevent unauthorized removal of the HDPii, attach an industry standard security cable to an immovable object and then lock the cable to the Security Lock Slot.
Note: HID Global does not sell any type of locking device, but provides this feature for your added security.
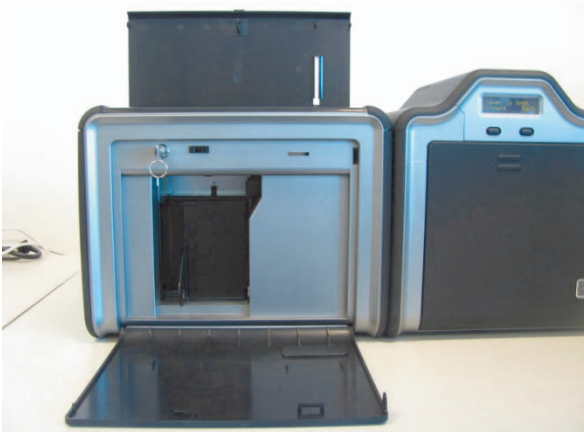
The lock slot has a plastic covering that needs to be penetrated by the lock.
Note: Simply push the lock end into the slot with adequate force to break the protective film.

Follow the locking procedure recommended by the lock vendor.

## A.2   Cleaning the Magnetic Encoder: HDPii Output Module

1. Open the front cover of the Output Module. Unlock and open the Top cover.

2. Use the Long Alcohol soaked cleaning card. Remove from package. Work quickly as this will dry out.

3. The Magnetic Head is located underneath the Flipper Table. Start by tilting the Flipper Table so it is Up & Down. Turn the Flipper Table slightly to the LEFT so the cleaning card is at an angle and will reach into the magnetic assembly.
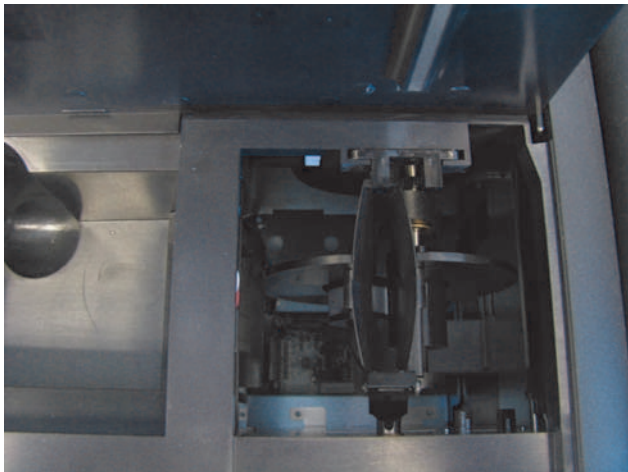
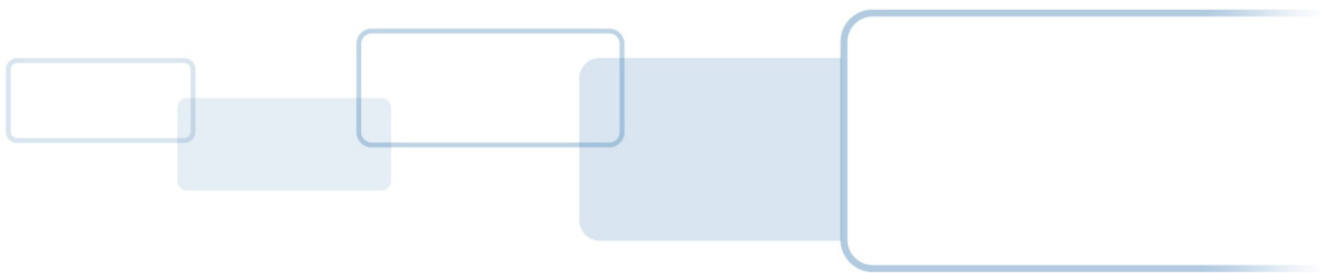4. Insert the cleaning card into the flipper table slot at a slight angle.
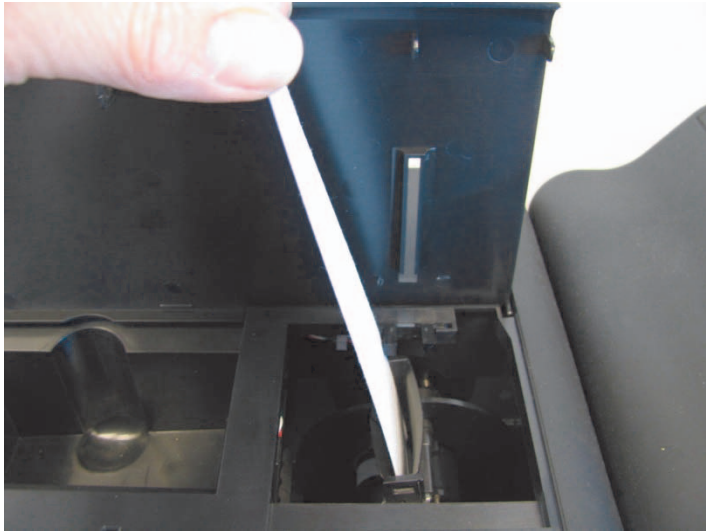
5. Use the OLED Forward and Back buttons to move the card back and forth.

Revision History

Date	Description	Version
February 2016	Added 600 DPI Print Head option.	4.0
July 2013	New Inhibit Panel functionality and updated Advanced Settings section. French translations added for agencies and safety.	3.0
December 2012	Combined HDP5000 & HDPii Plus User Guide, adding new functionality.	2.0
March 2011	HDP5000 High Definition Card Printer/Encoder User Guide. Added Windows 7, 32 & 64 bit support. Added Film Alignment procedure.	1.9
June 2010	HDP5000 High Definition Card Printer/Encoder User Guide – Corrected Print Speed	1.8
January 2010	HDP5000 High Definition Card Printer/Encoder User Guide – Power connecting method revised	1.7

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