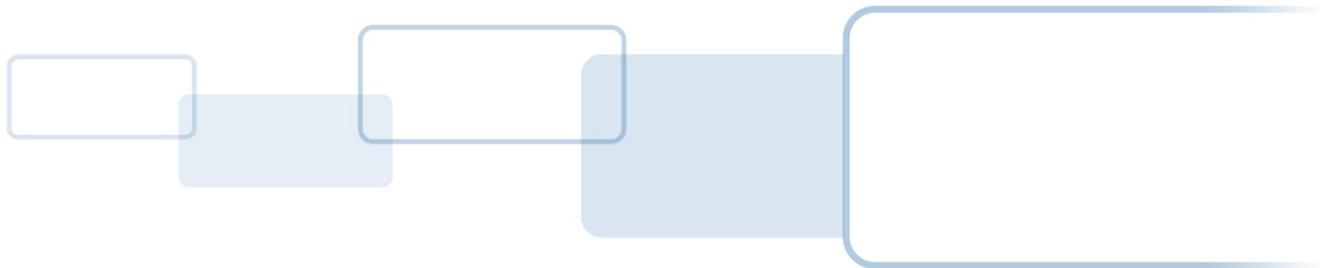




15370 Barranca Pkwy
Irvine, CA 92618-3106



HDP5000 & HDPii Plus

High Definition Card Printer/Encoder

USER GUIDE

L000950 Rev 3.0

July 2013

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1 HDP5000 & HDPii Plus High Definition Card Printer/Encoder User Guide L000950 Rev 3.0

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Revision History

| Revision | Date | Document Title |
|----------|---------------|--|
| 3.0 | July 2013 | New Inhibit Panel functionality and updated Advanced Settings section. |
| 2.0 | December 2012 | Combined HDP5000 & HDPii Plus User Guide, adding new functionality. |
| 1.9 | March 2011 | HDP5000 High Definition Card Printer/Encoder User Guide Added Windows 7 32 & 64 bit support Added Film Alignment procedure |
| 1.8 | June 2010 | HDP5000 High Definition Card Printer/Encoder User Guide – Corrected Print Speed |
| 1.7 | January 2010 | HDP5000 High Definition Card Printer/Encoder User Guide – Power connecting method revised |

Contacts

| North America | Europe, Middle East and Africa | Asia Pacific | Brazil |
|--|---|---|---|
| 15370 Barranca Parkway, Irvine, CA 92618, USA 866 607-7339, #6 M-F 7am-6pm CST | Phoenix Road, Haverhill, Suffolk CB9 7AE, England +44 1440 711 822 M-TH 8:30 - 17:30 GMT (FR 8:30 - 17:00) | 19/F 625 King's Road, North Point, Island East, Hong Kong +852 3160 9833 M-F 9am – 6pm GMT +8 | Av Guido Caloi 1985 Prédio 18 São Paulo – SP, CEP : 05802-140 55 11 5514-7110 M-F 9am – 6pm ATC |

support.hidglobal.com



2 Specifications

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

2.1 Regulatory Compliance

| | |
|----------------------|---|
| UL | The Card Printer is listed under UL 60950-1 (2 nd 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 24 V dc, 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 2 nd 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 EN300-330-1, EN300-330-2, EN301-489-1, EN60950-1:2006 + A11:2009 Note: Based on the above testing, the Printer manufacturer certifies that the Card Printer complies with the following of the European Community and has placed the CE mark on the Card Printer. LVD 2006/95/EC, EMC 2004/108/EC, R&TTE 1999/5/EC, ROHS 2002/95/EC |
| Environmental | Power supply Efficiency level V minimum, RoHS, China RoHS |

2.1.1 Agency Listings

| | |
|-----------------------------------|---|
| Emissions Standards | FCC Part 15 Class A, RSS-GEN, RSS 210 ,CNS 13438, EMC 2004/108/EC, R&TTE 1999/5/EC,GB9254, GB 17625 |
| Safety Standards | UL IEC 60950-1 (2nd edition), CSA C22.2 No. 60950-1-07 2 nd edition, LVD 2006/95/EC,GB4943, CNS14336 |
| Additional Agency Listings | CCC, BSMI, KC |

2.1.2 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, you are required to correct the interference at your 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.

2.1.3 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.

2.1.4 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。

2.1.5 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-13048 (HDP5000), AC-13049 (HDPiiPlus), 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

2.1.6 Korean

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

2.2 Safety Messages

2.2.1 United States (review carefully)

| Symbol | Critical Instructions for Safety purposes |
|--|---|
| <p>Danger:</p>  | <p>Failure to follow these installation guidelines can result in death or serious injury.</p> <p>Information that raises potential safety issues is indicated by a warning symbol (as shown to the left).</p> <p>To prevent personal injury, refer to the following safety messages before performing an operation preceded by this symbol.</p> <p>To prevent personal injury, always remove the power cord prior to performing repair procedures, unless otherwise specified.</p> <p>To prevent personal injury, make sure only authorized service personnel perform these procedures.</p> |
| <p>ESD:</p>  | <p>This device is electrostatically sensitive. It can be damaged if exposed to static electricity discharges.</p> <p>Information that raises potential electrostatic safety issues is indicated by a warning symbol (as shown to the left).</p> <p>To prevent equipment or media damage, refer to the following safety messages before performing an operation preceded by this symbol.</p> <p>To prevent equipment or media damage, observe all established Electrostatic Discharge (ESD) procedures while handling cables in or near the Circuit Board and Printhead Assemblies.</p> <p>To prevent equipment or media damage, always wear an appropriate personal grounding device (e.g., a high quality wrist strap grounded to avoid potential damage).</p> <p>To prevent equipment or media damage, always remove the Ribbon and Cards from the Printer before making any repairs, unless otherwise specified.</p> <p>To prevent equipment or media damage, take jewelry off of fingers and hands, as well as thoroughly clean hands to remove oil and debris before working on the Printer.</p> |
| <p>Caution:</p>  | <p>This symbol signifies electrical danger which may cause injury or death.</p> |

| | |
|---|--|
|  | <p>For safety purposes, do not use Ethernet for a direct connection outside of the building.</p> |
|---|--|

2.2.2 Safety Messages - French

| Symbole | Instructions critiques visant la Sécurité |
|---|---|
| <p>Danger :</p>  | <p>Si ces directives ne sont pas suivies les résultats peuvent être des lésions corporelles ou la mort.</p> <p>Pour éviter des lésions corporelles ou la mort:</p> <ul style="list-style-type: none"> • 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. |
| <p>ESD :</p>  | <p>Ce dispositif est sensible à l'électricité statique. Il peut souffrir des dommages s'il est exposé à des décharges électrostatiques.</p> <p>Pour éviter des dommages:</p> <ul style="list-style-type: none"> • 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 personnel approprié. • 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. |
| <p>Attention :</p>  | <p>Ce symbole est un avis de péril électrique possible de résulter en lésion corporelle ou mort.</p> |
| <p>Attention :</p>  | <p>Pour des raisons de sécurité, ne pas utiliser Ethernet pour une connexion directe à l'extérieur du bâtiment.</p> |

2.2.3 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：  | <p>未按照說明安裝可能造成人員傷亡。</p> <p>在可能產生潛在安全問題的地方有警示標記。（如左圖所示）。</p> <p>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。</p> <p>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。</p> |
| 小心：  | <p>此設備對靜電很敏感。如果受到靜電放電，設備會損壞。</p> <p>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）。</p> <p>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。</p> <p>為了避免損壞設備，在排放 circuit 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。</p> <p>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）。</p> <p>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。</p> <p>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。</p> |

2.2.4 China

安全消息（请仔细阅读）

| 符号 | 涉及安全的重要过程 |
|--|--|
| 危險：  | <p>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。</p> <p>可能引发安全问题的信息由警告符号（如左图所示）来表示。</p> <p>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。</p> <p>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。</p> |
| 小心：  | <p>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。</p> <p>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。</p> <p>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。</p> <p>为了防止设备或介质受损，请在处理 circuit 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電 (ESD) 过程。</p> <p>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帶）。</p> <p>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。</p> <p>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首饰，并将手上的油渍和污渍彻底清洗干净。</p> |



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

Use only in non-tropical conditions.

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.

2.3 Technical Specifications

| Term | Description |
|---|---|
| Print Method | Dye Sublimation / Resin Thermal Transfer |
| Print resolution | 300 dpi (11.8 dots/mm); continuous tone |
| Print Modes | There are two print modes (Performance and Normal) <ul style="list-style-type: none"> • Normal print mode (default) • Performance print mode is faster with lower image quality and is most suitable for minimal color with mostly resin text. |
| Colors | Up to 16.7 million colors / 256 shades per pixel |
| Accepted Card Types (Compositions) | ABS, Laminated PVC, PET, PETG, smart cards, mag stripe cards, optical memory cards, 100% polycarbonate able to accept HDP retransfer. |
| Card Cleaning | Replaceable cleaning roller (included with each print Ribbon) |
| Input Hopper Capacity | 100 cards , 30 mil cards-standard hopper 200 cards, 30 -40 mil cards- dual-input hopper optional |
| Output Hopper Card Capacity | 200 card Output Hopper capacity, 30 mil – 40 mil Reject hopper 5 cards minimum, 30 mil (with flipper module) |
| Card Sizes (Accepted Standard sizes) | These Card Printers accept standard CR80 sized cards (3.370L x 2.125W / 85.6mmL x 54mmW) with a thickness of 30 mil to 50 mil (.030/.762mm). The Laminator will accept card thickness of 30 mil to 50 mil. Dual Hopper limited to 30 mil to 40 mil. |



| Term | Description |
|--------------------------------------|---|
| Dimensions | <p>Printer: 11.50"H x 12.25"W x 9.25"D / 292mmH x 313mmW x 235mmD</p> <p>Printer + Dual-Sided Module: 11.50"H x 17.50"W x 9.25"D / 292mmH x 445mmW x 235mmD</p> <p>Printer + Single-Sided Lam Module: 12.75"H x 25"W x 9.25"D / 324mmH x 635mmW x 235mmD</p> <p>Printer + Dual-Sided Module + Dual-Sided Lam Module: 12.75"H x 30"W x 9.25"D / 324mmH x 762mmW x 235mmD</p> <p>Lam Module: 12.75"H x 12.25"W x 9.25"D / 324mmH x 313mmW x 235mmD</p> <p>Dual Input Hopper: 12" H x 5"W x 5.5" D</p> |
| Weight | <p>Printer : 16 lbs. / 7.3 kg</p> <p>Printer + Dual-Sided Module: 22 lbs. / 10 kg</p> <p>Printer + Single-Sided Lam Module: 28 lbs. / 12.7 kg</p> <p>Printer + Dual-Sided Module + Dual-Sided Lam Module: 36 lbs. / 16.4 kg</p> |
| Display | OLED Graphical Display |
| Encoding Options | <ul style="list-style-type: none"> • 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 | <p>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.</p> |
| InTM Film Options | <p>Clear Film, 1,500 prints</p> <p>Standard Holographic (500 prints)</p> <p>Custom Holographic, special order (500 prints)</p> <p>High Durable Clear Film (1,000 prints)</p> |
| InTM Film Storage Temperature | 77°F (25°C) or lower for no longer than 1.5 years. |
| Humidity | 20% to 80% (non-condensing) |
| Interface | <p>USB 2.0 (high speed)</p> <p>Ethernet with internal print server</p> <p>Interfacing information for E-card Options</p> |



| Term | Description |
|------------------------------|--|
| Locks | Hardware locks are an optional feature. <ul style="list-style-type: none">• 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 |
| Operating Temperature | 65° F to 90° F (18° C to 32° C). 20% - 80% non-condensing humidity |
| Options | <ul style="list-style-type: none">• 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 |
| Overlaminates Options | All overlaminates 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: <ul style="list-style-type: none">• Thermal Transfer Overlaminates, .25 mil thick, 500 prints• PolyGuard® Overlaminates, 1.0 mil and .6 mil thick, 250 prints, (clear, standard holographic and custom holographic) |
| Print Area | Over-the-edge on CR-80 cards. |
| Printing Method | HDP™ Dye-Sublimation / Resin Thermal Transfer |



| Term | Description | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|--|------------------------|-------------------|-----|--|--|------|--|--|-------|---|---|----------|--|---|-----------|---|---|
| <p>Print Ribbon Options</p> | <p>(Prints or Images):</p> <ul style="list-style-type: none"> • 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 <p>*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</p> | | | | | | | | | | | | | | | | | | |
| <p>Resin Scramble Option</p> | <p>The system can hide any information printed with the resin panel.</p> | | | | | | | | | | | | | | | | | | |
| <p>Print Speed-Batch Mode</p> | <p>There are two print speed modes: Normal and Performance</p> <table border="1" data-bbox="683 940 1446 1367"> <thead> <tr> <th></th> <th>Performance Print Mode</th> <th>Normal Print Mode</th> </tr> </thead> <tbody> <tr> <td>YMC</td> <td>24 seconds per card/ 150 cards per hour</td> <td>29 seconds per card/ 124 cards per hour</td> </tr> <tr> <td>YMCK</td> <td>29 seconds per card/ 124 cards per hour</td> <td>35 seconds per card/ 103 cards per hour</td> </tr> <tr> <td>YMCKK</td> <td>40 seconds per card/ 90 cards per hour</td> <td>49 seconds per card/ 73 cards per hour</td> </tr> <tr> <td>YMCK+Lam</td> <td>34 seconds per card/ 106 cards per hour</td> <td>40 seconds per card/ 90 cards per hour</td> </tr> <tr> <td>YMCKK+Lam</td> <td>48 seconds per card/ 75 cards per hour</td> <td>55 seconds per card/ 65 cards per hour</td> </tr> </tbody> </table> <p>Performance is most suitable for minimal color and mostly resin text.</p> <ul style="list-style-type: none"> • Print speed indicates an approximate print speed and is measured from the time a card feeds into the Printer to the time it ejects from the Printer. • Print speeds do not include encoding time or the time needed for the PC to process the image. • Process time is dependent on the size of the file, the CPU, amount of RAM and the amount of available resources at the time of the print. | | Performance Print Mode | Normal Print Mode | YMC | 24 seconds per card/ 150 cards per hour | 29 seconds per card/ 124 cards per hour | YMCK | 29 seconds per card/ 124 cards per hour | 35 seconds per card/ 103 cards per hour | YMCKK | 40 seconds per card/ 90 cards per hour | 49 seconds per card/ 73 cards per hour | YMCK+Lam | 34 seconds per card/ 106 cards per hour | 40 seconds per card/ 90 cards per hour | YMCKK+Lam | 48 seconds per card/ 75 cards per hour | 55 seconds per card/ 65 cards per hour |
| | Performance Print Mode | Normal Print Mode | | | | | | | | | | | | | | | | | |
| YMC | 24 seconds per card/ 150 cards per hour | 29 seconds per card/ 124 cards per hour | | | | | | | | | | | | | | | | | |
| YMCK | 29 seconds per card/ 124 cards per hour | 35 seconds per card/ 103 cards per hour | | | | | | | | | | | | | | | | | |
| YMCKK | 40 seconds per card/ 90 cards per hour | 49 seconds per card/ 73 cards per hour | | | | | | | | | | | | | | | | | |
| YMCK+Lam | 34 seconds per card/ 106 cards per hour | 40 seconds per card/ 90 cards per hour | | | | | | | | | | | | | | | | | |
| YMCKK+Lam | 48 seconds per card/ 75 cards per hour | 55 seconds per card/ 65 cards per hour | | | | | | | | | | | | | | | | | |



| Term | Description |
|----------------------------------|--|
| Software Drivers | 32 bit support for: <ul style="list-style-type: none">• Windows XP• Server 2003 32 and 64 bit support for: <ul style="list-style-type: none">• Vista• Server 2008• Windows 7• Windows 8 64 bit support for: <ul style="list-style-type: none">• Server 2008 R2• Server 2012 |
| Supply Frequency | 50 Hz / 60 Hz |
| Supply Voltage | 120-240 VAC |
| Supported Printers/Models | Ethernet USB (2.0) |
| System Requirements | x86 based PC or compatible, <ul style="list-style-type: none">• 500MHz computer with 256MB of RAM or higher• 500MB free hard disk space or higher |
| Warranty | Printer: Two year (One year On-Call Express, U.S. only); optional Extended Warranty Program (U.S. only); see below for more detail. <ul style="list-style-type: none">• Two (2) 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.• Extended Warranties available Printhead: Lifetime; unlimited pass with Fargo-certified Cards |

3 Setup and Installation Procedures

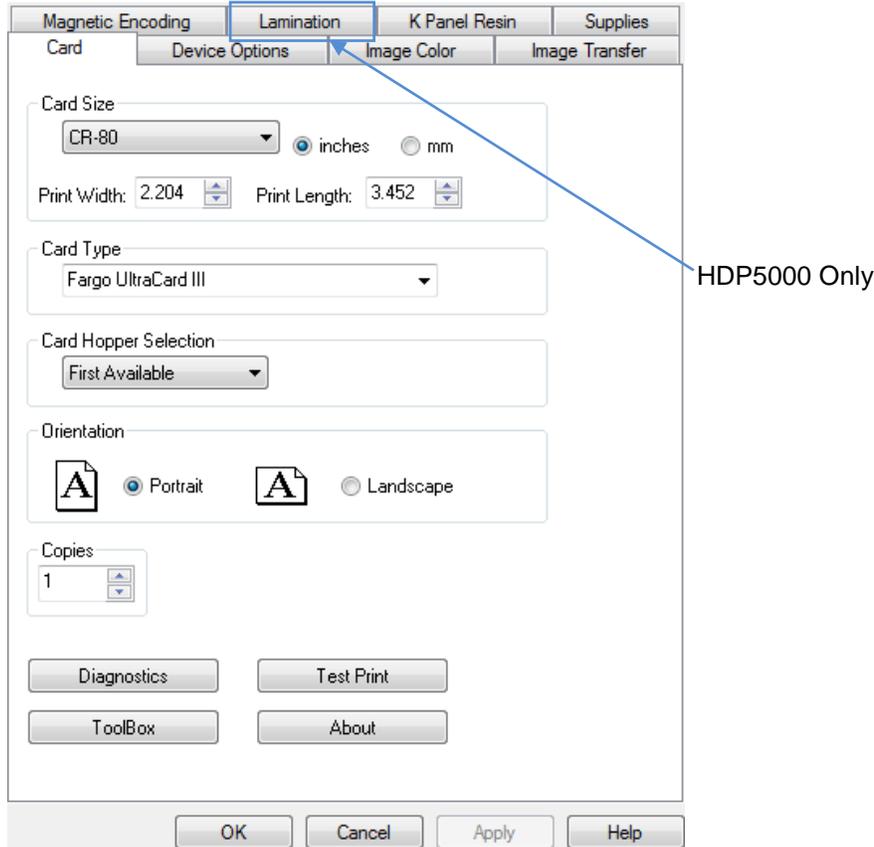
3.1 Inspection – Card Printer

- 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.

4 Printer Driver Operations

4.1 Using the Card tab



4.1.1 Selecting the Card Size

| Step | Procedure |
|------|--|
| 1 | <p>Select the Card Size option:</p> <ul style="list-style-type: none"> • CR-80: This selection is the default form size for the printer. This will print a 2.125 X 3.374 image including a .04 over-bleed on each of the 4 sides making the overall form size 2.204 X 3.452 (56 X 87.7 mm). • Custom: Use this selection to create a custom form size from 1.0 x 3.0 to 2.204 to 3.452 (25.4 X 76.2 mm to 56 X 87.7 mm). • The dimensions of the total print area for each card size appears in the Print Width and Print Length boxes. • These print area dimensions are .04" (1mm) larger than the actual card size. This is so the Printer can overprint images ensuring they appear Edge-to-Edge when transferred to the card. • When designing a card format, set the card or page size within the card design program to the exact Print Length and Width dimensions listed in the Printer Driver. |

4.1.2 Selecting the Card Type



From the **Card Type** dropdown list, select the desired **Card Type** according to the composition of the card stock.

| Step | Procedure |
|------|--|
| 1 | <p>You have these selections (to choose from) Normal print mode:</p> <ul style="list-style-type: none">• Fargo UltraCard III (Default Card Type) = 190°C and 2.0 sec.• Fargo UltraCard Premium = 185° and 2.0 sec• Fargo Ultracard = 175° and 2.0 sec• HID Tech Card Composite = 190° and 2.0 sec• HID Tech Card PVC = 185° and 2.0 sec• Indala FlexISO – Standard (FPISO) = 185° and 2.0 sec• Indala FLexISO XT-Composite (FPIXT) 190° and 2.0 sec• Custom 1 = 175° and 2.0 sec• Custom 2 = 175° and 2.0 sec <p>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.</p> <p>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.</p> <p>Proper Settings: Not all card types are accommodated by these default settings. In some cases, experimentation is required to find the proper settings.</p> <p>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.</p> |
| 2 | <p>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.</p> <ol style="list-style-type: none">a. Click Custom options and enter a name for the card stock.b. Click Image Transfer tab to adjust the Dwell Time and temperature sliders to the appropriate settings (see next page). Note: These settings will be saved for the custom card type when the Printer Driver setup window is closed.c. Custom Card stock: To determine the proper settings for custom card stock, apply the Tape Adhesion Test. See Section 7.1.2 Conducting the Tape Adhesion Test. |



4.1.3 Setting the Orientation

Select either the **Portrait** or **Landscape** radio buttons for Orientation.

| Step | Procedure |
|------|---|
| 1 | Select Portrait to cause the card to print in a vertical orientation. OR Select Landscape to cause the card to print in a horizontal orientation. |

4.1.4 Card Hopper Selection

Specifies which hopper the printer feeds a card. Selecting **Hopper Top** allows the printer to feed from the top hopper. Selecting **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.

4.1.5 Specifying the Number of Copies

Specifies the number of copies to be printed

The upper limit is 10000 and the lower limit is 1.

4.1.6 Selecting the Diagnostics button

Click **Diagnostics** to launch the WorkBench Printer Utility.

4.1.7 Printing a Test Print Image

Click **Test Print** to test the printer.

| Step | Procedure |
|------|---|
| 1 | Install a compatible ribbon in the Printer for the Test Print. |
| 2 | Open the Driver settings. <ol style="list-style-type: none"> From your computer's startup menu, select Settings > Printers and Faxes. Double-click the Printer under the Printer's window. Select Printing Preferences under the Printer drop-down menu. Note: This brings up the Printing Preferences window. |
| 3 | <ol style="list-style-type: none"> Select the Card tab, and then click Test Print. When selecting the Test Print button, an image is copied to the Printer. |

4.1.8 Selecting About

Select **About** to open a dialog box containing the Copyright, Driver Version and Date.

4.1.9 Selecting the Toolbox button



| Step | Procedure |
|------|--|
| 1 | <p>Select Toolbox to access the Toolbox window and its tabs, as shown throughout this section.</p>  <p>OK button: Closes the dialog box and saves the Driver configuration changes since the Driver dialog box has been opened.</p> <p>Cancel button: Closes the dialog box and cancels the Toolbox changes since the Driver dialog box has been opened.</p> <p>Help button: Launches Help specific to the Active tab.</p> |

4.2 Selecting the Configuration tab

| Step | Procedure |
|------|--|
| 1 | <p>Select the Configuration tab.</p> <ul style="list-style-type: none"> Under Optional Printer Features, select features by clicking a check box. <p>The Default setting is checked.</p> <ul style="list-style-type: none"> If checked, upon Configuration tab activation, the Driver retrieves the installed Printer features information from the Firmware and automatically checks the appropriate check boxes for Dual Sided, Lamination and Magnetic Encoder. If checked, the Dual Sided, Laminator, and Magnetic Encoder checkboxes are read only. If checked and no Printer is found or bi-directional capabilities are disabled or unavailable, the error message (shown) is displayed. If unchecked or cleared, feature check boxes become active and can be manually set. If the Driver is reinstalled, it resets to the default of checked. Under Event Monitoring, select events to be monitored. <p>Note: The Driver prompts the User when the selected events occur.</p> Under Set Language for Printer LCD Display, select a language. |

4.2.1 Using the Event Monitoring Group Box

This Event Monitoring group box displays the Low Supplies (Ribbon, Laminate and InTM Film).

- The default setting is checked.** If checked, the Ribbon Low message box is displayed with every print job when Printer reports low Ribbon to the Driver.
- Do not show this message again.** This check box allows the user to suppress a message per Driver instance. Default = unchecked.

4.2.2 Reviewing the Ribbon Low message

The ribbon in your printer is low.

To order additional ribbons, please refer to the reordering information on the ribbon label or on the Supplies tab.

Do not show this message again

4.2.3 Reviewing the Laminate Low Message

The laminate in your printer is low.

To order additional laminate, please refer to the reordering information on the laminate label or on the Supplies tab.

Do not show this message again

The default setting is checked.

- If checked, **Lamination Low** message box is displayed with every print job when the Printer reports low Lamination to the Driver.
- **Do not show this message again.** This check box allows the user to suppress a message per Driver instance. Default = unchecked.

4.2.4 Using the InTM Film Low message

The film in your printer is low.

To order additional film, please refer to the reordering information on the film label or on the Supplies tab.

Do not show this message again

The default setting is checked.

- If checked, **InTM Film Low** message box is displayed with every print job when Printer reports low InTM film to the Driver.



- **Do not show this message again.** The check box allows the user to suppress the message per Driver instance. Default = unchecked.

4.2.5 Using the Clean Printer message

The default setting is checked. If checked, a clean printer message displays after 3000 prints.

4.2.6 Using the Error Status message

The default setting is checked. If checked, error messages (with solutions) display when an error occurs.

4.2.7 Using the Password Prompt message

The default setting is checked.

- If checked, a dialog message requests a password to continue printing.
- Password protection is set and activated in the Workbench.

4.2.8 Selecting the Display Language

There are two areas where you change interface languages, the workstations Driver software and the printer display.

Select the Driver software language when installing the driver. For changing the Driver software language after the initial installation, use the **Toolbox**.

The default printer language is English. By sending a language pack file to the printer, the printer is capable of other languages. Change the printer language by using the **Toolbox** (once sending the proper language pack to the printer). Only the languages available within the printer firmware (as downloaded through the language packs) are choices in the dropdown menu. Contact Technical Support to obtain printer language packs.

4.3 Selecting the Calibrate Laminator tab

The **Calibrate Laminator** tab is active when the Laminator is detected automatically or manually selected (Printer Feature from the Configuration tab). If the Laminator is not detected, the tab is active; however, functions are grayed out.

- **Calibrate** button: Sends calibrate Laminator command to Printer. Follow the instructions to set up the Printer.
- **Help** button: Launches help specific to this tab.

| Step | Procedure |
|------|--|
| 1 | Select the Calibrate Laminator tab. <ol style="list-style-type: none"> Ensure that the Cartridges are out of the Laminator. Ensure the Laminator Cover is closed. Click Calibrate. Note: The Printer's LCD will display CALIBRATE PASSED. Error Message Calibration Failed may be solved by manually increasing the sensor calibration number to 13 or higher under the Advanced Settings tab. Do not use the AUTO calibrate function. Click OK on the LCD display to complete the procedure. |



4.4 Selecting the Calibrate Film tab

The two buttons for the Calibrate InTM Film tab are described.

- **Calibrate** button: Sends calibrate film command to Printer. Follow the instructions to set up the Printer.
- **Help** button: Launches help specific to this tab.

| Step | Procedure |
|------|--|
| 1 | Select the Calibrate Film tab. <ol style="list-style-type: none"> a. Ensure that the InTM Film Cartridge is installed. b. Ensure the Printer's Cover is closed. c. Click Calibrate. Note: The Printer's LCD will display CALIBRATE PASSED. d. From the LCD display, click OK to complete the procedure. |

4.5 Selecting the Calibrate Ribbon tab

The two buttons for the Calibrate Ribbon tab are described below.

- **Calibrate** button: Sends the Calibrate Ribbon Command to the Printer. Follow the instructions to set up the Printer.
- **Help** button: Launches help specific to this tab.

| Step | Procedure |
|------|---|
| 1 | Select the Calibrate Ribbon tab. <ol style="list-style-type: none"> a. Ensure that the Ribbon Cartridge is removed. b. Ensure the Printer's Cover is closed. c. Click Calibrate. Note: The Printer's LCD will display CALIBRATE PASSED. d. Click OK on the LCD display to complete the procedure. |

4.6 Selecting the Clean Printer tab

To clean the printer, follow the instructions outlined on the **Clean Printer** tab.

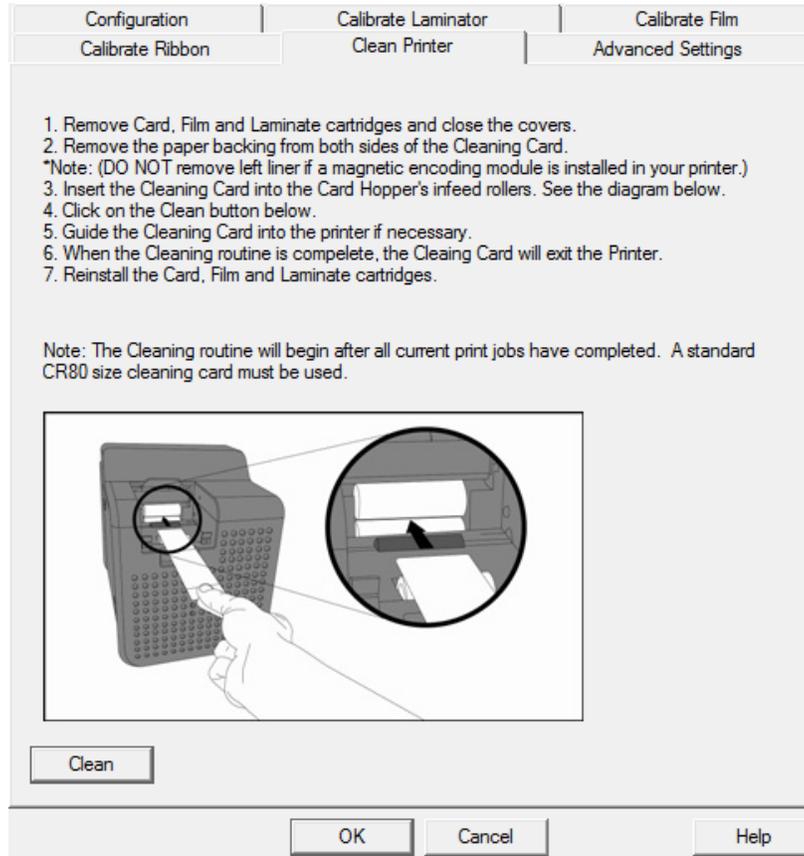


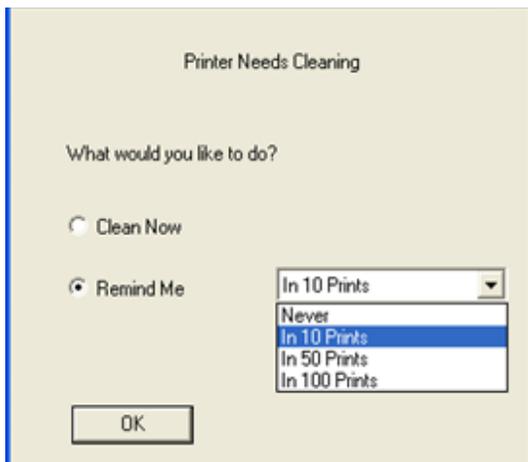
Figure 1 - Clean Printer

- **Clean** button: Launches cleaning routine. Follow the instructions to set up the Printer.
- **Help** button: Launches help specific to the Clean Printer tab.

| Step | Procedure |
|------|--|
| 1 | <p>Click the Clean Printer tab.</p> <ol style="list-style-type: none"> Remove the Card, InTM Film and Laminate Cartridges and close the covers. Remove the paper back from both sides of the Cleaning Card. Note: DO NOT remove the left liner if a Magnetic Encoding Module is installed in your printer. Insert the Cleaning Card into the Card Hopper's infeed rollers. Click Clean button. Guide the Cleaning Card into the Printer as needed. When the Cleaning routine is complete, the Cleaning Card exits the Printer. Reinstall the Card, InTM Film and Laminate Cartridges. <p>The Cleaning routine begins after completing all current print jobs. Use a standard CR80 sized cleaning card.</p> |

4.6.1 Using Clean Printer Group

The Clean Printer Group dialog is a Status Message initiated by the **Printer Event Monitoring** (see **Configuration** dialog). When displayed, selected is **Clean Now** (default). You can decide to click **Remind Me** and set the reminder as desired. If checked, the **Printer Cleaning Notification** dialog displays when Firmware EE setting changes after 3000 cards. **Note:** The Firmware EE setting resets upon sending the clean command to the Firmware.



- **Clean Now** radio button: This is the default. When you click **OK**, launched is the **Toolbox** to the **Clean Printer** tab.
- **Remind Me** radio button: This activates a drop down for the User to choose a number of cards to print until the next reminder. If the User chooses **Never**, then the **Clean Printer** notification is cleared from **Configuration** tab.
- **OK** button: Clicking **OK** accepts the settings and closes the dialog.
- **Cancel** button: Clicking **Cancel**, closes the dialog without saving changes. If the User exits the **Toolbox** without clicking **Clean**, the **Printer Cleaning Reminder** dialog box reappears on the next print.

4.6.2 Cleaning the Rollers

For additional cleaning information, see the Cleaning Kit Instructions provided with the Cleaning kit.

4.7 Selecting the Advanced Settings tab

Use the **Advanced Settings** tab for adjusting the internal printer settings. Customize the settings for each printer and save the settings within the Printer memory.

Note: Select **Restore Defaults** to restore the internal default settings.

CAUTION: In general, do not adjust these settings after the original printer configuration from the factory. However, under rare circumstances it is necessary to adjust these settings in the field. Ensure you have advanced knowledge prior to making these adjustments.

The described Settings change values for the Firmware. The following sections describe each setting and their use.

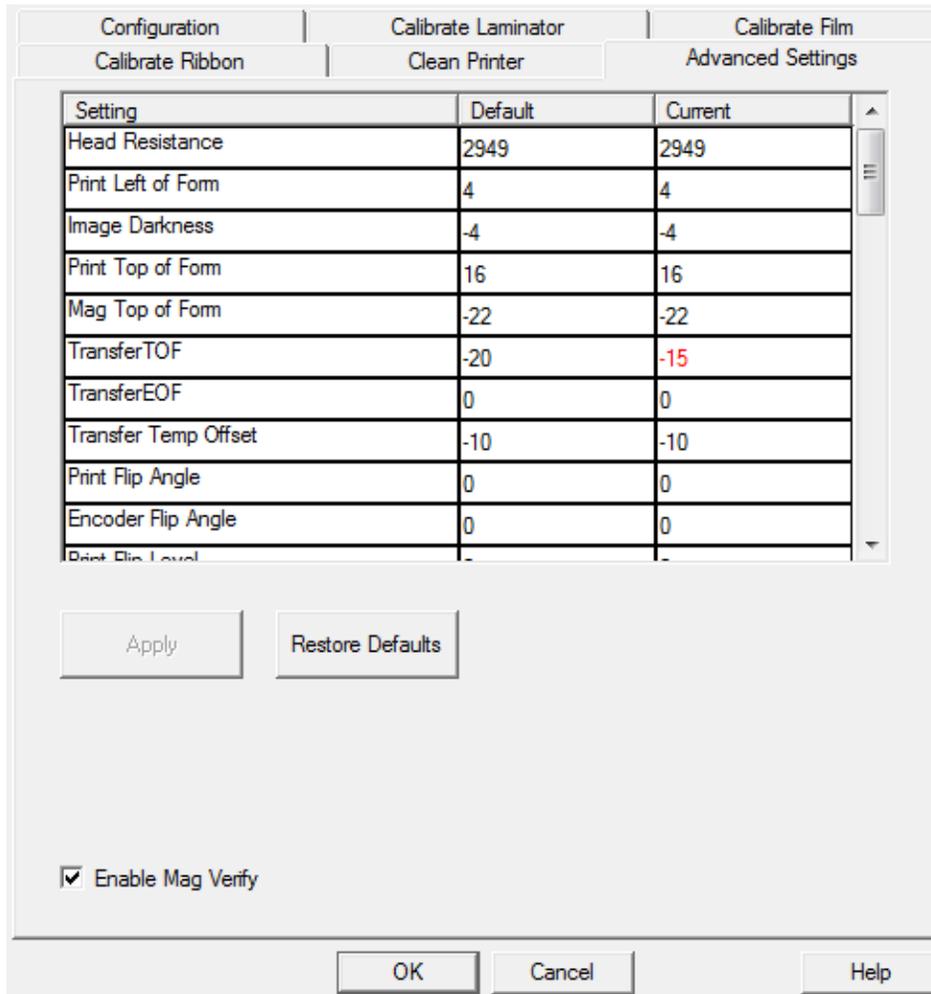


Figure 2 - Advanced Settings

- **Setting** column: Displays the type of setting
- **Default** column: Displays the default setting value
- **Current** column: Displays the current setting value

Change the Current value by clicking the field to activate the control and enter the new value.

- **Apply** button: Applies changed values.
- **Restore Defaults** button: Restores default values.

4.7.1 Head Resistance

This value is factory set. If the main circuit board or the printhead is replaced, adjust this number.

- Locate the Printhead Setting Number on the bottom of the Printhead.
- The number reads R=XXXX.

4.7.2 Print Left of Form

From **Advanced Settings**, modify the **Print Left of Form** Setting.

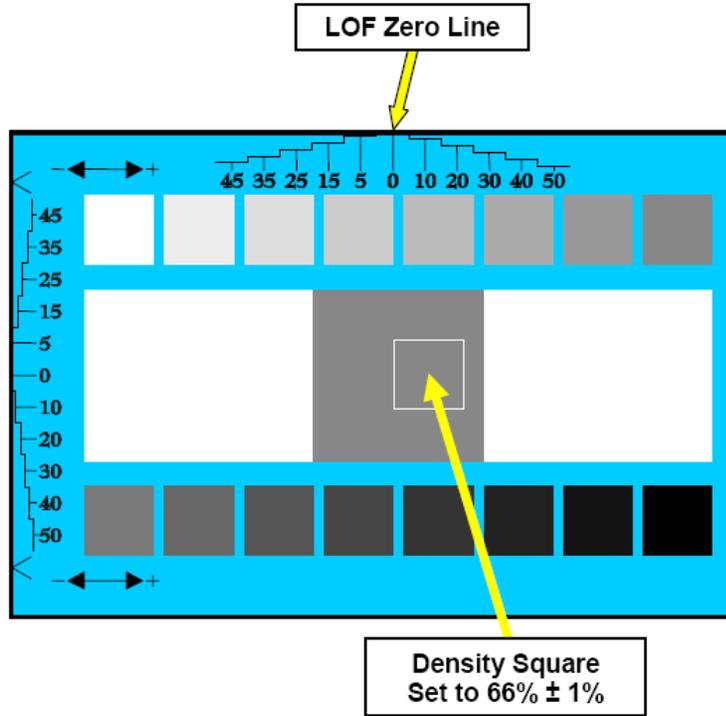


Figure 3 - Print Left of Form

| Step | Procedure |
|------|--|
| 1 | Print the Alignment Card Self-test. |
| 2 | Adjust the Print LOF up or down until the border of the LOF Zero Line is showing on the edge of the card as shown. |
| 3 | Measure the density square, as shown. Adjust the image density to 66% ± 1%. |

4.7.3 Image Darkness

Use the Image Darkness Setting to adjust the overall darkness of the printed image by increasing or decreasing the amount of heat used by the Printhead when printing.

| Step | Procedure |
|------|--|
| 1 | <p>Lighten the printed image by clicking ▼ or enter the exact negative value decreasing the Printhead heat.</p> <p>Darken the image by clicking ▲ or entering a positive value increasing the amount of Printhead heat.</p> <p>IMPORTANT: If the Image Darkness Setting is set too high, the Ribbon may jam or break.</p> |

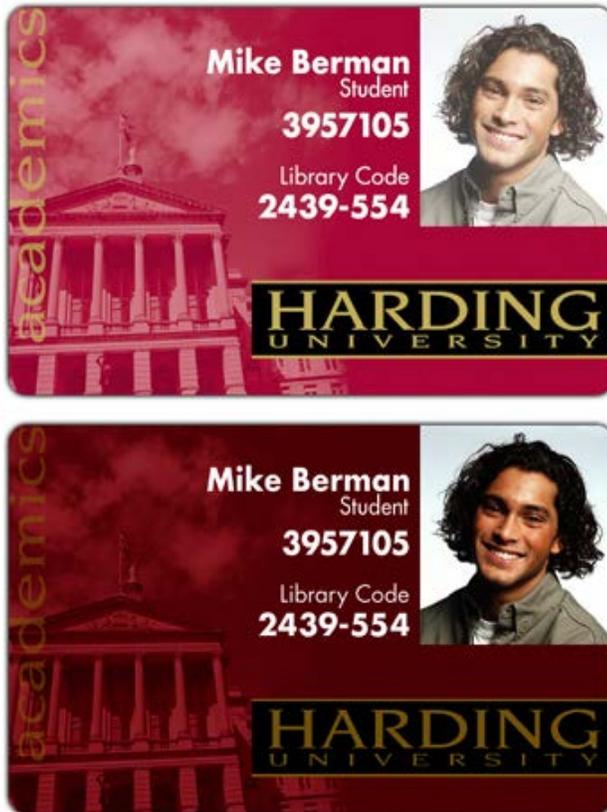


Figure 4 - Image Darkness

4.7.4 Print Top of Form

From **Advanced Settings**, modify the **Print Top of Form** Setting.

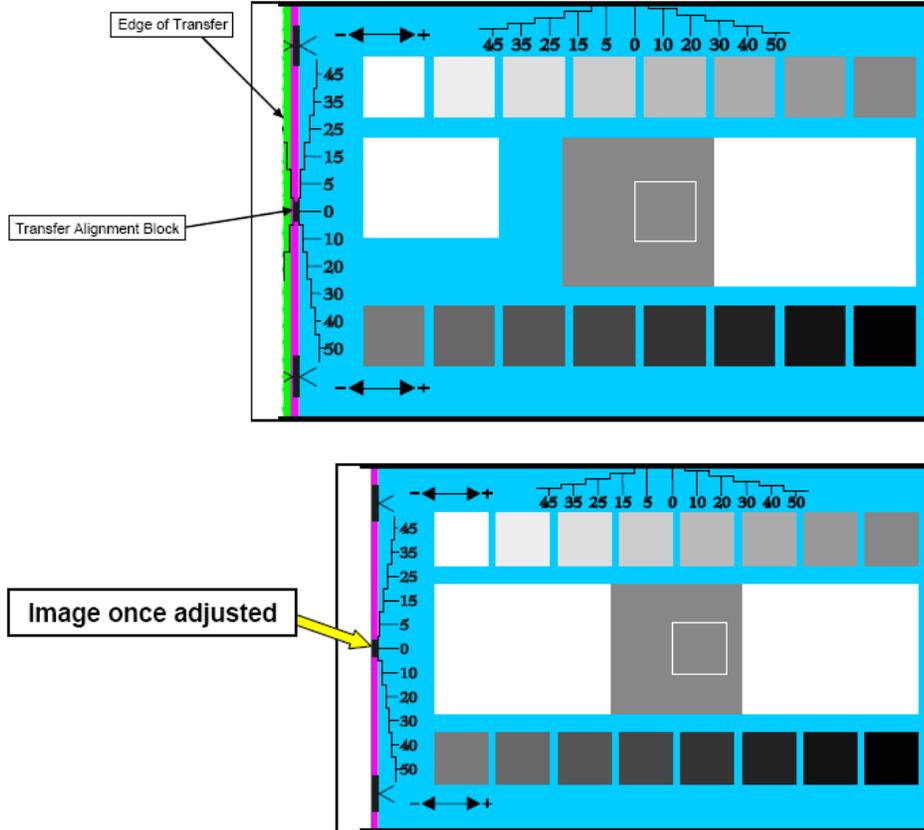


Figure 5 - Print Top of Form

| Step | Procedure |
|------|---|
| 1 | Verify the Transfer TOF is set to +35. |
| 2 | Verify the Print TOF is set to +20. |
| 3 | Verify the Print LOF is set to +7. |
| 4 | Print the alignment card self-test (the front edge should look like the figure). |
| 5 | Adjust the Print TOF until the green border is eliminated and the entire Transfer Alignment Block is shown in the center of the card. Note: Due to variation in roller alignment, the green border may appear at a slight angle on the top of the card. |
| 6 | Verify the entire alignment block is visible and the green has been eliminated from the center of the card. |

4.7.5 Mag Top of Form Setting

From **Advanced Settings**, modify the **Mag Top of Form** Setting.

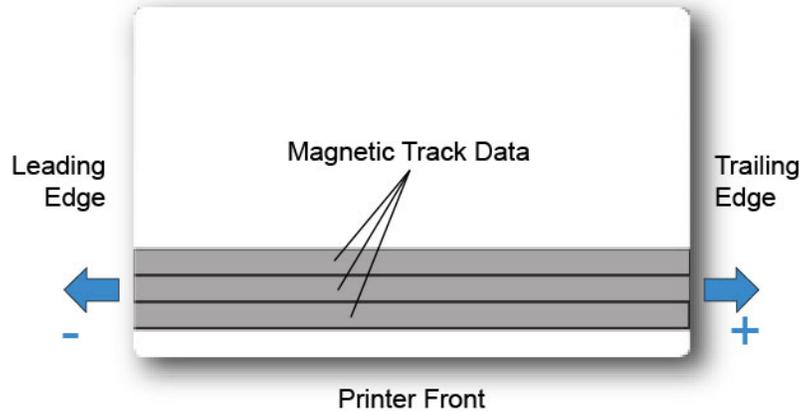


Figure 6 - Mag Top of Form

The Magnetic Stripe is on the front of the card (front of printer).

Use this option only if the Printer has a built-in Magnetic Stripe Encoder.

- If so, this option shifts the starting point of where the Printer begins 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 always remains in the same relative position as the card travels through the Printer.

The diagram represents:

- How the magnetic data will move in relation to the fixed position of a card's Magnetic Stripe as a "positive" or "negative" Magnetic Offset value is entered.
- For this diagram, assume that the card is transparent and the card's Magnetic stripe can be seen through the top or front side of the card.

| Step | Procedure |
|------|--|
| 1 | <p>Enter a negative value to move the start of the magnetic data more toward the leading edge of the card or the card output side of the Printer.</p> <p>OR</p> <p>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.</p> <ul style="list-style-type: none"> • Magnetic Data Direction: The arrows on these buttons indicate the direction the magnetic data will move on the card's Magnetic Stripe. • Maximum Adjustment Range: The maximum adjustment range is ± 99. As a rule, 20 equals about .030"/. 8mm.) <p>Note: Keep this in mind when adjusting this option to avoid over-adjusting.</p> <p>IMPORTANT: If the negative value is set too high, the Printer may start encoding before the card's Magnetic Stripe reaches the encoding head.</p> |

4.7.6 Transfer Top Of Form

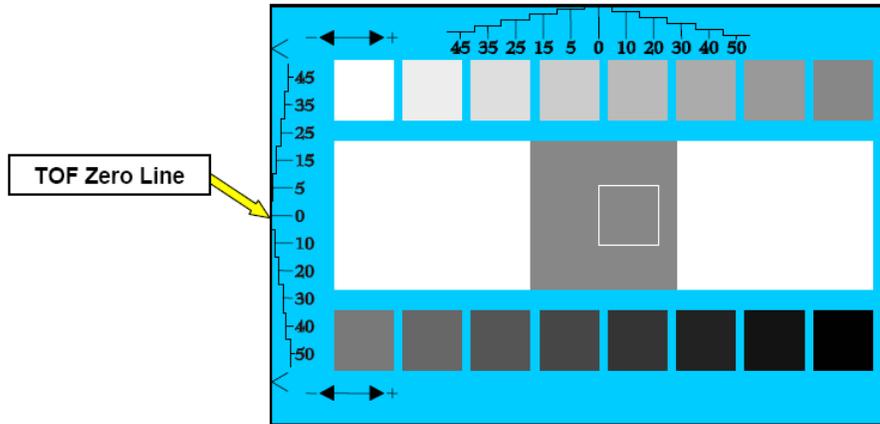


Figure 7 - Transfer Top of Form

| Step | Procedure |
|------|---|
| 1 | Print the alignment card self-test. |
| 2 | Adjust the Transfer Top of Form value until the TOF Zero Line is located on the card edge as shown. |

4.7.7 Transfer End of Form

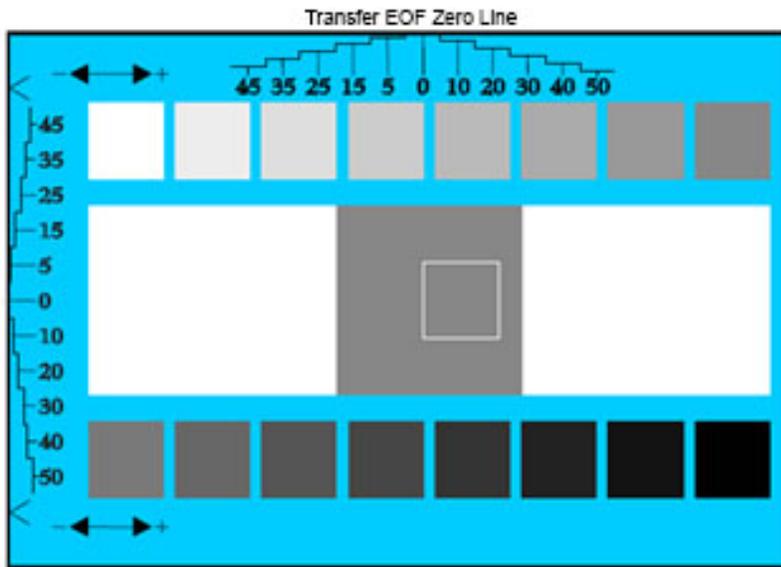


Figure 8 - Transfer End of Form

| Step | Procedure |
|------|---|
| 1 | Print the alignment card self-test. |
| 2 | Adjust the Transfer End of Form value until the EOF Zero Line is located on the card edge as shown. |

4.7.8 Transfer Temp Offset

This option adds an offset to the printer temperature of the transfer roller.

Note: Use this setting only for making the temperature of the transfer roller and the LCD goal match.

- Use the **Image Transfer** tab slider to make adjustments for card stock.
- A negative (-) adjustment increases the actual roller temperature.

4.7.9 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.

4.7.10 Encoder Flip Angle

Use the **Encoder Flip Angle** option to fine-tune the position of the flipper.

Note: This setting is in relation to the printer's built-in encoder if your printer is equipped with this option.

4.7.11 Print Flip Level

Use the **Print Flip Level** option to set the position of the flipper so it is level with the card path.

4.7.12 Ribbon Print Takeup Tension

Use the **Ribbon Print Takeup Tension** to set the tension of the color Ribbon during printing.

Adjust the Ribbon tension if the Ribbon wrinkle is appearing on the card.

Note: Adjustments moderately change the image length.

4.7.13 Using the Ribbon Print Supply Tension Setting

This procedure controls the tension of the color Ribbon during printing. Adjust the Ribbon tension if the Ribbon wrinkle is appearing on the card.

Note: Adjustments moderately change the image length. "+" Adjustments can eliminate some cases of wrinkle.

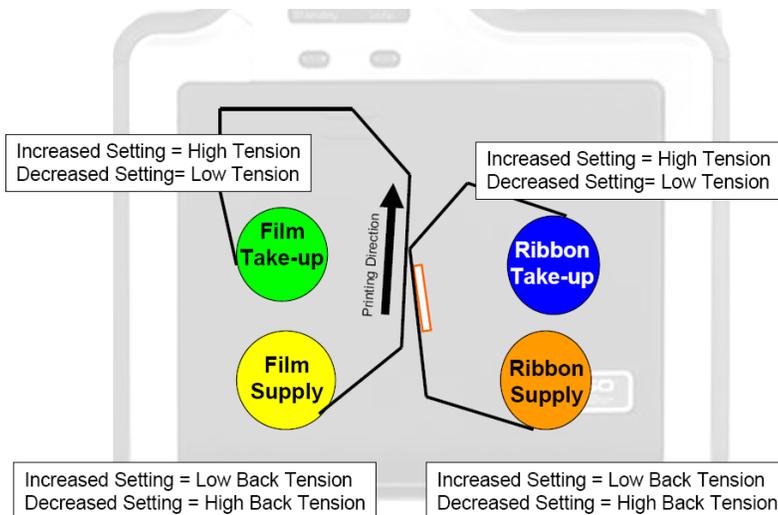


Figure 9 - Ribbon Print Supply Tension

4.7.14 Film Print Takeup Tension

Use the Print Takeup Tension to set the baseline for the film tension.

Note: Do not adjust the InTM Film Drive.

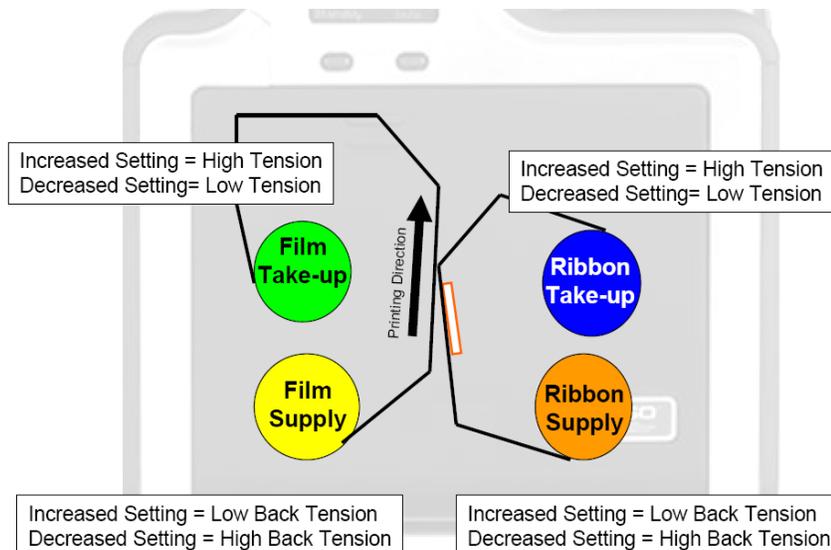


Figure 10 - Film Print Takeup Tension

4.7.15 Resin Heat Adjust

Use this adjustment for when the Black resin text and barcodes appear faded or too light/dark.

4.7.16 Sleep Time

This setting adjusts the time until the printer stops energizing the transfer roller conserving energy. Disable is indicated with a **0** setting.

Note: The counter for this setting starts after **Standby Time** has elapsed.

4.7.17 Blush Point

The blush point is compensation during printing:

- There is no dye transfer.
- There is no a light gray line on a portion of the card.
- It should be white.

4.7.18 LCD Contrast

This setting adjusts the LCD panel brightness.

4.7.19 Using the Film Supply Transfer Tension Setting

Adjustments significantly change image length. Recommend only small adjustments due to sensitivity.

Note: Adjustments affect flash and smudge.

4.7.20 Film Takeup Transfer Tension

Negative (-) adjustments may cause card jams.

Note: While positive settings help stop jamming. Adjustments affect flash and smudge.

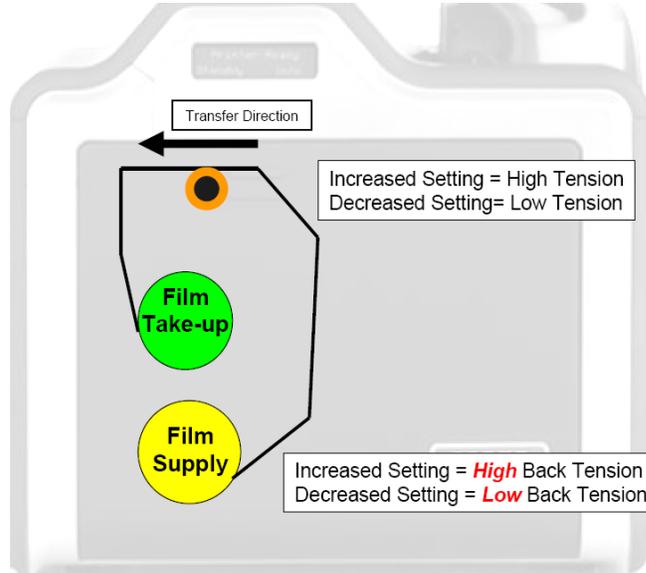


Figure 11 - Film Takeup Transfer Tension

4.7.21 Film Print Supply Tension

This setting establishes the baseline for the film tension. Do not adjust. Changes to this value moderately change the image length.

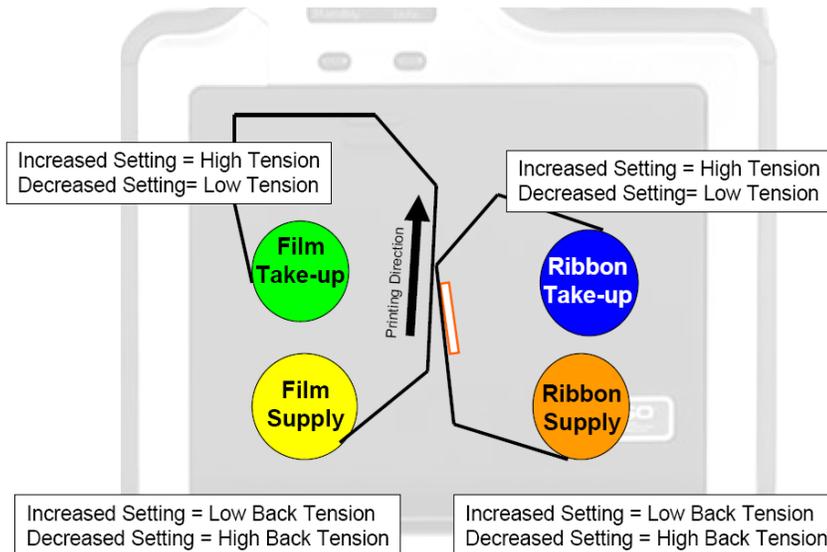


Figure 12 - Film Print Supply Tension

4.7.22 Film Print Cooling Level

This setting controls the speed of the transfer roller-cooling fan during the printing process.

This setting should be **OFF**. Turn on the InTM Print Cooling to help with splotchy color areas on the image. Too high of a fan speed can cause smudge.

4.7.23 Film Transfer Cooling Level

This setting controls the default speed of the cooling fan for the transfer process.

In addition, the Film Transfer Cooling Level adjusts fan speeds and when they are on during transfer. This setting affects both flash and smudge.

4.7.24 EAT Disable

This setting is an **ON** or **OFF** switch, where **0** is off and **1** is **ON**. This setting is part of the process of tracking the environmental temperature and to compensate for fluctuation.

Environmentally Adaptive Transfer (EAT) automatically adjusts the transfer temperature based on the ambient air conditions within the printer. EAT increases or decreases the transfer roller temperature by as much as 20C in extreme conditions.

The **EAT Disable** Setting defaults to **ON**.

4.7.25 Enable Ribbon Wrinkle Comp

This setting is an **ON** or **OFF** switch. Using Enable Ribbon Wrinkle Compensation turns on extra pixels on the printhead to help mitigate ribbon wrinkle during the print process.

4.7.26 Standby Time

This setting adjusts the time until the printer goes into a reduced transfer roller temperature to conserve energy.

A zero (**0**) setting disables. Settings are in minutes.

4.7.27 Beep Disable

This setting turns off the beeping sound, suppressing audible event notification.

4.7.28 I-Panel Heat Offset

This option adjusts the heat used during the removal of unwanted InTM Film. Use minimal adjustments. Otherwise, print ribbon and film breaks may occur.

4.7.29 Holo Transfer Offset

This option changes the Hologram Overlamine Offset for placement parameters.

4.7.30 Standby Temperature

This option changes the temperature used when the printer is in standby mode.

4.7.31 Mag Hi-Co Voltage Offset

This changes the voltage going to the magnetic head.

Mag Hi-Co Voltage Offset is factory set. Do not change without a technician.

4.7.32 Mag Lo-Co Voltage Offset

This option changes the voltage going the magnetic head.

Mag Lo-Co Voltage Offset is factory set. Do not change without a technician.



4.7.33 Mag Flipper Angle Offset

This option changes the angle of the Flipper Table. Increasing the flipper angle rotates the flipper table clockwise. The Mag Flipper Angle Offset is factory setting. Do not change without a technician.

4.7.34 Fluorescent Heat Offset

Use this setting to adjust how dark or light the fluorescent (F) panel is printed. The value has a range of +/-20.

4.7.35 Warming Delay Time

Use this setting to adjust how much additional time (in minutes) the printer waits after the transfer roller reaches temperature before beginning transfer. The value has a range of 0 to 20.

4.7.36 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.
0 – disabled/1- enabled.

4.7.37 Transfer Image Length

Use this setting to adjust the length of the image on the card during transfer. The value has a range of -10 to +10. An increase in the number increases the length of the image.

4.7.38 Transfer Cooling Delay

Use this setting to adjust the delay (in seconds) before transferring the second side of the card. The value has a range of 0 to 180. An increase in the number increases the length of the delay in seconds.

4.7.39 Hologram Film Transfer Release Tension

Use this setting to adjust the back tension of the film during the release phase when holographic film is used. An increasingly negative value increases the back tension. Higher back tension can fix trailing edge flash.

4.7.40 Enable Alternate Transfer Release

Use this setting to enable/disable the alternative transfer release routine. When enabled, this routine can improve smudging on cold printers.

4.7.41 Proximity Encoder Card Offset

Use this setting to fine tune the card position when docking a card into the prox encoder in Bay 2. The setting adjusts the number of steps out from a fully docked position that the card is placed.

4.7.42 Reviewing the No Printer Connected Error Message

If the driver is unable to communicate with the printer, the following error displays and the grid is blank.



Figure 13 - Unable to Read Settings Message

4.7.43 Reviewing the Value Outside the Range Error Message

If typing a value outside the range, an error message displays specific to the setting when leaving the control.



Figure 14 - Value Outside Range Message

4.8 Using the Device Options tab

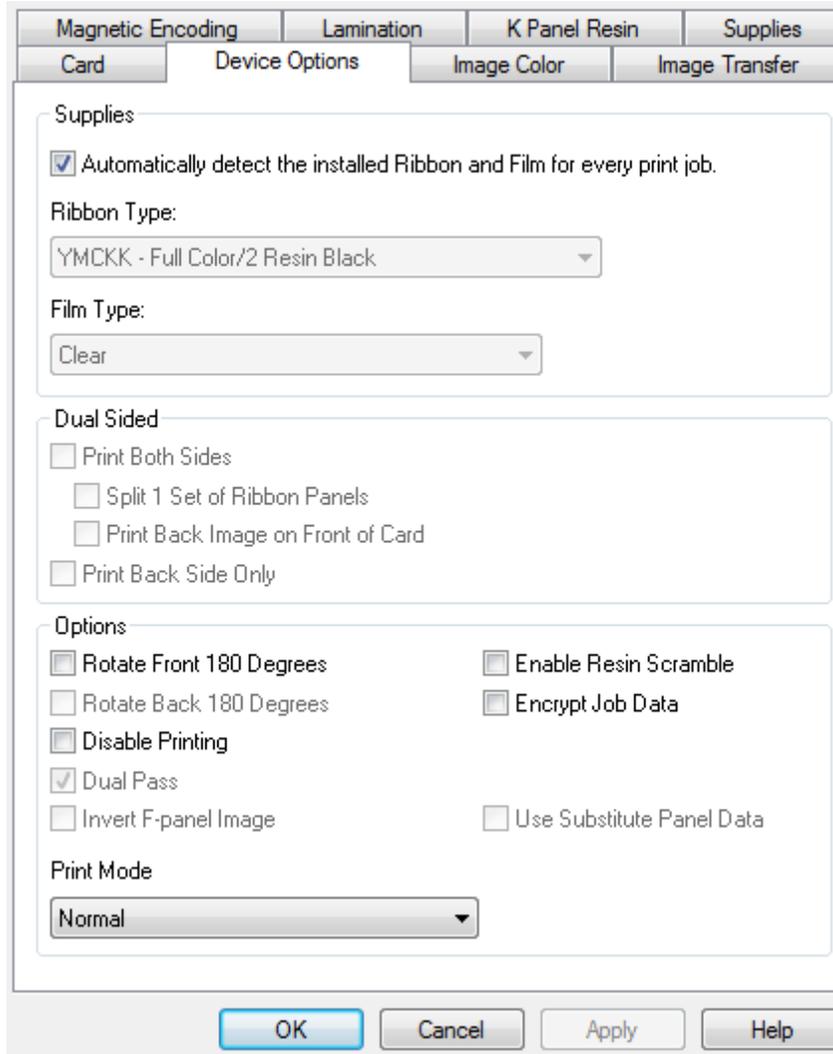


Figure 15 - Device Options



4.8.1 Detecting Supplies at Print Time Function

| Step | Procedure |
|------|--|
| 1 | <p>Use the Supplies checkbox for auto detection of the consumables, which are the Ribbon and InTM Film.</p> <ul style="list-style-type: none"> • In the Firmware, the values (representing the installed Ribbon, Transfer InTM Film and Laminate) are updated on initialization (including each time the cover is closed). • The Firmware compares the Ribbon and InTM Film values in the PRN file to the values (it holds regarding the currently installed consumables). <p>If the values do not match, the LCD displays the Wrong Ribbon and/or Wrong Film error, and the Driver returns the corresponding error message.</p> |
| 2 | <p>When the Supplies checkbox is checked, the following takes place.</p> <ul style="list-style-type: none"> • Ribbon and InTM Film Type dropdown boxes are inactive and populated with values of installed supplies. Dual Sided and Options are set to defaults for detected supplies. • For example, no Dual Side options are available without the Flipper installed. This function provides automatic detection of an installed feature whether it is automatically detecting supplies or not. • Before the Driver initiates each job, it retrieves the consumable values from the Firmware. • If finding no Printer or Ribbon, the Supplies checkbox is enabled the previously chosen Ribbon and InTM Film values remain. You will see an error message. • Activating the Device Options tab automatically repopulates the Ribbon and InTM Film types. <p>Note: You see an error message if no Printer is found when activating the Device Options tab.</p> |
| 3 | <p>When the Supplies checkbox is not checked or it is de-selected (cleared) from a selected state, the Ribbon and InTM Film dropdown boxes become active and auto selected Ribbon and InTM Film types remain (until manually changed).</p> |



4.8.2 Adjusting the Ribbon Type

Use the **Ribbon Type** dropdown menu to match Ribbon type.

| Step | Procedure |
|------|---|
| 1 | <p>Adjust to match the Ribbon Type selection with the Ribbon type that is loaded in the Printer.</p> <ul style="list-style-type: none">• YMC (Full Color): Yellow, Magenta, Cyan OR• YMCK (Full Color/Resin Black): Yellow, Magenta, Cyan, Resin Black OR• YMCKK (Full Color/2 Resin Black): Yellow, Magenta, Cyan, Resin Black, Resin Black OR• YMCKH (Full Color/Resin Black/Heat Seal): Yellow, Magenta, Cyan, Resin Black, and Heat Seal OR• YMCFK (Full Color/Resin Black/Fluorescing): Yellow, Magenta, Cyan, UV Fluorescing, and Resin Black• YMCKI (Full Color/Resin Black/Inhibit): Yellow, Magenta, Cyan, Resin Black, Inhibit• YMCIKH, (Full Color/ Inhibit/Resin Black/Heat Seal): Yellow, Magenta, Cyan, Resin Black, Heat Seal, Inhibit• YMCKIKI, (Full Color/Resin Black/ Inhibit/ Resin Black/ Inhibit)• YMCK Half panel• YMCKK Half Panel• K Premium Resin |

4.8.3 Adjusting the (InTM) Film Type

| Step | Procedure |
|------|--|
| 1 | <p>Allows you to select the InTM Film type option that is appropriate for the type of InTM Film currently loaded in the Printer.</p> <ul style="list-style-type: none">• Select the Clear option to automatically adjust the appropriate transfer time and temperature to pre-determined defaults. Note: Select this option to automatically adjust the transfer temperature and the dwell times to defaults when non-custom card type is chosen on Card tab. OR• Select the Holographic option to change appropriate internal Printer settings needed to make the holographic InTM Film work. (Note: Select this option to automatically adjust the transfer temperature and the dwell times to defaults when non-custom card type is chosen on Card tab.)• High Durable Clear InTM film Note: It will also adjust the necessary transfer temperature and the dwell settings in the Driver to provide the optimal high durable clear InTM Film performance. |

4.9 Using the Dual Sided Group Functions

The Dual Sided group checkboxes are disabled if no Flipper is automatically found or if Dual Sided is manually turned off.

4.9.1 Using the Dual Sided - Print Both Sides option

Use Dual Sided to print automatically onto both card sides.

| Step | Procedure |
|------|--|
| 1 | <p>Select Print Both Sides radio button in addition to any program supporting duplex printing.</p> <p>Note: The program must send down two or more separate pages for printing within the same document.</p>  |
| 2 | <p>Page 1 is transferred to the front side of the card. Page 2 is transferred to the backside of the card.</p> <p>With this option selected, the Printer Driver places all odd numbered pages on the front side of the card and all even numbered pages on the backside.</p> |

4.9.2 Using the Print Both Sides - Split 1 Set of Ribbon Panels option

Use this option to provide the most economical means of printing a dual-sided card since a single set of Ribbon Panels will split to print both the front and backside of a card.

- This option is active when **Print Both Sides** is checked.
- The Default is active and unchecked except for YMCKK and YMCKIKI, which are checked.

| Step | Procedure |
|------|--|
| 1 | <p>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 Print Ribbons).</p> <p>If using an YMCKK Ribbon, the front of the card is printed with the YMCK Panels and the back is printed with the second K Panel.</p> <p>Notes:</p> <p>This is enabled automatically when selecting the YMCKK Ribbon. This option is not available if using the YMCKH Ribbon.</p>  |

4.9.3 Using Print Both Sides - Print Back Image on Front of Card

This option becomes active when **Print Both Sides** is checked. The Default is active and unchecked.

| Step | Procedure |
|------|---|
| 1 | <p>Select this option:</p> <ul style="list-style-type: none"> If needing to print the first page of a two-page document on the backside of the card. <p>OR</p> <ul style="list-style-type: none"> If needing to print the resin black on the chip-side of the Smartcard. <p>The second page of the document is printed on the front side of the card.</p> |



4.9.4 Using the Dual Sided - Print Back Side Only option

Use this option to print only onto the backside of cards.

Note: The **Print Back Side Only** checkbox default is active and unchecked.

| Step | Procedure |
|------|---|
| 1 | <p>Select Print Back Side Only to print only onto the backside of preprinted cards that must have their Magnetic Stripe or smart card chip encoded.</p> <p>Note: Load the cards in the usual fashion.</p> <ul style="list-style-type: none"> When selecting this option, the Print Both Sides option is automatically disabled. When attempting to print a two-page document (if Print Back Side Only is selected), the first page of the document prints on the backside of the card. The second page of the document is then printed on the back of a second card. |



4.9.5 Using the Options Group

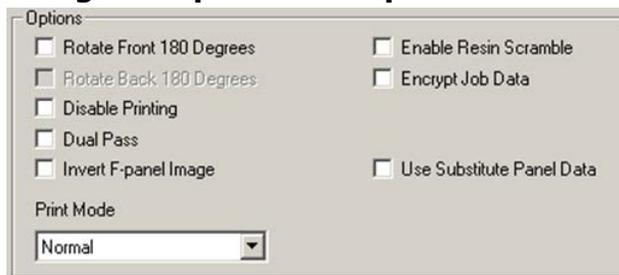


Figure 16 - Options



4.9.5.1 Using the Rotate 180 Degrees (Front or Back)

Use this option to change the position of the printed image in relation to the set location of a card's Magnetic Stripe or smart chip.

| Step | Procedure |
|------|--|
| 1 | Select the Rotate Front 180 Degrees option to rotate the image on the front of the card by 180 degrees when printed. OR Select the Rotate Back 180 Degrees option to rotate the image on the back of the card by 180 degrees when printed. |

4.9.5.2 Using the Disable printing option

Use this option to disable the printing capabilities of the Printer while still allowing the Printer to encode cards.

Note: This option is useful to encode or re-encode preprinted cards without wasting additional time or printing supplies.

| Step | Procedure |
|------|--|
| 1 | Select this option to ensure sending no print data to the Printer (while sending all encoding instructions according to how they are configured within the software). This option also allows you to laminate the card. |

4.9.5.3 Using the Dual Pass and Invert F-Panel Image options

See Configuring Fluorescent Data using Workbench procedure, page 84.

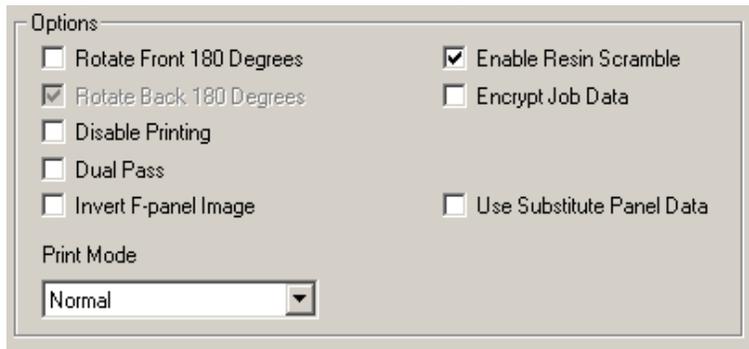
- **Dual Pass** option: This refers to the fact that the fluorescing dye can be applied to a separate panel of HDP InTM Film.
Note: First, the YMC ink is applied to a panel of InTM Film; then, the F and possibly K are applied to a separate panel. If this is not done, the fluorescent ink tends to mix with the YMC colors and lose its fluorescent qualities; it also tends to become invisible.

Use the default **Dual Pass** option if using the fluorescent image in places where other dye is used or if selecting **Invert F Panel**.

- **Invert F-Panel** option: 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** 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.

4.9.6 Using the Resin Scramble Option



Resin Scramble eliminates the personal data traceability on used ribbon panels and lowers the risk of identity theft.

The Yellow, Magenta, Cyan and resin (K) panels are printed like normal. However, prior to transfer, the film is reversed to the previously used film panel and the ribbon is rewound to the beginning of resin (K) panel.

A white noise image is then printed on the resin (K) panel to the used film panel. The film and ribbon are then backed up again. The white noise image is the printed again but it begins at a different point of the film from the first pass.

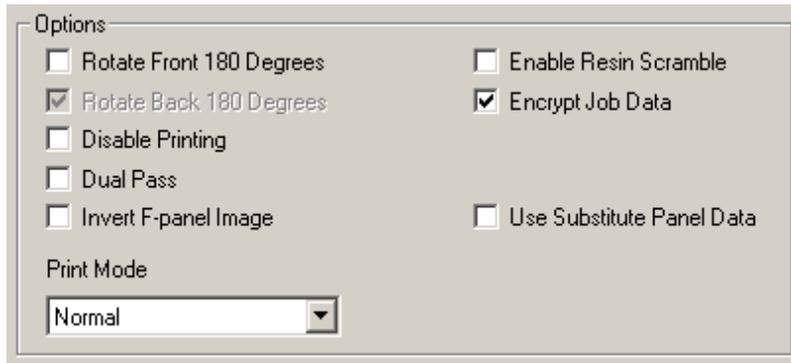
The result is the ribbon has almost no resin left on it while the film has the scrambled image.

Only ribbons with the K panel have this option available in the driver.

4.9.7 Using the Encrypt Job Data

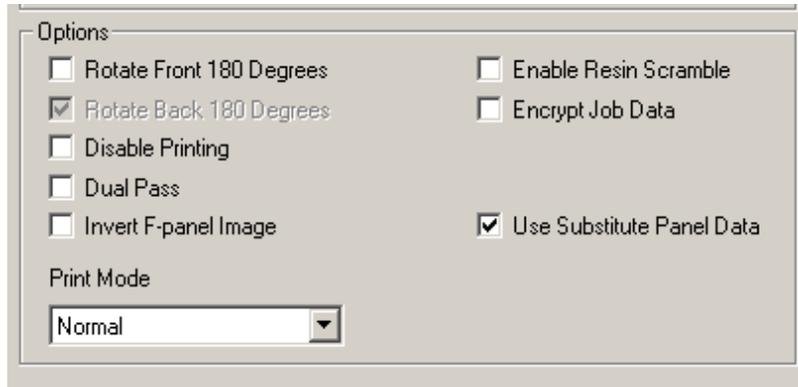
AES256 encryption protects the data passed from the computer to the printer.

Note: HDPii and HDPii Plus printers have Encrypt Job Data enabled automatically.



4.9.8 Using the Use Substitute Panel Data

Only ribbons with the **F** or **I** panel have this option available in the driver.



When selecting **Split Mode** in the driver and the Flipper Module is present, the first page of the document is printed to the front of the card with the YMC ribbon panel. Following, the second page is printed on the front of the card with the F ribbon panel. Lastly, the third page is printed on the back with the K ribbon panel.

When **Split Mode** is not selected and the Flipper Module is present, the first page of the document is printed to the front of the card with the YMC ribbon panel. Following, the second page is printed on the front of the card with the Fluorescent ribbon panel. The third page is printed on the back of the card with the YMC ribbon panel. Lastly, the fourth page is printed on the back of the card with the F ribbon panel.

When enabling Use Substitute Panel Data - displayed is the following details.

4.9.8.1 YMCFK Ribbon

Split Ribbon ON (Duplex)

Page 1 is YMC on the front, Page 2 is F on the front, Page 3 is K on the back. WB entry and “~” commands ignored.

Split Ribbon OFF (Duplex)

Page 1 is YMC on the front, Page 2 is F on the front, Page 3 is YMC on the back, Page 4 is F on the back. WB entry and “~” commands ignored.

Split Ribbon OFF (Simplex)

Page 1 is YMCK on the front, Page 2 is F on the front. WB entry and “~” commands ignored.



4.9.8.2 YMCKI Ribbon

Split Ribbon ON (Duplex)

Page 1 is YMC on the front, Page 2 is K on the back, Page 3 is I on the back. WB entry and “~” commands ignored.

Split Ribbon OFF (Duplex)

Page 1 is YMCK on the front, Page 2 is I on the front, Page 3 is YMCK on the back, Page 4 is I on the back. WB entry and “~” commands ignored.

Split Ribbon OFF (Simplex)

Page 1 is YMCK on the front, Page 2 is I on the front. WB entry and “~” commands ignored.

4.9.8.3 YMCKIKI Ribbon

Split Ribbon ON (Duplex)

Page 1 is YMCK on the front, Page 2 is I on the front, Page 3 is K on the back, Page 4 is I on the back.

Split Ribbon OFF (Duplex)

Page 1 is YMCK on the front, Page 2 is I on the front, Page 3 is YMCK on the back, Page 4 is I on the back.

Split Ribbon OFF (Simplex)

Page 1 is YMCK on the front, Page 2 is I on the front.

4.9.9 Use Substitute Panel Data - Disabled

4.9.9.1 YMC FK Ribbon

4.9.9.2 Split Ribbon ON (Duplex)

Page 1 is YMC on the front, Page 2 is K on the back. F Panel is on the front with “~” commands or WB entry.

4.9.9.3 Split Ribbon OFF (Duplex)

Page 1 is YMCK on the front, Page 2 is YMCK on the back. F Panel is on the front or back with “~” commands or WB entry.

4.9.9.4 Split Ribbon OFF (Simplex)

Page 1 is YMC FK on the front.

4.9.9.5 YMCKI Ribbon

Split Ribbon ON (Duplex only)

Page 1 is YMC on the front, Page 2 is K I on the back. WB entry and “~” commands ignored.

Split Ribbon OFF (Duplex)

Page 1 is YMCKI on the front, Page 2 is YMCKI on the back. WB entry and “~” commands ignored.

Split Ribbon OFF (Simplex)

Page 1 is YMCKI on the front. WB entry and “~” commands ignored.

4.9.10 Using Print Mode

There are two print modes (Performance and Normal)

- Normal print mode (default)
- Performance print mode is faster with lower image quality and is most suitable for minimal color with mostly resin text.

4.10 Using the Image Color tab

Use this tab to adjust color properties.

Note: The Printer Printing Preferences window has the same **Image Color** tab functionality as the Printer -LC Printing Preferences window.

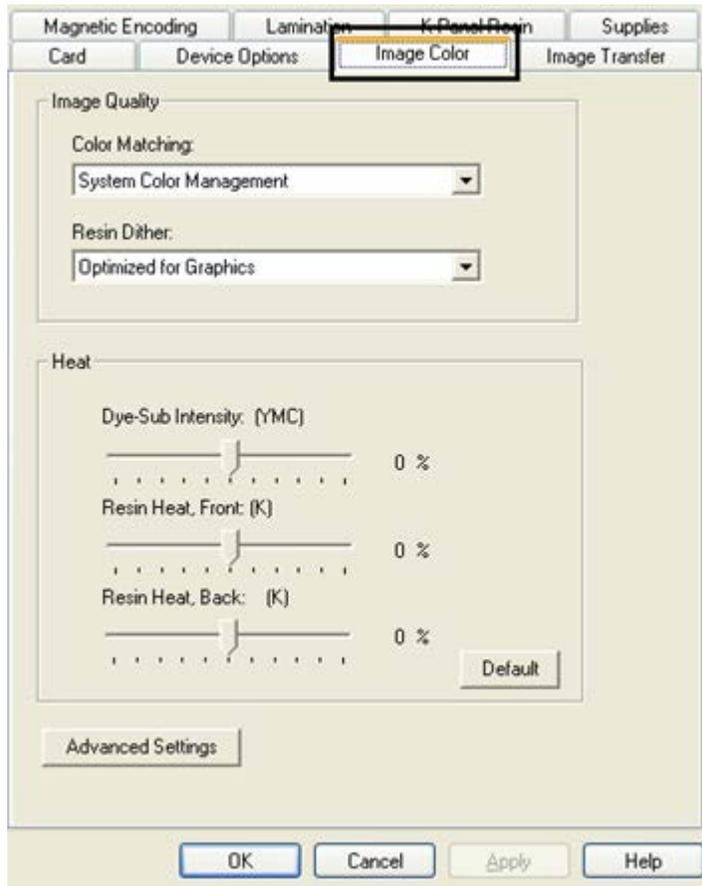


Figure 17 - Image Color

| Step | Procedure |
|------|--|
| 1 | Select the System Color Management color matching option to control the Sharpness, Contrast and Gamma of the printed image, as well as the individual color balance of Yellow, Magenta and Cyan. |

4.10.1 Using the Image Quality – Color Matching

| Step | Procedure |
|------|---|
| 1 | <p>Select None</p> <ul style="list-style-type: none"> (a) if interested in print speed rather than print color, (b) if color correcting the image for printing has already been done or (c) if using third party color matching software. <p>OR</p> <p>Select System Color Management 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 so the image more closely matches how they appear on screen.</p> |
| 2 | <p>Control the overall darkness and lightness of the dye-sub printed image by adjusting the Dye-Sub Intensity slide.</p> <p>Move the slide to the left to use less heat in the printing process, thus generating a lighter print.</p> <p>OR</p> <p>Move the slide to the right to use more heat, thus generating a darker print.</p> <p>Note: This slide only affects those images printed with dye-sublimation Ribbon Panels (YMC).</p> |
| 3 | <p>Control the amount of heat the Printer uses when printing with the resin black Panel by adjusting the Resin Heat slide.</p> <p>Move the slide to the left for using less heat in the printing process, causing resin images to be lighter or less saturated.</p> <p>OR</p> <p>Move the slide to the right for using more heat, causing resin images to be darker or more saturated.</p> <p>Note: This control can be helpful for fine-tuning the sharpness of resin text and bar codes.</p> |
| 4 | <p>As needed, return all options to their factory settings by clicking on the Default button.</p> |

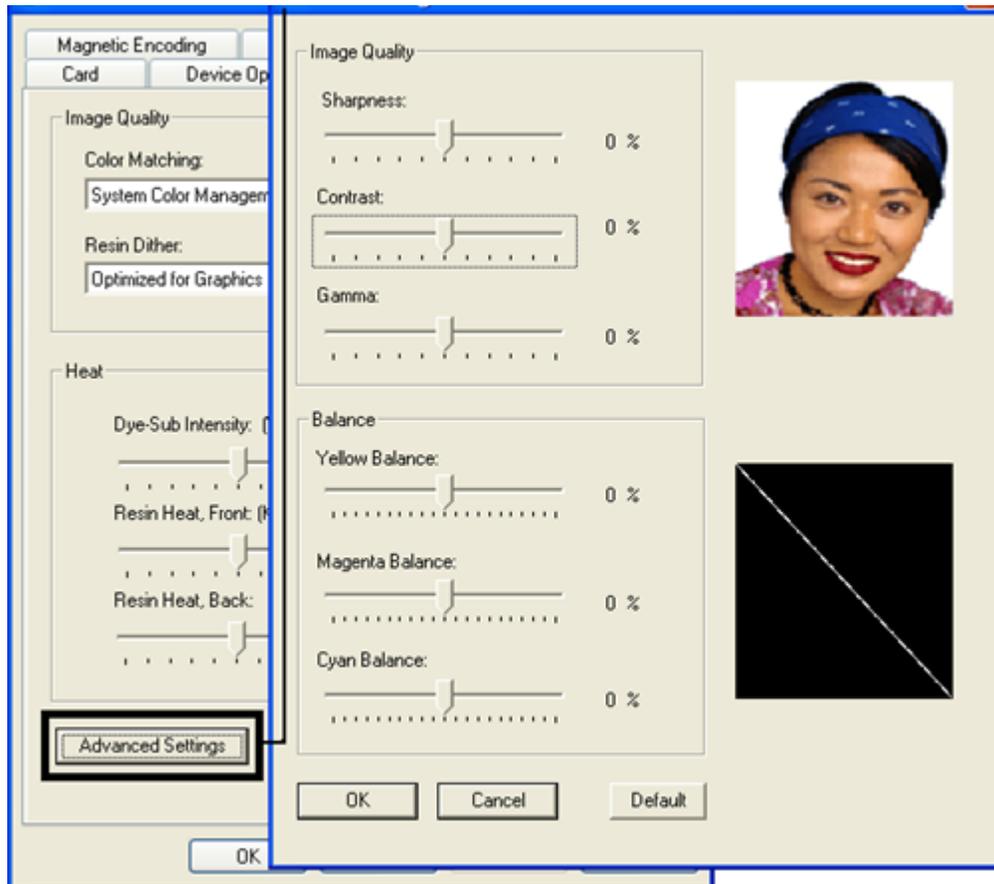
4.10.2 Adjusting for the Resin Dither

Select the appropriate dither method according to the type of image to be printed.

Note: This option only affects those objects printed on the backside of a card with the resin black Panel of an YMCK YMCKK and YMCKI Print Ribbon. This is enabled when using at least one K panel and dual sided enabled, splitting one set of panels.

| Step | Procedure |
|------|---|
| 1 | <p>Select Optimized for Graphics when printing lower quality images (for example, clipart, logos...etc.) with resin.</p> <p>OR</p> <p>Select Optimized for Photo when printing photo quality images with resin.</p> |

4.10.3 Using the Advanced Image Color window



| Step | Procedure |
|------|--|
| 1 | Click Advanced Settings to bring up the Advanced Image Color window. |
| 2 | <p>Click OK to accept any variance from the default (for this specific slider bar) and return to the Image Color tab window.</p> <p>Click Cancel to negate any variance on the slide and return to the Image Color tab window.</p> <p>Click Default to clear changes back to the default settings for this window only.</p> <p>In addition, here are further instructions:</p> <p>Sharpness (Default, 0%): Move the slide to the left for (-) or less sharpness. Move the slide to the right (+) or more sharpness of the printed image. Study the image (on the right) to determine correct sharpness.</p> <p>Contrast (Default, 0%): Move the slide to the left for (-) or less contrast. Move the slide to the right (+) or more contrast of the printed image. Study the image (on the right) to determine correct contrast.</p> <p>Gamma (Default, 0%): Move the slide to the left for (-) or less gamma. Move the slide to the right (+) or more gamma of the printed image. Study the image (on the right) to determine correct gamma.</p> |

| Step | Procedure |
|------|---|
| 3 | <p>For Balance slider bar controls, see the following.</p> <p>Click OK to accept any variance from the default (for this specific slider bar) and return to the Image Color tab window.</p> <p>Click Cancel to negate any variance on the slide and return to the Image Color tab window.</p> <p>Click Default to clear changes back to the default settings for this window only.</p> <p>Additional instructions:</p> <p>Yellow Balance (Default, 0%): Move the slide to the left for (-) or less yellow as an individual color. Move the slide to the right (+) or more yellow as an individual color balance. Study the image (on the right) to determine correct color yellow balance effect.</p> <p>Magenta Balance (Default, 0%): Move the slide to the left for (-) or less magenta as an individual color. Move the slide to the right (+) or more magenta as an individual color balance. Study the image (on the right) to determine correct color magenta balance effect.</p> <p>Cyan Balance (Default, 0%): Move the slide to the left for (-) or less cyan as an individual color balance. Move the slide to the right (+) or more cyan as an individual color balance. Study the image (on the right) to determine correct color cyan balance effect.</p> |
| 4 | <p>Click Default to clear changes back to the default settings for this window only and NOT for the Advanced Image Color dialog box.</p> |

4.11 Using the Image Transfer tab

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

Note: The Printer Printing Preferences window has the same Image Color tab functionality as the Printer -LC Printing Preferences window.

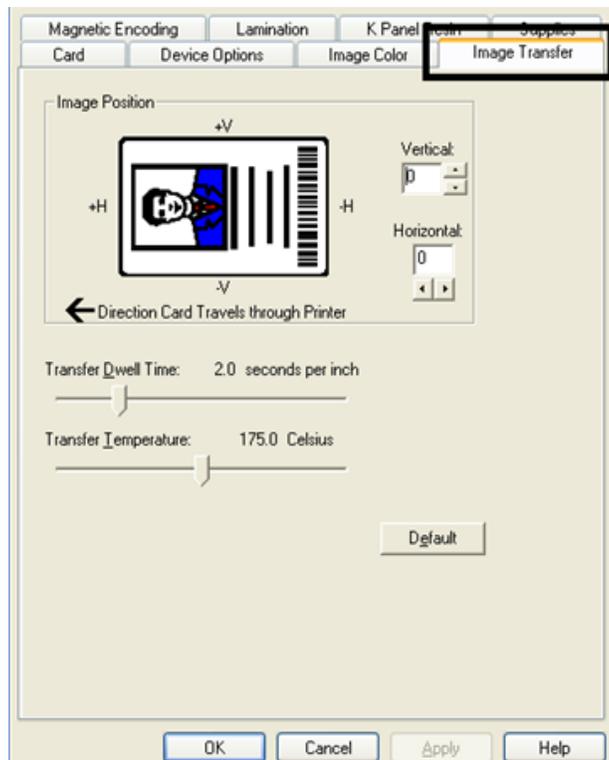
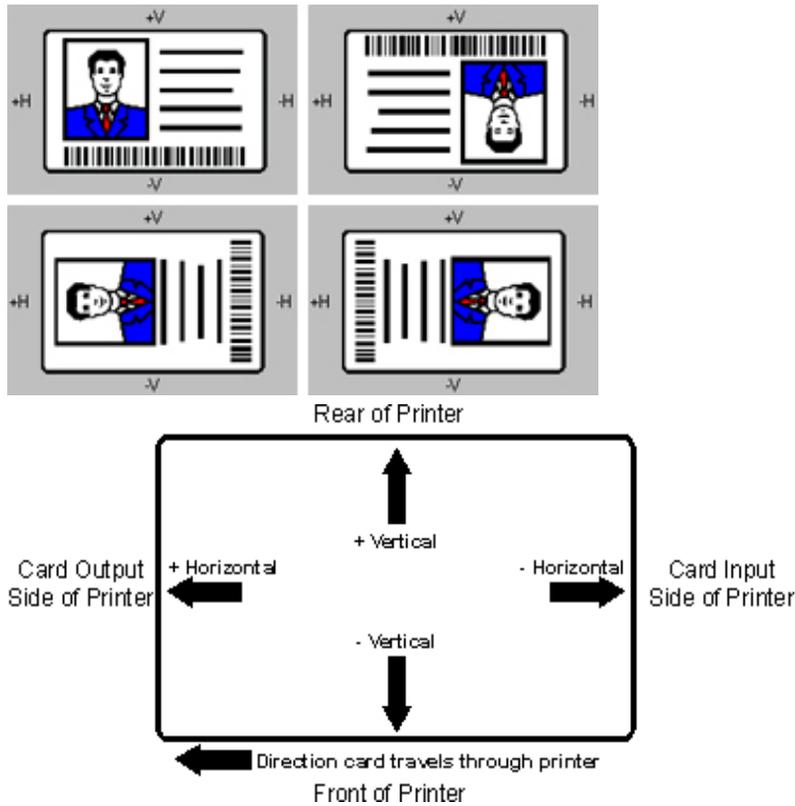


Figure 18 - Image Transfer

4.11.1 Adjusting the Image Position controls

Use the **Image Position** controls to position the image on a card (for adjustment).

The display represents how the printed image moves in relation to the fixed card position as positive and negative image placement values are entered.



| Step | Procedure |
|------|---|
| 1 | <p>Adjust the Image Position values by clicking Vertical and Horizontal adjustment arrows.</p> <ul style="list-style-type: none"> • These values ensure that the Cards always remain in the same position as they travel through the Printer (regardless of image orientation). • The Card Illustration (shown in the Image Position box) will flip and rotate according to the selection of Portrait, Landscape or Rotate 180 Degrees. • The outline around the illustration will always remain in the same Landscape orientation. |
| 2 | <p>Use the Vertical adjustment to move the image toward the front of the Printer if a positive number is entered and toward the rear of the Printer if a negative number is entered.</p> <p>OR</p> <p>Use the Horizontal adjustment to move the image toward the card output side of the Printer if a positive number is entered and toward the card input side of the Printer if a negative number is entered.</p> <p>Note: The maximum value for the Vertical and Horizontal adjustments is ± 100 Pixels (10 Pixels = 0.03 (.8mm)).</p> |



4.11.2 Adjusting the Transfer Dwell Time and Temperature

Use **Image Transfer** to control of the Transfer Dwell Time and Temperature.

- These settings control the speed and temperature at which printed images are transferred from the InTM Film to the card. These settings may vary depending on the card type.
- The Printer Driver automatically optimizes these settings according to the selection made in the **Card Type** option.
- Changes made to the Dwell Time and Temperature settings are saved for the selected **Card Type** option (upon exiting the **Printer Driver** setup, from the Printer's Control Panel).

| Step | Procedure |
|------|---|
| 1 | <p>Transfer Dwell Time Sets dwell time for InTM Film transfer in seconds per inch Lower limit = 1.0 seconds per inch, Upper limit = 3.0 seconds per inch</p> <ul style="list-style-type: none">• UltraCard III - Composite: Default = 2.0 seconds per inch• UltraCard - PVC: Default = 2.0 seconds per inch• Custom: Default = 2.0 seconds per inch |
| 2 | <p>Transfer Temperature Sets temperature for InTM Film transfer in Celsius Lower limit = 150.0 Celsius, Upper limit = 210.0 Celsius</p> <ul style="list-style-type: none">• UltraCard III - Composite: Default = 175 Celsius• UltraCard- PVC: Default = 175.0 Celsius• Custom: Default = 175.0 Celsius |
| 3 | <p>Return to the factory default settings for the selected Card Type by clicking on the Default button. If using cards (that differ from the Card Type Glossy-PVC or Matte-PVC options), select one of the Card Type Custom options.</p> |
| 4 | <p>Adjust the dwell time and temperature settings to ensure proper image transfer. Determine the appropriate settings for the card stock by setting the Transfer Dwell Time and Transfer Temperature to the default settings. Print a card.</p> <ol style="list-style-type: none">a. If the InTM Film is not transferring properly, adjust these settings accordingly. <p>OR</p> <ol style="list-style-type: none">b. If the InTM Film is transferring properly, perform a final durability test called the Tape Test. For instructions on how to do a tape test, see Conducting the Tape adhesion Test procedure. |
| 5 | <p>Use the Default button to reset the Transfer Dwell Time and Transfer Temperature to defaults for current Card Type choice.</p> |

4.12 Using the Magnetic Encoding tab

Use these options only if the Printer has an optional Stripe Encoding Module installed.
Note: If no Encoder is detected, the tab is active but all functions are grayed out.

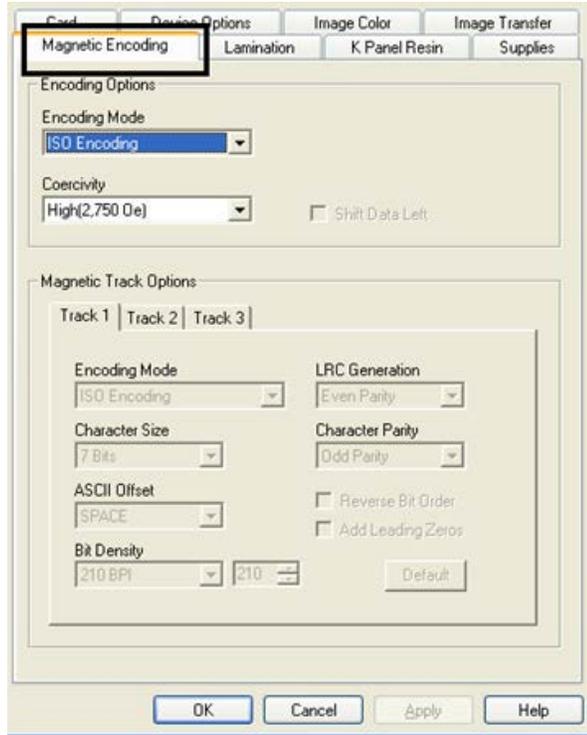


Figure 19 - Magnetic Encoding

| Step | Procedure |
|------|---|
| 1 | Select the Magnetic Encoding tab to display options for controlling the Magnetic Stripe encoding process. Note: The following describes these options and the Printer's magnetic encoding process. |



4.12.1 Use the Encoding Mode option to specify the magnetic encoding

| Category | Description |
|---|---|
| Magnetic Encoding options (changing and modifying) | Change the encoding mode and Coercivity setting or modify the ISO standards for tracks 1, 2 and 3, by correctly modifying these Magnetic Encoding options. |
| ISO Encoding Mode selection (active and inactive functions) | If you select ISO Encoding , you send down a formatted set of characters. Note: This selection activates the track tabs. However, all functions on the Track tabs are inactive/gray and display ISO defaults, which are the defaults listed for each track below. The Shift Data Left check box remains unchecked and inactive. |
| Custom Encoding Mode selection (active and inactive functions) | If you select Custom Encoding, all options are active. The Default is ISO Encoding. Note: The defaults are the same as the ISO Encoding defaults. However, all functions on the Magnetic Track Options tabs are active.) |
| Raw Binary Encoding Mode selection (active and inactive functions) | If you select Raw Binary Encoding, you send down a raw binary string rather than a formatted set of characters. Note: The Coercivity dropdown function is active and the Bit Density, Character Size, Reverse Bit Order and Add Leading Zeros are also active and configurable for each track when Raw Binary Encoding is selected. Reverse Bit Order is used to reverse the character bits and is used for the encryption of data in specific programs. Add Leading Zeros 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. Raw Magnetic Encoding The User can select Raw Magnetic Encoding from the Driver. Raw Coercivity The User can select options for the Coercivity from the Driver. (Low, Medium, High, Super) Raw Bit Density The User can select the Configurable Bit Density option. This option supports these standard configurable bit densities: 75 Bits Per Inch (BPI) 128 BPI 210 BPI Custom BPI Raw Bit Density Per Track The User can select the Configurable Bit Density, Character Size, Reverse Bit Order and Add Leading Zero options for each individual magnetic encoding track. |
| JIS II Encoding Mode selection (active and inactive functions) | If you select JIS II Encoding , specific standards are used. Note: This selection disables all the Magnetic Track Options tabs. It also disables the Coercivity dropdown function and Shift Data Left checkbox option. The default Coercivity is 600 Oe. |



4.12.2 Selecting the Coercivity/Magnetic Track

Use the **ISO** option for encoding capability for either high- or low-Coercivity cards on tracks 1, 2 and 3 and is the industry's standard mode of magnetic encoding.

| Step | Procedure |
|------|---|
| 1 | Select the Coercivity option (Oersted) to use the Magnetic Stripe type that matches the card type. High Coercivity to Super Coercivity = 2750-4000 Oersted (High Coercivity UltraCard IIIs are 2750 Oe) Medium Coercivity = 600 Oersted Low Coercivity = 300 Oersted |
| 2 | Select the Magnetic Track Selection option to specify which track is to be configured through the Magnetic Track Options (if the application being used requires customization of the standard ISO encoding process). |

4.12.3 Reviewing the Shift Data Left Function

Use the **Shift Data Left** option, which applies to all tracks when selected.

Note: When this option is unchecked, it is the default.

| Step | Procedure |
|------|--|
| 1 | Select this option to shift the recorded magnetic data to the left-hand side of the card's Magnetic Stripe. Note: This is useful in situations that require cards to be readable with insert type readers. |

4.12.4 Using the Character Size buttons

Use this option to customize 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).

| Step | Procedure |
|------|---|
| 1 | <ul style="list-style-type: none"> • Select 4 Bits to change the bits per character to 4 BPC. • Select 5 Bits to change the bits per character to 5 BPC. Note: This is the default for Tracks 2 and 3. <p>OR</p> <ul style="list-style-type: none"> • Select 7 Bits to change the bits per character to 7 BPC. Note: This is the default for Track 1. <p>OR</p> <ul style="list-style-type: none"> • Select 8 Bits to change the bits per character to 8 BPC. |



4.12.5 Using the ASCII Offset dropdown list

Use this option to customize 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.

| Step | Procedure |
|------|---|
| 1 | Select NULL to change the ASCII Offset to NULL. OR Select SPACE to change the ASCII Offset to SPACE. (Note: This is the default for Track 1.) OR Select ZERO to change the ASCII Offset to ZERO. (Note: This is the default for Tracks 2 and 3.) |

4.12.6 Using the Bit Density dropdown list

Use this option to customize the Bit Recording Density (Bits per Inch) used to encode the magnetic data on the currently selected track.

The following describes default **ISO Standard** selections.

| Step | Procedure |
|------|---|
| 1 | Select 75 BPI to change the bits per inch to 75 BPI. (Note: This is the default for Track 2.) OR Select 128 BPI to change the bits per inch to 128 BPI. OR Select 210 BPI to change the bits per inch to 210 BPI. (Note: This is the default for Tracks 1 and 3.) OR Select Custom BPI , which enables the custom BPI text box. (Note: The lower limit is 75 and upper limit is 210.) |

4.12.7 Using the LRC Generation dropdown list

Use this option to customize the LRC Generation Mode (used to encode the magnetic data on the currently selected track).

| Step | Procedure |
|------|--|
| 1 | Select No LRC to change the LRC Generation to none. OR Select Even Parity to change the LRC Generation to Even Parity. (Note: This is the default for all tracks.) OR Select Odd Parity to change the LRC Generation to Odd Parity. |

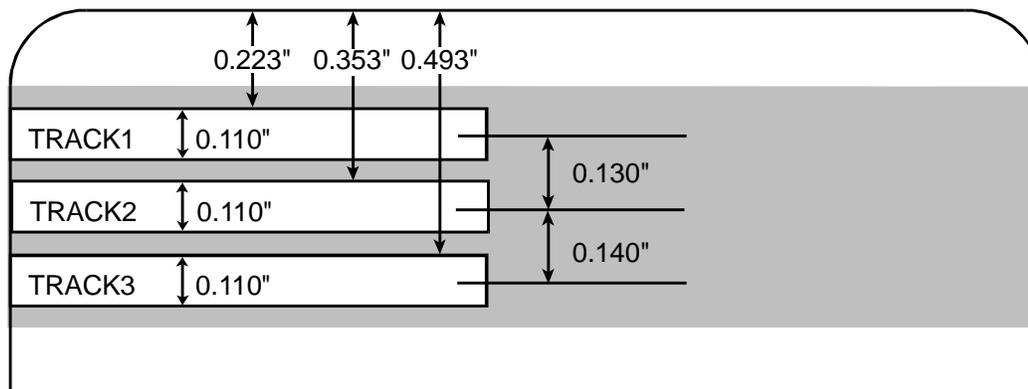
4.12.8 Using the Character Parity Mode dropdown list

Use this option to customize the Encoding Mode (used to encode the magnetic data on the currently selected track).

| Step | Procedure |
|------|---|
| 1 | Select No Parity to change the Character Parity to none. OR Select Even Parity to change the Character Parity to Even Parity. OR Select Odd Parity to change the Character Parity to Odd Parity. (Note: This is the default for all tracks.) |

4.12.9 Reviewing the ISO Track Locations

The magnetic Encoding Module encodes onto tracks in accordance with an ISO 7811-2 Magnetic Stripe.





4.12.10 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 the magnetic data to be encoded.
- 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 Magnetic Track 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, enter the track information as described.

| Step | Procedure |
|------|--|
| 1 | <p>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.</p> <ul style="list-style-type: none"> • 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 table below shows the SS, ES, FS and the valid characters defined for each track. |

4.12.10.1 Reviewing the Sample String

- Track 1: ~1%JULIEANDERSON^1234567890?
- Track 2: ~2;1234567890987654321?
- Track 3: ~3;1234567890987654321?

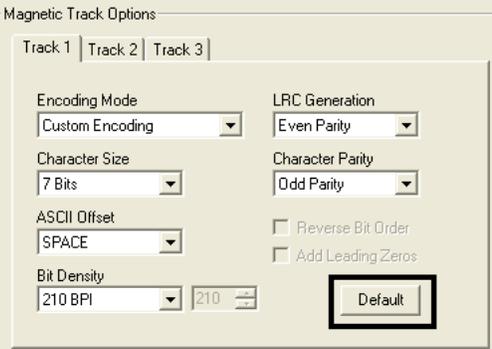
| Track | Start Sentinel | End Sentinel | Field Separator | Valid Characters | Maximum Number of Characters |
|---------|----------------|--------------|-----------------|------------------|------------------------------|
| Track 1 | % | ? | ^ | ASCII 32-95 | 78 |
| Track 2 | ; | ? | = | ASCII 48-63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



4.12.11 Reviewing the ASCII Code and Character Table

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

4.12.12 Using the Default button

| Step | Procedure |
|------|--|
| 1 | <p>Use the Default button to reset defaults for the current Track tab only.</p>  <p>The screenshot shows the 'Magnetic Track Options' dialog box with tabs for Track 1, Track 2, and Track 3. Track 1 is selected. The settings include: Encoding Mode (Custom Encoding), LRC Generation (Even Parity), Character Size (7 Bits), Character Parity (Odd Parity), ASCII Offset (SPACE), Bit Density (210 BPI), and checkboxes for Reverse Bit Order and Add Leading Zeros. A 'Default' button is highlighted with a black box.</p> |

4.13 Using the Lamination tab

Use this option to control specific Printer functions. These options allow you to control the Printer's Lamination process. (**Note:** When no Laminator is detected, the Lamination tab is active but all functions are grayed out.)

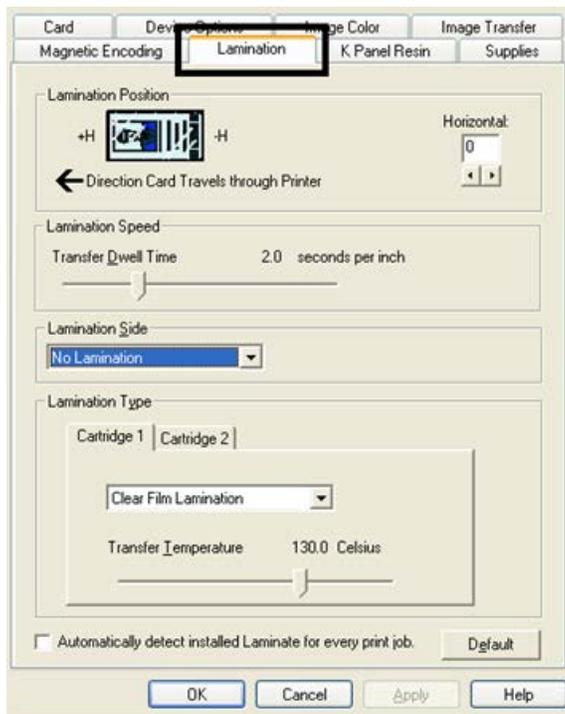


Figure 20 - Lamination

4.13.1 Selecting the Lamination Position

| Step | Procedure |
|------|---|
| 1 | <p>Use the Lamination Position control to adjust the horizontal position of the PolyGuard Overlaminates. (Note: This control functions in the same manner as the Image Position controls, except only the horizontal position of the overlaminates requires adjustment.)</p> <ul style="list-style-type: none"> To adjust the Lamination position, click the Horizontal adjustment arrows. To move the overlaminates more toward the card output side of the Printer, enter a positive number. To move the overlaminates more toward the card input side of the Printer, enter a negative number. (Note: The adjustment arrows point in the direction the patch will move on the card. The maximum value for the Horizontal adjustment is ± 100 Pixels (10 Pixels = about .03/.8mm) The default is 0.) |

4.13.2 Adjusting the Lamination Speed - Transfer Dwell Time

| Step | Procedure |
|------|---|
| 1 | <p>Adjust the Transfer Dwell Time to control the Lamination Dwell Time or throughput speed of a card in seconds per inch and the Lamination Temperature.</p> <ul style="list-style-type: none"> Default = 2.0 seconds per inch Upper Limit = 5.5 seconds per inch Lower Limit = 0.8 seconds per inch |

4.13.3 Selecting the Lamination Side dropdown menu

| Step | Procedure |
|------|---|
| 1 | <ol style="list-style-type: none"> Select No Lamination if you do not want to use the Printer's built-in Laminator. Select Laminate Front Side, Laminate Back Side, Laminate Both Sides or Laminate Opposite Sides to specify the side(s) of the card to laminate. |

4.13.4 Selecting the Lamination Type

| Step | Procedure |
|------|--|
| | <p>Select one of the Lamination Type options, according to which type of Lamination media is currently installed. The Driver supports two types of overlaminates: Film, Lamination and PolyGuard Lamination. Custom versions of each type are also available.</p> <ul style="list-style-type: none"> Select the Clear Lamination option if the Thermal Transfer Film Overlaminates type is installed in the Lamination Module. Select the 0.6 PolyGuard Lamination option or 1.0 PolyGuard Lamination option for either patch thickness. (Note: These require different heat settings and Lamination speeds. Select the appropriate option according to the thickness of the PolyGuard material you are using.) Select Registered Film Lamination if you have a registered thermal transfer film. PolyGuard Alternating Patch and Holographic Film Lamination are options. |

4.13.5 Selecting the Defaults button

| Step | Procedure |
|------|--|
| 1 | <p>Click Default to return the Transfer Dwell Time and Transfer Temperature to the Default settings for the Lamination Type (being used).</p> |

4.13.6 Selecting the Auto Detect Laminate button

| Step | Procedure |
|------|---|
| 1 | Check Auto Detection for allowing the printer driver to correct the lamination values. |
| 2 | If Auto Detection is unchecked and the lamination values do not match, the LCD displays a Wrong Laminate error. |

4.14 Using the K Panel Resin tab

Use this tab to adjust the **Print All Black with K Panel** (options) and the Defined Areas. Use this tab to control where the resin black (K) Panel of a full-color Ribbon is printed. (**Note:** When Disable Printing under the Device Options tab is selected, this tab will be active while all functions will be grayed out.)

- 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 grayed out. Resin black text is desirable due to its sharp, saturated color and resin black barcodes are required to ensure readability when scanned by an infrared barcode reader. (**Note:** The Printer Driver will automatically print all TrueType black text and TrueType barcodes only with the resin black (K) Panel of the Print Ribbon by default.)
- If printing black text or barcodes that are not TrueType fonts or black graphics, select one of the three options listed under **Print All Black with K Panel**. (**Note:** 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 each of the following options.)

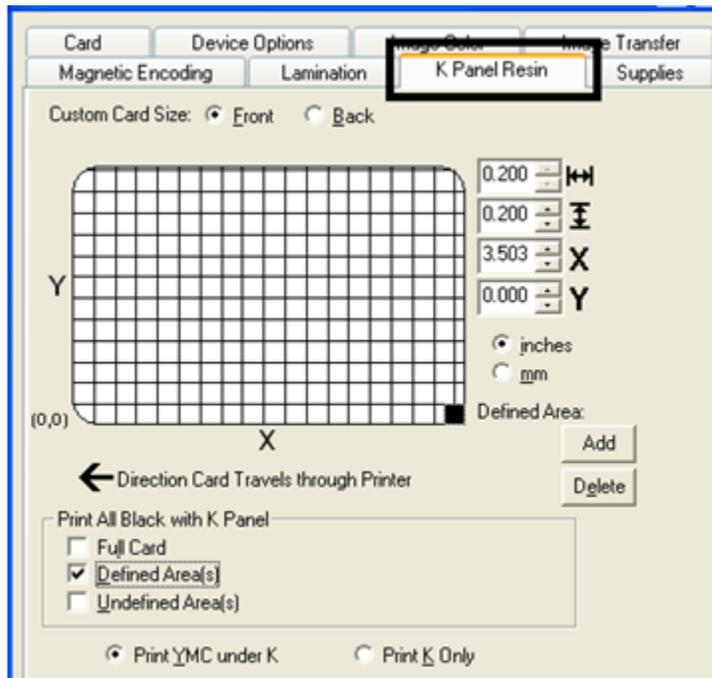


Figure 21 - K Panel Resin



4.14.1 Using the 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 size and X, Y coordinates update accordingly.

Click and drag the area to change the location.

- The X, Y coordinates update accordingly.

4.14.2 Selecting “inches or mm” radio button

Select from the **inches** or **mm** radio button to change the measurement type. (**Note:** This is similar to the choice on the Card tab.)

- The **inches** radio button displays the area size and the location in inches.
- The **mm** radio button displays the area size and the location in mm.

4.14.3 Using the Add and Delete buttons

| Step | Procedure |
|------|---|
| 1 | Use the Add button for these capabilities: <ul style="list-style-type: none"> • Add an area default sized to .2 (.2 at location “0” with focus on the added area). • Add multiple areas in the same location with the same affect (as if there were only one area). (Note: Intersecting/overlapping areas do not cancel each other out; instead, they act as one area.) |
| 2 | Using the Delete button to delete the area with focus from the graphic. |

4.14.4 Selecting the Full Card

| Step | Procedure |
|------|---|
| 1 | Select the Full Card option to print the resin black (K) Panel for all black found within all areas of the image, as shown below. <ul style="list-style-type: none"> • The Card image becomes fully black. • The resin prints anywhere for black. • The Add and Delete buttons become inactive and are grayed out. • The Defined Area object size and location scroll controls become inactive and are grayed out. • The inches and mm dials become inactive and are grayed out. |

4.14.5 Selecting the Defined Area(s)

| Step | Procedure |
|------|--|
| 1 | Select the Defined Area(s) option to print the resin black (K) Panel for all black found only in an area or areas defined, as shown below. <ul style="list-style-type: none"> • The card image becomes white with the grid and one area (available for the User to start with). • The defined areas print black with resin. |

4.14.6 Selecting the Undefined Area(s)

| Step | Procedure |
|------|---|
| 1 | Select the Undefined Area(s) option to print the resin black (K) Panel for all black found only in the space outside the areas defined, as shown below. <ul style="list-style-type: none"> • The card image becomes black with the grid and one area (available for the User to start with). • The defined area does not print black with resin. |



4.14.7 Defining the Area to activate the Card Grid

| Step | Procedure |
|------|---|
| 1 | <p>Select on the appropriate Defined Area (see below) to activate the card grid in the upper half of the window.</p> <ul style="list-style-type: none">• It is through this card grid that up to five areas can be defined, as shown below.• When the card grid is first activated, then a small black square will appear at its default size of .2 x .2 (5mm x 5mm) and at its default location in the lower left-hand corner (0,0). (Note: This square represents the first defined area.) |

4.14.8 Selecting the Print YMC under the K and Print K Only options

| Step | Procedure |
|------|---|
| 1 | <p>Use the Defined Area function.</p> <ol style="list-style-type: none">a. Define another area by clicking on the Defined Area. (Note: Another .2 x .2 (5mm x 5mm) area will appear in the lower left-hand corner. This is the location in which all newly defined areas will first appear. Up to 5 areas can be defined.)b. Delete an area by selecting the area and clicking on the Delete button. (Note: If all areas are deleted, the K Panel Resin options will automatically be deselected.) |
| 2 | <p>Select the Print YMC Under K option to print 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. (Note: Select this option if printing resin black text or barcodes onto a colored background to provide a more gradual transition between the two.)</p> <p>OR</p> <p>Select the Print K Only option to print all black in the designated Defined/Undefined areas only with the resin black (K) Panel or to print resin black onto a white background to maximize the sharpness of printed text and barcodes.</p> |

4.15 Using the Inhibit Panel tab

The Inhibit Panel tab prevents printing on a card area using the printer driver interface.

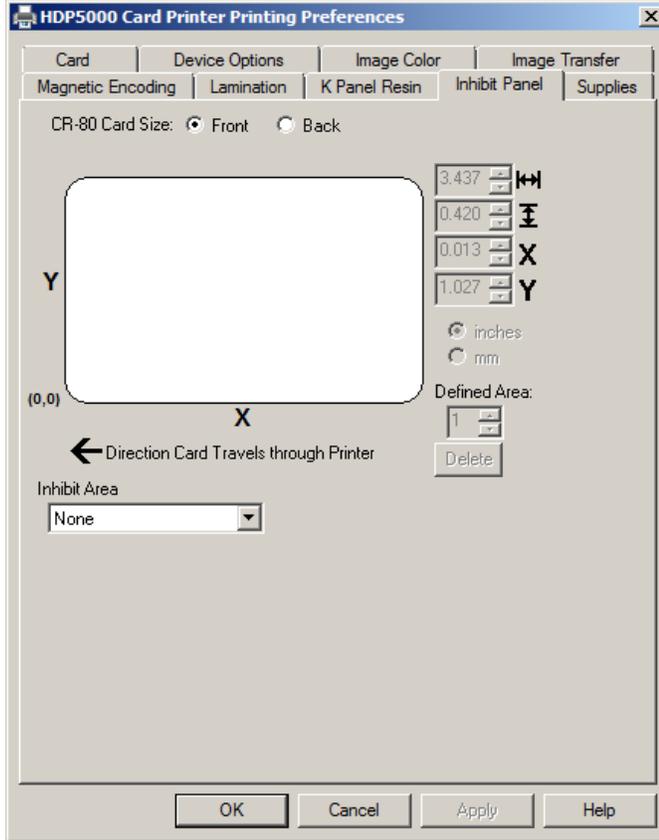
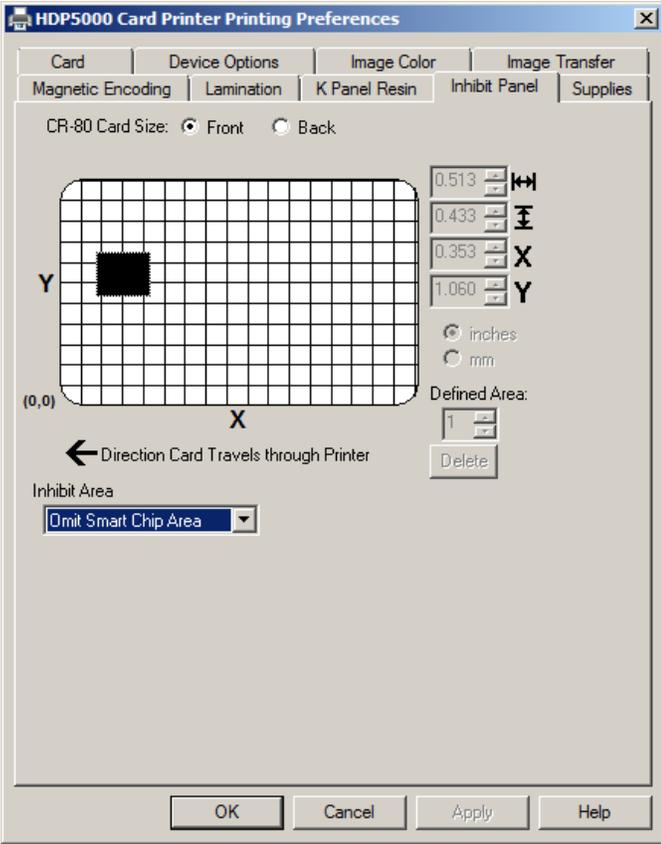


Figure 22 - Inhibit Panel

| Step | Procedure |
|------|---|
| 1 | Click Start then Devices and Printers . |
| 2 | Right-click the printer icon. |
| 3 | Click Inhibit Panel . |

4.15.1 Defining Inhibit Panels Using the Printer Driver Interface

| Step | Procedure |
|------|---|
| 1 | Click the Front or Back radio button to select the inhibited area. |
| 2 | <p>Click the Inhibit Area button and select a field type, such as Omit Smart Chip Area.</p>  <p>The Card Display Area indicates a grid and a black rectangle that represents the Inhibit Area of the smart chip location.</p>  |
| 3 | To move the Inhibit Area, click the rectangle and move your mouse. To enlarge the Inhibit Area, click an edge or corner of the rectangle and drag. |
| 4 | To create multiple Inhibit Areas, click Defined Area and click the Up button to increase the number of areas. A black square appears in the lower left-hand corner of the grid. To move the Inhibit Area, select the square and drag to the preferred location. To enlarge the Inhibit Area, click an edge or corner of the rectangle and drag. |

4.15.2 Combining Inhibit Panel Definitions

Inhibit Panels defined using the Printer Driver Interface are additive to panels defined using Workbench and text-based definitions or both (such as “~” commands). The Inhibit Panels defined using the Printer Driver Interface apply to a printed card in addition to other defined inhibit areas and do not override or eliminate prior definitions.

Inhibit Panels defined using the Printer Driver Interface are applied to card layouts as long as the Inhibit Panel is defined from the Inhibit Panel tab. To remove the Inhibit Panel from the card layout, remove the definition from the tab.

4.16 Using the Printer Supplies tab

Use the options on this tab to view information (Type, Reorder Number) about the Ribbon, InTM Film, Laminate (Cartridge 1) and Laminate (Cartridge 2) installed in the Printer. (**Note:** The gauges are horizontal.)

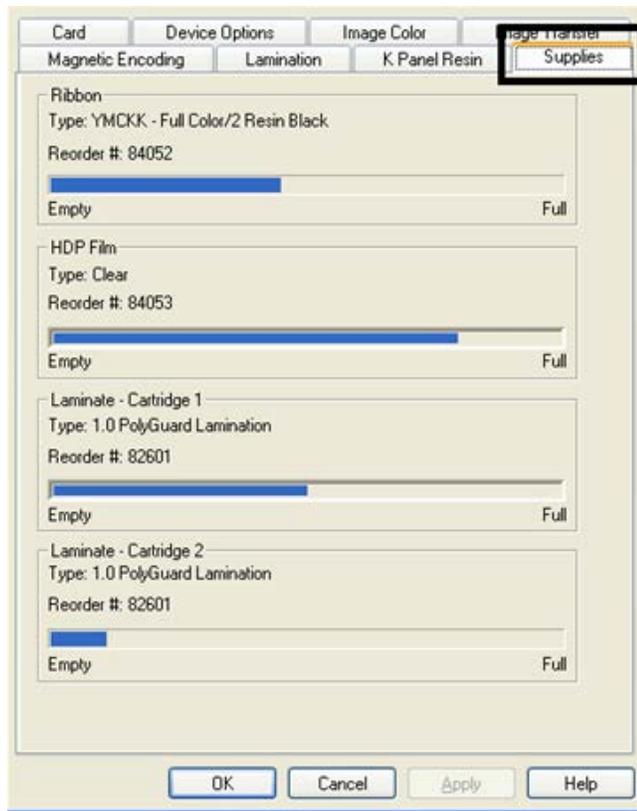


Figure 23 - Printer Supplies

5 General 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. |



Figure 24 - Unable to Feed Card



5.1.2 Troubleshooting with the LCD Error Message

| LCD Error Message | Cause | Solution |
|---|---|--|
| Calibrate Failed (PC Error Message No. 155 and 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 Nos. 128 and 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 Nos. 82, 112, and 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 Nos. 213 and 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 Nos. 38, 39, 40, and 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 poses 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 Nos. 26 and 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 Nos. 156 and 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 Nos. 74 and 199) | A card is jammed in the card flipping area of the Printer. | <p>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.</p> <p>Ensure that the Flipper Module can rotate freely. Close the Printer's Flipping Module Cover.</p> <p>Select Resume on the Printer's Front Cover to continue printing.</p> <p>To cancel the print, click Cancel Print from the Driver's display dialog.</p> |
| 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. | <p>Enter a value for head resistance in the EE settings in the Driver.</p> <p>Reset the correct value according to the steps in the Troubleshooting Section.</p> <p>If this problem persists, call for technical assistance.</p> |
| Head Sensor Error (PC Error Message No. 8) | <p>The Printhead Temperature Sensor is not functioning or is not connected properly.</p> <p>OR</p> <p>The Printhead is not cooling properly.</p> | If the problem persists, call for technical assistance. |
| Head Voltage Err (PC Error Message Nos. 103 and 105) | A hardware fault has prevented setting the correct Printhead voltage. | <p>Reset the Printer and try again.</p> <p>If this problem persists, call for technical assistance.</p> |
| Headlift Error (PC Error Message Nos. 102, 103, 104, and 105) | This is a problem with the Printhead Lift or Transfer Roller Headlift. | <p>Reset the Printer and try again.</p> <p>If this problem persists, call for technical assistance.</p> |
| Heater Error (PC Error Message No. 161) | The Transfer Heater Roller is too hot. | <p>Reset the Printer and try again.</p> <p>If this problem persists, call for technical assistance.</p> |
| Invalid Film (PC Error Message Nos. 94, 95, 96, 164, 165, and 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 Nos. 237 and 238)52 | 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. |



| LCD Error Message | Cause | Solution |
|--|---|--|
| 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 and 261) | The Lamination material in Cartridge 1 is not valid for this Laminator. | Install valid material. |
| 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 Nos. 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 and 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. |



| LCD Error Message | Cause | Solution |
|---|--|---|
| 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. |
| 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 and 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. |



| LCD Error Message | Cause | Solution |
|---|--|---|
| 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 Nos. 9, 65, 67, and 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 . |
| 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, and 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 and 101) | The print Ribbon has run out. | Install a new Ribbon and press Resume to continue. |



| LCD Error Message | Cause | Solution |
|---|---|--|
| 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, and 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 Nos. 14 and 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. |
| Utility Error (PC Error Message Nos. 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 Nos. 162 and 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. |



5.1.3 Troubleshooting - Printer Error Messages

| 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. | <ol style="list-style-type: none"> 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. | <ol style="list-style-type: none"> 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. | <ol style="list-style-type: none">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. | <ol style="list-style-type: none">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 Overlaminates 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. | <ol style="list-style-type: none">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. | <ol style="list-style-type: none"> 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. | <p>Check that the Ribbon is installed properly. Cancel is the only option.</p> <p>Press the Cancel Print button from the Driver's display dialog, or the Cancel button located on the Printer's LCD display.</p> |
| Wrong Ribbon Installed | An incorrect ribbon has been installed, or a driver setting is incorrect. | <p>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.</p> <p>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.</p> |
| 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. | <p>The printer has determined that the installed ribbon has either jammed or broken.</p> <ol style="list-style-type: none"> 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. | <p>Open the Printer's Cover and remove the Print Ribbon. Check the Ribbon and see if it is broken.</p> <ol style="list-style-type: none"> 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. | <p>Recalibrate the Ribbon Sensor using the Calibrate Ribbon tab within the Toolbox.</p> <p>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.</p> |
| Invalid Ribbon | An incorrect Print Ribbon has been installed in the Printer. (This is if you are using a SecureMark Ribbon). | <p>A non-SecureMark Ribbon is installed in a SecureMark Printer.</p> <ol style="list-style-type: none"> 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. | <p>Press the Resume button located on the Printer to continue.</p> <p>To cancel, press the Cancel Print button or the Cancel button located on the Printer.</p> |
| 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 . |



| Printer Error Message | Cause | Solution |
|--------------------------------|---|---|
| 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 . |
| 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 overlaminates have either jammed or broken. <ol style="list-style-type: none">Open the Laminator Cover and remove the Laminator Cartridge(s). If overlaminates are jammed, remove the 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 overlaminates together and wind any excess onto the Take-up Spool of the Overlaminates.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. |

5.1.4 Communications Errors

Symptom(s): Incorrect output, communications error on PC or Printer, stalling, no response from Printer, no job printed, “paper out” error.

| Step | Procedure |
|------|---|
| 1 | Confirm that the system meets the minimum requirements, as shown here: <ul style="list-style-type: none"> • IBM-PC or compatible. • Windows 7 (32 bit & 64 bit), Windows XP (32 bit) , Windows 2003 (R1 & R2 32 bit), Windows 2008, R2 (32 bit & 64 bit), Vista (32 bit & 64 bit), • 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) |
| 2 | Confirm the correct installation of the Printer Driver. <ol style="list-style-type: none"> a. Close the software program and check the Printer Driver. b. Reboot the computer. c. Ensure the Printer Driver is installed correctly. (Note: This pertains especially if an obsolete Driver was recently removed.) <p>Ensure the correct setup options within the Printer Driver are selected.</p> |
| 3 | Confirm the correct installation of the Flipper Table Module Assembly. Reboot the computer. Ensure that the Print Both Sides option in the Printer Driver is set correctly. Verify the Flipper Table Module Assembly is functioning properly by printing out cards in a test run. |
| 4 | Determine the problem with printing from the application. <ol style="list-style-type: none"> a. Print a self-test from the Printer by pressing Options -> Menu-> Select -> Print on the printer's LCD to ensure that the Printer (itself) is functioning properly. b. Print the Windows test page that is located in the General tab of the Driver. c. Use WordPad <ol style="list-style-type: none"> 1. Go to the File menu and select Page Setup. 2. Click Printer and select the Card Printer. 3. Click OK and reset all four margins to zero. (Note: WordPad will automatically replace the values with its minimum margins.) 4. Open the program and type: “This is a Test.” then, go to File on the menu bar and select Print. |



| Step | Procedure |
|------|---|
| 5 | <p>Determine whether there is adequate hard Drive space. (Note: A large volume of temporary files on the computer can cause communications errors.) Access the temporary files by following this process:</p> <ul style="list-style-type: none">• Search for all folders called TEMP. Once found, clear out the contents of the folders.• Use a disk cleanup utility (such as Disk Cleanup found in the System Tools folder of the Start menu) or use a third party application. |

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.



AVERTISSEMENT: Transfert Roller de l'imprimante atteint des températures supérieures à 350 ° F (175 ° C). Soyez extrêmement prudent lors de l'utilisation de la plastification. Ne touchez jamais le rouleau de transfert à moins que l'imprimante a été désactivé pendant au moins 20 minutes.

6.1.1 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.



Figure 25 - Adjusting Lamination Module

| Step | Procedure |
|------|-----------|
|------|-----------|

| Step | Procedure |
|------|--|
| 1 | <ul style="list-style-type: none"> 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 | <p>Print a test card to see if the Lamination needs to be adjusted.</p> <ul style="list-style-type: none"> 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. |

7 Printer Adjustments

The purpose of this section is to provide the User with specific information on Printer adjustment procedures.

7.1 Printing on Alternate Card Stocks

7.1.1 Selecting the Right Cards and optimizing the HDP Print Process

In order to optimize the Card Printer’s capabilities for cards with hard-to-print surfaces, we recommend 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 InTM 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 HDP 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.

7.1.2 Conducting the Tape Adhesion Test

It is important to conduct tape adhesion tests because one cannot be certain which transfer temperature and Dwell Time will work best (when printing cards other than UltraCard III). (**Note:** 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 to transfer InTM Film to the card to ensure a long lasting, durable card.

| Step | Procedure |
|------|---|
| 1 | Test the adhesion quality of the InTM Film to the card by printing sample cards and completing an adhesive tape test. |
| 2 | Select the UltraCard IIIs-Glossy PVC if the card is glossy and print a test card. |

| Step | Procedure |
|------|--|
| 3 | a. Apply a strip of ½ (12mm) wide Scotch-type clear adhesive tape (such as 3M brand 600), at least 2 (50mm) 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 inches/second (50mm/sec)) 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.) |
| 4 | Visually examine the card and the strip of tape pulled from the card, to see if any portion of the InTM Film was removed from the card. <ul style="list-style-type: none"> • If any residue (for example, oil or grease from fingertips) is present on the card surface, the evaluation results may be affected. • If the printed, transferred InTM Film particles (a) pull away from the card and (b) adhere to the tape, this indicates that inadequate adhesion of the InTM Film to the card. Increased heat and Dwell Times are necessary to resolve this problem. |
| 5 | If the tape test indicates inadequate adhesion, increase the heat setting by 5 degrees, print another card and try the tape test again. <ul style="list-style-type: none"> • Once the temperature has been increased 4 times (20 degrees), reset temperature to default and increase the Dwell Time by .5 second. • Repeat this process until adequate adhesion is achieved. • Ensure that the cards (in use) have a surface roughness (Ra) of 60 micro inches or less. This information should be available from the card manufacturer. |

8 Workbench Printer Utility

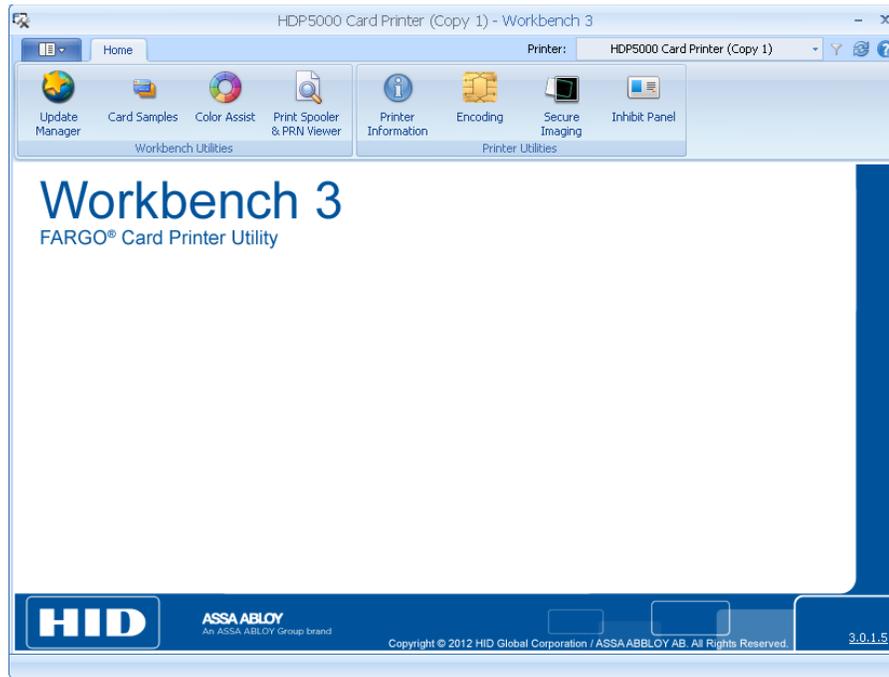
See the **Workbench Printer Utility Help** for additional information.

8.1 Access the Workbench Printer Utility

Click **Diagnostics** to access the Workbench Printer Utility.



The Workbench Printer Utility displays. Find the Workbench Printer Utility User Guide on your CD.



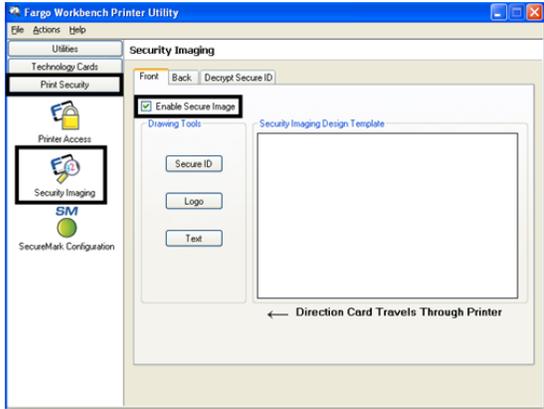
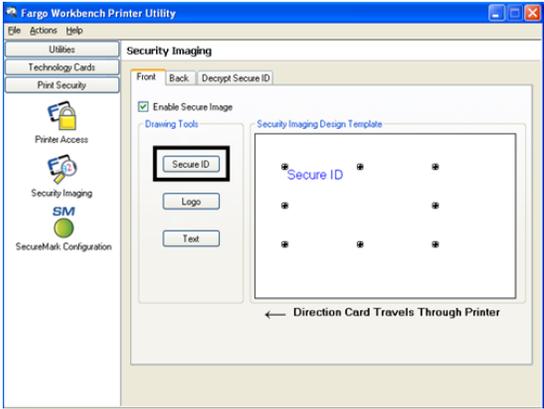
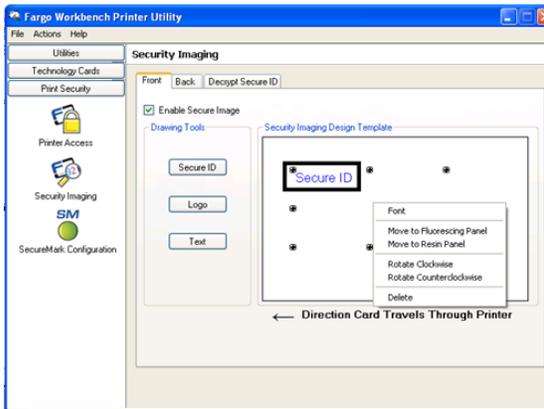
9 Fluorescent Panel Usage

YMCFK Ribbon for Printer is an economical way to add a fully customizable, incremental level of security to your photo identification cards. This process allows the user to configure the data that is printed with the fluorescent panel of an YMCFK Ribbon. (**Note:** Use any software program to print the special fluorescent 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**) that allows you to print a standard or one-to-one personalized grayscale fluorescing image that is 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 for the Printer.
- The first method uses the Workbench Printer Utility to create a static image 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. (**Note:** This enables the user to print a unique fluorescent image, such as the cardholder's picture on each card.)

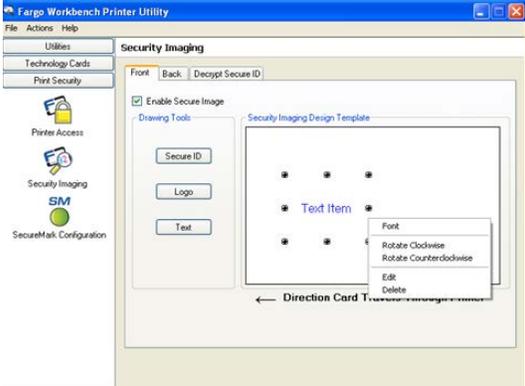
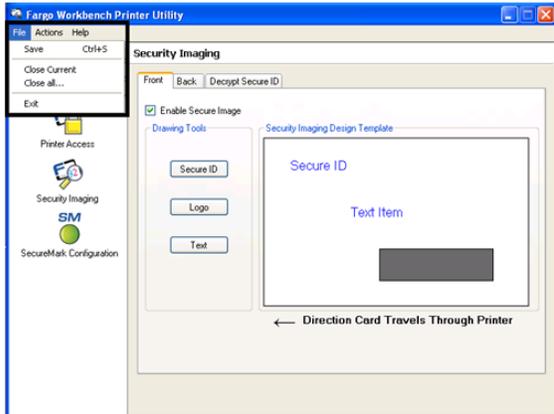
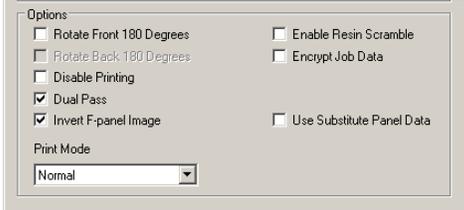
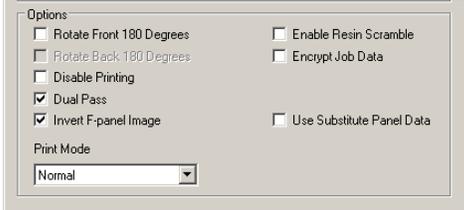
9.1 Configuring Fluorescent Data using Workbench

| Step | Procedure |
|------|---|
| 1 | From the Driver Printing Preferences, click Diagnostics to access the Workbench Printer Utility . |

| Step | Procedure | |
|------|---|--|
| 2 | <p>a. Click Print Security and select Security Imaging.</p> <p>b. Check the Enable Secure Imaging checkbox. (Note: The option for both front and back are set up the same way.)</p> |  |
| 3 | <p>a. Click Secure ID.</p> <p>b. Click and drag a box onto the Template.</p> <p>c. Move and size as needed.</p> |  |
| 4 | <p>From within the Security Imaging Design Template, right-click the Secure ID box to access Options.</p> |  |

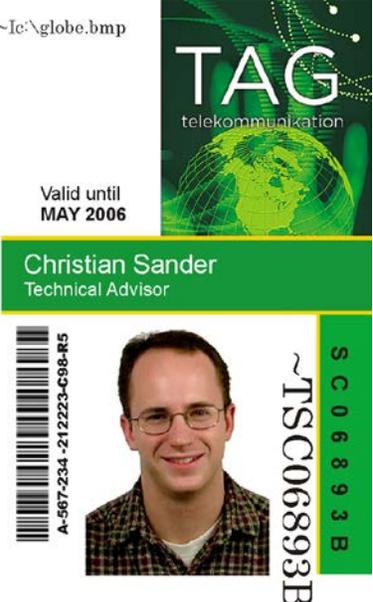
| Step | Procedure | |
|------|---|--|
| 5 | a. Click Logo . b. Click and drag a box onto the Template. c. Move and size the image by grabbing the box corners. | |
| 6 | From within the Security Imaging Design Template, right-click the Logo box to access Options. | |
| 7 | Select Logo File. Find the source of the Logo to place on the card. (Note: Fit to Frame sizes the image to fit the box. Once this is set up, this logo prints from the software program. This is set up in the background.) | |
| 8 | Click the Text box on the left. Click and drag a box onto the Template. Move and size as needed. | |

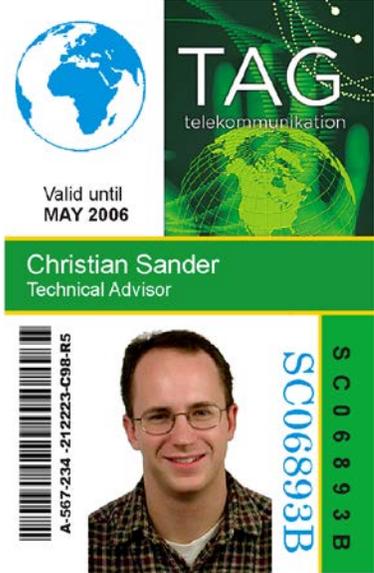


| Step | Procedure | |
|------|---|--|
| 9 | From within the Security Imaging Design Template, right-click the Text box for the Options shown. |  |
| 10 | Follow the same instruction as above for the backside of the card. | |
| 11 | Save this template using File > Save . Close the Workbench. (Note: Any 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 you recreate a new template.) |  |
| 12 | Set the ribbon for YMCFK in the Printing Preferences. (Note: In addition, use the Auto Detect button. Install the F panel ribbon for this process to work.) | |
| 13 | Check Dual Pass for printing the F panel on a separate InTM Film panel from the YMC image. (Note: Use the default Dual Pass option if using the fluorescent image in places where also using other dye, or any time selecting the Invert F-panel Image .) |  |
| 14 | Check Invert F-Panel Image to create a negative of the fluorescent image. (Note: This may improve the look of the person's image if used for the Logo.) |  |

9.2 Configuring Fluorescent Data (F-Panel for YMCFK Ribbon)

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

| Step | Procedure | |
|------|--|---|
| 1 | Creating Fluorescent Text. Create a new text box in your badge application. | |
| 2 | Type the TEXT that you want to 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. | <p>Card - Badge Application</p> <p>~Ic:\globe.bmp</p>  |
| 3 | Creating a Fluorescent Image. In a separate drawing program, create the image you wish to fluoresce. | <p>BMP Image located at c:\globe.bmp</p>  |
| 4 | Create the IMAGE in the actual size that you want it to appear on the card, and save it as a Grayscale or 1 - bit bmp file on the root c:\ directory. Do not put spaces in the file name. | |
| 5 | Create a new text box in your badge application, and type ~I followed by the address of your image (see Step 2). The top left of your image will start at the top left of your text box. | |
| 6 | Set up the printer driver preferences. Refer Steps 8-10. | |

| Step | Procedure | |
|------|---|---|
| 7 | <p>Printer prints the fluorescent BMP IMAGE at the ~I position on the card.</p> <p>Printer prints the fluorescent TEXT at the ~T position on the card.</p> | <p>Card as Printed</p>  |
| 8 | <p>Set the ribbon for YMCFK in the Printing Preferences. (Note: The Auto Detect button may also be used.)</p> | |
| 9 | <p>Check Dual Pass if you would like to print the F panel on a separate panel of InTM Film from the YMC image. (Note: Use the default Dual Pass option if the fluorescent image is used in places where other dye is used or any time the Invert F panel Image option is selected.)</p> | |
| 10 | <p>Check Invert F-Panel Image to create a negative of the fluorescent image. (Note: This may improve the look of the person's image if used for the Logo.)</p> | |

10 Inhibit Panel Usage

You can use the Inhibit Panel (I designation under YMCKI, YMCKIKI and YMCKIKH) to define areas on the surface of the card, in order to prevent the transfer of InTM Film to the card surface. Examples of where the I Panel has potential use are to ensure that signature panels, security holograms or pre-printed graphics are not covered or obscured by print images or transfer InTM Film.

- When **Active**. This feature is active when using YMCKI Ribbons.
- **Application Usage**. Text-based objects are used to access the Inhibit Panel.

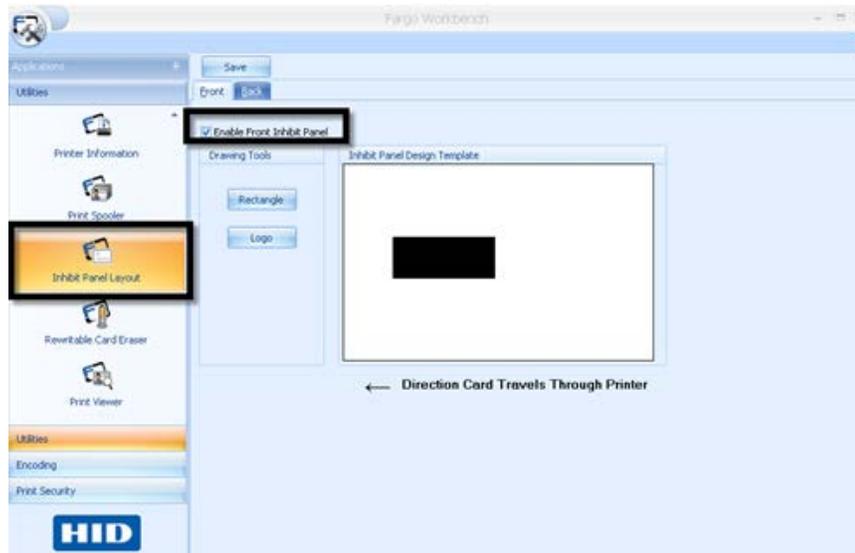
10.1 Using Inhibit Panel (Workbench Printer Utility)

Use the **Workbench Printer Utility** to generate an Inhibit Panel Layout. (**Note:** This utility allows the operator to add a rectangular area(s) that defines which areas are inhibited.)

- **Inhibit Panel Placement:** Each print job generates instructions within the print job that places the corresponding area(s) on the I-panel.
- **Operating Systems:** This method works with all applications generating print jobs to the Printer under Windows® operating systems.
Note: This is regardless of whether the printer is a shared instance from another workstation or local to that particular workstation.

Continue with these instructions.

- To create an inhibit area using the **Workbench Printer Utility**, see **Using the Inhibit Panel Layout** in the Help file associated with the specific application.
- To open the Workbench Printer Utility, click **Start > Programs > Fargo > Fargo Workbench Printer Utility > Fargo Workbench**.
- Verify that you have the latest version of the Workbench installed.





| Step | Procedure |
|------|--|
| 1 | Create the Inhibit Panel Layout within the Workbench Printer Utility. |
| 2 | Save the file. Failure to save the file prevents the Inhibit Panel to function. |
| 3 | You are now ready to print from your application. Images print with the inhibit panel until deleted. |

10.1.1 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 print job is rendered.

- Rendering is the process that changes the application output to instructions that the printer understands.
- This string will be removed from the print and the bitmap will be used to define the area where the transfer is to be inhibited.

10.1.2 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. Use Microsoft Paint for the 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.

Note: Compatible applications allow you to edit text strings after saving the file. Examples of compatible applications are Corel Draw, Microsoft Word, and Microsoft WordPad.

10.1.3 Rendering Print Jobs

Rendering of the print job occurs on the given local workstation if the Printer Driver is installed for use on that particular workstation.

Shared Instance: However, if the Printer Driver is a shared instance (for example, shared from another workstation), the print job is rendered (converted to something that the printer understands) on the workstation where the Printer Driver is shared from while under Microsoft Windows.

Print Job Rendering: Under Microsoft Windows Vista, the rendering of the print job may be performed on either the workstation sharing the printer or the workstation creating the print job, depending upon the setting chosen in the printer instance.



Rendering Engine: Since the Printer Driver looks for the file with the “~i” command, the file location specified within the command is relative to the sharing workstation on Windows.

- Under Windows Vista the default configuration is to render the job on the workstation that is generating the print job.
- The bitmap image file must exist in the location specified on the sharing workstation or on the printing workstation, depending upon your settings for that printer on the workstation generating the print job.

Example: Place a “~iC:\Test\inhibit.bmp” text object within a Word Pad print job against a non-shared (for example, local) printer under Windows XP to cause the Printer Driver to look for a file with that name and location on the local workstation.

Note: This is because the Printer Driver processing occurs on the local workstation.

Inhibit Area Location: The location of the inhibit area within the print job is the upper left hand corner, where the text object is placed upon the drawing within the application.

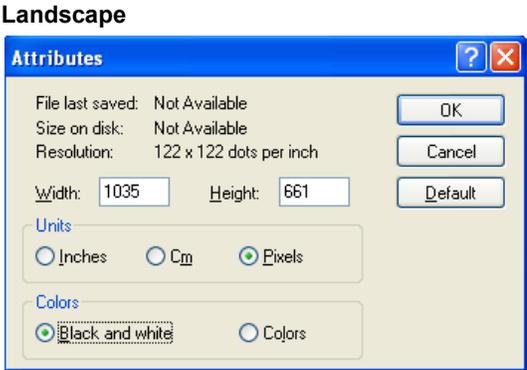
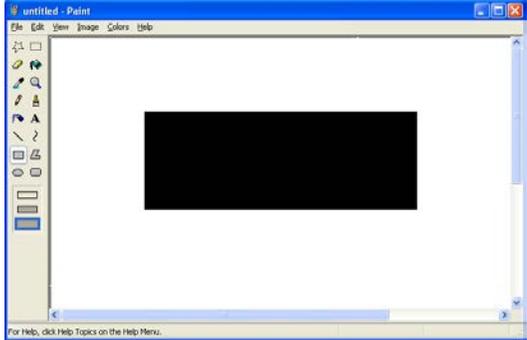
Note: The inhibit file bitmap must contain one bit per pixel (for example, monochrome).

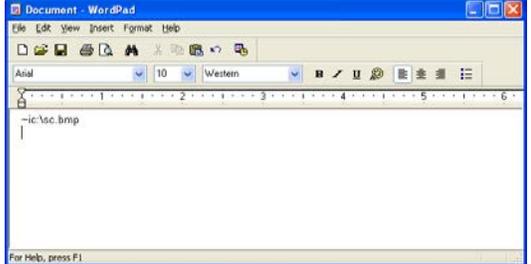
Print Size: If the inhibit bitmap is larger than the page print size, it is trimmed to fit it. The normal print size for a CR-80 card is 2.204 inches by 3.452 inches.

- 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 page print size, it will still be used by the driver and be referenced to the upper left hand corner of the ~i text object.

Bitmap Black Areas: The black areas of the bitmap are the areas that will correspond to where the inhibit material will prevent the transfer of dyes on to the card.

Generate the inhibit bmp file with any bitmap editor. The following procedure explains how this is done with Microsoft Paint.

| Step | Procedure | |
|------|---|--|
| 1 | <p>Create a bitmap file using Microsoft Paint.</p> <p>Notes: The size for Landscape orientation is Width 1035 pixels and Length 661 pixels. The size for Portrait orientation is Width 661 pixels and Length 1035 pixels. Set this under Paint > Image > Attributes. Select Black and White under Colors.</p> |  <p>Landscape</p> <p>Attributes</p> <p>File last saved: Not Available Size on disk: Not Available Resolution: 122 x 122 dots per inch</p> <p>Width: 1035 Height: 661</p> <p>Units <input type="radio"/> Inches <input type="radio"/> Cm <input checked="" type="radio"/> Pixels</p> <p>Colors <input checked="" type="radio"/> Black and white <input type="radio"/> Colors</p> <p>Portrait</p> <p>Attributes</p> <p>File last saved: Not Available Size on disk: Not Available Resolution: 122 x 122 dots per inch</p> <p>Width: 661 Height: 1035</p> <p>Units <input type="radio"/> Inches <input type="radio"/> Cm <input checked="" type="radio"/> Pixels</p> <p>Colors <input checked="" type="radio"/> Black and white <input type="radio"/> Colors</p> |
| 2 | <p>Place objects on the image, which correspond to the exact areas inhibited.</p> |  |
| 3 | <p>Fill the inhibit areas with black color.</p> |  |

| Step | Procedure | |
|------|--|---|
| 4 | Save the file as a BMP from within Microsoft Paint. |  |
| 5 | Add the '~i' command to the application file. (Note: In this case, Microsoft WordPad was used. With WordPad the '~' must be left justified.) |  |
| 6 | Create the rest of the card using the application. |  |
| 7 | Print the card from within the application. (Note: In this case, use File -> Print.) If the ~i text object is printed on the card, see Troubleshooting the Inhibit Panel. | |

10.1.4 Using the Test Print

The printer has a test print file sent to the printer to verify the Inhibit Panel functionality. This test image uses a pre-formatted inhibit area and will not test a user-defined inhibit bitmap.



| Step | Procedure |
|------|---|
| 1 | Bring up the Printer Preferences dialog through Start > Settings > Printers and Faxes . Right-click the Printer instance; then click Printer Preferences to select the Card tab. |
| 2 | Click Test Print . |

10.1.5 Troubleshooting the Inhibit Panel

If you are having trouble getting the Inhibit Panel to produce the expected results, verify the following information.

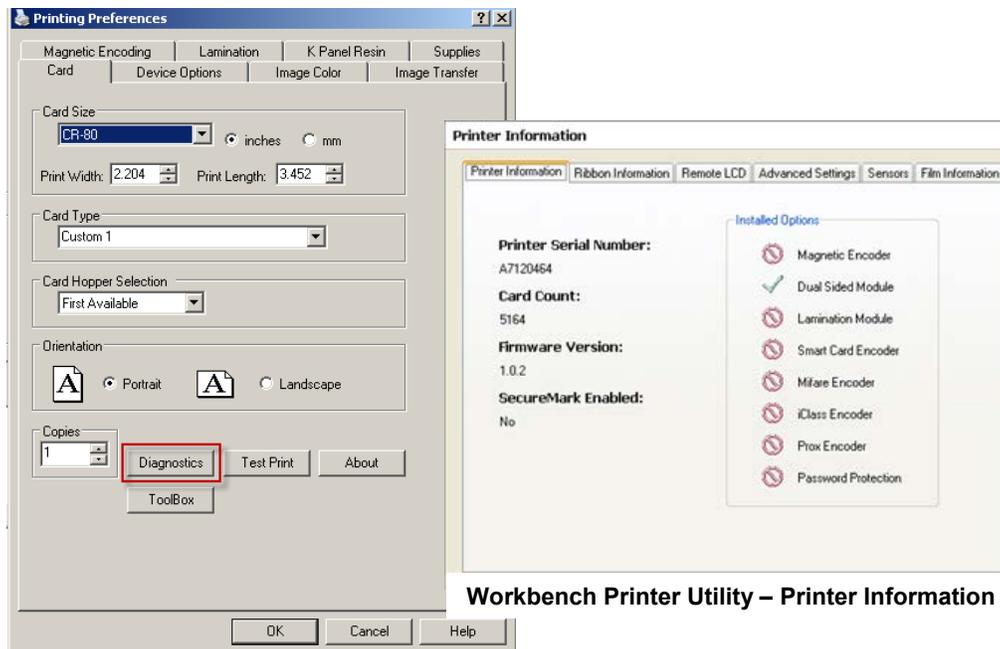
- You have used a lower case “~i”, not an upper case “~I”. Some applications have an auto-correct feature that will change the case on the small ‘i’.
- The bitmap file (being used) is at the location on the workstation (see notes above regarding shared printer instances) as specified by the text object.
- The bitmap file is monochrome (for example, black and white).
- The size of the bitmap image is large enough to cover the space you are seeking to inhibit.
Note: The printer resolution is 300 dpi on both the horizontal and vertical axis, which will aid you 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 your 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.

11 Firmware Updates

The purpose of this section is to provide the User with information on the internal software or Firmware, which controls all aspects of the Printer's operation. New Firmware versions may be released containing enhancements, such as improved reliability, added features or better print quality. New Firmware updates can be downloaded from the Internet.

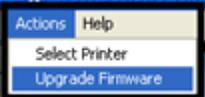
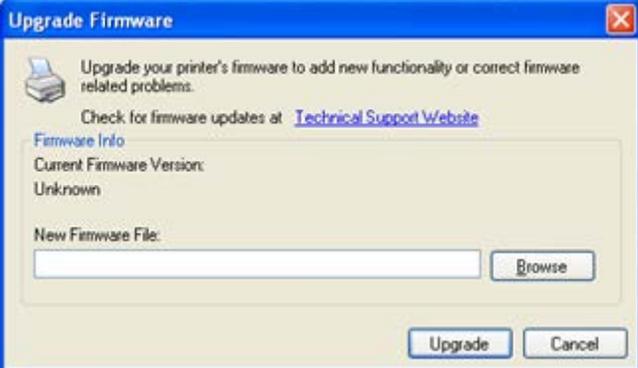
- Refer to the **Workbench Printer Utility User Guide** to download and install Firmware updates.
- **Important:** This is a new Printer. Once new Firmware is released and available (see Step 2), enlarged are Steps 3 through 14 with real world populated windows and dialogs. Until that time, review this procedure for future use.

11.1 Performing the Firmware Updates



Workbench Printer Utility – Printer Information

| Step | Procedure |
|------|---|
| 1 | Click Diagnostics to open the Workbench. Obtain the firmware from the manufacture website. |
| 2 | This will launch the Support page. <ul style="list-style-type: none"> • Click Firmware. • Using the dropdown menu, select the Printer. • Click Go. |
| 3 | Click Printer Name under Printer Firmware to begin download. |
| 4 | Click Save . |
| 5 | Click Save to save the file to the computer's Desktop. |
| 6 | Click Close to close this dialog when the download is completed. |
| 7 | From the computer's desktop, double-click the Firmware EXE file to expand. |
| 8 | Click Browse on the WinZip Self-Extractor window. |

| Step | Procedure | |
|------|---|--|
| 9 | Select the Desktop, and then click OK in the Browse for Folder dialog. | |
| 10 | <p>Click Unzip in the WinZip Self-Extractor window to unzip designated files.</p> <p>Note: If the firmware is in the FRM format then unzipping is not necessary.</p> |  |
| 11 | <p>Select Upgrade Firmware in the Actions dropdown menu. This brings up the Upgrade Firmware window.</p> |  |
| 13 | <ul style="list-style-type: none"> • Select Desktop from the Browse menu. • Click the .frm file. • Click Open. • Click Upgrade to send the Firmware to the Printer. | |

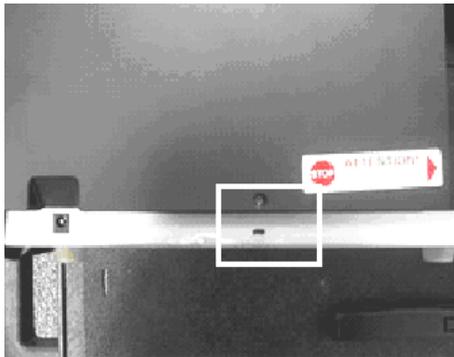
12 Appendix A: HDPii plus

This section only pertains to the HDPii plus.

| | |
|-------------------|---|
| 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 |
|-------------------|---|

12.1 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.

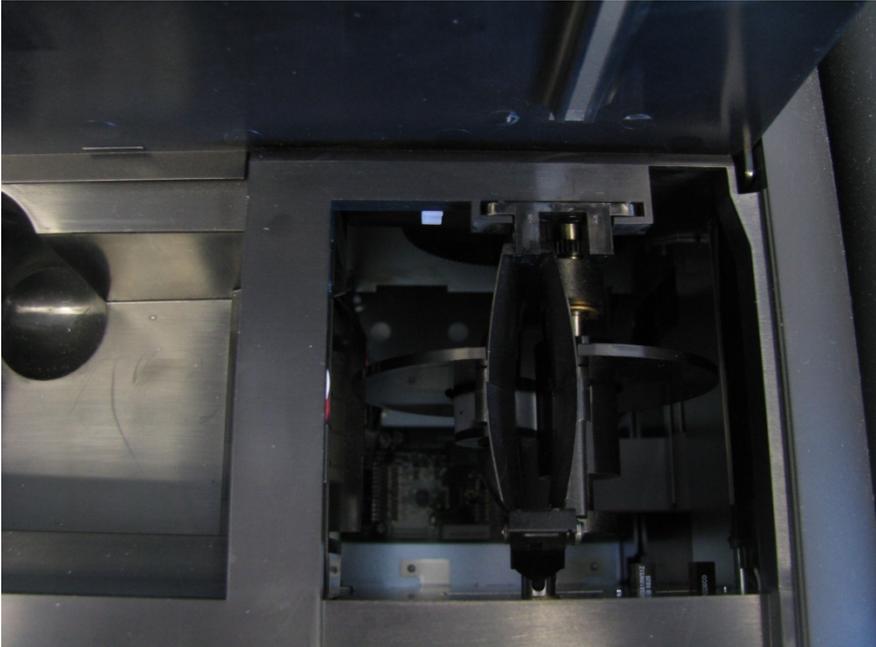
Note: HID Global does not sell any type of locking device, but provides this feature for your added security.

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.

12.1.1 Cleaning the Magnetic Encoder - HDPii Output Module

| Step | Procedure |
|------|--|
| 1 | <p>Open the front cover of the Output Module. Unlock and open the Top cover.</p>  |
| 2 | <p>Use the Long Alcohol soaked cleaning card. Remove from package. Work quickly as this will dry out.</p> |
| 3 | <p>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.</p>  |

| Step | Procedure |
|------|--|
| 4 | <p data-bbox="313 279 995 310">Insert the cleaning card into the flipper table slot at a slight angle</p>  <p>The image shows a close-up of a person's hand holding a white, rectangular cleaning card. The card is being inserted into a slot on the left side of a dark-colored card printer. The card is held at a slight angle, as described in the procedure. The printer's internal mechanism, including rollers and a flipper table, is visible through the slot.</p> |
| 5 | <p data-bbox="313 888 1101 919">Use the OLED Forward and Back buttons to move the card back and forth.</p> |