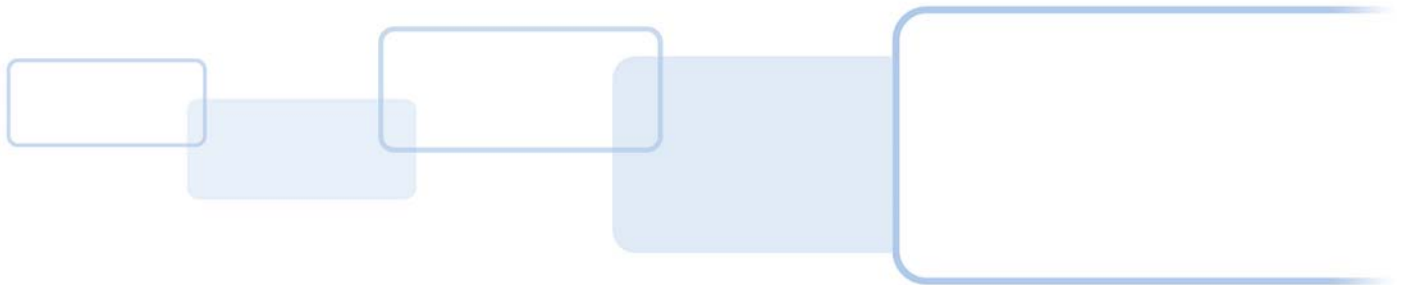# FARGO® C50 Card Printer User Guide

PLT-01277

Version: 1.2

November 2014

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Contents

Introduction and Specifications

FARGO C50 Card Printer User Guide At a Glance

This User Guide covers the information required to setup, install, and configure the printer driver options.

The following topics are covered in this User Guide:

Chapter 1: Introduction and Specifications

Chapter 2: Hardware User Interface

Chapter 3: Printer Preferences

Chapter 4: ToolBox

Chapter 5: Troubleshooting

Chapter 6: Cleaning

Chapter 7: Firmware Updates

1.1 Using this Document

Links are displayed in italic text. If the user clicks on a link, they will "jump" to that section in the document.

Hyperlinks to link to outside information are in underlined blue. Clicking one of these will open a webpage or another document the link "points" to.

1.2   Specifications

This section provides specific information on the Regulatory Compliances, Agency Listings, Technical Specifications and Functional Specifications for the C50 Card Printer.

1.2.1   Regulatory Compliance

UL	The Card Printer is listed under UL 60950-1 (2nd edition) Information Technology Equipment File Number: E145118 **Note:** This product is intended to be supplied by a Listed Power Unit marked Class 2 and rated for 24Vdc, 3.3A minimum.
CSA	The Printer manufacturer has been authorized by UL to represent the Card Printer as CSA Certified under CSA Standard C22.2 No. 60950-1-07 2nd edition **File Number:** E145118
FCC	The Card Printer complies with the requirements in Part 15 of the FCC rules for a Class A digital device.
CE	The Card Printer has been tested and complies with EN300-330-1, EN300-330-2, EN301-489-1, EN301-489-3, EN55022 class A, EN55024, EN6100-3-2, EN6100-3-3, EN60950-1. **Note:** Based on the above testing, the Printer manufacturer certifies that the Card Printer complies with the following European Council Directives and has placed the CE mark on the Card Printer. LVD 2006/95/EC, EMC 2004/108/EC, R&TTE 1999/5/EC, ROHS2 2011/65/EC
Environmental	ENERGY STAR, RoHS2, China RoHS, Power supply Efficiency level V minimum

1.2.1.1   Agency Listings

Emissions and Immunity Standards	FCC Part 15 Class A, RSS-GEN, RSS 210, CNS 13438, EN55022 Class A, EN55024, EN6100-3-2, EN6100-3-3, EN300-330-1, EN300-330-2, EN301-489-1, EN301-489-3, GB9254, GB 17625
Safety Standards	UL IEC 60950-1 (2nd edition), CSA C22.2 No. 60950-1-07(2nd edition), EN60950-1, GB4943, CNS14336
Additional Agency Listings	CCC, BSMI, KC

1.2.1.2   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, this interference is required to be corrected at the users expense.

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

1.2.1.3   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.

1.2.1.4   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。

1.2.1.5   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-14019 号です）
本製品は電波を使用した RFID 機器の読み取り□書き込み装置です。
そのため使用する用途□場所によっては、医療機器に影響を与える恐れがあります

1.2.1.6   Korea

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

1.3 Safety Messages

1.3.1 Safety Messages - United States

Symbol	Critical Instructions for Safety Purposes
Danger:	Failure to follow these guidelines results in personal injury or death. To prevent personal injury or death: • Reference the following safety messages before performing an operation. • Always remove the power cord prior to performing repair procedures, unless otherwise specified. • Ensure only qualified personnel perform these procedures.
ESD:	This device is electro statically sensitive. The device may be damaged if exposed to static electricity discharges. To prevent damage: • Reference the following safety messages before performing an operation. • Observe all established Electrostatic Discharge (ESD) procedures while handling cables in or near the Circuit Board and Printhead Assemblies. • Always wear an appropriate personal grounding device. • Always remove the Ribbon and Cards from the Printer before making any repairs, unless otherwise specified. • Remove jewelry and thoroughly clean hands before working on the Printer.
Caution:	This symbol warns of an electrical hazard that could result in personal injury or death.

1.3.2   Safety Messages - French

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

1.3.3   Safety Messages - Taiwan

繁體中文 射頻發射及安全指令 安全訊息（小心檢查）

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

1.3.4　Safety Messages - China

安全消息 （请仔细阅读）

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

1.4 Technical Specifications

Term	Function
Print Method	Dye Sublimation / Resin Thermal Transfer
Print resolution	300 dpi (11.8 dots/mm); continuous tone
Colors	Up to 16.7 million colors / 256 shades per pixel
Print Ribbon Options	• Full-color with resin black and overlay panel, YMCKO*, 250 prints • Resin black (standard and premium), 1000 prints • Resin green, blue, red, white, silver and gold, 1000 prints • Rewrite technology – No ribbon is required * Indicates the Ribbon type and the number of Ribbon panels printed where Y=Yellow, M=Magenta, C=Cyan, K=Resin Black, O=Overlay, F=Fluorescing Resin
Print Speed	• 7 seconds per card (K*) • 24 seconds per card (YMCKO*) • Print speed indicates an approximate batch 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. * Indicates the ribbon type and the number of ribbon panels printed where Y=Yellow, M=Magenta, C=Cyan, K=Resin Black, O=Overlay, F=Fluorescing Resin
Card Size and Types Supported	• CR-80 (3.375 in. L x 2.125 in. W / 85.6mm L x 54mm W) • CR-79 (3.313 in. L x 2.063 in. W / 84.1mm L x 52.4mm W
Accepted Standard Card Sizes	• CR-80 edge-to-edge (3.36 in. L x 2.11 in. W / 85.3mm L x 53.7mm W) • CR-79 (3.3 in. L x 2.04 in. W / 8 3.8mm L x 51.8mm W)
Accepted Card Thickness	• 10 mil • 20 mil • 30 mil • 40 mil
Accepted Card Types	• PVC or polyester cards with polished PVC finish • Monochrome resin required for 100% polyester cards • Optical memory cards with PVC finish • Rewrite
Input Hopper Card Capacity	50 Cards (.030 in. / .762 mm) + Manual Feed
Output Hopper Card Capacity	30 cards (.030 in. / .762 mm)
Card Cleaning	Each ribbon cartridge includes a new card-cleaning roller.
Printer Memory	32MB RAM
Operating Systems	Windows® XP/Vista™ (32 bit & 64 bit)/Server 2003 & 2008/Windows® 7 (32 & 64 bit)/Windows® 7(32 & 64 bit)/Linux®/MAC® OS X 10.5, 10.6, 10.7, 10.8
Interface	USB 2.0

Term	Function
Operating Temperature	65° F to 80° F (18° C to 27°C)
Humidity	20-80% non-condensing
Dimensions	8.8 in. H x 13.7 in. W x 7.9 in. D (224mm H x 348mm W x 201mm D)
Weight	7.5 lbs. (3.4 Kg)
Agency Listings	**Safety**: UL 60950-1, CSA C22.2 (60950-1), and CE; EMC; FCC Class A, CRC c1374, CE (EN 55022 Class A, EN 55024), CCC, BSMI, KCC
Supply Voltage	100-240 VAC, 1.6 A
Supply Frequency	50 Hz / 60 Hz
Warranty	Printer – Two years Printhead – Two years, unlimited pass with UltraCard®
Options	Printer Cleaning Kit
Software	FARGO Workbench™ Diagnosis Utility
Display	Status indicated by button color (red or blue), flashing, always on or always off.

1.5   Functional Specifications

This card printer utilizes two different, yet closely related printing technologies to achieve its remarkable direct-to-card print quality for dye-sublimation and resin thermal transfer.

1.6   Printer Components - Print Ribbons

Print ribbons are available in several versions to meet a variety of requirements:

- Resin-only
- Dye-sublimation-only
- Combination dye-sublimation / resin versions.

To make it easier to remember which print ribbons are which, a letter code has been developed to indicate the type of ribbon panels found on each ribbon. This letter code is as follows:

Y	= Dye-Sublimation Yellow Panel
M	= Dye-Sublimation Magenta Panel
C	= Dye-Sublimation Cyan Panel
K	= Resin Black Panel (Premium unless otherwise stated)
O	= Clear Protective Overlay Panel
F	= Fluorescing Panel

1.6.1   Ribbon Types and Print Counts

The following table lists print capability of each ribbon type.

Ribbon	Count
YMCKO – Full Color/Resin Black / Overlay	100
K – Standard Resin	1000
K – Premium Resin	1000
Colored Resin	1000

1.7   Printer Components - Blank Cards

Type	Description
Card Size	• CR-80 edge-to-edge (3.36 in. L x 2.11 in. W / 85.3mm L x 53.7mm W) • CR-79 (3.3 in. L x 2.04 in. W / 83.8mm L x 51.8mm W)
Card Surface	Suitable cards must have a polished PVC surface free of fingerprints, dust or any other types of embedded contaminants. In addition, cards must have a completely smooth, level surface for the printer to achieve consistent color coverage. Some types of proximity cards have an uneven surface that inhibits consistent color transfer. Some types of smart card chips are raised slightly above the card's surface, which also results in poor color transfer.
UltraCard Brand Cards	The UltraCard product line, available exclusively as part of HID Global's Fargo brand secure card issuance solutions, has a long standing reputation among dealers and end-users for consistent quality in construction. In addition to blank stock, the UltraCard line is available in a variety of configurations for magnetic stripe and other anti-counterfeiting features. UltraCard PVC cards are medium-durability cards for a glossy, photo quality finish. These cards are clean scratch-free cards for high-quality prints and extended printhead life.

1.8   Setup and Installation Procedures

The setup and installation procedure follows:

1. Unpack the printer and inspect the carton to ensure that no damage has occurred during transportation. Make sure that all supplied accessories are included with the unit.
2. See the Installation Guide for information on how to load the ribbon cartridge and card stock.
3. See the Installation Guide for how to connect the power to the printer.
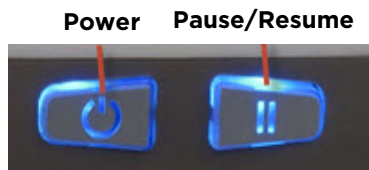
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Hardware User Interface

The Card Printer has two hardware user-interface features: buttons and beeps.

2.1   Card Printer Buttons

Card Printer Buttons

The card printer has two buttons that perform multiple functions. The light color of the buttons is blue, except when there is an error condition, which will be indicated in red.

2.1.1   Using the Power Button

The Power button initiates or interrupts electrical power to the printer.

- To start up the printer, press the **Power** button once. The buttons illuminate with a steady blue light.
- To deactivate the printer, press the **Power** button twice. The lighted buttons extinguish and become dark.
- The button also moves cards to the left along the card track toward the output hopper. Press the **Power** button to clear jammed cards.

2.1.2   Using the Pause/Resume Button

The Pause/Resume button enables the user to temporarily stop and continue the print process.

- To suspend printing, press the **Pause/Resume** button once. When printing stops, the button changes from steady to blinking.
- To continue printing, press the **Pause/Resume** button once again. The button returns to a steady glow.

2.1.3 Card Printer Beeps

The card printer beeps to indicate the successful completion of a setting or activity.

- A single beep generally indicates a successful change.
- One or more beeps signals the restoration of default values for settings on the Advanced Settings tab in ToolBox.

Printer Preferences

This section provides an overview of the **Printing Preferences** tabs.

There are some common buttons displayed on all screens:

Button	Description
OK	Closes the dialog box and saves the driver configuration changes since the dialog box opened.
Cancel	Closes the dialog box and discards configuration changes made since the dialog box opened.
Help	Displays Help topics specific to the active tab.
Default	Returns all settings to the default selection.

3.1 Card Tab

The **Card** tab has the options for the card type and positions, as well as access to diagnostics and calibrations.

Note: Never run cards with a contaminated, dull or uneven surface through the printer. Printing onto such cards will ultimately lead to poor print quality. Always store the card stock in its original packaging or in a clean, dust-free container. Do not print onto cards that have been damaged or soiled.

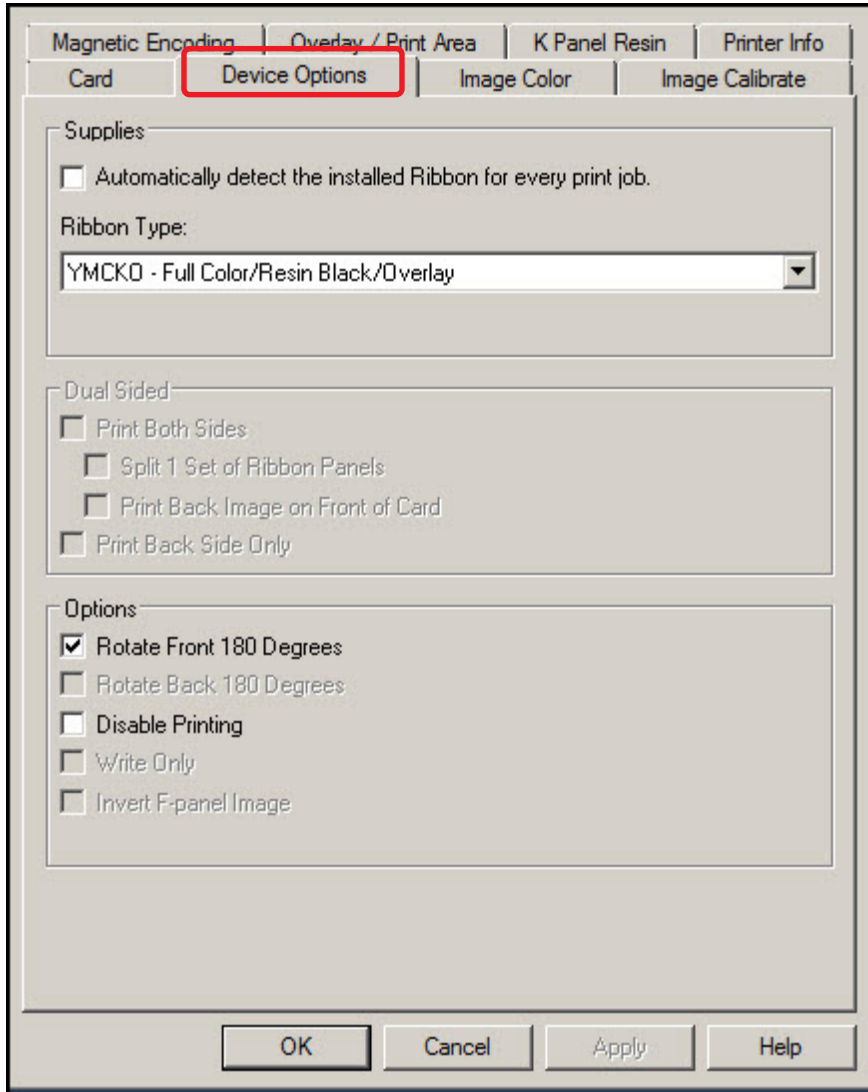| Group or Field	Description
Card Size	Select the Card Size option: **CR-80:** This is the default card size selection for the Card Printer with a print area 53.6mm x 85.5mm x 30mil (3.375 in. x 2.125 in. x 30 mil). **CR-79:** Use this selection to print to cards with a print area 53.6mm X 85.5mm X 30 mil (2.110 in. x 3.366in. x 30 mil). **Note:** These print area dimensions are 1mm (.04 in.) larger than the actual card size. This extension enables the Printer to overprint images so 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 Print Width dimensions listed in the Card Size panel.
Print Width	These two items display the actual card size.
Print Length	
Card Thickness	Select the Card Thickness (mil) value from the drop-down list. Options are: • 10 mil • 20 mil • 30 mil • 40 mil
Orientation	Select either the Portrait or Landscape option. **Portrait:** The card will print in a vertical orientation. **Landscape:** The card will print in a horizontal orientation.
Copies	Set the number of copies to be printed. Range is 1 to 10000.
Informational Buttons	
Diagnostics	Click **Diagnostics** to launch the Workbench Printer Utility.
ToolBox	Click **ToolBox** to access the ToolBox window and options.
Test Print	After installation of a compatible ribbon cartridge in the printer. Open the printer driver settings: 1. From the computer's **Start** menu, select **Devices and Printers**. 2. Right-click the **Card Printer** entry under **Printers and Faxes**. 3. Select **Printing Preferences**. 4. Select the **Card** tab, and click **Test Print**. An image is sent to the printer.
About	Select **About** to display the copyright information, the driver's version number and date code.

3.2   Device Options Tab

The **Device Options** tab has the ribbon options as well as image printing position on the card.

| Group or Field	Description
Supplies	
Automatically detect the installed ribbon for every print job The printer driver automatically detects the installed ribbon. To manually select the ribbon type, clear the checkbox option and select the ribbon from the Ribbon Type drop-down menu.	

Group or Field	Description
Ribbon Type	Select the ribbon type that is loaded in the printer. • **YMCKO**: Yellow, Magenta, Cyan, Resin Black, Overlay • **YMCKOK**: Yellow, Magenta, Cyan, Resin Black (2 Panels), Overlay • **K**: Black Standard Resin • **K**: Black Premium Resin • **Colored Resin**: Resin Yellow, Resin Magenta, Resin Cyan
Dual Sided	Not available in the C50 Card Printer.
Options	
Rotate Front 180 Degrees	Select this option to rotate the image on the front of the card by 180 degrees when printed
Disable Printing	Select this option to prohibit the printer from printing.
Write Only	This option is only available when the selected **Ribbon Type** is **NONE**. See *Section 3.2.1: Write Only*.

3.2.1 Write Only

Select this option to use rewritable cards. The default setup is for the printer to first erase the entire card then write new information on the card. There is no option to select specific areas to erase. To print or erase a section, use the Overlay/Print Area tab. Select the specific area in the same manner as a print job with a color ribbon.
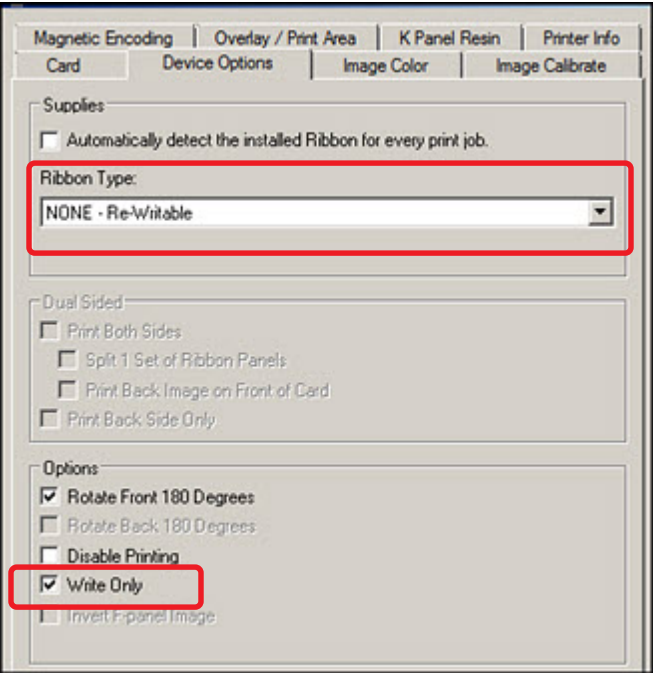
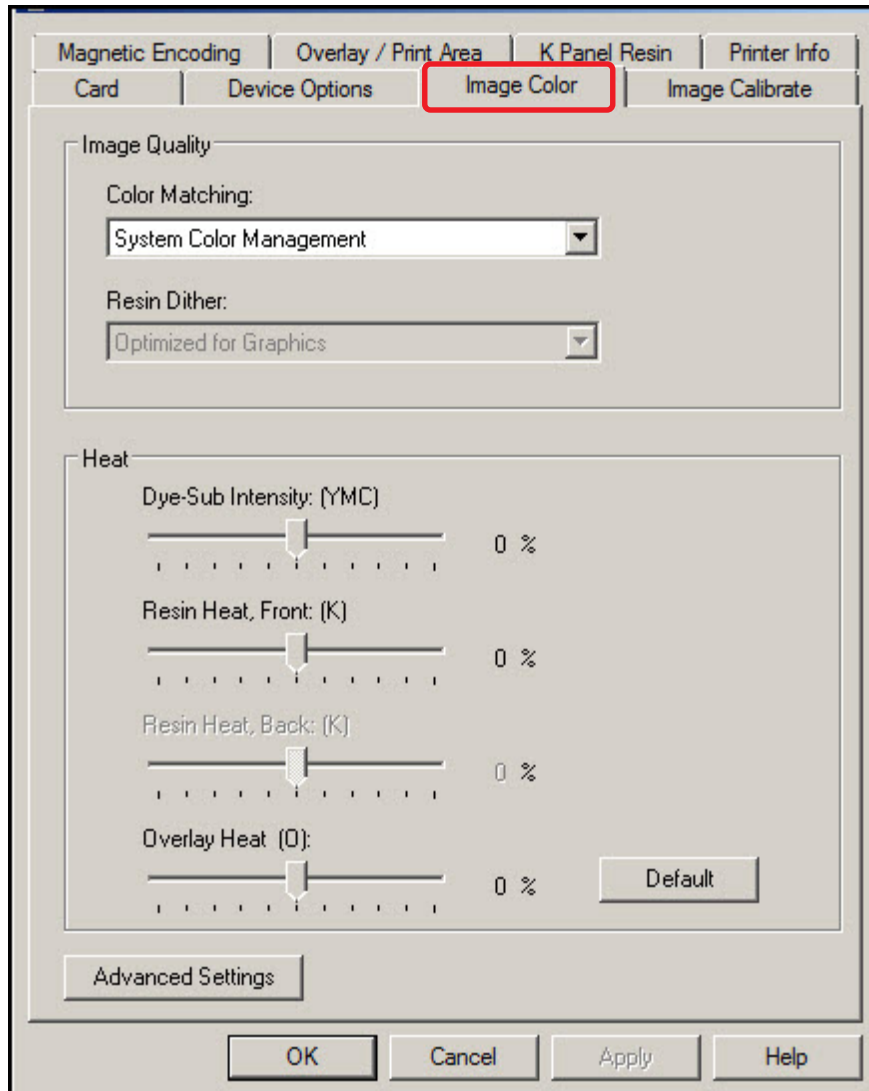To erase many cards, use the FARGO Workbench Re-Writable Card Eraser option. It does not print, It only erases.
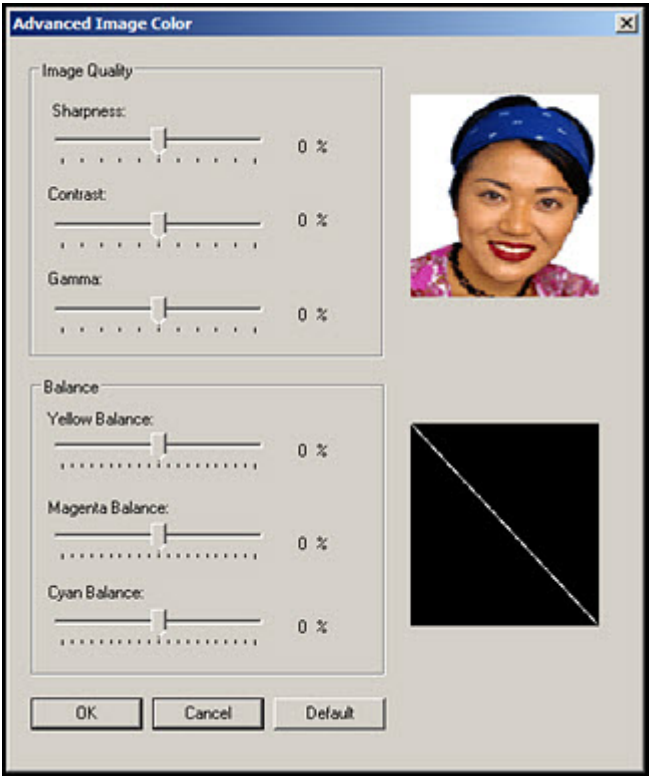
Note: No ribbon is used with rewritable cards. Do not load a ribbon into the printer when using this process. Printing on a rewritable card with a ribbon will ruin the card.

3.3   Image Color Tab

The **Image Color** tab has the options for adjusting the color printed onto the card.
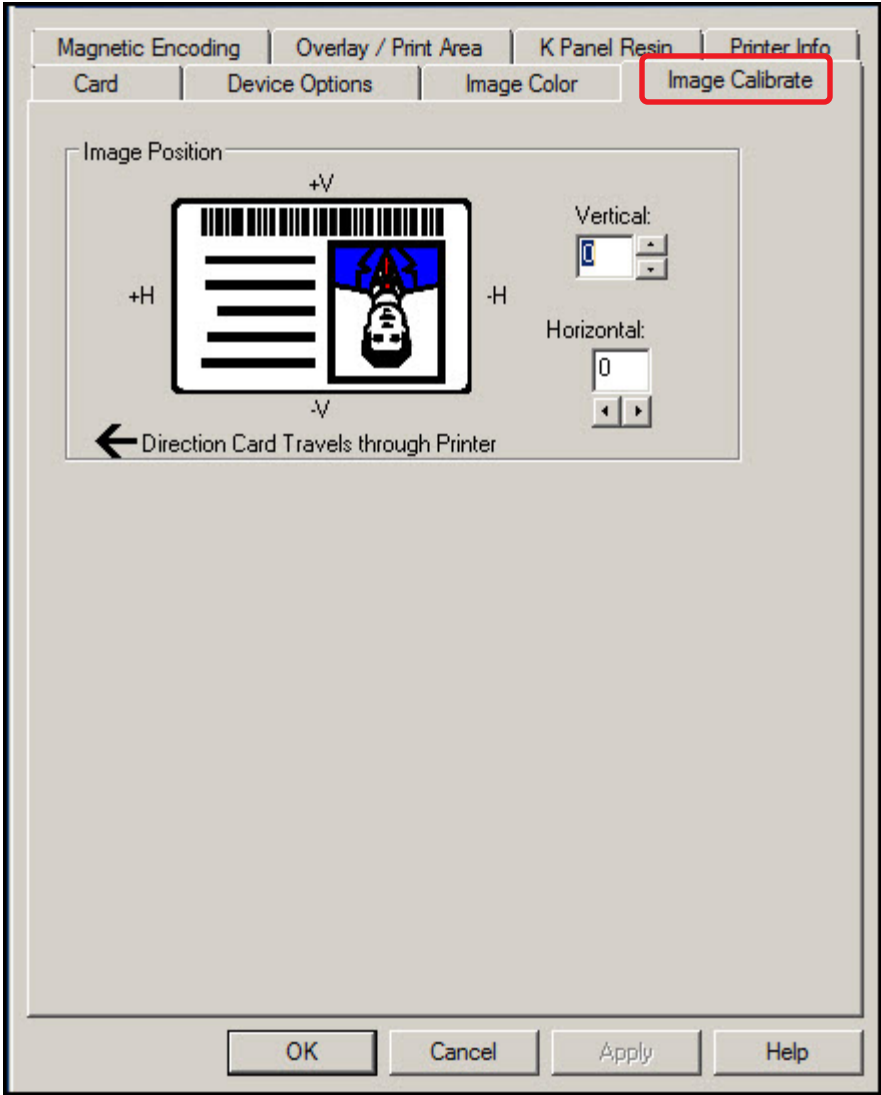
Group or Field	Description
Image Quality	
Color Matching	Select one of the following options from the drop-down menu. **None:** • If interested in print speed rather than print color • If color correcting an image that has been previously printed • If using third-party color matching software. **System Color Management:** Allows the printer driver to make color corrections through a complex color-matching algorithm. **Note:** This option shifts colors so the image more closely matches how they appear on screen. **Algebraic:** to use the Algebraic color-matching algorithm.
Resin Dither	Resin Dither is available when the resin ribbon is installed. This process produces different shades of gray by varying the patterns of black and white dots. There are no gray dots at all. There are two selections available: • Optimized for Graphics • Optimized for Photos
Heat	
Dye-Sub Intensity: (YMC)	Adjusting this slide controls the overall darkness and lightness of the dye-sub printed image. Move the slide to the left to use less heat in the printing process, resulting in a lighter print. Move the slide to the right to use more heat, resulting in a darker print. **Note:** This slide only affects those images printed with dye-sublimation ribbon panels (YMC).
Resin Head, Front	Adjusting this slide controls the amount of heat the printer uses when printing with the resin black panel. Move the slide to the left to use less heat in the printing process, resulting in a lighter or less saturated print. Move the slide to the right to use more heat, resulting in a darker or more saturated print. **Note:** This control can be helpful for fine-tuning the sharpness of resin text and bar codes.
Overlay Heat (O)	Move the slider to the left to use less heat on the overlay during the printing process. Move the slider to the right to use more heat.
Advanced Setting button	Clicking this opens the **Advanced Image Color** window.
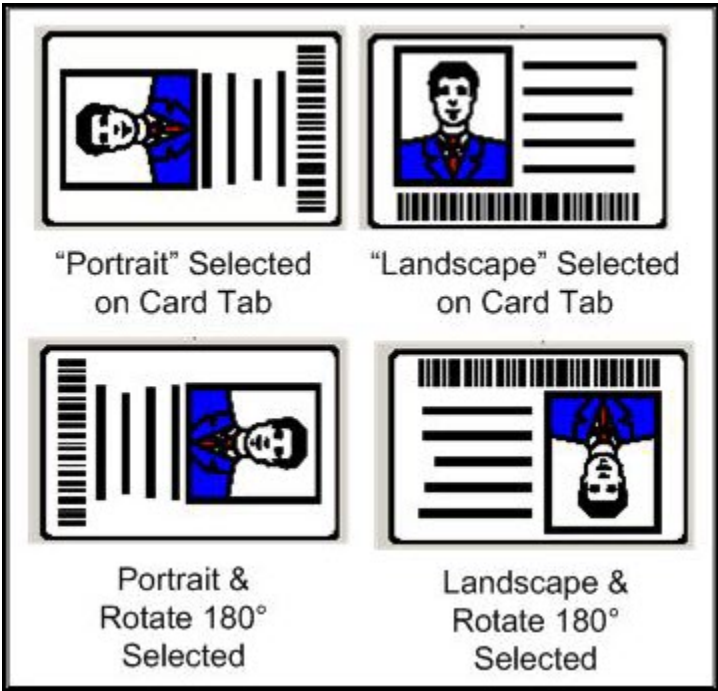
Group or Field	Description
Advanced Image Color	Adjust the sliders as needed to improve image quality. • Move the slide to the left (-) for less sharpness / contrast / gamma / color. • Move the slide to the right (+) for more sharpness / contrast / gamma / color. Click **OK** to accept any variance from the default values and return to the **Image Color** tab window. Click **Cancel** to negate all changes and return to the **Image Color** tab window. Click **Default** to clear changes back to the default settings for this window.

3.4 Image Calibrate Tab

The **Image Calibrate** tab has the adjustments to the image position on the card.

Group or Field	Description
Image Position	Adjust the image position values by clicking the arrow buttons next to the **Vertical** and **Horizontal** fields. These values ensure that the cards always remain in the same position as they travel through the printer (regardless of image orientation).

Vertical	Use the Vertical adjustment to move the image toward the top or bottom of the card. • A positive number moves the image toward the top. • A negative number moves the image toward the bottom. The maximum value for the Vertical adjustments is ±100 Pixels (10 Pixels = 0.03inches (.8mm).
Horizontal	Use the Horizontal adjustment to move the image toward the left or right side of the card. • A positive number moves the image toward the left. • A negative number moves the image toward the right. The maximum value for the Horizontal adjustments is ±100 Pixels (10 Pixels = 0.03inches (.8mm).

The card Illustration rotates according to the selection of Portrait, Landscape (Card tab) or Rotate Front 180 Degrees (Device Options tab).

The outline around the illustration remains constant in the landscape orientation.

"Portrait" Selected on Card Tab

"Landscape" Selected on Card Tab

Portrait & Rotate 180° Selected

Landscape & Rotate 180° Selected

3.5　Magnetic Encoding Tab

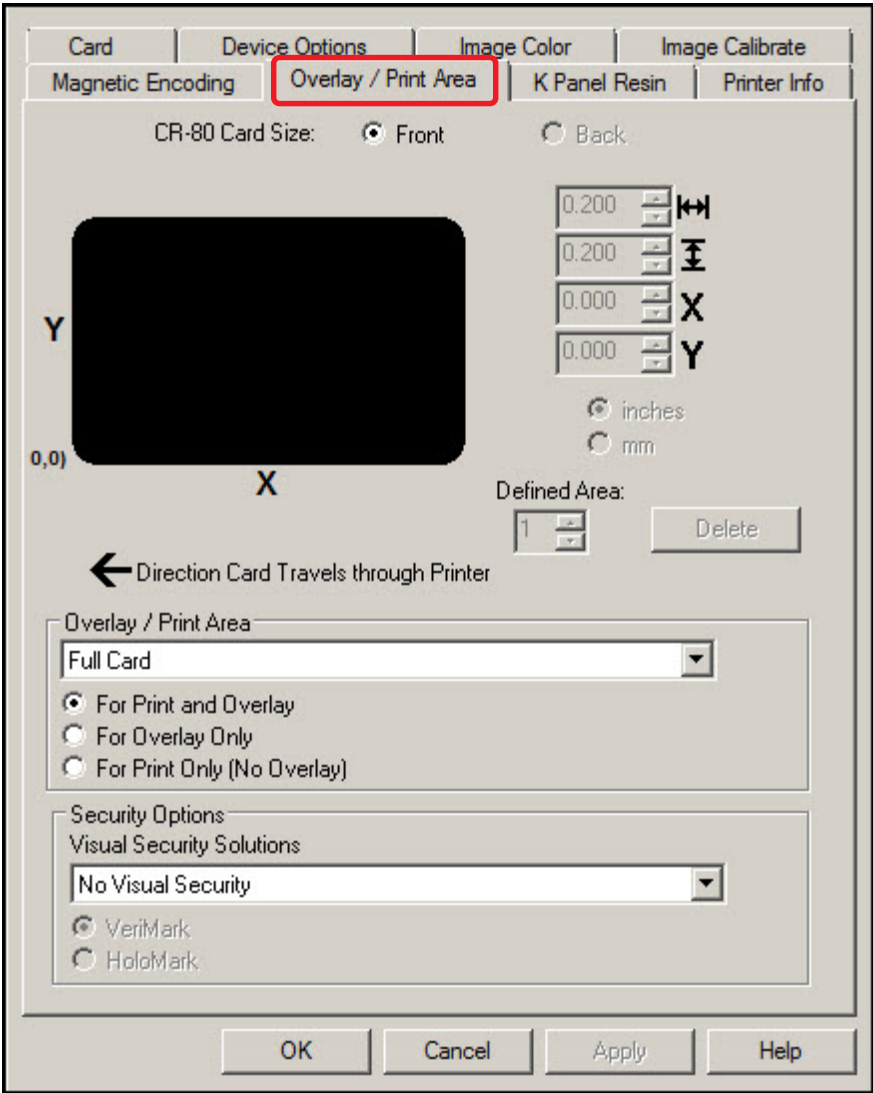Reserved (although currently displays as a tab).

3.6   Overlay / Print Area Tab

The **Overlay / Print Area** tab contains the options to control and customize where the overlay (O) panel and/or the print area appear on the card. By default, this option is set to print and overlay the entire card.

The orientation of the card display area is determined by the orientation specified on the Card tab.

Group or Field	Description
Overlay / Print Areas	To define an overlay or print area, select that option in the overlay / print field. • **Full Card**: Select this option to overlay and/or print the entire card. • **Defined Area(s)**: Select this option to overlay and/or print only in the selected and defined area(s). • **Undefined Area(s)**: Select this option to overlay and/or print in the space outside the selected and defined area. • **Omit Smart Chip Area**: Select this option to overlay and/or print only in the space outside the standard location of a smart chip. • **Omit Mag Strip Area**: Select this option to overlay and/or print only in the space outside the standard location of an ISO-standard magnetic stripe. • **Omit Signature Area**: Select this option to overlay and/or print only in the space outside the standard location of a signature panel. See *Section 3.6.1: Defining an Overlay or Print Area*
For Print and Overlay	This option applies the defined area to both the print and overlay processes.
For Overlay Only	The defined area applies only to the overlay process. The entire card prints and only the overlay is affected.
For Print Only (No Overlay)	The defined are applies only to the print process. Overlay is disabled.
Security Options	
Visual Security Solutions™	Use this field to enable and select a visual security option. The default value for all cards is No Visual Security. When one of the options is selected, the overlay/print area feature is disabled and the security options become selectable. See *Section 3.6.4: Visual Security Solutions*.
Verimark	This option is reserved for future use.
HoloMark	Use this option for hologram security.

3.6.1   Defining an Overlay or Print Area

To define an overlay or print area:

1. Click the drop-down list in the **Overlay / Print Area** field and select the option.

2. When an option is selected, a default black area displays on the card design area grid.

3. Click and drag to enlarge the area and move it to the preferred location on the card. The size and coordinates of the area update in the number fields using the units specified, inches or mm.
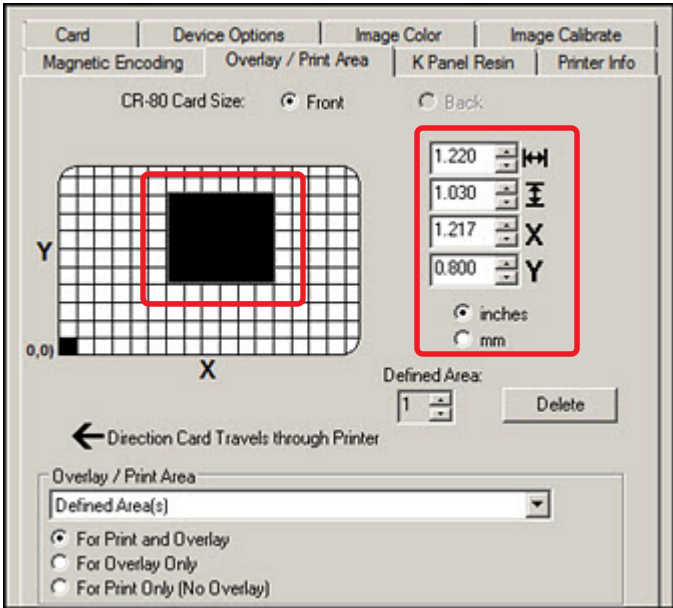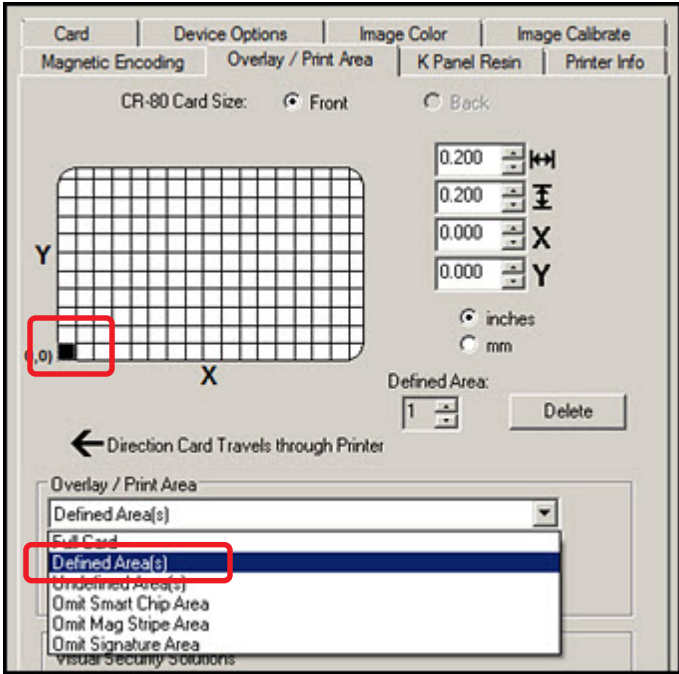
4. Up to five areas can be defined.

3.6.2 Defining additional areas

1. After the first area is defined, select 2 in the Defined Areas spin box.
2. The second area begins again at the 0,0 location.
3. Click and drag to enlarge the area and move it to the preferred location on the card.
4. This procedure can be done up to the five area limit.
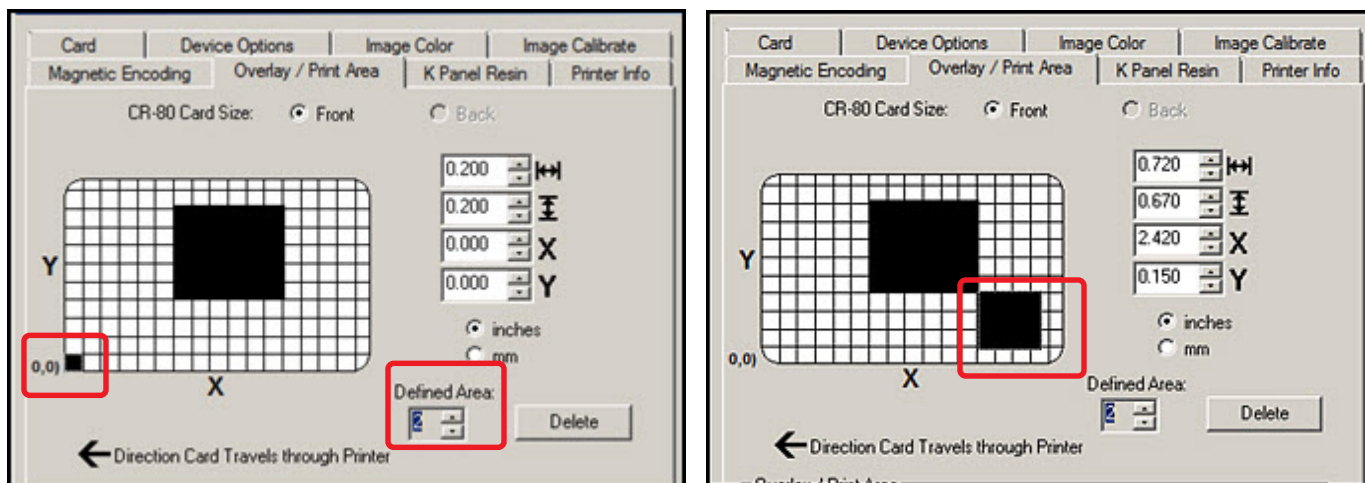
3.6.3 Deleting a Defined Area

To delete one or more defined areas:

1. Select the area to be deleted.
2. Click **Delete**.

3.6.4   Visual Security Solutions
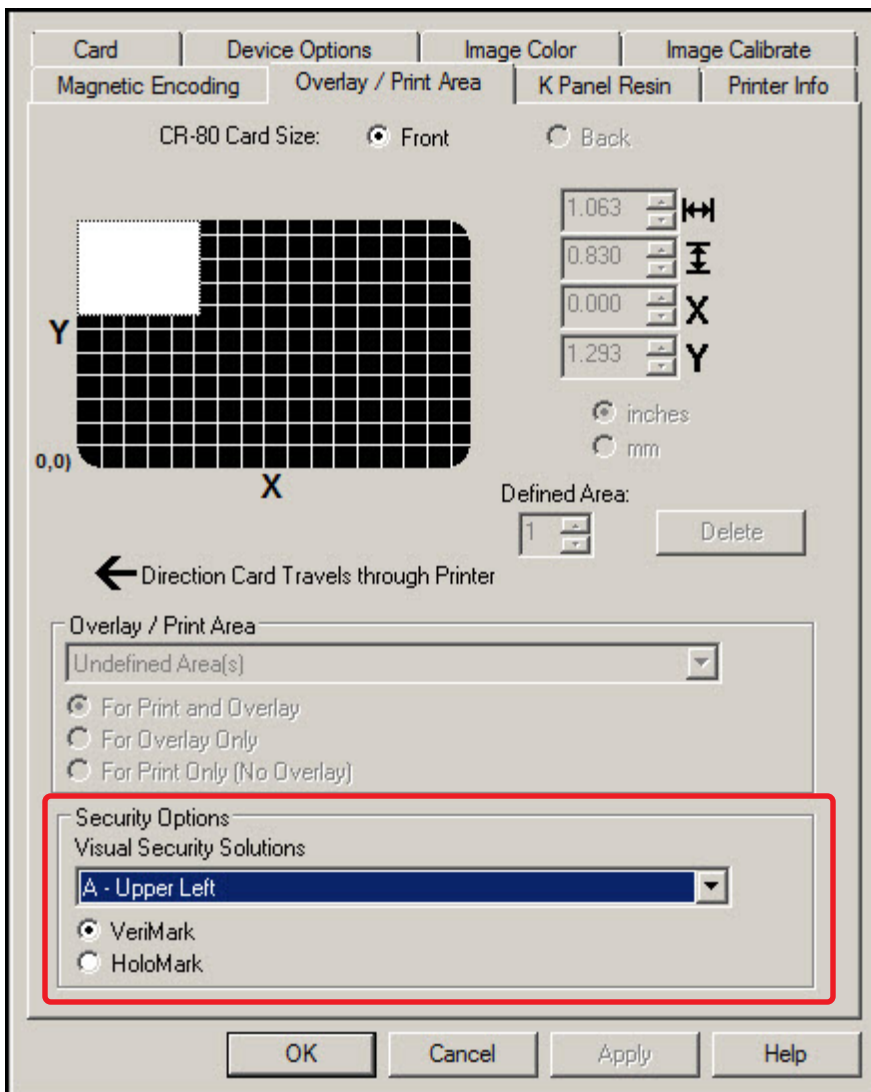
This field presents options based on the orientation of the card in the template.

Landscape designs offer

- A – Upper Left
- B – Upper Right
- C – Lower Left
- D – Lower Right

Portrait designs offer

- E – Upper Left
- F – Upper Right
- G – Lower Left
- H – Lower Right

3.7 K-Panel Resin Tab

The **K-Panel Resin** tab contains the controls for indicating the position where the resin black (K) panel of a full-color ribbon is printed. If a ribbon without a resin black panel is installed in the printer, these options are grayed out and unavailable.

The orientation of the card display area is determined by the orientation specified on the Card tab.
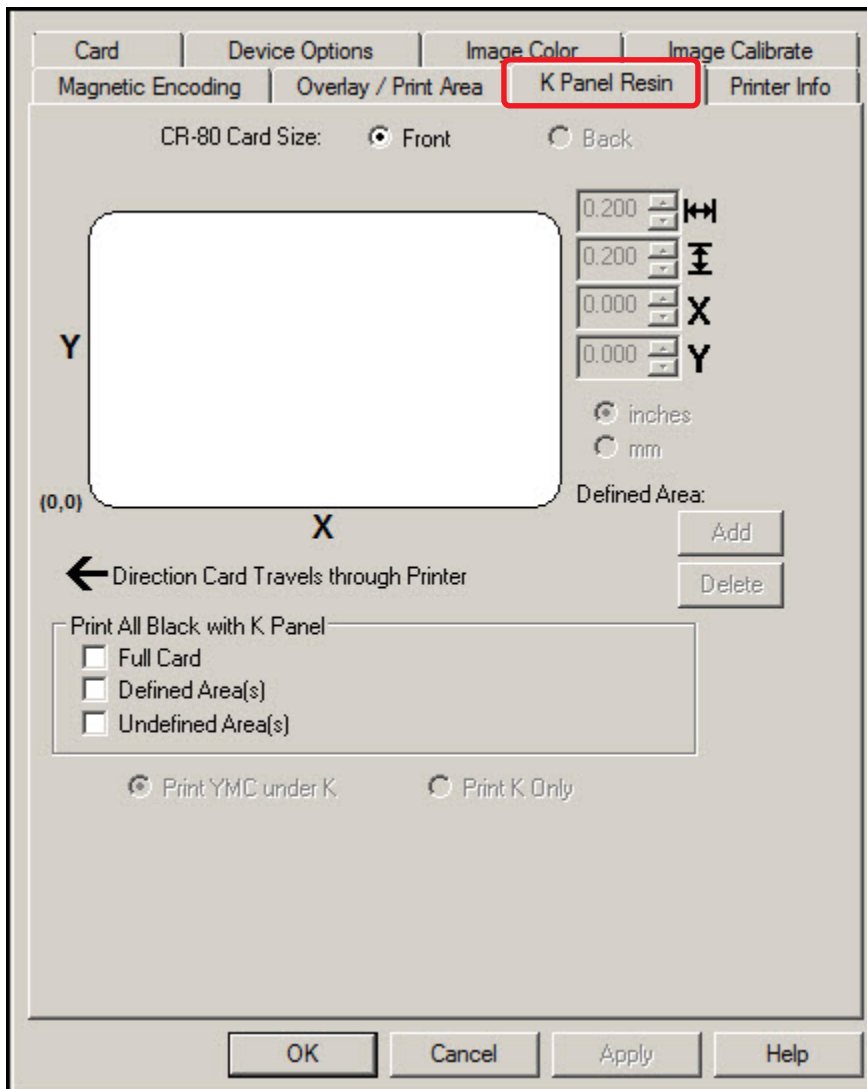
Group or Field	Description
Print All Black With K-Panel	This area includes three options: • Full Card • Defined Area(s) • Undefined Area(s)
Full Card	Select this option to print the resin black (K) panel for all black found within all areas of the image.

Group or Field	Description
Defined Area(s)	Select this option to overlay and/or print only in the selected and defined area(s).
Undefined Area(s)	Select this option to overlay and/or print in the space outside the selected and defined area.
Print YMC Under K	Select "**Print YMC under K**" to print all black in the designated areas with the yellow (Y), magenta (M) and cyan (C) ribbon panels directly beneath the resin black (K) panel. This combination provides a gradual transition between the resin black text or bar code.
Print K Only	Select "**Print K Only**" to print using the resin black (K) panel onto a white background to maximize the sharpness of printed text and bar codes.

3.8　Printer Info Tab

The **Printer Info** tab contains the supply information about the medias installed on the printer:

- Ribbon Type
- Reorder Number
- Card Count
- Printer Serial #
- Firmware Version
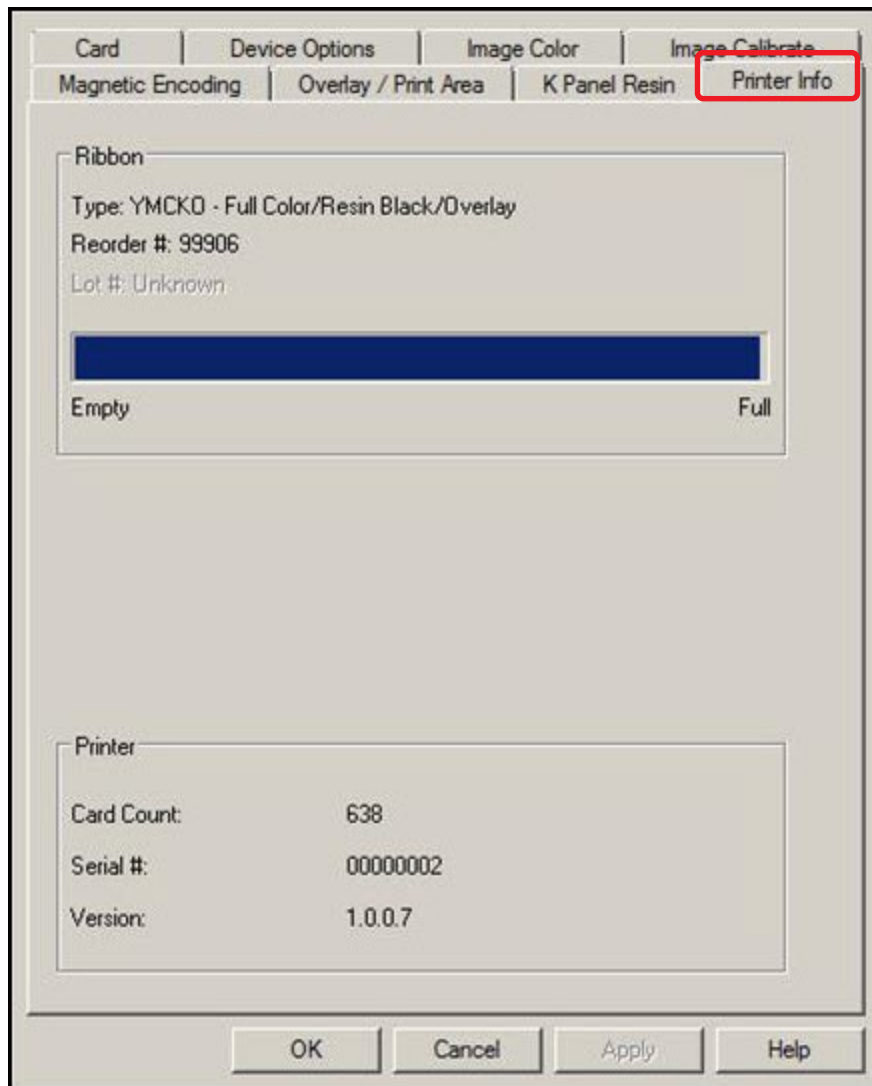
Note: Graphic for information **ONLY**. **DO NOT** use to order supplies.

ToolBox

This section provides an overview of the **ToolBox** tabs.

There are some common buttons displayed on screens:

Button	Description
OK	Closes the dialog box and saves the driver configuration changes since the dialog box opened.
Cancel	Closes the dialog box and discards configuration changes made since the dialog box opened.
Help	Displays Help topics specific to the active tab.
Default	Returns all settings to the default selection.

4.1 Configuration Tab

The **Configuration** tab has two sections: **Event Monitoring** and **Set Language**.

Group or Field	Description
Event Monitoring This section selects events that result in notification or displays prompt for the user. The default setting is to monitor four conditions:	
Low Ribbon	Notifies the user that the amount of ribbon remaining for use in the cartridge is diminishing. When error displays, a **Do not show this message again** message allows the user to suppress the message during the current printing session.

Group or Field	Description
Clean Printer	Notifies the user the printer requires cleaning and provides a **Clean** button to start the cleaning process. **Note**: The printer cleaning notification dialog displays when 3000 cards have been printed. The number of cards can be changed on the Advanced Settings tab. See *Section 4.4: Advanced Settings Tab*
Error Status	Notifies the user that an error status exists
Password Prompt	Requires the user to enter a security password before the printer driver accepts a print job.
Set Language	This section enables the selection of the language used for printer driver messages. The default printer language is English.

4.2   Calibrate Ribbon Tab

The **Calibrate Ribbon** tab enables the user to start the ribbon calibration. Follow the directions on the screen to perform this procedure.

Configuration	Calibrate Ribbon	Clean Printer	Advanced Settings

Ribbon Sensor Calibration

1. Ensure that the ribbon cartridge is removed.
2. Ensure the Printer's cover is closed.
3. Click on the Calibrate button.

The Printer will beep twice if the procedure was successful, once if the procedure failed. Click on the OK button to complete the procedure.

Calibrate

OK   Cancel   Help

4.3 Clean Printer Tab

The **Clean Printer** tab has the instructions to clean the printer.

Additional cleaning can be done as needed. See *Chapter 6: Cleaning*.
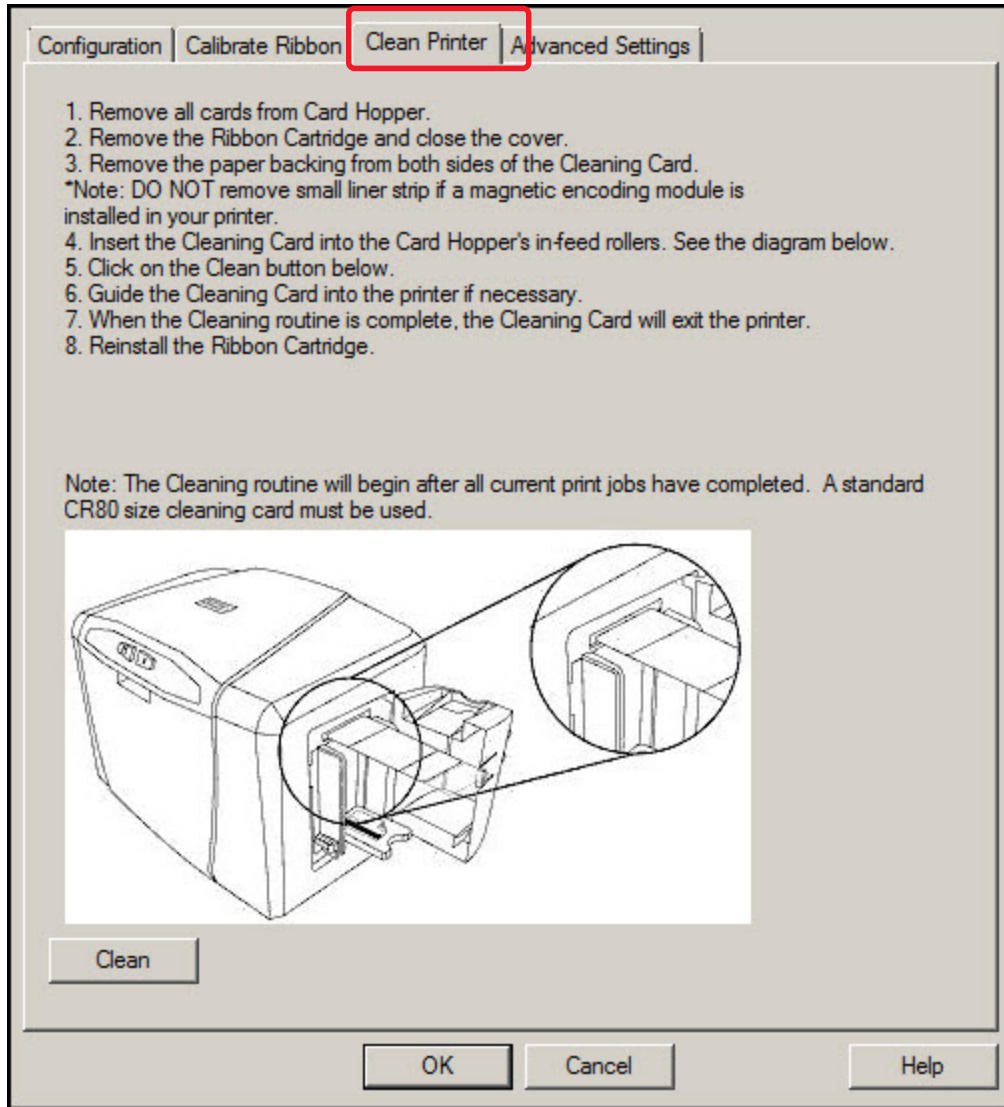
4.4 Advanced Settings Tab

The **Advanced Settings** tab contain the adjustments for the internal printer settings.

Adjustment is typically required in connection with troubleshooting.

Customize the settings for each printer and save the settings within the printer memory.

CAUTION: In general, do not adjust these settings. However, under rare circumstances, adjustment is necessary. Ensure there is advanced knowledge prior to making these adjustments.
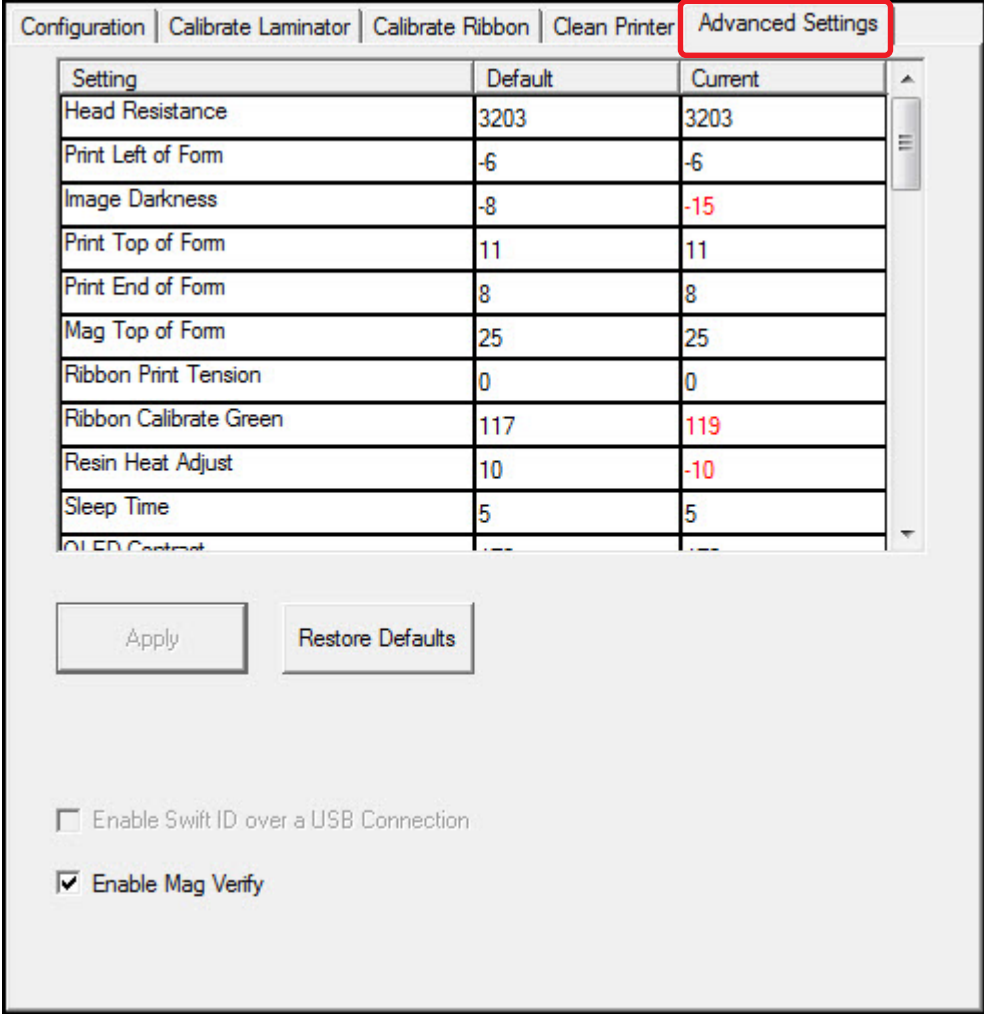
Group or Field	Description
Setting	This column displays the type of setting.
Default	This column displays the default setting value.
Current	This column displays the current setting value.

Group or Field	Description
Apply	This option applies the changed values. Change the current value by clicking the field to activate the control, enter the new value, and click **Apply** or **OK** to apply the change. The change to the firmware value is confirmed by one beep from the printer.
Restore Defaults	This option restores all factory default values. To restore the factory default values, click **Restore Defaults** and click **Yes** on the Settings confirmation window.

4.4.1 Settings and Troubleshooting

Setting	Description	Troubleshooting
Head Resistance	Printhead resistance is set to an incorrect value.	Locate the actual resistance value on the printhead, for example, R=XXX.
Print Left of Form	Adjusts the vertical position of the printed image on the card; so it appears centered.	Reserved
Image Darkness	Adjusts the overall darkness of the printed image by increasing or decreasing the amount of heat used by the printhead when printing.	Lighten the printed image by clicking ▼ or enter the exact negative value decreasing the printhead heat. Darken the image by clicking ▲ or entering a positive value increasing the amount of printhead heat. **IMPORTANT:** If this setting is set too high, the ribbon may jam or break.
Print Top of Form	Adjusts the length-wise or horizontal position of the printed image on the card (so it appears to be centered)	Reserved
Ribbon Print Tension	Adjusts the tension (drag) on the ribbon during printing.	Increase the value to increase tension. To decrease tension, decrease the value. **Note:** Small adjustments are recommended. Too high or too low tension can cause the ribbon to break.
Ribbon Calibrate Green	Reserved	Reserved
Resin Heat Adjust	Adjusts the darkness of black resin text and bar codes if they appear faded or too light or dark.	Increase the value to darken the print. Decrease the value to lighten the print.
Sleep Time	Adjusts the time until the printer stops energizing the transfer roller, which conserves energy.	Increase the setting to delay the sleep mode. Disable sleep mode with a 0 value. The counter for this setting starts after standby time has elapsed.
OLED Contrast	Reserved	Reserved
Ribbon Calibrate Blue	Reserved	Reserved

Setting	Description	Troubleshooting
Cleaning Rate	Adjusts the number of cards printed before the printer displays a message to indicate cleaning is needed.	The default value is 3000. To increase the frequency of cleaning, lower the value. **Note:** The card count on the **Printer Info** tab does not reset when cleaning completes.
Ribbon Green LED Level	Reserved	Reserved
Ribbon Blue LED Level	Reserved	Reserved
Head Home Offset	Reserved	Reserved
Head Print Offset	Reserved	Reserved
Head Contact Offset	Reserved	Reserved
Head Queue Offset	Reserved	Reserved
Head Card Thickness Offset	Reserved	Reserved
10 Mil Card Queue Offset	Reserved	Reserved

Chapter 5

Troubleshooting

The purpose of this section is to provide the user with specific procedures for recovering the printer from an error condition.

If problems are encountered beyond the situations described below, contact support.hidglobal.com.

5.1   Communications Errors

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

1. Confirm that the system meets the minimum requirements:
   - IBM-PC or compatible.
   - Windows 7 (32 bit & 64 bit), Windows XP (32 bit), Windows 2003 (R1 and R2 32 bit), Windows 2008, R2 (32 bit and 64 bit), Vista (32 bit and 64 bit),
   - Pentium™ class 500 MHz computer with 256 MB of RAM or higher
   - 500 MB free hard disk space or more
   - USB Port

2. Confirm the correct installation of the printer driver.
   Note: This pertains especially if an obsolete driver was recently removed.
   a. Close the software program.
   b. Reboot the computer.
   c. Select **Control Panel > Devices and Printers > Card Printer**.
   d. Right-click Card Printer
   e. Select **Printing Preferences > Card > About**.
   f. Check the date and version number of the printer driver.

3. Print a test print:
   a. Select **Start > Devices and Printers > Card Printer (USB)**.
   b. Right-click Card Printer (USB).
   c. Select **Printing preferences > Card > Test Print**.

4. Determine whether adequate disk space is available.
   Note: A large volume of temporary files on the computer can cause communications errors.

5.1.1   Error and Status Messages

Error Message	Description	Troubleshooting
Card Eject Error	A card is not successfully ejected from the printer.	Press the **Power** button repeatedly to move the card toward the output hopper.
Card Hopper Empty	No cards are loaded in the input hopper.	Place cards in the input hopper.
Card Jam	Multiple cards are located in the printer.	Press the **Power** button repeatedly to move all cards toward the output hopper.
Card Not Found	The printer is unable to feed a card from the input hopper.	Ensure that cards are available and loaded correctly. Press the **Pause/Resume** button. To cancel the print, click **Cancel** Print.
Cover Open	The printer cannot print when the cover is open.	Close the cover.

General Error	The printer does not print for an unspecified reason.	1. Power the printer off by pressing the **Power** button twice.
		2. Open the cover and remove the ribbon cartridge. Check for a jammed or broken ribbon.
		  • If the ribbon is not jammed or broken, reinstall the cartridge.
		  • If the ribbon is jammed or broken, replace it with a compatible cartridge.
		3. Close the cover and press the **Power** button once to restore power.
		4. Close the software program.
		5. Reboot the computer.

Headlift Error	The printhead does not move up / down successfully.	1. Open the cover, remove the ribbon cartridge and press the **Power** button two times to power down the printer. 2. Check for any obstructions in the printhead are or mechanism. Remove any obstructions. 3. Reinstall the ribbon cartridge and close the cover. 4. Press the **Power** button to return power to the printer. 5. The power off and back on procedure can reset the printhead or transfer headlift motor.
Invalid Ribbon	The printer is compatible with selected types of ribbons. An incompatible ribbon is installed. OR The Ribbon Type on the Device Options tab is set incorrectly.	Verify the **Ribbon Type** on the **Device Options** tab is set correctly. If incorrect, select the matching ribbon type. Open the cover and remove the ribbon cartridge. Install a compatible cartridge and close the cover.

Error Message	Description	Troubleshooting
No Ribbon Installed	No ribbon is installed. OR The ribbon is jammed in the cartridge. OR The cartridge RFID tag is corrupt.	1. Open the cover and check for a ribbon cartridge. If no cartridge is present, install a ribbon and close the cover. 2. If a ribbon cartridge is present, remove the cartridge and verify the ribbon can move freely and is not upside-down in the cartridge. 3. Verify the **Ribbon Type** on the **Device Options** tab is set correctly. 4. Test with a new ribbon to verify the RFID tag.
Printer Needs Cleaning	The number of cards set in the Cleaning Rate setting is reached.	The default value is 3000. Two options are available: **Clean Now** or **Remind Me**. To run the cleaning routine immediately, click **OK**. To delay the cleaning routine, select the **Remind Me** option and select one of four options: • Never • In 10 Prints • In 50 Prints • In 100 Prints
Ribbon Break/Jam	The ribbon is jammed or broken in the cartridge.	1. Open the cover and remove the cartridge. 2. Verify the ribbon can move freely. 3. If the ribbon is broken, tape the ends of the ribbon together and wind any excess onto the take-up spool. 4. Reinstall the cartridge, close the cover and press the **Pause/Resume** button. To cancel the print, click the **Cancel Print** button.
Ribbon Miscue	The ribbon is not able to find the next panel correctly.	1. Open the cover and remove the ribbon cartridge. 2. Verify the ribbon is not broken or upside down in the cartridge. • If the ribbon is not broken, reinstall the cartridge, close the cover and press the **Pause/Resume** button. • If the ribbon is broken, tape the ends of the ribbon together and wind any excess onto the take-up spool. Reinstall the cartridge, close the cover and press the **Pause/Resume** button. To cancel the print, click the **Cancel Print** button.
Ribbon Out	The print ribbon is used to its maximum capacity.	1. Install a qualified ribbon into the ribbon cartridge and press the **Pause/Resume** button. 2. Verify the ribbon is not broken or upside down in the cartridge and press the **Pause/Resume** button. 3. Verify the **Ribbon Type** on the **Device Options** tab is set correctly.
Ribbon RFID Error	The printer is incompatible with the ribbon installed.	Install a ribbon cartridge that is compatible with the printer. Press the **Pause/Resume** button.
Ribbon Sensor Error	The ribbon temperature sensor is out of range.	Calibrate the ribbon sensor: 1. Click on **Cancel Print**. 2. Open the cover and remove the ribbon cartridge. 3. Close the cover. 4. Select **Card > ToolBox > Calibrate Ribbon > Calibrate.**

Error Message	Description	Troubleshooting
The Supply information is unavailable at this time.	The printer driver does not automatically detect the ribbon type.	1. Click **OK**. 2. Click **Device Options**. 3. Clear the **Automatically detect the installed Ribbon for every print job** check box. 4. Select the **Ribbon Type** drop-down button and select the installed ribbon type.
Wrong Ribbon Installed	The printer is compatible with selected types of ribbons. An incompatible ribbon is installed. OR The Ribbon Type on the Device Options tab is set incorrectly.	1. Verify the **Ribbon Type** on the **Device Options** tab is set correctly. If incorrect, select the matching ribbon type. 2. Open the cover and remove the ribbon cartridge. 3. Install a compatible cartridge and close the cover.
Unable to Feed Card	The printer is unable to feed a card from the input hopper.	1. Ensure that cards are available and loaded correctly. 2. Press the **Pause/Resume** button. To cancel the print, click **Cancel Print**.
Unable to Read Settings from the Printer	The printer driver does not detect the printer.	1. Click **OK**. 2. Verify that the printer is powered on. 3. Check for communications errors. See *Section 5.1: Communications Errors*.

Cleaning

Important: Clean the printer on a regular basis to ensure that the printer consistently produces high quality output.

WARNING:

Disconnect the printer's power cord whenever performing any type of maintenance procedure unless otherwise directed.

AVERTISSEMENT:

Débranchez le cordon d'alimentation de l'imprimante à chaque fois d'effectuer tout type de procédure de maintenance, sauf indication contraire.

The cleaning described in this section is additional to the information on the **Clean Printer** tab of the ToolBox.

For detailed information, reference the Cleaning Kit instructions in the kit.

6.1 Using the Required Supplies

For the maintenance procedures outlined for the printer, a **Printer Cleaning Kit** is required, available from the reseller. This optional kit includes the following:

- Printhead cleaning swabs pre-moistened with 99.99% isopropyl alcohol for cleaning the printer's printhead.
- Cleaning cards with an adhesive backing for cleaning the printer's rollers.
- Gauze pads pre-moistened with 99.99% isopropyl alcohol for cleaning the printer's interior and exterior.
- Alcohol cards pre-moistened with 99.99% isopropyl alcohol for cleaning the printer's platen rollers, card feed rollers.

NOTE: As with any electronic device, internal components of the printer, such as the printhead may be damaged if exposed to static electrical discharges. To avoid potential damage, always wear an appropriate personal grounding device, such as a wrist strap (with integral resistor) connected to an ESD ground. At a minimum, make positive contact with the bare metal chassis of the printer with the hand prior to touching any internal electrical components.

6.2 Cleaning the Printer

6.2.1   Cleaning Inside the Printer

1. Open the cover.
2. Remove the ribbon cartridge from the printer.
3. With compressed air, blow out all visible areas of the printer interior to remove debris.
   Note: If there is not a can of compressed air, use a cleaning pad from the printer cleaning kit to wipe out all visible areas inside the printer. Remove any debris that may be inside.

WARNING:

Disconnect the Printer's power cord whenever performing any type of maintenance procedure unless otherwise directed.

AVERTISSEMENT:

Débranchez le cordon d'alimentation de l'imprimante à chaque fois d'effectuer tout type de procédure de maintenance, sauf indication contraire.

4. Re-install the printing supplies.
5. Close the cover.

6.2.2   Cleaning Outside the Printer

The printer has a durable casing that should retain its luster and appearance for many years.

Clean it only with a cleaning pad from the printer cleaning kit.

CAUTION:

Do not use cleaning solvents of any kind or spray the printer with a cleaner!

ATTENTION:

Ne pas utiliser de solvants de nettoyage de toute nature ou vaporiser de l'imprimante avec un nettoyant!

6.2.3   Cleaning the Printhead

To maintain consistent print quality:

- Clean the printhead every time the print ribbon is changed
- Perform this procedure approximately every 3000 prints.

CAUTION:

Never use a sharp tool or abrasive object to clean the printhead. Watches, rings, bracelets and other jewelry can damage the printhead.

ATTENTION:

Ne jamais utiliser un outil pointu ou un objet abrasif pour nettoyer la tête d'impression. Montres, bagues, bracelets et autres bijoux peuvent endommager la tête d'impression.

1. Remove watches, rings, bracelets and other jewelry.

2. Unplug the power cord from the electrical outlet.

3. Open the cover and remove the ribbon cartridge.

4. Use an alcohol swab (squeeze to saturate the tip) from the printer cleaning kit to firmly wipe back and forth across the surface of the printhead.

5. Reinstall the ribbon cartridge and close the cover when the printhead is completely dry.

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Chapter 7

Firmware Updates

New firmware releases provide enhancements, such as improved reliability, added features or better print quality. Updates are available for download from the Internet at <u>support.hidglobal.com</u>.

Refer to the **Workbench Printer Utility User Guide** to download and install firmware updates.

7.1   Upgrade Information

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

1. Run the FARGO Workbench Printer Utility.
2. If running FARGO Workbench Version 3 or greater:
    a. Select the Update Manager Workbench Utility.
    b. Select the printer(s) to update.
    c. Click the **Select Firmware file…** option to locate or enter this latest firmware file (FRW-00373_DTC100_v2.3.3.20.frm).
    d. Search for the firmware file, or enter the name and click **Open**.
    e. Click **Begin Updating Firmware** to send the file to the printer(s).
3. If running a FARGO Workbench release prior to Version 3:
    a. Choose the Application Menu at the upper left and select Upgrade Firmware.
    b. Enter the firmware file name or click **Browse** to find and select this latest firmware file (FRW-00373_DTC100_v2.3.3.20.frm).
    c. Click **OK** to send the file to the printer(s).
4. Restart the printer if it does not automatically restart.

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Revision History

Date	Description	Version
November 2014	Updated liability and trademark acknowledgments and copyright statements. Updated Japan cert. Updated to current format. Updated global customer support information.	1.2
July 2013	Ribbon print count change.	1.1
April 2013	First Release	1.0