CIM
CARD IMAGING MASTER

SunLight Lux

Card Printer

USER GUIDE

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The revision number for this document will be updated to reflect changes, corrections, updates and enhancements to this document.

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Section 1: 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 SunLight LUX Card Printer User Guide.

Term	Description
UL	The Card Printer is listed under UL 60950-1 (2nd edition) INFORMATION TECHNOLOGY EQUIPMENT **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. 60950-1-037 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, EN60950-1:2006 + All: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

Agency Listings

Term	Description
Emissions Standards	FCC Part 15 Class A, RSS-GEN, RSS 210 ,CNS 13438, CNS 14336, EMC 2004/108/EC, R&TTE 1999/95/EC,GB9254-2008, GB 17625
Safety Standards	UL IEC 60950-1 (2nd edition), CSA C22.2 No. 60950-1-07, LVD 2006/95/EC,GB4943

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 will be required to correct the interference at his own expense.

Canada

This Class A digital apparatus complies with Canadian ICES-003.

C’et appareil numerique de la classe A est comforme a la norme NMB-003 du Canada.

 **Caution:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Mandatory information for users

Information for users of **"professional"** type products:

*pursuant to art. 13 of Italian Legislative Decree n. 151 of 25 July 2005, "Implementation of Directives 2002/95/EC, 2002/96/EC and 2003/108/EC on the restriction of the use of hazardous substances in electrical and electronic equipment and the disposal of waste***"**

The crossed out waste bin symbol applied on the equipment or its package indicates that at the end of its useful life the product must be collected separately from other waste.

Separate collection of this equipment at the end of its life is organised and managed by the manufacturer. Any user who wishes to dispose of this equipment must therefore contact the manufacturer and abide by the system the latter has adopted to permit separate collection of end-of-life equipment.

Adequate separate collection aimed at subsequent recycling, treatment and environmentally compatible disposal of the dismantled equipment contributes to avoiding possible negative impacts on the environment and health and favours the reuse and/or recycling of the materials making up the equipment.

Illegal disposal of the product by the owner shall be subject to the administrative sanctions provided for under current laws and regulations.

Communication obligatoire aux utilisateurs

Modèle de communication aux utilisateurs de produits de type **"professionnels"**

RECOMMANDATION AUX UTILISATEURS

Conformément à l'art. 13 du Décret législatif du 25 juillet 2005, N°151 "Mise en œuvre des Directives 2002/95/CE, 2002/96/CE et 2003/108/CE, sur la réduction de l'utilisation de substances dangereuses dans les appareils électriques et électroniques ainsi que sur l'élimination des déchets."

Le symbole de la poubelle barrée reporté sur l'appareil ou sur son emballage indique que le produit à la fin de sa vie utile ne doit pas être jeté avec les autres déchets.

Le tri différencié d'un lave-vaisselle arrivé à la fin de sa vie est organisé et géré par le fabricant. L'utilisateur souhaitant se défaire de son appareil doit donc contacter le fabricant et se conformer au système que celui-ci aura adopté pour permettre un ramassage séparé de l'appareil.

Le tri différencié permettant d'entreprendre le recyclage de l'appareil à éliminer, ainsi qu'un traitement et une élimination compatible du point de vue environnemental contribuent à éviter les effets négatifs possibles sur l'environnement et sur la santé et favorisent le réemploi et/ou le recyclage des matériaux constituant l'appareil.

Une élimination frauduleuse du produit par son propriétaire comporte l'application des sanctions administrative prévue par la norme en vigueur.

Obblighi di informazione agli utilizzatori

Modello di informazioni agli utenti dei prodotti di tipo **"professionale"**

INFORMAZIONE AGLI UTENTI

ai sensi dell'art. 13 del Decreto Legislativo 25 luglio 2005, n. 151"Attuazione delle Direttive 2002/95/CE, 2002/96/CE e 2003/108/CE, relative alla riduzione dell'uso di sostanze pericolose nelle apparecchiature elettriche ed elettroniche, nonché allo smaltimento dei rifiuti **"**

Il simbolo del cassonetto barrato riportato sull'apparecchiatura o sulla sua confezione indica che il prodotto alla fine della propria vita utile deve essere raccolto separatamente dagli altri rifiuti.

La raccolta differenziata della presente apparecchiatura giunta a fine vita e' organizzata e gestita dal produttore. L'utente che vorrà disfarsi della presente apparecchiatura dovrà quindi contattare il produttore e seguire il sistema che questo ha adottato per consentire la raccolta separata ell'apparecchiatura giunta a fine vita.

L'adeguata raccolta differenziata per l'avvio successivo dell'apparecchiatura dismessa al riciclaggio, al trattamento e allo smaltimento ambientalmente compatibile contribuisce ad evitare possibili effetti negativi sull'ambiente e sulla salute e favorisce il reimpiego e/o riciclo dei materiali di cui è composta l'apparecchiatura.

Lo smaltimento abusivo del prodotto da parte del detentore comporta l'applicazione delle sanzioni amministrative previste dalla normativa vigente.

Verpflichtung zur Information der Benutzer

Info-Formular für die Benutzer von **"professionellen"** Produkten

INFORMATION FÜR DIE BENUTZER

gem. Art. 13 der Gesetzesverordnung Nr. 151 vom 25. Juli 2005 "Durchführung der Richtlinien 2002/95/EG, 2002/96/EG und 2003/108/EG über die Reduzierung des Gebrauchs von gefährlichen Substanzen in Elektro- und Elektronikgeräten sowie über die Abfallentsorgung. **"**

Das Symbol der durchgekreuzten Mülltonne auf dem Gerät oder auf der Verpackung bedeutet, dass das Produkt am Ende seiner Nutzungsdauer getrennt vom übrigen Müll gesammelt werden muss.

Die Wertstofftrennung für dieses Gerät am Ende seiner Nutzungsdauer wird vom Hersteller organisiert und durchgeführt. Der Benutzer, der das Gerät entsorgen möchte, muss sich daher an den Hersteller wenden und sich nach dem System richten, das dieser für die Durchführung der Wertstofftrennung für das Gerät am Ende seiner Nutzungsdauer vorgesehen hat.

Die getrennte Sammlung für die anschließende Wiederverwendung, Behandlung oder umweltfreundliche Entsorgung des nicht mehr benutzten Geräts trägt zur Vermeidung von negativen Auswirkungen auf die Umwelt und auf die Gesundheit bei und unterstützt die Wiederverwendung und/oder das Recycling der Materialien, aus denen das Gerät besteht.

Bei vorschriftswidriger Entsorgung des Produkts durch den Benutzer werden die von den geltenden Bestimmungen vorgesehenen Verwaltungsstrafen angewandt.

Obligaciones de información a los usuarios

Modelo de las informaciones a los usuarios de los productos de tipo **"profesional"**

INFORMACIÓN A LOS USUARIOS

*Al amparo de lo establecido en el art. 13 del Decreto Legislativo n° 151 de 25 de julio de 2005 "Aplicación de las Directivas 2002/95/CE, 2002/96/CE y 2003/108/CE sobre la restricción a la utilización de sustancias peligrosas en los aparatos eléctricos y electrónicos, así como para la gestión de los residuos***"**

El símbolo del contenedor de basura tachado que lleva el aparato o dibujado en el embalaje indica que el producto, cuando sea inservible, tiene que recogerse separadamente de los demás residuos.

La recogida selectiva del presente aparato cuando sea inservible está organizada y gestionada por el fabricante. El usuario que tenga que deshacerse del presente aparato tendrá que ponerse en contacto con el fabricante y seguir el sistema que éste último ha adoptado para permitir la recogida selectiva del aparato inservible.

La adecuada recogida selectiva del aparato para proceder con la gestión sucesiva de reciclado, tratamiento y gestión ambientalmente compatible contribuye a evitar posibles efectos negativos en el medio ambiente y en la salud y asimismo favorece la reutilización y/o el reciclado de los materiales con los que está compuesto el aparato.

La gestión abusiva del producto por parte del poseedor comporta la aplicación de las sanciones administrativas previstas por la normativa vigente.

Environmental Protection (China-RoHS)

环境保护(中国- RoHS)

Environmental Protection Use Period is based on the product being used in an office environment.

环保使用期限是基于本产品用于办公室环境

Traditional Chinese RF Emissions and Safety Statements

传统中文 射频放射及安全指令

安全信息 (小心检查)

标记	重要的安全事项说明安全
危险: 	**未按照说明安装可能造成人员伤亡。** 在可能产生潜在安全问题的地方有警示标记。(如左图所示)。 **为了防范人员伤害**，做带此警示标记的操作前，参考安全信息提示。 **为了防范人员伤害**，在没有特别说明的情况下，修理前关掉电源开关。
小心: 	**此设备对静电很敏感。如果受到静电放电，设备会被损害。** 在可能产生潜在静电安全问题的地方有警示标记。(如左图所示)。 **为了防范损害设备**，做带此警示标记的操作前，参考安全信息提示。 **为了防范损害设备**，在排放电路板和打印头联合装置里面或附近的电线时，请注意观察所有的静电放电设备。 **为了防范损害设备**，贴身佩戴合适的接地装置 (比如：手腕上带一个高质量的接地皮带以免受到可能的伤害)。 **为了防范损害设备**，如果没有特殊说明，在做任何修理前，请取下打印机上的色带和卡。 **为了防范损害设备**，在使用打印机之前，请摘下戒指和手上饰品，仔细清洗手上的油脂。

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。

Simplified Chinese

如何使用本手册

是一本整个证卡打印机的故障排除和服务手册。本手册旨在帮助安装人员和技术人员快速有效地查找相关过程、组件和术语。安装人员或技术人员可根据自己的喜好，高效地使用本手册的电子文档或纸面文档。

安全消息(请仔细阅读)

符号	安全事项的重要说明
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。 **为了确保人身安全**，只能由有资格的人员执行这些过程。

安全消息(请仔细阅读)

符号	安全事项的重要说明
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。

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 Full-color half-panel with resin black and overlay panel, YMCKO*, 350 prints Full-color with two resin black panels and overlay panel, YMCKOK*, 200 prints Resin black and overlay panel, KO*, 500 prints Dye-sublimation black and overlay print, BO*, 500 prints Resin black (standard and premium), 1000 prints Resin green, blue, red, white, silver and gold, 1000 prints * Indicates the Ribbon type and the number of Ribbon panels printed where Y=Yellow, M=Magenta, C=Cyan, K=Resin Black, O=Overlay
Print Speed	7 seconds per card (K*) 12 seconds per card (KO*) 24 seconds per card (YMCKO*) 31 seconds per card (YMCKOK*) 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.
Card Size and Types Supported	• CR-80 (3.375"L x 2.125"W / 85.6mmL x 54mmW) • CR-79 (3.313”L x 2.063”W / 84.1mmL x 52.4mmW

Accepted Standard Card Sizes	• CR-80 edge-to-edge (3.36"L x 2.11"W / 85.3mmL x 53.7mmW) • CR-79 (3.3”L x 2.04”W / 83.8mmL x 51.8mmW)
Accepted Card Thickness	.009” - .040” / 9 mil – 40 mil / .229mm – 1.016mm
Accepted Card Types	PVC or polyester cards with polished PVC finish; monochrome resin required for 100% polyester cards; optical memory cards with PVC finish;
Input Hopper Card Capacity	100 cards (.030” / .762.mm) 200 cards (.030” / .762 mm) (Dual Hopper)
Output Hopper Card Capacity	100 cards (.030” / .762.mm) 30 cards (.030” / .762.mm)
Reject Hopper Card Capacity	100 cards (.030” / .762.mm)
Card Cleaning	Card cleaning roller integrated into the Ribbon Cartridge. A new cleaning roller is included with each Ribbon Cartridge.
Printer Memory	32MB RAM
Software Driver	Windows® XP (32bit) / Vista™ (32 bit & 64 bit) / Server 2003 (32 bit) / Server 2008 (32 bit & 64 bit) / Windows® 7 (32 bit & 64 bit) / Linux® / MAC OS
Interface	USB 2.0 and Ethernet with internal print server
Operating Temperature	65 degrees to 80 degrees F / 18 degrees to 27 degrees C
Humidity	20-80% non-condensing
Dimensions	Here are the dimensions for the Sunlight Lux Card Printer: • **Single-Sided Printer:** 8.8˝H x 13.7˝W x 7.9˝D / 224mmH x 348mmW x 201mmD • **Dual-Sided Printer:** 9.8˝H x 18.7˝W x 9.2˝D / 249mmH x 475mmW x 234mmD
Weight	Single-Sided: 8 lbs. / 3.63 Kg; Dual-Sided: 10 lbs. / 4.54 Kg
Additional Agency Listings	**Safety:** 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™
Encoding Options Supported	▪ 13.56 MHz Contactless Encoder (OMNIKEY 5121) ▪ HID Prox Reader (OMNIKEY 5125) ▪ Contact Smart Card Encoder • ISO Magnetic Stripe Encoding, dual high- and low-coercivity, Tracks 1,2 and 3
Software	Workbench Diagnosis Utility

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.

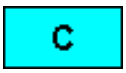
Printer Components: Print Ribbons

The Card Printer utilizes both dye-sublimation and/or resin thermal transfer methods to print images directly onto blank cards. Since the dye-sublimation and the resin thermal transfer print methods each provide their own unique benefits, Print Ribbons are available in resin-only, dye-sublimation-only and 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:

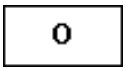
= Dye-Sublimation Yellow Panel

= Dye-Sublimation Magenta Panel



= Dye-Sublimation Cyan Panel

= Resin Black Panel (Premium unless otherwise stated)



= Clear Protective Overlay Panel

Ribbon Types/Count Table

Ribbon type, Ribbon Part Number, Image number

CIM Part Number	Description	Image Count per Ribbon
C28100000045300	SUNLIGHT LUX RBN CART YMCKO	250
C28100000045301	SUNLIGHT LUX RBN CART RESIN BLK PRE	1000
C28100000045302	SUNLIGHT LUX RBN CART RESIN BLK STD	1000
C28100000045303	SUNLIGHT LUX RBN CART RESIN BLU	1000
C28100000045304	SUNLIGHT LUX RBN CART RESIN GRE	1000
C28100000045305	SUNLIGHT LUX RBN CART RESIN RED	1000
C28100000045306	SUNLIGHT LUX RBN CART RESIN WHI	1000
C28100000045307	SUNLIGHT LUX RBN CART RESIN GLD	1000
C28100000045308	SUNLIGHT LUX RBN CART RESIN SLVR	1000
C28100000045310	SUNLIGHT LUX RBN CART YMCKOK	200
C28100000045311	SUNLIGHT LUX RBN CART RESIN KO	500
C28100000045313	SUNLIGHT LUX RBN CART BO	500
C28100000045314	SUNLIGHT LUX RBN CART HALF YMCKO	350
C28100000045315	SUNLIGHT LUX RBN CART YMCKO (refill)	250
C28100000045316	SUNLIGHT LUX RBN CART RESIN BLK STD (refill)	1000
C28100000045317	SUNLIGHT LUX RBN CART YMCKOK (refill)	200
C28100000045318	SUNLIGHT LUX RBN CART YMCKO (refill)	350

Printer Components: Blank Cards

Type	Description
Card Size	The Card Printer accepts standard CR-79 and CR-80 sized cards.
Card Surface	Suitable cards must have a polished PVC surface free of fingerprints, dust or any other types of embedded contaminants. In addition, cards must have a completely smooth, level surface in order for the Printer to achieve consistent color coverage. • Certain types of Proximity cards have an uneven surface that will inhibit consistent color transfer. • Certain types of smart card chips are raised slightly above the cards surface which also results in poor color transfer.

Section 2: Setup and Installation Procedures

This section describes the setup and installation for the Sunlight Lux Card Printer.

Choosing a Good Location

Follow these guidelines:

- Place the unit in a location with adequate air circulation to prevent internal heat buildup.
- Use the Printer's dimensions as a guideline for the minimum clearances to the unit. (**Note:** Allow for adequate clearance in front of the unit to accommodate the unit with its Covers open.)
- Do not install unit near heat sources such as radiators or air ducts or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.

About Moisture Condensation

If the unit is brought directly from a cold to a warm location or is placed in a very damp room, moisture may condense inside the unit. Should this occur print quality may not be optimal.

Leave the unit unplugged in a warm, dry room for several hours before using. This will allow the moisture to evaporate.

 **Caution:** For safety purposes, Ethernet is not intended for a direct connection outside of the building.

Unpacking and Inspection

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.

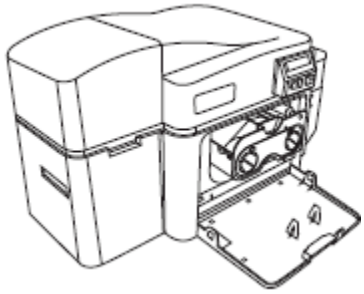
Check that the following items are included:

- Power Supply
- US / EU Power Cable
- USB cable (2.0)
- Software Installation CD
- Card Printer User Guide
- Warranty Statement

Installing the Print Ribbon Cartridge

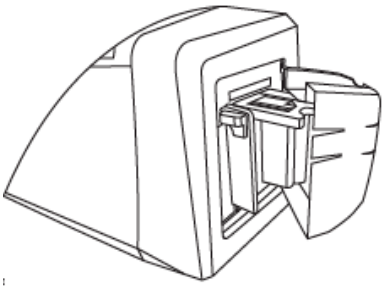
The Sunlight Lux Card Printer requires highly specialized supplies to function properly.

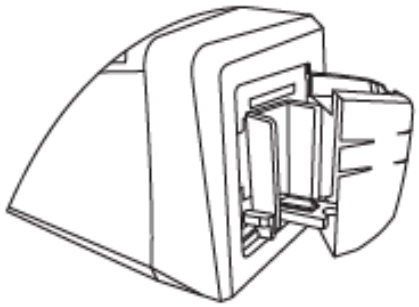
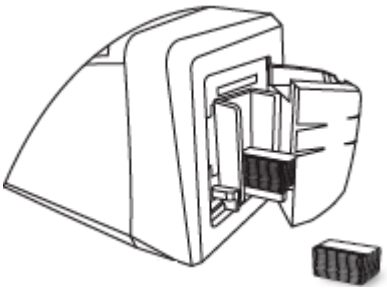
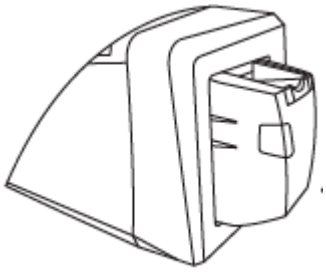
- The Sunlight Lux Card Printers use a one-piece, disposable Ribbon Cartridge load system.
- To maximize Printer life, reliability, printed card quality and durability, you must use only certified supplies.
- For this reason, your warranty is void, where not prohibited by law, if you use non-certified supplies.
- Printer cleaning is recommended with each Ribbon change to ensure quality printed cards.
- Resin-only Print Ribbons consist of a continuous roll of a single resin color. No protective overlay panel (O) is provided since resin images do not require the protection of such an overlay.

Step	Procedure
1	Insert the Print Ribbon Cartridge into the Printer. Close the front cover. 

Installing Blank Cards into the Card Hopper

The Sunlight Lux Card Printer is capable of printing single load cards and multiple feed cards (batch mode). To print using single feed, simply remove all cards from the Card Hopper, leave the Card Hopper door closed and place a card in the single Feed Card Slot (which can be used repeatedly).

Step	Procedure
1	**Pre-instruction.** Load the cards with the print side down and (if applicable) the magnetic strip up and towards the front of the Printer. **Caution:** Do not run the cards with a contaminated, dull or uneven surface through the Printer. • Printing onto such cards will ultimately lead to poor print quality and will greatly reduce the life of the Printhead. • Card Types include PVC or PVC finish. • Cards eject into the Output Hopper or Reject Hopper. • Both Hoppers hold 100 cards. • Certain types of smart card chips are raised slightly above the cards surface, which may result in poor color transfer. Design the card with white space surrounding the chip. • To print using single feed, simply remove all cards from the Card Hopper, leave the Card Hopper door closed and place a card in the single Feed Card Slot (which can be used repeatedly).
2	Open the Card Hopper Cover. 

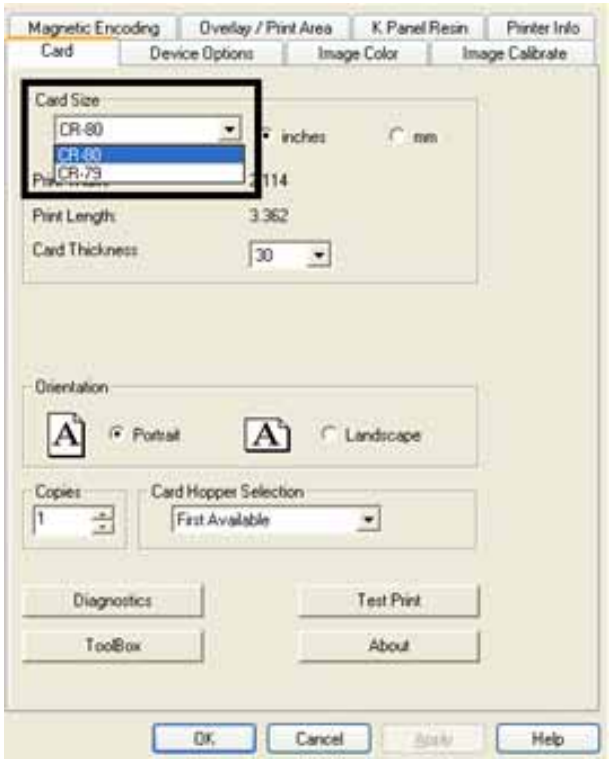
Step	Procedure
3	Press the Card Hopper Load Lever down until the Card Tray locks into place. 
4	a. Load up to 100 cards into the Hopper with the print side down. b. If using cards with a magnetic stripe, the magnetic stripe should be loaded with the stripe up and to the front of the Printer. 
5	Close the Card Hopper Cover to release the lever to the printing position. 

Setting the Card Size for CR79 and CR80

Follow this procedure in the Printer and in the Printer Driver to setup the card size.

Step	Procedure
1	Open the front door and locate the slide bar. 
2	If using the CR79 card, push the slide bar to the LEFT. 

Setting the Card Size for CR79 and CR80

Step	Procedure
3	If using the CR80 card, push the slide bar to the RIGHT. 
4	From the Driver Printing Preferences, select the correct card size. 

Connecting the Printer power

Follow this procedure. (**Note:** Do not connect the Printer's USB cable until prompted during the Printer Driver installation.)

Step	Procedure
1	Plug the AC adapter power cable into the back of the Printer 
2	Plug the wall power cable into the AC power supply adapter.
3	Plug the wall power cable into a standard 100-240VAC power outlet.
4	Press the Printer's Power Button to power on the printer.  NOTE: The printer will power down during the 'sleep time' but will automatically power up when a print job is sent.

Driver Installation Instructions

Start the installation process by inserting the Driver CD into the computer; then, follow the Installaware Wizard screen prompts.

This section describes the Printer Driver installation requirements and standard procedures. Requirements are listed below. The Sunlight Lux Card Printer Driver supports the following:

- Windows Vista 32 bit w/SP2
- Windows Vista 64 bit w/SP2
- Windows XP 32 bit w/SP3
- Windows Server 2003 (R1) 32 bit
- Windows Server 2008 (R1) 32 bit w/SP2
- Windows Server 2008 (R1) 64 bit w/SP2
- Windows Server 2008 R2
- Windows 7 32 bit & 64 bit
- Linux OS (Ubuntu7.10, Red Hat Enterprise Desktop 5, Fecora Core 7 & 8, openSUSE 10.3, open NOVELL SUSE 10.)
- MAC OS (OSX version 10.5 and 10.6,supporting only Intel architecture base hardware.

Contact Technical Support for the latest driver. www.cimitaly.it or E-mail: info@cimitaly.it

- Select “Install the Printer Driver” to start the Driver installation.
- Select the Workbench Utility Program to install the Diagnostic program.
- All versions of Windows require Administrator rights.
- From the Printer & Faxes folder, open the Printing Preferences to setup the Driver after it has been installed.
- Printing Preferences need to be setup after the Driver has been installed. Each TAB is shown below.
- Use the drop down arrows to select the correct options for each printing preference.

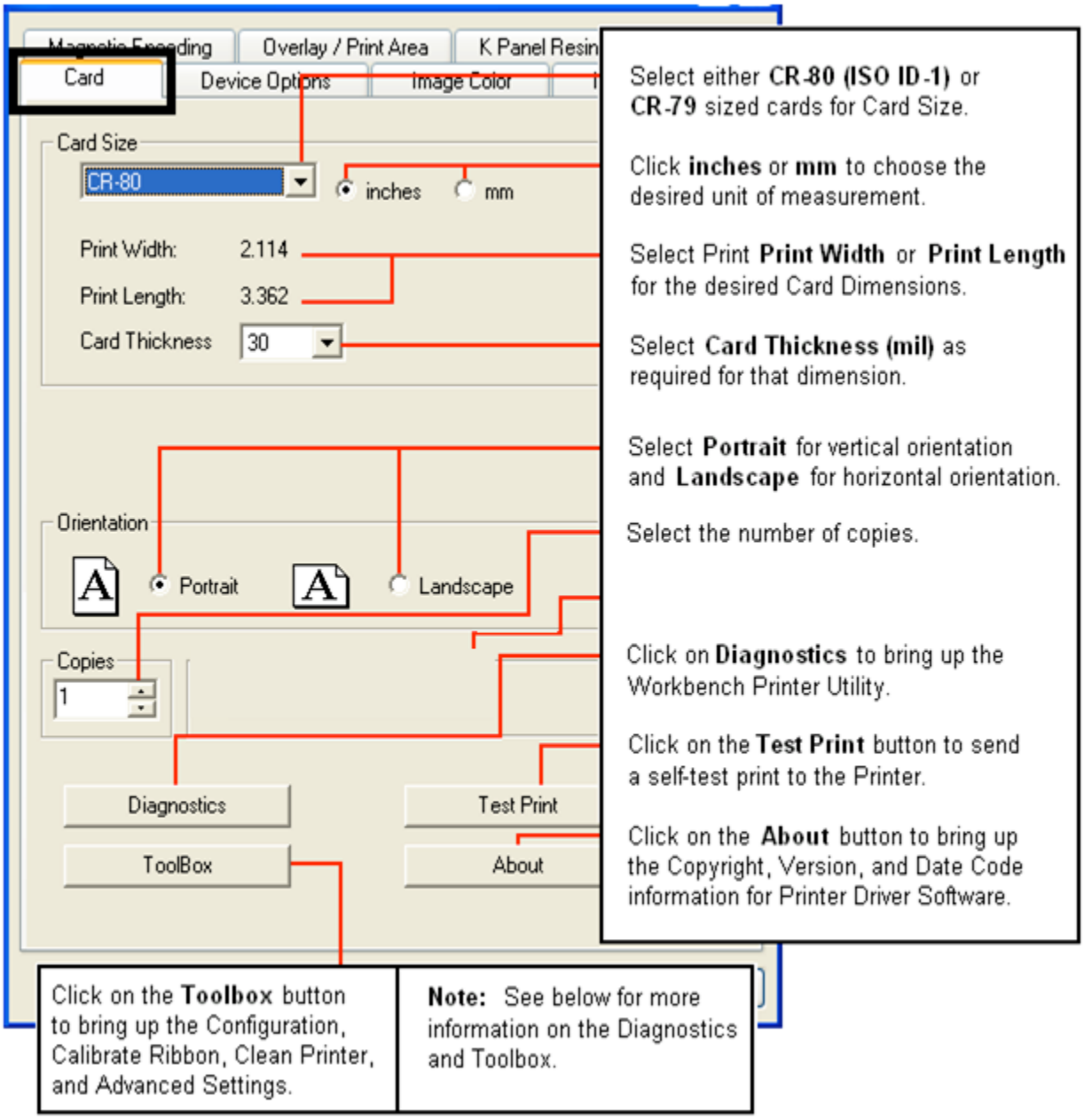
Section 3: Printer Preferences Tab Functions

This section provides an overview of the Printer Driver preferences tab.

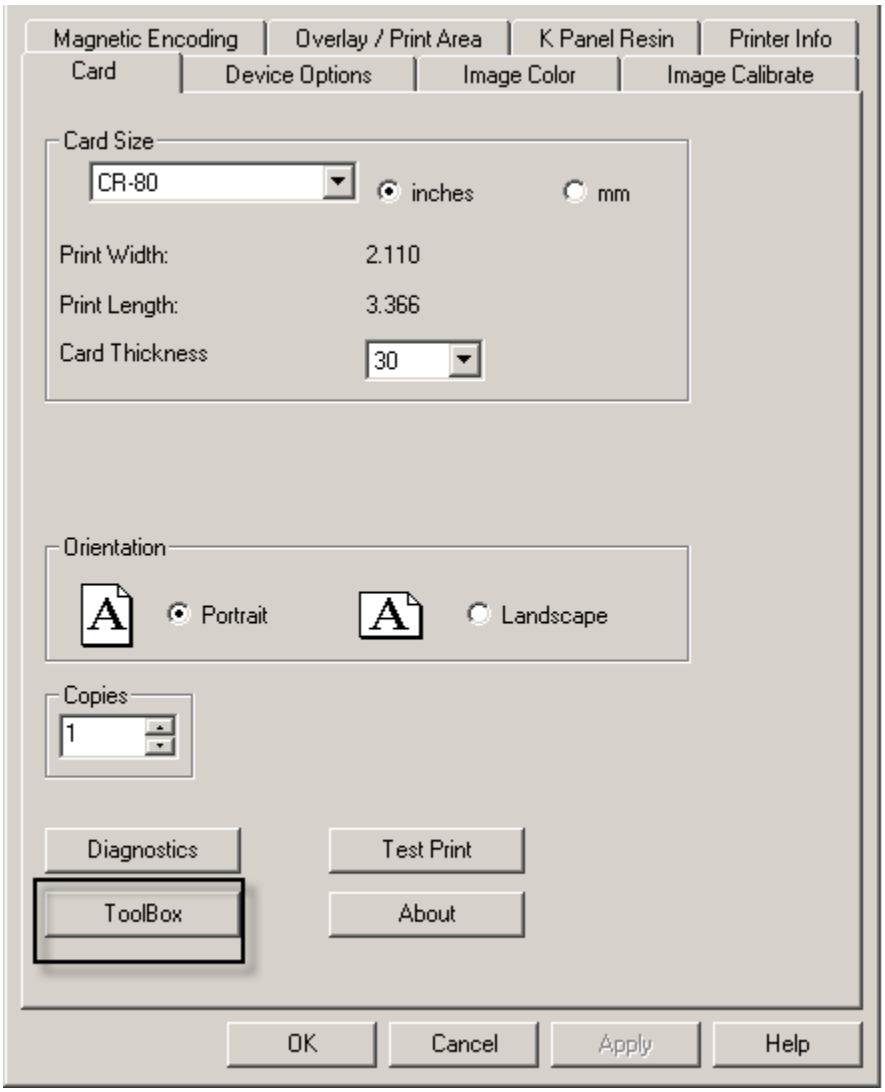
Using the Card tab

Click on the Card tab to bring up the window (shown below).

Refer to the **Help file** for the **Workbench Utility Program and User Guide**.



Using the Toolbox Options



Using the Configuration Tab

Using the Optional Printer Features Group Box

The Default setting is checked.

- 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 and Magnetic Encoder.
- If checked, the Dual Sided 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 below) 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.

Using the Event Monitoring Group Box

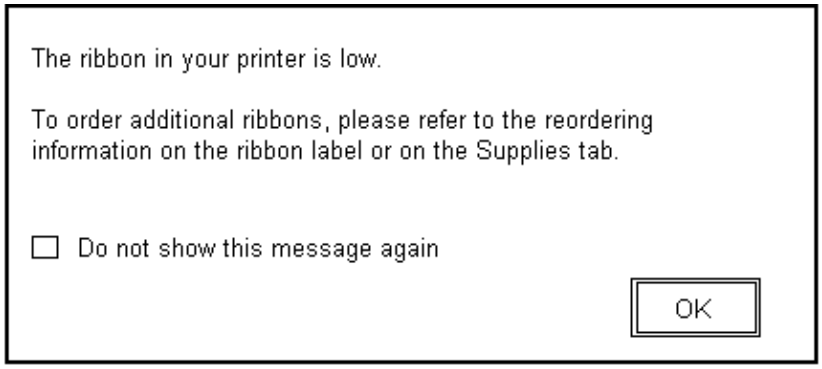
This Event Monitoring group box displays the Low Supplies , Clean Printer, Error Status, and Password Prompt.

- **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:** The check box allows the user to suppress message per Driver instance. Default = unchecked.

Reviewing the Ribbon Low message

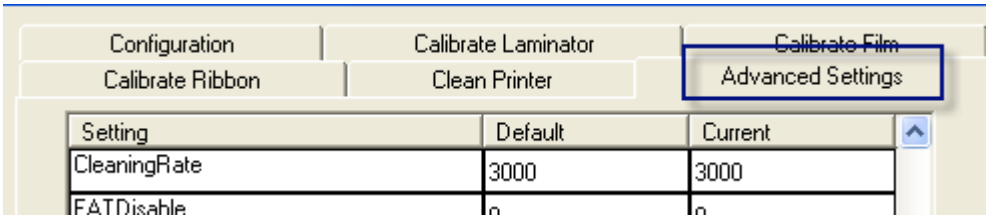
Display – Ribbon Low dialog



Using the Clean Printer message

The default setting is checked.

- If checked, a clean printer message will display after 3000 prints. The frequency is set within the Advanced Settings Tab.



Using the Error Status message

The default setting is checked.

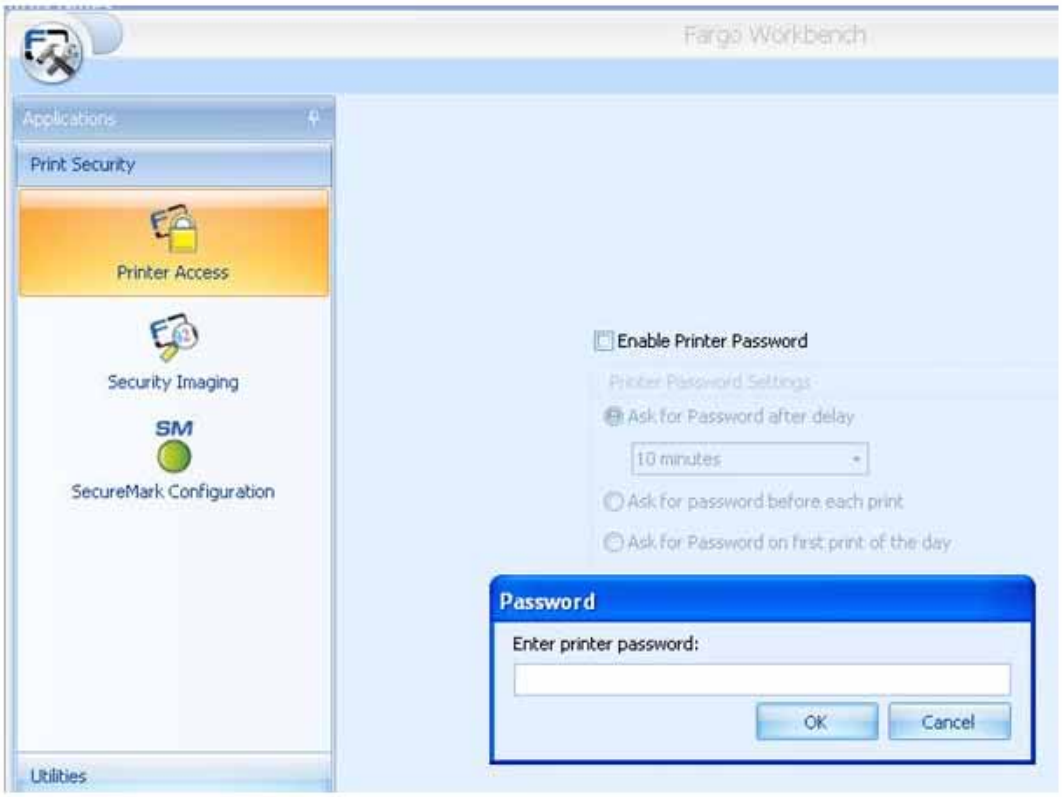
- If checked, error messages (with solutions) will display when an error occurs..

- To switch between languages, select the desired language and select OK twice, then reopen the driver in the new language

Using the Password Prompt message

The default setting is checked.

- If checked, a message will display that a password is needed to continue printing.
- Password protection is set and activated in the Workbench.

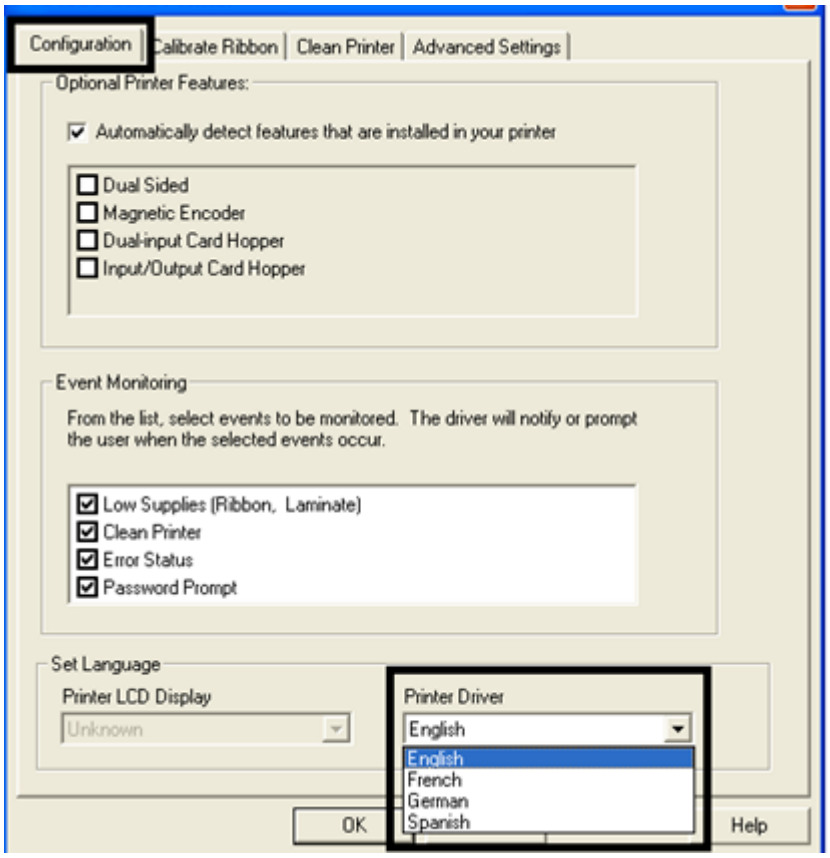


Selecting the Set Language for Printer LCD Display Group Box

The LCD Language can be chosen or changed from the Driver during installation, from the Driver Toolbox Configuration tab or directly from the LCD. The last language chosen from any of these methods is the active language for the LCD.

- English is the default.
- Languages (available in drop down list) are the languages available in the language set (currently resident in the Firmware).

- To switch between languages, select the desired language and select OK twice, then reopen the driver in the new language

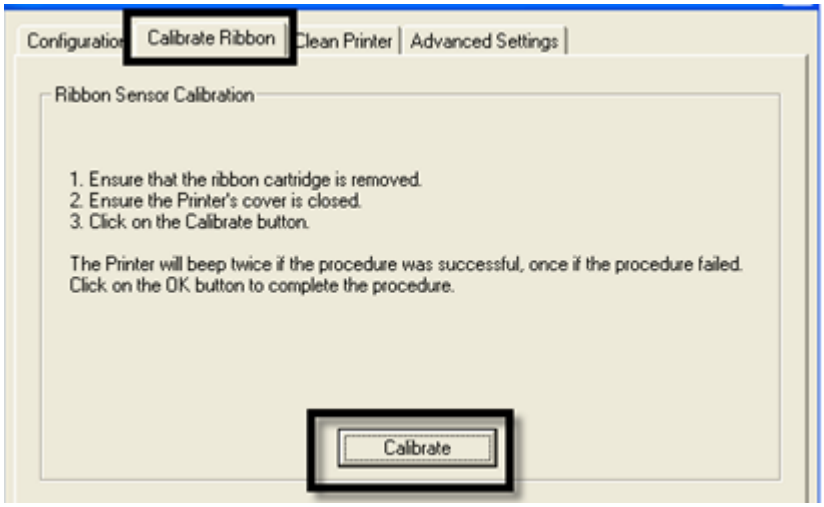


Selecting the Calibrate Ribbon tab

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

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

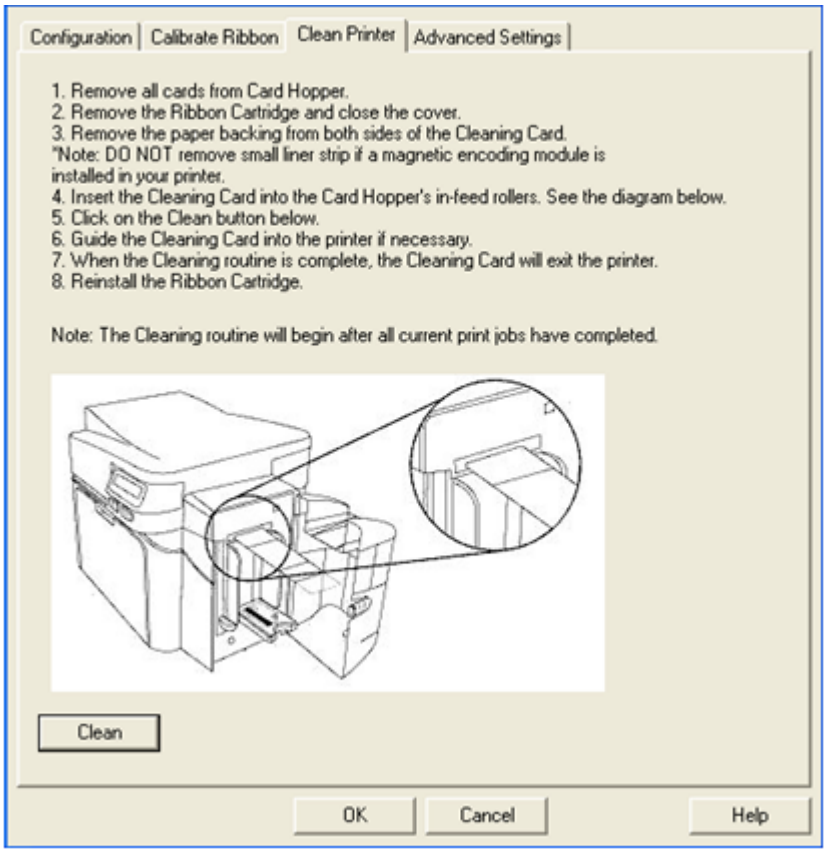
Step	Procedure
1	Select the Calibrate Ribbon tab. a. Ensure that the Ribbon is removed from the Ribbon Drawer. b. Ensure that the Ribbon Cartridge is removed. c. Ensure the Printer's Cover is closed. d. Click on the **Calibrate** button. (**Note:** The Printer will display CALIBRATE PASSED) e. Click on the **OK** button (on the driver window) to complete the procedure.



Selecting the Clean Printer tab

The button for the Clean Printer tab is described below.

- **Clean Button:** Launches the cleaning routine. Follow the instruction on the page for setting up the Printer.
- **Help button:** Launches help that is specific to this tab.



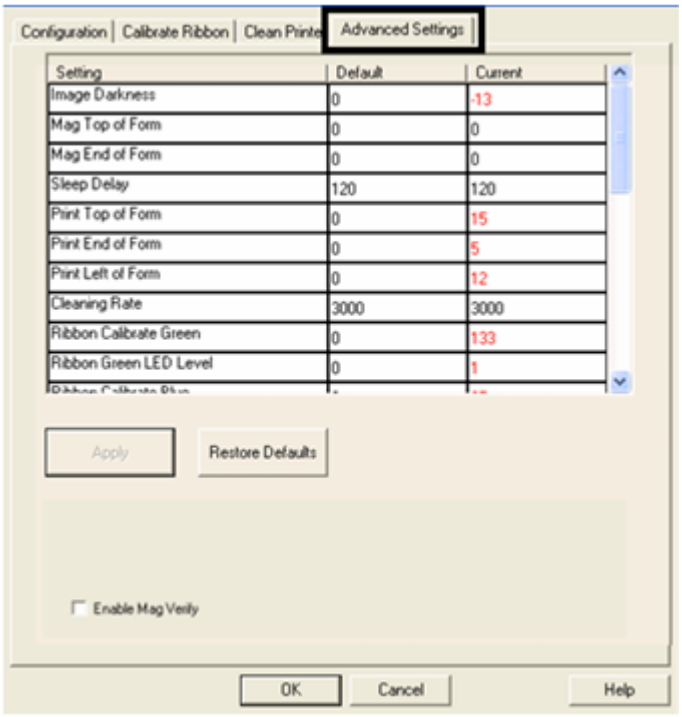
Selecting the Advanced Settings tab

Use the **Advanced Settings** tab for adjusting the internal Printer settings, which are customized for every Printer at the factory and saved directly within the Printer's memory. (**Note:** You can select the Restore Defaults to restore the internal default settings.)

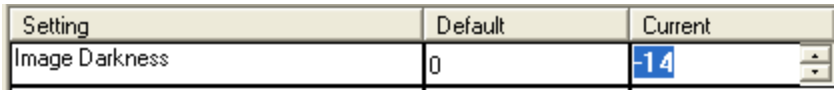
These change values for Firmware settings. See below.

- **Setting Column:** Displays label for setting
- **Default Column:** Displays default value for setting
- **Current Column:** Displays current value for setting
- Change the value by clicking on the value to activate spin control or type.
- **Apply Button:** Applies changed values.
- **Restore Defaults Button:** Restores default values.

Using the Advanced Settings tab need new pic with no swift ID



Example:



Using the Advanced Options

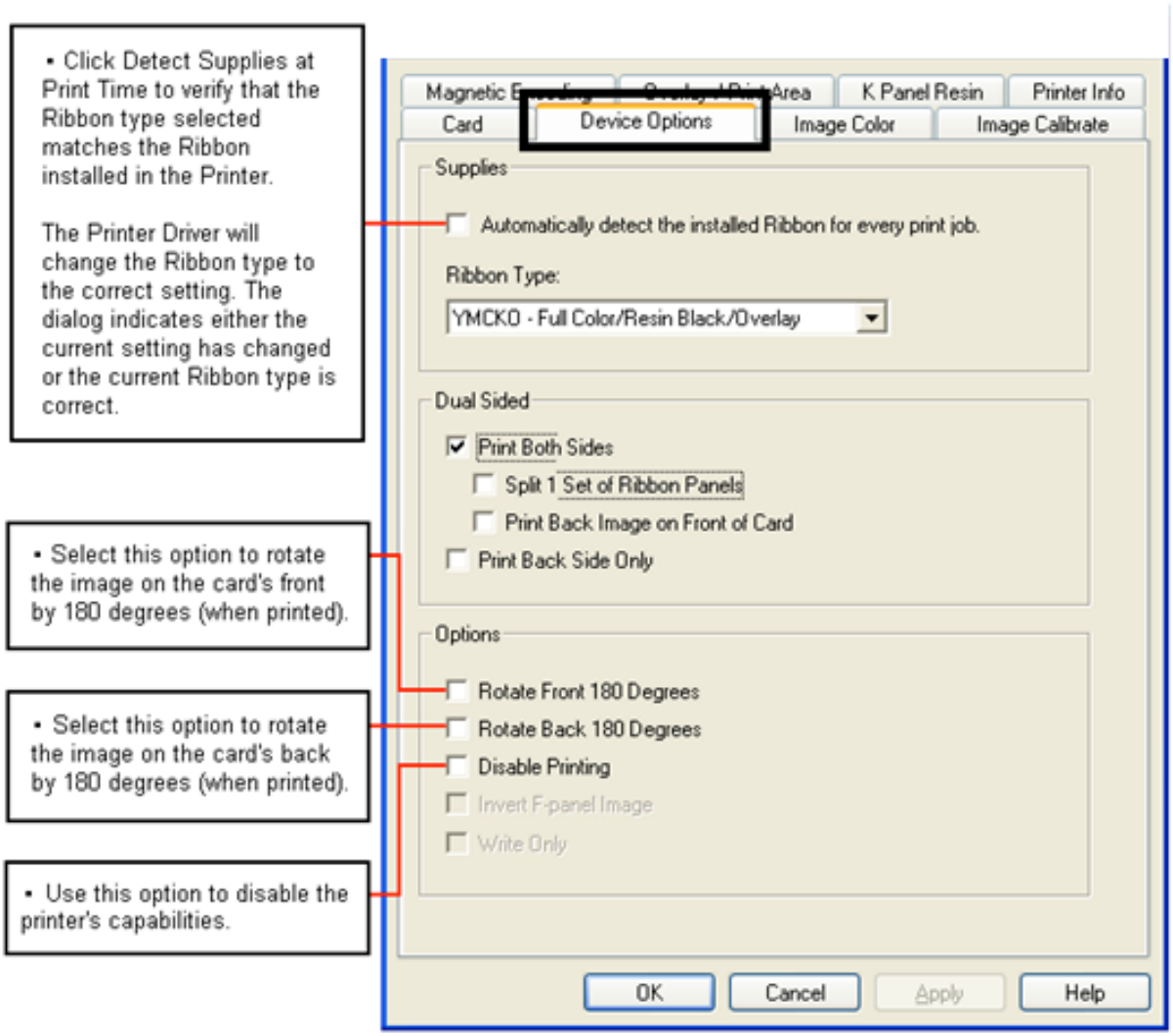
Setting	Option
Image Darkness	Use this option to set the overall darkness of the printed image by increasing or decreasing the amount of heat (used by the Printhead when printing).  **Caution:** If the value is set too high, the Ribbon may jam or even break.
Mag Top of Form	Use this option to shift the starting point where the Printer begins to encode the magnetic track data on the card's Magnetic Stripe.  **Caution:** If the negative value is set too high, the Printer may start encoding before the Magnetic Stripe reaches the encoding head. • Maximum adjustment range is +/- 80. • Each increment equals .01".
Print Top of Form	Use this option to adjust the length-wise or horizontal position of the printed image on the card (so it appears to be centered).  **Caution:** If the negative value is set too high, the Print Ribbon may break.
Print End of Form	Use this option to reduce or increase the overall printable area; this is done in order to optimize edge to edge printing toward the trailing edge of the card. • Maximum adjustment range is +/- 127. • Each increment equals .01".
Print Left of Form	Use this option to adjust the vertical position of the printed image on the card; so it appears centered.

	• Maximum Adjustment Range is +/- 127. • Each increment equals .01”.
Cleaning Rate	Use this option to adjust the number of cards printed before the Printer displays a message indicating cleaning is needed. • The default value is 3000 cards.
Ribbon Calibrate Green	This is a calibration driven value and should not be adjusted. (**Note:** This is factory set and should not be changed unless directed by a technician.)
Ribbon Green LED Level	This is a calibration driven value and should not be adjusted. (**Note:** This is factory set and should not be changed unless directed by a technician.)
Ribbon Calibrate Blue	This is a calibration driven value and should not be adjusted. (**Note:** This is factory set and should not be changed unless directed by a technician.)
Ribbon Blue LED Level	This is a calibration driven value and should not be adjusted. (**Note:** This is factory set and should not be changed unless directed by a technician.)
Ribbon Print Tension	Use the Ribbon Tension option to increase or decreases the amount of tension (drag) on the Ribbon during printing.
Flipper Home Offset	This is a calibration driven value and should not be adjusted. If the Flipper unit is replaced and has not been calibrated this value may need to be adjusted. (**Note:** This is factory set and should not be changed unless directed by a technician.)
Flipper Lam Height Offset	This is a calibration driven value and should not be adjusted. If the Flipper unit is replaced and has not been calibrated this value may need to be adjusted. (**Note:** This is factory set and should not be changed unless directed by a technician.)
Mag HI-Co Voltage Offset	This option changes the voltage going to the magnetic head. (**Note:** This is factory set and should not be changed unless directed by a technician.)
Mag Lo-Co Voltage	This option changes the voltage going the magnetic head. (**Note:** This is factory set and should not be changed

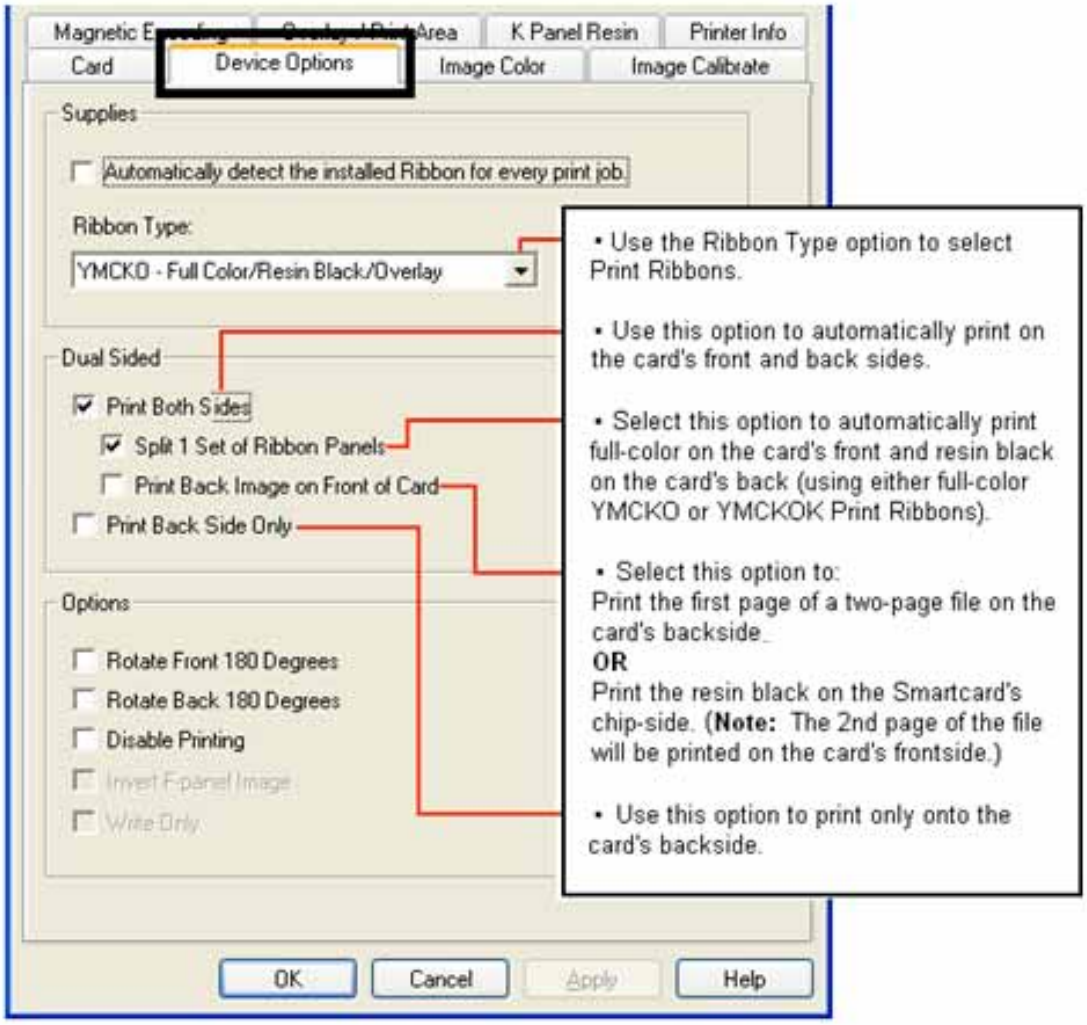
Offset	unless directed by a technician.)
Resin Heat Adjust	Use this adjustment for Black resin text and barcodes if they appear faded or too light/dark. • Maximum Adjustment Range is +/- 100. (**Note:** This control can be helpful for fine-tuning the transfer of resin text and bar codes.)
Head Resistance	This is factory set. If the main board or the Printhead is replaced then adjust this number. Locate the Printhead Setting Number on the bottom of the Printhead. The number reads R=XXXX.
Head Home Offset	This is a calibration driven value and should not be adjusted. If the Printhead assembly is replaced then this value may need to be adjusted. (**Note:** This is factory set and should not be changed unless directed by a technician.)
Head Contact Offset	This is a calibration driven value and should not be adjusted. If the Printhead assembly is replaced then this value may need to be adjusted. (**Note:** This is factory set and should not be changed unless directed by a technician.)

Using the Device Options tab

Click on the Device Option tab to bring up the window (shown below).

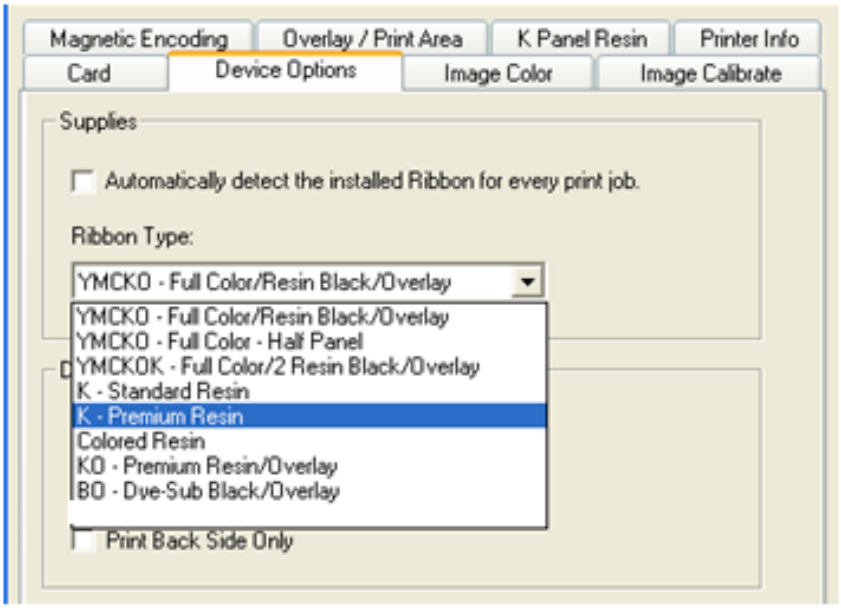


Using the Device Options tab



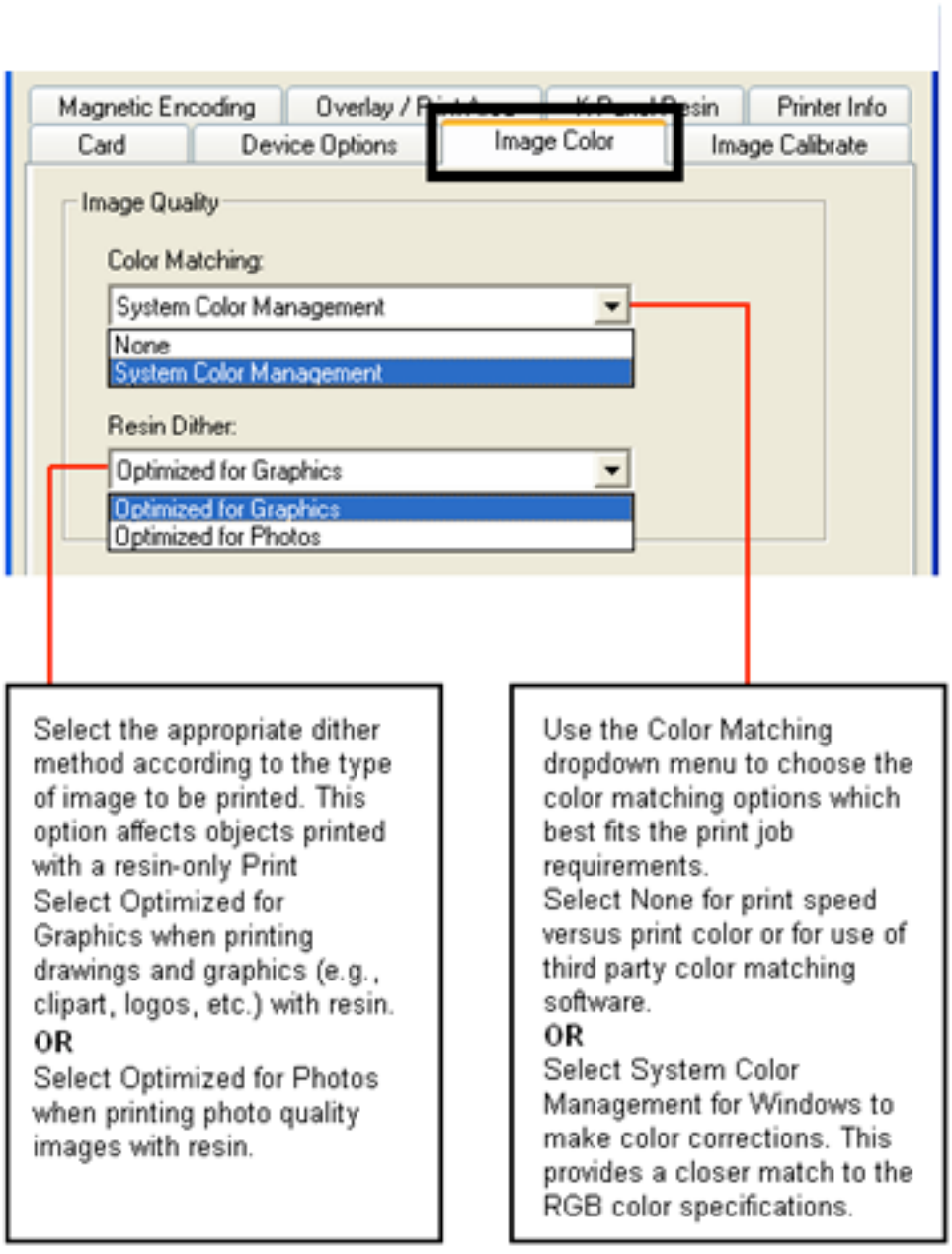
Using the Device Options tab

Display A –SUNLIGHT LUX Card PrinterDevice Options tab (Ribbon Type dropdown)

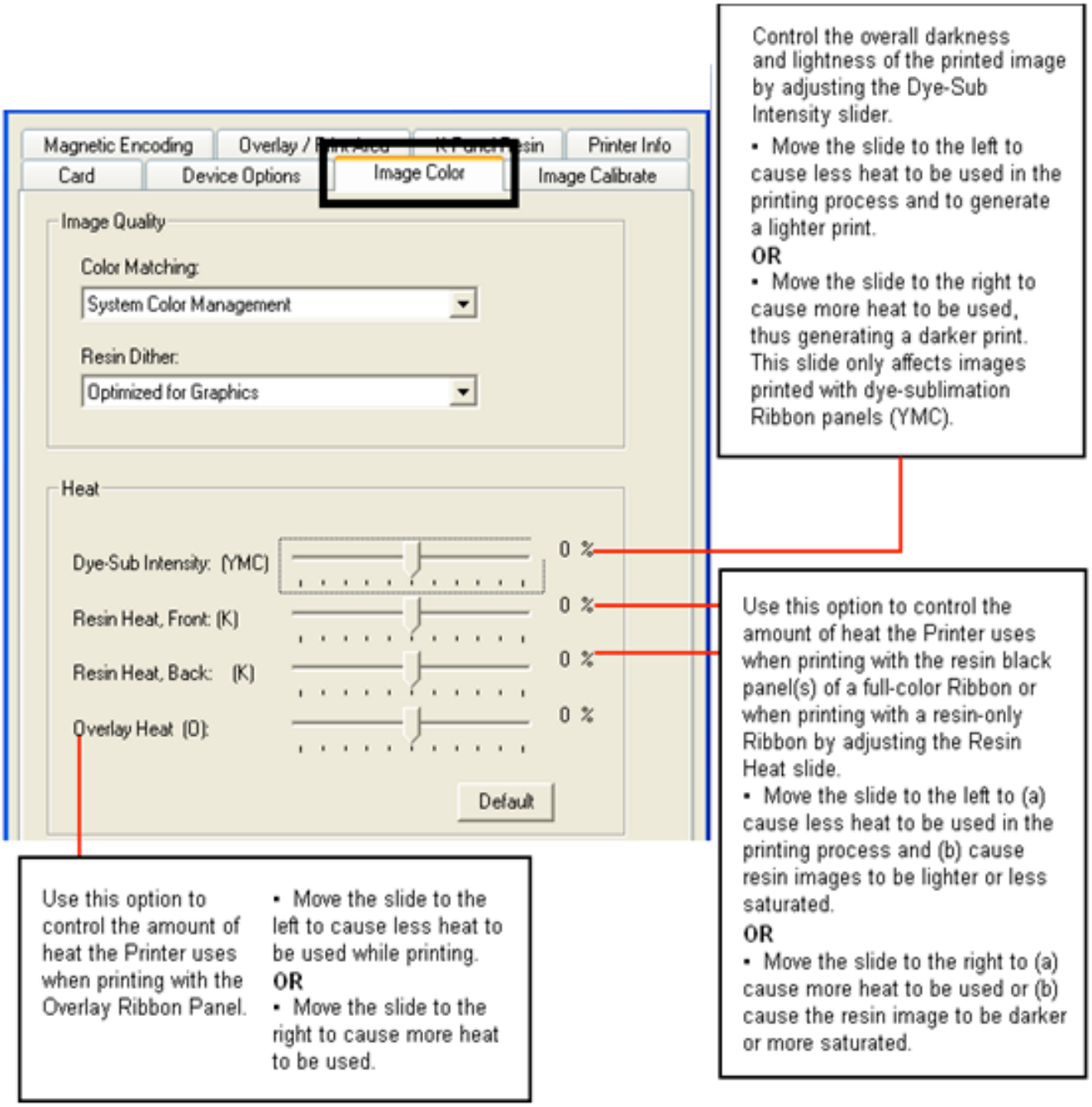


Using the Image Color tab

Click on the Image Color option tab to bring up the window (shown below).



Using the Image Color tab

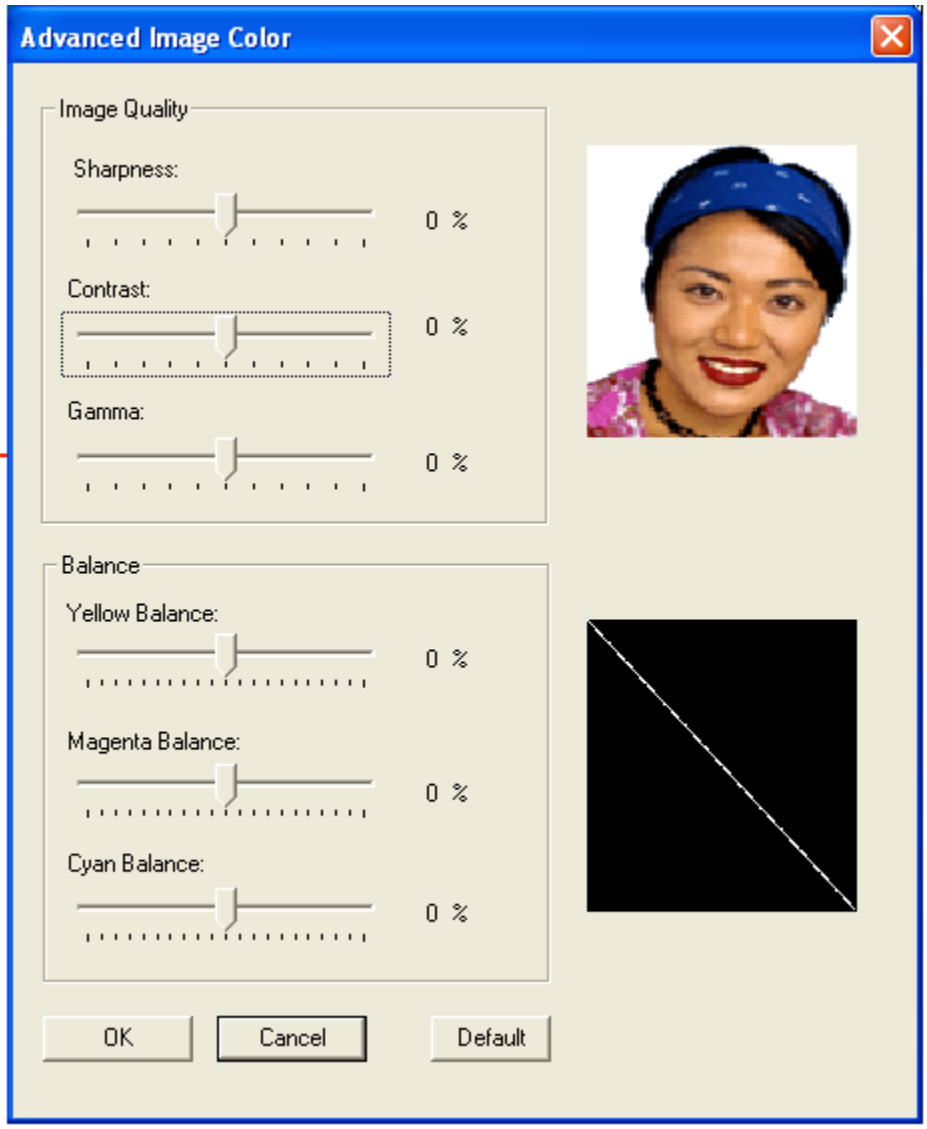


Using the Image Color tab

You can use this option to control the image quality. The Sharpness, Contrast and Gamma settings are controlled here.

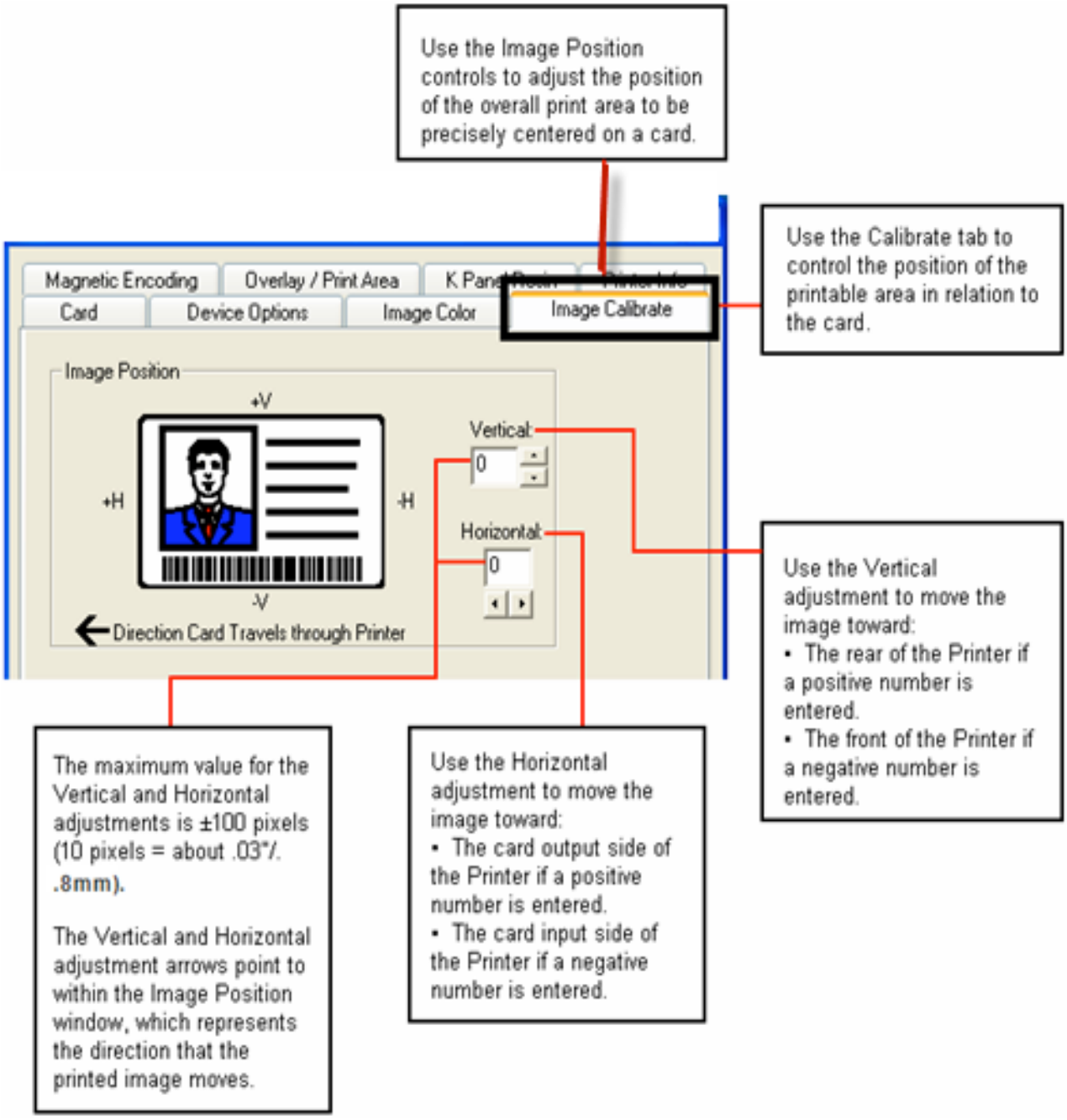
The color balance for yellow, magenta and cyan are adjusted with these settings.

Move the slide to the left to cause less of the particular option to be used in the printing process.
OR
Move the slide to the right to cause more of the particular option to be used.



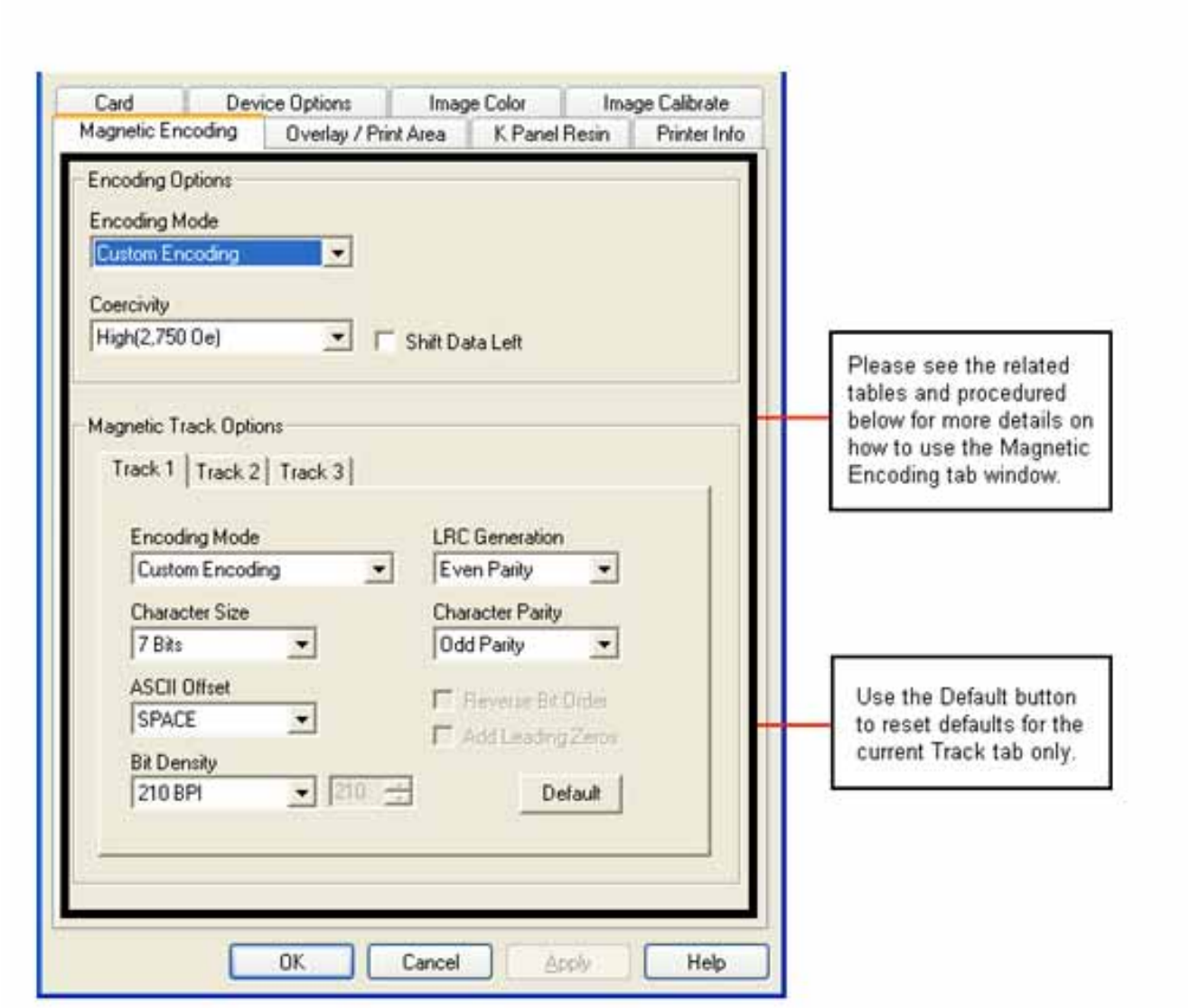
Using the Image Calibrate tab

Use the Image Calibrate tab to control the position of the printable area in relation to the card.



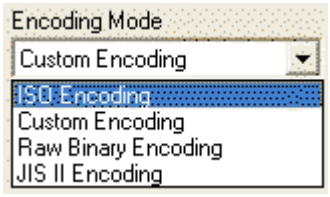
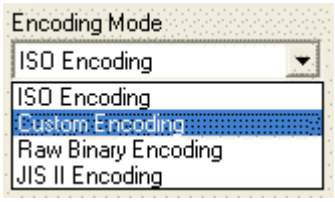
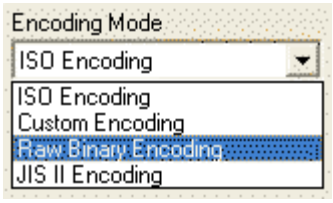
Using the Magnetic Encoding Tab

Select the **Magnetic Encoding** tab to display options for controlling the Magnetic Stripe encoding process. You should use these options only if the Printer has an optional Magnetic Stripe Encoding Module installed.

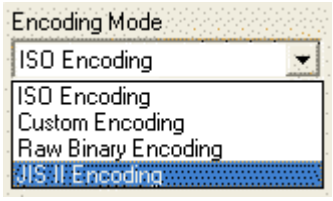
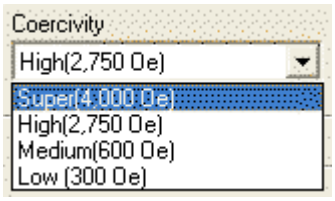
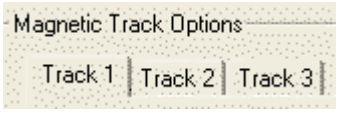


Using the Magnetic Encoding Tab – ISO Standards

You can change the encoding mode and coercivity setting or modify the ISO standards for Tracks 1, 2 and 3. This can be done by correctly modifying these Magnetic Encoding options.

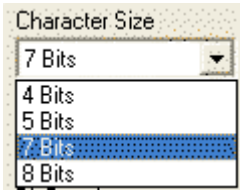
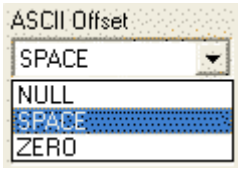
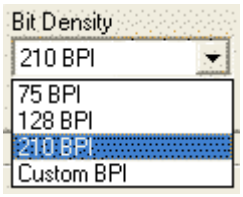
Window TAB	Procedure	Procedure (continued)
	If you select **ISO Encoding**, you send down a formatted set of characters.	This selection activates the track tabs. However, all functions on the Track tabs are inactive or gray and display ISO defaults, which are the defaults listed for each track below. The **Shift Data Left** check box remains unchecked and inactive.
	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.) All functions on the Magnetic Track Options tabs are active.
	If you select **Raw Binary Encoding**, you send down a raw binary string rather than a formatted set of characters.	The **Coercivity** dropdown function is active and the **Shift Data Left** checkbox is not active. All functions on the Magnetic Track Options tabs are inactive except for **Bit Density**.

Using the Magnetic Encoding Tab – ISO Standards

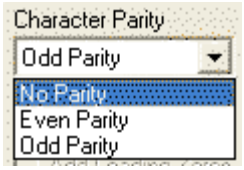
Window TAB	Procedure	Procedure (continued)
	If you select **JIS II Encoding**, specific standards are used.	This selection disables all the Magnetic Track Options tabs. It also disables the Coercivity dropdown function and **Shift Data Left** checkbox option. The default Coercivity is 600 Oe.
	Select the **Coercivity** option (Oersted) that matches the card type.	• Super Coercivity 4000 Oersted • High Coercivity =2750 Oersted • Medium Coercivity=600 Oersted • Low Coercivity = 300 Oersted
	Select this option to shift the recorded magnetic data to the left-hand side of the card's Magnetic Stripe.	This is useful in situations that require cards to be readable with insert type readers.
	Select the **Magnetic Track Selection** option to specify which track is to be configured through the Magnetic Track Options.	This applies if the application being used requires customization of the standard ISO encoding process.

Using the Magnetic Encoding Tab – Custom Encoding or Raw Binary Encoding Mode

You can change the Magnetic Track options for Tracks 1, 2 and 3 when using the Custom Encoding or Raw Binary Encoding Mode. These options are not available for ISO or JIS II encoding.

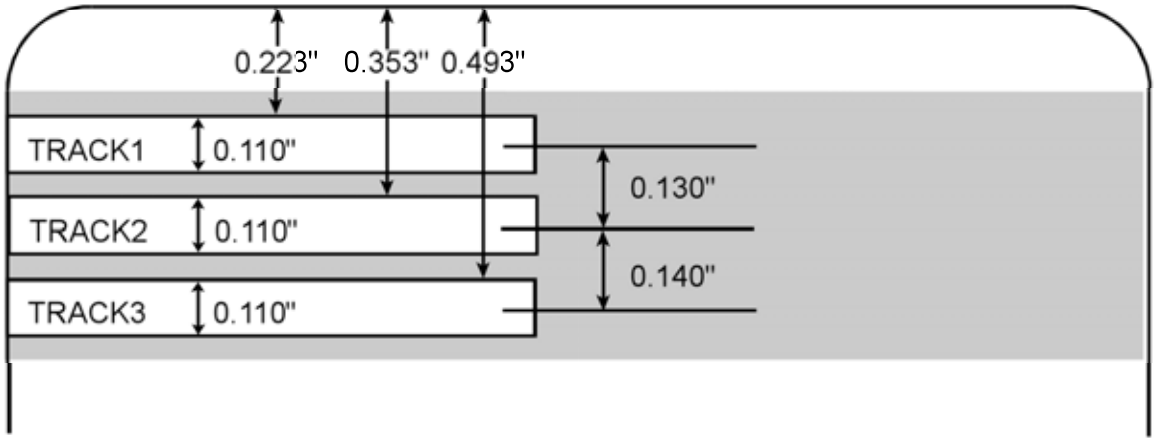
Window TAB	Procedure	Procedure (continued)
	Select **4 Bits** to change the bits per character to 4 BPC. (**Note:** This is the default for Track 3). Select **5 Bits** to change the bits per character to 5 BPC. (**Note:** This is the default for Tracks 2 and 3).	Select **7 Bits** to change the bits per character to 7 BPC. (**Note:** This is the default for Track 1). Select **8 Bits** to change the bits per character to 8 BPC.
	Select **NULL** to change the ASCII Offset to NULL. Select **SPACE** to change the ASCII Offset to SPACE. (**Note:** This is the default for Track 1.)	Select **ZERO** to change the ASCII Offset to ZERO. (**Note:** This is the default for Tracks 2 and 3.)
	Select **75 BPI** to change the bits per inch to 75 BPI. (**Note:** This is the default for Track 2.) Select **128 BPI** to change the bits per inch to 128 BPI.	Select **210 BPI** to change the bits per inch to 210 BPI. (**Note:** This is the default for Tracks 1 and 3.) Select **Custom BPI**, which enables the custom BPI text box. (**Note:** The lower limit is 75 and upper limit is 210.)
	Select **No LRC** to change the LRC Generation to none. Select **Even Parity** to change the LRC Generation to Even Parity. (**Note:** This is the default for all tracks.)	Select **Odd Parity** to change the LRC Generation to Odd Parity.

Using the Magnetic Encoding Tab – Custom Encoding or Raw Binary Encoding Mode

Window TAB	Procedure	Procedure (continued)
	Select **No Parity** to change the Character Parity to none. Select **Even Parity** to change the Character Parity to Even Parity.	Select **Odd Parity** to change the Character Parity to Odd Parity. (**Note:** This is the default for all tracks.)
	**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.

Reviewing the ISO Track Locations

The magnetic Encoding Module encodes onto tracks in accordance with an ISO 7811-2 Magnetic Stripe. For track locations, review the display below.



Reviewing the Sample String

- Track 1: ~1%JULIEANDERSON^1234567890?
- Track 2: ~2;12345678909876543 21?
- Track 3: ~3;12345678909876543 21?

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

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, track information must be entered as described below.

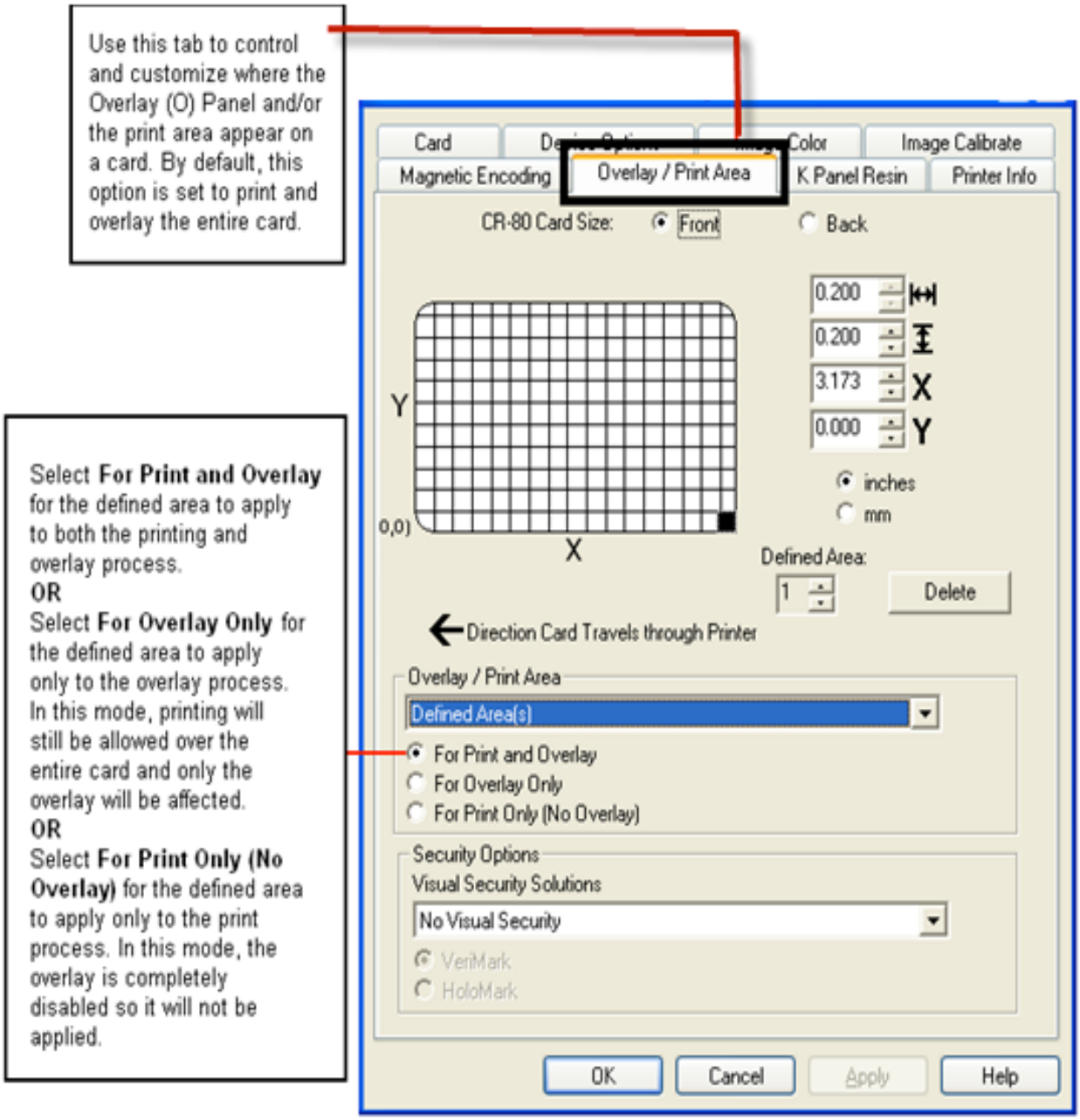
Step	Procedure
1	When entering track data, the ~ (tilde) character is entered first, followed by the track number (1, 2 or 3) on which the data should encode. This is followed by the data to be encoded. • The first character of this data string must be the track's specific Start Sentinel (SS) and the last character must be the specific End Sentinel (ES). • The characters or data in between the SS and ES can include all of the valid characters specific to each track. • The number of these characters, however, is limited by each track's maximum character capacity. • When segmenting track data, the appropriate Field Separator (FS) must be used. The table below shows the SS, ES, FS and the valid characters defined for each track.

Reviewing the ASCII Code and Character Table

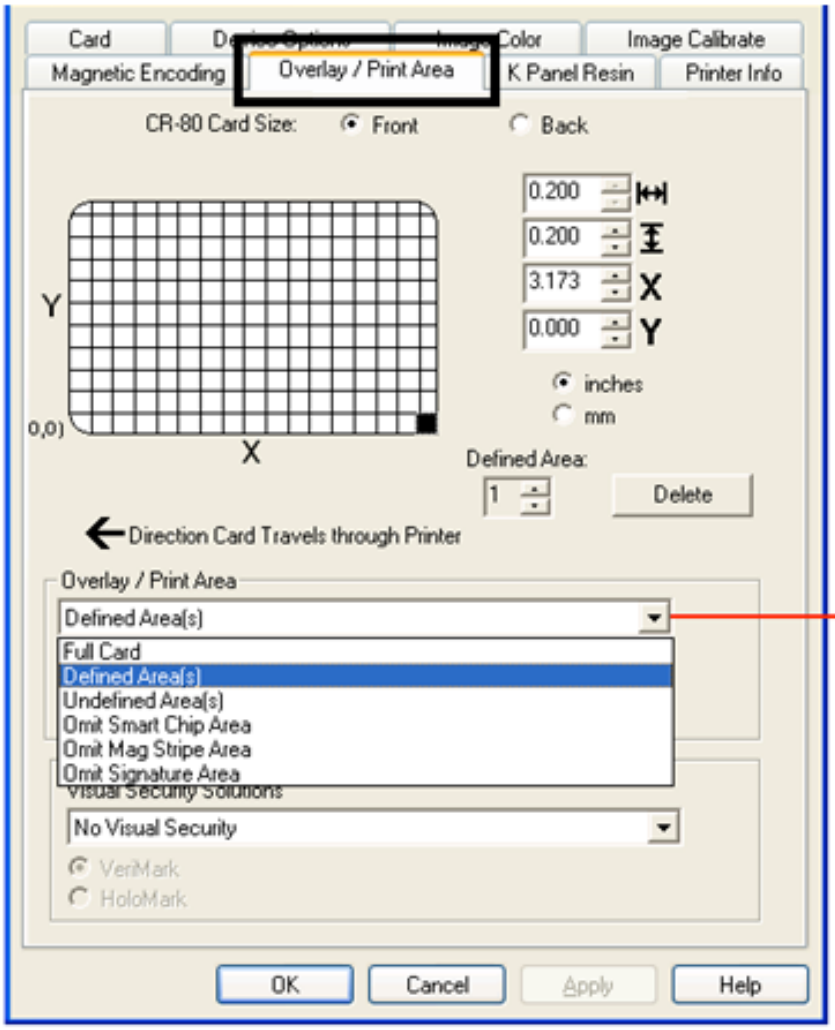
ASCII Code	Character	ASCII Code	Character	ASCII Code	Character
32	space	56	8	80	P
33	!	57	9	81	Q
34		58	:	82	R
35	#	59	;	83	S
36	$	60	<	84	T
37	%	61	=	85	U
38	and	62	>	86	V
39	'	63	?	87	W
40	(	64	@	88	X
41	)	65	A	89	Y
42	*	66	B	90	Z
43	+	67	C	91	[
44	'	68	D	92	\
45	-	69	E	93	]
46	.	70	F	94	^
47	/	71	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		

Using the Overlay / Print Area tab

This option is helpful if, for example, you would like to omit the printing or block out the overlay for a signature or printing around a card's smart chip or magnetic stripe.



Using the Overlay / Print Area tab



Select **Full Card** for the Printer to overlay and/or print the entire card.
OR
Select **Defined Area(s)** for the Printer to overlay and/or print only in the selected and defined area or areas.
OR
Select **Undefined Area(s)** for the Printer to overlay and/or print only in the space outside the selected and defined area.
OR
Select **Omit Smart Chip Area** for the Printer to overlay and/or print only in the space outside the standard location of a smart chip.
OR
Select **Omit Magnetic Stripe Area** for the Printer to overlay and/or print only in the space outside the standard location of an ISO Magnetic Stripe.
OR
Select **Omit Signature Area** for the Printer to overlay and/or print only in the space outside the standard location of a signature panel.

Using the Overlay / Print Area tab

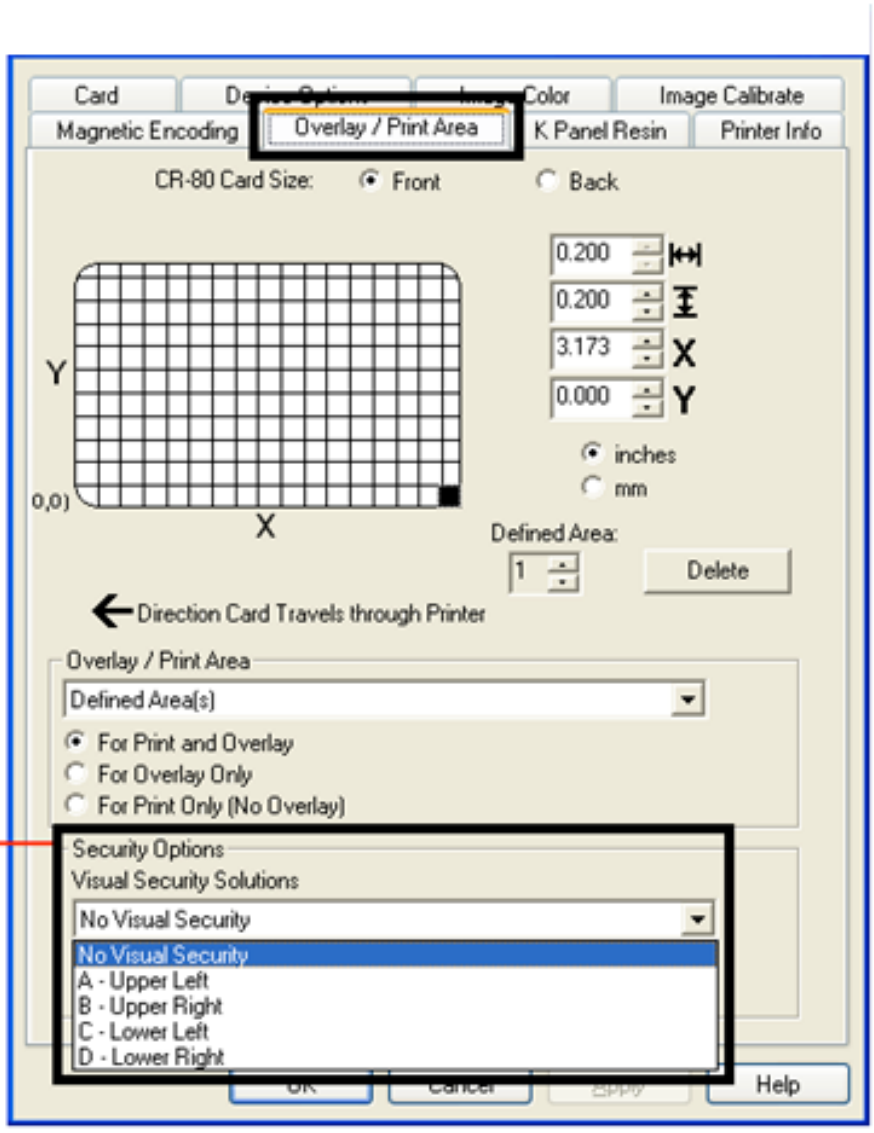
The Visual Security Solutions dropdown menu list is used to enable and select which type of visual security will be used.

The Visual Security dropdown list is selectable only on the Front side. Visual Security is not an option for the back side.

These actions occur when one of the Visual Security locations is selected.
- The Overlay / Print Area will be disabled.
- The Security Options become selectable.

Select **Landscape** under **Orientation** on the Card tab to use the Visual Security Solutions (A to D).

Select **Portrait** under **Orientation** on the Card tab to use the Visual Security Solutions (E to H).



Using the Defined Area Option

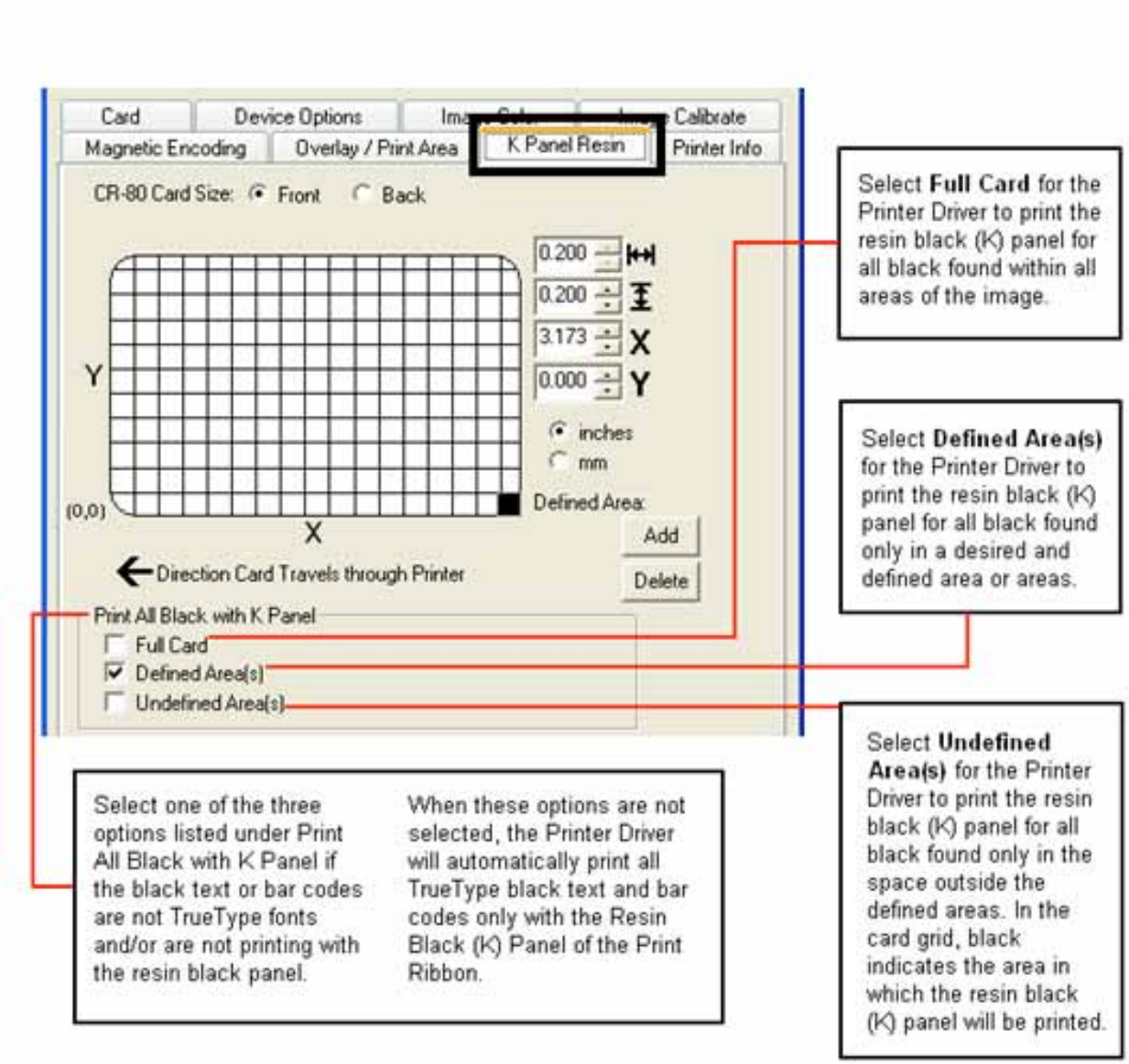
This procedure can be used with the K Panel or the Overlay /Print Area procedure to define specific areas. The K-Panel procedure is described below: The same process is used for the Overlay/Print Area option.

- Select **Defined Area(s)** for the Printer Driver to print the resin black (K) panel for all black found only in a desired and defined area or areas.
- Click **Defined Area(s)**, which will activate the card grid in the upper half of the window. It is through this card grid that up to five areas can be defined.
- Determine the area of the card necessary to define. In the sample, this area is indicated by the dashed outline.
- Determine the size of this area by actually printing a card and looking at it in the same orientation as when it exits the Printer.
- Measure the total size for the area and enter those dimensions into the dimension boxes.
- Once the area is sized properly, measure from the lower left corner of the card up and over to the lower left corner for the defined area. Enter these values into the X and Y boxes.

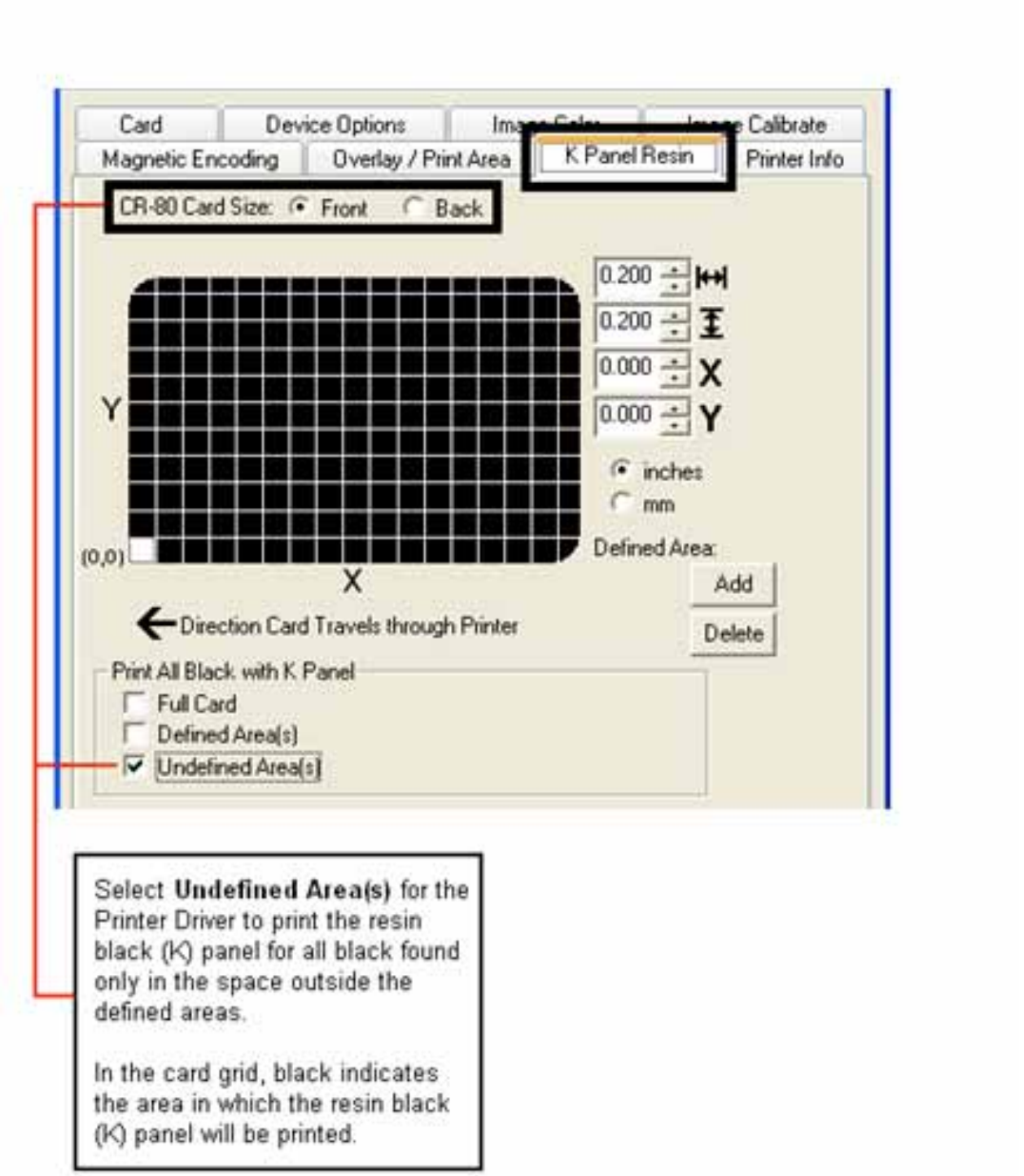
- Print the card design and note how the image is oriented on the card as it ejects from the Printer.
- Measure the defined area location based on the printed card.
- Define another area by clicking the Defined Area up arrow.
- Use the Defined Area arrows to navigate back and forth from area to area.
- Delete an area by using the Defined Area arrows to select the area.

Using the K Panel Resin tab

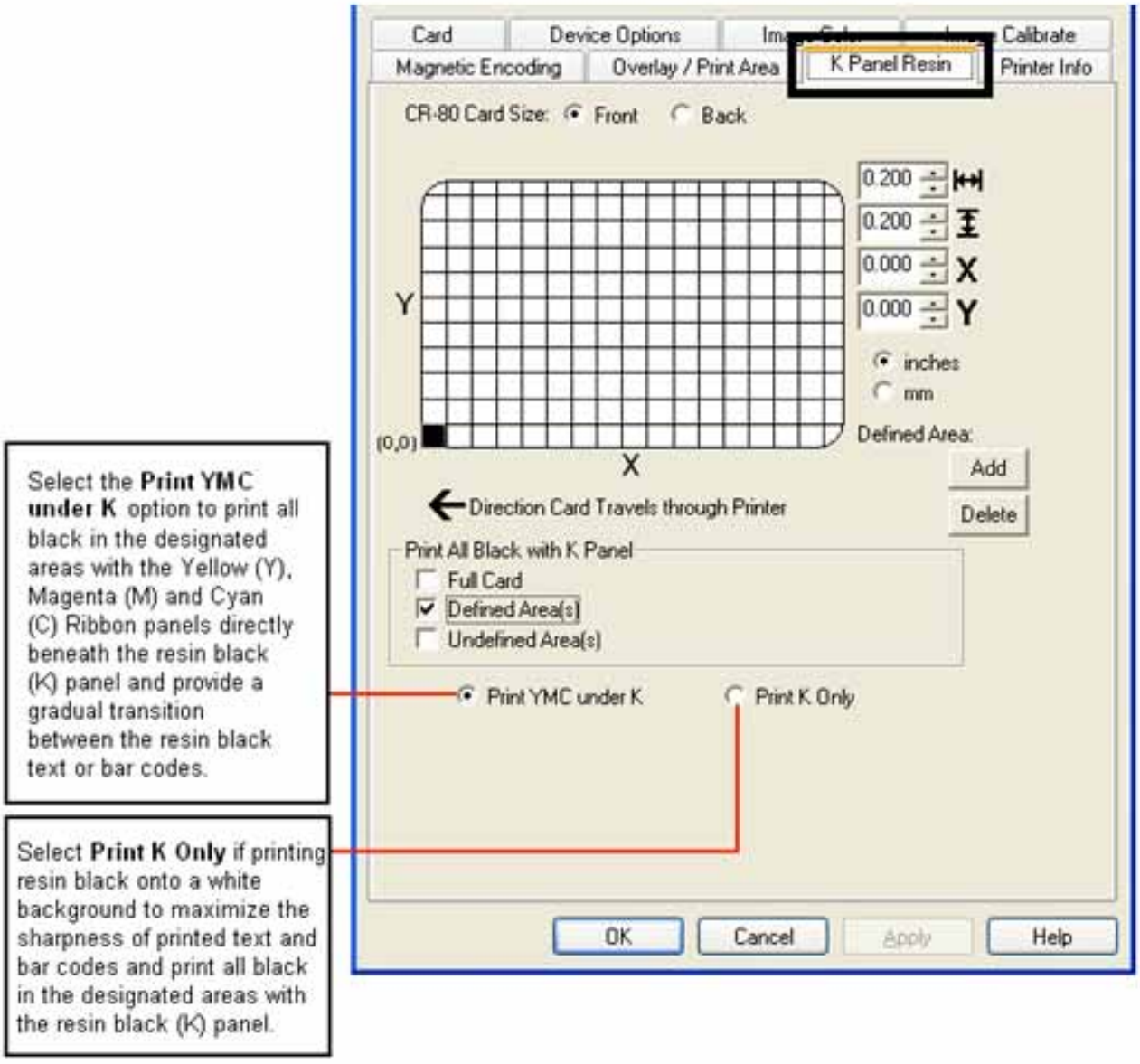
Use this tab to control where the resin black (K) Panel of a full-color Ribbon is printed. Refer to **Using the Defined Area Option** for a specific procedure that relates to this tab.



Using the K Panel Resin tab

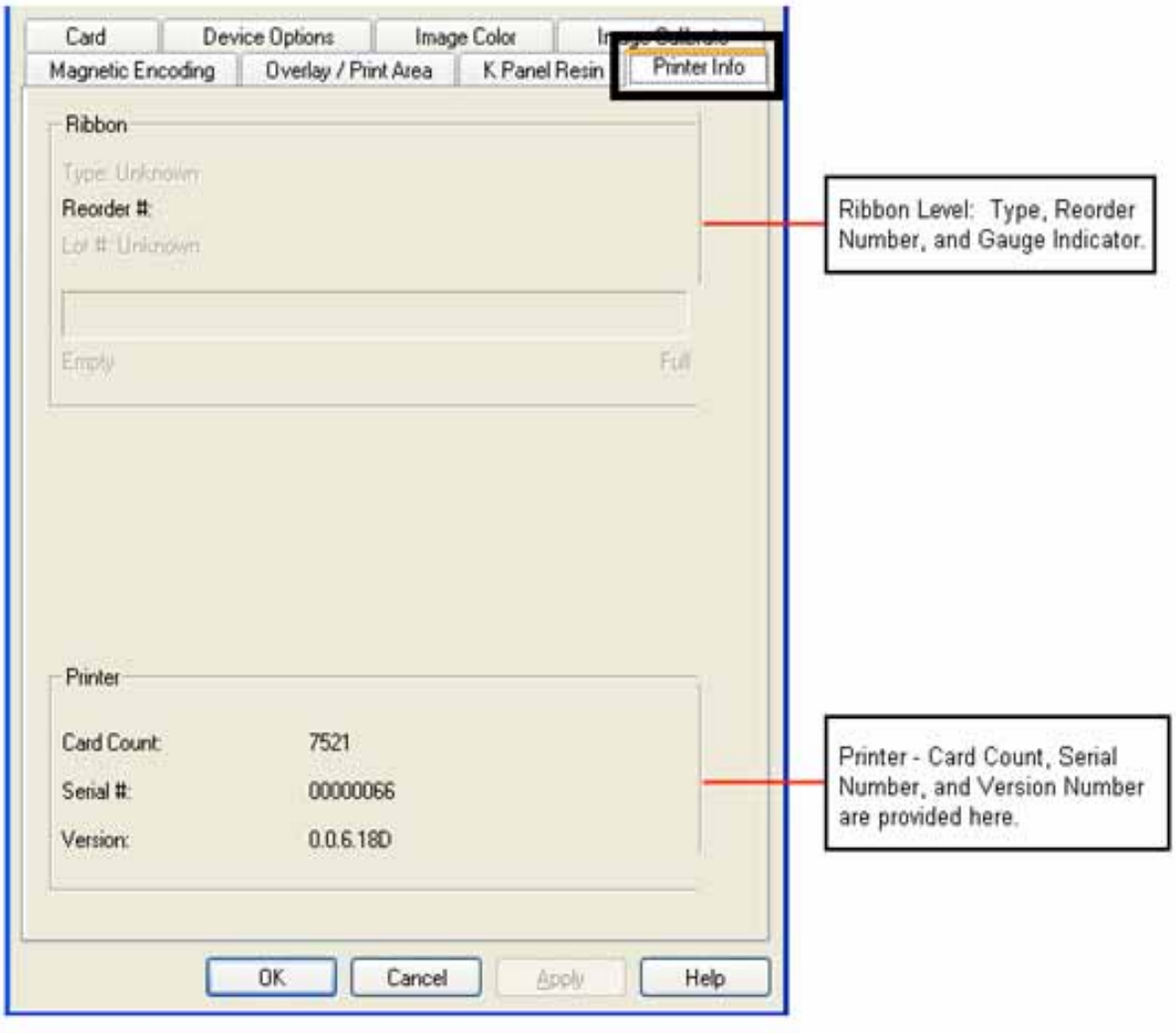


Using the K Panel Resin tab



Using the Printer Info tab

Use the options on this tab to view information about the Ribbon, Card Count, Printer Serial #, Firmware version, and Reorder Media #'s installed in the Printer.



Section 4: General Troubleshooting

This section provides Troubleshooting procedures for this Printer for Communication Errors, Card Feed Errors, Print Process Errors, Card Jam Errors, Encoding Errors and Diagnosing Image Problems.

Safety Messages (review carefully)

Symbol	Critical Instructions for Safety purposes
Danger: 	**Failure to follow these installation guidelines can result in death or serious injury.** Information that raises potential safety issues is indicated by a warning symbol (as shown to the left). • **To prevent personal injury**, refer to the following safety messages before performing an operation preceded by this symbol. • **To prevent personal injury**, always remove the power cord prior to performing repair procedures, unless otherwise specified. • **To prevent personal injury**, make sure only qualified personnel perform these procedures.
Caution: 	**This device is electrostatically sensitive. It may be damaged if exposed to static electricity discharges.** Information that raises potential electrostatic safety issues is indicated by a warning symbol (as shown to the left). • **To prevent equipment or media damage**, refer to the following safety messages before performing an operation preceded by this symbol. • **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. • **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). • **To prevent equipment or media damage**, always remove the Ribbon and Cards from the Printer before making any repairs, unless otherwise specified. • **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.

Communications Errors

Resolving the Communication 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: • x86 based PC or compatible • Windows 7, Windows 2000, Windows XP, Windows 2003 • 500MHz computer with 256MB of RAM or higher • 500MB free hard disk space or higher • USB 2.0 or higher port
2	Confirm the correct installation of the Printer Driver. a. Close the software program and check the Printer Driver. b. Reboot the computer. c. Ensure the Printer Driver is installed correctly. (**Note:** Especially if an obsolete Driver was recently removed.) d. Ensure the correct setup options within the Printer Driver are selected.
3	Confirm the correct installation of the Flipper Table Module Assembly. a. Reboot the computer. b. Ensure that the **Print Both Sides** option in the Printer Driver is set correctly. c. 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. a. Print a self-test from the Printer by holding down the **Pause** button on power up 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** (a Windows word processing program in the Accessories Program Group). 1) Go to the **File** menu and select **Page Setup**. 2) Click on the **Printer** button and select the Sunlight Lux Card Printer 3) Click **OK** and reset all four margins to zero. (**Note:** The 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**.
5	Determine whether there is adequate hard Drive space. (**Note:** A large volume of temporary files on the computer can cause communications errors.)

	a. Access the temporary files by following this process: • Search for all folders called TEMP. Once found, clear out the contents of the folders. • If using Windows 2000/XP, run the System Utility - Disk Defragmenter found in the Accessories folder of the **Start** Menu. • 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.

Print Process Errors

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Resolving a Card Not Fed Error (Cards will not feed off the Hopper)

Step	Procedure
1	Review the following information. • **Symptom:** Cards will not feed at all. • **Printer Error State:** Card is not being detected by the Card TOF Sensor 11 seconds after the initiation of a print job causing the Printer to produce an error • **Driver Monitor Error Display:** Unable to Feed Card

Step	Procedure

2	Check the card quality / loading. a. Remove cards from the Card Hopper. b. Ensure that the cards are not sticking together by fanning them out and then lining them back together in a straight deck. c. Press the Card Hopper Load Lever down until the Card Tray locks into place. d. Load up to 100 cards into the Hopper with the print side down. e. Close the Card Hopper Cover to release the Card Tray. f. Press on the **Resume** button. g. If the cards do not feed, continue to Step 3.
3	Press the **Cancel Print** button on the Driver Monitor Error Display Message.
4	Reboot the Printer by cycling the power.
5	Check the Card Feed Motor. a. Remove all cards from the Hopper. b. Press the Card Hopper Load Lever down until the Card Tray locks into place. c. Use the Fargo Workbench Printer Utility to send a test print to the Printer. d. Gently touch the Card Hopper Feed Roller to verify that it is turning e. If Roller is NOT turning, continue to Step 7. f. If Roller is turning, continue to Step 6.
6	Check the Hopper Tray Spring Tension. a. Open Card Hopper Cover. b. Use the Fargo Printer Workbench Utility to send a test print to the Printer. c. When the Card Hopper Feed Roller engages, push up on the Card Hopper Tray. g. If the cards feed, replace the Card Hopper Lift Spring. d. If the cards do not feed, replace the Card Hopper Feed Roller.
7	Card the Hopper Feed Roller is not turning during a print job. a. Remove the Printer rear cover. b. Ensure that the Card Hopper Feed Motor power cable is securely connected to J-20 on the Printers Main Board. c. Ensure that the Card Hopper Feed Motor power cable is securely connected to the Card Hopper Feed Motor. d. Use the Workbench Printer Utility to send a test print to the Printer. e. If the Card Hopper Feed Motor is not moving, continue to Step 8.

8	Replace Card Hopper Feed Motor. a. Replace the Card Hopper Feed Motor. b. Use the Fargo Workbench Printer Utility to send a test print to the Printer. c. If the Card Hopper Feed Motor does not turn, replace the Main Board. (Contact CIM Technical Support: techsupport@cimitaly.it)

Resolving a Card Not Fed Error (multiple feed)

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Step	Procedure
1	Review the following information. • **Symptoms:** Two or more cards feed at the same time causing the cards to jam at the Card Hopper Roller. Printer is out of cards. • **Printer Error State:** Card is not being detected by card TOF Sensor 11 sec after the initiation of a print job causing the Printer to produce an error • **Driver Monitor Error Display:** Unable to Feed Card

Step	Procedure

2	Check card quality / loading. a. Remove cards from the Card Hopper. b. Ensure that the cards are not sticking together by fanning them out and then lining them back together in a straight deck. c. Press the Card Hopper Load Lever down until the Card Tray locks into place. d. Load up to 100 cards into the Hopper with the print side down. e. Close the Card Hopper Cover to release the Card Tray. f. Press on the **Resume** button. g. If the cards do not feed, continue to Step 3.
3	Press the **Cancel Print** button on the Driver Monitor Error Display Message.
4	Reboot the Printer by cycling the power.
5	Check Card Feed TOF Sensor. a. Remove the Printers rear cover. b. Use a digital volt meter to place the Positive lead to pin 9 of the J-4 Main Board connection and the negative lead to pin 12 of the J-4 Main Board connection. • The blocked Sensor should read +4.99 vdc. • The open Sensor should read +1.5 vdc. c. If the Card Feed TOF Sensor does not read properly, replace the Sensor.
6	Clean the Card Feed Roller.

Resolving a Ribbon RFID Error (Ribbon RFID Antenna is Corrupted)

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

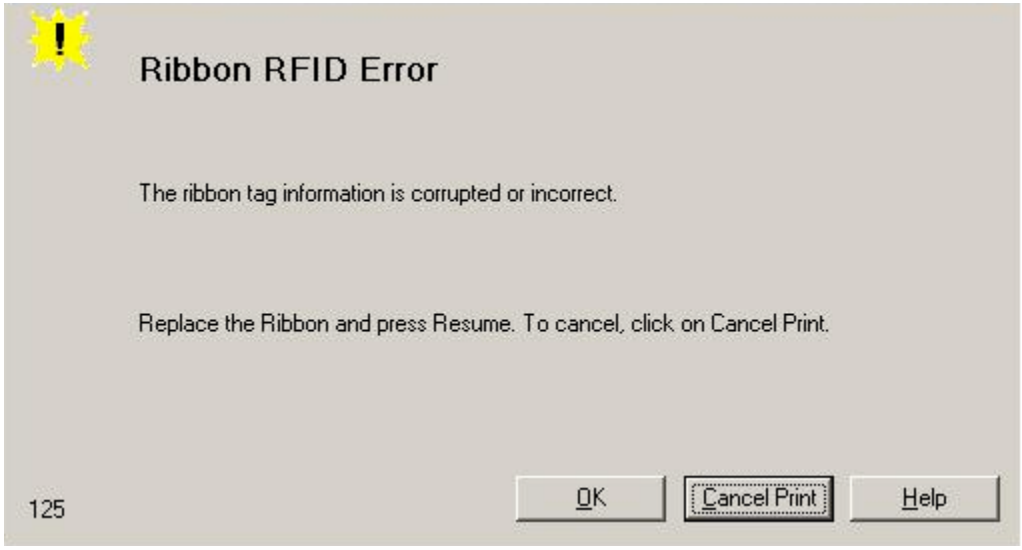
Step	Procedure
1	Review the following information. • **Symptom:** Printer RFID Sensor does not detect a recognizable signal from the Ribbon. • **Printer Error State:** The Ribbon tag information is corrupted or incorrect. • **Driver Monitor Error Display:** Ribbon RFID Error

Step	Procedure
2	Replace the Print Ribbon a. Replace the Print Ribbon Cartridge. b. Press on the **Resume** button. c. If the error continues, see **Resolving the Ribbon RFID Error** (Ribbon RFID Sensor is Corrupted) in this section.

Resolving a Ribbon RFID Error (Ribbon RFID Sensor is Corrupted)

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

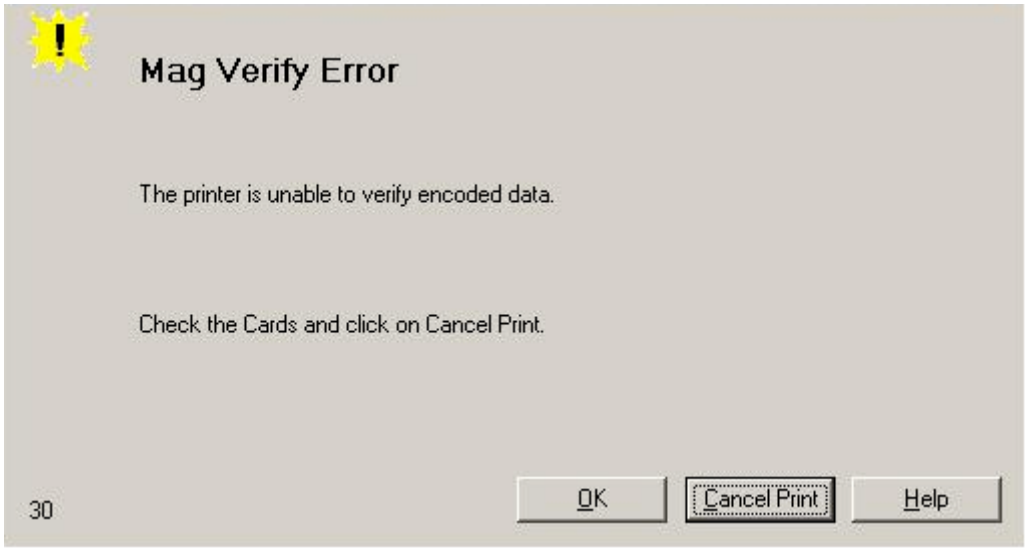
Step	Procedure
1	Review the following information. • **Symptom:** Printer RFID Sensor does not detect a recognizable signal from the Ribbon. • **Printer Error State:** The Ribbon tag information is corrupted or incorrect. • **Driver Monitor Error Display:** Ribbon RFID Error
2	Replace the Print Ribbon RFID Sensor. a. Replace the Print Ribbon RFID Sensor. b. Press on the **Resume** button. c. If the error continues, replace the Printer Main Board.



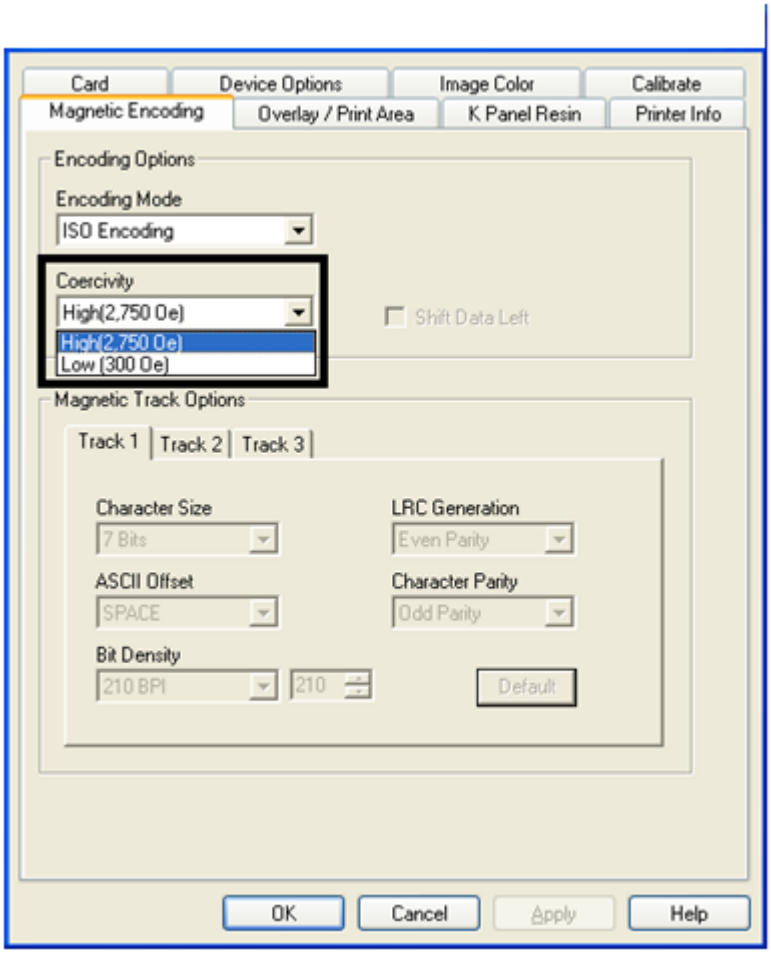
Resolving the Mag Verify Error

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Step	Procedure
1	Review the following information. • **Symptom:** The Printer is unable to verify encoded data. • **Printer Error State:** The Printer is unable to verify encoded data. • **Driver Monitor Error Display**: Mag Verify Error



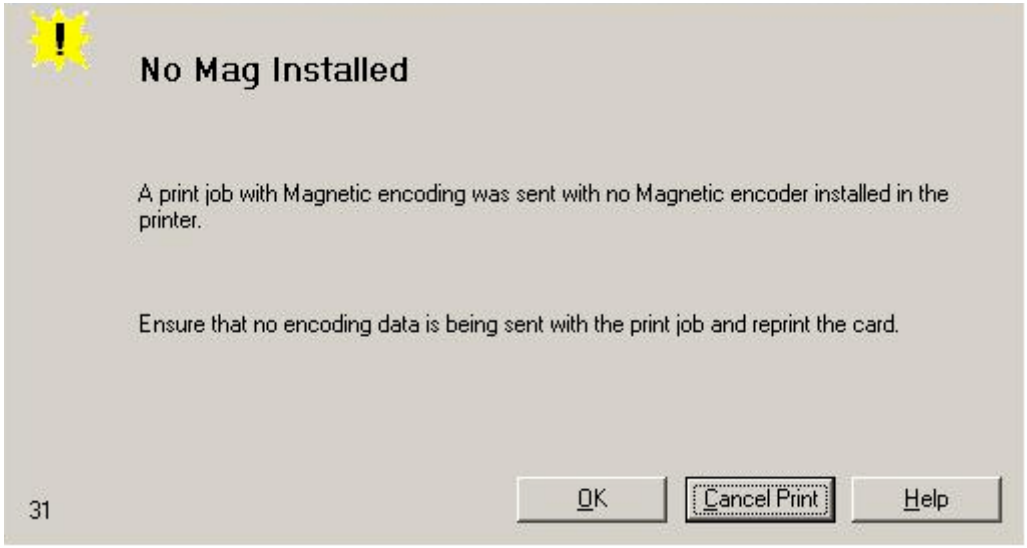
Step	Procedure
2	Check to ensure that the cards are loaded with the Magnetic Stripe facing Up and towards the front of the Printer.
3	a. Press on the **Resume** button. b. If the error continues continue to step 4
4	Verify the Driver settings if cards are loaded properly. See the **Using the Magnetic Encoding** tab procedure.
5	Verify that data is being encoded to the Magnetic Stripe. a. Clear any Error Messages by unplugging the Printer and reapplying power. b. Remove the failed card. c. Use a Magnetic Stripe reader or magnetic developer spray to determine if data is being written to the Magnetic Stripe. d. If data is not being written to the Magnetic Stripe, • Open the front cover. • Remove the Magnetic Module cover screw. • Remove the Magnetic Module cover. • Verify that the Magnetic Module is seated securely into the Magnetic Module docking station. e. If the Magnetic Module is properly seated, replace the magnetic head (as needed). f. If data is being written to the Magnetic Stripe, the Magnetic Offset may need to be adjusted. See the **Using the Mag Top of Form Option** procedure.
6	Verify that the coercivity of the cards matches the Driver Settings.



Resolving the No Magnetic Encoder Installed Error

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Step	Procedure
1	Review the following information. • **Symptom:** There is not a Magnetic Encoder installed. • **Printer Error State:** A print job with Magnetic encoding was sent with no Magnetic encoder installed in the Printer. • **Driver Monitor Error Display:** No Magnetic Encoder Installed



Step	Procedure
2	Press the **Cancel Print** button on the Driver Monitor Error Display Message.
3	Reboot the Printer by cycling the power.
4	Verify that the Printer has a Magnetic Encoder installed. a. Open the front cover. b. Remove the Magnetic Module cover screw. c. Remove the Magnetic Module cover. d. Verify that the Printer has a Magnetic Module installed. (**Note:** If the Printer is equipped with a Magnetic Encoder Module, ensure that it is seated securely into the Magnetic Module docking station. If the issue persists, replace the Magnetic Module.)
5	If the Printer has no Magnetic Encoder Module, verify that the encoding data was sent in error, check the appropriate software user's manual for encoding instructions.

Resolving a Ribbon Sensor Error (Ribbon Miscue)

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Note: Using the printer in direct Sunlight may adversely affect the ribbon sensor integrity.

Step	Procedure
1	Review the following information. • **Symptom:** The Printer rolls through Ribbon and errors out • **Printer Error State**: The Printer cannot find the next panel on the Ribbon. • **Driver Monitor Error Display**: Ribbon Sensor

Step	Procedure
2	Open the front cover and remove the Ribbon Cartridge. a. Check that the Ribbon is in good condition and not wrinkled or broken. b. If Ribbon is broke or wrinkled, repair the Ribbon and wind up the take-up roll 4 color panels past the damaged area.
3	Press on the **Resume** button. If the issue persists, continue to Step 4.
4	Replace the Ribbon Cartridge. a. Press on the **Resume** button. b. If the issue persists, continue to Step 5.
5	Press the **Cancel Print** button on the Driver Monitor Error Display Message.
6	Reboot the Printer by cycling the power.

7	Use the Driver Calibration tab to calibrate the Ribbon Sensor. Cover the front of the printer to block the light while calibrating this sensor. • If the issue persists, continue to Step 8.
8	Replace the Ribbon Sensor.

Resolving a Ribbon Sensor Error

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Step	Procedure
1	Review the following information. • **Symptom:** The Printer rolls through Ribbon and errors out • **Printer Error State**: The Printer cannot find the next panel on the Ribbon. • **Driver Monitor Error Display**: Ribbon Sensor

Step	Procedure
2	Open the front cover and remove the Ribbon Cartridge. c. Check that the Ribbon is in good condition and not wrinkled or broken. d. If Ribbon is broke or wrinkled, repair the Ribbon and wind up the take-up roll 4 color panels past the damaged area.

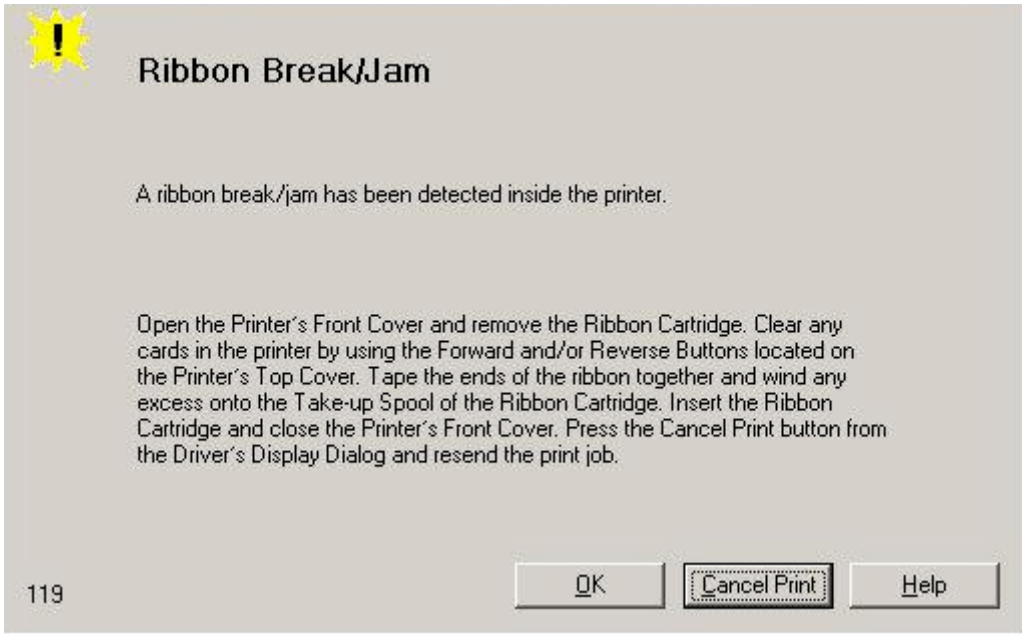
3	Press on the **Resume** button. If the issue persists, continue to Step 4.
4	Replace the Ribbon Cartridge. c. Press on the **Resume** button. d. If the issue persists, continue to Step 5.
5	Press the **Cancel Print** button on the Driver Monitor Error Display Message.
6	Reboot the Printer by cycling the power.
7	Replace the Ribbon Sensor.

Resolving a Ribbon Break Jam Error

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Note: Using the printer in direct Sunlight may adversely affect the ribbon sensor integrity.

Step	**Procedure**
1	Review the following information. • **Symptom:** The Print Ribbon has become jammed or has broken in the Printer • **Printer Error State:** The Ribbon Supply Encoder Sensor has unexpectedly stop receiving information from the Ribbon Encoder • **Driver Monitor Error Display:** Ribbon Break/Jam



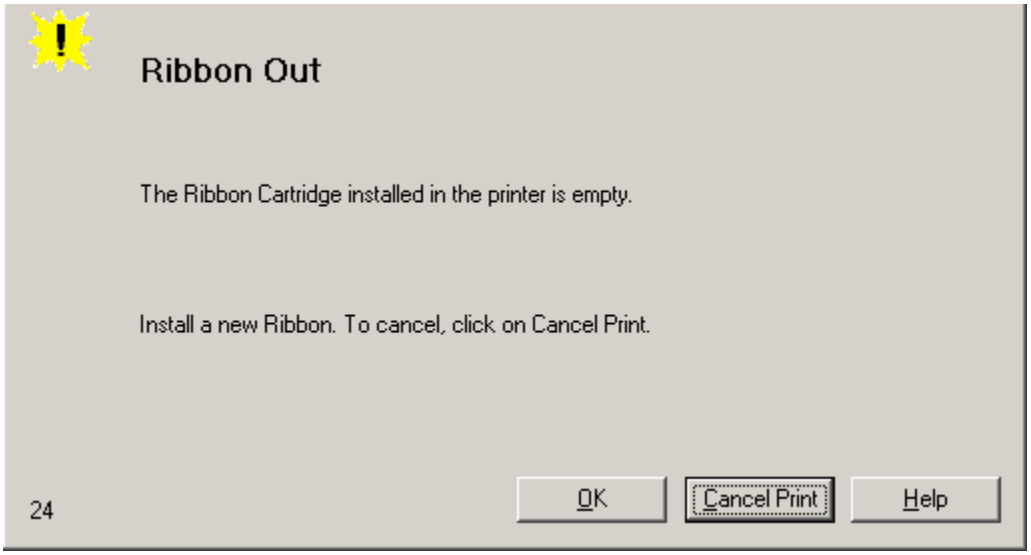
Step	Procedure
2	Open the front cover and remove the Ribbon Cartridge. • If Ribbon is broken, continue to Step 3. • If Ribbon is in good condition, continue to Step 6.
3	Adjust the print offset. See the **Using the Print Top of Form Option** procedure. If the issue persists, continue to Step 4.
4	Repair the Ribbon and wind up the take-up roll 4 color panels past the damaged area. a. Press on the **Resume** button. b. If the issue persists, continue to Step 5.
5	Use the Fargo Workbench Printer Utility to cycle the Printhead to ensure proper Printhead operation. • If the Printhead does not cycle properly, see **Resolving the Headlift Motor / Sensor Error.** • If the Printhead functions properly, continue to Step 6.
6	Replace the Ribbon Cartridge. a. Press on the **Resume** button. b. If the issue persists, continue to Step 7.
7	Remove the rear cover in order to check that the Ribbon Encoder Sensor is securely connected to the J-4 Main Board connection and to the Encoder

	Sensor. a. Press on the **Resume** button. b. If the issue persists, replace the Encoder Sensor. (Contact CIM Technical Support: techsupport@cimitaly.it)

Resolving a Ribbon Out Error

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer. (**Note:** Using the printer in direct Sunlight may adversely affect the ribbon sensor integrity.)

Step	Procedure
1	Review the following information. • **Symptom:** Printer will not print. • **Printer Error State:** The Ribbon Sensor has detected the End Of Ribbon mark • **Driver Monitor Error Display:** Ribbon Out
2	Replace the Ribbon Cartridge a. Press on the **Resume** button.



Resolving a No Ribbon Installed Error

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

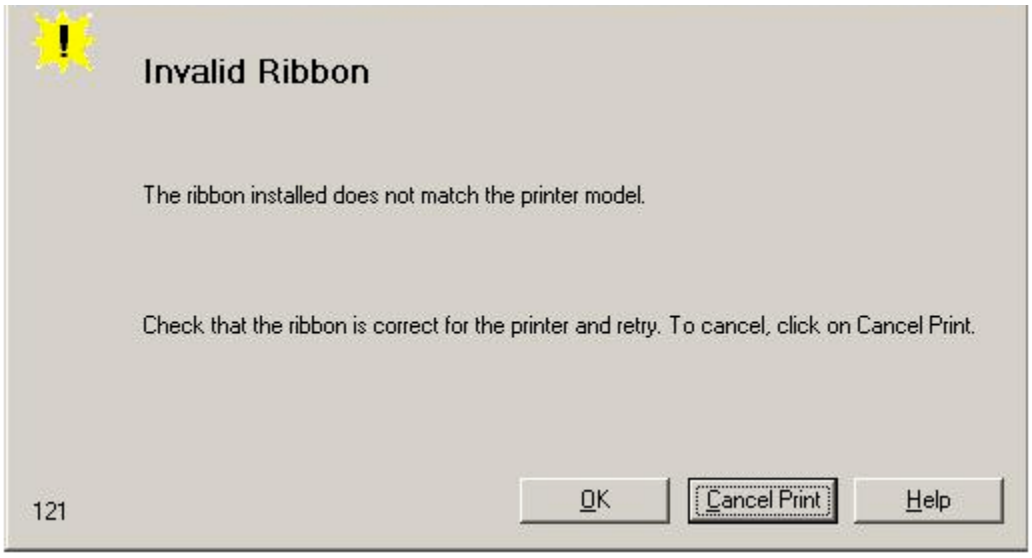
Step	Procedure
1	Review the following information. • **Symptom:** Printer errors out as soon as it receives data from PC • **Printer Error State:** The Printer RFID Sensor is not receiving a signal from the Ribbon • **Driver Monitor Error Display:** No Ribbon Installed

Step	Procedure
2	Verify that a Ribbon Cartridge is installed in the Printer. a. Press on the **Resume** button. b. If the issue persists, continue to Step 3.
3	Remove the rear cover and check that the Ribbon RFID cable is securely connected to the Main Board (J-5) and the RFID Sensor. • If the connections are loose, reattach them. • Press on the **Resume** button. • If the connections are good or if the issue persists, continue to Step 4.
4	Replace the Ribbon RFID Sensor.

Resolving a Invalid Ribbon Error

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Step	Procedure
1	Review the following information. • **Symptom:** Printer errors out as soon as it receives data from the PC • **Printer Error State:** The Ribbon installed does not match the Printer model. • **Driver Monitor Error Display**: Invalid Ribbon



Step	Procedure
2	Verify that the Ribbon Cartridge installed is designed for the correct Printer model.
3	Press on the **Resume** button. If the issue persists, continue to Step 4.
4	Remove the rear cover and check that the Ribbon RFID cable is securely connected to the Main Board (J-5) and the RFID Sensor. • If the connections are loose, reattach • Press on the **Resume** button. • If the connections are good or if the issue persists, continue to Step 5.
5	Replace the Ribbon RFID Sensor.

Resolving a Wrong Ribbon Error

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

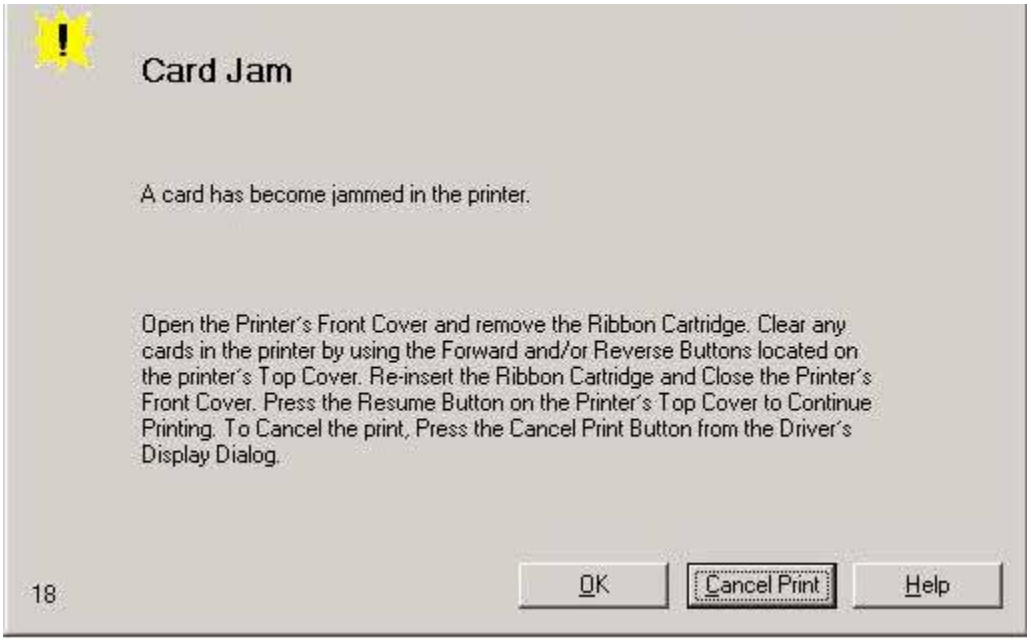
Step	Procedure
1	Review the following information. • **Symptom:** Printer errors out as soon as it receives data from the PC • **Printer Error State:** The Ribbon installed does not match the Printer Driver information • **Driver Monitor Error Display:** Wrong Ribbon

Step	Procedure
2	Verify the Driver settings are correct. a. Open the Printer Control Panel from the Computer. • If using Windows 2000/XP, right click on the Card Printer and select **Printing Preferences**. b. Click on the Device Option tab. c. Click on the **auto select** button. d. Check that the Ribbon type matches the Ribbon selected.
3	Press on the **Resume** button. If the issue persists, continue to Step 4.
4	Remove the rear cover and check that the Ribbon RFID cable is securely connected to the Main Board (J-5) and the RFID Sensor. • If the connections are loose, reattach it. • Press on the **Resume** button. • If the connections are good or if the issue persists, continue to Step 5.
5	Replace the Ribbon RFID Sensor.

Resolving a Card Jam Error

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Step	Procedure
1	Review the following information. • **Symptom:** Card is jammed. • **Printer Error State**: Card TOF Sensor is detecting no card motion • **Driver Monitor Error Display:** Card Jam

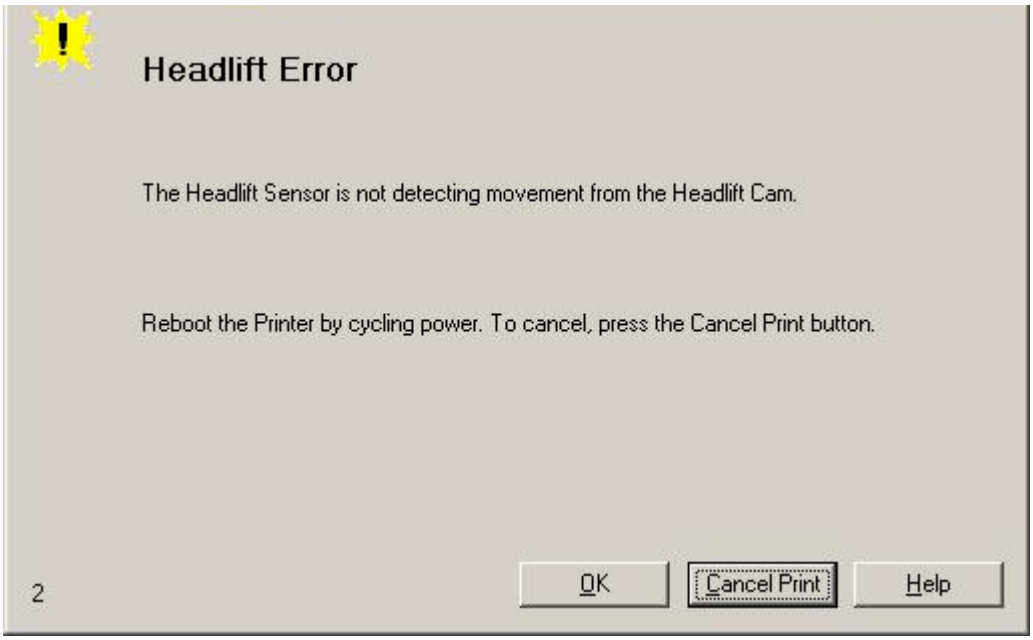


Step	Procedure
2	Look for a jammed card in the Printer. a. Open the Printer's front cover. b. Remove the Ribbon Cartridge from the Printer. c. Check to see if a card is jammed in the print station of the Printer. d. If a card is found in the print station, continue to Step 3. e. If no card was found in the print station, continue to Step 4.
3	Clearing a jammed card. a. If a card is jammed in the Printer, use the **Cancel button** and the **Pause button** to move the Feed Rollers and free the card. b. The card can then be fed out of the Printer.
4	Test the Card Sensor. a. Remove the rear cover. b. Using a Digital Voltmeter, connect the negative lead to ground. c. Connect the positive lead to Pin 10 of J4. • If **blocked**, the Sensor should read 4.9 to 5.5 VDC. • If **unblocked**, the Sensor should read 0.15 to 0.18 VDC. d. If the voltages do not read correctly, replace the Sensor. (Contact CIM Technical Support: techsupport@cimitaly.it)

Resolving a Headlift Motor or Sensor Error

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Step	Procedure
1	Review the following information. • **Symptom:** The Printhead continuously cycles or does not cycle at all • **Printer Error State:** Headlift Sensor is not detecting movement from the Headlift Cam • **Driver Monitor Error Display:** Headlift Error



Step	Procedure
2	Press the **Cancel Print** button on the Driver Monitor Error Display Message.
3	Reboot the Printer by cycling the power.
4	Cycle the Headlift Motors. a. Use the Fargo Workbench Printer Utility to cycle the Printhead to ensure proper printhead operation. a. Verify that the Headlift Motor turns. b. If the Motor does not turn or jams, continue to Step 5.
5	Check the Headlift Motor Main Board Connection (J20). a. Unplug the Printer.

	b. Remove the back cover. c. Verify that connection J20 is properly connected to the Main Board. d. If the Motor does not turn, continue to Step 7.

6	Test the Headlift Sensor. a. Remove the back cover. b. Attach the positive lead from a Digital Voltmeter to Pin 1 of J9. Attach the negative lead to the Pin 3 of J9. • If **open**, the Sensor should read 0.17 to 0.9 VDC. • If **closed**, the Sensor should read 4.9 to 5.5 VDC. c. Replace the Sensor if the voltages do not read correctly. d. If the Motor does turn, continue to Step 7.
7	Replace the Headlift Motor. a. If the Motor does turn, continue to Step 8. (Contact CIM Technical Support: techsupport@cimitaly.it)
8	Replace the Main Board.

Resolving the Cover Open Error Message

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Step	Procedure
1	Review the following information. • **Symptom:** The Printer remains idle after a print job is sent. • **Printer Error State:** The front cover Sensor detects that the cover is open • **Driver Monitor Error Display:** None
2	Check for debris, as follows: a. Open the front cover and check that no debris has accumulated in the Sensor opening. Use compressed air to clean the opening as needed. b. If the Sensor still does not work, continue to Step 3.
3	Check that the Sensor tab on the front cover is not damaged. a. Open the front cover and examine the Lid Sensor tab for damage, if the Sensor tab is damaged, replace the front cover. b. If the Sensor still does not work, continue to Step 4.
4	Replace the Main Board. (Contact CIM Technical Support: techsupport@cimitaly.it)

Resolving the Blank Output issues

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Step	Procedure
1	Review the following information. • **Symptom:** A card is ejected blank (that should be printed). • **Printer Error State:** None • **Driver Monitor Error Display:** None
2	Run a self-test. a. Clear any card jams. b. Unplug power from the Printer. c. While holding down the **Pause** button, reapply power. (**Note:** A self-test card will be printed.)
3	Look for an image on the Ribbon. After a self-test has been run, open the front cover. Remove the Print Ribbon from the Printer. Visually inspect the set of panels that were last used by the Printer. If an image is noticeable on the used Ribbon, continue to Step 4. If an image is not noticeable on the used Ribbon, continue to Step 5.
4	Adjust the placement. Reset the Printer to clear any Error Messages by removing the power and reapplying it. Open the Printer Control Panel from the Computer. If using Windows 2000/XP, right click on the Sunlight LUX Card Printer and select Printing Preferences. Click on the Calibrate tab. Click on the Settings button. Adjust the Image Placement Setting by +5. Click on the OK button. Print a self-test. After adjusting the Image Placement, if a white border appears on the card, adjust the image placement back toward its original value in increments of 2 until the white edge is gone. If still having blank card issues, continue to Step 5.
5	Check the Printhead connections. Remove the Printer power and USB cables.

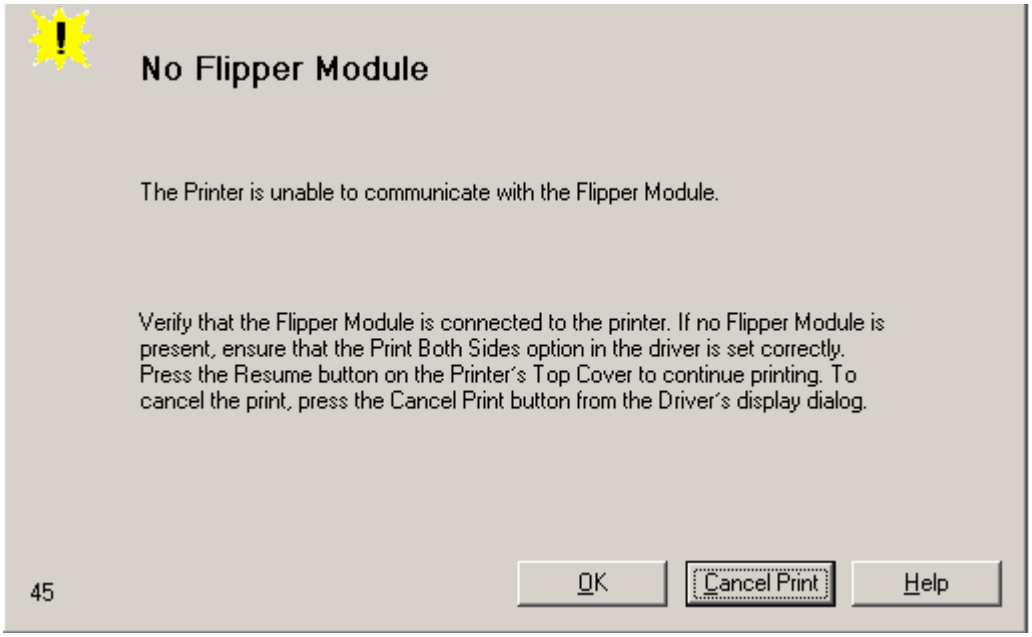
	Turn the Printer over to gain access to the base plate. Remove the one (1) thumbscrew from the Printhead cover plate and remove the cover plate. Depress the Printhead locking tabs and remove the Printhead. Check to ensure that Power and Data Cable (that connects to the Printhead) is properly seated. Remove the Back Cover. Ensure that the Printhead Power/Data Cable is properly seated on J16 on the Main board. If still having blank card issues, continue to Step 6.
6	Ensure that the proper voltage is being applied to the Printhead. a. Remove the back cover. b. Using a Digital Voltmeter, connect the negative lead to ground. c. Probe Pins 1 to 5 of the Printhead power connection on J16. d. Ensure that a voltage between 22 to 23 VDC is read on each pin. • If less than 22 volts is read on any of the pins, replace the Printhead. • If still having issue with blank cards, replace the Main Board. (Contact CIM Technical Support: techsupport@cimitaly.it)

Flipper Table Module Assembly Problems

Resolving the No Flipper Table Module problem

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

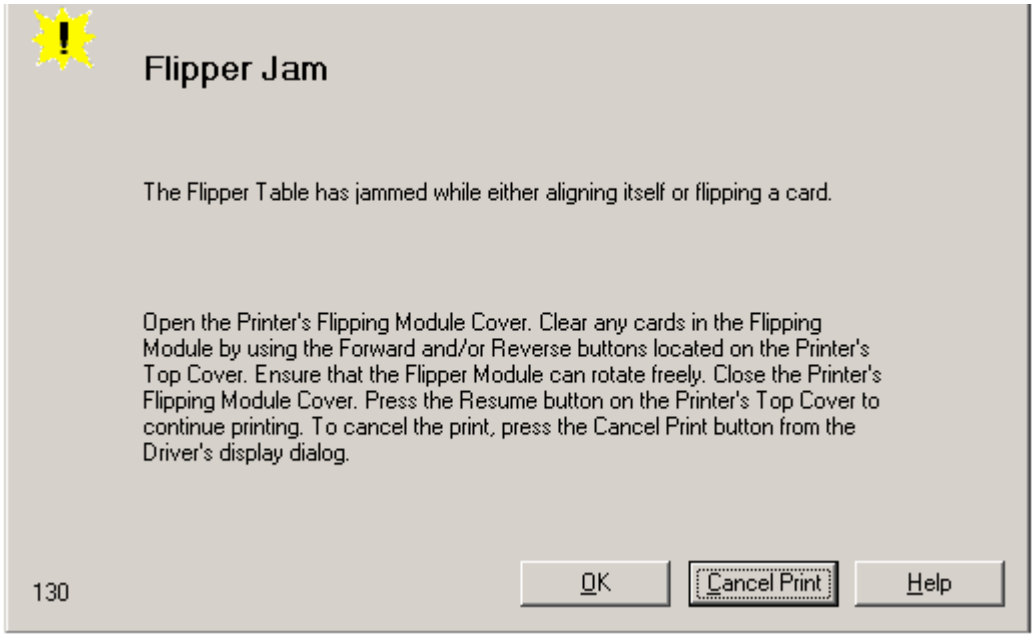
Step	Procedure
1	Review the following information. • **Symptom:** The Flipper Table Module Assembly is not functioning. • **Printer Error State:** The Printer is unable to communicate with the Flipper Module. • **Driver Monitor Error Display:** No Flipper Module



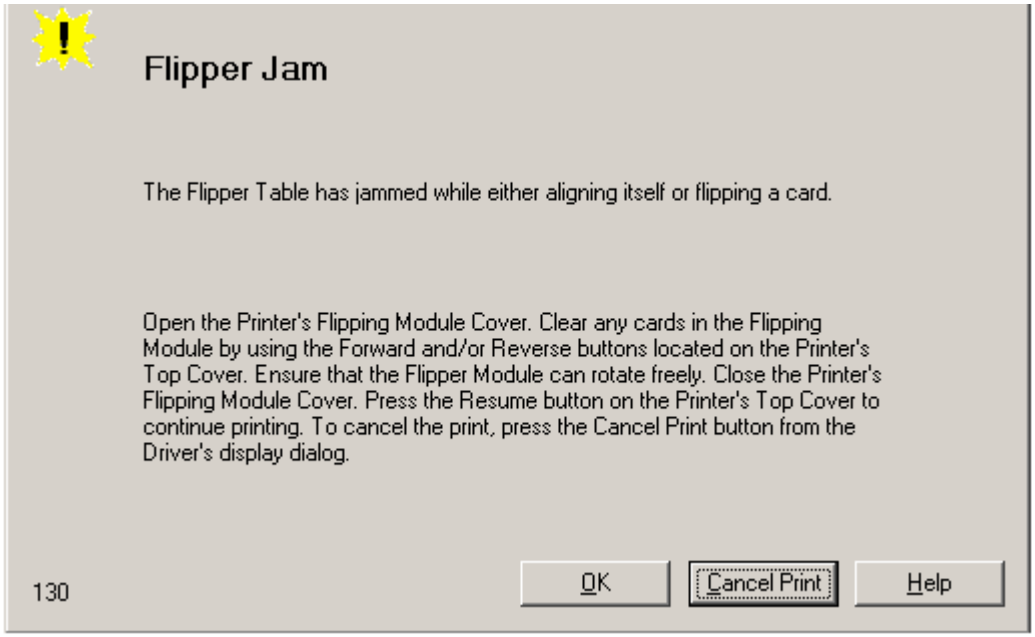
Resolving the Flipper Jam Error

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Step	Procedure
1	Review the following information. • **Symptom:** The Flipper Table Module is jamming. • **Printer Error State:** The Flipper Table has jammed while either aligning itself or flipping a card. • **Driver Monitor Error Display:** Flipper Jam



Step	Procedure
2	Open the Printer's Flipper Table Module Cover. a. Clear any cards in the Flipper Table Module by using the **Forward** and/or **Reverse** buttons located on the Printer's Top Cover. b. Ensure that the Flipper Table Module can rotate freely. c. Close the Printer's Flipper Table Module. d. Press the **Resume** button on the Printer's Top Cover to continue printing. e. To cancel the printing, press the **Cancel Print** button from the Driver's display dialog.



Diagnosing Image Problems

Resolving the Pixel Failure problems

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Step	Procedure
1	Review the following information. • **Symptom:** A thin line or scratch travels the entire length of the card (See sample image below). • **Printer Error State:** None • **Driver Monitor Error Display:** None
2	Check the card stock for scratches. Replace the cards (as needed).
3	Examine the Printhead for visible damage.
4	Clean the Printhead. See **Cleaning the Printhead.**
5	Replace the Printhead if the problem persists. Contact CIM Technical Support: techsupport@cimitaly.it)

Resolving the Card Surface Debris problems

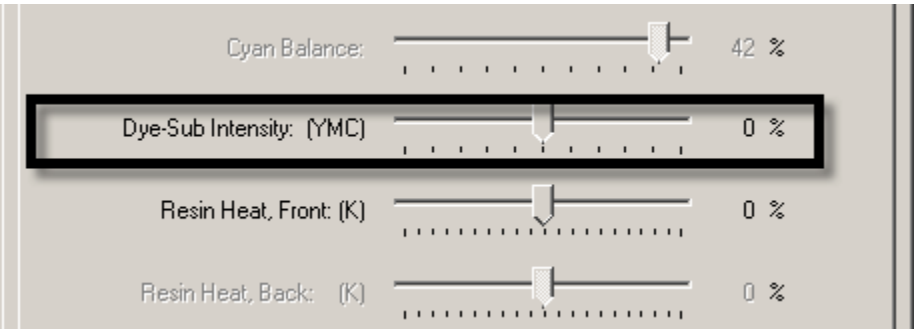
All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Step	Procedure
1	Review the following information. • **Symptom:** Prints have spots (white or colored voids) and/or dust on them (See sample image below). • **Printer Error State:** None • **Driver Monitor Error Display:** None
2	Ensure the cards are clean and stored in a dust-free environment. Do not use cards with embedded contaminants in the surface.
3	Clean the inside of the Printer. See **Cleaning the Printer's Interior**.
4	Clean the Cleaning Roller. See **Cleaning the Platen and the Card Cleaning Rollers.**

Resolving the Incorrect Image Darkness problems

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Step	Procedure
1	Review the following information. • **Symptom:** Printed cards are too dark or too light. • **Printer Error State:** None • **Driver Monitor Error Display**: None
2	Run a self-test to ensure that the issue is not with the Driver settings.
3	Adjust the **Dye-Sub Intensity** setting within the Image Color tab of the Printer Driver. See **Using the Image Color tab** procedure.

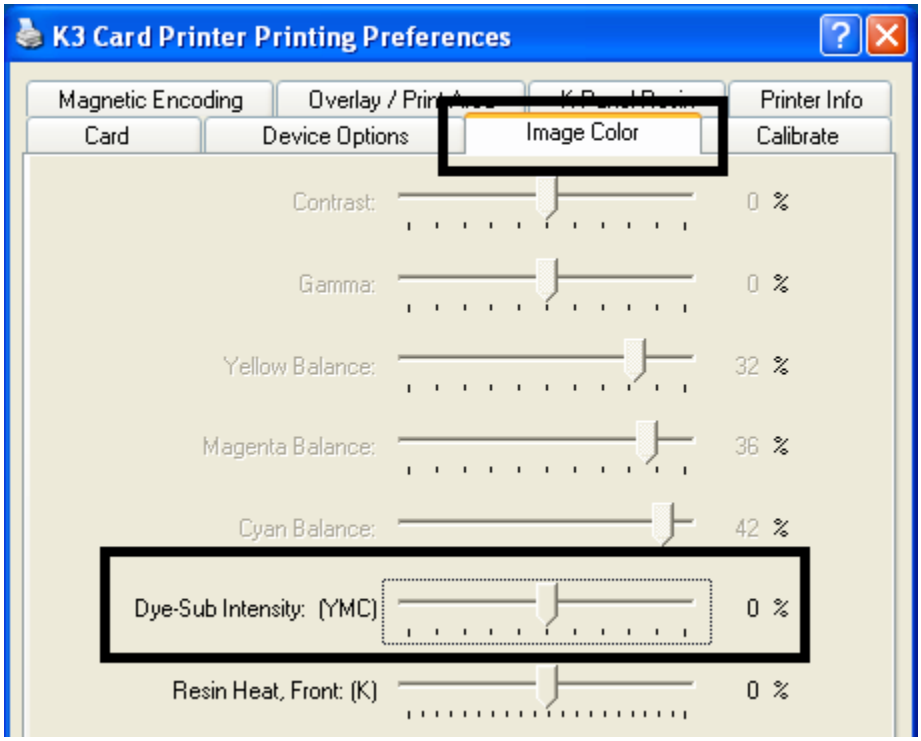


Step	Procedure
4	Correct the **Image Darkness**. See the **Using the Image Darkness Option** procedure.

Resolving Ribbon Wrinkle problems

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Step	Procedure
1	Review the following information. • **Symptom:** Printed cards have off-colored lines or streaks on them. • **Printer Error State:** None • **Driver Monitor Error Display:** None
2	Confirm that the Printer is using the most current Driver via e-mail: (Contact IM Technical Support: techsupport@cimitaly.it)
3	Reduce the **Dye-Sub Intensity** setting within the Image Color tab of the Printer Driver. See the **Using the Image Color tab.**

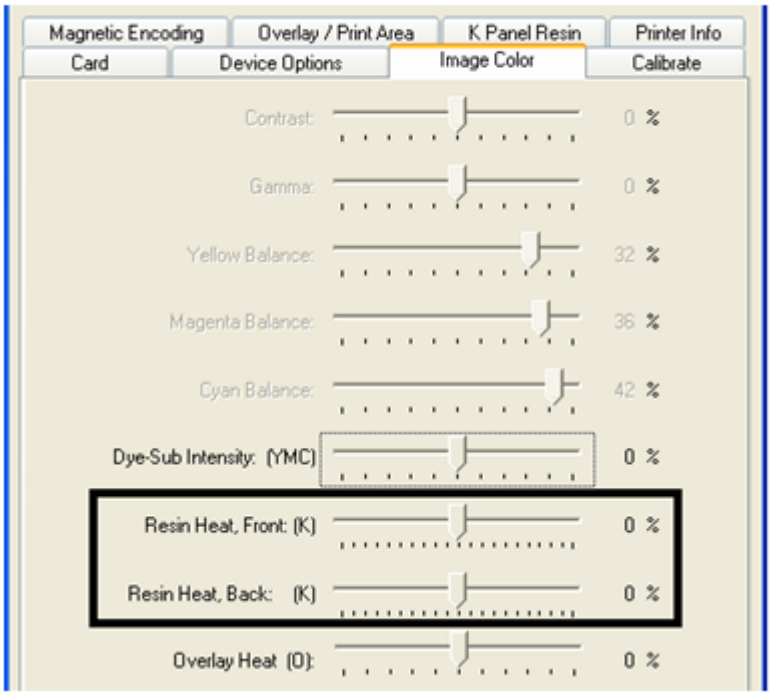


Step	Procedure
4	Reduce the Image Darkness. See the **Using the Image Darkness Option** procedure.

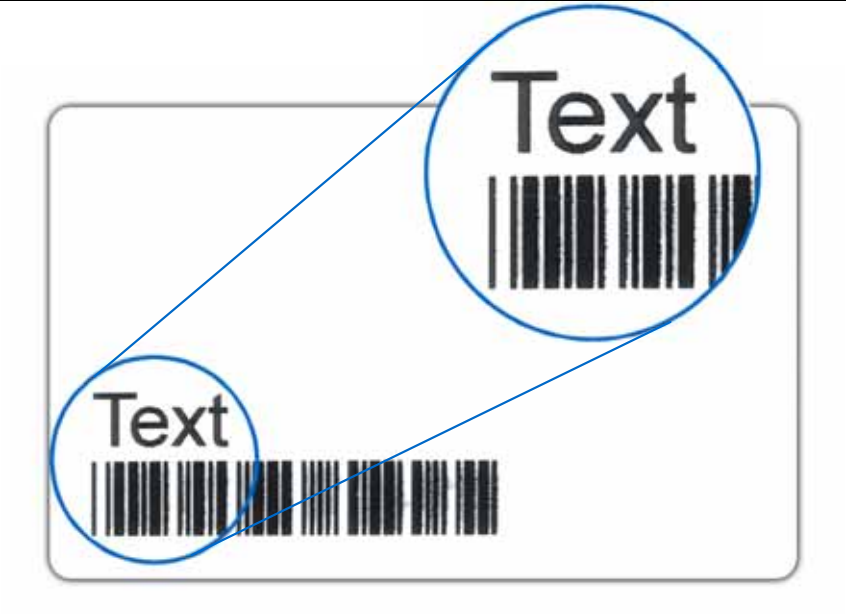
Resolving the Excessive Resin printing problems

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Step	Procedure
1	Review the following information. • **Symptom:** Black resin text and barcodes appear smeared or too thick. • **Printer Error State:** None • **Driver Monitor Error Display:** None
2	Reduce the Resin Heat setting within the Image Color tab of the Printer Driver. See the **Using the Image Color tab**.



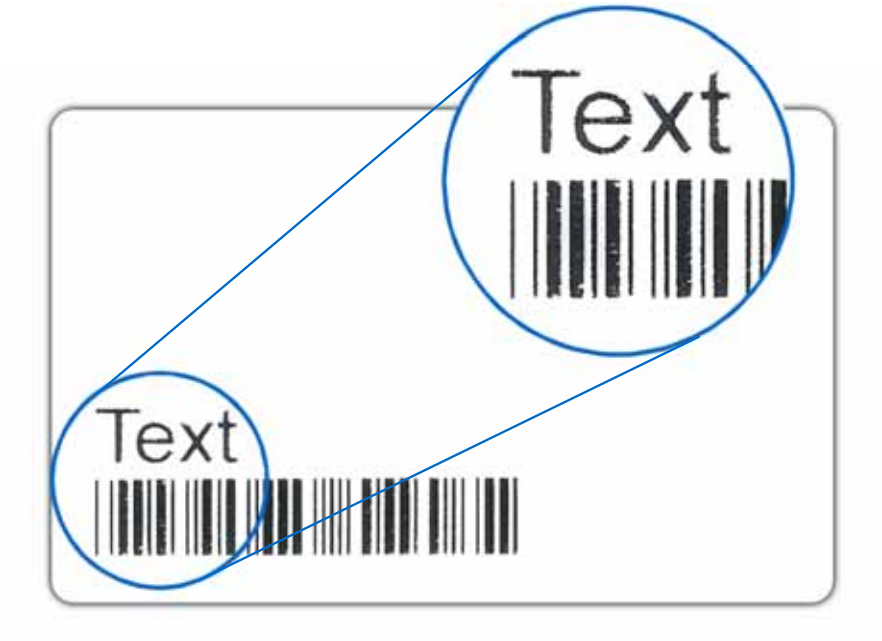
Step	Procedure
3	Reduce the Image Darkness. See the **Using the Image Darkness Option** procedure.



Resolving the Incomplete Resin printing problems

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

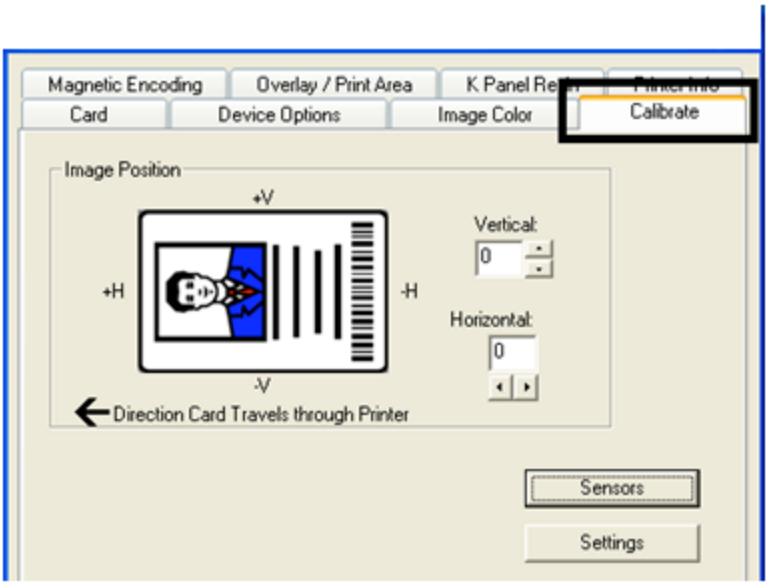
Step	Procedure
1	Review the following information. • **Symptom:** Black resin text and barcodes appear faded or too light. • **Printer Error State:** None • **Driver Monitor Error Display:** None
2	Increase the **Resin Heat** setting within the Image Color tab of the Printer Driver. See the **Using the Image Color tab** .
3	Increase the **Image Darkness**. See the **Using the Image Darkness Option** procedure.



Resolving the Image Placement problems

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer. This procedure is used to adjust the position of the card in the Print driver and does not change the internal settings of the Printer. See **Using the Printer Calibration Utility** for instructions on changing the Printer's internal settings.

Step	Procedure
1	Review the following information. • **Symptom:** Printing is cut off or is not centered on the card or a white border appears. • **Printer Error State:** None • **Driver Monitor Error Display:** None
2	Verify if the Image Position option within the Calibrate tab is set correctly or incorrectly. a. Open the Printer Control Panel from the Computer. • If using Windows 2000/XP, right click on the Sunlight LUX Card Printer and select **Printing Preferences**. b. Click on the Calibrate tab. c. Adjust the **Vertical** and/or **Horizontal Image Position** settings based on where the white border is on the card.



Step	Procedure
3	Verify if the **Horizontal Image Position Setting** is set correctly or incorrectly. See the graphic below. • If the white border is on the leading edge of the card, adjust the Horizontal value by +2. • If the white border is on the trailing edge of the card, adjust the Horizontal value by -2. a. Click on **OK**. b. Run a self-test. c. If the white border is diminished, continue the adjustment until it is gone.

Step	Procedure
4	Verify if the **Vertical Image Position Setting** is set correctly or incorrectly. See the graphic below. a. Adjust the value as described below: • If the white border is on the top edge of the card, adjust the Vertical value by +2. • If the white border is on the bottom edge of the card, adjust the Vertical value by -2. b. Click on **OK**. c. Run a self-test. d. If the white border is diminished, continue the adjustment until it is gone.

Resolving the Poor Image Quality problems

All Troubleshooting procedures assume that only factory-authorized supplies are in use in the Printer.

Step	Procedure
1	Review the following information. • **Symptom:** Photos on the cards look pixilated or grainy, as shown below. • **Printer Error State:** None • **Driver Monitor Error Display:** None
2	Use high-resolution, 24-bit color images to always capture an image: • at a 24-bit color setting • at 300 dpi • at the same size that it will be printed on the card, as captured either with a scanner or with a digital camera If a small or low-resolution image is stretched or blown up, a pixilated or grainy effect will occur when printing, as shown below (right side).

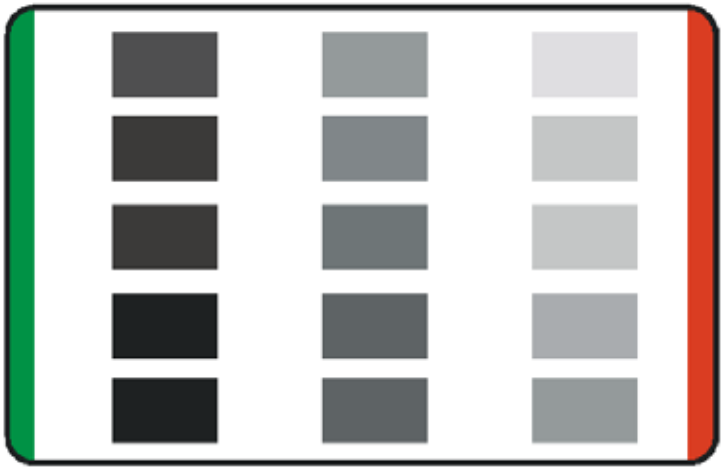
Running the Self Test

Perform a self-test after (a) an initial setup of the Printer, (b) a calibration procedure has been conducted or (c) a part has been replaced to check for proper Printer operation.

Step	Procedure
1	Verify that a full-color or Premium Resin Ribbon Cartridge is installed and that cards are properly loaded. **Caution:** If the power is ON, disconnect the Power Cable from the Printer's rear panel.
2	Press and hold the **Pause/Resume** button.
3	While holding down the **Pause/Resume** button, plug the power cable back into the Printer.
4	• **Full Color Ribbon Cartridge installed:** The Printer will print a 3-color process gray scale on the front of the card. The overlay pass is not printed during the Self-test. See the next procedure. • **Premium Resin Ribbon Cartridge installed:** The Printer will print a single color gray scale on the front of the card.)

Running the Standard Self Test Print

Display: Full Color Test Print



Running the Magnetic Self Test (HiCo Only)

Perform a self-test after (a) an initial setup of the Printer, (b) a calibration procedure has been conducted or (c) a part has been replaced to check for proper Printer operation.

Step	Procedure
1	Remove Ribbon Cartridge from the Printer and close the front cover **Caution:** If the power is ON, disconnect the Power Cable from the

	Printer's rear panel.
2	Press and hold the **Pause/Resume** button.
3	While holding down the **Pause/Resume** button, plug the power cable back into the Printer.
4	The Printer will encode magnetic information on all 3 magnetic tracks

Section 5: Troubleshooting

Printer Error Button Table

The Sunlight Lux Card Printeruse the Button messages rather than the Display Message system.

Step	Procedure
1	All Printers have two (2) buttons: • **ON/OFF**  • **Pause** 
2	The ON**/OFF** () button is blue when the Printer is ON. When the Printer enters the Sleep Mode, the button LED is dimmed but still ON.
3	The **Pause** () button will be illuminated blue when the Printer is capable of accepting a print job and is not in an error state. This button LED will continue to stay on while the Printer prints as long as there is no error. This button LED will also be dimmed when the Printer goes into sleep mode.
4	When an error occurs, the **Pause** () button will no longer be illuminated blue, but will blink red.
5	Press the **ON/OFF** () button when Printer is in an error state to cause the action to be cancelled. (Note: If no other error occurs, then the **Pause** button will illuminate its blue LED.)
6	Press the **Pause** () button when Printer is in an error state to cause the Printer to retry. (Note: It will illuminate its blue LED and retry the failed action.)
7	When downloading an upgrade file, both blue LED's will blink.
8	When no Printer Display is available, press or hold the buttons to access certain Internal Test jobs. See below. • To print a card with the Printer Settings, press the **Pause** () button and hold for 4+ seconds when the Printer is ready and idle. • To print the alignment or the Self Test, press and hold the **Pause** () button during the power-up sequence

Using the Error Message Table

This section provides the troubleshooting table for the error message.

When an error occurs in the Printer, the PC will show the error message on PC with solutions.

Each table uses a 3- column presentation to present a specific 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.

Error Message	Cause	Solution
# 2 **Head Move Error**	This is a problem with the Printhead Lift.	Reset the Printer and try again. If this problem persists, call for technical assistance.
# 8 **Head Sensor Error**	The Printhead Temperature Sensor is not functioning or is not connected properly. OR The Printhead is not cooling properly.	Reset the Printer and try again. If the problem persists, call for technical assistance.
# 9 **Reboot Required**	Unspecified system error detected by the Printer Firmware.	Reset the Printer and try again. If this problem persists, call for technical assistance.
# 25 **Ribbon not Installed**	A Ribbon is not installed in the Printer.	Install a Ribbon and retry.
# 30 **Mag Verify Error**	Magnetic encoding verification failure.	Try encoding with a different card. Verify cards have the Magnetic Stripe. Replace the Magnetic Encoding Module.

Troubleshooting with the Error Message Table

Error Message	Cause	Solution
# 31 **No Mag Module**	You are trying to send encoding data, but the Printer is not configured with this Encoder type.	Ensure that no encoding data is being sent with the print job and reprint the card. Install a Magnetic Encoding Module.
# 38 **# 39**	EEPROM restored with factory default values.	If changes were made in the Advanced Setting Tab in the Printer Driver, click the Default

# 40 **EEPROM Corrupt** **EEPROM Read Error**		button to reset these numbers. Reset the Printer and try again. If this problem persists, call for technical assistance.
# 44 **Flipper Jam/ Home Error**	A card has become jammed in the Printer's Flipper Table. The Flipper failed to position properly while aligning a card or flipping a card.	Clear any cards in the Flipper Table using the buttons to move the card out. Resume printing. ▪ The Flipper Table should be level when the Printer is powered up. If the Flipper Table is at an angle, open the card output door and manually level it. Then cycle the Printer Power to reset. Reset the Printer and retry. If problem persists call for technical assistance.
# 45 **No Flip Module installed**	Request to print on 2nd side of card, but no Flipper is installed.	If a Flipper Module is present, ensure that the Print Both Sides option in the Printer Driver is set correctly. Install a Flipper module.

Troubleshooting with the Error Message Table

Error Message	Cause	Solution
# 64 **# 65** **# 66** **Reboot Required**	Unspecified system error detected by the Printer Firmware.	Reset the Printer and try again. If this problem persists, call for technical assistance.
# 68 **Card in Printer**	A card is jammed in the Print Station or card flipping area of the Printer.	Clear the jam and press the **Pause** button.
# 70 **Multiple Feed**	Multiple cards were fed into the Printer.	Verify the card thickness is set to the thickness of your cards, then press the **Pause** button. Check for card slippage. If necessary, run the Printer cleaning routine Verify the Cleaning roller is properly installed on the Ribbon Cartridge. Verify the cards are not sticking together.
# 81 **Unable to Feed**	The Printer is unable to feed a card from the Card Hopper.	Check the following, then press the **Pause** button to continue. Verify the card thickness setting is set to the thickness of your cards. Verify the Cleaning roller is properly installed on the Ribbon Cartridge. Check for card slippage. If necessary, run the Printer cleaning routine. Verify that your cards are within the perimeters accepted card size range. Verify the cards are not sticking together.
# 82 Mag Jam	A card is jammed Magnetic station	Clear any cards in the Magnetic station using the buttons to move the card out. Press the **Pause** button to

		continue.
# 91 **Ribbon Out**	The Print Ribbon has run out.	Install a new Ribbon. Press the **Pause** button to continue or the ON/OFF button to cancel.
# 93 **Wrong Ribbon**	The Print Ribbon installed in the Printer does not match the Ribbon type selected in the Printer Driver.	Change either the installed Print Ribbon or the Ribbon type selected in the Printer Driver. Press the **Pause** button to continue or the ON/OFF button to cancel.
# 97 **Ribbon Search Error**	The Ribbon is not able to find the next panel correctly. Check for jams/breaks.	Recalibrate the Ribbon Sensor. If broken, repair by taping the Ribbon back on to the take- up core. Replace the Ribbon. Press the **Pause** button to continue or the ON/OFF button to cancel.
# 99 **Ribbon Error**	The Print Ribbon has either broken or jammed.	If jammed, clear the jam. If broken, repair by taping the Ribbon back on to the take- up core. Press the **Pause** button to continue or the ON/OFF button to cancel.
# 100 **Ribbon RFID Error**	There is no Ribbon or the Ribbon tag information is corrupted or incorrect.	Verify the Printer Driver settings for correct Ribbon. Try a new Ribbon and continue. Press the ON/OFF button to cancel.
# 102 **# 103** **# 104** **#3** **Headlift Error**	This is a problem with the Printhead Lift.	Reset the Printer and try again. If this problem persists, call for technical assistance.

# 106 **Job Data Error**	The print data sent to the Printer is corrupt or has been interrupted.	Check the interface cable. Select the ON/OFF button to cancel this print job and then resend the job.
# 107 **Printing Error**	An error was detected during printing.	Reset the Printer and try again. If this problem persists, call for technical assistance.
# 109 **# 113** **Ribbon Release Error**	The Printer cannot locate the next Ribbon panel in order to release the Ribbon from the card.	Ensure that the Ribbon is not stuck to the card. Replace the Ribbon. Recalibrate the Ribbon sensor. If the Ribbon is broken, repair by taping the Ribbon back onto the take- up core and manually advance to the next panel. Press the **Pause** button to continue.
# 110 **Card Jam/Align error**	A card is jammed in the Print Station or card flipping area of the Printer.	Clear the jam. Press the **Pause** button to continue.
# 111 **Head Loading**	An unrecoverable error has occurred during printing.	Reset the Printer and try again. If this problem persists, call for technical assistance.
# 112 **Card Jam/Align error**	A card is jammed in the Print Station or card flipping area of the Printer.	Clear the jam. Press the **Pause** button to continue.

Troubleshooting with the Error Message Table

Error Message	Cause	Solution
# 128 **# 170** **Calibrate Ribbon**	The Print Ribbon Sensor is out of calibration or has failed.	Calibrate the Ribbon Sensor. Check for material blocking sensor and try again.
# 131 **Flipper Jam/ Home Error**	A card has become jammed in the Printer's Flipper Table. The Flipper failed to position properly while aligning a card or flipping a card.	Clear any cards in the Flipper Table, using the buttons to move the card out. Resume printing. Reset the Printer and retry. If problem persists call for technical assistance.
# 139 **Please Remove Ribbon**	Ribbon needs to be removed.	Reset the Printer and retry. If problem persists, call for technical assistance.
# 144 **EEPROM Corrupt** **EEPROM Read Error**	EEPROM restored with factory default values.	If changes were made in the Advanced Setting Tab in the Printer Driver, click the Default button to reset these numbers. Reset the Printer and try again. If this problem persists, call for technical assistance.
#202 **Encoder not installed**	You are trying to send encoding data, but the Printer is not configured with this Encoder type. iCLASS,Prox,Mifare,SmartCard	Ensure that no encoding data is being sent with the print job and reprint the card. Install an Encoding Module.

Section 6: Cleaning

The Card Printer is built to require a minimum amount of maintenance. Nevertheless, there are a few procedures you can perform on a regular basis or as needed to ensure the best possible performance

Safety Messages (review carefully)

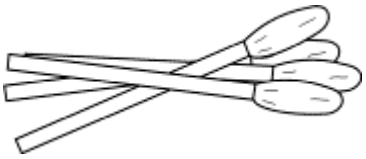
Symbol	Critical Instructions for Safety purposes
Danger: 	**Failure to follow these installation guidelines can result in death or serious injury.** Information that raises potential safety issues is indicated by a warning symbol (as shown to the left). • **To prevent personal injury**, refer to the following safety messages before performing an operation preceded by this symbol. • **To prevent personal injury**, always remove the power cord prior to performing repair procedures, unless otherwise specified. • **To prevent personal injury**, make sure only qualified personnel perform these procedures.
Caution: 	**This device is electrostatically sensitive. It may be damaged if exposed to static electricity discharges.** Information that raises potential electrostatic safety issues is indicated by a warning symbol (as shown to the left). • **To prevent equipment or media damage**, refer to the following safety messages before performing an operation preceded by this symbol. • **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. • **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). • **To prevent equipment or media damage**, always remove the Ribbon and Cards from the Printer before making any repairs, unless otherwise specified. • **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.

Sunlight Lux Card Printer/Encoders Cleaning Kit

Caution: 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.

Supplies (included with the Cleaning Kit)

This Cleaning Kit provides you with the specialized cleaning supplies and the required cleaning procedures for you to maintain the Sunlight Lux Card Printer/Encoders. The following cleaning procedures will require less than ten minutes.

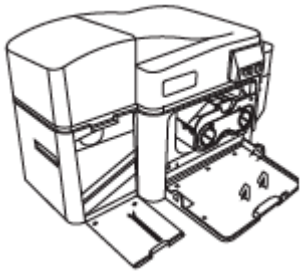
Description	Supplies (pictured)
Four (4) Printhead Cleaning Swabs are pre-moistened with 99.99% isopropyl alcohol for cleaning your Printer's Printhead.	
Ten (10) Cleaning Cards are provided with adhesive backing for cleaning your Printer's Platen and Card Feed Rollers.	

Printhead Cleaning

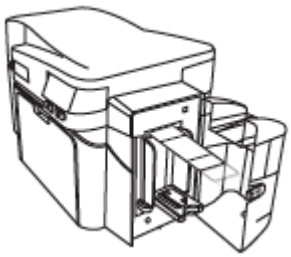
1	**Caution:** Turn **Off** the Printer and unplug the power cord from the Printer.
2	Remove the Ribbon Cartridge.
3	Open the **Printhead Cleaning Swabs**. Break it to moisten the tip.
4	Swab the tip back and forth across the top of the Printhead. Allow to dry thoroughly before sending a print job. 

Cleaning the Platen and the Card Feed Rollers

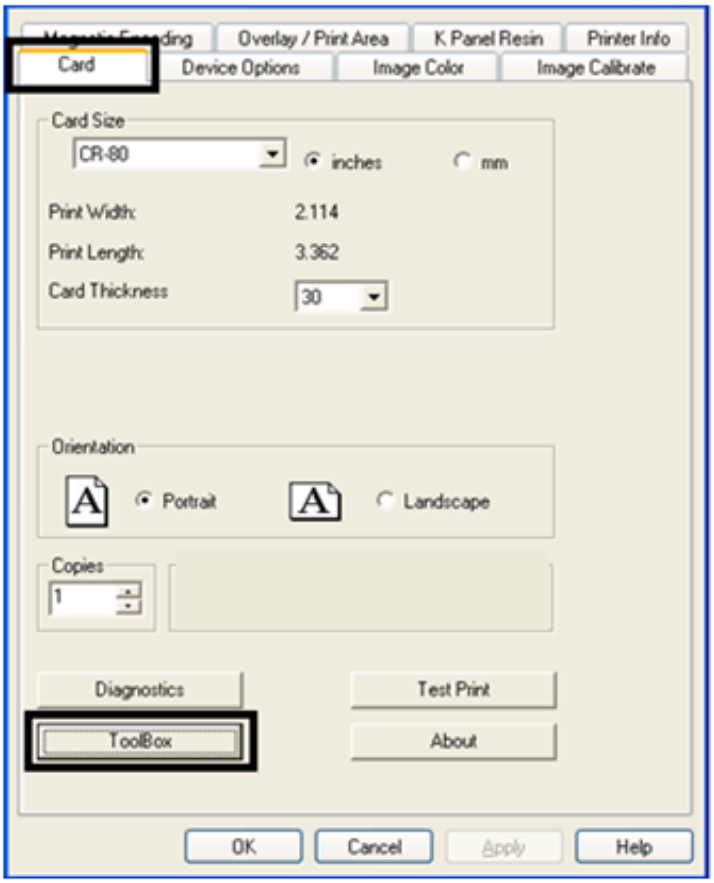
Perform this procedure approximately every **1000 prints** to maintain a consistent print quality. (**Note:** The Card Feed Rollers move the card throughout the print process. Rollers should be kept clean to prevent card jams and card contamination. This cleaning process will ultimately lead to better print quality and extended Printhead life.)

Step	Procedure
1	a. Open the Printer's Front Cover, remove the Print Ribbon and close the Front Cover. b. Remove all the cards from the Printer's Input Hopper. 
2	Use the **Cleaning Card** from the Printer's and remove the adhesive backing from both sides of the card. • If your Printer has a Magnetic Encoder installed, be sure to leave the small Liner Strip on top of the **Cleaning Card** in place. • This small strip is needed to protect the Magnetic Head from the adhesives on the **Cleaning Card**. 

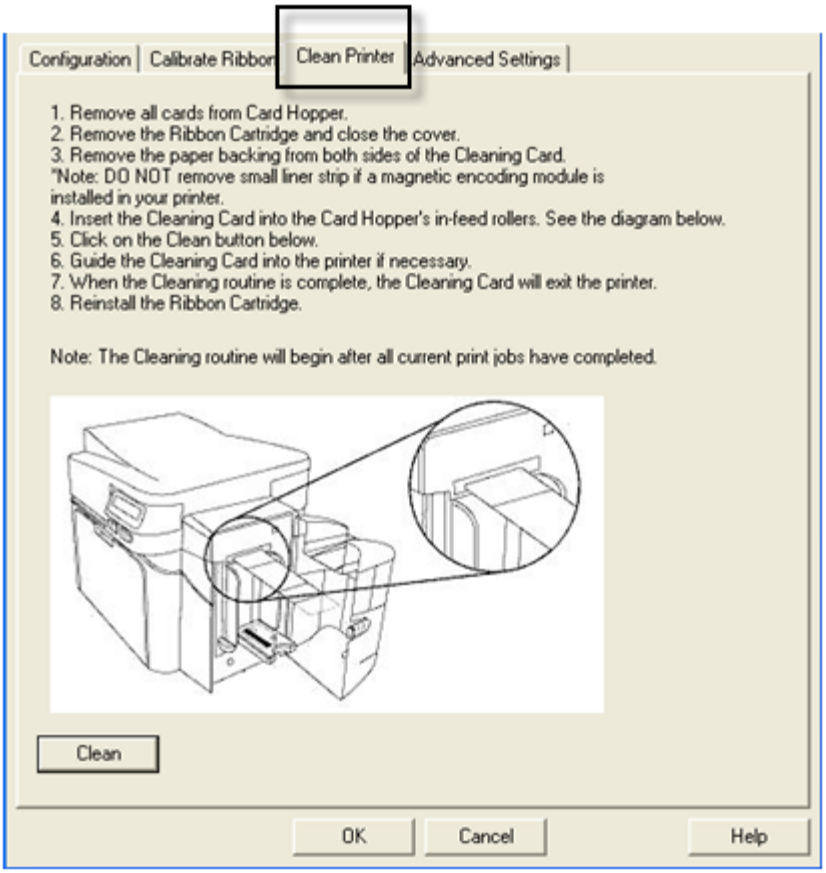
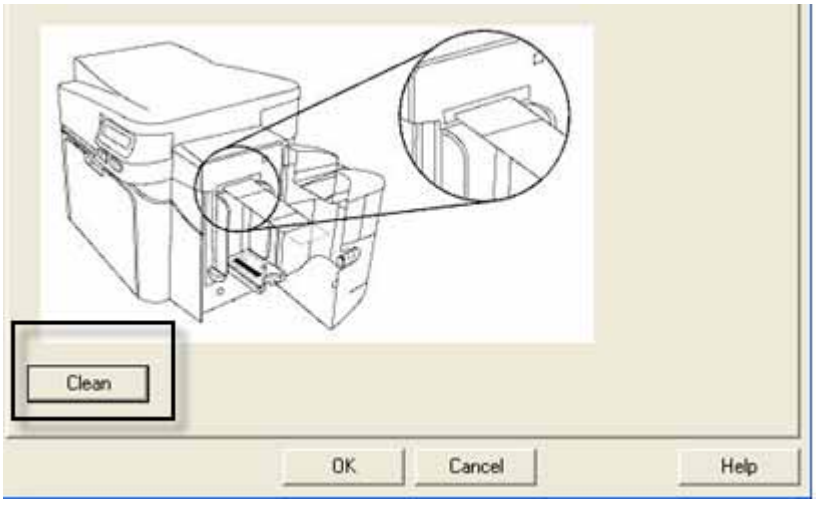
Cleaning the Platen and the Card Feed Rollers

Step	Procedure
3	Insert the **Cleaning Card** into the Single Feed Card Slot until the card stops. If your Printer is equipped with a Magnetic Encoder, you must insert the **Cleaning Card** with the printed side up and with the small Liner Strip towards the front of the Printer. 
4	From your computer, open the Printer Driver and select Printing Preferences.

Cleaning the Platen and the Card Feed Rollers

Step	Procedure
5	Click on the **Toolbox** button. 

Cleaning the Platen and the Card Feed Rollers

Step	Procedure
6	Click on the **Clean Printer** button. Follow the directions on the monitor. 
7	Click on the **Clean** button.  • The Printer will pull in the **Cleaning Card**. The Printer will then perform an automated cleaning procedure.

	• This procedure is designed to thoroughly clean the Platen and the Card Feed Rollers inside the Printer. • Dust and other particles may accumulate inside the Printer with continued usage. This can cause spots or specks to appear on the printed cards.)

Cleaning the Printer’s Exterior

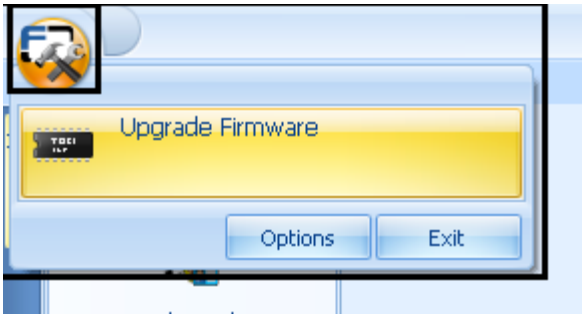
Clean it only with a soft micro fiber cloth. (**Note:** The Printer has a durable casing that should retain its luster and appearance for many years.

Section 7: Firmware Upgrades

Upgrade the Printer Firmware

Step	Procedure
1	**Requirements** • Internet Access • Printer is powered up and connected to PC
2	Open the Workbench Printer Utility or use the **Diagnostics** button from the Card tab of the Printing Preference page. (**Note:** The Workbench is also available from the Windows Program folder.) 

Upgrade the Printer Firmware

Step	Procedure
3	From the Application Icon, select **Upgrade Firmware**. 
4	Find the Firmware updates on www.cimitaly.it • Save the file to a folder. (Double-Click the file to Un-Zip the file) • Use the **Browse** button to find the .frm file. • Select the file. Click **Open**.
5	Click on **Upgrade** to start the upgrade process.
6	This message will appear while the Firmware is updating. **LOADING FIRMWARE**
7	The Printer will reboot after this process is completed.

Section 8: Technical Support

The purpose of this section to provide you with an efficient, step-by-step procedure to be used when contacting CIM Technical Support as needed for this Card Printer.

Step	Procedure
1	Contact the Technical Support Group by phone at +39 051 6465 011 **OR** Contact CIM Technical Support via the Web: www.cimitaly.com
2	Position a phone near the Printer and Computer so the technician can help to troubleshoot the Printer(s).
3	Please have a self-test and a sample card ready when calling Technical Support.

Section 9: Ethernet Option User Guide

Introduction

The Ethernet option includes the Ethernet port and the internal Printer Server.

Printer Management: The Printer Driver provides bi-directional status information so you can monitor and manage the Printer just as you would any other networked Printer.

Compatibility: The Ethernet option provides compatibility with TCP/IP and 802.3 Ethernet protocols with an IEEE 802.3 10/100Base-T Ethernet female RJ45 connector.

Application: With the Ethernet Option properly installed and configured, these printers are able to print in the same manner as a printer directly connected to the PC via a USB interface.

Technical Specification - Ethernet Option

 **Caution:** For safety purposes, Ethernet is not intended for a direct connection outside of the building.

Function	Requirement
Network	An IEEE 802.3 10/100 Base-T Ethernet network is required.
Printer	A Printer with the Ethernet option installed is required.
Printer Configuration	Since TCP/IP is used for the network communication, the Printer must be configured with an IP address and a subnet mask (before it can be seen on the network). An additional network setting for the Default Gateway can also be configured, which allows communication across the subnets.
Host Computer	A PC running Windows 7, Windows 2000, Windows XP or Windows Server 2003, connected to the network is required.
Host Printer Driver	The host PC must have installed the correct Printer Driver with Ethernet support. (**Note:** This Driver must be configured for printing to the IP address of the Printer.)

Functional Specification - Ethernet Option

The Ethernet option includes these features.

Feature	Description
Simultaneous Printing	Provides the ability to simultaneously print from multiple PCs to the network printer.
Printer Feedback	Provides status information from the network Printer to the PC.

Web Pages	Provides easy Printer configuration with any web browser.
Log Messages	Provides logging of usage and error events via e-mail, UDP or TCP/IP.
Password Security	Provides security with passwords and configurable User permission levels.
Telnet	Provides a Telnet command line interpreter for Printer configuration.
SNMP	Provides an SNMP agent that supports MIB-II.
Upgrades	Provides support for Firmware upgrades over the network.
Troubleshooting	Provides a Ping client for network troubleshooting.
IP Tracer	Provides a utility (IP Tracer) used to find Printers with Ethernet connection on a local network. (**Note:** This utility is included on the CD-ROM and online at www.cimitaly.it)

Network Services - Overview

The Ethernet option provides the services described in this section. (**Note:** Other additional services include a Ping client, address assignment and Printer discovery functions.)

Reviewing the Print Server

The Print Server provides printing services in the same manner as a printer connected directly to a USB interface except that the Printer is connected through the local area network to the client PC. The Print Server must be properly configured in order to provide this printing capability.

- The Print Server is capable of queuing up to eight (8) client PCs while printing. Communications between each PC and the Ethernet-enabled Printer are implemented over a bi-directional TCP/IP interface.
- All clients are able to send print jobs to the Printer and monitor Printer jobs and errors with the standard Windows printing system using the Printer Driver installed on their local PC.
- In this way, the User knows whether or not a print job has been successful. Also, the User knows what problems have been encountered while processing the print job. Printing using Ethernet works in a manner similar to the USB-connected PC/printer.

Reviewing the Web Page Server

An HTTP service serves web pages that provide an interface through which to configure and monitor the Printer. (**Note:** Users may also monitor all print jobs that have been sent to the Printer from any client PC.)

Reviewing the Network Management Interface

The Ethernet-enabled Printer operates as an SNMP agent to allow central administrators to monitor and configure the network interface and the Printer. (**Note:** A standard host MIB-II is implemented to maximize the utility of the Printer on the network.)

Network Management Interface

The SNMP interface is described below.

Interface	Description
SNMP	• The Ethernet interface is a fully-manageable SNMP agent that supports MIB-II. • The Ethernet interface is MIB II compliant, allowing SNMP managers to monitor protocol, network and routing statistics.

Reviewing the Telnet Server

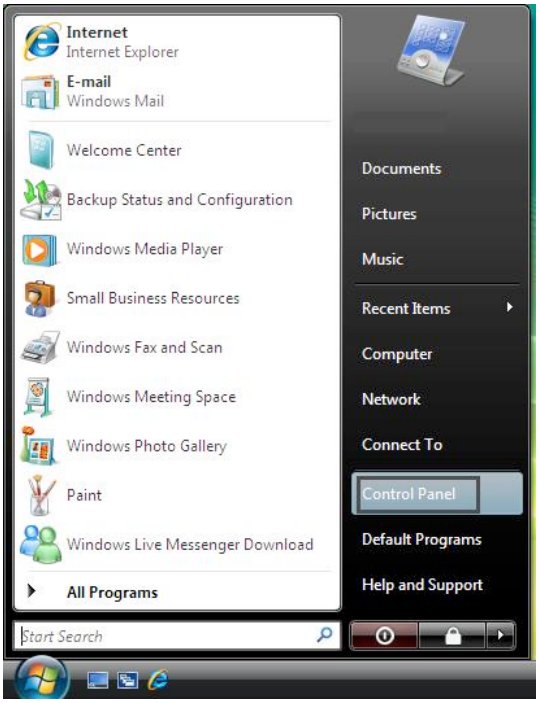
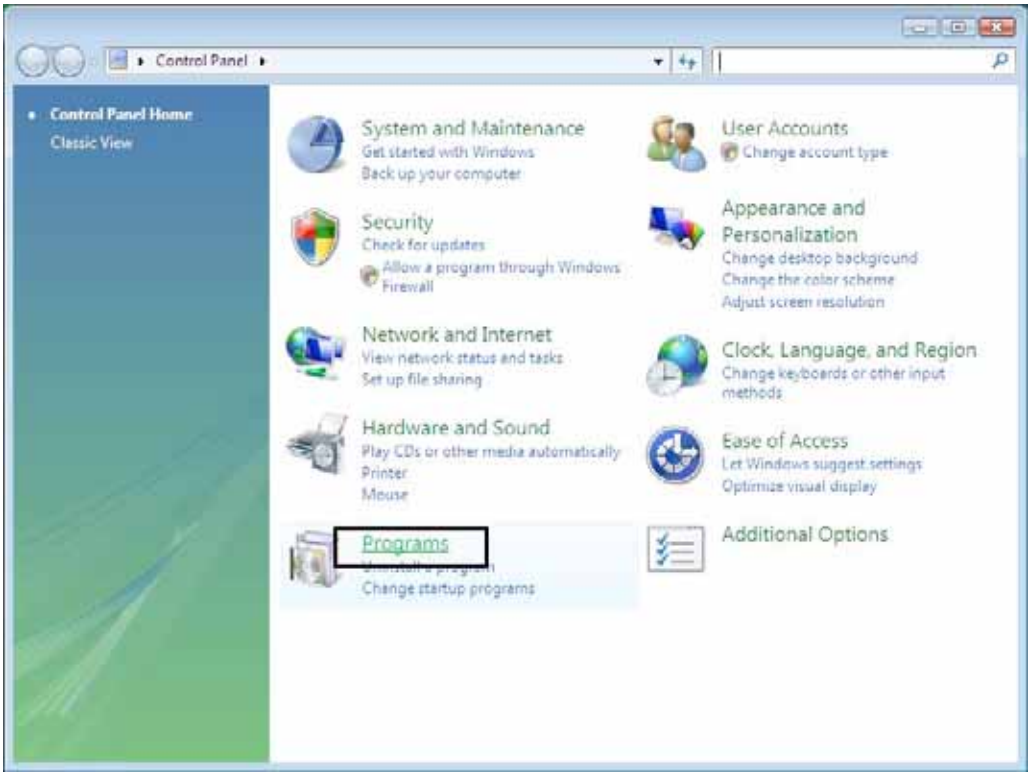
The Ethernet interface has a command line interpreter. (**Note:** The User can connect to the Printer using a Telnet session on their PC, issue commands to the Printer and receive response from the Printer.)

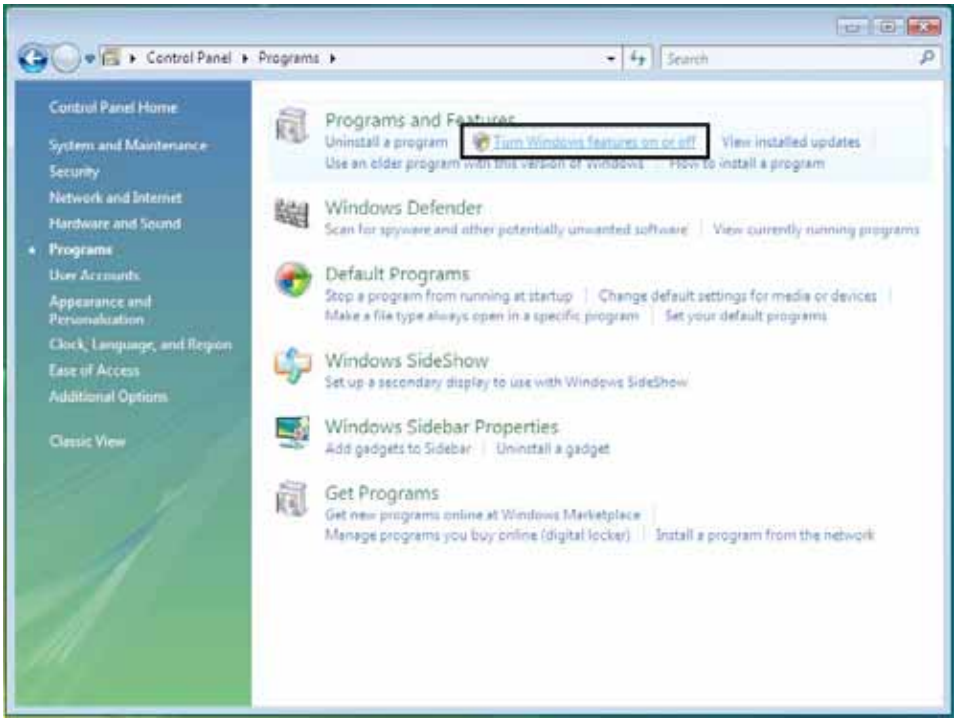
The Telnet commands are primarily used for network administration, and they will not be used by most Users. (**Note:** These commands will query the state of the Printer and configure various settings for the Printer. These include network settings, logging setting, User names and User passwords.)

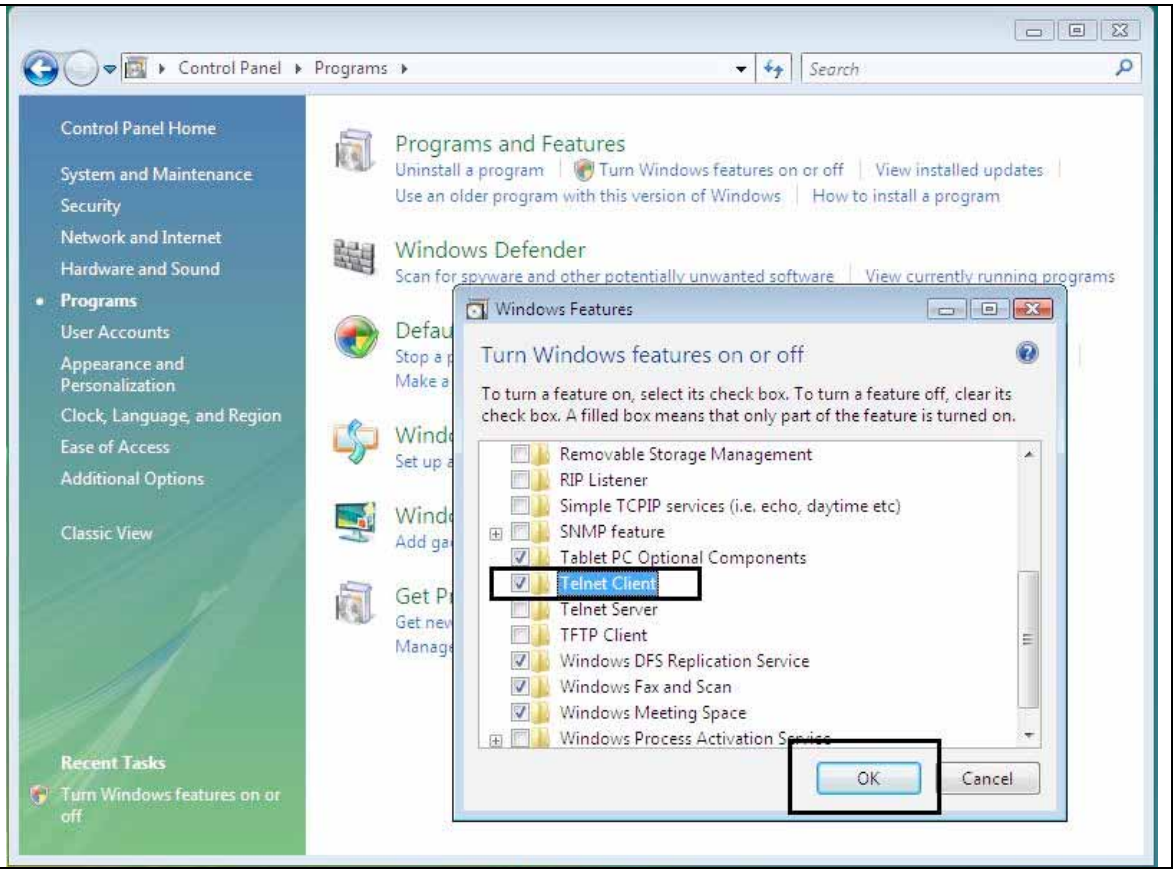
Installing the Telnet Client for Windows operating systems

Windows Vista 32 bit SP2 used as the example below.

Similar procedure can be followed for operating systems other than Windows Vista that do not have the Telnet Client installed.

Step	Description
1	Open the operating systems Control Panel. 
2	Click on the Programs option within the Control Panel. 

3	Click the option for “Turn Windows Features on or off.” If prompted, click on Continue 
4	Scroll down the list and check the box for “Telnet Client” Click on the OK button. After a few minutes the Telnet Client will be installed.

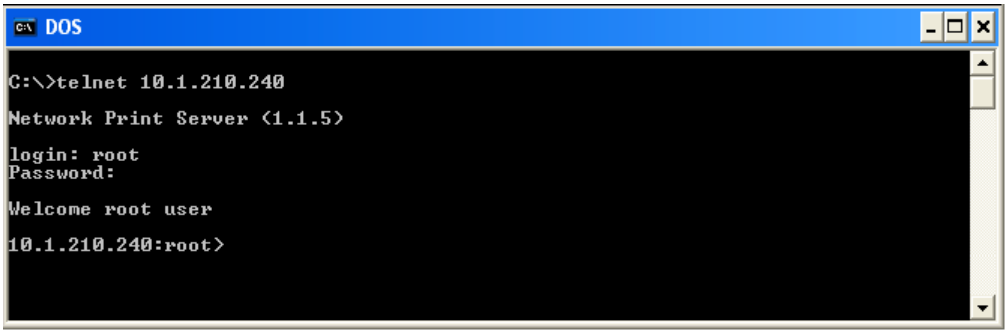


Telnet Command Line Interface

Initiating a Telnet Session

This procedure shows how to initiate a Telnet session from a PC in order to access the Telnet services provided by the Printer. Follow these instructions to issue Telnet commands.

Step	Description
1	Identify the IP address of your Printer. (**Note:** See the **Accessing the IP address of your Printer** procedure below.)
2	Initiate a Telnet session from a DOS window on your PC. At the DOS prompt, enter telnet [IP Address] **Example:** C:\>telnet 192.168.11.12 • All Telnet responses from the Printer will then be displayed in the Telnet session on the PC. • All commands entered will be sent to the Telnet client in the Printer.
3	Enter help or ? to get an on-window list of supported Telnet commands.



Accessing the IP address of your Printer

The additional LCD menus for Ethernet-enabled Printers are provided to view the IP address of the Printer. Follow these procedures to access the IP Address of your Printer model.

NOTE: If your model does not have a display, then press and hold the PAUSE button for 4+ seconds to print a settings card. The printer must be ready and idle for the card to print.

Step	Procedure
1	Apply power to the Printer.
2	Ensure that the Printer is connected to your network.
3	Wait up to one (1) minute to allow the Printer to configure the IP address.

4	Scroll through the informational messages on the LCD by selecting the **INFO** button (the button on the right of the front panel).
5	View the IP address displayed as a dotted quad number. **Example:** 168.192.1.1

Reviewing the Telnet Command Table

The following table describes available Telnet commands. (**Note:** You can enter partial full-word commands: the Printer will respond with additional help. For example, you can enter list, and the Printer will respond with all subcommands to the list command.)

Telnet Command			**Command Purpose**	**Command Format**
?			Display help for Telnet commands.	?
help				
reset			Reset the Ethernet interface for the Printer/Encoder.	reset
ping			Send a ping command to another IP address as a test of the Ethernet interface.	ping <IPADDR>
list	all		Display all information about this Printer.	list all
	diff		Display all differences between current and stored network settings.	list diff
	uptime		Display how long since the interface was last reset.	list uptime
	sysinfo		Display information about the Printer (i.e., model, label, contact, location, Firmware version and date, and serial number).	list sysinfo
	media		Display information about the installed media in the Printer.	list media
	net		Display information about the current network settings of the Ethernet interface.	list net
	stored	net	Display information about the stored network settings of the Ethernet interface.	list stored net

Telnet Command			Command Purpose	Command Format
	default	net	Display information about the default network settings of the Ethernet interface.	list default net
	user		Display information about the defined User names and their type (root or guest privileges).	list user
	lpq		Display information about print jobs and their settings.	list lpq

Telnet Command			Command Purpose	Command Format
	printer		Display information about the Printer (i.e., model number, Firmware version and serial number).	list printer
	printer	sm	Display information about the secure mark settings of the Printer.	list printer sm
set	sysinfo	contact	Set the contact string.	set sysinfo contact [<STRING>]
		location	Set the location string.	set sysinfo location [<STRING>]
		label	Set the label string.	set sysinfo label [<STRING>]
		from	Set all strings from default or current settings.	set sysinfo from default|current
	logpath	name	Change the name of a system log path	set logpath <LOG_NAME> name <NEW_NAME>
		type	Change the type of a system log path. This starts or stops logging on start of jobs or on faults.	set logpath <LOG_NAME> type [[-]job] [[-]pfault]
		dest	Change the destination of a system log path. This may be set to none, e-mail, udp or tcp.	set logpath <LOG_NAME> dest none|email|udp|tcp
		email	Change the e-mail address for e-mail notification for a system log path. It must specify a valid e-mail address.	set logpath <LOG_NAME> email <EMAIL>
		udp	Specify the IP address of the UDP system logging program.	set logpath <LOG_NAME> udp <IPADDRESS>
		from	Restore system log path settings from the default or current settings.	set syslog from default|stored
set	user	add	Add a new User	set user add <NAME>

Telnet Command			Command Purpose	Command Format
			definition. Up to four (4) Users may be defined.	
		del	Delete a User definition.	set user del <NAME>
		passwd	Define a new password for a User.	set user passwd <NAME> [<PASSWORD>]
		type	Specify a User as root or guest. Only root Users have administrative rights to change network interface settings.	set user type <NAME> root|guest
		from	Restore User setting from default or stored settings.	set user from default|stored
store	net	addr	Store a new IP address.	store net addr <ADDRESS>
		mask	Store a new address mask.	store net mask <MASK>
		gateway	Store a new default gateway.	store net gateway <ADDRESS>
		dns	Store a new DNS server address.	store net dns <ADDRESS>
		domain	Store a new DNS domain suffix.	store net domain <STRING>
		opts	Enable or disable automatic address assignment using DHCP. Static (non-automatic) addresses will come from the stored or default settings, depending on the other settings.	To enable automatic address assignment: store net opts dhcp To disable automatic address assignment: store net opts -dhcp
		from	Restore the network settings from either the default settings or the current settings.	store net from default|current

Telnet Command			Command Purpose	Command Format
	ifc	mode	Specify the Ethernet interface mode as: automatic, full or half duplex; 10 or 100 mHz.	store ifc mode auto|10half|10full|100half|100full
		from	Set the Ethernet mode settings from the default or current settings.	store ifc from default|current
save			Save all current settings as the stored settings in the permanent memory.	save
load			Take the settings from the stored memory and make them the current settings.	load
lpstat			Display information about the Printer status. This includes the status and device response. See the Printer web page description.	lpstat
cancel			Cancel a specific print job from the print queue.	cancel 10
quit			Stop the current Telnet session.	quit

Ethernet Web Pages – Standard Procedures

Reviewing Web page security

You can use the web pages from your Ethernet-connected Printer to view several attributes about the Printer. Users must have administrative rights, and they must enter the correct password to alter settings of the Printer.

Logging In

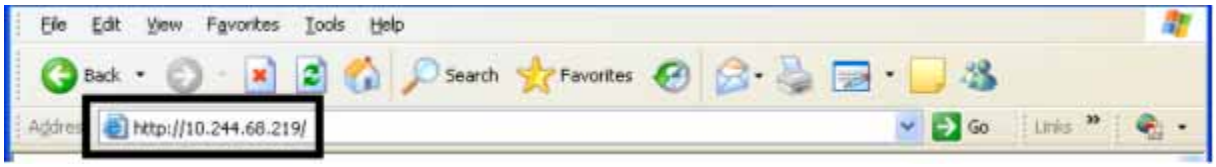
When a User attempts to change any setting, they are asked for a User name and password. (**Note:** The Guest Users can only view settings.)

Step	Procedure
1	Enter the correct User name: • The default administrative User name is **root**. • The default non-administrative User name is **guest**. • Non-administrative Users can only view settings.
2	Enter the correct password: • The default password is an empty string. If the password has not been changed, leave the field blank. • See **Password** page procedure for changing passwords.
3	Press **Enter** or click on the **OK** button.
4	If the name and password is not accepted, another login prompt will appear on screen. Repeat this procedure with the correct User name and password.

Accessing the Home page

Step	Procedure
1	Open a window for your network browser application on your local PC.
2	Find the IP address of the Printer. (**Note:** See Accessing the IP address of your Printer as needed to get this from the LCD of the Printer.)
3	Enter the IP address of the Printer you want to access into the address bar of the browser. (**Note:** The IP address will change for your printer installation.)
4	Press **Enter** or click on **GO**.
5	View the Home page. The Home Page displays general information about the Printer. See the next page.

Display – See Procedural Steps 2 and 3 (above)



Reviewing the Home Page

This section displays the Home Page. The window title bar will vary according to the serial number assigned to your Printer.

Reviewing the Home Page Categories and Fields (table)

You can view these categories and fields in the following table.

Category	Field	Purpose
Fixed for Printer		
	Serial Number (Printer)	Displays the unique fixed serial number of the Printer.
	Hardware Address On the network page	Displays the unique fixed hardware address (MAC) of the Printer, which is the unique Ethernet device identifier.
Set by User (May be configured via Telnet or from the	Hostname	Indicates the label that the User assigns to the Printer. This label is reported to the DHCP server as the Host Name (that may be used by the DNS server to resolve the IP

Administration web page.)	Hostname	address of the Printer). If left blank, the Printer will use a unique label based on the MAC address of the Printer.
	Location	Indicates the location string that the User assigns to the Printer.
	Contact	Indicates the contact person string that the User assigns to the Printer.
Set by Firmware		
	Firmware Version (Printer)	Displays the current Firmware version of the Printer.

Configuring the Network Settings

The procedures needed to configure the network settings are presented in this section.

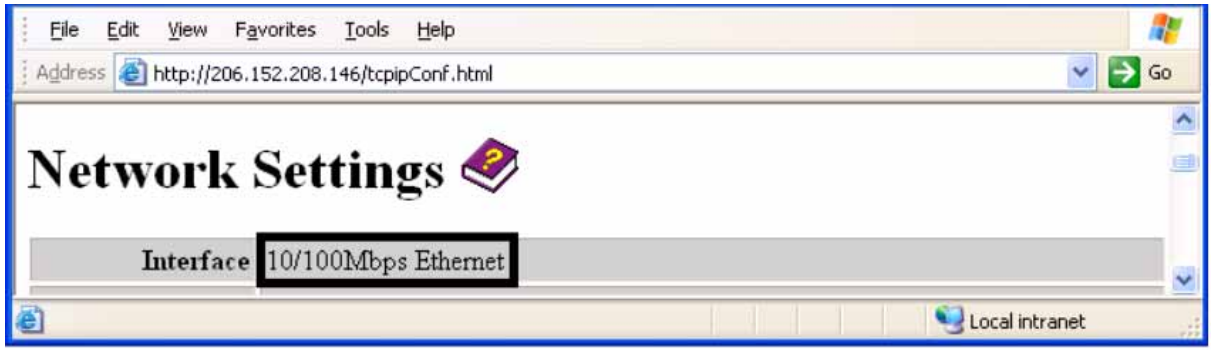
Accessing the Network Settings page

The Network page displays the current network settings and allows the User to change the settings.

Step	Procedure
1	Select the **Network** link from any web page of the Printer.

Reviewing the Interface

The Interface display indicates the network speed supported by the Printer.



Reviewing the Current Settings

The Current Settings page section displays the current active network settings for the Printer.

- These are also labeled as Dynamic if they were provided by DHCP or Static if they came from the Stored Settings.
- The current settings will be Dynamic only if **Obtain an IP address automatically** was selected when the Printer was restarted last.

Switching to the automatic IP address mode

Step	Procedure
1	Select the **Network** link from any web page of the Printer.
2	Select the **Obtain an IP address automatically** radio button to enable the DHCP/BOOTP, which automatically assigns the network settings. Even with this button selected, the User can enter Stored Settings, and the Stored Settings will remain in memory. See below. (**Note:** This is the default method.)
3	Click on the **Submit** button to save this setting.
4	Log in as a root User if you are so prompted. (**Note:** Any change of a setting will only be accepted after you have successfully logged in.)
5	Reboot the Printer for this change to take effect.

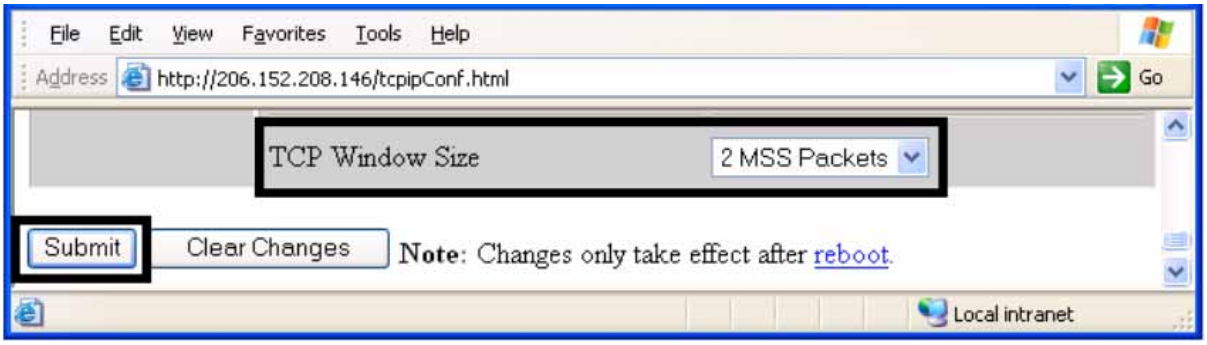
Changing to the static IP address mode

Step	Procedure
1	Select the **Network** link from any web page of the Printer.
2	Select the **Use the following IP address** radio button, which prepares the Printer to use network settings that the User has manually set. These manual settings will then be used the next time the Printer is rebooted.
3	Enter the network settings which are required for Ethernet communications from within the same subnet. With only these entries the User will be unable to print from a subnet other than the subnet on which the Printer is connected. These required settings are the following: • IP Address • Subnet Mask
4	Enter the optional network settings for Ethernet communications across a router from other subnets. The option setting is Default Gateway.
5	Enter the optional network settings for DNS. These are the following: • DNS Server Address • DNS Domain Suffix
6	Select the **Submit** button to save these changes to stored settings in the memory of the Printer. (**Note:** These settings will not be lost if the power is

	removed from the Printer.)
7	Log in as a root User if you are so prompted. (**Note:** Any change of setting will only be accepted after you have successfully logged in.)
8	Reboot the Printer for this change to take effect

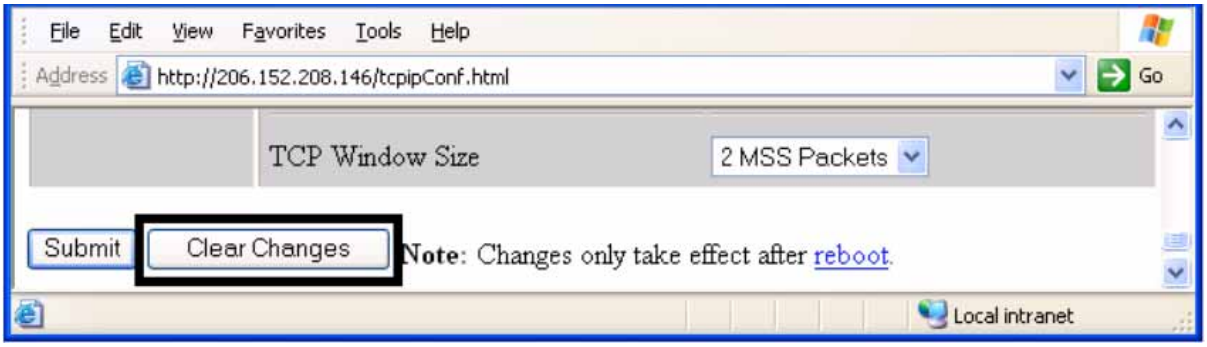
Entering the TCP Window Size

Step	Procedure
1	Select the **Network** link from any web page of the Printer.
2	Select the TCP window size from the drop-down menu, as shown below. • This entry provides for entry of the TCP Window Size. It adjusts how much data can be sent to the Printer at any one time. • It is recommended that the default value of 2 MSS Packets be used to ensure good compatibility with all client applications.
3	Click on the **Submit** button to save this setting.
4	Login as a root User if you are so prompted. (**Note:** Any change of a setting will only be accepted after you have successfully logged in.)
5	Reboot the Printer to effect this change.



Using the Clear Changes button

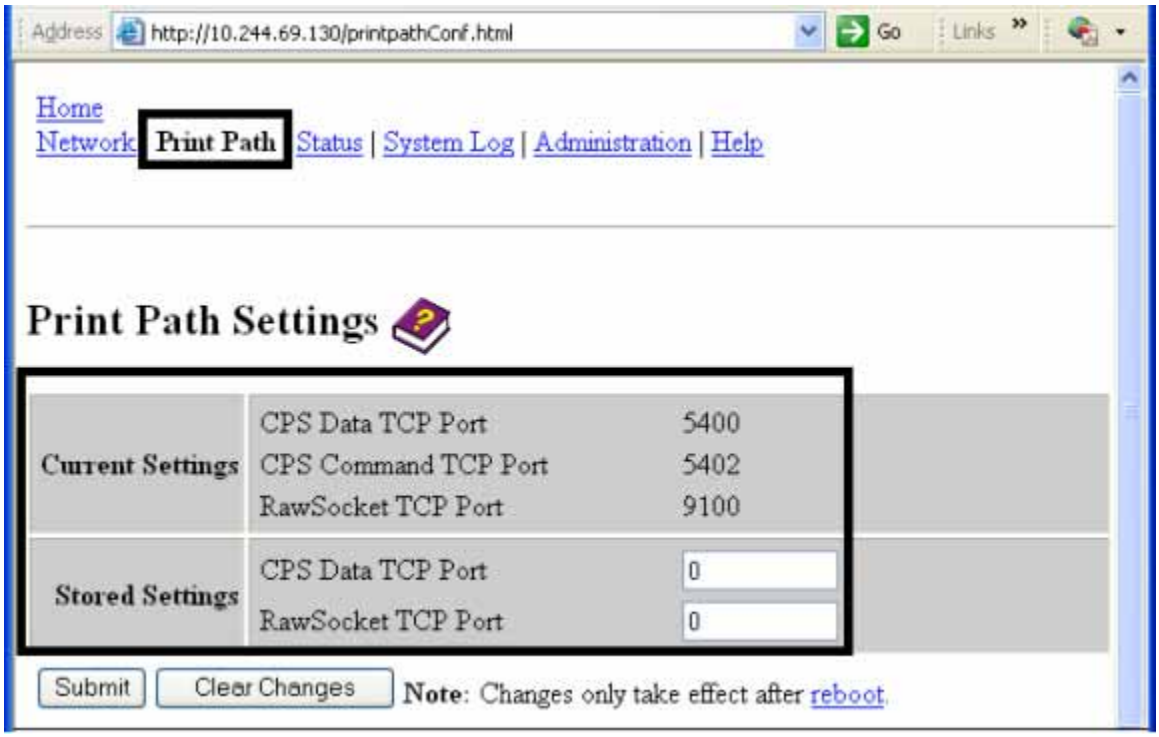
Step	Procedure
1	Click on the **Clear Changes** button to delete the information in the textboxes in the Stored Settings area. See the lower left corner of this display.



Using the Print Path page

The purpose of the Print Path page is to allow the User to view or change the TCP port numbers used to communicate to the printer. If these settings are left to the default entry of 0 then the default ports of 9100, 5400 and 5402 will be used for the **RawSocket TCP Port**, the **CPS Data TCP Port** and the **CPS Command TCP Port** respectively. The **CPS Command TCP Port** is dependent on the setting of the **CPS Data TCP Port** and always two units higher.

Step	Procedure
1	Select the **Print Path** link.
2	View the active configuration of the printer in the Current Settings area on this page.
3	New port numbers may be entered into the Stored Settings area in the text boxes provided on this page.



Step	Procedure
4	Select the **Submit** button to save these changes to stored settings in the memory of the Printer. (**Note:** These settings will not be lost if the power is removed from the Printer.)
5	Select the **Clear Changes** button to delete these changes from this page.

Using the Media Information page

The Media page displays Ribbon information about the Ribbon (currently installed in the Printer).

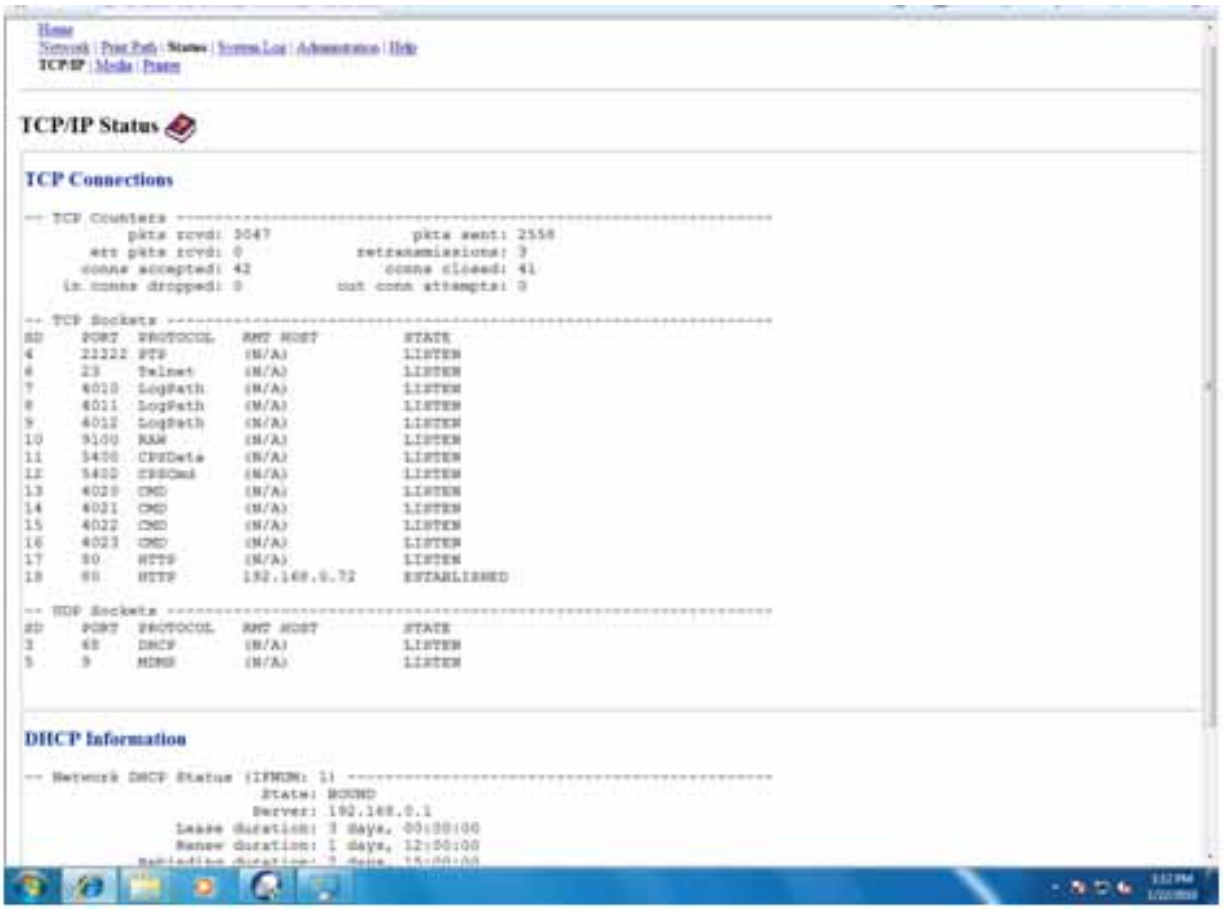
Step	Procedure
1	Select the **Status** link from any web page of the Printer.
2	Select the **Media** page link.
3	View currently-installed Ribbon information pertaining to the following: • Part Number • Percent Remaining • Ribbon Type

Using the TCP/IP page

The TCP/IP page displays the TCP/IP Status of each Printer connection, which are not configurable. See the next two pages for displays.

Step	Procedure
1	Select the **Status** link from any web page of the Printer.
2	Select the **TCP/IP** page link.
3	View information on all current network connections in the **TCP connections** area.
4	Review information on the network DHCP status in the **DHCP Information** area.

Using the TCP/IP Status Web Page



Using the Printer page

You can use the Printer page to review current information about the Printer device settings and print jobs. Device settings include the following:

The **status** displays information about the current print job.

The **device** displays information about the Printer.

The fields are described below.

Field	Status	Description
status	Idle	Indicates that no print job is active.
	printing	Indicates that the job is being sent to the Printer.
	printing – waiting	Indicates that the communication is being slowed by print operations.
	printing – blocked	Indicates that the communication has been stopped by some condition.
	canceled	Indicates that the current job was canceled and is being deleted.
device	online	Indicates it is ready to print.
	offline	Indicates that the Cover is open or the Printer is not ready to print.
	printer – error	Indicates that an error is detected.
	Busy	Indicates that printing is in progress.
Print Jobs		This is a display of the current print jobs that have been sent to the Printer. (**Note:** The current job that is being received by the interface is displayed as the active job.) Cancel a specific print job by selecting the appropriate **Cancel** button, which appears when a print job is queued.

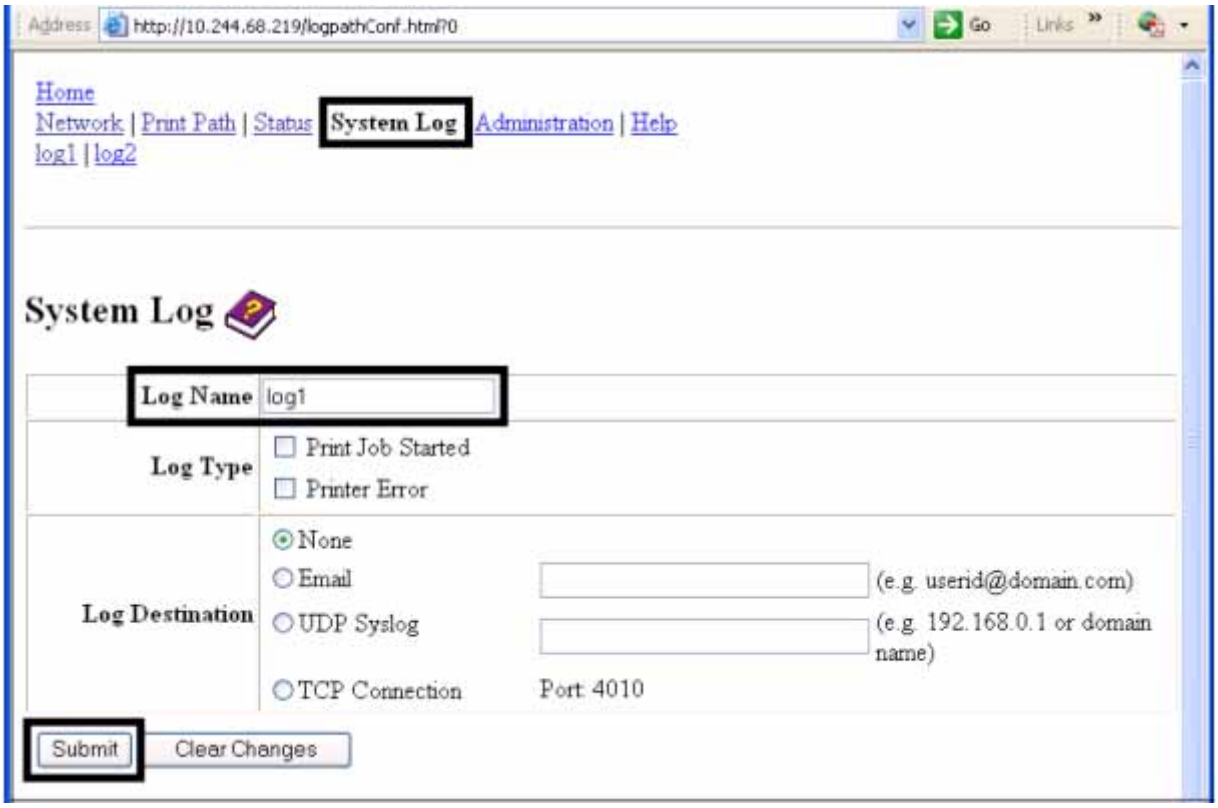
Using the System Log page

The System Log page displays the current system log settings and allows the User to change the settings. (**Note:** These settings configure how system logging occurs. There are two logs.)

Changing the Log Name

By default the names are log1 and log2. However, you can rename them from this page. (**Note:** This also updates the link to the corresponding web page.)

Step	Procedure
1	Select the **System Log** link.

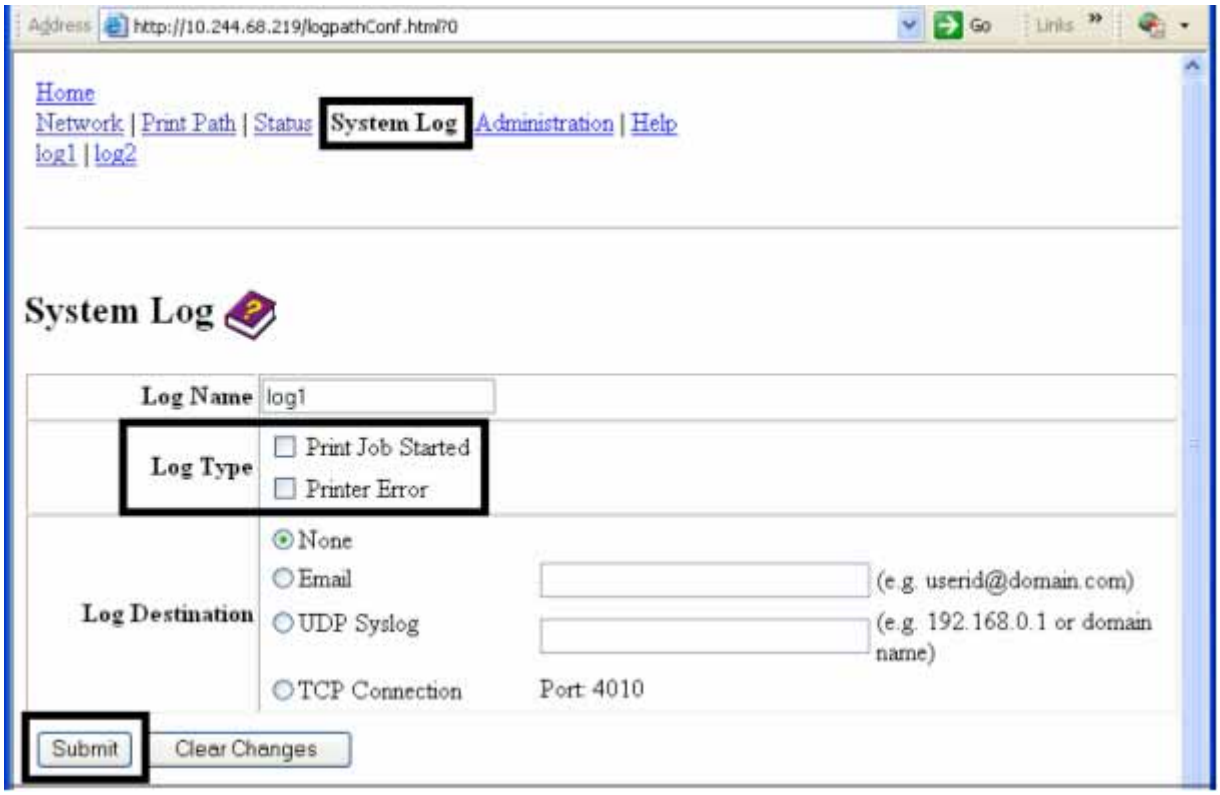


Step	Procedure
2	Select the link for the log name you want to view or configure (the default choices are **log1** or **log2**). See the previous page.
3	Enter a new log name in the textbox.
4	Click on the **Submit** button to save this change.
5	Log in as a root User if you are so prompted. (**Note:** Any change of a setting will only be accepted after you have successfully logged in.)

Selecting the Log Type

Step	Procedure
1	Select the **System Log** link. See the next page.
2	Select the link for the log name you want to view or configure (the default choices are **log1** or **log2**).
3	Select the **Print Job Started** checkbox to generate the log entries for each Print Job Started.
4	Select the **Printer Error** checkbox to generate the log entries for each Printer Error.

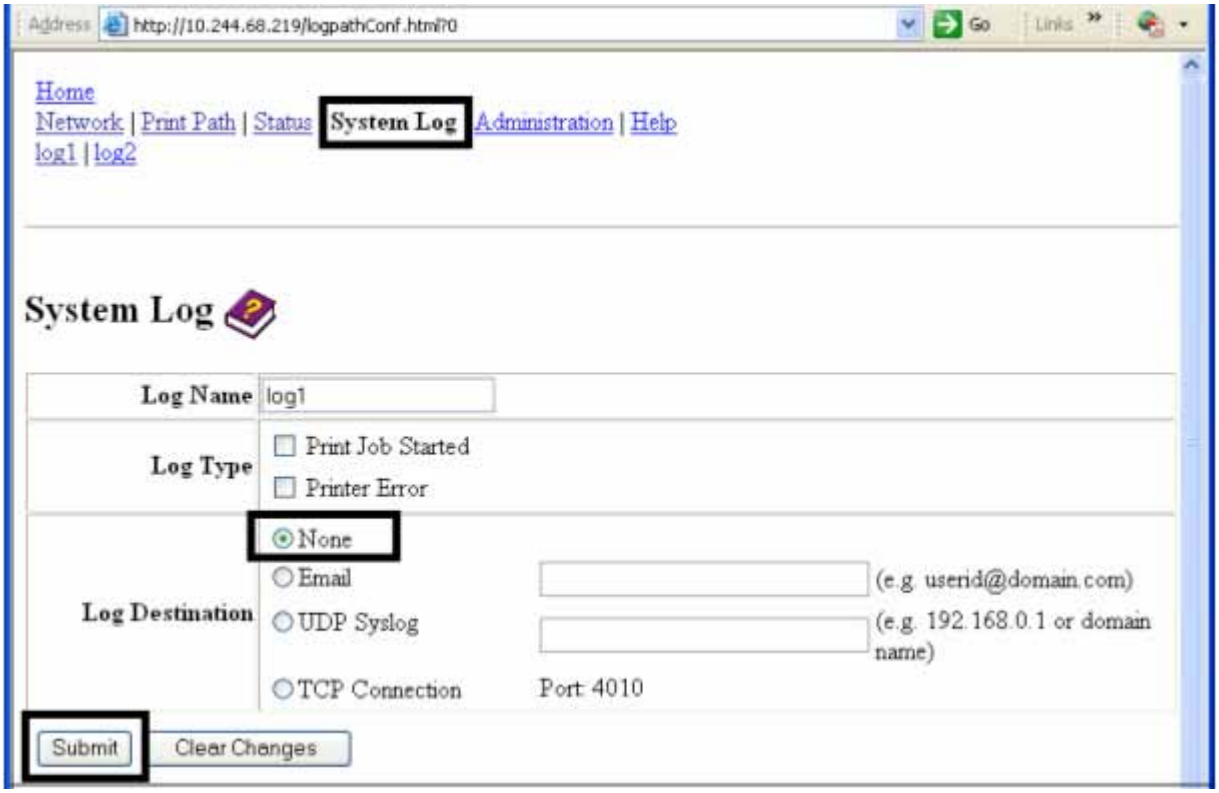
5	Select the **Submit** button.
6	Login as a root User if you are so prompted. (**Note:** Any change of a setting will only be accepted after you have successfully logged in.)



Selecting the Log Destination

Specify one destination for the log.

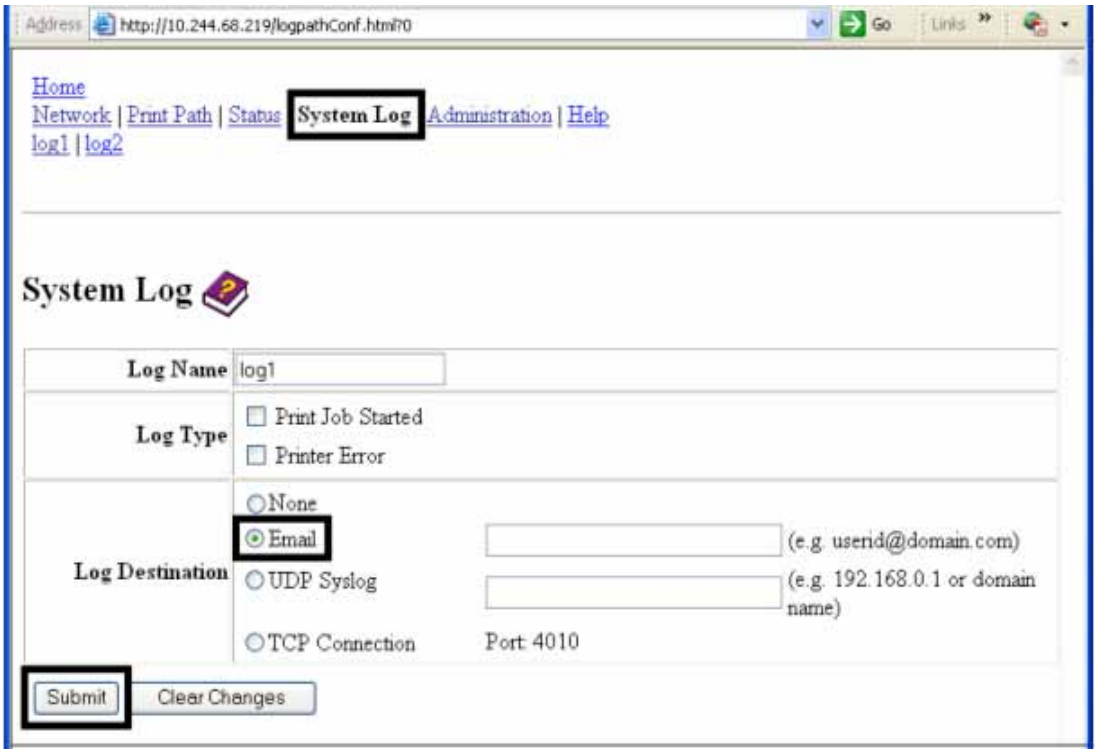
Step	Procedure (No event logging)
1	Select the **System Log** link.
2	Select the link for the log name you want to view or configure (the default choices are **log1** or **log2**).
3	Select the **None** radio button when no log is required. (**Note:** This is the default.)
4	Select **Submit**.
5	Login as a root User if you are so prompted. (**Note:** Any change of a setting will only be accepted after you have successfully logged in.)



Setting up Email Event logging

Follow this procedure to enable logging using email notification:

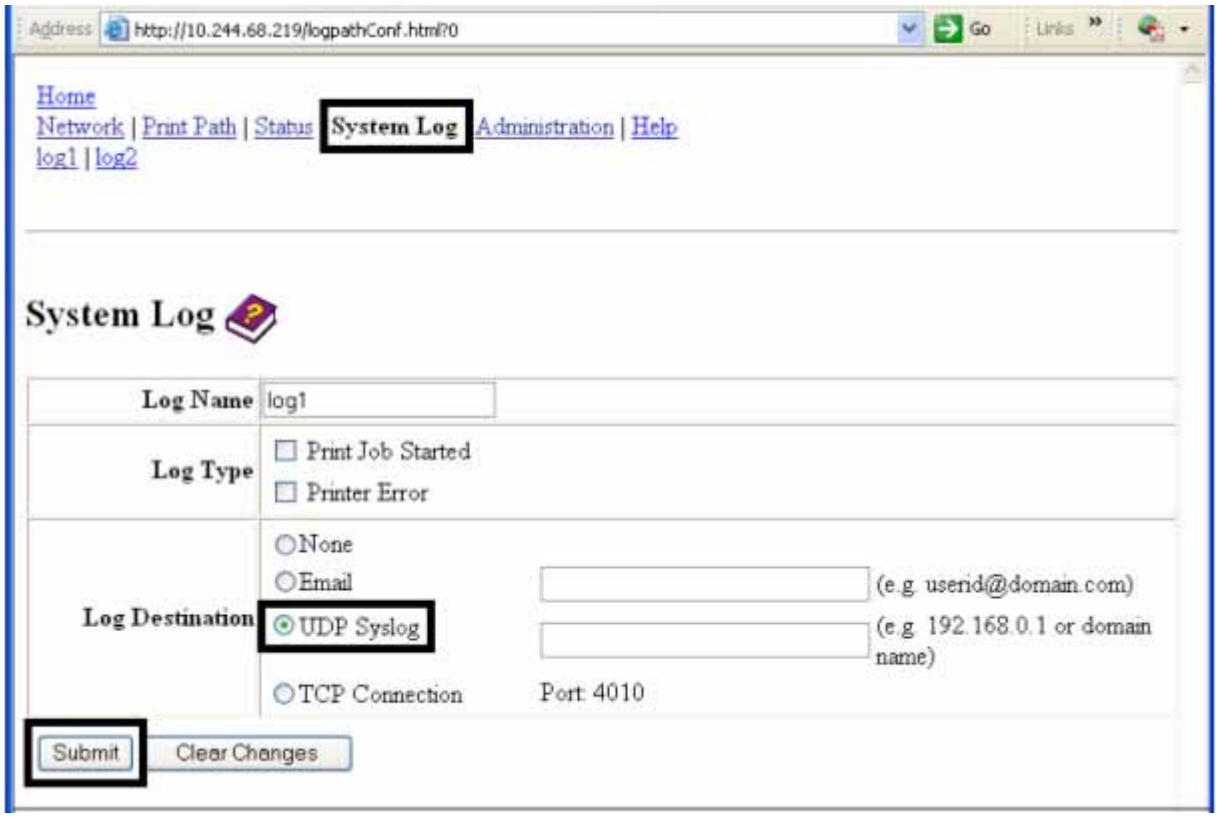
Step	Procedure (Specify email logging)
1	Select the **System Log** link.
2	Select the link for the log name you want to view or configure (the default choices are **log1** or **log2**).
3	Select the **Email** radio button to choose email log notification.
4	Enter a valid e-mail address in the associated textbox.
5	Select **Submit**.
6	Log in as a root User if you are so prompted. (**Note:** Any change of a setting will only be accepted after you have successfully logged in.)



Specifying UDP Event logging

Follow this procedure to enable logging to a UDP Syslog program.

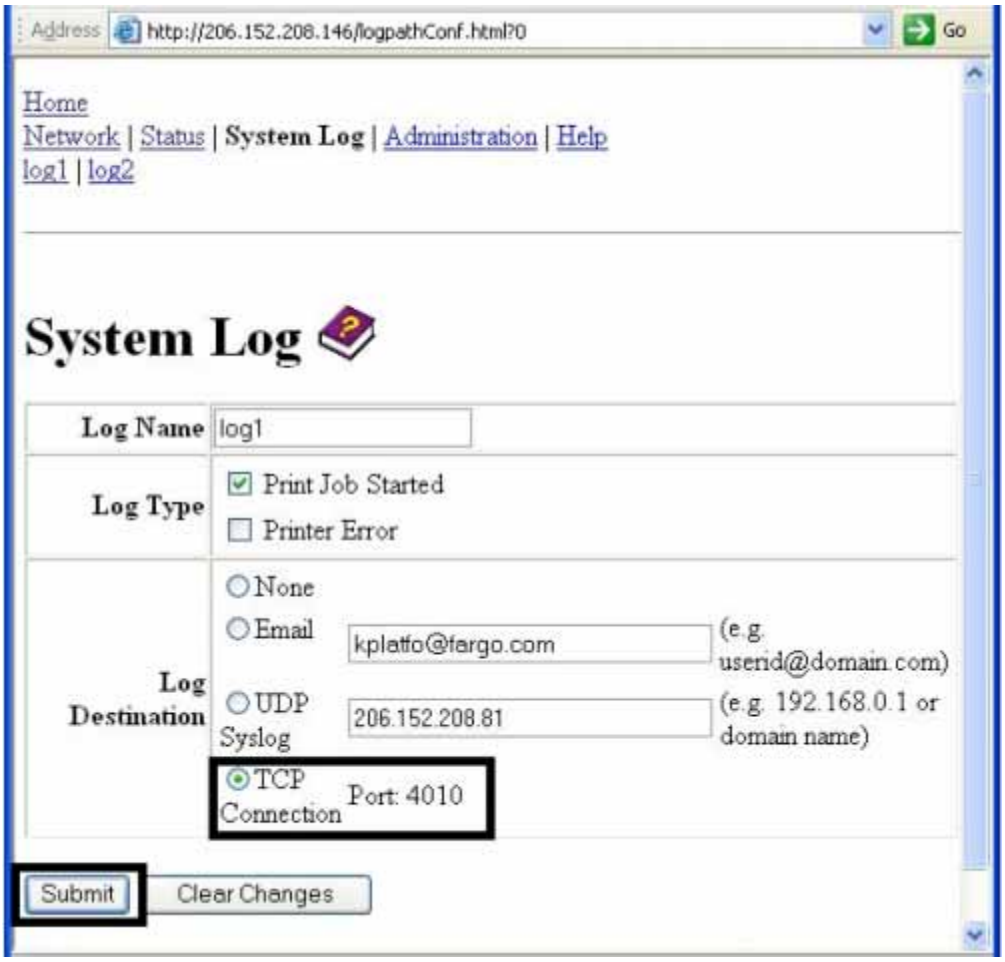
Step	Procedure
1	Select the **System Log** link. • The messages will be sent via UPD packets to the Syslog port (514) of the specified host. • It is up to the host program to listen to these messages for processing. • A syslog host program is necessary to use this method, such as, Kiwi Syslog Daemon or WinSysLog.
2	Select the link for the log name you want to view or configure (the default choices are **log1** or **log2**).
3	Select the **UDP Syslog** radio button.
4	Enter a valid IP address or domain name.
5	Select **Submit**.
6	Log in as a root User if you are so prompted. (**Note:** Any change of a setting will only be accepted after you have successfully logged in.)



Specifying TCP Event logging

Follow this procedure to send logging messages to a pre-existing IP connection made on the TCP port.

Step	Procedure
1	Select the **System Log** link.
2	Select the link for the log name you want to view or configure (the default choices are **log1** or **log2**).



Step	Procedure
3	Select the **TCP Connection** radio button. See previous page.
4	Select **Submit**.
5	Log in as a root User if you are so prompted. Any change of a setting will only be accepted after you have successfully logged in.
6	Use a host program such as Telnet to receive these TCP logging messages (**Note:** Other programs such as HyperTerminal are also used to monitor TCP connections). See below. • **Telnet Client:** You can use a Telnet client connected to the TCP port (log1 = 4010, log2 = 4011) rather than the default Telnet port (23). • **Telnet Session:** If there is a Printer at IP address 192.37.23.155 (and you have configured log1 for TCP logging), then you could initiate a Telnet session from a DOS window of a PC by entering Telnet 192.37.23.155 4010. • **Log Messages:** All system log messages would then be displayed in that Telnet session window. (**Note:** This is a one way connection for logging only. Any input to the Printer on this connection is ignored.)

Using the Administration pages

The purpose of the Administration pages is to allow the User to upgrade, reboot, modify passwords and enter User-specified system information strings.

Using the System Information page

The System Information page displays the current system information and allows the User to change the system information (which appears on the Home page).

Step	Procedure
1	Select the **Administration** link.
2	Select the link for the **System** web page.
3	To change an attribute, type the new entry in one of these boxes: • **HOSTNAME** textbox • **Location** textbox • **Contact** textbox
4	Select the **Submit** button.
5	Log in as a root User if you are so prompted. Any change of a setting will only be accepted after you have successfully logged in.

Changing the Root Password

The Passwords page allows the User to change the passwords needed to log in as a User. Changes to all settings require a login. (**Note:** However, these changes are only protected by password after the password has been set. Users can only be added or removed using Telnet commands.)

Step	Procedure
1	Select the **Administration** link.
2	Select the **Passwords** link to get to the Password web page.
3	Enter the current password in the **Root Password Old** textbox or leave it blank if no password has been previously set.
4	Enter the new password in the **Root Password New** textbox or leave it blank if you want to remove the old password.
5	Re-enter the new password in the **Root Password Confirm** textbox or leave it blank if you want to remove the old password.
6	Select the **Submit** button.

7	Log in as a root User (using the password) if you are so prompted. (**Note:** Any change of a setting will only be accepted after you have successfully logged in.)

Upgrading the Print Server

This procedure provides a means to upgrade the Firmware in Printer.

For an alternative method for firmware upgrade see: Upgrading the Printer Firmware using the Workbench Printer Utility

Step	Procedure
1	Select the **Administration** link.
2	Log in as a root User (using the password) if you are so prompted. (**Note:** Any change of setting will only be accepted after you have successfully logged in.)
3	Select the **Upgrade** link.
4	Select the **Browse** button.
5	Navigate to and select the appropriate file to upload.

Step	Procedure

6	Select the **Upgrade** button to start the Firmware upload.
7	Printer Reboots automatically.

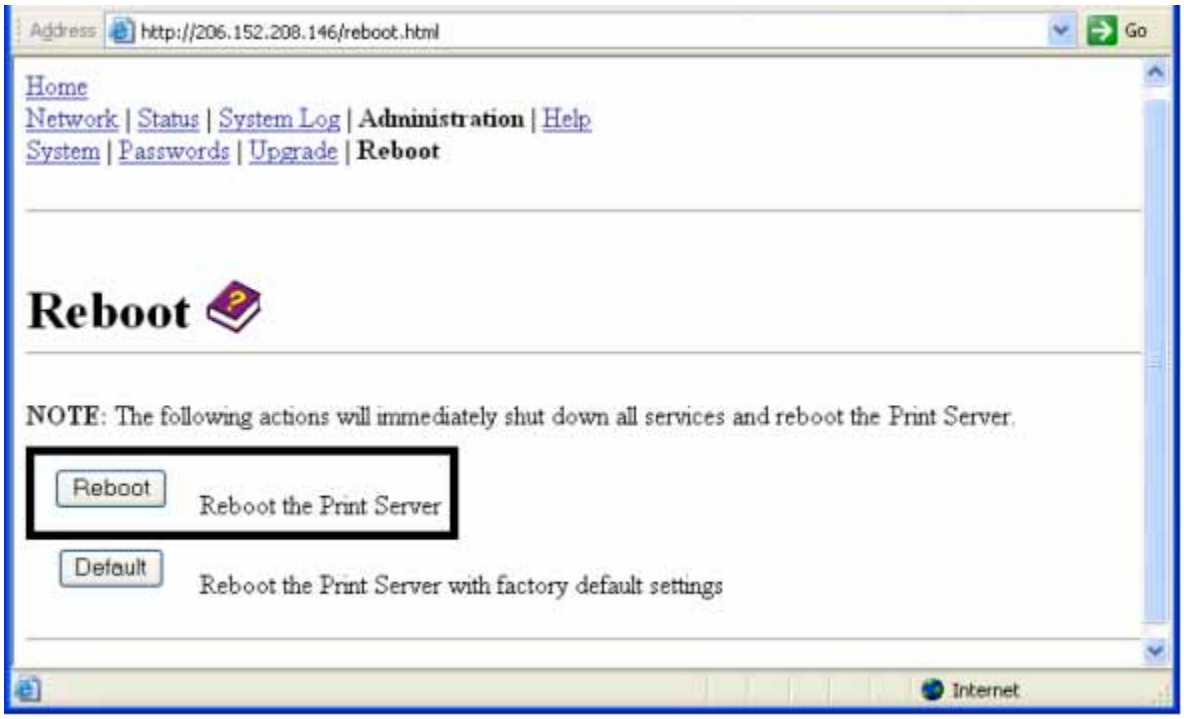
Using the Reboot pages

Rebooting the Printer restarts only the Ethernet Print Server.

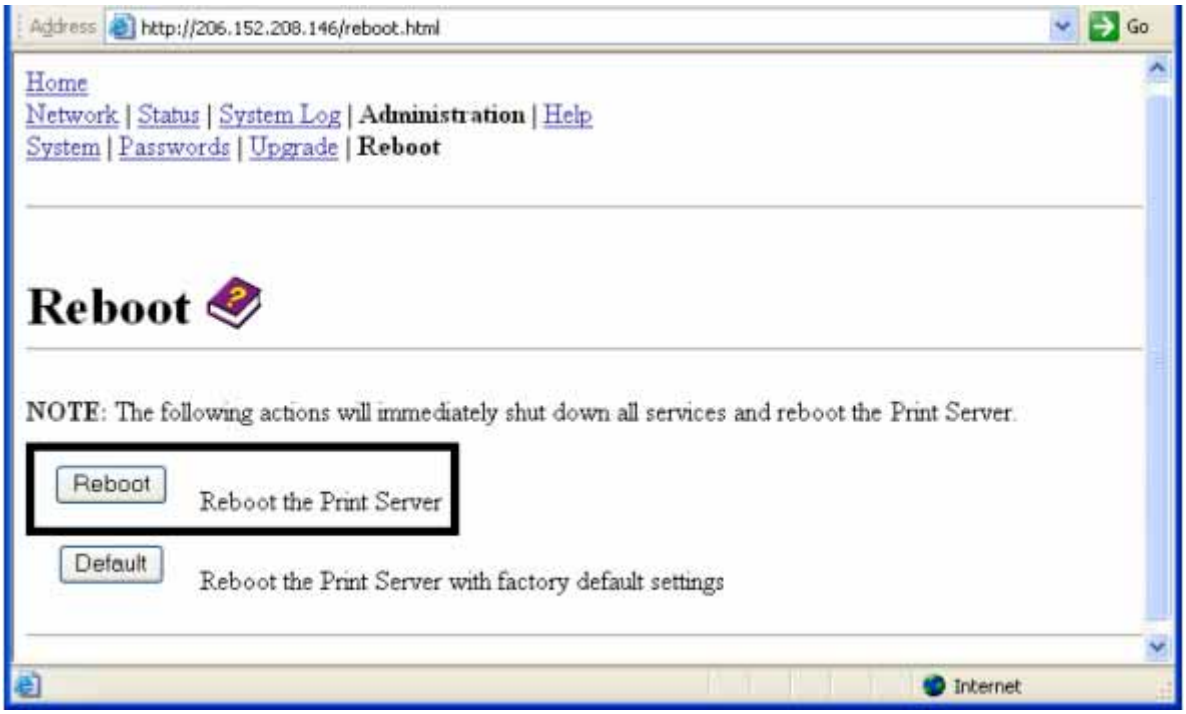
Rebooting the Ethernet Server

The Reboot page allows the User to restart the Ethernet Print Server.

Step	Procedure
1	Select the **Administration** link.
2	Log in as a root User (using the password) if you are so prompted. (**Note:** Any change of setting will only be accepted after you have successfully logged in.)
3	Select the **Reboot** link.
4	Select the **Reboot** button.



Step	Procedure
5	Wait for the Printer to reboot and display the home page.

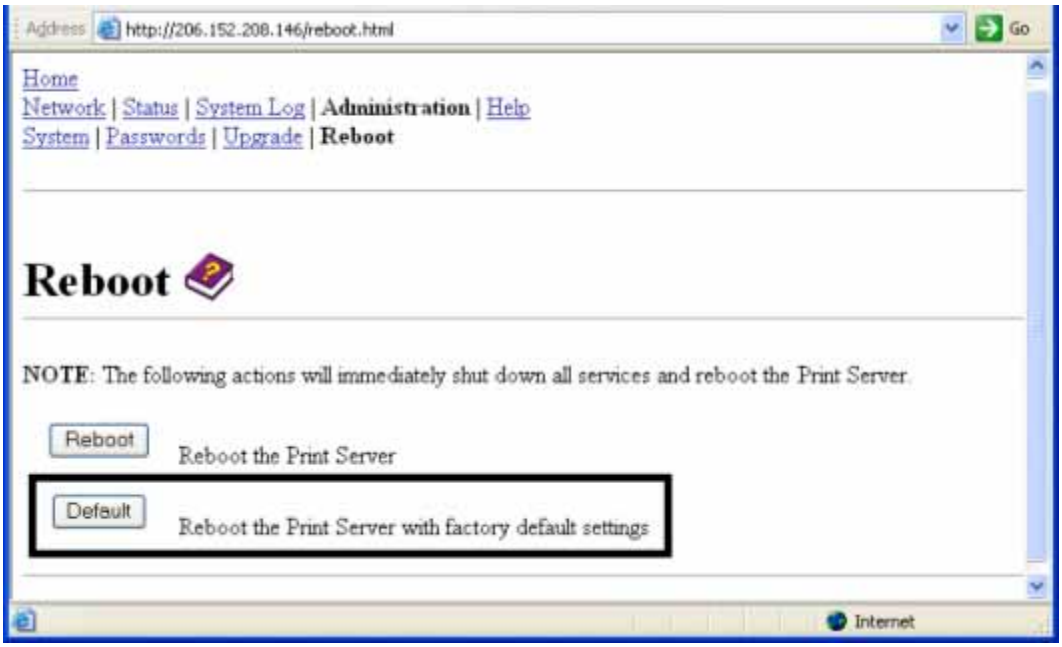


Resetting to Default Settings

The Reboot page also allows the User to reboot the Ethernet Print Server into a default settings mode. (**Note:** This simply restarts the Printer in a different state with the settings in memory temporarily ignored.)

When the **Default** button is selected, the stored settings in the Printer's memory are not changed.

Step	Procedure
1	Select the **Administration** link.
2	Log in as a root User (using the password) if you are so prompted. (**Note:** Any change of a setting will only be accepted after you have successfully logged in.)
3	Select the **Reboot** link.
4	Select the **Default** button.
5	Wait for the Printer to reboot and display the home page.



Using the Help page

The Help page displays the **Help** information.

Step	Procedure
1	Open this web page at the appropriate location by clicking on the Help book icon at the top of each page. See below.
2	Review the web interface for the Ethernet-enabled Printer.

Reviewing LED Tables

The LED can be found on the back of Printers.

Reviewing the LED Table

LED	Printer position	Flash Rate	Indicates
STAT LED	Upper	On once per second (i.e., more **OFF** than **ON**)	The Normal Mode, IP address is configured.
		On twice per second	The IP address is not configured.
		Off once per second	The Download mode is for updating the Ethernet interface.

		(i.e., more **ON** than **OFF**)	
		Off twice per second	There is a system error.
NET LED	Lower	On	The Network link is present.
		Off	The Network link is not present.
		Blinking, off 1/3 second	The Network link is present and transmitting. It flashes off for one-third (1/3) second each time a packet is transmitted.

Upgrading the Printer Firmware using the Workbench Printer Utility

For an alternative method of firmware upgrade see: Upgrading

The Printer Firmware upgrades are done with the same procedure as the USB-connected Printer. The PC doing the upgrade must have a Driver installed for the Printer to be upgraded.

Requirements

- Internet Access
- Printer is powered up and connected to PC

Upgrade the Printer Firmware

Step	Procedure
1	Open the Workbench Printer Utility by using the **Diagnostics** button from the Card Option Printing Preference page. The Workbench is also available from the Folder in the Windows Program folder.
2	From the Application Icon. Select Upgrade Firmware.
3	Find the Firmware via Check for Firmware Updates at www.CIMITALY.com • Save the file to a folder. • Use the **Browse** button to find the .frm file. Select the file. Click **Open**.
4	Click on Upgrade to start the upgrade process.
5	This message will appear while Firmware is updating.
6	The Printer will reboot after this process is completed.

Ethernet Printer Troubleshooting Procedures

If you are having trouble connecting to your Ethernet Printer or printing to it, you should go through each of the following procedures.

Step	Procedure
1	Follow the **Verifying the Printer Connection** procedure. See below.
2	Follow the **Verifying the Printer IP address** procedure. See below.
3	Follow the **Verifying that your PC can access the Printer using the ping command** procedure. See below.
4	Verify that you are choosing the correct Printer Driver. (**Note:** The Driver must match the model of the Printer.)
5	Verify that the port configuration of the PC Printer Driver is set to communicate to the Printer over the correct IP address.
6	Follow the **Printing a test page** procedure.

Verifying the Printer Connection

Step	Procedure
1	Ensure that your Printer has a valid network connection.
3	Verify that the Printer has both LEDs blinking on and off with network activity.
3	If the LEDs do not indicate connection, verify the network connection with another device.
4	If the connection is OK, then something may be wrong with the Ethernet option installation.

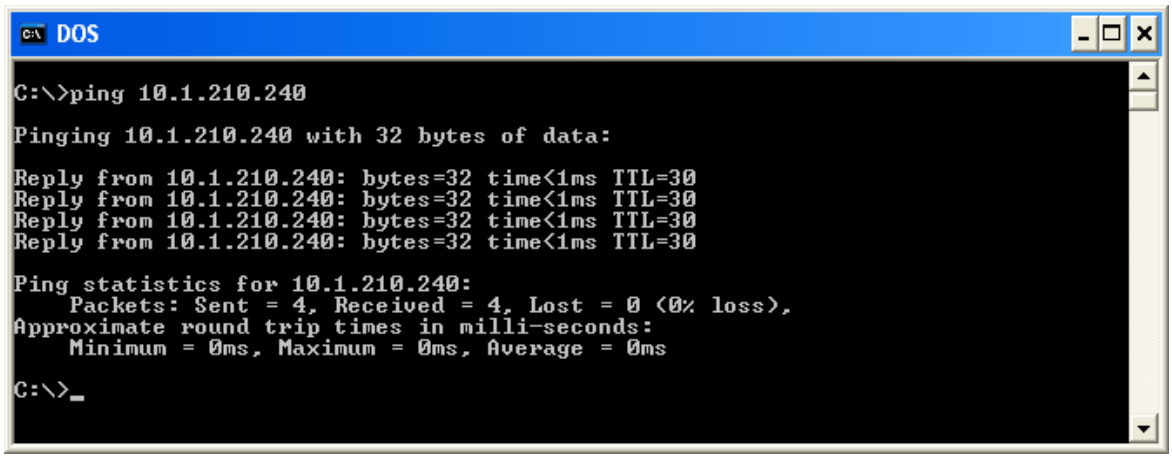
Verifying the Printer IP address

Step	Procedure
1	Check the LCD for a valid IP address (0.0.0.0 in not valid). • If the IP address is valid, go to step 4 (below). • If the IP address is not valid, go to step 2 (below).
2	If your network is using DHCP, then: • Use IP Tracer to verify that the Printer has not been configured to use a static address. (**Note:** This guideline applies unless you have a known, unused static IP address assigned to this Printer.)
3	If you are using a static IP address, then: • Verify that there is no other device using the same address by removing your Printer and ping to the desired address. If any device responds, then you must find a different available IP address.
4	If the Printer reports an IP address, then: • Verify that it matches subnet of the network where it is connected. If your Printer has DHCP disabled, then: • The static IP address may have been previously set for a different subnet.

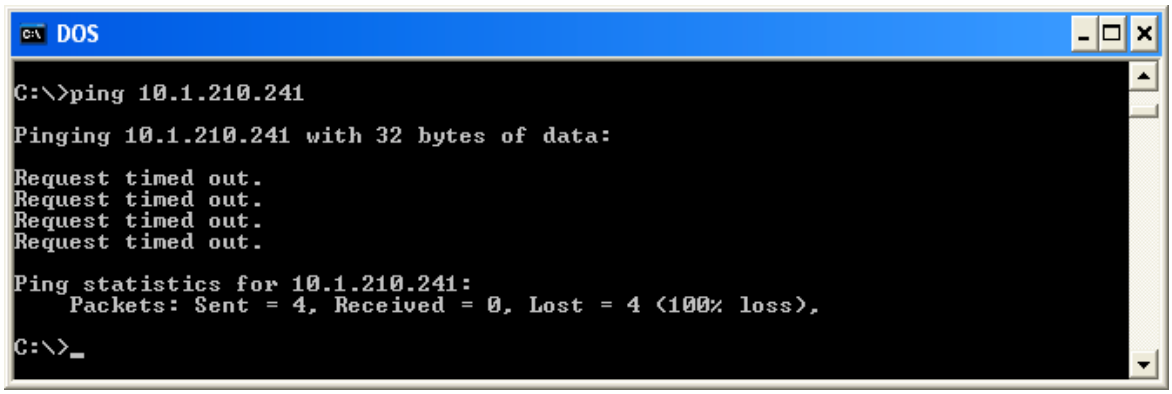
Verifying that your PC can access the Printer using the ping command

Step	Procedure
1	Follow these instructions to issue a ping command to the Printer: At a DOS prompt, enter **ping [IP Address]** **Example:** C:\>ping 210.1.10.240 • If the ping response is successful, move on to the next troubleshooting procedure. See Display A below. • If the ping response is not successful, continue to step 2 of this procedure. See Display B below.

Display A - Example of sending a ping to the Printer with a successful response



Display B - Example of ping timeout to an invalid IP address



Step	Procedure
2	Verify that the PC and the Printer are connected to the same network.

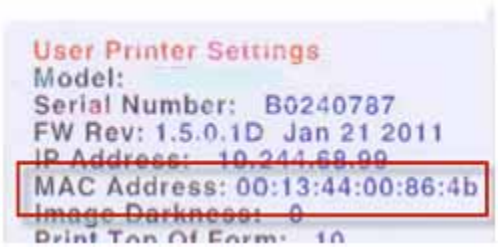
3	You may be on different subnets of your network and some of the network settings for the Printer are not correct. See your network administrator about this. (**Note:** The subnet mask must be the same as other devices on the network, and that the unique IP address is part of the network specified by the subnet mask.)

Printing a test page

Step	Procedure
1	Try printing a test page from the Printer Driver properties window. a. Open the Printer Driver properties window. b. Select Start -> Settings -> Printers and Faxes -> [your Printer Driver name] -> Properties. c. Ensure that the printing preferences are set correctly for the Ribbon installed in your Printer. d. Then select the **Print Test page** button. See the next section.
2	If you cannot print a test page, then consider the following: • There may be an error at the Printer. • There may be a job in the Windows print queue which has stalled. • The Printer may be paused or set to operate offline in the Windows print queue.

Reviewing Frequently-asked Questions

Question	Answer
How do I know if my Printer has the Ethernet option installed?	If your Printer has the RJ45 connector installed on the back of the Printer, then it has this Ethernet option installed.
Can my non-Ethernet-enabled Printer be upgraded to have an Ethernet interface?	No.
What PC operating systems work with my Ethernet Printer?	o Windows 7 32 bit o Windows 7 64 bit o Windows Vista 32 bit w/SP2 o Windows Vista 64 bit w/SP2 o Windows XP 32 bit w/SP3 o Windows Server 2003 (R1) 32 bit o Windows Server 2008 (R1) 32 bit w/SP2 o Windows Server 2008 (R1) 64 bit w/SP2 o Windows Server 2008 R2
How do I connect my Printer to my network?	You can connect from the RJ45 network connection on the back of your Printer to an available connection on your network (not directly to your PC). You can use a good CAT-5 or better cable to make this connection.

Question	Answer
How can I find the MAC address of my Ethernet Printer? Used for Windows 7 and Windows Vista	If you know the IP address of your Printer, you can access this through the Network web page of the Print Server. **OR** If you do not know the IP address or the Printer does not work with a usable IP address, then the MAC Address can be found using the IP Tracer. (**Note:** This can be installed and used to locate all the compatible Printers on your network.) Or The MAC address is accessible by printing a printer settings test card. Example of MAC Address:  The last 6 digits show the Printer name/MAC address (00:86:4b EXAMPLE) Match this address with the printer shown in the NETWORK folder. 
How can I find the IP address of my Ethernet Printer?	You can find it in the LCD of the Printer if the Ethernet option is functioning properly.

Question	Answer
How do I upgrade the Printer Firmware in my Ethernet-enabled Printer?	This is done in the same manner as a USB connected Printer, or from the Upgrade web page of the Print Server. The PC doing the upgrade must have a Driver installed for the Printer to be upgraded. Follow this procedure. 1. Run the Diagnostic Utility from the start menu: Go to the Start -> Programs ->CIM -> Workbench Printer Utility->Workbench. 2. Select the Printer to upgrade from the drop-down box. 3. Select Upgrade Firmware from the Application icon. 4. If you need to download the update file from the Internet, select the **Technical Support Website link**. 5. Choose the update file with the **Browse** button. 6. Select the **OK** button.
Can I print from my PC to multiple Ethernet Printers?	Yes. Follow this procedure: 1. You can install multiple Printer instances by using the Add Printer wizard. 2. Run the Add Printer Wizard by choosing Add Printer from the Printers Control Panel. 3. Select Add a Local Printer 4. Create a new port and select Sunlight Lux Card Printer TCP**/IP Card Printer Port**. Click **Next**. 5. Enter the IP address of the Printer. Click **Next**. 6. Enter a name for the port. Click **Next**. 7. Select for the Manufacturer and select the Sunlight Lux Card Printer for the Printer. Click **Next**. 8. Enter a name for the Printer instance. Click **Next**. 9. Keep existing driver. 10. Continue with the wizard instructions. 11. Click **Finish** to close the wizard.
Can multiple PC's print to my Ethernet Printer?	Yes. Each PC must have the Printer Driver software for the specific Ethernet-enabled Printer and connect to the intended Printer, using the correct IP address.
Can I print from my PC to an Ethernet Printer on a different network segment?	Yes. If you know the IP address of the Printer on any segment of your network, you will be able to print to it.

Question	Answer
Can I use IP Tracer to locate Printers on a different network segment?	No. The IP Tracer can only locate Printers located in the same network segment (as the PC running IP Tracer).
How do I upgrade the Printer Firmware in my Ethernet-enabled Printer?	This is done in the same manner as a USB connected Printer, or from the Upgrade web page of the Print Server. The PC doing the upgrade must have a Driver installed for the Printer to be upgraded. Follow this procedure. 1. Run the Diagnostic Utility from the start menu: Go to the Start -> Programs ->CIM-> Workbench Printer Utility->Workbench. 2. Select the Printer to upgrade from the drop-down box. 3. Select Upgrade Firmware from the Application icon. 4. If you need to download the update file from the Internet, select the **Technical Support Website link**. 5. Choose the update file with the **Browse** button. 6. Select the **OK** button.
What is the default User name and password for the Printer?	The default passwords are blank (i.e., an empty string). • The default Users are as follows: **root** as the administrative User and **guest** as a non-administrative User. • The Printer supports four (4) Users.
What if I lose the password for my Printer or it is not accepted?	Procedure for units with a display: 1.) Press the button for information on the display. 2.) Press the down arrow button until “Network” is highlighted. 3.) Press the button for Enter. 4.) Press the down arrow button until “Rst Password” is highlighted. 5.) Press the button for Enter. 6.) Press the button for OK (check mark).
What if I lose the password for my SUNLIGHT LUX Printer or it is not accepted?	The SUNLIGHT LUX printer does not have a display, so a PRN file will be generated by the Technical Support group and sent to you in order to reset the print server “root” user password. Please contact Technical Support for instructions on how to unlock the printer. Fill out and submit the form request. The printer serial number must be included

Question	Answer
What should I do if the IP address of my Printer is being changed by my network?	Follow this procedure: 1. Contact your network administrator. Ask that your current IP address be reserved or ask that they provide a specific IP address that you can use to configure the Ethernet interface. **OR** 2. Choose an IP address that you know will not be used by any other PC, server or network device. Use those settings to configure your Printer with static network settings. (**Caution:** Do not do this unless you know that these settings will always be available.)
How can I verify/change what IP address my installed Printer Driver is expecting to find my Printer?	Follow this procedure. 1. Open the Printer Driver properties window. 2. Select Start -> Settings -> Printers and Faxes -> [your Printer Driver] -> Properties. 3. From the Ports tab, select **Configure Port**. (**Note:** The Host name will indicate IP address of the connected Printer. If this does not match your Printer's IP address, you can change it from this window.) 4. Enter the correct IP address. 5. Select **OK**. 6. Select **Apply**. 7. Select **Close**.

Question	Answer
How do I configure my Printer's IP settings?	▪ There is now a new way to choose a specific IP address for the printer and to set the printer to use a static IP from the printer itself. ▪ From the network menu there is a "Set IP" and a "Set Subnet" menu option. ▪ Select "Set IP" from the printer to manually enter the static IP you want to use. The left button decrements the currently highlighted value, and the right button indexes the cursor to the next digit to the right: ▪ Once the index goes all the way to the right of the entire IP address- a save screen will appear to save the address. ▪ The left key will cancel the changes and the right key will save the address. If you save the IP address and the printer had been in DHCP (Dynamic address mode) then the printer will be changed to disable DHCP and use this static address. ▪ The "Set Subnet" is the exact same sequence to set and save a subnet mask.

How do I print the setting card if there is no display available?	If your model does not have a display, then press and hold the PAUSE button for 4+ seconds to print a settings card. The printer must be ready and idle for the card to print.
How do I choose a static IP address for my Ethernet Printer?	You can use the web pages if you know the current IP address. **OR** You can use IP Tracer which allows you to find compatible Printers and specify their addresses. (**Note:** You can save static addresses. However, they are not used until you reconfigure the Printer to use those static addresses and reboot the Printer.)
How do I set the Printer to work with a static IP address?	You can use the web pages if you know the current IP address. • Select the **Use the following IP address** button on the Network web page. **OR** • Use IP Tracer, which allows you to find compatible Printers and specify their addresses.
What do the LEDs by the Ethernet connection on the back of the Printer indicate?	The LEDs indicates network activity.
How do I print a test page from Windows to verify the Ethernet configuration of the Printer and Printer Driver?	Follow this procedure. 1. Open the Printer Driver properties window. 2. Select Start -> Settings -> Printers and Faxes -> [your Printer Driver name] -> Properties. 3. Ensure that the printing preferences are set correctly for the Ribbon installed in your Printer. Then select the **Print Test page** button.

Glossary of Terms

Term	Purpose
MAC (Media Access Control)	The unique numeric value address associated with a network device that gives the device a unique identity. This address is assigned by the device manufacturer to ensure its uniqueness.
TCP (Transmission Control Protocol)	The Network protocol that allows reliable network communications between devices.
IP (Internet Protocol)	The Network protocol that identifies devices and messages by addresses so that communications can occur between devices on different local networks.
TCP/IP	Network communications using TCP and IP protocols.
ICMP (Internet Control Message Protocol)	The Basic message protocol for the internet.
DHCP (Dynamic Host Configuration Protocol)	The protocol used by a network to automatically assign network settings to connected devices so that they will work together.
DNS (Domain Name System)	Defines the Network protocol that allows devices to find IP addresses from a network name server.
DNS Server Address	This is the address of the server that provides the translation from a descriptive name to an IP address.
DNS Domain Suffix	This is the suffix to be added to the domain name make a complete name.
SNMP (Simple Network Management Protocol)	This is protocol for the network management services. This protocol provides a means for network compliant devices, called agents, to store data about themselves in Management Information Bases (MIBs) and return this data to the SNMP requesters.
MIB (Management Information Base)	A formal description of the way an agent can be accessed using SNMP and the functions that can be managed.

Term	Purpose
Network Settings	The basic network parameters needed to configure the network interface. (**Note:** These include the IP Address, the Subnet Mask, the Default Gateway, the DNS Server Address and the DNS Domain Suffix.)
IP addresses	Specifies the current IP addresses that are 32-bit values that are normally expresses in dotted-quad format. (**Note:** This address must not be the same as another device on the same local network.)
Subnet mask	Specifies a 32-bit value that routers use to send a message to the correct subnet.
Default gateway	Specifies the address of the router (in a network using subnets) that forwards traffic to a destination outside of the subnet of the transmitting device.
Telnet	This is a common terminal emulation program that allows a User to send commands to a TCP/IP connected device and receive the responses.
UDP (User Datagram Protocol)	Defines a protocol for sending and receiving messages on a network.
Syslog	The standard method for logging system events.
Root User	A User with administrative rights to change any Printer settings.
Guest User	A User without rights to change Printer settings.
Ping	A common utility or command that sends a message to network devices asking for a return message. (**Note:** This is used to diagnose if the device is on the network or to troubleshoot the connection.)