ID Card Printer Driver Guide

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(Driver version 2.8.0)

CONTENTS

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PRINTER LIMITATIONS

- First and foremost, always ensure the printer is kept clean and free of any dust. The printer must be cleaned at the frequency recommended (after every 1000 images or at the change of a standard film). Do not leave card stock or partially spent dye film open to gather dust as trapped debris and dust will be evident in the finished card.

- Image Size is important to ensure full edge to edge coverage.

For Pronto 100:	1016 x 642 Pixels or 85.6 x 54mm
For Magicard 300, 600 and D and K Series:	1013 x 642 Pixels or 85.7 x 54mm
For Ultima and Prima:	1036 x 664 Pixels or 87.7 x 56.1mm

  Note: For the Retransfer series, it produces an ‘over-the-edge’ sized image consistent with reverse transfer printing which allows the entire card surface can be covered with a ‘bleed’.
  Therefore, it is important that any aspects of the image that the user wants to have wholly visible should fit centrally within 1013 x 642 pixel area to avoid any unwanted clipping.

- Cards to be printed on should be from a reputable source and conform to ISO7810. Any debris, inclusions, residue, finger-grease or pits within the card may be evident in the finished image reproduction and cause unwanted side-effects.

- To ensure optimal card feeding performance, the card stock should be fanned (separated) and the input hopper maintained between 10 minimum and 50 cards.

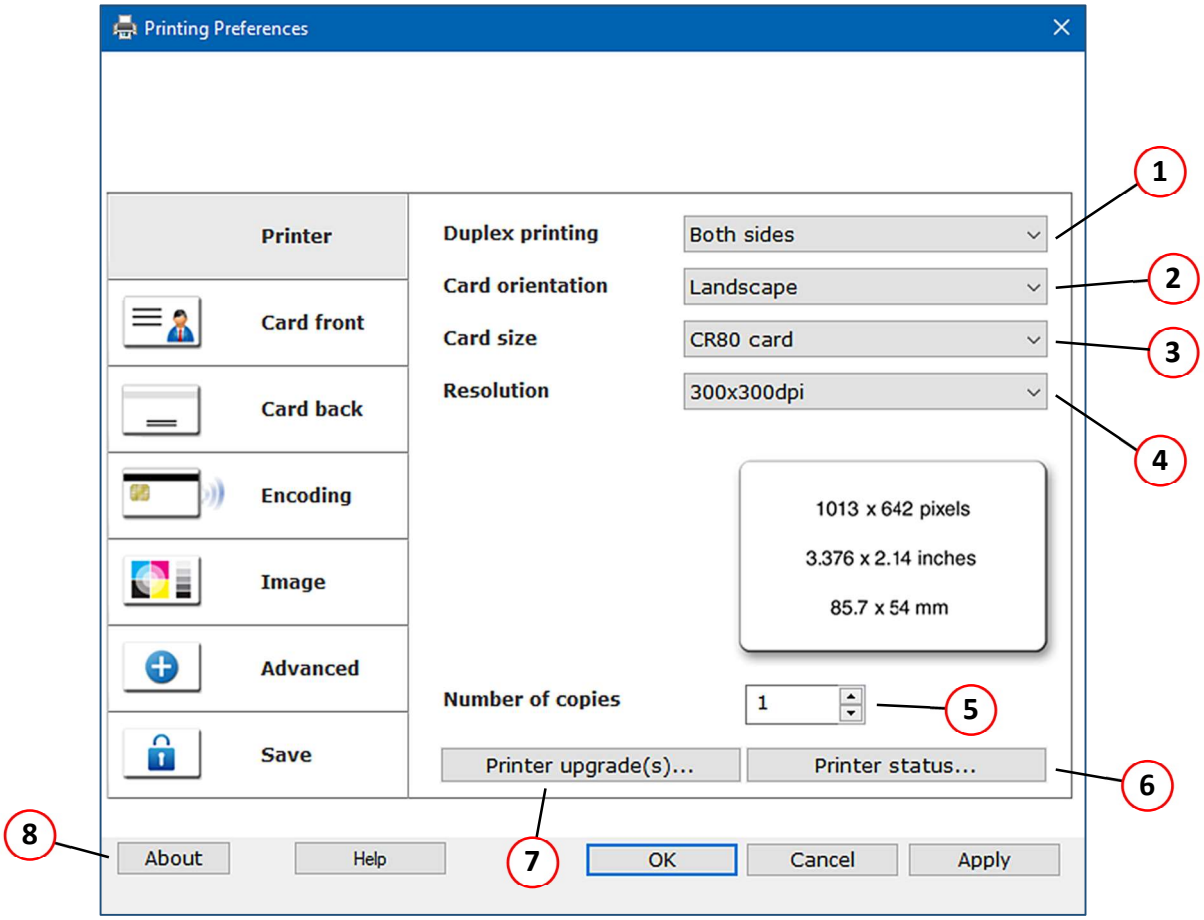
- Do not use any cards outside the printer’s card thickness specification 0.50 - 1.27mm (20 - 50mil). To do so may result in a card jam and may affect the manufacturer’s warranty.

THE DRIVER PRINTING PREFERENCES

User Tabs:

Printer

When the driver's Printing Preferences are first opened, the user is presented with the window below (the Printer tab being selected by default). The Printer tab shows the particular printer model being used.
Each of the preferences tabs will be described in turn.
NOTE: For driver model variations, please refer to the **Appendix** at the rear of this document. (For clarity, the differences only, will be shown).



User Options:

1. **Duplex Printing**
   Allows the user to select the sides of the card to print (side 1 and/or side 2). The available options are: 'Front only', 'Both sides' and 'Back only'. Selecting 'Both sides' will enable the 'Card back' tab options.
2. **Card Orientation**
   Allows the user to select either portrait or landscape orientation.
3. **Card Size**
   Allows the user to select the physical size of the card being used in the printer (either CR79 or CR80).
   NOTE: Some printer models are designed to use cards of sizes other than CR79/80 and are intended for specific applications. Please refer to the **Appendix** at the rear of this document for further details.

4. Resolution

User-selectable print resolution on the card. (300 x 300 or 600 x 300 dpi. dpi = dots per inch).
Please refer to page 28 for further details.

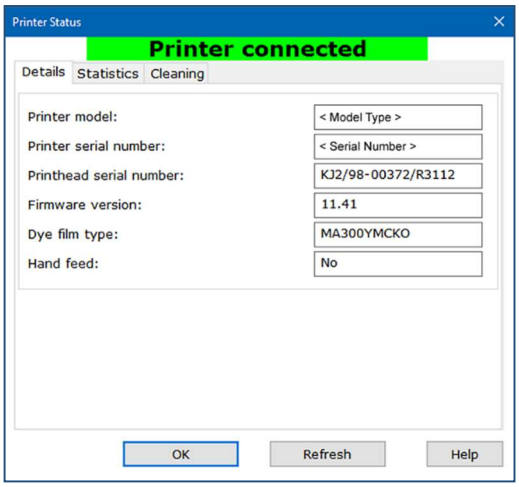
5. Number of copies

This is the number of copies (of the same card design) printed

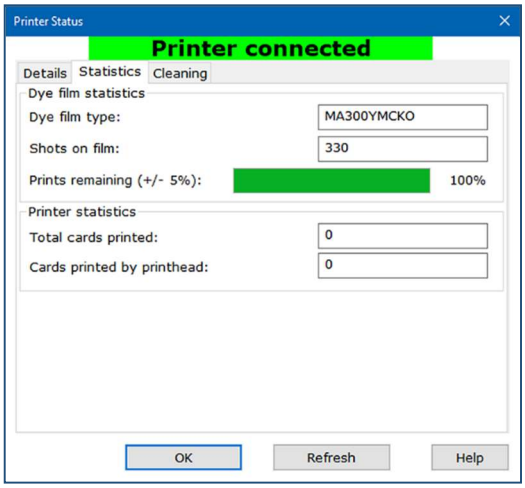
6. Printer Status…

The Printer Status window gives the user useful information on the current status of the printer. The 'Printer Connected' banner indicates a valid connection between printer and the user's PC (this can be via USB, Ethernet or WiFi depending on the printer model).

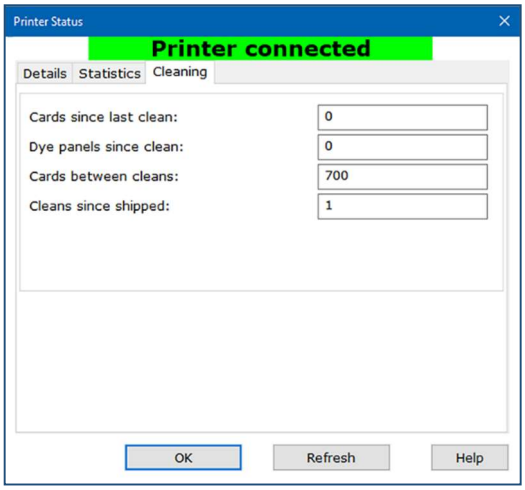
This information is sub-divided into 'Details', 'Statistics' and 'Cleaning' as follows:



The Printer Details Tab



The Printer Statistics Tab



The Printer Cleaning Tab

Should there be any changes to the printer's status (such as replacing the dye film or printhead), then it is generally a good idea to select the 'Refresh' option to ensure the current data is presented. Refreshing the data also indicates the fitted dye film RFID tag is being correctly read.

7. Printer Upgrade(s)…

The printer upgrades option allows the user to:

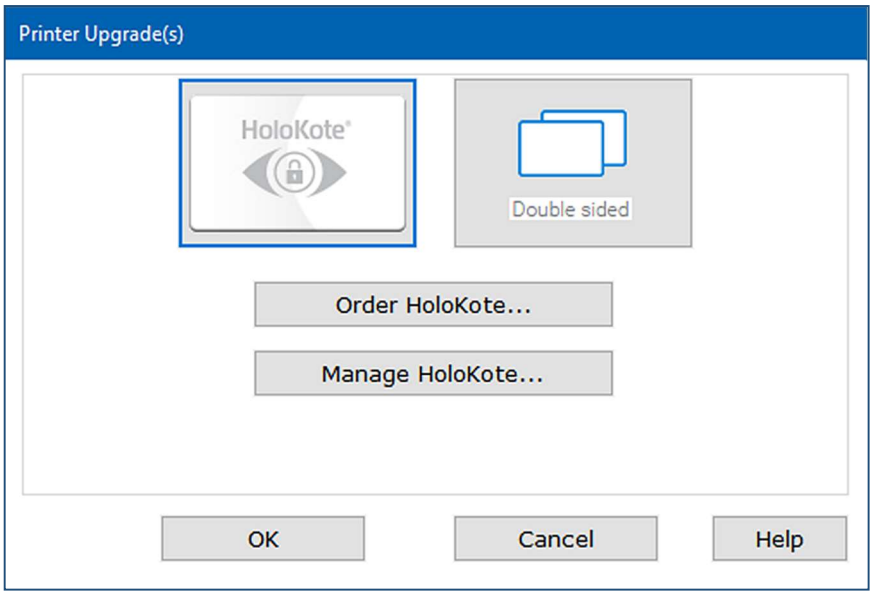
- Order and install a custom Holokote. Find out more here: https://magicard.com/holokote
- Order a double-sided upgrade (allowing the user to print double-sided card designs in one operation. (NOTE: This function may not be available on all printer models).

User Options:

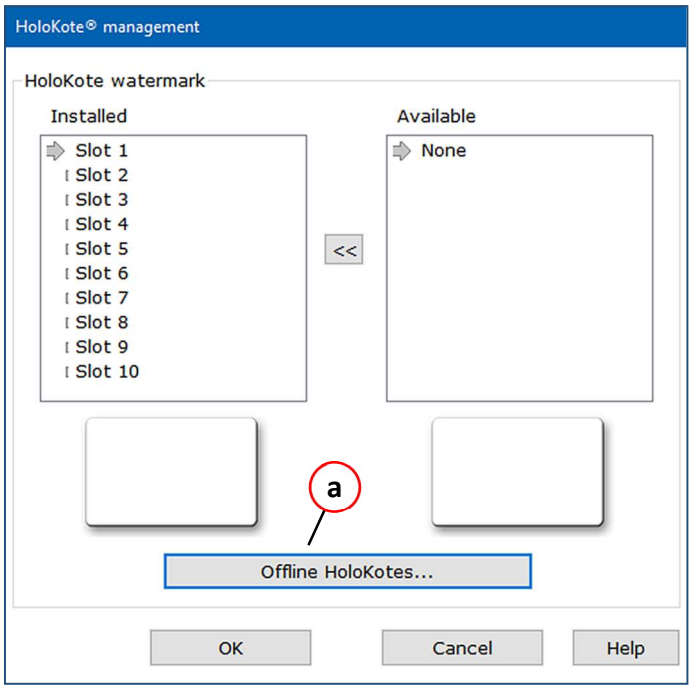
Order Holokote…

Selecting the **Order Holokote…** option opens a browser to Magicard's support website: https://support.magicard.com/login

Once a Magicard Support Account is created and the printer registered, the user will be able to order their custom Holokote via the online process built into the Support Account. Once the creation process is complete, Magicard will process the order and where applicable, payment will be taken via the original vendor of the printer. Upon payment completion and design approval, the custom Holokote will be ready to install to the printer via **Manage Holokote…** (please see below).



Manage Holokote…



Offline Holokotes

Select **Manage Holokote** to move an available Holokote into one of the printer's Holokote slots.
If the printer's PC is online, your custom Holokote file will be visible in the **Available**, right hand side pane. If the printer's PC is offline, the custom Holokote file can be downloaded from the Magicard Support Account ('Feature Key' section) from an online computer, then moved to the printer's computer and placed into the **Available** section via the computer's 'Browse' option.
The custom Holokote can then be allocated a slot in the left (**Installed**) window using the '**<<**' button.

The user is free to choose the order in which specific images are placed.
(NOTE: The number of available slots may vary between printer models).

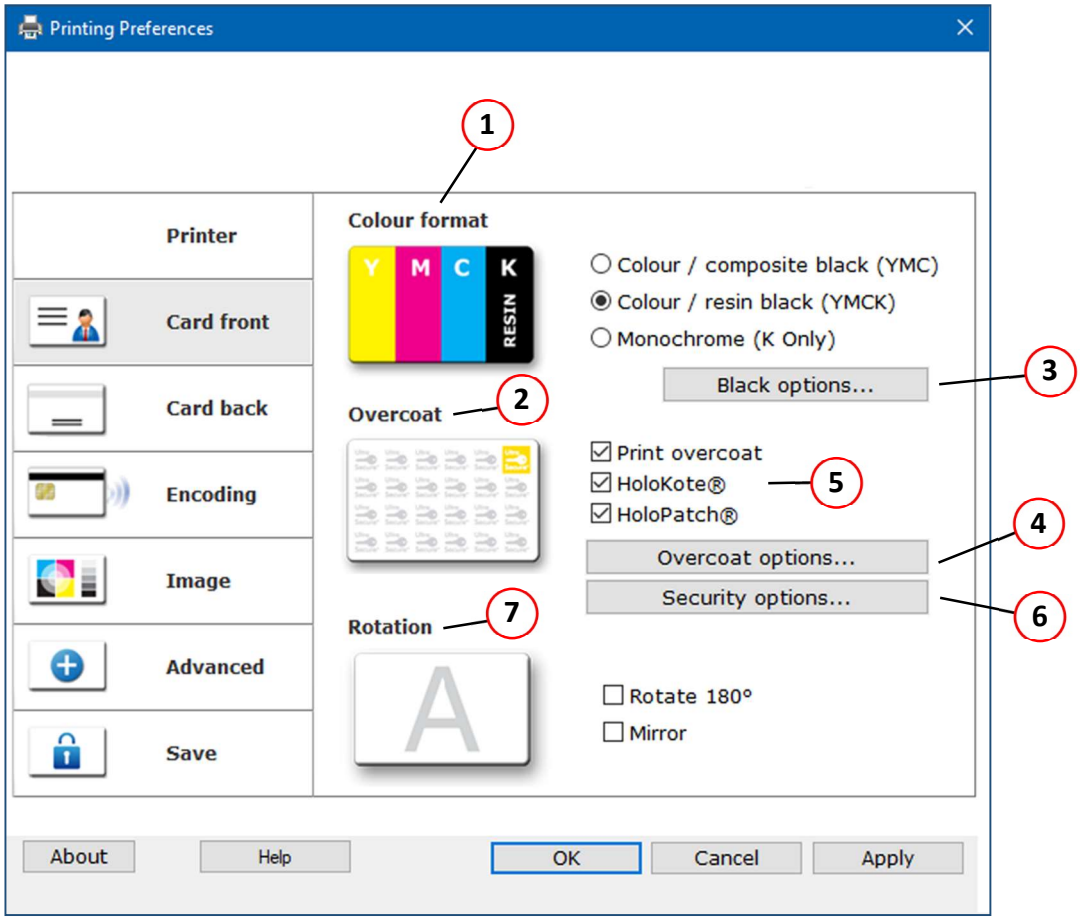
The **Offline Holokotes…** option **(a)** allows the user to browse for previously downloaded Holokote images stored on their computer which can then be added as required.
(Holokote files will have a *.jfif file extension).

8. About

Selecting the 'About' option displays the currently installed driver version together with the driver End User License Agreement (EULA). Prior to using the driver, the user will be presented with the option of accepting or declining the EULA.
NOTE: The user will need to accept the EULA to continue using the driver.

Card Front

The Card Front tab allows the user to set the card and colour format (within the printer) for the type of cards they wish to print.



User Options:

1. Colour Format

Allows the user to select the correct film type to match the film fitted (Colour/Resin Black is set as default as this generally suits most applications). Colour films usually have the designation YMCK which is an abbreviation for Yellow, Magenta, Cyan, Key ('Key' being the black panel).

For example, a typical film part number would be **MA300YMCK** (where **MA** is the film type, **300** is the capacity (300 cards in this case) and **YMCK** is the colour configuration of panels making up a set needed to print one card.

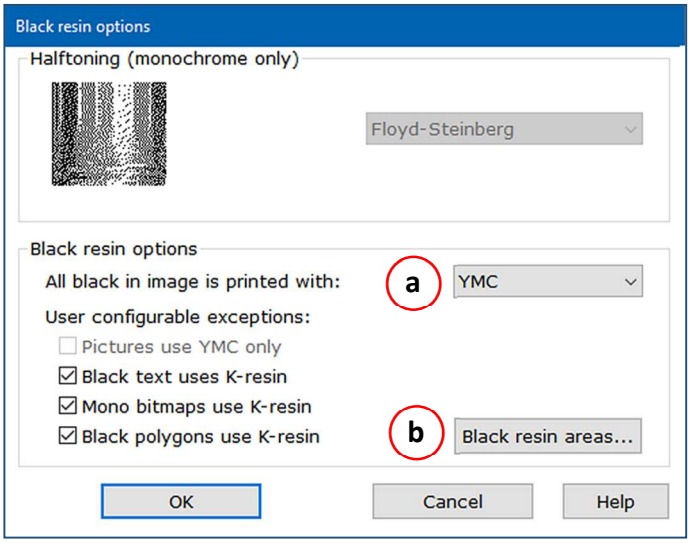
Monochrome film, rather than having sets of colour panels, is one continuous film of **one** colour (black, or K is the most commonly used). Films of other (single) colours are also available from your printer dealer.

2. Overcoat

The Overcoat is a clear layer and is the final layer applied to the card in the print process.
The primary function of the Overcoat is to effectively seal the card and to provide a degree of mechanical protection (against dust/scratches etc.) and also limited UV protection from the Sun (which would otherwise cause the printed card image to fade). Unless the card is to be laminated, it is recommended that all printed cards have the Overcoat layer applied during printing.

3. Black Options…

Selecting the Black Resin options gives the user the choice of how the back resin content of an image is displayed.



YMC (a)

Areas such as polygons often display better when printed using K-Resin (true black), whereas photographic images tend to print better using YMC 'black'. (YMC black, rather than true black, is a composite black derived from the yellow, magenta and cyan colour panels).
Halftoning is a method of applying thresholding to an image using various algorithms (in this case, 'Floyd-Steinberg').

Black Resin Areas… (b)

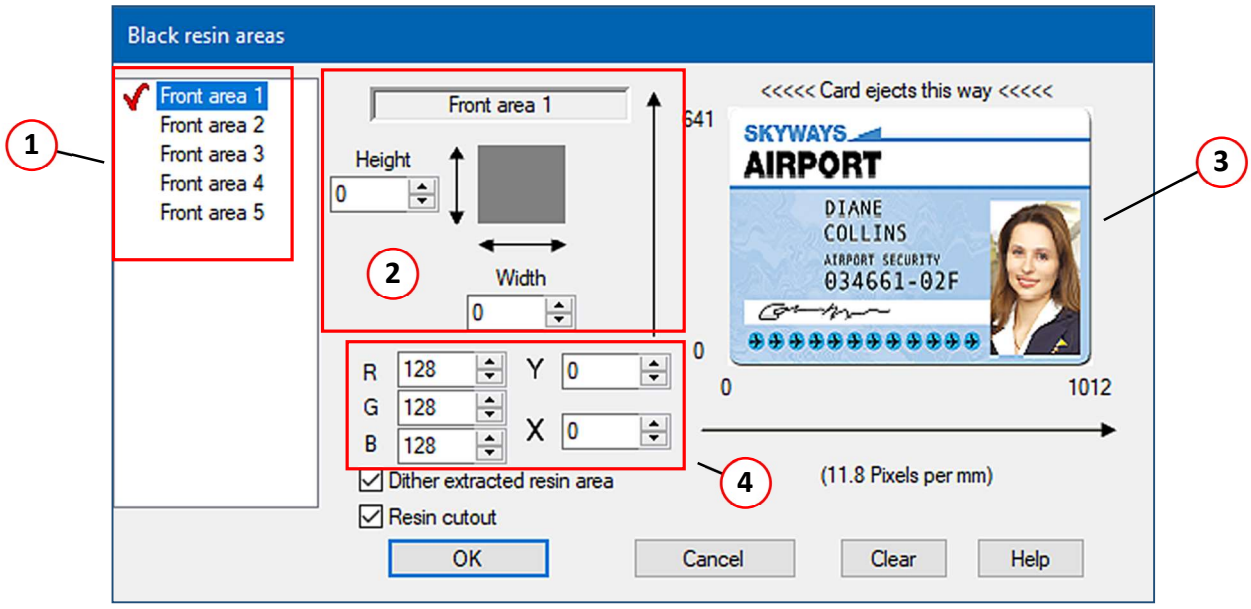
The Black Resin Areas window is used to define masked out regions on the card design that need to be printed using the K-Resin panel of the dye film (for example, an area reserved for barcodes etc.) rather than using composite (YMC) black.

Up to five separate regions can be added to the card design (**1**).
Defining these regions can be done in two ways (please refer to the following page):

Enter the height and width of the region in pixels (**2**), or alternatively, using the PC mouse, drag and drop on the card image to draw the required region (**3**). Each user-defined region will be visible (as a masked out area) on the card image. No K-Resin is physically printed on the card.

NOTE: As a guide, there are approximately 12 pixels per millimetre (use the card image (**3**) as a reference while increasing/decreasing the x,y values in (**2**)).

The R,G,B colour values of the masked-out regions can also be set by the user (**4**). By default, these values are set to 128 which gives a mid-grey colour, however these can be changed in the event this causes confliction with colours in the card design.

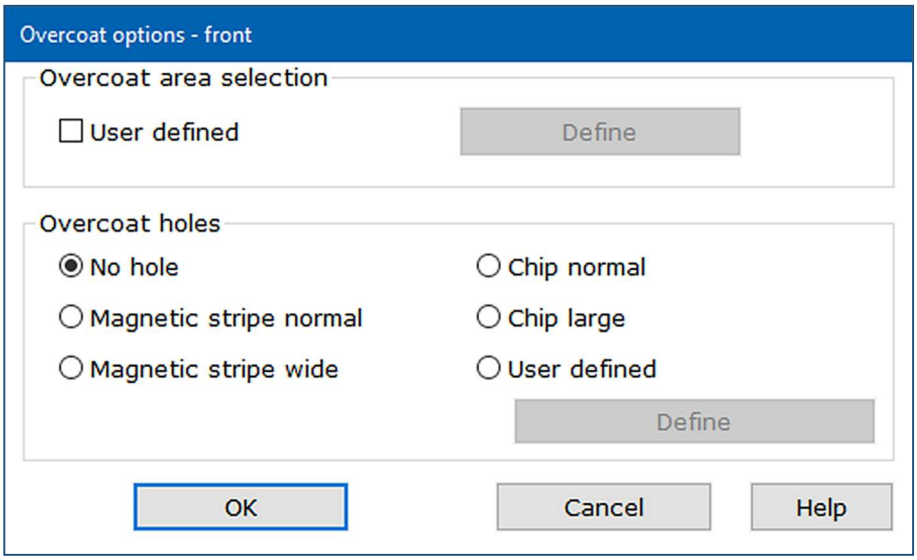


4. Overcoat Options…

The Overcoat options feature allows the user to set or manually define regions (or holes) in the clear Overcoat layer when printed on the card. This is particularly important when using magnetic stripe cards or Smart cards having contact-chip pads where physical contact is required with the card's surface.

The user is given the option of selecting pre-defined holes to suit standard and wide sized magnetic stripes and also holes for standard and large sized contact-chip pads.

A user defined option is also available. Selecting this option enables the user to specify a custom size using a window very similar to the Black Resin Areas window (above).



5. Print Overcoat, Holokote, Holopatch

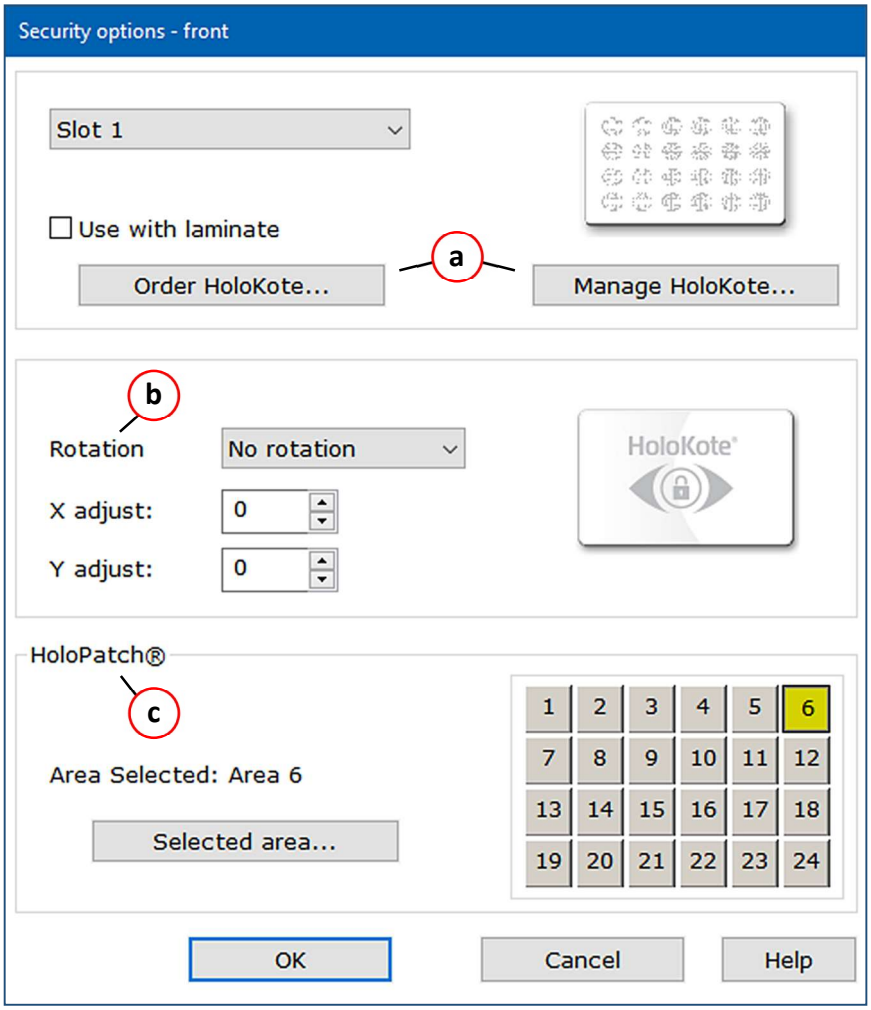
a. **Print Overcoat** This should always be selected when printing cards unless the finally printed card is to be laminated. This option instructs the printer to apply the top clear layer onto the card.

b. **Holokote** The Holokote feature is unique to Magicard printers and is the watermark applied to the clear Overcoat layer during printing. This can be one of the standard images programmed into the printer or a user's custom design. This option enable/disables the Holokote feature.
(NOTE: The custom Holokote option may not be available on all printer models).

c. Holopatch This option enables/disables the Holopatch feature on printed cards (please refer to the 'Security Options' section for further details.

6. Security Options…

The Security Options feature provides additional security features to the printed card. Please see below for further details.



Order/Manage Holokote… (a)

Please refer to the previous pages for details on ordering and managing custom Holokote images.

Holokote Rotation (b)

This feature gives the user the option to rotate Holokote images by 180 degrees. Also, the image position is adjustable in both the x and y axes.

Selecting Holopatch areas on the card (c)

Holopatch is a feature which is used specifically with Holopatch cards. (Holopatch cards are easily identified by a small gold-coloured square located in one corner of the card. Usually, this square has a highly polished appearance).

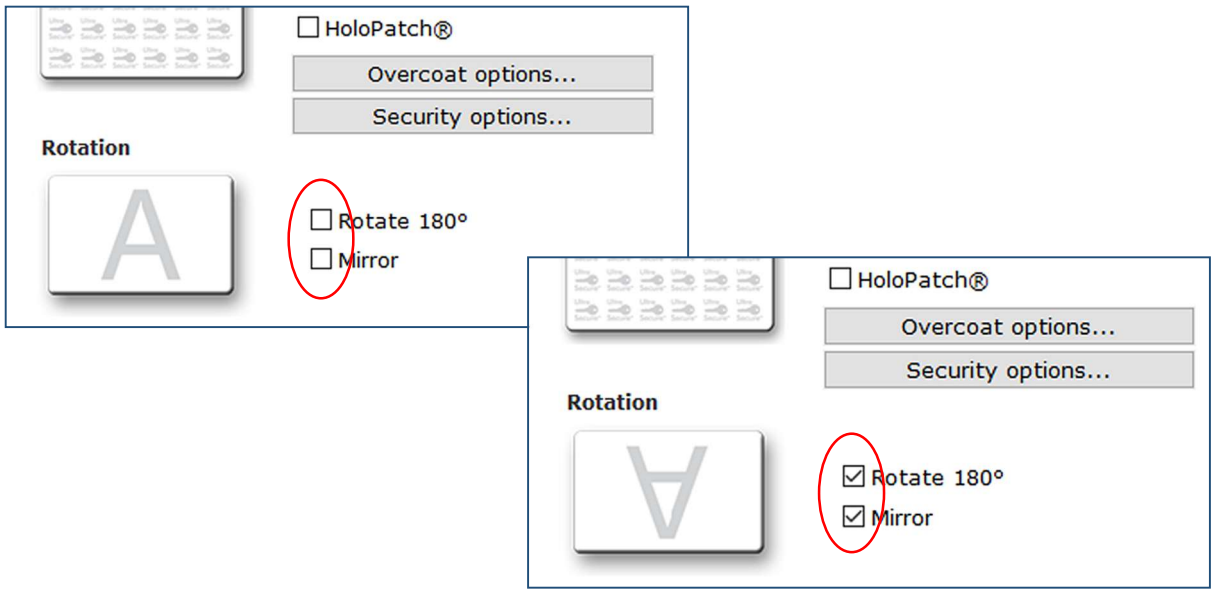
When used with a Holokote tile image (and the Holopatch feature enabled), a small section of the tile image will print across the gold square. With Holopatch enabled, no Overcoat will be printed on a user-selected area (accentuating the tile design in that selected area).

This feature allows the user to select any one of 24 areas on the card (the default being area 6). By clicking on any one of the numbered squares, the clicked square will be highlighted yellow and the Holopatch location selected.

'**Selected Area…**' Selecting this option allows the user to define their own custom area on the card. This will display a window very similar to that for defining 'Black Resin Areas' (please see previous pages).

7. Rotation

This option allows the user to rotate the Holokote image (flip vertically) or mirror the Holokote image (flip horizontally).



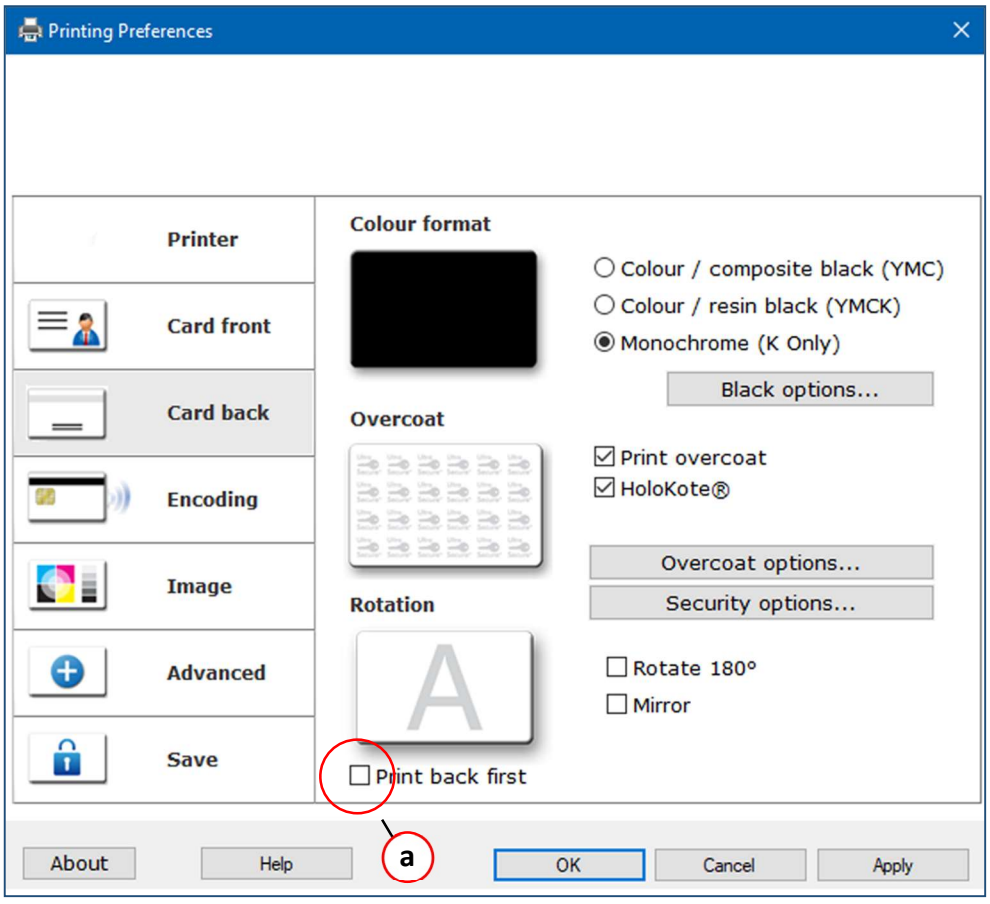
Card Back

The Card Back tab is very similar to the Card front tab but with fewer options. Generally, there are less requirements for printing on side two of a card design (for example, the reverse side of cards are often black text or monochrome images). However, selecting the full colour option is still available to the user if required (simply select the colour options as required in the 'Colour format' section).

Print Back First (a)

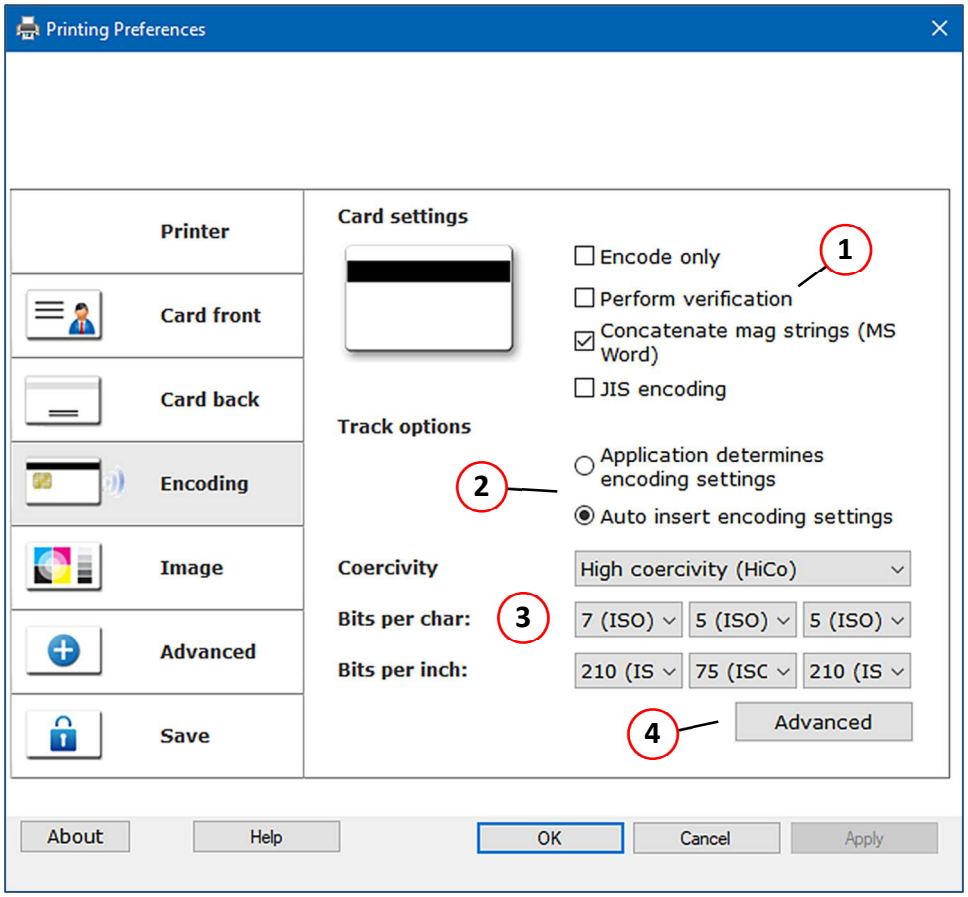
Printing the back of a card first is a useful feature when laminating. Once the back of the card is printed, the card is then flipped to it's front side, then printed and laminated in one operation, saving time.

NOTE: Not all printer models are designed for laminating cards.



Encoding

The Encoding tab enables the user to set up and encode magnetic stripe cards within the printer.
NOTE: The encoding option is only available on MAG variant printers. (Standard printers will still show the encoding option but this will be greyed-out).



1. Card Settings

Encode Only

This option will enable the user to carry out magnetic encoding from a badging application without printing the associated image, this is useful for encoding cards that are already in use. No dye film will be used.

Perform Verification

When enabled, the printer will self-check (verify) all magnetic encoded cards prior to printing the image to ensure that encoding has been successful.
Any unsuccessful cards will be re-encoded up to 3 times. If still unsuccessful, the card will be rejected and the printer will give an error message.

Concatenate Mag Strings (MS Word)

This option will help to overcome a situation in Microsoft Word where text strings that are sent using the tilde (~) method for magnetic encoding are split up into smaller chunks, thus they need to be concatenated together again to give valid magnetic encoding data.

JIS Encoding (Japanese Industrial Standard used in combination with MidCo setting below)

Provided a printer is a Mag variant model, the user has the option of encoding either ISO or JIS magnetic cards. JIS is a standard character set for encoding the 'Japanese Industry Standard' style cards
Rather than encoding the three magnetic tracks (as in ISO), JIS printers record on one track only.
JIS magnetic heads also physically differ from ISO in that they are slightly larger but have a smaller magnetic contact point than ISO heads.

2. Track Options

Application determines Encoding Settings

When enabled, the format of the magnetic encoding will be determined by the user's badging application. This option is recommended for users of proprietary badging applications.

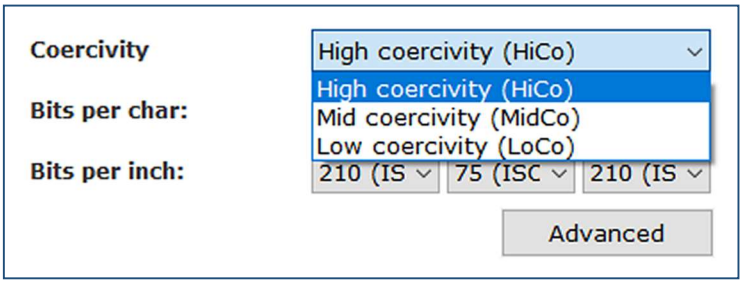
Auto Insert Encoding Settings

When enabled, the format of the magnetic encoding will be determined by the Coercivity, Bits per Character and Bits per Inch.

3. Coercivity

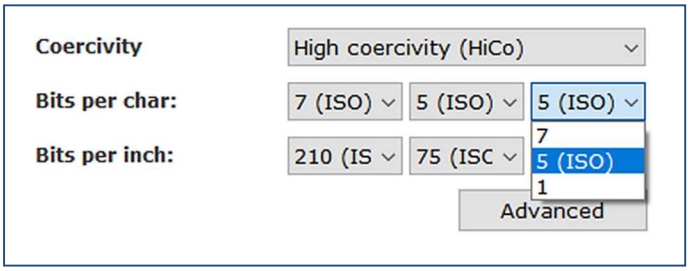
Coercivity is a measurement of a magnetic material's resistance to being magnetised. Set this option to match the coercivity of the cards used. Either Low Coercivity (**LoCo**), Mid Coercivity (**MidCo**) or High Coercivity (**HiCo**) cards can be encoded. Low Coercivity cards generally have magnetic stripes that are brown in colour whereas High Coercivity cards generally have stripes that are black in colour.

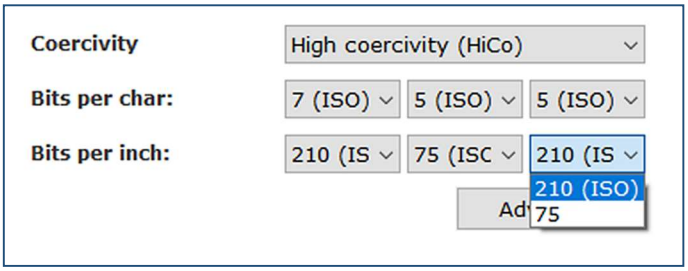
HiCo cards have a greater resistance to stray magnetic fields than Loco cards and are therefore, less likely to be accidentally erased or corrupted. Mid Coercivity cards (**MidCo**) offer a good price/performance compromise between the lower cost of LoCo cards and the greater resistance to stray magnetic fields that HiCo cards offer.



Bits per Character

Use the drop down lists to select how many binary bits should be used to encode each character of magnetic data. The recommended settings are: 7, 5 (ISO) and 1.



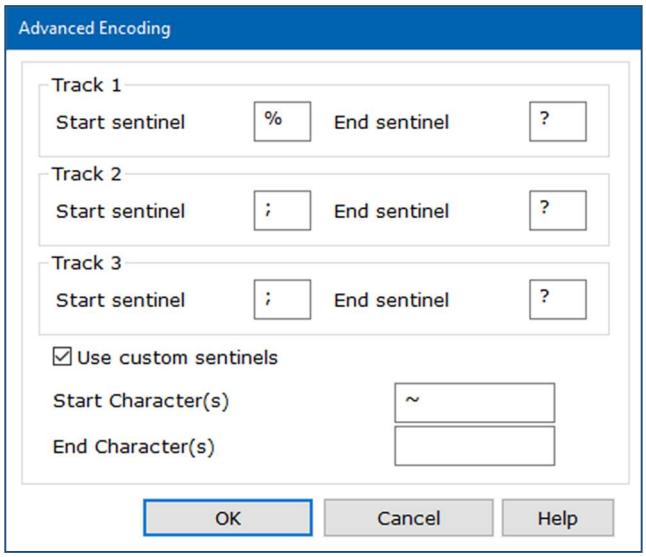


Bits per Inch

Use the drop down lists to select how many binary bits should be encoded in each inch length of magnetic stripe.
The recommended settings are: 210 (ISO) and 75.

4. Advanced

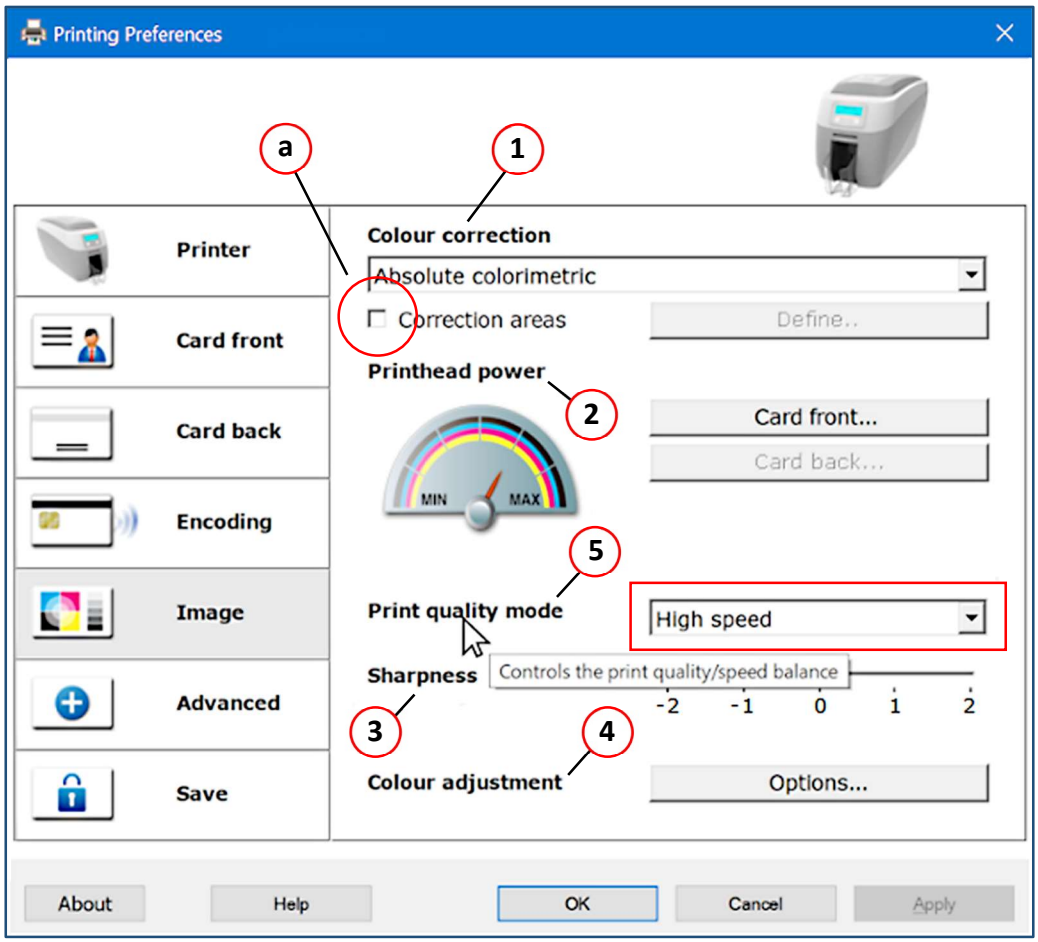
The Advanced encoding option enables the user to specify their own Start/End sentinels for each of the three magnetic tracks on the card (ISO). Whilst some applications may require custom sentinels, it is generally recommended that for most applications, standard (ISO) sentinels are used.



Image

The Image tab is used to customise the way the printed card will appear in terms of colour reproduction, density and sharpness. The final printed result will depend on several factors (for example, the individual printer, the type of cards used, and the particular dye film fitted).

NOTE: The D and K printer models have an additional **Print Mode** feature in the printer driver. This feature is only available on the D and K model printers. Please refer to page 30 for further details.



1. Colour Correction

The 'Colour Correction' is a drop-down list of ICC (International Colour Consortium) colour profiles. In colour management, an ICC profile is a set of data that characterises a colour input or output device, or a colour space, according to standard.
The profiles in the drop-down list are pre-set and not changeable by the user, however different profiles will have different characteristics and will improve images when applied to a greater or lesser degree depending on both the profile settings and the image.

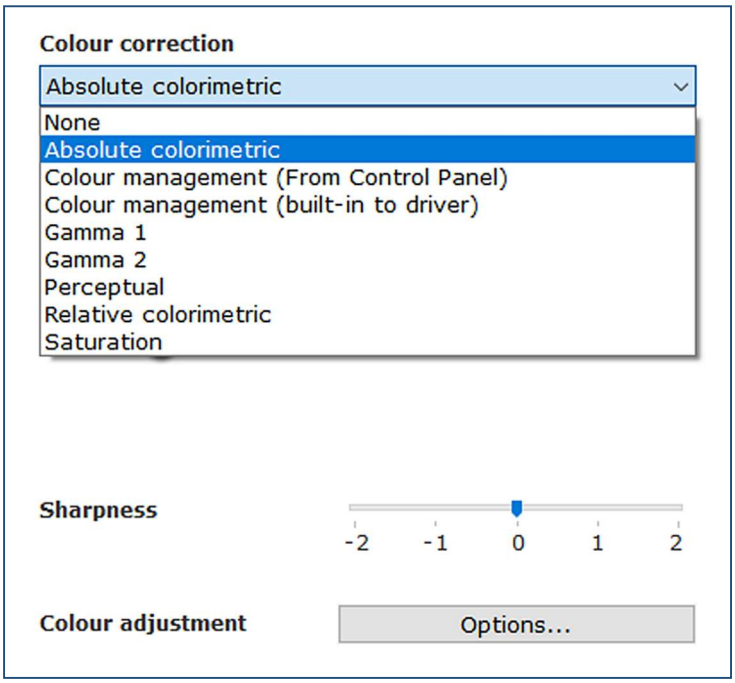
ICC Colour Profiles

Selecting the Colour Correction drop-down list displays the ICC colour profiles available to the user as standard.

Default = Gamma 1

The Colour Correction options provide software 'Gamma Curves' to correct for different characteristics of thermal printheads and dye films.

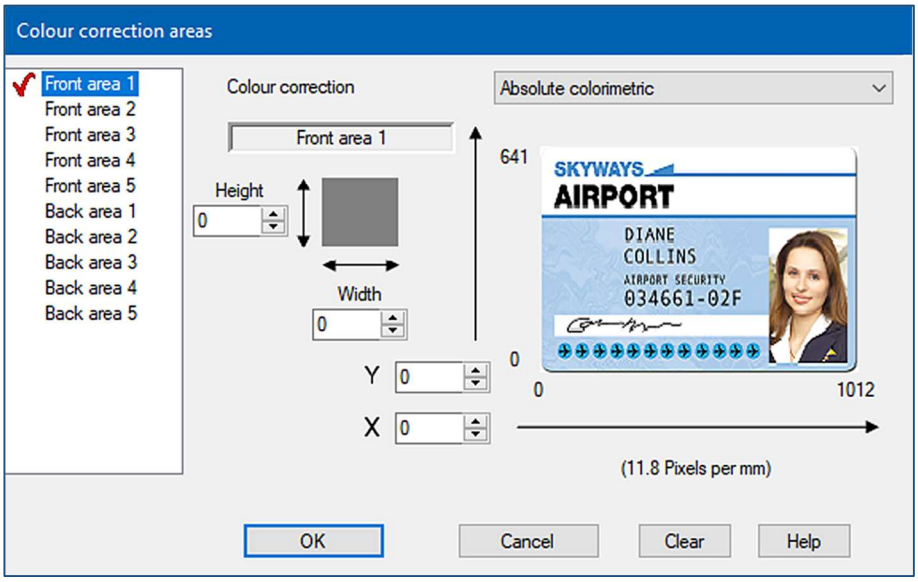
Three choices are available: **None**, **Gamma 1**, and **Gamma 2**. It is recommended that the setting is left on the default Gamma 1 option (which gives a more accurate colour reproduction).



Colour Correction Profiles

Correction Areas (a)

In addition to applying colour correction over the wholes card surface, the user has the option of applying correction to specific user-defined areas. By selecting the Correction Areas option followed by the Define… button, the user will be presented with the 'Colour Corrections Areas' window below.

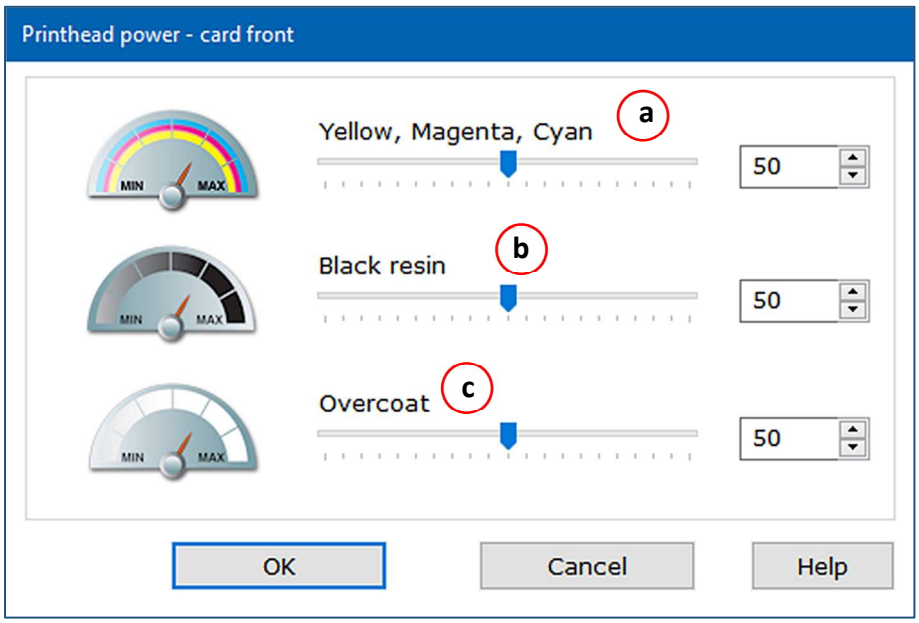


Colour Correction Areas

The user has the option to select five separate areas each, on side 1 and side of the card (using the mouse drag and drop method). When complete, click OK to return to the main Image window. Any colour correction can now be applied by selecting the required ICC Colour Profile.

2. Printhead Power

The printhead power option is used to control the density of the final printed image. The printhead power setting is applied to the colour, black resin and clear overcoat layers.
Generally, the lower the printhead power setting, the lighter the colour or intensity (in the cases of black resin and overcoat). The higher the setting, the darker the colour etc.
Printhead power settings can be applied to both sides of the card however, not all options may be available, depending on the film type fitted.



Printhead Power settings

Printhead Power Settings

The Power settings are adjusted via three slider bars. All should be set to 50 by default.

Yellow, Magenta, Cyan (YMC) (a)
An increase or decrease in the YMC Power will result in an increase or decrease in the overall colour density and images will be darkened or lightened. The higher the setting, the darker the image printed and vice versa.

Black Resin (b)
An increase or decrease in the Black Resin Power will result in an increase or decrease in the 'boldness' or 'thickness' of black text and barcodes. The higher the setting, the more prominent the print and vice versa.

Overcoat (c)
An increase or decrease in the Overcoat Power will result in an increase or decrease in the visibility of the HoloKote image. The higher the setting, the greater the contrast in the printed Holokote image and vice versa.

Caution:

Very low Overcoat Power settings can cause side effects such as card images fading over time, and also negate the HoloKote card protection system.
Very high settings of any of these 'Printhead Power' sliders can cause side effects such as incorrect or distorted colours, breaking of the dye film ribbon, dye film creasing and even damage to the thermal printhead.

In the event that the dye film ribbon breaks due to over-heating, it can be repaired with the use of adhesive tape; attach the broken ends together and then wind up the black take-up spool by hand for roughly two full turns. Then, before printing again, turn the printer off and back on again and reduce the power settings to lessen the chances of the dye film breaking again.

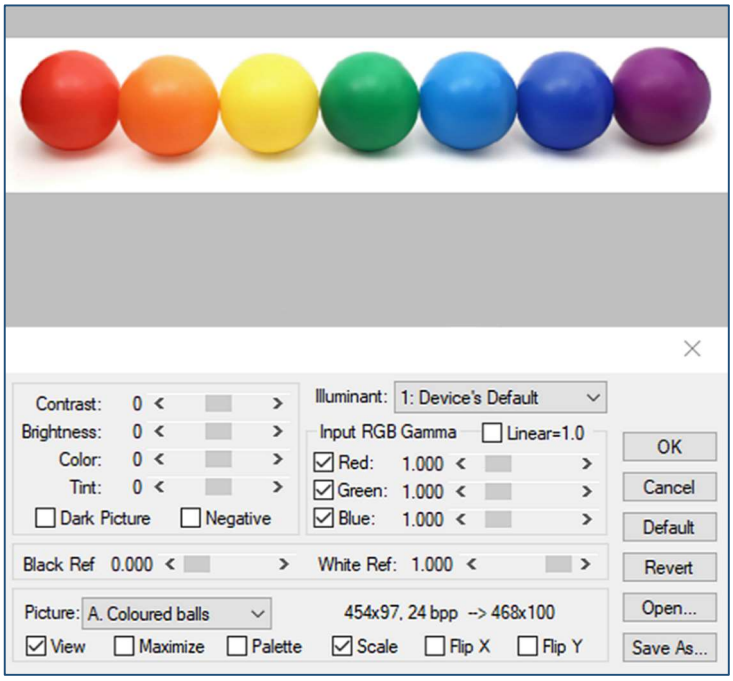
3. Sharpness

This control allows adjustment of the image sharpness. The control can be adjusted from -2 (lower) to +2 (higher). The default value being zero.

4. Colour Adjustment

To change the colour strength of a printed card or its brightness, saturation or contrast then click on the **Colour Adjustment** button.

Aside from the many dynamic colour options available to the user, the colour image (at the top of the window) is updated in real-time to reflect any current changes made.
In the event changes are not correct in any way, selecting the 'Default' option will restore the original settings.



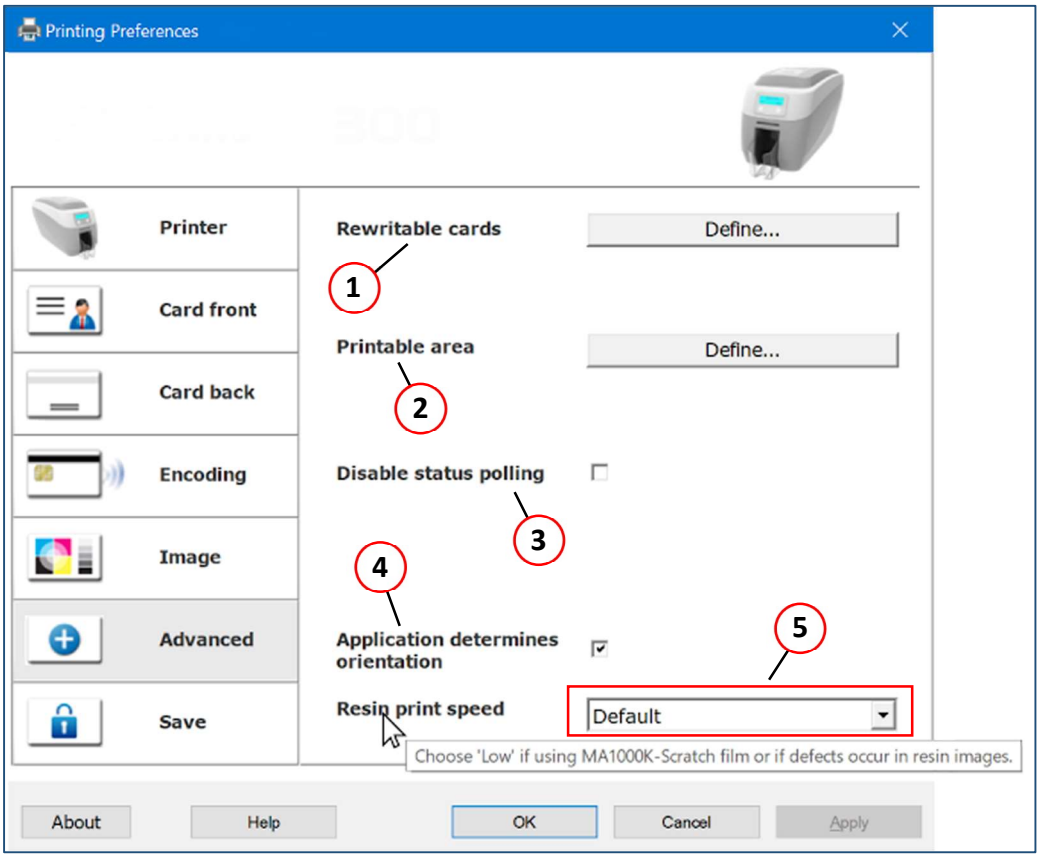
Colour Adjustment Options

5. Print Quality Mode

The Print quality mode can be used to set the print quality of the colour panels for all 360 based printers.
The options available are **High speed** and **High resolution** (the default being High speed which retains the same functionality prior to this option being available).

Advanced

The **Advanced** tab allows the customisation of some of the advanced technical settings related to colour correction and image positioning on the printed card.



1. Rewriteable Cards

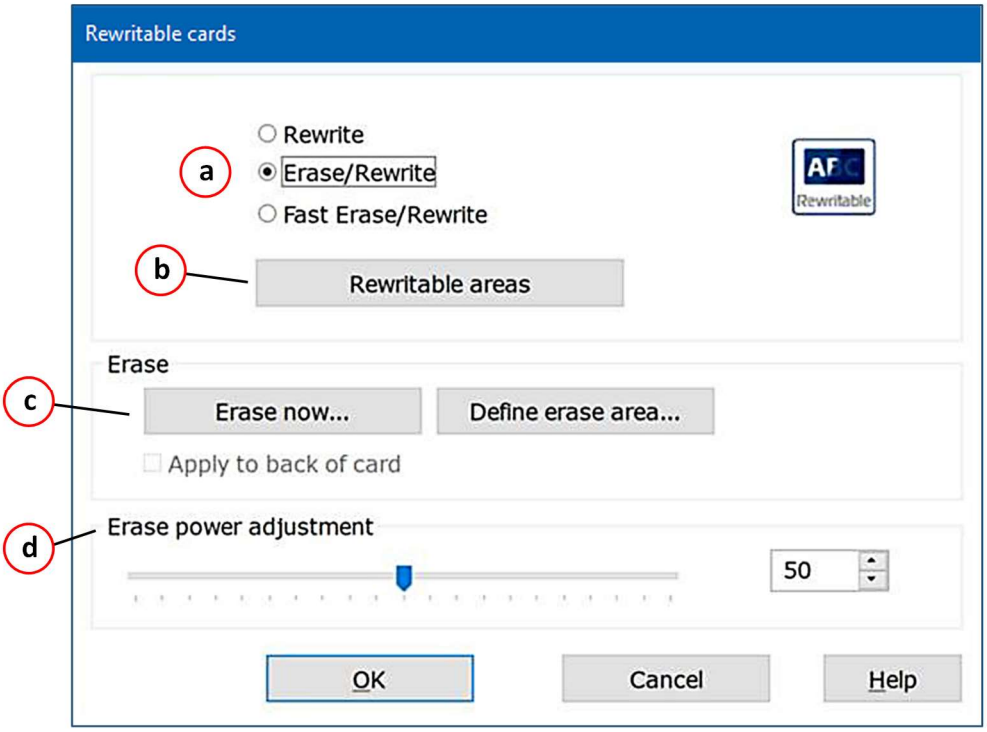
The Rewritable Cards options allow the user to make fine tuning adjustments to the erase and print functions when printing on rewritable card stock.

Warning: This option requires a special card stock. The card stock must be approved Rewritable card stock. This feature cannot be used on plain PVC, adhesive back or Proximity cards.

NOTE: Typical rewritable surfaces have a matt finish, unlike the glossy PVC surfaces. Make sure to insert the card with the matt finished side face-up. The dye film must be removed before attempting to print on rewritable cards.

Rewriteable Cards (Cont…)

When performing any rewriteable operations, it is assumed rewriteable cards will be used and no dye film fitted in the printer.



a. **Rewrite**
Selecting the Rewrite option will feed a card under the printhead. The printhead will then write an image onto the temperature-sensitive dye on the card's upper surface. As no colour dye film is used, the fine printed image will be monochrome only (the actual colour of which will depend on the particular dye used in the card's manufacture.
Erase/Rewrite
This option erases a previous rewriteable image and prints a new image in the same operation (one pass under the printhead).
Fast Erase/Rewrite
This is a similar operation to (b) except the printer uses a faster feed rate together with the printhead being driven slightly hotter (than that for a standard print) during the pass over the card.

b. Rewriteable Areas
This produces a window very similar to the 'Colour Correction Areas' (see page 18) where the user has the option of selecting five areas each on the card front and back.
NOTE: A double-sided rewriteable card will be needed if both sides of the card are used.

Please refer to the following page for additional details.

c. Erase Now… / Define Erase Area…

Selecting the Erase Now… option will cause the printer to feed one rewritable card and erase that card in a single operation (no image will be printed on the card).

The Define Erase Area… option will open the window (see below) where the user can define their own area on the rewriteable card (via the drag-and-drop method) using the computer mouse.
Running the Erase Now… option will erase this defined area.

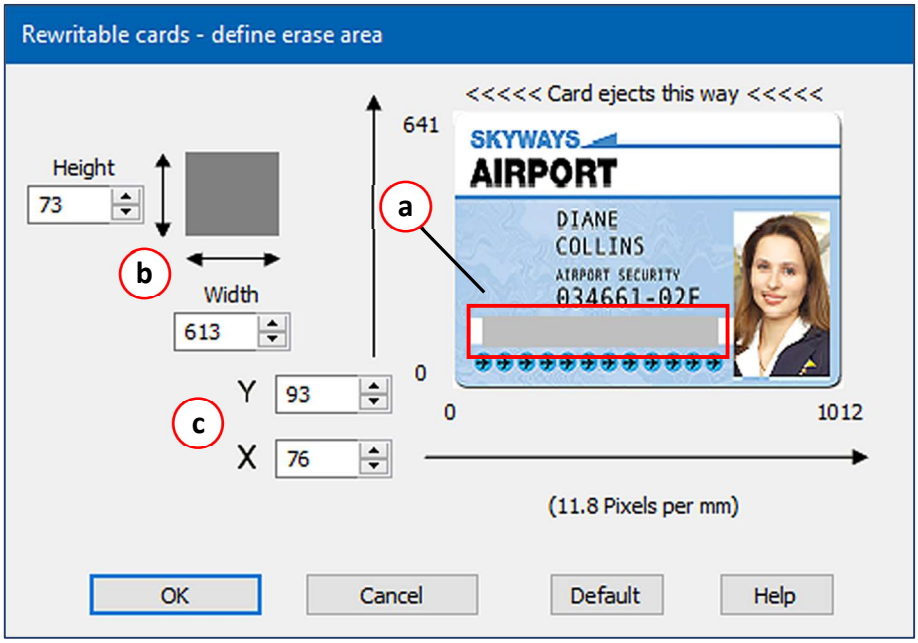
Apply to back of card

- For double sided printers, the checkbox **Apply to back of card** is shown. (For single sided printers, the original layout is shown).
- The checkbox is enabled if double sided printed is selected on the **Printer** tab.
- If single sided printing is selected on the **Printer** tab, the checkbox is disabled and is unchecked.
- The checkbox only applies when the user selects **Erase now…**
- To print a double sided rewritable card, simply select the **Colour format** to **Monochrome (K Only)** for the front and back of the card.

User-defined area for erasure (over the card's signature strip in this example). **(a)**

Co-ordinates specifying the physical size of the user-defined area. **(b)**

Co-ordinates specifying the physical location of the user-defined area on the card's surface. **(c)**



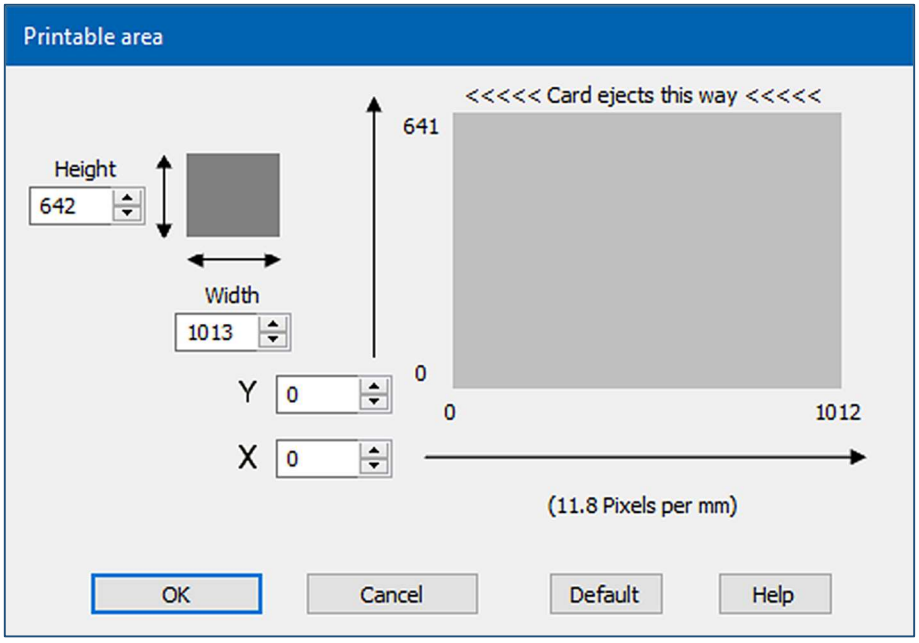
d. Erase Power Adjustment

This adjusts the strength of the erase operation by varying the temperature of the printhead to a greater or lesser degree (the user can set the value over the range 0 – 100 where 100 being the highest (default – 50).

2. Printable Area

This option allows the user to select a specific area within an existing card design for printing. The physical size of the area being defined by its pixel height and width and its position within the image defined using x,y co-ordinates within the card's total printable area.

When selected, the printer will only print the details within the defined area (the remainder of the card design will remain blank).



3. Disable Status Polling

When selected, the driver will no longer poll the printer for its status, dye film type, etc. This should be selected if connecting via terminal services to prevent polled status requests from filling the print queue (Default option not selected).

NOTE: Do not select unless you are using the Remote Desktop Connection via terminal services as this will disable some of the automatic configuration features.

4. Application Determines Orientation

When selected, the application being used to print the card determines the orientation of the printed image (Portrait or Landscape).

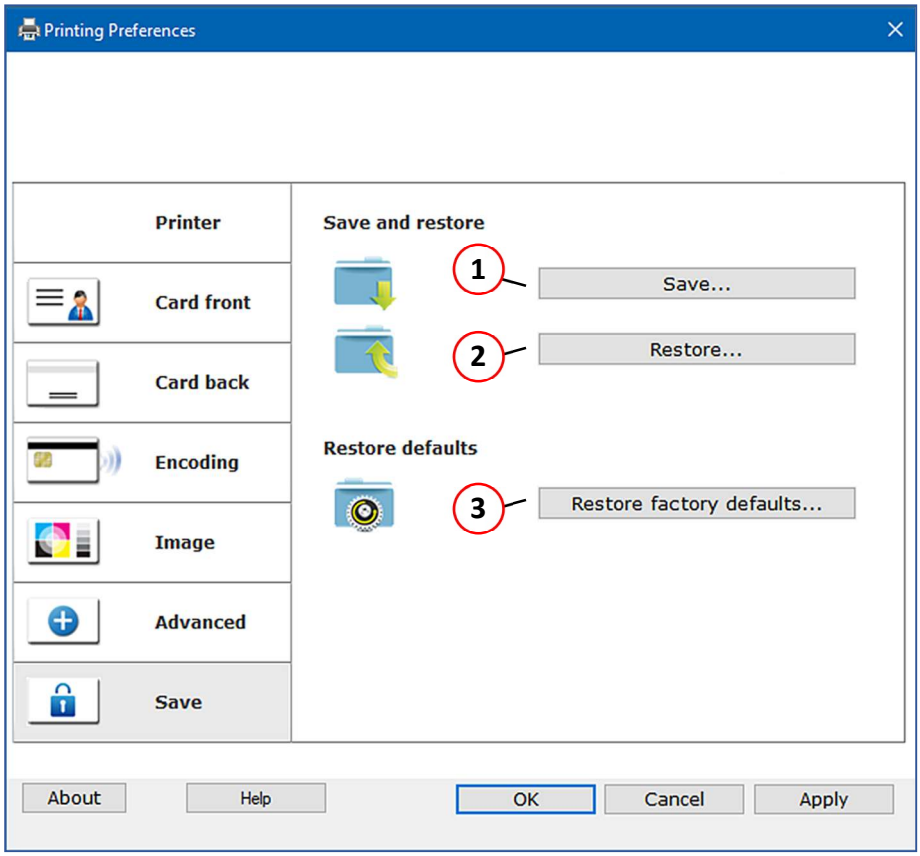
5. Resin Print Speed

This function gives the user the option of setting the speed at which the black resin panel is printed on 360 based printers.

It is recommended to choose the 'Low' option if using MA1000K Scratch film or if image defects occur in resin images.

Save

The Save & Restore Tab can be used to save your driver settings to a file, restore the settings from a file, or restore the settings to the original defaults.



1. **Save…**
   Saves current driver settings to a user specific file.

2. **Restore…**
   Restores previously user-saved driver settings to the current driver.

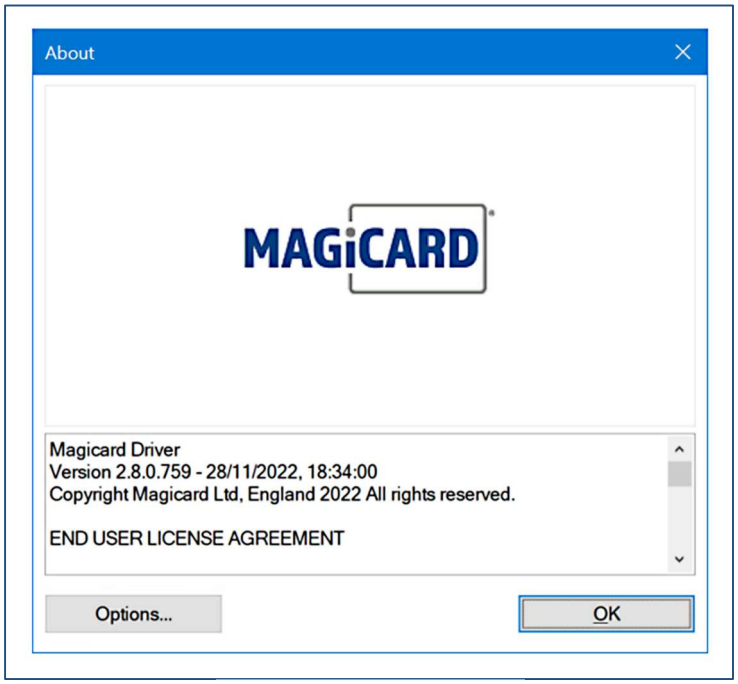
3. **Restore Factory Defaults…**
   Restores the installed driver settings to the ‘Factory Default’ settings (set at the time of manufacture).

   If the driver settings are changed, it is recommended that any new settings are saved to an independent file.
   This will allow the user to backup and restore the driver settings if:

   - The driver is updated.
   - The driver settings are changed.
   - The driver needs to re-installed.
   - The driver settings need to ne migrated to a different PC.
   - Specific driver settings have been created for specific user applications.

The 'About' Dialogue

Selecting the 'About' button in the 'Printing Preferences' window displays the 'End User License Agreement' (EULA) but has been updated in driver version 2.8.0 to allow the user to more easily select the options for downloading the printer firmware and gathering usage statistics.
The 'About' dialogue now includes a button named **Options…**

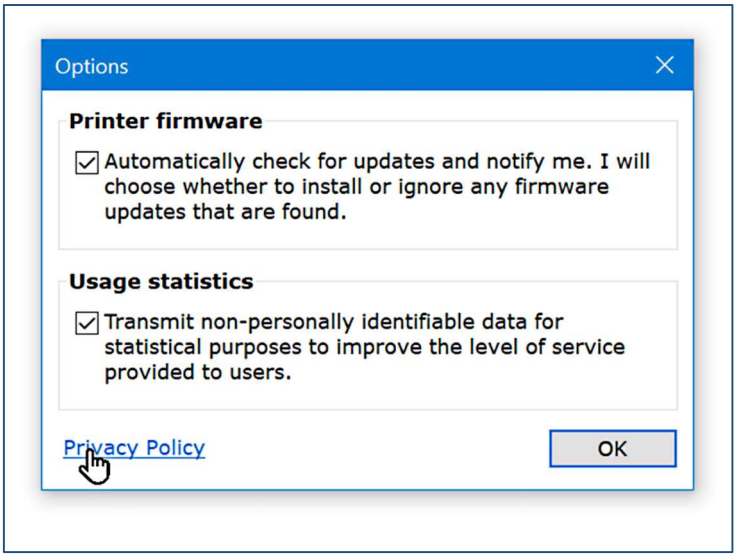


The 'About' Dialogue

Selecting the 'Options…' button presents the 'Options' dialogue showing two sections:

1. **Printer Firmware**
   When this option is selected, the user is presented with the option to upgrade the printer firmware.

2. **Usage Statistics**
   With this option selected, non-personally identifiable data is gathered and sent to Magicard for Statistical analysis.



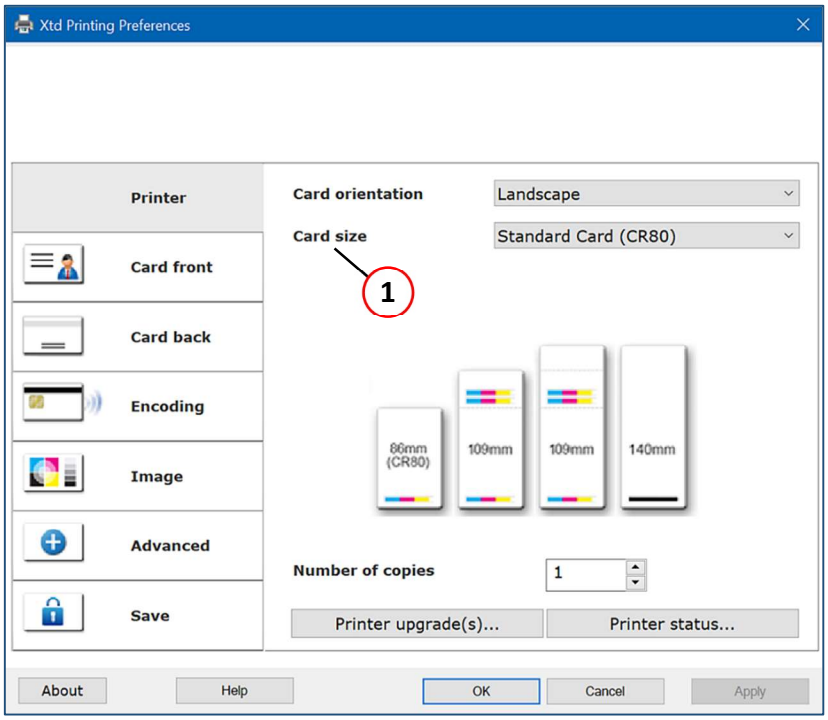
The Options Settings

APPENDIX

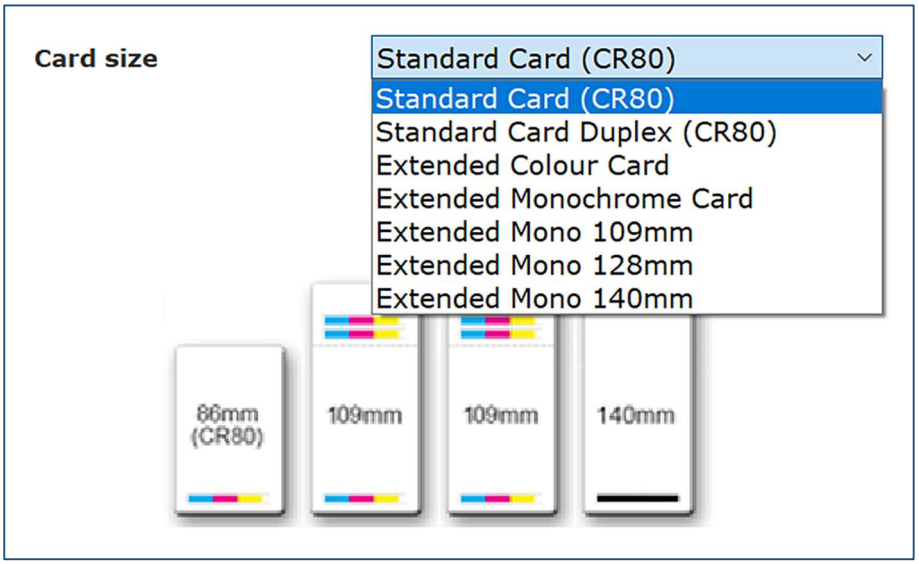
Driver Variations (By Model Type)

Extended Cards

Some printer models are designed to use cards of sizes other than CR79/80 and are intended for specific applications.
Card lengths can vary from the standard CR80 (85.6 x 53.98 mm) to 140 mm.
Card widths can be either 50 or 54 mm (54 mm being the standard width).
NOTE: Not all printer models are designed to accommodate extended cards.



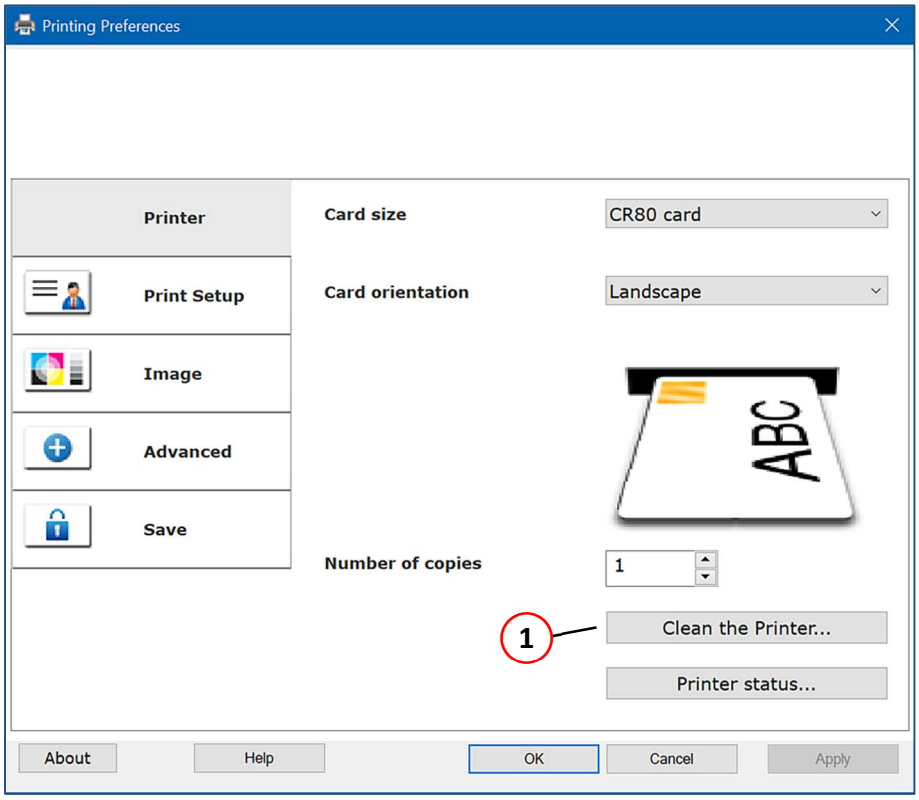
Printer Tab – Extended Cards



Driver Options – Extended Cards

Hand-Fed Models

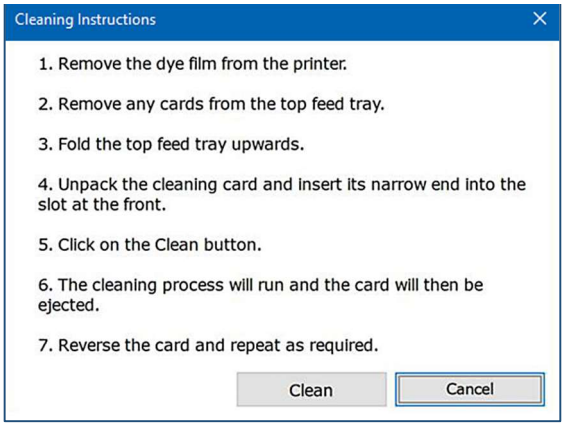
The hand-fed printer models are generally entry level machines and whilst similar, will not have the full range of driver user options found in the professional series printers. (**For clarity, only the driver differences will be shown**).



Printer Tab (Hand-Fed models only)

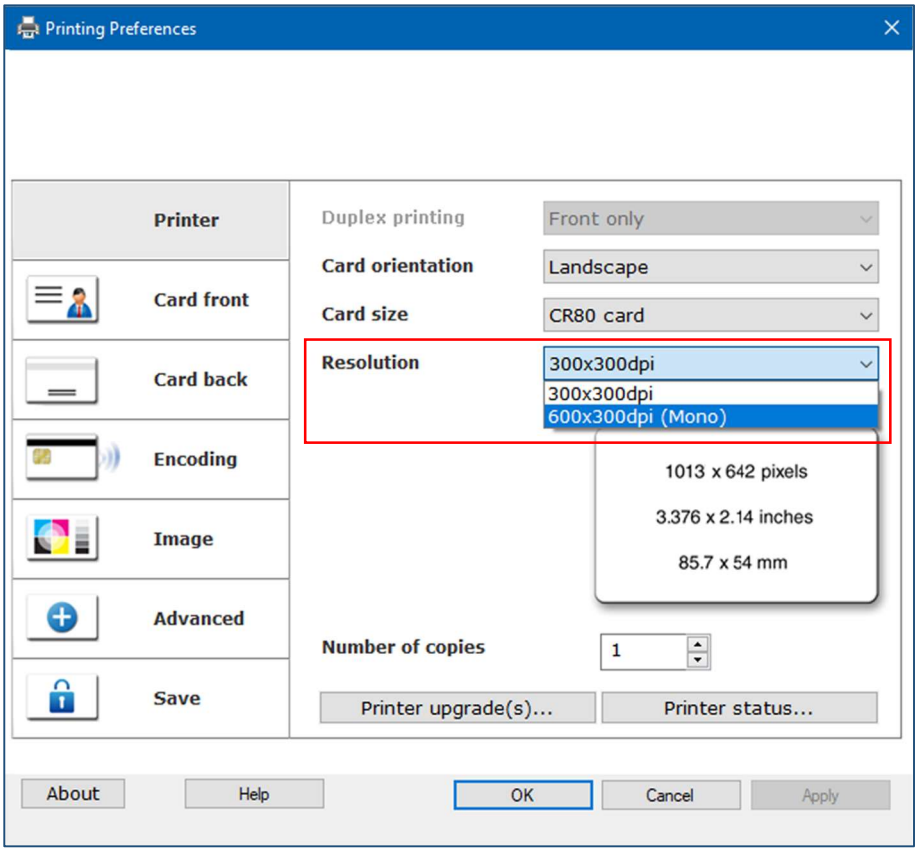
1. Clean the Printer…

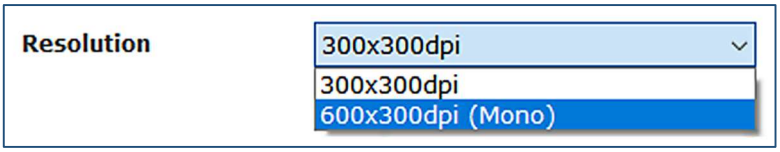
Cleaning the hand-fed printers is managed using a different procedure to the auto-feed machines as there is no front panel display fitted (and hence, no menu options available to the user).
Selecting the 'Clean the Pinter…' option in the Printer tab will open a second window displaying instructions to the user (please refer to the Cleaning Instructions window (below) for further details).
NOTE: The user will need an approved Cleaning Card ready before commencing the actual cleaning process.



600 dpi Print Resolution (600 Model Only)

An additional feature found only on the model 600 printer is the ability to print with a resolution of 300 x 600 dpi (dots per inch). This feature only applies to monochrome printing (colour being unaffected). Higher resolution monochrome printing enables the user to print finer details in applications such as barcodes etc.

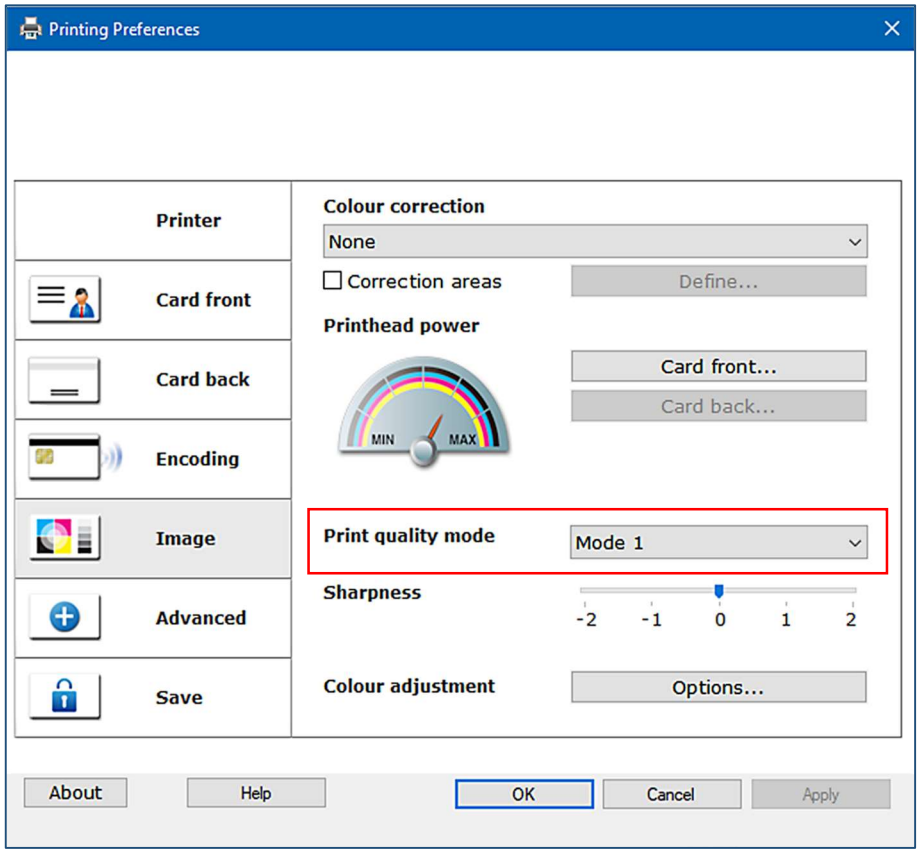




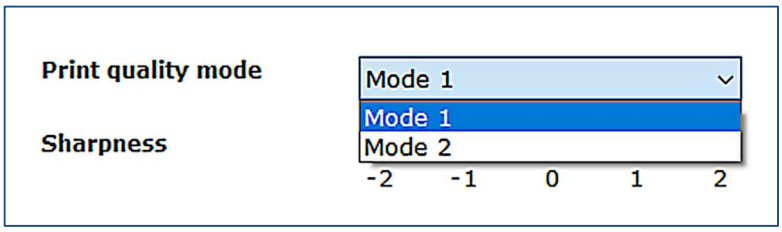
Increased Printing Resolution in Monochrome

Print Quality Mode (D and K Models Only)

The D and K printer models have an additional Print Quality Mode feature in the printer driver. This feature is only available on the D and K model printers.



Print Quality Mode (D and K models only)



Print Quality modes

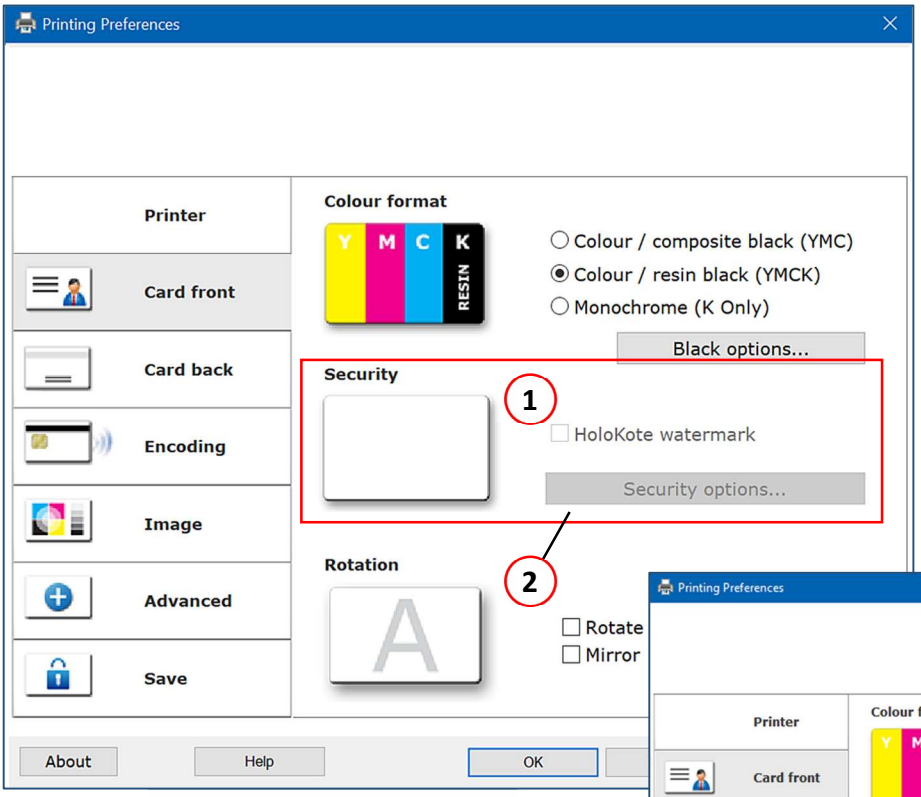
Print Quality Modes

This feature gives the user the option of printing in two modes: (1 and 2). Each mode determines the speed at which the card is printed (and therefore, the time the card actually passes under the printhead). Generally, the slower the card feed speed, the slightly higher the quality of the final printed image on the card.

Mode 1 selects the slightly faster print speed whereas Mode 2 selects the standard print speed. These modes give the user the option of selecting a slightly higher print quality against volume of cards printed (for a given timescale) in a production environment.

Retransfer Models

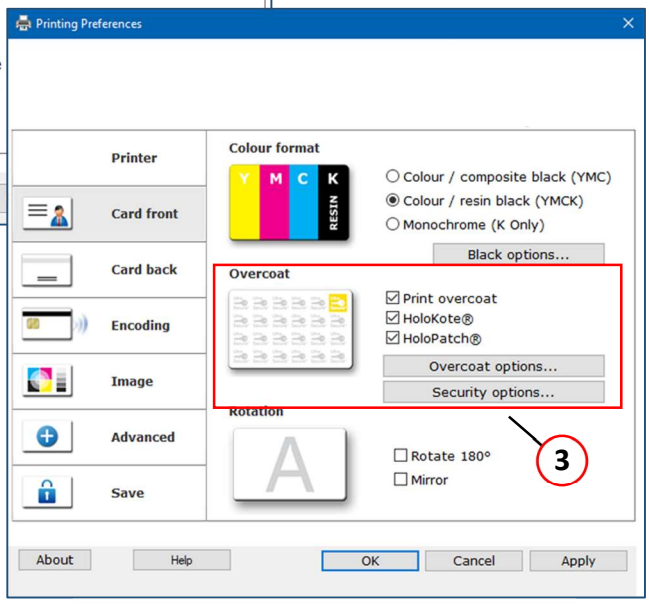
- **Card Front/Back Tab**



Retransfer – Card Front

The print process of a Retransfer printer is different to that of a standard DTC (Direct-To-Card) printer. There may also be features on a Retransfer printer not normally found on a standard printer.
For this reason, the Driver Preferences will often differ accordingly.

The Retransfer printer card front/back tabs differ from the standard DTC version in that a Security option **(1)** replaces the Overcoat option **(3)** in the standard Driver version.
The Security Options **(2)** remains similar in both cases.

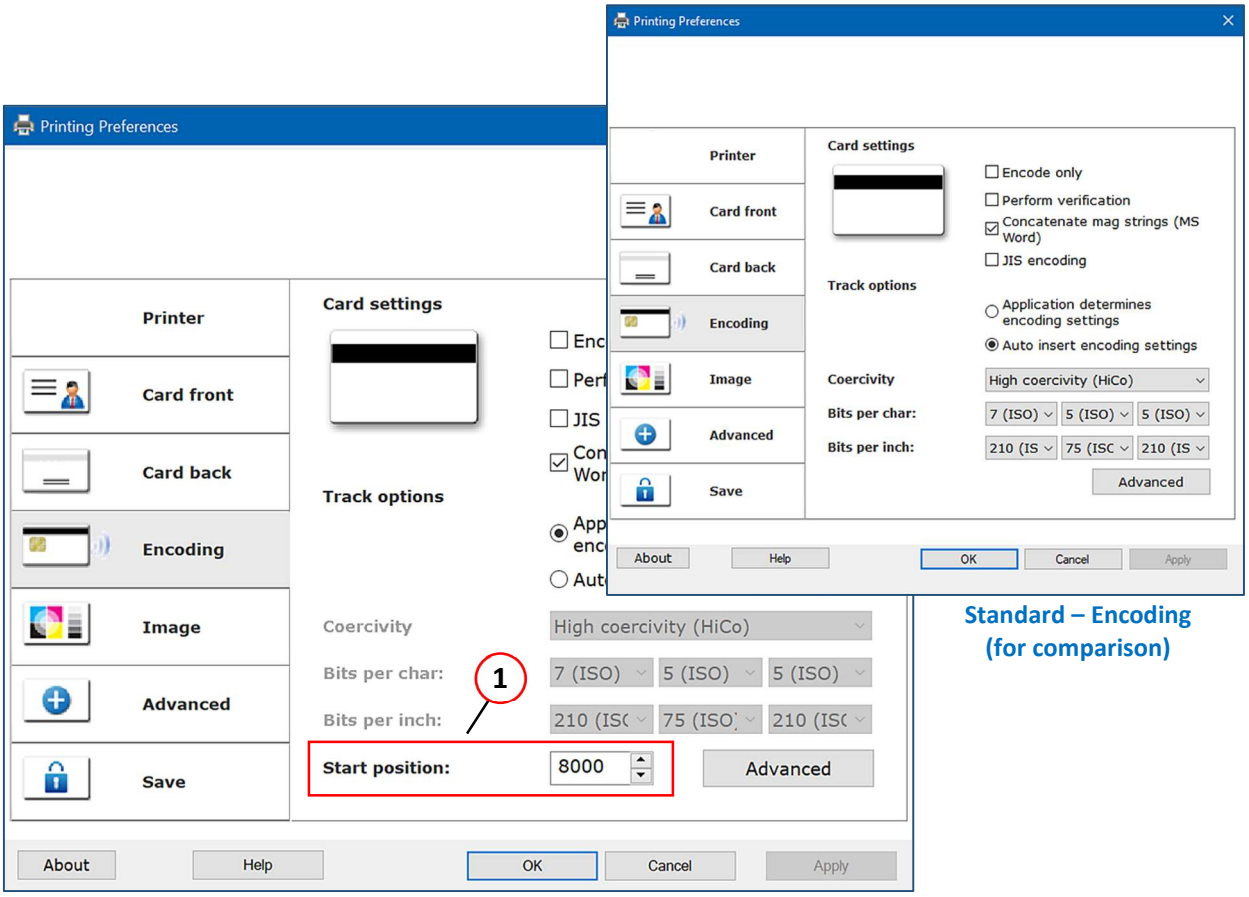


Standard – Card Front (for comparison)

• Encoding Tab

An additional feature in the Retransfer Driver is the Start Position: option **(1)**. (Please refer to the following page for further details).

This allows the user to set the start position for encoding the magnetic stripe on the card. This in turn, allows for greater precision when magnetic encoding and reduces the likelihood of errors. This setting is measured in microns with a default value of 8000 (1 millimetre equals 1000 microns).

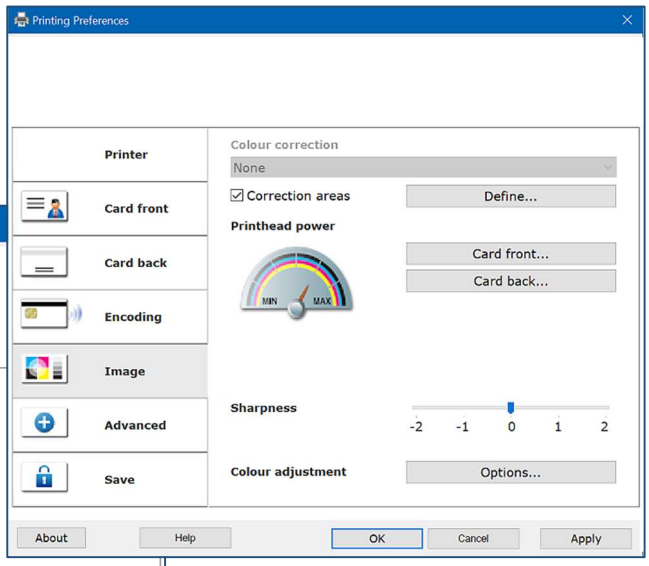


Retransfer – Encoding

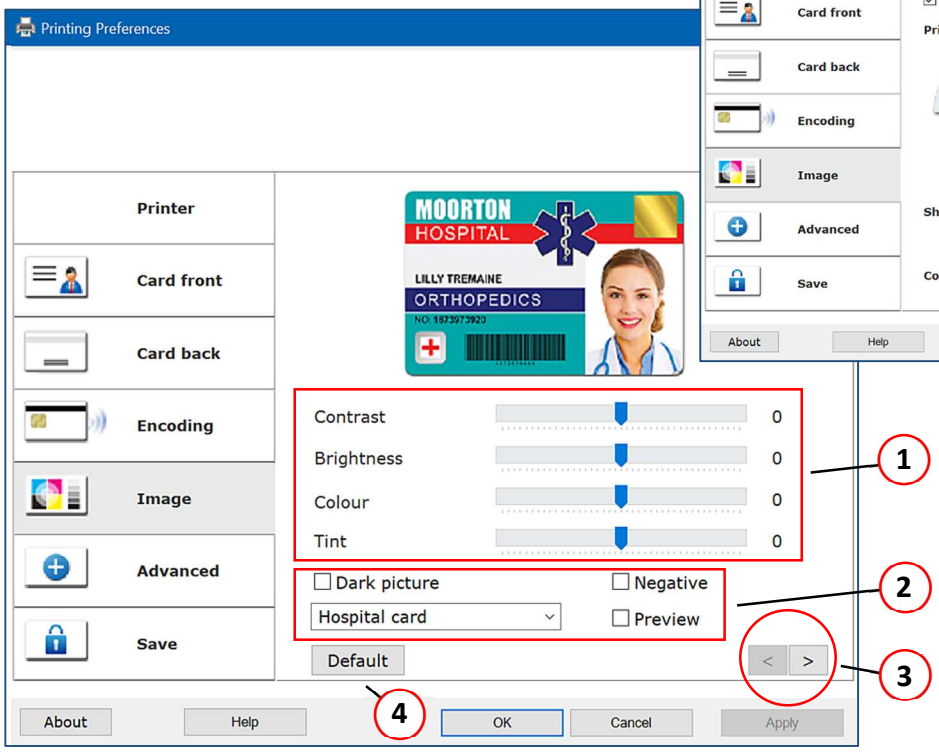
Standard – Encoding (for comparison)

• Image Tab

The Image Tab in the Retransfer Driver appears slightly different to that of the standard (DTC) version.



Standard – Image (for comparison)



Retransfer – Image

Using the four slider controls (**Contrast**, **Brightness**, **Colour** and **Tint**) **(1)**, the user is able to control the way the card will appear when printed. As changes are made, these changes are reflected (in real-time) in the card image shown in the Image tab window.
NOTE: These changes are representative only as the final printed image will ultimately depend on many factors such as the printer itself and also the dye film and card type used. For this reason, it is recommended to try a combination of various settings to achieve the desired result.

(2) **Dark Picture**: This option lightens a previously dark image prior to printing using pre-determined settings which are not user editable.

Negative: This option displays a photographic negative type card image which can be enhanced.

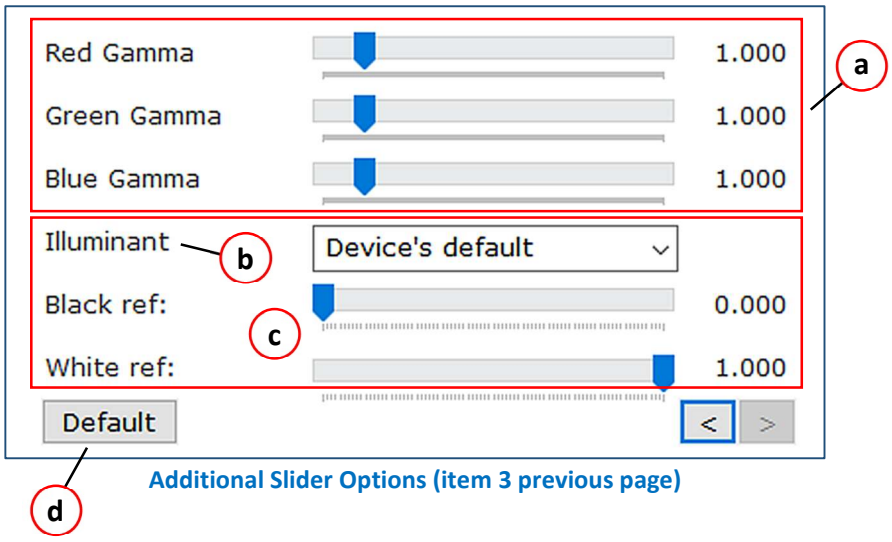
Drop-down Menu: This option provides the user with three example templates if required (Hospital Card, Airport Card, and Custom. (Selecting the Custom option allows the user to browse to a saved custom card design).

(3) Selecting the right-arrow option (**>**) displays an additional group of slider adjustments. These are used to set colour Gamma and Reference values – Please refer to the following page for details.

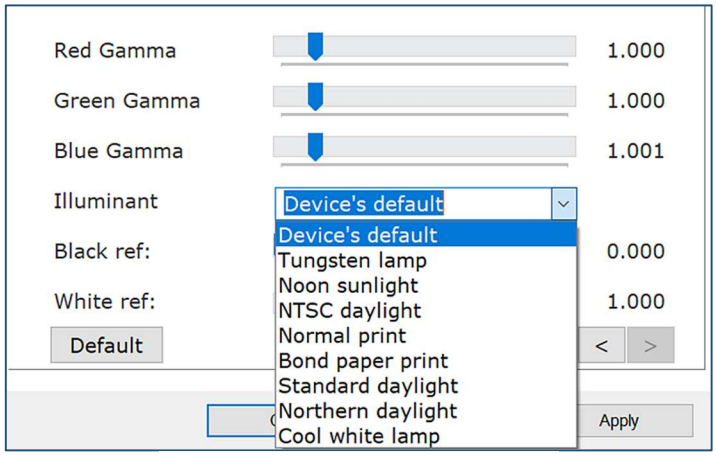
Image Tab (Cont…)

(a) Gamma Settings:
The Gamma settings remove the red, green and blue component from an RGB image.

(b) Illuminant:
The Illuminant setting applies a pre-defined colour profile to the card image and is designed to simulate everyday lighting conditions (please see below for further details).
These settings operate in a similar way to those shown on page 20.



Additional Slider Options (item 3 previous page)



Illuminant Settings Options

(c) Black/White Reference:
The Black and White reference option lightens or darkens the card image respectively.

(d) Default:
Applying the Default option will return all settings to their Factory defaults.