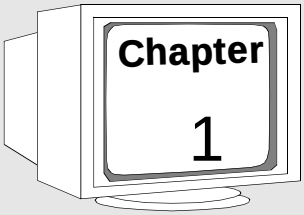
Access Vision™ Imaging Plug-In 1.0 User's Guide

Windows® Software for Picture Perfect™ - Access Vision

Part Number: 460414001 Rev. A
August 1999

This publication may contain examples of screens and reports used in daily operations. Examples include fictitious names of individuals and companies. Any similarity to names and addresses of actual business enterprises and persons is entirely coincidental.

Contents



Introduction

Purpose

This User's Guide provides information for system administrators to setup, configure, and use the **Imaging** system. This User's Guide is intended to complement the online Help but not duplicate the information.

Scope

Welcome to **Access Vision Imaging 1.0**! The primary function of this option is to:

- Create photo badge designs.
- Import graphics as card backgrounds and personalize your designs.
- Link your designs to badgeholder information, signatures, and images stored in the database.
- Add barcodes or encode magnetic stripes.

Here are some additional options and configurations you should know about:

- Can run on computers with Windows NT 4.0 (Service Pack 4) or Windows 98 Second Edition operating system.
- Windows NT operating system requires:
  - A processor equal to or better than a PII 200.
  - 128 megabytes of RAM.
  - 4 Gb hard drive.
- Windows 98 Second Edition operating system requires:
  - A processor equal to or better than a PII 200.
  - At least 64 megabytes of RAM (96 MegaBytes recommended).
  - 4 Gb hard drive.

A Note for First-Time Computer Users

The first step on the road to designing identification cards is to learn how to configure and use the software. This User's Guide was written to guide you through the entire process of configuring your **Imaging** workspace and designing cards. The procedures outlined in this guide are straightforward, step-by-step instructions that users will be able to follow. We have included a glossary at the back of this guide to introduce you to the terms that are associated with using this **Imaging** software and digital imaging. This same glossary, and most of these instructions— as well as extensive reference material— are also available online, through the application's Help menu.

Related Documentation

For more information, refer to the following:

IMAGING ONLINE HELP SYSTEM

The online help system provides reference information, such as screen and field descriptions, using the Windows controls.

ACCESS VISION USER'S GUIDE

This User's Guide provides information for operators of the **Access Vision** system. It covers aspects of the system they are likely to encounter during normal operations.

ACCESS VISION/ACCESS VISION IMAGING INSTALLATION GUIDE

This Installation Guide provides information for installation of **Access Vision** and **Access Vision Imaging**.

MICROSOFT

We recommend that you investigate the wide range of information available from Microsoft covering such topics as Windows NT Workstation (NTWS) 4.0, Windows 98 Second Edition, and networking. This information is conveyed in both printed and electronic format.

Notational and Typographical Conventions

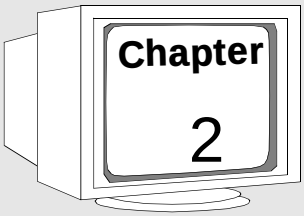
This User's Guide uses certain notational and typographical conventions to make it easier for you to identify important information.

Table 1-1: Notational and Typographical Conventions

Item	Example
Menu Titles, Menu Items, Field Names, Form Titles	***Administration***
Keys	Enter
Buttons	*OK*
Text you enter	To reduce the confusion between similar numbers and letters, namely, the number **1** and the lowercase letter **l** along with the number **0** and the letter **O**, refer to the following list. **1234567890** **ABCDEFGHIJKLMNOPQRSTUVWXYZ** **abcdefghijklmnopqrstuvwxyz**

Table 1-1: Notational and Typographical Conventions (Continued)

Item	Example
Notes	Provides additional information. The following graphic is displayed on the left side of the page: 
Warnings	Provides information you MUST know before continuing. The following graphic is displayed on the left side of the page: 



Imaging Installation and Removal

Introduction

Access Vision Imaging allows the capturing and printing of photo identification badges. This outline provides the information needed for system administrators to setup this option. For information about controlling permissions to **Imaging** functions, refer to *Chapter 10 - Permissions*.

ä **To add Access Vision Imaging:**

1. Install the capture card (optional).
2. Install the print driver.
3. Install signature pad drivers.
4. Install the **Imaging** software
5. Install the software license key.
6. Setup cameras and lighting (optional).

Install the Capture Card

Depending on the camera you are using, you may need to install a capture card into the computer. (TWAIN devices do not require a capture card.) Currently, **Access Vision** supports the IntegralFlash Point 128 Model 3075. Refer to the CASI-RUSCO document *INTEGRAL FLASH POINT INSTALLATION PROCEDURES* shipped with your Flash Point capture card. Once the board and its video drivers are loaded, don't forget to load the Video for Windows capture drivers (Windows 98) or TWAIN (Windows NT) as detailed in the *INTEGRAL FLASH POINT INSTALLATION PROCEDURES* document.

Install the Print Drivers

The **Access Vision** system requires the installation of print drivers into the computer. Currently, **Access Vision** supports the DataCard ImageCard Express printer, the DataCard ImageCard III, the MagiCard Turbo, and the Fargo 4250 on Windows 98 and Windows NT. Refer to the instructions shipped with your printer.

Install the Signature Pad Drivers

Depending on the signature pad you are using, you may need to install additional TWAIN or WINTAB drivers to make them compatible with **Imaging**. Currently, **Access Vision Imaging** supports the Penware, Topaz, and IPen Pro signature pads. After installing the pad, install a TWAIN or WINTAB driver for the pad.

ä **To install the driver:**

1. Insert the **Access Vision** CD into the CD-ROM drive.

2. Using Windows Explorer, navigate to the Signature Pads folder.

3. Locate the folder under Signature Pads that is for the brand, model, and operating system you are using.

4. The folder should have a **`setup.exe`** program that will install the driver. Double-click on **`setup.exe`** to install the driver.

5. Follow any instructions on the installation script.

Install the Imaging Software

The **Imaging** package allows you to create badge designs, print badges, and capture signatures and images. This feature is controlled by the **Imaging** license.

NOTE

You MUST have **Access Vision** installed and working before you proceed. If you have not installed **Access Vision**, do so now and then return to this document.

Server Installation

ä **To install the Imaging software on the server:**

If **Imaging** server was not installed, rerun **Access Vision** server installation now. When asked, answer **Yes** to installing **Imaging**. Then return to this document.

Client Installation

ä **To install Imaging with *AutoPlay* enabled:**

1. Place the **Access Vision** CD into your CD-ROM drive.

   Result: The installation process will automatically start.

2. Select ***Install Imaging***.

3. Provide the appropriate answers to the prompts and click on *NEXT* to continue.

4. Refer to *Chapter 3 - Licensing* for information about obtaining a license key.

ä **To install Imaging; *AutoPlay* is NOT enabled:**

1. Click on *START*, then ***Run***.

2. From the ***Run*** window, click on *BROWSE*.

3. In the ***Look In*** field, select your CD drive and then select:

   \Imaging\Disk1\Setup.exe

4. Click on *OPEN*.

5. In the ***Run*** window, click on *OK*.

6. Provide the appropriate answers to the prompts and click on *NEXT* to continue.

7. Refer to *Chapter 3 - Licensing* for information about obtaining a license key.

Set Up Cameras and Lighting

The **Access Vision Imaging** system requires cameras and lighting. Refer to *Appendix B - Lighting Devices and Usage* for useful information on camera and lighting setup.

Removing Imaging Software

ä **To uninstall Imaging software:**

1. From the ***Start*** menu, select ***Settings***, then ***Control Panel***.

2. From the ***Control Panel***, double-click ***Add/Remove Programs***.

3. On the ***Add/Remove Program Properties*** page, select ***EPISUITE SDK Redistribution***.

4. Click the *ADD/REMOVE* button.

5. Answer **Yes** when asked to delete DLLs that are no longer needed.

   Result: It will ask you to reboot your system. Do NOT reboot at this time.

6. On the ***Add/Remove Program Properties*** page, select ***Access Vision Imaging 1.0***.

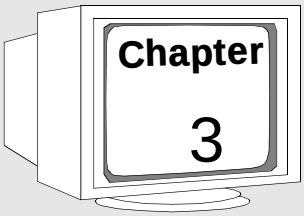
7. Click the *ADD/REMOVE* button.

8. Answer **Yes** when asked to delete DLLs that are no longer needed.

9. Click *OK* on the ***Add/Remove Program Properties*** page.

10. Reboot your computer at this time.

NOTES



Licensing

Introduction

You must purchase one client license per usage of the **Imaging** to enable the badge design, image capture, and badge printing functions.

Obtaining a License

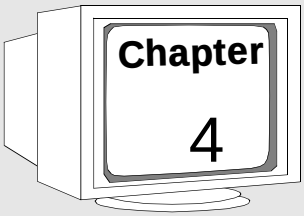
WARNING!

Each workstation where badge design or badge printing is to be performed must have its own license.

For complete details regarding licensing, refer to your *ACCESS VISION/ACCESS VISION IMAGING INSTALLATION GUIDE*.

We recommend that you store your license agreement number in a safe place, so that if the license key is ever destroyed or corrupted, you can re-install without having to contact CASI-RUSCO.

NOTES



Images

Introduction

Once the **Access Vision Imaging** is installed, you can capture, import, and view photographs and signatures from a variety of sources including digital cameras, video cameras, and signature pads. Refer to *Appendix A - Tested Input Devices*.

Selecting an Input Device

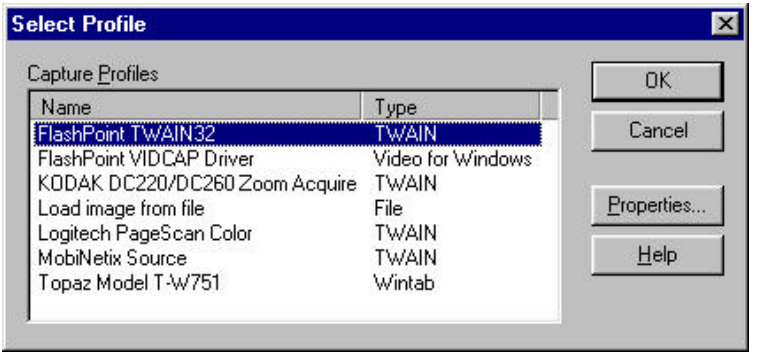
Follow the instructions provided by the device manufacturer for installing an input device. **Access Vision Imaging** can use any device that has a TWAIN, WINTAB, or Video for Windows (VFW) driver installed. The ***Load from file*** option is always available for both photos and signatures.

ä **By default, the input device loads from a file. To switch the input device to a camera or signature pad:**

1. Click the *SEARCH* button and select a record. From the ***Main*** menu, select ***Images***.

2. Select ***Input Device***, then ***Photograph***.

   Result: This will bring up a dialog that lists all available input devices available on your PC.

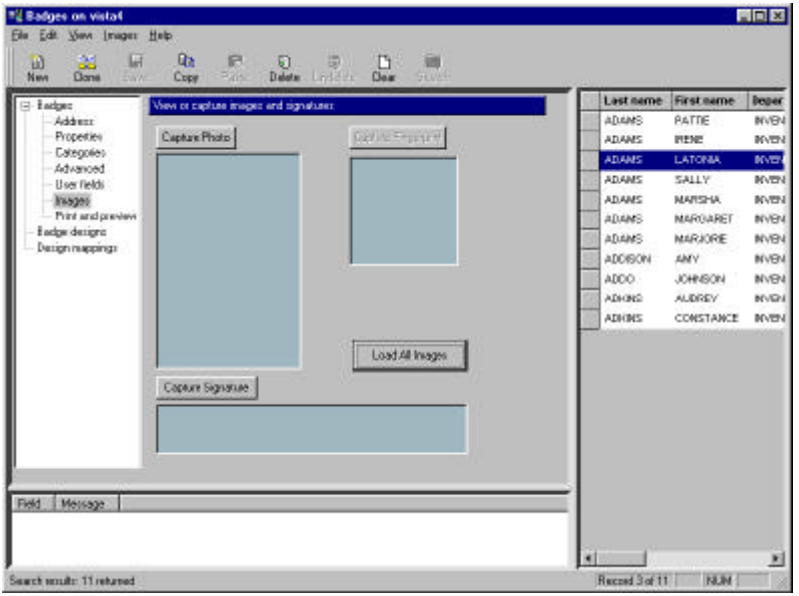


3. Select the input device you will be using and click *OK*. The next time you capture a photo, the program will use the input device you selected.

4. Repeat these steps to set up an input device for signature pads. The program will recognize a separate input device for photos and signatures.

Capturing a New Image

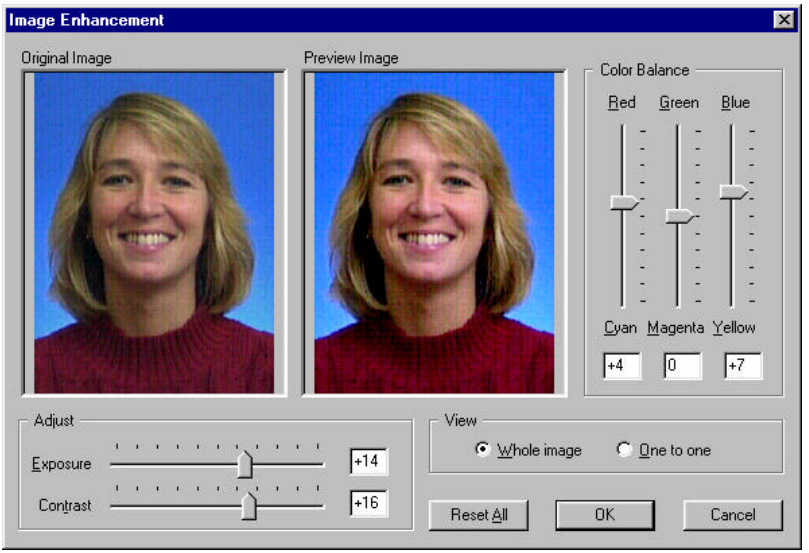
ä **Select one of the records in the *Record List*. To capture a new image for this record:**



1. Click on the *CAPTURE PHOTO* or *CAPTURE SIGNATURE* button to capture a new image.

   Result: Based on the input device selected, the proper interface will come up for capturing or loading a new image.

2. When the new image is captured, the ***Image Enhancement*** dialog box will appear.



Result: The dialog screen that appears will allow you to crop and enhance the newly-captured image.

3. Click *OK* when you are satisfied with the image.

Displaying Existing Images

During normal operations, images are not downloaded from the host. In order to view an existing image for a badge record, the image(s) must be loaded to the PC.

ä **To load the images for a record, you may choose one of several options:**

1. Click the *LOAD ALL IMAGES* button.

   Result: This will download the photograph and signature for all selected records.

2. Right-click over the image area and select the ***Load*** option from the menu.

   Result: This will load only that particular image (photo or signature) for each selected record.

3. Go to the ***Images*** menu option and select ***Load***, then select either ***Photograph*** or ***Signature***.

   Result: This will load only that particular image (photo or signature) for each selected record.

NOTE

Images will not appear when multiple records are selected.

Crop and Enhance

Right-click the mouse over an image; a popup menu for the image will appear. The menu offers the option to individually ***Crop*** or ***Enhance*** the current image. These options allow you to adjust the existing image without having to recapture the image.

Compare and Restore

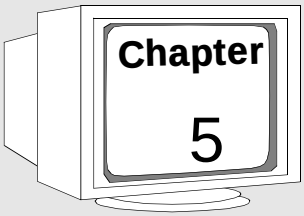
When a stored image is downloaded and a new image is captured, the ***Compare*** option will be enabled on the popup menu to compare the newly-captured or edited image to the original image. Choosing ***Restore*** will undo any changes made to the original image.

Details

The ***Details*** option provides information about the image and is available only on images that have been saved to the host.

Saving an Image

Changes to an existing image or newly-captured image are saved to the host when the user clicks the *SAVE* button.



Creating Badge Designs

Introduction

The first step in producing printed badges is to create a badge design or card layout. The badge design determines the card's background, size, and placement of objects, such as logo, photo, signature, text, or barcode fields that will be displayed on the badge, whether they are static (fixed) or dynamic (changing badge-to-badge), font type, and position on the badge. Badge designs are integrated into the **Access Vision** system, such that all printable fields from the badge record stored in the database are available to use in the badge designer, and that a specific design can be selected, at print time, based upon field values in the badge record.

Creating a New Badge Design

ä **To create a new badge design in Access Vision:**

1. Go to the ***Badge Designs*** dialog in the ***Badges*** application.

2. Click on the *NEW* button.

3. A popup dialog will ask you if you want a ***Portrait*** (vertical) or ***Landscape*** (horizontal) badge. **Access Vision Imaging** provides a default layout for a portrait and landscape orientation. Choose either ***Portrait*** or ***Landscape***. Refer to *Chapter 7 - Badge Designer* for complete instructions regarding the design function.

4. Edit and save the badge design. Refer to *Chapter 6 - Editing Badge Designs*.

5. Press the *X* button to close ***Badge Designer***.

6. Complete the ***Description*** field.

7. Click on *SAVE* in the ***Badges*** application to save the new badge design.

Cloning a Badge Design

Cloning provides a quick, convenient way to create new badge designs with the same look as another badge design. For example, this is a helpful tool if you choose to change the background color to distinguish a contractor badge from a temporary employee badge. You can safely edit the cloned design without altering the original. You do not have to redo all of the design work.

ä **To clone a badge design in Access Vision:**

1. Select **Badges** application, then ***Badge Designs.***

2. In the ***Record List,*** select the badge design that you want to clone.

3. Click on the *CLONE* button. (A new row will appear in the ***Record List***.)

4. Change the description by assigning a unique name to your new design.

5. Edit and save the badge design. Refer to *Chapter 6 - Editing Badge Designs*.

6. Exit ***Badge Designs***.

7. Click on *SAVE* in the ***Badges*** application toolbar to save the new badge design.

The Cloning feature can be used to create a series of similar badge designs based on a field value.

Example: A series of designs to use based on the personnel type or department. Refer to "Creating Design Mappings" on page 8.4 for additional information on how to map a series of badge designs to a database field value.

Importing a Badge Design

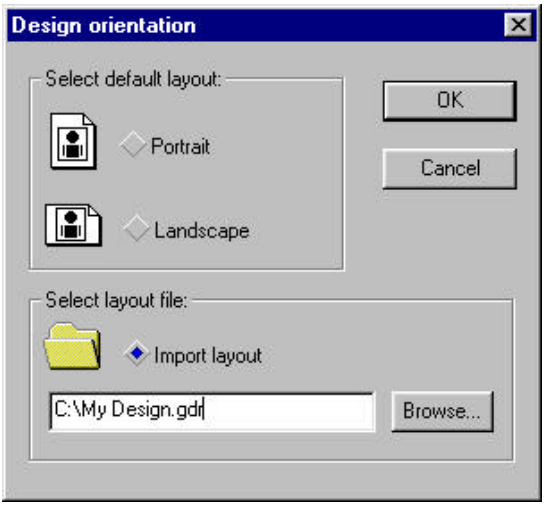
If you have an existing badge design file (with the **.gdr** extension), that is not in the **Access Vision** system, you can import that file into **Access Vision**. Doing so will enter it into the **Access Vision** system so that the badge design is available for badge printing.

ä **To import a badge design into Access Vision:**

1. Select ***Badges*** application, then ***Badge Designs***.

2. Click on the *NEW* button.

   Result: A popup dialog will appear.



3. Enable the *IMPORT LAYOUT* radio button.

4. Click on *BROWSE*.

   Result: An ***Open File*** dialog will appear.

5. Navigate to the proper directory, find and select the badge design file to import. The file must be a valid badge design file with a **.gdr** extension.

6. Click *OPEN*.

7. Click *OK* on the ***Design orientation*** dialog.

   Result: A new record has been created that will use the imported file.

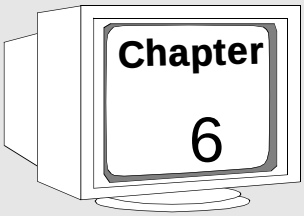
8. Edit and save the badge design. Refer to *Chapter 6 - Editing Badge Designs*.

9. Exit ***Badge Designs***.

10. Complete the ***Description*** field.

11. Click on *SAVE* in the ***Badges*** application toolbar to save the new badge design.

NOTES



Editing Badge Designs

Introduction

You can edit an existing badge design. Badge designs are integrated into the **Access Vision** system, such that all printable fields from the badge record are available to use in the badge designer, and that a design can be selected, at print time, based upon field values in the badge record.

Editing a Badge Design

ä **To edit a badge design:**

1. Go to the ***Badge Designs*** dialog and select the badge design from the ***Record List***.

2. Click on ***Edit Design***.

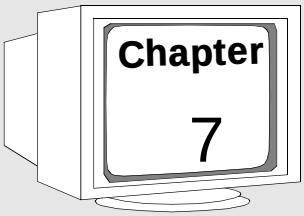
   Result: The **Badges** application is enabled. Refer to *Chapter 7 - Badge Designer* for complete details on the design function.

3. When changes are complete in ***Badge Designs***, click on *SAVE* to save the changes to the design.

4. Exit ***Badge Designs***.

5. Click *SAVE* on the ***Badges*** application toolbar.

6. Exit the ***Badges*** application.



Badge Designer

Introduction

This section covers the ***Badge Designer*** interface software and the options included in this software package.

Selecting Page Sizes

Different types of ID cards come in different sizes and these are dependent on the types of cards a printer will output. Therefore, it is very important that you select the card page size before you begin to design your card, since resizing the page can have a serious impact on the overall design. This information is stored in the card design file and is used by the application during the printing process.

ä **To select the card page size:**

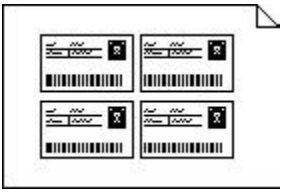
1. Make sure you setup the appropriate default printer. Refer to *Chapter 8 - Printing a Badge*.

2. From the ***File*** menu, choose the ***Page Setup*** command.

   Result: The ***Page Setup*** dialog box displays.

3. Select the required card size from the options listed in the ***Card Size*** pick list. Select any of the defaults, or select ***Custom Size*** to specify your own dimensions.

4. Select the card's orientation on the printed page as either ***Portrait*** or ***Landscape***. This affects only the orientation of the cards themselves, and is not connected to the orientation of the page.



Landscape cards on a landscape page.

Landscape cards on a portrait page.

5. Adjust the card's width and height, if desired. By modifying these settings, you are automatically resetting the card size to a custom configuration.

6. Adjust the left, right, top, and bottom page margins, if desired.

7. In the ***Cards Across*** field, indicate the number of cards that are to be printed across the page (for dossier printing purposes). In general, a landscape page will allow you to print more cards across than a portrait page, though you will not be able to print as many cards down.

8. In the ***Cards Down*** field, indicate the number of cards that are to be printed down the page (for batch printing purposes). In general, a portrait page will allow you to print more cards down than a landscape page, though you will not be able to print as many cards across.

9. Adjust the horizontal and/or vertical spacing between the cards printed on the page, if desired.

10. Check the ***Print Color and K planes separately*** option if your card printer outputs four process colors (cyan, magenta, yellow, and black) when they are specified on separate document "pages." The first page should be in CMY, and the second should be monochrome. This option merges the two pages into one, to output four-color process.

WARNING!

This feature is not supported on any of the printers supported by CASI-RUSCO. Setting this option ON will cause an extra unusable card to be printed for each side of the badge.

11. Click *OK* to confirm the card setup configuration.

Imaging Workspace

Toolbar

The toolbar is displayed across the top of the application window, below the menu bar. The toolbar provides quick mouse access to many of the ***File***, ***Edit***, ***Draw***, and ***Help*** menu commands.

The following tools are available in the **Imaging** toolbar:


New Button


Open Button


Save Button


Cut Button


Copy Button


Paste Button


Object Properties Button


Drawing Object Buttons


Print Button


Print Preview Button


About **Imaging**


Context Help Button

Drawing Object Buttons

The Drawing Object buttons provide quick mouse access to all of the commands in the ***Draw*** menu. They allow you to draw lines; rectangles; round rectangles (rectangles with rounded corners); ellipses; polygons; static text objects (text that remains the same from card to card); dynamic text objects (text that has been linked to database fields or expressions); bitmaps; image key lines (blank boxes that are linked to the application image display fields); and barcodes.

The line, rectangle, round rectangle, ellipse, and bitmap objects can be constrained to perfectly horizontal or vertical lines, or to perfect squares and circles, by holding down the Shift key while you draw.

Text Style Bar

The Text Style bar is displayed across the top of the application window, below the toolbar. The text style bar provides quick mouse access to the ***Style*** menu commands. The following tools are available in the ***Text Style*** bar:

Font Pick list

Point Size Pick list

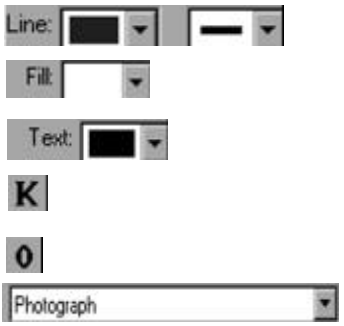
Font Style Buttons


Horizontal Justification Buttons


Vertical Justification Buttons

Attribute Bar

The Attribute bar is displayed across the top of the application window, below the text style bar. It provides quick mouse access to color settings for lines, object fills, and text.



Line Attribute Pick list

Fill Color Pick list

Text Color Pick list

K (Resin Black) Plane Button

O (Overlay) Plane Button

Static Text/Data Field Pick list

The ***Line Attribute*** pick lists determine the color and weight (thickness) of line objects and borders around drawing, text, and image objects.

The ***Fill Color*** and ***Text Color*** pick lists allow you to select colors for drawing objects (such as ellipses) and text objects.

The ***K*** and ***O*** buttons allow you to shift designated objects, such as barcodes, onto the ***K*** (resin black) Plane, or to apply protective

overlays across specific objects in your card design. For further information on ***K*** and ***O*** Plane printing, refer to "Placing Objects on the K and O Planes" on page 7.95.

The ***Static Text/Data Field*** pick list allows you to link dynamic text objects and image key lines to database fields and expressions. For instance, you could link a dynamic text object to the **First_Name** field in the database. "**First name**" will appear on your card design, in whatever font and point size you select; but it will be replaced by the cardholder's first name (in your specified font and size) when you print the ID card.

Barcode Bar

The ***Barcode*** bar is displayed across the top of the application window, below the attribute bar. It provides quick mouse access to barcode property settings. The following pick lists are available in the ***Barcode*** bar:

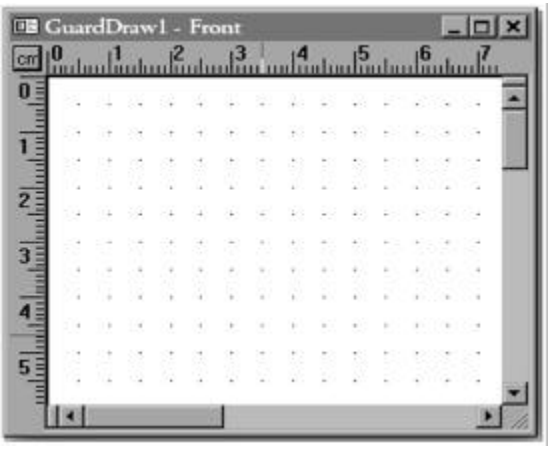
Barcode Property Pick list. Allows you to select barcode properties. By setting these properties, you have complete control over how the barcode is displayed and printed.

Barcode Value Pick list. Allows you to select values, or enter text, for barcode properties. Valid entries for this field may be found in the individual property descriptions.

For additional information, see "Adding Barcodes" on page 7.50.

Design Windows

These areas of the workspace are where you design your card templates. Whenever a new file is created, **Imaging** opens a design window for both the front and the back of the card. You do not need to keep the Back window open if you intend to design on the front of the card. You may, however, open the Back window at any time, simply by choosing the ***Back of Card*** command from the ***View*** menu.



Units of Measure Button. Units can be either inches or centimeters.

Rulers. Available both horizontally and vertically for object alignment.

Editing grid. Used for object alignment. Can be hidden from the screen.

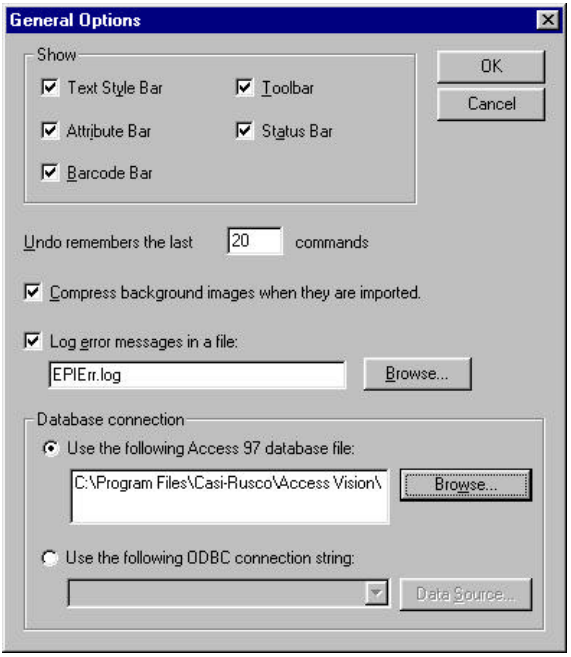
Setting Up the Imaging Workspace

You can tailor the **Imaging** workspace to suit your needs. For example, you can hide certain parts of the workspace, such as the status bar or any of the toolbars. The workspace setup you choose becomes the default setup used each time you start **Imaging**.

ä **To setup your Imaging workspace:**

1. From the ***View*** menu, choose the ***Options*** command.

   Result: The ***General Options*** dialog box displays.



2. In the ***Show*** section of the ***General Options*** dialog box, check the following options if you want them to be displayed each time you use **Imaging**:
   - ***Text Style Bar***
   - ***Toolbar***
   - ***Attribute Bar***
   - ***Status Bar***
   - ***Barcode Bar***

3. Click *OK*, or proceed to the next section for more configurations.

You can override these options at any time, while still maintaining the default setup, by choosing the ***Text Style Bar***, ***Toolbar***, ***Attribute Bar***, ***Status Bar*** and ***Barcode Bar*** from the ***View*** menu.

Specifying Undo Levels

Undo levels are the number of times that actions or commands can be reversed with the ***Undo*** command in the ***Edit*** menu. For instance, if you draw a circle on your card design, and then set the circle's line color from black to red, those actions represent two levels that can be undone. Therefore, if you invoke the ***Undo*** command twice, the first usage would revert the circle's line color from red to black, and the second ***Undo*** would delete the circle. If you undo too many levels of actions or commands, you can also reverse the ***Undo*** with the ***Redo*** command in the ***Edit*** menu.

ä **To undo an action or command:**

1. From the ***View*** menu, choose the ***Options*** command.

   Result: The ***General Options*** dialog box displays.

2. In the field entitled "***Undo remembers the last XXX commands***," enter the number of undo levels. The maximum number you can enter here is 100. The minimum is 1. The

higher the setting, the more memory **Imaging** requires to operate.

3. Click *OK*, or proceed to the next section for more configurations.

Setting the Error Logging Option

The **Imaging** program allows you to maintain a log for application errors. When the appropriate option is enabled, the system automatically logs all application errors and their corresponding messages in a flat ASCII file. It is recommended that you enable this feature, since it is useful for locating the source of any problems related to your software or hardware systems.

ä **To enable the logging option:**

1. From the ***View*** menu, choose the ***Options*** command.

   Result: The ***General Options*** dialog box displays.

2. Select the ***Log Error Messages in a File*** option.

   The default path for the error log file is **`C:\WINDOWS\EPIerr.log`**.

Use the *BROWSE* button if you are unsure of the drive/directory where the log file should be stored.

Result: When pressed, the ***Save As*** dialog box will appear, allowing you to browse through the various drives and directories that are available locally and on your network (if the workstation is on a network).

3. Click *OK*, or proceed to the next section for more configurations.

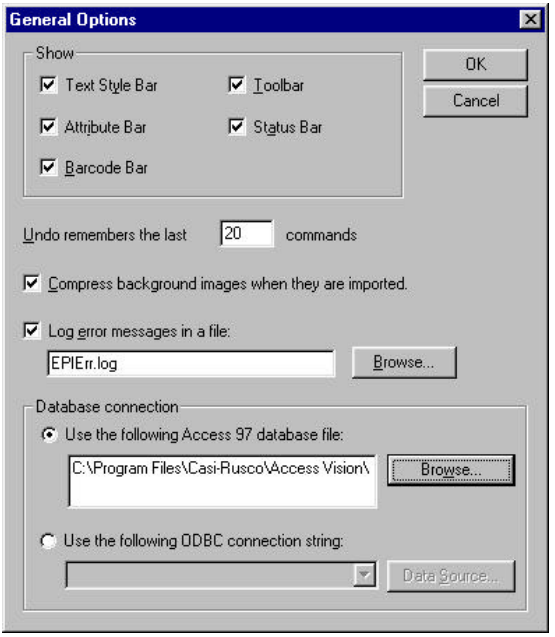
Setting Database Connections

The database connection you setup will become the default setup used each time you start **Imaging**.

ä **To setup your database connection:**

1. From the ***View*** menu, choose the ***Options*** command.

   Result: The ***General Options*** dialog box displays.



2. In the ***Database connection*** portion of the dialog box, click ***Use the following Access 97 database file***.

3. Click on the *BROWSE* button and navigate to the following folder:

   C:\Program Files
   Casi-Rusco\AccessVision
   Data Dictionary
   AccessVision_Imaging_1x0.mdb.

4. Click on *OK*.

Importing or Removing Card Background

Card backgrounds are graphics, such as bitmap images, which are created in other draw or paint programs. The background is the graphical "landscape" against which the various card design objects (such as images and text objects) are placed.

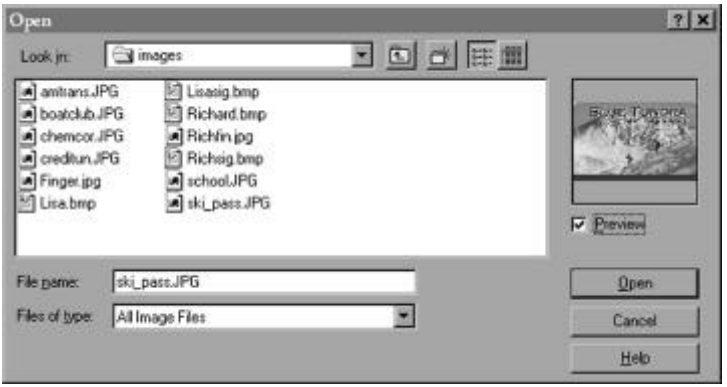
To Import the Card Background

ä **To import the card background:**

1. Make sure that you have selected the appropriate card design window (either the front or the back).

2. From the ***Edit*** menu, choose the ***Import Background*** command.

   Result: The ***Open*** dialog box displays.



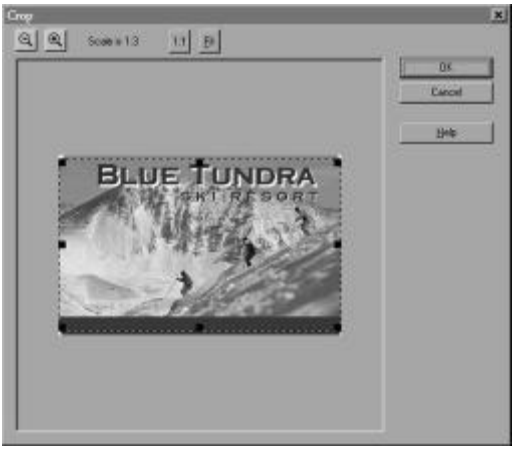
3. In the ***File name*** field, type the name, including the path and extension, of the background file you want to insert into your card design, or use the buttons to browse to your file.

4. Click *OPEN*.

   Result: The ***Crop*** dialog box will appear with your card background image displayed inside it.

5. Use the appropriate buttons on the dialog box to increase or decrease the magnification of the image.

   Use your mouse pointer to resize or move the highlighting box until you are satisfied with the appearance of your picture.



6. Click *OK*.

   Result: The card background will be placed on either the front or the back of your card design.

To Crop the Card Background

When you add a background image to the card design, it is placed in a dialog box that allows you to crop it to your taste. Once in the ***Crop*** dialog box, you will notice that a highlighting box with eight sizing handles is placed directly over the center of the image. The size of this highlighting box will change depending on your selected page size. Refer to "Selecting Page Sizes" on page 7.1.

At this point, you can either capture the portion of the image "as is," or resize the highlighting box to capture some or all of the image.

ä **To capture the whole image:**

1. Place your mouse pointer within the highlighting box's cropping area.

   Result: The pointer will change from a single arrow to a four-headed arrow. This allows you to move the cropping area across the newly-acquired image.

2. Press and hold down your left mouse button, and drag (move) the cropping area to the desired location on the background image. Release the left mouse button when you are satisfied with the new location of the highlighting box.

3. Click *OK*.

   Result: The card background will be placed on either the front or the back of your card design.

ä **To capture a portion of the image:**

1. Place your mouse pointer directly over one of the highlighting box handles.

   Result: The pointer will change from a single arrow to a two-headed arrow. This allows you to resize the cropping area.

2. Press and hold down your left mouse button, and drag (move) the handle towards the center of the cropping area.

3. When the cropping area is sized to your satisfaction, move the highlighting box so that it covers the portion of the image that you want to capture.

4. Click *OK*.

   Result: The card background will be placed on either the front or the back of your card design.

To Remove the Card Background

ä **To remove the card background:**

1. Make sure that you have selected the appropriate card design editing window (either the front or the back).

2. Choose the ***Remove Background*** command from the ***Edit*** menu.

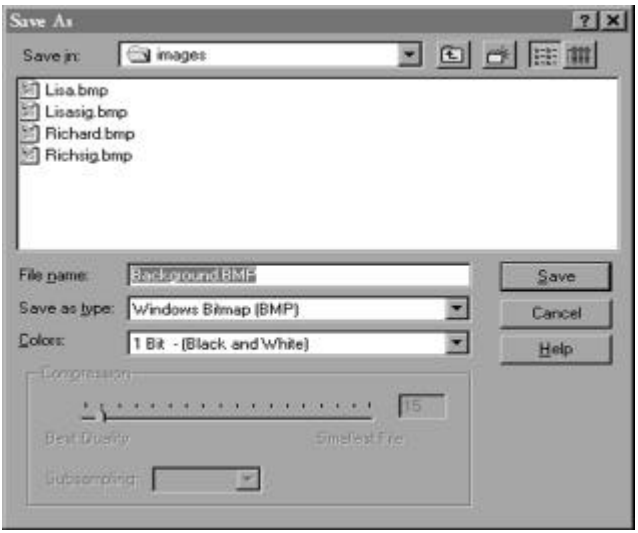
3. The system will ask: "***Are you sure you want to remove the background image from the front/back of the card?***" Choose ***Yes*** to remove the card background image. Choose ***No*** to cancel.

To Export the Card Background

ä **To export the card background:**

From the ***Edit*** menu, choose the ***Export Background*** command.

Result: The ***Save As*** dialog box will be displayed so you can name your image, define the file type, and specify the directory to which it will be saved.



Drawing Shapes

Imaging comes complete with an extensive selection of tools that allows you to design cards with ease. Use lines, squares, circles, rectangles, ellipses, and polygons to spice up your illustration, or to create security clearance symbols for easy identification of unauthorized persons.

Lines

ä **To draw a line:**

Line Button

1. Click on the *LINE* button in the ***Toolbar***, or choose the ***Line*** command from the ***Draw*** menu.

2. Move the mouse pointer onto the editing screen.

3. Press and hold down the left mouse button to anchor one end of the line, and then drag the pointer.

   Result: A flexible line stretches from the anchor point to the new pointer position.

4. When you are satisfied with the line, release the left mouse button.

ä **To edit a line:**

1. Select the line.

   Result: Handles will appear at either end of the line.

2. Position the mouse pointer over one of the handles, then press and hold down the left mouse button.

3. Drag the pointer to a new position on the editing screen.

4. When you are satisfied with the line, release the left mouse button.

Rectangles

ä **To draw a rectangle:**

Rectangle Button

1. Click on the *RECTANGLE* button in the ***Toolbar***, or choose the ***Rectangle*** command from the ***Draw*** menu.

2. Move the mouse pointer onto the editing screen.

3. Press the left mouse button to anchor one corner of a flexible rectangle, and then drag the pointer. The flexible rectangle stretches from the anchor point to the new pointer position.

4. When you are satisfied with the rectangle's size and shape, release the left mouse button.

ä **To edit a rectangle:**

1. Select the rectangle.

   Result: Handles will appear on each side and corner of the object.

2. Position the mouse pointer over one of the handles, then press and hold down the left mouse button.

3. Drag the pointer to a new position on the editing screen.

4. When you are satisfied with the rectangle's new size and shape, release the left mouse button.

ä **To draw a perfect square:**

Hold down the Shift key while you draw the rectangle.

Round Rectangles

ä **To draw a round rectangle:**

Round Rectangle Button

1. Click on the *ROUND RECTANGLE* button, or choose the ***Round Rectangle*** command from the ***Draw*** menu.

2. Move the mouse pointer onto the editing screen.

3. Press the left mouse button to anchor one corner of a flexible rectangle, and then drag the pointer. The flexible rectangle stretches from the anchor point to the new pointer position.

4. When you are satisfied with the rectangle's size and shape, release the left mouse button.

ä **To edit a round rectangle:**

1. Select the round rectangle.

   Result: Handles will appear on each side and corner of the object.

2. Position the mouse pointer over one of the handles, then press and hold down the left mouse button.

3. Drag the pointer to a new position on the editing screen.

4. When you are satisfied with the rectangle's new size and shape, release the left mouse button.

ä **To edit rounded corner curvatures:**

1. Select the round rectangle.

   Result: A special handle appears inside the upper right-hand corner of the rounded rectangle.

2. Position your mouse pointer over that handle, and the pointer will change from a single-headed arrow to a four-headed arrow.

3. Hold down the left mouse button, and drag the handle toward the center of the object, to increase the curvature of the rounded corners, or away from the center of the object, to decrease the curvature.

4. When you are satisfied with the rectangle's new shape, release the left mouse button.

ä **To draw a perfect square:**

Hold down the Shift key while you draw the round rectangle.

Ellipses

ä **To draw an ellipse:**

Ellipse Button

1. Click on the *ELLIPSE* button in the ***Toolbar***, or choose the ***Ellipse*** command from the ***Draw*** menu.

2. Move the mouse pointer onto the editing screen.

3. Press the left mouse button to anchor one corner of a flexible rectangle, and then drag the pointer. The flexible ellipse stretches from the anchor point to the new pointer position.

4. When you are satisfied with the ellipse's size and shape, release the left mouse button.

ä **To edit an ellipse:**

1. Select the ellipse.

   Result: Handles will appear on each side of the object.

2. Position the mouse pointer over one of the handles, then press and hold down the left mouse button.

3. Drag the pointer to a new position on the editing screen.

4. When you are satisfied with the ellipse's new size and shape, release the left mouse button.

ä **To draw a perfect circle:**

Hold down the Shift key while you draw the ellipse.

Polygons

ä **To draw a polygon:**

Polygon Button

1. Click on the *POLYGON* button in the ***Tool bar***, or choose the ***Polygon*** command from the ***Draw*** menu.

2. Move the mouse pointer onto the editing screen.

3. Press the left mouse button to anchor one corner of a flexible polygon, and then move the pointer. A flexible line stretches from the anchor point to the new pointer position.

NOTE

Do not hold down the left mouse button during this procedure, since the Polygon tool will continue to create anchor points as you move the pointer.

4. When you reach the point where you want the line to end, press the left mouse button to create another anchor point.

5. Continue adding sides in this fashion.

6. To add the last side, double-click where you want the point to end.

ä **To edit a polygon:**

1. Select the ellipse.

   Result: Handles will appear at each anchor point you created.

2. Position the mouse pointer over one of the handles, then press and hold down the left mouse button.

3. Drag the pointer to a new position on the editing screen, and then release the left mouse button.

4. Continue editing sides in this fashion.

Adding Static and Dynamic Text

Text Button

The Text command performs two functions.

- It can create static text objects, which are used as nonchangeable design elements such as headlines or field labels (for example, "Blue Tundra").
- It can create dynamic text/data objects— objects that are connected to a data field or expression and which change from card to card (for example, the first name of the cardholder).

The dynamic text/data field options available through the ***Text*** pick list are the fields available from the ***Badges*** application in **Access Vision**.

The links between the database (or table) and your card design are created automatically. Thus, your only task is to select the font, style, pointsize, color, and location of both the data fields/expressions and text objects.

To Create Static Text Objects

ä **To create static text objects:**

1. Click on the ***Text*** button in the Toolbar, or choose the ***Text*** command from the ***Draw*** menu.

2. Click on the arrow to the right of the ***Text/Data Field*** pick list in the Attribute Bar.

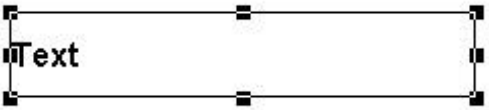
   Result: The list will expand to reveal your available text/data field options.

3. Select ***<STATIC TEXT>*** from the pick list.

4. Move your mouse pointer onto the editing screen.

   Result: The pointer will change from an arrow to a cross.

5. Press and hold down the left mouse button to anchor one end of the textbox, and then drag the pointer. A flexible box stretches from the anchor point to the new pointer position.



6. When you are satisfied with the size and location of the textbox, release the left mouse button.

7. Click on the *SELECT* button in the Toolbar, or choose the ***Select*** command from the ***Draw*** menu.

8. Double-click on the textbox, or select the text object and choose ***Object Properties*** from the ***Edit*** menu.

   Result: A ***Static Text Properties*** dialog box will appear.

9. Edit the text in the box to the text you want displayed.

10. Make whatever option selections are necessary, then choose *OK*.

11. Select the font, style, and point size by using the pick lists in the Text Style Bar, or by choosing the ***Font*** command in the ***Style*** menu.

12. Select the text color by using the ***Text Color*** pick list in the Attribute Bar, or by choosing the ***Text Color*** command in the ***Object*** menu.

13. Adjust the text justification by using the *JUSTIFY* buttons in the Text Style Bar.

14. Select the textbox line and fill colors by using the pick lists in the Attribute Bar, or by using the ***Line Color*** and ***Fill Color*** commands in the ***Object*** menu.

15. Adjust the textbox line weight by using the ***Line Weight*** pick list in the Attribute Bar.

16. Click on the horizontal and vertical justification buttons, to determine the text object's placement within the textbox.

To Create a Dynamic Text Object

ä **To create a dynamic text object:**

1. Click on the *TEXT* button in the Toolbar, or choose the ***Text*** command from the ***Draw*** menu.

2. Click on the arrow to the right of the ***Text/Data Field*** pick list in the Attribute Bar.

   Result: The list will expand to reveal your available text/data field options.

3. Select any database field or expression available.

4. Repeat steps 4 to 7 in "To Create Static Text Objects" on page 7.33.

5. Double-click on the textbox, or choose the ***Object Properties*** command from the ***Edit*** menu.

   Result: The ***Dynamic Text Properties*** dialog box will appear.

6. Make whatever option selections are necessary, then choose *OK*. Refer to ***Editing Object Properties*** for more details.

7. Repeat steps 10 to 15 in "To Create Static Text Objects" on page 7.33.

To Convert a Static Text Object to a Dynamic Text Object

ä **To convert a static text object to a dynamic text object**

1. Select the text object.

2. Click on the arrow to the right of the ***Text/Data Field*** pick list in the Attribute Bar.

   Result: The list will expand to reveal your available text/data field options.

3. Select any of the data fields available from the pick list.

Defining Expressions

Access Vision Imaging allows you to combine database fields together into one field, and combine it with static text. For example, this is used to create combined fields such as **`First_Name Last_Name`**. The advantage to creating expressions is that all formatting, colors, text size, and resizing options will apply

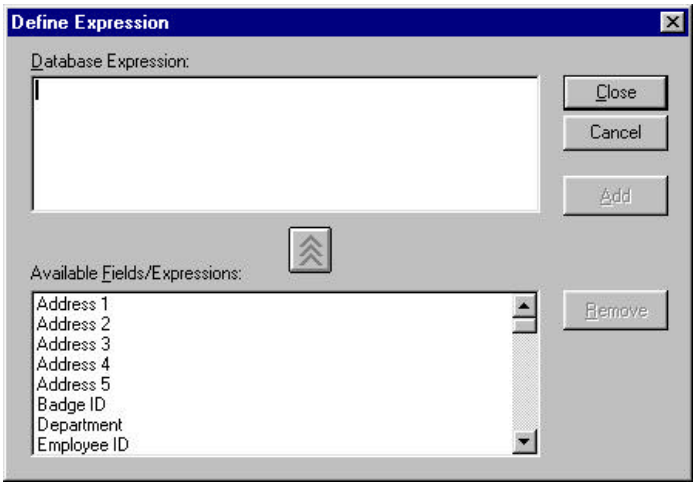
to the expression as a whole instead of individually.

To Define Expressions

ä **To define expressions:**

1. From the ***Edit*** menu, select ***Define Expression***.

   Result: A ***Define Expression*** dialog box is displayed.



2. ***Database Expression:*** contains the new expression being created. ***Available Fields/Expressions:*** contains all of the available fields from the badge record. To

combine fields, select the field from the bottom, then click the up arrow.

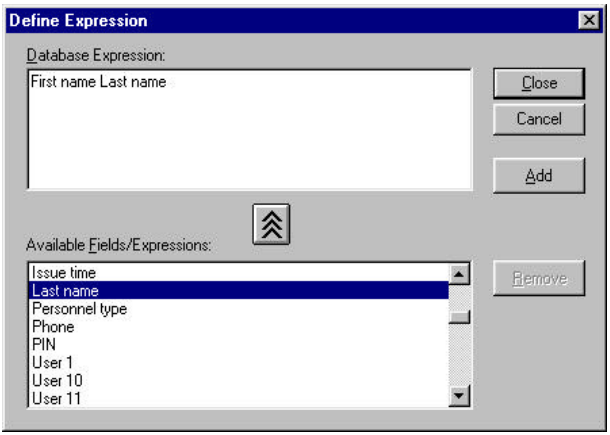
ä **Example 1:**

1. Select **First Name** and click the up arrow.

2. Select **Last Name** and click the up arrow.

3. You must add a space between the two expressions. Click between the words **Name** and **Last** in the top box and press the space bar.

   Result: The ***Database Expression:*** now reads **First Name Last Name**. This will print the first and last name together as one field. An example is shown below.



ä **Example 2:**

1. Select **Last Name** and click the up arrow.

2. Select **First Name** and click the up arrow.

3. You must add a space between the two expressions. Click between the words **Name** and **Last** in the top box and press the space bar.

   Result: The ***Database Expression:*** now reads **Last Name First Name**.

4. Click in the ***Database Expression:*** box after **Last Name**. Add a comma.

   Result: The expression now reads **Last Name, First Name**. This will print the last name followed by a comma, a space, and then the first name together as one field.

5. Once your expression has been properly defined, click *ADD*.

   Result: It is added to the list of available database fields and expressions.

6. Repeat for each expression that you want to define, click *CLOSE* when you are finished.

Explicitly Defined Expressions

By default, when translating expressions, anything that matches a defined database field name will be converted to the actual value for that field. If this is not generating the resulting expression you expect, the usage of database fields in an expression can be explicitly defined, to place the key fields in an exact location.

ä **To explicitly define an expression:**

1. From the ***Edit*** menu, select ***Define Expression***.

   Result: A ***Define Expression*** dialog box is displayed.

2. Create the expressions as outlined in the steps under "To Define Expressions" on page 7.38, or select an existing expression.

3. In the top editing box, enclose any database (or other expression) inside of square brackets **[** and **]**.

ä **Example:**

Original (implicit) expression:
`First name: First name`

Both occurrences of **`First name`** will be replaced by the cardholder's first name.

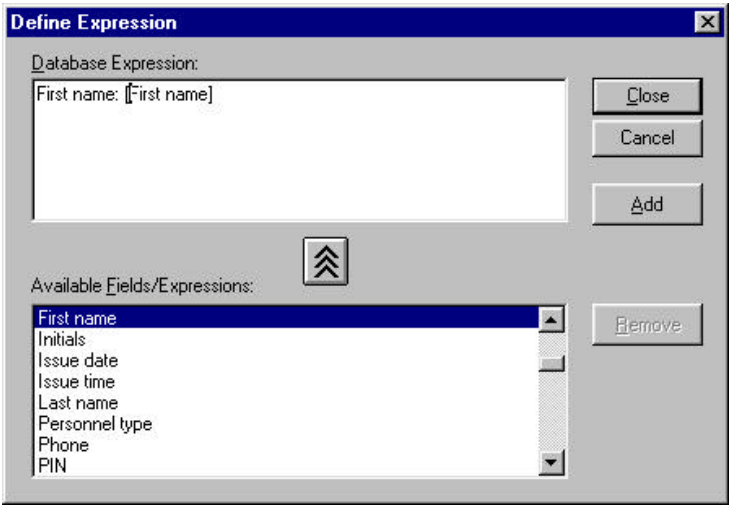
Result: **`Jack: Jack`**

Explicit expression:
First name: [First name]

Only **[First name]** will be replaced by the cardholder's first name.

Result: First name: Jack

An example dialog box is shown below.



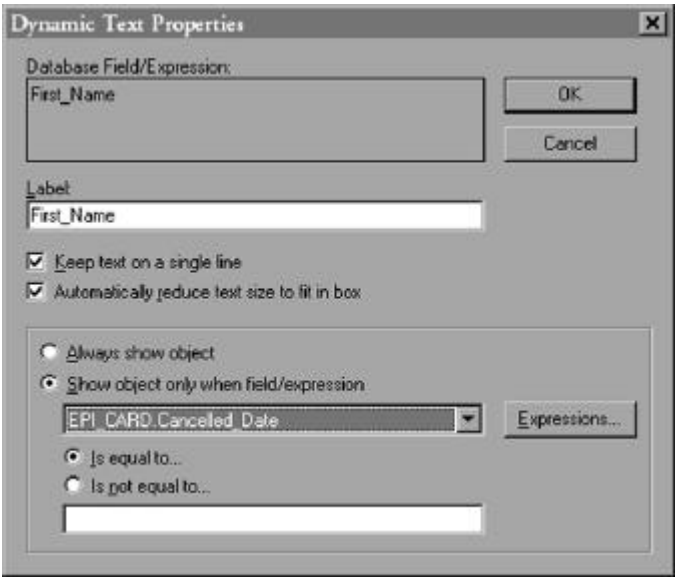
4. Once your expression has been properly defined, click *ADD*.

   Result: It is added to the list of available database fields and expressions.

5. Repeat for each expression that you want to define, click *CLOSE* when you are finished.

Using Expressions as Dynamic Text Objects

You may select any expression when creating a dynamic text object, just as you would any regular database field. Since an expression can be lengthy, you can edit the label so it more closely resembles the expression's intended purpose (for example, **Full_Name**).



Adding Images

Digital images such as photographs, fingerprints, signatures, and clip art can be added to the card design using a drawing tool. The Image tool allows you to import static image files from any external source. For photographs, signatures, and fingerprints, the DB Image tool creates a key line that indicates where the image will be printed.

Image key lines are automatically linked to the **Imaging** database. When you print cards with the **Imaging** application, the key lines are replaced by the cardholder's images. Hard-to-counterfeit "ghosts" and cameo effects can also be defined for the image key lines, thus providing an extra level of security to the cards you issue.

To Add Database Images

ä **To add database images:**

DB Image Button

1. Click on the *DB IMAGE* button in the Toolbar, or choose the ***DB Image*** command from the ***Draw*** menu.

   Result: You will notice that the default option in the ***Static Text/Data Field*** pick list has changed to **Photograph**.

2. Click on the arrow to the right of the ***Static Text/Data Field*** pick list.

   Result: The list will expand to reveal your available data field options (for example, ***Fingerprint***, ***Photograph***, or ***Signature***).

3. Select ***Photograph*** to draw a photograph keyline on the card, or select ***Signature*** to draw a signature keyline.

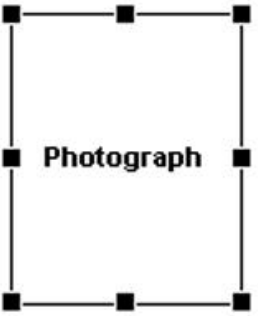
4. Move your mouse pointer onto the editing screen.

   Result: The pointer will change from an arrow to a cross.

5. Press and hold down the left mouse button to anchor one end of the image box, and then drag the pointer. A flexible box stretches from the anchor point to the new pointer position.

NOTE

Do not worry about sizing the keyline to its proper dimensions when you draw it on your card design. All keylines are automatically constrained to the aspect ratios of their respective images, as defined in the Imaging application; therefore, they will always print perfectly, no matter what size you specify for them.



6. When you are satisfied with the size and location of the image key line, release the left mouse button.

NOTE

The text color property and the text displayed inside the image box are ignored and removed when printing. You can safely change the text color in order to see it on the design.

To Create a Ghost Image

A ghost image is generally used in addition to a regular image, and can be placed anywhere on the card design—even behind text or other objects. This is considered to be an additional ID security feature, since ghosted images are extremely difficult to reproduce.

For complete details on ghost images, refer to the sections that follow and "Editing Object Properties" on page 7.76.

To Create a Cameo Effect

For complete details on removing the image background (that is, creating a cameo effect or chromakey), refer to the sections that follow and "Editing Object Properties" on page 7.76.

To Add Images

Image Button

Image objects are similar to card backgrounds, except that they can be placed on your card design in much the same way as objects, such as barcodes and static or dynamic text.

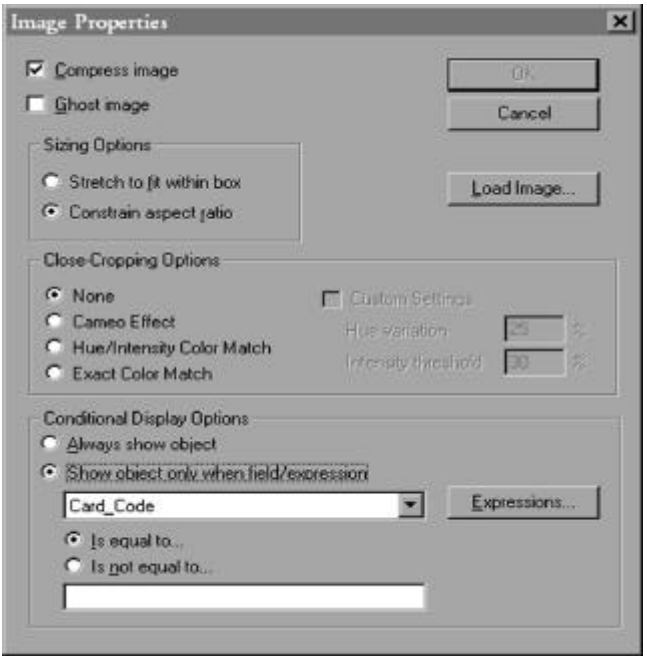
ä **To add images:**

1. Click on the *IMAGE* button in the ***Toolbar***, or choose the ***Image*** command from the ***Draw*** menu.

2. Move the mouse pointer onto the editing screen.

3. Press the left mouse button to anchor one corner of a flexible rectangle, and then drag the pointer. The flexible highlighting box stretches from the anchor point to the new pointer position.

4. When you are satisfied with the highlighting box's size and shape, release the left mouse button. The ***Image Properties*** dialog box appears.



5. Choose the *LOAD IMAGE* button. An ***Open file*** dialog box appears.

6. Select the image file you want to load into your card design, and click *OK*.

   Result: You will be returned to the ***Image Properties*** dialog box, and the image will be loaded onto the card design. If you wish, reposition the ***Image Properties*** dialog box so that you can view the image object beneath it. This will allow you to reset the object's properties, and see immediately how they will affect the appearance of the image.

7. Select whatever image property options are necessary. Refer to "Editing Object Properties" on page 7.76.

8. Click *OK*.

Ghost images and cameo effects can be applied to Image objects. For complete details, refer to the sections that follow and "Editing Object Properties" on page 7.76.

To Resize an Image Object

ä **To resize an image object:**

1. Select the image.

   Result: Handles will appear on each side and corner of the object.

2. Position the mouse pointer over one of the handles, then press and hold down the left mouse button.

3. Drag the pointer to a new position on the editing screen.

4. When you are satisfied with the image's new size and shape, release the left mouse button.

To Draw a Perfect Square

Hold down the Shift key while you draw the highlighting box. The image will be sized to fit within the square.

Adding Barcodes

Drawing barcodes on a card design can be a moderately complex process. It is, therefore, extremely important that you familiarize yourself with the many types of barcodes available, and that you set their corresponding properties, values, and database field specifications with care. The "Barcode Properties and Values - An Overview" below, contains descriptions of the various types of barcodes that can be added to your card design. More importantly, you should first refer to your hardware documentation for information on the types of barcodes supported by the card reader you have purchased.

Barcode Properties and Values - An Overview

The following barcode properties are available in the ***Barcode Property*** pick list:

Barcode Type

Sets the type of barcode to be used. By setting this property, you select the type of barcode that is displayed or printed. The following is list of the possible types of barcodes:

Code 3 of 9:

Alphanumeric barcode which allows uppercase letters and numbers. Each character consists of nine elements. Three of the elements are wide; hence the name, "3 of 9". An embedded CRC character is present. Set the Checksum value to Standard to add a checksum to the barcode.

Extended Code 3 of 9:

Similar to Code 3 of 9, except that it allows the full 128 ASCII character set to be encoded by printing two barcode characters for each text character. Set the Checksum value to Standard to add a checksum to the barcode.

Interleaved 2 of 5:

A numeric barcode. Each encoded character is composed of five elements— two wide and three narrow. The number of characters to be printed must be even. If the number of

characters is odd, then a zero will be appended to the beginning of the code. Set the Checksum value to Standard to add a checksum to the barcode.

Code 93:

Alphanumeric barcode allowing uppercase letters and numbers. Set the Checksum value to Standard to add a checksum to the barcode.

Extended Code 93:

Similar to Code 93, except that it allows the full 128 ASCII character set to be encoded. Set the Checksum value to Standard to add a checksum to the barcode.

UPCA:

Universal Product Code, Version A. Used to encode an 11-digit number. The first digit is the system number, and the rest are data characters. Both two- and five-digit supplementals are also supported. Checksum not used.

UPCE 10-Digit

A zero-compressed version of the UPCA barcode. This version allows 10 digits to be encoded. The first digit must be zero. Both two- and five-digit supplementals are also supported. Checksum not used.

UPCE0 6-Digit

A zero-compressed version of the UPCA barcode. This version allows 6 digits to be

encoded. The first digit must be zero. Both two- and five-digit supplementals are also supported. Checksum not used.

UPCE1 6-Digit

A zero-compressed version of the UPCA barcode. This version allows 6 digits to be encoded. The first digit must be zero. Both two- and five-digit supplementals are also supported. Checksum not used.

EAN 13:

Used when the country origin must be known. EAN 13 is composed of 13 digits. The first two characters are used to define the country of origin; the next 10 are data; the last is a checksum. Both two- and five-digit supplementals are also supported. Checksum not used.

EAN 8:

Used when the country origin must be known. EAN 8 is composed of eight digits. The first two characters are used to define the country of origin; the next five are data; the last is a checksum. Both two- and five-digit supplementals are also supported. Checksum not used.

Code 128 Auto:

A variable-length barcode that is capable of encoding the full 128 ASCII character set. Code 128 allows three subsets: A, B, and C. This version automatically selects the subset that will produce the smallest barcode. Set

the Checksum value to Standard to add a checksum to the barcode.

Code 128 A:

A variable-length barcode that is capable of encoding the full 128 ASCII character set. Code 128 allows three subsets: A, B, and C. This version allows all standard uppercase alphanumeric keyboard characters, plus control characters. Set the Checksum value to Standard to add a checksum to the barcode.

Code 128 B:

A variable-length barcode that is capable of encoding the full 128 ASCII character set. Code 128 allows three subsets: A, B, and C. This version allows all standard uppercase alphanumeric keyboard characters, plus all lowercase alpha characters. Set the Checksum value to Standard to add a checksum to the barcode.

Code 128 C:

A variable-length barcode that is capable of encoding the full 128 ASCII character set. Code 128 allows three subsets: A, B, and C. This version allows a set of 100 digit pairs, from 00 to 99 inclusively. This allows double-density numeric digits: two digits per barcoded character. Set the Checksum value to Standard to add a checksum to the barcode.

Codabar:

A variable-length barcode that is capable of encoding 16 characters, including 0 to 9, plus the symbols: **-**, **$**, **:**, **.**, and **+**. Used primarily for numeric data. Any one of **a**, **b**, **c**, or **d** must be used as the start and stop characters. Set the Checksum value to Standard, to add a checksum to the barcode.

MSI Plessey:

A variable-length barcode that is capable of encoding up to 15 numeric digits. Set the Checksum value to one of the following to add a checksum to the barcode:

- One modulus 10 checksum
- Two modulus 10 checksums
- One modulus 11 checksum / one modulus 10 checksum

UCC-128:

A specially-defined subset of Code 128 that is used primarily on shipping containers. It is numeric, and has a fixed length of 19 digits. Set the Checksum value to Standard to add a checksum to the barcode.

POSTNET (Zip + 4 Postal Code):

Used on envelopes and postcards that are shipped through the US Postal Service. This barcode is placed on the lower right-hand corner of the envelope. Checksum not used.

SymbolPDF417:

A two-dimensional symbology that allows you to encode a Portable Data File with ASCII, binary, or numeric data. The SymbolPDF417 is particularly useful if you need to encode large amounts of data onto a limited space (for example, an ID card that requires customer or employee profiles, biometric data, and personal descriptions). Refer to "Setting Up SymbolPDF417 Barcodes" later in this *USER'S GUIDE* for complete details on the proper use of this new technology.

Code 49:

A multiple-row barcode that can encode the full ASCII character set below ASCII 128. Up to 49 alphanumeric characters or 81 numeric characters can be encoded. These characters are encoded into two to eight rows, each divided by a separator bar. The top and bottom of the symbol also have separator bars that extend to the ends of the minimum quiet zones.

Code 16K Auto:

A multiple-row barcode that can encode the full ASCII character set below ASCII 128 using existing UPC and Code 128 character set patterns. Up to 77 full ASCII characters or 154 numeric characters can be encoded into 2 to 16 rows, and each row is divided by a separator bar. The top and bottom of the symbol also have separator bars that extend to the ends of the minimum quiet zones. Code 16K is similar to Code 128 in that you

can choose between three subsets directly (A, B, or C) or you can choose Code 16K Auto for auto switching mode.

Code 16K A:

A multiple-row barcode that can encode the full ASCII character set below ASCII 128 using existing UPC and Code 128 character set patterns. In Code 16K A, you can encode punctuation, digits, uppercase letters, and control codes below the space character.

Code 16K B:

A multiple-row barcode that can encode the full ASCII character set below ASCII 128 using existing UPC and Code 128 character set patterns. In Code 16K B, you can also encode lowercase letters, but not control codes below the space character.

Code 16K C:

A multiple-row barcode that can encode the full ASCII character set below ASCII 128 using existing UPC and Code 128 character set patterns. In Code 16K C, only digits can be encoded. This mode prints digits in double-density compressed mode.

Text

Sets the text to be used in creating the barcode. The Text property allows you to set the text that will be used to generate the barcode itself. When this property is selected, the Value pick list

changes to a data entry box and allows you to input the barcode text. The barcode changes on the editing screen as you type.

Checksum

Controls how the checksum is created. Checksums can be optionally added to some barcodes. See the section, "Barcode Type" on page 7.51 for more information.

Direction

This property controls the horizontal and vertical position of the barcode within the highlighting box.

Value	Description
Left to Right	Justifies the barcode horizontally from the left to right margins.
Top to Bottom	Justifies the barcode vertically from the top to bottom margins.
Right to Left	Justifies the barcode horizontally from the right to left margins.
Bottom to Top	Justifies the barcode vertically from the bottom to top margins.

Ratio

Sets the ratio of the barcode. The ratio of the wide bars to narrow bars can be controlled using this property. The default value is a ratio of 3:1. Valid selections for this property are listed below. This property only affects the following: Code 3 of 9, Extended Code 3 of 9, and Interleaved 2 of 5.

Value
3:1
2.5:1
2:1

Narrow Bar Width

This property sets the width of the thinnest bar in the barcode. The width of the wider bars is then based upon this setting. The unit of measure for this setting is based on twips (twentieths of a point). There are 72 points to an inch; therefore, the smallest measurement you can enter for this property's value is 1/20 of a point, or 1/1440 of an inch. The default value for this property is 30/20 of a twip.

To Draw a Barcode

ä **To draw a barcode:**

Barcode Button

1. Click on the *BARCODE* button in the Toolbar, or choose the ***Barcode*** command from the ***Draw*** menu.

2. Move the mouse pointer onto the editing screen.

3. Press the left mouse button to anchor one corner of a flexible barcode rectangle, and then drag the pointer. The flexible rectangle stretches from the anchor point to the new pointer position.

4. When you are satisfied with the barcode's size and shape, release the left mouse button.

To Link the Barcode to a Database Field or Expression

In order for the barcode to convert and use the proper data from **Picture Perfect**, it is extremely important that you link it to one of the database

fields available in the **Access Vision *Badges*** application database field.

ä **To link the barcode to a database field or expression:**

1. Select the barcode you have created.

2. Click the arrow to the right of the ***Static Text/Data Field*** pick list, and select the field to which the barcode should be linked.

To Set the Barcode Properties and Values

ä **To set the barcode properties and values:**

1. Click on the barcode using the ***Select*** tool.

2. Click the arrow to the right of the ***Barcode Property List***, located on the Barcode Bar.

   Result: The list expands to reveal the various types of properties associated with the barcode.

3. Select one of the barcode properties (for example, ***Barcode Type***).

4. Click the arrow to the right of the ***Property Value list***, located on the Barcode Bar.

   Result: The list expands to reveal the various options available for the selected barcode property.

5. Select the appropriate barcode property value.

6. Continue in this manner to select properties and their corresponding values, until you have properly configured your barcode.

Placing and Sizing Barcodes

It is very important to properly place and size the barcode in order to allow it enough room on the badge for printing and reading. If the barcode is too big to fit within the bounding box, some of the bars may be cut off, and render the barcode unreadable. The **Badge Designer** allows you to adjust the displayed barcode on the design in order to approximate the resulting size when printing. When sizing a barcode to fit onto your card design, remember the following useful points:

- Use a barcode style that best suits the data being encoded. Some barcode styles compress integers or text better than others, while others require a specific format or number of characters. Check the barcode

reader's documentation to make sure your barcode readers will be able read the barcode style you use.

- Make sure the maximum number of characters you have can fit on the badge. Most barcode styles expand when given more digits or characters to encode. See "Barcode Minimum Size Based on a Ratio Setting of 3:1 (M)" on page 7.66 for the number of characters per inch, or minimum size required for the barcode style you are using.

  Example: Using barcode style **Code 3 of 9**, which prints 6 characters per inch, will require approximately 3 inches to print an 18-digit barcode.

- To see how long the barcode will be (using the default **3:1** narrow bar width ratio), select the barcode and choose the ***Text option*** from the ***Barcode Property*** list. In the adjacent ***Value*** field, enter a sample text string with the same number of alphanumeric characters as you plan to use in the barcode. For example, if your planned barcoding sequence is 9 alphanumeric characters in length, enter nine sample alphanumeric characters in the ***Value*** field. The barcode on your card design will automatically resize itself to accommodate the new character length.

- If the barcode is too long to fit on your card design, select the barcode and choose the

Ratio option from the ***Barcode Property*** list. Select **2.5:1** or **2:1** from the ***Value*** list. This resizes the widest bars in the barcode by a ratio of 2.5 to 1 or 2 to 1 respectively, relative to the narrowest bars. The default Ratio is **3:1**. The barcode on your card design is automatically reduced in the length.

- If you reset your Ratio and you still cannot fit your barcode onto your card design, adjust the narrow bar width itself. To do this, choose the ***Narrow Bar Width*** option from the ***Barcode Property*** list, and reduce the value that appears in the ***Value*** field. The default Narrow Bar Width is 20. The barcode on your card design will automatically resize itself to accommodate the new character length.

NOTE

When printing to a paper or laser printer, the standard resolution is 600 dpi. When printing to a dye-sub card printer, the standard resolution is only 300 dpi.

- Because of lowered resolution, barcodes that read well from paper may not read well from a card. Setting the ***Narrow Bar Width*** and ***Ratio*** values too low may shrink the barcode to fit on the badge, but the resulting size and spacing of the lines in the barcode may be too compressed for the card printer to accurately print without bleeding the

lines together. Always print a test card with a barcode and make sure your barcode readers can accurately and consistently read the barcode before producing badges with the design.

- Make sure the barcode does not extend past the edge of the badge design. Otherwise some of the bars will be cut off, and the barcode will be unreadable.

- Make sure there is extra room on the left and right edges of the barcode. Barcodes readers require a blank lead space on the edges so they can detect when the bars start and stop. This lead space is called the "Quiet Zone."

WARNING!

PRINTING BARCODES IS UNPREDICTABLE! Test one card by scanning through a known-used reader at your facility prior to issuing additional badges.

Table 7-1: Barcode Minimum Size Based on a Ratio Setting of 3:1 (M)

Style	Minimum Size
2 of 5 Interlaced	11 characters per inch
Codabar	9 characters per inch
Code 3 of 9	6 characters per inch
Code 3 of 9 Extended	3 characters per inch
Code 93	10 characters per inch
Code 93 Extended	5 characters per inch
Code 128	6 characters per inch
Code 128 A	6 characters per inch
Code 128 B	6 characters per inch
Code 128 C	12 characters per inch
EAN/JAN-8	0.8 inches or 2.032 cm
EAN/JAN-8+2	0.875 inches or 2.223 cm
EAN/JAN-8+5	1.125 inches or 2.858 cm
EAN/JAN-13	1.0 inches or 2.54 cm
EAN/JAN-13+2	EAN/JAN-13+2
EAN/JAN-13+5	1.5 inches or 3.81 cm
HIBC	3-5 characters per inch
MSI	7 characters per inch

Table 7-1: Barcode Minimum Size Based on a Ratio Setting of 3:1 (M) (Continued)

Style	Minimum Size
PostNet (Zip)	4.2 characters per inch
UCC-128	UCC-128
UPC-A (11 Digit)	1.0 inches or 2.54 cm
UPC-A (13 Digit)	1.2 inches or 3.048 cm
UPC-A (16 Digit)	1.5 inches or 3.81 cm
UPC-E System 0 (6 Digit)	0.6 inches or 2.032 cm
UPC-E System 0 (8 Digit)	0.8 inches or 2.032 cm
UPC-E System 0 (11 Digit)	1.125 inches or 2.858 cm
UPC-E System 1 (6 Digit)	0.6 inches or 2.032 cm
UPC-E System 1 (8 Digit)	0.8 inches or 2.032 cm
UPC-E System 1 (11 Digit)	1.125 inches or 2.858 cm
UPC-E (11 Digit)	0.6 inches or 2.032 cm
UPC-E (13 Digit)	0.8 inches or 2.032 cm
UPC-E (16 Digit)	1.125 inches or 2.858 cm

Protecting Your Barcodes Against Counterfeiting

K Pane barcodes can be printed against a process black background and still be used by infrared card readers. Since infrared readers do not identify process black, this combination of

pure and process black makes barcodes impossible to photocopy or scan.

For other types of barcode readers, consult your supplier for possible anti-counterfeiting options. A particular reader, for example, may not identify Pantone 202; therefore, a K Plane barcode printed against this color will still be recognized by the reader, but remains difficult to reproduce.

To Print Barcodes on the K Plane

Barcodes should always be printed in black. There are, however, two types of black available: process black and pure black (that is, the black that is exclusively printed on the K Plane). While both colors are an acceptable selection, it is important to note that infrared barcode readers cannot recognize barcodes printed in process black. Unless you are sure that your barcode reader can read process black, it is recommended that you set your barcode to print in pure black.

ä **To set the barcode to print in pure black:**

1. Click on the barcode using the ***Select*** tool.

2. Click on the *K PLANE* button (located on the Attribute Bar), if you want the barcode to print in pure black, rather than in process black.

NOTE

This option is valid only if your card printer supports K Plane (pure black) printing.

To Set the Barcode Background Color

While the default barcode background color is white, and should generally remain white, the application allows you to specify any other color (including no color or transparent) to prevent the illicit duplication of ID cards by photocopying. It is important to note, however, that only a small number of readers can actually recognize the black code against a nonwhite field; thus, if you intend to specify a barcode background fill as any color other than white, first make sure that your reader is capable of distinguishing the code from the color field.

A good rule to remember, when printing barcodes against a nonwhite field, is to print the barcode on the K Plane (see above for details).

ä **To print the barcode on the K Plane:**

1. Using the ***Select*** tool, click on the barcode.

2. Change the barcode background fill color by selecting from the sixteen quick-access

colors in the ***FillColor Pick List***, or choose the ***FillColor*** command from the ***Object*** menu for a more extensive selection of colors.

Moving and Rotating Objects

Dragging objects with the mouse lets you position them interactively.

To Move an Object

ä **To move an object:**

1. Select the object you want to move.
2. Press and hold the left mouse button.
3. Drag the object to its new location.
4. Release the left mouse button to complete the move.

Alternatively, you may select the object and press any of the keyboard arrow keys to move it. This is called "nudging."

To Leave the Original Object Behind

ä **To leave the original object behind:**

1. Select the object you want to move.
2. Press and hold down the Ctrl key, and then press and hold down the left mouse button.

   Result: This will create a copy of the object behind the original.
3. Drag the copy of the object to its new location.
4. Release the left mouse button to complete the move.

To Rotate an Object

ä **To rotate an object:**

1. Select the object you want to rotate.
2. Choose the ***Rotate by 90 Degrees*** command from the ***Style*** menu.

   Result: The object will rotate, clockwise, by 90 degrees.
3. Repeat until the object's appearance is to your satisfaction.

NOTE

Rotating can be used to design duplex cards with different front and back page orientations.

Resizing Objects

ä **To resize an object:**

1. Select the object.

   Result: Handles will appear on each of its sides and at its corners.

2. Position the mouse pointer over one of the handles, then press and hold down the left mouse button.

3. Drag the pointer to a new position on the editing screen.

4. When you are satisfied with the object's new size and shape, release the left mouse button.

NOTE

You cannot resize static text objects, in the sense that the point size of the font will be increased or decreased as you stretch the text box. Rather, when you resize the text box, you expand or contract the amount of available space in which the text will fit. This is particularly important if you increase the font's point size, or if you type too much text to fit within the text box. To reveal text that has been hidden due to constraints in the size of the text box, follow the instructions above.

Changing Object Attributes

Object attributes, such as line weight or fill color, can be changed at any time while you are creating or editing the card design.

To Change Line Attributes

ä **To change line attributes:**

1. Using the ***Select*** tool, click on the line.

2. Change the line color by selecting from the sixteen quick-access colors in the ***Line Color*** pick list, or choose the ***Line Color*** command from the ***Object*** menu for a more extensive selection of colors.

3. Change the line weight by selecting from the ***Line Weight*** pick list in the Attribute Bar.

To Change Object Attributes

ä **To change object attributes:**

1. Using the ***Select*** tool, click on the object (for example, a rectangle, image, or text object).

2. Change the line color by selecting from the sixteen quick-access colors in the ***Line Color*** pick list, or choose the ***Line Color*** command from the ***Object*** menu for a more extensive selection of colors.

3. Change the fill color by selecting from the sixteen quick-access colors in the ***FillColor*** pick list, or choose the ***FillColor*** command from the ***Object*** menu for a more extensive selection of colors.

4. If the object is static or dynamic text, change the text color by selecting from the sixteen quick-access colors in the ***TextColor*** pick list, or choose the ***TextColor*** command from the ***Object*** menu for a more extensive selection of colors.

5. Change the line weight by selecting from the ***Line Weight*** pick list in the ***Attribute Bar***.

To Change Signature Fill and Text Attributes

You can modify signatures so that they are printed in different colors, with or without image frame fills.

ä **To change signature fill and text attributes:**

1. Using the ***Select*** tool, click on the signature.

2. Change the fill color by selecting from the sixteen quick-access colors in the ***FillColor*** pick list, or choose the ***FillColor*** command from the ***Object*** menu for a more extensive selection of colors. Choose "**x**" for no fill, so that the signature is printed against the card background.

3. Change the color of the signature itself by selecting from the sixteen quick-access colors in the ***Text Color*** pick list, or choose the ***Text Color*** command from the ***Object*** menu for a more extensive selection of colors.

To Set Default Attributes

If you plan to create several objects with the same attribute settings (such as line weight or fill color), and you do not want to reset the attributes for each individual object, you can

specify them as defaults by performing the following tasks:

ä **To set default attributes:**

1. Draw your initial object, and then define its attributes.

2. Select the ***Set Default Attributes*** command from the ***Object*** menu. This will set the default attributes to those of the object you have just created.

3. Draw your remaining objects.

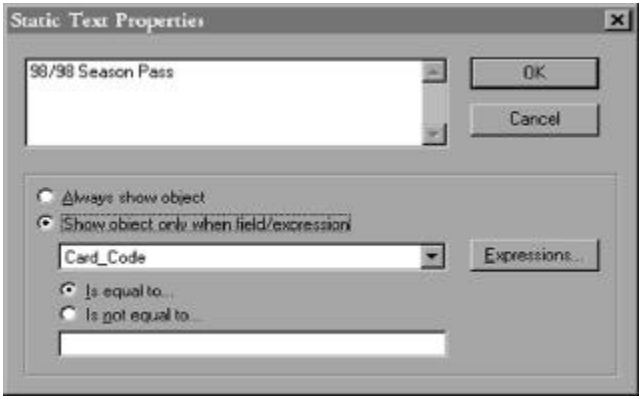
Editing Object Properties

Static Text Properties

ä **To edit static text properties:**

1. Double-click on the textbox using the ***Select*** tool, or select the text object and choose ***Object Properties*** from the ***Edit*** menu.

   Result: The ***Static Text Properties*** dialog box appears.



The following options will be available to you:

Text Editing Box

Displays the selected static text using the Microsoft Windows screen font. To edit the text, simply click anywhere within this editing box and make whatever modifications are necessary.

Conditional Display Options

Conditional display options are available. For complete information on these settings and what they do, see "Conditional Display Options" on page 7.89.

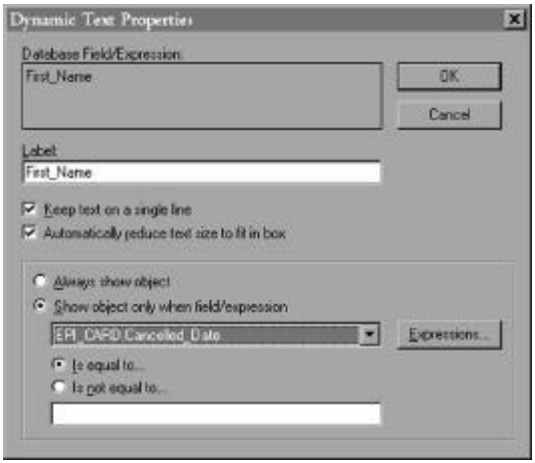
2. Make whatever option selections are necessary, then click *OK*.

Dynamic Text Properties

ä **To edit dynamic text properties:**

1. Double-click on the textbox using the ***Select*** tool, or choose ***Object Properties*** from the ***Edit*** menu.

   Result: A ***Dynamic Text Properties*** dialog box appears.



The following options will be available to you:

Database Field/Expression

Lists the currently-selected dynamic text object for your visual verification.

Label

Enter a new label for the dynamic text object, if desired. This does not affect output at

print time, but rather is used to provide a more significant identifier to the object. For instance, if the database field used to output the date a card was issued is called **Issuance_date**, you might want to rename the label "**Issue Date**" to better identify it on your card design.

This feature is particularly handy if you have written a lengthy database expression, and want to edit the label for brevity.

Keep Text on a Single Line

Check this box if you want to keep the dynamic output text on a single line. If you do not check this box, text will wrap around within the dynamic text object frame.

NOTE

This option, when selected, could truncate the output text if it is too long to fit on a single line within the object frame. If this occurs, make sure the following option box has been selected.

Automatically Reduce Text Size to Fit in Box

Check this box if you want to automatically reduce the font point size so that longer, single-line text will fit within the object frame. This is usually used in conjunction with the preceding option, so that output text is not truncated.

Conditional Display Options

Conditional display options are available. For complete information on these settings and what they do, see "Conditional Display Options" on page 7.89.

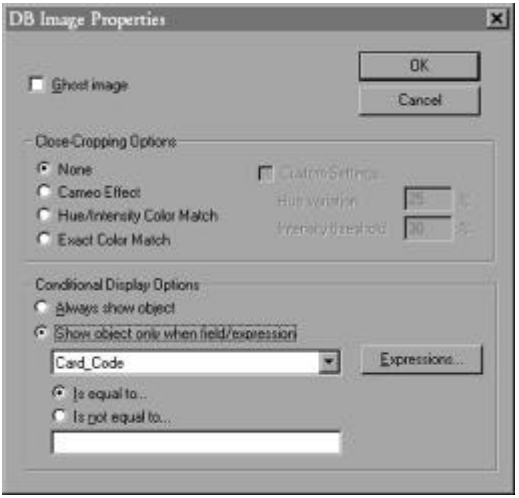
2. Make whatever option selections are necessary, then choose *OK*.

Image Properties

ä **To select DB Image Properties:**

1. Double-click on the database image using the ***Select*** tool.

   Result: The ***DB Image Properties*** dialog box appears.



The following options will be available to you:

Ghost Image

Check this option if you want to create a ghost image. A ghost image displays the image at 20 percent opacity.

NOTE

A ghost image is generally used in addition to a regular image, and can be placed anywhere on the card design - even under text or other objects. It is considered an additional ID security feature, since ghosted images are extremely difficult to reproduce.

Close-Cropping Options

The following options allow you to "close-crop" (that is, remove the background pixels) an image. The option you select depends on the image quality of the background you want to remove. For tips on how to use these settings, refer to "Tips and Tricks" on page 7.110.

WARNING!

Close-cropping options are not supported by all printers.

None

Choose this option if you do not want to close-crop the image.

Cameo Effect

Check this option if you want to create a cameo effect. This will remove all background pixels around the subject of the image (that is, the cardholder's head).

NOTE

The entire image background will not be removed if it is very dark or if there are distinct variations in shading. To work around this problem, click on the ***Custom Settings*** check box (described below), and enter your custom ***Hue Variation*** and ***Intensity Threshold*** percentages. If the background pixels are too dark, no amount of manipulation will produce a satisfactory result.

Hue/Intensity Color Match

Check this option if you want to remove all pixels within a specified hue/intensity range. This option is particularly useful if you are having trouble removing background pixels with the ***Exact Color Match*** option. Click on the ***Custom Settings*** check box (described below), and enter your custom ***Hue Variation*** and ***Intensity Threshold*** percentages.

Exact Color Match

Choose this option if you want to remove all background pixels that are exactly the same color. This option is particularly useful for solid-color backgrounds, which are commonly found in hand-made bitmap files (such as bgos).

Custom Settings

This check box and its corresponding settings are enabled when you choose the

Cameo Effect and ***Hue/Intensity Color Match*** options above. Use it to enter custom percentages for the following settings:

Hue Variation

This is the percentage of the hue that the application will use to scan for variations of the background pixels among the color spectrum. Pixels are removed by sampling the first one located in the upper left-hand corner of the image. It then uses this setting to scan for pixels of a similar hue among the specified percentage of the color spectrum. A higher value means that the application will scan and remove pixels across a wider percentage of the color spectrum. A lower setting means that the application will confine the removal to pixels that more closely match the first one that was sampled.

For example: If you enter a setting of **30** here, and if the image's first pixel is a shade of green, then the application will scan and remove all shades of green across 30 percent of the spectrum (and possibly into portions of the yellow and blue color ranges).

Intensity Threshold

This is the percentage that is used to scan for variations in color intensity. The application removes pixels by sampling the first one located in the upper left-hand corner of the image. It then uses this setting as a threshold by which all pixels of a certain intensity (and higher) will be scanned. A higher value

means that the application will confine its removal to the brighter pixels that fall within the specified ***Hue Variation*** range. A lower setting means that the application will widen its scan and remove a broader range of bright and dark pixels within the specified ***Hue Variation***.

For example: If you enter a setting of **60** here and a setting of **30** in the ***Hue Variation*** box, and if the image's first pixel is a shade of green, then the application will scan and remove all of the brighter shades of green across 30 percent of the color spectrum. In other words, fewer green pixels will be removed from the image. If, on the other hand, you lowered this setting to **20**, the removal will include a broader range of both light and dark green pixels.

Conditional Display Options

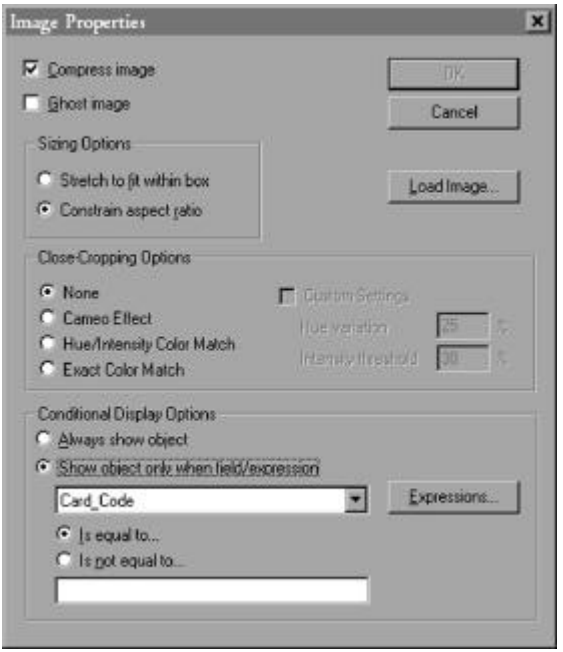
Conditional display options are available. For complete information on these settings and what they do, see "Image Properties" in the next bulleted list below.

2. Make whatever option selections are necessary, then click *OK*.

ä **To select Image Properties:**

1. Double-click on the image object using the ***Select*** tool, or choose ***Object Properties*** from the ***Edit*** menu.

   Result: The ***Image Properties*** dialog box appears.



The following options will be available to you:

Compress Image

Check this option if you want to maintain the original Image file's compression ratio.

GhostImage.

Refer to "GhostImage" on page 7.81.

Stretch to Fit Within Box

Check this option if you want to resize (or stretch) the image so that it fits inside the drawing box. You should be aware that this option will override the image's aspect ratio, thus distorting the image.

Constrain Aspect Ratio

Check this option if you want to constrain the image's aspect ratio, thus protecting the image from distortion.

None

Refer to "None" on page 7.82.

Cameo Effect

Refer to "Cameo Effect" on page 7.82.

Hue/Intensity Color Match

Refer to "Hue/Intensity Color Match" on page 7.83.

Exact Color Match

Refer to "Exact Color Match" on page 7.83.

Custom Settings

Refer to "Custom Settings" on page 7.83.

Conditional Display Options

Conditional display options are available only. For complete information on these

settings and what they do, see "Conditional Display Options" on page 7.88.

2. Make whatever option selections are necessary, then click *OK*.

Object Properties

ä **To select object properties:**

1. Double-click on the object using the ***Select*** tool, or choose ***Object Properties*** from the ***Edit*** menu.

   Result: The ***Object Properties*** dialog box appears.

The following options will be available to you:

Conditional Display Options

For complete information on these settings and what they do, see "Conditional Display Options" below.

2. Make whatever option selections are necessary, then choose *OK*.

Conditional Display Options

Conditional display options allow you to print objects on the card design only if certain conditions are met. This allows you to adapt the same card format to meet the identification needs of various departments within your organization.

Always Show Object

Click on this radio button if you want to print the object on all ID cards.

Show Object Only When Field/Expression

Click on this radio button if you want to print the object on specific ID cards. The field beneath this radio button will be enabled. To define the instances in which this object should be printed on the card, click on the arrow to the right of the field. A drop-down list will appear. You may scroll through and select any of the available data fields.

You must use this option in conjunction with one of the two remaining options described below.

Is Equal To

Click on this button to set the condition under which the object will be printed on

the ID card. In this instance, the object will print on the ID card only when the field/expression entered above is equal to the contents of the data entry field at the bottom of this dialog box.

For instance, if you want to print the object only when the Department field contains the word **Accounting**, you would click on this radio button and enter the word **Accounting** below. Thus, the selected object will only be printed on IDs that are to be issued to members of the Accounting Department.

Is Not Equal To

Click on this button to set the condition under which the object will be printed on the ID card. In this instance, the object will print on the ID card only when the field/expression entered above is not equal to the contents of the data entry field at the bottom of this dialog box.

Example: If you want to print the object only when the ***Department*** field contains anything except the word **Accounting**, you would click on this radio button and enter the word **Accounting** below. Thus, the selected object will be printed on all IDs except those which are issued to members of the Accounting Department.

Example: If you want to print the **Expires date** but not on badges without an **Expires date**, then enter a blank space " ", in the bottom text.

The **Expires date** field will print only if a date was entered.

Expressions

Click on this button to define database expressions for object printing conditions.

Selecting Colors

To Select Colors Using the Attribute Bar Lists

ä **To select colors using the attribute bar lists:**

1. Select the object.
   - If you want to change the line color, select any of the sixteen quick-access colors from the ***Line Color*** pick list in the Attribute Bar.
   - If you want to change the fill color, select any of the sixteen quick-access colors from the ***FillColor*** pick list in the Attribute Bar.
   - If you want to change the text color, select any of the sixteen quick-access colors from the ***Text Color*** pick list in the Attribute Bar.

To Select Colors Using the Color Dialog Box

The ***Color*** dialog box offers a wide range of colors for immediate selection. The number available to you depends on your display setting in the Windows Display control panel.

ä **To select colors using the color dialog box:**

1. Select the object.
   - If you want to change the line color, choose the ***Line Color*** command from the ***Object*** menu.
   - If you want to change the fill color, choose the ***FillColor*** command from the Object menu.
   - If you want to change the text color, choose the ***Text Color*** command from the ***Object*** menu.
2. In the ***Color*** dialog box, select the color you want from the palette by clicking it with the left mouse button.
3. Click *OK*.

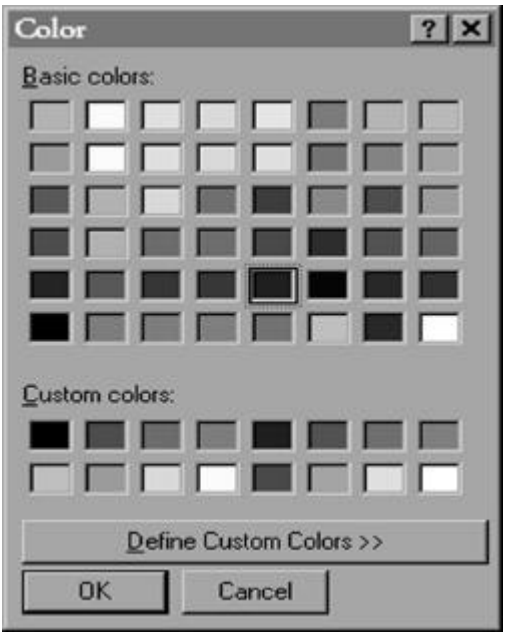
Creating Your Own Colors

You can create your own colors and apply them to screen elements.

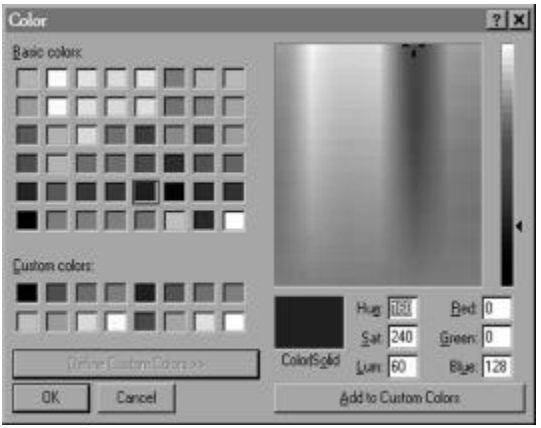
To Create Your Own Colors

ä **To create your own colors:**

1. In the ***Object*** menu, choose either the ***Line Color***, ***Fill Color***, or ***Text Color*** commands. The ***Color*** dialog box will be displayed.



2. Choose the *DEFINE CUSTOM COLORS* button.



3. Drag the cursor in the color refiner box, and the arrow beside the luminosity bar, to define your color. You can also create a color by typing numbers in the ***Red***, ***Green***, and ***Blue*** boxes, or in the ***Hue***, ***Sat*** (saturation), and ***Lum*** (luminosity) boxes.

4. The color you create is shown in the leftside of the ***Color/Solid*** box. You can double-click the rightside of the box, or press (Alt) and **0** to use the solid color that most closely resembles the one you have created.

5. In the ***Custom Colors*** palette, select an empty box for the new color, or select a color that you want to change.

6. Click the *ADD TO CUSTOM COLORS* button.

7. Create any other colors you want, and add them to the palette.

8. Click *OK*.

Placing Objects on the K and O Planes

Imaging for Windows supports 24-bit color, with output process colors in the following modes: CMY (cyan, magenta, and yellow), CMYO (CMY plus a protective overlay); CMYK (CMY plus pure black), and CMYKO (CMYK plus a protective overlay). Each color is considered a "plane."

CMYK

For CMYK, ribbon-based ID card printers will use individual ribbons or ribbon segments for each process color. Some color document printers, like the HP DeskJet 560C, have a CMY ink cartridge and a pure black (K) ink cartridge. As the card is passed through the printer, each plane is applied to the card in such a way that it is combined with the other planes to achieve a desired color. For example, if you were to print process black on a card, the printer would combine 100% of the cyan, magenta, and yellow

planes to achieve black. By contrast, pure or resin black (which is much richer) is achieved by printing 100% of the K Plane.

The Protective Overlay

While the protective overlay (also referred to as the overcoat) is not technically a colour, it is treated as such by printers that offer protective overlay printing as an option. Literally, it is a transparent film on a separate ribbon (the O Plane) which is applied after the other colours have been printed onto the card. It is used to protect the card from wear and tear.

Placing Objects on the K Plane

ä **To place objects on the *K Plane*:**

1. Using the ***Select*** tool, click on the object that you want to place on the K Plane.

2. Click the *K PLANE* button.

NOTE

This option is valid only if your card printer supports K Plane printing.

Placing Objects on the O Plane

ä **To place objects on the O Plane:**

1. Click ***Select***, or choose ***Select*** from the ***Draw*** menu.

2. Click on the object that you want to place on the O Plane.

3. Click on the *OVERLAY* button.

NOTE

This option is valid only with certain printers. Please consult your printer documentation for further details.

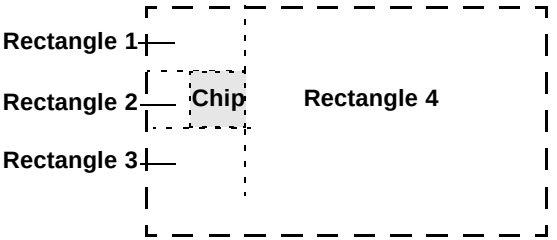
In general, applying protective overlays is a simple task when printing ordinary ID cards. It becomes more complicated when you apply them to cards that have embedded smart chips.

By default, a protective overlay is applied across the entire surface of every card, unless you place

a single card design object on the O Plane. In this case, the default is overridden and the protective overlay is applied only to the specified object.

The whole-surface overlay default has significant implications when printing ID cards with smart chips, as applying an overlay to a SmartChip will render the chip inoperable.

To apply a protective overlay to the surface of an ID card, while excluding the portion of the card that is occupied by the SmartChip, draw four rectangles, place each of them on the O Plane, and then arrange them on the card as shown below.



NOTE

The rectangles do not require a fill/line color or a line weight (they remain invisible on the editing screen), as O Plane objects have a 100% solidity. Apply the O Plane rectangles as your last step in the design process, as adding them will interfere with the layout of your card.

Setting Up Magnetic Stripe Information

Using Magnetic Stripes to Retrieve Cardholder Records

Imaging allows you to encode virtually any database information you like on the magnetic stripe, which is particularly helpful if you are creating items such as credit cards, ATM cards, long distance telephone cards, or public transportation access cards.

Allowable Track Information

The following table illustrates the type of information that may be encoded to each track of the magnetic stripe:

Track	Bits per Inch	No. of Alphanumerics	No. of Numerics
1	210	76	Not Applicable
2	75	Not Applicable	37
3	210	Not Applicable	104

Track 1 allows alphanumeric (both alphabetic and numeric) characters, and Tracks 2 and 3 only permit numeric characters. Certain character sets are accepted for encoding on each track. For more information on allowable character sets, refer to the documentation that accompanies your magnetic stripe encoding module.

The printer automatically verifies whether or not a card has been successfully encoded. If a card is not encoded properly, the printer ejects the blank card and the on-line LED flashes. If this occurs, re-examine the information you have selected for encoding and make the necessary modifications to your track layout.

NOTE

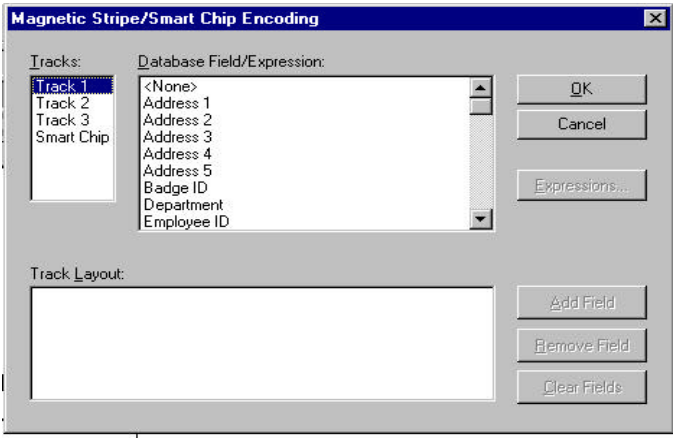
You do not need to add special data characters to signify Start Sentinels, End Sentinels, and Field Separators (as defined by ISO 7811-2 standards). The **Imaging** application adds these characters automatically during the encoding process.

Magnetic Stripe Tracks

ä **To layout magnetic stripe tracks:**

1. From the ***Edit*** menu, select ***Card Encoding***.

   Result: The ***Magnetic Stripe Encoding*** dialog box is displayed.



2. Select the track (or tracks) which can be read by your card reader from the ***Tracks*** list.

Refer to your hardware documentation to find out which tracks are supported by your particular device.

3. Scroll through the ***Database Field/Expression*** list and select any available database field or expression that you want to encode on this track of the magnetic stripe. To create a new expression, click ***Expressions***.

4. Click ***Add Field***. Your selection appears in the ***Track Layout*** listbox.

5. Repeat steps 3 and 4 for each database field or expression that you want to encode on this particular track.

6. Repeat steps 1 to 4 to encode additional tracks.

7. When you are finished, click *OK*.

The track layout information is saved to your card design when you choose ***Save*** or ***Save As*** from the ***File*** menu. The physical encoding of the magnetic stripe occurs when you print or externally encode the card with the application.

Removing Individual Fields and Expressions from the Track Layout

To remove individual fields/expressions from the track layout, scroll through the ***Tracks*** list and select the track from which the database field or expression is to be removed. Select the database field or expression from the ***Track Layout*** listbox, and click *REMOVE FIELD*.

Removing All Fields and Expressions from the Track Layout

To remove all fields and expressions from the track layout, scroll through the ***Tracks*** list and select the track from which all of the database fields and expressions are to be removed, and click *CLEAR FIELDS*.

Setting Up PDF417 Barcodes

What is PDF417

PDF417 is a two-dimensional stacked barcode symbology from SymbolTechnologies. It provides sufficient information density and capacity for both Portable Data File and small item marking applications.

The SymbolPDF417 is unlike linear barcodes in that it works independently from a database.

Linear barcodes act as a "key" to locate and retrieve a record that resides in a database. The PDF417 can contain data from an entire record, and can therefore be read in the absence of an external database system or where the external system is not accessible.

Uses for the Symbol PDF417

The following items are a few of the personal identification uses for PDF417:

- Medical information can be encoded in a PDF417 symbol that is placed on an identity card. This information is then readily available to physicians anywhere in the world, without their having to contact the cardholder's local hospital.
- Security clearance and other departmental data can be encoded on corporate identity cards, which are worn by a company's employees. This allows security personnel to perform roaming spot checks, without the need of expensive wireless computers.
- PDF417 can be used to encode a shopper profile card with such marketing information as the customer's birthday or anniversary, buying preferences (such as favorite brands and colors), clothing sizes, charge card information, and significant purchase history. Customer service is enhanced as the sales associate has all of the relevant information about the shopper without needing to ask.

Drawing a Symbol PDF417 Barcode

ä **To draw a symbol PDF417 barcode:**

1. Click the *BARCODE* button in the ***Toolbar***, or select ***Barcode*** from the ***Draw*** menu.

2. Move the mouse to the editing screen.

3. Press the left mouse button to anchor one corner of a flexible barcode rectangle, and then drag the pointer.

   Result: The flexible rectangle stretches from the anchor point to the new pointer position.

4. When you are satisfied with the barcode's size and shape, release the left mouse button.

5. The ***Barcode Property and Value*** lists have been activated in the Barcode Bar. The Barcode Property is set to ***Barcode Type***, by default. The Barcode Value is set to **`Code 3 of 9`**, by default.

6. Click the arrow to the right of the ***Value*** list in the Barcode Bar, and scroll down and select ***Symbol PDF417*** as your barcode type.

7. Link the barcode to a database field or expression, according to the instructions in the next section, "Linking a Barcode to a Database Field/Expression."

Linking a Barcode to a Database Field

ä **To link a barcode to a database field/expression:**

1. Click the *SELECT* button in the Toolbar, or choose ***Select*** from the ***Draw*** menu.

2. Click on the barcode you have just created.

3. Click the arrow to the right of the ***Static Text/Data Field*** list, and select the field or the expression to which the barcode should be linked.

4. Set the PDF417 barcode's properties and values, according to the instructions in "Setting the Barcode Properties and Values" (next).

For complete information on how to set the PDF417 properties and values according to your own specific requirements, refer to the documentation that accompanies your PDF417 symbol scanner.

Setting the Barcode Properties and Values

ä **To set barcode properties and values:**

1. Click the *SELECT* button in the Toolbar, or choose ***Select*** from the ***Draw*** menu.

2. Click on the PDF417 barcode you have just created (if it has not yet been selected).

3. Click the arrow to the right of the ***Barcode Property*** list, located on the Barcode Bar.

   Result: The list expands to reveal the various properties available for the Symbol PDF417.

4. Select the appropriate barcode property, and set its corresponding value from the ***Value*** list.

The following information describes PDF417 properties and their allowable value settings:

Property: Text
Value: 123456

Description: Enter sample text here. This does not affect the creation of the barcode. It is intended to serve as an example of how your barcode will appear when it is encoded with a similar amount of data.

Property: Rows
Value: Auto, 3-90

Description: The number of data rows to use. This number must be between 3 and 90. If the number of rows and columns is not specified (for example, both Rows and Columns are set to "Auto"), the barcode is printed twice as wide as high (aspect ratio of 1:2). If only the number of rows is specified (for example, Columns=Auto), the number of columns is calculated so that the minimum number of columns required is used. The default setting is **Auto**.

Property: Columns
Value: Auto, 1-30

Description: Number of data columns to use. Data columns do not include the start or stop character, or the left and right row indicators. This number must be between 1 and 30. If the number of rows and columns

is not specified (for example, both Rows and Columns are set to "Auto"), the barcode is printed twice as wide as high (aspect ratio of 1:2). If only the number of columns is specified (for example, Rows=Auto), the number of rows is calculated so that the minimum number of rows required is used. The default setting is **Auto**.

Property: Aspect
Value: 1:2

Description: Cannot be changed. Specifies the barcode's aspect ratio (ratio of width to height), which is used during the encoding process for row and column calculations. An aspect ratio of **1:2** means the barcode is twice as wide as it is high.

Property: ECC Level
Value: 0 - 8

Description: Allows you to set the error correction level used when encoding the PDF symbol. A value of **0** indicates no error correction will be encoded. A value of **8** indicates the maximum level of error correction will be used. The default setting is **3**.

Property: X Dimension
Value: 3.33 to 66.66

Description: Sets the X dimension of the narrowest element, in mils. The default setting is **13.33 mils**.

5. Continue to select properties and their corresponding values, until you have properly configured your barcode.

Tips and Tricks

Creating Your Own Card Backgrounds

There are plenty of software packages available that offer high resolution bitmap images that can be used as card backgrounds. If you would like to develop your own company-specific backgrounds, there are a few points to remember.

- Use a sophisticated paint program to design your card backgrounds, and save them in a bitmap file format that is recognized by **Imaging**. While Microsoft Paint is an adequate tool for some kinds of graphic design, it does not offer the creative effects (such as gradient fills and artistic text) that can give your artwork a professional quality.

- Always set the size of your card background graphic to the page size of the medium onto which you will be printing (for example, 80mm long by 54mm high). Also, set the output resolution to at least 300 dots per inch, with a 24-bit (16 million) color setting.

- If you prefer to use a draw program, export your card background graphic with a one-to-one pixel setting. Set the output resolution to at least 300 dots per inch with a 24-bit color setting. If the draw program offers anti-aliasing with the export utility, it will smooth out the rough-looking edges in your artwork.

- You can save or export your background graphic to 256 dithered colors, to conserve disk space. The end result will be noticeably inferior to 24-bit color output. Sixteen million colors will give your card background a near-photographic quality. If disk space is an issue, save the file as a JPEG image. This file format offers exceptional compression, but maintains the high quality of the image.

- Test-print your background design on the printer you will be using to produce your ID cards. ID card printers do not always output the colors you see on your screen. Test-printing allows you to adjust the color output to your satisfaction before you go into full ID card production.

Large Card Background Files

Large card background files can greatly impede your ability to draw or resize objects in your card design. If you find that your card background is slowing down your design time, deactivate the ***Show Background*** command in

the ***View*** menu (ensure there is no check mark next to the menu item). This hides your background from view, and allows you to draw or resize objects with ease.

Using the Close-Cropping Options

ä **To View the Effects of Close-Cropping:**

Imaging only allows you to add image keylines (boxes that represent the size and shape of images stored in the **Imaging** database), and not the actual database images themselves. Therefore, setting the image property close-cropping options can be very time-consuming— especially when you do not know what effect your settings will have until the card has been printed from within the **Imaging** application.

To bypass this problem, import one of your images as a bitmap object. When the bitmap is loaded, reposition the ***Bitmap Properties*** dialog box so you can view the image beneath it. Click on any of the ***Close-Cropping*** options. You can immediately view its affect on the image. If you customize the ***Cameo Effect*** and ***Hue/Intensity Color Match*** options, take note of the new ***Hue Variation*** and ***Intensity Threshold*** settings that work best on the image you have loaded.

When you have removed the bitmap object's background pixels to your satisfaction, add an image to the card design and use these new

settings in the ***Close-Cropping Options*** area of the ***Image Properties*** dialog box.

ä **To view the hue variation and intensity threshold settings:**

The effects of these settings depend entirely on the tonal quality of image that is being close-cropped. Images with darker background pixels, or backdrops that have distinct variations in shading, pose more of a problem than images with brighter, solid-colored backgrounds.

For best results on close-cropping photographs, follow these image capturing tips:

- Make sure your subject is well lit.
- Photograph your subjects against a solid-colored backdrop.
- If you are using the ambient lighting in an office, rather than specialized photographic lighting, place your subjects against a colorful backdrop (sky blue, red, or green work well). This enhances your subject's flesh tones, and makes it easier for **Imaging** to differentiate the background pixels from those that compose the image of the cardholder.

Nudging Objects

You can "nudge" **Imaging** objects one pixel at a time, to place them on your card design with precision. To do this, select the object and use your arrow keys to move it in the direction of your choice.

Constraining Objects

To draw perfect squares and circles, or perfectly horizontal or vertical lines, hold down the Shift key to constrain the object while you draw or resize it.

Quick-Copying Objects

You can quick-copy an object by holding down the Ctrl key, and selecting and moving the original object with your mouse pointer. This allows you to bypass the ***Copy/Paste*** commands and Toolbar buttons.

Shadow Effects

You can create a shadow effect for an object by copying the object, specifying a darker fill color for the copy, and staggering the lighter-colored original on top of the copy.

Selecting/Deselecting Multiple Objects

You can select multiple objects by holding down the Shift key and clicking on the objects of your choice. Deselecting objects from a previously-selected group can be performed in the same manner.

Another way to select multiple objects is to click and hold down your left mouse button, and draw a marquee box around the group of objects that you want to select. Be careful to not click and hold down your left mouse button while the pointer is located over an object, as this will select and move the object.

Dynamic Text Objects

When you create a dynamic text object (a field or database expression), you can modify the label for brevity or concision. For example, if you create the database expression:

```
First name Last name
```

which concatenates the ***First_Name*** and ***Last_Name*** fields with a single space between them, the full expression appears when you link it to the text object. To change the expression label to something more concise (for example, ***FullName***), double-click the text object and type

a new label into the ***Edit Text*** dialog box that is displayed.

Field and expression labels are used for design purposes only. They do not affect the dynamic information that is output to the card during the printing process.

Typography

If you are new to the concepts of proper font usage, remember these simple rules to great ID card typography:

- Never use more than one or two fonts in your ID card design. If using two fonts, be sure they complement each other. In general, combine one serif typeface and one sans serif typeface.

- If your ID card printer prints at unusually low resolutions (for example, 200 dots per inch or under), always use a single bold sans serif typeface (printers with low resolutions cannot print the thin line weights in a serif font). Set the point size to at least 10.

- If you are using a card background bitmap, ensure your typeface fill color makes your text objects stand out against the background. Generally, yellow and white characters can be easily read against dark background colors. Try to avoid harsh contrasts (for example, red typography against a dark green background).

- To test if you have selected the proper typographical point size, print out a sample card and try to read it at arm's length. If you cannot see what is written on the card, select a different font.

Setting Up Printers

You must set up a printer in **Imaging** before you begin to create and design cards. All of the necessary printer and page information is stored in your card design file, which in turn is used by the application as a card format - a packet of information that includes the **Imaging** card design file, and the printer and page setup.

To Install a Printer Driver

Follow the instructions provided by your printer manufacturer. The printer will appear automatically in the **Imaging** Print dialog box, the next time you sign in to the system.

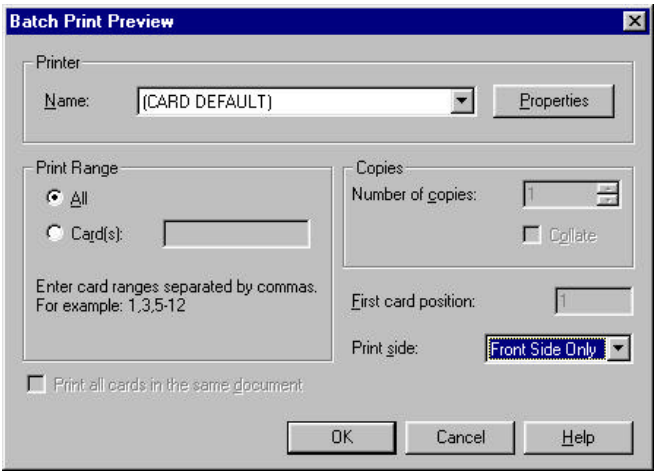
To Set Up a Card Printer

ä **To set up a card printer:**

1. Select the badges to print.

2. From the ***File*** menu, choose the ***Print*** command.

   Result: The ***Print*** dialog box displays.



3. Select the printer you want to use.

   Result: The default printer (as specified in the ***Windows Printers*** control panel) will appear in the listbox. To select a different printer, scroll down the list and choose from the printers displayed.

4. To determine which side(s) of the card to print, select one of the options from the ***Print side:*** pick list. If the card design currently open has only a front or back face, the program will make that option the default.

   If you want to print the design in the Front editing window on the front of the card, select ***Front Side Only*** from the ***Print side:*** pick list. If you want to print the design in the Back editing window on the back of the card, select ***Back Side Only***. If you want to print the design in both editing windows on the front and the back of the card respectively, select the ***Front and Back*** option.

   .

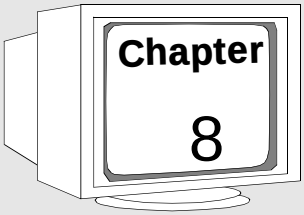
NOTE

With the exception of the ***Front Only***, these selections should only be made if you have a specialized printer that prints on both the front and the back of cards, or if you want to manually flip the cards over to print on their backs. If you want to manually flip cards over to print on their backs, especially if you are batch-printing both sides of the cards, you should know that this method will require a moderate amount of trial and error before you achieve satisfactory results.

5. Set the number of copies to be printed in the ***Copies*** field. The default is one copy.

6. Click the *OK* button.

NOTES



Printing a Badge

Introduction

This section covers the steps for selecting a badge design and printing one or more badges.

Selecting a Printer

ä **To select a printer:**

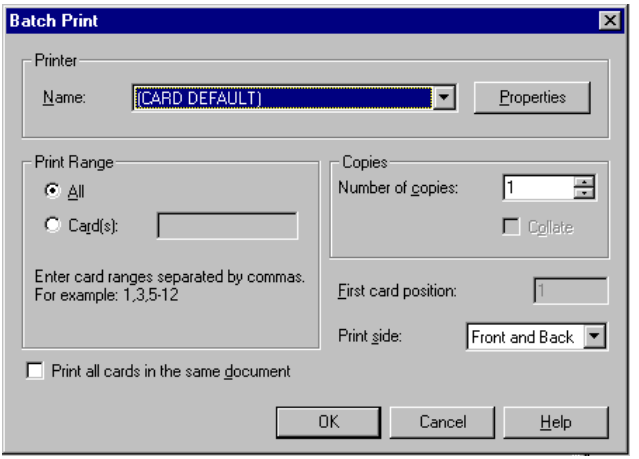
1. From the ***File*** menu, choose the ***Print*** command.

2. Select the printer from the ***Printer Name:*** pick list.

3. Select which side to print from the ***Print side*** pick list.

4. Click *OK*.

When multiple badges or badge designs are selected, the following dialog box will appear:



Selecting a Badge Design

To print a badge, select the design file to be used.

- **On the *Print and Preview* dialog, you have three ways to select a badge design:**

  1. Use the system default.

  2. Select a specific design.

  3. Use a mapping to select a design based upon field values.

When restarting the ***Badges*** application, the option that was used the last time the application was run will automatically be selected.

Using the System Default

When the ***Use System Default*** option is selected in the ***Print and Preview*** page, the application will use the selected default for printing and previewing badges. Refer to "Setting the System Default" on page 8.4.

Selecting a Specific Badge Design

When the ***Use Design*** option is chosen, a drop-down list of all available designs on the host system will appear. Select the desired design from the list. Thereafter, when printing or previewing, all selected records will use this design until changed again by the operator.

Selecting a Design Mapping

When the ***Use Mapping*** option is chosen, a drop-down list of all available design mappings on the host system will appear. A design mapping will select a badge design based upon a field value in the badge record. Select the design mapping you wish to use from the list. Thereafter, when printing or previewing, all selected records will use this design until

changed by the operator. Refer to "Creating Design Mappings" on page 8.4.

Setting the System Default

The system default for a badge design or design mapping is set in a manner similar to setting a printer default. This system default will be used when no other design is found.

ä **To set a badge design as the system default:**

1. Go to the ***Badge Designs*** dialog and search for the design you want for the system default.

2. Click the *SET AS PRINTING DEFAULT* button.

ä **To set a design mapping as the system default:**

1. Go to the ***Design Mappings*** dialog, and search for the design mapping you want for the system default.

2. Click the *SET AS PRINTING DEFAULT* button.

Creating Design Mappings

Design mappings are used to automatically select a badge design based on a field value in

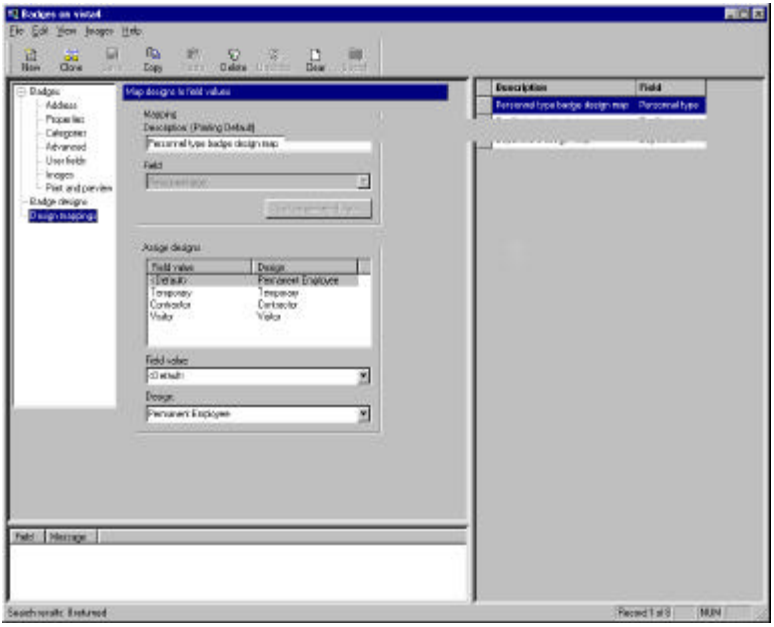
the badge record, such as using a specific badge design based upon personnel type.

ä **To create and setup a badge mapping:**

(To create and setup a badge design, refer to "Creating Badge Designs" on page 5.1.)

1. Choose the ***Badges*** application, then select ***Design mappings***, then ***New***.

   Result: The ***Map Design to field values*** dialog appears.



2. Select a mapping field by choosing from the ***Field:*** pick list.

   When creating a mapping, the available fields are ***Department***, ***Facility***, and ***PersonnelType***. Mappings are made by assigning a design to the appropriate field value. Users can create multiple mappings using the same field. This is done by creating multiple design mapping records, and using the same field value. One design file can be associated with multiple field values.

ä **To assign a design in the bottom section of the dialog box:**

1. Select a field value from the ***Field value*** pick list.

2. Select a design file from the ***Design*** pick list to use when the badge matches this value.

The ***Field value*** pick list contains a **<Default>** option followed by all of the valid field values for the field selected in the ***Field*** control. Selecting the **<Default>** option will cause the design associated with this option to be used for printing when no other match for the field value is found.

Example: Assigning Design 1 to the **<Default>** value, and Design 2 to the value **X** will use Design 2 when the badge matches **X** and Design 1 in all other cases. If the user does not use the **<Default>** field value option, an exact

match must be found for all badges being printed.

The ***Design*** drop-down will contain a **<Blank value>** option followed by all badge designs available on the host. Selecting one of the badge designs will assign that design to the currently selected value. This value design pair will then appear in the table above. Selecting the **<Blank value>** option will remove the mapping previously associated with the current field value in the ***Field value*** box. The value-design pair will be removed from the table above.

Batch Printing

Once a design has been selected on the ***Print and Preview*** dialog, one or more badges can be printed. The *PRINT AND PREVIEW* buttons will send the print job directly to the Windows default printer or preview screen. The ***Print and Preview*** menu options under the ***File*** menu will show the print setup dialog prior to printing.

ä **To print multiple badges as multiple print jobs:**

1. Select the badge records to be printed.

2. Click the *PRINT* button.

ä **To print multiple badges in one batch:**

1. Select the badge records to be printed.

2. From the ***File*** menu, select ***Print***.

   Result: A print setup dialog will appear.

3. Select the ***Print all cards in same document*** checkbox.

Dossier Printing

Dossier printing populates multiple badges across and down a sheet of paper.

ä **To setup dossier printing:**

1. On the ***Print and Preview*** panel, select the ***Use Design*** option.

2. Select the badge design that will be replicated on each badge. Be sure only one record is selected.

3. From the ***File*** menu, select ***Print Preview***.

   Result: This will enable the ***Print Preview*** dialog.

4. Select the desired printer. This should be a standard laser or ink jet paper printer and not a card printer.

5. Click *OK*.

6. Answer **Yes** to ***Do you want to save changes to the printer into the layout?***

7. Close the ***Print Preview*** window.

8. Click on the *PAGE SETUP* button.

9. Select either the portrait or landscape option. This should be the same orientation as the selected badge design.

10. Under ***Page Layout***, enter the number of cards across and cards down.

11. Tab out of the ***Cards across*** and ***Cards down*** field when finished. This will recalculate the spacing and page margins for you.

12. Click *OK*.

13. If you get a warning messages stating ***The page layout will not fit completely on the selected printer***, it may mean that the printer cannot fit that many badges across or down the page. Answer **No** to go back and change the values, or **Yes** to continue.

14. Select the rows from the ***Record List*** for the badges to be printed.

15. Click *PREVIEW* to see how the badges will be printed on the page.

16. Click *PRINT* to print the badges.

Printing Full-Page Wanted Posters

ä **To create a full-page Wanted poster of an image:**

1. At the ***Badge Designs*** dialog, click ***New*** to create a new badge design.

2. Select ***Portrait*** as the orientation.

   Result: The ***Badge Designer*** will appear.

3. Enlarge the ***Badge Designer*** window, and the badge design to full screen.

4. Under the ***File*** menu, select ***Print***.

   Result: The ***Print*** dialog appears.

5. On the ***Print*** dialog, change the printer to a full-page, paper/laser printer.

6. Click *OK*. This will set the available page size for the badge design.

7. From the ***File*** menu, select ***Page Setup***.

8. Under ***Card Size***, select ***Full Printer Page***.

9. Select ***Portrait*** as the orientation.

10. Click *OK*.

    Result: The page size should expand to 8x10.

11. Delete the signature, and **`Your Logo Here`** from the default badge design.

12. Move **`First name`** and **`Last name`** to the top of the screen. Refer to "Defining Expressions" on page 7.37. Adjust the font and text size to your preference.

13. Expand the Photograph box to be the remaining size of the page.

NOTE

This will be constrained to the aspect ratio for photographs.

14. Save the design in the ***Badge Designer***.

15. Exit the ***Badge Designer***.

16. Enter a description for the design on the ***Badge Designs*** dialog.

17. Save the design to the host.

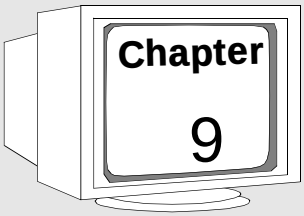
18. Go to the ***Print and Preview*** dialog.

19. Select ***Use design*** and select the design you just named.

20. Select the rows from the ***Record List*** for the poster to be printed.

21. Click *PREVIEW* to see how the poster will print on the page.

22. Click *PRINT* to print the poster.



Magnetic Encoding

Introduction

In order to correctly encode the magnetic stripe or smart chip on a badge, the encoding command information must be setup prior to printing.

Magnetic Stripe Encoding

ä **To setup the encoding option:**

1. Select a single row from the ***Record List***.
2. Go to the ***Print and Preview*** dialog panel.
3. Click the *ENCODER SETUP* button.

   Result: The ***Card Printer Encoder Setup*** dialog will appear.

4. Select the card printer that will be performing the magnetic stripe encoding.
5. Select the ***MagStripe*** tab.
6. Select ***Generic Magnetic Stripe Encoder*** from the list.

7. Click the *SETUP* button.

8. Click the *IMPORT* button.

9. Answer **Yes** to the ***Are you sure you want to overwrite the encoder definition for the XXX printer?*** message.

   Result: A ***File Open*** dialog will appear.

10. Navigate to: **C:\Program Files\G&A Imaging Ltd\episuite sdk\5.0\Generic Encoder Setup Files**.

11. Select the **.enc** file that matches your printer. Refer to Table 9-1, "Encoder Files and Supported Printers," on page 9-3.

12. Click ***Open*** on the ***File Open*** dialog.

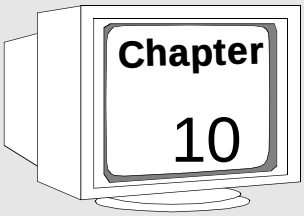
13. Click *OK* on the ***Generic Magstripe Encoder Setup*** dialog.

14. Click *OK* on the ***Encoder Setup*** dialog. Refer to "Setting Up Magnetic Stripe Information" on page 7-99.

Table 9-1: Encoder Files and Supported Printers

Encoder File	Supported Printers
HitachiDP300H.enc	Hitachi printer
MagFargo Color ID Crd.enc	Fargo 4250, Cheetah II
MAGICARD 300 printer.enc	MAGICARD Turbo printers
P300, P400, P500.enc	Eltron P400
DataCard ICIII.enc	DataCard Imagecard III

NOTES



Permissions

Introduction

Permission for each of the **Access Vision Imaging** functions can be individually enabled or disabled in order to restrict available operator control.

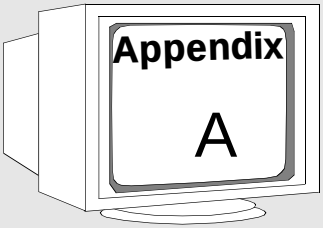
Controlling Permissions

Permissions for these functions are controlled by the ***Permissions*** application in **Access Vision**, in the same manner as other table, field, and special operation permissions. In the ***Permissions*** application, select ***Badging***, then ***Badges*** dialog from the tree node. This panel displays the assignable permissions for the ***Badges*** application, and for **Access Vision Imaging** features.

In the ***Permissions*** application, on the ***Badging/Badges*** panel, the following Special Operations are available:

Table 10-1: Access Permissions for Special Operations

Special Operation	Grants Access To
Capture images	***Capture***, ***Input Device***, ***Crop***, and ***Enhance*** options on ***Images*** dialog.
Edit badge designs	Enables *EDIT DESIGN* button on ***Badge Designs*** dialog. Enables ***New*** and ***Clone*** toolbar functions.
Edit badge design mappings	Enable the controls on the ***Design Mapping*** dialog. Enables ***New*** and ***Clone*** toolbar options.
Print badges	Enables the *PRINT*, *PREVIEW*, and *PAGE SETUP* buttons and ***File*** menu options (On ***Print*** and ***Preview*** dialog, and the ***Badge Design*** dialog). Enables ***Encode*** and ***Encode Setup***.
Select design for printing	Allows user to select which option to use on the ***Print*** and ***Preview*** dialog for choosing the badge design.
Set printing default design	Enables the *SET AS PRINTING DEFAULT* buttons on the ***Badge Designs*** and ***Design Mappings*** dialog.



Tested Input Devices

Introduction

The following products and equipment have been tested and found to be compatible with **Access Vision Imaging** software:

Table A-1: Tested Input Devices

Equipment	Brand
Printer	***DataCard:*** ImageCard III ImageCard Express
	Fargo: *(Not sold by CASI-RUSCO)* 4250 Cheetah II (has flip capabilities)
	UltraElectronics: Magicard Turbo Magicard Turbo M Magicard Turbo Flip Magicard Turbo Flip M
Video Camera	***Flashpoint128:*** Video Capture Card (with JVC and/or Hitachi camera)

Table A-1: Tested Input Devices (Continued)

Equipment	Brand
Digital Camera	***Kodak:*** DC 120 DC 260
Signature Capture	***Penware:*** 1100 1500 ***Topaz:*** SignatureGem 4X5 (T-S751-B) ***IpenPro by Cross:*** IP21000-01
Scanner	Although not supported by CASI-RUSCO, any scanner with TWAIN-compatible format for Windows 98 or Windows NT may be used.

Camera Consideration and Selection

Camera choices are numerous. Consider the following when planning a complete system, enhancing the image quality before capturing your image, and producing a higher-quality badge.

- Digital Camera

  Take longer to download the image, but convenient for remote-location picture taking and use with a laptop computer.

- Camcorders (S-Video Output)

  Instantaneous capture through video capture board, automatic focus, excellent quality, convenient for remote-location picture taking. (Now, units have the capability to take stillphotos.)

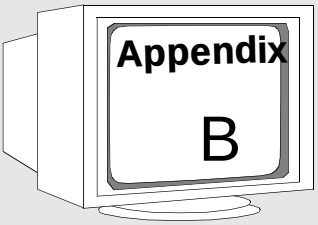
- CCD (S-Video Output)

  Auto-focus, instantaneous capture through video capture board. Good Quality. (Similar to Hitachi.)

- CCD (RGB Output)

  Requires separate, manually-operated lens for focus. Instantaneous capture through video capture board. Very good quality. (Similar to JVC.)

NOTES



Lighting Devices and Usage

Introduction

The following are suggested lighting choices to be considered carefully when planning a complete system, enhancing the image quality before capturing your image, and producing a higher-quality badge. These are optional considerations and not supported by CASI-RUSCO.

Flash

The flash unit you choose can be either a part of the camera system or a separate unit that attaches to the top of a camera or small desk top tripod. Some units require a special shoe bracket in order to attach.

Strobe Light

A strobe light unit is a small-size to medium-size light that attaches to the top of a camera or small desk top tripod. Prior to snapping a picture, the strobe light is turned on by a switch or button. After the picture is taken,

the strobe light is turned off. Some units require a special shoe bracket in order to attach.

Studio Light

A studio light is a medium-size light that attaches to a full-size tripod and stands 4 to 5 feet high. Studio lights are used in pairs, one on each side of the camera and angled toward the picture subject. The light is turned on by a switch or button and remains on. The lights are not designed for flashing bursts.

Diffuser

A diffuser is used on a strobe light or studio light to eliminate glare and soften the light shining on the picture subject. The diffuser attaches to the light or light housing.

Umbrella

An umbrella may be used with studio lights to eliminate glare, soften the light, and direct the light where needed on the picture subject. The umbrella attaches to a full-size tripod; usually, it is attached to the same tripod as the studio light. Umbrellas require more space in the room.

Taking Exceptional Pictures

NOTE

The initial setup of your **Imaging** system takes experimentation, time, and patience to adjust lighting, camera, **Imaging** software, and printer software working in tandem to achieve optimum end results, GREAT PICTURES.

ä **Consider the following:**

1. The **Imaging** software has multiple options to enhance the photograph such as brightness, color hue, and intensity of color.

2. The dye sublimation printer has multiple options to enhance the end product. These choices are found in the printer driver.

3. The picture subject should be seated, relaxed, and 3 to 6 feet from the camera. The subject's head and part of the shoulders should be in view when the picture is produced. There should be space between the top of the photo and the top of the subject's head to properly frame the subject.

4. The subject's head and shoulders should be even with the camera lens. DO NOT shoot down or up to obtain the photo.

5. The backdrop should be nonglossy, matte material to avoid bouncing the light back into the camera. The material can be cloth, a full-size piece of matte framing material (found in a picture-framing store), or material designed specifically for professional studios.

6. Background colors of blue, gray, or a similar combination produce the best skin tone on the subject. NEVER use a white background. If the background is a single solid color, then this will allow the chroma-key options to more effectively remove the background later.

7. The background should be of a size large enough to allow moving the subject away from the wall to avoid shadows. This is especially helpful when using flash and strobe lighting.

8. The subject's chair should easily raise and lower to accommodate various-sized people, unless your camera has tilt and zoom capabilities.

9. DO NOT have overhead fluorescent lighting above your subject. The overhead light will make your subject appear green or yellow, put a shiny spot on a bald head, and cause shadows under the eyes, nose, and chin.

10. Subjects wearing eyeglasses present a challenge. Unless your camera or lighting

system specifically addresses this problem, subjects with eyeglasses should raise or lower their heads slightly to avoid a glare on their glasses.

11. Each time you change a setting in your picture taking, print the image to evaluate the end result. You will begin to understand how the equipment works together and be able to adjust the parameters accordingly. Allow a minimum of 2 hours to achieve initial setup. Arrange to have a subject available when taking the pictures.

Once the optimum effect is achieved, you should not have to readjust the system again. The time spent up front is well worth the end results.

Saving Automatic Image Enhancement Settings

Once you have properly setup the camera, lighting, and backdrops for optimum effect, and you have captured a photo, you can perform further enhancements, such as adjusting the exposure, contrast, and color balance. **Access Vision Imaging** will allow you to setup automatic post-capture image enhancements. Once setup, it will perform the same enhancements for each photo captured. This allows you to adjust any enhancement settings

just once for the first sample image, without having to repeat the same enhancement adjustments for each image captured. The settings are setup per input device. This allows you to save and use different enhancement settings when using a digital camera versus a live video camera or other input device.

ä **To setup the automatic post-capture image enhancement settings for an input device:**

1. Select a badge record from the ***Record List***.

2. From the ***Main*** menu, select ***Images, Input Device***, then select either ***Photograph*** or ***Signature***.

3. The ***Select Profile*** dialog pane will appear. Select the input device for which you want to set the enhancement settings (for example, Flash Point TWAIN 32).

4. Click on the *PROPERTIES* button. The ***Capture Profile Properties*** dialog will appear.

5. Check the ***Perform automatic enhancements*** checkbox.

6. Click on the *CAPTURE SAMPLE IMAGE...* button.

   Result: Based on the input device selected, the proper interface will come up for capturing or loading a new image.

7. Capture a sample image.

   Result: This will return to the ***Capture Profile Properties*** dialog

8. Click on the *EDIT...* button.

   Result: The ***Image Enhancement*** dialog will appear displaying the sample image.

9. Use the slider controls to adjust the ***Exposure***, ***Contrast***, and ***Color Balance*** to the desired effects. These adjustments will later be applied to all images captured by this device.

10. Click *OK* on the ***Image Enhancement*** dialog.

11. Click *OK* on the ***Capture Profile Properties*** dialog.

12. Click *OK* on the ***Select Profile*** dialog.

    Result: The enhancement settings for the device have now been saved. Each time you capture an image from the device, it will automatically perform the same enhancements.

13. Click on the *CAPTURE PHOTO* button.

    Result: Based on the input device selected, the proper interface will come up for capturing or loading a new image.

14. Capture a new image.

Result: The ***Image Enhancement*** dialog will appear. The automatic post-capture image enhancements will have been applied to the image.

Glossary

aspect ratio

The ratio of the width of an image to its height. Normally displayed in the form **w:h**.

attributes

Characteristics assigned to objects, with respect to the line and fill. Line attributes include weight (thickness) and color. An object's fill attribute is a color. Text objects also have attributes, such as the font (typeface), style and color.

bitmap

An image composed of a series of dots (pixels). Scanners and paint programs, such as Paint, generate this type of image. By contrast, **Imaging** creates images using vector objects—shapes stored internally as mathematical equations.

cameo effect

An artistic effect that is accomplished by removing the bitmap image's background pixels. In the case of photographs, the image backdrop will be removed, and a close-cropped image of the cardholder will be placed against the card background.

card

The printed card that has been issued to the cardholder. A card can exist as a record in the database, even if the card itself has never been printed.

card background

A card background is a high resolution bitmap image that is imported into the card design. It serves as a scenic backdrop to the graphic objects and static or dynamic data that is printed on the card.

card reader

A card reader is an access control hardware device used to read barcodes, magnetic stripes, smart chips, or microwave emissions from the different types of advanced security cards.

cardholder

The person for whom a cardholder record is maintained, and to whom the printed card is issued.

constrain

Holding down the Shift key while drawing or resizing an object, to force the object into a specific shape. For example, holding the Shift key down while you draw or resize a rectangle forces that object to become a perfect square. Images (photographs,

fingerprints, and signatures), when drawn, are automatically constrained to their proper aspect ratios (as determined in the **Imaging** application).

crop

Reducing or increasing the visible area of an image by using the *CROP* button in the ***Crop Image*** dialog box. The area of the image that resides within the rectangle will be cropped and saved to the database. The area of the image that resides outside the rectangle will be discarded.

directory

A directory is a structure used to organize files on a disk like a drawer in a filing cabinet. Directories have names, and can be divided into subdirectories.

double-click

To press and release the left mouse button twice in quick succession.

drag

To move the mouse while holding down the left mouse button.

drive

A device in a computer that spins disks used to store information. Personal computers normally have a fixed, or hard disk (labeled C), one floppy disk drive (labeled A), and one CD-ROM drive (labeled D).

drop-down list

A drop-down list allows you to choose commonly-used entries for a specific category of information (such as ***Blue***, ***Green***, ***Brown*** or ***Gray***, if you create a pick list for the cardholder's eye color).

dynamic text object

A text object in a card design that has been linked to a database field (such as the cardholder's first name or last name). Unlike static text, a dynamic text object outputs the variable information that was entered into its associated field.

expression

A combination of static text and database field links that produce a single value. You can use expressions to combine database fields for magnetic stripe or smart chip encoding, or for database field links to dynamic text objects (for example, the ***First_Name*** and ***Last_Name*** fields can be combined into one dynamic text object that prints the cardholder's full name on a single line).

extension

Characters following the period in a filename that identify the type of information in the file. For example, the **.GDR** extension indicates that the file contains a drawing.

field label

The name which identifies the field. In **Imaging**, a dynamic text object's label can be modified using the ***Object Properties*** command in the ***Edit*** menu.

ghost image

An image or bitmap that is almost transparent, so that the card background can be seen through it.

grid markers

A series of evenly spaced, intersecting horizontal and vertical dots used to align objects.

handles

Small squares that appear on the corners and sides of the cropping rectangle. You can use these handles to resize or move the rectangle over the captured image. The area of the image that resides within the rectangle will be cropped and saved to the database. The area of the image that resides outside the rectangle will be discarded.

hue

The position of a color along the color spectrum. For example, green is located in the spectrum between yellow and blue.

justification

The alignment of text in relation to the left, right, top and bottom margins of the text frame.

landscape (page orientation)

A page oriented so that it prints from left to right across its longest dimension.

luminosity

The brightness of a color on a scale from black to white.

orientation

Refers to the direction in which print is oriented on the page. Printing across the width of the page is known as portrait orientation (derived from portraits of people, which are usually vertical in format). Printing across the length of the page is known as landscape orientation (derived from landscape paintings or photographs, which are usually horizontal in format).

pixel

Short for "picture element." Pixels are dots on a computer screen or television that combine to form an image.

pointsize

A unit of measurement used primarily in typesetting for designating type sizes. There are approximately 72 points to an inch.

portrait (page orientation)

A page oriented so that it prints from left to right across its shortest dimension.

saturation

The purity of a color's hue, moving from gray to the pure color.

static text object

A text object in a card design that has not been linked to a database field. Unlike dynamic text, a static text object, such as a headline or a field label, remains constant from card to card during the print process.

symbol pdf417

A two-dimensional symbology that allows you to encode a Portable Data File with ASCII, binary, or numeric data. The Symbol PDF417 is particularly useful if you need to encode large amounts of data onto a limited space (for example, an ID card that requires customer or employee profiles, biometric data, and personal descriptions).

textbox

A simple text field, which allows you to manually enter alphanumeric or numeric data.

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