



Alliance 8300 Imaging User Guide

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Manufacturer	UTC Fire & Security Americas Corporation, Inc. 1275 Red Fox Rd., Arden Hills, MN 55112-6943, USA Authorized EU manufacturing representative: UTC Fire & Security B.V. Kelvinstraat 7, 6003 DH Weert, Netherlands
Certification	
Contact information	www.utcfireandsecurity.com or www.interlogix.com
Customer support	www.interlogix.com/customer-support

Content

Introduction iii

Purpose iii

Scope iii

Recommended Minimum Requirements iii

A Note for First-Time Imaging Users iii

Related Documentation iii

Notational and Typographical Conventions iv

Imaging Installation and Removal 1

Introduction 1

Installing the Capture Card 1

Installing the Camera Drivers 1

Installing the Print Drivers 1

Installing the Signature Pad Drivers 2

Installing Scanner Drivers 2

Installing the Imaging Software 2

Licensing the Imaging Option 2

Setting Up Cameras and Lighting 2

Removing Imaging Software 3

Creating a Badge Design: Overview 4

Introduction 4

Overview 4

Images 6

Introduction 6

Selecting an Input Device 6

Capture 8

Displaying Existing Images 9

Enhancement 10

Manipulation 10

Creating Badge Designs 12

Introduction 12

Creating a New Badge Design 12

Importing a Badge Design 13

Editing Badge Designs 15

Introduction 15

Editing a Badge Design 15

Badge Designer 16

Introduction 16

Selecting Page Sizes 16

Imaging Workspace	18
Setting Up the Imaging Workspace	22
Setting Database Connections	24
Importing or Removing Badge Background	25
Drawing Shapes	28
Adding Static and Dynamic Text	31
Defining Expressions	34
Adding Images	37
Adding Barcodes	41
Barcode Properties and Values - An Overview	41
Setting Up PDF417 Barcodes	46
Placing and Sizing Barcodes	48
Moving and Rotating Objects	52
Resizing Objects	53
Changing Object Attributes	53
Editing Object Properties	55
Selecting colours	61
Defining Your Own colours	62
Placing Objects on the K and O Planes	63
Setting Up Magnetic Stripe Information	65
Tips and Tricks	67
Printing a Badge	70
Introduction	70
Setting Up Printers	70
Printing the Badge	71
Printing Full-Page Wanted Posters	74
Magnetic Encoding	76
Introduction	76
Magnetic Stripe Encoding	76
Appendix A. Compatible Devices	78
Appendix B. Lighting Devices and Usage	79
Introduction	79
Taking Exceptional Pictures	79
Saving Automatic Image Enhancement Settings	81
Glossary	83
Index	87

Introduction

Purpose

This User Guide provides information for Installation Technicians and system administrators to set up, configure, and use the Imaging system. This User Guide is intended to complement the Alliance 8300 Imaging Online Help.

Scope

Welcome to Alliance 8300 Imaging. The primary function of this option is to:

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

Recommended Minimum Requirements

Refer to *Alliance 8300 Installation Guide* for minimum requirements.

A Note for First-Time Imaging Users

The first step on the road to designing identification badges 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 badges.

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 Alliance 8300 Imaging software and digital imaging. The glossary, and most of these instructions — as well as extensive reference material — are also available online, through the application's Help menu.

Imaging help may not run on some Windows versions unless you install the Windows Help (WinHlp32.exe) program. See <http://support.microsoft.com/kb/917607> for details.

Related Documentation

For more information, refer to the following:

- *Alliance 8300 Administration Manual and Operation Guide*: This guide provides information for both the system administrator and the operator to set up, configure, and use the Alliance 8300 system.

- *Alliance 8300 Installation Guide*: This guide provides setup and installation instructions for Alliance 8300 and Alliance 8300 Imaging.
- *Alliance 8300 CCTV User Guide*: This manual provides interface instructions for CCTV equipment.
- *Alliance 8300 API Manual*: Alliance 8300 API (Application-Program Interface) provides the ability to import data from external applications such as a Human Resource Management System.

Notational and Typographical Conventions

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

Table 1: Notational and Typographical Conventions

Item	Description
Command sequences	Where appropriate, command sequences are abbreviated with the ">" symbol. For example, the command "Click Start, and then click Run" is written as "Click Start > Run."
Command alternatives	Many commands can be executed in a variety of ways including menu bar, tool bar, shortcut keys, right click, or double click. In general, commands are described from their menu bar location only, even when alternatives exist.
Keys	Capitalized, for example "press Enter".
Keystrokes	Text that you type is indicated in Courier New font. For example, "Type dcomcnfg".
Expanding a "tree" view	The word "expand" is used to indicate that selections may be hidden. For example, the command "Click the '+' box next to Computers" is written as "Expand Computers".
Notes	Notes alert you to information that can save you time and effort.
Caution	Cautions are displayed to advise the user that failure to take or avoid a specified action could result in loss of data.
[A]	This letter indicates that the action or option described is specific to the intrusion and access control equipment.
[C]	This letter indicates that the action or option described is specific to the CCTV equipment.

Imaging Installation and Removal

Introduction

Alliance 8300 Imaging allows the capturing and printing of photo identification badges. This chapter provides the information needed for Alliance 8300 Installation Technicians to configure PC hardware, and to install the software and system drivers for the Imaging system.

To add Alliance 8300 Imaging, refer to the following sections:

1. "Installing the Capture Card" below (optional).
2. "Installing the Camera Drivers" below.
3. "Installing the Print Drivers" below.
4. "Installing the Signature Pad Drivers" on page 2.
5. "Installing Scanner Drivers" on page 2.
6. "Installing the Imaging Software" on page 2.
7. "Setting Up Cameras and Lighting" on page 2 (optional).

Additional Instructions:

1. "Removing Imaging Software" on page 3.

Installing 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.)

Note: If the computer's motherboard contains a built-in graphics controller, the graphics controller *must* be disabled. Refer to the manual(s) that came with your computer.

If there is an on-board video card, you will need to go to BIOS setup to disable it.

Installing the Camera Drivers

The Alliance 8300 system requires the installation of camera drivers into the computer. Refer to "Appendix A. Compatible Devices" on page 78 for a list of supported camera products and equipment.

Installing the Print Drivers

The Alliance 8300 system requires the installation of print drivers into the computer. Refer to "Appendix A. Compatible Devices" on page 78 for a list of tested printers. Refer to the installation instructions shipped with your printer.

Installing 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. Follow the installation instructions included with your signature pad.

After installing the pad, install a TWAIN or WINTAB driver for the pad.

Installing Scanner Drivers

Alliance 8300 Imaging can accommodate any scanner that has TWAIN format for Windows 2000.

Installing 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 Alliance 8300 installed and working before you proceed. If you have not installed Alliance 8300, do so now and then return to this document.

For complete details regarding installation, refer to your *Alliance 8300 Installation Guide*.

If Imaging is to be used on any server or client computer it must first be installed on the server computer followed by installation on each client computer that may need to use it.

Note: Machines with Windows Vista, Windows 7, Windows Server 2008, or Windows Server 2008 R2 installed may have problem when opening WinHelp files (.hlp). To avoid this, you must download and install Windows Help (WinHlp32.exe) program from Microsoft website.

Licensing the Imaging Option

For complete details regarding obtaining and installing a license, refer to your *Alliance 8300 Installation Guide*.

Setting Up Cameras and Lighting

The Alliance 8300 Imaging system requires cameras and lighting. Refer to “Appendix B. Lighting Devices and Usage” on page 79 for useful information on camera and lighting setup.

Removing Imaging Software

To uninstall Imaging software:

1. Click Start, select Settings, Control Panel, and then Add/Remove Programs.
2. Select IO4APatch — Imaging Option Patch for Alliance 8300 and click Change/Remove.
3. On the Add/Remove Program Properties page, select Imaging Option 1.2.
4. Click Change/Remove.
5. On the Choose Setup Language page, select English.
6. Click Ok.

Result: The InstallShield Wizard progress screen displays.

7. You will receive a Confirm File Deletion popup. When asked “Do you want to completely remove the selected application and all of its components”, click OK.
8. You will receive a Maintenance Complete screen, InstallShield Wizard has finished performing maintenance operations on Imaging Option 1.2. Select Yes to reboot your computer at this time. Click Finish.

Result: You are returned to the Add/Remove Programs screen. Your system reboots at this time.

Creating a Badge Design: Overview

Introduction

This chapter is an abridged summary of the badge design, setup, and printing processes.

To create your own simple badge design:

1. Select Badge Design from the Alliance 8300 Personnel menu.
Result: The Badge Design Form, Design tab displays.
2. Click the Add button and enter a unique Description, then click Save.
3. Click Edit Badge Design to run the Imaging Badge Design application.
4. Select New from Imaging File menu.
5. Draw a rectangular shape in your design window the size of your badge. For a background colour, select Style > Fill Colour and select the required colour.
6. To move the shape to the background, select the shape and then click Object > Move > To Back.
7. Add one or several bitmaps inside the badge design parameters.
8. Add one or several text boxes.
9. Move or resize the photo and text as desired.
10. Save.

Detailed information about each process is referenced in the table that follows.

Overview

Table 2: Creating a Badge Design - Overview

Function	Where To Look
Badge Design Workspace	
Default Badge Design	By default, the Imaging application workspace displays a <i>sample</i> badge design when you click Add Badge Design. See “Badge Designer” on page 16 for details on changing the badge design.
Design Window	See “Imaging Workspace” on page 18. Note all tool bar options.
Landscape or Portrait	See “Selecting Page Sizes” on page 16.

Function	Where To Look
Badge Design	
Adding Fields to the Badge	Bitmaps: See “Adding Images” on page 37. Text Box: See “Setting Database Connections” on page 24 and “Adding Static and Dynamic Text” on page 31. Signature Box: See “Setting Database Connections” on page 24 and “Adding Images” on page 37.
Adding a Magstripe	See “Setting Up Magnetic Stripe Information” on page 65
Barcode Direction	See “Direction” on page 44.
Saving	New Design: See “Creating Badge Designs” on page 12. Existing Design: See “Editing Badge Designs” on page 15.
Selecting a Badge Design to Use	See “Selecting a Badge Design” on page 70.
Image Capture	
Image Capture Setup	See “Images” on page 6.
Image Capture	See “Capture” on page 10.
Capture Tips	See “Appendix B. Lighting Devices and Usage” on page 79.
Printer Settings	
Selecting a Printer	See “Selecting a Badge Printer” on page 72.
Printer Settings	See “Setting Up Printers” on page 70.
Magstripe Encoding Setup	See “Setting Up Magnetic Stripe Information” on page 65.
Printing a Badge	
Printing a Badge	See “Printing the Badge” on page 71.

Images

Introduction

Once Alliance 8300 Imaging is installed and you have obtained a license, you are ready to capture, import, and view photographs and signatures through Alliance 8300, Personnel menu, Badge Design. Your photographs and signatures can be created by digital cameras, video cameras, and signature pads. Refer to “Appendix A. Compatible Devices” on page 78.

Selecting an Input Device

Follow the instructions provided by the device manufacturer for installing an input device. Alliance 8300 Imaging can use any device that has a TWAIN, WINTAB, or Video for Windows (VFW) driver installed.

To select an input device:

1. Open Alliance 8300.
2. Go to the Personnel menu and select Person.

Result: The Person Form appears.

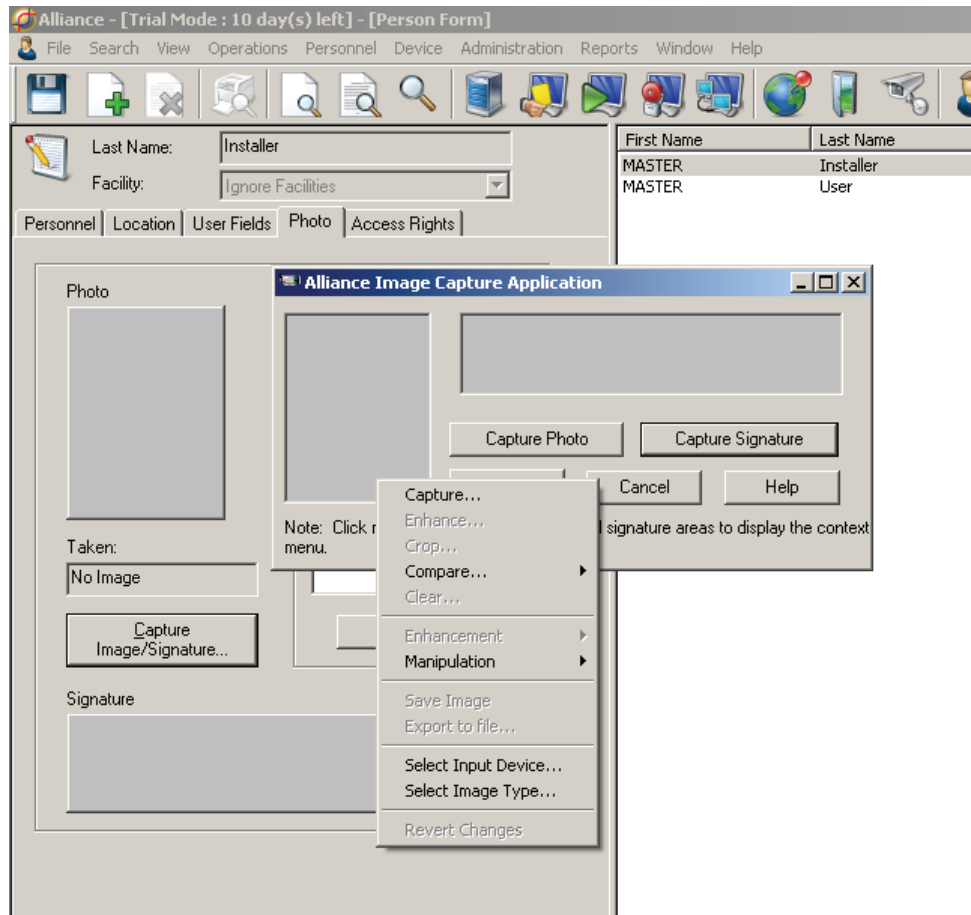
3. Select the Photo tab, and then click Search.



Result: A current list of records appears.

4. Select one of the records in the records list, and then click Capture Image/Signature.

Result: The Alliance 8300 Image Capture Application screen will appear.

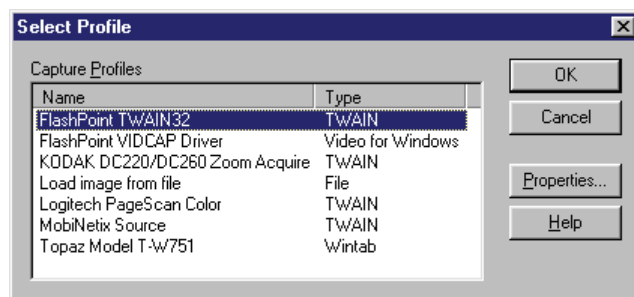


5. Using the mouse, point to the photo area and right-click.

Result: A context menu will appear.

6. Choose Select Input Device from the context menu.

Result: A Select Profile screen appears that lists the available input devices on your computer. By default, the input device loads from a file.



7. 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.
8. Repeat these steps to set up an input device for signature pads. The program will recognize a separate input device for photos and signatures.

Capture

To select a record and capture a *new* image for the selected record:

1. Select Person from the Personnel menu.
2. Select the Photo tab on the Person Form.
3. Select one of the records in the Record List.

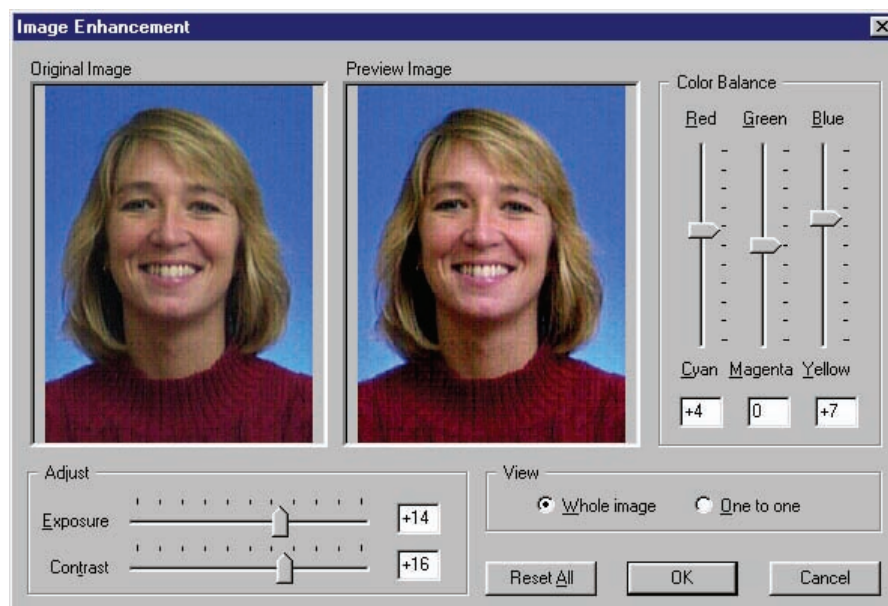
Note: Images will not appear when multiple records are selected.

4. Click Capture Image/Signature to capture a new image.

Note: Based on the input device you previously selected, the proper interface screen will come up for adjusting, capturing and loading a new image.

5. Adjust, and then save the adjusted settings.
6. Click Capture Photo to capture the new image.

Result: Once the photo is taken, the Image Enhancement dialog box will appear.



Result: The dialog box that appears will allow you to crop and enhance the newly-captured image. You will notice that a highlighting box with eight sizing handles is placed directly over the center of the Original Image.

7. Place your mouse pointer over the image.

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.

8. At this point, you can either capture a different portion of the image “as is,” or adjust the highlighting box to capture some or the entire image.

To crop an image:

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

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

Result: The photo can be placed on either the front or the back of your badge design.

Note: In order to print the photo, your badge design must include photo image keylines. When you print the badge with the Alliance 8300 application, the keylines are replaced by the image.

To resize the crop box:

1. Place your mouse pointer directly over one of the highlighting box handles.
Result: The pointer will change from a four-headed 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 toward the center of the cropping area.

The size of this highlighting box is fixed to the aspect ratio of the image type: 4 x 5 for photos; 5 x 1 for signatures.

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 Alliance 8300 Image Capture Application screen will appear with the selected image in place.

Note: In order to print the photo, your badge design must include photo image keylines. When you print the badge with the Alliance 8300 application, the keylines are replaced by the image. The photo can be placed on either the front or the back of your badge design.

5. Click Ok.

Result: The selected image will be moved to the Photo tab of the Person Form.

6. Click Save.

Result: The image capture is saved to the database.

Displaying Existing Images

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

On the Person Form, select the Photo tab, then click  Search, and highlight a record from the record list. Click Capture Image/Signature button to enable the Alliance 8300 Image Capture Application screen. Move the mouse pointer to the

existing image and right-click. A shortcut menu for the image will appear. The available image options on that menu are discussed in the paragraphs that follow.

Capture

Based on the input device you previously selected, the proper interface screen will come up for adjusting, capturing and loading a new image.

Enhance and Crop

These options allow you to individually crop or enhance the current image. You can 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 shortcut menu to compare the newly-captured or edited image to the original image. Choosing Restore will undo any changes made to the original image.

Clear

When you select the Clear option from the shortcut menu, the image will be cleared and the image file will be deleted. (The image cannot be recovered.)

Enhancement

There are four submenus for the Enhancement shortcut menu option.

Adjust by Example

When you select this option, a dialog box will display. You can adjust the brightness, contrast, focus, exposure, and red, green, and blue colours.

Special Effect by Example

This dialog box allows you to add special effects to any image. The applicable effects are Mosaic, Impressionist, Watercolour, Emboss, and Posterize.

Remove Red Eye

This dialog box allows you to remove the red eye effect of any person in an image.

Vignette

The Vignette dialog box allows you to configure a vignette effect to any image.

Manipulation

Mirroring

- Flip Vertically: Flip an image from top to bottom.
- Flip Horizontally: Flip an image from left to right.

Invert (negative)

Select this option to invert an image (create a colour negative).

Convert to 8-bit grayscale

Select this option to convert an image to an 8-bit 256 grayscale image. Once this election is selected, there is no undo. You will have to reload your image.

Save Image

Changes to an existing image or newly-captured image are saved to the host when you click Save.

Export To File

When you select this option, a Save As window will appear. Navigate to the Alliance 8300 Images folder that contains previously-captured photo images. You may select a filename, image format, bit depth, and JPEG compression factor. If you click Save, the contents of the image control are saved using the selected settings. If you wish, you may replace an existing image.

Select Input Device

This option allows you to select an input device on the Select Profile dialog box, from a list of Capture Profiles. You may also set and apply automatic properties for the image you are about to capture.

Select Image Type

This dialog box enables you to configure image types in the EPISUITE SDK configuration database.

You can use this dialog box to edit, create, or remove image types.

To modify an image type, highlight the image type name in the list and click Edit to open the Image Type Manager dialog box.

Click Add to create a new image type, or click Remove to delete the highlighted image type.

Revert Changes

When you make any change to the image, the Revert Changes option will be enabled. Otherwise, the option is dimmed and you will not be able to select it. Selecting this option will reload the original image.

Creating Badge Designs

Introduction

The first step in producing printed badges is to create a badge design or badge layout. The badge design determines the badge'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 from badge-to-badge), font type, and position on the badge.

Badge designs are integrated into the Alliance 8300 system, so that all printable fields from the badge record stored in the database are available for 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

To create a new badge design in Alliance 8300:

1. Go to the Personnel menu and select Badge Design.

Result: The Badge Design Form screen appears.

Description	File Name
badge design 1	1.gdr
badge design 2	2.gdr
badge design 3	3.gdr

2. Select the Add Record icon from the Alliance 8300 toolbar to display the form.

Note: Editing an existing record is discussed in “Editing Badge Designs” on page 15.

3. Type a unique design description in the Description box. Refer to “Badge Designer” on page 16 for complete instructions regarding the design function.

4. Select the badge orientation:

Select one of the default layouts, either Portrait (vertical) or Landscape (horizontal). Alliance 8300 Imaging provides a default layout for portrait and landscape orientation.

— or —

Select Import Layout, then Browse to locate and select an existing .gdr file from the appropriate directory. Refer to the following section, “Importing a Badge Design”.

5. Click Save on the Alliance 8300 toolbar.

Result: The Edit Badge Design button is now enabled.

6. Edit the badge design. Refer to “Editing Badge Designs” on page 15.

Importing a Badge Design

Badge design files (with a .gdr extension) saved outside the Alliance 8300 system can be imported into Alliance 8300. Doing so will enter it into the Alliance 8300 system so that the badge design is available for editing and printing.

To import a badge design into Alliance 8300:

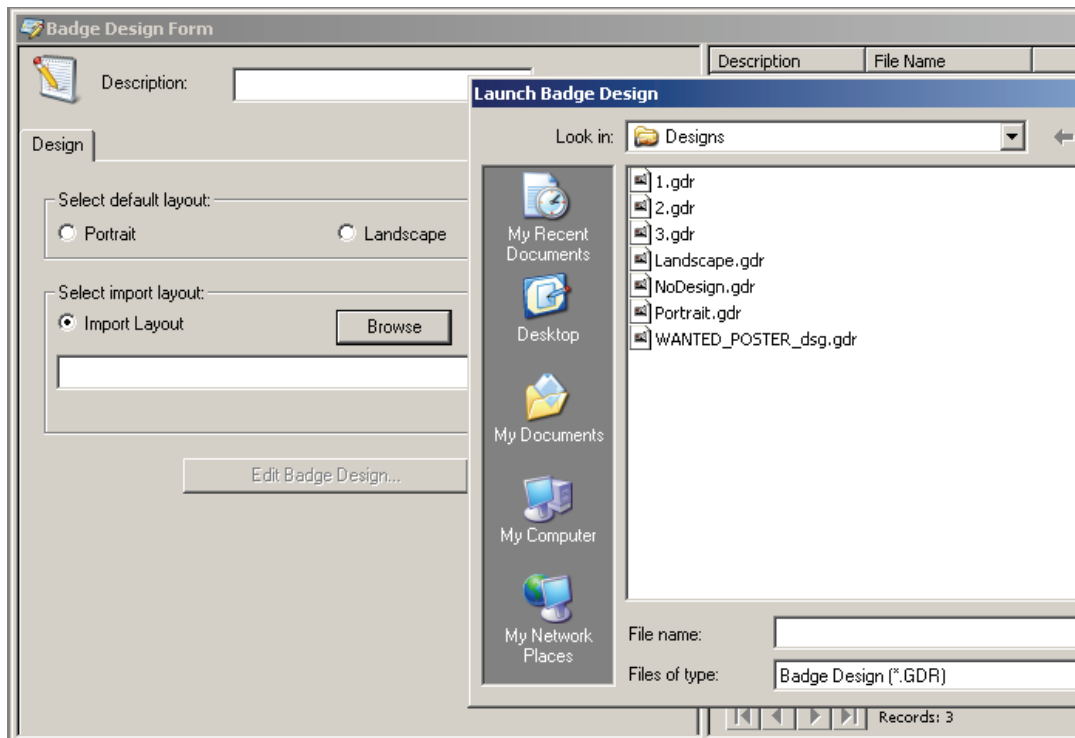
1. Go to the Personnel menu and select Badge Design.

Result: The Badge Design Form screen appears.

Description	File Name
badge design 1	1.gdr
badge design 2	2.gdr
badge design 3	3.gdr

2. Select the Add Record icon from the Alliance 8300 toolbar to display the form.
3. Select Import Layout, and then Browse.

Result: An Open File dialog will appear.



4. 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.
5. Click Open.

Result: The .gdr design file name appears in the Select import layout dialog box of the Badge Design Form.

6. Complete the Description field of the Badge Design Form.
7. Click Save on the Alliance 8300 application toolbar.
8. Edit the badge design, if appropriate. Refer to “Editing Badge Designs” on page 15.

Editing Badge Designs

Introduction

You can edit an existing badge design. Badge designs are integrated into the Alliance 8300 system. Printable fields from the badge and person records are available to use in the badge designer, and a design can be selected, at print time, based upon field values in the badge and person records.

Editing a Badge Design

To edit a badge design:

1. Go to the Personnel menu and select Badge Design.
2. Click Search.



Result: The Edit Badge Design is displayed and a Record List of existing badge designs appears.

3. Select a badge design to edit from the Record List, and then click Edit Badge Design.

Result: The designer application will execute and your selected badge design appears in the workspace, ready for editing. Refer to “Badge Designer” on page 16 for complete details on the design function.

4. When changes are complete in Badge Design, click Save to save the changes to the design or Save As, then rename the design and save in the Designs directory.

The Designs directory is located on the Alliance 8300 server computer in:

C:\Program Files\UTC Fire & Security\Alliance 8300\Designs

5. Exit Badge Design.
6. Click Save on the Alliance 8300 application toolbar.

Badge Designer

Introduction

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

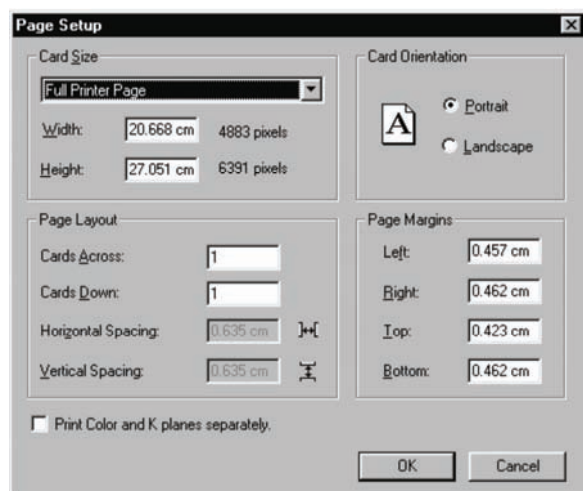
Selecting Page Sizes

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

To select the badge page size:

1. Make sure you set up the appropriate default printer. Refer to “Printing a Badge” on page 70.
2. From the File menu, select the Page Setup command.

Result: The Page Setup dialog box displays.



The default settings are for printing badges onto cards one at a time.

3. Select the required badge size from the options listed in the Card Size drop-down list. Select any of the defaults, or select Custom Size to specify your own dimensions.

4. Select the card 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 badges on a landscape page



Landscape badges on a portrait page

5. Adjust the badge's width and height, if desired. By modifying these settings, you are automatically resetting the badge 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 badges that are to be printed in rows across the page. In general, a landscape page will allow you to print more badges across than a portrait page, though you will not be able to print as many badges down.
8. In the Cards Down field, indicate the number of badges that are to be printed in columns down the page (for batch printing purposes). In general, a portrait page will allow you to print more badges down than a landscape page, though you will not be able to print as many badges across.
9. Adjust the horizontal and/or vertical spacing between the badges printed on the page, if desired.
10. Make sure Print color and K planes separately check box is not selected.

The default settings are for printing badges onto cards one at a time.

This option merges the two pages into one, to output four-colour process.

Caution: This feature is not supported on any of the printers supported by UTC Fire & Security. Selecting this check box will cause an extra unusable badge to be printed for each side of the badge.

11. Click Ok to save the badge setup configuration.

Imaging Workspace

Toolbar

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

The following tools are available in the Imaging toolbar:

Figure 1: 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 access to all of the commands on 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 badge to badge); dynamic text objects (text that has been linked to database fields or expressions); bitmaps; image keylines (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.

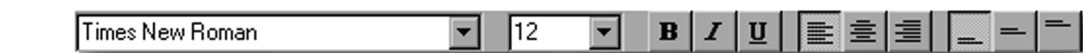
Figure 2: Drawing Object Buttons



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 access to the Style menu commands. The following tools are available in the Text Style bar:

Figure 3: Text Style Bar



	Font drop-down list
	Point Size drop-down 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 access to colour settings for lines, object fills, and text.

Figure 4: Attribute Bar Buttons



	Line Attribute drop-down list
	Fill colour drop-down list
	Text colour drop-down list
	K (Resin Black) Plane Button
	O (Overlay) Plane Button
	Static Text/Data Field drop-down list

The Line Attribute drop-down lists determine the colour and width (thickness) of line objects and borders around drawing, text, and image objects.

The Fill colour and Text colour drop-down lists allow you to select colours 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 badge design. For further information on K and O Plane printing, refer to “Placing Objects on the K and O Planes” on page 63.

The Static Text/Data Field drop-down list allows you to link dynamic text objects and image keylines 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 badge design, in whatever font and point size you select; but it will be replaced by the badgeholder’s first name (in your specified font and size) when you print the ID badge.

Barcode Bar

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

Figure 5: Barcode Bar

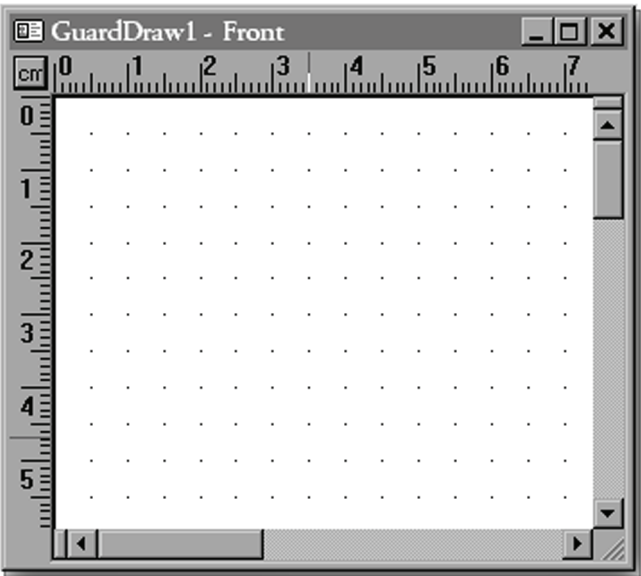
	
	Barcode Property drop-down list. Allows you to select barcode properties. By setting these properties, you have complete control over how the barcode is displayed and printed.
	Barcode Value drop-down list. Allows you to select values, or enter text, for barcode properties. Valid entries for this field may be found in the individual property descriptions.

For additional information, see “Adding Barcodes” on page 41.

Design Windows

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

Figure 6: Design Window



Units of Measure can be either inches or centimetres. Click the button to switch between inches and centimetres



Rulers are available both horizontally and vertically for object alignment. Select this option from the View menu.



Editing grid is used for object alignment. Can be hidden from the screen. Select this option from the View menu.

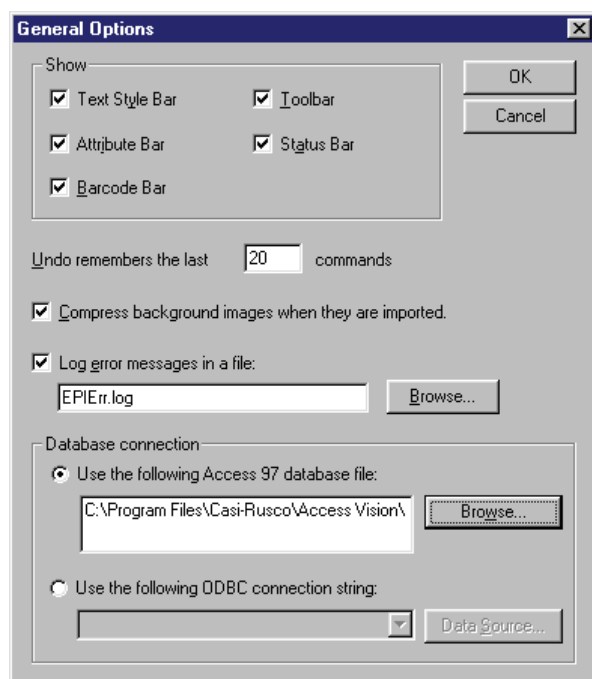
Setting Up the Imaging Workspace

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 select becomes the default setup used each time you start Imaging.

To set up your Imaging workspace:

1. From the View menu, select the Options command.

Result: The General Options window displays.



2. In the Show section of the General Options window, 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 settings.

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 badge design, and then set the circle's line colour from black to red, those actions represent two levels that can be

undone. Therefore, if you select the Undo command twice, the first usage would revert the circle's line colour 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.

To undo an action or command:

1. From the View menu, select the Options command.
Result: The General Options window displays.
2. In the field entitled "Undo remembers the last N 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 settings.

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.

To enable the logging option:

1. From the View menu, select 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.
3. Click Browse to locate the drive/directory where the log file should be stored.
Result: The Save As dialog box will appear, allowing you to navigate through the various drives and directories that are available locally and on your network (if the workstation is on a network).
4. Click Ok, or proceed to the next section for more configuration settings.

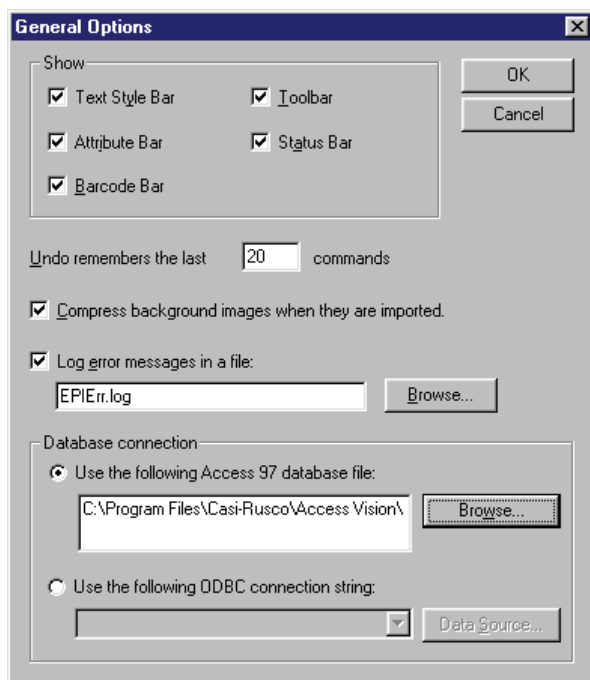
Setting Database Connections

The database connection you identify will become the default setting used each time you start Imaging.

To set up your database connection:

1. From the View menu, select the Options command.

Result: The General Options dialog box displays.



2. In the Database connection portion of the dialog box, select Use the following ODBC connection string:
3. From the drop-down list, select DSN=EPI-DATABASE; or click the Data Source button.

Result: The ODBC Data Source Administrator dialog appears allowing you to identify your database connection, and then click Ok.

4. Click Ok in the General Options dialog box.

Importing or Removing Badge Background

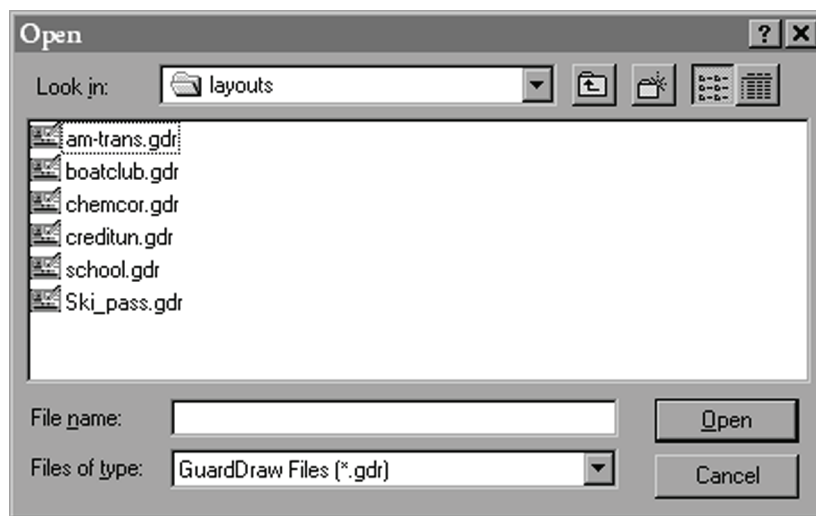
Some badge backgrounds use graphics, such as bitmap images, which are created in other draw or paint programs. The background is the “landscape” against which the various badge design objects (such as images and text objects) are placed.

Importing the Badge Background

To import the badge background:

1. Make sure that you have selected the appropriate badge design window (either the front or the back).
2. From the Edit menu, select the Background > Import 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 import into your badge design, or explore to move to your file.
4. Click Open.

Result: The Crop dialog box will appear with your badge 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 badge background will be placed on either the front or the back of your badge design.

To Crop the Badge Background

When you add a background image to the badge design, it is placed in a dialog box that allows you to crop. 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 16.

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

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. Left-click and drag to 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 badge background will be placed on either the front or the back of your badge design.

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 badge background will be placed on either the front or the back of your badge design.

Removing the Badge Background

To remove the badge background:

1. Make sure that you have selected the appropriate badge design editing window (either the front or the back).
2. From the Edit menu, select the Background > Remove command.
3. The system will ask: "Are you sure you want to remove the background image from the front/back of the badge?" Select Yes to remove the badge background image. Select No to cancel.

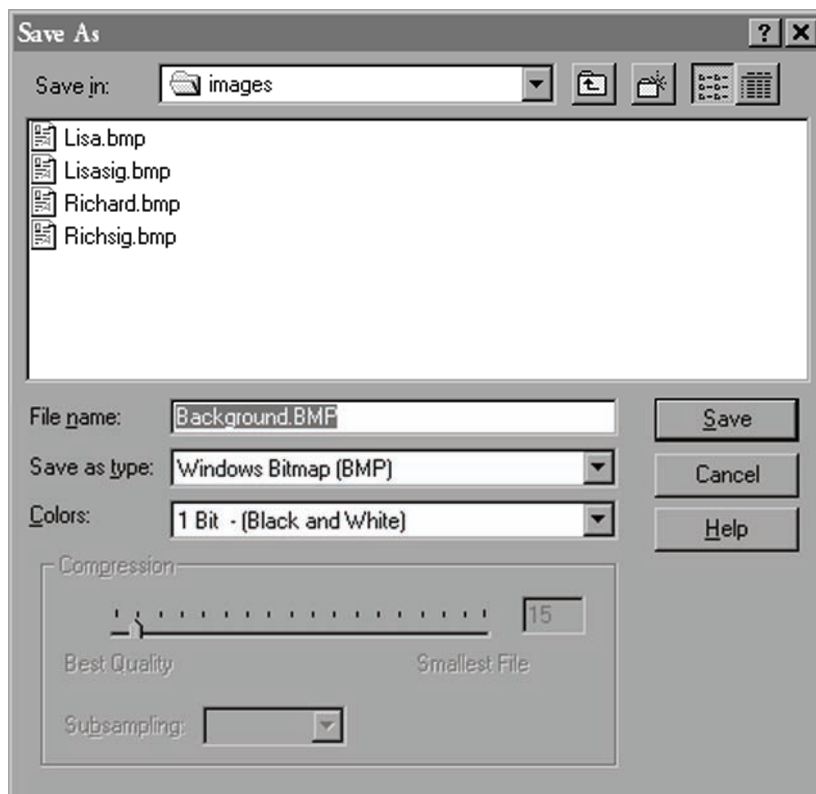
Exporting the Badge Background

To export the badge background:

From the Edit menu, select the Background > Export 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.

Figure 7: Badge Background Save As Screen



Drawing Shapes

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

Lines

To draw a line: 

1. Click the Line button in the Toolbar, or select 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.

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

To draw a rectangle:

1. Click the Rectangle button in the Toolbar, or select 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.

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.
3. Drag the pointer to a new position on the editing screen to adjust the size of the rectangle.
4. When you are satisfied with the rectangle's new size and shape, release the left mouse button.

To draw a perfect square:

Hold down the Shift key while you draw the rectangle.

Round Rectangles

To draw a round rectangle:

1. Click the Round Rectangle button, or select 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.

To edit or resize 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 to adjust the size of the object.
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.

To draw a perfect square:

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

Ellipses

To draw an ellipse:



1. Click the Ellipse button in the Toolbar, or select 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.

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.

To draw a perfect circle:

Hold down the Shift key while you draw the ellipse.

Polygons

To draw a polygon:

1. Click the Polygon button in the Toolbar, or select 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 as needed.
6. To add the last side, double-click where you want the point to end.

To edit a polygon:

1. Select the polygon.
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 the sides of the polygon as needed.

Adding Static and Dynamic Text

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 badge to badge (for example, the first name of the badgeholder).

The dynamic text/data field options available through the Text drop-down list are the fields available from the Badges application in Alliance 8300.

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

Creating Static Text Objects

To create static text objects:

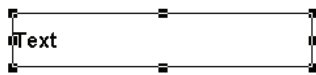
1. Click the Text button in the Toolbar, or select the Text command from the Draw menu.
2. Click the arrow to the right of the Text/Data Field drop-down list in the Attribute Bar.

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

3. Select <STATIC TEXT> from the drop-down 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 text box, and then drag the pointer. A box stretches from the anchor point to the new pointer position.



6. When you are satisfied with the size and location of the text box, release the left mouse button.
7. Double-click the text box, or select the text object and select Object Properties from the Edit menu.

Result: A Static Text Properties dialog box will appear.

8. Edit the text in the box to the text you want displayed.
9. Make whatever option selections are necessary, and then click Ok.
10. Select the font, style, and point size by using the drop-down lists in the Text Style Bar, or by choosing the Font command in the Style menu.
11. Select the text colour by using the Text colour drop-down list in the Attribute Bar, or by choosing the Text colour command in the Object menu.
12. Adjust the text justification by using the Justify buttons in the Text Style Bar.
13. Select the text box line and fill colours by using the drop-down lists in the Attribute Bar, or by using the Line colour and Fill colour commands in the Object menu.
14. Adjust the text box line width by using the Line Width drop-down list in the Attribute Bar.
15. Click the horizontal and vertical justification buttons, to determine the text object's placement within the text box.

Creating a Dynamic Text Object

To create a dynamic text object:

1. Click the Text button in the Toolbar, or select the Text command from the Draw menu.
2. Click the arrow to the right of the Text/Data Field drop-down 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 “Creating Static Text Objects” on page 32.
5. Double-click the text box, or select the Object Properties command from the Edit menu.

Result: The Dynamic Text Properties dialog box will appear.

6. Make whatever option selections are necessary, and then click Ok. Refer to Editing Object Properties for more details.
7. Repeat steps 10 to 15 in “Creating Static Text Objects” on page 32.

Converting a Static Text Object to a Dynamic Text Object

To convert a static text object to a dynamic text object:

1. Select the text object.
2. Click the arrow to the right of the Text/Data Field drop-down 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 drop-down list.

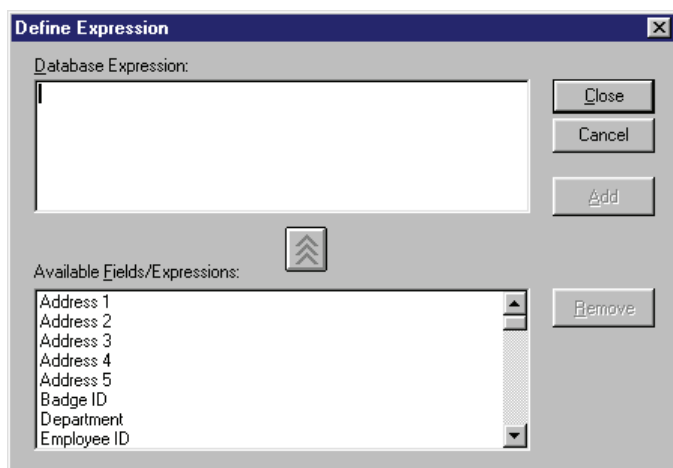
Defining Expressions

Alliance 8300 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, colours, text size, and resizing options will apply to the expression as a whole instead of individually.

To define expressions:

1. From the Edit menu, select Define Expression.

Result: A Define Expression dialog box is displayed.

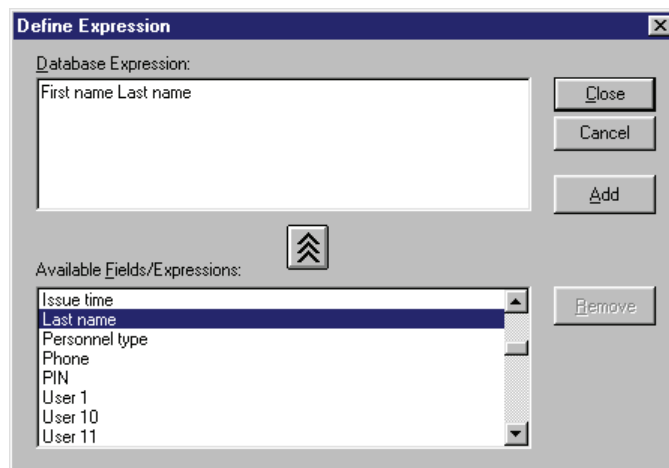


2. Database Expression: contains the new expression being created. Available Fields/Expressions: contains all of the available fields from the badge record. To combine fields, select the field from the bottom, then click the up arrow.

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 spacebar.

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.



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 spacebar.

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.

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 "Defining Expressions" on page 34, or select an existing expression.

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

Example

Original (implicit) expression: First name: First name

Both occurrences of First name will be replaced by the badgeholder's first name.

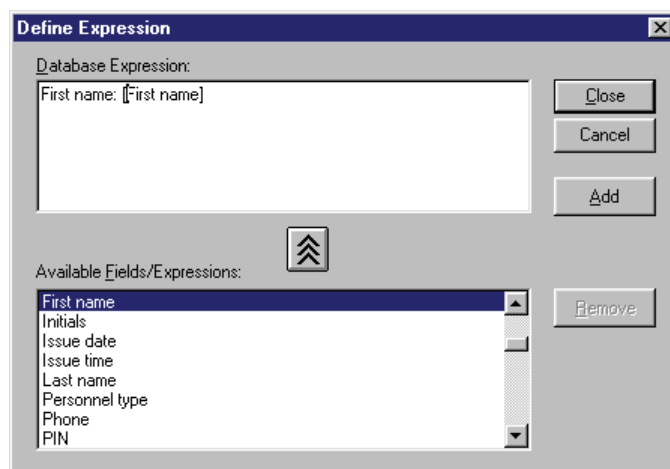
Result: Jack: Jack

Explicit expression: First name: [First name]

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

Result: First name: Jack

An example dialog box is shown below.

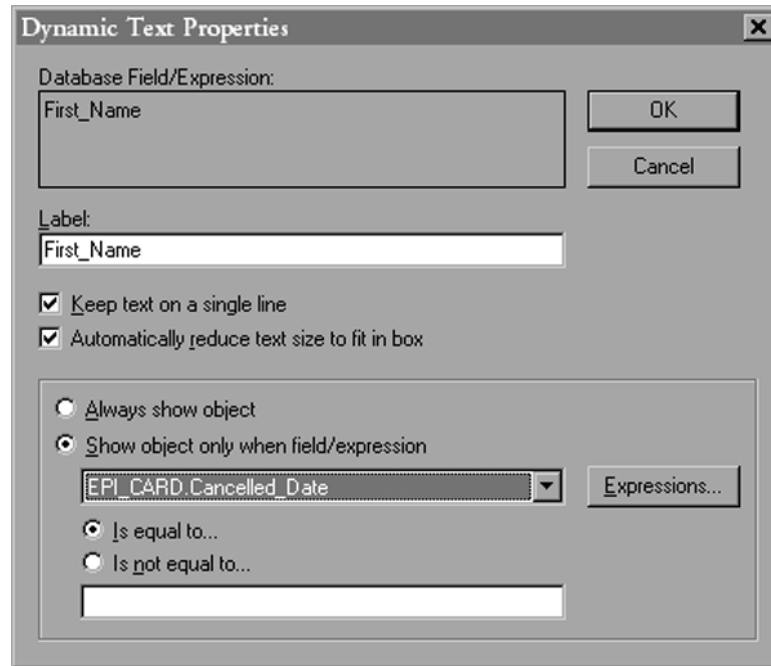


4. Once your expression has been properly defined, click Add.
Result: It is added to the list of available database fields and expressions.
5. Repeat for each expression that you want to define, click Close when you are finished.

Using Expressions as Dynamic Text Objects

You may select any available expression when creating a dynamic text object, just as you would select a 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). For additional edit instructions, refer to "Dynamic Text Properties" on page 56.

Figure 8: Dynamic Text Properties



Adding Images

Digital images such as photographs, signatures, and clip art can be added to the badge 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 keyline that indicates where the image will be printed.

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

Adding Database Images

To add database images:

1. Click the Db Image button in the Toolbar, or select the DB Image command from the Draw menu.

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

2. Click the arrow to the right of the Static Text/Data Field drop-down list.

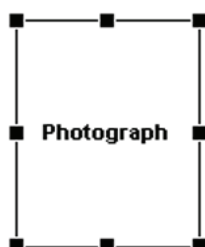
Result: The list will expand to reveal your available data field options (for example, Photograph or Signature).

3. Select Photograph to draw a photograph keyline on the badge, 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.

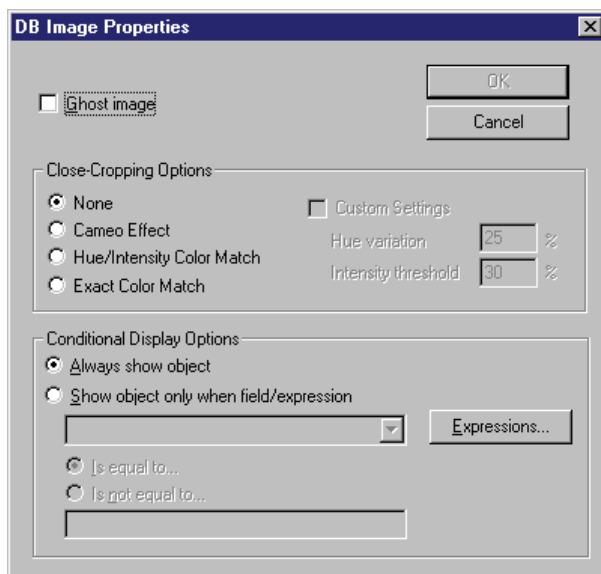
Note: Do not worry about sizing the keyline to its proper dimensions when you draw it on your badge design. All keylines are automatically constrained to the aspect ratios of their respective images, as defined in the Imaging application; therefore, they will always print perfectly, no matter what size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



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

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

7. While the Photograph keyline box is still selected, right-click within the keyline to bring up the DB Image Properties screen.



Refer to “DB Image Properties” on page 57 for complete details of the features on the DB Image Properties screen.

Creating a Ghost Image

A ghost image is generally used in addition to a regular image, and can be placed anywhere on the badge 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 55.

Creating 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 55.

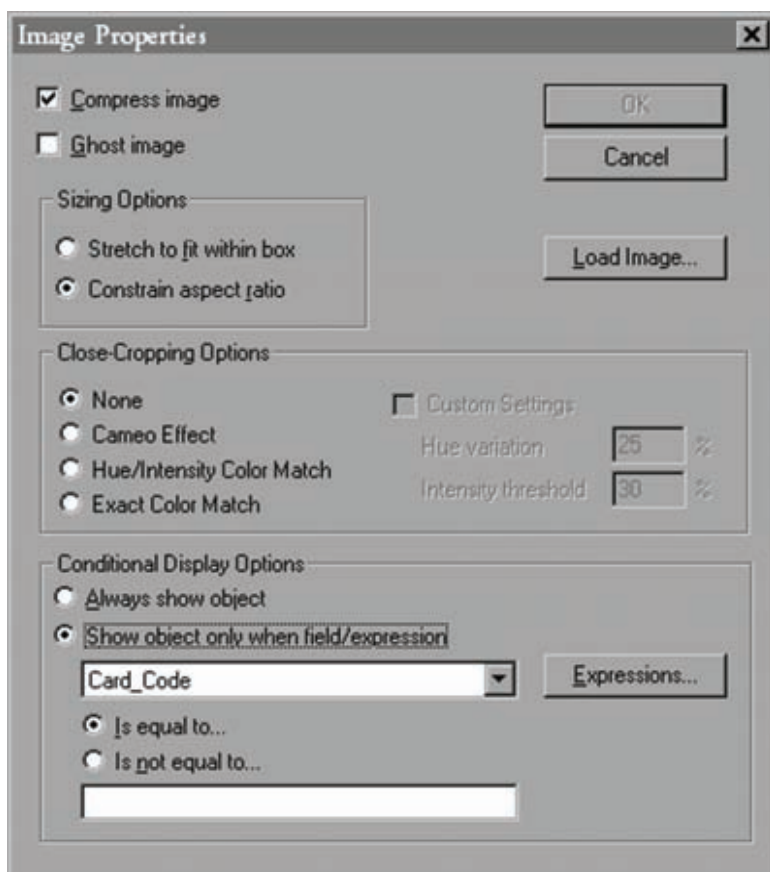
Adding Images

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

To add images:

1. Click the Image button in the Toolbar, or select 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.

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



- Click Load Image. An Open file dialog box appears.
- Select the image file you want to load into your badge design, and click Ok.

Result: You will be returned to the Image Properties dialog box, and the image will be loaded onto the badge design. If you want, 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 immediately see how they will affect the appearance of the image.

- Select whatever image property options are necessary. Refer to “Editing Object Properties” on page 55.
- 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 55.

Resizing an Image Object

To resize an image object:

- Select the image.

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

- 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.

Drawing 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 badge 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.

"Barcode Properties and Values - An Overview" below contains descriptions of the various types of barcodes that can be added to your badge design.

Note: More importantly, you should first refer to your hardware documentation for information on the types of barcodes supported by the badge reader you have purchased.

Barcode Properties and Values - An Overview

The following barcode properties are available in the Barcode Property drop-down 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 a 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 Cyclical Redundancy Checking (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. This is 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 is 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 six 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 six 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 PostalCode):** 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.
- **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 badge that requires customer or employee profiles, biometric data, and personal descriptions). Refer to “Setting Up PDF417 Barcodes” on page 46 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 select between three subsets directly (A, B, or C) or you can select 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 drop-down 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 “Barcode Type” on page 41 for more information. If you select Barcode Property as Checksum, the Value drop-down list checksum selections will display.

Direction

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

Table 3: Barcode Property Controls

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 affects only the following: Code 3 of 9, Extended Code 3 of 9, and Interleaved 2 of 5.

Barcode Ratios (Wide to Narrow) are as follows:

- 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.

Show Text

The data entered as a Value when selecting a Text barcode property will appear on a line beneath the barcode when you select this option. When this property is selected, the Value drop-down list changes to a toggle on/off selection. The barcode changes on the editing screen as you make your selection. This type of barcode is not readable by all readers.

Drawing a Barcode

To draw a barcode:

1. Click the Barcode button in the Toolbar, or select 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.

Linking the Barcode to a Database Field or Expression

In order for the barcode to convert and use the proper data from Alliance 8300, you must link it to one of the database fields available in Alliance 8300 Imaging.

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 drop-down list, and select the field to which the barcode should be linked.

Setting the Barcode Properties and Values

To set the barcode properties and values:

1. Click 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.

Setting Up PDF417 Barcodes

What is PDF417?

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

The Symbol PDF417 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 badge. This information is then readily available to physicians anywhere in the world, without their having to contact the badgeholder’s local hospital.
- Security clearance and other departmental data can be encoded on corporate identity badges, 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 badge with such marketing information as the customer’s birthday or anniversary, buying preferences (such as favorite brands and colours), clothing sizes, charge badge 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

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.

Result: 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.

5. 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.
6. Link the barcode to a database field or expression, according to the instructions in the next section, "Linking a Barcode to a Database Field."

Linking a Barcode to a Database Field

To link a barcode to a database field/expression:

1. Click the Select button in the Toolbar, or select Select from the Draw menu.
2. Click 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" below.

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

To set barcode properties and values:

1. Click the Select button in the Toolbar, or select Select from the Draw menu.
2. Click 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.

Table 4 below describes PDF417 properties and their allowable value settings.

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

Table 4: PDF417 properties and values

Property	Description	Allowed value
Text	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.	123456
Rows	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.	Auto, 3 to 90
Columns	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.	Auto, 1 to 30
Aspect	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.	1:2
ECC Level	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.	0 to 8
X Dimension	Sets the X dimension of the narrowest element, in mils. The default setting is 13.33 mils.	3.33 to 66.66

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 badge 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 Table 5 on page 50 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 six characters per inch, will require approximately three 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 select 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 nine alphanumeric characters in length, enter nine sample alphanumeric characters in the Value field. The barcode on your badge design will automatically resize itself to accommodate the new character length.
- If the barcode is too long to fit on your badge design, select the barcode and select 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 badge design is automatically reduced in the length.
- If you reset your Ratio and you still cannot fit your barcode onto your badge design, adjust the narrow bar width itself. To do this, select 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 badge 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 badge printer, the standard resolution is 300 dpi.

- Because of lowered resolution, barcodes that read well from paper may not read well from a badge. 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 badge printer to accurately print without bleeding the lines together. Always print a test badge 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. Barcode 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.”

Caution: *Printing barcodes is unpredictable.* Test one badge by scanning through a known-used reader at your facility prior to issuing additional badges.

Table 5: 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
Post Net (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

Style	Minimum Size
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 Plane barcodes can be printed against a process black background and still be used by infrared badge readers. Since infrared readers do not identify process black, this combination of pure and process blacks 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 colour 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 colours 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.

To set the barcode to print in pure black:

1. Click the barcode using the Select tool.
2. Click 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 badge printer supports K Plane (pure black) printing.

To Set the Barcode Background colour

While the default barcode background colour is white, and should generally remain white, the application allows you to specify any other colour (including no colour or transparent) to prevent the illicit duplication of ID badges 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 colour other than white, first make sure that your reader is capable of distinguishing the code from the colour 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).

To print the barcode on the K Plane:

1. Using the Select tool, click the barcode.
2. Change the barcode background fill colour by selecting from the sixteen quick-access colours in the Fill colour drop-down list, or select the Fill colour command from the Object menu for a more extensive selection of colours.

Moving and Rotating Objects

Dragging objects with the mouse lets you position them interactively.

Moving an Object

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.”

Leaving the Original Object Behind

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.

Rotating an Object

To rotate an object:

1. Select the object you want to rotate.
2. Select 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 badges with different front and back page orientations.

Resizing Objects

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 width or fill colour, can be changed at any time while you are creating or editing the badge design.

Changing Line Attributes

To change line attributes:

1. Using the Select tool, click the line.
2. Change the line colour by selecting from the sixteen quick-access colours in the Line colour drop-down list, or select the Line colour command from the Object menu for a more extensive selection of colours.
3. Change the line width by selecting from the Line Width drop-down list in the Attribute Bar.

Changing Object Attributes

To change object attributes:

1. Using the Select tool, click the object (for example, a rectangle, image, or text object).
2. Change the line colour by selecting from the sixteen quick-access colours in the Line colour drop-down list, or select the Line colour command from the Object menu for a more extensive selection of colours.
3. Change the fill colour by selecting from the sixteen quick-access colours in the Fill colour drop-down list, or select the Fill colour command from the Object menu for a more extensive selection of colours.

4. If the object is static or dynamic text, change the text colour by selecting from the sixteen quick-access colours in the Text colour drop-down list, or select the Text colour command from the Object menu for a more extensive selection of colours.
5. Change the line width by selecting from the Line Width drop-down list in the Attribute Bar.

Changing Signature Fill and Text Attributes

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

To change signature fill and text attributes:

1. Using the Select tool, click the signature.
2. Change the fill colour by selecting from the sixteen quick-access colours in the Fill colour drop-down list, or select the Fill colour command from the Object menu for a more extensive selection of colours. Select “x” for no fill, so that the signature is printed against the badge background.
3. Change the colour of the signature itself by selecting from the sixteen quick-access colours in the Text colour drop-down list, or select the Text colour command from the Object menu for a more extensive selection of colours.

Setting Default Attributes

If you plan to create several objects with the same attribute settings (such as line width or fill colour), and you do not want to reset the attributes for each individual object, you can specify them as defaults by performing the following tasks:

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.

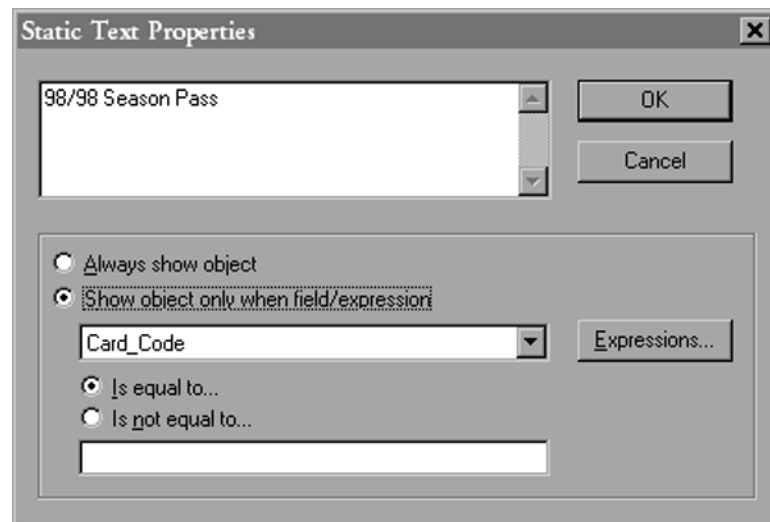
Editing Object Properties

Static Text Properties

To edit static text properties, Double-click the text box using the Select tool, or select the text object and select Object Properties from the Edit menu.

Result: The Static Text Properties dialog box appears.

Figure 9: Static Text Properties



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 60.

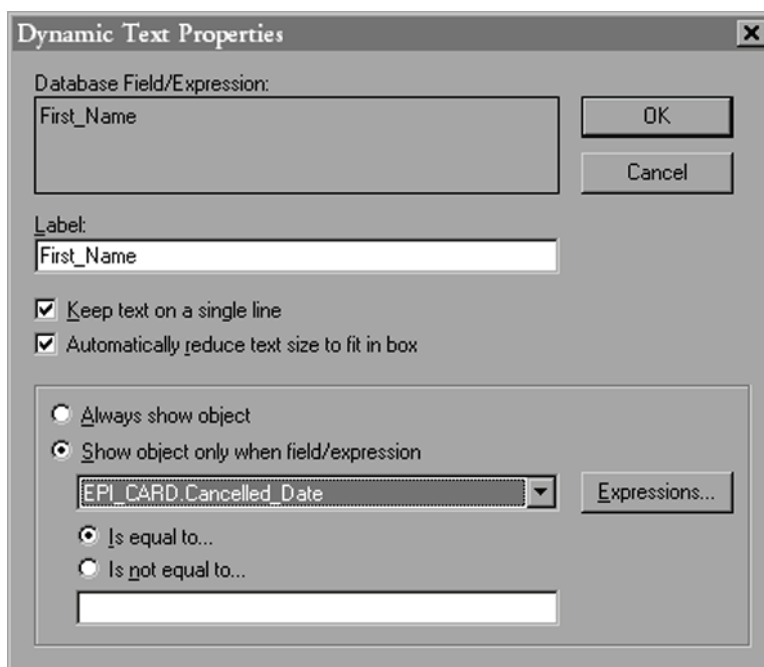
Make whatever option selections are necessary, and then click OK.

Dynamic Text Properties

To edit dynamic text properties, Double-click the text box using the Select tool, or select Object Properties from the Edit menu.

Result: A Dynamic Text Properties dialog box appears.

Figure 10: Dynamic Text Properties



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 badge was issued is called `Issuance_date`, you might want to rename the label "Issue Date" to better identify it on your badge 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:** Select this check box if you want to keep the dynamic output text on a single line. If you do not select this check 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:** Select this check 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 60.

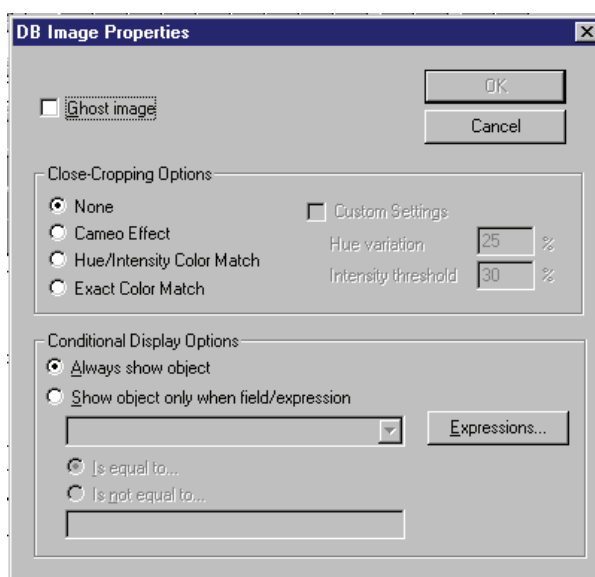
Make whatever option selections are necessary, then click *Ok*.

DB Image Properties

To select DB Image Properties, Double-click the database image using the Select tool.

Result: The DB Image Properties dialog box appears.

Figure 11: DB Image Properties



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 badge 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 67.

Note: Close-cropping options are not supported by all printers.

- **None:** Select this option if you do not want to close-crop the image.
- **Cameo Effect:** Select 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 badgeholder’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 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 colour Match:** Select 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 colour Match option. Click the Custom Settings check box (described below), and enter your custom Hue Variation and Intensity Threshold percentages.
- **Exact colour Match:** Select this option if you want to remove all background pixels that are exactly the same colour. This option is particularly useful for solid-colour backgrounds, which are commonly found in hand-made bitmap files (such as logos).
- **Custom Settings:** This check box and its corresponding settings are enabled when you select the Cameo Effect and Hue/Intensity colour Match options. 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 along the colour 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 along the specified percentage of the colour spectrum. A higher value means that the application will scan and remove pixels across a wider percentage of the colour 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 colour ranges).

Intensity Threshold: This is the percentage that is used to scan for variations in colour 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 range.

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 colour 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 bullet below.

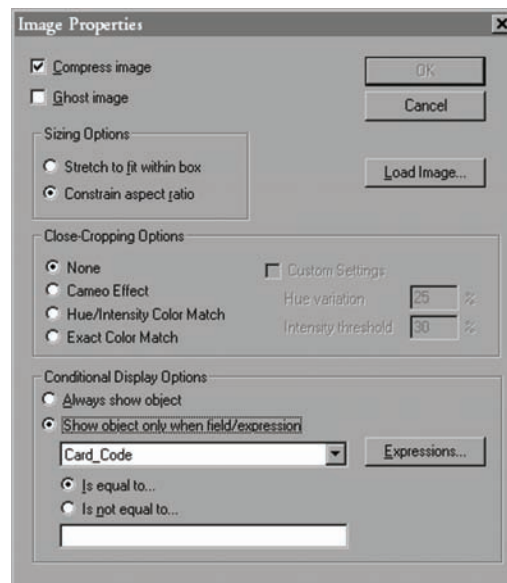
Make whatever option selections are necessary, and then click OK.

Image Properties

To select Image Properties, Double-click the image object using the Select tool, or select Object Properties from the Edit menu.

Result: The Image Properties dialog box appears.

Figure 12: Image Properties



The following options will be available to you:

- **Compress Image:** Select this option if you want to maintain the original Image file's compression ratio.
- **Ghost Image:** Refer to “DB Image Properties” on page 57.
- **Stretch to Fit Within Box:** Select 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:** Select this option if you want to constrain the image's aspect ratio, thus protecting the image from distortion.
- **None:** Refer to “DB Image Properties” on page 57.
- **Cameo Effect:** Refer to “DB Image Properties” on page 57.
- **Hue/Intensity colour Match:** Refer to “DB Image Properties” on page 57.
- **Exact colour Match:** Refer to “DB Image Properties” on page 57.
- **Custom Settings:** Refer to “DB Image Properties” on page 57.

- **Conditional Display Options:** Conditional display options are available only. For complete information on these settings and what they do, see “Conditional Display Options” below.

Make whatever option selections are necessary, and then click OK.

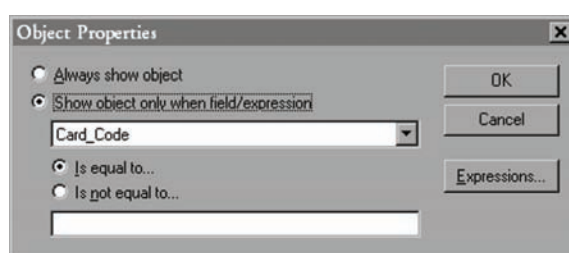
Object Properties

To select object properties:

Double-click the object using the Select tool, or select Object Properties from the Edit menu.

Result: The Object Properties dialog box appears.

Figure 13: Edit Menu Object Properties



Conditional display options will be available to you. For complete information on these settings and what they do, see “Conditional Display Options” below.

Make whatever option selections are necessary, and then select OK.

Conditional Display Options

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

- **Always Show Object:** Select this option if you want to print the object on all ID badges.
- **Show Object Only When Field/Expression:** Select this option if you want to print the object on specific ID badges. The field beneath this radio button will be enabled. To define the instances in which this object should be printed on the badge, click 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 entries.

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

- **Is Equal To:** Select this button to set the condition under which the object will be printed on the ID badge. In this instance, the object will print on the ID badge only when the field/expression entered above is 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 the word Accounting, you would click 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:** Select this button to set the condition under which the object will be printed on the ID badge. In this instance, the object will print on the ID badge 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 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:** Select this option to define database expressions for object printing conditions.

Selecting colours

Using the Attribute Bar Lists

To select colours using the attribute bar lists, select the object.

- If you want to change the line colour, select any of the sixteen quick-access colours from the Line colour drop-down list in the Attribute Bar.
- If you want to change the fill colour, select any of the sixteen quick-access colours from the Fill colour drop-down list in the Attribute Bar.
- If you want to change the text colour, select any of the sixteen quick-access colours from the Text colour drop-down list in the Attribute Bar.

Using the Colour Dialog Box

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

To select colours using the colour dialog box:

1. Select the object.

- If you want to change the line colour, select the Line colour command from the Object menu.
- If you want to change the fill colour, select the Fill colour command from the Object menu.
- If you want to change the text colour, select the Text colour command from the Object menu.

2. In the colour dialog box, select the colour you want from the palette by clicking it with the left mouse button.
3. Click OK.

Defining Your Own colours

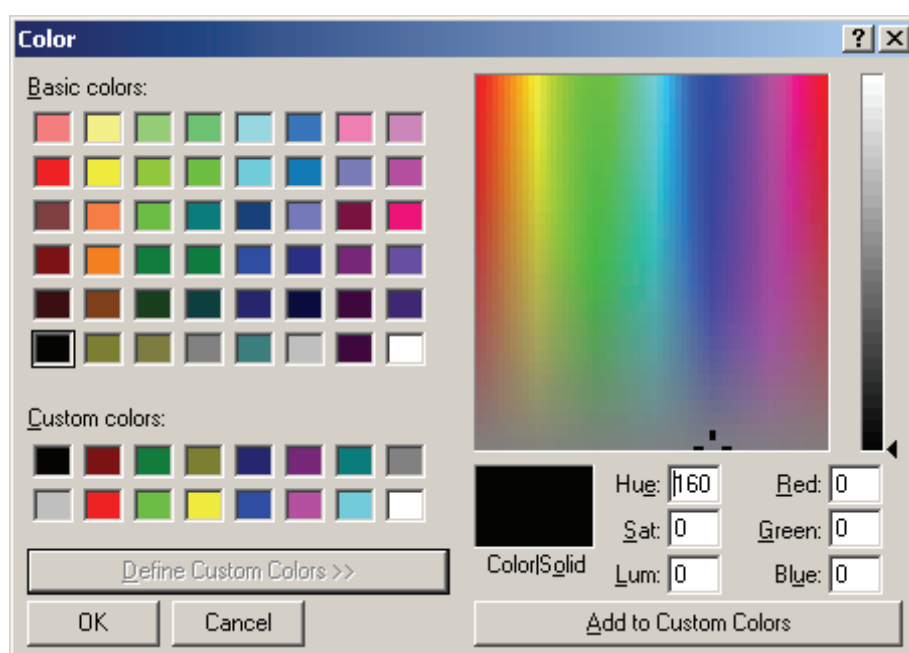
You can define your own colours and apply them to screen elements.

To create your own colours:

1. In the Object menu, select either the Line colour, Fill colour, or Text colour commands. The colour dialog box will be displayed.



2. Click Define Custom colours button.



3. Drag the cursor in the colour refiner box, and the arrow beside the luminosity bar, to define your colour. You can also create a colour by typing numbers in the Red, Green, and Blue boxes, or in the Hue, Sat (saturation), and Lum (luminosity) boxes.
4. The colour you create is shown in the left side of the colour/Solid box. You can double-click the right side of the box, or press Alt and O to use the solid colour that most closely resembles the one you have created.
5. In the Custom colours palette, select an empty box for the new colour, or select an existing colour that you want to change.
6. Click the Add To Custom colours button.
7. Create any other colours 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 colour, with output process colours in the following models: CMY (cyan, magenta, and yellow), CMYO (CMY plus a protective overlay); CMYK (CMY plus pure black), and CMYKO (CMYK plus a protective overlay). Each colour is considered a “plane”.

CMYK

For CMYK, ribbon-based ID badge printers will use individual ribbons or ribbon segments for each process colour. Some colour document printers, like the HP DeskJet 560C, have a CMY ink cartridge and a pure black (K) ink cartridge.

As the badge is passed through the printer, each plane is applied to the badge in such a way that it is combined with the other planes to achieve a desired colour. For example, if you were to print process black on a badge, 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 badge. It is used to protect the badge from wear and tear.

Placing Objects on the K Plane

To place objects on the K Plane:

1. Using the Select tool, click 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 badge printer supports K Plane printing.

Placing Objects on the O Plane

To place objects on the O Plane:

1. Click Select, or select Select from the Draw menu.
2. Click the object that you want to place on the O Plane.
3. Click the Overlay button.

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

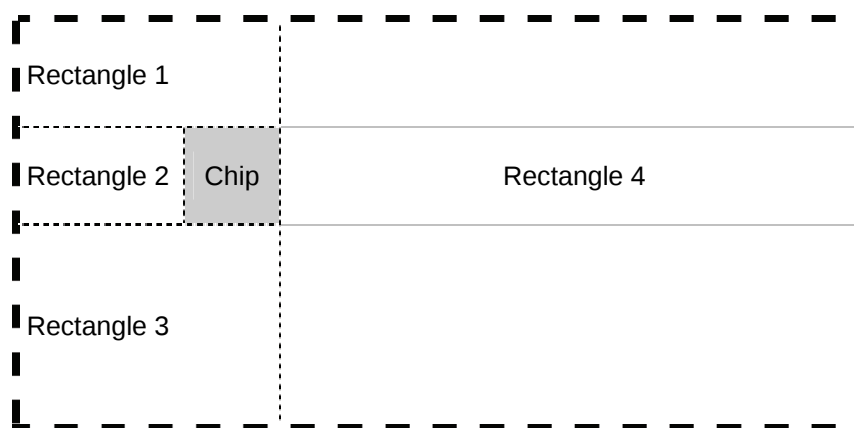
In general, applying protective overlays is a simple task when printing ordinary ID badges. It becomes more complicated when you apply them to badges that have embedded smart chips.

By default, a protective overlay is applied across the entire surface of every badge, unless you place a single badge 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 badges with smart chips, as applying an overlay to a Smart Chip will render the chip inoperable.

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

Figure 14: Arrangement example



Note: The rectangles do not require a fill/line colour or a line width (they remain invisible on the editing screen), as O Plane objects have 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 badge.

Setting Up Magnetic Stripe Information

Using Magnetic Stripes to Retrieve Badgeholder 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.

Note: See “Magnetic Encoding” on page 76 instructions on how to set up the printer with the encoding command information.

Allowable Track Information

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

Table 6: Magnetic Stripe Encoding Details

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 badge has been successfully encoded. If a badge is not encoded properly, the printer ejects the blank badge 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.

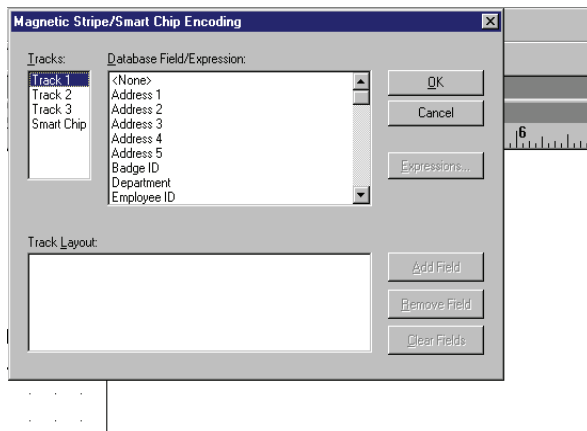
Note: You do not need to add special data characters to signify Start Sentinels, End Sentinels, and Field Separators (as defined by ISO 7811-2 standards). The Imaging application adds these characters automatically during the encoding process.

Magnetic Stripe Tracks

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 badge 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 list box.
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 badge design when you select Save or Save As from the File menu. The physical encoding of the magnetic stripe occurs when you print or externally encode the badge with the application.

Removing Individual Fields and Expressions

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 list box, and click Remove Field.

Removing All Fields and Expressions

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.

Tips and Tricks

Creating Your Own Badge Backgrounds

There are plenty of software packages available that offer high resolution bitmap images that can be used as badge 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 badge 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 badge 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) colour setting.
- If you prefer to use a draw program, export your badge background graphic with a one-to-one pixel setting. Set the output resolution to at least 300 dots per inch with a 24-bit colour 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 colours, to conserve disk space. The end result will be noticeably inferior to 24-bit colour output. Sixteen million colours will give your badge 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 badges. ID badge printers do not always output the colours you see on your screen. Test-printing allows you to adjust the colour output to your satisfaction before you go into full ID badge production.

Large Badge Background Files

Large badge background files can greatly impede your ability to draw or resize objects in your badge design. If you find that your badge 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

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 badge 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 any of the Close-Cropping options. You can immediately view its affect on the image. If you customize the Cameo Effect and Hue/Intensity colour 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 badge design and use these new settings in the Close-Cropping Options area of the Image Properties dialog box.

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-coloured 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-coloured backdrop.
- If you are using the ambient lighting in an office, rather than specialized photographic lighting, place your subjects against a colourful 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 badgeholder.

Nudging Objects

You can “nudge” Imaging objects one pixel at a time, to place them on your badge 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 colour for the copy, and staggering the lighter-coloured original on top of the copy.

Selecting/Deselecting Multiple Objects

You can select multiple objects by holding down the Shift key and clicking 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! Do not hold down your left mouse button while the pointer is located over an object and then move the pointer, 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, Full Name), 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 badge during the printing process.

Typography

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

- Never use more than one or two fonts in your ID badge 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 badge 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 widths in a serif font). Set the point size to at least 10.
- If you are using a badge background bitmap, ensure your typeface fill colour makes your text object stand out against the background. Generally, yellow and white characters can be easily read against dark background colours. 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 badge and try to read it at arm's length. If you cannot see what is written on the badge, select a different font.

Printing a Badge

Introduction

This section covers the steps for setting up printers, selecting a badge design, selecting a badge printer, and printing a badge.

Setting Up Printers

Note: Refer to *Alliance 8300 Installation Guide*, “Appendix B”, for additional printer installation instructions.

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

To Install a Printer Driver

Confirm the badge printer installation by selecting Start, Settings, then Printers. If the printer you will be using for badges is not listed, you will need to install at this time.

Follow the printer installation instructions provided by your printer manufacturer. You will select a driver during the printer installation process.

Selecting a Badge Design

To select a badge design:

1. Select Personnel, Person, then the Photo tab.
2. Click Search.



Result: The Capture Image/Signature and Print buttons are now enabled.

3. Select one of the designs from the Badge design pulldown list. Your screen should look similar to Figure 15 below.

Figure 15: Person Form - Photo Tab

The screenshot shows the 'Person Form' window with the 'Photo' tab selected. The form includes fields for 'Last Name' (Zhang) and 'Facility' (Ignore Facilities). Below these are tabs for 'Personnel', 'Location', 'User Fields', 'Photo', and 'Access Rights'. The 'Photo' section contains a 'Photo' field with a sample photo, a 'Taken' date field (2011-01-24), a 'Capture Image/Signature...' button, and a 'Signature' field. The 'Badge' section contains a 'Badge design' pulldown menu with options: 'badge design 1', 'badge design 2', and 'badge design 3'. To the right of the form is a table with columns 'First Name', 'Last Name', and 'Ini'. The table contains three records: 'MASTER', 'Installer', 'H'; 'MASTER', 'User', 'H'; and 'Helen', 'Zhang', 'H'. At the bottom right, there are navigation buttons and a 'Records: 3' indicator.

First Name	Last Name	Ini
MASTER	Installer	
MASTER	User	
Helen	Zhang	H

Printing the Badge

To print the badge, click  Search on the Person Form, Photo tab, then select a badge to print from the records list displayed to the right of the screen.

Select Print.

Result: The Alliance 8300 Badge Print dialog box displays.

Figure 16: Alliance 8300 Badge Print Screen

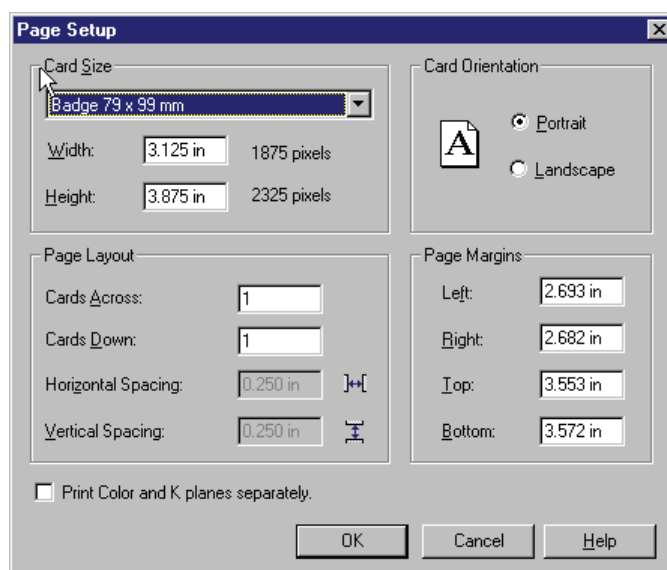
The screenshot shows the 'SPBadgePrint' dialog box with the following buttons: 'Print Preview', 'Encoder Settings', 'Print Setup...', 'Encoder Only', 'Print', and 'Cancel'.

The following option buttons will be available to you:

- **Print Preview:** This is a preview of your badge design and person record as it will print on your badge.

- **Print Setup:** A Page Setup screen appears allowing you to set card size, orientation, layout and margins.

Figure 17: Page Setup Dialog Box



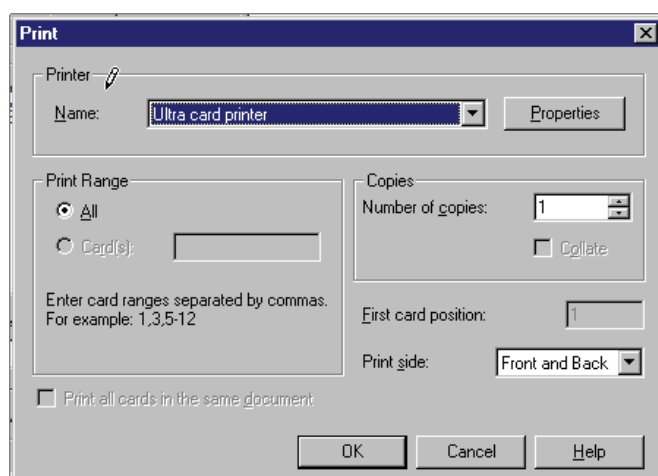
- **Encoder Settings:** The Card Printer Encoder Setup screen appears and allows you to set up encoder properties. Refer to “Setting Up Magnetic Stripe Information” on page 65.
- **Encoder Only:** Allows processing of encoder information only onto a badge.
- **Cancel:** The Alliance 8300 Badge Print dialog box screen will close.
- **Print:** The Print dialog box displays. See “Selecting a Badge Printer” below.

Selecting a Badge Printer

To select a badge printer:

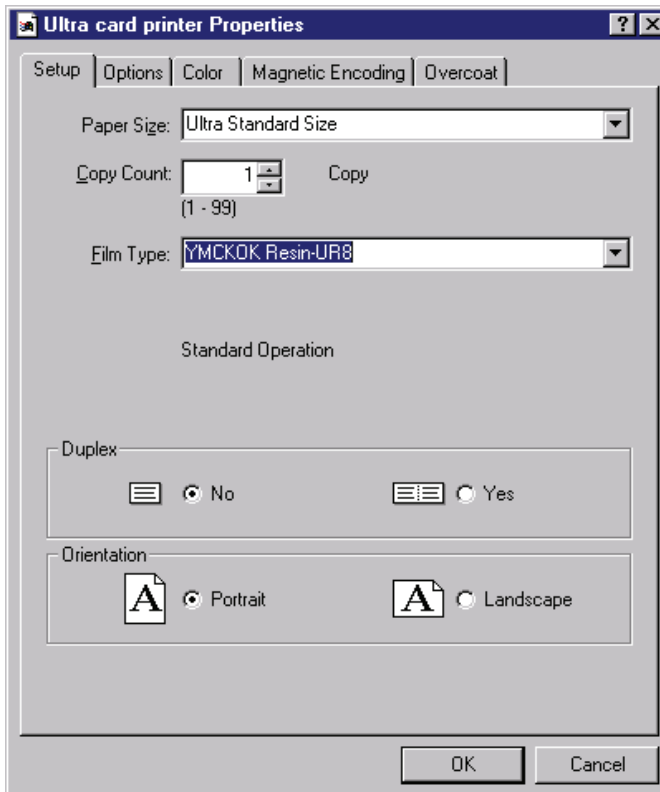
1. Select Print from the Photo tab of the Person Form.

Result: The Print dialog box appears.

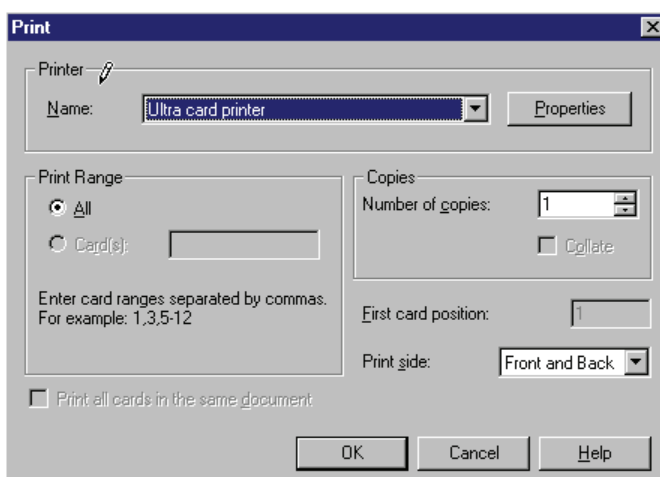


2. The default printer (as specified in the Windows Printers control panel) will appear in the Name box. To select a different printer, scroll through the drop-down list and select from the printers displayed.
3. Select the Properties button and verify that the setup properties as displayed on the Setup tab are appropriate for your printer and the badge layout you are executing.

Your screen should look similar to the following:



4. Click OK to close the printer Properties.



To determine which side(s) of the badge to print, select one of the options from the Print side: drop-down list. If the badge 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 badge, select Front Side Only from the Print side: drop-down list. If you want to print the design in the Back editing window on the back of the badge, select Back Side Only. If you want to print the design in both editing windows on the front and the back of the badge 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 badges, or if you want to manually flip the badges over to print on their backs. If you want to manually flip badges over to print on the backs, especially if you are batch-printing both sides of the badges, you should know that this method will require a moderate amount of trial and error before you achieve satisfactory results.

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

5. Click Close or Ok to close the Print screen.
6. Click Save to save any changes made to the printer in the layout.

Result: The badge will print.

7. Click Save on the Alliance 8300 application toolbar.
8. Exit the Person Form.

Note: When restarting the *Badge Designer* interface, the option that was used the last time the application was run will automatically be selected.

Printing Full-Page Wanted Posters

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

1. At the Badge Design dialog, click New to create a new badge design.
2. Enlarge the Badge Designer window, and the badge design to full screen.
3. Under the File menu, select Print.

Result: The Print dialog appears.

4. Select Portrait as the orientation.

Result: The Badge Designer interface will appear.

5. On the Page Setup 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 34. Adjust the font and text size to your preference.
13. Expand the Photograph box to be the remaining size of the page. 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 Design 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. Click Preview to see how the poster will print on the page.
21. Click Print to print the poster.

Magnetic Encoding

Introduction

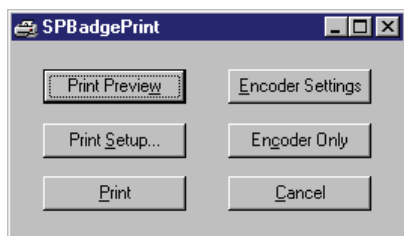
In order to correctly encode the magnetic stripe or smart chip on a badge, the encoding command information must be set up prior to printing. Refer to “Setting Up Magnetic Stripe Information” on page 65.

Magnetic Stripe Encoding

To set up the encoding option:

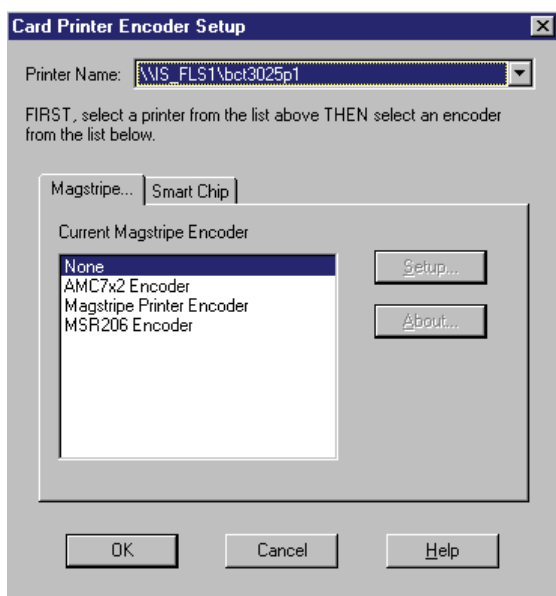
1. On the Person Form, Photo tab, click Search , then select a badge to print from the records list.
2. Select Print.

Result: The Alliance 8300 Badge Print dialog box displays.



3. Click the Encoder Settings button.

Result: The Card Printer Encoder Setup dialog will appear.



4. Select the badge printer that will be performing the magnetic stripe encoding.
5. Select the MagStripe tab.

6. Select Magstripe Printer 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 N printer? message.

Result: A File Open dialog will appear.

10. Navigate to: C:\Program Files\G&A Imaging Ltd\episuite sdk\5.0\Encoders Setup Files\Printer Magstripe.
11. Select the .enc file that matches your printer.
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.

Appendix A. Compatible Devices

Many external devices may be used with Alliance 8300 Imaging software, including printers, scanners, image capture cards, digital cameras, and signature capture devices.

A capture card is required only if you are using the capture feature of Imaging and you are using a video camera as the image source. UTC Fire & Security supports the Integral Technologies FlashPoint 3D Plus card.

Please note that support for certain Alliance 8300 Imaging features and functions may be product-specific and not necessarily supported by all compatible peripherals.

Appendix B. 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 UTC Fire & Security.

Flash

The flash unit you select can be either a part of the camera system or a separate unit that attaches to the top of a camera or small desktop 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 desktop 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 Alliance 8300 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.

Consider the following:

- The Alliance 8300 Imaging software has multiple options to enhance the photograph such as brightness, colour hue, and intensity of colour.
- The dye sublimation printer has multiple options to enhance the end product. These choices are found in the printer driver.
- 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.
- The subject's head and shoulders should be even with the camera lens. DO NOT shoot down or up to obtain the photo.
- The backdrop should be nongloss, 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.
- Background colours 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 colour, then this will allow the chroma-key options to more effectively remove the background later.
- 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.
- The subject's chair should easily raise and lower to accommodate various-sized people, unless your camera has tilt and zoom capabilities.
- *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.
- Subjects wearing eyeglasses present a challenge. Unless your camera or lighting system specifically addresses this problem, subjects with eyeglasses should raise or lower their head slightly to avoid a glare on their glasses.
- 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 two 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 set up 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 colour balance. Alliance 8300 Imaging will allow you to set up automatic post-capture image enhancements.

Once set up, 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 set up 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.

To set up the automatic post-capture image enhancement settings for an input device:

1. Open the Person form from the Personnel menu, then click the Photo tab. Select a record from the records list.
2. Select the Capture Image/Signature button to open the Alliance 8300 Image Capture dialog.
3. Right-click any image picture area to open the context menu.
4. From the context menu, click Select Image Type, and then select either Photograph or Signature.
5. From the context menu, select Input Device.

Result: The Select Profile dialog panel will appear. Select the input device for which you want to set the enhancement settings (for example, FlashPoint TWAIN 32).

6. Click the Properties button.

Result: The Capture Profile Properties dialog will appear.

7. Select the Perform automatic enhancements check box.
8. Click 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.

9. Capture a sample image.

Result: This will return to the Capture Profile Properties dialog

10. Click the Edit... button.

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

11. Use the slider controls to adjust the Exposure, Contrast, and colour Balance to the desired effects. These adjustments will later be applied to all images captured by this device.
12. Click Ok on the Image Enhancement dialog.

13. Click Ok on the Capture Profile Properties dialog.

14. 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.

15. Click the Capture Photo button.

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

16. 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 width (thickness) and colour. An object's fill attribute is a colour. Text objects also have attributes, such as the font (typeface), style and colour.

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

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

Badge reader. A badge 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 badges.

Badgeholder. The person for whom a badgeholder record is maintained, and to whom the printed badge is issued.

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 badgeholder will be placed against the badge background.

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 organise 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 select commonly-used entries for a specific category of information (such as Blue, Green, Brown or Grey, if you create a pick list for the badgeholder's eye colour).

Dynamic text object. A text object in a badge design that has been linked to a database field (such as the badgeholder'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 badgeholder'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 has a small amount of opacity (or mostly transparent), so that the badge 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 colour along the colour 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 colour on a scale from black to white.

Opacity. The degree to which something blocks the transmission of light. The opposite of transparency.

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.

Point size. 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 colour’s hue, moving from gray to the pure colour.

Static text object. A text object in a badge 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 badge to badge 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 badge that requires customer or employee profiles, biometric data, and personal descriptions).

Text box. A simple text field, which allows you to manually enter alphanumeric or numeric data.

TWAIN. Acronym for technology without an interesting name. TWAIN is the de facto standard interface between software applications and image-capturing devices such as a scanners. Nearly all scanners contain a TWAIN driver, but only TWAIN-compatible software can use the technology.

Index

A

- application errors, 23
- attributes
 - changing object, 53

B

- badge
 - page sizes, 16
- badge background, 25
 - crop, 26
 - export, 27
 - import, 25
 - remove, 27
- badge design creation process overview, 4
- badge design, selecting, 70
- bar
 - attribute bar, 19
 - barcode bar, 20
 - Imaging toolbar, 18
 - text style bar, 19
- barcodes, 41
 - background color, 51
 - checksum, 44
 - counterfeiting, 51
 - direction, 44
 - link the barcode, 45
 - narrow bar width, 45
 - placing and sizing, 48
 - properties and values, 45
 - ratio, 44
 - text, 44
- buttons
 - drawing object buttons, 18

C

- cameo effect, 39
- capture card, 1
- checksum, 44
- colors
 - creating your own, 62
 - selecting, 61
- conventions, notational and typographical, iv
- CRC, 41
- creating
 - backgrounds, 67
 - badge designs, 12
 - dynamic text objects, 33, 37
 - expressions, 34
 - static text objects, 32
- crop, 8

D

- database connections, 24
- defining
 - colors, 62
- design windows, 20
- documentation, related, iii
- drawing
 - ellipses, 30
 - lines, 28
 - polygons, 31
 - rectangles, 29
 - round rectangles, 29
 - shapes, 28
- drawing object buttons, 18
- drivers
 - print, 1
 - signature pad, 2
- dynamic text object, 33

E

- ellipses, 30
- enhancement settings, 80
- error logging, 23
- expressions, 34
 - explicitly defined, 35

G

- general options, 22
- ghost image, 39

I

- image
 - capturing a new image, 8
 - compare and restore, 10
 - details, 10
 - enhance and crop, 10
 - ghost image, 39
 - perfect square, 41
 - properties, 57
 - resize, 40
- Imaging workspace
 - toolbar, 18
- import background, 25
- input device, 6
 - tested input devices, 78
- installation, 1
- introduction, iii

K

- K and O Planes, 63
- K Plane, 63

L

- lighting devices and usage, 79
 - diffuser, 79
 - flash, 79
 - saving settings, 80
 - strobe light, 79
 - studio light, 79
 - umbrella, 79

- lines, 28

M

- magnetic stripe information, 65
 - encoding, 76
 - tracks, 66
- move an object, 52

N

- notational and typographical conventions, iv

O

- O Plane, 64
- object properties
 - editing, 55

P

- PDF417 barcodes, 46
- polygons, 31
- printers
 - printer driver, 70
 - select a badge printer, 72
 - setting up, 70

- printing, 70
 - badge, 71
 - wanted posters, 74
- properties
 - dynamic text, 56
 - object properties, 60

R

- ratio, 44
- rectangles, 29
- related documentation, iii
- resize an image object, 40
- rotate an object, 52
- round rectangles, 29

S

- software
 - installing Imaging, 2
 - removing Imaging, 3
- static text objects, 32

T

- text, 31
- tips and tricks, 67
 - taking exceptional pictures, 79
- toolbar, 18

U

- undo levels, 22