

Secure Perfect®

Access Control and Integrated
Security Management System

Imaging Guide

v6.0



imagination at work



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Introduction

Welcome to Imaging, the professional-quality design software that makes creating superb, full-color photo badge templates quick and easy. Import eye-catching graphics as card backgrounds and personalize your designs with the logo of your organization. Link templates to cardholder information and images stored in your database. Add bar codes, or encode magnetic stripes and smart chips, all within the same application. Even if you're not a design professional, you'll get picture-perfect results in minutes with Imaging.

What's New in this Version

If you are already familiar with Imaging, here's what is new in this version:

- Zoom in to view your card design up close for detail work, or zoom out to get an overall view of your card (see "Zoom In/Out" on page 15).
- Use the customizable grid size and "snap to grid" features to make object placement easier and more precise (see "Grid Lines" on page 15).
- Flip your objects to create visual interest (see "Flipping Objects" on page 38).
- Create shadows in one easy step (see "Creating a Shadow" on page 29).
- Distribute and align multiple objects across your card design or make them all the same size with Imaging's flexible object functions (see "Aligning and Distributing Objects" on page 38).
- Use time and date fields in your conditional display options (see "Conditional Display Options" on page 45).
- Display your bar code text above as well as below your bar code (see "Show Text" on page 35).
- Add solid color to your card background to create a more customized effect (see "To Change the Background Color" on page 22).
- Use the Tab key to highlight individual design objects in succession (see "Selecting Individual Objects" on page 56).

First-Time Computer Users

The first step on the road to designing identification cards is to learn how to configure and use this software. This User's Guide was written to guide you through the entire process of configuring your Imaging

workspace, linking to your database, and designing cards. The procedures outlined in this guide are straightforward, step-by-step instructions that even first-time computer users will be able to follow.

If you are uninitiated in the use of computers in general, do not be intimidated by some of the terminology used in this guide. These terms are common throughout the computer and photo imaging industries. We have included an extensive glossary at the back of this guide to introduce you to the terms that are associated with using Imaging and digital imaging. This same glossary, and most of these instructions—as well as extensive reference material—are also available on-line, through the Help menu. Please make ample use of these tools.

Conventions

This guide and the Imaging Help system use the following conventions for menus and shortcuts:

Example	Describes
Choose File > Page Setup	Choosing the Page Setup command in the File menu.
Ctrl + n	Holding down Control and pressing the lowercase letter 'n'.
Ctrl + Shift + n	Holding down Control and Shift, and pressing the letter 'n'.
Right-click	Clicking the right mouse button
Ctrl-click	Holding down Control and clicking the left mouse button.

Setting Up Imaging

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

To set up the Imaging workspace, follow these steps:

1. Choose View > Options. The General Options dialog box appears (see Figure 1).

Figure 1. General Options Dialog Box



2. Select the following options to be displayed each time Imaging is used, from the Show section:

- Text Style Bar
- Toolbar
- Attributes Bar
- Status Bar
- Bar Code Bar

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

These options can be overridden at any time (while still maintaining the default setup) by selecting the Text Style Bar, Toolbar, Attribute Bar, Status Bar, and Bar Code Bar commands from the View menu.

Specifying Undo Levels

Undo levels refer to the number of times that actions or commands can be reversed by choosing Undo from the Edit menu.

For example, if you draw a circle on a card design and then set the line color from black to red, these actions represent two levels that can be undone. Therefore, if you select Undo twice, the first usage would revert the line color of the circle from red to black, and the second Undo would delete the circle.

If you undo too many levels of actions or commands, you can reverse the Undo by selecting Redo from the Edit menu.

1. Choose View > Options. The General Options dialog box appears (see Figure 1 on page 9).
2. Enter the number of undo levels in the “Undo remembers the last XXX commands,” field. The maximum you can enter is 100 and the minimum is 1.

Note: The higher the setting, the more memory Imaging requires to operate.

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

Note: This option will not take effect until the next time you create or open a Imaging file.

Setting the Error Logging Option

Imaging allows you to maintain a log for application errors. When this 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 as it is useful for locating the source of any problems related to your software or hardware systems.

To set the Error Logging option, follow these steps:

1. Choose Options from the View menu. The General Options dialog box appears (see Figure 1 on page 9).
2. Select the “Log error messages in a file” option.

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

Click Browse if you are unsure of the drive/directory where the log file should be stored. The Save As dialog box appears, allowing you to browse through the various drives and directories that are available locally and on your network.

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

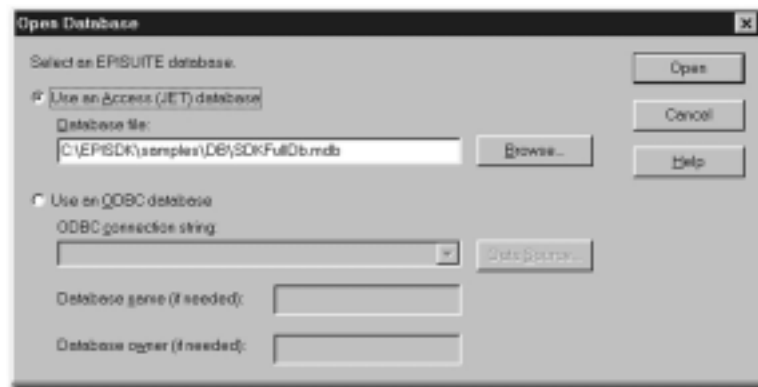
Connecting Imaging to a Database

Setting Database Options

To use a database with Imaging (other than the default Microsoft Access 97 database), follow these steps.

1. Choose View > Options. The General Options dialog box appears (see Figure 1 on page 9). The path and filename of the currently connected database appear in the Database connection field.
2. Click the Change Database button. The Open Database dialog box appears (see Figure 2).

Figure 2. Open Database Dialog Box



3. Select the type of database to be used (either JET or ODBC).

- For a JET database, select the Use an Access (JET) database option and type in the path and filename of the new database, or click Browse to navigate to it.
- For an ODBC database, select the Use an ODBC database option and select a database source from the Database ODBC connection string list (if required, input the database name and owner information), or click Database Source to access the Microsoft ODBC Data Source Administrator.

Imaging automatically reconfigures itself to use the information stored in the selected database.

4. Click OK.

Setting Up Printers

You will need to set up a printer before creating and designing cards. All necessary printer and page information is stored in the card design file (with the extension .GDR), which in turn is used by your application as a card format (a packet of information that includes the Imaging card design file, and the printer and page setup).

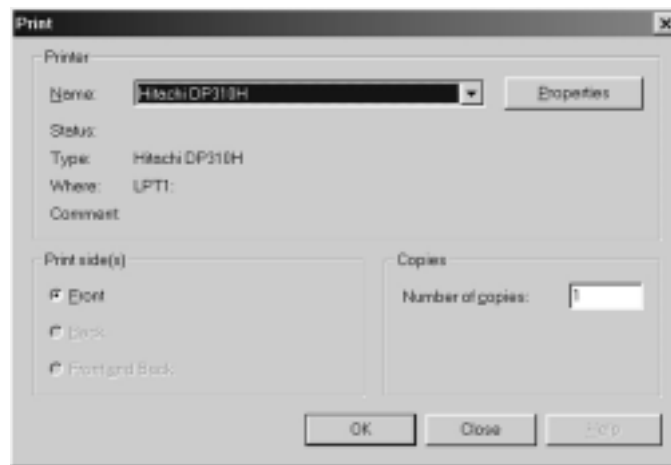
Installing a Printer Driver

Install the printer drivers according to the instructions provided by your printer manufacturer. The printer will appear automatically in the Print dialog box the next time you sign into the system.

Setting Up a Card Printer

To set up a card printer in Imaging, follow these steps:

1. Choose File > Print. The Print dialog box appears (see Figure 3).

Figure 3. Print Dialog Box

2. Select a printer. The default printer (as specified in the Windows Printers control panel) appears in the list. To select a different printer, scroll through the list and choose from the printers displayed.
3. Select from the “Front”, “Back”, or “Front and Back” radio buttons to determine which side of the card to print (if the card design only has a front or back face, Imaging will make that option the default).

To print the design in the Front editing window on the front of the card, ensure the “Front” radio button is selected. To print the design in the Back editing window on the back of the card, ensure the “Back” radio button is selected. To print the design in both editing windows on the front and the back of the card respectively, ensure the “Front and Back” radio button is selected.

Note: With the exception of the “Front” radio button, these selections should only be made if you have a specialized printer that prints on both the front and the back of cards (or if the cards will be manually flipped over to print on the back).

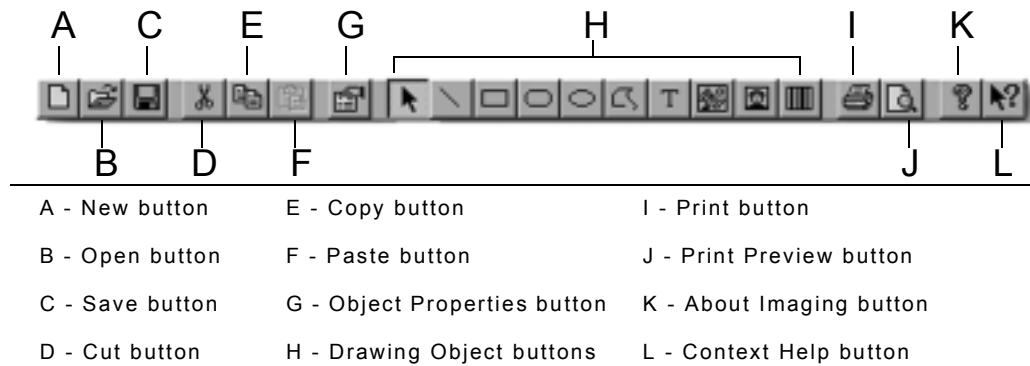
4. Set the number of copies to be printed in the “Number of copies” field (the default is 1).
5. Click OK.

The Imaging Workspace

The Toolbar

The Toolbar appears across the top of the application window. It provides quick access to many of Imaging’s File, Edit, Draw, and Help menu commands.

Figure 4. Imaging Toolbar



The Drawing Object Buttons

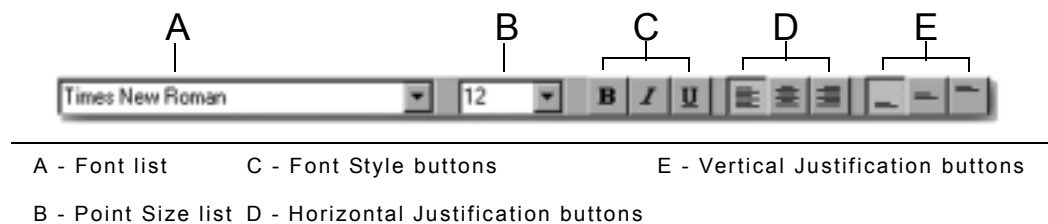
The Drawing Object buttons provide quick access to all commands in the Draw menu. These commands allow you to draw lines; rectangles; round rectangles (rectangles with rounded corners); ellipses; polygons; static text objects (text that remains the same from card to card); dynamic text objects (text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

Note: 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.

The Text Style Bar

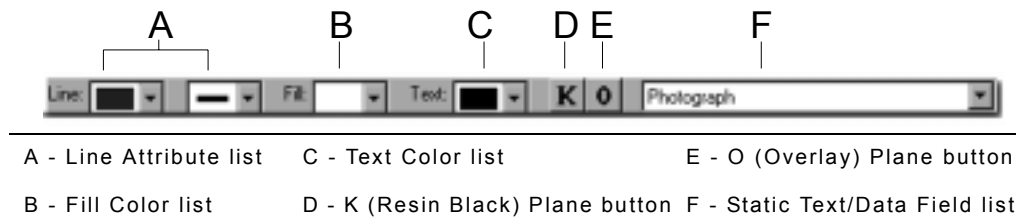
The Text Style bar appears across the top of the application window, below the Toolbar. The Text Style bar provides quick access to many of the commands in the Style menu.

Figure 5. Imaging Text Style Bar



The Attribute Bar

The Attribute bar appears across the top of the application window, below the Text Style bar. It provides quick access to color settings for lines, object fills, and text.

Figure 6. Imaging Attribute Bar

The Line Attribute list determines the color and weight (thickness) of line objects and borders around drawing, text and image objects.

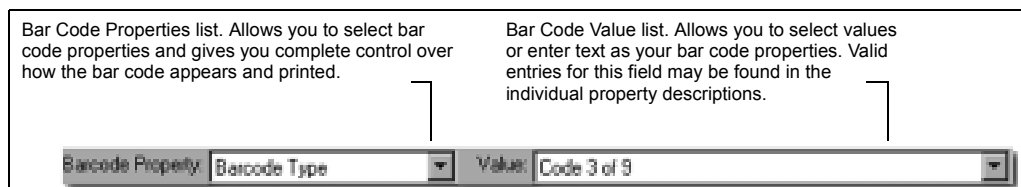
The Fill Color and Text Color lists allow you to select colors for drawing objects (ellipses, etc.) and text objects.

The K and O buttons allow you to shift designated objects—such as bar codes—onto the K (resin black) plane, or to apply protective overlays across specific objects in your card design. See “Placing Objects on the K and O Planes” on page 48 of this guide for more information.

The Static Text/Data Field pick list allows you to link dynamic text objects and image keylines to your database fields and expressions. For example, linking a dynamic text object to the First_Name field in the database results in “First_Name” appearing on the card design (in whatever font and size you select). This is replaced by the cardholder’s first name (in your specified font and size) when the ID card is printed.

The Bar Code Bar

The Bar Code bar appears across the top of the application window, below the Attribute Bar. It provides quick access to bar code property settings.

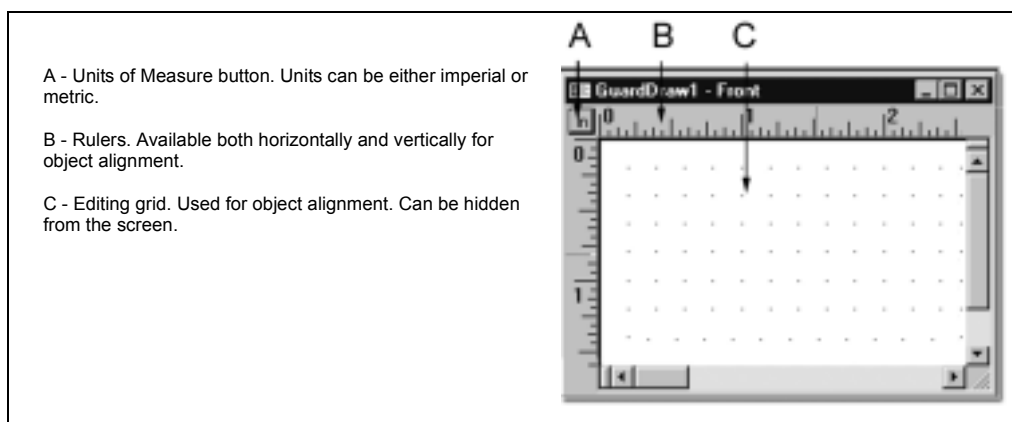
Figure 7. Imaging Bar Code Bar

The Imaging Design Windows

The Design Window areas of the Imaging workspace are where you design card templates. When a new file is created, Imaging opens a Design Window for both the front and back of the card. If you intend to only design on the front of the card you can close the Back Design Window. The Back Design Window can be opened at any time, by selecting Back of Card from the View menu. The same also applies to the Front Design Window.

You may have multiple Front and Back Design Windows open at the same time.

Figure 8. Imaging Design Windows



Grid Lines

Use the View > Grid Lines command to modify the editing grid. Select the Show grid option to display the grid lines, and set the grid size by typing in a positive number between 0.01 and 1.0 (inches or their equivalent metric values) in the Spacing fields, thus changing the distance between the lines. Use the Snap to grid option to have the objects you move always line up along the grid lines.

Zoom In/Out

Use the View > Zoom commands to enlarge or reduce the size of your card design. This command affects only how you view your card on your computer monitor and does not affect how the card will print.

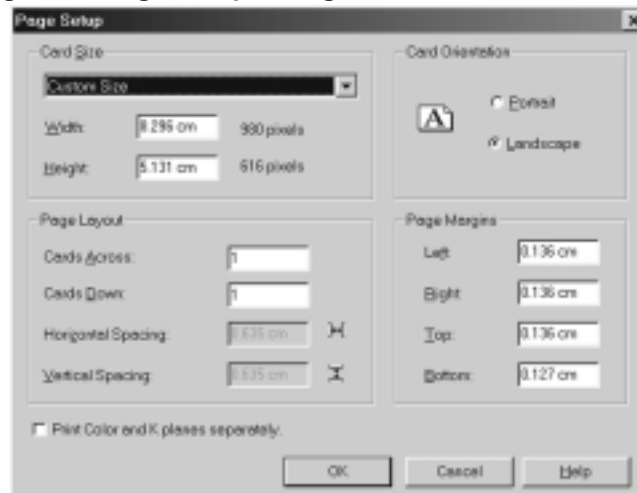
Note: Magnifications less than 100% are “view only,” meaning that you will not be able to add new objects or move existing objects.

Selecting Page Sizes

Different types of ID cards come in different sizes dependent on the types of cards a printer will output. It is important to select the card page size before beginning to design a card, since resizing the page can have a serious impact on the overall design. The page size information is stored in the card design file and is used by your application during the printing process.

To set up the appropriate page size information, follow these steps:

1. Choose File > Page Setup. The Page Setup dialog box appears (see Figure 9).

Figure 9. Page Setup Dialog Box

2. Select the required card size from the options listed in the Card Size drop-down list, or select “Custom Size” to specify your own dimensions.
3. Select the card’s orientation on the printed page as either Portrait or Landscape (see Figure 10).

Note: This affects only the orientation of the cards, and is not connected to the orientation of the page.

Figure 10. Landscape Card Layouts

Landscape cards on a landscape page



Landscape cards on a portrait page

4. (Optional) Adjust the width and height of the card, and the left, right, top, and bottom page margins.

Note: By modifying these settings, you are automatically resetting the card size to a custom configuration.

5. Indicate the number of cards to be printed across the page in the Cards Across field (for batch printing purposes).

Note: A landscape page allows for more cards to be printed across than a portrait page, although you will not be able to print as many cards down.

6. Indicate the number of cards to be printed down the page in the Cards Down field (for batch printing purposes).

Note: A portrait page allows for more cards to be printed down than a landscape page, although you will not be able to print as many cards across.

7. (Optional) Adjust the horizontal and/or vertical spacing between the cards printed on the page.
8. Select the “Print Color and K planes separately” option if your card printer outputs four process colors (cyan, magenta, yellow and black) when they are specified on separate document “pages”.

The first page should be in CMY, and the second page should be monochrome. This option merges the two pages into one in order to output four-color process.

9. Click OK.

Creating New Card Designs

To create a new card design, follow these steps:

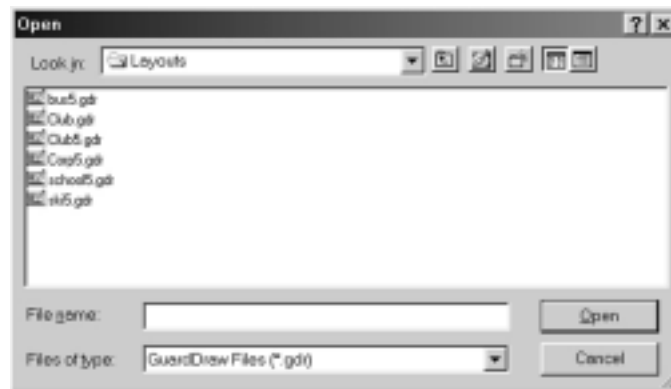
1. Specify the appropriate card size information (see “Selecting Page Sizes” on page 15).
2. Choose File > New, or click New on the Toolbar. Imaging opens two design windows, one for the front of the card and another for the back.
3. Click on the design window of your choice.
4. Design your card. Use the various drawing tools, or import a card background using Background > Import from the Edit menu.

Opening Existing Card Design Files

To Open an Existing Card Design File

To open an existing card design file, follow these steps:

1. Choose File > Open, or click the Open button on the Toolbar. The Open dialog box appears (see Figure 11 on page 18).

Figure 11. Open Dialog Box

2. Type the name of the card design you want to open in the File name field (or select it from the list by double-clicking).

Note: If the card design is in another drive or directory, select it from the Look In list. You will only be able to access network drives that are mapped to your PC or available from your Network Neighborhood.

3. Click Open.

To Open a Recently Saved Card Design

To open a recently saved card design simply open the File menu and the last four card designs that were saved to disk will be listed at the bottom of the menu. Select the name or number of the card design that you want to open and it will be displayed.

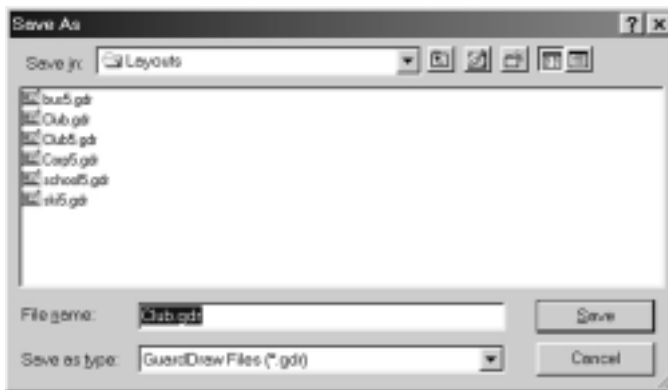
Saving Card Designs

The Save command displays a dialog box where you can give a new card design a filename, and specify a location in which to store it.

To Save a Card Design For the First Time

To save a card design for the first time, follow these steps:

1. Choose File > Save. The Save As dialog box appears (see Figure 12 on page 19).

Figure 12. Save As Dialog Box

2. Type a name in the File name field (Imaging automatically adds the extension “.GDR” to the file name).

Note: To save the card design in a different drive or directory, select the drive from the Save In drop-down list. You will only be able to access network drives that are mapped to your PC or available from your Network Neighborhood.

3. Click OK.

To Save Previously-Saved Card Designs

After making changes to an existing card design, choose File > Save, or click the Save button on the Toolbar. Your changes are automatically saved to the file. To save the design with a new filename, choose File > Save As and follow steps 2 and 3 above.

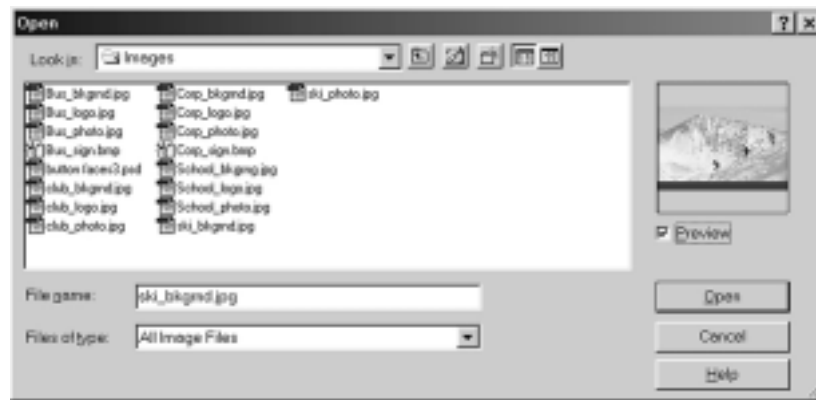
Importing or Removing the Card Background

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

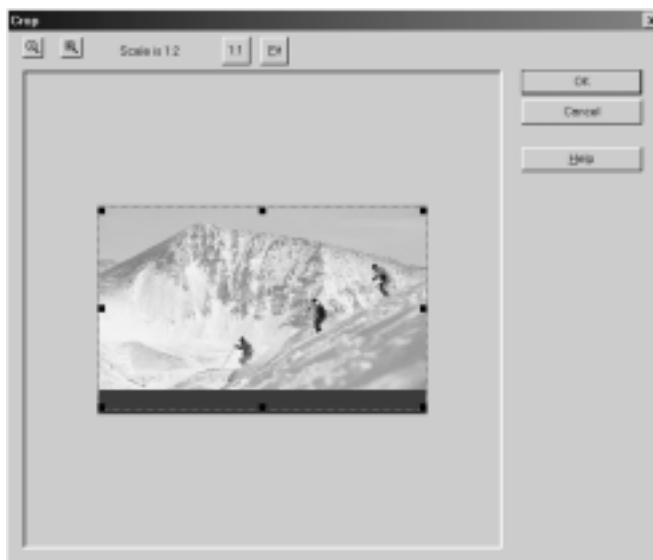
To Import the Card Background

To import card backgrounds, follow these steps:

1. Select the appropriate card design window (either the front or the back).
2. Choose Edit > Background > Import. The Open dialog box appears (see Figure 13).

Figure 13. Open Dialog Box

3. Type the name, path, and extension of the background file to insert into your card design, in the File name field (or use the buttons to browse to your file).
4. Click OK. The Crop dialog box appears with the card background image displayed inside (see Figure 14).
5. Use the buttons on the dialog box to increase or decrease the magnification of the image, and use the mouse to resize or move the highlighting box until the appearance of the picture is satisfactory.

Figure 14. Crop Dialog Box

6. Click OK. The card background is placed on the front or the back of the card design (depending on which was selected).

To Crop the Card Background

When a background image is added to a card design, it is placed in a dialog box that allows for cropping. A highlighting box, with eight sizing handles, is placed directly over the center of the image. The size of this highlighting box changes depending on the selected page size (see

“Selecting Page Sizes” on page 15). At this point, a portion of the image can be captured “as is,” or the highlighting box can be resized to capture some or all of the image.

To Capture a Whole Image

To capture whole images, follow these steps:

1. Place the mouse within the cropping area of the highlighting box. The pointer changes from a single arrow to a four-headed arrow allowing the cropping area to be moved across the newly acquired image.
2. Press and hold the left mouse button, and drag the cropping area to the desired location on the background image. Release the mouse button when the new location of the highlighting box is satisfactory.
3. Click OK. The card background is placed on either the front or the back of your card design, depending on which was selected.

To Capture a Portion of an Image

To capture a portion of an image, follow these steps:

1. Place the mouse directly over one of the highlighting box handles. The pointer changes from a single arrow to a two-headed arrow to allow the cropping area to be resized.
2. Press and hold the left mouse button, and drag the handle towards the center of the cropping area.
3. When the cropping area is a satisfactory size, move the highlighting box to cover the portion of the image that you want to capture.
4. Click OK. The card background will be placed on either the front or the back of the card design, depending on which was chosen.

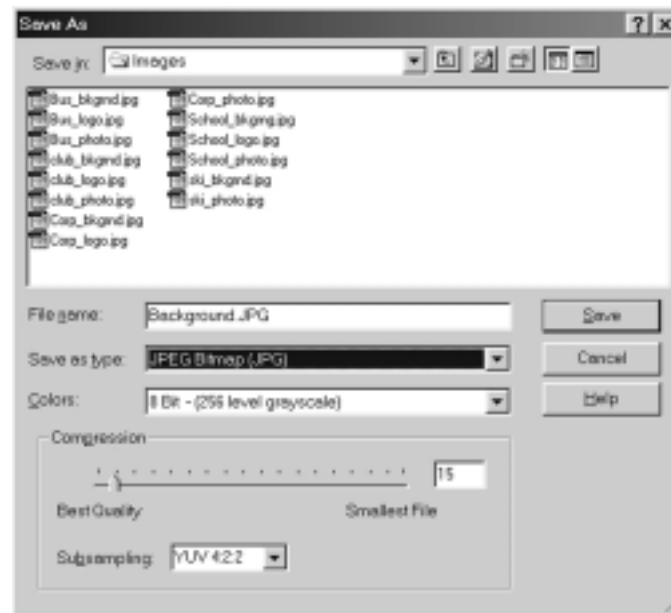
To Remove a Card Background

To remove a card background from a card design, follow these steps:

1. Select the appropriate card design editing window (either the front or the back).
2. Choose Edit > Background > Remove. A dialog box appears asking: “Are you sure you want to remove the background image from the front/back of the card?”
3. Click Yes to remove the card background image, or No to cancel.

To Export a Card Background

To export a card background, choose Edit >Background > Export. The Save As dialog box appears where you can name the image, define the file type, and specify the directory to which it will be saved.

Figure 15. Export Background Dialog Box

To Change the Background Color

This new feature allows you to add a solid color to your card's background. This differs from the View > Paper Color command in that the color selected in Background > Color will be printed on your finished card; Paper Color is only a simulation of your design as it would look printed on colored card stock and will appear on your printed card.

Note: If you use both a background color and a background image file, the background color will be covered over by the image file and will not be visible.

To change the card's background color, choose Edit > Background > Color. The Color dialog box appears (see Figure 27 on page 47). Select the color you want to appear on your card and click OK.

To remove the Background Color, choose Edit > Background > Remove. This removes any background color or image file previously applied to your card design.

Drawing Shapes

Imaging comes complete with an extensive selection of tools to allow the design of cards with ease. Lines, squares, circles, rectangles, ellipses, and polygons are available to spice up your illustration, or to create security clearance symbols for the easy identification of unauthorized persons.

Lines

Line button



To Draw a Line

1. Choose Draw > Line, or click the Line button on the Toolbar.
2. Move the mouse to the editing screen.
3. Press and hold the left mouse button to anchor one end of the line, and drag the pointer. A flexible line stretches from the anchor point to the new pointer position.
4. Release the left mouse button when the length of the line is satisfactory.

To Edit a Line

1. Select the line. Handles appear at either end of the line.
2. Position the mouse over one of the handles, then press and hold 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

Rectangle button



To Draw a Rectangle

1. Choose Draw > Rectangle, or click the Rectangle button on the Toolbar.
2. Move the mouse to the editing screen.
3. Press the left mouse button to anchor one corner of a flexible rectangle, and 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. Handles appear on each side and corner of the rectangle.
2. Position the mouse over one of the handles, then press and hold the left mouse button.
3. Drag the pointer to a new position on the editing screen.
4. When you are satisfied with the rectangle's new size and shape, release the left mouse button.

To Draw a Perfect Square

Hold down the SHIFT key while you draw the rectangle.

Round Rectangles

Round
Rectangle button



To Draw a Round Rectangle

1. Click the Round Rectangle button on the Toolbar, or select Round Rectangle 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 rectangle, and 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 Round Rectangle

1. Select the round rectangle. Handles appear on each side and corner of the object.
2. Position the mouse over one of the handles, then press and hold the left mouse button.
3. Drag the pointer to a new position on the editing screen.
4. When you are satisfied with the rectangle's new size and shape, release the left mouse button.

To Edit Rounded Corner Curvatures

1. Select the round rectangle.
2. A special handle appears inside the upper right-hand corner of the rounded rectangle. Position the mouse over the handle and the pointer changes from a single-headed arrow to a four-headed arrow.
3. Hold down the left mouse button, and drag the handle toward the center of the object to increase the curvature of the rounded corners, or away from the center of the object, to decrease the curvature.
4. When you are satisfied with the rectangle's new shape, release the left mouse button.

To Draw a Perfect Square

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

Ellipses

Ellipse button



To Draw an Ellipse

1. Choose Draw > Ellipse, or click the Ellipse button in the Toolbar.
2. Move the mouse to the editing screen.
3. Press the left mouse button to anchor one corner of a flexible rectangle, and 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. Handles appear on each side of the ellipse.
2. Position the mouse over one of the handles, then press and hold 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

Polygon button



To Draw a Polygon

1. Choose Draw > Polygon, or click the Polygon button in the Toolbar.
2. Move the mouse to 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, as the Polygon tool will continue to create anchor points as you move the pointer.

4. When you reach the point where you want the line to end, press the left mouse button to create another anchor point.
5. Continue adding sides in this fashion.
6. To add the last side, double-click where you want the point to end.

To Edit a Polygon

1. Select the ellipse. Handles appear at each anchor point created.
2. Position the mouse 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 release the left mouse button.
4. Continue editing sides in this fashion.

Adding Static and Dynamic Text

Text button



The Text command performs two functions in Imaging. It can create static text objects, which are used as non-changeable design elements such as headlines or field labels (for example, “First Name”). It can also create dynamic text/data objects—objects that are connected to a data field or expression, and which change from card to card (for example, the first name of the cardholder).

The dynamic text/data field options available through the Text list are directly dependent on the type of database connection you have. For example, if Imaging is configured to access the textual data in your database, it will retrieve the available field names through the GA_TABLENAMES table. This points to the tables in your database, which contain all of the data you will be printing on your cards. The field names displayed in the Text list will have the table name as a prefix. If there is no prefix, then the field name is an alias located in the GA_ALIAS table. Aliases behave in much the same way as the Label does in an Expression, allowing you to create more meaningful or shorter names for the fields you need to access.

When Imaging has access to your database, you will have full use of the Define Expressions feature. You do not require special programming experience to create dynamic text objects. You do, however, require a knowledge of your database’s particular SQL expressions, if you intend to use expressions in your card design (see “Defining Expressions” on page 49).

If Imaging does not have access to textual data, it will display the field names found in the GA_LAYOUTFIELDS table. This table contains tags that are used to retrieve the available data fields directly from your application. Therefore, the text/data field options must be pre-configured in this table to reflect the input fields in your application in order to be available from the Text list.

Note: The Define Expressions feature is not available in this mode.

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

Creating Static Text Objects

To Create Static Text Objects, follow these steps:

1. Choose Draw > Text, or click the Text button in the Toolbar.
2. Select <STATIC TEXT> from the Text/Data Field list.
3. Move your mouse onto the editing screen. The pointer changes from an arrow to a cross.
4. Press and hold the left mouse button to anchor one end of the text box, and drag the pointer. A flexible box stretches from the anchor point to the new pointer position (see Figure 16).

Figure 16. Creating a Text box



5. When you are satisfied with the size and location of the text box, release the left mouse button.
6. Choose Draw > Select, or click the Select button in the Toolbar.
7. Double-click the text box, or select the text object and choose Edit > Object Properties. A Static Text Properties dialog box appears.
8. Make the necessary option selections and click OK.
9. Select the font, style, and point size using the lists in the Text Style bar, or by choosing Style > Font.
10. Select the text color using the Text Color list in the Attribute Bar, or by choosing Object > Text Color.
11. Adjust the text justification using the Justify buttons in the Text Style bar, or from the Style menu.
12. Choose the Object > Line Color and Fill Color commands, or select the text box line and fill colors using the lists in the Attribute bar.
13. Adjust the text box line weight using the Line Weight list in the Attribute bar.
14. To determine the text object's placement within the text box, click the horizontal and vertical justification buttons.

Creating Dynamic Text Objects

To create Dynamic Text objects, follow these steps:

1. Choose Draw > Text, or click the Text button in the Toolbar.
2. Select an available database field or expression the Text/Data field in the Attribute bar.
3. Repeat Steps 3 to 6 in the “Creating Static Text Objects” procedure above.
4. Choose Edit > Object Properties, or double-click the text box. The Dynamic Text Properties dialog box appears.
5. Make the necessary option selections and click OK. See “Editing Object Properties” on page 40 of this guide for more information.
6. Repeat Steps 9 to 14 in the “Creating Static Text Objects” procedure above.

Converting Static Text Objects to Dynamic Text Objects

To convert a Static Text object to a Dynamic Text object, follow these steps:

1. Select the text object.
2. Select any of the data fields available from the Text/Data Field list in the Attribute bar.

Adding Images

Digital images such as photographs, fingerprints, signatures, and clip art can be added to a card design using a drawing tool. The DB Image tool is used to create a keyline for any dynamic image type available in Imaging. The DB Image tool allows you to import static image files from any external source.

Image keylines are automatically linked to your database. When you print cards with your application, the keylines are replaced by the cardholder’s images. Hard-to-counterfeit “ghosts” and cameo effects can also be defined for the image keylines, therefore, providing an extra level of security to the cards issued.

Adding Database Images

DB Image button

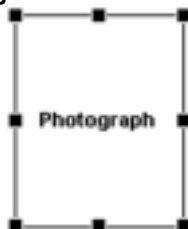


To add database images to a card, follow these steps:

1. Choose Draw > DB Image, or click the DB Image button in the Toolbar. The default option in the Static Text/Data Field list changes to Photograph.
2. From the Static Text/Data Field list, select either Photograph to draw a photograph keyline on the card, or Signature to draw a signature keyline, etc.
3. Move the mouse to the editing screen. The pointer changes from an arrow to a cross.
4. 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 (see Figure 17).

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

Figure 17. A Photograph keyline



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

Creating an Image Ghost

An image ghost is generally used in addition to a regular image, and can be placed anywhere on the card design—even behind text or other objects. This is considered to be an additional ID security feature, as ghosted images are extremely difficult to reproduce. See “Editing Object Properties” on page 40 for more information on creating image ghosts.

Creating a Cameo Effect

A Cameo effect, or chromakey, refers to removing the image background. See “Editing Object Properties” on page 40 for more information.

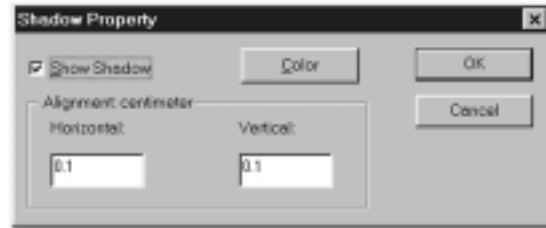
Creating a Shadow

The Style > Shadow command is used to create a shadow behind any text or image object, static or dynamic. A shadow gives a sense of depth and dimension to a 2D object.

To add a shadow to an object, follow these steps:

1. Select the image or text to be modified.
2. Choose Style > Shadow. The Shadow Properties dialog box appears.

Figure 18. Shadow Properties Dialog Box



3. Select the Show Shadow option.
4. Click OK to use the default settings.

The default settings for the amount of offset are, horizontally and vertically, 0.1 of the units of measurement you are currently using for images and 0.01 for text, and the color for both is 50% gray. These settings create a medium gray shadow appearing below and to the right of the object. To change these settings, follow these steps:

- Type in a new setting for the horizontal and vertical settings. Positive integers create a shadow below (horizontal) and to the right (vertical), while negative integers create them above and to the left.
- Click the Color button to change the shadow color. The Windows color palette appears (see “Selecting Colors” on page 46 for more information).

Adding Image Objects

Image button

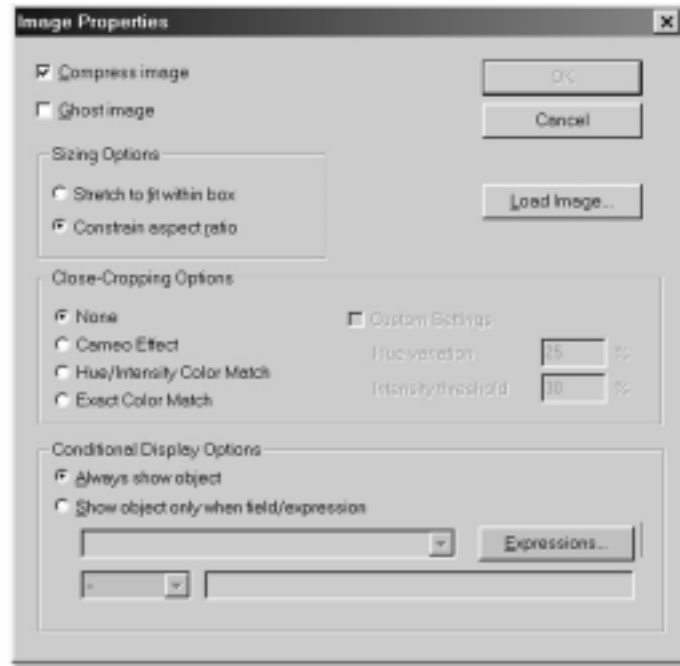


Image objects are similar to card backgrounds, except they can be placed on your card design in much the same way as objects such as images, barcodes, and static or dynamic text.

To add an image object to a card, follow these steps:

1. Choose Draw > Image, or click the Image button in the Toolbar.
2. Move the mouse to the editing screen.
3. Press the left mouse button to anchor one corner of a flexible rectangle, and drag the pointer. The flexible highlighting box stretches from the anchor point to the new pointer position.
4. When you are satisfied with the highlighting box's size and shape, release the left mouse button. The Image Properties dialog box appears (see Figure 19).

Figure 19. Image Properties Dialog Box



5. Click Load Image. The Open file dialog box appears.
6. Select the image file you want to load into your card design, and click OK.

You will be returned to the Image Properties dialog box, and the image is loaded into the card design. You can reposition the Image Properties dialog box so you can view the image object under it. This allows you to reset the object's properties and immediately see how they affect the appearance of the image.

7. Select the necessary image property options (see “Editing Object Properties” on page 40).
8. Click OK.

Image ghosts and cameo effects can be applied to Image objects. See “Editing Object Properties” on page 40 of this guide for more information.

Resizing an Image Object

To resize an Image object, follow these steps:

1. Select the image. Handles appear on each side and corner of the object.
2. Position the mouse 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 Bar Codes

Drawing bar codes on a card design can be a moderately complex process. It is important to familiarize yourself with the many types of bar codes available, and to set the corresponding properties, values, and database field specifications with care. Bar Code Properties and Values (below) contains descriptions of the various types of bar codes that can be added to your card design. You should first refer to your hardware documentation for information on the types of bar codes supported by the card reader you have purchased.

Properties and Values

The following sections describe the bar code properties that are available in the Bar Code Property list.

Bar Code Type

This property is used to set the type of bar code to be used. By setting the Bar Code property, you select the type of bar code that appears or printed. The following is a list of the possible types of bar codes:

- Code 3 of 9 - an alphanumeric bar code allowing uppercase letters and numbers. Each character consists of nine elements, three of which are wide. An embedded CRC character is present. To add a checksum to the bar code, set the Checksum value to Standard.
- Extended Code 3 of 9 - this bar code type is similar to Code 3 of 9, except it allows the full 128 ASCII character set to be encoded by printing two bar code characters for each text character. To add a checksum to the bar code, set the Checksum value to Standard.
- Interleaved 2 of 5 - a numeric bar code. 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, a zero is appended to the beginning of the code. To add a checksum to the bar code, set the Checksum value to Standard.
- Code 93 - an alphanumeric bar code allowing uppercase letters and numbers. To add a checksum to the bar code, set the Checksum value to Standard.
- Extended Code 93 - this bar code type is similar to Code 93, except it allows the full 128 ASCII character set to be encoded. To add a checksum to the bar code, set the Checksum value to Standard.
- UPCA - Universal Product Code version A. This bar code type 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 supplements are supported. Checksum is not used.

- UPCE 10 digit - a zero-compressed version of the UPCA bar code. This version allows 10 digits to be encoded. The first digit must be a zero. Both two and five digit supplements are supported. Checksum is not used.
- UPCE0 6 digit - a zero-compressed version of the UPCA bar code. This version allows 6 digits to be encoded. The first digit must be a zero. Both two and five digit supplements are also supported. Checksum is not used.
- UPCE1 6 digit - a zero-compressed version of the UPCA bar code. This version allows 6 digits to be encoded. The first digit must be a zero. Both two and five digit supplements are supported. Checksum is not used.
- EAN 13 - this bar code type is 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 supplements are supported. Checksum is not used.
- EAN 8 - this bar code type is 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 supplements are supported. Checksum is not used.
- Code 128 Auto - a variable-length bar code 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 produces the smallest bar code. To add a checksum to the bar code, set the Checksum value to Standard.
- Code 128 A - a variable-length bar code 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. To add a checksum to the bar code, set the Checksum value to Standard.
- Code 128 B - a variable-length bar code 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 bar code.
- Code 128 C - a variable-length bar code that is capable of encoding the full 128 ASCII character set. Code 128 allows three subsets: A, B, and C. This version includes a set of 100 digit pairs, from 00 to 99 inclusively. This allows double-density numeric digits: two digits per bar-coded character. To add a checksum to the bar code, set the Checksum value to Standard.
- Codabar - a variable-length bar code that is capable of encoding 16 characters, including 0 to 9, plus the symbols "-", "\$", ";", ".", and "+". It is used primarily for numeric data. Any one of "a," "b," "c", or "d" must be used as the start and stop characters. To add a checksum to the bar code, set the Checksum value to Standard.

- MSI Plessey - a variable-length bar code that is capable of encoding up to 15 numeric digits. To add a checksum to the bar code, set the Checksum value to one of the following:
 - 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. To add a checksum to the bar code, set the Checksum value to Standard.
- POSTNET (Zip + 4 PostalCode) - this bar code type is used on envelopes and postcards that are shipped through the US Postal Service. It is placed on the lower right-hand corner of the envelope. Checksum is 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 card that requires customer or employee profiles, biometric data, and personal descriptions). See "Setting Up Symbol PDF417 Bar Codes" in the Imaging Help system for complete details on the proper use of this technology.
- Code 49 - a multiple-row bar code 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 2 to 8 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 bar code that can encode the full ASCII character set below ASCII 128 using existing UPC and Code 128 character set patterns. Up to 77 full ASCII characters or 154 numeric characters can be encoded into 2 to 16 rows, and each row is divided by a separator bar. The top and bottom of the symbol also have separator bars that extend to the ends of the minimum quiet zones. Code 16K is similar to Code 128 in that you can choose between three subsets directly (A, B, or C), or you can choose Code 16K Auto for auto switching mode.
- Code 16K A - a multiple-row bar code 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 bar code 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 bar code 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 This property sets the text to be used in creating the bar code. The Text property allows you to set the text that is used to generate the bar code itself. When this property is selected, the Value list changes to a data entry box and allows you to input the bar code text. The bar code changes on the editing screen as you type.

Checksum This property controls how the checksum is created. Checksums can be optionally added to some bar codes. See each Bar CodeType description for more information.

Direction This property controls the horizontal and vertical position of the bar code within the highlighting box.

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

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

Value
 3:1
 2.5:1
 2:1

Narrow Bar Width This property sets the width of the thinnest bar in the bar code. The width of the wider bars is then based on 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 This property determines the position of the bar code text that was entered in the Text value field. The text can appear either above or below the bar code, or can be turned off so it does not appear on the card.

Drawing a Bar Code

Bar Code button



1. Choose Draw > Bar Code, or click on the Bar Code button in the Toolbar.
2. Move the mouse to the editing screen.
3. Press the left mouse button to anchor one corner of a flexible bar code rectangle, and then drag the pointer. The flexible rectangle stretches from the anchor point to the new pointer position.

Figure 20. A sample bar code



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

Linking a Bar Code to a Database Field or Expression

In order for the bar code to convert and use the proper data from your database, it is important that you link it to a database field. To link a bar code to a database field or expression, select the bar code and click the arrow to the right of the Static Text/Data field list. Select the field to which the bar code should be linked.

Setting Bar Code Properties and Values

To set the bar code properties and values, follow these steps:

1. Using the Select tool, highlight the bar code on your card design.
2. Select a bar code property from the Bar Code Property list (for example, "Bar Code Type").
3. Select the appropriate bar code property value from the Property Value list.

Note: The the Bar Code Properties and Values lists are linked. When you make a selection from the Properties list, you will be presented with a related Values list.

4. Continue selecting properties and their corresponding values until you have properly configured your bar code.

Printing Bar Codes on the K Plane

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

To print bar codes on the K plane, highlight the bar code on your card design using the Select tool. Click the K Plane button (located on the Attribute bar), if you want the bar code to print in pure black, rather than in process black.

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

Setting the Bar Code Background Color

While the default bar code background color is white, and should generally remain white, Imaging allows you to specify any other color (including no color, or transparent) to prevent the illicit duplication of ID cards by photocopying.

Note: Only a small number of readers can recognize the black code against a non-white field; therefore, if you intend to specify a bar code background fill as any color other than white, first make sure your reader is capable of distinguishing the code from the color field.

A good rule to remember, when printing bar codes against a non-white field, is to print the bar code on the K plane ((see “Printing Bar Codes on the K Plane” on page 36) of this guide for more information).

To set the bar code background color, highlight the bar code on your card design using the Select tool. Change the bar code background fill color by selecting from the sixteen quick-access colors in the Fill Color list, or choose Style > Fill Color for a more extensive selection of colors.

Moving and Aligning Objects

Dragging objects with the mouse allows you to position them interactively.

Moving Objects

To move an object, follow these steps:

1. Highlight the object you want to move using the Select tool.
2. Drag and drop the object at its new location.

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

Copying Objects

To copy or duplicate an object, follow these steps:

1. Highlight the object you want to copy using the Select tool.
2. Press and hold the CTRL key, and then drag and drop the copy to its new location. This creates a copy of the object and leaves behind the original.

Aligning and Distributing Objects

The new Align function allows you to select several objects on your card design and align them by their left, center or right points, and/or their top, middle, or bottom points.

The new Distribute function allows you to select several objects and space them evenly either vertically or horizontally on your design.

To align or distribute several objects, follow these steps:

1. Select several objects by holding down the SHIFT key and clicking on the objects of your choice.
2. Choose either Object > Align or Distribute and then the appropriate command from the submenu that appears.

Rotating Objects

To rotate an object, follow these steps:

1. Highlight the object you want to rotate using the Select tool.
2. Choose Object > Rotate by 90 Degrees. From the submenu, choose either Left to rotate the object counterclockwise, or Right to rotate the object clockwise.
3. Repeat until the object's appearance is to your satisfaction.

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

Flipping Objects

The new Flip function allows you to invert the selected object either vertically (from right to left) or horizontally (from top to bottom), thereby creating a mirror image of the original object. To flip an object, follow these steps:

1. Select the object to be flipped.
2. Choose Object > Flip. The Flip submenu appears.
3. Choose either Left - right, or Top - bottom.

Figure 21. Flip Object Samples



Note: This function is not available for either bar codes or text objects.

Resizing Objects

To resize an object, follow these steps:

1. Highlight the object using the Select tool. Handles appear on the sides and corners of the object.
2. Position the mouse over one of the handles, then press and hold the left mouse button.
3. Drag the pointer to a new position on the editing screen.
4. When you are satisfied with the object's new size and shape, release the left mouse button.

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

Changing Object Attributes

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

Changing Line Attributes

To change a line attribute, follow these steps:

1. Select the line using the Select tool.
2. Change the line color by choosing from the sixteen quick-access colors in the Line Color list, or choose Object > Line Color for a more extensive selection of colors.
3. Change the line weight by selecting from the Line Weight list in the Attribute Bar.

Changing Object Attributes

To change object attributes, follow these steps:

1. Highlight the object using the Select tool.
2. Change the line color by selecting from the sixteen quick-access colors in the Line Color list, or choose Object > Line Color for a more extensive selection of colors.

3. Change the fill color by selecting from the sixteen quick-access colors in the Fill Color list, or choose Object > Fill Color for a more extensive selection of colors.
4. If the object is static or dynamic text, change the text color by selecting from the sixteen quick-access colors in the Text Color list, or choose Object > Text Color for a more extensive selection of colors.
5. Change the line weight by selecting from the Line Weight list in the Attribute Bar.
6. You can modify signatures so they are printed in different colors, with or without image frame fills.

Changing Signature Fill and Text Attributes

To change signature fill and text attributes, follow these steps:

1. Highlight the signature on your card design using the Select tool.
2. Change the fill color by selecting from the sixteen quick-access colors in the Fill Color list, or choose Object > Fill Color for a more extensive selection of colors. Choose “x” for no fill, to print the signature against the card background.
3. Change the color of the signature itself by selecting from the sixteen quick-access colors in the Text Color list, or choose Object > Text Color for a more extensive selection of colors.

Setting Default Attributes

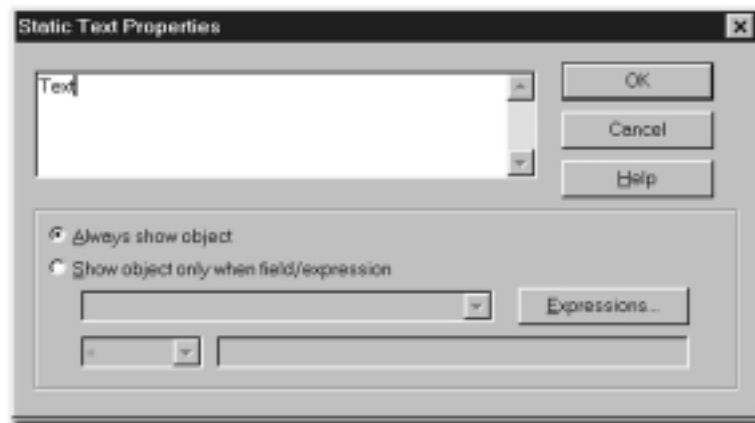
If you plan to create several objects with the same attribute settings (for example, line weight or fill color), and you do not want to reset the attributes for each individual object, you can specify them as defaults by performing the following tasks:

1. Draw your initial object, and define its attributes.
2. Choose Object > Set Default Attributes. This sets the default attributes to be the same as the object you just created.
3. Draw your remaining objects.

Editing Object Properties

Static Text Properties

To set Static Text properties double-click the text box on your card design using the Select tool, or choose Edit > Object Properties. A Static Text Properties dialog box appears where you can make the necessary option selections.

Figure 22. Static Text Properties Dialog Box

The following options are available:

Text Editing Box

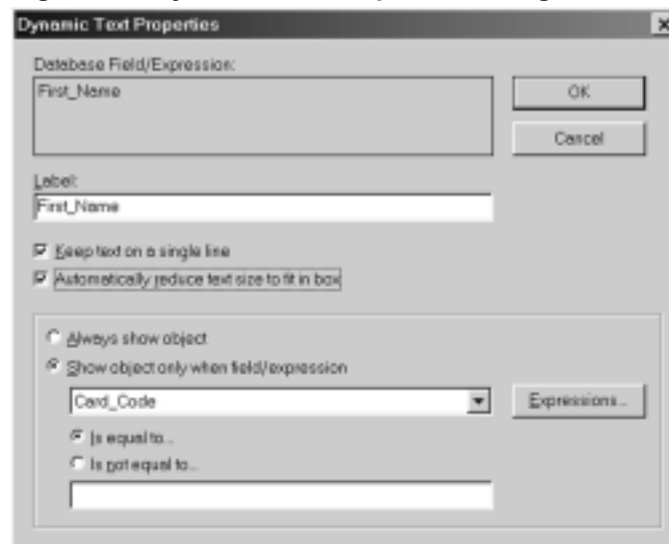
This box displays the selected static text using the Microsoft Windows screen font. To edit the text, click anywhere within the editing box and make the necessary modifications.

Conditional Display Options

For complete information on these settings and what they do, (see “Conditional Display Options” on page 45).

Dynamic Text Properties

To set Dynamic Text properties, double-click the text box on your card design using the Select tool, or choose Edit > Object Properties. A Dynamic Text Properties dialog box appears where you can make the necessary option selections.

Figure 23. Dynamic Text Properties Dialog Box

The following options are available:

Database Field/ Expression

This field displays the expressions or database fields linked to the highlighted dynamic text object.

Label

Type a new label for the dynamic text object in the Label field. This does not affect output at print time, but is used to provide a more significant identifier to the object. For example, if the database field used to output the date a card was issued is called ISSUANCE_DATE, you might want to rename the label “Issue Date” to better identify it on your card design. This feature is useful if you have written a lengthy database expression and want to edit the label for brevity.

- **Keep text on a single line** - to keep the dynamic output text on a single line. If you do not check this box, text wraps around within the dynamic text object frame.

Note: This option 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 “Automatically reduce text size to fit in box” option is selected.

- **Automatically reduce text size to fit in box** - to automatically reduce the font point size so longer single-line text fits within the object frame. This is usually used in conjunction with the “Keep text on a single line” option, so that output text is not truncated.

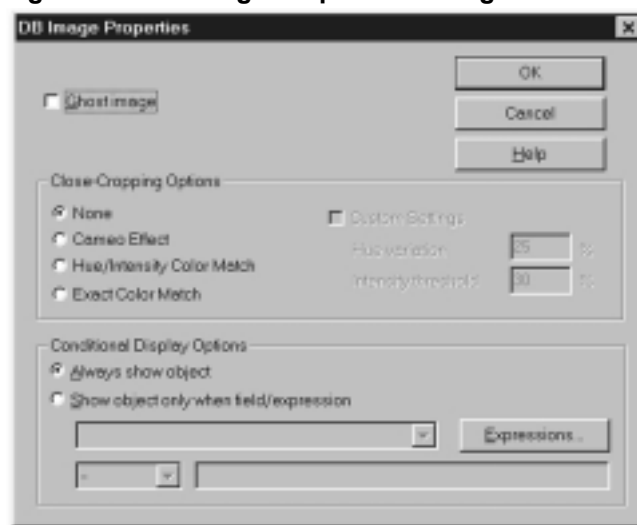
Conditional Display Options

For complete information on these settings and what they do, (see “Conditional Display Options” on page 45).

DB Image Properties

To set DB Image properties, double-click the database image using the Select tool. The DB Image Properties dialog box appears where you can make the necessary option selections.

Figure 24. DB Image Properties Dialog Box



The following options are available:

Ghost Image

Select the Ghost image option if you want to create a ghost image.

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

Close-Cropping Options

The following options allow you to “close-crop” (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, (see “Using the Close-Cropping Options” on page 54) in the Tips & Tricks section.

- **None** - to keep the image as is.
- **Cameo Effect** - to create a cameo effect. This removes all background pixels around the subject of the image (for example, the card holder's head).

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

- **Hue/Intensity Color Match** - To remove all pixels within a specified hue/intensity range. This option is useful if you are having trouble removing background pixels with the Exact Color Match option. Select the Custom Settings check box (described below), and enter your custom Hue Variation and Intensity Threshold percentages.
- **Exact Color Match** - Select this option if you want to remove all background pixels that are exactly the same color. This option is useful for solid-color backgrounds, which are commonly found in hand-made bitmap files (e.g., logos, etc.).
- **Custom Settings** - This option and its corresponding settings are enabled when you select the Cameo Effect and Hue/Intensity Color Match options above. Use it to enter custom percentages for the following settings:

Hue Variation - the percentage of the hue that Imaging used to scan for variations of the background pixels along the color spectrum. Imaging removes pixels 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 color spectrum. A higher value means Imaging will scan and remove pixels across a wider percentage of the color spectrum. A lower setting means Imaging will confine the removal to pixels that closely match the first one sampled.

For example, if you enter a setting of “30”, and the image's first pixel is a shade of green, Imaging will scan and remove all

shades of green across 30 percent of the spectrum (and possibly into portions of the yellow and blue color ranges).

Intensity Threshold - the percentage that Imaging uses to scan for variations in color intensity. Imaging 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 Imaging will confine its removal to the brighter pixels that fall within the specified Hue Variation range. A lower setting means Imaging will widen its scan and remove a broader range of bright and dark pixels within the specified Hue Variation.

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

Conditional Display Options

For complete information on these settings and what they do, (see “Conditional Display Options” on page 45).

Image Properties

Double-clicking an image object using the Select tool, or selecting Edit > Object Properties displays the Image Properties dialog box where you can make the necessary option selections (see Figure 19 on page 31).

In addition to the options described in “DB Image Properties” (above), the following options are also available for Image objects:

Compress Image

Select this option to maintain the original compression ratio of the image file.

Ghost Image

See “DB Image Properties” on page 42.

Sizing Options

Sizing options consist of the following:

- Stretch to fit within box - to resize (or stretch) the image, so it fits inside the drawing box. This option overrides the aspect ratio of the image and results in a distorted image.
- **Constrain aspect ratio** - to constrain the aspect ratio of the image and protect it from distortion.

Close-Cropping Options

See “DB Image Properties” on page 42.

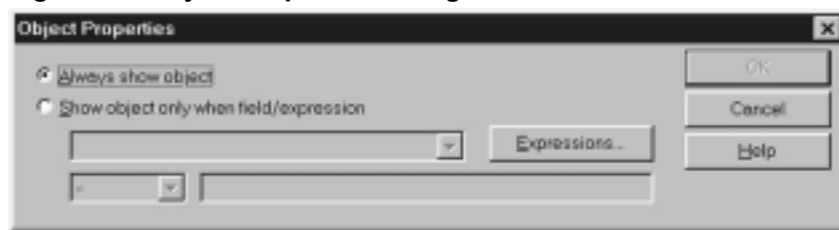
Conditional Display Options

For complete information on these settings and what they do, see “Conditional Display Options” on page 45.

Object Properties

Double-clicking an object using the Select tool, or choosing Edit > Object Properties displays the Object Properties dialog box where you can make the necessary option selections.

Figure 25. Object Properties Dialog Box



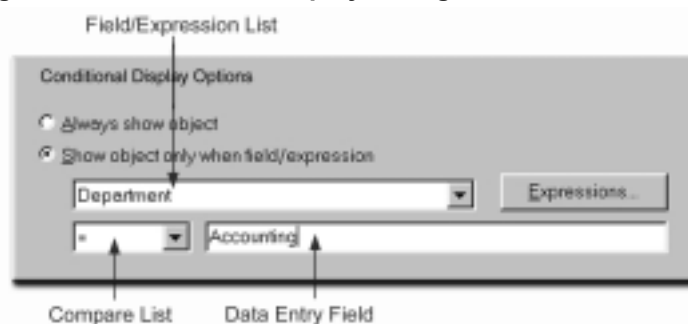
Type in the text you want to appear in the text field (up to 240 characters).

Conditional Display Options

Conditional display options allow objects to be printed on a card, but only when certain conditions are met. This enables the user to adapt the same card format to meet the identification needs of various departments within the organization.

A newly added feature allows you to type date and time values into the Data Entry field and Imaging will recognize them as such. For example, if you typed in "01/01/01", Imaging will recognize that as the date January 01, 2001.

Figure 26. Conditional Display Dialog Box



Always Show Object

Select this option if you want to print the object on all ID cards.

Show Object Only When Field/Expression

Select this option if you want to print the object on specific ID cards. The fields beneath this radio button will be enabled. To define the instances in which this object should be printed on a card, do the following:

1. Select an entry from the Field/Expression list. If no entries are available, click Expressions to add a data field or create an expression. The Define Expression dialog box appears (see "Defining Expressions" on page 49 for more information).
2. From the Compare list, select any of the following options (this specifies what type of comparison will be made against the contents of the field you specified and the value entered in the corresponding Value box):

- = (equals) - indicates the contents of the selected field should be equal to the value entered in the corresponding Value box.
- <> (not-equal-to) - indicates the contents of the selected field should not be equal to the value entered in the corresponding Value box.
- > (greater-than) - indicates the contents of the selected field should be greater than the value entered in the corresponding Value box.
- < (less-than) - indicates the contents of the selected field should be less than the value entered in the corresponding Value box.
- >= (greater-than or equal-to) - indicates the contents of the selected field should be greater than or equal to the value entered in the corresponding Value box.
- <= (less-than or equal-to) - indicates the contents of the selected field should be less than or equal to the value entered in the corresponding Value box.
- Null - indicates the contents of the selected field should be null (empty). You do not need to enter a value if you select this option.
- Not Null - indicates the contents of the selected field should be not null (filled with any type of information). You do not need to enter a value if you select this option.

3. Type a value in the data entry field.

4. Click OK.

For example, if you want to print the object only when the Department field in your database contains the word “Accounting,” you would select this option and type the word “Accounting” in the data entry field. The selected object will only be printed on IDs that are to be issued to members of the Accounting department.

Expressions

Click this button to define database expressions for object printing conditions. See “Defining Expressions” on page 49 for more information.

Selecting Colors

Selecting Colors Using the Attribute Bar Lists

To select colors using the Attribute bar lists, follow these steps:

1. Highlight the object using the Select tool.
2. If you want to change the line color, select any of the sixteen quick-access colors from the Line Color list in the Attribute Bar.

To change the fill color, select any of the sixteen quick-access colors from the Fill Color list in the Attribute Bar.

To change the text color, select any of the sixteen quick-access colors from the Text Color list in the Attribute Bar.

Selecting Colors Using the Color Dialog Box

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

To select colors using the Color dialog box, follow these steps:

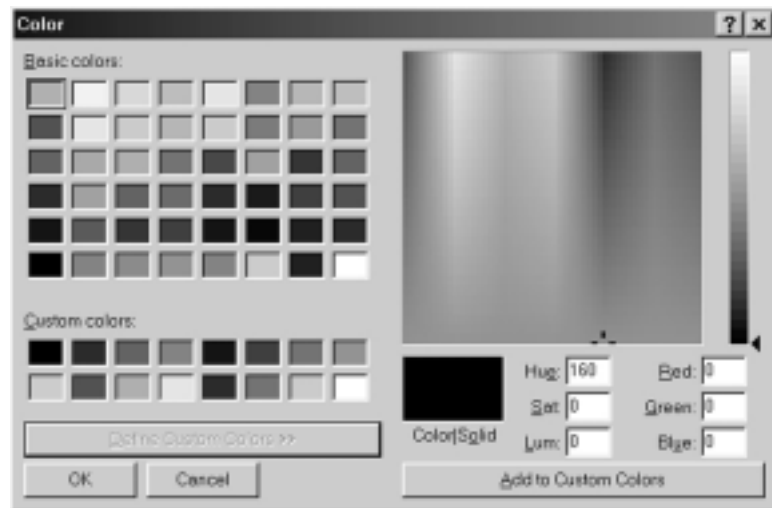
1. Highlight the object using the Select tool.
2. If you want to change the line color, choose Object > Line Color.
To change the fill color, choose Object > Fill Color.
To change the text color, choose Object > Text Color.
3. In the Color dialog box, select the color you want from the palette by clicking on it.
4. Click OK.

Creating Your Own Colors

You can create your own colors and apply them to screen elements. To do this, follow these steps:

1. Choose either Object > Line Color, Object > Fill Color or Object > Text Color. The Color dialog box appears.
2. Click Define Custom Colors. The Color dialog box expands (see Figure 27 on page 47).

Figure 27. Expanded Color Dialog Box



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

Note: The color you create is shown in the left side of the Color/Solid box. You can double-click the right side of the box, or press ALT+O, to use the solid color that most closely resembles the one you have created.

4. In the Custom Colors palette, select an empty box for the new color, or select a color that you want to change.
5. Click the Add in Custom Colors button.
6. Create any other colors you want and add them to the palette.
7. Click OK.

Placing Objects on the K and O Planes

Imaging for Windows supports 24-bit color, with output process colors, 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 color is considered a “plane.”

CMYK

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

The Protective Overlay

While the protective overlay (also referred to as the overcoat) is not technically a color, 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 colors have been printed onto the card. It is used to protect the card from wear and tear.

Placing Objects on the K Plane

To place objects on the K plane, follow these steps:

1. Select the object that you want to place on the K plane using the Select tool.
2. Click the K Plane button.

Note: This option is only valid if your card printer supports K plane printing.

Placing Objects on the O Plane

To place objects on the O plane, follow these steps:

1. Select the object that you want to place on the O plane.
2. Click the Overlay Plane button.

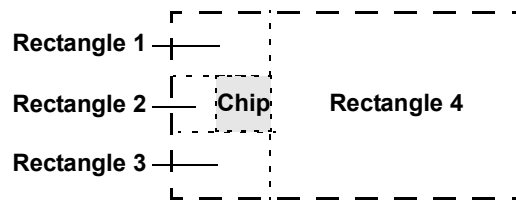
Note: This option is only valid with certain printers. Refer to your printer documentation for further details.

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

By default, a protective overlay is applied across the entire surface of every card, unless you place a single card design object on the O plane. In this case, the default is overridden and the protective overlay is applied only to the specified object. The whole-surface overlay default has significant implications when printing ID cards with Smart Chips, as applying an overlay to a Smart Chip will render the chip inoperable.

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

Figure 28. Applying protective overlays to cards with Smart Chips



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

Defining Expressions

While Imaging allows you to define any manner of valid SQL expressions, you will most likely use the Define Expressions feature to combine available database fields (for example, First_Name and Last_Name) or to produce a desired output value (such as a specific date format).

Note: You cannot use expressions if your configuration does not access textual data in your database (see “Adding Static and Dynamic Text” on page 26).

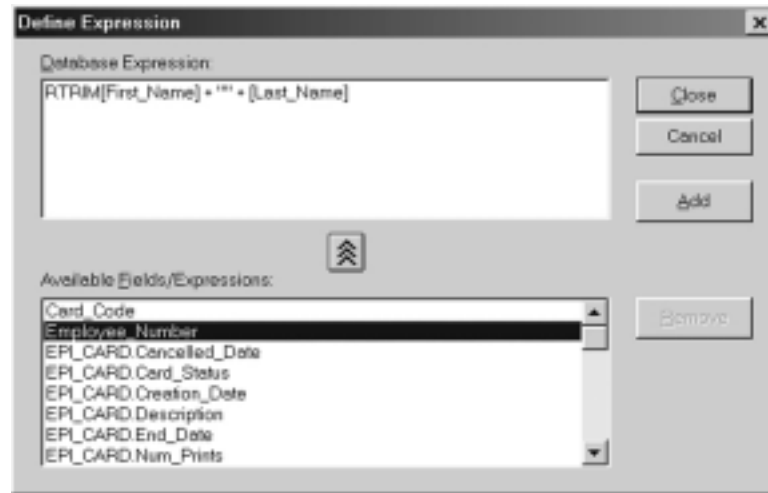
SQL expressions that can be defined in Imaging differ from database to database. Refer to the documentation that accompanies the ODBC-compliant database you are using.

To Define Expressions

To define expressions, follow these steps:

1. Choose Edit > Define Expression. The Define Expression dialog box appears.

Figure 29. Define Expression dialog



2. Define your valid SQL database expression in the Database Expression data entry area. You may add available fields or expressions to your editing area from the Available Fields/Expressions list by selecting (highlighting) the ones you want and clicking the Transfer Field/Expression button (the button with three stacked arrows).

Note: When you click the Transfer button or double-click an available field to create a new expression, Imaging automatically adds square brackets around each field name in the Database Expression data entry area. When you type in field names manually, you will need to add these brackets yourself to avoid an SQL error.

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

Using Expressions as Dynamic Text Objects

You may select any expression when creating a dynamic text object, just as you would any regular database field. Since an expression can be lengthy, you can edit the label so it more closely resembles the expression's intended purpose (for example, "Full Name"). See "Adding Static and Dynamic Text" on page 26 for more information.

Setting Up Magnetic Stripe Information

Using Magnetic Stripes to Retrieve Cardholder Records

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

To use a Magnetic Stripe to retrieve database records from within your application, only encode the card code on Track 1 of the Magnetic Stripe as this is the exclusive method used to successfully retrieve records.

Allowable Track Information

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

Track	Bits per Inch	No. of Alphanumerics	No. of Numerics
1	210	76	
2	75		37
3	210		104

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

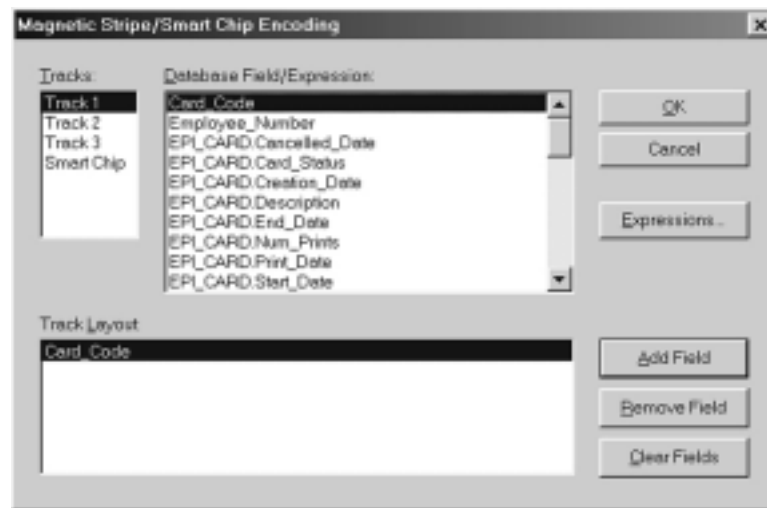
The printer automatically verifies whether or not a card has been successfully encoded. Depending on your printer's features, if a card is not encoded properly, the printer ejects the blank card and the on-line LED flashes. If this occurs, reexamine the information you have selected for encoding and 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). Your application will add these characters automatically during the encoding process.

Magnetic Stripe Tracks

To layout Magnetic Stripe tracks, follow these steps:

1. Choose Edit > Card Encoding. The Magnetic Stripe Encoding dialog box appears.

Figure 30. Magnetic Stripe Encoding Dialog Box

2. Select the track (or tracks) which can be read by your card reader from the Tracks list. Refer to your hardware documentation to find out which tracks are supported by your particular device.
3. From the Database Field/Expression list, 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.
5. Repeat steps 3 and 4 for each database field or expression that you want to encode on this particular track.
6. Repeat steps 1 to 4 to encode additional tracks.
7. When you are finished, click OK.

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

Removing Individual Fields/Expressions from the Track Layout

To remove individual fields/expressions from the track layout, select the track, from the Tracks list, from which the database field or expression is to be removed. Select the database field or expression from the Track Layout list, and click Remove Field.

Removing all Fields and Expressions from the Track Layout

To remove all fields and expressions from the track layout, select from the Tracks list, the track from which all of the database fields and expressions are to be removed, and click Clear Fields.

Setting Up Smart Chip Information

This information is valid only if your ID card printer has an optional Smart Chip encoding module installed.

Encoding Smart Chips

To encode Smart Chips, follow these steps:

1. Choose Edit > Card Encoding. The Magnetic Stripe/Smart Chip Encoding dialog box appears.
2. Select Smart Chip from the Tracks list.
3. From the Database Field/Expression list, select any available database field or expression that you want encoded on the Smart Chip. 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 the Smart Chip.
6. When you are finished, click OK.

Removing Individual Fields/Expressions from a Smart Chip

The Smart Chip information is saved to your card design when you select Save or Save As from the File menu. The physical encoding of the Smart Chip occurs when you print the card from your application.

To remove individual fields/expressions from a Smart Chip, select Smart Chip from the Tracks list. Select the database field or expression from the Track Layout list box and click Remove Field.

To Remove All Fields/Expressions from the Smart Chip

To remove all fields or expressions from the Smart Chip, select Smart Chip from the Tracks list and click Clear Fields.

Tips and Tricks

Creating Your Own Card Backgrounds

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

- Use a sophisticated paint program to design your card backgrounds, and save them in a bitmap file format that is recognized by Imaging. While Microsoft Paint is an adequate tool for some kinds of graphic design, it does not offer the creative effects (such as gradient fills or artistic text) that can give your artwork a professional quality.
- To assure your custom card background graphic will not be cropped during import, always set the size of your card background to the page size of the medium onto which you will be printing (for example, 80mm long by 54mm high). Also, set the output resolution to at least 300 dots per inch, with a 24-bit (16 million) color setting; line art should have a higher dpi for the best quality, and photographs can be a bit lower than 300 dpi without significant degradation in quality.
- If you prefer to use a draw program, export your card background graphic with a one-to-one pixel setting. Set the output resolution to at least 300 dots per inch with a 24-bit color setting. If the draw program offers anti aliasing with the export utility, it will smooth out the “jaggies” in your artwork.
- You can save or export your background graphic to 256 dithered colors to conserve disk space. The end result will be noticeably inferior to 24-bit color output. Sixteen million colors will give your card background a near-photographic quality. If disk space is an issue, save the file as a JPEG image. This file format offers exceptional compression, but maintains the high quality of the image.
- Test-print your background design on the printer you will be using to produce your ID cards. ID card printers do not always output the colors you see on your screen. Test-printing allows you to adjust the color output to your satisfaction before you go into full ID card production.

Large Card Background Files

Large card background files can greatly impede your ability to draw or resize objects in your card design. If you find that your card background is slowing down your design time, deactivate the Show Background command in the View menu (ensure there is no check mark next to the menu item). This hides your background from view, and allows you to draw or resize objects with ease.

Using the Close-Cropping Options

Imaging only allows you to add image keylines (boxes that represent the size and shape of images stored in your database), and not the actual database images themselves. Therefore, setting the image property close-

cropping options can be very time-consuming—especially when you do not know what effect your settings will have until the card has been printed from within your application.

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

When you have removed the object's background pixels to your satisfaction, add an image to the card design and use these new settings in the Close-Cropping Options area of the Image Properties dialog box.

Hue Variation and Intensity Threshold Settings

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

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

- Make sure your subject is well lit.
- Photograph your subjects against a solid-colored backdrop.
- If you are using the ambient lighting in an office, rather than specialized photographic lighting, place your subjects against a colorful backdrop (sky blue, red, or green work well). This enhances your subject's flesh tones, and makes it easier for Imaging to differentiate the background pixels from those that compose the image of the cardholder.
- When you are not using cameo or ghosting effects, darker backgrounds reduce the intensity threshold of the image.

Nudging Objects

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

Constraining Objects

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

Note: Images (photographs, fingerprints and signatures) are automatically constrained to their proper aspect ratios when you draw or resize them on your card design.

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 action leaves behind a copy of the original image at the original location. This allows you to bypass the Copy/Paste commands and Toolbar buttons.

Selecting/Deselecting Multiple Objects

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

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

Selecting Individual Objects

It can be difficult to highlight an individual object when there are several objects overlapping one another, particularly if the object you want to select is in between or underneath others. An easy way to achieve this is to press the Tab key on the keyboard to select each object in succession.

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:

```
RTRIM([First_Name]) + ' ' + RTRIM([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 appears.

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

Placing Bar Codes

When adding a bar code to your card design, place it so the bottom of the code is at least 1/4-inch from the bottom margin of the card. Most card readers are incapable of reading bar codes that are printed below this location. To be sure your bar code is in the right spot, test-print a single ID card and try it on your card reader.

When sizing a bar code to fit onto your card design, remember the following useful points:

- To see how long the bar code will be (using the default 3:1 narrow bar width ratio), select the bar code and choose the Text option from the Bar Code 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 bar code. For example, if your planned bar coding sequence is 9 alphanumeric characters in length, enter nine sample alphanumeric characters in the Value field. The bar code on your card design will automatically resize itself to accommodate the new character length.

- If the bar code is too long to fit onto your card design, select the bar code and choose the Ratio option from the Bar Code Property list. Select “2.5:1” or “2:1” from the Value list. This resizes the widest bars in the bar code by a ratio of 2.5 to 1 or 2 to 1 respectively, relative to the narrowest bars. The bar code on your card design is automatically reduced in the length.

Note: This option does not apply to all bar code types.

- If you reset your narrow bar width ratio and you still cannot fit your bar code onto your card design, adjust the narrow bar width itself. To do this, choose the Narrow Bar Width option from the Bar Code Property list, and reduce the value that appears in the Value field.
- Select the “Show text” option to add human readable text.
- Add a “quiet zone” (that is, a clear space with no machine readable marks in it) before and after the bar code.
- If your bar code reader is not infrared, place the bar code on a white background.

Protecting Your Bar Codes Against Counterfeiting

K (resin) plane bar codes can be printed against a process black background and still be used by infrared card readers. Since infrared readers do not identify process black, this combination of pure and process blacks makes bar codes impossible to photocopy or scan.

For other types of bar code readers, consult your supplier for possible anti-counterfeiting options. Intermec readers, for example, do not identify Pantone 202; therefore, a K plane bar code printed against this color (either resin or dye) will still be recognized by the reader, but remains difficult to reproduce.

Using Fonts

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

- Never use more than one or two fonts in your ID card design. If using two fonts, be sure they complement each other. In general, combine one serif typeface and one sans serif typeface (for example, Times and Arial).
- If your ID card printer prints at unusually low resolutions (for example, 200 dots per inch or under), always use a single bold sans serif typeface (printers with low resolutions cannot print the thin line weights in a serif font). Set the point size to at least 10.
- If you are using a card background bitmap, ensure your typeface fill color makes your text object stand out against the background.

Generally, yellow and white characters can be easily read against dark background colors. Try to avoid harsh contrasts (for example, red typography against a dark green background).

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

Glossary

A

Aspect Ratio	The ratio of the width of an image to its height.
Attributes	Characteristics assigned to objects, with respect to the line and fill. Line attributes include weight (thickness) and color. An object's fill attribute is a color. Text objects also have attributes, such as the font (typeface), style and color.

B

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

Cameo effect	An artistic effect that is accomplished by removing the bitmapped image's background pixels. In the case of photographs, the image backdrop will be removed, and a close-cropped image of the card holder will be placed against the card background.
Card	The printed card that has been issued to the cardholder. A card can exist as a record in the database, even if the card itself has never been printed.
Card Background	A card background is a high resolution bitmapped image that is imported into the card design. It serves as a scenic backdrop to the graphic objects and static or dynamic data that is printed on the card.
Card Format	A card format is a template from which ID cards are produced. It is composed of a Imaging card design including the card background image, design objects, smart chip or magnetic stripe track layout, and the printer setup information.
Card Reader	A card reader is an access control hardware device used to read bar codes, magnetic stripes, smart chips, or microwave emissions from the different types of advanced security cards.
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 your 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.

Cropping Rectangle The rectangle with eight handles that signifies the cropping area over a captured image.

D

Directory A directory is a structure used to organize files on a disk like a drawer in a filing cabinet. Directories have names, and can be divided into subdirectories. For example, you can have a directory named CARDS to store your card designs.

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) and one or two floppy disk drives (labeled A and B).

Drop-down List A drop-down list allows you to choose commonly-used entries for a specific category of information (such as Blue, Green, Brown or Gray, if you create a pick list for the card holder's eye color). This is often referred to simply as a "list".

Dynamic Text Object A text object in a Imaging card design that has been linked to a database field (e.g., the cardholder's first name, last name, etc.). Unlike static text, a dynamic text object outputs the variable information that was entered into its associated field.

E

Expression In Imaging, a combination of operators, constants and names of fields 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 (e.g., the First_Name and Last_Name fields can be combined into one dynamic text object that prints the cardholder's full name on a single line).

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

F

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.

G

- Ghost Image*** An image or bitmap that is almost transparent, so that the card background can be seen through it.
- Grid Lines*** A series of evenly spaced, intersecting horizontal and vertical dots used to align objects.

H

- Handles*** Small squares that appear on the corners and sides of the cropping rectangle. You can use these handles to resize or move the rectangle over the captured image. The area of the image that resides within the rectangle will be cropped and saved to the database. The area of the image that resides outside the rectangle will be discarded.
- Hue*** The position of a color along the color spectrum. For example, green is located in the spectrum between yellow and blue.

J

- Justification*** The alignment of text in relation to the left, right, top and bottom margins of the text frame.

L

- Landscape (Page Orientation)*** A page oriented so that it prints from left to right across its longest dimension.
- Luminosity*** The brightness of a color on a scale from black to white.

O

- 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).

P

- 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.

S

- Saturation*** The purity of a color's hue, moving from gray to the pure color.
- Static Text Object*** A text object in a Imaging card design that has not been linked to a database field. Unlike dynamic text, a static text object, such as a headline or a field label, remains constant from card to card during the print process.
- Symbol PDF417*** A two-dimensional symbology that allows you to encode a Portable Data File with ASCII, binary, or numeric data. The Symbol PDF417 is particularly useful if you need to encode large amounts of data onto a limited space (e.g., an ID card that requires customer or employee profiles, biometric data, and personal descriptions).

T

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

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