Johnson Controls

P2000AE

Security Management System

Integrated Video Imaging

Installation and Operation Manual

(ID Server®)

Version 4.1 and higher, December, 2008
24-10241-46 Revision A

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CE

Declaration of Conformity

This product complies with the requirements of the European Council Electromagnetic Compatibility Directive 2004/108/EEC and the Low Voltage Directive 2006/95/EEC.

This equipment must not be modified for any reason and it must be installed as stated in the Manufacturer's instruction.

If this shipment (or any part thereof) is supplied as second-hand equipment, equipment for sale outside the European Economic Area or as spare parts for either a single unit or system, it is not covered by the Directives.

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INTRODUCTION

Video Imaging is a full-featured video imaging and badging system that is fully integrated with your *P2000AE Security Management System (SMS)*. Video Imaging improves your security by providing a visual identification of every entity. Through the imaging software's graphical user interface, you can create custom badge layouts easily and quickly.

You can include a number of elements on a badge identifier, such as company logos or other important identifying images, entity photographs, custom text, barcodes, and signatures. You can also add user-defined fields (UDFs) to give you the flexibility to produce sophisticated designs with a minimum of time and effort.

NOTE

Badges in the P2000AE SMS are referred to as access badge identifiers (for badges used to gain access to a secured area) and ID badge identifiers (for badges used solely for visual identification of the entity). For the purposes of this manual, unless specified, access badge identifiers and ID badge identifiers are simply referred to as "badge identifiers" or "badges."

NOTE

"P2000AE" is also referred to as "P2000" throughout this manual.

CHAPTER SUMMARIES

- ***Chapter 1: Introduction*** presents a general overview of Video Imaging system components and conventions used throughout this manual.
- ***Chapter 2: Installation*** presents the information you need to successfully install and set up your Video Imaging hardware and software.
- ***Chapter 3: System Configuration*** walks you through configuration steps to get your connections and capture hardware up and running.
- ***Chapter 4: Badge Design*** describes all aspects of creating, managing, and printing badge identifiers.
- ***Chapter 5: System Administration*** covers the networking aspects of the Video Imaging system.

NOTE

Depending on the software version you are using, the screen captures depicted in this manual may differ slightly. Also, this document only covers information from the ID Server® application. For information on EPI Builder®, refer to the Integrated Video Imaging Installation and Operation Manual (EPI Builder) (Document No. 24-10241-54).

BASIC SYSTEM COMPONENTS

Basic Video Imaging components include a P2000 Server with a video imaging server license installed and one or more P2000 workstations, which have video imaging licenses installed, connected to the Server through a 10Base-T, 10/100Base-T, or 10/100/1000Base-T hub. These workstations can include options such as a signature pad, camera, and badge printer, and also function as standard networked P2000 workstations. Figure 1-1 on page 1-3 shows a typical P2000 system, including an integrated Video Imaging system.

VIDEO IMAGING PC

To run the Video Imaging software option, you need a suitably configured Windows®-compatible PC. Video Imaging PCs purchased from Johnson Controls are shipped with the following specifications (all components or “better”):

- Microsoft Windows XP Professional
- Intel P4 Minimum 3.2 GHz CPU
- 512 MB RAM
- 17-inch Flat Panel Monitor
- 80 GB hard disk drive or better
- 10/100 Base-T Network Card
- CD-RW drive or better
- Two-button mouse
- 101-type keyboard
- Available USB ports for use with a digital camera, the USB FlexCam, and the Topaz® model T-S261-HSB signature pad.

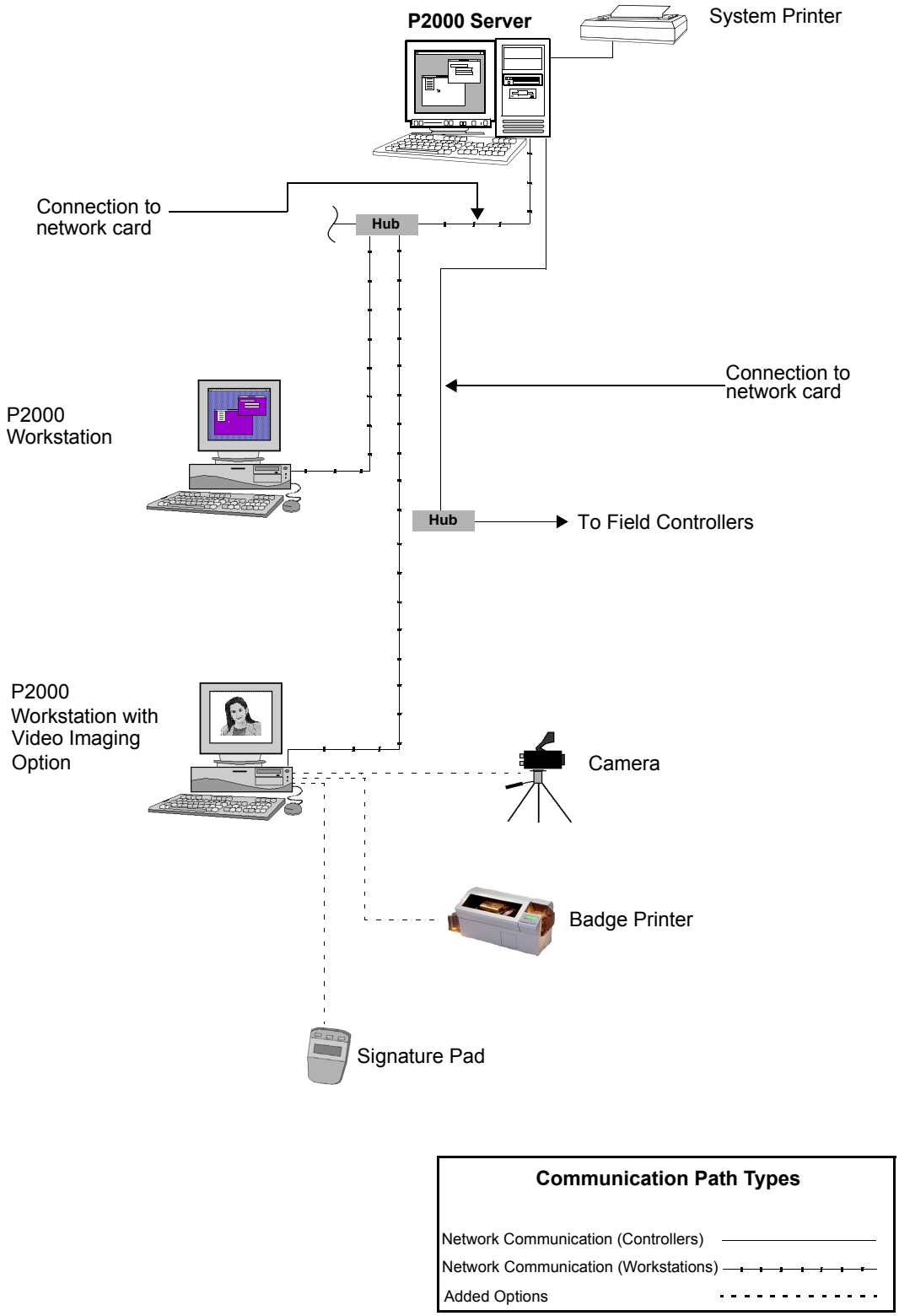


Figure 1-1: Typical P2000 Video Imaging Configuration

VIDEO IMAGING BADGE PRINTERS

Johnson Controls offers three Zebra/Eltron badge printers described below:

- **P310i**
  Single-sided color PVC card printer with memory expansion and dual coercivity magnetic stripe encoder. 120V/240V.
- **P420i**
  Dual-sided color PVC card printer with memory expansion and dual-coercivity magnetic stripe encoder.
- **P520i**
  Dual-sided color card printer with memory expansion and dual-coercivity magnetic stripe encoder. After printing, a 1-mil thick laminate can be applied to either side of the card. This laminate offers outstanding protection for swipe card applications.

NOTE

In addition to the above card printers, you can use the Video Imaging option with any printer that has standard Windows drivers.

NOTE

As of March 19, 2008, Zebra/Eltron has not provided compatible Microsoft Windows Vista® drivers for their P310i, P420i, and P520i model badge printers. Before using a badge printer, check with the printer manufacturer for current printer drivers.

VIDEO IMAGING ACCESSORIES

The following accessories are available for use with the Video Imaging system. Installation and use of each is described later in this manual.

- **Digital Camera**
  You may use any digital camera that can be identified by the Windows® operating system. Digital cameras connect to the Video Imaging PC via the USB port. The following Canon® cameras are supported by Imageware® drivers, part number 12.07.103.01 or 12.7.103.02 (with Face Finder software): A70, A75, A80, A85, A95, A510, A520, A410, A420, G3, G, G6, PRO1 (PowerShot Pro 1).
- **FlexCam**
  USB camera with adjustable focus from 1/4 inch to infinity and a flexible gooseneck for precise positioning.
- **Signature Pad**
  The Topaz® Model T-S261-HSB is a 1”x5” inch signature capture tablet that connects to the P2000 workstation’s USB port.

Additional accessories (e.g. cards, cleaning tools, slot punches, etc.) are listed in the *Johnson Controls Security Price List*.

VIDEO IMAGING SPECIFICATIONS

Video Imaging provides a full-featured badge design and imaging solution. The following are Video Imaging specifications:

- Integration with the *P2000 Security Management System*. All entity records, images, and so forth are stored centrally at the P2000 Server.
- The P2000 workstation with the Video Imaging option functions as a fully-capable P2000 workstation as well as a badging workstation.
- Easy-to-use WYSIWYG (what you see is what you get) badge design.
- The number of badge designs created is limited only by available hard disk space.
- Supports digital camera and signature pad video capture options.
- Simple to capture photos and signatures.
- Magnetic stripe encoding.
- Can be used with partitioned or non-partitioned P2000 systems.

ASSUMPTIONS

This manual assumes that you are familiar with Microsoft® Windows. If you are not familiar with this program, refer to your Microsoft documentation.

This manual also assumes that you are using a right-handed mouse, with the left button configured as the primary button. When you are asked to click or double-click an item, use the left button. Certain features require the right button, which are called out specifically in this manual.

OTHER MANUFACTURER'S DOCUMENTATION

When unpacking your equipment, keep all manufacturer's documentation, as you may need to refer to it.

TECHNICAL SUPPORT

Technical assistance is provided to *Johnson Controls* authorized dealer representatives from 5 a.m. PT to 5 p.m. PT Monday through Friday. System users can get answers to operator questions by calling the local *Johnson Controls Inc.* sales/service office.

The authorized dealer representatives can also provide you with information on the maintenance contracts and the on-site field service.

MANUAL CONVENTIONS

The following items are used throughout this manual to indicate special circumstances, exceptions, important points regarding the equipment or personal safety, or to emphasize a particular point.

NOTE

Notes indicate important points or exceptions to the information provided in the main text.

TIP

Tips describe time saving or additional information.

Indicates possible damage to the equipment, including software, if the procedures are not performed correctly.

Chapter 2

INSTALLATION

This chapter describes how to install and set up the hardware and software for the Video Imaging workstation.

HARDWARE REQUIREMENTS

At a minimum, the hardware required for an operational Video Imaging system includes:

- P2000 Video Imaging PC
- Badge printer
- Camera hardware (including drivers and software)

In addition, you can also include signature pad hardware.

Complete software installation for the Video Imaging system includes:

- Badge printer driver
- Video Imaging software (installed during P2000 installation)

HARDWARE INSTALLATION

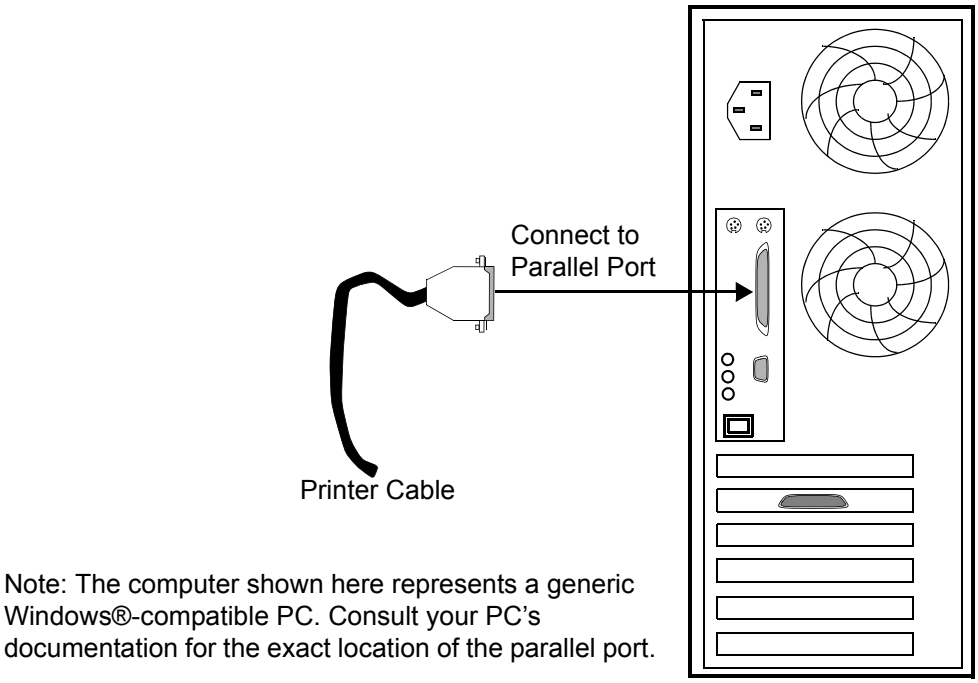
Electronic components, such as circuit boards, are extremely sensitive to electrostatic discharge. If possible, a properly grounded wrist strap should be worn at all times when handling these components. Wearing an anti-static smock also protects against static discharge. If a wrist strap or smock is not available, touch any part of the computer's metal case prior to handling the components to discharge electrostatic electricity. Avoid working on carpet when possible and keep components in their anti-static bags until you are ready to install.

Connecting the Badge Printer

Installation of the badge printer is identical, regardless of which model printer you are using. Connect the printer to your PC's parallel port (LPT1). Refer to your printer documentation for more information on the installation, operation, and maintenance of your badge printer.

NOTE

If your printer has a USB port, you may use a USB cable to connect the printer to the USB port on the PC.



Note: The computer shown here represents a generic Windows®-compatible PC. Consult your PC's documentation for the exact location of the parallel port.

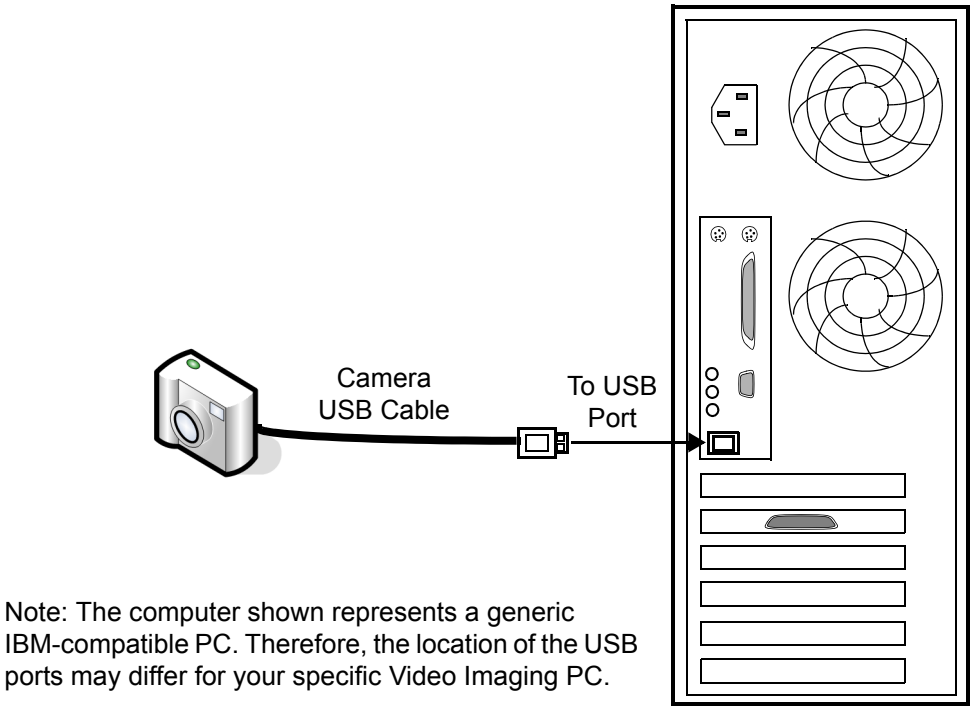
Figure 2-1: Video Imaging Printer Connection

Connecting the Digital Camera

The Digital Camera requires a simple USB cable connection from the camera to the PC.

➤ To Connect the Digital Camera:

1. Install the camera driver software that comes with your digital camera. Refer to the manufacturer's documentation.
2. Connect the camera's USB cable from the camera to one of the computer's available USB ports.
3. Verify that the Windows® operating system recognizes the camera.
4. Install and configure the Canon ID Camera interface software, if purchased, according to the instructions on page 2-8 and page 3-14.



Note: The computer shown represents a generic IBM-compatible PC. Therefore, the location of the USB ports may differ for your specific Video Imaging PC.

Figure 2-2: Digital Camera to PC Connection

Connecting the USB FlexCam

This section describes the proper installation of the USB FlexCam to the back of the computer.

➤ To Connect the USB FlexCam:

1. Install the camera driver software that comes with the FlexCam. Refer to the manufacturer's documentation.
2. Connect the camera's USB cable into one of the PC's available USB ports (see Figure 2-3).

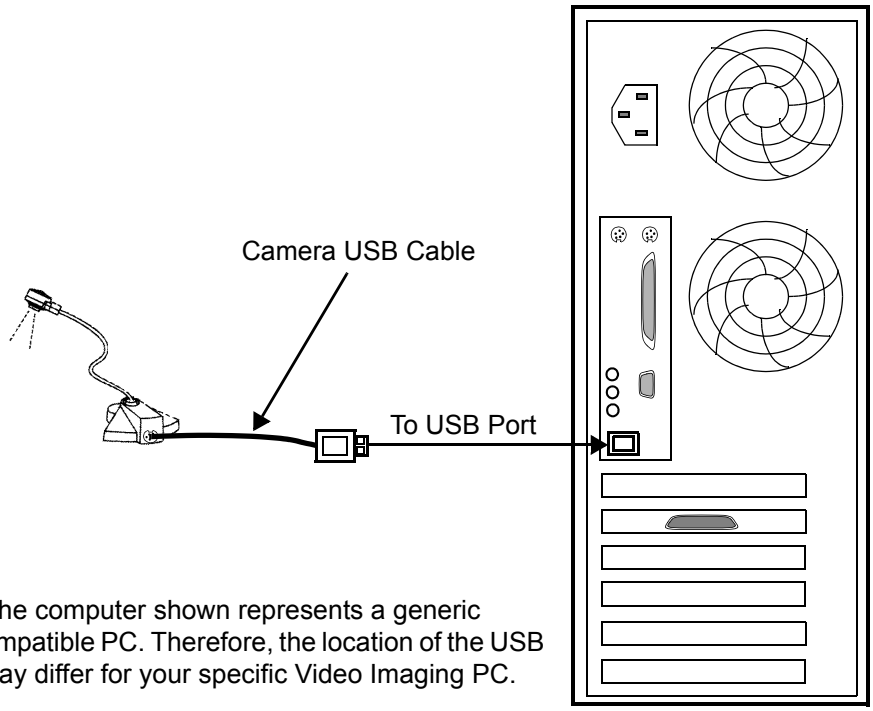


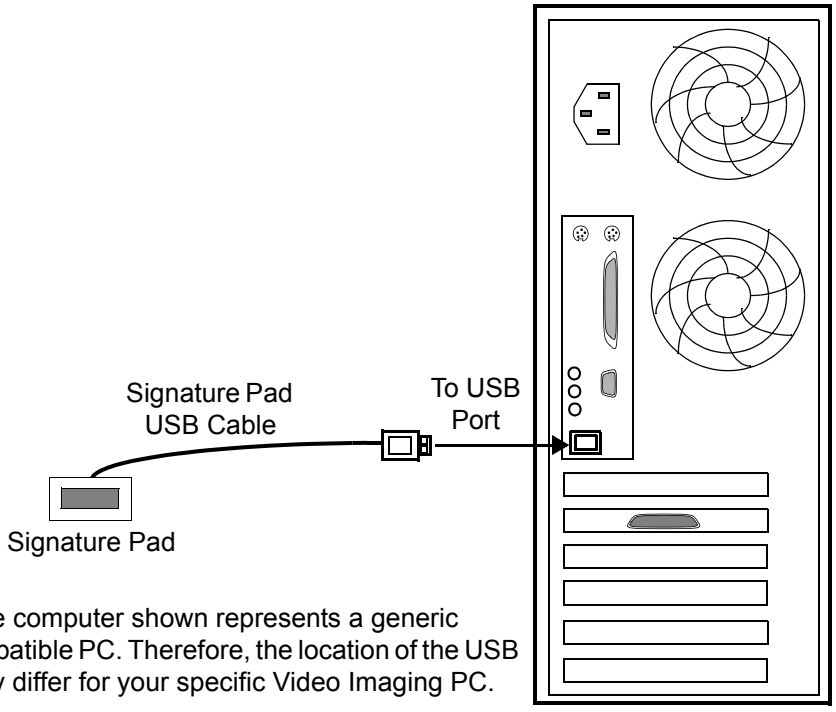
Figure 2-3: FlexCam to PC Connection

Connecting the Signature Pad Hardware

The P2000 Video Imaging option supports the Topaz® Model T-S261-HSB 1”x5” signature pad.

➤ To Connect the Signature Pad:

1. Install the driver software that comes with the signature pad. Refer to the manufacturer’s documentation.
2. Connect the signature pad’s USB cable to one of the PC’s available USB ports.



Note: The computer shown represents a generic IBM-compatible PC. Therefore, the location of the USB ports may differ for your specific Video Imaging PC.

Figure 2-4: Signature Pad Connection

Network Connection

The Video Imaging workstation connects to the P2000 Server using TCP/IP protocol that runs over a 10Base-T, 10/100Base-T, or 10/100/1000Base-T Ethernet link. The Server connects to a 10Base-T, 10/100Base-T, or 10/100/1000Base-T hub; P2000 workstations, including the Video Imaging station, also connect to the hub, as shown in Figure 2-5.

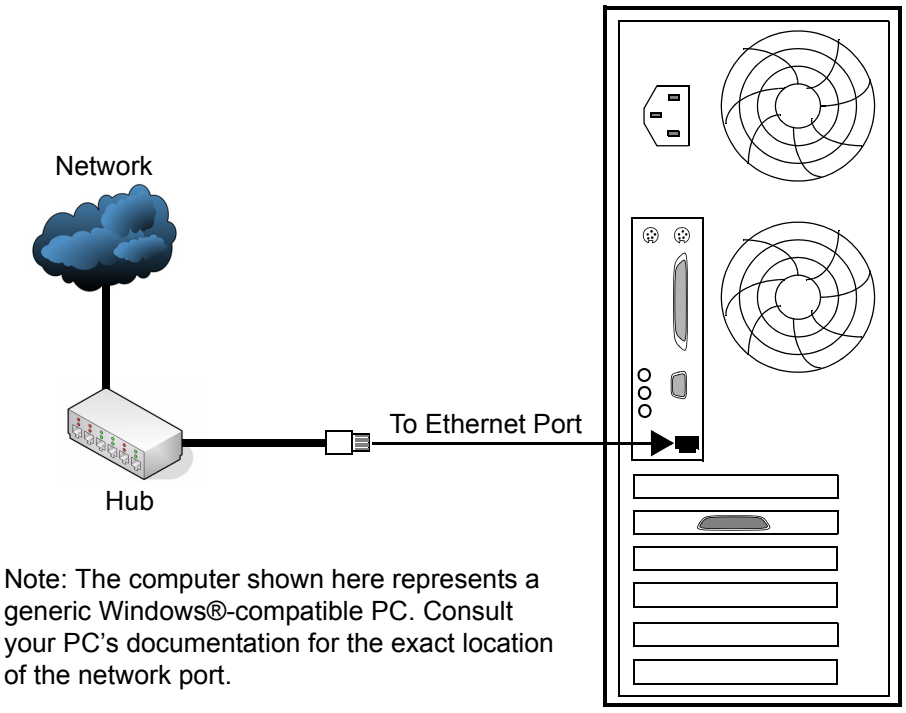


Figure 2-5: Network Connection

Connection to the Hub

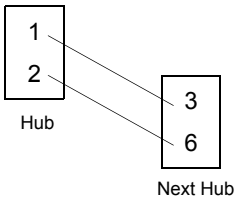
The P2000 Server is connected to a hub. The following subsections describe network principles to keep in mind when you install workstations and so forth.

Networking Guidelines

The following guidelines must be considered when you plan a 10Base-T, 10/100Base-T, or 10/100/1000Base-T network installation.

- Maximum segment length is 100 meters (328 feet).
- Wiring from the PC (workstation and host) to the hub is straight through.

- Wiring **between hubs** requires the following pins to be crossed (all other pins are wired straight through):



- The 4X5 rule applies to 10Base-T, 10/100Base-T, or 10/100/1000Base-T networks, meaning that a single Local Area Network (LAN), which does not use bridges or routers, can contain a maximum of four repeaters (hubs) and five segments.

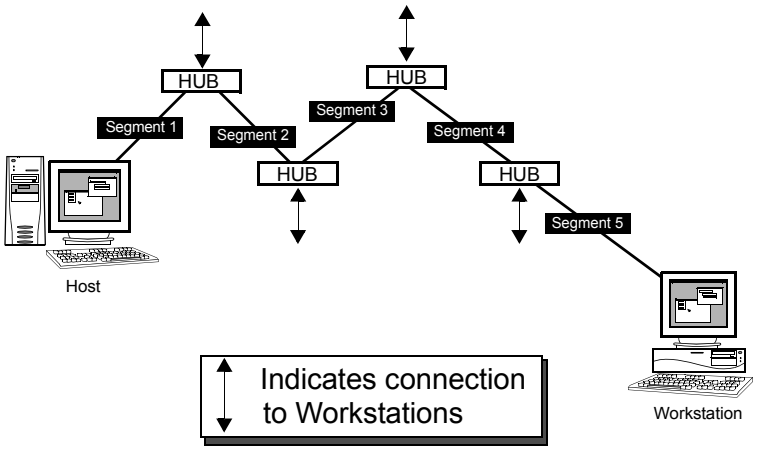


Figure 2-6: 10Base-T, 10/100Base-T, or 10/100/1000Base-T Network Configuration

- The maximum distance between the P2000 Server and the farthest workstation is 500 meters (1640 feet), without the use of bridges or routers.

Using Bridges and Routers

You can extend the distance of a LAN, or form LANs into Wide Area Networks (WANs), through the use of bridges and routers. A variety of bridges and routers are available on the market and are designed for different use. For example, a bridge can be used to connect LANs in the same building, or across many states.

We recommend you consult an experienced network professional when you consider the use of network bridges, routers, or network switches, any or all of which can extend your network's distance.

SOFTWARE INSTALLATION AND ACTIVATION

After you set up your Video Imaging PC and peripherals, you are now ready to begin installing and activating the software.

Installing Printer Drivers

Locate the CD shipped with your printer and use the instructions provided by the manufacturer's documentation. Once the printer driver is installed, you may select the printer for badge printing. For information on selecting a printer that will be used for badge printing, see "Printer Options" on page 3-5.

Installing P2000 with Video Imaging Option

If you purchased your Video Imaging PC from Johnson Controls, the complete software package is already installed.

For instances when the software must be reloaded, or if you are converting an existing P2000 workstation into a Video Imaging workstation, refer to the *P2000AE Server/Workstation Software Installation Manual*.

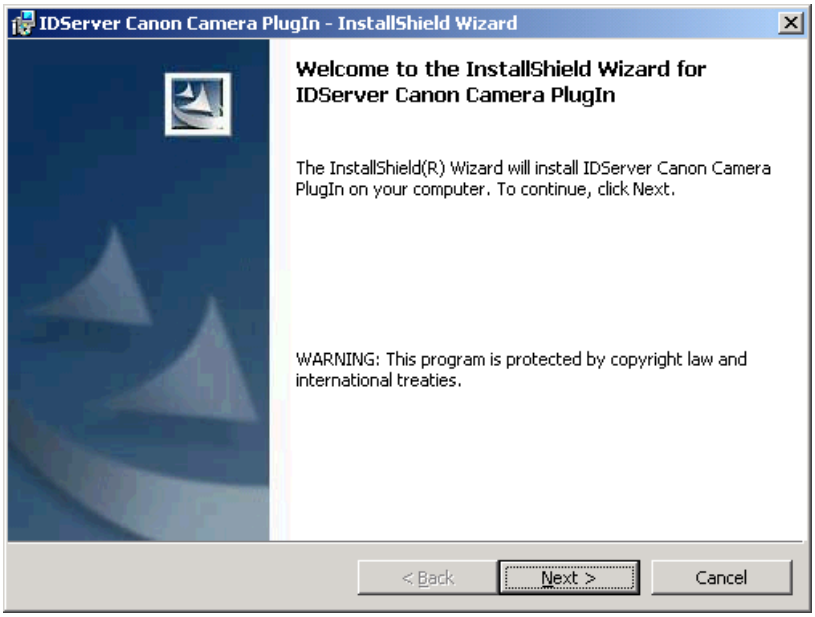
Canon ID Camera Interface Software Installation

In order to use the Canon ID Camera Interface software, you must purchase a license. The license you obtain will depend on whether you have a *Canon-only* or *Canon plus Face Finder* Canon ID Camera interface.

➤ **To Install the Canon ID Camera Interface Software:**

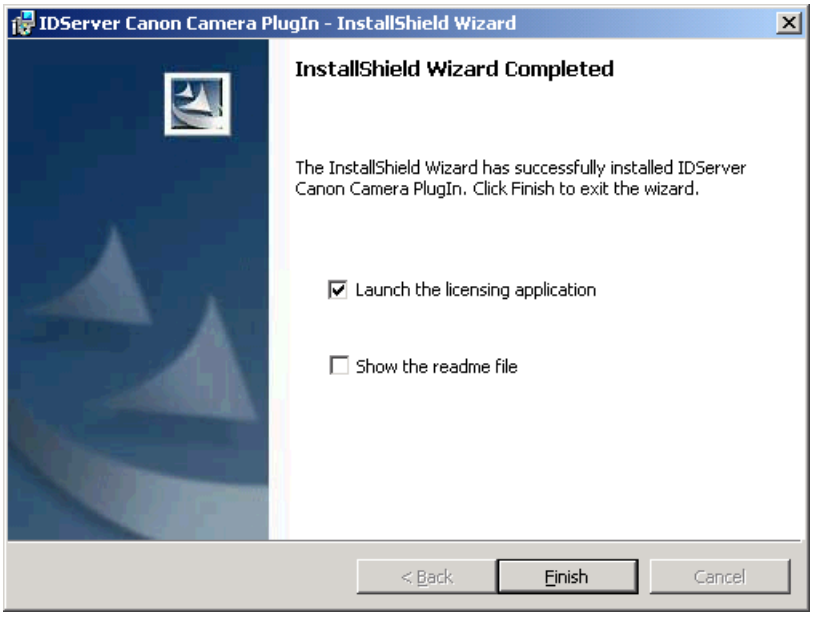
1. Access the following directory on the P2000 badging workstation:

   Local Disk:\Program Files\Johnson Controls\P2000\Third Party Driver\ITC\Canon G5
2. Double-click to run the **setup.exe** file and follow the instructions on the InstallShield Wizard.



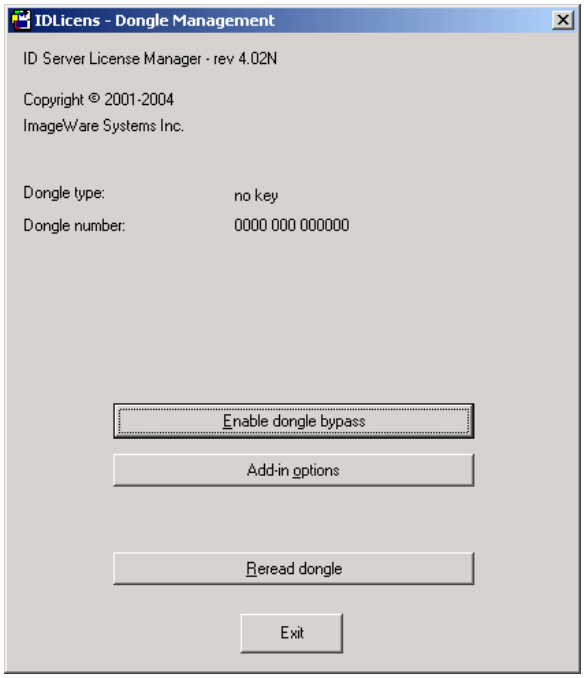
The Wizard will detect your ID software application and install the Canon ID Camera files in the appropriate directory.

3. When the Wizard has completed the installation, select the **Launch the licensing application** option on the dialog box.



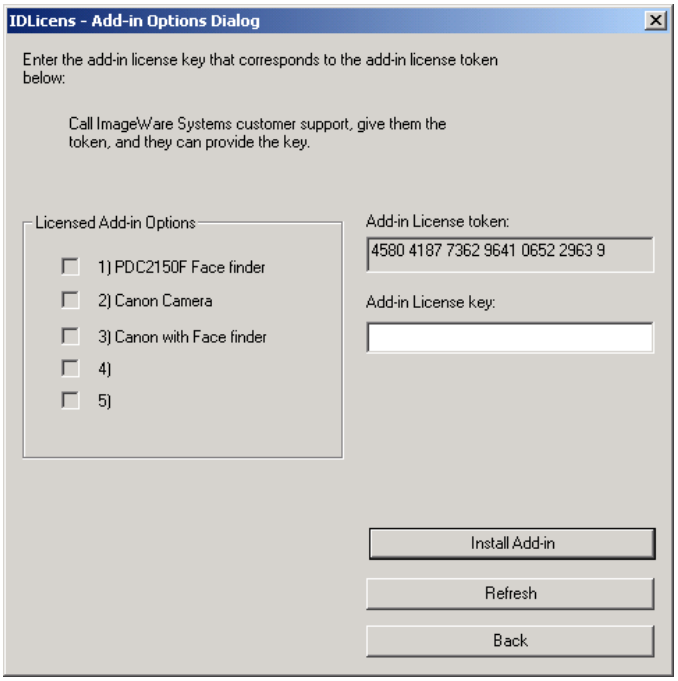
4. Click **Finish**. The IDLicens Dongle Management dialog appears.

5. Click the **Add-in Options** button.



The Add-in Options dialog appears.

6. Obtain a license for the camera. You need either a Canon only license or a Canon plus face finder license.
7. Contact the third party supplier and give them the number in the **Add-in License token** box.



The third party supplier will issue you a number to enter in the **Add-in License key** box.

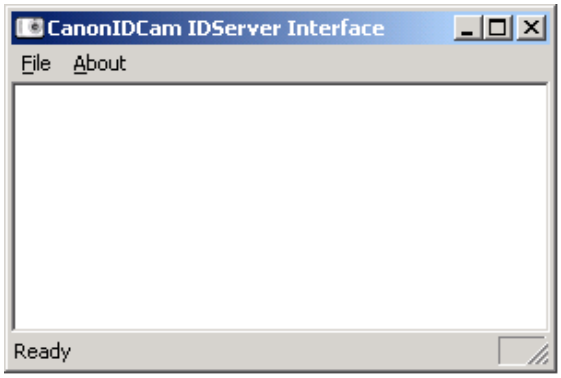
8. Enter the license key number and click **Install Add-in**. The IDLicens dialog will appear if the add-in was successful.
9. Click **OK**.

   The Licensed Add-in Options #2 and/or #3 should become checked (enabled), depending on whether you are licensing Canon only and/or a Canon plus face finder, respectively.
10. Close the IDLicens – Add-in Options Dialog and the IDLicens – Dongle Management Dialog.
11. Register the camera (see below).

➤ To Register the Camera:

1. Double-click to run the **CanonIDCam.exe** file, normally located in the *Local Disk:\Program Files\Johnson Controls\P2000\BMaster* directory.

   The CanonIDCam IDServer Interface screen appears.

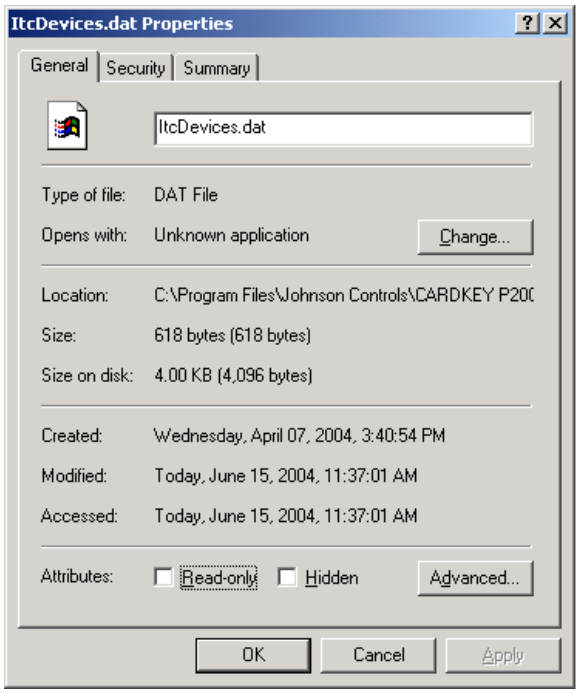


2. Select **File>Register with IDSetup**.
3. If successful, a message will appear to inform you that the camera was successfully registered.

   If you receive the following error message, continue with step 4.

4. In the BMaster directory, right-click the **ItcDevices.dat** file and select **Properties**.

5. Clear the **Read-only** check box.



6. Click **OK**.
7. Repeat steps 1-3.

To configure the Canon ID Interface Software, refer to page 3-14.

Chapter 3

SYSTEM CONFIGURATION

An important task must be performed at the P2000 Server before you can configure your Video Imaging system: define your system as a Video Imaging workstation from the P2000 Server. Once this task is performed (usually by your system administrator), you are ready to configure the capture hardware. This chapter addresses the following procedures:

- Defining the Video Imaging Workstation
- Navigating the System
- Enabling and Configuring the Badging Hardware

You must complete these procedures to finalize the system's configuration. Afterwards, you will be familiar with the system and ready to design a badge for your specific needs. (See "Chapter 4: Badge Design").

DEFINING THE VIDEO IMAGING WORKSTATION

Prior to using Video Imaging, the Video Imaging workstation must be configured at the P2000 Server. This configuration step is administrative in nature and is described in more detail on page 5-1 in "Chapter 5: System Administration". If you are the system administrator, please refer to this procedure before you proceed. If you are a system operator, check with your administrator before continuing to ensure this item has been configured properly.

NAVIGATING THE SYSTEM

When you use Video Imaging, you are communicating with the P2000 Server. The following sections will familiarize you with the basic tools for starting the program, logging on and off, and general navigation through the system.

Logging On to the P2000 System Software

The P2000 system uses a User Name and unique password to establish each authorized user. Passwords are used to protect access within a database or system. A password is a unique combination of alphanumeric characters, such as in a string of letters and/or numbers.

1. Double-click the **Launch P2000** icon on your Windows® desktop.

2. The Login window appears.

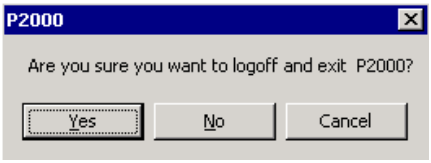
3. Enter the **User Name** (the default user name is `Cardkey`).
4. Enter the **Password** (the default password is `master`). For security purposes, the password is displayed only as asterisks.
5. If this is a partitioned system, select **Super User** from the **Partition** field. Operators that belong to the Super User partition have access to all areas of the P2000 program.
6. Click **OK** or press <**Enter**> to continue. The P2000 Main menu bar appears. To cancel the login procedure, click **Cancel**.

Refer to the *P2000AE Software User Manual* for detailed information on changing the default user name and password.

Logging Off of the P2000 System Software

1. From the P2000 Main menu, select **Exit>Exit**.

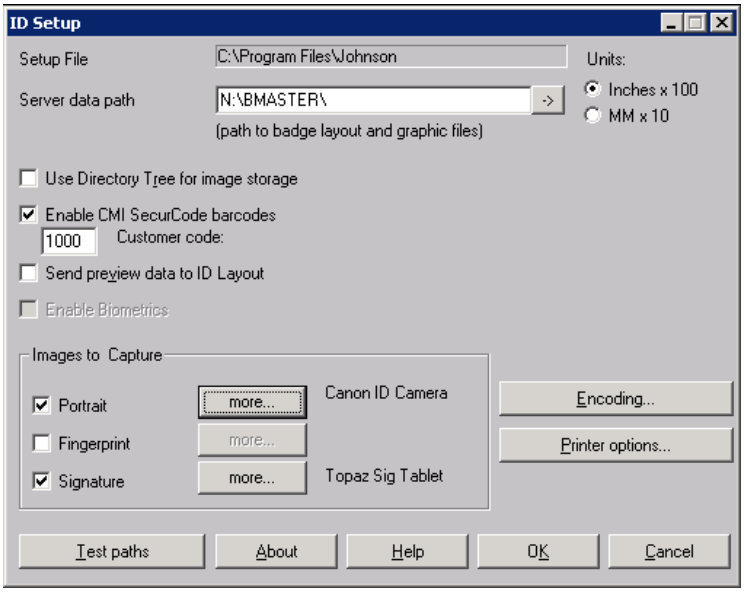
2. The system prompts for logout verification, as shown below.



3. Click **Yes** or press <**Enter**> on your keyboard. The system returns to the Windows desktop.

ENABLING AND CONFIGURING THE BADGING HARDWARE

This section specifies the settings you will use to configure your system's badging hardware, specifically the printer, encoder, camera, and signature pad. To start, select **Config>Integrated Badging>Setup** from the P2000 Main menu bar. The ID Setup dialog box appears.



ID Setup Field Definitions

Setup File – Name of the file you are editing. Any setup changes made in ID Setup will be written and saved to this file.

Server data path – Default directory for the badge layouts and the captured portrait and signature images.

Units – Select the button for either inches or metric units.

Use Directory Tree for image storage – Do not check this box.

Enable CMI SecurCode barcodes – Allows the use of CMI SecurCode barcodes. When checked, the system displays a field below this field for entering the customer code.

Send preview data to ID layout – Allows you to use personal data in the ID Layout screen. When checked, the system displays the following message when leaving this screen, "The next time you run your application's Badge Review command that personal data will become the data used by the preview of the ID Layout." Click **OK** to leave the message screen.

Enable Biometrics – This feature is currently unavailable.

Encoding – Opens the ID Setup - Encoding dialog box, which is used to specify the type of encoding device you are using, as well as the encoding prefix and suffix strings you want the printer to place on each magnetic stripe. See "Mag Encoding" on page 3-7.

Printer Options – Opens the ID Setup - Printer Options dialog box, which is used to select the printer device used for badge or sheet printing. See "Printer Options" on page 3-5.

Layout Sheet – Opens the Batch ID Printer - Sheet Layout dialog box where you can specify the number and arrangement of badges on a single sheet. This button only appears on the ID Setup dialog box when the **Use Batch printing option** and **Use Sheet formatting option** check boxes are enabled on the Printer Options dialog box. See "Layout Sheet" on page 3-8.

Images to Capture – Click the check box next to the image type (Portrait, Signature) you wish to capture. Click the **more** button to open the Graphics definition dialog box to specify further image capture parameters for each type of image. See "Images to Capture" on page 3-12.

NOTE

The Fingerprint capture option is currently not supported.

Test paths – Checks the configuration parameters for internal consistency and checks the integrity existence of the selected paths to image files.

About – This screen gives you information about the ID Setup.

Help – Online help is provided with Video Imaging as a reference aid when working with the program. The ID Setup Help menu is available from any ID Setup window, or by pressing <**F1**>. You can also click **Search** in order to find a specific topic.

OK – Accept the changes and leave the ID Setup screen.

Cancel – Leave the ID Setup screen without accepting any changes.

Printer Options

The Printer Options dialog box is used to select the printer device used for badge or sheet printing. It also contains several parameters that determine how badges are printed: X and Y offset, batch printing, and sheet formatting option, as well as batch queue mode.

NOTE

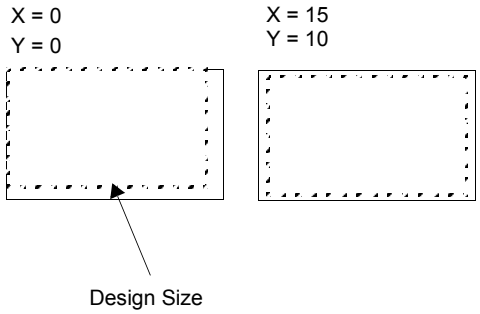
All Johnson Controls video imaging products are compatible with any printer that provides Windows drivers. Within the video imaging software, specifically ID Setup, you are allowed to select two printers as default, one for badge printing, the other for sheet formatting. You can use any printer installed within Windows, including network printers, for sheet formatting.

1. Begin configuration by clicking **Printer options** in the ID Setup dialog box. The ID Setup - Printer Options dialog box appears.
2. Enter the information as described in "Printer Options Field Definitions."
3. When finished, click **OK** to save your settings and return to the ID Setup dialog box.

Printer Options Field Definitions

Badge printer selection and Sheet printer selection – Allow you to select the printer that will be used for badge or sheet printing. If the badge or sheet to be printed has either height or width greater than four inches, it will automatically be sent to the sheet printer you selected.

X origin offset and **Y origin offset** – Allow you to adjust how closely to the borders of the card or page your printer will print. This is useful when you design badges that will not be printed edge-to-edge, leaving a border around the main card design. X and Y offset is determined by hundredths of an inch, where 1 unit equals 1/100 inches. An X and Y setting of 0,0 means align the design with the top left corner. To make the badge or text begin its print more to the right, set the X offset to a positive number (5, 10, 15); to make the badge or text begin its print lower on the card or page, set the Y offset to a positive number.



Adjusting the X and Y offset affects how your badge design is printed.

NOTE

Most card printer drivers also contain settings for X and Y offset. You can access them through the printer's Properties dialog box. The X and Y offset settings in Video Imaging should only be used when printer's drivers do not offer the offset option. For printers that do allow you to set the offset within the driver, such as all Eltron card printers supplied by Johnson Controls, set the X and Y offset in the printer Properties only. To view a printer's Properties, from the Windows desktop, select Start>Settings>Printers, click a printer icon once to select it, then right-click the icon to display a popup menu and select Properties. For more information on Properties settings, refer to the manufacturer's documentation or, in the case of Eltron Card Printers, the online Help available through the Properties dialog box.

Print Text as Graphics – Enable this option to convert text to a bitmap before printing. This is useful when your card printer cannot support the fonts you want to use on your badge layout.

Alternate Resolution (dpi) – Allows you to manually adjust the speed and memory requirements of the print process. A "0" in this field means to use the printer's default resolution when rendering images. In some cases, if your printer is able to print at extremely high resolution (1200 dpi, for instance), setting the Alternate Resolution to 300 improves print speed and performance.

Use Batch printing option – Check this option to enable batch printing. If this option is selected, the Batch Queue Mode box opens. If you do not select this option, the badge will be printed immediately after you click on a Print button.

NOTE

The first time you enable batch printing, the system will inform you that the Queue subdirectory does not exist. Click Yes to allow Video Imaging to automatically create it. You may queue a total of 600 badges at any given time.

Use Sheet formatting option – Sheet formatting allows you to print entity information, including captures like a portrait or signature, along with any information contained in the record, in a layout of your choosing on media other than cards. This function allows you, to a degree, to customize the layout of the printed format.

When this option is selected, the **Layout Sheet** button appears on the ID Setup dialog box.

Directory for Queued Badges – This box appears only if the **Use Batch printing option** is selected. You may accept the default path to where queued badges are stored, or specify another location on your hard disk.

Batch Queue Mode – Controls the kind of user interface required for printing. You have three options:

- **Always ask** – The system asks if you want to print now or queue until later.

- **Auto print** – Automatically prints each badge when you use the print option. When printing badges to paper, the badge is sent to queue until enough badges are queued to fill a page.
- **Always queue** – Puts a badge in the print queue until you decide to print the contents of the queue.

Mag Encoding

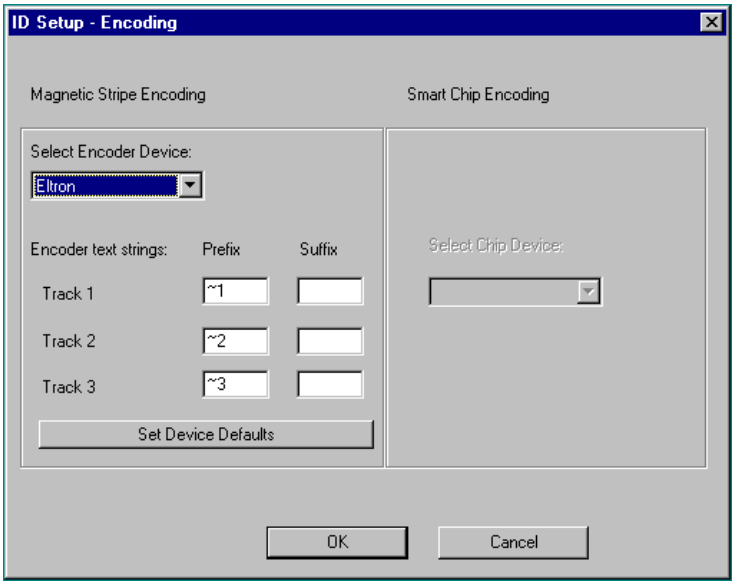
All Zebra/Eltron card printers supplied by Johnson Controls have the ability to encode magnetic stripe cards. Use the Mag Encoding button on the ID Setup dialog box to tell the software which type of encoder your printer uses and add any required prefixes or suffixes to the tracks. (Actual encoding data is set up using Mag Track Formulas, which is discussed on page 4-3.)

If magnetic encoding has been specified in the Properties of Badge Background dialog box of the ID Layout program, ID Setup automatically inserts the encoder prefixes and suffixes specified here.

Select your printer manufacturer name from the Encoder Device drop-down list on the Magnetic Encoding dialog box. This automatically places the correct prefixes and suffixes in the fields. The operator may override the automatic choices if necessary.

➤ To Set Up Magnetic Stripe Encoding on your Printer:

1. In the ID Setup dialog box, click Encoding. The ID Setup-Encoding dialog box appears.



2. Choose the proper encoder device, as well as what information you want the printer to place on each magnetic stripe.

NOTE

When you manually program the printer to encode each track, you must program each track according to the ISO standards. Otherwise, the printer gives an Error Message when it tries to encode.

ISO Standards

- **Track 1**: Can use up to 79 alphanumeric characters. The letters must all be capitalized. Track one can be encoded at 210 bpi.
- **Track 2**: Can use up to 40 numeric characters. Track two allows the use of a few special characters, and can be encoded at 75 bpi.
- **Track 3**: Can use up to 80 numeric characters (limited to the maximum data field length). Track three can be encoded at 120 bpi.

3. When you have finished programming your printer to encode tracks 1, 2, and 3, click **OK** to return to the ID Setup dialog box.

Layout Sheet

Use the Layout Sheets option to define the number of badges and their position on a sheet of paper. This button is visible only if the Use Sheet formatting option box is checked in the Printer Options dialog box.

Specify the number of badges you wish to print on a sheet of paper by entering numbers in the Badge Columns and Badge Rows fields. The left side of the Sheet Layout window shows a graphical representation of the sheet layout; the right side of the window contains fields for changing the layout. The top right of this window displays the name of the printer you selected in the ID Setup - Printer Options dialog box.

➤ To Set Up Sheet Formatting:

1. Click **Printer Options** in the ID Setup dialog box. The ID Setup - Printer Options dialog box appears.
2. Note the top right of the dialog box; here you select which sheet printer to use. In the example given, the selected printer is an Eltron P420. Also note that the default printer is set to a different printer. This indicates which printer Windows has installed as the default. The setting does not affect either badge or sheet printing; it is simply provided for informational purposes.
3. Enable the **Use Batch printing option** for the **Sheet formatting option** to be active.
4. For Batch Queue Mode, select either **Always Ask**, **Auto Print**, or **Always Queue**.

   If you choose **Always Ask**, the system asks if you want to print now or queue until later.

For **Auto Print**, the system compares the number of records queued for printing with the number of layouts in your sheet format design (described below). When the number of queued records equals the number of layouts on the sheet format page, the system automatically prints the sheet.

When **Always Queue** is selected, the system queues records continuously until you manually start the print job.

The effect of these settings becomes clear throughout the remainder of this manual.

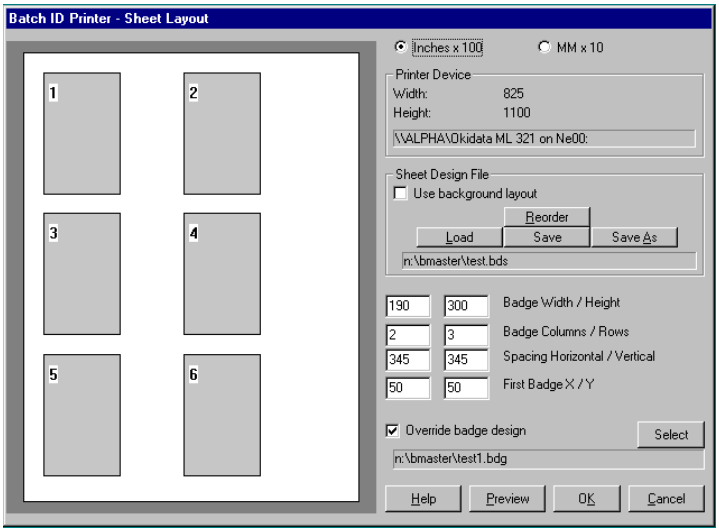
5. After setting up the system for sheet formatting, click **OK** to return to the main ID Setup dialog box.

➤ To Set Up Sheet Formatting Layout:

NOTE

Deciding What to Print – When designing a sheet layout, keep in mind what will print. The most important settings are Badge Height and Width. You have two design/print choices. You can use an existing badge layout design for sheet format printing, which could be the same design(s) you use for printing individual badges. You can also design a layout specifically for sheet formatting printing. The second method allows you to include specific information in the sheet layout that may not be applicable on an individual badge. The differences in these two choices will become more apparent throughout these instructions.

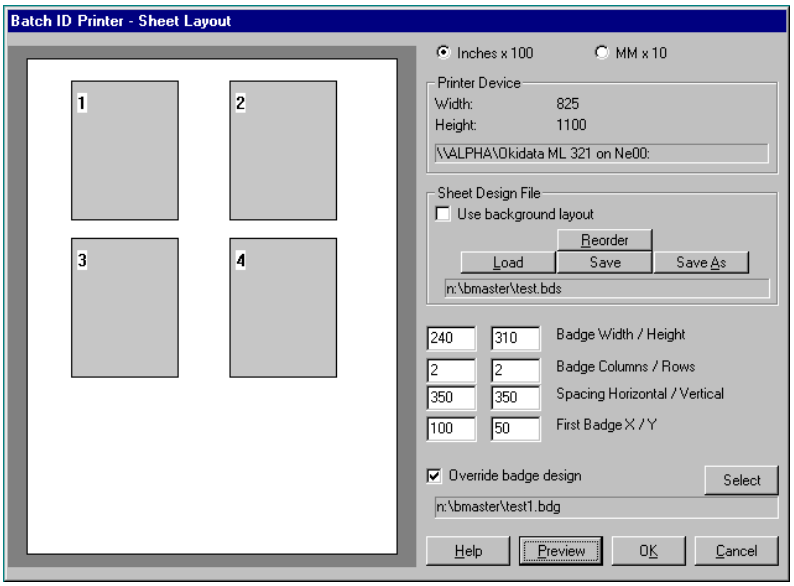
1. Click the **Layout Sheet** button from the ID Setup window, or if you are already on the ID Setup - Printer Options window, click **Layout Sheet**. The Batch ID Printer - Sheet Layout dialog box appears, showing default settings.



These settings are described in "Sheet Layout Field Definitions."

The following steps show how changes to the settings can be used to create custom layouts.

2. The following sample contains four layouts, which should be considered placeholders for the information you intend to print for each record. Note the rectangle lines are for layout purposes only. They are not printed in the final output. The number of layouts was specified in the Badge Columns and Rows settings.



3. The size of each layout was also modified to 240 by 310 (2.4 inches by 3.1 inches). Adjust the size according to the badge design to be used for sheet printing. Alternatively, to make a custom sheet design only for sheet printing, its size must match each placeholder on your layout.
4. Note the differences in the layout made by changing the Horizontal/Vertical Spacing and First Badge X settings. These settings are relative to the placeholder size. Because the Vertical Spacing setting is from top edge to top edge, there is a 15 pixel space (.15 inches) between the bottom edge of the first row and the top edge of the second row (vertical spacing of 325 minus the placeholder height of 310).
5. When finished, click **Save** to save your settings and return to the ID Setup dialog box.
6. Click **OK** to close the window.

See “Creating a Sheet Formatting Badge Layout” on page 4-36 for further instructions.

Sheet Layout Field Definitions

Notice that Sheet Layout automatically uses your Windows default printer, unless you choose a specific printer through the ID Setup - Printer Options dialog box. This is one of the reasons not to set your badge printer as the system default.

Inchesx100 and **MMx10** – The Inches and MM (millimeters) radio buttons change the values (numbers) of the measurements. You can work with Sheet Layout in units of 1/100 of an inch or in 1/10 millimeters. Inches is the default scale of measurement. Important to remember is that when using the Inches x 100 value, you are actually working with pixels. One pixel equals 1/100 of an inch.

Printer Device

- **Width** and **Height** – The Width and Print values, automatically supplied by the printer driver, refer to the total print area of the page. 800 wide by 1054 high, for example, equates to 8 inches by approximately 10 ½ inches, leaving a ¼ inch margin around the outside of the page.

Sheet Design File

- **Use background layout** – Select this checkbox to use background layout.
- **Reorder** – Allows you to rearrange multiple badges on a page.
- **Load** – Opens a saved sheet layout.
- **Save** – You may create as many sheet layouts as you wish. After designing a sheet layout, click Save. When saving the layout for the first time, you will need to enter the file name.
- **Save Layout** – You may create as many sheet layouts as you wish. After designing a sheet layout, click Save As and enter a descriptive name in the dialog box that appears.

Print Width/Height – The Print Width and Print Height values, automatically supplied by the printer driver, refer to the total print area of the page. 800 wide by 1054 high, for example, equates to 8 inches by approximately 10 ½ inches, leaving a ¼ inch margin around the outside of the page.

Badge Width / Height – Refers to the width and height, in your chosen units of measure, of each badge on the page. Badges cannot be assigned individual sizes.

Badge Columns / Rows – Sets the number of columns and rows to print on a single page.

Horizontal / Vertical Spacing – These settings determine the amount of space between badge designs.

First Badge X / Y – Determines where the top left corner of the first badge prints. Settings of X = 0 and Y = 0 is the top left corner of the page.

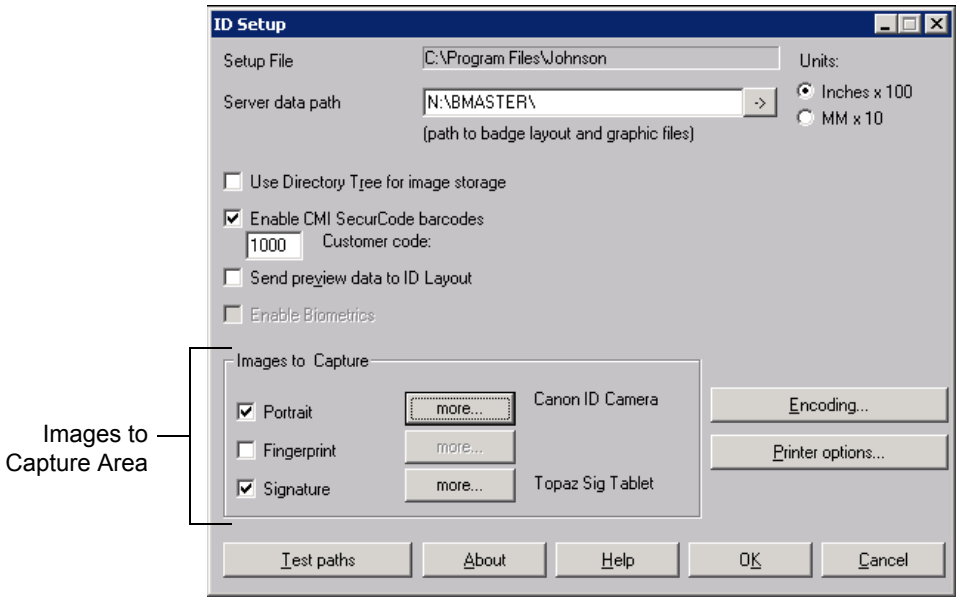
Override Badge Design – Prompts for a previously-saved badge layout (.bdg) file. When selected, the badge design will automatically be substituted in place of each of the current layouts (length, width, etc.).

Select – Allows you to select badge design override.

Preview – Shows a sample of the print layout on-screen.

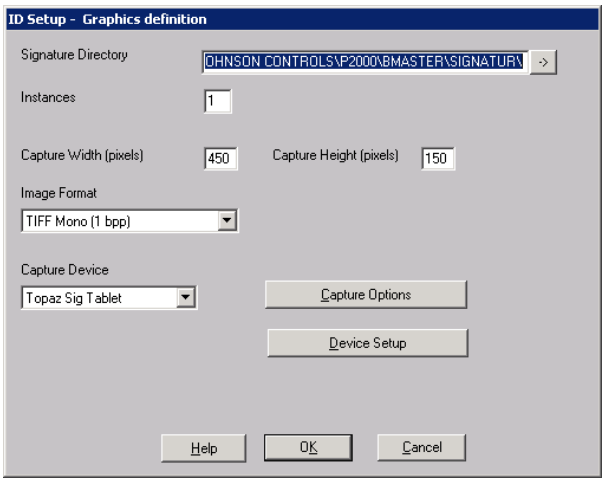
Images to Capture

The **Images to Capture** area of the ID Setup dialog box allows you to enable and configure a camera and/or signature pad for use in P2000. Before configuring the capture devices, install all applicable drivers from the manufacturer and verify that Windows® correctly identifies the equipment.



➤ To Configure a Capture Device:

1. Select the **Portrait** and/or **Signature** check boxes.
2. For each selected check box, click the **more** button to open the ID Setup - Graphics definition dialog box.



3. Configure the fields on the ID Setup - Graphics definition dialog box according to “ID Setup – Graphics Definition Field Definitions” on page 3-13.
4. Click **OK** to return to the ID Setup dialog box.

5. Click **OK** on the ID Setup dialog box when you have completed the configuration of your capture device(s).

ID Setup – Graphics Definition Field Definitions

Portrait Directory – The entire path to the directory where the images are stored. ID Setup creates a folder called "Portrait" for portraits and "Signatur" for signature images.

Instances – The number of images to be taken. For example, setting **Instances** to 3 for Portraits will allow you to take a front view and both profiles, before moving on to capturing a signature. Note that only the first capture is displayed in the Entity Management window. (Click **Display Picture** to see all captured images.)

Capture Width and **Capture Height** – This refers to the size of the image capture window. Enter width and height parameters in the width and height fields. The numbers you enter are in pixels; 100 pixels equals 1 inch. We recommend a width of 300 and height of 375 for portraits (yielding a 1 inch by 1 ¼ inch image) and a width of 450 and height of 150 for signatures.

Image Format – You can create images in any number of file formats. Select the format of your choice from the drop-down list. We recommend JPEG for portraits and TIF Mono for signatures.

JPEG Quality – This option appears when the selected image format is JPEG (Joint Photographic Experts Group). The value entered indicates the balance between compression and image quality. A value of 100 produces the highest possible image quality with minimal compression. The default value is 70.

Capture Device – Select the capture method for the images from the drop-down list:

- **Canon ID Camera** – Select this option if capturing images with the Canon ID Camera plug-in software and a supported Canon camera. This option only appears once you have installed the plug-in software. See "Canon ID Camera Interface Software Installation" on page 2-8 for more information. For a list of compatible Canon cameras, see "Video Imaging Accessories" on page 1-4.
- **FlashPoint 128** – Currently not supported in this release.
- **FlashPoint 3D** – Currently not supported in this release.
- **FlashPoint FlashBus** – Currently not supported in this release.
- **Get from File** – Select this option if capturing images with a digital camera or if the image is already in a file format. When you begin the capture process (by clicking **Take Picture** from the Entity Management window), the system prompts you for a graphic file.
- **Penware Sig Tablet** – Currently not supported in this release.
- **Topaz Sig Tablet** – Select this option if using the Topaz model T-S261-HSB signature tablet to capture signatures.

- **Twain** – Select this option if the input device is a camera that uses the industry standard TWAIN interface.
- **Video for Windows** – Select this option if the input device is a camera that uses the industry standard Video for Windows interface. Select this option if you are using the USB FlexCam.

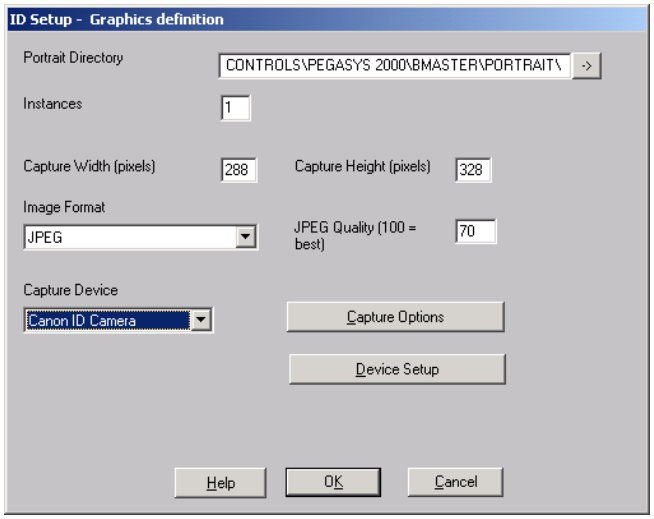
Capture Options – This button brings up the Capture Options dialog box, which is used to select options appropriate for the chosen Capture Device.

Device Setup – This button brings up the Device Setup Options dialog box, which is used to set device parameters appropriate for the device. This option should be used by experienced users.

Canon ID Camera Interface Software Configuration

➤ To Configure the Canon ID Camera Interface Software:

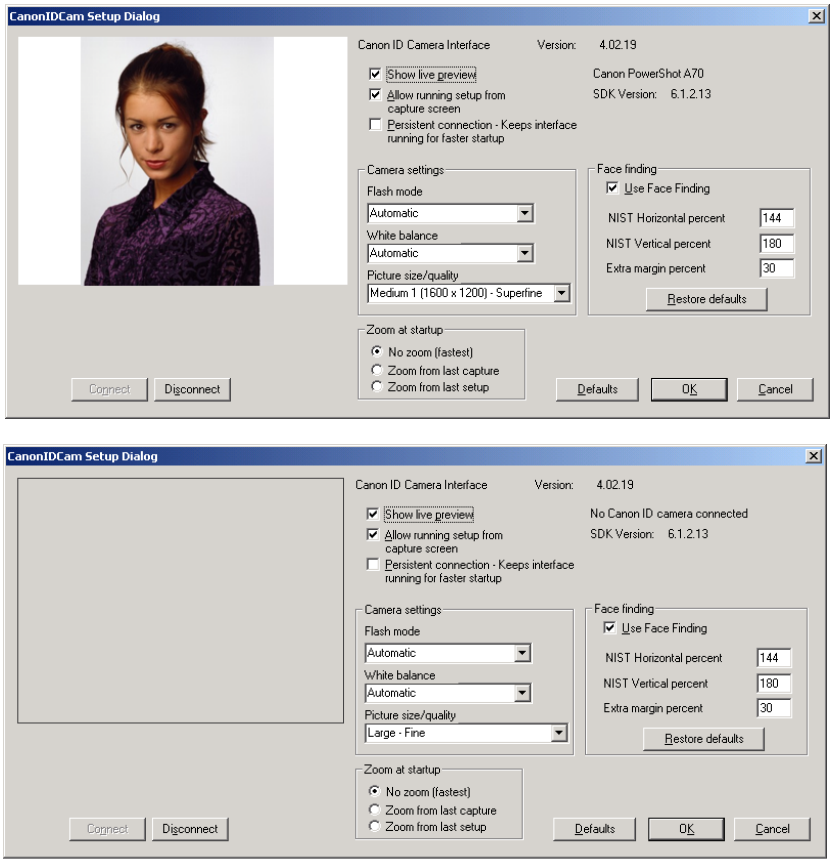
1. Ensure the camera is connected to the PC.
2. Turn on the camera and set to Replay mode.
3. Launch P2000 and select **Config>Integrated Badging>Setup**. The ID Setup dialog appears.
4. Click the **more** button next to the **Portrait** option in the Images to Capture area. The ID Setup - Graphics Definition dialog appears.
5. Select **Canon ID Camera** from the Capture Device drop-down list.



6. Click the **Device Setup** button. The CanonIDCam Setup dialog appears.

   If the camera is properly installed, licensed, connected, and turned on, a live image will appear in the preview window, as shown below (top screen capture).

   If these conditions are not met, an error message will appear and the dialog will appear with a blank preview window, as shown below (bottom screen capture).



7. Change the settings, if applicable, and click **OK**.

Canon ID Camera Setup Dialog Screen Definitions

Connect – Attempts to connect to the camera.

Disconnect – Disconnects from the camera. Use this if you are seeing unanticipated error conditions with the camera.

Show live preview – Enables you to see a live image through the camera's viewfinder as you take a picture.

Allow running setup from capture screen – Enables the image capture operator to access the Canon ID Camera's setup screen and change the camera settings whenever he/she is using the image capture screen. If this check box is cleared, only an operator with configuration permissions will be able to change the camera settings.

Persistent Connection – Causes the interface program (CanonIDCam.exe) to remain running after an image is captured, therefore making subsequent image-capture start up much faster. If this check box is cleared, the interface program disconnects the camera and terminates itself after each capture. The system must restart the program and reconnect the camera for each subsequent image.

Defaults – Restores all settings to their default conditions. Some settings are camera-dependent.

OK – Accepts and saves all settings and closes the Setup dialog.

Cancel – Cancels all changes and closes the Setup dialog.

Zoom at startup area – This section offers three options that govern the default zoom state of the camera when you initiate image capture.

- **No Zoom** – The default and is recommended as the fastest choice. Select this option if the relative positioning of the camera to the subject and the returned image resolution permit it. Without zoom, the camera sees the widest possible area, thus providing the most latitude for the positioning of the subject.
- **Zoom from Last Capture** – Remembers the zoom position of the lens during the last capture session, and returns the lens to that position each time a new capture is initiated until the operator changes the setting.
- **Zoom from Last Setup** – Displays a Zoom slider below the Preview window, enabling you to set the zoom state. This slider will also appear on the CanonIDCam Capture dialog, allowing the camera operator to adjust the zoom manually, but the zoom will return to the original setting at the next capture session.

Camera Settings – This section contains settings for the camera's Flash mode, White balance, and Picture size/quality. The options available from the drop down lists will vary depending on the capability of the Canon camera connected. Please refer to your camera's manual for full descriptions of these modes.

- **Flash mode** – Determines when the flash is used. The Automatic setting will trigger the flash only when the camera's light meter senses inadequate light. This is the best setting to use for most situations.
- **White balance** – Controls the camera's internal color adjustments for various lighting conditions. Generally, the best setting is Automatic, especially when using the camera's flash.
- **Picture size/quality** – Controls the size in pixels (width times height) and the amount of image compression (or inversely image quality lost) when uploading an image file from the camera to the computer.

Face Finding – The Face Finding feature finds a subject's eyes and mouth within an image and then composes a frame around those objects according to the settings.

- **NIST Horizontal Percent** – A value representing the left-right expansion around the eyes for a portrait.
- **NIST Vertical Percent** – A value representing the top-bottom expansion around the eyes-mouth for a portrait.
- **Extra Margin Percent** – A value representing the added area around the initial cropping box that will be available during the cropping operation.

Selecting the Correct Capture Profile for a Digital Camera

If you will be using a digital camera without the Canon ID Camera Interface software to capture portrait images, please note the following:

- You must capture the image and transfer it the Video Imaging PC before using it for an entity portrait.
- You may import or take a picture from the Entity Management window using the **Import** or **Take Picture** buttons. Importing the image does not allow you to modify it before it is applied to an entity. Clicking **Take Picture** on the Entity Management window does not actually take a snapshot of the image; it simply allows you to enhance the image before applying it to an entity record.
- Select **Get from File** when selecting the Portrait capture device setting on the ID Setup - Graphics definition dialog box.

Enabling and Configuring Video for Windows Devices

(To be used with the FlexCam)

➤ To Configure Video for Windows Devices:

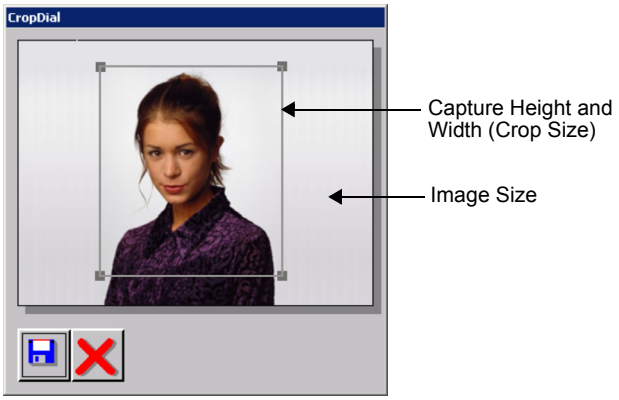
1. Click the **Portrait** check box in the **Images to Capture** section of ID Setup. When you do this, the **more** button for Portrait is enabled.
2. Click **more** next to the Portrait option. The ID Setup – Graphics definition dialog box appears. For detailed information see “ID Setup – Graphics Definition Field Definitions” on page 3-13.
3. Select **Video for Windows** from the Capture Device drop-down list.
4. Click **Capture Options**. The Capture Options dialog box appears.

5. The following settings determine how a picture is cropped after it is captured.

   Automatic – The image is automatically cropped to the capture width and capture height selected. If the image is larger or smaller than the specified

width and height, a cropping window allows you to select a portion of the image.

Always – This is the recommended option. A cropping window always appears, allowing you to select a specific portion of the image to be used. The portion you crop is saved to the pixel width and height you select.

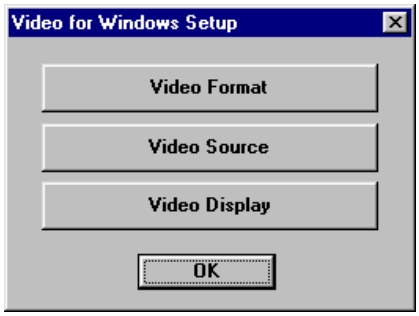


Never – A cropping window is never presented. The entire image is saved.

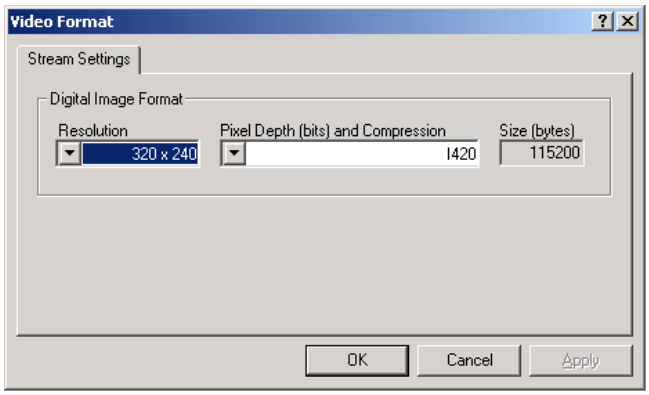
6. Click **OK** to return to the ID Setup - Graphics definition dialog box.

➤ To Configure the Video Format:

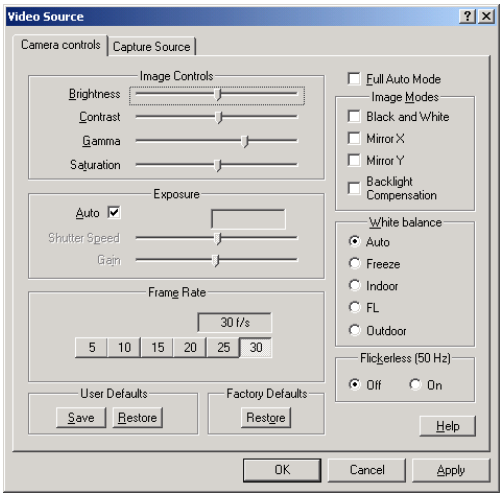
1. From the ID Setup - Graphics definition dialog box, click **Device Setup**. The Video for Windows Setup screen appears.



2. Click the **Video Format** button. The Video Format screen appears.



3. View the default settings and accept them by clicking **OK**.
4. On the Video for Windows Setup screen, click the **Video Source** button. The Video Source screen appears.



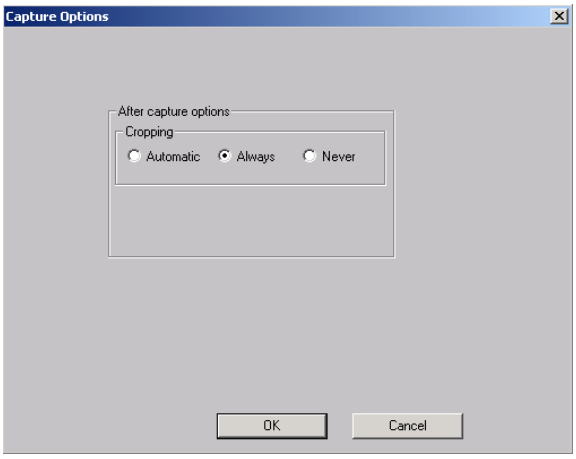
5. View the default settings and accept them by clicking **OK**.
6. Close the Video for Windows Setup screen by clicking **OK**.
7. In the ID Setup - Graphics definition dialog box, click **OK**. You will return to the ID Setup dialog box.

Enabling and Configuring the Signature Pad

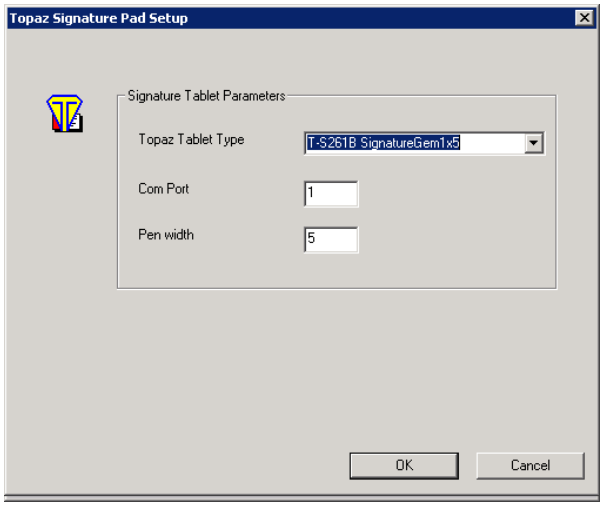
(To be used with the Topaz® T-S261-HSB signature pad)

➤ To Initialize and Configure the Signature Pad:

1. Click the check box next to **Signature** in the Images to Capture section of ID Setup. When you do this, the **more** button for Signature is enabled.
2. Click **more** next to the Signature option. The ID Setup – Graphics definition dialog box appears. For detailed information see “ID Setup – Graphics Definition Field Definitions” on page 3-13.
3. Select **Topaz Sig Tablet** from the **Capture Device** drop-down list.
4. Click **Capture Options**. The Capture Options dialog box appears.



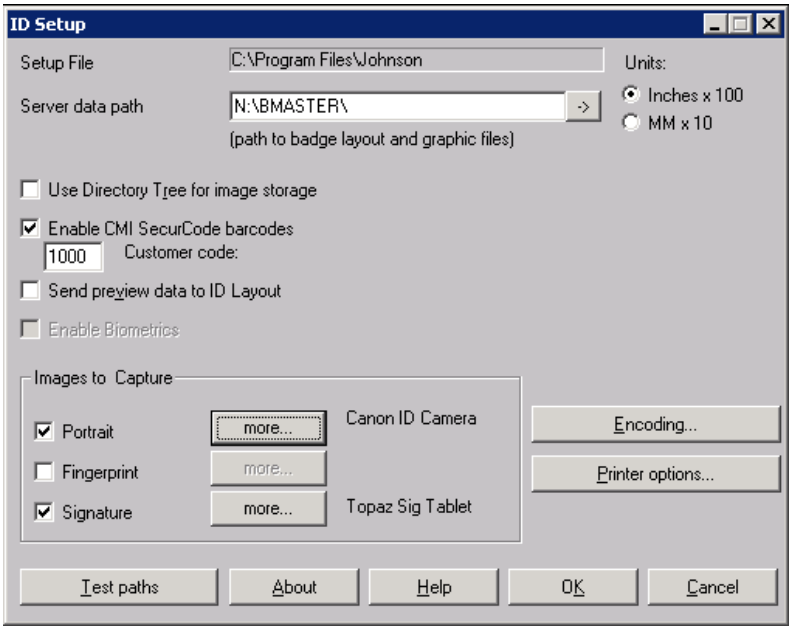
5. This setting determines how a signature is cropped after it is captured by the pad. The setting of **Always** is recommended.
6. Click **OK** to return to the ID Setup – Graphics definition dialog box.
7. Click **Device Setup**. The Topaz Signature Pad Setup dialog box appears.



8. Verify that the **T-S261B SignatureGem1x5** is selected in the **Topaz Tablet Type** drop-down list.
9. Edit the **Pen width** setting, if necessary. This setting determines the width of the lines drawn on the signature pad. The default setting of 5 is recommended.
10. Click **OK** to return to ID Setup - Graphics definition dialog box.
11. Click **OK** to return to ID Setup dialog box.

COMPLETING CONFIGURATION

After configuring your capture devices, the ID Setup dialog box appears.



From here, click **OK** to close the ID Setup dialog box. You can proceed with designing a badge layout, described in "Chapter 4: Badge Design".

Chapter 4

BADGE DESIGN

Once the capture devices have been configured, and you have become familiar with navigating through the Video Imaging user interface, you are ready to design badges that meet your specific requirements.

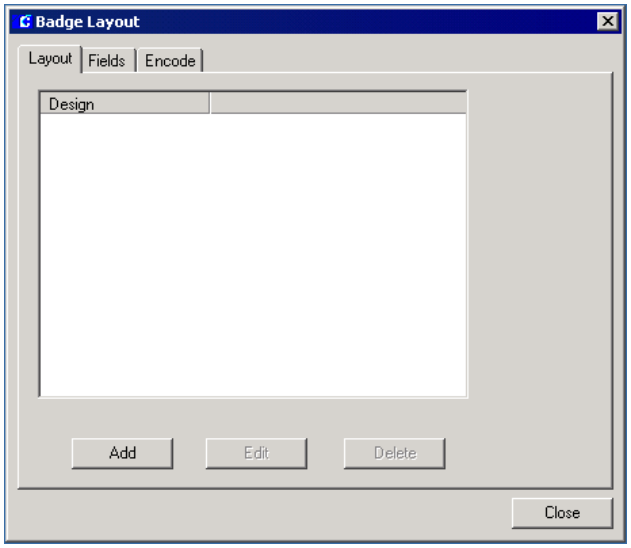
This chapter describes in detail how to custom design a badge layout using your Video Imaging program. You can include portraits, signatures, and user-defined fields. You can create two-sided badges, use mag stripe encoding, or print badges or adhesive labels using the sheet formatting feature.

The following sections describe how to:

- Set Badge Fields
- Encode Mag Track Formulas
- Create a Badge Layout
- Print a Test Badge

We recommend you start by setting up fields, then magnetic encoding, and finally create the actual badge layout.

When you select **Config**>**Integrated Badging**>**Badge Layout** from the P2000 Main menu bar, the Badge Layout dialog box appears.

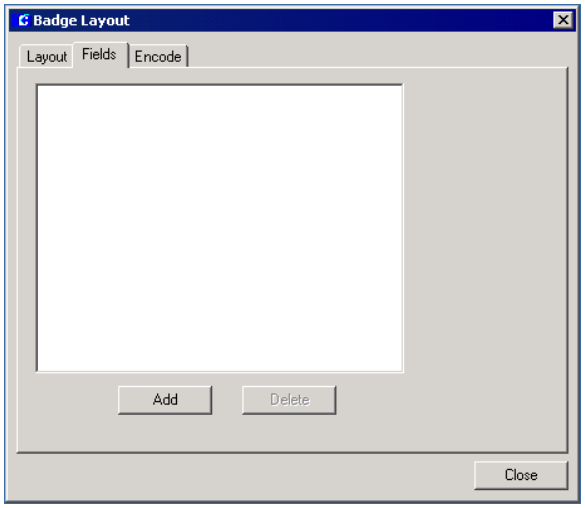


SETTING BADGE FIELDS

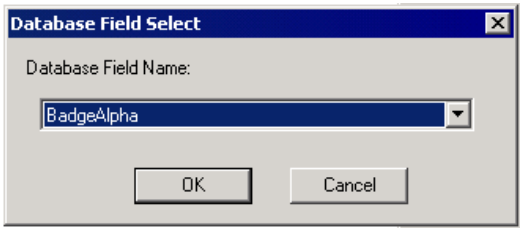
You can create fields that can be placed on a badge design.

➤ To Create Fields:

1. From the Badge Layout dialog box, click the **Fields** tab.



2. Click **Add**. The Database Field Select dialog box appears.



3. Select an entry from the **Database Field Name** drop-down list.
4. Click **OK** to return to the Badge Layout dialog box.

➤ To Delete Fields:

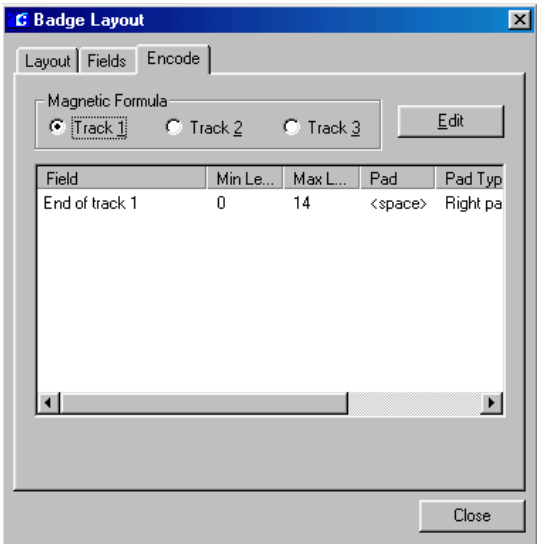
1. In the Badge Layout dialog box, select the field you wish to delete and click **Delete**.
2. The system prompts you to confirm the deletion. Select **Yes**. The field is deleted from the list and will also be removed from all magnetic stripe formulas.

ENCODING MAG TRACK FORMULAS

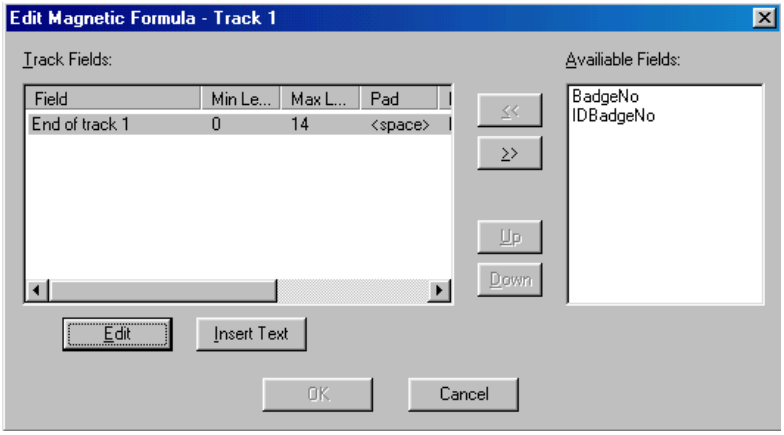
With Video Imaging, you can use magnetic stripe encoding on your badges.

➤ To Add Mag Track Formula to the Badge Design:

1. From the Badge Layout dialog box, click the **Encode** tab.



2. Select the Magnetic Formula Track you wish to set and click **Edit**. The Edit Magnetic Formula dialog box appears.

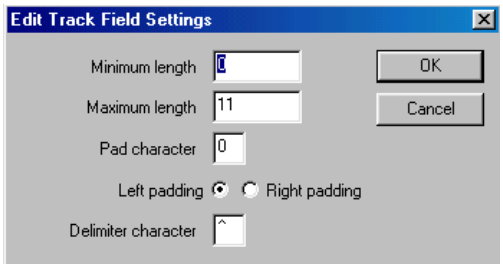


3. In the Available Fields list, select the fields you wish to insert and click **<<**.

   The selected fields appear on the Track Fields list.

   If you wish to remove fields from the Track Fields list, select the fields and click **>>**.

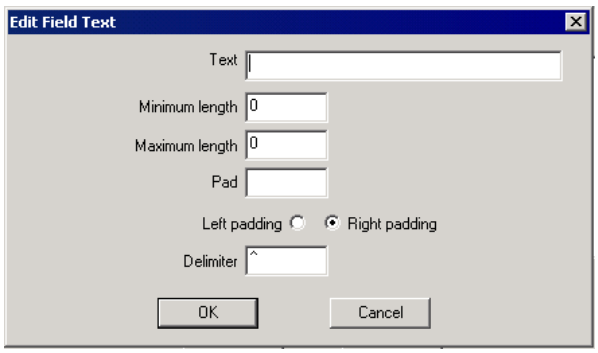
4. In the Track Fields list, highlight the field you want to set and click **Edit**. The Edit Track Field Settings dialog box appears.



5. Enter a value in the **Minimum length** field.
6. Enter a value in the **Maximum length** field.
7. Enter a **Pad character** value.
8. Select **Left padding** or **Right padding**.
9. Enter a **Delimiter character**.
10. Click **OK** to return to the Edit Magnetic Formula dialog box.
11. Click the **Up** or **Down** button to move the field up or down on the Track Fields list.

➤ To Insert a Text Field:

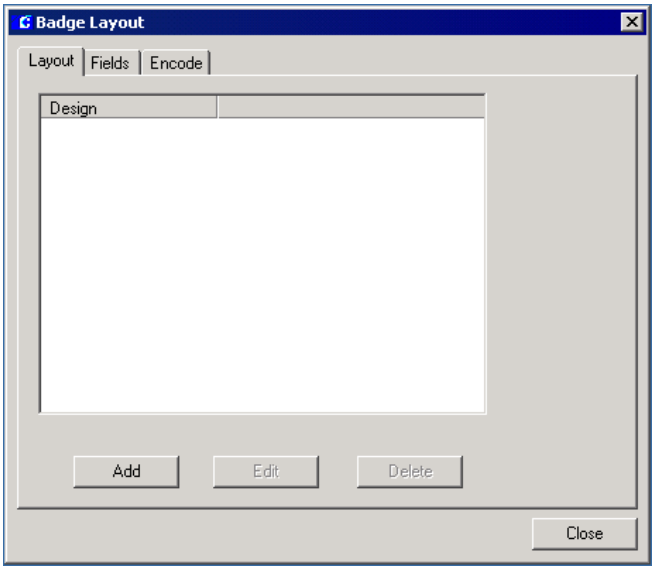
1. From the Edit Magnetic Formula dialog box, click **Insert Text**. The Edit Field Text dialog box appears.



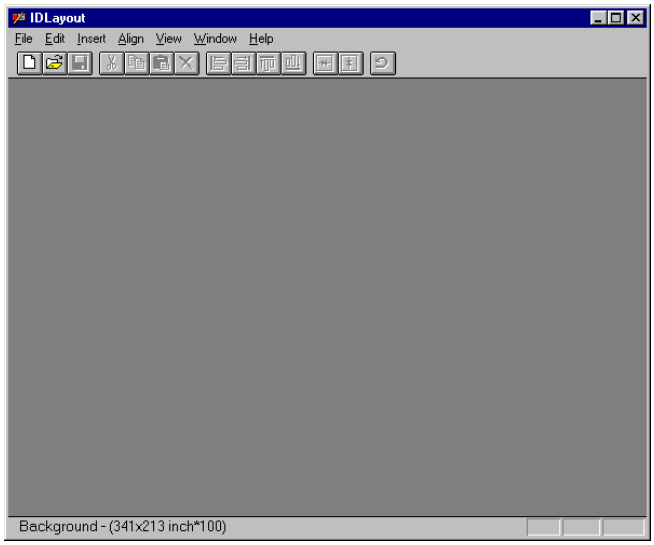
2. Enter the field text you wish to insert in the Track Fields list.
3. Enter a value in the **Minimum length** field.
4. Enter a value in the **Maximum length** field.
5. Enter a value in the **Pad** field.
6. Select **Left padding** or **Right padding**.
7. Enter a **Delimiter character**.
8. Click **OK** to return to the Edit Magnetic Formula dialog box.
9. Click the **Up** or **Down** button to move the field up or down on the Track Fields list.
10. Click **OK** to return to the Badge Layout dialog box.

CREATING A BADGE LAYOUT

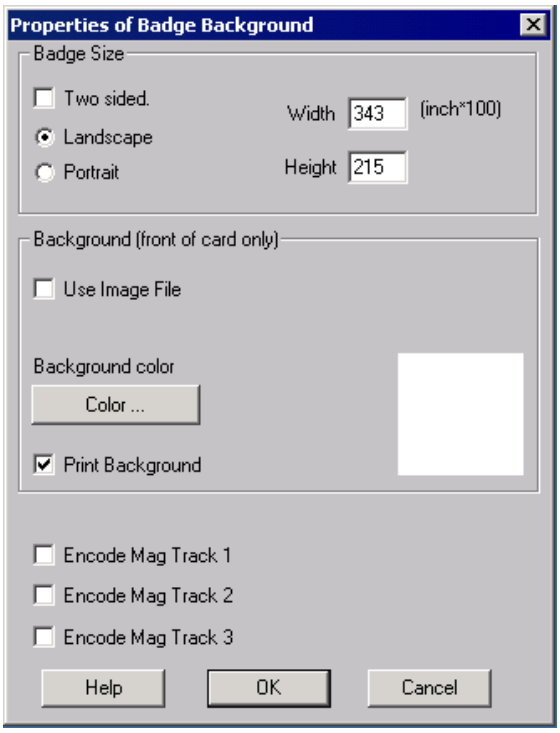
1. From the Badge Layout dialog box, click the **Layout** tab.



2. Click **Add**. The ID Layout window appears. See “ID Layout Main Menu Definitions” on page 4-7.

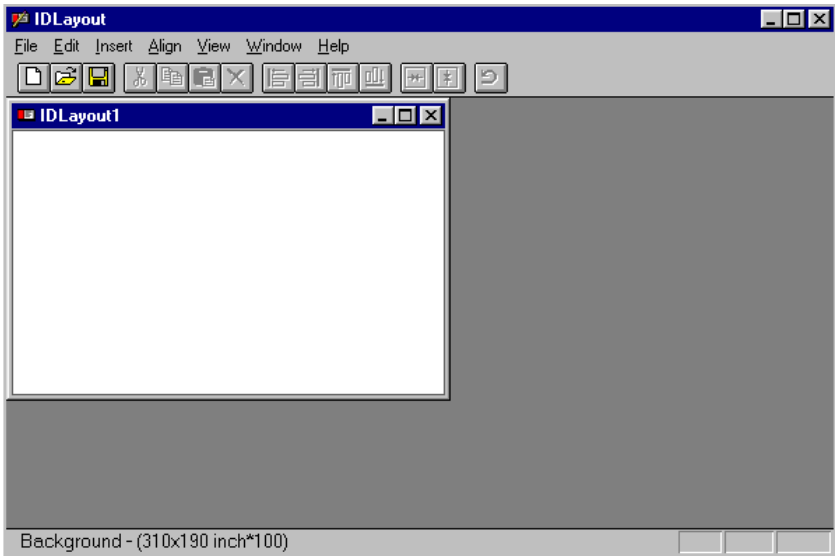


3. Select **File**>**New** from the ID Layout Main menu bar. The Properties of Badge Background dialog box appears.



4. For detailed information see “Badge Background” on page 4-11. Click **OK** to continue.

   A blank badge design is displayed in the ID Layout window.



   Before you create the badge layout, see “ID Layout Main Menu Definitions” on page 4-7 which describe basic badge design principles. It will be helpful to understand these basic principles before you continue.

ID Layout Main Menu Definitions

ID Layout menu options, shown across the top of the ID Layout window, are described in detail in the following sections. (Some selections are enabled only when an object on the ID Layout window is selected.)

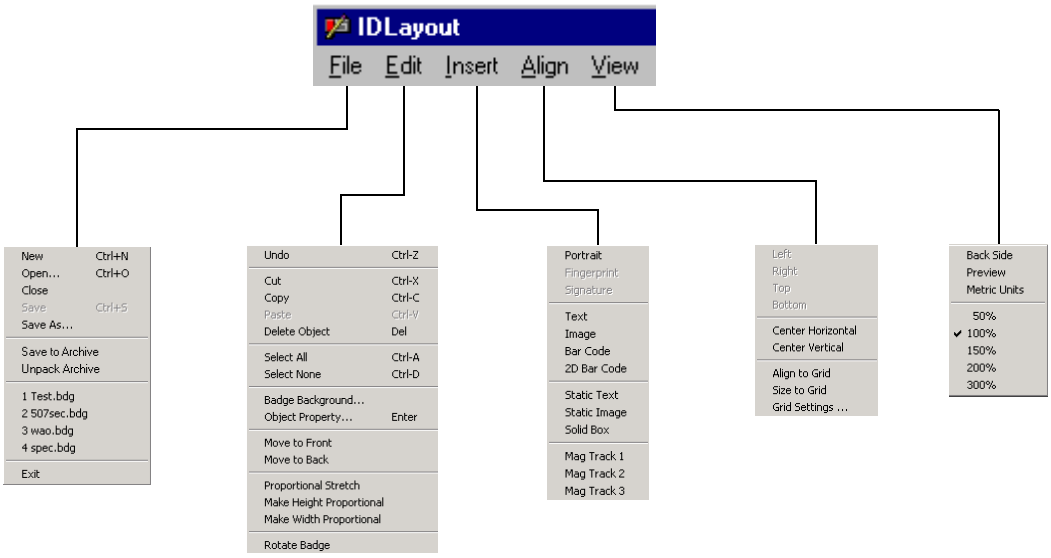


Figure 4-1: IDLayout Menu Options

File Menu

The File menu is a standard Windows menu for opening and closing files, in this case, badge design files, saving your work, and closing ID Layout. Each selection has the following function:

New – Opens a blank badge for creating a new design.

Open – Opens an existing badge design. By default, all badge designs are stored in the *\BMaster* directory.

Close – Closes the currently selected badge design. You can also close the design window by clicking the exit button (X) in the top right corner of the badge window.

Save – Use this option when you are editing a badge design. The design will be saved using the same file name, and in the same location, as the design file that was previously saved.

Save As – Use this option when you are saving a brand new badge design. The Windows standard Save As dialog box will be displayed allowing you to name your design. All designs must be stored on the shared directory (as in *\BMaster*). All badge design files must have an extension of .bdg.

Archive – Use this option to archive a design. The archive will be saved using the same file name, and in the same location, as the design file that was previously saved.

Archive As – Use this to archive a design under a new name.

Edit Menu

The Edit menu contains options to create badge backgrounds and set object properties such as position, rotation, intensity, scale, and so forth. The Undo, Cut, Copy, Paste, Delete Object, Select All, and Select None selections are basic manipulation tools.

Badge Background – This selection opens the Properties of Badge Background. See "Badge Background" on page 4-11 for detailed information.

Object Property –This selection opens the properties dialog box for the object selected. See "Object Property" on page 4-13 for detailed information.

Move to Front/Back – Places the currently selected object in front of, or behind, overlapping objects.

Proportional Stretch – When this selection is enabled (a checkmark appearing next to it), and you re-size an object, the height and width will remain in proportion (height to width ratio).

Make Height Proportional – After re-sizing an object, you can make the height of the object match the width by selecting the object, then applying this setting.

Make Width Proportional – After re-sizing an object, you can adjust the width of the object to match the height by selecting the object, then applying this setting.

Rotate Badge – Rotates the design 90 degrees clockwise. You cannot rotate a badge design if any text fields on the design have word wrap enabled in their properties dialog box.

Insert Menu

Use the selections in this menu to place objects on a badge design. Objects are any fields placed on the design, including capture objects (portrait and signature images), static images, and text objects, which are the fields contained in an entity record. Text and capture objects are also referred to as dynamic objects, because the information placed inside the object border can be changed.

Portrait – Adds a portrait object to the badge design. Portraits are captured in the Entity Management window. See "Capturing the Portrait and Signature Images" on page 4-38.

Signature – Adds a signature object to the badge design. Signatures are captured in the Entity Management window. See "Capturing the Portrait and Signature Images" on page 4-38.

Fingerprint – Currently not supported in this release.

Text – Adds a text object to the design. When you choose Text, the following dialog box is displayed. The font to be displayed in the text field is selected as part of the text object properties, described in "Object Property" on page 4-13.

- **Name** – Click the drop-down button to display a list of all text fields that can be added to a badge design. The list will include all default text fields that relate to the Entity Management window, which were previously set under the Fields tab. (See "Setting Badge Fields" on page 4-2.)
- **Sample Value** – A sample value is a design tool you can use in the ID Layout window. The text typed into this field will appear in the design window of ID Layout (it is not printed on the badge or viewed in the Entity Management window). This allows you, for example, to view "worst" case scenarios like lengthy names and so forth.

Image – Places an object that will contain a variable image file on the design. This is useful, for example, in cases where you want to use a single badge design, but have different logos for each department.

The following steps are used for the Image feature:

1. Insert an image on the design. The system will prompt you for the field name. We recommend you use a UDF for this option (UDF1, for example).
2. In the Entity Management window, enter the name of the graphic file in the field you have selected for the image (UDF1, in this example). Enter the file's name WITH the extension (for example, enter *logo.bmp* in the UDF).
3. The system will then search the *\BMaster* directory for the file specified. When found, the selected graphic file will be placed in the Entity Management window.

The same basic badge design can be used for entities who need different graphic symbols on their badge, without having to create completely separate designs.

Bar Code – Adds a bar code to the badge design. Uses the *RiversEdge* default bar codes. The system will prompt you for the file name containing the bar code text.

2D Bar Code – Adds a 2D bar code to the badge design. Uses the *WASP* default bar codes. The system will prompt you for the file name containing the bar code text.

Static Text – This option inserts a static text field. When you select this option, a dialog box is displayed where you can type in the static text for the object. The term static means that you cannot change the text in the Entity Management window. You can edit this text in the ID Layout window, however. The font of the text is chosen through text object properties, described in "Object Property" on page 4-13.

Static Image – Static images are graphic files you can add to a badge design. The system supports the following graphic file formats for static images:

- Windows Bitmap (*.bmp*)
- JPEG (*.jpg*)
- Paintbrush (*.pcx*)
- Targa (*.tga*)
- Tagged Image File Format (*.tif*)
- Windows Metafile (*.wmf*)

Solid Box – A solid box is a "box" or rectangle used as a border around text or image objects and is placed immediately behind a previously placed object. The solid box should be about one pixel larger than the image.

NOTE

Any graphic file used in badge design must first be copied onto the P2000 system, into the same directory as the badge designs (as in \BMaster), then incorporated into a design. This allows sharing and availability of the files and badge designs to all video imaging workstations.

Magnetic Tracks 1, 2, 3 – Enables the encoding for each of the three magnetic tracks, if you are using the P420i or P520i printers. You do not move or resize these objects like other objects.

Align Menu

Selections in the Align menu assist you in aligning objects on the badge design window. After setting up the grid measurements, objects can be aligned to the grid or sized within the grid.

Left, Right, Top, Bottom – Aligns the object to the Left, Right, Top, or Bottom of the badge design window.

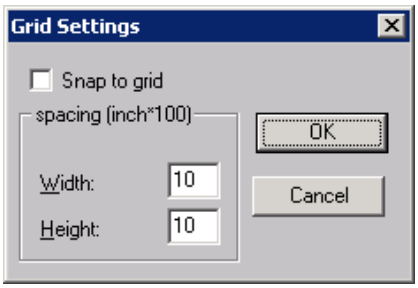
Center Horizontal – Centers the object horizontally on the badge design window.

Center Vertical – Centers the object vertically on the badge design window.

Align to Grid – Click an object then select this option to align an object to the nearest grid lines.

Size to Grid – Click an object then select this option to size an object within the nearest grid lines.

Grid Settings – Selecting this option displays the following dialog box.



- Enable the grid by clicking the **Snap to Grid** check box. A checkmark in the box means the grid is enabled.
- Set the grid width and height in units of 1/100 of an inch.
- Once the grid is enabled, any new objects placed on the design will automatically align with the nearest grid lines and size itself within the nearest grid parameters. If objects were placed on the design before the grid was enabled, they can be aligned with the **Align to Grid** and **Size to Grid** options.

View Menu

Preview – Allows you to view a badge as it will actually be displayed and printed.

Metric Units – ID Layout defaults to inches; to change to a metric measurement, select this option.

50%, 100%, 150%, 200%, 300% – To zoom in or out of your badge layout, choose one of these percentages.

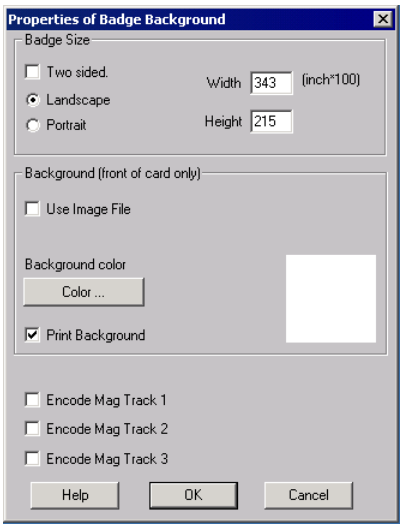
Back Side – This selection will only be available once you have enabled the **Two Sided** selection in the Properties of Badge Background dialog box. It acts as a toggle switch: when viewing the reverse side of a badge, simply select **Back Side** from the View menu to return to the front side view of the badge.

Badge Background

This selection (located under the Edit menu), opens the Properties of Badge Background dialog box, which is used to set the appearance of your background design. Each element of background design is described in the following subsections.

TIP

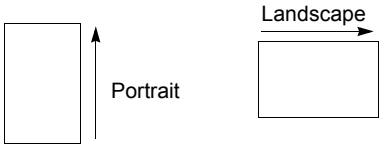
You can also open the Badge Background dialog box by right-clicking the badge background in the design window.



Badge Size

Two Sided – Click this check box to enable two-sided badge design.

Landscape/Portrait – Determine the orientation of the badge, as follows:



Whether a badge is portrait or landscape must be determined prior to placing objects on the badge. Once the design contains an object, the ability to change this setting is disabled.

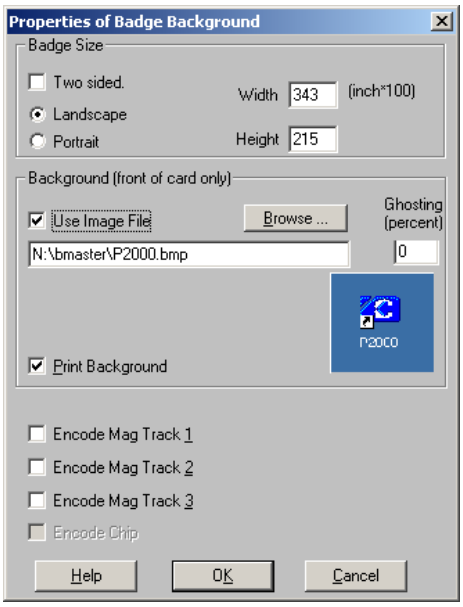
Width/Height – Enter the width and height of your badge in units of 1/100 inches.

Background

Use Image File – Click the check box to enable the use of an image file for a background. The image file may be in one of the following graphic formats: Bitmap (*.bmp*), JPEG (*.jpg*), TIFF (*.tif*), or Targa (*.tga*). When you enable **Use Image File**, the Background Image Selection dialog box appears. Select the image to be used as a background and click **OK**. The File name button and the image file selected will appear on the Properties of Badge Background dialog box. You can click the File name button again if you wish to change the graphic file.

NOTE

Any graphic file used in badge design should first be copied onto the P2000 system, into the same directory as the badge designs (as in \BMaster), then incorporated into a design. This allows sharing and availability of the files and badge designs to all video imaging workstations.



Background Color – Use Image File must be disabled to access Background Color. Clicking the Color button opens the Windows XP standard color palette, which can be used to assign, or create and assign colors for your background. Consult your Microsoft® documentation for more information on using the color palette.

Print Background – If this option is enabled, the background image or background color will be printed for this badge design. Disabling the option means the background image or background color will be ignored when the badge is printed.

Encode Mag Tracks

The P310i, P420i or P520i printers have magnetic encoding components. To enable printing on magnetic tracks 1, 2, or 3, click the check box next to the track. A checkmark in the box means that encoding is enabled for that track.

When you select the check box next to the mag track you wish to encode, you can choose from a list of fields presented in a drop-down list. Select a field for 1, 2, or all 3 tracks as required.

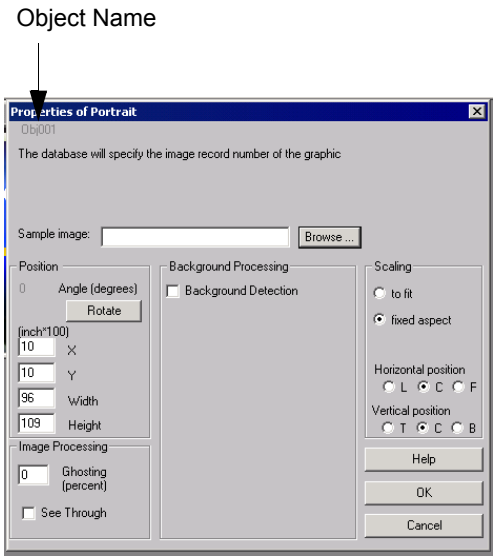
Object Property

When you select Object Property from the Edit menu, or right-click an object on the badge design window, a properties dialog box opens. There are three types of properties dialogs:

- Portrait
- Static Image
- Text

Properties of Portrait

When you click an object on the badge design window and then select Object Property from the Edit menu, the correct property dialog box will open. Alternatively, if you right-click an object, the correct property dialog will open for the object type.



Object name, as shown above, is used for reporting purposes or in case of an error. By default, objects are assigned a number to distinguish them from other objects.

Sample image – A sample image is a design tool you can use in the Badge Design window. The text typed into this field will appear in the badge design window. This allows you, for example, to view "worst" case scenarios like lengthy names and so forth. This feature is intended to sample text objects, rather than capture objects. See also **Sample Value** on page 4-18.

Position – Specifies the exact location of the object on the badge background to 1/100 inches. X and Y specify the location of the object, or more specifically, the top left corner of the object (where X=0, Y=0 is the top left corner of the badge).

While you can adjust the position of an object using properties, it is much simpler to use the drag-and-drop technique in the design window, where you can visually reference an object's position.

Rotate – Use this button to rotate the selected object 90 degrees clockwise. This option is also available from the Edit menu, where you can view the effect of using Rotate.

Image Processing – Image processing allows you to add the following effects to the selected object.

- **Ghosting** – Determines the amount of intensity reduction an object has. The default value of zero is no ghosting. The maximum value range is 99 percent (complete ghosting). Refer to the following example.

Image Ghosted at 0%

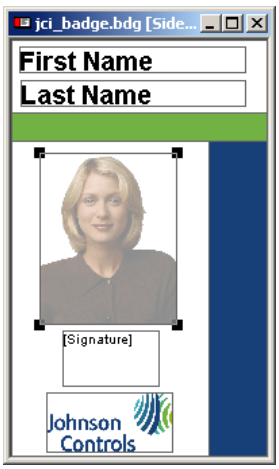
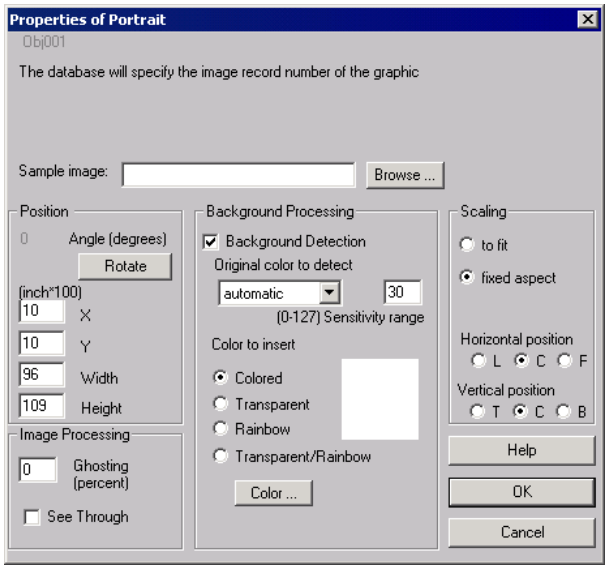


Image Ghosted at 55%

- **See Through** – See Through ghosting allows an image located behind a ghosted image to be seen. For example, if an image is ghosted at 55 percent, an image located on the badge design behind the ghosted image would be seen at 45 percent, with this option enabled. Click the check box to enable or disable See Through ghosting.

Background Processing – Select the **Background Detection** check box to enable this function, as shown below. This option determines if an object's background will be rendered transparent or replaced with a rainbow effect or specified color.



Background Processing provides advanced features regarding color and badge/object backgrounds.You can think of these features as input/output settings. For example, if you capture an entity image against a white background, you can use Background Processing to a) leave the background image as white, b) change the background to another color, c) make the background transparent, or d) use a rainbow image for the background. Background settings generally refer to captured images more than static images.

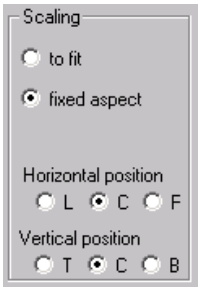
- **Sensitivity range** – Sensitivity range is the degree to which a background color must match your key color, in order for the colored background to be substituted. The range indicates how many steps, out of a possible 255, the actual background color may deviate from the ideal uniform background.
- **Original color to detect** – Use this setting to determine which background color will be processed during image capturing. A setting of automatic means that the system will automatically attempt to determine the background color.

  Example: If a Sensitivity Range of 30 is set, and a key color of red also set, the background of the capture (portrait, signature) could be 30 steps out of the red color range. If the background of the capture image were to go over 30 steps, a uniform color, selected as the Colored Background option, would be substituted.
- **Colored** – When Colored is enabled for Background Processing, you can click the Color button to display the Windows color palette. The currently selected color is shown next to the button.
- **Transparent** – Enabling this option sets the background of an image as transparent. If there is an image or color behind the object, it will show through.
- **Rainbow** – Choosing the Rainbow option allows you to browse among three default Rainbow images and select one to use as a portrait background. These sample images are located in *P2000\BMaster\Rainbows*.

  Any JPEG or bitmap file of your choice can be used as a background image.
- **Transparent/Rainbow** – This feature enables you to make a white background transparent and to choose a rainbow image as a second background color.

Scaling – You have two options: **to fit** and **fixed aspect**. Scaling to fit means the captured portrait image will be fitted within the portrait object border, regardless of proportion changes (changes in the width to height ratio) required.

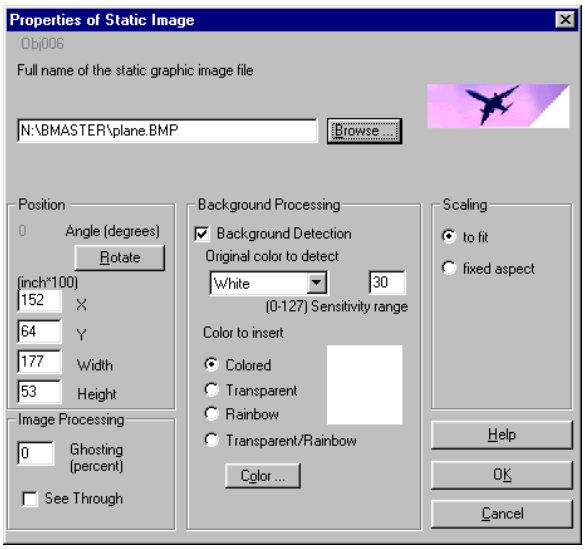
If you enable fixed aspect scaling, the following items will be displayed.



The horizontal and vertical settings allow you to place the image in a specific location within the object borders, indicated by: Horizontal - Left, Center, Right; Vertical - Top, Center, Bottom. For example, if you select horizontal position as **C**(enter), and vertical position as **B**(ottom), the image will be aligned in the center of the object border, along the bottom edge of the border.

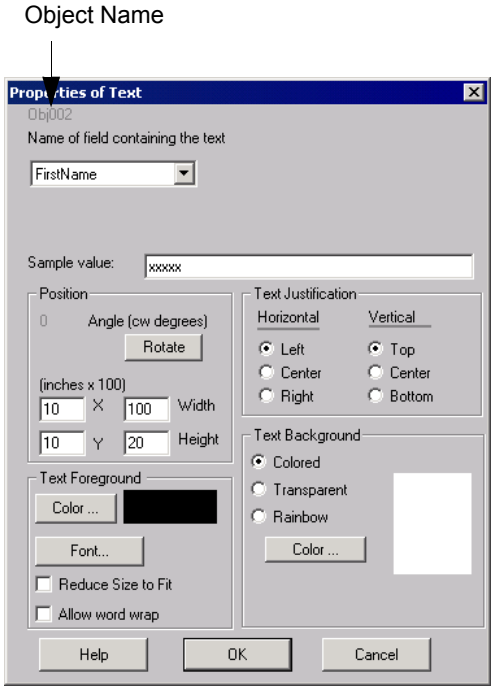
Properties of Static Images

The properties for static images are identical to the settings for portraits. See “Properties of Portrait” on page 4-14 for details.



Properties of Text

Text objects include default text fields and all UDFs. The term text applies to numeric, date, and toggle fields in this context.



Object name, as shown above, is used for reporting purposes or in case of an error. By default, objects are assigned a number to distinguish them from other objects.

Name of field containing the text – This field displays the field name of the text object currently selected. You can change the field name by clicking the drop-down button. The same default and UDF text fields that were available when the object was added can be chosen from this location, as well.

Sample Value – A sample value is a design tool you can use in the badge design window. The text typed into this field will appear in the badge design window. This allows you, for example, to view "worst" case scenarios like lengthy names and so forth.

Position – Specifies the exact location of the object on the badge background to 1/100 inches. X and Y specify the location of the object, or more specifically, the top left corner of the object (where X=0, Y=0 is the top left corner of the badge).

While you can adjust the position of an object using properties, it is much simpler to use the drag-and-drop technique in the design window, where you can visually reference an object's position.

Rotate Button – Rotates the selected object 90 degrees clockwise. This option is also available from the Edit menu, where you can view the effect of using Rotate.

You cannot rotate text field objects when word wrap is enabled.

Text Foreground – Color determines the color of the text in the currently selected object. Click the **Color** button to display the Windows color palette.

Click the **Font** button to choose a font type, style, and size for the text appearing in the selected object. You can choose any font installed in the Windows system (for more information on installing fonts, consult your Microsoft documentation).

Enabling Reduce Size to Fit forces the font into the size of the currently selected object, regardless of the size of the font defined.

Allow word wrap allows text to wrap to the next line, if longer than the text field. If this option is disabled, the text will be truncated if longer than the field.

Text Justification – These options determine how text is formatted with the object:

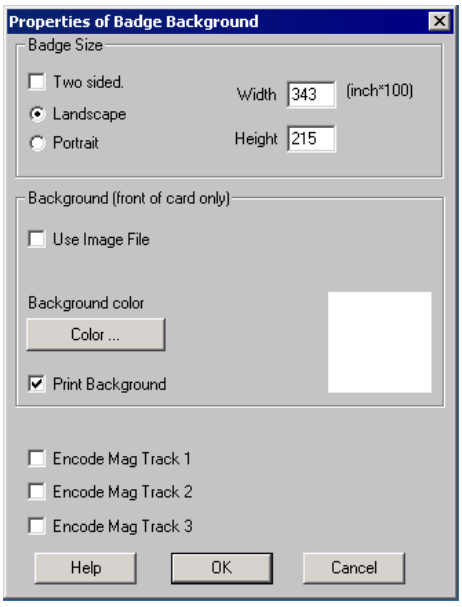
- **Horizontal** – When set **Left**, text begins on the left edge of the object. Selecting **Center** forces the text to automatically center within the object. Select **Right** to start the text on the right edge of the object.
- **Vertical** – **Top** starts the text at the upper edge of the object. Select **Center** and the text starts in the middle of the object. A **Bottom** setting starts the text along the lower edge of the object.

Text Background – The background of a text object can be transparent, appear as a rainbow, or assigned a color. If you define the background as Colored, click the Color button to open the Windows color palette. The currently selected color is displayed next to this button.

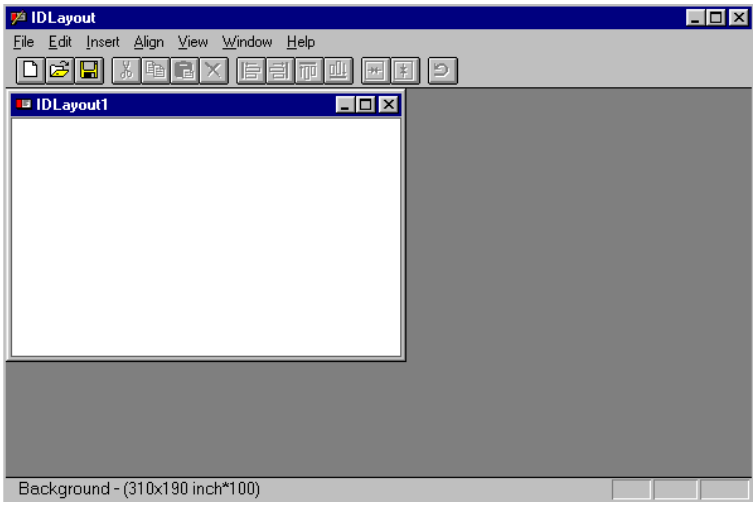
Remember to assign different colors to text and background settings.

Placing Objects on a Badge Design

1. Select **File**>**New** from the ID Layout Main menu bar. The Properties of Badge Background dialog box appears.



2. For detailed information see “Badge Background” on page 4-11. Click **OK** to continue.
3. A blank badge design is displayed in the ID Layout window.

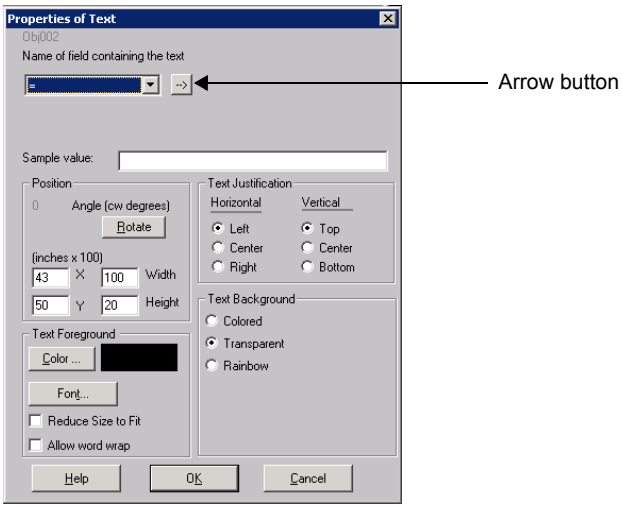


4. Select **Insert**>**Portrait** from the ID Layout Main menu; a portrait object is placed on the badge design.
5. Select **Insert**>**Text** from the ID Layout Main menu.
6. The ID Layout - New Badge Object dialog box appears. Remember, you must define your fields first, see “Setting Badge Fields” on page 4-2 to insert fields on the badge design.

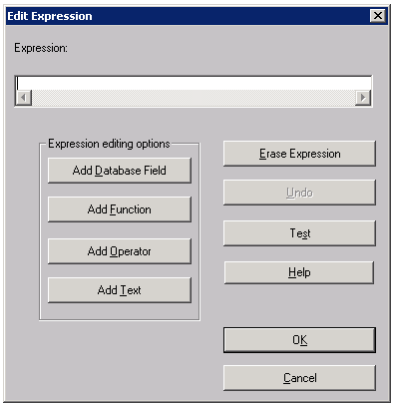
7. Click the drop-down list button to select the field to be added to the badge design and click **OK**.

Text and Barcode Expressions

In addition to inserting the contents of a single database field, you may build expressions or concatenations of fields using the Expression Builder. When first inserting a text or bar code object, or when editing it in the Properties of Text dialog, the first entry in the drop-down list of database fields is an "=" (equal sign). When this option is selected, a button with an arrow symbol appears to its right.



Clicking the arrow button brings up the Expression Builder.



Expression Builder

The Expression Builder lets you assemble database fields or parts of fields in different ways and for badge layout/badge printing purposes only.

An editable **Expression** field allows you to enter expressions manually, but you may prefer to use the easy Add buttons in the Expression editing options area instead.

NOTE

If your system is running Windows® XP, expressions will not be visible unless your computer's Display Properties are configured to display the Windows Classic style (Appearance tab, Windows and buttons drop-down list). To access the Display Properties dialog box, right-click on the Windows desktop and select Properties.

Add Database Field

Presents a list of database fields. When you select a field and click **OK**, it is inserted into the **Expression** field.

Add Function

Presents a list of formatting functions.

NOTE

When a function is inserted into the Expression edit field, it is followed by parentheses. The parentheses may have none, one or two commas embedded within them. You must click inside the parentheses, before or after the appropriate commas, to insert either a database field name, operator, or literal text, depending on the function you are using. See the following individual functions for descriptions of the data inserted within the parentheses.

Command: FORMATL

Format: FORMATL(,)

Example: FORMATL ([EmployeeID], 0000000000)

This argument expands the specified database field with the mask supplied after the comma. In this example, 10 zeros is the mask, meaning the employee ID field must have 10 characters; if the employee ID field contains less than 10 characters, zeros will be added to the right of the data until there are a total of 10 characters. If the employee ID is originally "12345," the previous example would result in: "1234500000."

12345 = actual data
0000000000 = mask
1234500000 = final result

Command: FORMATR

Format: FORMATR(,)

Example: FORMATR ([telephone], (716)00000000)

This argument expands the telephone database field with the mask supplied after the comma. The characters to the right of the comma make up the mask, meaning the telephone field must have 13 characters; if the telephone number only has 8 characters (e.g. 575-2456), the portion of the mask to the left of the number will be added.

575-2456 = actual data
(716)00000000 = mask
(716)575-2456 = final result

Command: IIF

Format: IIF(, ,)

Example: IIF(NickName=NOT NULL, NickName & " " & LastName, FirstName & " " & LastName)

This IF statement reads: IF the field "NickName" is not empty, THEN insert the contents of the NickName field PLUS a blank space PLUS the contents of the LastName field, OTHERWISE insert the contents of the FirstName field PLUS a blank space PLUS the contents of the LastName field.

Command: LCASE

Format: LCASE( )

Example: LCASE ([LastName])

This argument reads: Convert the contents of the LastName field to lower case letters. If the last name is Wilson, the result is: wilson

Command: LEFT

Format: LEFT(,)

Example: LEFT ([LastName], 2)

This argument reads: Get the first two letters from the left side of the contents of the LastName field. If the last name is Wilson, the result is: Wi.

Command: LEN

Format: LEN(, ,)

Example: IIF(LEN(FirstName) = 2, 'abc', 'xyz')

This argument reads: If the length of the FirstName is equal to 2, display *abc*; if not, display *xyz*.

Command: MID

Format: MID(, ,)

Example: MID ([LastName], 2, 3)

This argument reads: Beginning after the second letter, get the next three letters from the contents of the LastName field. If the last name is Wilson, the result is: lso

Command: REVERSE

Format: REVERSE( )

Example: REVERSE ([LastName])

This argument reads: Reverse the contents of the LastName field. If the last name is Wilson, the result is: nosliW.

Command: RIGHT

Format: RIGHT(,)

Example: RIGHT ([LastName], 2)

This argument reads: Get the last two letters from the right side of the contents of the LastName field. If the last name is Wilson, the result is: on.

Command: TRIM

Format: TRIM( )

Example: TRIM ([LastName])

This arguments reads: Remove all leading and trailing non-printing characters from the contents of the LastName field (e.g. spaces, tabs, returns, etc.). If a database editor inadvertently entered a carriage return after the last name, the TRIM command would remove it.

Command: UCASE

Format: UCASE( )

Example: UCASE ([LastName])

This argument reads as follows: Convert the contents of the LastName field to upper case letters. If the last name is Wilson, the result is: WILSON

Add Operator

Click this button to get a choice of operators. Operators produce either numeric or Boolean (true or false) results.

Table 4-1: Operators

Operator	Name	Function
%	Mod	Returns the remainder of a division. 25 % 2 results in: 1 10 % 3 results in: 1
&	Ampersand	Concatenates values. [lastname] & ", " & [firstname] results in: Wilson, Jerry
,	Comma	Separates statements. Note the commas in the following expression: IIF (argument, result1, result2)
/	Forward Slash	Divides numbers. 100 / 2 results in: 50
+	Plus	Adds numbers. 100 + 50 results in: 150
<	Less Than	A Boolean function returning a "true (1)" or "false (0)" value. [*ParitionName*.Printcount] < "4" results in a True or "1" if the record's badge was printed less than four times. Use this in an IIF statement. **Example:** IIF ([*ParitionName*.Printcount] < "4", "", "Needs to be updated.") **Explanation/Translation:** This example would do nothing if the badge was printed less than four times; otherwise, the text "Needs to be updated" would be displayed on the badge.
<>	Not Equal To	A Boolean function returning a "true (1)" or "false (0)" value. Use this in an IIF statement. **Example:** IIF (Middle] <> "", [Middle] & " " & [LastName], [FirstName] & " " & [LastName]) **Explanation/Translation:** If the middle name does not equal nothing (two quotes with nothing between them represents "nothing"), that is, if the middle name field contains something, then add the middle name and last name. Otherwise, if the middle name field is empty, use the first name with the last name.
=	Equal To	Use this in an "IIF" statement. **Example:** IIF ([Department] = "Engineering", "Engineer", "") **Explanation/Translation:** If the department field contains the text "Engineering," then insert the word "Engineer" on the badge. Otherwise, don't do anything.

Table 4-1: Operators

Operator	Name	Function
>	Greater Than	A Boolean function returning a "true (1)" or "false (0)" value. [*ParitionName*.Printcount] > "4" results in a True or "1" if the record's badge was printed more than four times. Use this in an IIF statement. **Example:** IIF ([*ParitionName*.Printcount] > "4", "", "Needs to be checked.") **Explanation/Translation:** This example would do nothing if the badge was printed less than four times; otherwise, the text "Needs to be checked." would be displayed on the badge.
AND	AND	Use AND when you want a query to satisfy more than one argument. Individual arguments must be enclosed within parentheses. The AND operator is used with IIF statements. **Example:** IIF ([Clearance] = "5" AND [Department] = "Security", "Access Permitted", "") **Explanation/Translation:** If the individual has a security clearance level of 5 and is also part of the Security department, then print the words "Access Permitted" on the badge. Otherwise, don't print anything.
OR	OR	Use OR when you want a query to satisfy only one part of an argument. Individual arguments must be enclosed within parentheses. The OR operator is used with IIF statements. **Example:** IIF ([Clearance] = "5" OR [Department] = "Security", "Access Permitted", ""). **Explanation/Translation:** If the individual has a security clearance level of 5 OR is part of the Security department, then print the words "Access Permitted" on the badge. Otherwise, don't print anything.

Add Text

Allows you to insert strings of literal text into an expression. You do not need to supply the enclosing quotation marks within the Add Text window; Expression Builder provides them automatically.

Test

Verifies the syntax of the current expression. If the expression passes, the Test window will display the result of the expression.

Erase Expression

Clears the current expression.

Undo

Removes the last action taken.

More Examples of Expressions

Expression Builder is a powerful way to manipulate data. You can:

- Extract portions of data from within a database field
- Combine data with literal text
- Create a single badge object which contains data from numerous database fields
- Insert images into a 2D Superscript bar code
- Create “what if” arguments to insert text on a badge if certain conditions apply

This section provides a more detailed discussion of the steps and concepts involved in the creation of expressions.

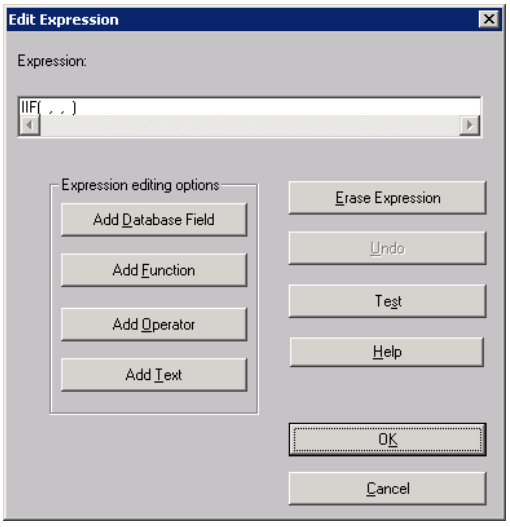
Creating IIF Statements

➤ **To Create an IIF Statement:**

1. Click the **Add Function** button on the Edit Expression dialog box. Add Function presents a list of available functions.
2. Select **IIF** and click **OK**.

   The following appears in the Expression Builder’s Editing Window:

   IIF (, ,)



3. Enter the IIF statement.

The IIF function will operate on information you supply within the parentheses. The commas within the parentheses separate the three parts of the IIF function, which are: (argument, result1, result2).

See “IIF Statement Examples” for more information.

4. Click **OK**.

IIF Statement Examples

The IIF function could be described as the following:

If such and such a condition is true, then automatically generate this response; otherwise, if the condition is not true, generate this alternate response.

The “such and such condition,” “this response,” and “alternate response” in the previous sentence is placed within the parentheses of the IIF statement.

Example 1:

Enter **IIF (, ,)** in the Edit Expression dialog box and click your mouse between the open parenthesis and the first comma. This is where you will enter the argument.

Arguments typically compare the data from a specified database field with a value that you supply within this parenthesis. For example:

- [company] = "Delta"
- [*ParitionName.*PrintCount] > "2"
- [ExpDate] BETWEEN #01/01/1999# AND #12/31/1999#

The first word in these examples is the actual name of a database field; database fields must always be enclosed within square brackets ([ ]). The field name is followed by a Boolean operator (=, <, >, And, etc.); the Boolean operator describes how you want the data in the database field compared to the value you will supply next. The final element of the argument is the actual data (text, dates, or numbers) you will specify. Therefore, you may create any argument or condition that you want.

For example, you are willing to print your employees’ first three badges at company expense, but they must pay $15 for each additional badge if they become lost or damaged. You want to make a visible reminder on the badge so employees will be more careful. So, if the badge has been printed two or more times already, you want the following message printed on the badge:

“You will have to pay for your next badge!”

The argument for this is: *ParitionName.*PrintCount >= "3"

PrintCount (a user-defined field) is the name of an actual database field that keeps a running count of the number of times a badge has been printed. >= (the greater than and equals signs) means “is greater than or equal to.”

In the Edit Expression window, after inserting the IIF function, click your mouse after the open parenthesis, but before the first comma, and enter your argument:

[*ParitionName.*PrintCount] >= "3"

The Edit field should display: IIF ([*ParitionName.*PrintCount] >= "3", ,)

Next, define what the system will do if the argument passes or fails. The syntax of the IIF statement is IIF (argument, result1, result2). Result1 is the true result – what should happen if Expression Builder finds records whose PrintCount is greater than or equal to 3. (In this case, the desired result is text displayed on the badge.)

Click your mouse between the first and second commas embedded within the parentheses and enter (with quotation marks):

"You will have to pay for your next badge reprint!"

This message will be displayed on every badge that has been printed 2 or more times.

If the argument fails (if the badge has NOT been printed 2 or more times), you do not want anything printed on the badge.

Click your mouse in the space after the second comma, and before the closing parenthesis, and type two double-quotes (""). Two double-quotes, with nothing entered between them, equals "nothing" in Expression Builder.

Your finished IIF statement should look like the following:

IIF ([*ParitionName.*PrintCount] >= "3", "You will have to pay for your next badge reprint!", "")

Example 2:

Consider a variation: You want to indicate on the badge if the portrait image is older than 12 months. You create an argument that compares the date an image was last captured with an arbitrary test date. If the difference is greater than 12 months, you want the word "Dated!" to be displayed on the badge underneath the portrait image. The expression looks like the following:

IIF([ImageCreateDate] < #01/01/1999# ,"Dated!" , "")

ImageCreateDate is a database field that appears when you click the **Add Database Field** button. The application automatically records the date whenever an image is captured. We use the "less than" operator, because dates going backward (in the past) are numerically less than today or future dates.

We arbitrarily pick a date from 12 months ago – images captured earlier than that will be flagged. Note that dates must be enclosed within pound signs (#). And if you set your "Short date format" in the Windows Regional Control Panel to a 4-digit year, you must enter a 4-digit year. If the argument is true, we want the word "Dated!" to be displayed underneath the portrait. If the argument does not pass (because the portrait is more recent than 1/1/99), nothing will be printed.

After you close Expression Builder, the text object will display the actual expression within the object boundary. (If Preview has been enabled on the View menu, the data specified for result1 or result2 will be displayed.) Double-click on the text

object in the Badge Layout window to open the Properties of Text dialog. Edit the text's font, size, weight, color, etc. Reposition the text object so it appears below the portrait.

FormatL and FormatR

You can force the addition of user-defined characters at either the left or right end of a field. For example, if you want the characters "XYZ!!" appended to the left or right of the Employee Number field when that field is printed on the badge, you would use the FormatL or FormatR function to do this.

Additionally, if you need a field to display a user-specified maximum number of characters, regardless of how many characters are entered in the actual database, you would use the FormatL and FormatR function to do this.

The FormatL function begins with the existing database data on the left, and supplies user-specified padding to the right. FormatR is the opposite – it places existing database data to the right and supplies padding to the left.

As explained in FormatL, plan the maximum number of characters you want displayed in the field. If you require specific characters at the left or right of the text string, determine which ones and at what locations they should be displayed.

For example, if you want at least three asterisks to precede whatever data has already been entered into an Employee Number field, and the maximum number of characters in the Employee Number field is 6, you would use the following expression:

FormatR ([EmployNU] , "*********")

The result would be:

123456***

Again, use any characters you want to "pad" the left or right of a database field.

Mid

The Mid function extracts a user-specified number of characters from the middle of a database field. The syntax of the Mid function is: Mid (database field name, start extracting after character number:, number of characters to extract).

After inserting "Mid (, ,)" in the Edit window, click your mouse between the opening parenthesis and the first comma. Either enter the database field name (enclosed within square braces) or click the **Add Database Field** button to select a field.

Next, click your mouse between the first and second commas inside the parentheses. Enter the number (enclosed within quotation marks) representing the character after which you want to start extracting data. (For example, if your database has a field whose contents contain Bldg400-a, Bldg400-b, Bldg400-c, Bldg500, and Bldg500-a, entering the number "4" means that text after "Bldg – the first four characters – will be extracted.)

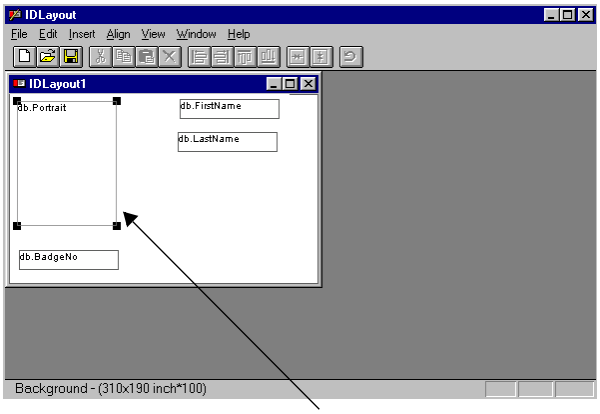
Finally, click your mouse between the last comma and the closing parenthesis. Enter the number (enclosed within quotation marks) representing how many characters you want to extract. (Using the example above, “3” would extract the 4-Zero-Zero and 5-Zero-Zero from the records.)

Manipulating Objects on a Badge Design

Because of Video Imaging’s graphical user interface, most of the steps necessary for creating and editing badges require only simple point-and-click actions, as shown in the following examples. When an object is first placed on a badge background, it is placed in a default position and given a default size, which you may want to change.

➤ To Select an Object to Move or Re-size:

1. Place your mouse pointer over the object and click the left button. The object is then highlighted on all four corners.

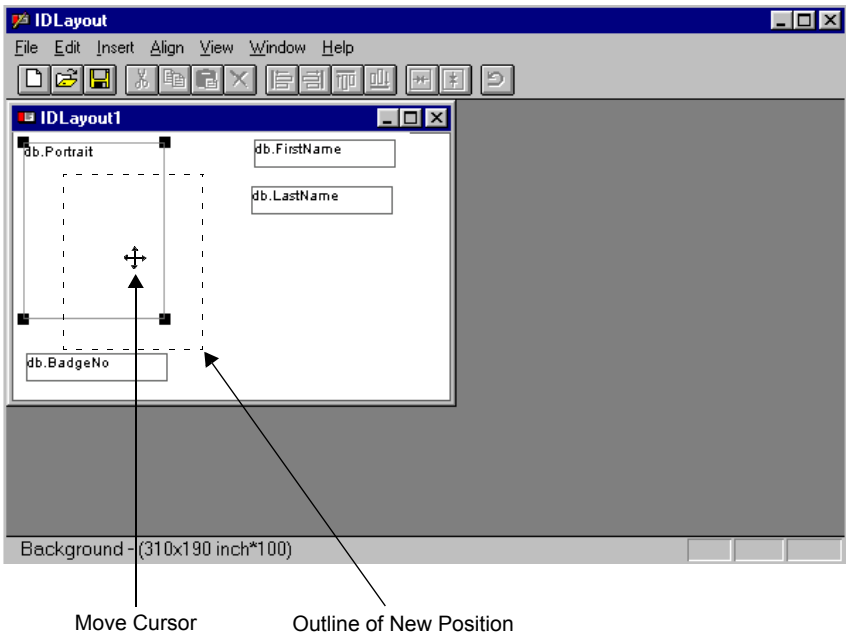


➤ To Move an Object:

1. Place the mouse pointer over the center part of the object. The pointer changes into a move cursor, similar to:

2. Move the object by pressing and holding the left mouse button and dragging the move cursor to another location. A shadow outline of the image is displayed indicating the object’s new position. Release the left button to place the object in the new location.

   Except for a badge background (described in “Badge Background” on page 4-11), any object can be moved in this manner.



➤ To Select Multiple Objects:

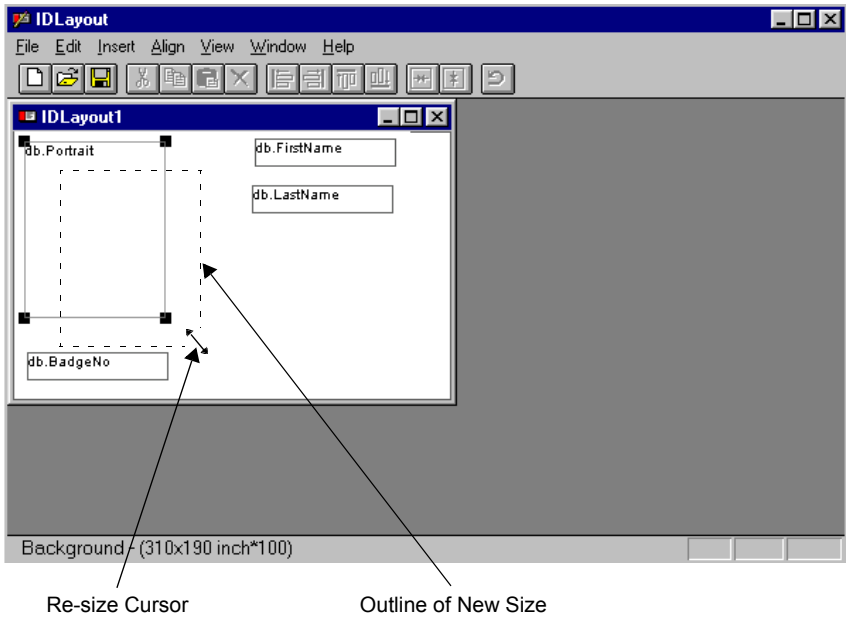
1. You can select multiple objects on a badge design by pressing and holding the <**Shift**> key, then clicking on the objects.

   Use this function when you want to move multiple objects simultaneously, keeping the spacing layout for the objects. Or, when you want to change the properties of multiple text objects, such as the font (this applies only to properties of text objects, not to capture or static image objects).

➤ To Re-size an Object:

1. Select an object by placing the mouse pointer over the object and clicking the left button.
2. Place the mouse pointer over one of the highlighted corners of the object. The pointer changes to a re-sizing cursor, similar to:

3. Re-size the object by pressing and holding the left mouse button and dragging the re-sizing cursor to make the object larger or smaller. A shadow outline of the image is displayed indicating the object's new size. Release the left button to re-size the object.



Except for a badge background (described in "Badge Background" on page 4-11), any object can be re-sized in this manner.

When experimenting with object re-sizing, you may see that some objects do not always re-size exactly to the proportions of the shadow outline. This is because Video Imaging automatically attempts to maintain an object's proportions (height versus width ratio) so they do not appear distorted when printed. You can manipulate, to some degree, how Video Imaging determines an object's proportions using options in the Edit menu. This is described in detail in "ID Layout Main Menu Definitions" on page 4-7.

➤ To Delete an Object:

1. To remove an object from a design, place the pointer over the object and click the left mouse button to highlight it.
2. Press <**Delete**> on the keyboard. The object is removed from the badge design.

Adding a Signature Object

Inserting a Signature object on a badge design requires the same steps as in "Placing Objects on a Badge Design" on page 4-19.

The Insert menu provides you with all the choices available for adding objects to a badge design. For the purposes of verifying operation, only a signature object will be described here. The remaining options are described, in detail, in "ID Layout Main Menu Definitions" on page 4-7.

➤ To Insert a Signature Object:

1. Select **Insert>Signature** from the menu bar.

A default object is placed on the badge design.

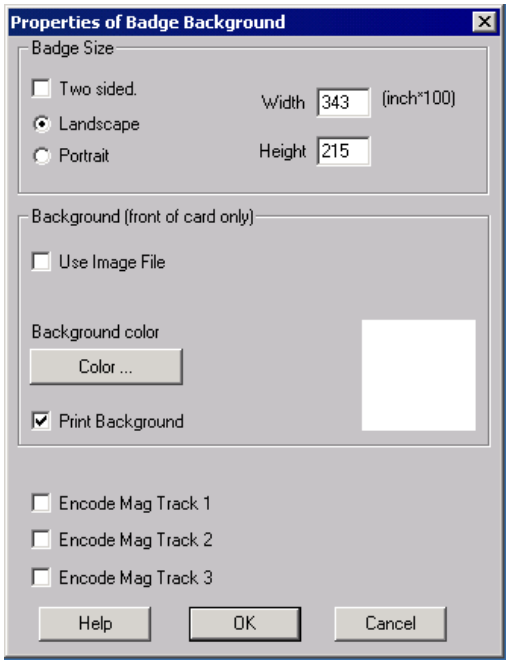
If you are going to add the signature object to the back of the badge, refer to "Enabling Double-sided Printing" before adding the objects.

Enabling Double-sided Printing

If you are using P420i or P520i printers, you have double-sided printing capability. In order to print double-sided, and therefore be able to add objects to the back side of a badge design, you must enable the double-sided feature.

➤ To Enable Double-sided Printing and Design:

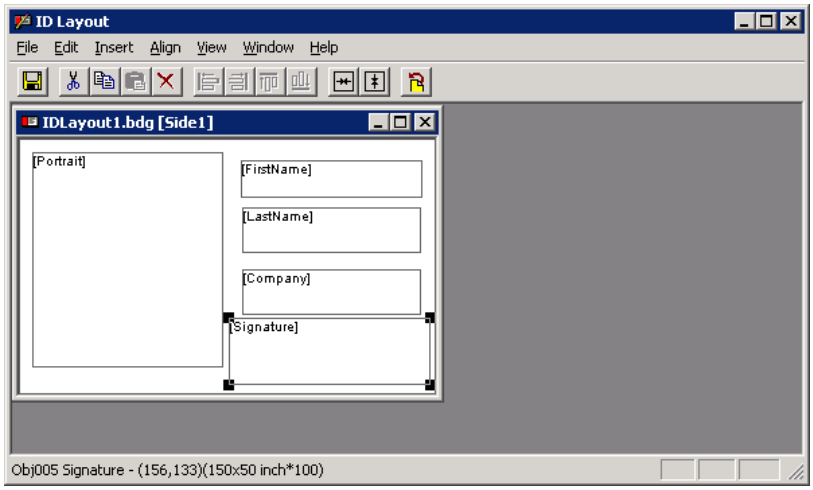
1. Open the Properties for Badge Background dialog box by right-clicking anywhere on the badge background, or select **Edit**>**Badge Background** from the ID Layout Main menu. If you right-click a specific object, you will open the properties dialog for that object, rather than the badge background.



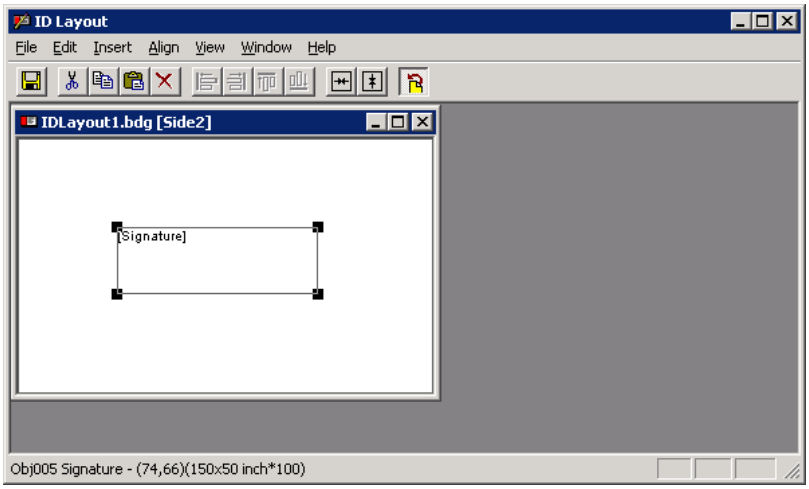
2. When the Properties of Badge Background dialog box opens, click the check box next to **Two sided** to enable the feature.
3. Click **OK** to return to the ID Layout window.
4. To view the other side of the badge, click **View** on the ID Layout Main menu and click **Back Side**. This selection is only available once you have enabled the **Two Sided** selection in the Properties of Badge Background dialog box.
5. The Back Side selection acts as a toggle switch. When viewing the reverse side of a badge, simply un-select **Back Side** from the View menu to return to the front side view of the badge.

Completing the Badge Layout

Now that you understand the basic principles of badge layout, you can add the signature object as desired. The illustration below contains both a double- and single-sided example.



Single-sided, where objects will be moved to make room for the signature object.



Double-sided, where the signature object was moved to the reverse side of the badge.

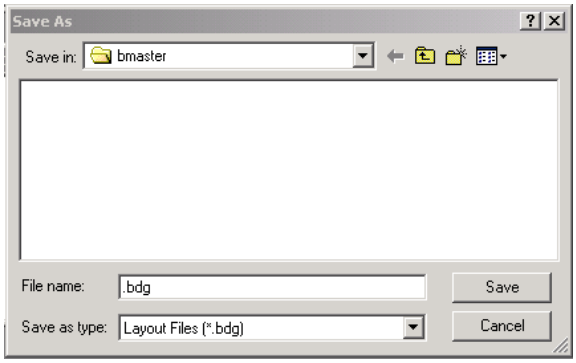
Saving the Design

Once badge designs are created, they need to be saved to the integrated database on the P2000 Server. Once a design is saved, you can:

- Assign it to entities.
- Open it in Badge Layout to edit the design.
- Remove it from the hard disk to delete the design.

➤ **To Save your Badge Design:**

1. From the ID Layout Main menu, select **File**>**Save As**, which allows you to save the design under a name you choose.
2. When you select **Save As,** the Save As dialog box appears.



3. Select a name for your design and save the design in the *\BMaster* directory by clicking **OK**.

   All badge designs you create should be stored in the integrated P2000 directory (*\BMaster,* for example), with the file extension of .bdg.

NOTE

By default, the last badge you create or edit, and save will be displayed when you open the ID Layout dialog box.

4. After saving your design, close the ID Layout dialog box by selecting **File**>**Exit** from the Main menu. As an alternative, you can also click the exit button (X) in the top right corner of the ID Layout dialog box.

Creating a Layout Design

You can use an existing badge design for sheet format printing. To do so, you make the size of the placeholders equal to the size of the existing badge layout. This approach is limiting because it restricts what information is printed on the existing design.

An alternative approach is to create a badge layout for sheet format printing *only*. This allows you to include information in the sheet format that may not be included on actual ID badges. In addition, you must assign the sheet format layout to every entity you wish to print in sheet format, as well as any badge layouts contained in their records.

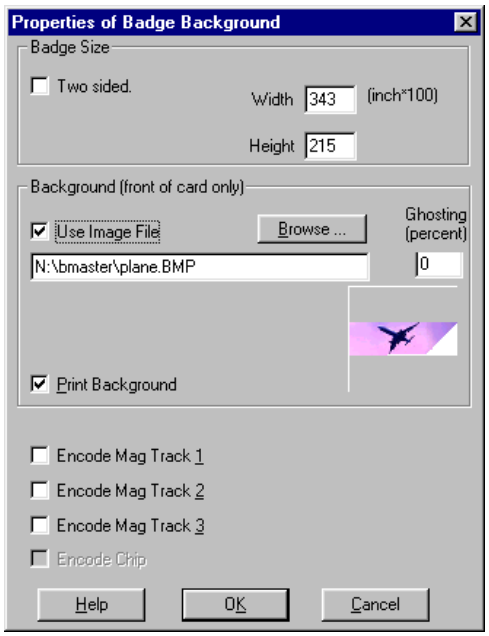
See “Creating a Sheet Formatting Badge Layout” on page 4-36 for a sample for creating a badge layout for use in sheet printing only.

Creating a Sheet Formatting Badge Layout

NOTE

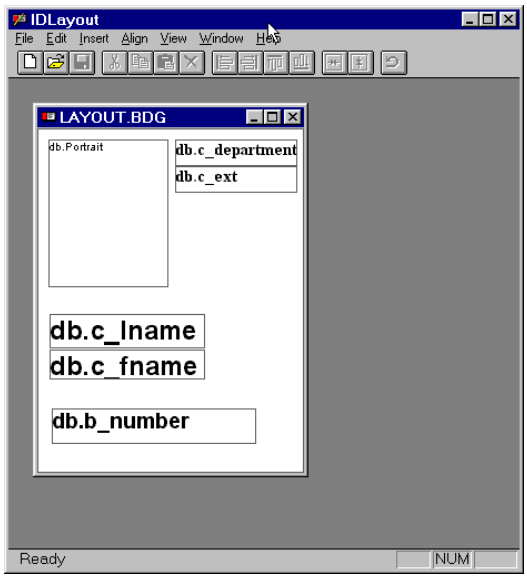
Before proceeding, it may be helpful to refer to "To Set Up Sheet Formatting Layout:" on page 3-9 to recall the sample sheet formatting layout design mentioned in the following instructions.

A sheet format design layout is created as any other badge design. Note in the example below the size of the design (width/height) is set to match the size of the placeholders created in the sheet sample.



The following screen shows a sample layout. Please note the following:

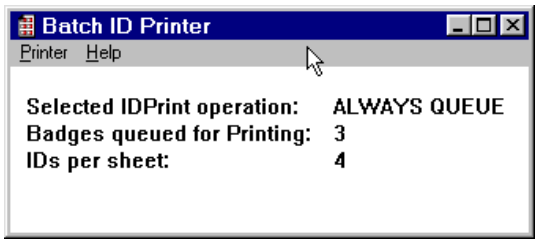
- Any entity field, including User-Defined Fields (UDFs), may be used.
- Any captured image (portrait or signature) may be used.
- Printing may be color, black and white, or grayscale, depending on the printer.



Once you have created the layout, simply add the design to the entity records you want to print for sheet format.

Batch Printing Notes

When Sheet Formatting is enabled, the Batch ID Printer dialog box displays the additional information on how many IDs are contained on a sheet. This is determined by the Badge Columns/Rows settings in Sheet Layout. In this example, the number of IDs is four.



If you set the batch printing function to **Auto print**, the sheet prints when the number of badges queued equals the number of IDs per sheet. If you set batch printing to **Always queue**, the badges will simply collect in the *\BMaster\Queue* folder until you manually print them using this dialog box, under the Printer menu option. Note that when set to **Always queue** you can print whether or not the number of queued badges equals the number of IDs per sheet. If fewer badges are queued than IDs per sheet, the system will print at column one, row one, then column two, row one, and so forth until all records are printed.

The following sample is the output from the Sheet Layout configuration and sheet format badge designed described in this manual.

PRINTING A TEST BADGE

Once a badge design has been saved, printing a badge requires only the following steps:

- **Creating an entity record.** For details, refer to Chapter 3 in *P2000AE Software User Manual.*
- **Assigning the badge to the entity.** For details, refer to Chapter 3 in *P2000AE Software User Manual.*
- **Capturing the portrait and signature images.**
- **Viewing and printing the badge.**

Capturing the Portrait and Signature Images

The following sequence of steps assumes you are using all available capture devices for Video Imaging (camera and signature pad).

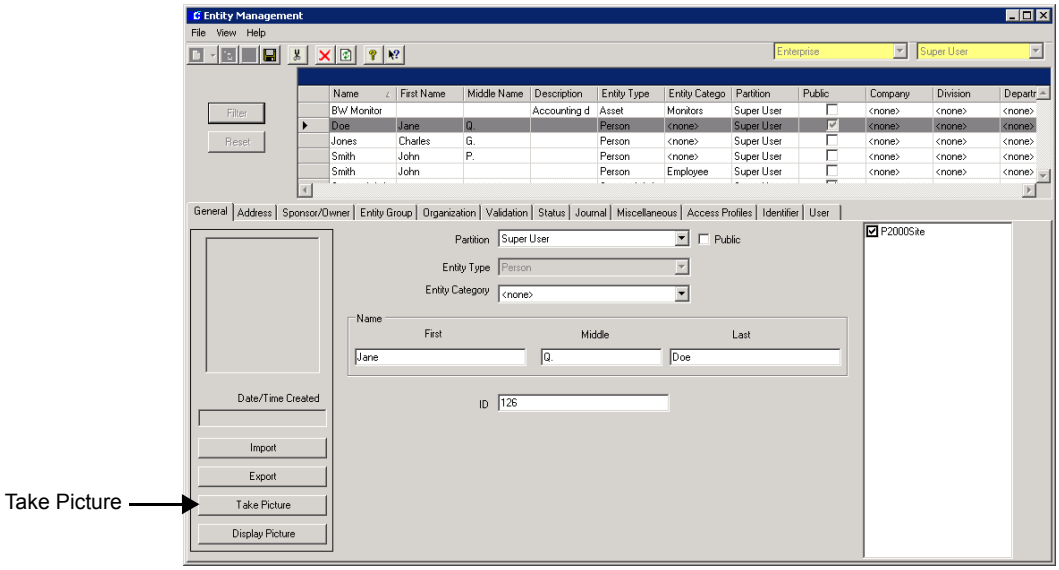
Any devices not used, and therefore not configured in ID Setup, will automatically be skipped by the Video Imaging application.

NOTE

Capturing and/or importing a portrait image that is too large (i.e. at a high resolution) may result in a degraded image when printed to a badge. Generally, the ideal size of a portrait image should be 290 pixels wide x 330 pixels tall.

➤ To Capture a Portrait or Signature Image:

1. From the P2000 Main menu, select **Access**>**Entity Management.** The Entity Management window appears.
2. Select an entity from the list.
3. Click the **Edit** button on the toolbar.
4. Click **Take Picture** to begin the process of capturing the portrait and signature, in that order.



Capturing a Portrait Image with a Digital Camera

NOTE

To perform the following instructions, the Capture Device drop-down list on the ID Setup - Graphics definition dialog box must be set to ***Get from File****.*
See "ID Setup – Graphics Definition Field Definitions" on page 3-13.

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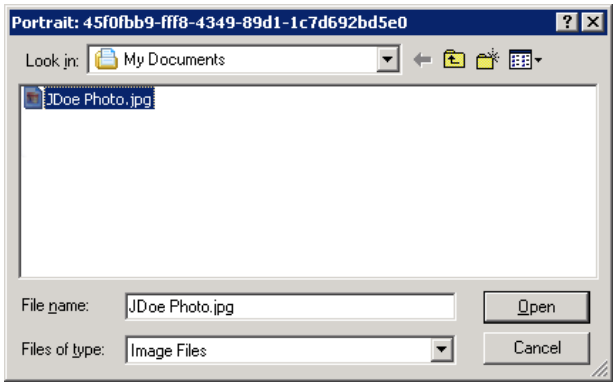
1. Use the camera to capture the portrait image of the entity.
2. Plug the camera into an available USB port on the Video Imaging PC.
3. Turn on the camera. If the Windows® operating system does not correctly identify the camera, install the camera manufacturer's driver. Refer to the camera's user documentation for assistance.
4. Transfer the graphic file of the entity image to the Video Imaging PC. This can be accomplished by using the driver software or the operating system (Windows® XP only).

NOTE

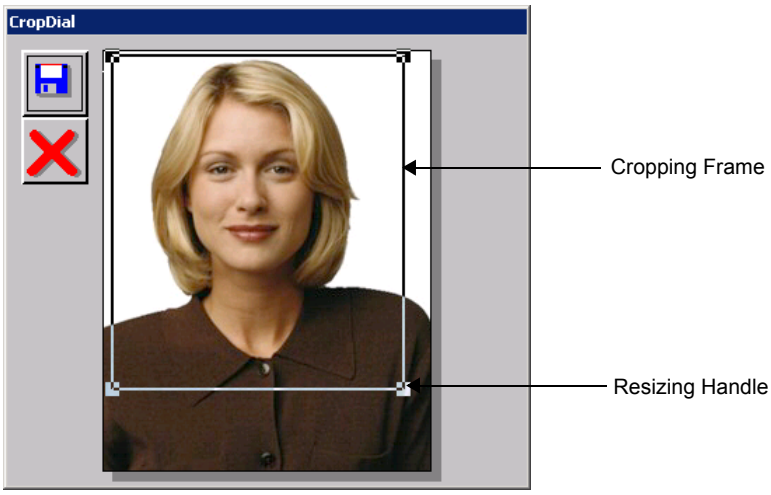
*You may use XP's digital camera image capture and transfer feature by clicking **Advanced Users Only** on the Scanner and Camera Wizard (see screen capture below). Refer to the Windows XP User Documentation for assistance.*

5. Once the image file has been transferred to the Video Imaging PC, click the **Take Picture** button on the Entity Management window. The Open dialog box appears.
6. Select the image file of the entity portrait.



7. Click **Open**.

   If you have configured your capture options to allow cropping, the CropDial dialog box appears.



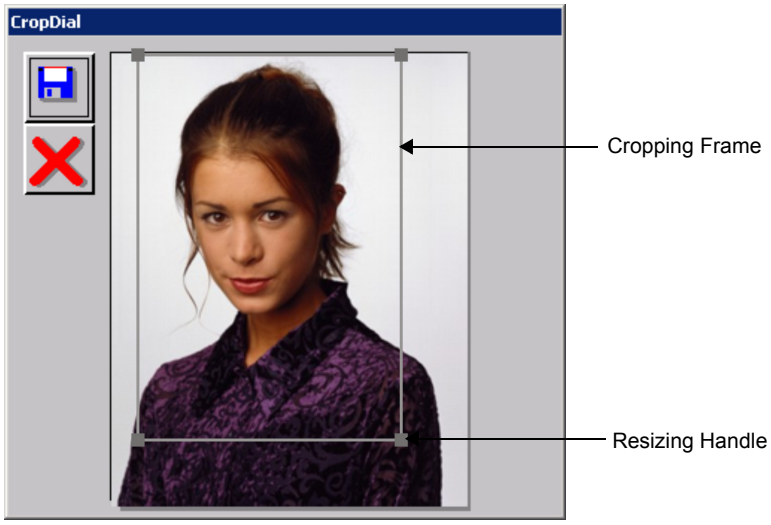
8. If the face is not framed to your liking, move the cropping frame by clicking and dragging it to a new position. You may also resize the frame by clicking and dragging any of its resizing handles.
9. Click the floppy disk icon (save) when you are satisfied with the image, or click the red X button to cancel.

Capturing a Portrait Image with the USB FlexCam

1. After clicking the **Take Picture** button on the Entity Management window, the ITC VFW capture window appears.

2. To capture the image, click the green check icon. To cancel, click the red X icon.

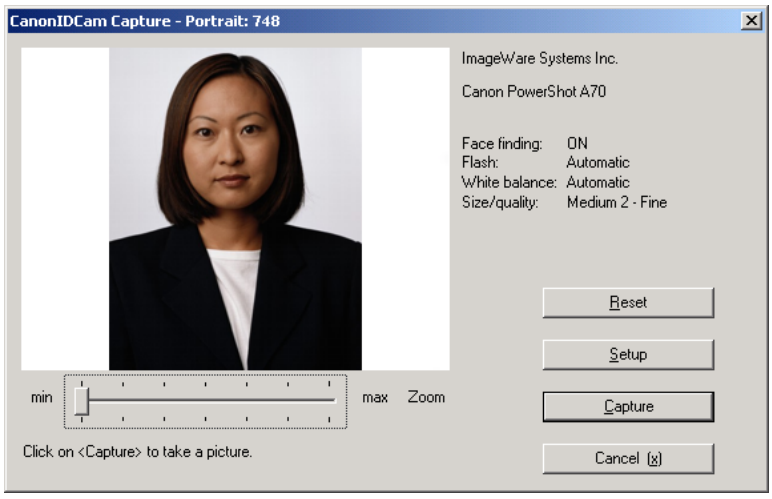
   If you have configured your capture options to allow cropping, the CropDial dialog box appears.



3. If the face is not framed to your liking, move the cropping frame by clicking and dragging it to a new position. You may also resize the frame by clicking and dragging any of its resizing handles.
4. Click the floppy disk icon (save) when you are satisfied with the image, or click the red X button to cancel.

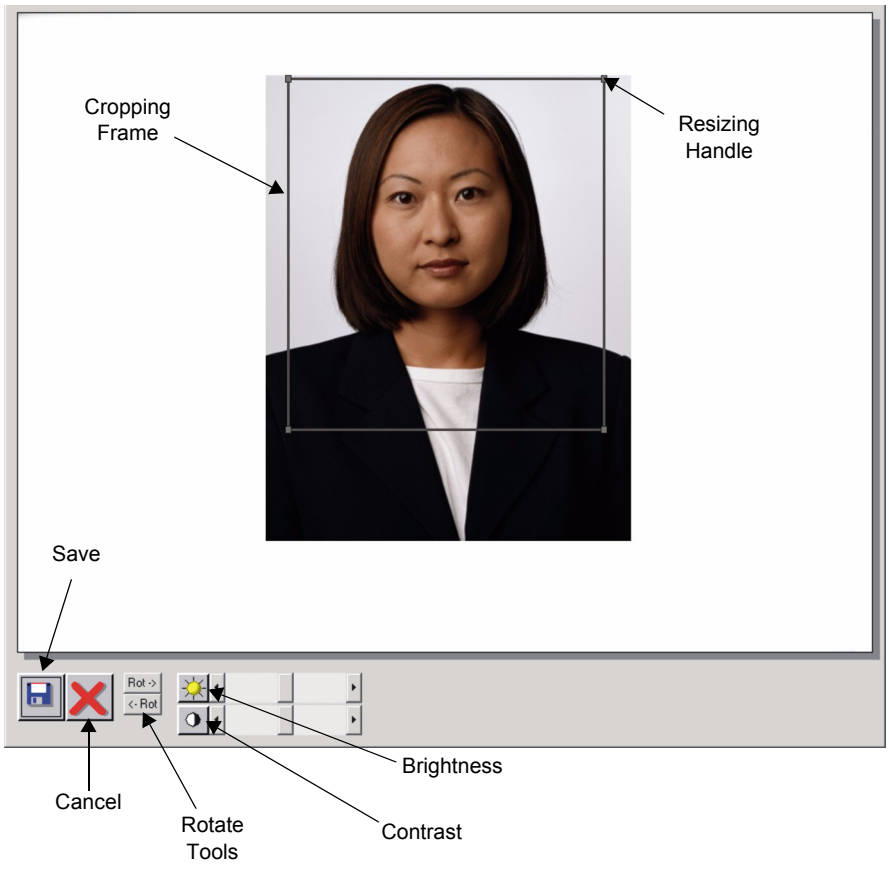
Capturing a Portrait Image with the Canon Digital Camera

1. After clicking the **Take Picture** button on the Entity Management window, the first capture window displayed will be the CanonIDCam Capture – Portrait dialog (if you have purchased the ID Camera Interface Software).



2. Use the Zoom slider bar to zoom in/out on the image.
3. Click **Capture** to take the picture. An enlarged image of the picture appears.
4. Make any adjustments, if necessary. If you have purchased the Face Finder feature, a cropping frame will appear on the image.

If the face is not framed to your liking, move the cropping frame by clicking and dragging it to a new position. You may also resize the frame by clicking and dragging any of its resizing handles.



5. Click the diskette button to save the portrait. The image will be automatically linked to the current entity record.

Image Adjustments

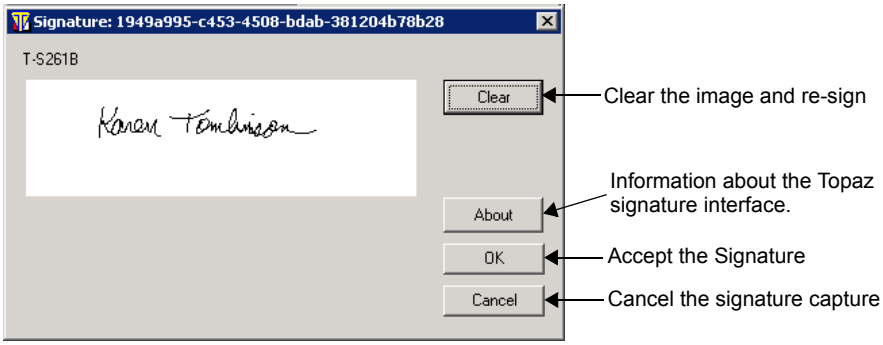
Rotate tools – Rotates the image 90 degrees clockwise or counter-clockwise.

Brightness slider – Darkens or lightens the image. Click the Sun icon to return the slider to the center.

Contrast slider – Increases or decreases the image contrast. Click the Half Moon icon to return the slider to the center.

Capturing a Signature Image

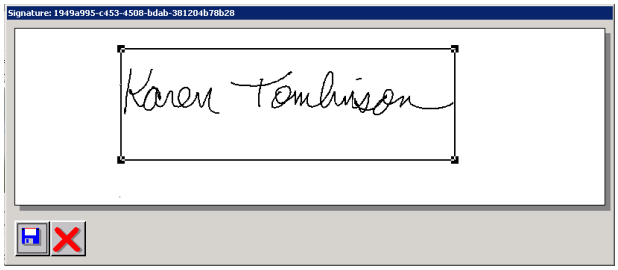
1. After capturing the portrait image, the signature capture window automatically opens (if previously configured in ID Setup).



   Use the special plastic-tipped pen shipped with the pad to sign your name.

2. Click **OK** to accept the signature.

   A crop image window appears, if configured.



3. To crop the signature, place the mouse pointer over one of the highlighted corners of the crop area and resize the area by pressing and holding the left mouse button. Only the area placed within the crop area will be displayed in the signature field of the badge design.

   Cropping options are configured on the ID Setup window. See “Enabling and Configuring the Signature Pad” on page 3-19.

4. Click the diskette button to save the signature (within the crop area) and assign it to the current entity, or click the red X to cancel.

Viewing and Printing a Badge

After capturing all the images, you can now view and print your badge design. Note that since the captured images are usually large files, it takes a few seconds to save them into the database. Always wait a few seconds after capturing images before printing a badge.

NOTE

An access badge or identification badge identifier must be defined on the Entity Management window's Identifier tab before you can preview or print an entity badge. Refer to the P2000AE Software User Manual for instructions.

➤ To View a Badge Before Printing:

1. Open the Entity Management window. Refer to the *P2000AE Software User Manual* for assistance.
2. Select the record of the entity whose badge you wish to view.
3. Select the **Identifier** tab.
4. Expand the **Access Badge** or **Id Badge** option in the navigation tree on the left side of the tab.
5. Select the badge identifier you wish to view.
6. Click **Preview**.
7. Your design will be displayed in its own window with all the images you have captured.

   Example:

➤ To Print a Badge:

1. Before printing the badge, make sure you have loaded the ribbon and cards according to the printer's manual.
2. Open the Entity Management window. Refer to the *P2000AE Software User Manual* for assistance.
3. Select the record of the entity whose badge you wish to print.
4. Select the **Identifier** tab.
5. Expand the **Access Badge** or **Id Badge** option in the navigation tree on the left side of the tab.
6. Select the badge identifier you wish to print.

7. Click **Print**.

Chapter 5

SYSTEM ADMINISTRATION

This chapter describes, in detail, all aspects of Video Imaging from a system administration viewpoint. It is assumed that you have configured the system, as described in "Chapter 3: System Configuration", and are also now familiar with navigating through the Video Imaging user interface. Specifically, this section describes the following areas of the Video Imaging application:

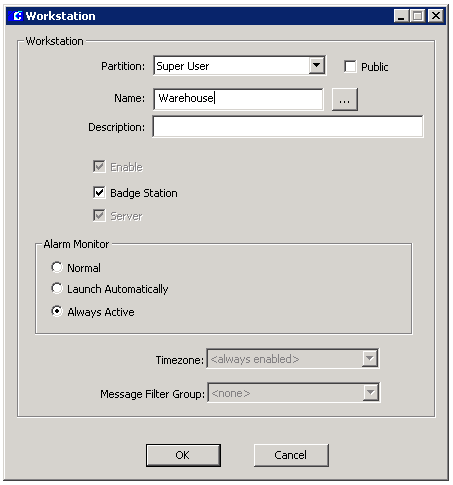
- Defining the Video Imaging Workstation
- Backing-up Badge Designs and Application Files
- Addressing Network Failures

DEFINING THE VIDEO IMAGING WORKSTATION

Like any P2000 workstation, the Video Imaging workstation must be defined at the P2000 Server before the station can properly connect to the Server.

➤ To Configure a Workstation for Badging:

1. From the P2000 Main menu, select **Config>System**.
2. In the System Configuration window, select the **Workstation** option in the navigation tree.
3. Click **Add**. The Workstation dialog box appears.



4. Enter the information required. Refer to the *P2000AE Software User Manual*.
5. Select the **Badge Station** check box to define this workstation as the Video Imaging station.
6. Click **OK** to save your entries and return to the System Configuration window.

NOTE

If you edit an existing workstation and assign it as the Video Imaging station, you must exit the P2000 software and re-launch the application for the change to take effect.

BACKING UP VIDEO IMAGING IMAGES AND DATA

Video Imaging data and images should be backed up frequently using the P2000 database maintenance feature. Use the **Backup Configuration (Append or Overwrite)** P2000 database maintenance option to back up Video Imaging data and images.

Backups can be performed using several supplied methods, and can be made to any backup device supported by Microsoft® SQL Server™. Tape backup systems are usually the most cost-effective while also being fast and reliable, and are the only type that allows backups larger than a single media.

For detailed information on using the Database Maintenance tool in P2000, refer to the *P2000AE Software User Manual*.

ADDRESSING NETWORK FAILURES

If you experience a network failure, Video Imaging workstations will not automatically recover. Should network operation become interrupted, turn off your Video Imaging workstations by exiting the P2000 software, then properly exiting Windows. Re-boot the PCs to resume proper operation once the network error has been corrected.

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