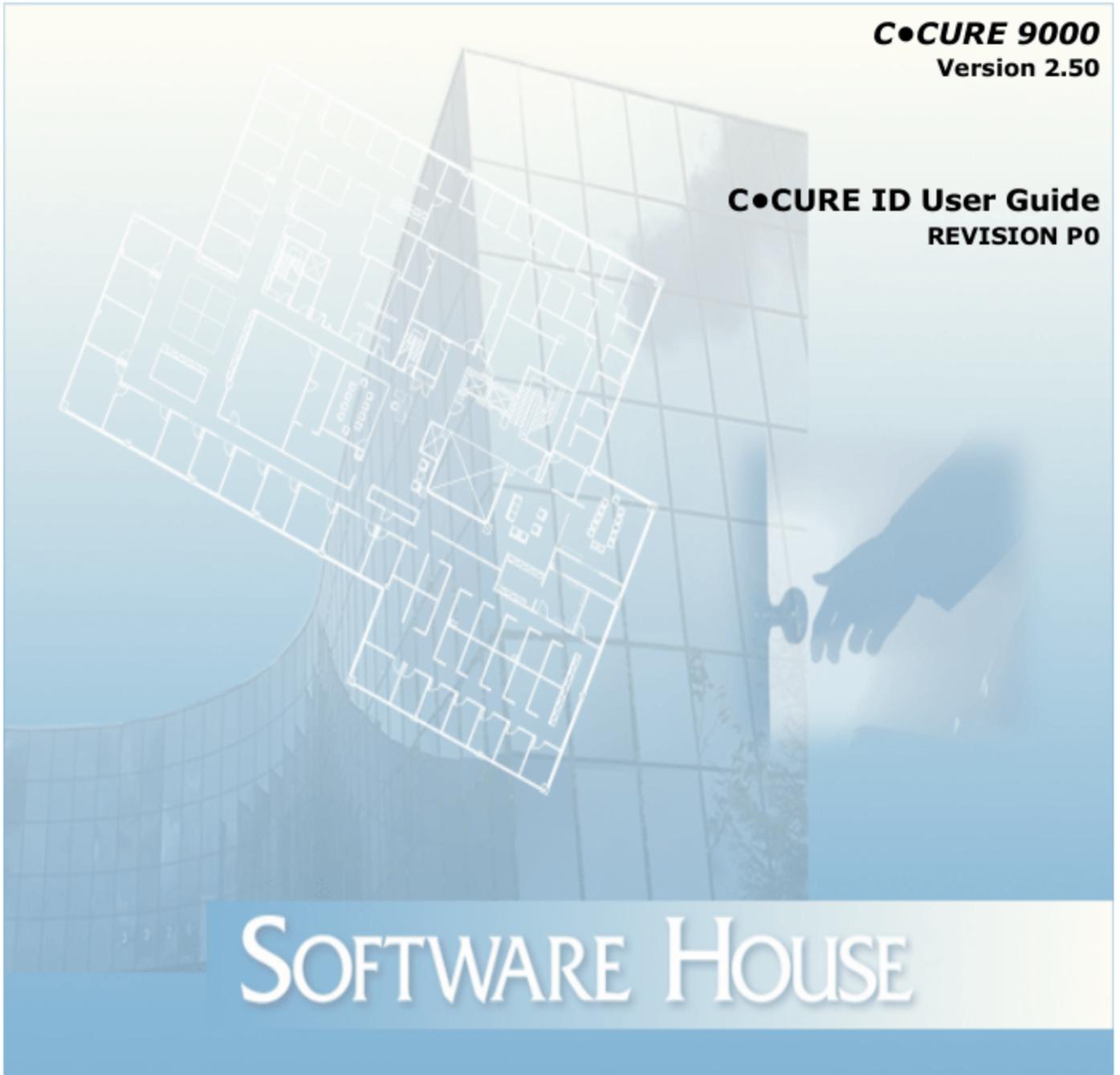


# SOFTWARE HOUSE

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# Table of Contents

<b>Preface</b>	<b>11</b>
How to Use this Manual .....	12
Finding More Information .....	13
Manuals .....	13
Online Help .....	13
Conventions Used in This Manual .....	14
Software House Customer Support Center .....	15
Telephone Technical Support .....	15
Before Calling .....	15
<b>Chapter 1 - Introducing C•CURE ID</b>	<b>17</b>
Overview .....	18
What's New .....	19
Enhancements in Version 3.4 .....	19
Enhancements in Version 3.2 .....	19
Enhancements in Version 3.1 .....	19
Hardware Requirements .....	20
Supported Printers .....	20
Supported Cameras .....	21
Software Requirements .....	22
Display Properties for Badging Stations .....	22
How to Use C•CURE ID .....	23
Using Help .....	25
<b>Chapter 2 - Setting Up a Badging Station</b>	<b>27</b>
Registering C•CURE ID .....	28
Setting Up Permissions .....	29
Simultaneous Badging Stations .....	29
Setting Up Operator Permissions .....	29
Setting Up the Room .....	31
Ambient Lighting .....	31
Positioning the Camera .....	31

Printer Set-up for Fargo HDP5000 or DTC400e with Encoder .....	33
--	----

**Chapter 3 - Setting Up C•CURE ID 35**

Using C•CURE ID Badge Setup .....	36
Backing Up Your Images .....	36
Accessing C•CURE ID Badge Setup .....	36
Badge Setup Tasks .....	37
Badge Setup Definitions .....	38
Enrollment for Proximity Cards .....	40
Configuring Enrollment .....	40
How Batch Enrollment Works .....	40
Batch Enrollment Tasks .....	41
Configuring Batch Enrollment for Proximity Cards .....	41
Configuring Individual Enrollment for Proximity Cards .....	42
Configuring an Import Definition for Batch Enrollment .....	44
Setting Batch Printing Options .....	50
Batch Printing Setup Tasks .....	50
Accessing the Batch/Sheet Printer Dialog Box .....	50
Setting Up Batch Printing .....	52
Selecting a Batch Printer .....	52
Setting the Origin Offset for Badge Printing .....	53
Setting Up Batch Queue Mode .....	53
Batch Printing Definitions .....	54
Configuring a Sheet Layout .....	56
Sheet Layout Design Tasks .....	56
Configuring the Badge Sheet Layout for a Badge Printer .....	56
Custom Sheet Layout Templates .....	57
Saving a Custom Layout .....	57
Loading a Custom Layout .....	58
Using the Label Designer to Create/Modify a Custom Layout .....	58
Sheet Layout Configuration Dialog Box Definitions .....	59
Label Designer Dialog Box Definitions .....	61
Setting Printer Options .....	62
Badge Printer Configuration Dialog Box Definitions .....	62
Changing the Default Printer .....	63
Magnetic Encoding Options .....	64
Setting Magnetic Encoding Options .....	65
Magnetic Encoding Definitions .....	65
Configuring Portrait Capture Settings .....	68
Portrait Configuration Tasks .....	69
Setting the Height and Width for Graphics .....	69
Choosing a Graphic Format .....	69
Selecting a Capture Device for Portraits .....	70
Setting Up a TWAIN Device for Portrait or Signature Capture .....	71

Setting Up Import from File for Portrait Capture .....	72
Portrait Configuration Dialog Box Definitions .....	72
Signature Settings .....	74
Signature Configuration Tasks .....	74
Choosing Cropping Options for Signatures .....	75
Enabling Brightness/Contrast Adjustment .....	75
Specifying Capture Settings for Signatures .....	75
Selecting a Capture Device for Signatures .....	76
Configuring a Penware Tablet as the Capture Device .....	76
Configuring a Topaz Tablet as the Capture Device .....	77
Configuring Import from File as the Signature Capture Device .....	78
Signature Configuration Dialog Box Definitions .....	79
Configuring Biometric Capture Settings .....	80
C•CURE ID Biometric Configuration Tasks .....	80
Setting up a Bioscrypt Device .....	82
C•CURE ID Biometric Configuration Definitions .....	83
<b>Chapter 4 - Smart Card Setup .....</b>	<b>85</b>
Smart Card Overview .....	86
Supported Devices .....	86
The Smart Card Process .....	88
Smart Card Device Configuration .....	89
Smart Card Device Configuration Tasks .....	89
Accessing the Smart Card Device Configuration Dialog Box .....	89
Configuring a Smart Card Device .....	91
Configuring a Device or Printer .....	91
Configuration Tasks .....	91
Configuring a Smart Card Device or Printer .....	92
Configuring a Printer for Smart Card Enrollment and Programming .....	92
Configuring a Batch Printer for Smart Card Encoding .....	93
Testing the Encoder Connection .....	95
Smart Card Device Configuration Definitions .....	96
Smart Card Templates .....	98
Sample Descriptions of Smart Card Templates .....	98
Creating a New Smart Card Template .....	100
Editing a Smart Card Template .....	101
Configuring an iClass Smart Card Template .....	102
iClass Template Configuration Definitions .....	103
Configuring a DESFire Smart Card Template .....	104
DESFire Template Configuration Definitions .....	105
Configuring a MIFARE Smart Card Template .....	106
MIFARE Template Configuration Tasks .....	107

Create a New MIFARE Template .....	107
Enroll a Blank MIFARE Smart Card .....	107
Program a Smart Card Using Default MIFARE Read and Write Keys .....	108
Enroll a Smart Card Using Default MIFARE Keys .....	109
Program a Smart Card Using Custom MIFARE Read and Write Keys .....	110
<b>Smart Card Keys .....</b>	<b>111</b>
Smart Card Key Configuration .....	111
Smart Card Key Tasks .....	111
Accessing the Smart Card Key Dialog Box .....	112
Creating a Smart Card Key .....	112
Editing a Smart Card Key .....	114
<b>Smart Card Key Definitions .....</b>	<b>116</b>
Smart Card Key Dialog Box .....	116
New Key File Dialog Box .....	116
Smart Card Key Configuration Dialog Box .....	117
<b>MIFARE Template Configuration Definitions .....</b>	<b>118</b>
MIFARE Application Directory (MAD) Definitions .....	118
Sectors Definitions .....	119
Details Definitions .....	119
Keys Definitions .....	120
Data Definitions .....	120

## **Chapter 5 - Designing a Badge 123**

<b>The Badge Designer .....</b>	<b>124</b>
The Badge Designer Panels .....	124
Accessing the Badge Designer .....	125
Badge Designer Menus and Toolbars .....	126
<b>Using the Badge Designer .....</b>	<b>132</b>
Creating a Badge Layout .....	132
Editing an Existing Badge Layout .....	133
Importing a Badge Layout .....	133
Exporting a Badge Layout .....	134
Saving Your Badge Layout .....	135
Exiting the Badge Designer .....	135
<b>Sample Data .....</b>	<b>136</b>
Configuring Sample Data .....	137
<b>The Badge Layout Panel .....</b>	<b>138</b>
Configuring a Badge Layout .....	139
Badge Layout Panel Toolbars .....	139
Badge Layout Panel Tasks .....	140
Adding Text to a Badge .....	141
Adding a Barcode to a Badge .....	142
Adding an Image to a Badge .....	143
Adding a Portrait to a Badge .....	144
Adding a Signature to a Badge .....	144

Moving and Resizing Objects on a Badge .....	145
Grid Preferences .....	146
Aligning Objects Using the Grid .....	146
Setting Front-to-Back Order for Objects .....	148
Deleting an Object from a Badge Layout .....	148
Adding a Border to an Object .....	149
Adding a Border to the Badge .....	149
Badge Layout Properties Panel Tabs .....	150
The Badge Layout Properties Panel .....	151
Badge Properties Panel Tasks .....	152
Badge Layout Tab .....	152
Badge Layout Tab Definitions .....	152
Mag Encoding Tab .....	154
Mag Encoding Tab Tasks .....	155
Properties Panel Background Color Tab .....	155
Properties Panel Borders Tab .....	157
Borders Tab Definitions .....	157
Setting the Badge Layout to One-sided or Two-sided .....	159
Setting the Badge Layout to Portrait or Landscape .....	159
Setting the Badge Size .....	159
Setting the Front or Back Image of a Badge .....	159
Setting the Badge Background Color .....	160
Encoding Magnetic Tracks .....	160
Adding Magnetic Tracks to a Badge Layout .....	161
Using a Magnetic Track for Access Control .....	162
Important Considerations for Magnetic Encoding .....	162
Setting Magnetic Stripe Encoding Formats .....	165
The Image Properties Panel .....	166
Accessing the Image Properties Panel .....	166
Image Properties Panel Tabs .....	167
Image Properties Panel Tasks .....	167
Image Source Tab .....	167
Image Source Tab Definitions .....	168
Background Detection Tab .....	169
Color Management Tab .....	170
Setting a Dynamic Image Source for an Image Object .....	171
Setting a Static Image Source for an Image Object .....	172
Setting Background Detection Properties .....	172
Setting Background Color for an Object .....	173
Setting Color Management Properties .....	174
The Portrait Properties Panel .....	175
Accessing the C•CURE ID Portrait Properties Panel .....	175
Portrait Properties Panel Tabs .....	176
Portrait Properties Panel Tasks .....	176
Setting a Sample Filename .....	177
The Signature Properties Panel .....	178
Accessing the C•CURE ID Signature Properties Panel .....	178

Signature Properties Panel Tabs .....	179
Signature Properties Panel Tasks .....	179
<b>The Text Properties Panel .....</b>	<b>180</b>
Text Properties Panel Tasks .....	180
Defining a Boolean Expression for a Text Object .....	181
Setting Color and Font Properties for a Text Object .....	182
Setting the Text Background to Opaque or Transparent .....	182
Setting the Background Color of a Text Object .....	183
Rotating a Text Object .....	183
Setting Justification for a Text Object .....	184
Text Properties Text Tab .....	184
Text Properties Font/Color Tab .....	185
<b>The Barcode Properties Panel .....</b>	<b>187</b>
<b>Barcode Overview .....</b>	<b>189</b>
Setting Barcode Properties .....	189
Setting Barcode Caption Properties .....	190
Adding Static Text to a Barcode Caption .....	191
Adding Dynamic Text to a Barcode Caption .....	191
Barcode Formats .....	192
Barcode Properties Tab Definitions .....	193
Barcode Captions Tab Definitions .....	194
<b>Expression Builder .....</b>	<b>196</b>
What is an Expression? .....	197
Using the Expression Builder .....	197
Adding a Database Field .....	198
Adding a Function .....	198
Adding an Operator .....	198
Adding Text .....	198
Testing the Expression .....	199
Erasing the Expression .....	199
Undoing an Entry .....	199
Redoing the Most Recent Entry .....	199
Expression Builder Definitions .....	199
Expression Builder Functions .....	200
Expression Builder Functions .....	201
Expression Builder Operators .....	204
Expression Builder Operators .....	205
<b>Sample Expressions .....</b>	<b>207</b>
Concatenating Fields .....	207
Proper Case Name .....	207
Proper Case Name with Optional Middle Initial .....	208
Date Formatting with 4-Number Year .....	208
Date Formatting with 2-Number Year .....	208
Date Formatting with MM/DD/YY Format .....	208
Date Formatting with MM/DD/YYYY Format .....	209

<b>Chapter 6 - Creating Badges for Personnel</b>	<b>211</b>
Personnel Badging .....	212
Accessing Personnel Badging .....	213
Accessing Badging from the Personnel Dynamic View .....	213
Using Quick Search to Access Badging Functions .....	214
Using Advanced Search to Access Badging Functions .....	215
Using a Query to Access Badging Functions .....	216
Assigning a Badge Layout .....	217
Taking Portrait Pictures .....	218
Taking Pictures with a TWAIN Device .....	219
Using the Video Capture Dialog Box .....	219
Taking Signatures Using Signature Devices .....	223
Importing Existing Portraits or Signatures .....	225
Displaying Personnel or Signature Images .....	225
Enrolling Fingerprints .....	227
Bioscrypt Fingerprint Enrollment .....	228
<b>Chapter 7 - Printing Badges</b>	<b>233</b>
Previewing and Printing a Badge .....	234
Previewing a Badge .....	235
Printing a Badge .....	236
Printing Queued Badges .....	237
Batch Printing Badges .....	238
Queuing a Badge for Batch Printing .....	239
Individually Add Badges to the Batch Print Queue .....	239
Batch Print Badges from a Query .....	241
Batch Print Badges from a Dynamic View .....	243
Batch Print Manager .....	244
Batch Print Manager Context Menu .....	245
Batch Print Manager Definitions .....	246
<b>Chapter 8 - Smart Card Programming, Enrollment, and Printing</b>	<b>249</b>
Smart Card Programming and Enrollment .....	250
Using the Enroll/Program Smart Card Button .....	251
Using Print Badge for Smart Card Enrollment, Programming, and Printing .....	251
Using Batch Print Badge for Smart Cards .....	252
Performing Batch Enrollment for Proximity Cards .....	253
Performing Individual Enrollment for Proximity Cards .....	254
Smart Card Data Confirmation Form Definitions .....	256



## Preface

The *C•CURE 9000 C•CURE ID User Guide* is for new and experienced security system users who want to learn to use C•CURE ID for the C•CURE 9000 Security Management System.

In this preface

How to Use this Manual .....	12
Finding More Information .....	13
Conventions Used in This Manual .....	14
Software House Customer Support Center .....	15

## How to Use this Manual

This manual is organized into the following chapters that provide information about C•CURE ID.

### Chapter 1: Introducing C•CURE ID

Provides basic information about the badging option, including hardware and software requirements.

### Chapter 2: Setting Up a Badging Station

Tells you how to enable C•CURE ID by registering it in the licensing program, and describes how to set up the software and image-capture environments.

### Chapter 3: Setting Up C•CURE ID

Describes how to use the Badge Setup option on the Administration Client application to customize C•CURE ID for your site.

### Chapter 4: Smart Card Setup

Describes how to set up Smart Card devices and Smart Card templates for programming and enrolling Smart Cards.

### Chapter 5: Designing a Badge

Describes how to design a badge with C•CURE ID. The chapter explains how to configure portraits, images, text, barcodes, and magnetic stripes on a badge layout.

### Chapter 6: Creating Badges for Personnel

Describes how to perform badging functions such as portrait, fingerprint, and signature capture using C•CURE ID.

### Chapter 7: Printing Badges

Describes how to preview and print badges for personnel records.

### Chapter 8: Smart Card Programming, Enrollment, and Printing

Describes how to perform Smart Card programming, enrollment, and printing.

## Finding More Information

You can access C•CURE 9000 manuals and online Help for more information about C•CURE 9000.

### Manuals

C•CURE 9000 software manuals and Software House hardware manuals are available in Adobe PDF format on the C•CURE 9000 DVD.

You can also access the manuals if you install the Adobe Acrobat reader and copy the appropriate PDF files from the DVD. See the *C•CURE 9000 Installation and Upgrade Guide* for more information on copying the C•CURE 9000 manuals to your system.

The available C•CURE 9000 and Software House manuals are listed in the *C•CURE 9000 Getting Started Guide Product Guides and Help* section, and appear as hyperlinks in the **online.pdf** file on the DVD. If you copy the manuals folder from the DVD, you can click on any manual listed in **online.pdf** to open that manual.

These manuals are also available from the Software House Member Center website

([\[REDACTED\]](#)).

### Online Help

You can access C•CURE 9000 Help by pressing F1 or clicking Help from the menu bar in the Administration/Monitoring Station applications.

## Conventions Used in This Manual

This guide uses the following text formats and symbols.

Convention	Meaning
<b>Bold</b>	This font indicates screen elements, and also indicates when you should take a direct action in a procedure. Bold font describes one of the following items: <ul style="list-style-type: none"> <li>• A command or character to type</li> <li>• A button or option on the screen to press</li> <li>• A key on your keyboard to press</li> <li>• A screen element or name</li> </ul>
<a href="#">blue color text</a>	Indicates a hyperlink to a URL, or a cross-reference to a figure, table, or section in this guide.
<i>Regular Italic font</i>	Indicates a new term, or a book title.
<text>	Indicates a variable.

The following items are used to indicate important information.

### NOTE

Indicates a note. Notes call attention to any item of information that may be of special importance.

### TIP

Indicates an alternate method of performing a task.



Indicates a caution. A caution contains information essential to avoid damage to the system. A caution can pertain to hardware or software.



Indicates a warning. A warning contains information that advises users that failure to avoid a specific action could result in physical harm to the user or to the hardware.



Indicates a danger. A danger contains information that users must know to avoid death or serious injury.

## Software House Customer Support Center

### Telephone Technical Support

During the period of the Agreement, the following guidelines apply:

- Software House accepts service calls **only** from employees of the Systems Integrator of Record for the installation associated with the support inquiry.

### Before Calling

Ensure that you:

- Are the Dealer of record for this account.
- Are certified by Software House for this product.
- Have a valid license and current Software Support Agreement (SSA) for the system.
- Have your system serial number available.
- Have your certification number available.

<b>Hours</b>	Normal Support Hours	Monday through Friday, 8:00 [REDACTED] to 8:00 [REDACTED], EST. Except holidays.
	Emergency Support Hours	24 hours/day, seven days a week, 365 days/year. Requires Enhanced SSA "7 x 24" Standby Telephone Support (emergency) provided to Certified Technicians. For all other customers, billable on time and materials basis. Minimum charges apply – See MSRP.
<b>Phone</b>	U.S. Puerto Rico U.S. Virgin Islands	+1-800-392-2873
	For other regions, see [REDACTED]	



## Introducing C•CURE ID

C•CURE ID is a photo badging system that provides imaging and badging technology for Software House Security Management Systems.

In this chapter

Overview .....	18
What's New .....	19
Hardware Requirements .....	20
Software Requirements .....	22
How to Use C•CURE ID .....	23
Using Help .....	25

## Overview

C•CURE ID is an optional software product for Software House Security Management Systems that provides imaging station and badging station capabilities.

An **Imaging Station** is a C•CURE 9000 client PC with a video capture capability and a camera that is used to take photographs of personnel and store those photos in Personnel records for use on access card badges.

A **Badging Station** is a C•CURE 9000 client PC that is used to design badge layouts and to print personnel badges to a PVC Badge Printer. An Imaging Station and a Badging Station can be combined on the same client PC.

### NOTE

To capture images, you must purchase hardware that supports the TWAIN protocol. See [Hardware Requirements](#) on [Page 20](#).

## What's New

The C•CURE ID Badging Application, version 3.4, has the following new features.

### Enhancements in Version 3.4

- Support for the following new devices: Magicard RIO Pro printer, Fargo DTC4500 printer, SCM SDI 011 Contactless Interface (SCM Wedge), Videology 20K758USB-CL6, 24C7.38USB-CL8, and 20K758USB-SYS cameras. See [Supported Devices](#) on [Page 86](#).

### Enhancements in Version 3.2

- Enrollment for proximity cards on Fargo HDP 5000 printers. This function uses Smart Card configuration to define a proximity card template for the OMNIKEY CardMan PC/SC encoder on the Fargo HDP 5000 printer. See [Enrollment for Proximity Cards](#) on [Page 40](#).

### Enhancements in Version 3.1

- Smart Card Programming and Enrollment allows you to program and modify MIFARE smart cards for C•CURE 9000 Personnel, and enroll MIFARE, iCLASS, and DESFire Smartcard credentials into C•CURE 9000 Personnel records. See [Smart Card Overview](#) on [Page 86](#).
- Smart Card Printing allows you to set up Smart Card printers to program and print Smart Cards individually or use the Batch Print Manager to program and print multiple cards. See [Smart Card Device Configuration](#) on [Page 89](#) and [Using Print Badge for Smart Card Enrollment, Programming, and Printing](#) on [Page 251](#).
- Support for the SCM Microsystems Inc. SDI010 Contactless Reader. The SCM wedge device supports the PC/SC interface and includes a MIFARE reader and encoder. See [Supported Devices](#) on [Page 86](#).
- Support for the Fargo HDP 5000 printer with an OMNIKEY CardMan 5x21-CL 0 PC/SC interface encoder for MIFARE or iClass smart cards. See [Supported Devices](#) on [Page 86](#).
- Import and Export of badge layouts to/from C•CURE 800/8000 to/from C•CURE 9000. In addition, exported badge layouts can be used like templates because they can be exported from one system and imported into another. See [Importing a Badge Layout](#) on [Page 133](#) and [Exporting a Badge Layout](#) on [Page 134](#).
- Badge sizes up to 11"x 11" inches (27.94 x 27.94 centimeters) are supported. See [Setting the Badge Size](#) on [Page 159](#).

## Hardware Requirements

Both Badging Stations and Imaging Stations must comply with the C•CURE 9000 minimum hardware requirements for a client workstation. See the *C•CURE 9000 Data Sheet* for client workstation requirements.

In addition, the Badging Station requires the following hardware:

- C•CURE ID Video Identification and Badging System Package, or equivalent:
  - Camera
  - Tripod
  - Flash
  - Cables
- PVC Badge Printer (for example: Fargo, MagicCard, Nisca). See [Supported Printers](#) on [Page 20](#).
- Badging Camera (for example, Digi International V2 and VA-3, Videology). See [Supported Cameras](#) on [Page 21](#)

## Supported Printers

C•CURE ID supports the badge printers listed in [Table 1](#) on [Page 20](#).

**Table 1:** Supported Badging Printers

Printer Model	Supported Drivers						
	Windows XP	Windows 2003	Windows Vista	Windows 7 32-bit	Windows 7 64-bit	Windows 2008 32-bit	Windows 2008 R2 64-bit
Nisca 5350, 5350i, 5350m	✓		✓ <sup>1</sup>	✓	✓		✓
Fargo DTC 400, DTC550, DTC400e	✓	✓	✓				
Fargo HDP 600	✓	✓	✓	✓			
Fargo HDP 5000	✓	✓	✓	✓	✓		
Fargo DTC4500	✓	✓	✓	✓	✓	✓	✓
Magicard Tango 2e, Rio 2e, RIO Pro	✓	✓	✓	✓	✓	✓	✓

<sup>1</sup> Microsoft Vista is supported, but the user must either log in to the PC as an Administrator or run the Administration Workstation application as an administrator. UAC must be turned off only when SMART Card encoding is being used.

## Supported Cameras

C•CURE ID supports the following cameras:

- Digi International Watchport/V2 USB digital camera.
- Video Associates VA-3 USB digital camera.
- Videology 20K758USB-CL6, 24C7.38USB-CL8, 20K758USB-SYS.

### **NOTE**

Software House has qualified the Digi International Watchport/V2 USB digital camera and the VA-3 USB digital camera for use with the C•CURE ID badging station.

The Digi International Watchport/V2 USB digital camera is not supported on systems with DEP (Data Execution Prevention) enabled. You must turn off DEP to use this camera.

## Software Requirements

The following are minimum software requirements for a C•CURE ID client:

- The system must meet the requirements for a C•CURE 9000 client. See the *C•CURE 9000 Data Sheet* for more information.
- The system must have the printer drivers for any installed badge printers.

### Display Properties for Badging Stations

The Badging Station display settings should be set to Highest Color (32 bit) and 1024 x 768 pixels.

---

#### To Set the Display Properties on Your Windows System

1. From the Windows desktop, click **Start>Settings** and select **Control Panel**. (On Windows XP, click **Start>Control Panel**).
2. Double-click **Display**. The Display Properties dialog box opens.
3. Click the **Settings** tab and check that **Color quality** is set to Highest Color (32 bit) and that the Desktop area is set to 1024 by 768 pixels.

## How to Use C•CURE ID

This section outlines the process of setting up and using C•CURE ID with your C•CURE 9000 Security System.

**Table 2:** How to Use C•CURE ID

Task	For More Information
1. Set up a Badging Station.	<p><a href="#">Chapter 2, Setting Up a Badging Station</a></p> <ul style="list-style-type: none"> <li>• <a href="#">Setting Up the Room on Page 31</a></li> <li>• <a href="#">Registering C•CURE ID on Page 28</a></li> <li>• <a href="#">Setting Up Permissions on Page 29</a></li> </ul>
2. Use C•CURE ID Setup to configure the system badging and imaging options.	<p><a href="#">Chapter 3, Setting Up C•CURE ID</a></p> <ul style="list-style-type: none"> <li>• <a href="#">Setting Batch Printing Options on Page 50</a></li> <li>• <a href="#">Configuring a Sheet Layout on Page 56</a></li> <li>• <a href="#">Setting Printer Options on Page 62</a></li> <li>• <a href="#">Magnetic Encoding Options on Page 64</a></li> <li>• <a href="#">Configuring Portrait Capture Settings on Page 68</a></li> <li>• <a href="#">Signature Settings on Page 74</a></li> <li>• <a href="#">Configuring Biometric Capture Settings on Page 80</a></li> </ul>
3. Use C•CURE ID Setup to configure Smart Card devices and printers.	<p><a href="#">Chapter 4, Smart Card Setup</a></p> <ul style="list-style-type: none"> <li>• <a href="#">Smart Card Overview on Page 86</a></li> <li>• <a href="#">Smart Card Device Configuration on Page 89</a></li> <li>• <a href="#">Configuring a Smart Card Device on Page 91</a></li> <li>• <a href="#">Smart Card Templates on Page 98</a></li> <li>• <a href="#">Configuring an iClass Smart Card Template on Page 102</a></li> <li>• <a href="#">Configuring a DESFire Smart Card Template on Page 104</a></li> <li>• <a href="#">Configuring a MIFARE Smart Card Template on Page 106</a></li> </ul>
4. Use C•CURE ID Badge Designer to design your badge layout.	<p><a href="#">Chapter 5, Designing a Badge</a></p> <ul style="list-style-type: none"> <li>• <a href="#">The Badge Designer on Page 124</a></li> <li>• <a href="#">The Badge Layout Panel on Page 138</a></li> <li>• <a href="#">The Badge Layout Properties Panel on Page 151</a></li> <li>• <a href="#">The Image Properties Panel on Page 166</a></li> <li>• <a href="#">The Text Properties Panel on Page 180</a></li> <li>• <a href="#">The Barcode Properties Panel on Page 187</a></li> <li>• <a href="#">Expression Builder on Page 196</a></li> </ul>
5. Use the Personnel Badging tab in the Personnel Record to create personnel badges and print them.	<p><a href="#">Chapter 6, Creating Badges for Personnel</a></p> <ul style="list-style-type: none"> <li>• <a href="#">Accessing Personnel Badging on Page 213</a></li> <li>• <a href="#">Assigning a Badge Layout on Page 217</a></li> <li>• <a href="#">Taking Portrait Pictures on Page 218</a></li> <li>• <a href="#">Taking Signatures Using Signature Devices on Page 223</a></li> <li>• <a href="#">Importing Existing Portraits or Signatures on Page 225</a></li> <li>• <a href="#">Enrolling Fingerprints on Page 227</a></li> </ul>

## How to Use C•CURE ID (continued)

Task	For More Information
6. Use the Personnel Badging tab in the Personnel Record to print badges.	<a href="#">Chapter 7, Printing Badges</a> <ul style="list-style-type: none"><li>• <a href="#">Previewing a Badge on Page 235</a></li><li>• <a href="#">Printing a Badge on Page 236</a></li><li>• <a href="#">Batch Printing Badges on Page 238</a></li></ul>
7. Program, Enroll, and Print Smart Cards	<a href="#">Chapter 8, Smart Card Programming, Enrollment, and Printing</a> <ul style="list-style-type: none"><li>• <a href="#">Smart Card Programming and Enrollment on Page 250</a></li><li>• <a href="#">Using the Enroll/Program Smart Card Button on Page 251</a></li><li>• <a href="#">Using Print Badge for Smart Card Enrollment, Programming, and Printing on Page 251</a></li></ul>

## Using Help

The C•CURE ID Badge Setup dialog box and the C•CURE ID Badge Designer provide online help so you can get help information while you are using C•CURE ID.

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### To Access Help From C•CURE ID Setup

1. Choose **Options & Tools>Badge Setup** from the C•CURE 9000 Administration Navigation pane application menus. The C•CURE ID Badge Setup dialog box appears.
2. Click **Help** or **F1** in the C•CURE ID Badge Setup dialog box to open the C•CURE ID Help window.

---

### To Access Help From C•CURE ID Badge Designer

1. Choose **>Personnel>Badge Layout** from the C•CURE 9000 Navigation pane. The Badge Layout Selection dialog box appears.
2. Click **New**. The C•CURE ID Badge Layout dialog box appears.
3. Type a name for the Badge Layout in the **Name** field.
4. Click **Launch C•CURE ID Badge Designer**.
5. Click **Help>Help Contents** from the menu or **F1** in the C•CURE ID Badge Designer to open the C•CURE ID Help window.



## Setting Up a Badging Station

Once you have installed C•CURE 9000 on your computer, you need to enable C•CURE ID by registering it in the C•CURE 9000 licensing program, set up permissions for access to the C•CURE ID software, and set up the image-capture devices for your badging station.

In this chapter

Registering C•CURE ID .....	28
Setting Up Permissions .....	29
Setting Up the Room .....	31
Printer Set-up for Fargo HDP5000 or DTC400e with Encoder .....	33

## Registering C•CURE ID

Use the C•CURE Licensing program to update your license information and enable the C•CURE ID software option.

Software House includes a license information document with your software. Ensure that you have the license information document for C•CURE ID before starting the licensing program. For additional information on running the License Program, refer to the *C•CURE 9000 Installation and Upgrade Guide*.

When the Administration client application is running, you can view the number of simultaneous badging stations allowed by your license on the **About C•CURE 9000** dialog box **License** tab by right-clicking the C•CURE 9000 System Tray Icon and choosing **About** from the context menu. If the number of simultaneous badging stations displayed on the License tab matches the number on your license information document, that means C•CURE ID is licensed and ready to run.

You can run the licensing program whether or not the C•CURE server is running; however, you must restart the C•CURE 9000 Server Service and Framework Service for changes to the licensing program to take effect.

---

### To Register the Software or Update Your Licenses

1. Log in to an account with the appropriate privileges. See the *C•CURE 9000 Installation and Upgrade Guide* for information.
2. Click **Start>Programs>SoftwareHouse>C•CURE9000>Licensing**. After a few seconds, the C•CURE 9000 Licensing Program opens with the General Tab displayed.
3. In the Capabilities section, verify the Simultaneous Badging Stations allowed on your system. See the C•CURE 9000 license information document included in your software package for the number allowed.
4. Click  to close the Licensing Application.

## Setting Up Permissions

The ability to use the imaging and badging features at a Software House C•CURE 9000 security workstation is affected by the following:

- The number of badging stations specified in the product license for C•CURE 9000. See [Simultaneous Badging Stations](#) on [Page 29](#).
- Privileges assigned to each Operator in the Security Management System. See [Simultaneous Badging Stations](#) on [Page 29](#).
- Selections made in C•CURE ID Badge Setup. For example, Portrait, Fingerprint, and Signature settings must be configured in order to capture or import images, fingerprints, or signatures. Otherwise these options are unavailable in the Personnel Editor.

### Simultaneous Badging Stations

Your license defines the number of clients that can run the C•CURE ID Badging Station components of C•CURE 9000 at the same time. For example, if you have two licenses, one client can be running the Badge Designer, while another could be performing image captures. If a third user tried to use a third client to print badges, they would be denied access. The number of Simultaneous Badging Stations is displayed on the About Box License tab.

### Setting Up Operator Permissions

Before you can use any of the Badging functions, you must make sure your Operator account has the appropriate access Privileges to run C•CURE ID.

An Operator who needs to create and edit Badge Layouts needs to have Edit, Delete, and New Permissions for Badge Layout.

An Operator who needs to import/capture images and assign them to Personnel records needs to have Edit, Delete, and New Permissions for Images.

An Operator who needs to Capture Portraits and Signatures, Print Badges, Enroll Fingerprints, Preview Badges, and Batch Print Badges needs to be Granted each of these Permissions under Personnel in Privileges.

For more information on Privileges, see the *C•CURE 9000 Software Configuration Guide*.

#### To Set Up Operator Permissions

1. In the C•CURE 9000 Admin client, click the **Configuration** button in the Navigation pane.
2. Choose **Operator** from the drop-down menu in Configuration.
3. Click  to open a Dynamic View listing all Operators.
4. Select the Operator you want to configure from the list, and double-click that Operator to edit the record.
5. Note the Privileges assigned to this Operator.
6. Choose **Privilege** from the drop-down menu in Configuration.
7. Click  to open a Dynamic View listing all Privileges.

8. Select the Privilege(s) that the Operator was assigned, and review them to make sure that the appropriate privileges are enabled, as shown in [Table 3](#) on [Page 30](#).

**Table 3:** Badging Privilege Settings

Badging Functions	Permissions
Create and edit Badge Layouts	Badge Layout <ul style="list-style-type: none"> <li>• Edit</li> <li>• Delete</li> <li>• New</li> </ul>
Import images	Images: <ul style="list-style-type: none"> <li>• Edit</li> <li>• Delete</li> <li>• New</li> </ul>
Perform Personnel Badging functions	Personnel: <ul style="list-style-type: none"> <li>• Capture Portraits and Signatures</li> <li>• Print Badge</li> <li>• Enroll Fingerprint</li> <li>• Preview Badge</li> <li>• Batch Print Badges</li> </ul>

## Setting Up the Room

C•CURE ID ID was designed for a typical ID badging office. Your office should include the following equipment for an ID setup:

- A desk for the computer and printer
- A chair without arms for your subject to sit in
- A backdrop with backlighting
- An appropriate power source for the computer, badge printer, and other peripherals

Place the chair so that the backdrop is about 1 to 2 feet behind the chair, and provide some sort of even backlighting. There should be no shadows behind your subject.

You might want to use a halogen light behind the chair to illuminate the backdrop. You might need a dimmer control for adjusting the intensity of the backdrop light. Avoid dark colored walls, and do not place the capture system in a dark colored cubicle, as this reduces the amount of lighting on your subject.

### Ambient Lighting

Try to provide a space that ensures even and controlled ambient lighting. Avoid rooms with large open windows that allow sunlight to shine directly on your subject.

Overhead fluorescent lighting casts a greenish tint that can affect images. To counter this, you can use color-corrected fluorescent tubes, available at most speciality lighting stores. Or, you should ensure that your subject is centered under the fluorescent lights, then provide enough portrait quality light to compensate.

### Positioning the Camera

The distance of the camera from the subject is important. The type of camera and lighting you choose dictates the proper distance. The following list gives some guidelines for cameras with an  $f1.8$  lens. For specifications, refer to the documentation that came with your camera.

- Place the camera so that it is level or slightly higher than your subject's head. Tilting the camera up yields unflattering results.
- Have the subjects turn their heads slightly to the left or right from the camera, to give a pleasing semi-profile image. Positioning the subject in this way also gives some depth to the portrait.

### Portrait Lighting

The portrait lighting stand (not included) comes with a silver umbrella for reflecting light onto your subject. You can substitute a white umbrella and project the light through it for a softer light.

### Flash Lighting

Place the stand for flash lighting approximately 5 to 6 feet from your subject.

As in conventional photography, flash introduces a shadow behind the subject's head. To compensate, you should consider using a slave strobe flash, such as the Morris AC Slave. The slave strobe has an electric eye that causes it to fire when the camera flash goes off. Place the slave strobe on the back of the chair and aim it at the backdrop to

eliminate the shadow. Depending on how close the backdrop is, you may have too much light from the slave, which creates a flare. In this case, you should use a less powerful slave or place a piece of white paper over the strobe to reduce the light.

**NOTE**

If there is more than one capture system in the same room, all the slave strobes may go off when one of the main cameras flash. You may need to reorient the capture stations or place dividers between the chairs.

---

### To Ensure Consistent Lighting When Using a Flash

- Turn the flash on at least five minutes before you start taking pictures, to ensure the flash is fully charged. The green light on the back of the flash means that the flash is 80% charged.
- Set the thyristor control on the front of the flash appropriately. A recommended value to start with is 1/16. The M (manual) setting usually emits too much light.

### Portrait Backdrops

The backdrop you use should be large enough to fill the window of your capture window. Generally, a 36 inch square is sufficient.

The software recognizes any consistent solid color as background and processes the image to remove it or allow changes to another color. The only requirement is that the background color must be different from any color in the subject (face, clothes, etc.). Blue produces the best results.

When you place a portrait in a badge layout, the software can examine the top-left and top-right corners of the image to determine the background color. If the color is not consistent across the top, automatic detection is not possible. The software can also scan the entire image, line by line, and change all the **pixels** that fall within the specified range to a solid known color.

See [Setting Background Detection Properties](#) on [Page 172](#) or information on background detection and adjusting the color range.

**NOTE**

If C•CURE ID detects the background color in a person's face or clothing, those pixels also change. For this reason, select a backdrop color that is not likely to be in a person's hair, eyes, face, or clothing.

## Printer Set-up for Fargo HDP5000 or DTC400e with Encoder

The Fargo HDP5000 or DTC400e printer with a MIFARE or iClass encoder requires additional drivers to be installed on the badging client workstation connected to the printer. These drivers must be installed in the correct order to support all of the Smart Card badging functions provided by the printer.

[To Set-up the Fargo HDP5000 Badge Printer with Encoder on Page 33](#)

[To Set-up the Fargo DTC400e Badge Printer with Encoder on Page 33](#)

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### To Set-up the Fargo HDP5000 Badge Printer with Encoder

1. Perform printer installation according to the Fargo documentation.

#### NOTE

Do not plug in the printer-to-encoder USB cable until prompted to do so.

2. Download the most up-to-date driver for the Fargo HDP5000 printer by navigating to the Fargo Support website (██████████) and selecting **Printer** from the **What type of product** drop-down list, then select **HDP5000** printer from the available choices and click **Go**.
3. Select **HDP5000 Driver Windows** to download the printer driver.
4. Navigate to the following webpage to download the OMNIKEY DRIVER:  
██
5. Select **OMNIKEY**, then select the **OMNIKEY 5125 Reader Board USB PROX** encoder.
6. Choose the Operating System from the drop-down list for the system to which you will connect the printer.
7. Download the Synchronous API for HID OMNIKEY Readers (currently **HID\_OMNIKEY\_Synchronous\_API\_V1\_1\_1\_4B.zip**).
8. Download the OMNIKEY 5x2x Driver PC/SC Driver (currently **OMNIKEY5x2x\_V1\_2\_5\_2.exe** for 32-bit systems and **OMNIKEY5x2x\_V1\_2\_5\_2\_x64.exe** for 64-bit systems).
9. Install the PC/SC driver for the Encoder (for example, **OMNIKEY5x21\_V1\_2\_5\_2.exe**) on your badging client PC.
10. Install the Synchronous API for the Encoder (**HID\_OMNIKEY\_Synchronous\_API\_V1\_1\_1\_4B.zip**) on your badging client PC by extracting the contents of the ZIP file to your system and running **setup.exe** from the folder.
11. Install the Fargo HDP5000 printer driver (**HPD5000DRV\_2305.exe**) on your badging client PC.
12. Plug in the HDP5000 USB cable as specified in the Fargo 5000 Printer installation instructions.
13. Restart your badging client PC.

You can verify the installation by accessing **Control Panel/System/ Device Manager** on your badging client PC. The Encoder should be present in Device Manager under Smart card readers.

---

### To Set-up the Fargo DTC400e Badge Printer with Encoder

1. Perform printer installation according to the Fargo documentation.

#### NOTE

Do not plug in the printer-to-encoder USB cable until prompted to do so.

2. Download the most up-to-date driver for the Fargo DTC400e printer by navigating to the Fargo Support website ( [REDACTED] ) and selecting **Printer** from the **What type of product** drop-down list, then select **DTC400e** printer from the available choices and click **Go**.
3. Select **DTC400e Driver Windows** to download the printer driver
4. Select **OMNIKEY DRIVER LINK** to download information about software downloads for the Encoder. This PDF file directs you to the OMNIKEY link at HID Global ( [REDACTED] ).
5. Select OMNIKEY, then select the **OMNIKEY 5125 Reader Board USB PROX** encoder.
6. Choose the Operating System from the drop-down list for the system to which you will connect the printer.
7. Download the Synchronous API for HID OMNIKEY Readers (currently **HID\_OMNIKEY\_Synchronous\_API\_V1\_1\_1\_4B.zip**).
8. Download the OMNIKEY 5x2x Driver PC/SC Driver (currently **OMNIKEY5x2x\_V1\_2\_5\_2.exe** for 32-bit systems or **OMNIKEY5x2x\_V1\_2\_5\_2\_x64.exe** for 64-bit systems).
9. Install the PC/SC driver for the Encoder (for example, **OMNIKEY5x21\_V1\_2\_5\_2.exe**) on your badging client PC.
10. Install the Synchronous API for the Encoder (**HID\_OMNIKEY\_Synchronous\_API\_V1\_1\_1\_4B.zip**) on your badging client PC by extracting the contents of the ZIP file to your system and running **setup.exe** from the folder.
11. Install the Fargo DTC400e printer driver (**DTC400e DRV 1200.exe**) on your badging client PC.
12. Plug in the DTC400e USB cable as specified in the Fargo 5000 Printer installation instructions.
13. Restart your badging client PC.

You can verify the installation by accessing **Control Panel/System/ Device Manager** on your badging client PC. The Encoder should be present in Device Manager under Smart card readers.

## Setting Up C•CURE ID

Setting Up C•CURE ID describes how to use the C•CURE ID Setup dialog box to specify settings for capturing, storing, and printing badges.

In this chapter

Using C•CURE ID Badge Setup .....	36
Enrollment for Proximity Cards .....	40
Setting Batch Printing Options .....	50
Setting Up Batch Printing .....	52
Configuring a Sheet Layout .....	56
Setting Printer Options .....	62
Magnetic Encoding Options .....	64
Setting Magnetic Encoding Options .....	65
Configuring Portrait Capture Settings .....	68
Signature Settings .....	74
Configuring Biometric Capture Settings .....	80
Setting up a Bioscrypt Device .....	82
C•CURE ID Biometric Configuration Definitions .....	83

## Using C•CURE ID Badge Setup

C•CURE ID Badge Setup lets you configure the settings for data, printers, capture devices, and badge design.

The following sections provide more information about using C•CURE ID Setup.

- [Accessing C•CURE ID Badge Setup on Page 36](#) explains how to access C•CURE ID Setup.
- [Badge Setup Tasks on Page 37](#) provides links to the settings you can configure with C•CURE ID Setup.
- [Badge Setup Definitions on Page 38](#) gives more information about the fields and buttons on the C•CURE ID Setup dialog box.

The choices you make in C•CURE ID Badge Setup affect the way you use C•CURE ID to:

- Design badges – see [The Badge Designer on Page 124](#)
- Print badges – see [Setting Printer Options on Page 62](#)
- Capture images – see [Configuring Portrait Capture Settings on Page 68](#)
- Capture biometric data – see [Configuring Biometric Capture Settings on Page 80](#)

You need to view and adjust these settings to make sure that the devices and options for C•CURE ID are configured correctly for your system.

## Backing Up Your Images

Images in C•CURE 9000 are stored in the C•CURE 9000 database and are backed up by C•CURE 9000 database backup. See the *C•CURE 9000 System Maintenance Guide* for more information.

## Accessing C•CURE ID Badge Setup

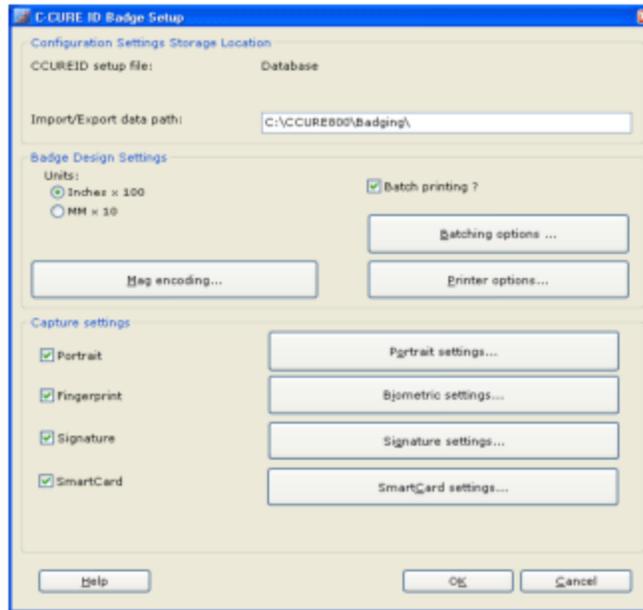
The C•CURE ID Badge Setup dialog box lets you specify settings for image capture, magnetic encoding, batch printing, and your badge printer.

### To Access the Badge Setup Dialog Box

1. From the C•CURE 9000 Administration Client, choose **Options & Tools>Badge Setup** from the Navigation pane.

The C•CURE ID Badge Setup dialog box appears, as shown in [Figure 1 on Page 37](#).

**Figure 1: C•CURE ID Badge Setup Dialog Box**



2. See [Badge Setup Tasks](#) on [Page 37](#) for more information about the tasks you can perform from C•CURE ID Setup.
3. See [Badge Setup Definitions](#) on [Page 38](#) for definitions of the fields and buttons on this dialog box.

## Badge Setup Tasks

[Table 4](#) on [Page 37](#) lists the tasks that you can perform using C•CURE ID Badge Setup.

**Table 4: C•CURE ID Badge Setup Tasks**

To Perform this Task...	See this Section...
Set the Import/Export data path.	<a href="#">Import/Export data path</a> on <a href="#">Page 38</a> .
Set the Badge Unit of Measure (Inches or MM).	<a href="#">Units</a> on <a href="#">Page 38</a> .
Set the options for batch badge printing.	<a href="#">Setting Batch Printing Options</a> on <a href="#">Page 50</a> .
Set the options for your badge printer.	<a href="#">Setting Printer Options</a> on <a href="#">Page 62</a> .
Set the options for Magnetic encoding on badges.	<a href="#">Magnetic Encoding Options</a> on <a href="#">Page 64</a> .
Set the options for Portrait image capture.	<a href="#">Configuring Portrait Capture Settings</a> on <a href="#">Page 68</a> .
Set the options for Signature data capture.	<a href="#">Signature Settings</a> on <a href="#">Page 74</a> .
Set the options for Biometric data capture.	<a href="#">Configuring Biometric Capture Settings</a> on <a href="#">Page 80</a> .
Set the options for Smart Card programming and enrollment	<a href="#">Smart Card Overview</a> on <a href="#">Page 86</a> .

## Badge Setup Definitions

The fields and buttons on the C•CURE ID Badge Setup Dialog Box are defined in [Table 5](#) on [Page 38](#).

**Table 5:** C•CURE ID Badge Setup Definitions

Field/Button	Description
C•CURE ID Setup File	C•CURE ID places the initialization file in the location specified here during installation. Any changes you make to C•CURE ID Badge Setup are written and saved to this file on your computer.
Import/Export data path	Enter the pathname of the directory from which you want to import badge layouts and/or store exported badge layouts. This directory is the location displayed when you select <b>Import</b> or <b>Export</b> from the Badge Designer File menu.
<b>Units</b> Inches x 100 MM x 10	This option allows you to size badges in inches or millimeters. Select <b>Inches x 100</b> or <b>MM x 10</b> . The display size of these measurements is relative to the pixels per inch displayable on your monitor.
Mag Encoding	Lets you specify a badge printer for cards with mag encoding. You can specify a printer and the Encoder prefix and suffix used for each magnetic track. To use magnetic encoding, your printer must have an encoding option.  See <a href="#">Magnetic Encoding Options</a> on <a href="#">Page 64</a> .
Batch Printing	Select this option if you want to specify batch printing of badges. See <a href="#">Setting Batch Printing Options</a> on <a href="#">Page 50</a> .
Batching Options	This option only appears when Batch Printing is selected. Opens the <b>C•CURE ID Batch/Sheet Printer</b> dialog box where you specify batch printing options.  When you select Batch Printing, all printing is done in batch mode using the C•CURE ID Batch Print Manager. Settings that you make on this dialog box supersede any settings you enter in Printer Options.  See <a href="#">Batch Print Manager</a> on <a href="#">Page 244</a> for more information about the Batch Print Manager.
Printer Options	Opens the <b>C•CURE ID Badge Printer Configuration</b> dialog box where you specify printer options. These settings only apply if you do not select Batch Printing.  See <a href="#">Setting Printer Options</a> on <a href="#">Page 62</a> .
Portrait check box  Portrait Settings button	Select this option to specify settings for the portrait capture device.  Click <b>Portrait Settings</b> to set the options.  See <a href="#">Configuring Portrait Capture Settings</a> on <a href="#">Page 68</a> .
Fingerprint check box  Fingerprint Settings button	Select this option to specify settings for the fingerprint capture device.  Click <b>Biometric Settings</b> to set the options.  See <a href="#">Configuring Biometric Capture Settings</a> on <a href="#">Page 80</a> .
Signature check box  Signature Settings button	Select this option to specify settings for the signature capture device.  Click <b>Signature Settings</b> to set the options.  See <a href="#">Signature Settings</a> on <a href="#">Page 74</a> .

## C•CURE ID Badge Setup Definitions (continued)

Field/Button	Description
SmartCard check box  SmartCard Settings button	Select this option to specify settings for your Smart Card device. Click <b>SmartCard Settings</b> to set the options. See <a href="#">Smart Card Device Configuration</a> on <a href="#">Page 89</a> .
Help	Click <b>Help</b> to open the C•CURE ID Help system. See <a href="#">Using Help</a> on <a href="#">Page 25</a> .
OK	Click <b>OK</b> to accept the changes you have made to C•CURE ID Setup and return to the C•CURE 9000 Administration Client.
Cancel	Click <b>Cancel</b> to exit C•CURE ID Setup and return to the C•CURE 9000 Administration Client.

## Enrollment for Proximity Cards

You can configure C•CURE ID to perform individual or batch enrollment of card numbers from proximity cards on a Fargo HDP 5000 printer that is equipped with an OMINKEY CardMan 5x25 encoder. The printer's encoder enrolls the card number from the card to the chosen Personnel record, and the printer prints the badge design on the card.

Typically, you use batch enrollment to create badges for a selected group of Personnel from a pre-numbered batch of proximity cards. Batch enrollment captures the card number and uses an Import definition to add the card number to the correct Personnel record in C•CURE 9000.

You set up batch enrollment using C•CURE ID Setup, and you create a C•CURE 9000 Import definition to import the data read from the proximity cards into the C•CURE 9000 Personnel database. You can then enroll a multiple cards to selected Personnel using the **Batch Print Badge** selection on the Personnel Dynamic View context menu.

### Configuring Enrollment

You can configure Proximity Card enrollment three different ways:

- Batch Enrollment - Configure **Batching Options** in C•CURE ID Setup to use a Proximity Card Enrollment template, then queue a batch of credentials to print using **Badge Batch Print** from the Credentials or Personnel Dynamic View.
- Individual Enrollment - Configure **Printer Options** in C•CURE ID Setup to use a Proximity Card Enrollment template, then send individual credentials to print using **Print Badge** from the Personnel editor Badging tab.
- Individual Enrollment without Printing - Configure **SmartCard Settings** in C•CURE ID Setup to use a Proximity Card Enrollment template, then send individual credentials to enrollment using **Enroll/Program Smart Card** from the Personnel editor Badging tab.

### How Batch Enrollment Works

1. You use C•CURE ID Badge Setup to configure Batch Printing with enrollment using the Fargo HDP 5000 printer with an OMNIKEY CardMan 5x25 encoder.

**NOTE** (Alternatively, you can configure the Personnel Badging tab **Print Badge** button to enroll/print badges individually, or the **Enroll/Program Smart Card** button if you do not want to print the badges.)

2. You define a C•CURE 9000 Import definition to listen for new imports and import the Enrollment data into Personnel records.
3. You select the Personnel records to which you want the proximity card data enrolled from the Personnel or Credentials Dynamic View, and send the records to batch print using **Batch Print Badges**.
4. The printer prints the badge and encodes the data to a .CSV file.
5. The Import Watcher notices the new .CSV file and uses the Import definition you defined to import the data.
6. For each of the Personnel you selected, the card number of the proximity card you printed as a badge is enrolled to the correct Personnel record.

**NOTE** The import of batch enrollment data into Personnel records makes use of the Text24 and Text25 fields of the personnel record. This means that these two fields are not available for other use. If you have previously used these fields in Personnel records, and subsequently batch enroll data from a proximity card, any data that existed in the Text24 and Text25 fields is overwritten.

## Batch Enrollment Tasks

You need to perform the following tasks to configure and perform batch enrollment of proximity cards.

- [Configuring Batch Enrollment for Proximity Cards](#) on [Page 41](#).
- [Configuring Individual Enrollment for Proximity Cards](#) on [Page 42](#).
- [Configuring an Import Definition for Batch Enrollment](#) on [Page 44](#).
- [Performing Batch Enrollment for Proximity Cards](#) on [Page 253](#).
- [Performing Individual Enrollment for Proximity Cards](#) on [Page 254](#).

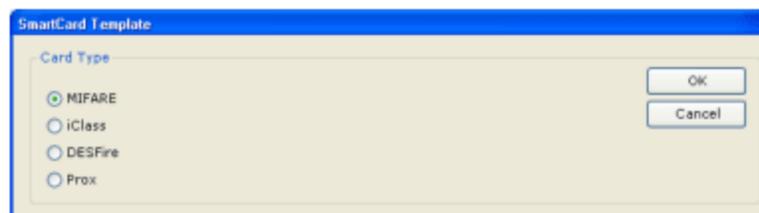
## Configuring Batch Enrollment for Proximity Cards

To set up batch enrollment for proximity cards, your badge printer must be a Fargo HDP 5000 with an OMNIKEY CardMan 5125 encoder. With this encoder, you can enroll card number information into selected Personnel records while you are printing your C•CURE ID card design onto the cards.

### To Configure Batch Enrollment in Badge Setup

1. Access C•CURE ID Badge Setup. See [Accessing C•CURE ID Badge Setup](#) on [Page 36](#).
2. On the Badge Setup dialog box, select  **Batch printing?**, then click **Batching options**. The Batch/Sheet Print Configuration dialog box opens.
3. Select  **Smartcard**, then click **Smartcard**. the Smart Card device Configuration dialog box opens.
4. Select **Fargo - Prox : USB** from the **Device Type** drop-down list.
5. Select the **OMNIKEY Cardman 5x25 CL** encoder from the **Encoder Name** drop-down list. If this encoder name is not available, you should check to make sure the encoder is installed correctly in your Fargo printer, and that your printer is accessible to your Badging Station.
6. Select your Fargo HDP 5000 printer from the **Printer Name** drop-down list.
7. Select  **Create Import File** so that the enrollment process creates a file to be imported containing the enrollment data.
8. Click **New Template** to create a new Smart Card Template for your proximity cards. The SmartCard Template dialog box appears (see [Figure 2](#) on [Page 41](#)).

**Figure 2:** SmartCard Template Dialog Box



9. Select **Prox** and click **OK**. The Prox Configuration dialog box appears (see [Figure 3](#) on [Page 42](#)).

Figure 3: Prox Configuration Dialog Box

10. Type a name for the Prox Configuration template in the **Name** field.
11. **Confirm Enrollment Data** is not used with batch enrollment, so you need not select this option.
12. Select a proximity card format from the **Card format** drop-down list.
13. Click **OK**. The Smart Card Device Configuration dialog box re-appears, with the template you defined added to the list of **Available** templates.
14. Select your new template in the Available list and click **Add** → to add the template to the **Selected** list for the device.
15. Click **OK** to close the Smart Card Device Configuration dialog box.
16. Click **OK** to close the Batch/Sheet Printer Configuration dialog box.
17. Click **OK** to close C•CURE ID Badge Setup, saving your changes.

## Configuring Individual Enrollment for Proximity Cards

To set up individual enrollment for proximity cards, your badge printer must be a Fargo HDP 5000 with an OMNIKEY CardMan 5125 encoder. With this encoder, you can enroll card number information into selected Personnel records while you are printing your C•CURE ID card design onto the cards.

### NOTE

If you configure Batch Enrollment using Batching Options, those settings take precedence over any settings you configure using Printer Options. You can still enroll and print individual cards by selecting them to print individually from the Batch Print Manager Queue (see [Batch Print Manager](#) on [Page 244](#)).

You can configure individual enrollment two ways:

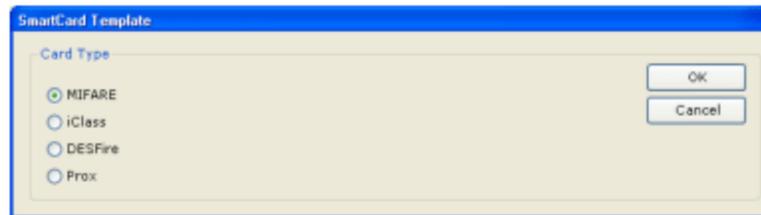
- For enrollment and printing using **Printer Options** in **Badge Setup** and the **Print Badges** button on the Personnel Editor Badging tab.
- For enrollment only using **Smartcard** in **Badge Setup** and the **Enroll/Program Smart Card** button on the Personnel Editor Badging tab.

### To Configure Individual Enrollment and Printing in Badge Setup

1. Access C•CURE ID Badge Setup. See [Accessing C•CURE ID Badge Setup](#) on [Page 36](#).
2. On the Badge Setup dialog box:
3. To configure enrollment only, skip to step 5.

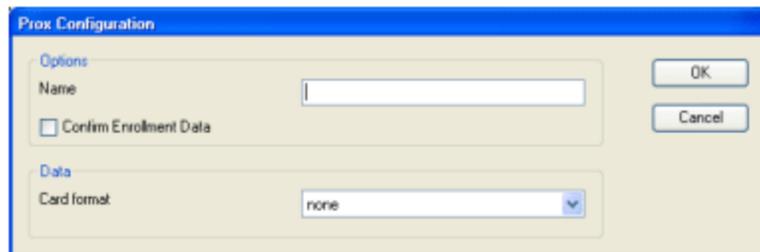
4. To configure enrollment and printing, select  **Printer Options**, then click **Batching Options**. The Batch/Sheet Print Configuration dialog box opens.
5. Select  **Smartcard**, then click **Smartcard**. The Smart Card device Configuration dialog box opens.
6. Select **Fargo - Prox : USB** from the **Device Type** drop-down list.
7. Select the **OMNIKEY Cardman 5x25 CL** encoder from the **Encoder Name** drop-down list. If this encoder name is not available, you should check to make sure the encoder is installed correctly in your Fargo printer, and that your printer is accessible to your Badging Station.
8. Select your Fargo HDP 5000 printer from the **Printer Name** drop-down list.
9. Select  **Create Import File** so that the enrollment process creates a file to be imported containing the enrollment data.
10. Click **New Template** to create a new Smart Card Template for your proximity cards. The SmartCard Template dialog box appears (see [Figure 4](#) on [Page 43](#)).

**Figure 4:** SmartCard Template Dialog Box



11. Select **Prox** and click **OK**. The Prox Configuration dialog box appears (see [Figure 5](#) on [Page 43](#)).

**Figure 5:** Prox Configuration Dialog Box



12. Type a name for the Prox Configuration template in the **Name** field.
13. **Confirm Enrollment Data** is not used with batch enrollment, so you need not select this option.
14. Select a proximity card format from the **Card format** drop-down list.
15. Click **OK**. The Smart Card Device Configuration dialog box re-appears, with the template you defined added to the list of **Available** templates.
16. Select your new template in the Available list and click **Add** → to add the template to the **Selected** list for the device.
17. Click **OK** to close the Smart Card Device Configuration dialog box.
18. Click **OK** to close the Batch/Sheet Printer Configuration dialog box.
19. Click **OK** to close C•CURE ID Badge Setup, saving your changes.

## Configuring an Import Definition for Batch Enrollment

To enroll proximity cards to C•CURE 9000 Personnel records from C•CURE ID, you need to set up an Import definition to import the card number data from the proximity card into the correct Personnel record and credential.

Whenever proximity cards are enrolled, a new .CSV file is added to the watched folder you defined in C•CURE ID Setup. The Import Watcher associated with your Import Definition processes this file and uses the field mapping and match fields you have specified to import the proximity card number information into the correct Personnel records for each proximity card.

You need to perform the following tasks to configure an Import definition for batch enrollment.

- [Creating a Data Import Definition for Batch Enrollment on Page 44](#)
- [Specifying the Data Conversion for the Import on Page 46](#)
- [Defining the Match Fields for the Import on Page 48](#)

For more information about Data Imports, see the *C•CURE 9000 Software Configuration Guide*.

## Creating a Data Import Definition for Batch Enrollment

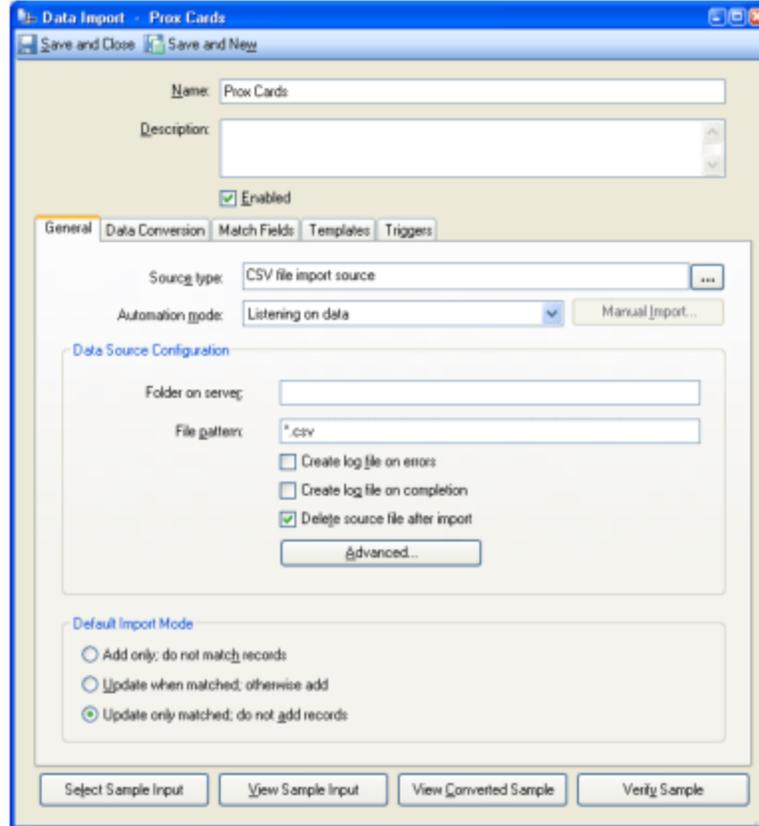
The Data Import definition uses the Import Watcher server component to initiate a data import when a new file is created in a watched folder on the C•CURE 9000 server. You configure the Data Import to watch for new .csv files in a specific directory, and when a .csv file appears, the Data Import updates the records in the database that match the Personnel and Credential GUID numbers in the .csv file.

---

### To Create a Data Import Definition for Batch Enrollment

1. From the Configuration pane, select **Data Import** from the drop-down list.
2. Click **New** to create a new Data Import definition. The Data Import editor opens. (See [Figure 6 on Page 45.](#))

Figure 6: Data Import Editor



3. Type a name for the Data Import in the **Name** field.

**Example:**

Prox Card Enrollment

4. Click **...** in the **Source Type** field and select **CSV File import source** for the Source type.
5. Select **Listening on data** from the **Automation mode** drop-down list.
6. Specify the folder that you want the Import Watcher to monitor for new **.csv** files in the **Folder on server** field.

Choose the folder that you specified in C•CURE ID Badge Setup as the **Import/Export data path** (see [Badge Setup Definitions](#) on [Page 38](#)).

The default value for this folder is typically C:\Program Files\Software House\SWHSystem\Badging.

7. Specify **.csv** as the **File Pattern**.
8. Select **Delete source file after import** (because you are using the automated import mode Listening on data). If you do not select this option, you will need to manually delete the import files from the folder.
9. Set the Default Import Mode to **Update only matched; do not add records**. The Enrollment process does not support adding new Personnel records. (If a dialog box appears asking "To complete import configuration it is necessary to select matching fields. Do you want to do it now? Yes/No" click **No** because it is easier to define data conversion first.

- You can click **Save and Close** to save your changes, or continue to edit the Import definition by [Specifying the Data Conversion for the Import](#) on [Page 46](#).

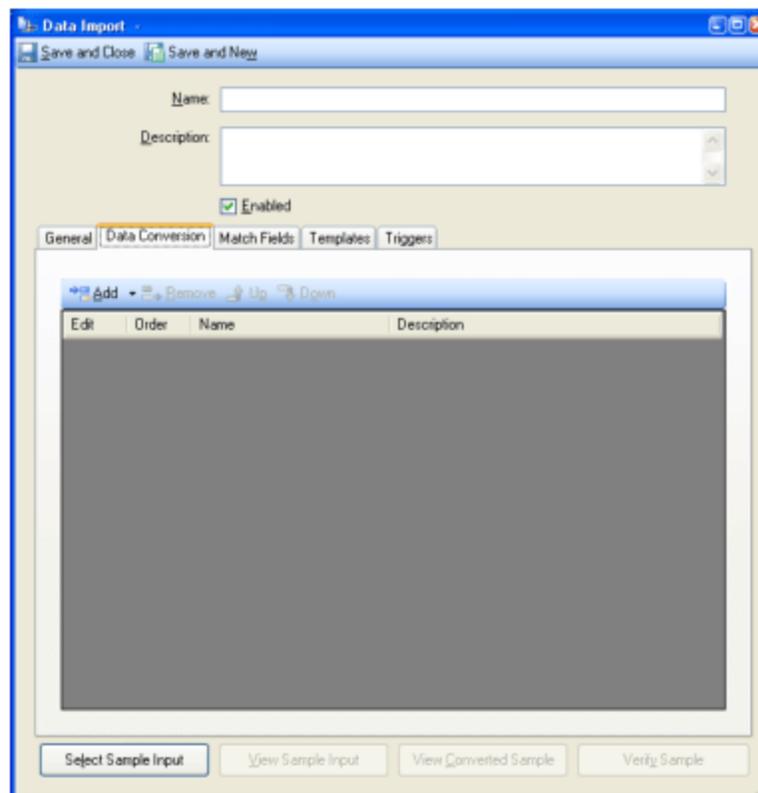
## Specifying the Data Conversion for the Import

To import the enrolled data from the proximity card to a C•CURE 9000 Personnel record requires data conversion from a .csv flat file to a hierarchical structure. To configure a Data Import definition, you need to have enrolled one or more proximity cards using Batch Print Badges, or you can use the sample .CSV file (SWHSystem\Client\ImportScripts\SampleProxEnroll.csv) as an import sample.

### To Specify the Data Conversion for the Import

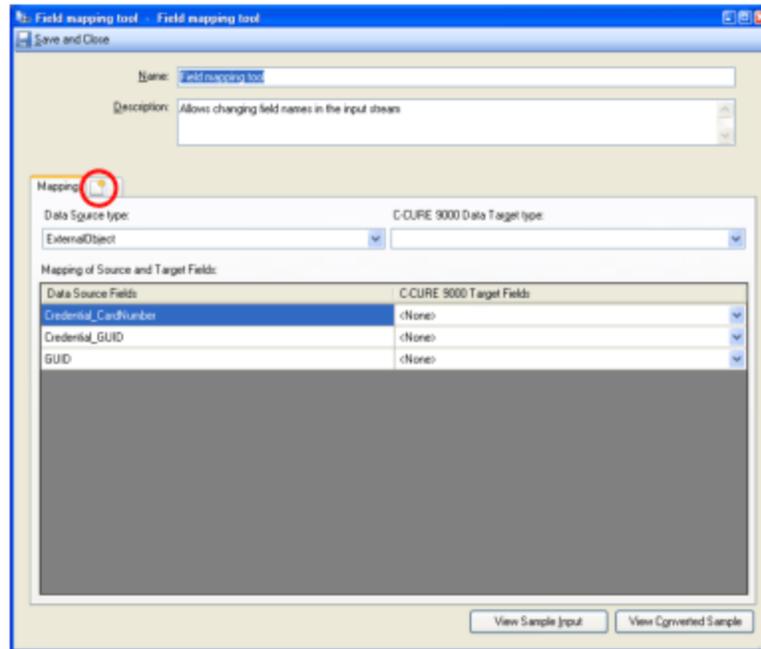
- In the Data Import editor, click the Data Conversion tab. (See [Figure 7](#) on [Page 46](#).)

**Figure 7:** Data Import Data Conversion Tab



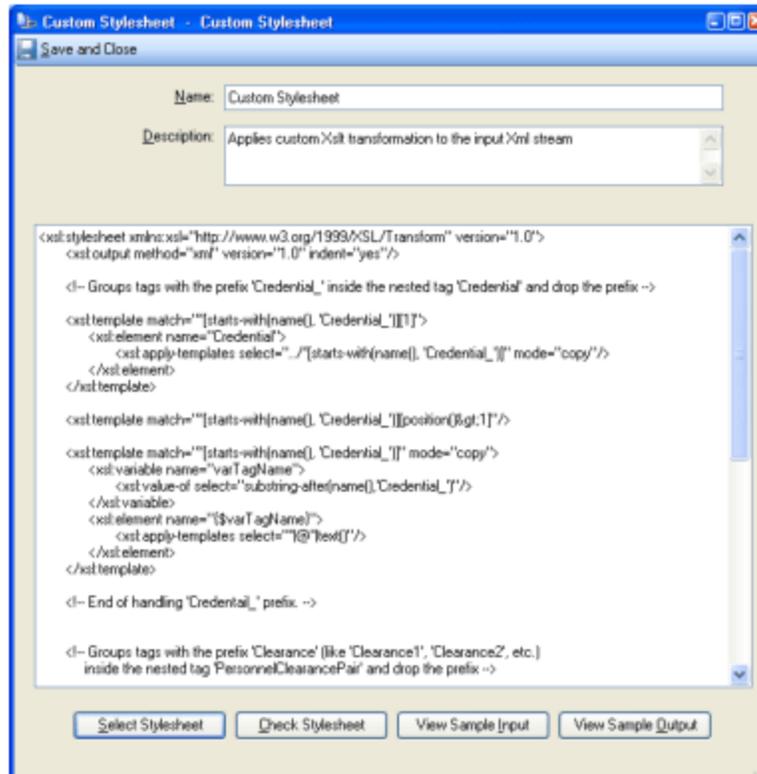
- Click the down-arrow on the **Add** button and select Field Mapping Tool.
- A Select File with Sample dialog box opens. Navigate to the folder containing a .csv file that resulted from enrolling proximity cards, or use SWHSystem\Client\ImportScripts\SampleProxEnroll.csv, the sample file provided with C•CURE 9000. Select the sample file you wish to use and click **OK**.
- The Field Mapping Tool appears. (See [Figure 8](#) on [Page 47](#))

**Figure 8:** Field Mapping Tool



5. In the **C•CURE 9000 Data Target type** field, click the drop-arrow and select **Personnel**.
6. Make sure the **Data Source Fields** row labeled **GUID** has **GUID** selected in the **C•CURE 9000 Target Fields** column.
7. Click  on the Field Mapping Tab control (circled in [Figure 8](#) on [Page 47](#)) to create a new Mapping tab.
8. In the **C•CURE 9000 Data Target type** field, click the drop-arrow and select **Credential**. The tab name changes from **Mapping** to **Credential**.
9. Select **Card Number** from the drop-down list in the **Data Source Fields** row labeled **Credential\_CardNumber**.
10. Select **GUID** from the drop-down list in the **Data Source Fields** row labeled **Credential\_GUID**.
11. Click **Save and Close**. The Field Mapping Tool closes and a field mapping tool row has been added to the Data Conversion table.
12. Click the down-arrow on the **Add** button and select **Custom Stylesheet**. The Custom Stylesheet dialog box appears (see [Figure 9](#) on [Page 48](#)).

Figure 9: Custom Stylesheet Dialog Box



13. Click **Select Stylesheet**. Select **PersonnelFlattoNested.xslt** (you may need to navigate to Program Files\Software House\SWHSystem\Client\ImportScripts to find this file) and click **Open**.
14. Click **Save and Close**.
15. You can click **Save and Close** to save your changes, or continue to edit the Import definition by [Defining the Match Fields for the Import](#) on [Page 48](#).

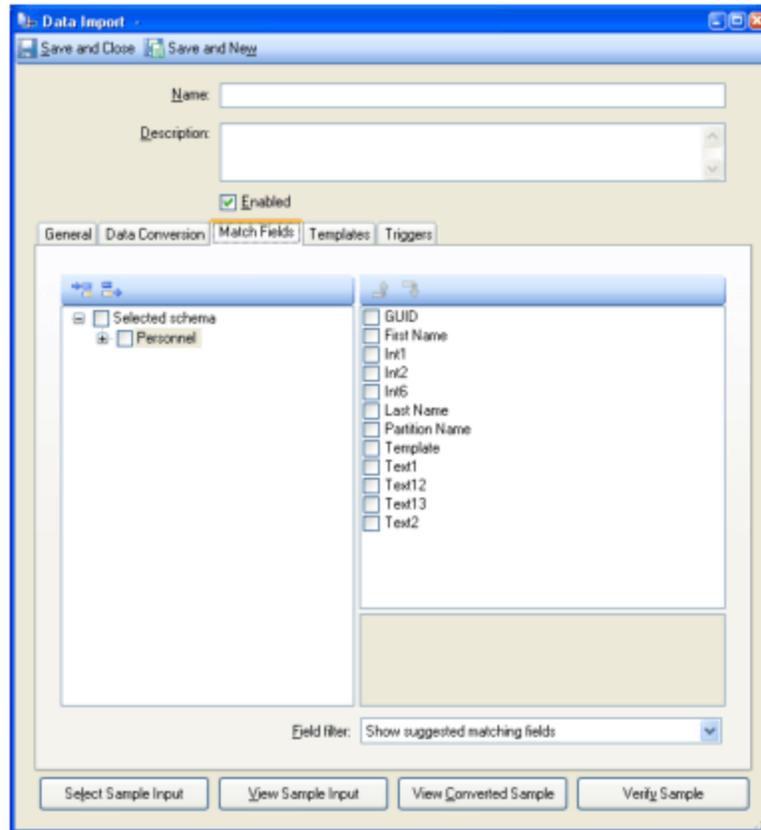
## Defining the Match Fields for the Import

The converted data needs to be mapped into the appropriate field in the Personnel record using the Field Mapping Tool.

### To Define the Match Fields for the Import

1. In the Data Import editor, click the Match Fields tab (see [Figure 10](#) on [Page 49](#)).
2. Click **Add** and select **Personnel** from the selection dialog box that appears. The schema for Personnel appears.

**Figure 10: Match Fields Tab Personnel Schema**



1. Select **GUID** from the right-hand column.
2. Click next to Personnel, then click on **Credential**.
3. Select GUID and Card number (only) in the right-hand column.
4. Click **Save and Close** to save your Import Definition.

The Import Watcher should begin to process any enrollment .CSV files in the target folder. Whenever you enroll additional proximity cards, the Import Watcher will use the data in the resulting .CSV files to import the enrollment data to C•CURE 9000 Personnel records.

## Setting Batch Printing Options

Batch Printing allows you to print several badges together or on a sheet printer designed for this purpose.

To configure batch printing, select **Batch Printing** in the C•CURE ID Badge Setup dialog box, and the **Batching Options** button becomes available. You can then specify batch printing options for your badges from the C•CURE ID Batch/Sheet Printer dialog box.

See [Batch Printing Definitions](#) on [Page 54](#) for more information about the fields and buttons on this dialog box.

### Batch Printing Setup Tasks

You can perform the following tasks to configure C•CURE ID Batch Printing.

- [Accessing the Batch/Sheet Printer Dialog Box](#) on [Page 50](#)
- [Setting Up Batch Printing](#) on [Page 52](#)
- [Setting the Origin Offset for Badge Printing](#) on [Page 53](#)
- [Setting Up Batch Queue Mode](#) on [Page 53](#)
- [Configuring the Badge Sheet Layout for a Badge Printer](#) on [Page 56](#)

### Accessing the Batch/Sheet Printer Dialog Box

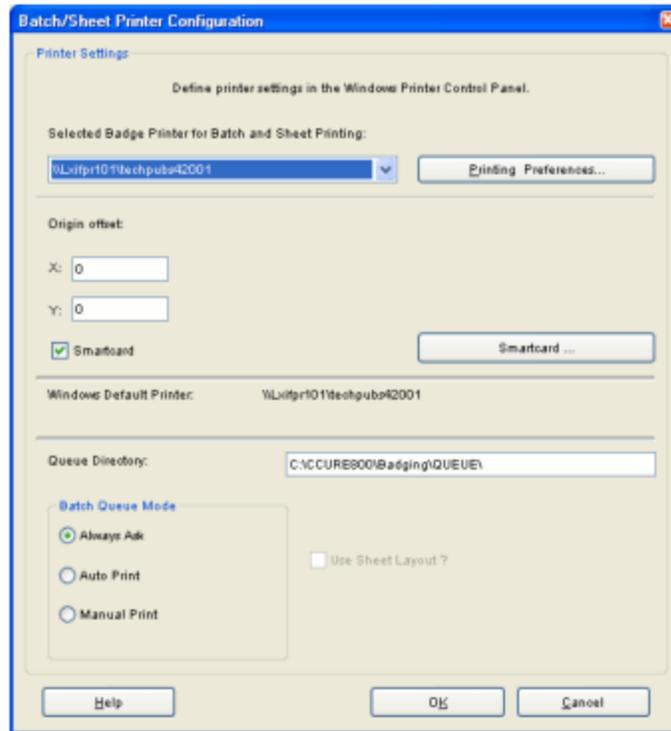
To setup your badge printer for batch/sheet printing, perform the following steps.

---

#### To Access the Batch/Sheet Printer Configuration Dialog Box

1. Select **Batch Printing?** from the C•CURE ID Badge Setup dialog box. The **Batching Options** button becomes available.
2. Click **Batching Options**. The Batch/Sheet Printer Configuration dialog box opens, as shown in [Figure 11](#) on [Page 51](#).

**Figure 11:** Batch/Sheet Printer Configuration Dialog Box



You can select the settings for Batch Printing (see [Setting Batch Printing Options](#) on [Page 50](#)). Click **OK** to save the settings you configured, or **Cancel** to discard any changes.

## Setting Up Batch Printing

Perform the following steps to set up Batch Printing in C•CURE ID Badge Setup.

### To Set Up Batch Printing

1. Access C•CURE ID Badge Setup (see [Accessing C•CURE ID Badge Setup](#) on [Page 36](#)).
2. Click **Batch Printing?** to make the **Batching Options** button available.
3. Click **Batching Options** in the C•CURE ID Setup dialog box. The C•CURE ID Batch/Sheet Printer Configuration dialog box opens.
4. Select a specific printer or the Windows default printer from the **Selected Badge Printer for Batch and Sheet Printing** drop-down list of available printers on your system.
5. You can view and adjust the settings for your printer by clicking **Printing Preferences** to display the Windows standard printer properties dialog box.
6. If necessary, provide the origin offset values for the x-axis and y-axis (see [Setting the Origin Offset for Badge Printing](#) on [Page 53](#)).
7. If your batch printer is a Smart Card printer, select the **Smartcard** check box and click the Smartcard button to configure the Smart Card printer (see [Smart Card Device Configuration Tasks](#) on [Page 89](#)). Note that **Smartcard** and **Use Sheet Layout** are mutually exclusive. You cannot use the printer for both Smartcard enrollment/programming and sheet printing.
8. Select the **Batch Queue Mode**:
 

**Always Ask** - When you select **Print Badge** from Edit Personnel Record, the Batch Print Manager dialog box appears to let you choose between printing a single badge and printing additional badges in the badge print queue.

**Auto Print** - When you select Print Badge from Edit Personnel Record, the badge is sent to print, unless you had chosen **Use Sheet Layout?** during set up. If **Use Sheet Layout?** was selected, the badge is added the print queue. When the number of badges queued matches the number of badges on the Badge sheet layout, a sheet of badges is automatically printed.

**Manual Print** - Select Manual Print to always send the current badge to the batch printing queue. You can then print the badge manually from the queue. To print the badges in the queue, see [Printing a Badge](#) on [Page 236](#).
9. If you have a badge sheet printer and wish to set up a sheet layout, select **Use Sheet Layout?** and the **Layout Sheet** button becomes available.
10. If you want to set up sheet printing, click **Layout Sheet**. See [Configuring a Sheet Layout](#) on [Page 56](#) for more information.
11. Click **OK** to save your changes to the C•CURE ID Batch/Sheet Printer dialog box.

### Selecting a Batch Printer

To identify the badge printer you want to use for batch/sheet printing, perform the following steps.

---

### To Select a Batch Printer

1. Open the C•CURE ID Batch/Sheet Printer dialog box (see [Accessing C•CURE ID Badge Setup on Page 36](#)).
2. Select a specific printer or the Windows default printer from the available printers on your system in the **Selected Badge Printer** list.
3. Click **OK** to save your changes and close the C•CURE ID Batch/Sheet Printer dialog box.

### Setting the Origin Offset for Badge Printing

The Origin Offset settings move the badge image right or left on the x-axis and up or down on the y-axis from the top-left corner of a badge during printing. You can use this option to adjust the placement of the printed image on the badge if necessary.

If you have selected inches as the unit of measurement, the offset values are in 1/100<sup>ths</sup> of an inch.

If you have selected millimeters as the unit of measurement, the offset values are in 1/10<sup>ths</sup> of a millimeter.

- A positive X value moves the image right.
- A negative X value moves the image left.
- A positive Y value moves the image down.
- A negative Y value moves the image up.

---

### To Set Origin Offsets for Batch Printing

1. Open the C•CURE ID Batch/Sheet Printer dialog box (see [Setting Batch Printing Options on Page 50](#)).
2. Enter a number for the offset values on the x-axis in the **X:** field.
3. Enter a number for the offset value on the y-axis in the **Y:** field.
4. Click **OK** to save your changes and close the C•CURE ID Batch/Sheet Printer dialog box.

---

### To Set Origin Offsets for Badge Printing

1. Open the C•CURE ID Badge Printer dialog box (see [Setting Printer Options on Page 62](#)).
2. Enter a number for the offset values on the x-axis in the **X:** field.
3. Enter a number for the offset value on the y-axis in the **Y:** field.
4. Click **OK** to save your changes and close the C•CURE ID Badge Printer dialog box.

### Setting Up Batch Queue Mode

You can set the Batch Queue mode to determine how C•CURE ID processes a request to print a badge. Perform the following steps to configure this setting.

## To Set Batch Queue Mode

1. Open the C•CURE ID Batch/Sheet Printer dialog box (see [Accessing C•CURE ID Badge Setup on Page 36](#)).
2. Select the Batch Queue Mode:
  - **Always Ask:** to ask the user whether to print the badge now or send it to the batch printing queue.
  - **Auto Print:** to always print the current badge.
  - **Manual Print:** to always send the current badge to the batch printing queue. You can then print the badge manually from the queue.
3. Click **OK** to save your changes and close the C•CURE ID Batch/Sheet Printer dialog box.

## Batch Printing Definitions

The fields and buttons on the C•CURE ID Batch/Sheet Printer dialog box are defined in [Table 6 on Page 54](#).

**Table 6:** Batch/Sheet Printer Configuration Dialog Box Definitions

Field/Button	Description
Selected Batch Printer	Select a printer from the list of available Windows printers that are on your system.
Printing Preferences	Opens a standard Windows Printer Properties dialog box so that you can examine and modify the printer settings.
Origin Offset	Moves the badge image from the top-left corner of a card right or left (x), up or down (y). If the selected measurement unit is inches, the values shown represent the offset in 1/100 of an inch. If the selected measurement unit is millimeters, the values shown represent the offset in 1/10 of a millimeter. A positive offset value moves the image right or down while a negative value moves the image left or up.
Smartcard check box Smartcard button	Select this option to specify settings for your Smart Card batch printer. Click <b>SmartCard</b> to set the options. If you select the <b>Smartcard</b> checkbox, <b>Use Sheet Layout?</b> becomes unavailable. You cannot use sheet layout with a Smart Card printer. See <a href="#">Configuring a Smart Card Device on Page 91</a> . You can also use this setting to configure Batch Enrollment of HID Corporate 1000 proximity cards on a Fargo HDP 5000 printer. See <a href="#">Enrollment for Proximity Cards on Page 40</a> .
Windows Default Printer	Displays the name of the printer currently selected as the default Windows printer.
Queue Storage Location	In C•CURE 9000, the Batch Print queue information is stored in the database.
Batch Queue Mode	Choose one of the following Batch Queue modes: <b>Always Ask</b> , <b>Auto Print</b> , or <b>Manual Print</b> .
Always Ask	When you selects <b>Print Badge</b> from Edit Personnel Record, a <b>Print Badges Now?</b> dialog appears to let the user choose between printing a single badge and printing all badges in the badging dialog.

Batch/Sheet Printer Configuration Dialog Box Definitions (continued)

Field/Button	Description
Auto Print	When you select <b>Print Badge</b> from Edit Personnel Record, the badge is sent to print, unless you had chosen <b>Use Sheet Layout?</b> during setup. If <b>Use Sheet Layout?</b> was selected, the badge is added the print queue. When the number of badges queued matches the number of badges on the Badge sheet layout, a sheet of badges is automatically printed.
Manual Print	When you select <b>Print Badge</b> from the Personnel Badging tab, it adds the badge to the badge print queue, rather than sending it to print. You can then manually print the badge from the queue.
Use Sheet Layout?	If you wish to set up a sheet layout to print multiple badges per sheet, select <b>Use Sheet Layout?</b> and the <b>Layout Sheet button</b> becomes available. If you select the <b>Smartcard</b> checkbox, <b>Use Sheet Layout?</b> becomes unavailable. You cannot use sheet layout with a Smart Card printer.
Layout Sheet	If you want to set up sheet printing, click <b>Layout Sheet</b> . See <a href="#">Configuring a Sheet Layout on Page 56</a> for more information.
Help	Launches the online help for the Batch/Sheet Printer Configuration dialog box.
OK	Accepts and saves your changes in the Badge Printer dialog box and returns you to the C•CUREID Badge Setup Dialog box.
Cancel	Returns you to the C•CUREID Badge Setup dialog box without accepting or saving any changes made in the Badge Printer dialog box.

## Configuring a Sheet Layout

The Sheet Layout Design dialog box lets you configure the way badges are printed to a printer that supports badge sheet printing. The Sheet Layout Design dialog box shows a preview of the badge sheet as it is currently configured. You adjust the settings so that the preview matches the way your sheets of badges are laid out, so that C•CURE ID can print your badge sheets correctly. As you adjust the settings on the dialog, the preview changes to reflect the changes you have made.

### Example:

If your badge sheets have four rows, each with two badges, you can use this dialog box to configure C•CURE ID so that the correct amount of spacing between badges is allotted when a badge sheet is printed.

C•CURE ID now provides the ability to use Avery™ Label Templates as badge sheet layouts for batch/sheet printing. You can select an Avery label template as the basis of your sheet layout, so that you can easily print label versions of your badges, or use the Label Designer to create a label design to print database information on labels, such as mailing labels. See [Using the Label Designer to Create/Modify a Custom Layout on Page 58](#) for more information.

See [Sheet Layout Configuration Dialog Box Definitions on Page 59](#) for more information about the fields and buttons on this dialog box.

You need to enable Batch Printing to access the Sheet Layout Design dialog box. See [Setting Batch Printing Options on Page 50](#).

## Sheet Layout Design Tasks

You can perform the following tasks from the Sheet Layout Configuration dialog box.

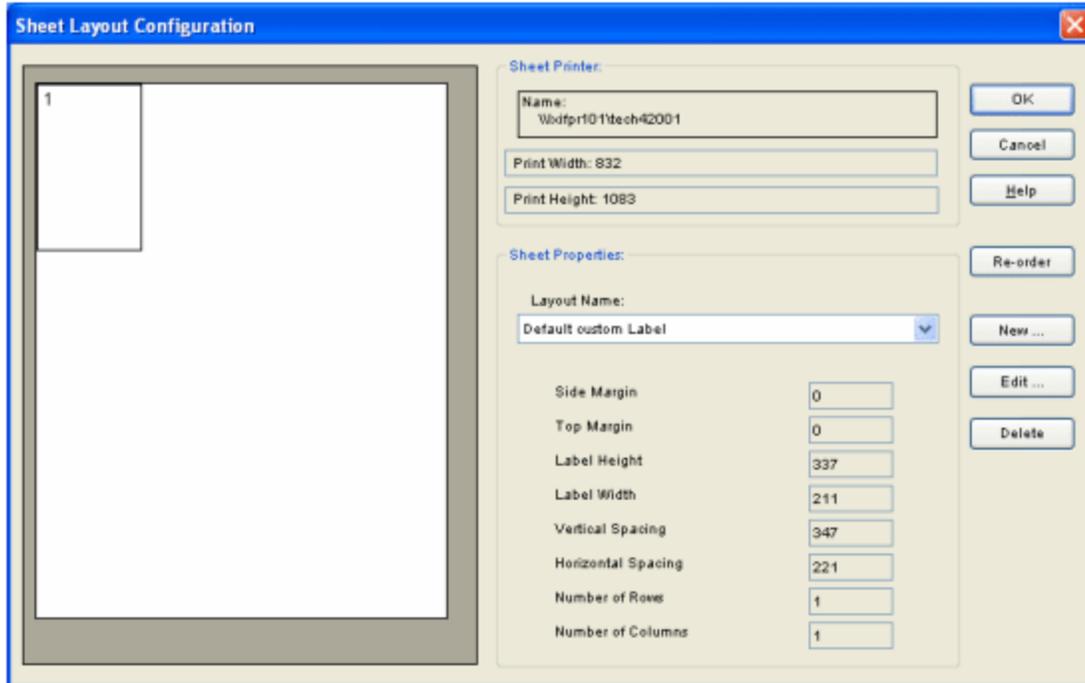
- [Configuring the Badge Sheet Layout for a Badge Printer on Page 56](#)
- [Saving a Custom Layout on Page 57](#)
- [Loading a Custom Layout on Page 58](#)
- [Using the Label Designer to Create/Modify a Custom Layout on Page 58](#)

## Configuring the Badge Sheet Layout for a Badge Printer

### To Configure the Badge Sheet Layout for a Badge Printer

1. Open the Batch/Sheet Printer dialog box (see [Accessing the Batch/Sheet Printer Dialog Box on Page 50](#)).
2. Select **Use Sheet Layout?** from the Batch/Sheet Printer dialog box.
3. Click **Layout Sheet** to set up the print page layout. The Sheet Layout Configuration dialog box opens.

Figure 12: Sheet Layout Configuration Dialog Box



4. Verify that the correct printer is listed in the Sheet Printer section. If the correct printer is not listed, click **Cancel**, then select the correct printer from the Batch/Sheet Printer Configuration dialog box.
5. Select the Layout Name from the drop-down list for the sheet layout you want to use. A visual depiction of the sheet layout is displayed in the Layout Preview area of the dialog box.
6. If you want to change the order in which badges are printed in the layout, click **Re-Order** to toggle the print order (in a 2x3 layout, you would toggle between a 123456 and a 142536 print order). The change in print order is shown on the Layout preview.
7. If you want to create a new custom layout based on the layout you selected, click **New**. If you want to modify a custom layout, click **Edit**.
8. If you want to delete the currently selected layout, click **Delete**.
9. Click **OK** to save your settings on the Sheet Layout Design dialog box.
10. Click **OK** to save your changes and close the C•CURE ID Batch/Sheet Printer dialog box.

## Custom Sheet Layout Templates

You can use any of the templates as the basis of a custom sheet layout. In a custom sheet layout you can change settings like the side and top margins, horizontal spacing, and the number of rows or columns. You can save your custom sheet layout with a name you choose, and select this custom sheet layout for batch sheet printing.

## Saving a Custom Layout

You can save the settings that you configure on the Sheet Layout Configuration dialog box so that you can subsequently load and use these settings. This capability is useful if you are setting up a new printer or diagnosing

an issue with an existing one. You can save your settings, experiment with new settings, and restore the saved settings if needed.

---

### To Save a Custom Layout

1. Open the Batch/Sheet Printer Configuration dialog box (see [Accessing the Batch/Sheet Printer Dialog Box on Page 50](#)).
2. Select **Use Sheet Layout?** from the Batch/Sheet Printer Configuration dialog box.
3. Click **Layout Sheet** to set up the print page layout. The Sheet Layout Configuration dialog box opens.
4. Select a layout from the Layout Name field.
5. Click **New** to create a new layout, or **Edit** to edit an existing layout.
6. Make any needed changes to the layout, then click **Save** to save the new settings.
7. Click **OK** to set the currently selected layout to be used to batch print badges.

### Loading a Custom Layout

If you have previously saved a layout, you can load it and replace the settings currently displayed on the Sheet Layout Design dialog box.

---

### To Load a Custom Layout

1. Open the Batch/Sheet Printer Configuration dialog box (see [Accessing the Batch/Sheet Printer Dialog Box on Page 50](#)).
2. Select **Use Sheet Layout?** from the Batch/Sheet Printer Configuration dialog box.
3. Click **Layout Sheet** to set up the print page layout. The Sheet Layout Configuration dialog box opens.
4. Select the layout you want to load from the Layout Name drop-down list.
5. Click **OK** to set the currently selected layout to be used to batch print badges.

### Using the Label Designer to Create/Modify a Custom Layout

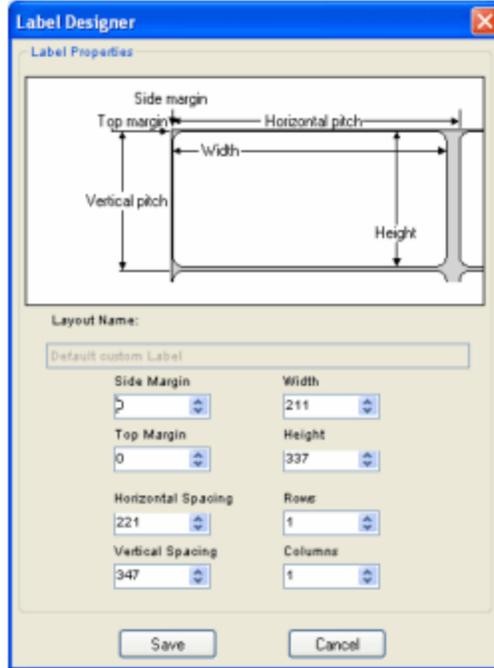
You use the Label Designer dialog box to create new custom layouts or modify existing ones.

---

### To Use the Label Designer to Create/Modify a Custom Layout

1. From the Sheet Layout Configuration dialog box, click **New** or **Edit** to open the Label Designer dialog box.

**Figure 13:** Label Designer Dialog Box



2. Type in a layout name for the new layout (if you are editing an existing layout, this field is read only).
3. Make any adjustments to the settings for the layout by using the spinners for each field, or typing in the field box. As you make changes, they are reflected in the Label Properties graphic depiction at the top of the dialog box. See [Table 8](#) on [Page 61](#) for definitions of the fields.
4. Click **Save** to create a new sheet layout, or save the changes you made to an existing sheet layout.

### Sheet Layout Configuration Dialog Box Definitions

The fields and buttons on the Sheet Layout Configuration dialog box are defined in [Table 7](#) on [Page 59](#). All measurements are in the unit of measure specified for the badge design on the Setup dialog box (see [Badge Setup Definitions](#) on [Page 38](#)).

**Table 7:** Sheet Layout Configuration Definitions

Box	Description
Layout Preview of the page	This area of the dialog box shows a visual representation of the layout selected in the <b>Layout Name</b> field.
Sheet Printer Name	Displays the name of the batch sheet printer you configured on the Batch/Sheet Printer Configuration dialog box. This is a read-only field.
Print Width	The print width of the badge sheet in the unit of measure selected, based on the size of the page the printer can print. This is a read-only field.

Box	Description												
Print Height	The print width of the badge sheet in the unit of measure selected, based on the size of the page the printer can print. This is a read-only field.												
Layout Name	This drop-down list includes all the Avery Label Templates that are included with C•CURE ID and the custom label templates that you have designed and saved. The template that you select is used to batch print badges. The settings for the selected template are displayed in the fields below, and are shown in the <b>Layout Preview</b> area. This selection is also used as the basis of a custom design when you click the <b>New</b> or <b>Edit</b> buttons.												
Side Margin	Shows the setting for the left side margin for the selected badge layout.												
Top Margin	Shows the setting for the top margin for the selected badge layout.												
Label Height	Shows the height of each badge/label for the selected badge layout.												
Label Width	Shows the width of each badge/label for the selected badge layout.												
Vertical Spacing	Shows the vertical spacing between the labels for the selected badge layout.												
Horizontal Spacing	Shows the horizontal spacing between the labels for the selected badge layout.												
Number of Rows	Shows the number of rows in the selected badge layout.												
Number of Columns	Shows the number of columns in the selected badge layout.												
OK	Click this button to set your currently selected sheet layout as the sheet layout for your batch printer.												
Cancel	Click this button to discard all changes and close the Sheet Layout Configuration dialog box.												
Help	Click this button to open online Help for the Sheet Layout Configuration dialog box.												
Re-order	<p>Click this button to toggle the number order for badges on the sheet layout. The number order is displayed on the Layout Preview.</p> <p><b>Example:</b></p> <p>If you have a 2 x 3 badge layout, the badge number order is either of:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td>1</td><td>2</td></tr> <tr><td>3</td><td>4</td></tr> <tr><td>5</td><td>6</td></tr> </table> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td>1</td><td>4</td></tr> <tr><td>2</td><td>5</td></tr> <tr><td>3</td><td>6</td></tr> </table> </div>	1	2	3	4	5	6	1	4	2	5	3	6
1	2												
3	4												
5	6												
1	4												
2	5												
3	6												
New	Click to open the Layout Designer dialog box with the current layout as a default. You can make changes to the layout and then save it as a custom layout.												
Edit	Click to open the Layout Designer dialog box and edit a custom layout. You can only edit custom layouts. However, you can use <b>New</b> to open a standard layout and save it as a custom layout.												
Delete	<p>Click to delete the selected sheet layout.</p> <p>Use carefully, because you can delete any layout, and there is no undo function. If you delete a custom layout by mistake, you will have to recreate it.</p>												

## Label Designer Dialog Box Definitions

The fields and buttons on the Label Designer dialog box are defined in [Table 8](#) on [Page 61](#). All measurements are in the unit of measure specified for the badge design on the [Badge Setup](#) dialog box (see [Badge Setup Definitions](#) on [Page 38](#)).

**Table 8:** Layout Designer Dialog Box Definitions

Box	Description
Label Properties	This area of the dialog box shows a visual representation of the label settings for the layout.
Layout Name	Displays the name of the layout you are editing. If you are creating a new layout you can type a name in the field. If you are editing an existing layout, this field is read-only.
Side Margin	Sets the left side margin (distance between the left edge of the sheet and the left column of labels) for the sheet layout.
Top Margin	Sets the top margin (distance between the top edge of the sheet and the first row of labels) for the sheet layout.
Horizontal Spacing	Sets the amount of space between label columns for the sheet layout. The number in this field is the total of the label width and the space between columns.
Vertical Spacing	Sets the amount of space between label rows for the sheet layout. The number in this field is the total of the label height and the space between rows.
Height	Sets the height of each badge/label for the sheet layout.
Width	Sets the width of each badge/label for the sheet layout.
Rows	Sets the number of rows in the sheet layout.
Columns	Sets the number of columns in the sheet layout.
Save	Click this button to save your settings for this sheet layout.
Cancel	Click this button to discard all changes and close the Label Designer dialog box.

## Setting Printer Options

From the C•CURE ID Setup dialog box, you can click **Printer options** to configure your badge printer.

You can print badges on individual cards to a printer designed to print badges.

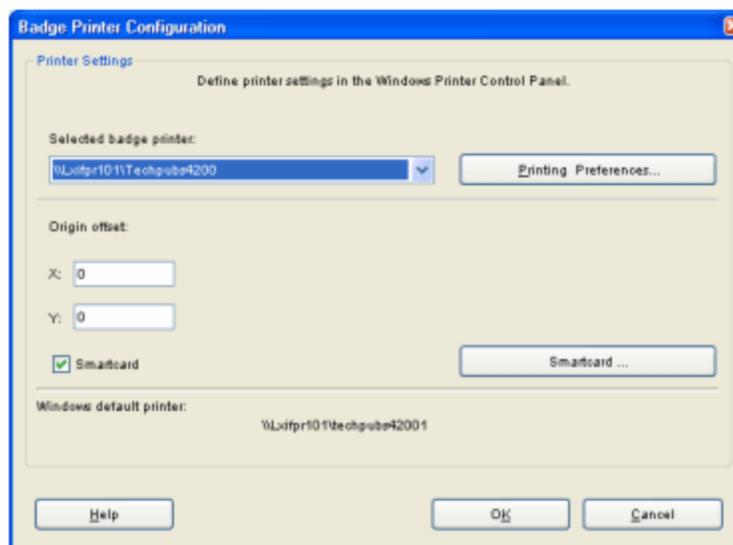
For instructions on connecting your printer to the computer, see the documentation supplied with your printer.

To set up batch printing of badges, refer to [Setting Batch Printing Options](#) on [Page 50](#).

### To Set Up a Badge Printer

1. In the C•CURE ID Badge Setup dialog box, click **Printer options**. The C•CURE ID Badge Printer Configuration dialog box opens.

**Figure 14:** Badge Printer Dialog Box



2. Select a specific printer or the Windows default printer from the available printers on your system in the **Selected Badge Printer** list.
3. Provide the Origin offset values in the **X-axis** and **Y-axis** fields. See [Setting the Origin Offset for Badge Printing](#) on [Page 53](#) for information about Origin offset values.
4. If your printer supports Smart Card printing, you can click  **Smartcard** to enable Smart Card configuration, then click **Smartcard...** to configure this printer for Smart Card printing. See [Smart Card Device Configuration](#) on [Page 89](#).
5. Click **OK** to finish configuring your Badge Printer.

### Badge Printer Configuration Dialog Box Definitions

The Badge Printer Configuration dialog box has the following fields and buttons.

**Table 9:** Badge Printer Configuration Options

Field	Description
Selected Badge Printer	Select a printer from the list of available Windows printers that are on your system.
Printing Preferences	Opens a standard Windows Printer Properties dialog so that you can examine and modify the printer settings.
Origin offset (x/y)	Moves the badge image from the top-left corner of a card right or left (x), up or down (y). This adjustment can be used to position the badge image to print correctly with your printer. If the selected measurement unit is inches, the values shown represent the offset in 1/100 of an inch. If the selected measurement unit is millimeters, the values shown represent the offset in 1/10 of a millimeter. A positive offset value moves the image right or down while a negative value moves the image left or up.
Smartcard checkbox  Smartcard button	Select this option to specify settings for your Smart Card printer. Click <b>SmartCard</b> to set the options. See <a href="#">Configuring a Smart Card Device on Page 91</a> .
Windows Default Printer	Displays the name of the printer currently selected as the default Windows printer.
Help	Launches the online help for the Badge Printer Configuration dialog box.
OK	Accepts and saves your changes in the Badge Printer dialog box and returns you to the C•CURE ID Badge Setup Dialog box.
Cancel	Returns you to the C•CURE ID Badge Setup dialog box without accepting or saving any changes made in the Badge Printer Configuration dialog box.

## Changing the Default Printer

The badging printer must be a specific printer, rather than a default printer. If you do not have another printer connected to your computer, set up a “dummy” default printer and install the printer driver.

– or –

If you have two printers attached to your system, including your badging printer, you can change the Windows default printer.

### To Change the Windows Default Printer

1. On the desktop, click **Start>Settings>Printers**.
2. Select the name of the printer you want to make the default.
3. Choose **File>Set as Default Printer**.

## Magnetic Encoding Options

You can encode information from the C•CURE 9000 Personnel record in one of the three magnetic tracks available with magnetic cards.

The following links provide more information about C•CURE ID Magnetic Encoding Configuration.

- [Setting Magnetic Stripe Encoding Formats](#) on Page 165
- [To Access C•CURE ID Magnetic Encoding Configuration](#) on Page 65
- [To Configure Magnetic Encoding](#) on Page 65
- [Magnetic Encoding Definitions](#) on Page 65

The encoded information on a magnetic card can include the information in [Table 10](#) on Page 64.

**Table 10:** Magnetic Card Information

Available for All Card Formats	Available for Enhanced (256-bit) Card Formats Only
<ul style="list-style-type: none"> <li>• Facility or company code</li> <li>• Issue code</li> <li>• Site code</li> <li>• Card number</li> <li>• Expiration date</li> </ul>	<ul style="list-style-type: none"> <li>• Agency code</li> <li>• System code</li> <li>• Credential series</li> <li>• Credential issue</li> </ul>

The Controller interprets the encoded information in a track when a user swipes a magnetic card containing encoded information, such as a card number, through a card reader.

Once you have set up the magnetic encoding hardware as described here, you can add up to three tracks to a badge layout and specify the information you want to include.

**NOTE** Card readers that are sold by Software House for use with C•CURE 9000 for access control can, by default, read Track 2 only.

You must have a printer with the encoding option. You can then specify which magnetic tracks will be used. The prefix and suffix for each magnetic track are special characters encoded by the printer to indicate the start and end of the data that you want to include in the track.

You should be familiar with the card formats being used by your readers. See [Mag Encoding Tab](#) on Page 154 for information on configuring the magnetic tracks.

## Setting Magnetic Encoding Options

The C•CURE ID Magnetic Encoding dialog box lets you configure the settings for a encoding magnetic tracks on the badges you print.

### To Access C•CURE ID Magnetic Encoding Configuration

From the C•CURE ID Setup dialog box, you can click **Mag Encoding** to configure your magnetic encoding device.

Once you have set up the magnetic encoding hardware you can add up to three tracks to a badge layout and specify what information you want to include. See [Encoding Magnetic Tracks](#) on [Page 160](#) for more information.

#### NOTE

You must have a printer with the encoding option to specify the magnetic tracks used. The prefix and suffix for each magnetic track are special characters encoded by the printer to indicate the start and end of the data that you want to include in the track.

### To Configure Magnetic Encoding

1. From the C•CURE ID Setup dialog box, click **Mag Encoding**. The C•CURE ID Magnetic Encoding dialog box opens.
2. Select your printer from the **Select Encoder Device** drop-down list. The Encoder text string prefix and suffix for each track then fills automatically.
3. You can change the default string prefix and suffix for each track by typing different text strings into these fields.
4. If your printer needs to use text for magnetic encoding rather than character images (glyphs) select **Write encoded data as text**.
5. To reset encoder text strings to default settings for the chosen printer type, click **Reset**.
6. If you do not want to use the Encoder text string prefix and suffix for a track, click in the Prefix or Suffix field, highlight the text, and press **Delete**.
7. Click **OK**.

## Magnetic Encoding Definitions

The following fields and buttons appear on the Magnetic Encoding Configuration dialog box.

**Table 11:** Magnetic Encoding Configuration Options

Name	Description
Select Encoder Device	The <b>Select Encoder Device</b> drop-down list provides a list of the supported devices. See <a href="#">Table 12</a> on <a href="#">Page 66</a> .
Encoder Text Strings	The Encoder text string prefix and suffix for each track is filled automatically with the supplied default values for each of the devices. If you need to change these values to work with your printer, you can type a new value in the appropriate box. You can reset the values to the default settings by clicking <b>Reset</b> .
Track 1 Prefix	Enter the prefix value used to tell the printer device to turn on Mag Track 1 Encoding for the data that follows.

Magnetic Encoding Configuration Options (continued)

Name	Description
Track 1 Suffix	Enter the suffix value used to tell the printer device to turn off Mag Track 1 Encoding following the data.
Track 2 Prefix	Enter the prefix value used to tell the printer device to turn on Mag Track 2 Encoding for the data that follows.
Track 2 Suffix	Enter the suffix value used to tell the printer device to turn off Mag Track 2 Encoding following the data.
Track 3 Prefix	Enter the prefix value used to tell the printer device to turn on Mag Track 3 Encoding for the data that follows.
Track 3 Suffix	Enter the suffix value used to tell the printer device to turn off Mag Track 3 Encoding following the data.
Reset	Click to reset the Suffix and Prefix values for the currently selected Encoding Device back to the Default settings.
Help	Click to launch the online help for the Magnetic Encoding dialog box.
OK	Click to save the current changes and return you to the C•CURE ID Badge Setup dialog box.
Cancel	Click to return to the C•CURE ID Badge Setup dialog box without saving changes.

Table 12 on Page 66 provides the prefix and suffix defaults for each device type.

Table 12: Magnetic Encoding Device Defaults

Device	Prefix Defaults	Suffix Defaults
Atlantek	Track 1 ~1= Track 2 ~2= Track 3 ~3=	Track 1 [None] Track 2 [None] Track 3 [None]
Datacard III	Track 1 [None] Track 2 [None] Track 3 [None]	Track 1 [None] Track 2 [None] Track 3 [None]
Datacard IV	Track 1 [None] Track 2 [None] Track 3 [None]	Track 1 [None] Track 2 [None] Track 3 [None]
Eltron	Track 1 ~1 Track 2 ~2 Track 3 ~3	Track 1 [None] Track 2 [None] Track 3 [None]

Magnetic Encoding Device Defaults (continued)

Device	Prefix Defaults	Suffix Defaults
Fargo	Track 1 ~1% Track 2 ~2; Track 3 ~3;	Track 1 ? Track 2 ? Track 3 ?
Nisca	Track 1 ~@1,0,0, Track 2 ~@1,2,0, Track 3 ~@1,4,0,	Track 1 [None] Track 2 [None] Track 3 [None]
Polaroid	Track 1 ~1 Track 2 ~2 Track 3 ~3	Track 1 [None] Track 2 [None] Track 3 [None]
Other	Track 1 ~1 Track 2 ~2 Track 3 ~3	Track 1 [None] Track 2 [None] Track 3 [None]

## Configuring Portrait Capture Settings

The C•CURE ID Portrait Configuration dialog box lets you configure the settings for portrait capture.

You need to view and adjust these settings to make sure that the devices and options for C•CURE ID portrait capture are configured correctly for your system.

### NOTE

You must select **Portrait** in the C•CURE ID Setup dialog box to enable the **Portrait Settings** option, or you will not be able to access the C•CURE ID Portrait Configuration dialog box.

See [Portrait Configuration Tasks](#) on [Page 69](#) for a list of Portrait Settings configuration tasks you can perform from C•CURE ID Setup.

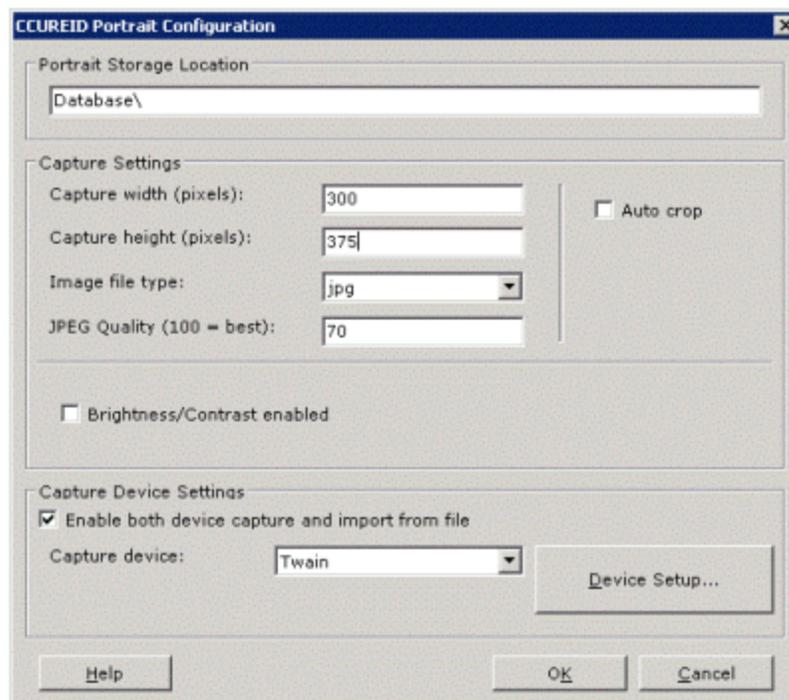
For more information about the fields and buttons on the Portrait Configuration dialog box, see [Portrait Configuration Dialog Box Definitions](#) on [Page 72](#).

### To Access Portrait Configuration

To access the C•CURE ID Portrait Configuration dialog box:

1. Choose **Options & Tools>Badge Setup** from the **C•CURE Administration Client**. The C•CURE ID Badge Setup dialog box appears.
2. Select the **Portrait** checkbox, then click **Portrait Settings**. The C•CURE ID Portrait Configuration dialog box opens (see [Figure 15](#) on [Page 68](#)).

**Figure 15:** C•CURE ID Portrait Configuration Dialog Box



## Portrait Configuration Tasks

From the C•CURE ID Portrait Configuration dialog box, you can perform the following tasks to set up portrait capture:

- [Setting the Height and Width for Graphics](#) on Page 69
- [Choosing a Graphic Format](#) on Page 69
- [Selecting a Capture Device for Portraits](#) on Page 70
- [Setting Up a TWAIN Device for Portrait or Signature Capture](#) on Page 71
- [Setting Up Import from File for Portrait Capture](#) on Page 72

### Setting the Height and Width for Graphics

You can set height and width values for portraits by entering values in the appropriate boxes in the C•CURE ID Portrait Configuration dialog box.

The **Capture Width** and **Capture Height** values determine the proportions of the images you capture. The default value, 375 by 300, captures a 1 1/4 inch x 1 inch (32 x 25 mm) image consisting of 375 rows, each 300 pixels wide.

The default capture height and width are suitable for most image captures. An image capture size of 1 inch x 1 inch (25 x 25 mm) is a good size for a credit-card size badge; a resolution of 300 pixels maintains image quality with some enlargement.

#### NOTE

You can shrink or enlarge an image on the badge layout. If you enable the option Proportional Stretch, the image will not distort; if you have disabled Proportional Stretch, the image might be distorted if you shrink or enlarge it. See [Image Source Tab Definitions](#) on Page 168.

The actual printed size may be scaled differently, since you determine the printed size when you design the badge. In the C•CURE ID Badge Designer, the **Formatting** fields in the Image Properties panel lets you set the size of printed images. See [The Image Properties Panel](#) on Page 166 for more information.

There is a slight performance advantage if you avoid unnecessary scaling. Un-scaled images process faster and are usually sharper than scaled images. Software House recommends the following formula:

image width (pixels) = printer resolution (dots/inch) X image size (inches)

If the print resolution is greater than 300 dots per inch, capture enough pixels for a 300 resolution printer and let the system automatically scale the image.

### Choosing a Graphic Format

C•CURE ID can create images in several different file formats. The default format is Joint Photographic Experts Group or JPEG, a compression technique that achieves higher compression by reducing the resolution of an image. JPEG is the best choice for portrait images, unless you need to use another image processing product that cannot handle JPEG. The best file type for signatures is TIF Mono.

**NOTE**

For consistent results, you should decide on a format before beginning your image captures. For Portrait captures, set the Graphic format in the Image File Type field in the [Portrait Configuration Dialog Box Definitions](#) on Page 72. For Signature captures, set the Graphic format in the Image File Type field in the [Signature Configuration Dialog Box Definitions](#) on Page 79.

**To Choose a Graphics Format**

- In the C•CURE ID Portrait or Signature Configuration dialog box, choose from a list of possible formats from the **Image File Type** drop-down list:

**Table 13:** Image Format List

Image File Type	Description
jpg	Recommended for portraits. JPEG format provides the best compression, but image information is lost during compression. The system stores images with the extension .JPG.  If you choose this format, a value for the JPEG quality appears to the right. Supply a value in this box to indicate the balance between compression and image quality. A value of 100 produces the highest image quality with minimal compression. The default value, 70, provides a good compromise between high compression and good image quality.
Tif Mono (1bpp)	This version of Tagged Image File Format (TIFF) is recommended for signatures. The Tif Mono selection uses 1 bit per pixel. For black and white images only; not for grayscale.
Tif	Tagged Image File Format (TIFF) with a file extension of .tif. This format is popular format for high color-depth images.
BMP (8bpp)	Provides an uncompressed Windows color bitmap. The system stores images with the extension .BMP.
BMP (24bpp)	Provides a compressed Windows color bitmap. The system stores images with the extension .BMP.
BMP (8bpp GRAY)	Provides an uncompressed Windows grayscale bitmap. The system stores images with the extension .BMP.
WMF	Provides a Windows MetaFile. The system stores images with the extension .WMF.

**Selecting a Capture Device for Portraits**

The Capture Device list in the Portrait Configuration dialog box lets you select a capture device for portraits.

**To Select a Capture Device for Portraits**

1. On the C•CURE ID Setup dialog box, select  **Portrait**, then click **Portrait Settings**. The C•CURE ID Portrait Configuration dialog box opens.

- In the **Capture Device Settings** list, select one of the following options:

**Table 14:** Portrait Capture Devices and Descriptions

Option	Description
Import from File	Select this option to import existing portrait or signature images. See <a href="#">Setting Up Import from File for Portrait Capture</a> on Page 72.
TWAIN	Select this option if you are using a TWAIN interface board to capture signatures or portraits. If you are using the Watchport/V USB Digital Camera, select TWAIN as your device. Use the TWAIN setup to set your camera up. C•CURE ID supports the TWAIN interface, but the TWAIN interface does not support all of the C•CURE ID software options, such as software-controlled zooming. The quality of images captured using TWAIN hardware and interface may not equal the quality of images captured using the Flashpoint VGA capture board. See <a href="#">Setting Up a TWAIN Device for Portrait or Signature Capture</a> on Page 71.

**NOTE**

C•CURE ID supports the TWAIN interface, but C•CURE ID does not control the TWAIN functionality. Refer to the documentation for your TWAIN capture device for information on using these features.

### Setting Up a TWAIN Device for Portrait or Signature Capture

If you have a TWAIN device on your system, use the following procedure to choose capture options for capturing Portraits or Signatures.

You can use a TWAIN device to capture both portraits and signatures.

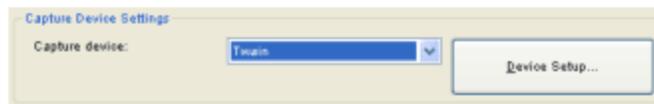
**NOTE**

If you are using a TWAIN protocol capture device, you might not have access to all of the software-controlled camera and flash options. Refer to the documentation provided by your TWAIN supplier.

#### To Set up a TWAIN Device for Portrait or Signature Capture

- In the C•CURE ID Portrait or Signature Configuration dialog box, select **Twain** from the Capture device list.

**Figure 16:** Capture Device Settings Selection



- Click **Device Setup**. The TWAIN Source Configuration dialog box opens with a list of available TWAIN drivers on your computer.

**Figure 17:** TWAIN Source Configuration Dialog Box



3. Select either a specific driver to always use to capture portraits, or select **Always Ask** to select a specific driver each time you capture an image.
4. Click **OK** to save the settings.

## Setting Up Import from File for Portrait Capture

If you already have portraits or signatures in a compatible file format you can import them into the personnel records.

### To Set Up Import from File as the Capture Device

1. From the C•CURE ID Badge Setup dialog box, select  **Portrait**, then click **Portrait Settings**. The C•CURE ID Portrait Configuration dialog box opens.
2. From the **Capture Device** drop-down list, choose **Import from File**.
3. You can set other Portrait Configuration options from this dialog, and when you are ready to save your settings, click **OK**.

## Portrait Configuration Dialog Box Definitions

The Portrait Configuration dialog box has the following fields and buttons.

**Table 15:** C•CURE ID Portrait Configuration Properties

Field	Description
Capture Width and Capture Height	Enter the height and width of images on badges in pixels. See <a href="#">Setting the Height and Width for Graphics on Page 69</a> for more information.
Capture Image File Type and JPEG Quality	Specify the graphic format for images. See <a href="#">Choosing a Graphic Format on Page 69</a> for more information.

C•CURE ID Portrait Configuration Properties (continued)

Field	Description
Auto crop	Select this option to automatically size captured images. If this option is not selected, you can manually size (crop) images after capture.
Brightness/Contrast enabled	Select this for an optional after-capture adjustment of the brightness and contrast. Brightness and contrast can be adjusted on the second window that displays after the live image has been captured.
Enable both device capture and import from file	Select this to display both options on the Personnel Imaging tab. The Imaging tab then displays a button labeled <b>Capture   Import</b> is displayed to allow you to choose either: <ul style="list-style-type: none"> <li>• Capture via a Capture Device.</li> <li>• Import from file</li> </ul> <p>If you do not select this option, then the button displays as Capture</p>
Capture Device	Select the device that you will use to capture images. <ul style="list-style-type: none"> <li>• Twain - Use this option if the input device is a scanner or camera which uses the industry standard TWAIN interface. Device setup for this option is dependent upon the Twain Device Driver / Manufacture.</li> <li>• Import from file - Use this option if the image is already in a file somewhere on your computer or network. No device settings are available for this option.</li> </ul> <p>See <a href="#">Selecting a Capture Device for Portraits</a> on <a href="#">Page 70</a>.</p>
Device Setup	Device Setup is available when you select a <b>Capture Device</b> option other than <b>Import from File</b> . <ul style="list-style-type: none"> <li>• See <a href="#">Setting Up a TWAIN Device for Portrait or Signature Capture</a> on <a href="#">Page 71</a> for instructions on Device setup for a TWAIN device.</li> </ul>
Help	Click this button to access the help for C•CURE ID Setup.
OK	Click this button to save your changes and return to the C•CURE ID Setup dialog box.
Cancel	Click this button to cancel your changes and return to the C•CURE ID Setup dialog box.

## Signature Settings

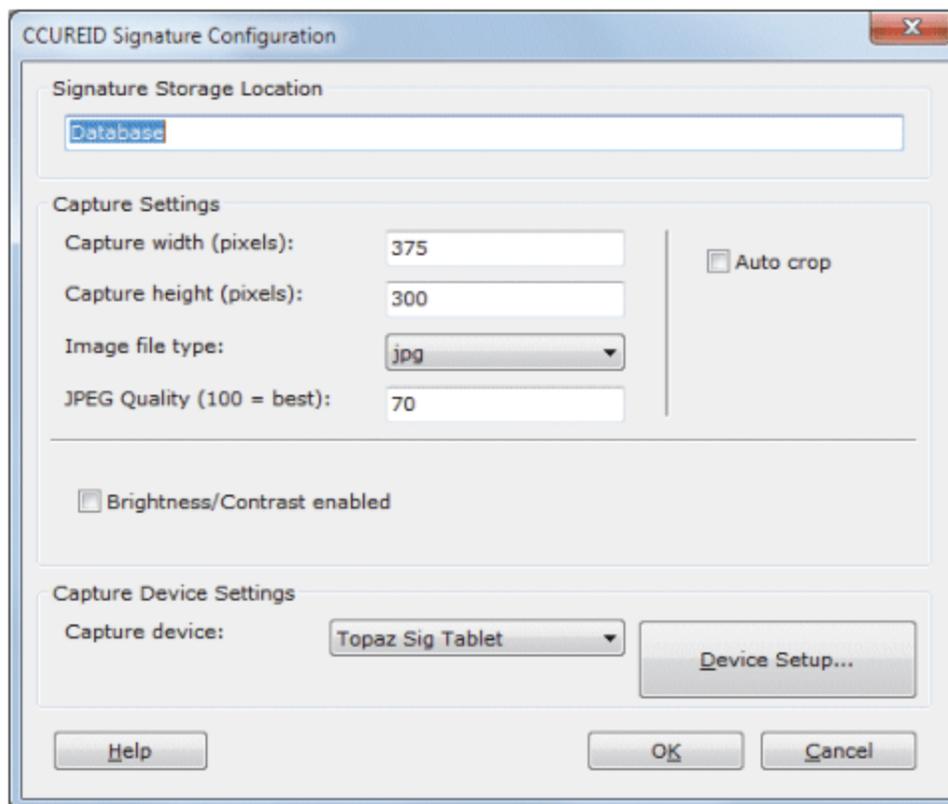
The C•CURE ID Signature Configuration dialog box lets you specify image options for signatures. Use this window to specify a location, size, and graphics format for image files, a capture device for taking images, and device options.

You need to view and adjust these settings to make sure that the devices and options for C•CURE ID signature capture are configured correctly for your system.

### To Access Signature Configuration Settings

1. Choose **Options>Badge Setup** from the C•CURE Administration Client menus.
2. Select the **Signature** check box, then click **Signature Settings**. The C•CURE ID Signature Configuration dialog box opens.

**Figure 18:** C•CURE ID Signature Configuration Dialog Box



For more information about the fields and buttons on the Signature Configuration dialog box, see [Signature Configuration Dialog Box Definitions](#) on [Page 79](#).

## Signature Configuration Tasks

From the C•CURE ID Signature Configuration dialog box, you can perform the following tasks to set up signature capture:

- [Specifying Capture Settings for Signatures on Page 75](#)
- [Selecting a Capture Device for Signatures on Page 76](#)
- [Configuring a Penware Tablet as the Capture Device on Page 76](#)
- [Configuring a Topaz Tablet as the Capture Device on Page 77](#)
- [Choosing Cropping Options for Signatures on Page 75](#)
- [Enabling Brightness/Contrast Adjustment on Page 75](#)
- [Configuring Import from File as the Signature Capture Device on Page 78](#)

## Choosing Cropping Options for Signatures

If you want to be able to crop the signature after it is taken, you need to clear the **Auto crop** option, to enable a bounding box that you can resize to fit the part of the image you want to use. If you select **Auto crop**, the image is automatically sized for you.

---

### To Choose Cropping Options for Signatures

1. From the C•CURE ID Badge Setup dialog box, select the **Signature** check box, then click **Signature Settings**. The C•CURE ID Signature Configuration dialog box opens.
2. In the Capture Settings section of the dialog, select **Auto crop** to enable images you have captured to automatically be cropped to the **Capture Width** and **Capture Height** you have specified. When **Auto crop** is not selected, a bounding box is displayed after captures, and you can manually resize the box to crop the captured image.
3. You can set other Signature Configuration options from this dialog, and when you are ready to save your settings, click **OK**.

## Enabling Brightness/Contrast Adjustment

If you want to be able to adjust brightness and contrast after the signature is taken, you need to enable Brightness/Contrast adjustment.

---

### To Enable Brightness/Contrast Adjustment

1. From the C•CURE ID Badge Setup dialog box, select the **Signature** check box, then click **Signature Settings**. The C•CURE ID Signature Configuration dialog box opens.
2. Select the Brightness/Contrast enabled check box if you want to be able to adjust the brightness and contrast of captured signatures.
3. You can set other Signature Configuration options from this dialog, and when you are ready to save your settings, click **OK**.

## Specifying Capture Settings for Signatures

You configure the settings for capturing signatures by on the **C•CURE ID Signature Configuration** dialog box.

## To Specify Capture Settings

1. From the C•CURE ID Badge Setup dialog box, select the **Signature** check box, then click **Signature Settings**. The C•CURE ID Signature Configuration dialog opens.
2. In the **Capture width (pixels)** field, enter the width in pixels for captured images.
3. In the **Capture height (pixels)** field, enter the height in pixels for captured images.
4. Select the graphic format for images in the **Image File Type** field from the drop-down list. The choices for graphic formats are the same as those for Portraits. The best file type for signatures is TIFF Mono.
5. If you have selected JPEG as the **Image File Type**, you can set the **JPEG Quality** for the captured image, with a range from 1 to 100 (100= best quality). Type in a number from 1 to 100 to set the **JPEG Quality**.
6. You can set other Signature Configuration options from this dialog, and when you are ready to save your settings, click **OK**.

## Selecting a Capture Device for Signatures

The Capture Device field in the C•CURE ID Signature Configuration dialog box lets you select a capture device for signatures.

### To Select a Capture Device for Signatures

1. Click **Signature Settings** in the C•CURE ID Badge Setup dialog box.
2. In the **Capture Device** list, select one of the following options:

**Table 16:** Signature Capture Devices and Descriptions

Option	Description
Import from File	Select this option to import existing signature images. See <a href="#">Selecting a Capture Device for Signatures on Page 76</a> .
Penware Sig Tablet	Select this option to use a Penware signature tablet for signatures. See <a href="#">Selecting a Capture Device for Signatures on Page 76</a> for more information.
Topaz Sig Tablet	Select this option to use a Topaz signature tablet for signatures. See <a href="#">Selecting a Capture Device for Signatures on Page 76</a> for more information.
TWAIN	Select this option if you are using a TWAIN interface board to capture signatures. If you are using the Watchport/V USB Digital Camera, select TWAIN as your device. Use the TWAIN setup to set your camera up. C•CURE ID supports the TWAIN interface, but the TWAIN interface does not support all of the C•CURE ID software options, such as software-controlled zooming. See <a href="#">Setting Up a TWAIN Device for Portrait or Signature Capture on Page 71</a> .

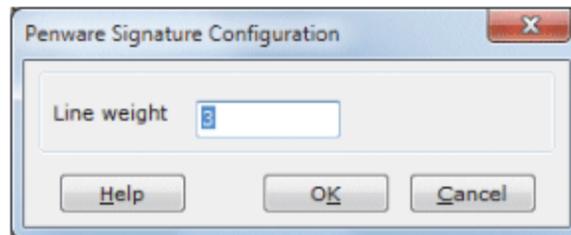
## Configuring a Penware Tablet as the Capture Device

Perform the following steps to configure a Penware tablet as your capture device for signatures.

### To Configure a Penware Tablet as the Capture Device

1. From the C•CURE ID Badge Setup dialog box, select the **Signature** check box, then click **Signature Settings**. The C•CURE ID Signature Configuration dialog opens.
2. From the **Capture Device** drop-down list, choose **Penware Sig Tablet**.
3. Click **Device Setup**. The Penware Signature Configuration dialog box opens.

**Figure 19:** Penware Signature Configuration Dialog Box



4. Type a value between 1 and 10 in the **Line weight** field to specify the thickness of the line. The default value is 3.
5. Click **OK**.
6. You can set other Signature Configuration options from this dialog, and when you are ready to save your settings, click **OK**.

### Configuring a Topaz Tablet as the Capture Device

Perform the following steps to configure a Topaz tablet as your capture device for signatures.

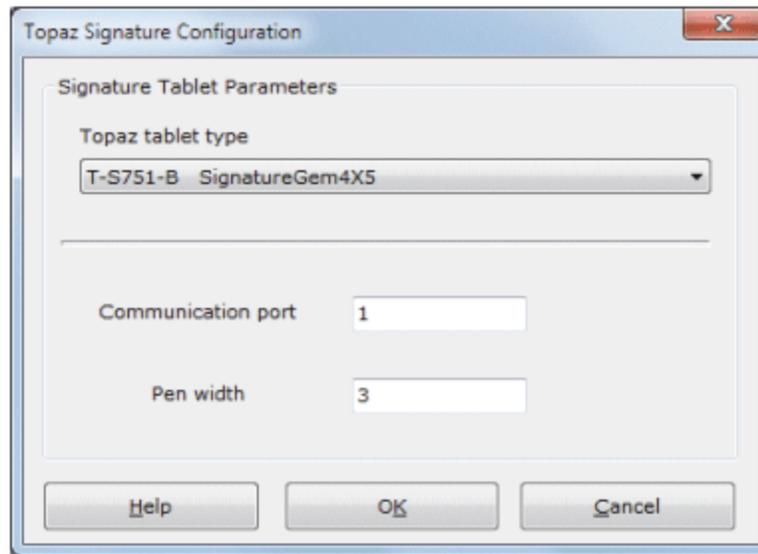
#### **NOTE**

To configure a Topaz Signature Tablet to perform signature capture from a Client running Windows Vista, the Operator must be logged on as an Administrator. Once the Topaz Tablet is configured in C•CURE ID Setup, a non-Administrator user can capture Signatures with the tablet from the Personnel Badging tab.

### To Configure a Topaz Tablet as the Capture Device

1. From the C•CURE ID Badge Setup dialog box, select the **Signature** check box, then click **Signature Settings**. The C•CURE ID Signature Configuration dialog box opens.
2. From the **Capture Device** drop-down list, choose **Topaz Sig Tablet**.
3. Click **Device Setup**. The Topaz Signature Configuration dialog box opens.

Figure 20: Topaz Signature Configuration Dialog Box



4. Select the type of tablet you are using from the **Topaz tablet type** list.

**NOTE**

If you change the tablet type selection, the system attempts to update the Sigplus.ini file (typically in C:\Windows). The current user must have write permissions to this folder. On Vista, UAC must be off (temporarily) for this operation to succeed. If this update is not successful, when you attempt to capture a signature an error message is displayed stating that "No Topaz device is attached".

5. In the **Communication port** field, type the Communication port that is being used to connect the signature tablet to the system. The default is 1.
6. In the **Pen width** field, enter a line weight value between 1 and 9. The default line thickness is 3.
7. Click **OK**.

## Configuring Import from File as the Signature Capture Device

If you already have signatures in a compatible file format you can import them into the personnel records by configuring **Import from File** as your device for Signature capture.

### To Configure Import from File as the Capture Device

1. From the C•CURE ID Badge Setup dialog box, select the  **Signature** check box, then click **Signature Settings**. The C•CURE ID Signature Configuration dialog box opens.
2. From the **Capture Device** drop-down list, choose **Import from File**.
3. You can set other Signature Configuration options from this dialog, and when you are ready to save your settings, click **OK**.

## Signature Configuration Dialog Box Definitions

The Signature Configuration dialog box has the following fields and buttons.

**Table 17:** C•CURE ID Signature Configuration Properties

Field	Description
Signature Storage Location	In C•CURE 9000, Signatures are stored in the C•CURE 9000 database.
Capture Width and Capture Height	Enter the height and width of images on badges in pixels. See <a href="#">Signature Configuration Tasks on Page 74</a> for more information.
Image File Type	Specify the graphic format for images. See <a href="#">Signature Configuration Tasks on Page 74</a> for more information.
Brightness/Contrast enabled	Select this for an optional after-capture adjustment of the brightness and contrast. Brightness and contrast can be adjusted on the dialog box that displays after the image has been captured.
Auto crop	Select this option to automatically size captured images. If this option is not selected, you can manually size (crop) images after capture.
Capture Device	Select the device that you will use to capture images. You can use a camera, a TWAIN device, a signature device, or Import from file. See <a href="#">Signature Configuration Tasks on Page 74</a> .
Device Setup	Select your options for capture devices. See the appropriate section for the device you are using. See: <ul style="list-style-type: none"> <li>• <a href="#">Configuring a Penware Tablet as the Capture Device on Page 76</a></li> <li>• <a href="#">Configuring a Topaz Tablet as the Capture Device on Page 77</a>.</li> </ul>

## Configuring Biometric Capture Settings

The **C•CURE ID Biometrics Configuration** dialog box lets you configure the settings for a fingerprint capture device, as well as how the system should communicate with the hardware and how the data is encoded for storage.

You need to view and adjust these settings to make sure that the devices and options for C•CURE ID fingerprint capture are configured correctly for your system.

**NOTE** You must select **Fingerprint** in the C•CURE ID Setup dialog box to enable the **Biometric Settings** option before you can set up the device options for capturing fingerprints.

### C•CURE ID Biometric Configuration Tasks

From the C•CURE ID Biometric Configuration dialog box, you can:

- [Accessing C•CURE ID Biometric Configuration](#) on [Page 80](#)
- [Setting up a Bioscrypt Device](#) on [Page 82](#)

See [C•CURE ID Biometric Configuration Definitions](#) on [Page 83](#) for more information about the fields and buttons on this dialog.

### Accessing C•CURE ID Biometric Configuration

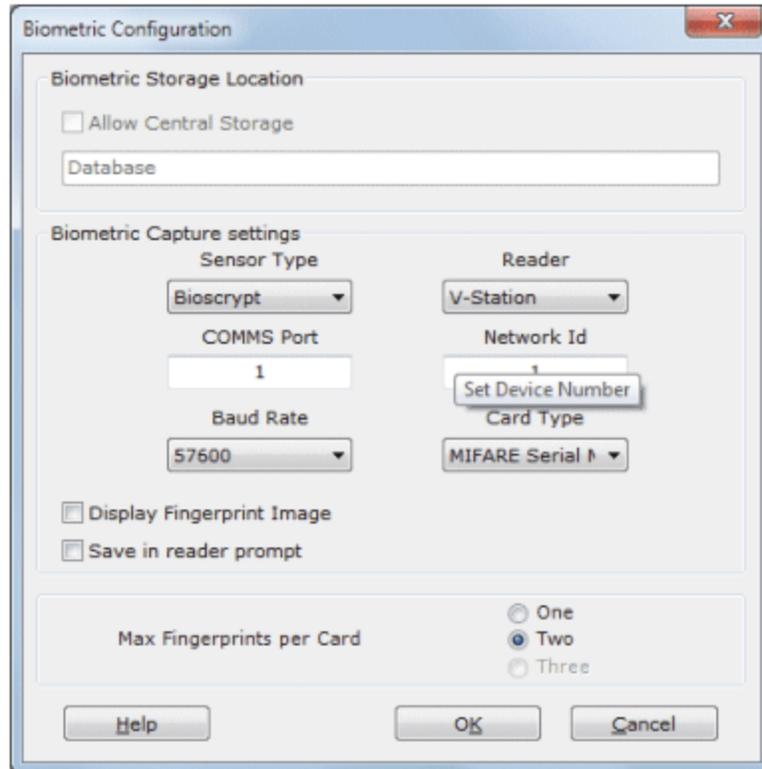
To configure a biometric device to capture fingerprints, you must enable the **Fingerprint** image capture setting on the Badge Setup dialog box.

---

#### To Access C•CURE ID Biometric Configuration

1. Choose **Options & Tools>Badge Setup** from the C•CURE Administration Client Navigation pane.
2. Select the **Fingerprint** check box, then click **Biometric Settings**.The C•CURE ID Biometrics Configuration dialog box opens.

Figure 21: C•CURE ID Biometrics Configuration dialog box



## Setting up a Bioscrypt Device

Perform the following steps to set up a Bioscrypt device for capturing fingerprints.

### To Set up a Bioscrypt Hardware Device

1. From the C•CURE ID Badge Setup dialog box, click **Fingerprint**, then click **Biometric Settings**. The C•CURE ID Biometrics Configuration dialog box opens.
2. Select **Bioscrypt** from the **Sensor Type** drop-down list.
3. Set the **Reader Type** to the correct setting for your reader (either V-Smart or V-Station).
4. Set the **COMMS Port** that your computer uses to communicate with the reader. The default value is serial port 1.
5. Set the **Network ID** to the physical ID of the reader attached to the serial port. The default Network ID is 1.
6. Set the **Baud Rate** that your reader uses from the drop-down list.
7. Set the **Card Type** that your reader uses from the Card Type drop-down list.
8. If you want to display the fingerprint on the computer screen during the enrollment process, select **Display Fingerprint Image**.
9. Select the **Save in reader prompt** option if you want to display a prompt after you capture fingerprints that asks "You have captured fingerprints. Do you want to keep them in the Bioscrypt unit?"
10. Select the **Max Fingerprints per Card** for your reader. Choices are **One** or **Two**.
11. Click **OK** to save your settings.

## C•CURE ID Biometric Configuration Definitions

Table 18 on Page 83 provides definitions of the fields and buttons on the C•CURE ID Biometric Configuration dialog box.

**Table 18:** Biometric Configuration Definitions

Field	Description
Allow Central Storage	This option is not available on C•CURE 9000. All biometric settings are stored in the database.
Sensor Type	Select the Biometric capture device type. Only <b>Bioscrypt</b> is available for C•CURE 9000.
Reader	Select the capture and encoding device that matches your installation. <ul style="list-style-type: none"> <li>For Bioscrypt, the possible choices are V-Smart or V-Station.</li> </ul> You can have only one enrollment station per client. Software House only supports an RS232 connection for this purpose.
COMMS Port	Select the communications port for the capture devices. Typical values are '1' or '2' for serial ports one and two respectively.
Device number	This option is used with RS485 based devices to specify a specific device on the RS485 network. Refer to the installation guide for your Biometric device for additional information. If you do not use an RS485 device, this option can be ignored.
Baud Rate	Select the communications speed for your device. This field appears only for Bioscrypt devices. Refer to the installation guide for your Bioscrypt device for additional information about this setting.
Cancel	Click this button to discard your changes and return to the C•CURE ID Setup dialog box.
Card Type	Only Simplex Wiegand 26 is supported for C•CURE 9000.
Display Fingerprint Image	Select this option to display captured fingerprints on the computer screen during the enrollment process.
Save in reader prompt	Select this option to display a prompt when you capture a fingerprint asking "You have captured fingerprints. Do you want to keep them in the Bioscrypt unit?" If you do not select this option, the prompt does not appear.
Max Fingerprints per Card	For a Bioscrypt reader, you can select <b>One</b> or <b>Two</b> for the number of fingerprints that can be stored on a card.
Help	Click this button to access the help for C•CURE ID.
OK	Click this button to save your changes and return to the C•CURE ID Setup dialog box.



## Smart Card Setup

This chapter explains how to configure Smart Card settings in C•CURE ID Badge Setup so that you can program, enroll, and print Smart Cards.

In this chapter

Smart Card Overview .....	86
Smart Card Device Configuration .....	89
Configuring a Smart Card Device .....	91
Smart Card Device Configuration Definitions .....	96
Smart Card Templates .....	98
Creating a New Smart Card Template .....	100
Editing a Smart Card Template .....	101
Configuring an iClass Smart Card Template .....	102
iClass Template Configuration Definitions .....	103
Configuring a DESFire Smart Card Template .....	104
DESFire Template Configuration Definitions .....	105
Configuring a MIFARE Smart Card Template .....	106
Smart Card Keys .....	111
Smart Card Key Definitions .....	116
MIFARE Template Configuration Definitions .....	118

## Smart Card Overview

C•CURE ID provides the capability to program and enroll Smart Cards. You can:

- Program and modify MIFARE smart cards for personnel records.
- Enroll data from MIFARE, iCLASS, and DESFire smart cards into personnel records.

Programming and enrolling smart cards is accomplished with a Smart Card Wedge Device or a Smart Card Printer. You perform enrollment from the Personnel Badging tab, in a manner similar to the other C•CURE ID functions such as Take Picture, Preview Badge, Print Badge, etc.

You can perform programming and enrollment from:

- Smart Card Printer - This feature allows you to configure a Printer to perform Smart Card programming and enrollment when the Print Badge function is activated. In general, when the user clicks the current **Print Badge** button, the smart card programming/enrollment function occurs, and then the print badge function follows. It is thus possible to program, enroll and print a badge in one operation. See [Using Print Badge for Smart Card Enrollment, Programming, and Printing on Page 251](#).
- Smart Card Device - On C•CURE 9000, a Smart Card button has been added on the Personnel Badging tab to utilize a Smart Card Device (Wedge or Printer). In general, when this button is clicked, the user can program and/or enroll a smart card for that particular Personnel record. See [Using the Enroll/Program Smart Card Button on Page 251](#).

### NOTE

The Smart Card Device can be a printer. The printer can be used for programming/enrolling a Smart Card without actually printing the badge (for badges that have already been printed).

### Example:

For a MIFARE card that is programmed and locked when purchased, you can read the card information into C•CURE ID. You can re-program the card allowing you to more fully utilize the card's capabilities (perhaps including Vending, Finance and Parking credentials).

Smart Card Programming and Enrollment is supported for the following card types:

- MIFARE (first 1K block for 1K & 4K Cards) - Program and enroll.
- iCLASS - Enroll the Card Serial Number and sector data for this HID product.
- DESFire - Enroll the Card Serial Number.

## Supported Devices

The following tables summarize the support for MIFARE, iClass, and DESFire Smart Cards. The printers listed must have a Smart Card Encoder option installed in order to encode Smart Cards.

### NOTE

To perform Smart Card programming and enrollment with a Magicard, Nisca, or Fargo printer connected to a C•CURE 9000 Client running either Windows Vista or Windows 2003 Server, the Operator must be logged on as an Administrator.

**Table 19: MIFARE Smart Card Support**

Device	Enroll Serial Number	Enroll Sector	Encode	Print
Fargo DTC400, DTC400e, DTC550, DTC4500, HDP600	✓	✓	✓	✓
Fargo HDP 5000 with OMNIKEY CardMan 5x21-CL 0 Encoder	✓	✓	✓	✓
Nisca 5350	✓	✓	✓	✓
Magocard Tango 2E, Rio 2e, RIO Pro	✓	✓	✓	✓
Software House Wedge	✓	✓	✓	
ACR 120 USB	✓	✓	✓	
SCM Wedge	✓	✓	✓	

**Table 20: iClass Smart Card Support**

Device	Enroll Serial Number	Enroll Access Control Data	Encode	Print
Fargo DTC400, DTC400e, DTC550, DTC4500, HDP600	✓			✓
Fargo HDP 5000 with OMNIKEY CardMan 5x21-CL 0 Encoder	✓	✓		✓
Nisca 5350	✓	✓		✓
Magocard Tango 2E, Rio 2e, RIO Pro	✓	✓		✓
Software House Wedge				
ACR 120 USB				
SCM Wedge				

**Table 21: DESFire Smart Card Support**

Device	Enroll Serial Number	Enroll Sector	Encode	Print
Fargo DTC400, DTC550, DTC4500, HDP600	✓			✓
Fargo HDP 5000 with OMNIKEY CardMan 5x21-CL 0 Encoder				
Nisca 5350	✓			✓

DESFire Smart Card Support (continued)

Device	Enroll Serial Number	Enroll Sector	Encode	Print
Magocard Tango 2E, Rio 2e, RIO Pro	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
Software House Wedge	<input checked="" type="checkbox"/>			
ACR 120 USB	<input checked="" type="checkbox"/>			
SCM Wedge				

## The Smart Card Process

The following is a summary of the steps that you perform to program, enroll, and print Smart Cards with C•CURE ID.

1. Set up the devices used for Smart Card programming, enrollment, and printing using C•CURE ID Setup. See [Smart Card Device Configuration](#) on [Page 89](#).
2. Define the Smart Card Templates for your Smart Card devices to define the programming and enrollment actions for your cards. See [Smart Card Templates](#) on [Page 98](#).
3. If you are using MIFARE cards and you want to use a custom key to secure the cards, you need to create a Smart Card custom key using the **Card Formats and Keys>Smart Card Key** function from the C•CURE 9000 Administration Client Navigation pane. See the [Smart Card Keys](#) on [Page 111](#) for more information.
4. Use the **Enroll/Prog. Smart Card** button on the Personnel Badging tab to program and enroll your Smart Cards.
5. Use the **Print Badge** button to program/enroll and/or print one or more badges, depending upon the Smart Card template you have selected.

## Smart Card Device Configuration

Smart Card device configuration is used to define the Smart Card device that is connected to your C•CURE ID system, and to associate one or more Smart Card Templates with the device.

### To Configure a Smart Card Device

1. Identify the device type and the USB or COM port to which it is attached. See [Configuring a Smart Card Device on Page 91](#).
2. Test the connection to the device to make sure C•CURE ID can communicate with the device. See [Testing the Encoder Connection on Page 95](#).

#### NOTE

PCSC devices (such as the SCM SDI010 Mifare: USB and Fargo - Mifare: USB do not have a Test Encoder button because only devices that are detected by the operating system are visible in the list of devices for selection in the **Encoder Name** field. If your PCSC device is not listed, check its connection.

3. Assign one or more Smart Card Templates to the device to specify the programming and/or enrollment actions that can be performed with each device. See [Smart Card Templates on Page 98](#).

## Smart Card Device Configuration Tasks

You can perform the following Smart Card Configuration tasks:

- [Accessing the Smart Card Device Configuration Dialog Box on Page 89](#).
- [Configuring a Smart Card Device on Page 91](#).
- [Editing a Smart Card Template on Page 101](#).
- [Creating a New Smart Card Template on Page 100](#).

For definitions of the fields and buttons on the Smart Card Device Configuration and Template Configuration dialog boxes, see the following topics:

- [Smart Card Device Configuration Definitions on Page 96](#).
- [iClass Template Configuration Definitions on Page 103](#).
- [DESFire Template Configuration Definitions on Page 105](#).
- [MIFARE Template Configuration Definitions on Page 118](#).

## Accessing the Smart Card Device Configuration Dialog Box

You can access the Smart Card Device Configuration dialog box from three places, depending upon the type of device you want to configure.

- **C•CURE ID Badge Setup** - to set up a Smart Card Device (such as an ACR120 Wedge) or Printer. See [To Set Up a Smart Card Device or Printer on Page 90](#).
- **C•CURE ID Badge Printer Configuration** - to set up a Smart Card Badge Printer. See [To Set Up a Smart Card Badge Printer on Page 90](#).

- C•CURE ID Batch/Sheet Printer Configuration - to set up a Smart Card Badge Printer for batch printing. See [To Set Up a Smart Card Badge Printer for Batch Printing](#) on [Page 90](#).

---

### To Set Up a Smart Card Device or Printer

1. Choose **Options>Badge Setup** from the C•CURE Administration Client menus.
2. Select the **Smartcard** check box to make the **Smartcard Settings** button available.
3. Click **Smartcard Settings** to open the Smart Card Device Configuration dialog box.
4. See [Configuring a Smart Card Device](#) on [Page 91](#) for more information.

---

### To Set Up a Smart Card Badge Printer

1. Choose **Options>Badge Setup** from the C•CURE Administration Client menus.
2. Click **Printer Options** to open the Badge Printer Configuration dialog box.
3. Select the **Smartcard** check box to make the Smartcard Settings button available.
4. Click **Smartcard** to open the Smart Card Device Configuration dialog box.
5. See [Configuring a Printer for Smart Card Enrollment and Programming](#) on [Page 92](#) for more information.

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### To Set Up a Smart Card Badge Printer for Batch Printing

1. Choose **Options>Badge Setup** from the C•CURE Administration Client menus.
2. Select the **Batch printing?** check box to make the **Batching options** button available.
3. Click **Batching Options** to open the Batch/Sheet Printer Configuration dialog box.
4. Select the **Smartcard** check box to make the Smartcard Settings button available.
5. Click **Smartcard** to open the Smart Card Device Configuration dialog box.
6. See [Configuring a Batch Printer for Smart Card Encoding](#) on [Page 93](#) for more information.

**NOTE** You can only program Smart Cards with patch printing, Enrollment is not supported during batch printing.

## Configuring a Smart Card Device

There are three different ways to configure a Smart Card Device in C•CURE ID.

- You can configure a Smart Card Device to program/enroll Smart Cards from the **Badge Setup** dialog box. This device can be a Smart Card programming device or a printer with a Smart Card encoder. See [Configuring a Device or Printer](#) on [Page 91](#).
- You can configure a Smart Card printer with a Smart Card encoder from **Badge Setup>Printer Options**. You can configure this device to program/enroll/print Smart Cards. You can also choose to display a prompt to the user to choose whether to print only, program/enroll only, or both when they send a badge to print. See [Configuring a Printer for Smart Card Enrollment and Programming](#) on [Page 92](#).
- You can configure a Smart Card batch printer with a Smart Card encoder from the **Badge Setup>Batching Options** dialog box. You can configure this device to program and print batches of MIFARE Smart Cards. See [Configuring a Batch Printer for Smart Card Encoding](#) on [Page 93](#).

### Configuring a Device or Printer

You can configure a Smart Card Device or a printer with a Smart Card encoder from the Badge Setup dialog box.

To enroll and program a Smart Card, a user clicks the **Enroll/Program Smart Card** button.

The **Enroll/Program Smart Card** button does not provide a means to print a badge layout on the Smart Card, even if you have configured a printer as your Smart Card device. To print a badge layout on the Smart Card, use the **Print Badge** button.

#### NOTE

Currently, the ACR 120, SCM SDI010, and Software House Wedge devices only support MIFARE/DESFire card technology. You cannot configure an iCLASS Template on these devices.

You can configure an iClass template on a Fargo, Magicard Tango, or Nisca printer equipped with an iClass encoder.

### Configuration Tasks

You can configure your Smart Card Devices and Printers to perform programming, enrolling, and printing of Smart Cards.

- [Configuring a Smart Card Device or Printer](#) on [Page 92](#).
- [Configuring a Printer for Smart Card Enrollment and Programming](#) on [Page 92](#).
- [Configuring a Batch Printer for Smart Card Encoding](#) on [Page 93](#).
- [Testing the Encoder Connection](#) on [Page 95](#).

## Configuring a Smart Card Device or Printer

### To Configure a Smart Card Device or Printer

1. Select **Options>Badge Setup** from the C•CURE 9000 Administration Client Options & Tools pane.
2. Select the **SmartCard** check box to enable the SmartCard settings button.
3. Click **SmartCard settings** to open the Smart Card Device Configuration dialog box.
4. Use the **Device Name** drop-down list to select the device or printer you wish to configure.
5. If you are configuring a Smart Card device, select the Encoder Port you are using from the drop-down list.
  - For an ACR 120 USB, select the USB port to which the device is connected.
  - For the Software House Wedge, select the Comm Port to which the device is connected.
6. If you are configuring a printer, three fields appear for you to specify settings:
  - Encoder Port – Choose the COM port to which your printer is connected.
  - Encoder Baud – Choose the Baud Rate for your printer (9600, 19200, 38400, or 57600).
  - Printer Name – Pick the name of your printer from the list of printers defined on your system.
7. If you are configuring an SCM Wedge - Mifare: USB Smart Card device, select SCM Microsystems Inc. SDI010 Contactless Reader from the Encoder Name field drop-down list.
8. Click **Test Encoder** to test the connection to the Smart Card device or Printer Encoder. See [Testing the Encoder Connection](#) on [Page 95](#). (**Test Encoder** is not available for PCSC devices like the SCM SDI010.)
9. From the Smart Card Templates table, select the template(s) you wish to assign to the device, then click **Add** to move that template to the Selected list. If you choose a template that cannot be used with that device an error message appears. You can remove a template from the Selected list by selecting it and clicking **Remove**.
10. If you want to create a new template, click **New Template**. See [Creating a New Smart Card Template](#) on [Page 100](#) for more information.
11. If you want to modify an existing template, click **Edit Template**. You cannot edit the default templates (the default template names are prefaced with SWH). See [Editing a Smart Card Template](#) on [Page 101](#) for more information.
12. If you want to delete an existing template, click **Delete Template**. You cannot delete the default templates (the default template names are prefaced with SWH).
13. Click **OK** to save any changes you have made. You can click **Cancel** instead to discard any changes you have made.

## Configuring a Printer for Smart Card Enrollment and Programming

You can configure a Smart Card printer with a Smart Card encoder from the Badge Printer Configuration dialog box.

To enroll and program a Smart Card, as well as print a badge layout on the card, a user clicks the **Print Badge** button.

## To Configure a Printer for Smart Card Enrollment and Programming

1. Select **Options & Tools>Badge Setup** from the Administration Client menu.
2. Click **Printer Options**.
3. Select the **SmartCard** check box to enable the SmartCard settings button.
4. Click **SmartCard settings** to open the Smart Card Device Configuration dialog box.
5. Use the **Device Name** drop-down list to select the device or printer you wish to configure.
6. If you are configuring a printer, three fields appear for you to specify settings:
  - **Encoder Port** – Choose the COM port to which your printer is connected.
  - **Encoder Baud** – Choose the Baud Rate for your printer (9600, 19200, 38400, or 57600).
  - **Printer Name** – Pick the name of your printer from the list of printers defined on your system.
7. Click **Test Encoder** to test the connection to the Smart Card device or Printer Encoder. See [Testing the Encoder Connection](#) on [Page 95](#) for more information. (**Test Encoder** is not available for PCSC devices.)
8. From the Smart Card Templates table, select the template(s) you wish to assign to the device, then click **Add** to move that template to the Selected list. If you choose a template that cannot be used with that device, an error message appears. You can remove a template from the Selected list by selecting it and clicking **Remove**.
9. If you want to create a new template, click **New Template**. See [Creating a New Smart Card Template](#) on [Page 100](#) for more information.
10. If you want to modify an existing template, click **Edit Template**. You cannot edit the default templates (the default template names are prefaced with SWH). See [Editing a Smart Card Template](#) on [Page 101](#) for more information.
11. If you want to delete an existing template, click **Delete Template**. You cannot delete the default templates (the default template names are prefaced with SWH).
12. Click **OK** to save any changes you have made. You can click **Cancel** instead to discard any changes you have made.

## Configuring a Batch Printer for Smart Card Encoding

You can configure a Smart Card batch printer with a Smart Card encoder from the Batch/Sheet Printer Configuration dialog box.

You can assign one Smart Card Template to a Smart Card printer equipped with a Smart Card Encoder, and configured for batch printing, so that you can encode and print Smart Cards in batch mode. Batch processing does not support enrollment.

If you select **Batch printing** on the C•CURE ID Badge Setup dialog box and configure a printer using **Batching options**, these selections supersede any selections you have made in **Printer options**, and any Smart Card operations are performed in batch mode.

### NOTE

Smartcard programming and Batch Sheet Layout are mutually exclusive for Batch/Sheet Printer Configuration. If you select **Smartcard**, then **Use Sheet Layout?** is unavailable.

---

## To Configure a Batch Printer for Smart Card Encoding

1. Select **Options & Tool>Badge Setup** from the C•CURE Administration Client menu.
2. Click **Batching Options**.
3. Select the **SmartCard** check box to enable the **SmartCard settings** button.
4. Click **SmartCard settings** to open the Smart Card Device Configuration dialog box.
5. Use the **Device Name** drop-down list to select the device or printer you wish to configure.
6. Specify settings for:
  - **Encoder Port** – Choose the COM port to which your printer is connected.
  - **Encoder Baud** – Choose the Baud Rate for your printer (9600, 19200, 38400, or 57600).
  - **Printer Name** – Pick the name of your printer from the list of printers defined on your system.
7. Click **Test Encoder** to test the connection to the Smart Card device or Printer Encoder. See [Testing the Encoder Connection](#) on [Page 95](#) for more information.
8. From the Smart Card Templates table, select the template you wish to assign to the device, and then click **Add** to move that template to the Selected list. If you choose a template that cannot be used with that device, an error message appears. You can only choose one template when configuring a batch badge printer. You can remove a template from the Selected list by selecting it and clicking **Remove**.
9. If you want to create a new template, click **New Template**. See [Creating a New Smart Card Template](#) on [Page 100](#) for more information.
10. If you want to modify an existing template, click **Edit Template**. You cannot edit the default templates (the default template names are prefaced with \$SWH). See [Editing a Smart Card Template](#) on [Page 101](#) for more information.
11. If you want to delete an existing template, click **Delete Template**. You cannot delete the default templates (the default template names are prefaced with \$SWH).
12. Click **OK** to save any changes you have made. You can click **Cancel** instead to discard any changes you have made.

## Testing the Encoder Connection

The **Test Encoder** button is used to test the connection between non-PCSC Smart Card devices and the the C•CURE ID system, so that you can tell if the device is correctly communicating with C•CURE ID.

The **Test Encoder** button is not available for PCSC devices because these devices are detected by Windows. These device types instead provide an **Encoder Name** field that displays all of the PCSC devices detected on the C•CURE ID system. If the device you want to configure is not visible in the **Encoder Name** field drop-down list, you should check the device's connection to the system.

When you click **Test Encoder**, C•CURE ID attempts to connect to the device, based on the Device configuration. The result is displayed in a Message Box.

- If the connection is successful, the message "Communication with the device Succeeded" is displayed.
- If the connection is not successful, and the device cannot be contacted, the message "Communication with the device failed" is displayed.

## Smart Card Device Configuration Definitions

The following fields and buttons appear on the C•CURE ID Smart Card Device Configuration dialog box.

Table 22 on Page 96 lists definitions for the Device Configuration fields.

Table 23 on Page 97 lists definitions for the Smart Card Template fields.

**Table 22:** Smart Card Device Configuration Definitions

Field	Description
Device Name	Select the device to configure from the list of supported devices. The devices are: <ul style="list-style-type: none"> <li>• ACR 120 USB (Smart Card Wedge)</li> <li>• Software House Wedge</li> <li>• SCM Wedge</li> <li>• Fargo - Mifare (printer)</li> <li>• Nisca - Mifare (printer)</li> <li>• Fargo - Mifare : USB</li> <li>• Fargo - iClass : USB</li> <li>• Nisca - iClass (printer)</li> <li>• Tango 2E - Mifare (Printer)</li> <li>• Tango 2E - iClass (Printer)</li> </ul>
Encoder Port	Select the port to which the device is connected. If a COM port device is chosen in the <b>Device Name</b> field, the drop-down list shows all the COM ports on the system. If a USB port device is chosen in the <b>Device Name</b> field, the drop-down list shows all the USB ports on the system.
Encoder Name	This drop-down list includes all PCSC devices detected by Windows. Only available for the SCM SDI010 - Mifare : USB, Fargo - Mifare : USB, and Fargo - iClass : USB devices.
Encoder Baud	The Baud rate of the selected device. Settings are: <ul style="list-style-type: none"> <li>• 9600 (the default and currently the only setting supported), 19200, 38400, 57600</li> </ul> If a USB device is selected, this field is unavailable.
Printer Name	Lists all printers installed on the system. If a USB device is selected, this field is unavailable.
Prompt for Print	This check box only appears when you are configuring a badge printer as a Smart Card printer by clicking <b>Printer Options</b> from C•CURE ID Badge Setup. (It is not available if you configure a printer as a Smart Card device by clicking <b>SmartCard Settings</b> from C•CURE ID Badge Setup, or if you are configuring the printer as a batch printer by clicking <b>Batching Options</b> from C•CURE ID Badge Setup.) If you select this option, the Smart Card Print Options dialog box is displayed when a user clicks <b>Print Badge</b> , so that the user can choose to print the badge, program the Smart Card, or both.
Test Encoder	Click this button to attempt to connect to the device selected, based on the configuration settings. If a connection is made, the message "Communication with the device Succeeded" is displayed. If the connection attempt fails, the message "Communication with the device Failed" is displayed.
OK	When you have completed configuring a device, click <b>OK</b> to save the configuration settings.
Cancel	Click <b>Cancel</b> if you want to discard any changes that you have made to the Smart Card Device Configuration settings.

**Table 23:** Smart Card Template Configuration Definitions

Field	Description
Available	<p>Lists the Smart Card Templates that are available for use. This list includes templates that you have created, and the following templates that come with C•CURE ID:</p> <p>SWH Enroll MIFARE with MIFARE Key</p> <ul style="list-style-type: none"> <li>• Use Default MIFARE Key to Read Sector 1.</li> <li>• Enroll Wiegand26 Card Format from Sector 1, Block 0.</li> </ul> <p>SWH Enroll MIFARE CSN to Card Number</p> <ul style="list-style-type: none"> <li>• Enrolls Card Serial Number to Card Number</li> </ul> <p>SWH Program MIFARE with MIFARE Key</p> <ul style="list-style-type: none"> <li>• Use Default MIFARE Key to Program MAD Read and Write Keys.</li> <li>• Use Default MIFARE Key for Read and Write Key to Sector 1.</li> <li>• Program Read and Write Key to Sector 1.</li> <li>• Program Wiegand26 Card Format to Sector 1, Block 0.</li> </ul>
	<p>SWH Enroll iClass</p> <ul style="list-style-type: none"> <li>• Enrolls Card Serial Number to Card Number</li> </ul> <p>SWH Enroll DESFire</p> <ul style="list-style-type: none"> <li>• Enrolls Card Serial Number to Card Number</li> </ul> <p>WSH Enroll MIFARE with SWH Key</p> <ul style="list-style-type: none"> <li>• Use Default Software House Key to Read Sector 1.</li> <li>• Enroll Wiegand26 Card Format from Sector 1, Block 0.</li> </ul>
Selected	Lists the Smart Card Templates that you have selected for the device you are configuring. You add a template to this list by selecting the template name in the Available list and clicking <b>Add</b> .
Add	<b>Add</b> is used to add a template from the Available list to the Selected list for the device you are configuring. Click <b>Add</b> after selecting a template name in the Available list.
Remove	<b>Remove</b> removes a template from the Selected list and moves it back to the Available list. Select a template in the Selected list, then click <b>Remove</b> to remove that template.
New Template	Click <b>New Template</b> to create a new Smart Card template. Smart Card templates are used to define the data transfer that will occur between the physical card and the Personnel Record. See <a href="#">Smart Card Templates</a> on <a href="#">Page 98</a> for an introduction to Smart Card Templates. See <a href="#">Creating a New Smart Card Template</a> on <a href="#">Page 100</a> for instructions.
Edit Template	Select a template from either the Available or Selected list and click <b>Edit Template</b> to edit a Smart Card template. See <a href="#">Editing a Smart Card Template</a> on <a href="#">Page 101</a> for instructions.
Delete Template	<p>Select a template from either the Available or Selected list and click <b>Delete Template</b> to delete a Smart Card template. You cannot delete a default template. You cannot delete a template that is configured for use by another device.</p> <p><b>Example:</b></p> <p>You created a template called "Enroll Temporary Cards" and assigned it to a badge printer used for printing Visitor badges. You cannot delete this template while you are editing the configuration of a different device.</p>

## Smart Card Templates

Smart Card Templates are basically smart card configurations that are used to define the data transfer that occurs between the physical card and the Personnel Record. A template defines the card type (MIFARE, iCLASS or DESFire), all relevant data (personnel fields, card fields, or card formats), the operations that will be performed (enrollment, programming), and if necessary, the Security Keys needed to access the data.

In C•CURE ID Badge Setup, after you define these Templates, you assign them to smart card devices (Smart Card Device or Printer). Once a template is assigned to the device, it becomes part of the device's active configuration. This means, in the case of printing, that when the user clicks **Print Badge**, the selected smart card template will be applied.

When you click **New Template** on the Smart Card Device Configuration dialog box, the Smart Card Template dialog box appears so you can choose the card type for the template you are creating.

You can choose one of these three card types:

- iClass – Click this button, then click **OK** to create an iClass template. See [Configuring an iClass Smart Card Template](#) on [Page 102](#).
- DESFire – Click this button, then click **OK** to create a DESFire template. See [Configuring a DESFire Smart Card Template](#) on [Page 104](#).
- MIFARE – Click this button, then click **OK** to create a MIFARE template. See [Configuring a MIFARE Smart Card Template](#) on [Page 106](#).

### Sample Descriptions of Smart Card Templates

- SWH iCLASS Enroll: Read the iCLASS card serial number and enroll to Personnel:CardNumber.
- SWH DESFire Enroll: Read the DESFire card serial number and enroll to Personnel:CardNumber.
- SWH MIFARE PROGRAM CardFormat Enroll Serial Number: Use the Card Data Fields, and on Sector 1, Block 0, write the WIEGAND 26 card format. Also enroll the Card Serial Number to Personnel:Inf1.

Multiple templates can be assigned to a Smart Card Device or the Individual Badge Printer, and a prompt allows you to select which template to use. Batch printing only supports one Smart Card template at a time, and only a template for programming actions can be assigned.

#### NOTE

Currently, the wedge devices (ACR120, SDI010, and Software House Wedge) only support MIFARE/DESFire card technology, so you cannot set up an iCLASS Template for these devices.

Typically, a printer has either an iCLASS encoder or a MIFARE encoder installed. However, C•CURE ID cannot determine which encoder is installed on the printer. C•CURE ID prevents you from configuring two different Card Technology Templates on a single printer. But it is possible to configure the wrong type of template for your printer—configuring a MIFARE template for a printer whose encoder supports only iCLASS cards.

To ensure the printer has the proper encoder installed on the printer, you should utilize the **test encoder** button in C•CURE ID Smart Card Setup. If you attempt to use a template (print or smartcard program/enroll) on the wrong encoder device (for example, a MIFARE template on an iCLASS printer) the software reports a “Device is missing!” message because the card type you configured in the template is not present on the printer.

Therefore, you are responsible for determining whether or not the Card Template you use is supported on the printer. To ensure the proper encoder is installed, use the **Test Connection** button in C•CURE ID Setup to verify the proper encoder. See [Testing the Encoder Connection](#) on [Page 95](#).

See the following sections or more information:

- [Smart Card Templates](#) on [Page 98](#).
- [Smart Card Programming and Enrollment](#) on [Page 250](#).
- [Using the Enroll/Program Smart Card Button](#) on [Page 251](#).
- [Using Print Badge for Smart Card Enrollment, Programming, and Printing](#) on [Page 251](#).
- [Using Batch Print Badge for Smart Cards](#) on [Page 252](#).

## Creating a New Smart Card Template

Follow these steps to create a new basic Smart Card template.

1. Navigate to the Smart Card Device Configuration dialog box. See [Smart Card Device Configuration on Page 89](#) for more information.
2. Click **New Template** to create a new template. The Smart Card Template dialog box appears.
3. Choose **the type of template you want to create (MIFARE, iClass, or DESFire)** and click **OK**. The Configuration dialog box opens for the card type you chose.
4. Chose the settings for the specific card type and template operations.
  - See [Configuring an iClass Smart Card Template on Page 102](#) for steps to configure an iClass template.
  - See [Configuring a DESFire Smart Card Template on Page 104](#) for steps to configure a DESFire template.
  - See [Configuring a MIFARE Smart Card Template on Page 106](#) for steps to configure a MIFARE template.
5. Click **OK** to save the template.

## Editing a Smart Card Template

Follow these steps to edit a Smart Card template.

### NOTE

You cannot modify and save a default template, but you can create a copy of it if you want to change some of the settings. If you try to edit a default template, you will get a message that says: "Can't make changes to a default template." If you click **OK**, the Template Configuration dialog box appears. You can save a copy of the default template by changing the name of the template and clicking **OK** to save it as a new template. You can then select it from the list of templates and edit it.

1. Navigate to the Smart Card Device Configuration dialog box. See [Smart Card Device Configuration](#) on [Page 89](#) for more information.
2. Select a template from the Available list or the Selected list and click **Edit Template** to edit an existing template. The Configuration dialog box opens for the template you chose.
3. Chose the settings for the specific card type and template operations.
  - See [Configuring an iClass Smart Card Template](#) on [Page 102](#) for steps to configure an iClass template.
  - See [Configuring a DESFire Smart Card Template](#) on [Page 104](#) for steps to configure a DESFire template.
  - See [Configuring a MIFARE Smart Card Template](#) on [Page 106](#) for steps to configure a MIFARE template.
4. Click **OK** to save the template.

## Configuring an iClass Smart Card Template

The iClass Configuration dialog box is used to set up a template for enrollment and programming of iClass cards. You can define a template and attach it to a Smart Card device configuration so that the enrollment options you set up are executed when you send a badge for enrollment by pressing the **Enroll/Prog. Smart Card** button on the Personnel Badging tab.

See [iClass Template Configuration Definitions](#) on [Page 103](#) for more information about the fields and buttons on this dialog box.

---

### To Configure a iClass Smart Card Template

1. Navigate to the Smart Card Device Configuration dialog box. See [Smart Card Device Configuration](#) on [Page 89](#) for more information.
2. Click **New Template** to create a new template, or select an iClass template in the Available or Selected list and click **Edit Template** to edit an existing template (the iClass Configuration dialog box opens).
3. If you are creating a new template, you need to pick a card type from the SmartCard Template dialog box. Select **iClass** and click **OK**. The iClass Configuration dialog box opens.
4. Type in a name for the iClass template in the **Name** field. Consider including "iClass" in the name to help you identify the template later.
5. Select **Confirm Enrollment Data** if you want C•CURE ID to display a confirmation message box prior to enrolling data from the card to the Personnel database.
6. Select the field you want to enroll the Card Serial Number (CSN) to by choosing a field from the drop-down list in the **Enroll CSN to** field.
7. Select the card format for the data on the card from the drop-down list in the **Card Format** field.
8. To save the iClass Smart Card Template, click **OK**.

## iClass Template Configuration Definitions

The following fields and buttons appear on the iClass Configuration dialog box.

**Table 24:** iClass Configuration Dialog Box Definitions

Field or Button	Description
Name	Enter a valid object name for the iClass template in the <b>Name</b> field. The name of the Smart Card Template must be from 1 - 200 characters. Consider including "iClass" in the name to help you identify the template later.
Confirm Enrollment Data	Select this option if you want C•CURE ID to display a dialog box allowing you to confirm enrollment data before writing it to the Personnel database.
Enroll to:	Select the Personnel database field to which you wish to enroll the Card Serial Number (SCN) from the drop-down list.
Card Format	Select the card format to use when enrolling sector data from the card to the Personnel database. (Not supported on all devices.) The format you use determines which fields the sector data is enrolled in. This option is not supported on all iClass devices. <b>Example:</b> Wiegand 26 format will enroll the facility code and card number from the card into the Personnel record <b>Facility Code</b> and <b>Card Number</b> fields. Choose a card format from the drop-down list in the <b>Card Format</b> field.
OK	Click <b>OK</b> to save your changes to the iClass template configuration.
Cancel	Click <b>Cancel</b> to discard any changes you have made to the iClass template configuration.

## Configuring a DESFire Smart Card Template

The DESFire Configuration dialog box is used to set up a template for enrollment of DESFire cards. You can define a template and attach it to a Smart Card device configuration so that the enrollment options you set up are executed when you send a badge for enrollment/programming by pressing the **Enroll/Prog. Smart Card** button on the Personnel Badging tab.

See [DESFire Template Configuration Definitions](#) on [Page 105](#) for more information about the fields and buttons on the DESFire Configuration dialog box.

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### To Configure a DESFire Smart Card Template

1. Navigate to the Smart Card Device Configuration dialog box. See [Smart Card Device Configuration](#) on [Page 89](#) for more information.
2. Click **New Template** to create a new template, or select a DESFire template in the Available or Selected list and click **Edit Template** to edit an existing template (the DESFire Configuration dialog box opens).
3. If you are creating a new template, you need to pick a card type from the SmartCard Template dialog box. Select **DESFire** and click **OK**. The DESFire Configuration dialog box opens.
4. Type in a name for the DESFire template in the **Name** field. Consider including "DESFire" in the name to help you identify the template later.
5. Select **Confirm Enrollment Data** if you want C•CURE ID to display a confirmation message box prior to enrolling data from the card to the Personnel database.
6. Select the field you want to enroll the Card Serial Number (CSN) to by choosing a field from the drop-down list in the **Enroll CSN to** field.
7. To save the DESFire Smart Card Template, click **OK**.

## DESFire Template Configuration Definitions

The following fields and buttons appear on the DESFire Configuration dialog box.

**Table 25:** iClass Configuration Dialog Box Definitions

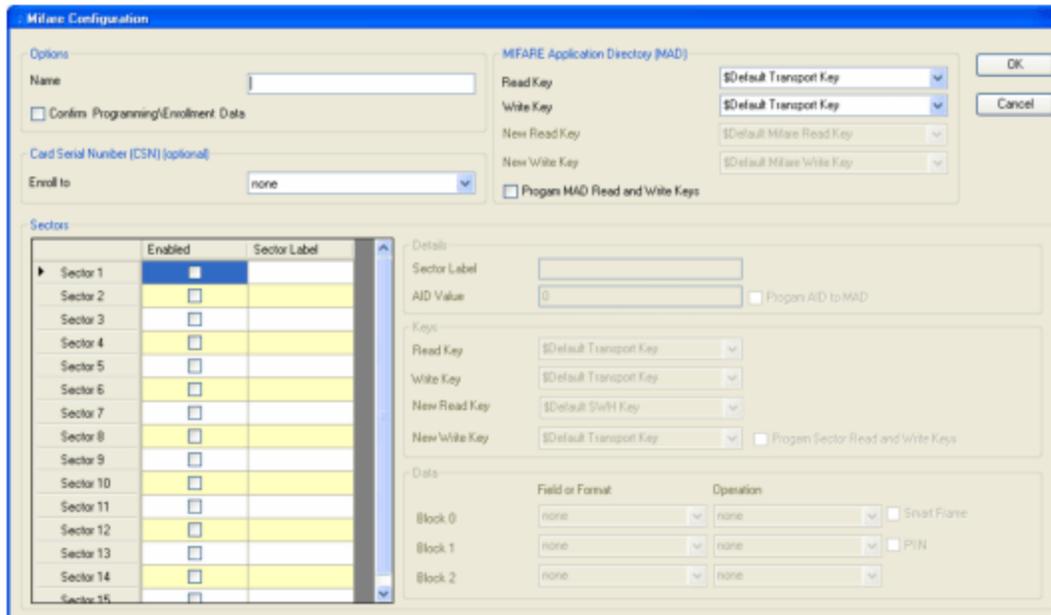
Field or Button	Description
Name	Enter a valid object name for the DESFire template in the <b>Name</b> field. The name of the Smart Card Template must be from 1 - 200 characters. Consider including "DESFire" in the name to help you identify the template later.
Confirm Enrollment Data	Select this option if you want C•CURE ID to display a dialog box allowing you to confirm enrollment data before writing it to the Personnel database.
Enroll to:	The DESFire Card Serial Number is enrolled to the Card Number field. You need to enable a 20-digit length for the Card Number field using <b>Personnel&gt;CHUID Format</b> . Otherwise the card number from the DESFire card is truncated. See the <i>C•CURE 9000 Personnel Configuration Guide</i> for more information on CHUID Formats.
OK	Click <b>OK</b> to save your changes to the DESFire template configuration.
Cancel	Click <b>Cancel</b> to discard any changes you have made to the DESFire template configuration.

## Configuring a MIFARE Smart Card Template

The MIFARE Configuration dialog box is used to set up a template for enrollment and programming of MIFARE cards. You can define a template and attach it to a Smart Card device configuration. The enrollment and programming options you set up are executed when you send a badge for enrollment/programming by pressing the **Enrol/Prog. Smart Card** button on the Personnel Badging tab.

Figure 22 on Page 106 shows the MIFARE Configuration dialog box.

Figure 22: MIFARE Configuration Dialog Box



Templates for MIFARE cards let you program data to the card from the Personnel database and/or enroll data from the card to the Personnel database.

MIFARE cards contain software keys for reading and writing to and from the card. If the keys you use to read and write do not match the keys stored on the card, you will be denied access to the card. This rule applies when you are enrolling data from the card, programming data to the card, and when your card readers are reading the card to apply access control security (the reader must be programmed to match the keys stored on the Smart Card, or it will not be able to read the Smart Card).

A template allows you to change the keys stored on the card, so that you can customize the level of security enforced by the Smart Card.

There are several default templates available to simplify programming and enrollment for Smart Cards. These templates appear in the Available list and have names beginning with "\$SWH".

### NOTE

You cannot change a default template, but you can create a copy of it if you want to change some of the settings. If you try to edit a default template, you will get a message that says: "Can't make changes to a default template." If you click **OK**, the Template Configuration dialog box appears. You can save a copy of the default template by changing the name of the template and clicking **OK** to save it as a new template. You can then select it from the list of templates and edit it.

If you are programming or enrolling a blank MIFARE card, you are likely to need a template that reads the default transport read and write keys that are programmed into blank MIFARE cards. You are also likely to want to reprogram the card to use MIFARE read and write keys, either default MIFARE keys or custom MIFARE keys. If you choose to use custom keys, you will also need to ensure that your card readers are programmed to use the custom keys, or the card readers will be unable to read your Smart Cards.

See [MIFARE Template Configuration Definitions](#) on [Page 118](#) for more information about the fields and buttons on the MIFARE Configuration dialog box.

## MIFARE Template Configuration Tasks

You can perform the following tasks to configure MIFARE Smart Card templates:

- [Create a New MIFARE Template](#) on [Page 107](#).
- [Enroll a Blank MIFARE Smart Card](#) on [Page 107](#).
- [Program a Smart Card Using Default MIFARE Read and Write Keys](#) on [Page 108](#).
- [Enroll a Smart Card Using Default MIFARE Keys](#) on [Page 109](#).
- [Program a Smart Card Using Custom MIFARE Read and Write Keys](#) on [Page 110](#).

## Create a New MIFARE Template

These steps explain how to create a new basic MIFARE template. These steps are the same for each of the MIFARE Template tasks shown later.

---

### To Create a New MIFARE Template

1. Navigate to the Smart Card Device Configuration dialog box.
2. Click **New Template** to create a new template. The Smart Card Template dialog box appears.
3. Choose **MIFARE** and click **OK**. The MIFARE Configuration dialog box opens.
4. Enter a descriptive name for the template in the **Name** field. This name should give enough information about the template so that a user can correctly choose the template from a list of templates when programming or enrolling a Smart Card.
5. You can continue to make further changes, or you can click **OK** to save the template and go back to the Smart Card Device Configuration dialog box.

## Enroll a Blank MIFARE Smart Card

Typically, a blank Smart card uses the default transport key for read and write, and has a Card Serial Number that you might want to enroll in the Personnel database.

### To Configure a Template to Enroll a Blank MIFARE Smart Card

1. [Create a New MIFARE Template on Page 107.](#)
2. To display a form that allows you to confirm the data when you are programming/enrolling the card, select **Confirm Programming/Enrollment Data**.
3. Because this is a blank MIFARE card, you should be able to read and write data from/to the card using the default transport keys, so you should not need to change the **Read Key** and **Write Key** fields from their default value (\$Default Transport Key).
4. Choose the field in the Personnel database to which you want to enroll the Card Serial Number from the **Enroll to** field drop-down list.
5. Click **OK** to save the template.
6. Select the template you just created from the Available list and click **Add** to add the template to the Selected list.
7. Click **OK** to save the Smart Card Device Configuration. When you attempt to enroll the Smart Card, use this template (if your Smart Card device has more than one template configured, you can choose this template from a drop-down list).

### Program a Smart Card Using Default MIFARE Read and Write Keys

If you are going to program additional data to a smart card, you should consider changing the Smart Card Keys on the card from the default transport keys. To implement better card security than that provided by the default transport keys, you can program your cards to use the default MIFARE read and write keys. To do this you need to set a New Read Key and New Write Key for each sector to which you wish to write data.

### To Configure a Template to Program a Smart Card Using Default MIFARE Read and Write Keys

1. [Create a New MIFARE Template on Page 107.](#)
2. To change the MIFARE Application Directory from the Default Transport Key to MIFARE Keys, Select **Program MAD Read and Write Keys**. When you select this, the **New Read Key** and **New Write Key** fields become available.
3. Change the **New Read Key** to MIFARE by choosing **Default MIFARE Read Key** from the drop-down list.
4. Change the **New Write Key** to MIFARE by Choosing **Default MIFARE Write Key** from the drop-down list.
5. If you wish to program data to a sector on the card, select that sector from the Sectors table by clicking in the Enabled check box  for that sector's row in the table.
6. Type in a descriptive name in the **Sector Label** field in the Details box. That name then appears in the Sector Label field for that sector in the Sectors table.
7. If your application has an AID value, type that number into the **AID Value** field.
8. If you want that AID value to be programmed into the MIFARE Application Directory (MAD), select the **Program AID to MAD** check box.
9. To change the keys for this sector, select the Program Sector Read and Write Keys check box. When you select this, the New Read Key and New Write Key fields for this sector become available.
10. Change the **New Read Key** to MIFARE by choosing **Default MIFARE Read Key** from the drop-down list.

11. Change the **New Write Key** to MIFARE by Choosing **Default MIFARE Write Key** from the drop-down list.
12. Select the data you wish to write to this Sector by picking a Card Format or a Personnel Database field from the **Field or Format** drop-down list for the block you wish to write to.
13. For that block, select an Operation from the **Operation** drop-down list. You can select **Program ASCII** if you are programming a text field or **Program Hex** if you are programming an integer field.
14. If needed, repeat Steps 12 and 13 for each block.
15. If needed, repeat Steps 5 through 14 for each sector you wish to program.
16. Click **OK** to save the MIFARE Template.

## Enroll a Smart Card Using Default MIFARE Keys

If you have purchased or programmed a Smart Card to use default MIFARE Keys, you can create a template that will let you enroll data from that card.

### To Configure a Template to Enroll a Smart Card Using default MIFARE Keys

1. [Create a New MIFARE Template](#) on [Page 107](#).
2. To display a form that allows you to confirm the data when you are programming/enrolling the card, select **Confirm Programming/Enrollment Data**.
3. If you want to enroll the Card Serial Number to a field in the Personnel database, choose the field in the Personnel database to which you want to enroll the Card Serial Number from the **Enroll to** field drop-down list.
4. Select **\$Default MIFARE Read Key** from the drop-down list in the **Read Key** field.
5. Select **\$Default MIFARE Write Key** from the drop-down list in the **Write Key** field.
6. If you want to enroll additional data from the Smart Card to the Personnel database, choose the sector on the card that contains the data you want to enroll by selecting () the **Enabled** check box for that sector in the Sectors table.
7. Select the sector you wish to read in the Sectors table, change the values in the Data section for Block 0, Block 1, and Block 2 **Field or Format** to specify the destination for the data you expect to read from the card.

#### Example:

If Block 1 of Sector 2 contains data that you want to enroll in the Text1 field in the Personnel database, choose **Text1** from the drop-down list under Field or Format.

#### Example:

If Block 2 of Sector 2 contains data that you want to enroll in the fields that represent the Wiegand 26 card format, choose **Wiegand 26** from the drop-down list.

8. For each Block for which you specified a Field or Format, choose an Operation. If you are enrolling alphanumeric data, such as a text field, choose **Enroll ASCII**.
9. Change the Read Key field for this sector to \$Default MIFARE Read Key and Write Key fields for the Sectors from their default value (\$Default Transport Key).
10. Repeat Steps 6 through 9 for each sector from which you wish to enroll data.
11. Click **OK** to save the new Smart Card template.

- The template will now be listed in the Available column so that you can select it and click Add to add it to the Smart Card device.

## Program a Smart Card Using Custom MIFARE Read and Write Keys

To implement the highest level of security, you can program your cards to use custom MIFARE read and write keys. You create custom keys in the C•CURE 9000 Administration Application using **Card Formats and Keys>Smart Card Key** from the menus. See the Administration Application help for more information.

### To Configure a Template to Program a Smart Card Using Custom MIFARE Read and Write Keys

- Create a New MIFARE Template on Page 107.
- To change the MIFARE Application Directory from the Default Transport Key to custom MIFARE Keys, select **Program MAD Read and Write Keys**. When you select this, the **New Read Key** and **New Write Key** fields become available.
- Change the **New Read Key** to your custom key by choosing your custom key from the drop-down list.
- Change the **New Write Key** to your custom key by choosing your custom key from the drop-down list.
- If you wish to program data to a sector on the card, select that sector from the Sectors table by clicking in the Enabled check box  for that sector's row in the table.
- Type in a descriptive name in the **Sector Label** field in the Details box. That name then appears in the Sector Label field for that sector in the Sectors table.
- If your application has an AID value, type that number into the AID Value field. (The registered AID for Software House is 5120.)
- If you want that AID value to be programmed into the MIFARE Application Directory (MAD), select the **Program AID to MAD** check box.
- To change the keys for this sector, select the Program Sector Read and Write Keys check box. When you select this, the New Read Key and New Write Key fields for this sector become available.
- Change the **New Read Key** to your custom key by choosing your custom key from the drop-down list.
- Change the **New Write Key** to M your custom key by choosing your custom key from the drop-down list.
- Select the data you wish to write to this Sector by picking a Card Format or a Personnel Database field from the **Field or Format** drop-down list for the block you wish to write to.
- For that block, select an Operation from the **Operation** drop-down list. You can select either **Program ASCII** or **Program Hex**, depending on the nature of the data you plan to write to the card.
- If needed, repeat Steps 12 and 13 for each block.
- If needed, repeat Steps 5 through 14 for each sector you wish to program.
- Click **OK** to save the MIFARE Template.

## Smart Card Keys

C•CURE ID provides the ability to define Smart Card Keys for MIFARE Smart Cards.

MIFARE Smart Card Keys are six byte (48-Bit) values used to secure sectors on the card. There is one key for reading and one key for writing per sector. The keys can be the same value if desired, but for security reasons, they are typically assigned different values.

The Smart Card Keys are used when you are reading data from MIFARE Smart Cards and programming MIFARE Smart Cards.

- To read data from a MIFARE Smart Card, a device must know the Read Key that is on the Smart Card, or the read attempt is rejected.
- To program (write data to) the Smart Card, the device must know the Write Key.

Each sector on the Smart Card can have a different Read Key and Write Key.

In addition, you must program your Smart Card readers with the Read key that you used on the cards, so that your Smart Card readers can read the data that you program onto the Smart Cards.

You define Smart Card Keys using the Smart Card Key editor.

You can access the Smart Card Key editor from the **Card Formats and Keys** pane in the Administration Client application.

See **Smart Card Keys** help for more information about Smart Card Keys.

### Smart Card Key Configuration

Use **Card Formats and Keys>Smart Card Key** from the C•CURE 9000 Administration Client to create, edit, and specify Smart Card keys. A Smart Card key is used to securely read and write data to a Smart Card, and also to program Smart Card readers to read cards that are encoded with this Smart Card key.

### Smart Card Key Tasks

You can perform the following tasks from the Smart Card Key dialog box.

- [Accessing the Smart Card Key Dialog Box on Page 112.](#)
- [Creating a Smart Card Key on Page 112.](#)
- [Editing a Smart Card Key on Page 114.](#)

For more information on Smart Card Keys, see:

- [Smart Card Keys on Page 111.](#)
- [Smart Card Key Definitions on Page 116.](#)

## Accessing the Smart Card Key Dialog Box

### To Access the Smart Card Key Dialog Box

You can access the Smart Card Key Editor from the **Card Formats and Keys** pane of the C•CURE 9000 Administration Client.

1. Choose **Card Formats and Keys>Smart Card Key** from the Navigation pane, and click . A Dynamic View showing a list of existing Smart Card Keys box opens.
2. Select a Smart Card Key from the selection list, then right-click and choose **Edit** from the context menu to edit an existing Smart Card Key, or click **New** to create a new Smart Card Key. The Smart Card Key dialog box opens.

## Creating a Smart Card Key

You can create custom Smart Card Keys that can be used to read and write Smart Card data to MIFARE Smart Cards. Custom keys provided additional security over default keys because you can make them unique to your site. However, they add complexity because you have to program your Smart Card readers to read your custom keys, and if you decide to change custom keys, you will need to re-program your readers and re-issue cards with the new custom keys.

After you create a Smart Card Key file with a custom key, you can add the Smart Card Key file to a template for enrolling and programming MIFARE Smart Cards in **Options>Badge Setup**.

1. Choose **Card Formats and Keys>Smart Card Key** from the Administration Application menu.
2. Click **New** on the Card Format and Keys pane. The Smart Card Key dialog box opens.
3. On the Smart Card Key dialog box, type a name for the Smart Card Key in the **Name** field.
4. Type a description that describes the Smart Card Key in the **Description** field.
5. If you want to use an existing Smart Card Key file (the file that defines the read and write key values) for this Smart Card Key, select the file name from the **Smart card key file name** field and click **Edit File**. The Smart Card Key dialog box opens and you can edit the Smart Card Key.
6. Alternatively, if you want to create a new Smart Card Key, type a name for the Smart Card Key into the **Smart card key file name** field and click **New File**. The Smart Card Key file dialog box opens and you can create a new Smart Card Key.
7. On the Smart Card Key dialog box, you can type in a new key value in the **Key Value** field, then retype it in the **Confirm Key Value** field.
8. Alternatively, if you want to create a random key, you can click **Generate Random Key**, and a 12 hex character random key is inserted into the **Key Value** and **Confirm Key Value** fields.
9. Whether you type in or generate a random key, you should write this key down and save it in a secure location. When you save the key, the key will be encrypted, and you will not be able to read it.
10. If you want to export the encrypted key to a file for later use (for example, to buy programmed cards from Software House), click **Export Key**. A **Save as** dialog appears to let you save the encrypted key as a file with a

.doc extension. Note that this is not a Word document, and it should not be opened with a word processing editor.

11. Click **OK** to save the Smart Card Key file. If you have changed the Smart Card Key value, a confirmation dialog box appears to confirm the change.



If you have modified an existing Key, the system displays the following message

**“Are you sure you want to overwrite this key? Loss of a key could result in reissuing all of the cards in the system along with programming all of the readers.”**

This means that if you change the Key value and use it to program one or more Smart Cards, your Smart Card readers will need to be re-programmed to accept a card with the new key. If you re-program the readers, any cards you have issued using the previous key will need to be re-issued as well.

12. Select **Confirm file over write operation** and click **Continue** to save the changes. The key file is encrypted and saved, and the Smart Card Key dialog box re-opens.
13. Click **OK** to save your Smart Card Key, or **Cancel** to discard ALL changes (even if you have saved changes to a Smart Card Key, clicking **Cancel** signifies that you want to discard them).

## Editing a Smart Card Key

You can create custom Smart Card Keys that can be used to read and write Smart Card data to MIFARE Smart Cards. Custom keys provided additional security over default keys because you can make them unique to your site. However, they add complexity because you have to program your Smart Card readers to read your custom keys, and if you decide to change custom keys, you will need to re-program your readers and re-issue cards with the new custom keys.

After you create a Smart Card Key file with a custom key, you can add the Smart Card Key file to a template for enrolling and programming MIFARE Smart Cards in **Options>Badge Setup**.

1. Choose **Card Formats and Keys>Smart Card Key** from the Administration Application menu.
2. Click **New** on the Card Format and Keys pane. The Smart Card Key dialog box opens.
3. On the Smart Card Key dialog box, edit the name for the Smart Card Key in the **Name** field.
4. Make any changes needed to the description that describes the Smart Card Key in the **Description** field.
5. If you want to use a different Smart Card Key file for this Smart Card Key, select the file name from the **Smart card key file name** field and click **Edit File**. The Smart Card Key file dialog box opens and you can edit the Smart Card Key.
6. Alternatively, if you want to create a new Smart Card Key file, type a name for the Smart Card Key file into the **Smart card key file name** field and click **New File**. The Smart Card Key dialog box opens and you can create a new Smart Card Key.
7. On the Smart Card Key dialog box, you can type a new key value into the **Key Value** field, then retype it in the **Confirm Key Value** field.

### NOTE

You will not be able to see the existing Key Value. The Key Value is represented by asterisks (\*\*\*\*\*).

8. Alternatively, if you want to create a random key, you can click **Generate Random Key**, and a 12 hex character random key is inserted into the **Key Value** and **Confirm Key Value** fields.
9. Whether you type in or generate a random key, you should write this key and save it in a secure location. When you save the key, the key will be encrypted, and you will not be able to read it.
10. If you want to export the encrypted key to a file for later use (for example, to buy programmed cards from Software House), click **Export Key**. A **Save as** dialog appears to let you save the encrypted key as a file with a .doc extension. Note that this is not a Word document, and it should not be opened with a word processing editor.
11. Click **OK** to save the Smart Card Key file. If you have changed the Smart Card Key value, a confirmation dialog box appears to confirm the change.



If you have modified an existing Key, the system displays the following message

**“Are you sure you want to overwrite this key? Loss of a key could result in reissuing all of the cards in the system along with programming all of the readers.”**

This means that if you change the Key value and use it to program one or more Smart Cards, your Smart Card readers will need to be re-programmed to accept a card with the new key. If you re-program the readers, any cards you have issued using the previous key will need to be re-issued as well.

12. Select **Confirm file over write operation** and click **Continue** to save the changes. The key file is encrypted and saved, and the Smart Card Key dialog box re-opens.
13. Click **OK** to save your Smart Card Key, or **Cancel** to discard ALL changes (even if you have saved changes to a Smart Card Key, clicking **Cancel** signifies that you want to discard them).

## Smart Card Key Definitions

The following fields and buttons appear on the Smart Card Key dialog boxes.

### Smart Card Key Dialog Box

Table 26 on Page 116 provides definitions for the fields and buttons on the Smart Card Key dialog box.

**Table 26:** Smart Card Key Definitions

Field/Button	Description
Name	Enter a name for the Smart Card Key. The name can be from 1-50 characters, and is validated as a unique name by C•CURE 9000 .
Description	Enter a textual description of the Smart Card Key. The description can be from 1 to 3000 characters.
Smart card key file name	This drop-down list will be populated with all ".SWK" files in the database . Key files are unique per C•CURE 9000 System.
Edit File	Click this button to open the Key Configuration dialog box to edit the key file.
New File	Click this button to open the New Key file dialog box, so that you can create a new key file.
OK	Click <b>OK</b> to save your edits to the Smart Card Key.
Cancel	Click <b>Cancel</b> to discard any edits you have made to the Smart Card Key.

### New Key File Dialog Box

Table 27 on Page 116 provides definitions for the fields and buttons on the New Key File dialog box.

**Table 27:** Smart Card Key Definitions

Field/Button	Description
New File Name	You can enter a name for the Smart Card Key file. The name must be from 1-50 characters. The name is validated as a unique name by C•CURE 9000 .
OK	Click <b>OK</b> to save your edits to the Smart Card Key file.
Cancel	Click <b>Cancel</b> to discard any edits you have made to the Smart Card Key file.

## Smart Card Key Configuration Dialog Box



This dialog box displays the following recommendation:

**It is recommended that you save this HEX key value in an external source. This data is not stored in the database, and the loss of this key could result in reissuing all of the cards in the system along with reprogramming all of the readers.**

The key value in C•CURE 9000 is encrypted. You should save an unencrypted copy of the HEX key value in a secure location so that you can reproduce it if needed, and so that you can use it to program Smart Card readers to read the cards you program.

You can use the **Export Key** button to save the Key value in a file with the extension .doc – this is not a Microsoft Word document file, it is a text file with encrypted data. Do not open it with a word processor like Word. This .doc file is used if you order pre-programmed cards from Software House, or if you order program cards from Software House to program your Smart Card readers.

Table 28 on Page 117 provides definitions for the fields and buttons on the Smart Card Key dialog box.

**Table 28:** Smart Card Key Definitions

Field/Button	Description
Key Value (12 Hex characters)	This is a 6 Byte Value (12 Hex Digits: '0'-'9', 'A'-'F') that you can type in to create a new Smart Card Key. When you edit an existing Smart Card Key, this field will only show "asterisks" like a password field.
Confirm Key Value	This is a 6 Byte Value (12 Hex Digits: '0'-'9', 'A'-'F'), that must match the key in <b>Key Value</b> , otherwise any changes in the key value will not be saved when you click <b>OK</b> . When you click <b>Generate Random Key</b> , matching keys are generated and inserted into both the <b>Key Value</b> and <b>Confirm Key Value</b> fields.
Generate Random Key	Click this button to have the system generate a random number key value. The Random key value is displayed in the <b>Key Value</b> and <b>Confirm Key Value</b> fields. Click <b>OK</b> to save this random key value.
Export Key	This button will export a key to a ".DOC" format that can be used to order a program card to program smart card readers, or to order pre-programmed smart cards from Software House. When you click <b>Export Key</b> , a prompt appears asking for the path where you want to save the key file. type in the path and click <b>OK</b> .
Destination File	This read-only field displays the location that the export key .doc file will be written to. The file is named by the Smart Card key name that you typed in to create the key.
OK	Click <b>OK</b> to accept the Key value. If you have modified an existing Key, the system displays the following message <b>"Are you sure you want to overwrite this key? Loss of a key could result in reissuing all of the cards in the system along with programming all of the readers."</b>  This means that if you change the Key value and use it to program one or more Smart Cards, your Smart Card readers will need to be re-programmed to accept a card with the new key. If you re-program the readers, any cards you have issued using the previous key will need to be re-issued as well.  When the Smart Card Key dialog box reappears, you must click <b>OK</b> to save the Smart Card Key File. If you click <b>Cancel</b> from the Smart Card Key dialog box, the changes you made to the Smart Card key file will not be saved.
Cancel	Click <b>Cancel</b> to discard any changes that you have made, or to cancel creating a Key file.

## MIFARE Template Configuration Definitions

The following fields and buttons appear on the MIFARE Configuration dialog box.

**Table 29:** MIFARE Template Configuration Definitions

Field or Button	Description
Name	Enter a valid object name for the template. The name of the Smart Card Template must be from 1–200 characters. Consider including "MIFARE" in the name to help you identify the template later.
Confirm Programming/Enrollment Data	If this check box is selected, a prompt is displayed during the Enrollment/Programming to confirm the Data before programming or enrollment actually takes place. The user can cancel the programming and enrollment from the Data Confirmation Screen. If this box is cleared, programming and enrollment happen automatically without confirmation. The default setting is cleared.
Enroll to	Select a Personnel database field from the drop-down list. The Card Serial Number (CSN) is enrolled into the field you select when the Program/Enroll button is clicked on the Badging tab of a Personnel record.

## MIFARE Application Directory (MAD) Definitions

The MAD defines the data structures for application identifier entries on the card, allowing a reader to identify the card and the correct memory sector within the card without needing to perform a search through the memory of each card passed in proximity (if multiple applications are using the same MIFARE card) until the appropriate application is found.

If a person carries a MIFARE smart card for both access control to an office and for public transport fare collection, a reader needs to identify which sector is being used for each application. When the cardholder wants to enter the office, the reader identifies the office access sector by checking the MAD for the registered Application Identifier (AID) instead of reading the entire card. The AIDs are stored in sector 0x00 (and sector 0x10 if applicable) of the card's memory, and enables identification of all registered card applications. The reader can thus use the sector pointers in the AID instead of physical sector addresses.

**Table 30:** MIFARE Application Directory (MAD) Definitions

Field or Button	Description
Read Key	The current key on the card that is needed to read the MIFARE Application Directory (MAD). The drop-down list contains all keys on the system and each of the Default Keys. The default value is \$Default Transport Key (value FFFFFFFFFF).
Write Key	The current key on the card that is needed to write to the MIFARE Application Directory (MAD). The drop-down list contains all keys on the system and each of the Default Keys. The default value is \$Default Transport Key (value FFFFFFFFFF).
New Read Key	The key that will be programmed to the MAD if the <b>Program MAD Read and Write Keys</b> check box is selected. This key is used to change the value of the Read Key on cards that have already been programmed. If the <b>Program MAD Read and Write Key</b> check box is cleared, this field is unavailable. The default value is \$Default Mifare Read Key (value A0A1A2A3A4A5). The MIFARE Default Read Key is typically used by ALL Mifare cards. This enables all readers to at least reference the AIDs, even if you are using Custom keys.
New Write Key	The key that will be programmed to the MAD if the <b>Program MAD Read and Write Keys</b> check box is selected. This key is used to change the value of the Write Key on cards that have already been programmed. If the <b>Program MAD Read and Write Key</b> check box is cleared, this field is unavailable. The default value is \$Default Mifare Write Key (value B0B1B2B3B4B5).

## MIFARE Application Directory (MAD) Definitions (continued)

Field or Button	Description
Program MAD Read and Write Keys	If this check box is selected, the Template will program the <b>New Read Key</b> and the <b>New Write Key</b> to the MAD. If the <b>New Read Key</b> and the <b>New Write Key</b> are custom keys that you created, rather than default keys, only readers you have programmed with this read key can read a card programmed with the custom key, and can prevent others from reading or writing to the MAD. This check box is cleared by default.

## Sectors Definitions

The following fields appear on the MIFARE Configuration dialog box in the Sectors area of the dialog box.

**Table 31:** Sectors Definitions

Field	Description
Sector Number (1 - 15)	This table lists the sectors (1 through 15) that you can program on a card. When you click on a sector name (such as Sector 4) the Sector Details, Keys, and Data sections of the dialog box become selected for that sector. If you select the <b>Enabled</b> check box, you can modify these values. This table lists the sectors (1 through 15) that you can program on a card. When you click on a sector name (such as Sector 4) the Sector Details, Keys, and Data sections of the dialog box become selected for that sector. If you select the <b>Enabled</b> check box, you can modify these values.
Enabled	If this check box is selected for a sector number, Sector Details, Keys, and Data sections become editable, and you can change the settings for these fields.
Sector Label	This field in the table lists the sector name you have given the sector in the Details section.

## Details Definitions

The following fields appear on the MIFARE Configuration dialog box in the Details area of the dialog box.

**Table 32:** Details Definitions

Field	Description
Sector Label	You can create a Sector Label for each sector. If you type in a Sector Label here, it is assigned to the <b>Sector Label</b> in the Sector table.
AID Value	The Registered Application Identifier (AID) value you want to associate with the Sector. This field is only needed if Programming AID to MAD. The MAD uses registered AIDs in Sector zero of the card's memory to enable identification of all registered card applications. The Software House registered AID is 5120.
Program AID to MAD	If this value is checked, the AID Value is written to the MAD during card programming. The template must have the proper <b>Write Key</b> value in the MIFARE Application Directory (MAD) or the AID value will not be programmed to the MAD.

## Keys Definitions

The following fields appear on the MIFARE Configuration dialog box in the Keys area of the dialog box.

**Table 33:** Keys Definitions

Field	Description
Read Key	Represents the current read key on the card that is used to read the Sector. You need to set this value to match the read key that is currently on this sector of the card(s) you want to program/enroll, or your device will not be able to read the sector. The default value is \$Default Transport Key.
Write Key	Represents the current write key on the card that is used to write to the Sector. You need to set this value to match the write key that is currently on this sector of the card(s) you want to program/enroll, or your device will not be able to write to the sector. The default value is \$Default Transport Key.
New Read Key	The New Key that will be programmed to the Read Block on the sector if the <b>Program Sector Read and Write Keys</b> check box is selected. This key is used to change the value of the Read Key on cards that have already been programmed. If the <b>Program Sector Read and Write Key</b> check box is cleared, this field is unavailable. The default value is \$Default Mifare Read Key (value A0A1A2A3A4A5).
New Write Key	The key that will be programmed to the Write block on the sector if the <b>Program Sector Read and Write Keys</b> check box is selected. This key is used to change the value of the Write Key on cards that have already been programmed. If the <b>Program Sector Read and Write Key</b> check box is cleared, this field is unavailable. The default value is \$Default Mifare Write Key (value B0B1B2B3B4B5).
Program Sector Read and Write Keys	If this check box is selected, the Template will program the <b>New Read Key</b> and the <b>New Write Key</b> to the Sector. If the <b>New Read Key</b> and the <b>New Write Key</b> are custom keys that you created, rather than default keys, only readers you have programmed with this read key can read a card programmed with the custom key, and can prevent others from reading or writing to the Sector. This check box is cleared by default.

## Data Definitions

The following fields appear on the MIFARE Configuration dialog box in the Data area of the dialog box.

**Table 34:** Data Definitions

Field	Description
Block 0, Block 1, Block 2	For each of Block 0, Block 1, and Block 2, you can select a field/format and the operation to be performed. <b>Example:</b> Select <b>Int1</b> for Block 0, and the Operation <b>Program Hex</b> to have a card sector Block 0 programmed with the data from the Int1 field.

Data Definitions (continued)

Field	Description
Field or Format	<p>You can choose a Personnel database field or a card format for the selected block from the drop-down list. your selection will be the subject of the Operation you select in the <b>Operation</b> field for this sector. You can choose one of the following:</p> <ul style="list-style-type: none"> <li>• none – this is the default selection</li> <li>• Personnel Database Fields – you can choose a Personnel database field from the drop-down list.</li> <li>• MIFARE Serial Number (32 bits)</li> <li>• Smart Card Serial Number (64-bits)</li> <li>• Simplex Wiegand 36</li> <li>• Simplex Wiegand 26</li> <li>• HID Keypad</li> <li>• HID Simplex Grinnel 36</li> </ul> <p>The drop-down list also includes Card Formats that you have defined.</p>
Operation	<p>You can choose the Operation to perform on the selected block. You can choose one of the following operations:</p> <p><b>none</b> – this is the default selection. No operation to perform.</p> <p><b>Enroll ASCII</b> – Enroll the Data in ASCII from this Block into the Personnel Field/Format. If the Field is a Card Format, the data will be parsed and put into the fields specified by the Card Format.</p> <p><b>Enroll Hex</b> – Enroll the Data in Hex from this Block into the Personnel Field/Format. If the Field is a Card Format, the data will be parsed and put into the fields specified by the Card Format.</p> <p><b>Program ASCII</b> – Program the Field data in ASCII to the specified block. If the field is a Card Format, the card fields will be assembled based on the Personnel Card data and written to the block.</p> <p><b>Program Hex</b> – Program the Field data in Hex to the specified block. If the field is a Card Format, the card fields will be assembled based on the Personnel Card data and written to the block.</p>
Smart Frame	<p>If you are using Software House readers, you can select Smart Frame. SmartFrame is a method of encoding the data on the card that defines the number of bits to be sent out by the Software House reader. This can be useful in emulating prox card formats (card number, facility code, etc.). It also adds a layer of data integrity by providing checksum information to the reader. It is a proprietary technology only supported on the Software House readers.</p> <p>If you choose to encode data in SmartFrame, be sure your Software House readers have been programmed to read SmartFrame. Contact Software House Applications Engineering for the appropriate program cards for your reader.</p> <p>If this box is not checked, then Passthrough mode is used (the data or block will be padded with zeros).</p>
PIN	<p>Select this check box if the field you selected for Block 1 contains a PIN value. Formatting is added so that a Software House reader can read the PIN.</p>
OK	<p>Click <b>OK</b> to save your changes to the MIFARE Configuration.</p>
Cancel	<p>Click <b>Cancel</b> to discard any changes you have made to the MIFARE Configuration.</p>



## Designing a Badge

This chapter describes how to design a badge layout with the C•CURE ID Badge Designer.

In this chapter

The Badge Designer .....	124
Using the Badge Designer .....	132
Sample Data .....	136
The Badge Layout Panel .....	138
Setting Front-to-Back Order for Objects .....	148
The Badge Layout Properties Panel .....	151
The Image Properties Panel .....	166
The Portrait Properties Panel .....	175
The Signature Properties Panel .....	178
The Text Properties Panel .....	180
The Barcode Properties Panel .....	187
Barcode Overview .....	189
Expression Builder .....	196
Sample Expressions .....	207

## The Badge Designer

The C•CURE ID Badge Designer lets you create and edit badge designs.

The [Badge Designer Panels](#) on [Page 124](#) provide the tools that you use to design your badge layout.

You can add color, images and text to your badge layout, and specify how you want the information on the badge to appear. You can also specify the card formats for magnetic stripe encoding, if your badge design includes magnetic tracks (see [Mag Encoding Tab](#) on [Page 154](#) for more information).

You can include information that changes for each badge, such as the person's name (see [Adding Dynamic Text to a Badge](#) on [Page 141](#)) and individual portrait (see [Adding a Portrait to a Badge](#) on [Page 144](#)), or information that remains the same for all badges, such as a company name or logo.

A badge layout has a unique name in C•CURE 9000, and has a badge layout object associated with it. A badge layout object contains all the badge design settings, and it can be assigned to multiple badge layouts.

To create a new Badge Layout using the C•CURE ID Badge Designer, see [Creating a Badge Layout](#) on [Page 132](#).

To edit an existing Badge Layout using the C•CURE ID Badge Designer, see [Editing an Existing Badge Layout](#) on [Page 133](#).

[Using the Badge Designer](#) on [Page 132](#) provides a list of the tasks you can perform to create badge layouts.

### The Badge Designer Panels

The Badge Designer is made up of seven panels, two of which are displayed at a time:

- **The Badge Layout panel** – This panel, which is always displayed, provides a visual palette for adding and arranging objects on the badge, such as images, signatures, text, and barcodes. When a particular type of object is selected by clicking it, the appropriate Properties panel becomes active and you can edit the object's properties. See [The Badge Layout Panel](#) on [Page 138](#).
- **The Badge Layout Properties panel** – This panel is displayed when you select the badge background rather than an object on the badge layout. It lets you configure the properties of the badge itself. See [The Badge Layout Properties Panel](#) on [Page 151](#).
- **The Image Properties panel** – This panel is displayed when you select an image object on the badge layout. It lets you configure the properties of an image or graphic that you placed on the badge. See [The Image Properties Panel](#) on [Page 166](#).
- **The Portrait Properties panel** – This panel is displayed when you select a portrait object on the badge layout. It lets you configure the properties of a portrait that you placed on the badge. See [The Portrait Properties Panel](#) on [Page 175](#).
- **The Signature Properties panel** – This panel is displayed when you select a signature object on the badge layout. It lets you configure the properties of a signature that you placed on the badge. See [The Signature Properties Panel](#) on [Page 178](#).
- **The Text Properties panel** – This panel is displayed when you select a Text object on the badge layout. It lets you configure the properties of a text object that you placed on the badge. See [The Text Properties Panel](#) on [Page 180](#).

- **The Barcode Properties panel** – This panel is displayed when you select a barcode object on the badge layout. It lets you configure the properties of a barcode object that you placed on the badge. See [The Barcode Properties Panel](#) on [Page 187](#).

## Accessing the Badge Designer

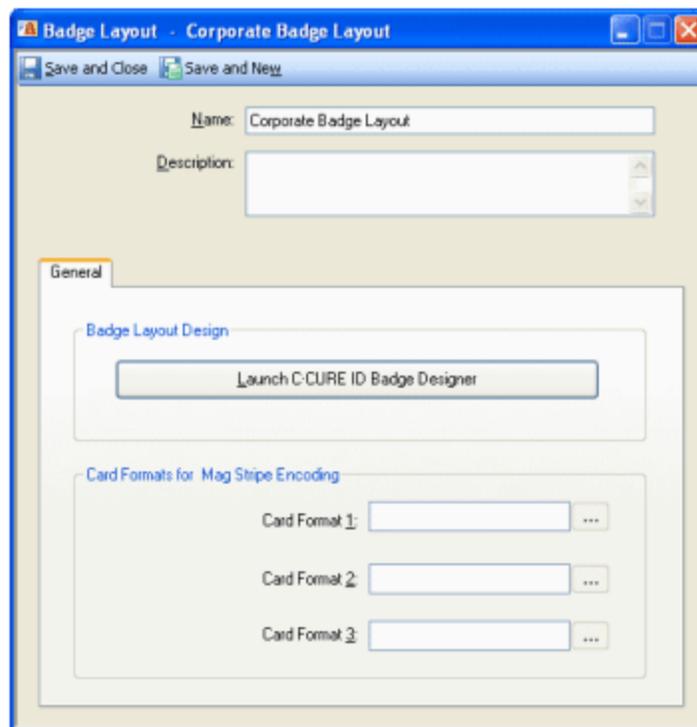
You access the C•CURE ID Badge Designer to create a new badge layout file, or to edit an existing badge layout file.

### To Access the C•CURE ID Badge Designer

1. Choose **Personnel > Badge Layout** from the C•CURE 9000 Administration Client Navigation pane.
  - To edit an existing Badge Layout, click  to open the Dynamic View listing all Badge Layouts and double-click the Badge Layout you wish to edit.
  - To create a new Badge Layout, click **New**.

The Badge Layout Editor appears.

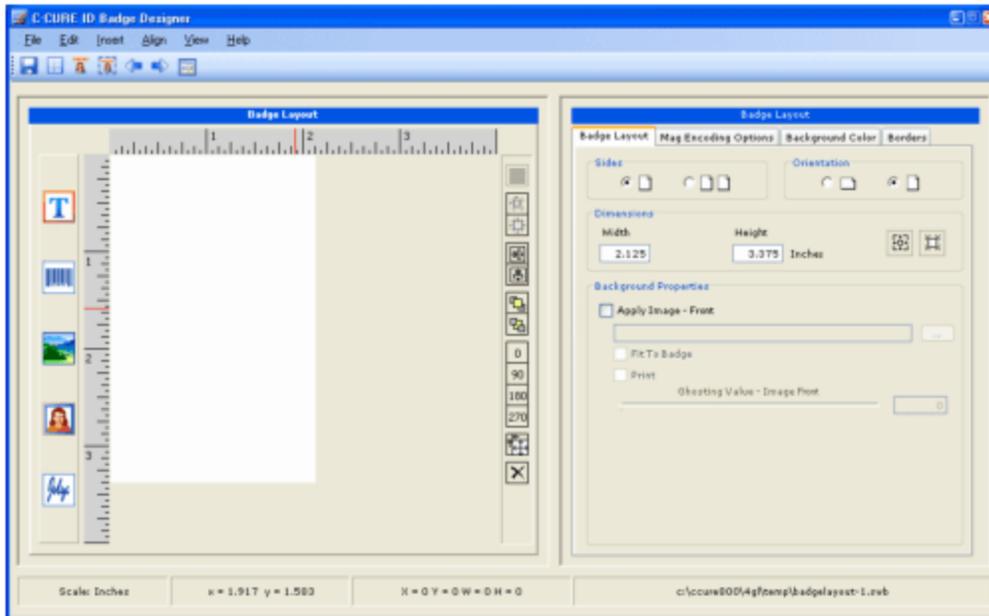
**Figure 23:** Badge Layout Editor



2. If you are creating a new badge layout, type a name for the badge layout in the **Name** field.
3. Click **Launch C•CURE ID Badge Designer**.

The C•CURE ID Badge Designer, shown in [Figure 24](#) on [Page 126](#), appears.

Figure 24: C•CURE ID Badge Designer



## Badge Designer Menus and Toolbars

The C•CURE ID Badge Designer includes the following menus and toolbars:

- [Badge Designer Menus on Page 126](#)
- [Context \(Right-Click\) Menu on Page 128](#)
- [Badge Designer Status Bar on Page 129](#)
- [Badge Designer Toolbar on Page 130](#)
- [Badge Layout Panel Toolbars on Page 139](#)

## Badge Designer Menus

The functions available from the C•CURE ID Badge Designer menus are listed in [Table 35 on Page 126](#).

Table 35: Badge Designer Menus

Menu Item	Description
<b>File Menu</b>	
Import	You can import badge layouts from C•CURE 800/8000 .swb or .bdg files, or C•CURE 9000.badge layouts that were exported to .swb files. When you select <b>Import</b> , a Windows file selection dialog box opens and you can select the badge layout file you wish to import. Click <b>Open</b> and the badge layout is opened in the Badge Designer. you can then edit the badge layout and save it when you close the Badge Designer. See <a href="#">Importing a Badge Layout on Page 133</a> .

## Badge Designer Menus (continued)

Menu Item	Description
Export	You can export badge layouts from C•CURE 800/8000 or C•CURE 9000 as .swb files that are suitable for importing to another C•CURE 800/8000 or C•CURE 9000 system.. When you select <b>Export</b> , a Windows Save As dialog box opens and you can select or type the badge layout filename you wish to export. Click <b>Save</b> and the badge layout is saved as a .swb file. See <a href="#">Exporting a Badge Layout</a> on <a href="#">Page 134</a> .
Exit	Closes the C•CURE ID Badge Designer and prompts you save changes if any edits have not been previously saved. See <a href="#">Exiting the Badge Designer</a> on <a href="#">Page 135</a> .
<b>Edit Menu</b>	
Cut	Removes the selected item from the layout, keeping a copy of it in paste memory.
Copy	Copies the selected item on the Badge Layout into paste memory.
Paste	Pastes the item in memory onto the current Badge Layout.
Delete	Deletes the selected item on the Badge Layout. Delete does not save the object in paste memory.
Bring to Front	Moves the selected item from the back of the Badge Layout to the front, placing it above all other items except for text. Text fields have a order of their own which is on top of all other object types.
Send to Back	Moves the selected item to the back of the Badge Layout, placing it behind all other items except text. Text fields have a back-to-front order of their own which is on top of all other object types.
Preferences	Launches the Grid Preferences dialog box. See <a href="#">Grid Preferences Dialog Box</a> on <a href="#">Page 130</a> .
Sample Data	Allows you to enter sample values for any of the fields in the Personnel database. When you add a field to the badge layout, the Sample Data for that field is displayed, to show you that field's appearance. See <a href="#">Sample Data</a> on <a href="#">Page 136</a> .
<b>Insert Menu</b>	
Barcode	Inserts a Barcode object on the Badge Layout Panel and displays the Barcode Properties Panel. See <a href="#">The Barcode Properties Panel</a> on <a href="#">Page 187</a> .
Image	Inserts an Image object on the Badge Layout Panel and displays the Image Properties Panel Properties for Images. See <a href="#">The Image Properties Panel</a> on <a href="#">Page 166</a> .
Portrait	inserts a Portrait object on the Badge Layout Panel and displays the Image Properties Panel Properties for Portraits. See <a href="#">The Portrait Properties Panel</a> on <a href="#">Page 175</a> .
Signature	Inserts a Signature object on the Badge Layout Panel and displays the Image Properties Panel Properties for Signatures. See <a href="#">The Signature Properties Panel</a> on <a href="#">Page 178</a> .
Text	Inserts a Text object on the Badge Layout Panel and displays the Text Properties Panel. See <a href="#">The Text Properties Panel</a> on <a href="#">Page 180</a> .
<b>Align Menu</b>	

## Badge Designer Menus (continued)

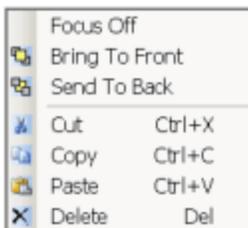
Menu Item	Description
Center Horizontal	Centers the currently selected control(s) in the Badge Layout Panel horizontally (left/right) relative to the badge layout.
Center Vertical	Centers the currently selected control(s) in the Badge Layout Panel vertically (up/down) relative to the badge layout.
Align to Grid	Moves the currently selected object in the Badge Layout Panel into alignment with the closest grid coordinates on the Badge Layout Panel. The grid must be visible for this function to work.
Size to Grid	Moves the currently selected object in the Badge Layout Panel into alignment with the closest grid points, and changes its size horizontally and vertically to align with the closest grid points on the Badge Layout Panel. The grid must be visible for this function to work.

Menu Item	Description
<b>View Menu</b>	
Badge Front	For badges with two sides, this menu selection, or the key combination CTRL + F, displays the Front of the badge.
Badge Back	For badges with two sides, this menu selection, or the key combination CTRL + B, displays the Back of the badge.
Scale – Inches	Changes the current scale for the Badge Layout into inches.
Scale – Centimeters	Changes the current scale for the Badge Layout into centimeters.
Next Control	Selects the next object on the badge. This menu choice is useful if you have overlapping objects and are finding it hard to select the one you want to edit.
Previous Control	Selects the previous object on the badge. This menu choice is useful if you have overlapping objects and are finding it hard to select the one you want to edit.
<b>Help Menu</b>	
About C•CURE ID Design	Launches the About C•CURE ID Design Dialog Box that describes the version of the product. <b>OK</b> – Closes the About dialog box
Help Contents	Displays the Table of Contents of the online Help.

### Context (Right-Click) Menu

When you click on an object in the Badge Layout panel to select it, you can then Right-click on the object to bring up a context menu (Figure 25 on Page 129) that provides the functions listed in Table 36 on Page 129.

**Figure 25:** Context Menu



**Table 36:** Context Menu Functions

Menu Item	Description
Focus Off	Removes focus from (de-selects) the currently selected object on the badge layout.
Bring to Front	Moves the selected item to the front of the Badge Design, changing the front-to-back order, and placing it above all other items, except for text. Text fields have a front-to-back order of their own on top of all other object types. See <a href="#">Setting Front-to-Back Order for Objects on Page 148</a> .
Send to Back	Moves the selected item to the back of the Badge Design, changing the front-to-back order, and placing it behind all other items except the badge background. The badge background is behind all other badge elements. See <a href="#">Setting Front-to-Back Order for Objects on Page 148</a> .
Cut	Removes the selected item from the Badge Design, keeping a copy of it in paste memory.
Copy	Copies the selected item on the Badge Design into paste memory.
Paste	Pastes the item in memory onto the current Badge Design.
Delete	Deletes the selected item on the Badge Design. <b>Delete</b> does not save the object in paste memory.

### Badge Designer Status Bar

The Badge Designer Status Bar is displayed at the bottom of the C•CURE ID Badge Designer, and shows information about the badge layout you are editing.

**Table 37:** Badge Designer Status Bar

Field	Description
Scale	Shows the scale currently in use: either Inches or Centimeters. Use the View menu to change the scale.
x = and y =	Shows the exact position of the mouse pointer, according to the scale in use. Red indicator lines are displayed on the X / Y rulers to help track the exact position of the mouse pointer within the badge layout.
X = Y = W = H =	Shows the pixel address of the object selected. If you move a selected object these values will change.

Badge Designer Status Bar (continued)

Field	Description
Badge Layout name	Shows the name of the badge layout currently being edited in the Badge Designer.

## Badge Designer Toolbar

The Badge Designer Toolbar provides quick access to several functions, such as viewing the back or front of the badge, and cycling among the objects on the badge layout.

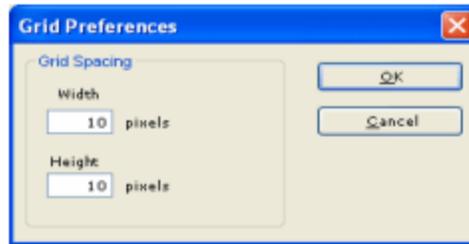
Table 38: Badge Designer Toolbar

Icon	Name	Description
	Edit Sample Data	Click this button to edit the sample field values in the Sample Data dialog box. See <a href="#">Sample Data</a> on <a href="#">Page 136</a> .
	Compose	Creates a single composite object from all of the objects on the badge layout.
	Decompose	Separates a composite object into separate objects, so that you can modify an individual object on the badge layout.
	Switch to Front of Badge/Switch to Back of Badge	This button is available only if you have specified the badge as two-sided. Click to toggle the Badge Layout view between the back and front of the badge.
	Select Badge Properties	Click this button to select the badge background and activate the Badge Properties Panel. This can be useful when there are multiple objects on the badge that substantially cover the background, so that it is difficult to find an empty space to click in.
	Previous Control	Select the next object on the badge. This button is useful if you have overlapping objects and you are finding it hard to select the one you want to edit.
	Next Control	Select the previous object on the badge. This button is useful if you have overlapping objects and you are finding it hard to select the one you want to edit.

## Grid Preferences Dialog Box

The Grid Preferences dialog box (see [Figure 26](#) on [Page 131](#)) lets you set the width and height (in pixels) of the space between the dots in the badge layout grid. You can type in a value for the height and width, then click **OK** to change the grid. Your change is only visible if the grid is toggled on using .

**Figure 26:** Grid Preferences Dialog Box



## Using the Badge Designer

You use the C•CURE ID Badge Designer to design a badge layout for your personnel badges. After you initially create a badge layout, the steps you take to complete your badge layout design depend upon the badge elements you decide to include on the design. The tasks outlined here provide you with instructions for adding these badge elements. See the sections listed below for instructions on performing Badge Layout design tasks.

- [Creating a Badge Layout on Page 132](#)
- [Editing an Existing Badge Layout on Page 133](#)
- [Saving Your Badge Layout on Page 135](#)
- [Configuring a Badge Layout on Page 139](#)
- [Importing a Badge Layout on Page 133](#)
- [Exporting a Badge Layout on Page 134](#)
- [Aligning Objects Using the Grid on Page 146](#)
- [Adding Magnetic Tracks to a Badge Layout on Page 161](#)
- [Adding an Image to a Badge on Page 143](#)
- [Adding a Portrait to a Badge on Page 144](#)
- [Adding a Signature to a Badge on Page 144](#)
- [Adding Text to a Badge on Page 141](#)
- [Adding a Barcode to a Badge on Page 142](#)
- [Deleting an Object from a Badge Layout on Page 148](#)
- [Create a Boolean Expression using the Expression Builder on Page 196](#)

### Creating a Badge Layout

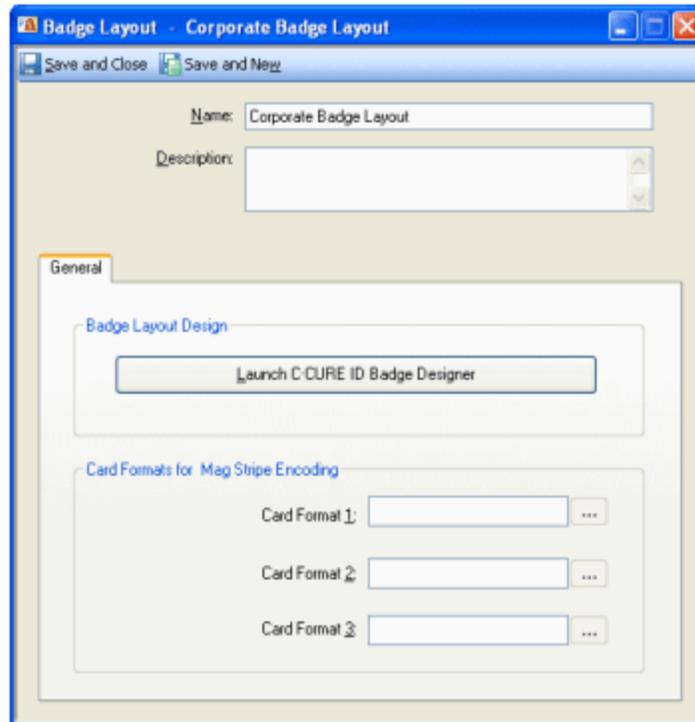
Badge layouts are stored in the C•CURE 9000 database. (A Badge Layout can be exported to an .SWB file for use on another C•CURE ID system - see [Exporting a Badge Layout on Page 134](#).)

---

#### To Create a New Badge Layout

1. In the C•CURE 9000 Administration client application Navigation pane, click **Personnel**.
2. Choose **Badge Layout** from the drop-down list and click **New**. The Badge Layout Editor opens.

Figure 27: Badge Layout Editor



3. Type a name for your new badge layout in the **Name** field.
4. Type an optional description for your badge layout in the **Description** field.
5. Click **Launch C•CURE ID Badge Designer**. The C•CURE ID Badge Designer opens, and you can configure the new badge layout.

## Editing an Existing Badge Layout

If you have previously created a badge layout, you can edit it to make changes to the badge design.

### To Edit an Existing Badge Layout

1. In the Administration application window, choose **Personnel>Badge Layout**, then click . A Dynamic View listing the available Badge Layouts opens.
2. Double-click a badge in the list to open the Badge Layout Editor.
3. Click **Launch C•CURE ID Badge Designer**. The C•CURE ID Badge Designer opens, and you can edit the badge layout.

## Importing a Badge Layout

If you have previously exported a badge layout from C•CURE 9000 or saved a badge layout from C•CURE 800/8000, you can import the badge layout into C•CURE 9000 and edit it to make changes to the badge layout.

**NOTE**

The paths for the Import and Export files must be the same if you are importing or exporting between C•CURE systems.

**To Import a Badge Layout**

1. In the C•CURE 9000 Administration client application Navigation pane, click **Personnel**.
2. Choose **Badge Layout** from the drop-down list and click **New**. The Badge Layout Editor opens.
3. Type a name and description for the badge layout in the **Name** field and the **Description** field.
4. Click **Launch C•CURE ID Badge Designer**. The C•CURE ID Badge Designer opens.
5. Choose **File>Import** from the Badge Designer menu.
6. From the Windows **File Open** dialog box that appears, navigate to the folder where your badge layout files are stored.
7. Choose the type of badge layout file you want to import from the **Fields of type:** drop-down list (.swb or .bdg files).
8. Select a file from the list of badge layout files and click **Open**. The badge layout file you selected opens in the Badge Designer. You can now edit the file.
9. To save the badge layout to the C•CURE 9000 database when you are done editing, exit the Badge Designer, then click **Save and Close** from the Badge Layout Editor. The badge layout is saved to the C•CURE 9000 database with the name that you specified in the Badge Layout Editor.

**Exporting a Badge Layout**

You can export a badge layout from C•CURE 9000 so that it can be imported into another C•CURE 9000 or C•CURE 800/8000 system.

**NOTE**

The paths for the Import and Export files must be the same if you are importing or exporting between C•CURE systems.

**To Export a Badge Layout**

1. In the C•CURE 9000 Administration client application Navigation pane, click **Personnel**.
2. Choose **Badge Layout** from the drop-down list and click . A list of the Badge Layouts in your C•CURE 9000 database appears.
3. Double-click on a Badge Layout in the list. The Badge Layout Editor opens.
4. Click **Launch C•CURE ID Badge Designer**. The C•CURE ID Badge Designer opens.
5. Choose **File>Export** from the Badge Designer menu.
6. From the Windows **File Save As** dialog box that appears, navigate to the folder where you want to store your exported badge layout .
7. Type a file name for the Badge Layout file you wish to save.
8. Click **Save**. The Badge Layout file is saved to the folder you selected.

## Saving Your Badge Layout

When you have created a new badge layout or edited an existing badge layout from the C•CURE ID Badge Designer, you need to save your work.

### NOTE

Your edits are saved only if you click **Save and Close** in the Badge Layout dialog box. If you made changes to the badge layout file, save them in the Badge Designer, but click **Cancel** in the Badge Layout dialog box, C•CURE 9000 interprets this as your intent to discard the changes you made.

---

### To Save Your Badge Layout

1. From the C•CURE ID Badge Designer, choose **File>Exit** from the Badge Designer Toolbar to save your badge layout.
2. The Badge Layout Editor appears. You need to click **Save and Close** to save the changes that you made to the badge layout file.

## Exiting the Badge Designer

When you have completed your edits to the Badge Layout, you can save your work and exit from the Badge Designer.

---

### To Exit the Badge Designer

1. From the C•CURE ID Badge Designer, choose **File>Exit** from the Badge Designer menus.
2. The Badge Layout Editor appears. You need to click **Save and Close** to save the changes that you made to the badge layout file.

## Sample Data

The Sample Data dialog box (Figure 28 on Page 136) lets you simulate personnel data so you can evaluate how text data fits your badge layout. You can use Sample Data to see how any field in the Personnel database displays in your badge layout.

### Example:

If you want to include a user-named field (such as Text1) on your badge layout, you can type a sample value for Text1 in Sample Data, and then add the Text1 field to the badge layout to see how the field data looks on the badge.

Similarly, if you want to use an expression to concatenate the First\_Name, ████, and Last\_Name fields into a dynamic text object, you can type values for these fields in Sample Data and they will be displayed on the badge layout by your expression, so that you can check for correct spacing of the data and sizing of the text object. (See Using the Expression Builder on Page 197 for more information.)

Also, if you are using Dynamic filenames with image objects, you can type the name of a value that matches a file name in your badging directory into Sample Data.

### Example:

If you have an image file called Escort.bmp that represents a value of Escort in the Person\_Type field in the database and you type "Escort" into Sample Data for the Person\_Type field and include on the badge layout a dynamic filename image object that uses Person\_Type to get its value, the Escort.bmp image appears on the badge layout as the Dynamic image.

See Setting a Dynamic Image Source for an Image Object on Page 171.

Figure 28: Sample Data Dialog Box

Fields	Values
Person_ID	666
Card_#	1231
First_Name	Quentin
M.I.	Q
Last_Name	Quirk
Activation	
Expiration	1/1/2009
Facility_Code	
Person_Type	
Clearance_Filter	
Text1	
Text2	
Text3	
Text4	
Text5	
Text6	
Text7	
Text8	
Text9	
Text10	
Text11	
Text12	
Text13	
Text14	
Text15	

Sample Data loads all of the fields currently in your Personnel database and lets you assign sample values to them. Assigning values to Sample Data fields is optional, and you only need to assign values to those fields you expect to use on your badge layout. Table 39 on Page 137 describes the columns and buttons on the Sample Data dialog box.

**Table 39:** Sample Data Columns and Buttons

Fields/Buttons	Description
Fields	This column lists all the sample data fields.
Values	Provides a text-based field that allows for standard alpha-numeric data entry of sample data to be used by the Badge Designer. When you add a field from the database to the badge layout, the Sample Data value is displayed to represent that field on the badge layout.
OK Button	Saves current changes to sample data and exits the Sample Data editor.
Cancel Button	Discards any current changes to the Sample Data and exits the Sample Data editor.
Back Button	Displays the previous page of sample data values.
Next Button	Displays the next page of sample data values.

## Configuring Sample Data

You can type values for any Personnel fields into Sample Data, and the values will be displayed on the badge layout, so that you can check for correct spacing of the data and sizing of the text object.

### To Configure Sample Data

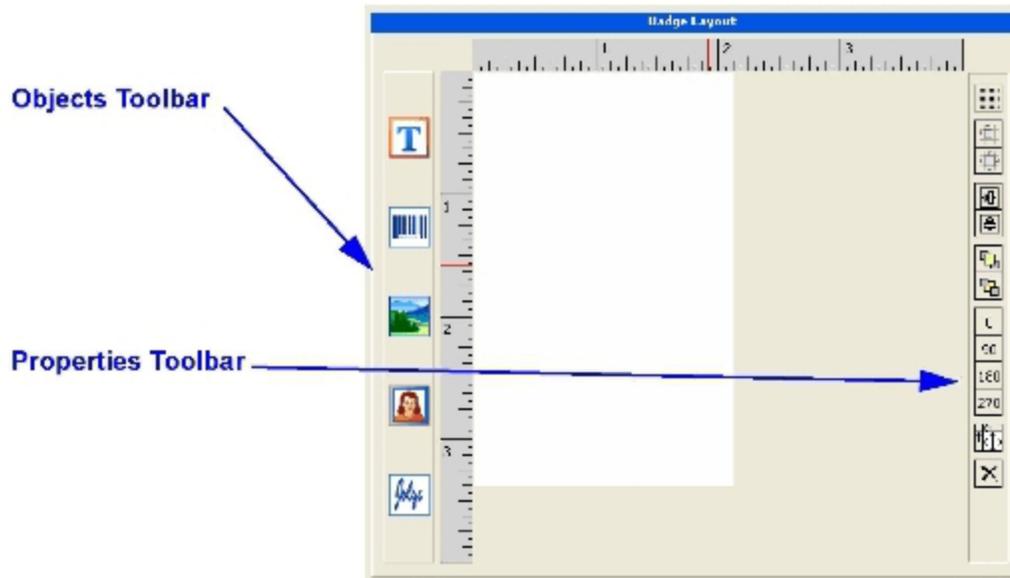
1. In the Badge Designer, select **Edit>Sample Data** from the menus. The Sample Badge Data dialog box opens, displaying a list of Personnel fields.
2. Click **Next** or **Back** if needed to find the field you want to modify.
3. Click in the **Value** column for the field to which you want to add sample data.
4. Type the data you want to add into the Value column.
5. If you want to add data to additional fields, repeat steps 3 and 4.
6. Click **OK** to save the Sample Data.
7. You should see the Sample Data you typed displayed in the Text objects on your badge design.

## The Badge Layout Panel

The C•CURE ID Badge Layout Panel let you add objects to the badge layout, and set the properties of the Badge Layout, such as one-sided or two-sided, and badge orientation.

The Badge Layout panel on the left side of the Badge Designer lets you design the arrangement of text and graphics on your badge, using the graphical tools and buttons on the panel to add and arrange text, images, portraits, signatures, and barcodes to the badge design. See [Creating a Badge Layout on Page 132](#) for more information. [Figure 29 on Page 138](#) shows the Badge Layout Panel.

**Figure 29:** Badge Layout Panel



The Badge Layout Properties panel on the right side of the Badge Designer lets you configure the badge properties, Mag Encoding Options, Background Color, and badge borders. See the [The Badge Layout Properties Panel on Page 151](#) for more information.

The following links provide more information about the **C•CURE ID Badge Layout Panel**.

- [To Access the C•CURE ID Badge Layout Panel on Page 138.](#)
- [Badge Layout Panel Tasks on Page 140.](#)
- [Badge Layout Panel Toolbars on Page 139.](#)

### To Access the C•CURE ID Badge Layout Panel

To access the **C•CURE ID** Badge Layout Panel:

1. Access the C•CURE ID Badge Designer (see [Accessing the Badge Designer on Page 125](#)).
2. The Badge Layout Panel is always active in the Badge designer. You can drag objects onto the badge layout, or use the [Badge Layout Panel Toolbars on Page 139](#) buttons to modify the badge layout.

## Configuring a Badge Layout

You use the Badge Layout panel to configure the badge layout by dragging and dropping objects from the Objects toolbar onto the badge layout (white space), formatting these objects using the Properties toolbar, and using the other panels (such as the Text Properties Panel) to configure these objects.

See [Badge Layout Panel Toolbars](#) on [Page 139](#) for information on the meaning and use of each of the toolbar buttons.

See [Badge Layout Panel Tasks](#) on [Page 140](#) for an outline of the tasks you can perform using the Badge Layout panel.

## Badge Layout Panel Toolbars

The Badge Layout panel has two toolbars:

- The Object toolbar to the left of the Badge Layout is used to insert objects onto the badge layout. The Object toolbar is described in [Table 40](#) on [Page 139](#).
- The Properties toolbar to the right of the Badge Layout is used to set properties of the objects on the badge layout, such as borders, colors, alignment, and rotation. The Properties toolbar is described in [Table 41](#) on [Page 139](#).

**Table 40:** Badge Layout Panel Object Toolbar

Icon	Button	Description
	Text	Click and drag the text icon to place a text object on the Badge Layout. You use the Text Properties Panel to edit the text object. See <a href="#">The Text Properties Panel</a> on <a href="#">Page 180</a> .
	Barcode	Click and drag the barcode icon to place a barcode object on the Badge Layout. You use the Barcode Properties Panel to edit the object. See <a href="#">The Barcode Properties Panel</a> on <a href="#">Page 187</a> .
	Picture	Click and drag the picture icon to place a picture object on the Badge Layout. You use the Image Properties Panel to edit the object. See <a href="#">Adding an Image to a Badge</a> on <a href="#">Page 143</a> .
	Portrait	Click and drag the portrait icon to place a portrait object on the Badge Layout. You use the Image Properties Panel to edit the object. See <a href="#">Adding a Portrait to a Badge</a> on <a href="#">Page 144</a> .
	Signature	Click and drag the signature icon to place a signature object on the Badge Layout. You use the Image Properties Panel to edit the object. See <a href="#">Adding a Signature to a Badge</a> on <a href="#">Page 144</a> .

**Table 41:** Badge Layout Panel Properties Toolbar

Icon	Button	Description
	Toggle Grid	Click this icon to turn the Badge Layout grid on and off.

Badge Layout Panel Properties Toolbar (continued)

Icon	Button	Description
	Align Control to Grid	Click this button to snap the selected object to the closest badge design grid coordinates. The grid must be visible for this function to work.
	Size to Grid	Click this button to snap the selected object to the closest badge design grid coordinates and change the size of the object to align its borders with the nearest grid points. The grid must be visible for this function to work.
	Center Horizontal	Click this button to center the selected object horizontally on the badge design. The vertical position of the object remains the same.
	Center Vertical	Click this button to center the selected object vertically on the badge design. The horizontal position of the object remains the same.
	Bring Control to Front	Click this button to move the selected object in front of other objects on the badge design. Text objects and non-text objects have separate front to back-orders, so that non-text objects never obscure text on the badge.
	Send Control to Back	Click this button to move the selected object behind other objects on the badge design. Text objects and non-text objects have separate front to back-orders, so that non-text objects never obscure text on the badge.
	Rotate 0 degrees	Rotates the selected object to start at zero degrees (the normal orientation, such as text reading from left to right).
	Rotate 90 degrees	Rotates the selected object to start at 90 degrees (for example, text reads from the lower edge of the text box to the upper edge).
	Rotate 180 degrees	Rotates the selected object to start at 180 degrees (for example, text reads upside down).
	Rotate 270 degrees	Rotates the selected object to start at 270 degrees (for example, text reads from the upper edge of the text box to the lower edge).
	Set X, Y, Height, and Width Values	If you want to precisely set the X/Y axis position for a selected object, and also precisely set its height and width, click this button to pop up a Position and Size dialog box that allows you to type in values or use a spinner  to increase or decrease values. The object is repositioned dynamically when you click from one field on the dialog to another. Click  to close the dialog box.
	Delete	Click this button to delete the currently selected object from the Badge Layout Panel.

## Badge Layout Panel Tasks

You can perform the following tasks from the Badge Layout panel:

- [Adding Text to a Badge on Page 141](#)
- [Adding a Barcode to a Badge on Page 142](#)
- [Adding an Image to a Badge on Page 143](#)
- [Adding a Portrait to a Badge on Page 144](#)
- [Adding a Signature to a Badge on Page 144](#)
- [Moving and Resizing Objects on a Badge on Page 145](#)
- [Aligning Objects Using the Grid on Page 146](#)
- [Setting Front-to-Back Order for Objects on Page 148](#)
- [Deleting an Object from a Badge Layout on Page 148](#)
- [Adding a Border to an Object on Page 149](#)
- [Adding a Border to the Badge on Page 149](#)

## Adding Text to a Badge

You can add two kinds of text fields to a badge layout:

- Dynamic text is used to print text on the badge that is specific to the badge holder. The Dynamic text source is a field in the badge holder's Personnel record, such as Last\_Name, First\_Name, or Card\_#. See [Adding Dynamic Text to a Badge on Page 141](#).

You can also use the Expression Builder to add Dynamic Text to a badge. See [Defining a Boolean Expression for a Text Object on Page 181](#).

- Static text does not come from the Personnel record, but is text that appears on every person's badge; for example, the static text may be a company name, address, or phone number. See [Adding Static Text to a Badge on Page 142](#).

## Adding Dynamic Text to a Badge

### To Add Dynamic Text to a Badge

When you add Dynamic Text to a badge design, you are choosing a Personnel database field to be the source for the text. When the badge is printed, that field's contents appear in the text field on the badge.

1. In the Badge Layout Panel, drag the text icon  onto the Badge Layout (or choose **Insert>Text** from the menus). A selected text object appears on the Badge Layout.



2. Position the text object in the Badge Layout.
3. To size the text object, use the selection handles (mouse pointer changes to ↔ when you hover over).

4. On the Text Properties Panel Text tab, select **Dynamic Text**, and choose a Personnel Database field from the drop-down list to be the source of the dynamic text.
5. On the Text Properties Panel Font/Color tab, set the font and color properties for the text object. See [Setting Color and Font Properties for a Text Object](#) on Page 182.

## Adding Static Text to a Badge

### To Add Static Text to a Badge

1. In the Badge Layout Panel, drag the text icon  onto the Badge Layout (or choose **Insert>Text** from the menus). A selected text object appears on the Badge Layout.



2. Position the text object in the Badge Layout.
3. To size the text object, use the selection handles (mouse pointer changes to  $\leftrightarrow$  when you hover over).
4. On the Text Properties Panel Text tab, select **Static Text**, and type in the text you wish to appear in this field on the badge.
5. You can apply an Auto Sizing setting to the text:
  - Use **Fit Text to Control** to adjust the text size.
  - Use **Fit Control to Text** to change the size of the text object to fit the text.
  - Use **Max Font Size** to set the current text size as the maximum size, so that the text stays the same size if you enlarge the object.

#### Example:

You can use **Fit Text to Control** to size the text, then use **Max Font Size** to ensure that the text size does not change if you later enlarge the text object.

6. You can enable or disable text wrapping by clicking one of the buttons under **Wrapping**.
7. On the Text Properties Panel Font/Color tab, set the font and color properties for the text object. (See [Setting Color and Font Properties for a Text Object](#) on Page 182.)

## Adding a Barcode to a Badge

Follow these steps to add a barcode to a badge layout.

### To Add a Barcode to a Badge

1. In the Badge Layout Panel, drag the barcode icon  onto the Badge Layout (or choose **Insert>Barcode** from the menus). A selected barcode object appears on the Badge Layout.



2. Position the barcode object in the Badge Layout, using the mouse to drag the object into position.
3. Use the selection handles (mouse pointer changes to  when you hover over) to size the barcode object.
4. In the Barcode Properties Panel, set the barcode properties for the barcode object. See [Setting Barcode Properties](#) on [Page 189](#).
5. In the Barcode Properties Panel, on the Barcode Caption tab, set the barcode caption properties for the barcode object. See [Setting Barcode Caption Properties](#) on [Page 190](#).

## Adding an Image to a Badge

Follow these steps to add an image to a badge layout.

### To Add an Image to a Badge

1. In the Badge Layout Panel, drag the Image icon  onto the Badge Layout (or choose **Insert>Image** from the menus). A selected Image object appears on the Badge Layout. (When you select a source image for the object, the “Missing Object” label is replaced by the image itself, or “Dynamic” if you chose a dynamic image source.)



2. Position the image object in the Badge Layout, using the mouse to drag the object into position.
3. Select the image formatting options for the image. See [Image Source Tab](#) on [Page 167](#) for definitions of these settings.
4. Use the selection handles (mouse pointer changes to  when you hover over) to size the image object.
5. In the Image Properties Panel, select the image source (static or dynamic) that you wish to include on the badge. See:
  - [Setting a Static Image Source for an Image Object](#) on [Page 172](#)
  - [Setting a Dynamic Image Source for an Image Object](#) on [Page 171](#)
6. If you want to use Transparency or Ghosting for the image, set the Rendering options. See [Image Source Tab](#) on [Page 167](#) for definitions of these fields.
7. If you want to use Background Detection to replace the image background with a replacement color, click the Image Properties Panel Background Detection tab and set the Background Detection properties for the image object. See [Setting Background Detection Properties](#) on [Page 172](#) for more information.
8. On the Image Properties panel Background Color tab, you can set a background color and a color gradient. These options are available only for images that are set to **Maintain Ratio** on the Image Source tab. See [Setting Background Color for an Object](#) on [Page 173](#) for more information.
9. If you want to add a border to the image, set the border properties on the Borders tab. See [Adding a Border to the Badge](#) on [Page 149](#) for more information.
10. On the Image Properties panel Color Management tab, set the color properties for the Signature object. See [Setting Color Management Properties](#) on [Page 174](#) for more information.

## Adding a Portrait to a Badge

You can add Personnel database pictures to badges and use the C•CURE ID Graphic File dialog box to specify the size of the portrait, the location of the portrait on the badge, and the background color. The image that is printed on the badge is taken from the Portrait field in the Personnel database of the badge holder.

### To Add a Portrait to a Badge

1. In the Badge Layout Panel, drag the Portrait icon  onto the Badge Layout (or choose **Insert>Portrait** from the menus). A selected Portrait object appears on the Badge Layout.



2. Position the portrait object in the Badge Layout, using the mouse to drag the object into position.
3. Use the selection handles (mouse pointer changes to  when you hover over) to size the portrait object.
4. In the Image Properties Panel, select the **Sample file name** that you wish to include on the badge.
5. On the Portrait Properties panel Image Source tab, set the Formatting and Rendering options for the Signature. See [Image Source Tab](#) on [Page 167](#) for definitions of these fields.
6. On the Portrait Properties panel Background Detection tab, choose the settings for Background Detection. See [Setting Background Detection Properties](#) on [Page 172](#).
7. On the Portrait Properties panel Background Color tab, you can set a background color and a color gradient. These options are available only for signatures that are set to **Maintain Ratio** on the Image Source tab. See [Setting Background Color for an Object](#) on [Page 173](#) for more information.
8. If you want to add a border to the signature, set the border properties on the Borders tab. See [Adding a Border to an Object](#) on [Page 149](#) for more information.
9. On the Portrait Properties panel Color Management tab, set the color properties for the Signature object. See [Setting Color Management Properties](#) on [Page 174](#) for more information.

## Adding a Signature to a Badge

You can add Personnel signatures to badges and use the C•CURE ID Signature File dialog box to specify the size of the signature, the location of the signature on the badge, and the background color.

### To Add a Signature to a Badge

1. In the Badge Layout Panel, drag the signature icon  onto the Badge Layout (or choose **Insert>Signature** from the menus). A selected signature object appears on the Badge Layout.



2. Position the signature object in the Badge Layout, using the mouse to drag the object into position.
3. Use the selection handles (mouse pointer changes to  when you hover over) to size the signature object.
4. On the Signatures Properties panel Image Source tab, select the Sample file name that you wish to include on the badge.
5. On the Signatures Properties panel Image Source tab, set the Formatting and Rendering options for the Signature. See [Image Source Tab](#) on [Page 167](#) for definitions of these fields.
6. On the Signatures Properties panel Background Detection tab, choose the settings for Background Detection. See [Setting Background Detection Properties](#) on [Page 172](#) for more information.
7. On the Signatures Properties panel Background Color tab, you can set a background color and a color gradient. These options are available only for signatures that are set to Maintain Ratio on the Image Source tab. See [Setting Background Color for an Object](#) on [Page 173](#) for more information.
8. If you want to add a border to the signature, set the border properties on the Borders tab. See [Adding a Border to an Object](#) on [Page 149](#) for more information.
9. On the Signature Properties panel Color Management tab, set the color properties for the Signature object. See [Setting Color Management Properties](#) on [Page 174](#) for more information.

## Moving and Resizing Objects on a Badge

After you add text and objects to a badge layout, you can use the mouse or the position and sizing  toolbar button to move and resize the objects.

### To Resize an Object with the Mouse

1. Select the object you wish to resize. A frame with selection handles appears around the object. (The selection handles are the solid white boxes you see on the corners of each object.)



2. Hover over a selection handle (the mouse pointer changes to ) , click and hold the Left Mouse Button and drag the selection handle to size the object.

### To Move an Object with the Mouse

1. Select the object you wish to move. A frame with selection handles appears around the object. (The selection handles are the solid white boxes you see on the corners of each object.)



2. Click and hold the Left Mouse button, then drag the object to the position you want.

### To Position and Size an Object to Exact Measurements

The Position and Size dialog box lets you set the position and size of a selected object exactly.

1. Select the object you wish to move. A frame with selection handles appears around the object. (The selection handles are the solid white boxes you see on the corners of each object.)



2. Click  and the Position and Size dialog box appears.
3. To change the X and Y position of the object, type in a new value, or use the spinner control .
4. To change the size of the object, type in a new value, or use the spinner controls  to change the **Width** and **Height** of the object.

## Grid Preferences

You can change the grid settings for the Badge Designer from the **Edit** menu.

You can use the non-printing grid as a guideline for arranging objects on a badge.

---

### To Modify Grid Settings

1. From the C•CURE ID Badge Designer menus, choose **Edit>Preferences**. The C•CURE ID Grid Preferences dialog box opens.
2. Type your preferred grid dimensions in the Width and Height boxes. Note that 1 inch equals 100 pixels.

#### Example: Example:

If you want a 3" x 3" box, type 300 for the width and height. If you want 3mm x 3mm, type 30 for the width and height.

3. Click **OK**.

You can use the options on the [Align Menu on Page 127](#) and the [Badge Layout Panel Toolbars on Page 139](#) to align objects and text on a badge.

## Aligning Objects Using the Grid

Use the options on the [Align Menu on Page 127](#) and the [Badge Layout Panel Toolbars on Page 139](#) to align objects and text on a badge. You can use the non-printing grid as a guideline for arranging objects on a badge. The grid line spacing is set at 1/100th of an inch as a default.

See [Aligning Objects Using the Grid on Page 146](#) modify the grid line spacing.

---

### To Center an Object Horizontally

1. Select the object you wish to center. A frame with selection handles appears around the object. (The selection handles are the solid white boxes you see on the corners of each object.)



2. Select **Align>Center Horizontal** from the menus. The object will move to a horizontally-centered position (its top-to-bottom positioning does not change).

---

### To Center an Object Vertically

1. Select the object you wish to center. A frame with selection handles appears around the object. (The selection handles are the solid white boxes you see on the corners of each object.)



2. Select **Align>Center Vertical** from the menus. The object will move to a vertically-centered position (its left-to-right positioning does not change).

---

### To Align an Object to the Grid

1. To display the grid, click **Toggle Grid On/Off** .
2. In the Badge Layout panel, select the object you want to align and choose **Align>Align to Grid** from the menu, or click **Align Control to Grid** .

---

### To Size an Object to the Grid

You can move and resize an object to match up with the badge grid so that you can more precisely control how the object is placed. The Size to Grid menu selection and toolbar button snap the selected object to the closest badge design grid coordinates, and change the size of the object to align its borders with the nearest grid points.

1. To display the grid, click **Toggle Grid On/Off** .
2. In the Badge Layout panel, select the object you want to align with the grid.
3. Choose **Align>Size to Grid** from the menu, or click **Size Control to Grid** .

## Setting Front-to-Back Order for Objects

You can change the front-to-back order of badge elements. There are four planes for badge elements:

**Text** – The topmost plane. No other elements can be in front of the Text layer.

**Signature** – Signatures are behind Text but in front of Images and the Badge Background.

**Image** – Images are behind Text and Signatures but in front of the Badge Background.

**Badge Background** – The lowest plane. No other elements can be behind the Badge Background.

Each plane can hold multiple objects with a front-to-back order you can specify. For example, if two images overlap, you can determine which image is in front and which is behind the other. But the images can never be behind the Badge Background or in front of a Text object.

### To Bring an Object to Front

1. Select the object you wish to bring to front. A frame with selection handles appears around the object. (The selection handles are the solid white boxes you see on the corners of each object.)



2. Right-click on the object, and a Right-click menu appears.
3. Select **Bring to Front**.
4. Click in another area of the badge to de-select the object (objects always appear on top when selected). The object will appear in front of other objects in its plane and in planes behind it.

### To Send an Object to Back

1. Select the object you wish to send to back. A frame with selection handles appears around the object. (The selection handles are the solid white boxes you see on the corners of each object.)



2. Right-click on the object, and a Right-click menu appears.
3. Select **Send to Back**.
4. Click in another area of the badge to de-select the object (objects always appear on top when selected). The object will appear in back of other objects in its plane and in planes in front of it.

## Deleting an Object from a Badge Layout

Follow these steps to delete an object from a badge layout.

### To Delete an Object from a Badge Layout

1. In the Administration application window, choose **Configure>Badge Layout**. The Badge Layout Selection browser opens.
2. Select a badge to design from the list and click **Edit**. The Badge Layout Editor opens.
3. Select the Badge Layout file that you want to edit and click **Edit File...**
4. In the C•CURE ID Badge Layout Panel, select the object that you want to delete.
5. Choose **Edit>Delete** from the menus, or click  **Delete Object** on the [Badge Layout Panel Toolbars](#) on [Page 139](#).

### Adding a Border to an Object

You can put a colored border on any object in the badge layout, except a barcode.

#### To Add a Border to an Object

1. In the Badge Layout panel, click on an object to select it.
2. Click the **Borders** tab on the Properties panel.
3. Choose a **Border Type**:
  - **None** is the default, no visible border.
  - **Solid** adds a single-color border to all four sides of the object.
  - **Diagonal** adds a border with mitered edges to the object, with up to four colors.
  - **Square** adds a border with squared edges to the object, with up to four colors.
4. If you want to draw the border outside of the object (so that the border does not obscure the edges of the object), select **Draw Around**.
5. Select a **Border Width** for the border by typing in a number or using the spinner .
6. For Diagonal or Square borders, select a **Border Height** by typing in a number or using the spinner .
7. Pick a **Border Color** for the object by clicking on the  in the Border Colors box.
  - If you chose **Solid** for the Border type you can pick one color for all four sides.
  - If you chose **Diagonal** or **Square**, you can pick up to four colors, one for each of the Top, Bottom, Left, and Right sides.
8. Observe the borders that are visible for the object in the Badge Layout, and make any adjustments needed.

### Adding a Border to the Badge

You can add a colored border on the badge background of the badge layout, so that the entire badge has a border.

---

## To Add a Border to the Badge

1. In the Badge Layout panel, click on  to select the badge background.
2. Click the Borders tab on the Badge Layout Properties panel.
3. Choose a **Border Type**:
  - **None** is the default, no visible border.
  - **Solid** adds a single-color border to all four sides of the object.
  - **Diagonal** add a border with mitered edges to the object, with up to four colors.
  - **Square** adds a border with squared edges to the object, with up to four colors.
4. Pick a **Border Color** for the object by clicking on  in the Border tab.
  - If you chose **Solid** for the Border type you can pick one color for all four sides.
  - If you chose **Diagonal** or **Square**, you can pick up to four colors, one for each of the Top, Bottom, Left, and Right sides.
5. Select a **Border Width** for the border by typing in a number or using the spinner .
6. For Diagonal or Square borders, select a **Border Height** by typing in a number or using the spinner .
7. Observe the borders that are visible for the object in the Badge Layout, and make any adjustments needed.

## Badge Layout Properties Panel Tabs

The Badge Layout Properties Panel has four tabs. The following sections describe the fields and buttons on these tabs.

- [Badge Layout Tab on Page 152](#) describes the Badge Layout Tab.
- [Mag Encoding Tab on Page 154](#) describes the Mag Encoding Options Tab.
- [Properties Panel Background Color Tab on Page 155](#) describes the Background Color tab.
- [Properties Panel Borders Tab on Page 157](#) describes the Borders tab.

## The Badge Layout Properties Panel

The C•CURE ID Badge Layout Properties Panel has four tabs:

The Badge Layout Properties Panel has four tabs. The following sections describe the fields and buttons on these tabs.

- [Badge Layout Tab on Page 152](#) describes the Badge Layout Tab.
- [Mag Encoding Tab on Page 154](#) describes the Mag Encoding Options Tab.
- [Properties Panel Background Color Tab on Page 155](#) describes the Background Color tab.
- [Properties Panel Borders Tab on Page 157](#) describes the Borders tab.

The following links provide more information about the Badge Layout Properties Panel.

- [To Access the C•CURE ID Badge Layout Properties Panel on Page 151.](#)
- [Badge Properties Panel Tasks on Page 152.](#)

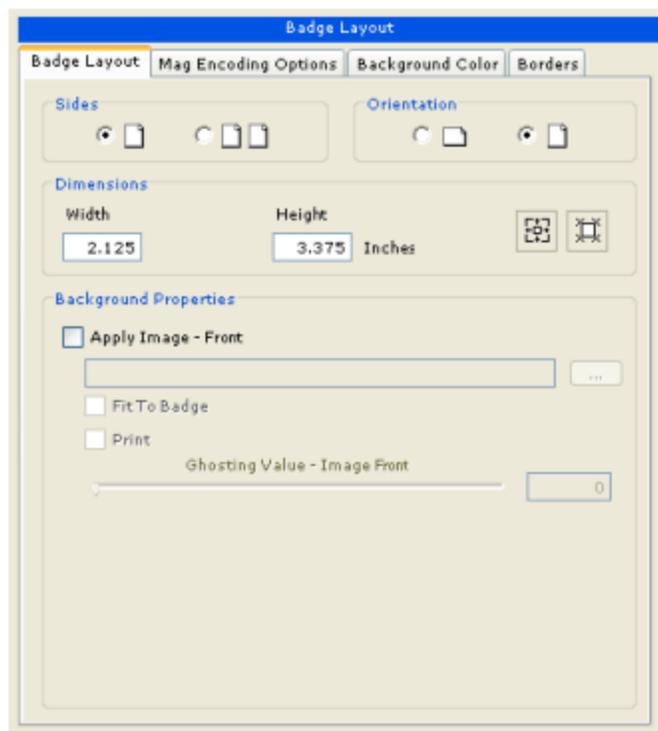
### To Access the C•CURE ID Badge Layout Properties Panel

To access the C•CURE ID Badge Properties Panel:

1. Open the C•CURE ID Badge Designer (see [Accessing the Badge Designer on Page 125](#)).
2. The Badge Properties Panel is initially active in the Badge Designer. You can change the settings in the Badge Properties Panel to modify layout and Mag Encoding properties of the badge layout.

[Figure 30 on Page 151](#) shows the Badge Layout Properties panel.

**Figure 30:** Badge Layout Properties Panel



## Badge Properties Panel Tasks

From the C•CURE ID Badge Properties Panel, you can perform the following tasks:

- [Setting the Badge Layout to One-sided or Two-sided on Page 159](#)
- [Setting the Badge Layout to Portrait or Landscape on Page 159](#)
- [Setting the Badge Size on Page 159](#)
- [Setting the Front or Back Image of a Badge on Page 159](#)
- [Setting the Badge Background Color on Page 160](#)
- [Adding Magnetic Tracks to a Badge Layout on Page 161](#)
- [Using a Magnetic Track for Access Control on Page 162](#)
- [Setting Magnetic Stripe Encoding Formats on Page 165](#)

## Badge Layout Tab

The Badge Layout tab lets you set the size and orientation of the badge using the Badge Layout tab, and also add a background image to the front and/or back of the badge.

You can perform the following tasks from the Badge Layout Tab:

- [Setting the Badge Layout to One-sided or Two-sided on Page 159](#)
- [Setting the Badge Layout to Portrait or Landscape on Page 159](#)
- [Setting the Badge Size on Page 159](#)
- [Setting the Front or Back Image of a Badge on Page 159](#)
- [Setting the Badge Background Color on Page 160](#)

See [Badge Layout Tab Definitions on Page 152](#) for descriptions of the fields and buttons on this tab.

## Badge Layout Tab Definitions

The Badge Properties Panel Badge Layout Tab has the following fields and buttons.

**Table 42:** Badge Layout Tab Definitions

Button/Icon	Description
One-Sided Badge 	Click this button to set the badge design to single-sided. Doing so disables the  button on the Badge Layout panel.

## Badge Layout Tab Definitions (continued)

Button/Icon	Description
Two-Sided Badge 	Click this button to set the badge design to double-sided. Doing so enables the  button on the Badge Layout panel, so that you can switch the display to the front or back of the badge.
Landscape Badge 	Sets the badge design to Landscape, where the badge width is greater than the badge height.
Portrait Badge 	Sets the badge design to Portrait, where the badge height is greater than the badge width.
Width	Type in the width of the badge in Inches or Centimeters (set with <b>View&gt;Scale -Inches</b> or <b>View&gt;Scale - Centimeters</b> ), then click the <b>Resize Badge</b> button. The default settings are: Portrait Badge - 2.125 inches Landscape Badge - 3.375 inches
Height	Type in the height of the badge in Inches or Centimeters (set with <b>View&gt;Scale -Inches</b> or <b>View&gt;Scale - Centimeters</b> ), then click the <b>Resize Badge</b> button. The default settings are: Portrait Badge - 3.375 inches Landscape Badge - 2.125 inches
Unit of Measure	Displays the current Scale mode (Inches or Centimeters), set with <b>View&gt;Scale -Inches</b> or <b>View&gt;Scale - Centimeters</b> .
Resize Badge 	If you type in a new badge height and/or width and click this button, the badge design is resized to those dimensions. The maximum badge size is 11 x 11 inches (27.94 x 27.94 centimeters).
Default Badge Size 	Click this button to reset the badge to the default size of 2.125 x 3.375 (CR-80 size). <ul style="list-style-type: none"> <li>Landscape default size: 3.375 x 2.125 inches or 8.572 x 5.397 centimeters.</li> <li>Portrait default size: 2.125 x 3.375 inches or 5.397 x 8.572 centimeters.</li> </ul>
Apply Image (Front)	Select this check box to enable the selection of a badge background image for the front side of the badge. You can then click the Selection button  to open a Windows file selection dialog box and choose an image file for the badge background.
Fit to Badge (Front)	Select this check box to resize the background image to fit the full size of the badge background for the front side of the badge.
Ghosting Value Slider (Front)	Drag the slider to change the percentage of Ghosting you want to apply to the background image for the front side of the badge. Ghosting adds whiteness to the image, but unlike transparency, it does not allow an object behind the image to show through.

Badge Layout Tab Definitions (continued)

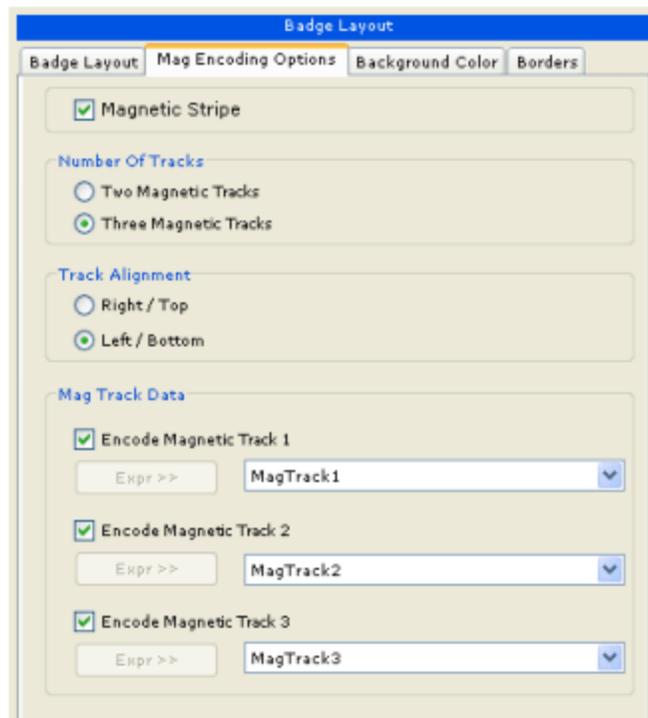
Button/Icon	Description
Print (Front)	Select this check box to have the background image print on the front of the badge when the badge is printed. If you do not select this check box, the background image is not printed.
Apply Image (Back)	Select this check box to enable the selection of a badge background image for the back side of the badge. You can then click the Selection button  to open a Windows file selection dialog box and choose an image file for the badge background.
Fit to Badge (Back)	Select this check box to resize the background image to fit the full size of the badge background for the back side of the badge.
Ghosting Value Slider (Back)	Drag the slider to change the percentage of Ghosting you want to apply to the background image for the back side of the badge. Ghosting adds whiteness to the image, but unlike transparency, it does not allow an object behind the image to show through.
Print (Back)	Select this check box to have the background image print on the back of the badge when the badge is printed. If you do not select this check box, the background image is not printed.

## Mag Encoding Tab

The Mag Encoding tab on the Badge Properties panel lets you add magnetic stripes to your badge design, and then configure the magnetic tracks using database fields or the Expression Builder.

Figure 31 on Page 154 shows the Mag Encoding tab.

Figure 31: The Mag Encoding Tab



See [Mag Encoding Tab Definitions](#) on [Page 155](#) for descriptions of the fields and buttons on this tab.

## Mag Encoding Tab Tasks

You can perform the following tasks from the Mag Encoding tab:

[Encoding Magnetic Tracks](#) on [Page 160](#)

[Adding Magnetic Tracks to a Badge Layout](#) on [Page 161](#)

[Using a Magnetic Track for Access Control](#) on [Page 162](#)

[Setting Magnetic Stripe Encoding Formats](#) on [Page 165](#)

You should also review [Important Considerations for Magnetic Encoding](#) on [Page 162](#) to see if these specific issues apply to your badges or printers.

## Mag Encoding Tab Definitions

The Badge Properties Panel Mag Encoding Tab has the following fields and buttons.

**Table 43:** Mag Encoding Tab Definitions

Button/Field	Description
Magnetic Stripe check box	Select this choice to enable magnetic stripe encoding for the badge. This choice is only available for two-sided badges.
Two Magnetic Tracks	Select this choice to enable Magnetic Tracks 1 and 2. A two-stripe magnetic track is displayed on the back side of the badge.
Three Magnetic Tracks	Select this choice to enable Magnetic Tracks 1, 2, and 3. A three-stripe magnetic track is displayed on the back side of the badge.
Encode Magnetic Track 1 Encode Magnetic Track 2 Encode Magnetic Track 3	Select a magnetic track, and choose a database field to encode from the drop-down list, or chose "=" to create an expression using the Expression Builder.  <b>MagTrack2 and MagTrack3 can contain only numeric data.</b> Do not assign a database field or an expression that contains non-numeric characters to MagTrack2 or MagTrack3.
Expr>>	Click this button to open the Expression Builder. This button is available only if you have chosen "=" for the value of Encode Magnetic Track.

## Properties Panel Background Color Tab

The Background Color tab allows you to set the Background color for an object on the badge layout. You can set the Background Color for Text, Image, Portraits, Signatures, and the Badge Background. Barcodes do not support background colors.

**NOTE**

On the Image, Portrait, and Signatures Properties panels, the Background Color tab is available only if **Maintain Ratio** is selected. This is because only images that use aspect ratio can have a background.

To set the background color of an object, select the object and click the Background Color tab on the Properties Panel for the object.

For step instructions, see [Setting Background Color for an Object](#) on Page 173.

Table 44 on Page 156 provides definitions of the fields and buttons on the Background Color tab.

**Table 44:** Background Color Tab Definitions

Field/Button	Description
Background Color	<p>To set the background color for an object, click  to open a color selection dialog box.</p> <p>Click on the color you want to use then click <b>OK</b>. You can click <b>Define Custom Colors</b> to expand the color selection dialog box if you want to choose precise RGB or Hue/Saturation/Luminosity values for a border. After choosing these values, click <b>Add to Custom Colors</b>, then click on the custom color and click <b>OK</b> to set the background color.</p>
Transparent	<p>To set the transparency of the background color, use the slider  or type in a transparency percentage in the field and press <b>Enter</b>. Values range from 0% (Opaque) to 100% (full transparency). 0% is the default value.</p>
Gradient drop-down	<p>If you do not want to use a gradient for the background, use the default setting (<b>None</b>).</p> <p>If you want to use a gradient for the background, select one of the following gradient types:</p> <ul style="list-style-type: none"> <li>• Horizontal</li> <li>• Vertical</li> <li>• Forward Diagonal</li> <li>• Backward Diagonal</li> <li>• Center Diamond</li> <li>• Center Square</li> <li>• Center horizontal Bell</li> <li>• Center Vertical Bell</li> <li>• Center Horizontal Narrow</li> <li>• Center Vertical Narrow</li> </ul>
Blend Color	<p>If a gradient type other than <b>None</b> is chosen, the color selected here is blended with the color selected for the <b>Background Color</b>.</p> <p>To set the blend color for an object, click  to open a color selection dialog box.</p> <p>Click on the color you want to use then click <b>OK</b>. You can click <b>Define Custom Colors</b> to expand the color selection dialog box if you want to choose precise RGB or Hue/Saturation/Luminosity values for a border. After choosing these values, click <b>Add to Custom Colors</b>, then click on the custom color and click <b>OK</b> to set the blend color.</p>
Blending Value	<p>Blending Value lets you set the blending percentage for the object.</p> <p>Use the spinner  to increase or decrease the blending value for the object background. You can also type a value into the field and press <b>Enter</b>.</p> <p>0 value is the default blend value and results in an even blend from the background color to the blend color.</p> <p>Values 1-20 result in a percentage blend. A higher the blend value increases the amount of the blend color in the gradient.</p>

## Properties Panel Borders Tab

The Borders tab allows you to add borders to an object on the badge layout. You can add borders to Text, Image, Portraits, Signatures, and to the Badge Background. Barcodes do not support borders.

To add borders to an object, select the object and click the Borders tab on the Properties Panel for the object.

For more detailed instructions, see [Adding a Border to an Object](#) on Page 149.

## Borders Tab Definitions

[Table 45](#) on [Page 157](#) provides definitions of the fields and buttons on the Borders tab.

**Table 45:** Borders Tab Definitions

Field/Button	Description
None	This is the default selection indicating an object with no visible borders. Select <b>None</b> to remove an existing border from an object.
Solid	Select <b>Solid</b> to add a single-color border to all four sides of an object. You will only be able to pick one color from the border colors box. If you have previously chosen multiple colors, the <b>Top</b> color is the default color for the solid border.
Diagonal	Select <b>Diagonal</b> to add up to four colored beveled borders to the object. The three pictures below show the diagonal edge of the borders.  You can choose up to four colors for the borders, one each for the top, bottom, left, and right sides. You can control the thickness of the borders by adjusting the Border Width and Border Height settings. See the examples in <a href="#">Table 46</a> on <a href="#">Page 158</a> .
Square	Select <b>Square</b> to add up to four colored square borders to the object. The three pictures below show the square edge of the borders.  You can choose up to four colors for the borders, one each for the top, bottom, left, and right sides. You can control the thickness of the borders by adjusting the Border Width and Border Height settings. See the examples in <a href="#">Table 46</a> on <a href="#">Page 158</a> .
Draw Around	This selection determines whether or not the border covers over some of the image or text of the object.  If you select <b>Draw Around</b> , the border is drawn at the outer edge of the object box, and image or text is placed within the remaining region inside the object box. The entire image or text is visible. You can change the size of the object box if the image or text is too small after the border is applied.  If you do not select <b>Draw Around</b> , the border is drawn at the outer edge of the object box, but over the image or text, possibly covering part of the image or text. The entire image or text may not be visible. Any overlap will remain if you change the size of the object box.
Border Width	Use the spinner  to increase or decrease the width of the left- and right-side borders on the object. You can also type a value into the field and press <b>Enter</b> .
Border Height	Use the spinner  to increase or decrease the Height of the top and bottom borders on the object. You can also type a value into the field and press <b>Enter</b> .

Borders Tab Definitions (continued)

Field/Button	Description
Colors	Click  to open a color selection dialog box to set the color for a border. You can click <b>Define Custom Colors</b> to expand the color selection dialog box if you want to choose precise RGB or Hue/Saturation/Luminosity values for a border. After choosing these values, click <b>Add to Custom Colors</b> , then click on the custom color and click OK to set the border color.  If you select <b>Solid</b> as the border type you can only select one color. If you select <b>None</b> for the border type, these buttons are unavailable.
Top	To set the color for the top border, click  to open a color selection dialog box. Click on the color you want to use then click <b>OK</b> .
Bottom	To set the color for the bottom border, click  to open a color selection dialog box. Click on the color you want to use then click <b>OK</b> .
Left	To set the color for the left border, click  to open a color selection dialog box. Click on the color you want to use then click <b>OK</b> .
Right	To set the color for the right border, click  to open a color selection dialog box. Click on the color you want to use then click <b>OK</b> .

Table 46: Borders Example

Example	Description
	In this picture, a <b>diagonal</b> red top border and a black bottom border are defined, with no right or left borders.
	In this picture, a <b>diagonal</b> colored border is defined for each of the top, bottom, left, and right sides. The width and height settings are not equal, so the border's diagonal edges do not meet exactly.
	In this picture, if <b>diagonal</b> adjacent borders are the same color and set to an equal width and height, they will look merged.
	In this picture, a <b>square</b> red top border and a black bottom border are defined, with no right or left borders.
	In this picture, a <b>square</b> colored border is defined for each of the top, bottom, left, and right sides. The width and height settings are not equal, but because of the square border edges, the borders meet evenly, even though the width and heights vary.
	In this picture, if <b>square</b> adjacent borders are the same color and equal width and height, they will look merged.

## Setting the Badge Layout to One-sided or Two-sided

Perform the following steps to set the badge layout to One-sided or Two-sided.

### To Set the Badge Layout to One-Sided or Two-Sided

In the Badge Properties Panel, chose either One-sided or Two-sided for the badge layout.

- Click  to set the badge to One-sided. You can only add layout elements to the front of the badge if you choose One-sided.
- Click  to set the badge to Two-sided. Several additional options become available so that you can add an image to the back of the badge.

## Setting the Badge Layout to Portrait or Landscape

Perform the following steps to set the badge layout to Portrait or Landscape orientation.

### To Set the Badge Layout to Portrait or Landscape

In the Badge Properties Panel, chose either Portrait or Landscape orientation for the badge layout.

- Click  to set the badge to Landscape. If there are badge elements already on the badge, a dialog box appears to inform you that changing the orientation might effect the arrangement of these elements on the layout. Click **Yes** to accept the change, or **No** to cancel the change.
- Click  to set the badge to Portrait orientation. If there are badge elements already on the badge, a dialog box appears to inform you that changing the orientation might effect the arrangement of these elements on the layout. Click **Yes** to accept the change, or **No** to cancel the change.

## Setting the Badge Size

You can set the badge dimensions for your badge layout by performing the following steps.

### To Set the Badge Size

1. In the Badge Properties Panel, click in the **Width** field and type in a setting for the Badge Width.
2. Click in the **Height** field and type in a setting for the Badge Height.
3. Click the **Resize Badge** button  to apply the new settings.
4. Alternatively, you can click the **Default Badge Size** button  to change the badge size back to the default size (3.375 x 2.125 for Landscape and 2.125 x 3.375 for Portrait).

## Setting the Front or Back Image of a Badge

You can set the background of a badge layout to an image. If you have a Two-sided badge, you can also specify a back image for the badge layout

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### To Set the Front Image of a Badge

The front image on the badge acts as a background for the front of the badge. You can place other badge elements over it, and set their background to transparent so that the background image shows through. If you set the background of an object to opaque, then the front image of the badge is not visible through that badge element.

1. In the Badge Properties Panel, click the **Apply Image - Front** checkbox to enable a badge front image.
2. Click Select  to select an image for the badge front. A Windows file selection dialog box opens and you can navigate to find the image you want to use. Click **OK** and the background image you chose is displayed on the Badge Layout Panel.
3. If you want to reduce or enlarge the image so that it fits on the badge front, click **Fit to Badge**.
4. To make the image darker or lighter, click in the **Ghosting Value** slider to move the slider bar left or right. The box to the right of the slider will display the Ghosting Value as you adjust it.
5. Click the **Print** checkbox if you want the image to be printed on the badge when you send the badge to print.

---

### To Set the Back Image of a Badge

1. In the Badge Properties Panel, click the **Apply Image - Back** checkbox to enable a badge rear image.
2. Click Select  to select an image for the badge back. A Windows file selection dialog box opens and you can navigate to find the image you want to use. Click **OK** and the background image you chose is displayed on the Badge Layout Panel.
3. If you want to reduce or enlarge the image so that it fits on the badge rear, click **Fit to Badge**.
4. To make the image darker or lighter, click in the **Ghosting Value** slider to move the slider bar left or right. The box to the right of the slider will display the Ghosting Value as you adjust it.
5. Click the **Print** checkbox if you want the image to be printed on the badge when you send the badge to print.

## Setting the Badge Background Color

You can set a background color for the front and/or back of a badge. The background color is not visible if also choose a background image.

---

### To Set the Badge Background to a Color

1. From the Badge Designer toolbar, click **Select Badge Properties**  to select the badge background.
2. Click **Fill Control Background Color**  to open a Windows color selection dialog box.
3. Click on the background color you want to assign to the badge background and click **OK**. The badge background changes to the selected color.

## Encoding Magnetic Tracks

You can encode up to three magnetic tracks on a badge layout, if your badge printer supports magnetic track encoding.

You can encode information from a C•CURE 9000 personnel record onto any of the three magnetic tracks available with magnetic cards. When a track contains encoded information, such as a card number, a controller interprets the information when a user swipes the magnetic card through a card reader.

**Readers supported on C•CURE 9000 can only read Track 2 for access control.** If you are using the magnetic stripe for access control, the information must be encoded on Track 2.

If you are using the magnetic stripe for access control, refer to [Using a Magnetic Track for Access Control on Page 162](#) for specific instructions on configuring the magnetic stripe.

All three magnetic tracks can be encoded for functions other than access control.

You should review [Important Considerations for Magnetic Encoding on Page 162](#) to see if these specific issues apply to your badges or printers.

## Adding Magnetic Tracks to a Badge Layout

To add magnetic encoded tracks to your badge layout, perform the following steps.

### To Add Magnetic Tracks to a Badge Layout

1. Open the Badge Designer (see [Accessing the Badge Designer on Page 125](#)).
2. The Badge Properties Panel is initially active in the Badge Designer. In the Badge Properties Panel, click on the **Mag Encoding** tab.
3. Select **Magnetic Stripe**. The **Number of Tracks** and **Track Alignment** boxes appear.
4. Select either **Two Magnetic Tracks** or **Three Magnetic Tracks**. The **Mag Track Data** box appears, containing fields for either two or three tracks.
5. To encode one or more of these Mag tracks, select the track to encode (**Encode Magnetic Track 1**, **Encode Magnetic Track 2**, or **Encode Magnetic Track 3**).
6. The drop-down list box for the magnetic track you selected becomes available, with the default MagTrack# field selected.
7. If you want to print the personnel data for the Mag Card format to the track on the badge, use the default selection (MagTrack1, MagTrack2, or MagTrack3). See [Setting Magnetic Stripe Encoding Formats on Page 165](#) for more information.
8. If you want to use a different database field for the magnetic track, select a database field from the **Mag track field name** drop-down list.
9. If you want to use the Expression Builder to create a boolean expression, choose "=" for the **Mag Track Field Name**. The **Expr>>** button becomes available. Click **Expr>>** to create a Boolean expression. See [Expression Builder on Page 196](#) for more information.
10. You can choose the track alignment of the magnetic tracks by choosing either Right/Top or Left/Bottom in the Track Alignment box. If you are viewing the back of the badge (click  to toggle the front/back view) you can see how the magnetic stripes are positioned on the badge when you select either track alignment.

Note that MagTrack2 and MagTrack3 can contain only numeric data. Do not assign a database field or an expression to MagTrack2 or MagTrack3 that contains non-numeric characters.

## Using a Magnetic Track for Access Control

If you are using the badges you design with a Mag Reader for access control, you need to make sure that the correct card format data is printed to the magnetic stripe.

**Readers supported on C•CURE 800/8000 can only read Track 2 for access control.** If you are using the magnetic stripe for access control, the information must be encoded on Track 2.

Therefore, when you configure the Mag Encoding Options on the Badge Layout, you need to:

- Select **Encode Magnetic Track 2**.
- Use the default selection (MagTrack2) for the **Mag Track Data**.
- Assign the correct Card Format for Magnetic Stripe Encoding to Stripe 2 on the Badge Layout dialog box.

---

### To Configure Mag Encoding Options for Access Control

Perform the following steps to configure Mag Encoding Options for C•CURE 800/8000 access control:

1. Open the C•CURE ID Badge Designer (see [Accessing the Badge Designer on Page 125](#)).
2. The Badge Properties Panel is initially active in the Badge Designer. In the Badge Properties Panel, click on the Mag Encoding tab.
3. Select **Magnetic Stripe**. The options for **Two Magnetic Tracks** and **Three Magnetic Tracks** appear.
4. Click on **Two Magnetic Tracks** to enable two magnetic tracks on the badge layout, or on **Three Magnetic Tracks** to enable three magnetic tracks on the badge layout. The fields appear to enable you to encode up to three magnetic tracks.
5. Select **Encode Magnetic Track 2**.
6. The **Mag Track Field Name** drop-down default value is MagTrack2. This is the correct choice for C•CURE 800/8000 access control.
7. Exit the C•CURE ID Badge Designer, saving your changes. The Badge Layout dialog box appears.
8. Double-click the **Stripe 2** field under Card Formats for Magnetic Stripe Encoding. The Card Format Selection dialog box appears.
9. Select the card format that you want to encode on the badge (this must be a card format supported by your Mag Reader. The most commonly used format is Magnetic 14). Click **Select**.
10. When the Badge Layout dialog box appears, the card format you chose appears in the **Stripe 2** field.
11. Click **OK** to save your changes.
12. When you configure your Mag Reader, be sure to enable the same Magnetic card format.

## Important Considerations for Magnetic Encoding

Before designing and printing badges with magnetic strips, you should review the following issues to ensure that your badge design works as intended with your badge printer.

- [Uppercase ASCII in Mag Track 1 on Page 163](#)
- [Numeric Fields in Mag Track 2 on Page 163](#)
- [Encoding Magnetic Track 3 on Page 163](#)
- [Two-Sided Badges and the Magnetic Stripe on Page 163](#)
- [Magnetic Encoding with Eltron Printers on Page 164](#)
- [Magnetic Encoding with Nisca Printers on Page 164](#)

### Uppercase ASCII in Mag Track 1

Because most printers expect MagTrack 1 to be uppercase ASCII characters, C•CURE ID converts all MagTrack 1 characters to uppercase ASCII.

### Numeric Fields in Mag Track 2

When encoding MagTrack 2 data, C CURE ID appends zeroes to fill numeric fields.

#### Example:

The Card\_# database field has a maximum length of 10 numeric characters. If you use only four characters for your Card\_#'s, C•CURE ID appends six zeroes to fill this 10-character field prior to encoding MagTrack 2.

### Encoding Magnetic Track 3

If you need to encode Magnetic Track 3, note that this track supports numeric data only, and will not encode space characters. Therefore, you must ensure that any data you encode—whether you use a card format, a database field, or an expression—contains only numeric data with no spaces, or the printer will not encode the magnetic stripe.

#### Example:

The Card\_# database field has a maximum length of 10 numeric characters. If your Card\_#'s are only four characters long, encoding will fail.

To avoid this problem, you can use the Expression Builder LEN() function to specify the length of the data you want to encode.

#### Example:

The expression LEN([Card\_#])+", "+[Card\_#] tells the printer to encode exactly the number of characters that exist in the Card\_# database field.

### Two-Sided Badges and the Magnetic Stripe

When you design a two-sided badge with a magnetic stripe on the reverse side, you need to make sure that your badge design does not include objects that will overprint the magnetic stripe. Therefore, you must be aware of the orientation your badge printer uses for the magnetic stripe.

If your printer orients the magnetic stripe at the bottom of the badge, your badge design should not contain any design elements (text, images, pictures) that print on the badge in that area.

If your printer orients the magnetic stripe at the top of the badge, your badge design should not contain any design elements (text, images, pictures) that print on the badge in that area.

## Magnetic Encoding with Eltron Printers

If you are using an Eltron printer, make sure before you attempt to print cards with magnetic encoding that the Mag Encoding printer property is set to On. This property is Off by default. To view this setting, right click on the printer icon in Windows, select Properties, then click on the Device Settings tab and make sure that **With magnetic encoding** is set to Yes.

## Magnetic Encoding with Nisca Printers

The Nisca printer default Encoder text string prefix and suffix configured on the C•CURE ID Magnetic Encoding dialog (See [Setting Magnetic Encoding Options](#) on Page 65) includes the default data length for the Mag14 card format. If the data you wish to encode uses a different card format, or has a different length than the default, you need to adjust the prefix for your Nisca printer.

If the length of the data is fixed, you can change the default data length in the prefix:

1. From the ID Setup dialog box, click **Mag Encoding**.
2. Select Nisca from the Select Encoder Device list. The Encoder text string prefix and suffix for each track then fills automatically.
3. Change the data length parameter in the prefix to the correct value for your data.

### Example:

If you are encoding 15 characters on Track 1, change the prefix from:

"~@1,0,0" to "~@1,0,15".

4. Click **OK**.

If the length of the data is variable, you need to use the Expression Builder to create an expression that includes the printer prefix code, instead of using the default printer prefix:

1. From the ID Setup dialog box, click **Mag Encoding**.
2. Select Nisca from the Select Encoder Device list. The Encoder text string prefix and suffix for each track then fills automatically.
3. Clear the default text string prefix by clicking in the Prefix field, highlighting the text, and pressing **Delete**.
4. Click **OK**.
5. Use the Expression Builder to create an expression that includes the printer prefix code, and calculates the length of the variable data you wish to encode.

### Example:

To encode the database field Card\_# on Mag Track 3, use an expression such as:

```
"~@1,3," + LEN([Card_#])+"+[Card_#]
```

where "~@1,3," represents the prefix for Mag Track 3, LEN([Card\_#]) calculates the length of the Card\_# field, and [Card\_#] is the actual data from the Card\_# field.

## Setting Magnetic Stripe Encoding Formats

In the C•CURE ID Badge Design Editor, you can specify the card formats for magnetic stripe encoding for a badge layout file. You can encode up to three magnetic stripes on a card. However, these three fields are initially grayed out, and only become active after you have inserted a Magnetic Stripe while editing the badge layout file using the C•CURE ID Design Editor.

---

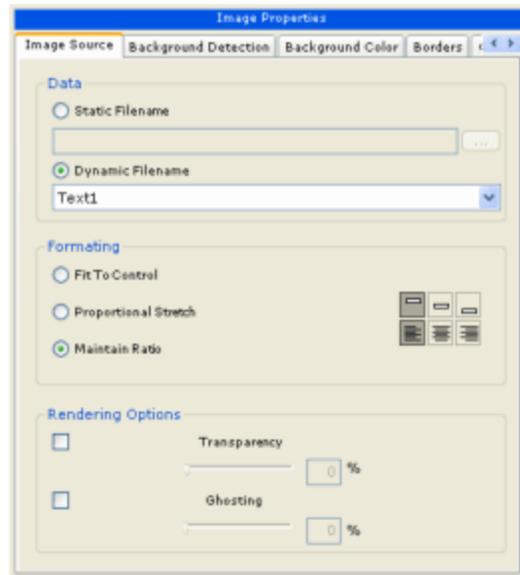
### To Specify the Card Format for Magnetic Stripe Encoding

1. Follow the steps for [Adding Magnetic Tracks to a Badge Layout](#) on [Page 161](#), using the default selection (MagTrack1, MagTrack2, or MagTrack3) for each track you have enabled.
2. Click **Save**  and **Exit**  to close the Badge Designer.
3. The Badge Layout Dialog Box opens. For each Magnetic Track you enabled and assigned a MagTrack# to, you can select a Card format by double-clicking on the appropriate field: Stripe 1, Stripe 2 or Stripe 3 (if these fields are unavailable, you need to go back to the Badge designer and assign MagTrack1, Magtrack 2, or MagTrack 3 to the corresponding magnetic stripe).
4. The Card Format Selection dialog opens. Select a Card Format from the list and click **Select**. (Typically, Magnetic 14 is used for access control magnetic stripe cards.)
5. Click **OK** in the Badge Layout dialog box.

## The Image Properties Panel

The C•CURE ID Image Properties Panel lets you configure an image object that you have added to the badge layout. [Figure 32 on Page 166](#) shows the Image Properties panel with the Image Source tab active.

**Figure 32:** Image Properties Panel



The following sections provide more information about the C•CURE ID Image Properties Panel.

- [Accessing the Image Properties Panel on Page 166](#)
- [Image Properties Panel Tasks on Page 167](#)
- [Image Properties Panel Tabs on Page 167](#)

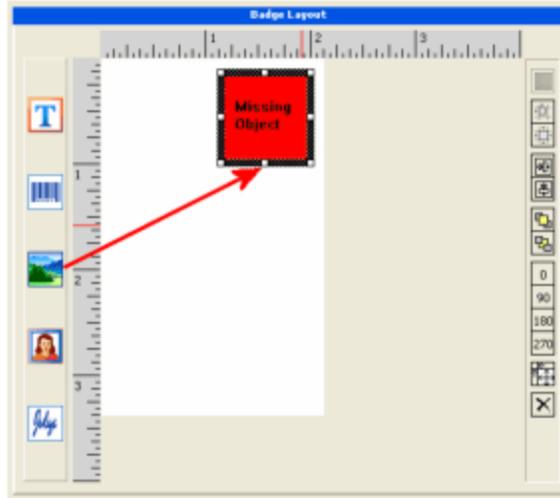
### Accessing the Image Properties Panel

Perform the following steps to access the C•CURE ID Image Properties Panel:

#### To Access the Image Properties Panel

1. Open the C•CURE ID Badge Designer.
2. Drag an image object icon  from the from the Badge Layout Toolbar onto the Badge Layout, or select **Insert>Image** from the menus, or select an existing image object on the Badge Layout, and the Image Properties Panel becomes active. See [Figure 33 on Page 167](#).

Figure 33: Click and Drag Icon to Create Image Object



## Image Properties Panel Tabs

The Image Properties Panel has the following tabs.

- [Image Source Tab](#) on [Page 167](#) describes the Image Source Tab.
- [Background Detection Tab](#) on [Page 169](#) describes the Background Detection Tab.
- [Properties Panel Background Color Tab](#) on [Page 155](#) describes the Background Color tab.
- [Properties Panel Borders Tab](#) on [Page 157](#) describes the Borders tab.
- [Color Management Tab](#) on [Page 170](#) describes the Color Management tab.

You can click  to scroll these tabs to the left or right.

## Image Properties Panel Tasks

From the C•CURE ID Image Properties Panel, you can perform the following tasks:

- [Accessing the Image Properties Panel](#) on [Page 166](#)
- [Setting a Static Image Source for an Image Object](#) on [Page 172](#).
- [Setting a Dynamic Image Source for an Image Object](#) on [Page 171](#).
- [Setting Background Detection Properties](#) on [Page 172](#).
- [Setting Background Color for an Object](#) on [Page 173](#)
- [Setting Color Management Properties](#) on [Page 174](#).

## Image Source Tab

The Image Source tab lets you specify a static or dynamic filename for an image object.

A static filename is used to identify a picture that is displayed on all badges using this layout.

A dynamic filename is used to identify a field in the Personnel database that contains a filepath identifying a picture file. Using a dynamic filename allows you to display a variety of images on the badges using this badge layout. For example, if you have several image files that represent employee levels (manager, associate, assistant, supervisor, etc) you can use a field in the database to store the name of the file that matches each person's level. Their badge will display the appropriate graphic.

For Portrait and Signature objects, this tab includes a Sample FileName field that can be used to display a graphic file in badge previews (see ) to verify the position and appearance of the signature or portrait on the badge. When the badge is printed, the actual Signature or Portrait associated with the Personnel record will be printed on the badge.

The Image Source tab also provides fields that let you position the image, and adjust the transparency and ghosting effects.

### Image Source Tab Definitions

Table 47 on Page 168 provides definitions for the Image Source Tab fields and buttons.

**Table 47:** Image Source Tab Definitions

Button/Field	Description
Sample Filename Select 	Available only when you add a Portrait or Signature to the Badge Layout. Click the <b>Select</b> button to open a Windows Open File dialog box to select a file to be used as the sample Portrait/Signature image.
Static Filename	Click this checkbox to enable the Static Filename Select button. A static image is an image that appears on every badge to the badge layout.
Static Filename Select 	Click this button and an Open file dialog box appears so that you can choose an image that will appear on every badge. Alternatively, you can manually enter a path and file name in the field.
Dynamic Filename	Click this checkbox to enable the Dynamic Filename Select button, so that you can add a database field whose value is an image filename.
Dynamic Filename Select 	Click this button to select any database field from the drop-down list. C•CURE ID will take the value of the database field and use it as the filename for an image at print time. This method supports any of the following file types: .BMP, .EXF, .GIF, .JPG, .PNG, .TIF, .WMF.
Fit to Control	Stretches the selected image to fit the full size of the control. Alignment buttons are not available with this option.
Proportional stretch	Forces a graphic to retain its original proportions when you resize the graphic along with the size of the control. Alignment buttons are not available with this option.  On badge designs upgraded from a prior release, you will need to select proportional stretch per object if you wish to resize objects proportionally.
Maintain Ratio	Maintains the ratio of the original image size within the size of the control but allows the control to have space around the image. Alignment buttons are enabled and available with this option.

Image Source Tab Definitions (continued)

Button/Field	Description
Alignment (vertical) 	<b>Top</b> – The text is anchored to the top of the text box. <b>Middle</b> – The text is anchored in the middle of the text box. <b>Bottom</b> – The text is anchored to the bottom of the text box.
Alignment (Horizontal) 	<b>Left</b> – The text is anchored to the left of the text box. <b>Center</b> – The text is anchored to the center of the text box. <b>Right</b> – The text is anchored to the right of the text box.
Transparency	Enables the Transparency slider that sets a percentage for transparency from 0 - 100%. Transparency allows objects behind the image to show though the selected image. This option must be selected for Transparent Replacement Mode in Background Detection to work.
Ghosting	Enables the Ghosting slider that sets a percentage for ghosting from 0 – 100%. Ghosting adds whiteness to the image but does not allow object behind the image to show through the selected image.

## Background Detection Tab

The background Detection tab lets you control whether or not background detection is used to modify the background or an image, signature, or portrait object on the badge layout.

The Background Detection Tab has the following fields and buttons.

Table 48: Background Detection Tab Definitions

Button/Field	Description
Enable Background Color Detection	Select this check box to enable the Background Detection fields.
Colored	Selects Color Replacement Mode, enabling the Replacement Color Button.
Transparent	Selects Transparent Replacement Mode, disabling the <b>Replacement Color</b> Button. The selected color is treated as transparent, so that objects behind the image on the badge layout can show through.
Color To Detect	Select the color to use for background detection from the drop-down list. The <b>Automatic</b> selection uses an algorithm that takes a sample of the background from the upper right and left corners of the images and then calculates the average color to use for background detections. The <b>Select Color</b> choice enables the Eyedropper button.
Eyedropper 	Click to change the cursor to an eye dropper. You can click on a pixel in the image displayed on the badge layout to select the color to be used for background detection.  This button is visible only if <b>Select Color</b> is chosen from the Color to Detect drop-down list.
Tolerance level	Use the slider to select from 0-100% tolerance from the selected color to replace or make transparent. Alternatively you can type in the tolerance value manually in the field. Transparency from the Image Source tab must be enabled for this option to work.

Background Detection Tab Definitions (continued)

Button/Field	Description
Replacement Color 	Click to open a Color Selection dialog box, so that you can select a color to replace the background detected color.

## Color Management Tab

Color Management adjusts the way colors are used in the badge layout graphical elements you have defined.

### Example:

If all the employee portraits you have taken have a yellow tint because of lighting conditions, you can use Color Management to adjust the contrast and brightness levels to compensate.

The Image Properties Panel Color Management Tab has the following fields and buttons.

**Table 49:** Color Management Tab Definitions

Button/Field	Description
Brightness slider	Adjusts the brightness of the image from -100 to 100. Alternatively you can type in the value manually in the value field. The default value is 0. -100 is completely black, 100 is completely white, if all other values are left at default settings.
Contrast slider	Adjusts the contrast of the image from 0 to 100. Alternatively you can type the value manually in the field. The default value is 25. A higher contrast value makes the image lighter, while a lower value darkens the image.
Saturation Slider	Adjusts the level of saturation from 0 – 100. Alternatively you can type the value manually in the field. The default value is 20. Reducing saturation makes an image look grayer. Increasing saturation adds brilliance but can distort skin tones.
Hue Slider	Adjusts the level of hue from 0 – 360. Alternatively you can type the value manually in the field. The default value is 0.
Red slider	Adjusts the level of red from 0 – 255. Alternatively you can type the value manually in the field. The default value is 0.
Green slider	Adjusts the level of green from 0 – 255. Alternatively you can type the value manually in the field. The default value is 0.
Blue Slider	Adjusts the level of blue from 0 – 255. Alternatively you can type the value manually in the field. The default value is 0.
Sharpness Radius Slider	Sets the amount of sharpness modification to apply to the image object. Increasing the Radius compensates for blurry edges.
Sharpness Depth Slider	Sets the amount of sharpness modification to apply to the image object. Increasing the Depth of field can decrease blurring of out-of-focus areas of the image.
Grayscale	Select this check box to convert the image to GrayScale (shades of white, black, and gray) and enable the GrayScale slider and field. Use the slider to select a GrayScale value from 0-255. Alternatively you can type the value manually in the field. The default value is 127.
Reset	Click this button to reset all color management tools back to default settings: Brightness = 0, Contrast = 25, Saturation = 20, GrayScale = cleared, All color and Sharpness sliders = 0

## Setting a Dynamic Image Source for an Image Object

When you place an Image Object on the badge layout, the image source must be specified. You can configure a Dynamic image that can be different on each badge. You select Dynamic Filename if you want to use a database field to determine which image appears on each badge. You set up the database field you chose to contain the file name of the image you want to place on the badge.

When the badge is printed, C•CURE ID looks for an image object in the database that has the same name as the field's value in the database.

For example, for a field value of "SafetyTeam" C•CURE ID looks for an image object named "SafetyTeam" to print on the badge. You can also use a User-named field such as Text1 to link to dynamic image objects for a badge.

### Example:

If you want to print a graphic on specific badges to identify members of the corporate Safety Team:

1. For each person that you want to have this graphic printed on their badge, assign "SafetyTeam" to the Text1 field.
2. Import an image into the database to add to these badges, and name it "SafetyTeam". See the *C•CURE 9000 Personnel Configuration Guide* for instructions on importing an image.
3. Add an image to the badge layout, and assign it a Dynamic Filename of Text1.
4. When printing a badge, if the value of Text1 for a Personnel record is "SafetyTeam" C•CURE ID looks for an image object in the database of that name.

### To Set a Dynamic Image Source for an Image Object

1. Access the Image Properties panel by creating a new image object (see [Accessing the Image Properties Panel](#) on [Page 166](#) or selecting an existing image object.



2. On the Image Properties Panel Image Source tab, select **Dynamic Filename** to select an image that will be keyed to a C•CURE Database value.
3. Select a text database field from the drop-down list. The database field you choose is used to determine what image should be placed on the badge.
4. Import an image into the database to add to these badges, and name the image. See the *C•CURE 9000 Personnel Configuration Guide* for instructions on importing an image.
5. For each Person's badge that you want the image to appear on, use the Personnel Editor (see the *C•CURE 9000 Personnel Configuration Guide*) to edit that text field and type the name of the imported image object that you saved.
6. On the Personnel Editor Badging tab, click **Preview Badge** to view a preview of the badge to make sure the dynamic image called "Badge Image" appears correctly.

## Setting a Static Image Source for an Image Object

When you place an Image Object on the badge layout, the image source must be specified. It can be a Static image that is identical on every badge. This is useful for company logos, building pictures, or similar images you want repeated on all badges.

### To Set a Static Image Source for an Image Object

1. Access the Image Properties panel by creating a new image object (see [Accessing the Image Properties Panel on Page 166](#) or selecting an existing image object.



2. On the Image Properties Panel Image Source tab, select **Static Filename** to select an image that will appear on every badge.
3. Click  to choose a image file to display as a placeholder in the Badge Designer. A Windows File Selection dialog box appears. You can navigate to the folder your images reside in, and you can change the **Files of type** drop-down to **All files** to see file types other than the default .JPG files.
4. Choose a image file from the dialog box, then click **Open**.
5. The image you chose is added to the badge layout as a static image.

## Setting Background Detection Properties

Use the Background Detection tab if you want to remove the background of an image, or if you want the background of the image to be transparent or have a specified color.

### To Set Background Detection Properties for an Image Object

1. Select the image object you want to configure.
2. On the Properties Panel Background Detection tab, click on **Enable Background Detection** to make the Background Detection fields available for configuration. The Background Detection fields appear.
3. Choose a Replacement Mode:
  - Colored** – You can specify a color on the image that you want to replace with another color using the **Color to Detect** and **Replacement Color** fields.
  - Transparent** – You can specify a color on the image that you want to be treated as transparent so that the background color from the badge will be visible, using the **Color to Detect** field.
4. If you want to isolate the the main object in the image from color replacement and fill the rest of the image with the background color, Select **Edge Detection**. (This is most useful in portrait images, so that any color in the person's picture that coincidentally matches the background color is not replaced.) You can select and clear this check box after you have chosen a replacement color to see how edge detection affects the image.

5. Use the **Color To Detect** drop-down list to pick a specific color to be replaced (Colored mode) or be rendered as transparent (Transparent mode).
6. Alternatively, you can chose a specific pixel color from the image to be replaced or rendered transparent. (This is useful if you have an area on the image whose color is not included in the drop-down list.)
  - a. Choose **Select Color** from the Color To Detect drop-down list and the  button appears.
  - b. Click , then move the cursor to a pixel in the image that you want to chose as the Replacement Color. The replacement color is used to fill in all pixels that are replaced.
7. Use the **Tolerance Level** slider to choose how closely a color on the image must match the color you selected for replacement to occur. The higher the tolerance level, the more shades of the color you chose are replaced. A Tolerance Level of 0 means that only the color you specified is replaced. You can try different settings of the Tolerance Level, observing the result on the Badge Layout Panel, until you achieve the desired result.
8. If you chose **Colored** as a Replacement Mode, you can click  to choose the **Replacement Color**. The replacement color is used to fill in all pixels that are replaced. For example, if you choose white, every pixel in the image that is replaced will be colored white. (If you chose **Edge Detection**, the color replacement does not occur within the portion of the image inside the edge.)

## Setting Background Color for an Object

You can set the background color for an object such as a portrait, signature, image, or text, or for the badge background itself. You cannot set the background color for a barcode object.

You use the settings on the Background Color tab of the Properties panel for your object to control the background color of an object.

For image, portrait, and signature objects, the **Maintain Ratio** setting on the Image Source tab of the Properties panel must be selected for the settings on the Background Color tab to be available.

### To Set the Background Color for an Object

1. Select the object for which you want to set the background color in the Badge Layout panel. To select the badge background, click  to de-select all other objects.
2. For an image, portrait, or signature, make sure that **Maintain Ratio** is selected on the Image Source tab.
3. Click the Background Color tab.
4. Click  to open a Windows color selection dialog box. Select a color from the dialog box and click **OK**.
5. Use the **Transparency** slider to adjust the level of transparency for the background color.
6. If you want to add a Gradient effect using a second color, select a Gradient pattern from the drop-down list.
7. Click the **Blend Color**  to open a Windows color selection dialog box. Select a Blend Color from the dialog box and click **OK**.
8. Use the  to set the **Blending Value** between 0 and 20 (the default value of 0 displays a 50% blend. A value of 20 shows the maximum amount of the Background Color. A value of 1 show the maximum amount of the Blend Color.

## Setting Color Management Properties

### (For a Portrait, Image, or Signature)

Color Management adjusts the way colors are used in the badge layout graphical elements you have defined.

#### Example:

If all of the employee portraits you have taken have a yellow tint because of lighting conditions, you can use this tool to adjust the contrast and brightness levels to compensate.

---

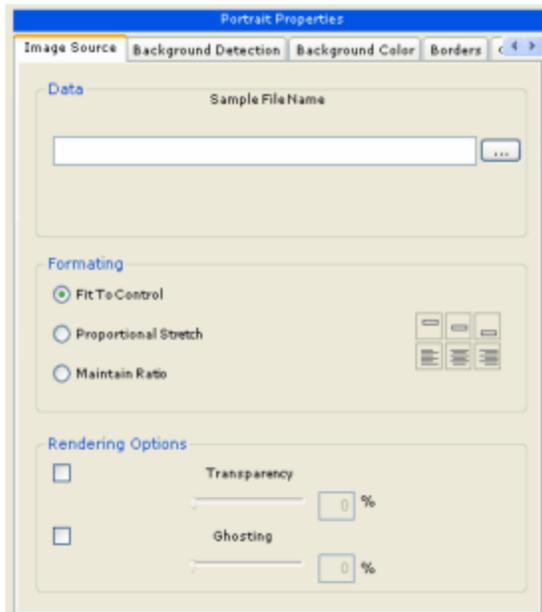
### To Set Color Management Properties for an Object

1. Select the image object you want to configure.
2. On the Properties Panel Color Management tab, click on the **Brightness** slider to set the amount of Brightness modification to apply to the image object.
3. Click on the **Sharpness Radius and Depth** sliders to set the amount of sharpness modification to apply to the image object. Increasing the Radius compensates for blurry edges. Increasing the Depth of field can decrease blurring of out of focus areas of the image.
4. Use the color sliders (Red, Blue, Green, Hue, and Saturation) to adjust the values of these color settings.
5. Alternatively, click **GrayScale** if you want the image to be converted to a non-color image.
6. Adjust the GrayScale level using the slider, or type in a number from 0 to 255 in the GrayScale setting box. (You can click **Reset** to return the GrayScale setting to the default value of 127.)

## The Portrait Properties Panel

The C•CURE ID Portrait Properties Panel lets you configure a portrait object that you have added to the badge layout. [Figure 34](#) on [Page 175](#) shows the Portrait Properties panel with the Image Source tab active.

**Figure 34:** Portrait Properties Panel



The following sections provide more information about the C•CURE ID Portrait Properties Panel.

- [Accessing the C•CURE ID Portrait Properties Panel](#) on [Page 175](#).
- [Portrait Properties Panel Tasks](#) on [Page 176](#).
- [Portrait Properties Panel Tabs](#) on [Page 176](#).

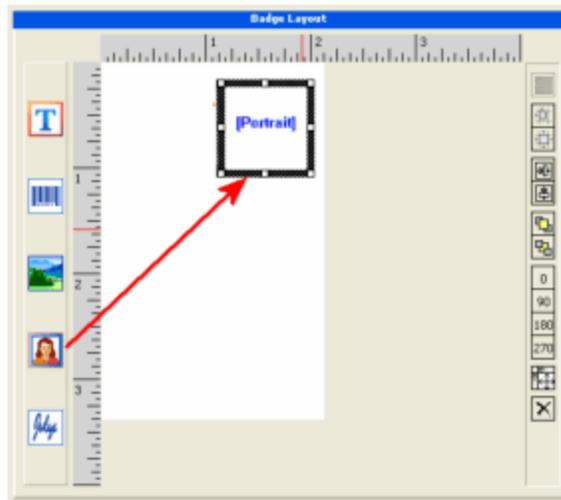
### Accessing the C•CURE ID Portrait Properties Panel

Perform the following steps to access the C•CURE ID Portrait Properties Panel:

#### To Access the C•CURE ID Portrait Properties Panel

1. Open the C•CURE ID Badge Designer (see [Accessing the Badge Designer](#) on [Page 125](#)).
2. Do one of the following:
  - Select an existing portrait object on the Badge Layout.
  - Drag a Portrait Object icon  onto the Badge Layout to insert a new Portrait object.
  - Select **Insert>Portrait** from the menus to insert a new Portrait object.
3. The Portrait Properties Panel becomes active on the right side of the Badge Designer.

**Figure 35:** Click and Drag Icon to Create Portrait Object



## Portrait Properties Panel Tabs

The Portrait Properties Panel has the following tabs.

- [Image Source Tab on Page 167](#) describes the Image Source Tab.
- [Background Detection Tab on Page 169](#) describes the Background Detection Tab.
- [Properties Panel Background Color Tab on Page 155](#) describes the Background Color tab.
- [Properties Panel Borders Tab on Page 157](#) describes the Borders tab.
- [Color Management Tab on Page 170](#) describes the Color Management tab.

You can click  to scroll these tabs to the left or right.

## Portrait Properties Panel Tasks

From the C•CURE ID Portrait Properties Panel, you can perform the following tasks:

- [Accessing the C•CURE ID Portrait Properties Panel on Page 175](#)
- [Adding a Portrait to a Badge on Page 144.](#)
- [Setting a Sample Filename on Page 177](#)
- [Setting Background Detection Properties on Page 172.](#)
- [Setting Background Color for an Object on Page 173.](#)
- [Adding a Border to an Object on Page 149.](#)
- [Setting Color Management Properties on Page 174.](#)

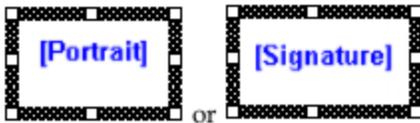
## Setting a Sample Filename

When you place a Portrait or Signature on the badge layout, your image source is the Portrait or Signature associated with the badge holder in the C•CURE Personnel database. The image you choose here acts as a placeholder in the design.

---

### To Set a Sample File Name for a Portrait or Signature Object

1. Select the Portrait or Signature object you want to configure.

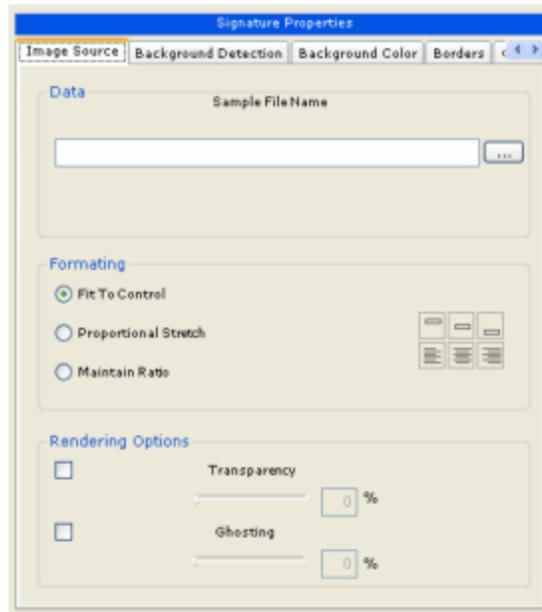


2. On the Image Properties Panel Image Source tab, click  to choose a sample image file to display as a placeholder in the Badge Designer. A Windows File Selection dialog box appears.
3. Choose an image file from the dialog box, then click **Open**.
4. The image you chose is added to the badge layout as a sample image.

## The Signature Properties Panel

The C•CURE ID Signature Properties Panel lets you configure a signature object that you have added to the badge layout. [Figure 36](#) on [Page 178](#) shows the Signature Properties panel with the Image Source tab active.

**Figure 36:** Signature Properties Panel



The following sections provide more information about the C•CURE ID Signature Properties Panel.

- [Accessing the C•CURE ID Signature Properties Panel](#) on [Page 178](#).
- [Signature Properties Panel Tasks](#) on [Page 179](#).
- [Signature Properties Panel Tabs](#) on [Page 179](#).

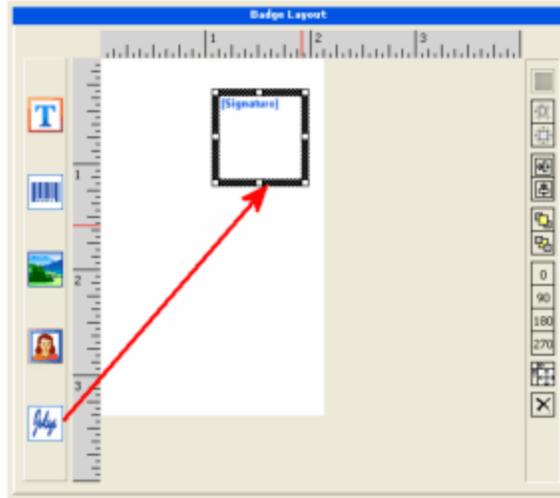
### Accessing the C•CURE ID Signature Properties Panel

Perform the following steps to access the C•CURE ID Signature Properties Panel.

#### To Access the C•CURE ID Signature Properties Panel

1. Open the C•CURE ID Badge Designer.
2. Drag a Signature Object onto the Badge Layout using the Signature icon , or select **Insert>Signature** from the menus, or select an existing signature object on the Badge Layout, and the Signature Properties Panel becomes active.

**Figure 37:** Click and Drag Icon to Create Signature Object



## Signature Properties Panel Tabs

The Signature Properties Panel has the following tabs.

- [Image Source Tab](#) on [Page 167](#) describes the Image Source Tab.
- [Background Detection Tab](#) on [Page 169](#) describes the Background Detection Tab.
- [Properties Panel Background Color Tab](#) on [Page 155](#) describes the Background Color tab.
- [Properties Panel Borders Tab](#) on [Page 157](#) describes the Borders tab.
- [Color Management Tab](#) on [Page 170](#) describes the Color Management tab.

You can click  to scroll these tabs to the left or right.

## Signature Properties Panel Tasks

From the C•CURE ID Signature Properties Panel, you can perform the following tasks:

- [Adding a Signature to a Badge](#) on [Page 144](#).
- [Setting Background Detection Properties](#) on [Page 172](#).
- [Setting Background Color for an Object](#) on [Page 173](#).
- [Adding a Border to an Object](#) on [Page 149](#).
- [Setting Color Management Properties](#) on [Page 174](#).

## The Text Properties Panel

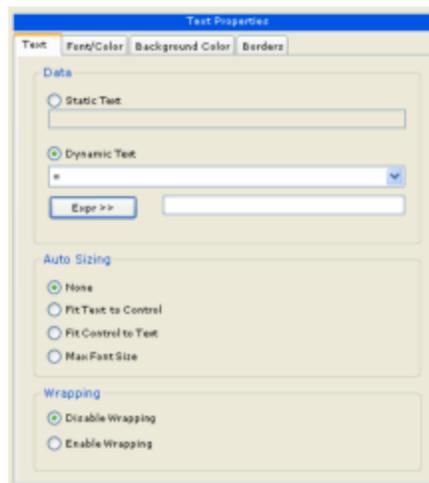
The C•CURE ID Text Properties Panel lets you configure a text object that you have added to the badge layout.

The panel has four tabs:

- [Text Properties Text Tab on Page 184](#) – lets you specify the text you want to display on the badge design, whether it is static text you type in, Dynamic Text from the personnel database, or the result of an expression you put together using the Expression builder. This tab also lets you determine the way the text is positioned.
- [Text Properties Font/Color Tab on Page 185](#) – lets you set the font for the text, and the foreground and background colors for the text.
- [Properties Panel Background Color Tab on Page 155](#) – lets you set the background color for the text object.
- [Properties Panel Borders Tab on Page 157](#) – lets you set the borders for the text object.

Figure 38 on Page 180 shows the Text Properties panel.

**Figure 38:** Text Properties Panel



See [Text Properties Panel Tasks on Page 180](#) for tasks you can perform using the Text Properties Panel.

See [Text Properties Text Tab on Page 184](#) for more information about the fields and buttons on the Text Properties panel.

### To Access the C•CURE ID Text Properties Panel

1. Open the C•CURE ID Badge Designer (see [Creating a Badge Layout on Page 132](#)).
2. Drag a Text Object onto the Badge Layout using the Text icon , or select **Insert>Text** from the menus.

The Text Properties Panel becomes active on the right side of the Badge Designer.

## Text Properties Panel Tasks

You can perform the following tasks from the Text Properties panel.

- [Adding Text to a Badge on Page 141.](#)
- [Defining a Boolean Expression for a Text Object on Page 181.](#)
- [Adding a Border to an Object on Page 149.](#)
- [Setting Color and Font Properties for a Text Object on Page 182.](#)
- [Setting the Text Background to Opaque or Transparent on Page 182.](#)
- [Setting the Background Color of a Text Object on Page 183.](#)
- [Rotating a Text Object on Page 183](#)
- [Setting Justification for a Text Object on Page 184](#)

## Defining a Boolean Expression for a Text Object

The Expression Builder lets you combine one or more personnel database fields, functions, Boolean operators, and/or text strings so that you can control the text that is dynamically printed on each badge. The expression is evaluated at print time to determine what is printed or encoded on each badge.

### Example:

You could create an expression that would print "Home Office" or Branch Office" on the badge, depending on the value of a database field, such as Facility Code. The expression could use an "IIF" function to test the value of Facility Code, and print the appropriate text depending upon the value returned by the "IIF" function.

See [Using the Expression Builder on Page 197](#) for more information about adding expressions to a badge layout.

To use the Expression Builder, you set the **Dynamic Text** field to "=" rather than an actual field name. This enables the **Expr>>** button so that you can open the Expression Builder to create an expression .

---

### To Define a Boolean Expression for a Text Object

1. From the Text Properties panel Text tab, select **Dynamic Text**.
2. Select "=" from the **Dynamic Text** drop-down list.
3. Click **Expr>>**.

The C•CURE ID Expression builder opens.

4. Use the following functions to create an expression:
  - **Database Fields** to add a personnel database field to your expression.
  - **Functions** to add a function to your expression.
  - **Operators** to add an operator to your expression.
  - **Text** to add a text string to your expression.
5. Click **OK** to add the expression to the Dynamic Text field, or select one of the following options:
  - **Erase:** to erase the expression you have built.
  - **Undo:** to remove the last value you have added to your expression.

- **Test:** to validate the expression.
- **Cancel:** to return to the C•CURE ID Text Properties panel without building an expression.

## Setting Color and Font Properties for a Text Object

You can use the Font/Color tab of the Text Properties tab of the Badge Designer to change the appearance of a text object you have added to your badge design.

### To Set Font and Color Properties for a Text Object

1. Select the text object in the Badge Layout panel you want to configure.



2. On the Text Properties Panel, click the Font/Color tab.
3. Use the **Font** drop-down list to select the font for your text.
4. Use the **Font Size** drop-down to select the point size for your text.
5. Click any of the following buttons to apply an attribute to the text:

 Bold the text.

 Italicize the text.

 Underline the text.

6. Set the color of the text by clicking the text color button . A Windows color selection dialog box appears to let you select a color for the text. Pick a color and click OK. The color you selected is shown by the text color box  to the right of the text color button.
7. If you want to change the vertical positioning of the text, click on Top , Middle , or Bottom .
8. If you want to change the horizontal positioning of the text, click on Left , Center , or Right .
9. If you want to change the angle that a text object is displayed, click on the Rotation spinner . Click the up arrow to angle the text in a clockwise rotation, or click the down arrow to angle the text in a counterclockwise rotation.

## Setting the Text Background to Opaque or Transparent

Perform the following steps to set the background of a text object to opaque (solid color, 0% transparency) or a percentage of transparency (objects and background beneath the text object on the badge are visible).

### To Set the Text Background to Opaque or Transparent

1. On the Text Properties Panel, click the Background Color tab.
2. Use the slider  in the **Transparent** field to change the degree of transparency for the text background, or type in a transparency percentage into the field. The higher you set the transparency percentage, the more the background color of the badge, or other objects on the badge, are visible behind the text object.

### Setting the Background Color of a Text Object

Perform the following steps to set the background color of a text object.

Note that if the text object's background (see [Setting the Text Background to Opaque or Transparent on Page 182](#)) is set to 100% **Transparent**, the background color will not be visible. To see the background color, choose a lower percentage of transparency for the text background.

### To Set the Background Color of a Text Object

1. In the Badge Layout Panel, click on a Text Object to select it.



2. Click the Background Color tab on the Text Properties Panel.
3. Click the **Background Color** button  and a color selection dialog box appears.
4. Click on the color you want to use and click **OK**. The Text Object background color is changed to the color you selected.
5. You can use the **Transparent** field to set the percentage of transparency for the Text Object background color. 0% is opaque, while 100% is full transparency.
6. You can also use a **Gradient** to blend two colors in the Text Object background. Pick a Gradient pattern from the Gradient drop-down list.
7. If you want to blend a second color into the gradient (other than the default color white) , click the **Blend Color** button  and a color selection dialog box appears.
8. Click on the color you want to use and click **OK**. The Gradient blend color is changed to the color you selected.
9. Use the **Blending Value** spinner  to change the amount of each color in the gradient. The default setting of 0 results in a 50% blend of both colors.

See the [Properties Panel Background Color Tab on Page 155](#) for more information about using Background colors.

### Rotating a Text Object

Perform the following steps to rotate a text object.

**NOTE** You can rotate an object using the 0, 90, 180, and 270 buttons on the [Badge Layout Panel Toolbars on Page 139](#).

---

### To Rotate a Text Object

You can rotate the text within a Text Object (the object itself does not rotate).

1. In the Badge Layout Panel, click on a Text Object to select it.



2. In the Text Properties Font/Color tab, in the Rotation box, type in the angle of rotation you want for your text (or use the up and down buttons to set the angle).
3. To reset the rotation angle to a previous setting, retype that setting.

### Setting Justification for a Text Object

Perform the following steps to set the text justification for a text object.

---

#### To Set Justification for a Text Object

1. Select the text object you want to configure.



2. On the Text Properties Panel, click the Font/Color tab.
3. To set Vertical positioning of text within the text object, click one of the following:
  - Text starts at the top of the text object.
  - Text starts at the middle of the text object.
  - Text starts at the bottom of the text object.
4. To set horizontal positioning of the text within the text object, click one of the following:
  - Text is aligned to the left border of the text object.
  - Text is aligned in the center of the text object.
  - Text is aligned to the right border of the text object.

### Text Properties Text Tab

The Text Properties Text tab lets you define static or

dynamic text for a text object, and adjust settings for the text size and text wrapping.

- Text Tab Definitions are provided in [Table 50 on Page 185](#).
- Font/Color Tab Definitions are provided in [Table 51 on Page 186](#).

### Text Tab Definitions

The Text Properties Panel Text Tab has the following fields and buttons.

**Table 50:** Text Properties Panel Text Tab Definitions

Button/Field	Description
Static Text	Select the Static Text button if you want to type in the text that appears in the text object. The text you type in appears on all badges printed using this design.
Dynamic Text	Select the Dynamic Text button if you want to use a database field for the text object. You select a database field from the drop-down list. You can choose "=" if you want to use the Expression Builder to create an expression to be evaluated.
Exp>> Button	Click this button to open the Expression Builder. This button is available only if you have chosen "=" from the Dynamic Text drop-down list.
Create Text as Graphic	If selected, this choice causes the text object to be sent to the printer as a graphic image. This can produce a lower quality text image, but it may be necessary if the font for the text is not supported by the badge printer. This setting can be changed individually for all text objects on a badge design.
Auto Sizing	Auto Sizing provides four options for adjusting the size of the text. <b>None</b> – Text is not auto-sized. <b>Fit Text to Control</b> – Increases or decreases the size of the text to the maximum size that can fit within the borders of the text control. <b>Fit Control to Text</b> – Increases or decreases the size of the control to match the current size of the text in the text object. <b>Max Font Size</b> – Allows the text to decrease in size to fit within the borders of the control, but does not allow the text size to increase larger than the current text size.
Wrapping	Wrapping provides two options for adjusting the appearance of the text. <b>Disable Wrapping</b> – Does not wrap text within the object. Text that is too long for the size of the text object is cropped unless you resize the text object. <b>Enable Wrapping</b> – Allows text to wrap at the border of the object, to better fit the text within the text object. If the text object is too small to fit the text even with wrapping on, the text is cropped unless you resize the text object.

### Text Properties Font/Color Tab

The Text Properties Font/Color tab lets you set the font for the text, and the foreground and background colors for the text. You can also set the percentage of transparency for text, the justification (such as left-right and top-bottom) for text, and the degree of rotation for the text box.

Font/Color Tab Definitions are provided in [Table 51 on Page 186](#).

### Font/Color Tab Definitions

The Text Properties Panel Font/Color Tab has the following fields and buttons.

**Table 51:** Text Properties Panel Font/Color Tab Fields and Buttons

Button/Field	Description
Foreground	<p>These settings allow you to specify the style for the text:</p> <p><b>Font</b> – Choose the font for the text object from the drop-down list of available fonts.</p> <p><b>Font Size</b> – Choose the font size for the text object from the drop-down list.</p> <p><b>Bold</b> – Toggle the bold attribute for the entire text object.</p> <p><b>Italic</b> – Toggle the italic attribute for the entire text object.</p> <p><b>Underline</b> – Toggle the underline attribute for the entire text object.</p> <p><b>Color</b> – Click this button to pick the text color for the text object. When you select a color, it will be visible in the color box to the right of the Color button.</p>
Background	<p>These settings allow you to specify:</p> <p><b>Opaque</b> – The text box has a colored background, with a default color of white. You can click the toolbar <b>Fill Control Background Color</b> button to change the color.</p> <p><b>Transparent</b> – The text box is transparent; the background color for the badge shows through.</p>
Justification	<p>These settings allow you to specify justification for the text (positioning of the text within the text object). You can choose one of the three vertical justification settings:</p> <p><b>Top</b> – Align the text to the top of the text object.</p> <p><b>Middle</b> – Align the text to the middle of the text object.</p> <p><b>Bottom</b> – Align the text to the bottom of the text object.</p> <p>You can choose of the three horizontal justification settings:</p> <p><b>Left</b> – Align the text to the left edge of the text object.</p> <p><b>Center</b> – Align the text to the center of the text object.</p> <p><b>Right</b> – Align the text to the right edge of the text object.</p>
Rotation	<p>You can set the degree of rotation for the text in the text object by clicking the spinner control or typing in a number from 0 to 360 degrees. This rotates the text itself, not the text box.</p>

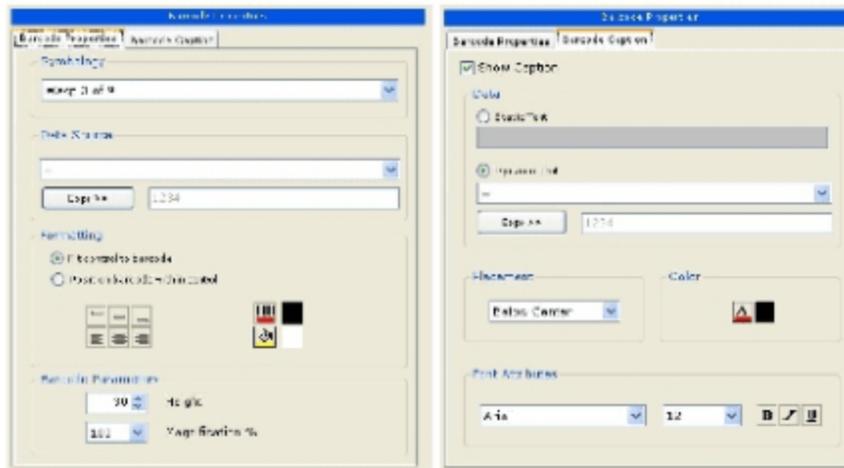
## The Barcode Properties Panel

The C•CURE ID Barcode Properties Panel lets you configure a barcode object that you have added to the badge layout.

The Barcode Properties Panel, as shown in [Figure 39](#) on [Page 187](#) has two tabs:

- Barcode Properties tab – used to add barcodes, which correspond to text fields, to a badge layout. See [Barcode Properties Tab Definitions](#) on [Page 193](#).
- Barcode Captions tab – used to add barcode captions, which provide readable text that can be placed above or below the barcode. See [Barcode Captions Tab Definitions](#) on [Page 194](#).

**Figure 39:** Barcode Properties Panel



The following sections provide more information about the C•CURE ID Barcode Properties Panel.

- [Barcode Overview](#) on [Page 189](#).
- [Accessing the Barcode Properties Panel](#) on [Page 187](#).
- [Setting Barcode Properties](#) on [Page 189](#).
- [Setting Barcode Caption Properties](#) on [Page 190](#).
- [Adding Static Text to a Barcode Caption](#) on [Page 191](#).
- [Adding Dynamic Text to a Barcode Caption](#) on [Page 191](#).
- [Barcode Properties Tab Definitions](#) on [Page 193](#).
- [Barcode Formats](#) on [Page 192](#).
- [Barcode Captions Tab Definitions](#) on [Page 194](#).

### Accessing the Barcode Properties Panel

You use the Barcode Properties panel to configure barcode objects on you badge layout. You access the panel by selecting an existing barcode object, or by adding a new one.

---

### To Access the Barcode Properties Panel:

1. Open the C•CURE ID Badge Designer. See [Creating a Badge Layout](#) on [Page 132](#).
2. Select an existing barcode object on the badge layout, or drag a barcode object onto the Badge Layout using the Barcode icon , or select **Insert>Barcode** from the menus. The Barcode Properties Panel becomes active.

## Barcode Overview

You can add barcodes, which correspond to text fields, to a badge layout from the Insert menu (see [Badge Designer Menus and Toolbars on Page 126](#)) or from the [Badge Layout Panel Toolbars on Page 139](#). Barcodes are like text fields, but require encoding (error correction, encryption). See [Barcode Properties Tab Definitions on Page 193](#) for more information about Barcode fields.

You can also add a barcode caption to the barcode, to provide readable text that can be placed above or below the barcode. The caption can be taken from any field in the personnel database, or it can be user-typed text. See [Barcode Captions Tab Definitions on Page 194](#) for more information about Barcode caption fields.

**NOTE** If the barcode caption is wider than the barcode itself, due to the length of the caption text or the size of the caption font, the caption may be clipped (not all text is visible).

You can use the Wasp family of bar codes that are available as part of the C•CURE ID product. See [Barcode Formats on Page 192](#) for more information about the barcode settings you can choose.

Barcodes require the use of special readers; select the barcode font required by the reader you are using. Barcode readers look for encoded characters embedded within the text. They require these characters to know when to start and stop encoding and to provide additional encryption instructions.

Check with bar code reader manufacturers to see which models are suitable for your application. Ensure that the application supports your barcode reader and printer before inserting barcodes on badges.

## Setting Barcode Properties

From the C•CURE ID Barcode Properties Panel Barcode Properties tab, you can set the encoding method, data source, and appearance of barcodes on your badge layout.

### To Set Barcode Properties for a Barcode Object

1. Select the barcode object you want to configure.



2. Select the encoding method that you are using from the **Symbology** drop-down list.
3. Select a data source from the **Data Source** drop-down List.

C•CURE Personnel database field – If you want the contents of a database field to be printed on the badge as a barcode, select that field from the list.

“=” – If you want to use the Expression Builder to create a boolean expression, chose “=” from the drop down list, and click **Expr>>** to open the Expression Builder. (See [Expression Builder on Page 196](#) for more information.)

5. Choose either **Fit control to barcode** or **Position barcode within control**.

**Fit control to barcode** sizes the barcode background slightly larger than the barcode itself. You cannot change the size of the barcode background.

**Position barcode within control** lets you specify the position of the barcode within the background. You can change the size of the background by dragging the selection handles of the barcode object. You can use the buttons under this choice to position the barcode within the barcode object.

6. Click  to pick the color for the barcode. A color selection dialog box appears so that you can pick a color and click **OK**.
7. Click  on the Badge Layout toolbar to pick the color for the barcode background. A color selection dialog box appears so that you can pick a color and click **OK**. If you chose **Transparent** as the background, the color you pick will not be visible.
8. Configure the Bar Parameters by setting the **Height** of the barcode. Type in the number or use the up/down arrows to set the Height.
9. Use the **Magnification %** drop-down list to pick a barcode magnification percentage, increasing or decreasing the size of the barcode on the badge.

### To Set Barcode Data Source Using the Expression Builder

1. Add a barcode object to the badge design.
2. Select the barcode object.
3. In the Barcode Properties Panel, on the Barcode Properties tab, click in the Barcode Field drop-down.
4. Select "=" from the drop-down to serve as the Data Source for the barcode object. This enables the **Exp** button.
5. Click the **Exp** button to open the Expression Builder.
6. Create an expression using the buttons on the Expression Builder. See [Using the Expression Builder on Page 197](#) for more information.

## Setting Barcode Caption Properties

From the C•CURE ID Barcode Properties Panel Barcode Captions tab, you can set the data source and appearance for barcode captions on your badge layout.

### To Set Barcode Caption Properties for a Barcode Object

1. Select the barcode object you want to configure.



2. Click the Barcode Captions tab.
3. Select **Show Caption**. The Barcode Caption fields appear.
4. To add static text, select **Static Text** and type in the text you want to appear as the barcode for each badge.
5. To add a personnel database field, select **Dynamic Text** and choose a database field from the drop-down list.
6. Select a value for location of the barcode caption within the barcode object from the **Placement** drop-down list.

#### NOTE

If the barcode caption is wider than the barcode itself, due to the length of the caption text or the size of the caption font, the caption may be clipped (not all text is visible).

7. Choose the Font attributes for the barcode caption. Select the font from the **Font** drop-down list. Select the font size from **Font Size** drop-down list. Click the **Bold**, **Italic**, or **Underlined** buttons to apply that style to the caption text.
8. Click  to choose a color for the barcode caption text. A color selection dialog box appears. Click on a color and click **OK**.

## Adding Static Text to a Barcode Caption

You can add static text (text that is the same on each badge, such as a company name or a facility location) to a barcode caption.

### To Add Static Text to a Barcode Caption

1. From the C•CURE ID Badge Designer, drag the Barcode icon onto the badge design area of the Badge Layout Panel, and drop it to create a Barcode object.
2. Drag the barcode object with the mouse into position on the badge design, and use the sizing handles on the object to adjust its size.
3. In the Barcode Properties Panel, on the Barcode Caption tab, select **Show Caption**.
4. Click the **Static Text** radio button to select static text, and type in the text you want to appear in the barcode caption.
5. Choose a position for the Barcode Caption from the **Placement** drop-down list.
6. You can select **Font Attributes** for the caption by choosing from the Font drop-down list and the font size drop-down list. You can also choose to add Bold, Italic, and underline attributes to the barcode caption by using the buttons for these attributes.
7. You can use the **Color** selector to choose a color for the barcode caption.
8. You can click the **Save** icon to save your changes, or continue editing the badge design and save your changes later.

## Adding Dynamic Text to a Barcode Caption

You can add dynamic text (text that is contained in a database field in C•CURE ID, and is specific to each badge holder record; for example, Last\_Name or Person\_ID). C•CURE ID gets the data from the Personnel Database when you send a specific badge to print.

### To Add Dynamic Text to a Barcode Caption

1. From the C•CURE ID Badge Designer, drag the Barcode icon onto the badge design area of the Badge Layout Panel, and drop it to create a barcode object.
2. Drag the barcode object with the mouse into position on the badge design, and use the sizing handles on the object to adjust its size.
3. In the Barcode Properties Panel, on the Barcode Caption tab, click the **Dynamic Text** radio button to select dynamic text.

4. Chose a database field from the drop-down list. With each badge you print, the value of that field appears as the barcode caption.
5. Choose a position for the Barcode Caption from the **Placement** drop-down list.
6. You can select **Font Attributes** for the caption by choosing from the Font drop-down list and the font size drop-down list. You can also choose to add Bold, Italic, and underline attributes to the barcode caption by using the buttons for these attributes.
7. You can use the **Color** selector to choose a color for the barcode caption.
8. You can click the **Save** icon to save your changes, or continue editing the badge design and save your changes later.

## Barcode Formats

This table outlines the barcode options selectable in the **Symbology** field on the Barcode Properties Panel in C•CURE ID, describing the format and requirements of each format. If a barcode is listed as numeric only, you will get an error message if you use it with an alphanumeric database field or text string.

**Table 52:** Barcode Formats

Barcode	Data Format/Comments
Wasp 3 of 9	Alphanumeric. Provides Code 39 with extended 128 character symbology (full ASCII) by combining one of the special characters (#d4e7ff, /, %, +) with a letter (A-Z) to form the characters that are not present in the standard Code 39. <b>Example:</b> In standard Code 39 a lowercase "a" cannot be represented. In Code 39 Full ASCII, however, "a" is represented as "+A".
Wasp 3 of 9/Check	Alphanumeric. Provides Code 39 with extended 128 character symbology (full ASCII), including a calculated checksum to increase data integrity.
Wasp Code128	Alphanumeric. Code 128 is a high-density alphanumeric bar code. It has 106 different characters. You can encode the entire ASCII character set, including control characters.
Wasp Code128/Check	Alphanumeric. Provides Code128 with a calculated checksum to increase data integrity.
Wasp Code128C/Check	Numeric only. Provides Code128 subset C with a calculated checksum to increase data integrity.
Wasp Code93	Alphanumeric Code93 is a more compact version of Code39. It encodes the same characters as Code39, but uses 9 barcode elements per character instead of 15.
Wasp 12of5	Numeric only. Interleaved 2 of 5 is a numeric-only barcode. Adjacent characters are interleaved, alternating the spaces from one character with the bars of the other. Interleaved 2 of 5 REQUIRES an EVEN number of digits, because digits are paired.

## Barcode Formats (continued)

Barcode	Data Format/Comments
Wasp12of5/Check	Numeric only. Provides Interleaved 2 of 5 with a calculated checksum to increase data integrity.
Wasp Codabar	Numeric only. Codabar can encode the digits 0 through 9, six symbols (-:.#d4e7ff/+), and the start/stop characters A, B, C, D, E, *, N, or T. The start/stop characters must be used in matching pairs and may not appear elsewhere in the barcode.
Wasp Codabar/Check	Numeric only. Provides Codabar encoding with a calculated checksum to increase data integrity.
PDF417	PDF417 is a very high-density 2D barcode format that can encode both text and numbers.

## Barcode Properties Tab Definitions

The Barcode Properties Panel Barcode Properties Tab has the following fields and buttons.

**Table 53:** Barcode Properties Tab Definitions

Name	Description
Symbology	This drop-down list lets you pick the Symbology to be used when generating the barcode. C•CURE ID only supports WASP Barcodes and the PDF 417 2D barcode. The available choices are: Wasp 3 of 9 Wasp 3 of 9/Check Wasp Code128 Wasp Code128/Check Wasp Code128C Wasp Code128C/Check Wasp Code93 Wasp I2of5 Wasp I2of5/Check Wasp Codabar Wasp Codabar/Check PDF417 See <a href="#">Table 52</a> on <a href="#">Page 192</a> for more information about the available barcode formats.
Data Source	This drop-down list lets you select the personnel field to be used when generating the barcode. Alternatively, you can select the "=" value to enable the Expression Builder (Exp>>) button.
Exp	Click this button to use the Expression builder dialog box to create a boolean expression for the barcode contents. This is useful for concatenating multiple database fields into one.
Fit control to barcode	Click to size the barcode background slightly larger than the barcode itself. You cannot change the size of the barcode background.

Barcode Properties Tab Definitions (continued)

Name	Description
Position barcode within control	Lets you specify the position of the barcode within the background. You can change the size of the background by dragging the selection handles of the barcode object. You can use the alignment buttons under this choice to position the barcode within the barcode object.
	These barcode alignment buttons allow you to position the barcode within the barcode background. You can choose Top, Middle or Bottom vertical positioning, and Left, Right, and Center horizontal positioning.
Barcode Color	Click to open a Color Selection dialog box to select the color to be applied to the Barcode. The Default Value is Black.
Height	Set the height of the barcode, from 0 – 200. The Default value is 30.
Magnification%	Select a magnification level for the barcode. Select from the following magnifications: 10%, 20%, 25%, 50%, 75%, 100% (Default Value), 150%, 200%, 400%.

## Barcode Captions Tab Definitions

The Barcode Caption tab is used to add barcode captions, which provide readable text that can be placed above or below the barcode.

The Barcode Properties Panel Barcode Captions Tab has the following fields and buttons.

Table 54: Barcode Captions Tab Definitions

Name	Description
Show Caption	Select the <b>Show Caption</b> checkbox to enable all properties on the Barcode Caption Tab. The caption is a usually a text display of the same field as the barcode, but you can also use another field or an expression.
Static Text	Enables the <b>Static Text</b> Edit Box, which allows you to type in alpha-numeric characters as a barcode caption. The text you type in will appear on all badges printed using this design.
Dynamic Text	Enables the <b>Dynamic Text</b> drop-down List that provides a list of database fields. Typically you would choose the same database field that is being used for the barcode. You can choose "=" to define a boolean expression using the Expression Builder.
Expr>>	Launches the Expression builder dialog box if the <b>Dynamic Text</b> drop-down list is equal to "=".
Placement	Allows you to select the following placement settings for the barcode caption relative to the barcode: Off, Below Left, Below Center, Below Right, Above left, Above Center, Above Right.
Color	Click to select the color for the barcode caption font. Opens a standard Windows Color Selection Dialog box. The color you select is displayed in the box to the right of the Color button.
Font	Provides a drop-down list of available fonts from Windows and allows you to assign a font to the barcode caption for display/print.
Font Size	Allows you to select the Font size to be used for the barcode caption from a drop-down list.

## Barcode Captions Tab Definitions (continued)

Name	Description
Bold	Allows you to toggle the Bold attribute on and off for the barcode caption.
Italic	Allows you to toggle the Italic attribute on and off for the barcode caption.
Underline	Allows you to toggle the Underline attribute on and off for the barcode caption.

## Expression Builder

The Expression Builder lets you create a statement that combines one or more personnel database fields, functions, Boolean operators, and/or text strings. This statement is then evaluated at print time to determine what is printed or encoded on a badge.

### Example:

If you want to print the first name, middle initial, and last name of personnel on each badge, rather than setting up three separate text fields on the badge, you can create one text field and define an expression that combines the three fields, with spacing that adjusts to the length of each field (so the space between a short first name and the middle initial would be the same as the space between a long first name and the middle initial, for example).

For more information about expressions, see:

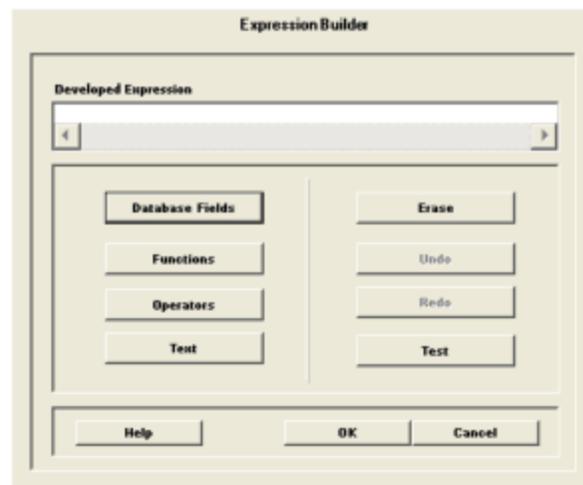
- [What is an Expression?](#) on [Page 197](#).
- [Using the Expression Builder](#) on [Page 197](#).

You can use the Expression Builder from the following panels when:

- [Adding Text to a Badge](#) on [Page 141](#) using the C•CURE ID Text Properties Panel.
- [Adding a Barcode to a Badge](#) on [Page 142](#) using the C•CURE ID Barcode Properties Panel (Barcode Captions tab).
- [Adding Magnetic Tracks to a Badge Layout](#) on [Page 161](#) using the C•CURE ID Badge Properties Panel (Mag Encoding Options tab).

To use the Expression Builder, you set the **Dynamic Text** field to “=” rather than an actual field name. This enables the **Expr** button so that you can open the Expression Builder, shown in [Figure 40](#) on [Page 196](#).

**Figure 40:** Expression Builder Dialog Box



- For definitions of the fields and buttons on the Expression Builder, see [Expression Builder Definitions](#) on [Page 199](#).
- [Expression Builder Functions](#) on [Page 200](#) defines the Expression Builder functions.
- [Expression Builder Operators](#) on [Page 204](#) defines the Expression Builder operators.

- [Sample Expressions on Page 207](#) provides examples of using the Expression Builder to construct some useful expressions.

## What is an Expression?

An expression is a combination of personnel database fields, functions, Boolean operators, and/or text strings that C•CURE ID can resolve to a text value that can be placed on a badge when it is printed. Fields and text string define the text element, and functions and operators evaluate and modify the text to achieve a result.

### Example:

```
[First Name]&" "&[Middle Name]&". "&[Last Name]
```

[First Name],[Middle Name], and [Last Name] are database fields. Database fields must be enclosed in square brackets. When C•CURE ID resolves this expression, it gets the values for these fields from the Personnel record of the badge that was sent to print.

& is an operator that is used to concatenate text and database fields.

" " represents a space between fields. Typed text such as spaces are enclosed in double quotes.

". " represents a period and a space.

You can test an expression like this by clicking the Expression Builder **Test** button. This expression would evaluate to the cardholder's name, for example:

Tommy T. Thomas

### NOTE

Double quotes are used to delineate text in expressions. You cannot include a double-quote character within an expression as a printable character. Use two single quote characters (') if you want your expression to print a double quote on the badge.

## Using the Expression Builder

You can perform the following tasks with the Expression Builder.

- [Adding a Database Field on Page 198.](#)
- [Adding a Function on Page 198.](#)
- [Adding an Operator on Page 198.](#)
- [Adding Text on Page 198.](#)
- [Testing the Expression on Page 199.](#)
- [Erasing the Expression on Page 199.](#)
- [Undoing an Entry on Page 199.](#)
- [Redoing the Most Recent Entry on Page 199.](#)

## Adding a Database Field

### To Add a Database Field

1. Position the cursor in the Developed Expression field at the place where you want to add a database field.
2. Click **Database Fields**.
3. Select a database field from the Database Fields drop-down list.
4. Click **Add** to add the field to the expression.

## Adding a Function

### To Add a Function

1. Position the cursor in the Developed Expression field at the place where you want to add a function.
2. Click **Functions**.
3. Select the function you wish to add from the Functions drop-down list.
4. Click **Add** to add the function to the expression.
5. Most functions have parameters that you need to fill in. Fill in the parameters for the functions between the "(" and ")". See [Expression Builder Functions](#) on [Page 201](#) for a list of the functions and their parameters.

## Adding an Operator

### To Add an Operator

1. Position the cursor in the Developed Expression field at the place where you want to add an operator.
2. Click **Operators**.
3. Select the operator you wish to add from the Operators drop-down list.
4. Click **Add** to add the operator to the expression.
5. See [Expression Builder Operators](#) on [Page 204](#) for a list of the operators and their functions.

## Adding Text

### To Add Text

1. Position the cursor in the Developed Expression field at the place where you want to add text.
2. Click **Text**.
3. Type the text you wish to add into the **Additional Text** field.
4. Click **Add** to add the text to the expression.

## Testing the Expression

### To Test the Expression

1. Click **Test**.
2. A dialog box appears displaying the results of the expression as it would be printed on the badge, using the values in Sample Data. (See [Badge Layout Panel Toolbars on Page 139](#) for more information.)
3. If the expression is invalid, a dialog box appears to explain why the expression is invalid.

## Erasing the Expression

### To Erase the Expression

1. Click **Erase**.
2. The entire expression is deleted. This function can be used on subsequent edits of the expression.

## Undoing an Entry

### To Undo an Entry

1. Click **Undo**.
2. The most recent addition to the expression is deleted.
3. You can click **Undo** multiple times to undo entries.

## Redoing the Most Recent Entry

### To Redo the Most Recent Entry

1. Click **Redo** to recover an entry lost because you clicked **Undo**. (**Redo** is only available after you have clicked **Undo** one or more times.)
2. You can click **Redo** multiple times to recover entries that were erased by **Undo**.

## Expression Builder Definitions

The Expression Builder dialog box (see [Figure 40 on Page 196](#)) contains the following fields and buttons.

**Table 55:** Expression Builder Fields and Buttons

Button/Field	Description
Developed Expression	You can create an expression for C•CURE ID to evaluate when putting together a badge. You can use a developed expression in place of a database field with barcodes, text, and magnetic tracks.

Button/Field	Description
Database Fields	Allows you to add database fields to the Expression.
Erase	Erases the currently displayed Developed Expression.
Functions	Allows you to add functions to the expression.
Undo	Use this button to undo, in reverse order, changes made to the developed expression. If you add an operator and a database field, clicking <b>Undo</b> twice would delete the database field first, then the operator.
Operators	Allows you to add Boolean and mathematical operators to the expression.
Redo	Click this button to restore expression elements that you deleted using <b>Undo</b> .
Text	Lets you add static text to the expression.
Test	Lets you test the expression. A dialog box appears displaying the text resulting from the expression, as it would appear on the badge. If the expression is invalid, a dialog box appears to describe the problem.
Help	Launches online help for the Expression Builder.
OK	Validates the developed expression, assigns the expression to the appropriate field in the panel that opened the Expression Builder, and closes the Expression Builder.
Cancel	Cancels any changes to the developed expression and closes the Expression Builder.

## Expression Builder Functions

Expression Builder functions provide commands that can filter, format, and change text to achieve a result. You can use these functions whenever static text or field values direct from the Personnel database do not meet the need.

You can also perform binary (IIF) tests on database field values and print differing text on the badge as a result.

For example, you can use IIF to test whether a field (such as [Middle Name]) is blank or not, and print the field plus a space if a middle initial is present, or print just a single blank space if the field is empty.

See [Expression Builder Functions](#) on [Page 201](#) for a list of the functions and their definitions.

For examples of the use of these Functions, see [Sample Expressions](#) on [Page 207](#).

### To Add a Function

Perform the following steps to add a function to an expression in the Expression Builder.

1. Position the cursor in the Developed Expression field at the place where you want to add a Function.
2. Click **Add Function** in the Expression Builder dialog box.
3. Select a function from the **Add Expression** drop-down list. See [Expression Builder Functions](#) on [Page 201](#) for more information about the functions you can choose.
4. Click **Add** to add the function to the expression.

## Expression Builder Functions

Expression Builder functions provide commands that can filter, format, and change text to achieve a result. You can use these functions whenever static text or field values direct from the Personnel database do not meet your need.

You can also perform binary (IIF) tests on database field values and print differing text on the badge as a result.

**Table 56:** Expression Builder Functions

Function	Example	Result	Description
FORMATL	FORMATL ([Card #], 0000000000)	If Card # = "12345"  Result =1234500000	This argument "pads" the specified database field with the "mask" supplied after the comma.  In this example, 10 zeros is the "mask," meaning the Card # field must have 10 characters. If the Card # 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 Card # is originally "12345," the example above would result in: "1234500000" 12345=actual data 0000000000="mask" 1234500000=final result.
FORMATR	FORMATR ([Card #], 0000000000)	If Card # = "12345"  Result =0000012345	This argument "pads" the specified database field with the "mask" supplied after the comma.  In this example, 10 zeros is the "mask," meaning the Card # field must have 10 characters; if the Card # field contains less than 10 characters, zeros will be added to the left of the data until there are a total of 10 characters. If the Card # is originally "12345," the example above would result in: "0000012345" 12345=actual data 0000000000="mask" 0000012345=final result.
IIF	IIF ([Middle Name]="", [First_Name] & " " & [Last_Name], [First_Name] & " " & [Middle Name] & " " & [Last_Name])	[Middle Name] = "", [First_Name] = "Jones", [First_Name] = "Homer"  Result = "Homer Jones"	This "if" statement reads: IF the field "[Middle Name]" is empty, THEN insert the contents of the [First_Name] field PLUS a blank space PLUS the contents of the [Last_Name] field, OTHERWISE insert the contents of the [First_Name] field PLUS a blank space PLUS the contents of the [Middle Name] field PLUS a blank space PLUS the contents of the [Last_Name] field.
LCASE	LCASE ([Last_Name])	[Last_Name] = Jones  Result = jones	This argument reads: Convert the contents of the [Last_Name] field to lower case letters. If the last name is Jones, the result is: jones.
LEFT	LEFT ([Last_Name], 2)	[Last_Name] = Jones  Result = Jo	This argument reads: Get the first two letters from the left side of the contents of the [Last_Name] field. If the last name is Jones, the result is: Jo.
LEN	LEN ([Last_Name])	[Last_Name] = Johnson  Result = 7	This argument reads: Return the length of the [Last_Name] field. If the last name is Johnson, the result is: 7

## Expression Builder Functions (continued)

Function	Example	Result	Description
MID	MID ([Last_Name], 2, 3)	[Last_Name] = Johnson Result = hns	This argument reads: Beginning after the second letter, get the next three letters from the contents of the [Last_Name] field. If the last name is Johnson, the result is: hns
REVERSE	Reverse ([Last_Name])	[Last_Name] = Johnson Result = nosnhoJ	This argument reads: Reverse the contents of the [Last_Name] field. If the last name is Johnson, the result is: nosnhoJ.
RIGHT	Example; RIGHT ([Last_Name], 2)	[Last_Name] = Johnson Result = on	This argument reads: Get the last two letters from the right side of the contents of the [Last_Name] field. If the last name is Johnson, the result is: on.
RIGHT	Example; RIGHT ([Last_Name], 2)	[Last_Name] = Johnson Result = no	This argument reads: Get the last two letters from the right side of the contents of the [Last_Name] field. If the last name is Johnson, the result is: on.
TRIM	Example; TRIM ([Last_Name])	[Last_Name] = "Johnson " Result = "Johnson"	This argument reads: Remove all leading and trailing non-printing characters from the contents of the [Last_Name] field (spaces, tabs, returns, etc.). If a database editor inadvertently entered a "carriage return" after the last name, the TRIM command would remove it.
UCASE	Example; UCASE ([Last_Name])	[Last_Name] = Jones Result = JONES	This argument reads as follows: Convert the contents of the [Last_Name] field to upper case letters. If the last name is Jones, the result is: JONES.
GETMONTHNAME	GETMONTHNAME ([Integer])	December	This argument outputs the month name that corresponds to the integer that you input. Months are numbered from 1-12 (January - December). Input numbers less than 1 and greater than 12 result in an empty string. For example, if you input 12, the output is <b>December</b> .
GETMONTHNAME	GETMONTHNAME ([Integer])	December	This argument outputs the month name that corresponds to the integer that you input. Months are numbered from 1-12 (January - December). Input numbers less than 1 and greater than 12 result in an empty string. For example, if you input 12, the output is <b>December</b> .
GETMONTHNAMEABBREV	GETMONTHNAMEABBREV ([Integer])	Dec	This argument outputs the month name abbreviation that corresponds to the integer that you input. Months are numbered from 1-12 (Jan - Dec). Input numbers less than 1 and greater than 12 result in an empty string. For example, if you input 12, the output is <b>Dec</b> .
YEAR	YEAR()	2007	This argument returns the current year in four digit format, based on the system date for today. If the current year is 2007, the result is <b>2007</b> .

## Expression Builder Functions (continued)

Function	Example	Result	Description
YEARTWODIGIT	YEARTWODIGIT ()	07	This argument returns the current year in two digit format, based on the system date for today. If the current year is 2007, the result is <b>07</b> .
MONTHNAME	MONTHNAME ()	September	This argument returns the name of the current month, based on the system date for today. If the current month is September, the result is <b>September</b> .
MONTHNAMEABBREV	MONTHNAMEABBREV()	Sep	This argument returns the abbreviated name of the current month, based on the system date for today. If the current month is September, the result is <b>Sep</b> .
MONTHNUMERIC	MONTHNUMERIC()	9	This argument returns the number of the current month, based on the system date for today. Months are numbered from 1-12 (January - December). If the current month is September, the result is <b>9</b> .
DAY	DAY()	13	This argument returns the number of the current day, based on the system date for today. Days are numbered from 1-31. If the current day is September 13, the result is <b>13</b> .
WEEKDAY	WEEKDAY()	Wednesday	This argument returns the weekday name of the current day, based on the system date for today. If the current day is Wednesday, the result is <b>Wednesday</b> .
WEEKDAYABBREV	WEEKDAYABBREV()	Wed	This argument returns the abbreviation for the weekday name of the current day, based on the system date for today. If the current day is Wednesday, the result is <b>Wed</b> .
HOUR	HOUR()	9	This argument returns the number of the current hour, based on the system time. The hours are numbered from 1 - 12. If the current time is 9:30 AM, the result is <b>9</b> .
HOURTWENTYFOUR	HOURTWENTYFOUR()		This argument returns the number of the current hour, based on the system time, using a twenty-four hour time. The hours are numbered from 0 - 23. If the current time is 9:30 PM, the result is 21.
MINUTE	MINUTE()		This argument returns the number of the current minute, based on the system time. The minutes are numbered from 0 - 59. If the current time is 9:30:01, the result is 30.
SECOND	SECOND()		This argument returns the number of the current second, based on the system time. The seconds are numbered from 0 - 59. If the current time is 9:30:17, the result is 17.

## Expression Builder Functions (continued)

Function	Example	Result	Description
GET_ASCII_CHAR	GET_ASCII_CHAR(value)		<p>Takes a hex or decimal number input and returns the raw ASCII character for that value. Can be used to embed ASCII characters in a barcode expression.</p> <p><b>Example:</b></p> <pre>GET_ASCII_CHAR(0x01) &amp; GET_ASCII_CHAR(0x7f) &amp; [Card_#] &amp; GET_ASCII_CHAR(0x0D) &amp; GET_ ASCII_CHAR(0x0A)</pre> <p><b>Returns:</b></p> <pre>CtrlA DEL &lt;Card # data&gt; Carriage Return LineFeed</pre>

## Expression Builder Operators

Expression Builder operators provide mathematical and boolean calculations that can concatenate and evaluate text and numbers in database fields to achieve a result.

You can use these operators whenever static text or field values direct from the Personnel database do not meet the need.

### Example:

You can use AND in conjunction with an IIF function to test whether the values of two fields are (or are not) specific values, and use the result to determine what to print on the badge.

For examples of the use of these operators, see [Sample Expressions](#) on [Page 207](#).

### To Add an Operator

Perform the following steps to add an operator to an expression in the Expression Builder.

1. Position the cursor in the Developed Expression field at the place where you want to add an Operator.
2. Click **Add Operator**.
3. Select a function from the **Add Expression** drop-down list. See [Expression Builder Operators](#) on [Page 205](#) for more information about the operators you can choose.
4. Click **Add** to add the operator to the expression.

## Expression Builder Operators

**Table 57:** Expression Builder Operators

Operator	Description
%	The mod operator returns the remainder of a division operation. 25% 2 results in: 1 10% 3 results in: 1
&	The ampersand operator is used to concatenate values. [lastname] & ", " & [firstname] results in: Smith, John
=	The equals operator means "equal to". [Personnel Type] = "Contractor" Use this in an "IIF" statement. <b>Example:</b> IIF ([Personnel Type] = "Contractor", "Contract", "") This example says, "If the employee type field contains the text "Contractor," then insert the word "Contract" on the badge. Otherwise, don't do anything.
+	The plus sign operator adds numbers. 10 + 5 results in: 15
/	The forward slash operator divides numbers. 10 / 2 results in: 5
-	The minus sign operator subtracts number. 10 - 5 results in: 5
*	The asterisk sign operator multiplies numbers 10 * 5 results in: 50
,	The comma operator separates statements. Note the commas in the following expression: IIF (argument, do if true, do if false)
<	The "less than" sign is a Boolean function returning a "true (1)" or "false (0)" value. [Facility Code] < "4" results in a True or "1" if the record's badge site code was less than four. Use this in an "IIF" statement. <b>Example:</b> IIF ([Facility Code] < "4", "", "Off Campus.") This example would do nothing if the badge site code was less than four; otherwise, the text "Off Campus." would be displayed on the badge.
<>	This means "not equal to" and is a Boolean function returning a "true (1)" or "false (0)" value. <b>Example:</b> [Middle Name] <> "" IIF (Middle) <> "", [First Name] & " " & [Middle Name] & " " & [Last Name], [First Name] & " " & [Last Name]) Use this in an "IIF" statement. This example says, "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 first name, middle name and last name. Otherwise, if the middle name field is empty, use the first name with last name only.

## Expression Builder Operators (continued)

Operator	Description
>	<p>The "greater than" sign is a Boolean function returning a "true (1)" or "false (0)" value. [Site_Code] &gt; "4" results in a True or "1" if the record's badge site code was more than four" Use this in an "IIF" statement.</p> <p><b>Example:</b></p> <p>IIF ([Facility Code] &gt; "4", "", "On Site.")</p> <p>This example would do nothing if the badge site code was less than four; otherwise, the text "On Site." would be displayed on the badge</p>
AND	<p>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.</p> <p><b>Example:</b></p> <p>IIF ([Facility Code] = "5" AND [Personnel Type] = "Contractor", "Building 5 Contractor", "")</p> <p>This states, "if the individual has a site code of "5" and also is an employee type of the "Contractor", then print the words " Building 5 Contractor" on the badge. Otherwise, don't print anything</p>
OR	<p>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.</p> <p><b>Example:</b></p> <p>IIF ([Facility Code] = "5" OR [Personnel Type] = "Contractor", "Access Limited", "")</p> <p>This states, "if the individual has a site code of "5" or is an employee type of "Contractor", then print the words "Access Limited" on the badge. Otherwise, don't print anything.</p>

## Sample Expressions

This topic shows some examples of how the Expression Builder can be used to customize data that you want to appear on the badge layout. This can be useful if you want to use encode data, but the database does not store the data in a way that is compatible with the encoding. For example, some barcode formats can not encode dates formatted with delineating characters such as "/" or "-". Or you may want to display a first initial in the cardholder's name, but there is no First Initial field in the database.

- [Concatenating Fields on Page 207](#)
- [Proper Case Name on Page 207](#)
- [Proper Case Name with Optional Middle Initial on Page 208](#)
- [Date Formatting with 4-Number Year on Page 208](#)
- [Date Formatting with 2-Number Year on Page 208](#)
- [Date Formatting with MM/DD/YY Format on Page 208](#)
- [Date Formatting with MM/DD/YYYY Format on Page 209](#)

### Concatenating Fields

One of the most common uses of the Expression Builder is to concatenate database fields so that they can be displayed on a badge as a single entity. Displaying the fields separately on the badge can result in uneven spacing, for example, in a person's name (three separate fields for first, middle, and last name, often with a short first name and a large blank space).

Combining the fields with Expression Builder produces a more professional result. This example outputs a person's first name, middle initial followed by a period, and last name as if they were a single database field, also simplifying the badge layout.

#### Example:

```
[First Name] & " " & [Middle Name] & ". " & [Last Name]
```

### Proper Case Name

Sometimes a large Personnel database can have inconsistently entered data. Some name fields might be all uppercase, others may be proper case, and others may be lowercase. Finding and normalizing the name entries in a database can be costly and time consuming. You can use the Expression Builder to ensure that the names on your badges are consistently capitalized.

In this example, the UCASE function is used to capitalize the first letter of the first and last names, using MID to select just the first character. The rest of the name is rendered in lowercase by LCASE, using MID to select all but the first character (starting at position 1, with a LEN -1).

This expression would render BILL SMITH, bill smith, Bill smith, or BiLl SMitH as "Bill Smith".

#### Example:

```
UCASE(MID([First Name],0,1)) & LCASE(MID ([First Name],1,(LEN([First Name])-1))) & " " & UCASE(MID([Last Name],0,1)) & LCASE(MID ([Last Name],1,(LEN([Last Name])-1)))
```

## Proper Case Name with Optional Middle Initial

The middle initial can also cause problems with Badge appearance. Not all people have a middle initial, or that data might be missing from the database. The expression below checks for the existence of a middle initial, and spaces the name properly if the middle initial is present (or not).

In this expression, the names are rendered in proper case as in the previous example, but an IIF function is used to determine how to handle the middle initial. If the Middle Name field is not blank, it is rendered in uppercase with a leading and following space, with a period if present (i.e., " T. "), but if it is empty, only one space is used to separate the first and last names.

### Example:

```
UCASE(MID([First Name],0,1)) & LCASE(MID ([First Name],1,(LEN([First Name])-1))) & IIF([Middle Name]="", "", "
" & UCASE([Middle Name]) & IIF([Middle Name]="", " ", IIF(RIGHT([Middle Name],1)=".", " ", ". ")) & UCASE
(MID([Last Name],0,1)) & LCASE(MID ([Last Name],1,(LEN([Last Name])-1)))
```

## Date Formatting with 4-Number Year

The Expression Builder can also be used to customize the way dates are presented on the badge layout. This example formats a date as eight characters with no delineating characters. This can be useful for encoding a date in a barcode format that does not allow non-alphanumeric characters. This example outputs the Expiration date as either mmddyyyy or ddmmyyyy, depending on how your date format is configured.

In this example, MID is used to extract the date numbers (starting at position 0 for 2 numbers, position 3 for 2 numbers, and position 6 for 4 numbers), while discarding the separators. "01/01/2006" is thus rendered as "01012006".

### Example:

```
MID( [Expiration Date Time] ,0 ,2 ) & MID( [Expiration Date Time] ,3 ,2 ) & MID( [Expiration Date Time] ,6 ,4 )
```

## Date Formatting with 2-Number Year

This example outputs the Expiration date as either mmddy or ddmyy, depending on how your date format is configured.

In this example, MID is used to extract the date numbers (starting at position 0 for 2 numbers, position 3 for 2 numbers, and position 8 for 2 numbers), while discarding the separators. "01/01/2006" is thus rendered as "010106".

### Example:

```
MID( [Expiration Date Time] ,0 ,2 ) & MID( [Expiration Date Time] ,3 ,2 ) & MID( [Expiration Date Time] ,8 ,2 )
```

## Date Formatting with MM/DD/YY Format

This example outputs the Expiration date as either mm/dd/yy or dd/mm/yy, depending on how your date format is configured.

In this example, MID is used to extract the date numbers (starting at position 0 for 2 numbers, position 3 for 2 numbers, and position 8 for 2 numbers), while discarding the separators. The character "/" is used as the date separator, so "01/01/2006" is thus rendered as "01/01/06". If "-" were used, "01-01-06" would be the result.

**Example:**

```
MID( [Expiration Date Time] ,0 ,2 ) & "/" & MID( [Expiration Date Time] ,3 ,2 ) & "/" & MID( [Expiration Date Time] ,8 ,2 )
```

**Date Formatting with MM/DD/YYYY Format**

This example outputs the Expiration date as either mm/dd/yyyy or dd/mm/yyyy, depending on how your date format is configured.

In this example, MID is used to extract the date numbers (starting at position 0 for 2 numbers, position 3 for 2 numbers, and position 6 for 4 numbers), while discarding the separators. The character "/" is used as the date separator, so "01/01/2006" is thus rendered as "01/01/2006". If "-" were used, "01-01-2006" would be the result.

**Example:**

```
MID( [Expiration Date Time] ,0 ,2 ) & "/" & MID( [Expiration Date Time] ,3 ,2 ) & "/" & MID( [Expiration Date Time] ,6 ,4 )
```



## Creating Badges for Personnel

This chapter describes the way Personnel records are used with the badging functions of the Badging Station. For information on creating and editing a personnel record, see the *C•CURE 9000 Personnel Configuration Guide*.

When you are working with personnel records, you can assign a badge layout to a personnel record, take a picture, signature, or biometric reading and associate it with a personnel record, display the image associated with a personnel record, and print a badge.

In this chapter

- Personnel Badging ..... 212
- Accessing Personnel Badging ..... 213
- Taking Portrait Pictures ..... 218
- Taking Pictures with a TWAIN Device ..... 219
- Taking Signatures Using Signature Devices ..... 223
- Importing Existing Portraits or Signatures ..... 225
- Enrolling Fingerprints ..... 227

## Personnel Badging

After you have designed a badge layout, you can create badges for personnel in your C•CURE personnel database from the Personnel Record Badging tab.

Badging (and Imaging) functions for a Personnel record consist of specifying a Badge Layout for a Credential, configuring badge images, optionally enrolling fingerprints, and configuring, previewing, and printing the badge(s).

From the Badging tab of the Personnel record, you can:

- Access Personnel Badging functions - see [Accessing Personnel Badging on Page 213](#).
- Specify a Badge Layout for this Personnel record - see [Assigning a Badge Layout on Page 217](#).
- Take a Picture - see [Taking Portrait Pictures on Page 218](#).
- Take a Signature - see [Taking Signatures Using Signature Devices on Page 223](#).
- Take (Encode) a Fingerprint - see [Enrolling Fingerprints on Page 227](#).
- Preview the badge - see [Previewing a Badge on Page 235](#).
- Print the Badge - see [Printing a Badge on Page 236](#).
- Enroll/Program a Smart Card (if you have configured Smart Card settings; refer to [The Smart Card Process on Page 88](#)) - see [Using the Enroll/Program Smart Card Button on Page 251](#).

## Accessing Personnel Badging

To access Personnel badging, you can use either **Personnel**, **Quick Search**, or **Advanced Search** from the C•CURE 9000 Administration application Personnel Pane, or **Query** from the Configuration Pane.

The Personnel Dynamic View displays a list of all Personnel records. If you have a large database, you can usually get quicker results by using **Quick Search** to filter the database to show just the records you want to view.

You can also use **Advanced Search** to create a Query if you need to do a complex search, or if you expect to want to repeat the search more than occasionally.

Once you have created a **Query** using Advanced Search, you can access it from **Advanced Search** or from **Query** in the Configuration Pane.

- [Accessing Badging from the Personnel Dynamic View](#) on Page 213.
- [Using Quick Search to Access Badging Functions](#) on Page 214.
- [Using Advanced Search to Access Badging Functions](#) on Page 215.
- [Using a Query to Access Badging Functions](#) on Page 216.

### Accessing Badging from the Personnel Dynamic View

The Personnel Dynamic View by default lists all of the Personnel records in your C•CURE 9000 database. You can view this list of records and access specific records to perform badging functions.

#### To Access Badging Functions from the Personnel Dynamic View

1. In the C•CURE 9000 Administration application, click **Personnel** in the Navigation Pane.
2. Choose **Personnel** from the drop-down list in the Personnel pane and click  to view the default Personnel Dynamic View listing all Personnel records. See [Figure 41](#) on [Page 213](#).

Figure 41: Personnel Dynamic View



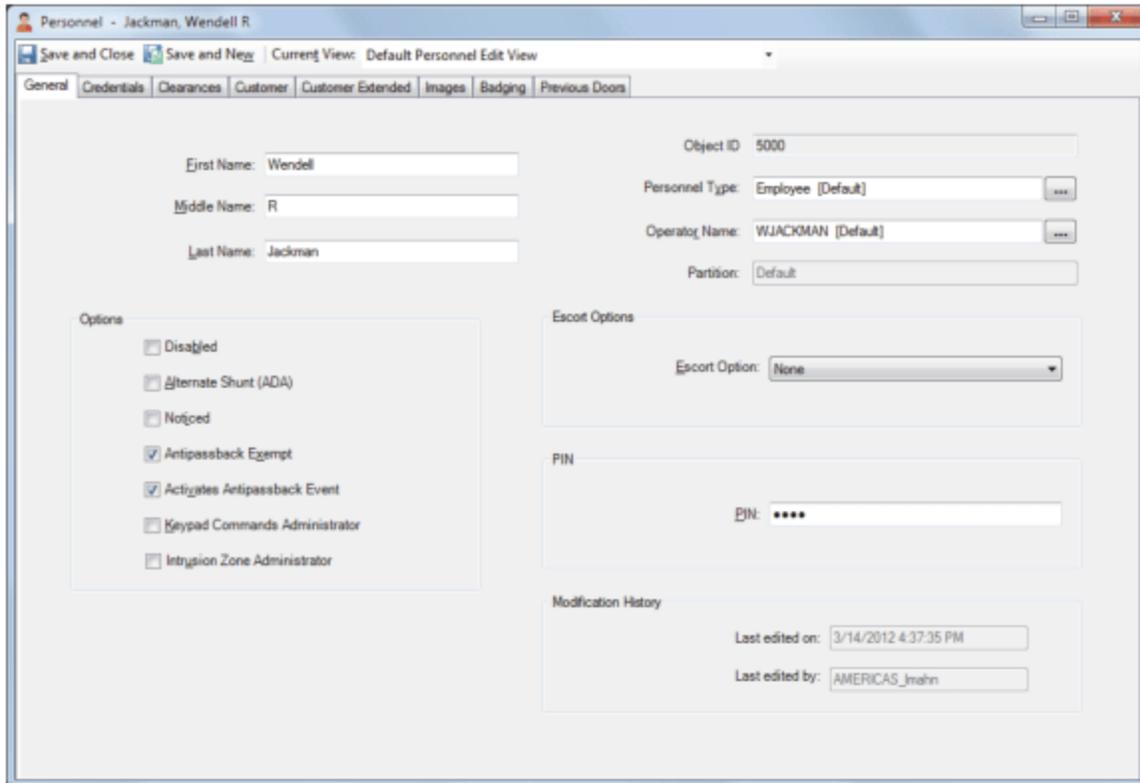
Name	Personnel Type	Int1	Test1
Aggs, John	Employee	22	
Barney, Smith	Contractor	33	
DeHiro, William	Contractor	44	
Evans, Bill-Joe	None	55	
Hendricks, Thomas	Employee	66	
Jones, Harold	Employee	77	
Logge, Almond	Contractor	88	
Lunbergh, Bill	Employee	99	
Orso, Terrell	Contractor	111	
Plausible, Kim	Employee	222	
Shelby, Carl	Employee	333	
Smith, Barney	Contractor	444	
Waddens, Milan	None	555	Storage Room B

- You can scroll through the list by clicking the scroll bar.
- You can sort the list by clicking a column head.
- You can filter the list using the Filter button.

See Dynamic Views in the *C•CURE 9000 Data Views Guide* for more information.

3. Double-click on the person in the list whose record you want to edit. The Personnel Editor opens. See [Figure 42](#) on [Page 214](#).

**Figure 42:** Personnel Editor



4. Click the Images tab to access Image and Signature capture functions. [Taking Portrait Pictures](#) on [Page 218](#) provides instructions for using the Images tab.
5. Click the Badging tab to access Badging and Fingerprint functions.
6. See the following topics for instructions for using the Badging tab.
  - [Previewing a Badge](#) on [Page 235](#)
  - [Printing a Badge](#) on [Page 236](#)
  - [Enrolling Fingerprints](#) on [Page 227](#)

## Using Quick Search to Access Badging Functions

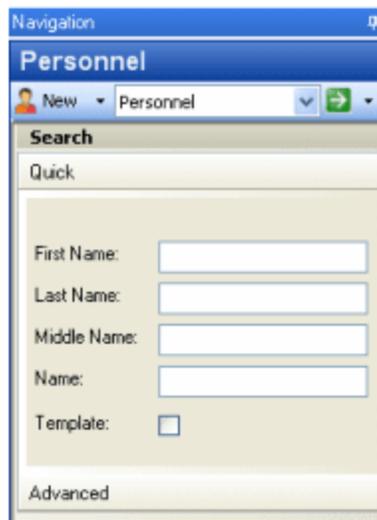
If you have a large database and you need to narrow your search results, you can use Quick Search to look for a Personnel record by name. Quick Search performs a “Starts with” search that looks for people whose name starts with the letters you typed.

### To Use Quick Search to Access Badging Functions

1. In the C•CURE 9000 Administration application, click **Personnel** in the Navigation Pane.
2. Choose **Personnel** from the drop-down list in the Personnel pane.

3. Click the **Quick** button. The Quick Search panel is displayed.  
See [Figure 43](#) on [Page 215](#).

**Figure 43:** Quick Search Panel



4. Type the first characters of the name that you want to search for and click . The Personnel Dynamic View listing the Personnel records you searched for opens.
5. Double-click the person in the list whose record you want to edit. The Personnel Editor opens.
6. Click the Images tab to access Image and Signature capture functions. [Taking Portrait Pictures on Page 218](#) provides instructions for using the Images tab.
7. Click the Badging tab to access Badging and Fingerprint functions. See the following topics for instructions for using the Badging tab:
  - [Previewing a Badge on Page 235](#)
  - [Printing a Badge on Page 236](#)
  - [Enrolling Fingerprints on Page 227](#)

## Using Advanced Search to Access Badging Functions

You can create an Advanced Search and save it as a Query to use for subsequent searches.

### To Use Advanced Search to Access Badging Functions

1. In the C•CURE 9000 Administration application, click **Personnel** in the Navigation Pane.
2. Choose **Personnel** from the drop-down list in the Personnel pane.
3. Click the **Advanced** button. The Query panel is displayed, listing Queries that you have saved.
4. Click **New Query**. The Query Editor opens so that you can define and save your Advanced Search settings.
5. Type in a Name and **Description** for your Query. The Query target type is already pre-set to **Personnel**.

6. Click **Add** to add a row to the Query Criteria table. You can then add the field and filter values you want to search for. See the *C•CURE 9000 Data Views Guide* for more information on configuring Queries.
7. You can add more rows to the table, depending on the type of search you wish to make.
8. Click **Save and Close** to save the Query. The Query is added to the list of Personnel Queries in the Query pane.
9. Double-click the Query you just saved to run the Query. A Dynamic View displaying the Query results is displayed.
10. Double-click the person in the list whose record you want to edit. The Personnel Editor opens.
11. Click the **Images** tab to access Image and Signature capture functions. [Taking Portrait Pictures on Page 218](#) provides instructions for using the Images tab.
12. Click the Badging tab to access Badging and Fingerprint functions. See the following topics for instructions for using the Badging Tab:
  - [Previewing a Badge on Page 235](#)
  - [Printing a Badge on Page 236](#)
  - [Enrolling Fingerprints on Page 227](#)

## Using a Query to Access Badging Functions

Once you have saved a Personnel Query, you can access it either from the Personnel Advanced Search panel or the list of saved Queries.

### To Use a Query to Access Badging Functions

1. In the C•CURE 9000 Administration application, click **Data Views** in the Navigation Pane.
2. Choose **Query** from the drop-down list in the Data Views pane.
3. Click . The Dynamic List of all queries opens.
4. Double-click the Personnel Query you want to use to run the Query. A Dynamic View displaying the Query results is displayed.
5. Double-click the person in the list whose record you want to edit. The **Personnel Editor** opens.
6. Click the **Images** tab to access Image and Signature capture functions. [Taking Portrait Pictures on Page 218](#) provides instructions for using the Images tab.
7. Click the **Badging** tab to access Badging and Fingerprint functions. See the following topics for instructions for using the Badging Tab.
  - [Previewing a Badge on Page 235](#)
  - [Printing a Badge on Page 236](#)
  - [Enrolling Fingerprints on Page 227](#)

## Assigning a Badge Layout

You create badge layouts using the C•CURE ID Badge Designer. Once you have created these layouts and saved them, they appear in the **Badge Layout** list on the **Credential** tab in the Personnel Editor so that you can assign a badge layout to the cardholder's credentials.

---

### To Assign a Badge Layout

1. Open the Personnel record to which you wish to assign a badge layout.
2. Click the **Credentials** tab.
3. Select the Credential you wish to edit, or click Add to create a new Credential.
4. Select a badge layout from the available layouts on the **Badge Layout** list on the Personnel Credentials tab.
5. Click **Save and Close** to save your Badge Layout choice.

## Taking Portrait Pictures

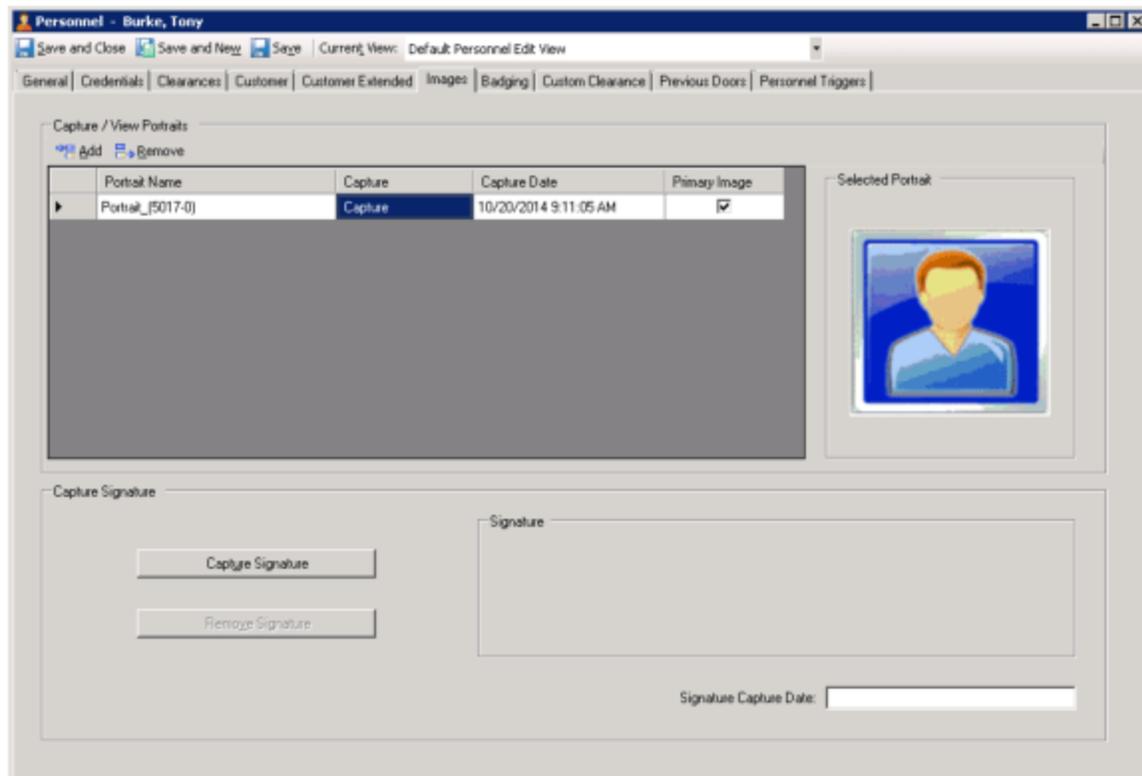
You can add a portrait to a personnel record. You open the personnel record of the person for whom you want to take a picture, and go to the Images tab to access the portrait capture function.

You can add multiple portraits to a Personnel record, then choose on the Badging tab the portrait you want to use for each badge.

### To Add a Portrait

1. Open the Personnel Editor for the person and click the Images tab. See [Figure 44](#) on [Page 218](#).

**Figure 44:** Personnel Images Tab



2. Click **Add** to add a portrait to the Personnel record, then click **Capture** to capture or import an image for the portrait.
  - If you are using a capture device to add portraits, the Video Capture dialog box opens to let you freeze and save a picture. See [Using the Video Capture Dialog Box](#) on [Page 219](#).
  - If you are importing existing images, the Import Image dialog box opens to let you import the portrait. See [Importing Existing Portraits or Signatures](#) on [Page 225](#).

## Taking Pictures with a TWAIN Device

Portrait capture using a third party TWAIN device can vary depending upon the TWAIN device being used. The following procedure is a general example of how portrait capture with TWAIN would work.

### To Take a Picture with a TWAIN Device

1. Click **Capture** on the Images tab of the Personnel Editor. C•CURE launches the appropriate TWAIN window, with the image of the person in the left side and the camera controls on the right side and the bottom of the window.

#### NOTE

The Video Capture dialog box appears only if you have configured a camera or TWAIN source with C•CURE ID Badge Setup. If you have configured C•CURE ID to **Always Ask** for an image capture source, the TWAIN Source dialog box appears, listing the available image capture sources. See [Setting Up a TWAIN Device for Portrait or Signature Capture on Page 71](#) for more information.

2. To edit capture settings, click **Settings** (when available):
  - Specify the Flash options.
  - Specify Composite as the Input Type.
  - Specify if video is NTSC or PAL.
  - Specify the Capture width and height and ratio.
  - Center the image on its x-axis and y-axis.
  - Click **Save Settings** to save the capture settings and use it every time you capture a portrait.
3. Click:
  - **Cancel**: to exit the Setup window without capturing the portrait
  - **Capture**: to capture the portrait. The Video Capture dialog box opens.
4. See [Using the Video Capture Dialog Box on Page 219](#) to adjust the image.

### Using the Video Capture Dialog Box

The Video Capture dialog box (shown in [Figure 45 on Page 220](#)) is used to display a video image from your camera, and allow you to capture it, and then adjust and save it using the Save Image dialog box (shown in [Figure 46 on Page 220](#)).

#### NOTE

The Video Capture dialog box appears only if you have configured a camera or TWAIN source with C•CURE ID Badge Setup. If you have configured C•CURE ID to **Always Ask** for an image capture source, the TWAIN Source dialog box appears, listing the available image capture sources. See [Setting Up a TWAIN Device for Portrait or Signature Capture on Page 71](#) for more information.

### To Use the Video Capture Dialog Box

1. Click **Capture** from the Personnel Imaging tab capture a portrait. The Video **Capture** dialog box opens to let you freeze and save a picture.

**Figure 45:** Portrait Capture Dialog Box



1. Frame your subject in the Video Capture dialog box by moving the camera or by using the cursor.
2. Make any adjustments using the controls on the dialog box, and click **Accept** to capture the image.
3. The Save Image dialog box (see [Figure 46](#) on [Page 220](#)) opens so that you can make adjustments to the captured image.

**Figure 46:** Save Image Dialog Box



4. A bounding box is present within the image window to indicate the region of the image that will be saved as the portrait. You can use the mouse (click and drag) to move this box anywhere on the captured image. In addition, the bounding box comes with sizing handles, which gives you the option to change the dimensions of the image as required.
5. The window provides brightness and contrast controls by default. If **Software Controlled Camera** is selected, other camera features may appear, such as Backlighting, Zoom In/Out, or Flash On/Off. These controls are described in [Table 59](#) on [Page 222](#).
6. When you have selected the portion of the image you want to save, and you have performed all adjustments, click **Save** to save the image.
7. The system stores each image using the **Person\_ID** field (PID) for each personnel record.

**Example:**

If you choose the JPEG graphics format, an image for a person with an ID number of 1234 is saved as the file 1234.JPG. The graphics format you specify on the **C•CURE ID Portrait Configuration** editor determines the file extension. See [Choosing a Graphic Format](#) on [Page 69](#) for more information.

8. The Edit Personnel Record Badging tab appears with your captured image in the Portrait box.
9. Click **Preview Badge** to see how the badge layout appears; a sample preview is shown below.

**Figure 47:** Example of a Badge Preview



10. Click **OK** to save your changes to the Personnel Record.

**Capture Dialog Box Definitions**

[Table 58](#) on [Page 221](#) summarizes the fields and buttons on the Video Capture dialog box.

**Table 58:** Video Capture Dialog Box Definitions

Field/Button	Description
	Click to zoom out so that the image appears farther away.
	Click to zoom in so that the image appears closer.
Setup	Click to open the setup dialog box to adjust the camera and capture board controls.
Capture	Click to capture the current image.
Live	Click to discard the current capture and return to the live camera to recapture an image.
Backlight	Use the backlight control to adjust the image background lighter or darker.
Help	Click to get online help for this dialog box.
Accept	Click Accept to open the Save Image dialog box, so you can make adjustments and save the portrait.
Cancel	Click <b>Cancel</b> to cancel the portrait capture.

**Save Image Dialog Box Definitions**

[Table 59](#) on [Page 222](#) summarizes the fields and buttons on the Save Image dialog box.

**Table 59:** Save Image Dialog Box Definitions

Field/Button	Description
Brightness	Adjusts the brightness of the image. The default value is 0 and the range is from -1 to 1.
Contrast	Adjusts the contrast of the image. The default value is 1 and the range is from 0.2 to 4.
Saturation	Adjusts the Saturation (color intensity) of the image. The default value is 1 and the range is from 0 to 3.
Hue	Adjusts the Hue (color) of the image. The default value is 0 and the range is from -180 to 180.
Sharpness Radius	Adjusts the Sharpness Radius of the image. The Radius controls the size of edges to be sharpened to remove blurring. The higher the value, the more loss of small details may occur. The default value is .7 and the range is from 0 to 8.
Sharpness Depth	Adjusts the Sharpness Depth of the image. The Depth controls the focus distance; higher Depth values can increase the sharpness of the image. The default value is .8 and the range is from 0 to 4.
Reset	Click to reset the image adjustment controls to their default values.
Cancel	Click to cancel saving the image and return to the Video Capture window.
Save	Click to save the portrait to the Personnel record.

## Taking Signatures Using Signature Devices

When you select Penware Sig Tablet or Topaz Sig Tablet as the capture device for signatures, you can use the signature tablet to take badge signatures. The capture screens for the two tablets are slightly different as explained in the following sections. You can also use a camera to take signatures by photographing signatures written on paper.

**NOTE** The Penware Signature Tablet is not supported on a Vista client or on Windows Server 2008, and can only be used on Windows 2003 Server by a user logged on as an administrator.

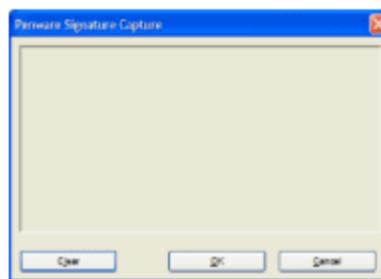
See [Portrait Configuration Tasks](#) on [Page 69](#) for information about selecting a capture device.

**NOTE** When a record is open, you can take pictures and signatures for the record, one image at a time. You must finish capturing an image before you capture another image for the record.

### To Take a Signature Using a Penware Sig Tablet Signature Device

1. Open the Personnel Record for the person and click **Badging** tab. The Personnel Badging tab opens.
2. Click **Take Signature** to capture a signature. The Penware Signature Capture dialog box opens.

**Figure 48:** Penware Signature Window



3. Have the person sign on the signature tablet. The Signature window displays the signature.
4. Click:
  - **OK** to save the signature.
  - **Clear** to erase the signature
  - **Cancel** to close the window without saving the signature

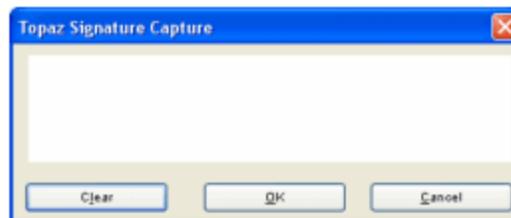
If you saved the signature, the Save Image dialog box opens.

**Figure 49:** Save Image Dialog Box

5. Use the bounding box to mark the required boundary around the captured signature. Again, use the brightness and contrast sliders to adjust the image as required. Click **Save** to save the signature, or click **Cancel** to close the window without saving the signature.

### To Take a Signature using a Topaz Sig Tablet Signature Device

1. Open the Personnel Record for the person and click the **Badging** tab.
2. Click **Take Signature** to capture a signature. The Topaz Signature window opens.

**Figure 50:** Topaz Signature Window

3. Have the person sign on the signature tablet. The Signature window displays the signature.
4. Click:
  - **OK** to save the signature
  - **Clear** to erase the signature
  - **Cancel** to close the window without saving the signature

If you saved the signature, the Save Image dialog box opens.

5. Use the bounding box to mark the required boundary around the captured signature. Again use the brightness and contrast sliders to adjust the image as required. Click **Save** to save the signature, or click **Cancel** to close the window without saving the signature.

## Importing Existing Portraits or Signatures

If you already have portraits or signatures in a compatible file format, you can import them into personnel records.

### To Import an Existing Portrait or Signature

Make sure that the Capture Device is set to **Import from File** in the C•CURE ID Setup Portraits Configuration dialog or Signature Configuration dialog. See:

- [Setting Up Import from File for Portrait Capture on Page 72](#)
- [Signature Configuration Tasks on Page 74](#)

1. Navigate to a personnel record by clicking **Personnel** from the Administration Client application Personnel Pane, then clicking  to display a list of Personnel records.
2. Select the Personnel record to which you want to import an image, and double-click on the Personnel record.
3. Click the Images tab of the Personnel Editor.
4. Click:
  - **Capture** to import a portrait file
  - **Capture Signature**: to import a signature file.

The **Import Image** dialog box opens.:

5. Navigate to the appropriate directory in your C•CURE ID installation containing the picture you want to import.:
6. Select the image file from the list. The image appears in the preview window on the bottom right of the screen.
7. Click **Rotate** if you want to rotate the image through 90 degree increments.
8. Click **Load Image** to proceed, or **Cancel** to cancel the operation.  
The image appears in a preview window, and if the image is larger than the allotted size, a dotted rectangle appears that you can position with the mouse pointer to crop the image to the correct size.
9. If you have enabled **Brightness/Contrast Adjustment** in C•CURE ID Setup [Portrait Configuration Dialog Box Definitions](#) on [Page 72](#), you can use the Image adjustment sliders to adjust Brightness, Contrast, Saturation, Hue, and Sharpness.
10. Click **Save** to import the image.
11. Click **Save and Close** in the Personnel Editor to save the Personnel record with the new image.

## Displaying Personnel or Signature Images

You can retrieve and display the portrait or signature image associated with a particular record in the database.

### To Display an Image

1. Retrieve the record you want by choosing **Personnel** from the drop-down list in the Personnel pane, then click  to display the list of Personnel records.
2. Select the desired record in the list and right-click to choose **Edit** from the context menu. The Personnel Editor

opens.

3. From the **Personnel Editor**, click the **Images** tab.

The Images tab opens, showing the portraits and/or signatures associated with the Personnel record.

## Enrolling Fingerprints

Fingerprints are captured in a manner similar to Portraits or Signatures, but they are encoded to a chip within the badge instead of being printed onto one.

Fingerprint enrollment consists of capturing two fingerprints and encoding the resultant data onto a card or token. You enroll two different fingers to allow alternatives in case the employee forgets, or is injured and cannot use the usual finger for verification.

An enrollee's finger or thumb should:

- Lie flat on the sensor
- Cover the entire sensor area (touching the edges of the sensor area.) Individuals with small fingers should use thumbs if possible
- Be parallel to the sensor's sides
- Positioned with the cuticle in the center of the sensor
- Be dry
- Not move during scanning

Once a fingerprint is captured, a copy of the captured image is displayed on the screen, with a message reporting the number of Minutiae calculated from the scan. Quality prints are those with the whorls of the fingerprint in the center of the image area with at least 20 minutiae. However, the displayed image should also be inspected for clarity.

The fingerprint is displayed only if **Display Fingerprint Image** is selected in the **C•CURE ID Biometric Configuration** dialog box.

The following screen shots show examples of good and bad quality captures.

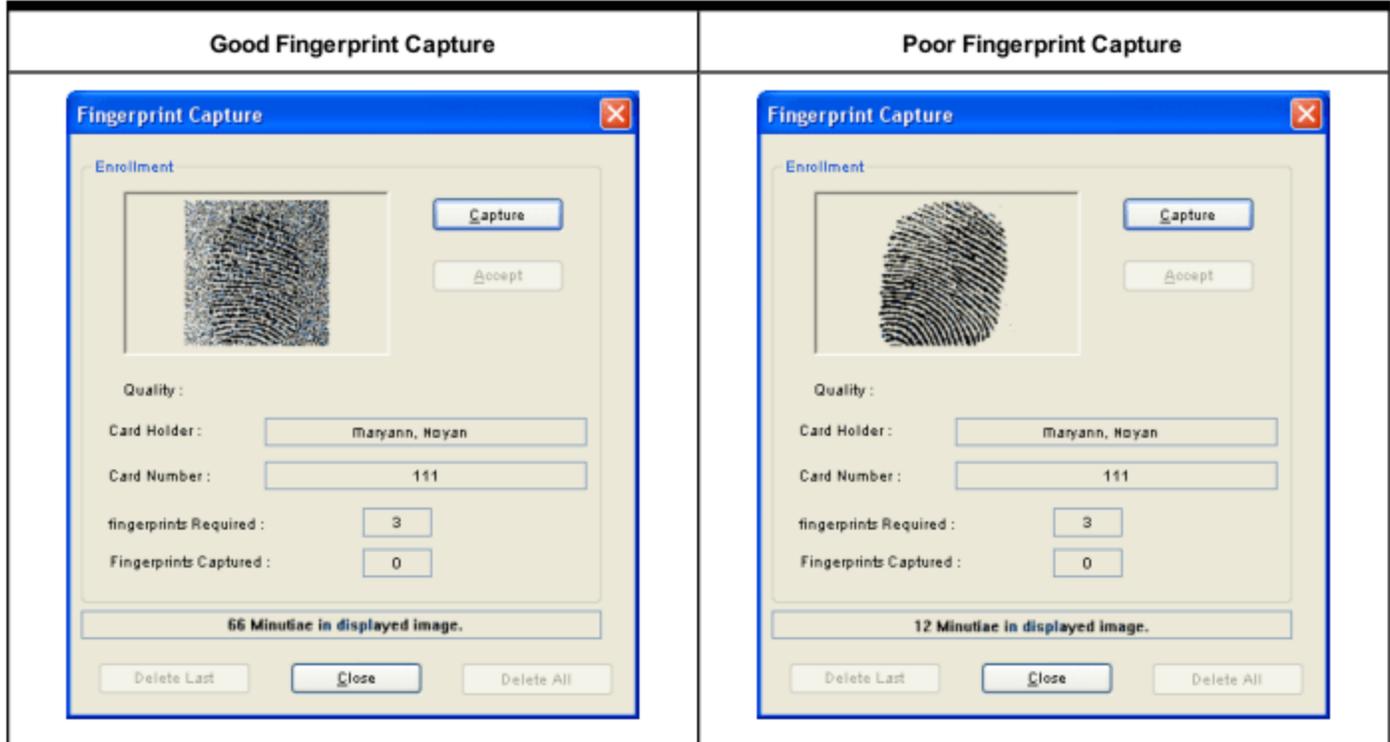
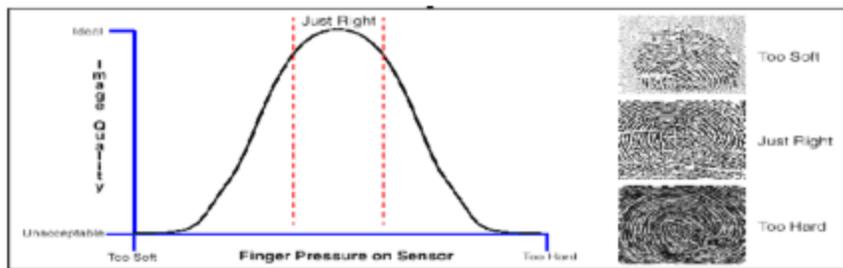


Figure 51: Finger Pressure

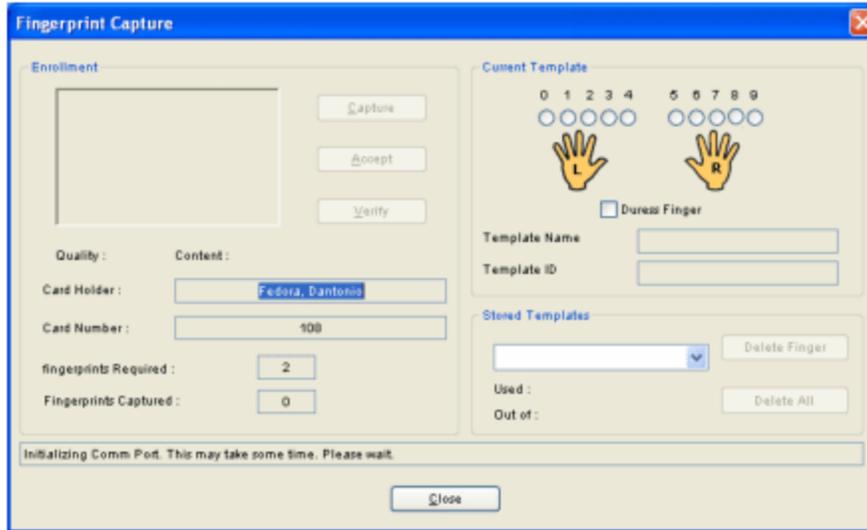


## Bioscrypt Fingerprint Enrollment

If you have a Bioscrypt enrollment center, follow this procedure to enroll a fingerprint:

1. Click **Take Fingerprint**. The Bioscrypt Fingerprint Capture dialog box opens (see [Figure 52](#) on [Page 229](#)).

**Figure 52:** Bioscrypt Fingerprint Capture Dialog Box



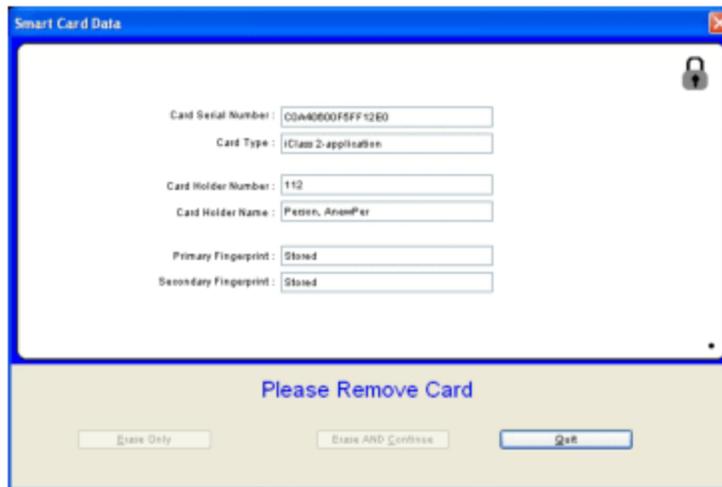
2. Select the fingerprint to capture by clicking on the appropriate number 0-9 above the left and right hand graphic.
3. If this finger will be used for Duress entry, click the **Duress Finger** checkbox.
4. Click **Capture**, then have the employee place a finger on the enrollment center.
5. Repeat steps 2 through 4 for each required fingerprint.
6. When you have captured all the required fingerprints, click **Accept** to store the fingerprints.
7. The Present Card dialog box shown in [Figure 53](#) on [Page 229](#) appears to prompt you to present the card to the reader to encode the fingerprints on the card.

**Figure 53:** Present Smart Card Dialog Box



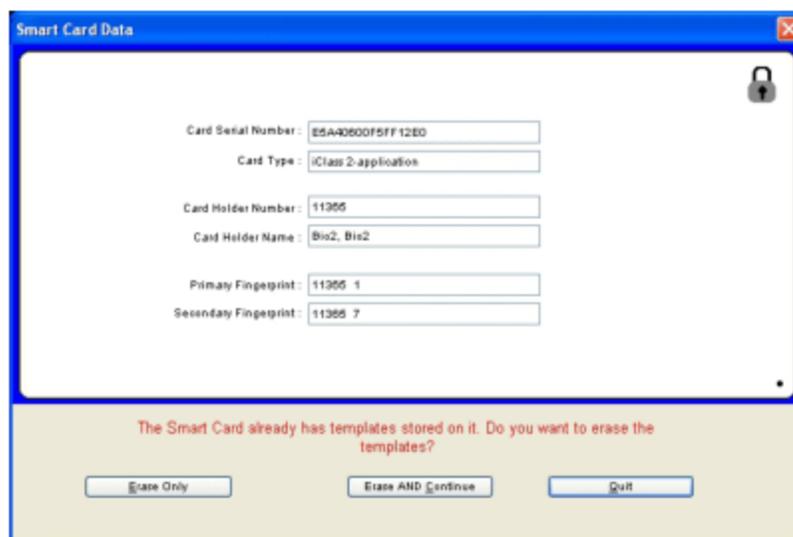
8. When the encoding process is successfully completed, the Please Remove Card dialog box shown in [Figure 54](#) on [Page 230](#) appears. Click **Quit** to finish.

**Figure 54:** Please Remove Card Dialog Box



9. If the card presented already has fingerprint data encoded on it, the Erase Encoded Data dialog box appears. You can click one of these buttons:
  - **Erase Only** – to delete the encoded data. When the data is erased, click **Quit** to return to the Bioscrypt Fingerprint Capture dialog box.
  - **Erase AND Continue** – to delete the encoded data and encode new data.
  - **Quit** – to exit the encoding process and retain the fingerprint data encoded on the card.

**Figure 55:** Erase Encoded Data on Card



10. If you click **Erase AND Continue**, the Enter Facility Code dialog box appears so that you can enter the correct Facility Code for this card.

**Figure 56:** Enter Facility Code Dialog Box



11. When encoding is completed, the Please Remove Card dialog box (Figure 54 on Page 230) appears.
12. When all the required fingerprints have been encoded, click **Close** to close the Bioscrypt Fingerprint Capture dialog box.

### Bioscrypt Fingerprint Capture Dialog Box Definitions

See Table 60 on Page 231 for definitions of the fields and buttons that appear on the Bioscrypt Fingerprint Capture dialog box (see Figure 52 on Page 229).

**Table 60:** Bioscrypt Fingerprint Capture Dialog Box Definitions

Field	Description
<b>Enrollment</b>	
Capture	Click this button to capture a fingerprint.
Verify	Click this button to compare the captured fingerprint with the presented fingerprint. You can see the captured fingerprint only if you have selected <b>Display Fingerprint</b> in the <b>C•CURE ID Biometric Configuration</b> dialog box.
Accept	Click this button to prompt the employee to place the badge on the reader and store the captured fingerprint data on it.
Quality	Displays the percentage of the captured fingerprint quality. A percentage over 40 is acceptable.
Content	Displays the percentage of the captured fingerprint content. A content of over 25 is acceptable.
Card Holder	This field displays the name of the employee that you are enrolling
Card Number	Displays card number of the current employee.
Fingerprints Required	Displays the total amount of fingerprints you need to enroll for this employee.
Fingerprints Captured	Displays the number of fingerprints already captured for this employee.
<b>Current Template</b>	
Finger selection	Select the finger that you wish to enroll by clicking in a finger number field (0-9). This should be the same finger you asked the employee to place on the enrollment center.

## Bioscrypt Fingerprint Capture Dialog Box Definitions (continued)

Field	Description
Duress Finger	Select this option to identify the fingerprint currently being captured as the fingerprint for duress entry.
Template Name	This field displays the name of the employee that you are enrolling
Template ID	Displays the fingerprint template ID for the current employee.
<b>Stored Templates</b>	
Template list	This drop-down list contains the templates (fingerprints) that you have captured for this employee.
Used	Lists the number of fingerprints captured for this employee.
Out of	Lists the number of fingerprints remaining to be captured.
Delete Finger	Select an already captured fingerprint template from the Template list and click <b>Delete</b> to delete this fingerprint from the Bioscrypt unit.
Delete All	Click this button to delete all stored fingerprint templates for this employee from the Bioscrypt unit.
Status Display	This line displays any messages or errors from the Bioscrypt enrollment center.
Close	Click this button to close the <b>Fingerprint Capture</b> dialog box.

## Printing Badges

This chapter provides information about printing badges with C•CURE ID. You can choose to print badges automatically, queue all badges, or print badges from a Personnel Query.

In this chapter

Previewing and Printing a Badge .....	234
Previewing a Badge .....	235
Printing a Badge .....	236
Printing Queued Badges .....	237
Batch Printing Badges .....	238
Queuing a Badge for Batch Printing .....	239
Batch Print Badges from a Query .....	241
Batch Print Badges from a Dynamic View .....	243
Batch Print Manager .....	244

## Previewing and Printing a Badge

The C•CURE 9000 Administration Client application lets you print badges from a Personnel Query and from the Badging tab of a Personnel Record.

From a Personnel Dynamic View or Query result, you can batch print badges from a list of Personnel using [Batch Printing Badges](#) on [Page 238](#).

From a Personnel Record, you can:

- Preview a Badge - see [Previewing a Badge](#) on [Page 235](#).
- Print a badge to the specified badge printer - see [Printing a Badge](#) on [Page 236](#).
- Queue a badge for batch printing - see [Queuing a Badge for Batch Printing](#) on [Page 239](#).
- Print queued badges to the specified badge printer - see [Printing Queued Badges](#) on [Page 237](#).

## Previewing a Badge

You can preview a badge for a Personnel Record from the Personnel Badging tab.

Before you can preview a badge, a badge layout must be assigned to the badge on the Cards tab of the Personnel Record. See the Administration Client Help for instructions on assigning a badge layout.

---

### To Preview a Badge

1. Access **Personnel** from the Administration Client. See [Accessing Personnel Badging on Page 213](#).
2. Select the Personnel Record that you want to preview from the list and click **Edit**.
3. Click on the Badging tab in the Personnel Record.
4. Select a badge from the list of badges.
5. Click **Preview Badge** to display the badge layout. The system displays a picture of the badge as it would be printed.
6. Click **Side 2** to show the back side of a two-sided badge.
7. Click  to close the Preview dialog.

## Printing a Badge

You can print a badge from the Personnel Badging Tab. The print settings you have chosen when setting up the printer determine how and when the badge is printed (for example, whether the badge is queued or printed immediately).

If you have configured Batch Printing, the setting you chose in C•CURE ID Badge Setup determines your options now.

When you queue one or more badges to print, the [Batch Print Manager](#) on [Page 244](#) is available (minimized on the Windows task bar) giving you the status of the batch printing queue, and allowing you to change print options.

If you configured:

**Always ask** – the **Batch Print Manager** dialog box appears, with this badge selected (☑). You can click **Print Selected Badges** to print the badge.

**Always Queue** – the badge is automatically added to the batch print queue .

**Autoprint** without badge sheet layout – the badge is printed immediately.

**Autoprint** with badge sheet layout – the badge is automatically added to the batch print queue.

- If adding this badge to the batch print queue completes a badge layout sheet, all the badges on that layout page are printed.
- If adding the badge to the batch print queue does not complete a badge layout sheet, the badge remains in the queue until a full sheet of badges is queued, then that sheet of badges is printed.

### NOTE

You need to set up a printer for printing badges to be able to print a badge (see [Setting Printer Options](#) on [Page 62](#)).

### To Print a Badge

1. Choose **Personnel**>**Browse** from the Administration client menus.
2. From the browse list, select the Personnel Record that you want to print and click **Edit**.
3. Click on the Badging tab in the Personnel Record.
4. Select a badge from the list of badges.
5. Click **Print Badge** on the Badging tab.
6. If you have not configured Batch Printing, the badge is printed at the badge printer you configured during set up. A progress indicator appears to show you if the badge is processed correctly.
7. If you have configured Batch Printing, the setting you chose previously determines your options now.

## Printing Queued Badges

From the Personnel Badging tab, you can print the badges that are currently in the Badge Batch Print Queue.

### To Print Queued Badges

1. Click **Print Badge** on the Badging tab. The **Print Badges Now?** dialog box opens.
  2. Select **Print Entire Queue**, then click **Print** to print all badges in the queue.
  3. Alternatively, right-click on the C•CURE ID Batch Print Manager icon  in the Windows System Tray. You can select a printing action from the context menu that appears. (The current selection is shown grayed out.) See [Batch Print Manager Context Menu](#) on [Page 245](#) for more information.
    - Auto Print
    - Always Queue
    - Suspend All
    - Print Selected Badges
    - Delete Entire Queue
    - Exit
1. Click **Print Badge** on the Badging tab. The C•CURE ID Batch Print Manager dialog box opens.
  2. To print all badges in the queue, click **Select All**, then click **Print Selected Badges** to print all badges in the queue.
  3. Alternatively, use the buttons on the Batch Print Manager toolbar to manage the Batch Print Queue. See [Batch Print Manager Toolbar Definitions](#) on [Page 246](#).

## Batch Printing Badges

You can queue badges to print in a “batch” – multiple badges queued to print as a single print job.

You can queue badges to batch print in three ways:

- [Individually Add Badges to the Batch Print Queue on Page 239](#)
- [Batch Print Badges from a Query on Page 241](#)
- [Batch Print Badges from a Dynamic View on Page 243](#)

## Queuing a Badge for Batch Printing

You can place a badge in the batch printing queue from the Personnel Badging Tab. The print settings you have chosen when setting up the printer determine how and when the badge is printed (for example, whether the badge is queued or printed immediately).

### To Queue a Badge for Batch Printing

#### NOTE

You should have selected the batch printing option to be able to queue badges to print together. See [Setting Batch Printing Options](#) on [Page 50](#).

1. Click **Print Badge** on the Badging tab.
2. If you have configured Batch Printing, the setting you chose then determines your options now. If you configured:
  - **Always ask** – the **Print Badges Now** dialog box opens. Click **Queue** to add this badge to the batch print queue.
  - **Always Queue** – the badge is automatically added to the batch print queue.
  - **Autoprint** without badge sheet layout – the badge is printed immediately.
  - **Autoprint** with badge sheet layout – the badge is automatically added to the batch print queue.
    - If adding this badge to the batch print queue completes a badge layout sheet, all the badges on that layout page are printed.
    - If adding the badge to the batch print queue does not complete a badge layout sheet, the badge remains in the queue until a full sheet of badges is queued, then that sheet of badges is printed.
3. If you added the badge to the batch print queue, you can use the [Batch Print Manager](#) on [Page 244](#) (minimized on the Windows task bar) to view the details of the printing job, send queued badges to print, and change print options.

### Individually Add Badges to the Batch Print Queue

You can set up Batch Printing options to specify how badges are added to the batch print queue, as an alternative to being printed immediately at your badge printer. You can choose:

- **Always Queue** – adding badges automatically to the queue when a badge print request occurs.
- **Always Ask** – displaying a prompt that lets the user choose between printing the badge or queuing the badge.
- **Auto Print** – send the badge directly to print.

In addition, if you have enabled **Use Sheet Layout?** when you set up batch printing, queued badges are only printed when a full sheet of badges is queued.

#### Example:

The Autoprint setting with sheet layout enabled only prints badges when a full sheet of badges is queued, based on the badge sheet layout defined in C•CURE ID Setup.

**NOTE**

When you send badges to batch print, C•CURE ID blocks you from queuing more badges while a print job is running, to ensure the integrity of the queue. If you try to add badges to the queue, C•CURE ID displays a notification that you cannot queue additional badges until the current batch print is completed.

For more information on these options, see [Setting Batch Printing Options](#) on [Page 50](#).

## Batch Print Badges from a Query

You can batch print badges using the result list from a Personnel Query (or a Personnel Dynamic View). This capability lets you query your personnel record database to find the badges you want to print, and then send them to print using the context menu selection **Batch Print Badges**.

### To Batch Print Badges from a Personnel Query

1. Define a Query to display the Personnel Records that contain the badges you wish to print. For example, define a query that returns only personnel records for cards that were activated today. See the **C•CURE 9000 Data Views Guide** for more information about defining a Query.
2. Run the query by:
  - a. Clicking **Personnel** from the C•CURE 9000 Administration Client Application
  - b. Selecting **Personnel** from the drop-down list.
  - c. Clicking **Advanced** to show the list of saved Personnel Queries.
  - d. Double-click the Query in the list that you want to run.
3. The Personnel Query result appears as a Dynamic View, listing the records your query returned.
4. Select one or more of the Personnel records in the list (using standard Windows multiple selection shortcuts such as **SHIFT+Left-click**) for the badges that you want to print.
5. Right-click selected row(s) to display the context menu.
6. Select **Batch Print Badges** from the menu. The selected badges are then queued to print based on the Batch Printing options you have chosen during C•CURE ID Badge Setup.
7. C•CURE ID displays a log window to show the progress of your queuing request, and the status of the badges you queued (see [Figure 57](#) on [Page 242](#) for an example). Click **OK** to close the log window. (The **Print** button on the log window prints out the log window, not the badges themselves.) See [Batch Print Badges Log Window](#) on [Page 241](#) for more information.

### Batch Print Badges Log Window

When you send badges to print using Batch Print Badges, C•CURE ID displays a log window that shows the status of each badge you sent to print. See [Figure 57](#) on [Page 242](#).

You can click **Print** to print the message box or click **Email** to email the message box to the recipient who was configured in the **System Variable Email Address** under **Customer Support**. (The Email function is intended to provide a way to email information to Customer Support for your site. See the *C•CURE 9000 System Maintenance Guide* for more information.)

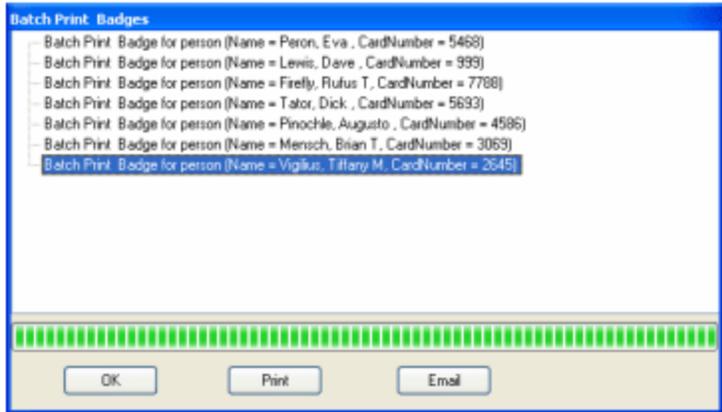


Figure 57: Batch Print Badges Log Window

**NOTE**

If C•CURE ID is unable to prepare a badge for printing, that badge is skipped. C•CURE ID displays a message box to inform you of this. You can view and print this message to determine why a badge was skipped.

Badges are skipped when:

- There is no Badge Layout assigned to the card. See [Assigning a Badge Layout on Page 217](#)
- The Personnel record is invalid (for example, the badge was queued but the Personnel Record was deleted after the badge was queued to print).
- The card in the Personnel record is marked as **Disabled, Expired, Lost, or Stolen**.
- No cards (credentials) are found for the person.

## Batch Print Badges from a Dynamic View

When you view a list of Personnel in a Dynamic View, you have the option to use the context menu selection **Batch Print Badges** to print some or all of the badges in the list as a batch print job.

Perform the following steps to batch print badges from the list of Personnel.

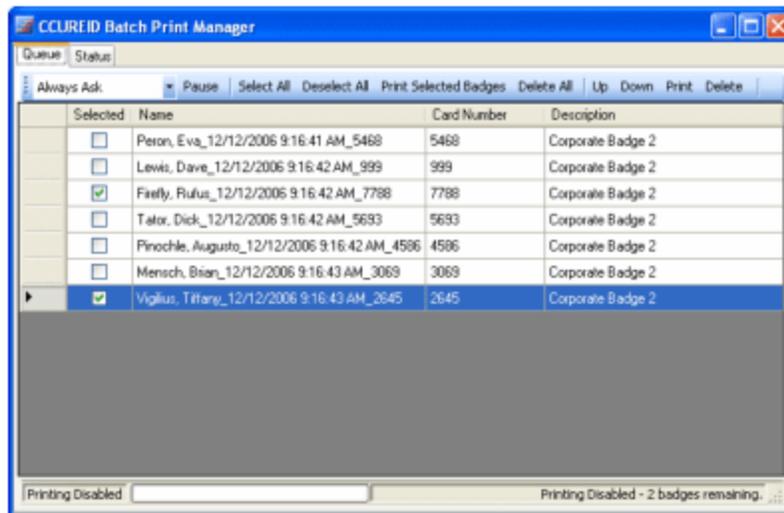
### To Batch Print Badges from a Dynamic View

1. From a Dynamic View of Personnel, select the Badges you want to print:
  - Click on a row in the list to select a single badge.
  - Use **CTRL + left mouse click** to select multiple badges.
  - Use **SHIFT + left mouse click** to select a range of badges.
2. Right-click to open the context menu, then click **Batch Print Badges**.
3. The Batch Print Badges dialog box appears listing the badges that you sent to the Batch Print Queue. You can print this list by clicking on the **Print** button, or email this list to the email address specified in **System Variables>Customer Support>Email Address** by clicking the **Email** button.
3. The personnel records you selected are processed in accordance with the Batch Print settings you chose when you configured batch printing (see [Setting Batch Printing Options](#) on [Page 50](#)).
4. If you chose the **Always Ask** option for batch printing, the **Print Badges Now?** dialog box opens. From this dialog you can:
  - **Print Entire Queue** – Select this option to specify that you want all the badges in the queue printed when you click the **Print** button.
  - **Print This Badge** – Select this option to specify that you want to print the badge(s) from your query result list when you click the **Print** button.
  - **Print** – Click this button when you are ready to print badges.
  - **Queue** – Click this button if you want to add the badges to the Batch Printing Queue rather than print them right now. You can subsequently print the queued badges using the C•CURE ID Batch Printing Dialog in the Windows Task Bar (see [Batch Print Manager](#) on [Page 244](#)).
5. If you chose the **Always Queue (Manual Print in Badge Setup)** option for batch printing, the badge is automatically placed in the batch printing queue for later printing.
6. If you chose the **Auto Print** option for batch printing, the badge is printed automatically if **Use Sheet Layout?** is not enabled. If **Use Sheet Layout?** is enabled, the badge is automatically added to the batch print queue.
  - If adding this badge to the batch print queue completes a badge layout sheet, all the badges on that layout page are printed.
  - If adding the badge to the batch print queue does not complete a badge layout sheet, the badge remains in the queue until a full sheet of badges is queued, then that sheet of badges is printed.

## Batch Print Manager

When you send a badge to the badge print queue by clicking **Print Badge** from the Personnel Badging tab or **Batch Print Badges**, the C•CURE ID Batch Print Manager opens. See [Figure 58](#) on [Page 244](#).

**Figure 58:** Print Queue Manager

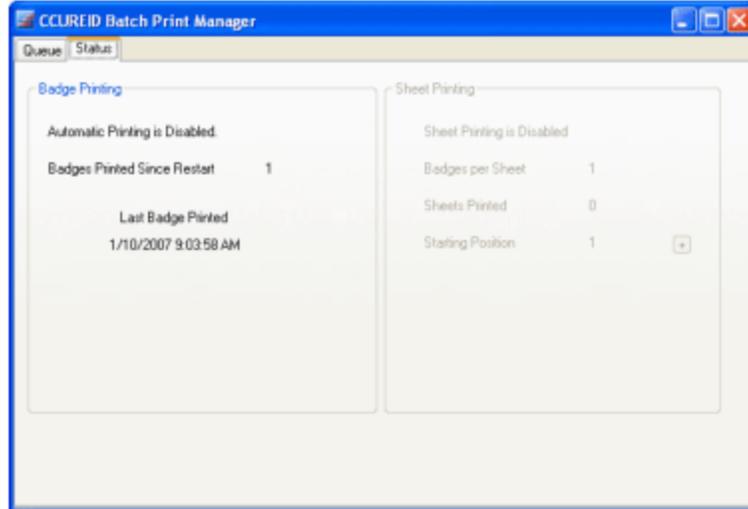


The Batch Print Manager displays important information about badges queued to print, the batch printing options you have chosen, and includes a toolbar with commands that you can use to print badges, change options, and modify the queue.

The Batch Print Manager displays two tabs:

- **Queue** tab – This tab shows the badges currently in the queue, and provides a Tool Bar that you can use to manage the queue. See for definitions of the fields and buttons on the Batch Print Manager Queue tab. See [Batch Print Manager Definitions](#) on [Page 246](#) for definitions of the buttons on the Tool Bar.
- **Status** tab – This tab shows the settings for badge printing and Sheet printing. Click **Status** to view the Status tab. See [Batch Print Manager Status Tab Definitions](#) on [Page 247](#).

Figure 59: Batch Print Manager Status tab.



The C•CURE ID Batch Print Manager also has a System Tray Icon  with a context menu that you can access by right-clicking the icon in the System Tray. If you minimize the C•CURE ID Batch Print Manager dialog box, you can open it again by clicking the System Tray icon. See [Batch Print Manager Context Menu](#) on [Page 245](#) for more information.

### Exiting the Batch Print Manager

Click the Exit  button on the Window title bar to close the C•CURE ID Batch Printing dialog.

A confirmation dialog box appears, asking "Do you really want to stop the Batch badge queue processing?" Click **Yes** to close the Batch Print Manager dialog box, or click **No** to cancel closing the Batch Print Manager dialog box.

Closing the Batch Print Manager dialog box does not delete badges from the print queue. You can re-open the dialog by adding another badge to the print queue (click **Print Badge** from the Edit Personnel Record screen) if Batch Printing is enabled in C•CURE ID Setup.

### Batch Print Manager Context Menu

You can right-click the Batch Print Manager System Tray icon  to display the Batch Print Manager context menu. The context menu for the Batch Print Manager dialog box offers choices for printing your badges from the queue.

Table 61: Batch Print Manager Context Menu Definitions

Option	Description
Always Queue	Select this option to change to <b>Always Ask</b> , which lets you choose the badges you want to print. This change is in effect only for the current session with the Batch Print Manager. When you close the Batch Print Manager, this setting reverts to the value set with <b>C•CURE ID Badge Setup</b> . See <a href="#">Setting Up Batch Queue Mode</a> on <a href="#">Page 53</a> .

Batch Print Manager Context Menu Definitions (continued)

Option	Description
Auto Print	Select this option to change to <b>Auto Print</b> , which sends badges to print immediately as they are queued. This change is in effect only for the current session with the Batch Print Manager. When you close the Batch Print Manager, this setting reverts to the value set with <b>C-CURE ID Badge Setup</b> . See <a href="#">Setting Up Batch Queue Mode</a> on Page 53.
Suspend All	Select this option to deselect all entries in the queue. Each entry in the queue with a <input checked="" type="checkbox"/> changes to <input type="checkbox"/> .
Delete Entire Queue	Select this option to delete all entries from the Batch Print Queue.
Exit	Select this option to close the <b>Batch Print Manager</b> dialog box. When you close the dialog box, any badges that are in the queue remain in the queue.

## Batch Print Manager Definitions

The following fields and buttons are available on the Batch Print Manager dialog box:

- Batch Print Manager Toolbar in [Table 62](#) on [Page 246](#).
- Batch Print Manager dialog box Queue tab in [Table 63](#) on [Page 247](#).
- Batch Print Manager dialog box Status tab in [Table 64](#) on [Page 247](#).

**Table 62:** Batch Print Manager Toolbar Definitions

Field/Button	Description
Always Ask	You can select this setting from the drop-down list if you wish to change the Batch Print Queue setting for the current session to <b>Always Ask</b> , so that badges are added to the queue rather than being printed automatically. When you close the <b>Batch Print Manager</b> , this setting reverts to the value set in <b>System Variables</b> .
Auto Print	You can select this setting from the drop-down list if you wish to change the Batch Print Queue setting for the current session to <b>Auto Print</b> , so that badges are printed automatically when added to the queue. When you close the <b>Batch Print Manager</b> , this setting reverts to the value set in <b>System Variables</b> .
Always Queue	You can select this setting from the drop-down list if you wish to change the Batch Print Queue setting for the current session to <b>Always Queue</b> , so that badges are added to the queue rather than being printed automatically. When you close the <b>Batch Print Manager</b> , this setting reverts to the value set in <b>System Variables</b> .
Pause	Click this button when the queue is set to <b>Auto Print</b> to pause printing. Click this button again to resume printing.
Select All	Click this button to select all entries in the queue. A <input checked="" type="checkbox"/> appears to the left of each entry in the queue.
Deselect All	Click this button to deselect all entries in the queue. A <input type="checkbox"/> appears to the left of each entry in the queue.
Print Selected Badges	Click this button to print all of the currently selected <input checked="" type="checkbox"/> badges in the Batch Print Queue.
Delete All	Click this button to delete all of the currently selected <input checked="" type="checkbox"/> badges in the Batch Print Queue.

Batch Print Manager Toolbar Definitions (continued)

Field/Button	Description
Up	Click this button to move the currently highlighted entry in the queue one position nearer the top of the queue. Selected badges are printed in order from the top of the queue.
Down	Click this button to move the currently highlighted entry in the queue one position nearer the bottom of the queue. Selected badges are printed in order from the top of the queue.
Print	Click this button to print the currently highlighted (not necessarily selected <input checked="" type="checkbox"/> ) badges.
Delete	Click this button to delete the currently highlighted (not necessarily selected <input checked="" type="checkbox"/> ) badges.

Table 63: Batch Print Manager Queue Tab Definitions

Field/Button	Description
Selected	This column in the queue displays whether or not the badge in that row is selected <input checked="" type="checkbox"/> for printing.
Name	This column displays the name of the badge in this row of the print queue. The name is the file path of the badge print file in the queue.
Card Number	This column displays the Card Number for the badge in this row of the print queue.
Description	This column displays the Badge Layout file used for this badge in the print queue.
Badges Per Sheet	This field lists the setting for the number of badges per print sheet. If you have enabled sheet printing during Badge Setup, the number is derived from your sheet layout. If you have not enabled sheet printing, this setting is 1 (every badge prints on a separate sheet).
Status	The status message on the left at the bottom of the window shows the current status of the Batch Print Queue: <ul style="list-style-type: none"> <li>• Printing Disabled if the Queue is set to <b>Always Ask</b> or <b>Always Queue</b>.</li> <li>• Printing Paused if you press the <b>Pause</b> button.</li> <li>• Printing Automatic if the Queue is set to <b>Auto Print</b>.</li> </ul>
Badges Remaining	The status message on the bottom right of the window displays the number of badges currently selected to be printed, and the Batch Print Queue status (Disabled, Paused, or Automatic).

Table 64: Batch Print Manager Status Tab Definitions

Field	Description
<b>Badge Printing</b>	
Automatic Printing	This field displays whether Automatic Printing is enabled or disabled.
Badges Printed Since Restart	This field displays how many badges have been printed since the start of the current Batch Print Queue session.

## Batch Print Manager Status Tab Definitions (continued)

Field	Description
Last Badge Printed	This field displays the Date/Time that the last badge was printed.
<b>Sheet Printing</b>	
Sheet Printing Status	This field displays whether Sheet Printing is enabled or disabled.
Badges per Sheet	This field displays the setting for the number of badges per sheet.
Sheets Printed	This field displays the number of sheets of badges printed during this session.
Starting Position	This field displays the current starting position (where the next badge will be printed on the sheet for sheet printing).
	Click this button to change the starting position of sheet printing on the current sheet. Changing the starting position is useful if you are using a partially printed sheet or you want to control where on the sheet the next badge is printed.

## Smart Card Programming, Enrollment, and Printing

This chapter explains how to program, enroll, and print a Smart Card with C•CURE ID.

In this chapter

- Smart Card Programming and Enrollment ..... 250
- Smart Card Data Confirmation Form Definitions ..... 256

## Smart Card Programming and Enrollment

Smart Card Programming is the process of writing information to a Smart Card from a record in the Personnel database. The amount of information that can be programmed depends upon the type of Smart Card programming device and the Smart Card templates configured for your Smart Card programming device. You can only program MIFARE cards.

Smart Card Enrollment is the process of reading information from Smart Cards and writing it to a record in the Personnel database. The amount of information that can be enrolled depends upon the amount of information stored on the cards, and the type of Smart Card being used. You can only program up to 16 bytes per block, since a block only consists of 16 bytes. Data will be truncated if this limit is exceeded.

There are three ways that you can Program/Enroll Smart Cards:

- [Using the Enroll/Program Smart Card Button on Page 251.](#)
- [Using Print Badge for Smart Card Enrollment, Programming, and Printing on Page 251.](#)
- [Using Batch Print Badge for Smart Cards on Page 252.](#)

You can enroll/program a single card or you can set up a batch printer that can program multiple cards from a queue (you cannot enroll cards using a batch printer). You can also program cards and print them in a single operation (see [Using Print Badge for Smart Card Enrollment, Programming, and Printing on Page 251](#)).

To program and/or enroll Smart Cards, you need:

- A Smart Card programming/enrollment device or a badge printer with a Smart Card encoder configured on your system through **C•CURE ID Badge Setup** (see [Smart Card Device Configuration on Page 89](#)).
- One or more programming and/or enrollment Smart Card Templates configured for that device. When you create an enrollment template, you define the fields that will be populated by data from the Smart Card. When you create a programming template, you define the fields that will be used to write data to sectors on the Smart Card. See [Smart Card Templates on Page 98](#).
- The **Enroll/Program Smart Card** button on the Personnel Badging tab.

### NOTE

If you have configured a printer as a Smart Card device using **C•CURE ID Badge Setup>Badge Printer Configuration**, you can program/enroll a Smart Card by clicking **Print Badge** on the Personnel Badging tab.

### C•CURE 9000 provides the ability to do these badging tasks:

- Program and modify MIFARE smart cards from personnel records.
- Enroll MIFARE, iCLASS, and DESFire smart cards into a personnel record.
- Use the **Enroll/Program Smart Card on Selected Credential** button on the Personnel record Badging tab to program and enroll smart cards.
- Use the **Print Badge** button to program, enroll, and print Smart Cards to a printer-based smart card encoder in one step, from the Personnel record Badging tab.

## Using the Enroll/Program Smart Card Button

If you have set up a badge printer or Smart Card Wedge device using **C•CURE ID Badge Setup>SmartCard** settings, you can use the **Enroll/Program Smart Card** button to program MIFARE Smart Cards.

### To Enroll/Program Smart Cards Using the Enroll/Prog. Smart Card Button

1. Click on the Badging tab in the Personnel Record.
2. Select a badge from the list of badges.
3. Click **Enroll/Program Smart Card** on the Badging tab.
4. If you have configured more than one Smart Card template for your Smart Card device, the Smart Card Print Options dialog box appears. Choose the template that you want to use from the drop-down list and click **OK**.
5. If you selected **Confirm Enrollment Data** when you configured the Smart Card Template, the Confirm Enrollment Data dialog box for the card type appears. Click **Confirm** to proceed with the programming or enrollment or click **Cancel** to cancel the operation.

## Using Print Badge for Smart Card Enrollment, Programming, and Printing

You can use the **Print Badge** button on the Personnel Badging Tab in two different ways for Smart Card Enrollment/Programming and Printing.

- **Individual Processing** – If you configured a badge printer for Smart Card programming and enrollment from the **C•CURE ID Badge Setup>Printer Options** dialog box, you can click **Print Badge** to perform programming, enrollment, and printing for a person's Smart Card. See [To Enroll/Program Smart Cards Using the Print Badge Button](#) on [Page 251](#).
- **Batch Processing** – If you configured a badge printer for batch processing of Smart Cards from the **C•CURE ID Badge Setup>Batching Options** dialog box, when you click **Print Badge**, the badge is added to the Batch Queue Manager for programming and printing. See [To Batch Program and Print Smart Cards Using the Print Badge Button](#) on [Page 252](#).

### NOTE

You cannot enroll Smart Cards using a batch printer, therefore batch processing is only useful for programming MIFARE cards (you cannot program DESFire and iClass cards). When you configure the batch printer for use with Smart Cards, you are prevented from adding any Smart Card template that includes an Enroll action. You also can configure only one template with a batch printer. See [Configuring a Smart Card Device](#) on [Page 91](#) for more information.

### To Enroll/Program Smart Cards Using the Print Badge Button

1. Click on the Badging tab in the Personnel Record.
2. Select a badge from the list of badges.
3. Click **Print Badge** on the Badging tab.
4. If your printer has more than one Smart Card template configured, the Smart Card Print Options dialog box appears. You can choose which Smart Card template to use to enroll/program the Smart Card and click **OK**, or click **Cancel** to cancel the programming/printing of the card.

5. If you chose the **Prompt for Print** selection when you configured the printer, the Smart Card Print Options dialog box appears. You can choose which Smart Card template to use to enroll/program the Smart Card, and which operation you wish to perform:
  - Print the badge, do not program the Smart Card.
  - Program the Smart Card, do not print the badge.
  - Program Smartcard and print Badge.
6. Choose one option and click **OK**, or click **Cancel** to cancel programming and printing the badge.
7. If the template was configured with the Confirm Programming/Enrollment Data option, the Smart Card Data Confirmation form appears so that you can **Confirm** the programming/enrollment that will occur, or click **Cancel** to cancel both programming and printing. See [Smart Card Device Configuration Definitions on Page 96](#) for definitions of the fields on the Confirmation form.
8. If your template includes enrollment, the enrollment data is included if needed when the badge is printed, and then the data is enrolled into the Personnel record, so that enrollment and printing can be done in a single step.

### To Batch Program and Print Smart Cards Using the Print Badge Button

If you have configured your badge printer using **Badge Setup>Batching Options** to support batch operations, **Print Badge** works differently. With batch printing, only MIFARE cards can be programmed, only one template can be assigned to the batch printer, enrollment is not available, and badges are queued to the Batch Print Queue for processing.

1. Click the Badging tab in the Personnel Record.
2. Select a badge from the list of badges.
3. Click **Print Badge** on the Badging tab.
4. The badge is processed according to your Batch Queue Mode setting:
  - If the mode is set to **Auto Print**, the badge is programmed and then printed.
  - If the mode is set to **Always Ask**, the **Batch Print Manager** dialog box is displayed to let the user choose whether to print a single badge, print all badges in the queue, or add the badge to the batch print queue.
  - If the mode is set to **Always Queue**, the badge is added to the batch print queue, and the **Batch Print Manager** dialog box is displayed to let the user choose whether to print a single badge, print all badges in the queue, or leave the badge in the batch print queue and print it at a later time.
5. To print the badge from the Batch Print Manager, select the badge from the badges listed in the queue and click **Print** on the toolbar. See [Batch Print Manager on Page 244](#) for information on other batch printing options.

### Using Batch Print Badge for Smart Cards

If you have set up a batch badge printer using **C•CURE ID Badge Setup>Batching Options**, you can use the **Batch Print Badge** selection on the context menu for one or more Personnel records in a Dynamic View to program multiple MIFARE Smart Cards in one operation.

**NOTE**

You cannot enroll Smart Cards using a batch printer, therefore batch processing is only useful for programming MIFARE cards (you cannot program DESFire and iClass cards). When you configure the batch printer for use with Smart Cards, you are prevented from adding any Smart Card template that includes an Enroll action. You also can configure only one template with a batch printer. See [Configuring a Smart Card Device on Page 91](#) for more information.

### To Program Smart Cards Using Batch Print Badge

1. From a Dynamic View of Personnel records, select one or more Personnel records.
2. Right-click to display the context menu.
3. Click **Batch Print Badge**.
4. If you had set the Batch Queue to **Auto Print**, each badge is first programmed according to the Smart Card Template you configured for the printer, then printed. If you set the Batch Queue to **Always Ask** or **Always Queue**, each badge is added to the Queue. You can program/print any or all of the badges from the Batch Print Manager dialog box.

### Performing Batch Enrollment for Proximity Cards

You perform batch enrollment for proximity cards from either the Personnel or Credential Dynamic View by selecting the persons whose badges you want to enroll and choosing **Batch Print Badges** from the context menu.

If your Personnel have more than one badge, you can control which badges you enroll by using the Credential Dynamic View to select only the credentials you want to enroll. The Credential Dynamic View lists each person's credentials in a separate row, so you can choose which of a person's credentials to associate with the proximity card you want to enroll/print.

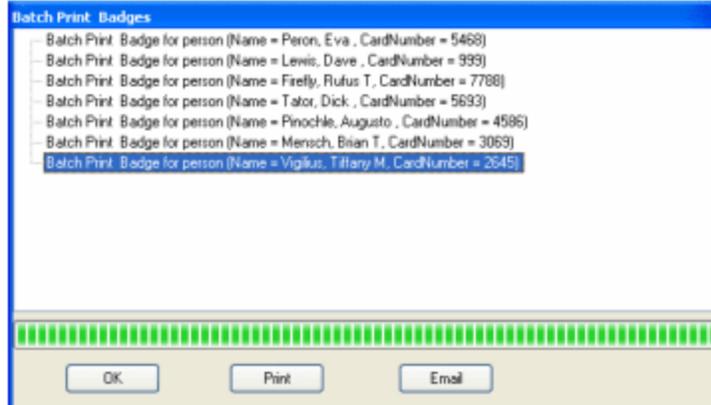
To use this capability, you must have:

- Configured your printer to perform batch enrollment of Proximity Cards (see [Configuring Batch Enrollment for Proximity Cards on Page 41](#)).
- and
- Set up an Import definition to import the card number from the Proximity card into the corresponding Personnel record (see [Configuring an Import Definition for Batch Enrollment on Page 44](#)).

### To Batch Enroll Proximity Cards

1. Choose **Personnel** or **Credentials** from the Personnel pane drop-down list.
2. Click  to display a Dynamic View listing all Personnel (or Credentials).
3. Select the Personnel whose proximity cards you want to enroll from the list (using **CTRL+Left-click** to select multiple Personnel).
4. Right-click to display the context menu, and select **Batch Print Badges**.
5. C•CURE ID displays a log window to show the progress of your queuing request, and the status of the badges you queued.

Figure 60: Batch Print Badges Log Window



6. Click **OK** to close the log window.

## NOTE

The **Print** button on the log window prints out the log window, not the badges themselves. You can click **Email** to email the message box to the recipient who was configured in the **System Variable Email Address** under **Customer Support**. (The Email function is intended to provide a way to email information to Customer Support for your site. See the *C•CURE 9000 System Maintenance Guide* for more information.)

7. Depending upon the options you have chosen for Batch Printing, the badges you queued are either processed immediately or are held in the Batch Print Manager.
  - If you had set the Batch Queue to **Auto Print**, each badge is first programmed according to the Smart Card Template you configured for the printer, then printed.
  - If you set the Batch Queue to **Always Ask** or **Always Queue**, each badge is added to the Queue. You can program/print any or all of the badges from the Batch Print Manager dialog box.
8. When the printer prints the badge, it also encodes the card number and Personnel record data to a .CSV file.
9. The Import Watcher notices the new .CSV file and uses the Import definition you defined to import the data.
10. For each of the Personnel you selected, the card number of the proximity card you printed as a badge is enrolled to the correct Personnel record.

## Performing Individual Enrollment for Proximity Cards

You perform individual enrollment for proximity cards from the Personnel Badging tab.

- Click **Print Badge** to print and enroll the proximity card selected on the Badging tab for this Personnel Record.
- Click **Enroll/Program Smart Card** to enroll the proximity card selected on the Badging tab for this Personnel Record without printing it.

To use this capability, you must have:

- Configured **Printer Options** in Badge Setup to perform printing and enrollment of Proximity Cards (see [Configuring Individual Enrollment for Proximity Cards](#) on Page 42).

or

- Configured **Smartcard settings** in Badge Setup to perform enrollment of Proximity Cards (see [Configuring Batch Enrollment for Proximity Cards](#) on [Page 41](#)).
- You also must have set up an Import definition to import the card number from the Proximity card into the corresponding Personnel record (see [Configuring an Import Definition for Batch Enrollment](#) on [Page 44](#)).

---

### To Enroll Proximity Cards

1. Choose **Personnel** or **Credentials** from the Personnel pane drop-down list.
2. Click  to display a Dynamic View listing all Personnel (or Credentials).
3. Select the Personnel whose proximity cards you want to enroll from the list.
4. Right-click to display the context menu, and select **Edit**. The Personnel Editor opens.
5. Click the **Badging** tab.
6. Select the badge you want to enroll from the table listing the badges for this Personnel record.
7. Click **Print Badge** to print the badge and enroll it, or click **Enroll/Program Smart Card** to enroll the badge only.
8. When the printer prints the badge, it also encodes the card number and Personnel record data to a .CSV file. (If you used the **Enroll/Program Smart Card** button, the card is enrolled but not printed).
9. The Import Watcher notices the new .CSV file and uses the Import definition you defined to import the data.
10. For each of the Personnel you selected, the card number of the proximity card you printed as a badge is enrolled to the correct Personnel record.

## Smart Card Data Confirmation Form Definitions

If you select **Confirm Programming Enrollment Data** when you define a Smart Card template, the Smart Card Data Confirmation Form is displayed when you use that template to program data to or enroll data from a Smart Card. This form lets you preview the operations that will be performed, and gives you an opportunity to confirm and continue the operation, or cancel the operation. If you cancel the operation, the card is ejected from the printer without being printed.

**NOTE** The Default Smart Card Templates do not have **Confirm Programming Enrollment Data** selected. If you want to have the chance to confirm data, create a template that has **Confirm Programming Enrollment Data** selected.

**Table 65:** Smart Card Data Confirmation Form Definitions

Field	Description
Sector Number	This column displays each of the sectors that are being programmed or enrolled.
Sector Label	This column displays the user-defined label of the sector.
AID Value	This column displays the Application Identifier (AID) value of the sector.
Value	Displays the Card Serial Number read from the card.
Enroll to Field	Displays the Personnel database field to which the Card Serial Number is being enrolled. If this field is blank, the Card Serial Number is not being enrolled.
Block Name	Each row of this column represents a block on this sector of the card. Blocks are 0, 1, and 2.
Data	This column displays the actual data that is being programmed to the block or the data that was enrolled from the card.
Operation	This column displays the operation being performed - Program, Enroll, or None.
Data Field	This column displays the data field that was configured in the template in the <b>Field or Format</b> field for this block.
Optional Fields	If a template is performing operations with a Card Format, additional columns representing the Card Format fields are added to the data grid. These columns represent the data fields that are being programmed or enrolled.
Confirm	Click <b>Confirm</b> to proceed with the Program/Enroll operation as displayed on the form.
Cancel	Click <b>Cancel</b> to cancel the Program/Enroll operation and eject the card.

# Index

## A

- Add 144
  - Portraits to Badges 144
- Add Function 200
- Add Operator 204
- Adding a Barcode 142
- Adding a Border
  - Badge 149
  - Object 149
- Adding a Signature 144
- Adding an Image 143
- Advanced Search 215
- Align Control to Grid 146
- Align Menu 146
- Alternate Resolution 50
- Always Ask 52, 234
- Always Queue 234
- Ambient lighting 31
- Assigning a Badge Layout 217
- Asterisk 192
- Auto Print 52
- Automatic detection
  - of background color 32
- Autoprint 234
- Avery labels 56

## B

- Back checkbox 159
- Background Color 183
- Background Color Tab 155
- Background Color, Badge 160
- Background Detection tab 169
- Badge 144, 160, 234
  - Add Magnetic Tracks 160
  - Add Portraits 144
  - Batch Printing 244
  - Personnel Data: on 141
  - Preview 234
  - Print 234
  - Text: on 141

- Badge Background 160
- Badge Background Color 160
- Badge Batch Print All 234, 243-244
- Badge Design Settings 36
- Badge Designer 124
  - Accessing 125
  - Exiting 135
  - Using 132
- Badge Designer Panels 124
- Badge Height 159
- Badge Layout 212
  - Configuring 139
  - Saving 135
- Badge Layout Panel 138
  - Tasks 140
  - Toolbar 139
- Badge Layout Properties Panel 151
- Badge Layout Properties tabs 150
- Badge Layout tab 152
- Badge Layout, Export 134
- Badge Layout, Import 133
- Badge Preview 212
- Badge Printer 62
- Badge Printer Configuration 62
- Badge Properties Tasks 152
- Badge Setup
  - Accessing 36
- Badge Setup Tasks 37
- Badge Size 159
- Badge Width 159
- Badges
  - personnel images 225
  - printing 50
  - taking pictures for 31-32, 218
- Badging Station
  - display settings 22

- hardware requirements 20
  - software requirements 22
  - Badging Stations, Simultaneous 29
  - Barcode Caption 189
  - Barcode Caption tab
    - Definitions 194
  - Barcode height and width 189
  - Barcode Overview 189
  - Barcode Properties Panel 187
  - Barcode Properties tab Definitions 193
  - Barcodes 192
  - Batch Enrollment
    - Proximity cards 40-41, 253
  - Batch Enrollment Import Definition 44
  - Batch Print Badges 241
  - Batch Print Badges from Personnel Query
    - Results 241
  - Batch Print Badges Log Window 241
  - Batch Print Manager
    - Definitions 246
    - Queue tab 246
    - Status tab 246
    - Toolbar 246
  - Batch Print Manager Menu 245
  - Batch Printer
    - Selecting 52
  - Batch Printing
    - Setup 50
  - Batch Printing Badges 238
  - Batch Printing Definitions 54
  - Batch Printing options 239
  - Batch Printing Options 36
  - Batch Queue Mode 50, 53, 244
  - Batch/Sheet Printer 50
  - BatchError.txt 234
  - Baud Rate 82
  - Biometric Settings 80, 82
  - Bioscrypt 82
    - fingerprint 228
  - BMP 70
  - Boolean 204
  - Boolean Expression 181
  - Border
    - adding to badge 149
  - Border Tab 157
  - Brightness/Contrast 225
  - Bring To Front 148
- ## C
- C•CURE ID
    - hardware requirements 20
    - installing 27
  - C•CURE ID Magnetic Encoding dialog 160
  - C•CUREID, Software requirements 22
  - Camera
    - positioning
      - flash lighting 31
      - portrait lighting 31
    - software controlled options 75
    - taking pictures 218
  - Cameras, supported 21
  - Capture
    - device 70, 76, 79, 83
    - Device 70
    - height 72, 79, 83
    - options 83
    - width 72, 79, 83
    - window 219
    - window icons 221
  - Capture Device 73
  - Capture Options 36
    - for signature devices 77
  - Capture Settings 70
  - Capturing
    - signatures with a camera 218
    - signatures with signature devices 223
  - Card number 65
  - Caution symbol 14
  - Class Template Configuration 103
  - Color Management tab 170
  - COMM Port 82
  - Commands
    - Badge Layout 124

- Take Signature 223-224
- company code 65
- Configuration 36
- Configuration Settings 36
- Configuring
  - Device or Printer 91
  - Smart Card Device 91
  - Smart Card Template 101
- Configuring a Badge Layout 139
- Configuring a Badge Sheet Layout 56
- Configuring a DESFire Smart Card Template 104
- Configuring an iClass Smart Card Template 102
- Configuring Batch PrinterSmart Card Encoding 93
- Configuring Portrait Capture Settings 68
- Contrast 174
- Conventions used in this manual 14
- Conventions,documentation 14
- Creating a Smart Card Key 112
- Custom Sheet Layout Templates 57

## D

- Danger symbol 14
- Data Confirmation Form, Smart Card 256
- Database Fields 181
- Default Mag Track 160
- Deleting objects 148
- DESFire 86
  - Supported Devices 86
- DESFire Template
  - Definitions 105
- DESFire Template Configuration Definitions 104
- Device options
  - capture 74
- Device Setup 73, 79
- Display Settings 22
- Documentation conventions 14
- Dynamic text 141, 181
  - On Badges 141
- Dynamic Text
  - adding to barcode caption 191

## E

- Edit Personnel Record 212
- Editing a Badge Layout 133
- Editing a Smart Card Key 114
- Editing a Smart Card Template 100
- Encode Mag Track 160
- Encoder Device 65
- Encoder Name field 95
- Encoder text Strings Prefix 165
- Encoding 65
  - Magnetic Tracks 65
- Enroll Smart Card
  - Default MIFARE keys 109
  - MIFARE Blank 107
- Enrolling
  - fingerprints
    - bioscrypt 228
- Enrolling smart cards 86
- Enrollment for Proximity Cards 40
- Exiting
  - Badge Designer 135
- Expiration date 65
- Exporting a Badge Layout 127, 134
- Expr>> button 161
- Expression 197
- Expression Builder 161, 181, 196, 200, 204
- Expression Builder Definitions 199
- Expression Builder Operators 204
- Expression Builder, Using 197

## F

- Facility code 65
- Fargo DTC400e
  - Printer setup 33
- Fargo HDP5000
  - Printer Setup 33
- Field Mapping Tool, Batch Enrollment 48
- Finger
  - pressure 228
- Fingerprint
  - bad 228

- enrollment-bioscrypt 228
  - good 228
- Flash lighting 31
- Flourescent lighting 31
- Font/Color tab 182, 185
- Format
  - for images 72
- Front checkbox 159
- Functions 181, 200
- G**
- Ghosting Value 160
- Graphics
  - format 69
  - height and width 69
- Graphics Format 36, 69
  - Setup 36
- GrayScale setting 174
- Guidelines
  - for setting up the portrait room 31
- H**
- Hardware
  - requirements 20
- Height
  - for captures 72, 79, 83
  - for graphics 69
- Horizontal Spacing 56
- Hue 174
- I**
- iClass
  - Supported Devices 86
- iCLASS 86
- IIF 200
- Image Properties Panel 166
  - Accessing 166
  - Tasks 167
- Image Source tab 167
- Images
  - backdrops for 32
  - capturing 218, 224
  - displaying personnel 225
  - format 72
  - height and width of 69
  - Import: existing 225
- Images Properties Tasks 167
- Imaging Station
  - Software Requirements 22
- Import 225
  - Existing Images and Pictures 225
  - Images 225
  - Pictures 225
- Import Definition, Batch Enrollment 44
- Import from File
  - option 71, 76
  - Signature 78
- Importing a Badge Layout 126, 133
- Importing Existing Portraits 225
- Individually Add Badges to the Batch Print Queue 239
- Issue code 65
- J**
- JPEG 69-70
- Justification for text 184
- L**
- Label Designer
  - Definitions 61
  - using 58
- Label Height 56
- Label Width 56
- Landscape 159
- Layout Panel 138
- Layout Sheet 52
- Lighting 31
- Lightness 174
- Load Image 225
- M**
- Mag Encoding 65, 160
- Mag Encoding Tab 154
- Mag Track Field Name 161
- Magnetic 65
  - cards 64

- Encoding 160
  - Strip 161
  - Track Encoding 65
  - Tracks 160
- Magnetic Encoding 36
  - Definitions 65
  - device 65
  - Eltron Printers 164
  - Encoding Magnetic Track 3 163
  - Important Considerations 162
  - Nisca Printers 163
  - Numeric Fields 163
  - Options 65, 161
  - Uppercase ASCII 163
- Magnetic Stripe 161
  - Encoding 165
  - Encoding Formats 65, 165
- MagTrack 160
- Manufacturer dropdown list 82
- Match Fields, Batch Enrollment 48
- MID 200
- MIFARE 86
  - Application Directory (MAD) 118
  - Configuration 106
    - Data Definitions 120
  - Keys Definitions 120
  - Sectors Definitions 119
  - Supported Devices 86
  - Template
    - Creating 107
  - Template Definitions 118
  - Template Tsaks 107
- MIFARE Configuration Details 119
- Moving Objects 145

**N**

- Node
  - setting up 29
- NTSC 219

**O**

- One-Sided Badge
  - Layout 159
- Opaque 182-183
- Operator 204
- Operator Permissions 29
- Operators 181
- Options
  - Printer: Set 62
- Origin Offset 53

**P**

- PAL 219
- PCX 69
- Penware Tablet
  - Capture Device 76
  - format 76
- Performing Batch Enrollment 253
- Performing Individual Enrollment 254
- Permissions
  - setting 29
- Personnel 141
  - Add Pictures to Badges 144
  - badging 211
  - Data on Badge 141
  - records, retrieving images for 225
- Personnel Badging 213
  - Dynamic View 213
  - Query 216
  - Quick Search 214
- Personnel Query Browser 244
- PICT 69
- Picture 144
  - Add to Badges 144
  - Import 225
  - Take 219, 225
  - Taking 212
- Portrait 159
  - Capture 219
- Portrait Configuration
  - Tasks 69

- Portrait lighting stand 31
  - Portrait Properties Panel 175
    - Accessing 175
    - Tabs 176
    - Tasks 176
  - Portraits 144, 225
    - Add to Badges 144
    - backdrops 32
    - Capture device 70
    - capture devices 70, 76
    - Import 225
    - importing 227
  - Position and Size dialog box 145
  - Prefix 65, 165
  - Preview 225, 234
    - Badge 212, 234-235
  - Print 234
    - Badge 234
  - Print Badge button 251
  - Print Entire Queue 244
  - Print Height 56
  - Print Newest Badge 244
  - Print One Badge 244
  - Print Preview 212
  - Print Width 56
  - Printer
    - default 63
    - Set Options 62
  - Printer Configuration
    - Smart Card Enrollment 92
  - Printer Options 36
    - Batch 36
    - Set up 36
  - Printer Setup
    - Fargo DTC400e 33
    - Fargo HDP5000 33
  - Printing 234
    - Badge 234
    - set up 62
    - Windows default printer 63
  - Printing a Badge 236
  - Printing Dialog (Batch) 244
  - Printing Queued Badge 237
  - Privilege Settings 29
  - Processing Panel Background Color Tab 155
  - Processing Panel Border Tab 157
  - Program Smart Card 86
    - Custom MIFARERead and Write Keys 110
    - Default MIFARERead and Write Keys 108
  - Prox Configuration dialog box 43
  - Proximity Card Enrollment 40
  - Proximity Cards
    - Batch Enrollment 41
    - Individual Enrollment 254
- ## Q
- Queuing a Badge for Batch Printing 239
- ## R
- Reader Type 82
  - Replacement Color 172
  - Replacement Mode 172
  - Resin Black 189
  - Resizing Objects 145
  - Right-click menu 148
  - Rotate 225
  - Rotate a Text Object 183
- ## S
- Sample Data 136
  - Sample Expressions 207
  - Sample Filename, Setting 177
  - Saturation 174
  - Saving a Badge Layout 135
  - Selecting
    - Capture Device 70
  - Selecting a Batch Printer 52
  - Send To Back 148
  - Set Color 182
  - Set Font 182
  - Set Justification 184
  - Set up
    - Capture Options 36
    - Graphics Format 36

- Printer Options 36
- TWAIN 36
- Set Up a Smart Card Badge Printer 90
- Set Up a Smart Card Device or Printer 90
- Setting
  - Printer Options 62
- Setting a Dynamic Image Source for an Image Object 171
- Setting a Static Image Source for an Image Object 172
- Setting Background Color for an Object 173
- Setting Background Detection Properties 172
- Setting Barcode Caption Properties 190
- Setting Color Management Properties 174
- Setting Front-to-Back Order 148
- Setting up
  - Batch Queue Mode 53
  - Import from File 72
- Sheet Layout 56
  - Definitions 59
- Sheet Layout Design Tasks 56
- Sheet Printer Name 56
- Side Margin 56
- Signature
  - Adding to Badge 144
  - Capture Settings 75
  - Import from File 78
  - Properties Panel 178
    - Accessing 178
    - Tabs 179
    - Tasks 179
- Signatures 212
  - Capture devices 76
  - Displaying images 225
  - Importing 227
  - Taking 212
    - taking signatures with a camera 218
    - using signature devices 223
- Site code 65
- Smart Card
  - Configuring 91
  - Print Badge button 251
  - Smart Card Data Confirmation Form 256
  - Smart Card Device Configuration 89
    - Tasks 89
  - Smart Card Device Definitions 96
  - Smart Card Enrollment
    - Print Configuration 92
  - Smart Card Key Configuration 111
  - Smart Card Key Definitions 116
  - Smart Card Key Overview 111
  - Smart Card Overview 86
  - Smart Card Process 88
  - Smart Card Programming
    - Printer Configuration 92
  - Smart Card Programming and Enrollment 250
  - Smart Card Template
    - Configuring 101
  - Smart Card Templates 98
  - Software requirements 22
  - Static text 141
    - Barcode Caption 191
      - on Badges 141
  - Suffix 65, 165
  - Supported Cameras 21
  - Supported Devices 86
  - Supported Printers 20
  - Symbology 189
- T**
- Take 219
  - Pictures 212, 225
  - Signatures 212, 225
- Targa 69
- Test Encoder button 95
- Test Signature window 223-224
- Testing the Encoder Connection 95
- Text 181
  - Dyanmic 141
  - Horizontal Positioning 184
  - Justification 184
  - Static 141
  - Vertical Positioning 184

Text Background 182  
     Opaque 182  
     Transparent 182

Text Properties  
     Font/Color tab 185  
     Text tab 184

Text Properties Panel 180, 182

Text Properties Panel Font/Color 142

Text Properties Panel Tasks 180

Text Properties Panel Text 142

TIF 69

TIF Compressed 69

TIF Mono 69

Toggle Grid On/Off 146

Tolerance Level 173

Toolbar 146  
     Badge Layout Panel 139

Top Margin 56

Total Sheets 244

Track 65  
     Magnetic: Encoding 65

Transparent 182-183

TWAIN Device  
     interface 71, 76  
     protocol 18  
     setting up 71

Two-Sided Badge 159

Two-Sided Badge Layout 159

**U**

Updating licenses 28

Use Sheet Layout 52, 56

Using a Magnetic Track for Access Control 162

Using Badge Batch Print All for Smart Cards 252

Using C•CURE ID Setup 36

Using Expression Builder 197

Using Help 25

Using the Badge Designer 132

Using the Enroll/Program Smart Card Button 251

Using the Label Designer 58

**V**

Vertical Spacing 56

Video 219

**W**

Warning symbol 14

What's New 19

What is an Expression 197

Width  
     for captures 72, 79, 83  
     for graphics 69

WMF (Windows MetaFile) 70