

## Getting Started

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EzData is a unique tool that allows quick creation of [forms](#). A [Microsoft Access database](#) is automatically generated for every form. Data can be entered into the database either manually using the [database toolbar](#) and [form validation document](#) or you can scan in the forms in using any Twain compliant scanner. Data from scanned forms is displayed in the form validation document for review before storing it to the database.

EzData comes with over 12 [dictionaries](#) including U.S. cities, first names, surnames, states, medical, legal and more which can be used to improve recognition accuracy. A custom [dictionary editor](#) allows you to create your own dictionaries as needed. In addition to use of a secondary character recognition engine allows you to quickly review process forms and immediately know which if any fields need to be validated manually to ensure accuracy.

To simplify the form creation process EzData provides 21+ [formatted entry fields](#) for all common data types including phone numbers, Social Security numbers, ZIP codes, e-mail addresses, and more. These formatted fields allow you to enter a variety of text, numbers, alphanumeric fields into any form.

[Checkbox](#) fields are also supplied to allow simple selection and extremely accurate data entry. We provide two types of checkboxes. One for use when only a single selection would apply and the other for cases when multiple selections would be desired.

In addition we provide dozens of [field templates](#) and users can create their own new ones. A custom field template is a set of predefined, formatted fields and can be placed in new forms to speed up the form development process. For example there is a template for a customer's name and address information that can be placed in a form in one step.

You can add [boxes](#), [lines](#), [bitmap images](#), and [text](#) into forms to enhance the look and usability.

Included with EzData is an [Html report](#) generation tool for extracting useful information out of the database. This allows you to create reports from data stored in any Microsoft access database. Importing the data into Microsoft Excel allows you to quickly create graphs, charts, and enhanced table based

reports. Since the database is standard it can also be imported into many other tools. For protection of critical data a [database password](#) can be used.

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## System Requirements

- PC with a Pentium-class processor Pentium 90 or higher
  - Microsoft Windows 2000/XP
  - 128MB or more of RAM
  - 100MB of hard disk space free
  - CD-ROM drive or Modem for software installation
  - (Optional) Twain compliant scanner that can produce black and white windows BMP images at a resolution of 200-400DPI for scanned input features.
  - (Optional) Color Inkjet printer for printing forms.
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## Installation

Insert the disk into the CD-ROM and the installation wizard should start automatically. If the wizard does not open automatically, you can use Setup.exe found at the root of the disk. Go to the windows Start Menu and select Run. Then use the browse button to locate and run the Setup.exe file on the CD-ROM. Follow the installation wizard instructions to complete the installation.

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## Initial Setup

Step 1: [Optimizing Character Recognition](#)

Step 2: [Printing Forms](#)

**Related Topics:** [Troubleshooting](#)

You can use our [example forms](#) and [example images](#) to test the product the can be accessed through the [help menu](#).

## Overview

It is important to take the time to properly set up your application for the particular scanner and printer that you use. Be aware that many scanners claim to be TWAIN compliant are not truly TWAIN compliant. If you encounter scanning related problems see the [Trouble Shooting](#).

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## Optimizing Character Recognition

The primary character recognition engine was trained on over 20,000 samples of handwriting. It should yield results that are greater than 97% accurate for numbers, 92% for upper case letters and 97% for lower case letters. The secondary tertiary and quad character recognition engines are trained on a smaller set of samples and standard fonts but should yield similar accuracy.

In addition you can select a character set preference when processing with the secondary, tertiary, or quad engines. Including accented characters or standard fonts. With the aid of the automatic dictionary lookup and the specialized form layout the attainable accuracy for all fields should be 98% or better.

To configure the default usage of the character recognition engines and character sets used use the [application preferences](#) dialog.

To improve the accuracy it is important to calibrate printed forms to work with the scanner and color printer you use. Even without calibration the default settings should yield acceptable results on most scanners and printers.

To start the calibration process use the [File Menu](#) and select the [Print Forms](#) entry. This will bring up the print forms dialog. Select the “Calibration Form” entry from the drop list and press the “ok” button to print it.

After the form has printed fill out the fields using a pencil or pen similar to what you will normally use. Then check the [Show Scanned Image](#) entry under the Scanner Menu. This will display the scanned in image for review. Make sure and correct the [Scanner Brightness](#) before making any adjustments to the form dropout color. If the text you wrote in the fields before scanning is not clearly readable or has lots of missing segments then darken the scanner brightness to help compensate for pencil type or writing style. Pressing firmly while writing will also help darken the text and make it more readable to the scanner. Refer to the example on the card for what it should look like when properly calibrated for both brightness and form dropout color. Now that the brightness has been calibrated it may be necessary to lighten the form color to insure the form is dropped out when scanned in as a black and white image. Use the [Set Form Colors](#) entry under the form menu to adjust the color. If you have lots of black dots from the form showing up around the text entered in the fields you should lighten the color of the form until only a few or less show up. It is not necessary to remove them all since there is an advanced image filter that is used to clean up a field before processing it.

At this point the application should be optimized to insure maximum accuracy and enjoyment. Remember to recalibrate the system if you change scanners or printers to insure you are always getting the maximum accuracy attainable.

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## Sample Forms, Form Images, and Databases.

Provided with EzData are several sample forms and form images. To print a sample form select "[Print Forms](#)" from the [file menu](#) then pick the one you wish to print. To open an example form image for processing select "[Open](#)" from the file menu go up one level then click on "Form Images" and select the example form image to open. Then select form image files as the file type (\*.fim). Select a form image to load. Once the image is loaded click the "[Process Image](#)" icon on the toolbar or under the file menu. This will process the form and display the [validation view document](#).

Use the [database menu](#) to open an example database for viewing or generate a [report](#) using a [report menu](#).

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EzData supports the standard Microsoft command line options. In addition you can also perform command line batch scanning, custom record printing, and exporting the data via command line options.

Lists for records and fields can be separated by a ",", or ":", or ";". Lists for suggested value fields can contain a ",", or ":" as a separator but not a ";" because multiple selection checkbox fields use a ";" as a separator.

You can use the "-start" command to start an instance of EzData that stays running until you run a "-stop" command. All other commands will be forwarded to the single running instance. If you have not started a single instance using "-start" then a new instance of EzData runs for each command and exits when the command is complete.

Start/Stop EzData Command Arguments	
-start	Starts a single instance of EzData running. This allows you to issue multiple script commands without running a new instance of EzData for each command.
-stop	Stops a single instance of EzData

Scan Command Arguments	
-scan	required, starts tool and does scanning for manual verification, user closes tool after saving to database

### Batch Scanning Command Arguments

-batchscan		required, starts with tool hidden, performs scanning, auto saves to database, generates a report, closes the tool
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### Batch Process Command Arguments

-batchprocess		required
-filelist	<file list>	optional if -dirlist specified otherwise required
-dirlist	<directory list>	optional if -filelist specified otherwise required

### Print Records Batch Command Arguments

-printrecords	<form name>	required
-dbpassword	<password>	optional, unless database has a password specified
-records	<record list>	required
-fields	<field list>	optional, default = all
-usesugvalues	<field list[=value]>	optional (use suggested values default or specified on field)
-copies	integer	optional, default = 1

### Print Form Batch Command Arguments

-printform	<form name>	required
-fields	<field[=value], ...>	optional, (print form with field values prefilled)
-usesugvalues	<field[=value], ...>	optional (use suggested values default or specified on field)
-copies	integer	optional, default = 1

### Export Data Batch Command Arguments

-exportdata	<form name>	required
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-dbpassword	<password>	optional, unless database has a password specified
-records	<record list>	required
-fields	<field list>	optional, default = all
-exportfile	filename	required
-delimiter	<delimiter>	default is a ","

### Import Data Batch Command Arguments

-importdata	<form name>	required
-dbpassword	<password>	optional, unless database has a password specified
-importfile	filename	required
-delimiter	<delimiter>	default is a ","

### Clear Database Batch Command Arguments

-cleardb	<form name>	required
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### Examples:

```
echo "Starting a single instance of EzData to send multiple commands to."
```

```
start "EzData Server App" "ezdata.exe" -start
```

```
ezdata.exe -exportdata "Medical History.crf" -fields "First_Name, Last_Name" -exportfile  
"exportMedicalHistory.txt"
```

```
ezdata.exe -stop
```

```
ezdata.exe -scan
```

```
ezdata.exe -batchscan
```

```
ezdata.exe -batchprocess -dirlist "C:\My Documents\My ICR Images 1;C:\My Documents\My ICR  
Images 2"
```

```
ezdata.exe -batchprocess -filelist "Medical History 01.fim;Medical History 02.fim"
```

```
ezdata.exe -exportdata "Medical History.crf" -records "1,2" -fields "First_Name,MI,Last_Name" -  
exportfile exportdata1.txt
```

```
ezdata.exe -importdata "Medical History.crf" -importfile exportdata1.txt
```

```
ezdata.exe -cleardb "Medical History.crf"
```

```
ezdata.exe -printrecords "Medical History.crf" -records 1 -fields "First_Name,MI,Last_Name" -copies 1
```

```
ezdata.exe -printform "Medical History.crf" -fields "First_Name=John,MI=R,Last_Name=Smith" -  
usesugvalues "Exercise=2, Medical_Conditions=Arthritis;Angina" -copies 1
```

```
ezdata.exe -printrecords "Medical History.crf" -records 1 -fields "First_Name,MI,Last_Name" -  
usesugvalues "First_Name=John, MI=L, Last_Name=Smith,Allergies=Soy;Egg;Peanuts"
```

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## About Creative ICR Inc

Creative ICR, Inc. was founded in 1999 and is located in Beaverton Oregon. You can contact Creative ICR, Inc. by sending email to [contact@creativeicr.com](mailto:contact@creativeicr.com) or [support@creativeicr.com](mailto:support@creativeicr.com) on the Internet at <http://www.creativeicr.com>.

Creative ICR is an innovative company that was founded in 1999. Our specialty is intelligent character recognition for hand written forms.

## **Documents**

[Form](#)

[Validation/Database](#)

[Image](#)

[Html Report](#)

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## **Form**

[Create New Form](#)

[Setting Form Attributes](#)

[Textbox Fields](#)

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[Image Box Field](#)

[Barcode Field](#)

[Boxes](#)

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## **Create New Form**

To create a new form select [new](#) under the [file menu](#). After the form is displayed you can select [form attributes](#) under the [form menu](#) and customize the form size, borders, database name, number of pages, form identification number, and form title. You can also edit form attributes by double-clicking on the form identification number.

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## **Setting Form Attributes**

[Form Title](#)

[Form Identification Number](#)

[Form Size](#)

[Multi-page Forms](#)

[Form Database Name](#)

[Form Database Password](#)

[Form Border Attributes](#)

[Form Grid Size](#)

[Form Margins](#)

[Form Units](#)

## **Form Title**

The form title is a text item that is displayed at the top center of each page. Although it is automatically generated for you you can edit it to change the colors, font size, as well as text value. Click the right mouse button over the item to show before menu, select from the menu to modify the title attributes.

## **Form Identification Number**

Each form requires a unique identification number. This number is used to determined which forms are being scanned in. Any valid four digit number is acceptable. Click on the form identification number to edit the the [form attributes](#). You can also move the form identification number if you do not like the location but it must be visible on the form and obscured by other fields.

## **Form Size**

You can customize the size of a form using any of the standard sizes in the drop-down list or you can select custom and then set the width and height. Form sizes are limited by the constraints of the printers to a maximum size of a legal document.

## **Multi-page Forms**

You can create multi-page forms by setting the number of pages in the form attribute dialog. Select [form attributes](#) under the [form menu](#) to display the form attributes dialog. When scanning a multi-page form the individual page order is not important. If you're scanning a batch of multi-page forms you must ensure that all of the pages for the first form are scanned before scanning pages for additional forms.

## **Form Database Name**

A Microsoft access database is automatically generated for each form. The name of the database is set in the form attributes dialog. Select [form attributes](#) under the [form menu](#) to display the form attributes dialog. The database file that is generated is located in the database directory underneath the installation directory. This would typically be C:\Program Files\Creative ICR\EzData\Databases.

Typically most forms would only have one database table because they have less than 255 fields. You can select to include the record number in each additional table generated by checking the checkbox

"Create a record number for each table in multitable forms".

You can also choose to generate a GUID our global unique identifier for a database by checking the checkbox "Create GUID's for database records". Typically most forms would only have one database table because they have less than 255 fields. You can select to include a GUID in each additional table generated by checking the checkbox "Create a GUID for each table in multitable forms".

When forms are scanned in a [validation form](#) is displayed. This allows any errors to be corrected before saving the data to the database. After verification you can use the database toolbar or the [file menu](#) to save the form to the database. If you scanned in a batch of files you can save them all at one time by selecting "[Save All Processed Forms](#)" under the file menu.

If you do not save the form validation view document to the database all data will be lost when the document is closed or you switch to another database record.

## **Form Database Password**

If you need to secure the information that is being saved you can set a password for the database. This will require you enter this password to access the database or to save scanned in forms to the database. When scanning in a batch of forms you are asked for a password. If you have not specified a password for the forms that you can leave it blank. If the forms you're scanning require a password this enables you to enter it only once even though you're scanning multiple forms. If you are scanning several different forms and they all have passwords you'll be asked for the password as each form scanned.

## **Use GUID in Database Records**

If this checkbox is checked database records for the formed will contain a unique global ID field to identify each record.

## **Form Border Attributes**

You can display a border around the form by setting a border width and color in the [form attributes](#) dialog. Select [form attributes](#) under the [form menu](#) to display the form attributes dialog.

## **Form Grid Size**

To assist and placement of form fields you can set the grid size in the [form attributes](#) dialog. Although the grid is not displayed items will automatically snap to the closest grid location when placed or moved.

## **Form Margins**

Set the left, right, top, bottom margins as desired for your form and the specified printer.

## **Form Units**

Check the metric units checkbox if you prefer viewing form and field sizes and Metric rather than English units.

## **Print a GUID on each form.**

Check the print GUID checkbox if you want a globally unique identifier (GUID) printed on each form.

## **Add form image full path to database.**

Check the add form image full path checkbox if you want to store a path to the image file used for the record in the database.

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## **Textbox Fields**

To add a new text box recognition field select "[Add Textbox](#)" under the [form menu](#). This displays the text box attributes dialog. You can also display an alternate form menu by using the right mouse button when over the form document.

The field name for a text box is also the name that will be used to represent that field in the database. For this reason it is important that you pick a name that has some relationship to the data you are expecting to be entered. For example if you are adding a text box for a first name you might want to use the words "First Name" for the field name. This will ensure when you generate reports the field names you see will be meaningful and explain what the data is.

The text box format is used to determine the type of text field. There are over 22 field types available ranging from simple text and number fields to more complex fields like Social Security numbers, street addresses, phone numbers, and more.

If you restrict the expected characters to only uppercase or only lowercase you'll get increased accuracy. The default setting is mixed case to simplify data entry by users who may not be familiar with the form.

For mixed alphanumeric fields select the Char Type to be alphanumeric. Only use alphanumeric fields where it is required like street addresses or other fields where the text can include numbers. Accuracy for alphanumeric fields is generally not as good as other field types because some numeric characters look identical to alpha characters. For example 1 and l look the same when written by hand.

For floating point numbers you can use one of the three different floating point formats. The fixed floating point formats support xxx.y and xxx.yy floating point numbers. Where the decimal point is fixed but you can control the number of significant digits to the left of the decimal point. For more advanced floating point number entry you can use the free format floating point number format. It supports most standard floating point number formats (12.34, +12.3e-2, 12.3d+1, -1.234e-3, ...).

For fields that contain a fixed or specified format of alphanumeric characters you can select the field type "Specified Format" and supply the type of each character. For example [MNNNN] specifies a 5 character string that contains a mixed case letter followed by four numbers. The following table shows the possible values for specifying specific field formats. Character format identifiers must be enclosed in the special format brackets otherwise they will be interpreted as normal characters.

Special Format Brackets	[]
Uppercase character	U
Lowercase character	L
Mixed case character	M
Number	N
Punctuation	P
Alphanumeric character	X

Examples specified formats:

Phone Number	[NNN]-[NNN]-[NNNN]
Currency	[\$[NNNN].[NN]]
Alpha numeric identification number	ID:[MM][NNNN]

To increase recognition accuracy the use of a dictionary is recommended for fields where it is appropriate. We supply more than 12 [dictionaries](#) with the product. Included is a dictionary editor that can be used to create your own custom dictionaries. The dictionary files are located in the dictionary directory underneath the installation directory. This would typically be C:\Program Files\Creative ICR\EzData\Dictionary.

To a create multi-line title for a textbox insert a "\" into the title text where you want the line break to be.

To create a multiple line text box field set the number of lines to more than 1. Multi-line fields can be

useful when you need to enter something like a short comment.

If you wish to display a field without individual character boxes then uncheck the individual character box checkbox. Note that this may decrease the accuracy of the recognition if users enter characters that are touching.

To edit/enter a default value for a field select the field then select edit value from the form menu. This will bring up an editing window for you to make the changes. You can use the Tab key to navigate to the next field. Holding the Shift key while pressing the Tab key will take you to the previous field. To close the correction/edit window without saving the changes press the Esc key. To close the correction/edit window and apply the changes just click on any blank area in the form.

To display a suggested value in the dropout color for a field just enter the desired text in the suggested value entry when editing the field. The date and time fields have default values (I.E. MM-DD-YYYY). Other fields do not have a value initially. If you would like to clear the value for a date or time field just select the text and press backspace or delete.

You can show and hide default values using the form menu. Select the fields then use the [form menu](#) to either show or hide the values for those fields.

You can save the current set of values for a field by using before menu in selecting "[Save Value Set](#)". Once a value set is saved you can reload it at a later time.

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## **Checkbox Fields**

To add a new checkbox recognition field select "[Add Checkbox](#)" under the [form menu](#). This displays the text box attributes dialog. You can also display an alternate form menu by using the right mouse button when over the form document.

The field name for a checkbox is also the name that will be used to represent that field in the database. For this reason it is important that you pick a name that has some relationship to the data you are expecting to be entered. For example if you are adding a checkbox for salary range you might want to use the words "Salary Range" for the field name. This will ensure when you generate reports the field names you see will be meaningful and explain what the data is.

You can modify the default field value to be something different than the label by checking the checkbox to enable the database value entry fields.

To add entries to a checkbox field type the desired label into the label entry field then press the add item

button. You can customize the font, color, orientation of the label text and its relationship to the checkbox. To create multi-line label for a checkbox insert a "\n" into the label text where you want the line break to be.

In the case where there's only one valid selection make sure the multiple selection checkbox is unchecked. This creates a checkbox with circles and only one value can be checked the time.

To create a check box field that allows multiple selection make sure to multiple selection check box is checked. This creates a checkbox with squares and users may check any fields that apply.

You can create a grid or multi-line set of checkboxes by changing the boxes per line value. This controls how many checkboxes will be displayed on each line.

To edit/enter a default value for a field select the field then select edit value from the form menu. This will bring up an editing window for you to make the changes. You can use the Tab key to navigate to the next field. Holding the Shift key while pressing the Tab key will take you to the previous field. To close the correction/edit window without saving the changes press the Esc key. To close the correction/edit window and apply the changes just click on any blank area in the form.

You can show and hide default values using the form menu. Select the fields then use the [form menu](#) to either show or hide the values for those fields.

You can save the current set of values for a field by using before menu in selecting "[Save Value Set](#)". Once a value set is saved you can reload it at a later time.

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## **Image Box Field**

To add an image box field select "[Add Image Box](#)" under the [form menu](#). This displays the image box attributes dialog. You can also display an alternate form menu by using the right mouse button when over the form document.

Image box fields are useful for capturing bitmap images of signatures or other hand drawn information which he once stored in the database.

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## **BarCode Box Field**

To add a bar-code box field select "[Add BarCode Box](#)" under the [form menu](#). This displays the bar-code

box attributes dialog. You can also display an alternate form menu by using the right mouse button when over the form document.

Bar-code box fields are useful for capturing a barcode value and type to store in the database.

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## **Boxes**

To add a box for decoration or grouping of fields select "[Add Box](#)" under the [form menu](#). This displays the box attributes dialog. You can also display an alternate form menu by using the right mouse button when over the form document. Boxes are purely for decoration and organization and do not affect the database. They cannot be used as recognition fields.

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## **Lines**

To add a line for decoration or grouping select "[Add Line](#)" under the [form menu](#). This displays the box attributes dialog. You can also display an alternate form menu by using the right mouse button when over the form document. Lines are purely for decoration and organization and do not affect the database.

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## **Bitmap Images**

To add a bitmap image for decoration or grouping select "[Add Bitmap](#)" under the [form menu](#). This displays the bitmap attributes dialog. You can also display an alternate form menu by using the right mouse button when over the form document. Bitmaps images are purely for decoration and organization and do not affect the database.

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## **Text**

To add text for decoration or grouping select "[Add Text](#)" under the [form menu](#). This displays the box attributes dialog. You can also display an alternate form menu by using the right mouse button when over the form document. Text items are purely for decoration and organization and do not affect the database.

To create multi-line text insert a "\" into the text where you want the line break to be. You can use the

attributes dialog to determine if the text is center, left, or right justified.

Example:

This is\ a test

Displays As:

This is

a test

To edit/enter a default value for a field select the field then select edit value from the form menu. This will bring up an editing window for you to make the changes. You can use the Tab key to navigate to the next field. Holding the Shift key while pressing the Tab key will take you to the previous field. To close the correction/edit window without saving the changes press the Esc key. To close the correction/edit window and apply the changes just click on any blank area in the form.

You can show and hide default values using the form menu. Select the fields then use the [form menu](#) to either show or hide the values for those fields.

You can save the current set of values for a field by using before menu in selecting "[Save Value Set](#)". Once a value set is saved you can reload it at a later time.

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## Dictionaries

Dictionaries are for use with text box recognition fields. They help improve the accuracy of recognition. EzData comes with more than 12 dictionaries. Included is a dictionary editor that can be used to create your own custom dictionaries. The dictionary files are located in the dictionary directory underneath the installation directory. This would typically be C:\Program Files\Creative ICR\EzData\Dictionary.

The format for a dictionary file is a standard text document with space separated or line separated words. You can use any text editing tool to create a dictionary file or you can use the built-in dictionary editor. To use the dictionary editor select "[Dictionary Editor](#)" under the [form menu](#) to display the dictionary editor dialog. You can also display an alternate form menu by using the right mouse button when over the form document.

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## Custom Templates

Currently EzData comes with more than 30 custom templates to help you quickly create new forms. A

custom template is a predefined field or set of fields that is saved. You can create your own custom templates by selecting a set of fields and other items. To save the selected items as a custom template select "Save Custom Template" under the [form menu](#) . You can also display an alternate form menu by using the right mouse button when over the form document.

To add a Custom template to your form select "Add Custom Template" under the [form menu](#) . You can also display an alternate form menu by using the right mouse button when over the form document.

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## **Database Groups**

Some forms may require repeating a set of fields multiple times were each set or group of fields should be saved as a separate database record along with any other non grouped fields. For example if you have a form with the current date, a person's name, and phone number repeated 20 times saving the entire form as one database record would make it difficult to extract information and reports about a particular person. If you use the database group feature it would save each group, (date, name, phone), as an individual record making report generation more useful.

To create a database group select "Group -> Group Selected Items" under the [form menu](#) . You can also display an alternate form menu by using the right mouse button when over the form document. This will create a group for the set of selected fields. You can now copy and paste a group or select "Group -> Duplicate Group" under the [form menu](#) to create multiple instances of your group. You can only have one group definition in a form.

To remove a group you can either delete it or select "Group -> Ungroup Selected Items" under the [form menu](#) . Ungrouping the selected items leaves them on the form but removes the group definition.

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## **Validation/database**

The form validation/database view allows you to enter, delete, and edit information in the database. When a form is scanned in a form validation view is created to display the scanned information. This provides an opportunity to correct any mistakes before saving it to the database. After verification of the data you can use the database toolbar or the [file menus](#) to save the form to the database.

To verify a questionable value simply click the right mouse button over the field. The actual images used during recognition for that field will be displayed for validation. You can use the Tab key to navigate to the next field. Holding the Shift key while pressing the Tab key will take you to the previous field. Press the Esc key or click the mouse on an empty part of the form to return to the normal display.

To make corrections use the left mouse button and click on the field you wish to edit. This will bring up an editing window for you to make the changes. You can use the Tab key to navigate to the next field. Holding the Shift key while pressing the Tab key will take you to the previous field. Press the Esc key or click the mouse on an empty part of the form to return to the normal display canceling any edits. To apply the edits press the enter key, tab to the next field, or simply click the mouse over any blank area in the form.

If you scanned in a batch of files you can save them all at one time by selecting "[Save All Processed Forms](#)" under the file menu.

You can also manually enter new records into the database using the [database toolbar](#) for adding, editing, deleting records from the database.

The database file that is generated is located in the database directory underneath the installation directory. This would typically be C:\Program Files\Creative ICR\EzData\Databases.

The database is a standard Microsoft access database. This allows you to import the data into other tools like Microsoft Excel and generate charts and graphs or enhanced reports.

When validating a scanned in form the color of the text indicates the recognition confidence for that field. A color of red indicates the recognition engine had difficulty determining the value and as a low confidence it is correct. A color of yellow indicates the recognition engine was unsure. A color of black indicates the recognition engine as a high confidence that the value is correct. These indicators are provided to assist in validation but just because a value is black does not mean its correct. Likewise a value that is red does not necessarily mean that is not correct.

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## Image

Image files are created by scanning in forms. The main use of an image file is to verify that you have a reasonable image for processing. The text should be dark and clear and the form boxes should not be visible. If you're able to see the individual character boxes in the scanned in an age you should lighten the [dropout color](#) for the form. To adjust the color of individual character boxes select "[Set Form Dropout Color](#)" from the [scan menu](#).

If the text is not dark enough you can adjust the brightness of the scan by selecting "[Set Scanner Brightness](#)" from the [scan menu](#). Note that darkening the image may require you to lighten the form dropout color to maintain good recognition accuracy. Follow the [calibration procedure](#) when setting up your printer and scanner for the first time.

You can turn off the display of scanned image files by unchecking "[Show Scanned Image](#)" from the [scan menu](#). This will reduce the number of open windows when performing batch scanning.

You can also adjust the scanner resolution by selecting "[Set Scanner Resolution](#)" from the [scan menu](#). Although the optimum value for recognition accuracy is the default value of 300 DPI.

If you check "[Show Scanner Interface](#)" from the [scan menu](#) it will bring up the native interface for your scanner. If you choose to use this method you must make sure that your scan is in black and white or fax mode and that the image resolution is 300 DPI.

---

## **Html Report**

You can generate Html reports from the database by selecting "[Html Report](#)" from the [report menu](#). Html reports can be viewed, saved and printed. Use the [Html report toolbar](#) for navigating multi-page Html documents and reports.

## File Menu

[New](#)

[Open](#)

[Close](#)

[Save](#)

[Save As](#)

[Print](#)

[Print Preview](#)

[Print Setup](#)

[Print Forms](#)

[Print Records](#)

[Save All Processed Forms](#)

[Print All Processed Forms](#)

[Save All Scanned Images](#)

[Process All Open Images](#)

[Process Form Image](#)

[Dictionary Editor](#)

[Recent Files List](#)

[Exit](#)

# Overview

EzData application supports reading and writing of the following document types.

---

## Form Files:

[Form files](#) are created by selecting new from the file menu. Use the form menu to add entries to the form. Forms can then be printed for users to fill out. After printing the form can be scanned in and the data saved to a Microsoft Access database. The database will be generated if one does not already exist. If a database exists but you have modified the fields in the form fields in removed from the form will be deleted in the database.

**Ext:\***.crf (read only)

**Location:** In the installation directory under the "Forms" folder. This would typically be C:\Program Files\Creative ICR\EzData\Forms.

---

## **Image Files:**

[Image files](#) are Windows form image files (.fim), bitmap, JPG, PNG, or TIFF files. The form image file (.fim) format is identical to a windows bitmap. Image files are processed and the information is stored into the database. Normally there is no need to save an image file to disk unless you want to save it for processing at a later date.

**Ext:\*.fim** (read/write)

\*.bmp (read only)

**Location:** Anywhere the user wants to save them.

---

## **Html Report Files:**

The report menu can be used to generate HTML [report files](#) from the databases. Reports can also be created by importing the database information into Microsoft Excel or other tools that except Microsoft access databases.

**Ext:\*.htm, html** (read/write)

**Location:** Anywhere the user wants to save them.

---

## **Database Files:**

[Database files](#) are Microsoft access databases that get generated when you save processed forms. The data can then be used to generate reports and charts using the report tool. It can also be imported into any application that accepts Microsoft access databases. An example would be Microsoft Excel.

**Ext:\*.mdb** (read/write)

**Location:** In the installation directory under the "Database" folder. This would typically be C:\Program Files\Creative ICR\EzData\Database.

---

## Dictionary Files:

You can specify the use of a [dictionary](#) to improve the accuracy of field processing. Dictionaries are text based files that contain a list of words or numbers. Users can create their own dictionary files using the dictionary editor or any text editor and saving them into the dictionary directory.

**Ext:**\*.txt (read/write)

**Location:** In the installation directory under the "Dictionary" folder. This would typically be C:\Program Files\Creative ICR\EzData\Dictionary.

---

## Form Template Files:

[Form templates](#) allow users to quickly generate a new form using predefined fields. Users can create their own form templates by selecting a group of fields in the former editor and saving them as a template.

**Ext:**\*.fit (read/write)

**Location:** In the installation directory under the "Form Templates" folder. This would typically be C:\Program Files\Creative ICR\EzData\Form Templates.

---

## Character Set Files:

Character set files are used during form processing and should not be edited or modified by the user.

**Location:** Are stored in the application installation directory under the "CharSets" directory and are read only files used by the application. These files should not be moved or modified.

---

## New

Use this command to open a [new form document](#) in a new window. You can open multiple documents at once. Use the Window menu to switch among the multiple open documents. See [Window 1, 2, ... command](#).

## Shortcuts

Toolbar: 

Keys:CTRL+N

---

## Open

Use this command to open an existing document in a new window. You can open multiple documents at once. Use the Window menu to switch among the multiple open documents. See [Window 1, 2, ... command](#).

## Shortcuts

Toolbar: 

Keys:CTRL+O

---

## Close

Use this command to close all windows containing the active document. The Application suggests that you save changes to your document before you close it. If you close a document without saving, you lose all changes made since the last time you saved it. Before closing an untitled document, the Application displays the [Save As dialog box](#) and suggests that you name and save the document.

You can also close a document by using the Close icon on the document's window, as shown below:



## Save

Use this command to save the active document to its current name and directory. When you save a document for the first time, the Application displays the [Save As dialog box](#) so you can name your

document. If you want to change the name and directory of an existing document before you save it, choose the [Save As command](#).

## Shortcuts

Toolbar: 

Keys:CTRL+S

---

## SaveAs

Use this command to save and name the active document. The Application displays the [Save As dialog box](#) so you can name your document.

To save a document with its existing name and directory, use the [Save command](#).

---

## Print

Use this command to print a document. This command presents a [Print dialog box](#), where you may specify the range of pages to be printed, the number of copies, the destination printer, and other printer setup options.

## Shortcuts

Toolbar: 

Keys:CTRL+P

---

## Print Preview

Use this command to display the active document as it would appear when printed. When you choose this command, the main window will be replaced with a print preview window in which one or two pages will be displayed in their printed format. The [print preview toolbar](#) offers you options to view either one or two pages at a time; move back and forth through the document; zoom in and out of pages; and initiate a print job.

---

## Print Setup

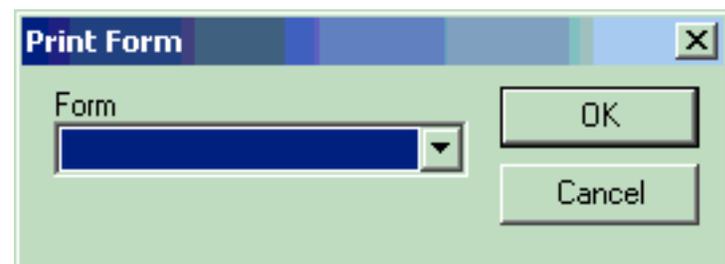
Use this command to select a printer and a printer connection. This command presents a [Print Setup dialog box](#), where you specify the printer and its connection.

---

## Print Forms

Use the Print [Forms](#) menu pick under the file menu to print out forms.

Print Forms Dialog:



## Print Records

Use this command to print records or customized forms. A dialog is displayed that allows you to select the desired form, records, and fields to print. You can alter the records display information by selecting various combination of record identifiers. By default records are displayed by the record number.

This can also be used to print out forms that have fields already entered for the user. For example you could print out a medical history sheet already having the patient name and Social Security number filled out. Patients could then enter updates for the remaining fields.

In addition you can also perform [command line](#) record printing by using the /printrecords command line option.

---

## Print All Processed Forms

Use this command to print all currently open form validation windows. This command is useful if you are processing a batch of forms and do want to print each form before closing it. Use the [window menu](#) to close all opened forms at one time.

---

## Save All Processed Forms

Use this command to save all currently open form validation windows. This command is useful if you are processing a batch of forms and do not want to validate each form before saving. You can use this command to save all open forms to the database at one time. Use the [window menu](#) to close all opened forms at one time.

---

## Save All Scanned Images

Use this command to save all currently open scan image windows. This command is useful if you are processing a batch of forms and want to save the images for future processing. You can use this command to save all open images at one time. Use the [window menu](#) to close all opened images at one time.

---

## Process Form Image

Use the Process Image Icon to process [form images](#) that were previously saved on disk. After opening the image file from desk press the process image icon on the toolbar to recognize the form and display the [form validation document](#) for saving and validating the results.



## Process All Open Images

Use the Process All Open Images menu item to process all [form images](#) that are currently open. After processing the [form validation document](#) for saving and validating the results will be displayed for each form.

---

## Dictionary Editor

The dictionary editor allows you to create new dictionary files or edit existing ones. [Dictionary files](#) are useful for improving accuracy for recognition fields that have a limited possibility of expected entries.

---

## Exit

Use this command to end your the Application session. You can also use the Close command on the application Control menu. The Application prompts you to save documents with unsaved changes.

## Shortcuts

Mouse:Double-click the application's Control menu button.



Keys:ALT+F4

---

## Recent File List 1, 2, 3, 4

Use the numbers and filenames listed at the bottom of the File menu to open the last four documents you closed. Choose the number that corresponds with the document you want to open.

---

## File Open Dialog Box

The following options allow you to specify which file to open:

### File Name

Type or select the filename you want to open. This box lists files with the extension you select in the List Files of Type box.

### List Files of Type

Select the type of file you want to open:

<< List your application's file types here. >>

### Drives

Select the drive in which the Application stores the file that you want to open.

### Directories

Select the directory in which the Application stores the file that you want to open.

### **Network...**

Choose this button to connect to a network location, assigning it a new drive letter.

---

## **File Save As Dialog Box**

The following options allow you to specify the name and location of the file you're about to save:

### **File Name**

Type a new filename to save a document with a different name. A filename can contain up to eight characters and an extension of up to three characters. The Application adds the extension you specify in the Save File As Type box.

### **Drives**

Select the drive in which you want to store the document.

### **Directories**

Select the directory in which you want to store the document.

### **Network...**

Choose this button to connect to a network location, assigning it a new drive letter.

---

## **Print Dialog Box**

The following options allow you to specify how the document should be printed:

### **Printer**

This is the active printer and printer connection. Choose the Setup option to change the printer and printer connection.

### **Setup**

Displays a [Print Setup dialog box](#), so you can select a printer and printer connection.

## **Print Range**

Specify the pages you want to print:

**All** Prints the entire document.

**Selection** Prints the currently selected text.

**Pages** Prints the range of pages you specify in the From and To boxes.

## **Copies**

Specify the number of copies you want to print for the above page range.

## **Collate Copies**

Prints copies in page number order, instead of separated multiple copies of each page.

## **Print Quality**

Select the quality of the printing. Generally, lower quality printing takes less time to produce.

---

## **Print Setup Dialog Box**

The following options allow you to select the destination printer and its connection.

### **Printer**

Select the printer you want to use. Choose the Default Printer; or choose the Specific Printer option and select one of the current installed printers shown in the box. You install printers and configure ports using the Windows Control Panel.

### **Orientation**

Choose Portrait or Landscape.

### **Paper Size**

Select the size of paper that the document is to be printed on.

## **Paper Source**

Some printers offer multiple trays for different paper sources. Specify the tray here.

## **Options**

Displays a dialog box where you can make additional choices about printing, specific to the type of printer you have selected.

## **Network...**

Choose this button to connect to a network location, assigning it a new drive letter.

---

## **Print Preview toolbar**

The print preview toolbar offers you the following options:

### **Print**

Bring up the print dialog box, to start a print job.

### **Next Page**

Preview the next printed page.

### **Prev Page**

Preview the previous printed page.

### **One Page / Two Page**

Preview one or two printed pages at a time.

### **Zoom In**

Take a closer look at the printed page.

## **Zoom Out**

Take a larger look at the printed page.

## **Close**

Return from print preview to the editing window.

## Window Menu

[Cascade](#)

[Tile](#)

[Arrange Icons](#)

[Close All](#)

[Open Window List](#)

---

### Cascade

Use this command to arrange multiple opened windows in an overlapped fashion.

---

### Tile

Use this command to arrange multiple opened windows in a non-overlapped fashion.

---

### Arrange Icons

Use this command to arrange the icons for minimized windows at the bottom of the main window. If there is an open document window at the bottom of the main window, then some or all of the icons may not be visible because they will be underneath this document window.

---

### Close All

Use this command to close all opened document windows.

---

### Open Window List 1, 2, ...

The application displays a list of currently open document windows at the bottom of the Window menu. A check mark appears in front of the document name of the active window. Choose a document from this list to make its window active.

## **Form Menu**

[Form Attributes](#)

[Forum Processing Engine Settings](#)

[Form Colors](#)

Templates

[Add Custom Template](#)

[Save Custom Template](#)

Item

[Add Box](#)

[Add Line](#)

[Add Text](#)

[Add Bitmap](#)

[Add CheckBox](#)

[Add TextBox](#)

[Add Image Box](#)

[Add BarCode Box](#)

[Create GroupBox](#)

Group

[Group Selected Items](#)

[Ungroup Selected Items](#)

[Duplicate Group](#)

Align

Lefts

Rights

Tops

Bottoms

[Edit](#)

[Move](#)

[Delete](#)

Value

[Edit Value](#)

[Save Value Set](#)

[Load Value Set](#)

[Delete Value Set](#)

[Hide Value](#)

[Show Value](#)

[Set Field Points](#)

[Send To Back](#)

[Send To Front](#)

[Snap To Grid](#)

[Show Grid](#)

[Set Image Name](#)

[Dictionary Editor](#)

---

## **Form Attributes**

Use this command to edit a [forms attributes](#). Form attributes include items like the number of pages, size of the form, a title for the form, and the size of the form.

---

## **Form Process Engine Settings**

Use this command to change the engines used when a field gets processed. You can choose to use all engines with a voting algorithm for the final result or choose one of the other 3 engines for processing a fields value. Choosing all engines will generally give you better accuracy and confidence indication however it increases processing time slightly.

---

## **Add Custom Template**

Use this command to create a [custom field template](#). A custom field template is a field or set of fields that are predefined and simplify the form creation process.

---

## **Save Custom Template**

Use this command to save a [custom template](#). A custom field template is a field or set of fields that you would like to save for future use in other forms. To create a custom template simply select a group of fields in the form and use this menu item to save them.

---

## **Add Box**

Use this command to add a [box](#) to the form. Boxes are purely for decoration and organization and should not be used as text recognition fields.

## **Shortcuts**

Toolbar: 

---

## Add Line

Use this command to add a [line](#) to the form. Lines are purely for decoration and organization.

## Shortcuts

Toolbar: 

---

## Add Text

Use this command to add [text](#) to the form. Text is purely for decoration and organization.

## Shortcuts

Toolbar: 

---

## Add Bitmap

Use this command to add a [bitmap image](#) to the form.

## Shortcuts

Toolbar: 

---

## Add Textbox

Use this command to add a [textbox recognition field](#) to the form. Text box recognition fields will be processed to read any and written characters entered into them.

## Shortcuts

Toolbar: 

---

## Add Checkbox

Use this command to add a [checkbox recognition field](#) to the form. Checkbox fields will be processed to detect any check to fields.

## Shortcuts

Toolbar: 

---

## Add Image Box

Use this command to add a [image recognition field](#) to the form. Barcode recognition fields are useful for capturing the value and type of a barcode that you want preserved in the database.

---

## Add BarCode Box

Use this command to add a [barcode recognition field](#) to the form. Image recognition fields are useful for capturing signatures or other images that you want preserved in the database.

---

## Create GroupBox

Use this command to create a group box and group title around the selected set of items. After the group box and title are created you can edit them by double-clicking on the item you wish to [edit](#) or selecting it and selecting edit from the [form menu](#).

---

## Group Selected Items

Use this command to create a [database group](#) for the set of selected items. There can only be one group definition in a form although you can create as the duplicate groups as needed to populate the form. Database groups allow multiple records to be created for a single form. A good example of this would be an exercise log that allowed to to enter a date, the distance you ran, and how many calories you burned. Using database groups you could repeat this set of fields numerous times on the form and for each

occurrence found a new record would be entered into the database. Normally there is only one record for each form scanned in.

---

## **Ungroup Selected Items**

Use this command to remove a [database group](#) for the set of selected items.

---

## **Duplicate Group**

Use this command to duplicate a [database group](#) for the set of selected items. You can also use [copy](#) and [paste](#) to perform the same function.

---

## **Edit**

Use this command to edit the selected item in a form. If you have multiple items selected a special dialog is displayed to make edits to all of the selected items. If only a single item is selected the normal item dialog is displayed.

---

## **Move**

Use this command to move the selected items in the form.

---

## **Delete**

Use this command to delete the selected items in the form.

---

## **Save Value Set**

Use this command to save the current values for all recognition in text fields as a set. These values can then be loaded back in at a later time. Example of how you might use this feature is in attendance sheet. Each class would have their own value set saved so they can be noted before printing to avoid having to enter names for each person in the attendants sheet.

You can also save an <Expected Value> set that can be used for validating the answers supplied to fields. For example a teacher may want to ask a series of questions and have EzData validate the

answers given and display the percentage of correct entries. Editing each field's value and then saving the values as an expected value set allows you to do this. You also need to [define a point value](#) for each field. Fields with a point value of 0 are ignored when calculating the percentage of correct entries.

When you create an <Expected Value> set it automatically adds the fields below to the database to record correct value and point information.

<b>Database Fields:</b>
TotalPossibleAnswers
TotalWrongAnswers
TotalPossiblePoints
TotalWrongPoints

---

### **Load Value Set**

Use this command to load a save values set.

---

### **Delete Value Set**

Use this command to edit the value displayed in a recognition or text field. This can be used to set values for form fields or to change values before saving to the database when validating form. You can use this feature to set values for a form before printing it out. This could be used to avoid users having to manually enter data for these fields.

When you create an <Expected Value> set it automatically removes the fields below to the database to record correct value and point information.

<b>Database Fields:</b>
TotalPossibleAnswers
TotalWrongAnswers
TotalPossiblePoints
TotalWrongPoints

---

### **Edit Value**

Use this command to edit the value displayed in a recognition or text field. This can be used to set values

for form fields or to change values before saving to the database when validating form. You can use this feature to set values for a form before printing it out. This could be used to avoid users having to manually enter data for these fields. You can use the Tab and Shift Tab keys to navigate to the next in previous fields.

You can use the Tab key to navigate to the next field. Holding the Shift key while pressing the Tab key will take you to the previous field. To close the correction/edit window without saving the changes press the Esc key. To close the correction/edit window and apply the changes just click on any blank area in the form.

---

### **Hide Selected Values**

Use this command to hide values displayed in a selected fields.

---

### **Show Selected Values**

Use this command to show values displayed in a selected fields. Forms can be printed with default values displayed for fields that you would like to be fixed in value yet it displayed and saved to the database when scanned.

---

### **Send To Back**

Use this command to send an item to the back of the display. This insures it will be displayed behind other items in the form.

---

### **Send To Front**

Use this command to bring an item to the front of the display. This insures other items in the form will not obscure the item.

---

### **Snap To Grid**

Use this command to cause items to be moved to the closest grid location when you move them.

---

### **Show Grid**

Use this command to display the current grid. If the grid is too fine to be displayed it will automatically adjust the visible grid lines so the display is reasonable. This does not affect the actual grid points that will be used when snapping items to the grid.

---

## **Set Field Points**

Use this command to edit the points associated with a particular field for fields. The points are used in determining an overall score when comparing actual values with the expected values. All fields that have a point value of 0 will be ignored when doing comparison in calculating the overall score.

---

## **Set Image Name**

Use this command to set the base name of the image when automatically saving scanned images. By default it is set to the form name and the current date and time. You can choose to set it to almost any field name in your form. For example you could use a Social Security number to uniquely identify the saved scanned images.

---

## **Form Colors**

Use this command to set the [form dropout color](#) and [form registration mark color](#).

---

## **Align**

Use these commands to align a group of selected fields.

---

### **Align Lefts**

Use this command to align a group of selected fields to the left edge of the left most field.

---

### **Align Rights**

Use this command to align a group of selected fields to the right edge of the right most field.

---

### **Align Tops**

Use this commands to align a group of selected fields to the top edge of the top most field.

---

## **Align Bottoms**

Use this commands to align a group of selected fields to the bottom edge of the bottom most field.

## **Edit Menu**

[Cut](#)

[Copy](#)

[Paste](#)

[Undo](#)

[Redo](#)

[Selected All](#)

[Select All Items](#)

[Deselect All](#)

[Application Preferences](#)

[Default Scanner](#)

[Scanner Resolution](#)

[Scanner Brightness](#)

[Display Scanner Interface](#)

[Show Form Process Errors](#)

[Auto Save/Close Form Data](#)

[All Engines](#)

[Primary Engine](#)

[Secondary Engine](#)

[Tertiary Engine](#)

[Quad Engine](#)

[Use Primary Engine Values](#)

[Use Secondary Engine Values](#)

[Display Image](#)

[Auto Save/Close Form Image](#)

[Image Directory](#)

[Image Conversion Threshold](#)

[Analysis Results Directory](#)

[Field Box Dropout Color](#)

[Registration Mark Color](#)

[Form Directory](#)

[Database Directory](#)

[Dictionary Directory](#)

[Form Template Directory](#)

[Generate HTML Report](#)

[HTML Report Directory](#)

[Auto Processing](#)

---

## Cut

Use this command to remove the currently selected data from the document and put it on the clipboard. This command is unavailable if there is no data currently selected.

Cutting data to the clipboard replaces the contents previously stored there.

### Shortcuts

Toolbar: 

Keys:CTRL+X

---

## Copy

Use this command to copy selected data onto the clipboard. This command is unavailable if there is no data currently selected.

Copying data to the clipboard replaces the contents previously stored there.

### Shortcuts

Toolbar: 

Keys:CTRL+C

---

## Paste

Use this command to insert a copy of the clipboard contents at the insertion point. This command is unavailable if the clipboard is empty.

### Shortcuts

Toolbar: 

Keys:CTRL+V

---

## Undo

Use this command to reverse the last editing action, if possible. Currently undo/redo is not supported for database commands.

### Shortcuts

Toolbar: 

Keys:CTRL+Z

---

## Redo

Use this command to reverse the undo editing action, if possible. Currently undo/redo is not supported for database commands.

### Shortcuts

Toolbar: 

Keys:CTRL+Y

---

## Select All

Use this command to select all items in a form.

### Shortcuts

Keys:CTRL+A

---

## Select All Items

Use this command to select all specified item types in a form.

---

## **Deselect All**

Use this command to deselect all items in a form.

---

## **Application Preferences Dialog**

Use this command to edit the configurable application preferences.

## **Default Scanner**

Set default scanner to use during image acquisition.

## **Scanner Resolution**

For optimum results a scanner resolution of 300DPI is recommended.

You can adjust the scanner resolution to speed up the scanning process. If you find you are not having accuracy problems you can set the scanner resolution as low as 200DPI with out much accuracy loss. Use this feature if you are letting the application control the scanning process.

If you are using your Scanners native interface to control scanning then it is up to you to pick the right resolution. Increasing the resolution to more than 300DPI will most likely decrease the accuracy.

Also insure that images are not scaled by more than 5 to 7% to ensure the form its properly registered and can be processed by EzData.

## **Scanner Brightness**

Change the scanner black and white threshold to calibrate the scanner for your style of writing and preference in pens or pencils. Setting it to a larger number will darken the image and ensure that light pencil marks are scanned correctly and improve accuracy. The default value is 128 and the range is 0 to 255.

Anytime you darken the black and white threshold setting make sure and recheck the form text outlined boxes still drop out when the form is scanned in. If any of the form text outline boxes show up in the form image then use the [Set Form Dropout Color](#) dialog to lighten the color in the printed forms. Even small dots left over on the scanned in image can cause a decrease in recognition accuracy.

For an example see the [form calibration dialog](#).

## **Display Scanner Interface**

Use the Show Scanner Interface feature to show the native scanner interface supplied with the scanner for scanning in forms. After scanning the image the active document will be displayed. You may need to use [Process Form Image](#) to recognize the form and display the form for validation and saving to the database.

## **Show Form Process Errors**

Show warnings during form processing. For example if a single selection checkbox has no selections a warning would be issued.

## **Auto Save/Close Form Data**

This feature automatically saves processed forms to the database and then closes the form file.

## **All Engines**

This feature selects all of the character recognition engines to be used during form processing. This improves the overall accuracy by using a voting algorithm to determine the final value used. In addition when manually verifying data the color indicators showing the confidence in the answer will also be more reliable. If a dictionary match was used the color will be brown. The color black is used for the highest confidence, orange for medium, and red for poor.

## **Primary Engine**

This feature selects the primary character recognition engine to be used during form processing. The accuracy of the primary character recognition engine is in general superior for tough to read images.

## **Secondary Engine**

This feature selects the secondary character recognition engine to be used during form processing.

## **Tertiary Engine**

This feature selects the tertiary character recognition engine to be used during form processing.

## **Quad Engine**

This feature selects the tertiary character recognition engine to be used during form processing.

## **Display Image**

This feature will display this can be an image as well as the processed form. The image can be used for verification purposes or saved if required.

## **Auto Save/Close Form Image**

This feature automatically saves scanned images to the disk and then closes the image file. The file is saved in the default [image directory](#).

## **Image Directory**

This is the default location to save a scanned images to.

## **Image Conversion Threshold**

This is the color threshold used to convert color images to black-and-white. When processing color images you may need to adjust this threshold to ensure the character boxes drop out correctly and the text is dark and clear.

## **Analysis Results Directory**

This is the default location to save a analysis results (charts/reports) to.

## **Field Box Dropout Color**

Use this feature to change the color of the form field boxes. This may be necessary to compensate for variations in printers and scanners. It is important that no part of the form field boxes shows up on in the scanned in image. Even small dots can cause a decrease in character recognition accuracy. Other colors can be used beside light blue but it yields the best performance for most scanners.

The default color settings using the for the color dialog are: Red=200, Blue=255, Green=255.

## **Registration Mark Color**

Set the color used for the registration marks. It is important the color is dark enough to produce clear solid black rings on the scanned images. Without this performed will not be able to properly register itself.

## **Form Directory**

This is the default location to save forms to.

### **Database Directory**

This is the default location to save databases to.

### **Dictionary Directory**

This is the default location to save form field dictionaries to.

### **Form Template Directory**

This is the default location to save form deal templates to.

### **Generate HTML Report**

Use this field to set automatic generation of HTML form processing reports.

### **HTML Report Directory**

This is the default location to save form deal templates to.

### **Auto processing**

This feature allows EzData to monitor an existing directory for new images to automatically process. You can control the frequency at which the directory is monitored for new images to process. In addition you can specify the location to move successfully processed image files to as well as ones with errors.

## Scan Menu

[Select Scanner](#)

[Deselect Scanner](#)

[Scan New Image](#)

[Calibration Help](#)

---

### Select Scanner

Use the Select menu item under the scanner menu to select the desired scanner to use with application. This step is only required the first time you use a different or new scanner. The application will remember the selected scanner allowing you to skip this step and just click on the "[Scan New Image](#)" menu item to scan in the documents.

---

### Deselect Scanner

Use the Deselect Scanner menu item under the scanner menu to deselect the scanner being used by the application. This will allow other applications to access the scanner.

---

### Scan New Image



Use the Scan Icon on the Toolbar or the scanner menu to start a scan and process the scanned image.

By default EzData will directly access and control the scanner via the TWAIN interface standard. Note that not all scanners provide adequate control of image resolution and threshold via the TWAIN interface. Scanning black and white images may require adjusting the threshold used to determine a black from a white pixel to insure sharp text and dropout of the image character outlined boxes. If changing these values in the [application preferences dialog](#) does not change the scanned image then choose the option to display the scanners interface. From the scanners own interface you should be able to adjust the image acquisition preferences as needed to attain optimum character recognition.

In addition you can also perform [command line](#) batch scanning by using the /batchscan command line option. If you have set the application preferences to automatically generate an HTML form processing report you can review the results after the scanning has completed.

---

### Show Calibration Help

This dialog shows how to calibrate the application for your scanner and printer.

See also [Optimizing Character Recognition](#)

Calibration Help Dialog:

**Calibration Help Message** [?] [X]

For best results make sure and calibrate the application for use with your scanner and printer! You can lighten/darken the scanner brightness and form background colors as well as change pen/pencil types.

OK  
Cancel

**STEP 1**  
Start by printing out the calibration form. To do this go the "File" menu and select "Print Forms". Choose Calibration Form from the dialog and print the form.

**STEP 2**  
Fill out the calibration form using the pen or pencil that you would normally use when filling out the forms. For best results use a black pen or dark pencil!

**STEP 3**  
Place the calibration form into the scanner and press the Scan icon on the activity toolbar to scan the image into the application.

**STEP 4**  
Repeat steps 1-3 as required to get the fields for scanned in images to look like the ideal example image below. Adjust scanner brightness, form dropout color, and the pen or pencil type as needed to achieve the optimum recognition results.

This is the ideal image for achieving optimum character recognition accuracy!	Lighten the scanner brightness or the form dropout color to remove field boxes from image.	Darken the scanner brightness to avoid gaps in characters or use a darker pen or pencil.
		

## View Menu

[Toolbar](#)

[Database Toolbar](#)

[Form Toolbar](#)

[Html Toolbar](#)

[Status Bar](#)

[Zoom In](#)

[Zoom Out](#)

[Zoom All](#)

[Zoom 100%](#)

---

## Toolbar

Use this command to display and hide the main Toolbar, which includes buttons for some of the most common commands in the application, such as File Open. A check mark appears next to the menu item when the Toolbar is displayed. It can be moved using the mouse to drag and drop it.



The toolbar is displayed across the top of the application window, below the menu bar. The toolbar provides quick mouse access to many tools used in the application,

To hide or display the Toolbar, choose Toolbar from the View menu (ALT, V, T).

## ClickTo



Open a new form document.



Open an existing document. The Application displays the Open dialog box, in which you can locate and open the desired file.



Save the active document or template with its current name. If you have not named the document, the Application displays the Save As dialog box.



Print the active document.



Remove selected data from the document and stores it on the clipboard.



Copy the selection to the clipboard.



Insert the contents of the clipboard at the insertion point.



Zooms the image making it appear smaller on the screen.



Zooms the image making it fit into the existing window.



Zooms the image to default or 100%.



Zooms the image making it appear larger on the screen.



Scan in a new form image and process it.



Process the active or displayed form image document.



Use this to get help about a specific item like a Menu or Icon



Displays the copyright and company information.

---

## Database Toolbar

Use this command to display and hide the database Toolbar, which includes buttons for some of the most common database commands in the application, such as Record Save. A check mark appears next to the menu item when the Toolbar is displayed. It can be moved using the mouse to drag and drop it.



To hide or display the Database Toolbar, choose Database Toolbar from the View menu (ALT, V, D).

## ClickTo



Open a database for editing/viewing.



Save edits to the active database record.



Create a new database record for editing.



Delete the active record.



Cancel edits on the active record and refresh the data.



Go to the first record in the active database.



Go to the previous record in the active database.



Go to the next record in the active database.



Go to the last record in the active database.



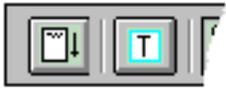
Find a record in the active database.

---

## Form Toolbar

Use this command to display and hide the form Toolbar, which includes buttons for some of the most common form commands in the application, such as adding new textbox or checkbox fields. A check

mark appears next to the menu item when the Toolbar is displayed. It can be moved using the mouse to drag and drop it.



To hide or display the Form Toolbar, choose Form Toolbar from the View menu (ALT, V, F).

## ClickTo



Create a new form for editing/viewing.



Add new text box field.



Add do checkbox field.



Add new text.



Add a new line.



Add a new box.

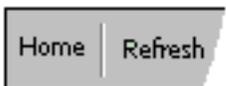


Add a new bitmap image.

---

## Html Toolbar

Use this command to display and hide the Html Toolbar, which includes buttons for some of the most common Html commands in the application, such as next and previous page. A check mark appears next to the menu item when the Toolbar is displayed. It can be moved using the mouse to drag and drop it.



To hide or display the Html Toolbar, choose Html Toolbar from the View menu (ALT, V, H).

## ClickTo

 Go to Html homepage.

 Refresh Html document view.

 Go to previous Html page.

 Go to next Html page.

---

## Status Bar



The status bar is displayed at the bottom of the application window. To display or hide the status bar, use the Status Bar command in the View menu.

The left area of the status bar describes actions of menu items as you use the arrow keys to navigate through menus. This area similarly shows messages that describe the actions of toolbar buttons as you depress them, before releasing them. If after viewing the description of the toolbar button command you wish not to execute the command, then release the mouse button while the pointer is off the toolbar button.

The right areas of the status bar indicate which of the following keys are latched down:

To hide or display the Status bar, choose Status bar from the View menu (ALT, V, H).

### Indicator Description

**LOCATION:** Indicates the X,Y location in image documents and form documents.

**RECORD NUMBER:** Indicates the active or current database record number.

**CAP:** The Caps Lock key is latched down.

**NUM:** The Num Lock key is latched down.

SCRL: The Scroll Lock key is latched down.

---

### **Zoom In**

 Zooms the image making it appear larger on the screen.

---

### **Zoom Out**

 Zooms the image making it appear smaller on the screen.

---

### **Zoom All**

 Zooms the image making it fit into the existing window.

---

### **Zoom 100%**

 Zooms the image default or 100%.

## Analyze Menu

[Html Report](#)

[Home](#)

[Back](#)

[Forward](#)

[Refresh](#)

---

### **Html Report**

Use this command to generate [database](#) reports in and Html format. To generate a report document select "[Html Report](#)" from the report menu. This will display the report dialog allowing you to select the database you wish to generate reports from as well as the columns in the database that you and displayed.

---

### **Html Home**

Use this command to the Html home page.

---

### **Html Back**

Use this command to go back one Html page.

---

### **Html Forward**

Use this command to go forward one Html page.

---

### **Html Refresh**

Use this command to refresh an Html page.

## Troubleshooting

[Solution Guide](#)

[Contact Support](#)

# Overview

Creative ICR, Inc. is dedicated to providing the highest quality software and support. Please be sure and report any problems found by going to <http://www.creativeicr.com> too file a bug report or email [support@creativeicr.com](mailto:support@creativeicr.com) with the details of the problem.

Please include the type of computer including the processor type and speed, printer type, scanner type, and as much other detail about the problem as you can. The more information you can supply the easier to find and fix the problems and in return give you a better quality product.

---

## Contact Support

For support in installing the application or to report problems encountered while using it send email to [support@creativeicr.com](mailto:support@creativeicr.com) or use the Internet to go to <http://www.creativeicr.com>. Creative ICR, Inc. is dedicated to providing the highest quality software and support.

---

## Solution Guide

[Problems Scanning](#)

[Problems Registering Form](#)

[Problems With Recognition Accuracy](#)

[Problems With Form Layout](#)

---

## Problems Scanning

### Problems:

- Nothing happens when the scan image icon is pressed.
- Scanning starts but does not complete.
- Scan image only works the first time after that nothing happens.

### Solutions:

- Be sure you have a scanner selected. If scanning is not enabled the icon should appear gray in appearance. Use the [Scanner Select](#) menu pick under the Scanners Menu to select a scanner.
- Try checking the [Show Scanner Interface](#) button under the Scanners Menu. This should bring up the native scanner interface to do the scan and avoid problems that may occur with scanners the claim to be TWAIN compliant but are not.
- Scan the image outside of the application and use the [File Open](#) icon to load the scanned in file and [Process](#) the image.
- Note that many applications such as Microsoft Paint do not set the image resolution for scanned images. Images that do not have a correct resolution setting cannot be scanned.

### **Problem:**

- When the application is being used I am not able to use the scanner for other applications.

### **Solutions:**

- Use the [Deselect](#) menu pick under the Scanner Menu to disconnect the application from the scanner.

---

## **Problems Registering Form**

### **Problem:**

- You get an error message about the form not being able to be recognized.

### **Solutions:**

- Make sure the form was printed on a color ink jet printer that can deliver laser quality prints. Forms that are printed in black and white will not work with the application.
  - Check the form identification number area for any pencil marks. The application reads the form identification number to determine which form it is and how to process the data. Pencil or other marks in this area could cause the name to be read incorrectly.
  - Check the area around the 3 registration circles for any pencil marks. The application uses these marks to correct for any form rotation and to determine the location of the fields. It must be able to accurately locate all three marks.
  - If the above items do not fix the problem then it may be necessary to [manually enter](#) the data for that form.
-

## Problems With Recognition Accuracy

### Problem:

- The recognition accuracy is not very good.

### Solutions:

- Make sure the form was printed on a color ink jet printer that can deliver laser quality prints. Forms that are printed in black and white will not work with the application.
- Use a dark pencil or black pen and press firmly.
- Try writing in a clear in block style printing.
- Calibrate the [Scanner Brightness](#) and the [Form Dropout Color](#).

- 

---

## Problems With Form Layout

### Problem:

- Form items are overlapping after printing or win zoomed in or out but looked fine when initially placed.

### Solutions:

- Unfortunately the windows operating system does not always display fonts exactly the same as they will be printed. Also when zooming in or out the windows operating system tries to pick the closest font match available. Sometimes the size of the font as well as other characteristics will cause items to be printed out overlapping or display overlapping on the screen. The best solution is to lay out the form with the zoom factors set to 100 percent. In addition pick common fonts like Arial, Courier and Times for text based items. This ensures the best possibility for the screen fonts to match the printer fonts. Checkbox fields are the most affected by fonts mismatch problems due to the fact the bounding box is sized based on the text size.

## Help Menu

[Help Topics](#)

[Quick Reference Guide](#)

[Purchase Online](#)

[Support](#)

[Product Evaluation](#)

[Example Forms](#)

[Example Images](#)

[Show License Information](#)

[Update License Information](#)

---

## Help Topics

Use this command to bring up the main help window.

---

## Quick Reference Guide

Use this command to launch the HTML quick reference guide window.

---

## Product Evaluation

Use the [example forms](#) and [example images](#) accessed through the help menu to evaluate the product performance.

---

## Example Forms

Use this command to load example forms to print, fill out and scan. This allows you to evaluate the product performance without having a valid license key. After printing and filling out a form place it in

the scanner and press the scan icon or use the scanner menu to [scan the new image](#). Some [printer/scanner calibration](#) may be required form [optimum accuracy](#).

---

## **Example Images**

Use this command to load example form images for processing. This allows you to evaluate the product performance without having a valid license key. After loading and example image press the process image icon or use the file menu item for [processing the form image](#).

---

## **Support**

Use this command to go to the support web page.

---

## **Purchase Online**

Use this command to bring up a web browser window allowing you to purchase the product.

---

## **Show License Information**

Use this command to show the current licensing information.

---

## **Update License Information**

Use this command to change the current license settings.

## **Update License Dialog:**

## Edit License Information



Application does not have a valid product license key.  
To enable it to run in a non-demo mode please enter the  
new license key now!

OK

Cancel

Enter Product License Key

## **Database Menu**

[Open Form](#)

[Database](#)

[Import Data](#)

[Export Data](#)

[Save Record](#)

[Add Record](#)

[Clear Field Values](#)

[Delete Record](#)

[Cancel Edits](#)

[First Record](#)

[Next Record](#)

[Previous Record](#)

[Last Record](#)

[Find Record](#)

[Delete All Records](#)

---

## **Open Form Database**

Use this command to open a form database for editing. You can use this command on new forms to [manually enter records](#).

---

## **Import Data**

Use this command to import data from a text file to a database. The file must contain field name and field values in a comma or tab separated format. You can use the output of the export data command as an example for the expected format.

---

## **Export Data**

Use this command to export data from a database. The output will be field name and field values using a comma for the delimiter. In addition you can also perform [command line](#) exporting by using the / exportdata command line option.

---

## **Save Record**

Use this command to save changes to the current record.

---

### **Add Record**

Use this command to add a new record to the database.

---

### **Clear Field Values**

Use this command to clear the field values for the current record from the database.

---

### **Delete Record**

Use this command to delete the current record from the database.

---

### **Cancel Record**

Use this command to cancel edits of the current record and refresh or reload the record from the database.

---

### **First Record**

Use this command to move to the first record in the database.

---

### **Previous Record**

Use this command to move to the previous record in the database.

---

### **Next Record**

Use this command to move to the next record in the database.

---

## **Last Record**

Use this command to move to the last record in the database.

---

## **Find Record**

Find and display a record in the database. This command displays a dialog that allows you to select the column or field that you wish to search for. For more complicated searches you can select up to two columns.

---

## **Delete All Records**

Use this command to delete all records in the database.