ZebraDesigner™ Pro™

User Guide

13857L-002

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Contents

1 • Introduction 7

Welcome 8
Contents of the package 8
About this Manual 9
Overview 9
Software Restrictions 9
Typographical Conventions 9

2 • Installation and Activation 11

System and Software Requirements 12
ZebraDesigner Editions 12
Installing ZebraDesigner Pro 12
Overview 12
Close All Software Applications 12
Run Installation 13
Define Setup Options 13
Install Printer Driver from within the ZebraDesigner Environment 14
Activate ZebraDesigner Pro 14
Demo Mode 14

3 • Setting Up ZebraDesigner Software 15

User Interface 16
Using the Keyboard and Mouse Effectively 16
Interface Reference 17
Database Menu 33
Tools Menu 33
System folder 36
Welcome Wizard 36

4 • Designing Labels 37
Using Label Setup Wizard 39
Overview 39
Select a Printer 39
Select the Label Stock 41
Define the Page Size 42
Select the Label Orientation 43
Define the Label Dimensions 44
Designing a Basic Label 45
Overview 45
Create a Basic Label 46
Add Variable Fields 57
Designing an RFID Smart Label 64
Overview 64
Create RFID Smart Label 64
Encode RFID Tag 66
Support for RFID Tags 67
RFID Tag Locking 69
RFID Tag Settings 69
Change Printer Settings 71
Change Common Printer Settings 71
Change Dithering Options 72
Using Toolbars 73
Use the Standard Toolbar 73
Use the Toolbox 74
Use the Text Toolbar 74
Use the Design Toolbar 75
Working with Objects 76
Using Text Wizard 79
Using Bar Code Wizard 91
Using EAN.UCC 128 Wizard 103
Selecting Bar Code Type 109
Select Objects 117
Edit Objects 118
Move Objects 118
Aligning Objects 119
Resize Objects 119
Rotate Objects 120
Supported Graphics Formats 120
Grouping Objects 121

Working with Variable Data 122
Dynamic Data Overview 122
Database Wizard 122
Link Label to Text Databases 128
Using Text File Wizard 136
Work with Visual Basic Expressions 139
Using Expression Editor 139
Using Printer Real Time Clock (RTC) 140
Available Date Formats 141
Available Time Formats 142
Using Contents Mask 143

5 • Printing and Previewing Labels 145

Preview Pictures 146
Preview and Print a Label 146
Optimize the Printing Speed 147

A • Technical Support 149

Online Support 150
Contact Information 151

B • Glossary of Terms 153

Index 155

Notes •

1

Introduction

Contents

Welcome 8
Contents of the package 8
About this Manual 9
Overview 9
Software Restrictions 9
About this Manual 9

Welcome

ZebraDesigner software is a family of labeling software products that offers a complete bar code printing solution to label printing users. ZebraDesigner offers an easy-to-use interface and meets any label design and printing requirement for efficient label printing solutions to users in retail, logistics, health care, chemical, automotive, and other industries.

ZebraDesigner can be used with any of the following 32-bit or 64-bit Windows® operating systems: Windows 2000, Windows XP, Windows Vista, Windows Server 2003, and Windows Server 2008.

The latest software is available for download on the Zebra web site at www.zebra.com/software.

Contents of the package

The latest software is available for download on the Zebra web site at www.zebra.com/software.

Before starting the installation of ZebraDesigner software, check the contents of the package to ensure it is complete. The package includes:

- ZebraDesigner CD
- Software Activation key, located on label inside of CD case, or delivered via email if purchased via www.zebrasoftware.com

If any of the mentioned items are missing, please contact your software vendor immediately for package replacement.

About this Manual

Overview

The ZebraDesigner Pro User Guide helps you design and print labels quickly.

The User Guide contains the following sections:

Introduction: This chapter will introduce you to ZebraDesigner Pro.

Installation and Activation: This chapter will show you how to install and activate the labeling software.

Setting up ZebraDesigner software: This chapter will show you how to set up and customize software to your preferences.

Designing Labels: This chapter will show you how to create labels. You should refer to this chapter regularly while designing labels, until you have completely familiarized yourself with the commands. By using the information contained in this chapter, you will able to use labeling software quickly and efficiently.

Printing and Previewing Labels: This chapter will show you how to print and preview labels.

Interface Reference: This chapter describes details and explains all the commands used in the labeling software.

Technical Support: This chapter provides information on how to contact technical support.

Software Restrictions

All features explained in the document are available in the ZebraDesigner Pro edition; however, some features are not available in the ZebraDesigner edition.

Sections discussing features available only in ZebraDesigner Pro will display a note or a "Pro Only" icon.

Typographical Conventions

- Text that appears in **bold** refers to menu names, file names (**SETUP.EXE**), interface buttons (**OK**), PC keyboard keys (**Alt**), and menu flows; menu flows have a > that separates one menu to the next menu (**Start > Programs > Zebra Technologies > ZebraDesigner Pro**).
- Text that appears in *italic* refers to confirming actions, identifies graphic captions, identifies text that you need to type, and locations such as Folder.

Notes •

2

Installation and Activation

Contents

System and Software Requirements 12
ZebraDesigner Editions 12
Installing ZebraDesigner Pro 12
Overview 12
Close All Software Applications 12
Run Installation 13
Define Setup Options 13
Install Printer Driver from within the ZebraDesigner Environment 14
Activate ZebraDesigner Pro 14
Demo Mode 14

System and Software Requirements

ZebraDesigner Editions

To run ZebraDesigner, you need at least the following:

- Pentium-based computer with at least 64 MB of RAM.
- One of these 32-bit or 64-bit Windows operating systems: Microsoft® Windows® 2000, XP, Vista, Server 2003, or Server 2008.
- Hard disk with 100 MB of free disk space.
- CD-ROM drive.
- Support for OLE DB database drivers. Recent Windows operating systems have included OLE DB database drivers. If your operating system does not have the database support, the installation wizard prompts you to install it.
- Administrator rights to the local computer during installation.

Installing ZebraDesigner Pro

Overview

When you put the ZebraDesigner Pro CD in your CD-ROM drive, the installation/demonstration program automatically starts. You can browse the directory of the CD and look at the brochures, technical documentation, sample files, and other documents.

Note • You must be logged on with Administrator rights to the local computer to perform the installation.

Close All Software Applications

To ensure complete installation of ZebraDesigner Pro, close all open software applications before you start installing ZebraDesigner Pro.

Run Installation

Use the installation wizard to install ZebraDesigner Pro on your computer.

To install the software, do the following:

1. Put the ZebraDesigner CD in your CD-ROM drive. An installation window automatically opens.

   Note • If the installation wizard does not start automatically, go to the main CD directory of your ZebraDesigner CD and double-click the file **START.EXE**.

2. Select the language in which you wish to use the software.

3. Click **OK**. A new window opens showing the ZebraDesigner Pro installer.

4. Click **Next** and confirm the License Agreement.

5. Follow the prompts of the Installation Wizard and enter the relevant information.

   Note • For ZebraDesigner Pro, you may be prompted to activate the product when you run it for the first time.

Define Setup Options

To continue installation, do the following:

1. Click the **Next** button.

2. Specify the program group you want to use for ZebraDesigner Pro.

3. Specify if shortcuts to ZebraDesigner Pro should be created on the desktop or in the Quick Launch bar.

4. To finish installation, click the **Install** button.

   After installation you will be asked to install a printer driver. It is necessary to install a ZebraDesigner driver. If you do not install a Zebra printer driver after installing ZebraDesigner, you will be prompted to install one the first time you run the program.

5. Once the installation is complete, the **Start** menu in Windows shows a new program group for **Zebra Technologies** that contains shortcuts for all ZebraDesigner Pro applications.

Install Printer Driver from within the ZebraDesigner Environment

To install the ZebraDesigner printer driver on your computer, do the following:

1. In ZebraDesigner environment, open the **File Menu** and click on **Install Printer.**
2. The printer installation wizard starts.
3. Follow the onscreen instructions.

The driver not only allows you to use all supported Zebra printers with the ZebraDesigner software, but also provides a handy way of sending settings and commands straight to the printer through the driver.

Activate ZebraDesigner Pro

Activate ZebraDesigner Pro to obtain all features. If you do not complete the activation process, ZebraDesigner Pro only runs in DEMO mode.

Note • ZebraDesigner does not require activation. It is free software, but available with less functionality than ZebraDesigner Pro.

To activate the software, do the following:

1. Start ZebraDesigner Pro.
   The *Warning* dialog box appears.
2. Click the **Activate** button.
3. Enter the key number.

Demo Mode

ZebraDesigner Pro running in the DEMO mode has limited functionality. The major limitations of the ZebraDesigner Pro DEMO mode are:

- All *e* characters in the text objects are replaced by *Z* characters.
- Graphic images are printed with DEMO text written over them

You should use the DEMO version only to evaluate the software.

Any commercial use of the DEMO software is prohibited. To obtain the full working version of ZebraDesigner Pro, you must purchase and register the software.

3

Setting Up ZebraDesigner Software

Contents

User Interface. 16
Using the Keyboard and Mouse Effectively 16
Interface Reference 17
System folder 36
Welcome Wizard 36

User Interface

Start the software by clicking on the desktop icon or selecting it from the Start menu: **Start > Programs > Zebra Technologies > ZebraDesigner Pro 2 > ZebraDesigner Pro 2**

This is the ZebraDesigner Pro main window, with a blank label design displayed.

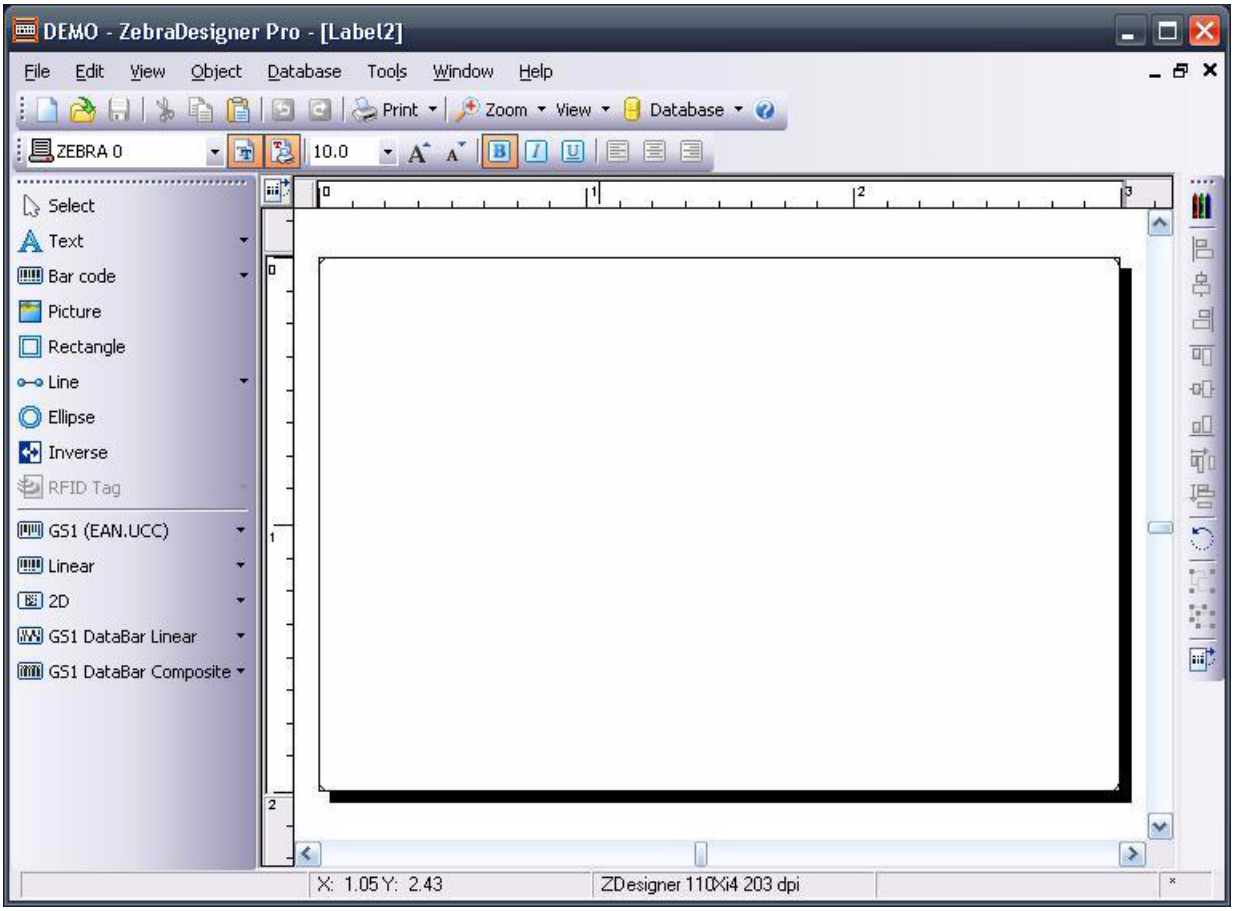


Figure 1 • Main Window

Using the Keyboard and Mouse Effectively

When selecting objects, use the **Ctrl** key to adjust object's anchoring point by clicking the object placeholders.

If you have a Wheel Mouse, you can use the wheel to scroll the label up and down. Holding **Ctrl** when rotating the wheel adjusts zoom factor, and **Shift** scrolls the label left or right.

Double-click on the printer's name in status bar at the bottom of the screen to open printer properties dialog box in which you can set various options for the currently selected printer.

You can quickly move objects from one open label to another by dragging the desired object to another window while holding **Alt**. If you want to copy objects instead, hold both **Alt** and **Ctrl**. Note that you must have both label windows visible to do that.

You can select different objects on a label using the **Tab** and **Shift +Tab** keys.

Pressing the cursor keys while holding the **Ctrl** key can move the selected object. You can use this to fine-tune the position of the object. Holding **Shift** while pressing cursor keys will resize the object.

You can use the right mouse button almost anywhere on the label to access the most common options for that area/object. For example, if you click an object with the right mouse button, a pop-up menu appears that contains options and actions that can be performed on the selected object. Similarly clicking other parts of the label produces pop-up menus with options for that part of the label.

You can select multiple objects by holding **Shift** while clicking them.

Use the element shortcuts in toolbars whenever possible. Each label element that can be connected to some Contents Provider has a shortcut enabled to quickly access existing variables or define new ones. Click the element's shortcut handle, shown as a small arrow by the side of some toolbox icons.

Interface Reference

Mouse Wheel support

If you have a mouse that has a wheel in place of the middle button, you can use it to speed up zooming and scrolling:

- Turning the wheel scrolls the label up or down.
- Holding **Shift** and turning the wheel scrolls the label left or right.
- Holding **Ctrl** and turning the wheel zooms the label in or out.

Shortcuts

Delete	Deletes selected object
Ctrl + X	Cut
Ctrl + C	Copy
Ctrl + V	Paste
Alt + Backspace	Undo
+ (on numeric pad)	Zoom In
- (on numeric pad)	Zoom Out
Alt + Shift + Backspace	Redo
Ctrl + T	Rotate 90°
Ctrl + A	Align
Ctrl + Z	Undo
Ctrl + Y	Redo
Ctrl + N	New
Ctrl + O	Open
Ctrl + S	Save
Ctrl + P	Print
Ctrl + R	Print preview
Ctrl + move the object with mouse	Parallel moving of the object by main axes only
Alt + move the object with mouse	Objects snap to grid even if it is off
Ctrl + move the object with cursor keys	Fine tuning the position of the object
Shift + cursor keys	Fine tuning the dimensions of the object, resize width and height in very small steps
Right-clicking the object	Opens pop-up menu with shortcuts to commands. The content of the pop-up menu depends on where you clicked your mouse button and what was selected at that time
Enter F2 or double-click	Opens properties dialog box of the selected element

File Menu

New Label

To create a new label and clear the application work area, select **New Label** command from **File** menu . Clicking the button has the same effect.

The software supports opening multiple documents and they are named with the increasing numbers: Label1, Label2... unless you save them to different filename.

The Label Setup Wizard dialog box will appear on your screen. **Label Setup Wizard** offers defining dimensions of the label and changing printer setup.

Open

This command opens an existing label. You can also click the button in the standard toolbar.

The default label folder is **My Labels** in **My Documents**. This folder also includes shortcuts to other folders with sample labels. When you need to open a label file, which has been saved in a different folder or drive, you can use the Windows browse function to access it.

Once you have found the appropriate label, you can open it by double clicking its name, or by clicking the **Open** button.

Close

This command closes the active document. If you have made changes in the document and have not saved them, the program will prompt you to save the label.

If the document has not been named yet, the software will also prompt you for the name Save As command will be executed).

Save

This command saves the active document in the current label file. If no file name has been defined yet, you will enter the Save As dialog box.

The **Save** command can also be accessed directly by click the button.

Save As

Select this command when you want to name a new label or when you want to copy an existing label under the new name or to another folder or drive.

The default folder to save the labels is **My Label** in *My Documents*. When you need to save the label to a different folder or drive, you can use Windows browse function to define the target folder.

Export to Printer

Export the label to the printer so it is available for stand-alone printing.

Label Setup

Should you want to change the label parameters, such as dimensions or print orientation, use the **Label setup** command from the **File** menu or double click the label. The Label Setup Wizard dialog is shown.

Install Printer

Select this command when you want to run the printer installation wizard. After completing the wizard, the printer becomes available, and ZebraDesigner does not need to be restarted.

Remove Printer

Select this command when you want to remove one of your installed printers.

The printers that are currently used by the application are shown as disabled and cannot be removed. The removal of the printer does not require a restart of the application.

Printer Settings

Specific printer settings are set here. The shortcut to this dialog is to double click the printer name in a status bar in the bottom of the working window.

Note that all printer settings are saved with the label and are restored every time the label is opened. Each label will store its own custom printer settings. In case you want to print the label with a different printer, the other printer will have to be setup again to suit your needs. When changing the printer associated withthe label, every custom setting is lost and have to be re-configured.

When you change the printer associated with the label or when you create a new label, the default printer settings are used. These default settings can be set for each printer in **Control Panel**.

Print and Print Preview Menu

Print and Print Preview

From the **File** menu, use the **Print** and **Print Preview** commands to print the labels on your printer and to simulate the production of the labels onscreen. Previewing the label allows you to check that all objects are positioned correctly without spending time and wasting labels.

In the **Standard Toolbar**, you can click the

button.

When you set values to variables and select records from the database, click on the appropriate button in the bottom of the dialog box. The **Preview** button will preview labels onscreen. The **Print** button will print labels to the selected printed.

If you are previewing labels, a control window will open to preview the next labels in a series.

Figure 2 • Print pause dialog box

Next: Go to the next label in a series.

Previous: Go to the previous label in the series.

Delay: Labels will be previewed automatically. Next label will be displayed after a short time delay. Click on the **Stop** button to disable automatic advance.

Cancel: Click this button to stop previewing labels.

Print: Click on this button to print the labels.

Print Dialog Box

The *Print* dialog box is shown when you want to print or preview the labels. This dialog box allows you to:

- Provide values for the variables.
- Select records from the database.
- Specify label quantity.

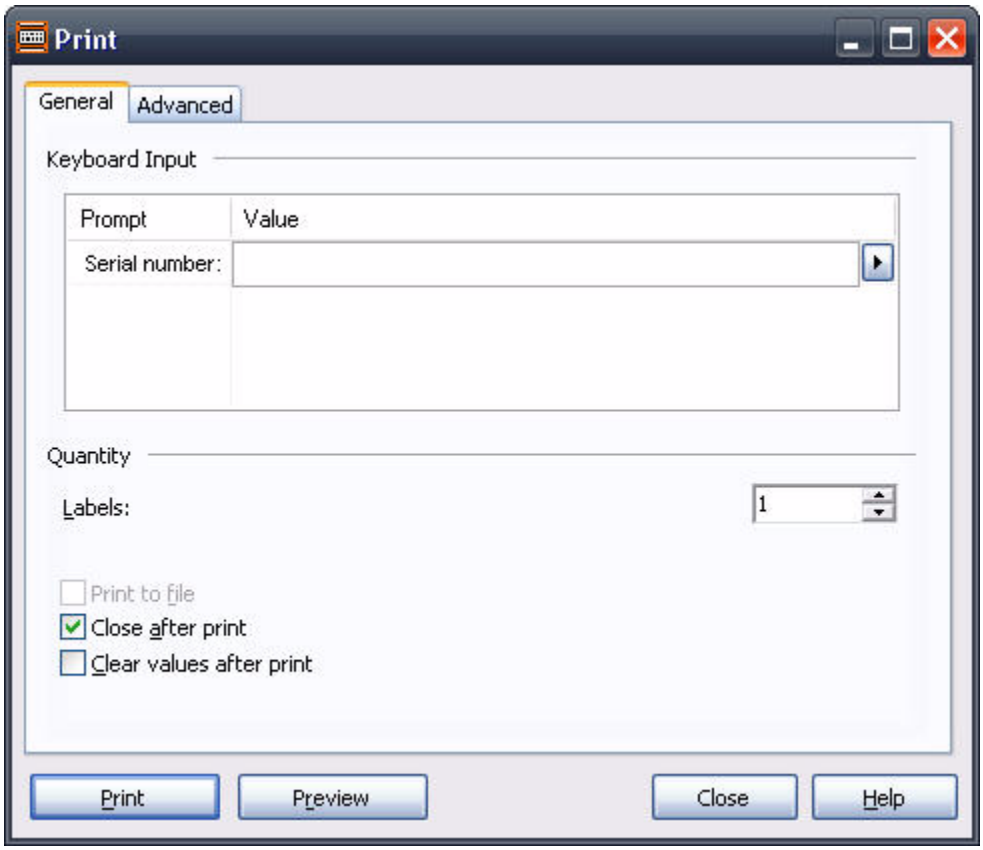


Figure 3 • Print dialog box

General: Use this dialog to enter the values for prompted variables.

The entries are displayed in the table. The first column displays the prompt text of the variable. You can enter the values for variables in the second column. The third column will display the formatted values (based on the variable format).

Pro Only

Select records: This dialog displays when a database is being used. Click on this button to select the records from the database. A separate *Record Selection* dialog box will open.

Note • The button Select Record is accessible only if the records selection is enabled in the database properties.

Quantity: Select the quantity of labels to be printed.

Print to file: When this checkbox is selected, the software package will offer the user the ability to write the command language out to a file.

Close after print: The print dialog will be closed after the print button has been clicked.

Clear values after print: When selected, this option will clear the last entered values for the variable fields. If not selected, the last entered values could be re-used in the prompt field and the label is ready to be printed again with the old values.

Click the **Print** button to start printing (or **Preview** for preview).

To close the dialog box, click the **Close** button.

Pro Only

Record Selection

The **Record Selection** dialog box is available only if you have a database linked to your label and have specified that you want to select records from the database.

The purpose of the *Record Selection* dialog box is to be able to instruct the application not to print all records from the database, but only the records that you will select.

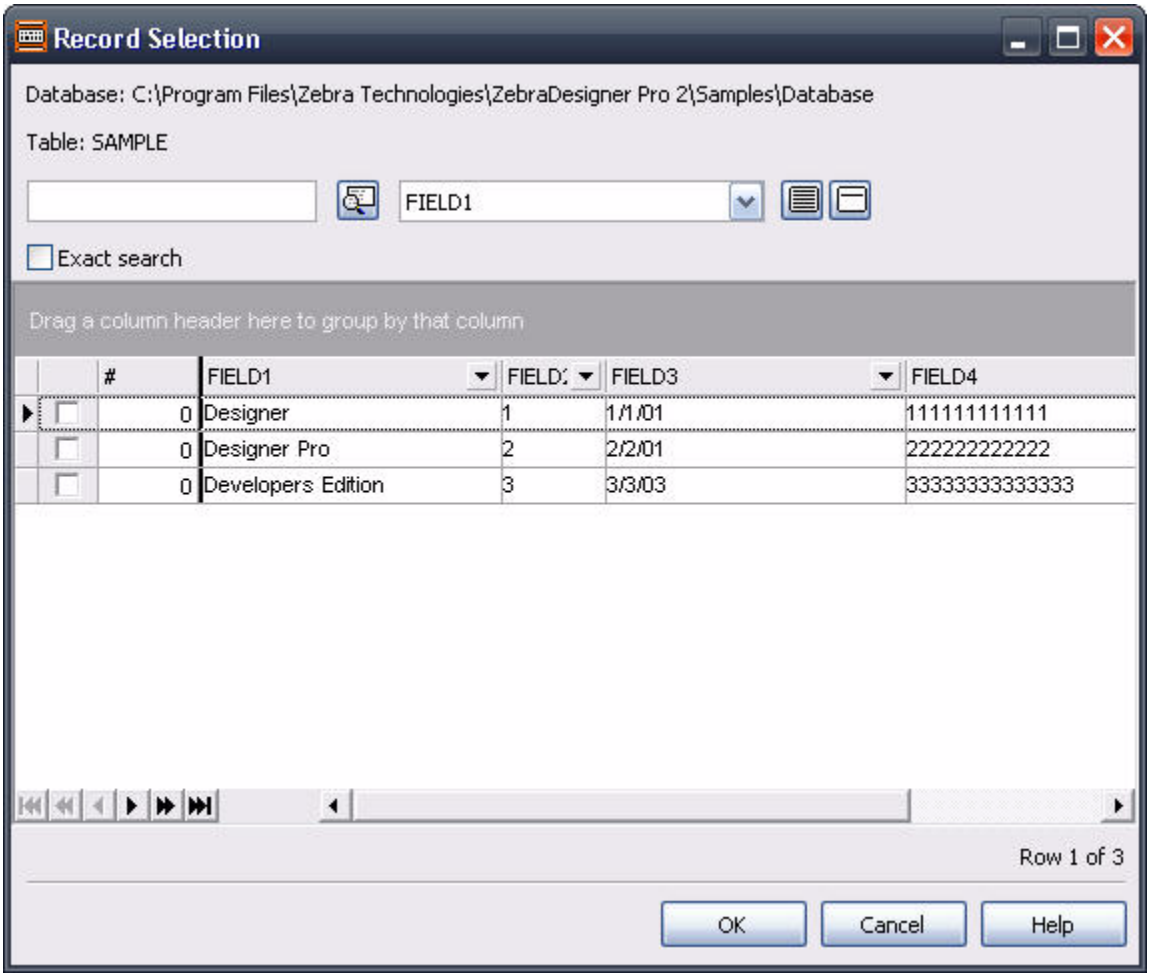


Figure 4 • Record Selection dialog box

	If you do not know the exact location of the record in the database you want to print, you can use the search functionality. Enter the phrase you would like to find, select the field name where the text should be searched for, and click the **Find** button. **Exact Search:** Only the records that match exactly the entered condition will be displayed. The record has to contain only the data entered and it has to be in the proper case.
	Select All: This button will select all records in the database.
	Unselect:This button will de-select all marked records in the database.

You can select the multiple records using standard Windows shortcut with **Ctrl** key. Press and hold the **Ctrl** key, use the mouse to select records one after another, or you can check each selected record in the beginning of the line. Put a check mark in the checkbox . Only the records that have a check in the checkbox will be printed. Use **Space** key to toggle the selection/de-selection of marked records.

If you have set up your database connection to enter the quantity of labels you need to print for each record, additional field will be inserted in front of the first field. It is marked with pound (#). Use this field to define the quantity for each record you need to print.

Optimize for fast windows load: Enable this option to speed up the display of table data when you enter the dialog box the next time. The check boxes for selection of record will not be displayed, which speeds up working with larger databases. Record selection in this mode can be performed using standard Windows shortcuts with **Shift** and **Ctrl** keys.

If you want to easier navigate through larger databases there is an option for you to group the records by some database field. You can nest fields one below the other and create a tree structure for more complex field grouping. Just click and drag the field name to the spot above the table.

Besides grouping, you can also benefit from filtering functionality. Filtering can be very useful in situations where you are dealing with larger tables and would like to limit the view of the table data. You can set a user-defined conditions to the table and only record that comply to them are displayed.

To enable filter on some field, click the arrow button next to the field's name. There are multiple options you can select:

All	Select this to disable filter on this field.
Custom	Create a custom filter for this field. You can select standard qualifiers as: equals, does not equal, is less than, is less than or equal to, is greater than, is greater than or equal, like, not like, is blank, is not blank. You can nest two conditions for the filter and thus build a more complex condition for the field. They can be joined together using AND (all conditions must be true in order to display the record) or OR (only one condition must be true in order to display the record) logical qualifiers. A separate dialog box is used for defining the custom filter.
Blanks	Only the records with blank values for this field are shown.
Non Blanks	Only the records with non blank values for this field are shown.
<data values>	Only the records that have the selected data value in this field will be shown.

Filters can be combined on more than just one field.

If the field has a filter defined, the arrow next to field name in the caption will be displayed in blue color. If the filter is not defined, the arrow is displayed in black color.

The list of defined filters is also visible below the table. You can remove the filter(s) by clicking the button or temporary disable the filter by ticking the button next to the filter definition.

If you want to make more modifications to the filter(s) used on the table, click the **Customize** button to open a separate dialog box with detailed control over filters. If you prefer to have more structural overview on the filters, you will like this option. This way you can quickly define more conditions and groups using one dialog box.

You can save the filter for the future use (**Save As** button), and you can load a filter you have created previously (**Load** button).

Test Print

The **Test** print command will print the current label to the printer defined on the label. All variable fields on the label are automatically filled with the default values.

Only one label will be printed. The purpose of this command is to quickly print the label, in order to verify that the label objects are positioned and aligned on the label correctly.

Recently Used Files

At the bottom of the pull down menu, the file names of the four most recently edited labels are shown, available for quick selection.

Selecting the file here is the same as choosing the **Open** command from the **File** menu and selecting the file there.

Exit

Use this command to leave the labeling application. When using the keyboard, the shortcut to this command can be invoked by pressing the **Alt** and **F4** keys simultaneously. If the opened labels haven't been saved yet, you will be prompted to do so.

Edit Menu

Undo

The **Undo** command cancels up to 10 of the most recently carried out commands or actions. If you do not like the results of a command, or accidentally delete some elements, choose the **Undo** command as the next action to restore the previous mistake.

The **Undo** command can also be activated by clicking the button on the toolbar, or pressing the **Alt** and **Backspace** key simultaneously.

Redo

The **Redo** command is used when you need to restore the last Undo action. It also has the capability to store (and restore) up to 10 previously made steps.

The **Redo** command can be activated by clicking the button on the toolbar, or pressing **Shift**, **Alt**, and **Backspace** keys simultaneously.

Cut

This command is used when you want to remove selected element(s) from the label. Note that the first element is selected by clicking it. When you want to select additional elements, you must press and hold down, the **Shift** key while clicking each additional element.

The cut elements are stored in the internal clipboard and can be re-inserted on the label with the **Paste** command. The combination of **Cut** and **Paste** commands can be used to speed-up label editing and designing.

The Cut command can be also activated by clicking the button on the toolbar, or by pressing the **Shift** and **Del** keys or **Ctrl** and **X** keys simultaneously.

Copy

This command copies the selected elements to the Windows clipboard.

Clicking the button or pressing **Ctrl** and **Ins** keys or **Ctrl** and **C** keys simultaneously can also activate the **Copy** command.

Paste

The **Paste** command is used to paste the contents of the clipboard to a label. This command can be used to paste the same information more than once.

It is very useful when you need to have multiple copies of the same element on the label.

Once the element has been designed, it can be copied to the clipboard and pasted on to the label, in different places and multiple times.

You can also design objects in other Windows applications, copy them to the clipboard, and place them on the label with the **Paste** command.

Clicking the button or pressing the **Shift** and **Ins** keys or **Ctrl** and **V** keys simultaneously can also activate the Paste command.

Paste Special

This command provides different ways to paste the contents of the clipboard.

The **Result** box explains the appearance of the clipboard contents on the label.

For example, you can paste the text from the clipboard, produced by Microsoft® Word as a Word document, or as a Metafile Picture. When pasted as a Word document, the object can be edited by double clicking it. Instead of icons and menus of a labeling application you will see Word working space. You can use familiar Word user interface to make a changes. When finished, labeling interface will be restored.

When the object is pasted as a Metafile Picture, it is treated as a graphics.

In the dialog box you can choose between two different types of paste. The first one (Paste) makes the copy of the original, the second one (Paste Link) links the original document with the label.

Paste Link

Using the **Paste link** command establishes a link between labeling application and the source application for the contents of the clipboard.

The link information is saved in the source file; only the location of the information in the source file is saved. The link data shows in the graphic form.

Double clicking a Paste-link object will place you into the original source Windows application for that object. The object is then edited in the application.

Delete

The command is used to delete selected elements. Deleted elements are not stored in the clipboard. To restore deleted elements, the **Undo** command must be used before any further actions. **Delete** command can also be activated using the **Del** key.

Select

This command allows you to select different objects on the label.

You can select all objects on the label, or selectively mark only objects from the same group (i.e. all text objects, all bar code objects, all picture objects, etc).

Insert Object Menu

Insert Object

This command inserts an OLE object on the label. Two subcommands exist, to import the document from the existing file on the disk or to create a new document from scratch.

Avoid using inserted objects on the label. This consumes a lot of memory because the server application must be running too. The file size of the label will also increase. These are other solutions to consider:

- Convert your objects to picture and place such picture on the label.

  Note • Resizing an OLE object may not work as you expect. It is advisable to resize the object only when in OLE edit mode (after double clicking the object).

Create from File

With this command you can insert to labels already defined objects. If the object is in a Word file, you just select the directory and the name of the file.

Create New

With this command you can insert in a label objects from any Windows application that supports OLE 2 interface.

Links

On the screen this command shows a list of all links between the active label and other applications in your working environment. When you insert an object on the label with the **Paste Link** command, you will see this link in the list.

The links can be interrupted. This means that the changes made in the source document will not be made on the label.

Show Objects

The command shows all inserted objects:

- If the object is linked, the object is marked with a dotted line.
- If the object is inserted, the object is marked with a solid line.

The purpose of this command is to separate objects created on the label from those linked to other applications.

View Menu

Normal View

Selects normal label view.

In this view type, variables are shown on screen as a series of question marks (?). The number of question marks corresponds to the variable length. Use this view to precisely position the elements on the label as you know their maximal possible length.

Data View

Selects the data label view.

The variable elements are shown as they will appear when printed. For example, counters will show numbers and database variables will show data that is obtained from database.

When using data view printing starts at the record currently shown on the screen and not at the beginning of the database. Be careful when printing records from a database. If you want to print labels from the first record, make sure the first record is shown on the label.

Note • Databases are locked if you are using data view and variables from these databases. An already opened database cannot be simultaneously used in another program. You cannot change the structure of the database and alter its records, if using data view.

Zoom In

Zoom in command shows a smaller section of the label. The **+** (**Plus**) key on the numeric keypad can also be used. Each time Zoom in is selected and you click once on the label, the displayed picture becomes 10% larger.

Zoom Out

Zoom out command shows a wider view of the label. The **-** (**Minus**) key on the numeric keypad can also be used. Each time **Zoom out** is selected, the displayed picture becomes 10% smaller.

Zoom

When using the **Zoom** command, you can define the optional zoom factor you need. You can choose any zoom factor from 5 to 3000.

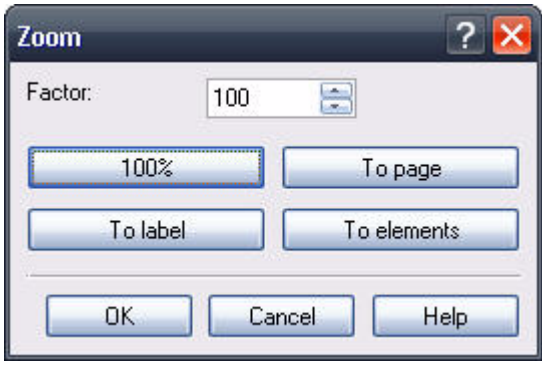


Figure 5 • Zoom dialog box

In the *Zoom* dialog box you can select the different ways of zoom.

Factor	You can define your own factor of zoom (in %).
100%	The size of the document on screen will be the same as the size of the document on the label.
To page	You will see the entire page on the screen.
To label	You will see the entire label on the screen.
To objects	You will see all the objects on the screen.

Snap to Grid

Selecting this option enables the positioning of the objects to be based on the grid settings. When you move the objects, they are placed on a grid position. De-selecting this option allows elements to be freely moved on the label.

The upper left corner of the object is used for starting point of the grid.

Grid size cannot be modified.

Display Grid

Selecting this option makes the grid visible on the label. De-selecting the option hides the grid.

Toolbars

Standard Toolbar

Buttons in the standard toolbar provide shortcuts to frequently used commands for working with the software.

Design Toolbar

The design toolbar provides you with the shortcuts to the frequently used design actions on the label.

By default, the design toolbar is docked on the right side of ZebraDesigner window.

You can use the design toolbar to:

- Change the color of label objects.
- Align the objects relatively to each other or to the label.
- Rotate the objects.
- Change the order of the objects.

Text Toolbar

Shortcuts in the text toolbar enable you to format text objects with a single mouse click. You can change font selection and style.

Toolbox

Select

Use this tool to enable the select tool.

Text

Use this tool to define the text object.

Click on the small arrow button for additional options.

Bar code

Use this tool to define the bar code object.

Click on the small arrow button for additional options.

Picture

Use this tool to define the picture object.

Rectangle

Use this tool to define the rectangle object.

Line

Use this tool to define the line object.

Ellipse

Use this tool to define the ellipse or circle object.

Inverse

Use this tool to define the inverse object.

Object Menu

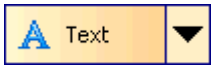
Select

After you select the **Select** command in the **Object** menu or click the

button in the **Toolbox**, the arrow cursor appears.

Use this command to select objects on the label.

Text

After you select the **Text** command in the **Object** menu or click the 

button in the **Toolbox**, the cursor with the bar text appears.

Use this command to place text objects on the label.

Bar Code

After you select the **Bar Code** command in the **Object** menu or click the

button in the **Toolbox**, the cursor with the bar code symbol appears.

Move the mouse cursor to the desired position of the label and click to enter the *Bar code Wizard* dialog box.

Picture

After you select the **Picture** command in the **Object** menu or click the

button in the **Toolbox**, the cursor with the picture symbol appears.

Select this command to place a picture on the label.

Rectangle

After selecting the **Rectangle** command in the **Object** menu or clicking the

button in the **Toolbox**, the cursor with the rectangle symbol appears.

Thickness: Defines the width of the object borders.

Note • The valid values for thickness depend on the printer being used on the label. Not all values are acceptable for all printers.

Print as Graphics: This option lets you print the object as an internal printer element, or as graphic elements.

Note • Printing will be faster if you do not check this option. However, if you have selected some line or fill style options that your printer does not natively support, the printing will be auto-set to **Print as Graphics** and you will not be able to disable it.

Rounded Rectangle: With this option you can define rounded corners of the rectangle. You can select thickness and radius for the object.

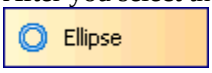
Line

After you select the **Line** command in the **Object** menu or click the

button in the **Toolbox**, the cursor with the line symbol appears.

Use this command to draw lines on the label.

Ellipse

After you select the **Ellipse** command in the **Object** menu or click the 

button in the **Toolbox**, the cursor with the ellipse symbol appears.

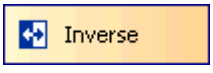
Thickness: Defines the width of the object borders.

Note • The valid values for thickness depend on the printer being used on the label. Not all values are acceptable for all printers.

Print as Graphics: The option lets you print the object as aninternal printer element, or as graphics element.

Note • Printing will be faster if you do not tick this option. However if you have selected some line or fill style options that your printer does not natively support, the printing will be auto-set to **Print as Graphics** and you will not be able to disable it.

Inverse

After you select the **Inverse** command in the **Object** menu or click the 

button in the **Toolbox**, the cursor with the inverse symbol appears.

Adds an inverted box to the label. The inverted box turns inverses the color of all underlying objects.

Note • The Inverse command is not available for all printers. If the printer does not support Inverse functionally internally, the command cannot be selected.

Pro Only

RFID tag

The button is used to enable programming of RFID tags embedded into the labels.

Database Menu

Pro Only

Database Menu

ZebraDesigner Pro allows you to use databases, in which your data is stored. Database types can be:

- ASCII (text file) where fields are fixed-length or are separated with the delimiter.
- Microsoft Excel database.
- Microsoft Access database.
- Existing ODBC data sources.

Create Database Connection: This command starts the database wizard that will help you link the database to the label.

Note • If the database is already linked on the label, you will be able to change its settings.

Delete Database: This command removes the database from the label.

Note • The database fields must not be used on the label, if you want to delete the database link from the label.

Tools Menu

User Interface

Toolbox

Bar codes

Display toolbar with bar codes for easier access to the available bar code types.

Captions

Display captions next to the icons in the Toolbox.

Large Icons

Use large icons in the toolbars.

Small Icons

Use small icons in the toolbars.

Menus Show Recently Used Commands First

Enable this option to show only recently used commands in the menus.

All other commands are hidden to minimize the length of the menus.

Printer Tools

Printer Tools allow you to send specific commands directly to the printer. These commands are simply pre-programmed strings of commands that you would be able to enter in the **Direct Communication** interface. The Printer Tools interface provides a user-friendly tool which allows the sending common commands to the printer, without the need for the printer to provide a reply to the user. The commands are divided into the following two categories:

- **Print** – includes commands which trigger printing
- **Action** – includes commands which alter a setting in the printer and do not trigger printing

Language

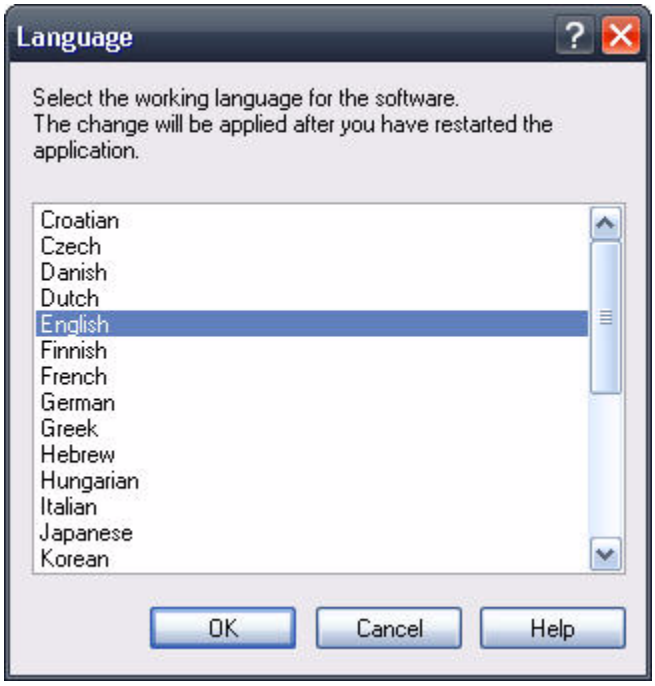


Figure 6 • Language dialog box

You can change the language used in the application with this option. For changes to take effect application must be restarted.

Store pictures into label

This option allows you to store the images used in the label into the label file. This enables you to transfer the label to a different computer by simply transferring the label file. If this option is not selected, images are lost when the label file is transferred to a different computer.

Font Downloader

This command starts the Zebra Font Downloader, which is used to download fonts to the printer's internal memory. Downloaded fonts perform in the same way as internal printer fonts, optimizing printing by reducing the amount of needed communication sent to the printer.

It is also possible to access the Zebra Font Downloader by clicking the **Start Menu > Programs > Zebra Technologies > Zebra Font Downloader > Zebra Font Downloader**

If this option is not available in ZebraDesigner, Zebra Font Downloader is not installed. The installation of the Zebra Font Downloader is available with the installation of printer drivers.

Window Menu

Cascade

Use this command to cascade all open windows.

Note • Make sure all the windows you want to display are open. Minimized windows cannot be displayed.

Tile

Use this command to tile all open windows in working space.

Note • Make sure all the windows you want to display are open. Minimized windows cannot be displayed.

Arrange Icons

Use this command to arrange icons (minimized windows) in working space - to the bottom of it. This has effect only if icons are not already arranged.

Close All

This command closes all open windows (documents) with prompting for all unsaved documents. Use it to quickly close all windows with one command (otherwise you have to use Close command in File menu for each window).

Window List

When one or more windows (documents) are open, they are all listed. You can quickly switch between windows by selecting an appropriate one. If more than nine windows are opened, more are accessible by choosing option **More windows…**

Help Menu

Content

This command opens the content file for this help.

About

This command displays the application version information and name of the user that has installed and registered the application.

System folder

The labeling application uses its system folder for storing files needed to run the program. The location of the folder varies depending on the Windows operating system used.

The default location is **C:\Documents and Settings\All Users\Application Data\Zebra Technologies\ZebraDesigner Pro**. This location may be modified by the user during installation.

It is important to own **the write access** to this folder on your computer system and the right to write to and modify files in this folder.

In these files, user data and user rights are stored, as well as custom settings, variable trace logs, label usage logs, variable definition files ***.LVR**, bar code standards, and file names **GLOBALS.TDB**. It also stores the values of global variables.

You should design the appropriate folder layout on disk for your label projects. You can increase your work efficiency if you always know where certain types of files are stored. The application also finds required elements faster this way. This is important with more demanding labels, which intensively use databases, pictures, and forms. Make a separate folder for each project you are building, e.g. Project1. Beneath this folder make subfolders Database (for databases), Forms (for forms) and Labels (for labels). Store appropriate files in each of these subfolders.

Welcome Wizard

When you start the labeling software, a Welcome Wizard will appear. It provides a quick access to most-used commands when starting working on a label layout.

Create a new label	A blank label will appear and Label Setup Wizard will start. You can then design a new label from scratch.
Open recently used label	A list of recently used labels will appear to provide a quick access to commonly used labels.
Open other existing label	A common Windows dialog box opens to let you browse for the appropriate label file.

4

Designing Labels

Contents

Using Label Setup Wizard 39
Overview 39
Select a Printer 39
Select the Label Stock 41
Define the Page Size 42
Select the Label Orientation 43
Define the Label Dimensions 44
Designing a Basic Label 45
Overview 45
Create a Basic Label 46
Add Variable Fields 57
Designing an RFID Smart Label 64
Overview 64
Create RFID Smart Label 64
Encode RFID Tag 66
Support for RFID Tags 67
RFID Tag Locking 69
RFID Tag Settings 69
Change Printer Settings 71
Change Common Printer Settings 71
Change Dithering Options 72

Contents (Continued)

Using Toolbars . . . 73
Use the Standard Toolbar . . . 73
Use the Toolbox . . . 74
Use the Text Toolbar . . . 74
Use the Design Toolbar . . . 75
Working with Objects . . . 76
Using Text Wizard . . . 79
Using Bar Code Wizard . . . 91
Using EAN.UCC 128 Wizard . . . 103
Selecting Bar Code Type . . . 109
Select Objects . . . 117
Edit Objects . . . 118
Move Objects . . . 118
Aligning Objects . . . 119
Resize Objects . . . 119
Rotate Objects . . . 120
Supported Graphics Formats . . . 120
Grouping Objects . . . 121
Working with Variable Data . . . 122
Dynamic Data Overview . . . 122
Database Wizard . . . 122
Link Label to Text Databases . . . 128
Using Text File Wizard . . . 136
Work with Visual Basic Expressions . . . 139
Using Expression Editor . . . 139
Using Printer Real Time Clock (RTC) . . . 140
Available Date Formats . . . 141
Available Time Formats . . . 142
Using Contents Mask . . . 143

Using Label Setup Wizard

Overview

With the Label Setup Wizard you can define the dimensions of the label and change printer setup. It consists of a few simple steps.

Select a Printer

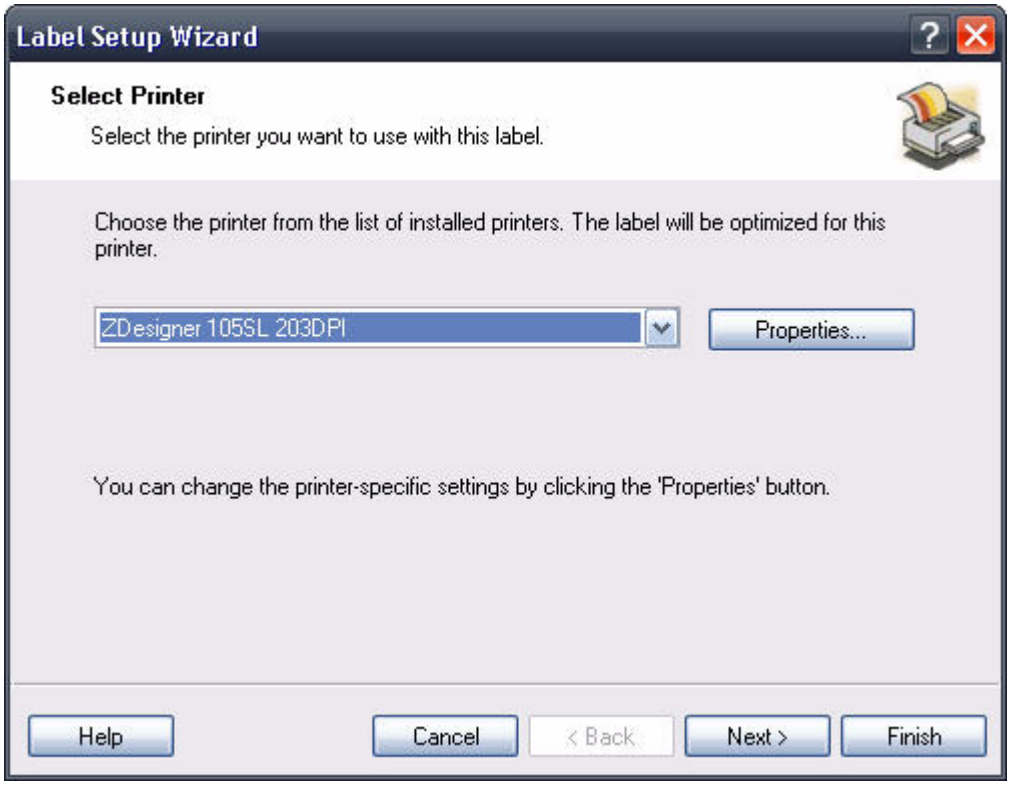


Figure 7 • Label Setup Wizard - Selecting printer

If you want to set the printer parameters, select the desired printer, and click the **Properties** button. The printer properties dialog box appears, allowing you to set the printer parameters such as print speed, print darkness, and print direction.

Note • This is a standard Windows printer properties dialog box and its options may differ from printer to printer because it is based on the printer driver.

To continue, click **Next**.

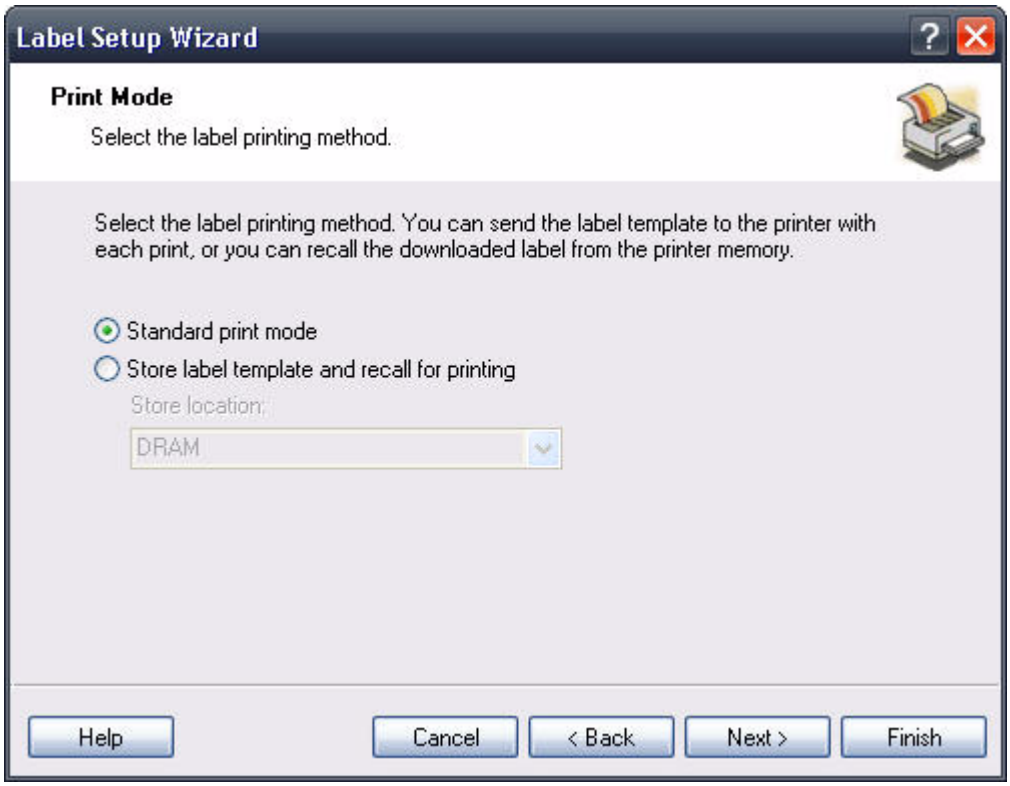


Figure 8 • Label Setup Wizard - Print Mode

Standard Print Mode

This is the usual print mode, where the printer sends all of the information to the printer and prints it immediately.

Store label template and recall it for printing

This setting allows the user to store the fixed data on the label to the printer's internal memory and only send the variable information to the printer during the print operation. The variable data is merged with the stored fixed data by the printer. This results in faster printing of repetitive labels due to less data being sent between ZebraDesigner and the printer.

Store and Recall is operated in the **Print** dialog window, where the *Store Label Template* tab is used to execute the storage operation. Any regular print command on such a label is a *Recall* operation.

Select one of the print modes and click Finish to complete the Label Setup Wizard.

Select the Label Stock

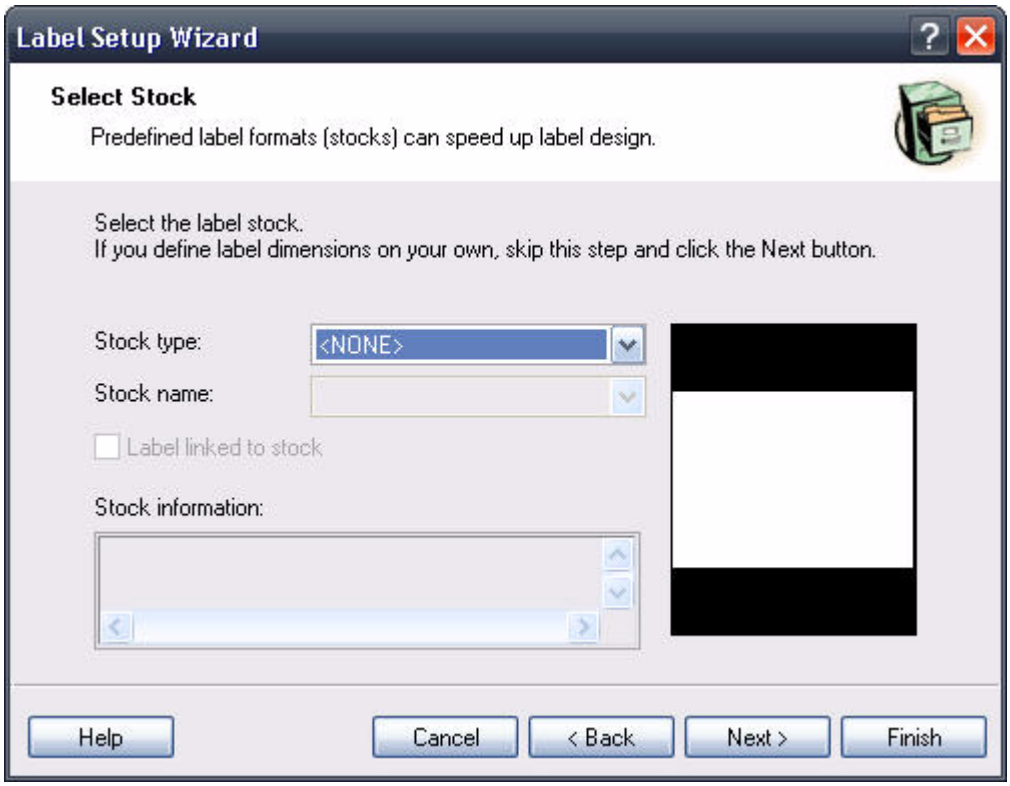


Figure 9 • Label Setup Wizard - selecting label stock

If you use one of the standard predefined label formats, you can specify it here.

Stock Type: Select the type of stock.

Stock name: Select the stock from the list.

Stock information: The information about label dimensions, printer settings, and background images as defined by the selected stock.

Label linked to stock: If you enable this option, you cannot change the dimensions of the label, because the stocks locks the dimensions.

Note • Using pre-defined stocks simplifies the process of label creation because you do not have to define the label dimensions manually.

To continue, click the **Next** button.

Define the Page Size

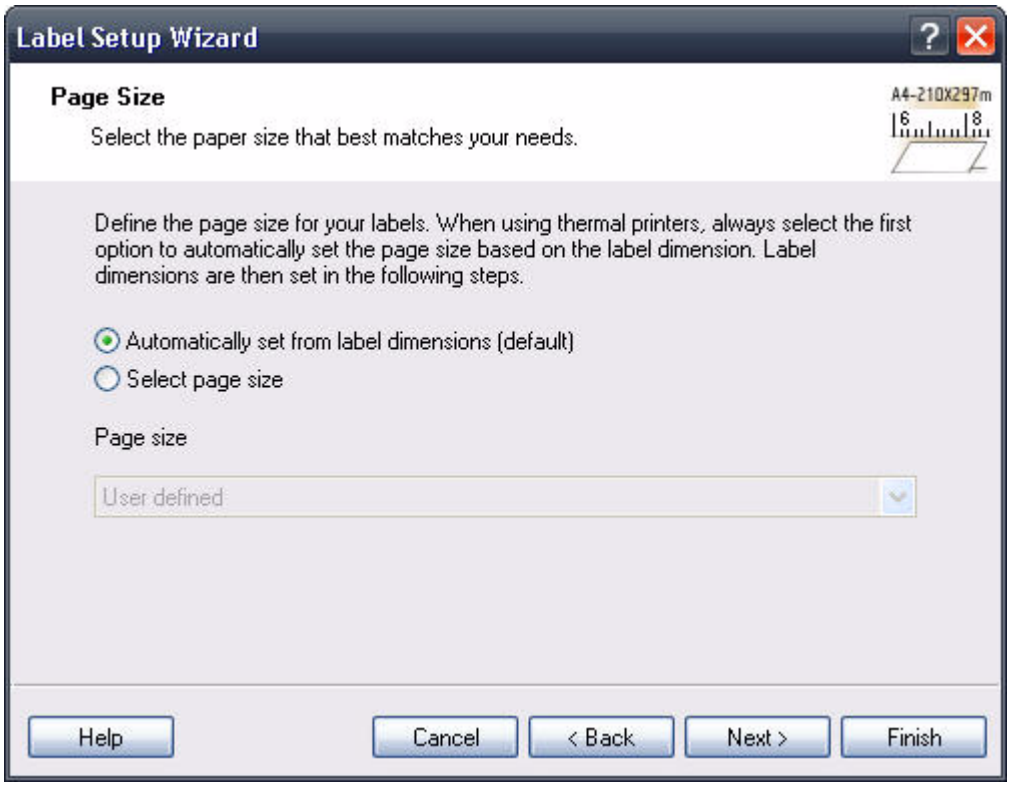


Figure 10 • Label Setup Wizard - choosing Label Dimensions

Select the page size for your labels.

Automatically set from label dimension: ZebraDesigner printer drivers will automatically size the label dimensions.

Select page size: You can also manually define the page size.

To continue, click **Next**.

Select the Label Orientation

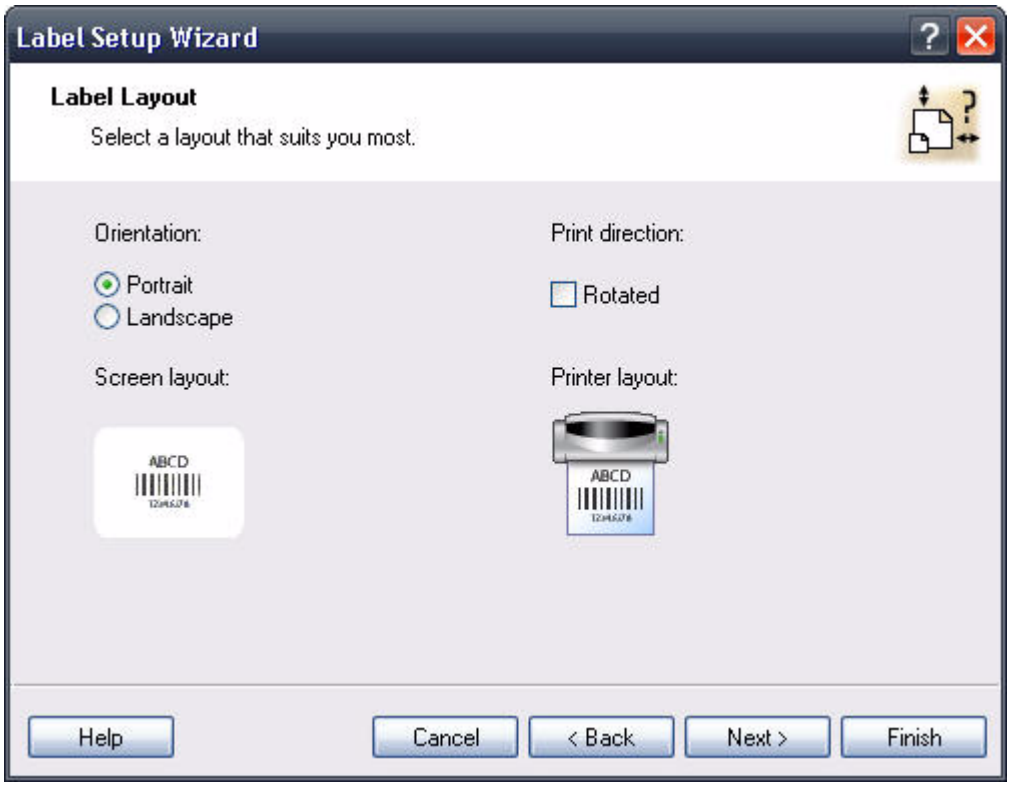


Figure 11 • Selecting label layout

Orientation: Select the label orientation. Look at the screen and printer layouts to see how the label will be printed from the printer.

Print directions: Click the **Rotated** option to rotate the label 180 degrees, when printed.

To continue, click the **Next** button.

Define the Label Dimensions

Enter the label dimensions in this dialog box.

Note • If you selected the label stock in the previous step, the values for dimensions are entered automatically.

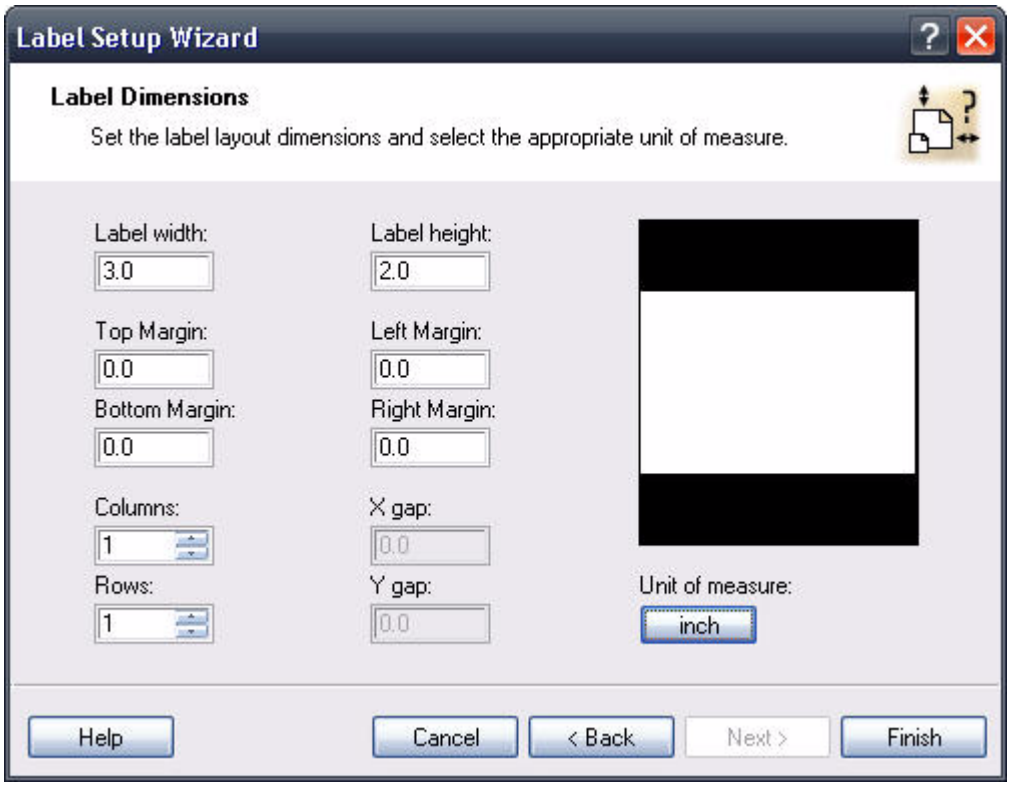


Figure 12 • Label Setup Wizard - defining the label format

Width, height: Define the label dimensions.

Margins: Define the label margins.

Rows, columns: Define the number of labels in horizontal and vertical directions. This option is commonly used with office printers.

Gaps: Define the gap between the labels.

Note • Define gaps only if you changed the rows and columns options. If you have rolls of labels, the gaps between the labels are auto-identified by the gap sensor in the printer.

Unit of measure: Change the unit of measure you want to use.

When you are satisfied with the label dimensions, click the **Finish** button to close the Label setup wizard.

Designing a Basic Label

Overview

In this section you will learn how to design a simple label file with fixed and variable objects. The variable objects get values from several sources. You will learn how to:

- Provide object values with a keyboard prompt.
- Obtain object values from a database.
- Preview the label on the screen.
- Print the label.

The label you create will look like this:

Figure 13 • Basic label

Create a Basic Label

Create a New Label

To create a basic label, do the following:

1. Open ZebraDesigner Pro or ZebraDesigner.
2. From the **File** menu, select **New** or click the button in the **Standard Toolbar**.

Each time you create a new label, a Label Setup Wizard will start to help you set up the label and connect to the printer.

Note • You can leave the Wizard at any time and accept the default settings for the label by clicking the **Finish** button.

Select a Printer

1. Select the printer you want to use for label printing.

   Note • If you don't find your printer on the list, see Install Printer Driver from within the ZebraDesigner Environment for installation instructions.

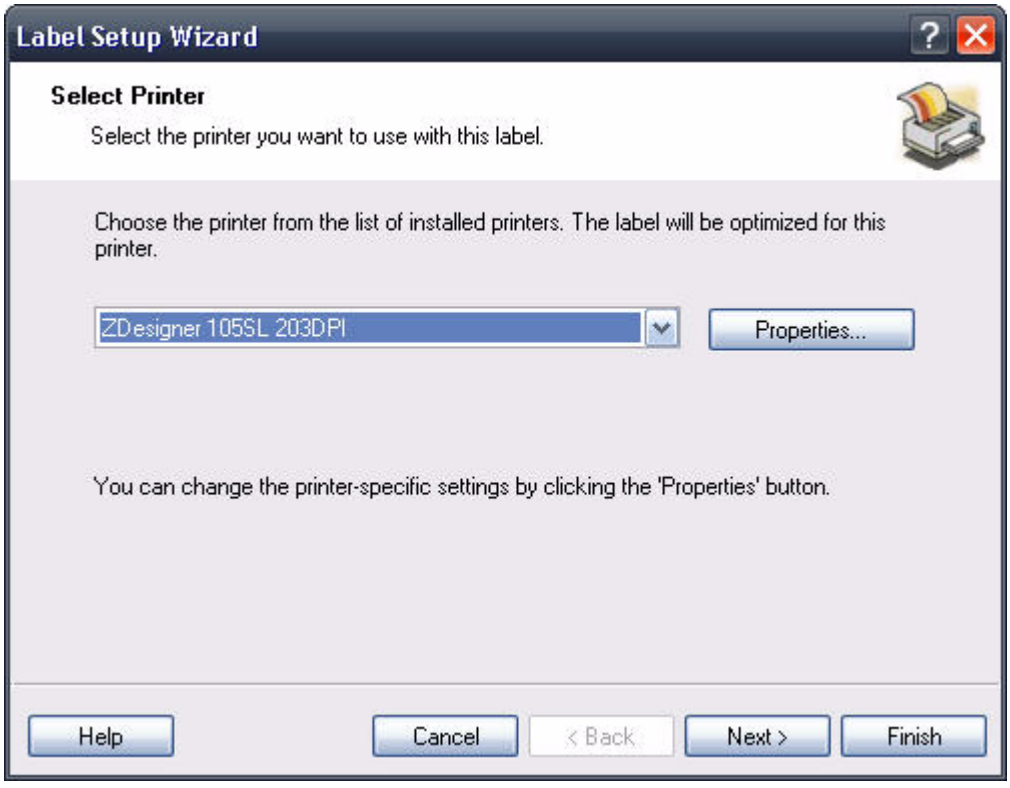


Figure 14 • Selecting a printer

2. Click the **Next** button.

Define Label and Page Dimensions

1. If you want to use the label stock, select your choices in the **Select Stock** window.

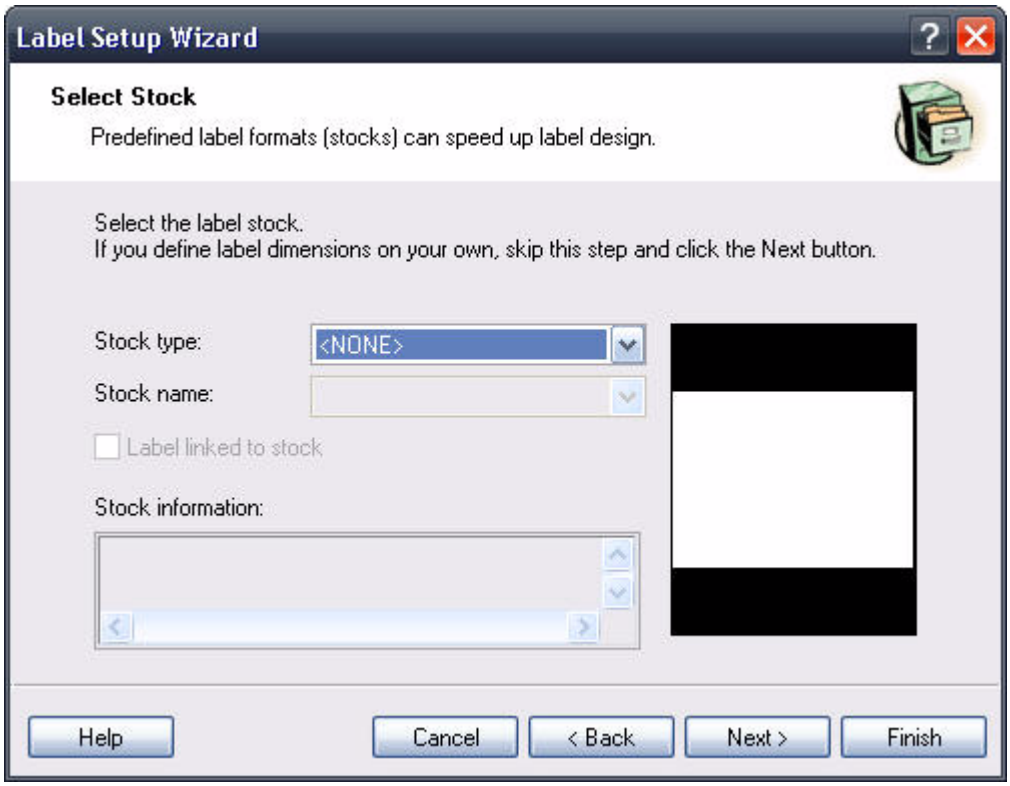


Figure 15 • Selecting stock

2. Click the **Next** button.

A new window opens to define the label dimensions manually.

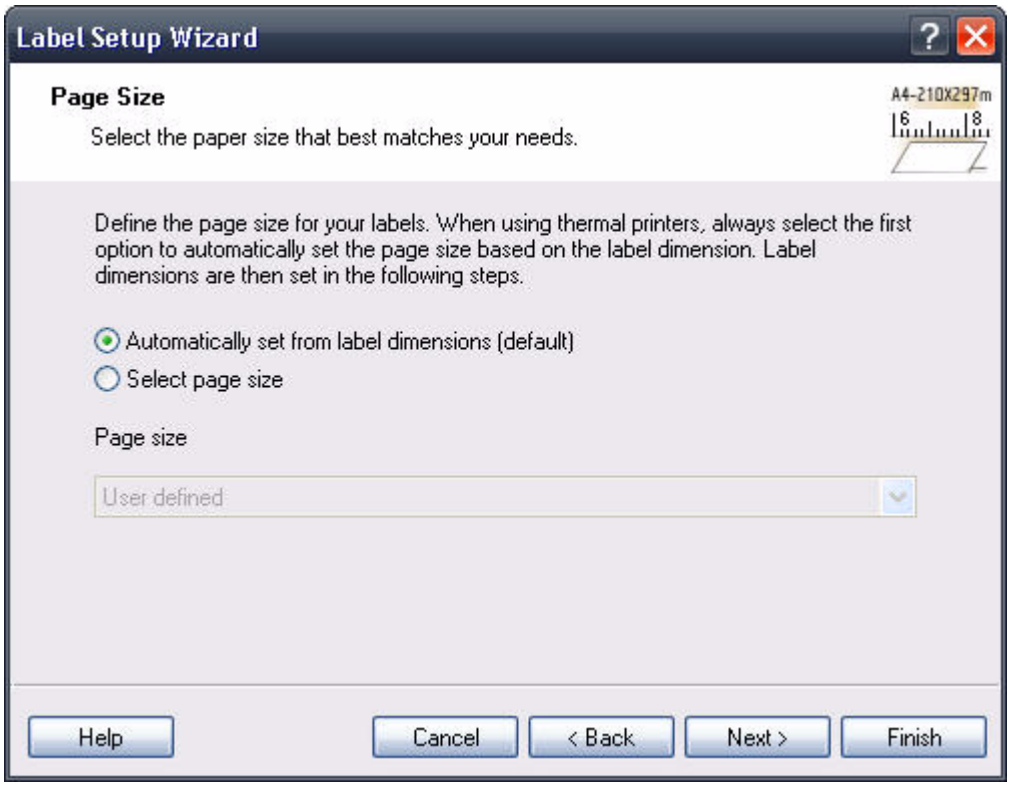


Figure 16 • Selecting page size

3. Leave the **Page Size** option at **Automatically set from label dimensions (default)** and check **Automatic Sizing**.

4. Click the **Next** button.

A new window opens

5. Select the label orientation and print direction.

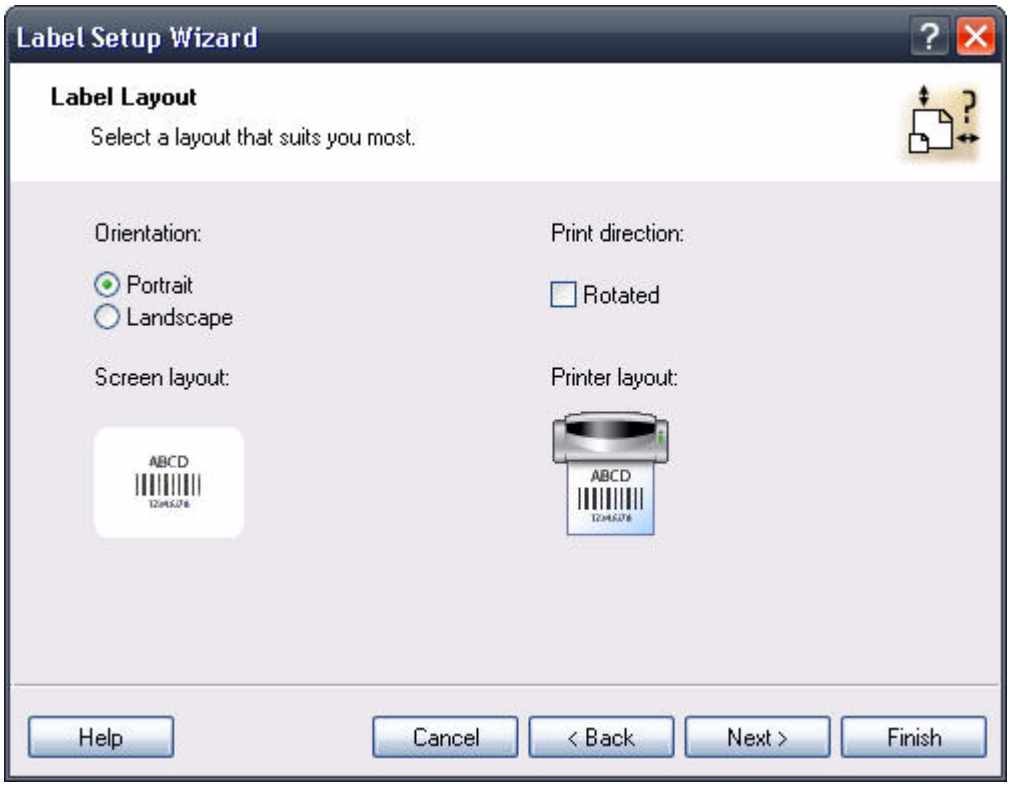


Figure 17 • Selecting the label layout

6. Click the **Next** button.

A new window opens.

7. Enter the label width and height.

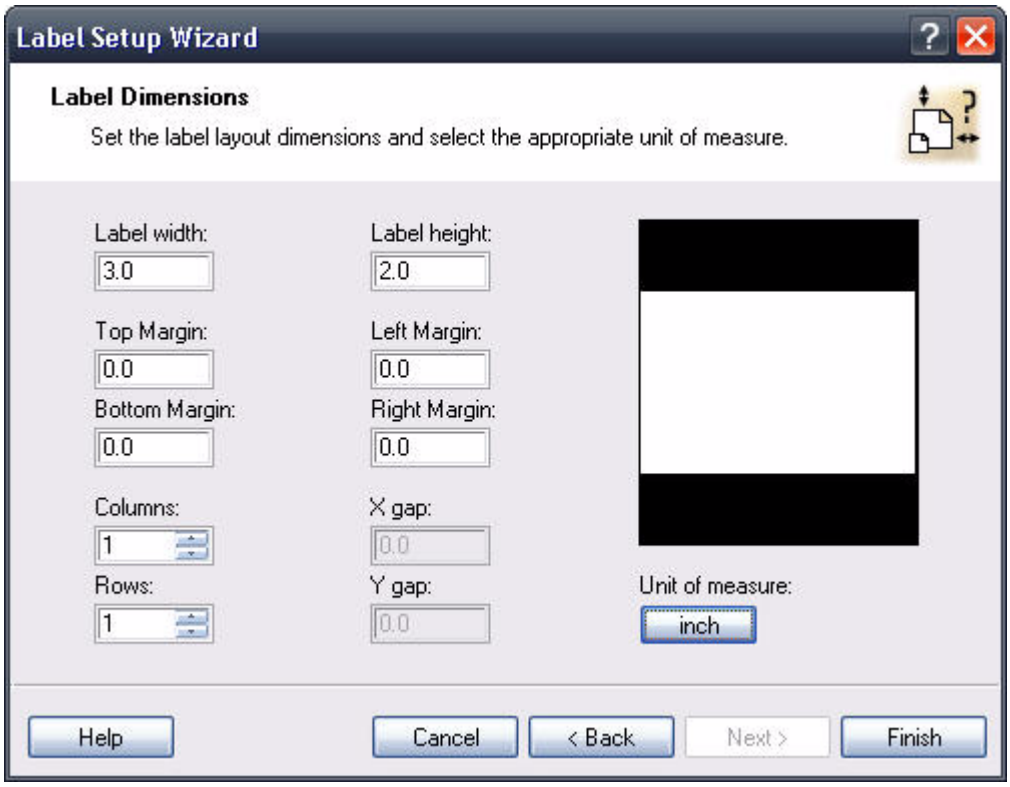
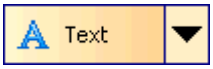


Figure 18 • Defining label dimensions

Note • To change the unit of measure from centimeters to inches or other supported units, click on the button with unit of measure below the label preview in the dialog box.

8. Click the **Finish** button. A new empty label with the settings you selected is created.

Enter Fixed Text

9. Click the 

button in the **Toolbox**. The text cursor appears on the screen.

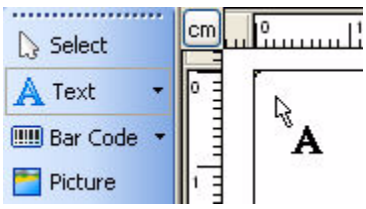


Figure 19 • Cursor for text object

10. Move the cursor to the location on the label where you want to place the text object and click the mouse button.
The Text Wizard dialog box with object properties opens.

11. Type *SAMPLE* and click the **Finish** button.

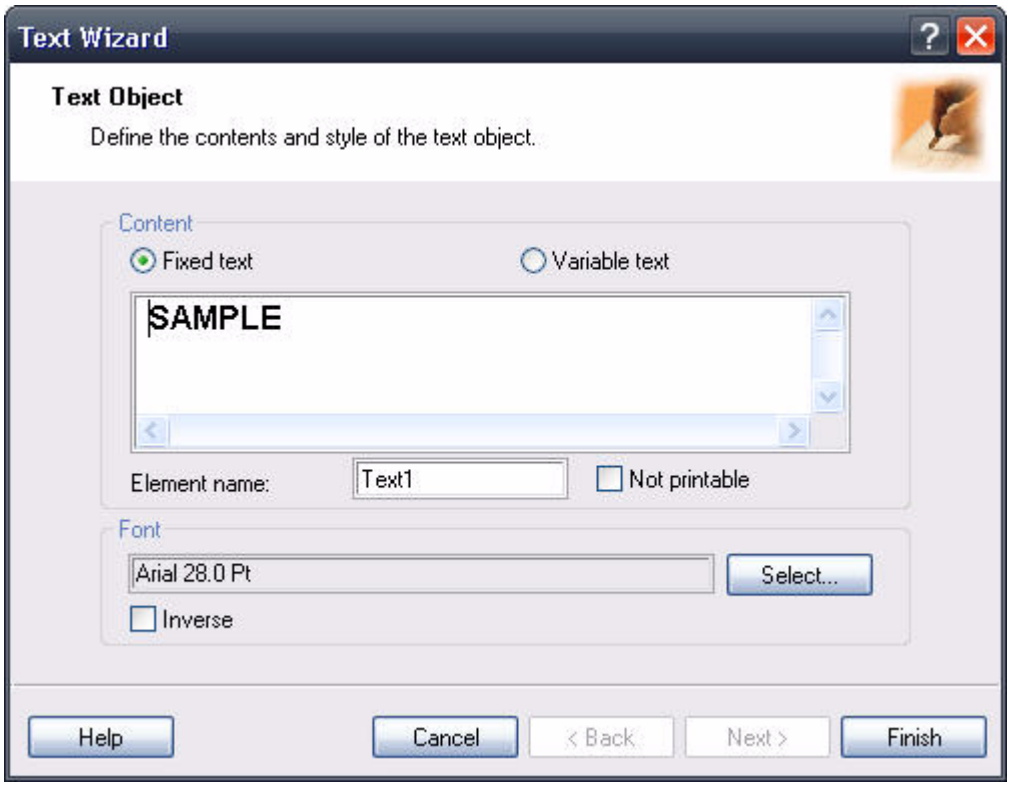
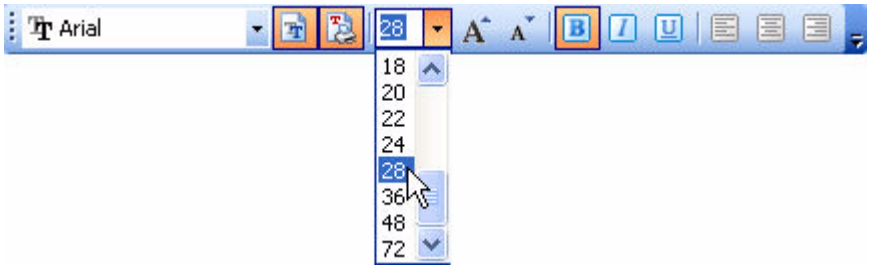


Figure 20 • Entering content for text object

12. Click on the text object to select the object.

13. Using the **Text Toolbar**, change the font for the text object. Choose Arial font, 28 point size, and bold style.



Using format options in the text toolbox:

14. To change the position and size of the text object, select the text object and drag the object with your mouse to the desired position.

The screen should show the following:

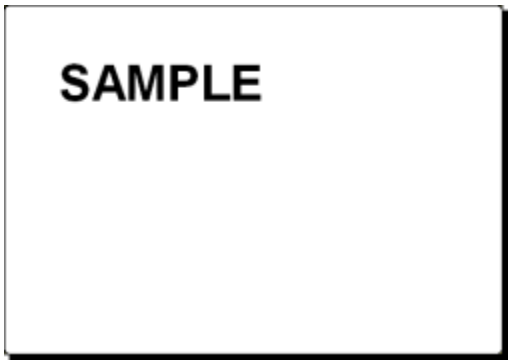


Figure 21 • The text object is placed on the label

Object Positioning Guidelines

Guidelines are available to assist you in positioning objects on the label. The functionality of guidelines is similar to grid, but they allow you much more freedom regarding positioning, moving, and combining positioning delimiters.

Although the guidelines may be visible while designing the label, they will not be printed on the final product, regardless of whether the **Display Guidelines** setting is turned on or off.

Create Guidelines

Create vertical and horizontal guidelines:

- Click anywhere in the ruler area and drag the line out of it (the top ruler contains horizontal, and the side ruler contains vertical guidelines).
- Finally, you can open the View menu and access the commands there.

Using Guidelines

The guidelines may be moved at any time with the drag of a mouse. If they are dragged back to the ruler area, they are deleted. It is possible to toggle between displaying and hiding the guidelines, either by using the menu or right clicking them.

The guidelines can be hidden with the *Ctrl+H* shortcut key combination, and when they are hidden, the Snap to Guideline functionality is also disabled. The menu also includes a **Remove all Guidelines** command, which removes all the guidelines on the label.

Holding down the SHIFT key while dragging objects allows you to temporarily turn on the Snap to Guidelines function.

Guideline Properties

Double-click a guideline or right click a guideline and choose **Edit Guideline Properties** to open the Guideline Properties dialog window. The dialog allows you to enter the numeric positioning value, choose the horizontal or vertical guideline type, or remove the individual guideline.

Pro Only

Note • This functionality is only available in ZebraDesigner Pro

Insert Bar Codes

Now you will add a non-changeable Code128 bar code on the label.

1. To insert the bar code, click the

button in the **Toolbox**.
2. Move the cursor to the desired position on the label and click the mouse button. The Barcode Wizard dialog box with object properties will open.
3. Enter the value *1234567890* for the bar code contents.
4. Click the **Define** button. *Edit Bar Code* dialog box opens.
5. Make sure you select bar code Code128 and click the **OK** button.

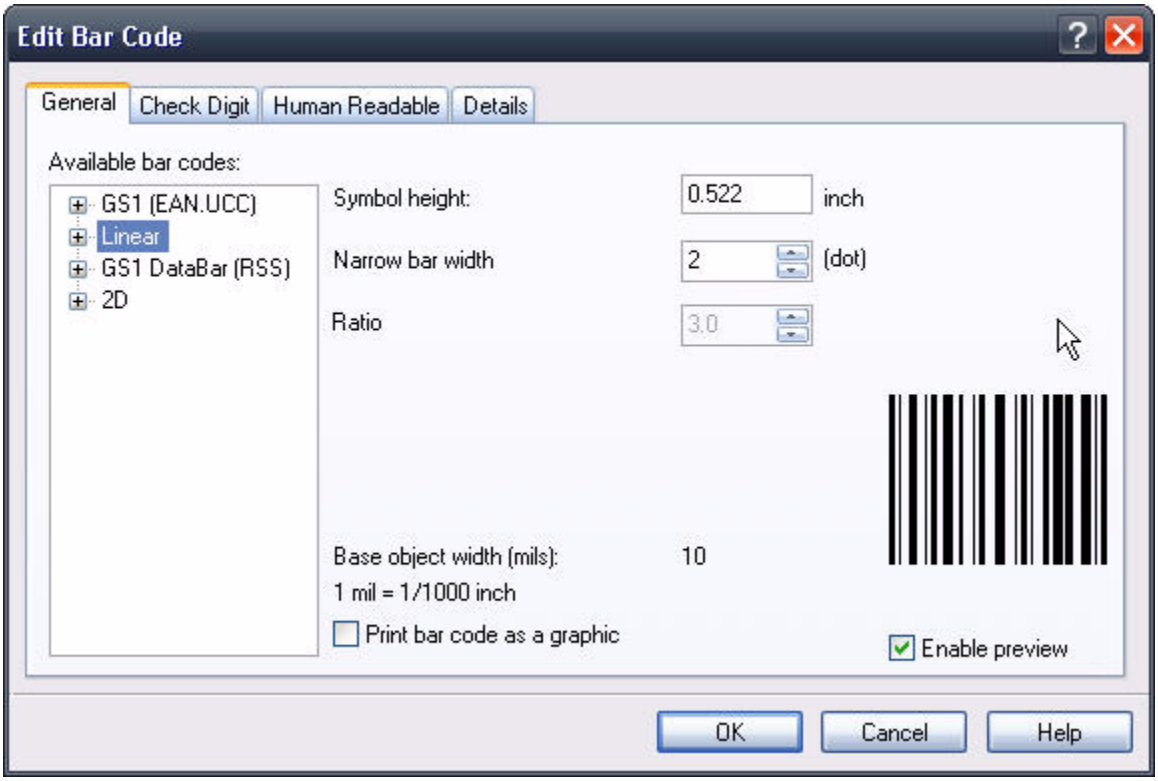


Figure 22 • Selecting bar code type

6. To return to the label, click the **OK** button.
7. Change the position of the bar code by selecting the bar code and dragging it to the desired position.

8. Change the object size by dragging the object handles. The handles are small rectangles surrounding the object when it is selected.

The label should now show the following:

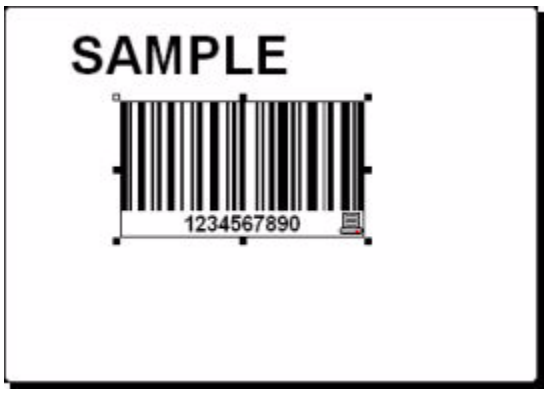


Figure 23 • Label with text and bar code objects

Insert Pictures

The ZebraDesigner Pro works with BMP, PCX, GIF, WMF, JPEG and many other popular graphic formats.

1. To insert the picture, click on the

button in the **Toolbox**.
2. Move the cursor to the desired position on the label and click the mouse button.
3. The *Open* dialog box will open allowing you to browse for a picture on your hard drive. Go to the folder **Samples >Graphics** and select the picture **LEISURE.WMF**.
4. Click the **Open** button.

The screen should show the following:

Figure 24 • Label with text, bar code, and picture objects

Save a Label

Always save your label during the design process.

To save a label, do the following:

1. Click the button.
2. Type in the name of the label. For example, type *label* for the name of the label. The name of the label appears in the program caption.

Use Alignment Tools

You have placed the objects on the label. Now you want to make sure they are aligned on the horizontal center of the label. You can align objects on the label by using the **Align Toolbar** on the right side of the working window.

To align objects on the label, do the following:

1. In the **Toolbox**, choose a select arrow and draw a frame around all objects to select all objects.

   Note • The first object you select determines the alignment orientation for all selected objects.

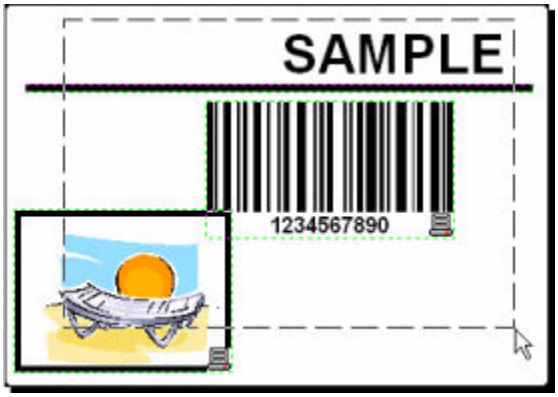


Figure 25 • Selecting the objects on the label

2. To arrange the objects, click the **Center Align** button in the Design toolbar. The selected objects will be rearranged and positioned, centered to first object that was selected.

   Note • The **Align Toolbar** has other alignment commands available in the **Align Toolbar**. You can also align the objects to the label grid. The option **Snap to Grid** is available in the View menu.

Use Drawing Tools

Now you will insert a line to separate a text object from other objects and a rectangle around the picture object.

1. From the **Toolbox**, select the

button and move the cursor to the required starting point of the line.
2. While drawing the line, press and hold down the mouse button. Move the mouse to the end position of the line and release the button. The Line object is placed on the label.
3. In the **Toolbox**, click the

button and point the mouse to the upper left corner of the picture.
4. While you stretch the rectangle to the lower right corner of the picture, click and hold the mouse button.
5. To change the thickness of the vertical and horizontal line, double-click on the rectangle object to open its properties. Select the thickness you want and click the **Finish** button.
6. To edit the drawing object, double-click on the line or rectangle to open the dialog box with its properties.

The label should show the following:

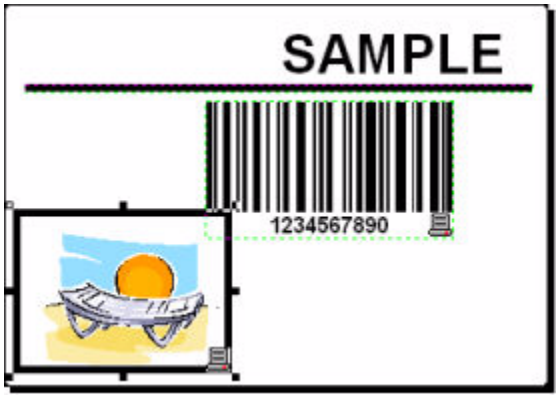


Figure 26 • Label with fixed objects

Add Variable Fields

Overview

You may want to print a label on which the data changes for each label. ZebraDesigner Pro offers different variable fields (counters, date/time fields, operator's input from the keyboard) that you can use with text, graphics, and bar code objects.

For this example, a new label was created. The steps in the following topics explain how to create a label that contains a prompted field, a counter, and date/time fields.

The captions in the following screenshots were added separately.

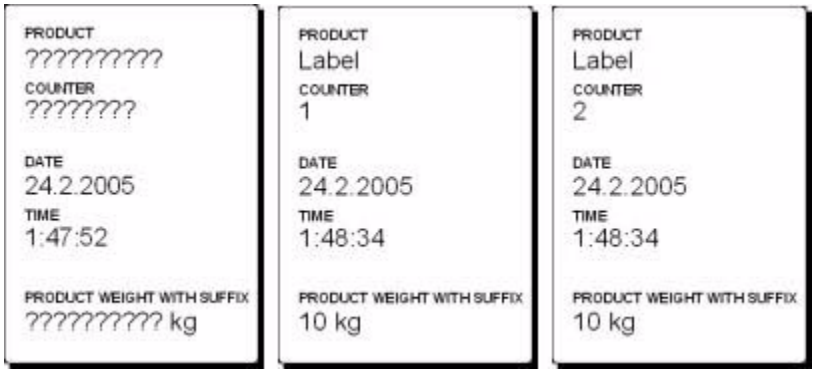
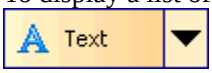


Figure 27 • The left label shows design mode, the right two labels are two consecutive labels from print preview

Create Keyboard Entry Variable Fields

The content of a prompted field can be different for every print job. Before you print the label, you enter the value for the field.

1. To display a list of available variable types, click the small arrow next to the 

button in the **Toolbox**.

2. From the list, select **New Keyboard Input** and click on the label where you want to position the object.

   A dialog box with the Variable Wizard opens.

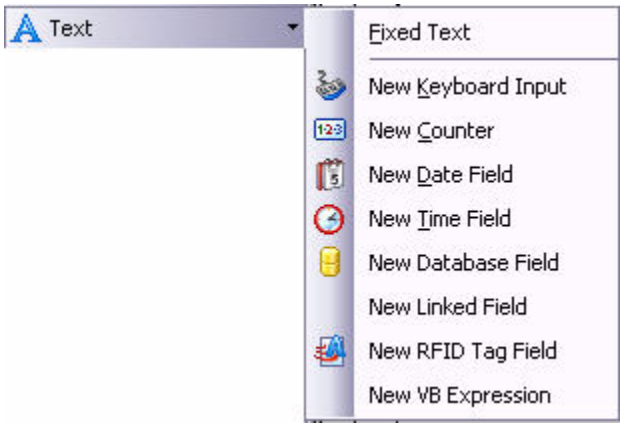
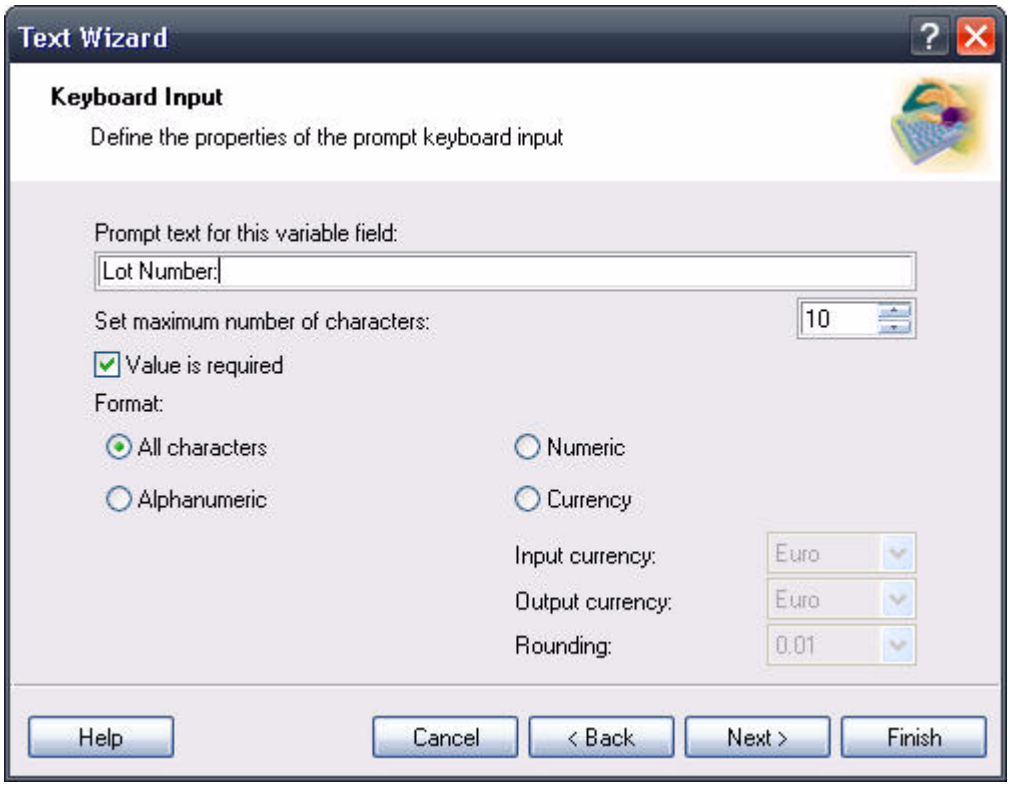


Figure 28 • Creating new keyboard input variable field

Note • Some of the entries in the image are only available in ZebraDesigner Pro.

3. Type *Lot Number:* to define the prompt that the user will see at print time.



4. Click the **Finish** button.

   The text object is placed on the label and linked to the new variable.

   Note • When you print the label, you are prompted to enter the product name, which is shown in preview on the label and on the printed label.

Create Serialized Data Variable Fields (Counters)

Now create a counter field on the label. The value of that variable field automatically increases by one on every label. Typically, the counter increases by 1 on each label. For example, 1, 2, 3, 4, 5, etc. You can also define different incremental steps.

1. To display a list of available variable types, click the arrow in the

button in the **Toolbox**.
2. Select **New Counter** from the list. The Cursor changes to an arrow with a text object.
3. Click on the label where the counter field should be placed.

A dialog box with counter properties opens.

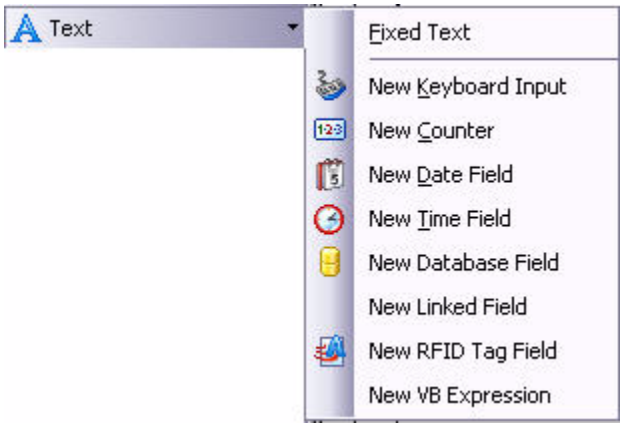
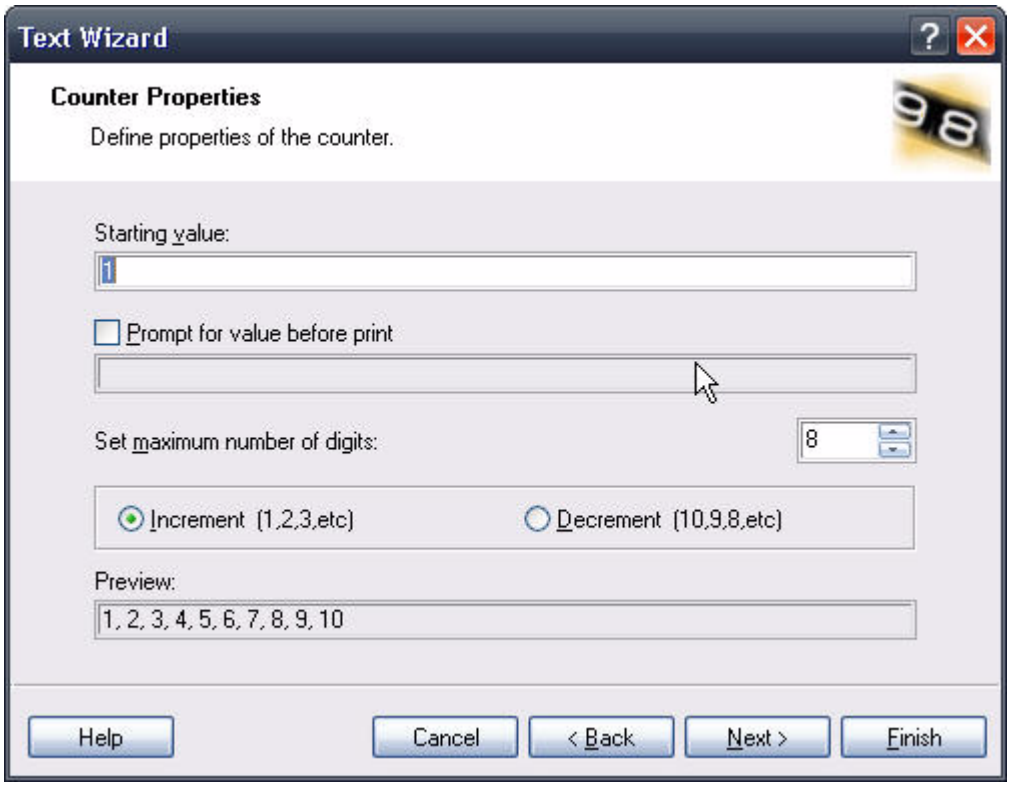


Figure 29 • Creating new counter variable field

Note • Some of the entries in the image are only available in ZebraDesigner Pro.

4. Leave everything as default so that the counter will always start from 1 and increase by one on each label.



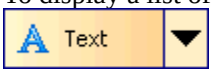
5. Click the **Finish** button.

   The new variable is linked to the text object on the label.

   Note • The use of hardware counters in linked fields is only supported in EPL printers. Using hardware counters in any other printers will result in the counter being removed from the list of linked fields. If the label is created for an EPL printer, all internal counters in linked fields are converted to software counters.

Create Date and Time Variable Fields

Content of the variable field can be filled automatically with the date or time stamp from the computer clock or printer clock (for supported printer models).

1. To display a list of available variable types, click the small arrow next to the 

button in the **Toolbox**.

2. From the list, select **New Date Field**. A dialog box with date properties opens.

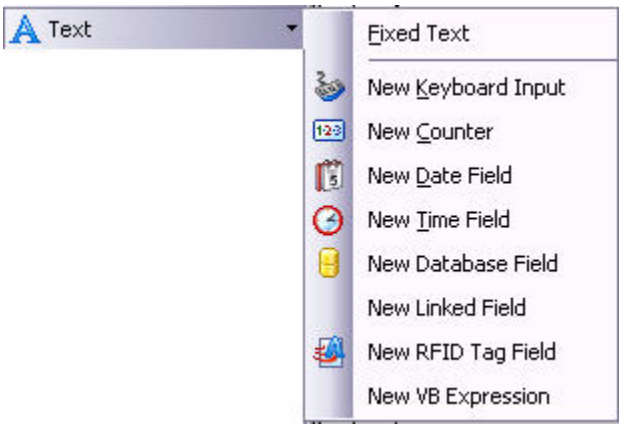
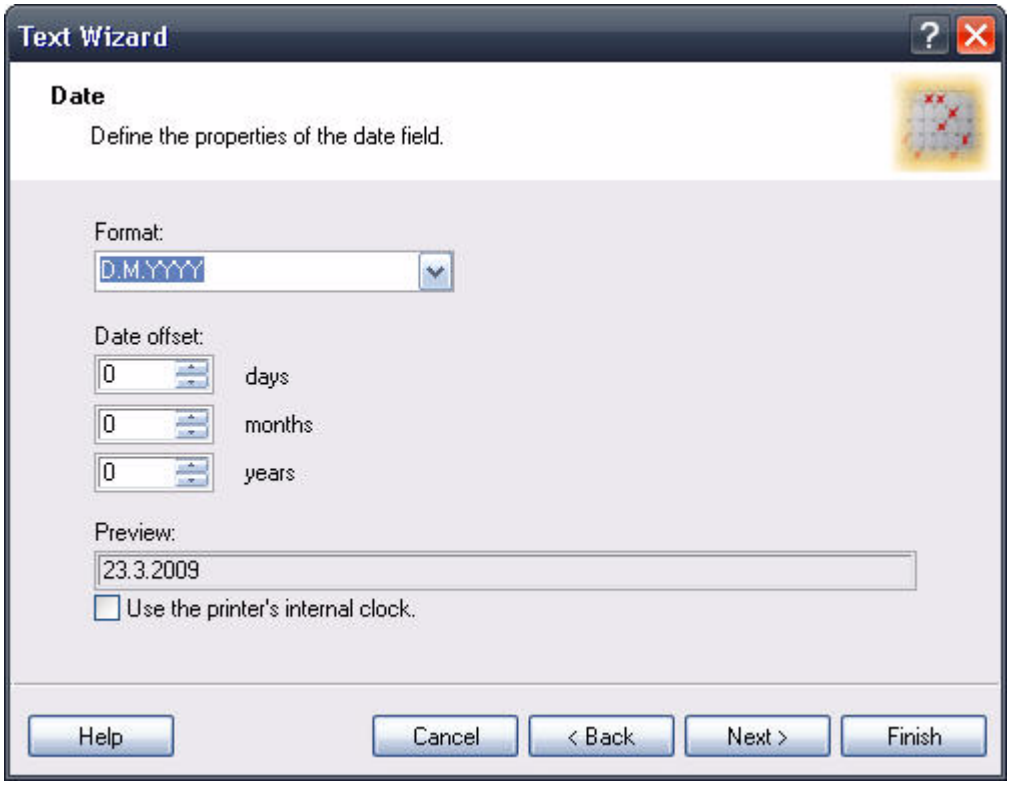


Figure 30 • Creating new variable date field

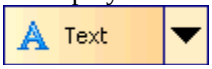
Note • Some of the entries in the image are only available in ZebraDesigner Pro.

3. Leave everything as default, and the date will be used on the label using the format as defined in your Windows operating system.



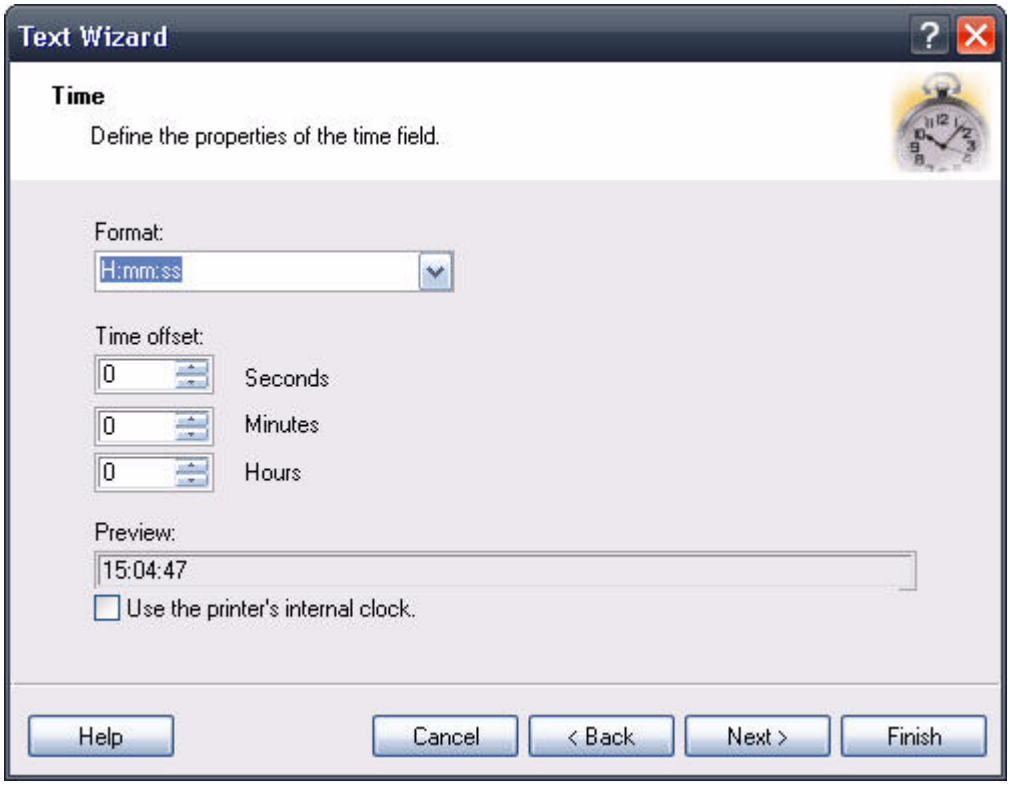
4. Click **Finish**.

To place a time field on the label:

5. To display a list of available variable types, click the small arrow next to the 

button in the **Toolbox**.

6. From the list, select **New Time Field**.
7. Click on the label where the counter should be placed.
8. Leave everything as default and the time will be used on the label using the format as defined in your Windows operating system.



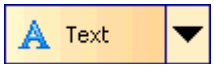
9. Click **Finish**.
   The new variable is linked to the text object on the label.

The date and time fields are updated when you preview or print the label. In this example, the values come from your computer's system clock.

Use Prefix or Suffix Options

You can add a prefix and suffix to each variable field on the label. Both are added to the value when you preview and print the label.

To add the suffix to the variable field on the label, do the following:

1. To display a list of available variable types, click the arrow in the 

button in the **Toolbox**.
2. From the list, select **New Keyboard Input**. A dialog box with variable properties will open.
3. Type the text *Enter product weight* for the **Prompt text for this variable field** option.
4. Set the **Format** to **Numeric** and click **Next**.

5. Enter *kg* for the **Suffix** option.

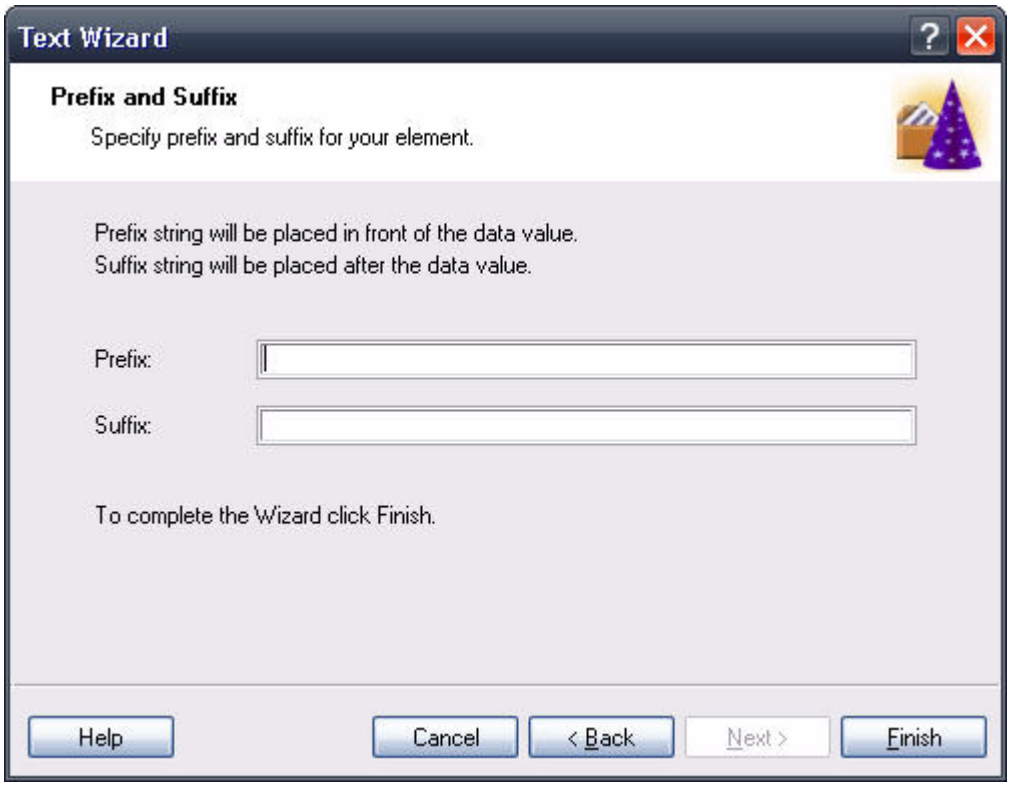


Figure 31 • Defining the prefix and suffix

Figure 32 • Defining the variable suffix

6. Click **Finish**.

7. Click on the label where you want to position the **Keyboard Input** field.
   The text object is placed on the label and linked to the new variable. When you preview or print the label, the suffix *kg* will be appended to the entered value on the right side.

Designing an RFID Smart Label

Overview

The concept of RFID (Radio Frequency IDentification) can be simplified to that of an electronic bar code. First emerging in the 1980's, RFID was primarily used to track objects in industrial environments where bar codes were unable to sustain the harsh surroundings. Today, RFID is being used to track proprietary assets, automate access control and has many more additional fields of usage.

Some thermal printers have the ability to program a RFID tag at the same time as they are printing the label. Two different technologies and their encoding methods are joined on the same label. Of course a label must have embedded a RFID tag. The tag is paper thin, flexible and small in size which allows it to be placed inconspicuously under the label. It consists of an etched antenna and a tiny chip that can store ID number or your custom data in larger quantities. This contrasts with a bar code label, which does not store any enhanced information, but merely some code number.

RFID refers to technologies that use radio waves to automatically identify individual or groups of items. The labeling software and ZebraDesigner driver support programming and printing of RFID tags embedded in a label.

Note • You can use RFID functionality in the labeling software only if you have installed a Zebra Driver with RFID support. Make sure you install the Zebra Driver for your RFID printer before you design and print an RFID smart label. RFID functionality is only available with ZebraDesigner Pro.

Create RFID Smart Label

1. Click on button in the **Standard toolbar**. Label Setup Wizard will start.
2. Select the printer that supports RFID smart label printing.

3. Click on the **Finish** button.

   You will see that **RFID Tag** command is enabled in the Toolbox on the left side of the label design environment.

Figure 33 • RFID Tag is available for use

4. Click on the **RFID Tag** option in the Toolbox and define the data you want to encode into the RFID tag.

Pro Only

Encode RFID Tag

The RFID tags embedded into the label are usually of two types: ISO tags, which encode blocks of data; or UHF tags, which can encode one string of data.

1. In the **Toolbox** to begin encoding the data, click on RFID Tag.

   The *RFID tag* dialog box opens.

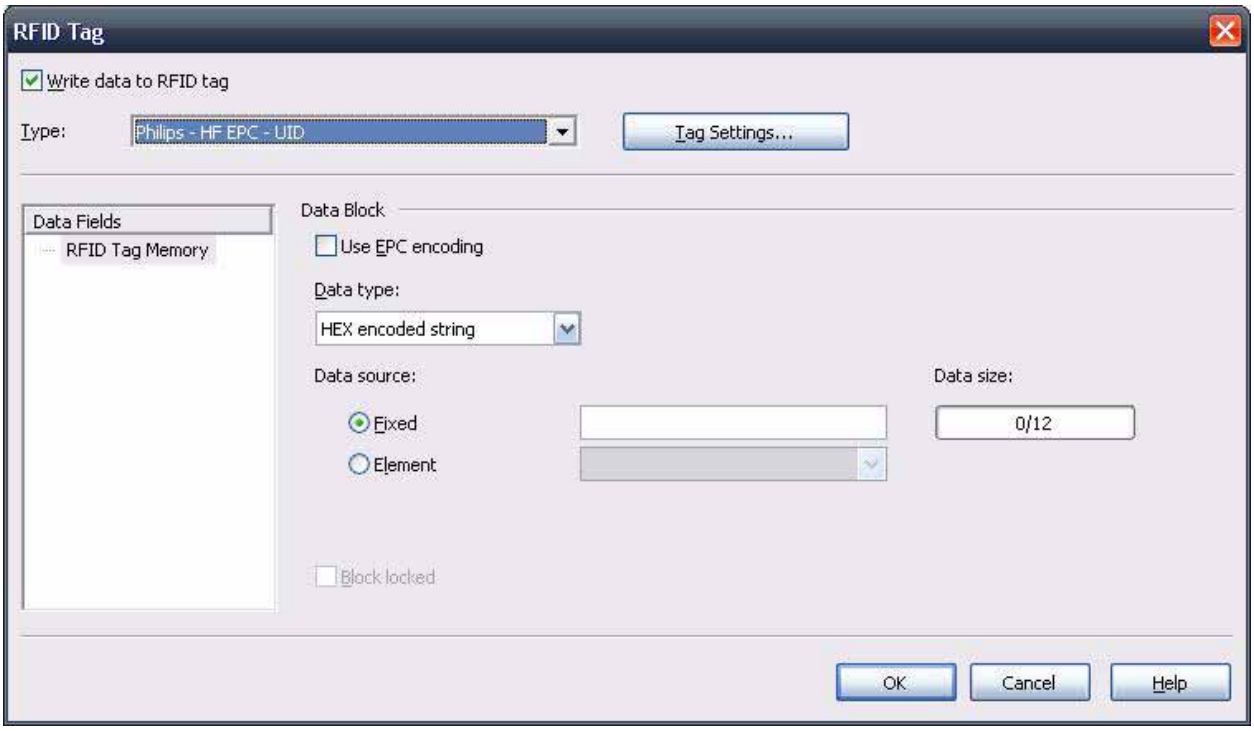


Figure 34 • Encoding contents for RFID Tag

2. Select the type of the RFID Tag you want to use from the list box on the top of the dialog box. Click on the **Tag Settings** button to review RFID tag contents and define the encoding advanced properties.

3. Enable the option **Write data to RFID tag** if you want to program the tag at the same time as the label is printed.

   Note • If you don't select this option, the definition of tag content is saved but not sent to the printer.

4. Select the appropriate entry from **Data Fields** section.
   For RFID Gen2 tags, you are able to select from different data fields. For other RFID tags usually only one data field is possible - RFID Tag Memory.

5. Go to the first available block in the section **Data Blocks** and click on the **Data** cell in the table.

   Note • You might not see the table-like structure. Instead you can see edit fields to enter the RFID data. The type of data that can be entered depends on the type of RFID tag that has been selected.

6. Type in the value you want to encode into this block. Repeat the process for other blocks.
7. Click on the **OK** button. A schematic view of the RFID Tag antenna will open in the label background identifying the definition of the RFID data on the label.
8. You can continue designing the smart label with non-RFID data as described in the previous sections.

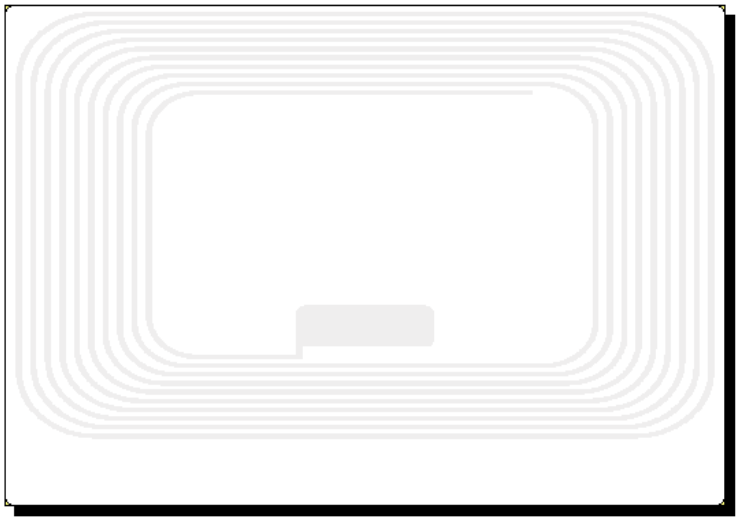


Figure 35 • RFID Tag antenna in the background

When you print the label, the RFID data will be sent to the printer. The printer prints the RFID smart label and programs the RFID tag embedded into the label at the same.

Note • The labeling software can work with Unique RFID Tag numbers. Each RFID tag has embedded a unique serial number. Some printers can read the Unique RFID Tag number and it can be used on the label linked with some label objects.

Support for RFID Tags

With the labeling software you can program RFID tags of different manufacturers. It is important to use a ZebraDesigner printer driver. You cannot program RFID tags, if you do not use the ZebraDesigner Driver.

ZebraDesigner Driver will let the labeling software know which types of RFID tags the printer supports.

Not all tag types are always available. The kind of RFID tags that will be available depends on the selected printer model. There are generally two types of tags:

- ISO tags (TagIt, iCode, ISO...): These are block oriented tags. The data can be encoded in multiple blocks.
- UHF tags (EPC): The data is encoded in one block of data.

You can input content for RFID tags using different methods, depending on the tag type (UHF or ISO).

For UHF tags

Data type: Data type of the selected tag can be specified here.

Data source: Incoming data that is encoded in the tag can be a fixed value or acquired from some variable, defined in the label.

Data size: The currently used data is previewed here. You can see the amount of space still available in the tag. The occupancy of the tag is seen graphically with growing bar and numerically with the digit, explaining the number of already used bytes.

Block locked: If you set the block as locked, the data will be permanently encoded into the tag. You will not be able to erase this block to re-program it with some other value. Use this option with caution!

For ISO tags

The blocks that are dimmed and inaccessible are reserved blocks that cannot be used.

Block Number: The successive number of block in the tag.

Data source: Select where the data block will receive the data from. It can be Fixed, where you will manually type in the data or can be Variable, where the value is acquired from some variable defined in the label.

Data: Type in the tag value manually, if the selected data type is Fixed. Select the variable defined in the label, if the selected data type is Variable. If your variable length is greater than the block size, the next block will automatically be reserved for the data.

Size: The currently used data is previewed here. You can see the amount of space still available in the tag. The occupancy of the tag is seen graphically with growing bar and numerically with the digit, explaining the number of already used bytes.

Data type: The data can be encoded as ASCII string or as HEX encoded string.

Locked: If you set the block as locked, the data will be permanently encoded into the tag. You will not be able to erase this block to re-program it with some other value. Use this option with caution!

RFID Tag Locking

Tag locking is not available for all tag types, printers, and drivers. If the **Locking Settings...** button is not displayed in the **RFID tag** dialog window, you may be using an unsupported RFID tag type, printer, or driver. The locking settings are available for some GEN2 tag types. For more information, see your printer and driver documentation.

RFID tag locking enables the user to lock the RFID tag, so that no changes can be made to it without unlocking the tag first. If the tag is permanently locked, it is not possible to unlock it, and the RFID tag can never be changed.

Preserve original locking setting: The original locking setting cannot be retrieved, but the default option assumes that the tag setting should remain unchanged.

Lock: The RFID tag is locked and further changes to it are prevented.

Unlock: The RFID tag is unlocked, so that it can be changed.

Relock: The RFID tag is unlocked, the changes are applied, and the tag is locked immediately after.

Permanent lock/unlock: Checking this box will apply your selection above permanently and prevent later changes to it. This setting cannot be undone.

RFID Tag Settings

Tag Information: This section provides the information about the selected tag type. You can see the structure of the selected RFID tag. The outlook of the information depends on the selected type of the tag. For RFID Gen2 you will see table-like structure with the information about the available data fields, number and size of the block, read or write support.

For other RFID tags, you can review the following structure:

Number of blocks: The number of blocks that are available in the RFID tag.

Reserved blocks: The number of blocks that cannot be accessed and used.

Block size: The size of each block (in bytes).

Unique RF Tag: This property is set to Yes, if you have the printer and/or the tag type that can provide you with the Unique Tag ID. Each tag has a unique ID encoded already in the production line. If your printer can read this information from the tag, you can use it with the label objects using **RFID Tag Contents** contents provider.

For example: The printer scans Unique Tag ID, remembers it and prints it on the label encoded in a bar code element. The value of Unique Tag is never returned to the labeling software. It is handled internally by the printer.

RFID Tag Data Read: This property is set to Yes, if you have the printer and/or the tag type that allows the extraction of the encoded data. You can extract all or part of the data encoded in the RFID tag and use it with the label objects.

Tag Settings: This section provides more control for RFID programming.

Antenna offset: To achieve better programming accuracy use this option to define the offset for the antenna in the printer. The Offset is the distance from the antenna to the embedded tag on the label. This option will help you program the tags more accurately.

Maximum tags to stop: When the programming of the RFID tag fails, usually the word "VOID" is printed on the label. With this option you can specify how many tags can be programmed incorrectly. The option can be used as a precaution measure to prevent endless consumption of labels.

Number of retries: The number of times the printer will try to program the tag if first attempt fails. The parameter is sent to the printer with the rest of the data.

Check for a valid tag: Before the tag programming begins, the printer will verify if there is a proper RFID tag available in the smart label. The printer will also verify if the tag can be programmed at all. If the printer cannot check the currently selected RFID tag, the option will not be accessible.

Verify data write: Once the data has been encoded into the RFID tag, the printer will check if the written data is equal to the original value.

Electronic Article Surveillance (EAS) settings

EAS is not available for all printers and drivers. If your RFID Tag Settings do not include EAS Settings, you may need to update your printer driver or select a different printer. For more information, see your printer and driver documentation.

Preserve original EAS setting: The original EAS setting cannot be retrieved, but the default option assumes that the tag setting should remain unchanged.

Enable EAS: Enable Electronic Article Surveillance in the RFID tag. If this was the original setting, the tag will remain unchanged.

Disable EAS: Disable Electronic Article Surveillance in the RFID tag. If this was the original setting, the tag will remain unchanged.

Permanently lock EAS tag setting: Checking this box will permanently lock the chosen setting for the EAS. This lock cannot be undone.

Change Printer Settings

Change Common Printer Settings

When you start designing a label, tell **ZebraDesigner Pro** what printer to connect the label to. Each label file remembers the printer settings for the selected printer driver on the label.

This example shows you how to change the printing speed and darkness.

To change the printer settings, do the following:

1. From the **File** menu, select **Printer Settings**.
   The window with the printer settings opens.
2. Open the **Options** tab.
3. Change the **Speed** and **Darkness** options.
4. Click the **OK** button.
5. To save the label, click the button in the Standard toolbar, or from the menu select **File > Save**.

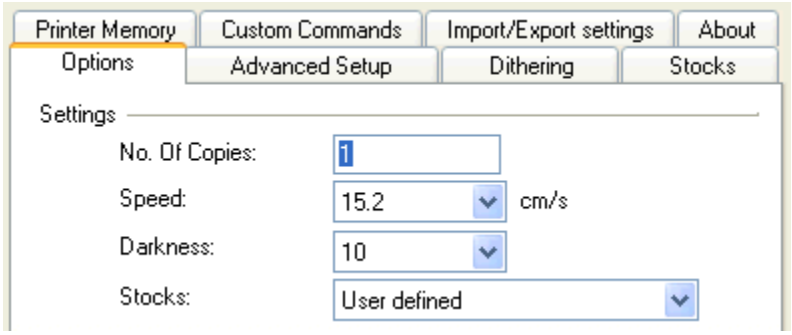


Figure 36 • Printer driver properties

Note • Any changes in the printer settings dialog box will be saved to the label and applied to future print actions.

Change Dithering Options

Dithering is a process of converting color or gray scale pictures to black and white pictures that can be printed on thermal printers. Thermal printers normally cannot print color images and can either print a dot on the label or not. There are no intermediate shades of gray.

During the dithering process all colors and shades of gray in the picture are converted to black and white dots, creating the illusion of new colors and shades by varying the pattern of dots. Different shades of gray are produced by varying the patterns of black and white dots. There are no gray dots at all. In printing, dithering is usually called halftoning. Shades of gray are called halftones.

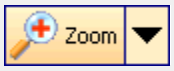
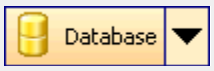
To change the dithering settings, do the following:

1. From the **File** menu, select **Printer Settings**.
   The window with the printer settings will open.
2. Open the **Dithering** tab.
3. Change the **Dithering Type** option to suit your needs. Look at the preview on the right side to see the result of your selection on the label.
4. Click the **OK** button.
5. Save the label by clicking the button in the Standard toolbar or selecting **Save** in the **File** menu.

Using Toolbars

Use the Standard Toolbar

Click on the buttons in the standard toolbar to execute the following actions:

	Create new label
	Open existing label
	Save currently opened label
	Cut the selected objects to clipboard
	Copy the selected objects to clipboard
	Paste the objects from the clipboard
	Undo last action
	Redo last action
	Access to the print functionality. Click on the small arrow in the toolbar for more commands
	Access to the zoom functionality. Click on the small arrow in the toolbar for more commands
	Access to the view functionality. Click on the small arrow in the toolbar for more commands
	Access to the databases. Click on the small arrow in the toolbar for more commands
	Open the help file

Use the Toolbox

To use the Toolbox, do the following:

1. Click on the icon in the **Toolbox** to select the object.
2. Move the mouse over the label. Notice how the cursor has changed.
3. To place the selected object, click on the label where you want to place the object.

Some objects have additional shortcuts on the right side of the icon. Using this shortcut, you can quickly create a new object with fixed content, create a new variable and connect it to the selected object, or connect the object to one already defined variable.

Use the Text Toolbar

You can use the text toolbar to quickly format the text objects on the label.

To format text objects, do the following:

1. Select the text object by clicking it.
2. Click the appropriate shortcut button in the text toolbar.
3. To change the font, select the appropriate font from the list in the list box.

   Note • You can limit the display of fonts in the list. You can list all fonts on the system, only graphic fonts (TrueType, OpenType, Type 1, bitmap Windows fonts,) or only thermal printer resident fonts. Click on the two icons next to the list of fonts.

4. To change the size of the text, click on the list with font sizes and select the appropriate size. You can also click on the and buttons that will increase/decrease the size of the font to the next size.

   Note • You can also change the fonts size directly on the label by resizing the text element with a mouse.

5. To format the text bold, italic, or underline, click on the appropriate formatting buttons.

	Formats the selected text in bold style
	Formats the selected text in italic style
	Formats the selected text in underline style

6. To change the alignment of the text object, click on the appropriate alignment buttons.

   Note • These buttons are accessible only for multi-line text objects.

	Aligns text to the left edge
	Aligns text to the horizontal center
	Aligns text to the right edge

Use the Design Toolbar

The design toolbar is used for:

- Changing color of the objects.
- Aligning objects.
- Rotating objects.
- Arranging objects.

Working with Objects

Defining Objects

Define the Text Object

To place the text object on the label, do the following:

1. In the **Toolbox**, click the **Text** button.
2. Click the position on the label where you want to place the object.
   The *Text Wizard* dialog box opens.
3. Define the contents for the text object.
4. To advance to the next step of the wizard, click the **Next** button.
5. Follow the onscreen instructions in the next steps.
6. Click the **Finish** button.

   Note • To edit the object, select it, then double-click it. The wizard with properties appears.

Define the Bar Code Object

To place the bar code object on the label, do the following:

1. In the **Toolbox**, click the **Bar Code** button.
2. Click the position on the label, where you want to place the object.
   Bar Code Wizard dialog box opens.
3. Define the contents for the bar code object.
4. To advance to the next step of the wizard, click on the **Next** button.
5. Follow the onscreen instructions in the next steps.
6. Click the **Finish** button.

   Note • To edit the object, select it then double-click it. The wizard with properties appears.

Define the Picture Object

To place the picture object on the label, do the following:

1. From the **Toolbox**, click on the **Picture** object.
2. Click on the label where you want to place the picture.
   The *Graphics Wizard* dialog box opens.
3. Browse for the picture on the hard disk, then click the **Open** button.

   Note • To edit the object later, select it, and then double-click it. The wizard or dialog box with properties appears.

Define the Rectangle Object

To place the rectangle object on the label, do the following:

1. In the **Toolbox**, click the **Rectangle** button.
2. Click the position on the label where you want the upper-left position of the object to be set.
3. Drag in the bottom-right direction until the object size is correct.
4. The other method of positioning the rectangle object on the label is selecting the Rectangle tool and then clicking the label. A default-sized rectangle will appear, and you can resize it using handles around the object.

   Note • If you want to draw a square, grab a handle on one of the rectangle corners, simultaneously press and hold the Shift key, then resize the rectangle. A square will be drawn. For more useful shortcuts available in the software, see Shortcuts.
5. To move a rectangle to a different position, select it and drag it elsewhere on the label.

   Note • To edit the object, select it then double-click it. The dialog box with properties appears.

Define the Line Object

To place the line object on the label, do the following:

1. In the **Toolbox**, click on the **Line** object.
2. Define the line starting point by clicking the mouse at the start position.
3. Move the cursor to the end point while holding down the mouse button.
   A line will be drawn from the left to right side of the label.

   Note • To draw a vertical line, click the starting point and then drag the cursor in the up-down direction.

   Note • Database, Visual Basic Expression and RFID Tag Contents fields are only available in ZebraDesigner Pro.

Pro Only

Define the Ellipse Object

To place the ellipse object on the label, do the following:

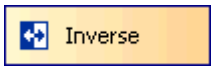
1. In the **Toolbox**, click the

button.
2. Click the position on the label where you want the upper-left position of the object to be set.
3. Drag to the bottom-right direction until the object size is correct.
4. The other method of positioning the object on the label is selecting the **Ellipse** tool and then clicking the label. A default-sized ellipse will appear, and you can resize it using handles around the object.

   Note • To draw a circle, grab a handle on one of the ellipse corners, simultaneously press and hold **Shift** key, then resize the ellipse. A circle will be drawn. For more useful shortcuts available in the software, see Shortcuts.
5. To move an ellipse to a different position, select it and drag it elsewhere on the label.

Define the Inverse Object

To place the inverse object on the label, do the following:

1. In the **Toolbox**, click on the 

button.
2. Click the position on the label where you want the upper-left position of the object to be set.
3. Drag to the bottom-right direction until the object size is correct.

   Note • To draw a square, grab a handle on one of the rectangle corners, simultaneously press and hold the Shift key, then resize the rectangle. A square will be drawn. For more useful shortcuts available in the software, see Shortcuts.
4. To move an inverse object to a different position, select it and drag it elsewhere on the label.

Using Text Wizard

Text Wizard

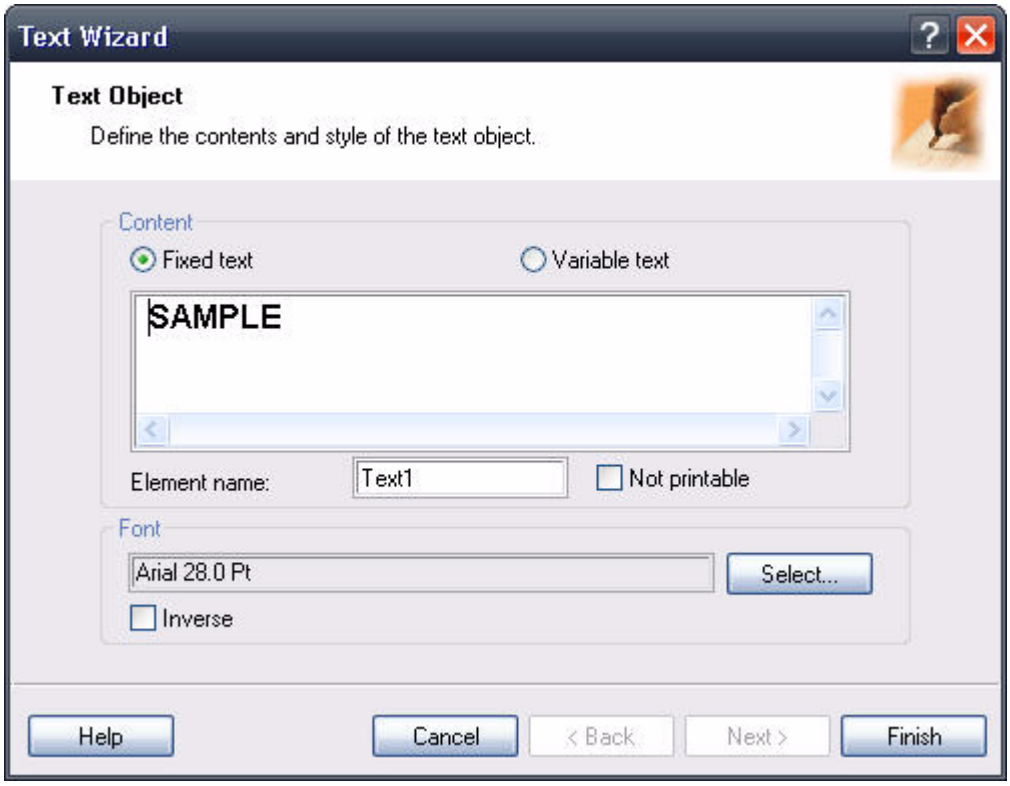


Figure 37 • First screen of Text Wizard

The Text Wizard guides you to define all parameters for the text object.

Fixed text: Select this option if you would like to have a fixed non-changeable content of the object. If you select this option, you can enter the text directly in this dialog box.

Variable text: Select this option if you would like to have variable content in the object. Defining the content is defined in the next step.

Element name: Each text object on the label has a unique name. You can refer to the names when you are linking fields together.

Not printable: If the object is marked as *not printable*, it is visible on the label during the label design but is not printed.

Font: Currently selected font type is shown in this field.

- **Inverse**: Enable this option to use the text in inverse.

  Note • The option is not available for all printers.

- **Select button**: You can select different font types for this text object among available fonts in the system.

Text Wizard - Choosing Variable Text

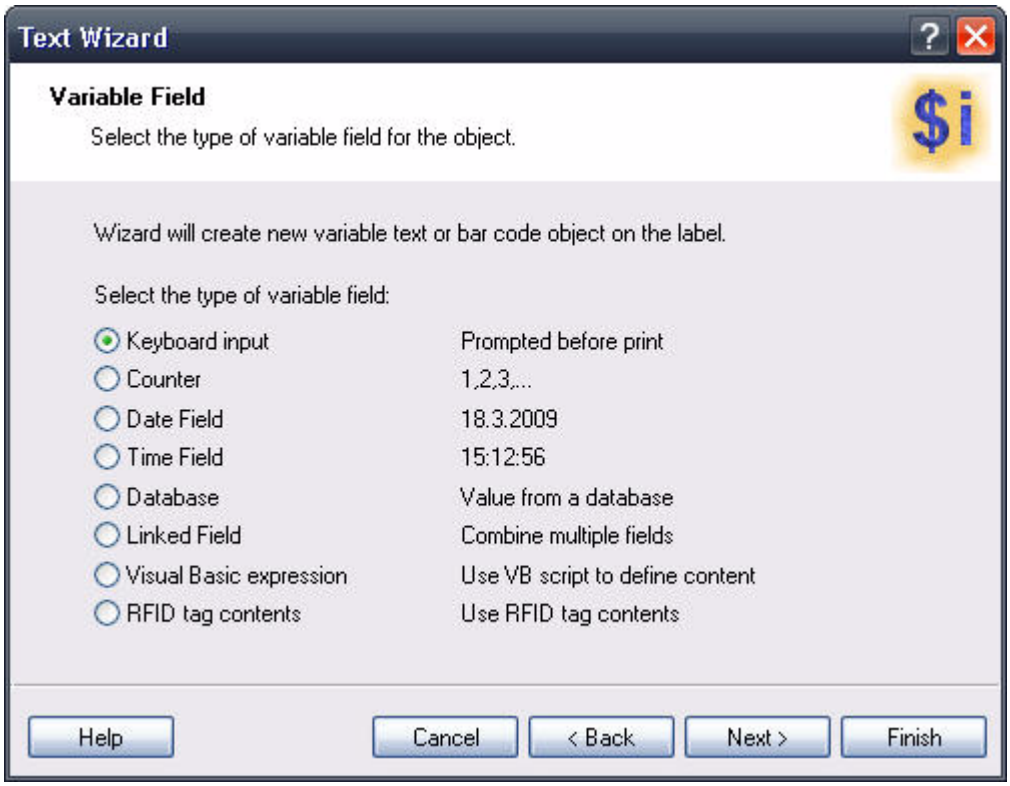


Figure 38 • Text Wizard - Choosing variable text

Pro Only

Note • The Database, Visual Basic expression, Linked Fields, and RFID tag contents field types are only available in ZebraDesigner Pro.

Select the type of the variable field you want to use.

The next page of the wizard depends on your selection here.

Text Wizard - Keyboard Input

Use this variable type when you want the operator to enter a value of the variable from the keyboard before printing the specified number of labels.

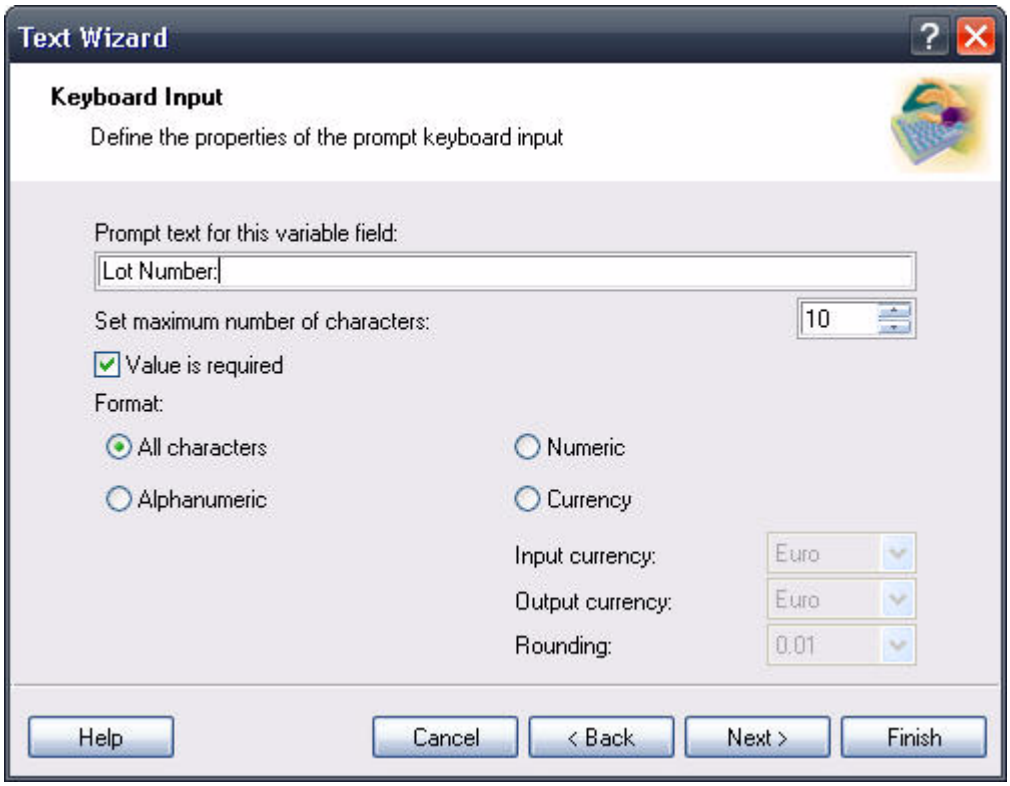


Figure 39 • Dialog box for Text Wizard when Keyboard input option is chosen

Prompt text for this variable field: Fill in the message that will be shown to the user when he enters the values for the variable field.

Set maximum number of characters: Define the maximum length of characters that can be entered for the variable field.

Value is required: Check this box, if you wish to set this variable value as a requirement for label printing.

Format: Select the format of data, currency, and rounding settings (if applicable) for the variable field.

Text Wizard - Counter

On this page of the wizard, you define the counter variable.

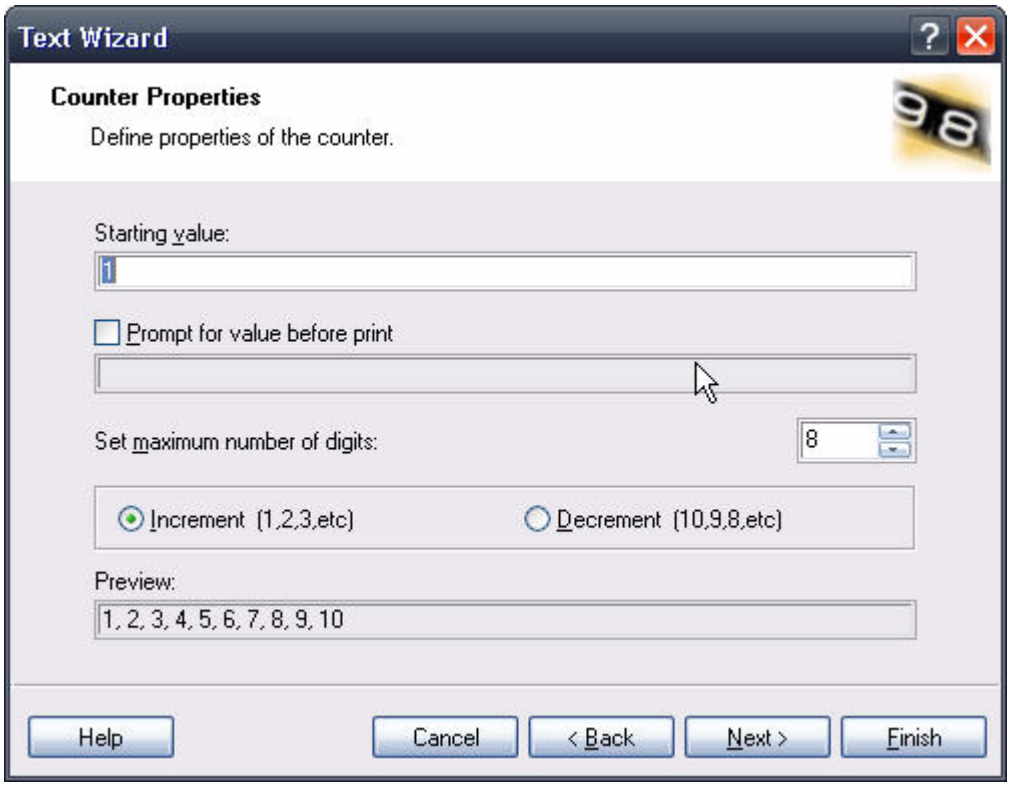


Figure 40 • Dialog box for Text Wizard when Counter option is chosen

Starting Value: Set the starting value for the counter. The counter will increment or decrement from the starting value.

Available counters: When adding a text object, the user is prompted to define whether this will be a fixed or variable value object. If the Variable action is chosen, and then the date or time option the user can decide between the computer time and value offsets. If the checkbox "Use the printer's internal counter" is checked, the variable counter will be set by the printer to the time of printing. The variable field must use a native printer font for the counter to work.

Prompt for value before print: Click this option to enable entering the starting value of the counter when you start printing labels. Enter the text that will be shown before printing.

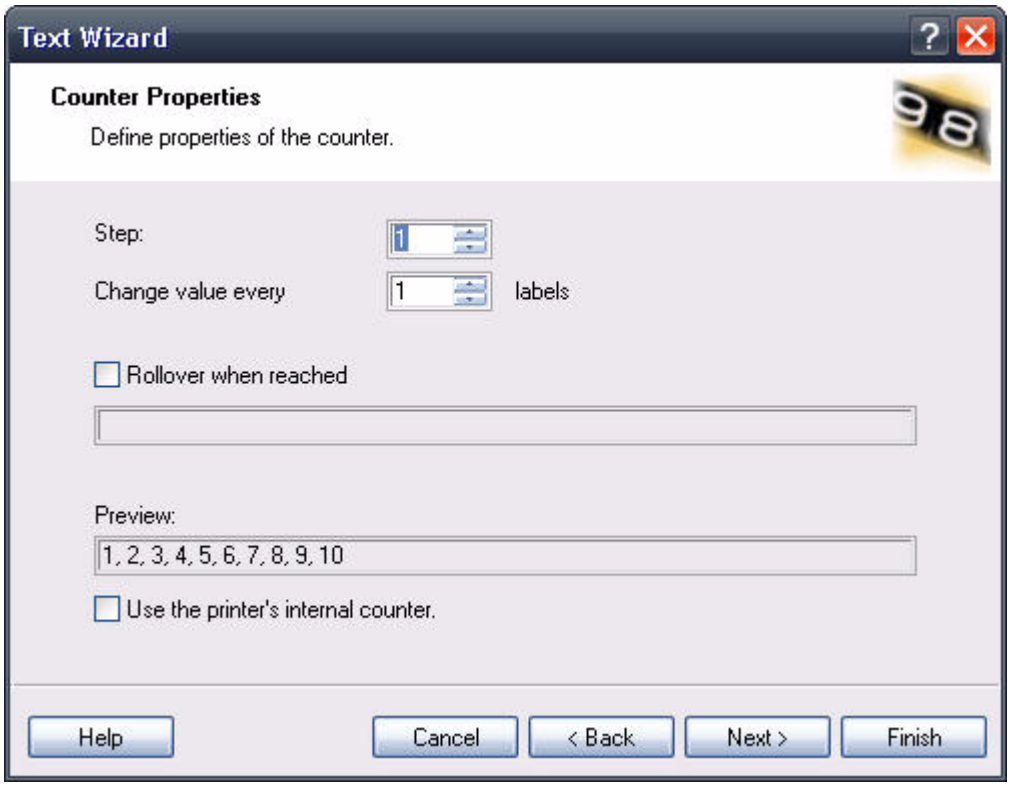
The message will be shown on the screen each time the label is to be printed.

Set maximum number of digits: Define whether the maximum length of digits the counter can occupy.

Increment or decrement: Define that the variable value will increase from label to label, or decrease.

Preview: The field shows the preview of the counter based on your selection.

Text Wizard - Counter Continuation



Step: Define the step for your counter. The counter will increase by this number on every label.

Change value every <n> labels: Define the number of label when the counter will change value.

Rollover when reached: Enter the value, which when reached, will cause the counter to reset the value to the starting value.

Use the printer's internal counter: Enable this option to use the internal counter built into the printer. Using this option increases printing speed by reducing the quantity of information exchanged between the computer and the printer.

Text Wizard - Date Field

Define the properties of the date field. The field will get the value from the computer clock.

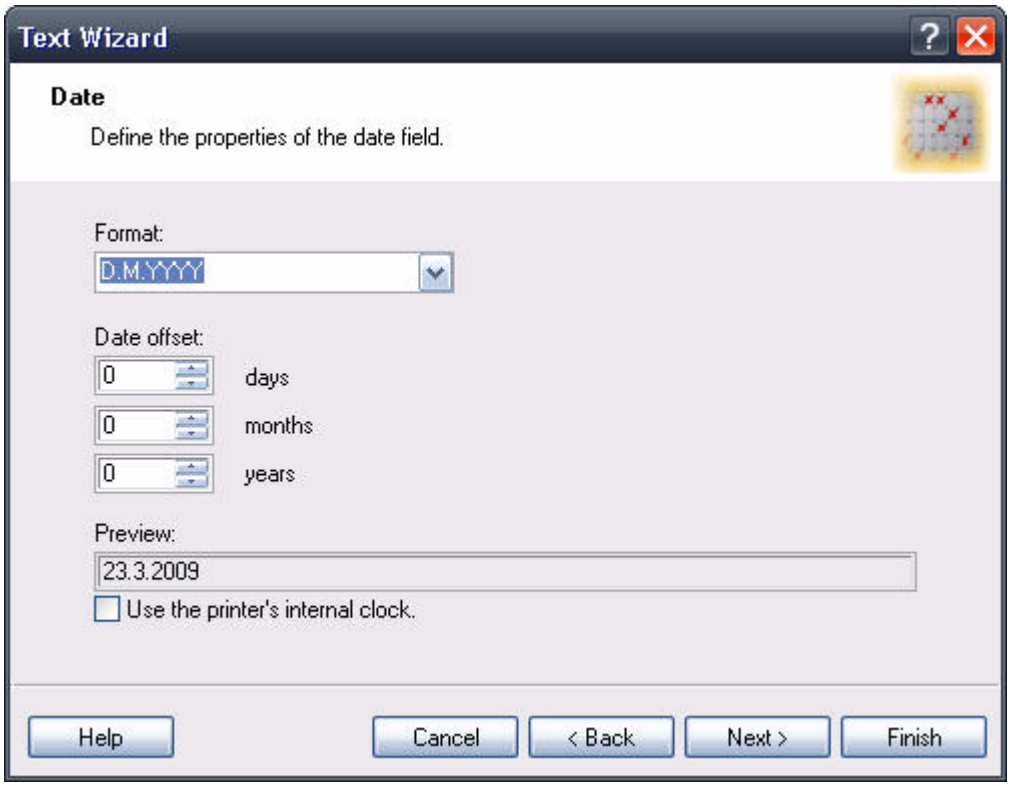


Figure 41 • Dialog box for Text Wizard when Date field option is chosen

Format: Select the format for your date from the list. You can also enter a custom format.

Date offset: You can add a certain number of days, months, or years to a current date and print that date instead of the current one.

Preview: The printer will print the date as shown on the *Preview* field. This allows you to see how the selected date format will look on the label.

Use the printer's internal clock: Enable this option to recall the date information from the real time clock (RTC) built in to the printer not the clock from the computer. The list of available date formats changes accordingly to the capabilities of the selected printer.

Note • You must format the current text object in an internal printer font to be able to use the *printer's internal clock* option.

Text Wizard - Time Field

Define the properties of the time field. The variable field will get the value from the computer's clock.

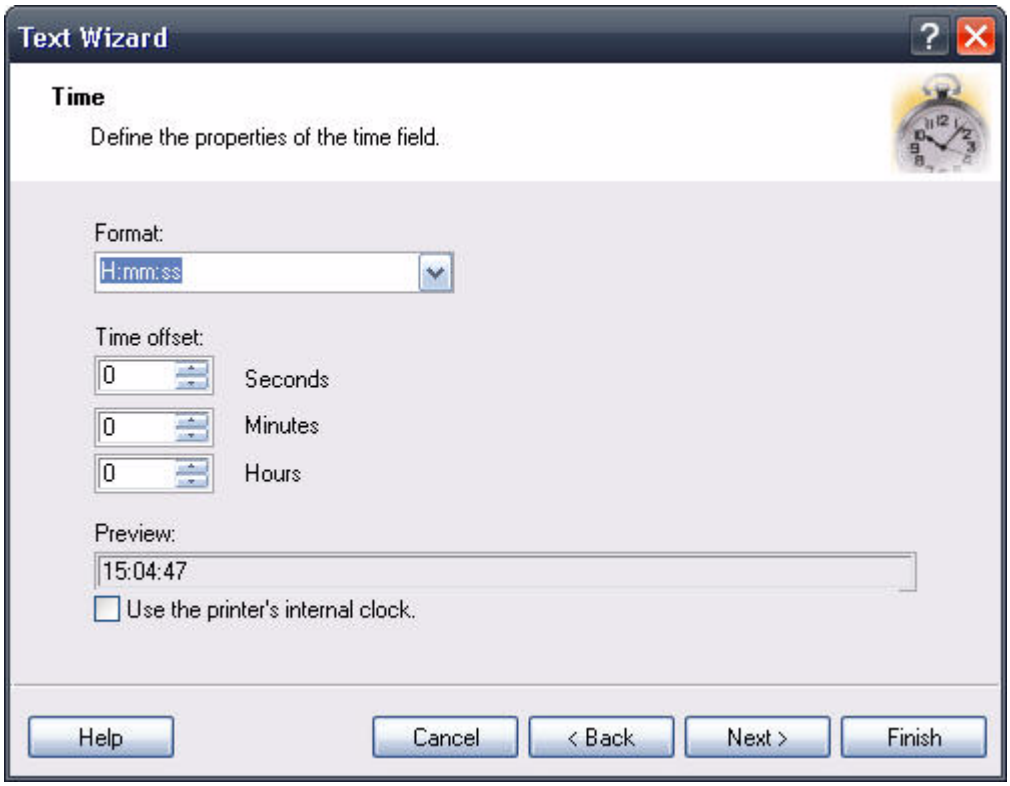


Figure 42 • Dialog box for Text Wizard when Time field option is chosen

Format: Select the format for the time from the list. You can also enter a custom format.

Time Offset: The time offset settings allow the time field to be offset from the system clock. Enter the duration for which you wish to increase or decrease the time on the label.

Preview: The printer will print the time as shown in the *Preview* field. This will allow you to see how the selected date format will look on the label.

Use the printer's internal clock: Enable this option to recall the time information from the Real Time Clock (RTC) built in to the printer not the clock from the computer. The list of available time formats changes accordingly to the capabilities of the selected printer.

Note • You must format the current text object in an internal printer font to be able to use the printer's internal clock option.

Pro Only

Text Wizard - Database

Variable field linked to a database gets the value from the specified database field.

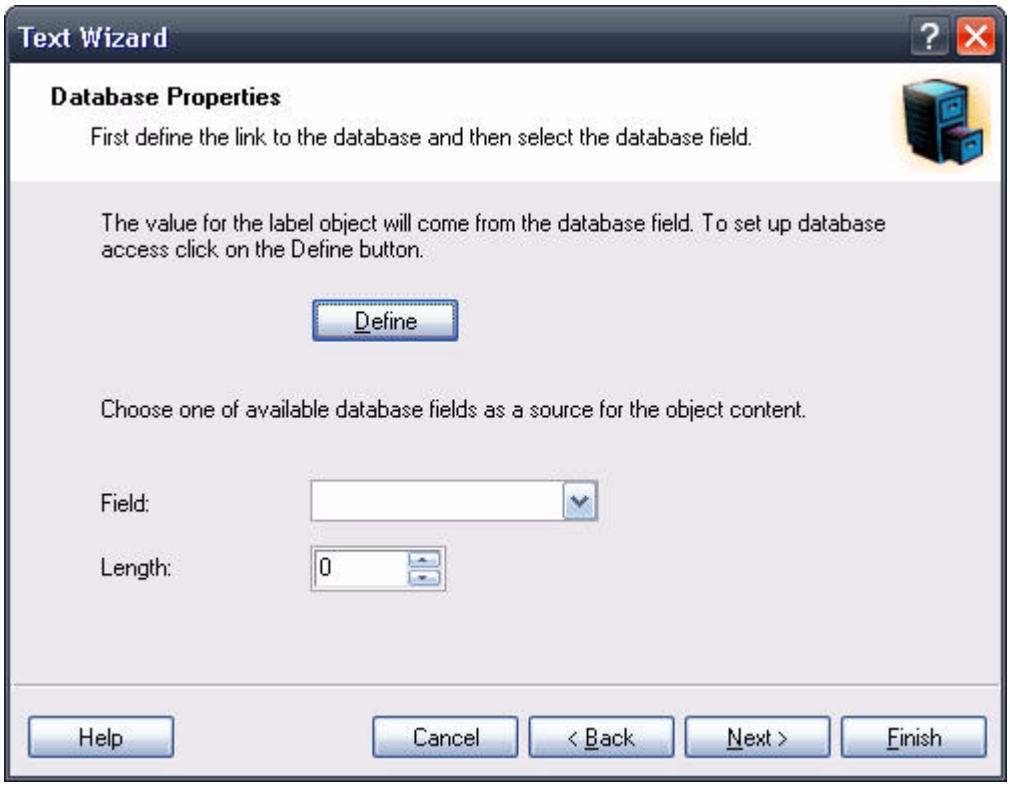


Figure 43 • Database Properties dialog

Define: Click this button to open the database wizard that will help you define the link to the database.

Field: Choose one of the available database fields as a source for the variable field.

Length: Define the maximum length of the string in the variable. If a field in the database contains more characters, they will not be printed. This option is useful if the field length in your database is not fixed (for example tab delimited ASCII file) or if you don't want to reserve space for all the characters in database's field.

Pro Only

Text Wizard - Linked Field

Select this type of field to merge the contents of selected variable fields into one field. The selected input variable fields are combined values and used as the value for the current object.

Note • Concatenated linked fields used with EPL-based printers can only be used with the Export to Printer function.

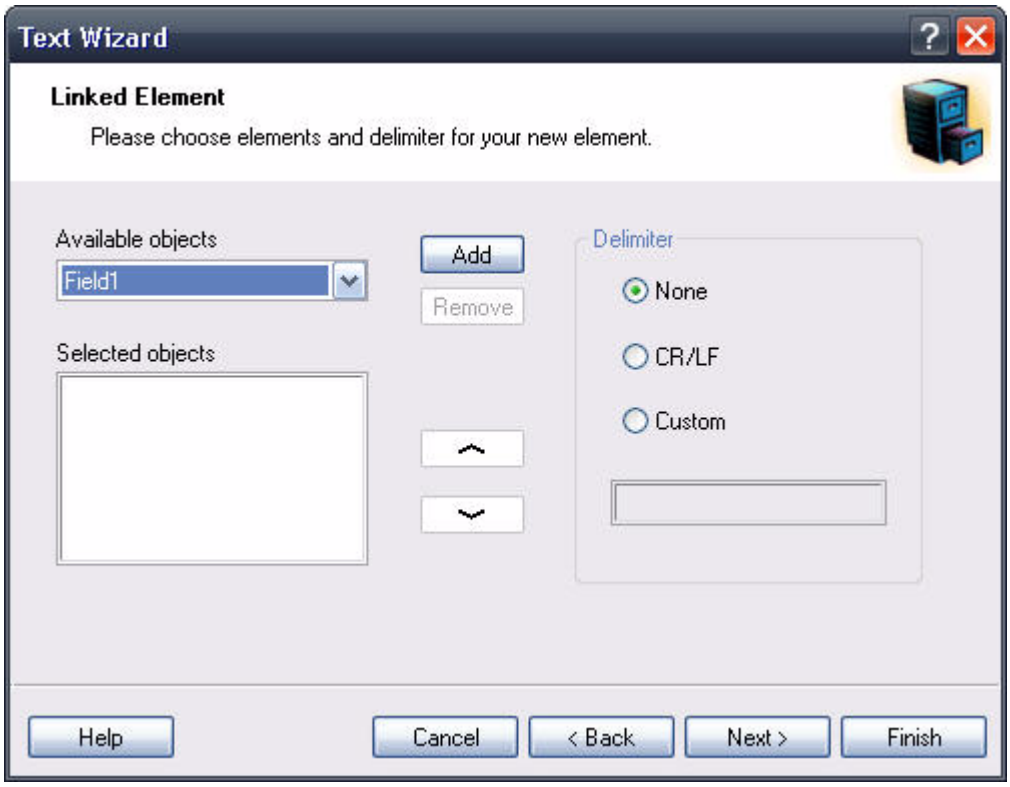


Figure 44 • Linked Element dialog

Available objects: The drop down menu contains the list of all defined variable fields on the label. You can select the fields and click the **Add** button to add them to the resulting field.

Selected objects: The **Selected Objects** list box contains the names of the selected variable fields, whose values are merged into the resulting field. Click the up and down arrow buttons to change the relative position of the selected variable fields within the merged value.

Delimiter: Select the optional separator character that will be included between the merged variable fields.

Note • When you are merging the variable field containing time or date value from the printer Real Time Clock, ensure the fields positioned before and after the Real Time Clock field do not exceed 31 characters.

Pro Only

Text Wizard - RFID tag Unique ID

Printers with RFID functionality can program RFID tags embedded in the labels. Each RFID tag has a unique ID number that was programmed into the tag during the manufacturing process. The Unique number cannot be altered, but the RFID-enabled printer can read it.

RFID tag Unique ID functionality allows you to read the unique ID number from the RFID tag and use the content with the selected bar code object. When the label is printed, the printer will first read the unique ID from the tag and then immediately use the value with the bar code object.

RFID tag Unique ID can only be used with the bar code objects that are printed as internal printer objects. You must format the bar code object to use internal fonts not TrueType fonts.

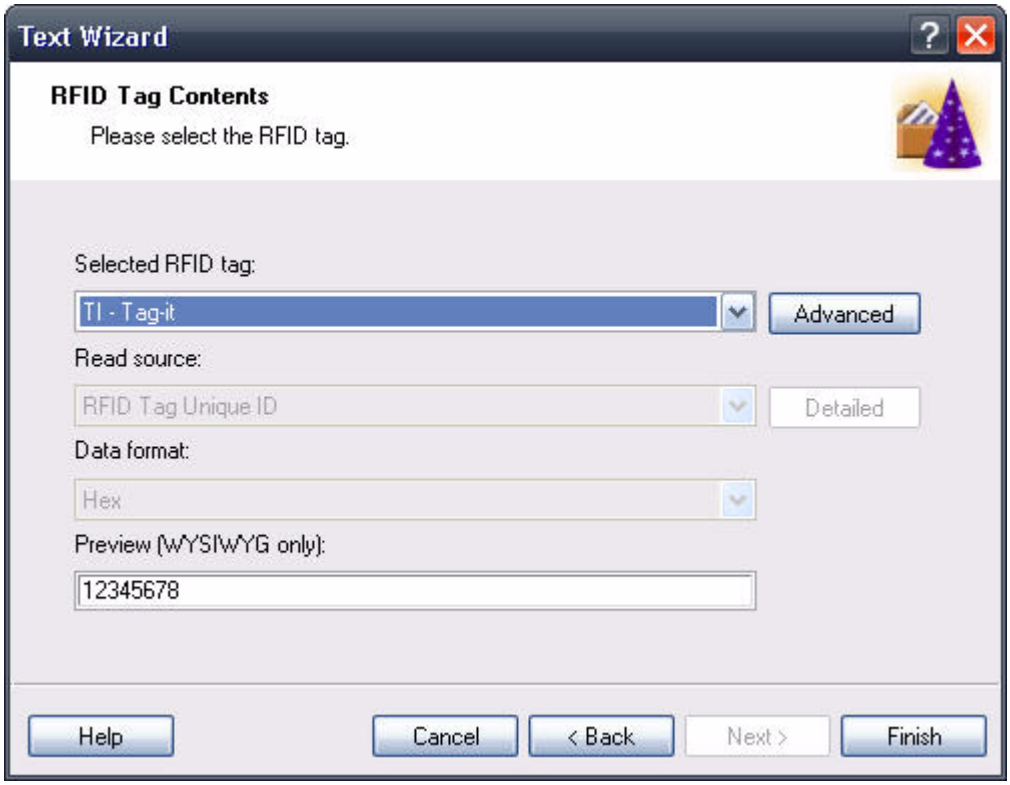


Figure 45 • RFID Tag dialog

Selected RFID tag: Select the tag from the list.

Note • Only tags supported by the currently selected printer are listed.

Read Source: Select the source of the RFID data.

Data Format: Select the format of the data.

Preview (WYSIWYG only): Because RFID tag Unique ID information is not returned to the labeling software, you do not see the actual data. Enter the data in a format similar to the format encoded in the RFID tag. This information will be used for preview on the label only.

Pro Only

Text Wizard - Visual Basic Expression

Select this type of field to manipulate your variable fields with the Visual Basic function. The result of the expression will be used with the current object on the label. You can define one-line expressions that must follow Visual Basic programming syntax.

Look at the samples in the dialog box for ideas of what can be done with the Visual Basic script.

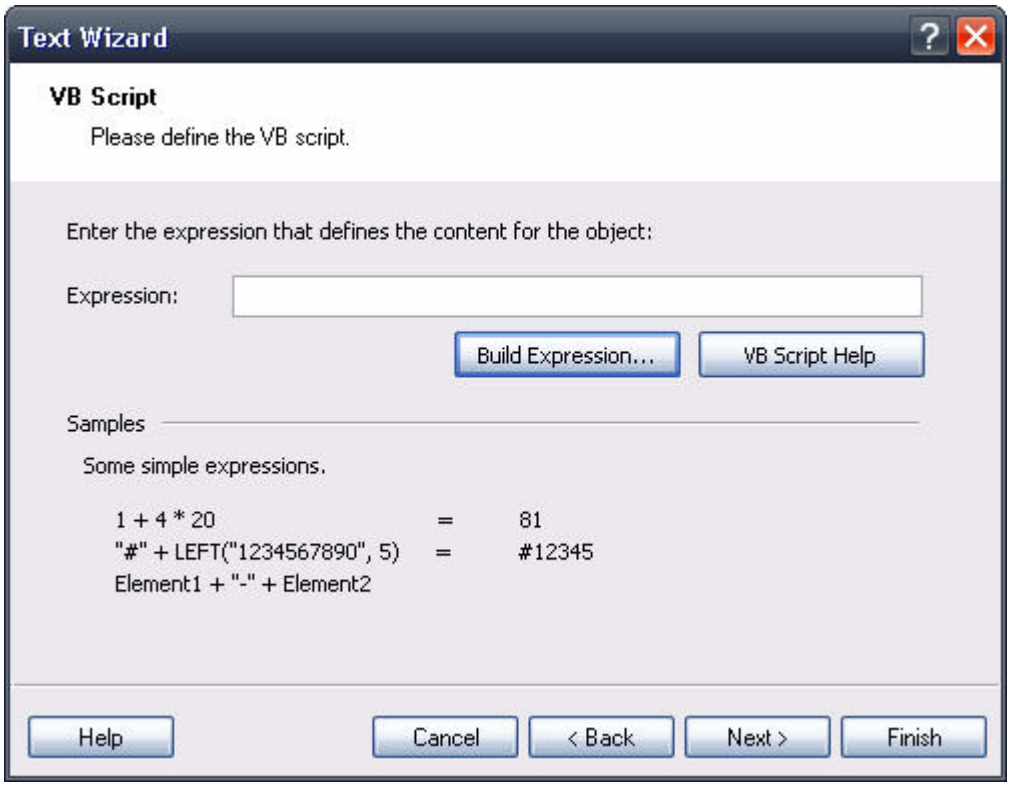


Figure 46 • VB Expression dialog

Expression: Enter the Visual Basic expression. Include the names of the variable fields in the straight quotes.

Build Expression: Click this button to open the Expression Builder text editor with reference to frequently used Visual Basic functions.

VB Script Help: Click this button to open the Microsoft help files explaining syntax and usage of Visual Basic scripting.

Example • The Visual Basic expression functionality can be used for merging text fields or to perform simple mathematical operations.

Text Wizard - Prefix and Suffix

The variable element can have prefix and suffix values. The prefix text is placed in front of the variables value. The suffix text is placed at the end of the variables value.

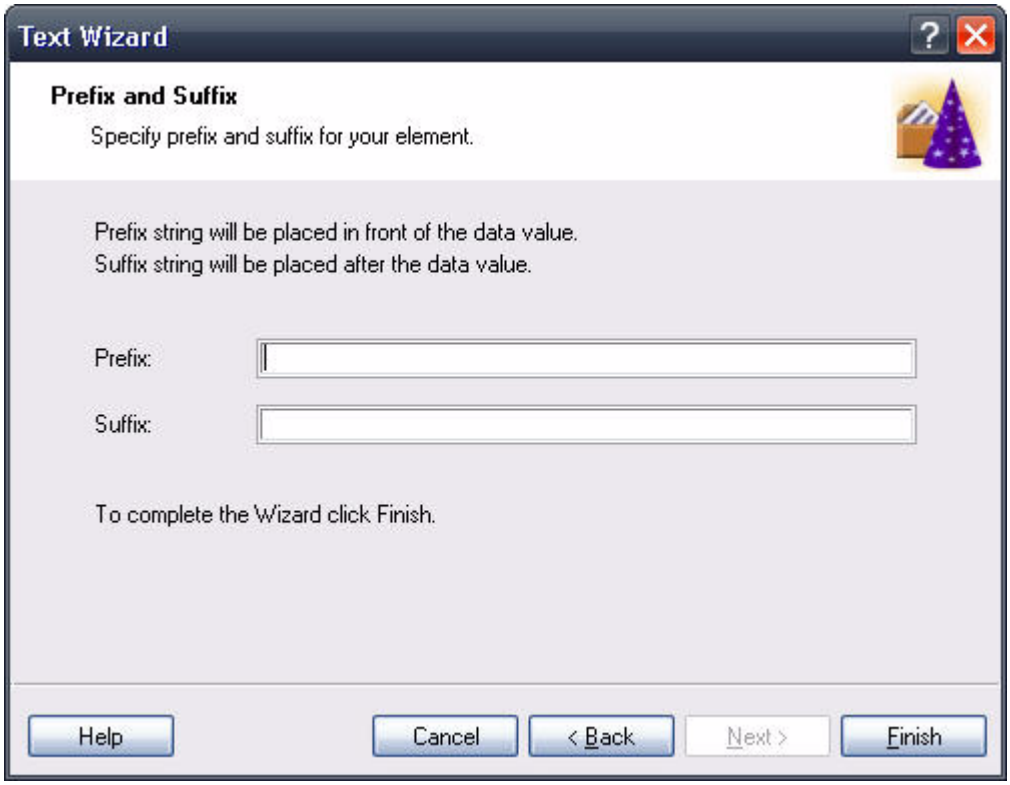


Figure 47 • Setting Prefix and Suffix string for the variable text element

Note • If you leave the edit fields empty, the prefix/suffix will not be used.

Prefix and suffix can be used in situations where they are required only if the variable has a value set. If the variable is empty, the prefix/suffix will not be printed.

Note • When you use the printer Real Time Clock for date or time fields, the length of prefix and suffix cannot exceed 31 characters.

Using Bar Code Wizard

Bar Code Wizard

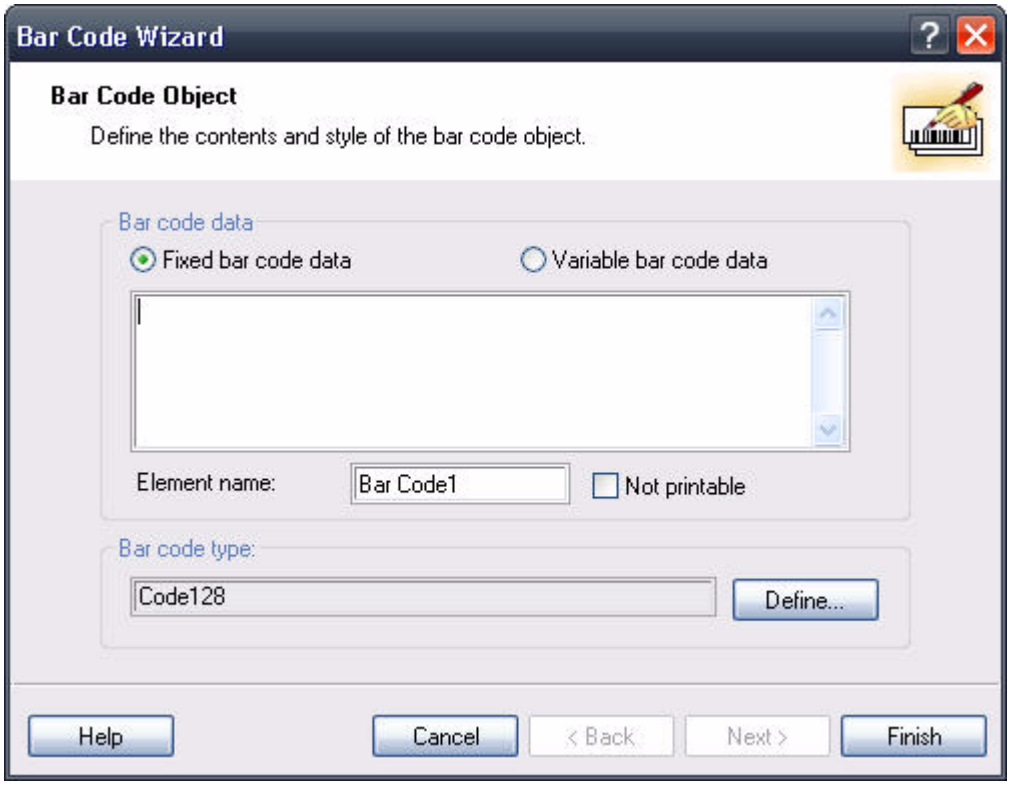


Figure 48 • First page of Bar Code Wizard

The Bar Code Wizard guides you to define all parameters for the text object.

Fixed bar code data: If you would like to have fixed non-changeable content for the text object, select this option. If you select this option, you can enter the text directly in this dialog box.

Variable bar code data: If you would like to have variable content for the text object, select this option. Defining the content is defined in the next step.

Note • When entering values for RSS composite bar codes, you need to provide the value for the linear and composite (2D) parts at the same time.

Use the following syntax for entering values for RSS composite bar codes. The pipe character (|) is used to distinguish between the components.

Syntax: <linear part>|<composite part>

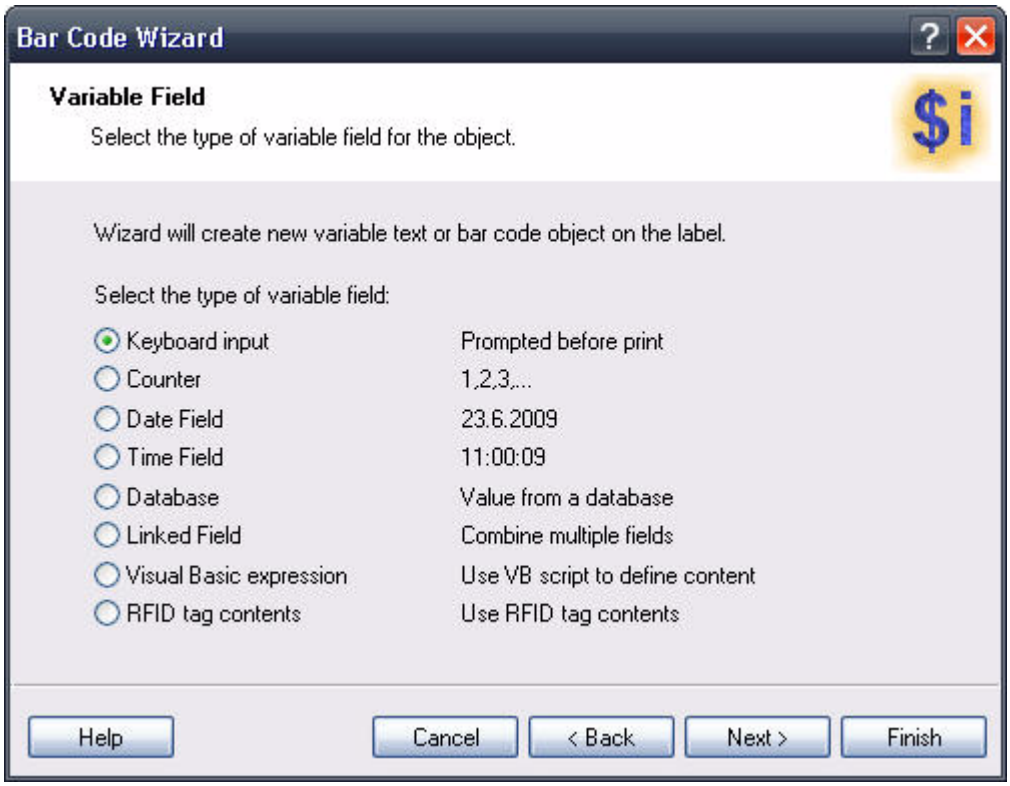
Example • 12345|description

Element name: Each bar code object on the label has a unique name. You can refer to the names when you are linking fields together.

Not printable: If the object is marked as *not printable*, it is visible on the label during the label design, but is not printed.

Bar Code Type: Click on the **Define** button to select the bar code type you want to use on the label.

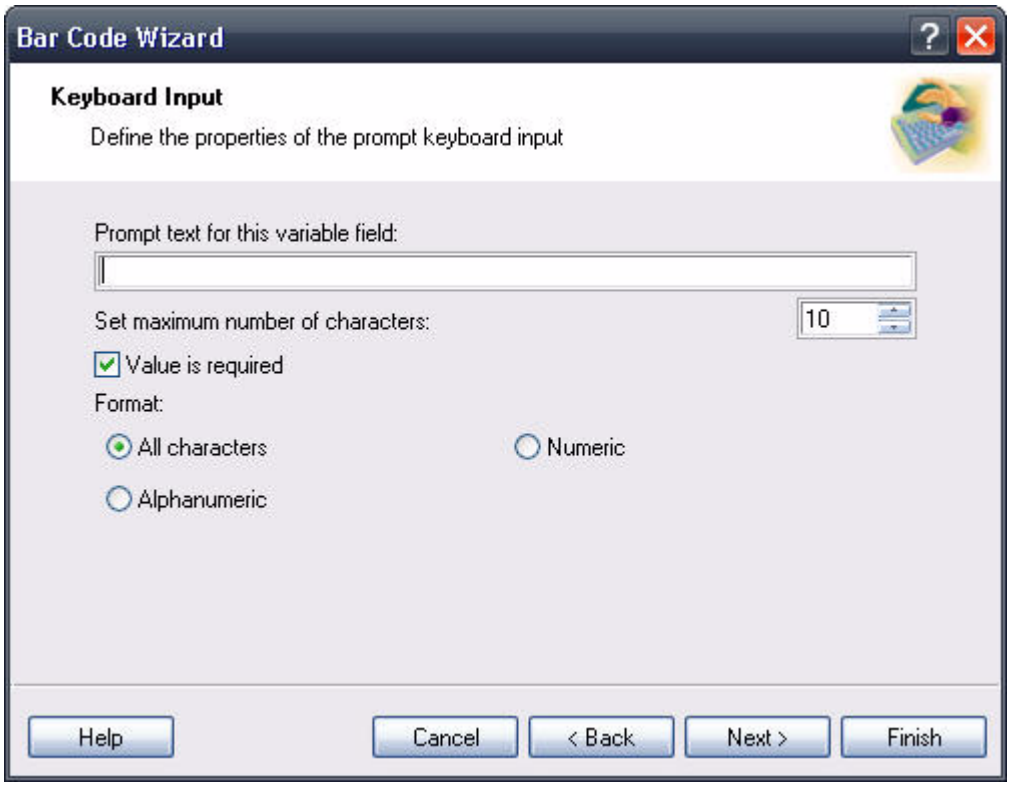
Bar Code Wizard - Choosing Variable Bar Code



Select the type of variable field you want to use.

The next page of the wizard depends on your selection.

Bar Code Wizard - Keyboard Input



Use this variable type when you want the operator to enter a value for the variable from the keyboard before printing the specified numbers of labels.

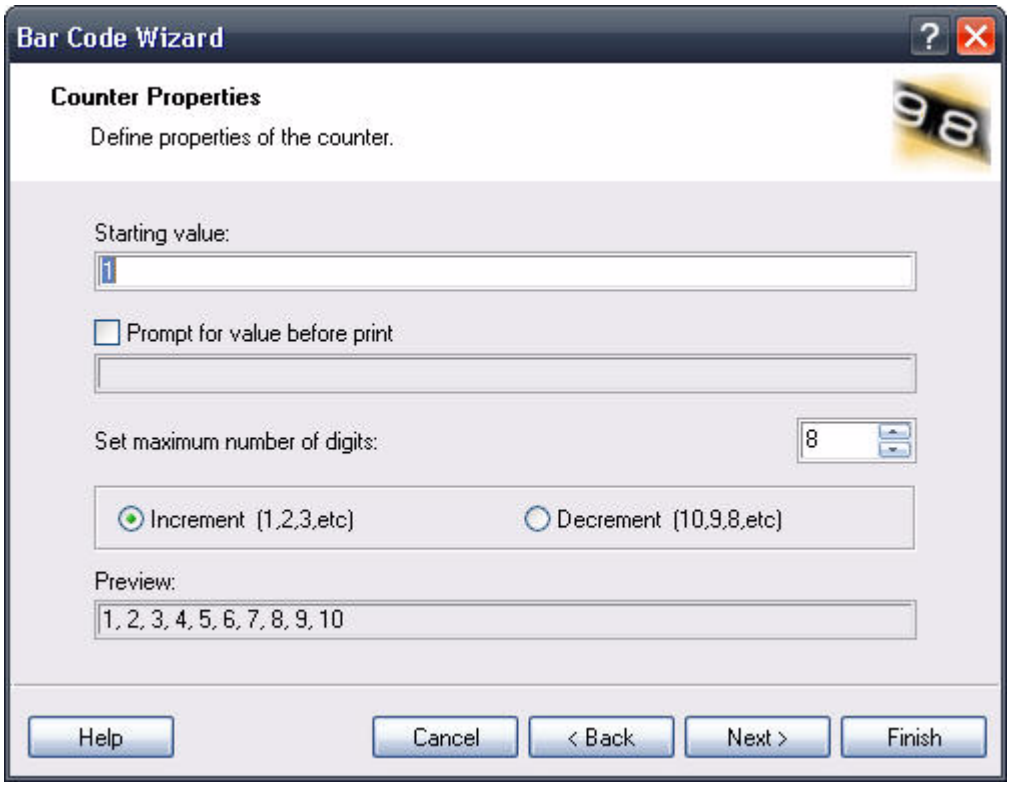
Prompt text for this variable field: Fill in the message that will be shown to the user when they enter the value for the variable field.

Value is required: User is require to enter a value for this field, if checked.

Format: Select the format of data you allow to be entered for the variable field.

Set maximum number of characters: Define the maximum length of characters that can be entered for the variable field.

Bar Code Wizard - Counter



On this page of the wizard, you define the counter variable.

Starting Value: Set the starting value for the counter. The counter will increment or decrement from the starting value.

Note • You can enter only digits for the starting value.

Prompt for value before print: Click this option to enable entering the starting value of the counter when you start printing labels. Enter the text that will be shown to the user before printing.

The message will be shown on the screen each time the label is to be printed.

Set maximum number of digits: Define the maximum length of digits the counter can occupy.

Increment or decrement: Define whether the variable value will increase from label to label or decrease.

Preview: The field shows the preview of the counter based on your selection.

Bar Code Wizard - Counter Continuation

Step: Define the step for your counter. The counter will increase by this number on every label.

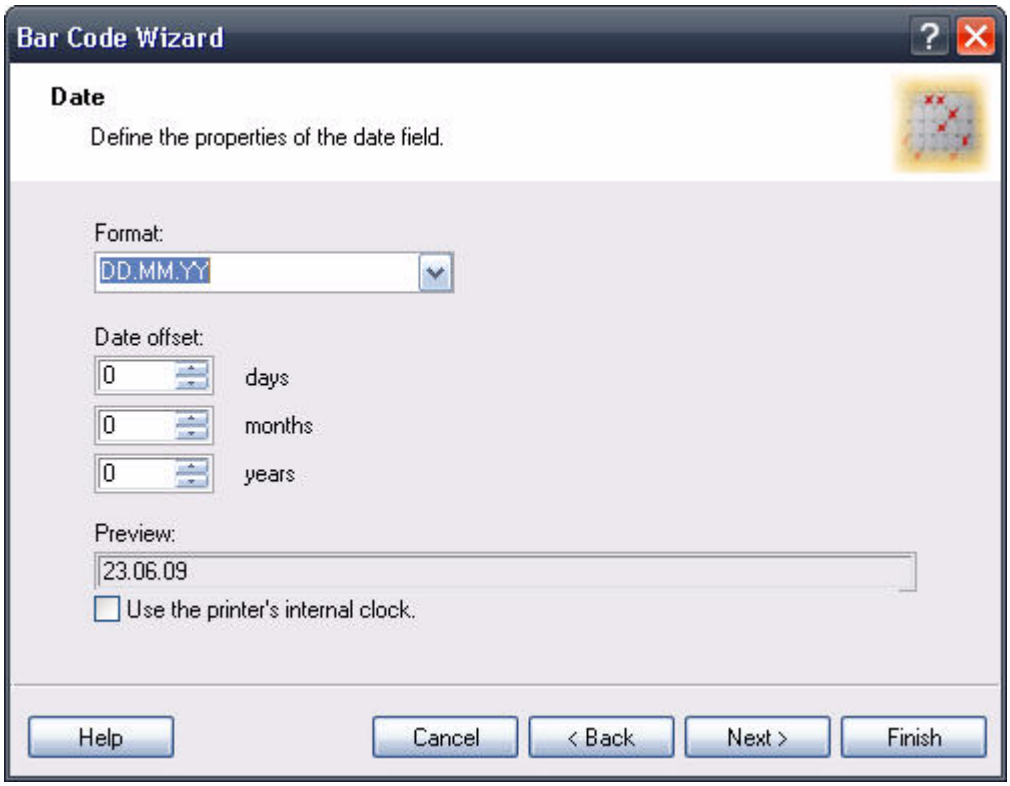
Change value every <n> labels: Define the number of labels, when the counter will change the value.

Rollover when reached: Enter the value, when reached, will cause the counter to reset the value to the starting value.

Preview: Shows the first 10 values of the serial number.

Use the printer's internal counter: The printer will increment the serial number.

Bar Code Wizard - Date Field



Define the properties of the date field. The variable field will get the value from the computer's clock.

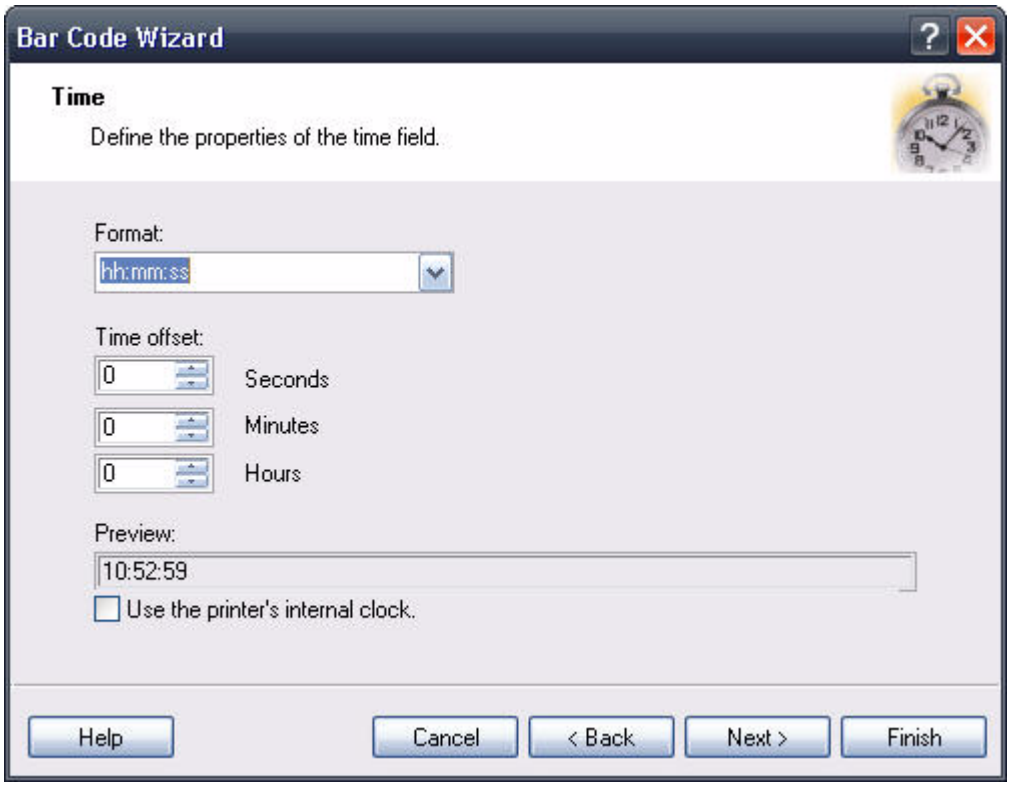
Format: Select the format for your date from the list. You can also enter a custom format.

Date offset: You can add a certain numbers of days, months, or years to a current date and print that date instead of the current one.

Preview: The printer will print the date as shown in the Preview field. You can see how the selected date format will look on the label.

Use the printer's internal clock: The printer's internal clock for the field data.

Bar Code Wizard - Time Field



Define the properties of the time field. The variable field will get its value from the computer clock.

Format: Select the format for your date from the list. You can also enter a custom format.

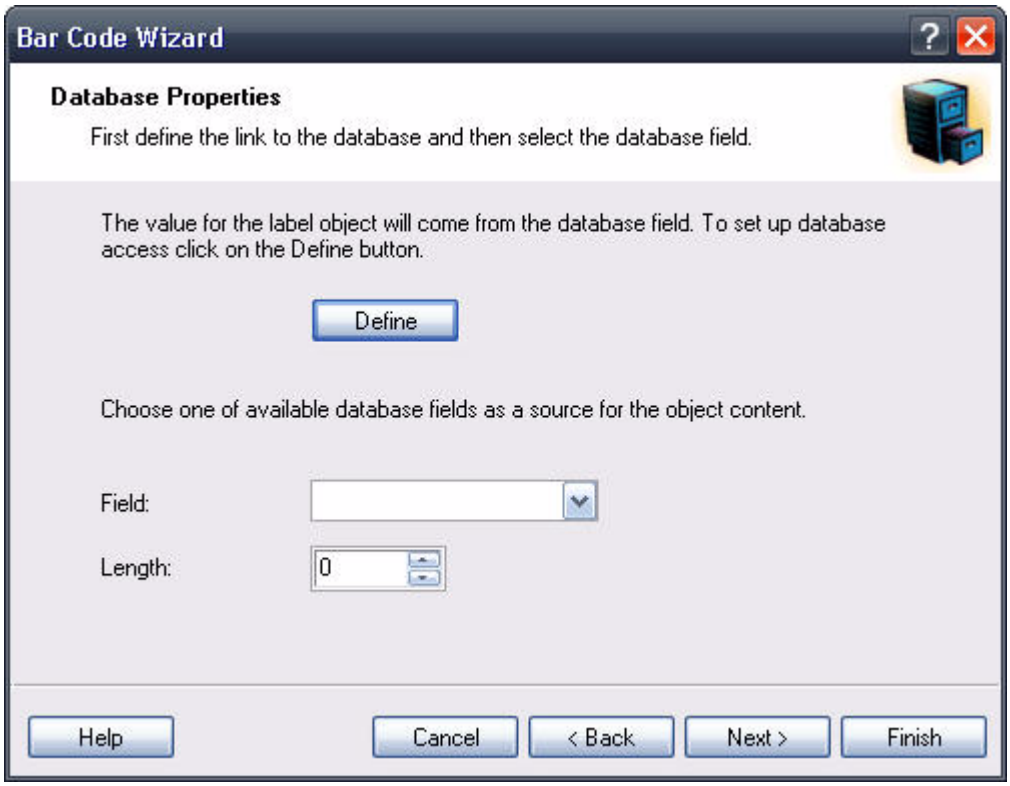
Time offset: You can add a certain numbers of hours, miutes, seconds to a current time and print that time instead of the current one.

Preview: The printer will print the time as shown in the Preview field. You can see how the selected date format will look on the label.

Use the printer's internal clock: The printer's internal clock for the field data.

Pro Only

Bar Code Wizard - Database



Variable field linked to a database gets the value from the specified database field.

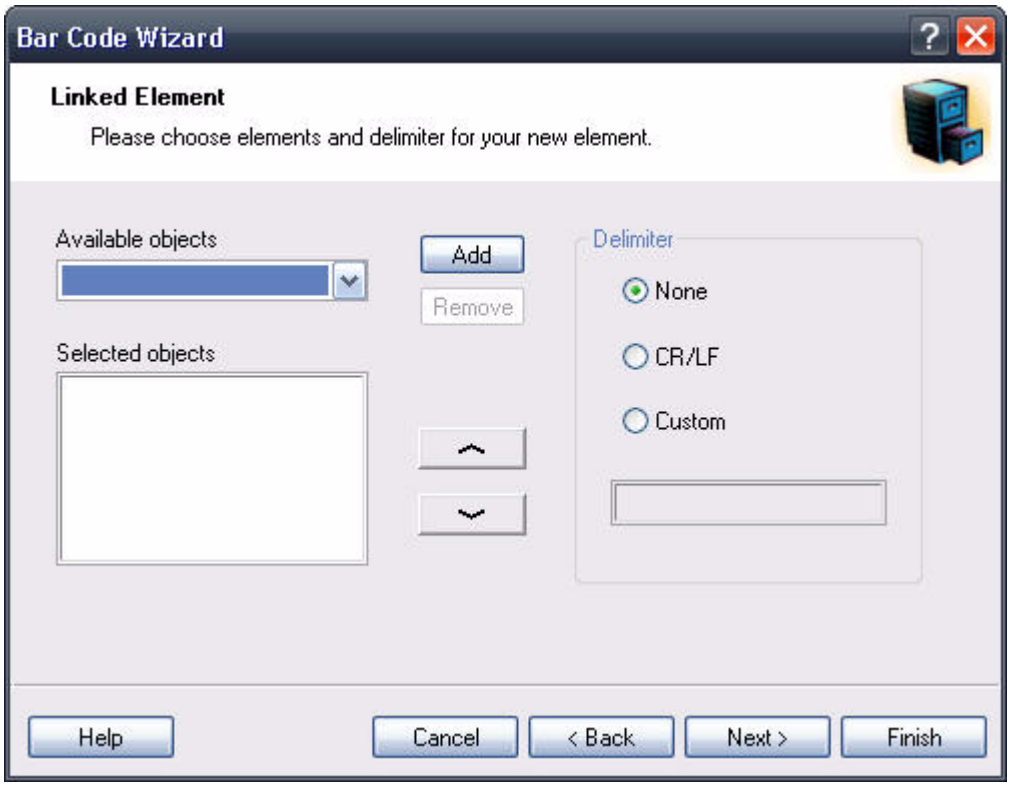
Define: Click this button to open the database wizard that will help you define the link to the database.

Field: Choose one of the available database fields as a source for the variable field.

Length: Define the maximum length of the string in the variable. If the field in the database contains more characters, they will not be printed. This option is useful if the field length in your database is not fixed (for example, a tab delimited ASCII file), or if you don't want to reserve space for all the characters in database's field.

Pro Only

Bar Code Wizard - Linked Field



Select this type of field to merge the contents of the selected variable fields into one field. The selected input variable fields are combined values and used as the value for the current object.

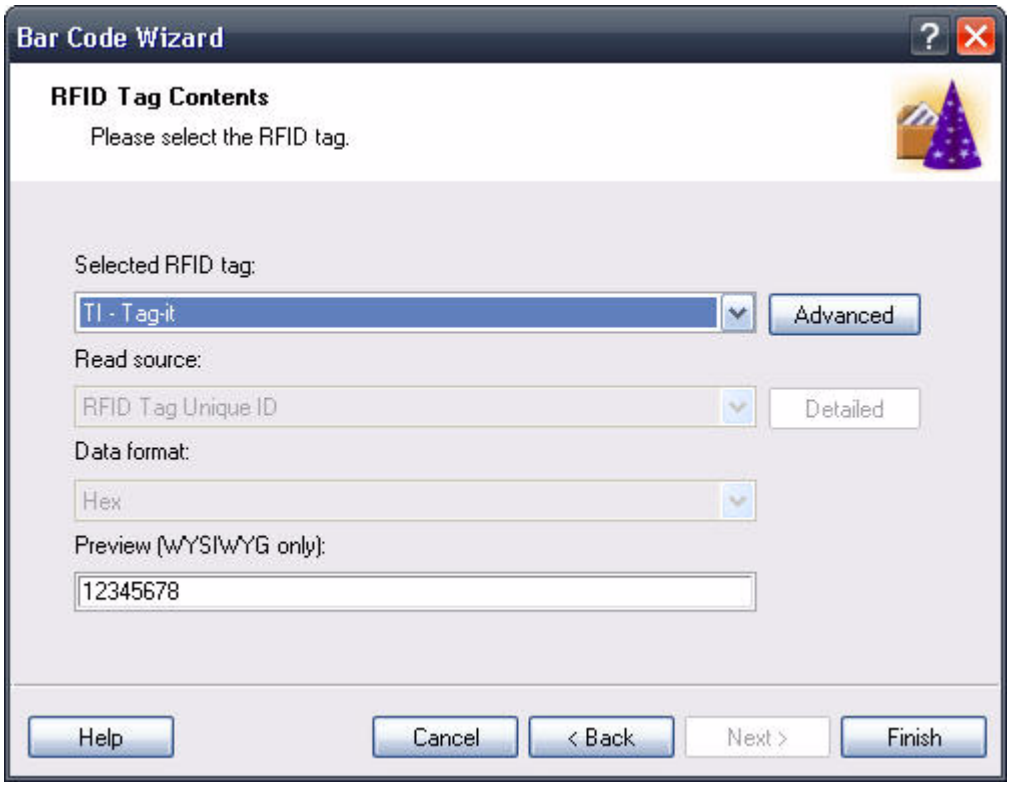
Note • Concatenated linked fields used with EPL-based printers can only be used with the Export to Printer function.

Available objects: The combo box contains the list of all defined variable fields on the label. You can select the fields and click the **Add** button to add them to the resulting value.

Selected objects: The list box contains the names of the selected variable fields, which will be merged into the resulting value. Click the up and down arrow buttons to change the relative position of the selected variable field within the merged value.

Delimiter: Select the optional separator character that will be included between the merged variable fields.

Bar Code Wizard - RFID tag Unique ID



Note • This feature is only available with ZebraDesigner Pro.

Printers with RFID functionality can program RFID tags embedded in the labels. Each RFID tag has a unique ID number that was programmed into the tag during the manufacturing process. The Unique number cannot be altered, but the RFID-enabled printer can read it.

RFID tag Unique ID functionality allows you to read the unique ID number from the RFID tag and use the content with the selected bar code object. When the label is printed, the printer will first read the unique ID from the tag and then immediately use the value with the bar code object.

RFID tag Unique ID can only be used with the bar code objects that are printed as internal printer objects. You must format the bar code object to use internal fonts not TrueType fonts.

Selected RFID tag: Select the tag from the list.

Note • Only tags supported by the currently supported printer are listed.

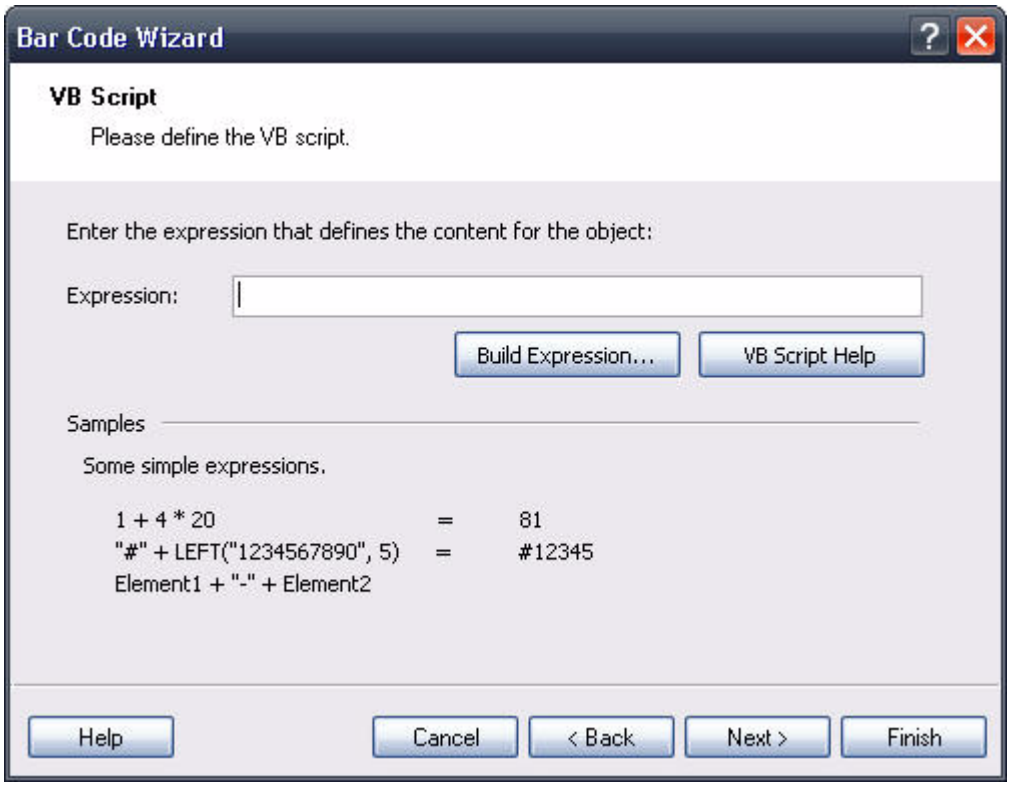
Read Source: Select the source of the RFID data.

Data Format: Select the format of the data.

Preview (WYSIWYG only): Because the RFID tag Unique ID information is not returned to the labeling software, you do not see the actual data. Enter the data in a format similar to the format of the RFID tag. This information will be used for preview on the label only.

Pro Only

Bar Code Wizard - Visual Basic Expression



Select this type of field to manipulate your variable fields with the Visual Basic functions. The result of the expression will be used with the current object on the label. You can define one-line expression that must follow Visual Basic programming syntax.

Look at the samples in the dialog box for ideas of what can be done with the Visual Basic script.

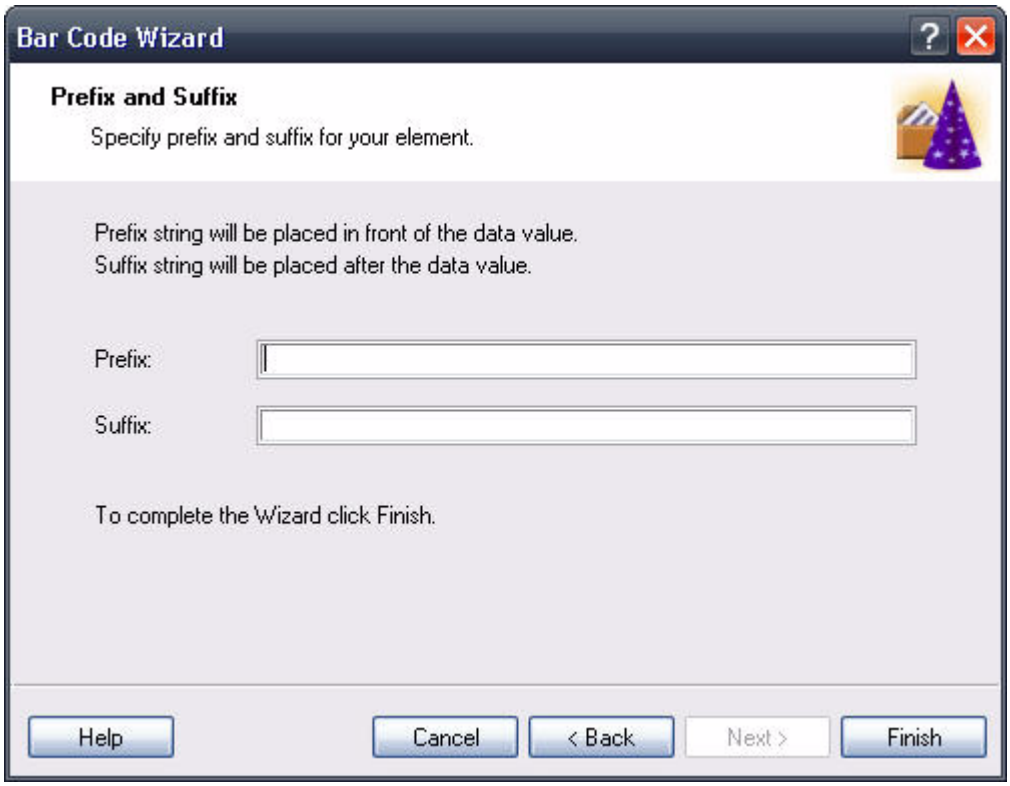
Expression: Enter the Visual Basic expression. Include the names of the variable fields in the straight quotes.

Build Expression: Click on this button to open the Expression Builder text editor with reference to frequently used Visual Basic functions.

VB Script Help: Click on this button to open the Microsoft help files explaining syntax and use of Visual Basic scripting.

Example • The Visual Basic expression functionality can be used for merging text fields or to perform simple mathematical operations.

Bar Code Wizard - Prefix and Suffix



The variable element can have prefix and suffix values. The prefix text is placed in front of the variable's value. The suffix text is placed at the end of the variable's value.

Note • If you leave the edit fields empty, the prefix/suffix will not be used.

Prefix and suffix can be used in situations where they are required only if the variable has a set value. If the variable is empty, the prefix/suffix will not be printed as well.

Pro Only

Using EAN.UCC 128 Wizard

GS1-128 (EAN.UCC) Wizard

This wizard allows you to define the data structure for GS1-128 bar code. This kind of bar code has different areas of application that include trade items, logistic units, assets, and locations.

The GS1-128 bar code is an extremely flexible symbology. It allows representation of data of variable length, and makes it possible to encode several pieces of information in one bar code symbol. This is called concatenation. An **Application Identifier** is a field of two or more characters at the beginning of a data value. Application identifiers are prefixes that uniquely identify the meaning and the format of the data field following. The data fields are either of fixed or variable length, depending on the AI.

Step 1: Choose the application identifier

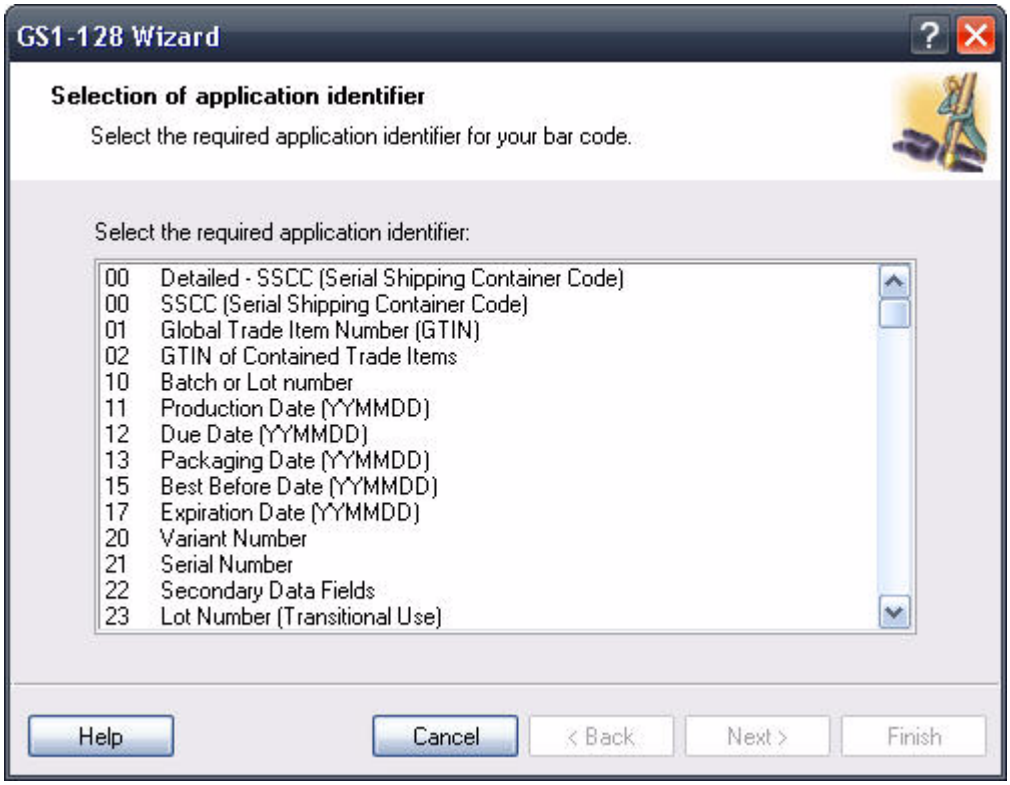


Figure 49 • GS1-128 Wizard: Choosing application identifier

The dialog in the first step of the Wizard allows you to select the GS1-128 bar code data structure. Each bar code is composed of one or more Application Identifiers and the corresponding data.

Choose one of the Application Identifiers in this list. You can add, edit, or delete Application Identifiers from the bar code later in the process.

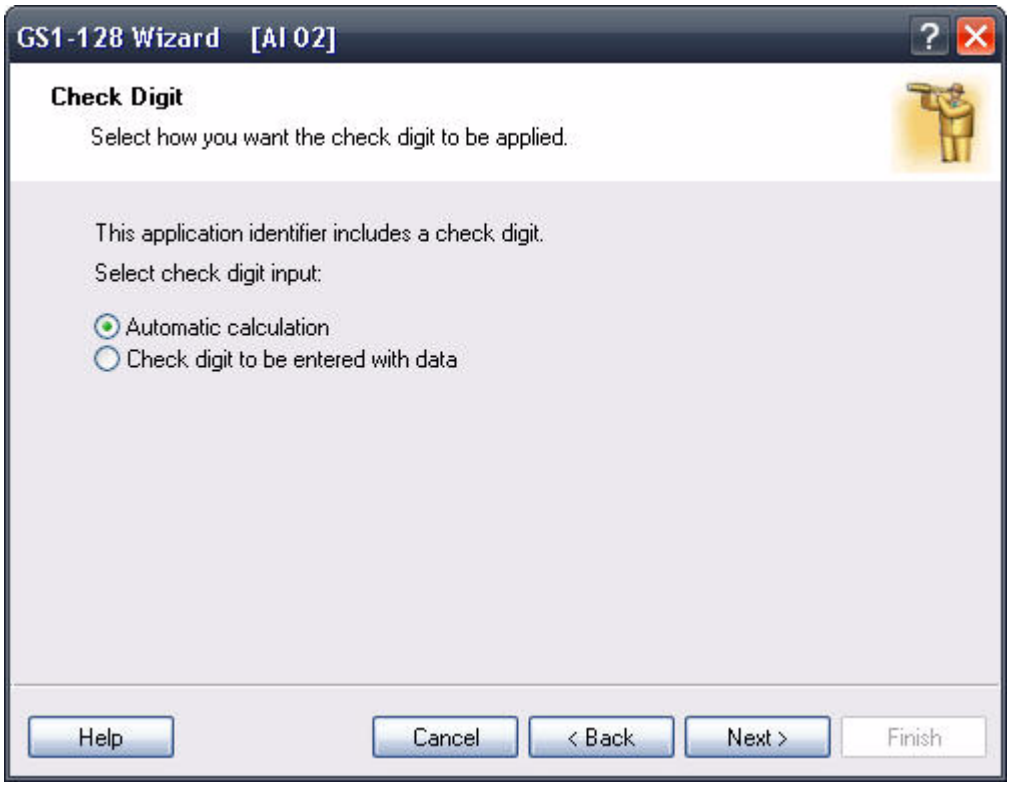


Figure 50 • GS1-128 Wizard: How check digit should be applied

If you have selected an Application Identifier with data that includes a check digit (for example, AI (01) - GTIN, Global Trade Item Number), then first you have to select how the check digit will be applied. The possible options are:

- **Automatic calculation:** Check digit will be calculated by the application.
- **Check digit to be entered with data:** Manually enter the data and check digit. The application will verify if the entered check digit is valid.

Step 2: Application Identifier Input Type

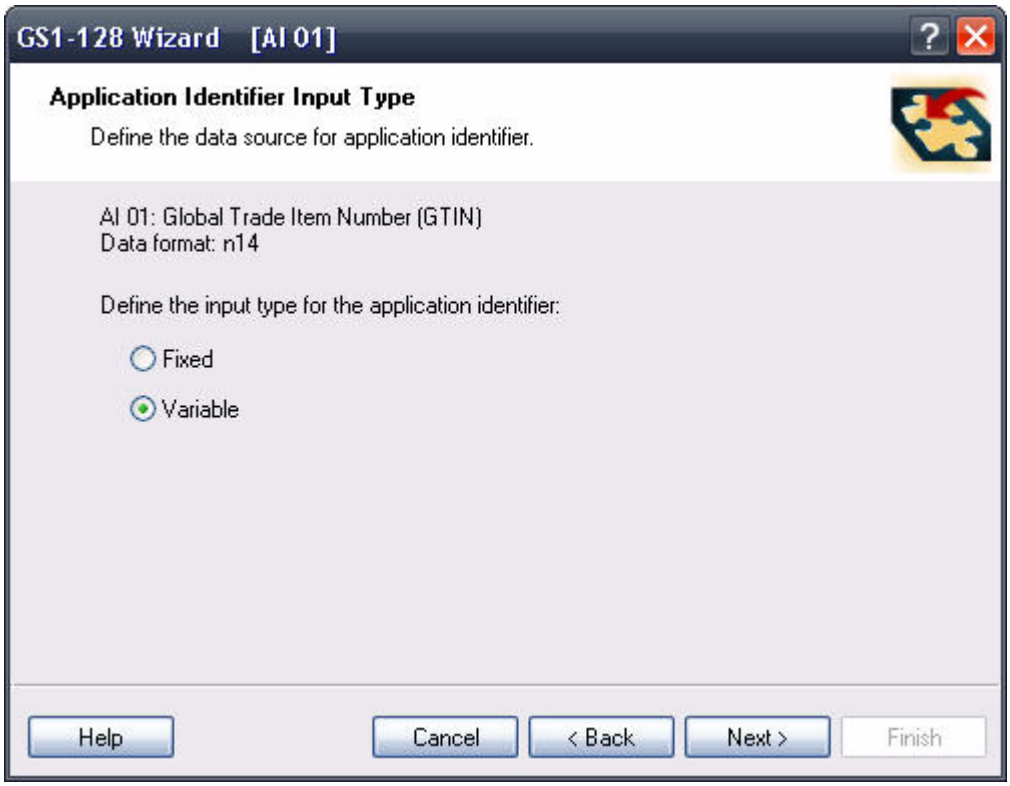


Figure 51 • GS1-128 Wizard: Where the data for AI is obtained from

When the Application Identifier is selected, the data source must be defined. These are the possible options:

- **Fixed:** The application identifier will have a fixed value on every label.
- **New variable:** The application identifier will be linked to the variable and have variable value on each label. You will define a new variable.

Step 3: Enter the value for the Application Identifier (AI)

Entering fixed value for the application identifier.

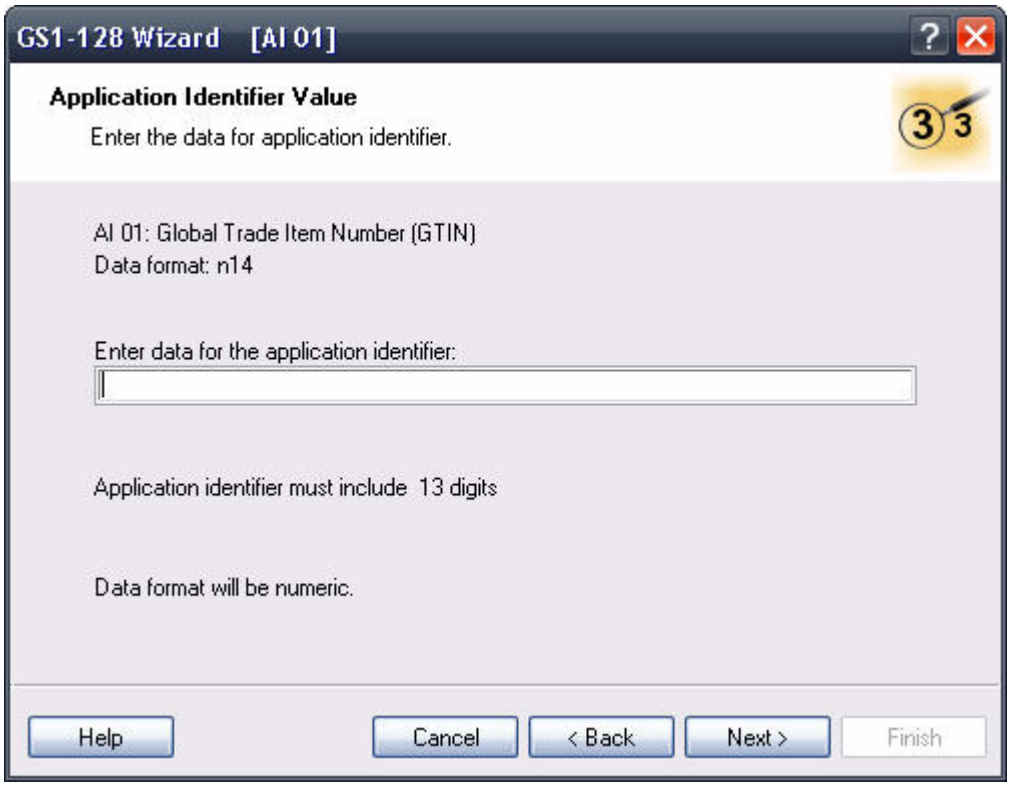


Figure 52 • Entering fixed value for the application identifier

If you selected a fixed value in the previous dialog box, you should enter a value for the Application Identifier here. The Wizard will let you know about the required data format for this AI and how long the AI value should be. For some AI's the field length is fixed to certain number of digits; for others, only the maximum number of possible digits is stated. You will also be reminded of the AI's proper field format (numeric, alphanumeric) if you enter incorrect data.

Entering a variable value for the application identifier.

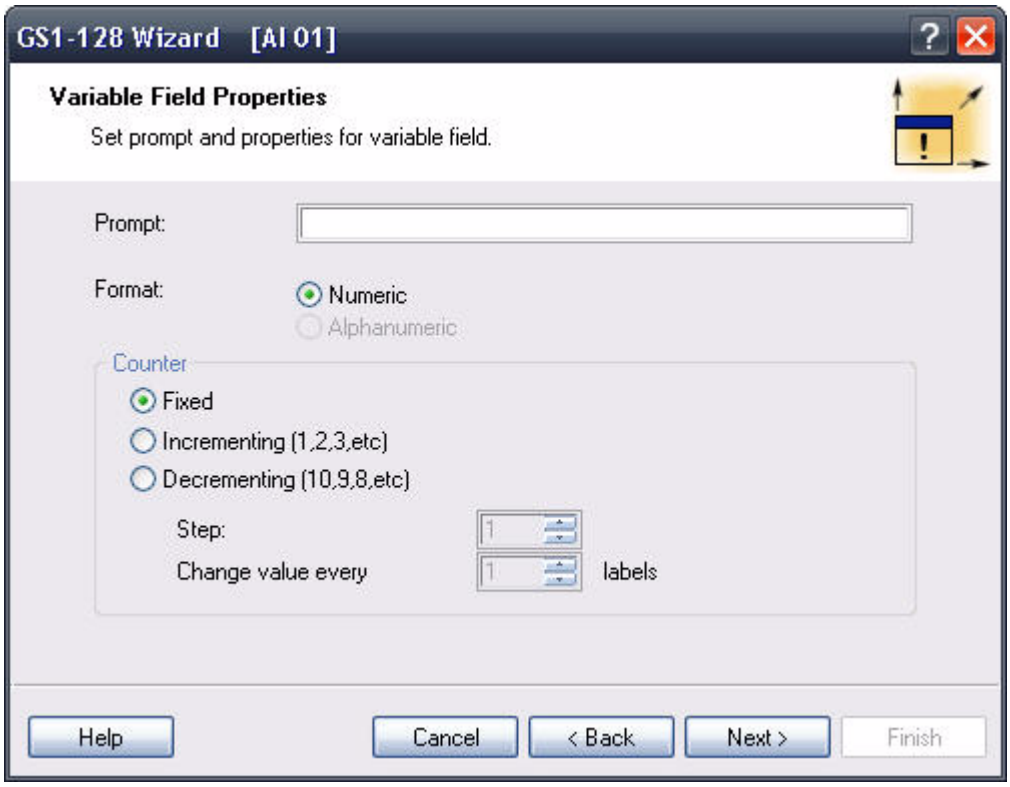


Figure 53 • Creating new variable for the application identifier

If you selected new variable values in the previous dialog box, a new variable field will be created. You will have to provide some information about the variable being used.

Calculate the Check Digit

To select how the check digit will be calculated, do the following:

1. Enter the check digit with the data and the software will validate it.
2. The software can calculate the check digit.

Define a New Variable

Define the properties of the variable that will provide a value for the application identifier.

Prompt: Enter the text that will be displayed to the user at print time.

Format: Define the format of the variable.

Counter: If the variable will be a counter, define its properties.

Step 4: List of selected application identifiers

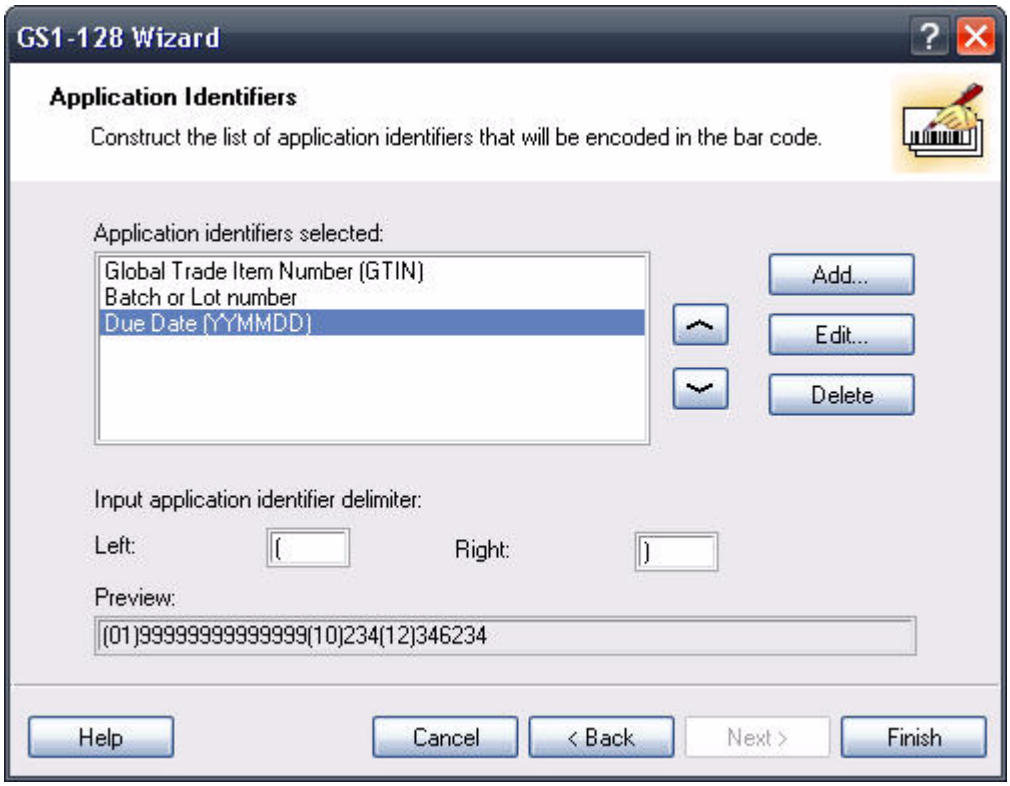


Figure 54 • Listing the selected application identifiers

This is the last step of the GS1-128 Wizard. Here you can add, edit, or delete Application Identifiers and define a separator.

Application Identifiers selected: In this field all selected application identifiers for the bar code are listed in the order of creation. You can change the order with the arrow buttons.

Add, Edit, or Delete buttons: Use these buttons to add additional application identifiers and edit or delete existing ones.

Input Application identifier delimiter: Define left and right separators among different application identifiers. The default setting is to use parenthesis.

Preview: A sample bar code content based on your application identifier selection is shown here.

To exit the wizard, click the **Finish** button.

Selecting Bar Code Type

Settings for Advanced Bar Codes

GS1-128 Bar Code

This bar code is combined from one or more input values and standard AI's - Application Identifiers. Each AI must be followed by the standard values. These values can be fixed or variable.

When you select the GS1-128 bar code, the Bar code data field in the **Bar code Wizard** dialog box is disabled. To define the contents of the bar code, click the Next button.

From the list of available Application Identifiers select the first identifiers. It will be written in brackets below the bar code.

When the Application Identifier also includes check digits, you have to define whether it will be calculated or entered together with data.

Next, define how you will set the values for the selected identifier. You may enter a fixed value or define a variable value.

Fixed values

When values are fixed, the Wizard dialog box will inform you what to enter.

The defined AI is presented on the list of selected Application Identifiers. Click the **Add** button to add a new AI or the **Delete** button to delete an existing one.

Should you need to change the AI and the data, select the AI and click the **Edit** button.

You can sort the listing of AI's by using the **Up** and **Down** buttons.

All the settings can be previewed on the **Preview** field.

The separator among Application Identifiers can be defined by entering the required separator for the left and for the right side of the Application Identifier. The default separator is brackets.

Variable values

GS1-128 bar code supports keyboard variables – the variable data will be entered from the keyboard.

You can define the Prompt – the message for the operator, who will enter the data.

The data can be numeric only or all characters.

The value can be fixed or incremented/decremented on every label or a certain number of labels with the desired step.

The variable data will be written in the **Preview** field as a series of *A* characters.

When you are satisfied with the settings, click the **Finish** button to put the GS1-128 bar code on the label.

PDF 417 2D Code

General tab

X expansion factor
This option defines the X expansion of the bar code symbol.

Y expansion factor
This option defines the height of the bar code symbol.

Security tab

According to the standard, you can select among 9 levels of security. Higher security levels allow more reliable reading regardless of errors, but the bar code symbol is bigger.

Truncated bar codes can be used where label damage is unlikely and there is no demand for a high level of security. The truncated symbol is smaller.

Aspect Ratio

It is the ratio between the number of columns and the number of rows.

Contents

PDF 417 code can encode:

- Full 128 ASCII character set
- All 128 Extended ASCII characters
- 8-bit binary data

DataMatrix Bar Code

General tab

X expansion factor
This option defines the X expansion of the bar code symbol.

Y expansion factor
This option defines the height of the bar code symbol.

Aspect Ratio

It is the ratio between the number of columns and the number of rows. Select one of the values from the drop down menu.

Details tab

ECC Type

Error Correction Codes define the security level. You can select one from the standard levels in the pull-down menu.

Format ID

This option defines which character set will be used in the bar code. You can select one of the formats with the following filter.

01 and 11	0..9, space
02 and 12	A..Z, space
03 and 13	A..Z, 0..9, space
04 and 14	A..Z, 0..9, space,.-/
05 and 15	7-bit ASCII lower part (from 0 to 127)
06 and 16	all
07 and 17	7-bit ASCII

The formats from 1 to 7 allow a data length up to 500 characters, while formats from 11 to 17 allow up to 2000 characters.

Border Size

Factors from 1 to 15 set the dimension of the border in the shape of the character L.

Data Matrix can encode:

- Full 128 ASCII character set
- All ISO characters
- All EBCDIC characters

MaxiCode 2D Code

General tab

Y expansion factor

This option defines the height of the bar code symbol.

Details tab

When the option **Structured** is not selected, the content of the bar code is optional.

For Structured bar code you may encode only standard contents.

Edit Bar Code Dialog Box

This dialog box is displayed when you click the **Define** button on the bar code dialog box. On this dialog box you specify the type of bar code you want to use on the label and all additional advanced settings: how the bar code should be generated, if the check digit should be automatically calculated or not, and various other options. If the **Enable preview** check box is checked, a preview of a resulting bar code is displayed on the right side of the dialog box.

When you are satisfied with the bar codes properties, confirm the changes you made by clicking the **OK** button or reject them and keep previous settings by clicking the **Cancel** button.

The *Edit bar code* dialog box has several pages (tabs).

General Tab

On this tab, you can select the bar code type you want to use and the properties of the bar code.

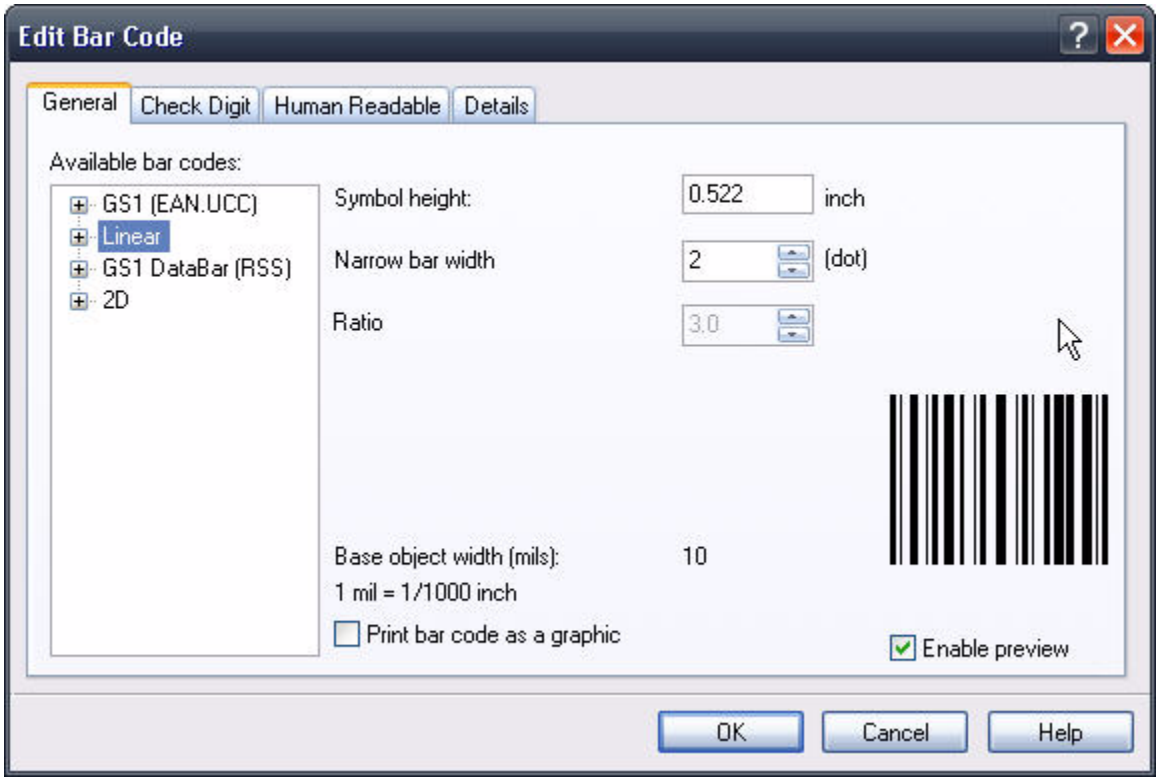


Figure 55 • Edit bar code dialog box – General tab

Type of bar code: The required bar code symbology is selected from the tree list of available bar codes.

Symbol height: The height dimension of a bar code can be specified either by entering a value here or by resizing the bar code symbol directly on the label.

X-Expansion factor: The expansion factor defines the width of the bar code symbol.

Ratio: This is the ratio between narrowest and widest bar in the bar code. It is locked for the majority of bar codes, but it can be changed for some.

Base object width: Shows the width of the narrowest bar in the bar code.

Print bar code as graphics: Select if bar code should be converted to a picture and sent to the printer as image or should the printer print bar code as an internal element. Printing internal bar codes will speed up label printing because less data must be transferred to the printer.

Note • If the printer does not support the selected bar code internally, the option **Print bar code as graphics** will not be available.

Check Digit Tab

This tab is used to specify if you want to use the check digit in the bar code or not. This option can only be modified for the bar codes that allow you to enable and disable the check digit.

Some bar code standards include the check-digit by definition and it cannot be omitted. An example of such bar codes are EAN and UPC bar codes, where the check digit cannot be disabled at all. But some codes allow you to enable/disable the check-digit.

Note • We recommend that you always include the check digit character in the bar code. It will increase the scanning reliability.

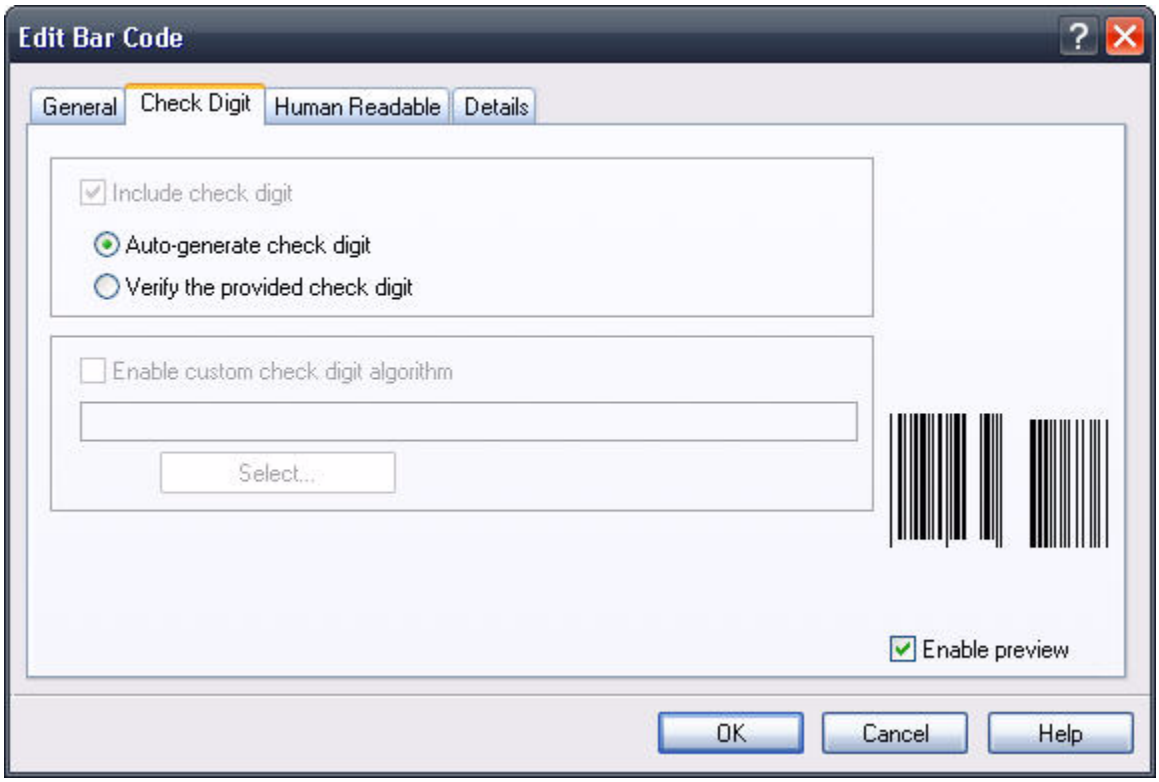


Figure 56 • Edit bar code dialog box – Check digit tab

You can choose whether you want to input the check digit value, or let the program calculate it for you:

Auto-generate check digit: Check digit is calculated by the software. You enter the bar code data only. For example: when using EAN-13 bar code, you enter the first 12 digits; check digit in the 13th place will be calculated and added automatically.

Verify the provided check digit: Use this command when you want to enter the value for the check-digit. At print time, the entered check digit will be verified for validity.

Enable custom check digit algorithm: You can set a custom algorithm for calculating the check digit. Click on the button **Select** to choose the algorithm.

Human Readable Tab

On this tab, you can set the options regarding position and format of the bar code interpretation.

No interpretation: Bar code object does not have any human interpretation.

Below bar code: All data encoded in the bar code is placed beneath the bar code symbol as human readable characters.

Above bar code: All data encoded in the bar code is placed above the bar code symbol as human readable characters.

Font: Using the **Font** button, you can choose the font for auto-translation text. The option **Auto font scaling** will adjust the font of the auto translation text to the size of the bar code.

Note • You can format the font for human interpretation only if the bar code is printed as a graphic. When printing the bar code as an internal printer object, the printer will print the interpretation using resident built-in fonts.

Contents mask sets the custom format of the human interpretation.

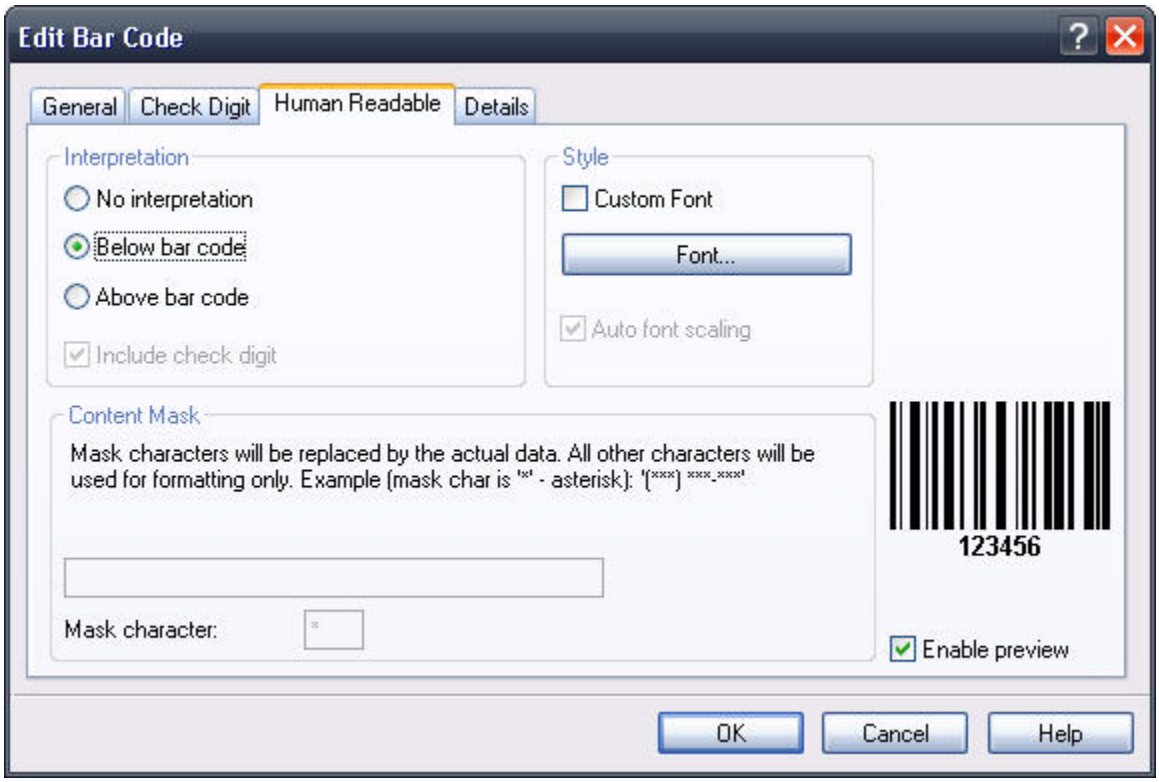


Figure 57 • Edit bar code dialog box – Human readable tab

Details Tab

On this tab, you can define advanced settings for the bar code.

Note • Not all of these options are available for all bar codes and printers.

Include quiet zones: Check this field if you want the bar code to have some white space in the front and in the end for increased readability.

Descender bars: Some bars of a bar code will be longer than others. This is typically used with EAN and UPC bar codes that have longer bars in the beginning, in the middle and in the end of the bar code.

Mirror horizontally/mirror vertically: The bar code can be mirrored vertically and horizontally. The bar code will usually have to be printed as a graphic for this option to be accessible.

Intercharacter gap: Some bar codes allow you to change the gap between characters in the bar code (e. g. Code-39).

Include EAN white space: Before and after the bar code, a white space is inserted or not, as desired. It indicates the width of the bar code. If you put any other object in the area of the bar code, it will reduce the readability of the bar code. This option is valid only for EAN bar codes.

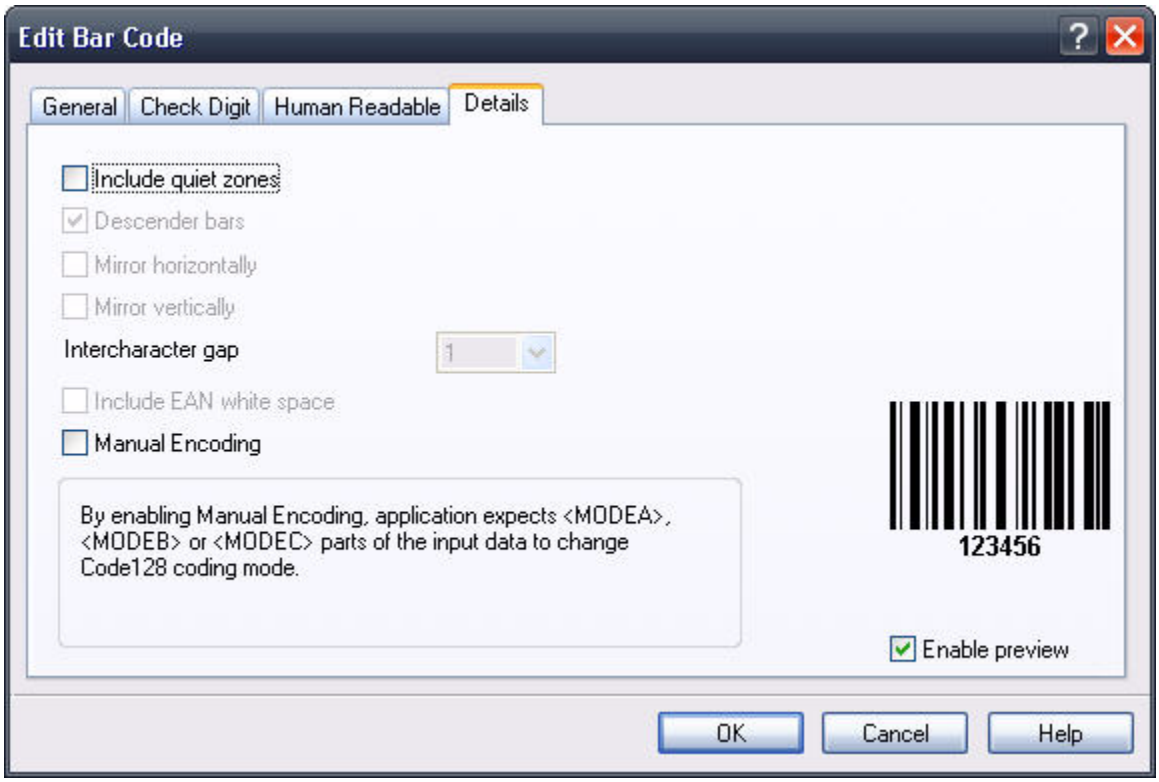


Figure 58 • Edit Bar Code – Details tab

Supported Bar Code Types

Bar Code Group	Bar Code Types
EAN and UPC	EAN-8, EAN-8 + 2-digit supplement, EAN-8 + 5-digit supplement, EAN-13, EAN-13 + 2-digit supplement, EAN-13 + 5-digit supplement, EAN-14, DUN-14, UPC Case Code, UPC-A, UPC-A + 2-digit supplement, UPC-A + 5-digit supplement, UPC-E, UPC-E + 2-digit supplement, UPC-E + 5-digit supplement, UPC-E(1), GS1-128, SSCC, Bookland, Addon 2, Addon 5
Linear	Interleaved 2 of 5, ITF 14, ITF 16, Code 39, Code 39 Tri Optic, Code 39 Full ASCII, Code 32, Code 93, CODE 128 (A, B and C subsets), MSI, Codabar, Postnet-32, Postnet-37, Postnet-52, Postnet-62, Kix, Pharmacode, Plessy, Anker

RSS	**Linear RSS symbologies** RSS14, RSS14 Truncated, RSS14 Stacked, RSS14 Stacked Omnidirectional, RSS Limited, RSS Expanded **Composite RSS symbologies** RSS14, RSS14 Truncated, RSS14 Stacked, RSS14 Stacked Omnidirectional, RSS Limited, RSS Expanded, UPC-A, UPC-E, EAN-8, EAN-13, GS1-128 & CC-A/B, GS1-128 & CC-C
Two-dimensional	2D-Pharmacode, PDF-417, DataMatrix, MaxiCode, Aztec, QR, MicroQR, Codablock F, MicroPDF, InfoGlyph

Select Objects

To select the object on the label, do the following:

1. In the **Toolbox**, click the

button.
2. Click on the object on the label that you want to select.

To select two or more objects, press the **Shift** key, and hold down, while clicking the object with a mouse.

The objects can be selected, cut, copied, pasted, and edited with the right mouse button. If you click the right mouse button on the object, the menu shows all the available commands. Note that these commands are equivalent to correspondent menu commands.

You can also change the anchoring point of a selected object by holding **Ctrl** while clicking the placeholders (corners of the bounding box) of the object.

Edit Objects

To edit the properties of the object, do the following:

1. Double-click the object on the label.
   The dialog box with object properties opens.

   Note • You can also press the **Enter** key while the object is selected.

2. Make modifications to the object properties.

3. Click the **Finish** button.

Move Objects

To move the object on the label, do the following:

1. Select the object.

2. Click on the object with the left mouse button.

3. Hold the mouse key down.

4. Move the position of the cursor on the screen.
   The object will move with the cursor.

Aligning Objects

First you have to select objects that you want to align.

Note • All objects are aligned relative to the first selected object.

Then click appropriate buttons in the Design toolbar to align selected objects to each other. If Align toolbar is not visible (by default it is located on the very right side of the window), enable the Design toolbar in the *Toolbar* option in the **View** menu.

You can align objects to:

	Left
	Right
	Horizontal center
	Top
	Bottom
	Vertical center

You can also distribute objects evenly, so that spacing between them is equal:

	Horizontally
	Vertically

Note • If you hold the **CTRL** key while clicking the buttons, the selected objects are aligned relative to the label and not to the first selected object.

Resize Objects

To resize the object on the label, do the following:

1. Select the object.
   The selected object is framed with a rectangle.
2. Click on one of the small rectangles in the corners of the rectangle.
3. Hold the mouse key down.
4. Move the position of the cursor on the screen.
   The object will resize with the cursor.

Rotate Objects

To rotate the object, do the following:

1. Select the object.
2. In the **Design Toolbar**, click the button.

   The object will be rotated 90° clockwise.

   Note • If the Design toolbar is not visible in the application, enable the toolbar in the Toolbars section in the View menu.

Supported Graphics Formats

The following graphical formats are supported:

File extension	Graphics type
BMP, DIB, RLE	Windows Bitmap
GIF	CompuServer Bitmap
JPG, JPEG, JPE	JPEG Bitmap
TIFF, TIF, FAX, G3N, G3F	TIFF Bitmap
PNG	Portable Network Graphics
WMF	Windows Metafile
EMF	Enhanced Windows Metafile
ICO	Windows Icon
CUR	Windows Cursor
TGA, TARGA, VDA, ICB, VST, PIX	Targa Bitmap
PXM, PPM, PGM, PBM	Portable Pixmap, GreyMap, BitMap
JP2	JPEG2000
J2K, JPC	JPEG2000 Code Stream
PCX	Paintbrush

Grouping Objects

You can work with individual objects on the label, or you can group the objects into a group of objects. When you group two or more objects into a group, the objects behave as one single object on the label. In some cases the grouping feature will make the label design easier.

To group objects on the label, do the following:

1. Select two or more objects on the label.
2. Select **Group** from the Design Toolbar.
   The individual objects will be grouped into one group.

   Note • To ungroup the objects in a group you must use the command Ungroup from Transformations menu.

Working with Variable Data

Dynamic Data Overview

You may want to print labels on which the data changes for each label, for example, counter, serial numbers, date, and time. To accommodate changing data, ZebraDesigner Pro can be used to format labels using the variable fields. Variable fields can be used with text and graphic objects.

There are several types of variables you can choose. Data, which must be printed as a variable, is prepared at the time of printing. It can be entered in the program in these ways:

- by the operator from the keyboard
- from the computer's clock (date and time)
- from the label design (using counters with predefined starting values and steps)
- from the RFID tag embedded into the label (ZebraDesigner Pro only)
- as output of 'Linked field' or 'Visual Basic expression' (ZebraDesigner Pro only)
- database can be used to provide data for the fields (ZebraDesigner Pro only)

Note • The variable data can be the same for many labels and/or specific for one label only.

Note • If a variable defines the label, making it absolutely necessary, it is possible to set the requirement, that a variable value must be entered in the field for printing to succeed. This option is available in the Text Wizard. For more information, see Define the Text Object.

Database Wizard

Working with Databases

Pro Only

ZebraDesigner Pro allows you to use databases in which your data is stored. Database types can be:

- ASCII (text file) where fields are fixed-length or are separated with any selected character
- Microsoft Excel database
- Microsoft Access database
- Existing ODBC Data Sources

You can use a single database on the same label.

Databases are very useful when printing labels with a large quantity of different data and variable values. You don't have to enter values for every variable before label production any more; you can use previously prepared database instead. A database in the ASCII text file can be created in any text editor (for example Notepad), it can be also exported from other applications (for example Microsoft Word). You can also use Microsoft Excel to edit your data.

Before you can use the data from the database, you have to link the database on the label. During this process, the database fields get connected to the variable fields on the label.

When you start printing labels, every variable field will automatically get the value from the linked database field. Each record in the database is used on a single label.

Note • Database functionality is only available in ZebraDesigner Pro.

Using Data from the Databases

Imagine that you have the following database that contains first and last names of people:

field1	field2
John	Smith
Jane	Wright
Bob	Doe

1. To use the data on the label, you must first define this database using the Database Wizard.
2. To include two variable texts on a label, create two text objects.
3. In the text wizard, select **Variable text** and click the **Next** button.
4. Select the Database option as the source of variable data.
5. Link both text objects to the variable fields, each to a separate field.

When you print the labels, each of the text objects on the label will get the value from the corresponding field in the database. When one label is printed, the next record is used for the second label and the process is repeated. Each name and surname is printed on a separate label.

Use Database Wizard

The process of defining a new Database access function consists of four steps (pages). On those pages you enter the data required by the Wizard. You can go to the next step (page) by clicking the **Next** button or return to previous with the **Previous** button.

When all necessary data has been entered, the **Finish** button will become available, allowing you to complete the process of defining a new Database access function. Note that some options have predefined values, so you don't really need to go through all the steps of a wizard.

Note • Database functionality is only available in ZebraDesigner Pro.

Select the Database File

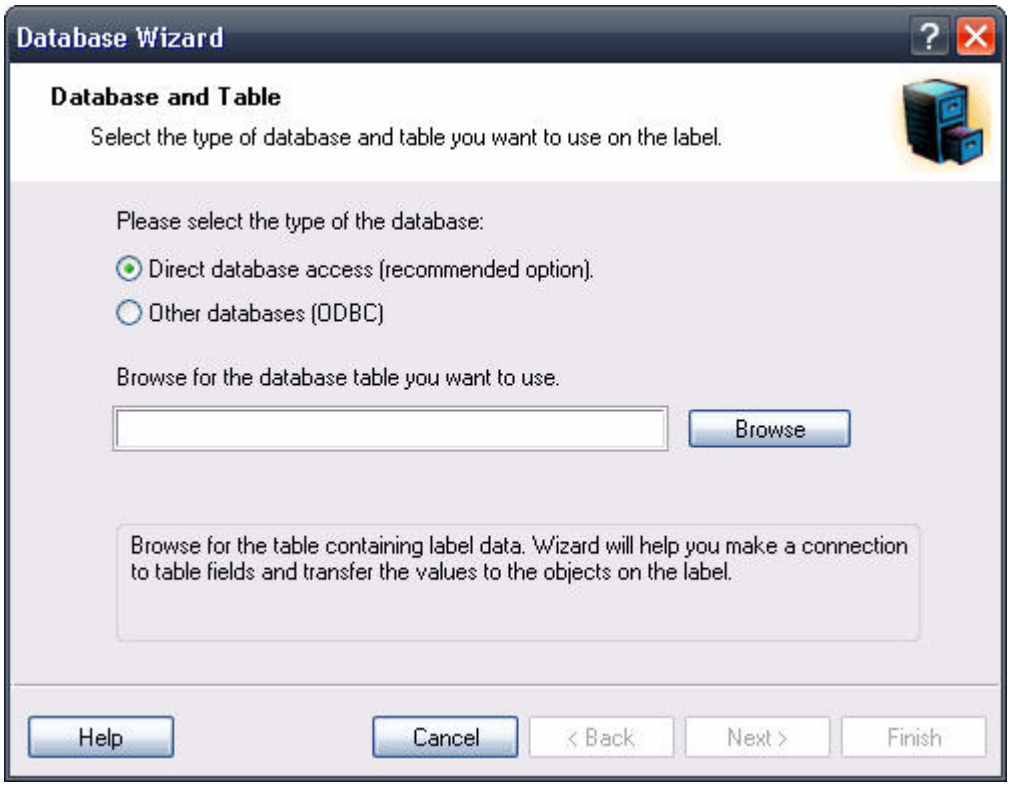


Figure 59 • Database wizard – Selecting database file

Enter the full path name of the database file in the edit box or use the **Browse** button to find the file on your computer.

Note • You can only browse to the databases that are stored in the files. If you use databases through ODBC or OLE DB drivers, you will have to set up the connection parameters in the ODBC Data Sources administration in the Control Panel.

Select the Desired Fields

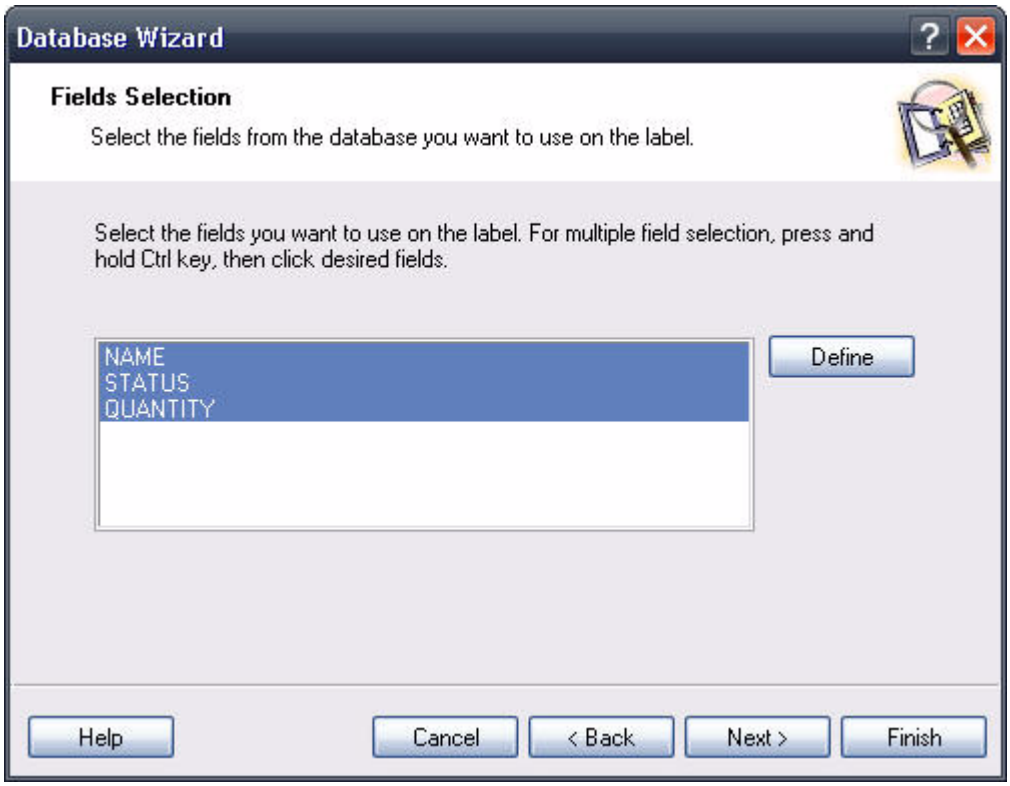


Figure 60 • Database wizard – Selecting fields

On this page, you can select the fields you want to use on the label. All fields in a table are selected by default, but you will probably want to deselect some of them, especially if you have a large table. Variables will be created for each selected field and can later be attached to objects.

Select the Records to Print

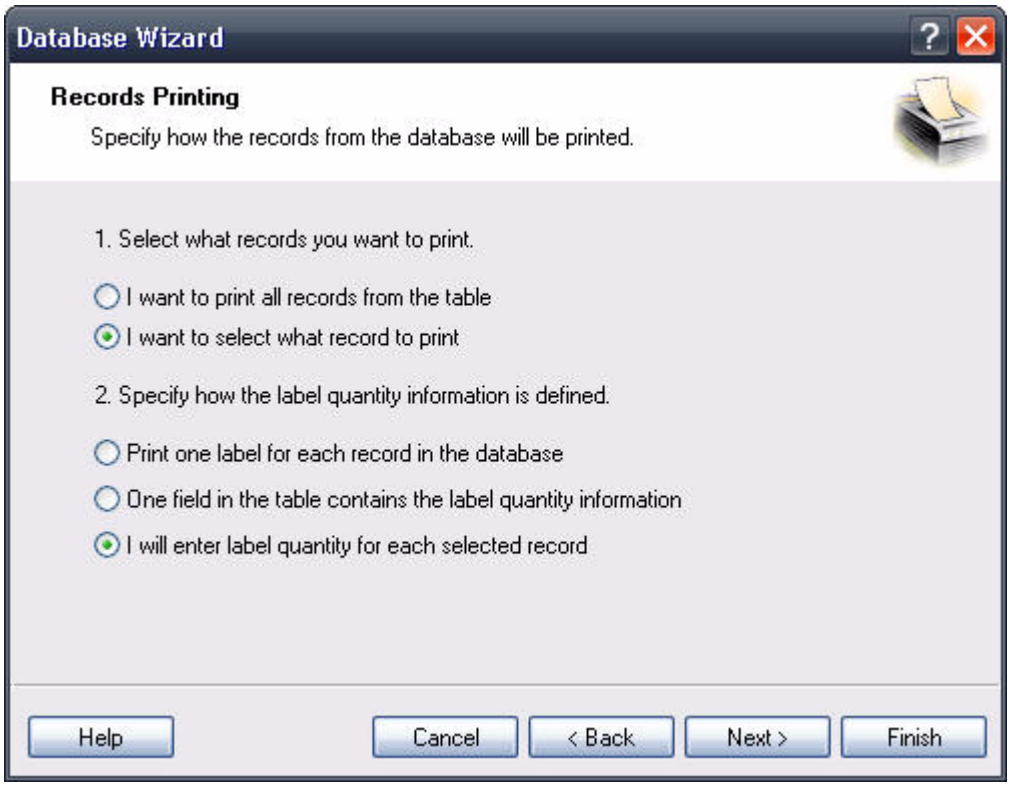


Figure 61 • Database Wizard – Selecting which records will be printed

Select the desired option for how you want to use the records in the database. By default, the option **I want to print all records from the table** is set and all records in a table will be printed one at a time. Each record will be printed only once.

If you do not want to print the entire database, you can select which records should be printed. In this case, select the option **I want to select what record to print.** Before printing you will be shown a dialog box with all records from the database. Then you will be able to select which records should print.

By default, records are used once for a single label. If you would like to print several copies of a label with database data, you can define it in the second part of the Wizard.

One field in the table contains the label quantity information: This option will let you choose a field in the database that the software will use to determine how many labels to print. This field has the information about the quantity of labels for each record. For example, you have a database with records of your products. It contains a field with a numeric value where the required number of label copies is stored. Select this field and let the application print the quantity of labels specified here.

I will enter label quantity for each selected record: This option is enabled only if you selected **I want to select what record to print** in step 1. Before printing you will be able to select which records will be printed in the selection dialog box. At the same time, you will be able to type in the exact label copy for each selected record.

Select Variable Quantity from the Database Field

Select a field in the database that contains the label quantity information. The database record will be printed on as many consecutive labels as the selected field contains.

Note • Make sure to select the field that has been formatted with the numeric data.

Add Fields to the Label

Figure 62 • Database wizard – Adding fields to the label

On this page, you specify if you want the wizard to generate text objects on the label that are already linked to corresponding fields in the table. Text objects are created in the upper left corner of a label, but you can move them to another position.

Link Label to Text Databases

Overview

Text databases are text files containing data values that can be used for variable objects on the label. The text database is not a real database. It contains the data values but lacks the information of the data structure, name of the fields, and maximum lengths of the fields. You have to provide the missing information before ZebraDesigner Pro can use the data from such a text database.

Connect to a Database

ZebraDesigner Pro offers a Database Wizard that guides you through the necessary steps to connect the database to a label.

To connect your label to a database using the Database Wizard, do the following:

1. In the **Standard Toolbar**, click the Database button.
2. Click the **Browse** button and point to the text database **SAMPLE.TXT** in the *Samples* folder.

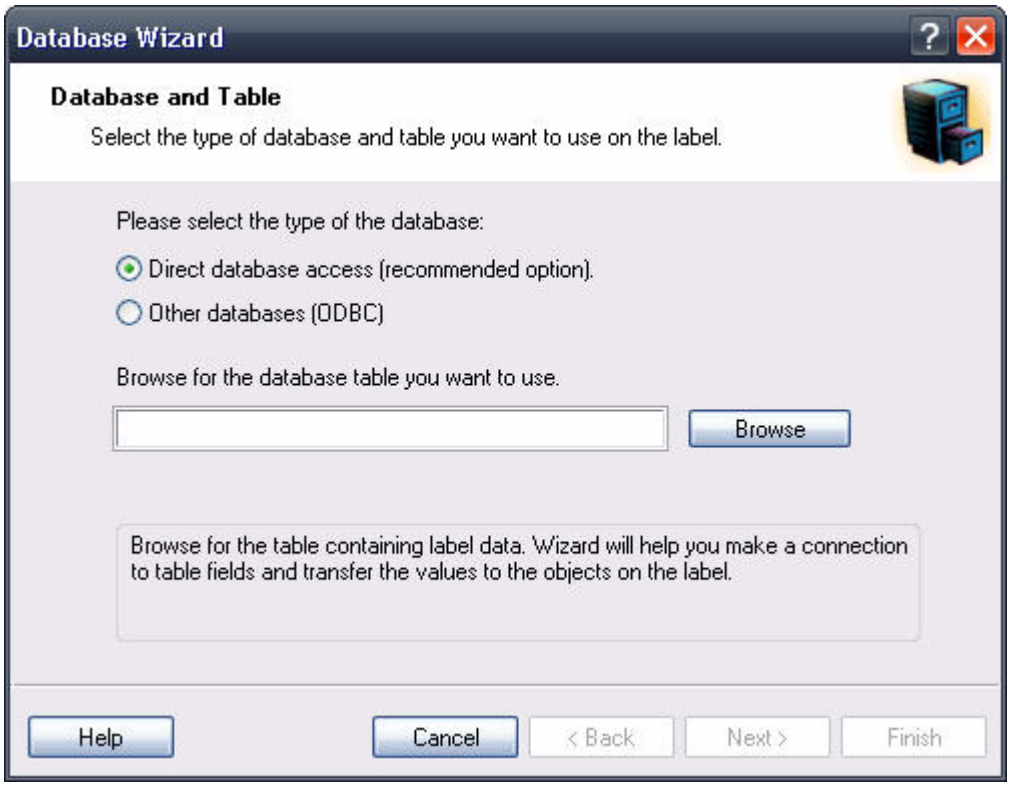


Figure 63 • Selecting the text database

3. Click the **Next** button.

   Note • If you connect to the database for the first time, you need to define the database structure. Continue with the next section.

Format the Data with the Text File Wizard

Because text files do not contain structural information like real databases do, you must define the fields and their data structure. When you use the same text database again, you won't have to define the structure again.

1. Choose the data type for the selected text database. The fields are delimited by comma so you must select the **Delimited** option.

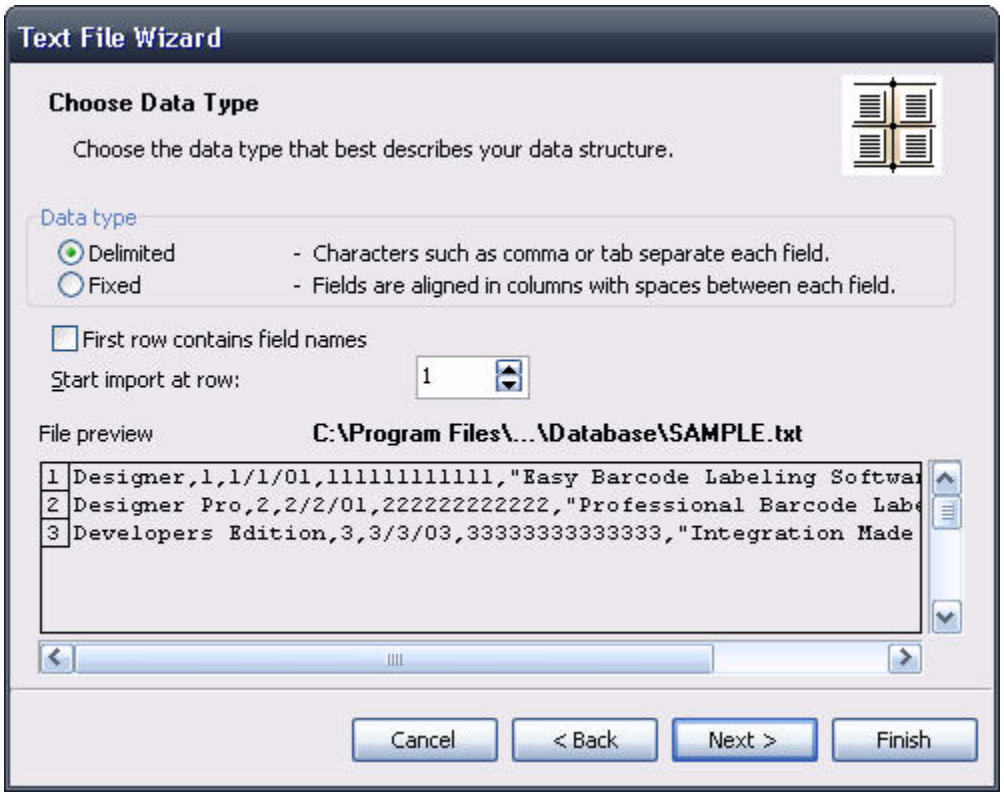


Figure 64 • Defining the type of the text database

2. Click the **Next** button.

3. Review if ZebraDesigner Pro has properly auto-determined the format of the text file. The delimiter must be set to **Comma**.

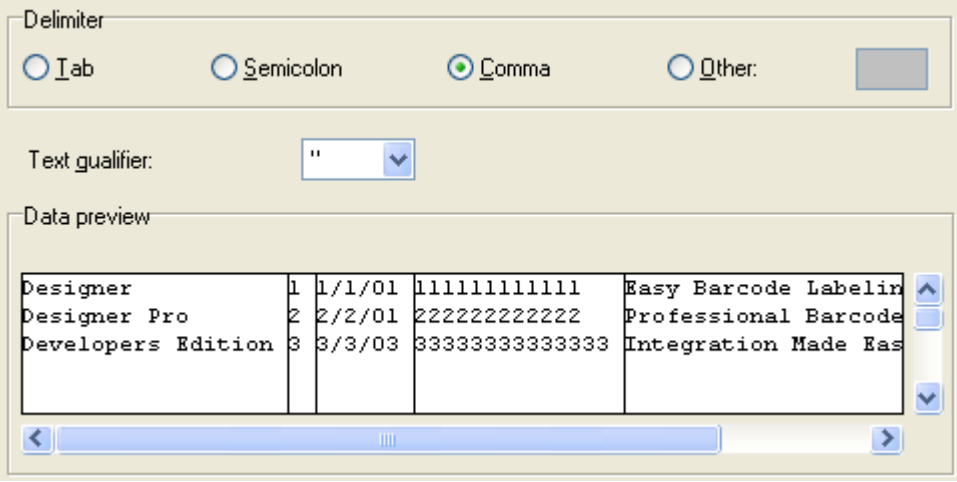


Figure 65 • Defining the fields in the text database

4. Click the **Next** button.
5. Accept the default field names and click the **Next** button.
6. Review the text database structure. The field names and their maximum lengths are displayed.
7. To close the Text File Wizard, click the **Finish** button.

The link to the database has been created, and database fields are available on the label.

ZebraDesigner Pro brings you back to the Database Wizard.

Place Database Fields on a Label

The next step in the Database Wizard opens the dialog box with the list of available fields from the database.

1. By default, all fields from the database will be used on the label. Click the **Next** button.

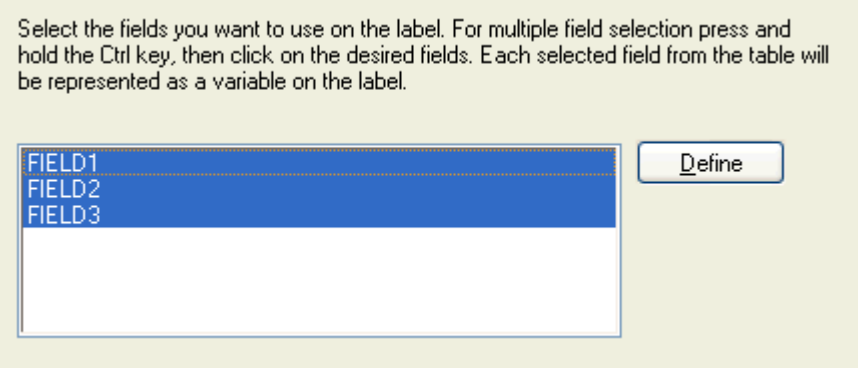


Figure 66 • Using all fields in the text database

2. Specify what records and how many you want to print:
   Select the options **I want to select which record to print** and **I will enter label quantity for each selected record**. Before printing labels, the table with the records will open, and you will be able to select the records you want to print and the quantity of labels for each record.

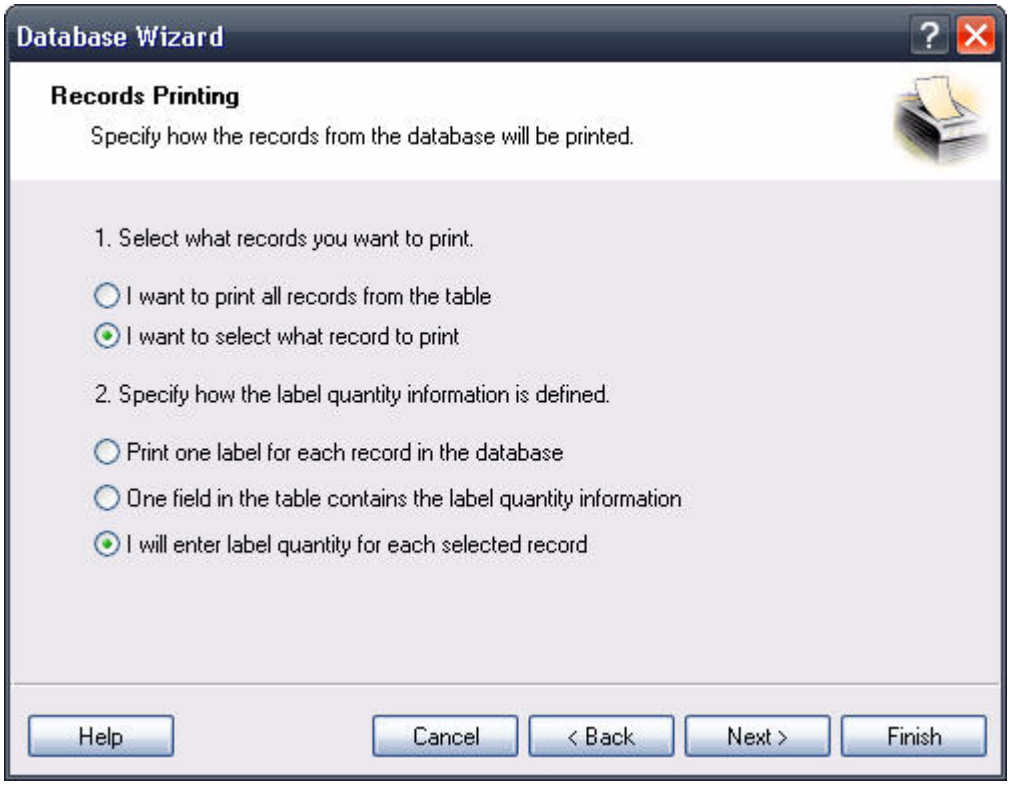


Figure 67 • Specifying what records from the database will be printed and in what quantity

3. Click the **Next** button.

4. Select if the Database Wizard should link all selected fields from the database to the text objects on the label or if you want to link the fields manually to the label.

5. Click the **Next** button.

6. Select **I want a text object for each selected field** and click the **Finish** button.

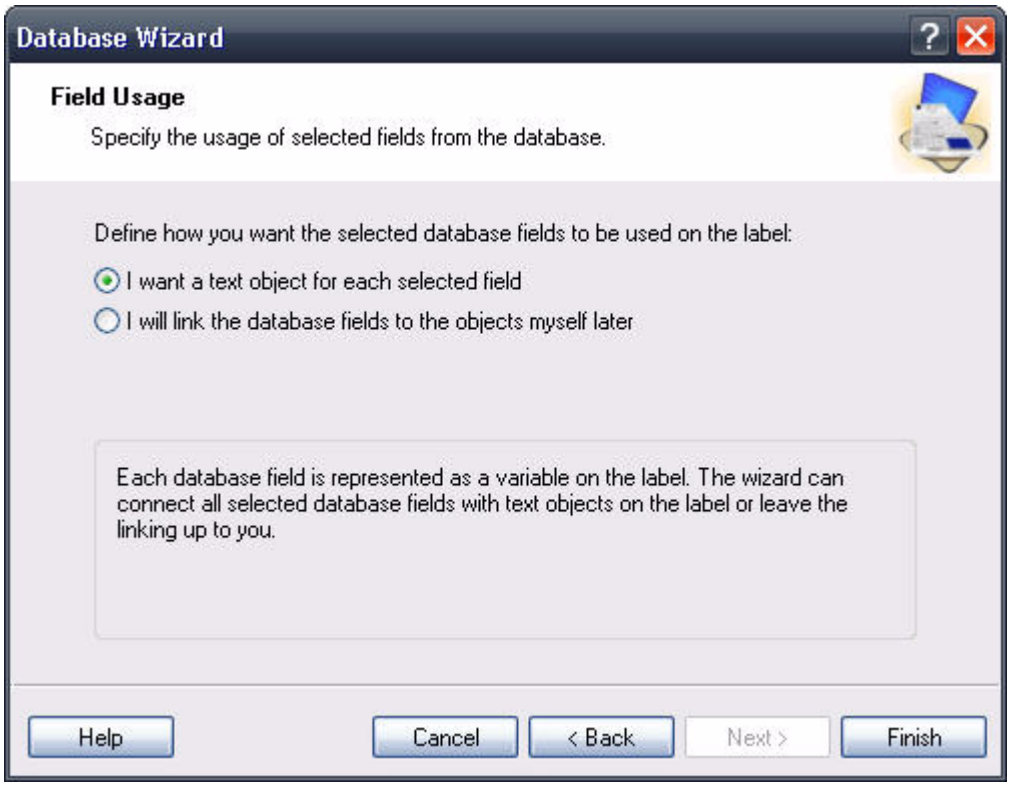


Figure 68 • Each field from the database will be linked to a text object

The label will show several text objects. Every field from the database is linked with the text object on the label.

Use Print Preview to Select Data and View a Label

Now you will simulate label printing using print preview.

1. In the **Standard Toolbar**, click on the

button.

2. The *Print* dialog box opens with the Quantity of labels set to **Variable quantity (entered for each database record**). This setting corresponds to your selection in the Database Wizard when you have selected the options **I want to select which record to print** and **I will enter label quantity for each selected record**.

   Only the records you select will be printed in the defined quantity.

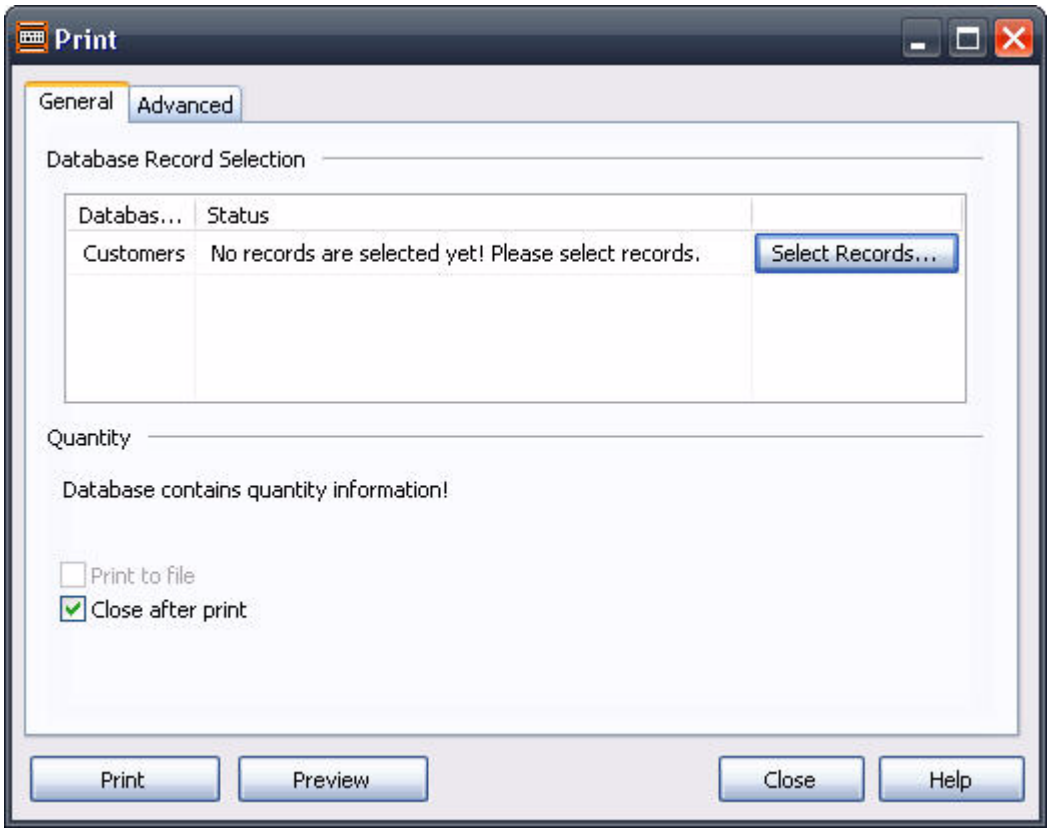


Figure 69 • Print / Print preview dialog box

3. To choose which records to print from the database, click on the **Select Records** button. The **Record Selection** dialog box will open.

4. Select the records from the database you want to print and enter the number of labels you want to print for each selected record.

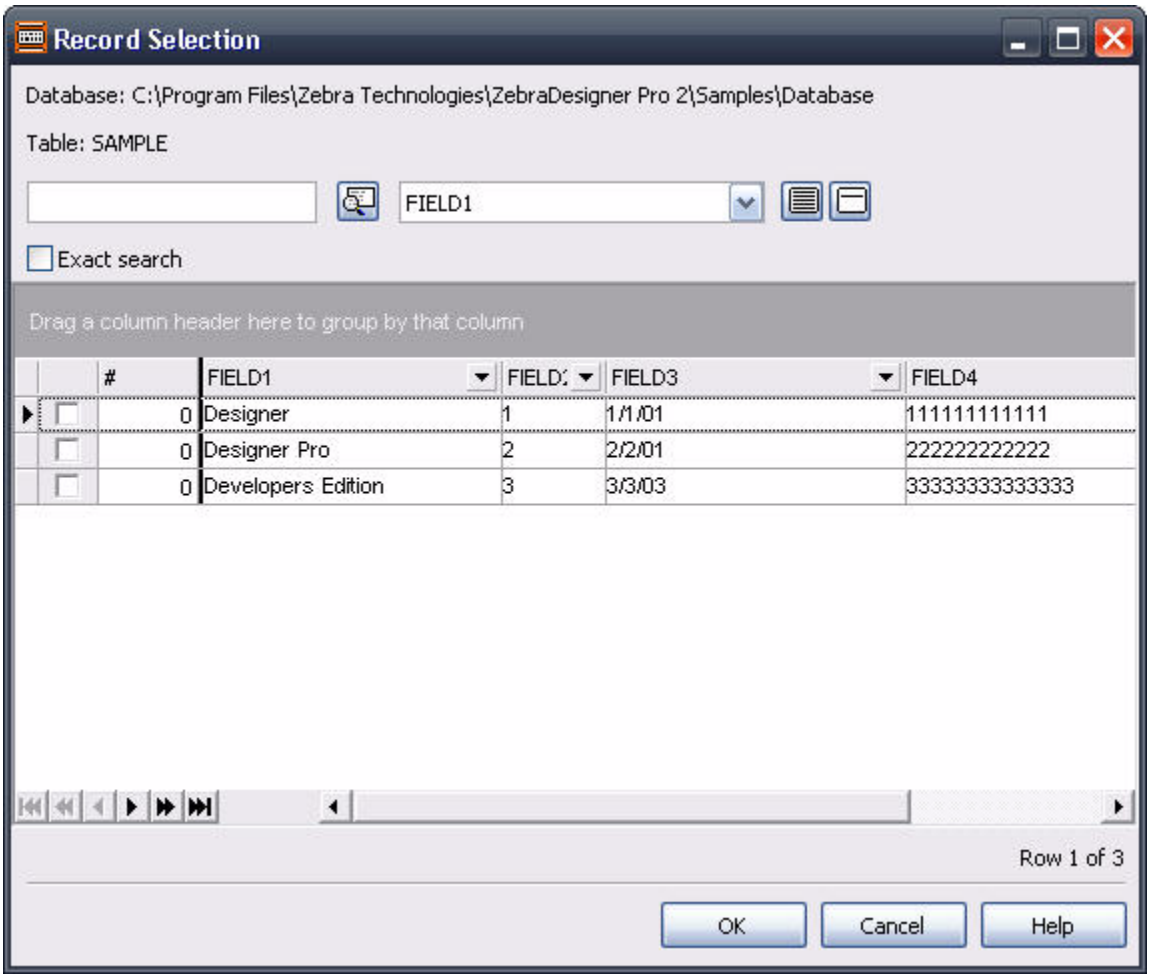


Figure 70 • Record selection dialog box

5. Click the **OK** button. You will return to the Print dialog box.

6. Click the **Preview** button. Now you can preview the labels on the screen. Note that the text objects on the label change for each new record.

7. In the *Command* window to advance to the next label or return to the previous label in the series, click the **Next** or **Previous** button. After you see the last label in the Preview series, the command window is closed.

Print a Label

When you are certain that the label design is correct and the label preview shows the correct values from the database, you can start sending the labels to the printer.

To print a label, do the following:

1. In the **Standard Toolbar**, click the

button.
The Print dialog box will open (same as the print preview dialog box).

2. Click the **Select Records** button and select the records you want to print and specify the label quantity for each record.

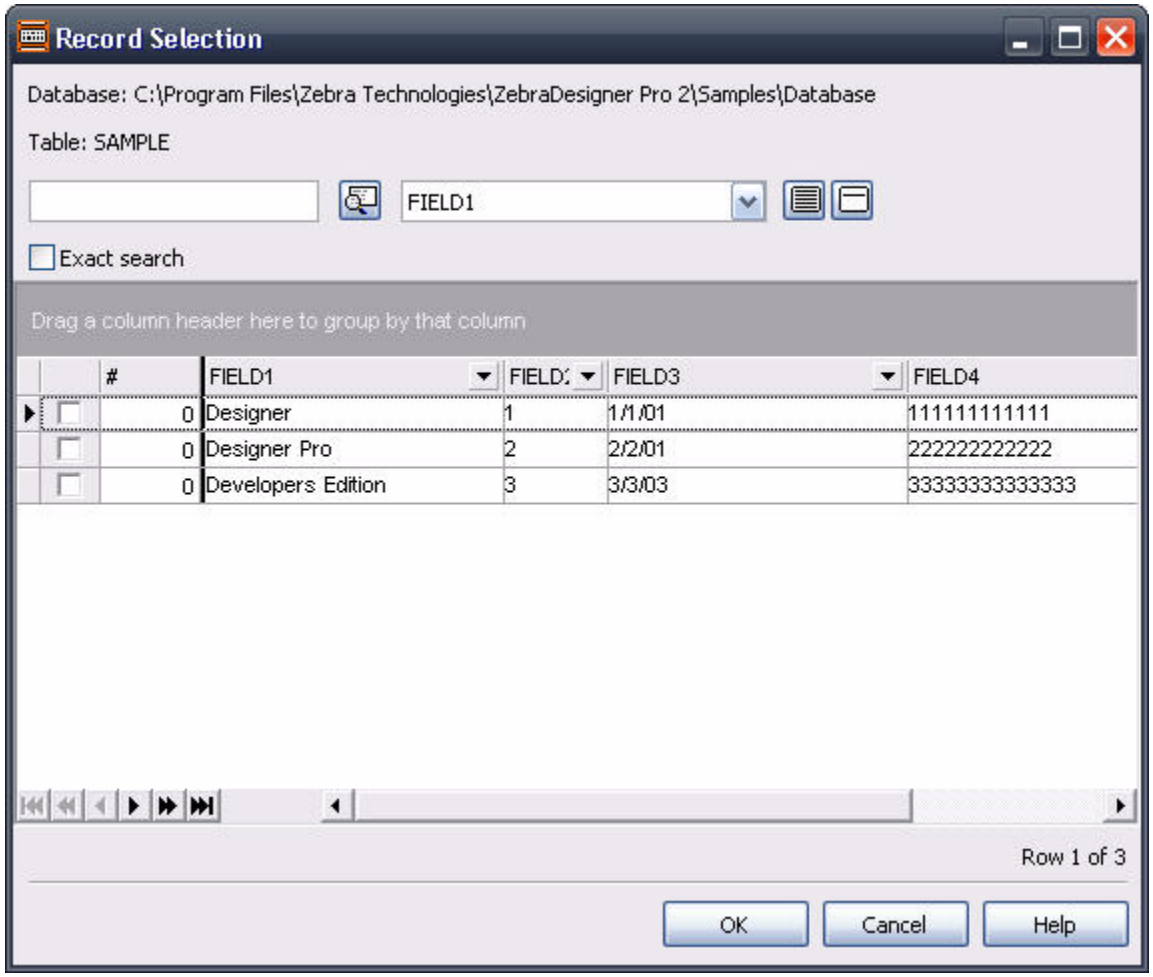


Figure 71 • Selecting records and specifying label quantity

3. Click the **OK** button.

4. To start printing labels, click the **Print** button.

5. To close the dialog box, click the **Close** button.

Using Text File Wizard

Text File Wizard

When the input database file is a plain ASCII text file or formatted CSV (Comma Separated Values), **Text File Wizard** will be started within Database Wizard and it will guide you through the steps of text data acquire. The main difference between a real database and a text file is in their data structure information. Databases include all information about their fields (names, data format, length) and can be automatically used with the application. Text files, on the other hand, do not have such information, and you will have to instruct the application on how the data is encoded.

When the Text File Wizard finishes, it will return control to the Database Wizard that will guide you the rest of the way.

Choose a Data Type

Before you can use text file, you will have to define its data structure. Fields can be delimited by a separator (tab, semicolon, comma, or some entirely user-defined separator) or can be of a fixed length.

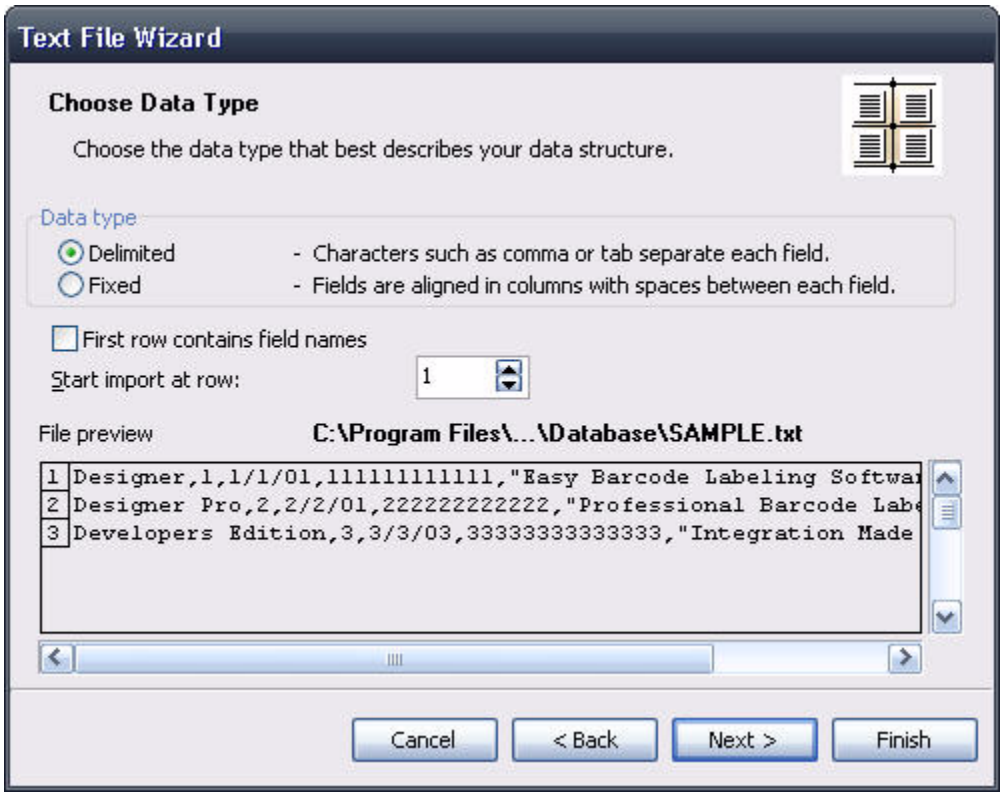


Figure 72 • Database Wizard –Choosing Data Type

Choose **Delimited**, if you know that data fields are separated with a special character. File preview at the bottom of the dialog box can be helpful if you do not know exactly how the data is organized.

Choose **Fixed** if you know that your data fields always occupy the same number of characters.

Start import at rowoption is useful when you do not want to import some rows at the top of the file. You may want to use this option when the text file contains a header on top of actual data fields.

Set the Fields

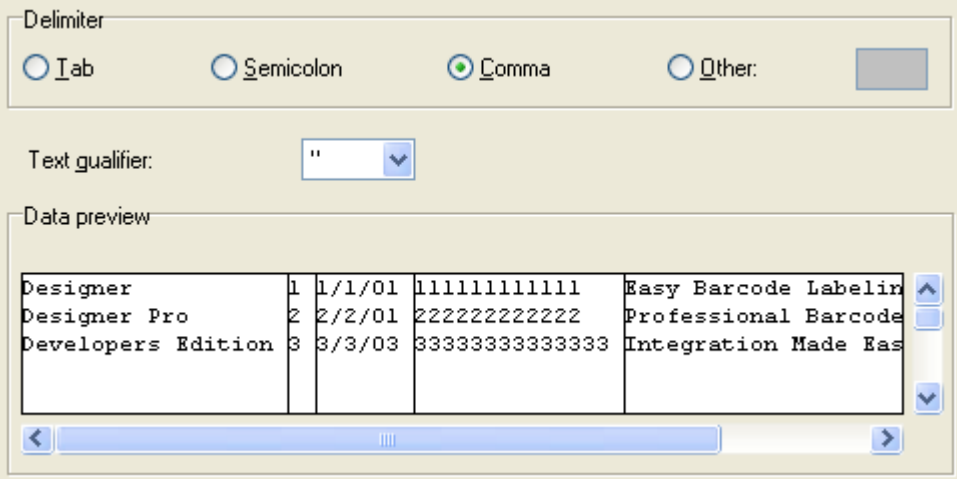


Figure 73 • Database Wizard –Setting separator and delimiter

In the second step of the Text File Wizard, you have to set the fields in the text file. If you have selected **Delimited** in the previous step, choose the appropriate separator here. Commonly, used separators are already pre-defined. But if you require some other, there is an option to use a custom-defined one.

You can also select the Delimiter character that is used when a separator character is used in the text field itself. The delimiter should be used to enclose this field. Text between two delimiter characters is treated as one field although it contains the field separator character.

The data preview in the bottom part of the dialog box will let you know if your choice of a separator character is a correct one. Fields will be separated with vertical lines if a separator is valid.

If you selected to have your data formatted with fixed widths, the second step of the Wizard will be slightly different. Instead of selecting a character for field separation, you will have to define field widths. Use a mouse and draw a vertical line to the start positions of the fields. Lines will indicate where the new field starts.

Format the Fields

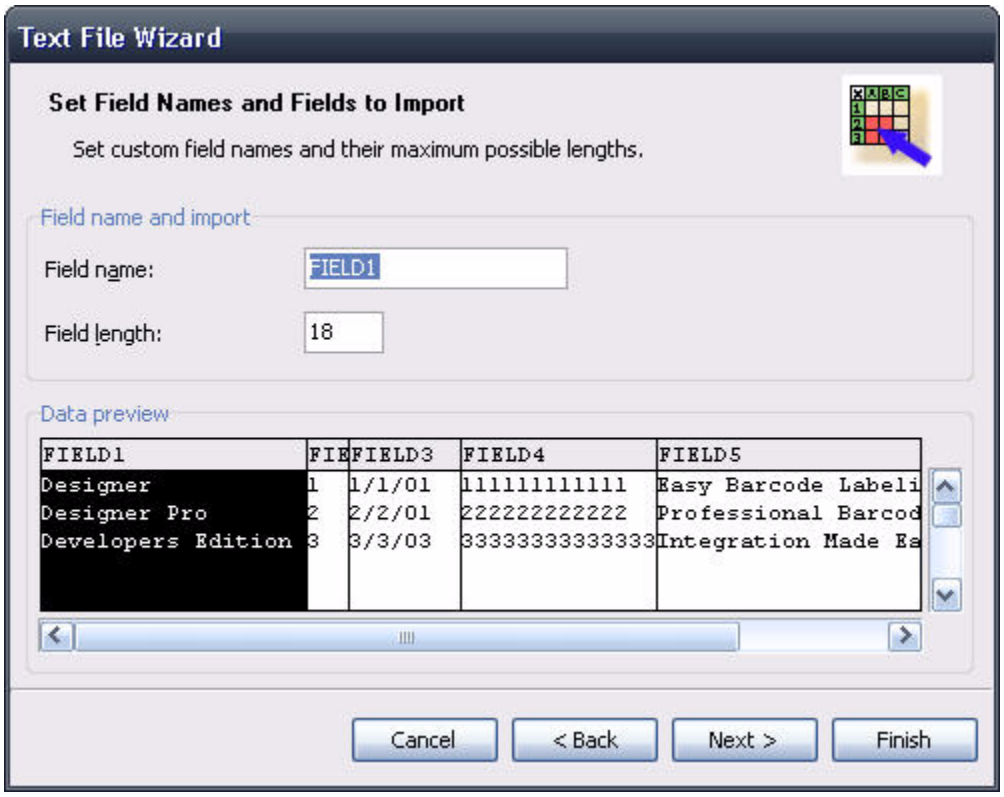


Figure 74 • Database Wizard –Formatting the fields

In this step of the Wizard, you can review the field names and lengths. If necessary, you can modify them. You may use more recognizable field names so you can distinguish between them more easily.

When you are finished with Text File Wizard, the structure information of the used text file is stored to a separate file with an extension of **.SCH** (Scheme File). If you try to use the same text file on a different label, you will not have to recreate the structure. **SCH** files will be automatically used and the Text File Wizard will not be necessary.

Work with Visual Basic Expressions

Visual Basic expressions allows you to manipulate the data values on the label. Input to Visual Basic can be fixed values or variable fields from the label. The output is always a data value that is used as content for the current object.

The expression is a one-line Visual Basic script. You can use up to 100 characters for your expression.

Note • The multi-line commands like "if..then..else.." cannot be used with the Visual Basic expression. You can use one-line expressions.

A Visual Basic expression must follow the Visual Basic script programming syntax. For more information on how to write your expressions, refer to the Microsoft help on Visual Basic scripting. Click on the button 'VB Script Help' in VB script step in the Text or Bar Code wizard to open the Microsoft help.

Note • You can also open the Visual Basic reference help file VBS55.CHM in the Bin folder of ZebraDesigner Pro folder.

Some common samples of Visual Basic expressions:

Visual Basic Expression	The result	Comment
1 + 4 * 20	81	Numeric calculation
"#" + LEFT("1234567890",5)	#12345	Working with string functions
[MyField1] + "-" + [MyField2]	The values from variable fields MyField1 and MyField2 are merged together.	Concatenating string values

Using Expression Editor

The labeling software has a simple text built-in editor. You can use it to design your own simple Visual Basic scripts.

The Expression editor is a programming text editor with constant access to command reference of the script language you are currently using.

The Expression editor lets you edit your scripts and expressions with ease. The **Load** and **Save** buttons allow you to import / export Visual Basic scripts from / to external text files. The editor uses standard shortcuts for positioning of the cursor and working with text files. Standard Search and Replace shortcuts (**Ctrl** + **F**, **Ctrl** + **R**) are also available.

The working window is divided into four parts.

Category	This section contains the groups of available commands, functions, and operators. Similar objects have been grouped together for easier identification and faster search. The groups are displayed as a tree-view. Select the main group name to display all its contents into the **Name** section. Or you can click the plus sign in front of the group name (if available) to display all defined sub-groups. Then select the sub-group name to display only its contents.
Name	This section will display the contents of the selected group in the **Category** section. All available commands, functions, operators etc. will be listed here. If you select one of them, its properties will be displayed in the **Description** section. If you want to insert the selected operands into the Expression field, double click its name or click the **Insert** button.
Expression	This section is the main workplace of the Expression editor. Use it to write and modify the script you are working on.
Description	This section displays the name, sample use and description of the currently selected operand in the **Name** section. You will get an idea of how the current operand should be used.

Language Help: The button will open the help file with the detailed reference of the Visual Basic script.

Using Printer Real Time Clock (RTC)

When the printer selected on the label has a built-in Real Time Clock (RTC), you can use the time or date fields from the Real Time Clock with text objects on the label. The available time and date formats are defined in the printer driver.

To use the time field from the printer RTC on the label, do the following:

1. In the **Toolbox**, click the **Text** button.
2. Click the position on the label, where you want to place the object.
   Text Wizard dialog box will open.
3. Enable the **Variable text** option.
4. Click the **Next** button.
5. Select the **Time Field** option.
6. Click the **Next** button.
7. Enable the option **Use the printer's internal clock**.
8. Select the appropriate time format from the list.
9. Click the **Finish** button.

Note • When you are using a prefix and suffix with the Real Time Clock field on the label, make sure that the length of the prefix and suffix does not exceed 31 characters.
When you are using a linked field and are merging a Real Time Clock field with other fields, make sure that the length of fields surrounding Real Time Clock field does not exceed 31 characters.

Available Date Formats

The date fields can be printed in various formats. In this field, you define how the date will look. You can select some of the predefined date formats or enter you own. When defining the formats, the following notation is used:

D	Number of the day in a month. Can occupy one or two characters.
DD	Number of the day in a month. Always occupies two characters (leading zeros will be added as necessary).
M	M is number of the month. Can occupy one or two characters.
MM	MM is number of the month. Always occupies two characters.
YY or YYYY	The year as 2 or 4 digits.
DDD	Abbreviation of the day of the week.
DDDD	The full name of the day of the week.
MMMM	The full name of the month.
MMM	The abbreviation of the name of the month.
J	The number of days since January 1. Can occupy from one to three characters.
JJJ	The number of days since January 1. Always occupies three characters.
W	The week number in the current year. Can occupy one or two characters.
WW	The week number in the current year. Always occupies two characters.
	Any other sequence of characters will be displayed unchanged so you can insert dots, commas and other characters needed to properly write the date.

The examples:

Format	**How the date will look**
D/M/YYYY	10/3/2005
DD/MM/YY	10/03/05
DDDD, D. MMMM YYYY	Thursday, 10. March 2005
JJJWWYYYY	069102005

Available Time Formats

The time can be printed in various formats. In this field, you define how the time will look. You can select some of the predefined time formats or enter you own. When defining the formats, the following notation is used:

h	Hours in 12-hour format (AM/PM will be added if they follow the time). Can occupy one or two characters.
hh	Hours in 12-hour format (AM/PM will be added if they follow the time). Always occupies two characters. (leading zeros will be added as necessary).
H	Hours in 24-hour format. Can occupy one or two characters.
HH	Hours in 24-hour format. Always occupies two characters.
mm	Used for minutes.
ss	Used for seconds.

The examples:

Format	How the time will look
h:mm {AM/PM}	8:25PM
H:mm	20:25
hh:mm:ss	08:25:36

Using Contents Mask

The contents mask is very useful when you must display the input data differently on the label. With contents mask, you can reformat the data to suit your needs. Contents Mask is available in the Human Readable tab in bar code properties.

The mask character will be replaced by the actual data and any other used character will be used as-is. If the current bar code value is

"AD951"

and the contents mask is

"**C - ** /*/"

the resulting output will be

"ADC - 95 /1/"

Powerful formatting structures can be defined using Contents mask, but it is only available with bar codes that allow custom formatting of the human interpretation. You should also make sure to print bar codes as graphics; otherwise, the contents mask is not available.
If your data contains the asterisk "*" character, then you will have to change the default mask character to something else. It should be a unique value, not appearing anywhere in the data.

Notes •

5

Printing and Previewing Labels

Contents

Preview Pictures 146
Preview and Print a Label 146
Optimize the Printing Speed 147

Preview Pictures

When you place a picture on the label, in design mode it is always shown in color-depth as defined in the picture.

However, when previewing the labels on-screen, the preview of the pictures depends on the dithering option set in the printer driver. All color pictures (except WMF and EMF files) are converted to monochrome images. The illusion of colors and shades of grey is accomplished by varying the pattern of dots. More dots close together will provide a darker shade of grey.

The preview of the label will show pictures in the same way as they will be printed according to the dithering setting. A more accurate print preview is guaranteed this way.

If the picture is not previewed as you would like to print it, change the dithering setting in the printer driver.

Preview and Print a Label

If you want to print a label, you can use the print preview to simulate a print output. The label preview shows the label on the screen.

Simulate printing 10 labels on the screen to check label layout and printing procedure.

1. In the **Standard Toolbar** click the

button or from the **File** menu select the **Print** command.
The Print dialog box appears.

2. Enter *10* for Label Quantity and click on the **Preview** button.
ZebraDesigner Pro will close the dialog box and simulate the production for 10 labels on the screen.

   Note • You can select between the quantity of the labels and the quantity of pages. The page can have one or more labels, and the labels are arranged on the page in columns and rows. If you have eight labels on the page, quantity of ten pages will print 80 labels.

When you are certain that the labels will be printed correctly and the preview shows the correct values, you can proceed to real printing.

To actually print the labels, do the following:

1. In the **Standard Toolbar**, click the

button.
The Print dialog box appears.

2. Enter *10* for the Label Quantity and click the **Print** button.
Your printer will now print 10 labels.

Optimize the Printing Speed

There are many factors that affect the printing speed. By following the guidelines below you can dramatically increase the speed of printing:

- If your printer supports parallel and serial ports, use the parallel port. Your computer can send data to the printer over a parallel port much faster than over serial port.
- Use the printer's internal fonts instead of Windows' true-type fonts. True-type fonts must be sent to the printer as graphics and the size of the file is much bigger (kilobytes). When using internal fonts, only the text is sent to the printer (couple of bytes). If you must use true-type fonts, use the Font Downloader program, to download these fonts to the printer's memory and access these fonts as internal printer fonts (only if your printer supports this).
- When using bar codes, make sure that you do not print bar codes as graphics if your printer supports printing bar codes.
- When using counters, the printer will internally increment the numbers if the internal fonts are used (if supported by the printer). This means, that the printer will receive only the first number of objects, and will later increment this number to print other labels. Using this option also reduces the amount of data transferred between computer and printer, but the difference is noticeable only with high quantities of labels.
- Set the printing speed to a higher value (if your printer supports it). Note that setting the printing speed usually affects the quality of printing. The higher the speed, the lower the quality.

Notes •

A

Technical Support

Contents

Online Support 150
Contact Information 151

Online Support

You can find the latest builds, updates, workarounds for problems and Frequently Asked Questions (FAQ) under the Support section on the Zebra Web site. If you cannot solve the problem on your own, please contact your local vendor or representative offices listed in the topic Contact Information.

Contact Information

Technical Support via the Internet is available 24 hours per day, 365 days per year.

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E-mail address: emb@zebra.com
Subject line: Emaillist
Self Service Knowledge Base: www.zebra.com/knowledgebase
Online Case Registration: www.zebra.com/techrequest

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Notes •

B

Glossary of Terms

Auto translation

Bar code interpretation in human readable characters.

Darkness

The print-head temperature defines the print darkness. The higher is the temperature, the darker is the printout. (thermal printers only)

Descender bars

Longer first and last bar in the EAN 13 bar codes.

Quiet zone

The empty place before and after the bar code symbol. This is necessary for the bar code reader to properly read the bar code.

Security

The definition of the control check-digit with some bar code types.

Notes •

Index

Numerics

12-hour
  time format, 142
24-hour
  time format, 142
2D-Pharmacode, 117
32-bit Windows, 8, 12
64-bit Windows, 12
8-bit, 110

A

A.Z, 110
About, 9, 36
Activate, 26
  Copy, 26
  Paste, 26
Activate button, 14
Activate ZebraDesigner Pro, 14
Activating, 14
  ZebraDesigner Pro, 14
Activation, 9
AD951, 143
ADC, 143
Add, 127
  Fields, 127
Add button, 87, 99, 109
Addon, 116
Administrator, 12
AID, 109
  select, 109
Align toolbar, 55, 119
Aligning, 119
  Objects, 119
All 128 Extended ASCII, 110
All EBCDIC, 111
All ISO, 111
Alt, 16, 25
  holding, 16
  pressing, 25
Alt + Backspace, 18
Alt + Shift, 18
AM/PM, 142
AND, 23
And/or, 122
Anker, 116
Application Identifier, 103, 104, 105, 106, 108, 109
  depending, 103
  long, 106
  selected, 104
Application Identifiers, 106
Area/object, 17
Arrange Icons, 35
ASCII, 33, 122, 136
ASCII file, 86, 98
Aspect Ratio, 110
Auto, 114
Auto-determined, 130
Automatic Sizing, 42, 48
Auto-translation, 114
Available Date Formats, 141
Aztec, 117

B

Back, 130
  Database Wizard, 130
Backspace, 18, 25
Backspace key, 25
Bar
  Define button, 112
Bar Code, 31, 139
  selecting, 31
Bar Code button, 76
Bar Code group
  two-dimensional, 117
Bar Code Object, 76
  Defining, 76
Bar Code Wizard, 91
Bitmap, 120
  BMP, 54
Bitmap Windows, 74
BMP, 120
Bookland, 116
Border Size, 111
Browse button, 124, 128
  use, 124
Build Expression, 89, 101

C

Calculating, 107
  Check Digit, 107
Cancel button, 112
  clicking, 112
Captions, 33
Cascade, 35
Category
  Working Window, 140
CC-A/B, 117
CC-C, 117
CD, 12, 13
CD-ROM, 12, 13
Change, 71, 72
  Dithering Type, 72
  Speed, 71
Change Common Printer Settings, 71
Change Dithering Options, 72
Check, 113
Check Digit, 107
  13th place, 114
  Calculating, 107
Check Digit Tab, 113
Checkbox, 24
Choose Arial, 51
Choose Delimited, 136
Choose Fixed, 136
Choosing, 25, 80, 136
  Data Type, 136
  Open, 25
  Undo, 25
Choosing Data Type, 136
Choosing Variable Bar Code, 92
Choosing Variable Text, 80
Clicking, 19, 27, 46, 112, 123
  Cancel button, 112
  Finish button, 46
  Next button, 123
  OK button, 112
  Open button, 19
  Paste-link, 27
Close, 19, 35, 130
  Print dialog, 134
  Text File Wizard, 129
Close All, 35
Close All Software Applications, 12
Close button, 21, 133, 135
Codabar, 116
Codablock F, 117
CODE 128, 116
Code 32, 116
Code 39, 116
Code 39 Full ASCII, 116
Code 93, 116
Code Type, 92
Code Wizard, 91, 92, 93, 94, 96, 97, 98, 99, 101, 102
Code Wizard dialog, 76
Code128, 53
Code128 bar, 53
Code-39, 115
Codes, 30, 31, 33
Comma, 129
  set, 130
Comma Separated Values, 136
Command window, 133
Composite RSS symbologies, 117
CompuServer Bitmap, 120
Computers, 122
Connect, 128
  Database, 128
Contact Information, 151
Contents, 8, 36, 143
  package, 8
Contents Mask, 143
Contents Provider, 17
Control, 136
  Database Wizard, 136

Control Panel, 20
Copy, 26
  activate, 26
Counter, 82, 94
Counter Continuation, 83
Create, 27, 46
  New Label, 46
Create Database Connection, 33
Create Date, 60
Create Keyboard Entry Variable Fields, 57
Create New, 27
Create Serialized Data Variable Fields, 59
CSV, 136
Ctrl, 16, 17, 18, 24, 26, 117, 139
  Holding, 16, 17, 117
  pressing, 26
CTRL key, 16, 23, 119
  hold, 24
  holding, 16
  use, 16
CUR, 120
Customize button, 23
Cut, 26

D

D/M/YYYY, 141
Darkness, 71
Data, 129
  Format, 129
Data Matrix, 111
Data Type, 136
  Choosing, 136
Data View, 28
Database Field, 127
Database File, 124
  Selecting, 124
Database Menu, 33
Database Wizard, 123, 128, 130, 133, 136, 137, 138
  back, 130
  control, 136
Databases, 86, 98, 122, 123, 128
  Connect, 128
  Select, 123
DataMatrix, 117
DataMatrix Bar Code, 110
Date, 84
Date Field, 84, 96
Date/time, 57
DD, 141
DD/MM/YY, 141
DDD, 141
DDDD, 141
Define button, 53, 91, 112
  bar, 112
Define Label, 47
Define Setup Options, 13
Defining, 42, 44, 76, 77, 78, 107, 109
  Bar Code Object, 76
  Ellipse Object, 78
  Inverse Object, 78
  Label Dimensions, 44
  Line Object, 77
  New Variable, 107
  Page Size, 42
  Picture Object, 77
  Prompt, 109
  Rectangle Object, 77
  Text Object, 76
Del, 26
Del key, 27
Delete, 27
Delete button, 109
Delete Database, 33
Delimited, 129, 137
  select, 129
Delimiter, 137
  select, 137
DEMO, 14
  use, 14
DEMO dialog, 14
Demo Mode, 14
Depending, 36, 103
  AI, 103
  Windows, 36
Descender, 115, 153
Description, 140
  Working Window, 140
Deselect, 125
  want, 125
Design toolbar, 30, 119
  enable, 119
Designing, 9
  Labels, 9
Desired Fields, 125
  Selecting, 125
Details, 115
Details Tab, 115
DIB, 120
Display, 62
Display Grid, 29
Dithering, 72
  Open, 72

Dithering Type, 72
  Change, 72
Document1, 19
Document2, 19
Dont, 46
Down, 109
DUN-14, 116

E

EAN, 113, 115, 116
EAN 13 bar, 153
EAN bar, 116
EAN.UCC 128, 116
EAN.UCC 128 bar, 103, 109
  select, 103, 109
  structure, 103
EAN.UCC 128 Bar Code, 109
EAN.UCC 128 Wizard, 103
EAN-13, 116, 117
EAN-13 bar, 114
EAN-14, 116
EAN-8, 116, 117
ECC Type, 110
Edit bar, 112
Edit Bar Code dialog, 53
Edit Bar Code dialog Box, 112
Edit button, 109
Editing, 118
  Objects, 118
Ellipse, 31, 32
  selecting, 32
Ellipse button, 78
Ellipse Object, 78
  Defining, 78
Ellipse tool, 78
  selecting, 78
EMF, 120, 146
Enable, 112, 119, 140
  Design toolbar, 119
  Variable, 140
Enable/disable, 113
Enhanced Windows Metafile, 120
Enlarge/reduce, 75
Enter, 62, 89, 101
  Visual Basic, 89, 101
Enter key, 118
Enter Non-Changing Text, 50
Error Correction Codes, 110
Exact Search, 23
Existing, 33, 122
  ODBC, 33
  ODBC Data Sources, 122
Exit, 25
Export, 19
  Printer, 19
Expression, 139
  Working Window, 140
Expression Builder, 89, 101
  open, 89, 101

F

F2, 18
F4, 25
FAQ, 150
FAX, 120
Field1, 123
Field2, 123
Fields, 127, 137, 138
  Adding, 127
  Formatting, 138
  Setting, 137
File menu, 19, 20, 25, 35, 46, 72, 146
Find button, 23
Finish button, 44, 46, 47, 50, 53, 56, 57, 59, 60, 62, 76, 108, 109, 118, 123, 129, 130, 140
  clicking, 46
Folder, 9
Follow, 14, 57, 76, 139
  onscreen, 14, 76
  screenshots, 57
  Visual Basic, 139
Font button, 114
Font Downloader, 147
  use, 147
Format ID, 111
Formatting, 129, 138
  Data, 129
  Fields, 138
Frequently Asked Questions, 150
Full 128 ASCII, 110, 111

G

G3F, 120
G3N, 120
General, 112
General Tab, 112
GIF, 54, 120
Global Trade Item Number, 104
GLOBALS.TDB, 36
Glossary, 153
  Terms, 153
Graphics, 32, 54

GreyMap, 120
Grid, 29, 55
  Snap, 29, 55
Group, 13, 116
  ZebraDesigner Pro, 13
GS1-128, 117
GTIN, 104

H

h, 142
Halftoning, 72
Hh, 142
hh, 142
Hold, 16, 17, 24, 117
  Alt, 16
  Ctrl, 16, 17, 117
  CTRL key, 16, 23, 119
  Shift, 16, 17
Human, 114
Human Readable, 143
Human Readable Tab, 114

I

ICB, 120
ICO, 120
Identifier Input Type, 105
Identifiers, 108
If.then.else, 139
Include EAN, 116
Incremented/decremented, 109
InfoGlyph, 117
Input, 139
  Visual Basic, 139
Input Application, 108
Ins, 26
Insert Bar Codes, 53
Insert button, 139
Insert Object, 27
Insert Pictures, 54
Inserts, 27
  OLE, 27
Install button, 13
Install Printer Driver, 46
Installation/demonstration, 12
Installed, 12, 13
  ZebraDesigner, 13, 14
  ZebraDesigner Pro, 12
Intercharacter, 115
Interface Reference, 9
Inverse, 31, 32
  selecting, 32
Inverse button, 78
Inverse Object, 78
  Defining, 78
ITF 14, 116
ITF 16, 116

J

J2K, 120
Jane, 123
January, 141
JJJ, 141
JJJWWYYYY, 141
JP2, 120
JPC, 120
JPE, 120
JPEG, 54, 120
JPEG Bitmap, 120
JPEG2000, 120
JPEG2000 Code Stream, 120
JPG, 120

K

Keyboard, 16, 81
  Using, 16
Keyboard Input, 81, 93
Kix, 116

L

L, 111
Label, 9, 20, 36, 44, 55, 127, 130, 133, 135, 146
  Designing, 9
  Place Database Fields, 130
  Print, 135, 146
  Save, 55
  use, 20
  View, 133
Label Dimensions, 42, 44
  Defining, 44
Label Orientation, 43
  Selecting, 43
Label Quantity, 146
Label Setup, 20
Label Setup Wizard, 19, 36, 39, 46
Label Stock, 41
Language, 34
Language Help, 139
Large Icons, 33
Leave, 46, 48
  Page Size, 47
  Wizard, 46
LEFT, 139

LEISURE.WMF, 54
liability, 2
Line, 31, 32, 56, 77
  selecting, 32
Line Object, 77
  Defining, 77
Linear RSS symbologies, 117
Linked, 28, 122
Linked Field, 87, 99
Load, 139
Long
  Application Identifiers, 106
LVR, 36

M

Main Window, 16
Manual, 9
MaxiCode, 117
MaxiCode 2D Code, 111
MB, 12
  RAM, 12
Menus Show Recently Used Commands First, 34
Merging, 141
  Real Time Clock, 140
Metafile Picture, 26
MicroPDF, 117
MicroQR, 117
Microsoft, 89, 101, 139
  open, 89, 101, 139
  refer, 139
Microsoft Access, 33, 122
Microsoft Excel, 33, 122
Microsoft Word, 26, 122
Mirror horizontally/mirror, 115
MM, 141
mm
  time format, 142
MMM, 141
MMMM, 141
MMMM YYYY, 141
More windows, 35
Mouse Effectively, 16
Mouse Wheel support, 17
Moving, 118
  Objects, 118
MSI, 116
My Documents, 19
My Labels, 19
MyField1, 139
MyField2, 139

N

Name, 140
  Working Window, 140
New, 46
New Date Field, 60
New Keyboard Input, 58, 62
New Label, 19, 46
  Create, 46
New Time Field, 60
New Variable, 107
  Defining, 107
Next button, 13, 39, 41, 42, 43, 46, 47, 62, 76, 109, 123, 128, 129, 130, 133, 140
  clicking, 123
Non Blanks, 24
Normal View, 28
Notepad, 122

O

Object menu, 31, 32
Objects, 117, 118, 119, 120
  Aligning, 119
  Editing, 118
  Moving, 118
  Resizing, 119
  Rotating, 120
  Selecting, 117
ODBC, 33
  Existing, 33
ODBC Data Sources, 122
  Existing, 122
OK, 9
OK button, 53, 71, 72, 112, 133, 135
  clicking, 112
OLE, 27
  inserts, 27
OLE DB, 12
  Support, 12
Online Support, 150
Onscreen, 14, 20, 76
  Follow, 14, 76
Open, 19, 25, 71, 72, 89, 101, 139
  choosing, 25
  Dithering, 72
  Expression Builder, 89, 101
  Microsoft, 89, 101, 139
  Options, 71
  Visual Basic, 139
Open button, 19, 54, 77
  clicking, 19
Open dialog, 54, 77

Open ZebraDesigner Pro, 46
Optimize, 147
  Printing Speed, 147
Options, 71
  Open, 71
OR, 23
Overview, 45, 57, 128

P

Package, 8
  Contents, 8
Page Dimensions, 47
Page Size, 42, 47
  Defining, 42
  Leave, 48
Part>|, 91
Paste, 26, 27
  activate, 26
Paste Link, 26, 27, 28
Paste Special, 26
Paste-link, 27
  clicking, 27
PBM, 120
PC, 9, 13, 84, 85
PCX, 54, 120
PDF 417, 110
PDF 417 2D Code, 110
PDF-417, 117
Pentium-based, 12
PGM, 120
Pharmacode, 116
Picture, 31, 77, 146
  Previewing, 146
  selecting, 31
Picture Object, 77
  Defining, 77
PIX, 120
Place Database Fields, 130
  Label, 130
Plessy, 116
PNG, 120
Portable Network Graphics, 120
Portable Pixmap, 120
Postnest-62, 116
Postnet-32, 116
Postnet-37, 116
Postnet-52, 116
PPM, 120
Prefix, 90, 102
  Setting, 90
Press, 25, 26, 117
  Alt, 25
  Ctrl, 26
  Enter key, 118
  Shift, 25, 26
  Shift key, 117
Preview, 21, 84, 85, 96, 97, 109, 146
  Pictures, 146
Preview button, 20, 133, 146
Previewing Labels, 9
Previous button, 123
Print, 20, 71, 126, 135, 146
  10, 146
  Label, 135, 146
print
  simulate 10 labels, 146
Print / Print, 133
Print bar, 113
Print button, 20, 21, 135, 146
Print dialog, 21, 134, 135, 146
  return, 134
Print dialog box, 21
Print Preview, 20
Printer, 19, 46, 71
  Export, 19
  Select, 46
Printer Settings, 20, 71, 72
Printing Speed, 147
  Optimize, 147
Program Files/ZebraDesigner Pro/Bin/System, 36
Programming, 33
Project1, 36
Prompt, 109
  define, 109
Properties button, 39
PXM, 120

Q

QR, 117
Quantity, 133
Quick Launch, 13

R

RAM, 12
  MB, 12
Real Time Clock, 85, 87, 140
  merging, 141
  surrounding, 141
Recent Windows, 12
Recently Used Files, 25
Record Selection, 23

Record Selection dialog, 23, 134
Rectangle, 31, 32
  selecting, 32
Rectangle button, 77
Rectangle Object, 77
  Defining, 77
Rectangle tool, 77
  selecting, 77
Redo, 25
Refer, 139
  Microsoft, 139
  Related Topics button, 57
Replace, 139
Resizing, 119
  Objects, 119
  OLE, 27
Result, 26
Return, 134
  Print dialog, 134
RFID, 88, 100
RFID-enabled, 88, 100
RLE, 120
Rotated, 43, 120
  Objects, 120
Rounded Rectangle, 32
RSS, 117
RSS Expanded, 117
RSS Expanded, UPC-A, 117
RSS Limited, 117
RSS14, 117
RSS14 Stacked, 117
RSS14 Stacked Omnidirectional, 117
RSS14 Truncated, 117
RTC, 84, 85, 140
Run Installation, 13

S

SAMPLE.TXT, 128
Samples, 54, 128, 139
  Visual Basic, 139
Save, 19, 55, 71, 72, 139
  Label, 55
  selecting, 72
Save As button, 23
SCH, 138
Scheme File, 138
Screen, 79
  Text Wizard, 79
Screenshots, 57
  following, 57
Select All, 23
Select Data, 133
  Use Print Preview, 133
Select New Counter, 59
Select Printer, 39
Select Record, 21
Select Records button, 133, 135
Select Stock window, 47
Selecting, 27, 30, 31, 32, 39, 43, 46, 72, 77, 78, 103, 109, 113, 117, 123, 124, 125, 126, 127, 129, 137, 140
  AID, 109
  Application Identifier, 103
  Bar Code, 31
  Database, 123
  Database File, 124
  Delimited, 129
  Delimiter, 137
  Desired Fields, 125
  EAN.UCC 128 bar, 103, 109
  Ellipse, 32
  Ellipse tool, 78
  Inverse, 32
  Label Orientation, 43
  Label Stock, 41
  Line, 32
  Objects, 117
  Picture, 31
  Printer, 46
  Rectangle, 32
  Rectangle tool, 77
  Save, 72
  Select, 31
  Text, 31
  Time Field, 140
  Variable Quantity, 127
  Which Records, 126
Selection/de-selection, 24
Set, 90, 130, 133, 137
  Comma, 129
  Fields, 137
  Prefix, 90
  Variable, 133
Settings/All Users/Application Data/Zebra/ZebraDesigner Pro, 36
SETUP.EXE, 9
Shift, 16, 17, 24, 25, 26
  Holding, 16, 17
  pressing, 25, 26
Shift key, 26, 117
  press, 117
Shortcuts, 18
Show Objects, 28

simulate
printing, 146
Small Icons, 34
Snap, 29, 55
Grid, 29, 55
Software Restrictions, 9
Speed, 71
Change, 71
ss
time format, 142
SSCC, 116
Standard Search, 139
Standard Toolbar, 30, 46, 71, 72, 128, 133, 135, 146
Start > Programs, 9
Start menu, 13
Start ZebraDesigner Pro, 14
START.EXE, 13
Starting, 82, 94
Value, 82, 94
Step, 103, 105, 106, 108
Stock Type, 41
Stop button, 20
Structure, 103, 111
EAN.UCC 128 bar, 103
Structured bar, 111
Subfolders, 36
Subfolders Database, 36
Suffix, 62, 90, 102
Suffix Options, 62
Support, 12, 150
OLE DB, 12
supported Bar Codes, 116
Supported Graphics Formats, 120
Surrounding, 141
Real Time Clock, 140
Symbology, 103
System folder, 36

T

Tab, 17
TARGA, 120
Targa Bitmap, 120
Technical Support, 9
Terms, 153
Glossary, 153
Test, 25
Test Print, 25
Text, 30, 31, 139
selecting, 31
Text button, 76, 140
Text File Wizard, 129, 136, 137, 138
close, 130
Text Object, 76
Defining, 76
Text Toolbar, 30, 50
Text Wizard, 79, 80, 81, 82, 83, 84, 85, 86, 87, 89, 90
screen, 79
Text Wizard dialog, 76, 140
TGA, 120
TIF, 120
TIFF, 120
TIFF Bitmap, 120
Tile, 35
Time, 85
Time Field, 85, 97, 140
Select, 140
time format
12-hour, 142
24-hour, 142
h, 142
mm, 142
ss, 142
Time Formats
available, 142
Time Variable Fields, 60
Toolbars, 17, 33, 34
Toolbox, 31, 32, 50, 53, 54, 55, 56, 57, 59, 60, 62, 66, 74, 76, 77, 78, 117, 140
Truetype, 88, 100
Type Enter, 57
Type SAMPLE, 50
Types, 116
Typographical Conventions, 9

U

Undo, 25
choose, 25
Unselect, 23
UPC, 116
UPC bar, 113, 115
UPC Case Code, 116
UPC-A, 116
UPC-E, 116, 117
Use, 14, 16, 20, 101, 124, 140, 147
Browse button, 124
Ctrl key, 16
DEMO, 14
Font Downloader, 147
Label, 20
Visual Basic, 101
Use Alignment Tools, 55

Use Drawing Tools, 56
Use Prefix, 62
Use Print Preview, 133
  Select Data, 133
Use Space key, 23
User Guide, 9
Using, 16
  Keyboard, 16
Using Contents Mask, 143
Using Data, 123
Using Database Wizard, 123
Using Design Toolbar, 75
Using Expression Editor, 139
Using Label Setup Wizard, 39
Using Printer Real Time Clock, 140
Using Standard Toolbar, 73
Using Text Toolbar, 74
Using the Toolbox, 74

V

Value, 82, 94
  Starting, 82, 94
Variable Quantity, 127
  Selecting, 127
Variable Wizard, 58
Variables, 123, 133, 140
  Enable, 140
  set, 133
VB, 139
VB Script Help, 89, 101, 139
VDA, 120
View, 133
  Label, 133
View menu, 55, 119
Visual Basic, 89, 101, 122, 139
  Enter, 89, 101
  follow, 139
  Input, 139
  open, 139
  samples, 139
  use, 101
Visual Basic Expression, 89, 101, 139
VST, 120

W

Want, 125
  deselect, 125
Welcome, 8
Welcome Wizard, 36
Wheel Mouse, 16
Which Records, 126
  Selecting, 126
Windows, 13, 19, 24, 26, 36, 61, 147
  depending, 36
Windows 2000, 8, 12
Windows application, 27
Windows Bitmap, 120
Windows Cursor, 120
Windows dialog, 36
Windows Icon, 120
Windows Metafile, 120
Windows NT, 12
Windows Server 2003, 8, 12
Windows Server 2008, 8, 12
Windows Vista, 8, 12
Windows XP, 8, 12
Wizard, 39, 42, 44, 46, 91, 103, 106, 123, 126, 137, 138
  leave, 46
Wizard dialog, 109
WMF, 54, 120, 146
Word, 26
Word file, 27
Workarounds, 150
WW, 141
WYSIWYG, 88, 100

X

X-Expansion, 112
XP, 12

Y

YY, 141
YYYY, 141

Z

Zebra Technologies Corporation, 151
Zebra Web site, 150
ZebraDesigner, 8, 9, 12, 13, 14, 42, 46
  install, 13
ZebraDesigner CD, 8
ZebraDesigner Edition, 12
ZebraDesigner Pro, 9, 12, 13, 14, 16, 33, 42, 54, 57, 71, 122, 128, 130, 133, 146
  Activating, 14
  group, 13
  installing, 12
ZebraDesigner Pro CD, 12, 13
ZebraDesigner Pro DEMO, 14

ZebraDesigner Pro User Guide, 9
ZebraDesigner window, 30
Zoom, 28, 29
Zoom dialog, 29
Zoom In, 18, 28
Zoom Out, 18, 29

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