



*The World's Leading Software for
Label, Barcode, RFID & Card Printing*

Getting Started with the BarTender Application Suite

Overview, installation, and basic
usage

(English Edition)

Rev. 12.02.13.1335
English



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Chapter 1: Introduction to the BarTender Application Suite

Overview

In addition to the main design and print application, the BarTender Application Suite includes a variety of additional companion applications and other components. Together, they provide a level of power and flexibility not available in any other label, barcode, card, tag, part or carton printing software package.

Depending on the BarTender edition you purchased, some applications may only be available for use during the first 30 days after your installation. Except as noted, the installed components can be run from the BarTender folder of the Windows **Start** menu.

BarTender



BarTender is the main design and print application in the suite. Although BarTender first became famous as label and barcode software, it is now one of the most versatile design and print applications in the world, with powerful additional capabilities for cards (with and without magnetic stripe), RFID, tags, film packaging, cartons and more. (RFID support is not available in all editions.)

More Information

Online Help: Press F1 from within the application.

The “Using BarTender” chapter in this document covers basic usage.

Drivers by Seagull



Seagull Scientific developed the very first true Windows printer drivers for thermal printers. Today we produce the best, most highly-regarded printer drivers in the world, with support for more than 2,800 printer models, including label printers, card printers, online printers, and others.

BarTender will work with printer drivers from just about every printer manufacturer in the world, including those for laser, inkjet and dot-matrix printers. However, BarTender delivers the fastest possible performance when using its own Drivers by Seagull™.

More Information

See the [Installing, Upgrading, and Removing Printer Drivers](#) section of this document.

White paper:

http://www.seagullscientific.com/ftp/whitepapers/WhitePaper_TheAdvantageOfDriversBySeagull.pdf

Integration

All BarTender editions except for Basic can read external data. However, only the two Automation editions can be controlled from within other software. Some of the methods are summarized in this section.

More Information

White Paper:

http://www.seagullscientific.com/ftp/whitepapers/WhitePaper_IntegrationOverview.pdf

Commander

(Only supported after 30 days with the two Automation editions of BarTender.)



Commander is a middleware utility that enables you to control BarTender from within other software in situations when it is not convenient or possible to do so using the BarTender SDKs. When a software application needs to print, it performs a triggering action, such as placing a file in a location of your choosing on the network or sending information through a TCP/IP socket connection. Commander detects these “triggers” and then “wakes up” BarTender so it can automatically generate your print job.

More Information

Online Help: Press F1 from within the application.

White Papers:

<http://www.seagullscientific.com/ftp/whitepapers/WhitePaperIntegrationOverview.pdf>

<http://www.seagullscientific.com/ftp/whitepapers/WhitePaperCommander.pdf>

<http://www.seagullscientific.com/ftp/whitepapers/WhitePaperCommanderExamples.pdf>

BarTender .NET SDKs

Before the BarTender .NET SDKs became available, the only way to programmatically control BarTender from within other software was through BarTender’s ActiveX Automation interface. This continues to be a powerful and flexible way to control BarTender. However, .NET programmers now have a faster, easier option. The BarTender .NET Software Development Kits (SDKs) include pre-written source code and extensive documentation that greatly simplify the task of writing code to control BarTender. Now, using either C# or VB.NET, you can seamlessly integrate BarTender functionality into your applications without having to write from scratch the most commonly-needed routines for automated printing.

BarTender's .NET SDKs include:

- ◆ Sample source code and project files, including a sample web application
- ◆ Extensive documentation
- ◆ Integration with Visual Studio

More Information

White Paper:

http://www.seagullscientific.com/ftp/whitepapers/WhitePaper_BarTender's.NET_SDKs.pdf

System Administration

Several utilities are included to help you manage and secure your printing environment.

BarTender Security Center

(Only supported after 30-days with the two Automation editions of BarTender. Some features are only available in the Enterprise Automation edition.)



The BarTender Security Center allows a system administrator to define permissions that control which users and groups of users can perform specific actions within each application of the BarTender Application Suite. For example, you can specify that some users can both modify *and* print templates, while other users are only allowed to print. Security Center also supports “Digital Signatures,” which allows you to verify a user’s identity by having them enter their password when they perform specific actions.

More Information

Online Help: Press F1 from within the application.

White Paper:

http://www.seagullscientific.com/ftp/whitepapers/WhitePaper_System_Security.pdf

Printer Maestro

(Not all Printer Maestro features listed below are available in all editions after the initial 30 days of use.)



The Printer Maestro software application consolidates multiple print management functions within Windows into a single view to make it easier to manage printers and print jobs. In addition, Printer Maestro introduces exciting new features for managing printer supplies.

Printer Maestro features include:

- ◆ Printer and Print Job Management
 - Display and manage the status of every printer and print job on a network in a single, convenient, customizable view. (Without Printer Maestro, Windows has to pop-up a view for each different printer).
 - Warns you of printer and job errors by email or text message.
 - Makes it easier to configure printer settings.
- ◆ Printer Supplies Management (Enterprise Automation edition only)
 - Tracks usage of media in printers and transmits “low media” warnings.
 - Tracks inventory of printing supplies in storage, such as labels, cards, ribbon, print heads, etc. and transmits “low inventory” warnings.

More Information

Online Help: Press F1 from within the application.

White Paper:

http://www.seagullscientific.com/ftp/whitepapers/WhitePaper_Printer_Maestro.pdf

Librarian

(Available for use after the first 30 days only with the Enterprise Automation edition.)



BarTender Librarian lets large groups of users, designers and administrators cooperatively and securely manage the storage and revision of BarTender documents and other files. Librarian stores files in the BarTender System Database, instead of “loose” on your hard drive. You can then define custom states for files (such as Proposed, Approved and Published) and workflow management rules for transitions between these states. You can easily view your revision history and even rollback to old versions of your files if you need to.

More Information

Online Help: Press F1 from within the application.

White Paper:

http://www.seagullscientific.com/ftp/whitepapers/WhitePaper_Librarian.pdf

History Explorer

(Only supported after 30-days with the two Automation editions of BarTender.)



History Explorer is an application that lets you view logged information about jobs you have printed in the past and any messages created by the applications that processed the print jobs. History Explorer is required in order to be able to audit printing activity with BarTender. For History Explorer to work, a BarTender System Database (see the section on [BarTender System Database](#)) must be set up to allow logging from the BarTender Application Suite.

More Information

Online Help: Press F1 from within the application.

White Paper:

http://www.seagullscientific.com/ftp/whitepapers/WhitePaper_History_Explorer.pdf

Seagull License Server

(Only required by the two Automation editions of BarTender.)



Seagull License Server (SLS) is a software utility that monitors and enforces the maximum allowable number of printers that can be used by the two Automation editions. It runs unattended and invisibly on any computer on your network. SLS interacts with BarTender seamlessly so that BarTender users need not even know that it is running.

More Information

Online Help: Press F1 from within the application. Also see the “Licensing Setup Dialog” topic in BarTender’s online help.

White Paper:

http://www.seagullscientific.com/ftp/whitepapers/WhitePaper_Licensing_ForBarTendersAutomationEditions.pdf

System Database Setup

(For optional use in the two Automation editions of BarTender.)



System Database Setup is a utility that helps you setup your BarTender System Database. It may be hosted by either an SQL Server or an SQL Express database. The database is not necessary in order to use BarTender, but it is required in order to log information about BarTender print jobs and record messages from the rest of the BarTender Application Suite. This allows for future auditing using History Explorer and use of the Reprint Console. It is also required in order to use Librarian.

More Information

Online Help: Press F1 from within the application.

White Paper:

http://www.seagullscientific.com/ftp/whitepapers/WhitePaper_BTSystemDatabase.pdf

Printing Utilities

Web Print Server

BarTender Web Print Server is an ASP.Net application that comes with the Enterprise Automation edition of BarTender. It lets you use most common web browsers to connect to and control a centralized copy of BarTender running on a server. You can select BarTender documents and output them on a printer anywhere on your LAN, WAN, or even to remote printers on the internet.

More Information

White Paper:

http://www.seagullscientific.com/ftp/whitepapers/WhitePaper_BarTenderWebPrintServer.pdf

Reprint Console

(Only supported after 30 days with the two Automation editions of BarTender.)



Reprint Console allows you to quickly reprint previously printed jobs. An entire job, or just a portion of a job can be selected. This is particularly useful in automated printing environments, because the sequence of actions required to reprint the same job(s) from within other programs might be impossible to recreate. For example, information in the other program's database may have changed. Reprint Console requires the use of a BarTender System Database, which is discussed in a previous chapter.

More Information

Online Help: Press F1 from within the application.

White Paper:

http://www.seagullscientific.com/ftp/whitepapers/WhitePaper_Reprint_Console.pdf

Print Station



The BarTender “Print Station” utility gives non-technical users easy “point and click” selection and printing of BarTender documents without ever having to see the inside of the BarTender design program.

More Information

Online Help: Press F1 from within the application.

White Paper:

http://www.seagullscientific.com/ftp/whitepapers/WhitePaper_PrintStation.pdf

Batch Maker

(Not supported after 30 days with the Basic edition of BarTender.)



The Batch Maker utility makes it easy to specify a list of multiple BarTender documents to print as a single “batch.” Batches can be printed from within Batch Maker itself, as well as from BarTender, Print Station, and Windows Explorer.

More Information

Online Help: Press F1 from within the application.

White Paper:

http://www.seagullscientific.com/ftp/whitepapers/WhitePaper_Batch_Maker.pdf

Chapter 2: Installation and Activation

Installing the BarTender Application Suite

The BarTender components you need to install depend on the edition you purchased and the features you require. Prior to installation, you should do some pre-installation planning, as noted below. After installing the desired modules, you will be prompted to activate your software, which is required. (See [Activation](#) for details.)

Pre-installation Planning for the Basic and Professional Editions

You will need to decide which PC to install BarTender on. In addition, the following Companion Applications will be installed by default:

- ◆ Print Station
- ◆ Batch Maker (Professional Edition Only)

Pre-installation Planning for the Automation Editions

You will need to install a single copy of Seagull Licenser Server (SLS).

- ◆ **If Running One Copy of BarTender:** In this case, SLS and BarTender are usually installed on the same computer
- ◆ **If Running BarTender on Multiple, Networked Computers:** In this case, SLS must be installed on a computer that is accessible across your network by all copies of BarTender. You can optionally install and run one of your BarTender copies on the same computer on which SLS is installed.

The Installation program can install both SLS and the BarTender Application Suite, or you can optionally install just one of these applications. When

installing the BarTender Application Suite, the following companion applications are installed by default:

- ◆ Commander
- ◆ Security Center
- ◆ Librarian (Enterprise Automation edition only)
- ◆ History Explorer
- ◆ Printer Maestro
- ◆ System Database Setup
- ◆ Reprint Console
- ◆ Print Station
- ◆ Batch Maker

These additional components can optionally also be installed at the same time:

- ◆ Seagull License Server
- ◆ The BarTender .Net SDKs
- ◆ BarTender Web Print Server (Enterprise Automation Edition Only)

(If you aren't sure whether or not you need these additional components, you can always add them later by running the installation program again and choosing the Modify option.)

For more information about SLS or any of the Companion Applications listed above, please see Chapter 1 of this manual.

Installation Procedures

To begin installation:

1. Insert the BarTender CD into your computer's CD drive. If the StartMenu program does not automatically load, manually run **STARTMENU.EXE** from the root folder of the CD.
2. In the **Install** section, click **BarTender Application Suite** and follow the instructions given by the installation program.

With the Automation editions, some of the companion applications require that you create a new BarTender System Database or connect to an existing one. Please see the next section for details.

Installing the BarTender System Database

(This BarTender System Database topic only applies to the two Automation editions.)

Creating and Managing the System Database

If you do not already have a System Database installed when you run BarTender for the first time, BarTender will ask if you want to run the System Database Setup Wizard. You will have the option of using your own copy of Microsoft SQL Server as the System Database, or you can use Microsoft SQL Express, which comes for free with BarTender.

If you decide not to run the System Database Setup Wizard right away, you can manually select this option in the future from within the BarTender folder of the Windows **Start** menu.

Logging Data and Storing Files in the System Database

Most applications in the BarTender Application Suite can log information to the System Database. However, each application has its own logging or storage options that first need to be enabled. Check the help system for each application.

Installing, Upgrading, and Removing Printer Drivers

Overview

Starting with BarTender 8.0, Drivers by Seagull™ began shipping with the Seagull Driver Wizard utility.

A Warning About Microsoft’s “Add Printer Wizard:”

We strongly recommend that you use Seagull’s Driver Wizard to install, remove, and upgrade drivers. The “Add Printer Wizard” that comes with Windows does not always properly perform driver upgrades.

Driver Installation Instructions

1. Turn off your printer, connect the appropriate cable, and then turn on the printer.
2. If your printer supports Plug-and-Play and you have connected it using a USB or Parallel cable, then the Windows Add Hardware Wizard will automatically detect the printer and display a driver install dialog. Be sure to click **Cancel** and *not* install the driver using this Windows wizard.
3. Instead, from the **Install** section of the StartMenu program, click **Printer Drivers by Seagull**.
4. Select **Install Printer Drivers** and complete the wizard.
5. Your Seagull driver(s) should now be properly installed.

Upgrading Printer Drivers

Do *not* use the Microsoft Windows Add Printer Wizard to upgrade printer drivers. It sometimes does not upgrade all driver files correctly, which leaves printer drivers in a corrupted state.

Instead, use Seagull’s Driver Wizard to upgrade existing printer drivers:

1. From the **Install** section of the StartMenu program, click **Printer Drivers by Seagull**.
2. Select **Upgrade Printer Drivers** and complete the wizard.

Removing Printer Drivers

Driver Wizard may be used to remove printer drivers from the system.

1. From the **Install** section of the StartMenu program, click **Printer Drivers by Seagull**.
2. Select **Remove Printer Drivers** and complete the wizard.

Activation



During the installation, you will have the opportunity to activate your software. Activation is a quick, easy, anonymous process that unlocks a software product for unlimited use and helps combat software piracy. When you choose to activate, an **Activation Wizard** will run. Click its **Help** button for more information about activation and privacy.

Chapter 3: Using BarTender

Overview

This chapter guides you through the process of creating and modifying BarTender documents and templates.

Begin by running BarTender. The BarTender Welcome dialog is shown and gives you the option of starting a new BarTender document or opening an existing one.

Documents and Templates

A template is the design for the label, card, tag, or other item that you want to print. You can create many types of objects on a template, including text, barcodes, lines, shapes, and pictures.

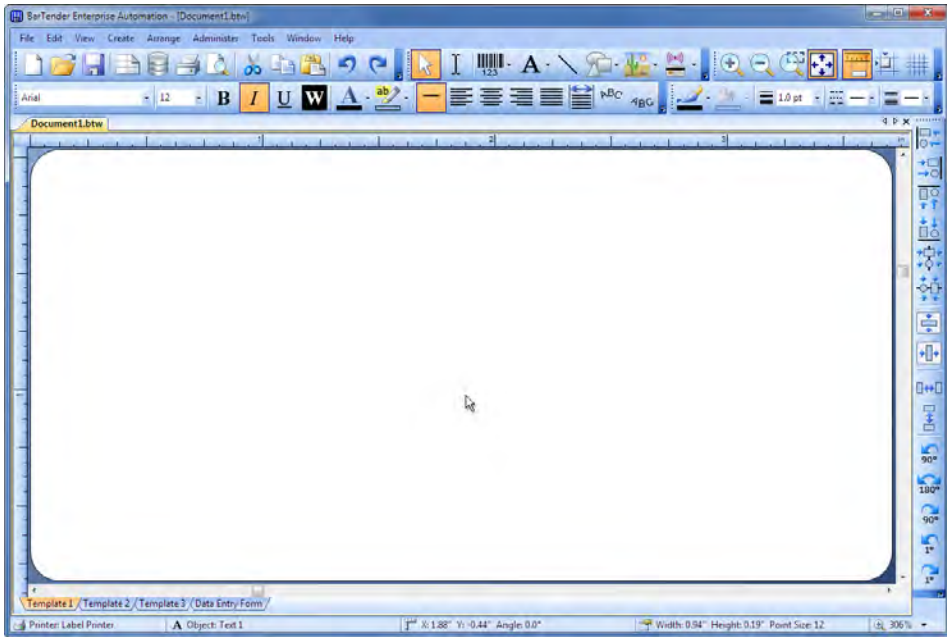
Most commonly, your BarTender documents will contain only a single template. However, BarTender's ability to design and save multiple templates within a single document and automatically switch between them can greatly simplify your integration challenges in more advanced applications.

Creating a New BarTender Document

To begin a new BarTender Document:


1. Select **New** on the **File** menu. The **New Document Wizard** will open.
2. The **New Document Wizard** guides you through the steps needed to start your document and its associated template(s).

Among parameters you specify while running the wizard is your preferred printer. Doing so before you design your template(s) ensures that all of your font options are available and that barcodes are printed at the correct dimensions. If you need to make changes to your preferred printer or media size in the future, follow the instructions in the next two sections.



A blank template in a new BarTender document.

Changing the Specified Printer


1. Click the printer button  on the **Main** toolbar, or **Print** in the **File** menu, to display the **Print** dialog.
2. Click the down arrow on the right side of the **Name** option to display a list of installed printer drivers.
3. Click the name of the printer to which you will be printing.

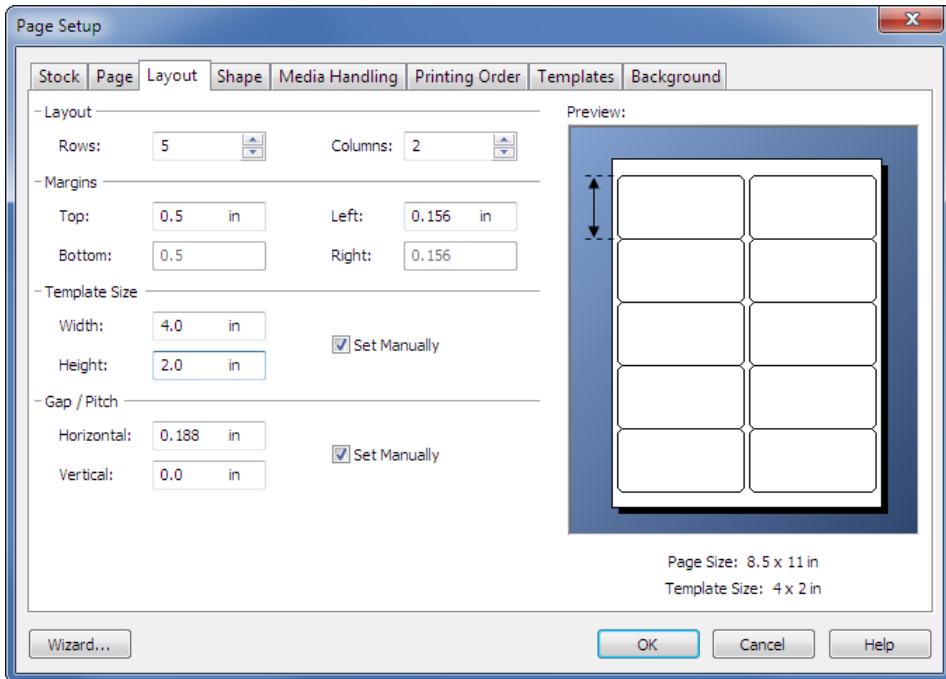
Note:

If the desired printer is not listed, use the Seagull Driver Wizard to install its printer driver. Refer to [Installing, Upgrading, and Removing Printer Drivers](#).

4. Click **Close**.

Changing the Specified Media Size

1. Display the **Page Setup** dialog by either clicking the page setup button  on the **Main** toolbar, clicking **Page Setup** in the **File** menu, or double-clicking on the blank part of the template viewing area.
2. Click the **Stock** tab and select the appropriate manufacturer from the **Category** list. (If the manufacturer of your label, card, tag or other stock is not listed, skip to step 4.)
3. Select the stock from the **Stock Name** list. (If your stock is not listed, proceed with step 4, otherwise click **OK**.)
4. Click the **Page** tab and specify the **Page Size** and the **Orientation** (either **Portrait** or **Landscape**).




5. Click the **Layout** tab and specify the page margins, and the number of rows and columns. (These options are usually available for laser printers

only, but occasionally label stock for thermal printers may have columns and/or rows.)

6. Based on the other values in the **Layout** tab, BarTender by default automatically calculates the height and width of your label, card, tag or other item to be printed. To override these dimensions, check the **Set Manually** checkbox and enter values into the **Height** and **Width** controls.
7. Click OK.

Creating a Text Object

1. Click the create text button  on the Main toolbar.
2. For a typical text object, select **Single Line** from the drop down menu.
3. Move the cursor into the template design area and click where the center of the object should be located.



Note:

You can also use the BarTender Toolbox to add objects to a template. Refer to [The BarTender Toolbox](#) below.

Creating a Barcode or RFID Object

1. Open the **Standard Barcode** or **Standard RFID** pane in the **Toolbox**. (Refer to [The BarTender Toolbox](#) below.) Each has a list of already configured objects. The barcodes have a symbology and other options already chosen. The RFID objects are configured with a tag type and a data format scheme.
2. Drag the desired object into the template design area.

Notes:

If you prefer a barcode or RFID object with default values in all its properties, you can click the barcode button  or RFID button  on the **Main** toolbar and then click in the template design area.

(RFID support is not available in all editions.)

Selecting and Deselecting an Object

To select any object, click it. When an object is selected, it has eight solid handles, one at each corner and one in the middle of each of the four sides, used for resizing the object. Click anywhere away from an object to deselect it.

Moving an Object

The easiest way to change the position of an object is to click and drag it to a new location using your mouse.

Refer to [Copying, Cutting, and Pasting an Object](#) below for how to move an object from one template to another.

Stretching and Resizing Objects

An object is resized by clicking it once (to select it) and then dragging one of the small handles that appear along the edges of the object.

1. Select the object and position the pointer cursor on one of the four corner handles to resize both height and width. To resize in only one direction, position the pointer on one of the side handles. When the cursor is properly positioned, it will turn into a thin arrow with points at both ends.
2. Click and drag the selected handle until the object is the desired size.

Copying, Cutting, and Pasting an Object

Using The Windows Clipboard

Any object in the template design area can be copied (or cut) and pasted to another template, or to another place on the current template, using the Windows clipboard and the **Copy**, **Cut**, and **Paste** buttons. See your Windows documentation for details.

Using Click and Drag

You can also click and drag an object to a new place on a template. Doing this with the CONTROL key held down creates a copy at the new location.

Finally, you can right-click and drag to the desired location. Release the mouse button and a pop-up menu appears. Click **Copy Here** on the menu.

Deleting an Object from the Template Design Area


Select the object and press the DELETE key or click **Delete** on the **Edit** menu. (To remove an object from the template design area, but save a copy of its specifications in the Windows clipboard at the same time, use the **Cut** command instead of the **Delete** command.)


Specifying the Data Source of a Text or Barcode Object

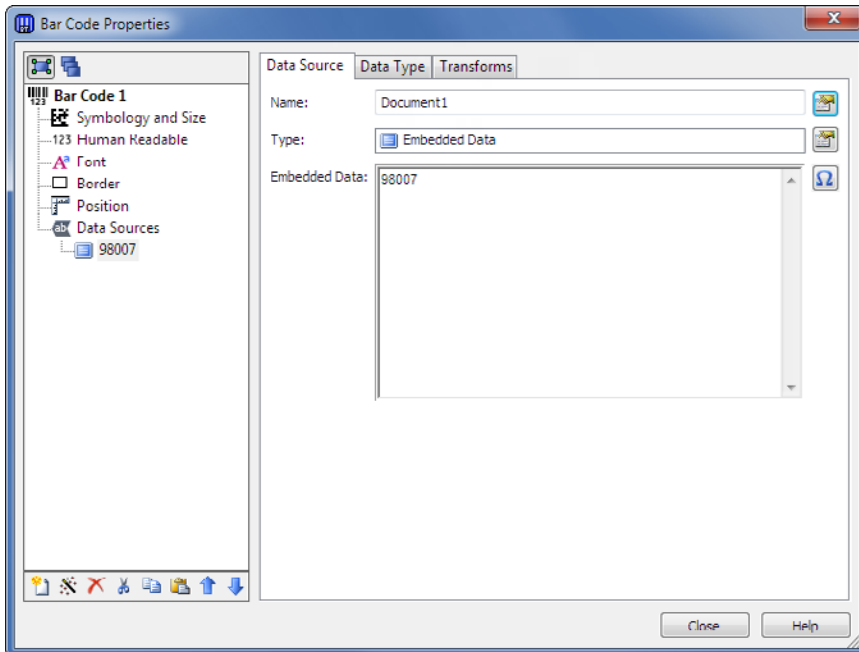
Data for the objects in your BarTender templates can come from a variety of sources, including:

- ◆ Data from databases, including delimited text files, fixed-width text files, OLE DB, ODBC (Open Database Connectivity) databases and spreadsheets, and SAP™ IDocs
- ◆ Data generated from Visual Basic Scripts
- ◆ The system date and time on your computer
- ◆ Data typed directly into the BarTender document

To change an object's data source:


1. Double-click on the object whose data source you want to change. The **Object Properties** dialog will be displayed.
2. In the navigation pane on the left, click on the desired sub-node underneath **Data Sources**. (If this is a new template object, there will only be one sub-node.)
3. Press the Change Data Source Type button  in order to select an alternate source. (If you are selecting **Database Field** as the source and

have not yet setup a connection to a database, then press the database connection setup button  on the **Main** toolbar. See [Setting Up a Connection to a Database for Printing](#) below.)



To concatenate multiple data sources:

Sometimes you need to place information from two or more data sources into a single barcode or text object. You can do this by concatenating multiple data sources so that they are output as a single object.

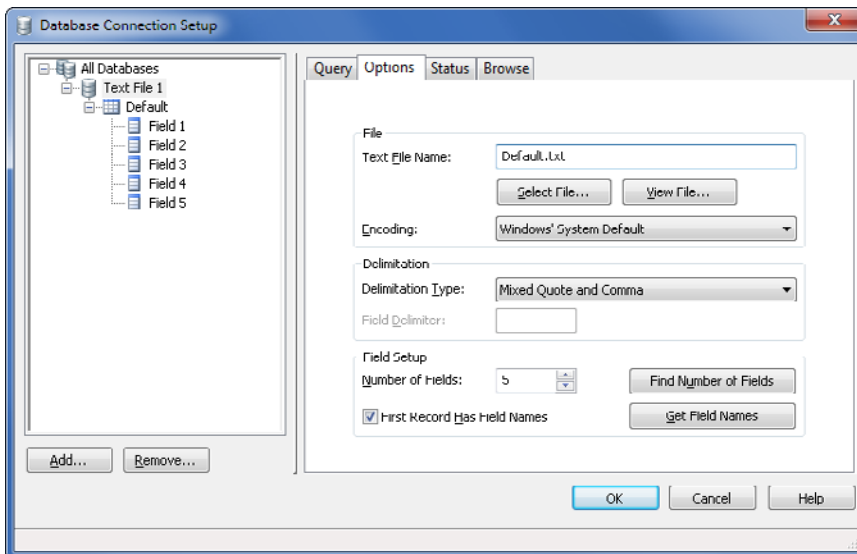
1. In the Properties dialog, select either the **Data Sources** node, or one of its sub-nodes.
2. Insert additional data sources by pushing the New Data Source button  on the toolbar below the Navigation pane.

Refer to BarTender's help for additional data-sourcing topics such as data validation, serialization, and prompting.


Setting Up a Connection to a Database for Printing

Sometimes it is desirable to print items based on a list of data, such as a parts list or a list of customers. This requires reading from a database. BarTender can read from the following database types:

- ◆ Delimited and Fixed-Width Text Files
- ◆ Oracle[®], Microsoft Access, Excel, and SQL Server[™]
- ◆ Other OLE DB Supported Databases
- ◆ ODBC (Open Database Connectivity) Supported Databases and Spreadsheets
- ◆ SAP IDocs



To tell BarTender to read from a database:

1. Open the **Database Connection Setup** dialog by clicking on the database connection setup button  on the **Main** BarTender toolbar. The **Add Database Connection Wizard** will display in the center of the dialog.

2. The **Add Database Connection Wizard** guides you through the steps needed to configure a connection to your database.

Refer to BarTender's help for information about joining tables, reading from multiple databases, and specifying queries.

Changing the Options of a Barcode

1. Double-click the barcode to display the **Barcode Properties** dialog.
2. Click the **Symbology and Size** node in the Navigation pane on the left to display the associated Properties pane.
3. Modify the properties as desired.

Changing the Font


1. Double-click the barcode or text object. The appropriate **Properties** dialog is displayed.
2. Click the **Font** node in the Navigation pane on the left.
3. Change the typeface name, size, italics, boldness, scale, and script as needed.

Other Modifications to the Properties of Objects

Double-clicking any object displays the **Properties** dialog for that type of object. Click a node in the Navigation pane on the left to view the corresponding Properties pane on the right.

Importing a Picture

This procedure should be used when the picture will not be changing with each printed label, card, tag or other item.



1. Click the create picture button  on the Object toolbar.
2. In the dropdown list that appears, select **Insert from File...**
3. Browse for and select the desired picture file.

4. Click where you want the picture located.

After you have placed the picture in the template design area, you may change its position as explained in [Moving an Object](#) above.

You can also import a picture from a database. Refer to the online help for complete instructions.


Printing

1. Click the printer button  on the **Main** toolbar, or the **Print** option in the **File** menu, to display the **Print** dialog.
2. Confirm that the correct printer name is selected.
3. If any of the objects in your document use data from a database file, the **Use Database** box should be checked. You can use the database connection setup button  to display the **Database Connection Setup** dialog.
4. Enter the desired number into the **Copies** control.
5. Click the **Print** button.

Starting with a Preexisting BarTender Document

BarTender comes with some predesigned documents, most of which contain a single predesigned template. If one of them is close to your needs, it may be faster for you to modify it rather than design a complete document from scratch.

To start a new document based on an existing document:

1. Press the **File New** button  on the Main toolbar to start the New Document Wizard.
2. For the **Starting Point**, select **Existing BarTender Document** and press the **Select...** button.
3. Press the **BarTender Documents** location button in the Location Shortcuts navigation bar on the left.

4. Browse through the folders and click on documents to see a preview of the template. When you see one that you want to use as a starting point, press the **Open** button.
5. Finish the New Document Wizard. You will now have started a new document from a copy of an existing one.

The BarTender Toolbox

The BarTender Toolbox provides additional functions and alternative ways of accomplishing certain tasks. It contains four panes:

- ◆ **Components:** This functions as a storage bin in which you save barcodes, text, and other objects, or groups of objects, that you have configured. Reuse any stored component by dragging it onto a template.
- ◆ **Data Sources:** Use this pane to link objects quickly to particular data sources including previously configured database fields or named data sources.
- ◆ **Standard Barcodes:** From this pane you can drag barcodes that are already linked to particular symbologies.
- ◆ **Standard RFID:** From this pane you can drag RFID objects that are already configured with a data format type.

Getting BarTender Help

You can access the help system by using any of the following procedures.

To open the main help window:

Click **BarTender Help** menu option in the **Help** menu.

To access context-sensitive help:

- ◆ From inside of a dialog, click the **Help** button or press F1.

or

- ◆ For help on a particular menu option, highlight the menu option and press F1.

For further options in using and customizing the help, see the topic *Using BarTender's Online Help* in the help system.

For help with Visual Basic select **Visual Basic Script Help** from the **Help** menu. This will open Microsoft's full Visual Basic help document in your default web browser.

Chapter 4: The Commander Integration Utility

What Is Commander?



Commander is a software utility, available with the two Automation editions of BarTender, that enables you to automatically generate BarTender print jobs from other programs. In situations where using command line or ActiveX automation is either not possible or not cost-effective. Commander can be run as an application or as a Windows service.

When an application needs to generate a print job, it simply creates a triggering event (called a “trigger”), such as placing a file in a location of your choosing on the network or sending an e-mail to an account of your choosing. Commander detects the arrival of this file (or e-mail) and then “wakes up” BarTender so it can flow your data into a BarTender document and automatically generate your print job.

A trigger file or message may be empty; but it can also contain data that will be read by BarTender, by another application that Commander launches, or by Commander itself. Because trigger-creating applications can include different content in different triggers, the tasks Commander will execute, and the data it uses, can be defined dynamically by the application.

For example, an in-house order fulfillment application enters data about an order into a database and saves an empty file named `NewOrder.dat` in a directory being watched by Commander. Commander finds the file and launches BarTender with a document that has been configured to query the database about orders entered after a specified time. BarTender reads the data and prints the labels, cards, tags, or other items. Commander then deletes the `NewOrder.dat` file and resumes monitoring the directory.





Common Procedures for Commander

Launching Commander

To launch Commander, double-click its icon on the BarTender branch of the **Start** menu. Below are the steps for the most common tasks.

Creating or Modifying a Commander Task List

Commander actions are governed by tasks lists, which identify the triggers and the tasks to be performed in response. To create a task list:



1. Create a new task list file by clicking the new task list button  or selecting **New** from the **File** menu. If you are modifying an existing task list, click the open button  or select **Open** from the **File** menu; then browse to the task list file and click **Open**.
2. Start a new task definition by clicking the create new task toolbar button  or selecting **Add** from the **Tasks** menu. If you are editing an existing task, highlight it and click the properties toolbar button  or select **Properties** from the **Task** menu.
3. Use the **Task Options** dialog to enter details about how to trigger the task and to select and configure the commands that will execute when the task is triggered, then click **OK**.
4. Repeat steps 2 and 3 for every task needed on the task list, and then save the task list.

Deleting, Moving, and Reordering Commander Tasks

Delete tasks from the list by highlighting the task and pressing the **DELETE** button or selecting **Delete** from the **Edit** menu. Use the **Cut**, **Copy**, and **Paste** items on the **Edit** menu to reorder tasks as needed or to move tasks from one task list to another.

Running a Commander Task List

To run a Commander task list:

1. Open a task list by clicking the open button  or selecting **Open** from the **File** menu.
2. Enable tasks by highlighting each task you want to execute and selecting **Enable** from the **Task** menu.
3. Start trigger detection by clicking the start detection button  or selecting **Start Detection** from the **Detection** menu.

For More Information

There are a number of sources of additional information on Commander.

Commander Help

Commander comes with an extensive help system that includes detailed examples of Commander in use and additional information about its many powerful features.

White Papers

These two white papers provide more details about using Commander:

http://www.seagullscientific.com/ftp/whitepapers/WhitePaper_Commander.pdf

http://www.seagullscientific.com/ftp/whitepapers/WhitePaper_CommanderExamples.pdf

Appendix A: Serial Communications

Overview

We recommend that you use a parallel port, USB port, or Ethernet connection if any of these is available on your printer. They improve printer performance and they eliminate confusion about what kind of cable to use.

However, some printers come with only a 9-pin or 25-pin (RS-232) serial port. This section covers some of the most common obstacles encountered with such old-style serial port communications and explains how to best configure Windows and select the proper serial cable.

Note:

A more detailed discussion of serial communication issues is in the *Serial Communications* section of your printer driver's help.

Setting and Cable Issues

If you don't set the serial ports on your computer and printer identically, communication will be unreliable. Moreover, there are dozens of ways that serial cables can be wired internally and one can't tell by looking at a serial cable how it is wired.

It is important to keep in mind that the program from which you will be printing, such as BarTender, does not control the serial communication between your computer and printer. Your mode of serial communications is controlled by:

- ◆ The serial port settings in your printer.
- ◆ The serial port settings on your computer.
- ◆ The type of serial cable being used.

Serial Port Settings

Serial communication is governed by the following parameters. These must be set identically on both the printer and the computer.

- ◆ **Baud Rate:** This is the rate at which your printer will receive data (in bits-per-second). Common values are 2400, 4800, 9600, 19200, 38400, and 57600; with 9600 being the most common default setting. You want to set the highest rate at which your printer will work reliably. Use trial-and-error to find this rate after you have set your other serial communication parameters.
- ◆ **Data Bits** (sometimes called "Word" length or byte length): This specifies the number of bits used to encode each character sent to your printer. The most common value is **8**, although older printers may default to **7**.
- ◆ **Parity Bit:** This is an optional extra bit sometimes sent after the data bits of a transmitted character for the purpose of error checking. The possible settings are **Odd**, **Even**, and **None**.
- ◆ **Stop Bits:** This is the length of the pause at the end of a transmitted character. One stop bit is the most common setting.
- ◆ **Flow Control** (sometimes called "Handshaking"): This can be set to **software** (also called **Xon/Xoff**) or **hardware**. Never use the **None** setting for Flow Control. Disabling flow control can result in intermittently corrupted or completely failed print jobs.

Note:

Refer to the topic *Understanding and Setting Flow Control (Handshaking)* in your printer driver's help for more information about choosing a handshaking method.

Setting Serial Parameters on your Printer

You control serial port settings for your printer with either DIP switch settings or through a menu system accessed from the printer's front panel. Consult your printer's documentation for details.

Most printers do not allow changing all of the above parameters. Consult your printer manual to determine what settings are required, and be sure to make identical settings in Windows.

Setting Serial Parameters in Windows

You first specified your serial port settings when you installed your printer driver, but if you need to change them, follow the procedure below to configure your serial port.

1. Click the Windows **Start** button.
2. In Windows 2000, 2003 and XP, select **Settings** and then **Printers**. In Windows Vista, select **Control Panel** and then **Printers**. In Windows 7, select **Start**, then **Devices and Printers**. The **Printers** (or **Devices and Printers**) folder will be displayed.
3. Click your right mouse button on the printer you wish to change your settings for and select the **Properties** option. The **Properties** dialog opens.
4. Click on the **Ports** tab.
5. To check your port settings, click on the **Configure Port** button. The **Port Settings** will be displayed.
6. Adjust your port settings as necessary and click **OK**.
7. Click **Close** to exit from the printer's **Properties** dialog.

Using the Correct Serial Cable

Because a printer and computer both use serial ports that have their inputs and outputs on the exact same pins, a wiring configuration must be established that crosses over the outputs from one port to the corresponding inputs of the other port. A serial cable that connects signals by crossing them over in this manner is referred to as a null modem cable. By contrast, a straight-through serial cable, often used to connect a computer to a modem, connects pins 1, 2, 3, etc. on the computer to pins 1, 2, 3, etc. on the modem. If a straight-through serial cable were attached to a printer, an output signal

from the computer would go, not to an input pin of the printer where it can be received, but to an output pin of the printer where it would be ignored.

Note:

Some newer thermal printers do require a straight-through cable. If there is any doubt, you should consult the documentation provided by the manufacturer.

Cabling and Flow Control (Handshaking)

It is also possible to cross over other lines so that the printer can offer the hardware handshaking option. (Refer to [Serial Port Settings](#) above.) Thus, it is important to consult your printer's manual to determine what cable is best. Some general purpose cable configurations, though they may contain more wires than all printers require, will work for a great variety of printers.

Note:

Refer to the help for your driver for pin and wiring diagrams of the null modem cables most commonly used by thermal printers, and for a special note on grounding.

Appendix B: Configuring for Performance

Performance Tips

Some of the graphics capabilities of Windows, including the ability to print TrueType fonts, can result in large amounts of information being sent to your thermal printer. Therefore, you should optimally configure your printer and personal computer.

The following tips contain information to help you maximize your printing speed and understand the difference between images that are formatted by Windows and images that are formatted by your printer.

Avoid RS-232 Serial Communication Whenever Possible

Some thermal printers come standard with only a 9-pin or 25-pin (RS-232) serial port. A parallel port, USB port, or Ethernet connection may be extra options. RS-232 serial communication will work fine if you only intend to use your printer's built-in barcodes and typefaces. However, if you want to take advantage of any of Windows' graphics capabilities, you will achieve significantly better performance if you use a parallel port, a USB port, or an Ethernet connection.

Use Printer-based Objects and Fonts or Downloaded Fonts Whenever Possible

Windows programs often print images, and non-downloadable fonts, by drawing them out dot-by-dot using bitmap graphics, a process that can slow the printer. Fortunately, many thermal printers can output barcodes, lines, boxes, and built-in (or downloaded) scalable text fonts using high-level commands. A Windows program can, for example, print using a font built into the printer by outputting a few quick control codes, instead of sending a large dot-by-dot bitmap drawing of the text image.

There are times when a Windows program must output an image as a bitmap. So keep in mind, that the more graphics that you send to your printer, the slower your printing speed will be.

Printer Capabilities That Are Not Available To All Programs

Because most of the special capabilities built into thermal printers are different for each brand of printer, and because thermal printers are totally different from the more common printers used by Windows, it is just not possible for standard Windows programs to access certain high-level thermal printer commands. BarTender, however, was designed to take advantage of these commands.

Appendix C: Printer Driver Troubleshooting

This appendix presents the best procedure for solving printing problems.

Step-by-Step Procedure for Solving Printing Problems

If you are having any problems printing, take the following steps. If this does not resolve the problem, contact Seagull Technical Support (Refer to [Appendix D: Technical Support](#).)

1. **Check Serial Port Settings:** If you are using a serial port, check your printer and Windows settings for baud rate, data bits, stop bits and parity. (Refer to [Serial Port Settings](#) in [Appendix A](#).)

Do not assume that the “default” printer settings shown in your manual reflect your printer’s actual settings. You must directly inspect either the mechanical switches (usually on the back of your printer) or the front panel menu settings before you can be sure how your printer’s communications settings are configured.

2. **Check Cable:** Check that the cable is properly connected and attached to the correct port on your computer, and that the Windows printer port settings accurately reflect the port to which the printer cable is attached.
3. **Print the Printer’s Status Page:** To check for mechanical problems with the printer, print out from the printer's control panel (not from a computer) some document or label that is built into the printer's memory. Such documents have different names depending on the printer model. They are sometimes called status pages, sample labels, configurations, or configuration labels. Consult your printer manual for the exact steps. If you are unable to print such a test document or label, you may need to have your printer serviced before you can continue with the rest of this troubleshooting process.

Note:

If you had to adjust a printer switch in order to output your printer’s status page, remember to put it back the way it was.

4. **Reboot Printer:** Your printer may not have properly reset after the last failed print job or after the last time you made a change to a communication setting. Turn the printer off and leave it off for five seconds before turning it on again. When it goes on again, make sure it completes its self-test procedure before you attempt to print again. (No lights should be blinking. Some printers will display the word **Ready** or display a ready light, usually green.)
5. **Print the Driver's Test Label:** For the first print job after steps 1 through 4, use the Seagull printer driver's **Print Test Label** feature:
 - a. Click the Windows **Start** button.
 - b. Select **Settings** and then **Printers**. The **Printers** folder will be displayed.
 - c. Click your right mouse button on the printer you wish to change your settings for and select the **Properties** option. The **Properties** dialog opens.
 - d. Click the **General** tab.
 - e. Click the **Print Test Page** button.

If no label (not even a blank label) comes out and/or you get a printer communications error message, proceed to step 11. Otherwise, continue with step 6.

6. **Print Device Text From Application:** Create a label in your application. Use only the fonts built-into your printer, rather than Windows TrueType. If this test works, and you do not need to use any graphics or TrueType on your label, then you should be able to implement your desired label design right away and get back into production.
7. **Print Small Graphics From Application:** Add a very small graphic to the label, and one letter of TrueType text (such as Arial or Times New Roman). This first letter test should be a small size, around 12 pt.

If the TrueType text and graphic do not print, you may need to upgrade the printer's firmware or memory. Consult your printer manual for more information.

8. **Print More Graphics From Application:** Increase the point size of your TrueType text and try printing an entire word or more in TrueType,

instead of just a single letter. If this works, then you should go ahead and try to print all of the graphics you need on your label.

9. **Diagnose Printer Memory Shortage:** If all of your TrueType or bitmap graphics print perfectly only so far down the label and then are cut off cleanly straight across the label, you have insufficient memory in your printer to output the amount of graphics you are attempting to print. Contact your printer reseller for a printer memory upgrade.

In contrast to the clean cut off described in the previous paragraph, if the printer outputs incorrect label data, corrupted graphic images, or even no label at all, this too may indicate a memory shortage. But, if you are using a serial port, it may also indicate a flow control (handshaking) problem, as described in step 10. (Always turn the printer off and on again following his type of failure.)

10. **Diagnose Serial Port Flow Control Problems:** If you are using a serial port and a print job stalls and/or generates a communication error message after some data has already been successfully transmitted to the printer, you may have a flow control problem.

Test for this by slowing down your printing speed. For example, if you had been printing at 9600 baud, try a test print job at the much slower rate of 1200 or even lower. (Make the identical change in the port settings for both Windows and your printer.)

If slowing down the baud rate made your problem go away, or caused the problem to occur later in the print job, then you should adjust your flow control settings. Try switching from **software (Xon/Xoff)** to **hardware** flow control (or vice versa). Be sure you are using a cable that will allow your printer to use **hardware** flow control. (Consult the printer's manual.)

11. **Diagnose Serial Port Cable Problems:** If the **Print Test Label** fails and you are using a serial port, you can test for a cabling problem by temporarily turning off flow control (handshaking).
 - a. Verify that your printer's communication settings agree with those in your Windows port settings.
 - b. Verify that you are using a "null-modem" cable, rather than a "straight-through" serial cable.

- c. Change the Windows Flow Control settings for your serial port to **None**. Then, turn your printer off for five seconds and back on again.
- d. After your printer has finished its power-on self-test, repeat the small print job.

If the print job is successful, you have confirmed that the cable is incompatible with the flow control (handshaking) system. Determine what is wrong with your cable. Correct it, and then switch back to either **software (Xon/Xoff)** or **hardware** flow control.

12. **Diagnose Other Problems:** If you still can't print, it is very likely that:
- ◆ You have a second hardware product competing for an interrupt or I/O address with your communication port.
- or
- ◆ You have an advanced Windows setting configured improperly.

Either way, you need to contact your computer vendor or your company's internal computer support staff for assistance.

Other possible problems:

- ◆ A bad (or improperly configured) serial printer cable. For example, a simple "3-wire" null-modem serial cable will not allow printing from inside Windows unless your flow control is set to **None**.
- ◆ The printer cable is attached to the wrong port of your computer.
- ◆ A malfunctioning printer port in your computer or printer.
- ◆ The printer is off or off-line.
- ◆ The computer's communications port may be conflicting with some other hardware component in your computer.

You will have to rule them out one-by-one in order to solve your problem.

Appendix D: Technical Support

If you still have questions after consulting this manual and the help system, Seagull's Technical Support Department can be reached at the phone numbers and e-mail addresses below. Faxed technical support requests receive a faxed response. Internet technical support inquiries receive an Internet response.

You *Must* Register Your Software to Receive Support

Register your product online at:

<http://www.seagullscientific.com/aspx/registration.aspx>

Unless you register your product, you will not receive technical support.

You *Must* Call From Next to Your Computer

When calling for technical support, it is very important to call from a phone right next to a computer that is running BarTender. This makes it much easier for our technical support personnel to assist you.

About Tech Support for Visual Basic Script

Technical support for Visual Basic Scripting is limited. For information on support limitations, please refer to *Technical Support, A Note on Technical Support for Visual Basic Scripting* in BarTender's help.

Technical Support Contact Information

Please see next page.

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