



Drivers by Seagull™
The Advantage of Using
Drivers by Seagull with BarTender

Contents

- Overview 3**
- Understanding Printer Drivers 4**
 - "Embedded" Printer Drivers 4
 - Windows Printer Drivers 4
 - Drivers by Seagull 4
- Using Drivers by Seagull with BarTender 5**
 - Printer-based Serialization 5
 - Printer-based Barcodes 5
 - Printer-encoded RFID Tags, Smart Cards and Magnetic Stripes 5
 - Printer-based Real Time Clock 5
 - Printer-based Optimizations 6
 - Caching of Graphics and Printer Code Templates 6
- Additional Features of Drivers by Seagull 7**
 - Advanced Status Monitor Support 7
 - Special Font Functions 7
 - Advanced Media Handling 8
 - Logging Functions 8
 - Printer Configuration and Diagnostics 8
 - Printer Driver Administration 8
 - International Language Support 9
- Related Documentation 10**

Overview

Drivers by Seagull™ bring standard printing functionality to any Windows program.

Although Drivers by Seagull will work with any properly-written Windows application, when used with our BarTender design and print software, they can take advantage of special high-performance printing features not normally accessible to other Windows programs.

Seagull Scientific was the very first company to design Windows drivers for label printers. Over the years, we have added support for a variety of printing technologies, including color label printers, card printers, RFID and smart card encoding, industrial marking and coding systems, and more.

Today, we are the world's largest developer of such drivers, and proud to be the official driver supplier to many well-known printer manufacturers. Drivers by Seagull are widely recognized as the fastest and most reliable Windows drivers in the world, which is why so many printer manufacturers ship them in the box with their printers.

Understanding Printer Drivers

Drivers are special software modules that are used by programs to communicate with hardware and software. The main job of a printer driver is to translate the graphic control commands output by your programs into commands understood by your printer. Also, if a printer offers status information, a full-featured printer driver can make that information available to Windows and certain programs.

There are two kinds of printer drivers in today's industry: *embedded printer drivers* and *Windows printer drivers* (such as Drivers by Seagull).

"Embedded" Printer Drivers

Before Microsoft created open driver standards for Windows, most of a program's printing functions were locked (or "embedded") inside of the program and could only be used by that program. Some industrial printing programs still use embedded printing methods. In these applications, the driver does not let other Windows applications use the printer, and it cannot be managed from the Windows printer directory.

Windows Printer Drivers

Windows Printer Drivers (such as Drivers by Seagull) are installed on a computer or network and are shared by a number of printing applications. They allow you to use standard Windows functions to set print access rights, configure printers, monitor job queues and delete print jobs.

Applications that are designed to use Windows printer drivers automatically get access to the Windows print spooler, Print Manager, advanced printer port control, high-speed network printing, extended font capabilities and additional Microsoft-provided features and functions.

Drivers by Seagull

Drivers by Seagull expand upon Windows printing architecture by enabling the usage of advanced printer features such as serialization, native barcode printing and RFID support.

Using Drivers by Seagull with BarTender

When you use other software (such as Word, Excel, Access, etc.) with our drivers, you can easily print graphics and access printer-based fonts, as discussed further in the next chapter. However, your other software can only access printer-based barcodes by using our drivers' barcode utility fonts.

Using Drivers by Seagull with BarTender, you get exclusive access to additional printer optimizations and advanced features that are unavailable with other applications. These include device barcodes, RFID support, smart card encoding, caching functionality and device serialization. (Some features, such as font downloading and caching, depend on sufficient memory being available in the printer.)

For more information about using fonts and Drivers by Seagull to improve print performance, refer to the **Optimizing Print Performance** white paper:

<http://www.seagullscientific.com/support/white-papers>

The following high speed printer optimizations and advanced features are only available when using BarTender:

Printer-based Serialization

In print jobs that include serial numbers, many printers can accept a starting value and the incremental step size. This allows you to print a large number of serialized items without having to send any data after the first label.

Printer-based Barcodes

Printers with built-in barcode functionality allow software to request complex barcodes using simple text strings (such as "1234"). This is much faster than sending bitmap images (or pictures) of barcodes that consume hundreds or thousands of extra bytes per printed item. (When using software other than BarTender, our driver fonts give you some limited functionality.)

Printer-encoded RFID Tags, Smart Cards and Magnetic Stripes

Printers with built-in RFID encoders allow you to encode RFID tags while printing. Drivers by Seagull allow BarTender to present a simplified user interface for supplying the data to be encoded in the tags. (When using software other than BarTender, our driver fonts give you some limited functionality.)

Drivers by Seagull also support the encoding of data into magnetic stripes and both types of smart card memory:

- Contactless (or RFID)
- Contact (or "touch")

Printer-based Real Time Clock

Printers with a built-in real time clock can print the time and date in a text object, barcode or RFID tag. Drivers by Seagull allow BarTender to present a simplified user interface for accessing the printer's clock.

Printer-based Optimizations

When supported by the printer, BarTender and Drivers by Seagull can send all of the required text, barcode and graphic formatting commands just once at the beginning of a print job, and then send only the variable character data for each item to be printed.

Furthermore, many printers can store the unchanging parts of your template design at the start of a print job, so it doesn't have to be resent with each item to be printed.

Caching of Graphics and Printer Code Templates

Most printers allow for templates and graphics to be stored indefinitely in the printer for reuse at any future time. Drivers by Seagull take advantage of these features to implement automatic graphic and template caching. So, whether you have specified a graphic that changes, a graphic that stays the same on several different documents, or you are printing several different templates, our drivers can cache this information in your printer to allow for faster printing.

Additional Features of Drivers by Seagull

Drivers by Seagull offer a variety of features that are available to all Windows applications. These advanced features may not be available in other drivers available for your printer.

Advanced Status Monitor Support

Using bidirectional printer communication (“bi-di”), many printer drivers can report basic conditions such as “Printer Offline” and “Toner Low” to the Windows spooler. Drivers by Seagull can report a great variety of status conditions. These range from the basic, such as ribbon and label out, to the more advanced, such as a print-head temperature error.

Convenient Display of Status Information

You don’t need BarTender or its Printer Maestro companion application to view enhanced printer status information. Just install the appropriate Seagull Windows printer driver on a client PC, and the status of the printer will be visible in:

- Your computer's **Devices and Printers** folder
- Your printer's **Print Queue** window
- The system tray

Success Verification

The status monitor for Drivers by Seagull even lets you pause for success verification for each printed page or job. (This is helpful in heavily regulated environments, such as medical and pharmaceutical industries.)

For more details about the Status Monitor functions of our drivers, refer to the **Status Monitoring** white paper:

<http://www.seagullscientific.com/support/white-papers>

Special Font Functions

By simulating certain features as fonts, Drivers by Seagull are able to give conventional Windows programs limited access to some printer features they would otherwise not be able to use.

Barcode and RFID Fonts

Drivers by Seagull allow your conventional Windows programs to access some of your printer’s built-in barcode and RFID functions as fonts.

Printer Command Fonts

By specifying “Printer Command Font” as the font for a text string, Seagull drivers will let you embed any printer-specific code sequence directly into your document.

Driver Command Fonts

By specifying “Driver Command Font” as the font for a text string, Seagull drivers will let your programs control drawing functions (such as lines, boxes, circles or ellipses) and print settings

(such as mirror or inverse) if they are available in your printer.

Downloaded Fonts

The fastest way to print text is with a printer's built-in fonts. However, no printer offers the full variety of font styles available in Windows. Drivers by Seagull can download fonts from Windows into printers that support doing so. Depending on the capabilities of your printer, these fonts may be downloaded as TrueType fonts or just as bitmap fonts. Your Windows programs can then print with these fonts as quickly and easily as if they came built into the printer.

For more information about using fonts and Drivers by Seagull to improve print performance, refer to the **Optimizing Print Performance** white paper:

<http://www.seagullscientific.com/support/white-papers>

Advanced Media Handling

Drivers by Seagull support a variety of actions taken at specified intervals in the print job. These actions, such as cutting the label stock or detecting that a label has been removed, can be incorporated in a print job in addition to settings such as number of labels. Using Drivers by Seagull, you can utilize your printer's cutters and sensors, including the "label taken" sensor.

Logging Functions

Drivers by Seagull can generate log files of:

- General print job information, including job name, time, date and user.
- Events that occur during the print job, such as job start, pause, restart, delete, out of labels, complete and more.
- The actual print code used to generate the job.

Printer Configuration and Diagnostics

Drivers by Seagull allow you to perform printer management functions that otherwise require use of the printer's front panel and/or a custom program from the printer manufacturer. These functions include:

- Printing a variety of test and diagnostic items
- Calibrating the printer
- Reading the printer's configuration
- Managing files stored in the printer
- Configuring and formatting printer memory

Printer Driver Administration

Drivers by Seagull provide convenient functions to import and export driver settings. This lets you export a variety of printer settings, stock specifications and other information from one driver, and import them into the driver for another printer. This feature simplifies the administration of large numbers of printers.

For example, Drivers by Seagull offer a command line interface that allows you to automate the importing and exporting of driver settings without using the drivers' Windows dialogs. And, by replacing the default configuration settings for a driver installation package with settings you have exported, you can even create your own fully-configured driver installation packages.

International Language Support

The user interface of Seagull's Windows printer drivers can display in any of the more than 20 languages supported by the BarTender user interface. This lets you view and set your printer options using a familiar language.

Related Documentation

White Papers and Manuals

- Installing Drivers by Seagull™
- Optimizing Print Performance
- Status Monitoring
- Printer Maestro

For downloadable versions, visit:

<http://www.seagullscientific.com/support/white-papers>

