

SP400X Series

Template Design Software User Guide

For use with the Handheld SP400X



handheld

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1. About this document

Intended audience

This document is intended to be used by system administrators and others experienced in working with server applications. This document will be used in concert with the Handheld SP400X Series Configuration Software to configure your organization's server to communicate with the Handheld SP400X. The configuration software is available for download at www.handheldgroup.com/manuals.

Additional Handheld SP400X documents

- For general instructions for using and maintaining the SP400X, see the Handheld SP400X Series SP400X Scanner Printer System Administrator Guide.
- For help designing your organization's print templates, see the Handheld SP400X Series Template Design Software User Guide.
- For information about implementing the server application, see Communication Protocols.

All of these documents are available at www.handheldgroup.com/manuals.

System requirements

- SP400X device and accessories
- Wireless network and server application
- Computer with the following installed on it:
 - Windows® XP and Service Pack 2
 - Microsoft® .NET Framework 2.0 or later
- USB-compliant cable that does not exceed three meters (10 feet) in length, with a type B 5-pin plug at one end to connect to the SP400X's port

NOTE: If you are connected to the internet when you install the software and you do not have .NET Framework installed on your computer, .NET Framework will automatically be downloaded and installed.

2. Overview of the Software

The Handheld SP400X Series Template Design Software

The Handheld SP400X Series Template Design Software is a tool for creating print templates for use with the Handheld SP400X. A print template contains a complete description of what the printed output from the SP400X will contain. This printed output may contain static (non-changing) images and text, as well as dynamic text that may change with each print based on information received from an external source, such as a wireless server application.

The Template Design Software can be used to create and store one or more templates on the SP400X. After the desired templates have been created and stored on the SP400X, the Template Design software will only be needed when changes to the design of the printed output are desired.

In addition to saving the templates on the SP400X using the Template Design Software, print templates can be shared wirelessly with one or more SP400X devices using a wireless server application.

The SP400X comes from the factory with four default print templates. These default print templates can be used to communicate information about the SP400X or they can be adapted for your printing needs.

3. Using the Handheld SP400X Series Template Design Software

Connect the SP400X

If you have not already connected the SP400X on your computer, do that now, following the instructions in the Handheld SP400X Series Configuration Software User Guide. This user guide is available to download at www.handheldgroup.com/manuals.

Create a print template

Use the software to design print templates for the SP400X.

1. If you have not already downloaded and installed the Handheld SP40X Series Template Design Software, do that now. It is available at www.handheldgroup.com/manuals.

NOTE: Microsoft .NET Framework 3.0 or later must be installed on your computer in order for you to install and use the Handheld SP400X Series Template Design Software. If you connect to the internet to install the software and you do not have .NET Framework installed on your computer, .NET Framework will automatically be downloaded and installed.

2. Open the software. The program will open a blank template.

3. Add static and/or dynamic text fields. See **“Create static text fields”** and **“Create dynamic text fields.”**

Select template settings

1. Click Template Settings.

2. In the Print Mode box, select Normal or Fast Dry.

NOTE: The print mode setting controls the length of time the print takes to dry. Select Fast Dry if you will be printing on plastic sleeves or on other non-porous material.

3. Enter a width for your new template in the Template Width box.

4. Press OK.

Create static text fields

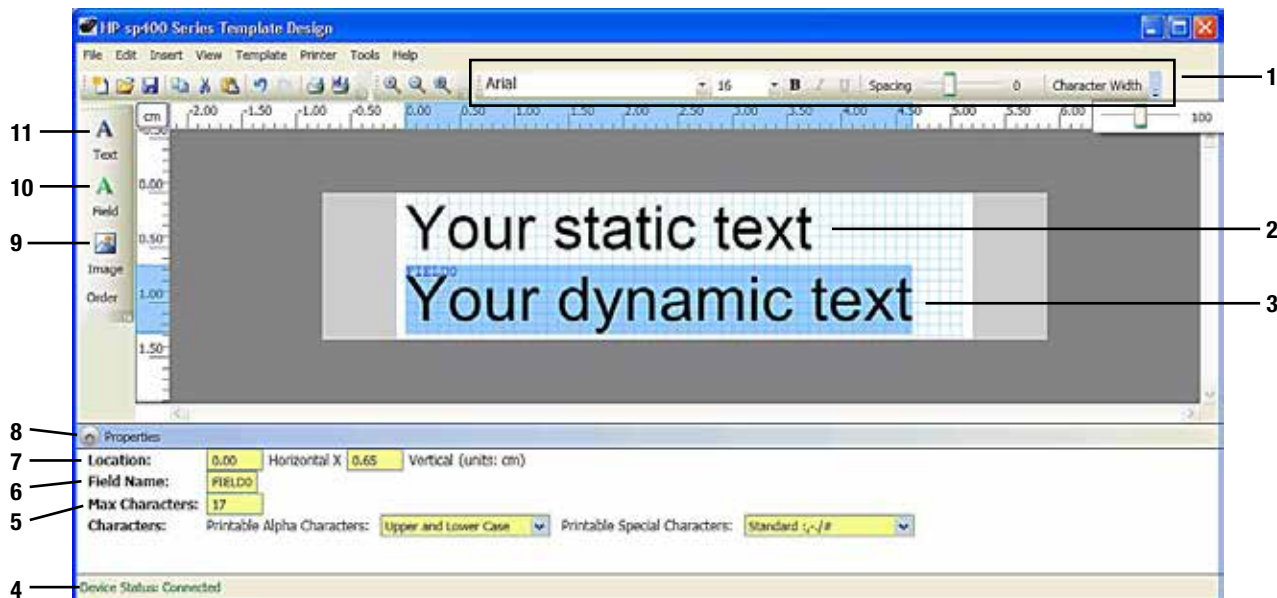


FIGURE 3-1. Handheld SP400X Series Template Design Software window

- | | |
|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| 1. Font toolbar, including the Spacing and Character Width sliders | 6. Max Characters box—only available for dynamic text fields |
| 2. Example of a static text field | 7. Field name box—only available for dynamic text fields |
| 3. Example of a dynamic text field that has been selected by the user | 8. Location values |
| 4. Device Status | 9. Insert Image button |
| 5. Printable Alpha Characters and Printable Special Characters boxes—only available for dynamic text fields | 10. Insert Dynamic Text Field button |
| | 11. Insert Static Text Field button |

Static text is text that will always appear on each print. To create a static text field, do the following:

1. Select **Insert → Static Text Field** or click the **Insert Static Text Field** button.
2. Change the font settings using the font toolbar located at the top of the window. Any changes you make to the font settings will affect all of the text in the text field.
3. Adjust the spacing and character width by moving the sliders to the right or left. You may have to click the pull-down menu on the right side of the toolbar to access the spacing and character width controls.
4. Move the location of the text field on the print template in one of two ways:
 - Drag the text field with the mouse.
 - Change the Location values in the Properties list located in the lower portion of the window.

Create dynamic text fields

Dynamic text is text that is controlled by a server over the wireless network. To create a dynamic text field, do the following:

1. Select **Insert → Dynamic Text Field** or click the **Insert Dynamic Text Field** button.
2. Modify the text by double-clicking in the text field that you created and then selecting “Text” and typing.
NOTE: The text that you enter is only an example of what might be printed in this field. The server application will send the actual text string that will be printed in this field.
3. Change the font settings using the font toolbar located at the top of the window. Any changes you make to the font settings will affect all of the text in the text field.
NOTE: A limited number of fonts are available for use in dynamic text fields.
4. To move the location of a text field on the print template, select the text field and then do one of the following things:
 - Drag the text field with the mouse.
 - Change the Location values in the Properties list located in the lower portion of the window.
5. Enter a field name in the Field Name box in the Properties list located in the lower portion of the window. The field name is the name that the server will use to identify this field. It must be unique and include no spaces.

IMPORTANT:

- The field name given to a dynamic text field must match the field name used by the server.
 - The field name given to a dynamic text field must be unique and include no spaces.
6. Type a new value in the Max Characters box to specify the maximum number of characters that can be printed in this field.
 7. Select the type of characters that will be printed in this field by clicking the arrow next to the Printable Alpha Characters and Printable Special Characters boxes.

NOTE:

- Numbers are always available for all text fields. Changing the settings in the Printable Alpha Characters and the Printable Special Characters boxes only places limits on the alpha characters (letters) and special characters.
- Reducing the variety of characters that are available for use in a dynamic text field reduces the amount of memory the SP400X requires to store fonts.

Add images

Add images if desired:

1. Select **Insert → Image** or click the **Insert Image** button.
2. Find and select the image you wish to add.
3. Change the location of the image by dragging the image or changing the Location values as you would do to move a text field.
4. To change the size of an image, select the image and change the Size settings in the Properties list or click and drag from the lower right-hand corner of the image.

Save the print template on your computer

Print templates can be saved as HPL files on your computer while you are working on them.

1. Click **File** → **Save**.
2. Use the **Save** in drop-down menu to select a location on your computer to save the print template.
3. Type a name for the print template in the **File name** box. Make sure this name matches the name used by the server application.
4. Click **Save**.

The print template will be saved as an HPL file in the location you specified.

When you open an HPL file that you have saved on your computer, the Handheld SP400X Series Template Design Software will automatically open to display the print template. The print template can then be modified or saved on the SP400X.

Test print the template


To test print your new template, do the following:

1. Turn on the SP400X if it is not already on.
2. Connect the SP400X to the computer with a USB cable.
3. Click **Printer** → **Test Print Template**. The SP400X will emit a Hi tone when it is ready to print.
4. Print the template.

Save the print template on the SP400X

Be sure to save your completed template on the SP400X:

1. Click **Printer** → **Save Template to Printer** button. The Template Name Dialog box appears.
2. Enter a name for the template. Make sure this name matches the name used by the server application.

 **IMPORTANT:** When saving a print on the SP400X, make sure the name matches the name that will be used by the server application to identify this template.

NOTE: The template can also be saved as an demonstration template to be used when the printer is in Demonstration (non-wireless) mode by clicking **Printer** → **Save Template as Non-Wireless Demo Template**.

View and/or delete templates stored on the printer To

To view your saved templates or to delete them, do the following:

1. Click **Printer** → **Print Manager**. A list is displayed with all templates installed on the SP400X. The list is categorized into wireless and non-wireless templates.
2. If you want to delete a template or templates, select one or more templates and click **Delete Selected Template(s)**.

NOTE: If you selected one or more of the system information or diagnostic templates, a System Information Deletion warning will appear and ask you to confirm or cancel this action. If you delete one of these templates, you may not be able to perform some printer diagnostic functions.

The system information and diagnostic templates can be restored to the device using the Handheld SP400X Series Configuration Software.

Use the default print templates

The SP400X comes from the factory with four default print templates installed on it.

There are three non-wireless templates for use in Demonstration mode (where a wireless connection is not used):

- System Information print template
- SP400X Demonstration print template
- Pen Diagnostic print template

There is one wireless print template (for use with a wireless connection):

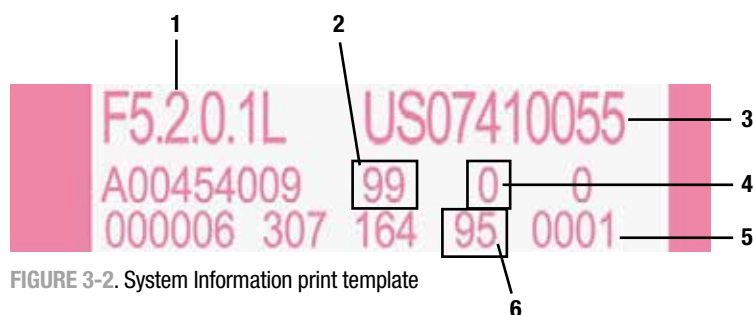
- SP400X Default (wireless) print template

To turn the SP400X on in Demonstration mode, press the CLEAR button while pressing the Power button.

To select the default print templates on the SP400X while in Demonstration mode, press the CLEAR button. You will hear one Hi tone when the system information template is selected, two when the SP400X Demonstration template is selected, and three when the Pen Diagnostic template is selected, and so on. Scan a barcode to print the selected print template.

The SP400X can save up to seven user-defined demonstration print templates if sufficient memory is available on the SP400X.

The System Information print template and the Pen Diagnostic print template contain information that is useful to service technicians when problems arise.



1. FW version
2. Ink remaining % (estimate)
3. Serial number
4. Image count on print cartridge
5. Image count since power turned on
6. Battery level %

SP400X Series - 3. Using the Handheld SP400X Series Template Design Software



FIGURE 3-3. SP400X Demonstration print template

- 1. Upper base alphanumeric value of scanned bar code (truncated to 10 digits)
- 2. Print templates printed

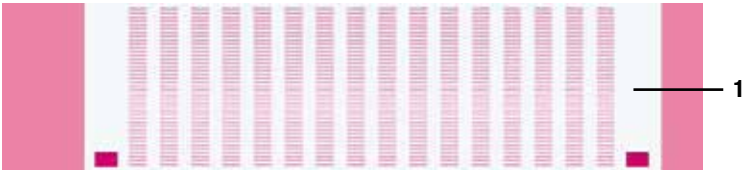


FIGURE 3-4. Pen Diagnostic print template

- 1. This area displays diagnostic information about print cartridge health




FIGURE 3-5. SP400X Default (wireless) print template

- 1. FIELD1
- 2. FIELD2

4. Advanced use

Save template as HHP files

When you save print templates on your computer using **File → Save**, they are saved as HPL files. Templates should be saved using this file format if they will be viewed and edited with the Template Design software at a later date.

 **IMPORTANT:** You must save your template as an HPL file if you want to be able to reopen and edit it with the Template Design software. Exported HHP files cannot be reopened for later editing with the Template Design software.

Templates can also be saved in a file format known as an HHP file. Templates saved as HHP files can be shared with the Handheld SP400X Series Configuration Software and the server to update the SP400X. Only templates saved as HHP files can be transferred wirelessly.

When a template is saved in HPL format, only one file is created, while if a template is saved in HHP format, a collection of up to three files is created.

1. Open or create a template using the Handheld SP400X Series Template Design Software.
2. Click **File → Export Template as HHP Files**.
3. Browse to a folder where you want to save the files and click **OK**.
4. Enter a name for the template and click **OK**.

NOTE: This will save the template as HHP files in the specified folder. Up to three HPP (.hhp) files will be created, depending on what is included in the template design.

The template can now be deployed to one or many SP400X devices through a wireless server application or through the Handheld SP400X Series Configuration Software.

Use memory wisely

When you design a print template, remember that the SP400X has a fixed amount of memory. The fonts and other attributes you choose for your dynamic text fields and the placement of dynamic text fields in the print template have a significant effect on the amount of memory your template will require.

To make the most efficient use of the memory available on the SP400X, observe the following rules:

- When two or more dynamic text fields will be placed horizontally beside each other, place them at the exact same vertical location and use the same font name, font style, font size, spacing and character width. This will result in only one font being stored on the SP400X. See **FIGURE 4-6** and **FIGURE 4-7**.
- Limit the number of characters that are available for use in your dynamic text field by making selections in the Printable Alpha Characters and Printable Special Characters boxes in the Properties list located in the lower portion of the window. For example, if only numbers will be printed in this field, set the Printable Alpha Characters to **None** and the Printable Special Characters to **None**.

NOTE: For every unique combination of the following attributes in a dynamic text field, a font will be stored on the SP400X:

- Vertical location
- Font name
- Font style
- Font size
- Spacing
- Character width

Dynamic text fields can have different horizontal locations without creating additional unique fonts, so it is possible to have many dynamic text fields on one template that share only one font.

NOTE: You may place static text fields in different vertical locations and use different text styles, sizes, and other text attributes for static text fields without affecting the amount of memory used on the SP400X.

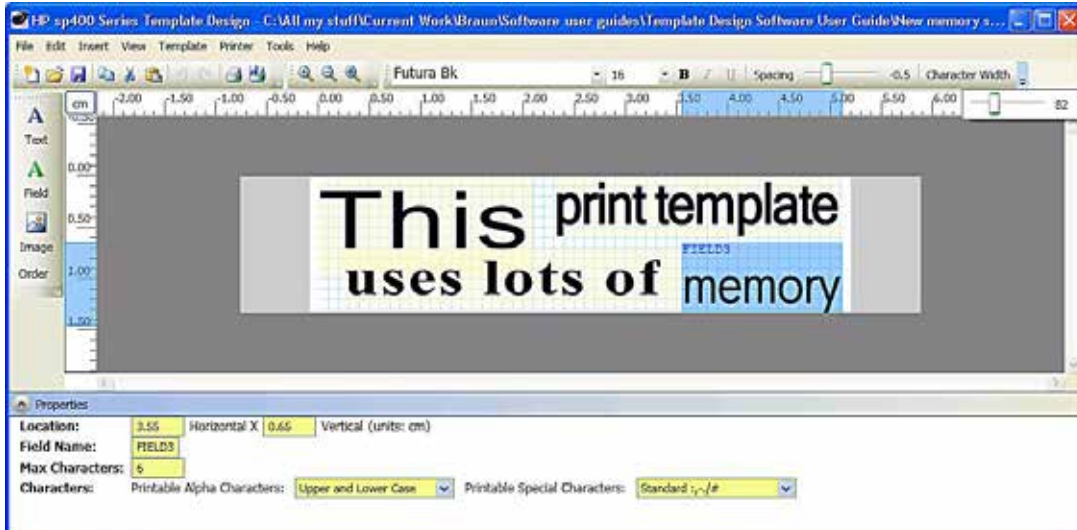


FIGURE 4-6. An example of a print template (made up of four dynamic text fields) that requires the storage of four unique fonts on the SP400X. The text fields in this print template use four different font names and are each in a different vertical position. The text fields also differ in font style, font size, spacing, and character width.

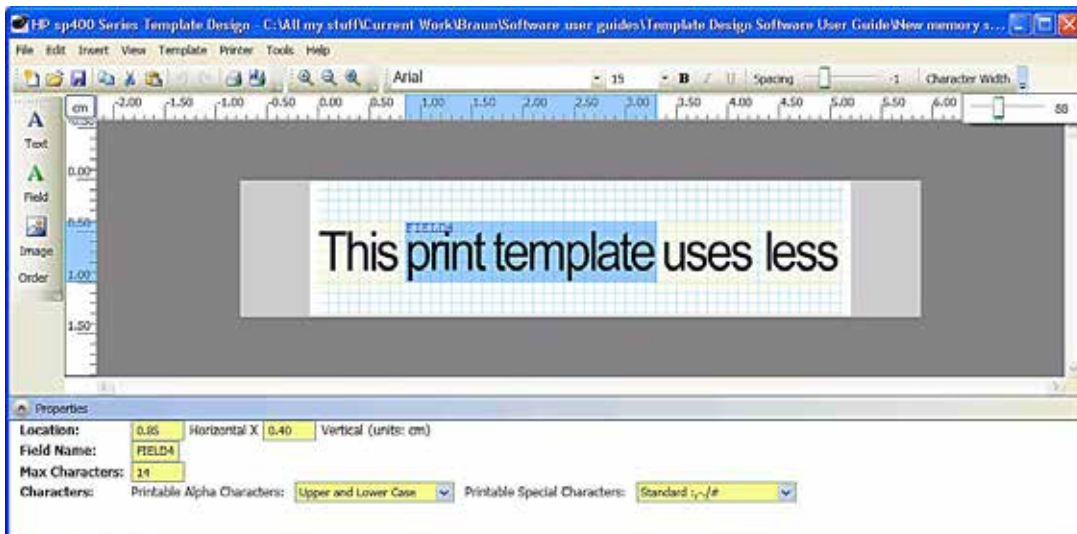


FIGURE 4-7. An example of a print template (made up of four dynamic text fields placed beside each other) that requires the storage of only one unique font on the SP400X. All four text fields are aligned vertically and they all share the same font name, font style, and other attributes.

5. Troubleshoot problems and get support

Troubleshoot

TABLE 5-1 General problems

Problem	Cause	Solution
Device status reads “Not connected”	The SP400X is not turned on.	Turn the SP400X on by pressing the green Power button for three seconds.
	The USB cable is not securely connected to the computer or the SP400X.	<ul style="list-style-type: none"> • Press the plug into the SP400X to make sure it is connected. • Unplug the cable from the USB port and plug it in again.

TABLE 5-2. Errors

Problem	Cause	Solution
An error appears that says “The printer is not connected”	The SP400X is not turned on.	Turn the SP400X on by pressing the green Power button for three seconds.
	The USB cable is not securely connected to the computer or the SP400X.	<ul style="list-style-type: none"> • Press the plug into the SP400X to make sure it is connected. • Unplug the cable from the USB port and plug it in again.
	The FTDI drivers are not installed.	Locate the drivers in the FTDI folder in the Handheld SP400X Series Configuration Software folder and install them on the SP400X. For instructions, see the Handheld SP400X Series Configuration Software User Guide, available at www.handheldgroup.com/manuals .
An error appears that says “USB communication error”	USB communication failed.	Wait a few seconds and retry.
An error appears that says “The memory on the printer is full”	Too many templates are stored on the device.	Use the print manager (Printer Manager) to delete one or more templates from the SP400X and retry. 2 Repeat this process as needed.
	The printer memory is fragmented.	Delete all the templates from the printer. (Deleting the System Information and Diagnostic templates is not required.) 2 Save the desired templates on the SP400X.
	The template you are saving contains too many dynamic fields.	Delete one or more of the dynamic fields and retry.

TABLE 5-3. Problems with the software

Problem	Cause	Solution
Not able to edit the order of elements on the template design because the menu items are grayed out	The element you are trying to change the order of is a dynamic text field. Dynamic text fields are always printed on top of all other elements and cannot be reordered.	Select an element that is not a dynamic text field.
Not able to change the field name of a dynamic field	The field name you have chosen is not different from all other field names on the template.	Use a name that is not used by any other dynamic fields on the template.
	The field name chosen does not follow naming rules.	Use a name that is not blank and does not contain any spaces.
Not able to place elements on the template where desired	Snap to Grid setting is enabled	Click Tools → Preferences , clear the Snap to Grid box and press OK .
Test Print does not work	The SP400X is not turned on.	Turn the SP400X on by pressing the green Power button for three seconds.
	The USB cable is not securely connected to the computer or the SP400X.	<ul style="list-style-type: none"> • Press the plug into the SP400X to make sure it is connected. • Unplug the cable from the USB port and plug it in again.
	The SP400X is in wireless mode, but is not able to connect to the wireless network (the blue light is flashing).	Turn on the SP400X in Demonstration mode (non-wireless mode). See “Use the default print templates” for instructions.

TABLE 5-4. Problems printing

Problem	Cause	Solution
The SP400X does not print all characters sent to it by the server application	Max Characters is set too low for the dynamic field on the template.	<ol style="list-style-type: none"> 1. Open the template in the Template Design software. 2. Increase the Max Characters setting for the field in question. 3. Resave the template on the SP400X.
	The server is sending characters that are not included in the font set stored on the SP400X.	<ol style="list-style-type: none"> 1. Open the template in the Template Design software. 2. Make sure that your selections in the Printable Alpha Characters drop-down box and the Printable Special Characters drop-down box for the dynamic text field(s) in question include the characters that you are trying to print. 3. Resave the template on the SP400X.

Support services

If you have a problem, follow these steps:

1. Check the documentation that came with the product.
2. Visit the Handheld online support Web site at www.handheldgroup.com/manuals. Online support is available to all Handheld customers. It is the fastest source for up-to-date device information and assistance and includes the following features:
 - Access to qualified online support specialists
 - Valuable product and troubleshooting information for common problems
3. Call Handheld support: 1-800-Handheld Invent (800-474-6836). Support options and availability vary by device, country/region, and language.