

PrintBoy

for the Palm Computing Platform

Standard Edition

Network Printing User Documentation

Bachmann Software

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Introduction: Network Printing with PrintBoy

Bachmann Software's PrintBoy mobile printing solution meets the demands of the mobile handheld computer user, providing the most comprehensive set of options for printing from handheld devices.

PrintBoy supports printing directly from Palm OS handhelds to virtually any printer, supporting direct IR and Bluetooth connections as well as connections to networked printers over Wi-Fi/802.11, Bluetooth, dialup, wireless and smartphone connections.

This user manual is a companion to the main PrintBoy User Documentation, and focuses exclusively on the topic of Network Printing, including the new PrintBoy Server web service (<http://www.print-boy.com>), and PrintBoy Printer Discovery features on the handheld.

Understanding IP-based Printing with PrintBoy

Understanding the dizzying variety of ways that traditional desktop and laptop computers connect to networks, computers and printers can be a daunting task. There are large public networks like the Internet, and private local area networks. There are dialup modems, ISDN, Cable modems, t-1 lines and Ethernet jacks. Not to mention VPN's, secure socket layers and firewalls. With all of these options, how in the world do we manage to connect computers at all?

The answer is simple: IP, or Internet Protocol. Strip away all of the other stuff, and what you are left with is a guarantee that the computers on either side of the connection can speak the language of IP. With that understanding, everything else falls into place: web browsers, e-mail clients, file servers, networked printers, all begin to be able to speak to one another.

With PrintBoy running on a Palm OS handheld, attempting to locate and print to a networked printer, the same rule applies: if there is a way to find out a given printer's IP address, and speak the IP language to it, PrintBoy can print to that printer. All PrintBoy cares about is that there is an established IP connection between the PDA and the printer.

How is an IP connection created? Same as with any other computer: you need to know the printer's IP address, and the port that it is configured to respond to. Virtually all of the printers sold to businesses and corporations today are capable of making an IP connection, either via a network adapter built directly into the printer, or via an inexpensive add-on printer sharing appliance, such as HP's JetDirect product.

Thus the first and foremost requirement for PDA network printing is a printer that can be reached by an IP address. If that is in place, as long as a PDA can reach the same network that the printer is connected to, PDA network printing can occur.

What is PrintBoy Server

PrintBoy Server is a printer registration service that is hosted on the public internet at <http://www.print-boy.com>. Using PrintBoy Server, locations anywhere in the world can create printer profiles that define how PDAs connect to the printers at that location.

Once registered, the list of printers at a given location can be downloaded from PrintBoy Server to any internet-enabled PDA using PrintBoy's Discovery feature. Once downloaded, a PDA user simply chooses and prints to an available printer, without ever needing to know what kind of printer, or even how to connect to it.

What is PrintBoy Discovery

PrintBoy Discovery is a program that comes with the PrintBoy software. PrintBoy Discovery enables PDA users to automatically "discover" available printers that are available at their location. PrintBoy Discovery does this by querying PrintBoy Server on the world wide web, and downloading the appropriate printer profiles that have been registered at your location.



To use PrintBoy Discovery, your handheld must be able to connect to the public internet and access the www.print-boy.com web site. This connection can be

made using Wi-Fi, Bluetooth, modem, smartphone dialup, or any other means available.

Although PrintBoy Discovery is most often used to locate printers that are shared on IP networks, it can just as easily discover printers that support IR or Bluetooth connections.

Registering Printers on www.print-boy.com

Registering your printers at www.print-boy.com is free of charge, and typically takes ten minutes or less. It involves the following steps:

1. Sign up for a free PrintBoy Server account, with a login name and password of your own choosing
2. Define a location where one or more printers is available for use. A location can be an office, a building, a school, or a house, it doesn't matter, as long as it's a convenient way to remember where a group of printers is found.
3. Within a location, define one or more printers that are available for use. For each printer, you type in a name (ex. "Conference Room LaserJet"), along with the appropriate printer driver to use, and the connection settings that are used to connect to the printer (ex. IP Address of 201.100.0.14 and Port 9100)

That's it! With three simple steps, you have now successfully registered your printers for use by PDA-carrying employees, visitors, customers, or others who wish to print directly from their handhelds.

The next section walks you through the registration process in more detail.

Setting Up a Free PrintBoy Server Account

To set up a free PrintBoy Server account that will allow you to register and manage your printer profiles, visit <http://www.print-boy.com>, and click on the highlighted link to proceed to the login page. You will see a screen similar to the following:



Please Login

Email Address	<input type="text"/>
Password	<input type="password"/>

[Haven't registered yet? Registration is free, click here to sign up now](#)

If this is your first time visiting PrintBoy Server, you will need to register using a valid e-mail address. Click on the “Haven’t registered yet?” link to proceed to the signup form.

The PrintBoy Server signup form, shown below, prompts you for an e-mail address, a name, and a password that you will use to login to the site, and which will allow you to create and administer your printer profiles. Your e-mail address and password also prevents unauthorized access to your PrintBoy Server account and printer profiles.



Sign Up

Email Address	<input type="text"/>
Your Name	<input type="text"/>
Password	<input type="password"/>

Sign Up

To complete registration, click the Sign Up button. You will be asked to re-enter your password for confirmation, after which PrintBoy Server will automatically log you on using your new account settings, and bring you directly to the Manage Sites page where you can begin defining printer locations and printer profiles.

Defining and Managing PrintBoy Sites

Since in most cases PDA users will want to print to a printer that is available in their current location, PrintBoy Server lets you group your printers according to where they are located. These locations are called “Sites”, and you may create one or more sites under the same PrintBoy Server login account.

For example, if you work in a corporate campus comprised of 2 buildings, you may wish to define two PrintBoy Server sites, one for each building. You would then group your printers according to the building where they are located. Alternatively, you could create a site for each floor of your building, or for each department, or for different geographic locations. As long as the groupings make sense to you and the PDA users who will need access to your printers, how you define sites is totally up to you.

Defining a new site is done using the form below, and you are prompted for a SiteCode and a Description. Note that the Site Code will be the code that PDA users will enter on their handhelds when they search for printers at their location, so you will want to make the code short enough for easy entry on a PDA. Use the Description field to add more detail about the location.



Manage Sites for julie@bachmannsoftware.com

Help			
Printers	SiteCode	Description	Action
N/A	<input type="text"/>	<input type="text"/>	<input type="button" value="Create New Site"/>

When you have filled out the two fields, click the Create New Site button. After a moment, PrintBoy Server will display the new site, and prompt you to create additional sites if you wish, as follows:



Manage Sites for julie@bachmannsoftware.com

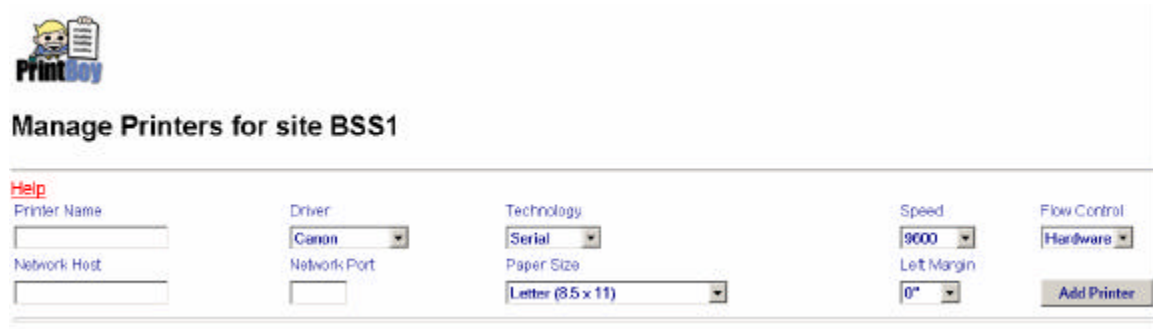
Help			
Printers	SiteCode	Description	Action
N/A	<input type="text"/>	<input type="text"/>	<input type="button" value="Create New Site"/>
Edit	<input type="text" value="BSS1"/>	<input type="text" value="Bachmann Software Home Office"/>	<input type="button" value="Save"/> <input type="button" value="Delete"/>

In this example, we have defined a site BSS1, which will represent the printers available at the Bachmann Software home office.

Your next step is to define Printer Profiles at your new site. To do this, click on the Edit link that is displayed to the left of the Site listing you wish to administer.

Defining and Managing Printer Profiles

You can define as many printers at a given site as you wish. To define Printer profiles for your printers, you use the Manage Printers form, shown below:



PrintBoy

Manage Printers for site BSS1

[Help](#)

Printer Name	Driver	Technology	Speed	Flow Control
<input type="text"/>	<input type="text" value="Canon"/>	<input type="text" value="Serial"/>	<input type="text" value="9600"/>	<input type="text" value="Hardware"/>
Network Host	Network Port	Paper Size	Left Margin	
<input type="text"/>	<input type="text"/>	<input type="text" value="Letter (8.5 x 11)"/>	<input type="text" value="0"/>	<input type="button" value="Add Printer"/>

The fields for a printer profile are important because they not only identify your printer to a PDA PrintBoy user, they also define the connection settings for how PDAs communicate with your printer. The fields are described below:

Printer Name

This should be a recognizable name that uniquely identifies your printer at your site. For example “Conf Room LaserJet” is a good choice, since it will give users an idea of where the printer is located when they wish to find their printouts.

Driver

Because PrintBoy is powered by the PrintBoy Run Time Print Engine, you can print from your handheld device to almost any desktop, networked or mobile printer. PrintBoy comes with many special print drivers to help your handheld create the best output possible for your printer. The available printer drivers are selectable in the dropdown list.

To help you select the best driver for your printer, you should consult the Appendix A: Printer Compatibility Matrix, located at the end of this manual. Find your printer in the list, and note the recommended PrintBoy driver.

Important! Which printer you own, and which printer driver you select, will determine how well PrintBoy works. In some cases it will also determine whether PrintBoy gives you fully graphical output or plain text output. (See Appendix A)

You should also consult the user guide that came with your printer and see if it talks about compatibility with other printers. For example, a great many printers support (or “emulate”) Hewlett-Packard’s “Printer Control Language” (also known

as PCL). If this is the case, you can try to use either the LaserJet or the DeskJet driver. Similarly, many modern printers support the Postscript standard.

If your printer is not listed in the Compatibility Matrix, and your printer manual does not describe any emulation for a printer that is in the Matrix, you will almost certainly be able to achieve basic printing by choosing the “Generic” printer driver.

Technology

This is a drop down list that lets you choose among the possible ways to connect to your printer. The choices are “Serial”, “IrDA”, “BlueTooth” or “Network”. Although most PrintBoy users who have devices capable of connecting to PrintBoy Server will also be able to wirelessly connect to a networked printer, most printers you define will be IP addressable networked printers, thus you should choose “Network” for those printers. However, you are free to choose any of the other communication options as well.

Note that the Network option requires that you know the Network Host, or IP Address, for your printer on the network, as well as the IP Port that it is set up on (the Port setting is in many cases set to 9100 by popular networked printers and print servers).

Also note that Speed and Flow Control apply to printing with a Serial Cable connection only, and can be safely ignored for Bluetooth and Network printing.

Optional Paper Settings

Paper Size and Margin can be set if your printer uses a paper size that is different than the standard Letter size. For example, many international locations use A4 paper. Also, some specialty printers use a smaller paper size, such as the various Franklin Covey sizes.

When you are happy with your printer settings, simply click the Add Printer button, and your printer will be added to the list of printers defined on the current site, as in the following example:



Manage Printers for site BSS1

Help

Printer Name	Driver	Technology	Speed	Flow Control
<input type="text"/>	Canon	Serial	9600	Hardware
Network Host	Network Port	Paper Size	Left Margin	
<input type="text"/>	<input type="text"/>	Letter (8.5 x 11)	0"	<input type="button" value="Add Printer"/>

Printer Name	Driver	Technology	Speed	Flow Control
Conf Room Laser	Laser Jet	Network	9600	Hardware
Network Host	Network Port	Paper Size	Left Margin	
207.99.19.214	9100	Letter (8.5 x 11)	0"	<input type="button" value="Save Printer"/> <input type="button" value="Delete Printer"/>

Congratulations, you have made your printer available for automatic discovery and printing by PDA users! At this point you can add additional printers, additional locations, or you can stop here. To go back to the Site Management page, click on the Manage Sites link. If you ever need to come back and manage sites or printers, simply visit the www.Print-Boy.com home page and sign in using your e-mail address and the password that you defined during sign up.

The next sections of this manual describe how PDA users can make use of PrintBoy Server to find and connect to your defined printers at your location, by making use of the PrintBoy Printer Discovery feature.

Using PrintBoy Discovery

For handhelds which can connect to the Internet, PrintBoy allows your handheld to automatically locate, or “Discover” printers that have been defined in a PrintBoy Printer Profile on an accessible host computer. Once discovered, you can select an available printer via its profile name, and print to it instantly without needing to either select the proper printer driver or configure the connection at all.

To use the Discovery feature, tap the menu icon from within Print Setup, and choose the Discover Printers command. You will be greeted by a screen which looks like the following:



The above screen displays all of the printers which have been located by the Discovery feature. To perform a Discovery, simply tap the Discover button at the lower left. You will be asked to enter a “Site Code” (see below):



The Site Code allows you to specify a location-specific code that the locally available printers have been associated with via their PrintBoy Server Printer Profile. In the example above, if you wish to gain access to the printers in the Bachmann Software home office, you might enter “BSS1” as your site code. The Site Code can be any combination of numbers or letters used to define a group of printers that are shared as a set of PrintBoy Profiles. Site Codes may not contain embedded spaces.

If you enter your site code and tap the OK button, PrintBoy Discovery will contact the PrintBoy Server host site on the web, and query the Printer Profile registration database for any printers which have been defined with the requested Site Code. Any printers that match will be returned to the list in the main Discovery screen, as follows:



At this point the only thing you need to do is select one of the printer by tapping on the printer’s description and choosing the Select Printer button. The chosen printer will automatically be set as Print Setup’s Default Printer, with the proper

configuration parameters already set. You are now ready to print from your handheld!

If you wish to edit the settings for the discovered printer, you may do so in the Print Setup utility. Printer Profiles discovered by PrintBoy Discovery remain in the list until you have either run a new discovery query, or until you have removed them using the Delete menu.

For information on how to create an account that will allow you to define PrintBoy Printer Profiles on PrintBoy Server, please visit <http://www.print-boy.com>.