

PalmPrint / SCS Print Server



Printing Software for the Palm Computing Platform from Stevens Creek Software Users Guide

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NOTE: This manual supports three different products. **PalmPrint** is our general purpose printing software, which prints a wide variety of information itself, and also provides printing services to other applications. **SCS Print Server** is a stripped down version of the software which only provides printing services to all other applications which choose to support it, and does not itself do any printing. And finally, there are special versions of **SCS Print Server** which support printing only to a single application. Most of the material in this manual applies to all three versions, with a few exceptions. The name of the application file, which you need to know when you install the software, is `PPrint.prc` if you have the full version of **PalmPrint**, and `SCSPrint.prc` if you have the server version. And when you go to the application window on your Palm to start the application, the **PalmPrint** icon is labelled "PalmPrint", while the **SCS Print Server** icon is labelled "SCS Print".

Chapter 1: Installing the Software

Installing PalmPrint in Your Palm

Whether you downloaded the software from our Web site or received it in the mail, you should have a file called `PPrint.prc` (or `SCSPrint.prc`, as appropriate) on your computer or floppy disk or CD. **If you do not have the file `PPrint.prc`, you cannot proceed.** If you do, here's how to install it on your Palm handheld device:

From a Macintosh:

Using MacPac Version 1: Run the program **InstallApp**. Click on the **Select** button, set the **List Files of Type** to **All Files**, locate and select the file `PPrint.prc`, and click **Open**. Now click on the **Install** button. The next time you HotSync your Palm, the program will be downloaded.

Using MacPac Version 2: Select the **HotSync Manager** from the "Instant Palm" menu on the upper right of your menu bar. In the HotSync menu, select **Install**. Click on the **Add To List** button. Locate and select the file `PPrint.prc`, and click **Add File**. The next time you HotSync your Palm, the program will be downloaded.

From Windows:

Using the Install software that came with PalmPrint: As part of the download or on this diskette or CD you should see a program named **Install** in the same folder as the **PalmPrint** software (`PPrint`). Double-click on **Install**, and it will copy all of the files to a new `PalmPrint` folder in your `Palm` folder on your computer, and at the same time will perform all the steps to install the software in your Palm, except for the final step of performing an actual HotSync. When you do your next HotSync, the software will be installed in your Palm.

If the procedure above does not work for some reason, or if your desktop computer is supporting multiple Palms, try the "manual" procedures described in the next few paragraphs; if those don't seem to apply to your setup, please consult the manual that came with your handheld device (Palm, Handspring Visor, Symbol SPT1500, etc.), which contains instructions on installing applications

into the handheld

Using current Palm desktop software: Try this first: Double-click on the file `PPrint.prc`. If your system is correctly configured with the latest Palm software, a window labelled "Palm Install Tool 3.0" (or perhaps higher) will appear. Check that the user name displayed is the name of the unit on which you are installing the software, change it if it isn't, and click on **OK**. A new window labelled "Palm Install Tool" will appear with a list of software to be installed in your Palm, which should include `PPrint.prc`. Click on **Done** to show you are done, then on **OK** to confirm. The next time you HotSync your Palm, the program will be downloaded.

If the method in the previous paragraph didn't work, try this: Start your Palm desktop software. Click on the **Install** button. Check to make sure the User name displayed at the top of the Palm Install Tool window which appears is the user name of the Palm handheld device on which you want to install the software; if not, select the correct user name. Now click on **Add**. Using the file browser which appears, locate and select the `PPrint.prc` file, and click **Open**. Now click on the **Done** button, and then on **OK**. The next time you HotSync your Palm, the program will be downloaded.

Using old Pilot desktop software: Run the program `INSTAPP.EXE` (it may be displayed simply as `INSTAPP`, depending on how you have Windows configured), which is located in the `C:/PALM` folder. Click on the **Browse** button, locate and select the `PPrint.prc` file, and click **Open**. Now click on the **Install** button. The next time you HotSync your Palm, the program will be downloaded.

Installing Companion Applications

Depending on how you obtained the software, **PalmPrint** often comes with several companion applications. These include **SnailMailer** (`Snail.prc`), which lets you print envelopes and mailing labels from the information in your Address Book, and **Mail/P** (`Mail.prc`), which replaces the standard Palm Mail program and lets you print emails. These programs are installed in the same manner as **PalmPrint**, as described above.

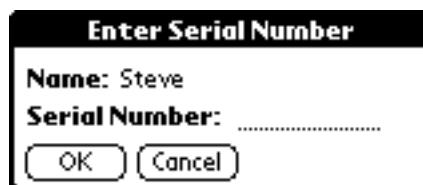
Starting the Application

From the **Applications** window on your **Palm**, look for the icon labelled **PalmPrint** (or **SCS Print**) which looks like this:



Entering Your Serial Number

If you have registered the software, and have obtained a serial number from **Stevens Creek Software**, you enter the serial number by tapping on the word ***Unlicensed*** in the upper right of the main screen. When you do, you'll see this screen appear:



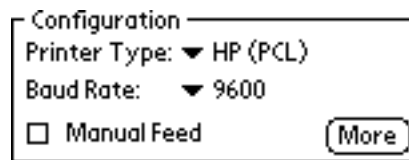
Use Graffiti (or the on-screen keyboard) to enter your serial number (supplied to you by Stevens Creek Software); when you're done, tap on the **OK** button. If you enter an incorrect number, the

software will let you know. If necessary, tap on the **Cancel** button to dismiss the Enter Serial Number screen. When you have entered the Serial Number correctly, you'll see the word ***Unlicensed*** disappear from the main screen.

If you run into a problem, this probably means that when you provided your Palm user name to Stevens Creek Software, you did so incorrectly. Check the name in the Enter Serial Number screen shown above, and write it down exactly (including case, i.e., whether the letters are upper-case letters like THIS or lower-case letters like this) and [email it to Stevens Creek Software technical support](#) and wait for a new serial number to be provided to you.

Chapter 2: Configuring the Software

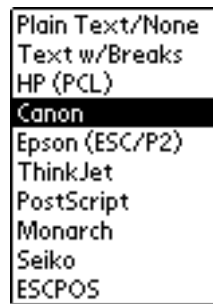
On the top of the main screen when you open **PalmPrint**, you will see this display:



Setting the Printer Type and Baud Rate is the most important part of configuring **PalmPrint**. We choose to put it in the main screen for two reasons - first, to remind you of how you have the software configured, and second, to allow you to quickly change configurations if you use **PalmPrint** with more than one printer.

Printer Type

The **Printer Type** pop-up menu offers you these choices:



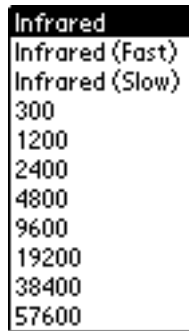
The first choice, **Plain Text/None**, is provided for the case when you want to use **PalmPrint** to send data to another computer, although you also may find this mode suitable for a number of small receipt printers which don't accept standard printer languages. In this mode **PalmPrint** sends out only the text it is asked to send, exactly as it exists. Automatic word-wrapping and page breaks are disabled, and no additional control characters are sent. The next choice, **Text w/Breaks**, is similar, but in this mode **PalmPrint** will add line breaks after the number of specified characters (as discussed below).

The remaining choices describe various types of printers and printer languages that are in common use. If you are unsure of what language your printer uses, you should consult the manual that came with your printer. Note that there is not a direct correlation between manufacturer and printer type. For example, many printers (such as many Apple LaserWriters) support PCL. Printers from many manufacturers support PostScript, but often PostScript is an optional capability on the printer so

you'll need to be sure that it's installed on your particular printer. If you're completely unsure, you can try all the possibilities, but try Epson first, since Epson compatibility is probably the most common configuration for different printers.

Baud Rate

The **Baud Rate** pop-up menu offers you these choices:



In some cases, you will be able to choose a variety of baud rates; in other cases the baud rate is fixed by your printer. You will need to determine the appropriate baud rate. If you connect your Palm to another computer (instead of a printer) and use the "Plain Text" mode of **PalmPrint** to transmit information to a terminal emulation program (see next chapter), you'll probably be able to vary the baud rate within the terminal emulation program (and within **PalmPrint**).

You'll also see three "Infrared" choices on the pop-up menu. Select one of these to use the infrared (IrDA) port for printing to IrDA-capable printers. For most IrDA printers, you should select "Infrared," the first choice on the list. If you encounter difficulties communicating with the printer, then you can try the other two choices, "Infrared (Fast)" and "Infrared (Slow)" to see if you can reliably establish communication with either of those settings (the **Seiko DPU-3445** requires a setting of "Infrared (Fast)"). If your unit does not support IrDA (for example, it's an older, non-upgraded Pilot or PalmPilot), then the software won't let you select Infrared.

If you are using a serial-to-parallel converter cable, data arrive at your printer in a "parallel" mode, but they are sent out of the Palm as a serial transmission, and the baud rate must be set above to match the baud rate required by the serial-to-parallel converter. Stevens Creek Software sells two different cables for this task. The GA945CE9M has a 9-pin connector on one end which mates with either a "HotSync cable" (sold by Palm) or the cable coming from the HotSync cradle. If you are using this cable, set the baud rate to 9600. The GA945PP has a "Palm serial" connector on one end which mates directly with all Palm handheld units except the Palm V. If you are using this cable, set the baud rate to 57600.

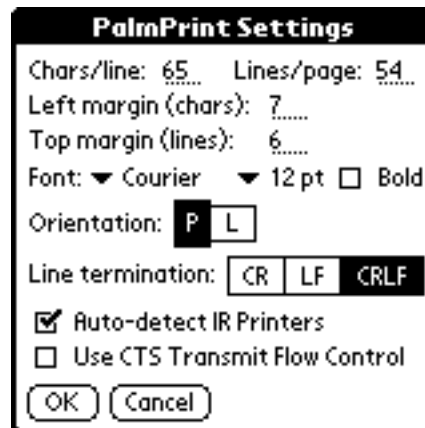
If you are "printing" to terminal emulation software on your host computer (see Chapter 4), set the baud rate to match the baud rate in your terminal emulation software. If you are printing via cable to the serial port of a printer, the baud rate set in **PalmPrint** should match that of your printer. Some printers are fixed (typically at 9600 or 19200 baud - the **Monarch 6015** requires 19200 baud, for example), while others have baud rates which can be selected. Consult your printer documentation for information on what the fixed baud rate of your printer is, or how to change it if it is adjustable. If you set the baud rate incorrectly, you will often see output on your printer, but it will consist of nonsense characters. If you see output like that, the likely solution is to change the baud rate. However some printers will not print anything until they receive the final "page eject" command, and if that is garbled like the rest of the page, you will see no output whatsoever. In other words, an incorrect baud rate is not a guarantee that you will see garbled output; you may see no output at all.

Manual Feed

If you check the Manual Feed box **PalmPrint** will select the manual feed tray for paper input. In all other cases the built-in paper tray will be used. This setting is only applicable to certain printers; on other printers it is ignored.

More Configuration Settings

Clicking the **More** button will display this screen, which allows you to choose additional settings:



Char(acter)s per line and **Lines per page** set the maximum values for those parameters, which are used by the software when it does automatic word-wrapping and page breaks. The values are set by default to numbers appropriate for 8 1/2 x 11" paper; change them if you wish. Set lines/page to 0 if you are printing on continuous roll-feed paper and don't want page breaks. Characters per line has a maximum of 255; lines per page has a maximum of 99. However most likely neither of these values is correct for your printer; you are responsible for setting these numbers to values which are meaningful for the printer you are using.

On two printers, the chars/line is used to set the font size. On the **Seiko DPU-3445**, if you set the Chars/line to 52 (or fewer), printing will be in the standard size font for that printer; if you set the Chars/line to 69 (or anything larger than 52), printing will be in a small size font. On the **Monarch 6015**, you can set Chars/line to 48, 42, 38, 32, or 24 (42 is "normal") to get progressively larger characters.

Note that characters per line will vary with the font size chosen (see below); if you print in smaller fonts, more characters will fit on a line. If you set the characters per line too low, and you print a memo which contains paragraphs longer than one line, the printing will not fill the page, like this:

This is an example of setting the characters per line too small for the page so that the full page is not filled up as it should be.

If your printed page looks like this, you can safely increase the number of characters per line. On the other hand, if you enter a number of characters per line which is greater than the number which really fit on one line, then the lines will wrap around, like this:

This is an example of setting the characters per line too large for the page so that each line wraps around because the software thinks the paper is wider than it really is.

If your printed page looks like this, decrease the number of characters per line.

Left margin and **Top margin** should be self-explanatory; note that the former is measured in characters and the latter in lines. Note that on printers with continuous roll-feed paper, the top margin setting is also used at the end of the printing as a bottom margin to ensure that the paper moves past the cutting mechanism.

Font can be set to Courier, Times, or Helvetica. Automatic word-wrapping is only accurate if you select Courier font. The software counts characters only, not actual character widths, and thus the word-wrapping for proportional fonts (Times and Helvetica) will be approximate only. If you are printing material which has columns which are supposed to line up (such as a table), you must select the monospaced font Courier in order to get proper output. **Font size** can be set to 12 pt, 10 pt, and 9 pt. **Bold** sets the default print to be bold rather than plain.

Orientation can be set to P (Portrait - long axis of the page vertical) or L (Landscape - long axis of the page horizontal). When you change orientation, the Characters per line and Lines per page will change, because there are actually two sets of those numbers, one for each orientation. Changes you make to the Characters per line or Lines per page always apply to the currently selected orientation. **Orientation is applicable only to PCL and PostScript printers** and is ignored on other printers.

Line termination can be CR (Carriage Return), LF (Line Feed), or CRLF (Carriage Return-Line Feed). This comes into play mostly when you are using **PalmPrint** to transfer information to another computer, in which case the end of line character(s) may affect how the data appears on the receiving computer or software. **Leave this setting at CRLF if you aren't sure**, or experiment and see what happens. When you are printing, most printers have some kind of setting (often set by DIP switches) which set the end of line character. Again, if you aren't sure, leave the setting at CRLF, but consult your printer manual for more guidance on the appropriate setting.

Auto-detect IR Printers is used to take advantage of a feature of IrDA communication, in which IrDA devices identify themselves by name such as "BJC-80" or "DeskJet 340". If you regularly print to more than one type of IrDA device, you probably want to leave this box checked. In that case, if you try to print to a printer which does not match the currently selected printer type (set on the main page), the software will automatically switch the printer type for you. This identification process does take a fraction of a second, though, and if you only print to one type of printer, you're probably better off just setting the printer type on the main screen and leaving this box unchecked.

Use CTS Transmit Flow Control should be checked when you are sending data via serial transmission to printers which may not have a sufficient internal buffer to accept everything being sent; this is particularly true with small receipt printers. This mode may also be useful when you are using **PalmPrint** to send data to another computer and want to ensure the most reliable data transmission. If you are sending data via cable and some characters are being lost, it is almost certain that use of this mode will solve the problem. However **you should NOT check this setting unless you need to**, because if you do so and try to print via the serial port without being properly connected, the software may hang (tap **Cancel** if it does).

Infrared Setup and Testing

If you will be printing via infrared, you'll first want to test the IR "connection" to make sure that your Palm III can "talk" to your printer. After setting the **Baud Rate** to **Infrared** (see above), point the top of your Palm III (you can hold it level, you need not turn it so the IR port which is on the back side is visible) at the IR port of your printer (check your printer manual if you aren't sure where the IR port is). **The distance is critical.** You cannot be too far (our experience shows a maximum distance of 20 inches (50 cm), but this will vary with your handheld unit as well as your printer. If your batteries are weak, longer distances will be less likely to work. **You also must not be too close.** Again, distances vary, but it seems that as you get closer than 4 inches (10 cm), transmission can become unreliable with some printers. Now, once you have the units aligned, tap on the Menu icon and select **Test IR Communications** from the menu:



A window labelled PalmPrint Status Window will appear on your screen, and show you a message "Looking for IR printer..." After a few seconds, it should identify the printer, and you'll see (for five seconds, before it erases itself) a message like this: "Printer ID: BJC-80". If instead you get a message "No IR devices found within range!", you'll know that something is wrong. Check the obvious (did you remember to turn the printer on?) and then experiment with distance and angle. If you have access to another Palm III with IR, you can try pointing your Palm III at the other one (make sure the other one is on at the time). In this case you should see a message that says "The IR device found is not a printer!", which will at least let you know that your IR port is functional.

Aside from distance, the only "trick" with IR is timeout issues. If you have a failed communication, you may still have partially engaged the IR software in the printer. If this happens, further attempts to communicate will fail, because the printer acts as if it's not there. You either need to turn the printer off and on again, or, usually, just wait for a timeout period (15-30 seconds) for the printer IR software to "reset" itself. In other words, don't just keep tapping on **Test IR Communications** repeatedly, but "give it a rest" for a short time if the effort doesn't succeed.

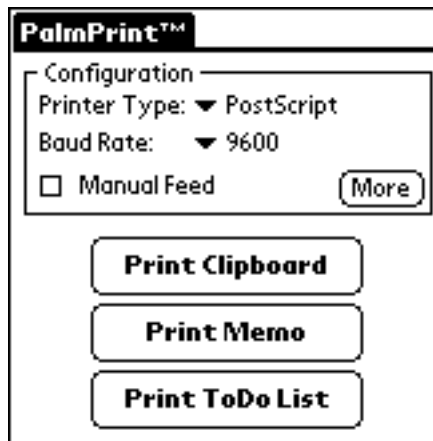
Batteries may also be an issue. At a battery level significantly above that at which you receive a "low battery" warning from the Palm operating system, IR printing may fail, so for your first attempt at IR printing, make sure you have fresh batteries.

Once you understand the distance constraints and are successful in establishing reliable communications, you'll find that you can successfully communicate with the printer every time, so don't be discouraged by any initial failures.

Chapter 3: Printing

Printing Clipboard Contents, Memos, and ToDo Lists

After configuring **PalmPrint** appropriately, you can turn your attention to the bottom of the screen, where you will see three buttons to allow you different printing choices:



Print Clipboard prints the current contents of the Clipboard. Information is put on the Clipboard by other applications, using either the **Copy** or **Cut** functions in the **Edit Menu** of that application. You'll find these menu choices in all the built-in Palm applications, as well as a wide variety of other applications available for the Palm.

Print Memo will bring you to a new screen on which will appear a list of all your memos (showing you the first line or so of the memo).

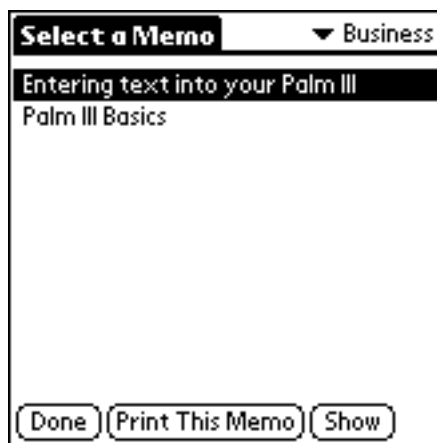


There are three options for printing memos; the current option is shown on the large button in the center of the bottom of the screen. If you display all your memos (as selected by the "category selector" in the upper right hand as shown in the example above), the button reads **Print All Memos** and if you tap it, ALL your memos will be printed, one after the other (you'll actually be required to confirm your request in case you do this by accident). If you use the category selector to select just one category of memos, you'll see this instead:



Now the button on the bottom reads **Print Category**, and if you tap the button, all the memos in just that one category will be printed, one after the other.

To print just a single memo, tap the stylus on the memo you want to print (it doesn't matter whether you are displaying "All" categories or just one category), using the scroll arrows in the lower right of the screen if all your memos don't appear. The memo you select will be inverted (white text on a black background), like this:



The button now reads Print This Memo, and if you tap it, that's what will happen. If you tap the wrong memo, don't worry, just tap on another one (or tap the same one again to "unhighlight" it. Of course, after you print one memo, you can select another memo to print. When you're done, tap the **Done** button to return to the main screen.

There are a few special features of the memo screen. First, you'll see a **Show** button, which displays the first 1024 characters of the memo, so if you can't tell which memo you want to print from just the first line (which is all that is displayed), tap the **Show** button (note that the memo is not editable in this mode; to modify your memo, you must use the Palm Memo Pad application). Second, the memo display, unlike the display in the normal Palm Memo Pad application, skips over leading blank lines and blank spaces. This allows you to use **PalmPrint** to do such things as have a memo configured to print on letterhead paper, spaced down several lines to skip over the preprinted address, but still allows you to identify the memo in the display (instead of just seeing a blank line).

Print ToDo List pops up a small window which looks like this:



First select the category of items to be printed, or select All to print all ToDo items. If you want to print items which have been marked as completed, check the box, otherwise those items will be omitted from the output. Also check whether you want any notes attached to your ToDo items to be printed (or not). Tap on **OK** to actually print the ToDo list, or **Cancel** if you change your mind. The printout includes the ToDo item itself, any Note which is attached to the ToDo item (optional), the Category of the ToDo item, the Priority, and the Due Date (if one is present).

Monitoring and Cancelling Printing

When you print, the lower portion of the screen will display a small "status window" which lets you know what's happening. This is particularly valuable for IrDA printing, since you'll want to know if the transmission is occurring, and when it's done, so watch the screen and see what it says (you need to keep pointing the Palm at the printer while it is transmitting data!). There is a **Cancel** button in this window; if something goes wrong, or for some reason you want to abort the printout, just tap on **Cancel**.

If you are using **SCS Print Server** instead of **PalmPrint**, the three buttons described above will be replaced by two buttons labelled **Test IR** and **Test Print**. Tap on **Test IR** to test IR communications with your printer, and tap on **Test Print** to produce a simple printed message to verify that you have printing set up correctly. After that you won't need to interact with **SCS Print Server** directly again, you'll just print from your other application(s) which will send their information to **SCS Print Server** to print.

Advanced Printing - Control Codes and more

PalmPrint is written to be printer independent, so that if you have something that you print on one type of printer, you can switch to another type of printer and still get the same output. As a result of this, however, **PalmPrint** doesn't take advantage of some of the special features built into particular printers, which are usually accessed using special non-printing "control codes" (sometimes called "Escape sequences"). If you are willing to sacrifice printer independence, PalmPrint lets you embed these special codes directly into your memos, letting you change font size, switch to bold or italics, print a barcode, or a myriad of other things.

The heart of this special notation are pairs of double angle brackets - "double-less than" symbols and "double-greater than" symbols, surrounding one to three digits which are the numeric value of the control code - <<27>>, <<18>>, etc. These special symbols ARE found on the built-in keyboard of the Palm, but they have no Graffiti equivalent, so to create a memo containing these symbols, you'll need to use the built-in (pop-up) keyboard (or download them from the desktop). Once you do this once, doing it the second time can be done most simply by copying from the first memo and pasting into a new one. **Note carefully:** in this manual, we represent these symbols by two separate one-character symbols (e.g., "less than, less than") because many web browsers don't display these special characters properly. But the proper character to use are SINGLE characters (characters 171 and 187 respectively for those with an interest in the details), which are found in the lower right corner of the "Int'l" portion of the popup keyboard on the Palm.

As a simple example, "ESC"-W-1 turns on a special "double-wide" mode on a Canon printer, and

"ESC"-W-0 turns it off. So the following memo would print with a special "headline" at the top (27 is the numeric value of the ESC character):

```
<<27>>W1 This is the headline  
<<27>>W0And the normal text is starting here
```

If you want to make a note to yourself of what you are doing with the control codes, you can take advantage of this special feature - if the material enclosed between the double angle brackets is non-numeric, it is taken as a comment and simply ignored. Since the first line of a memo is what shows on the list of memos, you can use this feature to make a note of the relevance of the memo which follows. The following example would produce the same output as the example above:

```
<<Memo with headline>><<27>>W1 This is the headline  
<<27>>W0And the normal text is starting here
```

Printing Address Book Information

A "companion" application which ships with **PalmPrint** is called **SnailMailer**. You'll find both the SnailMailer software and a separate manual on the diskette with your PalmPrint software (or you can [download SnailMailer](#) from our web site). **SnailMailer** has two "levels." The basic software, which is included with **PalmPrint**, lets you print individual envelopes, mailing labels, and address book information (phone, etc.) by selecting names from your Palm Address Book. The full functionality of the software, which requires a separate license, lets you maintain multiple "mailing lists" of the names in your Address Book, and print out batches of envelopes or sheets of mailing labels for mass mailings. The full package also lets you perform "mail merge", combining information from different fields in the Address Book with a memo that you select to produce customized output. This feature uses a notation identical to that used above for printing special control codes, but with the added ability to put things like <<Last name>> or <<Address>> into the memo and have them filled in with information from one or more selected addresses. You can use this feature to print out form letters, phone lists, and lots more. For more information about **SnailMailer**, read its separate manual.

Other Sample Applications

There are several other sample applications you can download (or which you'll find on the floppy diskette or CD which you obtained) and use in conjunction with **PalmPrint**. All of these are provided at no charge, and provided "as is." **Mail/P** is a modified version of the standard Palm Mail application, which allows you to print email messages. Just tap on the email message to bring it up on screen, and you'll see a little printer icon at the bottom of the screen (as well as the choice **Print Message** in the menu if you prefer to use the menu). When you tap the button (or select the menu), **Mail/P** sends the message to **PalmPrint** to be printed. **Mail/P is available only for PalmOS 2.0 and 3.0 devices** (the Palm III, or older units which have been upgraded with the Palm upgrade).

Other Applications

PalmPrint was written to allow other applications running on your Palm to use it to do the printing for them. For example, our [Take An Order!](#) software is one such application, which lets you do business in the field, taking orders (or preparing quotations) and printing receipts (or estimates) on the spot. To print or transmit data from such applications, you will usually find a menu item or a button in that application which will send the information (transparently to you) to **PalmPrint** for printing or transmission. You won't interact with **PalmPrint** directly in this case. However, before using the other application to print for the first time, you must use **PalmPrint** itself and configure it

properly (as discussed in [Chapter 2](#)). When you leave **PalmPrint**, your configuration settings are saved, so that when the other applications sends data to **PalmPrint**, it will print correctly.

You'll find a current list of applications which support printing via **PalmPrint** at <http://www.stevenscreek.com/palm/palmprint.shtml>.

If another application doesn't support **PalmPrint**, then you may be able to use the **Print Clipboard** function described above to print information from that application. You might also want to write to the application's developer, and encourage them to support **PalmPrint**.

Chapter 4: Hardware Considerations

Serial and Parallel Connectivity

If you don't have infrared capability, one of the most difficult aspects of using **PalmPrint** for most people is getting the hardware configured properly. The Palm has a serial connector (**note: the Handspring Visor has a USB connector, and PalmPrint supports printing ONLY via infrared from the Visor**), and most printers have parallel input (serial connections send one bit of information at a time, while parallel connections send eight bits of information at once using a larger number of wires).

If you have a printer which accepts serial input, the connector on the printer will almost always be a "DB-25 female" connector. This is a long connector, slightly wider on one side than the other, with 13 holes on the wider side and 12 on the other side. To plug into this connector you need a DB-25 male cable. The standard output from the Palm, whether the Palm is in the cradle or you are using the "HotSync cable" available from 3Com, is a DB-9 female (9 holes, 5 on the slightly wider side, 4 on the other) connector. For this situation, you will need a DB-9 male to DB-25 male cable, an item you can find in most computer or electronics stores or catalogs.

With some printers, the "polarity" of the connection may be wrong. If you see no response from your printer whatsoever, it is possible that you need a "null modem" device (which swaps two of the lines on the input). You can find inexpensive 9-pin or 25-pin null modems at most computer and electronics stores.

If you have a printer which accepts parallel input, the connector on the printer will almost always be a "Centronics" connector. Note that you **cannot** simply connect a cable such as a DB-9 male to Centronics between your Palm and your printer. Cables like that are made to take the parallel output of a PC (usually available on a DB-25 connector but sometimes on DB-9) to the parallel input of your printer. You must instead have a "serial to parallel converter", which is a more complex (and more expensive) device which converts the serial output of the Palm to a parallel signal which can be accepted by your printer. Stevens Creek Software sells two such cables, one which attaches directly to your Palm (except for the Palm V), and a second which attaches to your HotSync cradle. Visit the [PalmPrint](#) web page for details.

Notes on Specific Printers (Mandatory & Suggested Settings)

Canon BJC-50 and BJC-80

- Printer Type: Canon
- Baud Rate: Infrared (Serial-to-Parallel printing is also possible to the BJC-80 only if you

have an older Palm lacking infrared)

- Notes: Both of these printers should work flawlessly with any Palm, Symbol, or Visor unit. There is one "catch." These printers have two "modes"; one called "BJ" and the other called "LQ". The printer **MUST** be in the "LQ" mode for it to work with **PalmPrint**. If **PalmPrint** does not appear to be working, check the manual that came with your printer for instructions on switching the printer to "LQ" mode.

Citizen PD-04

- Printer Type: Epson
- Baud Rate: Infrared
- Left/top margins: 0
- Chars/line: 46
- Lines/page: 0

Citizen PN-60i

- Printer Type: Epson
- Baud Rate: Infrared
- Left/top margins: 7/5
- Chars/line: 78
- Lines/page: 52

Datamax E-3202

- Printer Type: ESCPOS
- Baud Rate: 57600 (Serial - requires a "null modem" cable available from Datamax)
- Use CTS Transmit Flow Control: checked
- Left/top margins: 4/4 - Left margin setting is also used on the right; top margin is also used on the bottom.
- Chars/line: 52 and 68 are the acceptable values A setting of 52 prints in 24 dots per character mode; 68 prints in 16 dots per character.
- Lines/page: 0
- Notes: Printer must be configured in ESCPOS mode, not Epson mode. Baud rate can be changed on printer, and must be set in PalmPrint to match, but there is no reason not to use the highest setting on both (57600).

Hewlett-Packard LaserJets

- Printer Type: PCL (or PostScript if your printer accepts it, although PCL will be faster because fewer characters need to be transmitted).
- Baud Rate: Infrared for units with built-in infrared including the 5P, 6P, and 2100; Serial-to-Parallel printing is also possible for almost all LaserJets and some even have serial ports as well.
- Notes: Newer units (6P, 2100) work flawlessly with **PalmPrint**. The 5P's appear to be problematic; some work, some don't; you need to test any particular printer to see if it does work (there are some timing issues between the IR on the 5P and the Palm which cause this problem).

Hewlett-Packard DeskJet 340/350

- Printer Type: PCL
- Baud Rate: Infrared with the IR attachment available for this printer; otherwise Serial-to-Parallel printing is also possible.

- Notes: No known problems or special tricks.

Monarch 6015

- Printer Type: Monarch
- Baud Rate: 19200 (Serial)
- Use CTS Transmit Flow Control: MUST be checked
- Left/top margins: 0 (or larger if desired) - Left margin setting is also used on the right; top margin is also used on the bottom.
- Chars/line: 48, 42, 38, 32, and 24 are the acceptable values; as you decrease the number, the printer will print larger and larger characters.
- Lines/page: 0
- Orientation: With 24 characters/line only, Landscape (L) orientation can be used to print "sideways" characters
- Font: setting is ignored (font size is chosen on the basis of characters per line)
- Notes: Print quality seems to depend on batteries so make sure batteries have a good strong charge.

Seiko DPU-3445

- Printer Type: Seiko
- Baud Rate: Infrared (Fast) [Very important; will not work in "Infrared" setting]
- Left/top margins: 0 (or larger if desired) - Left margin setting is also used on the right; top margin is also used on the bottom.
- Chars/line: 52 and 79 are the acceptable values A setting of 52 prints in 24 dots per character mode; 79 prints in 16 dots per character.
- Lines/page: 0

Using PalmPrint to Transmit Data to A Computer

To transmit data to a computer, the connector which you use to perform a HotSync is the proper connector. The only "trick" here is that you must first turn off HotSync on your desktop computer, because you are going to establish a connection between your Palm and your computer which bypasses the standard HotSync software. Of course, you won't need this trick if you are transmitting information to a computer which is not running HotSync at all. Once you turn off HotSync (if necessary), start your terminal emulation software (whether standalone, or the Communications module of a "works" program such as ClarisWorks), configure the connection settings (primarily the baud rate) within your desktop software, and make sure to select the button or menu item which opens the connection between the terminal emulation software and the serial port of your computer (it is usually not opened automatically). Some step-by-step examples follow for software commonly available:

Using HyperTerminal (Windows 95)

If you have Windows 95, here are complete instructions for transferring information from your Palm to your desktop computer, using the HyperTerminal application which is included with Windows 95:

1. Stop your **HotSync** program (if it is running), but leave the cabling from your Palm to your computer exactly as it was.
2. Select **Start Menu -> Programs -> Accessories -> HyperTerminal**
3. Double-click on **Hypertrm.exe**
4. The **Location Information** window which appears is irrelevant. You must fill in your area code (it won't proceed if you don't), then click **OK**.
5. In the **Connection Description** screen, enter as the **Name**: Palm (or anything else you

- like)
6. In the **Phone Number** screen, set the menu to **Connect Using:** Direct to Com1 (or whatever Com port you are using to connect your Palm).
 7. In the **Port Settings** screen, set the **Bits per second** (known as the Baud rate in **PalmPrint**) to any number; try 57,600 first. Set the **Data bits** to 8, the **Parity** to None, the **Stop bits** to 1, and **Flow Control** to Hardware. Click **OK**.
 8. In the **Call Menu**, select **Connect**.
 9. Start **PalmPrint** on your Palm, set the **Printer Type** to Plain Text/None, and the **Baud Rate** to the same number to selected at step 7. Now whatever you "print" from **PalmPrint** (or any other application which uses **PalmPrint** to do its printing) will appear in the HyperTerminal screen. If you select **Capture Text** from the **Transfer** menu, you can capture the information to a file.
 10. When you exit **HyperTerminal**, answer **Yes** when asked if you want to save this session. An icon (which you selected at step 4 above) will appear in the **HyperTerminal** folder. In future sessions, you can just double-click on this icon, and proceed right to step 8.

Using Terminal (Windows 3.1)

If you have Windows 3.1, here are complete instructions for transferring information from your Palm to your desktop computer, using the Terminal application which is included with Windows 3.1:

1. Stop your **HotSync** program (if it is running), but leave the cabling from your Palm to your computer exactly as it was.
2. Start the **Terminal** application.
3. Select **Communications** from the **Settings** menu.
4. Set the **Baud Rate**; try 19,200 first. Set the **Data bits** to 8, the **Parity** to None, the **Stop bits** to 1, **Flow Control** to Hardware, and **Connector** to COM1 (or whatever port your Palm is connected to). Click **OK**.
5. Start **PalmPrint** on your Palm, set the **Printer Type** to Plain Text/None, and the **Baud Rate** to the same number to selected at step 4. Now whatever you "print" from **PalmPrint** (or any other application which uses **PalmPrint** to do its printing) will appear in the Terminal screen. You can use **Copy** in the **Edit** menu to copy the text to your Clipboard, and then transfer it to another application. Our attempts to use **Receive Text File** in the **Transfers** menu resulted in GPF crashes of the Terminal application, so we can't recommend that!

Using AppleWorks/ClarisWorks (Macintosh)

The Mac doesn't come with any standard terminal emulation software, but AppleWorks (formerly ClarisWorks) is probably the most popular program which includes a Communications module. Here are complete instructions for transferring information from your Palm to your Mac using AppleWorks:

1. Stop your **HotSync** program (if it is running), but leave the cabling from your Palm to your computer exactly as it was.
2. Start **AppleWorks**, and open a new **Communications** document.
3. Select **Connection** under the **Settings** menu. Set the **Method** to Serial Tool. Set the **Current Port** to the one to which your HotSync cable is attached. Configure the **Baud Rate** to whatever you like; try 57,600 first. Set **Data Bits** to 8, **Parity** to None, **Stop Bits** to 1, and **Handshake** to DTR & CTS. Click **OK**.
4. Select **Open Connection** in the **Session** menu.
5. Start **PalmPrint** on your Palm, set the **Printer Type** to Plain Text/None, and the **Baud Rate** to the same number to selected at step 3. Now whatever you "print" from **PalmPrint** (or any other application which uses **PalmPrint** to do its printing) will appear

in the Terminal screen. You can use **Copy** in the **Edit** menu to select information and then transfer it to other applications. Alternatively, use **Capture to File** in the **Session** menu to capture the text to a file; select **Stop Capture** when you're done.

6. When you're done, select **Close Connection** in the **Session** menu.
7. Use **Save** in the **File** menu to save the session as a document. In the future you can just open that document and skip right to step 4.

Using Terminal (WindowsCE)

PalmPrint can also be used to transfer data from the Palm to a WindowsCE handheld computer. Unlike when you connect to a desktop computer, where the same cabling you use for HotSync'ing is appropriate, when you connect to a WindowsCE computer you'll need a null modem device of some type. We have connected the two with the following setup: a DB-9 male to DB-25 male cable, a DB-25 null modem, and the DB-25 female to DB-9 male adapter which comes with the Palm. No doubt simpler connections are possible. Once the connection is made:

1. Select **Start Menu -> Programs**.
2. Double-click on **Communications**.
3. Double-click on the **Terminal** application.
4. Click on **Make a New Connection**. Set the **Session Name** to something appropriate (like **Palm**), set **Select a Modem** to **Hayes Compatible** (this isn't true but it will be ignored). Enter an **Area Code** and **Telephone Number** because you are required to; they too will be ignored.
5. Click on **Configure** and make sure to check **Manual Dial**; this is the only real trick. Configure the **Baud Rate** to whatever you like (you just need to set the same Baud Rate within **PalmPrint**), **Data Bits** to 8, **Parity** to **None**, **Stop Bits** to 1, and **Flow Control** to **Hardware**. Click **OK** twice.
6. Double-click on the new icon (labelled **Palm** in our example). A "dialing" window will appear briefly and then disappear; you are now connected.
7. Start **PalmPrint** on your Palm, set the **Printer Type** to **Plain Text/None**, and the **Baud Rate** to the same number to selected at step 5. Now whatever you "print" from **PalmPrint** (or any other application which uses **PalmPrint** to do its printing) will appear in the Terminal screen. You can use **Copy** in the **Edit** menu to copy the text to your Clipboard, and then transfer it to another application.

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