Online

User's Guide

December 2002

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Introduction

■ Welcome

Online is a VT100 terminal emulator, serial debugger and telnet application for Palm OS organizers.

Users of Online can connect their handheld to other computer systems and access real computer power and network resources wherever they are. Online has been used to connect to Unix systems and then surf the web using Lynx, edit files with vi and emacs - and even to read and write e-mail using elm!

Online can be connected to either a modem or the serial port of another computer or device (such as a hub or router), as well as do a telnet session over a TCP connnection (such as can be made via 802.11, wireless modems, or smartphones). If connecting to a modem or similar device, use a modem cable, such as the Mark/Space, Inc. DataCord (www.markspace.com/datacord.html.

Thank you for choosing Online… Enjoy!

■ How to Use This Guide

This guide provides thorough, step-by-step instructions and troubleshooting information. You'll want to read the Installation and Setup chapters at least once. From then on you'll be likely to use only those sections or chapters you need for information on specific tasks. The User's Guide is divided into six chapters, as follows:

Chapter 1 - **Introduction:** This chapter introduces you to Online. It discusses the main components of the package, what they are and why they are used. You'll also find other general information which may be useful to you.

Chapter 2 - **Installation:** This chapter defines system requirements, includes registration information, and provides step-by-step instructions on installing Online from your PC or Macintosh.

Chapter 3 - **Setup:** Before sending your first page, you'll need to configure a few items. Generally, you'll only need to do this once. You'll learn how to set your preferences, enter dialing information, establish your communication settings, add services and pager/phone information.

Chapter 4 - **Using Online:** This chapter walks you through the processes of Connecting and Disconnecting, Sending Data, Receiving Data and Navigating the screen.

Chapter 5 - **Troubleshooting:** Consult this chapter if you are experiencing trouble when using Online. Included are a troubleshooting checklist, methods of contacting technical support, and a list of information to include along with your support request.

■ How to Reach Us

The Mark/Space, Inc. philosophy is to ensure that you use and enjoy Online to the fullest possible extent by being as helpful to you as we possibly can be. Should you have questions, comments, suggestions, or requests, we would be happy to hear from you. Here's how to reach us:

Technical support: Please visit our support center at http://www.markspace.com/faq for answers to common questions. If you need further assistance email: support@markspace.com.

Email the following departments for answers to specific questions:

       General information: info@markspace.com

       Sales, OEM, site licensing and distribution: sales@markspace.com

Other ways to reach us:

       Web: http://www.markspace.com

       ftp: ftp://ftp.markspace.com/pub/mspace/

       Feedback: http://www.markspace.com/survey_online.html

       Voice Mail: 408-293-7299

       Fax: 408-293-7298

       Mail: Mark/Space, Inc.
                    540 North Santa Cruz Ave., #300
                    Los Gatos, CA 95030
                    USA

■ Palm OS Basics

This manual assumes the user has knowledge of fundamental Palm OS concepts. If you are unsure how to enter text, select commands from menus, or other related concepts, please consult the owner's guide that came with your organizer.

Installation

■ The Online Package

Before you begin, take a moment to make sure everything was included in your Online for Palm OS package. The package should contain the following, whether you have the full electronic or packaged version of the product:

- Online Palm OS "prc" file
- This Guide
- Release Notes
- The Online survey

■ Requirements

- Online for Palm OS electronic or packaged version
- Handheld organizer using Palm OS 2.0 or later

■ Registering

If you have not already done so, it is a good idea to take a moment now to fill out and return the registration card (included in retail package only) to Mark/Space, Inc.

By registering your name in our customer support database, you receive free technical support, a newsletter packed with tips and product news, and special offers to enhance your new product.

■ Installing Your Software

If you are unsure how to install an application into your organizer, please consult your the manual which came with it.

Before you install Online, you should make a copy of the original disk and/or files and store the originals in a safe place, along with your registration code. Use a copy to install Online from your Windows or Macintosh via InstallApp or similar program during your next HotSync session.

When you first run your new software, you'll need to enter a registration code (received via e-mail). Enter your registration number to fully enable the software, or tap "Demo" to use as a demo.

■ About the Demo Version

The demo version of Online provides a 50 launch or 30 day evaluation period, whichever comes first. To purchase a registration code, please visit http://store.markspace.com/online.html. Once purchased, you will receive a registration code via e-mail.

■ What Now?

To learn more about each of the settings and how to configure Online, read Chapter 3, "Setup."

For general information, read Chapter 4, "Using Online."
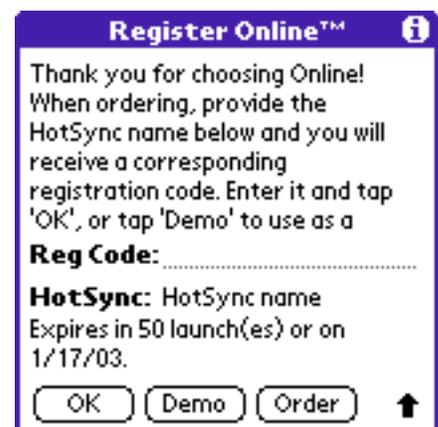
Setup

The first time you use Online, you should take a moment to visit each of the choices in the "Options" menu to make sure everything is properly configured.

■ Communications

Method
Select a method. Select "Serial" to conmunicate via the selected serial port. Choose "IRDA" to talk over the selected Infrared port using "Serial IR". Choose "Telnet" to telnet directly to a host.

Note: "IRDA" will not work on devices running OS 3.3 thru 4.0 due to a bug in Palm OS. As of the writing of this manual, the only currently shipping devices that this feature will work as designed are the older Visor units running OS 3.1. We hope to see Palm correct this in a future OS, possibly as early as OS 4.1.

When available, IRComm is a preferred method of connecting to a device via IR, and is well supported on OS 3.3 and higher. IRComm is supported by most computers, PDAs, and mobile phones. "Serial IR" / "IRDA" is a less robust protocol, mostly used in custom hardware projects where IRComm is not supported for reasons of cost or complexity.

Port
Select the serial port/device to connect to. Select "IRComm" for devices with an integrated IR modem. "IRComm" is only available on devices running Palm OS 3.3 or later. On some Palm and most Sony handheld devices, not all of the ports are named correctly on the handheld device. Because of this design flaw, you may see "blank" entries in the port list. One of these "blank" entries is the serial port.

Baud
Select a rate from the menu from 300 up to 115200. Rates over 9600 will require some form of flow control, or data may be lost.

Data Bits
Select 8, 7, 6 or 5 data bits. Most modern systems use 8 data bits. Some, such as CompuServe dial-up, use 7. Very rarely are 6 or 5 data bits used.

Parity
Select None, Even, or Odd. Most systems use None. A few, such as CompuServe dial-up, use Even. Very rarely is Odd used.

Stop Bits
Select 1 or 2. Most modern systems use 1 stop bit.

Handshake
Select between None (off), software (using XON/XOFF flow control characters) and Hardware (using RTS/CTS hardware handshaking lines if available).
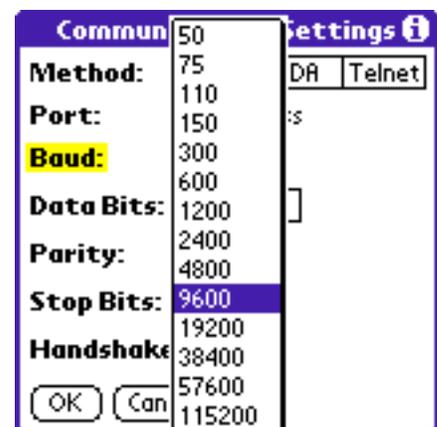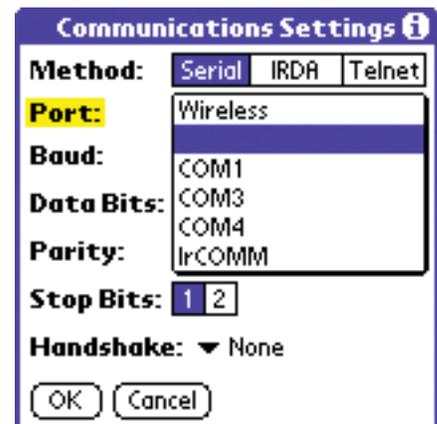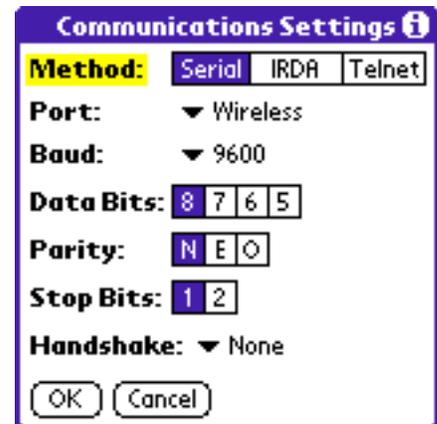
Host (Telnet Method)
Enter the name of the server you want to Telnet into. The server must allow Telnet connections, if you have problems connecting, please contact your ISP to find out if Telnet connections are allowed on your server.

Port (Telnet Method)
Enter the port number you want to Telnet into. The default Telnet port is 23.

■ Terminal

Select "Terminal" from the "Options" menu to edit settings that control the font size, end of line character, line feeds, whether the display will track the cursor, to enable or disable VT100 emulation, and to have the cursor wrap-around when it reaches the end of a line.

Emulate
Choose between VT-100 (80 by 24 virtual screen), TTY (dumb terminal) and Hex (useful for serial debugging). An example of Hex emulation is shown above.

Font
Choose between the larger font (32 characters across per screen) and smaller font (40 characters across per screen).

Return
Select CR, LF, or CR+LF for sending a return, line feed, or both when a return character is to be sent.

Backspace
Select BS or Delete for the character to send when a backspace character is to be sent. Most systems expect to use backspace, some systems (usually unix/linux) prefer delete.

Add LF (incoming)
Turn on to have a line feed character added to each return character received.

Display Follows Cursor
Enabled to have the virtual screen scroll to follow the location of the cursor.

Auto wrap to next line
When enabled, when the end of the line is reached, the next character will be placed at the beginning of a new line.

Local echo
When enabled, each character you send will be sent to the screen as well as the remote device.

Pacing
When enabled, online will delay for the selected number of ticks (60ths of a second) after each character sent via paste, macro, or button macro. This is useful for talking to systems that can't keep up with data sent as fast as possible. The default setting, "Off", introduces no delay.
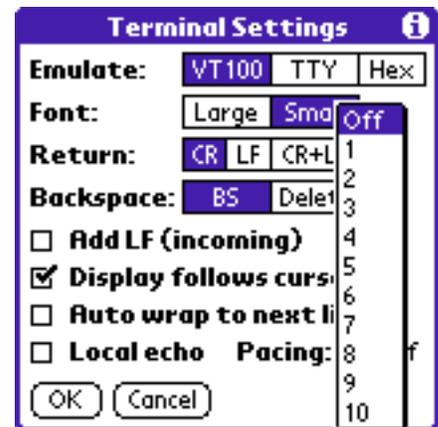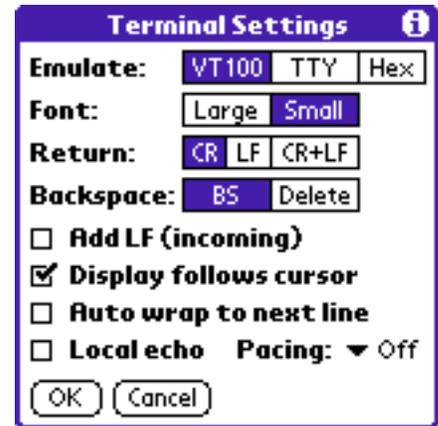
Hi-Res
When enabled, Online will use the hi-res mode of HandEra (320*240) or Sony CLIÉ (320*320) or Palm OS Hi-Res API (Palm OS 5 devices and selected Palm OS 4 devices). While the text will be extremely small, this allows a full 80 columns to be viewed at once! High Res option will not appear on devices without hi-res support.
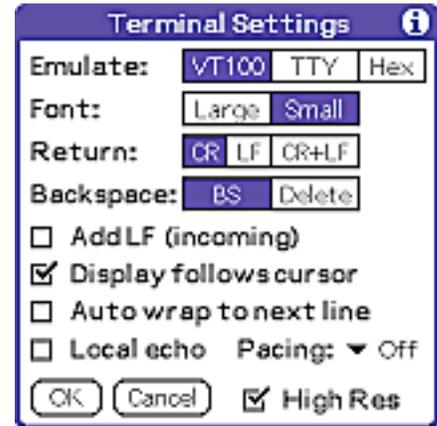
■ Macros

Select "Macros" to edit the names and text sent for each of 12 macros. Use the scroll arrows to view/edit the macros in groups of 6.
Each may contain text to send, or special sequences such as:

|	
^x	control-X (where X is any letter a-z or A-Z)
^^	caret (^)
\b	backspace
\d	delete
\e	escape
\f	form feed
\l	line feed
\n	newline (uses EOL setting)
\r	carriage return
\t	tab
\v	vertical tab
\0	null
\\	backslash
\xnn	hexadecimal code - nn = ASCII value of character to send in hex

■ Buttons

Select "Buttons" to edit the names and text sent for each of the 4 tool bar buttons as well as the 4 hardware keys. Each may contain text to send, or special sequences (see "Macros", above").

Use Hardware Buttons
When enabled, each of the hardware buttons can be re-defined to send a macro.

Defaults
Will set all of the names and text to the "Factory Defaults".
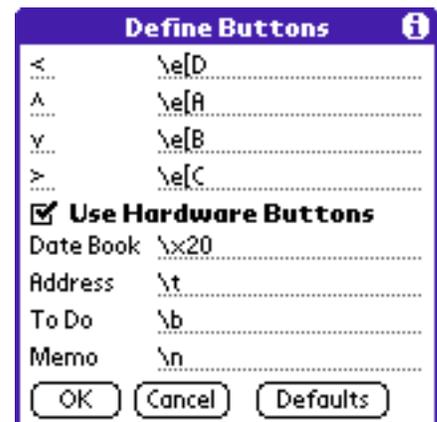
■ Logging

Select "Logging" to edit settings for the log file, such as the inclusion of a header for each new record created, and the ability to log incoming text in hex format (instead of text). VFS option will only appear on handheld devices with VFS support.
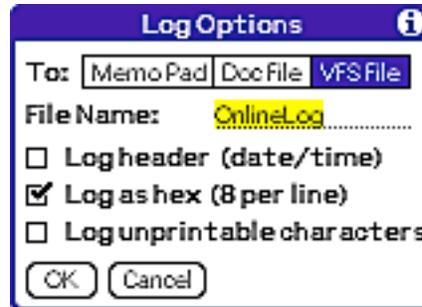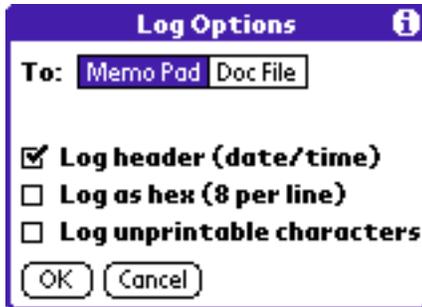
Log To:
Select a location to log the incoming data to. Consult the table below to select the method most appropriae for a given situation.

Log To	Limited To	View With
Memo Pad	4k per record. Records created as needed.	Memo Pad
Doc File	Amount of free main (device) memory.	A "Doc" file reader such as AportisDoc, WordSmith, etc.
VFS File	Amount of free space on card. Cards commonly come in 8 – 128MB, with some disks even larger such as compact flash hard disks.	View on the Palm with a VFS aware text file viewer or place the expansion card on a PC and read as you would any other text file.

Log header (date/time)
If selected, a header will be written to the top of each record created containing the date and time the log was started.

Annotate Log
Add notes to your data log by choosing options > session > annotate log.

Log as hex (8 per line)
If selected, data will be written in hexadecimal format rather than as regular text. Useful for debugging.

Log unprintable character
If selected, all incoming data will be logged. When off, only printable characters (roughly ASCII 32 to 127 or " " thru "~") and end of line characters will be logged.
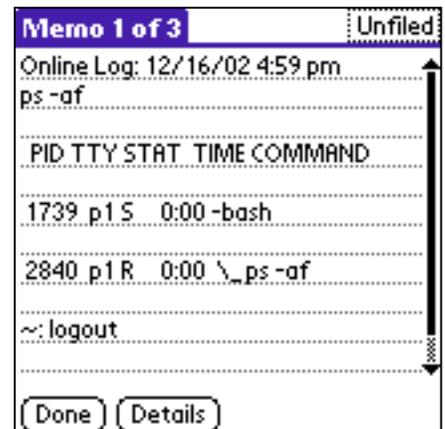
Using Online

■ Connecting and Disconnecting

Online can be connected to either a modem or the serial port of another computer or device. If connecting to a modem use the modem cable available from Palm. You can also combine a null modem adaptor with the cradle or serial cable to turn it into the equivalent of the modem cable.

Online also works great with the clip-on modem from Palm, the Snap-On modem from Option International, and if using Palm OS 3.3 or later, IR modems and alternate serial ports such as Compact Flash devices with the TRG Pro or the TDK Global Pulse GSM software modem.

When you are ready to connect, tap the "On" push button. Tap it again to disconnect. Disconnect when you are not transmitting or receiving data, as this will help prevent excess drain on the batteries.

You can dial a phone number by either using the "Connect" command of the session menu, or by entering AT commands directly in the input buffer, i.e. "ATDT 5551212" to dial the number 555-1212.

```
Linux 2.2(he.net) (ttyp0)

he.net login: login
Password: ▮



abc 123 Intl          Ctl Esc  ⓘ
▢ On Log (<)(^)(v)(>) ▼ Macros ●
```

Communications parameters can be changed by using the "Options" menu. Online supports a range of baud rates and communication parameters.

■ Sending Data

There are several ways to send data:

Palm OS on-screen Keyboard
Tap the "abc" or "123" buttons, enter a string of text, and tap "done". This will send whatever is in the text area to the serial port and onwards to the target device. You can send special characters (escape, control, tab, etc.) by using the codes summarized in a chart below.

^x	control-X (where X is any letter a-z or A-Z)
^^	caret (^)
\b	backspace
\d	delete
\e	escape
\f	form feed
\l	line feed
\n	newline (uses EOL setting)
\r	carriage return
\t	tab
\v	vertical tab
\0	null
\\	backslash
\xnn	hexadecimal code - nn = ASCII value of character to send in hex

For example (a complex one at that), to send the sequence ESCAPE [Y CONTROL-C Hello RETURN you would enter "\e[Y^cHello\r" in either the popup keyboard or macro text definition.

Direct Entry

When connected and online, any graffiti characters entered are sent directly to the serial port.

"Macro" Entry

Select what you wish to send on the pop-up list and the selected item will be sent. You can set your own macros by selecting "Macros" from the "Options" menu.

"Buttons"

By default, the 4 on-screen buttons are mapped to control cursor movement. However you can label and define these buttons any way you like.

You can also (optionally) map the 4 hardware buttons to send macro text as well.

Shortcuts

The Palm OS shortcut feature works in Online. Any shortcuts entered will be sent to the selected port. This is a good way to send frequently used strings.

Send a MemoPad memo

Choose the "Send Memo" menu item, select the memo you wish to send from the dialog box, decide to skip the title line, then press OK - the memo's contents will be sent to the serial port. If you use the "skip first line" option, the first line of text in the note will note be sent. In this manner you can use the first line of memo pad records as a "title" to aid in selecting the record. Text in the memo pad record will be interpreted the same as text in a macro; i.e., special characters (\n, etc.) are decoded before being sent.

Paste Clipboard text

Choose "Paste" from the edit menu to send the contents of the clipboard.

The on-screen arrows are cursor keys. They send the VT-100 commands to move the cursor to the serial port.

The hardware up and down buttons are used to pan the virtual screen up/down one line for each press of the button.

File Transfer (VFS only) – Sending a File

Send a VFS file using Xmodem or Ymodem. In the terminal window, issue the command to start the file transfer, then select Options > Session > Send File and select the file you want to send. After selecting the file, tap OK. You will then be presented with the protocol to use for sending the file. Your choices are XModem, XModem-1K, and YModem. After tapping OK, the file transfer will start.
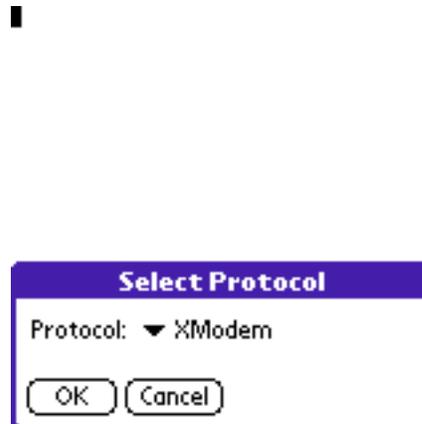
■ Receiving Data

The organizer polls the serial port for data all the while it is online. A "Line Feed" can be appended to incoming data by choosing a check box in the Terminal Settings dialog.

The screen can be cleared by using the "Clear Screen" menu item.

Tapping the "Log" push button will log data to Memo Pad records. Since Memo Pad records are limited to 4K, an additional record will be created each time the limit is reached. You can add your own notes to the log by selecting the "Annotate Log" menu choice.

Wrapping can be toggled with the "Wrap" option in the terminal options dialog.

File Transfer (VFS only) – Receiving a File
Receive a VFS file using Xmodem or Ymodem. In the terminal window, issue the command to start the file transfer, then select Options > Session > Receive File. You will be presented with a dialog that allows you to choose the protocol for the file transfer. If you choose XModem, you will then be presented with a dialog which lets you set the name for the received file and the location. If you choose YModem, you will be presented with a dialog that lets you select the location for the saved file (the filename will automatically be set). After tapping OK, the file transfer will start.

■ Navigating

When in VT100 emulation mode, Online keeps an 80x24 terminal screen in memory, but only displays what it can on-screen. A small map shows which part of the terminal window is currently seen. You can move around the 80x24 virtual terminal in two ways: either by tapping the pen on a different section of the map, which will move to display that section; or by tapping in the received data area.

Imagine this as the square where incoming data is displayed...

        [A][B]
        [C][D]

        tap in upper left corner [A] of output area to go up and left
        tap in upper right corner [B] to go up and right
        tap in lower left corner [C] to go down and left
        tap in lower right corner [D] to go down and right

Tip: You can also use the hardware up and down buttons to scroll the display up or down a single line for each press of the button.

You can change the font of the display via the "Large Font" checkbox in the "Display" dialog reached via the "Options" menu. This switches between a 7pt and 8pt fixed-width Minico font. The 7pt font allows Online to display 40 characters across the screen, greatly reducing the amount of scrolling required.

You can determine whether the screen in view moves automatically to follow the cursor by using the Display Follows Cursor checkbox in the same dialog.

Note: For devices that support a hi-res display (HandEra 330, Sony CLIE or Palm OS device with HiRes), you can elect to have a full 80 column display. Just enable the "hi-res" checkbox via the terminal settings dialog.

Menu Reference

Many commands can be references from the Online menu bar. To access the menu bar, simply tap the "menu" button in the silk-screen area at the bottom of the screen. While the image and name of the button is difference from unit to unit (the below image is from the original Palm Pilot) the location is always the same - the button that is at the bottom-left corner of the graffiti area. In the image below, it is labeled "menu". Newer devices from Palm, Handspring and others will have a slightly different icon and may or may not have the label "menu" under the icon, but the location is ALWAYS the bottom-left:

■ Options Menu

Communications	M	Adjust various communications parameters.
Terminal	T	Adjust terminal emulation settings.
Macros	R	Define a set of macros for the macros popup menu on the main form.
Buttons	B	Define macros for the on-screen buttons as well as (optionally) the 4 hardware buttons.
Logging	L	Set preferences related to logging text to memo pad records.
Register		Brings up the registration dialog. Enter your reg code here.
About Online	A	Shows information about Online (such as version number) and product credits

■ Edit Menu

Copy Screen	C	Copy the contents of the entire emulated screen (up to 80*24) to the clipboard. Trailing spaces will be eliminated.
Paste	P	Paste the contents of the clipboard to the current edit field (dialogs), or to the open connection (main form).
Send Memo	X	Send the contents of a memo pad record to the open connection.
Clear Screen	S	Clears the contents of the screen and resets the cursor location.
Keyboard	K	Brings up the on-screen keyboard. Enter text and tap 'Done' to send.
Graffiti Help	G	Brings up an on-screen Graffiti reference.

■ Session Menu

Dial	D	Allows you to enter a phone number for an attached modem to dial.
Hang Up	H	Commands an attached modem to hang up. (Sends the command "ATH" to the modem).
Annotate Log		Allows you to enter a string of text to append to the log file.

■ Keys Menu

PF1	Sends the DEC VT100 PF1 key character.
PF2	Sends the DEC VT100 PF2 key character.
PF3	Sends the DEC VT100 PF3 key character.
PF4	Sends the DEC VT100 PF4 key character. Sends the ASCII DEL (delete) character.
Delete	Sends the ASCII DEL (delete) character.
Break	Sends a 500ms BREAK signal. Only available for serial/modem connections.

Troubleshooting

If you are experiencing problems, first check the Frequently Asked Questions section of the Mark/Space, Inc. web site. These documents contain the most common questions and answers that we receive for each of our products. If your question is still not answered, use the following information to contact product support.

■ Contacting Technical Support

Please visit our support center at http://www.markspace.com/faq for answers to common questions. If you do need to report a problem or request assistance when using this version of Online, please include the following information and send e-mail to support@markspace.com

1. The version that you are using (found in the lower right corner of the "About Online" Option Menu item)
2. The make, model and OS version of the Palm OS device you are using. i.e., "Palm V, OS 3.3" or "Handspring Visor Deluxe, OS 3.1H"
3. The make, model, and speed of the modem or digital phone you are using
4. Your phone #, time zone, and e-mail address
5. A detailed description of what is (or is not) happening when you experience a problem, and the steps you have tried to take to resolve it.

Please be as detailed as possible about your configuration and your support issue.