

# Configuration

NCSA Telnet for the Macintosh® allows you to customize the environment to suit special needs and habits. This chapter describes the configuration system used by NCSA Telnet for sessions, the use of saved sets, and the several global preferences.

Configuration of the file transfer related services is described in Chapter 4, "File Transfer."

## Configuration Overview

NCSA Telnet has several preference options that effect every session or the operation of NCSA Telnet in general. Those preferences are described in the section "Global Preferences."

NCSA Telnet 2.6 utilizes an entirely new configuration system. Previously, NCSA Telnet required an external text file named config.tel. That file contained several keywords that specified the user's preferences. The configuration system for NCSA Telnet 2.6 is entirely graphical in nature and does not require any external user-editable files.

### Connection Preferences System Rationale and Overview

NCSA Telnet's configuration system for connections is comprised of two parts, "Sessions" and "Terminals". Ideally, all of the configuration options for a connection would be combined into one entity. However, due to the great number of options for each connection, the options have been divided into the aforementioned categories. The "terminal" configuration record contains the options that pertain primarily to the terminal emulation done by NCSA Telnet. The "session" configuration record contains the remaining options. Each session configuration record has a terminal configuration record associated with it. The terminal record associated with a given session record is entirely up to the user.

### The <Default> Session and Terminal Configuration Records

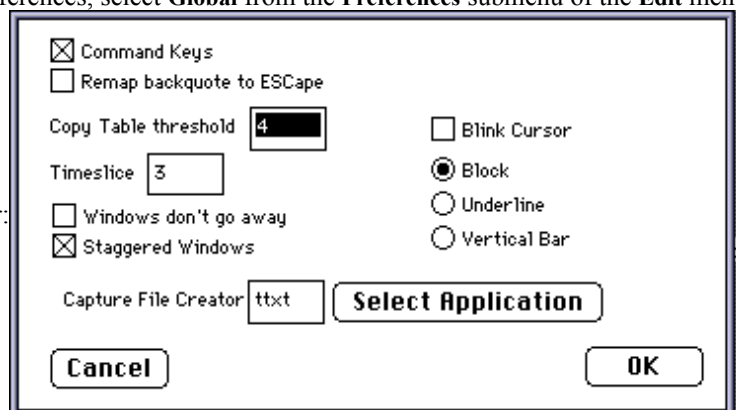
The <Default> terminal and session configuration records are set to reasonable defaults when NCSA Telnet is launched for the first time. The user may change the preferences in the <Default> records, but the <Default> records may not be deleted.

The <Default> session and terminal records are used when the user enters a hostname in the open connection dialog box. The preferences contained in the <Default> records are used as the defaults for any connection that does not have a preconfigured session or terminal record. The <Default> records are also used to set the initial values of any new terminal or session configuration records the user may define.

## Global Preferences

To edit the Global Preferences, select **Global** from the **Preferences** submenu of the **Edit** menu. A modal

dialog box will appear:




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Each of these options are described in the following sections.

### Command Keys


When **Command Keys** is checked, the menus are configured to accept command key equivalents.

**Note:** When NCSA Telnet is running on a Macintosh that has no control key, NCSA Telnet will remap the  key to the control key if **Command Keys** is not checked. If **Command Keys** is checked on such machines, the user will have no way to generate control key characters.

### Remap Backquote to ESCape

When **Remap backquote to ESCape** is checked, NCSA Telnet sends the ESCape character to the remote host when the ` key is pressed. This is useful for users with the original Macintosh or Macintosh Plus keyboards. This option, however, is available to users regardless of their keyboard type. Pressing -` will always produce a backquote character, regardless of the setting of this option.

### Copy Table Threshold

The **Copy Table Threshold** value determines the number of spaces which, at a minimum, are replaced by tabs when the user issues the **Copy Table** command from the **Edit** menu or press -T. Instead of using the standard **Copy** command, the user can use the **Copy Table** command to copy tables of data from the NCSA Telnet screen onto the Clipboard.

When the user uses the **Copy Table** command, all strings of contiguous spaces that are greater than the threshold are turned into tabs before being placed on the Clipboard. This produces a format that can be pasted into most spreadsheet and graphing programs without losing data or requiring additional formatting.

### Timeslice

The **Timeslice** value determines how much time NCSA Telnet gives to other applications that may be running. Increasing this value reduces NCSA Telnet's responsiveness, but improves the performance of the applications in the background. The value is measured in sixtieths of a second.

### Windows Don't Go Away

When **Windows Don't Go Away** is checked, session windows remain open after their associated connections have terminated. The window title is placed within parenthesis to signify that the associated connection has closed. To close such a window, click in the window's close box, or select **Close** from the **File** menu.

This feature allows the user to view, copy, and print text that is in a window whose connection has been closed. It is also useful for reading connection error messages that occur with hosts which may close connections immediately after they are established due to an error.

### Staggered Windows

When the user selects the **Staggered Windows** option, the program staggers multiple windows by a whole title bar, allowing the user to see each window's title. Otherwise, NCSA Telnet only staggers each new window by a few pixels.

### Blink Cursor

If **Blink Cursor** is checked, NCSA Telnet periodically blinks the cursor present in session windows.

### Cursor Selection

Clicking the appropriate radio button: **block**, **underscore**, or **vertical bar** selects the type of cursor used by NCSA Telnet for the cursor present in session windows.

### Capture File Creator

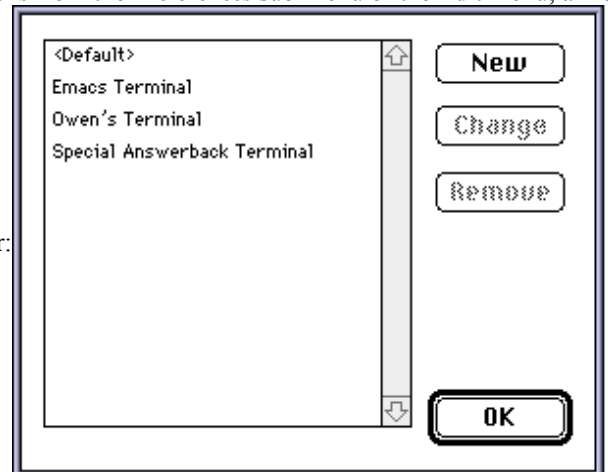
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Every file on the Macintosh has a filetype and file creator type. The filetype specifies the type of file (e.g. text file, word processing document, saved set). The file creator type tells the Finder which application to launch when a user double-clicks on a file. NCSA Telnet lets the user specify the creator type given to the files in which NCSA Telnet saves captured text from sessions. If the user knows the four letter creator type for the application the user wishes to specify, type it in the **Capture File Creator** field. If the user does not know the four letter creator type, click the **Select Application** button. NCSA Telnet will present the user with a standard open file dialog box. Double click on the application the user wishes to find the creator type for. NCSA Telnet will then enter the four letter creator type in the **Capture File Creator** field for the user.

## Editing Session or Terminal Configuration Records

When the user selects **Terminals** or **Sessions** from the **Preferences** sub-menu of the **Edit** menu, a modal

dialog box similar to this one will appear:



To add a new session or terminal, click on **New**. To change an existing terminal or session record click on **Change**. To remove an existing terminal or session record click on **Remove**. The <Default> records can not be removed.

## Session Configuration Records

When the user creates a new session configuration record or change an existing record, the following modal dialog box is used:

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Alias: boom  
Hostname: bonham.zeppelin.com  
Port: 23  
TEK:  Inhibit  4014  4105  
Paste Method:  Quick  Block (120)  
Delete Sends:  Delete  Backspace  
 Forcesave  
 Berkeley 4.3 CR mode  
 Allow linemode  
 TEK page clears screen  
 Half duplex  
 Show low level errors  
 Authenticate  
 Encrypt  
 Local Echo  
Interrupt:   
Suspend: ^S  
Resume: ^Q  
Terminal: <Default> Translation Table: None  
Buttons: Cancel, OK

These fields and options are described in the following sections:

### Alias

The **Alias** field specifies the name of the session configuration record. Typing the text contained in this box in the **Host/Session Name** field of the **Open Connection** dialog will make NCSA Telnet use the configuration information contained in this session configuration record, as well as the information contained in the terminal configuration record specified by the **Terminal** popup menu in the session configuration record dialog box. **NOTE:** Spaces are not allowed in alias names.

When editing the <Default> session configuration record, the **Alias** field is disabled, as the <Default> records cannot be renamed.

### Hostname

The **Hostname** field contains the text passed to MacTCP's Domain Name Resolver (DNR). The Domain Name Resolver translates a host's domain name into an IP address.

### Port

The **Port** field specifies the port on which NCSA Telnet will attempt to connect to the remote machine.

### TEK Options

There are three choices for Tektronix emulation in NCSA Telnet. **Inhibit** prevents NCSA Telnet from using any Tektronix emulation for this session. **4014** and **4105** select Tektronix 4014 emulation or Tektronix 4105 emulation, respectively.

### Paste Method

NCSA Telnet can use two different methods when pasting data into a session. If **Quick** is selected, NCSA Telnet sends all of the data to be pasted to the remote host at once. This method works well for small amounts of text and for sessions involving hosts that are close to the user on the network. For pasting large amounts of text, or when the user is connected to a machine that is slow to respond, the **Block** paste method is recommended. When the Block method is selected, NCSA Telnet sends the data to be pasted to the remote host in sections, or blocks of text. The size of the blocks is determined by the number entered in the field next to the **Block** radio button.

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### The Delete Key

Some hosts expect the delete character for deleting, others expect the backspace character. Selecting **Delete** or **Backspace** determines what character NCSA Telnet will send to the remote host when the user presses the DELETE character on the user's keyboard.

### Forcesave

**Forcesave** forces NCSA Telnet to always save the contents of the screen to the scrollbar buffer. This option is only for users of full screen VMS environments such as DEC All-In-One.

### Berkeley 4.3 CR Mode

This is a special compatibility option for 4.3 BSD UNIX. There is an official UNIX bug fix for this problem, but some hosts may still want CR-NULL to be used as the end-of-line character.

### Allow linemode

When **Allow linemode** is checked, NCSA Telnet will negotiate and use linemode with hosts that support it. If this option is not checked, NCSA Telnet will refuse to use linemode.

### TEK Page clears screen

When this option is on, NCSA Telnet's Tektronix emulation will clear the current Tektronix window when a Tektronix clear screen command is received. If this option is off, NCSA Telnet will create a new window for the new Tektronix image. Each new screen created in this way has as its name the session name and time. For more information regarding Tektronix drawing mode and the clear screen code, refer to Chapter 5, "Tektronix 4014 and 4105 Emulation."

### Half Duplex

This option only applies to hosts that negotiate non-echoing mode but do not expect local line editing. If checked, all character keys are sent and echoed to the screen immediately, otherwise the characters are echoed locally and queued until a RETURN or CONTROL character is sent. This parameter has no effect when local echo is off.

### Show low level errors

Turning this option on tells NCSA Telnet to display minor error conditions it normally would not. This can be useful when the user is trying to diagnose a problem with NCSA Telnet.

### Interrupt, Suspend, and Resume

NCSA Telnet uses certain key combinations for the telnet functions Interrupt, Suspend, and Resume. The default key assignments for the Interrupt, Suspend, and Resume functions correspond to the traditional interpretation of ASCII characters.

The Interrupt, Suspend, and Resume telnet functions and their default key assignments are discussed below.

#### Interrupt (CONTROL-C) Function

The Interrupt function sends a telnet interrupt process character that is equivalent to the Interrupt Process command in the **Network** menu (see "Network-Related Commands" section in Chapter 3, "Advanced Features"). The host implementation of telnet is required to listen for and interrupt the current application when this option is received.

Interrupt also does a *timing mark* operation. In many implementations of telnet, the user presses CONTROL-C and can wait several minutes before the text stops scrolling on the user's screen. This occurs because the TCP protocol has buffered up to 16K or even 32K bytes of data, which is waiting in the pipeline to be delivered even before the user presses CONTROL-C. To avoid this, NCSA Telnet initiates a process known as timing mark flush when the user issues an interrupt command.

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To do timing mark processing, NCSA Telnet sends to the host a special character, which the host echoes back. While waiting for the host to echo, all characters for that session are thrown away. The session appears to pause for up to 15 seconds and then resumes as usual. During the pause NCSA Telnet is throwing away all of the buffered data so that the user does not have to wait for it to be displayed.

### Suspend (CONTROL-S) Function

The Suspend function instantly interrupts all output coming from the network. The current session does not produce any more characters on the screen until the user issues the Resume command.

### Resume (CONTROL-Q) Function

The Resume function allows character printing to resume to the current session. Resume does nothing unless a Suspend command is in effect.

## Terminal Popup Menu

The **Terminal** popup menu selects which terminal configuration record will be used when the alias identifying this session configuration record is used to open a session.

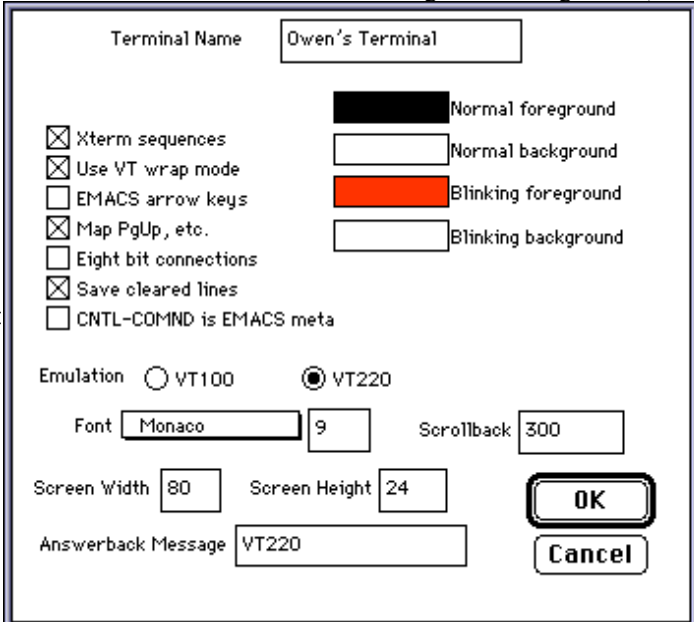
## Translation Table Popup Menu

The **Translation Table** popup menu selects which translation table will be initially selected for this session.

# Terminal Configuration Records

When the user creates a new session record or change an existing record, the following modal dialog

box is used:



The dialog box is titled "Terminal Configuration Records". It contains the following fields and options:

- Terminal Name: Owen's Terminal
- Color selection:
  - Normal foreground: Black swatch
  - Normal background: White swatch
  - Blinking foreground: Red swatch
  - Blinking background: White swatch
- Options (checkboxes):
  - Xterm sequences
  - Use VT wrap mode
  - EMACS arrow keys
  - Map PgUp, etc.
  - Eight bit connections
  - Save cleared lines
  - CNTL-COMND is EMACS meta
- Emulation:  VT100  VT220
- Font: Monaco, Size: 9
- Scrollbar: 300
- Screen Width: 80, Screen Height: 24
- Answerback Message: VT220
- Buttons: OK, Cancel

These fields and options are described in the following sections.

### Terminal Name

This is the name of the terminal that will appear among the other terminal configuration records in the **Terminal** popup menu of the session configuration record dialog. When editing the <Default> terminal record, this field is hidden.

### Xterm sequences

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When **Xterm sequences** is checked, NCSA Telnet will recognize the Xterm escape sequences for changing window and icon titles. NCSA Telnet will change the title of the session's window in response to those sequences.

### Use VT wrap mode

When this option is on, NCSA Telnet will set the VT emulator to use auto-wrap mode by default.

The VT terminal maintains an internal setting to determine whether characters printed off the right hand side of the screen cause the terminal to wrap or not. If the user sets the terminal to wrap, the new characters appear on the next line of the screen and the screen is scrolled if necessary. If the user disables wrap mode, each new character replaces the last character on the current line and the cursor neither moves right nor onto the next line. Whenever the user selects the **Reset Terminal** command in the **Session** menu, wrap mode is disabled.

### EMACS arrow keys

When this option is on, the arrow keys will send the appropriate control codes for moving around in the EMACS editor. When this option is off, NCSA Telnet sends the VT codes for the arrow keys. This option also affects the codes sent when the option mouseclick feature is used. See the section "Cursor Positioning with the Mouse" in Chapter 3, "Advanced Features" for more information.

### Mapping the PageUp, PageDown, Home, and End Keys

When **Map PgUp, etc.** is checked, NCSA Telnet will use the PAGE UP, PAGE DOWN, HOME, and END keys to move the position in the session's scrollbar buffer, rather than sending the VT codes for these keys to the remote host.

### Eight bit connections

When this option is on, NCSA Telnet does not strip the eighth bit from the data it receives.

### Save cleared lines

When this option is on, NCSA Telnet saves the screen in the scrollbar buffer before clearing the screen when a VT clear screen code is received. Otherwise, the data on the screen is lost.

### CNTL-COMMAND is EMACS meta

When this option is on, pressing CONTROL, COMMAND, and a key is equivalent to pressing Meta and that key on a keyboard that has a Meta key. This option does not allow the sending of Meta Control keys since the CONTROL key is needed to activate this sequence. This option will be changed in the future to better support simulating Meta key sequences.

### Emulation

The **VT100** and **VT220** radio buttons select VT100 or VT220 emulation for this connection, respectively.

### Font and Size

The **Font** popup menu and the size field to the right of the **Font** popup menu allow the user to specify the font and font size to be used for this connection.

### Screen Size

The **Screen Height** and **Screen Width** fields allow the user to specify the initial size of the VT emulation screen.

### Scrollbar

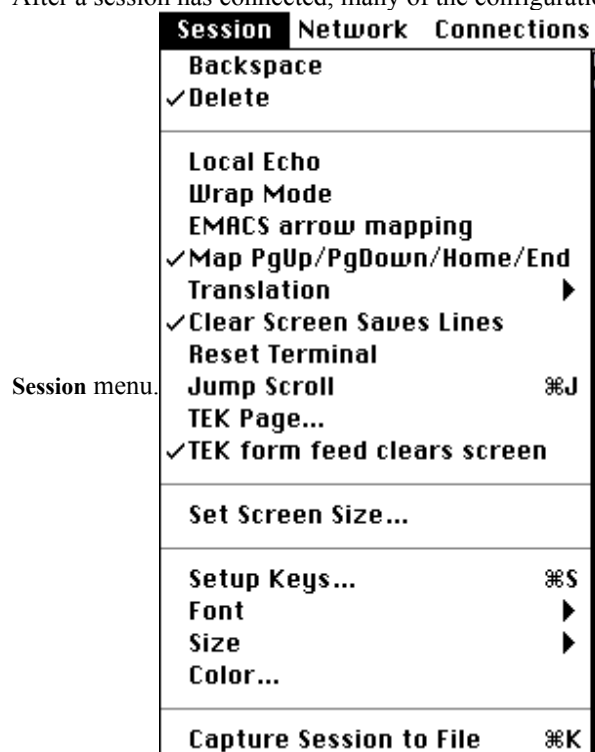
The **Scrollbar** field determines the size, in lines, of the scrollbar buffer.

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The four fields used for setting the foreground and background colors for normal and blinking mode are only visible on color equipped Macintosh computers. When they are present, clicking on any of the boxes will present the standard Color Wheel modal dialog box. The boxes are filled with the current color selection. For additional information on using the Color Wheel modal dialog box, refer to the Macintosh System Software User's Guide.

## Changing Configuration After the Session Has Been Created

After a session has connected, many of the configuration parameters can be changed by using the



Each of the items is described in the following sections.

### Backspace and Delete

When **Backspace** is checked, the DELETE key sends a backspace character when pressed. If **Delete** is checked, the DELETE key sends a delete character when pressed.

### Local Echo

When linemode is not being used, NCSA Telnet can operate in two different echo modes: local and remote. In local echo mode, characters are copied to the screen immediately as the user types them. In remote echo mode, the characters are sent to the host, which sends them back to be printed. When **Local Echo** is checked, NCSA Telnet enters local echo mode.

### Wrap Mode

Enables or disables the wrap mode of the VT terminal emulator. Refer to "Use VT Wrap mode" in the section "Terminal Configuration Records" for further explanation.

### EMACS arrow mapping



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When **EMACS arrow mapping** is checked, the arrow keys send codes appropriate for moving around in the EMACS editor. When **EMACS arrow mapping** is not checked, NCSA Telnet sends the VT codes for the arrow keys.

### Map PgUp, PgDown, Home, End

When **Map PgUp/PgDown/Home/End** is checked, NCSA Telnet will use the PAGE UP, PAGE DOWN, HOME, and END keys to move the position in the session's scrollbar buffer, rather than sending the VT codes for these keys to the remote host.



The **Translation** submenu allows the user to choose which translation table will be used for this session. In the case above, no translation is desired.

### Clear Screen Saves Lines

This option toggles between saving lines and erasing lines when the VT clear screen code is received. If the user checks the option, all lines currently displayed on the screen are scrolled into the scrollbar region before the screen is cleared. If this option is not checked, the cleared lines are permanently disposed of when the screen is cleared.

### Reset Terminal

Select **Reset Terminal** to reset the VT screen, for example when a host program accidentally sets VT graphics mode or fails to leave VT graphics mode. The **Reset Terminal** command resets all VT mode settings, disabling wrap mode, resetting VT graphics mode, resetting the keypad mode to the default, and resetting tabs to every eight spaces.

### Jump Scroll

Select **Jump Scroll** to skip to the end of the local buffer.

The **Jump Scroll** option causes the screen to pause and then jump ahead over scrolling text. The text is placed into the scrollbar, but the screen update advances to the end of the local network buffer instead of printing every line on the screen.

The purpose of this feature is to save time. For example, when the user enters a command that produces a great deal of output, the user can use Jump Scroll to avoid waiting for the output to scroll by.

### TEK Page

Select **TEK Page** to quickly create or clear a Tektronix emulation window without requiring intervention from host software.

Normally the emulation window appears automatically when the clear screen command sequence is received from the host. But the **TEK Page** command creates the window immediately. To clear the current session window, use the **TEK Page** command the same way the user would use the Page key on a real Tektronix terminal. For more information regarding the clear screen command and Tektronix emulation, refer to Chapter 3, "Advanced Features."

The **TEK Page** option is disabled if the user has selected **Inhibit** as the TEK Emulation in the session configuration record used to create this session. Refer to "TEK Options" in the section "Session Configuration Records" for more information.

### TEK form feed clears screen

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Setting this option forces NCSA Telnet's TEK emulation not to clear the screen when a form feed is encountered. Often TEK images include a form-feed command at the end of them which cause the TEK screen to be immediately cleared upon reaching the end of the image. However, this makes it hard to see the final image of the TEK file.

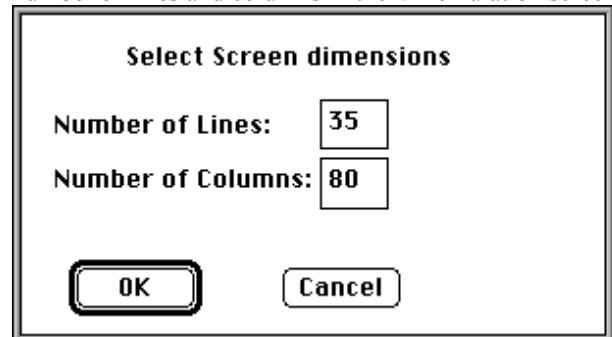
### Set Screen Size

Select this option to change the size of the VT emulation screen.

NCSA Telnet's VT emulation screens contain 24 lines by default, because an actual VT terminal screen has room for exactly 24 lines of text. Some host systems allows the user to define a VT-like terminal type which has more or fewer than 24 lines. **NOTE:** The user may change this default by changing the terminal configuration record. Refer to "Screen Size" in the section "Terminal Configuration Records" for more information.

To increase or decrease the size of the VT emulation screen:

Select **Set Screen Size** from the Session menu. A modal dialog box appears, showing the current number of lines and columns in the VT emulation screen.



Change the value as desired.

Click **OK** or press RETURN to return to the user's session window or click **Cancel** to abort the change.

If the user changes the size of the VT emulation screen, the session window will resize to reveal the entire VT screen.

#### Shortcut

To quickly change the size of the VT emulation screen, hold down **OPTION** before adjusting the size of the window using the size box. As the window changes size, NCSA Telnet recalculates the number of lines in the window and displays the current dimensions in the upper left corner of the window. When the user releases the mouse button, the size of the VT emulation screen will be set. This method is equivalent to using the **Set Screen Size** command. **NOTE:** Resizing a session window without holding down **OPTION** only resizes the Macintosh window and does not change the size of the VT emulation screen.

**WARNING:** If the user does not have a good working knowledge of how the user's host system makes us of terminals with greater than 24 lines, you are recommended to use only 24-line windows. The following warnings and suggestions assume knowledge of UNIX-based software to control the number of lines for the terminal. Consult your host system documentation or system administrator for more information.

#### Warnings and Suggestions

The termcap file, (found in UNIX systems only), is commonly located in `/etc/termcap`, and can be set up to include the number of lines on the terminal. The default VT100 termcap includes an explicit setting of 24 lines, so even if you enlarge your NCSA Telnet window, the host uses only the top 24 lines. You can create special termcap entries by editing the `/etc/termcap` file. Copy the VT100 entry to a new name and change the number of lines to your preferred screen size.

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Berkeley UNIX-based systems have a special feature in the stty program. The number of rows in a session window can be set to any value, and applications programs such as vi learn your window size from the stty setting. The following command line sets the window size to 33 lines.

```
stty rows 33
```

Using the special macro variable #, you can create a macro that issues this command and automatically substitutes the number of lines for the current window. For example, you could define the macro for `^L-0` as the following.

```
stty rows \#
```

Now, you can set the window size by pressing `^L-0` and then RETURN. The sequence `\#` is replaced with the proper number of lines.

See the section "Defining Macros" in this chapter for information about creating and saving macros.

Some systems have a program installed called `resize`. `resize` sends a special sequence of VT control characters to NCSA Telnet's VT emulator to determine the size of the screen. If `resize` is available on your system, putting

```
resize > /dev/null
```

in your `.cshrc` or `.login` will automatically set your screen size correctly when you log in. For help using `resize` and determining if it is available at your site, contact your system administrator.

### NAWS

NAWS, Negotiations About Window Size, is a relatively new option in the telnet standard. UNIX hosts that support NAWS allow NCSA Telnet to send information to the host regarding the VT window size. Consequently, when the user changes the VT screen size by using the **Set Screen Size** option, the new screen size is sent over the network to the host. In this case, the user does not need to perform the `stty rows` operation. The host knows how big the window is, which eliminates possible problems for screen-oriented applications such as vi. NOTE: NAWS is not supported by all UNIX machines. You can determine if the host you are connected to supports NAWS by changing the size of the VT emulation screen and then asking the remote host for the screen size. If the screen size the host responds with matches the new screen size you have just set, the host supports NAWS.

## Setup Keys

Select **Setup Keys** to select which keys, if any, issue the telnet commands Interrupt, Suspend, and Resume (see "Interrupt, Suspend, and Resume" in the section "Session Configuration Records" in this chapter.)

## Font Submenu

The **Font** submenu contains the fonts that you may use to display text in a session window. When you select a font from this submenu, the current window is resized to contain the text and the selected font is used to display all text in the current window.

**NOTE:** Fonts which are proportionally spaced (most fonts except Courier and Monaco) display slowly and appear spread out.

## Size Submenu

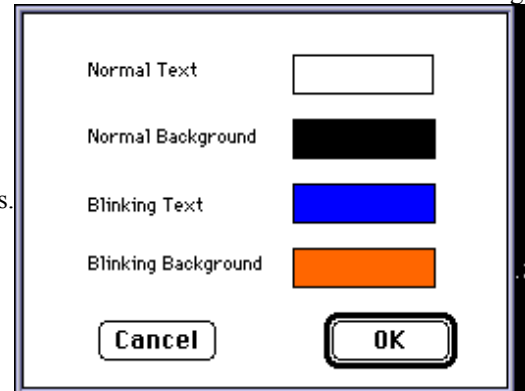
This option allows you to change the size of text in the current window. The **Size** submenu contains the point sizes that you may use to display text in a session window. The submenu lists several sizes, displays a check-mark next to the current size, and outlines all sizes present in your system. When you select a size from this submenu, the current window is resized to contain all the resized text and the text is redrawn according to the specified point size.

**NOTE:** Sizes which do not appear outlined in the submenu must be scaled by the system software and therefore may be slow and not as sharply defined as the non-scaled sizes.

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### Color

The **Color** option only applies to Macintosh computers that are color-equipped. Select **Color** to change the foreground and background colors of the current window for both normal text and blinking text.



The Color Selection modal dialog box appears.

To assign a color to text or the background of a session window:

Click the box next to the item to which you wish to assign a color: **Normal Text**, **Normal Background**, **Blinking Text**, or **Blinking Background**. This will bring up the Color Wheel modal dialog box.

Select a new color by clicking in the color wheel. The color you select appears in the top rectangle under the heading **Please Select New Color**.

Click **OK** or press RETURN to enable the color change and return to the Color Selection modal dialog box. The box next to the item you selected in Step 1 reflects the color you chose from the Color Wheel modal dialog box.

Repeat Steps 1 through 4 to assign colors to other items in the Color Selection dialog box.

Click **OK** when you have finished choosing colors. The colors you selected are applied to your current session window.

For additional information on using the color wheel dialog box, refer to your Macintosh System Software User's Guide.

## Capture Session to file

NCSA Telnet is able to save the text from a session to a file. When **Capture Session to file** is selected, all normal text output that appears on the screen will also be saved to the file specified by the user in the standard save file dialog presented. This functionality turns on when the user selects this menu item, and turns off when the user again selects the menu item. As is standard with NCSA Telnet, a check will appear in the menu when this option is selected, to inform the user that the text from that session is being captured.

## Saved Sets

NCSA Telnet makes it easy for you to begin multiple telnet sessions quickly. This allows you to log on and get right to work without resetting the special characteristics and configuration of a connection each time you start up. This is accomplished through saved sets.

A *set* is a snapshot of the open sessions and their current configuration. A set consists of current macro settings and each session's window location and size, connected host, window name, scrollbar setting, color, font, font size, backspace/delete settings, and all other configuration information.

## Saving a Set

To save a set:

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Log on to the desired host as instructed in Chapter 1, "Getting Started."

Customize the session by moving the session window to an ideal location on the screen, specifying a background or text color, choosing a font and font size, setting the desired number of scrollbar lines, and choosing the function for the BACKSPACE/DELETE key.

Select **Save Set** from the **File** menu.

A standard file dialog box appears and prompts you to name the set. After naming the set, click on the **Save** button in the dialog box to save the set.

### Using a Saved Set

Using sets lets you bypass the start-up procedure described in Chapter 1, "Getting Started."

Specifically, you do not need to select **Open Connection** from the **File** menu or press **-⌘-O** to open a connection, nor do you need to specify the connection host or window name. These operations are performed automatically when you load a set.

After you load a set, the session window automatically appears for the specified host at the specified location on the screen and with the specified window name, scrollbar setting, color and other characteristics. The following characteristics are saved in a set:

- session name
- hostname
- port number
- window size and location
- scrollback setting
- BACKSPACE/DELETE key setting
- macro definitions
- command key setting
- number of columns
- Tek clear screen setting
- font and font size
- color characteristics
- assigned keys for Interrupt, Suspend, and Resume functions
- CRMAP setting
- "Allow linemode" setting
- eightbit status
- translation table setting
- TEK emulation setting
- answerback message

Loading a set from the Finder

To load a set from the Finder and automatically invoke NCSA Telnet, doubleclick on the set icon or

file. The sample below shows the set icon for a set named Setup One.



Setup One

Loading a set from within NCSA Telnet

To load a set from within the NCSA Telnet application, select **Load Set** from the **File** menu. In the standard file dialog box that appears, select and open the set.

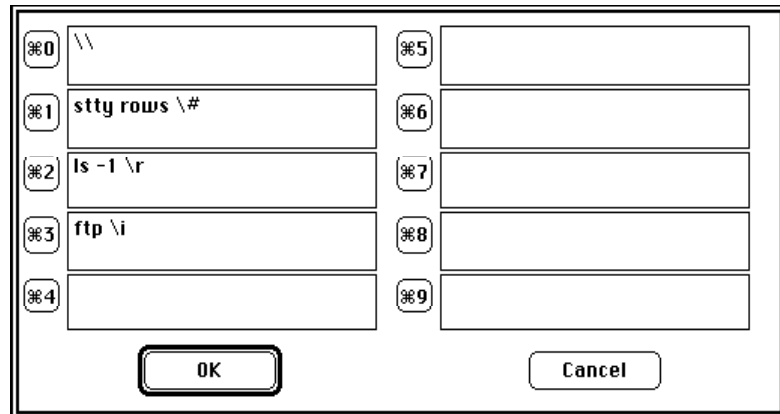
**NOTE:** You can edit a set datafile using any editor capable of editing files, even if the files are not of the operating system type TEXT. However, NCSA recommends that you do not rely on this feature, as it may not work with future versions of NCSA Telnet.

## Defining Macros

NCSA Telnet lets you use the key combinations ⌘-0 through ⌘-9 as macro keys. You can program these keys to send from 0 to 255 characters.

To define a macro:

Select **Set Macros** from the **Edit** menu or press ⌘-M. The Macro Configuration modal dialog box below shows several sample macro definitions.



Click on the button of the command key you wish to define, or select the box next to that button.

Enter the appropriate macro key sequence as instructed in the following section.

Click on the **OK** button in the dialog box (or press the RETURN key) to activate the new macros, or click on the **Cancel** button to invalidate the additions or changes you made. Clicking either the **OK** or **Cancel** button returns to the application.

## Reverting to the Previous Macro Definitions

While you are working in the Macro Configuration dialog box, you can undo changes you made to a macro and revert the associated command key to its previous setting by clicking on the button corresponding to that command key. For example, to undo changes to the definition for ⌘-2, click on the button labeled ⌘2. To simultaneously abandon all changes you have made, click on the **Cancel** button.

## Entering Macro Key Sequences

The key sequences used to generate special control characters in a macro may seem somewhat strange, unless you are familiar with the C programming language. To define a special character, you must first enter a backslash (\). Indicate nontypable control characters with their equivalents in the octal numbering system. Below are some common macro key combinations you might want to enter:

Desired Character	Definition
Backslash (\)	\\
TAB	\t
ESC	\033
CONTROL-C	\003
CONTROL-D	\004
CONTROL-E	\005
CONTROL-H or BACKSPACE	\010
Size of current window†	\#
Internet address of this Macintosh††	\i

† Concerns setting the number of usable lines in a session window. See the "Using the Session Menu" section of this chapter.

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†† See also the discussions of the **Show Network Numbers** command in the "Network-Related Commands" section of Chapter 3, "Advanced Features," and of the **Send IP Number** command in the "Transferring Files" section of Chapter 4, "File Transfer."

### Saving Macros

Currently, the only way to save the macro settings is in a set file. See the section "Saved Sets" in this chapter for more information regarding sets. NCSA plans to extend the macro capability of NCSA Telnet in future versions.