napsaterm

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napsaterm

1.1 napsaterm.guide

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NapsaTerm 3
***********
```

   NapsaTerm is a VT100 terminal emulator and rlogin client for
AmiTCP/IP.

   This is edition 1.3.1 of the NapsaTerm documentation,
13 May 1994, for Napsaterm version 3.8.

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```
About Authors
=============

   NapsaTerm is © copyright 1991, 1993, 1994 Pekka Pessi and AmiTCP/IP
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   We are interested to continuously develop NapsaTerm and AmiTCP/IP.
If you improve NapsaTerm or fix bugs, please send the changes to us.

   The Tektronix emulation is written by Robert A. Knop,
'<rknop@cco.caltech.edu>'.  He has also written some new features and
bug fixes to VT100 emulation.
```

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1.3   napsaterm.guide/Copying NapsaTerm

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1.4   napsaterm.guide/Niftyterm licence

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```

```
    Authors: Christopher J. Newman and Todd Williamson
Niftyterm source code is available upon request.  Send a disk and a
self-addressed mailer to the address below, and I'll send you a copy.

    If you find this program useful, Chris and I would certainly
appreciate a donation to support further development:
    Todd Williamson
    5440 Fifth Avenue Apt. 59
    Pittsburgh, Pa.  15232-2243
```

1.5   napsaterm.guide/Invoking from Shell

```
Invoking NapsaTerm from Shell
==============================

   You can start NapsaTerm with following command line options and
parameters:

    NAPSATERM [-V] [--vt102] [--vt52] [--h19] [-7] [-l FILE] [--slow]
             [-g GEOMETRY] [--80] [-f FONTNAME] [-p PROGRAMTITLE] [-S SCREEN]
             [--ic] [-v] [--application] [--numeric] [-w]
             [-d DEVICE] [-u UNIT] [-B LINESPEED] [--shared] [--stdio]
             [-N NET] [-s SERVICE] [-r REMOTENAME] [HOST]

   Command line options can be entered in any order and any combination
(except those that override each other).  Single character options begin
with single hyphen and can have optional arguments, multicharacter
options begin with double hyphen.  The rest of the command line
arguments are interpreted as host names.  With Preference file you can
change the default preferences of 'NapsaTerm'.
```

1.6   napsaterm.guide/Invoking from Workbench

```
Invoking NapsaTerm from Workbench
==================================

   You can start NapsaTerm from Workbench with various tool types to
accommodate your personal preferences.

   If you are using a project icon with NapsaTerm as tool, the
tooltypes of the project icon will override the tool types of the tool
icon.

'LOGFILE=FILENAME'
'WAITTOEND'
    See General options.

'DEVICE=NAME'
'UNIT=NUMBER'
```

`LINESPEED=NUMBER'
`SHARED'
`REMOTENAME=LOGIN NAME'
`REMOTETYPE=TERMINAL TYPE'
`SERVICE=SERVICE TYPE'
     See Device options.

`EMULATION=TERMINAL TYPE'
`NATIONAL=MODE'
`NATION=NATION NAME'
`KEYMAP=[NATION/]MAPNAME'
`KEYBOARD=[NATION/]MAPNAME'
`KEYPAD=[NUMERIC/APPLICATION]'
`MOUSE=EVENTS'
`BACKSPACE2DELETE'
`DELETE2BACKSPACE'
`CURSORBLINK'
`CURSOR=TYPE'
`BELL=TYPE'
`PASS8'
`CTRL8BIT'
`INVERSE'
`ALTISMETA'
     See Emulation options.

`GEOMETRY=SPECIFICATION'
`PUBSCREENNAME=NAME'
`BASEFONT=FONT/SIZE'
`TITLE=STRING'
`SIZEGADGET=TYPE'
`FIXEDCOLUMNS'
     See Display options.

`HOST'
     See Host names.

1.7 napsaterm.guide/Options

Options
=======

   The NapsaTerm can be given either command line options or icon tool
types.

  General options
  Device options   Using different interfaces.
  Emulation options   Changing the emulation type.
  Display options   Changing the `NapsaTerm' window.
  Host names   Selecting remote host.
  Preference file   Setting default preferences

1.8 napsaterm.guide/General options

```
General Options
---------------
```

`'-V'`
>   Displays the current version number and copyright notice. There is
>   no corresponding tool type.

`'-l FILE'`
`'LOGFILE=FILENAME'`
>   Logs the terminal output into specified file.

`'-w'`
`'WAITTOEND'`
>   Wait for a keypress before closing the emulation window after the
>   input stream has finished.

`'WAITTOEND=NOT'`
>   Negative form of previous tool type.

1.9 napsaterm.guide/Device options

```
Device Options
--------------
```

`'-d DEVICE'`
`'DEVICE=NAME'`
>   Uses specified device. The DEVICE may be any device compatible
>   with serial.device (normal Exec device name) or one of the
>   following:

>   * NET - use the remote login protocol over TCP/IP (default).

>   * TELNET - use the Telnet protocol over TCP/IP.

>   * DNET - use a "DNet" channel.

`'-u UNIT'`
`'UNIT=NUMBER'`
>   causes NapsaTerm to use the specified unit of the device. It has no
>   effect when using TCP/IP or DNet.

>   There is no corresponding tool type.

`'-N NETWORK'`
>   Uses the specified DNet NETWORK. This option is not currently
>   implemented.

`'-B LINESPEED'`
`'LINESPEED=NUMBER'`
>   Starts the NapsaTerm with specified LINE SPEED (as bits per
>   second). This parameter is used with 'serial.device' and

```
        rlogin protocol.

'--shared'
'SHARED'
        If this option is specified, NapsaTerm will open the device
        specified in "shared" mode. This allows NapsaTerm to share the
        serial port with other applications which also can open the serial
        port in shared mode (including another 'NapsaTerm'). You can also
        prevent NapsaTerm from reading characters from serial device, See
        Unlisten menu command.

'--stdio'
        Causes NapsaTerm to display whatever comes from standard input, and
        send all keystrokes to standard output. For example:
            NapsaTerm --stdio < filein > fileout
        would display file in a NapsaTerm window.

        There is no corresponding tool type.

'REMOTENAME=LOGIN NAME'
        This tool type is used to specify user name in the remote system
        when using the rlogin protocol.

'REMOTETYPE=TERMINAL TYPE'
        This tool type specifies the terminal type used in the remote
        system when using the rlogin protocol.

'REMOTETYPE=TERMINAL TYPE'
        Napsaterm connects to the service or server port which is
        specified by this tool type or option when using Telnet protocol.
```

1.10 napsaterm.guide/Emulation options

```
Emulation Options
-----------------

'EMULATION=TERMINAL TYPE'
        Select the emulation type to use. The emulation type can be chosen
        with following options from the command line.

'--vt102'
        Emulate a "vt102" terminal.

'--vt52'
        Emulate a "vt52" terminal.

'--h19'
        Emulates a "ht19" terminal.

'NATIONAL=MODE'
        Determines the national mode used. National modes are (valid
        abbreviation for each mode in parenthesis):
        * 'None' ('No')
        * 'Multinational' ('Mu')
```

```
    * `National' (`Na')
     See National modes.

`NATION=NATION NAME'
     Specifies the used nation. Valid nations are as follows (valid
     abbrevations for each nation in parenthesis):
    * `US ASCII', (`US')
    * `Danish', (`Da')
    * `Finnish', (`Fi')
    * `French', (`Fr')
    * `German', (`Ge')
    * `Norwegian', (`No')
    * `Swedish', (`Sw')
    * `UK ASCII', (`UK')
     Default nation is `US'.

`KEYMAP=[NATION/]MAPNAME'
`KEYBOARD=[NATION/]MAPNAME'
     These tool types are synonymous. They specify the keymap the
     NapsaTerm will use. It is possible to change also a specific
     national keymap, for instance the tool type `KEYMAP=Finnish/sf7'
     will change the Finnish national keymap to `sf7'. For default
     national keymaps, See Keymaps.

`KEYPAD=[NUMERIC/APPLICATION]'
`--numeric'
`--application'
     These options and tool type control the behauvior of keypad.  If
     the option `--numeric' is specified or the tool type `KEYPAD' has
     value `NUMERIC', the keypad is in normal mode.  If the option
     `--application' is specified or the tool type `KEYPAD' has value
     `APPLICATION', the keypad is in the application mode.

     In application mode, the vt100 control sequences will be sent to
     remote host instead of normal characters.  This is handy for text
     editors and the like that use the keypad as a function keypad.

`--slow'
     Starts in slow mode. This mode is useful only watching some vt102
     animations with `--stdio' option.

     There is no corresponding tool type.

`MOUSE=EVENTS'
     This tool type controls which kind of mouse events are sent to the
     remote end.
     OFF
          Don't send mouse clicks

     DOWN
          Send an event only when user presses the select button

     UP
          Send a mouse event only when user releases the select button

     BOTH
          Send both up- and downward clicks
```

When mouse events are enabled NapsaTerm sends the following
sequence when the user presses the left (selection) button on the
Amiga mouse:
        ESC 'M' QUALS COLUMN LINE
where column and line are bytes that represent the x, y
coordinates of the mouse click (offset by 32; a click on (0, 0)
results in sending two space characters), and quals is like so:

bit 0
    Control key

bit 1
    Shift key

bit 2
    Meta (alt) key

bit 3
    Caps lock

bit 4
    Mouse down event

bit 5
    Mouse up event

bit 6
    Always on (making qual a printable value)

 For example, clicking on column 1, row 1 results in the escape
 sequence
        ESC 'M' 'P' SPC SPC

'BACKSPACE2DELETE'
    This switch tool type causes the backspace key mapped to 'DEL'.

'BACKSPACE2DELETE=NOT'
    Negative form of previous tool type.

'DELETE2BACKSPACE'
    This switch tool type causes the Delete key mapped to Backspace.

'DELETE2BACKSPACE=NOT'
    Negative form of previous tool type.

'CURSORBLINK'
    By default, NapsaTerm has a solid cursor. Setting this tool type
    will cause cursor to blink at the rate of once per second.

'CURSORBLINK=NOT'
    Negative form of previous tool type.

'CURSOR=TYPE'
    Available cursor types are 'Invisible', 'Underlined' and 'Block'.

'--ic'

This option causes NapsaTerm to start up with an invisible cursor.

`BELL=TYPE`
     Available bell types are `Visual`, `Audio`, `Both`, `None` and
     `Display`. The visual bell flashes the NapsaTerm window, audio
     bell plays a simple beep with `audio.device`. Both of them can be
     used at the same time. The display bell uses Intuition function
     `DisplayBeep()`.

`PASS8`
     Prevents NapsaTerm from stripping off the 8th bit of the input
     stream character. This is the default mode.

`-7`
`PASS8=NOT`
     Causes NapsaTerm to strip off the 8th bit of the incoming
     characters. This is useful, if the input may contain 7 bit
     characters with parity enabled.

`CTRL8BIT`
     Prevents NapsaTerm from converting the 8-bit control codes to
     escape sequences. Normally, Napsaterm converts any 8-bit control
     character (ie. ASCII codes from 128 to 159) to a two character
     escape sequence. The escape sequences consist of a ESC code and
     original control character code minus 64. For example, CSI (ASCII
     code 155) will be converted to escape sequence ESC [, the ASCII code of [is ↩
       91, 155 -
     64.

`CTRL8BIT=NOT`
     Causes NapsaTerm to convert the 8bit control codes to escape
     sequences.

`-v`
`INVERSE`
     Starts up with an inverted window. This may be controlled by
     terminal codes when emulating a VT102 terminal. See also
     Setup menu.

`INVERSE=NOT`
     Negative form of previous tool type.

`ALTISMETA`
     If this tool type is given, the left alt key on the keyboard will
     act as a meta key. If the left alt key is pressed down, all single
     character key sequences will be prefixed by ESC character. This is
     particularly useful for emacs.

`ALTISMETA=NOT`
     Negative form of previous tool type.

1.11 napsaterm.guide/Display options

```
Display Options
---------------
```

   These preferences or tool types affect the NapsaTerm window, its
size, placement and title.

```
'-g GEOMETRY'
'GEOMETRY=SPECIFICATION'
```
     Sets up the window geometry. The format for geometry is
     /LEFT/TOP/WIDTH/HEIGHT. A value of -1 for the WIDTH or HEIGHT
     makes the window stretch to the right edge or bottom of the
     screen. A value of -1 for the TOP makes the window's top edge
     appear just below the screen title bar. The LEFT and TOP are
     specified in pixels. The WIDTH and HEIGHT are specified in
     characters.

```
'-S SCREEN'
'PUBSCREENNAME=NAME'
```
     Opens the NapsaTerm window on the specified "public screen". If the
     screen don't exist, open the window on the default public screen
     (which is normally the Workbench Screen).

```
'-f FONTNAME'
'BASEFONT=FONT/SIZE'
```
     Sets the font for the NapsaTerm window. By default the font 'napsa
     11' or, if 'napsa 11' cannot be found, 'topaz 8' is used. If you
     wish to use a different font such as "courier 11", simply specify
     FONT as 'courier/11'. If the font you choose is not fixed width,
     strange and unusual things will happen. For more information of
     NapsaTerm fonts see Fonts.

```
'-p PROGRAMTITLE'
'TITLE=STRING'
```
     Draws the PROGRAM TITLE with given text. The actual window title is
     concatenated with display size indicator '(width $\times$ height)'.
     Normal title is the remote host name when using rlogin, otherwise
     'NapsaTerm'.

```
'SIZEGADGET=TYPE'
```
     This tool type controls which border of the window the window's
     sizing gadget will appear in. If you have a sizing gadget on a
     window, you must lose some of the window space for the border to
     contain it. This preference controls whether you lose rows,
     columns, or nothing. If you choose NONE, the window will not have
     a size gadget, and will therefore not be resizeable. It is useful
     if you want an 80x24 window to take up the smallest possible
     screen space. If you choose COLUMN, the sizing gadget will be on
     the right border, and if ROW, the sizing gadget will be on the
     bottom border.

```
'--80'
'FIXEDCOLUMNS'
```
     If this option or tool type is given NapsaTerm won't use no more
     than 80 columns of text. This is useful for running programs
     written for terminals that assume the terminal has 80 columns.

`FIXEDCOLUMNS=NOT'
      Negative form of previous tool type.

1.12   napsaterm.guide/Host names

```
Host Names
----------
```

`HOST=NAME[|NAME2...]'
    The tool type HOST is used to specify remote host name(s). The host
names should be given in standard internet format.

    When NapsaTerm is started from command line, command line arguments
which do not start with hyphen are regarded as host names. If you need
to use host name which begins with hyphen `-', give a single hyphen as
an argument after all options and before the host name.
      NapsaTerm -d net - -weird.host.name.in.net

    If NapsaTerm is given multiple host names, it will randomly connect
to one of them.

    The following command causes NapsaTerm connect to either `punkku' or
`vinkku':
      run NapsaTerm -g 0/-1/80/30 punkku vinkku

1.13   napsaterm.guide/Preference file

```
Preference File
---------------
```

    The preference file `AmiTCP:db/NapsaPrefs' contains default
preferences when you invoke `NapsaTerm' from CLI.

    The preference file contains tool-type-like options given in a
X-resource-look-a-like format. The preference file format is compatible
with `NiftyTerm' and older `NapsaTerm' versions. Each row in the
preference file has format as follows:
[COMMAND NAME`.']PREFERENCE NAME`:' VALUE

    "Preference name" is the part of the line before the `:' character,
"preference value" is the part after it.

    Unless otherwise specified, preference name and value are
case-insensitive. Unregocnized preference names are ignored,
unrecognized values revert to default.

    If the corresponding tool type is a *switch*, the preference value
should be `1', `true' or `yes', or the preference is silently ignored.

    Tool type `Host' has no corresponding preference.

   See Alternative command names, if you need many different default
preference sets.

   For compatibility reasons, if the file 'AmiTCP:db/NapsaPrefs' does
not exist, also the files 'S:NapsaPrefs' and 'S:NiftyPrefs' are
searched for preferences.

1.14 napsaterm.guide/Alternative command names

Using Alternative Command Names
....

   If the preference name is prefixed with COMMAND NAME, it is valid
only when 'NapsaTerm' is invoked with that name. You can invoke
'NapsaTerm' with a different name, if you rename the 'NapsaTerm'
program file or make a new link to it. For example, you could make
following links
     makelink AmiTCP:bin/NapsaTermUS AmiTCP:bin/NapsaTerm
     makelink AmiTCP:bin/NapsaTermUK AmiTCP:bin/NapsaTerm
   and you have added following preferences
     Nation: Finnish
     NapsaTerm.Nation: US
     NapsaTermUK.Nation: UK
   If you started 'NapsaTerm' with the command 'NapsaTerm', you could
use Finnish keyboard ('s') and character set (ISO 646 SF-2). If you
gave command 'NapsaTermUK', you would get the British keyboard ('uk')
and character set (UK-ASCII).

1.15 napsaterm.guide/Menus

Using Menus
===========

   NapsaTerm have three menus, 'Command', 'Edit' and 'Setup'. The
'Command' menu contains terminal control commands. The 'Edit' menu
handles the clipboard. The 'Setup' menu allows the user to adjust the
way 'NapsaTerm' functions.

   Command menu
   Edit menu
   Setup menu

1.16 napsaterm.guide/Command menu

```
Command Menu
------------
```

   The 'Command' menu contains terminal control commands.

'Clear Screen 'Amiga-S''
     Moves the current NapsaTerm prompt to the top of the NapsaTerm
     window and clears the screen.

'To Tek4010   'Amiga-G''
     Selects the Tek4010 emulation and activates the Tek4010 window.

'To VT102   'Amiga-T''
     Selects the VT102 emulation and activates the VT102 window.

'Soft Reset   'Amiga-R''
     Resets all terminal styles, scroll regions, and invert mode.

'Flush   'Amiga-F''
     Flushes the buffers for the current device. Useful if you did
     something that will cause a lot of output, and you want to tell
     NapsaTerm not to display it all.

'Break   'Amiga-B''
     Sends a break signal to the current device.

     'Break' is enabled only when NapsaTerm is connected to a serial
     device.

'Unlisten   'Amiga-U''
     NapsaTerm will cease to talk to whatever device it is connected
     to, so that another program can use it exclusively. Note that all
     keyboard input is flushed as well until you select 'Listen' menu
     option.

     'Unlisten' is enabled only when NapsaTerm is started in 'Shared'
     mode.

'Listen   'Amiga-L''
     NapsaTerm restarts talking and listening to device it is connected
     to.

     'Listen' is enabled after 'Unlisten' is selected.

     An example of usage for 'UnListen' and 'Listen': you're logged in
     and you want to save something to a log file. You had foresight
     and started NapsaTerm in shared mode. You select 'Unlisten' and
     start another NapsaTerm writing to a log file. When you have
     everything in the log file, you quit the second NapsaTerm and
     select 'listen' the original. This option might be useful if
     someone wants to write some stand-alone file transfer utilities.

'Quit   'Amiga-Q''
     Exits NapsaTerm and closes the window.

1.17 napsaterm.guide/Edit menu

```
Edit Menu
---------
```

   The 'Edit' menu handles the clipboard.

```
'Copy         'Amiga-C''
     Copies the selected text into the clipboard.  You can put the text
     you copied most recently back into any document by choosing
     'Paste'.

'Paste        'Amiga-P''
     Copies the most recently copied text to the current cursor
     position.

'Move         'Amiga-M''
     If a previous command or some text is selected in the NapsaTerm
     window, 'Move' inserts the text as if it had been typed.

'Execute      'Amiga-E''
     The same as 'Move', only it follows the text with a 'LF' character.
```

1.18 napsaterm.guide/Setup menu

```
Setup Menu
----------
```

   The 'Setup' menu allows the user to adjust the way 'NapsaTerm'
functions.

```
'National Mode'
     See Tool type 'NATIONAL'.

'Nation'
     See Tool type 'NATION'.

'Terminal Type'
     See Tool type 'EMULATION'.

'Backspace is sent as'
     See Tool type 'BACKSPACE2DELETE'.

'Del is sent as'
     See Tool type 'DELETE2BACKSPACE'.

'Left Alt key is'
     See Tool type 'ALTISMETA'.

'Keypad'
     See Tool type 'KEYPAD'.

'Mouse Events'
```

        See Tool type 'MOUSE'.

'Control Codes'
     See Tool type 'CTRL8BIT'.

'Cursor'
     See Tool type 'CURSOR'.

'Display Width'
     See Tool type 'FIXEDCOLUMNS'.

'Display Speed'
     See Option '--slow'.

'Bell Type'
     See Tool type 'BELL'.

'Reverse'
     See Tool type 'INVERSE'.

'Ansi_LNM'
     Controls whether RETURN should be sent as CR-LF sequence.

1.19   napsaterm.guide/Fonts

How NapsaTerm Uses Fonts
========================

   NapsaTerm should be able to use any fixed-width font. However,
standard Amiga fonts do not represent the VT100's character set very
well. Included with this NapsaTerm is a set of fonts with names
starting with 'Napsa'. Some explanation of these fonts is in order.

   NapsaTerm starts out with a base font name, something like 'topaz'
or 'Napsa'. If NapsaTerm needs an italic or bold font, it first looks
in the fonts: directory to see if there is a version of the current
font which was designed to be italic or bold. If not, it uses the
Amiga's internal functions to construct one. When it needs one of the
special VT100 character sets, it appends an extension to the font name
and looks for a font of the same size as the current font with the new
name. The extensions are as follows:

'v'
     alternate character set

'w'
     double-width font

't'
     top half of double-width double-height font

'b'
     bottom half of double-width double-height font

'vw', 'vt', and 'vb' are also extensions, meaning the alternate
character set version of the different-sized font. So, for example, if
NapsaTerm was using the font 'Napsa/11', and it needed a double-width
font, it would look for the font 'Napsaw/11'.

The fonts that come with the distribution are designed to be used on
screens where the pixels are roughly as wide as they are tall. Any of
the 640$\times$400 graphics modes fall into this category. In the 640$\times$200
modes, the fonts will seem too tall.

If anyone creates any fonts for use with NapsaTerm or Niftyterm, I'd
like to get a copy of them.

1.20   napsaterm.guide/National

National Modes
==============

The national mode is set with tool type 'NATIONAL' There are three
different national modes in NapsaTerm.

None
    By default, when no national mode in not in use, ('None',
    abbreviated as 'NO'), NapsaTerm uses the ISO-8857 Latin 1 character
    set, the standard character set used in Amiga. By default,
    NapsaTerm uses either the default system keymap or the keymap
    specified with tool type 'KEYMAP', if any.

Multinational
    In the 'Multinational' mode (abbreviated as 'MU') NapsaTerm uses
    the Latin 1 character set and the appropriate national keymap. See
    Keymaps for a list of default national keymap names. A specific
    national keymap can also be specified with tool type 'KEYMAP' or
    'KEYBOARD'.

National
    In the 'National' mode (abbreviated as 'NA') NapsaTerm uses the
    appropriate national 7 bit character set and the national keymap.
    See Character tables for tables of national character sets.

  Keymaps   Default national keymaps
  Character tables   National character tables

1.21   napsaterm.guide/Keymaps

National Keymaps

Default national keymaps are as follows:

```
*  'US ASCII' uses ('usa1')
*  'Danish', ('dk')
*  'Finnish', ('s')
*  'French', ('f')
*  'German', ('d')
*  'Norwegian', ('n')
*  'Swedish', ('s')
*  'UK ASCII', ('gb')
     You can change national keymap with tool type
'KEYMAP'=NATION/KEYMAPNAME, for example
       KEYMAP=Finnish/s-term
     changes the Finnish keymap to 's-term'. You can abbreviate the
nation name, See tool type NATION.
```

1.22 napsaterm.guide/Character tables

```
National Character Tables
-------------------------
```

NapsaTerm uses ISO 646 national character codes as follows:

DEC	35	36	64	91	92	93	94	96	123	124	125	126
US-ASCII	#	$	@	[	\	]	^	`	{	|	}	~	
Danish	#	$	@	Æ	Ø	Å	^	`	æ	ø	å	~	
Finnish	#	$	@	Ä	Ö	Å	^	`	ä	ö	å	~	
French	#	$	à	\textdegree{}		ç	§	^	`	é	ù	è	¨
German	#	$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß	
Norwegian	#	¤	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü	
Swedish	#	¤	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü	
UK-ASCII	£	$	@	[	\	]	^	`	{	|	}	~	
HEX	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E	

1.23 napsaterm.guide/IO modes

```
Using Different IO Modes
========================
```

NapsaTerm provides four different ways to do the terminal IO.

   rlogin protocol

```
  Telnet protocol
  Serial device
  DNet
  DOS IO
```

1.24 napsaterm.guide/rlogin protocol

```
Rlogin protocol
---------------
```

   The rlogin protocol is described in the 'RFC 1282'. It is a
Unix-specific remote terminal session protocol, somewhat like
Telnet protocol but with different features. The remote rlogin session
get your the user name, terminal type and line speed from the rlogin
client.

   Rlogin protocol uses your local hostname (domain name of the computer
you are logging from), your local user name and user name at the
"rlogin server" for authentication. If there is a matching entry in the
'rhosts' files, the rlogin server let you log in without asking the
password. If no match is found, rlogin server asks you for the password
for the remote user. If it is not correct, it reverts to normal login
procedure.

   NapsaTerm is used as a rlogin client for AmiTCP/IP. Currently
NapsaTerm gets the local user name from environment variable 'USER'.
The remote user name is same as your local user name unless you specify
tool type 'RemoteName'.

   For example, your local user name is 'ppessi', but remote user name
is 't35082k'. If not told otherwise, NapsaTerm will introduce your as
'ppessi' to the remote machine. As the rlogin server regards it as the
password of account of 'ppessi', you can not give your password at the
first 'Password:' prompt. You should use tool type 'RemoteName':
    RemoteName=t35082k
   Now you can enter password for 't35082k''s account without typing
the user name each time.

   You should add an entry to your '.rhosts' file in a Unix machine
only if your Amiga is trustworthy -- that is, nobody else but you can
use it and it is in secure network. A '.rhosts' entry consists of a
host name and a user name in that host. The host name is the canonic
host name of machine you are logging from. For example, if you have
account 't35082k' in machine called 'kaira.hut.fi', you could add
following line to your '.rhosts' file:
    kaira.hut.fi t35082k

   The line speed has additional meaning when using rlogin protocol.
Some Unix programs and terminal drivers use the nominal terminal speed
to determine the throughput of your connection. There may be a problem
if the speed is 300 b/s (or even 9600 b/s) while you are using Ethernet.
Likewise the nominal speed of 38400 b/s over a 2400 b/s slip connection
is likely to cause trouble. You can determine your nominal speed in the
Unix systems with the 'stty' command.

1.25   napsaterm.guide/Telnet protocol

```
Serial devices
--------------
```

   The Telnet protocol is described in various RFC documents. It is a
generic remote session protocol with rich features and more general use
than rlogin protocol.

   Currently the Napsaterm supports terminal type and size negotation.
It does not pass your user name to telnet server.

1.26   napsaterm.guide/Serial device

```
Serial devices
--------------
```

   NapsaTerm can use any 'serial.device'-compatible Exec device. You
can specify the device name and unit number with tool types or command
line options. See Device options.

   You can start NapsaTerm in shared mode, See '--shared'. In "shared
mode" other programs (like another NapsaTerm) can open serial device in
the same time. The actual input data is is not shared, but all programs
will read the data from device in their turn. NapsaTerm can stop
reading data from serial device, see See Unlisten.

1.27   napsaterm.guide/DNet

```
DNet
----
```

   "DNet" is a serial line multiplexing protocol with priorities and
provisions for server/client architecture. It works between Amigas and
Unix machines running 4BSD or SunOS. There are ports for different 4BSD
variants and Linux. There exists many network-type applications for
DNet.

   If you are using "DNet", you can use NapsaTerm instead of 'FTerm'.

1.28   napsaterm.guide/DOS IO

```
DOS IO
------
```

   The input and output of NapsaTerm can be read from and written to
"standard input" and "standard output" DOS IO streams. For example, if
you want to view a VT100 animation with NapsaTerm, you can give command
     NapsaTerm --slow --stdio < vt100-animation-file

1.29   napsaterm.guide/Tektronix emulation

```
Tektronix emulation
===================
```

   There are two versions of Napsaterm binaries in distribution archive,
one with Tektronix emulation and one without. The tektronix emulation
is implemented in separate window, the VT100 window works as usually.

   Two menu items have been added to Tektronix emulation version. They
are 'To VT102' and 'To Tek4010'. When a emulation window (tek or vt)
is selected, it may be brought to the front and activated (depending on
settings of the config menus on the Tek4010 window). However, if you
click in a window, or bring it to the front, it does not necessarily
make it the one receiving data from the host. The 'To Tek4010' and 'To
VT102' menu items in each screen switch that, as can certain escape
sequences from the host.

1.30   napsaterm.guide/History

```
NapsaTerm History
=================
```

   NapsaTerm is derived originally from Niftyterm 1.2. It is called
NapsaTerm because original authors wanted to keep distinction clear
between it and their versions of Niftyterm. See Niftyterm licence.

   There are some features in NapsaTerm 3 which are incompatible with
earlier versions or with NiftyTerm 1.2.

  Changes in Version 3
  Changes in Version 2
  Changes in Version 1

1.31   napsaterm.guide/Changes in Version 3

Changed in Version 3.8
----

   * The tool type `CTRL8BIT' is no more enabled by default, ie. 7 bit
     control codes are used normally.

   * Bug with audio bell is fixed.

Changed in Version 3.7
----

   * Support for Telnet protocol was added. Supported features include
     terminal type and size negotation.

   * The long options have now double hyphen at the beginning.

   * The 8-bit/7-bit control codes are working for all keys.

   * New menu item added, See Control Codes, which enables sending
     8-bit control codes.

Changed in Versions 3.4 and 3.5

   Robert Knop, `<rknop@cco.caltech.edu>', released these versions. The
major new feature in these releases is the Tektronix emulation. Any
bug reports on the tek4010 emulation should be sent to Rob Knop.

   * The tek4010 emulation has following features:
        - Vector, Alpha, Incremental, and Point-plot modes are (at
          least partially) supported.

        - As of version 3.5, the GIN cursor is supported.

        - Some GraphOn enhancements, e.g. block fill mode, are also
          supported.

        -   * `ANSI LNM' added to the Setup menu. Sometimes changing the state
     of this flag can improve the operation of the terminal's newlines
     under Unix when running directly over the serial port. It does
     not seem to be necessary when Napsaterm is used with AmiTCP/IP.

   * Support for the VT100 application keypad has been added. Under the
     Setup menu, if you select `Application' for keypad type, VT100
     escape sequences will be sent to the host instead of characters
     when you hit keys on the numeric keypad. This is handy for text
     editors and the like that use the keypad as a function keypad.

   * A small number of additional minor enhancements and bugfixes to
     the VT100 emulation.

Changed in Version 3.3
----

   * For compatibility reasons, if the file `AmiTCP:db/NapsaPrefs' does
     not exist, the files `S:NapsaPrefs' and `S:NiftyPrefs' are

searched for preferences.

   * New menu item 'Left Alt key is' was added to 'Setup' menu.

Changes in Version 3.2 (3beta)
----

   * Workbench support is added. You can start NapsaTerm directly from
     Workbench

   * As a consequence of previous, the preference parsing is altered.
     See Preference file. Preference files are used only when NapsaTerm
     started from shell. The program name used in preference parsing is
     not fixed, the command name given by shell is used

   * NapsaTerm can select randomly a host if it is given multiple host
     names

   * Mouse support is enchanched. (See Mouse.) NapsaTerm sends Mouse
     events as 'ESC M' sequences. Preference 'Emacsmode' is obsolete
     and it is supported no more

   * New preference 'Backspace2Delete'. (See Backspace2Delete.) There
     was an old preference 'NormalBackspace', which had opposite meaning

   * New preference 'Delete2Backspace'. (See Delete2Backspace.) There
     was an old preference 'NormalDelete', which had opposite meaning

   * Preference 'LineSpeed' is used to change the serial speed, also a
     new option '-B' changes the line speed

   * Preference 'National' has now three values, 'None', 'MultiNatinal'
     and 'National'

1.32   napsaterm.guide/Changes in Version 2

Changes in Version 2.2
----

   * Preference 'PubScreenName'

   * Preference 'ctrl8bit'

   * Preference 'Keyboard' was mentioned version 2 documentation instead
     of correct preference 'Keymap'. Now both preferences can be used

Changes in Version 2.1
----

   * Option '-p' selects the public screen

   * The preference file is moved into the directory 'AmiTCP:db/'

Changes in Version 2.0

   The AmiTCP/IP BSD socket interface was added to NapsaTerm after the
porting of real "rlogin" program seemed to take too much effort and
time. The rlogin protocol is a very simple. However asynchronous,
interactive IO with AmigaDOS is quite ineffective and quite complex to
implement. Fortunately Niftyterm IO implementation was extremely
flexible and it was easy to add new IO methods for rlogin.

   * Option '-d net' selects now rlogin protocol ('-d dnet' will select
     DNet).

   * New preferences:
     'Linespeed'
     'RemoteName'
     'RemoteType'

1.33   napsaterm.guide/Changes in Version 1

NapsaTerm 1.3 Compared to Niftyterm 1.2
----

   * Support for different international keyboards layouts and
     character sets is added. NapsaTerm supports multinational ISO
     8857-Latin-1 character set, the native Amiga character set. It
     also supports some ISO 646 national character sets. For the
     character tables for ISO 646 character sets see Character tables.

   * New preferences were added:
     'Keymap'
     'National'
   * Left Alt key can be used as a 'Meta' key by setting the "AltisMeta"
     preference. If you press a key with left Alt key NapsaTerm sends an
     Escape character (ASCII 27) before the key's ASCII code. Niftyterm
     sets the 8th bit of sent ASCII code.

   * Switching 'Delete' and 'Backspace' keys was enchanched. Switching
     'Delete' and 'Backspace' keys are now done before key code
     conversion. So, even if the 'Backspace' key (arrow to left above
     the 'Enter' key) will send a 'DEL' code (ASCII 127) but if you
     press Ctrl and H, NapsaTerm sends still '^H' (ASCII 8).

   * A bug in the clipboard handling is fixed.

   * NapsaTerm do not free the console window when it is started, you
     must start it explicitly with run. Iconify feature is removed (if
     you really want it, do recompile from the sources).

   * Iconifying was removed as the zoom feature in Amiga OS 2.04 had
     most of its functionality

1.34   napsaterm.guide/Glossary

```
Glossary
========
```

1.35   napsaterm.guide/Index

```
Index
=====
```

~/.rhosts file   rlogin protocol