# term

A terminal program for Amiga computers

Version 3.4
16 July 1993

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# 1 Introduction

'term' is a telecommuncations program designed for use with any Commodore-Amiga computer running Kickstart 2.04 or higher. Its features include

- Fast built-in VT-220 terminal emulation
- Support for custom terminal emulation modules following the *XEM 2.0* standard
- Operates in any display environment, supports all screen display modes
- Support for file transfer modules following the *XPR* standard
- File- and printer-capturing functions
- Review-buffer support
- Powerful phone book and dialing functions
- *Amiga User Interface Style Guide* conformant user interface
- Online-help (as of Workbench 3.0)
- Built-in *ARexx* interface

Although this program is freely-distributable, it is not entirely free. If you like and use it frequently, you are requested to send the author a donation which you suppose will do as a payment for the program. See the chapter Chapter 2 [Gift-Ware fee], page 3 for details.

# 2 Gift-Ware fee

The development of 'term' required considerable expense. The effort to find out by trial and error and with a little help from the DevCon-Disks and the Includes & Autodocs the operating principles of some routines would alone be worth a remuneration to the author – it's simply bad luck if the Atlanta-DevCon records arrive with considerable delay. The author is susceptible to all kinds of donation and gifts so long as it is assured that they are useful to him. Therefore anyone pleased by 'term' or who works with the source code is welcome to remunerate my programming efforts as he/she thinks that it matches my efforts - a lot of thanks! If you have got no ideas yet, here is a (by no means complete) list of suggestions:

- Infocom games and Infocom hintbooks. Although I already own almost all games published in *The Lost Treasures of Infocom vol I+II* I still collect the originals (not those super-cheap Virgin Software re-releases). With the exception of *A Mind forever voyaging*, *Arthur*, *Hollywood Hijinx*, *Leather Goddesses of Phobos*, *Nord and Bert couldn't make head or tail of it*, *Plundered Hearts*, *Shogun*, *Spellbreaker*, *The Lurking Horror*, *Trinity*, *Wishbringer*, *Zork Zero* (which I already own) I welcome any game in any format – it does not necessarily have to be an Amiga game, Apple II, Kaypro, Atari-XL, C64, etc. will be fine, too.
- The director's cut of Ridley Scott's film *Bladerunner* on a PAL-VHS video cassette
- The films *Jabberwocky*, *Brazil*, *The Fisher King* or *Time Bandits* on a PAL-VHS video cassette
- A CD by Donald Fagen (*The Nightfly*, *Kamakiriad*)
- A CD by the Beatles (except for *Sgt. Pepper's Lonely Hearts Club Band* and *Magical Mystery Tour*), Jackson Browne (except for *Running on empty* and *Lawyers in love*), Little Feat (-1989), Weather Report, Paul Simon (1971-1985), Eric Clapton (-1988), Al Di Meola (except for *Land of the Midnight Sun* and *Kiss my Axe*)
- Raymond Elias Feist's books *Magician: Apprentice* and *Magician: Master*
- A book by Michael Crichton, Bruce Chatwin, Raymond Chandler or Steven Meretzky
- Old CinemaWare games – with the exception of *Defender of the Crown*, *The King of Chicago*, *The Three Stooges*, *Sinbad*, *It came from the desert TV-Sports Basketball* and *TV-Sports Football*
- An old game by Activision (*Borrowed Time*, *Hacker*, *Hacker II*, *Little computer people*, *Portal*, *Shanghai*, *Tass Times in Tonetown*), Electronic Arts (*Arcticfox*, *Marble Madness*, *One on one*, *Return to Atlantis*, *Seven cities of Gold*, *Skyfox*, *The Bard's Tale*) or Epyx (*Temple of Apshai*, *Rogue*, *World Games*, *Winter Games*, *California Games*)
- Scenery disks for the SubLogic Flight-Simulator II – except for *Japan*, *USA #7* and *USA #9*
- CD-ROMs and CD-ROM caddies
- MPEG movie files and JPEG image files
- Cash and checks (no credit cards – sorry) are always welcome.

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Would those people looking at the source code to extend it or do some modifications here and there please contact me before publication so that our efforts can be coordinated.

# 3 Reporting bugs

'term' is a rather complex program which is difficult to maintain – especially since there is only one person to take care of it: me. Although one tries to write correct, bug-free software, one cannot always achieve this goal. Tough – but that's life. It rains when you leave the umbrella at home. Toast falls buttered-side down. The phone rings while you are in the bath.

In case you come upon one of those nasty features which even the author was unable to track down and remove, follow these steps:

1. Keep calm. Shouting, cursing, crushing disks may help to cool your temper, but it will not help anybody (the least yourself!) if it results in a sudden cardiac infarction: you will have problems in reporting the problem.
2. Read the documentation! The bug you may want to report may be a deliberate feature.
3. Repeat previous step as often as possible. Yes, really, do so. Read the documentation. You will be glad you did.
4. Describe your problem elaborately. A comment like 'things fall down when dropped' may have inspired Sir Isaac Newton, but a similarly laconic comment 'downloads do not work' will most certainly fail to give any useful hints how to approach the problem. In case you encounter a problem with the built-in terminal emulation, try to make a verbatim file capture (i.e. turn off the `Capture filter`) of the session in which the offending codes were used and send it to me.
5. If you wish to report a bug in the ARexx interface include a sample ARexx script to produce the bug.
6. Do not forget to write it down! There is a difference between noticing a bug and reporting it (honestly!). Do not suppose that a bug will be fixed in a future program revision or rely on anybody else to report it: do it yourself. Send a letter to the author, preferably per electronic mailing services. The addresses are given at the end of this document.
7. State your system and program configuration. It helps a lot to know on which machine the program caused problems. Please include information such as memory expansion size, Amiga model (A500+, A600, A1200, A3000, A4000, etc.), graphics hardware (ECS, AGA, etc.), CPU type (MC68000, MC68020, MC68030, MC68040, etc.).

# 4 Background

This program is a product of anger and despair; I was unable to find a telecommunications program to suit my personal needs – neither in the commercial area, nor in the public-domain.

Most programs had a lot of extras but lacked other more important, perhaps more sensible features (just to take an example: in revision 2.20c and after four years of constant development '`Handshake`' still fails to use the current keymap settings and also strips the high order bit when receiving text – sorry Eric, that's why I never registered!).

I have hesitated for a long time before starting my first attempt at writing my very own telecommunications program. When Kickstart 2.x was about to become widely available I took the opportunity to create 'term' always trying to use the new OS routines wherever possible. While this started to be quite a difficult task it also was a lot of fun (imagine Columbus wrecking his fleet four times on his journey to the West Indies due to unexpected leakages in all vessels and sudden changes in the ships' sailing manuals – that's how I felt!).

As far as computer-telecommunications are concerned, Germany appears to be a developing country. This is partly due to the Deutsche Bundespost, the federal mail/phone company whose telecommunications monopoly used to be protected by federal law. Until 1989 you would risk a heavy penalty if using a non-registered modem or telephone instead of the Bundespost-supplied hardware. So, if you have any complaints or miss a few extremely important features in 'term', don't boo and hiss, I am not as long in the telecomm business as you are (I have yet seen only a single '`DEC VT-101`' from afar!). Tell me what you need and I will try to add it in the next revision.

This project was started at December 24 1990 and completed by January 25 1991.

# 5 Acknowledgements

My thanks go to the following people for their invaluable help and assistance: Andreas Kirchwitz, Christoph Teuber, Christopher Wichura, Garry Glendown, Germar Morgenthaler, Henning Hucke, Holger Lubitz, Juergen Otte, Marc-Christian Schroer, Marko Kuechmann, Markus Stoll, Martin Berndt, Martin Taillefer, Matthias Zepf, Michael Vaeth, Michael Wolfgang Hohmann, Oliver Wagner, Peter Fischer, Ralf Thanner, Ralph Schmidt, Roby Leemann & AUGS, Stefan Becker, Thorsten Seidel, Till ‘Dill-Prince’ Prinzler, Udo Wolt, Ueli Kaufmann, Veith Schoergenhummer, Volker Ulle & the Aquila Sysop Team and to all those who supplied libraries & control sequence tables.

Special thanks go to John Burton of Papua New Guinea who revised and rewrote certain parts of the program, in particular the terminal emulation routines, Leo Schwab who discovered means to use interleaved screen bitmaps in a system-integrated manner and to Nicola Salmoria whose invaluable assistance helped to reduce the incredible number of bugs lurking in the source code.

The xpr-libraries were created by Terence Finney (‘`bplus`’), Kenneth Osterberg & Markus Pietz (‘`jmodem`’), Marco Papa & Stephen Walton (‘`kermit`’), Jack Rouse (‘`quickb`’), Marc Boucher (‘`xmodem`’), Ueli Kaufmann (‘`ascii`’, ‘`ymodem`’ & ‘`vms`’) and Rick Huebner & William M. Perkins (‘`zmodem`’).

The xpr-standard was created by Willy Langeveld, the quicksort routine (‘`QuickSort.asm`’) was written by David Jones.

The current implementation of the external terminal emulation library interface was developed by Ueli Kaufmann, who also wrote the external terminal emulation libraries supplied with ‘term’. Without the invaluable help of Martin Berndt the library interface would probably not be working at all.

Since time did not permit me to translate the full original German documentation into English, I had asked the Z-Net Amiga community for help. As a result this document was translated by three different authors (in order of translation): me, Marc Schroer and Henning Hucke. Garry Glendown took care of the original termRexx documentation – thanks to all of you!

The beta tester group, consisting of Alfredo Rojas, Andreas Kirchwitz, Andrew Harrison, Bernd Ernesti, Chris Hanson, Chris Mattingly, Dabe Murphy, Dean S. Pemberton, Holger Lubitz, Joel E. Swan, Julian Matthew, Kai Iske, Kay Gehrke, Keith A. Stewart, Keith Christopher, Leon D. Shaner, Mark Constable, Martin Bernd, Matti Rintala, Peer Hasselmeyer, Piotr Kaminski, Robert L. Shady, Sebastian Delmont, Stefan Becker, Stefan Hudson and Yves Perrenoud, took care of testing the program – thank you very, very much!

# 6 Source code

Since there are still only very few well-documented examples (or general programming examples) for Kickstart 2.x and Kickstart 3.x I have decided to include the full ‘C’ source code with the ‘term’ distribution.

The source code is *not* intended for commercial use. If you are about to include portions in commercial programs you will need to ask me for permission. Still you may use parts of the source code for non-commercial software development without my consent.

I sincerely hope that the release of the full ‘term’ source code will give Kickstart 2.x a better start (I’ve overcome quite a lot of obstacles) so that more programs to use the new OS features will be available soon.

# 7 Program updates

Whenever a new release of ‘term’ becomes available I will try to make it known in the telecommunications networks. To order a copy send a self addressed envelope, the equivalent to DM 7,- (cash or cheque) and two 3.5" double density disks/one 3.5" high density disk to the author.

The most current ‘term’ release will be available through ftp from `ftp.informatik.uni-oldenburg.de` (`134.106.1.9`), look into the ‘`/pub/amiga/term`’ directory.

New program releases will be announced in the ‘`comp.sys.amiga.datacomm`’ newsgroup.

Whereever possible, I will include PGP signature certificate files with the binaries to ensure their authenticity.

# 8 Documentation and online help

'term' comes bundled with a number of documentation files, these are:

'term.doc'
: Human-readable english program documentation in standard ASCII format.

'term.guide'
: English program documentation in AmigaGuide(tm) format suitable to submit to 'AmigaGuide' or 'MultiView'.

'termRexx.doc'
: Human-readable english 'term'~ARexx interface documentation in standard ASCII format. This file describes all the ARexx host commands 'term' supports and also gives a brief introduction how to use them.

'termRexx.guide'
: English ARexx interface documentation in AmigaGuide(tm) format suitable to submit to 'AmigaGuide' or 'MultiView'.

'xprascii.doc ... xprzmodem.doc'
: Human-readable documentation on the XPR transfer libraries supplied with 'term'.

In addition to the pure ASCII files documentation files are available in TeX-DVI format and Postscript. As space requirements do not permit to include them on the distribution disks they are only available directly from the author.

'term.dvi'
: English program documentation in a format suitable for printing using a utility to print TeX-DVI-output files, such as supplied with the packages AmigaTeX(tm) or PasTeX.

'term.ps'
: English program documentation in Postscript(tm) format. This file was generated from 'term.dvi' using the 'dvips' utility.

'termRexx.dvi'
: English ARexx interface documentation in a format suitable to printing using a utility to print TeX-DVI-output files, such as supplied with the packages AmigaTeX(tm) or PasTeX.

'termRexx.ps'
: English ARexx interface documentation in Postscript(tm) format. This file was generated from 'termRexx.dvi' using the 'dvips' utility.

In order to take advantage of the online-help feature, Kickstart 3.0 and the file 'term.guide' are required. Copy the file to the drawer the 'term' main program is located in and configure the ''term' help text file' settings (see Section 14.10 [Path panel], page 50) to point to PROGDIR:term.guide. Once this has been done, pressing the Help key in any window to support online help will bring up context sensitive online help.

There is a copyrighted, freely distributable AmigaGuide release available which will run on Kickstart 2.04 installations. As of this writing it does not work properly with 'term', this is why 'term' requires the AmigaGuide release included with Workbench 3.0.

# 9 Foreign language support

'term' supports foreign language text catalog tables as introduced with Workbench 2.1 '`locale.library`'. As of this writing there is only a german translation of the program text available. If you wish to create your own national translation table you should consult the program source code file '`term-blank.ct`' which is a blank translation table. Before actually starting to fill in the translation table you should contact me first; there may already be someone preparing a translation. However, you should keep in mind that once you have created a foreign language translation of the program text I may ask you to update your translation for a future program release.

Once you are done with the translation table, send it to me on disk or via eMail, *don't compile the catalog on your own!*.

# 10 Workbench and Shell

The program can be started both from Workbench and from Shell. Kickstart 2.04 (revision 37.175) and Workbench 2.04 (revision 37.67) are required to run 'term'.

The 'behaviour' of 'term' can be changed by adding tool type entries to the corresponding Workbench icon or by specifying additional command line parameters when running the program from the Shell. Supported keywords are:

'WINDOW'
: The console window specifier to be used when opening terminal output windows (this will override the default settings). The default is `CON:0/11//100/term Output Window/CLOSE/SCREEN TERM`.

'PUBSCREEN'
: The name of a public screen to open the 'term' window on. In case the public screen happens to be unavailable, 'term' will fall back to the Workbench screen. Note that 'term' assumes that the main window is to be opened on a public screen rather than on a custom screen if this option is in effect, regardless how the default settings may be configured.

'STARTUP'
: The name of an ARexx script file to be run on program startup.

'PORTNAME'
: The ARexx host port name 'term' is to use instead of the built-in default name. The port name will be translated to upper case characters as required by the ARexx host port naming convention. The resulting name must be unique or 'term' will fall back to its built-in default name.

'SETTINGS'
: This keyword determines where to read the default configuration file from. In order to read it from '`Work:term/config`', one would use `term Settings Work:term/config` from Shell or add the tooltype entry `SETTINGS=Work:term/config` from Workbench. This argument does not necessarily need give the name of a path to search, but can also specify the name of the configuration file to be used.

'UNIT'
: Similar to the '`DEVICE`' keyword the '`UNIT`' keywords affects the serial driver settings. It determines which serial driver unit is to be used instead of the one specified in the default configuration file. In order to use unit number 4 one would use `term Unit 4` from Shell or add the tooltype entry `UNIT=4` from Workbench.

'DEVICE'
: In order to use a different serial device driver than the one specified in the default configuration file, use this keyword. To use `duart.device` one would use `term Device duart.device` from Shell or add the tooltype entry `DEVICE=duart.device` from Workbench.

'QUIET' If this parameter is present, the program will not start opening a display but rather put an icon on the Workbench backdrop, waiting to be invoked. A double-click will bring it to life. This parameter will be ignored in case the STARTUP-Parameter is used along with it.

'SYNC (Shell only)'
If called from Shell 'term' will detach itself immediately allowing the Shell window to be closed afterwards. This effect can be avoided if SYNC is entered in the command line.

'NEW (Shell only)'
Usually, running 'term' twice will cause the screen of the other program to be popped to the front instead of creating a second 'term' process. To avoid this effect, enter NEW as a calling parameter. If called from Workbench, each program will run as a separate process.

# 11 Keyboard control

To operate a gadget, press the key corresponding to the letter highlighted in the gadget label. Suppose a slider is labeled `Baud rate` with the letter `r` of the word `rate` underlined; in order to increase the slider value one had to hit the key labeled `R`, to decrease the value one is to hold down either `Shift` key while pressing the key `R`.

With some requesters and windows string gadgets will be auto-activated. Pressing the `Return` key will cycle through all the available strings gadgets, holding down either `Shift` key will break the cycle.

# 12 Screen

Unless configured to open only a simple window on a public screen the 'term' main screen will alway open to the full text-overscan size (which can be set using the '`Overscan`' tool in the '`Prefs`' drawer).

At the bottom of the screen a small window displays a few basic parameters. These are:

'`Status`' The current program operating status. This includes '`Ready`', '`Holding`' (`Control + S` was pressed), '`Dialing`' (the dialing function is at work), '`Upload`' (data is being sent), '`Download`' (data is being received), '`Breaking`' (a break signal is transmitted across the serial line) and '`Hanging up`' (connection is being cancelled).

'`Font`' The currently active screen font used for text/graphics rendering.

'`Protocol`'
The currently set data transfer protocol.

'`Emulation`'
The currently active terminal emulation mode.

'`Baud rate`'
The data transfer rate in bits per second.

'`Parameters`'
The current serial parameters (Data bits-Parity-Stop bits).

'`Time`' The current time of day.

'`Online`' The time elapsed after a connection was successfully established. This counter will be stopped as soon as the connection is cancelled (e.g. by hanging up) and is reset to 00:00:00 as soon as a new connection is made.

Every five seconds the time display will change to a calling fee display and the other way round.

The screen itself is opened as a public screen (called `TERM`) which is available to other programs for their purposes. If more than one 'term' process is running, the public screen name will change according to the number of the program (i.e. the first 'term' to be started will call the scren `TERM`, the second one will call it `TERM.1`, the third one `TERM.2`, etc.). The screen title bar will also display the name of the public screen.

# 13 Menus

For each requester and input window there exists a set of menu items to execute the commands associated with the buttons, dials and gauges in the requester/window. Press the right mouse button to have a look at the commands and their shortcuts.

The following text is to describe the menu items available in the 'term' main menu.

## 13.1 Project

'`Save screen as Picture/Text`'
: This menu serves to save the current terminal window contents either as plain ASCII text file or as a picture file.

'`Print Screen/Clipboard`'
: These menu entries are to output text on the printer. You can either print the contents of the main screen or the contents of the clipboard.

'`Capture to File/Printer`'
: Selecting one of these menu entries will toggle capturing incoming text to the printer and/or a file on disk.

'`Iconify`'
: Closes all screens and windows 'term' has currently open, resets and releases the serial driver and puts an icon into the Workbench window. Double-clicking this icon will cause 'term' to wake up and to return the state is was in before iconification took place.

*While 'term' is iconified, most incoming ARexx-commands will be queued and the corresponding ARexx programs will appear to 'hang'. In order to reactivate the program either double-click on the program icon or send the ARexx command* `ACTIVATE`*. As soon as 'term' is 'awake' again pending commands will be processed again*

'`About`'
: Shows some information on the program.

'`Quit`'
: Terminates the program, hold down a `Shift` key to quit immediately, otherwise you will be prompted to confirm your decision.

After selecting the '`Quit`' menu item the program may take a few seconds to exit since the contents of the Chapter 16 [Text buffer], page 71 are freed first.

## 13.2 Edit

'Copy' In order to transfer any currently marked screen text to the clipboard buffer, select this menu item. Text can be marked by double-clicking the select button while the mouse is over a word or by clicking the select button and dragging the mouse. Holding down either shift key will append the selected text to the current clipboard contents. In any other case the new text will replace the previous contents.

'Paste' Pastes the contents of the clipboard at the current cursor position provided that the clipboard contains text data. Hold down either `Shift` key to have 'term' include the 'Paste prefix' and the 'Paste suffix' (see Section 14.6 [Clipboard panel], page 44) along with the clipboard contents.

'Clear' Any currently marked text will be released as soon as any rendering operations are to be executed in the main window. To release marked text manually, select this menu item.

## 13.3 Commands

'Execute AmigaDOS command'
Enter the command you want to execute and its command line arguments here.

'Execute ARexx command'
This function calls the ARexx server to execute a script file. If the first input character is a ' or " the input will be considered as a small program in a single line. Note that this function will not be available if the ARexx server isn't running.

The ARexx command set supported by 'term' is described in the 'term' ARexx interface documentation.

## 13.4 Phone

'Phonebook'
The phonebook is one of the most powerful and complex functions of 'term' and will be described later in this document (see Section 15.7 [Phonebook], page 62).

'Redial' Dialing list entries which the dialing routine was unable to establish a connection to are once again passed to the dialer.

'Dial' To dial a single phone number select this menu item. The phone number entered will be passed to the dialing routine.

'Send break'
: Sends a 'break' signal across the serial line.

'Hang up'
: Tells the modem to hang up the serial line.

'Wait...'
: Will cause 'term' to emit the character sequence `<Blank space><Backspace>` every second in order to fool the remote into believing that terminal input is currently taking place.

'Flush receive buffer'
: Tells the serial driver to drop its input buffer contents and resets the state of the internal serial buffers.

'Release serial device'
: The serial driver is released for other programs to use it. A requester will appear which allows you to reopen the serial driver or to quit 'term'.

  If the serial driver has been released by the ARexx interface and has not been reopened yet, this menu item will do it.

If you are still online, the 'Redial' and 'Dial' menu entries will be disabled. In order to make another call, hang up the line first.

## 13.5 Transfer

'Upload ASCII file(s)'
: This is a pure ASCII-file upload. It was added to allow poor BBS programs to receive text files (especially Paragon doesn't seem to like ZModem text file upload).

'Download ASCII file(s)'
: This is a pure ASCII-file download. Refer to 'Upload ASCII file(s)' for features/options of this mode.

'Upload text file(s)'
: Sends a file/files to the remote receiver using the current transfer protocol. If possible this command will 'ask' the transfer protocol to transmit the file(s) in text mode (whatever that means) which may include CR/LF substitution and other gimmicks. Consult the library documentation to find out if your favourite transfer library supports text mode.

'Download text file(s)'
: Request a file/files using the current transfer protocol. Refer to 'Upload text file(s)' for features/options of this mode.

'Edit & upload text file'
: Invokes the currently selected (see Section 14.10 [Path panel], page 50) text editor on a file to be selected using a file requester.

'term' will block and wait until the editor has returned.

After the editor has returned, the user will be asked whether the file edited is to be transferred as plain ASCII or via text upload.

'`Upload binary file(s)`'
: Send a file/files to the remote receiver using the current transfer protocol. True batch upload is supported both through wildcard expressions ('`#?.txt`' will send all files whose names end with `.txt`) or through multiple selection. Refer to the documentation of your favourite transfer library to find out if batch file transfer is supported.

'`Download binary file(s)`'
: Receive a file/files using the current transfer protocol. If the protocol does not support batch download you are required to enter the name of the file to be received. Files which remain empty after the transfer are deleted automatically.

The transfer routines open an information window in which a number of transfer parameters are displayed (see Section 15.5 [Transfer progress panel], page 58).

## 13.6 Buffer

'`Clear buffer`'
: Clears the contents of the Chapter 16 [Text buffer], page 71. Any text will be discarded and *cannot* be recovered. Capture files are not affected by this command.

'`Display buffer`'
: Opens the Chapter 16 [Text buffer], page 71 screen.

'`Close buffer`'
: Closes the Chapter 16 [Text buffer], page 71 screen but does not free the contents.

'`Freeze buffer`'
: This menu entry will, if enabled, stop the Chapter 16 [Text buffer], page 71 from filling up with new text.

'`Open buffer...`'
: Loads the contents of the Chapter 16 [Text buffer], page 71 from a file. If there are still text lines in the Chapter 16 [Text buffer], page 71 a requester will appear giving you the choice to discard the old data, append the new data, or to cancel the action.

'`Save buffer as...`'
: Saves the contents of the Chapter 16 [Text buffer], page 71 to a file. You will be notified if the file to save to exists already (you may discard the old file, append the new data or cancel the action).

More detailed information on the Chapter 16 [Text buffer], page 71 will be given later in this document.

## 13.7 Terminal

'`Clear screen`'
: Clears the whole 'term' screen and moves the cursor to the top left home position.

'`Reset font`'
: Will change the screen font back to the default screen font.

'`Reset styles`'
: Resets all character style attributes (bold, blinking, inverse video, underlined, etc.) and sets the text colour to the default pen.

'`Reset terminal`'
: Use this menu item to reset the state of the entire terminal emulation.

## 13.8 Settings

This is where you adjust the program preferences settings. There is a difference between local and global settings: local settings can also be set by making a connection to a mailbox while global settings are kept even while local settings are active. They have to be changed explicitely.

'`Serial...`'
: See Section 14.1 [Serial panel], page 33

'`Modem...`'
: See Section 14.2 [Modem panel], page 35.

'`Screen...`'
: See Section 14.3 [Screen panel], page 37.

'`Terminal...`'
: See Section 14.4 [Terminal panel], page 40.

'`Emulation...`'
: See Section 14.5 [Emulation panel], page 42.

'`Clipboard...`'
: See Section 14.6 [Clipboard panel], page 44.

'`Capture...`'
: See Section 14.7 [Capture panel], page 45.

'Commands...'
: See Section 14.8 [Command panel], page 47.

'Miscellaneous...'
: See Section 14.9 [Miscellaneous panel], page 48.

'Paths...'
: See Section 14.10 [Path panel], page 50.

'Transfer protocol...'
: This command allows you to specify the transfer protocol library to be employed for up-/downloads.

'Transfer...'
: The transfer options can be changed with this command. If possible a control panel will pop up which allows you to change the current parameters by mouse/keyboard. If the selected transfer protocol does not provide these option hooks, a simple string requester will prompt for input. Consult the documentation of your favourite transfer protocol for legal options and the values to which they can be set.

'Translation tables...'
: See Section 14.12 [Translation panel], page 52.

'Function keys...'
: See Section 14.13 [Function key panel], page 53.

'Fast! macros...'
: See Section 15.1 [Fast macro panel], page 55.

'Hotkeys...'
: See Section 15.2 [Hotkey panel], page 56.

'Speech...'
: See Section 15.3 [Speech panel], page 57.

'Sound...'
: See Section 15.4 [Sound panel], page 57.

'Console window...'
: Whenever an AmigaDOS/ARexx command is executed an output window is opened. This menu item will bring up a requester allowing you to edit the size and position of the window to be opened (consult your AmigaDOS manual for a description of the window position string). If you do not want the window to appear, simply enter 'NIL:'.

## 13.9 Windows

'Status'
: This function opens a window to display program status information. Click the window to update the information:

'`Session start`'
: When was the program started?

'`Bytes received`'
: The number of bytes received.

'`Bytes sent`'
: The number of bytes sent.

'`Connection message`'
: The string returned by the modem when a connection was made.

'`BBS name`'
: If available, the name of the BBS the modem is currently connected to.

'`BBS phone number`'
: If available, the phone number of the BBS the modem is currently connected to.

'`BBS comment`'
: If available, the phone book comment corresponding to the BBS the modem is currently connected to.

'`BBS user name`'
: If available, the user name, as available through the phone book, corresponding to the BBS the modem is currently connected to.

'`Screen size`'
: The size of the terminal output window in characters (columns / rows).

'`ARexx port name`'
: If available, the name of the ARexx host 'term' is currently using.

'`Buffer size (bytes)`'
: The size of the Chapter 16 [Text buffer], page 71.

'`Free memory (bytes)`'
: The amount of free system memory.

'`Review`' A review window is opened which basically displays the same text as the text buffer screen. You can scroll through the text displayed both by mouse (see the right hand side scroller) and by cursor keys.

'`Packet`' Opens an input window in which a single line of characters to be transferred across the serial line can be entered. More on this feature is explained under Chapter 20 [Packet window], page 79 below.

'`Fast! macros`'
: Opens or closes the so-called Section 15.1 [Fast macro panel], page 55. The role of the Chapter 19 [Fast! macros], page 77 will be discussed later in this text.

## 13.10 The quick dialing menu

Note: this menu is available only in case any phone book entries have the special `Quick menu` switch set.

Selecting any item of this menu will cause the corresponding phone number to be dialled.

# 14 Control panels

This where all the control panels employed by 'term' are explained:

## 14.1 Serial panel

This is where the serial parameters may be changed.

'`Baud rate`'
: Transfer speed in bits per second.

'`Bits/char`'
: Number of bits per transferred character (7 or 8).

'`Parity`'
: Serial parity (none, odd, even, mark or space).

'`Stop bits`'
: Number of stop bits (1 or 2).

'`Handshaking`'
: Serial handshaking mode (RTS/CTS, RTS/CTS with DRS signal check, none).

'`Duplex`'
: Determines whether characters are echoed back to the terminal screen or not (full, half = local echo).

'`Buffer size`'
: The number to be specified here allows to set the serial driver I/O buffer size. *Every number you enter here will result in 'term' and the serial driver allocating twice the buffer size (this is only a word of warning for those among us who prefer buffer sizes of 256K and up).*

'`Break length`'
: Length of the break signal given in microseconds.

'`Strip bit 8`'
: For those guys and gals who need it: if this switch is effect each character received or transmitted by 'term' will have its high-order bit cleared.

'`High-speed mode`'
: Activates a special mode of the serial driver which is to skip a couple of internal parity and stop bits checks resulting in higher data throughput rate. *If this switch is turned on, the serial parameters will be reset to 8 bits per char, no parity and 1 stop bit.*

'`Check carrier`'
: 'term' will recognize the `NO CARRIER` message a modem emits when the carrier line signal drops back to low. For maximum safety, 'term' will also check the carrier signal line after

receiving the `NO CARRIER` message if this switch is enabled. This is to make sure that no accidentally appearing string causes confusion.

If this switch is enabled, 'term' will check the carrier signal during file transfers and will abort the transfer if the signal is lost.

*Note: Be sure to switch this feature off in case you wish to transfer files using a null-modem cable!*

'`Shared access`'
: Requested by many (two to be accurate) users, this switch allows you to run the serial driver in shared access mode. Not all driver types will allow this to happen.

'`xON/xOFF`'
: This switch enables the processing of the flow-control characters `xON` (= `Control` + `S`) and `xOFF` (= `Control` + `Q`).

'`Pass ^S/^Q through`'
: If this switch is enabled, 'term' will pass the `xON/xOFF` characters through to the modem rather than swallowing them.

'`Serial device`'
: The name of the serial driver to be used by 'term'. This is usually '`serial.device`' ('`modem?.device`' for the internal Supra modem, '`sxbios.device`' for ASDG's serial IO card).

'`Device unit number`'
: The device unit number of the serial driver selected above. This is usually left '0' but can also be used to address multiple serial IO ports.

'`Quantum`'
: The number of bytes 'term' tries to read in one 'gulp' and runs through the terminal emulation. The more bytes read, the more time it takes to process them. While the text is processed, mouse and keyboard input are not are delayed. So, choose this value carefully.

'`Use`' Accept the current settings.

'`Default (phone book only)`'
: Drop the current settings, making a connection to the corresponding phone number will leave the corresponding main configuration entry unchanged.

'`Cancel`' Don't use the current settings.

Most modems will not recognize a sudden change in the baud rate. Type `AT<RETURN>` to make the change known.

If '`RTS/CTS (DSR)`' handshaking is selected, 'term' will check to see if the `Data set ready` line happens to be high active. If not, it will default back to software handshaking (`xON/xOFF`). The `RTS/CTS` handshaking mode will ignore the presence or absence of the `DSR` signal.

'term' will take advantage of Christopher Whichura's '`OwnDevUnit.library`' if installed in your system, allowing controlled access to the serial driver's resources.

## 14.2 Modem panel

This is where modem control strings and other related parameters are configured.

'`Modem init command`'
: The string to send to the modem after successful program initialization. This string is optional and does not need to be entered.

  The dialing routine will use the initialization string entered here before dialing a phone number.

'`Modem exit command`'
: The string to be sent to the modem shortly before the program terminates. Just like the modem init string this string is optional and does not need to be entered.

  The dialing routine will use the initialization string entered here before dialing the next telephone number.

'`Hangup command`'
: The string to be sent to the modem when asked to hang up the line. This string does have to be present if the '`Drop DTR on hangup`' switch is enabled.

'`Dial prefix`'
: The string to be used to prefix each dialing command. This is usually a variant of `ATDP` or `ATDT`.

'`Dial suffix`'
: The string to be used to append to each dialing command. This is usually the carriage-return character `\r`.

'`'No carrier' message`'
: The message the modem emits if the data carrier is lost. The program uses this to determine the length of the connection and to calculate the how much the user is to pay for it.

'`'Connect' message`'
: The message the modem emits after detecting a carrier signal. 'term' uses this input to determine successful telephone connection, to reconfigure itself and to start the online timer.

'`'No dialtone' message`'
: The message to be returned by the modem in case it does not encounter any dialing tone on the phone line.

'`'Voice' message`'
: The message 'term' is expected to receive if the modem detects a voice call. If in dialing mode, 'term' will abort the process. The user will in any case be notified of the event.

‘‘Ring’ message’
: The message the modem emits if it receives a call, same effects as with the ‘Voice message’.

‘‘Busy’ message’
: The message the modem returns if the number which has just been dialed is busy.

‘‘Ok’ message’
: The message the modem returns if a command was successfully executed.

‘‘Error’ message’
: The message the modem returns if a command was not to be executed successfully.

‘Redial delay’
: The time to wait after walking through the whole dialing list without making any successful connection before another attempt is started.

‘Number of dial retries’
: The number of times the dialer walks through the dialing list trying to make a successful connection before giving up.

‘Dial timeout’
: The time to wait for a successful connection during dialing. After this time has elapsed, the dialer will skip to the next entry in the list.

‘Redial after hanging up’
: If this switch is in effect, ‘term’ will redial all the phone numbers still in the dialing list as soon as the line is hung up or the carrier signal is lost.

‘Connect auto-baud’
: Most modems echo the baud rate upon successful connection. If enabled the baud rate will be read and set for the serial driver.

*Use this feature with care as it may have certain negative side-effects (such as the modem dropping the line just after connecting to a BBS)! If you happen to use a modern high-speed modem you will most certainly not need this feature. If in doubt whether you need to enable this feature you should rather disable it!*

‘Drop DTR on hangup’
: Some modems will track the `data terminal ready` line in order to make sure that the terminal program is listening, once the line goes back to low potential, these modems will drop the line and hang up. Use this button to enable this feature.

‘‘NO CARRIER’ = ‘BUSY’’
: If this switch is in effect, the dialing function will treat the modem response code `NO CARRIER` exactly as the `BUSY` response code.

‘Connect limit’
: This gauge is to set a certain period of time to be counted after a connection is made. When elapsed, a control sequence will be executed as to be set using the `Limit macro` settings. If set to `0:00` this function will be disabled.

'`Limit macro`'
A control sequence to be triggered when the time to be set using the `Connect limit` gauge has elapsed. If no text is entered this function will be disabled.

'`Time to connect`'
'term' cannot measure the time to pass between the remote modem picking up the line and the local modem sending the 'CONNECT' message. This slider allows to set the length of this interval. Upon connection, it will be added to the total online time.

'`Use`' Use the current settings.

'`Default (phone book only)`'
Drop the current settings, making a connection to the corresponding phone number will leave the corresponding main configuration entry unchanged.

'`Cancel`' Keep original settings.

## 14.3 Screen panel

'`Display modes`'
All display modes available for the main screen are displayed here.

*The A2024-modes should only be used in connection with an A2024/Hedley-monitor. Otherwise the screen may 'crash' and working with 'term' will not be possible any longer.*

'`Colour`' This button determines the colour-mode the terminal emulation is going to use. Until now, three modes have been implemented:

'`4 Colours (Amiga)`'
Four colours, optionally blinking.

'`8 Colours (ANSI)`'
Eight colours, optionally blinking.

'`16 Colours (EGA)`'
Sixteen colours, as the EGA-palette, optionally blinking.

'`2 Colours (Monochrome)`'
Monochrome, two colours.

'`Palette`'
These buttons are used to select a colour of the screen palette that is to be changed.

'`Red/Green/Blue`'
Use these sliders to modify the red, green and blue components of the currently active colour.

'`Use default colours`'
Press this button to have the current colour palette set to the built-in default colours.

'Screen font'
: The name of the current user-interface font is displayed here.

'Select new screen font'
: Press this button to select a new font to be used for the user-interface design.

'Make screen public'
: As dealt with before, the 'term' mainscreen is opened as 'public'. With this button the user may define if other applications are allowed to open up their windows on the 'term' screen.

''Shanghai' windows'
: This item, which is only displayed if 'Make screen public' has been selected, is closely related to the function before. If active, all windows that will normally be displayed on the Workbench screen will open on the 'term' main screen.

'Blinking'
: If selected the VT100-blink option is enabled. If running in eight colour mode, 'term' will only use three bitplanes instead of four for text display.

'Faster layout'
: Activating this switch will slow down display updates and window management. Oh well, not always, there may be a speed increase with some configurations, such as with external emulations activated or when using more than four colours on the screen.

I suggest to experiment with the effects of this button before actually using it.

'Screen title'
: If this button is enabled, the 'term' screen will contain a draggable title bar, if not, the title bar will be disabled, leaving more space for the terminal output window.

'Use public screen'
: 'term' does not necessarily open a custom screen, this switch will make the main and auxilary windows appear on a named public screen. 'term' will try to adapt colours and text rendering modes to its new environment. It will share the screen palette with other applications which makes it possible to run the built-in terminal emulation in eight or sixteen colours provided that enough shareable screen pens are available (note: Kickstart 3.0 required). 'term' will inherit the text font to be used for user-interface layout from the public screen it will open its window on. As of Kickstart 2.04 'term' will fall back to opening a custom screen in case the public screen text font happens to be proportional-spaced.

*Note: only the built-in terminal emulation is guaranteed to take advantage of pen-sharing facilities, external emulation libraries will most likely fail to display text correctly!*

Take care when resizing the 'term' main window as a size change will reset the terminal emulation.

'Public screen name'
: The name of the public screen 'term' is to open windows on. 'term' will fall back to the Workbench screen if no proper name is given (i.e. no name is entered) or the desired screen is unavailable.

`Status line`
: This switch allows to disable the status line display or to change between two alternative status line displays:

  `Disabled`
  : No status line is displayed.

  `Standard`
  : The standard two status lines are displayed.

  `Compact`
  : A very condensed version of the status line is displayed, only the data is shown but no captions. The data is displayed in the following order:

    1. Status
    2. Terminal type
    3. Transfer protocol
    4. Baud rate
    5. Serial parameters
    6. Time of day
    7. Online time

`Online display`
: This switch determines what type of information is to be displayed in the bottom right corner of the status display:

  `Online time`
  : The time online

  `Online cost`
  : The amount of money to be paid for the connection

  `Time & cost`
  : Both time and money, the display will toggle between both of them every five seconds.

`Use`
: Use the current settings.

`Default (phone book only)`
: Drop the current settings, making a connection to the corresponding phone number will leave the corresponding main configuration entry unchanged.

`Cancel`
: Keep the old settings.

Some display modes (such as Super-Hires, Productivity, etc.) restrict the number of screen colours on ECS machines. Instead of 16 bit fractions for red, green and blue only 2-bit fractions are used which leads to a maximum width of the palette of at all 64 colours. This is not a 'feature' of 'term', but a hardware restriction.

## 14.4 Terminal panel

All settings that may be done here determine the behaviour of the terminal itself, i.e. how command sequences are interpreted and displayed.

`Bell` This is where you select the action(s) 'term' is to take whenever a `bell` character turns up in the data stream:

- `Visual` The screen will flash.
- `Audible` An audible signal will be generated.
- `Visual & audible` A combination of both effects.
- `Ignore` Nothing will happen.
- `System default` The system beep routines will be used.

`Alert` 'term' notifies the user of certain events, such as a connection being established or a file transfer action which has just been finished. This switch allows you to select the type of notification:

- `Bell` A bell signal will be given.
- `Screen` The 'term' screen will be brought to the front.
- `Bell/Screen` A combination of the two actions above.
- `None` Nothing will happen.

`Emulation`

At this point the user may select the terminal emulation. First there is a solid VT102/VT220/ANSI emulation which supports all common commandsequences, then there is a so called `Atomic` emulation which does only support the very basic command-sequences (CR, LF, Backspace, etc.), all VT102- and ANSI-command-sequences are suppressed, and, last but not least, a `TTY`-emulation which does not suppress all command-sequences, as `Atomic` does, but rather echoes them to the screen.

In addition to the built-in terminal emulation, 'term' also supports external terminal emulations. To select one, set the terminal emulation type to `External` and enter the name of the emulation in the string gadget below (the file may alternatively selected by hitting the `Select new emulation` button). In case anything goes wrong loading or initializing the terminal emulation library, 'term' will switch back to the built-in `ANSI/VT` emulation.

If in hex-mode the program will display all incoming characters in a special notation. The left hand screen side will show the character code in hexadecimal notation, the right hand side will – if possible – display the character as a glyph.

'Emulation name'
: The name of an external terminal emulation library to be used by 'term' instead of the built-in emulation code.

'Font'
: Here the type of the font to be used for text display in the terminal window can be selected:

  'Standard'
  : The standard text font.

  'IBM-PC style'
  : A font similar to the IBM-PC text font will be used. *This requires the 'IBM.font' to be present in the 'Fonts:' directory.* No matter how the translation tables (see Section 14.12 [Translation panel], page 52) are configured, outgoing Amiga characters are translated into PC character values.

  'IBM-PC style (raw)'
  : This selection has very much the same effect as 'IBM-PC style' but no character translation is involved.

'Text font'
: Here the name of the standard terminal window text font is displayed.

'Select new text font'
: Press this button to select a new terminal window text font.

'Send CR'
: This button determines the sequence that is sent to the remote if a carriage-return is issued.

  'As CR'
  : Without any change

  'As CR+LF'
  : Carriage-return and linefeed

  'Ignore'
  : Suppress any carriage-return

'Send LF'
: This button determines the sequence that is sent to the remote if a linefeed is issued.

  'As LF'
  : Without any change

  'As LF+CR'
  : Linefeed and carriage-return

  'Ignore'
  : Suppress any linefeed

'Receive CR'
'Receive LF'
: These two buttons have largely the same effect as the Send CR/LF buttons, they are different in that they affect the incoming data rather than the data transmitted.

'Columns'
: The number of columns to use for the terminal window. The minimum value is 20 columns, the maximum value is defined by the actual screen size.

'Lines'
: The number of lines to use for the terminal window. The minimum value is 20 lines, the maximum value is defined by the actual screen size.

'`Keymap file`'
If your installation requires that 'term' is to use a custom keymap layout, enter the keymap file name here.

*At the time of this writing the program will not support custom keymap layouts with the* *Chapter 20 [Packet window], page 79* *due to operating system limitations.*

'`Use`' Use the current settings.

'`Default (phone book only)`'
Drop the current settings, making a connection to the corresponding phone number will leave the corresponding main configuration entry unchanged.

'`Cancel`' Keep the old settings.

## 14.5 Emulation panel

The buttons found here allow you to change the internal parameters of the selected emulation.

The following text only describes the parameters to change when using the built-in terminal emulation; if an external terminal emulation is in effect, this menu will conjure up the corresponding parameters menu supported by the external terminal emulation module.

'`Cursor keys`'
If this mode is active the cursor keys transmit a command-sequence instead of a cursor move event. If the remote computer needs these sequences, this mode – applications mode – can be activated with this button.

'`Numeric keypad`'
If this mode is activated the keys of the numeric keypad transmit a command-sequence instead of a number. If the remote computer needs these sequences, this mode – applications mode – can be activated with this button.

'`Wrap cursor moves`'
According to the VT100-specification the cursor movements have to stop at the edges of the screen. In spite of this the cursor may leave these borders, especially in ANSI-mode, and may appear at the other side of the screen. This button activates a more 'tolerant' mode.

'`Wrap characters`'
This function activates the automatical carriage return function which is triggered as soon as the cursor crosses the right screen margin. To avoid unpleasant side-effects, this gadget should be activated all the time.

'`'CLS' resets cursor position`'
: As per the VT-100 specs, the control sequence to clear the screen is not to change the current cursor position. However, several applications expect it to be moved to the top left corner of the screen. This button will activate this behaviour.

'`Insert mode`'
: Normally, 'term' is in overwrite-mode (characters entered overwrite the contents of the screen). If this gadget is activated, typed characters are inserted by pushing all the characters right of the cursor towards the right margin.

  *The insert-mode does only work for lines. If characters are pushed out of the screen they cannot be restored.*

'`New-line mode`'
: This gadget activates a special mode in which some VT100-control-sequences cause 'term' to perform a linefeed instead of clearing the screen or other serious changes of the contents of the screen.

'`Font scale`'
: VT-100 offers several different sizes of fonts. Some can be selected with this gadget:

  '`Normal`' The normal height of the font.

  '`Half width`'
  : Half width of font.

'`Scrolling`'
: This button selects one of two different scrolling modes: smooth or jumping.

'`Destructive backspace`'
: Determines if the `Backspace` code, which will delete the character left from the cursor, only moves the cursor to the left or removes the character from the screen.

'`Swap 'Backspace' and 'Del' keys`'
: For all VT100 groupies: if this switch is enabled the roles of the backspace key and the delete key are reversed. *This also applies to sequences such as* `Control + H` *which will produce a delete character instead of a backspace character.*

'`Printer control enabled`'
: 'term' supports the standard VT220 printer control commands. If you don't want the application on the other side of the line to play with the printer the printer support commands can be disabled with this switch. If disabled 'term' will act like a VT220 terminal with no printer attached.

'`Answerback message`'
: The string to send across the serial line whenever an `ENQ` character is received. The string is – as usual – a command sequence.

'`Use`' Use the current settings.

'Default (phone book only)'
: Drop the current settings, making a connection to the corresponding phone number will leave the corresponding main configuration entry unchanged.

'Cancel'
: Keep the old settings.

## 14.6 Clipboard panel

'Clipboard unit'
: The clipboard supports several units (0-255) which can be accessed independently. It can make sense to change this value but generally you will probably leave it as unit '0'.

'Character delay'
: When sending text this number determines how many seconds to wait before sending the next character.

'Line delay'
: When sending text this number determines how many seconds to wait before sending the line-termination character (carriage return).

'Line prompt'
: The character to wait for the receiver to issue after a line of text is send. These character may include control sequence tokens.

'Send timeout'
: If the 'Text pacing' mode is set to 'Wait for echo' or 'Wait for line prompt' the maximum time to wait for echo/prompt before the insertion is aborted.

'Text pacing'
: The mode to determine how text is sent to the remote:

  'Direct'
  : Each line will be sent without any delay.

  'Wait for echo'
  : The program will wait for each single character sent to be echoed by the remote.

  'Wait for any echo'
  : The program will wait for the remote to return any character in response to any character sent. Typically, this is the case with password prompts issued by BBSes.

  'Wait for line prompt'
  : The program will wait until the remote sends a certain line prompt text.

  'Character/line delay'
  : The program will respect the character/line delay values to be set using this control panel.

'Keyboard delay'
The program will send character separated by a delay to be determined by the current system keyboard repeat delay.

*Note: the 'echo' text pacing mode is to be used with greate care. Certain online services do not echo characters back to the sender as they run only in half-duplex mode. On the other hand most mailbox programs will not echo certain characters, such as escape codes, etc.*

'Paste prefix'
If enabled, the text to send before the clipboard contents are fed into the input stream, see Chapter 17 [Clipboard], page 73.

'Paste suffix'
If enabled, the text to send after the clipboard contents are fed into the input stream, see Chapter 17 [Clipboard], page 73.

'Use' Use the current settings.

'Default (phone book only)'
Drop the current settings, making a connection to the corresponding phone number will leave the corresponding main configuration entry unchanged.

'Cancel' Keep the old settings.

## 14.7 Capture panel

'Log actions'
If enabled will write a protocol of each program action (uploads, downloads, dial attempts, etc.) to a file. Each action is listed along with time and date. Carrier-lost events will also note the approximate cost of the call.

'Log file'
The name of the file in which the information on the actions executed by 'term' will be logged if 'Log actions' is enabled.

'Log calls'
If this switch is enabled, 'term' will create call-log files in a format compatible with the 'NComm' terminal program.

'Call log file'
The name of the file in which the information on calls made by 'term' will be logged if 'Log calls' is enabled.

'Maximum text buffer size'
To save memory, a high-water mark concerning the maximum amount of memory the Chapter 16 [Text buffer], page 71 will allocate for text may be specified. The minimum value to

be entered here is 2,000 bytes which are roughly equivalent to two Chapter 16 [Text buffer], page 71 pages of text. A value of 0 will cause the Chapter 16 [Text buffer], page 71 to always allocate as much memory as required to buffer all the incoming text.

'`Text buffer enabled`'
: This switch works in conjunction with the '`Freeze buffer`' menu entry (freezing the Chapter 16 [Text buffer], page 71 contents). In fact, the menu entry is adjusted according to the configuration settings whenever a new configuration is invoked (that is, whenever a new connection is made through the dialing panel or at program startup time). *'term' will only freeze the buffer if this switch is set, it will leave the buffer state (frozen or not) untouched if this switch is not enabled.*

'`Text buffer file path`'
: The path the file requester will bring up when saving the contents of the text buffer.

'`Connect-auto-capture`'
: If enabled will automatically open a capture file after successfully making a connection. Any other already open capture file will be closed before proceeding. The files created will bear the names of the corresponding phonebook entry, the first line to be written to tell the time and date when the file was opened.

'`Creation date`'
: By default 'term' will append the date of the call made to the name of the auto-capture file created. Alternatively, 'term' will use only the BBS name for auto-capture files, including creation date lines in the file.

'`Capture filter enabled`'
: If selected, command sequences are filtered out before the incoming characters are captured to disk or printer.

'`Capture file path`'
: This string gadget contains the path in which the the capture files will be created if '`Connect-auto-capture`' is enabled.

'`Open buffer window`'
: This switch controls which part of the text buffer contents the review buffer window will display when opened:

  '`Top`' Displays the top of the buffer contents.

  '`End`' Displays the end of the buffer contents.

'`Remember window position`'
: If this switch is in effect, the program will remember the text display position between calls rather than jumping to the top or the end of the text buffer.

'`Open buffer screen`'
: This switch controls which part of the text buffer contents the review buffer screen will display when opened:

'Top' Displays the top of the buffer contents.

'Remember'
Keeps the previous buffer position.

'End' Displays the end of the buffer contents.

'Remember screen position'
If this switch is in effect, the program will remember the text display position between calls rather than jumping to the top or the end of the text buffer.

'Buffer screen position'
The buffer screen will usually not be quite as wide as the system overscan settings permit. This switch determines the horizontal placement of the screen:

'Left' The screen will be left-edge aligned.

'Centre' The screen will be centred.

'Right' The screen will be right-edge aligned. This will bring the screen depth arrangement gadget in line with the other screens.

'Buffer line width'
The text buffer stores lines at a fixed size, this slider determines the maximum line width.

'Use' Use the current settings.

'Default (phone book only)'
Drop the current settings, making a connection to the corresponding phone number will leave the corresponding main configuration entry unchanged.

'Cancel' Keep the old settings.

## 14.8 Command panel

Here you will find entries for four command sequences which serve four functions:

'Startup/Login macro'
At the beginning of every session with 'term' and after a connection has been established by the dialing routine a command-sequence is executed which may execute command-files or perform a automatical 'login'.

'Logoff macro'
The macro to execute when the line is hung up or the carrier signal is lost.

'Upload macro'
'term' will execute this macro after a successful upload has been made.

'Download macro'
: 'term' will execute this macro after a successful download has been made.

'Use' Use the current settings.

'Default (phone book only)'
: Drop the current settings, making a connection to the corresponding phone number will leave the corresponding main configuration entry unchanged.

'Cancel' Keep the old settings.

## 14.9 Miscellaneous panel

This is the place where options can be set which would not fit into other control panels

'Program priority'
: Use this slider to determine the priority under which the 'term' main process is to operate. Adjusting this value can make 'term' perform more reliably in a system which experiences heavy task loading. It is recommended to play with this value until a satisfactory state is found, setting the program priority too high or too low may affect the performance of coprocess-services such as the double-buffered file I/O routines.

'Backup configuration'
: By default the local program configuration saved along with a phonebook entry will replace the global configuration as soon as a successful connection is made. If this switch is enabled, 'term' will remember the global configuration in effect before the configuration data of a phonebook entry is adopted. As soon as the serial driver loses track of the carrier signal or the user chooses to hang up the line, 'term' will switch back to the previous global configuration.

'Show fast! macros'
: If this switch is enabled, the Section 15.1 [Fast macro panel], page 55 will be opened whenever the current configuration becomes active (e.g. at startup time).

'Release serial device when iconified'
: By default the serial device driver is released when 'term' is iconified. Unfortunately, some modems drop the line when the device is closed so this switch allows you to keep the link.

'Override transfer path'
: Each batch file transfer protocol allows you to specify the name of the directory to place the files it receives in. By default 'term' will redirect the files to a directory to be specified in the Section 14.10 [Path panel], page 50. If this switch is disabled, the internal settings of the current transfer protocol will be used.

'Use auto upload panel'
: Some users found the so-called 'ZModem auto-upload panel' to be invoked whenever 'term' encounters the ZModem inquiry sequence rather disturbing, this switch will allow them to disable this feature.

'Transfer performance meter'
: When a file transfer is running, 'term' may optionally display the file transfer performance in a small resizable window. The lines drawn represent the following information:

  - Black line — This line displayes the current transfer performance (usually heavily oscillating).
  - Blue line — This line displays the average transfer performance.
  - White line — This line displays the smallest transfer performance (should be constant during the transfer).

'Set 'archived' bit'
: If enabled, this switch will cause 'term' to set the `Archived` bit on files transferred using the XPR-interface.

'Transfer file icons'
: This switch works in conjunction with the drag & upload feature (see Section 15.5 [Transfer progress panel], page 58). By default, 'term' will upload only the files whose icons are dragged on the main window, if this switch is in effect the icon files will be transferred as well.

'Create icons'
: If this switch is in effect 'term' will try to provide icons for all files it receives. The following file types (and the corresponding icon files) are supported:

  - Text file — icon 'ENV:sys/def_text.info'
  - Sound file — icon 'ENV:sys/def_sound.info'
  - Picture file — icon 'ENV:sys/def_picture.info'
  - Tool — icon 'ENV:sys/def_tool.info'
  - Archive file — icon 'ENV:sys/def_archive.info'
  - Preferences file — icon 'ENV:sys/def_pref.info'
  - Other file types — icon 'ENV:sys/def_project.info'

  Text and pictures saved by the program will also get icons attached.

'File comment'
: This is where the action to perform on downloaded files can be set:

`Ignore` The file comment will not be touched.

`File type`
: The file will be examined and a guess will be made which type of file it is. The file comment will be set to the name of the file type.

`Source and time`
: The current BBS name and the time the file was received are placed in the file comment.

`Simple file I/O`
: This switch controls whether 'term' is to use double-buffered file management routines or not.

`Use` Use the current settings.

`Default (phone book only)`
: Drop the current settings, making a connection to the corresponding phone number will leave the corresponding main configuration entry unchanged.

`Cancel` Keep the old settings.

## 14.10 Path panel

In this part of the settings all paths, which 'term' uses to save or load any data, can be determined.

`...Uploadpath`
`...Downloadpath`
: The directories in which the functions contained in the `Transfer` menu will search and create files.

`Configuration storage directory`
: The directory that will contain all configuration files (Phonebook, Macrokeys, etc.). The default configuration file is called `term.prefs` and will be searched in the path defined by the enviroment variable `TERMCONFIGPATH` (see Chapter 21 [Environment variables], page 81).

`Text editor`
: Contains the name and search path of the editor used by `Edit & upload text file` in the Section 13.5 [Transfer], page 27 menu.

`"term" help text file`
: This is where the name of the online-help text file is stored. By default this is `PROGDIR:term.guide`.

`Use` Use the current settings.

`Default (phone book only)`
: Drop the current settings, making a connection to the corresponding phone number will leave the corresponding main configuration entry unchanged.

`Cancel` Keep the old settings.

## 14.11 Transfer panel

This is where the libraries to be employed for file transfers are to be selected.

`Default transfer library`
: This library will be active most of the time, unless a special library is temporarily enabled. Auto-downloads and auto-uploads will be handled by this library, even if you select a text transfer in the auto-upload panel.

`ASCII upload library`
: The XPR library to be used when sending plain ASCII text as triggered by seleting the `Upload ASCII file(s)` menu item. This is usually `xprascii.library`. If no name is given, the `Default transfer library` will be used.

`Use built-in upload routine`
: If this switch is enabled, 'term' will ignore the `ASCII upload library` settings and use a built-in transfer routine instead.

`ASCII download library`
: The XPR library to be used when receiving plain ASCII text as triggered by selecting the `Download ASCII file(s)` menu item. This is usually `xprascii.library`. If no name is given, the `Default transfer library` will be used.

`Use built-in download routine`
: If this switch is enabled, 'term' will ignore the `ASCII download library` settings and use a built-in transfer routine instead.

`Quiet ASCII transfer`
: When a built-in ASCII transfer routine is running, this switch controls whether incoming text will be displayed in the terminal window. You may want to watch how the remote responds to the data sent/received.

`Text upload library`
: The name of the XPR library to be used when selecting the menu item `Upload text file(s)`. If no name is given, the `Default transfer library` will be used.

`Text download library`
: The name of the XPR library to be used when selecting the menu item `Download text file(s)`. If no name is given, the `Default transfer library` will be used.

`Binary upload library`
: The name of the XPR library to be used when selecting the menu item `Upload binary file(s)`. If no name is given, the `Default transfer library` will be used.

'Binary download library'
: The name of the XPR library to be used when selecting the menu item `Download binary file(s)`. If no name is given, the `Default transfer library` will be used.

'Use'
: Use the current settings.

'Default (phone book only)'
: Drop the current settings, making a connection to the corresponding phone number will leave the corresponding main configuration entry unchanged.

'Cancel'
: Keep the old settings.

## 14.12 Translation panel

'term' is capable of replacing any incoming and outgoing character with custom text. This may come in handy with the numerous incarnations of the dreaded IBM PC font. The control panel to be opened features a large list of buttons, each single one representing a single character. Some characters are shown with their corresponding glyphs, some with their symbolic names and some as plain numbers. Clicking on one of the buttons will bring up a control panel which allows setting the text to be received by the terminal emulation when a certain character is received and the text to be sent when a certain characters is transmitted.

Both texts can consist of standard Chapter 18 [Command sequences], page 75, except for the following commands which are not supported: '\a', '\c', '\d', '\g', '\i', '\p', '\u' and '\x'.

Please note that the translation does not come for free, terminal input and output speed may suffer.

As of this writing only a few translation table files (see below) are included in the distribution. If you wish to create translation tables for IBM doorway mode, national IBM-PC style font variants, etc. feel free to send them to me. I will try to include them in the next 'term' release.

Currently included in the 'term' distribution are the following translation table files:

'ISO-4-(GB).prefs'
: British 7 bit (ISO code 4) character set.

'ISO-10-(S).prefs'
: Swedish 7 bit (ISO code 10) character set.

'ISO-11-(S).prefs'
: Swedish 7 bit (ISO code 11) character set.

'ISO-15-(I).prefs'
: Italian 7 bit (ISO code 15) character set.

'ISO-16-(P).prefs'
: Portuguese 7 bit (ISO code 16) character set.

'ISO-17-(E).prefs'
: Spanish 7 bit (ISO code 17) character set.

'ISO-21-(D).prefs'
: German 7 bit (ISO code 21) character set.

'ISO-60-(N).prefs'
: Norwegian 7 bit (ISO code 60) character set.

'ISO-61-(N).prefs'
: Norwegian 7 bit (ISO code 61) character set.

'ISO-69-(F).prefs'
: French 7 bit (ISO code 69) character set.

'PC-8.prefs'
: Character translation for standard IBM-PC style font. If you wish to use these translation tables, make sure to set the 'Font' type in the Section 14.4 [Terminal panel], page 40 to 'IBM-PC style (raw)'.

Unfortunately, there is no translation available for the Norvegian and Danish variants of the PC-8 character set as I do not yet have a fitting Amiga font available. Similar reasons have yet prevented to implement PC-850 character set support.

## 14.13 Function key panel

This control panel allows setting user definable texts for all ten function keys. All texts are considered Chapter 18 [Command sequences], page 75, a topic which will be covered later in this document.

'Modifier'
: All in all 40 keys may be covered with user defined Chapter 18 [Command sequences], page 75. As the Amiga keyboard only has ten function-keys this button switches between the modifier keys (Shift, Control, Alt) which, if pressed in addition which a function key, will execute one of the 40 command sequences.

'Load' Load the function key settings from a file.

'Save' Save the function key settings to a file.

'Use' Use the current settings.

'Cancel' Keep the old settings.

As the definition of the function keys with command sequences contradicts the standard definition of the four functions keys of a VT-100-terminal, the keys `F1-F4`, which may be executed by pressing the `Shift` key and the approriate function-key simultaneously, are mapped to the standard sequences for function-keys. The user may – of course – change these settings.

If an external terminal emulation happens to be active, those function keys the emulation has allocated for itself will be disabled and cannot be edited.

# 15 Cursor key panel

This control panel both works and looks similar to the Section 14.13 [Function key panel], page 53, the only difference is that it is to assign command sequences to the cursor keys rather than to the function keys. Displayed are the assignments for all four cursor keys and the following buttons:

'`Modifier`'
: Any cursor key can be pressed along with one of the modifier keys (`Shift`, `Control`, `Alt`). This button will switch between the different assignments.

'`Load`' Load the cursor key settings from a file.

'`Save`' Save the cursor key settings to a file.

'`Use`' Use the current settings.

'`Cancel`' Keep the old settings.

## 15.1 Fast macro panel

The design and implementation of the settings to be configured in this menu are closely related to the menu entry Section 14.13 [Function key panel], page 53 discussed before, the only difference to be seen in the fact that the fast! macros are mapped to buttons rather than function keys (more on this topic later in this document, see Chapter 19 [Fast! macros], page 77).

'`Macro list`'
: The list of macros entered yet, to edit one of these, select it by clicking the mouse button with the mouse pointer on it.

'`Macro`' The name of a macro by which it is listed in the fast! macro list.

'`Macro code`'
: The command sequence (see Chapter 18 [Command sequences], page 75) associated with a fast! macro. Command sequences are discussed later in this document.

'`New`' Appends a new macro to the list. The user may then select and customize it.

'`Delete`' Removes the currently selected macro from the list.

'`Load`' Loads the macro list from a file.

'`Save`' Saves the macro list to a file.

'`Top`' Places the currently selected macro at the top of the list.

'`Up`' Moves the currently selected macro one entry up.

'`Down`' Moves the currently selected macro one entry down.

'`End`' Places the currently selected macro at the end of the list.

## 15.2 Hotkey panel

This is where the key sequences used to arrange screens and to execute special functions are to be configured.

'`term screen to front`'
: The keys to press to bring the 'term' screen to the front.

'`Buffer screen to front`'
: The keys to press to bring the screen of the Chapter 16 [Text buffer], page 71 process to the front.

'`Skip dial entry`'
: As an alternative to the '`Skip`' button, pressing these keys will skip a dialing entry if the dialing function is currently active.

'`Abort ARexx command`'
: An ARexx script started from within 'term' can be aborted by pressing these keys. Use this function only if pressing `Control + C` does not stop the program execution.

'`Commodity priority`'
: The commodity priority to assign this task to. You may want to change this value if you have more than one program running which uses the same key sequences as 'term'. The program with the higher commodity priority will receive the keystrokes first.

'`Hotkeys enabled`'
: Whether the hotkeys are enabled or not can be toggled by clicking on this button, or by using the '`Exchange`' program to be found in the '`Tools/Commodities`' drawer.

'`Load`' Loads the hotkey settings from a file.

'`Save`' Saves the hotkey settings to a file.

'`Use`' Use the current settings.

'`Cancel`' Keep the original settings.

If any changes made here do not seem to take effect immediately, the user has probably typed a keyword wrong (causing the entire hotkey setup to fail). I'm sorry about this, but the current implementation of hotkey support does not sport error checking.

## 15.3 Speech panel

If enabled, the Amiga speech synthesizer will be used to alert the user of certain actions, such as carrier lost, connection made, etc. This feature makes sense if ‘term’ is running in the background where the user cannot see what is actually happening on the main screen. By default this feature is disabled.

*Note: speech synthesis is no longer available with Kickstart 3.0 and Workbench 2.1!*

‘`Rate`’ Speaking speed in words per minute.

‘`Pitch`’ The greater this value, the higher the voice appears to be speaking.

‘`Frequency`’
Voice frequency in Hertz.

‘`Volume`’ The volume of the voice.

‘`Sex`’ Enabled female or male voice.

‘`Speech enabled`’
Toggles the activity of the speech synthesizer.

‘`Speak!`’ Speaks a small sample text, note that speech must be enabled for this function to work.

‘`Load`’ Loads the speech settings from a file.

‘`Save`’ Saves the speech settings to a file.

‘`Use`’ Use the current settings.

‘`Cancel`’ Keep the original settings.

## 15.4 Sound panel

As an option ‘term’ will associate sounds with special program functions and events. This is where the sounds are configured:

‘`Terminal bell sound`’
The sound to be played whenever a `BEL` character is output on the terminal screen.

‘`'Connect' sound`’
The sound to be played when a connection is established.

‘`'Disconnect' sound`’
The sound to be played when a connection is lost.

'`File transfer finished' sound'
: The sound to be played when a file transfer is finished successfully.

'`File transfer failed' sound'
: The sound to be played when a file transfer is finished unsuccessfully.

'`Modem `ring' sound`'
: The sound to be played when the modem detects a call by a different modem.

'`Modem `voice' sound`'
: The sound to be played when the modem detects a phone call.

'`Preload sound files`'
: If this switch is enabled 'term' will load all sound files immediately rather than accessing and loading them on demand. This may save access time when a sound is to be played but may eat up precious memory.

'`Load`' Load the sound settings from a file.

'`Save`' Save the sound settings to a file.

'`Use`' Use the current settings.

'`Cancel`' Keep the old settings.

There is no fixed size limit to sound files, the amount of available system memory matters. The sound files may be compressed, mono or stereo files.

## 15.5 Transfer progress panel

The transfer routines open an information window in which a number of transfer parameters are displayed. Additionally, the file transfer can be aborted by clicking either of two buttons ('`Abort entire transfer`' and '`Skip current file`'). *For most transfer protocols both buttons (abort and skip) have the same effect.* Consult the documentation to see if different levels of abort are supported by your favourite transfer protocol.

The following information is displayed in the transfer window:

'`Protocol`'
: The name of the transfer protocol currently running.

'`Information`'
: A list to contain error message, the names files transferred and miscellaneous other messages addressed to the user.

'`File`' The name of the file being transferred.

'`Next file`'
: The name of the next file to be transferred.

'`Space left`'
: The space left on the destination device. 'term' will try to calculate the number of blocks the file being received will take on the destination device and display a warning the file in question is probably not going to fit.

  Caution: 'term' only makes a very likely guess which may or may not come true. The guess may be wrong if the destination device happens to be a kind of ram-disk which shrinks and expands as memory requirements come and go. Such devices are usually 100% full. In most other cases you will probably be able to make room for the file being received before any space problem turns up.

'`Completion time`'
: If the corresponding information is available, the point of time when the current file will be transferred completely.

'`File size`'
: If available, the size of the file.

'`Bytes transferred`'
: Number of bytes transferred yet.

'`Total size`'
: The total size of all files to be transferred.

'`Total bytes transferred`'
: The total number of bytes transferred yet.

'`Files transferred`'
: The number of files transferred yet and the number of files to go.

'`Blocks transferred`'
: Number of data blocks transferred yet.

'`Characters/second`'
: The effective transfer speed in characters per second.

'`Character delay`'
: The delay between two character being sent.

'`Packet delay`'
: The delay between two packets being sent.

'`Packet type`'
: A short description of the data block type employed for data transfer.

'`Block check type`'
: The method employed to verify the integrity of the data blocks being transferred (this usually is a form of cyclic redundancy checking).

`Block size`
: Size of a data block in bytes.

`Expected time`
: The time the transfer protocol expects the transfer will take.

`Elapsed time`
: The time elapsed during transfer.

`Message`
: A message of the transfer protocol addressed to the user.

`Number of errors`
: The number of errors occured during file transfer.

`Number of timeouts`
: The number of timeouts occured during file transfer.

If the currently active transfer protocol provides the necessary information, two bars will be displayed at the bottom of the transfer window indicating the amount of transferred data and of time to go before the transfer is finished.

'term' knows about the Z-Modem data-inquire sequence the remote receiver issues when expecting files. If recognized, this sequence will cause 'term' to display a requester asking for the type of data upload: text or binary. One could call this feature 'auto upload'. You also have the opportunity to select '`Abort`' which will transfer the ZModem abort sequence or to click on the '`Ignore`' gadget which will plainly ignore the fact that the ZModem inquiry sequence has been recognized. *The Z-Modem abort sequence will also be transferred if you select the '`Cancel`' button in the file requester to appear after selecting text- or binary-upload.*

*Some transfer protocols will allow you to enter a default receive path the library is supposed to create files it receives in. On request (see Section 14.9 [Miscellaneous panel], page 48) 'term' will ignore these settings and use the settings to be changed in the '`Settings/Paths`' (see Section 14.10 [Path panel], page 50) menu instead.*

Each file that is received and which does not remain empty is examined briefly to find out about the file type. If recognized successfully and the corresponding feature is enabled, a small comment indicating the file type will be attached to the file. 'term' currently knows about 83 different file types.

If the 'term' main window is opened on the Workbench screen, you can select and drag icons on it in order to upload the corresponding files. A requester will be opened to ask for the upload style (either binary or text).

In case a file transfer terminates with an unrecoverable error (*note: the transfer protocol is responsible for reporting error conditions to 'term'*) the file transfer window will stay open until explicitly closed by the user so the transfer error report list can be viewed.

## 15.6 ASCII-transfer panel

The built-in ASCII transfer routines as to be enabled in the Section 14.11 [Transfer panel], page 51 display transfer progress information in a special window (note that sending and receiving will open different windows). Here is a description of the controls and displays:

'`Bytes transferred`'
: The number of bytes sent/received.

'`Lines transferred`'
: The number of text lines sent/received.

'`Information`'
: Transfer progress information and error display.

'`Character delay`'
: When sending text this number determines how many seconds to wait before sending the next character.

'`Line delay`'
: When sending text this number determines how many seconds to wait before sending the line-termination character (carriage return).

'`Text pacing`'
: The mode to determine how text is sent to the remote:

  '`Direct`' Each line will be sent without any delay.

  '`Wait for echo`'
  : The program will wait for each single character sent to be echoed by the remote.

  '`Wait for any echo`'
  : The program will wait for the remote to return any character in response to any character sent. Typically, this is the case with password prompts issued by BBSes.

  '`Wait for line prompt`'
  : The program will wait until the remote sends a certain line prompt text.

  '`Character/line delay`'
  : The program will respect the character/line delay values to be set using this control panel.

'Keyboard delay'

The program will send character separated by a delay to be determined by the current system keyboard repeat delay.

*Note: the 'echo' text pacing mode is to be used with greate care. Certain online services do not echo characters back to the sender as they run only in half-duplex mode. On the other hand most mailbox programs will not echo certain characters, such as escape codes, etc.*

'Quiet ASCII transfer'

This switch controls whether incoming text will be displayed in the terminal window. You may want to watch how the remote responds to the data sent/received.

'Abort entire transfer'

Stops the ASCII data transfer.

'Skip current file'

Stops sending the current file and proceeds to the next.

In case a file transfer terminates with an unrecoverable error the file transfer window will stay open until explicitly closed by the user so the transfer error report list can be viewed.

## 15.7 Phonebook

The functions described in the following can be found in the 'Modem' menu and relate to the menu entries 'Phonebook', 'Dial' and 'Redial'.

'term' is equipped with a telephone number management system, the phonebook, which is described in the following lines.

'Name list'

The names of all phonebook entries are displayed here.

'BBS name'

Name of the last selected telephone book entry.

'Comment'

A comment to associate with a phonebook entry.

'Phone number'

The telephone number of the last selected telephone book entry.

If a BBS supports multiple lines, the phone number of each line may be entered, each one separated by a vertical bar | character (example: '123456|654321' would cause the dialing routine to dial the numbers '123456' and '654321'). The dialing routine will process all these phone numbers before proceeding to the next phonebook entry.

The | character also works for the modem init, modem exit and dial prefix sequences. Whenever the dialing routine dials another phone number from a list separated by bars, it will try to find a matching init/exit/dial prefix sequence. If more phone numbers are specified than sequences are available, it will use the last sequence given (an example: a phone number may be given as '123456|654321|12345', the dial prefix string may be 'ATDP|ATDT'; the dialing routine will call the first number using 'ATDP123456', the second number using 'ATDT654321' and the third number, since no special dial prefix is available, again using 'ATDT12345').

'Quick menu'
: If this switch is in effect, the corresponding phone book entry will be put into the 'quick dialing menu' (see at the right hand side of the main menu. Selecting the menu entry will dial the corresponding phone number. Note: only up to 50 phone numbers can be put into the list.

'New entry'
: Generates a new telephone book entry with standard settings and places it at the end of the telephone book.

'Clone entry'
: Will duplicate the currently selected phonebook entry and place it at the end of the list.

'Remove entry'
: Removes the last selected telephone book entry from the telephone book and frees the memory allocated for this entry.

'Dial list'
: Will pass the list of currently marked phonebook entries to the dialing routine.

'Clear list'
: Will clear the marks set for each telephone entry in the dialing list.

'Use entry'
: Takes over the local configuration settings saved with the currently selected phone book entry. Also installed are the associated password and user name entries.

'Load list'
: Loads the contents of a telephone book from a file.

'Sort list'
: If any phonebook entries have been selected to be dialed, the phonebook entries will be sorted in the order of dialing. The remaining phonebook entries will be sorted in ascending alphabetical order.

'Save list'
: Saves the contents of a telephone book to a file.

'Copy config'
: A lot of time can be saved by copying selected parts of the global configuration to a local configuration which is part of a phonebook entry. Selecting this button will invoke a control panel which allows to select which parts of the global configuration should be copied. The

control panel also remembers which parts were copied when it was invoked the last time, see Section 15.9 [Copy panel], page 67 for more information.

'Password'

Press this button if you wish to save a special access password with the currently active telephone book file. You will then be asked to enter the password. What you type will not appear on the screen.

To clear an existant password and to save the phonebook file without encryption, just press return when asked to enter the new password.

The next time you save the phonebook data, the password will be encrypted and saved with it, the phonebook data itself will be encrypted using the password.

*Whenever an encrypted phonebook file is loaded, it will take longer to load than an ordinary phonebook file, the same applies to saving phonebook data.*

'Print' This button will cause another control panel window to be opened which is to be described under Section 15.11 [Printing panel], page 69.

Another list is located at the right hand side of the window. Each entry refers to a control panel to be invoked on the currently selected phonebook entry.

'Settings'

'Serial'

'Modem'

'Screen'

'Terminal'
'Emulation'
'Clipboard'
'Capture'
'Commands'

'Misc'

'Paths'

'Transfer'
'Translations'
'Function keys'
'Cursor keys'
'Fast! macros'

These entries refer directly to the settings main menu entries of the same name.

'User/Password'

This entry will open a control panel in which the password and user name to be used for the current phonebook entry can be entered. Both password and name are made available from within the 'term' ARexx interface to allow auto login script files to set up a connection.

'Rates' 'term' will count the minutes you are online and connected to a BBS as soon as a connection is made through the dialing routine. This entry opens a control panel which allows setting the necessary data (see Section 15.8 [Rate panel], page 65).

If you are still online, the 'Dial list' gadget will be disabled. In order to make another call hang up the line first.

To put a phonebook entry into the dialing list, Shift-click (i.e. hold down either shift key, then click once on the list entry) its name. The number appearing to the left of its name indicates the precedence of entries in the dialing list. To remove an entry from the list, Shift-click it again. Instead of Shift-clicking on an entry, the space bar may be pressed as well.

Double-clicking on a name will immediately dial the selected entry.

To dial the list of selected entries, press the 'Dial list' button, control will be passed over to the dialing panel.

As I have been asked several times: For dialing a telephone number the dialing prefix specified for this telephone number is used. If the MNP-error correction for a certain mailbox has to be specifically switched on via the dial string, this has to be done in the modem settings for this mailbox and not in the global settings of 'term'. The 'Modem init string' and 'Modem exit string' entries of the telephone book can also be used for initialisation.

## 15.8 Rate panel

'term' will count the minutes you are online and connected to a BBS as soon as a connection is made through the dialing routine. As soon as the connection is lost or you hang up, 'term' will use the information to be specified in this control panel to calculate the amount of money to be paid for the call.

'Pay/unit'
: The amount of money to be paid for each single time unit when online. This fee must be given in the smallest currency unit available (pence, cents, centimes, etc.).

'Seconds/unit'
: This is where you enter how many seconds each time unit lasts.

There are two different groups of the two entries listed above available: one for the first unit and one for all following units. So, if you only pay for the call you make but not for the time you spend making it, just enter the fee in the first group and set the second group to zero.

'`Days and dates`'
: This list contains the default rate settings and exceptions for certain dates and days of the week. Each line displays the type of the entry and a comment (separated by the '`>>`' character). The following types are available:

  '`Day(s)`' Settings for certain days of the week

  '`12. Jan (example)`'
  Settings for a specific date

  If there is no special type available for an entry, it's probably the default settings you are dealing with. These settings are used whenever 'term' cannot find an entry for the current day.

For each entry in this list there is at least one associated starting time available which defines when the associated rate settings are to be used. You will find the time settings in the list titled '`Time`'. To add a new time use the '`Add time`' button, to edit an existing entry, use the '`Edit time`' button. To remove an entry, press the '`Remove time`' button.

'`Add date`'
: Will invoke a control panel to create a new rate entry to be used on a specific date. Use the sliders and button to select the day the settings will be valid for.

  *The control panel will allow you to enter nonexistant dates, such as '31. Feb' so you will have to make sure that the date in question really exists.*

'`Add day(s)`'
: Will create a new rate entry referring to one or more days of the week. Use the buttons of the control panel to select the days the current settings will be valid for.

'`Import`' Much work can be saved if the rate settings for the current phonebook entry are imported (or copied) from a different phonebook entry. To do so, select this button. The control panel to be opened will display the list of phonebook entries available and three buttons:

  '`Replace rates`'
  The rate settings of the current phonebook entry will be replaced by the settings of the selected entry.

  '`Append rates`'
  The rate settings of the selected entry will be appended to the current phonebook entry.

  '`Cancel`' Will abort the selection.

Whenever a rate entry is selected, the corresponding parameters (‘Pay/unit’ and ‘Seconds/unit’) can be edited. If the entry refers to a certain date or a specific day of week three additional buttons are made available:

‘Edit’ Just as the labels says, will allow you to modify an entry after it has been created.

‘Clone’ Will duplicate the current rate entry and append it to the list.

‘Remove’ Removes an entry from the list.

## 15.9 Copy panel

This control panel allows you to select which parts of the global configuration to copy into the currently selected phonebook entry.

‘All’ Selects all parts.

‘Clear’ Clears the current selection.

‘Copy to all’
The selected parts will be copied to all phone book entries. If any phone book entries are selected when this action is to be performed, only the selected entries will be affected.

‘Copy’ This is where you select from which source the configuration information will be copied:

‘Global configuration’
Parts of the currently active global configuration will be copied.

‘Defaults’
When going online, instead of overriding the currently active global configuration with the supplied local phone book configuration the corresponding global configuration will be left unchanged.

## 15.10 Dial panel

The following information about the dialing process is displayed:

‘Calling’
The name of the telephone book entry belonging to the number being dialled. If it is just a telephone number the string ‘-- Unknown --’ is shown, meaning that the name of the mailbox is unknown.

'Comment'
: This is where the comment corresponding to the current dialing list entry is displayed.

'Number'
: The telephone number being dialed or just dialed.

'Next'
: The name of the telephone book entry which will be processed next if no connection is established. If no further entry exists, '`-- None --`' will be displayed.

'Timeout'
: A counter which is decreased every second and which reflects the time remaining to establish a connection or to cycle through the dial queue again.

'Attempt'
: This field shows the number of unsuccessful cycles made through the dialing queue to establish a connection.

'Message'
: A message to the user. This can be:

  '`Dialing...`'
  : A dial is in process.

  '`Line is busy.`'
  : The dialed number is engaged.

  '`Incoming call!`'
  : The modem has been called from another modem.

  '`Incoming voice call!`'
  : The modem is receiving a call which was not originated by another modem.

  '`No dialtone detected!`'
  : The modem was unable to detect any dialing tone on the line, it may possibly be not connected.

  '`Connection established.`'
  : Just as the name says...

  '`Maximum number of dial retries reached!`'
  : Just as the name says...

  '`Dial attempt timeout.`'
  : The time available to establish a connection has been reached or exceeded.

  '`Redial Delay...`'
  : Pause until the next cycle through the dialing queue.

Additionally three buttons can be found in the input field which initiate the following functions.

'`Skip call`'
: With this function the current dialing attempt is cancelled and the next number is processed. If no succeeding telephone number exists 'term' waits for the next cycle through the dial queue or until '`Skip call`' is pressed again.

  There also is a hotkey combination available to accomplish the same effect.

'`Remove`'
: This button works in part similar to the '`Skip call`' button. Additionally, it removes the current phonebook entry from the dialing list.

'`Go to online`'
: If the line is very noisy, the connection to a mailbox has been made but the `CONNECT` signal has been lost, you can use this button to switch directly to the online mode of the modem. This will also start the pay unit counter and the dial queue will be exited.

'`Abort dialing`'
: Operation of this button exits the dial queue (leaving the the dial queue intact) and ends the dialing process.

If a connection is successfully made the corresponding entry in the dial queue will be removed.

Selecting the close gadget will close the window and cause the phone book panel to be reopened.

## 15.11 Printing panel

This control panel is part of the phone book. It is opened whenever the '`Print`' button is selected and allows for setting the output options.

'`Output file or device`'
: This is where you enter the name of the file or device (such as '`PRT:`') the phonebook printout is to be sent to.

'`Plain text`'
: If enabled only the plain and bare information text will be printed, else text attribute control sequences will be sent as well.

'`Include...`'
: Each switch determines whether the corresponding phonebook entry information will be included in the printout.

'`Use`'
: Will start printing the phonebook contents.

'`Cancel`'
: Returns to the phonebook.

# 16 Text buffer

The text buffer is a function which continually stores text displayed on ‘term’s main screen, so that the user can inform himself about the received text at any time.

## 16.1 General characteristics

The size of the text buffer is managed dynamically so that for every new line which is read new memory must be allocated. So the size of the text buffer is limited only by the amount of the available memory. It is recommended that the text buffer is emptied periodically to avoid using the entire free memory.

If there is insufficient memory to place a new line into the text buffer, the first line will be deleted to make room for the new line.

## 16.2 Operation

The contents of the text buffer can be paged through using the keys for moving of the cursor (`Shift + Cursor` keys moves page by page, `Control + Cursor` key jumps to the beginning or end of the text buffer). Additionally, the numeric keypad keys are overlaid with jump and paging functions (corresponding to the inscriptions/graphics on the front of the keys).

Additionally there is another menu whose functions should be explained briefly:

‘`Search`’
: A search function is called which searches from the topmost line on the screen downwards for an entered search string. Upper- and lowercase are ignored by this function. If the search string is found it is displayed and highlighted.

‘`Repeat search`’
: Continues the search process started with ‘`Search`’. The previously entered search string is carried over.

‘`Go to main screen`’
: Switches to the main screen of ‘term’.

‘`Clear buffer`’
: Clears the contents of the Chapter 16 [Text buffer], page 71.

‘`Close buffer, Quit`’
: Closes the Chapter 16 [Text buffer], page 71 screen but leaves the contents unchanged.

# 17 Clipboard

Cut & paste functions are available on the main screen, the buffer screen and the review buffer. Here is how to use them:

'`Buffer screen`'
: Use the mouse to point to the first character you wish to send to the clipboard, hold down the select button, drag the mouse to the last character you wish to copy and release the button. The text marked will be transferred to the clipboard.

  Holding down the `Control` key while clicking on a character will feed the single character into the input stream, it will not be buffered in the clipboard.

'`Main screen`'
: Use the mouse to point to the first character you wish to send to the clipboard, hold down the select button, drag the mouse to the last character you wish to select and release the button. Select the '`Copy`' menu item (see Section 13.2 [Edit], page 26 menu) to transfer the text to the clipboard. Instead of dragging the mouse you may also double-click on a single word to select it.

  Holding down the `Control` key while clicking on a character will feed the single character into the input stream, it will not be buffered in the clipboard.

'`Review buffer`'
: Use the mouse to point to the first character you wish to send to the clipboard, hold down the select button, drag the mouse to the last character you wish to select and release the button. Press `Amiga + C` to copy the selected text to the clipboard.

To paste the clipboard contents, i.e. feed them into the terminal input stream, either select the '`Paste`' menu item (see Section 13.2 [Edit], page 26 menu) or press `Amiga + V`. In order to send the clipboard contents along with a '`Paste prefix`' and '`Paste suffix`' hold down any `Shift` key when selecting the '`Paste`' menu entry or when selecting text with the mouse (this works both with the main screen and the Chapter 16 [Text buffer], page 71 screen).

Hold down one of the `Alt` keys and press the left mouse button to make 'term' emit a number of cursor move sequences which will position the on-screen cursor at the spot where you clicked the mouse.

In standard string editing gadgets a solution had to be found to preserve the line editing functions while still supporting menu shortcuts. To undo any changes made press `Amiga + Q`, to clear the string editing gadgets press `Amiga + X`. Menus associated with the shortcuts `Amiga + Q/X` are called by holding down any `Shift` key along with the `Amiga` keys (i.e. `Shift + Amiga + Q` will select the '`Quit`' menu item if available).

Clipboard functions are also available within string gadgets: press `Amiga + C` to copy the contents of the gadget to the clipboard and press `Amiga + V` to insert the current clipboard contents at the current cursor position.

# 18 Command sequences

Each string sent directly to the modem is a command sequence. This includes telephone numbers, modem initialisation strings, function key assignments, etc. In addition to the normal text strings various other commands are supported which will be described in the following section.

## 18.1 Backslash

‘\\’ Generates a single backslash.

‘\0’ Resets the text pacing mode (see Section 14.6 [Clipboard panel], page 44) to the settings defaults. Any changes of the text pacing mode affect only the line to be sent. The next following line will be sent using the default text pacing mode.

‘\1’ Sets the text pacing mode to ‘Direct’.

‘\2’ Sets the text pacing mode to ‘Wait for echo’.

‘\3’ Sets the text pacing mode to ‘Wait for any echo’.

‘\4’ Sets the text pacing mode to ‘Wait for line prompt’.

‘\5’ Sets the text pacing mode to ‘Character/line delay’.

‘\6’ Sets the text pacing mode to ‘Keyboard delay’.

‘\a’ Executes an ARexx command (all text to follow this character).

‘\b’ Generates a backspace (deletes the character to the left of the cursor).

‘\c’ Calls a main menu entry, the menu entry to be called is determined by the argument to follow; this is either a six digit number (example: ‘\c 010203’ would call subitem 1, item 2, menu 3) or the name of the menu entry enclosed in single quotes to call (example: ‘\c 'about'’ would call the ‘About...’ menu entry, the search is case-insensitive and only compares the characters given).

‘\d’ Executes an AmigaDOS command (all text to follow this character).

‘\e’ Generates the escape character (ASCII code 27).

‘\f’ Generates a form feed (skip to beginning of the next page or clear the screen).

‘\g’ Places the string to follow this character in the clipboard.

‘\h’ Appends the string to follow this character to the current clipboard contents.

‘\i’ Feeds the contents of the clipboard into the input stream.

'\n' Generates a line feed.

'\p' Feeds the password of the telephone book entry into the input stream of the last made connection. *The password is automatically cleared for security reasons when the connection is broken.*

'\r' Generates a carriage return.

'\t' Generates a tab jump.

'\u' Similar to the \p command, the \u command will feed the current user name into the input stream.

'\x' Generates a break signal (as with the 'Send break' menu entry).

'\^' Generates a caret character.

'*' The code to follow the asterisk determines the character to produce. This can be any three digit number or a symbolic name from the following list[1]:

'NUL', 'SOH', 'STX', 'ETX', 'EOT', 'ENQ', 'ACK', 'BEL', 'BS', 'HT', 'LF', 'VT', 'FF', 'CR', 'SO', 'SI', 'DLE', 'DC1', 'DC2', 'DC3', 'DC4', 'NAK', 'SYN', 'ETB', 'CAN', 'EM', 'SUB', 'ESC', 'FS', 'GS', 'RS', 'US', 'SP', 'DEL', 'SS2', 'SS3', 'DCS', 'CSI', 'ST', 'OSC', 'PM', 'APC', 'NBS' and 'SHY'

If none of the mentioned combinations is recognized the character which follows the \ will be fed into the input stream without any changes.

## 18.2 Caret

This character is used to change the following character to a 'control character'. So the sequence '^J' will become a Line feed and '^I' becomes a tab jump. The character which follows the ^ has to be located between @ and [, otherwise it is fed into the input stream without changes.

## 18.3 Tilde

This character causes the program to pause for exactly half a second before it continues to process the following commands.

[1] 'EOU' may be implemented in a future release

# 19 Fast! macros

In implementation and design the fast! macros are closely related to the function key macros (see Section 14.13 [Function key panel], page 53). If invoked by selecting the corresponding menu entry, a window will open on the right hand side of the screen sporting a scrollable list of macros (the contents of this list can be edited using the Section 15.1 [Fast macro panel], page 55). When a list entry is selected, the associated command sequence (see Chapter 18 [Command sequences], page 75) will be executed.

By using the fast! macros it is theoretically possible to control a BBS just by mouse, provided that you have the approriate macros in your fast! macro list.

The fast! macro panel can be resized and acts just like the main 'term' window: menu items can be selected and characters entered are sent to the serial driver.

# 20 Packet window

In this window a line can be edited before it is sent. All the usual editing functions known from standard input fields are available (`Shift + cursor left/right` jumps to the start/end of the line).

Additionally, some extended functions exist which are performed by pressing a cursor key together with the `Shift` or `Control` key:

'`Control + Cursor left`'
: Jumps to the next word.

'`Control + Cursor right`'
: Jumps to the previous word.

'`Cursor up`'
: Shows the last entered command in the input line.

'`Shift + Cursor up`'
: Shows the very first command entered so far.

'`Cursor down`'
: Shows the next entered command (if you moved back for some commands before).

'`Shift + Cursor down`'
: Shows the very last command entered so far.

This string gadget has a buffer where all previously entered commands are stored ('Command history'). You can page through this buffer, load and save it and individual lines can be recalled. As with the Chapter 16 [Text buffer], page 71 this buffer is managed dynamically. The same memory restrictions that apply to the Chapter 16 [Text buffer], page 71 are valid for this buffer.

The input line also has a menu which offers the following functions:

'`Load history`'
: Loads the contents of the input line buffer from a file. Each stored line in this file can be recalled and sent.

'`Save history as...`'
: Saves the contents of the input line buffer to a file.

'`Clear history`'
: Simply releases all previously stored commands and the memory used by them.

'`Other window`'
: Switches to the main screen of 'term'.

'`Quit`' Closes the window (corresponds to clicking the close gadget of the window).

*Every character entered into this window is shown immediately so that those things where it is better that they should not appear on the screen (like passwords for a mailbox) should be entered in another way.*

The content of every input line is interpreted as a command sequence and therefore can also contain control characters.

If a line taken from the input buffer is sent without change it is *not* stored in the buffer again ('true history' as known from 'ConMan').

The contents of the input buffer are cleared automatically after the window is closed. *Under no circumstances are the contents maintained until the next call!*

Provided that the packet window is large enough, a list to contain the command line history will be displayed.

# 21 Environment variables

Information which is to be available the next time the program is run is placed as AmigaDOS variables in the directory '`ENV:`' and '`ENVARC:`' by 'term'.

The variables used by 'term' can be used and manipulated by other programs transparently. In detail these variables are:

'`TERMCONFIGPATH`'
: The name of the directory in which all information used by 'term' is placed (standard configuration, telephone book, etc.). The default settings file name is '`ENVARC:term`'.

'`TERMWINDOW`'
: The window definition which can also be entered in the program via the menu item Section 13.8 [Settings], page 29.

'`xpr...`'
: The standard settings used for the corresponding transfer protocol ('`xprzmodem`', '`xprkermit`', etc.).

'`xem...`'
: The standard settings used for the corresponding external terminal emulation library ('`xemvt340`', '`xemascii`', etc.).

# 22 Revision history

## Changes introduced with v3.4:

- Raised the maximum number of quick dial menu entries to 50.
- Fixed a small bug connected with the text display screen.
- XPR protocols which do not support batch transfers now work again as they did in v2.4.
- Corrected a spelling mistake in the call logfile creation routine.
- Fixed a memory allocation error in the review buffer code.
- Fixed a major bug in the file transfer routines. In previous releases (say 3.1 and above) 'term' used to throw invalid file locks around (seems I will have to use less ambiguous identifier names in the future...).
- Fixed an Enforcer hit in the quick-dial menu creation.
- Rarely, the program could fail to rebuild the quick-dial menu after leaving the phonebook.
- As required by the specs, the XPR interface now switches baud rates and serial parameters.
- Enhanced the capture functions.
- Changed the user interface layout for some windows, such as the modem settings window.
- When running on a public screen will no longer cause lockups and trouble with Workbench. Rendering errors are still possible.
- The very first characters to follow a modem connect message are no longer quietly discarded.
- Finally solved the truly mysterious case of the missing screen line.
- Fixed yet another Enforcer hit in the packet window code.
- The standard beep routine would not work.
- Libraries and devices can now be selected using simple menus rather than the file requester.
- The program now flushes capture files to disk every minute in order to insure that at least fragments of the captured session will be safe when disaster strikes.
- Finally got the cross-hatch pattern to draw ghosted list views right.
- The terminal hex mode would write too many bytes per line.
- The program would not pay attention to any icon tool type settings.
- Upon making a connection the dialing routine will no longer drop the line by accident.
- The review buffer window will filter out unprintable characters before displaying text lines.
- The program no longer knocks itself out if an initialization error occurs during the startup phase.
- You can now select the name of the public screen the 'term' window is to be opened upon using a menu.

- If using a public screen the program will make use of the corresponding screen font and no longer try to modify it in any weird way.
- The ARexx command `READ` did not pay attention to the translation table settings.
- A configuration file to be loaded upon startup as specified using tooltypes or command line options will no longer be ignored.
- The positions and sizes of certain program windows will be stored in the main configuration file.
- Initially, when a file was received the information window would not display the space left on the output device.
- Introduced the 'time to connect' interval.
- Added the serial read quantum.
- The phone book window will now be opened large enough to hold all its gadgets inside.
- Blinking text display is no longer restricted to eight colour screens, provided the display architecture permits high-resolution screens in more than 4 bit planes.
- The program now exists cleanly if vital resources such as the output screen cannot be opened.
- The file transfer routines should run a tiny little bit faster now.
- Added the transfer performance meter.
- The clear screen control sequence now optionally resets the cursor position.
- Rarely, the text buffer screen would not update the first text line properly. Also, the screen display mode will no longer fall back to HIRES/HIRES_INTERLACED.
- Rarely, the review buffer window would render text in the wrong colours.
- The pen/palette sharing code was submitting incorrect colour codes.
- The review buffer window now responds to the same keypresses as the text buffer screen and the main input window.
- Not all packet menu items were to be invoked using menu shortcuts.
- Added 'Completion time' display to the transfer progress window.
- Introduced special transfer library settings. You can now select which library to use for ASCII, text or binary transfers.
- Added built-in ASCII transfer routines.
- You can now search forwards or backwards through the text buffer.
- Text stored in the buffer no longer gets trailing spaces stripped in order to keep weird uuencoded data intact.
- The menu items featured in the 'Edit' menu now properly reflect the state of the clipboard.
- A menu shortcut would be used twice in the main window menus.
- Rarely, the colour choices for the bar charts in the transfer progress window would be wrong.
- The quick dial menu would not be rebuilt if the phonebook was sorted or new entries were added.
- The ARexx commands `DELAY` and `SEND` would not turn off the text cursor prior to text processing.

- Unless it is absolutely necessary, the text display scope is no longer moved automatically.
- As for the text display screen and window the 'Alt' keys now have the same effect as the 'Control' key.
- If new text is added to the text buffer the buffer screen and the review window are properly updated now.
- A dialing list built using the quick dial menu was not enumerated properly.
- Building a dialing list using the quick dial menu via extended selection, then selecting the phonebook control panel, clearing the dialing list and leaving the phonebook will no longer start dialing the list just cleared.
- Checkmarks now indicate which entries in the quick dial menu are to be dialed.
- The bar charts displayed in the transfer progress window are now updated in a more efficient manner (the text colour has changed, too). Also, unzooming the window will properly update the bar charts now.
- A hardware buffer overrun error is no longer considered a fatal error.
- With some requesters and windows string gadgets are auto-activated now. Pressing the `Return` key will cycle through all the available strings gadgets, holding down either `Shift` key will break the cycle.
- Trying to quit the program will no longer ask for confirmation if there is no reasons to ask for.
- The bar charts in the transfer progress window will be omitted if the remaining screen space would not permit the entire window to be displayed.
- The fast! macro window contents would be rendered in the wrong colours.
- The phonebook window did not support any online-help features.

# Changes introduced with v3.3:

- Added the quick dialing menu.
- Enhanced the modem and screen settings
- Fixed a few bugs in the ARexx interface commands `REQUESTFILE` and `REQUESTRESPONSE`
- Unfortunately a single line was missing in the XPR option setup, causing them program not to save the transfer protocol options.
- No longer forces the creation date of an auto-capture file to be included in the file. As an option, will use the naming convention used in previous program releases.
- The program now optionally creates icons for files.
- Added a terminal hex-mode for debugging purposes
- Fonts are now opened using properly initialized DPI and aspect ratio values which results in much better scaled outline font rendering.

- The name of an external emulation library is no longer quietly suppressed.
- It is possible to disable the double-buffered file management routines now.
- Added the text pacing option.
- Apparently, external and internal terminal emulations tried to turn on/off each other's cursors.
- Copying text to the clipboard now permits to append the text to the current clipboard contents.

## Changes introduced with v3.2:

- Could not enter phonebook passwords
- The XPR interface now states much more clearly what the likely cause of a serial I/O error might have been
- New sound support functions added
- Added 'OK' and 'ERROR' modem response codes
- The order of messages displayed in the file transfer window has changed (now works top down rather than bottom up).
- The ARexx interface routines did not check whether the serial device handles were available or not (boom!)
- Redid the fast! macro handling
- The text buffer screen did not notice when the buffer contents were cleared
- Retuned the phone book and dial list routines which could generate Enforcer hits and trash innocent memory
- Boldface/italics characters will no longer leak into the window borders
- The cursor image now reflects the state of the terminal window
- The program would generate an Enforcer hit when files were to be transferred by dropping their icons on the main window
- When opening a capture file the program could ask twice whether an already existing file should be replaced.
- Paste operations triggered from the review buffer window would not start any paste operation until the main window was reselected
- Reworked the character translation table format. Translation table files should be smaller now and should load a lot faster
- The screen/output window size now changes to the number of columns specified in the terminal settings
- Rarely, the file transfer window would be opened very narrow and tall. So tall in fact that display elements would overlap each other, no text could be displayed in the big listview and Enforcer hits were not to be avoided.

- The file transfer interface would produce Enforcer hits when to transfer files using an old-style XPR library.
- The phonebook dial list handling would select single entries when a shift key was pressed during keyboard selection.
- The review buffer window no longer loses track of the text area it ought to display after resizing the window.
- Rewrote much of the keyboard/mouse/peanut butter handling loop. No longer quite so complex.
- Thanks to user persistence the ‘Password’ text entry field available through the password/user panel no longer hides the actual password text.
- ‘Hang up’ menu item did not cause a backed-up configuration to be restored.
- Naughty XPR protocols which would issue error reports through xpr_update() during XPRSetup() would cause the transfer window to be opened not to close afterwards.
- No more odd happenings in the status line online time display. The code responsible would misinterprete a string index. This has been fixed.
- It is no longer possible to dial phone book entries which have no name or phone number attached.
- The terminal emulation code no longer leaves background colour artifacts when scrolling text with a background colour other than the default background colour enabled.
- Calls to BeginIO() rather than SendIO() were giving some – if not most – device drivers hard times. According to the few tests I have run so far the program now performs more reliable when doing file transfers. ‘term’ now works again in conjunction with isdn.device.
- The program no longer encodes the creation date into the name of an auto-capture file but rather writes creation time and date to the first new line in the file.
- New tooltype/command line option ‘Quiet’ will cause ‘term’ to start up iconified.

# Changes introduced with v3.1:

- Previous releases of the phone book would not clone single phone book entries correctly.
- The configuration copying routine will now selectively copy config information to the currently selected phone book entries.
- The phone book encryption/decryption routines are a tad faster now.
- The program will now prompt twice for a phone book access password.
- Comment, phone number, user name and password can be much longer now than they used to be in previous releases.
- The phone book now only contains the configuration information to differ from the global configuration.
- Previous releases would not save any rate information along with encrypted phone book files, this has been fixed.

- The configuration copying routine now allows to 'drop' parts of the phone book configuration rather than replacing them with parts of the global configuration. This feature works in conjunction with the new phone book file format.
- A new feature has been added: as an option, the program will immediately start to redial the currently configured dialing list as soon as the line is hung up or the carrier is lost.
- The program finally includes context-sensitive online help implemented through amigaguide.library (note: Kickstart 3.0 required). Any window to offer a help text will display it when the 'Help' key is pressed.
- The ARexx interface documentation was entirely rewritten. The main program documentation was updated and slightly enhanced. Be sure to reread it!
- Both the text buffer screen and review buffer window now feature new and improved scrollers. Scrolling and screen refreshes are also quite a bit faster now.
- The text searching routine has been enhanced and now works much faster than in previous releases. It also happens to find multiple occurences of a string in a single line.
- Improved text buffer handling, reduced memory fragmentation if running under control of Kickstart 3.0.
- The text buffer will no longer quietly swallow single characters and will finally correctly wrap lines longer than 80 characters.
- The review buffer window now also sports a search function just like the text buffer screen, other useful menu items have been added as well.
- In previous releases the program would miscalculate the number of bytes left on a filing device when receiving a file. It would not take the number of bytes received into account, this has been fixed.
- In order to transfer files one can simply drag the corresponding icons on the 'term' main window (requires that the 'term' window is opened on the Workbench screen).
- Instead of identifying the type of a file received, the program will optionally attach a file comment to show the name of the BBS the file was received from and the time and date when the file was received.
- In case a file transfer is terminated due to errors the file transfer window will remain open until explicitely closed.
- The XPR interface will disable the xpr_unlink() routine if the 'override transfer path' option is in effect.
- The XPR interface will no longer sort files to be uploaded by size and name as most users found this feature annoying. It now sorts the files by name.
- The file transfer window now correctly displays the names of all files sent and received.
- The file transfer server was removed as it would not lead to a performance gain but a performance loss.
- 'term' now finally also runs as a window on the Workbench or any other public screen (that's what you always wanted, right?). If running under control of Kickstart 3.0 will attempt to share screen colours with other applications, making it possible to run the terminal emulation in eight or sixteen colours if enough shareable pens are available.

- ‘term’ will refuse to run on a public screen if running under control of Kickstart 2.x and if the screen font happens to be proportional-spaced.
- Some minor and some major bugs in the built-in terminal emulation have been fixed.
- The program distribution now includes the 11 point IBM.font donated by Bernhard F. Muller.
- I was surprised to discover that in previous releases the terminal emulation server would never get activated as the conditions it would be enabled would very rarely be met. Since the file transfer server would actually lead to a performance loss rather than a performance gain I chose to remove the terminal server along with it. Both may be implemented in a future release.
- The terminal emulation should work a tad faster now.
- The program now requires diskfont.library to be installed in order to work correctly.
- The program will ask for a confirmation prior to resetting the serial device driver while the program is still online. Most seasoned JR-Comm had trouble to adjust to the fact that the JR-Comm command ‘send password’ would use the same menu shortcut as the ‘term’˜‘release serial device’ command.
- The name of the call log file can now be configured completely. Previous releases would use the call file path and use the name ‘term-call.log’.
- The status window now displays the name of the ARexx host port, the BBS name, phone number, comment and current user name.
- In order to confuse and annoy you, the menu layout has been changed once again.
- A new feature has been added: the ‘wait’ menu item will repeatedly send the sequence <Space><Backspace> in order to simulate terminal input.
- The program now requires a bit more memory than before (program size has climbed by about 50 KBytes).
- New command line options and tool types have been added, some have been renamed.
- The program is now much smarter in determining the sizes of the phone book and file transfer window.
- The lists used by the phone book and the date panel no longer look quite so weird if using a proportional-spaced font.
- The main screen text snipping scheme has changed a bit and now resembles the standard console device snipping. Also supported is double-clicking on single words in order to snip them.
- The ARexx interface has been entirely rewritten from scratch.

# Index


## .

...Downloadpath ... 50
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