

term

COLLABORATORS

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REVISION HISTORY

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Chapter 1

term

1.1 term.guide

'term' 4.1 - A terminal program for Amiga computers

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You may make and distribute verbatim copies of this documentation if the contents are unchanged or the author has agreed to any changes made.

No guarantee of any kind is given that the program described in this document are 100% reliable. You are using this material on your own risk.

The program 'term' and the data received/sent by it must not be used for the following purposes:

1. The construction, development, production or testing of weapons or weapon systems of any kind.
2. The construction, development, production or use of plants/installations which include the processing of radioactive/fissionable material.
3. The training of persons to deal with the abovesaid actions.

Listen to your conscience.

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RESPONSIBILITY IS ASSUMED.

Introduction

Quick overview

Registration	How to register your 'term' copy?
Commercial distribution	Rules for commercial distribution of 'term'.
Orders	How to order the program and receive updates?
Letters to the author	How to communicate with the author
Known bugs & problems	Nobody is perfect...
Frequently asked questions	No, that's not a bug!
Reporting bugs	How to report program bugs?
Background	Why was 'term' created?
Future	Future plans.
Acknowledgements	Who was involved in the creation of 'term'?
Source code	Notes on using the source code.
Documentation and online help	Notes on the documentation and the online help features
Foreign language support	How to run 'term' in a language other than english?
Workbench and Shell	Parameters to pass to 'term' when to run it from Workbench and Shell.
User interface notes	Special services provided by the user interface.
Screen	Which information is displayed on the 'term' main screen?
Menus	Information on the pull-down menus.
Control panels	All control panels explained.
Configuration hints	Hints for first time users.
Built-in terminal emulation	Keys & features of the built-in terminal emulation.
Text buffer	Information on the text buffer.
Clipboard	How to use the keyboard and the mouse with the clipboard?
Command sequences	Command sequences explained.
Fast! macros	What are 'fast! macros' and how to use them?
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Script recording	How to record login scripts.
Environment variables	Which environment variables are used by 'term'?
PGP key	My PGP key file.
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1.2 term.guide/Introduction

Introduction

'term' is a telecommunications 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 phonebook and dialing functions
- 'Amiga User Interface Style Guide' conformant user interface
- Online-help (requires AmigaGuide package)
- Built-in 'ARexx' interface
- File upload list, which permits selecting the files to be transferred before the upload is started.
- Login script learn mode.
- Built-in keyword/response parser which makes it possible to have 'term' respond to BBS prompts and such with the user name, password, etc. without having to program the ARexx interface.
- Interface for external programs to rendezvous with 'term', taking over serial I/O processing (such as HydraCom).

Although this program is freely-distributable, it is not entirely free. If you like it and use frequently, you are requested to send the author a donation which you suppose will do as a payment for the program. See the chapter registration (see Registration) for details.

Admittedly, 'term' is a fairly large program which consumes quite an amount of memory when running. You need to have at least 2 MBytes of system memory installed if you wish to run the program. Please note that this is the bare minimum configuration. It is recommended that you run 'term' on a faster machine, i.e. plain MC68000-driven Amigas will have trouble running the program.

1.3 term.guide/Registration

Registration

'term' is made available under the concept of Gift-Ware, which is a variant of Share-Ware. Share-Ware software authors often release 'crippled' versions of their products, i.e. these programs do not support the same functionality as the registered versions you get when sending monetary contributions to the authors. It all comes down to 'pay for the software you are using' in Share-Ware terms. With Gift-Ware registration is different, you are not required to contribute money, but a gift will do. With 'term' you always get a fully functional program, there is no 'crippled' test release which you can try for a limited time and then have to pay for in order to receive the working registered version.

It may seem as if 'term' was free, but this is not the case. Although there is no need to pay the author in order to get a fully functional version of the program you should consider making a contribution. You don't need to feel guilty if you cannot or do not want to give me something in return for the work I have put into 'term'. Show me that it was worth spending so much time listening to users, updating, rewriting and enhancing this program. Your contributions will provide the motivation for me to keep developing the program.

The preferred method of 'payment' would be to order the 'Olsen Collection' CD-ROM. This CD contains almost every program I have written for the Amiga. The CD will be available in August 1994 and can be bought for US\$ 35 directly from me or from your local software distributor.

If you don't have any CD-ROM drive or just don't want to buy the CD, here is a list of suggested contributions:

- 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', 'Infidel', 'Leather Goddesses of Phobos', 'Nord and Bert couldn't make head or tail of it', 'Plundered Hearts', 'Shogun', 'Spellbreaker', 'Suspect', 'The Lurking Horror', 'Trinity', 'Wishbringer', 'Zork I', '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 films 'Jabberwocky', 'Brazil', 'The Fisher King', 'Time Bandits', 'Annie Hall', 'Zelig', 'Alien', 'Indiana Jones I-III' or 'Lawrence of Arabia' on a PAL-VHS video cassette
 - A CD by the Beatles (except for 'Help', 'Rubber Soul', 'Revolver', 'Sgt. Pepper's Lonely Hearts Club Band', 'The white album', 'Magical Mystery Tour', 'Abbey Road' and 'Past Masters, Volume II'), Little Feat (-1989), Weather Report, Paul Simon (1971-1985), Eric Clapton (-1985), Peter Gabriel (1977-1989) or Daniel Lanois
 - Raymond Elias Feist's books 'Magician: Apprentice' and 'Magician: Master'
 - A book by Michael Crichton, Bruce Chatwin, Raymond Chandler, Terry Pratchett 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', 'Lords of the Rising Sun', 'TV-Sports Basketball' and 'TV-Sports Football'
 - An old game by Activision ('Hacker II', 'Portal', 'Shanghai', 'Tass Times in Tonetown'), Electronic Arts ('Marble Madness', 'Return to Atlantis', 'Skyfox', 'The Bard's Tale') or Epyx ('Temple of Apshai', 'Rogue', 'California Games')
-

- An old Rainbird game ('Starglider', 'Starglider II', 'Jewels of Darkness')
- An old Telarium/Trillium game for the C64 on 5.25" floppy disk (such as 'The Amazon', 'Rendezvous with Rama', 'Fahrenheit 451').
- An old Lucasfilm game for the C64 on 5.25" floppy disk (such as 'Rescue on Fractalus', 'Ballblazer', 'Koronis Rift', 'The Eidolon').
- Scenery disks for the SubLogic Flight-Simulator II - except for 'Western European Tour', 'Japan', 'USA #7', 'USA #9' and 'USA #14'.
- CD-ROMs and CD-ROM caddies
- Cash and checks (no credit cards - sorry) are always welcome.

Send your contribution to the following address:

Olaf Barthel
Brabeckstrasse 35
D-30559 Hannover

Federal Republic of Germany

If you wish to be notified when program updates become available or wish to order the next update as it becomes available you must include enough money to cover my expenses, see the chapter entitled orders (see Orders) for more information.

1.4 term.guide/Commercial_distribution

Commercial distribution

I don't mind if you make a copy of 'term' for a customer who is looking for a decent terminal program. But if you decide to distribute the program on a larger scale, such as by including a copy with each modem you sell, I want to know about it. The reason is this: by distributing 'term' you take a certain responsibility; if your customer has difficulties in installing and configuring the program she/he will most likely ask you for assistance. I want to make sure that if a 'term' user is in bad need of help there is somebody who will be able to provide it. If you wish to become a 'term' distributor and want your name displayed in the 'About' window, contact me for details.

As a general rule, no profit must be made by distributing 'term', i.e. you may charge fees for copying, disks and for providing a printed manual but no money must be charged for the software itself. I consider taking legal actions against anyone who violates this rule. Payments for using the program should be made to the author, not to the provider.

1.5 term.guide/Orders

Orders

You can order a copy via standard mail by sending a self-addressed envelope, including postage and disks (more on this below) to the following address:

Olaf Barthel
Brabeckstrasse 35
D-30559 Hannover

Federal Republic of Germany

Either include three 3.5" double-density disks or two 3.5" high-density disks. The postage must cover the mailing costs, this should be the equivalent to DM 8,- in your preferred currency for Europe, and DM 16,- for all other countries. All orders are shipped via air mail. If you cannot provide the disks and the envelope, add DM 1,50 per double-density disk or DM 3,- per high-density disk and DM 2,- for a padded envelope. If you send a check to cover my expenses, please make sure that the fee I have to pay for cashing it (which currently is DM 3,-) does not 'eat up' the mailing costs.

As of this writing I do not distribute printed copies of the documentation.

Orders must be made by mail only, not by phone or eMail.

Whenever a new release of 'term' becomes available I will try to make it known in the telecommunications networks.

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. All Aminet sites will also receive copies of the program.

'term' is available for download in a number of BBSes. Careful please! For reasons I have always failed to understand certain individuals take pride in patching program version numbers, copying archives to disk and compressing them into .DMS files, attach silly notes to archives or extract single files from archives, just to recompress and release them later. Hands off these files! 'term' is always distributed only in complete LhA-archives, never as a single program or as a .DMS-file. In addition to this file lists and signatures generated using the PGP program provide authenticity. If any of these signs are missing chances are that you have found a corrupted copy which most likely was not released by me. My public key can be found in the chapter PGP key (see PGP_key).

I will not distribute 'term' via eMail, the program is too large to be mailed and since I am paying both for incoming and outgoing mail it would also be too expensive for me.

Unless requested, no update notifications will be sent via standard mail. I recommend that you include an international reply coupon for

each update notification you wish to receive.

The author reserves the right to discontinue development of the 'term' program.

1.6 term.guide/Letters_to_the_author

Letters to the author

It is always nice to receive feedback from users, to hear about critical comments and enhancement request. If you wish to communicate with me I suggest that you try electronic mail channels first. As of this writing there only exists a single Internet address (olsen@sourcery.han.de) you can send mail to. I have no Fidonet accounts or such, in fact I don't even visit any BBSes regularly. If you need to put a mail through to me and don't have direct Internet access it is recommended that you use the gateway facilities most nets offer, your local sysop or postmaster will be able to tell you more. Do not send mail larger than about 64K bytes, as it may get caught on the way to me and if it in facts arrives in my mail folder it will have cost me routing fees since I pay both for my incoming and my outgoing mail. Please don't expect me to make long-distance calls to your local BBS, German phone rates are rather steep and I am not that wealthy after all.

If you happen to be registered in a BBS which has no links to any net or if you don't have any email access at all the only alternative to dropping by and paying me a visit in person is to use the standard mail facilities: send a letter, mail a package. Although such mail will usually arrive safely and unharmed there still is a problem: I am slow at responding to 'real-world mail'. If a letter can be answered with a few lines of text chances are good for a snappy answer, but if the topic is a little more complex your letter may go into my mail service stack. To give you an impression how this stack looks like: it's a large pile of unanswered mail sitting on my desk which keeps falling over each time I open the window. Such mail will usually get answered at the end of the semester or when my bad conscience tells me to.

Be sure to mention it if you want me to send you an update to 'term' or the most recent version of the program and include some money to cover my expenses. If you want me to help you or to give advice please keep in mind that even though there is no denying the fact that I have written 'term' I am by no means an expert in telecommunications matters. So if you need to know which modem brand to choose or which Bulgarian BBSes are worth trying I strongly suggest that you ask someone else.

In any case, feel free to make comments and to ask questions.

1.7 term.guide/Known_bugs_&_problems

Known bugs & problems

During beta testing certain software did not work very well with 'term' (nothing serious I would say, but you may have a different opinion). There are also a few problems that would show up at the last minute (and at great expense) when it was too late to find a fix. Last but not least the following list also includes a few 'features' for which I was unable to find a better solution.

- When running on the Workbench screen 'term' keeps eating processing time, even the mouse no longer moves smoothly.

It's sad but true: if any other window partly obscures the status line display system performance will suffer greatly. Try to make 'term' the frontmost window or separate the status line display from the main window in order to get rid of this nuisance.

- As of Kickstart 2.04 slider and list displays look rather odd.

The gadtools.library user interface support routines do not handle proportional-spaced fonts very well in v2.04. Try to use a different user interface font, preferably a fixed-width font.

- With MagicMenu running in the background the checkmark and Amiga symbols overwrite some menu entries.

MagicMenu does not notice 'term' scales these symbols to fit the current screen display aspect ratio. Future versions of MagicMenu may address this problem.

- With small terminal window sizes the status line display no longer fits into the window.

'term' always pays attention to the terminal settings, it does not take the status line width into account. No harm should be done.

- Not all the buttons in the file transfer window do what their labels say.

The XPR library running the file transfer is responsible for listening to the commands 'term' sends to it when the Stop entire transfer, Skip current file and Stop transfer batch buttons are pressed. Not all libraries will pay attention to these commands. So far only xprkermit.library responds to all commands. The xprzmodem.library included in the 'term' distribution will ignore the Stop transfer batch command. All other XPR libraries either treat all buttons the same way, i.e. they stop the transfer no matter which button is pressed, or just pay attention to the Stop entire transfer command.

- The buttons in the fast! macro list do not respond to mouse clicks generated by pressing the Amiga+Alt keys.

As of this writing there is no explanation which the keys behave so oddly.

1.8 term.guide/Frequently_asked_questions

Frequently asked questions

This section was written in order to answer the most frequently asked questions concerning 'term'. Although I don't suppose that the users who this section was intended for will really read it, but it may nevertheless still be quite useful. Each entry in the following list explains why a particular feature works this way or the other and possibly why.

1. While scrolling 'term' quietly swallows characters and sometimes whole lines.

Usually, 'term' cannot process incoming serial data while the terminal output processing is taking place. If output processing takes too much time you may end up losing incoming data. There are several way how to approach this problem. You could reduce the number of colours used for screen output, or enable the terminal emulation process via the Enable emulation process switch in the section entitled terminal panel (see Terminal_panel).

2. Right after a connection is established the modem hangs up the line.

Following your configuration options 'term' makes sure that the modem is set up correctly prior to making a call. Does the modem drop the line right after the CONNECT message is received your modem or the remote modem may be responsible. Not unheard of are modems which due to firmware trouble fail to negotiate correctly with the remote modem over the transmission protocol to be used. With error correction enabled such modems would drop the line right after establishing the connection. Turning off the error correction mode would correct this problem. 'term' cannot do anything about the modem behaviour, it is up to you to find the correct setup.

3. Trying to run the modem at higher baud rates causes the modem to ignore commands, it does not even echo characters back.

A number of modems respond only to a fixed set of baud rates. While for example 9,600 bps are fine there is no response at 14,400 bps. I suggest that you try all available baud rates 'term' supports until one is found to fit. Do not overdo it however, try to keep the baud rate below 57,600 bps.

4. During file transfers error #6 is reported over and over again.

Data transfer to and from the serial hardware is a time requires quick responses by the handler routines, this is why interrupt processing is used for such time-critical jobs. Unfortunately, these interrupts cannot always be serviced as fast as possible. Read and write accesses to disk may temporarily slow interrupt processing down or even disable it in short intervals. If the send/receive buffers keep flowing over I suggest that you use a smaller file buffer size, so data gets written to disk in smaller

chunks, making the intervals smaller in which interrupt processing may be affected. You can change the default file buffer size in the miscellaneous settings (see `Miscellaneous_panel`). If this still does not have the desired effect, turn on the switch Simple file I/O (see `Miscellaneous_panel`) and change the buffer size of the file transfer protocol you are using. Start with a small buffer size, such as 4,096 bytes and gradually increase it as long as transfers still work correctly.

5. I have saved the phonebook and the configuration files to disk and an older 'term' release reports that it cannot read them.

'term' stores version information with the configuration files it saves. Older 'term' releases will refuse to read files created by newer releases. Newer releases will almost always read configuration files by older 'term' releases.

6. I upgraded from an older 'term' release, but the program refuses to read my configuration and phonebook files.

The phonebook and configuration file format was changed and greatly enhanced with the introduction of 'term' 3.1. Older files need to be converted to the new format, this is what the UpdateConfig program is for that should be included in the 'term' distribution. The conversion is easy, just enter UpdateConfig <old file name> <new file name>, the program automatically determines whether it is reading a configuration or a phonebook file.

Caution: the conversion program cannot read encrypted phonebook files, so they should be saved in unencrypted form first.

7. In some BBSes ANSI graphics and text output starts at the wrong screen position, especially after the screen contents are erased.

The so-called BBS-ANSI terminal command set treats the 'clear screen command' different from the VT-100 specs, i.e. it expects the cursor to be reset to the home position. You can enable this feature using the CLS' resets cursor position switch which can be found in the emulation panel (see `Emulation_panel`).

8. The text buffer window does not show any special characters, such as accented characters, but only dots ('.').

The text buffer window cannot display characters which fall into the range between code #127 and code #159. In order to show any text at all these codes get replaced by the dot character.

9. When I upgraded from an older program release (1.6 - 2.3) to the new 'term' release the program would no longer find all its configuration files.

In order to annoy you and make things generally irritating some of the configuration files were renamed in v2.4, and some were moved to different directories. While the files used to be present in `ENVARC:term 'term'` now looks for them in `TERM:config`. If 'term' finds no `TERM:` assignments, it will create one. If no `TERM:config` directory can be found, it will also be created. The

configuration files have been changed as follows:

```
Preferences.term
term_preferences.iff
    New name is now term.prefs

Phonebook.term
term_phonebook.iff
    New name is now phonebook.prefs

Hotkeys.term
term_hotkeys.iff
    New name is now hotkeys.prefs

Speech.term
term_speech.iff
    New name is now speech.prefs

Macros.term
term_macros.iff
macros.prefs
    New name is now functionkeys.prefs

Fast!Macros.term
term_fastmacros.iff
    New name is now fastmacros.prefs
```

In order to use 'term' and termcap you need to rename the TERMPATH variable to TERMCONFIGPATH. Look into the ENVARC: directory, rename the file and reboot.

Caution: it is not sufficient just to rename the file names, you will also have to take care of the phonebook entries.

10. I have added several phone numbers to the quick dial menu, but 'term' does not make them all available.

'term' has room for only up to 50 quick dial entries, any further entries will be ignore.

11. When transferring files between computers connected via null-modem cables the transfer always aborts immediately complaining that the DTR or the carrier signal was lost.

During a null-modem transfer there is no carrier or DTR signals present, only modems and such offer such features. Switch the handshaking mode to None and turn off the Check carrier feature in the serial panel (see Serial_panel).

12. The dialer skips two entries at once when pressing the Skip button.

Pressing the Skip button stops dialing, most modems will respond to this with an OK message. Some modems will however send NO CARRIER, which 'term' interpretes the same way as if BUSY had been sent. If this is what your modem does, change the 'NO CARRIER' = 'BUSY' switch in the Serial panel (see Serial_panel).

13. During ZModem file transfers using a fast modem the CPS display first lists an incredibly high value, then drops sharply, followed by lots and lots of transfer errors occurring.

This effect is mostly seen if the Handshaking mode is not set to RTS/CTS when using a fast modem. The trouble is caused by data getting sent while the modem has already stopped accepting new data. It flags this state using the RTS/CTS line.

14. None of my ARexx scripts work any more.

In v3.1 the 'term' ARexx interface was rewritten from scratch. If you wish to retain your old ARexx scripts they will need to be rewritten.

15. During file transfers errors show up while data is saved to and read from a hard disk drive.

Some hard disk drive controllers temporarily disable interrupt processing while accesses take place. In such cases I recommend to download and upload from the ram disk or to upgrade the hard disk driver.

16. Even though the speech support feature is enabled, 'term' does not speak a single word.

With the introduction of Workbench 2.1 Commodore ceased to support the speech synthesizer. If you don't have narrator.device and translator.library installed the speech support will not work.

17. When downloading files they don't end up in the right directory.

The file transfer protocol usually has its own opinion on where to place files it receives. This behaviour can be changed by editing the 'term' settings, open the miscellaneous panel (see Miscellaneous_panel) and turn on the Override transfer path switch. Now you can select the names of the directories to store files received in using the transfer panel (see Transfer_panel).

18. Sometimes 'term' stops processing input and output and just beeps when a key is hit.

Look at the status line, if it displays Holding 'term' has received an xOFF character. Press Control + S to restart.

19. When I moved my configuration files into a different directory and updated my main configuration the phonebook entries started to 'forget' about their settings files.

'term' uses the environment variable TERMCONFIGPATH to locate its configuration files. However, the local phonebook entries may have different search paths set. Check the paths settings to see where they are pointing to.

20. Even though several files are selected for transfer only the very first file is sent.

Not every file transfer protocol supports batch transfers. There is no way for 'term' to tell whether a protocol supports batch transfers, please consult your protocol documentation for more information.

21. Even though everything is set up correctly no ARexx scripts are executed.

In order for ARexx to work the REXXMac program needs to be running. Usually, this program is located in the System drawer of your system partition. Drag it into the WBStartup folder in order to use it at system startup time. Also make sure ARexx knows where to find your ARexx scripts. Either give a complete path name or copy your file into the REXX: drawer. Do not rely upon an Assign REXX: <drawer name> add call in your S:User-Startup file to work, as of this writing ARexx does not support multi-volume assignments.

22. Even though the auto-download feature of the current file transfer protocol is enabled no auto transfer takes place while an ARexx script is running.

Serial I/O processing only takes place if the main program takes care of terminal output.

23. Running 'term' twice from shell does not cause two 'term' processes to be started, instead only the first program is reactivated.

By default starting 'term' more than once only brings an already running 'term' process to the front. Use the NEW keyword to suppress this feature.

(To be continued)

1.9 term.guide/Reporting_bugs

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.).

If you can please run the standard Commodore debugging tools (Enforcer, Sushi, tnt, MungWall, SegTracker) in the background and capture the output. If you include Enforcer hit reports make sure that you have SegTracker running in the background or the Enforcer output will be worthless to me.

Please direct reports of problems with the file transfer and terminal emulation libraries to the respective authors, I am not responsible for maintaining the support libraries.

Error reports concerning the ARexx interface should include a sample script to illustrate what is going wrong.

1.10 term.guide/Background

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.

1.11 term.guide/Future

Future

I spent almost five years of my life programming and updating 'term'. Support for new operating system features was added as soon as Commodore lifted the veil. 'term' grew both in functionality and size, it was difficult to make plans for the path development would follow. While I have no specific idea which turn development may take in the future there are a few things I definitely do not want to add:

- FAX support

There are plenty of good commercial FAX solutions available for the Amiga. I lack both the time and the motivation to add FAX support to 'term'. However, future 'term' releases may provide interfaces to FAX programs.

- More terminal emulations

'term' offers support for the XEM standard, making it possible to easily add external terminal emulation libraries. If you are looking for a RIP emulation or a certain Data General terminal emulation, try to find an external emulation library.

- Script language
-

'term' supports ARexx, I don't see any reason why I should add another script language.

- More file transfer protocols

Except for the ASCII transfer routines 'term' offers no built-in file transfer protocols. This is what the XPR interface is for, external file transfer libraries provide all the file transfer services. If you need a file transfer protocol, look for an external transfer protocol library.

- Reduced functionality

It was 'tough' enough to implement all the features, bits & pieces that make up 'term'. Honestly, I don't have the heart to cut back features. It would not have been the first attempt to make 'term' smaller either; there have been numerous attempts to create programs to copy the functionality of 'term' or to build a smaller, scaled down terminal program based upon the 'term' source code. As far as I know none of these attempts was successful.

It is difficult to judge how the next 'term' release will look like. Also, v4.0 may be the last 'term' release, but then again maybe not. The future of 'term' depends on its users, and this includes you.

1.12 term.guide/Acknowledgements

Acknowledgements

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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.

Additional user interface wizardry and advice by Martin Taillefer. The file transfer section of this manual was rewritten to incorporate several suggestions made by Mike Safer.

The XPR libraries were created by Terence Finney (bplus), 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!

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1.13 term.guide/Source_code

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.

1.14 term.guide/Documentation_and_online_help

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 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 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 or PasTeX.

term.ps

English program documentation in Postscript 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 or PasTeX.

termRexx.ps

English ARexx interface documentation in Postscript format. This file was generated from termRexx.dvi using the dvips utility.

In order to take advantage of the online-help feature, AmigaGuide 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 Path_panel) 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 a help window.

1.15 term.guide/Foreign_language_support

Foreign language support

'term' supports foreign language text catalog tables as introduced with Workbench 2.1 locale.library. As of this writing there are Dutch, Swedish, French, Danish and 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 finished with the translation table, send it to me on disk or via eMail, don't compile the catalog on your own!.

1.16 term.guide/Workbench_and_Shell

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 the minimum 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 %s. The %s will be replaced by the name of the public screen 'term' uses.

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.

BEHIND

This option will cause 'term' to open its screen behind all other screens and not to activate its window.

1.17 term.guide/User_interface_notes

User interface notes

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 text gadgets will be auto-activated. Pressing the Return key will cycle through all the available text gadgets, holding down either Shift key will break the cycle.

Windows in which only a single scrolling list is present cursor keys may be used to scroll the contents.

The Return and Escape keys are respected by most windows. A button surrounded by a recessed box represents the default choice in a requester, pressing the Return key will select it. The Escape key always selects the 'stop' or 'cancel' button usually to be found in the lower right corner of a window. Most windows to feature a close gadget in the upper left corner can be closed by pressing the Escape key.

Numeric entry fields accept input several notations, namely hexadecimal (\$.. and 0x..), octal (&..) and binary (%..).

The user interface support library tries to make all control panel windows fit on the screen. If the first attempt fails a different font is used. If this did not help either a new screen will be opened for the window. This screen will usually be larger than the visible region. Move the mouse towards the borders of the screen to reveal more of it.

1.18 term.guide/Screen

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), Hanging up (connection is being cancelled), Recording (a script is being recorded) and Rec.line (a line of text is being recorded).

Buffer

Indicates whether the text buffer is currently recording incoming text or whether the current text buffer contents are frozen.

Protocol

The currently selected data transfer protocol.

Emulation

The currently active terminal emulation mode.

Rate

The data transfer rate in bits per second (= Baud).

Params.

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.

This display will show the online time, the online cost or both (toggled every five seconds) depending on your current settings.

Unless configured different, 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 screen 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.

1.19 term.guide/Menus

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.

Project	Printing, log files, iconification, program termination
Edit	Clipboard support
Cmnds.	ARexx- and AmigaDOS command execution
Phone	Modem and dialing functions

Transf.	File transfer functions
Buffer	Text buffer functions
Terminal	Terminal emulation control
Settings	Program settings control
Windows	Auxiliary windows
Dial	The quick dialing menu

1.20 term.guide/Project

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 (as text)/Clipboard

These menu entries are to output plain text on the printer. You can either print the contents of the main screen or the contents of the clipboard.

Print Screen (as graphics)

Select this menu entry to make a hardcopy of the screen contents. Printing will respect screen colours and follow the on-screen bit image.

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, if this feature is enabled, 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 it was in before iconification took place.

While 'term' is iconified, most incoming ARexx-commands will be queued and the corresponding ARexx scripts 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.

1.21 term.guide/Edit

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 Clipboard_panel) 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.

1.22 term.guide/Cmds.

Cmds. (= 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.

Record script

Select this menu item to start/stop script recording. More on script recording can be found under script recording (see Script_recording).

Record line

When in script recording mode this menu item will cause 'term' to temporarily switch into full line recording mode, rather than recording only single keystrokes. Pressing the shift+return keys has the same effect as calling the Record line menu item. More on the topic of script recording can be found under script recording (see Script_recording).

Edit traps...

This brings up the trap list editor (see Trap_panel. The list includes control sequences 'term' is to look for in the incoming data stream. When a sequence is found the corresponding command sequence (see Command_sequences) is executed.

The window contains the usual list management tools (edit, add, remove, clear and move). Please note that the order of processing occurs top-down, i.e. of two entries with the same control sequence data only the top-most will be evaluated.

The buttons Load and Save will let you restore and save the current trap list. The Load button appends the contents of a trap list file to the current trap list, so take care. On startup 'term' looks for a configuration file named trap.prefs and tries to load it. Thus, there can be only one global trap list. It is up to ARexx to load and modify the contents of the trap list, although this editor window provides a graphical interface to the list. Please note that the more list entries 'term' has to filter through the input data stream the slower input processing may become, affecting mostly terminal output.

Disable traps

This menu item provides a shortcut to stop trap list processing. On startup 'term' will enable trap list processing if the trap list loaded from disk is non-empty.

1.23 term.guide/Phone

Phone

Phonebook

The phonebook is one of the most powerful and complex functions of 'term' and will be described later in this document (see Phonebook).

Redial

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

Dial phone number

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.

1.24 term.guide/Transf.

Transf. (= Transfer)

This menu provides access to file transfer functions. For more information on this topic, see `Transfer_panel`, `XPR_options_sample`, `Transfer_progress_panel`, `ASCII-transfer_panel` and `ASCII-transfer_settings`.

Upload ASCII file(s)

This is a pure ASCII-file upload. It was added to allow poor BBS programs to receive text files.

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 `Path_panel`) text editor on a file to be selected using a file requester. `'term'` pays attention to the EDITOR environment variable and will use the program indicated by it.

`'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 `Transfer_progress_panel`).

1.25 term.guide/Buffer

Buffer

Clear buffer

Clears the contents of the text buffer (see `Text_buffer`). Any text will be discarded and cannot be recovered. Capture files are not affected by this command.

Display buffer

Opens the text buffer screen (see `Text_buffer`).

Close buffer

Closes the text buffer screen but does not free the contents.

Freeze buffer

This menu entry will, if enabled, stop the text buffer from filling up with new text.

Load buffer

Loads the contents of the text buffer from a file. If there are still text lines in the text buffer 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 text buffer to a file. You will be notified if the file to save to already exists (you may discard the old file, append the new data or cancel the action).

1.26 term.guide/Terminal

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.

1.27 term.guide/Settings

Settings

This is where you configure the standard preferences settings. If you select New in the phonebook window (see Phonebook) these standard settings will be used. Put in your most commonly used settings here. Change individual entries in the phonebook as needed.

Serial

See Serial_panel

Modem

See Modem_panel.

Screen

See Screen_panel.

Terminal

See Terminal_panel.

Emulation

See Emulation_panel.

Clipboard

See Clipboard_panel.

Capture

See Capture_panel.

Commands

See Command_panel.

Miscellaneous

See Miscellaneous_panel.

Paths

See Path_panel.

Transfer protocol

See Transfer_panel.

Transfer protocol options

If the transfer protocol options menu item is selected, a transfer settings panel is displayed. The Default transfer library in the transfer panel (see Transfer_panel) determines the contents of this control panel. If the selected default transfer library does not provide these facilities, a simple text requester will prompt for input. Consult the documentation of the chosen transfer protocol for legal options and the values to which they can be set.

As an example, see XPR_options_sample.

Translation tables

See Translation_panel.

Function keys

See Function_key_panel.

Fast! macros

See Fast_macro_panel.

Hotkeys

See Hotkey_panel.

Speech

See Speech_panel.

Sound

See Sound_panel.

Area codes

See Area_code_panel.

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:. If the %s formatting parameter is used in the output specification it will be replaced by the name of the public screen 'term' uses.

1.28 term.guide/Windows

Windows

Status

This function opens a window to display program status information. A click on the Update button will cause the information to be brought up to date:

Session start

When was the program started?

Bytes received

The number of bytes received.

Bytes sent

The number of bytes sent.

Connection message

The text returned by the modem when a connection was made immediately following the CONNECT message.

Name

If available, the name of the system the modem is currently connected to.

Phone number

If available, the phone number of the system the modem is currently connected to.

Comment

If available, the phonebook comment corresponding to the system the modem is currently connected to.

User name

If available, the user name, as available through the phonebook, corresponding to the system the modem is currently connected to.

Screen size

The size of the terminal output window in characters (columns and rows).

ARexx port name

The name of the ARexx host 'term' is currently using.

Buffer size (bytes)

The size of the text buffer (see Text_buffer).

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 below (see Packet_window).

Fast! macros

Opens or closes the so-called fast macro panel (see `Fast_macro_panel`). For more information on fast! macros see `Fast!_macros`.

Upload queue

This will open a window featuring a list of files to upload. You can drag icons of files to upload on this window, their names will appear in the list. Dragging icons on the icon labeled term Upload queue has the same effect. Double-clicking this icon will open the upload list window on the Workbench screen. In order to start an upload either press the Binary upload or Text upload button.

You can replace the icon 'term' uses by copying the icon of your choice into the directory 'term' resides in and naming it `term_DropIcon`.

For more information on the Upload queue see `File_upload_panel`.

1.29 term.guide/Dial

The quick dialing menu

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

Selecting any item of this menu will cause the corresponding phone number to be dialled. Extended selection and drag-selection are also available when picking services to dial. Please note that you can 'check in' single items by selecting them, but you cannot remove any items from the dial list.

1.30 term.guide/Control_panels

Control panels

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

Serial panel	Serial settings
Modem panel	Modem settings
Screen panel	Screen settings
Pen panel	Drawing pen settings
Terminal panel	Terminal settings
Emulation panel	Terminal emulation control
Clipboard panel	Clipboard settings
Capture panel	Capture file, log file and text buffer settings
Command panel	Command settings

Miscellaneous panel	Miscellaneous settings
Path panel	Path settings
Transfer panel	Transfer library settings
XPR options sample	Sample transfer protocol settings
Function key panel	Function key settings
Cursor key panel	Cursor key settings
Fast macro panel	Fast macro settings
Hotkey panel	Hotkey settings
Speech panel	Speech settings
Sound panel	Sound settings
Transfer progress panel	Data transfer control
ASCII-transfer panel	ASCII-data transfer control
ASCII-transfer settings	The preferences editor for the built-in ASCII transfer routines
Translation panel	Character translation control
Phonebook	The phone directory
Rate panel	Phone rate control
Copy panel	Copying of configuration elements
Dial panel	Dialing control
Printing panel	Phonebook printing control
Trap panel	Trap sequence controls
File upload panel	How to prepare file upload lists before the upload is started
Area code panel	An alternative way to control phone rate accounting

1.31 term.guide/Serial_panel

Serial panel

This is where the serial parameters may be changed.

Baud rate

The transfer speed in bits per second at which 'term' communicates with the serial hardware. The minimum value allowed is 110 baud. You may enter any value you like but keep in mind that not all modems will respond to all possible settings. Clicking on the arrows pointing to the left and to the right will cycle through a set of predefined rates.

As of this writing the standard Amiga serial hardware is capable of running baud rates from 110 up to and including 1,000,000 bits per second. These are the basic hardware limits, but in practice reliable transfer speeds are far lower at 57,600 baud and below. Custom serial hardware may support higher transfer rates. Do not underestimate the overhead caused by the terminal program & interrupt processing and the effects of connecting cable lengths.

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

Bits/char

Number of bits per transferred character (7 or 8). As of this writing the Amiga serial hardware does not support all possible

bits/char, parity and stop bits combinations.

Parity

Serial parity (none, odd, even, mark or space). As of this writing the Amiga serial hardware does not support all possible bits/char, parity and stop bits combinations.

Stop bits

Number of stop bits (1 or 2). As of this writing the Amiga serial hardware does not support all possible bits/char, parity and stop bits combinations.

Handshaking

Serial handshaking mode (RTS/CTS 7 wire hardware handshaking, RTS/CTS with DSR signal check, none). The RTS/CTS (DSR) mode will make 'term' check the 'data set ready' signal first before turning on RTS/CTS handshaking. If no signal is present 'term' will turn off RTS/CTS 7 wire hardware handshaking.

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

If this switch is effect each character received or transmitted by 'term' will have its high-order bit cleared.

Shared access

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). Whenever an xON character is received, 'term' will change its state to 'holding' and stop terminal input and output processing. Press Control + Q in order to restart.

Pass xON/xOFF through

If this switch is enabled, 'term' will pass the xON/xOFF characters through to the modem rather than quietly discarding them.

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 text causes confusion.

If this switch is enabled, 'term' will check the carrier signal during file transfers and will stop the transfer if the signal is lost. It will also check the carrier signal at program startup and if the signal is detected will start the online timer. If offline, 'term' will check the carrier signal periodically and go into online state if the signal is detected.

Note: Be sure to switch the carrier detect check off in case you wish to transfer files using a null-modem cable!

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 character, no parity and 1 stop bit. Do not expect dramatic speed increases.

Use OwnDevUnit

This switch controls whether Christopher Wichura's OwnDevUnit.library will be used to schedule access of multiple programs to the currently selected serial device driver.

Quantum

The number of bytes 'term' tries to read in one chunk at a time. The more bytes read, the more time it takes to process them. While the text is processed, mouse and keyboard input are delayed. Choose this value with care.

Serial device

The name of the serial driver to be used by 'term'. This is usually serial.device (modem0.device for the internal Supra modem, sxbios.device for ASDG's serial IO card, etc.; consult your hardware manual for more information).

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.

Use

Accept the current settings.

Default (phonebook 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.

1.32 term.guide/Modem_panel

Modem panel

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

Modem init

The text to send to the modem after successful program initialization. This text is optional and thus does not need to be present.

The dialing routine will use the initialization text entered here before dialing a phone number. You can separate multiple initialization commands with vertical bar (|) characters. Only the dialer will use them.

Modem exit

The text to be sent to the modem shortly before the program terminates. Just like the modem init text it is optional and does not need to be present.

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

The dialing routine will use the exit text entered here before dialing a phone number. You can separate multiple exit commands with vertical bar (|) characters. Only the dialer will use them.

Hang up

The text to be sent to the modem when asked to hang up the line. This text does have to be present if the Drop DTR on hangup switch is enabled.

No carrier

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 how much the user is to pay for it.

No dialtone

The message to be returned by the modem in case it does not detect any dialing tone on the phone line.

Connect

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.

Voice

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

Ring

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

Busy

The message the modem returns if the number which has just been dialed is busy.

Ok

The message the modem returns if a command was successfully executed.

Error

The message the modem returns if a command was not to be executed successfully.

Dial prefix

The text to be used to prefix each dialing command. This is usually a variant of ATDP or ATDT.

Dial suffix

The text to be used to append to each dialing command. This is usually the carriage-return character \r.

Redial delay

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

Dial retries

The number of times the dialer walks through the dialing list trying to make a successful connection before giving up. Setting this value to 'unlimited' will cause the dialer to retry over and over again until it either makes a connection or the dialing procedure is aborted.

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 make 'term' take advantage of 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.

Dialer abort hangs up

Unless this switch is enabled the dialing procedure will try to stop a modem dial command by sending a plain carriage return character. If the Dialer abort hangs up switch is enabled the usual modem hang up procedure will be used instead.

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.

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.

Use

Use the current settings.

Default (phonebook 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.

1.33 term.guide/Screen_panel

Screen panel

Display mode

Choose the display mode 'term' is to use for the main screen here.

Screen font

This is where you choose the user interface font 'term' is to use for the main screen.

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 permanently.

Make screen public

If this switch is enabled, the 'term' main screen will be made available as a public area other programs may open their windows on.

'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.

Use public screen

'term' does not necessarily open a custom screen, this switch will make the main and auxiliary 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.

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.

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.

Window border

The main window will be opened on a custom screen, featuring a drag bar and depth gadgets.

Separate status window

A separate window will be opened for the status display window.

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.

Colour

This button determines the colour mode the terminal emulation is going to use. Until now, four 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 (Mono.)

Monochrome, two colours.

Blinking

If selected the VT-100 blinking option is enabled. This may require to allocate more colours for a specific colour mode than with blinking disabled, so do not be surprised if display performance suddenly drops like a brick.

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.

Use standard pens

The user interface look is determined by the choice of on-screen rendering pens, i.e. which colour to use for highlighted text, active windows, inactive windows, etc. If this button is enabled the screen will be opened using a predefined standard set of drawing pens.

Edit pens...

Pressing this button will open the pen panel (see `Pen_panel`) which permits editing the drawing pens to use for this colour mode.

Use

Use the current settings.

Default (phonebook 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.

1.34 term.guide/Pen_panel

Pen panel

This control panel is available under Kickstart 3.0 and above only. Its functionality is not supported under previous operating system releases!

The user interface look is determined by the choice of on-screen rendering pens, i.e. which colour to use for highlighted text, active windows, inactive windows, etc. Changing the screen colour palette also affects the look of the user interface, this control panel permits to compensate for such changes: even if you reverse the terminal colours you can still retain the correct user interface look by adapting the pens. The controls available are similar to the Workbench Preferences

editor program Palette:

Background

The screen background colour to use, by default this is colour 0.

Text

The default colour to render common text, such as in control panel labels.

Important text

The colour to draw important text in, this should put a certain emphasis on the text rendered so the colour should be different from the Text colour.

Bright edges

The colour to use to render the bright edges of windows.

Dark edges

The colour to use to render the dark edges of windows.

Active window title bars

The colour to mark the currently active window and selected buttons and list entries.

Active window titles

The colour to use when printing text over active window title bars, selected buttons and list entries.

Menu background

The colour to render pull-down menus in.

Menu text

The colour to use when printing the menu text.

Use standard pens

Reset the current pen selection to default values.

Use

Keep the current settings.

Cancel

Return to previous settings.

1.35 term.guide/Terminal_panel

Terminal panel

These settings control the basic behaviour of the terminal emulation 'term' uses. More specific emulation options are available in the emulation window (see Emulation_panel).

Emulation

This is where you select the terminal emulation. Choose one of the following:

ANSI/VT-220

This emulation is a 'melange' of three terminal command sets which themselves are supersets or subsets of one another. Most of the VT-220 command set is supported, including some additions made in the ANSI X3.64 specifications. With VT-220 its subsets VT-100 and VT-102 are supported. However, not all the VT-52 commands are supported.

Atomic

A plain text-only terminal mode which filters out terminal commands and special control characters.

TTY

Also a text-only terminal mode but which displays all control codes and commands it cannot handle on-screen, great for debugging.

Hex

Another debugging mode which displays all incoming data in hexadecimal notation. If possible the corresponding glyphs will be displayed as well.

External

This enables the use of external terminal emulation libraries following the XEM v2.0 specifications. In this mode you need to specify the library to use, otherwise 'term' will return to ANSI/VT-220 mode.

Emulation name

The name of an external terminal emulation library to be used by 'term' instead of the built-in emulation code. Requires that the emulation mode is set to External

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.

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 packet window (see Packet_window) due to operating system limitations.

Use emulation proc.

If you are bold and daring you can have an external process handle the terminal text output, just turn on this switch. Please note that the external process will consume additional memory and text throughput speed is likely to suffer with fragmented memory. On the other hand the emulation process will relieve the main program of the tedious task of having to process the incoming data which. This helps the main program to keep up with the incoming data stream and makes it less likely that incoming text is lost.

Text font

The name of the standard or default terminal text display font. Please note that this font cannot be proportional-spaced.

IBM PC font

The name of the font to use if the terminal is in IBM PC mode. Please note that this font cannot be proportional-spaced.

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 selected under the Text font settings in this control panel.

IBM PC style

A font similar to the IBM PC text font will be used. No matter how the translation tables (see Translation_panel) are configured, outgoing Amiga characters are translated into PC character values. The terminal window will use the font selected under the IBM PC font settings in this control panel.

IBM PC style (raw)

This selection has very much the same effect as IBM PC style but no character translation is performed. The terminal window will use the font selected under the IBM PC font settings in this control panel.

Send CR

Send LF

These buttons determine the sequences that are sent to the remote if a carriage return (CR) or line feed (LF) character is to be transmitted. Both characters serve as end-of-line indicators.

-

The character is suppressed.

<<CR>>

A carriage return character is sent.

<<LF>>

A line feed character is sent.

<<CR>><<LF>>

A sequence of two characters (carriage return followed by line feed) is sent.

<<LF>><<CR>>

A sequence of two characters (line feed followed by carriage return) is sent.

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.

Use

Use the current settings.

Default (phonebook 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.

1.36 term.guide/Emulation_panel

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 as supported by the external terminal emulation module.

Cursor keys

If in 'applications mode' the cursor keys will cause a control sequence to be transmitted instead of a cursor move event. This mode is usually activated by special applications on the remote side.

Lock cursor key mode

Certain applications may excessively change the cursor key mode from standard to applications mode. If you do not want this to happen you can forbid it by using this switch.

Numeric keypad

If in 'applications mode' the numeric keypad will cause a control sequence to be transmitted instead of the characters indicated by the key labels. This mode is usually activated by special applications on the remote side.

Lock keypad mode

Certain applications may excessively change the keypad mode from standard to applications mode. If you do not want this to happen you can forbid it by using this switch.

Swap 'Backspace' and 'Del' keys

If this switch is in effect the backspace and delete key codes are swapped. This also applies to sequences such as Control + H which will produce a delete character instead of a backspace character.

Wrap cursor moves

According to the VT-100 specifications 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 switch should be activated all the time.

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 VT-100 control sequences cause 'term' to perform a linefeed instead of clearing the screen or other serious changes of the contents of the screen.

'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.

Printer control enabled

'term' supports the standard VT-220 printer control commands. If you do not want the remote application to play with the printer the corresponding support commands can be disabled with this switch. If disabled 'term' will act like a VT-220 terminal with no printer attached.

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.

The special size characters are produced in real-time, so text output may be slightly slowed.

Lock font mode

If this switch is turned on, any terminal commands to change the font scale will be ignored.

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. Off turns this feature off, Overstrike clears the character below the cursor and Shift shifts the line contents to the right of the cursor to the left.

Answerback message

The text to send across the serial line whenever an ENQ character is received. The text is - as usual - a command sequence.

Max. prescroll

This is where you set the maximum number of lines the terminal

emulation will scroll the screen contents up in one single 'jump'. This feature is often referred to as 'prescroll'. Note: the data throughput rate plays an important part when counting the number of lines to scroll. The higher the rate, the more lines will be scrolled.

Max. scroll jump

Here is where you set the number of lines to move the screen contents up when the cursor moves beyond the last terminal screen line.

Use

Use the current settings.

Default (phonebook 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.

1.37 term.guide/Clipboard_panel

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'.

Paste prefix

If enabled, the text to send before the clipboard contents are fed into the input stream, see Clipboard.

Paste suffix

If enabled, the text to send after the clipboard contents are fed into the input stream, see Clipboard.

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 modes are to be used with great 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 BBS programs will not echo certain characters, such as escape codes, etc.

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(s) to wait for the receiver to issue after a line of text is send. This text 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.

Use

Use the current settings.

Default (phonebook 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.

1.38 term.guide/Capture_panel

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. The log file created by this function is not intended for postprocessing via call-log file analyzers. Use the Log calls feature for this purpose.

Log file

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

Log calls

If this switch is enabled, 'term' will create call-log files in a format compatible with the CallInfo program. Sometimes this format is referred to as 'NComm format'.

Call log file

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

Enabled

This switch works in conjunction with the Freeze buffer menu entry (freezing the text buffer 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.

Max. size

To save memory, a high-water mark concerning the maximum amount of memory the text buffer (see Text_buffer) will allocate for text may be specified. The minimum value to be entered here is 2,000 bytes which are roughly equivalent to two text buffer pages of text. A value of 0 will cause the text buffer to always allocate as much memory as required to buffer all the incoming text.

File path

The path the file requester will bring up when saving the contents of the text buffer.

Buffer line width

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

Conn.-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 entries.

Filter enabled

If selected, command sequences are filtered out before the incoming characters are captured to disk or printer. This makes good sense with noisy lines generating random characters which might scare your printer. It also produces a text file that is much more readable than with all the control sequence codes cluttering up the text.

Creation date

By default 'term' will append the date of the call made to the name of the auto-capture file created (Add to name). Alternatively, 'term' will leave the name untouched and store the creation date within the file (Write to file).

File path

This text gadget contains the path in which the the capture files will be created if Connect-auto-capture is enabled.

Open 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 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 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 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.

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.

Display mode

This is where you choose the screen display mode the buffer screen should use.

Search history size

The text buffer search function maintains a backlog of all the search text entered. The number of texts to remember, before the oldest is discarded, can be set using the Search history size control. In the search text entry field you can use the Cursor up and Cursor down keys to scroll through the previously entered search strings.

Use

Use the current settings.

Default (phonebook 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.

1.39 term.guide/Command_panel

Command panel

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

Startup command

At the beginning of every session with 'term' and after a connection has been established by the dialing routine a command-sequence is executed. Do not use this command for auto-login scripts and such, this is what the Login command is for. Note that the dialing procedure executes the Startup command after the Login command.

Login command

This command will be executed immediately after the dialing procedure has established a connection. You should use this command for login scripts and such. Note that the dialing procedure first executes the Login command and then the Startup command.

Logoff command

The command to execute when the line is hung up or the carrier signal is lost.

Upload command

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

Download command

'term' will execute this command after a successful download has been made.

Use

Use the current settings.

Default (phonebook 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.

1.40 term.guide/Miscellaneous_panel

Miscellaneous panel

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

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 restore the previous global configuration.

Show fast! macros

If this switch is enabled, the fast macro window (see Fast_macro_panel) 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 path panel (see Path_panel). 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.

Set 'archived' bit

If enabled, this switch will cause 'term' to mark files uploaded as archived.

Transfer file icons

This switch works in conjunction with the drag & upload feature (see `Transfer_progress_panel`). 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.

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 displays 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).

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.

Simple file I/O

This switch controls whether 'term' is to use double-buffered file management routines or not.

Hide upload icon

The file upload panel can be invoked by double-clicking on the corresponding icon placed in the Workbench window (see `File_upload_panel`). If you do not want the icon to appear, turn on the Hide upload icon switch.

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 experiment 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.

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.

I/O buffer size

This slider controls how much memory the double-buffered file management routines will allocate for each buffer. This means a value of 4096 bytes will result in an allocation of 8192 bytes in total.

Use

Use the current settings.

Default (phonebook 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.

1.41 term.guide/Path_panel

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, macro keys, etc.). The default configuration file is called term.prefs and will be searched in the path defined by the environment variable TERMCONFIGPATH (see Environment_variables).

Default text editor

Contains the name and search path of the editor used by Edit & upload text file in the transfer menu (see Transf.).

'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 (phonebook 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.

1.42 term.guide/Transfer_panel

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.

Mangle filenames for upload

Certain transfer protocols running under MS-DOS get into serious trouble if told to receive files with names which do not match the local naming scheme (8 characters for the name + "." + 3 characters for the extension). For example, in such situations

ZModem will restart the file transfer over and over again in a row without getting anywhere. To steer clear of trouble you can turn on the Mangle filenames for upload switch which will cause the file transfer protocol to report 'condensed' file names to the remote receiver. A special algorithm will shrink the file names to the MS-DOS file name template, clearing potentially dangerous character combinations on the fly. Note: the algorithm may map two different Amiga file names to the same MS-DOS file name, so watch out!

ASCII upload library

The XPR library to be used when sending plain ASCII text as triggered by selecting 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

Instead of the ASCII upload library 'term' will use the built-in routines.

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

Instead of the ASCII upload library 'term' will use the built-in routines. Incoming text will be received in a fashion similar to the capture and review buffer functions, but no filtering, etc. will be performed. As the download routine cannot always tell when all the data to be received has arrived, you may need to stop the download by hand.

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 (phonebook 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.

Settings for each transfer library are saved in text files in the ENVARC: and ENV: drawers.

Leave the default transfer library set to the one you intend to use most.

1.43 term.guide/XPR_options_sample

XPR options sample

You will find an excerpt of the xprzmodem.doc documentation file for the ZModem file transfer protocol below which is the default transfer protocol 'term' is shipped with. Please note that other file transfer protocols will sport different options and controls, you should consult the corresponding documentation for more information.

Text translation mode:

Y = Text Yes

If receiving, translate CR/LF pairs or solo CR chars to normal Amiga LF chars. Ignore data past ^Z. If sending, suggests to receiver that they should receive this file in text mode.

N = Text No

Receive file verbatim, without changes. If sending, suggest to receiver that they receive this file verbatim, without translations.

? = Text status unknown

If receiving, use sender's suggestion as to whether to do end of line translations or not. If sending, tell receiver to use default mode, since we don't know either.

C = Text mode set by Comm program

The library asks the communications program whether or not to use Text mode for each file. If the communications program does not support the necessary xpr_finfo() call, or if the call fails, this option acts like T?. From the user's point of view, what this option normally does is set the Text mode to match the communications program's built-in text/binary/end-of-line/translation mode, if any.

Overwrite mode:

Y = Overwrite Yes

If about to receive file with same name as one which already exists, delete the old file and receive the new file in its

place.

N = Overwrite No

If about to receive file with same name as one which already exists, append ".dup" onto the name of the new file to keep them separate.

R = Overwrite Resume

If about to receive file with same name as one which already exists, resume receiving file data from the current end of the existing file.

S = Overwrite Skip

If about to receive file with same name as one which already exists, skip this file, we don't want it. Batch transfers will move on to the next file in the set, if any.

Buffer size:

xprzmodem.library adds a layer of file I/O buffering in addition to whatever the comm program may or may not provide. This option sets the size of XPRZModem's file I/O buffer in kilobytes. The minimum value is 1 KB, for those using RAM drives or fast hard drives, or those whose comm programs already provide sufficient buffering. The maximum value is as much contiguous RAM as you have available in your Amiga. If you specify more than is actually available, XPRZModem will keep decrementing the buffer size requested by 1 KB until the memory allocation works. That way, if your RAM is too fragmented to use the amount you request, XPRZModem simply uses the largest block available. Buffering is especially helpful for floppy drive users; it keeps your drive from continuously gronking and slowing things down all through the transfer.

Additional note for 'term' users: this option is practically replaced by the I/O buffer size settings in the miscellaneous panel (see Miscellaneous_panel).

Frame size:

Although normally avoided, ZModem has the ability to require an ACK to be sent from the receiver to the sender every X-many data bytes. Normally you don't want to use this feature, because not waiting for ACKs is part of how ZModem works so fast. However, this feature can be very useful in conjunction with file I/O buffering on slow devices (namely those floppy drives). If you set up a large I/O buffer to avoid gronking your floppy so often, you'll find that when the buffer finally does get around to being flushed that it can take a looonng time; so long, in fact, that the delay can cause timeouts and errors. But if you set your ZModem to require the sender to wait for an ACK every buffer's-worth of data, the sender will politely wait for you to flush your buffer to the slow floppy and send it an ACK saying it's OK to continue now. This value should be set to 0 to disable ACKs (normal mode), or set it to the actual number of data bytes allowed between ACKs. For example, if you set the Buffer size to 64KB because of your floppy, you should also set the Frame size to 65536 bytes.

Error limit:

This allows you to set the number of sequential errors which will be required to convince ZModem to abort the transfer. The normal value is 10, meaning that 10 errors must happen in a row with no valid data being transferred in order to cause an abort. This setting is provided for those using XPRZModem with a BBS, who may wish to use a relaxed setting, or those with really lousy phone lines who are desperate and patient enough to want the transfer to continue in spite of horrible performance.

Auto-activate mode:

Y = Auto-activate Yes

If the comm program supports the ability, the library will automatically go into receive mode when the start of a ZModem download is detected.

N = Auto-activate No

Don't try to automatically start downloading, make the user activate it.

Delete after sending:

Y = Delete Yes

Delete each file after it has been Successfully sent.

N = Delete No

Don't delete files after sending them.

Keep partial files:

Y = Keep Yes

Keep the fragment of a file received so far if file reception is aborted. This allows you to use the Overwrite Resume option above to pick up where you left off on your next attempt.

N = Keep No

Delete any partially-received file after an aborted transfer.

Send full directory path:

Send path Yes

Send full filenames including directory path to receiver.

Send path No

Send only simple filenames, not including directory path.

Default received path:

Store all received files in this directory, if option "Use received path" is not checked. Ignored entry if option Use received path is checked. The path can be any valid existing directory, with or without trailing / (e.g. df0:, Comm:hold, etc.).

Additional note for 'term' users: the default received path option is ignored if the Override transfer path switch in the miscellaneous panel (see Miscellaneous_panel) is enabled.

You will also find the familiar Use and Cancel buttons here which will either keep or discard the changes you made to the settings.

1.44 term.guide/Translation_panel

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. Alternatively, you can press the key combination corresponding to the character whose translation you wish to change.

Both receive and send translation texts can consist of standard command sequences (see `Command_sequences`), 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 terminal panel (see Terminal_panel) to IBM PC style (raw).

Unfortunately, there is no translation available for the Norwegian 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.

1.45 term.guide/Function_key_panel

Function key panel

This control panel allows setting user definable texts for all ten function keys. All texts are considered command sequences (see Command_sequences), a topic which will be covered later in this document.

Modifier

All in all 40 keys may be covered with user defined command sequences (Command_sequences). 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 appropriate 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.

The traditional VT-100 PF-keys (programmable function keys) are mapped to the top row of the numeric keypad. Hold down the Control key and press a top row key to produce the corresponding PF key code.

1.46 term.guide/Cursor_key_panel

Cursor key panel

This control panel both works and looks similar to the function key panel (see `Function_key_panel`), 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.

1.47 term.guide/Fast_macro_panel

Fast macro panel

The design and implementation of the settings to be configured in this menu are closely related to the menu entry function key panel (see `Function_key_panel`) 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 `Fast!_macros`).

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 text

The command sequence (see `Command_sequences`) 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.

Remove

Removes the currently selected macro from the list.

Clear

Removes all the macros from list, clearing it.

Load

Loads the macro list from a file.

Save

Saves the macro list to a file.

|<

Places the currently selected macro at the top of the list.

<

Moves the currently selected macro one entry up.

>

Moves the currently selected macro one entry down.

>|

Places the currently selected macro at the end of the list.

1.48 term.guide/Hotkey_panel

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 text buffer 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.

Stop 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.

'term' will refuse to accept invalid keyword combinations. You will be notified by a brief screen flash/bell signal and the cursor will reappear in the text entry field whose contents are rejected.

1.49 term.guide/Speech_panel

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 since Workbench v2.1 was introduced!

Rate (words/minute)

Speaking speed in words per minute.

Pitch (Hz)

The greater this value, the higher the voice appears to be speaking.

Frequency (Hz)

Voice frequency in Hertz.

Volume

The volume of the voice in percent.

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.

1.50 term.guide/Sound_panel

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.

Volume

This slider affects the volume of all sounds produced by 'term'.
Setting it to zero suppresses sound output.

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.

As of Workbench 2.04 'term' will only load plain IFF-8SVX format sound files. With Workbench 3.x any sound file can be loaded for which there exists a datatypes class. Please note that due to an operating system bug sound files larger than 102,400 bytes will not play correctly under Workbench 3.0.

1.51 term.guide/Transfer_progress_panel

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 the three buttons (Stop entire transfer, Skip current file or Stop transfer batch). For most transfer protocols all buttons 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. Error messages are printed in a special colour.

File

The name of the file being transferred.

Next file

The name of the next file to be sent.

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 xfered

Number of bytes transferred yet.

Total size

The total size of all files to be transferred.

Total bytes xfered

The total number of bytes transferred yet.

Files xfered

The number of files transferred yet and the number of files to go.

Blocks xfered

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.

Number of errors

The number of errors occurred during file transfer.

Number of timeouts

The number of timeouts occurred 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-inquiry 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. If the Upload from queue option is in effect the contents of the transfer queue will be uploaded.

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 Miscellaneous_panel) 'term' will ignore these settings and use the settings to be changed in the Settings/Paths (see Path_panel) 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.

1.52 term.guide/ASCII-transfer_panel

ASCII-transfer panel

The built-in ASCII transfer routines as to be enabled in the transfer panel (see `Transfer_panel`) 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 xfered

The number of bytes sent/received.

Lines xfered

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 modes are to be used with great 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 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.

Skip current file

Stops sending the current file and proceeds to the next.

Stop entire transfer

Stops the ASCII data transfer.

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.

1.53 term.guide/ASCII-transfer_settings

ASCII-transfer settings

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 modes are to be used with great 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.

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.

Send CR

Send LF

These buttons determine the sequences that are sent to the remote if a carriage return (CR) or line feed (LF) character is to be transmitted. Both characters serve as end-of-line indicators.

-

The character is suppressed.

<<CR>>

A carriage return character is sent.

<<LF>>

A line feed character is sent.

<<CR>><<LF>>

A sequence of two characters (carriage return followed by line feed) is sent.

<<LF>><<CR>>

A sequence of two characters (line feed followed by carriage return) is sent.

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.

Ignore data past terminator

With this option enabled the receiver will search for a termination character in the incoming data stream. If this

character is found the transfer will be terminated.

Terminator character

Enter the ASCII code of the terminator character to be used for the Ignore data past terminator feature here.

Quiet ASCII transfer

If this switch is not enabled, the built-in ASCII upload/download routines will display the outgoing/incoming data in the terminal window. This option is to let you watch the progress of the file transfer, so that, for example, if the remote does not respond to the data you send, you may want to stop and restart the upload.

Strip bit 8

If this switch is effect each character received or transmitted by 'term' will have its high-order bit cleared.

With ASCII uploads it is important to make sure that end-of-line characters such as carriage return and line feed are properly set up for the remote. While on the Amiga it is common to end a line of text with a line feed character, most editors and such expect a carriage return character to be transferred. This can easily be arranged by setting the Send LF switch to <<CR>>.

1.54 term.guide/Phonebook

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.

Name

Name of the last selected telephonebook entry.

Comment

A comment to associate with a phonebook entry.

Phone number(s)

The telephone number(s) of the last selected telephonebook entry.

If a system 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 text 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).

Note: if you do not enter a phone number you will be unable to use the entry for dialing.

Quick menu

If this switch is in effect, the corresponding phonebook 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

Generates a new telephonebook entry with standard settings and places it at the end of the telephonebook.

Clone

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

Remove

Removes the last selected telephonebook entry from the telephonebook and frees the memory allocated for this entry.

Copy cfg.

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 Copy_panel for more information.

Use

Takes over the local configuration settings saved with the currently selected phonebook entry. Also installed are the associated password and user name entries.

Tag

Tags the currently selected phonebook entry for inclusion in the dialing list. Pressing the Space key toggles the selection.

Untag

Removes the currently selected phonebook entry from the dialing list. Pressing the Space key toggles the selection. Press the Del key to untag the currently selected phonebook entry.

Tag all

Includes all phonebook entries in the dialing list.

Toggle all

Adds all phonebook entries that are not in the dialing list to the dialing list and removes all entries from it that are already in it.

Untag all

Removes all phonebook entries from the dialing list. Press Shift+Del to untag all entries.

Load

Loads the contents of a telephonebook from a file.

Save

Saves the contents of a telephonebook to a file.

Print

This button will cause another control panel window to be opened, see `Printing_panel` for more information.

Sort

If any phonebook entries have been selected to be dialled, the phonebook entries will be sorted in the order of dialing. The remaining phonebook entries will be sorted in ascending alphabetical order.

Password

Press this button if you wish to save a special access password with the currently active telephonebook 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.

Dial

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

Note: phonebook entries which lack a phone number will not be entered into the dialing list.

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.

With Translations, Function keys, Cursor keys and Fast! macros the data will be loaded from the corresponding files allowing you to edit it. 'term' will remember the names of the settings files data is read from or is written to. You can change the name directly by holding down a shift key when clicking on Translations, Function keys, Cursor keys or Fast! macros.

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 Rate_panel).

If you are still online, the Dial button 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 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 text, this has to be done in the modem

settings for this mailbox and not in the global settings of 'term'. The Modem init and Modem exit command entries of the phonebook can also be used for initialization.

1.55 term.guide/Rate_panel

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.).

Sec./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 button. To edit an existing entry use the Edit button. To remove an entry, press the Remove 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.

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 Sec./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.

1.56 term.guide/Copy_panel

Copy panel

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

To all entries

The selected parts will be copied to all phonebook entries. If any phonebook 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 phonebook configuration the corresponding global configuration will be left unchanged.

Select all

Selects all parts.

Clear all

Clears the current selection.

Use

Copies the selected items.

Cancel

The window is closed, no items are copied.

1.57 term.guide/Dial_panel

Dial panel

The following information about the dialing process is displayed:

Calling

The name of the telephonebook entry belonging to the number being dialled. If it is just a telephone number the text << Unknown >> is shown, indicating that the name of the BBS 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 phonebook entry which will be processed next if no connection is established. If no further entry exists, "-" 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, the following controls are available:

Skip

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 task.

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 may have been made, but the CONNECT text may be got lost. Pressing this button will cause 'term' to assume that the modem is in fact online now, start the rates accounting and return you to the main window.

Stop dialing

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

Start script recording on connection

As soon as the connection is establish 'term' will start recording incoming text and your responses to it, thus making it possible to create auto-login scripts and such. For more information on this topic see Script_recording.

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.

1.58 term.guide/Printing_panel

Printing panel

This control panel is part of the phonebook. 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.

1.59 term.guide/Trap_panel

Trap panel

By default 'term' scans the input data stream for a set of special character sequences, such as NO CARRIER, RING and VOICE, depending on how your modem settings (see Modem_panel) are set up. The trap panel permits adding custom character sequences which if found cause 'term'

to execute the corresponding command sequences (see `Command_sequences`). This makes it possible to write auto-login procedures by just adding traps for the user name and password prompts. For example, suppose your BBS prompts you to enter your user name with the text `User name:` and to enter your password with the text `Password:.` You would create two trap entries, one with `User name:` as the sequence and `\u\r` as the command and one with `Password:` as the sequence and `\p\r` as the command. Provided the phonebook entry is set up correctly (see `Phonebook`, `User/Password`) connecting to the system will log you in 'automatically'.

The trap settings editor consists of the following controls:

Trap list

This list contains all the trap sequences 'term' knows.

Sequence

This text entry field contains the currently selected sequence.

Command

This text entry field contains the command sequence (see `Command_sequences`) to be executed when the corresponding trap sequence is found.

|<

Move the currently selected entry to the beginning of the list.

<

Move the currently selected entry up in the list.

>

Move the currently selected entry down in the list.

>|

Move the currently selected entry to the end of the list.

New

A new trap list entry is added, prompting you to edit it.

Remove

Removes the currently selected list entry

Clear

Removes all entries from the list, clearing it.

Use

Closes the window, using the current trap settings.

Load

Loads the trap settings from a file.

Save

Stores the trap settings in a file. Note: 'term' reads the default settings from the file `trap.prefs`, so make sure your trap settings are named accordingly if you wish to use them upon startup.

1.60 term.guide/File_upload_panel

File upload panel

'term' permits building a list of files to upload before the upload is started. This list can be built in many ways, such as by dropping the icons of the files to send on the icon labeled term Upload queue, by dropping the icons on the upload panel window, by entering the names of the files in the upload panel window or by using the file requester.

There are two ways to open the file upload panel. You can double-click on the term Upload queue icon or use the main menu entry Upload queue. It includes the following controls:

Files to upload

This is the list of files to be sent. The text entry field below serves to add new file names or to edit the currently selected file name.

Add files

Clicking on this button brings up a file requester to add new files to the list. You can select files from one directory at a time. The file requester will pop up over and over again asking you to add more files until you press the 'Done' button.

Add

Click on this button to add another file name to the list, you will be prompted to type in its name.

Remove

Press this button to remove the currently selected entry from the list.

Clear

In order to remove all entries from the list, clearing it, press this button.

Binary upload

Use this button to upload the listed files in binary mode.

Text upload

Press this button to upload the listed files in text mode.

Hide

Click on this button to hide the file upload panel. The list contents will be stored.

1.61 term.guide/Area_code_panel

Area code panel

In the phonebook (see Phonebook) phone rate accounting information can be assigned to individual entries. The area code panel permits to

assign phone rate accounting information to the phone numbers themselves, so even the Dial phone number menu function will take advantage of it. The area codes in each phone number determine the rates accounting information to associate with it. In the area code list you assign a name to each entry and a pattern to match a single or multiple area codes; next you configure the rates parameters to use for this entry.

The area code rates accounting settings are not meant to replace the individual rates settings in the phonebook, but they have priority over them.

The area code panel sports the following controls:

Groups

This is the list of area code groups, the single entries are edited below.

Name

A name or title for an area group entry.

Pattern

The area code patterns are configured here. If you wish to have an entry correspond to area codes starting with 009 you would enter 009#? here. The pattern syntax follows the AmigaDOS wildcard pattern syntax, so for example multiple area codes can be easily combined, e.g. 009 and 007 could be combined as (009|007)#?. See your 'Using the system software' manual for more information.

'term' scans the area code list top-down, i.e. for two consecutive entries 009#? and 0097#? the number 00971324 would match the first entry, but not the second.

|<

Moves the currently selected entry to the beginning of the list.

<

Moves the currently selected entry up in the list.

>

Moves the currently selected entry down in the list.

>|

Moves the currently selected entry to the end of the list.

New

Creates a new area code entry and prompts you to edit it.

Remove

Removes the currently selected area code entry from the list.

Clear

Removes all area code entries from the list, clearing it.

Edit

Brings up the rates editing window for the currently selected entry. See Rate_panel for more information.

Use

Closes the window, keeps the current settings.

Load

Loads the area code & rates accounting information from a file.

Save

Saves the area code & rates accounting information to a file.

Upon startup 'term' will read the default area code & rates accounting information from a file named rates.prefs, so make sure that your settings file is named correctly for 'term' to find it.

1.62 term.guide/Configuration_hints

Configuration hints

Admittely, 'term' has more configuration options and settings than you can shake a stick at. I have received a number of request to explain where to start after installing the program:

1. Start with the serial settings (see Serial_panel). 'term' will usually copy your current system preferences settings. If you happen to know that they are correct and worked fine for you in the past you probably don't need to make any changes. But if you never were quite happy with the setup this is your chance to make it fit.

As the lucky owner of a high speed modem to support all those nifty compressing transfer protocols nobody knows how to pronounce correctly (v.32/v.32bis/MNP/etc.) you will probably want to run it at baud rates around 9,600-19,200 bps. If you choose to do so make sure that the Handshaking switch is set to RTS/CTS or data is easily lost during transmissions. Note: some modems will lock up if the RTS/CTS handshaking protocol is enabled although they should support it. In most cases the modem behaviour can be changed, I recommend to consult the manual (good luck!), to turn the RTS/CTS handshaking off, to find the modem command to change the handshaking behaviour, to save the modem setup back to its nonvolatile RAM, to turn RTS/CTS handshaking back on and to restart.

Older modem hardware usually supports only a fixed number of baud rates, mostly up to 2,400 bps. Do not enable RTS/CTS handshaking, leave it turned off. In fact if you don't turn it off 'term' will have trouble sending and receiving data.

Make sure that the baud rate fits and your modem supports it. Modern modem hardware usually can adjust to the baud rate you choose, older modems will send & receive illegible gibberish if addressed at the wrong baud rate. Not unheard of are modems which can communicate with the terminal program only at fixed baud rates: while they are happy with 9,600 bps they might find 14,400 bps not at all worth responding to. I recommend that you try

several baud rate settings until one is found to fit.

If you don't want to use the built-in Amiga serial port hardware you will want to change the device name and unit number settings. Your I/O expansion hardware manual will tell you which name to choose and which device unit numbers are valid.

The serial panel (see `Serial_panel`) sports a number of additional options. Do not change them right now! In particular stay away from that sexy High-speed mode button and don't let the Buffer size slider tempt you. Return from the serial settings to the main menu by clicking on the Use button and save your current setup back to disk using the Save settings menu item.

2. Proceed to the modem settings (see `Modem_panel`) and take a look at text gadget labeled Dial prefix. A modem usually dials phone numbers either using a technique called 'tone' or 'pulse' dialing. Technically, tone dialing requires your local phone net operator (some kind of computer) to listen to a sequence of sounds which represent the single digits of the phone number dialled. Pulse dialing involves getting a number of electric pulses, each of which represents a digit of the phone number, transmitted across the line. Tone dialing is usually much faster than pulse dialing, but it isn't supported all over the world. If the receiver of your phone reports a number of beeping sounds when you dial a number you can use tone dialing. If you hear rattling sounds it's probably pulse dialing for you. Let's get back to the Dial prefix entry: you will probably see something like `~~ATDP` here. Arrogant as I am, this is my personal default setup. The letter P indicates that pulse dialing will be used. If you can, change this to T for tone dialing.

Leave the rest of the modem setup as it is, do not change the Connect auto baud switch.

3. Next, take a look at the screen settings (see `Screen_panel`). This is where you choose the terminal screen/window look and colours. By default 'term' is configured to open a plain four colour screen using the Amiga default font. This should be sufficient unless you plan to spend most of your modeming time in PC-driven BBSes which keep throwing lots of colours at you.

Choose how many colours the terminal should use, the switch labeled Colour will let you choose between 4 Colours (Amiga), 8 Colours (ANSI), 16 Colours (EGA) and 2 Colours (Monochrome). Each of these settings has a particular default palette attached. The Amiga mode will use your current system default colours. ANSI represents the choice of colours the ANSI committee responsible for standardizing a certain terminal command protocol to be the best given the constraints they had. EGA reflects whatever the engineers who designed the first Enhanced Graphics Adaptor card for the PC considered to be an enhanced colour palette. Monochrome is my idea how an extremely simplistic, while still readable colour choice could look like. Choose what you find appropriate, but keep in mind that the more colours to use the slower screen updates, scrolling and text output will get. Also, a 16 colour high resolution screen will put your system under additional stress if

you are running an older Amiga model which is not equipped with the AGA chip set. Careful please, any changes you make will affect the performance of the program!

You might want to change the screen mode or the user interface font. When you are satisfied with the setup, return to the main menu.

4. Now it's time to edit the terminal settings (see `Terminal_panel`). This is where you control the basic behaviour of the terminal emulation. If you wish to use an IBM PC style font for the terminal display you can do so by changing the Font switch to IBM PC style. Alternatively, you might find it worth changing the Text font instead which is the font to be used for terminal text output. Note that if the Font switch is set to anything else but Standard your Text font settings will be ignored. Well, actually they will not be entirely ignored, but the IBM PC style font will be opened in the point size you selected.

Don't touch any other controls, return to the main menu when you are finished.

5. If you are likely to visit a lot of PC BBSes, edit the emulation settings now (see `Emulation_panel`). You might want to turn on the switch labeled 'CLS' resets cursor position, otherwise the terminal screen might not get cleared properly when the BBS sends the control codes it considers appropriate for this purpose.

Leave the rest of the setup as it is and return to the main menu.

6. The next step involves changing the path settings (see `Path_panel`). When receiving files on your machine you might want to have them stored in a special drawer. You can do this by editing the default download paths. Most important is the Default binary download path, I suggest to create a drawer called Downloads within the drawer 'term' resides in. Once this is done simply type the name `PROGDIR:Downloads` and return to the main menu. The next binary file downloaded will go into the Downloads drawer.

If you followed these steps 'term' should be configured for the first session. Save the current settings to disk now so you can always return to this working configuration later in case the changes you made to the current setup did not have the desired effect. You can try to fine-tune your 'term' setup now and change some of the options not covered in this brief introduction, but please remember to keep your original configuration file in a safe place, you will be glad you did.

1.63 term.guide/Built-in_terminal_emulation

Built-in terminal emulation

The 'term' built-in terminal emulation implements the VT-220 command set with a few exceptions. There are no country specific character sets, no down-line-loadable character sets, no user defined keys, no keyboard

language support and only ten function keys, not twenty (many of these features are supported through the Amiga operating system). Most VT-102 and VT-52 commands should be supported as well, but since my documentation on these command sets is rather incomplete I cannot be entirely sure all the features are covered.

The numeric keypad and the four cursor keys can be switched into applications mode if requested by the remote. The four programmable function keys (also known as PF keys) are mapped to the top row of the numeric keypad. When in applications mode these keys will generate the codes produced by the PF keys on a VT-102 terminal. If in standard mode, you will need to hold down the Control key in order to make these keys generate the correct PF key codes.

The Tab and Space keys receive special treatment if a qualifier key is held down when they are pressed. Shift + Tab will generate two Escape + Tab characters. Control + Space generates the ASCII NUL byte.

1.64 term.guide/Text_buffer

Text buffer

The text buffer implements a service which continually stores text displayed on 'term's main screen, so the user can refer to it later on.

General characteristics	General information on the text buffer.
Operation	How to operate the text buffer?

1.65 term.guide/General_characteristics

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.

1.66 term.guide/Operation

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).

There also is a pull-down menu available which is briefly described below:

Search

A search function is called which scans from the topmost line on the screen for the search text entered. If the search text is found it is displayed and highlighted.

'term' remembers search strings entered. You can use the Cursor up and Cursor down keys to recall previous input.

In addition to the search text there are a number of options which may be specified when searching:

Search forward

If this switch is enabled 'term' search from the topmost line on the screen downward to the end of the buffer, otherwise it searches upward to the beginning of the buffer.

Ignore case

With this switch enabled the search does not distinguish between lower case and upper case characters, i.e. TEXT = Text = text, etc.

Only whole words

If this switch is enabled, 'term' will search for whole words only, not for parts of a word. For example, searching for term with the Only whole words option enabled would stop at the word term, but ignore the word terminal.

Repeat search

Continues the search process started with Search. The previously entered search text is carried over.

Go to main screen

Switches to the main screen of 'term'.

Clear buffer

Clears the contents of the text buffer.

Close buffer

Closes the text buffer screen but leaves the contents unchanged.

1.67 term.guide/Clipboard

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 Edit) 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 Edit) 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 text buffer 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 text 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 text 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).

1.68 term.guide/Command_sequences

Command sequences

Each text 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.

Backslash	The backslash \
Caret	The caret ^
Tilde	The tilde ~

1.69 term.guide/Backslash

Backslash

\

Generates a single backslash.

\0

Resets the text pacing mode (see Clipboard_panel) 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).

<code>\d</code>	Executes an AmigaDOS command (all text to follow this character).
<code>\e</code>	Generates the escape character (ASCII code 27).
<code>\f</code>	Generates a form feed (skip to beginning of the next page or clear the screen).
<code>\g</code>	Places the text to follow this character in the clipboard.
<code>\h</code>	Appends the text to follow this character to the current clipboard contents.
<code>\i</code>	Feeds the contents of the clipboard into the input stream.
<code>\n</code>	Generates a line feed.
<code>\p</code>	Feeds the password of the currently active telephonebook entry into the input stream. The password is automatically cleared for security reasons when the connection is lost.
<code>\r</code>	Generates a carriage return.
<code>\t</code>	Generates a tab jump.
<code>\u</code>	Similar to the <code>\p</code> command, the <code>\u</code> command will feed the current user name into the input stream.
<code>\x</code>	Generates a break signal (as with the Send break menu entry).
<code>\^</code>	Generates a caret character.
<code>\~</code>	Generates a tilde character.
<code>*</code>	<p>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):</p> <p>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</p>

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

----- Footnotes -----

(1) EOU may be implemented in a future release

1.70 term.guide/Caret

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.

1.71 term.guide/Tilde

Tilde

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

1.72 term.guide/Fast!_macros

Fast! macros

In implementation and design the fast! macros are closely related to the function key macros (see `Function_key_panel`). 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 fast! macro panel). When a list entry is selected, the associated command sequence (see `Command_sequences`) will be executed.

By using the fast! macros it is theoretically possible to control a BBS just by mouse, provided that you have the appropriate 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.

1.73 term.guide/Package_window

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 text 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 text buffer this buffer is managed dynamically. The same memory restrictions that apply to the text buffer 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'.

Show output
If not enabled, this causes the input line not to be echoed in the terminal window.

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 contents of every input line are 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' such 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.

1.74 term.guide/Script_recording

Script recording

'term' offers a feature called 'Script recording' which lets you record incoming data sent by a BBS or a remote host and your response to it, i.e. the text you typed, such as login name and password. The recorded data can then be saved to an ARexx script file which can be used as an auto-login script. In order to record a script you can either use the dialing panel button labeled Start recording on connection or the menu item Record.

Once 'term' is recording terminal output and your input the status display will show Recording or Rec.line, depending on the text entry mode. By default 'term' will only record single keystrokes, which makes it difficult to enter whole words. If you want 'term' to remember the entire line of text you are about to enter either use the Record line menu item or press the shift+return key combination: the status will change to Rec.line. To return to keystroke recording just press the return key or select the Record line menu item/press shift+return again.

'term' only remembers the last ten characters sent and a maximum of 256 characters you can enter per line. If you enter more than this number of characters older keystrokes will be discarded.

When you are finished recording the script select the Record line menu item. A file requester will ask you for the file name to save the script under. If the file is successfully saved you may be asked whether you want the script file to be used as a login script for the currently active phonebook entry.

The script file generated will consist of ARexx commands 'term'

understands, mostly TIMEOUT, WAIT and SEND. The text to be waited for and to be sent is given in standard 'term' command sequence notation. For more information consult the chapter entitled Command_sequences. The 'term' ARexx interface documentation provides the necessary background to explain how the script commands work, it should also give you hints how to customize the recorded scripts.

Caution: scripts recorded by 'term' usually need additional editing, don't expect a script to work right away. You may want to change the timeout values, remove extra characters and input.

1.75 term.guide/Environment_variables

Environment variables

Information which is to be available the next time the program is run is placed as AmigaDOS variables in the directories 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, phonebook, etc.). The default settings path name is TERM:config.

TERMWINDOW

The window definition which can also be entered in the program via the menu item Settings.

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.).

1.76 term.guide/PGP_key

PGP key

Below you will find my signed public key. Save it to a disk file and enter PGP <file name> to decode it. This will produce a file called public_key. To add my key to your PGP keyring now enter PGP -ka public_key and follow the instructions on the screen. To verify my signature, now enter PGP <file name> again. It's probably pretty paranoid to rely upon PGP signatures and keys, but then again you might want to have a somewhat unambiguous proof that the distribution

archives you have downloaded are intact. Security can still be compromised, if you don't trust the key below you can still contact me to ask for an official key.

-----BEGIN PGP MESSAGE-----

Version: 2.3a.2

owHrZAhlYmXQEzvfldcZOadb3WIiI+OGm4y/2ZdpeDIxcR1o4V/elrPHvuTZjnbV
f54d6g++TrllqJz/35uNVg33GSfvfzH7lnVo/ZWHVwsuOTq+TDSZsnXTx5eGFyzW
MkolcRWUJuVkJsdnp1YyAIEuCDi5unv6KQS4BygEhDr5eDoreLtGKjj5+Dt7g6W5
wlKLijPz86wUjPSME/WMuLhyA538HDMrnSzMIh0dHV2dHX0yywxCSkNSvQKqnhKy
vHIynUvK8lyKU/XLsyJNvFKrynJLfLKN07RDk6NM0wrDuNK9QyO8MgIjw4NMzS2M
03MKCx1DHNOLfPxNI72T8nOi8jyL8/y9XB2dgtwNfFwtiyPDI9MjgXSyUVipV6WT
MldkhJdBontYsadLRVmSh19OUrZTVZJxWGwKUVhlarBpfmS4SWmUe6g2l6lprkEq
F9gfrn4ueDwJAA==
=kKr7

-----END PGP MESSAGE-----

1.77 term.guide/Revision_history

Revision history

Changes introduced with v4.1:

- Fixed an Enforcer hit in `glayout.library` caused by the text gadget handling code.
- If possible child windows are now opened within the bounds of their parent windows.
- Fixed an Enforcer hit caused by the `ARexx` interface building dialing lists.
- Reordered the parameters of the "ADDITEM" `ARexx` interface command.
- Rewrote the entire data capturing process. I somewhat opened a can of worms, making it necessary to rewrite the code that handles the translations for the "Receive CR as..." and "Receive LF as..." options as well. Careful please, although I am sure the code works correctly I may have knocked over some china cups.
- Added some more safety catches to the upload queue handling. Using the auto-upload panel with the upload queue could leave you locked out, blocking 'term'. Generally, not a very nice thing to do. Under the same conditions the code will now fall back to presenting the standard file requesters.
- Fixed a bug in the capture panel which could turn up if the editor was invoked from the phonebook.
- Corrected some few typos in the english user interface text.
- Turning off script recording did not reset the program status to 'ready'. This has been fixed.

- Heaven knows why, but v4.0 did not permit changing the screen colours if running in monochrome mode.
- The 'Freeze buffer' menu now properly toggles the state of the capture buffer.
- The terminal settings now take the maximum possible values into account when setting the selection ranges for the number of columns and lines.
- When using a startup script or a startup command the program no longer displays its 'about' window on program startup.
- The ARexx command "GOONLINE" now sets up some more of status variables than it used to do in v4.0.
- Upon startup the carrier signal is checked (provided your serial configuration says that the carrier should be checked) and if it is present the online timer is started.
- Added a bunch more of serial baud rates. Don't overdo it, a standard Amiga won't go faster than 115K baud.
- Replaced the serial rate slider with an integer gadget featuring incrementer arrows. Clicking on the arrows will cycle through all standard baud rates. Note: requires gtlayout.library 1.97 or higher.
- When offline detecting a carrier signal will bring 'term' into online state, provided the 'Check carrier' flag is enabled in the serial settings.
- ^Q now works again.
- The end-of-line character translation scheme was changed into one single unified concept. Both carriage return and line feed characters can now be translated into <cr>, <lf>, <lf><cr>, <cr><lf> or can be ignored.
- The phone rates management is moving from the individual phone book entries into a separate global settings editor. The old rates management style will continue to work, but the new management scheme has priority over it.

Here is how the new scheme works: you now assign the rates accounting data to area codes rather than to single phone book entries. Suppose you want a special set of rates settings to be used for all phone book entries and phone numbers which start with the area code "009". In this case you would add another group entry, assign a name to it and put "009#?" into the pattern field. The next time 'term' makes a connection to a phone number starting with the digits "009" the corresponding rates settings will be used. 'term' scans the list top-down, so the default settings should be put into the last list entry. The patterns follow the AmigaDOS syntax.

- Finally discovered why so many old phonebook files would cause trouble: the internal conversion routine was **never** called.
 - Horrors! The sound.datatype saves invalid sound files with the playback size set to zero, causing 'term' to crash with a 'division by zero' error. The replay routine now handles such odd files.
 - The sliders for redial delay and time to connect now finally sport a resolution of a single second rather than ten seconds.
 - Shortened gadget labels & texts and rearranged the gadget layout to make sure all windows will fit on a plain 640 x 400 sized screen with topaz/8. Sorry folks, 640 x 200 is right out of the question. These are the days of miracle and wonder and all modern Amiga hardware is capable of displaying screens this size in non-interlaced modes. If things still don't seem to fit try a different font, preferably proportional-spaced, or a different screen resolution (change the overscan size if necessary).
 - Whilst reworking the documentation discovered that I forgot to add the 'Alert' control to the terminal panel.
 - With Workbench v2.04 the screen mode requester automatically resets the screen size and overscan values to defaults.
 - The text buffer search requester now sports another option, "Whole words only".
 - The jump scroll option code had a control switch set in the 'wrong direction'. Nothing serious, 'term' would only scroll too many lines.
 - The jump scrolling routines did not take the size and position of the currently active scroll region into account. This could knock out the emulation since the cursor could cross the legal position limits.
 - Added some more control key codes as per the VT 220 Programmer Pocket Guide, such as ^2, ^3, ^4, ^5, ^[, ^/, ^].
 - Fixed another bug that would cause 'term' to busy loop if it stumbled upon a non-printable character in IBM PC style font mode.
 - 'term' now supports context-sensitive help with AmigaGuide v34. I finally discovered a set of AmigaGuide commands that would not crash when told to change the currently displayed context.
 - Changing XEM options will save them back to disk.
 - Rewrote the hangup/carrier lost/online/offline handling procedure. The online/offline status tracking is protected by semaphores now, the code to modify the status was reduced to a great deal, it's only in termDial.c, termARexxCommands.c and in termMain.c. The hang up command and carrier lost actions now go through the same code, i.e. backup config & redial on logoff now work both for logoff & hangup.
-

- The phone rates accounting by area codes did not work since the routines were commented out. I removed the comments, they should work now.
 - The buffer management no longer collapses if you try to clear the contents while there is still data coming in.
 - Reread the "VT 220 Programmer Pocket Guide" and added most of the remaining unsupported control sequences. Not supported are the programmable function keys and data transfers bracketed by DCS..ST. A number of control sequences are still no-ops, such as the national/multinational font support operations.
 - Double-clicking on a phonebook entry with no phone number attached no longer starts dialing.
 - Changed numeric keypad applications mode and PF key handling. I hope it works with all keymappings now.
 - Cloning a rates settings entry did not properly duplicate all data associated with the original entry.
 - Creating a new phonebook entry will set the rates accounting data connected with it to zeroes.
 - Rewrote the prescrolling/jump scrolling support code which now should get the job more quickly than before.
 - Resetting the terminal emulation no longer clears the state of the 'Wrap cursor moves' option.
 - Rewrote and simplified serial I/O processing, I hope it still works.
 - Dialing commands no longer make it into the text buffer.
 - The 'Cancel' button in the phonebook panel was relabeled, now showing 'Use' instead.
 - The program no longer puts the upload queue icon into the Workbench window by default, there is a new option to turn it off.
 - You can finally edit all the settings to be changed in the phonebook, this includes function keys, cursor keys, translation tables and fast macros. Hold down either shift key to bring up the old file requesters. Note that you will also get the old file requesters if something goes wrong reading and setting up the settings data.
 - Added an option to make a hardcopy of the screen contents, invoking the printer graphics dump function.
 - All the windows sporting pull-down menus now support menu help, i.e. if you press the help key while a menu item is being selected 'term' will bring up the online help page for the corresponding menu.
-

- Duplicating a phonebook entry now properly duplicates the corresponding rates settings.
 - Added new keyboard shortcuts to the phonebook controls. Pressing 'Del' untags the currently selected entry, 'Shift+Del' untags all entries.
 - 'term' now looks up the "Fonts" and "Libs" drawers in the current directory and adds them to the "Fonts:" and "Libs:" assignment list. At least for me, this greatly simplifies the installation procedure. Just copy the contents of all distribution archives into a single drawer and let 'term' do the rest.
 - The fast! macro button list now properly responds to Alt+Amiga key clicks. I also thinned out the code a bit, causing the buttons to render a little faster.
 - Relabeled the button in the bottom left corner of the phonebook window again. It now reads "Close".
 - The buffer search requesters are now non-modal so you can have them open and continue to use the text buffer display.
 - I reworked some parts of the user interface, trying to clarify the functions of menus and buttons. I also removed some redundant button labels and changed all references to 'directories' to 'drawers'.
 - Shortened the button labels for the phonebook and the rate panel, so they will finally fit on a 640 x 400 screen using topaz/8. Some button labels now look fairly obscure, sorry about that. I guess I'll rething the part about the "clarification" again...
 - More weird & wonderful changes to the serial device interface code. I hope it still works.
 - When hanging up the line using the corresponding menu command the online state is no longer reset to 'offline' if in the serial settings the "Check carrier" feature is enabled. This leaves the test for the carrier to the usual routines which will detect if the carrier is really gone.
 - With multi-number phonebook entries the dialer now displays how many of these numbers have been dialed already.
 - There was something really wrong with the way clipboard text was pasted as the 'end of line' character conversion would be applied twice.
 - The "Time to connect" data was never used for phone rates accounting, it only played a minor role in the "Connect limit" settings.
 - The pop-up 'About' window no longer is GimmeZeroZero, which is both sexy and uses less memory.
-

- Beep & action sounds are now loaded via datatypes if available. Under v39 this may not work well for large sound files due to a bug in sound.datatype. Plain IFF-8SVX format sound files will still be played using the built-in routines since they are more flexible than sound.datatype and can replay stereo sound.
- Non-standard-sized system imagery (sizing gadgets, arrow gadgets, etc.) is now supported wherever it is used.
- The phonebook window no longer sports a 'Close' button, all that's left is the 'Dial...' button.
- Phonebook entries which lack a phone number can no longer be used for the dialing list.

Changes introduced with v4.0:

- The window status line is no longer 'misplaced' under Kickstart v2.x.
 - Font, file and screen requesters are no longer quite so tiny.
 - Different font scales as by the VT-100 specs (half width, double width, top double size, bottom double size) work again.
 - All memory allocations now go through memory pools, reducing memory fragmentation greatly. Note: Kickstart 3.x owners *should* have SetPatch 40.16 installed as the memory pool code might have trouble freeing empty memory pools until the program exits. This memory allocation scheme should also help to get 'term' to work with certain virtual memory system extensions.
 - In the XPR transfer window the error/message list will no longer hold more than 100 entries in order to save memory. I have received reports of users who ran large file transfers overnight and when getting up in the next morning the transfer error/message list had accumulated so much memory it was no longer possible to move the mouse: Intuition was unable to allocate enough memory to create new input events. If 100 messages have accumulated and a new one is about to be added the first and oldest entry will be removed.
 - The status line display now properly reflects the name of the current file transfer protocol.
 - The quick dial menu checkmarks would get cleared only on some rare occasions, i.e. if the first phonebook entry had the 'Quick dial menu' feature set. Now it gets the job done no matter which phonebook entry is the first one in the quick dial menu.
 - The main window menus used to have the command shortcut 'W' assigned twice.
 - If running on the Workbench dropping icons on the 'term' window would ask for the type of file transfer (text or binary), but it would get the selection wrong, i.e. if you chose text you got a binary upload and the other way round. This has been fixed.
-

- When in zoomed state the XPR transfer window will display the name of the file currently being transferred and how much of it has already been transferred (if available). This display will be updated about once a second.
 - If icons are to be created for files downloaded it is no longer necessary to turn on file type identification to actually get the icons attached.
 - Freezing the text buffer contents now properly updates the text processing routine variables.
 - Calling the 'Print clipboard' function twice will no longer result in a general system lockup.
 - The double-buffered I/O routines now let you configure the buffer size to use. The memory allocation also is a lot more 'forgiving' than it used to be: if necessary it will shrink the buffer size until it can allocate enough space.
 - To keep naughty applications from switching the cursor key and numeric keymap into applications mode you can lock both key sets now, so they will not to change their current modes.
 - The old AmigaGuide release (v34 to be accurate) is supported now, but with limited functionality. The help text is not context sensitive and you need to shut down the AmigaGuide server manually (by closing the AmigaGuide window) if the screen its window resides upon is to be closed.
 - 'RING' and 'CONNECT' messages from the modem are now reported along with the time when they came in.
 - The program now complains loudly about outdated catalog files and incorrectly installed locale.library.
 - The hotkey settings panel now checks each hotkey description text after it is entered and complains if it is unuseable.
 - The 'QUIET' command line option (makes 'term' start up iconified) no longer crashes if Workbench isn't running.
 - The program now features an all-new user interface.
 - There is a new command line option called 'BEHIND' which causes the main screen to stay in the background and the main window not to become active upon startup.
 - If 'term' fails to open a screen and finds out that the requested screen display mode is unavailable it will copy the screen mode the default public screen is in and retry.
 - No more trouble with mixed-case device and library names. As you pick them from the list the files are validated, i.e. 'term' tries to load the file in question and hunts for the library/device resident tag included. If the tag is found the 'real' device/library name is copied from it, replacing the
-

original name the file was opened with. This means that you can select 'XPRZModem.Library' using the file requester and 'term' will look into the file to find out that the library wants to be opened under the name of 'xprzmodem.library'. Also included are a type check (i.e. if a library is to be opened only files with a library type resident tag are included in the list) and a brief name comparison (i.e. only name case differences are allowed, so 'XPRZModem.Library' = 'xprzmodem.library', but 'foo.device' != 'bar.device').

- The external emulation and the external protocol support routines no longer share the same code and the same set of error messages/options texts.
- A transfer protocol such as xprkermit.library will no longer leave 'term' in a 'half-dead' state if it opens a new window in the protocol setup phase. In previous releases this window was never closed.
- The label text of XPR/XEM command options which accept a parameter and thus cause the settings window to be closed after text is entered is now drawn in the current highlight colour. This helps to distinguish regular string gadgets and command option parameters.
- If 'term' fails to set up the XPR protocol properly, i.e. the setup routine does not flag success, the library is closed right away. This is how it has always been in previous 'term' releases. But this time the main menu is also updated to keep you from starting a file transfer or changing the transfer options while the library base pointer is invalid.
- In order to support external protocols which write data to or read data from the serial line serial I/O processing is temporarily disabled while the corresponding setup routines are running. Although this behaviour isn't quite that nice it should avoid serious trouble with xprkermit.library which could otherwise disrupt the serial device request queue.
- There are now three buttons in the file transfer panel which correspond to different abort levels:

* Skip current file Skips just the file currently being in transfer (level 2)

* Stop transfer batch Cancels the entire batch transfer (level 1)

* Stop entire transfer Emergency stop (level -1)

These abort levels are supported by xprkermit.library and a number of other file transfer protocols.

- Opening the transfer protocol settings editor will cause the currently selected default XPR protocol to be reopened in case it is not open yet.
 - Holding down the control key and clicking with the mouse on a
-

space character will now correctly send it.

- Double-clicking on a phonebook entry will no longer start dialing if the program is still online, i.e. if the regular 'Dial' button is disabled.
 - If the line is hung up or the carrier is lost the call log file (human readable, not the one that is intended for postprocessing using call log analyzers) will include the costs for the call. In previous releases 'term' would only look for the 'NO CARRIER' message.
 - The destructive backspace option now removes the character to the left of the cursor but does not move the rest of the line one step to the left. This makes the terminal emulation behaviour more consistent with how real video terminals handle this job.
 - The translation table settings panel now features a 'Default' button which resets the current translation settings to defaults.
 - Just like the text buffer screen the review buffer window is handled by a coprocess now.
 - The packet window now supports function keys.
 - For technical reasons I dropped the string gadget clipboard support. I suggest that you use StringClip or a similar program instead.
 - Clipboard pasting from the review buffer window no longer requires that you activate the main window.
 - In the phonebook the edit list (right hand side listview display) indicates whether an entry uses default settings or whether it actually uses custom settings. Custom settings are indicated by asterisks ('*').
 - The packet window now uses the current terminal text font.
 - Pressing Amiga+- in the packet window no longer transmits the current string but changes to the main window while leaving the current string intact.
 - Fixed a potential bug in the generic list management module.
 - With some file requester patches installed, such as old ReqTools or MFR, the file requester code could fail to notice if a single file was selected in multiselect mode.
 - The phone rates are now reported according to the current locale settings, i.e. they take the grouping and special attributes of the local currency into account.
 - The IFF-8SVX sound file player code now handles stereo and compressed sound files gracefully (all flavours including uncompressed stereo, compressed stereo, uncompressed mono and compressed mono).
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- The ARexx 'WAIT' command could fail to report how many characters it pulled from the data stream when a matching string was found. This could result in random characters showing up in the terminal text output.
 - The routine to attach the wait mouse pointer to windows and to block input to them was easily losing track of its nesting count. In theory the nesting count could have wrapped around, locking you out. The harmless side-effect was that sometimes windows would not get blocked.
 - The ARexx 'WAIT' command argument and the wait list may include control sequences now. These are expanded as soon as they go into the list. This feature makes it possible to wait for sequences such as 'login:\rpassword\r' but will return result strings which include control characters, so watch out!
 - The ARexx 'READ' command now allows you to combine the 'CR' and 'NUM' options. Also, the maximum number of characters to read with the 'CR' option is no longer limited to 255 characters.
 - The file transfer window will at startup display the name of the currently selected transfer protocol. It displays a default value, leaving the protocol identification to the XPR library.
 - The ARexx 'GETATTR' command would run into serious trouble if told to put information into a stem variable. The result would be Enforcer hits or crashes.
 - If you put 'term' into iconified state and press the hotkey combination to bring its screen to the front you will no longer get an Enforcer hit. Instead 'term' will exit its iconified state and return to normal action.
 - The status line display now coexists much nicer with MagicMenu and the like.
 - The status line no longer displays what text mode the terminal window is in (this was rather a silly feature) but rather if the text buffer is currently recording or if it's frozen.
 - The status line looks a bit different now (there is a proper separation bar now instead of the hair line).
 - Just like the v3.0 preferences palette editor 'term' now permits to select the screen rendering pens. This will *not* work under v2.04 since gadtools.library v37 cannot handle it (actually it can, but the default glyphs do not support it). This feature permits you to change the screen colours while you can still keep the window new look.
 - The ARexx 'READ' command could return random characters since the return buffer was not set up correctly.
 - Both the ARexx 'READ' and 'WAIT' commands now allow you type text on the local console and have it sent across the line. As for the
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'WAIT' command this is of great help if the script 'hangs'. Note: halting scripts and such still requires pressing the 'Shift + Shift + Esc' key combination.

- The ARexx 'READ' command would, if used with the 'NUM' option, always return a NULL-terminated string, no matter what kind of data came in. It now returns the entire amount of data transferred, including NULL-bytes.
 - The phonebook list now clearly shows which entries are selected for dialing and which are not (it flips the background and text colours). Note: this works only with Kickstart 3.0 and above.
 - I increased the possible number of dial retries in the modem panel to 1000. In addition to that you can set the number of dial retries to 'unlimited' now.
 - For those nasty MS-DOS based file transfer protocols which choke on file names longer than 12 characters (eight for the name, one for the dot, three for the extension) the file transfer options now permit to have filenames shrunk before they are handed to the transfer protocol. Internally, the XPR interface will still refer to the file under its original name. The routine responsible for shrinking the file names also takes care of the extension separator dot. If there is more than one dot in the file name all the others get replaced by underscore characters. Also, if there is no dot extension it will be added.
 - The packet window is handled by a coprocess now.
 - If you're bold and daring you can make 'term' handle the terminal output on the schedule of a terminal emulation task. Please note that this requires additional memory and will slow down the emulation if your memory is fragmented. But on the other hand the coprocess will stop serial input getting munged before it arrives in the terminal emulation output buffer. Such things can happen with systems which experience heavy DMA bus or task loading
 - Turning on the 'faster layout feature' no longer drops the screen & window newlook.
 - Due to an oversight the terminal emulation process could get enabled even when using an external emulation, this has been fixed.
 - The ARexx command 'SENDFILE' would never remove the names of files transferred from the upload list.
 - Yet another new option: by default the dialer sends a '\r' string when skipping an entry and when hanging up the line. You can change this behaviour via the 'Dialer abort hangs up' option now. If enabled the dialer will go through the routine hang up procedure (dropping the DTR signal, sending the hangup string, you name it). This should convince even the most stubborn modems to stop doing what they are currently thinking to be fun and to return to normal operation.
 - Clicking on the main window in order to activate it will no longer
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trigger the character snapping function.

- Rewrote the ARexx 'WAIT' routine to a great deal. It could easily forget to turn serial input processing back on for the main program. After a script would exit you would get stuck with data coming in from the serial line, but none of it would be displayed or worked upon.
 - Clicking on the text buffer screen window in order to activate it will no longer trigger the character snapping function. Since there is no safety catch, i.e. the clipboard contents are immediately replaced by what you selected after you let go of the mouse button, this will reduce the chance of losing your current clipboard contents.
 - Subtle change in the dialer procedure: if an entry would use the default serial settings they did not replace the current serial settings, even if the previous dial list entry had altered them. However, the original purpose of the default settings was to use the unmodified global settings. The dialer behaviour now respects this, changing the current serial settings back to the global settings, not keeping the changes the previous dial list entry had made.
 - In previous program releases trying to make certain phonebook entries not use the default settings was somewhat difficult: you had to change the corresponding settings entries to something different from the global defaults. Things are much easier now, just open the settings editor and click on the 'Use' button.
 - The 'Startup/Login macro' has been split into a startup macro and a login macro. The dialing routine will first invoke the login macro and then the startup macro. Only the dialing routine makes use of the login macro.
 - Small cosmetic changes to the user interface code: cycle gadgets are a few pixels wider now in order to keep 'CycleToMenu' happy.
 - When hanging up the line the logoff macro was never executed.
 - Finally discovered why the serial read quantum and all the scheduled events were never processed again once they reported that no further data was available. Now the event response loop updates the signal mask again when it reaches the bottom of the loop to see if any new data came in.
 - You can now configure the screen depth, permitting to use the Picasso II chunky display mode with 'term'. Note: asl.library v38-v40 fails to handle nonstandard background pen colours correctly, i.e. the depth slider text may be illegible.
 - External emulation libraries, namely xemvt340.library, should work again. I changed the memory allocation call for the XEM support interface, but I have no idea why it did the trick.
 - The status window is handled by a coprocess now.
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- Some ARexx interface commands now run asynchronously.
 - Yet another visual gimmick (sorry, couldn't resist): menu checkmarks and Amiga keys are now scaled according to the current screen display ratio. Note: not really compatible with utilities such as MagicMenu or Silicon Menus. Although the programs will run the menu layout may look odd.
 - The phonebook list can be scrolled with cursor keys now. You also get a visual feedback if running under Kickstart 3.x.
 - Fixed a nasty bug in the user interface code to pick the gadget shortcuts: it would prefer to pick the last letter of gadget labels and ignore any preceding letters.
 - Scrolling lists such as the phonebook list will size-adapt to the screen 'real estate' available.
 - The screen settings now give you full access over display overscan mode and screen dimensions. Note that asl.library v38 or higher is required to use these features.
 - Changed the cursor key control in listviews, making it possible to use the Shift/Alt/Control qualifier keys in Style Guide compatible fashion.
 - Rewrote certain dos.library related parts of the user interface code, permitting plain tasks to call the routines. Consequently, a number of coprocess-driven routines was rewritten to run on the schedule of a task. Note: this may conflict with the ChangeScreen utility included in the Picasso II distribution.
 - Old style XPR settings entered using the old style prefs interface (i.e. those that would pop up a text entry requester) were never saved.
 - The transfer library selection panel now allows you change the settings of all selected protocols, you no longer need to select all individual protocols as the default protocol and invoke the 'Protocol settings...' menu function on them.
 - The text and review buffer search requesters maintain backlogs of the previous search patterns now (use the cursor keys to scroll through the patterns). Use the capture settings to change the number of patterns to keep.
 - The text buffer search function no longer enforces a case-insensitive search.
 - Most time and date displays now use the current locale settings. It did not make sense to make all such displays use this text formatting scheme. All remaining displays will use the common dos date/time formatting parameters.
 - Modified OwnDevUnit.library support: if another task wants to gain access to the locked device 'term' will release it unless the modem is still online. The device is released by calling the
-

'Release serial device...' menu entry.

- Oops... the XPR options editing code did not flag changes in numeric arguments to the main program. Also, old style XPR options were always reported as 'changed'.
 - Not all memory allocations went through memory pools, this has been fixed.
 - The 'Printer control enabled' switch was omitted from the emulation panel, sorry about that.
 - Some windows would not be moved into the foreground when opened, so you had to play 'hide and seek' to see on which screen they appeared.
 - With display aspect ratios that aren't even remotely square incrementer arrows for integer gadgets are no longer larger than their container boxes.
 - The program no longer crashes if the XPR protocol feels about displaying a message before any other window is open.
 - By public demand the highlighting scheme in the phonebook window was changed to yield better contrast.
 - The speech volume is given in percent now, but the ARexx interface 'GETATTR' command did not reflect this.
 - The sound settings now sport a volume slider which affects all sounds played. Suppose a sound is to be played at maximum volume, i.e. 64 for the current Amiga hardware and the volume slider is set to 25%, then the sound will be played at volume level 16. Setting the volume slider to 0 will cause 'term' not to produce any sound.
 - The transfer panel message list dimensions are now auto-adjusted to the screen size. The layout code also tries hard not to make the window overlap the status line.
 - Added some bells & whistles to the phonebook window. I hope it still works.
 - Moved the user interface code into a shared library in order to make things more complicated.
 - The OwnDevUnit feature is no longer linked to the 'Shared access' option.
 - All sounds are now replayed in the same fashion as the bell sound, i.e. if a sound is currently being played a request to play another sound will not be satisfied.
 - Important file transfer notification messages are now printed in the current highlight colour.
 - The destructive backspace mode now offers three choices: off, overstrike and shift. Overstrike mode clears the character below
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the cursor and shift mode will shift the line contents to follow the cursor to the left.

- The screen panel now features some more options which permit to open the main window on a custom screen as though it were a public screen and an option to split the status line from the main window.
 - Tried to squeeze some space out of the control panels with mixed results.
 - The text buffer screen no longer uses the main screen display mode by default, it is possible to select the display mode now.
 - The built-in ASCII file transfer routines no longer draw upon the current clipboard settings to determine how to send and receive text. There is an all-new preferences editor for this purpose now.
 - Added an upload list editor, permitting to collect the files to be transmitted in a list before the transfer is started. You can enter the file names, drop icons on the editor window or on the AppIcon. When you are finished, just press the upload button.
 - The packet window string gadget now has room for more than 1000 characters. Note: the 'Load history' command only supports 255 characters per line.
 - Added a prescroll option to the emulation settings. The system is not very smart but should get the job done rather quickly; if the cursor is positioned on the last terminal line the number of line feeds in the input data stream is counted. The number of line feeds or the max.prescroll number (whatever is smaller) will determine how many lines to scroll the screen contents up.
 - With an empty phonebook loading a new phonebook file would not enable the phonebook list, this has been fixed.
 - Added another option to complement the prescroll settings. Testing revealed that the conditions leading to the prescroll feature to be used were met only rarely. The 'max. jump' option will give you roughly the same functionality as the 'max. prescroll' option, the difference is in the handling of the input data stream: the prescroll option counts the number of line feeds, the jump option only looks for a single line feed and then scrolls up the screen the given number of lines.
 - The program now remembers the window position and size before going into iconified state. When the window is reopened it will reappear at the position and in the size remembered
 - The ARexx ADDITEM command supports a new keyword RESPONSE to be used for entries added to the wait list. Suppose you want all More (Y/n)? prompts of the BBS login procedure to be skipped during your auto-login script. Then you would call ADDITEM TO wait NAME "More (Y/n)?" RESPONSE "\r", add the other keywords you would want to wait for and then finally call WAIT. Whenever the More (Y/n) prompt shows up the WAIT command will all by itself send the \r string (or in other words, the carriage return character) without
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exiting until the login string it was watching for is found. Please note that this feature only makes sense with the wait list but not with the WAIT command itself.

- Added login learn mode controls. If the option is enabled in the dial panel incoming text and your responses to it will be recorded. When you are finished with your usual login procedure, call the 'Record script' menu item in order to save the recorded data to an ARexx script. By default the recorder only watches for single keystrokes. If you wish to enter an entire line use the 'Record line' menu entry, calling this item a second time will transfer the line you entered into the recording buffer. Pressing the return key has the same effect. Pressing Shift+Return will also put you into line recording mode, no need to use the cryptic menu shortcut. Note: the 'term' main menu now uses all available printable 7-bit ASCII characters for keyboard shortcuts :-(
 - Reworked the error reporting scheme, one of the weak spots of 'term'. In previous releases you would be told that a file could not be saved or loaded, but no explanation would be given why the action failed. Where possible 'term' will now tell you the cause of the error.
 - The printer support code was not particularly sensible to printer trouble, such as reported by the infamous printer.device requester. Even if this requester was cancelled 'term' would happily continue to print, causing the printer trouble requester to pop up over and over again. This has been fixed.
 - The ARexx DIAL command is no longer synchronous by default, there is a new SYNC option which causes the ARexx script to wait until the dialer has made a connection/has failed to make a connection. The RC (result code variable) will be set to 5 if no connection was made, it will be 0 if a connection was made. Now control can pass right through the DIAL command.
 - ARexx support is no longer a compile-time option but an integral part of the program.
 - Fixed a couple of bugs in the user interface library which dealt with odd alignment of slider level strings under v39. Some few strings still break the rules, but the results are less devastating than they used to be. Thankfully, most of the gadtools.library bugs that caused such trouble were fixed in v40.
 - Added the 'trap' feature which implements the functionality of the ARexx wait list in an asynchronous fashion. For each sequence found a command sequence is executed. This should make it much easier to write UUCP scripts, BBS programs and such. Please note that the trap list is not identical to the wait list.
 - Rewrote the ARexx/AmigaDOS command execution routines which now execute their commands in truly asynchronous fashion, i.e. once their processes are spawned they keep to themselves and notify the main program when they are finished. This made it possible to remove the odd command handling workarounds and the special ARexx interface code that would take care of ARexx/AmigaDOS command
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execution.

- The upload queue window code did not get the upload buttons enabled if icons were dropped on it.
 - The trap list loading code mixed up the order of commands and sequences, this has been fixed.
 - Fixed a monetary quantity formatting bug in the locale support code.
 - A malformed text formatting string was causing Enforcer hits in the action logging routine.
 - Added a few more 'safety catches' to the screen opening code in order to make sure it does not open screens 'too deep'.
 - Changing the screen size in the screen panel did not cause the screen to be reopened, this has been fixed.
 - Realized that it was not such a good idea to make most windows simple refresh and changed them to smart refresh. I've probably seen too many Macintosh programs forced to redraw their window contents over and over again.
 - The auto-upload panel now sports a button labeled 'Upload from queue' which if enabled will cause the current upload queue to be transferred. Thanks to Bob Maple for pointing me into the right direction.
 - Fixed a truly nasty bug in the user interface code: integer type gadgets did not remember their original values when created, they would forget about them when queried and only would report them correctly when the values were changed. There is something I forgot to mention: integer gadgets understand hexadecimal (both 0x.. and \$.. notation), binary (%..) and octal (&..) notation. The idea came from Martin Taillefer.
 - The date and time entries in log files are now printed in DOS format again.
 - Recorded scripts and such no longer include *SP codes instead of plain spaces. This should improve readability.
 - With the 'shared screen' feature enabled 'term' would not respect the screen depth settings. This has been fixed.
 - The XPR routines no longer queue more than one IORequest, this should help to avoid trouble with some few device drivers.
 - The ARexx QUIT command really works now.
 - Removed the fixed-width font dependencies for Kickstart 2.04. Although windows may look funny if you use a proportional-spaced font, the program should deliver the same functionality as if it were using a fixed-width font.
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- Triggering the iconification function with the 'Release serial device when iconified' option enabled will ask you for confirmation if the modem is still online.
- Just for the fun of it added datatypes support. The IFF-ILBM saving routines of picture.datatype are used when saving the window contents to a file.
- If the console output window specifier includes the %s string formatting parameter it will be replaced with the name of the public screen 'term' resides upon.
- New ARexx command PROCESSIO permits to turn off serial I/O processing by the main program. This will let ARexx programs receive & process all incoming data, without having 'term' pull single strings from the input data stream.
- Keymap strings to include null-bytes should be properly processed now, previous 'term' releases would stop at the null-bytes and ignore the rest of the input lines.
- Changes in the serial buffer size now cause the serial driver data to be updated as well.
- Added facilities for external programs to rendezvous with 'term', allowing them to take over the serial driver. This was added primarily to support my HydraCom Amiga port (please note that you need revision 2 of my HydraCom port to interface to 'term'), but it may also help to support other file transfer protocols, such as the original rz/sz programs.
- Whether trap list processing is enabled or not is now saved along with the trap list itself.
- You can now lock the cursor keys and the numeric keypad separately.

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.
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- 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.
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- 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 phonebook 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
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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
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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
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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 phonebook 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.
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- No more odd happenings in the status line online time display. The code responsible would misinterpret a string index. This has been fixed.
- It is no longer possible to dial phonebook 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 phonebook would not clone single phonebook entries correctly.
 - The configuration copying routine will now selectively copy config information to the currently selected phonebook entries.
 - The phonebook encryption/decryption routines are a tad faster now.
 - The program will now prompt twice for a phonebook access password.
 - Comment, phone number, user name and password can be much longer now than they used to be in previous releases.
 - The phonebook now only contains the configuration information to differ from the global configuration.
 - Previous releases would not save any rate information along with encrypted phonebook 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 phonebook 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
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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 occurrences 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 explicitly 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
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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 phonebook and file transfer window.
 - The lists used by the phonebook and the date panel no longer look
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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.

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\0	Backslash
\1	Backslash
\2	Backslash
\3	Backslash
\4	Backslash
\5	Backslash
\6	Backslash
\a	Backslash
\b	Backslash
\c	Backslash
\d	Backslash
\e	Backslash
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\h	Backslash
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