

Everything you need to get on-line with your Amiga

# **AMIGA** **FORMAT** *PRESENTS*

## **Get into the Net With Your Amiga Start-up Guide**

- ★ **Find out how modems work**
- ★ **Choose the best hardware and software**
- ★ **Discover how to get on-line the easy way**

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# Internet, Modems, and the Whole Comms Thing

by Davey Winder

Excerpt introduced by Matt Bielby,  
editor of the internet magazine **.net**

## **Contents**

Preface by Matt Bielby	3
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### **Internet, Modems, and the Whole Comms Thing** Davey Winder

Introduction	7
--------------	---

Getting connected	11
-------------------	----

The Amiga	11
-----------	----

The modem	12
-----------	----

The phone line	17
----------------	----

Communications software	18
-------------------------	----

Features to look for	26
----------------------	----

Amiga comms packages	31
----------------------	----

Term	32
------	----

NComm 2.0	36
-----------	----

Terminus 2.0	40
--------------	----

Going online	44
--------------	----



## Preface

Connect yourself to a world of information! You've read all about it. The information superhighway. Cyberspace. The greatest development in information technology since the telephone. Hell, since the printing press. And you want to get involved.

But how? It's a strange new world out there, packed with computer geeks, infonauts, self-styled infobahn warriors – if anything was guaranteed to put you off, it's this lot.

That's why Future Publishing's new .net magazine is a jargon-free zone. We want to show you, simply and easily, how to get the most out of the Internet.

After all, the Internet's for everyone. If you want to get involved – and you should – buy issue one today!

As editor of .net, I'm obviously pleased to see our sister magazine, Amiga Format, giving away this free Internet start-up guide. Anything that helps Amiga owners get on-line can only be good news. And this covermounted book contains chapters 1 and 2 of Amiga Format's new "Internet, Modems, and the Whole Comms Thing" book. However, it's more than just a taster for the real thing – this excerpt was chosen

so that it will help you take your first steps in comms.

Comms is a pretty techie and off-putting area, but Davey Winder, Internet god, media star and the book's author, is determined to make it simple. Think of your modem as a car. You buy it to go places, not so that you can tinker around under the bonnet. That's the attitude of the whole book – it's where you can go and what you can do that's important.

## How this book will help you

These sample chapters cover the basics, the things you need to know to get started. The language is friendly, the concepts simple, but the message clear. Today's modems are foolproof and easy to use. Today's software is cheap and powerful. And today's communications networks let you tour the world (not simply log onto a trainspotting bulletin board in Pontefract).

After reading these chapters you'll be able to:

- Δ Give yourself 12 good reasons for buying a modem!
- Δ Pick the modem you need, not the one the salesman wants to shift
- Δ Pick the right software AND figure out how it works
- Δ Get yourself online



Pretty good, eh?

Needless to say, this forms only a part of "Internet, Modems, and the Whole Comms Thing". This is a 340-page book packed with information on every aspect of comms. It's a road atlas for the information superhighway, not a Haynes manual for fixing your modem.

More about the book as a whole

How do you save a fortune on phone bills? How do you stop yourself catching viruses? How do you dramatically reduce time spent transferring files? It's all in here.

What are bulletin boards and how do you log on to them? How do you send electronic mail. What's Fidonet? How does the Internet work and how do you find your way around it? What's an Internet Service Provider? How does the Internet software work? What can CompuServe and CIX do for you? What other online systems are there? Every online service that matters is explained – how to log on, how to find your way around, how much it will cost and what you'll get out of it.

Sooner or later you're going to want to know some technical stuff too, of course. That's in the book as well. Standard protocols, Hayes command set, Internet Service Providers, Email routing, error-correction systems, RS232 connections, Internet site directory, mailings lists,

bulletin board directory, 'smilies', acronyms and a comprehensive glossary of techie terms.

AND, as if all that wasn't enough, there are also £160-worth of vouchers for software, hardware and online services. Take advantage of just a couple of them and you've recovered the cost of the book!

If you hadn't got a modem, "Internet, Modems, and the Whole Comms Thing" would make you buy one, it's that good!

*Matt Bielby*



# Introduction

If you want to breathe life into your computer, then give it a modem. A modem is your introduction into the world of computer communication, or comms as it is known (unless you are an American then you will probably be thinking "oh he must mean telecomputing"). And at its simplest that's exactly what it is – communication between computers. It's the ability for your computer to talk to other computers, anywhere in the world, and to exchange information between them. That information can take many forms, be it a computer program, a picture, some music, a book, an animation... you name it.

But comms goes further than that, you can not only communicate with another computer but also with the people behind the keyboard. Real conversations take place, real friendships are forged, real communities can develop. It isn't unknown for people to fall in love across the network of computer networks known as The Internet, in fact I know of a number of people who are now happily married after having met this way. It doesn't stop there though, comms isn't just the future of dating agencies (although that may well be true), there are many varied and exciting opportunities open to you as soon as you

enter the online arena. Here are just a few of the things you can do:

- Δ Communicate using Electronic Mail. No more waiting days for your post to arrive at its destination. With EMail your letter can be delivered instantly to another user of the same service, literally as soon as you press the return key it has been delivered and simply waits for the recipient to connect to the service to retrieve it. If the EMail is sent to a user of a different service then it may take an hour or two to travel across the networks. Whatever, it isn't surprising that traditional postal services are known as "Snail Mail" to comms users because of the slowness of delivery!
- Δ Send faxes and receive faxes without a fax machine. Many modems now have a fax capability built in, and even if you don't possess one of these then many online services offer a fax facility via your computer.
- Δ Join a home banking scheme. Some banks offer users with the appropriate technology the opportunity to do their banking from home, getting statements, balances, issuing transfer requests etc.
- Δ Gain access to vast libraries of Public Domain and Shareware programs, covering every possible interest from games through accounting packages



to classics of literature in computer readable format.

- Δ Play online games, in real time, with real people. Imagine being able to pilot a World War Two bomber as part of a squadron, working with your co-pilots to try and defeat an enemy squadron. Could this be the ultimate flight sim fantasy? Stop imagining, it's no fantasy, you can do this now using comms.
- Δ Get help with your worst computer problems from experts in the field, free of charge and within a few hours of asking.
- Δ Go shopping without leaving your armchair, being able to buy anything from the latest CD by the "Waving Davids" to that new car you promised your partner. You can book holidays, reserve air and train tickets, get seats for a big concert, or even send flowers to your loved one. All from the comfort of your own home.
- Δ If you are writing a project for school, college, or maybe as part of your work, you can do the necessary research without having to spend a day at the library. Use the vast stores of information out in Cyberspace, ask your computer to find the information for you and then download it from a database in Tokyo direct to your Amiga in Croydon!
- Δ Forget Directory Enquiries if you need to find a telephone number, go straight to the computer databases that the operators use themselves.



Services such as "Phonebase" and "Electronic Yellow Pages" allow you to quickly find the numbers you want with the minimum of fuss.

- Δ Participate in lively, stimulating, or just plain daft debate on any subject you can possibly think of. If you want to talk about something it can be guaranteed that somewhere in CyberSpace there are other people who will want to talk about it with you.
- Δ Find out about the news as it is happening. Connect to the newsfeeds that are used by the professionals to see what's happening worldwide before it reaches the radio or television.
- Δ Work from home. Many people are now using modems to enable them to work at home, known as "Teleworking" this is an employment sector that is very definitely on the increase in the UK. Of course this is not just restricted to data input jobs. Many Journalists, myself included, write their copy on computers and then send them directly to the Editor using a modem.
- Δ There are, of course, many more avenues of opportunity within the comms arena but I think you get the idea from this short list. A modem is your gateway into another world, the world of the future. As they, whoever they may be, say, "the future is now".

## Getting connected

All you need to get into this fascinating world of comms is your Amiga, a modem, a telephone line, and some terminal software. Let's take a look at each of these items in more detail:

### The Amiga

Any type of computer can be used for comms but the Amiga is obviously my computer of choice and yours too if you're reading this! However, the type of computer is irrelevant when it comes to actually communicating. An Amiga will quite happily talk to a Mac, PC, Atari, SparcStation or whatever.



**To make your online life easier an Amiga with a hard disk is recommended, but not essential. Using a hard disk will speed up data transfers and make storage a lot easier. Many off line readers won't, for example, work on a floppy based system.**

As with most applications, the more RAM you have the better although a basic 1Mb system will work. Similarly, the faster your Amiga the better the performance you will get with comms.



The Amiga has a pretty decent serial port as standard, and this allows for fast transfer rates without the need for extra hardware, but you will get better results from a 68040 or 68030 equipped machine than a low end basic 68000 A500/1500. It is the serial port that is used for the sending and receiving of data, and it is used in preference to the parallel port because it offers a more reliable link over long distances.

As an Amiga owner you are fortunate in possessing a truly multitasking computer – it means that you have one of the best value for money machines available for comms use. Many PCs suffer from problems with high speed comms because they lose information during system interrupts, but the Amiga can deal with these interrupts efficiently because of its multitasking capability. To achieve effective high speed transfers on a PC you are looking at extra expense to purchase specialised add-ons such as a special chip for the serial port or even a serial port accelerator card.

## The modem

A modem is, simply, a device for converting computer data to and from sound so that it can be transmitted over an ordinary telephone line. Computers talk in a language that is made up of 0's and 1's, called binary. This digital information



has to be converted into an analogue signal, sound, before it can be transmitted using the telephone line. When the information is received at the other end of the link, the receiving modem converts the sound signal back into the digital information the computer there will understand.

Although this may all sound terribly complicated, it is in fact a very simplified explanation of what actually happens in the data transfer process. All you really need to know is that it works. Just let the modems do all the hard work – it's what they get paid for after all.

Modems have come an awful long way in a very short time. Not that long ago I was using what was then state of the art technology, yet it crawled along like a snail with a broken leg. Now just a few years later I'm using a modem that cost an awful lot less in real terms but can transfer data 100 times faster! In general terms the rule of thumb when looking at buying a modem is to go for the fastest that you can afford.

To buy a cheap but slow modem can be something of a false economy. The main cost of communications is going to be that of using the telephone line. All the time you are connected to an online service you are using your telephone and running up the phone bill.



**The slower the modem, the longer it takes you to transfer data, and so the more time you spend actually using your phone line. The faster the modem, the faster it will be to transfer data and the less time you will spend running up phone charges.**

With the prices of modems dropping all the time, you certainly should be looking at one that has a speed of 9,600bps (Bits Per Second) as a minimum. These modems will also be known as V32 standard.

Many modems now also feature a fax capability, but only pay the extra for this if you really think you will be making use of it. Remember that you will most likely need to purchase special software to enable you to utilise the fax facility of your modem, so there is that hidden expense to consider. Having said that, a fax modem is a wonderful creation. If you think about how most people use a fax machine it makes a lot of sense to have one built in to a modem. Most faxes are made up of text, text that is typed into a word processor or computer then printed out and fed through the fax machine. Wouldn't it be much easier to not have to print it out after you have typed it? With a fax modem you can, you simply type in your fax and then tell the computer where to send it. Incoming faxes are received and stored in the computer,



where they can be displayed at leisure. You can, of course, also send graphics in your faxes and a fax modem will send to any fax machine not just another fax modem.

One thing that is essential is that your modem is Hayes compatible. Hayes are a modem manufacturer, many would say the leading modem manufacturer, and were responsible for introducing a command set that allows computers to communicate effectively with modems in a standard manner.



**The Hayes command set is now the de facto standard, and is implemented on any modem worth its salt. Hayes commands are covered in detail in the reference section of this book.**

You have a choice of internal or external modems, and they work in exactly the same manner. The advantage of an external modem is that you can unplug it from one computer and connect to another with ease. External modems are fairly universal in that they will work with just about any computer. They also have a very visible display which may take the form of a row of flashing LEDs or in some cases now an alphanumeric display. These displays are used to give you information about the modem and its operation, and can be very useful in tracking down any problems. The internal modems have



the advantage that they take up no desk space. However, they cannot be easily transferred from computer to computer and are generally platform specific. Of course you don't get helpful flashing lights displayed either, and you use up a useful slot as well. For many Amiga users an internal modem won't even be an option, simply because of the design of an Amiga A500 or A1200 for example. An internal modem draws on the computer's power supply so no bulky power supply unit is required.

Look out for modems that feature error checking and data compression, as this dramatically improves the modem's efficiency and speed of operation. At the time of writing, V42/V42bis is the standard to look for. As an example, the new breed of modems from Hayes have a transmission speed of 28,800bps but this can be increased to a theoretical maximum throughput of 230,400bps using their implementation of V42bis data compression which can compress data by up to 8 times in some cases.



**Many modems may appear to offer exactly the same features as another that costs almost twice as much. However, make sure that you check that the cheaper modem is BABT approved.**

All modems must comply with the BABT approval system, which covers such things as safety issues like ensuring high voltages aren't generated on the telephone line, and usage factors like interference with other phone line users. All this costs money, a cost which is passed on to the consumer, but the important and simple fact is that it is **ILLEGAL** to use a non-BABT approved modem (or telephone for that matter) on the UK telephone system. Many people don't like the approval scheme, and many people do use non-BABT approved modems in this country. You should be aware that, possibly, your phone line could be disconnected if you were to be found using such equipment.

## **The phone line**

You don't need a dedicated telephone line to use a modem, although it can be useful as you will see in a moment. Your standard home or business line will be fine, you just plug your modem into the phone socket and your telephone into the modem. Some modems don't have a telephone socket to allow this, so you may require a socket doubler to connect both phone and modem to the same socket. And that's all there is to it. You can still use your telephone as usual, but not when you are using the modem, of course, as they both share the same phone line.



A separate, dedicated, phone line is really necessary only if you want to set up your own Bulletin Board System or are likely to be hooked up for such a period of time that you will seriously annoy your partner/parents/flatmate.



**Do keep an eye on the REN ratings of the equipment you are using, I have a combined telephone and answering machine connected to the same line as my modem without any trouble. But if the REN total gets too high it can cause problems with extensions not ringing properly etc.**

## Communications software

Terminal software has one sole purpose in life, and that is to make communication between computer and modem as easy and painless as possible. Good terminal software maximises the power of your communications setup in addition to just providing a user friendly interface. For terminal software to be of any real use to you there are a number of features you should be looking for. Basic (but nonetheless important) parameters need to be configurable such as data bits, parity, stop bits, duplex, and of course communication speed (or baud rate). These parameters demand some explanation, and here seems as good a place as any to give it.



For two computers to transmit data effectively they must agree on certain communication parameters, just as two people speaking need to use a common language.



**Data bits refer to the number of bits sent for each piece of information, or character, transmitted (a bit is the smallest unit of computer data, a single binary digit in fact).**



**Parity refers to a simple method of checking the integrity of data received, in other words if the stuff sent has arrived safely.**

Parity checking isn't the same thing as the error checking protocols that were mentioned previously. There are two types of parity checking, namely even/odd and mark/space. Of these the even/odd system is in far more common use.



**Start and stop bits let the receiving modem know when each character ends and the next one begins, because there are so many factors affecting the time it takes to send a character.**

A start bit is added to the start of each character, which is just a collection of bits itself, a stop bit is

added to the end of each character. Sometimes, although very rarely, two stop bits may be used.



**Duplex simply refers to whether the receiving computer should echo the characters you are sending back to your computer to be displayed. Setting the system to full duplex means your computer echoes characters to its counterpart, whereas half duplex means it echoes characters to your own screen.**

You'll soon know if this setting is wrong as it makes for an unreadable display, either nothing at all or words that have two of everything like WWaavveeeyy DDaavveeeyy depending on which duplex mode isn't being correctly used!

Communication speed is very important of course, and refers to how quickly data actually gets transmitted. Modems need to know how fast they can talk to each other, and have to be compatible with regards to speed. Your modem may be a super fast whizz bang model capable of transferring at 28,800bps, but it can't go that fast if the modem at the other end of the telephone line is an older model that can only talk at a rate of 9,600bps. You need to know the capabilities of the modem at the remote connection to be able to communicate effectively and understandably.

There is a whole heap of confusion when it comes to talking about modem speeds, and



people who write about comms are as guilty as anyone for helping to further this confusion by confusing bits per second (bps) with baud rate.



**Just for the record, bits per second refers to the number of bits transmitted every second. A baud is one unit of information per second but each unit could be comprised of one or many bits.**

You should also be looking at software that offers a good modem configuration menu, to enable you to get the very best out of your modem no matter which online service you are connecting to. Similarly the transfer protocol options are vitally important if you want to be able to transfer files to and from a number of different services with maximum efficiency in terms of both speed and stability. File transfer is simply the moving of a file, which can be of any variety (text, binary, etc.), between computers.

There are two basic types of file transfer, ASCII and binary. ASCII transfer is the moving of seven-bit ASCII files, binary transfer is more complicated and can send eight-bit characters, transferring the data in groups of bytes. Binary transfers use error checking protocols to ensure that each of these blocks of information gets sent correctly, as one corrupt block could completely ruin the entire file. ASCII transfer is fairly simple



and can only really be used for moving text files, although it is possible to convert binary files to an ASCII format for transferring in this way (however, this is not recommended for the faint hearted). ASCII transfers are transmitted a character at a time, just as if you were typing the text into the other computer directly from your keyboard. Of course, you cannot type as fast as data is sent during this type of transfer!

Although ASCII transfers are simple to implement and to use, their simplicity is also a disadvantage as only the simplest of files can be sent using this method. There is also a tendency for line noise (where there is a poor telephone line or connection) to result in lost characters during a transfer due to either the lack of error checking, or the inability to retransmit corrupt data. This tendency increases in direct proportion to the speed of transfer – the faster you send it the more chance there is of information getting lost en route.



**Many files cannot be transferred by ASCII transfer due to the fact that they contain eight-bit characters which would be corrupted, or seven-bit control characters that may be interpreted as a command by the receiving computer.**

So when you need to send binary data, programs etc, you have to use a binary (or error-checking) protocol. Binary transfers are sent in groups of characters, also called blocks or packets, which can be of varying size according to which of the many binary transfer protocols you use.

Information about each of these blocks is added by your computer and included as part of the block when transmitted. On receiving each block, the remote computer reads it and checks that the data contained matches the description given in this extra information tagged to it. If the block has been corrupted, it is sent again to ensure the integrity of the transfer. This "extra" information is transmitted either as a block header (that is part of the block itself) or before or after the block. Further blocks are not sent until the sending computer has received an acknowledgment from the receiving computer regarding the integrity of the block sent. To prevent excessive wasted online time when data is being severely corrupted for whatever reason, a block will only be resent so many times before the transfer is terminated. The number of attempts can be set by the user, or may sometimes be a default number depending on the protocol used. There are many different file transfer protocols in use, but the most popular of them are described below.



## Xmodem

Xmodem is one of the most common of the error checking protocols, having been around since 1978 and being implemented by just about every Online service known to man. Xmodem works by transferring files data in blocks of 128 bytes, to which a checksum is added. A checksum is an extra bit which is used by the receiving system to check the integrity of the transmitted block. If the checksum is wrong then the receiving machine will request that the block is sent again, if all is well it will ask for the next block to be transmitted. Xmodem can also use cyclic redundancy check to check for errors. Known as Xmodem/CRC this adds a second checksum bit to the transmitted block, thus increasing the reliability of the transfer.

## Kermit

Kermit is another of the old school of protocols, having been with us since 1981. Kermit is very similar to Xmodem in that it uses blocks and a checksum to transfer data (however, Xmodem is not named after a puppet frog while Kermit is!). It can transfer seven-bit files, which Xmodem can't do, and is slightly more flexible than Xmodem in that the size of the blocks can be altered to best suit the receiving system. Xmodem



can be troubled by line noise, but Kermit is able to resynchronise transfers in this circumstance. Kermit has some other advantages to Xmodem. First, it uses a form of file compression to increase transfer speeds providing both computers involved in the transfer are using the same Kermit protocol. Secondly, Kermit allows the use of wildcards for transfers, so using an asterisk to replace a name or extension will transfer a number of files.

## Ymodem

Ymodem transfers its data in blocks of 1024 bytes, compared to the 128 byte blocks that Xmodem uses. This results in much faster transfers, providing there are not too many errors in the transmission. Using a very similar checksum to Xmodem, Ymodem can be a superior protocol under ideal conditions. However, because block retransmission is automatic this can slow things down considerably if there is a bad connection or lots of line noise present during the transfer.

## Zmodem

Zmodem is the protocol that I use personally, as do the majority of people who frequent the online community. It uses larger blocks than

Xmodem, 512 bytes, and doesn't wait for acknowledgements before sending blocks (it looks for NAKs at the sending side only).

Zmodem is the fastest of the protocols, allows for wildcard transfers, and is simple to use.

As with file transfer protocol options, the more terminal emulation options available to you the less chance there is of finding a service that you cannot use. Communications packages sometimes appear to be overloaded with features that will never be used, but the simple truth is that there are so many different modems, online services, and communications setups out there that it would be sheer folly for the authors of these programs to not include every option they can think of.

## Features to look for

Once you get past the essential features list, and all packages will have them of course, you can start looking for the touches that will help to make your online life that much easier. In reviewing the three main terminal software programs available I have looked at five areas which are important in this respect.



## Phonebook

A good phonebook is a must-have if you intend to spend any time whatsoever online. You can store not only the numbers of online services here, and call them up at the click of a mouse or press of the return key, but also all the configuration details specific to that service. Once you get into using comms you may find there are many different systems you will want to use. Being able to store all the information that your modem and computer need to be able to talk effectively and efficiently to each one is very important. A good phonebook will allow you to enter this information easily, and offer a choice in how it is both sorted and displayed.

## Review buffer

A review buffer is simply a method of storing the information that is displayed on your screen during an online session. This information is saved to a file, a file whose size is configurable depending on the package you use. As an example, you may decide you want a review buffer that holds 400 lines of text. If you set the buffer size accordingly it will store all the information coming in until it reaches the 400 line figure, but will then discard line 1 when line 401 is received, discard line 2 when 402 is received



and so on. The information kept in the buffer is always the most recently received. Once you have ended your online session you can display the contents of the buffer in its own window. A review buffer needs both to be flexible and to offer good text searching and saving features. You may find yourself using the buffer to read through long messages offline (so saving money on telephone connect charges), or even studying the menu structure and roadmap of a new and unfamiliar BBS so as to minimise the amount of time you spend online just trying to find your way around.

## File transfer

As mentioned already, file transfer protocols are essential in order to maximise the efficiency of uploads and downloads. Look for a package that offers ZModem primarily, as this has now become a standard among online services, and as many other protocols as possible. The reason for looking for as many as possible is that there are lots of different online services available and some, like CompuServe for example, use proprietary protocols. Although not all the protocols are as efficient as ZModem, if it isn't implemented on the service you are connected to it isn't going to be of much use to you! Also look for such things as what information is given to

you during a file transfer. File transfer status windows can tell you much more than just the name of the file being moved. The sort of information that is important includes the size of the file, an estimate of how long it will take to transfer, an indication of the actual rate of transfer being achieved, some sort of graphical bargraph display to show you the percentage of the file transferred, details of any transfer errors, and when using a protocol such as ZModem the name of the next file waiting to be moved in a multiple transfer.

## Scripts

Some sort of scripting facility is important, although less so now than a few years ago. Most scripts are used to automate the logging on process and then collecting unread mail and messages for download to be read offline. These days there are not many online services that don't have some sort of offline reader available that does this for you. However, scripts are still useful and you should be looking for a package that supports ARexx at least. Some packages have their own built in script language, which can be very powerful but you need some basic programming skills to be able to utilise them.

## Macros

Macros help to make life easier, and online sessions quicker, by assigning strings of text to defined keys. Usually it will be the function keys that are used, sometimes in conjunction with qualifier keys such as shift, ctrl, and alt to give more macro keys to use. A macro key could be used for something as simple as typing your username with one key press, or a more complicated macro could be defined that actually automates part of the online process.



## Amiga comms packages

Amiga users are fortunate in that communications is one area where, without exception, all the best software packages are in the PD/Shareware marketplace. There have been a number of commercial programs over the years, but all of these have fallen by the wayside in the face of excellent and much superior shareware competition. Comms is very much a community of enthusiasts, all of whom seem to want to help each other and make online life easier for everyone. Of the three main software packages, one is absolutely free and the other two cost only a fistful of dollars to register. To find the communications package that is best for you, and essentially it is a very personal choice, I would suggest that you read the following reviews and with them in mind go and try all three pieces of software and see which you feel most comfortable with. All three will enable you to enter the wonderful world of comms with the minimum of hassle.

## Term



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**Availability: Most Amiga BBS and FTP sites, or  
PD libraries.**

**Cost: Giftware (see below)**

If you are using WorkBench 2.04 or higher (and one has to ask if not, why not?) then you should seriously consider using Term as your communications software. In the best tradition of comms Term is as good as free, in fact it is "giftware" requiring you to send the author a gift of any kind which you think will suffice as payment should you like and use the program.

Term is a highly configurable piece of software, down to the smallest of details. This may make its installation seem daunting, but there is a very complete manual provided as an AmigaGuide document as well as a plain text version, and using the default settings should enable you to get online before you have to worry about fine tuning your setup.

Term provides all the features you need to get online, but the following are among the most useful:



## Phonebook

This is a very nicely implemented feature, allowing every entry to be custom configured. Every possible setup option is catered for, so each entry can use a different connect speed, terminal type, and so on. In effect Term loads a new and different set of preferences for each entry selected from the phonebook. Nice touches include the ability to set rates for connect rates for individual entries, so enabling you to keep an eye on ongoing costs. The phonebook itself can be protected by a master password. When you first run Term you are then asked for the password and if you don't know it the phonebook file isn't loaded. This is a very nice secure little feature that helps to prevent the curious from getting details of the entries in your phonebook, especially useful if you store system passwords there (and I would have recommend that you don't, for pretty obvious reasons!). Term itself will still operate perfectly normally, there just won't be the password protected phonebook available. It is also possible to get a hardcopy printout of your phonebook, the amount of detail to be printed is configurable.

## Review Buffer

The review buffer has a good, fast, text search. The scrolling is smooth, and the review window is resizeable.

## File Transfer

The Zmodem implementation is good, with all the options that you will need. The status window provides all the information you could possibly want regarding the file transfer, including transfer speeds, estimated transfer times, a bargraph to give a graphical display of the file transfer, details of the next file to be transferred and so on. All in all Term is very thorough in this most important of areas.

## Scripts

While Term, unlike NComm and Terminus, doesn't have its own script language it is Arexx compatible to allow for scripting. ARexx commands, and for that matter AmigaDOS commands, can be executed from within Term.

## Macros

User defined command sequences can be attached to 40 keys (using function keys and



modifiers). Macros can also be mapped to buttons using the "Fast! Macro" feature, allowing for macro selection by mouse.

## Sound

Term allows the user to specify what sounds, if any, you want to hear for certain events. For example you could have specified sounds play when you connect to a BBS, when the modem rings, and when a file transfer is completed or aborted. Not particularly useful maybe, but fun and a nice touch. My setup comes up with "I'm sorry Dave, I'm afraid I can't do that" when a file transfer is aborted. Term also supports speech, and I find it useful that my comms software will tell me when a file transfer is completed, so I can go and do other things in other parts of the house happy in the knowledge I'll be told when important things happen. Of course, both sounds and speech are optional.

Personally I find that Term is so flexible and comprehensive, with its translation tables, terminal emulations, and almost endless configurability that I doubt you will ever need another communications package. It's free and it's regularly updated. I use Term every day, and I can't give a program a higher recommendation than that.

## NComm 2.0



**Author: Torkel Lodberg (based upon NComm 1.9 by Daniel Bloch)**

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**E-Mail: torkell@ifi.uio.no**

**Support BBS: +47 2 493210 (speeds to V32)**

**Availability: Most Amiga BBS and FTP sites, or PD libraries.**

**Cost: Shareware. Registration \$35(US)**

NComm has been around in one form or another for many years, and there are many people who swear by it. It works on any Amiga with 512K RAM or more, and so is useful for those of you still running WorkBench 1.3 on an old A500. Unlike Term, NComm is a shareware product that you have to register if you want to use it after a 4 week evaluation period. It costs \$35(US) to register, and for this you will receive a version that no longer has the "nag requesters" implemented.

NComm is highly configurable, and is supplied complete with detailed documentation. The documentation is in plain text format, to allow for compatibility with WB 1.3 users I would assume, but it is a shame that there isn't an AmigaGuide version available for those who could make use of it.



Like Term, NComm provides everything you need to get online but the following features are perhaps most important:

## Phonebook

The NComm phonebook is well implemented but not as comprehensive as it could be. There is no limit to the number of phonebook entries, but the first 46 can be displayed in the "Dial" menu and the first 10 can be dialled using hot keys to save time. The "Dial" menu is a nice touch which displays up to the first 46 phonebook entries in menu form, and double-clicking on the entry will result in that number being dialled. If you have the "traplist.library" available, then Fidonet users can enter a nodenumber in the phonebook and NComm will look up the details in the Nodelist to dial it, which saves having to enter all the details manually. There is the standard printing facility which I find essential as a backup of your all-important BBS numbers.

## Review Buffer

The NComm review buffer, or scrollbar as it called, is very much up to the job in all but one very important aspect. I have had no luck in getting the text search to work properly, always

being told there were no text matches even when I am looking at the words I specified!

## File Transfer

NComm's file transfer protocols are very complete, including options for Compuserve-QuickB and the mysterious (but I suspect not very useful) JModem. The ZModem options, which is what most users will require for stable and fast file transfer, isn't as comprehensive as some programs but offers all the important ones. The status window is adequate and no more, it includes the graphical "bargraph" transfer display.

## Scripts

Scripting has always been NComm's strong point in the opinion of many, including myself. The NComm script language is, undoubtedly, very powerful but it isn't exactly easy to use for someone with no programming skills. Luckily there are plenty of scripts available for doing all sorts of useful things from the file sections of many BBSs. These can easily be adapted to suit your personal needs. Scripts can be used for everything from automating the logging on procedure of a BBS, to almost being a small offline reader. NComm now also supports



ARexx, an increasingly important feature in Amiga applications.

## Macros

NComm allows for user defined macros to be attached to 24 keys, using the Function keys and modifiers plus the cursor keys. Whilst extremely useful, as macros always are, I can't help feeling it could have been implemented better by allowing for more macro keys.

NComm has, as previously stated, been the terminal package of choice for many people for many years now. As such, there is a large experienced user base to draw help from, and a number of add-on utility programs such as log analysers to help you watch costs etc. However, I can't help feel that it is slipping behind the competition these days. Term is the most obvious rival because it has the great advantage of being free, but Terminus is also trying to carve a piece of the action.

## Terminus 2.0



**Author: John P. Radigan**

**Dynalogic PO Box 444 Ocean City NJ 08226  
United States**

**Support BBS: 609-398-7453 (speeds to  
V32bis/16.8HST)**

**Availability: Most Amiga BBS and FTP sites, or  
PD libraries.**

**Cost: Shareware: Registration \$40(US)**

John P. Radigan wrote the first "must have" communications package for the Amiga. JR-Comm really was the bee's knees in terminal software, but over the years it started to show its age and was slowly eclipsed by NComm in particular. John hasn't sat on his laurels but has been busy writing a worthy successor to JR-Comm, and it has arrived in the guise of Terminus. Terminus isn't just an updated version of his earlier masterpiece though, it's a completely new program, a completely rewritten replacement. Like NComm, Terminus is shareware and costs much the same to register. The manual, which really has to be read if you want to get the best out of a package like Terminus, stretches to a huge print-out of 216 pages! Like NComm, an AmigaGuide document would make sifting through this information so much easier. Terminus does, however, make use



of the Commodore Installer utility and this makes installing the software really very simple and painless indeed.

And so let's take a look at the all important features that Terminus has to offer:

## Phonebook

The Terminus phonebook is perfectly adequate for the job in hand, with a fair degree of configurability for each entry, although this only goes as far as serial and file transfer preferences together with macro and script linking. Sorting and display options are plentiful. One distinctly odd feature here is the ability to let Terminus randomly generate your system passwords. It does this by taking a password of your choice as a seed and then combining it with the system name to generate a random password. You can choose to alter your password after every session so as to make your system access more secure. However, while this is all fine and dandy I'm no great fan of storing passwords in phonebooks, as it leaves them open to anyone who has access to your computer. There's also something odd to me about letting my computer choose my password, I'd rather trust my own common sense on this issue.

## Review Buffer

Terminus has an excellent multitasking windowed review buffer with a very fast text searching capability. The buffer size is configurable and has integrated clipboard support.

## File Transfer

JR-Comm was famous for its extremely comprehensive ZModem implementation. Terminus has followed in this tradition and offers you every ZModem option you could possibly require. Luckily the defaults are generally adequate to get you started, until you get the time to start playing with the settings to achieve optimum transfers in terms of both speed and reliability. The Terminus file transfer status window is comparable to NComm, and not as informative as the one to be found in Term.

## Scripts

Wow! Terminus has really got this area sewn up. Not only does it support ARexx as well as its own very extensive script language (in effect a small BASIC interpreter), but it has one major advantage over every other Amiga communications package in this aspect. Terminus



has a "Script Recorder". This feature will automatically record an online session, for example, and then turn that information into a script. An example would be that of logging onto a BBS, sending your username and password in response to the BBS requests, collecting your awaiting E-Mail and initiating a download, then logging off. The script recorder will convert all of this into a script which can then just be started to allow Terminus to automate the whole process for you. The "Recorder" enables those users who don't know how, or don't want to know how, to write scripts to utilise one of the communications software's most powerful aspects.

## Macros

Good macro key support, with a total of 40 Function key macros available using the Alt, Shift, and Ctrl keys as qualifiers.

JR-Comm was highly respected at the time because it was, quite literally, a market leader. Terminus does nothing, with the exception of the Script Recorder, that other packages can't do. The Script Recorder really is a nice feature, and one that I am very impressed with. However, it doesn't make Terminus worth \$40(US) on its own. I really do like Terminus, honestly, but I find myself unable to recommend it over and above the equally excellent Term, which is free.

## Going online

So, you have all the hardware and software you need to get connected, but how exactly do you go about it? Well, let me take you on a step by step guide to going online.

The most likely first point of call is going to be a Bulletin Board System. The majority are free to use and there is almost certainly going to be one that is a local call for you, we'll look at connecting to an imaginary one called for the sake of argument "Chez Wavey".

The first thing to do is make sure that your modem is actually switched on and that you have your terminal software running. Ensure the software is configured properly. The basic parameters you will need to set are in the serial preferences section and using the following options should get you connected OK:



**Bits = Eight Parity = None Stop Bits = One  
Handshaking = RTS/CTS**

Check to see if the modem and your computer are talking OK by typing the command AT, which is the Hayes command for "Attention". If all is well the modem will respond with "OK". You can then either enter the details of the Bulletin Board into the phonebook for your software and ask for the number to be dialled, or



simply type ATDT followed by the full telephone number. You should then hear the telephone of the BBS ringing on your modem's loudspeaker (if it has one, of course).

When the modem at the other end answers, don't be worried by the strange noises that you will hear. All these whistles and squeaks are actually your modem connecting to another modem and telling it what sort of connection it wants to make.

After a short while you should get the message "CONNECTED" output to your computer screen. At this point press the Return key to get things moving. Some systems require you to wait for 20 or 30 seconds or press the Escape key a couple of times as well.

If all has gone as it should you will then be greeted by a welcome screen which contains the details you need to use the BBS or "login". There will be a prompt asking for your name. As you are a new user it won't know you and will ask if you are therefore a new user (some systems ask for your name or if you are a new user they ask you type in "new").

As a new user you will need to complete a small questionnaire or application form. This will ask for details about yourself and your system. Always answer truthfully, and if you don't know an answer about your system accept the default

as this will usually work just fine and you can always change it later if it doesn't.



**Don't give a false name, address, or telephone number. These are often checked out and you may find yourself barred from using that BBS if you are dishonest.**

The rules of a Bulletin Board are there for a reason, and it is only fair that the SysOp (System Operator) who runs it should know who is using it. Anyway, once you have been accepted as a new member, usually provisionally until you have been checked out during which time you will most likely only have limited access to the BBS, the first thing to do is check out the menus and head straight for the files that will tell you all about that system.

Try to find out how to Mail the SysOp before leaving. Usually this will be an option before the connection is closed, so that you can say thanks for letting you look round.

This sort of courtesy goes down well with SysOps, and will be a good start to your online life. Remember that everyone, even the guy who is running the board you are using, had to go through the pains of logging on to a system for the very first time.

Enjoy it. Nobody will think you an idiot if you don't know the ropes straight away. What



you will find are lots of willing people with the expertise to help make your stay an enjoyable one.

**Now flip this book over  
to find out how to get  
into A1200 CD-ROM!**