AmigaNOS

COLLABORATORS

	TITLE : AmigaNOS	

ACTION	*NAME*	*DATE*	*SIGNATURE*
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Contents

Chapter 1

AmigaNOS

1.1 AmigaNOS

AmigaNOS is a package that allows you to connect to the Internet, via a
gateway. It also has several other functions to do with radio, but as I'm not
too well up on them, I won't even try to document them.

It supports connections via SLIP and PPP, across phone lines (using a
modem :-) or via a direct connection.

When connected, you can (amongst other things) download news (nntp), send
and receive mail (smtp) transfer files (ftp) and connect interactively
to other computers on Internet (telnet).

I use Demon to provide dial up connection to the Internet. They provide a
very good service, at GBP 10 per month, plus VAT.

Installation
Commands
MailBox

1.2 AmigaNOS Setup

Nos Set-up
==========

Here is a brief guide to getting Amiganos set up on your machine.
Consult the other files to fully customize your setup.

First Step
==========

Send mail to internet@demon.co.uk telling them what you want your
site name to be, also tell them your using SLIP and Amiganos.
(Hopefully you've already done this) If you haven't you'll have
to wait at least a day until you are able to go to the next stage.
(You can call demon voice to subscribe,currently 081-343 3881)

```
Log on to demon with a normal terminal program (ncomm,jrcomm etc).
Telephone : 0813434848

Your will be prompted with

gate login: (type in just your site name and not the full address)

New Password: (type in your desired password)

It will the give you your IP Address in the form;

number.number.number.number

Write this down as you will need it for the next part.

Running Nos
===========

(1) You must edit the following files putting in your own IP address
    and site name were indicated;

Domain.txt  in directory amiganos/slip
nos-startup in directory amiganos/slip

Note: Your site name will be what you asked demon to set your system
      up as. I.e. My site is "evil" so I have evil.demon.co.uk.
      Your IP       address is what you wrote down just a minute ago.

Also in Nos-startup you will need to tell it what speed your modem
will be logging on to demon at;

attach asy serial.device 0 slip nos 4096 1006 38400c  <-- The c is for
                                                ^          RTS/CTS
                                                |
                                        Use what you do in your
                                        terminal program.

(2) Edit the ftpusers file in directory amiganos/slip
(This is for when you logon to your NOS BBS.)

The following is your choice;

yourname : (Same as cix would be a good choice)
Password : (Anything not obvious)

(If you don't want any tom, dick or fis logging on get rid of the line
that says anonymous *).

(3)  In your startup-sequence put the following;

assign slip: <device>:amiganos/slip
assign tcpip: <device>:amiganos/slip
assign nntp: <device>:amiganos/slip/spool/articles

(4) Edit the Nos-dial file and put in your own site name and password.
```

```
(5) Copy files in amiganos/c to your c: directory.

(6)  To start simply click the icon - it will then load and dial
demon to connect.


(Make sure the assign's are running i.e. you've done a reset)
Troubleshooting
===============

Q: I only have one drive
A: Commit suicide or get a hard-disk

Q: It won't even open a window
A: You need 1MB or more of memory

Q: How do I log on to my own node?
A: Type "telnet yoursite.demon.co.uk" or "bbs" at the nos prompt.

Q: What are all these commands for?
A: Type help <command> for info.

CONSULT THE USENET GROUP DEMON.IP.SUPPORT.AMIGA IF YOU NEED HELP
================================================================

Information supplied by fis@evil.demon.co.uk
```

1.3 Demon

```
Demon (DIS) is a company providing connection to the Internet for
GBP 10 + VAT per month. They can be reached on 081-343 3881, or by
EMail at internet@demon.co.uk
```

1.4 AmigaNOS MAIN Index

1.5 AmigaNOS MBOX Index

1.6 amiganos_abort

```
abort [<session #>]
```

Abort a FTP get, put or dir operation in progress. If issued without an argument, the current session is aborted. (This command works only on FTP sessions.) When receiving a file, abort simply resets the data connection; the next incoming data packet will generate a TCP RST (reset) response to clear the remote server. When sending a file, abort sends a premature end-of-file. Note that in both cases abort will leave a partial copy of the file on the destination machine, which must be removed manually if it is unwanted.

1.7 amiganos_amiga

```
  amiga arplist [on] | [off]

Is used to denote whether the internal directory routine (OFF) or
an external LIST program (ON) is used for the ftp dir/ls and the
mailbox What commands.

  amiga command ["amigados command"]

Will cause the amigados command to be issued at specified intervals.
(see 'amiga interval [seconds]')

  amiga eightbit [on] | [off]

Allows the system to run telnet/mailbox sessions in 8-bit mode. (this
is needed to receive '7plus' files via the mailbox)

  amiga interval [seconds]

Issue the commands in the linked-list formed by 'amiga command ["xxx"]'
at regular intervals/

  amiga winsize <X_min> <Y_min> <X_max> <Y_max>

This is used to set the dimensions of all subsequent session windows.

  amiga wintype border [<on|off>]

This is used to specify whether subsequent session windows are to have
or have no border.

  amiga wintype resize [<on|off>]

This is used to specify whether it is possible to resize subsequent
session windows with the mouse.

The default setting for these commands is for all session windows to
be the same as the original command window.

  amiga sound [on] | [off]

With this set to ON, the Amiga makes use of the AmigaDOS command SAY
(not included!) to speak whenever a new mail message arrives. (It says
'NEW MAIL')
                                                    ** AmigaNOS4GW on **
  amiga guide [on] | [off]

With this set to ON, the Amiga makes use of the AmigaGuide command to
display help. The file AmigaNOS.guide must be accessible to AmigaGuide.
```

1.8 amiganos_arp

```
  arp

Display the  Address  Resolution  Protocol  table  that  maps  IP
```

```
addresses to their subnet (link) addresses on subnetworks capable
of broadcasting.  For each IP address entry the subnet type  (eg.
Ethernet, AX.25), subnet address and time to expiration is shown.
If the link address  is  currently  unknown,  the  number  of  IP
datagrams awaiting resolution is also shown.

  arp add <hostid> ax25|netrom <ax25|netrom_address>

Add a permanent entry to the table. It will not time out as  will
an  automatically-created entry, but must be removed with the arp
drop command.

  arp drop <hostid> ax25|netrom

Remove the specified entry from the ARP table.

  arp flush

Drop all automatically-created entries in  the  ARP  table;  per-
manent entries are not affected.

  arp publish <hostid> ax25|netrom <ax25|netrom_address>

This command is similar to the arp add command, but  system  will
also respond to any ARP request it sees on the network that seeks
the specified address.  (Use this feature with great care.)
```

1.9 amiganos_asystat

```
  asystat

Will produce a one-line display of each configured interface, showing
the number of bytes transmitted and received along with the device it
is attached to.
```

1.10 amiganos_attach

```
  attach asy <dev> <unit> <mode> <name> <bufsiz> <mtu> <speed>

where

  asy - is always 'asy' for the serial network driver;

  dev - is usually 'serial.device' for the normal Amiga serial
      device driver. If you happen to have additional serial
      ports on your Amiga, you should list the name of its
      serial.device compatible driver here.

  unit  - the unit number to be opened on the driver. Usually '0'
      for the case of the internal serial port.

  mode  - is either 'slip' for serial line IP use; 'ax25' for
```

```
      KISS AX.25 use, or 'nrs' for the NET/ROM serial
      interface.

  name  - is a symbolic name for the interface, something like
      'sl0' or 'nos'.

  bufsiz  - the amount of buffering that the device driver will
      do. The larger you specify then it lessens the chance
      you'll experience serial line overruns. The value of
      8000 works great with 9600 baud SLIP doing FTPs to a
      hard disk.

  mtu - the Maximum Transmission Unit of the interface; packets
      larger than this are fragmented.

  speed - baud rate you'd like the interface to run at. '9600'
      works great.
```

1.11 amiganos_ax25

```
  ax25 ...

These commands are used for AX25 interfaces.   With no parameters
it will display the AX.25 "heard" list. (see 'ax25 heard')

  ax25 bc [<interface>]

This command routes BEACON broadcasts via <interface>

  ax25 bcinterval [<seconds>]

Display or set the time interval between BEACON broadcasts.

  ax25 bctext [<"beacon_text">]

Display or set the text to be sent for BEACON broadcasts.

  ax25 blimit [<count>]

Display or set the AX25 retransmission  backoff  limit.  Normally
each successive AX25 retransmission is delayed by twice the value
of the previous interval; this is called binary exponential back-
off.   When  the backoff reaches the blimit setting it is held at
that value, which defaults to 30.  To prevent the possibility  of
"congestive  collapse"  on a loaded channel, blimit should be set
at least as high as the number of stations sharing  the  channel.
Note  that this is applicable only on actual AX25 connections; UI
frames will never be retransmitted by the AX25 layer.

  ax25 destlist

Displays the destination list: i.e, the addressed-to stations.
The display shows latest times of transmission TO stations, together
with the times that the station replied (if the destination was
out of range the replied field will be blank)
```

```
  ax25 digipeat [on|off]
```

Display or set the digipeater enable flag.

```
  ax25 filter [1] | [2] | [3]
```

Display or set the logging of heard lists of source and destination AX25 callsigns. This is a bitwise-OR function where the 01 value is for source stations and the 02 value for destination stations. When the bit is '0', logging is enabled, when '1' it is disabled.

```
  ax25 flush
```

Clear the AX.25 "heardlist" and "destlist" (see ax25 heardlist & destlist).

```
  ax25 heardlist
```

Display the AX.25 "heard" list. For each interface that is configured to use AX.25, a list of all callsigns heard through that interface is shown, along with a count of the number of packets heard from each station and the interval, in hr:min:sec format, since each station was last heard. The local station always appears first in the listing; the packet count actually reflects the number of packets transmitted. This entry is always present even if no packets have been sent.

```
  ax25 irtt [<milliseconds>]
```

Display or set the initial value of smoothed round trip time to be used when a new AX25 connection is created. The value is in milliseconds. The actual round trip time will be learned by measurement once the connection has been established.

```
  ax25 kick <axcb>
```

Force a retransmission on the specified AX.25 control block.

```
  ax25 maxframe [<count>]
```

Establish the maximum number of frames that will be allowed to remain unacknowledged at one time on new AX.25 connections. This number cannot be greater than 7.

```
  ax25 mycall [<call>]
```

Display or set the local AX.25 address. The standard format is used (eg. KA9Q-0 or WB6RQN-5). This command must be given before any attach commands using AX.25 mode are given.

```
  ax25 paclen [<size>]
```

Limit the size of I-fields on new AX.25 connections. If IP datagrams or fragments larger than this are transmitted, they will be transparently fragmented at the AX.25 level, sent as a series of I frames, and reassembled back into a complete IP

datagram or fragment at the other end of the link. To have any effect on IP datagrams, this parameter should be less than or equal to the MTU of the associated interface.

ax25 pthresh [<size>]

Display or set the poll threshold to be used for new AX.25 Version 2 connections. The poll threshold controls retransmission behavior as follows. If the oldest unacknowledged I-frame size is less than the poll threshold, it will be sent with the poll (P) bit set if a timeout occurs. If the oldest unacked I-frame size is equal to or greater than the threshold, then a RR or RNR frame, as appropriate, with the poll bit set will be sent if a timeout occurs.

The idea behind the poll threshold is that the extra time needed to send a "small" I-frame instead of a supervisory frame when polling after a timeout is small, and since there's a good chance the I-frame will have to be sent anyway (i.e., if it were lost previously) then you might as well send it as the poll. But if the I-frame is large, send a supervisory (RR/RNR) poll instead to determine first if retransmitting the oldest unacknowledged I-frame is necessary; the timeout might have been caused by a lost acknowledgement. This is obviously a tradeoff, so experiment with the poll threshold setting. The default is 128 bytes, one half the default value of paclen.

ax25 reset <axcb>

Delete the AX.25 connection control block at the specified address.

ax25 retry [<count>]

Limit the number of successive unsuccessful retransmission attempts on new AX.25 connections. If this limit is exceeded, link re-establishment is attempted. If this fails retry times, then the connection is abandoned and all queued data is deleted.

ax25 route

Display the AX.25 routing table that specifies the digipeaters to be used in reaching a given station, along with the transmission mode (VC - Virtual Circuit, DG - Datagram or IF - Default).

ax25 route add <target> [digis ...]

Add an entry to the AX.25 routing table. An automatic ax25 route add is executed if digipeaters are specified in an AX25 connect command, or if a connection is received from a remote station via digipeaters. Such automatic routing table entries won't override locally created entries, however.

ax25 route drop <target>

Drop an entry from the AX.25 routing table.

```
  ax25 route mode <target> [VC] | [DG] | [IF]
```

Change the transmission mode for a existing route entry.

```
  ax25 status [<axcb>]
```

Without an argument, display a one-line summary of each AX.25 control block. If the address of a particular control block is specified, the contents of that control block are dumped in more detail. Note that the send queue units are frames, while the receive queue units are bytes.

```
  ax25 t3 [<milliseconds>]
```

Display or set the AX.25 idle "keep alive" timer. Value is in milliseconds.

```
  ax25 t4 [<milliseconds>]
```

Display or set the AX.25 "link redundancy" timer. The value is in milliseconds.

```
  ax25 timertype [<original|linear|exponential>]

  ax25 version [1] | [2]
```

Display or set the version of the AX.25 protocol to attempt to use on new connections. The default is 2 (the version that uses the poll/final bits).

```
  ax25 window [<size>]
```

Set the number of bytes that can be pending on an AX.25 receive queue beyond which I frames will be answered with RNR (Receiver Not Ready) responses. This presently applies only to suspended interactive AX.25 sessions, since incoming I-frames containing network (IP, NET/ROM) packets are always processed immediately and are not placed on the receive queue. However, when an AX.25 connection carries both interactive and network packet traffic, an RNR generated because of backlogged interactive traffic will also stop network packet traffic from being sent.

1.12 amiganos_bak

```
  ftp <hostid>
```

Open an FTP control channel to the specified remote host and enter converse mode on the new session. Responses from the remote server are displayed directly on the screen.

FTP Subcommands

During converse mode with an FTP server, everything typed on the console is first examined to see if it is a locally-known command. If not, the line is passed intact to the remote server on

the control channel. If it is one of the following commands, however, it is executed locally. (Note that this generally involves other commands being sent to the remote server on the control channel.)

dir [<file>|<directory> [<local file>]]

Without arguments, dir requests that a full directory listing of the remote server's current directory be sent to the terminal. If one argument is given, this is passed along in the LIST command; this can be a specific file or subdirectory that is meaningful to the remote file system. If two arguments are given, the second is taken as the local file into which the directory listing should be put (instead of being sent to the console). The PORT command is used before the LIST command is sent.

get <remote file> [<local file>]

Asks the remote server to send the file specified in the first argument. The second argument, if given, will be the name of the file on the local machine; otherwise it will have the same name as on the remote machine. The PORT and RETR commands are sent on the control channel.

hash

A synonym for the verbose 3 command.

ls [<file>|<directory> [<local file>]]

ls is identical to the dir command except that the "NLST" command is sent to the server instead of the "LIST" command. This results in an abbreviated directory listing, i.e., one showing only the file names themselves without any other information.

mget <file> [<file> ...]

Fetch a collection of files from the server. File names may include wild card characters; they will be interpreted and expanded into a list of files by the remote system using the NLST command. The files will have the same name on the local system that they had on the server.

mkdir <remote directory>

Creates a directory on the remote machine.

put <local file> [<remote file>]

Asks the remote server to accept data, creating the file named in the first argument. The second argument, if given, will be the name of the file on the remote machine; otherwise it will have the same name as on the local machine. The PORT and STOR commands are sent on the control channel.

rmdir <remote directory>

Deletes a directory on the remote machine.

```
type [a|i|l <bytesize>]
```

Tells both the local client and remote server the type of file that is to be transferred. The default is 'a', which means ASCII (i.e., a text file). Type 'i' means image, i.e., binary. In ASCII mode, files are sent as varying length lines of text in ASCII separated by cr/lf sequences; in IMAGE mode, files are sent exactly as they appear in the file system. ASCII mode should be used whenever transferring text between dissimilar systems (eg. UNIX and MS-DOS) because of their different end-of-line and/or end-of-file conventions. When exchanging text files between machines of the same type, either mode will work but IMAGE mode is usually faster. Naturally, when exchanging raw binary files (executables, compressed archives, etc) IMAGE mode must be used. Type 'l' (logical byte size) is used when exchanging binary files with remote servers having oddball word sizes (eg. DECSYSTEM-10s and 20s). Locally it works exactly like IMAGE, except that it notifies the remote system how large the byte size is. bytesize is typically 8. The type command sets the local transfer mode and generates the TYPE command on the control channel.

```
verbose [0|1|2|3|4]
```

Set or display the level of message output in file transfers. Verbose 0 gives the least output, and verbose 3 the most, as follows:

```
0 - Display error messages only.
1 - Display error messages plus a one-line summary
    after each transfer giving the name of the file,
    its size, and the transfer time and rate.
2 - Display error and summary messages plus the
    progress messages generated by the remote FTP
    server.
3 - Display all messages. In addition, a "hash mark"
    (#) is displayed for every 1,000 bytes sent or
    received.
4 - Display all messages. In addition the number of
    bytes sent/received are displayed after each
    acknowledged packet.
```

If a command is sent to the remote server because it is not recognized locally, the response is always displayed, regardless of the setting of verbose. This is necessary for commands like pwd (display working directory), which would otherwise produce no message at all if verbose were set to 0 or 1.

1.13 amiganos_bbs

```
bbs
```

Will issue a telnet call to the local system's bbs on the loopback

interface.

1.14 amiganos_chatnode

```
  chatnode
```

Will issue a telnet call to the local system's chatnode on the loopback interface, the the user should identify him/her self with the command

```
        /n <Name>|<Callsign>
```

1.15 amiganos_close

```
  close [<session>]
```

Close the specified session; without an argument, close the current session. On an AX.25 session, this command initiates a disconnect. On a FTP or Telnet session, this command sends a FIN (i.e., initiates a close) on the session's TCP connection. This is an alternative to asking the remote server to initiate a close (QUIT to FTP, or the logout command appropriate for the remote system in the case of Telnet). When either FTP or Telnet sees the incoming half of a TCP connection close, it automatically responds by closing the outgoing half of the connection. Close is more graceful than the reset command, in that it is less likely to leave the remote TCP in a "half-open" state.

1.16 amiganos_connect

```
  connect <iface> <callsign> [<digipeater> ... ]
```

Initiate a "vanilla" AX.25 session to the specified call sign using the specified interface. Data sent on this session goes out in conventional AX.25 packets with no upper layer protocol. The de-facto presentation standard format is used, in that each packet holds one line of text, terminated by a carriage return. A single AX.25 connection may be used for terminal-to-terminal, IP and NET/ROM traffic. The three types of data are automatically separated by their AX.25 Level 3 Protocol IDs.

Up to 7 optional digipeaters may be given; note that the word via is NOT needed. If digipeaters are specified, they are automatically added to the AX25 routing table as though the ax25 route add command had been given before issuing the connect command.

1.17 amiganos_detach

```
  detach <iface>
```

Detach a previously attached interface from the system. All IP routing table entries referring to this interface are deleted, and forwarding references by any other interface to this interface are removed.

1.18 amiganos_digger

```
  digger [on] | [off] | [kick]
```

When (ON) it activates the Digger server, which is an SMTP based file server.

1.19 amiganos_disconnect

```
  disconnect [<session #>]
```

An alias for the close command (for the benefit of AX.25 users).

1.20 amiganos_domain

```
  domain ...
```

These commands are used for access to the Domain Name Service.

```
  domain addserver <hostid>
```

Add one or more domain name server(s) to the list of name servers.

```
  domain dropserver <hostid>
```

Remove one or more domain name server(s) from the list of name servers.

```
  domain listservers
```

List the currently configured domain name servers, along with statistics on how many queries and replies have been exchanged with each one, response times, etc.

```
  domain suffix [<domain suffix>]
```

Display or specify the default domain name suffix to be appended to a host name when it contains no periods. For example, if the suffix is set to ampr.org and the user enters telnet ka9q, the

domain resolver will attempt to find ka9q.ampr.org. If the host name being sought contains one or more periods, however, the default suffix is NOT applied (eg. telnet foo.bar would NOT be turned into foo.bar.ampr.org).

```
domain trace [on|off]
```

Display or set the flag controlling the tracing of domain server requests and responses. Trace messages will be seen only if a domain name being sought is not found in the local cache file, domain.txt.

1.21 amiganos_echo

```
echo [accept|refuse]
```

Display or set the flag controlling client Telnet's response to a remote WILL ECHO offer.

The Telnet presentation protocol specifies that in the absence of a negotiated agreement to the contrary, neither end echoes data received from the other. In this mode, a Telnet client session echoes keyboard input locally and nothing is actually sent until a carriage return is typed. Local line editing is also performed: backspace deletes the last character typed, while control-U deletes the entire line.

When communicating from keyboard to keyboard the standard local echo mode is used, so the setting of this parameter has no effect. However, many timesharing systems (eg. UNIX) prefer to do their own echoing of typed input. (This makes screen editors work right, among other things). Such systems send a Telnet WILL ECHO offer immediately upon receiving an incoming Telnet connection request. If echo accept is in effect, a client Telnet session will automatically return a DO ECHO response. In this mode, local echoing and editing is turned off and each key stroke is sent immediately (subject to the Nagle tinygram algorithm in TCP). While this mode is just fine across an Ethernet, it is clearly inefficient and painful across slow paths like packet radio channels. Specifying echo refuse causes an incoming WILL ECHO offer to be answered with a DONT ECHO; the client Telnet session remains in the local echo mode. Sessions already in the remote echo mode are unaffected. (Note: Berkeley Unix has a bug in that it will still echo input even after the client has refused the WILL ECHO offer. To get around this problem, enter the stty -echo command to the shell once you have logged in.)

1.22 amiganos_eol

```
eol [unix|standard]
```

Display or set Telnet's end-of-line behavior when in remote echo

mode. In standard mode, each key is sent as-is. In unix mode, carriage returns are translated to line feeds. This command is not necessary with all UNIX systems; use it only when you find that a particular system responds to line feeds but not carriage returns. Only SunOS release 3.2 seems to exhibit this behavior; later releases are fixed.

1.23 amiganos_escape

```
escape [<char>]
```

Display or set the current command-mode escape character in hex.

1.24 amiganos_exit

```
exit
```

Exit the AmigaNOS program and return to AmigaDOS.

1.25 amiganos_finger

```
finger <user@hostid> [<user@hostid> ...]
```

Issue a network finger request for user user at host hostid. This creates a client session which may be interrupted, resumed, reset, etc, just like a Telnet client session.

1.26 amiganos_ftp

```
ftp <hostid>
```

Open an FTP control channel to the specified remote host and enter converse mode on the new session. Responses from the remote server are displayed directly on the screen.

Most hosts will require you to logon and quote a password. The logon process can be automated by setting up the file slip:NOS.rc. This should contain one line per host, in the form:

<hostid> <logon> <password>

FTP Subcommands

During converse mode with an FTP server, everything typed on the console is first examined to see if it is a locally-known command. If not, the line is passed intact to the remote server on

the control channel. If it is one of the following commands, however, it is executed locally. (Note that this generally involves other commands being sent to the remote server on the control channel.)

dir [<file>|<directory> [<local file>]]

Without arguments, dir requests that a full directory listing of the remote server's current directory be sent to the terminal. If one argument is given, this is passed along in the LIST command; this can be a specific file or subdirectory that is meaningful to the remote file system. If two arguments are given, the second is taken as the local file into which the directory listing should be put (instead of being sent to the console). The PORT command is used before the LIST command is sent.

get <remote file> [<local file>]

Asks the remote server to send the file specified in the first argument. The second argument, if given, will be the name of the file on the local machine; otherwise it will have the same name as on the remote machine. The PORT and RETR commands are sent on the control channel.

hash

A synonym for the verbose 3 command.

ls [<file>|<directory> [<local file>]]

ls is identical to the dir command except that the "NLST" command is sent to the server instead of the "LIST" command. This results in an abbreviated directory listing, i.e., one showing only the file names themselves without any other information.

mget <file> [<file> ...]

Fetch a collection of files from the server. File names may include wild card characters; they will be interpreted and expanded into a list of files by the remote system using the NLST command. The files will have the same name on the local system that they had on the server.

mkdir <remote directory>

Creates a directory on the remote machine.

put <local file> [<remote file>]

Asks the remote server to accept data, creating the file named in the first argument. The second argument, if given, will be the name of the file on the remote machine; otherwise it will have the same name as on the local machine. The PORT and STOR commands are sent on the control channel.

rmdir <remote directory>

Deletes a directory on the remote machine.

```
type [a|i|l <bytesize>]
```

Tells both the local client and remote server the type of file that is to be transferred. The default is 'a', which means ASCII (i.e., a text file). Type 'i' means image, i.e., binary. In ASCII mode, files are sent as varying length lines of text in ASCII separated by cr/lf sequences; in IMAGE mode, files are sent exactly as they appear in the file system. ASCII mode should be used whenever transferring text between dissimilar systems (eg. UNIX and MS-DOS) because of their different end-of-line and/or end-of-file conventions. When exchanging text files between machines of the same type, either mode will work but IMAGE mode is usually faster. Naturally, when exchanging raw binary files (executables, compressed archives, etc) IMAGE mode must be used. Type 'l' (logical byte size) is used when exchanging binary files with remote servers having oddball word sizes (eg. DECSYSTEM-10s and 20s). Locally it works exactly like IMAGE, except that it notifies the remote system how large the byte size is. bytesize is typically 8. The type command sets the local transfer mode and generates the TYPE command on the control channel.

```
verbose [0|1|2|3|4]
```

Set or display the level of message output in file transfers. Verbose 0 gives the least output, and verbose 3 the most, as follows:

```
0 - Display error messages only.
1 - Display error messages plus a one-line summary
    after each transfer giving the name of the file,
    its size, and the transfer time and rate.
2 - Display error and summary messages plus the
    progress messages generated by the remote FTP
    server.
3 - Display all messages. In addition, a "hash mark"
    (#) is displayed for every 1,000 bytes sent or
    received.
4 - Display all messages. In addition the number of
    bytes sent/received are displayed after each
    acknowledged packet.
```

If a command is sent to the remote server because it is not recognized locally, the response is always displayed, regardless of the setting of verbose. This is necessary for commands like pwd (display working directory), which would otherwise produce no message at all if verbose were set to 0 or 1.

1.27 amiganos_ftpdown

```
ftpdown [xxyy]
```

This is used to restrict access to the system to a specific time window xxyy, where xx represents the first hour and yy represents

the last hour. So 'ftpdown 2108' would restrict access to between 21:00 hrs and 08:59 hrs.

1.28 amiganos_fttimeout

```
fttimeout [seconds]
```

Display or set the FTP inactivity timeout in seconds, after which an inactive session is closed.

1.29 amiganos_help

```
help [<command>]
```

Will invoke the LESS program to display a help file from the Spool/Help directory for a NOS command.

1.30 amiganos_hopcheck

```
hopcheck ...
```

These commands are used to test the connectivity of the network.

```
hopcheck check <hostid>
```

Initiate a hopcheck session to the specified host. This uses a series of UDP "probe" packets with increasing IP TTL fields to determine the sequence of gateways in the path to the specified destination. This function is patterned after the UNIX traceroute facility.

ICMP message tracing should be turned off before this command is executed (see the icmp trace command).

```
hopcheck maxttl [<hops>]
```

Display or set the maximum TTL value to be used in hop check sessions. This effectively bounds the radius of the search.

```
hopcheck maxwait [<seconds>]
```

Display or set the maximum interval that a hopcheck session will wait for responses at each stage of the trace. The default is 5 seconds.

```
hopcheck queries [<count>]
```

Display or set the number of UDP probes that will be sent at each stage of the trace. The default is 3.

```
  hopcheck trace [on|off]
```

Display or set the flag that controls the display of additional information during a hop check session.

1.31 amiganos_hostname

```
  hostname [<name>]
```

Display or set the local host's name. By convention this should be the same as the host's primary domain name. This string is used only in the greeting messages of the various network servers; note that it does NOT set the system's IP address.
If <name> is the same as an <iface> (see the Attach commands chapter), this command will search for a CNAME domain resource record which corresponds to the IP address of the <iface>.

1.32 amiganos_icmp

```
  icmp ...
```

These commands are used for the Internet Control Message Protocol service.

```
  icmp echo [on|off]
```

Display or set the flag controlling the asynchronous display of ICMP Echo Reply packets. This flag must be on for one-shot pings to work (see the ping command.)

```
  icmp status
```

Display statistics about the Internet Control Message Protocol (ICMP), including the number of ICMP messages of each type sent or received.

```
  icmp trace [on|off]
```

Display or set the flag controlling the display of ICMP error messages. These informational messages are generated by Internet routers in response to routing, protocol or congestion problems. This option should be turned off before using the hop check facility because it relies on ICMP Time Exceeded messages, and the asynchronous display of these messages will be mingled with hop check command output.

1.33 amiganos_ifconfig

```
  ifconfig

Display a list of interfaces, with a short status for each.

  ifconfig <iface>

Display an extended status of the interface.

  ifconfig <iface> broadcast <address>

Set the broadcast address for the interface.  The <address> takes
the  form  of  an  IP address  with  1's in the host part of the
address.  This is related to the netmask sub-command.   See  also
the arp command.

  ifconfig <iface> description ["description"]

Set the description for <iface>, to be used by the PORTS command
from the Mailbox.

  ifconfig <iface> encapsulation <name>

Not fully implemented.

  ifconfig <iface> forward <forward-iface>

Set a forwarding interface for multiple channel  interfaces.   To
remove the forward, set <forward-iface> to <iface>.

  ifconfig <iface> ipaddress <hostid>

Set the IP address for this interface.  It is  standard  Internet
practice that each interface has its own address.  For hosts with
only one interface, the interface address is usually the same  as
the host address.  See also the hostname and ip address commands.

  ifconfig <iface> linkaddress <hardware-dependant>

Set the hardware dependant address for this interface.

  ifconfig <iface> mtu <mtu>

Set the MTU for this interface.

  ifconfig <iface> netmask <address>

Set the sub-net mask for this interface.  The <address> takes the
form of an IP address with 1's in the network and subnet parts of
the address, and 0's in the host part of the  address.   This  is
related  to  the  broadcast sub-command.  See also the route com-
mand.

  ifconfig <iface> rxbuf <?>

Not yet implemented.
```

1.34 amiganos_ip

```
  ip
```

Display Internet Protocol (IP) statistics, such as total packet counts and error counters of various types.

```
  ip address [<hostid>]
```

Display or set the default local IP address. This command must be given before an attach command if it is to be used as the default IP address for the interface.

```
  ip rtimer [<seconds>]
```

Display or set the IP reassembly timeout. The default is 30 seconds.

```
  ip ttl [<hops>]
```

Display or set the time-to-live value placed in each outgoing IP datagram. This limits the number of switch hops the datagram will be allowed to take. The idea is to bound the lifetime of the packet should it become caught in a routing loop, so make the value slightly larger than the number of hops across the network you expect to transit packets. The default is set at compilation time to the official recommended value for the Internet.

1.35 amiganos_kick

```
  kick [<session>]
```

Kick all sockets associated with a session; if no argument is given, kick the current session. Performs the same function as the ax25 kick and tcp kick commands, but is easier to type.

1.36 amiganos_less

```
  less <filename>
```

Invokes the external LESS command to display the file <filename>

1.37 amiganos_listserv

```
  listserv [<on|off|kick>]
```

1.38 amiganos_log

```
  log [stop|<filename>]
```

Display or set the filename for logging server sessions. If stop is given as the argument, logging is terminated (the servers themselves are unaffected). If a file name is given as an argument, server session log entries will be appended to it.

1.39 amiganos_mbox

```
  mbox accept <to_address>
  mbox reject [<to_address>]
```

The subcommand REJECT will display the reject list, that is: the list of destination addresses that the system will reject from the mailbox prompt, and if supplied with a <to_address> string will add that to the reject list.

The subcommand ACCEPT will remove the <to_address> from the reject list.

```
  mbox attend [on] | [off]
```

Display or Set the Mailbox attended flag.

```
  mbox kick
```

Forces the Mailbox to run the ax25 forwarding system, if there is anything to forward.

```
  mbox maxmsg <messages>
```

Display or set the maximum number of messages in each mailbox message file.

```
  mbox password ["sysop password string upto 80 characters"]
```

Set the SYSOP password for access from the mailbox.

```
  mbox profile
```

Display the MOTD, ORGANISATION, REALNAME and RHEADER strings.

```
  mbox profile motd ["message of the day"]
```

Set the Mailbox MOTD string.

```
  mbox profile organisation ["name of organisation"]
```

Set the Mailbox ORGANISATION string.

```
  mbox profile realname ["your real name"]
```

```
Set the Mailbox REALNAME string.

  mbox profile rheader ["NTS header string"]

Set the Mailbox RHEADER string.

  mbox sysop [on] | [off]

Display or set the SYSOP access flag.

  mbox thirdparty [on] | [off]

Display or set the THIRDPARTY access flag.

  mbox timer [seconds]

Display or set the Mailbox forwarding timer period in seconds.

  mbox trace [trace_level]

Display or set the Mailbox trace level.  Set to 2, all user input
to the mailbox are shown, Set to 1, just the user commands are
shown.
```

1.40 amiganos_mem

```
  mem ...

  mem thresh [<bytes>]

Display or set the memory threshold in bytes.  If available memory
falls below this value, no new sessions are started or accepted/
```

1.41 amiganos_message

```
  message <socket> <"message">

  message <socket1> <... ...> <socketn> <"message">

Send a one-line message to the sockets specified.
```

1.42 amiganos_mode

```
  mode <iface> [vc|datagram]

Control the default transmission  mode  on  the  specified  AX.25
interface. In datagram mode, IP packets are encapsulated in AX.25
UI frames and transmitted without any other  link  level  mechan-
isms, such as connections or acknowledgements.
```

In vc (virtual circuit) mode, IP packets are encapsulated in AX.25 I frames and are acknowledged at the link level according to the AX.25 protocol. Link level connections are opened if necessary.

In both modes, ARP is used to map IP to AX.25 addresses. The defaults can be overridden with the type-of-service (TOS) bits in the IP header. Turning on the "reliability" bit causes I frames to be used, while turning on the "low delay" bit uses UI frames. (The effect of turning on both bits is undefined and subject to change).

In both modes, IP-level fragmentation is done if the datagram is larger than the interface MTU. In virtual circuit mode, however, the resulting datagram (or fragments) is further fragmented at the AX.25 layer if it (or they) are still larger than the AX.25 paclen parameter. In AX.25 fragmentation, datagrams are broken into several I frames and reassembled at the receiving end before being passed to IP. This is preferable to IP fragmentation whenever possible because of decreased overhead (the IP header isn't repeated in each fragment) and increased robustness (a lost fragment is immediately retransmitted by the link layer).

1.43 amiganos_netrom

```
  netrom acktime [<millisecs>]
```

Display or set the NET/ROM acknowledgement timer.

```
  netrom bcnodes <iface>
```

Send a NET/ROM routing broadcast out on <iface>

```
  netrom connect <node_callsign>
```

Make an ordinary NET/ROM connection to another NET/ROM node.

```
  netrom choketime [<millisecs>]
```

Display or set the NET/ROM choke time. This is the time to wait before breaking a send choke condition.

```
  netrom interface <interface> <alias> <quality>
```

The 'netrom interface' command specifies an <interface> to be used for NET/ROM, together with the NET/ROM node <alias> and <quality>.

The <alias> is a string of up to six characters, and is the name by which the node is known to other NET/ROM stations. There are no hard and fast rules for choosing an alias name, but ideally it should contain the letters "IP" or "TCP", or start with a "#", to make it clear to other users that this is not an ordinary NET/ROM node. A suggested convention is to incorporate the last half of your IP address, expressed in hexadecimal, into the alias.

```
The <quality> is the default quality for incoming NET/ROM
broadcasts (and is also the default quality for stations added to
the node filter list).

  netrom irtt [<millisecs>]

Display or set the NET/ROM Initial Round Trip Timer.

  netrom kick <&CB>

Kick the NET/ROM session with control block address <&CB>.

  netrom nodefilter

Display the node filter list.

  netrom nodefilter add <neighbour_callsign> <interface> [<quality>]

Add a node to the node filter list.

The default value of <quality> is the quality value assigned in
the 'netrom interface' command.

  netrom nodefilter drop <neighbour_callsign> <interface>

Remove a node from the node filter list.

  netrom nodefilter mode [none|accept|reject]

Display or set the node filter mode.  The settings are:

none:    No filtering.  The filter is ignored.

accept:  Only nodes in the nodefilter list will be heard by the
         node.

reject:  Nodes in the nodefilter list will be rejected.  This is
         used to disable a path to a neighbouring node; useful if
         there are several paths and you do not want to use a
         specific one.

  netrom nodetimer [<seconds>]

Display or set the NET/ROM route update broadcast interval.

  netrom obsotimer [<seconds>]

Display or set the NET/ROM obsolescence timer, which indicates
how long the entries will remain alive in the NET/ROM routing
table.

A new or refreshed entry in the table has a time-to-live (TTL)
count of 6.  Each time the obsotimer expires, the TTL count is
decremented by one.  If node information is not refreshed, the
entry will eventually disappear when the TTL count falls to zero.
```

```
  netrom qlimit [<bytes>]

Display or set the maximum number of bytes on the NET/ROM receive
queue.  This is the threshhold at which the sender is choked.

  netrom reset <&CB>

Reset the NET/ROM session with control block address <&CB>.  Use
the 'netrom status' command to obtain the control block address.

  netrom retries [<n>]

Display or set the maximum number of connect and disconnect
retries.

  netrom route

Display the NET/ROM routing table.  Entries are of the form
<alias>:<callsign>.

  netrom route add <alias> <target_callsign> <interface> <quality>
                                          <neighbour_callsign>

Add an entry to the NET/ROM routing table.

The <alias> and <target_callsign> apply to the station at the
eventual destination of the route.

The <neighbour_callsign> is the callsign of the local NET/ROM
node to which packets will be sent first on their journey to the
target.

  netrom route drop <target_callsign> <neighbour_callsign>
                                                  <interface>

Remove an entry from the NET/ROM routing table.

  netrom route info <target_callsign>

Display NET/ROM routing information.  The output includes the
quality, TTL, interface and neighbouring NET/ROM node.  Permanent
routes which have been manually entered are indicated with a "P".

  netrom status [<&CB>]

Display NET/ROM status.

The 'netrom status' command without a control block parameter
<&CB> displays the general status.

When a control block address is supplied, a more detailed
output is produced.

  netrom timertype [linear|exponential]

Display or set the NET/ROM timer backoff mode.  Linear backoff
is recommended for amateur radio work.
```

```
  netrom ttl [<hops>]

Display or set the NET/ROM Time-to-Live.  This is the maximum
number of hops a packet can take before it is thrown away.  This
prevents packets from circulating for ever in an endless loop.

  netrom user [<username>]

Display or set your NET/ROM user name.

  netrom verbose [on|off]

Display or set the NET/ROM "verbose" mode.  When set to 'on', the
node will act as a normal NET/ROM switch, broadcasting its
routing table in the normal NET/ROM manner.

  netrom window [<frames>]

Display or set the maximum NET/ROM window size.  This is the
largest negotiable send and receive window.
```

1.44 amiganos_nntp

```
  nntp addserver <nntpserver_host> <interval> [<range>] [<groups>]

Add an NNTP news server to query every <interval> seconds for new
articles in the specified <groups>.

<range> specifies the time-of-day limits when the queries will be
made.

Multiple 'nntp addserver' commands may be used to concatenate
groups (up to a maximum of 512 bytes).

  nntp directory [spool|control <directory>]

Display or set the default spool directory for spooling news
articles.  This is in addition to the control directory (SPOOL/NEWS).

  nntp dropserver <nntpserver_host>

Drop the specified NNTP server.

  nntp groups <group> [<group> ...]

Display or set the currently set USEnet newsgroup(s).  The group
names are separated by spaces or commas.  The '*' and '!'
metacharacters (meaning 'all' and 'not' respectively) are
supported.

  nntp kick <nntpserver_host>

Kick the local NNTP client to get in touch with the named server.
```

```
  nntp kill <message_number>

Kill the specified message number from the outbound news queue.

  nntp listservers

List the currently defined servers.

  nntp messages

List the Outbound message queue.

  nntp profile

Display the current nntp profile, i.e, full_name, hostname,
organisation, reply_address, signature_filename, username.

  nntp profile fullname ["your full name"]
  nntp profile host ["hostname"]
  nntp profile organ ["your organisation"]
  nntp profile reply ["address"]
  nntp profile sig ["pathname for signature file"]
  nntp profile user ["username"]

Set up the nntp profile.

  nntp post

Prepare Articles for nntp.

  nntp trace <level>

Sets or shows the current trace level for NNTP traffic.

Level
 0:  No tracing.
 1:  Display serious errors only
 2:  Display serious and transient errors
 3:  Display serious and transient errors, plus session progress
 4:  Display serious and transient errors, session progress and
        actual received articles
 5:  Display errors.
```

1.45 amiganos_nrstat

```
  nrstat

Display statistics for the NET/ROM serial interface (nrs).
```

1.46 amiganos_param

```
param <iface> [<param> ...]
```

Invoke a device-specific control routine. On a KISS TNC interface, this sends control packets to the TNC. Data bytes are treated as decimal. For example, param ax0 1 255 will set the keyup timer (type field = 1) on the KISS TNC configured as ax0 to 2.55 seconds (255 x .01 sec). On a SLIP interface, the param command allows the baud rate to be read (without arguments) or set. The implementation of this command for the various interface drivers is incomplete and subject to change.

1.47 amiganos_ping

```
ping <hostid> [<length> [<seconds> [<incflag>]]]
```

Ping (send ICMP Echo Request packets to) the specified host. By default the data field contains only a small timestamp to aid in determining round trip time; if the optional length argument is given, the appropriate number of data bytes (consisting of hex 55) are added to the ping packets.

If interval is specified, pings will be repeated indefinitely at the specified number of seconds; otherwise a single, "one shot" ping is done. Responses to one-shot pings appear asynchronously on the command screen, while repeated pings create a session that may be suspended and resumed. Pinging continues until the session is manually reset.

The incflag option causes a repeated ping to increment the target IP address for each ping; it is an experimental feature for searching blocks of IP addresses for active hosts.

1.48 amiganos_pop

```
pop mailbox [<name>]
```

Display or set the name of the local mailbox that is to hold all of the mail received from the POP server.

Note that this mailbox <name>, like all DOS filenames, is limited to eight characters. Also, <name> does NOT include a DOS path; all mail is placed in SPOOL/MAIL, along with other mail placed there by SMTP.

The POP client does not write directly to the user's mailbox. Instead it creates a file MBOX.POP in the current directory and places all of the mail it receives in that file. On completion it appends the contents of the file to the end of the mailbox when all mail has been collected from the mailbox server.

Normally this file is deleted after its contents have been

transferred to the mailbox. However, if the POP client is unable to access the mailbox (for example, if it is locked by SMTP), then MBOX.POP will remain in existence. Any new mail gathered by the POP client will be appended to the end of MBOX.POP. Then eventually when the mailbox becomes available the contents of MBOX.POP will be transferred to it.

pop mailhost [<host>]

Display or set the the POP server host.

pop kick

Force the POP client to check with the remote POP server.

pop quiet

Display or set the POP quiet flag.

This flag determines whether the bell sounds when the system announces that incoming mail has arrived. When quiet is set to 'off' you hear the bell.

pop timer

Display or Set the interval for POP sessions.

pop userdata

Display or set the user data required by the POP server to validate the client's mail request.

Note that <name> and <password> are case sensitive.

When only 'pop userdata' is entered to show the values, only the <name> is shown.

1.49 amiganos_ps

ps

Display all current processes in the system. The fields are as follows:

PID - Process ID (the address of the process descriptor).

SP - The current value of the process stack pointer.

stksize - The size of the stack allocated to the process.

maxstk - The apparent peak stack utilization of this process. This is done in a somewhat heuristic fashion, so the numbers should be treated as approximate. If this number reaches or exceeds the stksize figure, the system is almost certain to crash; the AmigaNOS

```
      program  should be recompiled to give the  process a
      larger allocation when it is started.

  event - The event this task is waiting for, if it is not
      runnable.

  fl  - Process  status  flags.  There  are  three:
      I  (Interrupts enabled),
      W (Waiting for event) and
      S (Suspended).
      The I flag  is  set  whenever  a task has executed a
      pwait() call (wait for event) without first disabling
      hardware interrupts. Only tasks that wait for hardware
      interrupt events will turn off this flag; this is done
      to avoid critical sections and missed interrupts. The
      W flag indicates that the process is waiting for  an
      event;  the  event column will be non-blank. Note that
      although there may be several runnable processes at
      any time (shown in the ps listing as those without the
      W flag and with blank event fields) only one process
      is actually running at any one instant  (The
      Refrigerator Light Effect  says that the ps command is
      always the one running when this display is generated.)
```

1.50 amiganos_record

```
  record [off|<filename>]
```

Append to filename all data received on the current session. Data sent on the current session is also written into the file except for Telnet sessions in remote echo mode. The command record off stops recording and closes the file.

1.51 amiganos_remote

```
  remote [-p <port>] [-k <key>] [-a <kickaddr>] <hostid>
    exit|reset|kick
```

Send a UDP packet to the specified host commanding it to exit the net.exe program, reset the processor, or force a retransmission on TCP connections. For this command to be accepted, the remote system must be running the remote server and the port number specified in the remote command must match the port number given when the server was started on the remote system. If the port numbers do not match, or if the remote server is not running on the target system, the command packet is ignored. Even if the command is accepted there is no acknowledgement.

The kick command forces a retransmission timeout on all TCP con- nections that the remote node may have with the local node. If the -a option is used, connections to the specified host are kicked instead. No key is required for the kick subcommand.

The exit and reset subcommands are mainly useful for restarting the net.exe program on a remote unattended system after the configuration file has been updated.

```
remote -s <key>
```

The exit and reset subcommands of remote require a password. The password is set on a given system with the -s option, and it is specified in a command to a remote system with the -k option. If no password is set with the -s option, then the exit and reset subcommands are disabled.

Note that remote is an experimental feature in NOS; it is not yet supported by any other TCP/IP implementation.

1.52 amiganos_reset

```
reset [<session>]
```

Reset the specified session; if no argument is given, reset the current session. This command should be used with caution since it does not reliably inform the remote end that the connection no longer exists. (In TCP a reset (RST) message will be automatically generated should the remote TCP send anything after a local reset has been done. In AX.25 the DM message performs a similar role. Both are used to get rid of a lingering half-open connection after a remote system has crashed.)

1.53 amiganos_rip

```
rip ...
```

These commands are used for the RIP service.

```
rip accept <gateway>
```

Remove the specified gateway from the RIP filter table, allowing future broadcasts from that gateway to be accepted.

```
rip add <hostid> <seconds> [<flags>]
```

Add an entry to the RIP broadcast table. The IP routing table will be sent to hostid every interval seconds. If flags is specified as 1, then "split horizon" processing will be performed for this destination. That is, any IP routing table entries pointing to the interface that will be used to send this update will be removed from the update. If split horizon processing is not specified, then all routing table entries except those marked "private" will be sent in each update. (Private entries are never sent in RIP packets).

Triggered updates are always done. That is, any change in the routing table that causes a previously reachable destination to become unreachable will trigger an update that advertises the destination with metric 15, defined to mean "infinity".

Note that for RIP packets to be sent properly to a broadcast address, there must exist correct IP routing and ARP table entries that will first steer the broadcast to the correct interface and then place the correct link-level broadcast address in the link-level destination field. If a standard IP broadcast address convention is used (eg. 128.96.0.0 or 128.96.255.255) then chances are you already have the necessary IP routing table entry, but unusual subnet or cluster-addressed networks may require special attention. However, an arp add command will be required to translate this address to the appropriate link level broadcast address. For example,

```
  arp add 44.131.0.0 ax25 qst-0
```

for an AX25 packet radio channel.

```
  rip drop <dest>
```

Remove an entry from the RIP broadcast table.

```
  rip merge [on|off]
```

This flag controls an experimental feature for consolidating redundant entries in the IP routing table. When rip merging is enabled, the table is scanned after processing each RIP update. An entry is considered redundant if the target(s) it covers would be routed identically by a less "specific" entry already in the table. That is, the target address(es) specified by the entry in question must also match the target addresses of the less specific entry and the two entries must have the same interface and gateway fields. For example, if the routing table contains

```
Dest      Len Interface    Gateway Metric  P Timer  Use
1.2.3.4   32  ethernet0    128.96.1.2       1       0 0      0
1.2.3     24  ethernet0    128.96.1.2       1       0 0      0
```

then the first entry would be deleted as redundant since packets sent to 1.2.3.4 will still be routed correctly by the second entry. Note that the relative metrics of the entries are ignored.

```
  rip refuse <gateway>
```

Refuse to accept RIP updates from the specified gateway by adding the gateway to the RIP filter table. It may be later removed with the rip accept command.

```
  rip request <gateway>
```

Send a RIP Request packet to the specified gateway, causing it to reply with a RIP Response packet containing its routing table.

```
  rip status
```

Display RIP status, including a count of the number of packets sent and received, the number of requests and responses, the number of unknown RIP packet types, and the number of refused RIP updates from hosts in the filter table. A list of the addresses and intervals to which periodic RIP updates are being sent is also shown, along with the contents of the filter table.

```
rip trace [0|1|2]
```

This variable controls the tracing of incoming and outgoing RIP packets. Setting it to 0 disables all RIP tracing. A value of 1 causes changes in the routing table to be displayed, while packets that cause no changes cause no output. Setting the variable to 2 produces maximum output, including tracing of RIP packets that cause no change in the routing table.

1.54 amiganos_route

```
route
```

With no arguments, route displays the IP routing table.

```
route add <dest_hostid>[/bits]|default <iface>
  [<gateway_hostid> [<metric>]]
```

This command adds an entry to the routing table. It requires at least two more arguments, the hostid of the target destination and the name of the interface to which its packets should be sent. If the destination is not local, the gateway's hostid should also be specified. (If the interface is a point-to-point link, then gateway_hostid may be omitted even if the target is non-local because this field is only used to determine the gateway's link level address, if any. If the destination is directly reachable, gateway_hostid is also unnecessary since the destination address is used to determine the interface link address).

The optional /bits suffix to the destination host id specifies how many leading bits in the host id are to be considered significant in the routing comparisons. If not specified, 32 bits (i.e., full significance) is assumed. With this option, a single routing table entry may refer to many hosts all sharing a common bit string prefix in their IP addresses. For example, ARPA Class A, B and C networks would use suffixes of /8, /16 and /24 respectively; the command

```
route add 44/8 sl0 44.64.0.2
```

causes any IP addresses beginning with "44" in the first 8 bits to be routed to 44.64.0.2; the remaining 24 bits are "don't-cares".

When an IP address to be routed matches more than one entry in the routing table, the entry with largest bits parameter (i.e.,

```
the "best" match) is used. This allows individual hosts or blocks
of  hosts  to  be  exceptions to a more general rule for a larger
block of hosts.

The special destination default is used  to  route  datagrams  to
addresses  not matched by any other entries in the routing table;
it is equivalent to specifying a /bits suffix of /0 to any desti-
nation hostid.  Care must be taken with default entries since two
nodes with default entries pointing  at  each  other  will  route
packets to unknown addresses back and forth in a loop until their
time-to-live (TTL) fields expire.  (Routing  loops  for  specific
addresses  can  also be created, but this is less likely to occur
accidentally).

Here are some examples of the route command:

# Route datagrams to IP address 44.0.0.3 to SLIP line #0.
# No gateway is needed because SLIP is point-to point.
route add 44.0.0.3 sl0

# Route all default traffic to the gateway on the local Ethernet
# with IP address 44.0.0.1
route add default ec0 44.0.0.1

# The station with IP address 44.0.0.10 is on the local AX.25 channel
route add 44.0.0.10 ax0

  route addprivate <dest hostid>[/bits]|default <iface>
    [<gateway hostid> [<metric>]]

This command is identical to route add except that it also  marks
the  new  entry as private; it will never be included in outgoing
RIP updates.

  route drop <dest hostid>

route drop deletes an entry from the table. If a  packet  arrives
for the deleted address and a default route is in effect, it will
be used.
```

1.55 amiganos_rspf

```
  rspf interface [<interface> <quality> <horizon>]

Display or set an RSPF interface.  The command 'rspf interface'
without parameters displays existing interface settings.

<interface> is the required interface RSPF should use.
<quality> is from 1 to 127
<horizon> is from 1 to 255 hops

  rspf maxping [<n>]

Display or set the maximum number of times to ping.
```

```
  rspf message ["<message_string>"]

Display or set the RSPF message string.

  rspf mode [vc | datagram | none]

Display or set the preferred mode for RSPF.

  rspf routes

Display the RSPF routing table.

  rspf rrhtimer [seconds]

Display or set the Router-to-Router Hello (RRH) message interval.

  rspf status

Display the current RSPF status.

  rspf suspecttimer [seconds]

Display or set the time limit for an idle link to be suspected to
be bad.

  rspf timer [seconds]

Display or set the interval between routing updates.
```

1.56 amiganos_session

```
  session [<session #>]

Without arguments, displays the list of current sessions, includ-
ing  session  number, remote TCP or AX.25 address and the address
of the TCP or AX.25 control block.  An asterisk (*) is shown next
to  the current session; entering a blank line at this point puts
you in converse mode  with  that  session.  Entering  a  session
number as an argument to the session command will put you in con-
verse mode with that session.  If the Telnet server  is  enabled,
the  user is notified of an incoming request and a session number
is automatically assigned.  The user may then select the  session
normally  to  converse with the remote user as though the session
had been locally initiated.
```

1.57 amiganos_smtp

```
  smtp ...

These commands are used for the Simple Message Transport Protocol
service (that is, mail).
```

```
  smtp batch [<on|off>]
```

Display or set the smtp batch flag.

When set to 'on', messages in the outgoing mail queue are sent as a batch, whereby many of the SMTP commands are sent in one fell swoop before waiting for responses. (Unfortunately this breaks many brain-damaged SMTP servers, and so may not be usable in practice).

```
  smtp gateway [<hostid>]
```

Displays or sets the host to be used as a "smart" mail relay. Any mail sent to a host not in the host table will instead be sent to the gateway for forwarding.

```
  smtp kick
```

Run through the outgoing mail queue and attempt to deliver any pending mail. This command allows the user to "kick" the mail system manually. Normally, this command is periodically invoked by a timer whenever net.exe is running.

```
  smtp list
```

List the messages in the outgoing mail queue.

```
  smtp maxclients [<count>]
```

Displays or sets the maximum number of simultaneous outgoing SMTP sessions that will be allowed. The default is 10; reduce it if network congestion is a problem.

```
  smtp mode [<route|queue>]
```

By default, the SMTP mode is 'route', which means that incoming mail is directed to the mail queue SPOOL/MAIL. You can then read the mail there with the 'bbs' command, or by using an external mailer such as BM or ELM.

If the mode is set to 'queue', incoming mail is directed instead to the special mail forwarding queue SPOOL/RQUEUE. The mail is stored in .WRK and .TXT files in the same format as the normal outgoing mail files in SPOOL/MQUEUE.

A special forwarding program (not supplied with NOS) is then required to send the mail in SPOOL/RQUEUE onwards to its destination.

This mechanism provides added flexibility to NOS for handling mail in different ways.

```
  smtp accept <name>
  smtp reject [<name>]
```

These two subcommands allow the sysop to build up a list of systems from which mail is not wanted, in the case of reject,

and to remove items from the list with accept.

```
smtp timer [<seconds>]
```

Displays or sets the interval between scans of the outbound mail queue. For example, smtp timer 600 will cause the system to check for outgoing mail every 10 minutes and attempt to deliver anything it finds, subject of course to the smtp maxclients limit. Setting a value of zero disables queue scanning altogether, note that this is the default! This value is recommended for stand alone IP gateways that never handle mail, since it saves wear and tear on the floppy disk drive.

```
smtp trace [<value>]
```

Displays or sets the trace flag in the SMTP client, allowing you to watch SMTP's conversations as it delivers mail. Zero (the default) disables tracing.

1.58 amiganos_socket

```
socket [<socket #>]
```

Without an argument, displays all active sockets, giving their index and type, the address of the associated protocol control block and the and owner process ID and name. If the index to an active socket is supplied, the status display for the appropriate protocol is called. For example, if the socket refers to a TCP connection, the display will be that given by the tcp status command with the protocol control block address.

1.59 amiganos_source

```
source <filename>
```

The 'source' command runs a set of NOS commands which are in <script_filename>. This is a very convenient way of executing a series of commands without having to enter them individually at the keyboard.

1.60 amiganos_start

```
start ax25|chat|discard|echo|ftp|netrom|remote|
  smtp|telnet
```

Start the specified Internet server, allowing remote connection requests.

1.61 amiganos_status

```
  status
```

The 'status' command displays general system information.

1.62 amiganos_stop

```
  stop ax25|chat|discard|echo|ftp|netrom|remote|
    smtp|telnet
```

Stop the specified Internet server, rejecting any further remote connect requests. Existing connections are allowed to complete normally.

1.63 amiganos_tcp

```
  tcp ...
```

These commands are used for the Transmission Control Protocol service.

```
  tcp irtt [<milliseconds>]
```

Display or set the initial round trip time estimate, in milliseconds, to be used for new TCP connections until they can measure and adapt to the actual value. The default is 5000 milliseconds (5 seconds). Increasing this when operating over slow channels will avoid the flurry of retransmissions that would otherwise occur as the smoothed estimate settles down at the correct value. Note that this command should be given before servers are started in order for it to have effect on incoming connections.

TCP also keeps a cache of measured round trip times and mean deviations (MDEV) for current and recent destinations. Whenever a new TCP connection is opened, the system first looks in this cache. If the destination is found, the cached IRTT and MDEV values are used. If not, the default IRTT value mentioned above is used, along with a MDEV of 0. This feature is fully automatic, and it can improve performance greatly when a series of connections are opened and closed to a given destination (eg. a series of FTP file transfers or directory listings).

```
  tcp kick <tcb_addr>
```

If there is unacknowledged data on the send queue of the specified TCB, this command forces an immediate retransmission.

```
  tcp mss [<size>]
```

Display or set the TCP Maximum Segment Size in bytes that will be sent on all outgoing TCP connect request (SYN segments). This

tells the remote end the size of the largest segment (packet) it may send. Changing MSS affects only future connections; existing connections are unaffected.

```
tcp reset <tcb_addr>
```

Deletes the TCP control block at the specified address.

```
tcp rtt <tcb_addr> <milliseconds>
```

Replaces the automatically computed round trip time in the specified TCB with the rtt in milliseconds. This command is useful to speed up recovery from a series of lost packets since it provides a manual bypass around the normal backoff retransmission timing mechanisms.

```
tcp status [<tcb_addr>]
```

Without arguments, displays several TCP-level statistics, plus a summary of all existing TCP connections, including TCB address, send and receive queue sizes, local and remote sockets, and connection state. If tcb_addr is specified, a more detailed dump of the specified TCB is generated, including send and receive sequence numbers and timer information.

```
tcp timertype [linear|exponential]
```

The TCP timer backoff can be either linear or binary exponential. Linear backoff is recommended for amateur radio work.

```
tcp trace [on|off]
```

Display or set TCP trace mode. When set to 'on', task control block activity is displayed, together with numbered TCP protocol messages.

```
tcp window [<size>]
```

Displays or sets the default receive window size in bytes to be used by TCP when creating new connections. Existing connections are unaffected.

1.64 amiganos_telnet

```
telnet <hostid>
```

Creates a Telnet session to the specified host and enters converse mode.

1.65 amiganos_time

```
  e server <time_server_host>

Set the server to be used.

  e read

Read the time from the time server previously specified.

  e set

Read the Amiga real-time clock from the time server previously specified

  e mincorrect <value>

Set a minimum threshold for time corrections to be applied; ie if time set
discovers the time difference is less than this amount, no correction will
be applied.

  e maxcorrect <value>

Set a maximum threshold for time corrections to be applied; ie if time set
discovers the time difference is greater than this amount, no correction will
be applied.
```

1.66 amiganos_trace

```
  trace [<iface> [off|<btio> [<tracefile>]]]

Controls packet tracing by the interface drivers.  Specific  bits
enable tracing of the various interfaces and the amount of infor-
mation produced.  Tracing is controlled on a per-interface basis;
without  arguments,  trace gives a list of all defined interfaces
and their tracing status.  Output can  be  limited  to  a  single
interface  by  specifying it, and the control flags can be change
by specifying them as well. The flags are given as a  hexadecimal
number which is interpreted as follows:

  O - Enable tracing of output packets if 1, disable
      if 0
  I - Enable tracing of input packets if 1, disable
      if 0
  T - Controls type of tracing:
    0 - Protocol headers are decoded, but data
        is not displayed
    1 - Protocol headers are decoded, and data
        (but not the headers themselves) are
        displayed as ASCII characters, 64
        characters/line. Unprintable characters
        are displayed as hyphens.
    2 - Protocol headers are decoded, and the
        entire packet (headers AND data) is also
        displayed in hexadecimal and ASCII, 16
        characters per line.
```

```
  B - Broadcast filter flag. If set, only packets
      specifically addressed to this node will be
      traced; broadcast packets will not be displayed.

If tracefile is not specified, tracing will be to the console.
```

1.67 amiganos_ttylink

```
  ttylink <hostid>

Creates a Telnet session to port 87 at the specified host and
enters converse mode.
```

1.68 amiganos_udp

```
  udp

Displays the status of all UDP receive queues.
```

1.69 amiganos_upload

```
  upload [<filename>]

Opens filename and sends it on the current session as  though  it
were typed on the terminal.
```

1.70 amiganosmbox_area

```
USAGE
     A[rea] [<area-name>]

DESCRIPTION
     The  area  command,  when used by itself,  will list the  mail
     areas that  contain messages you may read.  The list gives the
     name of each area  (<area-name>), followed by a description of
     the message area's contents.

     When  the area command is  followed  by a valid "<area-name>",
     as shown in the area list described above,  your  current mail
     context will be switched to the new area. You may then use the
     R[ead] and L[ist] commands      to review  messages in the selected
     catagory.

     If you want to add your own message to one of these areas, use
     the S[end] command to send mail addressed to "<area-name>".

EXAMPLES
```

```
     area public          (makes "public" your current mail area)
     send public          (puts a message in the "public" mail area)
```

1.71 amiganosmbox_bye

```
USAGE
     B[ye]

DESCRIPTION
     The bye command is used when you want to exit from the NOS
     MBOX.  This will  close      your  mailbox      file and remove any
     messages that you have deleted with the K[ill] command.

EXAMPLES
     bye
```

1.72 amiganosmbox_chatnode

```
  chatnode

Will issue a telnet call to the local system's chatnode on the
port number 3600
```

1.73 amiganosmbox_download

```
USAGE
     D[ownload] [/][<path_name>/]filename
     DU [/][<path_name>/]filename

DESCRIPTION
     The download command will begin sending a file from this system
     to you.  Use the  "D" command to send a plain  ASCII text file.
     You can also download binary files converted to UUENCODED ASCII
     by using the "DU" command. You will need the "uudecode" utility
     to convert  this ASCII  file  back to  binary.

     The system will check the file for non-ascii characters, and if
     any are found in the first 512 characters it is assumed to be a
     binary file and will be sent uuencoded.

     The optional  path_name may be included along with the filename
     if the  desired file is not in the  current  directory (you can
     determine this using the W[hat] command).  Please note that the
     character used to separate the path and filename is a "/".

EXAMPLES
     download index.txt
     du nos/ibm/g1emmkit.zip
```

1.74 amiganosmbox_escape

```
USAGE
     E[scape] [<new_escape_character>]

DESCRIPTION
     The escape command, when entered by itself, will display the
     character that is currently set as the escape character. This
     character is what will be used if you want to exit from the
     current session. For instance, if you have started a "chat"
     session, and you don't get any response from the operator after
     waiting a few minutes, you can enter the escape character,
     followed by a <RETURN> or <ENTER>, and the session will be
     terminated. You will then be returned to the MBOX prompt.

     The escape character may be changed to one of your preference
     by entering "escape" followed by a <SPACE> and the character
     that will become the new escape character. This must be a
     single typed character (the <CTRL> key may be used in addition).

EXAMPLES
     escape      ^Z          (the ASCII character <CTRL>Z)
     escape      X           (the character "x" is the new escape)
```

1.75 amiganosmbox_find

```
USAGE
     find <string>

DESCRIPTION
     The find command allows you to scan all the files in the
     cache for a given string.

EXAMPLES
     find kantronics

     find g1yyh

NOTE
     This command is unique to AmigaNOS v2.8
```

1.76 amiganosmbox_finger

```
USAGE
     F[inger] [<user_name>][@<host>]

DESCRIPTION
     The finger command retrieves personal information about users of a
     system. When used by itself, a list of known users on the current
     system will be displayed. When a user_name is added to the command,
     finger will display information about that particular user.
```

```
     The same functions  detailed above  may be  performed on some other
     TCP/IP host connected to the network. Just add the "@<host>" to the
     finger      command as specified in the usage line above.  To get a list
     of the  users on a  remote  system, enter  "finger"  followed  by a
     <SPACE> and an "@", then the host name.  To get information about a
     remote user, simply insert the user name before the "@".

EXAMPLES
     finger      (list the known users on this system)
     f g1yyh          (list info      about the local user "g1yyh")
     f @g1yyh         (list the known users at host "g1yyh")
     f g1yyh@g1yyh    (display info      about "g1yyh" at host "g1yyh")
```

1.77 amiganosmbox_gateway

```
USAGE
     G[ateway] <interface> <callsign> [<digipeater> . . .]

DESCRIPTION
     The gateway command allows you to connect to another AX.25 station
     through  this host  system's radio  ports.  You can determine what
     ports are available using the "J[heard]" command. The list will be
     divided by headings listing the interfaces available. You can also
     try using  the I[nfo]  command.  Your  connection will  assume the
     callsign of this TCP/IP station instead of your own.

     The station  you  want to  connect to must be  substituted for the
     "<callsign>"  parameter above.  If you  need to reach this station
     via one or more digipeaters,  enter the list  following the desti-
     nation  station's  callsign. The  first  digipeater in the list is
     the one that is to be connected through first.

EXAMPLES
     gateway nos gb7nwp         (connect to gb7nwp on interface nos)
     g nos g1aaa g2bbb g3ccc    (connect to g1aaa on the nos interface,
                                 via g2bbb and g3ccc as digipeaters)
```

1.78 amiganosmbox_help

```
USAGE
     H[elp] [<command-name>]

DESCRIPTION
     The help      command will display  help      for a given command.  The help
     command by itself,  displays this particular  message.  To get help
     for a specific  command, enter "help" followed by a space  and then
     the name of the command you want described.  The following commands
     have help      descriptions available for them:

     area      bye      chat        download    escape      finger
     gateway      help      info      jheard      kill        list
     netrom      read        retrieve      send        telnet      upload
```

```
     verbose      what        zap

EXAMPLES
     help      area      (displays a description of the "area" command)
     h download      (displays info      about downloading files)
```

1.79 amiganosmbox_info

```
Welcome to G1YYH's TCP/IP system

     The software running on this machine is the TCP/IP software package
     developed by Phil Karn, KA9Q which was ported to the Amiga by Louis
     Mamakos, WA3YMH and subsequently modified by me.  You can of course
     get a copy of both the IBM-PC and AMIGA versions directly from me.

     It is possible to download a copy of NOS using the AX.25 Mailbox      by
     using the  "DU" form of the download command  (use  "help download"
     for info).  This is not encouraged, as both versions are very large
     files ( 400K+ ), and will tie up a local packet channel for quite a
     long time.

The system here is composed of:

              Computer:  Commodore AMIGA B2000, 105MB disk, 5MB memory
       Radio Interface:  Kantronics KAM, (interface name "nos")

Leave mail for the owner of this system by using the command:

     S g1yyh
```

1.80 amiganosmbox_jheard

```
USAGE
     J[heard] [<interface>]

DESCRIPTION
     The jheard command will display a list of all the station callsigns
     that have been received as  sending packet  traffic on the channel,
     the time      since  the station was heard last, and the total number of
     packets  received.  When  the command  is used  alone (no interface
     specified), the "heard" lists for all interfaces will be displayed.
     To display a list of  stations  heard on only a particular channel,
     specify the "<interface>" name along with the "jheard" command.

     Warning:  if this system has been on the air for very long, and the
     channels are very active, this list could be extremely long.

EXAMPLES
     jheard       (displays all stations heard on all ports)
     j nos        (displays stations only heard on interface nos)
```

1.81 amiganosmbox_kill

```
USAGE
     K[ill] <message_number> [<message_number> . . .]

DESCRIPTION
     The kill  command  allows you to delete  messages  from the  current
     mailbox      (if you  have been  given that permission by the  operator).
     At least  one message  number must be supplied.  The message numbers
     you can select from can be displayed with the "L[ist]" command.  The
     second parameter on each line of the list is the <message_number>

     The kill  command  only applies  to messages  in  the  current  mail
     "area".  The current mail area      can be  checked and modified with the
     "A[rea]" command.

EXAMPLES
     kill 1
     k 2 4 5 7
```

1.82 amiganosmbox_list

```
USAGE
     L[ist] [<starting_msg_number> [<ending_msg_number>] ]

DESCRIPTION
     The list command prints a list of the messages in the current
     mailbox      (or "area").  For each message, the list contains the
     subject header line, the time      and date it was created, who it
     is from, how many bytes long it is, and whether or not it has
     been read.

     You may include an optional "starting_msg_number"  from which
     to begin displaying  the list.  If you specify a starting msg
     number, then  you may also specify an  ending number as well.
     This will limit the display for you in case there are a large
     number of messages in a particular "area" mailbox.

EXAMPLES
     list        (Display a list of all messages in the current area)
     l 6         (Display messages headers beginning with message 6)
     list 6 10   (Display only message headers from 6 to 10)
     ll 5        (Display the last 5 messages in the current area)
```

1.83 amiganosmbox_message

```
  message <"your message">

Send a one-line message to the sysop
```

1.84 amiganosmbox_movemail

```
  movemail <area>

Move the current message to <area>

  movemail <msg_num> <msg_num> area

Move <msg_num> ... to <area>
```

1.85 amiganosmbox_nconnect

```
USAGE
     NC[onnect]

DESCRIPTION
     The Nconnect command will attempt a NET/ROM connection to the
     specified system.

          nc[onnect] <node>

     When you are finished using the NetRom      interface, you may return
     to the mbox      by entering the "escape" character, <CTRL>X (or what
     ever you may have changed it to using the "E[scape]" command.

EXAMPLES
     nc orc22        (Attempts a connection to the netrom      node "orc22")
```

1.86 amiganosmbox_netrom

```
USAGE
     N[etrom]

DESCRIPTION
     The Netrom      command  places you  into a pseudo  NetRom      mode.  The
     typical NetRom      commands      available are:

          c[onnect] <node>
          i[dent]
          n[odes] [<callsign>]
          u[sers]

     When you are finished using the NetRom      interface, you may return
     to the mbox      by entering the "escape" character, <CTRL>X (or what
     ever you may have changed it to using the "E[scape]" command.

EXAMPLES
     netrom      (Puts you into the NetRom      interface)
     c orc22         (Attempts a connection to the netrom      node "orc22")
     ident           (Prints this station's callsign and NetRom      node ID)
     n gb3by-2       (Prints a list of all the paths to get to gb3by-2)
     users           (Prints a list of all the current mailbox      users)
```

1.87 amiganosmbox_nodes

```
USAGE
     No[des]

DESCRIPTION
     The Nodes command will either list the available NET/ROM nodelist
     or if supplied with a nodename/callsign  it will  show details of
     the node quality/routes

          no[des] [<callsign>]

EXAMPLES
     n gb3by-2      (Prints a list of all the paths to get to gb3by-2)
```

1.88 amiganosmbox_os

```
  os

The 'os' command displays general system information.
```

1.89 amiganosmbox_pagesysop

```
USAGE
     P[ageSysop]

DESCRIPTION
     The pagesysop command allows you to "talk" keyboard-to-keyboard
     with the operator of this NOS  system.  When  you  select  this
     function, a new window will be opened on the operator's console
     and whatever you type will be  visible  there.  If the operator
     is present, and types something in return, it will be sent back
     to you.

     When  you  wish  to  terminate the session,   type  the  escape
     character on your keyboard, and then press <ENTER> or <RETURN>.
     The default escape      character is "CTRL-X",  which  means to hold
     down the <CTRL> key and press the <X> key simultaneously.  This
     escape      character may be changed to whatever you prefer by using
     the "E[scape]" command.

EXAMPLES
     page
     p
     pagesys
```

1.90 amiganosmbox_ports

```
  ports

Display the available ports on the system along
```

1.91 amiganosmbox_read

```
USAGE
     R[ead] <msg_number> [<msg_number> . . .]
     <msg_number>
     <ENTER>

DESCRIPTION
     Each of these  commands      allows you to read a message (or messages) from
     the current mail area.  To read a specific message, you may either type
     "read #" or just  the number by itself.  If there is a specific list of
     messages  you are interested  in  (determined  by the use of the L[ist]
     command, for  instance),  you can  enter  the list  of  message numbers
     (separated by spaces) on the  "read" command-line.  You can also simply
     advance sequentially  through the messages by just pressing the <ENTER>
     key.  This will display the  next message in order.  The "read" command
     displays only an  abbreviated portion of the mail headers.  If you want
     all the header lines displayed, use the V[erbose] command instead.

EXAMPLES
     read 3 5        (Display only messages 3 and 5)
     4               (Display message 4)
```

1.92 amiganosmbox_retrieve

```
USAGE
     retrieve <file_name>

DESCRIPTION
     The retrieve command allows you to extract a file from within a
     system archive.

EXAMPLES
     retrieve index         (retrieves the INDEX of all files
                             contained in the archive.)

     retrieve tcp.v90-023   (retrieves 'tcp.v90-023' from the archive.)

     retrieve pkt.v90-Index (retrieves 'pkt.v90-index' from the archive.)

NOTE
     When a file is requested, the local cache directory is checked
     first to see if the file has been requested recently, if so it
     is sent from there.  If the file is not in the local cache
     directory, an AmigaDOS command is issued to de-archive the file
     and place it in the local cache directory as well as sending the
     file out.
```

```
     The cache directory will be cleaned out at regular intervals as
     new files are added to the archive.

     Also, this command is unique to AmigaNOS v2.8
```

1.93 amiganosmbox_send

```
USAGE
     S[end] <user>[ @ <host>] [< <from_addr>] [$<bulletin_id>]
     SR [msg_number]
     SF <user>[ @ <host>] [< <from_addr>] [$<bulletin_id>]

DESCRIPTION
     The send command allows you to enter a message  and send it to a user at
     either this system, or some other system on the network. The "from_addr"
     and "bulletin_id" fields are  for special use and won't be covered here.
     The "S" command  may also be followed by "P", "B", or any  other message
     type  you use  (e.g. SP wb7xxx @ n7xxx).  The "SR" command allows you to
     "reply" to either the  current message or the  message number specified.
     The subject will be copied  and the reply will be sent to the address it
     was  sent  from.  The "SF" command  will  forward a copy of  the current
     message to the user specified.

EXAMPLES
     send g1yyh             (Send a message to the local user, g1yyh)
     s g1yyh @ gb7crg       (Send a message to g1yyh at the gb7crg host)
     sr 3                   (Reply to message number 3)
     sf g7aaa%g7bbb@gb7ccc (Forward current msg to g7aaa at g7bbb via gb7ccc)
```

1.94 amiganosmbox_signon

```
    * North West Packet User Group *
    *                              *
    *    Annual General Meeting    *
    * Grappenhall Community Centre *
    *   Grappenhall,  Warrington   *
    *                              *
    *  Sunday  23rd February 1992  *
    *    19:30 Hrs     (7.30pm)    *
    ********************************
```

1.95 amiganosmbox_telnet

```
USAGE
     T[elnet] <hostname> [<port_number>]

DESCRIPTION
     The telnet      command allows you to initiate a TCP      connection from the
     NOS mailbox      out across  the network to another host.  This allows an
```

```
     AX.25  user with nothing more than a terminal and TNC to gain access
     to the TCP/IP network.

     By  including  the optional port_number,  you can connect to any TCP
     server at the given  host.  The  default is to  be connected  to the
     "telnet"  server, which  in the case  of NOS  software, is the MBOX.

     To quit the session at any time, enter the escape      character (<CTRL>X
     by default, can be changed with the E[scape] command).

EXAMPLES
     telnet      g1yyh      (Connect to g1yyh, (MBOX if NOS) )
     t g1yyh 25        (Connect to the SMTP      mail server at g1yyh)
```

1.96 amiganosmbox_upload

```
USAGE
     U[pload] [/][<path_name>/]<filename>

DESCRIPTION
     The  upload      command  allows you to transfer  an ASCII  file from your
     system onto disk at this host.  You may also specify a full  path_name
     containing a specific  directory in which to deposit the new "upload".
     All uploads can only go into the  directory that  you  logged into, or
     into another directory under the current one.

     The transfer  proceeds  line-by-line  until  the  file is sent and you
     enter either a "<CTRL>Z" or "/ex"  as the first thing on a blank line.

EXAMPLES
     upload      kepler.txt
     u /pub/satelite/oscar13.txt
```

1.97 amiganosmbox_verbose

```
USAGE
     V[erbose] <msg_number> [<msg_number> . . .]

DESCRIPTION
     This command allows you to read a message (or messages) from the current
     mail area, and it includes all the header lines for display.

     To view a specific message with all headers, type "verbose #", where the
     "#" is the number of  the message to be  displayed.  (The R[ead] command
     operates the same way, but with abbreviated header lines).

     If there is a specific list of messages  you are  interested in, you can
     enter the list of message numbers (separated by spaces) on the "verbose"
     command-line.

EXAMPLES
     verbose 3 5     (Display only messages 3 and 5 with full headers)
```

1.98 amiganosmbox_what

```
USAGE
     W[hat] [/][<path_name>]

DESCRIPTION
     The what command  generates a  sorted directory  listing of the  current
     directory or the one  specified  by the optional path_name.

           Directory "TCPIP:PUBLIC" on Saturday 18-May-91
           AMIGA                        Dir ----rwed Yesterday 20:16:11
           IBM                          Dir ----rwed Tuesday   07:44:44
           INDEX.txt                    909 ----rwed Yesterday 20:16:52
           ODDS-ENDS                    Dir ----rwed 03-May-91 11:51:23
           1 files - 3 directories - 6 blocks - 909 bytes

EXAMPLES
     what          (Displays a directory listing of the "current" dir)
     w ibm         (Display a list of files contained in the "ibm" dir)
     w "* quick"   (Displays the filename only in the current directory)
```

1.99 amiganosmbox_zap

```
USAGE
     Z[ap] [/][<path_name>/]<filename>

DESCRIPTION
     The zap command allows you to delete a file in the current directory
     of one you specify with the optional path_name.  Use of this command
     requires that  permission be granted by the operator of this system.
     (Which you won't get!!)

EXAMPLES
     zap myfile.txt            (Deletes myfile.txt in the current dir)
     z nos/mydir/myfile.txt    (Deletes myfile.txt in /nos/mydir)
```