WINTNC Driver Ver 2.10

USER MANUAL

Written By Jon Welch

Welcome To WinTNC

1 Welcome To WinTNC

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What's New In Ver 2.10

2 What's New In Ver 2.10

WINTNC Ver 2.10 21/07/24

This is a major update to WINTNC. Since its creation, WINTNC has been written for and compiled using Borland C++ For Windows Ver 5.02. The Borland compiler was last updated in 1997 and has since been discontinued. When I started to convert WINTNC to be 32 bit compatible in 2023, it was easier to continue using the Borland C++ compiler rather than update the code to use a more modern compiler. The conversion seems to have worked very well but the time has now come to abandon the Borland compiler and switch to something more modern and maintainable. Therefore, I have converted the code to use Visual Studio 2022 as an IDE/Compiler and also converted the old format help file (tnc.hlp) to a more modern compiled HTML help file (wintnc.chm). This change should also make converting the code to be 64 bit compatible much easier when the time comes that Microsoft abandons 32 bit software.

Using a newer compiler is a big change and I have hopefully caught all the bugs introduced by the conversion but please let me know if anything doesn't work properly. The new version is file compatible with your existing WINTNC installation so you won't loose any PMS mail files or users you already have. Having said that, do please backup your current working system first before upgrading to the new version.

A side effect of the upgrade is that some dialog boxes currently won't look as pretty as the previous version as Borland used their own controls for things like OK/Cancel/Help buttons with icons for ticks, crosses and help question marks etc. I haven't created new buttons yet so they are still plain and boring looking. Hopefully, this will get addressed in a future update.

Problems fixed

- Escape character ^[not being recognised in KISS Init String parameter

Enhancements

- Converted the code base to use Visual Studio 2022 as an IDE/Compiler
- Converted the help file to a compiled HTML file format so no longer need to install winhelp.exe
- Added a telstar client for displaying teletext/viewdata pages from telstar servers
- Added APRS online configuration through Alt-S setup menu
- Minor bug fixes and other small improvements

2.1 What Was New In 2.05

WINTNC Ver 2.05 Oct 23 to May 24

Problems fixed

- Implemented workaround to cure stack overflow issue preventing the software starting on some Windows 11 installations (Many thanks to Brook, N5DGK, for helping me sort this issue)

Enhancements

- Adds the **cls** command to clear the screen and home the cursor in a TNC window
- Sends your **ID** through the **UNPROTO** path

- Made the **UNPROTO** path configurable via the Alt-S, Port Configuration dialog box
- Now retains the SSID if **MyCall** contains one, previously stripped the SSID when making a connect
- Added a KISS over TCP option to port configuration
- Added APRS features
- Made TNC window text font and size configurable
- Added Wordle game to node and as PMS external server program
- Minor bug fixes and other small improvements

2.2 What Was New In 2.04

WINTNC Ver 2.04 20/09/23

Problems fixed

- None

Enhancements

- Allows you to configure an external editor rather than use the internal editor
- Alters the default telnet server port to 6301
- Removes registration requirements
- Got mail forwarding working with linbpq and BPQ32
- Increased font sizes in dialog boxes and tab strip
- Tidied directory browser to better support long filenames
- Reorganised Port Dialog configuration dialog box for AGW parameters
- Added connect option to force transparent telnet connections
- Auto start YAPP download when detect incoming YAPP transfer
- Got dialog bitmaps displaying properly
- Minor bug fixes and other small improvements

2.3 What Was New In 2.03

WINTNC Ver 2.03 03/09/23

Problems fixed

- None

Enhancements

- Added telnet server to node with callsign/password protection
- Increased COM port selection to allow COM1 to COM20
- Made screen width configurable with a max size of 70 rows x 132 cols
- Tidied up the port configuration dialog box
- Added RAW port mode to allow communications with a non KISS mode TNC

2.4 What Was New In 2.02

WINTNC Ver 2.02 29/08/23

Problems fixed

- Forced telnet line feed to be converted to a carriage return

Enhancements

- Included the Windows Help executables in the installation so the WINTNC help file displays without having to manually install the executables yourself

2.5 What Was New In 2.01

WINTNC Ver 2.01 26/08/23

Problems fixed

- None

Enhancements

- Added telnet client support
- Added ANSI driver support

2.6 What Was New In 2.00

WINTNC Ver 2.00 16/08/23

Problems fixed

- None

Enhancements

- Converted WINTNC to 32 bit to make it compatible with Windows 7/10/11
- Removed Baycom modem support as the existing Baycom driver won't work with Windows 7/10/11 and I don't know how to re-write it to make it work

Introduction

3 Introduction

WINTNC Ver 2.xx is a Windows multiuser/multitasking Packet Terminal Driver program for use with KISS mode TNC's, software modems using the AGWPE interface or telnet access to BBS's over the internet.

The software includes many features not often found in other TNC driver programs. These include :

- integrated Personal Mail System with FBB compatible compressed forwarding
- inbuilt multiport node
- Conference server accessible from node
- YAPP file server accessible from node
- split screen or full screen display
- 1000 line scroll back buffer with search facilities
- YAPP and ASCII file transfer facilities
- connect directory
- directory browser with comprehensive file viewer
- file, notepad and clipboard editor
- UUencode and UUdecode of files
- 7PLUS encoding and decoding of files
- external PMS mail servers including REQDIR. REQFIL & REQMSG
- external PMS program servers including ADVENT (the original Colossal Cave adventure)
- M_FILTER and C_FILTER with MD2 support
- simple to use yet sophisticated script language for automated operation
- timed execution of script files
- locator calculations
- configurable sound events
- FBB header broadcast support
- AGWPE Interface
- Telnet client for remote access to BBS's over the internet
- Telnet server for remote interface access to your node
- APRS support over RF and the internet

- plus many more !

The software is fully multiuser/multitasking which means that more than one person can be active in any part of the system at once whilst you are still using the software for your own purposes.

3.1 What is multiuser/multitasking software ?

The principle behind multiuser/multitasking software is to enable the program to run more than one task at once (multitasking) and to allow more than one person to be in a particular task at the same time (multiuser).

In this software, a task is taken to be a channel which can be configured to be either a PMS, a terminal driver or a node.

You can define up to 10 node channels and up to 10 of any combination of PMS and TNC channels and the program will then appear to be running them all simultaneously.

For example, you could define 7 PMS channels, 3 terminal driver channels and 10 node channels. With this setup, 7 users can be in your PMS at the same time whilst you can be making three outgoing connects, whilst 10 people are connecting through your node or accessing the various servers available on the node. All this would be happening simultaneously.

Of course, doing 20 things at once rather than just the one task will slow down the computer quite a bit and so depending on the speed and processor type of your computer, you will probably want to restrict the number of tasks to say, two of each for example.

3.2 System Requirements

The software is designed to run under a 32 or 64 bit version of Windows and should work with any recent version including Window 7, 10 or 11.

The software can connect to to a hardware TNC via a serial port, USB/Serial converter or even bluetooth if your TNC/Radio supports this mode. The software can be configured to talk through COM1 to COM20 but if your COM port is higher than this, you can manually edit the WINTNC.INI file by looking for the ComPort=X string and changing the number to whatever you need

The software can also use the AGW Packet Engine API to talk to AGWPE compatible software such as the SoundModem by UZ7HO.

The screen layout for WINTNC defaults to a 132 x 50 terminal emulation display but you can alter the screen dimensions if you require by changing the settings on the video configuration dialog box.

3.3 Registration

WINTNC Ver 2.xx has historically not been a public domain or free package. The software was distributed as an 'Evaluation Copy' package where all the features of the software were accessible except the 'on-air' PMS. This means that external users could not connect into the PMS but you could access the PMS locallaly to check out the features available.

Since performing the major upgrade of converting the software to be 32 bit compatible, I consider the software to be in a development phase at the moment. Whilst it is being tested to iron out any bugs that may be lurking due to the upgrade, I don't feel it fair to charge people for registering the software. Therefore I have removed the registration requirements from the program and you are free to use all the features of the software as you wish. Should you wish to show your appreciation for the software and help support its future, you can make a voluntary donation at https://www.g7jjf.com/wintnc2.htm

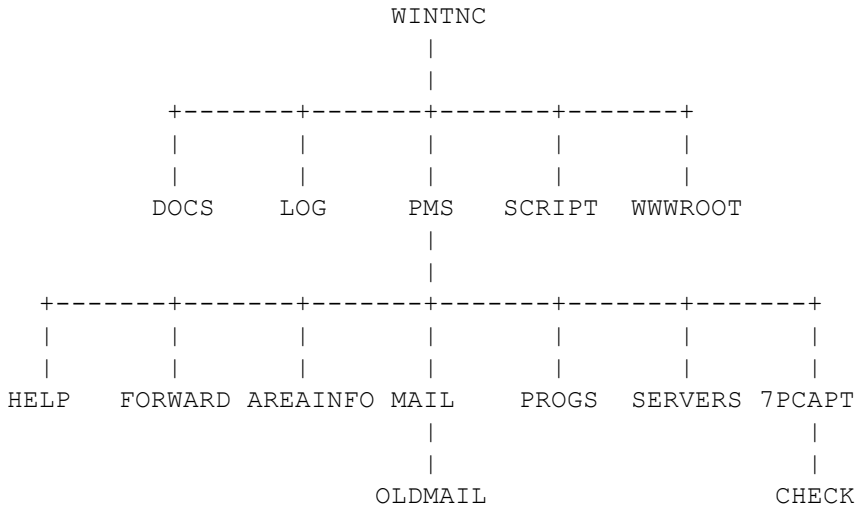
3.4 Installing The Software

If you are reading this, you have already successfully installed the software so there is not much more to say.

The software comes with a user friendly installation routine which can be re-run at any time to re-install the software or any of the optional components which you may have left out before. The installation routine will also upgrade over previous versions of the software without losing any of your configuration files or PMS data files etc.

If you chose to add icons to the program manager when installing the software, you will also see an icon for uninstalling the software if you find the software is not to your liking. This will remove all traces of the program from your computer apart from data files created by the software which you may wish to keep, eg mail files etc.

Installing the software will create the following directory structure. This is used to store any script files you may create, the PMS system and an area for your log files and other system information.



3.5 System Files and Useage

The files comprising the system, where they are located and their function are as follows. Further information on the files is available in the relevant section of the help manual.

```
WINTNC
------
TNC.CLR     - Colour configuration file
TNC.CT      - Optional CTEXT sent upon a connection
TNC.DIR     - Connect directory
TNC.LOG     - Log file of connect and disconnect times
TNC.TIM     - Optional timed event configuration file
WINTNC.CHM  - Help file (this file !)
WINTNC.INI  - Main configuration file
```

```
WINTNC.EXE  - Main Program
CONF.CT     - CTEXT for the node conference server
CONF.HLP    - Help file for the conference server
NODE.BYE    - Text sent when user disconnects from node
NODE.CT     - CTEXT sent when user connects to node
NODE.HLP    - Text sent when user issues Help command on node
NODE.INF    - Text sent when user issues Info command on node
NODE.REG    - Text sent when unregistered user tries to access
node
NODE.USR    - List of registered node users
YAPP.DAY    - Message of the day for the Yapp server
YAPP.HLP    - Help file for the Yapp server
YAPP.INF    - Info file for the Yapp server

WINTNC\LOG
----------
MAMAUTO.001 - Files created by the LOG, ENDLOG script commands
BADAUTO.001 - These can be deleted once read
GB7MAM .FBB - List of grabbed FBB message headers
GB7MAM .IDX - Index for above file
<other>.LOG - Debug log files

WINTNC\PMS
----------
PMS.BAD      - Callsigns not allowed on PMS  (optional)
PMS.DAY      - Message of the day            (optional)
PMS.HLP      - Text file sent for H command  (optional)
PMS.IDX      - Message index file            (created by
program)
PMS.INF      - Text file sent for I command  (optional)
PMS.LOG      - PMS usage log file            (created by
program)
PMS.OK       - Callsigns only allowed on PMS (optional)
PMS.SYS      - PMS system file               (created by
program)
PMS.USR      - PMS user details file         (created by
program)
PMS.CT       - CTEXT sent upon a connection  (optional)
WP.DAT       - White Pages database          (created by
program)
WP.LOG       - Log for White Pages           (created by
program)
7PEXTRCT.BAT - Batch file to extract 7PLUS files from incoming
messages
7PLUS.EXE    - Program to decode 7PLUS messages
C_FILTER.EXE - Provides password access to PMS
C_FILTER.PSW - Configuration for C_FILTER program
M_FILTER.EXE - Program to filter incoming mail
M_FILTER.FWD - Filtered messages


WINTNC\PMS\MAIL
---------------
MSGnnnnn.TXT - Message files - editable if required


WINTNC\PMS\OLDMAIL (Only created if OLDMAIL directory exists)
```

```
---------------
MSGnnnnn.TXT - Archive of killed messages - delete if required


WINTNC\PMS\FORWARD (All files optional)
------------------
G7JJF.LST - Text file containing lists of message subjects
which
G1EQT.LST - the user requests being made available for
forwarding
etc.

WINTNC\PMS\AREAINFO (All files optional)
-------------------
1.INF - File displayed before listing files in file areas and
can
2.INF - be used to describe what sort of files are in area
etc.

WINTNC\PMS\HELP (All files optional)
---------------
PMS.LM - Text file sent for ? LM command
PMS.W  - Text file sent for ? W command
etc.

WINTNC\PMS\PROGS (All files optional)
----------------
Contains external programs and datafiles available with '/'
command in the PMS

WINTNC\PMS\SERVERS
------------------
REQDIR.EXE  - Mail server programs and help files
REQDIR.HLP  -
REQFIL.EXE  -
REQFIL.HLP  -
REQMSG.EXE  -
REQMSG.HLP  -
SERVERS.EXE -
SERVERS.HLP -


WINTNC\SCRIPT (All files optional)
-------------
DADAUTO.SCR - General script file
DADAUTO.FWD - Script file for mail forwarding
DADAUTO.MAI - Script file for mail snatch
TNCINIT.nnn - Executed on running program
TNCEXIT.nnn - Executed on exiting program
etc.

WINTNC\WWWROOT - Files used by APRS Web Server
--------------
APRS0.PNG   - Icon symbol set
APRS1.PNG   - Icon symbol set
FAVICON.ICO - Favourite icon for showing on web server title
bar
```

```
INDEX.HTML  - Index page for web server
INDEX.JS    - Program generated code for displaying stations
heard
STYLE.CSS   - Style sheet for web server
```

Configuring The Software

4 Configuring The Software

The main configuration file for the program is called WINTNC.INI.

This file is a standard text file and should be edited with the inbuilt file editor or a text editor that does not add formatting characters to the text (such as the Windows Notepad program). Alternatively, you can use the online menu driven configuration option.

There are several other separate configuration files such as TNC.TIM, TNC.DIR etc which will be discussed below.

4.1 WINTNC.INI

The WINTNC.INI file contains the main configuration parameters for the program. The file is split into several different sections, each containing numerous items.

You can manually edit the file but it is easier to use the on-line configuration option.

My current WINTNC.INI file is

```
[Calls]
MyCall=G7JJF                    Pretty obvious really
MyAlias=JJFTNC                  All callsigns are a maximum of 6 characters with
                                an optional SSID
MyPMS=G7JJF-2
MyPMSAlias=JJFPMS
MyNode=G7JJF-8
MyNodeAlias=EAKR20
MyBBS=GB7NAS                    Local BBS - used when sending FBB Resync's

[Sounds]                        Sound WAV files for various events
ConnectTNC=connect.wav
DisconnectTNC=disc.wav
ConnectPMS=connect.wav
DisconnectPMS=disc.wav
ConnectChat=connect.wav
DisconnectChat=disc.wav
ConnectYAPP=connect.wav
DisconnectYAPP=disc.wav
NewMail=newmail.wav
Enabled=Y

[Ports]
NumPorts=1                      Number of hardware TNC's
NumTNC=2                        Number of virtual TNC channels
NumPMS=2                        Number of virtual PMS channels
```

```
NumNode=2                          Number of virtual Node channels

[TNC]                              Configuration for TNC channels
Paclen=128                         Default PACLEN
BST=0                              Use 0 for GMT, 1 when in BST
RegName=Evaluation Copy            Registration name
RegNum=999999                      Registration number
Log=Y                              Create a connect log - Y or N
TextSize=1024                      Size of editor buffer in K
MaxLines=15000                     Maximum number of lines in editor
TncSize=24                         Size of TNC text window on screen
MonSize=8                          Size of monior text window on screen
ScreenSize=50                      Size of total screen height in lines
Justify=N                          Justify typed text - Y or N
AutoResync=N                       Send FBB resync request if messages missed
High=600                           High water mark for FBB received headers
Low=300                            Lower water mark for FBB received headers
ScreenWidth=132                    Size of total screen width in characters
FontSize=16                        Font size of terminal text
FontName=Lucida Console            Font name of terminal text
UseOEM=N                           Use OEM (Y) or Unicode (N) character sets

[FKEY1]                            Macro text for F1 key - can define F1-F10 similarly
ShiftText=C G7JJF-2^M              Text sent when press Shift F1
ShiftHelp=Enter PMS                Help text
CtrlText={AG}c:                    Text sent for Ctrl F1
\wintnc\SCRIPT\BYE.SCR^M
CtrlHelp=Exit MSG                  Help text

[FKEY2]
ShiftText=^[[2J^H^H^H^H^M
ShiftHelp=Clear Screen

[PMS]                              PMS configuration items
Sysop=G7JJF                        Callsign of PMS Sysop
BoardName=Jon's Multiuser Personal Name of PMS
Mail System
NumFileAreas=4                     Number of file areas (defined below)
NormalPrompt=Cmd:B,C,D,E,H,I,K#,   Normal user prompt
KM,L,LM,R#,RM,S,U,V,W,X>
ExpertPrompt=Cmd: >                Expert user prompt
SysopPrompt=Ok $N, wot now ?       Sysop prompt
BText=G7JJF (Jon) Eakring, Notts.  BText
Node (EAKR20) ** WINTNC V 2.10
For Windows **
Beacon=15                          BText interval in minutes, 0 to disable
3rdParty=N                         Allow 3rd party mail in PMS, Y or N
FwdText=[Eakring]                  QTH identifier for mail routing
Log=Y                              Generate a PMS useage log, Y or N
MaxSize=40                         Max filesize (in K) a user can REQFIL
FileSize=4                         Split REQFIL requests into multiple messages of
                                   this size (in K)
Route=Y                            Add PMS routing line to sent messages

[YAPP]                             YAPP file server configuration
BoardName=Jon's Multiuser Yapp     Name of Yapp server
File Server
```

Prompt=Cmd:B,D,H,I,U,V,W >	User prompt
Log=Y	Generate useage log, Y or N
DownloadPath=C:\WINTNC\YAPP	Download path for auto received files
AutoStart=N	Automatically download YAPP files
[FileArea1]	Configuration for file areas, repeated for each file area
Area=100	4 character area identifier
Path=C:\WINTNC\PMS\DOWNLOAD\GENERAL	Path for file area
Description=General Download Area	Description of file area
Download=Y	Can user download from this area, Y or N
Upload=N	Can user upload to this area, Y or N
[FileArea2]	
Area=101	
Path=C:\WINTNC\PMS\UPLOAD	
Description=Upload Area	
Download=N	
Upload=Y	
[FileArea3]	
Area=102	
Path=C:\WINTNC\PMS\DOWNLOAD\TNC	
Description=TNC Driver Support	
Download=Y	
Upload=N	
[FileArea4]	
Area=103	
Path=C:\WINTNC\PMS\DOWNLOAD\PACKET	
Description=General Packet Software	
Download=Y	
Upload=N	
[Settings]	General configuration settings
WindowPos=312,52,1338,963	Default main window position and size
AGWDebug=ON	Generate AGW debug information log file ON/OFF
TelnetDebug=ON	Generate Telnet debug information log file ON/OFF
KISSDebug=ON	Generate KISS debug information log file ON/OFF
TCPDebug=ON	Generate TCP debug information log file ON/OFF
APRSDebug=ON	Generate APRS debug information log file ON/OFF
WebDebug=ON	Generate Web Server debug information log file ON/OFF
[Node]	Node Telnet Port Configuration
Port=6301	Port number for node telnet connection
Telnet=Y	Allow telnet access to node Y/N
[Editor]	Editor configuration settings
Program=Internal	Use Internal for internal editor or specifiy full path to external Windows editor program - see Editor

	Configuration for more information
[APRS-IS]	APRS Internet Server configuration
MyCall=G7JJF-10	Callsign to connect to APRS IS Server
Password=xxxxx	Passcode to connect to APRS IS Server
Server=euro.aprs2.net	Internet address of APRS IS Server
Port=14580	Port number to connect to on APRS IS Server
Radius=50	Radius of APRS information to receive from server
Path=WIDE1-1	Outgoing path for APRS beacons
Message=Running WINTNC 2.10 www.g7jjf.com	APRS beacon text
IDInterval=10	Interval in minutes for sending APRS beacon
SymbolTable=/	APRS symbol table to use for location ICON
SymbolCode=-	APRS symcol code to use for location ICON
[APRS-RF]	APRS RF Configuration
MyCall=G7JJF-9	Callsign for beacon's
Port=1	Hardware TNC port to send beacons through
Path=WIDE1-1	Path for beacon
Message=Running WINTNC 2.10 www.g7jjf.com	APRS beacon text
IDInterval=10	Interval in minutes for sending APRS beacon
SymbolTable=/	APRS symbol table to use for location ICON
SymbolCode=-	APRS symcol code to use for location ICON
[APRS]	General APRS configuration
Log=Y	Generate APRS debug log file Y or N
EnableIS=Y	Enable APRS IS features Y or N
EnableRF=Y	Enable APRS RF features Y or N
Lat=53.149509	Latitude of QTH
Lon=-0.993953	Longitude of QTH
Alt=415	Altitude of QTH
Refresh=5	Time in seconds to refresh APRS monitor window
MsgRetries=10	Number of retries when sending APRS messages
MsgAckTimeout=20	Timeout in seconds for received APRS message ACK
WebPort=9000	Port number of internal APRS Web Server interface
WebRoot=C:\WINTNC\wwwroot	Root directory where APRS Web Server files are stored
[Port1]	1st hardware TNC
ComPort=0	On COM 0
Number=1	Only define 1 virtual port
Unproto=CQ	Default UNPROTO path
Type=L	TNC is a loopback port

Notes

The BBS and Yapp Server prompts can contain the following macros to include the corresponding piece of system information at the relevant point.

$A - Number of active PMS messages
$C - Callsign of user

$D - System date
$H - Home BBS of user
$M - Next PMS message number
$N - Name of user
$T - System time
$U - Number of PMS users

4.2 TNC.TIM

The TNC.TIM file contains a list of times and assocciated script files which will automatically be run at the designated time.

The format of each line in the file is given below :

HH:MM <script filename>

where HH:MM is the time (in 24 hour format) when you wish the script file <script filename> (stored in the SCRIPT sub-directory) to be automatically executed. The times must be stored in chronological order.

For example, your TNC.TIM file could contain the following :

02:00 GB7MAM.SCR
04:00 GB7MAM.SCR etc.

and use the timed execution facility to automatically log on to you local BBS overnight at set times to download the latest messages for you.

When the software is first run, it interrogates the TNC.TIM file (if one is present) to find the next entry to be executed skipping over the times which have already gone. If there are no more entries for the current day, it goes back to the top of the file and waits for the time to arrive.

When it is time for one of the script files to execute, the last terminal driver port will automatically start to execute the relevant script file. If the last terminal driver port is busy, the script file will be put into a queue and executed as soon as the terminal driver becomes free once more.

After executing the script, the program will wait for the next timed event, looping back to the start of the file if necessary. The time of the next event is shown on the Alt I information screen

4.3 TNC.DIR

This file contains a directory of call signs and corresponding script files used by the Alt-C connect directory command.

The format of each line of the file is shown below :

<name>,<script file>

eg Jon,g7jjf.scr

When selecting Jon from the connect directory window, the program will execute the script file 'g7jjf.scr' which MUST be located in a subdirectory SCRIPT below the main WINTNC directory

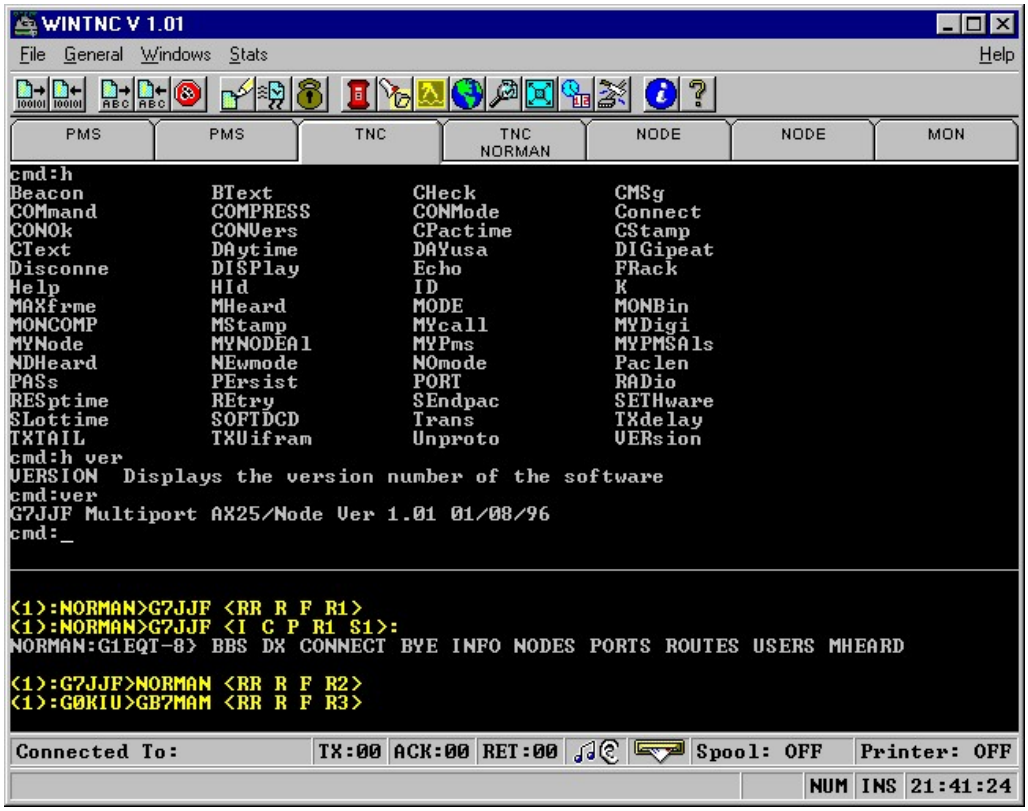
How To Use The Software

5 How To Use The Software

Before using the software for the first time, you must go through the various options on the configuration menu to setup your COM ports, callsigns, etc. and configure the miscellaneous text and help files which make up the system.

After loading the software, you should shortly see a terminal driver window which is split into two main windows. The upper screen is where you type text/commands and also displays text received back from the TNC driver. The lower screen monitors packet traffic. This is called full screen mode. You can also set the software to run in split screen mode where typed text and returned text are in separate windows. If you do not see something similar to the following screen, please refer to the troubleshooting section for hints on getting the software up and running.

Click on the parts of the box below where  *appears for explanations of features.*



As you can see, running the software puts you into a terminal driver window. To monitor what is happening on another channel or to select a different terminal driver to use, simply click on the tab strip at the top of the screen. The tab strip shows what type each channel is together with who is currently connected to it (if anyone).

When you are ready to exit from the program, this must be done from a proper terminal driver window in order to shut down the software correctly. Simply press Alt-X.

The WINTNC software operates in two modes called 'command mode' and 'convers mode'. In 'command mode', you are shown a 'cmd:' prompt and are able to issue commands to the TNC such as 'C' for connect and 'D' for disconnect etc. In order to issue TNC commands, you must make sure you are in 'command mode' or the commands you type will either be transmitted over air or ignored.

To enter command mode if the 'cmd:' prompt is not shown, simply press Ctrl-C followed by return.

The sequence for making a sample connect is thus :

Issue the connect,

eg 'C GB7MAM' and press RETURN.

If you are operating multiple radio ports, you may issue the port number as part of the connect command,

eg: C 2 GB7MAM would connect out on port 2
whereas C 0 JJFPMS would connect to your own PMS via the loopback port.

After making the connection, use the BBS as required.

When you are ready to disconnect, either enter the 'B' (BBS bye command) or press Ctrl-C <return> to enter command mode and enter 'D' <return> to disconnect. Alternatively, simply click on the disconnect icon on the tool bar.

There are other TNC commands you can use in command mode (type H for help list) but unless you consider yourself a packet expert, you will not need to use any of them apart from the Connect and Disconnect commands.

5.1 Telnet Connections

To make a telnet connect, use the syntax :

C <ip addr>:<port>

eg

C 212.159.61.112:6300

or

C <host name>:<port>

eg

C g7jjf.ampr.org:2300

if the address is resolveable on your computer to the actual IP address.

Telnet is usually used to connect to a remote BBS over the internet.

When you disconnect from a remote system, the telnet connection can take a few seconds to close down. You can always click the Disconnect button on the tool bar to help speed things up

There appears to be different ways of transferring data over a telnet connection, either in line mode where a CR is required after sending every packet, another mode where LF's

are automatically appended to CR's and 0xFF characters are escaped and sent as 0xFF 0xFF etc or you can use a transparent connection where characters are sent as is and not transformed in any way. I call these LINE MODE, FBB MODE and TRANSPARENT MODE. WINTNC attempts to detect which mode to use automatically but you can override the decision and force a transparent mode connection if required.

WINTNC can detect when connecting to an FBB system and automatically puts the connection into FBB mode which appends LF's to CR's and doubles up on 0xFF characters. This is most obvious when trying to do compressed mail forwarding as it wouldn't work if these transformations weren't removed from the data stream. You can force an FBB connection to use transparent mode by prefixing your callsign with a '.' when logging on but to get WINTNC to recognise this, you must also append a 'T' character to the connect string to force a transparent connection, ie to connect to the FBB BBS running on GB7MBC via a transparent connection, you could use a script which says :

```
REPLY C 212.159.61.112:6300 T^M
WHEN Callsign :
REPLY .g7jjf^M
WHEN Password :
REPLY ########^M
WHEN >
```

Note the '.' before the callsign and the 'T' at the end of the initial connect line.

BPQ/LINBPQ nodes also accepts telnet connections and this can be on two different port numbers, either the TCPPORT or FBBPORT (you will have to confirm with the remote sysop the actual port numbers to connect on). linbpq typically uses port 2323 for TCPPORT and 2424 for FBBPORT. A connection to TCPPORT put the connection into line mode where a CR is needed after sending each packet. A connection to FBBPORT is transparent and no transformation of data is performed. This is the preferred connection method when doing binary transfers such as YAPP or mail forwarding. Connections to FBBPORT don't prompt for a callsign/password to logon on with so you will need a connect script such as :

```
REPLY C g7rup.ddns.net:2424^M
REPLY g7jjf^M########^M^M
REPLY BBS^M
WHEN >
```

Note the double ^M^M at the end of the second line which is required.

Incoming connections to the telnet server in WINTNC are automatically put into transparent mode so binary YAPP transfers work without issues.

5.2 General Guidelines

When typing text at the keyboard, eg if you are sending a message, the program will automatically wrap text as you reach the right edge of the screen. This means you can just carry on typing and the program will press 'Enter' for you at the appropriate time, moving half typed words onto the line below. If you have turned on auto justification in the WINTNC.INI file, the program will insert spaces between words to pad out each line so the right margins align to the screen edge.

When entering information into an input box, full command line editing is available. You can use the cursor keys to move around the line, delete backwards with the backspace key and delete forwards with the Del key. The Insert key toggles between insert and overwrite modes with an indicator at the bottom of the screen showing the current mode.

When entering a filename at any point, you may enter a wildcard filename. If you do, you will enter the directory browser where you can select a file matching your wildcard filename. If you press RETURN in an empty input box, you will enter the directory browser with a default filename of '*.*'. Pressing ESCAPE will cancel the input prompt.

To select from the light bar menus, use the cursor left/right keys to move the bar and press RETURN to select. Alternatively, press the key corresponding to the initial letter of the required choice. You can press F1 to get a help screen reminding you of these keys. ESCAPE will cancel the menu without making a choice. You can also use the mouse to highlight menu items by single clicking. Use a double click to automatically choose the selected item.

5.3 Miscellaneous Key Index

Ctrl Cursor Right - Clear the TNC receive window.

TAB (or Page Up) - This will enter the scroll back buffer mode from a terminal driver window or the monitor window. Here you will be able to scroll back through the previous 1000 lines of text received from your TNC on your current channel. Each defined terminal driver and monitor window maintains it's own scroll back buffer. Use the normal cursor keypad to scroll the text. You can find text by pressing F and entering the search text. The search will only occur on text off the top of the screen. If the text is found, the buffer will scroll to display it at the top of the screen. Once finished browsing the scroll back buffer, press any key to exit. (See ALT F2-8 and ALT F10 for more scroll back buffer functions and ALT-N for the notepad function).

Shift Tab - This only works in split screen mode and allows you to access the last 8 commands you have entered. Press shift tab to scroll back through the list. To choose a previous command, press RETURN. This will send the command to the TNC again but leaves the cursor at the end so you may modify the command if you wish. To cancel this option press the space bar.

ESC-This is normally used to cancel menus and selection boxes.

PgDn-This key will access the list of grabbed FBB message headers.

@-This is used to automatically enter remote SYSOP mode on WORLI and NNA type BBS's, and can also be used to automatically enter remote SYSOP mode on this PMS as well.

On WORLI BBS's and when using this programs PMS, when you normally enter a single @ (followed by RETURN), you get back three lines of numbers from which you must choose one line and use it to decode your password.

If you enter your personal password as the text for Shift Function key 10, now when you press @<CR>, the program will automatically pick one of the three lines and use it to decode the password which it automatically sends to the remote end. It will first confirm this action by popping up a Yes/No menu just to make sure you did not accidentally press the wrong key.

On NNA BBS's, when you normally enter a single @ (followed by RETURN), you get back three, two digit pairs of numbers which index into an 8 by 8 matrix of characters.

If you enter your personal password as the text for Ctrl Function key 10 (as a single 64 character string made by joining the eight rows together), now when you press @<CR>, the program will automatically detect the three pairs of digits and use them to decode the password which it automatically sends to the remote end. It will first confirm this action by popping up a Yes/No menu just to make sure you did not accidentally press the wrong key.

The program detects which type of BBS/PMS you are connected to and which password routine to enter by counting the number of characters of the first line received from the remote system after sending the @<CR>. If it receives 8 characters, it assumes it is the NNA's three, two digit pairs and sends the corresponding password back. If more than 8 characters are received, it captures the next two lines as well and enters the WORLI/PMS password routine.

If you accidentally press @<CR> and say Yes to the pop up menu prompt when you really did not mean to do it, you can abort the automatic password sequence by pressing any key.

The program also operates a mail snatch facility. If the program monitors a 'Mail For' beacon containing your PMS Sysop callsign (as stored in the WINTNC.INI file), the last terminal driver channel will automatically start to execute a script file called '<callsign>.MAI' (stored in the SCRIPT directory) where <callsign> is the call of the station holding your mail. If the last terminal driver channel is busy, the script file will be put into a queue and executed as soon as the terminal driver becomes free once more.

eg. if the beacon

```
GB7MAM>BEACON:
Mail For : G7JJF ALL
```

was monitored and your callsign appeared in the Mail For line, the script file 'GB7MAM.MAI' would be automatically executed. The script file must be stored in the SCRIPT directory.

5.4 Function Key Index

Index of Function Keys

Please Note

F1, F3 and F10 also work on the monitor channel.
Alt F2-F8 and Alt F10 also work on the monitor channel scroll back buffer.

[F10] - Dump Screen

[Alt F9] - Toggle Sysop Available
[Alt F10] - Dump block

5.4.1 [F1] - ASCII Download

This command is used for storing incoming TNC text into a file on disc.

You will be asked for the name of the file to contain the downloaded information. If the file cannot be created or you do not enter a filename, the command will be cancelled.

If the file you specify already exists, you will be given the opportunity to overwrite the existing file or cancel the download.

See also [F3] PAUSE Download and [F2] ASCII Upload

5.4.2 [F2] - ASCII Upload

This command is used for sending a text file stored on disc or the clipboard to the TNC.

You will be asked if you want to upload from a file or the clipboard. If you select file, you will be asked for the name of the file you wish to upload. If the file cannot be found or you do not enter a filename, the command will be cancelled. Selecting clipboard will send data currently stored in the clipboard (if it is not empty !).

During the upload process, the program will periodically wait for the TNC to empty its buffer before it can send any more data. During this wait period, you can still switch to a different channel whilst you are waiting for the upload to finish.

See also [F1] ASCII Download

5.4.3 [F3] - Pause Download

This command will temporarily suspend output of characters to the capture file.

Press F3 again to resume capture.

See also [F1] ASCII Download and [F2] ASCII Upload

5.4.4 [F4] - YAPP Download

This command will initiate a binary receive file transfer.

You will be asked for the name of the file to contain the downloaded information. If the file cannot be created or you do not enter a filename, the command will be cancelled.

If the file you specify already exists, you will be given the opportunity to overwrite the existing file or cancel the download.

You can abort the download at any time by pressing the ESCAPE key (and again if you cannot wait for the remote station to acknowledge your intention to abort the transfer).

See also [F5] YAPP Upload

5.4.5 [F5] - YAPP Upload

This command will initiate a binary transmit file transfer.

You will be asked for the name of the file you wish to upload. If the file cannot be found or you do not enter a filename, the command will be cancelled.

You can abort the upload at any time by pressing the ESCAPE key (and again if you cannot wait for the remote station to acknowledge your intention to abort the transfer).

See also [F4] YAPP Download

5.4.6 [F10] - Dump Screen

This command will dump the current TNC text (either from the main screen, the previous screen or a saved screen) to either your printer or to a disc file.

It will first ask you to confirm your desire to dump the screen (just in case you caught the wrong key).

It will then ask where you want to send the dump (either printer or disc) and if you choose disc it will ask for a filename .

See also [Alt F10] Dump Block

5.4.7 [Alt F1] - Help Screen

This command will display the help screen for the function keys.

Press any key to return from the help screen to the main program

See also [Alt H] Display ALT help

5.4.8 [Alt F2] - Set start block marker

This command is used to set the start marker for a block of text in the scroll back buffer.

After pressing the Alt F2 key, use the cursor up/down keys to position the highlight bar at the start of the required block then press RETURN.

See also [Alt F3] Set End Marker, [Alt F4] Clear Markers, [Alt F10] Dump Block

5.4.9 [Alt F3] - Set end block marker

This command is used to set the end marker for a block of text in the scroll back buffer.

After pressing the Alt F3 key, use the cursor up/down keys to position the highlight bar at the end of the required block then press RETURN.

See also [Alt F2] Set Start Marker, [Alt F4] Clear Markers, [Alt F10] Dump Block

5.4.10 [Alt F4] - Clear markers

This command will erase any markers set by Alt F2 or Alt F3.

See also [Alt F2] Set Start Marker, [Alt F3] Set End Marker and [Alt F10] Dump Block

5.4.11 [Alt F5] - Save/recall screen 1

This command is used to access a screen which can be used to save any text received from your TNC.

This is done by accessing the scroll back buffer using the TAB key, scroll to the required screen of text then press Alt F5 to store the text in screen 1.

To recall the screen at a later time, press the Alt F5 when on the main program screen.

Please note that all terminal drivers share the same four screens.

See also [Alt F6] Save/recall screen 2, [Alt F7] Save/recall screen 3, [Alt F8] Save/recall screen 4

5.4.12 [Alt F6] - Save/recall screen 2

This command is used to access a screen which can be used to save any text received from your TNC.

This is done by accessing the scroll back buffer using the TAB key, scroll to the required screen of text then press Alt F6 to store the text in screen 2.

To recall the screen at a later time, press the Alt F6 when on the main program screen.

Please note that all terminal drivers share the same four screens.

See also [Alt F5] Save/recall screen 1, [Alt F7] Save/recall screen 3, [Alt F8] Save/recall screen 4

5.4.13 [Alt F7] - Save/recall screen 3

This command is used to access a screen which can be used to save any text received from your TNC.

This is done by accessing the scroll back buffer using the TAB key, scroll to the required screen of text then press Alt F7 to store the text in screen 3.

To recall the screen at a later time, press the Alt F7 when on the main program screen.

Please note that all terminal drivers share the same four screens.

See also [Alt F5] Save/recall screen 1, [Alt F6] Save/recall screen 2, [Alt F8] Save/recall screen 4

5.4.14 [Alt F8] - Save/recall screen 4

This command is used to access a screen which can be used to save any text received from your TNC.

This is done by accessing the scroll back buffer using the TAB key, scroll to the required screen of text then press Alt F8 to store the text in screen 4.

To recall the screen at a later time, press the Alt F8 when on the main program screen.

Please note that all terminal drivers share the same four screens.

See also [Alt F5] Save/recall screen 1, [Alt F6] Save/recall screen 2, [Alt F7] Save/recall screen 3

5.4.15 [Alt F9] - Toggle Sysop Available

This will toggle the 'sysop available for chat' status in the PMS.

If you toggle this off, when a PMS user enters C for chat, they will immediately be told the sysop is unavailable and offered the chance of leaving him a message.

If you toggle this option on, when a PMS user enters C for chat, the normal chat routine will be followed.

The current toggle status is shown on the Alt I info screen.

5.4.16 [Alt F10] - Dump block

This command will dump the current marked text in the scroll back buffer to either your printer, a disc file or the clipboard.

It will first ask you to confirm your desire to dump the text (just in case you caught the wrong key).

It will then ask where you want to send the dump (either printer, disc or clipboard) and if you choose disc it will ask for a filename.

See also [F10] Dump Screen, [Alt F2] Set Start Marker, [Alt F3] Set End Marker and [Alt F4] Clear Markers

5.5 Alt Key Index

Index of Alt Keys

Please Note

Alt D, Alt E and Alt J also work on the monitor channel.

5.5.1 [Alt B] - Toggle connect bell

When you make a connect or disconnect, the WAV sound defined to the event in the WINTNC.INI file will normally play.

This key will toggle this action so it can be turned off if you having a late night session.

5.5.2 [Alt C] - Connect directory

This command allows to make a connection to either a callsign in the MH list or one from a personal directory of callsigns.

Choosing the 'Monitor Heard' option from the menu will display a menu containing the internal MH listing. You can then use the cursor up/down keys to select a callsign to connect to. You can of course press the ESCAPE key to leave the window without making a connection.

Alternatively, you can create a directory of call signs and corresponding script files and use this key to pop up a window for selecting someone to connect to.

The directory must be stored in a file called TNC.DIR which must be located in the same directory as the WINTNC.EXE program.

The format of each line of the file is shown below :

<name>,<script file>

eg Jon,g7jjf.scr

When selecting Jon from the connect directory window, the program will execute the script file 'g7jjf.scr' which MUST be located in a subdirectory SCRIPT below the main WINTNC directory

5.5.3 [Alt D] - Directory browser

This command brings up a powerful directory file maintenance window where you can browse through directories on your discs, copy files, rename files, view files (in HEX and ASCII), delete files, edit files and print files etc.

Cursor Keys	Move around display	**Return**	Select file
TAB	Alter display format	**ESC**	Exit browser
C	Copy current file	**^C**	Copy tagged files
D	Delete current file	**^D**	Delete tagges files
E	Edit current file	**F**	Change file spec
L	Log onto another drive	**M**	Make new directory
P	Print current file	**^P**	Print tagged files
R	Rename current file	**^R**	Rename tagged files
T	Tag current file	**^T**	Tag all files in directory
U	Untag current file	**^U**	Untag all files in directory
V	View current file		

^ Means press **Control** plus the following character at the same time

5.5.3.1 Directory Browser

Choosing this option will bring up a powerful directory file maintenance window. Here you can browse through directories on your discs, copy files, rename files, view files (in HEX and ASCII), delete files, edit files and print files etc.

The following keys operate when using the directory browser (note that the **^** symbol means press **CTRL** followed by the following key, eg **^C** means press **CTRL-C**) :

Cursorkeypad - Use to move about the current display. The home, end, page up and page down keys also operate to move the cursor in larger steps.

Return - Use to select the current highlighted filename. When over a directory, it will change the display to that particular directory. When on a file, if the browser was entered from a filename input box, this will select the current file as though it was entered in the input box.

TAB - Use to alter the display format. Pressing TAB will toggle between a four column short display showing only filenames and tag markers and a long display showing two columns of filenames and corresponding file sizes.

ESC - Use to exit from the directory browser and return to the previous screen.

C - Use to copy the current file (not directory !) to another area of your disc, optionally changing its name during the copy process. You will be asked for a wildcard filename you wish to copy the file as. If you are copying the file to another directory or disc, you can simply default on '*.*' to keep the same name. Alternatively, you could for example change the wildcard filename to *.BAK to create a backup of the file elsewhere. You will next be asked where you wish to copy the file. This must be the full pathname of the destination directory which MUST already exist. You can specify another drive in the pathname if you wish. (When entering the pathname, you MUST enter the final '\' character unless you just press RETURN on a blank path to copy it to the current directory). Finally, you will be asked if you wish to automatically replace existing files. If you say YES, any file with the same name you wish to create will be overwritten. If you say NO, you will be prompted to overwrite any file which already exists of the same name.

^C - Use to copy all the tagged files from the current directory to another area of your disc. (You must of course tag the required files first before using this command). After being asked the same questions as above, each tagged file will be copied to the new pathname.

D - Use to delete the current file or directory. If pressed on a filename, you will be asked to confirm that you wish to delete it. If pressed on a directory name, only if the specified directory is empty will it be deleted. You are not asked to confirm the deletion of a directory.

^D - Use to delete all the tagged files. (You must of course tag the required files first before using this command). You will be asked if you wish to automatically delete all files. If you answer YES, all tagged files will be deleted otherwise if you answer NO, you will be asked to confirm the deletion of each tagged file.

E - Use to edit the current file. The file editor is a full screen editor based on the Wordstar command structure which seems to be the most common in existence. A summary of the keys used in the editor is shown here.

F - Use to change the current drive, directory and wildcard filespec. Upon using this command, you will be allowed to edit the current path as shown at the top of the window.

L - Use this to quickly log onto another drive without going through the F option described above. You will be presented with a menu of all available drives including those defined with the SUBST command. Simply select a drive to log onto its current directory showing all files in it.

M - Use to make a new directory under the current directory. You will be asked to enter the new directory name.

P - Use to print the current file to your printer. Whilst the file is being printed, you may abort the printout by pressing a key. After the printout is complete, a page throw will be performed on the printer.

^P - Use to print all tagged files to your printer. (You must of course tag the required files first before using this command). Each file will be printed as described above for the single file print option.

R - Use to rename the current file. You will be asked to enter the wildcard filename you wish to rename the current file as.

^R - Use to rename all the tagged files. (You must of course tag the required files first before using this command). You will be asked to enter the wildcard filename that each tagged file will be renamed as.

T - Use to tag the current file. When a file has been tagged, a diamond will appear after the filename on the screen. After a file has been tagged, it can be used with all the control key functions described in this section.

^T - Use to tag ALL files in the current directory. See above for information about tagged files.

U - Use to untag the current file. When a file has been untagged, the diamond will disappear after the filename on screen. Also, the file will no longer be available for use by the control key functions described in this section.

^U - Use to untag ALL files in the current directory. See above for information about untagged files.

V - Use to view the current file in ASCII/HEX mode. The file viewer is similar to the one provided in XTREE. Again, use the cursor keys to scroll around the file, press S to set a marker, press G to go to a marker, press H to toggle HEX/ASCII mode, press T to set the tab spacing and press RETURN to exit back to the browser.

5.5.4 [Alt E] - Edit file

This command will allow you to edit a file or the current contents of the clipboard using the inbuilt file editor.

If you select file, you will be asked for the name of a file you wish to edit. If you enter a filename which does not exist on disc, the editor will create a new blank file for you otherwise the editor will load in the existing file.

Selecting clipboard will edit the current contents of the clipboard which will initially be empty when first running the program. The clipboard can be thought of as a temporary file which resides in memory rather than on disc. This makes it quicker to access than a disc file.

The editor operates in full screen mode. This option is useful for creating messages offline ready to ASCII upload when online. The editor also multitasks so you can still switch channels whilst editing a file.

The editor uses similar key comands to Wordstar.

See also [F2] ASCII Upload, [Alt N] Enter Notepad

5.5.4.1 Summary Of Editor Keys

Key Action	Primary Key	Secondary Key
Character left	<CtrlS>	<Lft>
Character right	<CtrlD>	<Rgt>
Word left	<CtrlA>	<CtrlLft>

Word right	<CtrlF>	<CtrlRgt>
Line up	<CtrlE>	<Up>
Line down	<CtrlX>	<Dn>
Scroll up	<CtrlW>	
Scroll down	<CtrlZ>	
Page up	<CtrlR>	<PgUp>
Page down	<CtrlC>	<PgDn>
Cursor to left side	<CtrlQ><CtrlS>	<Home>
Cursor to right side	<CtrlQ><CtrlD>	<End>
Top of screen	<CtrlQ><CtrlE>	<CtrlHome>
Bottom of screen	<CtrlQ><CtrlX>	<CtrlEnd>
Top of window	<CtrlQ><CtrlR>	<CtrlPgUp>
Bottom of window	<CtrlQ><CtrlC>	<CtrlPgDn>
Top of block	<CtrlQ><CtrlB>	
Bottom of block	<CtrlQ><CtrlK>	
New line	<CtrlM>	<Return>
Insert line	<CtrlN>	
Toggle insert mode	<CtrlV>	<Ins>
Delete line	<CtrlY>	
Delete line right	<CtrlQ><CtrlY>	
Delete right word	<CtrlT>	
Delete current character	<CtrlG>	<Del>
Delete left character	<CtrlBks>	<CtrlH>
Begin block	<CtrlK><CtrlB>	
End block	<CtrlK><CtrlK>	
Toggle block display	<CtrlK><CtrlH>	
Copy block	<CtrlK><CtrlC>	
Move block	<CtrlK><CtrlV>	
Delete block	<CtrlK><CtrlY>	
Import from clipboard	<CtrlK><CtrlI>	
Export block to clipboard	<CtrlK><CtrlE>	
Read file into window	<CtrlK><CtrlR>	
Write block to file	<CtrlK><CtrlW>	
Cut block to clipboard	<CtrlB><CtrlX>	
Copy block to clipboard	<CtrlB><CtrlC>	
Paste block to clipboard	<CtrlB><CtrlV>	
Find pattern	<CtrlQ><CtrlF>	
Find and replace	<CtrlQ><CtrlA>	
Find next	<CtrlL>	
Tab	<CtrlI>	<Tab>
Exit editor	<CtrlK><CtrlD>	
Abandon editor	<CtrlK><CtrlQ>	<Esc>
Save file and continue	<CtrlK><CtrlS>	
Insert control char	<CtrlP>	
Editor help	<F1>	

5.5.5 [Alt G] - Perform Script

This command will ask for the name of a script file to execute. You can either enter a name or just press RETURN and pick a file from the directory browser.

If you just press ESC without entering a filename, any currently executing script file will be terminated.

Script files

5.5.6 [Alt H] - Display ALT help

This command will display the help screen for the ALT keys.

See also [Alt F1] Help screen

5.5.7 [Alt I] - Info Screen

This command will display the registration screen showing your registered name and number.

It will also show the time when the next script file will be automatically executed (if active), the current scipt file command being executed (if active), whether the sysop is available for a chat in the PMS and finally, if you have any unread mail in the PMS.

5.5.8 [Alt J] - Monitor Connects

This command only works on a monitor channel and will bring up a menu containing up to three options.

The first option will list the last 10 stations that were monitored connected to each other.

The second option allows you to monitor both sides of a connection fullscreen. This is done by stringing together all the monitored packets and displaying them in a continuous stream. Duplicate packets that are sent as retries are detected and stripped out to avoid corrupting the display. All other data received by the TNC is still processed and can be viewed on the scroll back buffer.

To select which connection to monitor, simply select it from the list after choosing the monitor option. The connection list is updated continuously and you can reselect another connection at any time.

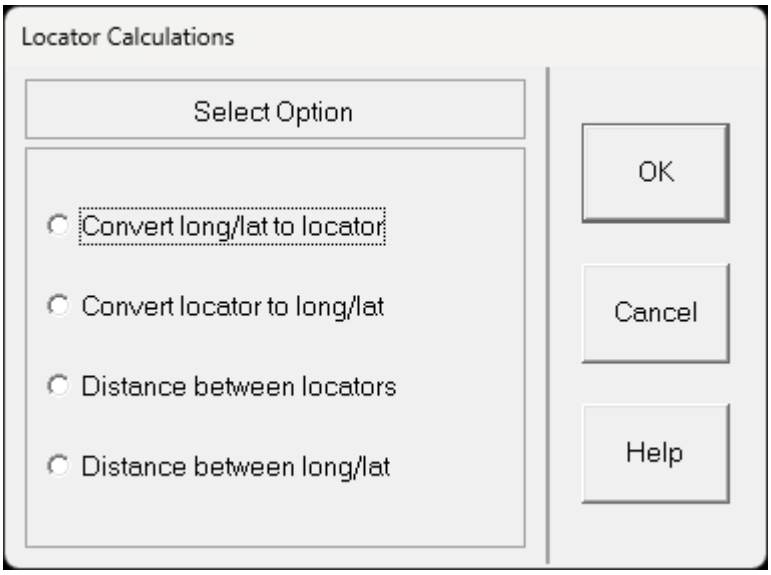
The third option only appears after entering the monitor mode. This option cancels the current monitor operation and reverts back to displaying all monitored data.

5.5.9 [Alt L] - Locator Calculations

This command will bring up a menu allowing you to convert between locators and longitudes/latitudes, and to calculate the distances between locators or between two different longitudes/latitudes.

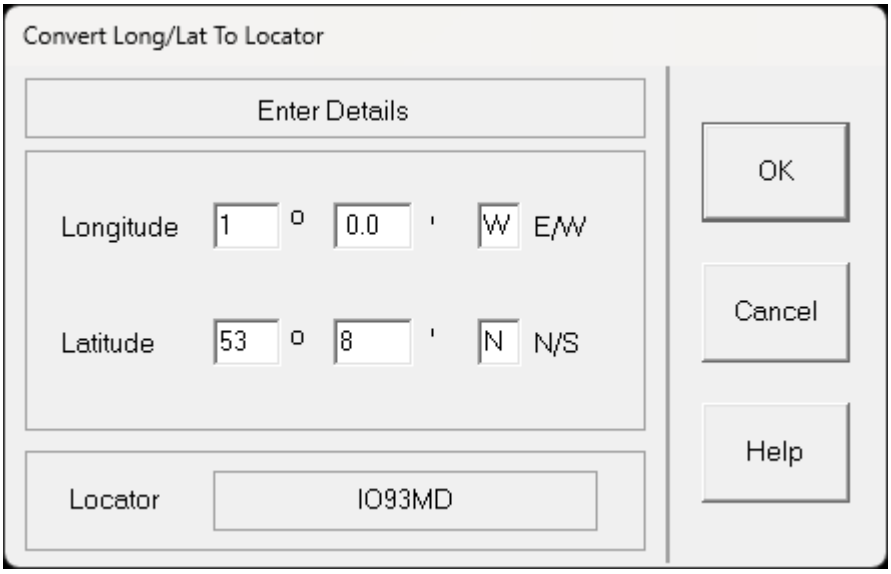
To choose one of the options, select an entry from the list and click the OK button.

Click on the parts of the box below where  *appears for explanations of features.*



5.5.9.1 Convert Long/Lat To Locator

This option will convert a longitude and latitude to a locator. Enter the values required for degrees, minutes and direction then press the OK button to display the corresponding locator.

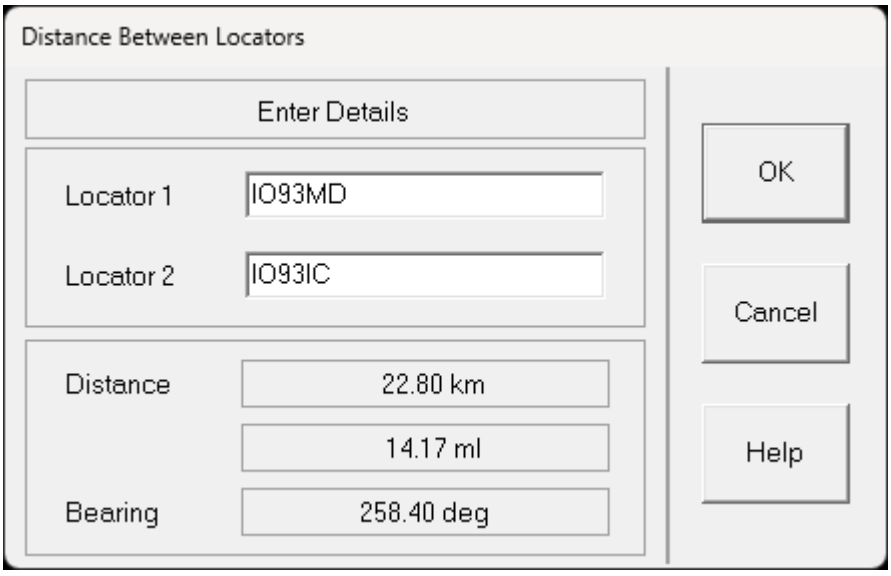


5.5.9.2 Convert Locator To Long/Lat

This option will convert a locator to its corresponding longitude and latitude values. Enter the locator required then press the OK button to display the corresponding longitude and latitude values.

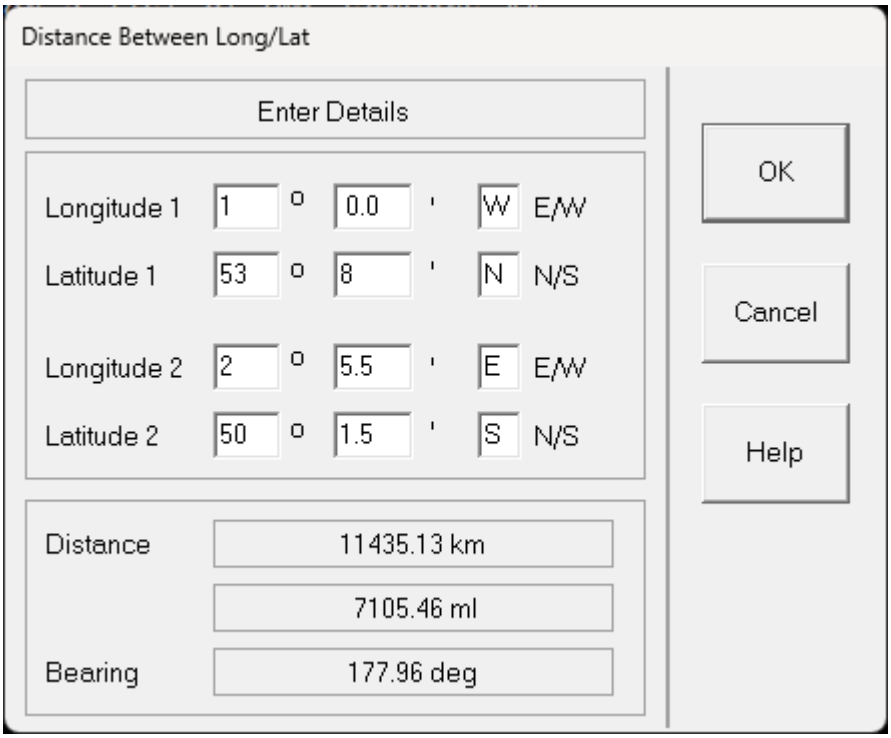
5.5.9.3 Distance Between Locators

This option will calculate the distance and bearing between two locator values. Enter the two required locators then press the OK button to display the calculated distance and bearing values.



5.5.9.4 Distance Between Long/Lat

This option will calculate the distance and bearing between two longitude/latitude values. Enter the two required longitude/latitude values then press the OK button to display the calculated distance and bearing values.



5.5.10 [Alt M] - Toggle Monitor Window

This command will toggle the monitor window at the bottom of a TNC driver window and will only show when the window is in full screen mode..

The size of the window is set in the WINTNC.INI file.

If you toggle between full screen and split screen modes, the monitor window will disappear and you will need to re-enable it with the Alt-M key again when you go back to full screen mode.

5.5.11 [Alt N] - Enter notepad

This command will bring up a quarter screen notepad in the top right hand corner of the screen.

It actually enters the file editor on a file called NOTEPAD.<channel> (where <channel> is the terminal driver channel you are currently using) which is created in the home WINTNC directory.

The notepad is active on the main screen and on the scroll back buffer.

See also [Alt E] Edit file

5.5.12 [Alt O] - Enter PMS locally

This command allows you to connect to your PMS.

PMS

5.5.13 [Alt P] - Toggle printer output

This command will toggle output to the printer.

When on, all characters received from the TNC will be dumped to the printer.

5.5.14 [Alt Q] - TNC I/P from file

This command allows you to replay TNC captured text through the program as though it had just been received again from the TNC.

Upon selecting this command, you will be asked for the file to replay.

All text from this file will be used as subsequent TNC input until the file has been fully processed.

The program will then revert back to taking input from the TNC.

5.5.15 [Alt R] - Send FBB Resync

This command will send a re-sync request to your local FBB BBS (as defined by the MyBBS parameter in the WINTNC.INI file).

The program maintains a record of the last header received and this option will send a request to the BBS to send a list of all messages received after that number.

FBB Header Broadcast Facility

5.5.16 [Alt S] - Online configuration

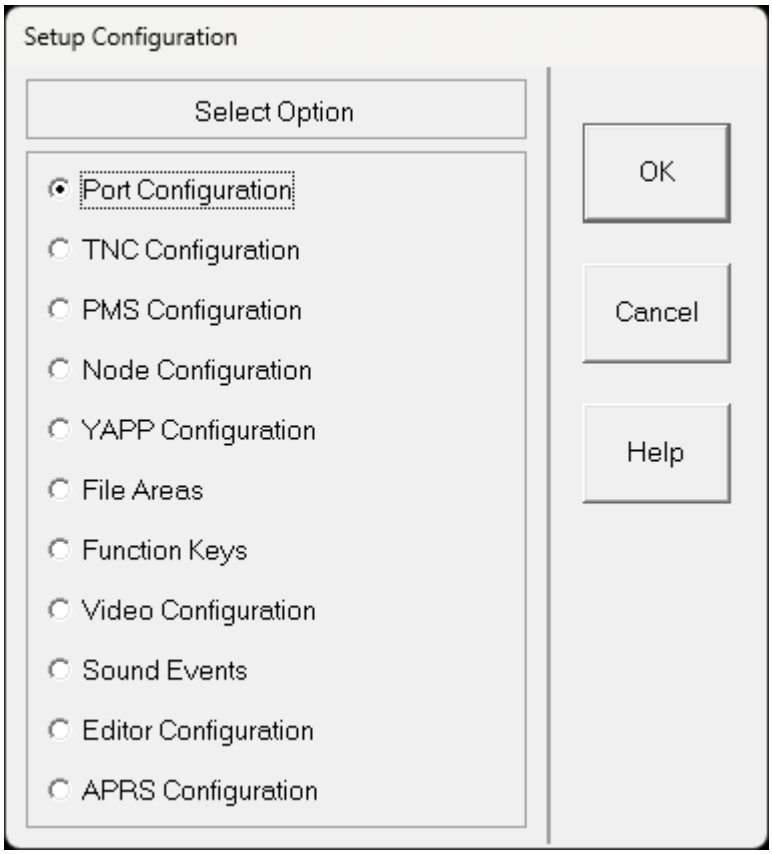
This command is the online configuration option.

To change any of the configuration items, select an entry from the list and click the OK button.

After altering any of the settings, the configuration files WINTNC.INI and TNC.CLR are updated to match the new values.

If you alter any of the settings, you will need to rerun the software for the changes to take effect.

Click on the parts of the box below where  *appears for explanations of features.*



5.5.16.1 Port Configuration

This option configures the hardware ports used by WINTNC.

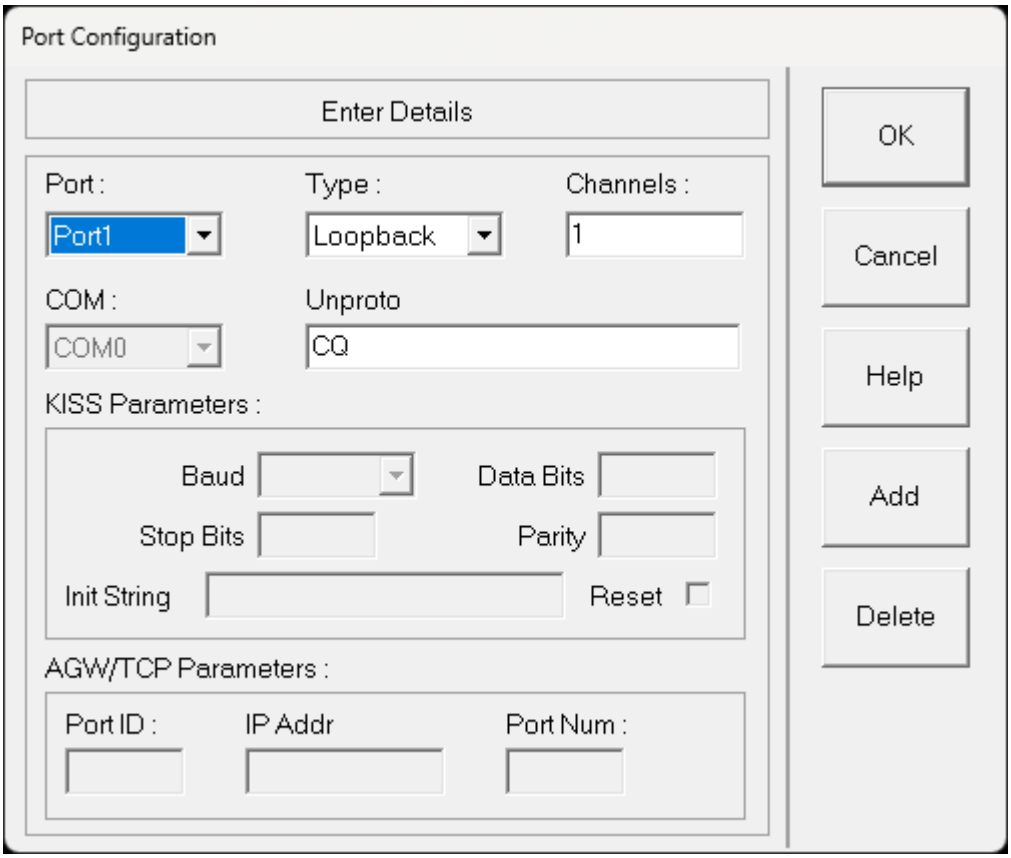
To modify an existing port, select it from the Port list and alter the settings as required.

You can Add a new port or Delete the current port with the appropriate buttons.

Please leave Port 1 as a loopback port or this may cause confusion and issues with the software if it is removed.

If you make any changes, you will need to rerun the software for them to take effect.

Click on the parts of the box below where  *appears for explanations of features.*

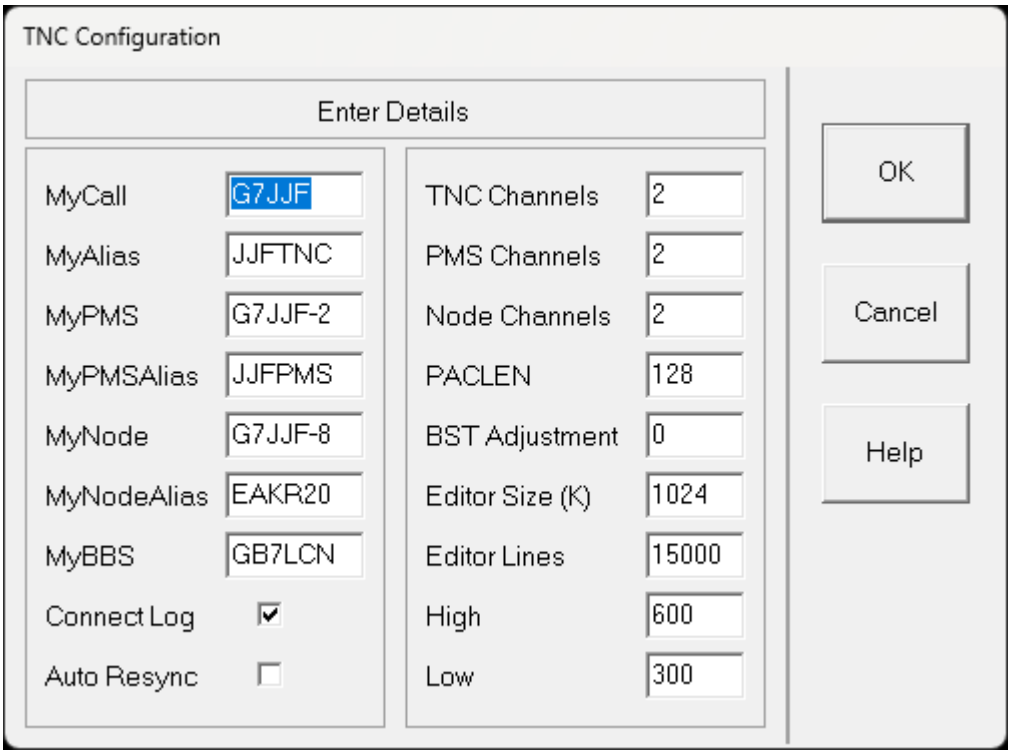


5.5.16.2 TNC Configuration

This option configures various parameters used by the TNC driver.

If you make any changes, you will need to rerun the software for them to take effect.

Click on the parts of the box below where  *appears for explanations of features.*

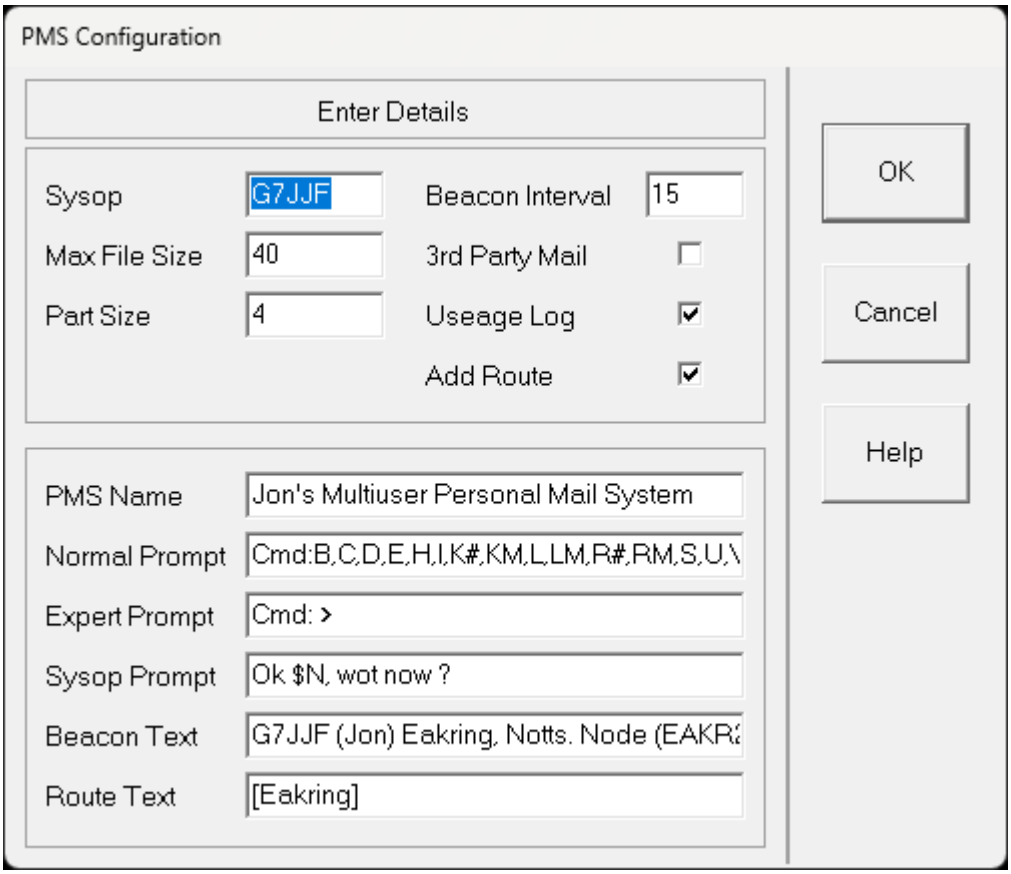


5.5.16.3 PMS Configuration

This option configures various parameters used by the PMS.

If you make any changes, you will need to rerun the software for them to take effect.

Click on the parts of the box below where  *appears for explanations of features.*



5.5.16.4 Node Configuration

WINTNC now includes a telnet server which allows users to connect to your node over the internet without the use of a radio. The connection is protected by a callsign/password combination which the remote user needs to enter correctly before being allowed onto the node. Once the user has connected to the node, he has access to all the facilities of your node including the PMS, Yapp server etc.

You are in control of who is allowed to connect to the node by the use of a user configuration file. This is called **node.usr** and is located in the same directory as the WINTNC.EXE program. This file contains a list of callsigns and passwords and is stored in a comma separated format. A user needs to contact you with their callsign and required password for you to create an entry in the **node.usr** before they can connect.

An example of a **node.usr** file is :

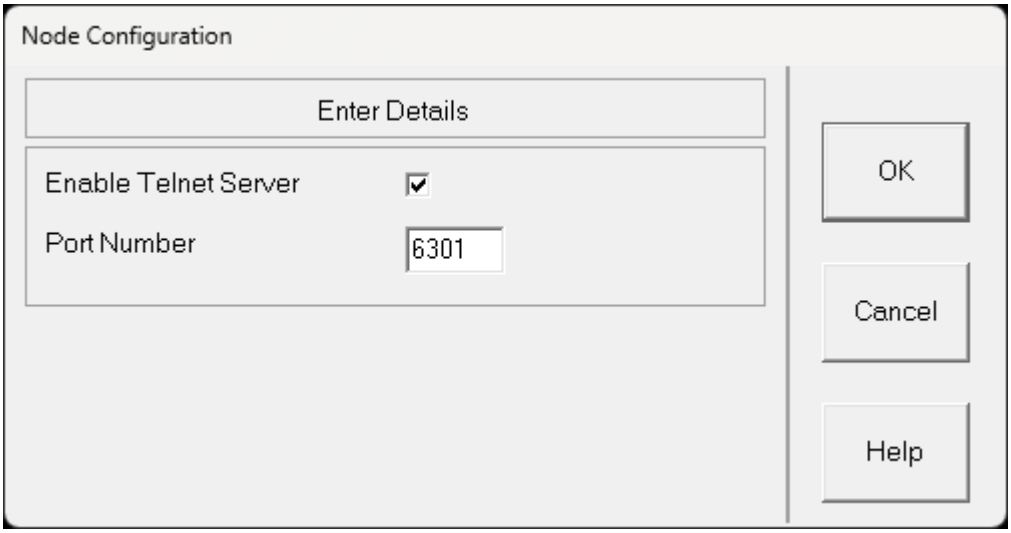
g7jjf,wintnc
g0smp,test
g1abc,hello

This contains three users and their passwords.

If a user tries to connect and provides a wrong password or an unrecognised callsign, WINTNC displays the contents of the **node.reg** file which is again stored in the WINTNC.EXE directory. A typical example of the contents of the **node.reg** file is :

To register for access to G7JJF's node, please send an email with your callsign and registration password to jon@g7jjf.com

To enable the node, you need to go to the Node Configuration option of the Alt-S configuration menu item :



Click the tick box to enable the server and enter the desired port number.

You will also need to allow this port through your computers firewall (if enabled) and also setup port forwarding through your router to the computer running WINTNC. Instructions for this are beyond the scope of this help file as this differs between computer setups.

Once this is all configured and WINTNC is running, a remote user can use a telnet client (such as WINTNC itself or the Windows telnet program) to connect to your node or you can locally connect using the 127.0.0.1 loopback address.

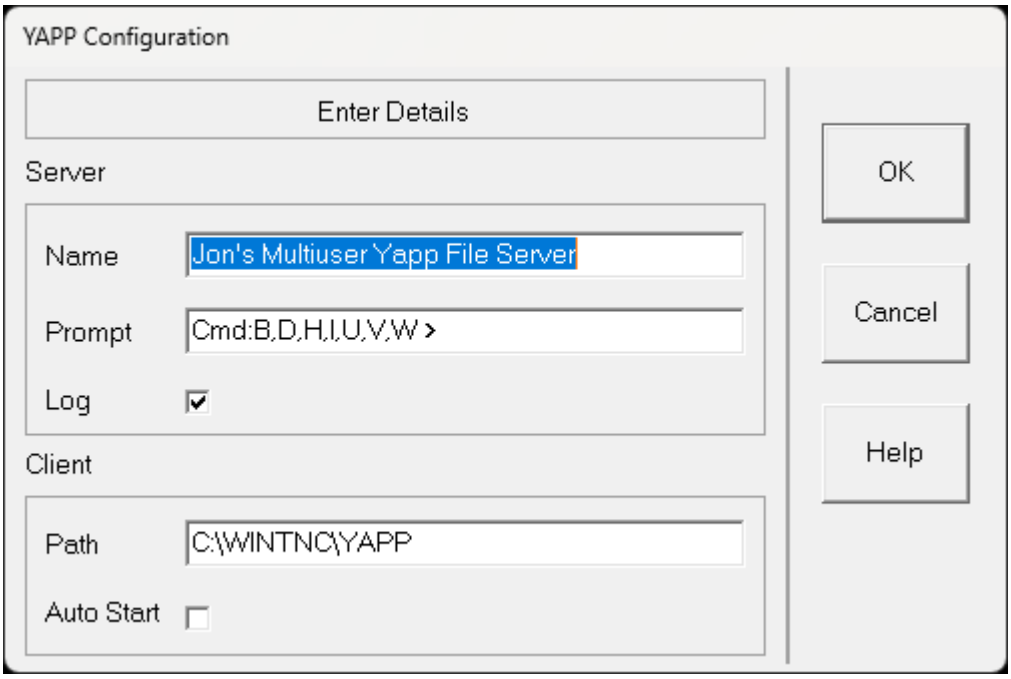
Please remember to disconnect your telnet session once you have finished to allow other users to connect to the node as well.

5.5.16.5 YAPP Server Configuration

This option configures various parameters used by the YAPP File Server.

If you make any changes, you will need to rerun the software for them to take effect.

Click on the parts of the box below where  *appears for explanations of features.*



When testing binary YAPP transfers on various remote systems, it was noticed that some YAPP servers do not automatically retry the initial YAPP enquiry command when performing the download. This has the side effect that you start the yapp download and the server sends the initial enquiry frame. You then have to initiate the YAPP download within WINTNC but the transfer stalls because the remote YAPP servers doesn't timeout and retry the initial enquiry command so nothing happens. The YAPP server within WINTNC has a timeout and retry mechanism on the downloads so this problem doesn't affect WINTNC.

To overcome this, I have added a YAPP autostart option such that if WINTNC detects the YAPP enquiry frame, it automatically goes into the YAPP download routine without you having to initiate it first. The auto routines picks up the YAPP filename from the protocol header packet and stores the received file in the YAPP download directory you configure in the YAPP configuration dialog box shown above.

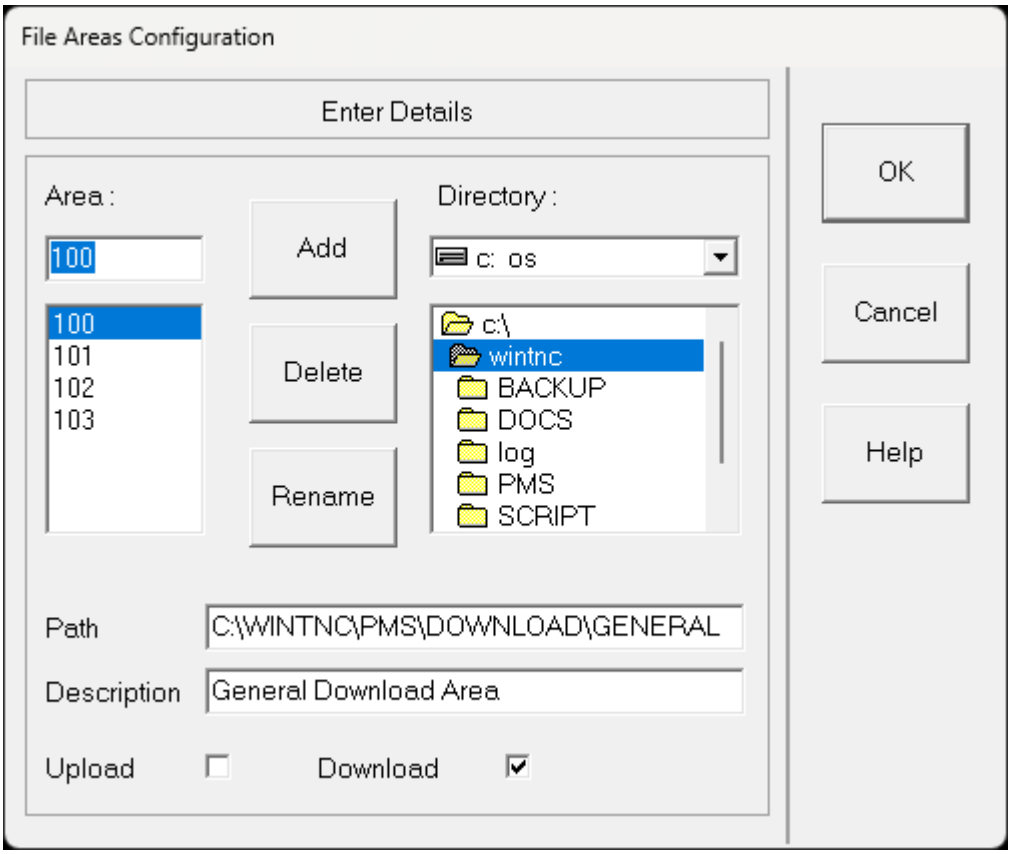
Tick the Auto Start check box to automatically start YAPP downloads, the files are stored in the directory specified (defaulting to the YAPP folder off the main WINTNC directory). Please make sure this directory exists before attempting a YAPP transfer.

5.5.16.6 File Areas

This option configures the file areas used by the PMS and YAPP File Server.

If you make any changes, you will need to rerun the software for them to take effect.

Click on the parts of the box below where  *appears for explanations of features.*

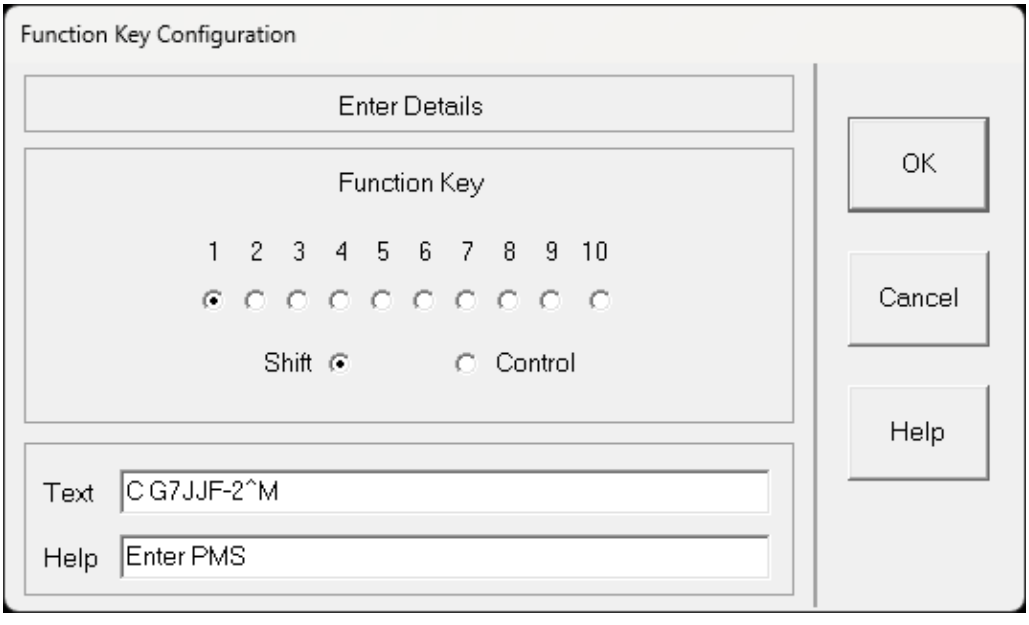


5.5.16.7 Function Keys

This option configures the Shift/Control function keys.

If you make any changes, you will need to rerun the software for them to take effect.

Click on the parts of the box below where  *appears for explanations of features.*

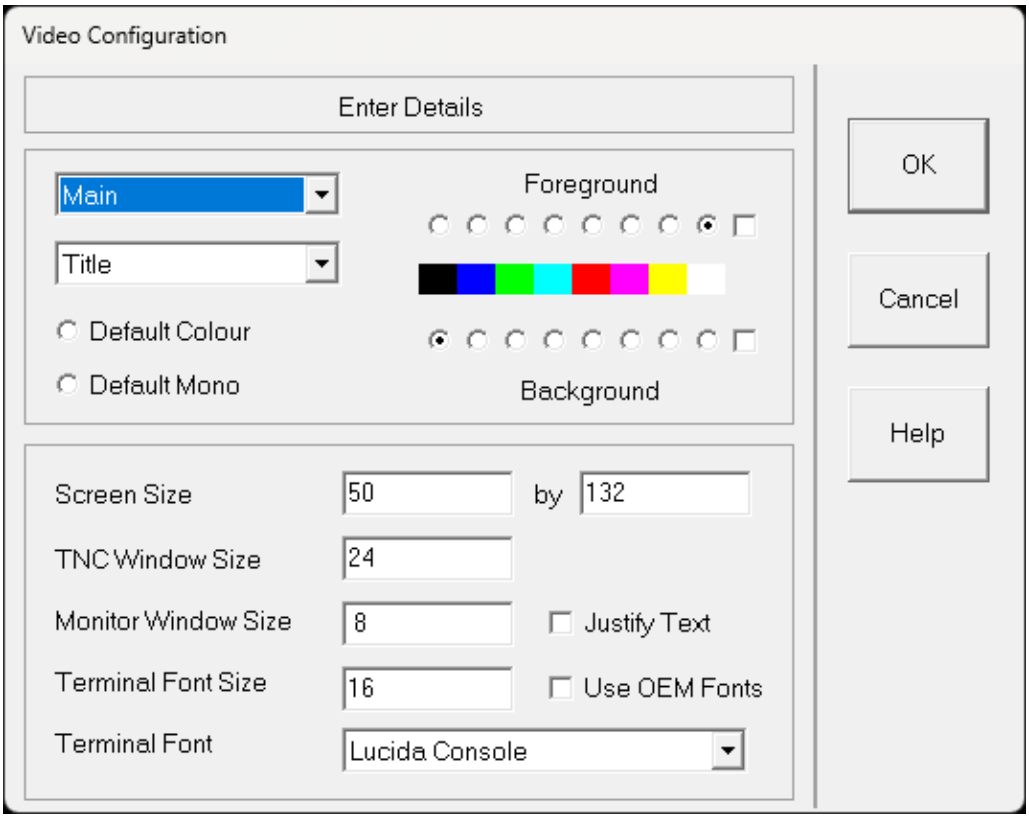


5.5.16.8 Video Configuration

This option configures various video display parameters.

If you make any changes, you will need to rerun the software for them to take effect.

Click on the parts of the box below where appears for explanations of features.

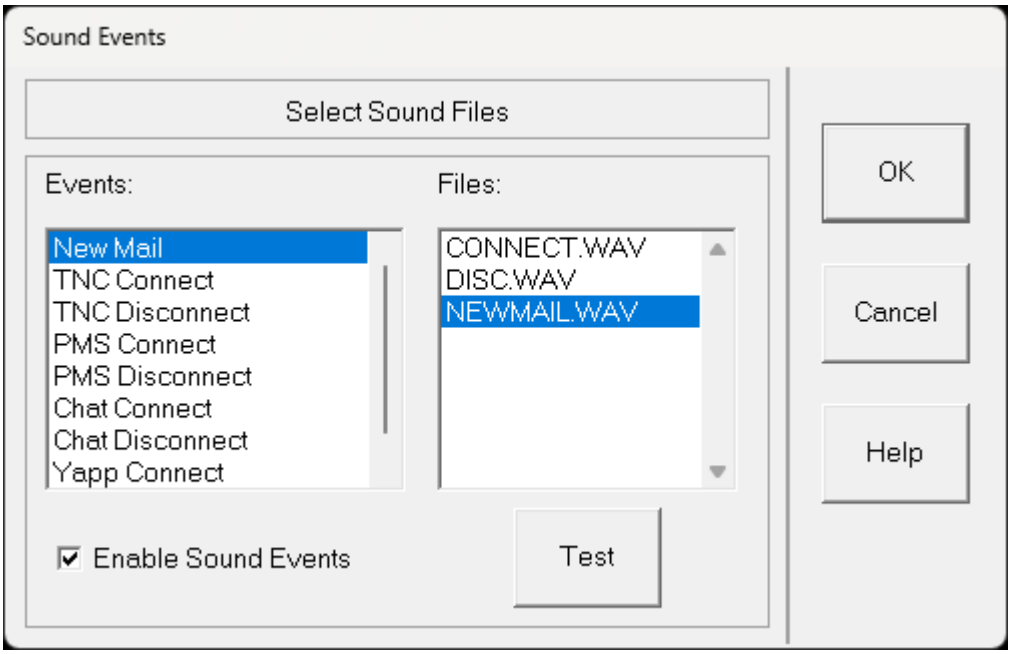


5.5.16.9 Sound Events

This option configures various sound events used by the program.

If you make any changes, you will need to rerun the software for them to take effect.

Click on the parts of the box below where appears for explanations of features.

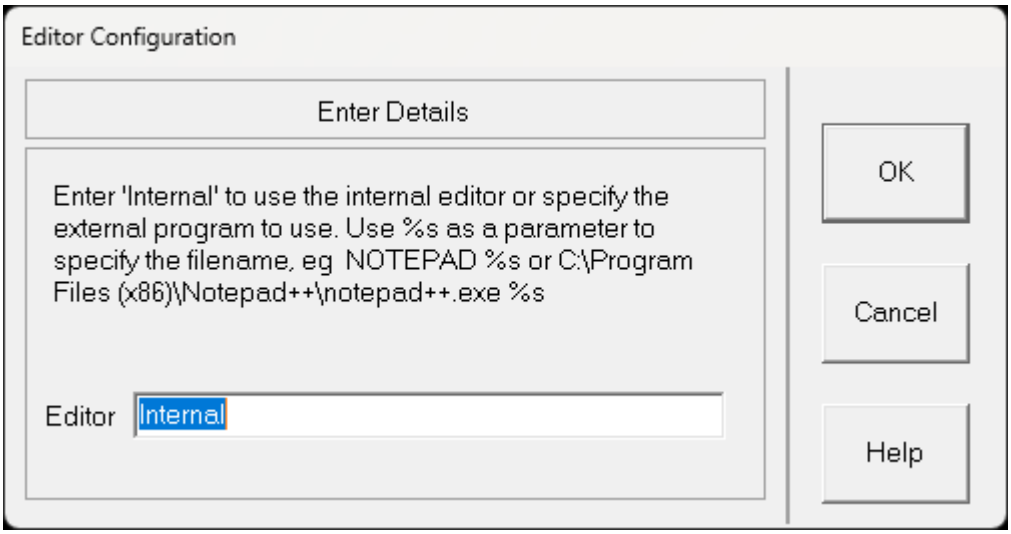


5.5.16.10 Editor Configuration

This option allows you to configure an external editor rather than use the inbuilt editor.

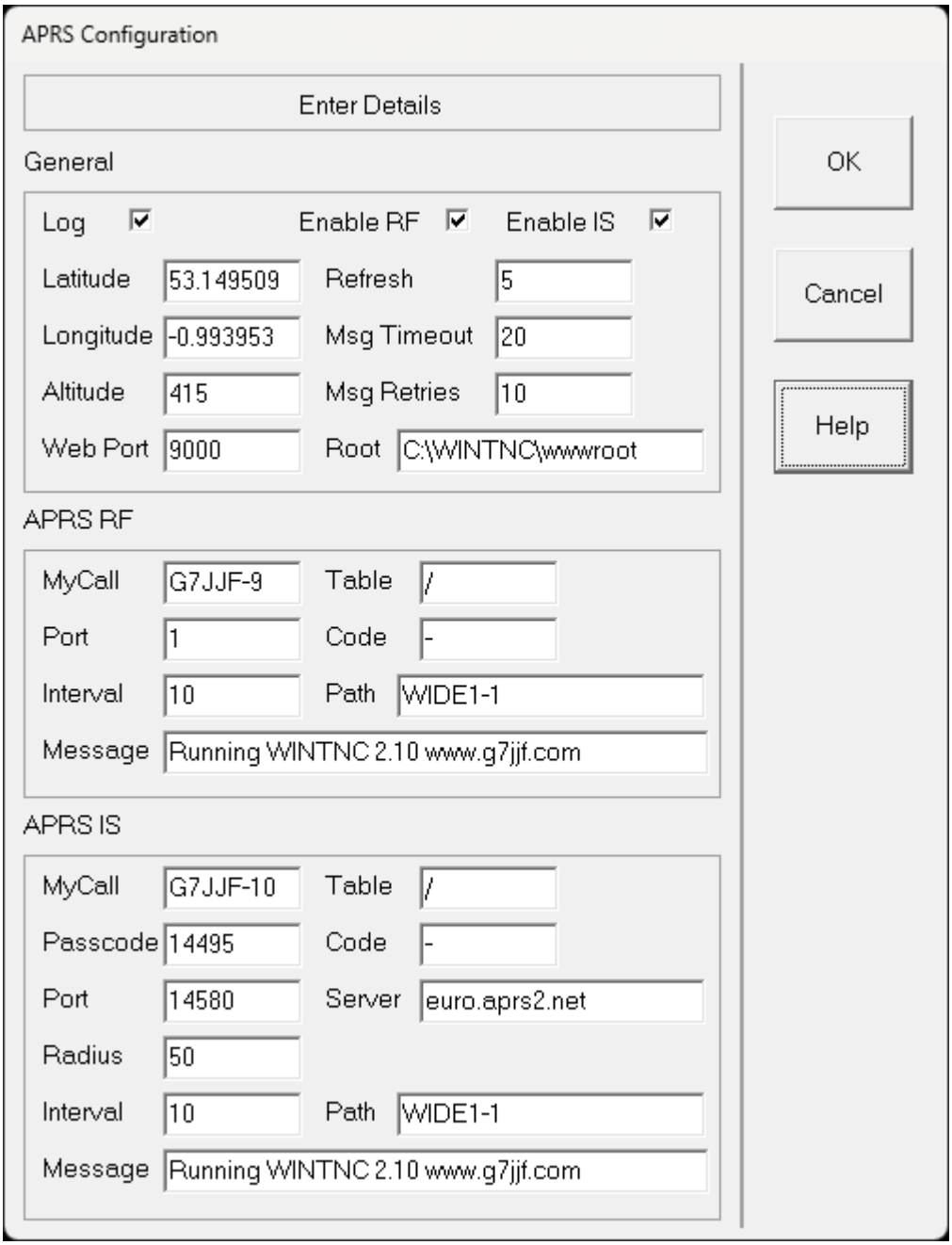
If you make any changes, you will need to rerun the software for them to take effect.

Click on the parts of the box below where  *appears for explanations of features.*



5.5.16.11 APRS Configuration

This option configures all the parameters used by the APRS interface.



This dialog allows editing of the APRS parameters in the WINTNC.INI file which are shown below :

[APRS]	General APRS configuration
Log=Y	Generate APRS debug log file Y or N
EnableIS=Y	Enable APRS IS features Y or N
EnableRF=Y	Enable APRS RF features Y or N
Lat=53.149509	Latitude of QTH
Lon=-0.993953	Longitude of QTH
Alt=415	Altitude of QTH
Refresh=5	Time in seconds to refresh APRS monitor window
MsgRetries=10	Number of retries when sending APRS messages
MsgAckTimeout=20	Timeout in seconds for received APRS message ACK

WebPort=9000	Port number of internal APRS Web Server interface
WebRoot=C:\WINTNC\wwwroot	Root directory where APRS Web Server files are stored
[APRS-IS]	APRS Internet Server configuration
MyCall=G7JJF-10	Callsign to connect to APRS IS Server
Password=xxxxx	Passcode to connect to APRS IS Server
Server=euro.aprs2.net	Internet address of APRS IS Server
Port=14580	Port number to connect to on APRS IS Server
Radius=50	Radius of APRS information to receive from server
Path=WIDE1-1	Outgoing path for APRS beacons
Message=Running WINTNC 2.10 www.g7jjf.com	APRS beacon text
IDInterval=10	Interval in minutes for sending APRS beacon
SymbolTable=/	APRS symbol table to use for location ICON
SymbolCode=-	APRS symcol code to use for location ICON
[APRS-RF]	APRS RF Configuration
MyCall=G7JJF-9	Callsign for beacon's
Port=1	Hardware TNC port to send beacons through
Path=WIDE1-1	Path for beacon
Message=Running WINTNC 2.10 www.g7jjf.com	APRS beacon text
IDInterval=10	Interval in minutes for sending APRS beacon
SymbolTable=/	APRS symbol table to use for location ICON
SymbolCode=-	APRS symcol code to use for location ICON

The configuration is split into three sections. The first defines general APRS parameters with the remaining two sections defining the parameters specific to the RF and IS interfaces.

Most parameters are self explanatory but a bit more explanation may be needed for several.

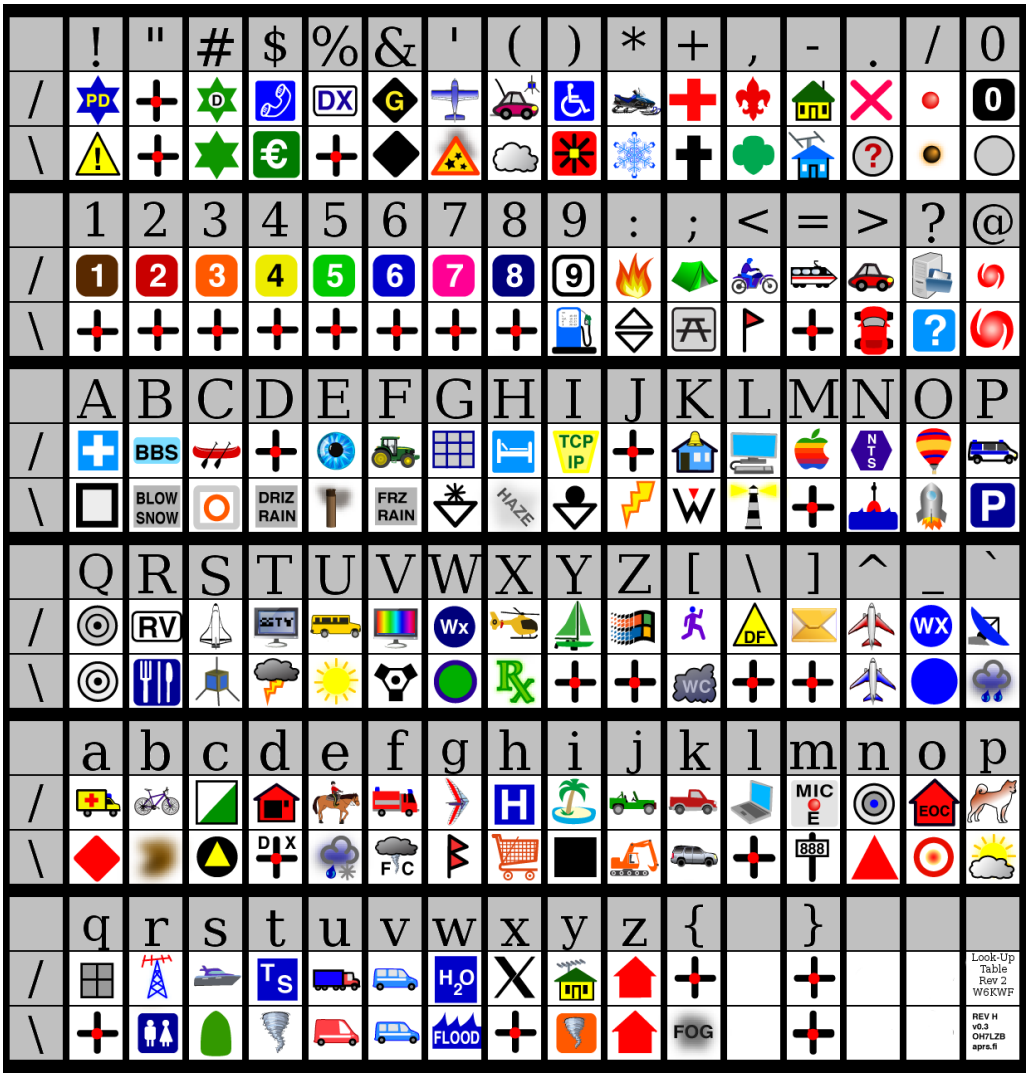
To access the APRS-IS server, you need a passcode. This is unique to your own callsign and can be obtained from various sites on the internet such as APRS Passcode Generator. The passcode received must be entered in the Password parameter of the APRS-IS section above along with your matching callsign. When requesting a passcode, don't include any SSID, just enter your basic callsign, eg G7JJF.

You will also need to enter an APRS-IS server address to connect to and its port number. The port is usually 14580 but the server address will be different depending which part of the world you live in so please check out the APRS Servers list and select one nearest to you. For reference, the current list shows :

Worldwide	rotate.aprs2.net
North America	noam.aprs2.net
South America	soam.aprs2.net
Europe/Africa	euro.aprs2.net
Asia	asia.aprs2.net
Oceania	aunz.aprs2.net

For more information of the Path settings, I would refer you to the internet links on the previous page but WIDE1-1 should be suitable for home stations running WinTNC. The RF link may require a path of WIDE1-1,WIDE2-1 in order to digipeat their beacons further afield but I don't have the means of testing this out.

The symbol table and symbol code characters refer to the icon which will be displayed against your callsign on interactive APRS maps. You can use the following diagram as a reference should you wish to change your displayed icon. The config above shows a symbol table of '/' and a symbol code of '-' which matches the house icon towards the end of the top row of icons. Be aware that not all APRS web sites use exactly the same icon symbols as shown so things like colour may vary but the meaning of the icon should be the same.



5.5.17 [Alt T] - Send DD-MON-YY HH:MM:SS

This command will send the sequence :

DD-MON-YY HH:MM:SS

to the TNC and is useful for date/time stamping messages when connected to another user.

5.5.18 [Alt U] - Encode/Decode File

This command is used to encode and decode files conforming to the UUcode protocol or 7PLUS protocol.

UUCode File

7PLUS File

5.5.18.1 UUCode File

This command is used to encode and decode files conforming to the UUcode protocol.

The encoder can split the source file into any number of smaller file sections and the decoder can subsequently merge any number of consecutive file sections into the original source file.

Selecting the encode option will ask you for the source filename, the destination file and the size of each encoded section. You must not enter a file extension since the protocol will automatically add an extension starting at .U01 and incrementing by one for each section of the encoded file. You will also be asked for the size of each encoded section. This will default to 4K (4096 bytes) but you can alter this to any size you wish. However, it is advisable to keep the value low to avoid sending large amounts of data over the packet airwaves. The resulting encoded file(s) will be stored in the current directory.

Selecting the decode option will ask you for the filename of the first file section and you must specify the full filename including the extension. The initial file is assumed to have an extension containing either a 01 or 1, eg .U01 or .UU1. The program will proceed to generate the original file merging together all the necessary file sections which must be present in the same directory. If any file sections are missing or any of the files are invalid an error will be produced. The resulting encoded file(s) will be stored in the current directory.

5.5.18.2 7Plus File

This command is used to encode and decode files conforming to the 7Plus protocol.

The encoder can split the source file into any number of smaller file sections and the decoder can subsequently merge any number of consecutive file sections into the original source file.

Selecting the encode option will ask you for the source filename, the file section size and the file end string. The encoded files(s) will be generated and stored in the current directory. Single encoded files will have the extension .7PL whereas multiple files have the extension .P01 and increment to .PFF as necessary.

Selecting the decode option will ask you for the source filename and the file end string. The program will generate the original file by merging together all the necessary file sections which must be present in the same directory. If any file sections are missing an error will be produced. If all goes well, the decoded file will be written to the current directory.

7Plus Encoding

5.5.18.2.1 7Plus Encoding

The program supports an option to encode and decode files conforming to the 7PLUS protocol which was designed by Axel Bauda DG1BBQ of Germany to whom I am grateful for putting the source code into the public domain which makes it possible for me to incorporate it into my software.

The encoder can split the source file into any number of smaller file sections and the decoder can subsequently merge any number of consecutive file sections into the original source file.

The advantages of 7PLUS encoding/decoding is that the protocol can detect and automatically correct single character errors in transmission and also generate 'error files' and 'correction files' which allow you to only re-send the parts of file that were corrupted in transmission rather than the whole file again.

To encode a file, use the Alt U option and select Encode 7Plus File. You will then be asked for the source filename, the file section size and the file end string. You can of course use the browser to select a source file by entering a wildcard file spec.

If the source file is larger than the file section size, the encoded file will be split into portions, each approximately the file section size in length. This will default to about 4K but you can alter this to any size you wish. However, it is advisable to keep the value low to avoid sending large amounts of data over the packet airwaves. The file end string will be appended to each file section and will default to '/ex' which is useful when uploading the files to a BBS. However, you can delete this out if required.

After entering all the data, the encoded file(s) will be generated. They will be stored in the current directory, ie the one from where the program was run or the last directory chosen from the browser if appropriate. If the encoding process only resulted in a single file, it will have an extension of .7PL. However, if multiple files were generated, the extensions will start at .P01 and increment in hex upto .PFF.

To decode a file, use the Alt U option and select Decode 7Plus File. You will then be asked for the source filename and the file end string. You can of course use the browser to select a source file by entering a wildcard file spec. Select the .7PL file if there is only one section or the .P01 file if there are multiple sections. The program will proceed to generate the original file merging together all the necessary file sections which must be present in the same directory. If any file sections are missing an error will be produced. If all goes well, the decoded file will be written to the current directory.

If any errors were detected in the decoding process, the program will either automatically correct them if it can or generate an 'error file' called '<source_filename>.err'. You can then send this file to the originator of the file to obtain the corresponding 'correction file'.

After receiving the 'correction file' back from the originator, to correct your files, you must select the Decode File option again and put <source_filename>.cor as the source filename. This will correct your files ready for decoding once more. If the original corruption was bad, further error files may be produced and you will have to repeat the above process until all errors are removed. You can combine the above correction, decoding procedure be specify the source filename without an extension. If the file with the .cor extension exists in the current directory, the program will automatically perform the correction and decoding in one step.

If after uploading a 7PLUS encoded message to a BBS, a user sends you an 'error file' due to message corruption, you will need to generate a correction file for him. This is done by choosing the 'Generate Correction File' off the Alt U menu. You will be asked for the source filename, the error filename and the file end string. This source filename must be the same as the original file you uploaded. The error filename will be the one sent from the user and you can of course use the directory browser to select it. The file end string is again optional and will be appended to the resulting correction file. After entering all the data, the program will generate the correction file called <source_filename>.cor which you can then send to the user to correct his file corruption.

If several users send error reports, you can combine them together and produce a single correction file for both users. This is done by choosing the 'Join Error Reports' option from the Alt U menu. You will be asked for the source filename and the second filename. Specifying both filenames will merge the second file into the source file. If you leave the second filename blank, the program will look for <source_filename>.e01 and join it to the source file, then look for <source_filename>.e02 and so on.

Finally, to aid extracting separate 7PLUS files from a capture log, you can choose the final option from the Alt U menu which is called 'Extract File'. You will be asked for the log filename and a search string. If you leave the search string blank, all 7PLUS from the capture log will be extracted and placed in the current directory. If you specify a search string however, only those files containing the search string in their filename will be extracted.

5.5.19 [Alt X] - Exit program

This command will exit the program.

You will be given the chance to confirm your actions before the program exits.

This command must be issued from a terminal driver window in order for the software to shut down correctly.

5.5.20 [Alt Z] - Toggle Full Screen

This command will make the program display all input/output to a single full screen window rather than two separate windows for user input and TNC output.

Personal Mail System

6 Personal Mail System

Included in the WINTNC driver program is an integrated Personal Mail System. It includes all the normal BBS facilities for message sending, YAPP/ASCII file upload and downloads, mail forwarding, 'Mail For' beacon, chat mode, C_FILTER, M_FILTER, external mail servers including REQDIR, REQFIL, REQMSG etc and external program servers.

Due to the current licensing conditions in the UK, it also disallows third party mail by only accepting incoming mail for the Sysop. However, the Sysop can send mail to anyone. Other countries may allow third party mail so this facility is configurable.

The configuration for the PMS is stored in the WINTNC.INI file.

6.1 Setting Up The PMS

There is very little to do in setting up the Personal Mail System.

If you have not done so already, create your file areas and configure the PMS accordingly.

You may also want to customise the main help file PMS.HLP, the ? help files HELP\PMS.xxx and the info file PMS.INF

You can create an optional 'Message of the Day' file. This is a plain ASCII text file which is dumped to the user when they log on. This must be called PMS.DAY and is stored in the PMS directory. You can alter the contents of this file as often as you wish.

For all your file areas, you can also create an optional 'area information' file. Again, this is a plain ASCII text file, must be called <area>.INF where <area> is the name given to the area in the WINTNC.INI file and stored in the directory AREAINFO. When the user issues a 'W <area>' command, the <area>.INF file is also displayed below the header line and before the list of file names. This feature can be used to tell the user, for example, that all files in the area are .ZIP files and must be decompressed with PKUNZIP before use.

If you want to bar anyone from your PMS, you may create the file PMS.BAD which is an ASCII text file containing one callsign per line which cannot access the PMS. You can either specify a full callsign or part of a callsign. If you specify only a part of it, any callsign trying to access the PMS which starts with the callsign you specified will be denied access.

The PMS can also operate as a closed system whereby only callsigns you specify are allowed access to the PMS. If you create an ASCII text file called PMS.OK containing one callsign per line, only those callsign may access the PMS. You can either specify a full callsign or part of a callsign. If you specify only a part of it, only callsigns which starts with the callsign you specified will be allowed access.

If you wish to force users to enter a password before entering the PMS, you will need to configure to C_FILTER program.

If you require automatic mail forwarding, you must also create the mail forwarding script files as discussed under the script file section and amend the TNC.TIM file to run the forwarding files at the required times.

If you want other users to be able to reverse forward mail you may need to create a forward file list for them. This is simply a file containing a list of subject matters (one per line) which interest the user. These are then called '<call>.lst' and are stored in the PMS\FORWARD directory.

eg. if G7JJF wanted to be able to reverse forward messages relating to DANPAC, TCPIP, IBM, you would then create a file called G7JJF.LST which contained :

DANPAC
TCPIP
IBM

Any message that was addressed either to or at any of the above subjects would then be considered for forwarding if the particular message had not been read or forwarded already.

If no forward list file exists for a particular user when they try to reverse forward mail, they will only receive messages addressed to their callsign.

The final operation to perform is to log on locally for the first time and identify yourself as the Sysop of the PMS.

6.2 Logging On To The PMS

The PMS can be accessed in one of four ways.

The first is by using the Alt O function to log on locally as the Sysop.

The second is for other users to log on. This is done by the remote user connecting to your node then typing CHAT. If you are about, you can have a normal QSO but if not, the user can then type 'PMS' (or 'BBS') to enter the mail system. You may wish to alter your PMS.CT file (which contains your CTEXT information) to inform the user of this, eg.

If I do not reply within 30 seconds, please type PMS
to enter my Personal Mail System.

Because you may want a small initial chat to tell the user about your new PMS, the PMS will only be accessed if the remote user types PMS on a blank line within the first five lines that he types.

The third way for a user to log on is to connect to the node and type PMS.

The final way to access the PMS is for someone to connect direct to your PMS callsign (or PMS callsign alias). Using either of these last two methods, the user will be taken straight into the PMS system.

6.3 Using The PMS

After the user logs on to the PMS, one of four things may happen.

1. If the users callsign is one contained in the PMS.BAD file, he will be told that he cannot access the PMS and will be logged off. If the PMS.OK file is being used and the users callsign is not contained in it, he will be told that he cannot access the PMS and will be logged off.

2. If the user has been excluded from the PMS with the EU <call> E command, he will be told that he has been excluded from the PMS and will be logged off.

3. If you are operating the C_FILTER program and the user has been allocated a password, he must enter the correct password before being allowed into the PMS.

4. The user will be welcomed to the PMS !

If it is the first time the user has called the PMS, he will be asked to enter his name (it must be at least three characters long).

The user will then be shown some systems statistics before being given the command prompt.

All the time the remote user is logged onto the PMS, the Sysop still has control over the keyboard when switched to the channel the user has connected on. This means that the Sysop can enter commands as though they were coming from the remote user. This can be used to guide new users through the PMS by showing them what commands do what, or the remote user can be logged off if he mis-uses the PMS etc.

Whilst the user is in the PMS, you will see on screen exactly what the remote user is seeing. The PMS window operates in split screen mode so the users commands will appear in the bottom window with the PMS output in the top window.

A user can be given one of three different levels.

A normal user and expert user have the same command privileges but the expert user can have a different command prompt as configured by the Sysop. The expert/normal user status can be altered by the user.

The third level is the Sysop level. The sysop has access to more commands used for maintaining the PMS and also a different command prompt (if configured).

6.4 Commands In The PMS

Index of PMS commands

6.4.1 @ - Enter sysop mode

If a user has been configured as a sysop, he may enter sysop mode with this command. Please note that a sysop logging into the system remotely (including you !) does not gain access to the sysop facilities until he uses the @ command. This is to stop people borrowing your own callsign and wrecking havoc on your system.

After entering the @ command, the user will get back three lines of numbers from which he must choose one line and use it to decode the password. The password string he uses is the one you generated for him using the EU <call> P command. To enter the password, for each of the eight numbers in the chosen line, the users counts up to that character in the password string (starting at 0 being the first character) and enters it. After typing all 8 characters and pressing return, if the user got the password correct he will enter sysop mode. If the user got the password wrong, he will stay as a normal user on the PMS.

6.4.2 *DOS Commands

***DIR (directory)(filespec)** - Display file directory

This command will display the files in the current or specified directory which match the optional filespec (defaulting to *.*)

***TIME (HH:MM:SS)** - Set or display the computers time

With no parameter, this command will display the current system time of the computer. Specifying a time will set the computers time to that required.

***DATE (DD-MM-YY)** - Set or display the computers date

With no parameter, this command will display the current system date of the computer. Specifying a date will set the computers date to that required.

The format of the displayed date and the format in which you must enter a new date to change it will depend on your country and should default to your normal method of entering dates.

***CD (directory)** - Set or change the current drive/directory

With no parameter, this command will display the current logged on drive and directory of the computer.
Specifying a directory (with optional drive specifier as well) will set the computers current directory to that required.

***MD <directory>** - Create a new directory

This command will create the specified directory on the computer if it can.

***RD <directory>** - Remove a directory

This command will delete the specified directory on the computer if it can.

***TYPE <filename>** - Display a file on-screen

This command will display the contents of the specified ASCII file on screen. Remember that you can still use the A (abort listing) command to stop the screen output if you wish.

***DEL <filename>** - Delete a file

This command will delete the specified file on the computer if it can. Please note that you cannot use wildcard here and only single files can be deleted at a time.

***REN <oldfile> <newfile>** - Rename a file

This command will rename the specified file on the computer to the new filename given. With this command you can also rename the file to a different directory on the same drive but not onto another drive. Please note that you cannot use wildcards here and only single files can be renamed at a time.

***COPY <oldfile> <newfile>** - Copy a file

This command will copy the specified file on the computer to the new filename given. Please note that you cannot use wildcards here and only single files can be copied at a time.

***HELP** - Display DOS command help summary.

This will display a summary of the above commands on screen and give you the syntax for each of them for reference.

6.4.3 A - Abort

The current listing being received from the PMS will be aborted and the user will be returned to the command prompt.

6.4.4 B - Log off the PMS

This command will log the user off the PMS.

Disconnecting has the same effect.

The 'Mail For' beacon will also be updated.

6.4.5 C - Chat to Sysop

If the 'Sysop Available' toggle is active (Alt F9), the sysop will be paged by the bell ringing once a second for thirty seconds. If the sysop is around, he can switch to the correct PMS channel and start typing at the keyboard to chat to the remote user. If the sysop does not reply within the thirty seconds, or the 'Sysop Available' toggle is inactive, the remote user will be told the sysop is unavailable and he will be given the opportunity of sending him a message instead. Either the user or the sysop can press Ctrl Z when finished with the chat to return to the PMS.

This command is not available in local mode

6.4.6 CM - Copy message

CM <message num> <callsign>

This is used to copy a message to another user without retyping it in. Sysops can copy a message to anyone but users can only copy messages to the sysop. The user will be asked for a new subject but the content of the message will remain unaltered.

eg. CM 5 G7JJF

6.4.7 DA - Download ASCII file

DA <area> <file>

This is used to download a file using ASCII transfer. The area can be up to a four character string as defined by the sysop in the WINTNC.INI file.

eg. DA 1 HELP.TXT

6.4.8 DS - Display PMS stats

This will display several stats about the PMS, eg number of users, active messages, who is currently using the PMS, what channel they are connected on and what operation they are currently performing etc.

6.4.9 DU - Display User stats

DU (callsign)

This will display stats about users of the PMS, eg. callsign, name, homebbs, number of times called etc.

If you include the optional callsign parameter, only the stats about the individual user will be displayed otherwise all users of the PMS will be displayed.

eg. DU G7JJF

6.4.10 DY - Download YAPP file

DY <area> <file>

This is used to download a file using YAPP transfer. The area can be up to a four character string as defined by the sysop in the WINTNC.INI file.

eg. DY 1 HELP.COM

This command not available in local mode

6.4.11 EH -Edit homebbs

EH <homebbs>

This will change the home bbs of the current PMS user.

eg. EH GB7MAM.#23.GBR.EU

It is important to set the homebbs for yourself if you intend to do mail forwarding as this is used in the routing line to identify the return path for your mail.

6.4.12 EM - Edit message

EM <num> U - Make unread

This will make the status of the message unread, ie. it will appear on a RM command, etc.

eg. EM 1 U

EM <num> R - Make read.

This will make the status of the message read, ie. the same as reading the message.

eg. EM 1 R

EM <num> F - Make forwarded.

This will make the status of the message to have been forwarded, ie. it will not be COLLECTed in the forwarding script file.

eg. EM 1 F

EM <num> N - Make not forwarded.

This will make the status of the message not to have been forwarded, ie. it will be COLLECTed in a forwarding script file.

eg. EM 1 N

EM <num> A - Make alive.

This will reverse the affect of the kill message command.

eg. EM 1 A

EM <num> K - Make killed.

This is the same as the kill message command.

eg. EM 1 K

EM <num> P - Toggle private/public status of message

If the message was originally a private one, this will toggle to make it accessible to the public and vice versa.

eg. EM 1 P

EM <num> S - Set next message number

This command sets the next message number to the one you specify. You cannot set it below a message number that already exists in the PMS unless the PMS is empty.

eg. EM 100 S

EM <num> < <callsign> - Sets from callsign of message

This command alters the 'from' callsign of the message to a different callsign.

eg. EM 100 < G7JJF

EM <num> > <callsign> - Sets to callsign of message

This command alters the 'to' callsign of the message to a different callsign. It will be most probably used to re-forward a message onto a different BBS if a PMS mail server cannot detect the return address for a message. You will manaually need to alter it.

eg. EM 100 > G7JJF @ GB7MAM.#23.GBR.EU

EM <num> T <new subject> - Alters the subject line of message

This command alters the subject line of a message to the new subject specified by the command.

eg. EM 100 T New Title

6.4.13 EN - Edit name

EN <name> (H <homebbs>)

This will change the current PMS users name and optionally his home bbs.

eg. EN Jon

or

EN Jon H GB7MAM.#23.GBR.EU

6.4.14 EU - Edit user

EU <call> N <name> (H <homebbs>) - Create/Edit user

This is used to create a new user or edit the details of a current PMS user. You can specify his name and optionally, his home bbs.

eg. EU G7JJF N Jon

or

EU G7JJF N Jon H GB7MAM.#23.GBR.EU

EU <call> H <homebbs> - Create/edit user.

This is used to create a new user or edit the details of a current PMS user. You need to specify his home bbs.

eg. EU G7JJF H GB7MAM.#23.GBR.EU

EU <call> D - Delete user.

This is used to delete a PMS user. You cannot delete yourself (ie the first user in the PMS system)

eg. EU G7JJF D

EU <call> B - Toggle BBS status

This is used to toggle the status of a user between being a BBS and not being a BBS. This is used to allow a BBS to enter the PMS from a connect without typing the PMS string and going straight into the mail transfer routines.

eg. EU GB7MAM B

EU <call> S - Toggle sysop status

This is used to toggle the status of a user between sysop level and non sysop level. Use with caution since anything you can do, a remote sysop user can also do.

eg. EU G7JJF S

EU <call> X - Toggle expert status

This is used to toggle the status of a user between expert user and normal user. At the moment, the only difference between an expert user and a normal user is that they get different command prompts as defined in the WINTNC.INI file.

eg. EU G7JJF X

EU <call> P - Generate Password

This is used to generate a password for a user in order to enter sysop mode. The password is unique to each user and is sent to a disc file called <callsign>.pwd in your PMS directory. You should then make the user aware of this password then delete the password file since it is no longer needed. The same password will be generated for each user every time this command is used.

eg. EU G7JJF P

EU <call> E - Toggle exclude status

This is used to temporarily exclude a user from the PMS if he misbehaves for example. The user record is still maintained on the PMS and you can reinstate the user by issuing this command again. You cannot exclude yourself with this command.

eg. EU G7JJF E

6.4.15 F - Convert message to file

F(V) <num> <area> <filename>

This is used to convert a mail message to a named file in a particular file area. The area can be up to a four character string as defined by the sysop in the WINTNC.INI file. If the optional V parameter is added as well, the message routing information is stored in the file as well.

eg. F 4 123 GAME.BAS

6.4.16 H - Display help file

This command will display the PMS\PMS.HLP file if one exists.

6.4.17 ? - Display command help

? <command>

This command will display the PMS\HELP\PMS.<command> file if one exists.

eg. ? LM

6.4.18 I - Display info file

This command will display the PMS\PMS.INF file if one exists. Use it to show your stations hardware/software configuration and anything else you may wish to tell the user.

6.4.19 J - Show MH list

J (port)

This command will display a list of the last 20 callsigns and the date and time they were heard.
If the option port parameter is specified, only those callsigns heard on the port will be displayed.

6.4.20 K - Kill messages

K <num> - Kills message.

This will kill a message if it exists. Users can only kill message either sent to them or sent from them.

eg. K 327 Kills message number 327.

KM - Kill my mail.

This will kill all mail addressed to you that you have read.

K 0 - kill all message base (sysops only).

This command will delete all the messages in the system. They cannot be recovered after being deleted.

6.4.21 L - List messages

L (<num> <num>) - Lists messages.

This will list all messages in reverse order, ie. newest to oldest which you can read. If two message numbers are optionally specified, only those messages between the two limits will be listed.

LL <num> - Lists last messages.

This will list the last <num> messages in reverse order, ie. newest to oldest which you can read.

LM - List Mine.

This will list all messages addressed to you.

LK - List killed. (sysops only).

This will list all messages that have been killed. Individual messages can be recovered by using the EM <num> A command.

L< <callsign> - List messages from user.

This will list all messages that are addressed from the user you specify which you can read.

L> <callsign> - List messages to user.

This will list all messages that are addressed to the user you specify which you can read.

6.4.22 R - Read messages

R <num> - Read message.

This command will read a message.

eg. R 325 reads message 325

RK <num> - Read killed message (sysops only).

This command will read a killed message.

eg. RK 325 reads killed message 325

RM - Read Mine.

This command will read all your unread messages.

RA - Read all messages.

This command will read all messages that you are allowed to read.

NOTE - In any of the above four read commands, if the R is replaced with a V, the equivalent read command is performed but a verbose listing of the message routing information is displayed as well.

6.4.23 S - Send message

S <call> - Same as SP <call>

SP <call> - Send personal message to station <call>.

This is used to send a personal message to another user. The PMS will prompt for the message title and then for the message text. The text entry is ended with a ctrl-Z or /EX. Only the user who sent the message or the recipient of the message can read it (as well as Sysops of course).

eg. SP G7JJF

SB <call> - Send bulletin to station <call>.

This is used to send a bulletin to another user. The PMS will prompt for the message title and then for the message text. The text entry is ended with a ctrl-Z or /EX. Normal users can only mail the sysop but a sysop can mail to anyone (including ALL) if the third party mail option is disabled otherwise anyone can send mail to anyone. Anyone can read a bulletin message.

eg. SB ALL

SR - Send reply to last message you read.

This will send a message to the user who wrote the last message you read. It will automatically address the message to the user @ his home bbs as found in the user

database and retain the same subject title as before. You then enter the message text as described under the S command above.

eg. SR

SPR - Send personal reply to last message you read.

This will send a personal message to the user who wrote the last message you read. It will automatically address the message to the user @ his home bbs as found in the user database and retain the same subject title as before. You then enter the message text as described under the S command above.

eg. SPR

6.4.24 SM - Send online message

SM <channel> <msg>

This command allows a logged on user to send a single line message to another user who is currently logged into the PMS. The <channel> is the channel number of the other logged on user as shown in the DS command and <msg> is the message he wishes to send. A sysop can also specify ALL for <channel> and will send the message to all logged on users.

eg. SM 1 Hi Ian

would send a message to the user logged onto channel 1 and display on his screen the following next time the command prompt was also displayed :

From Jon (G7JJF) Port 6 : HI IAN

6.4.25 T - Tidy message base

This will remove all killed messages from the system. They cannot be recovered after being deleted. If you have created the OLDMAIL directory under the PMS\MAIL directory, the killed message will be archived here.

6.4.26 UA - Upload ASCII file

UA <area> <file>

This is used to upload a file using ASCII transfer. The area can be up to a four character string as defined by the sysop in the WINTNC.INI file.

eg. UA 1 MYFILE.TXT

6.4.27 UY - Upload YAPP file

UY <area> <file>

This is used to upload a file using YAPP transfer. The area can be upto a four character string as defined by the sysop in the WINTNC.INI file.

eg. UY A MYPROG.EXE

This command is not available in local mode

6.4.28 V - Show version

This will show what version of the PMS is running.

6.4.29 W - List file areas

W - List file areas.

This will list the file areas as configured by the sysop in the WINTNC.INI file. Each area will indicate whether you can download and upload to it.

W <area> (filespec) - List files (matching filespec).

This will list all the files matching the optional filespec (defaulting to all files) contained in that particular area. The area can be upto a four character string as defined by the sysop in the WINTNC.INI file.

eg. W 1 *.ZIP

6.4.30 X - Toggle expert level

This will toggle the level of the user between expert level and normal level. Expert level normally gives shorter command prompts whereas normal level gives full command prompts.

6.5 Maintaining The PMS

How you maintain your PMS is really up to you. I can only give you common sense advice which may or may not seem obvious to you.

It is advisable to keep your message base tidy by removing killed messages using the T - tidy command. Also, kill and tidy any messages which have been forwarded or read.

Also, check any uploads made by users (if you get any :-) for viruses etc, before putting them into a download area for general access. Check that there is no breach of copyright on the program being offered for download.

Analyse the log file PMS.LOG to see what users have been doing in terms of uploading/downloading etc. to see what is popular and what is not. If you are feeling adventurous, you may want to write programs which will automatically analyse the log file and perhaps send thank you messages to people uploading files, and warnings to people who are hogging the PMS for downloads etc. You could also write programs to

produce top ten lists of PMS users or files etc. The log file may be deleted at any time but you may wish to archive it off for later analysis.

If you wish to totally start the PMS from scratch by deleting users and messages, you must delete all three files :

PMS.SYS, PMS.USR and PMS.IDX

and everything from the MAIL directory.

None of the above three files are user editable so please don't try and modify them as you will most probably destroy the system information contained in them.

Finally, PLEASE don't reboot your computer whilst running the program or you will probably corrupt the PMS data files. If you find the PMS asking for your name again after logging in before, the files have been zapped. To recover from this, you will need to restart the PMS again by deleting the files mentioned above.

6.6 BBS Access To The PMS

The PMS has the ability to perform reverse and normal forwarding between itself and other BBS's (including other users of this program).

In order to perform the mail transfer, the other user (or BBS) has to enter the PMS. Depending on the status of the user, the connection can take place in one of two ways. (The status being a BBS or not as defined with the EU <call> B command).

If the status of the user is a BBS, after the initial connect, if the user sends it's BBS id string, eg. [NNA-1.09-$], it will automatically enter the mail transfer routines.

If the characters BF appear in the BBS id string, the system will enter FBB compressed forwarding mode and mail transfers will progress automatically. The mechanics of FBB forwarding are beyond the scope of this help file (good get-out clause that !) and any interested parties are advised to consult the manual for the FBB program for more information.

If the user is not a BBS, after the initial connect and log on sequence, he must send his BBS id string, eg. [WINTNC-1.00-HM$]. The prompt will then change to a > and we are ready for mail transfer.

To reverse forward mail, the user types 'F>'. The program then finds the first message in the PMS that the user has not yet received. It will send out a header line identifying the message. The user will then send either 'OK' if it wants to receive the message or 'N-BID' if not. If the user wants it, the program will send the message and mark it in the PMS as being forwarded. The user then keeps issuing a 'F>' until there are no more messages to be received at which the point the program replies with '***DONE'.

To forward mail, the user sends the header line identifying the message and the PMS replies 'OK' or 'N-BID' accordingly. If OK, the user then sends the message etc and repeats the above for each message that needs to be sent.

Once all mail has been transferred, the user then types the 'B' command to log off the PMS.

NOTE:Once inside the mail transfer routines, all other PMS commands are disabled except for 'B'.

This procedure for reverse/forwarding mail is automatically handled by the use of the REVERSE and FORWARD BBS keywords if transferring between two copies of this program. Normal BBS's should also have this procedure built into their software.

An example script files to transfer mail between two copies of this software is thus :

```
REPLY C G7JJF-2^M              } Issue connect
WHEN now ?                     } When get PMS prompt
REPLY [WINTNC-1.01-HM$]^M      } Send ID
WHEN >                         } When get prompt
REVERSE NONE                   } Collect all my mail
COLLECT NONE1,G7JJF            } Any for Jon ?
FORWARD BBS                    } Send
:NONE1
REPLY B^M                      } Bye when finished
:NONE
DISPLAY Finished !!^M
```

or if you want to perform compressed mail forwarding between two copies of this software, you can use :

```
REPLY C G7JJF-2^M              } Issue connect
WHEN now ?                     } When get PMS prompt
REPLY [WINTNC-1.01-BFHM$]^M    } Send ID
COLLECT NONE,G7JJF             } Any for Jon ?
:NONE
FORWARD FBB                    } Send and collect mail
```

6.7 C_FILTER

The WINTNC program includes a simple C_FILTER program which is used to give password protected access to the PMS. The use of the C_FILTER is optional so if you do not require it, simply delete the file from your PMS directory.

The filter program was requested by European users and so emulates the password system used to gain access to BBS's there. It uses the FBB 5 character password method with optional MD2 encryption as well.

The configuration for the C_FILTER program is stored in the C_FILTER.PSW file in the PMS directory.

Its layout is :

```
# Filterfile
Password>
#
G1EQT,AAAAAAA
G7JJF,THIS IS JONS PASSWORD
```

(All lines beginning with a # are ignored)

A typical logon to the PMS using this file would be :

```
cmd:c 0 jjfpms
cmd:
*** CONNECTED to JJFPMS
[WINTNC-1.01-BFHM$]

Password> 7 17 18 5 5 [0838525049]
SSW

Welcome Jon to Jon's Multiuser Personal Mail System

Ok Jon, wot now ?
```

The first line of the C_FILTER.PSW file is the prompt sent before sending the string of password numbers.

Subsequent lines are a list of callsigns and the users password.

When the user connects, he gets back a string of 5 numbers like the above example. These numbers index into his password string and he enters the 5 characters corresponding to the numbers back as his password,

ie, the password for G7JJF is THIS IS JONS PASSWORD

so the 7th character is S, the 17th is S etc giving the 5 character password of SSW__ (where _ are spaces)

If the user enters the wrong password, he will be disconnected but if he gets it right, he will enter the PMS as normal. If the user is classed as a Sysop of the PMS, he will also automatically enter Sysop mode and doesn't need to use the @ PMS command.

In the above example logon, the [0838525049] is part of the MD2 encrypted password system and the user needs automated software in his terminal driver program to decode the necessary password. For users of WINTNC, this is provided by the PASSWORD script command.

6.8 M_FILTER

The WINTNC program includes a simple M_FILTER program which is used to process all incoming messages to the PMS.

I have included the source code for my M_FILTER program as part of the WINTNC distribution file so if anyone would like to enhance it with additional features, please do.

This program could do lots of wonderful things with mail such as automatically replying to /ACK requests etc but all I currently use it for is to automatically extract 7plus files from incoming messages, archive the 7plus parts to a separate directory and when all the parts have arrived, decode them into the original files.

To do this, the M_FILTER program looks at all incoming messages and if it contains a 7plus file, it will append the message to a file called M_FILTER.FWD in the PMS directory. It will also add an entry to the M_FILTER.LOG file in the PMS directory showing information about the message.

When the M_FILTER.FWD file contains information, you can then run the 7PEXTRCT.BAT file (which is also in the PMS directory) to automatically extract the individual file parts from the M_FILTER.FWD file and put them in the 7PCAPT directory. The BAT file will also then run the 7PLUS program (which I will assume you already have on your computer and be PATHed to it) to decode these part files and put the resulting decoded files into the 7PCAPT\CHECK directory you for to check over.

Before running the 7PEXTRCT.BAT file, you will need to edit it to suit your directory structure.

My current 7PEXTRCT.BAT file is :

```
@ECHO OFF
REM Use M_filter that captures ALL 7plus to M_filter.fwd
set spfilt=C:\WINTNC\PMS\M_FILTER.FWD          ; Change these
if required
set capdir=C:\WINTNC\PMS\7PCAPT                ; Change these
if required
set savedir=C:\WINTNC\PMS\7PCAPT\CHECK         ; Change these
if required
c:                                             ; Change these
if required
cd %capdir%
IF Not exist %spfilt% goto decode
echo
echo  Extracting from M_FILTER.FWD
echo
7plus -x -y %spfilt%
del %spfilt%
:decode
for %%F in (*.cor) do 7plus -k -y %%F
for %%F in (*.7pl) do 7plus -k -y %%F
for %%F in (*.p01) do 7plus -k -y %%F
echo
echo  Moving decoded files...
echo
for %%F in (*.exe *.com *.zip *.arc *.gif *.ico *.lzh) do move
%%F %savedir%
for %%F in (*.arj *.doc *.asc *.pif *.jpg *.lha *.mid) do move
%%F %savedir%
echo
echo  All done...
echo
```

Note : If you do not wish to have the M_FILTER program active, simply delete it from your PMS directory.

6.9 Mail Servers

The PMS in the WINTNC program has the ability of running external mail servers in response to incoming messages.

These mail server programs have to be specially written for WINTNC but I have included four different servers to get you going plus included the source code for one of them so prospective server writers can see how to implement one. The mail server programs are

all stored in the PMS\SERVERS directory together with their assocciated help and support files.

If you do not wish a mail server to be active, simply delete the corresponding files from the PMS\SERVERS directory.

To use a server, a user sends a personal message to the sysop of the PMS with the subject line of /<server> where <server> can be any of the following :

SERVERS	Sends a help file on using the server progams
REQDIR	Request a directory listing or list of available file areas
REQFIL	Request a file in either ASCII, UUCODE or 7PLUS format
REQMSG	Request a message or message listing from the PMS

The body of the message contains keywords which tell the server what to do. Keywords supported by all servers include :

HELP Sends the user a message containing the help file for the server

SUMMARY Sends the user a message showing how the server processed the request

For example, to request the help file for the REQFIL server,

```
SP G7JJF @ GB7NAS.#23.GBR.EURO
Subject : /REQFIL
Enter Message:
HELP
/EX
```

If the the body of the message is left empty, the servers help file will automatically be sent back to the user.

6.9.1 SERVERS

This server sends the user the contents of the SERVERS.HLP file. You can edit this text file to suit.

6.9.2 REQDIR

The REQDIR (Request Directory) server allows you to obtain a listing of file areas on this PMS and also the files within a specified file area which can be requested by the REQFIL server.

To use the server, send a personal message to the sysop of this PMS with the subject line of /REQDIR.

The body of the message can contain any of the following keywords :

HELP Sends you a message containing this help file

SUMMARY Sends you a summary message of how the server processed your request

INDEX Sends you a listing of the available file areas on this PMS

AREA <area> (filespec) Sends you a listing of all the files in the specified area or those matching the optional (filespec) parameter.

e.g.

```
SP G7JJF
Subject : /REQDIR
Enter Message:
HELP
INDEX
AREA 101 *.ZIP
/EX
```

This message to the REQDIR server will send you back this help file, a list of all available file areas and a list of all ZIP files in area 101.

If you leave the body of the message empty, this help file will automatically be sent back to you.

6.9.3 REQFIL

The REQFIL (Request File) server allows you to request a file from a file area on this PMS and send it to you in either ASCII, UUCODE or 7PLUS format.

To use the server, send a personal message to the sysop of this PMS with the subject line of /REQDIR.

The body of the message can contain any of the following keywords :

HELP Sends you a message containing this help file

SUMMARY Sends you a summary message of how the server processed your request

ASCII <area> <file> Sends you <file> from area <area> in ASCII format

UUCODE <area> <file> Sends you <file> from area <area> in UUCODE format

7PLUS <area> <file> Sends you <file> from area <area> in 7PLUS format

e.g.

```
SP G7JJF
Subject : /REQFIL
Enter Message:
HELP
7PLUS 100 GAME.ZIP
SUMMARY
/EX
```

This message to the REQFIL server will send you back this help file, a copy of GAME.ZIP from file area 100 in 7PLUS format and a summary report of how the server processed your request.

If you leave the body of the message empty, this help file will automatically be sent back to you.

Please don't try and request binary files (those with file extensions .ZIP or .EXE etc) without using the UUCODE or 7PLUS keywords since these cannot be transferred by BBS's without encoding them first.

There is currently a 40K filesize limit on transmitted files (approx 10 parts of 4K each)

The filesize limits are set by the MaxSize and FIleSize items in the WINTNC.INI file

6.9.4 REQMSG

The REQMSG (Request Message) server allows you to obtain a listing of messages available for requesting from this PMS and to request individual messages in full.

To use the server, send a personal message to the sysop of this PMS with the subject line of /REQMSG.

The body of the message can contain any of the following keywords :

HELP	Sends you a message containing this help file
SUMMARY	Sends you a summary message of how the server processed your request
LIST	List all messages available for requesting
LIST < callsign	List all messages available for requesting from 'callsign'
LIST > callsign	List all messages available for requesting to 'callsign'
msg_num	Sends you a message containing the text of the requested message

e.g.

```
SP G7JJF
Subject : /REQMSG
Enter Message:
HELP
LIST
LIST > ALL
100
200
/EX
```

This message to the REQMSG server will send you back this help file, a list of all available messages, a list of all messages address to ALL and will request messages 100 and 200 to be sent to you.

If you leave the body of the message empty, this help file will automatically be sent back to you.

6.10 Program Servers

The PMS in the WINTNC program has the ability of running external program servers in response to commands from the PMS user.

The external programs can be simple DOS programs which just return information, possibly using a command line given by the user or more complex Windows program where the program can fully interact with the user, eg Games !

All PMS program servers plus their assocciated support files are stored in the PMS\PROGS directory.

To use a program server from the PMS, the user simply types :

/<server> (optional command line parameters)

where <server> is the name of available program servers.

Servers which come with WINTNC include :

INDEX Displays a list of available servers

ADVENT Classic adventure game

WORDLE The five letter word guessing game - use the optional C parameter for a colour version !

Using DOS Servers

Using Windows Servers

6.10.1 Using DOS Servers

The are restrictions in what sort of DOS program you can use with WINTNC. They must be EXE files which send output to the screen and expect no input from the user apart from a command line perhaps.

To use DOS programs, you will need to create a BAT file to run the progam and a PIF file for the BAT file.
The BAT file **must** look something like :

```
J:
QRZ %3 > %1
DEL %2
```

I use this file (QRZ.BAT) to run a QRZ CD ROM callsign server. The important things to note about this file is the batch file parameters %1-%3. These must be present in all BAT files and in the same places,

ie %3 (and %4-%9) are the users command line, %1 is the file where output is put and %2 is a temporary file to synchronise the external program with WINTNC.

If you want to use a program which doesn't take command line parameters, you will need to use something like :

```
PROGRAM > %1
DEL %2
```

The redirection and DEL commands are very important and must always be present or your system will crash !

You will also need to create a PIF file for the BAT file. I assume you all know how to do this, but if not, consult the relevant Windows documentation.

The only important things about the PIF file is to run the program in a **minimised** window in Win95 and a **window** in normal Windows, not full screen. This is to simply to stop Windows from bringing up a DOS box, instead it will run the program in the background.

6.10.2 Using Windows Servers

Windows PMS servers programs have to be specially written for WINTNC and I have included the source code for a simple interactive server so prospective server writers can see how to implement one.

Node

7 Node

The WINTNC program includes a simple packet node. The node doesn't yet have any high level packet routing functions like the BPQ node but is still quite useful nevertheless.

The configuration for the node in mainly in the WINTNC.INI file plus various node text files in the main WINTNC directory.

To use the node, a user simply connects to your node callsign.

Once on the node, a user can connect out again, possibly on another radio port or use the facilities available on the node.

The command available on the node are :

?	Displays the node.hlp help showing what node commands are available
PMS	Enter your PMS
CHAT	Connects to a chat server where you can talk with the remote user
CONF	Connects to a conference server to chat to other node users
BYE	Disconnects the user from the node
INFO	Displays the node.inf file showing any information you want
USERS	Displays a list of users currently using the node
CONNECT (port) <CALLSIGN>	Connects to another callsign using the optional radio port
PORTS	Display a list of available radio ports and status information
YAPP	Enters your YAPP file server
MH (port)	Displays a list of callsign heard, either on all ports or just on the specified port
NDH (port)	Displays a list of nodes heard, either on all ports or just on the specified port

7.1 Conference Server

Included in the WINTNC driver program is an integrated Conference Server. It allows multiple users to connect to it and chat to each other on upto 255 group channels.

There is no configuration for the Conference Server apart from customising the CONF.HLP help file and CONF.CT connect text file if necessary. Of course, the number of people that can use the Conference Server is limited by the number of Node channels you have configured in the software. You may need to increase this if there are more people wanting to use the server than you have available Node channels.

To access the Conference Server, a user must connect to your node and type CONF. After receiving the welcome text, the user will be on Channel 0 and can chat to all other users on Channel 0. Messages sent from one user will be received by all other users on the same channel.

The command available in the server are :

text	Send text to all users on current channel
/? or **/HELP**	Print help information
/BYE	Terminate the conference session
/CHANNEL n	Switch to channel n (0-255)
/MSG user text	Send a private message to user
/WHO	List all users and their channel numbers

7.2 Yapp File Server

Included in the WINTNC driver program is an integrated YAPP File Server. It allows users to connect to it and transfer files both ways using the YAPP file transfer protocol. Although the user can also do this in the PMS, if all the PMS channels are busy, the user can then use the Yapp File Server should he wish instead.

The configuration for the YAPP File Server is stored in the WINTNC.INI file. The YAPP server shares the same file areas as the PMS as well as the AREAINFO directory.

Setting Up The YAPP File Server

Using The YAPP File Server

Commands In The YAPP File Server

7.2.1 Setting Up The YAPP File Server

There is very little to do in setting up the Yapp File Server since most of it will have been done when setting up the PMS. The only things you may want to customise are the main help file YAPP.HLP and the info file YAPP.INF

You can also create an optional 'Message of the Day' file. This is a plain ASCII text file which is dumped to the user when they log on. This must be called YAPP.DAY and is stored in the main WINTNC directory. You can alter the contents of this file as often as you wish.

7.2.2 Using The YAPP File Server

To access the YAPP File Server, a user must connect to your node and type YAPP.

Assuming there is a free YAPP channel, the users will then be welcomed to the file server and be given the command prompt.

All the time a remote user is logged onto the file server, the sysop still has control over the keyboard in the window as well. This means that the sysop can enter commands as though they were coming from the remote user. This can be used to guide new users through the program by showing them what commands do what, or the remote user can be logged off if he mis-uses the file server etc.

7.2.3 Commands In The YAPP File Server

The different commands available in the YAPP file server are :

B - Log off the Yapp File Server.

Disconnecting has the same effect.

D <area> <file> - Download file
or DY <area> <file> - Download file.

This is used to download a file using YAPP transfer. The area can be up to a four character string as defined by the sysop in the WINTNC.INI file.

eg. D 1 HELP.COM

H - Display help file.

This command will display the YAPP.HLP file to the user if one exists.

I - Display info file.

This command will display the YAPP.INF file if one exists. Use it to show your stations hardware/software configuration and anything else you may wish to tell the user.

U <area> <file> - Upload file.
or UY <area> <file> - Upload file.

This is used to upload a file using YAPP transfer. The area can be upto a four character string as defined by the sysop in the WINTNC.INI file.

eg. U 1 MYPROG.EXE

V - Show version.

This will show what version of the File Server is running.

W - List file areas.

This will list the file areas as configured by the sysop in the WINTNC.INI file. Each area will indicate whether you can download and upload to it.

W <area> (filespec) - List files (matching filespec).

This will list all the files matching the optional filespec (defaulting to all files) contained in that particular area. The area can be upto a four character string as defined by the sysop in the WINTNC.INI file.

eg. W 1 *.ZIP

Script Files

8 Script Files

Script files are very useful for creating automatic procedures which can be used for anything from automatically logging onto a BBS, spooling all your messages to a disc file then disconnecting to automatically forwarding mail to another user. The uses are only limited by your imagination.

The basic idea of a script file is for the program to monitor the incoming text for a certain string or any one of a selection of strings then automatically replying with something else or performing a certain action. To do this, you need to create a text file containing lists of strings to monitor for and strings to reply or actions to perform. The string you reply with can also contain function or Alt key presses to perform their normal action.

The format of the file consists of lines beginning with the following keywords :

WHEN	REPLY
DO	UNTIL
GOTO	:<label>
DISPLAY	PRINT
READ	IF
SCAN	ENDSCAN
STOP	;
LOG	ENDLOG
WRITELOG	CLS
COLLECT	FORWARD
REVERSE	PASSWORD
FBBCOLLECT	FBBREAD

You must make sure they are spelt correctly with exactly one space after the keyword if it uses a parameter.

Sample Script Files

8.1 WHEN

WHEN <text>

This keyword halts execution of the script file until the <text> is monitored in the incoming TNC text. If the text you are monitoring for contains a variable number, eg a port number in a BBS prompt, you can use the # wildcard character in the <text> field which will match any number in the incoming text.

For example, if your BBS prompt is :

(2) GB7MAM>

you could use the following command to monitor for it :

WHEN (#) GB7MAM>

8.2 REPLY

REPLY <text>

This keyword sends the <text> to the TNC.

8.3 DO

This keyword has no parameters and forms a loop in the script file in conjunction with the UNTIL <text>.

8.4 UNTIL

UNTIL <text>

This keyword signifies the end of the DO .. UNTIL <text> loop. The statements between DO and UNTIL are executed until <text> is monitored in the incoming TNC text. You can nest the DO..UNTIL loop up to 10 levels. The <text> can contain the # wildcard character as described in the WHEN command.

8.5 GOTO

GOTO <label>

This keyword causes execution of the script file to continue at the line defined with <label>. The search for the label starts at the top of the file and continues until the label is found or the end of the script file is reached. An error is generated if the specified label cannot be found.

8.6 :<label>

This keyword is used in conjunction with the GOTO keyword and identifies a place in the script file.

eg.

```
:TOP
DISPLAY Hello World !^M
GOTO TOP
```

will send 'Hello World !' to the display forever !

8.7 DISPLAY

DISPLAY <text>

This keyword will display <text> in the user window without sending it to the TNC. This is useful for displaying any message to the user about the outcome of a script file operation.

8.8 PRINT

PRINT <text>

This keyword will print <text> to the printer without sending it to the TNC. This is useful for displaying any message to the user about the outcome of a script file operation.!

8.9 READ

READ <prompt>,<subject1>,<subject2>,...

This is a very powerful command and is used when listing mail on a BBS. With this command, you can get the program to automatically issue 'read message' commands for every message that contains subject information that interests you.

eg.

```
REPLY L^M
READ (#) GB7MAM,IBM,BBC,DANPAC,MODS
```

This would issue a message list command to the BBS and then monitor all the incoming text until the GB7MAM prompt was monitored **AT THE START OF A LINE**. For every line that contained any of the subjects listed in the READ command, a 'R <num>^M' command would be issued where <num> was the message number displayed at the start of each message header.

For example, if the following text was received from the initial L^M command,

```
Msg# Stat Size  To    From   @ BBS  Date/Time Title
5613 B     322 ALL    GW4AZW GBR    1028/1151 Have 2 813's
new,swap.
5612 B     995 BBC    G3UDA  GBR    1028/1149 MUSIC 5000 AMPLE
Users
5611 B     509 ALL    G6FUM  GBR    1028/1148 AR-2001 RX MODS
HELP.
5609 BI    238 ALL    G3ZHI  GBR    1028/1113 LEICESTER SHOW
PARK
5607 B     490 ALL    G8VHB  GBR    1028/0935 anyone using
standard C58

(1) GB7MAM>
```

the program would send :

```
R 5612^M
R 5611^M
```

to the BBS to read the specified messages. The next read command is only sent after the last message had been completely read (ie when the BBS prompt as defined in the initial READ command is monitored again.) This stops some BBS systems aborting the current message if you issue another read command before it has finished sending it.

If your BBS prompt changes each time it is displayed, for example if it contains the connection port number, you can use the # wildcard character in the prompt field which will match any number in the BBS prompt. As in the example above, if your BBS prompt is :

```
(1) GB7MAM >
```

you will need to use :

```
READ (#) GB7MAM,IBM,BBC,DANPAC,MODS
```

8.10 IF

IF <text>

This keyword is used as part of the SCAN..ENDSCAN loop. The <text> can contain the # wildcard character as described in the WHEN command.

8.11 SCAN

This keyword has no parameters and forms a loop in the script file in conjunction with the IF<text>, ENDSCAN keywords. Using this loop, you can scan for up to 10 different <text> strings at a time, and depending which one is found, execute a separate series of script keywords. This is very useful when logging onto a BBS through a node for example, where you can either monitor for the BBS prompt or a busy reply and either continue with an automatic mail download or logoff from the node if the BBS is busy.

An example of connecting from a node will best illustrate this construct.

```
REPLY C 1 GB7MAM^M
SCAN
IF busy
        REPLY B^M
        DISPLAY GB7DAD is busy !!^M
IF GB7MAM>
        REPLY LM^M
        WHEN GB7MAM>
        REPLY B^M
ENDSCAN
```

(The indentation can be used to add clarity to the loop constructs in the script files as the initial spaces are ignored by the program).

This script file will issue the connect request to GB7MAM and enter the SCAN, ENDSCAN loop. The incoming text will then be monitored until one of the text strings after the IF keywords is encountered. Once one is found, the script keywords following the IF statement is then executed until another IF or ENDSCAN statement is found. Execution then continues with the next statement after the ENDSCAN keyword.

Thus, if the text 'BBS is busy, please try later' is received, the first IF takes control, logs off the node and display the message to the console. It then encounters an IF so jumps out of the SCAN..ENDSCAN loop and stop execution of the script file because there are no more commands to execute.

However, if the connection is made and the normal BBS prompt is received, the second IF takes control and continues to list all your messages before logging off. It then encounters the ENDSCAN statement so jumps out of the SCAN..ENDSCAN loop and stops execution of the script file because there are no more commands to execute.

The SCAN..ENDSCAN loops can be nested up to any required depth for very complicated conditional script file execution.

8.12 ENDSCAN

This keyword has no parameters and forms a loop in the script file in conjunction with the IF<text> and SCAN keywords..

8.13 STOP

This keyword has no parameters and stops execution of the script file without completing it.

8.14 ;

This keyword tells the program to ignore the remainder of the characters on the line and so is used to add comments to the script file.

8.15 LOG

LOG <file>

This command is used in conjunction with the ENDLOG command. It is similar to the 'REPLY {F1}capture.log^M' command but is more useful. Using the REPLY command above, the filename is fixed all the time so you cannot use the same script file

containing this command more than once, say overnight, to log on at different times to download your mail. Using the LOG command, you specify the filename, and the program automatically creates an extension for you, starting at .000 (or if some files already exist, with the next unused extension number) which increases sequentially every time the LOG command is issued. The log file is stored in the LOG directory and all subsequent text received will be stored in it as is normal. Thus the command 'REPLY {F1}capture.log^M' could be replaced by 'LOG capture'.

8.16 ENDLOG

This keyword has no parameters and is used in conjunction with the LOG command. It is equivalent to 'REPLY {F1}' and closes the LOG capture file.

8.17 WRITELOG

WRITELOG <text>

This command is used in conjunction with the LOG command. It appends <text> to the current log file opened with the LOG keyword. If a log file is not active, this command is ignored.

As well as containing normal text, the <text> parameter can also contain optional macros which when expanded can be used to write the current date or time to the log file as well, eg

WRITELOG Today is $D and the time is $T

will write 'Today is 21/04/95 and the time is 19:19' to the log file.

8.18 CLS

This command simply clears the TNC output window and moves the cursor to the top of the screen.

8.19 COLLECT

COLLECT <label>,<whoto1>,<whoto2>,...

This keyword is used in conjunction with the FORWARD keyword and is used to automatically collect together mail from the PMS mail files which need forwarding to another user or BBS. You specify which mail you wish to forward with the <whoto> parameters. These are matched with all un-forwarded mail addressed <whoto> @<whoto> (matches if <whoto> is contained in either callsign or home BBS). If there is mail to forward, the script file continues to execute, else a GOTO <label> command is

performed to skip the forwarding part of the script file. You may use the GOTO to skip to the next forward routine in the script file or to exit the file.

8.20 FORWARD

FORWARD (BBS) (FBB)

This keyword is used in conjunction with the COLLECT keyword and performs the actual forwarding part of the procedure. If you specify the optional BBS or FBB parameter, either FBB compressed forwarding or normal BBS forwarding will take place, otherwise the messages will be sent as though typed live at the keyboard. Upon executing the FORWARD command, the program will send the messages, kill them and mark them as being forwarded.

eg. if your PMS had the following mail,

```
 Msg# ST  Size    To     @ BBS    From  Date/Time Title
    3      295   G0HMZ  GB7FLG   G7JJF 0201/1912 Forward test
    2      154   G6YAL           G7JJF 0201/1912 Hello
    1     1049   G1EQT  GB7FLG   G7JJF 0201/1912 Test
```

the script file :

```
COLLECT NONE,GB7
REPLY GB7MAM^M
WHEN GB7MAM>
FORWARD
REPLY B^M
:NONE
DISPLAY Finished !!
```

would log onto GB7MAM and forward messages 1 and 3.

You would normally create a large script file containing the forwarding routines for all likely users and add an entry to the TNC.TIM file to forward all your mail overnight to the relevant people.

NOTE : Unless you consider yourself to be an expert packet user who really know's what's what, you will probably need to ignore the next section.

If you are friendly with your local BBS sysop, you could arrange for him to make you a BBS on his board. Also ask him to edit White Pages and the local user database so your homebbs is shown as your full hierarchical address, eg mine is G7JJF.GB7MAM.#23.GBR.EU. This would then allow you to do proper forwarding and reverse forwarding between his BBS and your PMS. If this is the case, you would then need to alter to syntax of the FORWARD command above to be :

```
FORWARD BBS

        or

FORWARD FBB
```

if the remote BBS performs FBB compressed forwarding.

You would also need to alter the script file slightly to send different prompt's when you are a 'BBS' user.

The following script file will reverse/forward mail using BBS forwarding :

```
REPLY C GB7MAM^M            } Normal connect
WHEN GB7MAM BBS >           } bit at top
; Start of reverse/forward bit
REPLY WINTNC-1.01-HM$]^M
WHEN >
REVERSE BYE                 } See below
COLLECT NONE,GB7MAM,G1EQT,EU
FORWARD BBS
:NONE
 REPLY B^M
```

and the following script file will reverse/forward mail using FBB compressed forwarding (much simpler !) :

```
REPLY C GB7MAM^M            } Normal connect
WHEN GB7MAM BBS >           } bit at top
; Start of reverse/forward bit
REPLY [WINTNC-1.01-BFHM$]^M
COLLECT NONE,GB7MAM,G1EQT,EU
:NONE
FORWARD FBB
```

Upon executing either script file, the program will receive any waiting mail and send any local messages (either as bulletins or as personal messages), kill them and mark them as being forwarded.

Note that the FORWARD FBB command automatically downloads mail waiting for you so there is no need for the REVERSE command. Also, you are automatically disconnected from the BBS when forwarding is finished so the commands to disconnect you as shown in the first script file are not required. This makes writing script files to perform FBB compressed forwarding much simpler and straight forward.

8.21 REVERSE

REVERSE <label>

This command is only for expert users and is used to request messages or bulletins from BBS's to be collected and stored in the local PMS. You will need to arrange with your local BBS sysop for him to create a forwarding file for you.

Upon executing this command, the program will issue requests for messages and stores them in your PMS until there are no more to be received. I have noticed that I occasionally get disconnected when downloading messages this way due to slow links so I have added a label parameter. If you do get cut off, the program will automatically issue a GOTO <label> to skip to the next bit of the script file.

If you are performing FBB compressed forwarding, you do not need to use the REVERSE command to request mail since the FORWARD FBB command automatically downloads all mail waiting for you.

8.22 PASSWORD

PASSWORD (FBB)|(MD2),<prompt>,<password>

This keyword is used to automatically send a password to BBS's who use a C_FILTER program using the FBB 5 character or MD2 password systems.

The FBB or MD2 parameters say which password system the remote BBS is using, the <prompt> **must match** the last part of the text the BBS sends before the string of password numbers and <password> is your password string for the BBS.

A typical script file to log on to a BBS using a password system could be :

```
REPLY C JJFPMS^M
PASSWORD FBB,word>,THIS IS JONS PASSWORD
```

A typical logon to a BBS using this script file would be :

```
cmd:c jjfpms
cmd:
*** CONNECTED to JJFPMS
[WINTNC-1.01-BFHM$]

Password> 7 17 18 6 6 [0838525049]
SSWII             < password sent by script file

Welcome Jon to Jon's Multiuser Personal Mail System

Ok Jon, wot now ?
```

If the BBS uses the MD2 password system (identified by the [0838525049] type number on the end of the password line), using the following script would send back a 32 character encrypted password which is much more secure.

```
REPLY C JJFPMS^M
PASSWORD MD2,word>,THIS IS JONS PASSWORD
```

8.23 FBBCOLLECT

FBBCOLLECT <label>,<bbs>,<subject1>,<subject2>,...

This keyword is used in conjunction with the FBBREAD keyword and is used to automatically scan the list of grabbed FBB Header broadcasts from the BBS defined as <bbs> for mail which interests you. You specify which messages you wish to read with the <subject> parameters which are matched with all unscanned message headers. If there are messages which match any of the parameters in your subject list, the script file continues to execute, otherwise a GOTO <label> command is performed to skip the next part of the script file.

8.23.1 FBB Header Broadcast Facility

The FBB-BBS software has a facility for sending unproto lists of messages headers which are broadcast every time a message is received by the BBS.

The WINTNC driver software monitors for these broadcasts and builds up a list of message headers in a disk file. You can then pull up this list and navigate it using the cursor keys marking messages of interest which the software can then automatically download from the BBS and place in your PMS.

The broadcasts are in the form :

```
GB7MAM>FBB:
2089    B    3233 PROPAG@EU      OK1HH   950421 FORECAST ONDREJOV
2090    B    3265 C64    @EU     PA2NJC  950421 to: disk maker
```

etc..

Every time the software monitors a packet addressed to FBB, it checks to see if the headers have already been recorded (by checking if the message number of the last header received is below that of the current header) and if not, it appends them to a disc file called GB7MAM.FBB stored in the LOG directory. Each BBS broadcasting in this way will have its own log file of course.

The program also maintains an associated index file called GB7MAM.IDX (also stored in the LOG directory) which contains the message number of the last header received and the message number of the last header scanned with the FBBCOLLECT command or downloaded with FBBREAD interactively, whichever occurred last. This second message number is therefore used to identify new messages which have been captured since the last scan was performed.

Please note that both these files are not editable. If you try and edit them, corruption will possibly occur. After a time, the .FBB file will grow quite large after several days worth of headers have been stored. Simply delete both .FBB and .IDX files to start again.

Before browsing the list of message headers, if you are going to actually select messages to download, you will need to manually connect to the BBS in question first. This was done to avoid having to write further script files to connect to the BBS before accessing the list. Makes life simpler thats all !

To pull up the list of message headers, press the Page Down key. You will be presented with a directory browser defaulting to LOG*.FBB which will show the available files to browse. After selecting a file (or press ESC to cancel), the screen will display (in reverse message number order) a list of the last 200 message headers received with a help bar at the bottom of the screen.

Each header is displayed in the following format :

```
2090    B    3265 C64    @EU     PA2NJC  950421 to: disk maker

2089    B    3233 PROPAG@EU      OK1HH   950421 FORECAST ONDREJOV
```
etc..

You can scroll through the list using the normal cursor keys. To mark a message for retrieval, select it with the cursor keys and press the space bar which will show a

diamond marker beside the message header. Press the space bar again to remove the marker. After marking all the messages you want downloading, press the Return key. This will start the message download process which retrieves each message in turn and places it in your local PMS where you can review them later. If you decide not to retrieve any marked messages, press Escape which will cancel the operation.

8.24 FBBREAD

FBBREAD <label>

This keyword is used in conjunction with the FBBCOLLECT keyword and is used to download the matched messages from the local BBS. If the download process gets disconnected due to slow links, the program will automatically issue a GOTO <label> to skip to the next bit of the script file.

The following script file shows an example of the FBBCOLLECT and FBBREAD commands in operation :

```
        FBBCOLLECT NONE,GB7MAM,JJF,MUBAY,BPQ,INTERNET,CDROM,CD-
ROM
        REPLY C GB7MAM^M
        WHEN >
        REPLY [WINTNC-1.01-$]^M
        WHEN >
        FBBREAD NONE
        REPLY B^M
        :NONE
```

The scanned message pointers are automatically updated as each message is downloaded so next time the script file is run, only new message headers will be scanned.

8.25 Sample Script Files

A simple example may illustrate the use of script files better.

```
REPLY {F1}capture.log^M        (or LOG capture)
REPLY C GB7MAM^M
WHEN GB7MAM>
REPLY LM^M
WHEN GB7MAM>
REPLY B^M
REPLY {F1}                     (or ENDLOG)
```

The first line shows how to include function keys in script files. You can include cursor, function, shift function, ctrl function, alt function or alt keys in this way. Each key is enclosed in { } characters.

```
A shift function key     is defined by {SF1} to {SF10}
A ctrl function key      is defined by {CF1} to {CF10}
An alt function key      is defined by {AF1} to {AF10}
An alt key               is defined by {AA} to {AZ}
```

Cursor up	is defined by {CU}
Cursor down	is defined by {CD}
Cursor left	is defined by {CL}
Cursor right	is defined by {CR}
Cursor home	is defined by {CH}
Cursor end	is defined by {CE}
Page up	is defined by {PU}
Page down	is defined by {PD}

You can also use other keys which are not included in the above list by specify the high byte of its extended key code as a number enclosed in { } 's, eg. the extended key code for shift-Tab (to recall the history list) is 0x0f00. You would enter {15} to simulate pressing the shift-Tab key.

The first line of the example script file above thus says, simulate F1 to start downloading a file. The filename is entered as capture.log followed by return. Note the use of control keys in the text strings. You can use ^A to ^Z, ^[is escape and ^. pauses for 0.5 seconds (excellent for creating rolling demos).

The next line then issues a connect to GB7MAM, again followed by return. You must remember to put ^M at the end of each line where you would normally press return.

The next line then monitors the incoming text until the GB7MAM> prompt is detected. A LM command is then issued to list all my messages. The prompt is then monitored for, to know when all the text has been displayed. The B (bye) command is then issued and the download file is closed by simulating the F1 key again.

You may find it useful to build up a collection of script files for connecting to users through nodes which requires cross connects or port specifiers.

You could thus have a script file such as

```
REPLY C NORMAN^M        (Issue connect to node)
WHEN Help ?             (Wait for prompt line)
REPLY 4 GB7DBY^M        (Issue connect on another port)
```

You can get very complicated when using script files, for example, checking for busy nodes or no BBS ports available when connecting. I will leave you to work out what the following script file does !

```
REPLY C G6YAL-8^M
SCAN
        IF ?
                ;  Connected
        IF busy
                STOP
ENDSCAN
REPLY X GB7DAD^M
SCAN
        IF GB7DAD>
                ;  Connected
        IF RETRIED
                REPLY B^M
                STOP
        IF ###LINK BUSY AT NODE G6YAL-8
                REPLY X DANPAC^M
                SCAN
```

```
                    IF DANPAC  #
                        REPLY BBS^M
                        SCAN
                            IF Please try later
                                REPLY B^M
                                STOP
                            IF GB7DAD>
                                ;       Continue
                        ENDSCAN
                    IF busy
                        REPLY B^M^[D^M
                        STOP
                ENDSCAN
        ENDSCAN
        LOG DADAUTO
        REPLY L^M
        READ GB7DAD,G7JJF,DANPAC,SOF,IBM,BBC,MOD,NOD,NET,SYSOP
        ENDLOG
        REPLY B^M
        DISPLAY Finished !!^M
        STOP
```

I have had numerous request from people asking for copies of script files which I use to perform my mail forwarding and other bits. The following script files are ones I use on a day to day basis.

BYE.SCR

```
REPLY ^MJon.                                  Message Sent {AT}
^M
REPLY /====================================\^M
REPLY | G7JJF @ GB7MAM.#23.GBR.EU      AX25 |^M
REPLY | jon@g7jjf.demon.co.uk      Internet |^M
REPLY +------------------------------------+^M
REPLY |      Providing Support For :        |^M
REPLY |TNCV142, MUTNC205, MUBAY102, BPQAX25 |^M
REPLY \====================================/^M
REPLY /EX^M
```

I use a similar script to this when signing off my messages and I call it by pressing Ctrl-F1, setup with the following :

```
[FKEY1]
CtrlText={AG}C:\WINTNC\SCRIPT\BYE.SCR^M
CtrlHelp=Exit MSG
```

in the WINTNC.INI file;

GB7MAM.FWD

```
REPLY C MAMBBS^M
WHEN >
REPLY [WINTNC-1.01-BFHM$]^M
COLLECT NONE1,G1EQT,GB7,.EU,DANPAC,.USA,GBR,.CAN,NZL
:NONE1
FORWARD FBB
```

This script file connects to my local BBS and reverse/forwards all mail using FBB compressed forwarding.

GB7MAM.FBB

```
REPLY C GB7MAM^M
FBBCOLLECT NONE,GB7MAM,JJF,MUBAY,BPQ,INTERNET,CDROM,CD-ROM
REPLY [WINTNC-1.01-$]^M
WHEN >
FBBREAD NONE
REPLY B^M
:NONE
```

I sometimes use this script file to scan the list of FBB header broadcasts and automatically connect to my local BBS to grab them. However, I prefer to use the interactive facility.

8.26 Automatic Script Files

If the program finds a file called TNCINIT.<port> in a directory called SCRIPT under the WINTNC home directory, this will be executed automatically at program start up. Using this method, you can have a separate TNCINIT script file for each terminal driver port. Also, the script file TNCEXIT.<port> will be automatically executed when the program exits for each port if one exists in the SCRIPT directory.

The default installation has a TNCINIT.3 file in the script directory containing :

REPLY {AZ}{AM}

which makes the first TNC tab full screen without the monitor window. The 3 being the tab number of the first TNC port (assuming you have tabs 1 and 2 as the default PMS ports).

APRS

9 APRS

According to Wikipedia, **Automatic Packet Reporting System** (APRS) is an amateur radio-based system for real time digital communications of information of immediate value in the local area. Data can include object Global Positioning System (GPS) coordinates Non-directional beacon, weather station telemetry, text messages, announcements, queries, and other telemetry. APRS data can be displayed on a map, which can show stations, objects, tracks of moving objects, weather stations, search and rescue data, and direction finding data.

APRS data is typically transmitted on a single shared frequency (depending on country) to be repeated locally by area relay stations (digipeaters) for widespread local consumption. In addition, all such data are typically ingested into the APRS Internet System (APRS-IS) via an Internet-connected receiver (IGate) and distributed globally for ubiquitous and immediate access. Data shared via radio or Internet are collected by all users and can be combined with external map data to build a shared live view.

This is all a bit of a mouthful so I suggest you read up more about APRS at the following web links :

APRS: Automatic Packet Reporting System

Automatic Packet Reporting System - Wikipedia

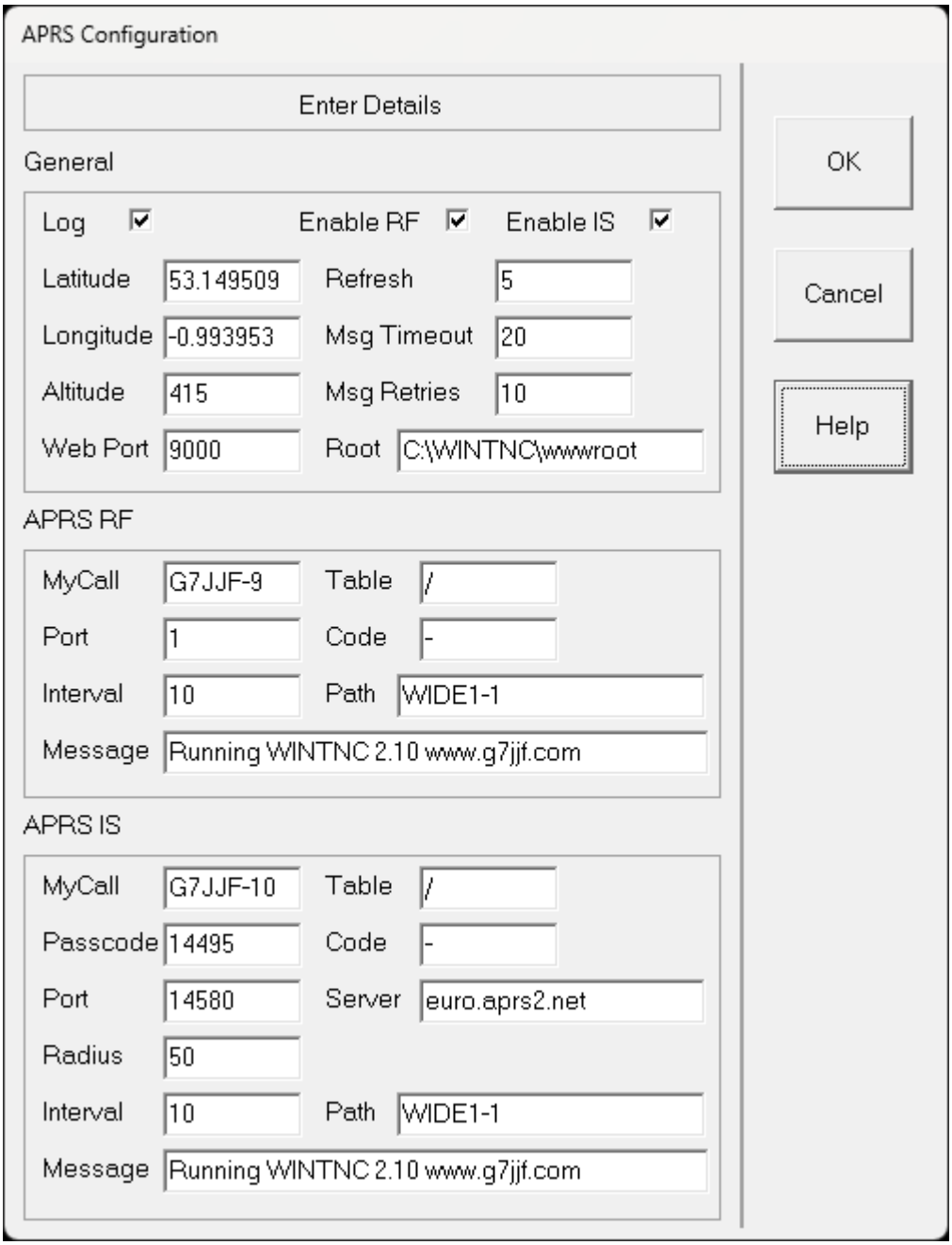
APRS-IS

Within the context of WinTNC, the following features of APRS are available :

- Monitor and transmit APRS information via RF and APRS-IS
- Send and receive APRS messages
- View station information via the aprs.fi web site
- View stations heard on inbuilt web server
- Filter/Sort monitored information on screen
- Export APRS data to disc

9.1 APRS Configuration

This option configures all the parameters used by the APRS interface.



This dialog allows editing of the APRS parameters in the WINTNC.INI file which are shown below :

[APRS]	General APRS configuration
Log=Y	Generate APRS debug log file Y or N
EnableIS=Y	Enable APRS IS features Y or N
EnableRF=Y	Enable APRS RF features Y or N
Lat=53.149509	Latitude of QTH
Lon=-0.993953	Longitude of QTH
Alt=415	Altitude of QTH
Refresh=5	Time in seconds to refresh APRS monitor window
MsgRetries=10	Number of retries when sending APRS messages
MsgAckTimeout=20	Timeout in seconds for received APRS message ACK

WebPort=9000	Port number of internal APRS Web Server interface
WebRoot=C:\WINTNC\wwwroot	Root directory where APRS Web Server files are stored
[APRS-IS]	APRS Internet Server configuration
MyCall=G7JJF-10	Callsign to connect to APRS IS Server
Password=xxxxx	Passcode to connect to APRS IS Server
Server=euro.aprs2.net	Internet address of APRS IS Server
Port=14580	Port number to connect to on APRS IS Server
Radius=50	Radius of APRS information to receive from server
Path=WIDE1-1	Outgoing path for APRS beacons
Message=Running WINTNC 2.10 www.g7jjf.com	APRS beacon text
IDInterval=10	Interval in minutes for sending APRS beacon
SymbolTable=/	APRS symbol table to use for location ICON
SymbolCode=-	APRS symcol code to use for location ICON
[APRS-RF]	APRS RF Configuration
MyCall=G7JJF-9	Callsign for beacon's
Port=1	Hardware TNC port to send beacons through
Path=WIDE1-1	Path for beacon
Message=Running WINTNC 2.10 www.g7jjf.com	APRS beacon text
IDInterval=10	Interval in minutes for sending APRS beacon
SymbolTable=/	APRS symbol table to use for location ICON
SymbolCode=-	APRS symcol code to use for location ICON

The configuration is split into three sections. The first defines general APRS parameters with the remaining two sections defining the parameters specific to the RF and IS interfaces.

Most parameters are self explanatory but a bit more explanation may be needed for several.

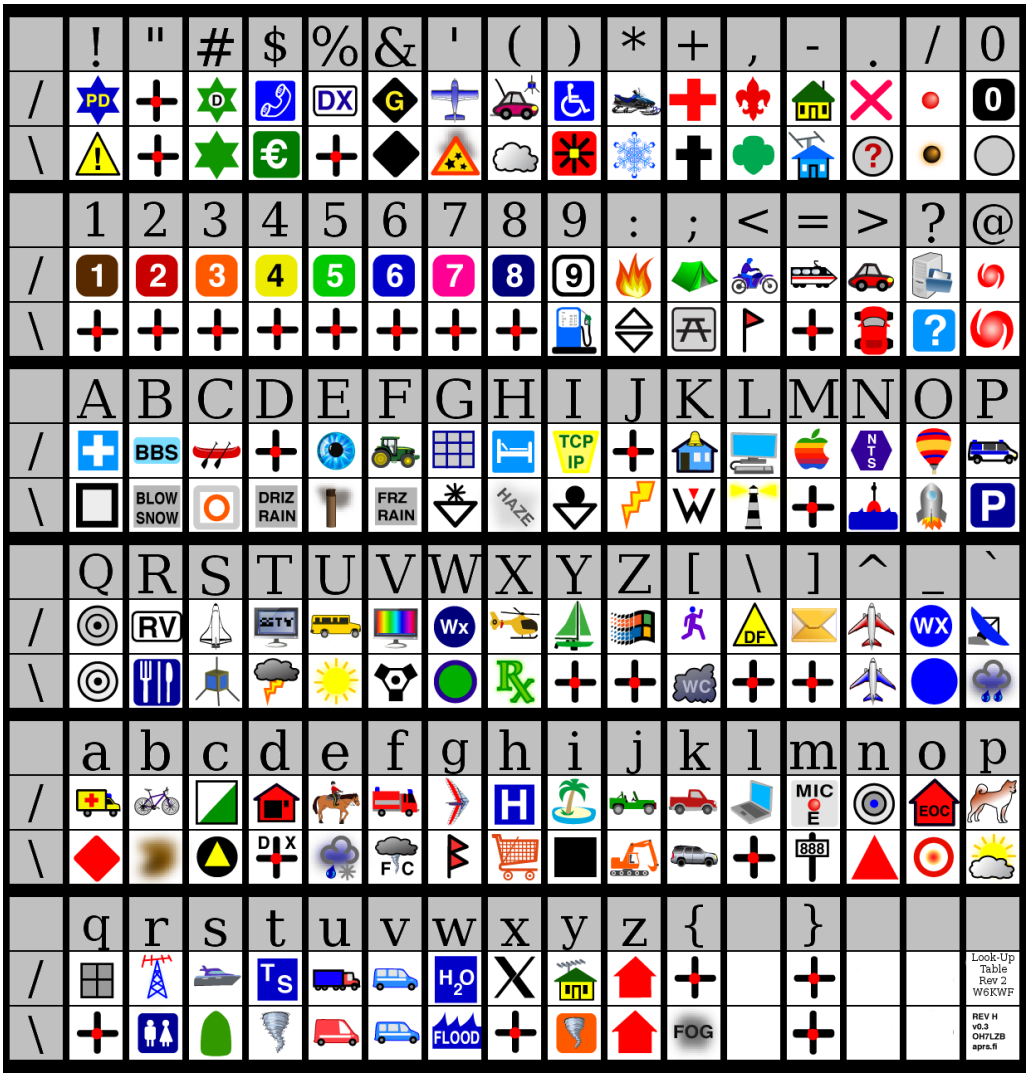
To access the APRS-IS server, you need a passcode. This is unique to your own callsign and can be obtained from various sites on the internet such as APRS Passcode Generator. The passcode received must be entered in the Password parameter of the APRS-IS section above along with your matching callsign. When requesting a passcode, don't include any SSID, just enter your basic callsign, eg G7JJF.

You will also need to enter an APRS-IS server address to connect to and its port number. The port is usually 14580 but the server address will be different depending which part of the world you live in so please check out the APRS Servers list and select one nearest to you. For reference, the current list shows :

Worldwide	rotate.aprs2.net
North America	noam.aprs2.net
South America	soam.aprs2.net
Europe/Africa	euro.aprs2.net
Asia	asia.aprs2.net
Oceania	aunz.aprs2.net

For more information of the Path settings, I would refer you to the internet links on the previous page but WIDE1-1 should be suitable for home stations running WinTNC. The RF link may require a path of WIDE1-1,WIDE2-1 in order to digipeat their beacons further afield but I don't have the means of testing this out.

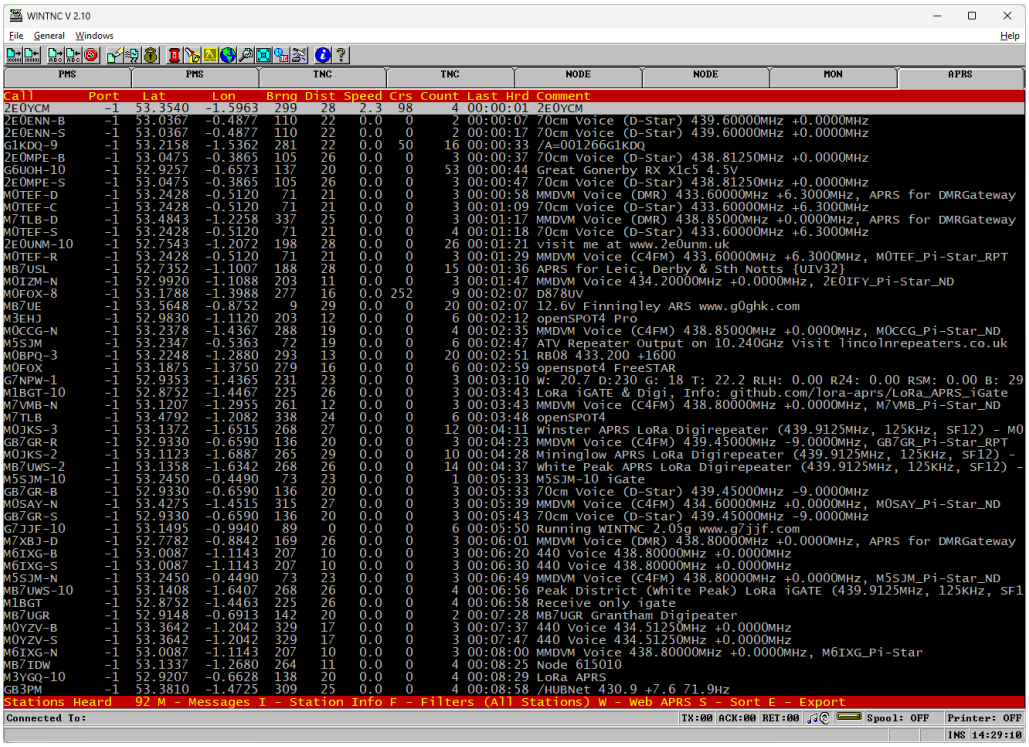
The symbol table and symbol code characters refer to the icon which will be displayed against your callsign on interactive APRS maps. You can use the following diagram as a reference should you wish to change your displayed icon. The config above shows a symbol table of '/' and a symbol code of '-' which matches the house icon towards the end of the top row of icons. Be aware that not all APRS web sites use exactly the same icon symbols as shown so things like colour may vary but the meaning of the icon should be the same.



9.2 Using APRS

When using an RF link, you must remember to tune your radio to the local APRS frequency in your country, typically 144.800 MHz in the UK.

Once you have configured your APRS interfaces, either an RF one using a normal TNC link or an IS one using an internet link or both, you will see an additional APRS tab across the top of your WinTNC screen. As your system hears APRS beacons, the APRS monitor screen will start to populate with APRS data as shown below :



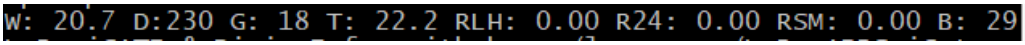
This screen is the default APRS monitor window and shows a list of heard station APRS beacons. The list contains several fields which are :

- Station callsign
- Port number the beacon was heard on, -1 is an IS link or this will show the TNC port number if the station was heard on RF.
- Latitude and longitude of the heard station
- Bearing and distance from your station
- If the heard station is mobile, the screen will also show the speed and course the station is travelling
- The number of beacons heard from the station
- The time since a beacon was heard from the station
- The last beacon text received from the heard station

The list defaults to showing beacons heard in most recent order but you can change the sort order via commands detailed below.

If there are more stations heard than can fit on screen, you can scroll the highlighted bar up and down to select a station as required using the cursor keys and page up/down/home/end keys. If you are seeing too many stations, you can reduce the radius parameter in the WINTNC.INI file to decrease the list size to only show more local stations.

If a weather report has been received, this will be indicated by a line with comments starting W:, such as :



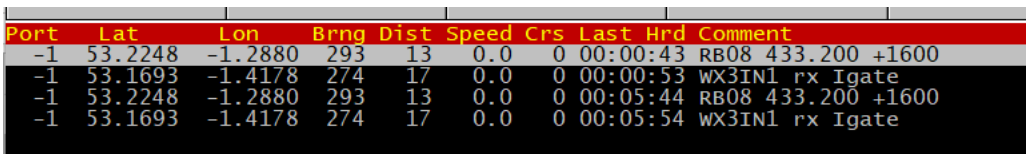
This indicates a weather report with various fields including (but not always) :

- W : Wind speed in mph
- D : Wind direction
- G : Gust peak in mph over last 5 minutes
- T : Temperature in celcius
- RLH : Rainfall in last hour
- R24 : Rainfall in last 24 hours
- RSM : Rainfall since midnight
- H : Humidity in %
- B : Barometric pressure in inches of mercury
- L : Luminosity in watts / sq meter
- S24 : Snowfall in last 24 hours in inches
- RR : Raw rain counter
- X : Nuclear radiation

The menu bar across the bottom of the screen shows the total number of stations heard and the available commands. It also shows the filter currently active. The available commands are :

- M - Messages
- I - Station Info
- F - Filters
- W - Web APRS
- S - Sort
- E - Export

If you select a station and press Enter, this will replace the information shown on the monitor window with a list of beacons heard from the selected station, eg :



Port	Lat	Lon	Brng	Dist	Speed	Crs	Last Hrd	Comment
-1	53.2248	-1.2880	293	13	0.0	0	00:00:43	RB08 433.200 +1600
-1	53.1693	-1.4178	274	17	0.0	0	00:00:53	WX3IN1 rx Igate
-1	53.2248	-1.2880	293	13	0.0	0	00:05:44	RB08 433.200 +1600
-1	53.1693	-1.4178	274	17	0.0	0	00:05:54	WX3IN1 rx Igate

An abbreviated menu bar is also displayed showing the selected callsign, the number of beacons heard from the station and menu options for M, I, W and E.

Press Return to go back to the full station heard list.

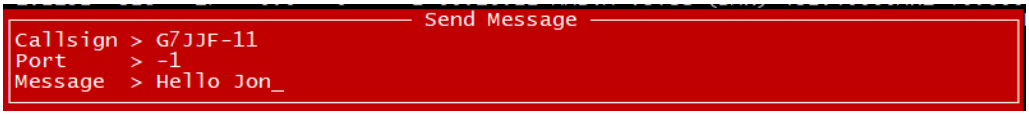
9.2.1 M - Messages

Selecting the Messages option will show the following menu. Pressing ESC will cancel the messages box.

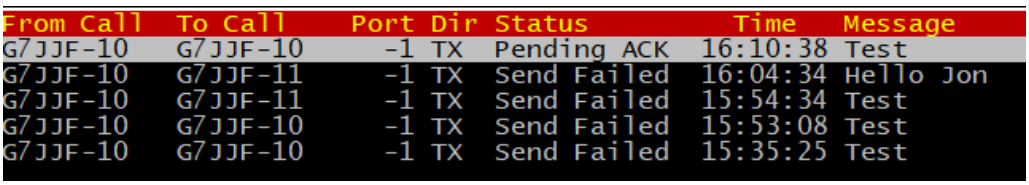
APRS messages are like sending SMS text messages to another station. Due to the nature of RF links especially, the message may not get through first time so a system of retires and message acknowledgements is used. When a message is sent, a sequence number is added to the message. The receiving station sends an acknowledgement message back with the same sequence number so the sending station knows the message has been received. If no acknowledgement is received for a sent message after the configured timeout value in the WINTNC.INI file (MsgAckTimeout) , the message is sent again for a total number of MsgRetries times before the program gives up and assumes the message transfer has failed.

When sending a message, you can either send it to the currently highlighted station by selecting option 3 or send to a different station by selecting option 4.

Option 3 will know which port you heard the station on so will automatically send the message on the same port. Option 4 won't know the port so will ask for this as well as the callsign and message, eg :



If you go back to the List All Messages option, you will see the message and its status.



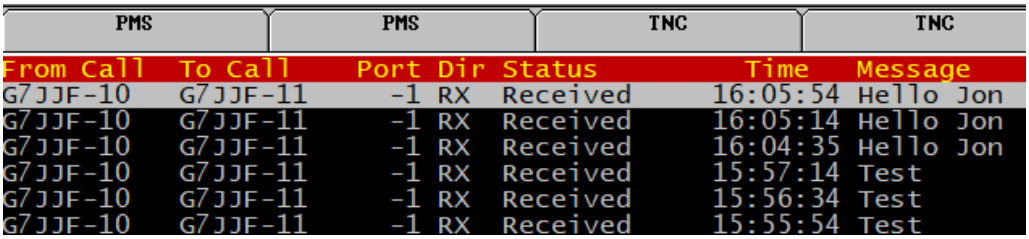
This is showing that a message has been sent from G7JJF-10 to G7JJF-10 over an IS link and it is pending acknowledgement. This will eventually timeout and retry and show sending failed as per the other message attempts.

(For some reason, sending to myself over IS doesn't get an acknowledgement so this is probably an APRS-IS issue rather than something in WinTNC)

Assuming the receiving end is on air, they should receive the message.

If you receive a message via RF or IS, you will see an indicator on the APRS tab showing the callsign of the sender :

Selecting the List All Messages option will then display received message similar to :



This shows that you have received several message from G7JJF-10 to G7JJF-11 at the specified time with the displayed message. You can select an individual message with the cursor keys.

The status bar at the bottom of the screen will show the number of received messages and a menu option to Reply to the highlighted message.

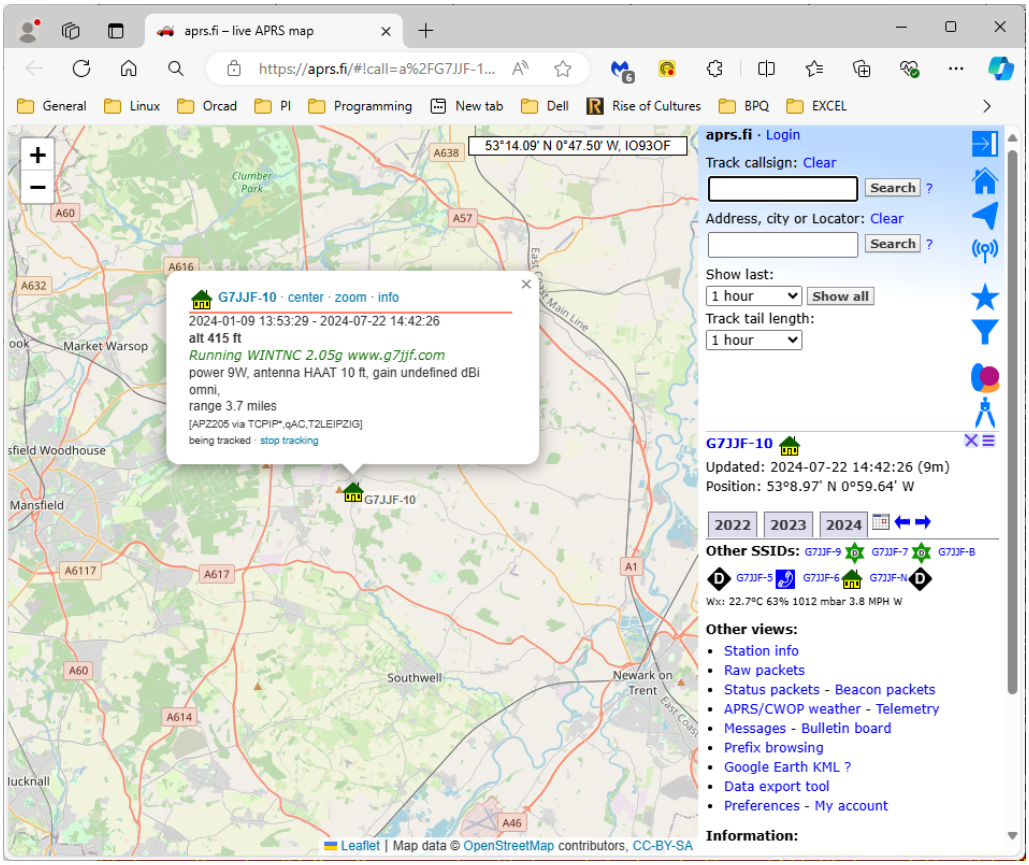
Press Return to go back to the APRS monitor window.

9.2.2 I - Station Info

Selecting the Station Info option will open the aprs.fi – live APRS map showing the station info for the currently selected station.

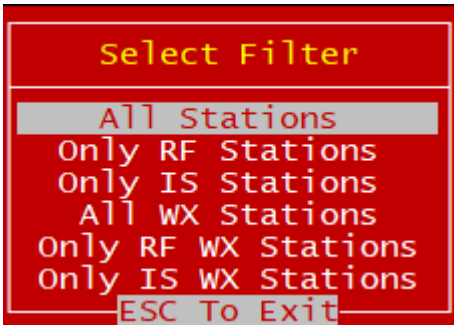
APRS.fi is a web service that collects information from the Automatic Packet Reporting System Internet System (APRS-IS). It is used by amateur (ham) radio operators to transmit real-time position information, weather data, telemetry, and messages over the radio. The service archives position tracking, weather, and message information from the APRS-IS network and displays it on an interactive map. Users can access this data and view routes traveled by APRS tracking stations.

A typical display would show :



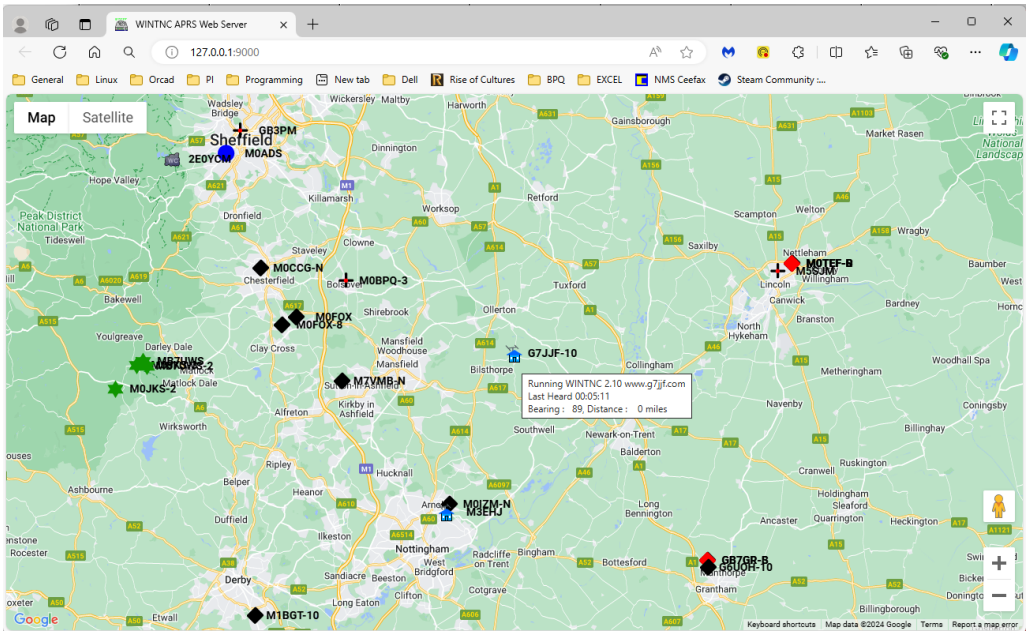
9.2.3 F - Filters

Selecting the Filters option will show a menu with options to filter the display by only RF stations, only IS stations, only WX (Weather) stations etc as shown below. Pressing ESC will cancel the filter box without changing the current filter.

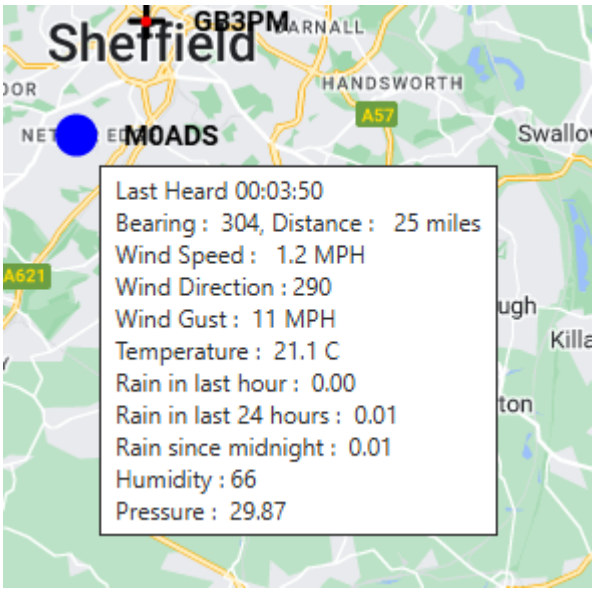


9.2.4 W - Web APRS

Selecting the Web APRS option will open the inbuilt Web APRS Interface. This will show a map of all the stations heard using the Google maps interface. Each station is indicated by their callsign and assigned APRS icon. You can hover with the mouse over the station icon to show a popup box containing further station information. You can use the standard Google maps controls to zoom in/out of the map and move the display around.

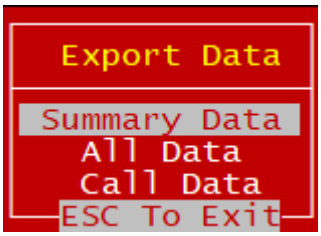


If a station is reporting weather information, you will also see this in the popup box, eg :



9.2.5 E - Export

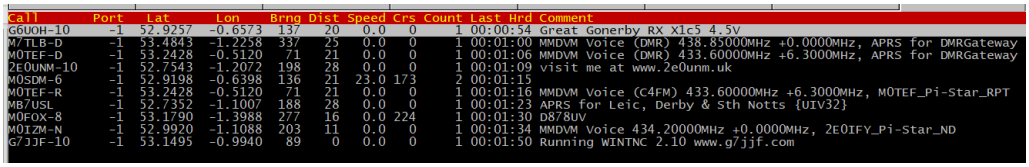
Selecting the Export option will show a menu with options to export summary data, all data or just the currently highlighted station call data. Pressing ESC will cancel the export data box without performing any action.



Selecting an export data option will bring up an enter filename dialog box for you to select where to store the exported data.

Each exported data file will contain lines of comma separated variables which you could import into Excel or a database for further processing.

For a typical station heard screen of :



Call	Port	Lat	Lon	Brng	Dist	Speed	Crs	Count	Last Hrd	Comment
G6UOH-10	-1	52.9257	-0.6573	137	20	0.0	0	1	00:00:54	Great Gonerby RX X1c5 4.5V
M7TLB-D	-1	53.4843	-1.2258	337	25	0.0	0	1	00:01:00	MMDVM Voice (DMR) 438.85000MHz +0.0000MHz, APRS for DMRGateway
M0TEF-D	-1	53.2428	-0.5120	71	21	0.0	0	1	00:01:06	MMDVM Voice (DMR) 433.60000MHz +6.3000MHz, APRS for DMRGateway
2E0UNM-10	-1	52.7543	-1.2072	198	28	0.0	0	1	00:01:09	visit me at www.2e0unm.uk
M0SDM-6	-1	52.9198	-0.6398	136	21	23.0	173	2	00:01:15	
M0TEF-R	-1	53.2428	-0.5120	71	21	0.0	0	1	00:01:16	MMDVM Voice (C4FM) 433.60000MHz +6.3000MHz, M0TEF_Pi-Star_RPT
MB7USL	-1	52.7352	-1.1007	188	28	0.0	0	1	00:01:23	APRS for Leic, Derby & Sth Notts {UIV32}
M0FOX-8	-1	53.1790	-1.3988	277	16	0.0	224	1	00:01:30	D878UV
M0IZM-N	-1	52.9920	-1.1088	203	11	0.0	0	1	00:01:34	MMDVM Voice 434.20000MHz +0.0000MHz, 2E0IFY_Pi-Star_ND
G7JJF-10	-1	53.1495	-0.9940	89	0	0.0	0	1	00:01:50	Running WINTNC 2.10 www.g7jjf.com

a summary data export would contain :

```
"G6UOH-10",-1,52.9257,-
0.6573,137,20,0.0,0,1,"00:00:28","Great Gonerby RX X1c5
4.5V"
"M7TLB-D",-1,53.4843,-
1.2258,337,25,0.0,0,1,"00:00:34","MMDVM Voice (DMR)
438.85000MHz +0.0000MHz, APRS for DMRGateway"
"M0TEF-D",-1,53.2428,-
0.5120,71,21,0.0,0,1,"00:00:40","MMDVM Voice (DMR)
433.60000MHz +6.3000MHz, APRS for DMRGateway"
"2E0UNM-10",-1,52.7543,-
1.2072,198,28,0.0,0,1,"00:00:43","visit me at
www.2e0unm.uk"
"M0SDM-6",-1,52.9198,-
0.6398,136,21,23.0,173,2,"00:00:49",""
"M0TEF-R",-1,53.2428,-
0.5120,71,21,0.0,0,1,"00:00:50","MMDVM Voice (C4FM)
433.60000MHz +6.3000MHz, M0TEF_Pi-Star_RPT"
"MB7USL",-1,52.7352,-
1.1007,188,28,0.0,0,1,"00:00:57","APRS for Leic, Derby &
Sth Notts {UIV32}"
"M0FOX-8",-1,53.1790,-
1.3988,277,16,0.0,224,1,"00:01:04","D878UV"
"M0IZM-N",-1,52.9920,-
1.1088,203,11,0.0,0,1,"00:01:08","MMDVM Voice
434.20000MHz +0.0000MHz, 2E0IFY_Pi-Star_ND"
```

```
"G7JJF-10",-1,53.1495,-
0.9940,89,0,0.0,0,1,"00:01:24","Running WINTNC 2.10
www.g7jjf.com"
```

Each field in the export file corresponds to one field on the screen display (the last heard field is different due to the time taken to select and export the data file).

Exporting all data would contain every beacon heard from every callsign on the list.

Exporting call data would only export all beacons heard from the selected callsign.

If any filter is in effect, this would also be taken into account on the export data option.

9.2.6 S - Sort

Selecting the Sort option will show a menu with options to sort the display by time last heard, distance or callsign. Pressing ESC will cancel the sort box without changing the current sort order.

Last Heard will sort by stations most recently heard.

Distance will sort by stations closest to you.

Callsign will sort by callsigns alphabetically.

Troubleshooting

10 Troubleshooting

It is very unlikely that you will encounter any problems when running this software. However, due to the complex nature of writing and testing Windows multiuser/multitasking software, it is virtually impossible to test out all combinations of everything that could possibly happen at the same time and so I cannot guarantee that there are no small bugs lurking somewhere in the code. If you do find something strange that is happening, please let me know about it so I can correct it if a problem exists.

There are, however, errors than can occur due to incorrect configuration of the software.

You may get a Message Box saying there is an error opening a Port. If you are using a physical COM port, please make sure you have the correct COM port settings and the COM port actually appears in the Device Manager software. If you are using a USB/Serial adapter, COM port numbers can get moved around depending which USB socket you are plugged into so just double check the COM port numbers are correct.

You may also get a Message Box saying various items are missing from sections of the WINTNC.INI file. Simply double check the configuration file and make sure nothing has been taken out in error.

Also, please do not delete the Loopback port which is normally Port 1 in the Port Configuration dialog. This is extremely useful for locally connecting to your own node or PMS for testing purposes and can confuse or cause problems if you delete it out.

If you get a system error occuring, please make a note of any information the program tells you about the error and let me know so I can investigate the problem.

Closing Remarks

11 Closing Remarks

If you have any problems using the software, first of all please read this help file thoroughly. The answer to most of your questions will be hidden somewhere. If all else fails, please contact me at any of the addresses given below help and advice.

I would also appreciate any input you would care to give concerning the program. If you have any ideas or comments that would make it a better program, then please let me know.

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