



Contest Logger Setup

How to setup N1MM+ for
CW Contests

Topics₁

- AFS CW Key Rules
- N1MM+ Overview
- Setup for a Single Operator
 - Installation or update of N1MM+
 - Creating the N1MM+ Database
 - Configuring Station Parameters and Log for a Contest
 - Configuring CAT Control
 - Testing configuration and logging
- Operations
 - Getting Started
 - Set Band/Frequency
 - Dupe checking
 - The Band Map
 - Cat Interface
 - Submitting the log after the contest
 - Backing up the log to Clublog
- Additional Information beyond the basic setup

AFS CW Rules extract

- CW: January 7th 2023
- Only the 3.5 & 7 MHz bands may be used.
- RST report plus a progressive contact serial number starting with 001 for the first contact.
- Full rules can be found here:
<https://www.rsgbcc.org/hf/rules/2023/rafs.shtml>

N1MM+ OVERVIEW

N1MM+ Overview

- N1MM+ is a free contest logging tool that can be used for most contests
- N1MM+ records exactly what is required for each individual contest and scores contacts according to the contest rules
- N1MM+ helps you to avoid duplicate contacts that will waste time and not add to your score
- To do these things, it has to be set up with a new log for each contest
- N1MM+ can display several windows. We'll cover the two most important in this overview.

N1MM+ Entry Window

Enter call signs,
frequency, mode, other
commands here

Enter contest exchange here.
Use space bar, tab or mouse
click to move among fields.
Press Enter key to log.

3520.00 CW Manual - VFO A

File Edit View Tools Config Window Help

12:40:51Z

CW

160

80

40

30

20

17

15

12

10

Run S&P

F1 S&P CQ F2 Exch F3 Spare F4 M1PTR F5 His Call F6 Spare

F7 Rpt Exch F8 Agn? F9 Zone F10 Spare F11 Spare F12 Wipe

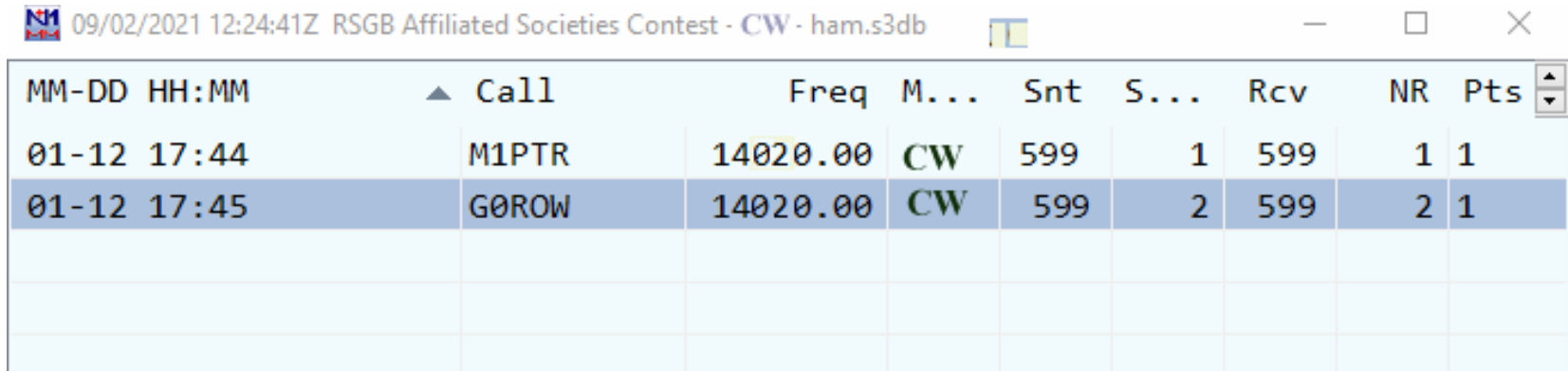
Esc: Stop Wipe Log It Edit Mark Store Spot It QRZ

Call history UserText appears here when enabled.

Change band/mode
by clicking here

These buttons are (mostly) for
automated sending of messages in
CW, digital, or with voice recordings

N1MM+ Log Window



The screenshot shows the N1MM+ Log Window interface. The title bar reads "09/02/2021 12:24:41Z RSGB Affiliated Societies Contest - CW - ham.s3db". The main area contains a table with the following columns: MM-DD HH:MM, Call, Freq, M..., Snt, S..., Rcv, NR, and Pts. The table has two rows of data, with the second row highlighted in blue.

MM-DD HH:MM	Call	Freq	M...	Snt	S...	Rcv	NR	Pts
01-12 17:44	M1PTR	14020.00	CW	599	1	599	1	1
01-12 17:45	G0ROW	14020.00	CW	599	2	599	2	1

Double click any field to edit it.

Right click an entry to get a menu for editing or deleting.

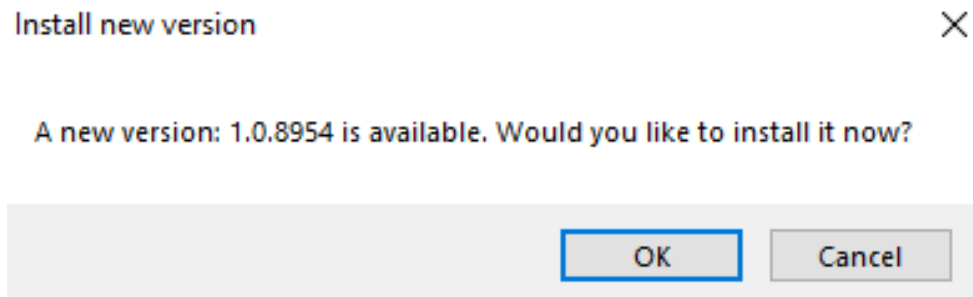
The WIPELOG command in the Entry window can be used to empty the log of all entries after testing.

SETUP

How to setup N1MM+
Assumes a Single Operator using 20m
CW only without any DX Cluster
assistance

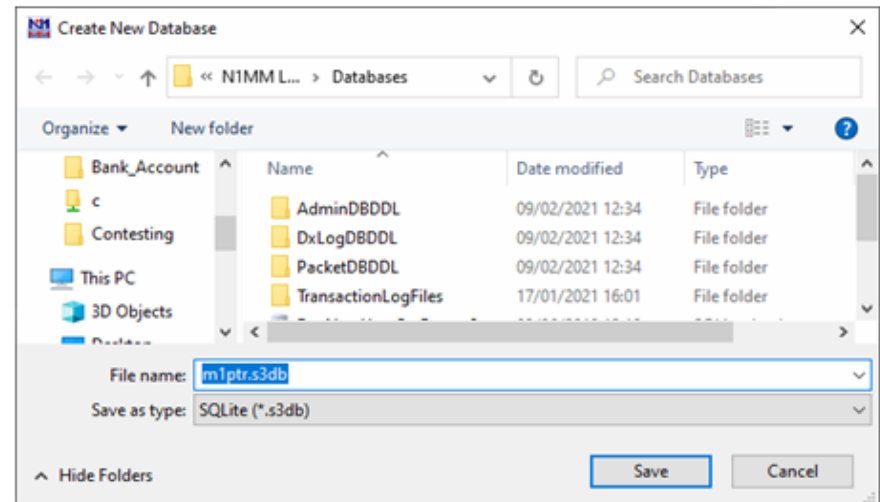
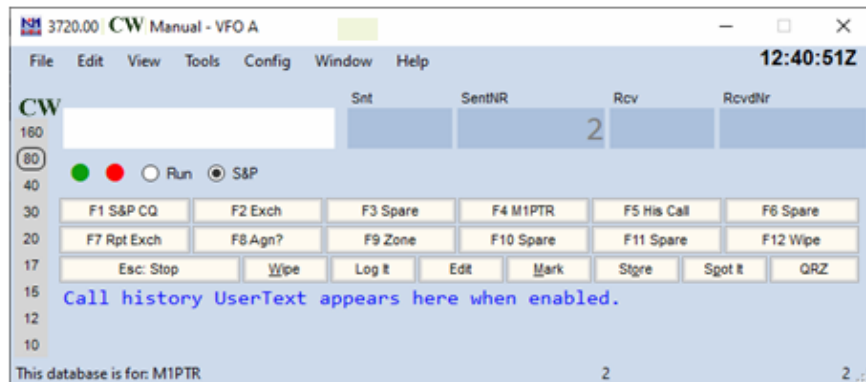
Install or Update N1MM+

- If N1MM+ is not installed first follow the Full Install instructions at this link:
 - <https://n1mmwp.hamdocs.com/downloads/n1mm-full-install/>
 - Accept defaults for locations of files
- A new installation or an existing installation should be updated to the latest version of N1MM+. Start N1MM+ while connected to the internet, and select OK when this dialog box appears:



Create a Database for Contests

- New installations – a dialog box should appear offering option to create a new database. Best to use the default (ham.s3db) or can change e.g. *your callsign.s3db*
- Existing installations – From the Entry window select File->New Database (Use an existing database ONLY if you already have one already set up)



Configure Station Data – Mandatory!

- If the dialog box below doesn't pop up, from the Entry window select Config -> Change Your Station Data...

Tip: You need to fill out this form or the program will not perform properly... Also, make sure your computer date and time are set to the LOCAL date and time zone for your location.

Call	M7HAM				
Name	Ray D O Ham				
Address	59 Down Road				
Address	Offenon				
City	Stockport	State			
Zip	SK73TU				
Country	ENGLAND				
Grid Square	IO83HI	CQ Zone	14		
ITU Zone	27				
License	Full	Latitude	53.3542 N		
Longitude	3.3750 W				
Station TX/RX	ICOM 7300		Power	100W	
Antenna	20m vertical	Ant. Height	7m	a.s.l.	300ft
ARRL Section	DX				
Rover QTH					
Club	Stockport Radio Society				
Email address	rado@ham.com				

Ok Help Cancel

Must use DX for a non US station.

Create Log for contest

From Entry window select File -> New Log in Database ham.s3db. Set station parameters:

ham.s3db

New log For: CQ WPX CW

Log Type Start Date

Use Up/Down cursor keys to see long description above.

Contest Associated Files

Category

Operator State for Log Type QSOPARTY

Band Note - the program does not validate categories. Check the contest rules for valid categories.

Power Mode

Overlay Station

Assisted Time Category

Transmitter

Sent Exchange Omit RST. E.g. CQWW: 05 SS: A 56 EM

Operators

Soapbox

Select RSGBAFS-C from drop down

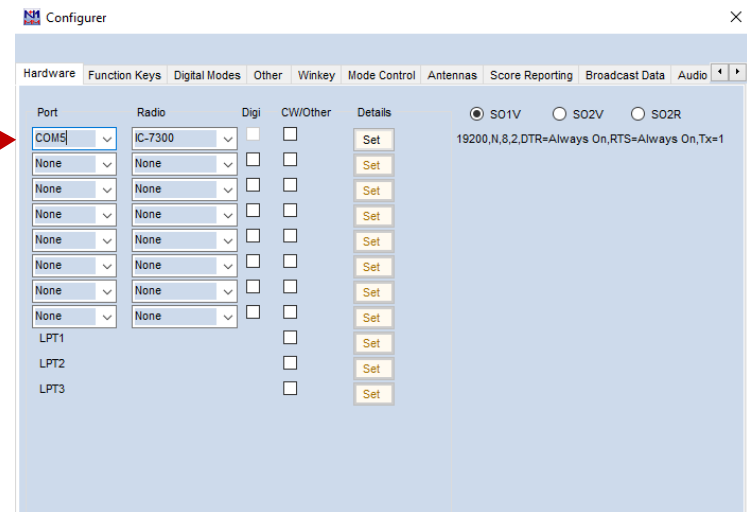
Enter information applicable to your station and what is allowed in the rules

Enter # as the Exchange for AFS i.e. incrementing number
Enter the callsign you are using for the contest

CAT Control Setup

- CAT allows N1MM to sense and change frequency and mode
- Requires serial interface to PC
- From Entry window select Config ->Configure Ports, Mode Control, Audio, Others...

Cat Port and Rig



CAT Control Details

- Access this menu from Set button

Set these values to match your radio

Note the suggested settings here

Com5

Speed	Parity	DataBits	Stop Bits
19200	N	8	1

DTR (pin 4)	RTS (pin 7)	Icom Code (hex)	Radio Nr
Always Off	Always Off	94	1

Enable Both Hardware & Software PTT
 PTT via Radio Command SSB Mode
 PTT via Radio Command CW Mode
 Allow ext interrupts
 PTT via Radio Command Digital Mode

FootSwitch (pin 6)
None

Radio Polling Rate
Normal

Suggested Icom Settings:
9600 - 19200, N, 8, 1, Always Off, Always Off, Icom Hex Code
DTR_RTS should be Always On with a COM port powered interface.
Set the radio to the same speed or auto-baud.
Set the radio CI-V Transceive option to OFF.

Help OK Cancel

CW Configuration TS 590

1 Configurater

Port	Radio	Digi	CW/Other	Details
COM1	None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Set
COM3*	TS-590	<input type="checkbox"/>	<input type="checkbox"/>	Set
None	None	<input type="checkbox"/>	<input type="checkbox"/>	Set
None	None	<input type="checkbox"/>	<input type="checkbox"/>	Set
None	None	<input type="checkbox"/>	<input type="checkbox"/>	Set
None	None	<input type="checkbox"/>	<input type="checkbox"/>	Set
None	None	<input type="checkbox"/>	<input type="checkbox"/>	Set
None	None	<input type="checkbox"/>	<input type="checkbox"/>	Set
None	None	<input type="checkbox"/>	<input type="checkbox"/>	Set
None	None	<input type="checkbox"/>	<input type="checkbox"/>	Set

2 Details

SO1V SO2V SO2R

DTR=CW,RTS=Always Off,Tx=1

115200,N,8,1,Handshake,Tx=1

3 Com1

DTR (pin 4) CW

RTS (pin 7) Always Off

VFO Nr 1

PTT Delay (msec) 30

Two Radio Protocol None

FootSwitch (pin 6) None

4 Com3

Speed 115200 Parity N DataBits 8 Stop Bits 1

DTR (pin 4) Handshake RTS (pin 7) Handshake Radio Nr 1

Enable Both Hardware & Software PTT

PTT via Radio Command SSB Mode

PTT via Radio Command CW Mode

PTT via Radio Command Digital Mode

Dig Modes Acc Jack Radio Cmd PTT

FootSwitch (pin 6) None

Radio Polling Rate Normal

Suggested TS-590 Kenwood Settings:
38400, N, 8, 1, Handshake, Handshake

The radio can not be in Memory or Call mode.

pin 4 DTR

COM Port

pin 5 GND

TX Key Input

BC547

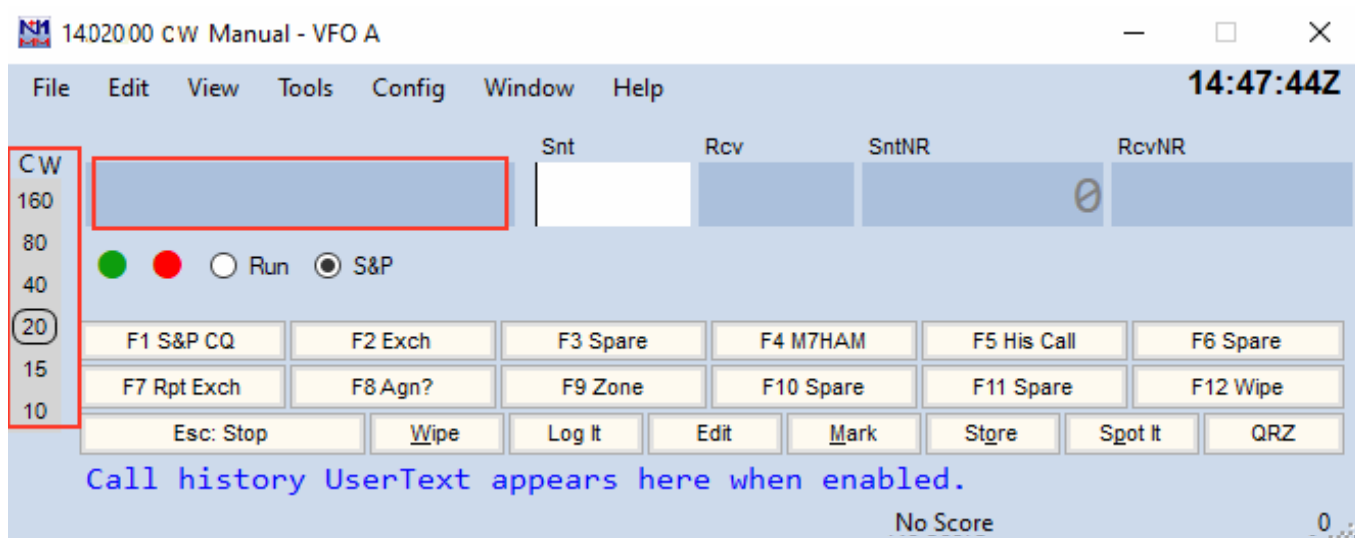
1k

USB to COM Adapter - FTDI

Simple COM port CW interface

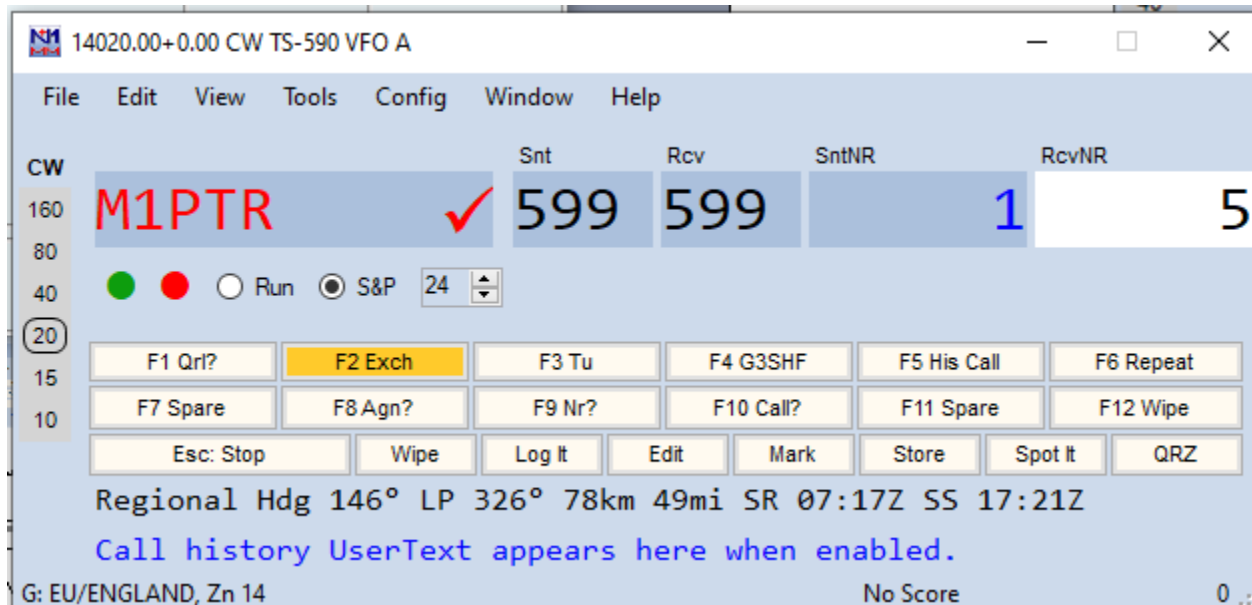
Testing

- Start N1MM+ and verify that the Entry window appears with expected entry fields, bands, mode(s), and CAT control (if installed and operational).



Test Logging

- Enter a dummy QSO in the Entry window



Use Space Bar (preferred) or Tab to go to next field

Use Enter to enter into log

Note. Function key F12 will clear entry fields (useful as a reset after error)

Verify Log

17/02/2021 19:49:47Z CQ WPX CW - ham.s3db

DD-MM HH:MM	Call	Freq	Snt	Rcv	Sent	NR	Wpx	M1	Pts
17-02 19:47	M1PTR	14020.00	599	599	1	5	M1	✓	1
17-02 19:47	M1PTR	14020.00	599	599	1	5	M1	✓	1

14020.00+0.00 CW TS-590 VFO A

File Edit View Tools Config Window Help

CW

160	M1PTR	✓	599	599	1	5
80						
40						
20						
15						
10						

Run S&P 24

F1 Qri? F2 Exch F3 Tu F4 G3SHF F5 His Call F6 Repeat

F7 Spare F8 Agn? F9 Nr? F10 Call? F11 Spare F12 Wipe

Esc: Stop Wipe Log It Edit Mark Store Spot It QRZ

Regional Hdg 146° LP 326° 78km 49mi SR 07:17Z SS 17:21Z

Call history UserText appears here when enabled.

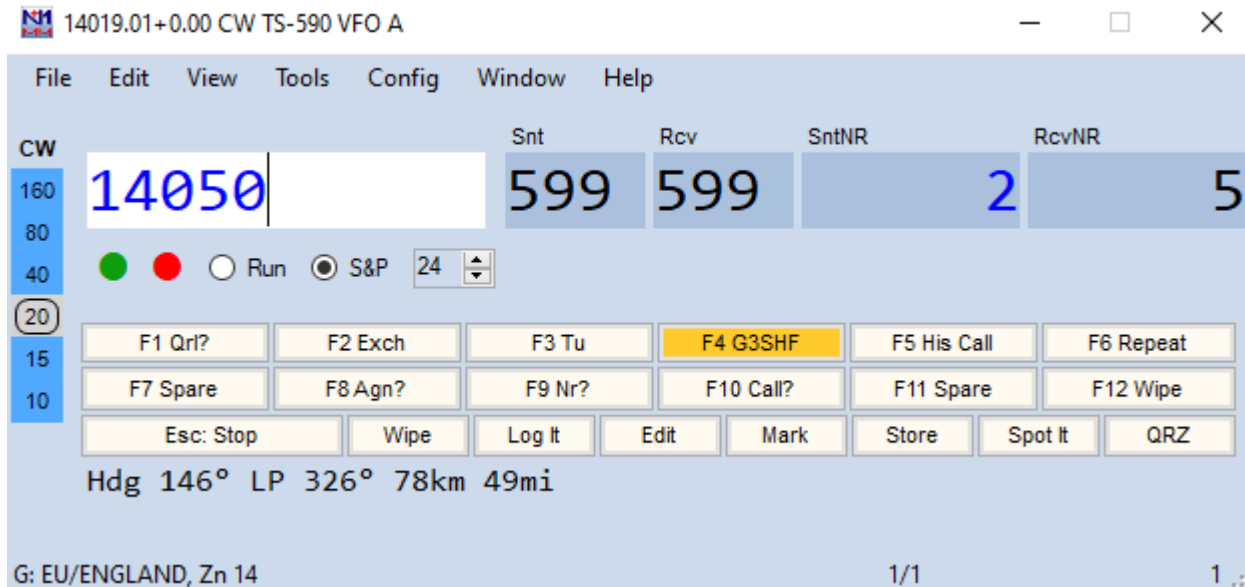
G: EU/ENGLAND, Zn 14 No Score 0

Check the log matches with the information entered in the Log Entry window

OPERATIONS

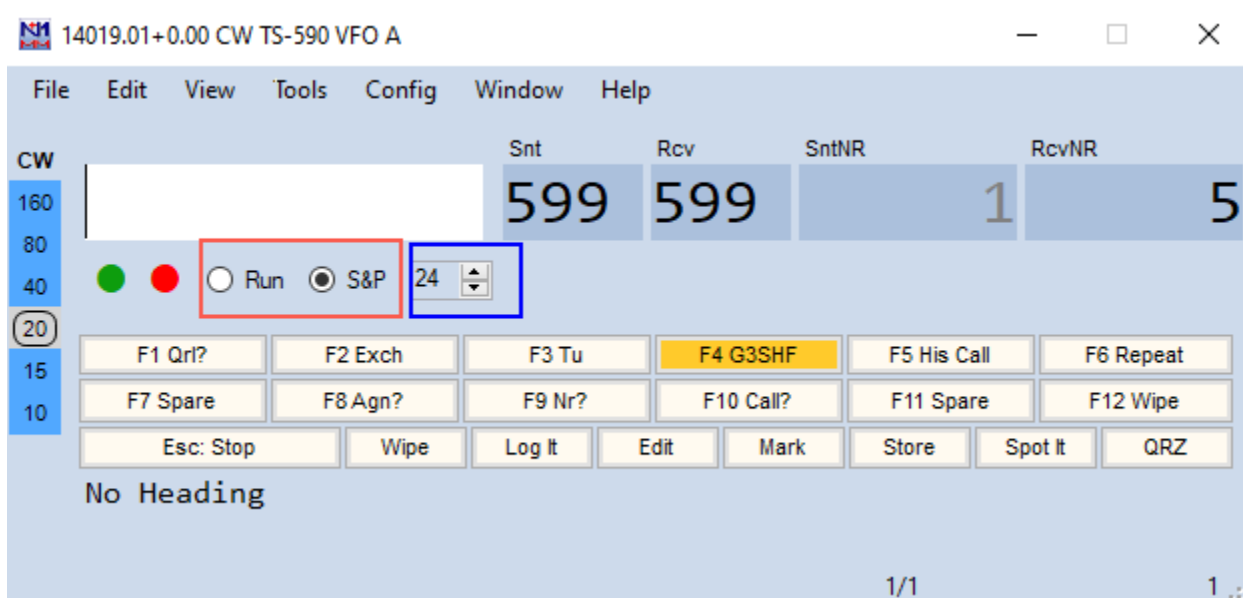
Setting Frequency

- With CAT control, just verify that Entry window shows radio dial frequency and correct mode
- Without CAT control, either click band/mode at left of Entry window or enter frequency in kHz



Set Run or S&P

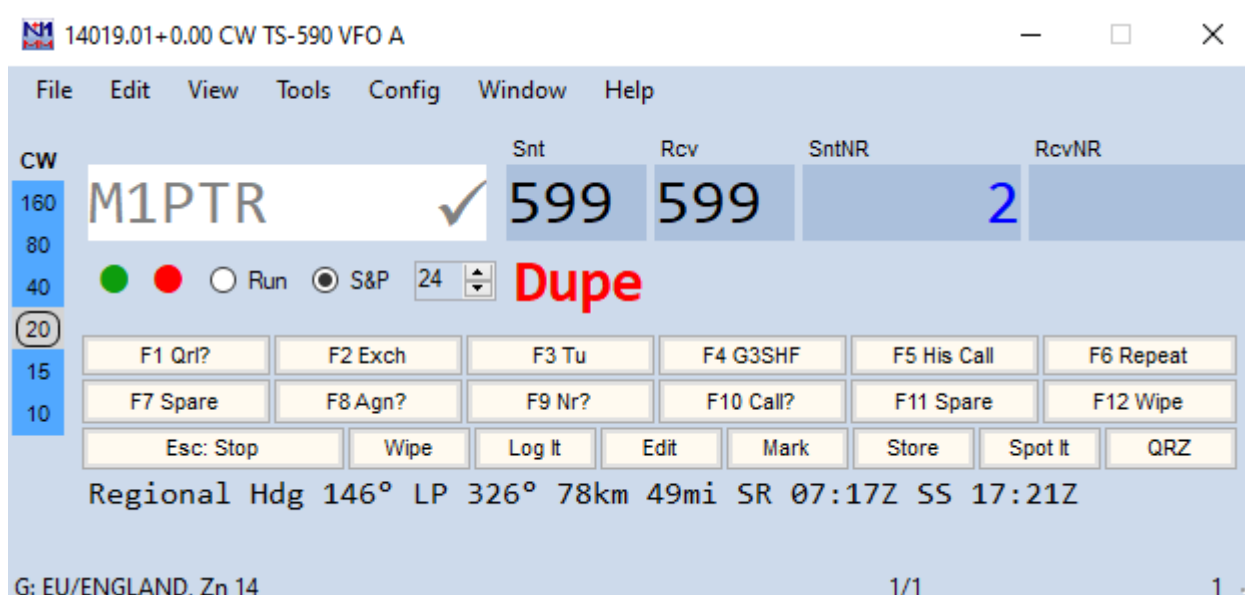
- Run = I will call CQ
- S&P = “Search and Pounce” – I will answer CQs



CW = 24 wpm

Dupe Checking

- A “Dupe” is a station already worked on the current band and mode. Working a dupe doesn’t add to our score.
- N1MM+ will identify a duplicate station when the call sign is entered



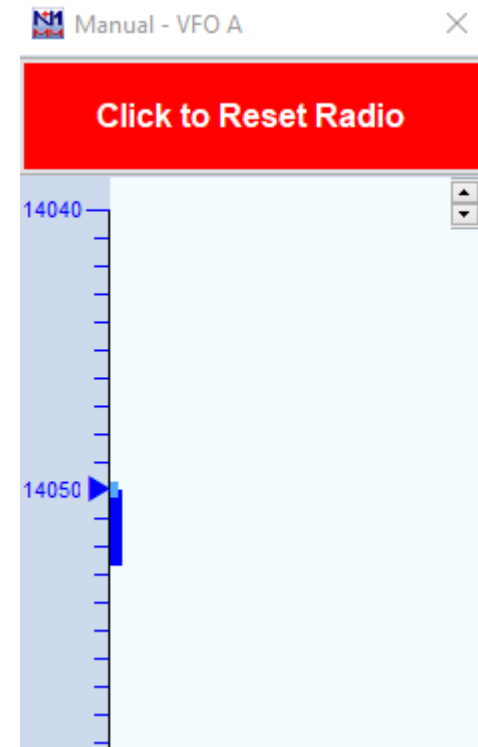
The Bandmap

- You can use the Bandmap window to return to a station you need but can't work at the moment
- Open the Bandmap window by selecting Window ->Bandmap from the Entry window
- Enter at least the call sign in the Entry window, then click "Store" to add to the Bandmap
- With CAT control, you can return to the station by clicking on the bandmap entry



CAT Interface

- It is not uncommon during a contest that the CAT interface can lock up. Reasons are varied and include RFI or PC slow down
- If this happens a Reset button will appear in the Bandmap window
- Click on the button and a timer window appears while radio interface is reset



Submitting the Log after the contest

- A copy of the log in Cabrillo format needs to be submitted at the end of the contest in a timely manner. Check the Rules before the contest starts.
- Recommended procedure
 - From the Entry window select File -> Generate Cabrillo File
 - Follow the instructions and note where the log is stored
 - Using a browser navigate to <https://www.rsgbcc.org/cgi-bin/hfenter.pl>
 - Follow the instructions and upload the log file stored above. Select *Stockport Radio Society*₂ from the drop down as your club

Backing Up the Log to Clublog

- A copy of the log in ADI format maybe also needed for upload to Clublog
- Recommended procedure
 - From the Entry window select File -> Export -> Export ADIF to File->Export ADIF to File...
 - Select a directory and give the backup a unique name.
Eg. "M7HAM_AFS_CW_2023.ADI"
 - Using a browser navigate to https://clublog.org/upload_html5.php
 - Follow the instructions, select the file stored above and be careful to merge with (and not replace) any existing log

Final Note

- N1MM+ is thoroughly documented. The slides only covered the basic configuration to enter a contest.

Much more info is here: <https://n1mmwp.hamdocs.com/>

- Any member of the SRS Contest Group will be happy to assist you with N1MM+ or advise you how to prepare for a contest such as AFS

Contesting Q & A



ADDITIONAL INFORMATION

Beyond the basic setup

Additional Info

- Add RBN feed for assisted operation
- Add a DX Cluster feed for assisted operation
- Using F-Keys to automate exchanges

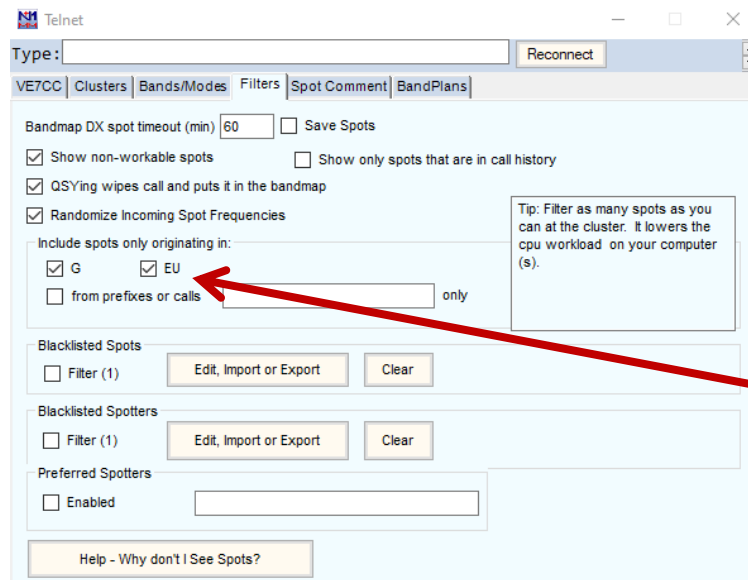
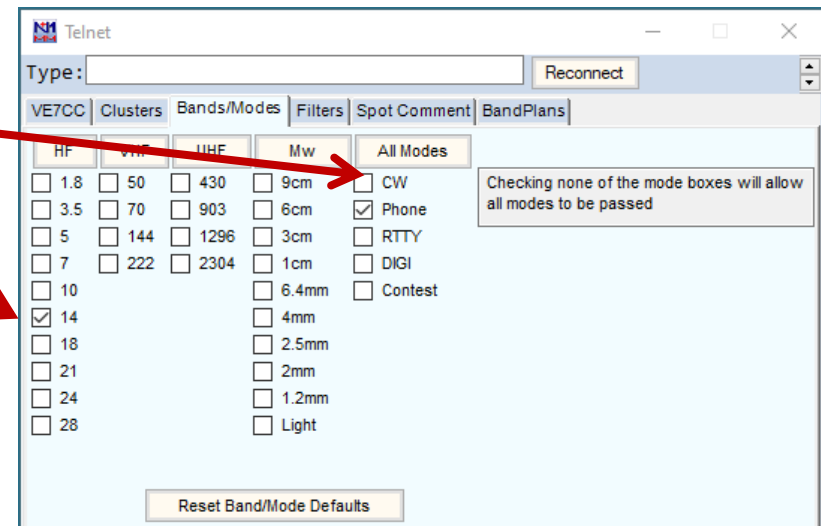
DX Cluster

- The DX Cluster is a world wide network of connected computers where users are logged in and add "DX spots"
- A DX spot is a piece of information sent from one station to every other one logged in on the DX Cluster, in real time.
- N1MM can be configured to connect to a DX Cluster so that DX Spots appear in the bandmap as callsigns
- During a contest clicking on a callsign in the bandmap automatically sets a radio with a CAT connection to the frequency of that station and places the callsign in the Entry window

Setup DX Cluster

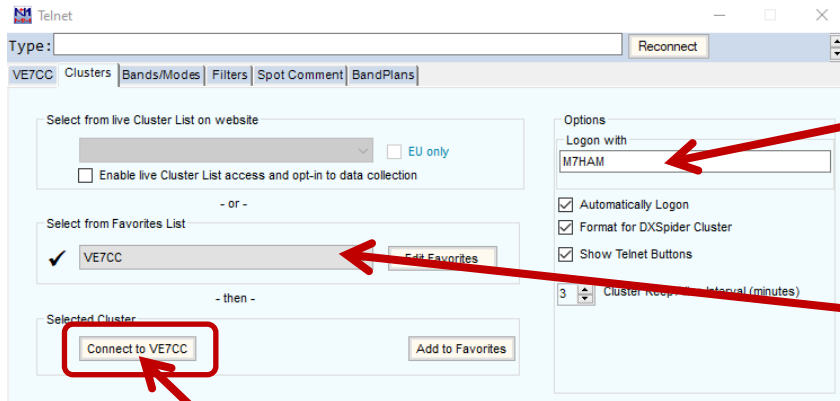
- Open a Telnet window from the Tools menu

Under Bands/Mode tab
Select band and mode to
those of interest



Under Filter tab select local spot
origins to improve your chances
of hearing the spotted station

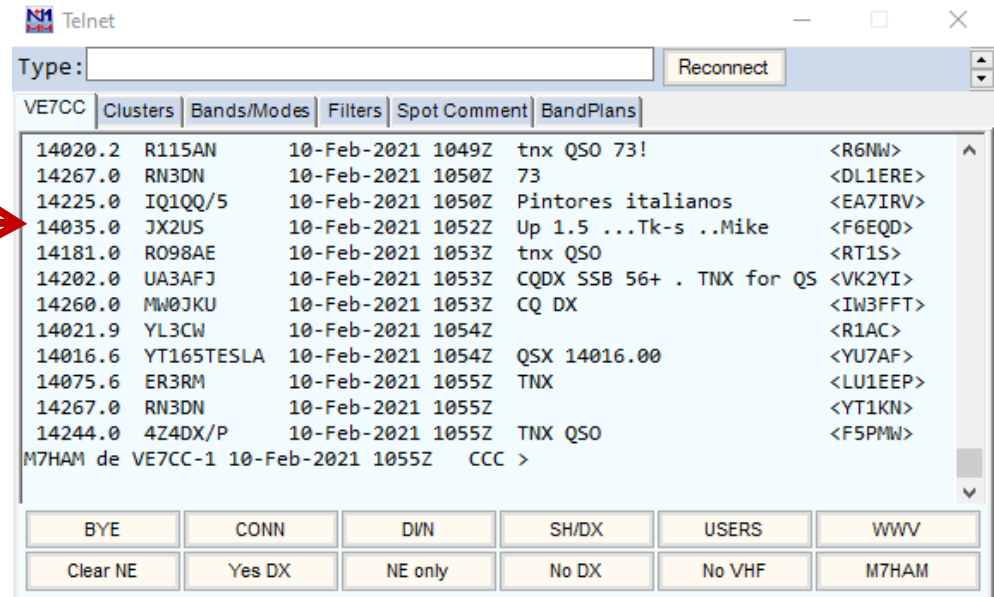
Connect to DX Cluster



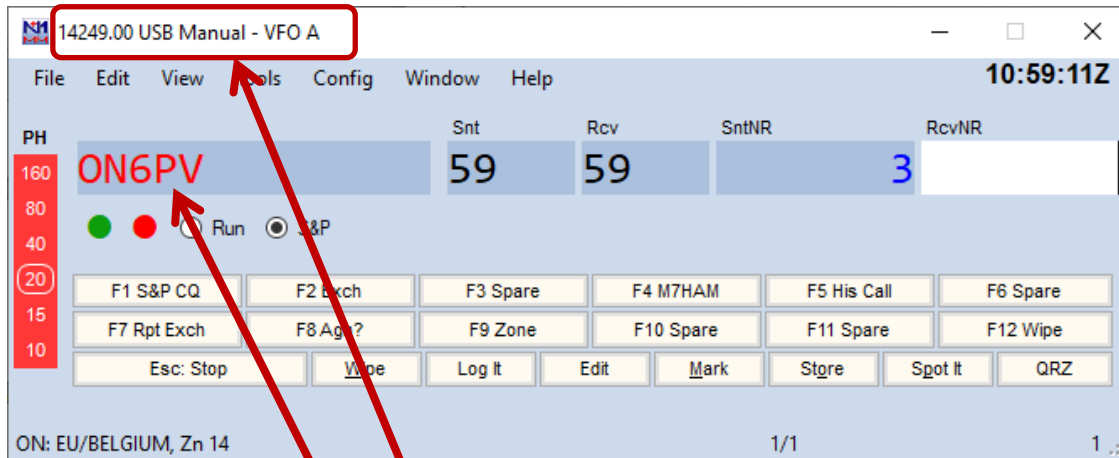
Under Clusters tab enter your callsign and check automatic login

Select the DX Cluster node from the drop down. VE7CC or GB7MBC are popular nodes

Click Connect and open the node tab (e.g. VE7CC) to view the DX spots



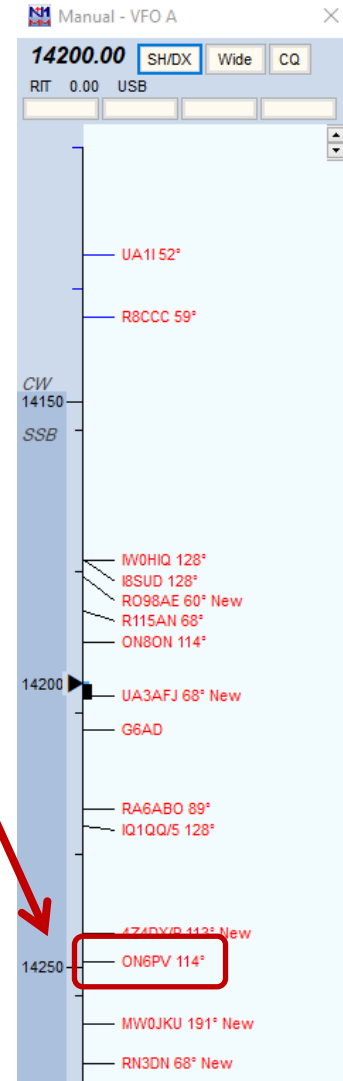
Using DX Cluster



Click on a callsign in the bandmap

Radio is set via CAT to station frequency

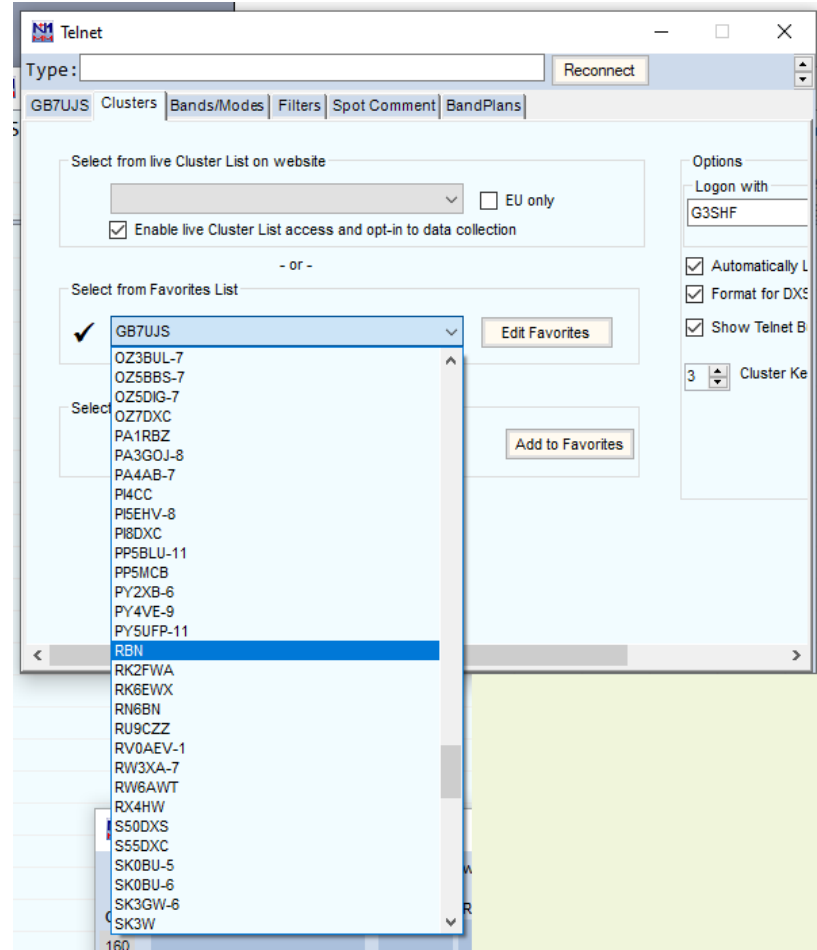
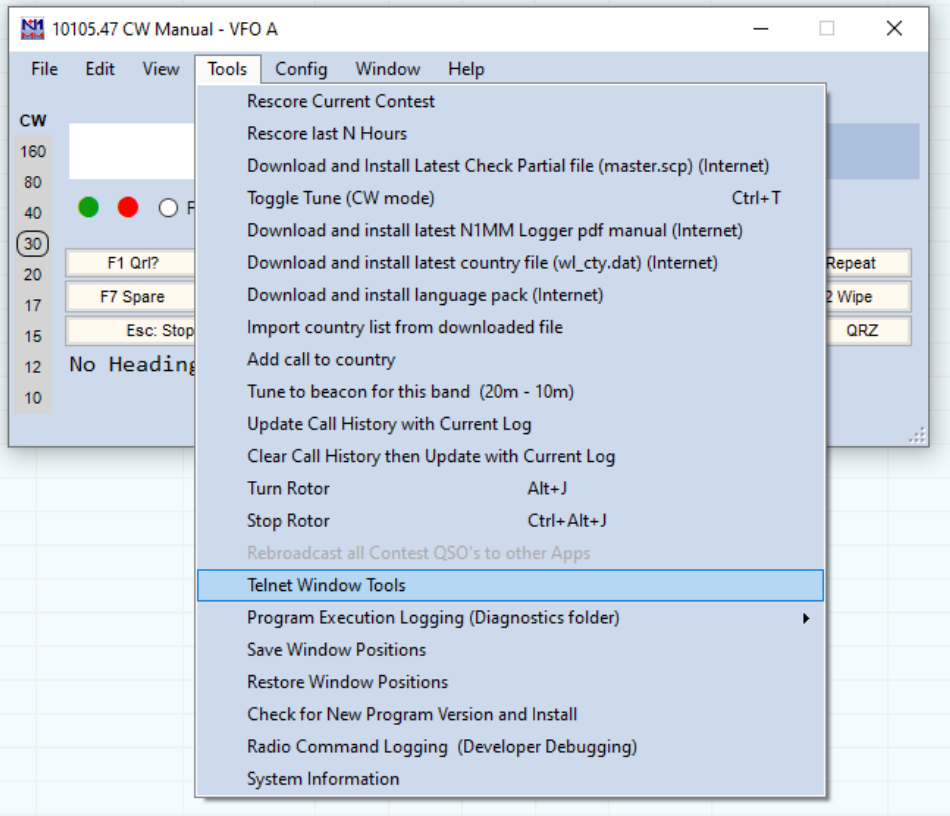
The callsign is placed in the Log Entry window ready for a QSO



Reverse Beacon Network

- Reverse Beacon Network is an international network of over a 100 receivers on all continents running a "Skimmer", which are aggregated in a common "feed" providing DX spots.
- As well as the Spots on the website there are a number of useful facilities including the ability to search for a particular callsign and also compare signals between up to 10 stations heard by a single reverse beacon on a given date.
<http://www.reversebeacon.net/main.php>
- You can also find out what stations, from a given country or zone, have been heard, at what times and on what frequencies. You can see when you have been 'spotted', who 'spotted' you, and how loud you were.

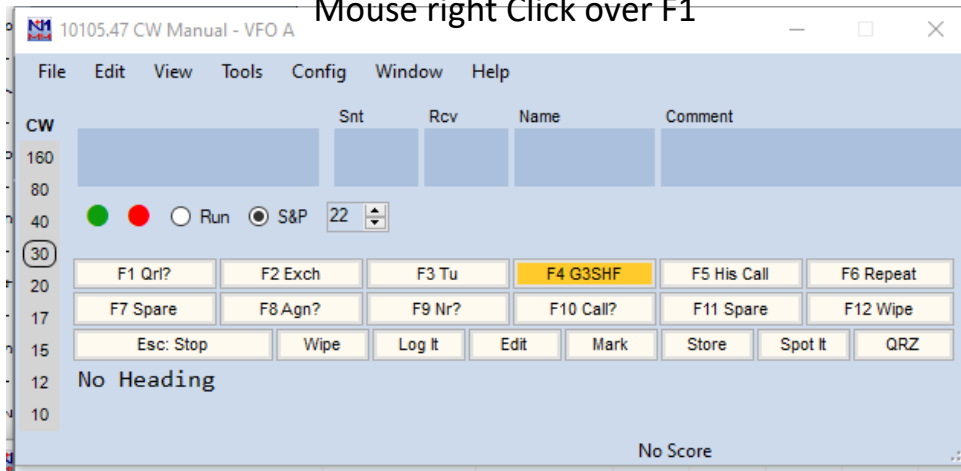
N1MM+ RBN ACCESS



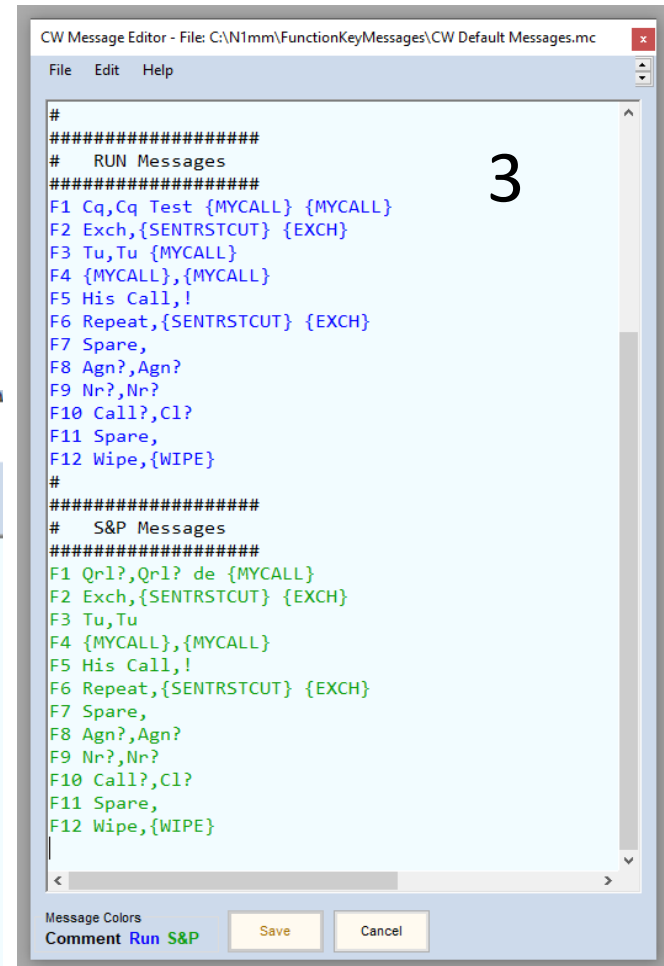
1

Set up The F - Keys

Mouse right Click over F1



3



2

CW Message Editor - File: C:\N1mm\FunctionKeyMessages\CW Default Messages.mc

File Edit Help

```

#
# CW Function Key File
#
# This file can be used in most CW contests that have a simple exchange
# The {EXCH} macro uses the contents of the Sent Exchange box in the contest setup
# The {SENTRSTCUT} defaults to 5NN. If you want to send another signal report,
# change the Sent RST in the Entry Window before transmitting your exchange.
#
# F5 uses "!" macro for his callsign
# Do not use the {CALL} macro in place of the ! macro
#
# S&P F1 calls QRL? before placing the program in RUN mode for calling CQ
# To respond to caller, send F5 then F2, or ; (default exchange key) or
# Insert, or Enter in ESM
#

```

References

- N1MM Website <https://n1mmwp.hamdocs.com/>
- N1MM Support <https://groups.io/g/N1MMLoggerPlus>
- VE7CC DX Cluster <http://www.bcdxc.org/ve7cc/>
- AFS Website <https://www.rsgbcc.org/hf/rules/2023/rafs.shtml>
- [Clublog guide](https://www.g8srs.co.uk/hf-ladder-2/) <https://www.g8srs.co.uk/hf-ladder-2/>
- RBN Website <http://www.reversebeacon.net/main.php>

THE END