

B



Contest Logger Setup

How to setup N1MM+ for
SSB Contests

Topics₁

- AFS SSB Contest Extract
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 - Creating the N1MM+ Database
 - Configuring Station Parameters and Log for a Contest
 - Configuring CAT Control
 - Testing configuration and logging
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 - Dupe checking
 - The Band Map
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 - Backing up the log to Clublog
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AFS SSB Contest

- For amateurs worldwide to contact as many amateurs and prefixes as possible during the contest period.
- CW: 7TH January 2023
- DATA 15th January 2023
- SSB: 21st January 2023
- Only the 3.5 & 7 MHz bands may be used.
- RS 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

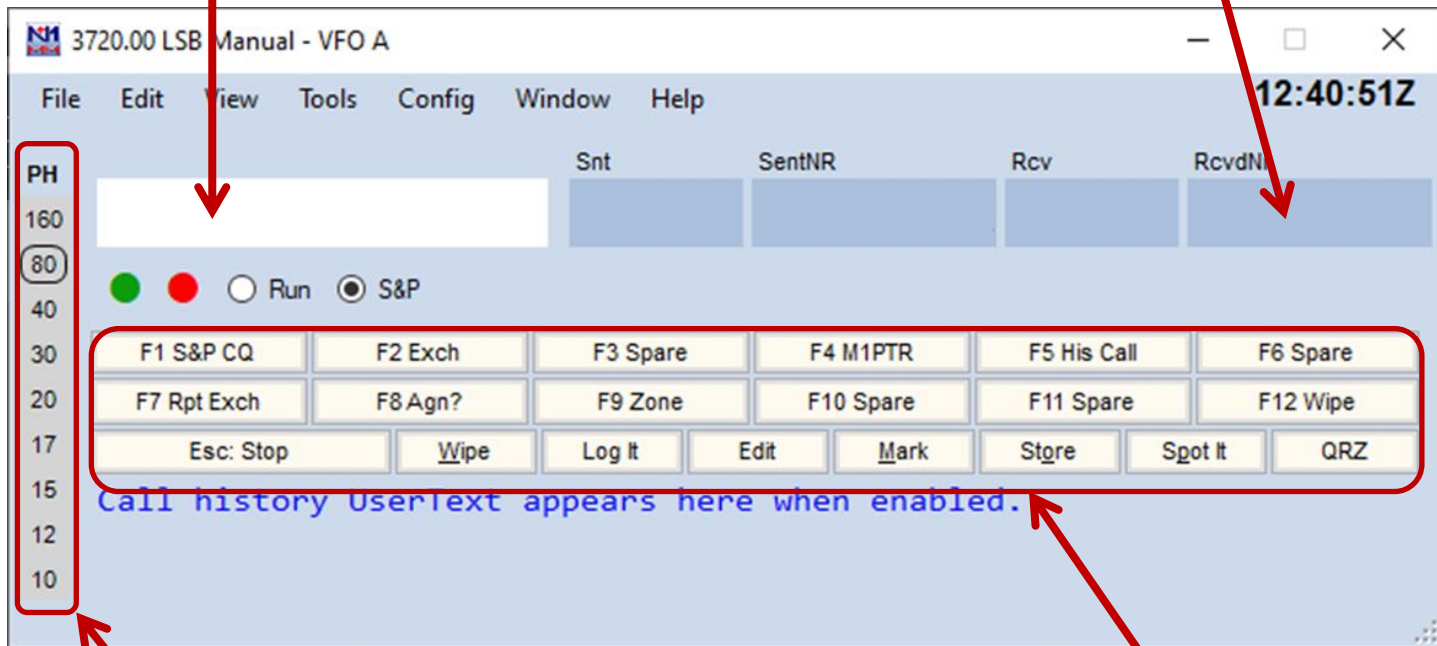
N1MM+ Overview

- 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.



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 a window titled "09/02/2021 12:24:41Z RSGB Affiliated Societies Contest - SSB - ham.s3db". The window 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	14200.00	USB	59	1	59	1	1
01-12 17:45	GØROW	14200.00	USB	59	2	59	2	1

From Entry window select Window -> Log to view Log (Ctrl L)

Double click any field to edit it.

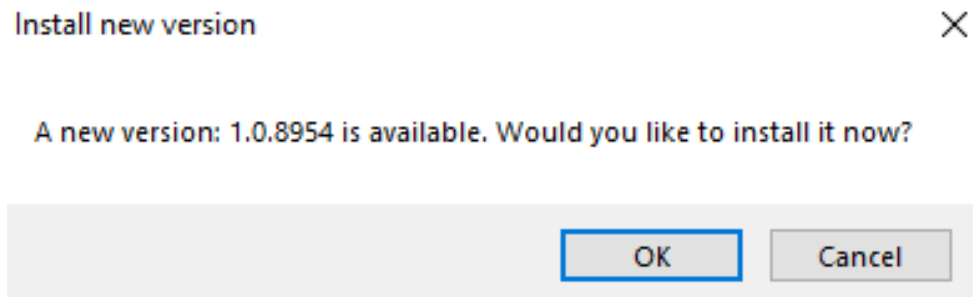
Right click an entry to get a menu for editing or deleting.

SETUP

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

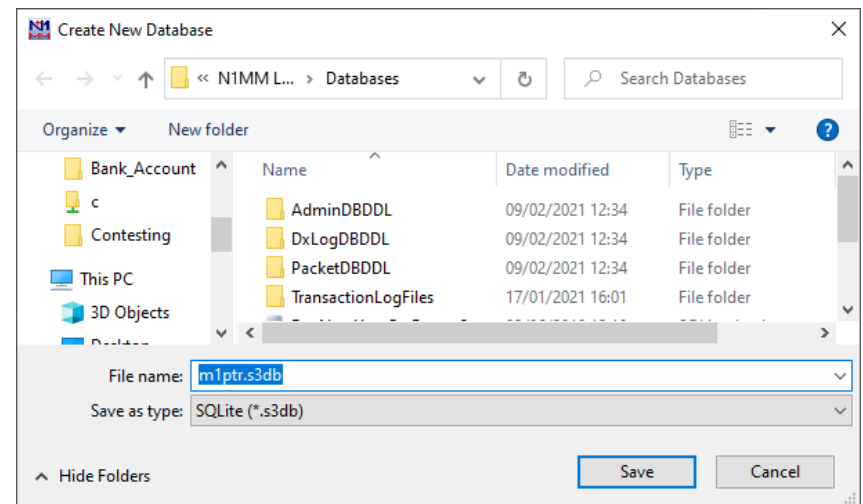
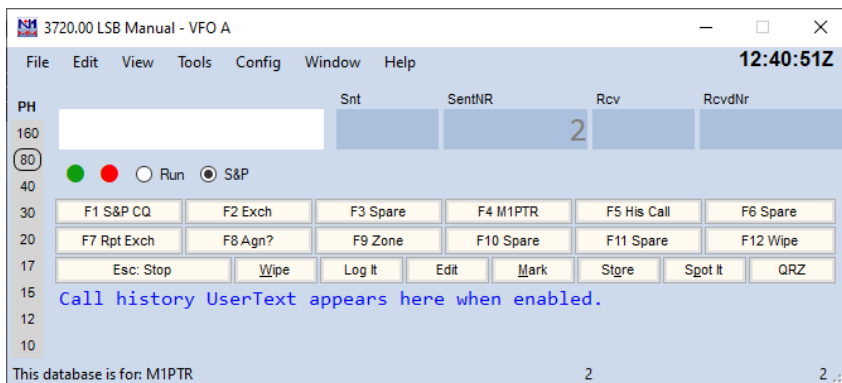
Install or Update N1MM+

- 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 a contest

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

ham.s3db

New log For: CQ WPX SSB

Log Type:

Start Date:

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

Contest Associated Files

Category:

Operator:

Band:

Power:

Mode:

Overlay:

Station:

Assisted: Time Category:

Transmitter:

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

Operators:

Soapbox:

Select RSGBAFS-S from drop down

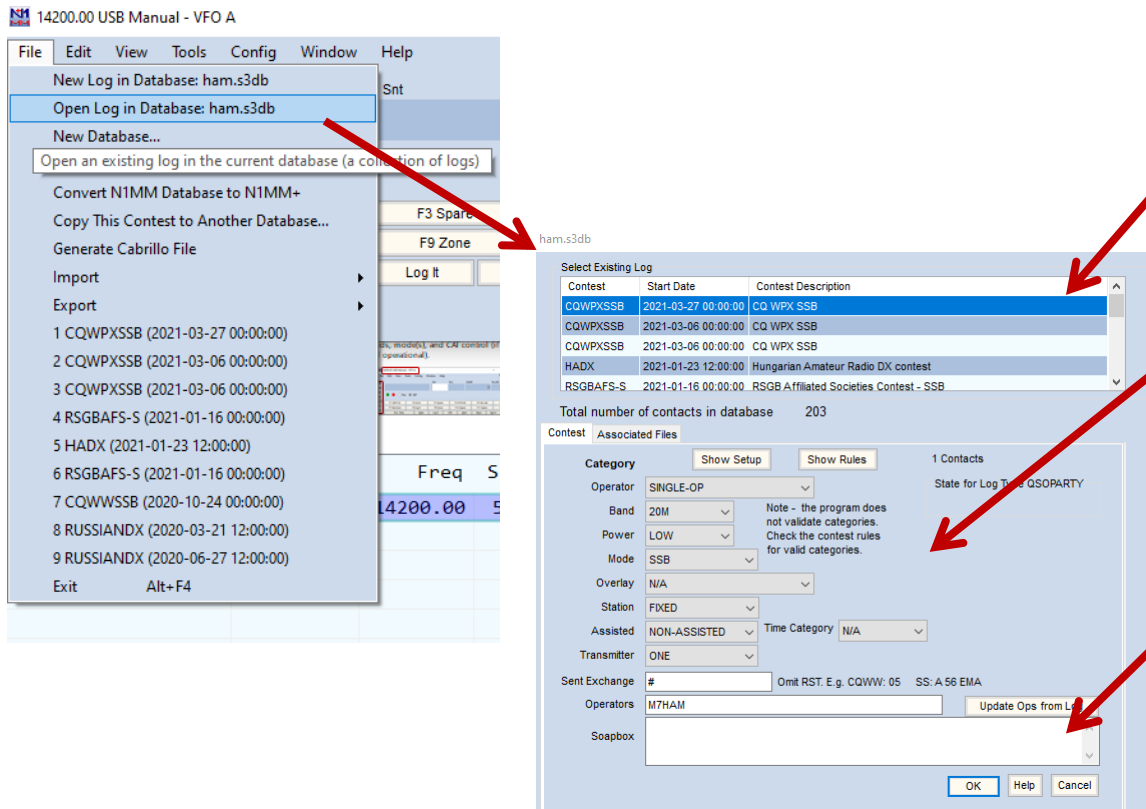
Enter information applicable to your station and what is allowed in the rules

Enter # as the Exchange for AFS i.e. incrementing number

Enter the callsign you are using for the contest

Open an Existing Log for a contest

- From Entry window select File -> Open Log in Database ham.s3db. Check contest parameters:



Select RSGBAFS-S SSB from drop down

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

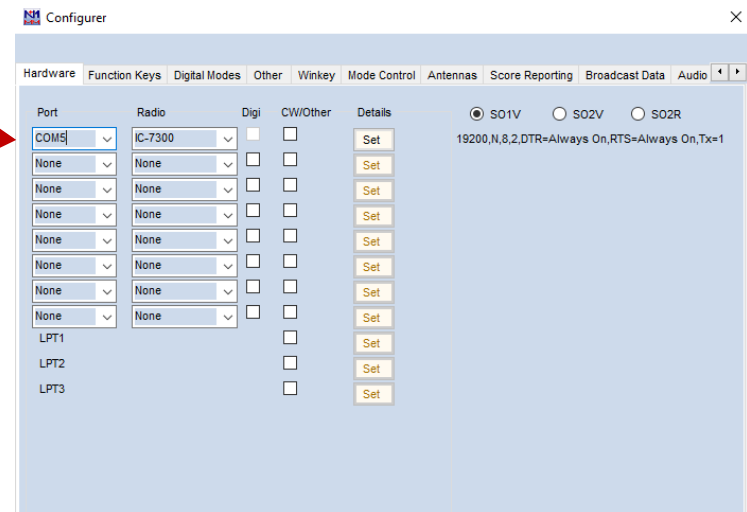
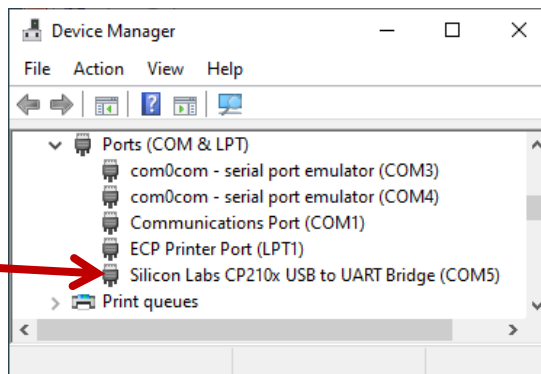
Add any comments you wish to make about the contest before submitting the log.

CAT Control Setup

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

Cat Port and Rig

Com Port



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

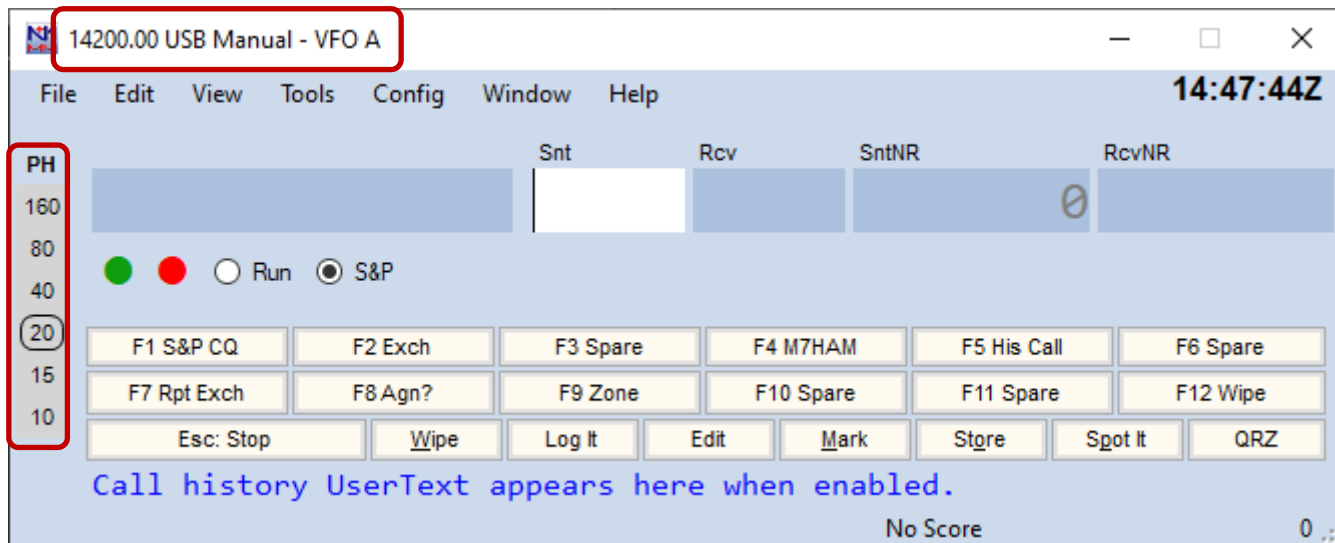
Radio Polling Rate
Normal

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

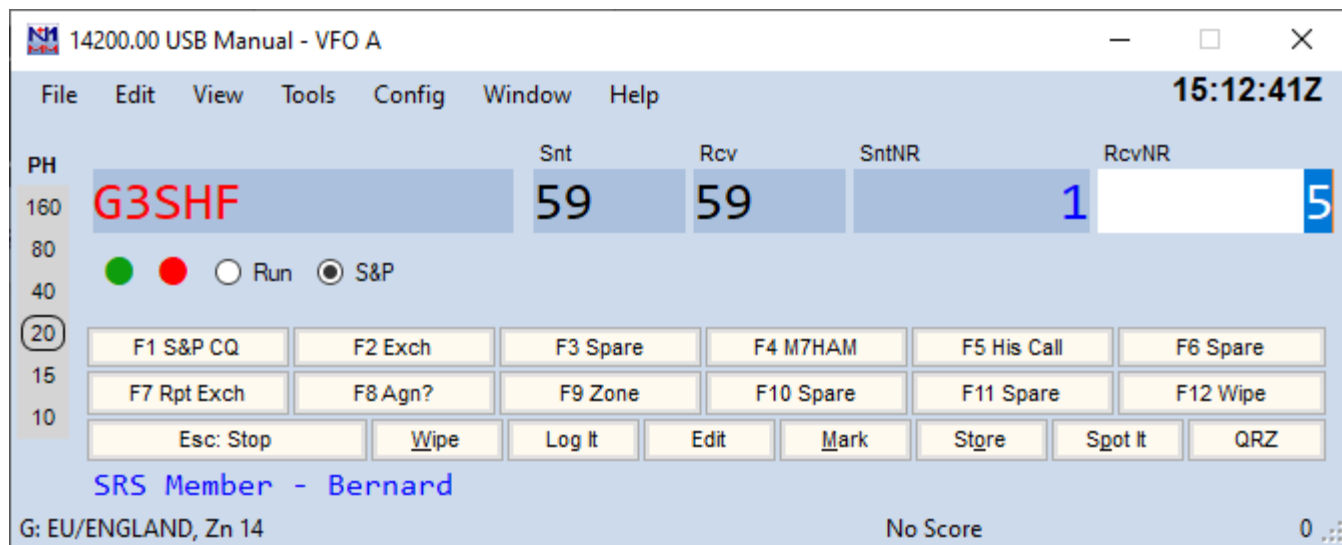
Testing

- 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

09/02/2021 15:16:18Z CQ WPX SSB - ham.s3db

MM-DD	HH:MM	Call	Freq	Snt	Rcv	Sent	NR	Wpx	M1	Pts
02-09	15:15	G3SHF	14200.00	59	59	1	5	G3	✓	1
02-09	15:15	G3SHF	14200.00	59	59	1	5	G3	✓	1

14200.00 USB Manual - VFO A

File Edit View Tools Config Window Help 15:12:41Z

PH

160 **G3SHF** Snt 59 Rcv 59 SntNR 1 RcvNR 5

80 Run S&P

40

20

15

10

F1 S&P CQ	F2 Exch	F3 Spare	F4 M7HAM	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

SRS Member - Bernard

G: EU/ENGLAND, Zn 14 No Score 0

From Entry window select Window -> Log to view your Log (Ctrl L)
 Check the log matches with the information entered in the Log Entry window

Typical N1MM+ Screen Layout

The screenshot displays the N1MM+ software interface, which is used for logging and scoring amateur radio contacts. The layout is divided into several main sections:

- Top Left: Telnet Window**
 - Buttons: Reconnect
 - Menu: VE7CC | Clusters | Bands/Modes | Filters | Spot Comment | BandPlans
 - Text: M7HAM de VE7CC-1 05-Mar-2021 1620Z CCC >
 - Log entries:

DX de D02QS:	3602.0	DB100AVUS	100 Jahre Avus	1620Z
DX de AA3B:	21013.5	9A1A	USB	1620Z
DX de SM1IUX:	18072.0	PT2AA	tk	1620Z
DX de OH8WR-2:	14197.0	CN8ZG		1621Z
DX de IK5WOD:	7098.0	IK5TBI	Navy Coastal	1621Z
 - Buttons: BYE, CONN, DWN, SH/DX, USERS, WWV, Clear NE, Yes DX, NE only, No DX, No VHF, M7HAM
- Top Right: Score - 54 Points**

Band	QSOs	Pts	WPX	Pt/Q
14	7	9	6	1.3
Total	7	9	6	1.3

Score: 54
1 Mult = 1.2 Q's
- Middle: Log Window (05/03/2021 16:21:14Z CQ WPX SSB - ham.s3db)**

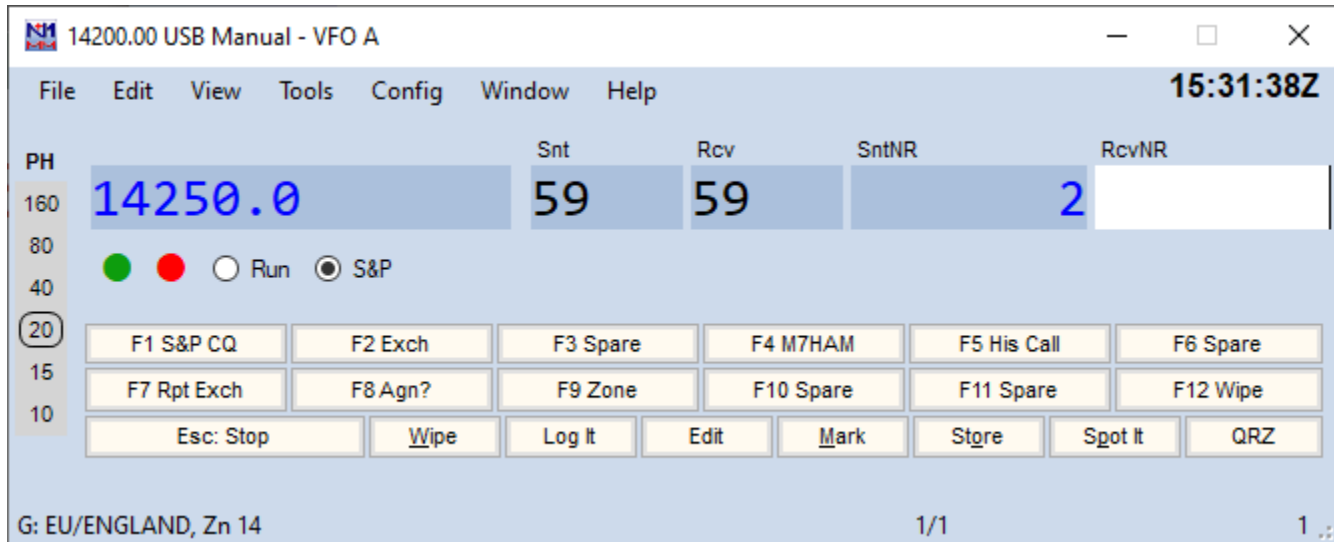
MM-DD HH:MM	Call	Freq	Snt	Rcv	Sent	NR	Wpx	M1	Pts
03-05 16:12	F10UI	14194.00	59	59	4	4	F1	✓	1
03-05 16:13	EA5OLE	14220.00	59	59	5	7	EA5	✓	1
03-05 16:15	F1NON	14220.00	59	59	6	8	F1		1
03-05 16:21	CN8DEM	14221.90	59	59	7	16	CN8	✓	3
03-05 16:21	CN8DEM	14221.90	59	59	7	16	CN8	✓	3
- Bottom Left: VFO Window (14221.90 USB FTDX-5000 VFO A)**
 - Menu: File Edit View Tools Config Window Help
 - Time: 16:21:14Z
 - Call: CN8DEM
 - Fields: Snt, Rcv, SntNR, RcvNR
 - Buttons: Run, S&P
 - Grid:

F1 S&P CQ	F2 Exch	F3 Spare	F4 M7HAM	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				
 - Status: CN: AF/MOROCCO, Zn 33
- Bottom Right: VFO Frequency Display**
 - Frequency: 14221.90
 - Mode: SH/DX, Wide, CQ
 - Buttons: RIT 0.00, XIT USB
 - Scale: 14210, 14220, 14230, 14240
 - Call: CN8DEM 184°
 - Call: S5DX 116° # New

OPERATIONS

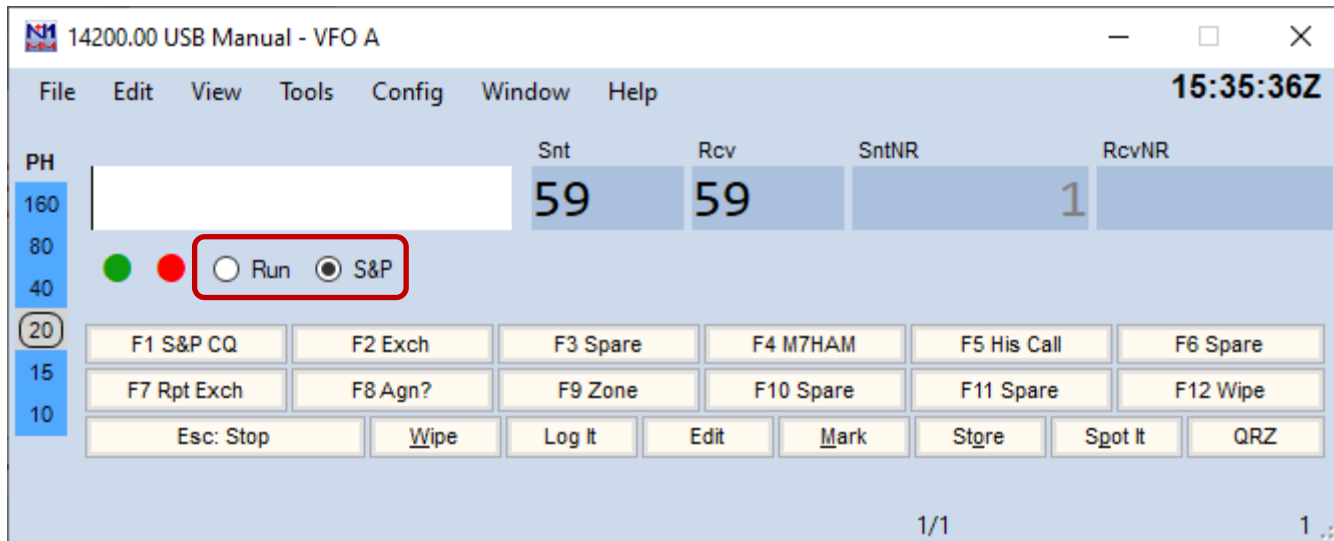
Setting Frequency

- 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



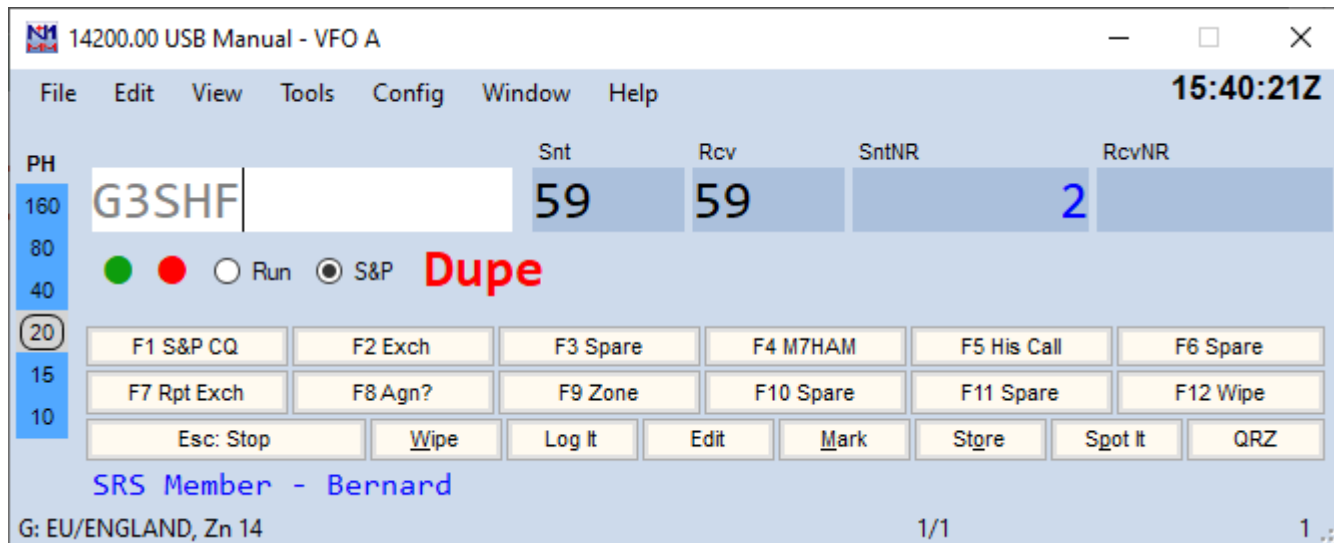
Set Run or S&P

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



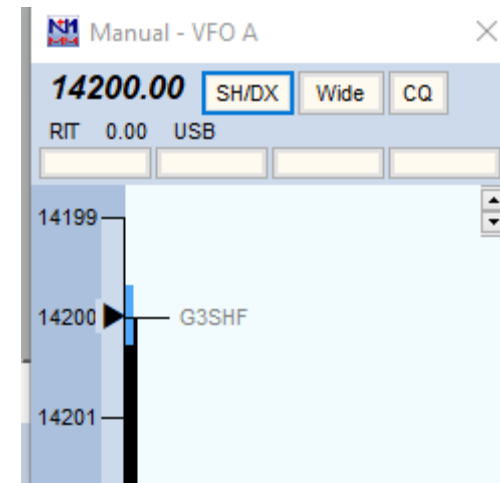
Dupe Checking

- 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. Note. Function key F12 will clear entry fields



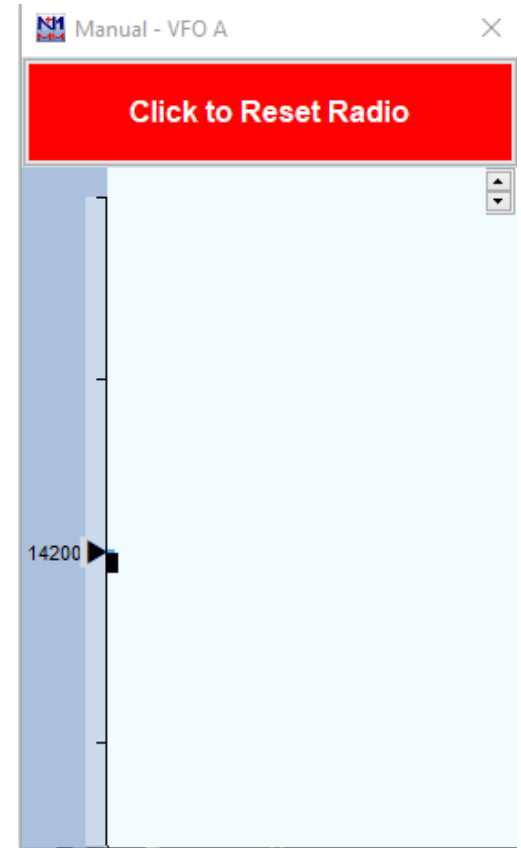
The Bandmap

- 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
 - Follow the instructions and upload the log file stored above.
 - Select *Stockport Radio Society*₂ from the drop down as your club

2 – Select the club name containing Stockport if an exact match is not displayed

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_SSB_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.

Q & A



ADDITIONAL INFORMATION

Beyond the basic setup

Additional Info

- Add a DX Cluster feed for assisted operation
- Using a Voice keyer to automate CQ calls
- Automatic PTT using F-Keys

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

Telnet

Type: Reconnect

VE7CC Clusters Bands/Modes Filters Spot Comment BandPlans

Bandmap DX spot timeout (min) Save Spots

Show non-workable spots Show only spots that are in call history

QSYing wipes call and puts it in the bandmap

Randomize Incoming Spot Frequencies

Include spots only originating in:

G EU

from prefixes or calls only

Tip: Filter as many spots as you can at the cluster. It lowers the cpu workload on your computer (s).

Blacklisted Spots

Filter (1)

Blacklisted Spotters

Filter (1)

Preferred Spotters

Enabled

Telnet

Type: Reconnect

VE7CC Clusters Bands/Modes Filters Spot Comment BandPlans

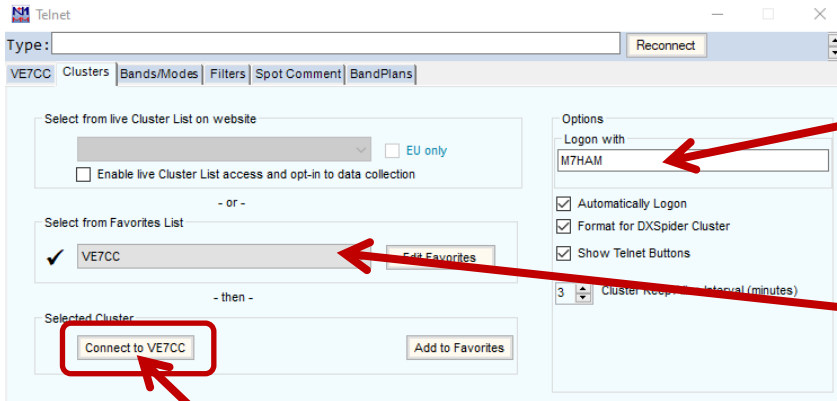
HF	VHF	UHF	Mw	All Modes
<input type="checkbox"/> 1.6	<input type="checkbox"/> 50	<input type="checkbox"/> 430	<input type="checkbox"/> 9cm	<input type="checkbox"/> CW
<input type="checkbox"/> 3.5	<input type="checkbox"/> 70	<input type="checkbox"/> 903	<input type="checkbox"/> 8cm	<input checked="" type="checkbox"/> Phone
<input type="checkbox"/> 5	<input type="checkbox"/> 144	<input type="checkbox"/> 1296	<input type="checkbox"/> 3cm	<input type="checkbox"/> RTTY
<input type="checkbox"/> 7	<input type="checkbox"/> 222	<input type="checkbox"/> 2304	<input type="checkbox"/> 1cm	<input type="checkbox"/> DIGI
<input type="checkbox"/> 10			<input type="checkbox"/> 6.4mm	<input type="checkbox"/> Contest
<input checked="" type="checkbox"/> 14			<input type="checkbox"/> 4mm	
<input type="checkbox"/> 18			<input type="checkbox"/> 2.5mm	
<input type="checkbox"/> 21			<input type="checkbox"/> 2mm	
<input type="checkbox"/> 24			<input type="checkbox"/> 1.2mm	
<input type="checkbox"/> 28			<input type="checkbox"/> Light	

Reset Band/Mode Defaults

Checking none of the mode boxes will allow all modes to be passed

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

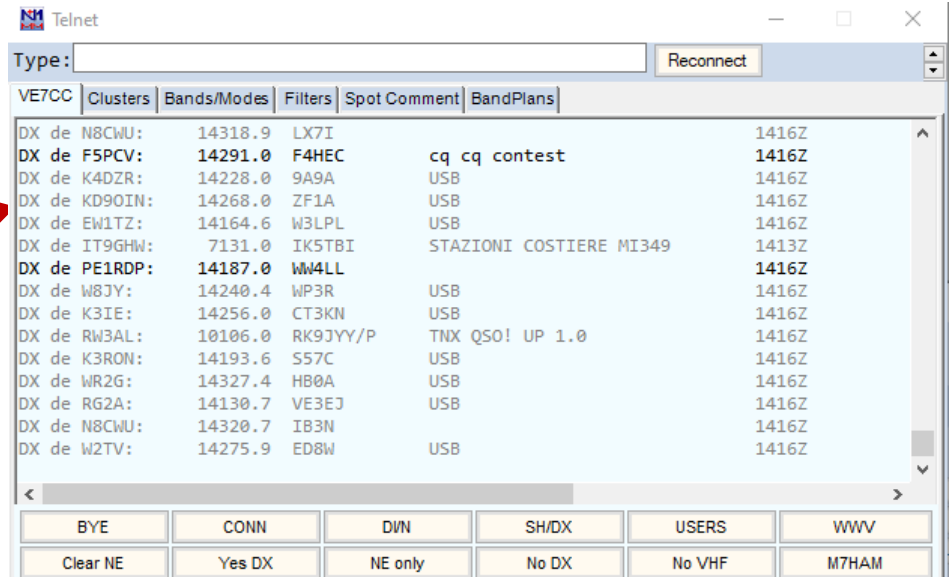
Connect to DX Cluster



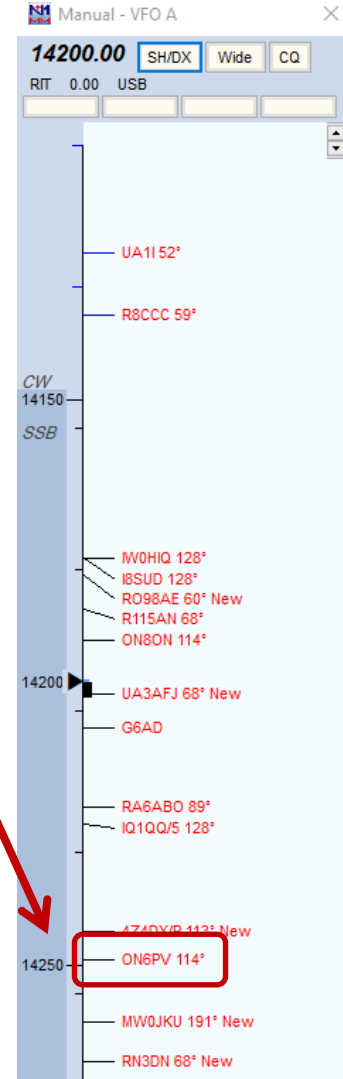
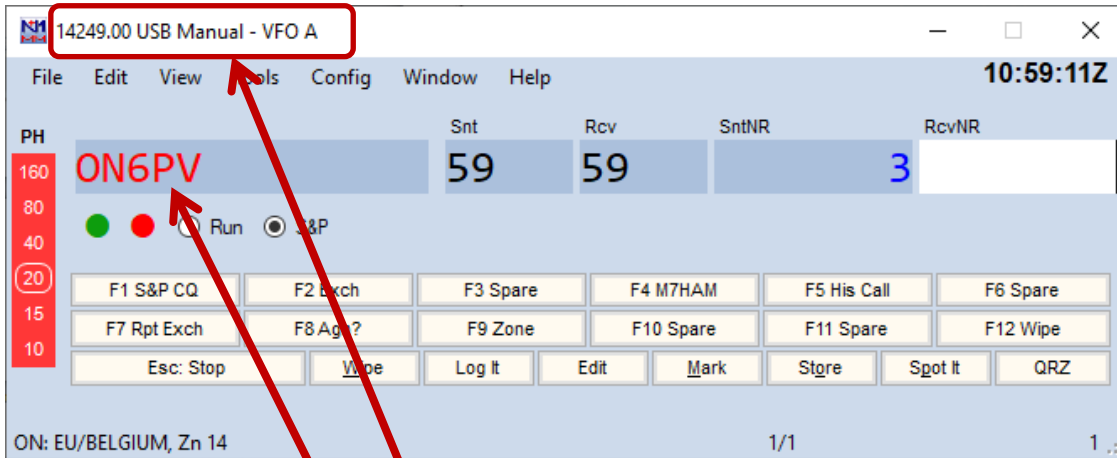
Under Clusters tab enter your callsign and check automatic login

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. Greyed out spots are filtered to not appear in the bandmap



Using DX Cluster



Click on a call sign in the bandmap

Radio is set via CAT to station frequency

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

Setup a Voice keyer

- A voice keyer uses a sound file to play automated messages
- Function keys are used to select the required message .wav file.
- If the PC audio is wired to the rig's audio input and PTT is active the sound is transmitted when a Function key is pressed. E.G F1 is a CQ message
- Select Config > select Change CW/SSB/Digital Function Key > Change SSB Function Key definitions to view or change settings

```

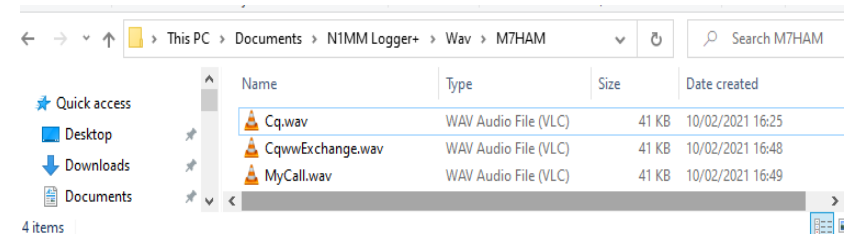
SSB Message Editor - File: C:\Users\pgr\Documents\N1MM Logger+\FunctionKeyMessages\SSB De...
File Edit Help
#
# SSB Function Key File
#
# Edits may be necessary before using this file
# Use Ctrl+O in the program to set the Operator callsign
#
#####
# RUN Messages
#####
F1 CQ, {OPERATOR}\Cq.wav
F2 Exch, {OPERATOR}\CqwwExchange.wav
F3 TNX, {OPERATOR}\Thanks.wav
F4 {MYCALL} {OPERATOR}\MyCall.wav
  
```

Message Colors
Comment Run S&P

Save Cancel

Pre-recorded .wav files for each function key need to be stored in an operator directory e.g.

MyDocuments\N1MM Logger+\Wav\M7HAM



Setup automatic PTT

- Push-to-Talk (PTT) can be switched a number of ways to allow automatic transmittal of stored messages using F-Keys
 - via serial or parallel port. This option uses the RTS or DTR lines on a serial port or pin 16 on an LPT port with a simple transistor interface circuit
 - via Winkeyer PTT output
 - via radio command - For radios that support it, this option eliminates any need for external hardware other than a serial port cable or a serial to USB converter. Check your radio manual for details

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>
- SRS Guide <https://www.g8srs.co.uk/hf-ladder-2/>

THE END