

Willamette Valley



DX Club

Digging Deeper.....



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Scappoose, OR

What we will cover next....

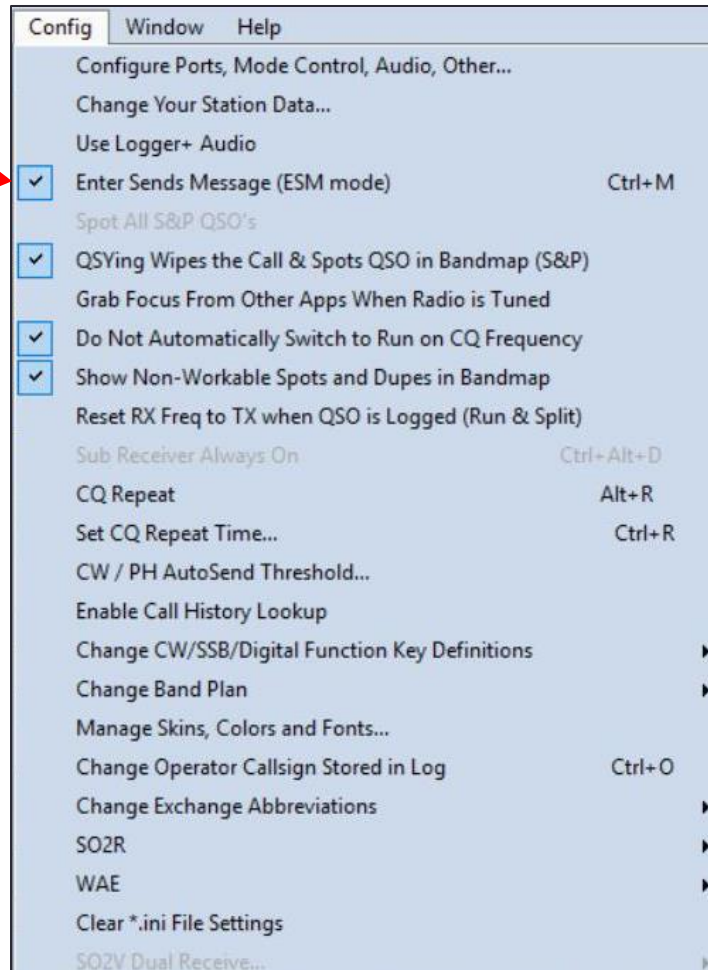
- Details on “Enter Sends Message” (ESM) for faster rates
- How to configure for RTTY contests, loading the MTTY plug-in, and configuring
- How to Network computers for multi-station contesting, or keeping a “real-time” back-up log on another computer
- Customizing the Function Message Buttons
- Evaluating N1MM Contest Statistics



Enter Sends Message (ESM)

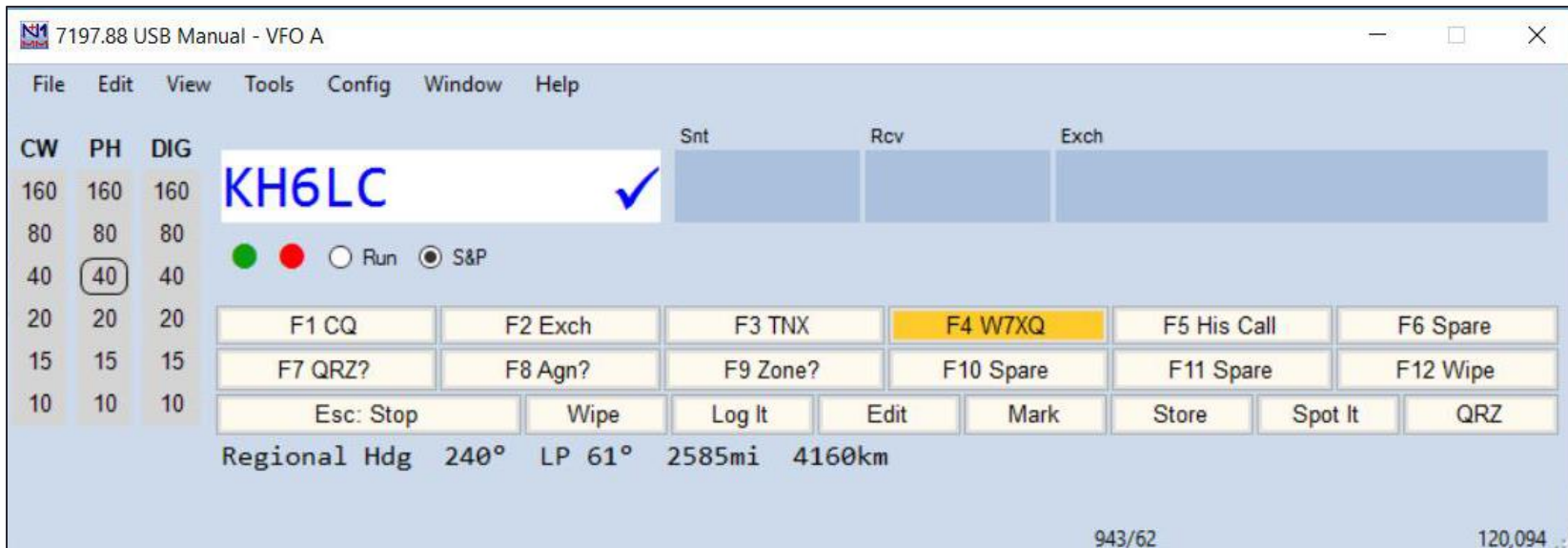
- Used to partially automate the contest logging process

Click this box
to activate



Enter Sends Message (ESM)

- Hitting ENTER key moves to next Function button automatically, and sends that message, or performs that task (Log It)
- Works great in CW and RTTY contests
- Not needed in Phone contests unless you are using digital voicing
- Next F key to use is highlighted in yellow



More on “Enter Sends Message”

- When in **RUN** mode, sequence is:

(F1=CQ) - (enter callsign) – (F2=Exch) – (they give exchange)- (F3=TU) - (Log it) – (F1=CQ lit again)

- When in **S&P** mode, sequence is:

(F4 = send your callsign)- (enter their callsign) – (F2=Exch) – (Log it) - (blank entry window, F4 lit again)

The screenshot shows the software interface for the 7197.88 USB Manual - VFO A. The window title is "7197.88 USB Manual - VFO A". The menu bar includes File, Edit, View, Tools, Config, Window, and Help. The main display area shows a CW table with columns CW, PH, and DIG. The CW column has values 160, 80, 40, 20, 15, and 10. The PH column has values 160, 80, 40, 20, 15, and 10. The DIG column has values 160, 80, 40, 20, 15, and 10. The value 40 in the PH column is circled. The main display area shows the callsign "KH6LC" in a blue box with a blue checkmark. Below the callsign are three radio buttons: a green one, a red one, and a white one labeled "Run". To the right of the "Run" button is a radio button labeled "S&P" which is selected. Below the radio buttons is a grid of function keys: F1 CQ, F2 Exch, F3 TNX, F4 W7XQ (highlighted in yellow), F5 His Call, F6 Spare, F7 QRZ?, F8 Agn?, F9 Zone?, F10 Spare, F11 Spare, F12 Wipe, Esc: Stop, Wipe, Log It, Edit, Mark, Store, Spot It, and QRZ. At the bottom of the interface, it displays "Regional Hdg 240° LP 61° 2585mi 4160km". The status bar at the bottom right shows "943/62" and "120,094".

ESM Example

7190.08 MIXED+DIG Manual - VFO A

File Edit View Tools Config Window Help

CW PH DIG CQ-Frequency Snt Rcv Exch

160	160	160			
80	80	80			
40	40	40			
20	20	20			
15	15	15			
10	10	10			

● ● ● Run ○ S&P

F1 S&P CQ	F2 Exch	F3 Spare	F4 W7XQ	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

No Heading
Call history UserText appears here when enabled.

945/62 120,342

7190.08 MIXED+DIG Manual - VFO A

File Edit View Tools Config Window Help

CW PH DIG CQ-Frequency Snt Rcv Exch

160	160	160	KH6LC		
80	80	80			
40	40	40			
20	20	20			
15	15	15			
10	10	10			

● ● ● Run ○ S&P

F1 S&P CQ	F2 Exch	F3 Spare	F4 W7XQ	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

Regional Hdg 240° LP 61° 2585mi 4160km
Call history UserText appears here when enabled.

KH6: OC/HAWAII, Zn 31 945/62 120,342

7190.08 MIXED+DIG Manual - VFO A

File Edit View Tools Config Window Help

CW PH DIG CQ-Frequency Snt Rcv Exch

160	160	160	KH6LC	59	59	HI
80	80	80				
40	40	40				
20	20	20				
15	15	15				
10	10	10				

● ● ● Run ○ S&P

F1 S&P CQ	F2 Exch	F3 Spare	F4 W7XQ	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

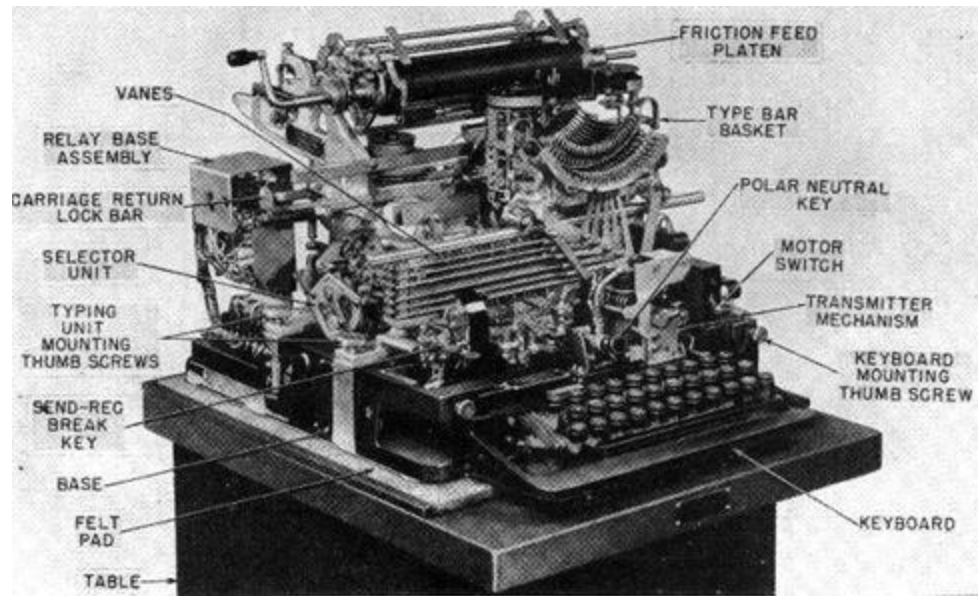
Regional Hdg 240° LP 61° 2585mi 4160km
Call history UserText appears here when enabled.

KH6: OC/HAWAII, Zn 31 945/62 120,342



Back
to
CQ

Things have improved in RTTY over the years!



The MTTY Software

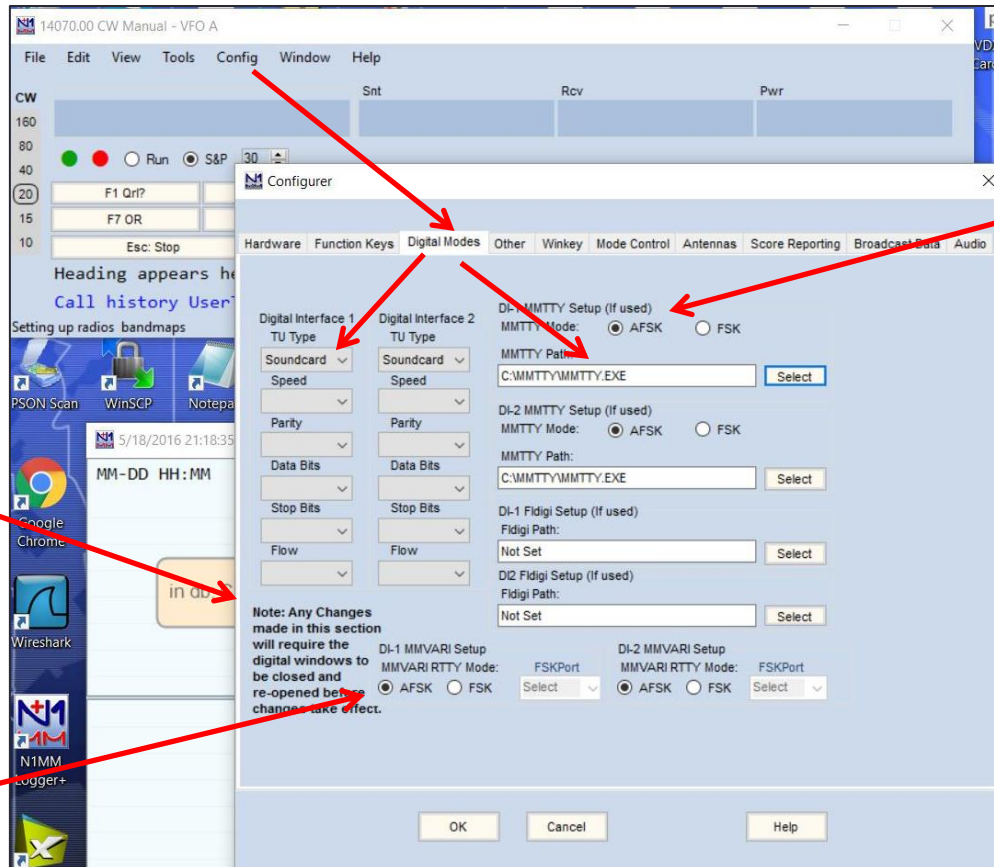
- Written by JE3HHT - Makoto Mori
- Another FREE software package (new version in beta)
- Normally a stand-alone program, but N1MM uses MTTY for the RTTY engine
- Download from: <http://hamsoft.ca/pages/mmtty.php>
- Suggest putting the software into C: root directory, in folder called "MTTY".
REMEMBER WHERE YOU DOWNLOADED IT TO!



The screenshot shows the MTTY software download page. On the left is a navigation menu with links like Home, Open source, History, MTTY, MMSSTV, MMVARI, MMANA-GAL, DSP-Filter, Extras & Add On, Interfacing, Programmers, Installer, Terms of Use, Contact & Support, About this Site, Donations, and Leech Attempt HELP. The main content area has a green 'START DOWNLOAD' button and a '3 Easy Steps' guide: 1. Click "Download", 2. Download on our website, 3. Enjoy. Below this is the text 'MMTTY BY JE3HHT - Makoto Mori' and 'RTTY with Windows and Soundcard WinXP - Vista - Win7'. A section titled 'MMTTY is free for Amateur Radio Use' includes a small image and a link for a full screen view. Below that is a warning for programmers: 'Attention Programmers! You can use MMTTY to add RTTY to your programs. Please read the terms of use carefully!' and a link to the 'New MMTTY Revision History Page'. A note for webmasters says 'Please Do Not link to files from your website!'. The 'Downloads' section lists: 'Coming soon MMTTY V1.70K', 'BETA', 'MMTTY V1.70KB May 19, 2017', 'MMTTY170kb.exe (Full Version - 3.5MB)', 'MMTTY V1.68A September 29, 2010', 'MMTTY168A.exe (Full Version - 3.0MB)', 'What's New in Ver. 1.68A', 'MMTTY168A-I.zip (No installer - for experienced users - 2.6MB)', 'Inno Installer Info', 'Updated ARRL.DX file - ARRL.DX.ZIP', and 'Unzip ARRL.DX.ZIP and copy ARRL.DX into the program folder.' The footer shows the file path: 'C:\Users\AUser\Desktop\MMTTY\%20-%20MM%20HamSoft\html\5/20/2017 5:07:44 PM'.

N1MM RTTY Set up

1. Open the Config Window, then select “Digital Interface”
2. Then point N1MM to where the MTTY.EXE file is located



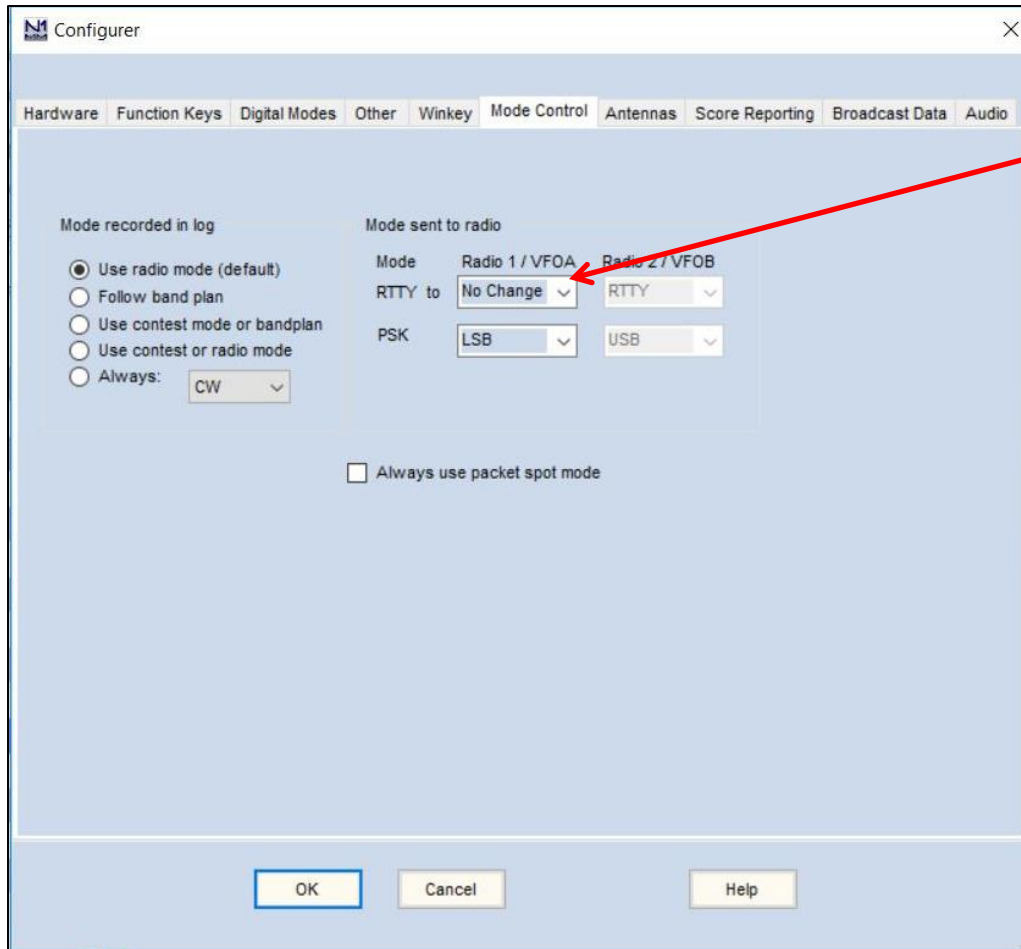
Select AFSK (soundcard), or FSK Here too!

Note!

Select AFSK (soundcard), or FSK

N1MM RTTY Set-up, Radio Mode

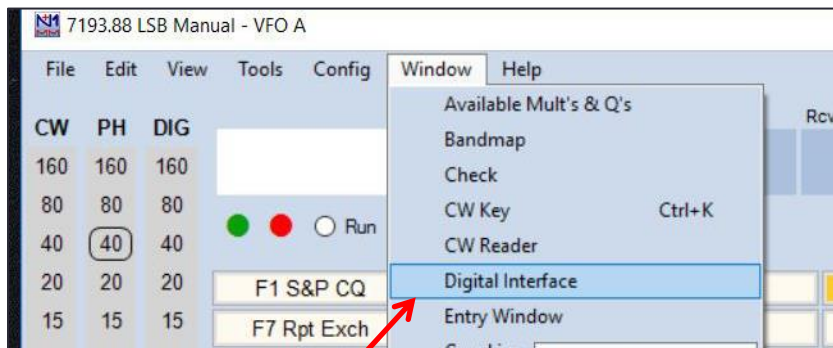
- Open the Config menu option again
- Make sure that mode control is where you want it if using AFSK, otherwise radio might default to RTTY/PKT mode!



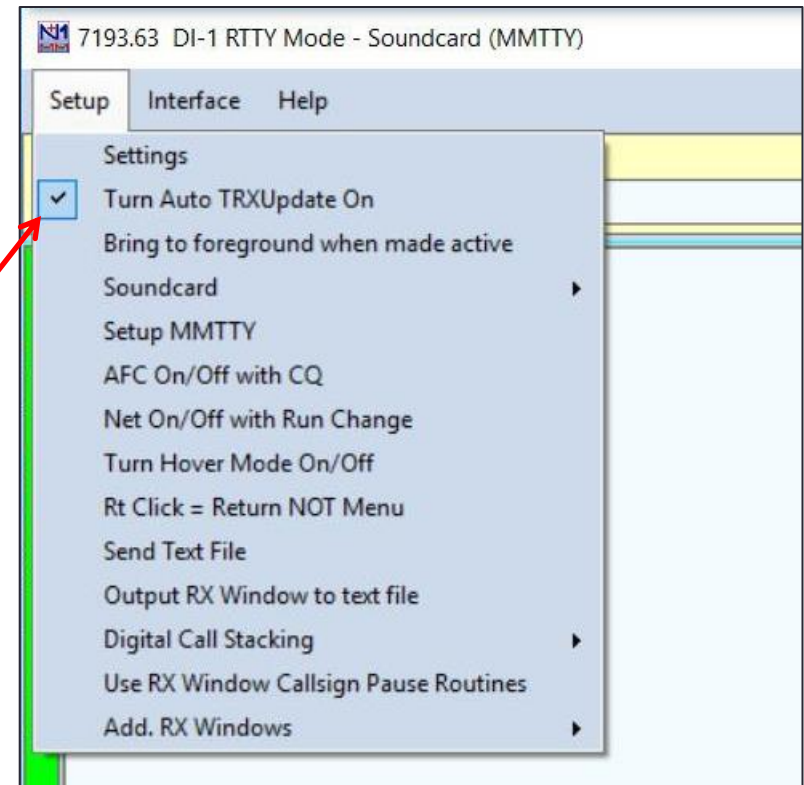
Change to LSB
if using AFSK
(soundcard)

Setting the frequency offset if using AFSK

- Remember that AFSK uses LSB for operation, so frequency is offset by about 2.1 KHz. To correct we need to turn the **Auto TRXUpdate** setting "ON"
- If you don't correct, you can no longer just click on the bandmap spots and be where you want to be!
- To fix, click on the Window option, then **Digital Interface**, then **Setup**



Opens up MTTY for editing



Click this box "on"

Using MTTY and N1MM

7193.88 LSB Manual - VFO A

File Edit View Tools Config Window Help

CW	PH	DIG	Snt	Rev	Exch	
160	160	160	TF2MSN	599	599	DX
80	80	80				
40	40	40				
20	20	20				
15	15	15				
10	10	10				

Run S&P

F1 CQ	F2 Exch	F3 TNX	F4 W7XQ	F5 His Call	F6 Spare
F7 QRZ?	F8 Agn?	F9 Zone?	F10 Spare	F11 Spare	F12 Wipe

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

Regional Hdg 30° LR 211° 3792mi 6102km

Call history UserText appears here when enabled.

TF: EU/ICELAND Zp 40 943/62 120.094

RTTY Engine 1

Waterfall plot showing signal activity with two vertical yellow lines.

Constellation diagram showing a cross-shaped pattern of points.

Callsigns are the “color of usefulness”

Just click on the callsigns, (or even the exchanges), and they automatically get loaded into the Entry window!

14086.00 DI-1 RTTY Mode - Soundcard (MMTTY)

Setup Interface Help

TX Letters/Figs **MouseOver**

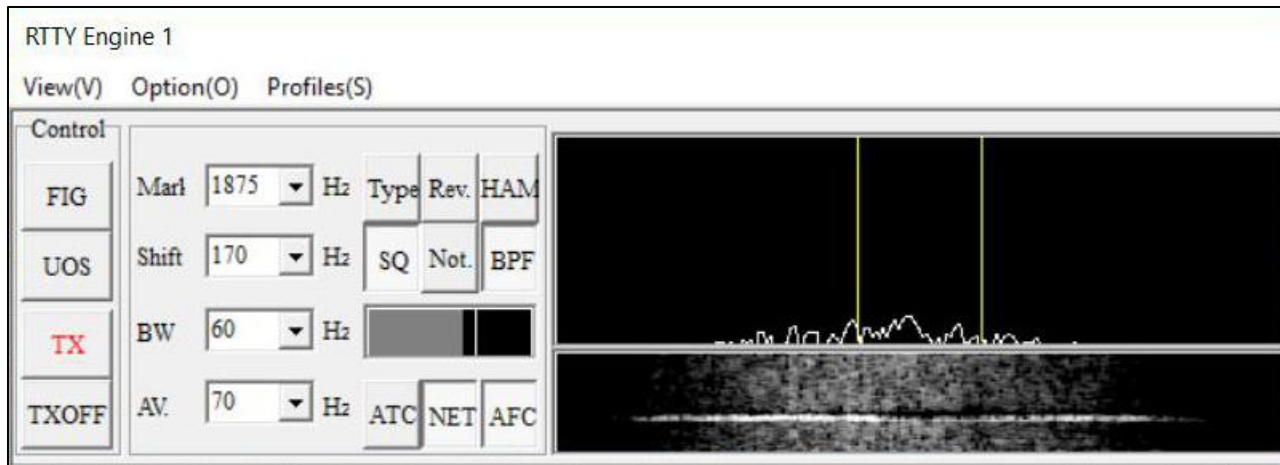
CQ CQ DE TF2MSN TF2MSN TF2MSN TF2MSN CQ SKMXUZASS CQ CQ DE TF2MSN
TF2MSN TF2MSN TF2MSN CQ SK
HLJ
RYWSCUZBEQVEJWDUVMVQGYKURK
BPQ CQ DE TF2MSN TF2MSN TF2MSNTF2MSN CQ SKOONMUPN CQ CQ DE TF2MSN
TF2MSN TF2MSN TF2MSN CQ SKWUL

Clr RX	Align	TX	RX	HAM	AFC	REV	
0x2	599TU	MYCL	NAME	ST	ZN	QRU	FSK
0x3	RRR	CALL	SER#	PREV#	TIME2	HAVE?	AFSK
AGN?	CL?	NR?	NAME?	ST?	TIME?	WANT?	PSK

TF2MSN
W7CT
K5WE
OZ8JD
IS0IGV
VE3NOO
W0SGM

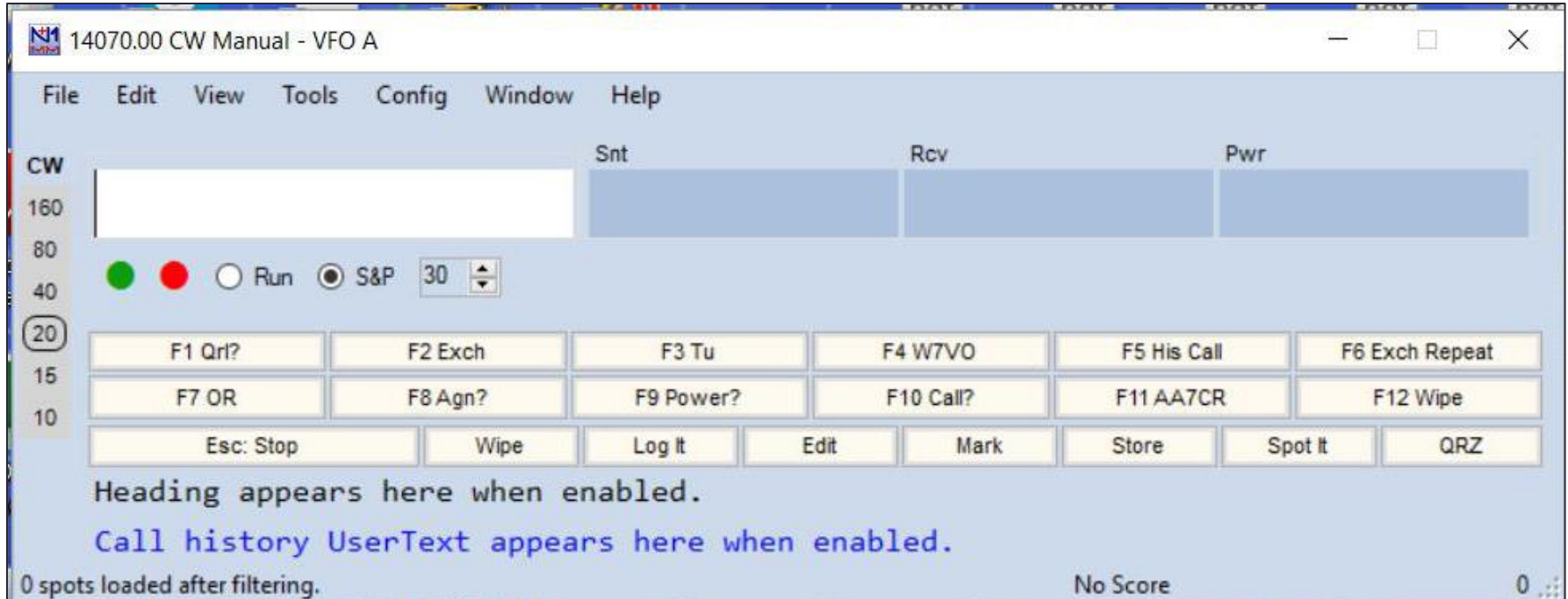
Grab CLR

Some Hints with MTTY



- Most of the time, the defaults are OK
- Some Recommendations
 - Turn AFC button “OFF”
 - Make sure HAM button is clicked “ON”
 - Check position of squelch bar
 - Turn NET “ON” for S&P, “OFF” for RUN mode
 - Turn BPF “ON” if using AFSK. If using FSK and RTTY mode, leave “OFF”
 - If you have problems decoding with AFSK, check if you are in LSB or USB, or click the REV button

Custom Messages - The Function (F) Buttons



- Can use defaults, or customize for different contests
- Separate messages for S&P and Run modes
- To access, right click on any of the F buttons, and edit away!

Default Function Buttons, Phone

#####

RUN Messages

#####

F1 **CQ**,{OPERATOR}\Cq.wav
F2 **Exch**,{OPERATOR}\CqwwExchange.wav
F3 **TNX**,{OPERATOR}\Thanks.wav
F4 {MYCALL},{OPERATOR}\MyCall.wav#
F5 **His Call**,
F6 **Spare**,
F7 **QRZ?**,{OPERATOR}\QRZ.wav
F8 **Agn?**,{OPERATOR}\AllAgain.wav
F9 **Zone?**,{OPERATOR}\ZoneQuery.wav
F10 **Spare**,
F11 **Spare**,
F12 **Wipe**,{WIPE}

#####

S&P Messages

#####

"&" doubled, displays one "&" in the button label

F1 **S&&P CQ**,{OPERATOR}\Cq.wav
F2 **Exch**,{OPERATOR}\S&PExchange.wav
F3 **Spare**,
F4 {MYCALL},{OPERATOR}\MyCall.wav# F6
Spare,
F7 **RptExch**,{OPERATOR}\RepeatExchange.wav
F8 **Agn?**,{OPERATOR}\AllAgain.wav
F9 **Zone**,{OPERATOR}\RepeatZone.wav
F10 **Spare**,
F11 **Spare**,
F12 **Wipe**,{WIPE}

Lots of programs to generate the .WAV files

Things you might use:

F6 Go Away!, {OPERATOR}\GetOffMyFrequency.WAV

Default Function Buttons, CW Mode

#####

RUN Messages

#####

F1 **Cq**,cq test {MYCALL} {MYCALL}
F2 **Exch**,{SENTRSTCUT} {EXCH}
F3 **Tu**,tu {MYCALL}
F4 {MYCALL},{MYCALL}
F5 **His Call**,!
F6 **Exch Repeat**,{SENTRSTCUT} {EXCH}
{EXCH} {EXCH}
F7 **Spare**,
F8 **Agn?**,agn?
F9 **Power?**,pwr? pwr?
F10 **Call?**,cl?
F11 **Spare**,
F12 Wipe,{WIPE}

#####

S&P Messages

#####

F1 **Qrl?**,qrl? de {MYCALL}
F2 **Exch**,{SENTRSTCUT} {EXCH}
F3 **Tu**,tu
F4 {MYCALL},{MYCALL}
F5 **His Call**,!
F6 **Exch Repeat**,{SENTRSTCUT} {EXCH}
{EXCH} {EXCH}
F7 **OR**, or or or
F8 **Agn?**, agn?
F9 **Power?**,pwr? pwr?
F10 **Call?**,Cl?
F11 Spare,
F12 Spare,
Wipe,{WIPE}

Other good ones to use: “RR”, F1 **RRR**, R R
“My SN”, F9 **My SN**, # #
“73” F7 **73**, 73

Default Function Buttons, RTTY

#####

RUN Messages

#####

F1 Run CQ,{TX}{ENTER}CQ CQ TEST
{MYCALL} {MYCALL} {RX}
F2 Run Exch,{TX}{ENTER}! {SENTRST}
{EXCH} {EXCH} ! {RX}
F3 Run TU,{TX}{ENTER}! TU de {MYCALL}
QRZ? {RX}
F4 {MYCALL},{TX} {MYCALL} {RX}
F5 His Call,{TX} ! {RX}
F6 Spare,
F7 My Exch,{TX}{ENTER}{SENTRST}
{EXCH} {EXCH} {RX}
F8 Agn?,{TX}{ENTER}agn? agn? {RX}
F9 Spare,
F10 Spare,
F11 Spare,
F12 Wipe,{WIPE}

#####

S&P Messages

#####

"&" doubled, displays one "&" in the button
label
F1 S&&P CQ,{TX} CQ TEST {MYCALL}
{MYCALL} CQ {RX}
F2 S&&P Exch,{TX}{ENTER}! {SENTRST}
{EXCH} {EXCH} {MYCALL} {RX}
F3 S&&P TU,{TX}{ENTER}! TU de {MYCALL}
{RX}
F4 S&&P Call Him,{TX}{ENTER}! de {MYCALL}
{MYCALL} {RX}
F5 His Call,{TX} ! {RX}
F6 {MYCALL},{TX} {MYCALL} {RX}
F7 My Exch,{TX}{ENTER}{SENTRST} {EXCH}
{EXCH} {RX}
F8 Agn?,{TX}{ENTER}agn? agn? {RX}
F9 Spare,
F10 Spare,
F11 Spare,
F12 Wipe,{WIPE}

Customized SSB Function Buttons, FT-2000

#####

RUN Messages

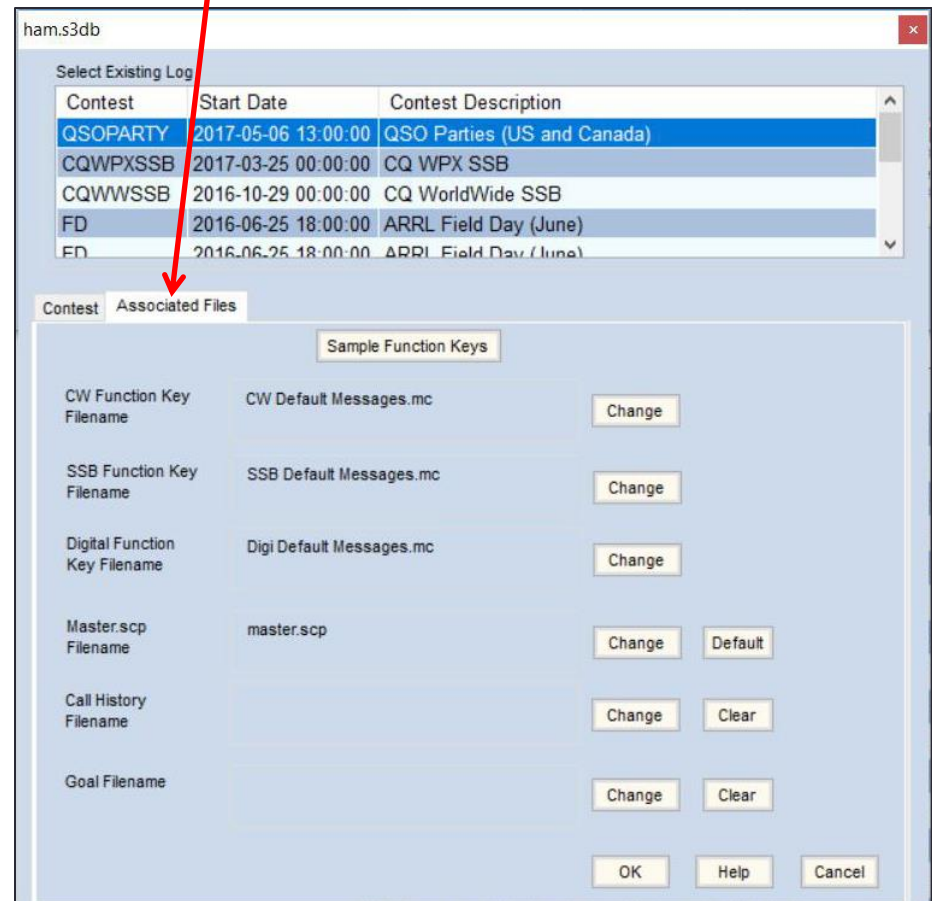
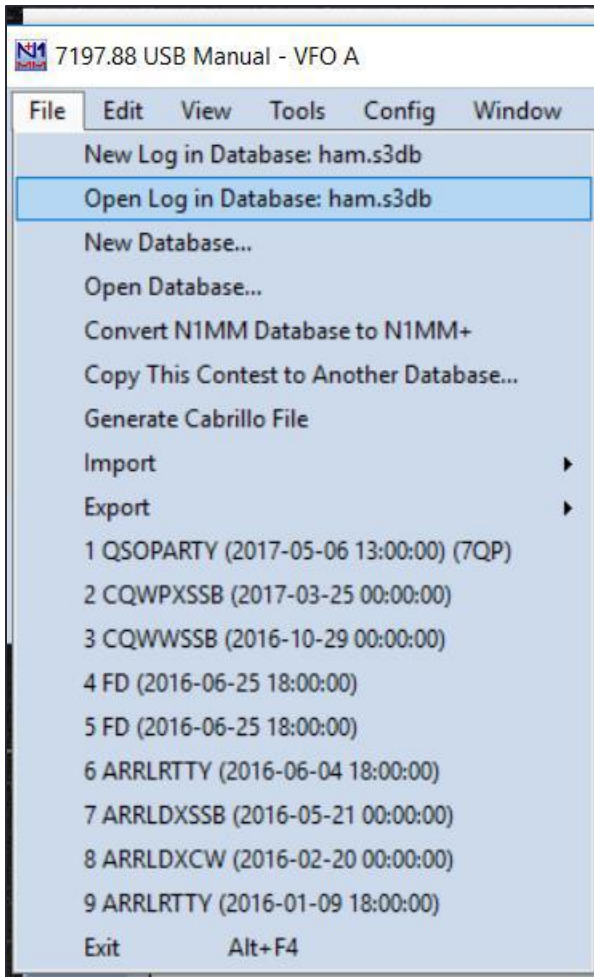
#####

- F1 **CQ**,{CAT1ASCPB01;}
- F2 **Exch**,{CAT1ASCPB02;}
- F3 **Callsign**,{CAT1ASCPB03;}
- F4 **QRZ?**,{CAT1ASCPB04;}
- F5 Spare,
- F6 Spare,
- F7 Spare,
- F8 Spare,
- F9 Spare,
- F10 Spare,
- F11 Spare,
- F12 **Wipe**,{WIPE}

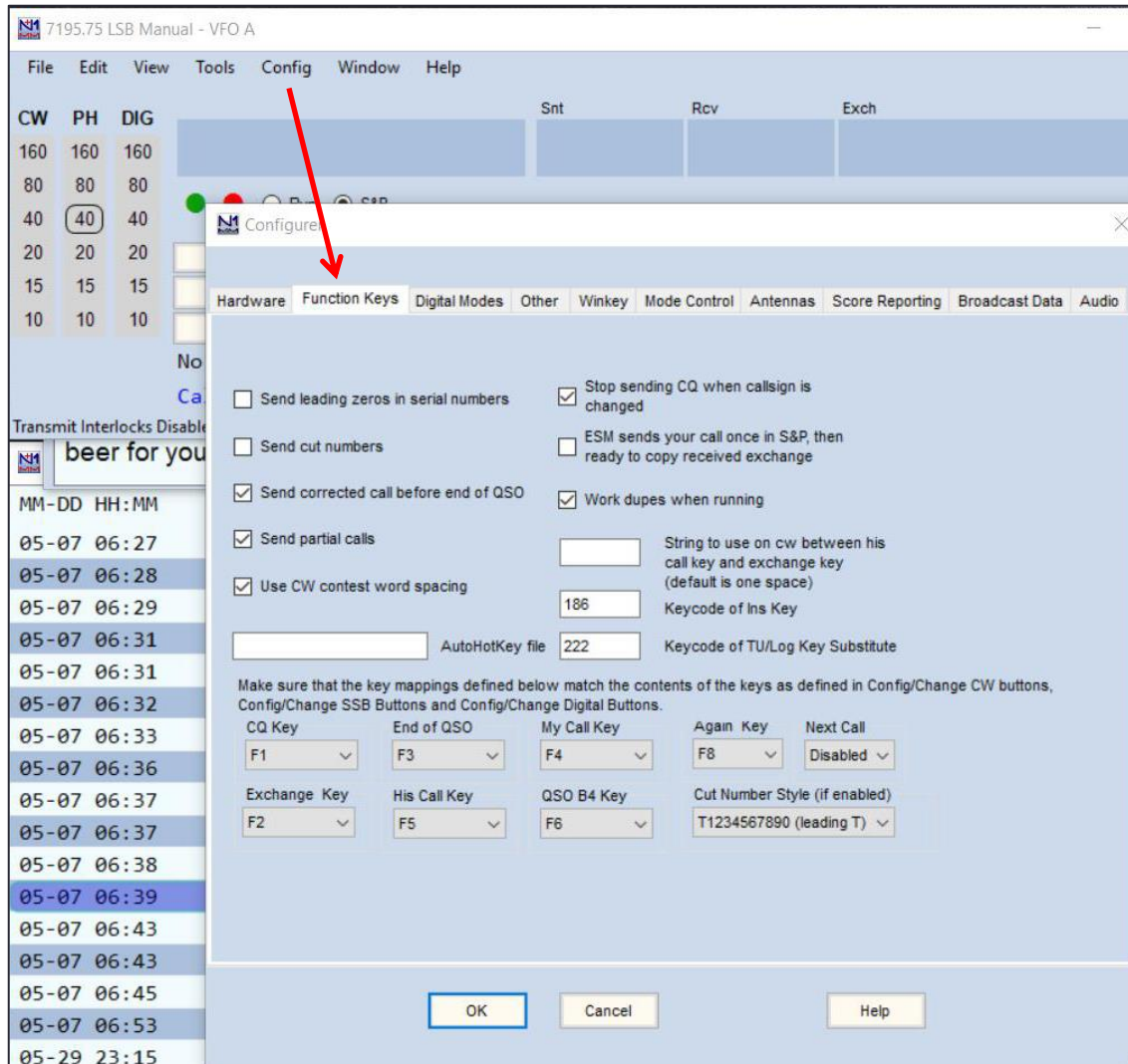


Selecting “.mc” Files

Click on
“Associated Files”



More Function Key Settings



Defaults here are OK, your preference!



Networking

- Used to automatically network multiple N1MM computers together
 - Multi-two or Multi-Multi operation logging
 - Second computer to provide back up log
 - Second computer so somebody else can see what is happening
 - Send private messages from station to station
 - See what the other station is doing.....
- Must designate a “Master” station
 - Master provides time synchronization between all N1MM computers
 - Logs are also synchronized
 - Master is usually the secondary station (frees up resources for primary station)
 - Telnet spots are also gathered by Master, then distributed to secondary stations
- All stations **must** have same version of N1MM+ on them, same revision of wl_city.dat (Country list), and same contest parameters

Networking

7197.88 USB Manual - VFO A

File Edit View Tools Config Window Help

CW PH DIG
160 160 160
80 80 80
40 40 40
20 20 20
15 15 15
10 10 10

Run

F1 S&P CQ
F7 Rpt Exch
Esc: Stop

No Heading
Call history

Transmit Interlocks Disabled

5/30/2017 20:46:06Z 7QP QSO Parties

MM-DD HH:MM Ca

05-07 06:27	K2H
05-07 06:28	N7
05-07 06:29	K7S
05-07 06:31	WA7RC
05-07 06:31	NX3L

Available Mult's & Q's
Bandmap
Check
CW Key Ctrl+K
CW Reader
Digital Interface
Entry Window
Gray Line
Info
Log Ctrl+L
Move Multipliers
Multipliers
Network Status
Rotor Windows
Talk to Another Station Ctrl+E
Score Summary
Telnet
Visible Dupesheet

Rcv Exch

F4 W7XQ F5 His Call F6 Spare
F10 Spare F11 Spare F12 Wipe
Edit Mark Store Spot It QRZ

943/62 120,094

Q	cv	M...	Exch	Sect	M1	Pts	Misc	Pfx
9	LSB	NY	NY		2		NY	K
9	LSB	AZGLA	AZ		0		AZGLA	K
9	LSB	WAKNG	WA		2		WAKNG	K
9	LSB	WASNO	WA		2		WASNO	K
9	LSB	PA	PA		2		PA	K

Network Status W7VO 192.168.10.128 - 2 Stations in network

Stations Resynchronize Rescore Options Actions Messages

Computer	IP Address	Pass	Run	10	100	Freq	Op	Msg	Send	Re...	Master	Band
W7VO	192.168.10.128	0.00	S&P	0	0	7197.88	W7VO		Ok	Ok	<input checked="" type="checkbox"/>	7
W7VO-2	192.168.10.146	2112...	S&P	0	0	21125.67	AA7CR		Ok	Ok	<input type="checkbox"/>	21

Networking

The Options page:

Network Status W7VO 192.168.10.128 - 2 Stations in network

Stations Resynchronize Rescore Options Actions Messages

Run1 Run2/Mult Don't automatically change to S&P mode Block my station from transmitting (conditions for blocking depend on transmitter category)

Log QSOs at all Stations Wipe callsign when logged by stack target Block my transmitter only if other station transmitting on same band and mode (multi-one)

Don't work non-mults Trace Networked Computer Messages Disable All Transmit Interlocks

Messaging (Opened with Control E):

N1
Talk to Another Station

Enter computer name (or * for all stations) followed by text of the message

* Time to get that rate up. I don't see very many contacts in the log from your station. No beer for you!



Statistics- Contesters LOVE statistics!

7195.75 LSB Manual - VFO A

File Edit View Tools Config Window Help

CW PH DIO Snt Rcv Exch

160 160 160

80 80 80

40 40

20 20 20

15 15 15

10 10 10

● Run ● S&P

F1 S&P CQ F2 Exch F3 Spare F4 W7XQ F5 His Ca

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

Esc: Stop Wipe Log It Edit Mark Store

No Heading
Call history UserText appears here when enabled.

Transmit Interlocks Disabled 943/62

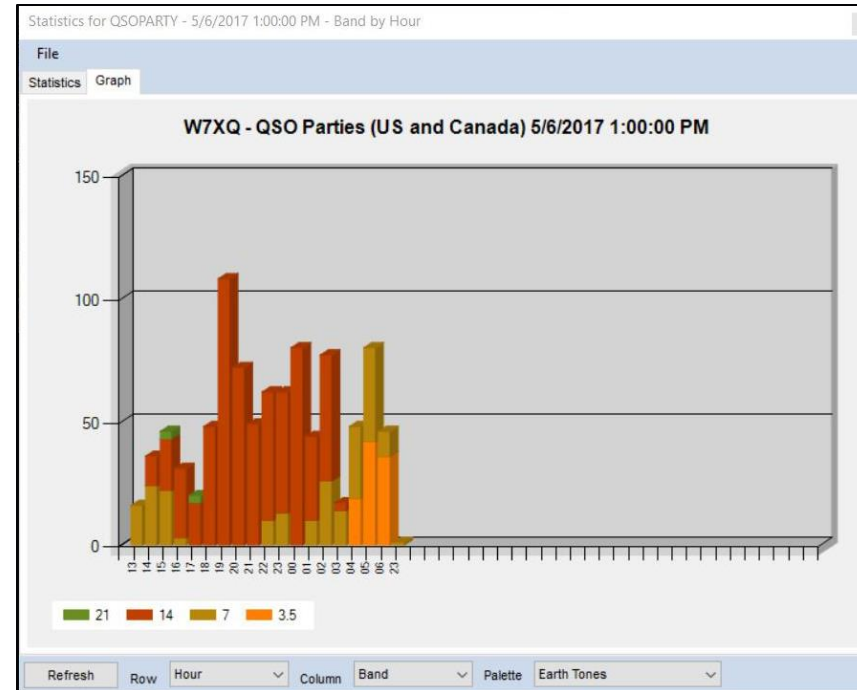
Statistics for QSOPARTY - 5/6/2017 1:00:00 PM - Band by Hour

File Statistics Graph

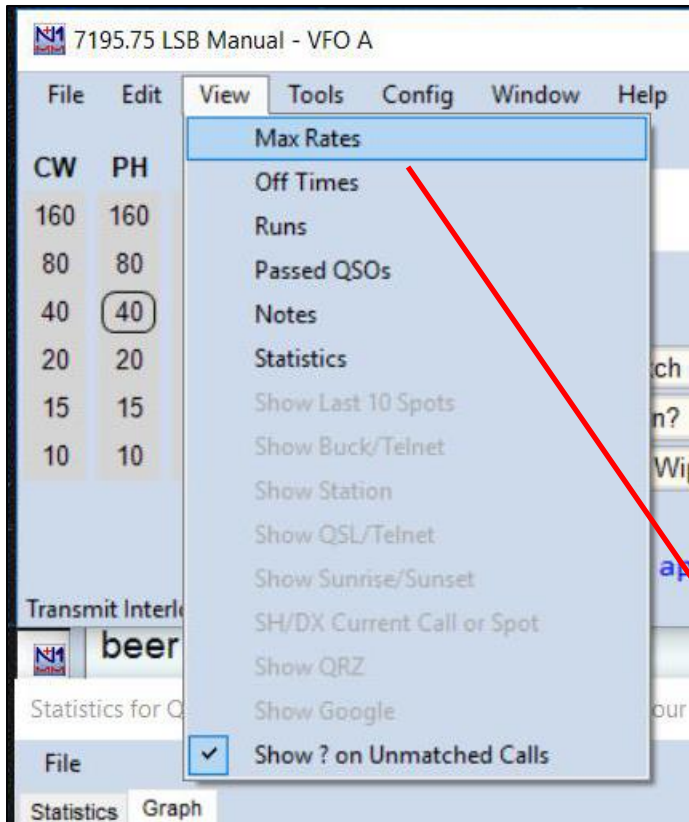
Day	Hr	3.5	7	14	21	Tot	Accum
2017-05-06	13		16			16	16
2017-05-06	14		24	12		36	52
2017-05-06	15		22	21	3	46	98
2017-05-06	16		3	28		31	129
2017-05-06	17			17	3	20	149
2017-05-06	18			48		48	197
2017-05-06	19			108		108	305
2017-05-06	20			72		72	377
2017-05-06	21			49		49	426
2017-05-06	22		10	52		62	488
2017-05-06	23		13	49		62	550
2017-05-07	00			80		80	630
2017-05-07	01		10	34		44	674
2017-05-07	02		26	51		77	751
2017-05-07	03		14	3		17	768
2017-05-07	04	19	29			48	816
2017-05-07	05	42	38			80	896
2017-05-07	06	36	10			46	942
2017-05-29	23		1			1	943
Total		97	216	624	6	943	943

Refresh Row Hour Column Band

Looking at hourly rates



More Statistics!

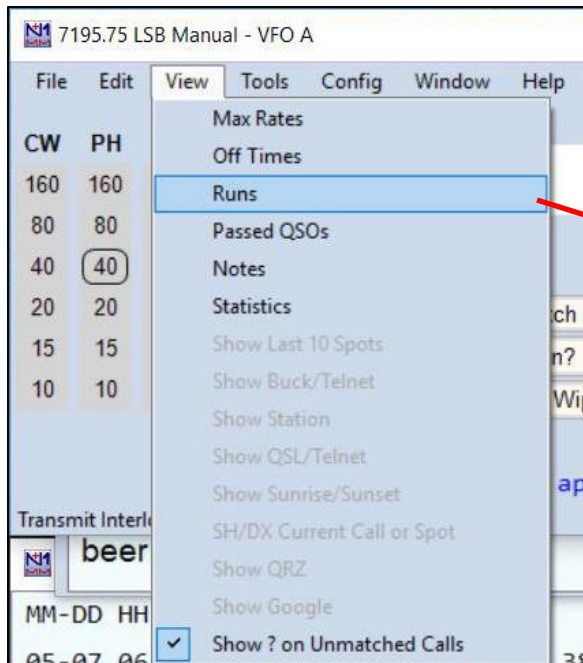


What were the best rates?

QSO Parties (US and Canada) - 2017-05-06 1300Z to 2017-05-07 0700Z - 945 QSOs
W7XQ Max Rates:

2017-05-06 1917Z - 4.0 per minute (1 minute(s)), 240 per hour by W7VO
2017-05-06 1925Z - 2.4 per minute (10 minute(s)), 144 per hour by W7VO
2017-05-06 1946Z - 1.9 per minute (60 minute(s)), 111 per hour by W7VO

Even more Statistics!



How effective were the runs?

QSO Parties (US and Canada) - 2017-05-06 1300Z to 2017-05-07 0700Z - 945 QSOs

W7XQ Runs >10 QSOs: for computer named: W7VO

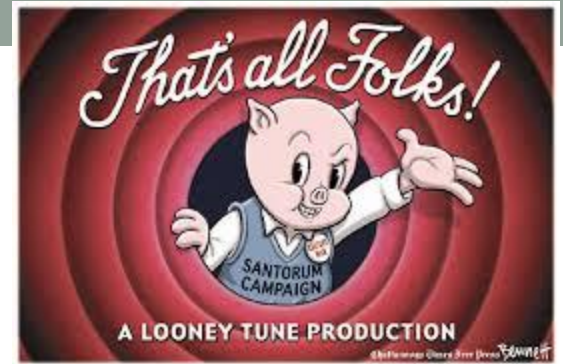
2017-05-06 1344 - 1428Z,	7222 kHz,	21 Qs,	28.6/hr	W7VO
2017-05-06 1458 - 1539Z,	7222 kHz,	23 Qs,	33.4/hr	W7VO
2017-05-06 2347 - 0225Z,	7200 kHz,	32 Qs,	12.1/hr	W7VO
2017-05-07 0436 - 0513Z,	7265 kHz,	40 Qs,	64.7/hr	W7VO
2017-05-07 0532 - 0554Z,	7200 kHz,	14 Qs,	38.9/hr	W7VO

QSO Parties (US and Canada) - 2017-05-06 1300Z to 2017-05-07 0700Z - 945 QSOs

W7XQ Runs >10 QSOs: for computer named: W7XQ-PC

2017-05-06 1415 - 1646Z,	14196 kHz,	53 Qs,	20.9/hr	W7VO
2017-05-06 1838 - 2139Z,	14294 kHz,	250 Qs,	82.9/hr	W7VO
2017-05-06 2147 - 2215Z,	14315 kHz,	23 Qs,	47.8/hr	W7VO
2017-05-06 2222 - 2358Z,	14283 kHz,	89 Qs,	55.8/hr	W7VO
2017-05-07 0015 - 0134Z,	14315 kHz,	111 Qs,	84.3/hr	W7VO
2017-05-07 0221 - 0252Z,	14303 kHz,	49 Qs,	95.6/hr	W7VO
2017-05-07 0524 - 0645Z,	3889 kHz,	72 Qs,	53.2/hr	W7VO

- **That's all for now, Folks!**
- **Explore other features, but now you know the basics of N1MM+!**



Willamette Valley



DX Club

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