

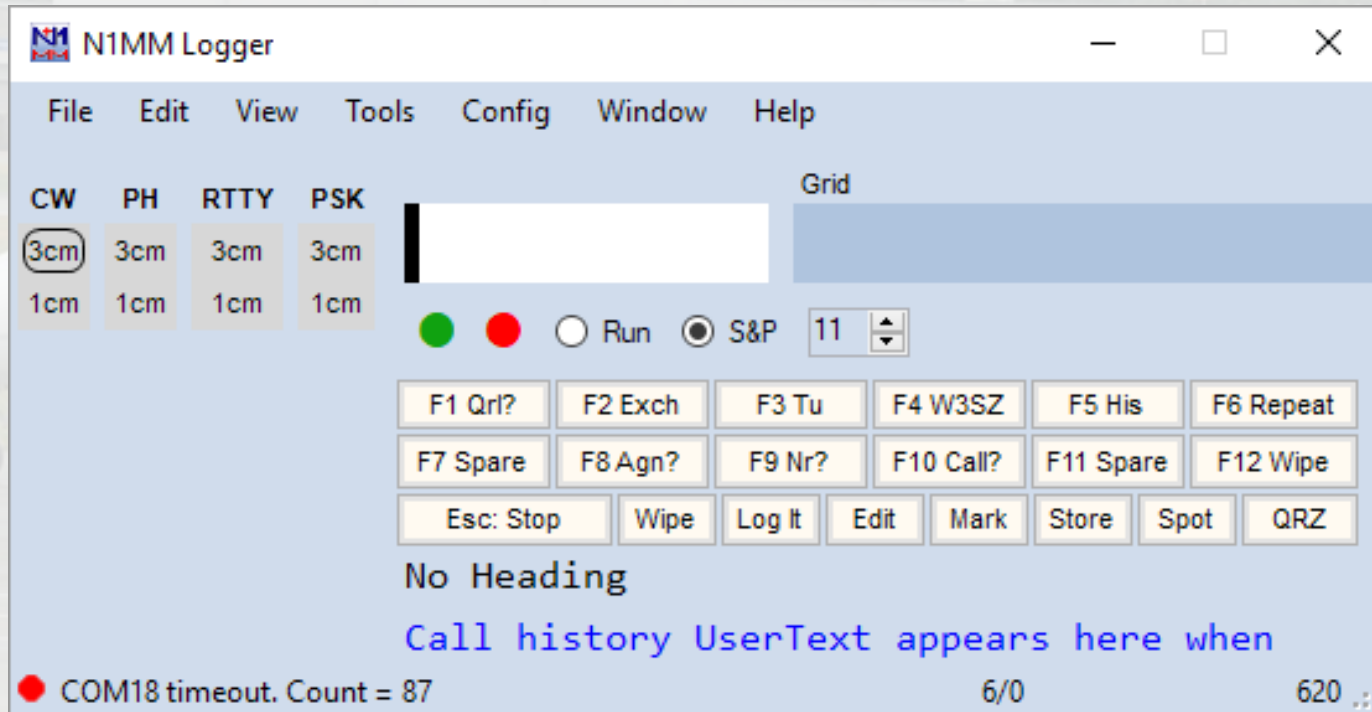
# N1MM Configuration

W3SZ and K3TUF

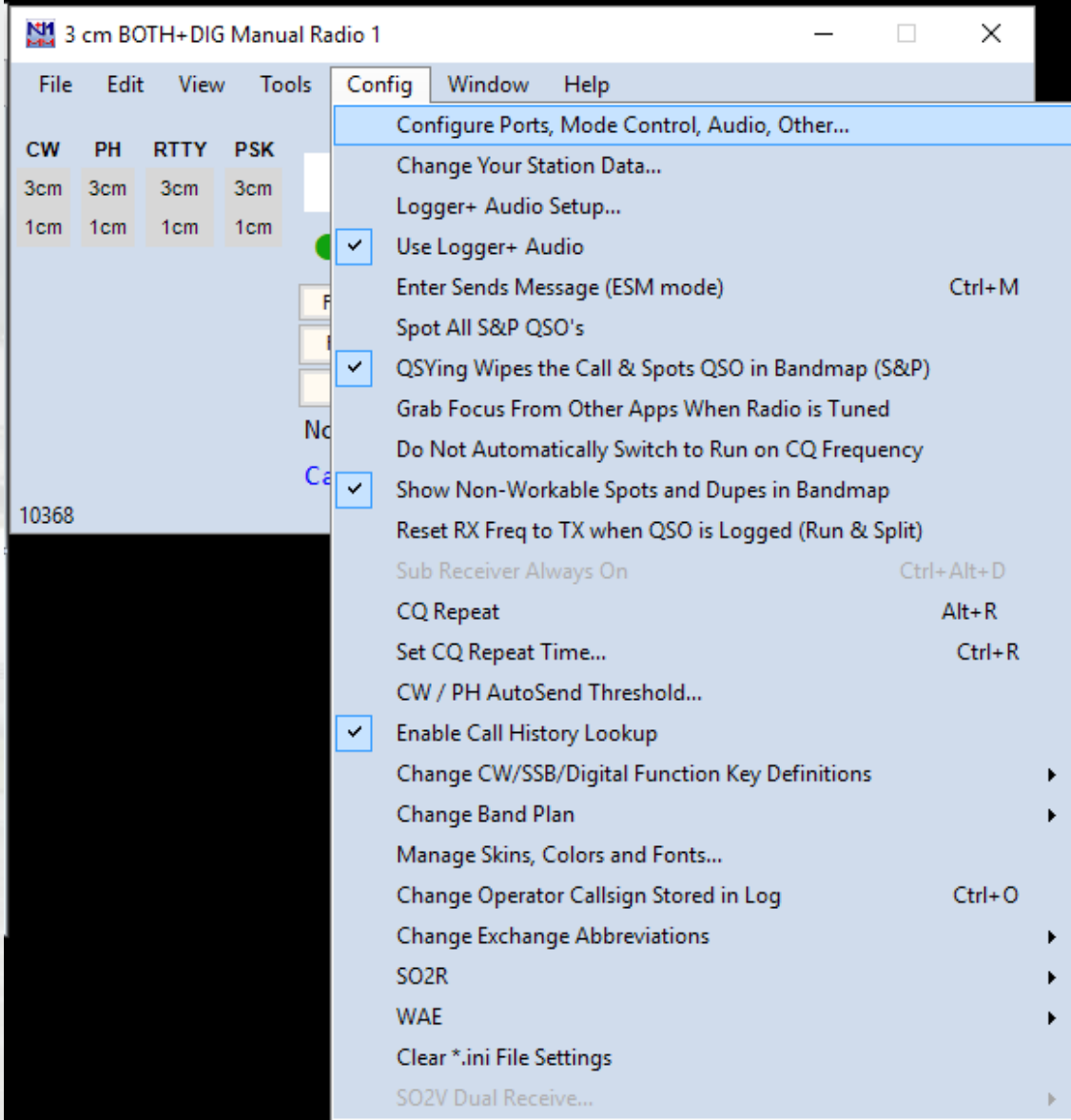


# Configuring N1MM

- Start From the Entry Window and click “Config”



Then click  
“Configure Ports,  
Mode Control,  
Audio, Other”



Port	Radio	Digi	CW/Other	Details
COM16	TS-2000	<input type="checkbox"/>	<input type="checkbox"/>	Set
COM18	TS-2000	<input type="checkbox"/>	<input type="checkbox"/>	Set
COM11	None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Set
COM35	None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Set
COM21*	None	<input type="checkbox"/>	<input type="checkbox"/>	Set
COM4	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
LPT1			<input type="checkbox"/>	Set
LPT2			<input type="checkbox"/>	Set
LPT3			<input type="checkbox"/>	Set

SO1V
  SO2V
  SO2R

9600,N,8,1,DTR=Always On,RTS=Always On,Tx=1

9600,N,8,1,DTR=Always On,RTS=Always On,Tx=2

DTR=Always On,RTS=Always Off,Tx=Both

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

Start with the Hardware Tab

# Hardware Tab is Used to Setup:

- Radios
- CW, PTT, Digital ports
- Interface to SO2R boxes
- Interface to Keyers

The screenshot shows the 'Configurer' software window with the 'Hardware' tab selected. The window contains a table for configuring hardware ports and SO2R settings.

Port	Radio	Digi	CW/Other	Details
COM16	TS-2000	<input type="checkbox"/>	<input type="checkbox"/>	Set
COM18	TS-2000	<input type="checkbox"/>	<input type="checkbox"/>	Set
COM11	None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Set
COM35	None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Set
COM21*	None	<input type="checkbox"/>	<input type="checkbox"/>	Set
COM4	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
LPT1		<input type="checkbox"/>	<input type="checkbox"/>	Set
LPT2		<input type="checkbox"/>	<input type="checkbox"/>	Set
LPT3		<input type="checkbox"/>	<input type="checkbox"/>	Set

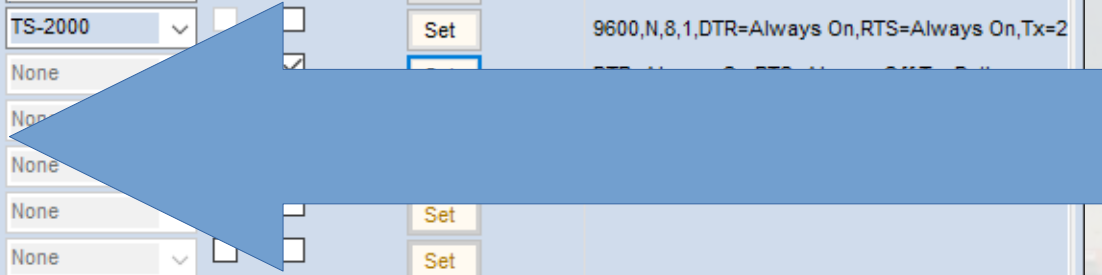
SO2R Settings:

SO1V    SO2V    SO2R

9600,N,8,1,DTR=Always On,RTS=Always On,Tx=1  
9600,N,8,1,DTR=Always On,RTS=Always On,Tx=2  
DTR=Always On,RTS=Always Off,Tx=Both  
DTR=PTT,RTS=Always Off,Tx=1

Buttons: OK, Cancel, Help

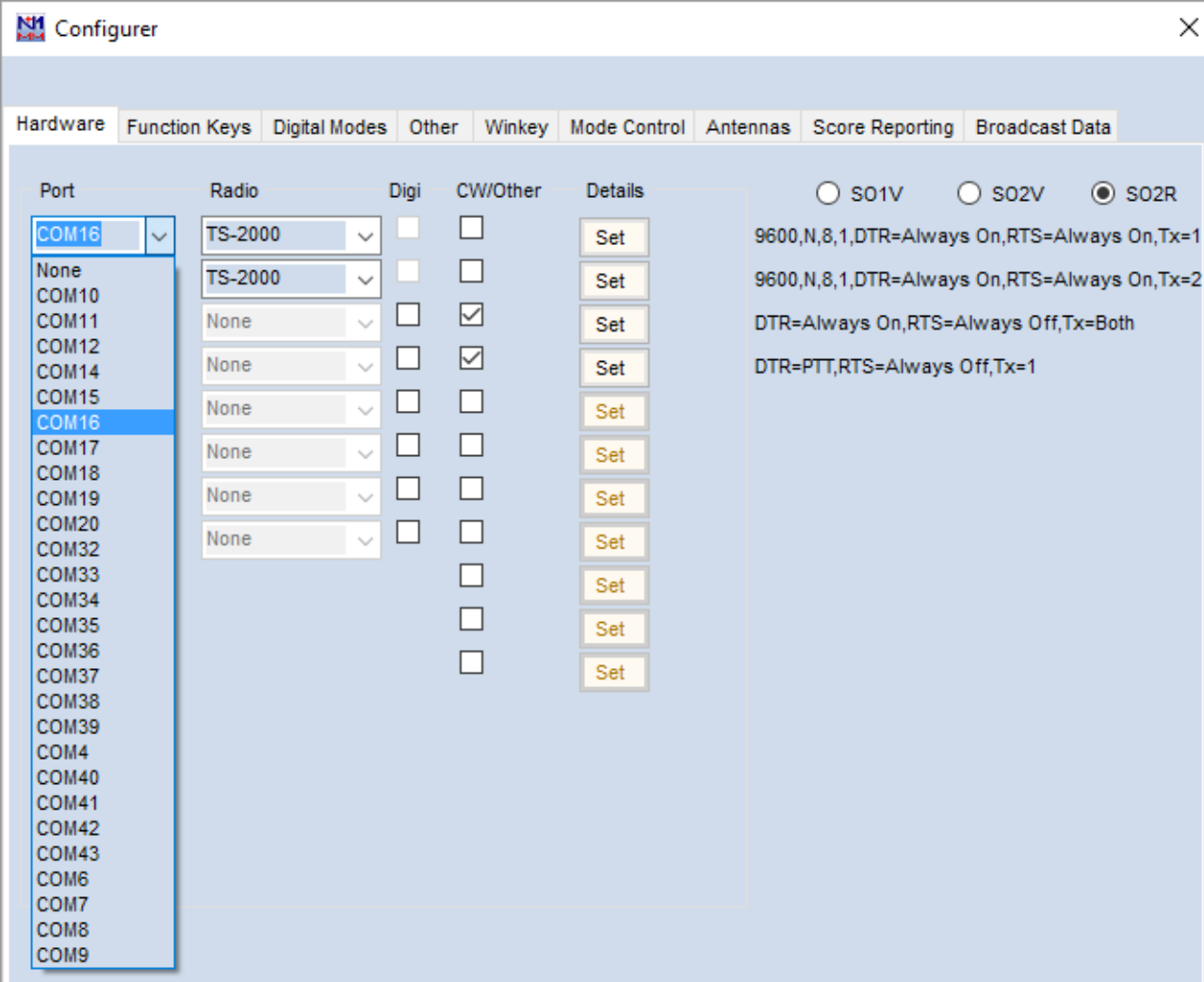
Port	Radio	Digi	CW/Other	Details	<input type="radio"/> S01V	<input type="radio"/> S02V	<input checked="" type="radio"/> S02R
COM16	TS-2000	<input type="checkbox"/>	<input type="checkbox"/>	Set	9600,N,8,1,DTR=Always On,RTS=Always On,Tx=1		
COM18	TS-2000	<input type="checkbox"/>	<input type="checkbox"/>	Set	9600,N,8,1,DTR=Always On,RTS=Always On,Tx=2		
COM11	None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Set			
COM35	None	<input type="checkbox"/>	<input type="checkbox"/>	Set			
COM21*	None	<input type="checkbox"/>	<input type="checkbox"/>	Set			
COM4	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			
LPT1		<input type="checkbox"/>	<input type="checkbox"/>	Set			
LPT2		<input type="checkbox"/>	<input type="checkbox"/>	Set			
LPT3		<input type="checkbox"/>	<input type="checkbox"/>	Set			



The **Port** column supports up to 8 serial ports in the range COM1-COM99 and 3 parallel ports, LPT1-LPT3.

The serial ports may be “real” serial ports, serial/USB adapters, or virtual serial ports like com0com, LP-Bridge, VSPE, etc.

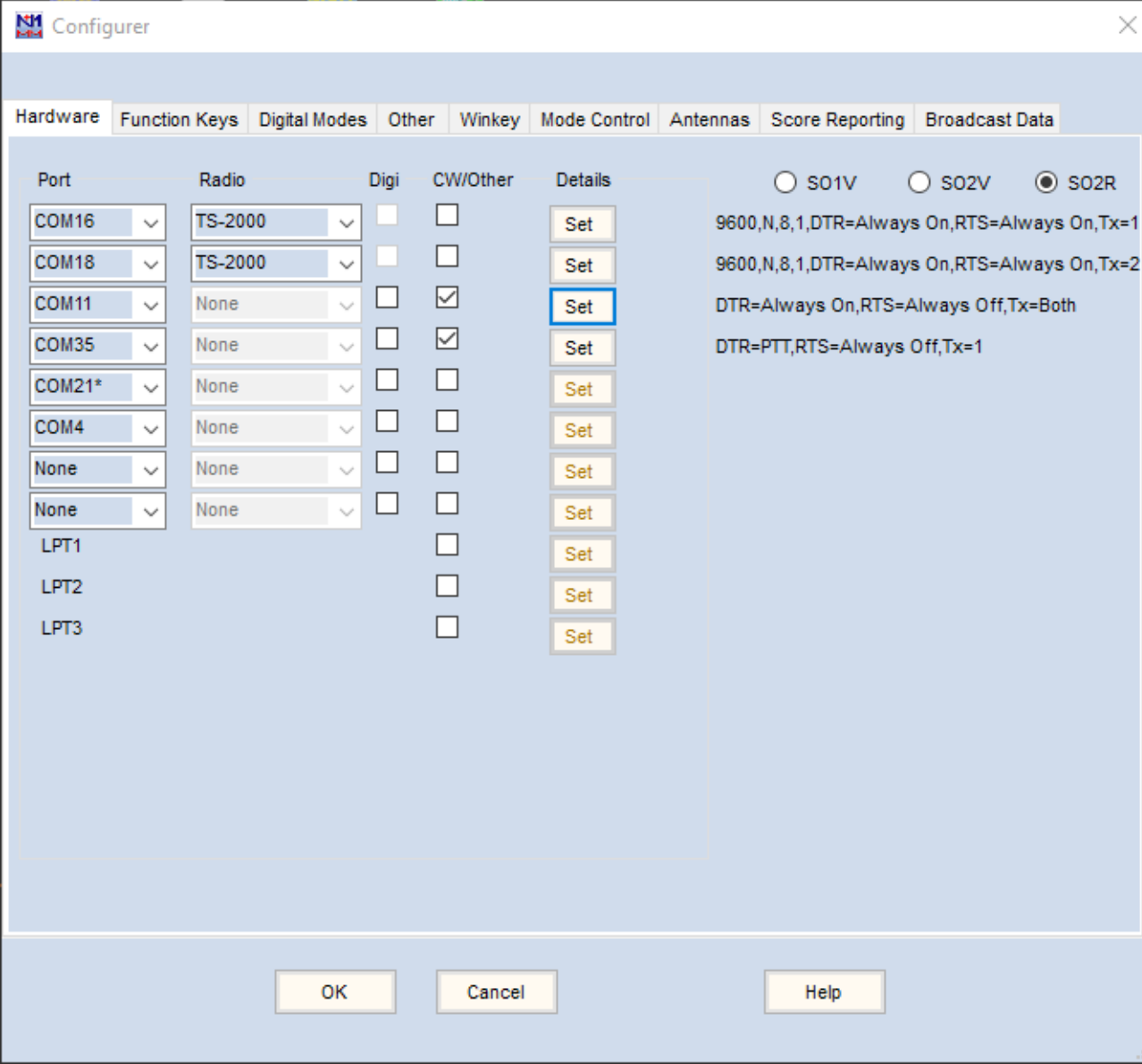




Clicking on the **Port** pulldown arrow brings up a list of all installed serial ports.

For each radio or device, the appropriate port for that device is selected by clicking on that port in this pulldown list.

In this case, I have selected COM16 for Radio 1, a TS-2000.



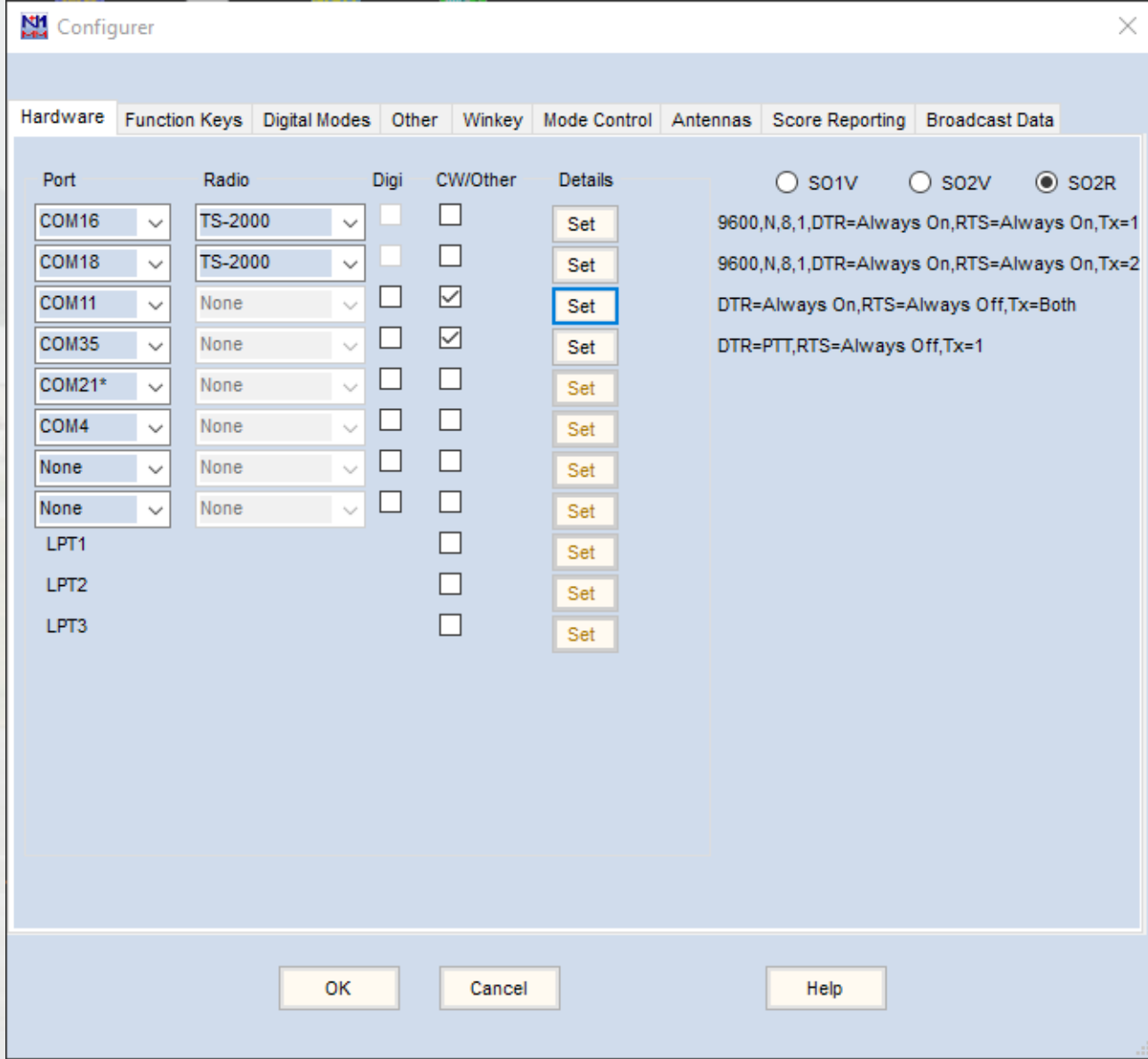
Here you can see that I have also selected COM18, for Radio 2, which is another TS-2000.

I have also selected COM11, COM35, and COM21, and COM4.

Of these additional ports, COM4 and COM21 are unused and COM11 and COM35 are assigned to "CW/Other".

The asterisk behind COM21 means that N1MM could not open this port.

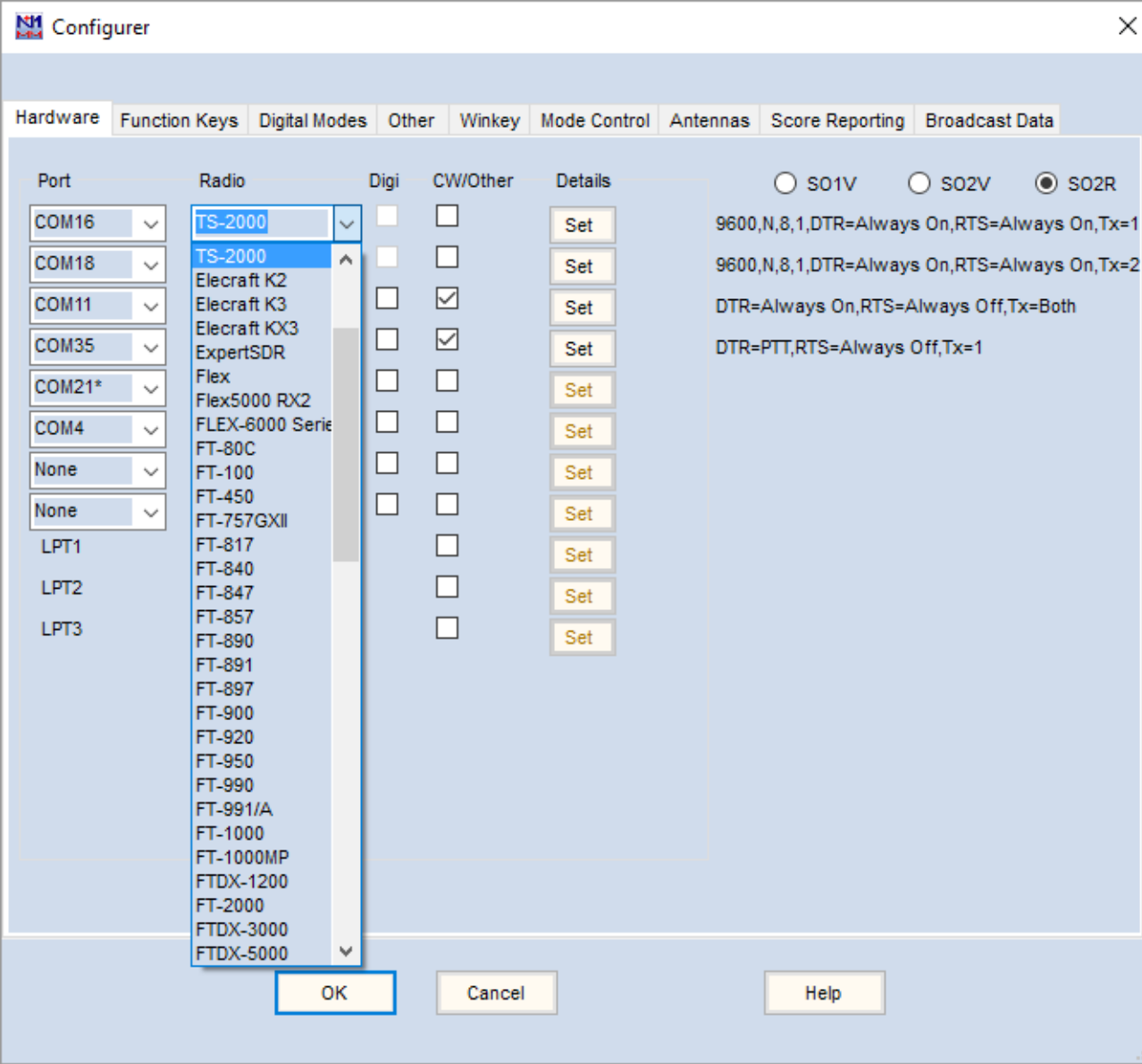




I am using two radios in SO2R Mode, so I have clicked the **SO2R** button so that N1MM knows I want to use SO2R mode with my radios.

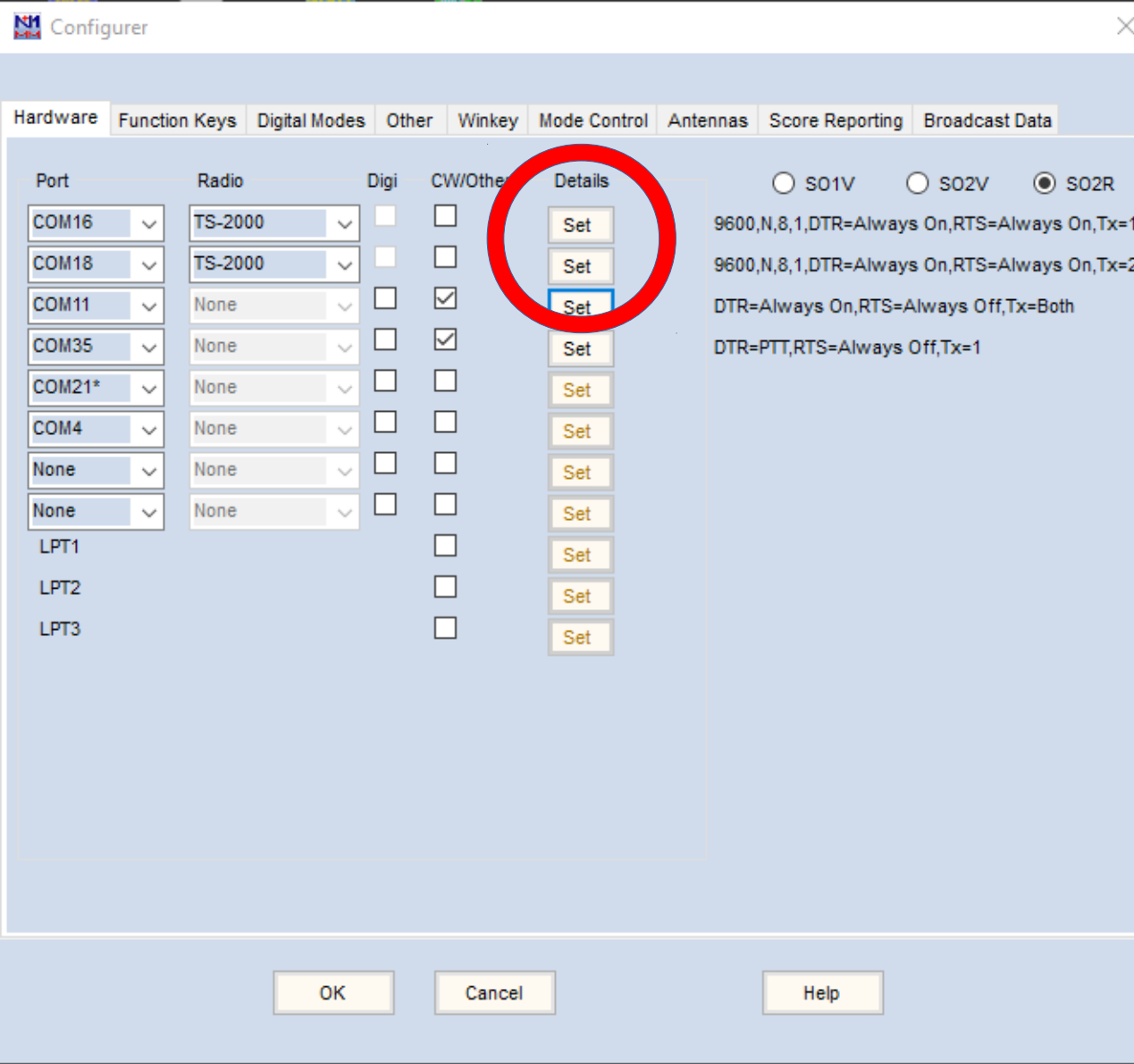
If were only using one radio with one VFO, I would have clicked **SO1V**.

And if I were using one radio with two VFOs, I would have clicked **SO2V**



The TS-2000 radios were selected by clicking on the arrow for the **Radio** pulldown list for the first and second rows of the **Radio** column and selecting "TS-2000" from the list.

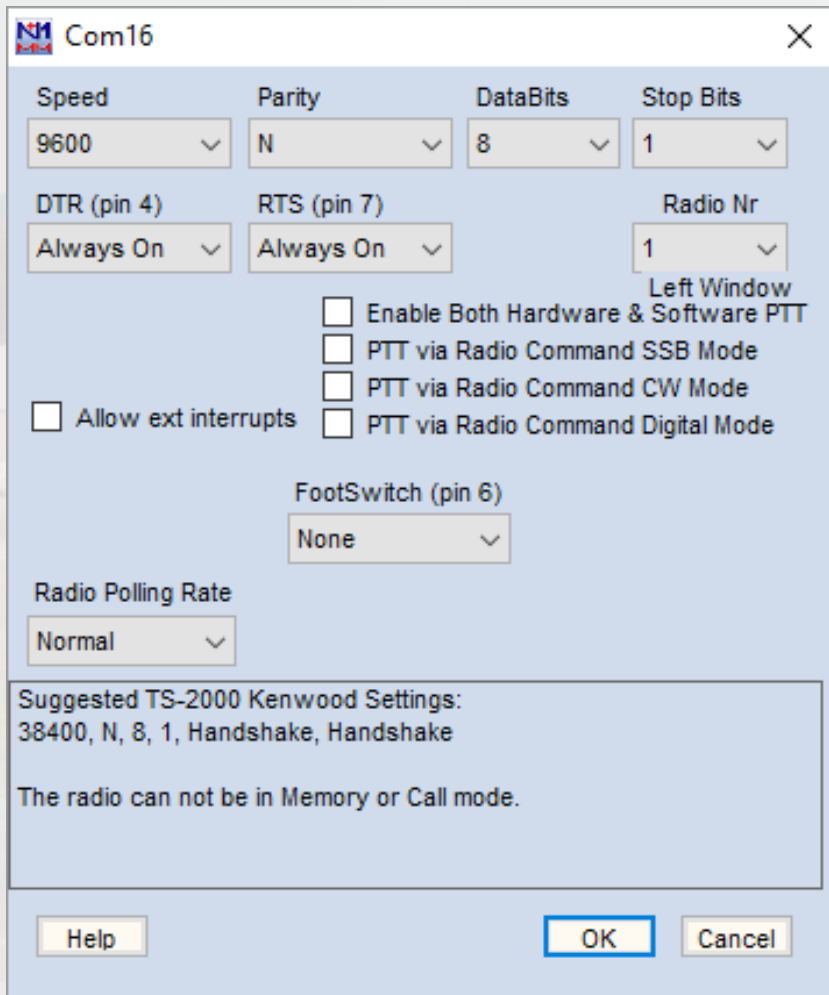
You may select no more than 2 radios, and you must only select a radio if it is actually connected to the COM port specified in the **Port** column AND if both the radio and the COM port are powered up and working.



Once the Ports and Radios have been specified, the ports need to be configured.

This is done by clicking on the appropriate **Set** button in the **Details** column for each Radio, one at a time.

You must complete setting up one port and close that setup window before moving on to configure the next port.



Set port parameters appropriately for your radio:

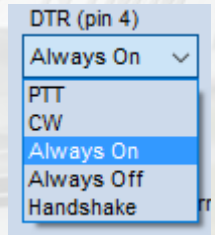
Baud (Speed)

Parity

Data Bits

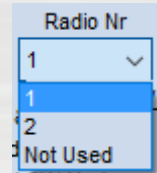
Stop Bits

DTR/RTS: may be used for PTT or sending CW, or set to “Always On”, “Always Off”, or “Handshake”



IF DTR/RTS used for CW or PTT, then the **CW/Other** checkbox in the main window must be checked

COM16 is assigned to **Radio Nr 1**



The screenshot shows a window titled "Com16" with a close button (X) in the top right corner. The window contains several configuration options:

- Speed:** 9600 (dropdown)
- Parity:** N (dropdown)
- DataBits:** 8 (dropdown)
- Stop Bits:** 1 (dropdown)
- DTR (pin 4):** Always On (dropdown)
- RTS (pin 7):** Always On (dropdown)
- Radio Nr:** 1 (dropdown)
- Left Window:** (text label)
- 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 (dropdown)
- Radio Polling Rate:** Normal (dropdown)

At the bottom of the window, there is a section titled "Suggested TS-2000 Kenwood Settings:" with the text "38400, N, 8, 1, Handshake, Handshake" and a message "The radio can not be in Memory or Call mode." Below this section are three buttons: "Help", "OK", and "Cancel".

As a beginner, leave the check boxes on this form unchecked.

As a beginner, leave the **FootSwitch** pulldown set to its default value of **None**.

Leave the **Radio Polling Rate** set to **Normal** unless you know what you are doing and have a reason to change this.

When you have completed setup on this form, click "OK" and you will be returned to the main Configurer window.



Com18

Speed: 9600  
Parity: N  
DataBits: 8  
Stop Bits: 1

DTR (pin 4): Always On  
RTS (pin 7): Always On  
Radio Nr: 2

Right Window

- Enable Both Hardware & Software PTT
- PTT via Radio Command SSB Mode
- PTT via Radio Command CW Mode
- PTT via Radio Command Digital Mode

Allow ext interrupts

FootSwitch (pin 6): None

Radio Polling Rate: Normal

Suggested TS-2000 Kenwood Settings:  
38400, N, 8, 1, Handshake, Handshake

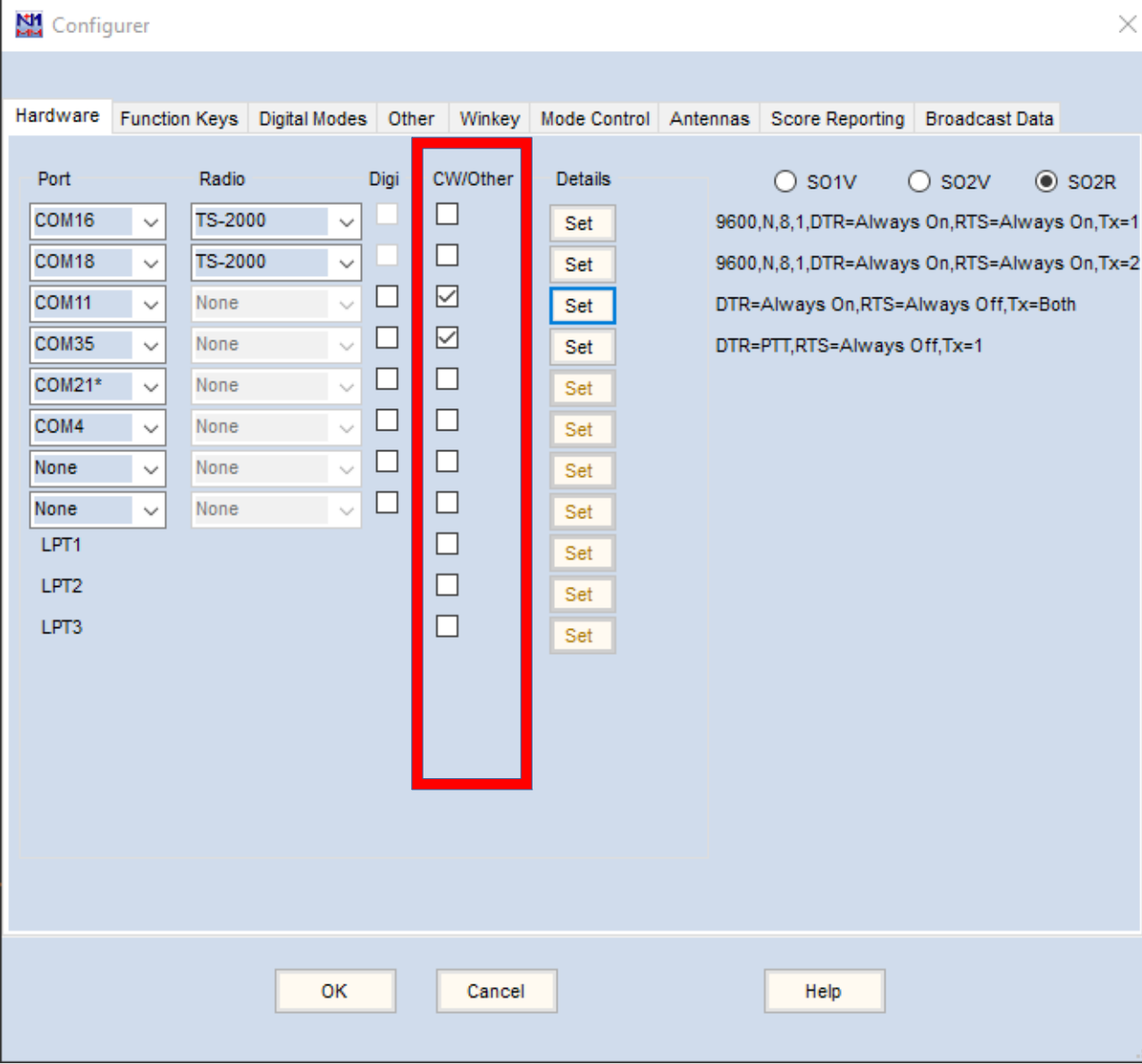
The radio can not be in Memory or Call mode.

Help OK Cancel

Clicking the **Set** button in the **Details** column for COM18 gives this form. It differs from the COM16 form only in that **RadioNr** for COM18 is 2.

The other parameters are identical.

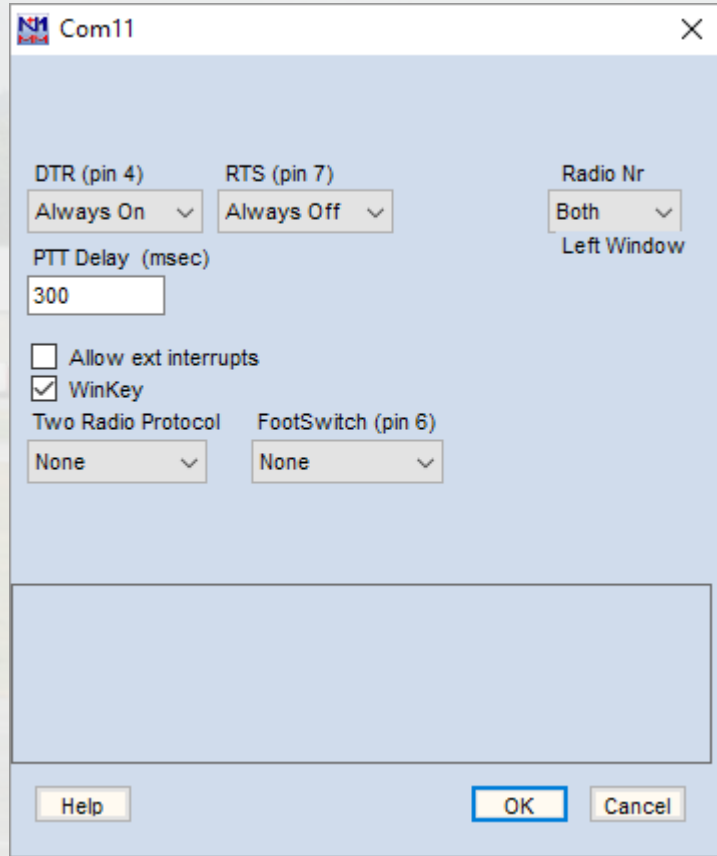




The **CW/Other** box is checked for a given port if that port is used for CW, PTT, a footswitch, a DVK, or an SO2R controller.

Radio control (CAT) and DTR/RTS CW/PTT on the same serial port are compatible, but Radio and WinKeyer control on the same port are not compatible.

Let's see what happens when we click on **Set** in the **Details** column for COM11 and COM35, starting with COM11.



The **PTT Delay** value is set to work with a sequencer.

COM11 is used here to interface with the WinKeyer

**DTR** is set to “Always On”

**RTS** is set to “Always Off”

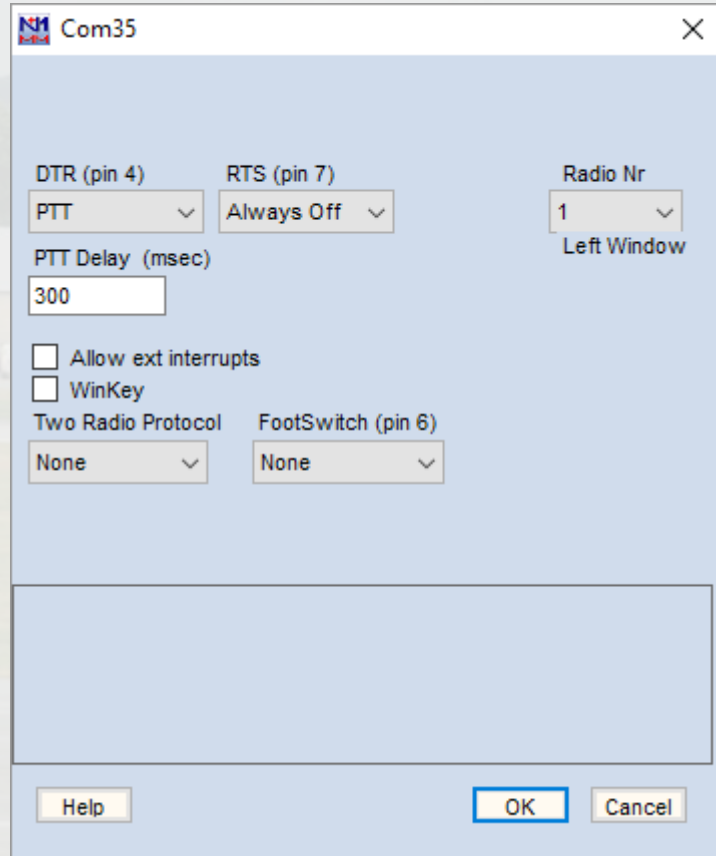
With these settings, the WinKeyer is powered via the serial port, with DTR supplying **+V** and RTS **-V**.

We want the Winkeyer to work with both radios, so **RadioNr** is set to **Both**

**WinKey** is checked so that COM11 will be used to control the WinKeyer.

No SO2R controller is used, so **Two Radio Protocol** is set to **None**.

**FootSwitch** is set to none, because no footswitch is being used with N1MM.



The **PTT Delay** value is set to work with a sequencer.

COM35 is set up here an example of how this port could be used to provide PTT for Radio 1. In my installation, CAT control is used to provide PTT.

**DTR** is set to “PTT”

**RTS** is set to “Always Off”

We want this PTT to work with only radio 1, so **RadioNr** is set to **1**.

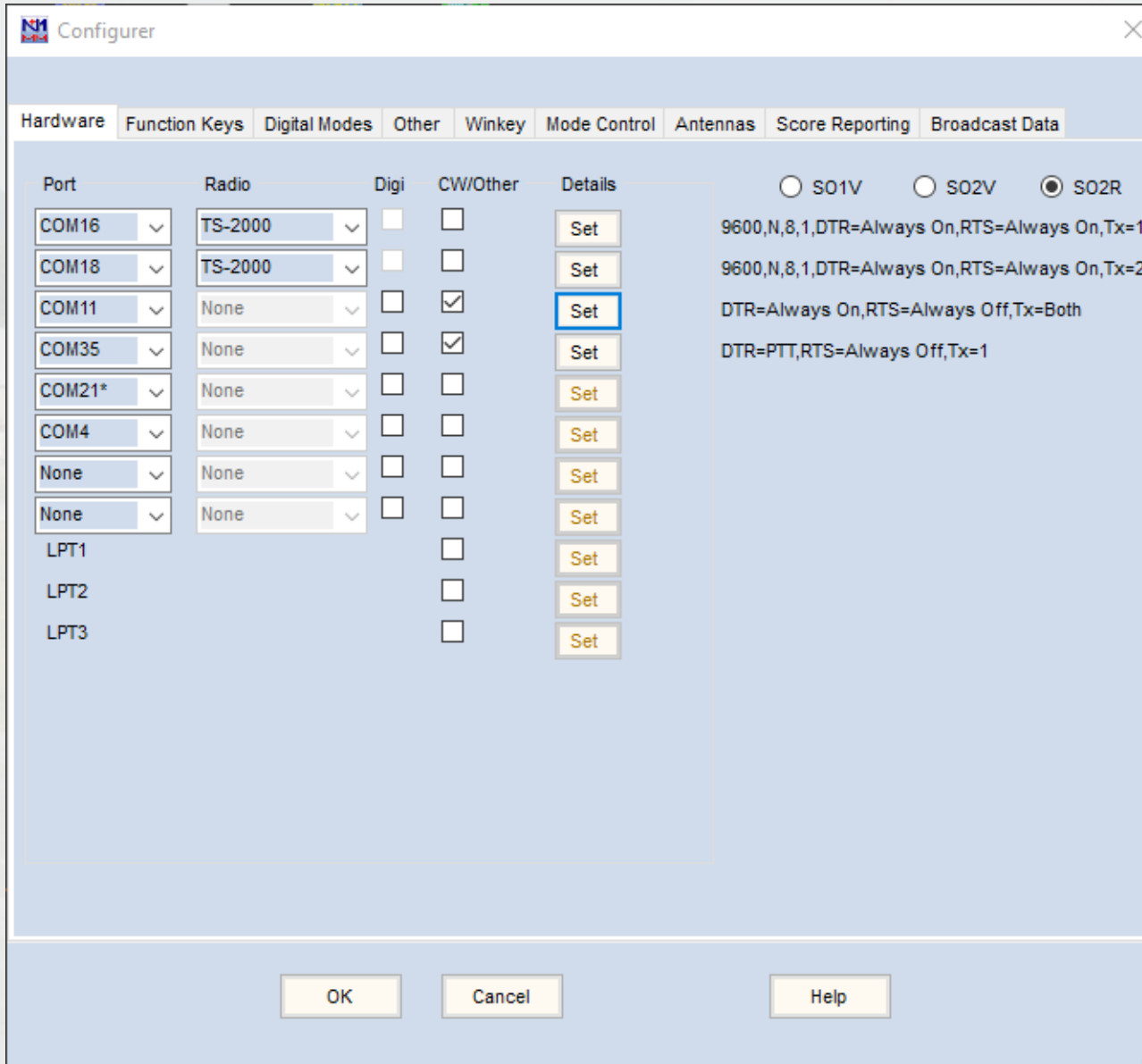
**WinKey** is not checked, because this port is not used to control the WinKeyer.

No SO2R controller is used, so **Two Radio Protocol** is set to **None**.

**FootSwitch** is set to none, because no footswitch is being used with N1MM.

# PTT with N1MM – 3 Options

- PTT via serial or parallel port
  - RTS or DTR for Serial Port, or Pin 16 for LPT
- PTT via WinKeyer
  - WinKeyer PTT output can be used for PTT for all modes
- PTT via CAT command
  - There is NO delay before logger begins sending stored messages when PTT via CAT command is used
- **USE ONLY ONE METHOD OF PTT OR CW KEYING!!**



## What about the Digi column?

The **Digi** check boxes are NOT checked for the WSJT modes.

They are only checked for a given port if that port is used with MMTTY, MMVARI, Fldigi engine, or TNC.

Not applicable to VHF contesting.



Send leading zeros in serial numbers
  Stop sending CQ when callsign is changed

Send cut numbers
  ESM sends your call once in S&P, then ready to copy received exchange

Send corrected call before end of QSO
  Work dupes when running

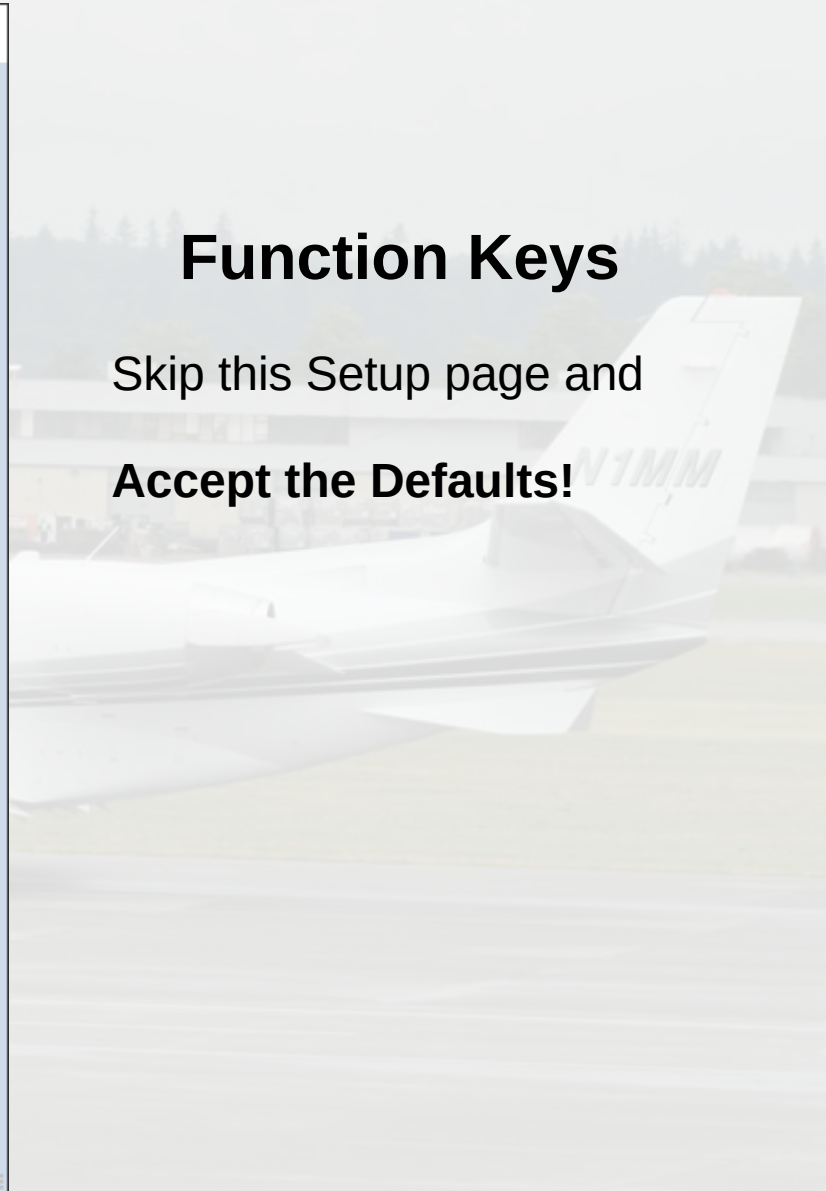
Send partial calls
  String to use on cw between his call key and exchange key (default is one space)

Use CW contest word spacing
  Keycode of Ins Key

AutoHotKey file
  Keycode of TU/Log Key Substitute

Make sure that the key mappings defined below match the contents of the keys as defined in Config/Change CW buttons, Config/Change SSB Buttons and Config/Change Digital Buttons.

CQ Key <input type="text" value="F1"/>	End of QSO <input type="text" value="F3"/>	My Call Key <input type="text" value="F4"/>	Again Key <input type="text" value="F8"/>	Next Call <input type="text" value="Disabled"/>
Exchange Key <input type="text" value="F2"/>	His Call Key <input type="text" value="F5"/>	QSO B4 Key <input type="text" value="F6"/>	Cut Number Style (if enabled) <input type="text" value="T1234567890 (leading T)"/>	



# Function Keys

Skip this Setup page and  
**Accept the Defaults!**



Configurer

Hardware Function Keys Digital Modes Other Winkey Mode Control Antennas Score Reporting Broadcast Data

Digital Interface 1  
TU Type: None  
Speed: [ ]  
Parity: [ ]  
Data Bits: [ ]  
Stop Bits: [ ]  
Flow: [ ]

Digital Interface 2  
TU Type: None  
Speed: [ ]  
Parity: [ ]  
Data Bits: [ ]  
Stop Bits: [ ]  
Flow: [ ]

DI-1 MMTTY Setup (If used)  
MMTTY Mode:  AFSK  FSK  
MMTTY Path: Not Set [Select]

DI-2 MMTTY Setup (If used)  
MMTTY Mode:  AFSK  FSK  
MMTTY Path: Not Set [Select]

DI-1 Fldigi Setup (If used)  
Fldigi Path: Not Set [Select]

DI2 Fldigi Setup (If used)  
Fldigi Path: Not Set [Select]

Note: Any Changes made in this section will require the digital windows to be closed and re-opened before changes take effect.

DI-1 MMVARI Setup  
MMVARI RTTY Mode:  AFSK  FSK  
FSKPort: Select [ ]

DI-2 MMVARI Setup  
MMVARI RTTY Mode:  AFSK  FSK  
FSKPort: Select [ ]

OK Cancel Help

# Digital Modes

This page is not applicable to VHF Contesting.

**Skip this page and Accept the Defaults!**

Configurer

Hardware Function Keys Digital Modes **Other** Winkey Mode Control Antennas Score Reporting Broadcast Data

Letters Wav File Path  
{Operator}\

Primary CW Speed Step 2	SSB Tuning Tolerance (Hz) 300	SSB Up/Down Arrow Incr (kHz) 0.10
Secondary CW Speed 4	CW Tuning Tolerance (Hz) 300	CW & Dig Up/Down Arrow Incr 0.02
Repeat time in millisecs 1800	RTTY Tuning Tolerance 300	PgUp/PgDn Incr (kHz) 10.00
Default # Spots in SH/DX/ 30	CW Weight 50	

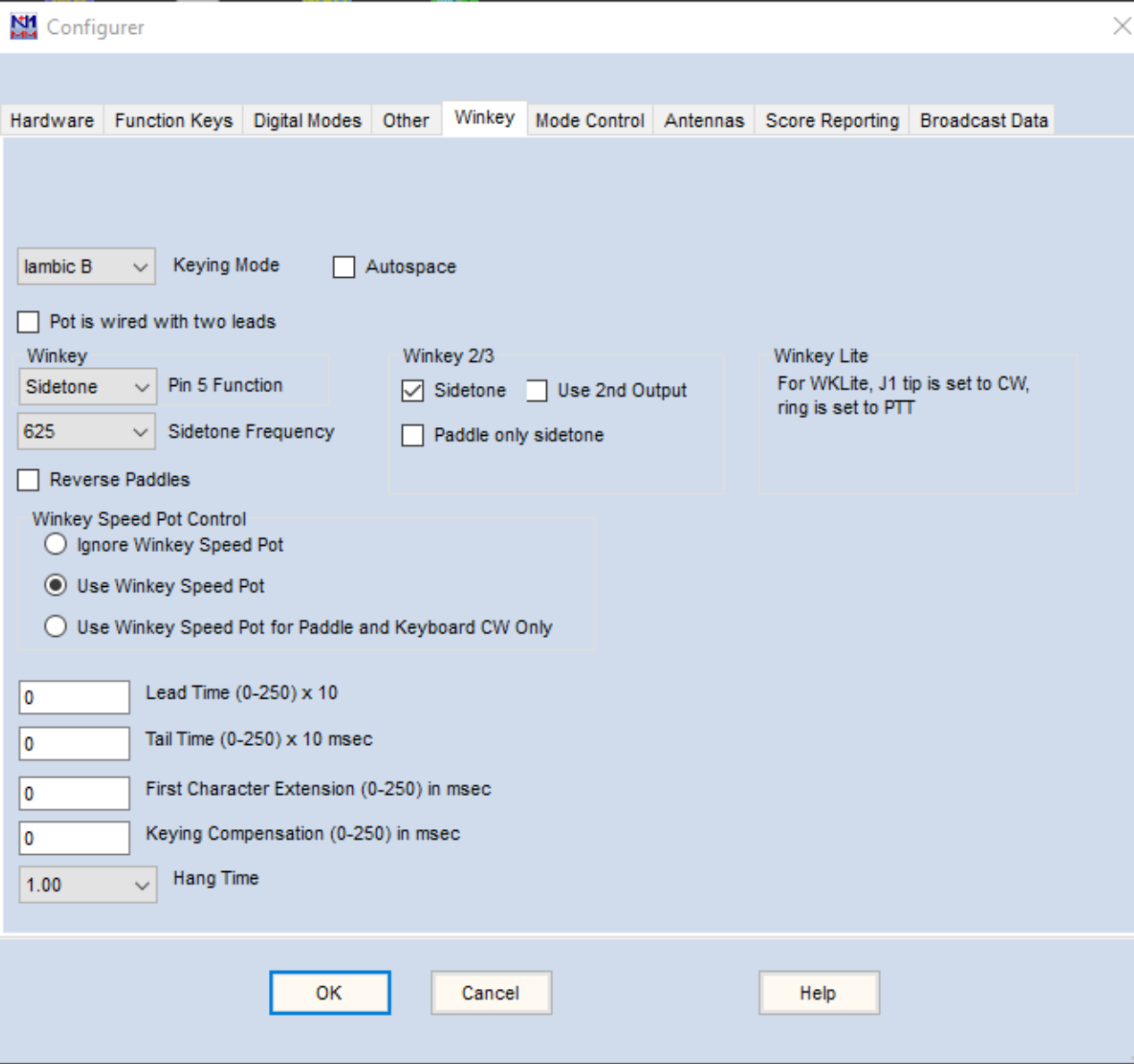
Clear automatically populated exchange on callsign change  
 Per Operator Function Key Messages  
 MorseRunner Mode

Mute mic on supported radios  
 Check for new program versions  
 CC Cabrillo to logs@supercheckpartial.com  
 Use Reverse CW Radio 1  
 Use Reverse CW Radio 2

OK Cancel Help

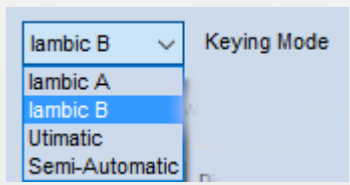
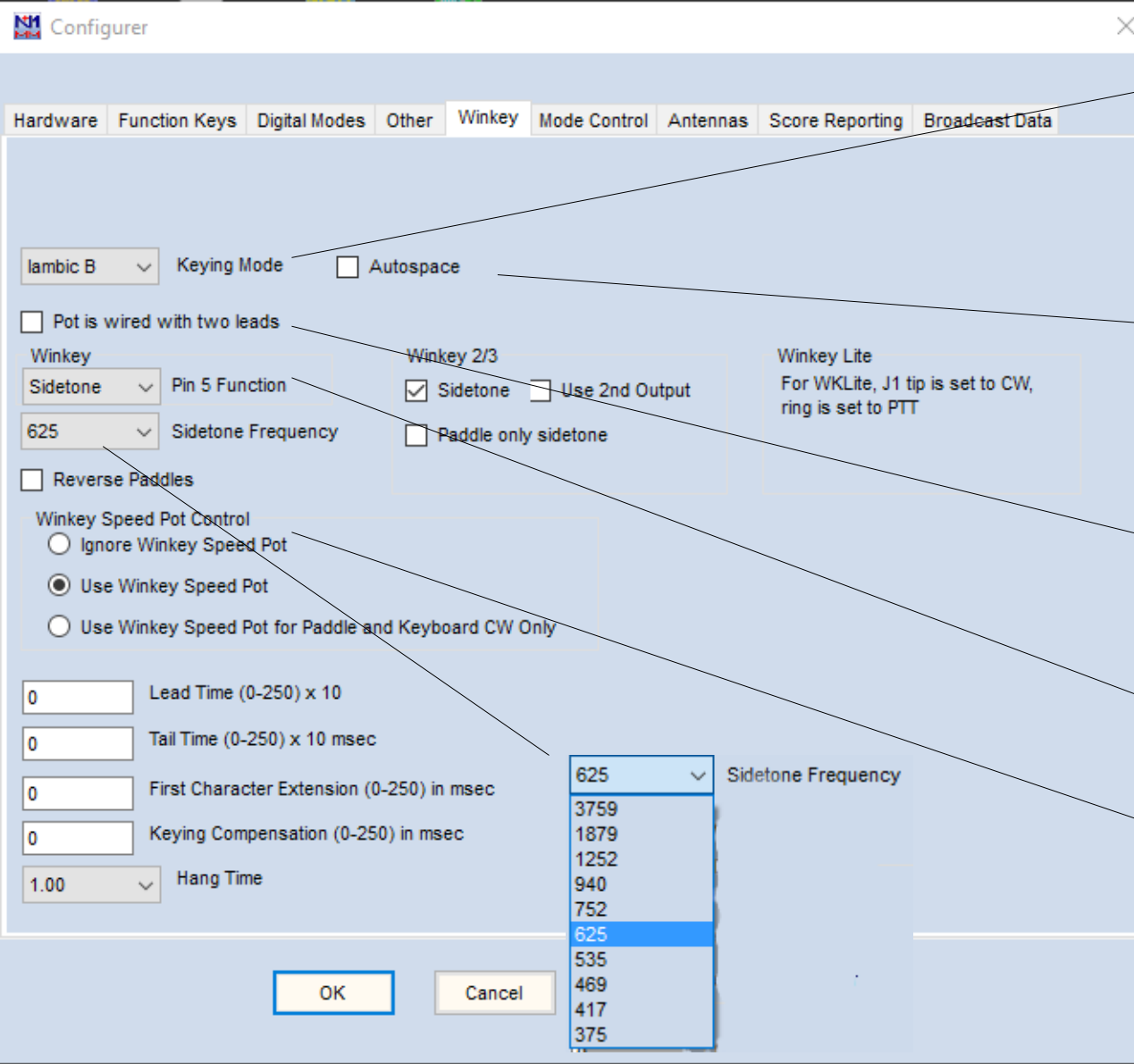
## Other

Skip this Setup page and  
**Accept the Defaults!**



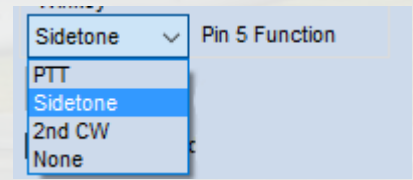
## WinKeyer Configuration

This only applies, and WinKeyer only works **IF you have set up a COM port for WinKey operation**, as we just described.



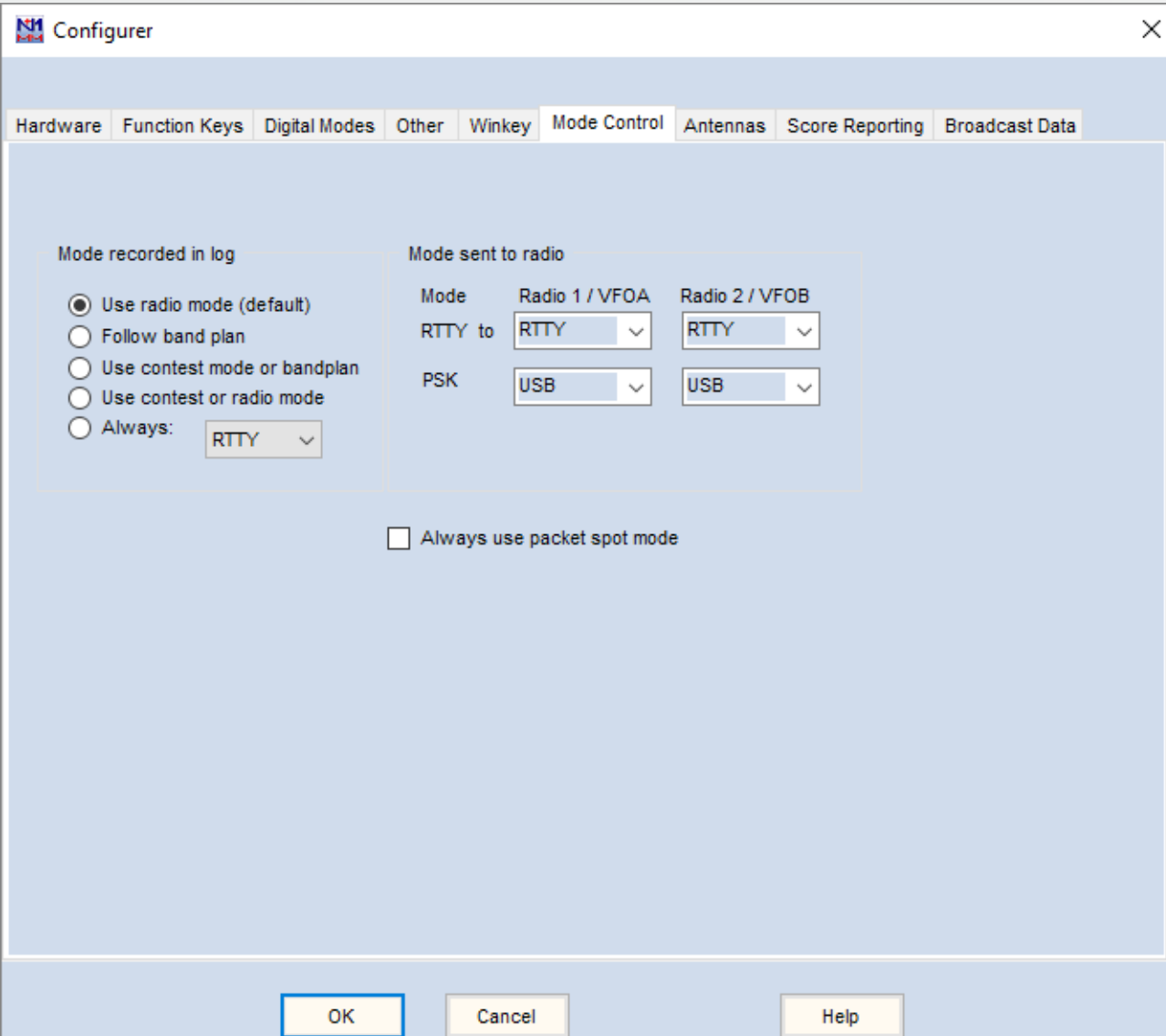
If selected, when using the paddles to send, if a pause of longer than one 'dit' time is detected, THREE dit times of pause will be inserted before the next character

Leave this alone unless you know what you are doing!



Pick one!

**Choose DEFAULTS for the rest!**

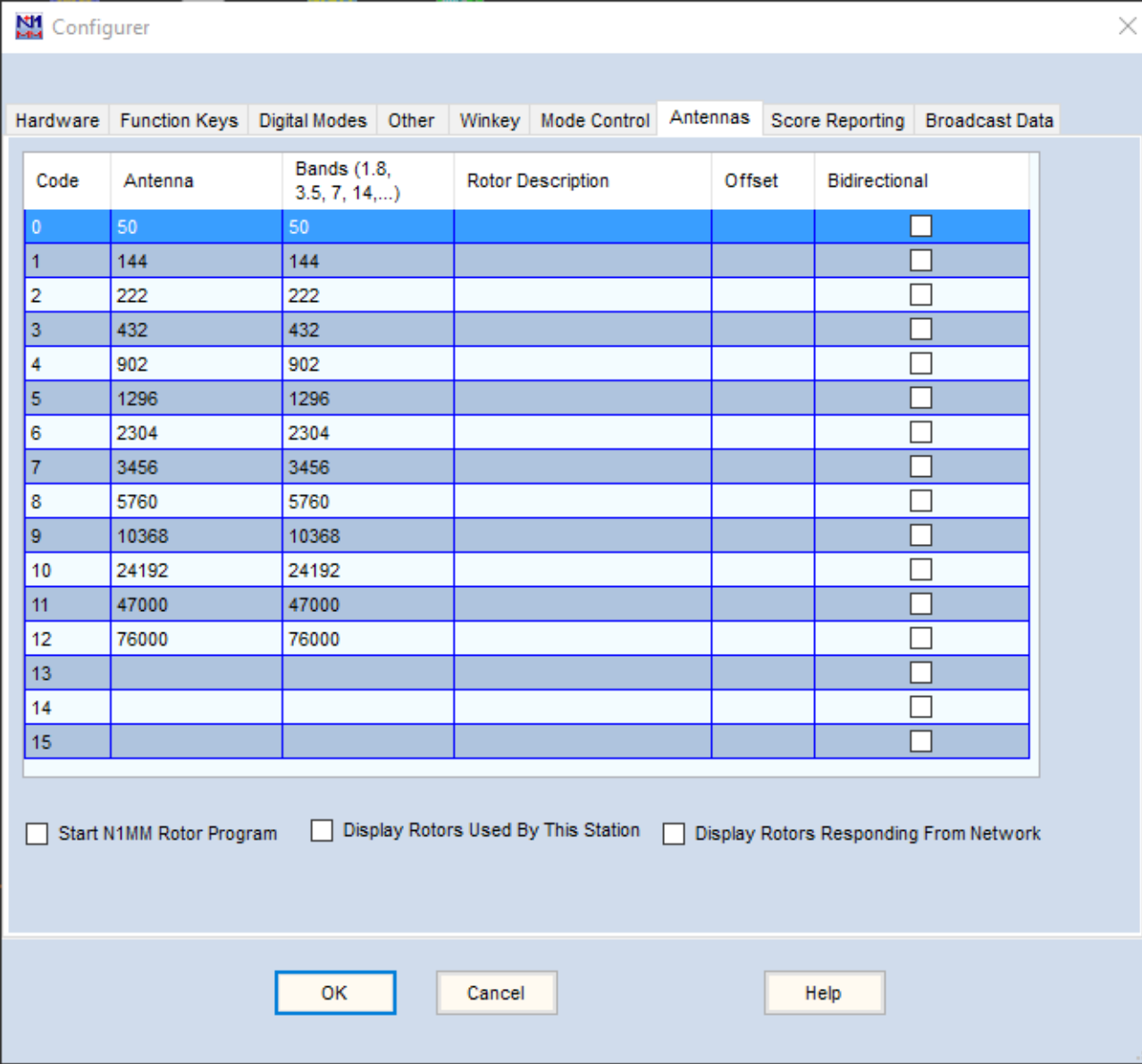


## Mode Control

Skip this Setup page and **accept the default (Use radio mode)**

This page is for HF digital modes.

WSJTX will properly record the mode in the N1MM log if you have “automatic WSJTX logging” set up properly.



# Antennas

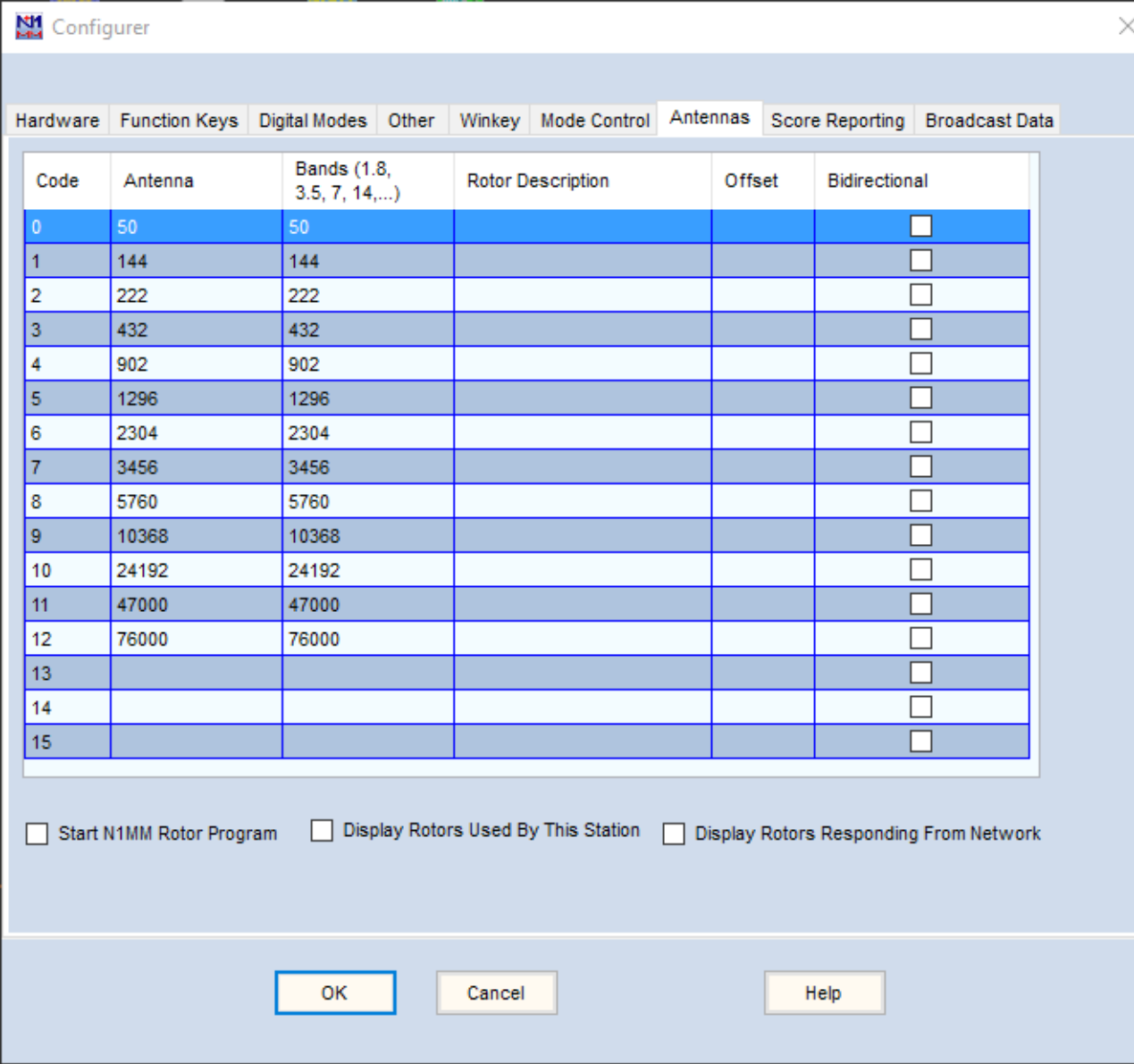
This window is used for setup of band-switching of transverters & antennas, via Serial or Parallel port.

Parallel port requires a band decoder

Serial port requires either MicroHam or OTRSP protocol device.

Rotor control uses N1MM Rotor protocol or third-party software via UDP packets.





# Code

Pre-determined numerical values 0-15 that will be sent on the LPT port as BCD, using pins 9,8,7, and 2, or used for the MicroHam or OTRSP serial device.

Each code represents ONE ANTENNA or TRANSVERTER

For LPT, must use with a band decoder, like:

N3FTI decoder

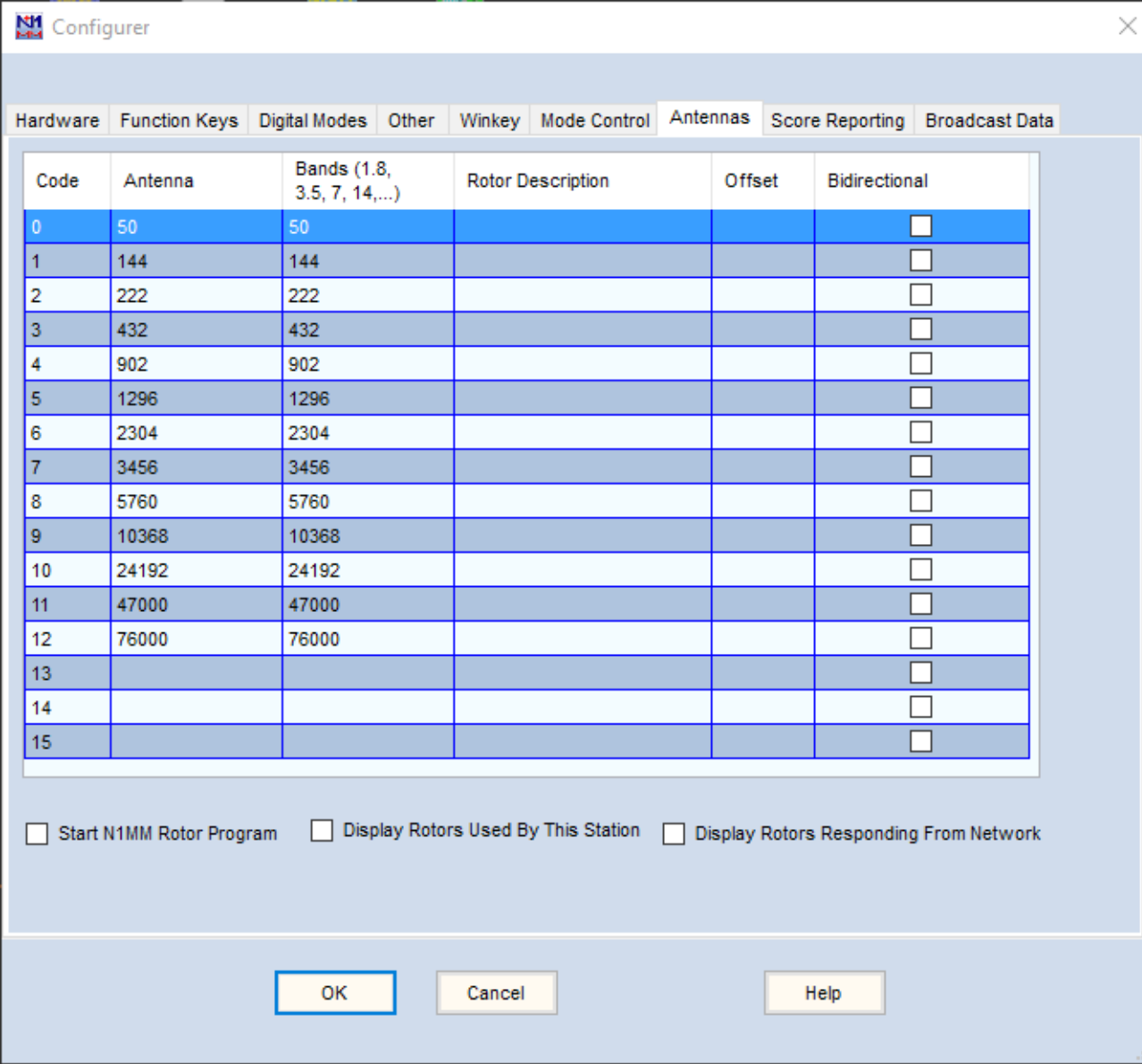
W3SZ Arduino-N1MM

Transverter Bandswitch

W9XT decoder

Top Ten Devices decoder

W3SZ device is **Project IV** (4) at:  
<http://w3sz.x10.mx/NEWS/StationAutomation.html>



## Code

For Serial Port (“real”, virtual, or serial-USB adapter) you must use:

MicroHam protocol device  
OTRSP device

There is a DIY OTRSP device at

<http://w3sz.x10.mx/NEWS/StationAutomation.html>

under **Project VIII** (8), described in the “Device Bandswitching” pdf and video, with the source code at:

[http://w3sz.x10.mx/SO2Rduino\\_To\\_NO\\_New\\_Mega.ino](http://w3sz.x10.mx/SO2Rduino_To_NO_New_Mega.ino)

Code	Antenna	Bands (1.8, 3.5, 7, 14,...)	Rotor Description	Offset	Bidirectional
0	50	50			<input type="checkbox"/>
1	144	144			<input type="checkbox"/>
2	222	222			<input type="checkbox"/>
3	432	432			<input type="checkbox"/>
4	902	902			<input type="checkbox"/>
5	1296	1296			<input type="checkbox"/>
6	2304	2304			<input type="checkbox"/>
7	3456	3456			<input type="checkbox"/>
8	5760	5760			<input type="checkbox"/>
9	10368	10368			<input type="checkbox"/>
10	24192	24192			<input type="checkbox"/>
11	47000	47000			<input type="checkbox"/>
12	76000	76000			<input type="checkbox"/>
13	50 SE Stack	50			<input type="checkbox"/>
14	Triband Vertical	144,222,432			<input type="checkbox"/>
15					<input type="checkbox"/>

Start N1MM Rotor Program  Display Rotors Used By This Station  Display Rotors Responding From Network

OK Cancel Help

# Antenna

In this column place the text that you want to describe the antenna or transverter.

This text will appear at the lower left corner of the status bar of the **Entry** window when you change bands or switch antennas for a given band.

Note that you can specify more than one antenna per band, and more than one band per antenna:

Both code 0 and code 13 are for 50 MHz antennas

Codes 1, 2, and 3 are for 144, 222, and 432 MHz monoband antennas, and code 14 is for a triband vertical covering 144, 222, and 432 MHz

Configurer

Hardware Function Keys Digital Modes Other

Code	Antenna	Bands (1.8, 3.5, 7, 14....)
0	50	50
1	144	144
2	222	222
3	432	432
4	902	902
5	1296	1296
6	2304	2304
7	3456	3456
8	5760	5760
9	10368	10368
10	24192	24192
11	47000	47000
12	76000	76000
13	50 SE Stack	50
14	Triband Vertical	144,222,432
15		

Typing **Alt-F9** when a given Entry window has focus will cycle through all available antennas for the current band selected in that Entry window.

The selected antenna will appear at the lower left corner of the status bar at the bottom of the **Entry** window

50125.00 CW Manual Radio 1

File Edit View Tools Config Window Help

CW	PH	RTTY	PSK
6m	6m	6m	6m
2m	2m	2m	2m
1.25m	1.25m	1.25m	1.25m
70cm	70cm	70cm	70cm
33cm	33cm	33cm	33cm
23cm	23cm	23cm	23cm
13cm	13cm	13cm	13cm
9cm	9cm	9cm	9cm
6cm	6cm	6cm	6cm
3cm	3cm	3cm	3cm
1cm	1cm	1cm	1cm

50

6/0 620

Grid

Run S&P 11

F1 Qr? F2 Exch F3 Tu F4 F5 His F6 Repeat  
 F7 Spare F8 Agn? F9 Nr? F10 Call? F11 F12 Wipe  
 Esc: Stop Wipe Log Edit Mark Stgr Spot QRZ

No Heading  
 Call history UserText appears here when

50125.00 BOTH+DIG Manual Radio 1

File Edit View Tools Config Window Help

CW	PH	RTTY	PSK
6m	6m	6m	6m
2m	2m	2m	2m
1.25m	1.25m	1.25m	1.25m
70cm	70cm	70cm	70cm
33cm	33cm	33cm	33cm
23cm	23cm	23cm	23cm
13cm	13cm	13cm	13cm
9cm	9cm	9cm	9cm
6cm	6cm	6cm	6cm
3cm	3cm	3cm	3cm
1cm	1cm	1cm	1cm

50 SE Stack

6/0 620

Grid

Run S&P

F1 S&P F2 Exch F3 Spare F4 F5 His F6 Spare  
 F7 Rpt F8 Agn? F9 Zone F10 F11 F12 Wipe  
 Esc: Stop Wipe Log Edit Mark Stgr Spot QRZ

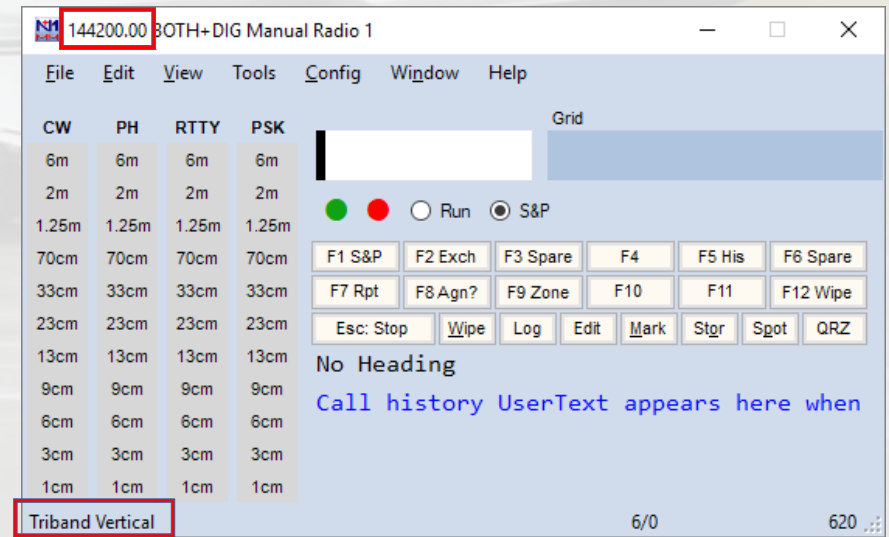
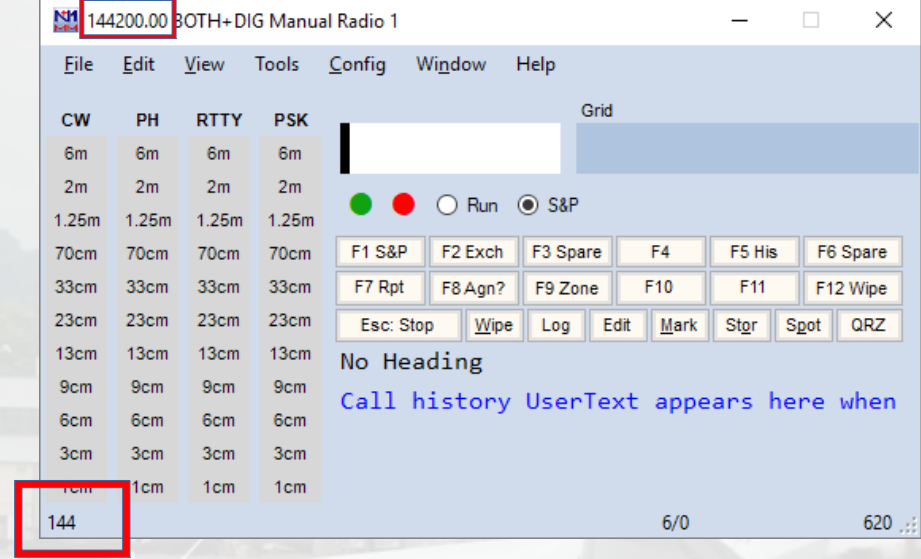
Heading appears here when enabled.  
 Call history UserText appears here when

Configurer

Hardware	Function Keys	Digital Modes	Other
Code	Antenna	Bands (1.8, 3.5, 7, 14,...)	
0	50	50	
1	144	144	
2	222	222	
3	432	432	
4	902	902	
5	1296	1296	
6	2304	2304	
7	3456	3456	
8	5760	5760	
9	10368	10368	
10	24192	24192	
11	47000	47000	
12	76000	76000	
13	50 SE Stack	50	
14	Triband Vertical	144,222,432	
15			

Typing **Alt-F9** when a given Entry window has focus will cycle through all available antennas for the current band selected in that Entry window.

The selected antenna will appear at the lower left corner of the status bar at the bottom of the **Entry** window





Configurer

Hardware Function Keys Digital Modes Other Winkey Mode Control Antennas Score Reporting Broadcast Data

Code	Antenna	Bands (1.8, 3.5, 7, 14,...)	Rotor Description	Offset	Bidirectional
0	50	50			<input type="checkbox"/>
1	144	144			<input type="checkbox"/>
2	222	222			<input type="checkbox"/>
3	432	432			<input type="checkbox"/>
4	902	902			<input type="checkbox"/>
5	1296	1296			<input type="checkbox"/>
6	2304	2304			<input type="checkbox"/>
7	3456	3456			<input type="checkbox"/>
8	5760	5760			<input type="checkbox"/>
9	10368	10368			<input type="checkbox"/>
10	24192	24192			<input type="checkbox"/>
11	47000	47000			<input type="checkbox"/>
12	76000	76000			<input type="checkbox"/>
13	50 SE Stack	50			<input type="checkbox"/>
14	Triband Vertical	144,222,432			<input type="checkbox"/>
15					<input type="checkbox"/>

Start N1MM Rotor Program  Display Rotors Used By This Station  Display Rotors Responding From Network

OK Cancel Help

## Bands (1.8, 3.5, 7, 14,...)

In this column place all bands for which this antenna may be selected, using a comma to separate each band from the preceding band.

The first antenna in the table for a given band will be selected when changing to a band the first time that band is selected in a given session. Thereafter, the antenna that was previously selected for that band will be selected on band changes.

VHF and Up bands include: 50, 70, 144, 222, 420, 902, 1240, 2300, 3300, 5650, 10000, 24000, 47000, 76000, 142000, 241000.

**YOU MUST USE THESE LABELS!!**





# Rotor Description

In this column enter the rotor description that you used when setting up N1MM Rotor or the third-party rotor application that you are using. The label must be IDENTICAL here and in N1MM Rotor or communications between N1MM Logger and the rotor program will not be properly established.

- Hardware
- Function Keys
- Digital Modes
- Other
- Winkey
- Mode Control
- Antennas
- Score Reporting
- Broadcast Data

Code	Antenna	Bands (1.8, 3.5, 7, 14,...)	Rotor Description	Offset	Bidirectional
0	50	50	Green Heron Terrestrial		<input type="checkbox"/>
1	144	144	Green Heron Terrestrial		<input type="checkbox"/>
2	222	222	Green Heron Terrestrial		<input type="checkbox"/>
3	432	432	Green Heron Terrestrial		<input type="checkbox"/>
4	902	902	Green Heron Terrestrial		<input type="checkbox"/>
5	1296	1296	Green Heron Terrestrial		<input type="checkbox"/>
6	2304	2304	Green Heron Terrestrial		<input type="checkbox"/>
7	3456	3456	Green Heron Terrestrial		<input type="checkbox"/>
8	5760	5760	Green Heron Terrestrial		<input type="checkbox"/>
9	10368	10368	Green Heron Terrestrial		<input type="checkbox"/>
10	24192	24192	Green Heron Terrestrial		<input type="checkbox"/>
11	47000	47000	Green Heron Terrestrial		<input type="checkbox"/>
12	76000	76000	Green Heron Terrestrial		<input type="checkbox"/>
13	50 SE Stack	50			
14	Triband Vertical	144,222,432			
15					

- Start N1MM Rotor Program
- Display Rotors Used By This Station
- Display

OK Cancel

Rotor Setup

Port	Rotor Type	Description
Com1	None	
Com2	None	
Com3	None	
Com4	None	
Com5	None	
Com6	None	
Com7	None	
Com8	None	
Com9	None	
Com10	RT-21	Green Heron Terrestrial
Com11	None	
Com12	None	
Com13	None	
Com14	None	
Com15	None	
Com16	None	

Ok Cancel

N1MM Rotor ...

File Tools Help

000°  Stop

Turn

30	60	90	120	150
180	237	267	310	340

Com10 is already open.

Configurer

Hardware Function Keys Digital Modes Other Winkey Mode Control **Antennas** Score Reporting Broadcast Data

Code	Antenna	Bands (1.8, 3.5, 7, 14,...)	Rotor Description	Offset	Bidirectional
0	50	50	Green Heron Terrestrial		<input type="checkbox"/>
1	144	144	Green Heron Terrestrial		<input type="checkbox"/>
2	222	222	Green Heron Terrestrial		<input type="checkbox"/>
3	432	432	Green Heron Terrestrial		<input type="checkbox"/>
4	902	902	Green Heron Terrestrial		<input type="checkbox"/>
5	1296	1296	Green Heron Terrestrial		<input type="checkbox"/>
6	2304	2304	Green Heron Terrestrial		<input type="checkbox"/>
7	3456	3456	Green Heron Terrestrial		<input type="checkbox"/>
8	5760	5760	Green Heron Terrestrial	+3	<input type="checkbox"/>
9	10368	10368	Green Heron Terrestrial	+5	<input type="checkbox"/>
10	24192	24192	Green Heron Terrestrial	-1	<input type="checkbox"/>
11	47000	47000	Green Heron Terrestrial		<input type="checkbox"/>
12	76000	76000	Green Heron Terrestrial		<input type="checkbox"/>
13	50 SE Stack	50			<input type="checkbox"/>
14	Triband Vertical	144,222,432			<input type="checkbox"/>
15					<input type="checkbox"/>

Start N1MM Rotor Program    Display Rotors Used By This Station    Display Rotors Responding From Network

OK   Cancel   Help

# Offset

In this column enter the rotor azimuth offset for every antenna for which there is an offset.

Offset can also be entered in N1MM Rotor program, but that does not allow PER BAND offsets, which are often necessary when multiple antennas are mounted on the same rotor.

Azimuth Terres...

File Tools Help

0°

30

180

Com10

- Setup Rotors
- Set Current Antenna Offset
- Set Current Antenna Bidirectional
- Set Rotation Limits
- Azimuth Terrestrial

Enter Offset

Enter antenna offset in degrees

OK

Cancel

0

Code	Antenna	Bands (1.8, 3.5, 7, 14,...)	Rotor Description	Offset	Bidirectional
0	50	50	Green Heron Terrestrial		<input type="checkbox"/>
1	144	144	Green Heron Terrestrial		<input type="checkbox"/>
2	222	222	Green Heron Terrestrial		<input type="checkbox"/>
3	432	432	Green Heron Terrestrial		<input type="checkbox"/>
4	902	902	Green Heron Terrestrial		<input type="checkbox"/>
5	1296	1296	Green Heron Terrestrial		<input type="checkbox"/>
6	2304	2304	Green Heron Terrestrial		<input type="checkbox"/>
7	3456	3456	Green Heron Terrestrial		<input type="checkbox"/>
8	5760	5760	Green Heron Terrestrial	+3	<input type="checkbox"/>
9	10368	10368	Green Heron Terrestrial	+5	<input type="checkbox"/>
10	24192	24192	Green Heron Terrestrial	-1	<input type="checkbox"/>
11	47000	47000	Green Heron Terrestrial		<input type="checkbox"/>
12	76000	76000	Green Heron Terrestrial		<input type="checkbox"/>
13	50 SE Stack	50			<input type="checkbox"/>
14	Triband Vertical	144,222,432			<input type="checkbox"/>
15					<input type="checkbox"/>

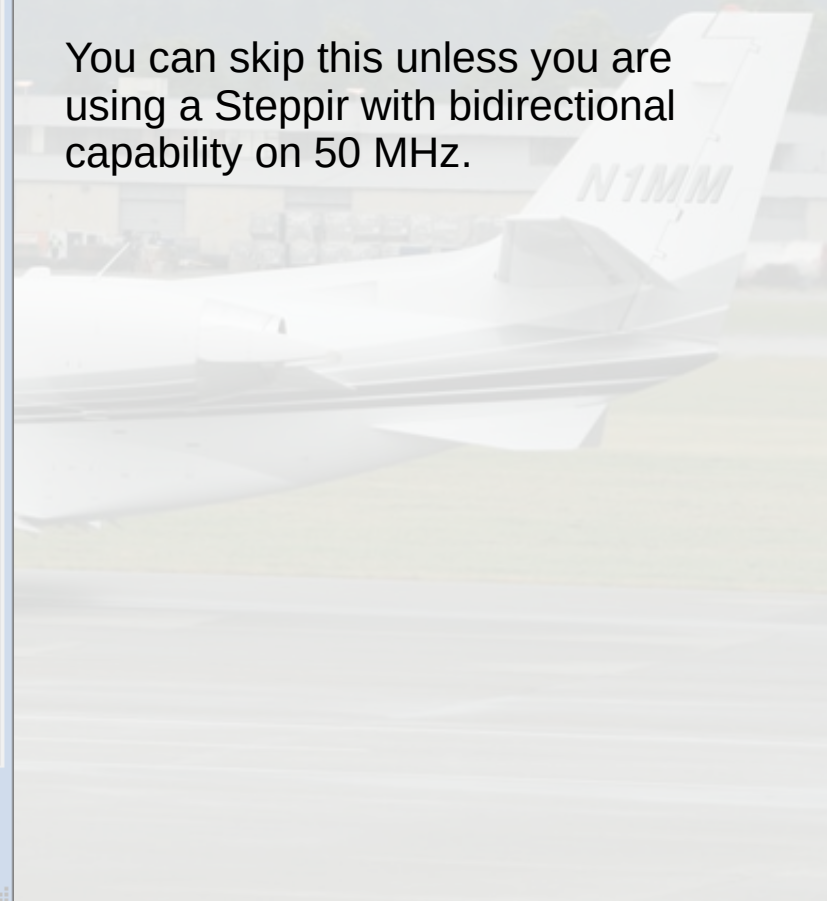
Start N1MM Rotor Program     Display Rotors Used By This Station     Display Rotors Responding From Network

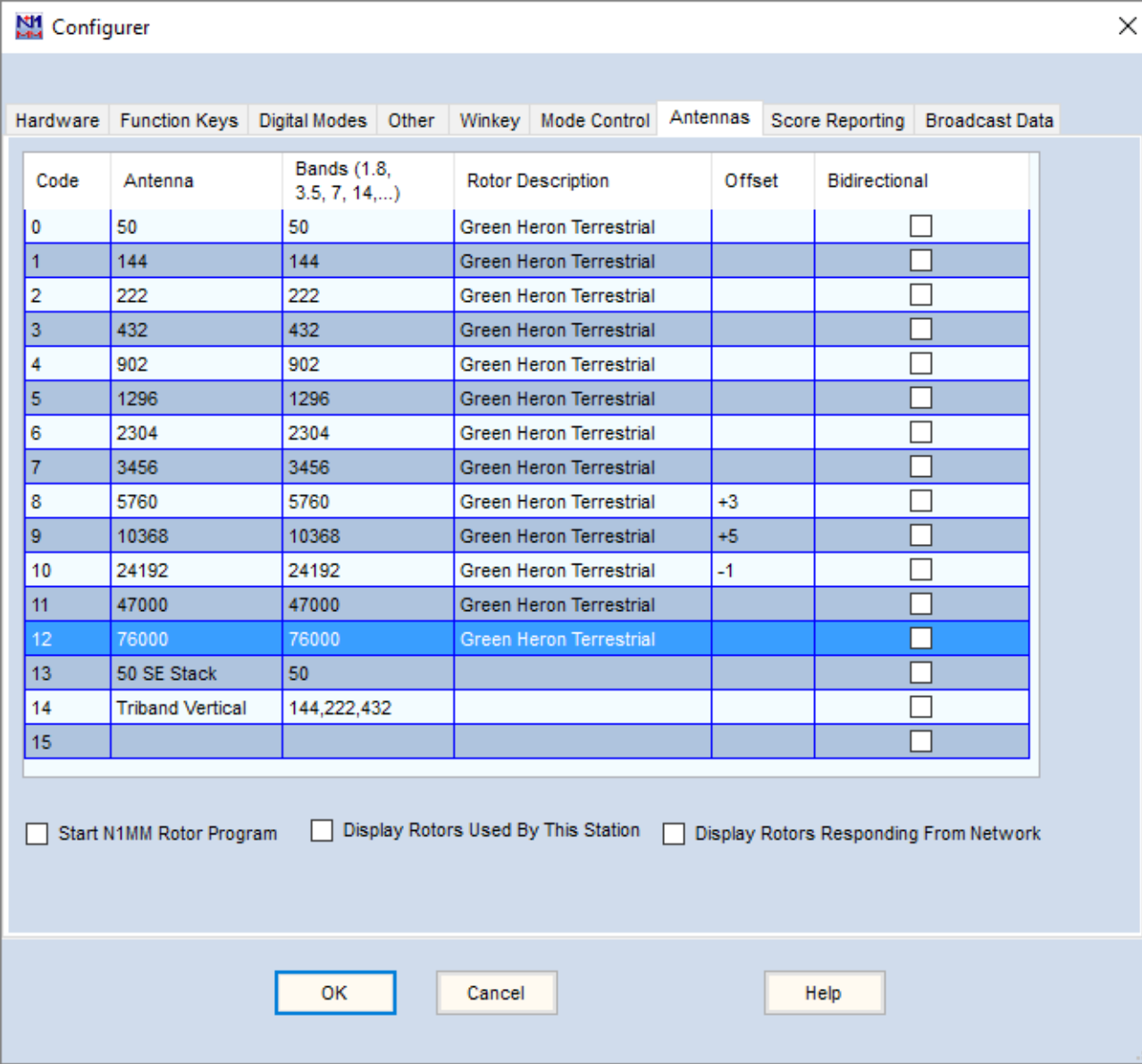
      

# Bidirectional

This is used for Steppir antennas, which can be set bidirectional.

You can skip this unless you are using a Steppir with bidirectional capability on 50 MHz.





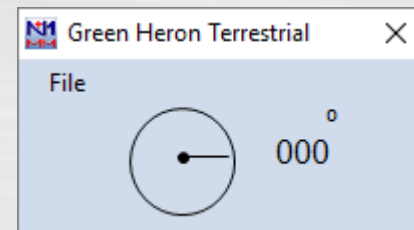
## Start N1MM Rotor Program

Checking this box will automatically start N1MM Rotor program when N1MM is started.

## Display Rotors Used By This Station

Checking this box will display rotor windows for all rotors that are used by the currently active bands in the **Entry Windows** used by this station.

When the band is changed in either **Entry Window**, the displayed rotors will be automatically updated.



Code	Antenna	Bands (1.8, 3.5, 7, 14,...)	Rotor Description	Offset	Bidirectional
0	50	50	Green Heron Terrestrial		<input type="checkbox"/>
1	144	144	Green Heron Terrestrial		<input type="checkbox"/>
2	222	222	Green Heron Terrestrial		<input type="checkbox"/>
3	432	432	Green Heron Terrestrial		<input type="checkbox"/>
4	902	902	Green Heron Terrestrial		<input type="checkbox"/>
5	1296	1296	Green Heron Terrestrial		<input type="checkbox"/>
6	2304	2304	Green Heron Terrestrial		<input type="checkbox"/>
7	3456	3456	Green Heron Terrestrial		<input type="checkbox"/>
8	5760	5760	Green Heron Terrestrial	+3	<input type="checkbox"/>
9	10368	10368	Green Heron Terrestrial	+5	<input type="checkbox"/>
10	24192	24192	Green Heron Terrestrial	-1	<input type="checkbox"/>
11	47000	47000	Green Heron Terrestrial		<input type="checkbox"/>
12	76000	76000	Green Heron Terrestrial		<input type="checkbox"/>
13	50 SE Stack	50			<input type="checkbox"/>
14	Triband Vertical	144,222,432			<input type="checkbox"/>
15					<input type="checkbox"/>

Start N1MM Rotor Program     Display Rotors Used By This Station     Display Rotors Responding From Network

## Display Rotors Responding From Network

Checking this box will display rotor windows for all rotors that report their position to the computer, from any N1MM Rotor running on the network.



Configurer

Hardware Function Keys Digital Modes Other Winkey Mode Control Antennas **Score Reporting** Broadcast Data

Report Real-Time Score to Server  Exclude band breakdown

Score Reporting Server  
cqctest.net

Score Reporting Username

Score Reporting Password

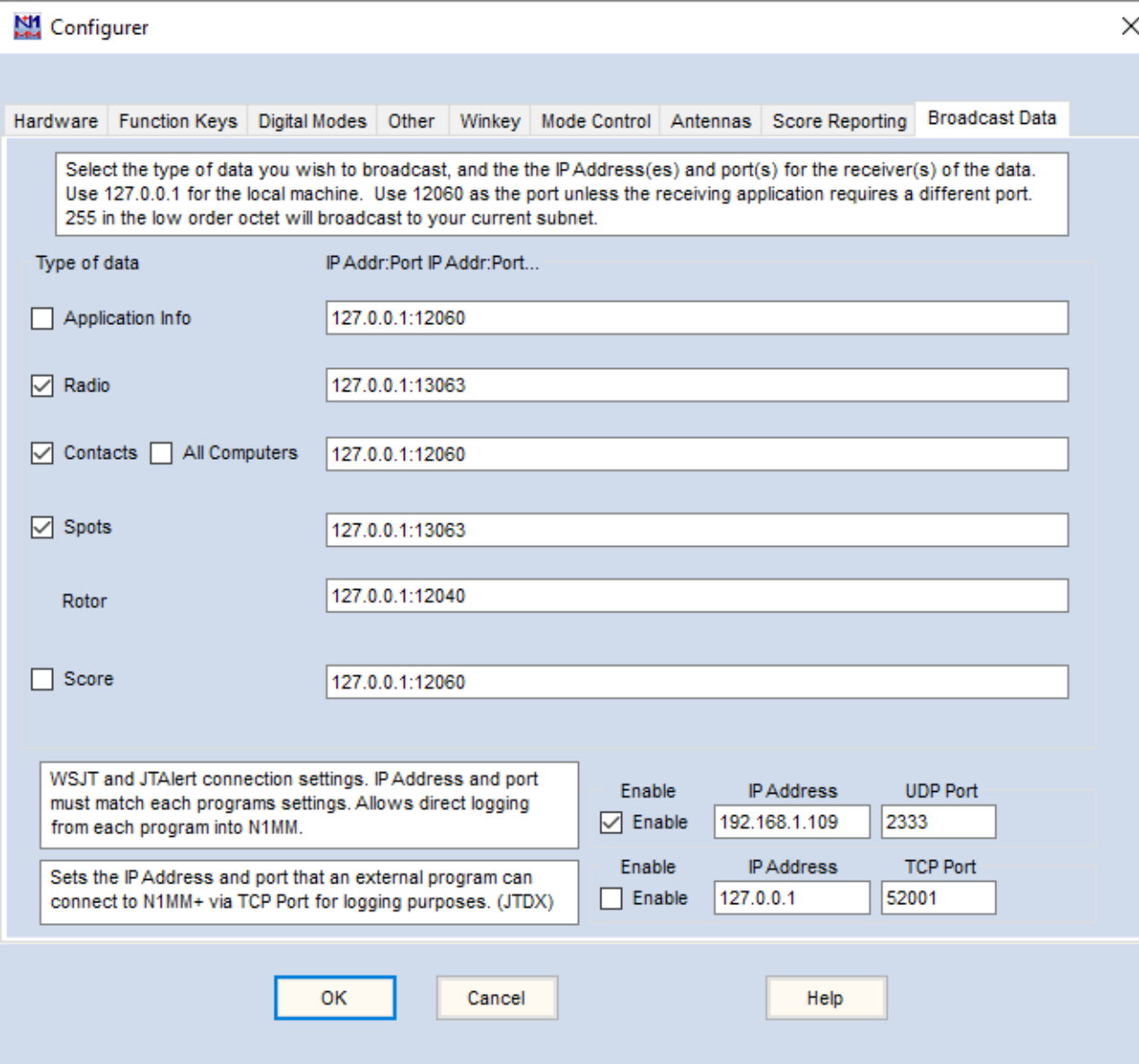
Update Interval (mins)  
5

OK Cancel Help

## Score Reporting

This is for Real-Time Score Reporting.

Ignore this tab.



## Broadcast Data

N1MM uses UDP packets to communicate with other programs.

You need to specify which UDP communications you want to enable, and then specify at least one IP address and port for each type of data.

You will likely use this Broadcast Data for Rotor Control, Spotting, and for communicating with WSJTX and possibly JTAAlert when operating the digital modes.

This feature is also used to communicate with PackRatFinder.

Configurer

Hardware Function Keys Digital Modes Other Winkey Mode Control Antennas Score Reporting Broadcast Data

Select the type of data you wish to broadcast, and the the IP Address(es) and port(s) for the receiver(s) of the data. Use 127.0.0.1 for the local machine. Use 12060 as the port unless the receiving application requires a different port. 255 in the low order octet will broadcast to your current subnet.

Type of data	IP Addr:Port	IP Addr:Port...
<input type="checkbox"/> Application Info		127.0.0.1:12060
<input checked="" type="checkbox"/> Radio		127.0.0.1:13063
<input checked="" type="checkbox"/> Contacts <input type="checkbox"/> All Computers		127.0.0.1:12060
<input checked="" type="checkbox"/> Spots		127.0.0.1:13063
Rotor		127.0.0.1:12040
<input type="checkbox"/> Score		127.0.0.1:12060

WSJT and JTAlert connection settings. IP Address and port must match each programs settings. Allows direct logging from each program into N1MM.

Enable	IP Address	UDP Port
<input checked="" type="checkbox"/> Enable	192.168.1.109	2333

Sets the IP Address and port that an external program can connect to N1MM+ via TCP Port for logging purposes. (JTDX)

Enable	IP Address	TCP Port
<input type="checkbox"/> Enable	127.0.0.1	52001

OK Cancel Help

**Application Info** When this is checked, some data is broadcast when the Contest Setup dialog is closed. Leave this unchecked.

**Radio** When this is checked, radio mode and frequency information is broadcast at the moment the frequency of the radio changes, or every 10 seconds if the VFO is stationary

**Contact** When this is checked, QSO information is broadcast at the moment a QSO is logged.

**All Computers** Leave this unchecked.

**Spots** When this is checked, spot information is broadcast whenever a new spot is processed, from any source.

Configurer

Hardware Function Keys Digital Modes Other Winkey Mode Control Antennas Score Reporting Broadcast Data

Select the type of data you wish to broadcast, and the the IP Address(es) and port(s) for the receiver(s) of the data. Use 127.0.0.1 for the local machine. Use 12060 as the port unless the receiving application requires a different port. 255 in the low order octet will broadcast to your current subnet.

Type of data	IP Addr:Port	IP Addr:Port...
<input type="checkbox"/> Application Info		127.0.0.1:12060
<input checked="" type="checkbox"/> Radio		127.0.0.1:13063
<input checked="" type="checkbox"/> Contacts <input type="checkbox"/> All Computers		127.0.0.1:12060
<input checked="" type="checkbox"/> Spots		127.0.0.1:13063
Rotor		127.0.0.1:12040
<input type="checkbox"/> Score		127.0.0.1:12060

WSJT and JTAlert connection settings. IP Address and port must match each programs settings. Allows direct logging from each program into N1MM.

Enable	IP Address	UDP Port
<input checked="" type="checkbox"/> Enable	192.168.1.109	2333

Sets the IP Address and port that an external program can connect to N1MM+ via TCP Port for logging purposes. (JTDX)

Enable	IP Address	TCP Port
<input type="checkbox"/> Enable	127.0.0.1	52001

OK Cancel Help

**Rotor** Leave the defaults here unless you know what you are doing.

**Score** Leave this unchecked.

**WSJT and JTAlert** Check **Enable** if you want to be able to receive log data from WSJT or JTAlert. As a beginner, start with just WSJT alone. You may never need JTAlert.

Put the IP address of the computer running WSJT in the **IP Address** text box. If that is the same computer as N1MM, just use 127.0.0.1. Use the default UDP Port, 2333.

On the next page, the complimentary setup work that must be done in WSJT for this to work is shown.

The image shows a screenshot of the WSJTX Settings application window. The window title is 'Settings'. The 'Reporting' tab is selected. The 'N1MM Logger+ Broadcasts' section is expanded, showing the following settings:

- Enable logged contact ADIF broadcast
- N1MM Server name or IP address:
- N1MM Server port number:

A large blue arrow points to the 'N1MM Server name or IP address' text box. At the bottom of the window, there are 'OK' and 'Cancel' buttons.

## WSJTX Setup for N1MM Logging

In the **N1MM Logger+ Broadcasts** section of **Settings** in **WSJTX**:

1. Check the **Enable Logged contact ADIF Broadcast** box
2. Add the IP address of the computer running N1MM to the **N1MM Server name or IP address** textbox. If this is the same computer as WSJTX, then you can enter 127.0.0.1
3. Leave the default value of 2333 in the **N1MM Server port number** text box.
4. Click **OK**



A white twin-engine turboprop aircraft is parked on a tarmac. The aircraft has the registration number N1MM on the tail. The background shows a hangar and a line of trees under a clear sky. The image is semi-transparent, allowing the text to be overlaid.

Questions?

Problems?