micro2R and N1MM Logger Setup
"USB Only" SO2R

Router setup:

Note: The specific port numbers are not important. The key is consistency - the same port number must be used for a specific function in both Router and the logger.

micro2R does not provide transceiver control. You will need a CAT/CI-V interface for each radio. They can be anything from traditional serial ports to microHAM microKEYER II. Connection data is in the micro2R User Manual.

1. Assign a port for Control. N1MM Logger will use this port to select transmit and receive focus.

2. Assign ports for FSK and check the PTT box.

   Suggestion: If you are using microHAM CAT/CI-V interfaces, use the FSK ports in those devices instead of FSK in micro2R.

3. Assign a port for WinKey. Use the PTT & ACC tab to select PTT or QSK operation in CW (Use WinKey PTT).

4. Use the PTT & ACC tab to select whether micro2R is to generate PTT for each radio (Generate PTT Output).

5. Select "microHAM control protocol on COM port" on the **SO2R** tab. This setting permits N1MM Loggger to control:
- ◆ **Transmit focus**
- ◆ **Receive Focus**
- ◆ **Stereo (Split) Headphones**
    Stereo receive is commanded by the "`" (grave accent or unshifted tilde key) and the {STEREOON} and {STEREOOFF} macros.
- ◆ **Antenna Selection**
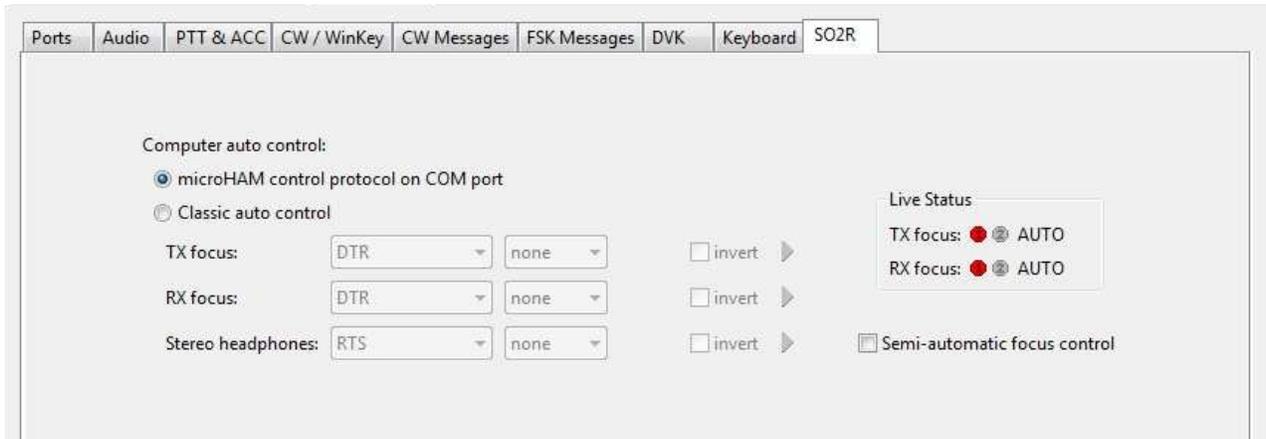
Antenna Relay is simply passed through to the ACCESSORY jack.   *micro*2R provides a four bit (binary) signal to drive a user supplied 1 of 16 decoder for each radio. Seen the N1MM Logger manual for information on configuring the antenna selections.

6. Save the settings to a preset by selecting menu Preset | Save as. Choose a position and name it N1MM.

N1MM hardware setup:

1. Click Config | Configure Ports, Telent Addresses, Other ...

2. Assign each radio to the virtual COM port you used in Router's Ports tab
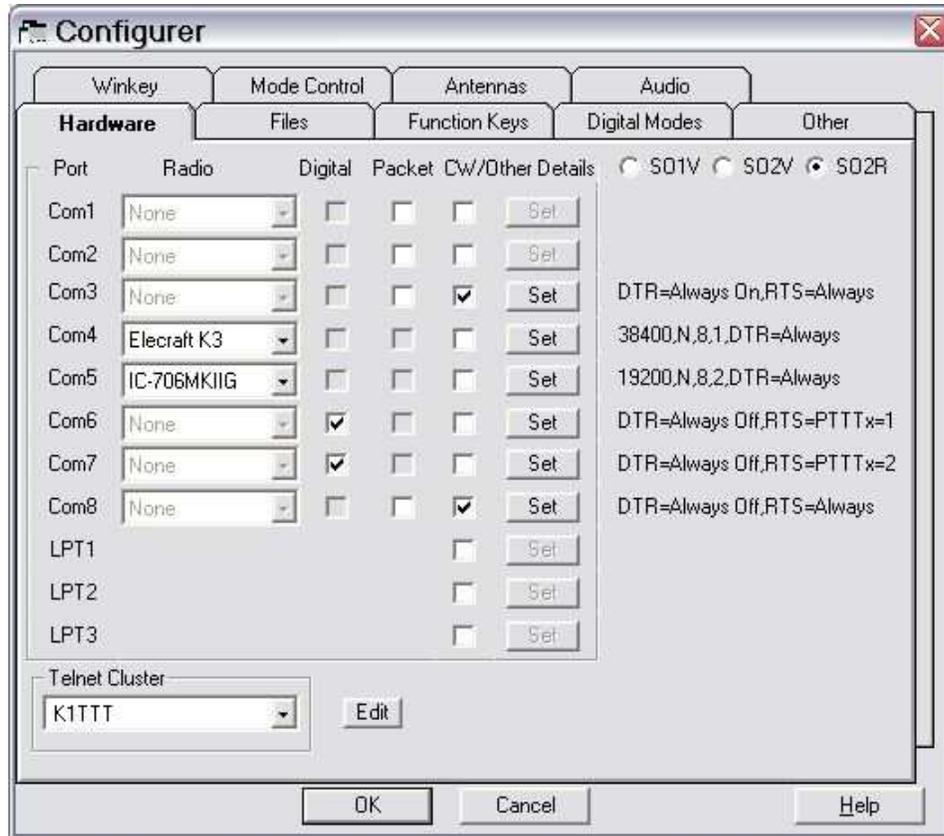
3. For each radio port click **Set** and configure the proper communication parameters as required for your CAT/CI-V interfaces.   **Do Not** check "Radio PTT via command."
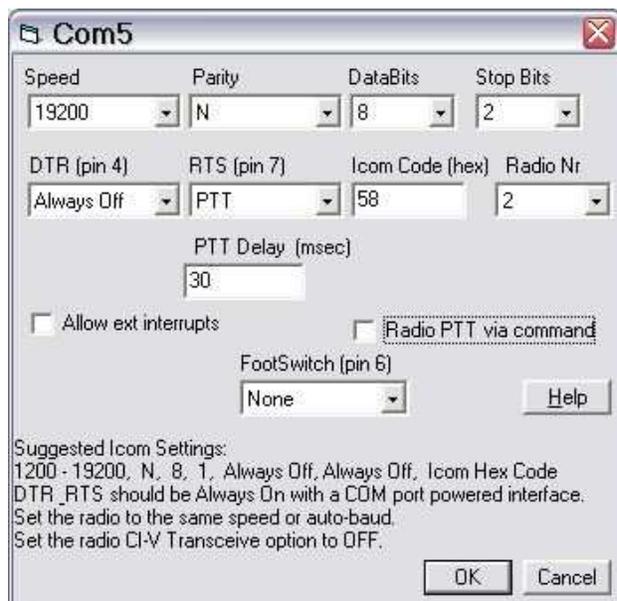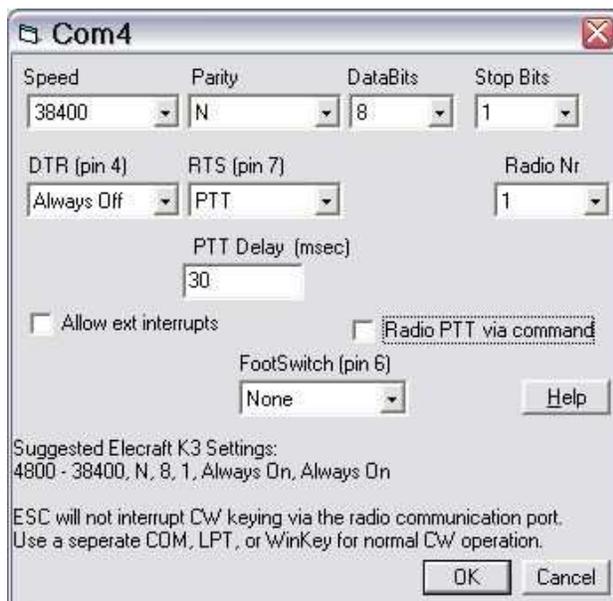
4. Configure the Digital ports taking care to associate each port with the correct Radio (Radio Nr) and Digital Interface (Dig Wind Nr).

5. Set DTR to "always Off" and set RTS (pin 7) to PTT. PTT will be available in all modes.

Com6

DTR (pin 4)	RTS (pin 7)		Radio Nr
Always Off	PTT		1

PTT Delay (msec): 30   Dig Wnd Nr: 0=None 1

☐ Allow ext interrupts
☐ WinKey
Two Radio Protocol: None

FootSwitch (pin 6): None   CW/PTT Port Addr: 3E0   Help

OK   Cancel

Com7

DTR (pin 4)	RTS (pin 7)		Radio Nr
Always Off	PTT		2

PTT Delay (msec): 30   Dig Wnd Nr: 0=None 2

☐ Allow ext interrupts
☐ WinKey
Two Radio Protocol: None

FootSwitch (pin 6): None   CW/PTT Port Addr: 2E0   Help

OK   Cancel

6. Assign a port for WinKey and select both radios. Use the port you created for WinKeyer2 in Router.

Com3

DTR (pin 4)	RTS (pin 7)	Radio Nr
Always On	Always Off	Both

PTT Delay (msec): 30

☐ Allow ext interrupts
☑ WinKey
Two Radio Protocol: None

FootSwitch (pin 6): None   CW/PTT Port Addr: 3E8   Help

OK   Cancel

Com8

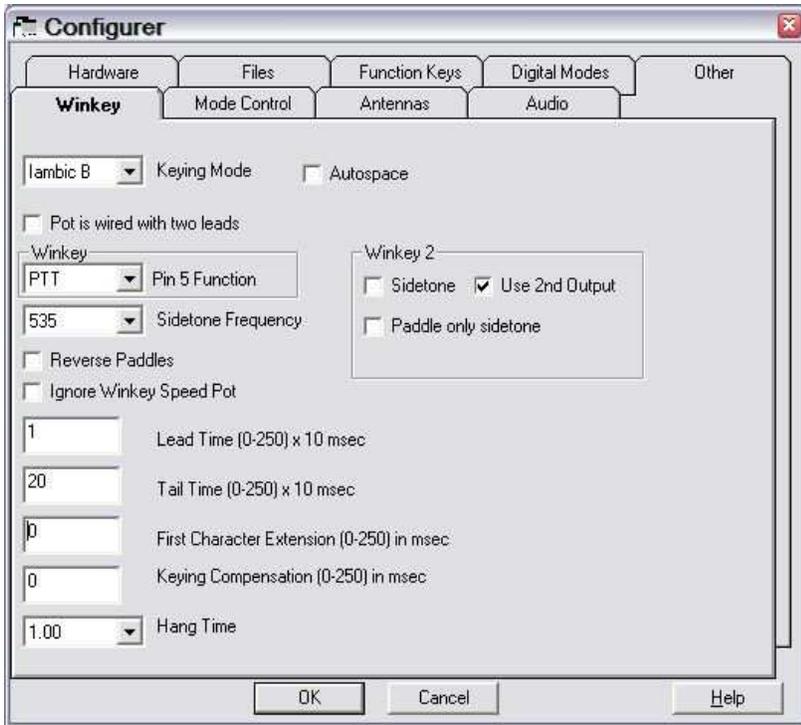| DTR (pin 4)	RTS (pin 7)	Radio Nr
Always Off	Always Off	Both

☐ Allow ext interrupts
☐ WinKey
Two Radio Protocol: MK2R

FootSwitch (pin 6): None   CW/PTT Port Addr: 260   Help

OK   Cancel

7. Check **CW/Other** for the Control port, click the **Set** button. Set Radio/VFO to **BOTH** and select **MK2R** for Two Radio Protocol.

8. Configure WinKey with the N1MM WinKey tab.

9. "Use 2nd Output" should be checked

10. Pin 5 Function should be PTT. Other settings are ignored – they should be set in Router.

11. Configure Audio for "1 - Zero or Single Card, One Radio, No Sound Card SO2R"

12. Select the soundcard you are using with *micro*2R as the Output Device.

13. Select microphone as the Port to Mute

14. Select the soundcard you are using with *micro*2R as the Message Recording Device.

15. Select Microphone as the Message Recording Port.

    NOTE: Selection of the **QSO Recording Device** will be dependent on your digital connection.
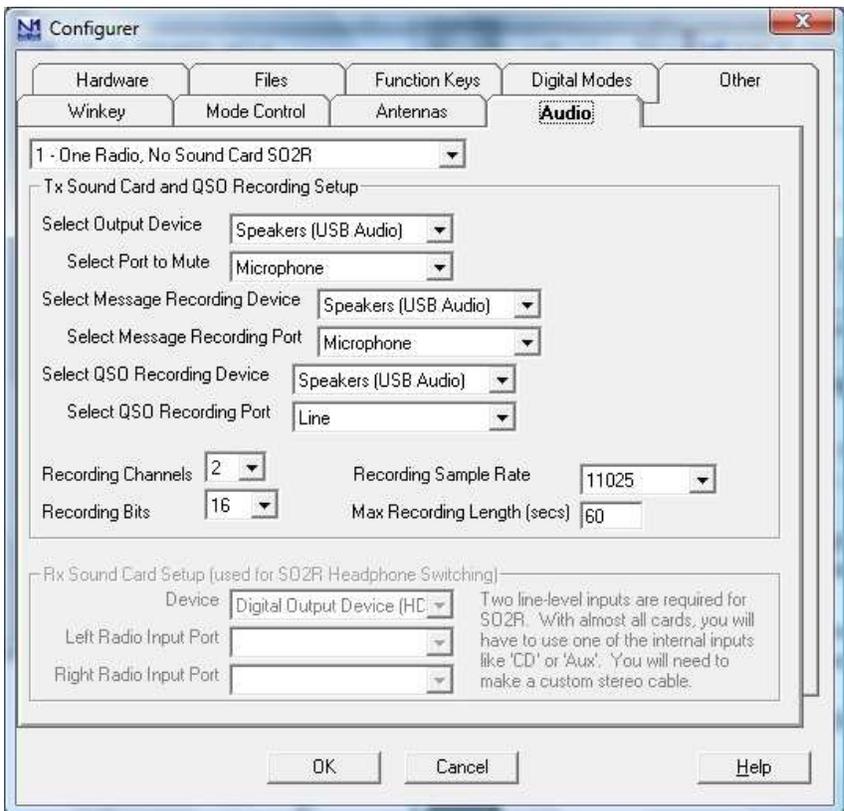
16. Set Recording channels to Two (2) if you have connected both receivers to the Line input of the sound card being used for QSO Recording.

NOTE: Other than setting the correct virtual port for FSK (if used) with MMTTY or MMVARI, the digital configuration is identical to that used with your existing digital interface. The information below is provided as a matter of convenience. Please refer to the N1MM Logger Help and documentation for your particular interface when configuring digital mode support.

FSK with MMTTY:

N1MM Logger supports the MMTTY Engine, MMVARI and/or an external TNC for RTTY contesting. This configuration is based on using MMTTY in FSK mode.
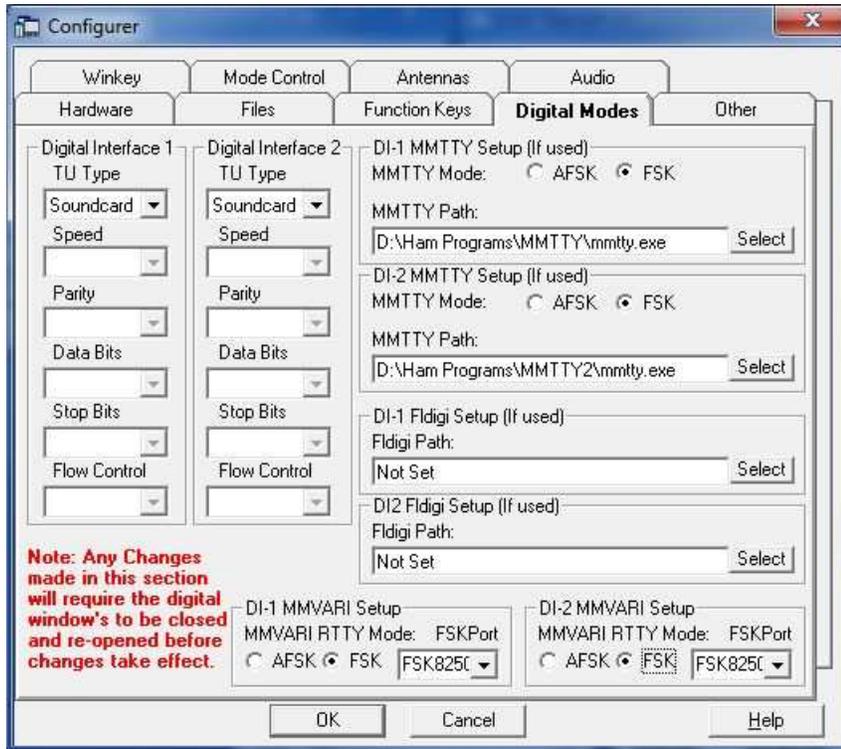

1. Install MMTTY in two *different* directories on your hard disk.

2. Select the **Digital Modes** tab in the N1MM Logger Configurer.

3. Set TU Type to Soundcard

4. Select FSK as the MMTTY mode for DI-1 and DI-2.

5. Enter the path to each MMTTY installation.

6. Open the **Mode Control** tab

7. Set the appropriate RTTY and PSK modes for each radio.

   Note: See the N1MM Logger Help files for the supported RTTY and PSK modes for your radios.

8. Set the method to determine the mode to log.

9. Click "OK" to save the settings and close the Configurer.
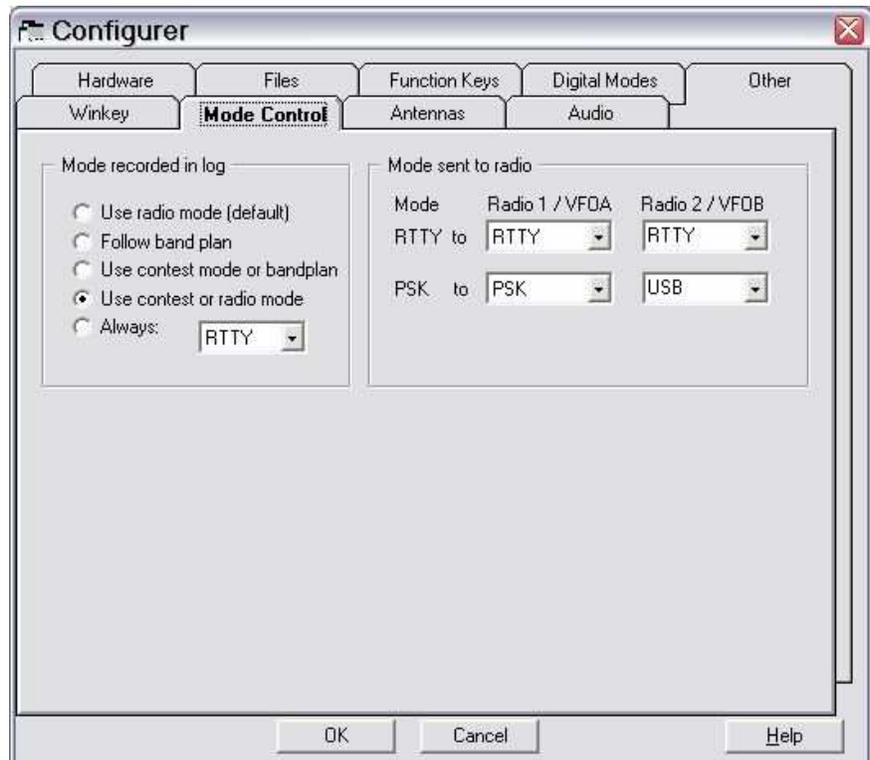
10. Activate the left Entry Window (Radio 1) and open the Digital Interface.

11. If this is the first time you have used the MMTTY interface, click on **Interface | MMTTY** to activate the MMTTY interface.

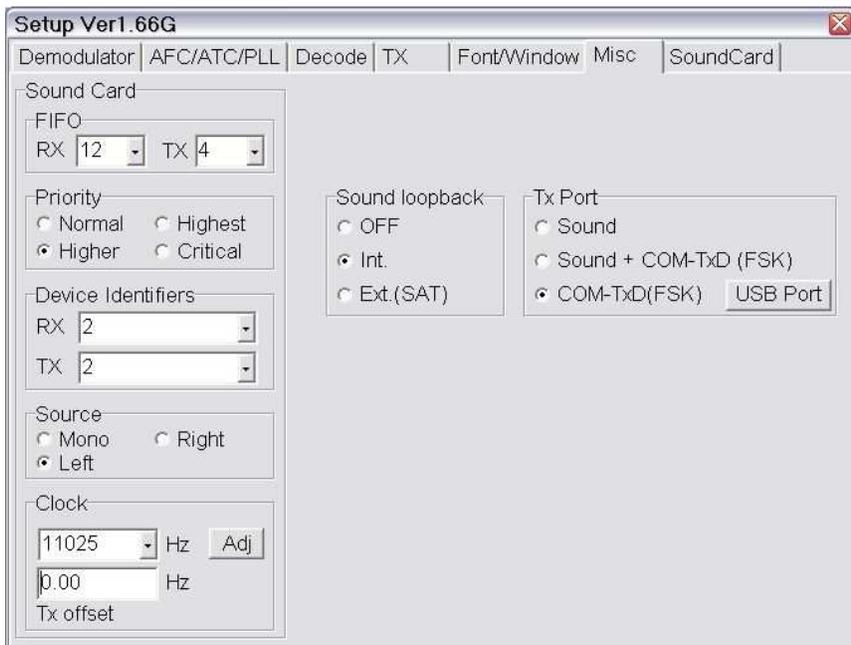**12.** In the Digital Interface, Click **Setup | Setup MMTTY.**

13. Select the "SoundCard" tab.

14. Select the sound card used for Reception and Transmission on Radio 1.

15. Select the TX tab

16. Set PTT & FSK to the port used for Router's Radio 1 FSK port.

17. Select the Misc Tab

18. If the same sound card will be used with both radios, select **Source = Left**

19. Set Tx Port to COM-TxD(FSK)

20. Click **USB port** button, choose **C: Limiting speed** and click OK

21. Click "OK" on the Misc tab to close the MMTTY Set-up for Radio 1

22. Activate the right Entry Window (Radio 2) and open the Digital Interface.

23. Click on **Interface | MMTTY** to activate the MMTTY interface.

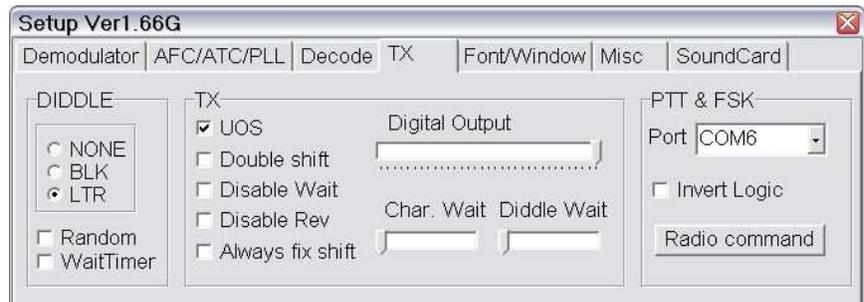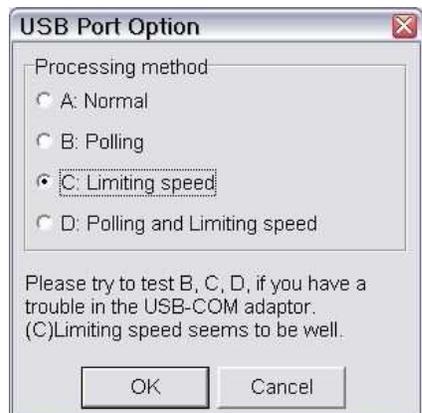**24.** In the Digital Interface, Click **Setup | Setup MMTTY.**

25. Select the "SoundCard" tab.

26. Select the sound card used for Reception and Transmission on Radio 2.

27. Select the TX tab

28. Set PTT & FSK to the port used for Router's Radio 2 FSK port.

29. Select the Misc Tab
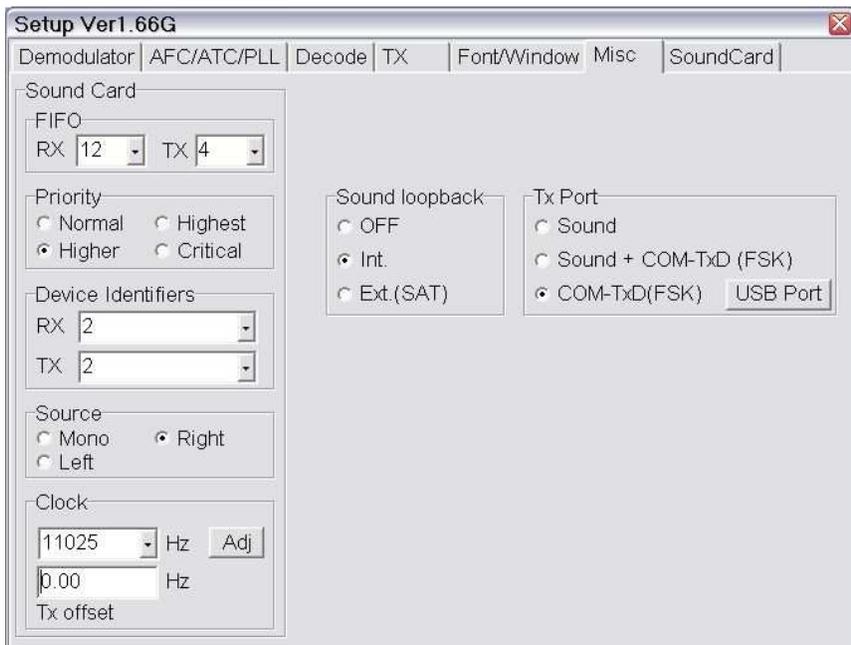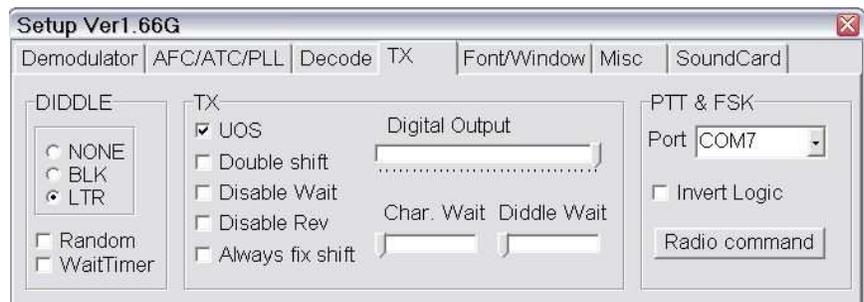
30. If the same sound card will be used with both radios, select **Source = Right**

31. Set Tx Port to COM-TxD(FSK)

32. Click **USB port** button, choose **C: Limiting speed** and click OK

33. Click "OK" on the Misc tab to close the MMTTY Set-up for Radio 1
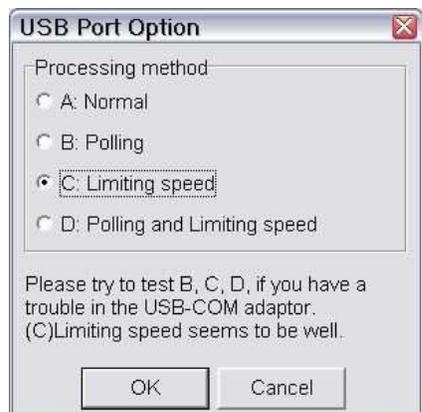
AFSK with MMTTY:

N1MM Logger supports the MMTTY Engine, MMVARI and/or an external TNC for RTTY contesting. This configuration is based on using MMTTY in AFSK mode.

AFSK does not require a digital port for each radio. If you will be using only AFSK and PSK, it is not necessary to define "Digital" ports on the N1MM "Hardware" tab or FSK ports in Router.

1. Install MMTTY in two *different* directories on your hard disk.

2. Select the **Digital Modes** tab in the N1MM Logger Configurer.

3. Set the TU Type to Soundcard

4. select AFSK as the MMTTY mode for both DI-1 and DI-2.

5. Enter the path to each copy of MMTTY.

6. Open the **Mode Control** tab

7. Set the appropriate RTTY and PSK modes for each radio.

   Note: See the N1MM Logger Help files for the supported RTTY and PSK modes for your radios.

8. Set the method to determine the mode recorded in the log.

9. Save and Close the Configurer.
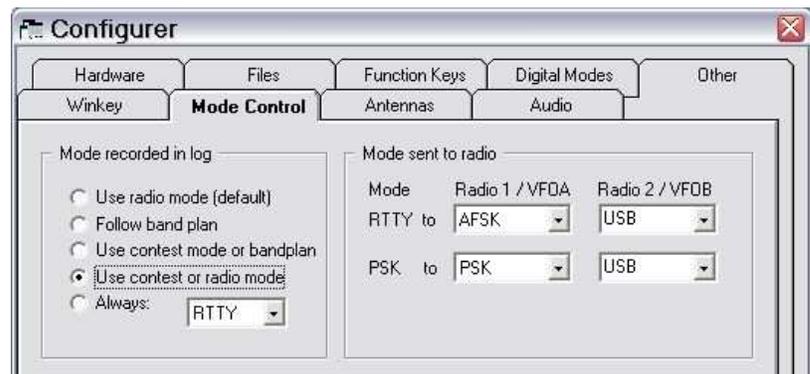
10. Activate the left Entry Window (Radio 1) and open the Digital Interface.

11. If this is the first time you have used the MMTTY interface, click on **Interface | MMTTY** to activate the MMTTY interface.

12. In the Digital Interface, Click **Setup | Setup MMTTY.**

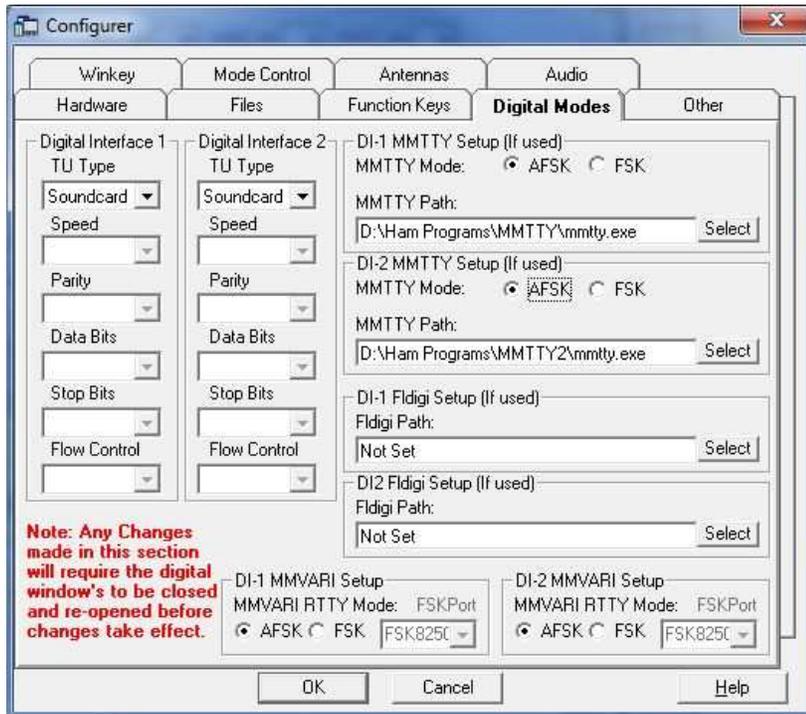13. Select the "SoundCard" tab.

14. Set Reception and Transmission to the sound card used with Radio 1.

15. Select the Misc Tab

16. Select **Source = Left** if using the same sound card for both radios

17. Select clock **11025**

18. Set Tx Port to **Sound**.

19. Click "OK" to close MMTTY Set-up for Radio 1

Setup Ver1.66G

Demodulator | AFC/ATC/PLL | Decode | TX | Font/Window | Misc | SoundCard

Sound Card

FIFO
RX 12 TX 4

Priority
○ Normal ○ Highest
◉ Higher ○ Critical

Sound loopback
○ OFF
◉ Int.
○ Ext.(SAT)

Tx Port
◉ Sound
○ Sound + COM-TxD (FSK)
○ COM-TxD(FSK)

Device Identifiers
RX 2
TX 2

Source
○ Mono ○ Right
◉ Left

Clock
11025 Hz Adj
0.00 Hz
Tx offset

20. Activate the right Entry Window (Radio 2) and open the Digital Interface.

21. Click on **Interface | MMTTY** to activate the MMTTY interface.

Setup Ver1.66G

Demodulator | AFC/ATC/PLL | Decode | TX | Font/Window | Misc | SoundCard

Reception
○ Conexant AMC Audio
○ USB Voice CODEC
◉ USB Audio CODEC
○
○

Transmission
○ Conexant AMC Audio
○ USB Voice CODEC
◉ USB Audio CODEC
○
○

22. In the Digital Interface, Click **Setup | Setup MMTTY.**

23. Select the "SoundCard" tab.

24. Set Reception and Transmission to the sound card used with Radio 2.

25. Select the Misc Tab

26. Select **Source = Right** if using the same sound card for both radios

27. Select clock **11025**

28. Set Tx Port to **Sound**

29. Click "OK" to close MMTTY Setup for Radio 2.

Setup Ver1.66G

Demodulator | AFC/ATC/PLL | Decode | TX | Font/Window | Misc | SoundCard

Sound Card

FIFO
RX 12 TX 4

Priority
○ Normal ○ Highest
◉ Higher ○ Critical

Sound loopback
○ OFF
◉ Int.
○ Ext.(SAT)

Tx Port
◉ Sound
○ Sound + COM-TxD (FSK)
○ COM-TxD(FSK)

Device Identifiers
RX 2
TX 2

Source
○ Mono ◉ Right
○ Left

Clock
11025 Hz Adj
0.00 Hz
Tx offset

FSK/PSK31 with MMVARI:

N1MM Logger supports the MMTTY Engine, MMVARI and/or an external TNC for RTTY contesting. This configuration is for **FSK RTTY** and PSK.

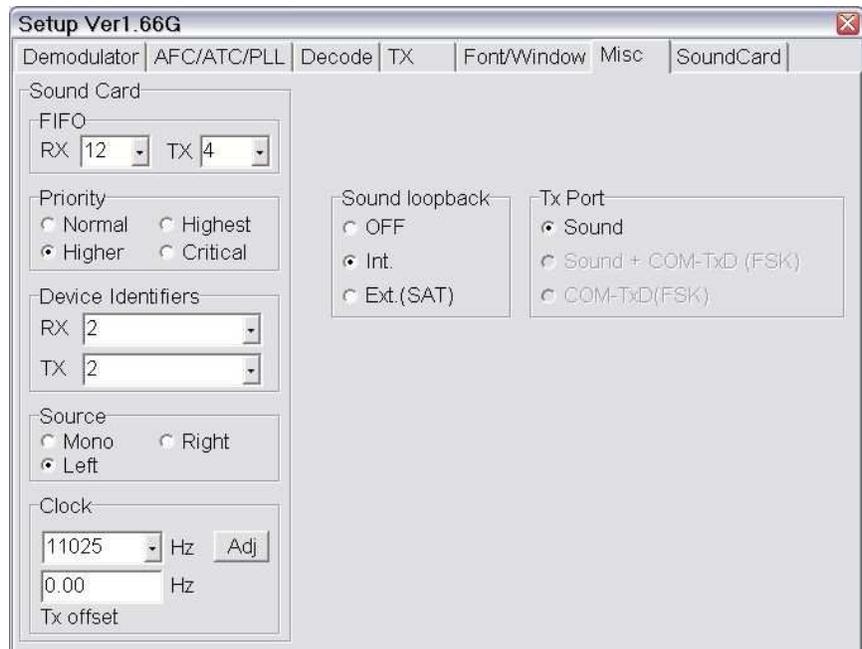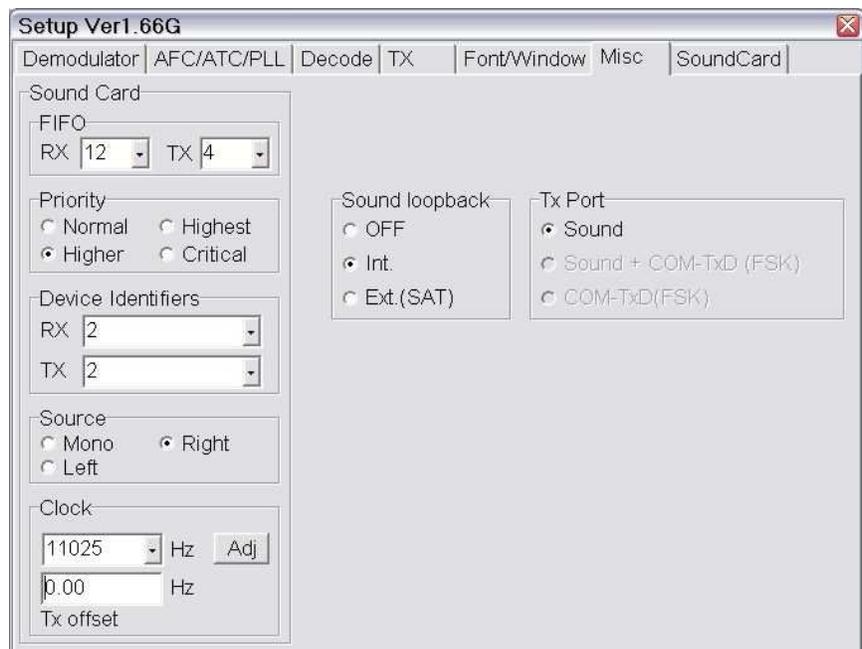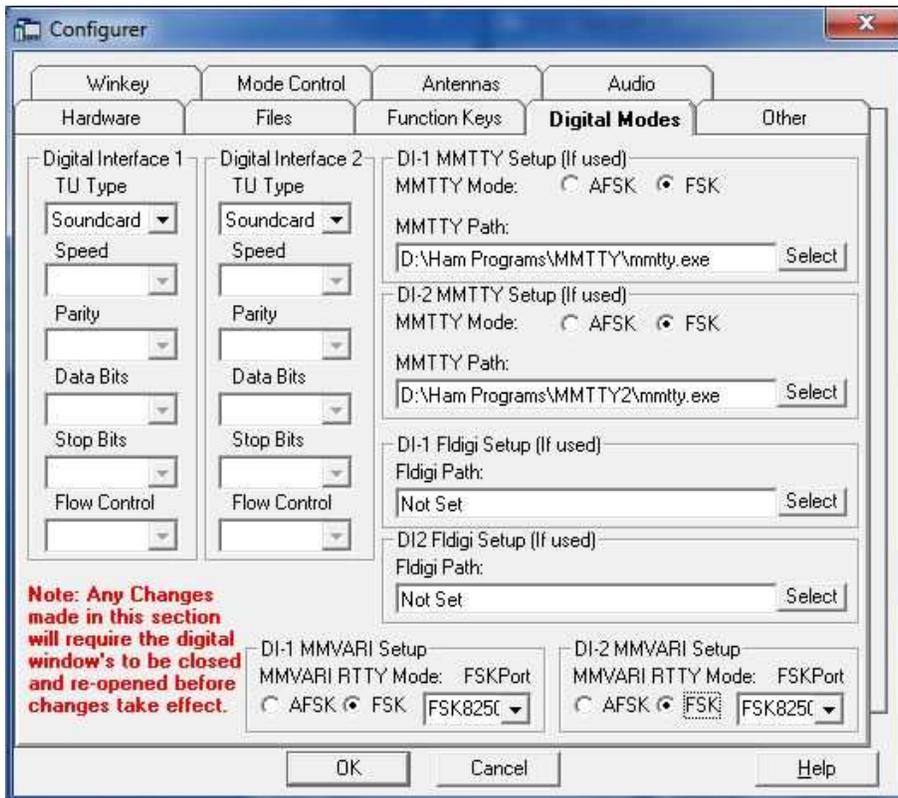FSK requires use of a digital port for each radio. Be sure you have defined Digital ports for each radio in the N1MM "Hardware" tab and FSK ports in Router.


1. Select the **Digital Modes** tab in the N1MM Logger Configurer.

2. Set the TU Type to Soundcard

3. select FSK as the MMVARI RTTY mode for both DI-1 and DI-2.

4. Set the FSK Port to FSK8250 for both DI-1 and DI-2

5. Open the **Mode Control** tab

6. Set the appropriate RTTY and PSK modes for each radio.

   Note: See the N1MM Logger Help files for the supported RTTY and PSK modes for your radios.

7. Set the method to determine the mode recorded in the log.

8. Save and Close the N1MM Configurer.
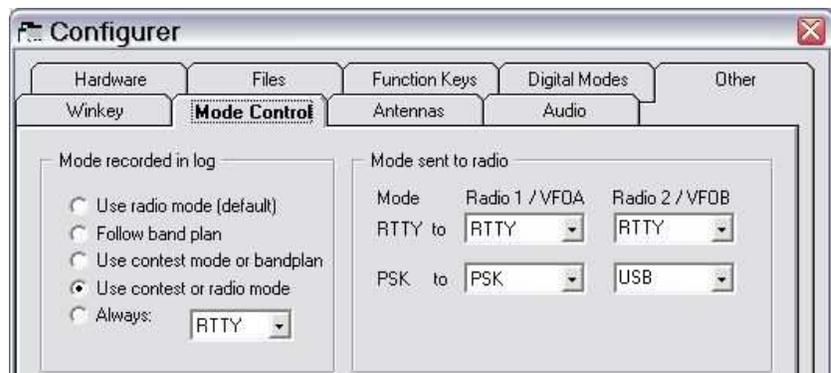
9. Activate the left Entry Window (Radio 1) and enter PSK.

10. Click **Setup | Settings.** Select MMVARI as the Preferred RTTY Interface and Preferred PSK Interface.
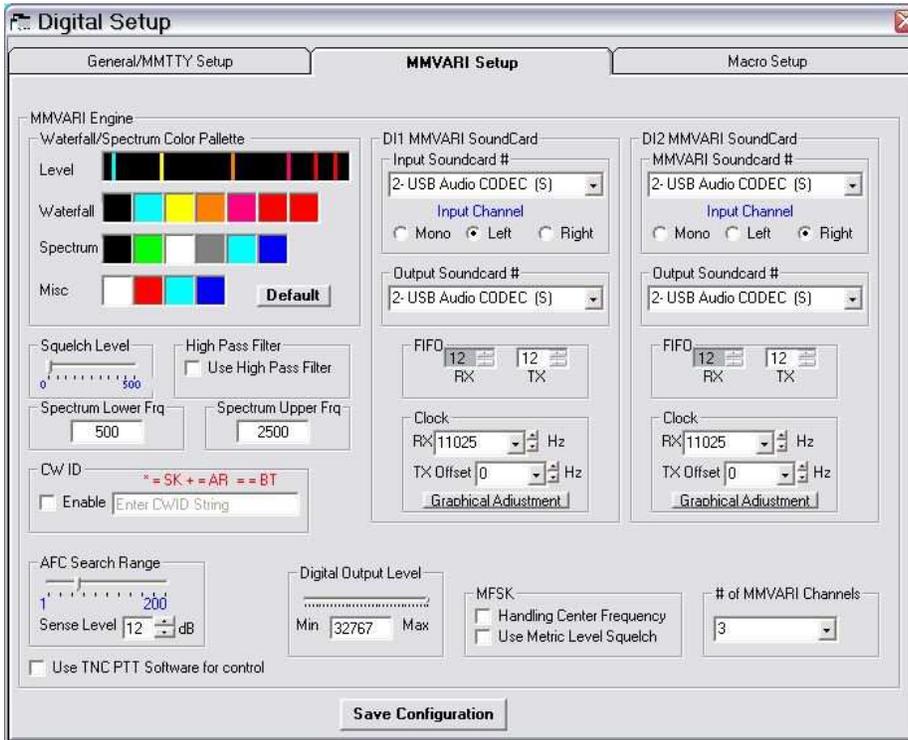
11. Select **MMVARI Setup.**

12. Set DI1 MMVARI Sound Card Input Soundcard # to the sound card used with Radio 1. Select **Left** if the same sound card is used for both radios.

13. Set DI1 MMVARI Sound Card Output Soundcard # to the sound card used with Radio 1.

14. Set DI2 MMVARI Sound Card Input Soundcard # to the sound card used with Radio 2. Select **Right** if the same sound card is used for both radios.

15. Set DI1 MMVARI Sound Card Output Soundcard # to the sound card used with Radio 2.

16. Save the configuration.

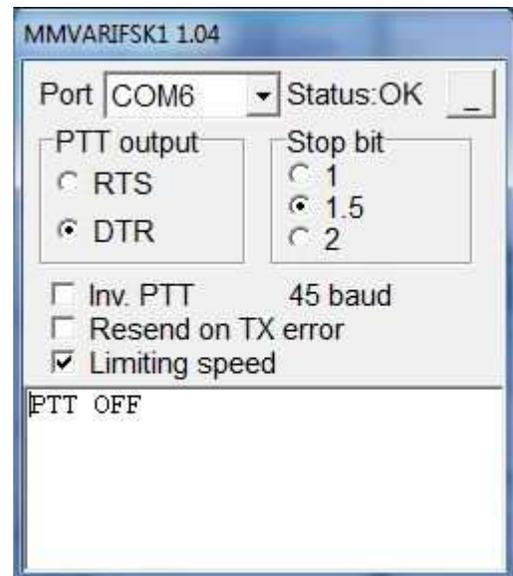17. Select RTTY-L mode in MMVARI in DI-1

18. Select the MMVARIFSK1 window from the Windows Task Bar.

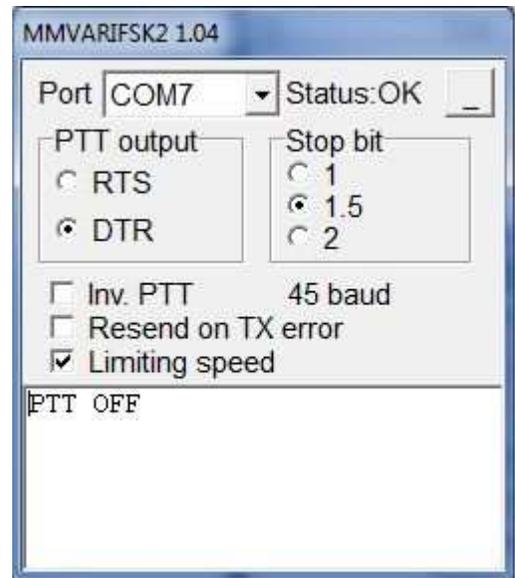19. Set Port to the port you chose for Radio 1 FSK in Router

20. Set PTT output to RTS

21. Check Limiting Speed

22. Return the MMVARIFSK1 window to the Task Bar.

23. Select DI-2 (Open the second DI if it is not already open)

24. Select **Interface | MMVARI** if MMVARI is not already the active interface

25. Select RTTY-L mode in MMVARI.

26. Select the MMVARIFSK2 window from the Windows Task Bar.

27. Set Port to the port you chose for Radio 2 FSK in Router.

28. Set PTT output to RTS

29. Check Limiting Speed

30. Return the MMVARIFSK2 window to the Task Bar.

MMVARIFSK2 1.04

Port COM7 ▼ Status:OK _

PTT output
- ○ RTS
- ◉ DTR

Stop bit
- ○ 1
- ◉ 1.5
- ○ 2

☐ Inv. PTT   45 baud
☐ Resend on TX error
☑ Limiting speed

PTT OFF

AFSK/PSK31 with MMVARI:

N1MM Logger supports the MMTTY Engine, MMVARI and/or an external TNC for RTTY contesting. This configuration is for **AFSK RTTY** and PSK.

AFSK and PSK do not require the use of a digital port for each radio. Do not configure a Digital Port in N1MM Logger or a FSK Port in Router.
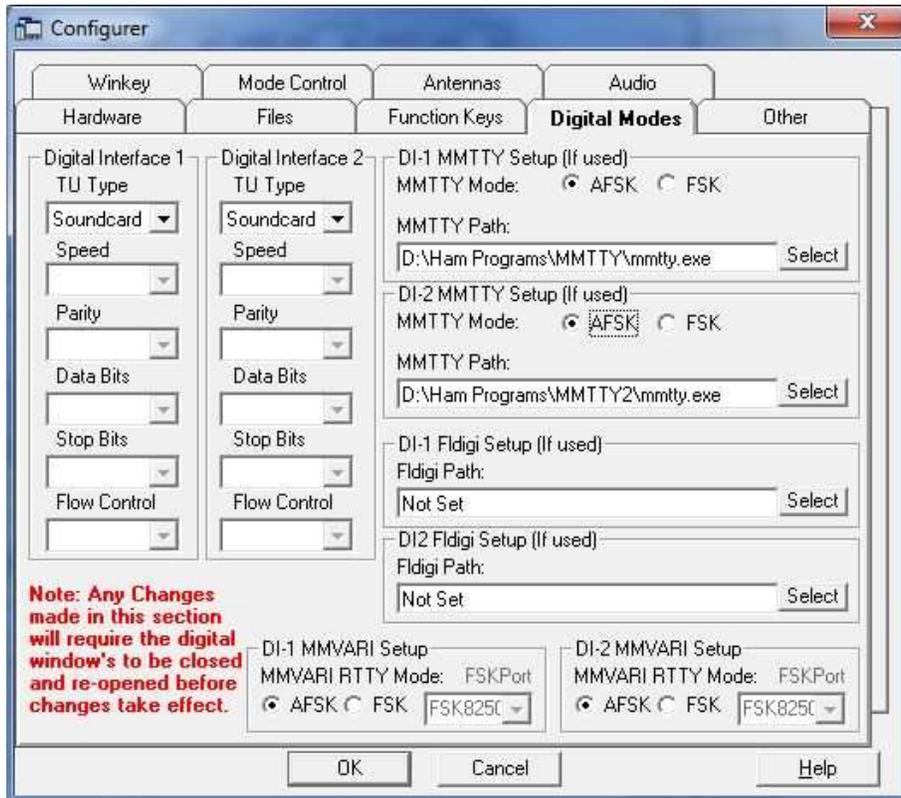

1. Select the **Digital Modes** tab in the N1MM Logger Configurer.

2. Set the TU Type to Soundcard

3. select AFSK as the MMVARI RTTY mode for both DI-1 and DI-2.

4. Open the **Mode Control** tab

5. Set the appropriate RTTY and PSK modes for each radio.

   Note: See the N1MM Logger Help files for the supported RTTY (AFSK) and PSK modes for your radios.

6. Set the method to determine the mode recorded in the log.

7. Save and Close the N1MM Configurer.
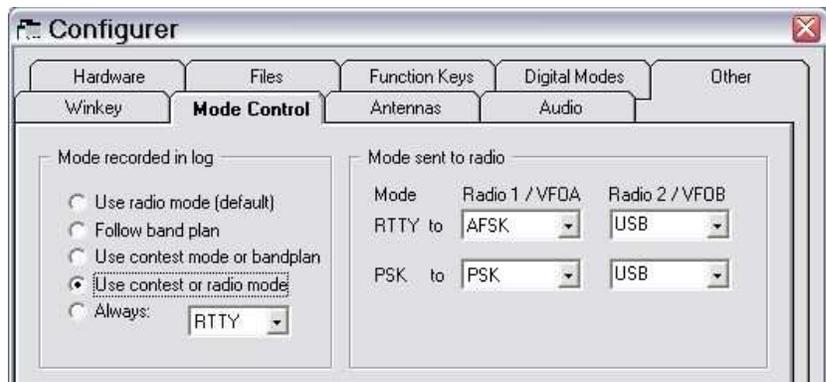
8. Activate the left Entry Window (Radio 1) and enter PSK.

9. Click **Setup | Settings.** Select MMVARI as the Preferred RTTY Interface and Preferred PSK Interface.
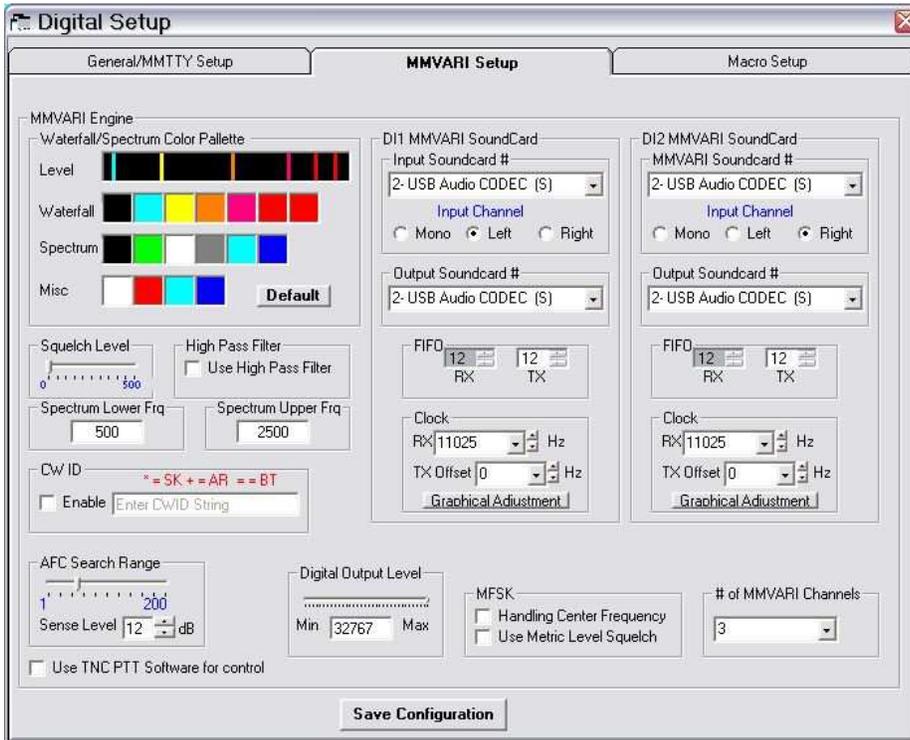
10. Select **MMVARI Setup.**

11. Set DI1 MMVARI Sound Card Input Soundcard # to the sound card used with Radio 1. Select **Left** if the same sound card is used for both radios.

12. Set DI1 MMVARI Sound Card Output Soundcard # to the sound card used with Radio 1.

13. Set DI2 MMVARI Sound Card Input Soundcard # to the sound card used with Radio 2. Select **Right** if the same sound card is used for both radios.

14. Set DI1 MMVARI Sound Card Output Soundcard # to the sound card used with Radio 2.

15. Save the configuration.