

micro2R and DXLab Suite Setup

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 application.

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. Commander will use this port to select rigs.
2. Assign a port for FSK and check the PTT box.
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).

The screenshot shows the 'Ports' window in the *micro2R* application, specifically the 'PTT & ACC' tab. The window is organized into three main sections: RADIO 1, RADIO 2, and a bottom section for general settings.

RADIO 1 Section:

- Tabs: CW, VOI, FSK. The 'CW' tab is selected.
- FSK: COM6 (dropdown), ☒ PTT, closed, Test button.
- 2nd FSK: none (dropdown), ☒ PTT, invert checkbox, strict bps checkbox, Test button.
- CW: none (dropdown), DTR (dropdown), Test button.
- PTT: none (dropdown), RTS (dropdown), Test button.
- 2nd PTT: none (dropdown), RTS (dropdown), Test button.

RADIO 2 Section:

- Tabs: CW, VOI, FSK. The 'CW' tab is selected.
- FSK: none (dropdown), ☒ PTT, Test button.
- 2nd FSK: none (dropdown), ☒ PTT, invert checkbox, strict bps checkbox, Test button.
- CW: none (dropdown), DTR (dropdown), Test button.
- PTT: none (dropdown), RTS (dropdown), Test button.
- 2nd PTT: none (dropdown), RTS (dropdown), Test button.

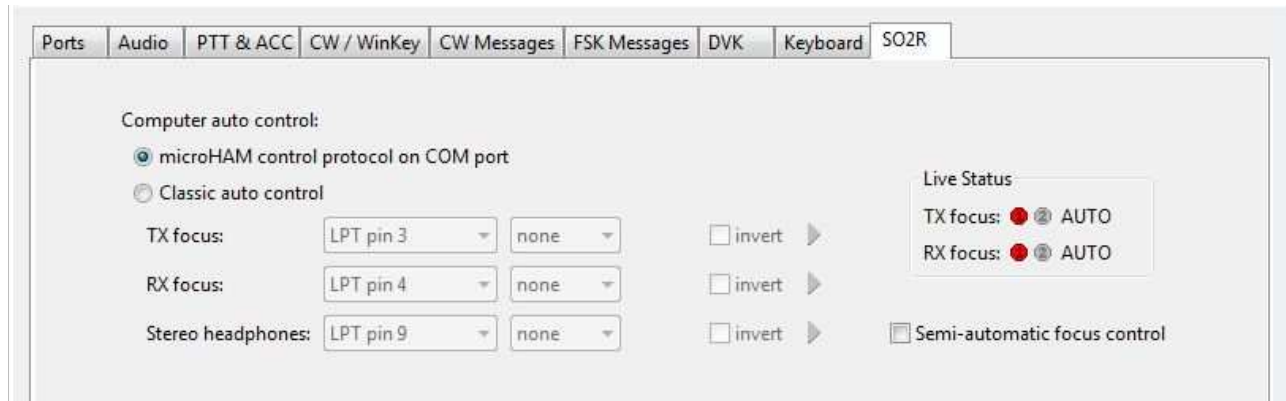
General Settings Section:

- WinKeyer2: COM3 (dropdown), closed, Test button, Mon button.
- Control: COM8 (dropdown), closed, Mon button.
- Foot Switch: none (dropdown), CTS (dropdown), invert checkbox.
- Use LPT for CW: ☐ Use LPT for PTT: ☐ Steer serial CW/PTT: ☐ Steer FSK: ☒ Steer WinKey CW/PTT: ☒

5. Check "Steer FSK"
6. Check "Steer WinKey CW/PTT"

7. Select "microHAM control protocol on COM port" on the **SO2R** tab.

This permits DXLab/Commander to select transceiver - including microphone, headphones, PTT, CW and RTTY (FSK) and antenna using the ACC Outputs.



Antenna selection is passed through to the ACCESSORY jack. *micro2R* provides a four bit (binary) signal to drive a user supplied 1 of 16 decoder for each radio. See the DXLab Suite help files information on configuring frequency dependent devices.

8. Save settings to a preset by selecting menu **Preset | Save as**. Choose a position and name it DXLab.

CI-V Commander setup:

1. Click **Config** and select the **MultiRadio** tab ...
2. Select the Transceiver model for each radio you defined in Router's Ports tab
3. Select the Serial Port, Baud Rate, Parity, Word Length, and Stop Bits settings for each radio.
4. Set RTS to "X" (on to xmit) - this is PTT for each radio.

The screenshot shows the 'Commander Configuration' window with the 'Multi Radio' tab selected. The window has several tabs: General, Ports, Device 0, Device 1, Device 2, Filter Groups, Memories, Multi Radio, Bandsread, and Transverters. The 'Multi Radio' tab contains two sections: 'Control' and 'Serial port'.

Control Section:

Radio	Model	CI-V Addr	Interrogate	Interval	Name	Enable
1	K3	16	☒	200	K3	☒
2	IC-706MKIIG	58	☒	200	IC-706	☒
3		Select	☒	500		☐
4		Select	☒	500		☐

Serial port Section:

Radio	Serial Port	Baud	Word	Parity	Stop	DTR	RTS
1	4	38400	8	N	1	Y	X
2	5	19200	8	N	1	Y	X
3			8	N	1	N	N
4			8	N	2	N	N

The screenshot shows the 'SO2R Serial Port' configuration window. It has a section for 'ACC Outputs: AS2' with an 'Enable' checkbox checked. Below this, there are fields for 'Device 0' and 'BAND'. The main section contains fields for 'Port#', 'Baud', 'Word', 'Parity', 'Stop', 'DTR', and 'RTS'.

ACC Outputs: AS2

☒ Enable

Device 0: [Device 0] BAND: [BAND]

Serial Port Settings:

Port#: [8] Baud: [4800] Word: [8] Parity: [None] Stop: [2] DTR: [Off] RTS: [Off]

5. Select the **Ports** tab.
6. Check the **Enable** box and select "microHAM" in the SO2R Protocol box.
7. Set the Port you selected for Control in Router.

8. If you want Commander to control antenna selection, enable the ACC Output. For information on configuring frequency dependent devices in Commander, see the DXKab Suite help files:
[http://www.dxlabsuite.com/commander/Help/Configuration.htm#SO2R Serial Port](http://www.dxlabsuite.com/commander/Help/Configuration.htm#SO2R%20Serial%20Port) and
<http://www.dxlabsuite.com/commander/Help/Devices.htm>

9. Select the **General** tab and check "supporess CAT" in the PTT box

The screenshot shows the 'Commander Configuration' window with the 'General' tab selected. It contains several sections: 'General', 'PTT: Rcv'ing', 'Frequency Colors', 'Sub-band Defs', and 'VFO Autorepeat Rate'.

General Section:

- ☐ Ignore Mousewheel
- ☒ Accept Dual Receive directives
- ☒ Use TX freq for devices when split
- ☐ Show User-defined Controls panel
- ☒ Display information in title bar
- ☐ Use multiple monitors
- ☐ Log debugging info

PTT: Rcv'ing Section:

TX RX

☒ suppress CAT

Frequency Colors Section:

In Out Back Def

Sub-band Defs Section:

Edit Reload

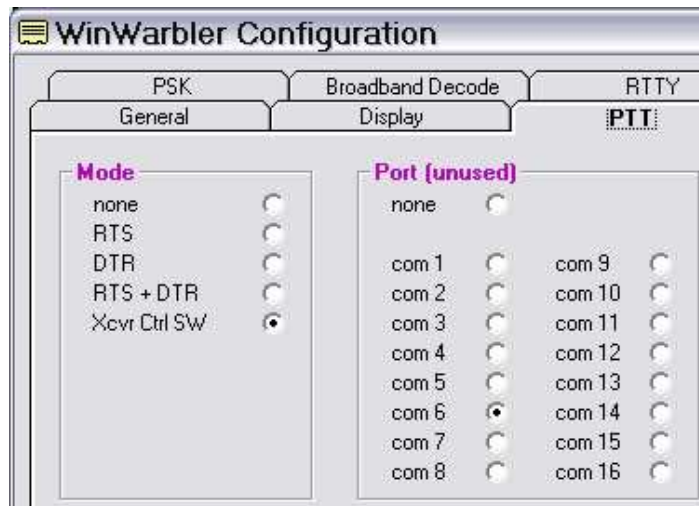
VFO Autorepeat Rate Section:

slow fast

WinWarbler setup:

Note: It is important to execute the following steps in order. Otherwise PTT, FSK and CW sharing will not operate properly.

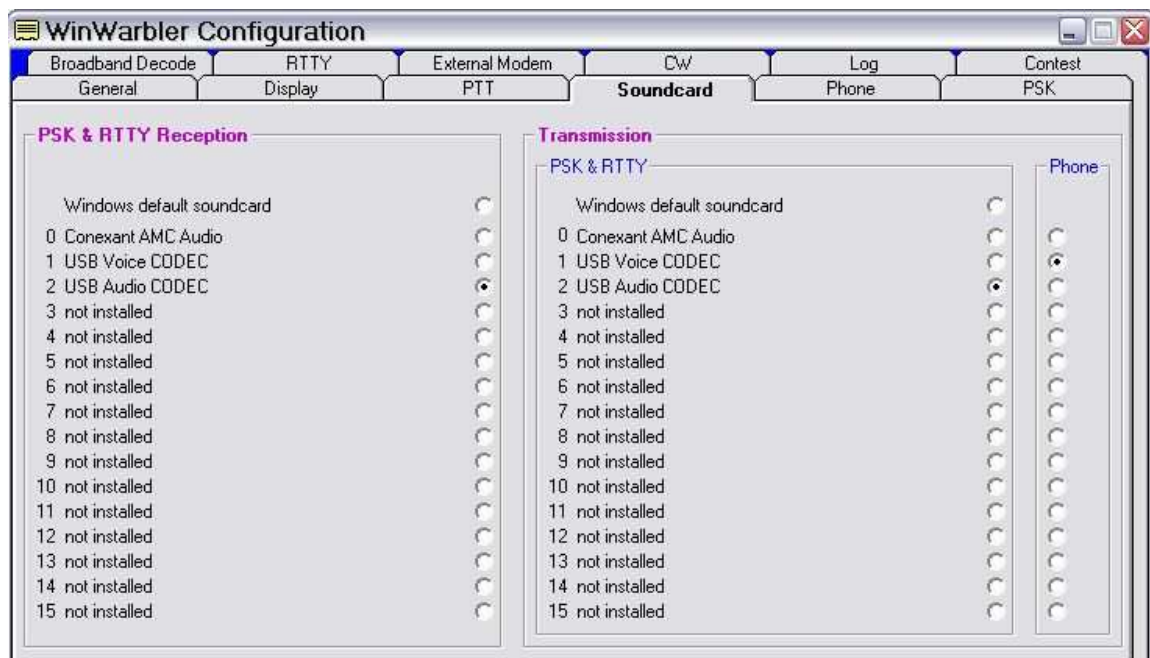
The user has the option to configure WinWarbler for either FSK or AFSK. Configuration information is provided for both options.



1. Click **Config** and select the **PTT tab** ...
2. Select "Xcvt Ctrl SW" as the Mode.

WinWarbler will direct Commander to assert PTT in Phone (Voice) and PSK modes.

3. Select the port you defined for FSK in the "Port" box. This will be used for MMTTY FSK and PTT.
4. Select the Soundcard Tab



5. Set the appropriate sound card for PSK & RTTY Reception
6. Set the appropriate sound card for PSK & RTTY Transmission.
7. Set the appropriate sound card for Phone Transmission.

CW setup:

1. Switch WinWarbler to CW Mode
2. Open the WinWarbler's Configuration and select the **CW Tab**.

The image shows the WinWarbler Configuration window with the CW tab selected. The window has a title bar and a menu bar. The main area is divided into several sections:

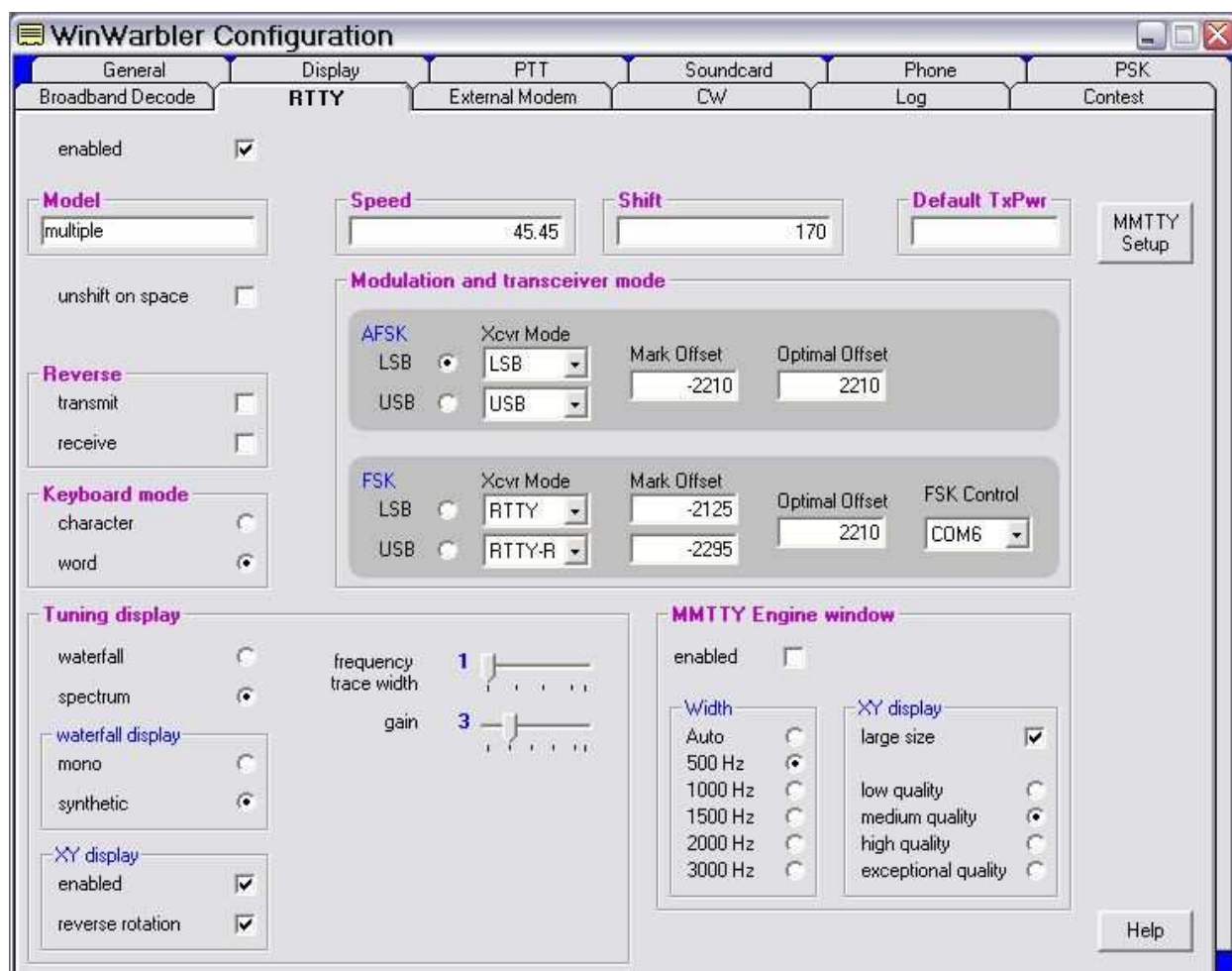
- General:** Includes a dropdown menu set to 'CW', a text field for 'CW offset (hz)', and a text field for 'Default TxPwr'. There is a checkbox for 'display xmit/rcv characters'.
- Keyboard mode:** Includes checkboxes for 'auto start' and 'auto stop', and radio buttons for 'character' and 'word'.
- PTT:** Includes a checkbox for 'assert PTT during CW', and spinners for 'lead time' (set to 10) and 'lag time' (set to 100).
- Keying:** Includes radio buttons for 'serial port RTS', 'serial port DTR', and 'WinKey'. The 'WinKey' option is selected, and the 'port' is set to 'com3'. There are also options for 'PTT: port RTS', 'PTT: port DTR', 'parallel port' (with 'port' and 'addr' fields), and 'external modem (com 8)'. A checkbox for 'Xcvr Ctrl SW' is also present.
- Weight:** Includes spinners for 'dot' (set to 9) and 'dash' (set to 27), and text fields for 'element space' (set to 10), 'character space' (set to 30), and 'word space' (set to 70).
- Cut numbers:** Includes a checkbox for 'use cut #s in macros' and two buttons: 'send T for zero' and 'send Q for zero'.
- WinKey (version 21):** Includes a section for 'speed potentiometer' with spinners for 'minimum speed' (set to 10) and 'maximum speed' (set to 40), and radio buttons for '2-wire' and '3-wire' (selected). There is a 'timing' section with spinners for 'Farnsworth speed' (set to 20) and 'dot/dash ratio' (set to 50), and text fields for 'first extension' (set to 0) and 'compensation' (set to 0). There is a 'sidetone' section with a checkbox for 'enabled' and a spinner for 'frequency (hz)' (set to 752). There is a 'paddle' section with radio buttons for 'iambic A', 'iambic B' (selected), 'ultimatic', and 'bug/straight', and checkboxes for 'swap', 'autospace', and 'echo back'. There is a 'switchpoint delay' spinner set to 50. There is an 'output port' section with checkboxes for '1' (selected) and '2'.

3. Select **WinKey** in the Keying box and set the Port that you chose for WinKeyer2 in Router.
4. Check "Assert PTT during CW." Other values (e.g., Weight, Speed Max/Min Speed, Timing, etc.) are controlled from Router's CW/WinKey tab.

RTTY/MMTTY setup (FSK):

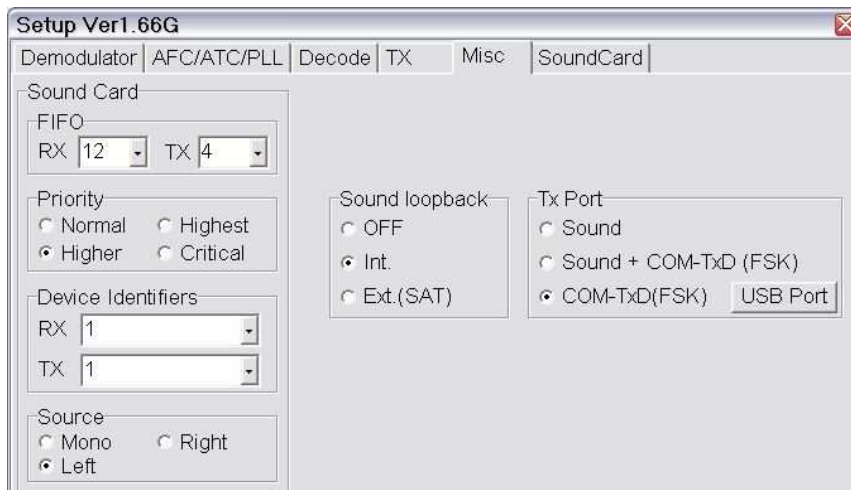
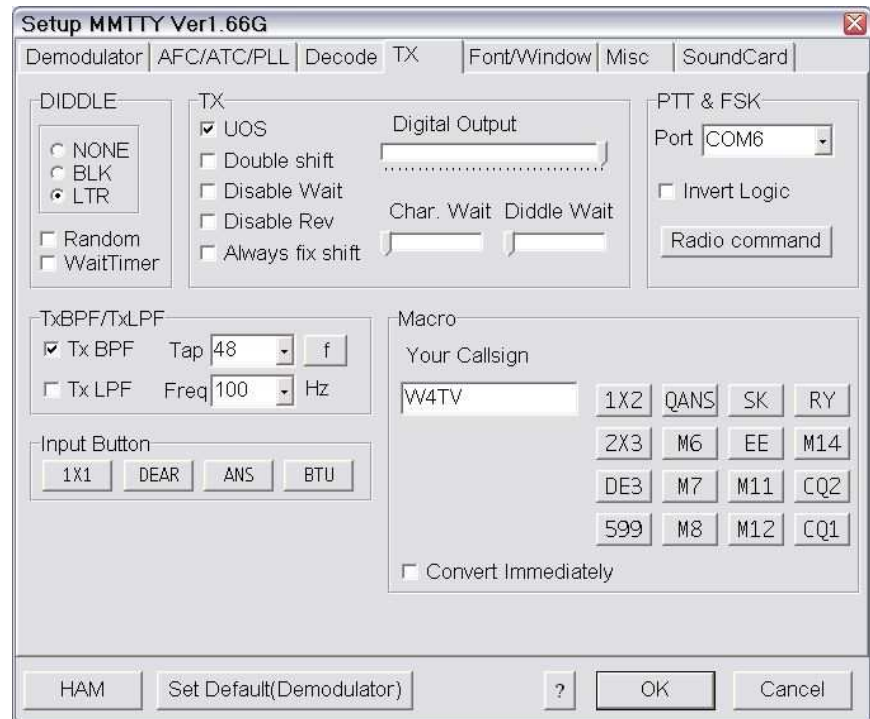
Note: FSK is the preferred mode for RTTY. In most transceivers RTTY is FSK but the AFSK modes change from manufacturer to manufacturer and even from model to model for some manufacturers. It is difficult to find a "common" AFSK mode.

1. Switch WinWarbler to RTTY mode.
2. Click **Config** and select the **RTTY tab** ...



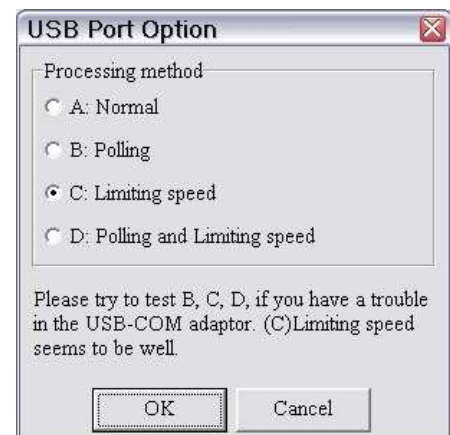
3. Configure the FSK Settings as needed by your radio
4. Set FSK Control to the port you selected for FSK in Router.

5. Click on the **MMTTY Setup** button ...
6. Select the **TX Tab** ...
7. Select the Port you configured for FSK in Router's Ports Tab in the PTT box.
8. Select the **Misc Tab** ...



9. Select Source **Left**

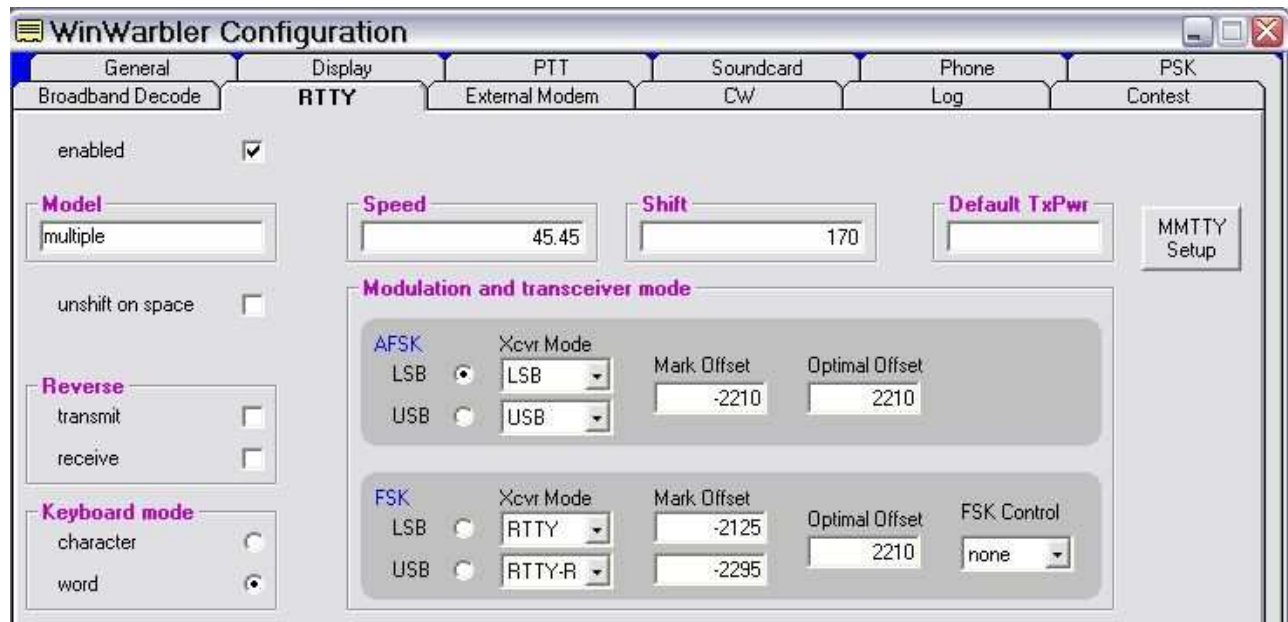
10. Select COM-TxD (FSK) in the TX Port box.



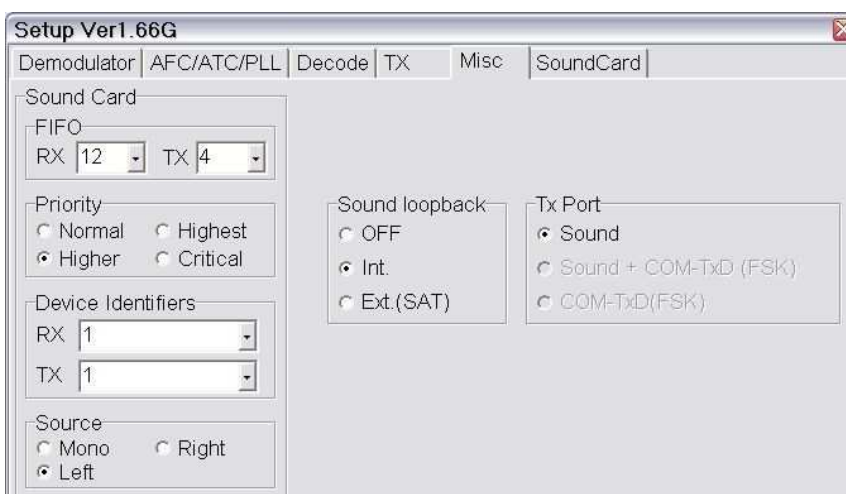
11. Click **USB port** button and choose **C: Limiting speed**

RTTY/MMTTY setup (AFSK):

1. Switch WinWarbler to RTTY mode.
2. Click **Config** and select the **RTTY tab** ...



3. Configure the AFSK Settings required by your radio.
4. Set FSK Control to None
5. Click on the **MMTTY Setup** button ...
6. Select the **TX Tab** ...
7. Select NONE in the PTT Port box.



8. Choose the **Misc Tab**.
9. Select Source **Left**
10. Select "Sound" as the TX Port.