micro2R and DXLab Suite Setup

Router setup:

<u>Note:</u> 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.

*micro*2R 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 *micro*HAM *micro*KEYER II. Connection data is in the *micro*2R 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 *micro*2R is to generate PTT for each radio (Generate PTT Output).

	RADIO 1						RADIO 2				
		CW	VOE FSK	CW				cw	VOI FSK	CW	
	FSK:	COM6	🔻 🔽 PTT	closed 🕨	Test		FSK:	none	- I PTT	Þ	Test
	2nd FSK:	none	▼ V PTT	₽	invert	t bps	2nd FSK:	none	- V PTT	Þ	invert strict bps
	CW:	none	▼ DTR	• •	Test		CW:	none	DTR •	• •	Test
	PTT:	none	▼ RTS	• •	Test		PTT:	none	RTS .	• •	Test
	2nd PTT:	none	▼ RTS	- >			2nd PTT:	none	RTS .	•	
Ì	WinKeyer2	COM3	•	closed	⊕ []	est Mon		Use LPT for (cw 🕨	E Steer ser	ial CW/PTT
	Control:	COM8	-	closed	∥ ► [M	lon		Use LPT for I	тт 🕨	V Steer FS	C
	Foot Switc	h: none	✓ CTS	•	4 🖻	invert				V Steer Wi	nKey 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.

Ports	Audio	PTT & ACC	CW / WinKey	CW Messages	FSK Messages	DVK	Keyboard	SO2R
	Compu	ter auto contri	ol:					
	🔘 mi	croHAM contr	ol protocol on (COM port				1. 0.1
	🔿 Cla	ssic auto cont	rol					Live Status
	TX fo	ocus:	LPT pin 3	* none	Ŧ	🗌 înver	t 🕨	TX focus: 🔮 🕲 AUTO
	RX fo	ocus:	LPT pin 4	* none	*	inver	t 🕨	
	Stere	o headphone	s: LPT pin 9	+ none	+	inver	t 🕨	Semi-automatic focus contro

Antenna selection is 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 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.

G Filter I	ieneral] Groups]	Ports Memories	Dev	ice 0 1 adio 1 1	Device 1 Bandspread	Tran) evice 2 sverters
Contro	ol		2 1 0				
Radio		vlodel	CI-V Addr 16	Interrogate	Interval	Name	Enable
1]	К3		· .	V	200	K3	
2	IC-706MKIIG	0	• 58		200	IC-706	~
3			- Select	V	500	Í	- -
4	(- Select		500	í –	Г
Serial	port						
Radio	Serial Port	Baud	Word	Parity	Stop	DTR	RTS
1	4 -	38400 -	8 -	N -	1 -	Υ.	Χ.
2	5 -	19200 -	8 -	N -	1 -	Y -	× •
3	-	-	8 -	N -	1 -	N -	N -
4			8 -	N -	2 -	N -	N -

🔽 Enable			ACC Outpu	its: AS2		0	
SO2R proto	col		🔽 Enable	Device 0	-	BAND	•
microHam	-			Device		Control	
Port#	Baud	Word	Parity	Stop	DTR	RTS	
8 🕶	4800 👻	8 -	None 👻	2 -	Off	Off Off	

- 5. Select the **Ports** tab.
- 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: <u>http://www.dxlabsuite.com/commander/Help/Configuration.htm#SO2R Serial Port</u> and <u>http://www.dxlabsuite.com/commander/Help/Devices.htm</u>
- 9. Select the **General** tab and check "supporess CAT" in the PTT box

General	PTT: Roving	Frequency Colors
Ignore Mousewheel	TX BX	In Out Back Def
Accept Dual Receive directives Use TX freq for devices when split Show User defined Controls panel	Suppress CAT	
Display information in title bar	Sub-band Defs	VFO Autorepeat Rate
Log debugging info	Edit Reload	slow fa

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.

PSK	$\neg \gamma$	Broadband Dec	:ode ``	F	RTT	
General Y		Display	\square	P1	PII	
Mode		-Port (uni	used) -			
none	C	none	C			
RTS	C					
DTR	C	com 1	C	com 9	0	
RTS + DTR	C	com 2	C	com 10	0	
Xovr Ctrl SW	•	com 3	C	com 11	0	
		com 4	C	com 12	0	
		com 5	C	com 13	0	
		com 6	(F	com 14	0	
		com 7	C	com 15	0	
		com 8	C	com 16	0	

- 1. Click **Config** and select the **PTT tab** ...
- 2. Select "Xcvr Ctl 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

Broadband Decode	RTTY	External Mo	dem 🚺 CW	Log	Contest PSK	
General	Display	PTT	Soundcard	Phone Y		
PSK & RTTY Receptio	in		Transmission			
			PSK&RTTY		Phone	
Windows default sound	dcard	C	Windows default soundcard	C		
0 Conexant AMC Audio		C	0 Conexant AMC Audio	C	C	
1 USB Voice CODEC		C	1 USB Voice CODEC	C	œ	
2 USB Audio CODEC		(•	2 USB Audio CODEC	(•	C	
3 not installed		C	3 not installed	C	C	
4 not installed		C	4 not installed	C	C	
5 not installed		C	5 not installed	C	C	
6 not installed		C	6 not installed	C	C	
7 not installed		C	7 not installed	C	C	
8 not installed		C	8 not installed	C	C	
9 not installed		C	9 not installed	C	C	
10 not installed		C	10 not installed	C	C	
11 not installed		C	11 not installed	C	C	
12 not installed		C	12 not installed	C	C	
13 not installed		C	13 not installed	C	C	
14 not installed		C	14 not installed	C	C	
15 not installed		C	15 not installed	C	C	

- 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**.

General Display PT1	Soundcard	Phone	PSK
Broadband Decode Y RTTY Y External Mo	dem CW	Log Y	Contest
Cw Image: Cw offset (hz) Default TxPwr Xcvr mode CW offset (hz) Default TxPwr Image: Cw offset (hz) Default TxPwr	Weight - 9 + dot - 27 + dash	element space - 10 + character space - 30 + word space - 70 +	Help
Kevboard mode	- Cut numbers		
✓ auto start ✓ character ✓ auto stop ✓ word	🖵 use cut #s in macros	send T for zero 🤅 send D for zero 🥐	
✓ assert PTT during CW lead time - 10 + lag time - 100 + Keying C serial port RTS C serial port DTR port com3 .	speed potentiometer 10 minimum speed 40 maximum speed timing 20 Farnsworth speed 50 dot/dash ratio	2-wire C 3-wire 🕫 first extension Compensation	0
C PTT port BTS C PTT port DTR	sidetone reabled	frequency (hz) 752	
C parallel port addr	C iambic A C iambic B C ultimatic C bug/straight	swap autospace autospace con back switchpoint delay switchpoint de	50
C Xovr Drl SW	output port	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):

<u>Note:</u> 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** ...

General Display PTT Soundcard Phone PSK Broadband Decode RTTY External Modem Cw Log Contest enabled Image: Contest in the image: Con	🗏 WinWarbler (Config	uratior	۱							
Broadband Decode RTTY External Modern CW Log Contest enabled ✓ ✓ Log Contest multiple ✓ ✓ Default TxPwr MMITY multiple 45.45 170 Default TxPwr MMITY unshift on space ✓ Modulation and transceiver mode MMITY Setup Harsonit C LSB LSB 2210 2210 VSB USB ✓ 2225 2210 Control Character C USB RTTY 2225 2210 COM6 waterfall C frequency 1 Image size V display waterfall C frequency 1 Image size V display waterfall C frequency 1 Image size V display large size V waterfall Giplay G Image size V large size	General		Display		PTT	Ĩ	Soundcare	H T	Phone	Ť	PSK
enabled ✓ Model multiple Speed Shift 170 Default TxPwr MMTTY Setup unshift on space ✓ Modulation and transceiver mode Mark Offset Optimal Offset Setup Reverse LSB LSB ✓ 2210 2210 transmit receive FSK Xcvr Mode Mark Offset Optimal Offset FSK Control LSB ISB ITY ✓ 2225 2210 COM6 ✓ Vord © USB ITY ✓ 2225 2210 COM6 ✓ Vord © USB ITY ✓ 2225 2210 COM6 ✓ waterfail C frequency 1 ✓ ✓ 2295 2010 COM6 ✓ waterfail C frequency 1 ✓ ✓ 2000 ✓ Image size Image size Image size </td <td>Broadband Decode</td> <td>F</td> <td>ITTY</td> <td></td> <td>External Modem</td> <td>Ŷ</td> <td>CW</td> <td>Ý</td> <td>Log</td> <td>(22) </td> <td>Contest</td>	Broadband Decode	F	ITTY		External Modem	Ŷ	CW	Ý	Log	(22) 	Contest
Model Speed Shift Default TxPwr MMTTY multiple 45.45 170 Metalt TxPwr MMTTY unshift on space Modulation and transceiver mode Mark Offset Optimal Offset Setup Reverse LSB • LSB • 2210 2210 transmit USB • USB • -2215 Optimal Offset receive FSK Xevr Mode Mark Offset Optimal Offset FSK Control character C USB • RTTY • -2235 2210 CDM6 • waterfall C BTTY • -2235 2210 CDM6 • waterfall C frequency 1 - - - 2235 200 Me • waterfall C frequency 1 -	enabled	9									
multiple 45.45 170 MMTTY unshift on space Modulation and transceiver mode AFSK Xevr Mode LSB LSB transmit receive Keyboard mode character word word frequency transmit gain 3 Y display enabled XY display enabled XY display enabled Interverse rotation Help	Model		Spe	ed		Shift	3		Default Tx	Pwr	
unshift on space Modulation and transceiver mode Reverse LSB LSB transmit USB LSB receive USB USB Keyboard mode FSK Xcvr Mode character C word FSK Xcvr Mode USB IUSB -2210 Z210 Z210 FSK Xcvr Mode USB RTTY -2235 Z210 CDM6 waterfall C gain 3 - - gain 3 - 1 waterfall G gain 3 - 1000 Hz 1000 Hz C mono C synthetic F Pabled Imodum	multiple		1		45.45	1		170	1		MMTTY Setup
AFSK Xcvr Mode LSB LSB USB USB VSB USB FSK Xcvr Mode character C word FSK USB RTTY USB Request Width Xt USB Intot USB Intot <td>unshift on space</td> <td>Г</td> <td>Mod</td> <td>lulation</td> <td>and transceive</td> <td>r mode</td> <td>-</td> <td></td> <td>ii ></td> <td></td> <td></td>	unshift on space	Г	Mod	lulation	and transceive	r mode	-		ii >		
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receive FSK Xevr Mode Mark Offset Optimal Offset FSK Control character C USB RTTY I 2125 2210 DDM6 Image: Control word Image: Control Image: Contro				ARRO 10	1030 1						
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character C LSB C RTTY ▼ -2125 CDM6 2210 word • USB RTTY-B ▼ -2295 2210 COM6 ▼ Tuning display waterfall C frequency 1 -	- Keyboard mode		FSI	K _	Xovr Mode	Mark	Offset	Ontima	Offeet FSK Contro	ol	
word Image: Width of the synthetic waterfall C spectrum frequency mono C synthetic Image: size xY display enabled image: size image: s	character	C	L	.SB ()	BTTY •		-2125		2210 COM6	_	
MMTTY Engine window waterfall	word	e	L.	ISB (RTTY-R •	1	-2295	-			
waterfall C frequency 1	Tuning display	1.6					MMTTY E	ngine v	vindow		
spectrum waterfall display mono synthetic Auto synthetic mono synthetic mono synthetic mono synthetic mono synthetic mono synthetic mono synthetic mono synthetic mono synthetic mono mono synthetic mono mono synthetic mono	waterfall	C	freque	ncu	a		enabled	Г			
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waterfail display Auto C large size Image size mono C Southand	spectrum	100		gain	3 _		Width		XY display	10000	
synthetic Synthetic AXY display enabled reverse rotation → Help	waterfall display	0					Auto	6	large size	M	
synthetic (* XY display enabled reverse rotation → Help	INOFIO	10 I					1000 Hz	C	low quality	C	
XY display 2000 Hz high quality sexceptional quality enabled Image: second secon	synthetic						1500 Hz	C	medium quality		
enabled IV reverse rotation IV							2000 Hz	C	high quality	C	
reverse rotation	enabled	V					3000 Hz	0	exceptional quality	0	
	reverse rotation	V									Help

- 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 Setup b
- 6. Select the
- 7. Select the configured Router's P PTT box.
- 8. Select the

	Setup MMTTY Ver1.66G	
5. Click on the MMTTY	Demodulator AFC/ATC/PLL Decode TX Font/Wir	ndow Misc SoundCard
Setup button		PTT & FSK
6. Select the TX Tab	C NONE	Port COM6
	C BLK C LTR □ Disable Wait Char Weit Didd	□ Invert Logic
7. Select the Port you configured for FSK in	□ Random □ WaitTimer □ Always fix shift □	Radio command
Router's Ports Tab in the PTT box	TxBPF/TxLPF	
	Tx BPF Tap 48 f Your Callsign	
8. Select the Misc Tab	T Tx LPF Freq 100 • Hz W4TV	1X2 QANS SK RY
	Input Button	2X3 M6 EE M14
	1X1 DEAR ANS BTU	DE3 M7 M11 CQ2
		599 M8 M12 CQ1
	Convert Imme	diately
	HAMSet Default(Demodulator)	? OK Cancel
Setun Ver1 66G	X	
Demodulator AFC/ATC/PLL Decode TX	Misc SoundCard 9. Select	t Source Left
Sound Card	10. Calas	
FIFO RX 12 - TX 4 -	10. Select	t COM-TXD (FSK) in the T.
-Prioritu	sheel Ty Port	
Normal C Highest C OFF	C Sound	t Option 🛛 🔯
• Higher • Critical • Int.	C Sound + COM-TxD (FSK)	g method
Device Identifiers	T) • COM-TxD(FSK) USB Port	mal
	C B: Polli	ng
	C: Limi	ting speed
C Mono C Right	C D: Polli	ng and Limiting speed
₢ Left	Please try t	o test B, C, D, if you have a trouble
	in the USB	COM adaptor. (C)Limiting speed
11. Click USB port button and	choose C: Limiting speed	, W 511.

OK

Cancel

RTTY/MMTTY setup (AFSK):

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

WinWarbler	Configur	ation					
General Broadband Decode	Dis BT1	iplay	PTT External Modem	Soundc	ard	Phone Log	PSK Contest
enabled	V						
Model multiple		Speed -	45.45	Shift	170	Default T	MMTTY Setup
unshift on space	Г	AFSK LSB	Acvr Mode LSB	er mode Mark Offset	Optimal Offs	set	
transmit receive	Г	USB	O USB 💽	-2210	221	0	
Keyboard mode character word	C C	FSK LSB USB	Xovr Mode C RTTY • C RTTY-R •	Mark Offset -2125 -2295	Optimal Offs 221	set FSK Coni 0 none	rol

- 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.

	AFCIAICIPLE		SoundCard
	TX VOS	Digital Output	PTT & FSK Port NONE
⊂ BLK ● LTR	E Disable Wait	Char. Wait Didd	le Wait
□ Random □ WaitTime	. □ Always fix shift		Radio command

Setup Ver1.66G				
Demodulator AFC/ATC/PLL	Decode	ТΧ	Misc	SoundCard
Sound Card FIFO RX 12 • TX 4 • Priority © Normal © Highest © Higher © Critical Device Identifiers RX 1 • TX 1 •	Sou c O c Ir c E	nd loopi FF it. xt.(SAT	pack	Tx Port • Sound • Sound + COM-TxD (FSK) • COM-TxD(FSK)
Source Mono CRight Cleft				

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