WICEN Setup and Config for RMS Express in WINMOR Peer-to-Peer mode.

The document covers the setup and config for WINMOR sound card TNC in Peer-to-Peer mode in RMS Express. A SignaLink USB external Sound card is used in this document. Other Sound cards may vary.

Install RMS Express for first time users.

Connect the SignaLink USB to the Computer.

Follow the SignaLink USB installation procedure for you version of Windows Operating system. This is a <u>must do</u> step.

Step 1 Launch RMS Express and select WINMOR P2P mode.

KMS Express 1.2.2.0 - V	VK3IFM			
VK3IFM - Files	s Message Attachments Move To: Saved Items 👻 Delete Open Session:	Winmor P2P 🗸 Logs Help		
	표 🗄 🔁 🔚 🕼 🕪 🛛 🞯	Telnet WL2K Packet WL2K		
No active session Pactor WL2K				
System Folders	Date/Time Vessage ID Size Source Sender Rec	Robust PR WL2K		
Inbox	2012/08/15 01:09 UTZ6XE50EPRZ 448 VK3JED VK3JED VK3J	kly Report 009		
Read Items	2012/08/15 01:09 I67RAYSI3X1V 389 System SERVICE VK3I	Packet P2P ared Message		
Sent Items	2012/07/29 09:36 OJ5TW1NQPFWG 384 VK3MCD VK3MCD VK3I	Robust PR P2P ision From Talbingo		
Saved Items	2012/07/26 10:09 5EG19890PRJW 35714 SMTP SMTP:query-repl VK3	Winmor P2P mor.bom.gov.au/radar/IDR022.gif?20		
Deleted items Drafts		M Lu. //		
Personal Folders	- Message ID: C1NA6S21BI9V			
	From: VK3CVF			
	To: VK3IFM			
	Source: VK3CVF Subject: ACK: Weekly Report 004			
	[message acknowledgement]	E		
Contacte	The following message was received by VK3CVF			
dromana@drivein.net.au				
ifm@live.com.au	Subject: Weekly Report 004			
VK3CVF	To: VK3CVF			
VK3DPW VK3GER	Received: 2012/07/09 10:54			
VK3IFM T	<pre>message-in: H10120W594AQ</pre>	-		
P	,			

Open the communication session with Open Session

Enter the Destination Callsign. Note only one call sign can be entered. Enter the Channel Frequency. This is 1.5KHz above the Dial Frequency. RMS-E will remember CallSign and Frequency for future use. (P-2-P address book)

Winmor Peer-t	o-Peer Session - VK3IFM				
Exit Setup S	witch to Winlink Session C	Channel Selection Sh	now/Hide TNC S	tart Stop	Abort
VK3AWI	Center Frequency (kH	z): 7032.000	Dial Frequency ((Hz): 7030.50	0
Favorites:		 Select Add to 	favorites Rem	ove from favori	tes
hannel Free In: 0,	0 Out: 0/0 BPM: 0/0 Dis	connected/Listening			
					1

From the Setup Menu select WINMOR TNC Setup. The SignaLink USB sound card name is "USB Audio CODEC"

🗱 WINMOR Setup	×
Ident	ify with Morse Code
WINMOR Capture Device:	Microphone (2- USB Audio CODEC)-4b
WINMOR Playback Device:	Speakers (2- USB Audio CODEC)-a5
Virtual TNC host address/name:	127.0.0.1
Virtual TNC Command Port:	8500 Data Port: 8501
Inbound Session Bandwidth (Hz) :	500 Drive Level: 90
Update	Cancel

RMS Express does support CAT control of the Radio which is not covered in this document. Radio Setup from the Setup menu should look like this.

Winmor P2P Settings	
Radio Selection Select Radio Model Manual	Antenna Selection Default
Icom Address 00 USB (● USB Digital ◎ FM ◎ Use Internal Tuner 🗌
Radio Control Port Serial Port to Use None B	aud 9600 - Enable RTS 🗸 Enable DTR 🗸 TTL 🗌
PTT Port (Optional) Serial Port to Use External	▼ Baud 9600 ▼ Enable RTS √ Enable DTR √
U	Jpdate Close

Step 2 - Setting RX Level.

Ensure the Delay control (labelled DLY) is full anti-clockwise on the Signalink USB.

Adjust the Receive level (labelled RX)on the WINMOR Sound Card TNC so that the noise is driving the green bar most of the way across.

WINMOR Sound Card TNC Ver:1.4.2.0 Port:8500				
Help Hide Send ID				
Connection State DISCONNECTED	Receive Rcv Level:	Busy Detector		
TCP Capture OK	Remote Station Off Rcv Frame:	fset: -204.0 Hz Squelch: 5		
Transmit				
0 Avg ACK Percentage 100	Waterfall			
Xmt Frame:	 Spectrum Disable 			
	500 Waterfa	all 2KHz 2500 4FSK / 15		

Then Receiving a WINMOR signal the AGC will adjust the level and successfully resolve the signal.

DSP must not be used to process the receive signal

<u>Step 3 – Setting TX Level.</u>

To adjust the Tx level. Tune the radio in the usual way. Ensure there is **no** Compression set on Tx.

Click the SendID button in the TNC to send Station ID. Adjust the Tx level on the SignaLink USB so there is about 10 to 30 of Power being transmitted. Repeat the step and check the ALC is reading zero on your Tranciever.

Now good to go.

Refer WICEN Radiogram Peer-to-Peer Procedure to send message.

Extract from Tigertronics Signalink USB Installation & Operations Document

- SETTING THE AUDIO LEVELS -

The SignaLink USB's built-in sound card provides the same consistent audio levels no matter what computer you are using, so the software audio level setting procedure has been greatly simplified. Before you operate your SignaLink USB on the air, you will need to adjust the PLAYBACK software volume controls, and the SignaLink's TX and RX level controls. Note that the SignaLink USB does NOT use software RECORDING controls ("waterfall drive", etc.), so you will not need to worry about adjusting those. Adjustment of the Receive Audio is done completely by the SignaLink's RX level control. While most levels are not too critical, incorrect adjustment of any of these levels can cause poor performance or unreliable operation. This procedure tells you how the levels should be set.

Preliminary Setup

Before you can adjust the audio levels, the SignaLink USB must be connected to the computer and radio. Both the SignaLink USB and the radio should be powered ON and a communications program that you have selected should already be installed on your computer. Note that you will be using the communications program to generate the audio tones that are used to adjust the level controls, so CW programs should NOT be used unless they have a continuous "Tune" mode. A PSK-31 program like DigiPan is ideal for making these adjustments.
Set the SignaLink USB's TX level control to minimum (fully counter-clockwise), and the RX level control to 50%. The Delay ("DLY") control can be set to minimum for now.
Start your communications program and verify that the sound card selected for both Transmit and Receive is "USB Audio Codec" (this is the sound card name used by the SignaLink USB). Most programs allow you to select the sound card that you want to use in their "Configure" or "Setup" menu. Once selected, you should not need to select the SignaLink USB adjust.

Radio Setup

CAUTION – Be sure that your radio is connected to an antenna or dummy load before proceeding.

• If you already know how to configure your radio for digital operation, then you can skip to the "Transmit Audio Adjustment" section below.

• If the SignaLink USB is connected to your radio's Mic jack, then set your radio to "USB" mode (note that you can change this later if the mode you want to run requires LSB).

• If the SignaLink USB is connected to a Data or Accessory Port, then you will need to set your radio to the appropriate mode for this type of connection. USB will work on most radios, but you may need to select a special mode such as "Data", "User", or "D-USB". If you are not sure which mode to use, then consult your radio manual.

• Set the radio's Mic Gain control to 50%. Note that if the SignaLink is connected to a Data or Accessory Port, this control may not have any effect on power output.

• Set your radio's "Forward Power" control to provide maximum power (this will be adjusted later to bring the power down to a suitable level). Note that the "Forward Power" control might be labelled "RF Power" or "Carrier Power" on your radio. Newer radios will have an "RF Power" menu setting instead of a knob.

• Your radio's Speech Processor / Compressor and VOX features should be turned OFF.

Transmit Audio Adjustment

• Open the Windows Volume Control Panel by clicking on the Start Button and selecting Programs (or "All Programs"), Accessories, Multimedia (or "Entertainment"), and then Volume Control.

• From the Options menu, select Properties to display the Properties page.

• In the "Mixer Device" drop-down menu, verify that

"USB Audio CODEC" is selected. This is the name /identifier used by the SignaLink USB's builtin sound card, so this MUST be selected.

• In the "Adjust Volume For" window, select Playback.

• In the "Show the Following Volume Controls" window, verify that the Speaker and Wave

controls are checked. Other controls can also be checked but they will not be used.

 \bullet The Properties window should now look like the one shown below in Figure 2. Verify that it does and then click OK

Properties		? X
Mixer device:	USB Audio CODEC	•
_ Adjust volume	e for	
• Playback		
C Recording	j	
C Other		
Show the follow	ving volume controls:	
 ✓ Speaker ✓ Wave ✓ SW Synth ✓ CD Player 	1	
•		►
	OK Can	cel

Figure 2 – Properties Window

• The volume control panel will now open. Set the "Speaker" control (far left control) to 100% max volume, and set the "Wave" control to 50%. Note that the Speaker and Wave controls should NOT be muted. All other controls can be. Your volume control panel should now look similar to the one shown below in Figure 3:



Figure 3 – Volume Control Panel

• The SignaLink's software volume controls are now set to provide an audio level that is suitable for most radios. If you determine that you need more audio (complete this procedure first!), then you can increase the "Wave" control. A special jumper can also be installed inside the SignaLink USB to provide even more audio (see the "Special Jumpers" section of this manual) • Select "TUNE" in your communications program. The SignaLink's PTT LED should now be ON, and your radio should be transmitting. If the PTT LED is not ON, then you may have the wrong sound card selected in your communications program or the volume control panel. If you cannot get the PTT LED to turn ON, then see the Troubleshooting section at the end of this manual.

You should now be able to adjust the SignaLink USB's "TX" level control for the desired Transmit power level (see important note below). If you cannot get adequate power, then see the notes on jumper JP3 under the "Special Jumpers" section of this manual. If the problem still persists, then please see the Troubleshooting section at the end of the manual.
Be sure to turn your program's "TUNE" function OFF when you are finished making adjustments!

IMPORTANT: We strongly suggest that you consult your radio manual to verify the manufacturers recommended maximum transmit level and duty cycle. Most digital modes are 100% duty cycle and cannot be run at full power without damaging your radio. Also, some modes (like PSK-31) typically only require 25 watts or less for reliable communication. You can actually "swamp" out other users if you use too much power.