

# Quick Setup Guide for Winlink on VHF/UHF with Signalink on Windows

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Thank you, **Mike KM6KAQ**, **Scott KI6FHO**, **Brian KM6IGY**, **Lew AC6LS** and **Keith KD6PYD** for testing, for your suggestions, insights and encouragement.

## Get the Software

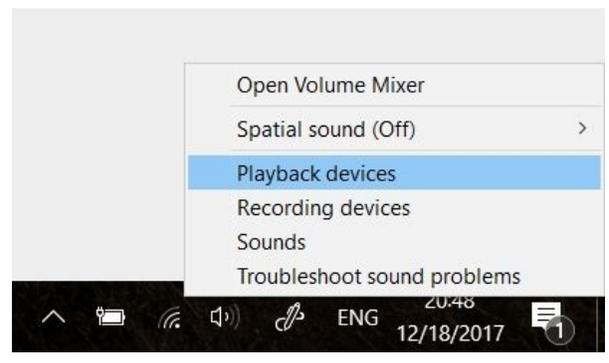
### Download

- Soundmodem: soundmodem100.zip from here <http://uz7.ho.ua/packetradio.htm> and extract the files in a location you can find easily (e.g. folder on Desktop)
- Winlink Express: <https://winlink.org/WinlinkExpress> Mind you, once installed it will show up as “RMS Express” (that is the old name, the Winlink team has not updated it yet).

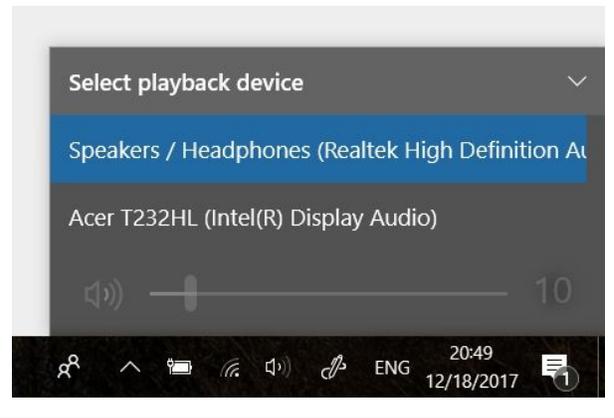
(Always check any downloads with your antivirus before executing)

## SoundCard Considerations

After you have hooked up your Signalink please make sure it is not selected as the default audio device by right mouse clicking on the speaker icon and selecting Playback Devices. You can adjust in that menu.

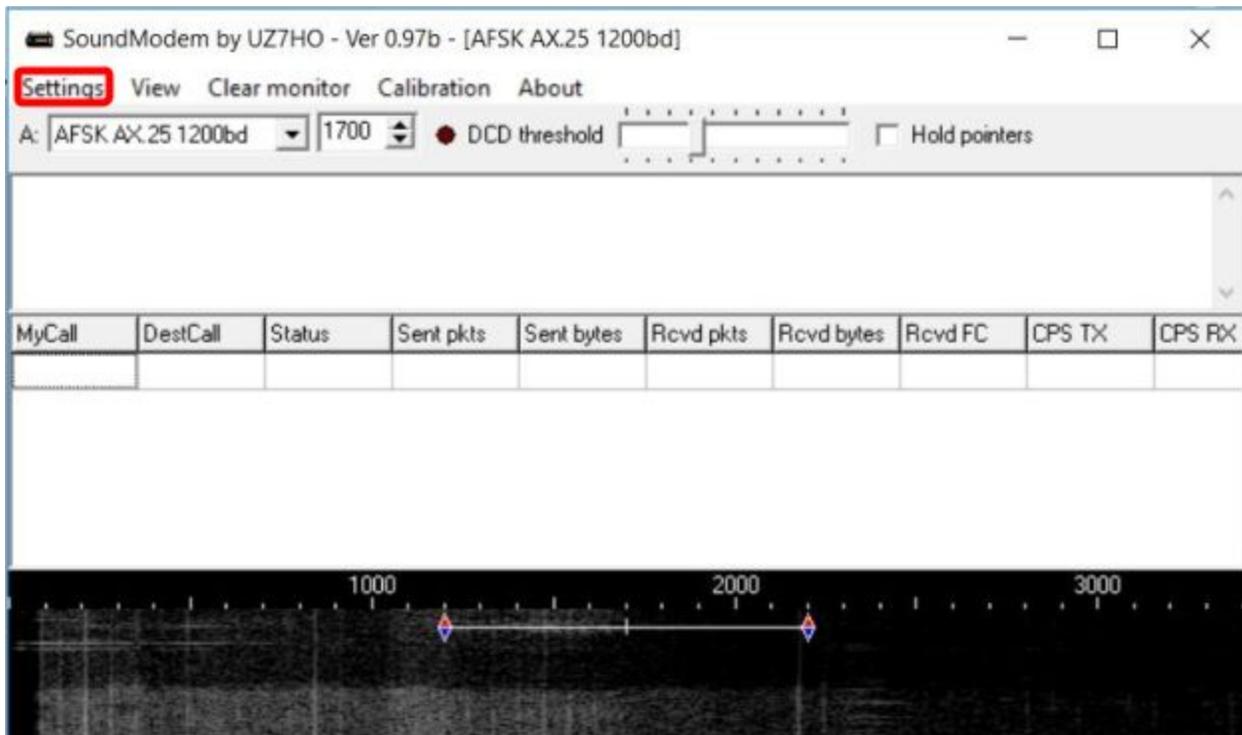


Also make sure that Signalink is not your active Playback Device. You can select your active playback device by left clicking on the speaker icon and selecting any playback device other than USB Audio CODEC. Selecting Speakers/Headphones in the example here is a good idea.



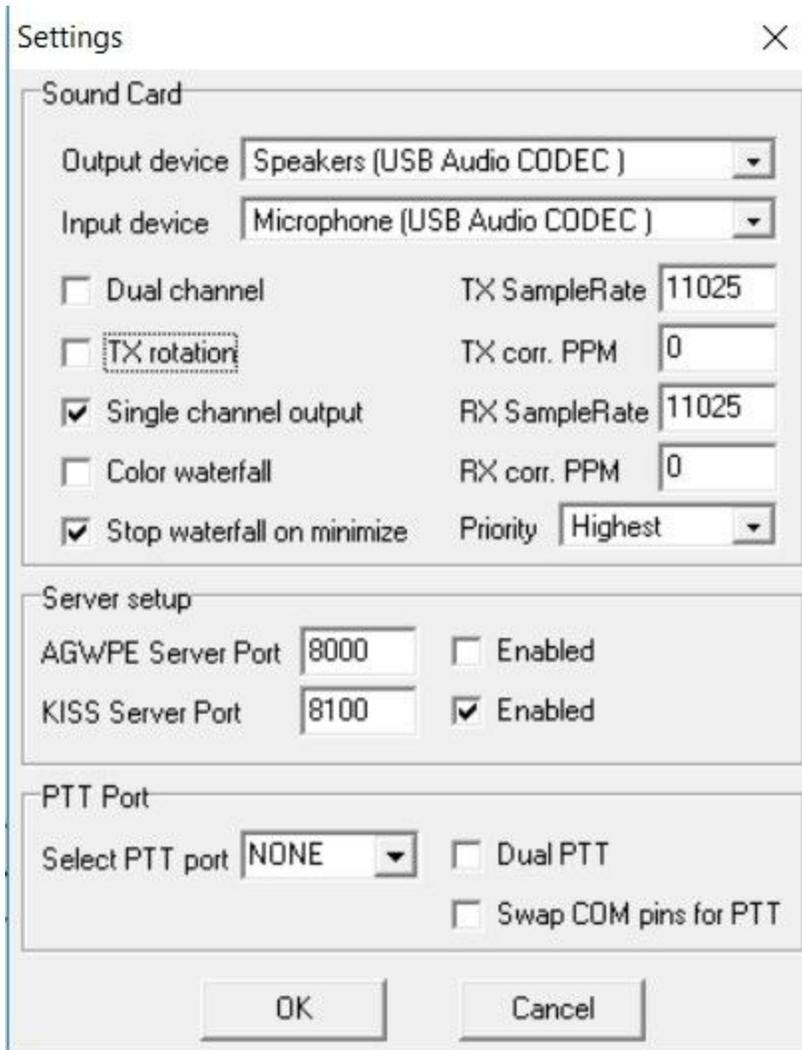
## Setting up Soundmodem100

Go to the soundmodem.exe file you extracted earlier. Double-click to run the program.



On the Soundmodem screen, click **Settings** then **Devices**.

You will see this screen:



Output device: **Speakers (USB Audio CODEC)**

Input device: **Microphone(USB Audio CODEC)**

Note: This selects your Signalink as the Output and Input device for soundmodem and Winlink Express. The Signalink may sometimes show up as 2-USB Audio CODEC or similar.

Set the TX and RX dials on your Signalink to the 11 o'clock position. You can adjust that later if needed. Set DLY(delay) to 0.

Uncheck **TX rotation**

Check **Single channel output**

Check **Stop waterfall on minimize**

AGWPE Server Port 8000 **Uncheck Enabled**

KISS Server Port **8100 Check Enabled**

Select PTT Port: **NONE** (for the SignalLink USB)

Uncheck **Dual PTT**

Uncheck **Swap COM pins for PTT**

Click **OK**

Click **Settings** then **Modems**

You will only have to change settings in “Modem filters ch:A”, ignore “ch:B”

Modem settings

Modem filters ch: A

BPF Width 1400 Show

TXBPF Width 1600 Show

LPF Width 650 Show

BPF Taps 256

LPF Taps 128

Default settings

PreEmphasis filter None  All

KISS Optimization

non-AX25 filter

Modem filters ch: B

BPF Width 500 Show

TXBPF Width 500 Show

LPF Width 155 Show

BPF Taps 256

LPF Taps 128

Default settings

PreEmphasis filter None  All

KISS Optimization

non-AX25 filter

Modem type ch: A

Mode AFSK AX.25 1200bd

TXDelay 500 msec

TXTail 50 msec

Add. RX 0 pairs

Add. RX shift 30 Hz

Bits Recovery NONE

Modem type ch: B

Mode AFSK AX.25 300bd

TXDelay 250 msec

TXTail 50 msec

Add. RX 0 pairs

Add. RX shift 30 Hz

Bits Recovery NONE

Ok Cancel

Check – **Default settings**

Check – **KISS Optimization**

Check – **non-AX25 filter**

Under Modem type ch: A

Set Mode to **AFSK AX.25 1200bd**

Enter TXDelay **500** msec

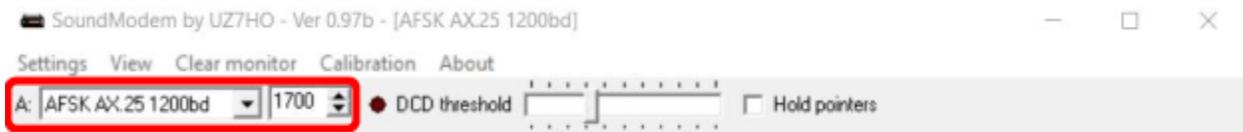
Note: TXDelay and TXTail can be adjusted over time. 500 and 50 are good starting numbers, your radio may support lower or higher numbers.

Click **OK**

In the main Window make sure to select

**A: AFSK AX.25 1200bd**

and set to **1700**



## Winlink Express

Leave soundmodem running and start RMS Express.

### Quick Tip: Winlink Express Setup

If you have not setup Winlink Express, go to **Settings -> Winlink Express Setup** and fill in the appropriate fields.

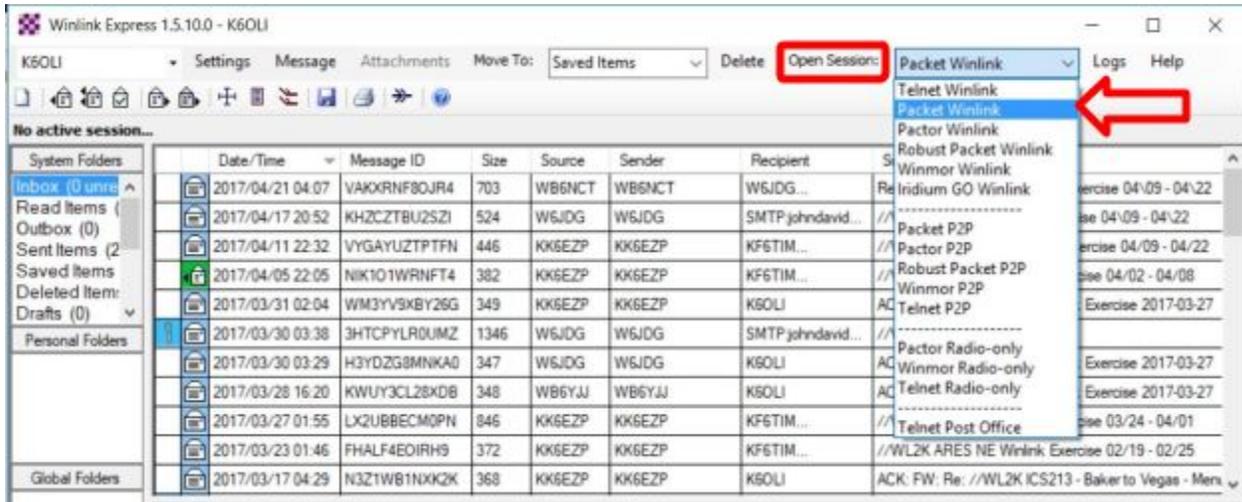
You only have to do this once (unless your personal information or location changes, e.g. Call Sign, Registration Number, Locator, etc., then update in Winlink Express Setup).

Entering your locator here will help you later finding Winlink Gateways near you. You can look up your Maidenhead Locator at

[http://www.levinecentral.com/ham/grid\\_square.php](http://www.levinecentral.com/ham/grid_square.php)

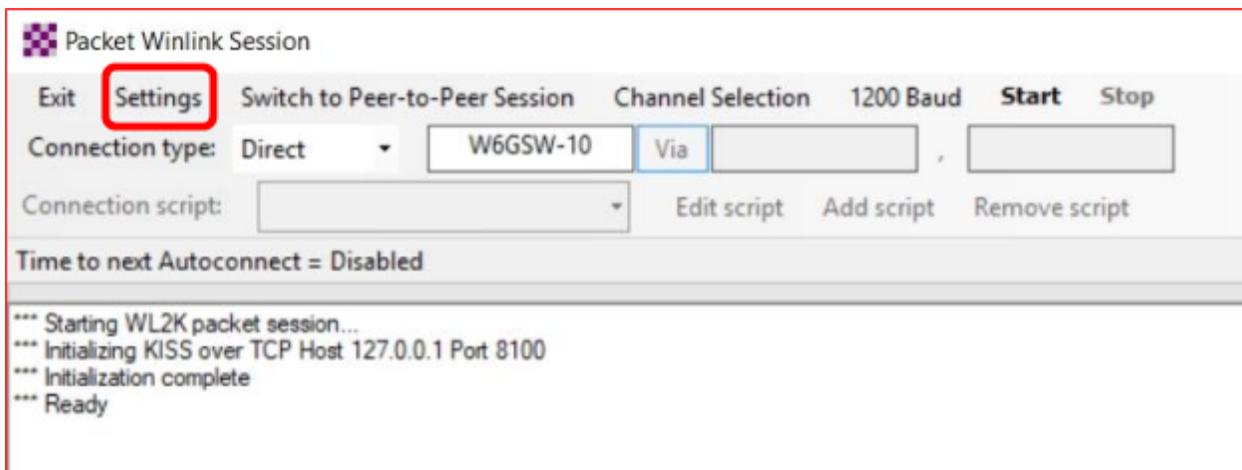
# Packet Winlink

Select Open Session: **Packet Winlink**



Click on **Open Session:**

You are now in the Winlink Packet Session



Click **Settings**

Packet Winlink/P2P Setup

TNC Connection

Packet TNC Type: **KISS**

Packet TNC Model: **NORMAL**

Serial Port: **TCP**

TCP Host/Port: **127.0.0.1** | **8100**

AutoConnect Time: Disabled

If Auto Connect is enabled, open session when Winlink Express is started

TNC Parameters

**1200 Baud**     9600 Baud

TX Delay (Milliseconds): 400    300

Maximum Packet Length: 128    255

Maximum Frames: 4    7

Frack: 2    2

Persistence: 160    224

Slot time: 30    20

Maximum Retries: 5    5

Disable Xmit Level Adjust     Transmit Level: 100    100

**Enable IPoll**   

Update    Cancel

Select Packet TNC Type: **KISS**

Select Packet TNC Model: **NORMAL**

Note: some gateways support ACKMODE, which may be useful if there is a lot of traffic, some gateways do not, so NORMAL is a good place to start.

Select Serial Port: **TCP** (instead of COM port options in the dropdown menu)

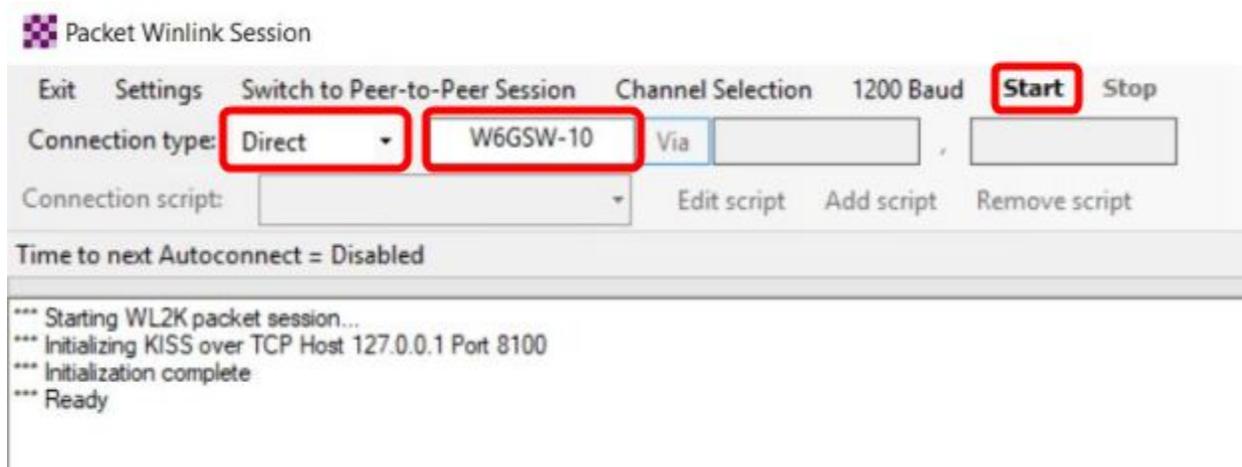
Set TCP Host / Port: **127.0.0.1 / 8100**

Select TNC Parameters **1200 Baud**

Check **Enable IPoll**

Click **Update**

Connecting to a gateway



Select Connection Type: **Direct**

Enter Gateway name, in this example: **W6GSW-10**

**On your radio set the frequency** to the gateway frequency, in this example 145.050MHz. This frequency will be different for different gateways! Use Channel Selection (see Quick Tip below) to make sure you have the correct gateway and frequency for your area.

Note: Some radios require digital mode to be enabled before you can make a digital connection on the selected frequency. Please refer to your radio manual for details.

Click **Start**

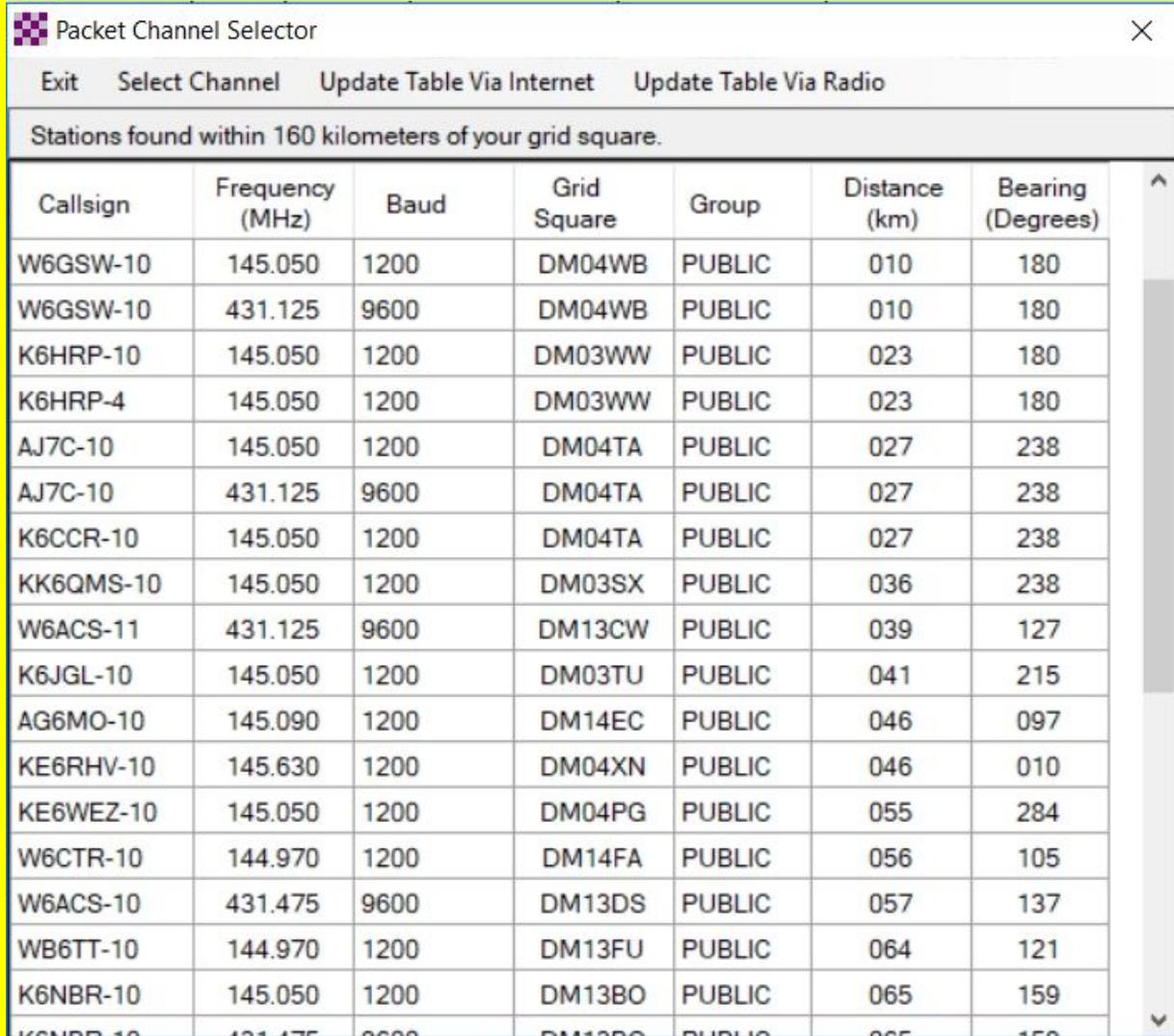
### Quick Tip: Channel Selection

Update your available channels on a regular basis, once a month at the very least. Using Channels automatically populates the relevant fields in the Packet Winlink Session window.

Click **Channel Selection**

Click **Update-via-Internet**

(if you have filled in your grid square correctly in Winlink Express Setup, the Channel list autopopulates)



Packet Channel Selector

Exit Select Channel Update Table Via Internet Update Table Via Radio

Stations found within 160 kilometers of your grid square.

Callsign	Frequency (MHz)	Baud	Grid Square	Group	Distance (km)	Bearing (Degrees)
W6GSW-10	145.050	1200	DM04WB	PUBLIC	010	180
W6GSW-10	431.125	9600	DM04WB	PUBLIC	010	180
K6HRP-10	145.050	1200	DM03WW	PUBLIC	023	180
K6HRP-4	145.050	1200	DM03WW	PUBLIC	023	180
AJ7C-10	145.050	1200	DM04TA	PUBLIC	027	238
AJ7C-10	431.125	9600	DM04TA	PUBLIC	027	238
K6CCR-10	145.050	1200	DM04TA	PUBLIC	027	238
KK6QMS-10	145.050	1200	DM03SX	PUBLIC	036	238
W6ACS-11	431.125	9600	DM13CW	PUBLIC	039	127
K6JGL-10	145.050	1200	DM03TU	PUBLIC	041	215
AG6MO-10	145.090	1200	DM14EC	PUBLIC	046	097
KE6RHV-10	145.630	1200	DM04XN	PUBLIC	046	010
KE6WEZ-10	145.050	1200	DM04PG	PUBLIC	055	284
W6CTR-10	144.970	1200	DM14FA	PUBLIC	056	105
W6ACS-10	431.475	9600	DM13DS	PUBLIC	057	137
WB6TT-10	144.970	1200	DM13FU	PUBLIC	064	121
K6NBR-10	145.050	1200	DM13BO	PUBLIC	065	159
K6NBR-10	431.475	9600	DM13BO	PUBLIC	065	159

Double-click the channel you want to use.

The Packet Winlink Session window will read **ATTENTION: Set the packet radio frequency to xxx.xxxMHz**, this also gives you the frequency you should set your radio to.

### Quick Tip: Winlink Screen Resolution Fix

In some cases Winlink resizes, making the font painfully small to read. You can keep this from happening by following these steps:

**Right mouse-click** on the RMS Express icon.

**Select** <Properties>.

**Select** the <Compatibility> tab.

**Check** <Override high DPI scaling behavior>.

In the <Scaling performed by> drop-down box **select** <System>

**Check** <Disable full screen optimizations>.

Click **OK**.

