Icom ID-5100, SignaLink USB, Winlink, Windows 10

It turns out that using *Winlink* with an *Icom ID-5100* and a *SignaLink USB* unit is pretty straightforward. You will still need to use the instructions that come with the SignaLink to complement.

Initial Hardware Configuration

<box red 100% |**Important**> Read and follow the instructions that come with the SignaLink unit carefully. These notes are missing some important details. </box>

Although the IC ID-5100 requires the "RG45" cable, you should purchase a SignaLink USB that comes with a different cable (such as the "6PM") since regular Ethernet patch cords are easy to come by.

- Remove the four Allen screws at the **front** of the SignaLink and slide the case off.
- Install the jumpers using this wiring page (scroll down to "RJ-45 Mic Connector" and make sure that "ID-5100A/E" is in the "radio model" column and secure the case back on). For quick reference:

G	no jumper
G	→ 7
G	→ 5
- - -	no jumper
PWR	no jumper [1]
PTT	→ 4
MIC	→ 6
SPKR	no jumper [2]

Connect the Signalink to the computer in this order:

1. Make sure the SignaLink unit is off.
2. Tune the radio to a simplex frequency not in use.
3. Connect the radio's speaker jack to the SignaLink's SPKR jack using the audio cable included.
4. Connect the radio's mic jack to the SignaLink's RADIO jack using a short Ethernet patch cord (RG45).
5. Connect USB cable between SignaLink to computer.
6. Set the SignaLink USB's TX level control to minimum (fully counter-clockwise), the RX level control to 50%, and the DLY control to minimum.
7. Power on SignaLink unit.
8. Wait for Windows to download and install any new drivers it may need.

Initial Software Configuration

Windows Sound

- Right click on the speaker icon (near the clock)
- Select "Playback Devices"
    - Select "Speaker" and click on "Set Default" at the bottom of the window. This will ensure that any windows generated sounds are played through the speakers instead of being transmitted on the air.
    - Select "USB AUDIO CODEC"[3] and click on "Default Communication Device".
    - At this point, you might as well double click on the device and rename it "Signalink". This will be useful if you ever connect multiple sound cards to the computer.

- Select the "Recording" tab
    - Select "Microphone" and click on "Set Default" at the bottom of the window.
    - Select "USB AUDIO CODEC" and click on "Default Communication Device"
    - Rename it "Signalink" also.

There should be a green check mark beside the speaker/Microphone (general computer sounds), and a green telephone beside the USB AUDIO CODEC (Default for communication sounds)

- Optionally, double click on the "USB AUDIO CODEC" and select the "Listen" tab and check the "Listen to this device" box to hear the radio through the computer's "Default Playback Device".

- Select the "Levels" tab and set the volume to 50%

UZ7HO SoundModem

- Download soundmodem1xx.zip
- Unzip the content to a convenient folder and create a link to the `exe` somewhere on your desktop for easy access.
- Configure the `Settings` → `Devices` and `Modems` as follow:

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 type ch: A

Mode	AFSK AX.25 1200bd ▾	
TXDelay	250	msec
TXTail	50	msec
Add. RX	0	pairs
Add. RX shift	30	Hz
Bits Recovery	NONE ▾	

- Make sure that all three nobs on the SignaLink are turned to "0"[4)]

- Output volume calibration. The idea here is that you want to transmit the loudest volume possible without over driving and distorting the signal. In general, there's three different volumes to adjust: the computer's output, the radio's microphone gain, and the SignaLink Tx Volume.

 - Start by setting the Windows output volume to 50%. 🔧 **Fix Me!**

  - and the Radio's microphone gain to 2 (`Settings →` 🔧 **Fix Me!**)
  - To adjust the Signalink Tx Volume:
    - Select a simplex frequency not in use, and identify using your microphone to let other potential operators know of your intention to conduct a brief test.
    - Using a second radio, monitor the frequency.
    - In the "Calibration" menu, click on "Both Tones" and slowly move the TX dial back and forth until you find the spot where the two tones are the clearest with the least inter modulation.
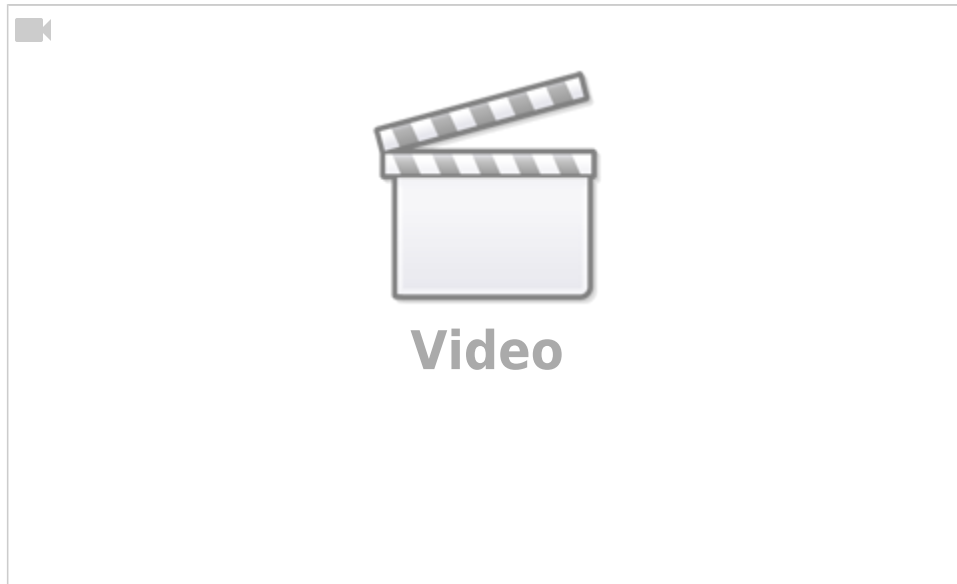
Without proper instruments this is a bit of a subjective test, but it's better than nothing.

Winlink

- Download WinlinkExpress, install, and register your callsign (not included in this guide).
- Send and receive messages.

Note

The first draft of this page was copied over from VA7FI's site with permission. Please feel free to expend on it.

[1]
The Signalink power is drawn from computer's USB port, not from the radio's mic jack
[2]
The mic jack on this radio doesn't have audio out so the audio is taken from the speaker jack at the back of the radio using a regular 1/8" audio cable instead
[3]
Note that the icons themselves might be different. Look for the words "USB AUDIO CODEC"
[4]
I added the numbers on the picture for easy reference only.