

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. In this guide, we begin with a quick operational checklist to switch from voice to Winlink, followed by a more detailed description of the initial setup. You will still need to use the instructions that come with the Signalink to complement.

Voice to Winlink Checklist

Important: If you haven't completed the initial setup yet, skip to the [Initial Hardware Configuration](#) section.

Follow these steps in order to use Signalink once the initial setup has been complete.

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. Power on Signalink unit.
7. Open SoundModem program monitor.
 1. Clap your hands. The water fall should not pick up sounds through the computer microphone. If so, check that in the Settings → Devices, the Output and Input devices are set to USB AUDIO CODEC
 2. Turn off the squelch on the radio, you should hear the sound through the computer speakers and see the waterfall running.
8. Open Winlink and:
 1. Open a "Packet Winlink" session.
 2. Click "Channel Selection", "Update Table Via Internet", and select a station.
9. Dial Radio to same packet frequency as the one selected in Winlink.
10. Make sure the radio is on Low power.
11. Ensure the correct transmitter is selected on the radio using the touch screen.
12. Press the **START** button in Winlink

Initial Hardware Configuration

Important: Read and follow the [instructions](#) that come with the Signalink unit carefully. My notes are missing some important details.

I purchased the [Signalink USB](#) that came with the "6PM" cable instead of the "RG45" cable because regular Ethernet patch cords are easy to come by and if I decide to use the Signalink with another radio later on, I'll have the "6PM" cable.

- 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".



- 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"



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:



- Make sure that all three nobbs 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%.

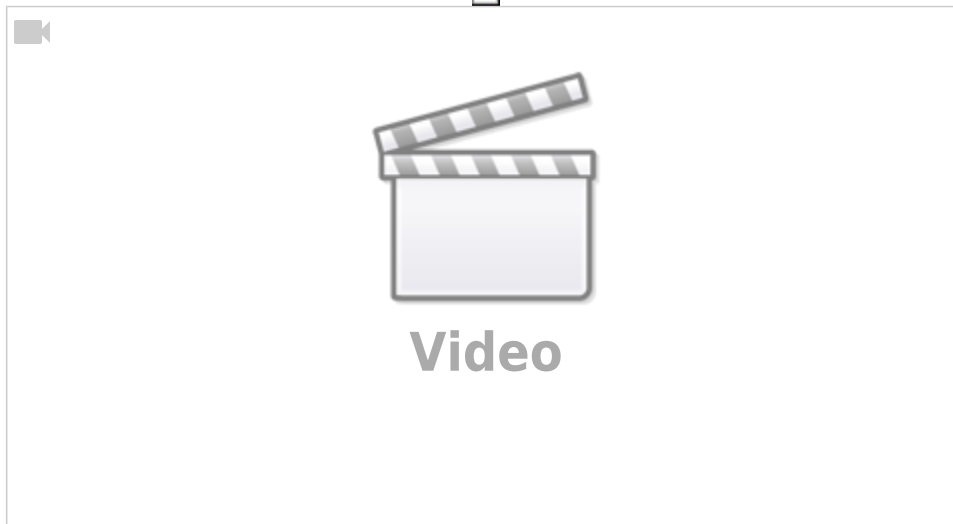


- and the Radio's microphone gain to 2 (Settings →



- 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).

My Setup



I use a short audio cable extension so that I don't have to reach behind the radio to connect and disconnect the speaker or Signalink cable, and I ziptied the Signalink patch cord (white) to the mic cord (black) so that they're easy to swap. Next, I'd like to get some sort of an A/B switch to easily select the Signalink or the external speaker.

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.