



## TigerTronics Signalink USB Interface

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When I first started in Amateur Radio a few years ago, I was interested in investigating the various digital modes that were available. The most cost-effective way was to use my computer sound card and the software applications that were available. I purchased Signalink SL-1+ interface from TigerTronics to function as the middleman between my transceiver and my computer. Not only did the Signalink provide excellent audio isolation and level management, I particularly enjoyed its ability to sense the transmit audio from the sound card and key the transceiver PTT (push-to-talk) line automatically. That meant that I wouldn't have to dedicate my computer's only serial port to transmit/receive switching.

But even though the Signalink had freed my serial port for other uses, there was still the question of the audio cables that snaked between the interface and the computer sound card. Like many hams, I use my sound card for a number of different purposes. I have audio cables connected to several devices including a dual tape deck, record player, VCR and a camcorder. Add the Signalink SL+ to the group and I had a nest of cables that had to be plugged and unplugged whenever I switched applications. The transmit/receive switching benefits of the SL+ notwithstanding, I still had to suffer with tedious cable swapping whenever I wanted to use it on the air.

### The USB Solution

When I saw the advertisement for the new TigerTronics Signalink USB, I realized that my problem was solved. The Signalink USB interface has a built-in low-noise sound chipset. This means that it doesn't need to connect to your computer's sound card. You simply plug the Signalink into any USB port and all computer communication is handled through that single connection. No other cable connections to your computer are necessary.

The Signalink USB brings the A/D,

D/A converters and op amp closer to the transceiver interface, which reduces overall noise in the system. Better yet, instead of manipulating the sound levels by using a computer mouse or track ball, traditional pots and knobs have been installed on the front of the unit. This makes it much easier to adjust the receive and transmit levels for the various digital modes.

The Signalink USB transmit/receive switching time can be controlled by an external time delay pot. The Signalink even obtains its 5 V dc power from the USB connector, so that's another issue solved. If you have several transceivers you could use a number of these units, each connected to its own USB port.



Connecting the Signalink USB to your radio is relatively easy. You can connect the unit to the transceiver data/auxiliary ports, or to the mike and speaker jacks. (TigerTronics sells pre-made interconnecting cables for a variety of transceivers.) There is a 16-pin DIN socket on the Signalink for receive audio, transmit audio, PTT and ground connections.

You configure the Signalink through the use of internal jumpers. Just do this once and you're good to go unless you change to a transceiver with different input/output wiring. TigerTronics further simplifies the jumper process by offering a pre-wired header for your particular radio.

The Signalink USB comes with a mini CD-ROM that contains a bundle of software that will get you on the air quickly. Of course, the Signalink will also operate with other available software. The operating system doesn't matter. If the computer has a USB port, it will work with the Signalink.

### The Proof is on the Air

When it comes to digital operating, I am mostly interested in PSK, RTTY and APRS (Automatic Position Reporting System). Pairing the Signalink USB with my ICOM IC-746PRO transceiver, along with *Hamscope* software, I had no problem copying RTTY and PSK31 signals at surprisingly low levels. During one PSK31 conversation, I dropped the receive audio level until there was very little background noise on the waterfall display and I was still decoding with no errors. That's a testimony to both the Signalink's performance as well as *Hamscope*.

Switching radio cables, I hooked up my ICOM IC-910H rig for APRS monitoring on 2 meters using *AGWPE* packet radio software. With the Signalink USB I could easily decode APRS data signals with the receive audio level control between 20% and 50%.

For an APRS transmit test, I opened the computer's audio mixer window and set the SPEAKER volume to 100% and the WAV output to 50%. With the Signalink transmit audio control adjusted to 10% of maximum, I could still transmit undistorted decodable packets.

I was curious about the Signalink's output frequency response, so I used an oscilloscope to measure the peak-to-peak output of a PSK31 signal at several frequencies from 100 to 2500 Hz. The output was adjusted to 300 mV and it remained fairly close to that value throughout the range. It is interesting to note that you can crank the Signalink USB audio output to 570 mV, and even as high as 2.2 V (through the use of an optional jumper), although I can't imagine that such a high level would be necessary.

TigerTronics has a great product in the Signalink USB. The only issue you may encounter is getting your hands on one. When this review was written, demand had outstripped supply, but TigerTronics is quickly closing the gap.

Manufacturer: TigerTronics, PO Box 2490, Grants Pass, OR 97528; tel 800-822-9722 (0700 to 1300 UTC); [www.tigertronics.com](http://www.tigertronics.com). \$99.95. 