

Amateur Radio Digital Data Signals

Getting Started

What do you need to get started

1. Radio appropriate for the band, either HF or VHF/UHF. You can use the same radio for Voice and Digital modes. It is easier if the radio has an auxiliary connection so that you do not need to keep swapping connections to the radio.
2. A sound card interface between the radio and the computer.
3. Computer – minimum I5 core, I7 better. I5 is too slow for some modems.

Radio to Computer Interfaces

1. Some modern radios have this interface built into them (ex. IC-7300 & IC-9700). For those radios, all you need is a USB cable.
2. For the radios that do not have a built in interface, here are some options:

“Cheap” Interface

- Audio Interface board - \$10
- Misc Connectors - \$2-3
- Radio Cable - \$6 - 20
- USB to Serial Interface - \$10-20. It has multiple uses.
- Total - \$30-50
- Pros – cost, learning experience
- Cons
 - you must make audio adjustments in multiple locations
 - Set audio for digital data
 - Turn off audio for all other applications
 - more to hook up
 - you have to build it
 - does not perform frequency control

“More Expensive” Interfaces

- You can save money (maybe) by building cables
- Digirig
 - <https://digirig.net/>
 - Unit - \$50
 - Radio interface cable - \$30
 - USB C cable - \$10
 - Cost (Items+shipping+tax) - \$102

Amateur Radio Digital Data Signals

- Pros
 - Easy to hook up
 - Performs frequency control
- Cons
 - All “sound” adjustments are made in the computer
 - Must order Digirig per radio (3 options, consumer can modify)
- Master Communications DRA modules
 - <https://www.masterscommunications.com/>
 - Cost \$80-100 depending on options, mostly type of case
 - Pros
 - Easy to hook up
 - Models available that use Signalink cables
 - Adjustments on the board
 - Cons
 - Some differences based on radio
 - Order/build cable separate.
- Tigertronics Signalink USB
 - <https://tigertronics.com/slusbmain.htm>
 - Cost \$139 – includes radio cable and jumper module
 - Upgrade to old units - \$80
 - Pros -
 - Easy hookup
 - Most inputs/outputs of all three
 - Adjustments on front Panel
 - Cons
 - most expensive
 - must order cable and jumper module to match radio. Fits multiple radios

Frequency Control Interface:

- For Icom Radios: Valley Enterprises Icom CT-17, \$32.50. The connector on the radio side will vary per radio manufacture.

Exercise: Setup for ID-5100 and computer for Winlink VHF/UHF

- Cheapest
 - Digirig Mobile CI-V
 - ICOM RJ-45 Cable for Digirig Mobile
 - Coiled USB-A to USB-C Cable (you may use your own and save \$10)

Amateur Radio Digital Data Signals

- This includes CI-V interface to control radio frequencies
- Cost \$102