

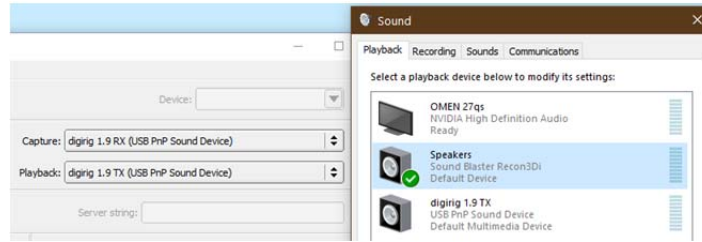
Kenwood TM-V71A - digirig 1.9 - fldigi 4.1.22 - Windows 10

A few words of caution, in light of the ever-changing landscape of hardware and software:

1. This is specific to the V71, connected via the DIN6. It may relate to other radios as well.
2. fldigi 4.1.22 found the correct COM port, but later versions didn't. However, the COM port drop list can be edited, so the correct COM port can likely be entered. Use the Device Manager to confirm COM port number.
3. There are several ways to get to the Windows Sound dialogue. This document assumes you know how to get there.

I always turn off my radios before dis/connecting anything but the antenna.

The first thing to notice is that I have named my device so that it is easier to identify in programs that use it.



In Playback and Recording, the digirig should NOT be a Default or Default Comm Device. Only fldigi will be using it.

In the Playback tab of the Sound dialog, select the digirig device driver, and click Properties.

If dB isn't displayed, right click the slider.

-Levels: Mic was set at 0.0 dB; it had no effect on the TX levels. My understanding is that the V71 massages the outgoing signal to keep it in a nominal range. At the lowest setting, no signal is sent. I set mine 1 step from the bottom, at -27.5 dB, and found that just a few dB more had a large impact on the signal as viewed in the receiving system. At -21.7 dB, the signal filled the RX fldigi SIG band limits. This suggests a lot of gain in the digirig hardware. I did all my testing with Tune at 512 Hz, because the fldigi SIG display doesn't have the same time adjustments that an oscilloscope has, and 512 Hz gave me a better view of the waveform.

-Enhancements: Select Disable all enhancements.

-Advanced tab: CD quality. I select both Exclusive Modes.

-Spatial sound: Off.

Select Apply, and OK.

In the Recording tab of the Sound dialog, select the digirig device driver, and click properties.

-Listen: Unselect Listen to this device.

-Custom: Unselect AGC.

-Levels tab: Set at runtime. My understanding is that the V71 sends audio OUT the DIN6 at a fixed level; that is, it can't be adjusted with the volume knob. To test this, I used a Signalink and an HT to send to the V71. With the digirig driver level set at +1.0 dB, I varied the SL TX level to the HT from min to max. The SIG display didn't change amplitude, but remained at a nominal 40% of fldigi SIG band. That seems to confirm that the V71 is massaging the signal to some nominal level. Leaving the SL TX set midrange, I increased the digirig driver level from +1.0 dB. At +12.0 dB, the signal filled the fldigi SIG band. This again suggests a lot of gain in the digirig. These findings are why I recommend using Tune at the start of a net so that receiving stations can be configured to optimal level settings.

-Advanced tab: CD quality. I select both Exclusive Modes.

Select Apply, and OK.

In fldigi...

Config Dialog...

Rig Control > Hardware PTT

... Select ONLY: Use separate serial port PTT, Use RTS.

... Device: Choose or enter the proper COM port.

... Click Initialize.

Soundcard > Device

... Enable PortAudio, and select your devices

Soundcard > Right channel: Unselect everything.

*** See the fldigi User Manual for RX/TX Audio Levels. I have found that the digirig Recording audio levels can easily overwhelm the fldigi SIG display band. Recall that the fldigi RX audio stream includes the radio volume > (hardware gain) > driver gain; the SIG level will depend on all 3. If the V71 uses a fixed audio signal, and the digirig has no adjustments, all the gain will be handled in the Sound driver.