

A Sound card interface for Amateur Radio digital modes.

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I once owned a commercially made sound card interface and eventually sold it when I discovered that I could make my own at much less cost. I found G4ILO's website, he is now long deceased but his website lives on and there I found his design for something similar. I adapted his design by including a sound card instead of using the computer's sound card and I also added small audio transformers to provide better isolation. G4ILO called his design a USBLink and I will call my design USBLink2. Here is G4ILO's website: <http://www.g4ilo.com/usblink.html>

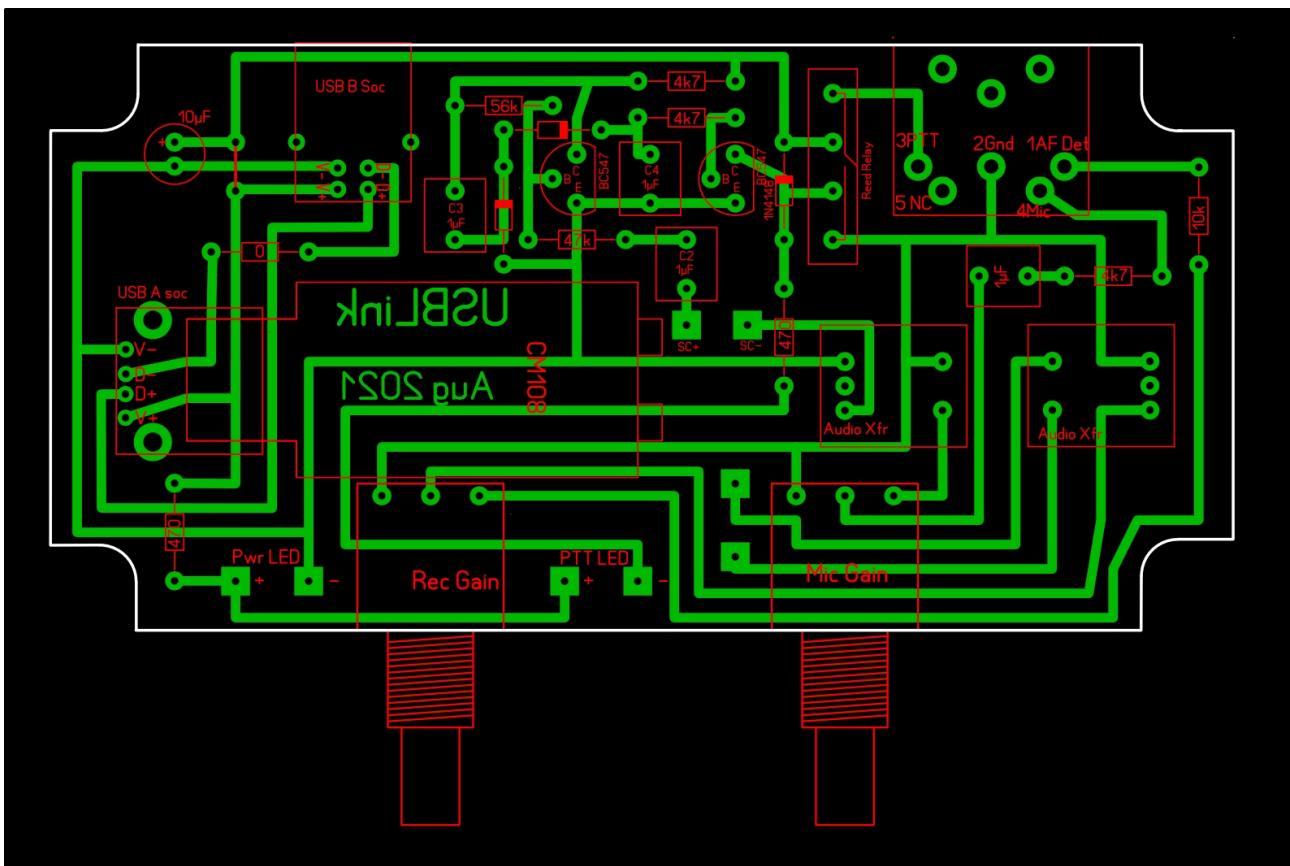
Small sound cards that plug into USB ports are available on the Internet for a few dollars but I found one that uses the CM108 Integrated circuit which is useful because the chip is not covered with a blob of insulation, but is left exposed so that all pins of the IC are accessible if you wished to use them. There is also a datasheet available if you needed it.

I constructed the interface so that it can be connected to a computer using a standard USB A to USB B cable. The USB port supplies power to the interface. I used G4ILO's circuit to provide the PTT signal via a relay in such a way that isolation is achieved. Two small audio transformers isolate the audio coming from and going to the sound card.

There are two control to set the audio levels to and from the radio and two LEDs that show power from the USB port ON and PTT ON.

Anyone wishing to use this circuit, is welcome to contact me and I can supply a board layout in JPeg format and a list of components and any other information needed. I use Sprint Layout and can supply the original file if needed. I can also supply Gerber files. The dimensions are 125 by 65 mm. The board is designed to fit into a standard plastic enclosure.

This is what the board looks like:



And here is the schematic:

