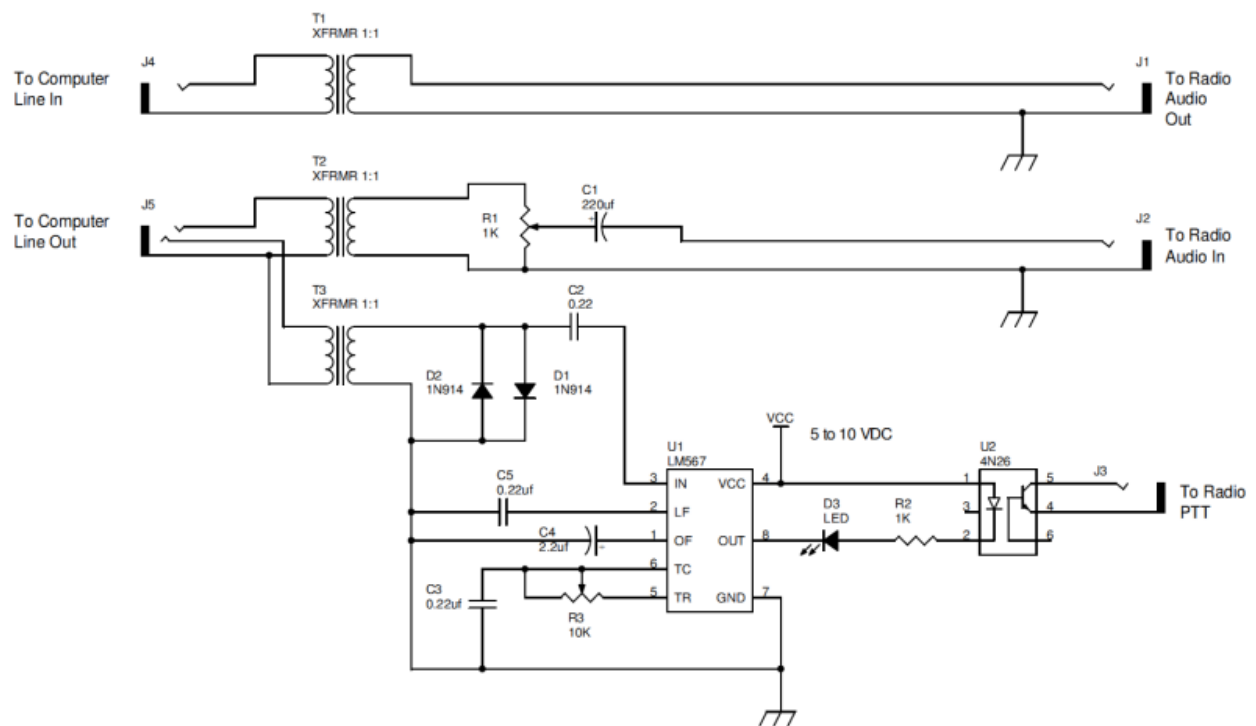


# Ham Radio Audio Interface

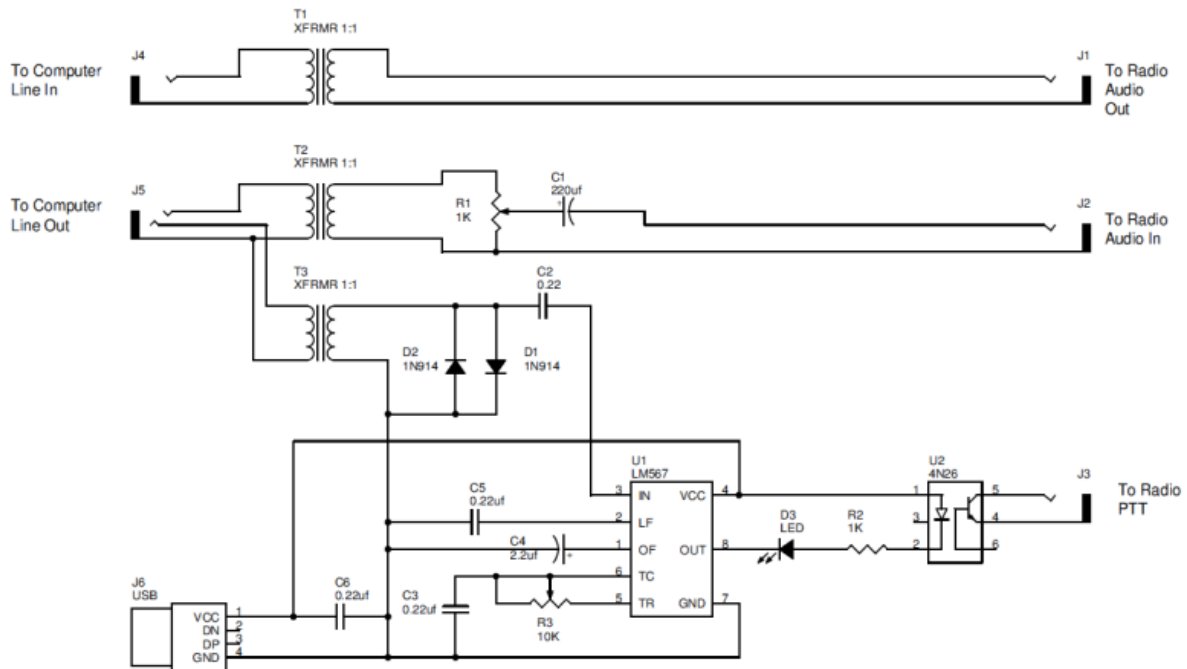
Last weekend, I came across an article in the August 2012 edition of QST. The author, David Spearing notes that Fldigi provides a 1 Khz tone on one of the two stereo audio channels when transmitting, and is rarely mentioned or circuits to use this feature.

## The KB9CSW Schematic



The spec sheet for the LM567 indicates that it works fine at 5 VDC. We can tap power from the USB port, and the USB cable can be obtained from that stockpile of dead USB mice. Below is the schematic adapting David's application with a USB cable for power(The QST article has a typo error).

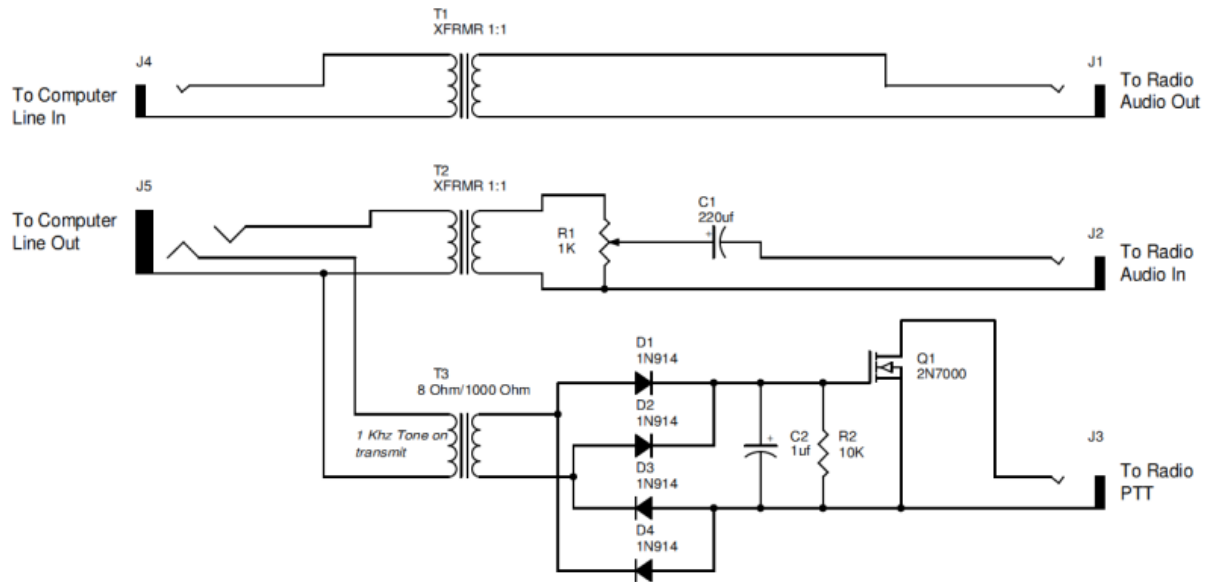
## The KB9CSW Schematic with USB for power



David provides a solution. And as I looked at his solution, I was already thinking, can we have a solution that doesn't require an external power source.

And now we have a passive PTT solution. The audio output on the right channel is fed to an 8 ohm to 1000 ohm transformer, to boost voltage level. The secondary side is rectified, full rectification for best output, to charge up a capacitor with it's bleed-off resistor. while there is tone, we will have voltage across the capacitor, and when the tone stops, then the capacitor is discharged accordingly. The voltage level from the secondary rectified/filtered output was observed at 2.5 VDC, sufficient voltage level to exceed  $V_{th}$  of a 2N7000 MOSFET.

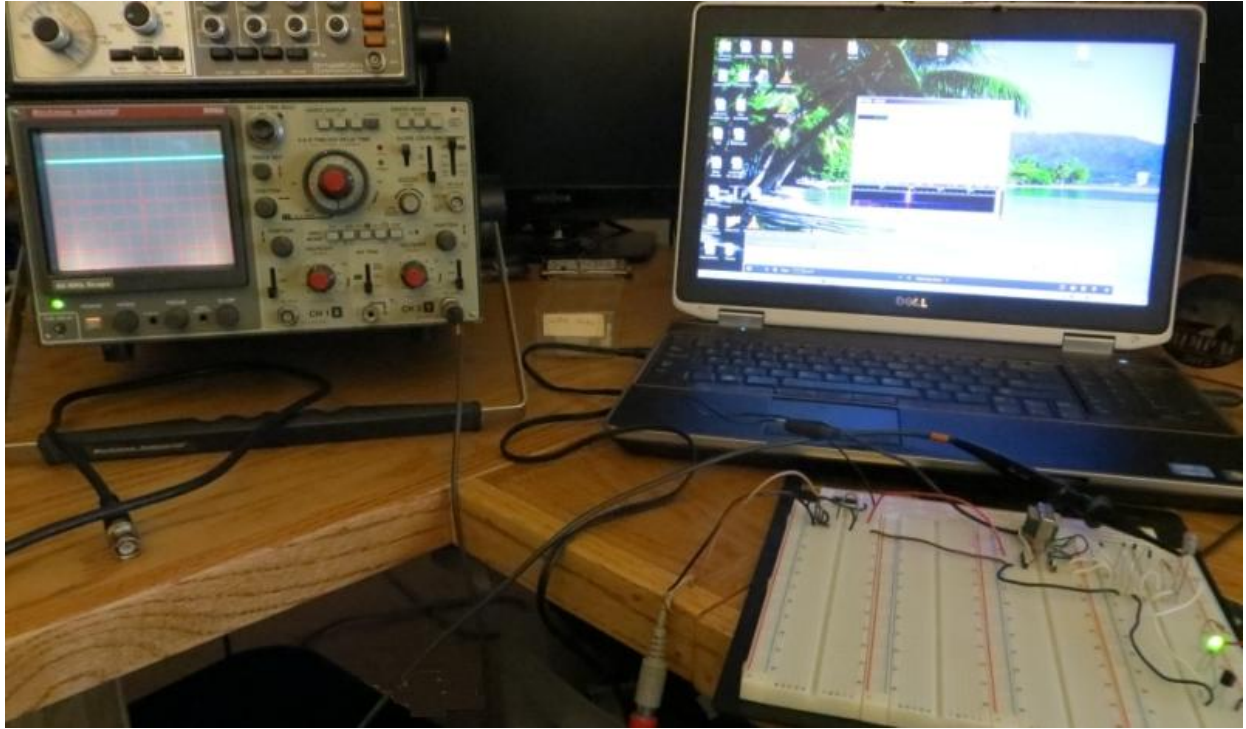
## The N1LAF Passive PTT Schematic



The proof is in the pictures. The source of the MOSFET is fed to a series LED/voltage dropping resistor to a 5 VDC power supply, sharing the same ground.



The LED is in the lower right of the pictures



July 4, 2014