Notes:

1. RX and TX audio interfacing is done via 3.5mm AUX audio cables. Stereo jacks + Stereo AUX cables are fine to use.

2. CAT control is done via a separate USB cable for uBitx.

3. NOTE: Use PC and Radio controls to adjust audio levels.

4. Use Bourns LM-NP-1001-B1L audio transformers for reproducible results. Be careful about 'bottom view pinout' vs 'top view pinout'. Note: Both the windings (4-1 and 5-8) are identical.

5. We recommend building this circuit in a progressive manner on a breadboard first.

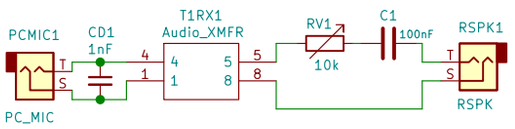
6. For debugging and quick TX testing purposes, Sound Card Output can be shorted with Radio Mic Input. 50 DX QRP QSOs in a single day (including US!) were also made this way ;)

7. We should probably block the Sound Card Mic's bias voltage too.

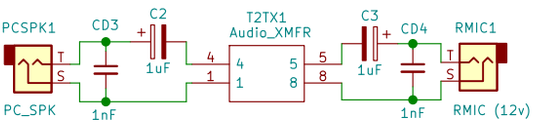
8. For fine line-level control, RV1 can be a *single-turn* 20k preset (RM-065). Note: use two pins only. Note: Make this pot external for best usability.

9. Note: The Sleeve ("S") is connected to Ground on both sides. With XFMR designs, the two GNDs are NOT connected together and are separate.

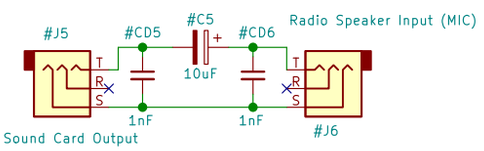
10. This digital interface works great with "Quantum USB Sound Card QHM 623" and similar reasonably priced clones.



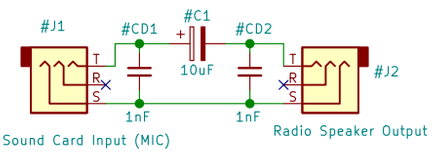
[RX path] Audio flows in right to left (R2L) direction



[TX path] Audio flows in left to right (L2R) direction.



[Quick TX path] Audio flows in left to right (L2R) direction



[Quick RX path] Audio flows in right to left (R2L) direction

v0.95 - Checked with 50 FT8 QSOs on air (on a single day)
27-December-2020
Authors: Dhiru (VU3CER), VU2ASH, VU2SFJ, Gordon Gibby, Kevin Loughin, VU2KYZ

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Title: LiDi (Light-Intuitive-Digital-Interface) for uBitx

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