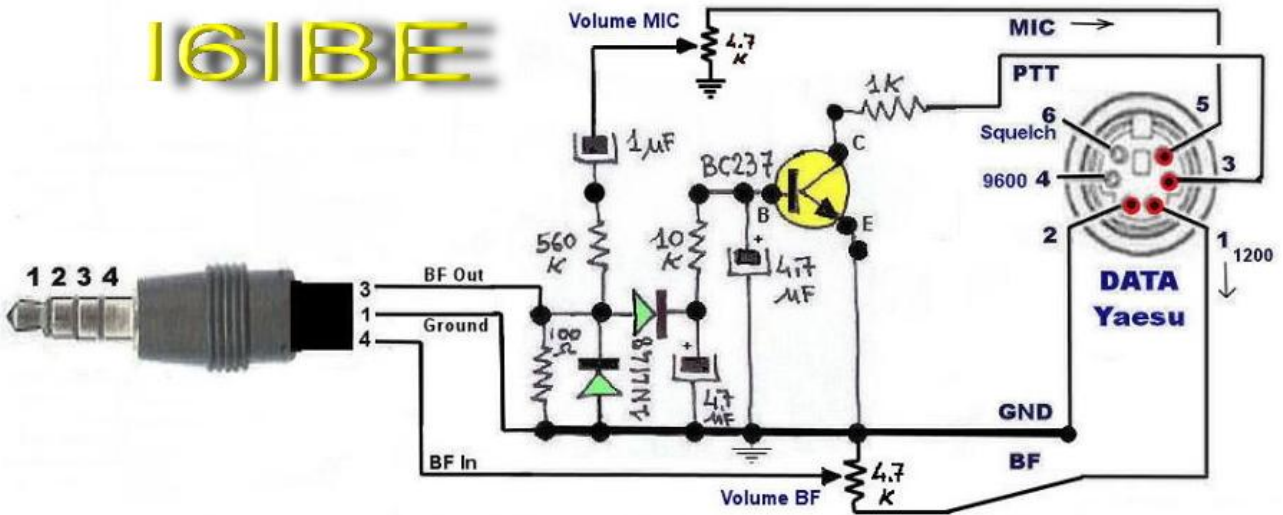


I6IBE Smartphone Interface

By Kevin Mc Donald ZS6KMD

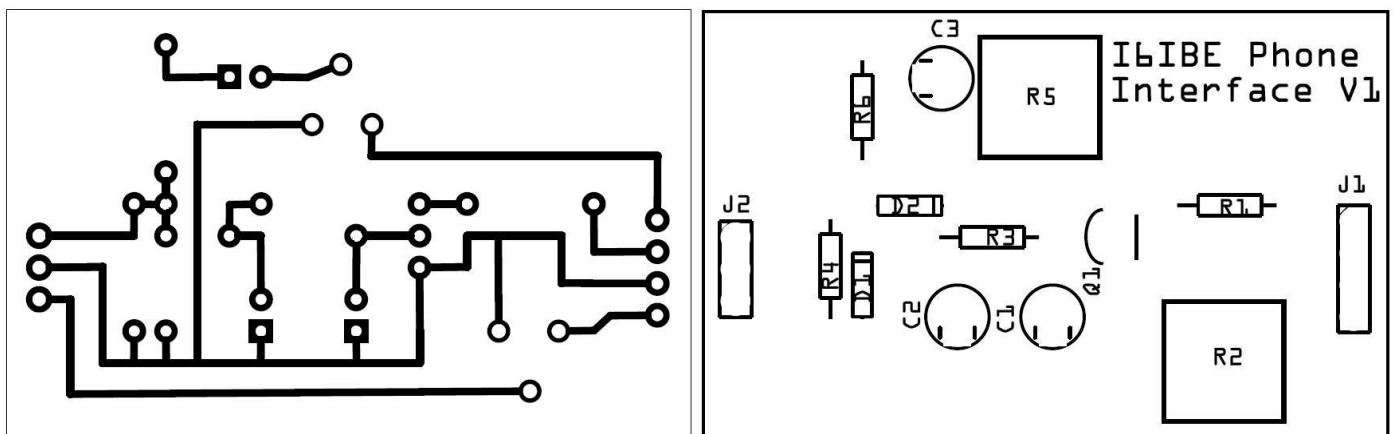


Thanks to Eddie Leighton ZS6BNE and Ivo Brugnera I6IBE we look at a Smartphone Data Interface this month. The design is based on a circuit from Ivo and shared by Eddie to the Zone 38 Discussion Forum. A simple design for use with the excellent applications by Wolphi available on the Android App Store. The interface is suitable for SSTV, RTTY, PSK31, WSPR and CW.



As shown in the image above, the circuit uses the BC237 to key the transceiver using an open collector configuration; Audio in and out is adjusted to suit the software and mode using R2 and R5. With a low component count (only 12), this is the ideal weekend project for the aspiring Digital Mode Operator. Thanks to Eddie using it out in the field while taking part in RaDAR is now a definite must for all.

I have designed a small PCB (55X35mm) that makes construction simple. The PCB files are available in the link at the end of this document or a complete kit can be ordered from ZS6KMD Projects & Kits.



Components:

R1 1K Ω	R2 4.7K Ω Pot	R3 10K Ω	R4 100 Ω	R5 4.7K Ω Pot	R6 560K Ω
D1 1N4148	D2 1N4148	C1 4.7 μ F	C2 4.7 μ F	C3 1 μ F	Q1 BC237

Construction:

Construction follows the normal order, starting with the smallest components, populate the board and solder them in making sure that no tracks are bridged and ensuring polarity is maintained for the semiconductors and capacitors.

Connecting to your radio to J1 needs to be done after referring to the user manual for your specific model. Starting at the top of J1 the first pin is the MIC input, the second pin is the PTT, the third pin is GND and lastly Audio out.

Connection to your phone is much the same; please refer to user manual to make sure of the connections beforehand. Starting at the top of J2, the first pin is Audio out, the second pin is GND and lastly the third pin is Audio in.

There you have it, a simple interface for use with your Smartphone and your transceiver to communicate using DroidPSK, DroidSSTV, DroidRTTY etc. Please send us some pics of your interface so we can pass them on to Eddie for the RaDAR blog and also post them in future articles. Mail can be sent to projects@zs6kmd.za.net.

Links:

PCB Files: <http://www.zs6kmd.za.net/I6IBE.rar>

Happy building