



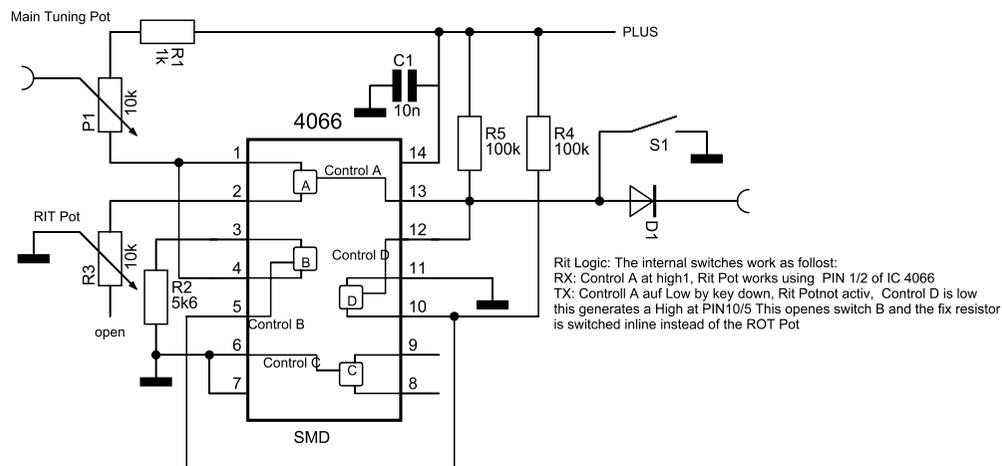
**DL-QRP-AG**

## **Universal RIT for different QRP receivers with Varicap VFO**

Es wird empfohlen, vor Baubeginn diese Baumappe komplett durchzuarbeiten. Baumappe Version 1.3

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This universal RIT was originally designed by Dave Benson of Small Wonder Labs with standard parts. It was discontinued some years ago. Because it's a real helpful little thing for small QRP rigs, we decided to redesign it using small SMT parts. The small PCB is soldered directly to the 3 PINs of the RIT Pot, so the complete RIT can be placed somewhere at the front panel without any extra mounts. The IC 4066 uses 4 fast FET switches with low „ON“



resistance. During Key on the RIT Pot is switch out of the line and replaced by fixed resistor R2, it's value is about the half of the RIT pot. If the rig is in receive, the VFO frequency is shifted by the difference between the actual resistance of the RIT Pot whis is now switched in line and R2.

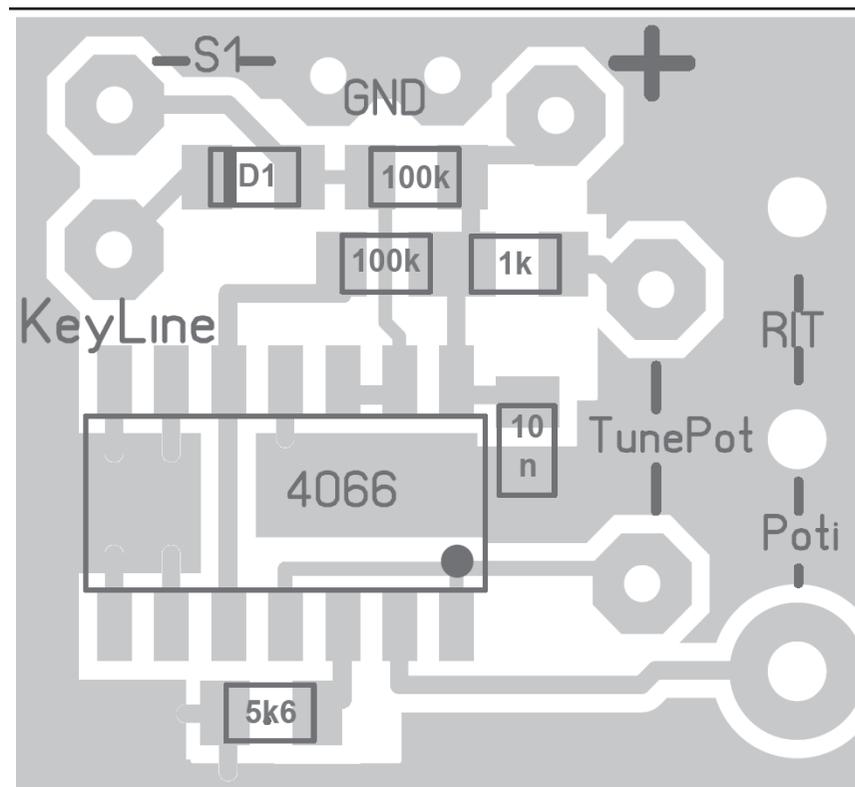
Assembling of the Universal RIT is very easy. Place the PCB on your work-bench as shown in the placement plan. Solder the IC first, take care to place the DOT, marking PIN 1 at the right place facing the bigger holes for RIT Pot and TUNE Pot.

[ ] IC1 4066

No place the resistors

[ ] 100k [ ] 100k [ ] 1k [ ] 5k6  
 and the Capacitor [ ] 10n (marked 104)

The Diode 1n4148 is a little bit bigger as the PADS are. Solder first the side facing the 100 k resistor. Place the Diode with the band (cathode) opposite to the 100k. leave a small gap between Diode and 100k resistor and solder. Dont forget to solder the cathode side. [ ] diode 1N4148.



Now apply the remaining parts:

Solder 2 wires between the solder pads -S1- and the switch. This switch if is in the off position activates the RIT.

[ ] S1

Solder a pair of wires between the solder lugs -Tune Pot - and both outer ends of the Tune pots. The middle connector (variable) of the tune pot stays connected to its connection point to the VFO.

[ ] Tune Pot connection

Connect the keyLine solder lug to key down line of your transmitter (or directly to the key entry point if you use a straight key.

[ ] key Line

Attach plus to a positive line of your transceiver (8-12V)

[ ] PLUS

connect ground of the RIT PCB to ground of your transceiver.

Remark: if you still use resistors between your tune pot and ground/plus they are not longer used but exchanged by R1 and R2 of the RIT