

## 4-valve 40m CW tcvr by PY2PBB

Written by Hans Summers  
Thursday, 27 April 2017 08:14 -

---

A very nice 4-valve 40m CW transceiver with QSK, submitted by Paulo PY2PBB.

{gallery}gallery10{/gallery}

### **Brief description of the circuit**

In RX mode, the rf input signal is mixed to the signal that come from the oscillator. The RF signal, after passing by the rf filter (tank circuit in TX mode), is mixed with the rf that comes from the oscillator, and the resulted audio is amplified by the double triode. In TX mode, with the key pressed, the PA tube starts to amplify the rf from the oscillator, injecting the signal via the tank circuit, to the antenna. With this arrangement, there is a small offset from tx and rx of near 500 Hz. The TX power is near 6W, but other tubes can be tested, in order to get more power. Other power sources can be used, but the aim of this circuit is to use readily available parts, avoiding that hard finding parts.....

This circuit proved to work very satisfactory as it is, but several possibilities could be considered, if desired, in order to improve some features, for example, the addition of pré rf circuit in rx, the addition of filter in the positive, the use of more power tubes, such as 6dq6 in the pa, etc.

So, this circuit is possible of several improvements, and the aim of it is to share experiences in tube transceivers. In the net, one do not see with frequency transceivers that are full qsk. Them all uses relays or keys to comute tx and rx. This transceiver (and my other circuits) do not use relays to convert between rx and tx.