FT290 CW KOX Circuit

By G8MNY (New Sep 04)

This is not actually break-in but just KOX circuit.

N.B. It can only be used on the CW mode otherwise it keys up the Tx!

Only very light currents are used in these rigs for the CW & PTT Lines & also a pulse detection circuit makes some KOX circuits unworkable.

```
+-- +6.8V
      \
      22K
      \ CW Jack __|_\ CW LOGIC
     / @ Rear /\ R I G
   |     |   +-----10K-----+ +5V
   |     |       |  |    Pin 4
   |     |       |  | C I R C U I T S
   |     |       |  | µPROC
   |     |       |  |++++>++++ PTT >-----<++++ LOGIC
   |     |       |  |  |    Pin 3
   |     |       |  |  D3 /\  |
   |     |       |  |  |    +----+--- Pulse
   |     |       |  |  |    P L U G
   |     |       |  |  |    M I C
   |     |       |  |  |    Circuit
   |     |       |  |  D2 /\  |  
   |     |       |  |  |    \e
   |     |       |  |  T2    |  P L U G
   |     |       |  |  |  T1    |  M I C
   |     |       |  |  |  |    PLUG
   |     |       |  |  |  |  \e
   |     |       |  |  |  CW  |  |
   |     |       |  |  |=== C1   |  |
   |     |       |  |  KEY X________|________|_____ GND
   |     |       |  |  Pin 1

T1,T2, = BC109 (high gain NPN)
D1,2,3 = 1N4148
C1 = 1 2.2 3.3 4.7uF depending on hang time wanted

HOW IT WORKS
1/ With the Key up, T1 is turn on by 1M & D1, the 1M is high enough not to load the CW circuit. T1 on keeps T2 turned off. PTT low, Rx Mode.

2/ On key down, D1 instantly discharges the 1uF & turns off T1. T2 is tuned on by the 10K & D3 from the MIC's +6.8V line. PTT Low... TX ON.

3/ In between key downs the 1uF starts to charge up from the 1M & if it reaches about 1V D2 conducts & T1 will turn on & state 1/ is reached. Otherwise further key downs repeat state 2/

PROBLEMS
If T2 does not operate rig properly, test PTT volts go from around 5v to 0.3V. Adjust the 10K if needed.

If the hang time is too slow try increasing the C1 to 2.2/3.3/4.7uF. etc

P.S. I have only bread boarded this circuit & tested it on FT290/690/790 mk 1 so far after Andy G0FTD wanted to know how to etc, & would like comments.

Why Don't U send an interesting bulletin

73 De John, G8MNY @ GB7CIP