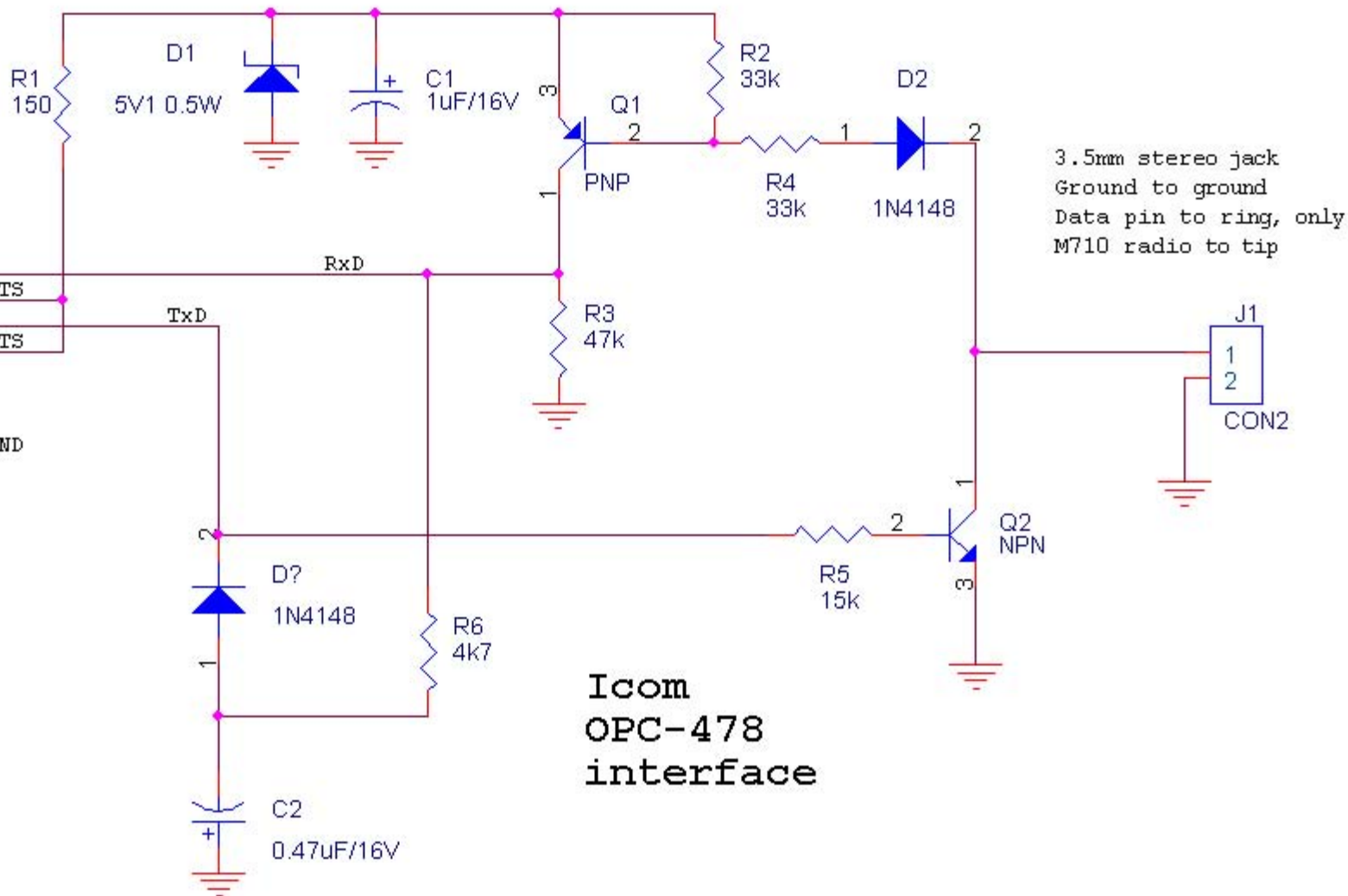
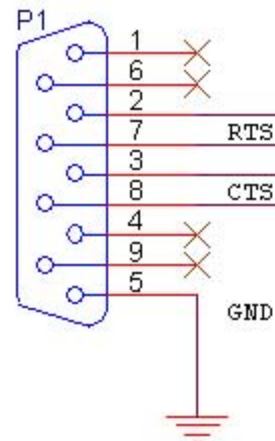
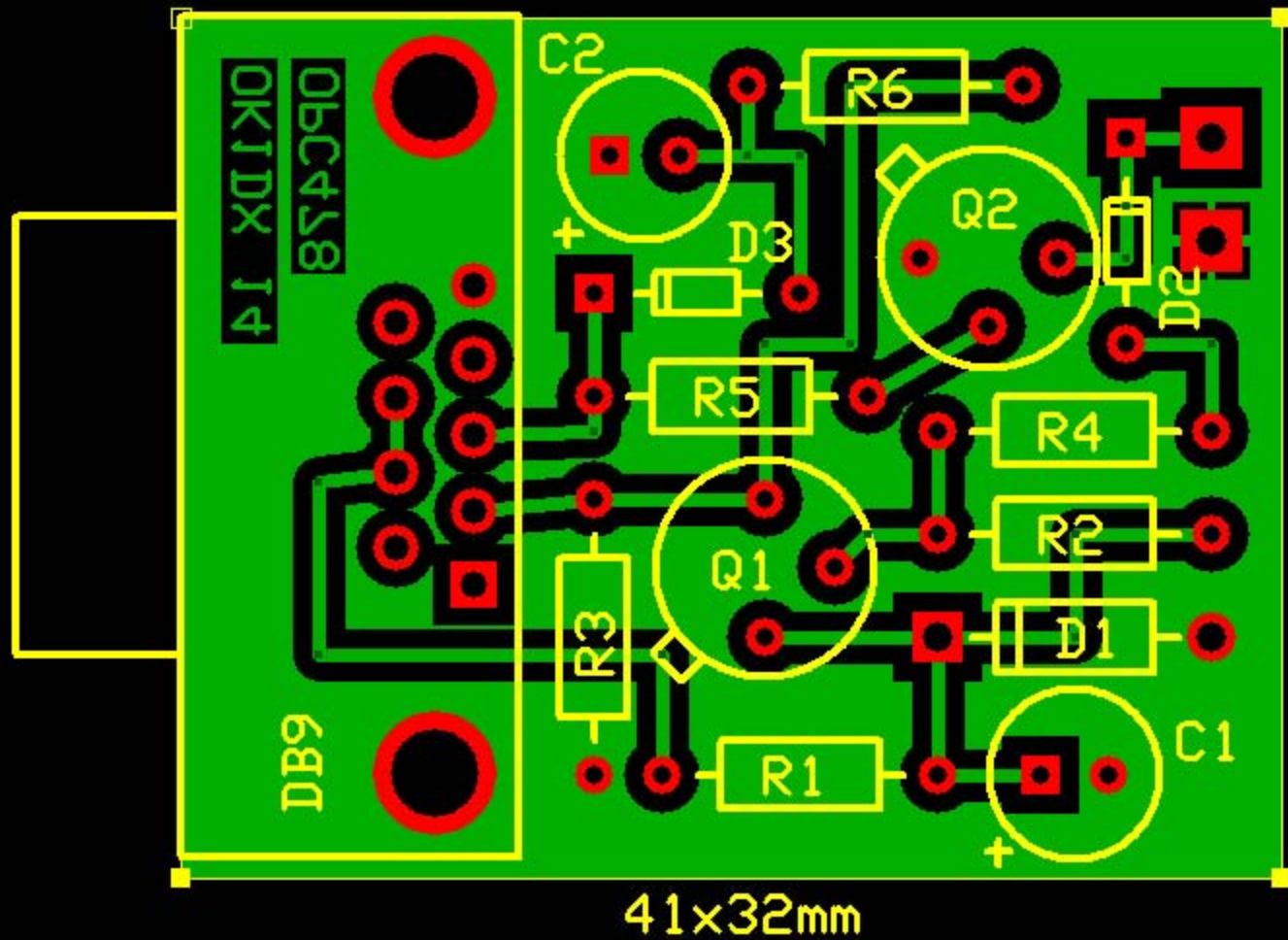
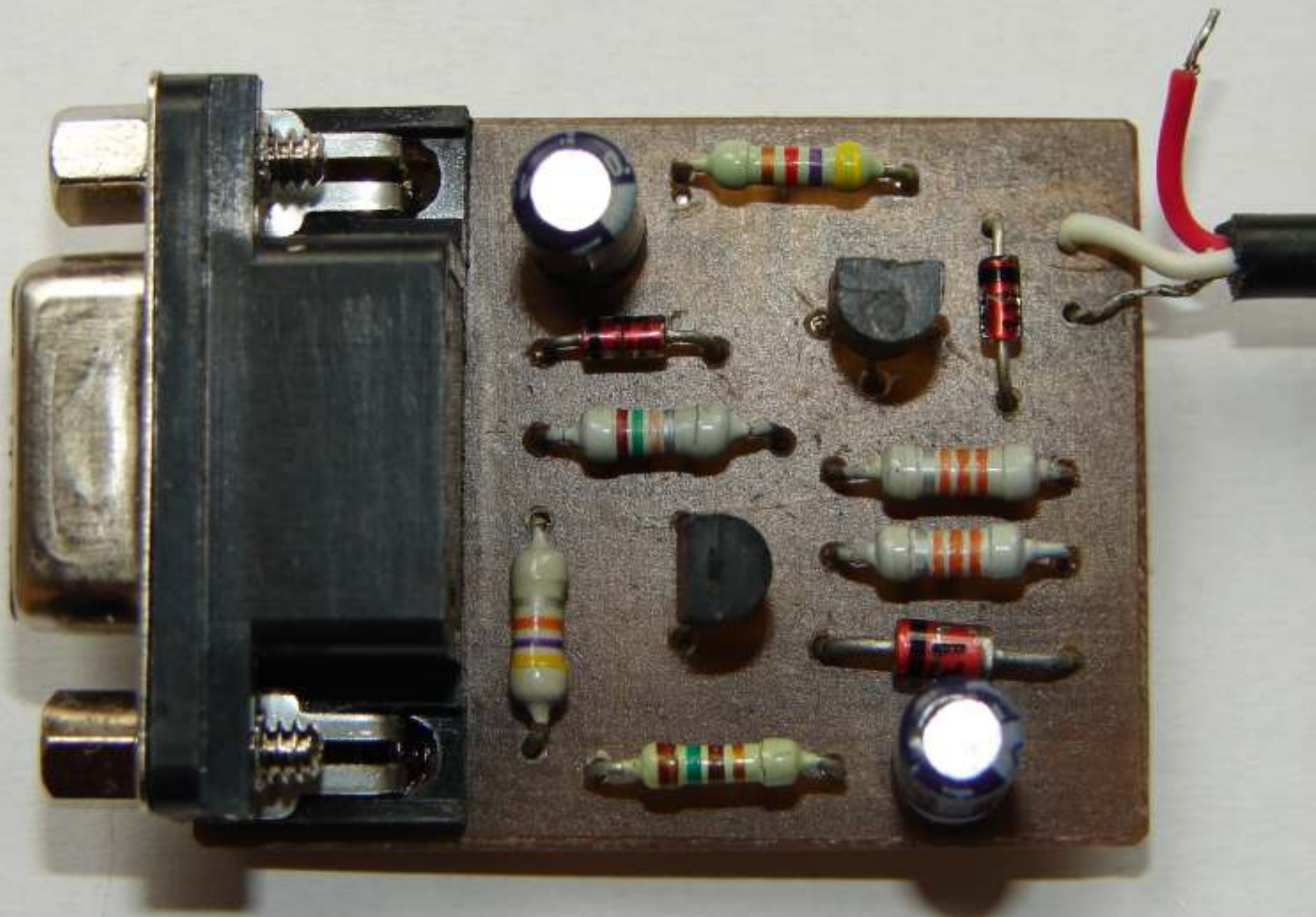
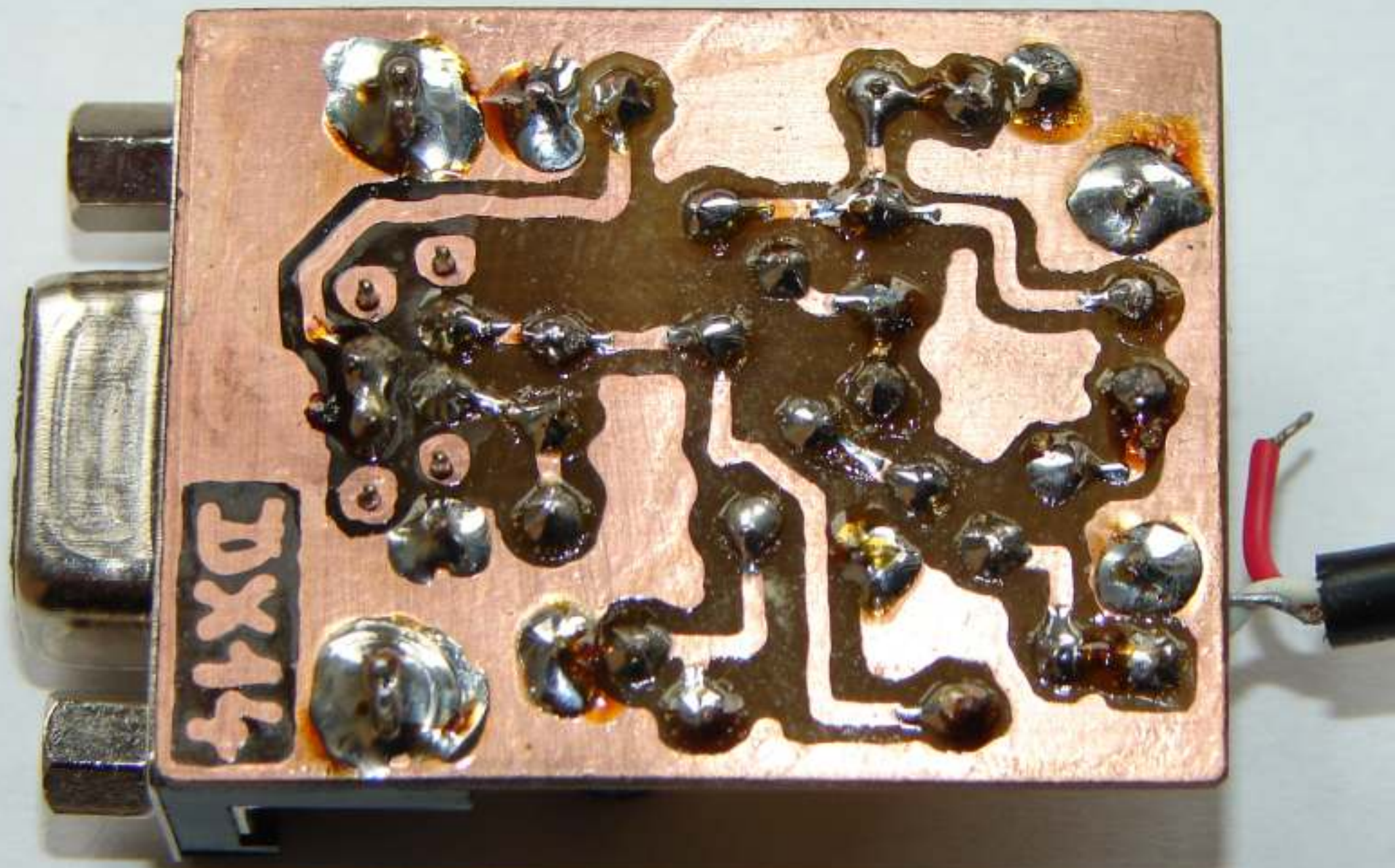


FEMALE DB9

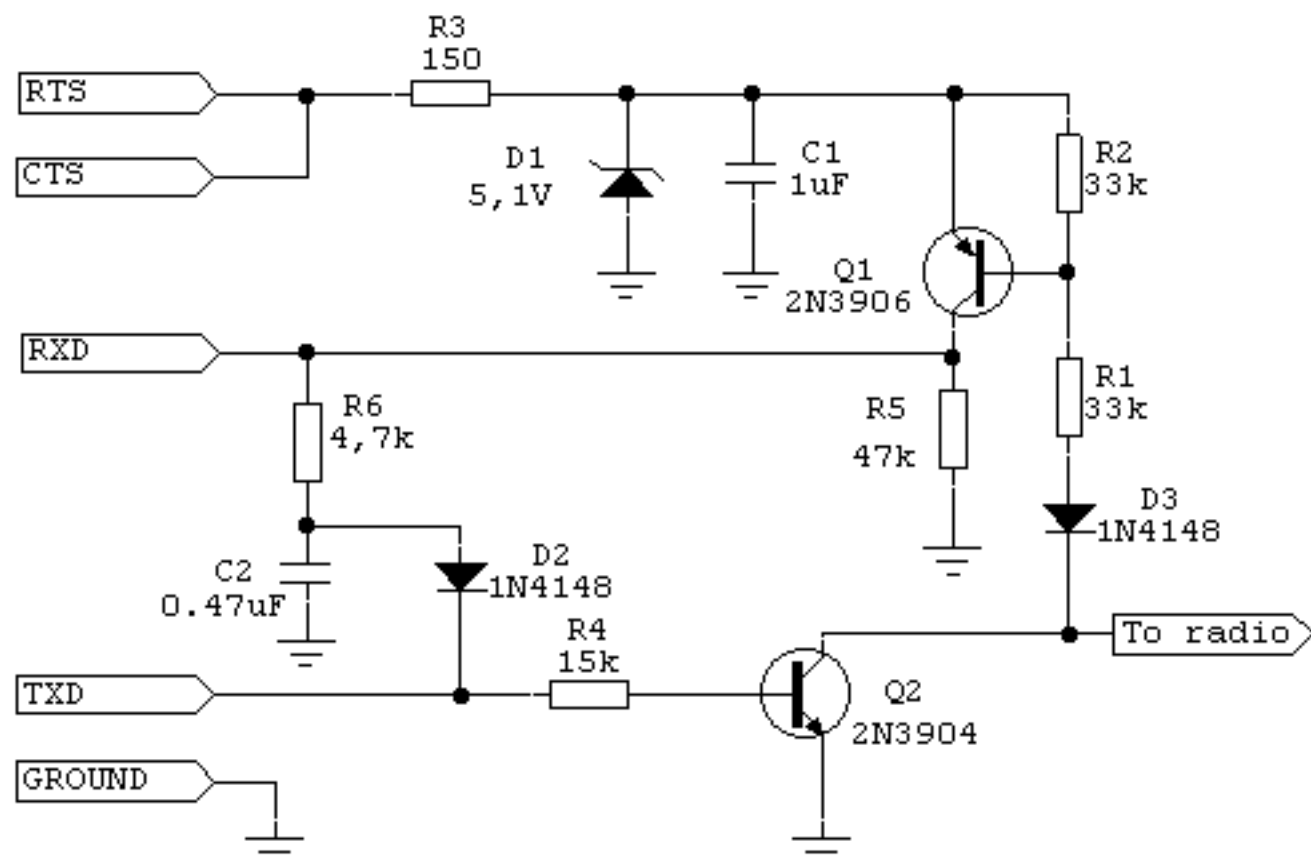




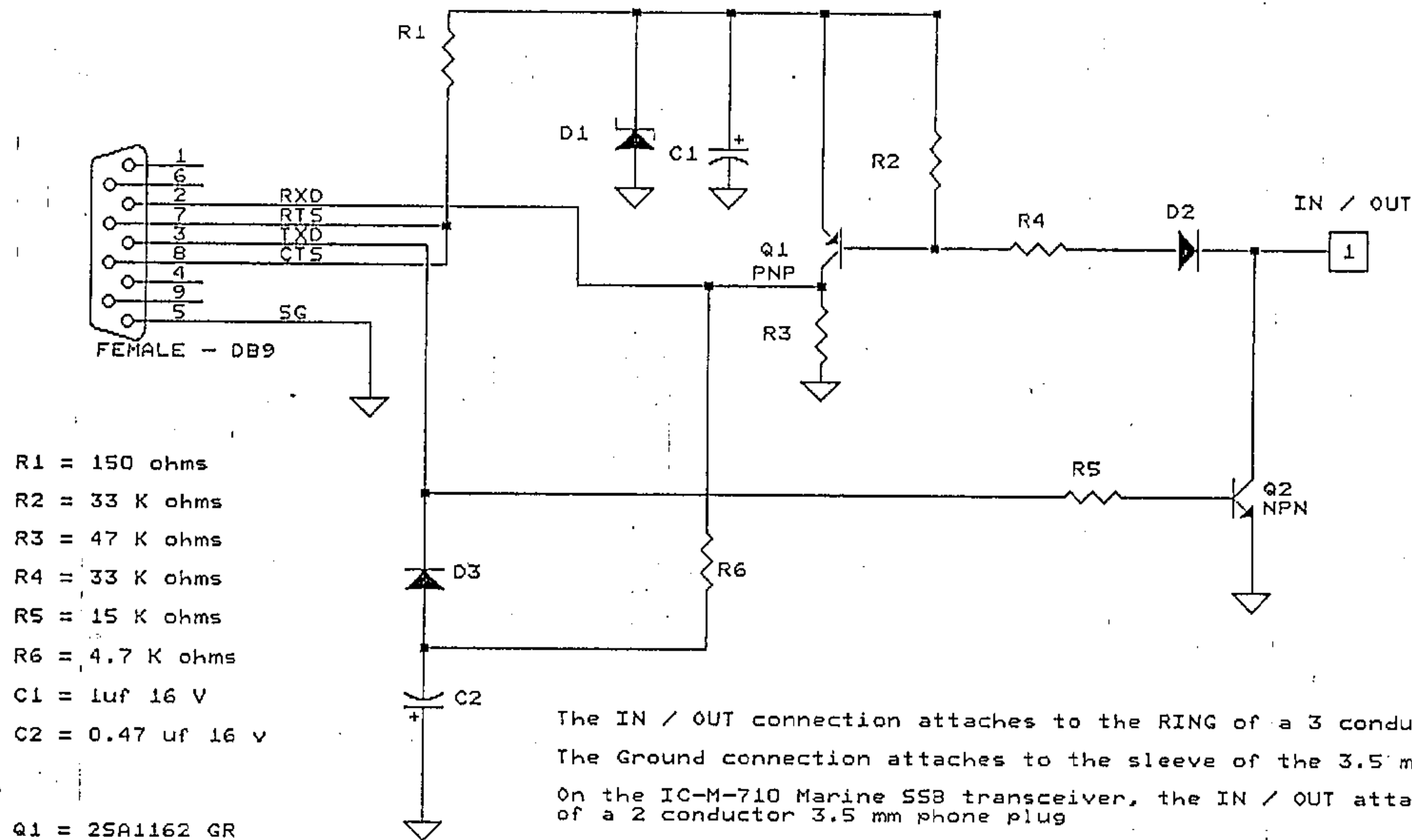




Icom interface OPC-478
can be used for programming radios
or PC control of HF transceivers



OPC-478 Cloning Cable Schematic



R1 = 150 ohms
 R2 = 33 K ohms
 R3 = 47 K ohms
 R4 = 33 K ohms
 R5 = 15 K ohms
 R6 = 4.7 K ohms
 C1 = 1uf 16 V
 C2 = 0.47 uf 16 v

Q1 = 2SA1162 GR
 Q2 = 2SC3324 GR
 D1 = 5.1 volt Zener 1/2 watt
 D2 = MA110
 D3 = 1SS133

The IN / OUT connection attaches to the RING of a 3 conductor 3.5 mm phone plug
 The Ground connection attaches to the sleeve of the 3.5 mm phone plug
 On the IC-M-710 Marine SSB transceiver, the IN / OUT attaches to the TIP of a 2 conductor 3.5 mm phone plug

ICOM America, Inc		
2380 116TH Ave. N. E.		
Bellevue, WA 98004		
Title		
OPC-478 Cloning Cable		
Size	Document Number	REV
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Date:	March 25, 1997	Sheet 1 of 1