TAPR Versatile WSPR Bias Current Adjustment

The VW’s are shipped as a kit. This requires the user to adjust the bias current after the kit is assembled. It’s best to defer this operation until after the rest of the Setup and Adjustment process has been performed.

What you'll need to complete the assembly

- DVM (digital voltmeter)
- Small flat blade or phillips screwdriver

Procedure to set the bias current is:

- Measure the voltage between the Current and Vcc testpoints as shown in the figure below. There is a 1 ohm resistor between the testpoints, so the voltage between the testpoints corresponds to the current flowing through the resistor (10 mV equals 10 mA). The DVM positive/red lead goes to the Vcc testpoint. The DVM negative/black lead goes to the Current testpoint.
- The bias current is different for each band. Find the appropriate bias current from Table below.
- Start up the transmitter and wait until it’s transmitting (LED is on).
- Set the bias current using R11 (see figure below) using a small blade screwdriver (clockwise increases the current). For example, the bias voltage for an 80m WSPR transmitter would be set to 85 mV, which corresponds to 85 mA.
- Do not let the bias current exceed 90 mA (90 mV on the DVM).

<table>
<thead>
<tr>
<th>Band</th>
<th>Bias Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>160m</td>
<td>75 mA</td>
</tr>
<tr>
<td>80m</td>
<td>85 mA</td>
</tr>
<tr>
<td>17m/15m</td>
<td>80 mA</td>
</tr>
<tr>
<td>12m,10m</td>
<td>70 mA</td>
</tr>
</tbody>
</table>
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Current

R11

Vcc