

How Peak Envelope Power is measured at Station W1VTP

The purpose of this procedure is to confirm proper operation of the Bird 43 in the peak envelope power (PEP) mode.¹

Section 1 – Setup for establishing 1500 watt carrier level.

Connect the station according to **Figure 1, Setup**. Be sure to set the Tektronix 2445 for 50 ohm operation.

If necessary, back the 4273 sampler coupling out to minimum sampled output. Set the Bird 43 for average measurements.

Connect the sampled output to the input to the Tektronix 2445 oscilloscope.

With the transceiver in the CW mode, non-Iambic mode, key the transceiver and adjust the power output as read on the Bird 43 for 1500 watts.

Adjust the Bird 4273 sampled coupling and Tektronix 2445 for a full scale deflection (8 divisions). This establishes a calibrated relationship between the 43 and the 2445 for 1500 watts.

Section 2 – Checking for proper operation of the peak reading function of the Bird 43.

Set the Bird 43 for peak power measurement.

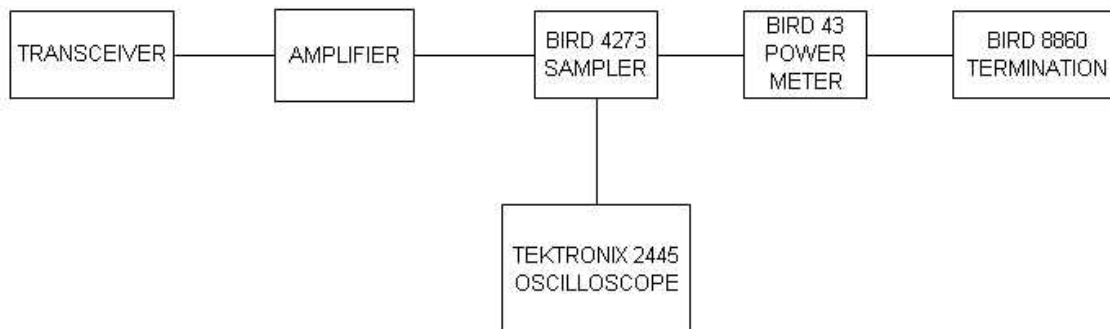
Set the transceiver for Iambic mode and press the dot paddle.

Adjust the scope timing and trigger for a coherent display. The peak of the RF power should be at full scale deflection on the 2445. If the scope does not display full scale deflection, adjust the power of the transceiver not the sampler or scope level. The Bird 43 should read 1500 watts PEP.

If the reading is lower than 1500 watts, the 9 volt battery is likely low and should be replaced. If replacing the 9 volt battery does not resolve the low reading, the PEP board will need to be calibrated.

The Bird watt meter may now be used to measure the peak power level of a SSB or AM transmitter.

FIGURE 1, SETUP



¹ This procedure assumes that the station has been properly adjusted for 1500 watt power level.