



## Calibration Instruction Sheet for Bird Element Model 4304A-1

### Purpose

Calibration of the Bird Element model 4304A-1

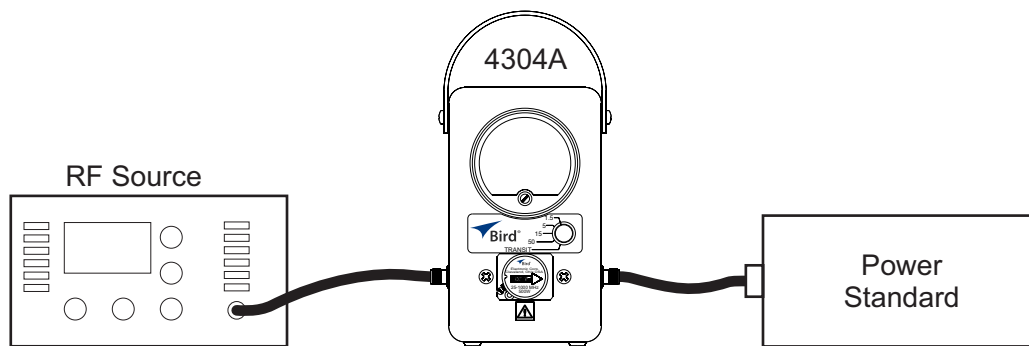
### Equipment Required

- RF source capable of 100 W from 25 MHz to 1000 MHz
- RF source capable of 500 W at 405 MHz
- Power Standard
- Model 4304A Wattmeter

### Procedure

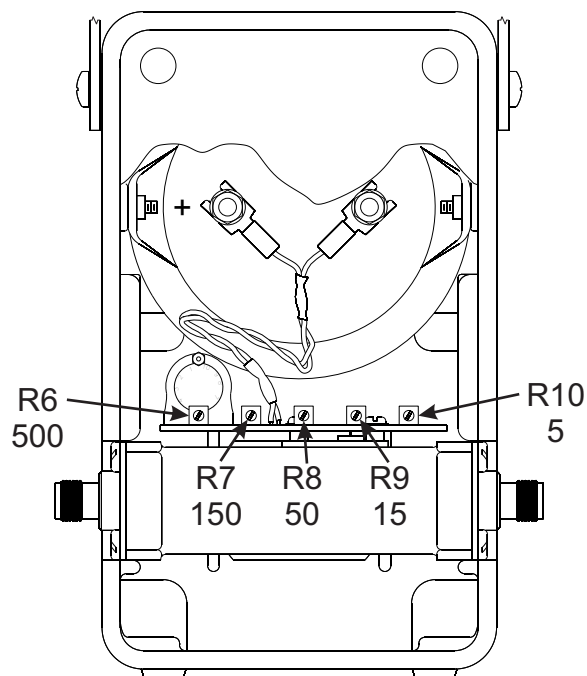
1. Setup the equipment. Refer to Figure 1.

**Figure 1** Equipment Setup



2. Set the range switch to "15" and apply an actual 12.5 watts at 100 MHz.
3. Adjust R9 for a meter indication of "12.5". Refer to Figure 2 on page 2 for the potentiometer locations.

**Figure 2 Potentiometer Locations**



4. Measure the actual power for a meter reading of "12.5" at 25, 50, 80, 150, 225, 400, 500, 800, and 1000 MHz.
5. Determine the average value, add the maximum and the minimum power readings and divide by 2.
6. Divide 156.25 by the average value, determined in step 5, and set the actual power at 100 MHz to this number.
7. Adjust the R9 potentiometer for a meter reading of "12.5".
8. Wait several minutes.
9. Set the range switch to "5".
10. Divide 50 by the average value and set the RF power at 100 MHz to this number.
11. Adjust R 10 for a meter indication of "4".
12. Set the range switch to "50". Divide 500 by the average value and set the RF power at 100 MHz to this number.
13. Adjust R8 for a meter indication of "40".
14. Record the power level for a meter indication of "40" at 405 MHz (for use in a later step).
15. Set the range switch to "150".
16. Divide 1562.5 by the average value and set the RF power at 100 MHz to this number.
17. Adjust the meter for a reading of "125".
18. Set the range switch to "500".
19. Multiply the actual power value (reading "40" at 405 MHz recorded earlier in step 13) by 10.
20. Apply this RF power level at 405 MHz and adjust R6 for a meter reading of "400".

The calibration of the element is complete. Turn the power down on all equipment before removing the wattmeter from the calibration setup.