

3. CALIBRATION CHECKS—THRULINE VS. TERMALINE WATTMETERS

It is recognized that calibration of absorption wattmeters is difficult and likely to be inaccurate unless comparison is made with a transmission (through) type of standard. The THRULINE being of such type, a natural question is: can a THRULINE be used to check or recalibrate absorption wattmeters, such as the Bird Electronic TERMALINE, both being rated at ± 5 percent accuracy? The main question is one of exact power calibration.

The answer is a qualified yes, although with both instruments being about equally old and known to be undamaged, there is not too much reason to prefer either on probable accuracy. The edge is somewhat in favor of the THRULINE, because each Element covers only 2-1/2 to 1 in frequency and will be flatter originally over this range than the TERMALINE can

be held initially over its very much wider (16.7 to 1) frequency range. Also the THRULINE will probably exhibit smaller changes with time, because of the narrower frequency range, because it is simpler in general design and easier in function (does not have to serve as a power load), and because it does not become heated in operation.

Certainly if the absorption wattmeter has gone years since calibration, or is reasonably suspected of inaccuracy, it may well be calibrated against the THRULINE as standard. (Rather than use correction factors, one can, with the TERMALINE Wattmeter, make use of the calibration adjustment screws used in factory calibration. These are concealed and not mentioned in instruction book to discourage tampering. Correspondence is necessary.)

If such calibration is undertaken, care and thoroughness are advised.

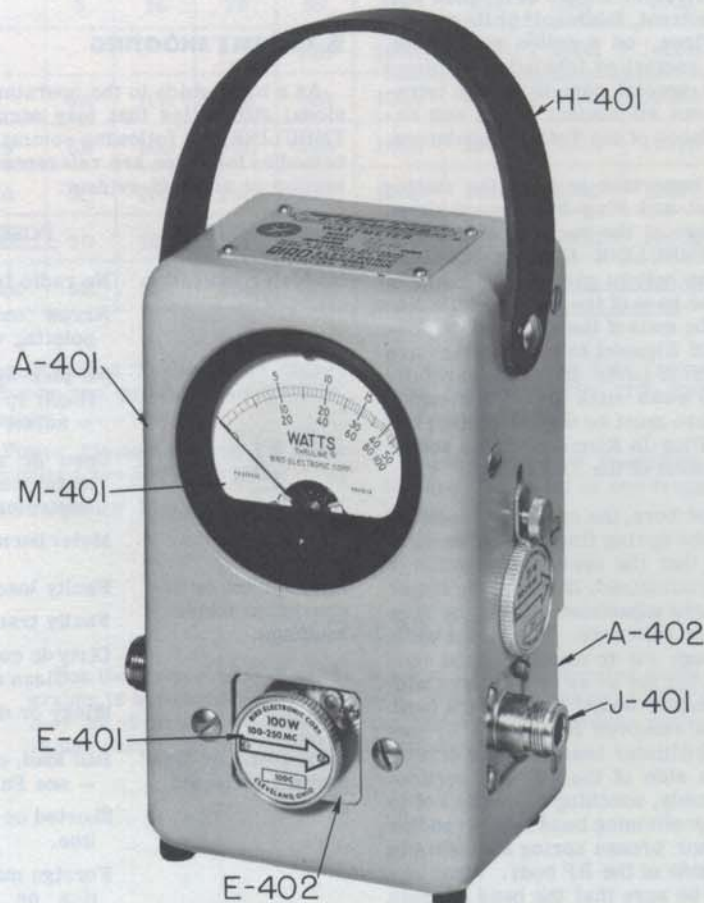


Fig. 5-1. Parts Illustration.