

HICKOK SERVICE OPTIONS

The following service upgrades are available for many Hickok testers!

1. SS-83 solid state rectifier: This replaces the 83 mercury vapor tube! This eliminates the hazardous material issue and reduces the typical problem of calibration drift in the tester. The 83 tube is the first and primarily the main cause of out of calibration and drift in the tester. This device has been designed to meet the requirements of the Hickok circuit design and operation to ensure proper calibration and correct/accurate Gm measurements.

There are two options: **Built in at \$55.00 and a plug in version that sells for \$55.00**

2. SS-5Y3 solid state rectifier: replaces 5Y3 tube! This tube is the second cause for out of calibration conditions in the tester! This device has been designed to meet the requirements of the Hickok circuit design and operation to ensure proper calibration and correct/accurate Gm measurements.

There are two options: **Built in at \$55. and a plug in version that sells for \$55.00**

3. Digital AC line set meter: This allows for a more accurate setting of the line set which has an effect on the degree of measurement accuracy of the tubes Gm (mutual conductance also called trans-conductance). All service testers and all Hickok models also suffer from this inherent design trade off. The 539 series and the 536/538 versions reduced this problem with the addition of the independent AC line set meter which allows for correcting the error (line sag) by readjusting the line set during the test operation. The digital meter makes it easier to adjust to the correct voltage and is more accurate than the older mechanical models! **Call or email for current pricing!**

4. Higher current 6 amp, or 10 amp at 6.3 volt filament transformer: This is both useful for testing 6.3 volt heater tubes which require up to 4 amps, or more of heater current, and important to add the required 6.3 volt heater to improve the accuracy of the Gm test results on these tubes. Many of the older testers suffer from a low heater voltage especially under load test conditions. This also reduces the accuracy of the test result. This addition will also allow for a lower load on the main transformer in the tester! Other transformers for 5.0 and 2.5/3.0 volt heaters are also available on request. 6 amp is \$40.00 and 10 amp is \$50.00 **For other transformers call or email for pricing.**

5. Precision calibration: This calibration includes installing precision resistors and trim controls to allow for improving the measurement accuracy of the tester! The improvement is typically from the standard +/- 10% to 12% to that of +/- 5% to 7% This is a Labor charge which includes all the required parts to improve the calibration! **Price is \$45.00**

6. Tight calibration with added calibration trim control: This improves the calibration and also allows for the trimming of key calibration items rather than selectively installing a resistor close enough to the required value based on standard resistor values which is the standard calibration method! The tighter calibration is about +/- 8% to 9% rather than the +/- 10 to 12% of the original factory calibration value! **This is a Labor charge and includes all the required parts to improve the calibration! Price \$20.00**

7. Calibration for using a variac (auto-transformer) to control the AC line set voltage: This is where the unit will be calibrated for allowing the customer to use a variac to adjust the line set on the tester. This greatly reduces the large line sag voltage that reduces the accuracy of the mutual conductance Gm measurement! Testers which have a separate line set meter like the 539A, 539B, and 539C already have improved capability because the ac line can be set separately and at the actual test load. The use of the variac provides even better accuracy over the adjustable resistor used in these testers which is in series with the primary of the power transformer! **Price \$10.00**

8. Addition of bias fuse lamp protection for units with no bias fuse: Early Hickok units did not have a bias pot protection circuit. If an error is made in testing a bad tube there is a good possibility to burn out the bias control which are no longer available. This upgrade installs this device as a circuit protection and it can be installed on the top panel, or inside the tester! **Lamp type - Price \$45.00**

9. Addition of bias fuse protection for units with no bias fuse: Early Hickok units did not have a bias pot protection circuit. If an error is made in testing a bad tube there is a good possibility to burn out the bias control which are no longer available. This upgrade installs this device as a circuit protection and it can be installed on the top panel, or inside the tester! Available for any unit without a bias fuse including the 539B and 539C models. **Fuse type - Price \$35.00**

10. Meter protection circuit: This addition reduces the possibility of meter damage from an excessive over voltage/current feed to the main Gm meter, includes parts and labor. **Price \$10.00**

11. Digital DC plate current meter: Price depends on type and mounting location.
Call or email for pricing.

12 Traditional mechanical plate current meter: Price depends on type and mounting location.
Call or email for more details and pricing.

13. Special bias adjust circuit independent of screen supply: Price varies by model call for details. Circuit modification makes the bias supply to 50 volts and it is separate from the screen supply!
Call or email for more details and pricing.

14. Digital meter set - AC line set, DC Bias, Plate Current: Price varies by combination.
Call or email for pricing.

15. Bogey tube: This is a 6L6 reference tube that is burned in and then tested to laboratory standards! The tube comes with a manual containing detailed data charts for use in checking, or calibrating most any tube tester. All data for accurately testing Hickok testers are provided. Data for most other makes and models are also in the manual. In addition the tube test results are compared to the tube manual (tube specification data sheet)! **See website for pricing and details!** www.alltubetesters.com

16. Add Ferrite beads: This is to ensure the tester can accurately perform Gm test measurement on high mu/Gm tubes like 6DJ8 and similar tubes. **Beads are \$1.00 each and labor is \$5.00 per tube socket.**

17. Cleaning: Top panel and under chassis cleaning. **\$20.00**

18. Top chassis wood frame replacement: This is the full replacement of the top wooden support frame which the chassis is attached to. New wood, and new screws.
\$35.00 labor includes wood and screws.

19. New case hardware: New latches and corner hardware (Chrome) installed (removable hinges not available). **Call or email for more details and pricing.**

20. Protection fuse: For 539 series bias pots. Top panel mount or under chassis mount.
Top panel mount price is \$35.00 parts and labor. Under chassis pricing is \$10.00 parts and labor.

Not all of the above options are available for all models. Please contact me by Email, or a phone call to find out which option applies to your tester.

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