

# New, Low Price, High Speed . . . PORTABLE CARDMATIC TUBE TESTER

MODEL

320 Heater Voltages, 140 Fixed
Bias Potentials,
640 Plate Voltages, 640 Screen
Voltages, 100 SelfBias Settings and
4000 QualityValue Sensitivity
Ranges...ALL SET
AUTOMATICALLY.

Active card magazine shows over 600 cards instantly available with automatic filing feature.

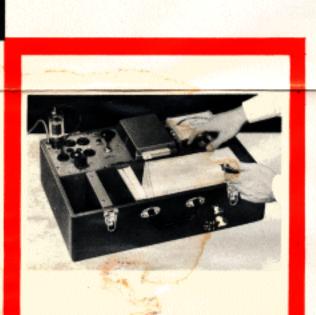
Instantaneous and high sensitivity, automatic Shorts Test.

Heater-to-cathode leakage is quantitatively indicated directly on the meter.

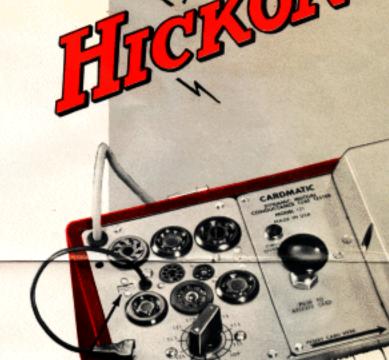
#### Push-button Automation

- #1 for line voltage check (read on the meter)
- #2 tube qualityvalue test (read on the meter)
- #3 Extremely sensitive detection of grid current due to gas (read on the meter)
- #4 Switches into
  2nd section of
  a tube to instantly allow a
  repeat of #2
  and #3 tests.

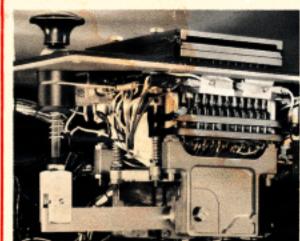












This tube tester incorporates a fully automatic mechanism actually incorporating 187 individual switches providing practically an unlimited number of voltage combinations to any tube element. This switch mechanism is sturdy and dependable. It has been life tested in a cycling process over 100,000 times—without fail.

In further evaluating for dependability, HICKOK successfully field-proved the reliability of this automatic switch over all other switching arrangements.

Switching unit is exclusively designed around substantial wiping (self-cleaning) type contacts for maximum trouble-free service.



Yes, you'll be able to test the newer tube types still under development.

In modern electronic circuitry, a tube must be tested under circuit-use conditions. Many tubes are still being used in amplification circuits, however, the fast growing minority of special

circuit uses is the cause of almost all the tube test problems.

It is logical then that the new Hickok concept of tube testing, called the "Tailored Test" should now become the new standard for tube evaluations, upgrade the value of tube checking in a practical and efficient manner and update tube testing to meet modern circuit-use applications.

Only the Cardmatic provides "Tailored Test" quality with high speed in use. The Hickok multi-card tests are proof of completeness and accuracy. For example, ordinary testers use only one card to check a typical tube like the 6SN7. If this tube were popular only as a Class A amplifier, one quality test would be sufficient, however, this tube is also widely used as a multivibrator in television and computer circuits. A meaningful multivibrator test requires two cards to test zero bias plate current, and cut-off

bias plate current, respectively. Any lesser test would provide so little information it would be impractical. That is why the Cardmatic uses 3 cards to provide 6 basic-quality tests in evaluating both sections of the 6SN7, 12SN7, 12AU7, etc.

Another example of the Cardmatic "Tailored Test" is the 2-card test for a 6BQ6 horizontal amplifier. Card 1 is the amplifier test. Card 2 is a special zero bias plate current check known as the "Knee Test" which evaluates this tube's ability to deliver the high peak currents encountered in horizontal amplifier applications. This particular multi-card "Tailored Test" is furnished for all such tubes as 6DQ6, 6CD6, 6BG6, etc. and is a vastly superior test to that furnished by ordinary card type tube checkers.

Hickok Tube Testers are designed and built by tube testing specialists.

Nearly half a century of leadership experience backs this specialization. Hickok quality and practical usefulness of test has been so right that there are more Hickok Tube Testers in use today than all other makes combined. There is no substitute for quality. Now is the time to move up as a professional . . .



New Hickok Model 121 features lightweight portable size.

# RADE UP TO A HICKOK

See your authorized HICKOK Distributor today!

Ask for a demonstration of the new "Tailored Test".

THE HICKOK ELECTRICAL INSTRUMENT COMPANY

## Model 121 Cardmatic TUBE TESTER

The Hickok 121 is an entirely new Automatic Tube, Transistor and Semiconductor Testing Machine which combines unusual flexibility and accuracy with the advantages of a high-speed test. The most outstanding features of this new tester are found in the quality and completeness of circuitry which permits Typical-Operation checks to a high degree of accuracy closely approaching Tube Handbook conditions.

The field-proven HICKOK Cardmatic Switch positively and automatically sets up the exact test conditions. This switch is exclusively designed around substantial wiping (self-cleaning) type contacts for maximum trouble-free reliability. The practically unlimited flexibility of this system provides an almost unbelievable number of test variables (12.6 sepdicillion) for an accurate check of all tubes including the newer types presently under development.

## SPECIFICATIONS

#### Sockets:

10 sockets accommodate all tubes normally encountered in electronic work.

#### Heater Voltages:

320 specific heater voltages from 0.1 to 119 volts assure complete coverage for all tubes.

#### Bias Voltages:

140 fixed bias potentials. This is many times the quantity available in comparable testers.

#### Plate Voltages:

640 different plate voltages permit the testing of all receiver type tubes very close to prescribed normal use conditions.

#### Screen Voltages:

640 specific steps of screen voltages allows an unusually wide variable for testing tubes to prescribed conditions.

#### Cathode Resistance Values:

100 specific self-bias automatic settings duplicate prescribed self-bias conditions.

#### **Quality-Value Sensitivity Ranges:**

4000 ranges completely cover requirements for the accurate evaluation of any tube.

#### **Dynamic Mutual Conductance:**

Complete range for testing tubes requiring this test.

#### Gas:

An extremely sensitive detection of grid current due to gas is read directly on the meter scale.

Form: 121 Litho in U.S./

#### **Active Card Magazine Capacity:**

Over 600 cards are instantly available with automatic filing feature. (Approximately 325 cards furnished.)

#### **Balance Between Twin-Type Tubes:**

Twin-Type Tubes are rapidly checked as individual sections with push-button control. All multiple section tubes are checked as individual sections . . . No compromise averge-value test here!

#### **Grid Emission:**

Specifically checked without reference to gas.

#### Cathode to Filament Leakage:

Instantly and automatically indicated directly on the meter. Reject level controlled to prescribed conditions.

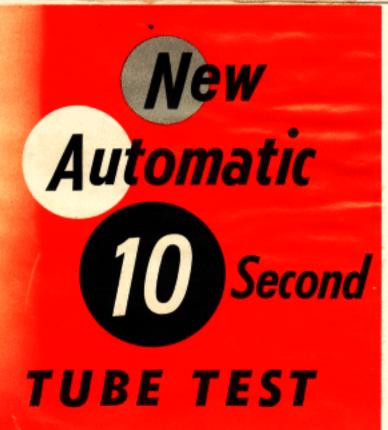
#### Line Voltage Adjustment:

Standardizes all potentials to permit increased accuracy in tube evaluations.

#### **Shorts Test:**

Shorts and interelement leakages are indicated on the five neon lamps. This high sensitivity system immediately indicates undesirable leakage paths between the plate, suppressor grid, screen grid, control grid and cathode.

Sturdy, portable case covered in attractive and durable red leatherette with brass finish hardware. Lid is detachable. Panel is high quality gold finish. 19 ¾ " L., 13 ¼ " W., 8" D. 105-125 volts AC, 50-70 cycles. 34 lbs.



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