NON-WESTERN ELECTRIC ELECTRON TUBE TEST DATA

KS-15559 L1 TUBE TESTER

1. GENERAL

1.01 Methods of making tests with the KS-15559 L1 tube tester are covered in Section 100-634-101.

1.02 This section is reissued to update information with respect to roll chart procurement and to eliminate pricing information.

1.03 As of the date of this section, the latest issue of the roll chart giving information for this tester is coded ▶No. 3200-291, dated 1972.◀ It may be obtained in accordance with usual Company routines directly from the Hickok Electrical Instrument Company, 10514 Dupont Avenue, Cleveland, Ohio, 44108. ***The importance of having the testers equipped with the latest issue of the roll chart needs to be emphasized, since experience to date has indicated that the number of charts ordered seldom comes anywhere near the number of sets which have been shipped.***

1.04 Mimeographed sheets listing supplementary tube test data for obsolete tube types not listed on the roll chart were forwarded with the October 1, 1955 issue of the chart. These should be retained, as they are not included with the present issue.

1.05 The KS model number and serial number of the test set with which the chart is to be used should be given in obtaining the chart, together with the full address to which the chart should be sent.

1.06 This issue of the chart contains data making it applicable also to the KS-15560 L1 and L2 tube testers. Where, in a few cases, there is a difference in the setups for the test, separate entries give the application with specific designation as to the set to which it applies.

1.07 Data on cold cathode voltage regulator-type tubes, such as the OA2, OB2, and OD3/VR150, have been omitted from the chart as tests of these types are not recommended with this set. Since a test in this tester gives only a check of the voltage breakdown and a rough check of emission for a VR-type tube, this obviously does not measure voltage-current characteristics, which are the important operating characteristics for such tubes. For this reason, this tube test is not adequate assurance that these tubes are satisfactory for service.

1.08 The new issue of the roll chart provides test data for such subminiature tube types having known Bell System applications as can be tested in this tester.

1.09 The following precautions should be observed in testing subminiature tubes.

(1) SELECTOR settings on the roll chart apply generally for ***long lead*** subminiature types which require octal based special adapters, such as the inline 7-lead 7AX51 (Raytheon); and the circular 8-lead T3 adapter, Sylvania code 7400-0012 (formerly coded as V24-198). In cases where subminiature tubes are to be tested with short-cut leads, to be inserted into the appropriate Vector adapter in the special 9-pin socket, interchange of SELECTOR settings representing terminals 1 and 2 and/or 7 and 8 will be necessary.

(2) In basing inline subminiature tubes, the red dot lead (designating pin 1) should always be inserted in the corresponding red dot, #1, position of the test socket or adapter regardless of the number of tube leads.

(3) Subminiature tubes of the battery type tested at 1.1 volts when new are sometimes thermionically instable (erratic meter reading) without previous production stabilization. Accordingly, Gm tests should be made rapidly, noting maximum values observed after an interval of not more than 10 seconds. Repeat tests with the filament turned off and cooled between tests may be made to obtain reliable indicated Gm readings. For the same reason, diode tests should be limited to less than 5 seconds.

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1.10 Cathode activity tests (@) are not required for subminiature low-filament voltage types (1.1-volt FIL) and therefore do not appear on the roll chart.

1.11 The 5639 subminiature tube is a slow heating tube and may take two or three times as long to reach a stable reading as compared to other 6.3-volt heater types.

1.12 In a few cases standard subminiature tubes have been modified by the set manufacturer to provide an offset pin arrangement. Tubes with offset pins cannot be tested with the selector settings shown on the roll chart. They require specially wired adapters. These adapters are not being standardized and should be made up locally when needed.

1.13 It is advantageous to install 3-unit replaceable socket sets (socket extenders) having ferrite ceramic beads. This is particularly important where tests are to be made on high Gm tubes, including certain subminiature types such as the 5639. Such replaceable socket sets may be obtained from the Hickok Electrical Instrument Company under their code No. 1050-75. This set provides for the octal socket and the 7- and 9-pin miniature sockets.