2. DESCRIPTION

A. General

2.01 The Model 1234A Tester is self-contained in a portable aluminum carrying case with removable cover. The outside dimensions of the case are approximately 19-1/2 inches wide by 9-1/2 inches high by 16-1/2 inches deep. The weight is about 42 pounds.

2.02 A card compartment is located in the front panel of the tester which can be used for storing the most frequently used program cards.

2.03 The cover of the tester case contains brief operating instructions, brackets for storing an instruction book, the power cord, a calibration cell for checking the meter and short test, calibration cards, 50 hand punch cards and a hand punch.

B. Description of Front Panel

2.04 The front panel is shown in Figure 2. The largest feature is the card switch which has a receptacle for receiving the program cards. When a pre-punched card is fully inserted into the switch it actuates a micro-switch which in turn actuates a solenoid to move the card switch contacts to complete the circuit. When the card switch actuates, the large knob at the left of it pops up. This PUSH TO REJECT CARD knob must be pressed to open the switch contacts and release the card. The card switch actuates only when a card is in the proper position and operates on the principle that absence of a hole in the card makes a contact.

2.05 The meter contains four scales. The upper scale is graduated from 0 to 100 for direct numerical readings. The three lower scales numbered 1, 2 and 3 are read for LEAKAGE, QUALITY and GAS respectively. Each numbered scale contains green and red areas marked GOOD and REPLACE.

2.06 Inside the small hood, directly in front of the meter, are five neon lamps which indicate shorts between tube elements.

2.07 A push button, marked 2, is used for transconductance, emission, and other quality tests which are described later. In general when this button is pressed, results are read on scale 2 of the meter.

2.08 Another button, marked 3, is used for making grid current measurements which result when gas is present in the tube vacuum. Results of this test are read on scale 3 of the meter. This button is interlocked with button 2.

2.09 A button marked 4 is used for tests of dual tubes in which both halves are alike. A neon lamp lights when button 4 is to be used.

2.10 Eleven sockets which will take all common tubes plus pin straighteners for the 7 and 9 pin miniature tubes are on the panel.

2.11 There is an ON-OFF spring-return toggle switch which turns the unit on by energizing a line slave relay, K101. A PILOT light appears next to this switch.

2.12 In the area above the ON-OFF switch there are five fuses. Three of these fuses are paired with neon lamps to indicate when they have blown. These three fuses protect portions of the circuit which are not protected by other means. The remaining two fuses protect both sides of the main power line.

Figure 2. Identification of Controls and Components