Type 575, Mod. 122C

This mod incorporates the following:

There is an added position to the Collector Selector switch for high Collector Volts, i.e. maximum of 400 volts .5 amp average current. This is suitable for testing higher voltage transistors. The supply itself should be treated with great care since it is potentially hazardous to life.

The second feature is a very high impedance (2 megΩ internal impedance) supply, useful for checking reverse voltage breakdown of diodes. This is an A.C. supply, and at nominal line volts provides a maximum of 1500 volts. This voltage is also controllable by the Variac in the same manner as the regular Collector Voltage in the 575.

Since the voltage available is a.c., it in effect, does not require that the diode or rectifier under test be tested with any particular polarity, except that the presentation will be reversed should one diode be reversed with respect to another. However, in the case where diode polarity is not being obeerved, the actual zero voltage point should occur in the center of the screen, which in effect limits the presentation to 1/2 screen diameter.

If one chooses to recognize the polarity of the rectifier or diode before testing, the zero point can then be referenced to say the left or right side of the screen to take advantage of the full screen diameter. To accomplish this presentation it is necessary to switch the Polarity Selector switch to the 1500 volt diode check position. This, in effect, disengages the Collector Selector switch.

Next, depending on the voltage swing requirements, the Horizontal Attenuator will have to be switched to the desired position. (There have been three positions added to the Horizontal Sensitivity switch, making minimum sensitivity 200 v/cm.) To obtain a presentation on the screen, it is then necessary to depress the "Press to Check" button provided for checking diodes. This then presents the high voltage to the binding posts on the test panel. The high voltage will be determined by the setting of the "Per Cent of Peak Volts Range" control.

When checking a diode for breakdown, first set the zero voltage point to the left side of the screen. Assume breakdown occurs at the 6 cm point from the left side of the screen. Since the applied voltage is a.c., when it tries to go negative, it will be clamped at essentially zero, due to the forward conductance of the diode and the high impedance of the supply. Hence, this is an easy way to check whether a diode is open or not.

Although this supply is capable of fairly high voltage, the current capabilities are fairly low due to the high series impedance. From this standpoint it is not as dangerous as the 400 volt position of the Collector Selector when checking transistors.

CN/dvm
5/17/61