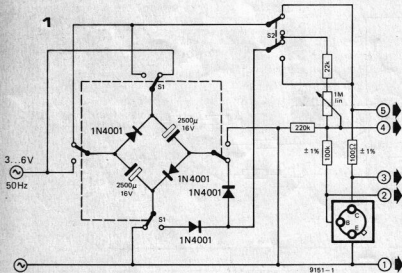


Those who have access to an oscilloscope can use this simple accessory-circuit to display several of the characteristic curves of diodes and transistors. The table lists the possibilities.

Switch S2 serves to set the value of the base-current. In the position drawn this bias current can be varied from 0 ... 100 μA by means of the 1 M potentiometer; in the other position this bias is non-adjustable and is

modulated – according to the instantaneous value of the incoming supply – between 10 and 100 μA (at 6 V supply). The circuit is only suitable for use with low-power devices.

curve tracer



A normal bell-transformer can be used for the power supply to the circuit. The voltage delivered by this transformer (which is invariably higher than the on-load value marked on the housing!) may vary between 3 and 6 volts. At 6 volts the highest DC level in the circuit is about 15 volts.

With switch S1 in the position drawn the circuit is correctly poled for testing PNP transistors; the other switch position reverses all polarities, for testing NPN devices.

Table

Function	X-input to:	Point M to:	Y-input to	Remark	curve
$I_C = f(I_B)$	4	1	3	S2 in position 1	A
$I_C = f(V_{CE})$	1	3	5	S2 in position 2	B
$I_B = f(V_{BE})$	4(1)	2	1(4)	S2 in position 1	C
$I_D = f(V_D)$	1(4)	2	4(1)	S2 in position 1	C

