Simple data analyser for laboratory statistics

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The recent requirement by the Ministry of Health that pathology laboratories should prepare detailed statistics of the origin and type of each request has prompted construction of a simple data analyser.

The device, shown in Fig. 1, consists of a bank of magnetic counters actuated by two series of switches. The first set of push switches, of the interlocking type found on tape recorders, denotes the origin of a request, *e.g.*, main hospital, general practitioners. Any one of these switches will lock down in the 'on' position. The second series of switches are ordinary push buttons and denote type of specimen, *e.g.*, haematology, biochemistry. Each

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FIG. 1. *The data analyser.*

type of origin and request has an individual counter which can only be actuated when both the appropriate push switch and button from each series is depressed.

CONSTRUCTION OF THE DEVICE

Forty *ex G.P.O.* magnetic counters are used. These may be purchased on the surplus market at prices between 3s. and 12s. 6d. each, the more expensive ones being newer. The push switches and buttons are standard items readily available. The power supply consists of a small transformer giving 50 volts at about 500 ma with full wave rectification by silicon diodes. (Other types of counters may have different power supply requirements.) A key switch is incorporated in the main supply to prevent unauthorized use. A small silicon diode is used in series with each counter in order to prevent actuation of more than one counter at a time. These diodes were brought from a surplus store at 1s. each. The circuit is shown in Figure 2. The whole equipment is built into a case made of $\frac{1}{2}$ in. plywood covered with Formica.

FIG. 2. *The circuit: for clarity, only 16 counters are shown.*

This apparatus has proved very satisfactory in use and a day's requests may be analysed in a few minutes. The counters used have no zero reset and their initial readings must be recorded before each quarterly counting period. If zero readings are required a simple motor-driven switch has been devised which actuates the counters about 200 times per minute until zero is reached.

The whole device has been made at a cost of about £15.

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