18. Wafer *a* of the Y-plate switch, SW1, selects the information to be fed to the Y1 plate of the engineer's tube: wafer *b* on this switch selects the signal to be fed to the grid. In all operative, switch positions except NORMAL, the beam current is modulated with the switching waveform from the cathode of V16, which raises the grid potential above cut-off only during the sweep period; in the NORMAL position of the switch, the grid is fed, like that of the programmer's tube, with the digit-frequency bright-up waveform from the Y-plate deflection circuit. The signals at the grids of the two tubes are DC-restored with their base levels at -2KV, and are limited positively to cathode potential.

## POWER SUPPLY

19. The monitor unit contains its own built-in power supply, which delivers 150 mA at +300V, 20 mA at -300V and 2 mA EHT at -2KV, as well as 16A AC at 6.3V and 4A AC at 4V for heaters. The monitor -300V supply is also used in the tape reader or readers, each of which requires 5 mA at this voltage. The supply circuit is shown in fig. 6.8; it is fed between phase C′ and neutral of the regulated computer supply. The monitor also uses the +10V and +20V computer bias supplies (fig. 6.1 and 6.2), and, the +13V and -150V supplies are required for switching purposes. Facilities are provided for measuring the monitor +300V and -300V supplies on the engineer's panel.

## PHYSICAL LAYOUT

20. The monitor unit is mounted on sliders in bay 1, and is held in position by a spring catch on the left-hand side at the back. When this catch has been depressed, the unit can be pulled out over the desk to the full extent of the runners; a pair of catches on the front ends of the runners can then be lifted to enable the unit to be pulled clear. The power-supply components are mounted on the back chassis of the unit; components associated with the timebase and Y-deflection circuits are mounted on boards attached to the side frames. Figs. 6.9 shows the component layout of the unit.

## MONITOR PROBES

21. Most of the package test sockets are connected to cathode-follower cathodes at low DC levels and can therefore be coupled direct to the display-tube Y-plate if desired. These sockets are surrounded by *red* plastic rings, and are to be used with the low-voltage probes, which can be identified from their *red* end sections. Those test sockets that are connected to high-voltage points are surrounded by *black* rings, and are to be used with the high-voltage probes; these are coloured entirely black, and incorporate DC-blocking capacitors. The two types of probe are supplied with alternative lengths of cable; long cables for attachment direct to the sockets in the bay skinning, and short cables for use with the cathode-follower units.

22. The cathode-follower units are cylindrical in construction, and are fitted with a clip so that they can be supported conveniently on the handle of a package. The circuit and construction are shown in figs. 6.10. V1 is a cathode follower, with V2