

THE CONTROL BOARD

By means of the 'board', the lighting designer can control:

- the **composition** of the stage picture – by selecting the appropriate combinations of individual lights.
- the **balance** of this picture – by selecting the level of brightness of each of these lights.
- the **fluidity** by which one picture is replaced by another.

What was once called a switchboard, or more properly a dimmerboard, is now formally called a Lighting Control. Which is fine so long as we take care to remember that our 'Lighting Control' only controls which lights we use and how bright they are. 'Lighting Controls' do not control where we put the lights, which lights we put there and where we point them. Most of us however still talk about our lighting control as 'the board' whether we use our knees, our fingers or a microprocessor to work it.

DIMMING AND DISTRIBUTION

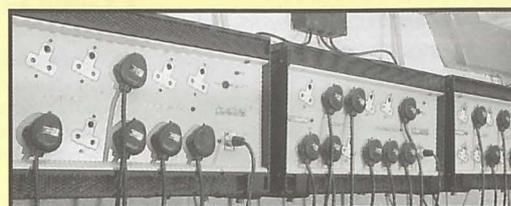
Modern boards are two-part:

- the **desks** whose controls we push, slide or turn to produce the desired changes in the intensity of the lights **and**
- the **dimmers** which interpret the instructions from the controls so that the appropriate amount of electricity is passed to each light.

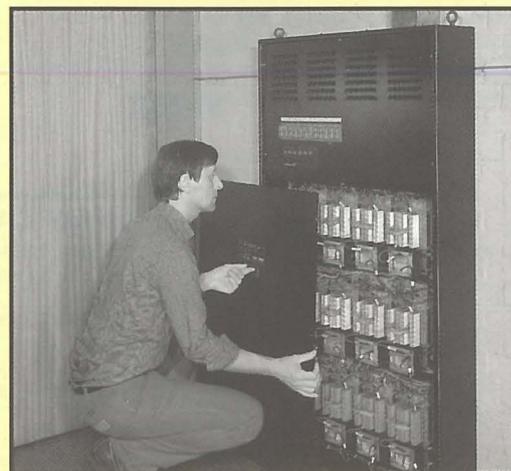
Fortunately the connection between desk and dimmers is slender cabling; from a maximum of one 8-core cable for each group of six dimmers in portable manual systems to a minimum of the single twin-core screened cable that can transmit all the required data between a memory system and its dimmers. This allows the desk to be positioned wherever it is convenient for the operator to have a good view of the stage. The dimmers can then be placed in their most convenient position to distribute 'controlled' electricity from the mains supply to the individual lights. This is normally a backstage position which is within the manufacturer's recommended extremes of temperature and:

- adjacent to a suitable mains supply switch-fuse.
- clear of actor and scenery movements.
- accessible for fuse changes.

For permanent installations of any size, the dimmers are normally mounted in racks with permanent wiring to numbered sockets suitably located around the stage and auditorium. For temporary installations (and some of the smaller fixed ones) portable dimmer packs are used, each pack having six dimmers with a pair of output sockets to each dimmer. Temporary cables can then be run from those socket outlets to the lights. It is essential that such an arrangement is kept tidy, with plugs clearly labelled and tape used to harness together cables which are proceeding in the same direction. Even the smallest stage lighting installation uses what is, by domestic standards, a lot of electricity. The function of dimmers (secondary to their artistic function) as a power distribution system must not be underestimated. Safety and efficiency go hand-in-hand.



Tempus Dimmer Rack



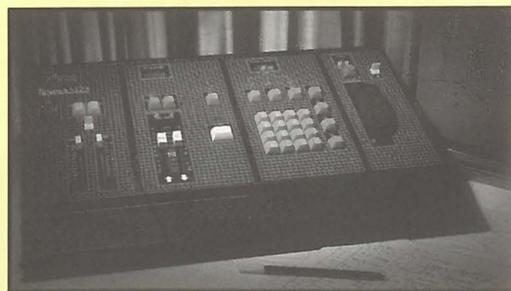
Permus Dimmer Rack

PRESETTING

The operation of today's boards is based on presetting. The intensity levels of the lights which compose the next picture are preset in preparation for the change. On manual systems the levels are filed as written numbers on a paper plot from which the individual dimmer levers can be set by hand at each performance. On memory systems, the data is filed in an electronic store from which it can be recalled instantly by fingering a simple control. On Cue, the change is effected by operating masters which replace the existing lighting state with the new one. Operation of these masters is so simple that the board operator can devote total attention to the timing of the change.

MANUAL PRESETTING

While manual presetting boards offer facilities undreamed of in the not-so-far-distant days of simple directly-operated resistance dimmers, their operation still requires a lot of work that is both time-consuming and error-prone. Although presetting allows cues to be performed smoothly and with accurate sensitive timing, the individual dimmer levels for each cue must still be written down at rehearsal – and re-set from the written plot for each cue at each performance. However, the rapid development of micro-processing techniques is bringing instant electronic memorising of plots within the financial resources of smaller and smaller installations. In particular, the M24 extension of the Tempus range means that memory is no longer just a dream for many of those who light the amateur stage. This is not the place to go into the details of operation. Suffice it to say that once a cue state has been established by a rapid selection and balancing of lights via a keyboard of familiar pocket calculator format (or by standard preset levers if you prefer), the levels can be instantly filed . . . and just as instantly recalled . . . and just as instantly adjusted if necessary. The time-wasting drudgery is removed but that essence of any live performance, the timing of a cue's progress, is completely under the operator's control.



M24 Control Desk

Abridged from 'Lighting the Amateur Stage' parts 1 & 2 by Francis Reid, published by Strand Lighting.

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Francis Reid is also author of 'The Stage Lighting Handbook', 'The Staging Handbook', 'Theatre Administration' and 'Designing for the Theatre'. For further reading also see 'Stage Lighting' by Richard Pilbrow and 'The Art of Stage Lighting' by Frederick Bentham.