



is for **Fade** which, although strictly speaking implies only a gradual reduction in brightness, is often used to describe any direction of intensity move – thus **fade-in** and **fade-up**. **Fade-out** implies a fade to zero of some channels, while **FBO** is the fade that takes everything to blackout. Crossfades (qv) can be ‘dipless’ (qv), ‘split’ (qv) or ‘profiled’ (qv).

All parts of a control system are protected by **fuses**, located for the power circuits in the dimmer room, and for the electronics at the desk. Wire has mostly been superseded by cartridges but the long awaited breaker (qv) revolution continues to remain a promise.

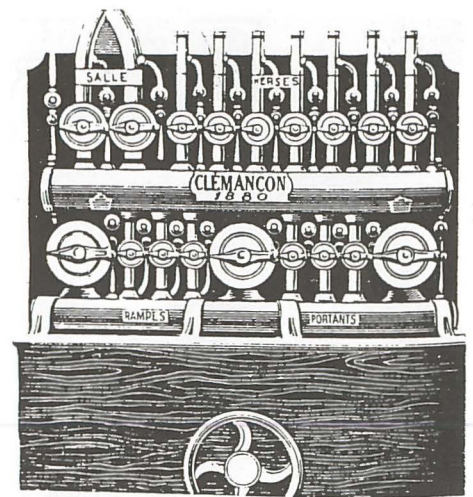
For driving boards the foot is a much underused portion of the operator’s anatomy. In **Bentham’s** Console and CD (qv), **foot pushes** were used as operational switches, usually doubling up the function of certain finger pushes primarily to free the hands for other tasks at critical moments. This might be thought to be a rather specialised technique appealing to organists, but the balanced pedal for speed regulation is a very natural movement for any driver, especially since sensitive board operation requires subtle acceleration and deceleration rather than a uniform speed maintained throughout the cue.



is for **Grandmaster**, the summit of the application of pure mechanical engineering to lighting control. Individual dimmers could be locked to shafts, each of which in turn could be selected to raise or lower when the single master wheel was turned on cue. All done by gears. Grandmasters were well suited to variety style washes of coloured floodlighting from battens, floats and wing floods – with the red, blue, amber and white dimmers each having their own shafts. Spotlight rigs were more complex to operate, particularly for plays. But in many theatres, particularly the number one touring houses, there were teams (of often not more than two people for 96 dimmers) who could perform feats of the most incredible dexterity. With enough operators (ie a lot) everything was possible, including some cues that can still be difficult on even the most sophisticated of today’s computer boards.

The **Gas Table** can be considered the first really centralised lighting control (but see candle ‘pole’). Centralised mounting of the gas taps allowed individual lighting instruments to be faded, and there was a system of pilot jets to permit circuits which had been faded to extinction to be remotely rekindled.

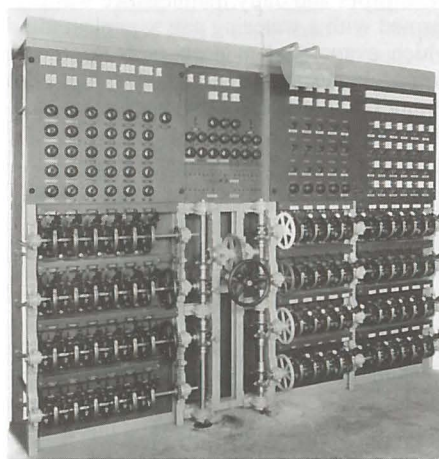
The formation of channels into **Groups** has always been one of the more contentious areas of board design. It was certainly the major point of debate in the design of the manual preset desks which accompanied the thyristor revolution in the mid-sixties. **Bentham** (qv) was convinced that the groups should be common across all presets: many users favoured the possibility of forming different groups within each preset. Thus ‘SP’ (qv) boards had a single set of grouping switches while ‘Threeset’ (qv) had a set of switches for each preset. The most versatile manual boards were the ‘LP’ (qv) and its more sophisticated progeny ‘Lightset’ (qv) which probably had just about the most flexible grouping achievable without a computer. The Strand grouping tradition, followed by **Thorn** on their introduction of pin patch (qv) allowed flexible grouping whereas the repertoire tradition of central



A Gas Table (Clemancon, 1880)



is for **Half** which was a convenient plotting level when boards were either uncalibrated or their operational procedures made the use of such basic calibrations as 1 to 10 unrealistic. ‘Full’, ‘three-quarters’, ‘half’, ‘quarter’, and ‘out’ was the usual scale with ‘plus’ or ‘minus’ added sparingly and optimistically. A theatre’s permanent control is called the **house board** when another board is brought in temporarily by a touring company. **Holophane** was the name of a company and their product which mixed colour on delicous principles (qv). **Hydraulic** power was used to operate dimmers at the Royal College of Music in a lighting installation which was away ahead of its time in many respects including control, not only at its inauguration in 1925 but for many years after. Indeed the capability for a single operator to control so many dimmers moving at independent speeds was not achieved again until the computer age. Each channel had a hydraulic valve which set that dimmers travel at any required rate up to half an hour.



One of the smaller Grandmasters

Europe tended to breed a system of fixed groups corresponding to the geographical layout of the installation. Development of memory controls has involved a growth in the number and flexibility of group masters. The launch of the first viable memory system included quite an intense discussion on whether or not groups would now be redundant (the prototype had none) – and the debate on how many groups still continues, particularly between those requiring boards for plotted shows and those wishing to create instant lighting during performance.

**Glyndebourne** has always been in the van of lighting development. The opera house opened in 1934 with a **Bordoni** (qv) offering load independence for 5w to 5Kw on each channel, and there were 40 presettable ‘stops’ on each channel’s control lever. Such load flexibility did not become general in Britain until after 1964 – by which time Glyndebourne had become the first theatre in Europe to install thyristors. And a control desk whose functions could be temporarily duplicated in mid-auditorium for rehearsal.