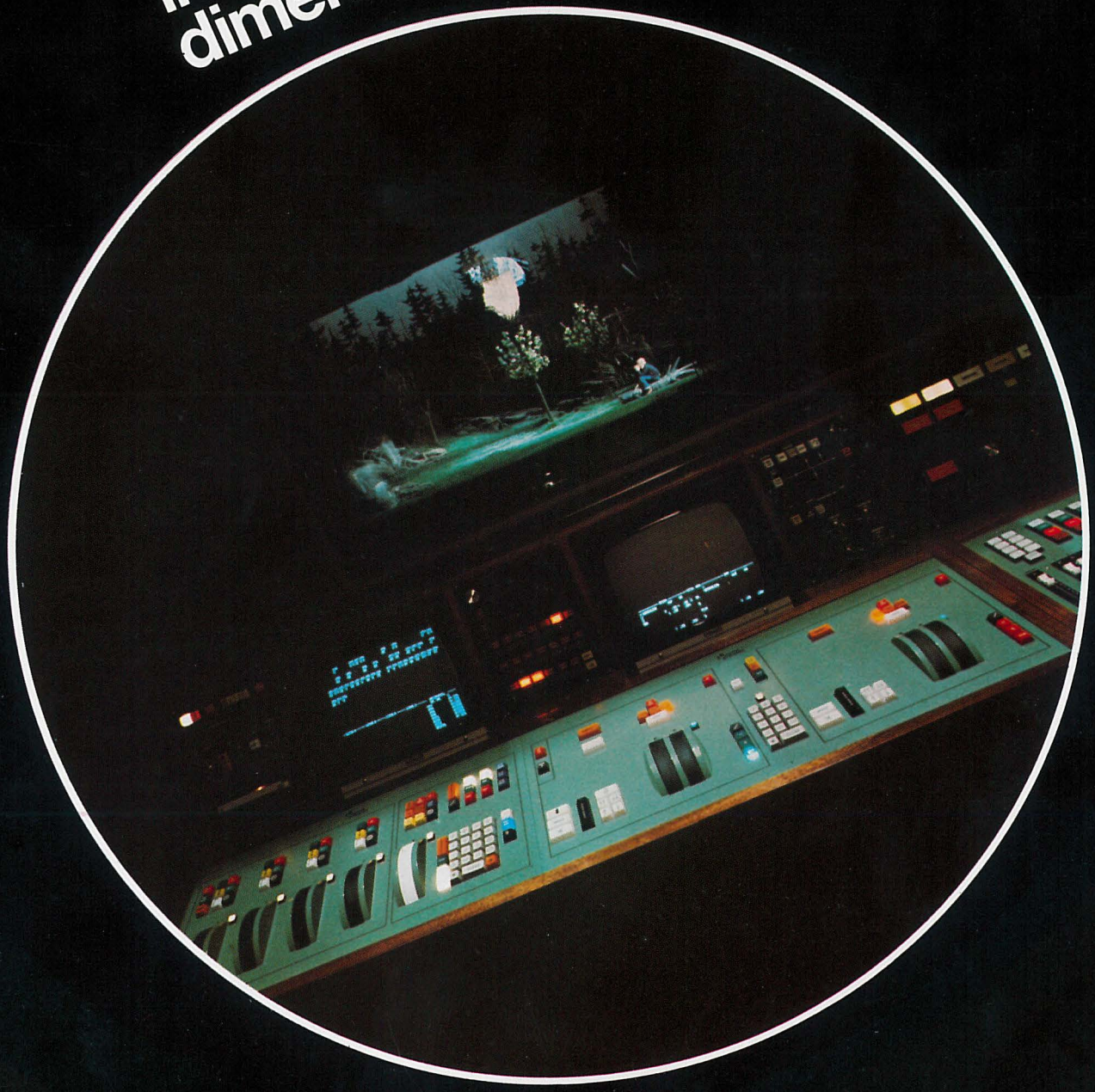
# LIGHTBOARD

## light control in the fourth dimension



Burgtheater, Vienna

RANK STRAND

# LIGHTBOARD

## a new dimension in light control, intensity, colour, direction, time.

Lightboard, the computer memory system, originally engineered especially for Britain's National Theatre by Rank Strand Electric, from a concept by Richard Pilbrow.

The two main auditoria in Britain's new National Theatre, the Olivier and the Lyttelton (shown below) are designed and equipped for the highest standard of productions in repertoire, with the possibility of three different productions in a day. The luminaire rig is designed to minimise re-setting with every lighting circuit directly connected to Lightboard.

Lightboard results from Richard Pilbrow's experience as one of the world's leading lighting designers and theatre consultant to the National Theatre and Rank Strand Electric's expertise and experience stemming from their computer memory System DDM and the modular memory system MMS.

The world renowned Burgtheater in Vienna also uses the world's foremost lighting control, Lightboard.

## LIGHTBOARD

is a major advance in memory lighting control – an amalgam of computer technology and systems design experience, providing control of stage lighting with unequalled flexibility, fluidity and creative potential.

## LIGHTBOARD

## painting with light - at the speed of light

The simplest or most complex lighting pictures can be moved at one or many varying interweaving speeds.
For the first time, light can be manipulated with all the fluidity of natural light itself. Multi-time movements can be started together or separately, and travel at their own speeds, yet always under the overriding control of the operator. Interface between operator and machine is total. Heads-up operation of one or a multiplicity of lighting units is through 'touch type' keyboard access to every light or pre-recorded group of lights.

## LIGHTBOARD

Computer controlled memory systems have revolutionised stage and studio lighting. The ability to memorise a lighting picture at the touch of a button, and to recall it at any time and in any order, has greatly extended the possibilities open to the designer.

Now, a leap forward. The manipulation and control of light at the speed of light, the speed of the computer and the speed of the human eye and brain interfaced with a control system that allows very rapid and playable access.

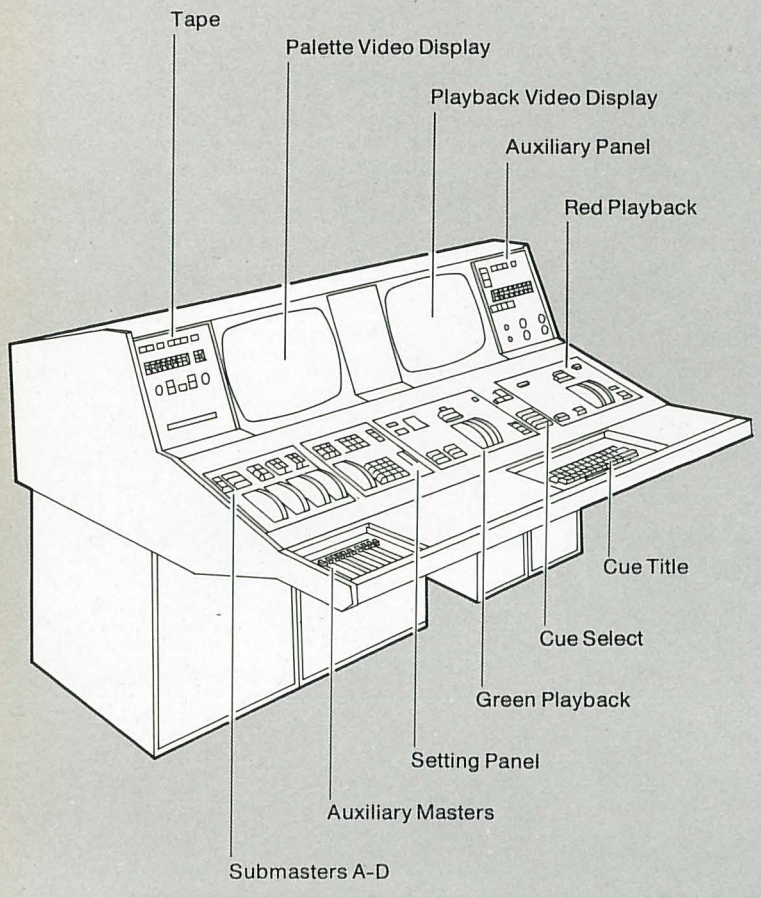
No longer is it necessary to think of lighting in terms of single dimmers. Lighting can be conceived in blocks and patterns or pictures of light that can be mixed, interwoven and balanced. Out of each block or picture, the single spotlight still has its role to play, but the operator requires equal ease of access to one light or groups of light.
At all times the progress of the lighting design, live and recorded, is available for display on the video monitors.
Lighting for frequent changes of production demands immediate access to a large number of circuits around the theatre or studio. Yet, the operator is only interested in those circuits being used. Lightboard ensures this and although up to 1,000 circuits may be permanently connected to the control it can select and display only those which will be required for the production being staged.

Theatre and studio lighting must increasingly be concerned not only with the balancing of levels of light but also with the orientation of light sources themselves. Now the potential of computer memory is introduced for control of luminaire position and colour change – total control of light – intensity, orientation, colour and time.

# LIGHTBOARD -the principal elements

In its simplest form Lightboard comprises:–

- One Palette with four Sub-Masters
- Two Playbacks
- Two monochrome Video Displays
- Tape and Auxiliary Panels




The system may be expanded to include:

- Up to 4 Palettes, with up to 6 Sub-masters on each.
- Up to 8 Video Displays, either monochrome or colour.
- A removeable Stalls Control, with one complete Palette and a Playback.
- A multi channel Modulation Unit allowing control of up to 6 groups of lighting from an audio cassette, flasher unit, or external audio input.
- Any number of hand-held designer/technician keyboards affording control of the lighting whilst maintaining complete freedom of movement.
- Manual and memory control of:–
  Mechanical orientation of luminaires e.g., Pan, Tilt and Focus.
  Colour and slide changers also other special effects.
  Non-dimmed circuits.
- Hard copy print-out of the stored data.

### Palettes

The left hand palette is the basic instrument with which lighting cues are prepared in the control room. An optional right-hand palette may be removed and used elsewhere for lighting rehearsals.

A palette itself consists of two sections: the Setting Panel and the Sub-Masters.

The Setting Panel contains a keyboard on which any lighting circuit or pre-recorded cue, containing a combination of circuits (with or without their levels) may be called up and adjusted. This adjustment of level may be with the controller wheel or within the keyboard itself. The Setting Panel can be used live or blind.

Once a pattern of lighting has been created on the Setting Panel it may be transferred to one of the four Sub-Masters. New lighting can then be prepared and balanced between any Sub-Masters which might be in use.

The Sub-Masters may also be used during performance as manual controllers in a conventional manner or they may be programmed via auxiliary Modulation Panels to give a random or programmed cycle of light, possibly linked to a sound source input, say for flashing or shimmering effects.

The Sub-Masters may be operated independently of or under the overriding control of the playbacks.

### Playbacks

These are identified as 'green' and 'red'. They provide the principal method of operating the lighting during performance. Part or all of the lighting may be cross-faded, moved up, down, raised to full or faded to out.

The playbacks may be operated in a manual or automatic mode. In manual, the controller wheels are used to manually move the lighting. In automatic the controllers become time setters that may be used to pre-set the speed for a change and then operated while the cue is in motion to accelerate or decelerate the movement of light. Times may be pre-recorded and up to six different up and down speeds of light may be separately or collectively invoked on either playback at one time.

An Automod facility may be used in an emergency (if for example a spotlight is knocked out of position during performance – or a lamp fails) to substitute a replacement in every cue necessary.

### Cue Select

The central panel contains a keyboard with which cues may be selected for either playback. This panel also selects the recorded time facility and the sequential call-up of cues for playback or recording.

### The Video Displays

The two principal video screens illustrate the state of lighting, indicating the circuits in use and their level. The bottom section of the screen provides information about the contents of each controller on the Palettes and Playbacks. Associated with the optional right-hand palette is a third display which is also removeable.

### Tape recording

Lighting cues may, at the same time as recording onto the core store, be recorded on tape automatically, or at the discretion of the operator. This tape can be used as a library store or to edit the order of cues between any primary cue.

### Auxiliary Facilities

*(a) Cue Title.* A typewriter keyboard is contained under the front part of the desk and may be used to type on to the video displays a 'Cue Title' list or other information that may be of use to the operator.

*(b) Auxiliary Masters.* Totally independent of the main system, a series of manual faders with a pin matrix provides control over any combination of lighting circuits.

*(c) Written Record.* Facilities are available to provide a permanent record of the lighting plot.

### Orientation Control

The optional panel at the right-hand end of the control system employs a keyboard to call-up a remote control luminaire or a projector with slide change. By use of the keyboard and the controller the pan, tilt and focus of luminaires or the slide change and focus of projectors may be operated and recorded on any cue number. The subsequent operation of this panel can be mastered from the 'green' playback. Separate facilities for colour change control can be provided.

RANK STRAND

*For further information contact:*
**RANK STRAND ELECTRIC** A Division of Rank Audio Visual Limited
P.O. Box 70, Great West Road, Brentford, Middlesex TW8 9HR, England.
Telephone: 01-568 9222 Telex: 27976 Cables: RANK AUDIO BRENTFORD

**W. GERMANY**
Rank Strand Electric,
3340 Wolfenbüttel-Salzdahlum,
Salzbergstrasse 2,
Tel: (05331) 7951
Telex: 09 56 41

**USA**
Strand Century Inc.
20 Bushes Lane,
Elmwood Park,
New Jersey 07407,
Tel: (201) 791-7000
Telex: 230 130322

Strand Century Inc.
5432 W. 102nd Street,
Los Angeles,
California 90045,
Tel. (213) 776-4600
Telex: 653508

**ASIA**
Rank Strand Asia Limited,
1618 Star House,
3 Salisbury Road,
Tsim Sha Tsui,
Kowloon, Hong Kong,
Tel: 3-685161
Cables: Spotlite Hong Kong

**CANADA**
Strand Century Limited,
6334 Viscount Road,
Malton,
Ontario,
Tel: (416) 677-7130
Telex: 210 6968646

**AUSTRALIA**
Rank Industries
Australia Pty, Limited,
Strand Electric Division,
19 Trent Street,
Burwood, Victoria 3125,
Tel: 29-3724
Telex: 31809

**SOUTH AFRICA**
Rank Strand Electric,
P.O. Box 6752,
Johannesburg 2000,
Tel: 838 6621
Telex: 8-0848 SA

Printed in England