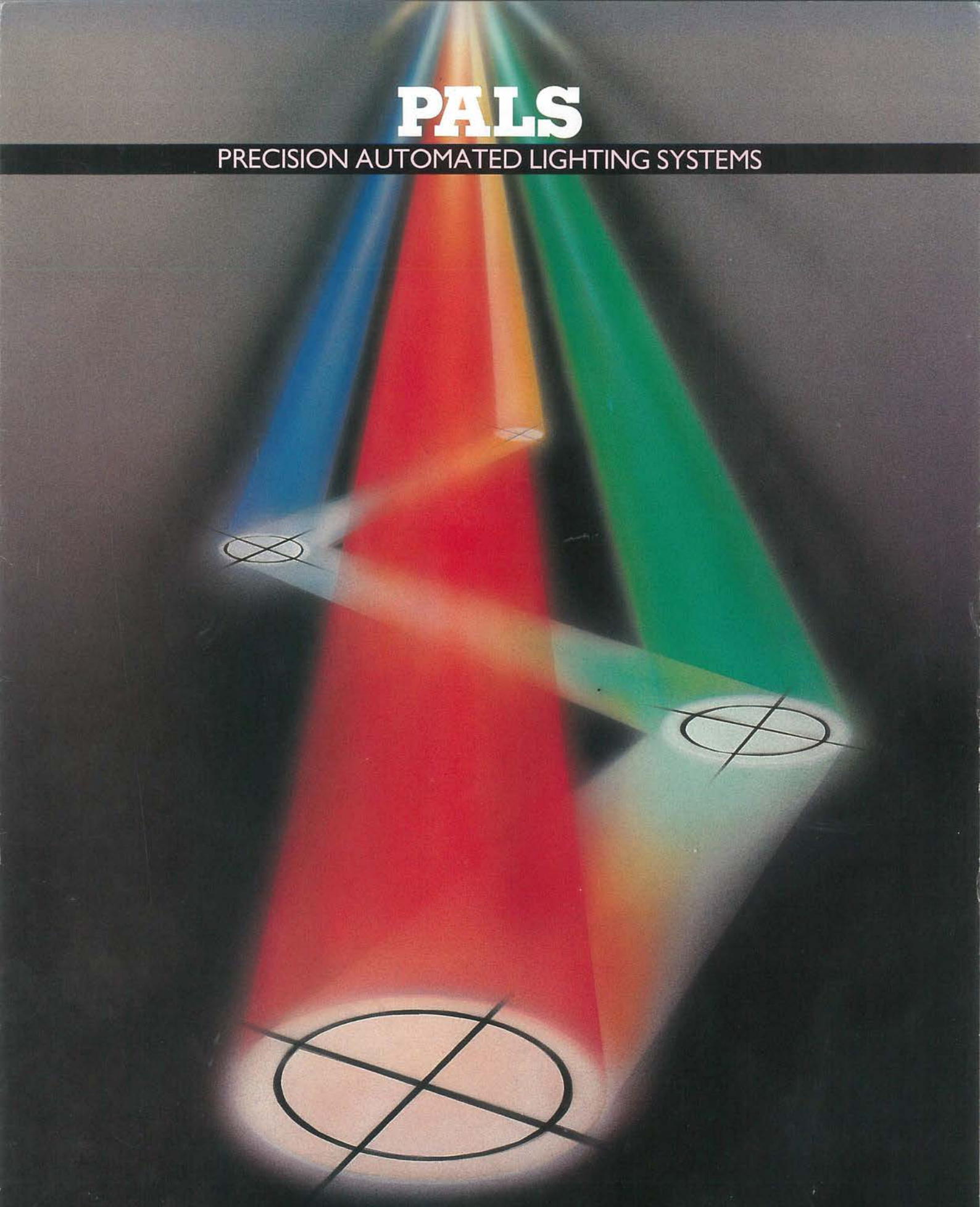
PALS

PRECISION AUTOMATED LIGHTING SYSTEMS



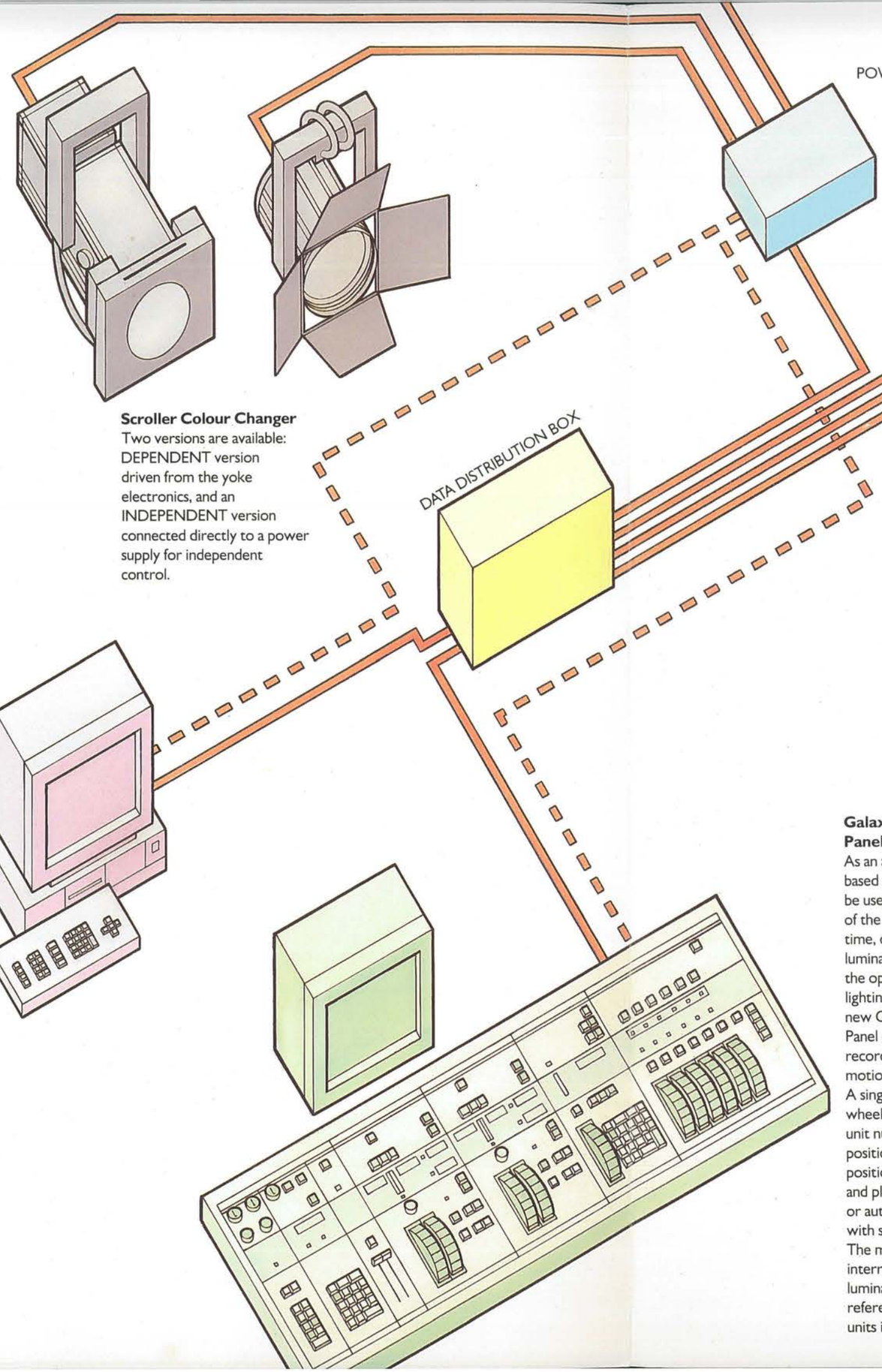
Strand Lighting

Picture this

A lighting rig with all the flexibility you have ever imagined. A few simple commands from a control console automatically move the luminaires into the required position – quietly, precisely and with total repeatability. At a touch, the spread is widened, colours are changed. You make minor adjustments to pan and tilt and record the settings. Back to the previous cue and run the change again. Lamp numbers and co-ordinates flash across the display. The luminaires move smoothly, quietly, to exactly the position and colour you recorded . . . perfect!

Strand Lighting are developing the automated lighting of your dreams – PALS – the Precision Automated Lighting System. The dream has become reality with the first installations under way now. At last it is possible to remotely position luminaires with accuracy and consistency, and without the jerks, grinds and shudders of some earlier attempts. It took some elegant engineering. A rigid rectangular section steel yoke housing servo motors and precision gearboxes supports each luminaire. Each motor/gearbox assembly is protected by a clutch whilst absolute position is measured by potentiometers and an on-board microprocessor. Tolerances – how about a beam that can be repeatedly repositioned to a resolution of one in 1,000? This light knows its place!

PALS Motorised Luminaire
Movement of pan, tilt, and other functions is controlled by a DC servo motor and a precision reduction gearbox. The ratios are optimised for each type and size of light. The clutch prevents damage if the light were to encounter an obstacle.



Scroller Colour Changer
Two versions are available: DEPENDENT version driven from the yoke electronics, and an INDEPENDENT version connected directly to a power supply for independent control.

Distribution and Buffers
The data and power distribution equipment between the control panel and the fixtures has been specially designed to get the maximum performance from the units and comprises:

DATA DISTRIBUTION BOX
Amplifies and buffers the control signals from the control system and feeds up to 40 x 3 or 10 way, power supply boxes.
POWER SUPPLY BOX
Supplies both data and 24 volt power to PALS yoke and available in either 3 or 10 way versions.
Up to 3 power supply boxes can be daisy chained together (max 3 x10 channels) without a data distribution box.

PC Based Control System
The PALS controller is a modified IBM PS/2 with a dedicated keyboard, high resolution colour monitor and a 20 megabyte hard disk. Cues are recorded directly onto the hard disk. Up to 18 show files may be stored, each with as many as 255 cues. Lights are positioned by means of cursor keys, and specialist command keys control recording, editing, playback, etc. An on line Help facility provides an instant explanation of each function.

Galaxy 3 Motion Control Panel
As an alternative to the PC-based controller, Galaxy 3 can be used to control all functions of the PAL system. For the first time, control of motorised luminaires is integrated into the operational structure of a lighting control system. The new Galaxy 3 Motion Control Panel offers co-ordinated recording and playback of all motion and dimming cues.
A single keypad and series of wheels is used to select the unit number and adjust position and colour. The new positions can then be recorded and played back independently, or automatically, in conjunction with standard lighting cues.
The monitor can be used to interrogate the status of a single luminaire or provide positional references of all motorised units in the installation.

Precision Automated Lighting System

THE PAL SYSTEM COMPRISES:

Luminaires in remote control yokes

Data and power distribution system

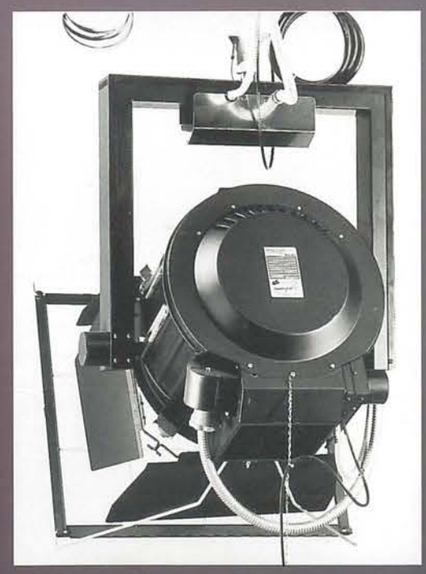
Dedicated control system

THE PAL SYSTEM PROVIDES:

Control of pan and tilt to 1 part in 1,000.

Control of auxiliary functions including:

Focus, Iris, Switching of dual power studio lamps and colour.



Theatre PALS

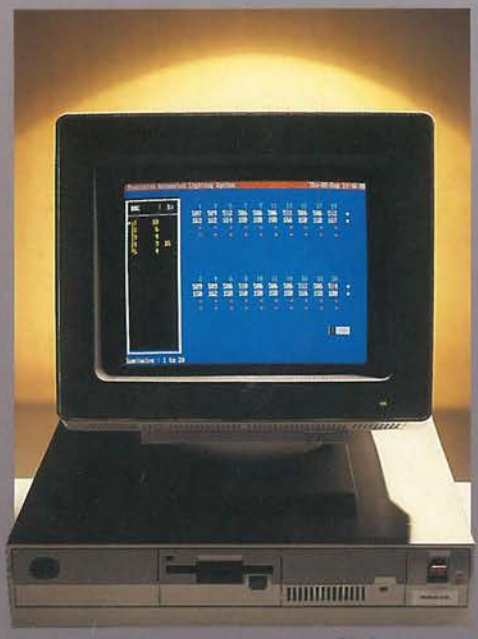
Fifteen minutes after the electrician climbs down, the director changes the blocking and the special is suddenly in the wrong place. Such time and patience consuming adjustments are suddenly simpler with PALS. Luminaires in the front-of-house or buried deep in the set can be controlled easily and precisely. The positional accuracy of the PAL system puts re-focusing at the operator's fingertips – and gives today's lighting designer a design tool for tomorrow. Whether repertory or touring production, musical, ballet or drama, PALS reduces the number of luminaires and setup time required.

Television PALS

Automation, remote control and computer graphics are producing even more dynamic video effects. In the hands of a skilled lighting director, the PALS system can bring the benefits of this technology to a whole host of lighting tasks.

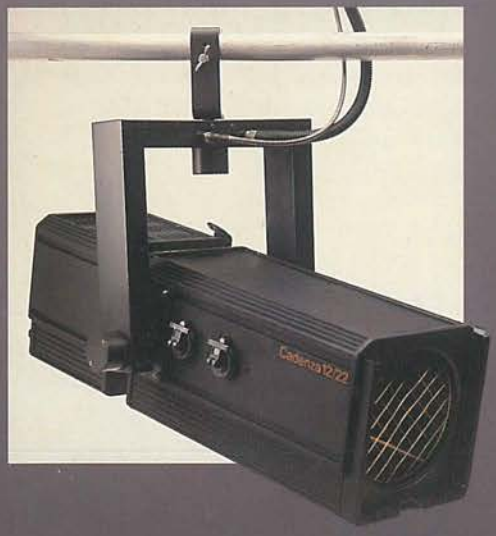
The main benefits of PALS in the studio is in rapid setting and re-focusing, particularly amongst awkward sets, whilst the memory control comes into its own where there are regular repeat productions.

Precision Automated Lighting System



The on-screen representation of lighting cues allows the operator to recall a scene by number, check lamp position, sequence and cue timing.

This new television studio in Hannover is probably the world's most sophisticated automated lighting facility. A studio floor control panel allows both lighting levels and positions to be adjusted to a very fine degree. Strand not only provided the PALS fixtures and control gear, but also supervised the design and complete installation.



Future PALS

The tremendous benefits of motorisation are now available on most theatre and studio luminaires from the extensive Strand range. Up to four functions per light may be controlled – pan, tilt, focus, iris and colour are available now and more are in progress.

If you don't see what you want here, talk to a Strand engineer. Chances are, we're working on it!

The company reserves the right to make any variation in design and construction to the equipment described.

Strand Lighting

Strand Lighting Limited, Grant Way (off Syon Lane), Isleworth, Middlesex TW7 5QD. Telephone 01 560 3171, Telex 27976 Fax 01 568 2103