

# SPOTLIGHT ON GERMANY

**HEAD OF OUR PROJECT TEAM AT MANNHEIM NATIONALTHEATER, BERND RATZMER EXPLAINS HOW PROVIDING 'REMOTE CONTROLLED BACKLIGHTS' MEANT ONE THING...**

## DEAR OLD PALS

**A**fter being a power plant technician responsible for lighting tasks for many years I couldn't really imagine what sort of light had to be used for stage lighting.

The simple requirements of industrial illumination are easy to solve technically. There are straightforward formulae for calculating lighting for halls, offices, machines and the like.

The technological requirements for stage and studio lighting opened up a completely new field for me and enlightened me in the true sense of the word. I was to learn that light bulbs, HMI and halogen spots mixed on a frame and remotely controlled could provide the answer for anything.

For example, in the Mannheim Nationaltheater, for safety reasons the theatre personnel there were not allowed to stand on the lighting frame. This was easier said than done.

The spots fitted on the lighting frame were in use in most of the plays and it was not possible simply to replace them with other equipment. The spots would have to remain. Nor was it possible to equip and reset the lighting with the frame lowered. A solution had to be found — fast and, above all, a feasible solution at reasonable cost.

Strand Lighting had the answer — PALS. PALS stands for precision automated lighting system, a system to operate all kinds of spots by remote control. With the flexible possibilities offered by this system, it was the solution.

Although not all the equipment required was immediately available, the

modular PALS concept facilitated design and production of all equipment in only four months.

A total of 13 low-voltage 'contre jour' ramps, probably better known as Svoboda ramps, six low-voltage Beamlite 1,000 spots and two HMI, 2,500W Sirio Fresnel spots equipped with PALS remote control was provided. In addition, three Fresnel Pollux 5kW spots and two Zoom profile Cadenza 12/22 spots were supplied and fitted from factory production. In the meantime, most of the spots for theatres and studios are immediately available as PALS equipment.

All this is computer-controlled by the lighting director. Each spot is brought into the required position via a keyboard. All control directions are transmitted to the spots via one single line. The control computer in the spot yoke then carries out these instructions independently. Position data, light cues and additional aids are displayed on the screen for the information of the user.

After the 'setting process' of all the equipment involved has been completed, the entire adjustment is stored as a cue and can be reproduced at any time extremely accurately.

As head of the project, I was responsible for both the technical management and fitting the new Strand Lighting PALS spots in the Mannheim Nationaltheater. All in all an interesting project.

Now that the PALS system has been in operation at the Mannheim Nationaltheater for several months, it is no longer possible to imagine the theatre without it. It has been used in more than 20 plays, and saved the personnel intricate and above all, acrobatic lighting operations at dizzy heights on the lighting frame.

In spite of the sensitive mechanics and electronics in the spot yokes the system works reliably and satisfactorily. Resetting the spot positions is often done while performances are in progress on the stage.

It is true that this may not be possible in all plays as when spots are moved by motor, this naturally makes a noise.

It would, of course, be desirable to have an even quieter system in the future although a noise level of under 60dB when moving spots fast almost qualifies for the German 'Blue Angel' environment award.

■ *The impressive array of automated lights at the Nationaltheater.*

