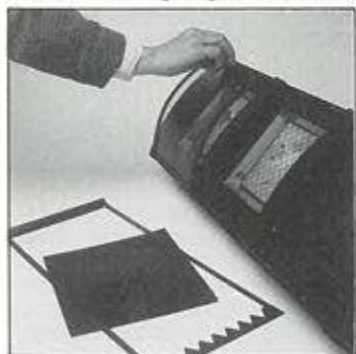


out pinks and so on. Any unevenness shows immediately and I must say the new flooding equipment does all this splendidly. However, what intrigues me is possible application of Coda floods to acting area lighting.

Of course, there is the intention to assemble lines of these units to take over the role of the old magazine or compartment battens; but since such equipment has long been thought of as playing a poor second fiddle to the massed ranks of spots, pars and the other nuclear weapons, it may not get much opportunity to shine. I don't think any such improved flooding equipment as the Nocturne and the Coda should be condemned always to the supportive role inherited from the dear old batts and floats of time immemorial. It is to make the reader think again that I write this article, stick my neck out and overstate my case - as usual! I am not saying that one should use this flood technique high above the great stage of the Olivier or for a centre stage with audience packed close all around. What I do think is that there are many stages in modern buildings where the comparative lack of height makes it advisable to think of flooding first and spots second - as the supportive gilt, so to speak. Further there *could* be special productions anywhere which would benefit from no spots or tightly controlled beams at all.

It is the characteristics of the Coda which make me speculate in this way: the line source, the asymmetric distribution reflector and - surprise, surprise - the colour frame! This last has the touch of genius. Not because it is curved when in the lantern and flat when in store, though that is good, but because one of the horizontal edges has serrated teeth. This affords the opportunity to have a sharp cut-off or a soft blending-edge to the beam.



For those who wish to go further, there is even a barndoor attachment available; but it is the colour frame that excites me. So much so, that I have broken a life-long rule and actually written an article in praise of battens and all-over wash. Give sparkle and high lights a miss sometimes whatever your installation. I recall being very pleased with the gentle gray dawn we got for Robert Nesbitt in *Rainbow Square* at the old Stoll, and that was standard battens, come to think of it, high up all over everything and nothing else for that cue!

*Secol was the early Strand Electric trade mark.

†Sightline (ABTT journal) Vol. 9, No. 2.



by Tony Brown

Tony Brown was born in Hertford in 1952, educated at Cheshunt Grammar School and the University of Liverpool where he graduated in the summer of 1974 with a degree B.Eng (Bachelor of Engineering) in Electrical and Electronic Engineering.

Following a brief encounter with BBC at Television Centre, he joined Rank Strand Electric as a Junior Design Engineer

working on the development of memory systems, MMS, Lightboard, Duet, and was responsible for the design of the AMC manual system.

Tony Brown became Senior Hardware Designer in 1978 and worked on the design of the electronics and operational philosophy of Galaxy. He is now Group Leader of Electronic Development responsible for the hardware design of the company's control systems.

WHEN THE LIGHTS GO OUT

OR WHAT HAPPENS WHEN A MEMORY SYSTEM FORGETS

SINCE the mid 'sixties lighting control systems for theatre and TV have embraced each masterpiece of electronic technology with relish, in some cases before the paint was quite dry.

The impetus for this trend was partly commercial and partly the demand for more elaborate control facilities to be able to repeat reliably more intricate lighting designs. However, as a result one finds a machine, whose entrails would be perfectly at home on the flight-deck of a Jumbo Jet, performing an often indispensable role behind the scenes. Compound this with the fact that operators of such systems are seldom electronic "Whiz-kids" and we have (in techno-jargon) high technology in a low technology environment.

If one describes this situation to a collection of individuals they surprisingly polarise into two camps: first the "So what? I drive a car but don't know a fan-belt from a spark-plug" brigade and the "What do they do when something goes wrong?" party. It is to the latter that I wish to bring illumination.

Regrettably but inevitably the electronic miracle will one day break down. The reason may be the demise of some hidden semiconductor or a wash down with a pint of best bitter, the result may well be the same. Those with experience in such matters will tell you that the timing of failures may be predicted by a variant of Murphy's Law which states: "The problem will occur when least expected and most inconvenient".

Once it is accepted that breakdowns will occur contingency plans can be made, just as a motor car carries a jack and spare wheel. In theatre or TV the contingency is usually a second independent lighting control.

Early memory systems were extensions of manual preset controls and, as such, had at least one fader level per channel. This provided a rudimentary back-up should the memory develop amnesia.

As the number of channels to be

controlled increased, the traditional fader wings became unwieldy, expensive and quite inoperable. To meet the need there evolved the concept of a single channel controller (either a wheel or servo-fader) with a channel selection keypad or button array. The back-up facilities for this generation of systems normally took the form of a pin-patch matrix, usually with ten holes for every channel which correspond to ten master faders. If a channel is required to be under the control of a particular master, a small pin is inserted at the appropriate cross-point of the matrix.

The limitation of this form of back-up are obvious: it is impossible to recreate the lighting as designed, furthermore, setting-up the pin-patch is a tedious task and, in practice, one that is often 'overlooked'.

Strand Century, our American sister company, introduced the concept of a small back-up memory, integral with the main control, in the Multi-Q system and took the principal further in Light Palette. Now the U.K. developed Galaxy has a memory back-up option allowing memories to be reproduced faithfully for performances, and recordings made so that technical rehearsals and plotting need not be postponed.

The Galaxy memory back-up can operate as a 'stand alone' memory lighting control, or can establish communications with a main Galaxy system so that memories and current lighting can be exchanged. At the centre of the system is an eight inch floppy-disc drive with control electronics provided by three or four microprocessor based printed circuit boards (depending on the number of channels). This unit provides the control signals for up to 768 channels, in a multiplexed format, which are then demultiplexed by a crate of output cards located adjacent to the dimmers. A small control unit connects to the disc unit and provides a single keypad for channel control or memory number

selection and a simple playback (with preset store) for executing crossfades or move-fades, either manually or with recorded times. It is possible to record the total output, the preset store contents or the times for fades.

Memories are stored directly on the floppy-disc in the same format as produced by the normal Galaxy Floppy-disc unit, allowing interchange of memories if both types of drive are fitted. Usually, however, this is not necessary as the memory back-up disc unit can perform all the functions of the standard disc unit when connected to a Galaxy.

Normally, with the Galaxy operational, the control outputs of the back-up are suppressed and memories may be transferred between the disc unit and the Galaxy along with text, patch information and all the usual data. If Autodump is switched on the Galaxy automatically copies the latest memory data to the disc each time a recording takes place. In addition, the Galaxy regularly tells the back-up the current lighting state. If the Galaxy fails the communication link is automatically broken, the back-up switched to active, and the lighting continued without a break!

The layout of controls and operating procedure of the memory back-up are designed to resemble the Galaxy as much as possible so that an operator does not have to remember how to drive a seldom used piece of equipment, especially whilst still in shock from the failure of the main system.

When one realises that the cost of the Galaxy memory back-up is comparable with a standard floppy-disc unit plus a 240 channel pin-patch, (considerably cheaper for larger systems) and that the Galaxy Preset Masters panel more than adequately performs the auxiliary control functions of the pin-patch, it seems very likely that matrices and diode pins will soon join wire wound dimmers and tracker wire in the great Valhalla of theatre and TV lighting archeology.