THE MX RANGE IS STRAND LIGHTING'S LATEST TWO SCENE PRESET+ MEMORY CONTROL BOARD. A NUMBER OF SPECIFIC DESIGN GOALS WERE SET FOR THIS RANGE. IT SHOULD BE: SUITABLE FOR USE IN ALL COUNTRIES WITHOUT MODIFICATIONS; SIMPLE TO OPERATE; POWERFUL; RELIABLE AND VALUE-FOR-MONEY. HERE WE SEE HOW...

RELIABILITY IS A DESIGNER FEATURE

Designing a manual/memory control desk for use in smaller venues presents the engineering team with a host of problems. Such a board must be capable of doing many things while remaining virtually foolproof and totally reliable at all times.

Building-in the many features the system needs is relatively simple. Designing-in reliability is another matter. And yet reliability is the feature of Strand's new MX range which crops up time and time again.

But first — what is the MX range and what does it do?

Its role is to meet the need in the market for an international-standard versatile board suitable for smaller venues such as clubs, pubs, studios and theatres. It blends both manual and memory controls in one easy-to-use system.

Not surprisingly, it is the smaller venues which often have to 'accommodate' — although until now, 'suffer' might have been a more appropriate word — the widest possible range of acts and uses, often at the hands of a variety of operators with varying levels of experience.

This is where MX comes into its own. Part of the design brief was that MX should be simple to use and international in operation. Software included as a standard package with MX comes in English, French and German; it is versatile enough to offer up to 48 channels of two-scene preset faders, electronic patching for up to 512 dimmers, allows rapid recording of up to 192 memories in four pages and has 24 real time programmable effects.

One of the biggest boons for the 'small band' level of use is that a MIDI interface allows the playback of lighting states and effects from musical instruments. Performers can pre-set their own lighting 'looks', without the need for a lighting operator.

While they play their music the MIDI signals may control changes in lighting rather than just the music beat, which until now has been the norm in discos and concert halls.

Built-in reliability — the MX control board.

As for the reliability of MX, this was designed-in at the earliest possible moment, with each component part being exhaustively tested even before the R+D stage was completed. This ensured that when MX was finally put together, there would be no question marks over the reliability of any of the electronics.

The product specification said that the switches had to operate mechanically and electrically for at least 1 million operations.

A test was carried out where a sample of ten of each selected switch was systematically bashed with solenoids four times a second until destruction. A tight mechanical size criterion limited the range to approximately half a dozen types. Most were expected to last the night. Only two did. Some fell by the wayside before a tenth of their specified life. Fortunately there were survivors. The type selected in fact lasts over two million operations before destruction.

FADERS

The faders were also required to operate through a long trouble-free life. The target here was 100,000 full cycles. A ruthless test treadmill was constructed. Several samples of the type selected were cycled for days on end. Unfortunately during one test, in the middle of the night, the test rig seized. The rig was worn out, but proved that the faders would last around 250,000 operations before giving up. Even once seized they still work electrically!

ELECTRONICS

Much is written about the perils of unreliable electronic systems and the effect of electronic smog. The impending EC legislation in 1992 is another pressure to build reliability and electronic cleanliness into our products.

The main threat to a lighting control system is from mains-borne interference. This can be aggravated when the dimmers are placed close to the control, and connected to the same