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additional hardware (a co-processor card and possibly extra memory) and a new program - J1.

MULTIPLEXED OUTPUT

In line with our original development plan for multiplexed control, we are introducing a multiplexed version of Galaxy. Several installation options will be available to the customer to make the choice of economics versus security of the system.

The multiplexed version of Galaxy will require less space in the equipment rack, because up to 8 channel cards will be replaced by a single 384

channel processor. Thus, the circuit cards for a fully fitted 768 channel Premier system with four monitors, 128K of memory, two pods, and memory back-up will reside in a

single 6U 19 inch crate. The wonders of modern science!

MEMORY

A new 64K memory card is under development which will provide the increased storage required by a full Premier system with programmable effects, whilst offering economies in space and expense.

NEW PREMIER PROGRAM

The Galaxy 2 Premier program will be expanded to J1 to accommodate the extra software for the programmable effects. This program (which will be known as J1) will support all Galaxy panels and options including theatre playbacks and geographic button mimic.

The geographic button mimic is an option which provides direct access

to any spotlight position in the theatre or studio by pressing a pushbutton on a diagram of the installation. The channel number (which may be any number from 1-999) is instantly selected on the channel control for use.

NEW ARENA AND STUDIO PROGRAMS

The new versions of the Arena and Studio programs, which have the reference F6:

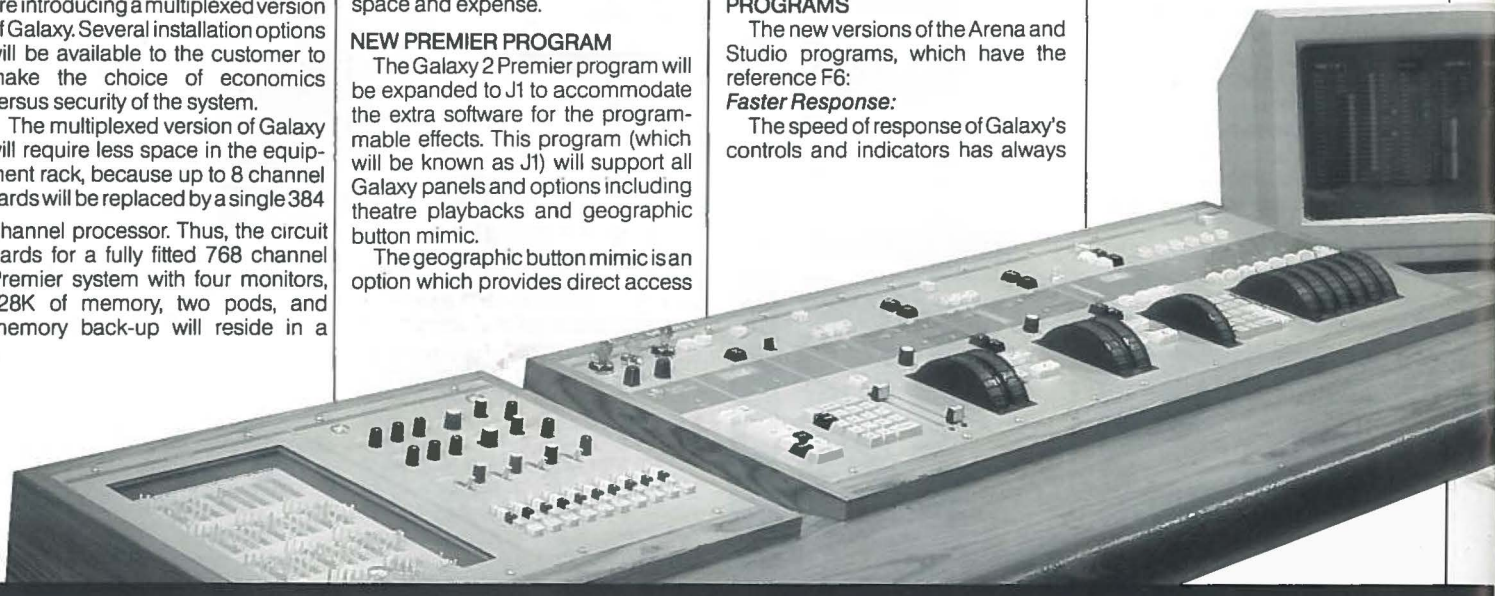
Faster Response:

The speed of response of Galaxy's controls and indicators has always

been impressively fast, but this was at the expense of the speed of update of the monitors. A result of some magical software tricks has been a dramatic increase in the update speed of the VDUs, which is particularly apparent on a 4-screen system.

Simultaneous Channel Controls:

Up to four channel controls may be



WHEN the opportunity presented itself for us to develop a new generation of special effects control as part of the Gemini project, we grasped it with eight pairs of enthusiastic hands. The project was to hold the key to future development of sophisticated special effects, and so the task was methodically researched, drawing on the experience of the past, requirements and products of the present, and resulting in a full technical brief of the direction to follow for the future.

The requirement that special effects equipment had to be incorporated in the lighting console was for many years the factor which separated the concept of control for the disco, rock lighting, theatre and T.V. lighting designers. Theatre effects were restricted to rippling water, flickering candlelight, blazing firelight, flashing neon signs, lightning and chases.

Rock concert lighting had matured in the exhilarating period of 'light shows' where lighting changes, movement, colours and special effects were creating a magical atmosphere within which the full potency of the music could be absorbed.

Thus grew the two armies of opinion: music influenced lighting, where the special effects were the visual attraction, versus theatre-influenced lighting, where the effects enhanced the performance without upstaging the actors. Either side of the fence considered each other's lighting with contempt - the 'traditional, unadventurous theatre' versus the 'naive, tasteless, unsympathetic rock shows' where subtle, subconscious manipulation of the audience was too traditional and theatrical to be contemplated.

Happily, the recent migration of lighting designers from rock to theatre, theatre to T.V. and rock to T.V., has caused this cultural antipathy to gradually dissolve. Rock shows are incorporating less primeval colour-wash floodlighting; profile spots are in evidence; there is an occasional glimpse of a memory system; and the audience are treated to some breathtaking visual effects showing all the subtlety and creation of the theatre. And the theatre and T.V. industry has not been slow to adopt the

Parcan, high density rolling dimmer racks, multicore load cables, pre-rigged trusses and . . . special effects controls.

So, we studied the latest programmable effects systems, their operation and facilities, in an effort to find a clue to the concept which would take us into the nineties. Surprisingly, the methods which had been generally adopted were restricted and restricting. Although offering a 'programmable' function, effects boards provided little more than a collection of chases which varied in speed, direction and contrast, where the lamps in each step of the chase could be programmed or used as the reference data for a pre-programmed pattern effect. True, these effects could be overlaid to produce a combination of images, but the scheme offered no room for manoeuvre in the future.



Gemini's programmable effects control panel.

With copious quantities of UNIX data files, ideas were bounced from terminal to terminal in Strand's Research department. Definitions: what is an effect . . . Categorisations: is a flash a single step chase? . . . Parameters: how many variables are wanted?

Take a simple chase for example, the list of controllable functions seems endless:

Step Type?

Manually controlled; automatic, with different recorded times for each step; variable, and

constantly adjustable by a panel control; beat, following the bass signal of an audio input; synchronised, to 'learn' a manual step sequence. . .

Lamps in each Step?

Individual channels; groups of lamps; balanced memories; additions to the previous step group; deletions from the preceding group; empty, blackout steps; number of channels per step; number of steps in a chase. . .

Starting the Effect?

Manually, by pressing 'go'; automatically, by attaching it to a lighting memory and starting both the fade and the effect from the main control. Which memory? Choose any number from 0.1 to 999.9. . .

Stopping the Effect?

At any time, by pressing, 'stop'; or, after a period of time, up to 99 mins, 59.9 secs; or after the chase has repeated for a programmed number of counts; or, of course, at the instigation of another fade on the main control panel. . .

The list continues: Should the effect switch on or fade up? When the effect completes, is the last step retained or does it fade out? Does the effect respond to a 'stop' command instantly or wait until it has reached the end of the sequence?

Even a brief attempt at listing the parameters which must be variable for a fully programmable effect produces a seemingly infinite combination of possibilities for a simple chase effect. But Gemini would not be limited to programmable step chases only.

It was found that any lighting effect could be defined by one of the five categories: chase, random flicker, on/off flash, lightning, or sound to light. During development a further dimension was needed for chase effects: a different fade up and down time for each step to give the powerful fast attack, slow delay 'starburst' type effect. The flexibility of the programmable system was tested immediately and within a short time another effect

PERFECT EFFECT

by Andy Collier