SHOWCAD: THE PC TAKES CONTROL

Robert Halliday assesses an emerging Show Control System

I have to admit that there were a few nagging doubts in the back of my mind as I finished my Viewpoint article for the November issue of this magazine, about using ordinary PCs as lighting controllers. The theory was obvious enough, and the technology seemed up to the challenge. Yet there didn't seem to be anyone doing it. Was there some problem I'd overlooked?

Someone else had been thinking along the same lines, of course, and the system was actually on show at the PLASA Show where, in the hubbub of other exhibits and lack of time available to me, I completely overlooked it, only learning about it a couple of months later when the subject of lighting control came up in conversation. Having written what I did last November, I had to try it.

Hence my trip to Cerebrum Lighting, where managing director John Lethbridge and Dominic Calvert, who looks after the product, introduced me to ShowCAD, a system which, for around £1950 plus a 386 or better PC compatible (£900 and falling all the time, if you don't already own one), gives you a 1024-channel DMX512 lighting control system complete with audio input. Throw in another £550, and it can send and receive MIDI control data as well.

ShowCAD is a development of Axon Digital Design and a progression of the acclaimed but, perhaps, under-utilised Oska lighting control of a few years ago. After working on that system, Martin realised that standard PCs provided the computing power required without the need to go to the expense of custom computing hardware and case production that perhaps hampered Oska. The result was three years of programming to produce a versatile lighting system capable of handling ordinary lights, moving lights and all of the other effects that are now commonplace.

The system first came to Cerebrum's attention in 1991, even though it was then completely text-based, it attracted the company's interest enough for them to propose taking the product on, subject to it being re-written to be graphics based. The new version was finished earlier this year, is now available, and has already been used for a show in Japan where it was run from the SMPTE time code on the sound-track, and live for a Swedish telethon, controlling some 60 moving lights. Its American distributors used it to run their display at this year's LDI show, and jointly won the award for best display. The system clearly has something going for it, and with even a little hands-on experience, it quickly becomes clear what. All kinds of things which are tedious, complex or just plain difficult on other controls become very easy using ShowCAD.

The ShowCAD software seen on the screen of a PC and on a laptop (right).

The system is mouse-operated, and controlled through a series of windows and menus, although these are specific to ShowCAD, which does not run under the Windows operating system. All of the operations are based around a series of patches. Initial setting up involves using the output patch to assign a 'logical' channel, or circuit controls. Each channel has a 32-character label attached - "5th PAR, upstage bar" or "Golden Scan 2, colour" for example. Channels can also have a number of parameters assigned to them, to set top or bottom limits, or even to invert the way the channel operates to allow the mirrors or lamps on opposite sides of the stage to work in opposite directions.

With the patch set up, scenes can then be created. A 'scene' can be anything from one lamp at full to a complex chase sequence. At the most basic level, the scene is formed by selecting channels from the channel list. These then come under the control of mouse-operated, on-screen faders. An output view window shows the status of each channel, switchable to show on/off or the actual level.

Big deal, and so far it hasn't offered anything to challenge the simplicity of a manual fader. Until you try to operate moving lights. With ShowCAD, this becomes stunningly easy; select the channels for left/right and up/down movement so that they appear as two faders. Then select the fader for left/right movement with the right mouse button; this means that the fader moves up and down as the mouse is moved left and right. Then select the up/down fader with the left mouse button - as normal, the fader moves up or down with the mouse. The combined result is that the moving light follows the mouse, and suddenly you have an intuitive control that allows the beam to be positioned with great ease.

From that, it's simple to set up a movement sequence. Normally this leads to another problem - if you want a move followed by a gobo change, for example, you can't just have a state for the start of the move and then one for the end, because this would make the gobo change mid-move. ShowCAD helps with this by allowing each state to have a set of start data, which remains fixed for the duration of the state, so the gobo remains fixed until the end of the move. The system's built-in 'ramps', initially designed to give different fade profiles on lamps, also allow a great deal of variety in lamp movement. The curves include linear,

John Lethbridge, Cerebrum's managing director, demo's ShowCAD.

PLASA Light & Sound Show 92, with the ShowCAD corner to the front left of the Cerebrum Lighting stand.

parabolic, and sine/cosine curves, the shapes of which can be seen as on-screen graphs if required. More importantly, the system allows the easy use of these curves to set up moving light circles in one step, with only the position and size being specified, rather than having to program a long series of positions and moves.

Chases and the like also count as scenes, although here a scene contains a number of 'steps'. The steps can be set to happen at a rate specified in beats per minute, on a keypress or other event (for example, a MIDI event from a keyboard or sequencer), or on bass or snare audio signals through the DMX cards' built-in audio input. Each step can also have pre-defined fade-in, hold and fade-out times.

The real beauty of the system is that once a scene has been set up, be it a fixed state, a chase, or whatever, it can be used as part of other scenes. A set of standard small effects, such as a Golden Scan sweep or Parcan flicker, can easily be combined to form much more complex effects. And, like the patch, all of the states can be given clear names, making it easy to keep track of what's going in. If you do lose something, a 'find' command enables you to say something like 'find blue Par chase', and the system will find the scene with that title.

Once a number of scenes have been set up, the system uses what it calls a 'scene patch' to allow a show to be performed. A scene patch is a list of scenes which can be selected using the mouse. An analogy with a traditional desk would be that a scene patch is a set of submasters; loading a different scene patch is equivalent to switching to a different page on the submasters. The scenes in the scene patch can either be set to be latched, so that a scene stays on until switched off, or to be interlocking - only one interlocked scene can be active at a time so that scrollers or the like aren't trying to move in two directions at once.

On stand at PLASA: Mick Martin (right), ShowCAD's designer, goes through its facilities.

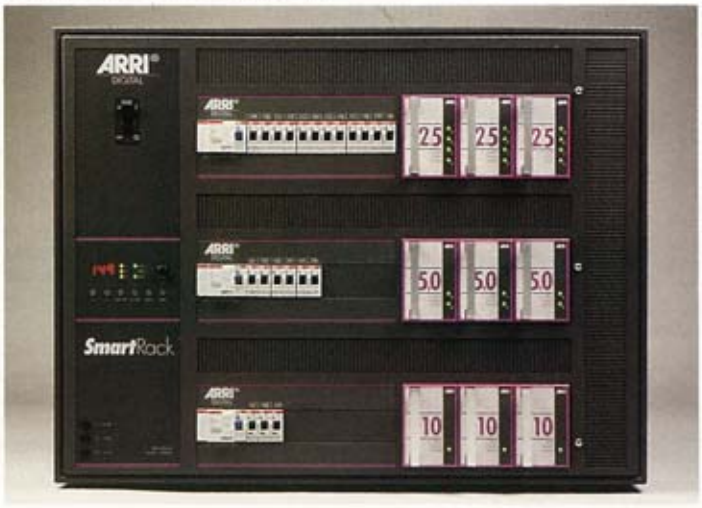
In performance, the scenes are either selected using the keyboard, the mouse (with on-screen faders giving control of level and rate), using a MIDI device through the MIDI interface or, in the near future, using an auxiliary fader panel linked to the PC through an RS232 interface. Giving, all in all, a powerful, flexible control device for live shows. It might sound like I'm raving about this system, and to a certain extent I am. I don't like every detail of it at the moment - for example, it would benefit from a move to a standard system like Windows (much as I dislike Windows), so that on-screen windows could be repositioned and re-sized to the user's preference. And it won't do theatre yet - there is no way yet of simply number-crunching data in, as directed by a lighting designer sitting on a set of cans, nor is there any way of setting up automatic timed crossfades. And there are a host of other minor niggles with the way the system operates.

But the design details, such as being able to name each channel, are stunningly useful. And the point is Cerebrum are listening and reacting quickly to what people want. The day I was there, a new version of the system had arrived, addressing several points that early users had made (and available free to them as a matter of course). The system, as it stands, shows that there isn't an obvious problem I'd overlooked - PCs do have the power to be lighting controllers. Cerebrum's demonstration studio doesn't contain a big rig, but we were running complex chase-and-movement sequences and the bar graph at the top of the screen showing the load on the computer was hardly registering. And for a really big show, you could always use a faster PC. Having said that, in November, ShowCAD was used by CP Sweden to run 13 Clay Paky Superscans, 41 Goldenscan 2s and six Tigerscans on a live six hour broadcast for Swedish TV.

The system, as it stands, has a number of the advantages I mentioned in my Viewpoint (L+SI, Nov 1992). Show data can be prepared in other PC programs and brought into ShowCAD, for example. New or customised versions of the software can quickly be installed, even over a telephone line if required. And if the PC does break, the card and software can quickly be installed in a new one - all of this with a system that is simultaneously affordable on even the lowest budgets, yet powerful enough to run the most complex shows, a combination that has never been achieved before.

The future holds even more exciting prospects, which Cerebrum are keen to produce. When the theatre version appears, I may well be a convert. And if you have any interest at all in theatre lighting control systems, then I think you should get hold of Cerebrum's demonstration copy of ShowCAD and have a play with it. Because, whatever some of the more established lighting control manufacturers may claim, I think that you will then be looking at the start of the future of computerised stage lighting control.

Arri SmartRack



February sees ARRI celebrating the first deliveries of their SmartRack digital dimmer racks, which aroused a great deal of interest at the PLASA Light and Sound Show last September. SmartRack's first contract was an order for 330 modular 5kW and 12 10kW dimmers destined for the new Spanish independent TV station Antena 3 in Madrid. The installation is due to be commissioned by ARRI distributor Fading SA this month.

Among current UK jobs, SmartRacks are being installed in the Northampton Theatre Royal and at London's Victoria Palace theatres. The Victoria Palace installation completes a package which includes a 500 channel Imagine 2 console and a Reflexion backup system. Scottish distributor Black Light has been quick to spot the advantages of the new dimmers for rental, and are busy flightcasing a total of 108 ways of 2.5ks for the road.

Tim Burnham, ARRI's lighting control product manager, told L+SI: "We've been knocked out by the response to SmartRack - the reaction at the PLASA Show indicated that we'd probably got it about right, but it seems that the combination of Smarts and a fairly radical look at how to put dimmers into a box, has really taken the market by storm. We've already doubled our production targets, and have many thousands of dimmers out to tender. I see no reason why a good number of these jobs shouldn't come in, giving a massive boost to our dimming business."

Cairo Gets Groovy With JBL

Cairo's nightlife has recently received a major boost in the form of a complete refurbishment of the Papillon Discotheque located in one of the city's most exclusive hotels. The Swiss-operated five-star Heliopolis Movenpick Hotel and Casino has long enjoyed the status of Cairo's most successful nightclub and it now also boasts the city's first JBL sound system.

The company responsible for the refurbishment is Super Vision International Discotheque Services, a London-based company that specialises in the design, installation, operation and maintenance of disco sound and lighting systems. With the aim of providing the best sound system in Cairo, four JBL 4726A mid/top units have been flown from custom-built brackets supplied by Marquee Audio, one at each corner of the room with a 30 degrees incline towards the dancefloor, while the bass frequencies have been catered for by two 18" JBL bass drivers housed in purpose-built cabinets which are recessed into the stage wall at one end of the dancefloor. 3k of amplification has been provided to drive the system.

As well as the sound and lighting systems, Super Vision also furnished the Papillon with a new video system. A JBL 6850 video projector throws a three metre-wide image onto what is the largest video screen in Cairo. It is located at the front of the stage adjacent to the dancefloor.

New Company Formed to Sell MBI in the UK

A new company, First Broadcast Limited (FBL), has been formed to undertake sales and installation of MBI products in the UK.

Mel Bowden, a founder of MBI Broadcast Systems Ltd, has set up the new independent company with Rob Eden and Viscount Peter Glenapp. FBL will move into MBI's old premises in Ship Street, Brighton.

MBI, which was acquired by Harman International Industries in July 1991 and is part of the Soundcraft Group, will continue to design, market, sell and install its products worldwide, operating through a network of distributors and dealers. The company offers a complete range of mixers for the radio market, its newest offerings being the Series 5 and Series 10 which are targeted at local and community radio stations worldwide. MBI also produces a range of larger consoles for more complex regional and national radio installations.

Commenting on the formation of FBL, Philip Hart, managing director of the Soundcraft Group, told L+SI: "We welcome this new addition to the MBI sales network. We are confident that FBL will further expand MBI sales in the UK radio market and we look forward to a long and fruitful business relationship."

LIGHTING+SOUND International

CYRANO DE BERGERAC AT THE HAYMARKET

PHOTO: WYATT ENEVER

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FEBRUARY 1993