

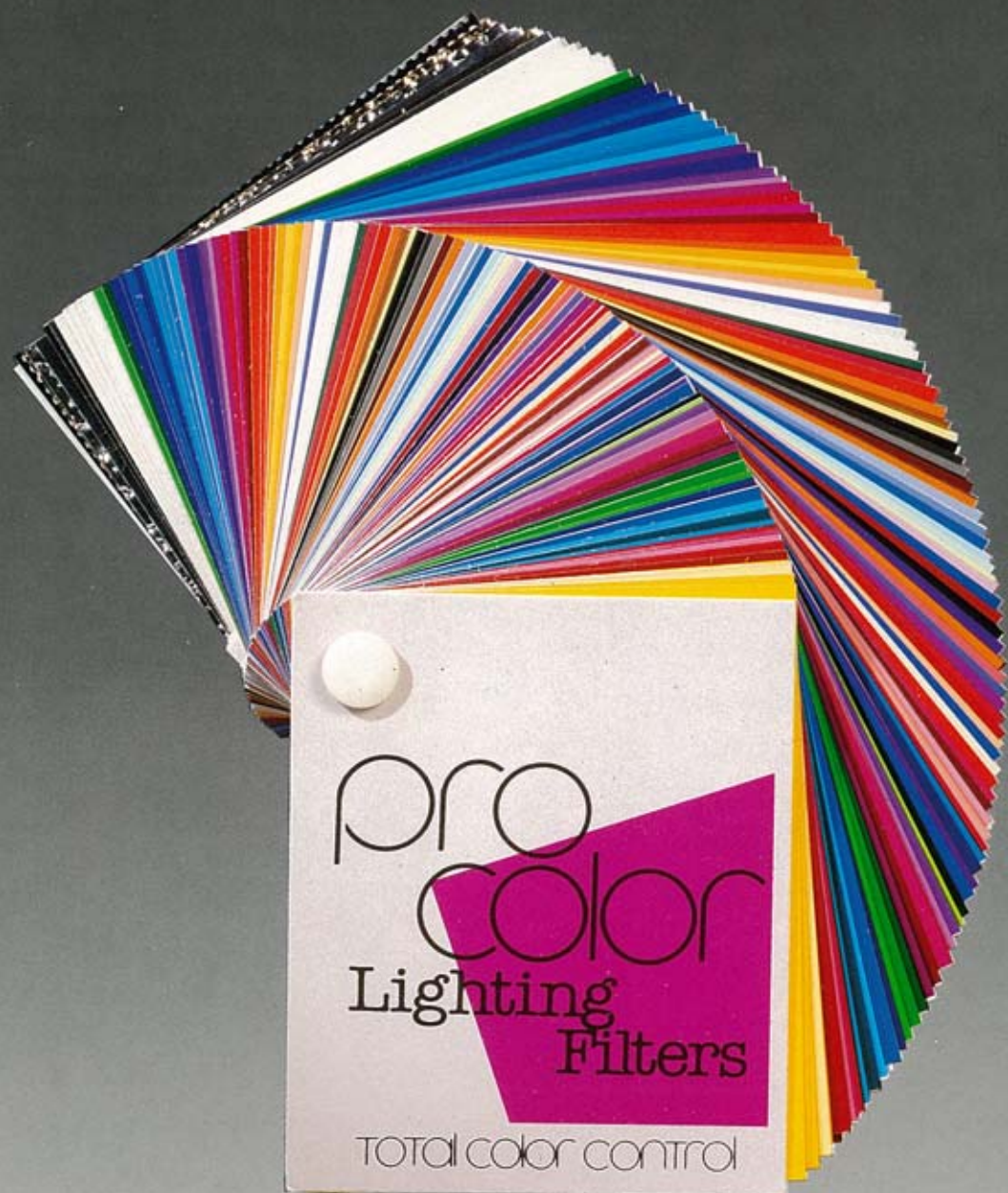
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- Triple show month: full reports from Frankfurt, Rimini and USITT
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- Sound and Light for Moby Dick
- Clive Green + Co: the CADAC company profiled
- With U2 in the States
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APRIL 1992



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LIGHTING+ SOUND *International*

APRIL 1992

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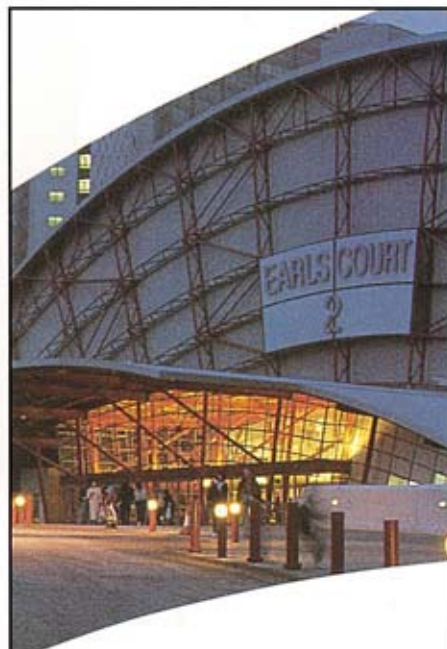
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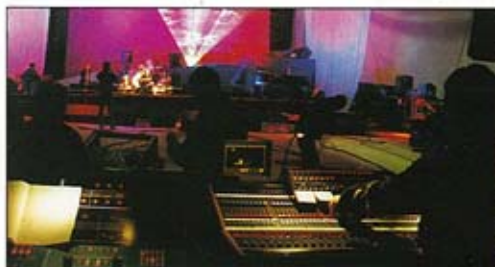
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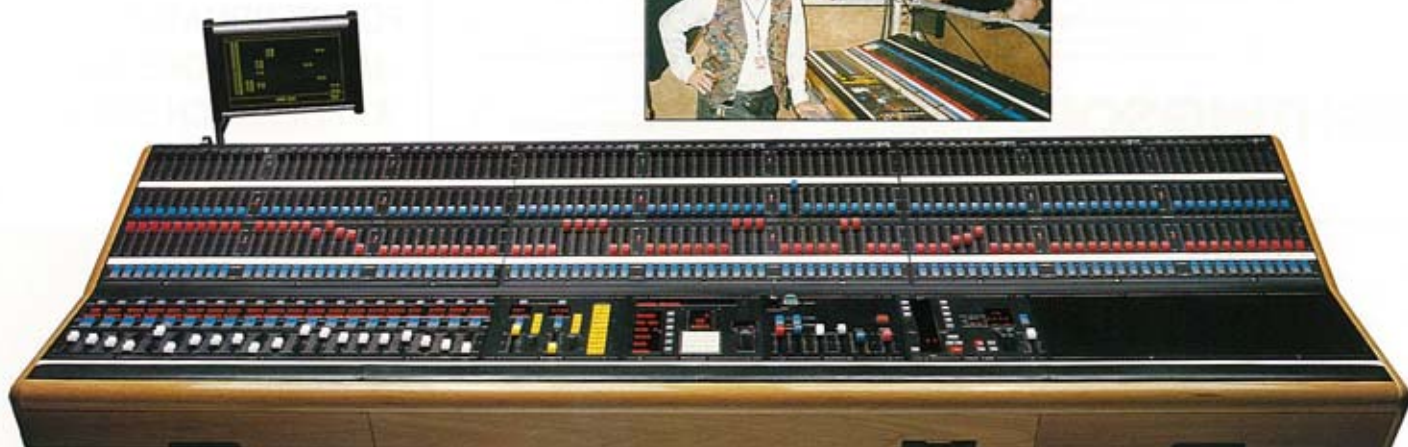
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Wet Wet Wet UK Tour 92
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The Ides of March

Amidst scenes worthy of a Greco-Roman tragedy, and as predicted between the lines of last month's L+SI interview with Bruno Dedoro, the first day of the SIB show in Rimini in March saw the Coemar supremo dispense with the services of his longstanding British distributor WB Lighting and, at a stroke, appoint a new company, headed by WB's ex-sales manager Ian Brown, in its place.

Dedoro was naturally reticent to talk 'on the record' about the past during the Show but he expressed confidence in the new arrangements and in Ian Brown, who he has obviously got to know well over some time. "We had been having difficulties establishing a sensible pricing policy in the UK," Dedoro told L+SI, "and I anticipate that this will be resolved very quickly now."

Brown's new outfit, which is called Coe-tech, is seeking new premises in the Northampton area and meanwhile will operate from Ian's home. Supported financially by a Jersey-based investor specialising in funding start-up ventures, Coe-tech will also distribute TAS products, the Coemar associate whose range of products runs parallel with their own. Brown confirms that one of his first tasks will be to rationalise pricing policies for Coemar equipment in the UK. "UK pricing has long been a sensitive issue," said Brown, "and one which has encouraged the 'grey' importation of Coemar product. I plan to pull our prices in line with a pan-European policy which should stop all that nonsense."

Meanwhile, Roman Walanta, WB's surviving director/shareholder and long regarded as the prodigal son, arrived in Rimini after the coup to find that the Emperor had already announced the withdrawal of his ambassadorial credentials. "There is no way that WB Lighting is going down as the result of this action," Walanta told us. "After all, we still have Griven, and Boss who manufacture in line with our specifications, though we have concluded our previous arrangements with Lampo. So it's business as usual as far as WB is concerned." No details were given of any arrangements which may have been made for the disposal of Dedoro's 30% shareholding in WB Lighting.

Meanwhile, elsewhere in the halls at SIB, David Churches' Batmink was appointed co-distributor of Genius in the UK, another geographical neighbour of Coemar's, and were rumoured to be picking up other Italian agencies as yet unnamed. "If Coemar introduce a rational pricing policy I am all for it," said Churches. "It is in everyone's interests to have a stable market and Ian and I have sat down and

discussed solutions, which I am perfectly happy with. We will continue to supply Coemar goods at fair prices, but in future I won't have the hassle of importing Coemar in my own right from Italian stockists."

The much vaunted re-launch of High End products in Italy via a new company run by ex-Clay Paky partner Julio Savoldi and his wife Gabriella also took place during the Show. L+SI will include an exclusive interview with Gabriella Savoldi in a future issue. Amongst other things, she told us: "Italians are not normally particularly impressed with American product and High End were finding the market here tough. But when someone with my husband's stature and successful record in the industry says that the product is OK, then people

pay attention."

Meanwhile, Savoldi's previous company stamped their authority on the Show with the launch of no less than 15 new and spectacular products which will, as usual, be distributed in the UK by their European partners Pulsar Light of Cambridge, who themselves introduced a number of new control innovations and their own versions of some standard lanterns. Sales director Derrick Saunders explained the *raison d'être*, reminiscent of earlier Coemar policy, now abandoned, behind the mass launch. "Clay Paky don't necessarily expect that all these products will succeed, but if most of them do, we will all be more than happy." There is a full report from the SIB exhibition starting on page 21 of this issue.

Duraplug Lives On

Following our news story last month on the fate of the 15 amp round-pin plug and socket, MK Electric have sent us the following statement:

"In your March issue you speculate that MK is about to delete the 15 amp 3 pin round plug (P153) from its range. Fear not! No such plans are afoot. As the market leader in portable power accessories we greatly value our customers in the lighting and sound industry, and recognise the importance of this particular plug to them. Nor did we ever cease production of the 5 amp Round Pin Duraplug (P53). I hope this clarifies the situation for your readers."

The story created a great deal of interest in the industry and several phonecalls on the subject were received at the L+SI offices. We also received a letter from Stanmore-based Clipsal UK who manufacture 2 amp, 5 amp and 15 amp round-pin plugs and sockets. They confirm that their products are readily available.

DTI Get Tough On Illegal Radio Mics

Further to last month's news story on the DTI clampdown on the illegal use of radio mics L+SI can reveal that the DTI have been in contact with a UK supplier, who chose to advertise an illegal radio mic system in a UK trade magazine and registered their disapproval. The publication concerned was also contacted. Presumably the DTI is of the opinion that the industry has at least some degree of self-regulatory responsibility.



Mike's Special Scotty

In return for being the distributor to sell most product Michael Goldberg of M&M Lighting of London (centre) was presented with a 'special edition' of the Smoke Factory's famous little 'Scotty' mobile smoke machine. Florian von Hoffen of The Smoke Factory is pictured left and Jörg (Otto) Pöhler of design company Ottec (right).

Quote of the Month

The following was spotted in *The Independent* by an L+SI reader:

"Many disabled people never think about trying the technical side (of theatre): someone who is blind might not be able to do the rigging but they can operate the lighting."

Action News

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The Art of Light

Filter Comparison

SUPERGEL		LEE FILTERS		
Product description	Clo	Sim	Com	
Bastard Amber	152	HT004		
Red Amber			151	
Bastard Amber	HT004			
Bastard Amber			154	
Bastard Amber			159	
Tint				104
Yellow Straw	HT007			
Yellow	103			
Gold	HT009			
Amber Gold	HT010			
Yellow	HT010			
Light Straw	102			
Orange	HT010			
Dark Orange	HT010			
Light Straw				104
Orange	HT015			
Light Straw				204
Light Orange				147
Light Orange	147			
Light Orange	HT019			
Light Orange				179, 134
Light Orange	HT020			
Light Orange				135
Light Orange	HT021			
Light Orange				158
Light Orange	HT022			
Light Orange				105, 166
Light Orange	HT024			
Light Orange	164			
Light Orange				182
Light Orange	HT026			
Light Orange				106
Light Orange	HT027			
Light Orange				176
Light Orange				109
Light Orange				107
Light Orange				157
Light Orange				193
Light Orange				248
Light Orange				107
Light Orange	HT035			
Light Orange	HT036			
Light Orange				110
Light Orange				110
Light Orange	HT008			
Light Orange				166, 103
Light Orange				113
Light Orange				110 x 2
Light Orange				203, 111
Light Orange	HT046			
Light Orange				148
Light Orange				136 - 170
Light Orange				170 - 110
Light Orange	126			
Light Orange				127
Light Orange				136
Light Orange	HT052			
Light Orange	HT053			
Light Orange				136
Light Orange				137
Light Orange				142
Light Orange				180
Light Orange				194
Light Orange	HT058			
Light Orange				181
Light Orange				202
Light Orange	HT061			
Light Orange				202 - 203
Light Orange	HT063			
Light Orange				165
Light Orange				161
Light Orange				174
Light Orange				151
Light Orange				117
Light Orange				117
Light Orange				196
Light Orange				174 - 196
Light Orange				132
Light Orange				141
Light Orange				116, 183
Light Orange				117 - 203
Light Orange				144 - 298
Light Orange				117 x 2
Light Orange				115
Light Orange				119
Light Orange				122 - 202
Light Orange				183 - 209
Light Orange				132
Light Orange				HT079
Light Orange	HT079			
Light Orange				197
Light Orange				195
Light Orange				121
Light Orange				245
Light Orange				138
Light Orange	HT089			
Light Orange				139
Light Orange	HT090			
Light Orange				124 - 210
Light Orange				116 - 298
Light Orange				212 x 2
Light Orange				209
Light Orange				210
Light Orange				156
Light Orange				101
Light Orange				247
Light Orange	128			

ROSCO CINECOLOR		LEE FILTERS		
No.	Product description	Clo	Sim	Com
602	Bastard Amber		162	159 - 153
603	Warm Rose			
604	No Color Straw	212	103	
605	Pale Gold			
608	Warm Straw	206		
609	Straw	HT010	147	
610	Light Flame			237 - 248
611	Rose Amber		134	
612	Golden Amber			
613	Light Amber		147	
614	Flame	134		
615	Deep Straw	105		
618	Orange	HT019		
619	Fire	113		
620	Deep Salmon	106		
621	Light Red			
624	Pink	247		
625	Pale Rose Pink			
627	Rose Pink			
632	Salmon			
638	Light Rose Purple		HT019	
641	Lavender		180	
644	Deep Lilac			
645	Indigo			
647	Pale Blue			
648	No Color Blue	202		
649	Booster Blue			
650	Light Blue	174		
651	Light Steel Blue			
652	Azure Blue			
653	Zephyr Blue			
654	Daylight Blue	196		
655	Steel Blue			
656	Steel Blue		HT010	
657	Primary Blue	118		
658	Medium Green Blue		132	
659	Green Blue		195	
661	Medium Blue		245	
669	Pale Yellow Green	244		
671	Light Green			
672	Moss Green	219		
676	Blue Green	209		
680	Light Grey		156	
682	Chocolate			

CINEMOID		LEE FILTERS		
No.	Product description	Clo	Sim	Com
1	Yellow	101	102	
2	Light Amber		HT013	
3	Straw		HT015	
4	Med. Amber		179, 195	
5	Orange		158	
6	Primary Red	106	182	
7	Light Rose		107	
9	Light Salmon		109	
10	Middle Rose		192	
11	Dark Pink		111	
12	Deep Rose		143	
13	Magenta	113		128 x 2
14	Ruby		HT026	
15	Peacock Blue	115	116	
16	Blue Green		117	
17	Steel Blue		174	
18	Light Blue		144	
19	Dark Blue		HT079, 118, 183	
20	Deep Blue		119	120 - 165
21	Pea Green	121		
22	Moss Green	122		
23	Light Green		HT089	
24	Dark Green		124	197 - 126
25	Purple			126
26	Mauve			127
27	Smokey Pink			
32	Medium Blue		132	
33	Deep Amber		HT020	
34	Golden Amber		HT021	
35	Deep Golden Amber		134	
36	Pale Lavender		135	
37	Pale Green		136	
38	Primary Green		HT058, 137, 194	
39	Pale Blue	139		
40	Pale Blue			117 x 2
41	Bright Blue		141	
42	Pale Violet		143	
43	Pale Navy Blue			117 - 203
45	Daylight			
46	Chrome Yellow		HT015	
47	Apricot		147	
48	Bright Rose		166	
49	Canary		102	212 x 2
50	Pale Yellow		151	
51	Gold Tint		152	
52	Pale Gold		154	

CINEMOID		LEE FILTERS		
No.	Product description	Clo	Sim	Com
61	State Blue		161	141 - 115*
62	Turquoise			165 x 2
63	Sky Blue			
64	Med. Red	164		
66	Pale Red			218
67	Steel Tint			
68				

GAM COLO		LEE FILTERS		
No.	Product description	Clo	Sim	Com
110	Dark Rose			
120	Bright Pink			
140	Dark Magenta			
155	Light Pink			
160	Chorus Pink			
170	Dark Flesh Pink			
180	Cherry			
190	Cold Pink			
195	No Color Straw			
205	New Straw			
208	Pale Green			
209	Light Green Yellow			
212	Grass Green			
245	Rich Green			
258	Med. Green			
262	Med. Green			115, 116*
265	Light Steel Blue			117
266	Azure Blue			201 - 213
267	Off Blue			118*
268	Nile Blue			143
269	Aqua Blue			117 x 2
270	Christal Blue			117 x 2
271	Shark Blue			202 - 203
272	Electric Blue			132*
273	Moon Blue			165
274	Moody Blue			161
275	Full Light Blue			174
276	North Sky Blue			202
277	Steel Blue			HT061
278	Blue (Primary)			161
279	Sky Blue			197, 119*
280	Daylight Blue			195*
281	Dark Sky Blue			201
282	Dark Blue			201 - 248
283	Alice Blue			120*
284	Pale Lavender			142
285	Real Congo Blue			203
286	Light Purple			181*
287	Special Lavender			137
288	Dark Lavender			HT058, 194, 183
289	Orchid			136
290				170 - 136
291				126



KEY

Clo: Close - Colour and density of Lee product within 10%.

Sim: Similar - Lee product is of a similar colour density but may be of a different hue.

Com: Combination of Lee Filters required to give a similar comparison.

*The Bold White Filter reference numbers are those that have no direct comparisons and are placed relative to their nearest colour type.

The Art of Light

revealed

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The third poster in the series—shown on the opposite page—is an invaluable comparison chart showing which Lee Filters products are equivalent to those manufactured by other companies. It shows, too, which colours are only available from Lee.

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First Year Success for CP&P Germany

Clay Paky and Pulsar Germany got off to a target-busting start in its first year of operation. "We had a figure we had to reach, and another figure we hoped to reach," said managing director Ralph-Jörg Wezorke. "At the year end we were 1.5m Deutschmarks above the 'hoped for' target," said Ken Sewell of Pulsar UK. "In the first two months of 1992 alone we've already exceeded half of the hoped for budget for 1991," he continued.



Ken Sewell (left) with Ralph-Jörg Wezorke at the Frankfurt Music Fair.

Ken and Ralph-Jörg figure much of the success is due to the relationship between price, quality and support. "We only sell to dealers, installers and hire companies, and never to the end user," said Wezorke. "We are dedicated to Pulsar and Clay Paky products only and can therefore answer the deepest technical questions. We already have two technical support staff. You hear a lot of talk about support, but to do it effectively is another thing."

"There's a lot more to generating sales than just shipping products out of the door," said Ken Sewell. "Dealers are able to count on our support for major projects, such as at the Magic Balloon in Berlin and Canary Wharf in London."

Following the success of CP&P Sewell told L+SI that "having proved the concept actually works we will be looking to expand the idea. However, each country needs a special study and we will need to establish a set of standards for the CP&P name."

With Pulsar in the UK and Clay Paky in Italy and two CP&P operations up and running in Germany and France, a very strong base for Europe-wide coverage is already in place. It will be interesting to see how the two founder companies decide to attack the rest of the world.

Mercers Sell Interest

In a deal concluded on Wednesday, February 12th, Stuart and Sheila Mercer sold their controlling interest in Carlsbro Technical Services, for an undisclosed sum. The new owners are Keith Woodcock, who already held a third of the shares, and Ivor Green. Premises, company name, phone and fax numbers remain unchanged. Keith Woodcock will continue to be managing director of Carlsbro Retail.

Colour Call Scroller from Strand

A new scroller system has been launched by Strand Lighting world-wide, and information was rushed to L+SI right on press date by product manager Philip Lehmann. "It has been specifically designed for theatrical and studio applications where quiet operation and long-term reliability are important criteria," the release states. There are two models, a Par 64 size for Strand Cantata, Cadenza and Leko luminaires, and a larger unit for 2k/5k studio luminaires. Backplates are available for nearly any luminaire.

David Brooks, Strand Lighting's marketing director, told L+SI: "We have entered into an agreement with Camelont of Sweden to supply a derivative of their Rainbow scroller to Strand's specification, with changes to suit our requirements. We recognised that there have been considerable developments in this area and reviewed a number of possible arrangements with different companies but we felt most comfortable with Camelont. We've taken the view that we want to be a full range supplier and over the years other products such as lamps and ballasts have been manufactured for Strand and now form part of our range."

A complete list of Colour Call features will be included within our Equipment News section in the May issue



Strand Lighting's new Colour Call scrolling colour changers.

Sister Company for Avitec Electronics

Hitchin-based Avitec Electronics (UK) Ltd have set up a new sister company, Avitec Distribution Ltd, in order to provide a better service for the two sectors of the market they address, with Distribution selling to trade customers and Electronics to the professional user, including contract sales.

Managing director, Tony Kingsley, told L+SI: "The original reason for setting up the new company was to market the Infinity lighting control system from Meteor USA, together with Meteor's new lighting products, which will shortly be released, from a new manufacturing base in Russia. But we felt that the opportunity to provide a dedicated service to our trade customer base, at the same time, was one too good to miss."

The new company can be contacted in Hitchin, telephone (0462) 420910 and 422599, fax (0462) 431019.



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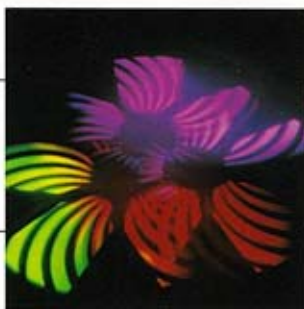


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- Motorized dimmer.
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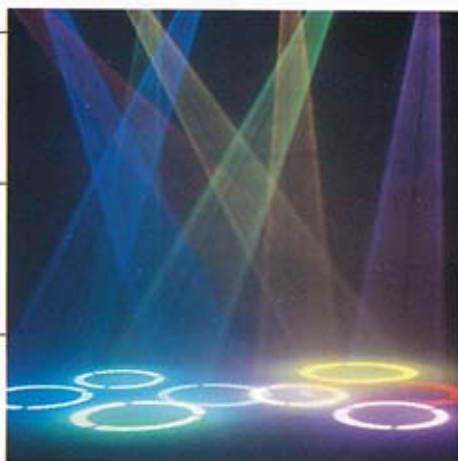
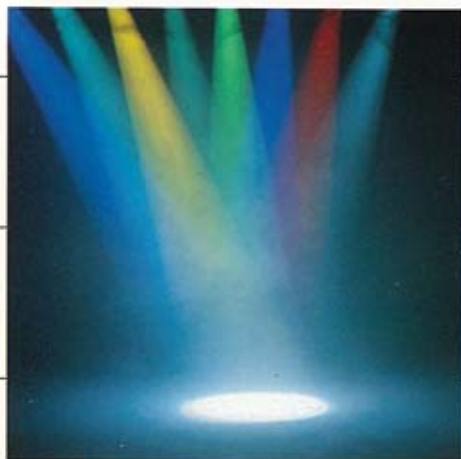
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No other projector on the market has the combination of state-of-the-art features and extraordinarily high lamp power that characterizes the 1020/MSR1200. No other projector can position its waggly mirror so precisely, so smoothly and so quickly. Pinpoint your target to within tiny fractions of a degree!!

This is the flagship of the Martin Professional range of lighting equipment and yet the price is as low as the cheapest models of intelligent lighting projectors in other manufacturers' product ranges. How do we do it? By doing everything ourselves. Everything from the idea stage, through research and development to the production stage is carried out on our own premises under the personal supervision of the company's founder, Peter Johansen. You told us what you wanted and we delivered the goods!

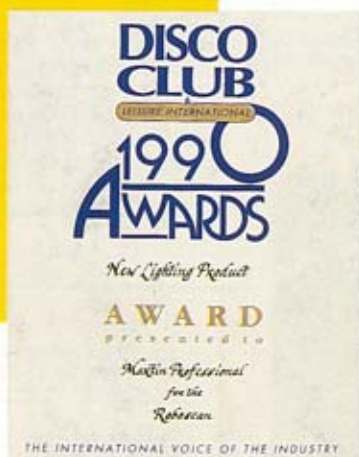
STATE OF THE ART IN LIGHTING - MARTIN!



The 2032 (32 channel) controller and the 2208 (8 channel) controller can be used to program all types of Martin intelligent lighting units to provide hours of richly varied lighting entertainment.

STOP PRESS!

Martin Professional won the 1991 Disco Club Manufacturer of the Year Award! The Roboscan won the 1990 Disco Club Award for the Best New Lighting Product.



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Ideal Home in Orbit

The vacuum cleaners were dancing and the toasters must have discharged their contents 100 times. Sounds seemed to come from nowhere and for some reason the traffic lights kept changing. This mesmeric cycle was to be seen by thousands of people as they passed the visual effects wall (pictured right) of the Nuclear Electric stand at the Ideal Home Exhibition last month.

Promoting the concept of nuclear power as an important part of our every day energy needs, the wall used hydraulically-powered domestic objects, video screens, an electric train and extremely sophisticated sound effects to get the message across. Despite the complexity of the ingredients, the continuous display had a cycle time of just 39 seconds.

The design contract was awarded to Pile Probert Kelly, who commissioned corporate and conferencing specialist Orbital Acoustics to design and install the sound. Lighting was handled by Simon Tapping, mechanical movements by MacAndroids and laser discs by Video Power.

In contrast to the carefully co-ordinated chaos of the display, the functional heart of the system was a scene of quiet efficiency. Hidden in a cupboard were seven Laser Disk players under the control of an Electrosonic program running on PC. Audio from the Laser Discs was fed into an Out Board Electronics theatre sound automation system and a Soundcraft Delta 16/2 mixing console. "The SS1 executes 12 fader cues and three re-routing cues, which is a lot in 39 seconds," said Chris Headlam-Morley of Orbital.

Although there was a pre-fixed budget for the audio, he decided from the outset that the number of cues and discrete audio channels made automation virtually essential. In theory it would have been possible to have set the levels before hand in a recording studio but "on site there would be vast variances and some element of panning was also going to be needed".

The motorised faders of the SS1 and the ease with which its automation capabilities could be synchronised via MIDI to the Electrosonic program meant that the unit could handle all the mixing duties while the Soundcraft Delta was used for the most part via its direct outputs as a series of equalisers. Power was provided by Amcron Microtech amplifiers. On the visual effects wall, these primarily powered ProAc Tablet speakers; Headlam-Morley's preference where a compact but high quality unit is required.

These were supplemented by a Bose 101W and a Klark Acoustic Jade 2, the latter providing a heart beat to demonstrate the importance of electricity in



medicine. One audio output did not feed a speaker system.

The wall included the screen display of a dBx RTA1 analyser fed from the main right output of the Delta. But there was more to the Nuclear Electric stand than the wall. Visitors also passed a 3D display, which used a Pepper's Ghost to superimpose video footage onto a physical model of buildings and streets. This was provided with sound via two ProAc EBT units for left and right, plus a rear Bose 101W fed a summed L/R signal.

Bose units were again used for a wall at the back of the stand, providing audio for the video monitors. While repeatability was the primary benefit of automation, reliability was also vitally important. When setup time is included in the equation, the system went through the programme cycle approximately 20,000 times.

Spotlights On Crowds

Following a successful first event, Crowdman the exhibition of products and services for crowd and venue management, is expanding and changing venue. The next Crowdman event will take place at Birmingham's National Exhibition Centre from 23-25 February 1993.

To be launched during the show is a new exhibition called Entech, dedicated to entertainment technology. This will focus on the latest products and services that assist in all aspects of entertaining crowds.

Promoted throughout EEC, Crowdman and Entech will provide visitors with an opportunity to explore the different techniques and methods for crowd management.

For further details contact Spencer Mehlman at Mack-Brooks Exhibitions on (0707) 275641.

New Line-Up at VPLT

At the recent annual meeting of German trade association VPLT Peter Klotz of Klotz & Co was re-elected as president, with Dieter Schaich from Audio Licht & Effects taking on the role of vice-president for the first time. Rudi Braun from Alle Nurnberg was re-elected to the post of treasurer, and Bodo Loppert of MUVI, responsible for administration, was also re-elected. A second new member to the committee is Flash-Art's Marais Katterle who will handle the association's PR work.

Florian von Hofen continues as the executive administrator for VPLT who have recently moved to new offices. They can be contacted at Vahrenwalder Str. 205-207, D-3000 Hannover 1, Germany. Telephone (49) 511 3730277 or fax (49) 511 3730423.

Mazda On The Move

On 7 April 1992, GE Thorn Lamps Limited, manufacturers of Mazda lighting, is relocating to Mitcham. This is part of the stage by stage progress towards the integration of GE Thorn and GE Tungsram as one company, GE Lighting UK, in which Mazda remains the key brand for the consumer channel. The newly-refurbished site and offices at Mitcham, currently the base of the company's commercial and industrial business, will become the UK commercial centre for GE Lighting.

By mid-1992, Mazda products will be distributed through the company's new warehouse in Northampton where £10million has been invested in this new facility. GLS production has moved to Leicester where significant resources have been invested in new production lines.

MS-Audiotron Audio For Finnish Opera

Finnish leading pro-audio distributor MS-Audiotron has been awarded the contract to supply and install all audio systems for the new National Opera House which is presently being built in Helsinki. "This is the largest single order in Finnish audio history and is worth \$3million USD.

The design of the opera house was started in the late 70s, construction began in 1988 and the venue is to be completed by early 1993. The overall cost of the Opera House is over \$160 million USD.

The audio project was split into three contracts of which the first covers the main house sound system, distributed paging and background music system and recording studio acoustical treatment, monitoring and signal processing equipment. The second contract covers numerous audio mixing consoles including main house and studio consoles. The third contract covers all digital and analogue recorders and players including a digital multitrack for the studio.

ALUMINUM

Primary manufacturers/suppliers worldwide of aluminium couplers (scaff clamps), aluminium snap hooks and many other aluminium fittings to fit either 2" (50.8mm) or 1.29/32" (48.4mm) tubes

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We manufacture and distribute all fibre optic lighting materials, Parglas harnesses and conduits, Parflex polymers, light sources, theatre curtain washers, spot ball and bullet lenses, side emitting fractured fibres, ceiling fittings and large bore fibre optics.

Examples of our fibre optics may be viewed at our Chiswick showroom, from subtle backgrounds to fibre optic fireworks. Leaflets available.

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Sound and Light

Q

**HOW MANY
COLOURS ARE THERE
IN A RAINBOW?**

**THERE ARE SIXTEEN.
NOW**

A

Sorry to turn your world upside down but we've increased the capacity of our Colour Changers to sixteen. The new *two16* is capable of scrolling through sixteen different colours in 1.4 seconds, and can be trimmed down to accept as few as two.

It's little wonder Rainbows are already being used at Expo 92 Seville, Spain, in shows such as Five Guys Named Moe on Broadway and Miss Saigon and Les Miserables all over the world -

now there's even more reason to specify them.

Faster. Quieter. More reliable. And now more variable. Just the sort of changes you'd expect from Rainbow.

For further information on the full Rainbow range, including 1K, 2/5K, 8 lite, light curtain and the new *two16*, contact our London office for our latest brochure.

Rainbow - something to depend on in a changing world.

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COLOUR CHANGERS

At last there's a console you can take anywhere



Concerts • Theatre • Industrials

The Event by Jands is available with 24, 36 or 48 channels but if a show comes up which needs more the console can be switched to wide to double the number of channels by using the bottom preset faders to control the extra outputs.

Recording and editing is a breeze with Event. 450 Memories are available and each can be given a label which displays in the LCD window, fade times and a cuestack link. Chases can include up to 99 steps and offer all the features of a memory plus controls for direction, speed and attack / decay.

The total flexibility of the Event is seen in the Assign Master faders, these can be used to control a Page of memories just like

regular scene masters but that's just the start. They can also control Chases and any combination of Memories and Chases can be assigned to the faders.

For theatrical applications a pair can be used as A/B crossfade masters, in fact it's possible to run 6 crossfades simultaneously.

Once the assign masters are set the way you want that selection can be saved as a File and recalled at any time.

With its on board softpatch to 512 dimmers, midi input, and options for a VDU, RAM card, and analogue outputs the Event is unquestionably a major contribution to the art of lighting design.



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A 'Natural' Show Controller

Memotech Computers have recently installed a Show Controller as an integral part of the new Videowall in the ecology section of the Natural History Museum, London. The Show Controller provides dedicated programmes for the museums AV presentation depicting the earth's life cycle.

The installation itself is a 4 x 5 configuration of 32" Barco Monitors. The Videowall was programmed on an I.B.M. PC and then down loaded onto R.O.M. on a Memotech computer using the Show Controller. The system controls laserdiscs, lightboxes and other AV components within the exhibition.



Soundcraft Revolutionizes Mixer Manufacture

Console manufacturer Soundcraft is using technology developed by Russian space scientists in order to boost production of its new Delta SR Series.

The technology called QUARI (Quasi-Autonomous Replicating Intelligence) enables complex electronic devices to be manufactured at very high speed and ultimately lower cost. Soundcraft claims a single production line can turn out 20 consoles an hour. A spokesperson for the company said the technology was only suitable for "extremely high volume production" but in the long term no other audio manufacturer could compete with the economies of scale.

The exact technologies behind QUARI are a closely guarded commercial secret but a "pseudo-organic culture" is used to "grow" blocks of electronic circuits several metres long under computer control. These are in effect continuous rows of fully formed channel strips which are then cut to the size required for the input configuration of the SR consoles under manufacture. During this second stage, robot arms add the mechanical and cosmetic fittings.

As a result, the QUARI line can be reprogrammed almost instantly to produce the right SR consoles to match incoming orders. But this flexibility must be handled with caution. During tests, a bug in the controlling software caused the system to produce 16 SRs with 120 input channels and not the 120 16 input consoles originally ordered. Fortunately the software was corrected in time for full production at the beginning of April and the accidentally created units were sold to a dealer in Mongolia who wanted them for stock.

A full appraisal of the Soundcraft manufacturing facilities appears in Lighting & Sound next month.

Catching 'em Young



"I know your mummy's Avolites' finance director, but are you sure she can afford one of these?"

(Steve Warren of Avolites explains the QM Diamond on stand at Frankfurt.)

Databeat Lives On

As the result of a deal completed towards the end of March, the assets and name of Databeat, manufacturers of the computerized CD system, have been acquired by a new BES company (Business Expansion Scheme) which will trade as Databeat Digital Music Systems.

John Leefe, founder and driving force behind the Databeat concept, will continue as joint managing director and is joined in similar capacity by Jim Foley, who was previously marketing Databeat in the USA, and merchant banker Peter Jennings as chairman. Jennings was previously much involved in financial aspects of Bacchus International Discotheques, where Leefe was also a partner, prior to their takeover by Juliana's some years ago.

John Leefe told L+SI: "This completes a period of very important reorganization which will allow us to trade with increased confidence and resources. Not only have we been able to strengthen management, but substantial funds from the BES investment will enable us to put in place an aggressive sales and marketing plan."

Databeat are now the exclusive UK distributors for the new NSM CD 3101 FPS player from Germany (See Equipment News this month), which has a capacity of up to 100 compact discs, and they will be re-launching their professional system based on these players with improved 'windows' operating software, providing users with much needed self-cataloguing facilities.

An autochanger-only version of the NSM system is also available and Databeat have recently sold the first 12 of these to Audio Systems Components of Aldermaston for use in broadcast applications. They continue to operate from the existing premises in Newbury.

Eurolight continue with Compulite

Since 1981 Eurolight have been distributors for Compulite R & D products in the UK market. These products, manufactured in Israel, were sold on a semi-exclusive basis due to the relatively small size market for large size control systems in the UK, say Eurolight, and 170 systems have been sold around the world by them.

In March 1992 Compulite decided to provide UK customers with a choice of supplier authorising two distributors in the UK. Compulite GB Ltd, part of the Lighting Technology Group and Eurolight are both appointed as distributors and service agents for these product lines. "We decided to undertake a more aggressive marketing approach," said Compulite R & D products. "We shall therefore market our products through additional distributor or distributors in the UK."

Eurolight have stated to L+SI that they will continue to support all of their new and existing customers, many of which have received letters from Compulite GB advising them of the changes. They felt the true situation had not been made clear either in the letter from Compulite GB or in the news release from them which appeared in our story 'New Distributor, New Company' which we ran in the March issue of L+SI.

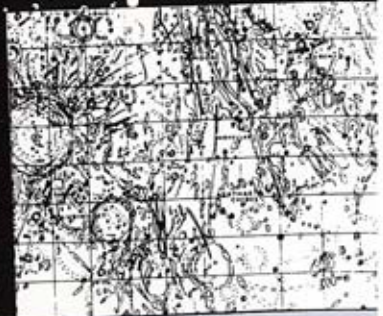


B.A.S.E.

BEDINI AUDIO SPACIAL ENVIRONMENT

A GAMMA ELECTRONIC SYSTEMS, INC. SUBSIDIARY

The Final Frontier



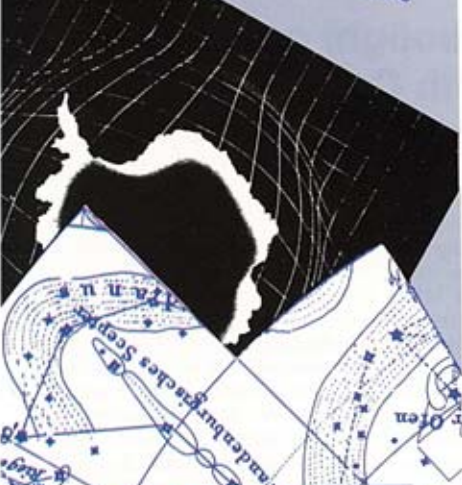
"It provides a realistic sense of height and width...because B.A.S.E. creates forward and backward sound movement, as well as left and right, it results in a sense of "sonic curve" which mirrors the camera moves. In fact by pulling back the centre image but keeping the stereo information present we got a negative space effect that we used on scenes where the large mother ship moved away"

Alan Howarth - Electric Melody Studios
(Sound Design for Star-Trek V)



"The perception of depth obtained by using B.A.S.E. on a solo instrument within a mix on a soundtrack or surround effect on a stereo mix is incredible"

Caetano Ria - Capri Digital Studios



Sound B.A.S.E. Ltd.
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Imagine an audio processor with no limit to its application, which can make any sound appear natural, brighter and clearer, with no restraint on the perception of stereo whether on or off axis and you will be close to describing the unique effect of B.A.S.E.

Arbitrary centering of level balance within a stereo mix, becomes a far easier task with B.A.S.E., as dimensional controls can alter the position of mono information in any direction, left or right, 'near' or 'far', with no 'smearing' of the image or change to the discrete stereo information.

B.A.S.E. can be used both as a creative "psychoacoustic" processor to achieve three dimensional pans and "out of speaker" image placement, or as a powerful post production tool to refine and balance a finished mix.

"Psychoacoustic" processing further allows the audio engineer to create "virtual" space between the left and right channels, and "open up" an otherwise "closed in" mix, without detriment to the integral stereo balance. Equally, B.A.S.E. may be used to correct a recording with phase imbalance or excessive 'width' by reducing the degree of stereo space.

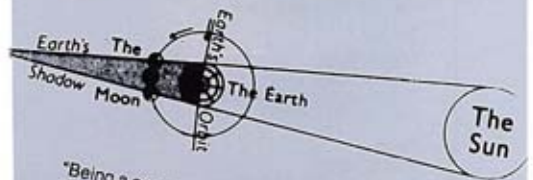
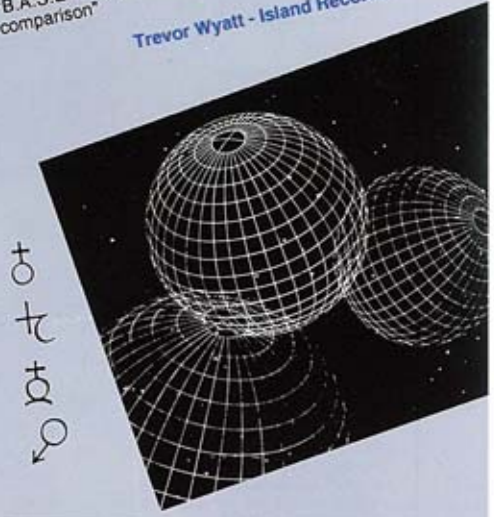
Applied to any stereo signal path, at virtually any stage, B.A.S.E. succeeds in creating a dimensional quality which approximates closer to the original recording environment, particularly appropriate when multitrack and final mix-down are performed in different locations.

All these benefits provide the audio engineer with countless possibilities to refine and develop recording technique, without the constraint of working within the confines of the stereo sweet-spot. The "psychoacoustic" sweet-spot is so dramatically enlarged that credence must be given to any device that makes this concept a reality.

To put yourself in the "3-D" picture, and let your ears be the judge, contact Sound B.A.S.E. or Audio FX.

"B.A.S.E. makes stereo sound like mono by comparison"

Trevor Wyatt - Island Records



"Being a sceptical engineer, I thought that people listening on their domestic trannies would not be able to hear the difference, but that's definitely not the case and we get lots of listeners ringing in and asking about it...The main problem is one of mono compatibility, B.A.S.E. was the first system I saw that was suitable for the job."

Andy Howard - Kiss 100 FM



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Super Channel XXVI

Each year's Super Bowl is noted for all kinds of 'biggest' and 'best' feats in the promotion and staging of the game and accompanying activities. The January 26, 1992 Super Bowl in Minneapolis/St. Paul, Minnesota - Super Bowl XXVI - was no exception.

Dayton Hudson Corporation was one of the leaders of the task force to promote the event and recommended the use of a medium with which it was very familiar; the videowall. Dayton's flagship retail store in downtown Minneapolis has used a permanently installed 32 monitor Electrosonic videowall for years for continuous in-store and public service promotional messages.



Electrosonic Super Channel XXVI was the result with the installation and linking of 10 videowalls of various configurations. Each was located in the Minneapolis Skyway pedestrian system plus one in the World Trade Center in St. Paul. In addition, a videowall was installed in the broadcast booth of WCCO TV. In all over 140 screens were used.

In the space of one week, all videowalls were installed. They operated continuously for the event week and, with the exception of the Dayton's videowall, were removed in a matter of hours after the game was completed.

Electrosonic provided the equipment, labour and programming for the videowalls. A variety of shapes were used, including pyramid, diamond, rectangle and tower. Video signals were digitized and distributed to the display screens under the control of Electrosonic C-Through software. Effects included full screen magnifications, distribution of images or parts of images to one or more screens in pre-programmed sequences and the use of colour washes for impact and visual separation between image effects.

Among the new products in use were Electrosonic's PROCUBE 2 video projection display and PICBLOC 3 videowall control system.

Lighting Exposition

The International Lighting Exposition will take place from June 21st - 23rd, 1993 at the Metro Toronto Convention Centre in Toronto, Ontario, Canada.

The organisers hope that delegates from around the world including architects, consulting engineers, interior designers, lighting designers, electrical contractors, television and theatrical lighting directors and lighting maintenance contractors, will all be in attendance.

Further details can be obtained from the show's organisers Kerwil Publications Ltd, Show and Conference Group, 395 Matheson Blvd. E, Mississauga, Ontario L4Z 2H2. Telephone (416) 890-18466, Fax (416) 890-5769.

TP add to Hire Stock

As part of a new programme of investment in equipment and quality control systems Theatre Projects Services Sound Operations has added 40 Amcron 120 amplifiers to its hire stock. This is part of a series of orders including Monitor Amps from Australia and Community loudspeakers and microphones.

Also on order is a Philips Portable Oscilloscope to enhance on-site system testing facilities and the PAT testing system.

Osram Education Programme

Wembley-based Osram Limited have launched Focus 2 - a free training programme for those involved in the design and specification of lighting. The one day seminar is designed to provide wholesalers, OEMs, architects, contractors and specifiers with a grounding in the new requirements of commercial lighting design.

Particular emphasis will be given to the latest advances in lighting technology and the implications of the latest EC regulations and directives regarding the lighting of areas containing VDT workstations. The series of one day seminars will run for eight consecutive months. The first one has already taken place at Osram's Wembley Light Studio and a further series is planned to be held at Osram's Shaw office located near Oldham. As well as learning general principles of lighting design, delegates will be equipped with the reference materials and calculation tools necessary to tackle complex lighting applications.

The seminar will cover the legal, economic and aesthetic requirements of lighting systems, including health and safety issues, lighting standards and the principles of cost effective lighting system management. There will be a demonstration of illuminance, room index and glare index calculation and a chance for delegates to tackle some practical examples.

Focus 2 also gives guidelines for the commercial presentation of lighting ideas, including installation analysis, design rationals and cost of justification.

Enabling them to put theory into practice, each delegate will take away a lighting design reference manual, calculation pads, installation layout grids and a pre-programmed calculator for the instant calculation of illuminance, economy and display lighting.



Strand Germany 'MIDI in Aktion'

Strand Germany's stand (shown above) at the Frankfurt Musik Messe had what they termed a 'MIDI in Aktion' programme in operation with an MX console linked to an Atari sequencer. Floods located inside the counters changed colour in sequence with the music track. A full line-up of control systems and luminaires was on display with all consoles 'live' for hands-on demonstration. Pictured below are Erhard Grickscheit (business development manager) and Thomas Straub (project manager) of Strand Germany.



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LIGHTING IN BRIEF

Memotech Computers recently supplied a 12x8 system 2000 videowall to Photo Centre of Oman (pictured below). The system comprises 96 Barco SCM2840 RGB MK2 monitors combined with Memotech videowall electronics. The company has also installed a 4x4 videowall system 1500 using the new Seleco SVM280 monitors into Greenhall Inns' Warrington-based 'Rakes'.



Both sound and lighting teams from **Entec Sound & Light** are out with indie chart toppers, Daisy Chainsaw, for four weeks on their UK club and college tour. Entec has supplied the band with a 40-channel Soundcraft console and 6kW rig of Court Signature 1000 series speakers. On the lighting side, Entec's Tony Fagan came up with a system designed to create dramatic shadow effects through use of strong floor light, colour washes and strobes. Entec are also on the road with Barclay James Harvest, and lighting designer Carol Cooper is the first to be using the new Golden Scans that Entec has recently added to their hire stock.

Laser Productions of Miami has merged with Laser Dimensions of Ft. Lauderdale. The newly-formed company will trade as Laser Production Network and offers design, installation, sales and rentals of laser projection systems.

Smithfield Electronics now holds amongst its stock the range of SLE lighting effects from Germany which are available for demonstration.

Luff Light & Sound have received orders for the installation of the Strand Light Palette 90 consoles in both the Aldwych and Vandeville theatres. The English National Ballet have ordered a specially engineered Strand Galaxy control from Luffs. Other recent Luff sales have included a Galaxy for the Queen Elizabeth Hall and a Lightboard M for the Hackney Empire.

PLASA Show '92

Almost 4,500 square metres of stand space has already been reserved by 116 exhibitors for the PLASA Show '92 to be held at Earls Court 2, London, 6 - 9th September.

The Show is internationally acknowledged as one of the premiere exhibitions for the disco, theatre, live entertainment, TV and film sectors and reflects the increasing diversity of the industry. The 1992 Show will see further expansion into the areas of theme parks, leisure centres, architecture and interior design.

The £80million Earls Court 2 complex, the Show's new venue, offers visitors many benefits. Earls Court and Old Brompton Road underground stations provide easy access to the exhibition while 650 parking spaces on-site and a further 1,200 nearby make life easy for those travelling by car.

Further exhibitor and visitor information for the PLASA Light & Sound Show '92 is available from: Philbeach Events Limited. Exhibitors contact: James Brooks-Ward, telephone 071-370 8215. Visitors contact: Vivienne Orchard, telephone 071-370 8214.

Masterpiece Award



Derrick Saunders (right) of Pulsar hands a certificate for completion of their Masterpiece Advanced Training Scheme to Günther Olbricht of CP&P Germany for eventual delivery to Stefan Thiel, managing director of ROT Licht Ton und Lasertechnik GmbH, who was unable to attend SIB in Rimini last month. ROT has been in operation for four years and is one of CP&P's leading German dealers. They are currently undertaking a major project in former East Germany where all equipment to be used is from Clay Paky and Pulsar.

Set for Showlight '93

Showlight '93 will mark the fourth international colloquium aimed at lighting for the performing arts covering television, film, theatre and concert lighting. The conference will be centred around Bradford's National Museum of Photography, Film and Television and the adjacent Alhambra Theatre.

Exhibitors and delegates from all over the world will attend the event which features a full conference with invited speakers presenting papers covering a wide range of topics, in tandem with a trade show at the Alhambra Theatre where a range of lighting equipment and information will be available throughout the conference. A call for papers has also been issued inviting professionals to submit papers as part of a forum for discussion and exchange of ideas. Further details on Showlight are available from Ruth Rossington at the PLASA office, telephone (0323) 642639.

Soundivision



Soundivision held an open evening in March to which they invited assorted clients and press to their new offices in London. The aim of the evening was to promote their design, supply and installation service. The new facility gives the opportunity for hands-on demonstrations of a comprehensive display of the latest products from many light and sound companies.

Soundivision are also opening a 16-track recording studio early in April. This will have fully equipped demo facilities for remixing, editing and sampling.

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Lighting And Sound Launch For Norbreck



Last month Blackpool's Norbreck Hotel relaunched its recently refurbished facilities. The weekend began with the switching on of the hotel's exterior floodlighting and culminated in a Gala Evening, the highlight of which was a spectacular West End-style floorshow. The responsibility for turning ideas into reality fell to lighting designer Benny Ball and his company Motivated Light Ltd.

The Norcalympia suite, (normally 26,000 sq.ft of exhibiton space) already contained a lightweight house truss, and a Strand EC90 control desk. However, to allow for specially choreographed routines from West End shows (alongside which came rotating trucks and abseiling army cadets!) more equipment was enlisted. On the day the lighting system comprised 216 Par 36 no 5s, 60 Par 36 no 2s, 96 Par 36 no1s, 138 500W Raylights, 38 Lekos, three Cadenza PCs, two Sil 15s, two Xenon Colorarcs, three 72-way Avolites dimming systems and a Galaxy 2 all supplied by Luff Light and Sound. The 28 Vari*Lite VL2s came, naturally enough, courtesy of Vari-Lite Europe with all necessary rigging and trussing supplied by Unusual Rigging.

Sound for the Norcalympia included Denon, Tascam, Sony, Yamaha-Kemble, Klark Teknik and Turbosound TMS3 V2 cabinets and amps, all donated by Dimension Audio. In between the various sets the evening's host Peter Purves linked the events backed by various scenic projections using audio visual equipment from Visual Techniques.

The lighting equipment in the ballroom - Minim Fs, Quartet 28/42s, Prelude 30s, and assorted pinspots - was supplied by Lancashire-based Futurist Light and Sound. The two 9W lasers (one multi-coloured and one green) came from Laserplay, the cracked oil machine from Supermick and, of course, no gala evening would be complete without its full complement of pyrotechnics courtesy of Le Maitre.

After the floorshow guests were invited to take their choice from jazz, disco or calypso, the latter by the hotel's pool subtly lit with Par 64s, Sil 30s, UV tubes, Minuette fresnels, and a few inflatable frogs thrown in for luck from Playlight's Manchester warehouses.

18 companies were involved in the whole production, not including those responsible for the direction and staging, for the event and most, if not all, of the time and equipment was donated free of charge.

Next Step for PAT

At the PLASA seminar on Portable Appliance Testing, on April 6th, considerable interest was shown in this method of identifying items, using adhesive bar-coded labels. As well as identification, the bar-code can also give details of the tests carried out, the date and other relevant details.

The suggestion was made, and supported by a number of delegates, that it would be a good idea for the bar-coding to be in a standardized format so that it could be read wherever the item finished up. This is particularly important in the case of items which are hired out, as it would enable anyone to find out where the item had come from, to whom it belonged and when it was last tested. There is a responsibility laid on employers under the Electricity at Work Regulations to ensure that equipment provided for their employees' use is safe, and for hired-in items it would be useful to know that the item has been recently tested.

A universal bar-coding system would need a register of the codes and their format, and a recognized industry body to administer the system. PLASA is prepared to do this but first the code arrangement must be agreed upon and it is proposed to set up a small Working Party from the industry to produce a standard format.

Any company interested in this proposal is invited to put forward a representative to join the Working Party in drawing up a Standard Bar-Code Format for use in the professional lighting and sound industry, along the lines of a British Standard, but of course administered by PLASA. It is not envisaged that many meetings would be involved, as much of the work could be done by post, but it is essential to get this scheme off the ground as soon as possible before everyone produces his own format, incompatible with all others.

Finally, would all those interested please let me know, via the Eastbourne Office, as soon as possible. Without your cooperation a unique opportunity will be lost.

G.C. Thompson (Standards Officer) PLASA



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SIBLING RIVALRIES MAY LEAD TO TEARS BEFORE SHOWTIME

The 1992 SIB Show in Rimini will go down as the event at which the clones finally took over the circus - says Tony Gottelier

With several European countries and the USA in the grip of election fever, as predicted in previous issues, recessionary stresses are proving a force for change in our industry also. But if the resultant changes in distribution arrangements, reported in our lead story this month, have created turmoil leaving us with ears firmly glued to the ground for the next bit of commercial tittle-tattle, the other big news from Rimini was that the cloning virus was developing into an epidemic.

Now that virtually everybody has re-invented the wheel, several times over, in a quite unbelievable waste of development resources, to ensure that absolutely every stand could boast a so called 'smart' or 'robotic' or 'articulate' or 'wagging mirror' luminaires, (the Italians persist in calling them 'scanners'), attention had been turned on the smash hit of last year's show, the Novalite 'Galaxy' (née 'Asterix'). This device, which cunningly uses a single discharge lamp source and a back reflector in combination with surrounding controllable mirrors and may, or may not, have dichroic colour change, provides a pretty dramatic centre-piece (actually, for those old enough to remember, which must be a diminishing constituency amongst our readers, it reminds me of a state-of-the-art version of Mode's 'Catherine Wheel'). Anyway, I counted at least ten different versions on various stands, of which my prize for the best by far, of a weekend for two in Rimini with free tickets to the Baia Imperiale and a copy of the rap version of 'Tears for a Clone', goes to Clay Paky for their 'Tornado' with Coemar's 'Piovra' running a close second. Meanwhile the big four in the wagging mirror stakes, in which one must now include Martin Professional, continue to battle it out with no one else in sight.

Does any of this really matter? Well, yes, I think it does and here's one reason why. At all these exhibitions the most common questions we are asked, especially by leisure operators is "Is there anything new?" For them there is nothing riveting in one manufacturer making a copy or a marginal improvement on another. This only benefits the salesmen, who are of course the people who are actually driving the ship as far as this is concerned. "We have got to have an equivalent of the XYZ to satisfy our customers." And OK there's nothing much wrong with that, except that it's a terrible distraction for the development guys who are the ones who should be coming up with the



Hall F at SIB, with Spotlight stand nearest camera, Space Cannon centre right and Coemar at back.

genuinely innovative new tricks. When I think of the number of precious man hours wasted by some of our brightest talent simply re-inventing the wheel it makes me wince. Why don't the manufacturers swallow their pride, and more importantly the designers their ego, and buy in the technology from the originators? Thus saving months of time, not to say vast amounts of money, and allowing their own designers to apply their imaginations to the cutting edge. Until this happens the pace of progress will constantly be hampered and the search for really new ideas will still be as far out of reach as the Holy Grail.

Curiously, it is this aspect which has forced me to re-consider my previous firm commitment to the distribution structures we have established in the industry. The reason for this about-face, and it has taken me 20 years to twig it, is that it is the very existence of those exclusive distribution arrangements which we have all been so keen to protect which actually cause the copying, and thus the dilution of the already limited development resources available to us.

What happens is that as soon as one manufacturer comes up with a bright idea which is unavailable except through his distribution chain, a vacuum is created and customers of other companies or distributors demand a

similar product. Now, although this is a powerful argument for scrapping such arrangements, though in a controlled fashion, there are many other good reasons also, which we won't enlarge on here as it would be too great a diversification from our SIB coverage. So meanwhile, if devolution of distribution rights seems too radical a step right now, I entreat manufacturers to share their advances via own-badging through others, or incorporation of their technology within others' products via a licence. End result? More income for all concerned, reduced overhead or more effective use thereof and, hopefully some really new innovation for the operators to lavish their expenditure on.

Incidentally, one of the few UK-based leisure operators in evidence was Tony Marshall of Rank Leisure and chairperson of BEDA. Tony has strong views on what he sees as the lack of pizzazz in evidence at the PLASA Light and Sound Show as compared with Rimini. "We are in the entertainment industry after all, shouldn't PLASA put a bit of showmanship into it to make it all a little less bland. Many operators out there get bored to death just looking at racks of equipment; give us some fun and fashion because it's all part of our business."

Accepting the fact that such shows are not just aimed at leisure operators, I can only assume



Whirlwind action - 'Tornado' six-headed centre-piece from Clay Paky.



The new kids on the block - Bruno Dedoro welcomes Ian Brown into the Coemar family (left), while ex-Clay Paky partners Guilio and Gabriella Savoldi pose in front of their new company logo. Sagitter are High End's distributors in Italy.





BA 592 at Bologna. A British team en route to Rimini.

that his comment alludes to the plethora of long-legged lovelies in the guise of promotion girls who wander freely through the halls in Rimini, some on roller skates, and the occasional mime or joker who accosts passing traffic on the bridge. Or does he mean the non-stop, ear-splitting scratch demos, one of which was semi-detached to the restaurant in Rimini? (such levels are definitely outlawed by PLASA in the interests of conducting business). Or perhaps the convivial atmosphere of the apres-fiera in the evenings where because of the size of the place, in Rimini everybody is thrown together at night in a way which would be hard to achieve in London without organising nightly events with a wide appeal to all.

This was done most successfully at the old Billboard Forums in the States, with outside sponsorship and the support of the record companies. Actually, I think each of these shows reveals a sense of the national characteristics of the host nation and it would be a pity for that to be eroded. The exuberance of the Italians, contrasting with the quirkiness of the French productions at Siel and the stoicism of the Brits. However, I can see that the evenings could be perked up and what is obviously missing from that configuration, is undoubtedly any input whatsoever from that other vital part of the operation, the music biz. Where are the record companies? Perhaps BEDA could exert the

necessary pressures in that direction and help to organise some real evening entertainment to hold the troop's attention.

I suppose we have come to rely on the exhibitors themselves providing relevant entertainment, for example through the set piece light shows provided by Clay Paky, Coemar, High End, Martin and others. Certainly these performances are a considerable extravaganza, and, as a combination, a fantasy for all but a tiny minority. Just consider the retail value of the equipment employed by Clay Paky for the Carl'n'John show at Rimini. We calculate the luminaires at £259,000 and that does not include the control equipment which weighed in at a further £24,000 using no less than 11 Pulsar Masterpieces! Now that's some hardware and, I would have thought, an indication of a commitment to entertain as part of a marketing philosophy.

Talking of Rimini nights, it is well known that, for many, all roads lead to the Rose and Crown, that infamous English pub washed up on a foreign shore, with cross border appeal. One habitu  who has gained something more than the usual headache for long hours and money invested therein, is Paul MacCallum of Wembley Loudspeaker Co who achieved the accolade of receiving a substantial order for speakers from the aforementioned who, after 18 years, finally gave up the unequal struggle with

their old system. Roy Millington of Cloud also benefited, with an order for the sound processing equipment.

From a positive to a somewhat negative note. Following LDI '91 the magazine received a complaint from APIAD, the Italian equivalent of PLASA, saying that we had failed to give their members sufficient coverage in our review. In fact, we are scrupulously careful to cover new products wherever they come from. However, in the case of APIAD members there seems to be a remarkable reluctance to provide any product information whatsoever and nor is this often included in the association's press releases which are otherwise replete with fulsome platitudes about the Italian market. At Rimini, especially, it was like pulling teeth on several of these stands with "I don't know nothing" the standard cry from people whom I assume want to sell their products.

On a brighter note, however, I noticed that one of the disco magazines had run a lighting designer's wish list for new products at this year's exhibitions. Top by consensus were new centre pieces, and these they would have found in abundance at Rimini. There was also a request for a universally flexible control system, a fledgling version of which could also be found on one of the British group stands. This group, incidentally, of ten exhibitors co-ordinated by PLASA, made quite an impression and seemed busy dealing with visitors throughout. Furthermore, the spirit of co-operation and camaraderie between them was at a high level, in true British fashion.

The group which included **Abstract, Cloud Electronics, Light Engineering, Mushroom Lighting and OCLI Optical Coatings** all looking for export opportunities, also involved a number of exhibitors presenting a clutch of new innovations. For example, **Anytronics** introduced the Mark II version of their 1500W 'Megastar' linear strobe, now fan-cooled and with a heavy duty hanging bracket; while **Cerebrum** came up with no less than five new British-made products for which they have been appointed distributors. These included a 'family' of digital lighting control devices and aids based on the PC, though from different developers, which together and individually address many of the problems associated with the demands of today's complex lighting systems.

This grouping was headed by 'ShowCAD' a lighting control package for any PC from 386 up. 'ShowCAD' consists of an expansion card and the relevant software to provide 1024 channels



Swings and roundabouts - Varytec's robotic light which caught the eye.



Paul MacCallum with 'Richard', owner of the Rose and Crown.



SGM Eliscan 400.



Gary Pritchard of LSC with Softlink and other DMXers.

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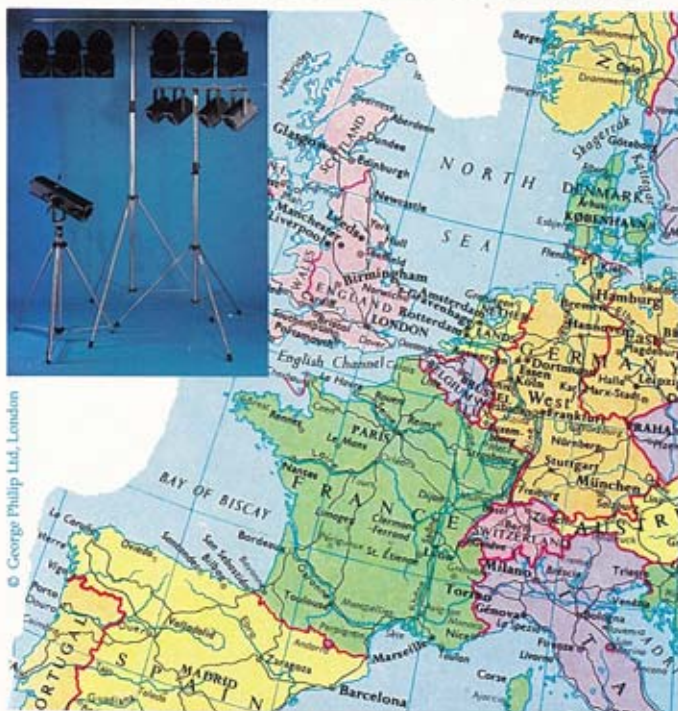
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FAL's light display included the 'Primoscan', their entry in the baby projector race.

of control through DMX512 in a modestly-priced package. The software provides full colour graphic displays with pull-down 'windows' and mouse or tracker ball control. Since it is produced by the originators of Oska, it was no surprise to see that graphic screens have been included to simplify the programming of moving light systems and to facilitate the creation of complex lighting combinations. Optional add-ons are MIDI Show Control and SMPTE.

'LightCAD' is a PC-based show transfer system which enables touring lighting designers to suck their cues out of any one of Celco, Avolites or MA Lighting's control boards and transfer them where previously these desks had been incompatible. Because 'LiteCAD' will function on a laptop it also provides a convenient off-line edit system en route between gigs. 'Mega Patch' also available from Cerebrum, is a 'bolt-on' digital soft patch providing any of the 512 channels into any of 512 dimmers, all graphically displayed on a VGA monitor. The system also enables up to four control channels to be patched to any individual dimmer, each with a separate proportional level, and up to four consoles can be linked to the same dimmers simultaneously. 'Mega Patch' also provides some fail-safe facilities in the event of a board failure. 'Digiview' enables operators to 'look-in' on the DMX output of their desk by displaying numerically, via 20 x 10 displays, the current state of the active channels. A freeze button facilitates preview of another cue, other than the current one running, to yield a blind edit possibility where such facilities are not available on the board itself. Cerebrum state that this is especially useful in a large installation where dimmers are patched to non-corresponding dimmer channels and apparently 'Digiview' enables very precise control of colour scrollers and moving lights.

One great advantage of all these systems is that they rely on low-cost but highly reliable technology for which off-the-shelf replacement is widely available across the globe. And presumably, where desirable, more than one of these packages could be run on the same PC if it has a big enough memory.

Another new item was Gel-stream, claimed to be the world's first cartridge loading colour scroller enabling quick changes of colour choices very quickly without tools or de-rigging the fitting. This device, for which patents have been applied, runs on all standard protocols and scrolls through 11 colours plus white in approximately 1.5 seconds but can also run slow fades. Unusually, the power supply is built-in to save unnecessary wiring.



Prompting the way to PC power, Cerebrum puts computers in control.



Mario DeSisti, Peter Kemp (Coemar DeSisti Australia) and Paolo Radi.

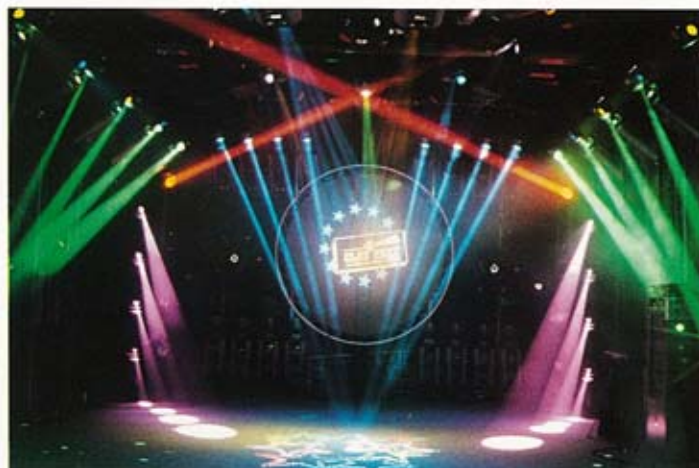
Meanwhile, **Ryger** were unveiling their new MIDI to light control product, alongside the more standard powered touch control panels and **Le Maitre's** Rick Wilson was singing the praises of his 624 pyro controller. As the numerical reference suggests, this panel provides six lines out with four scenesets on each. It also has a vigorous self-diagnostic system which, we agreed, was something we could all do with after a night at the Rose and Crown. Rick is also keen to put across the fact that Le Maitre's Show Mist fogger comes with a lifetime guarantee on the block.

I took a closer look at the two new **Ariane** products, first reported at Siel under gentle pressure from Andrew Morris of Mode, the UK importer. 'Hawaii' is a further development on the single MSR lamp principle producing four mirror controlled beams but with the added benefit of gobos as well as colour change, five of each, on every beam and a remotely-controlled universal shutter. A useful centre-piece doing much of the work of several individual projectors, sound activated via a microphone. 830 pre-programmed effects are claimed, less would be quite sufficient and more plausible. 'California' is a twin controllable scanner using two 250W discharge lamps each with a choice of four gobos and six colours.

Artick, the Italian dimmer manufacturer which has been showing us a thing or two about the design of digital dimmers, was once again displaying their 12 channel 'Digilight' intelligent dimmer. This compact (2u), 12 channel by 10A system was shown racked up in multiples and controlling various light sources. This time I particularly took note of the self-diagnostics possible through its 16-bit 24MHz single-chip microprocessor, which will provide data on the condition of the mains, the load, the status of the dimmer control channels and the dimmers themselves. It is also secured against many problems with the main supply.

A company that I hadn't come across previously, but showing an interesting laser effects controller-based on a 386 PC, were distribution company **ASM** from Germany. 'Pro-Las' claims to allow even the most inexperienced operator to create their own 3-dimensional animated laser images within a short time. And having seen it demonstrated I can believe it, especially as images can be transferred directly into the PC's memory by scanner where they can be animated without requiring further editing. At the programming stage the system is mouse and menu driven, though in performance and for recalling the complex animated sequences which the system allows, **ASM** recommend their piano keyboard as the human interface.

Another contender, if we really need more, in the automated light arena though this time, unlike their 'Varytec' product, without the wagging



The Carl-n-John show - Clay Paky/Pulsar's light show featured 15 new products.

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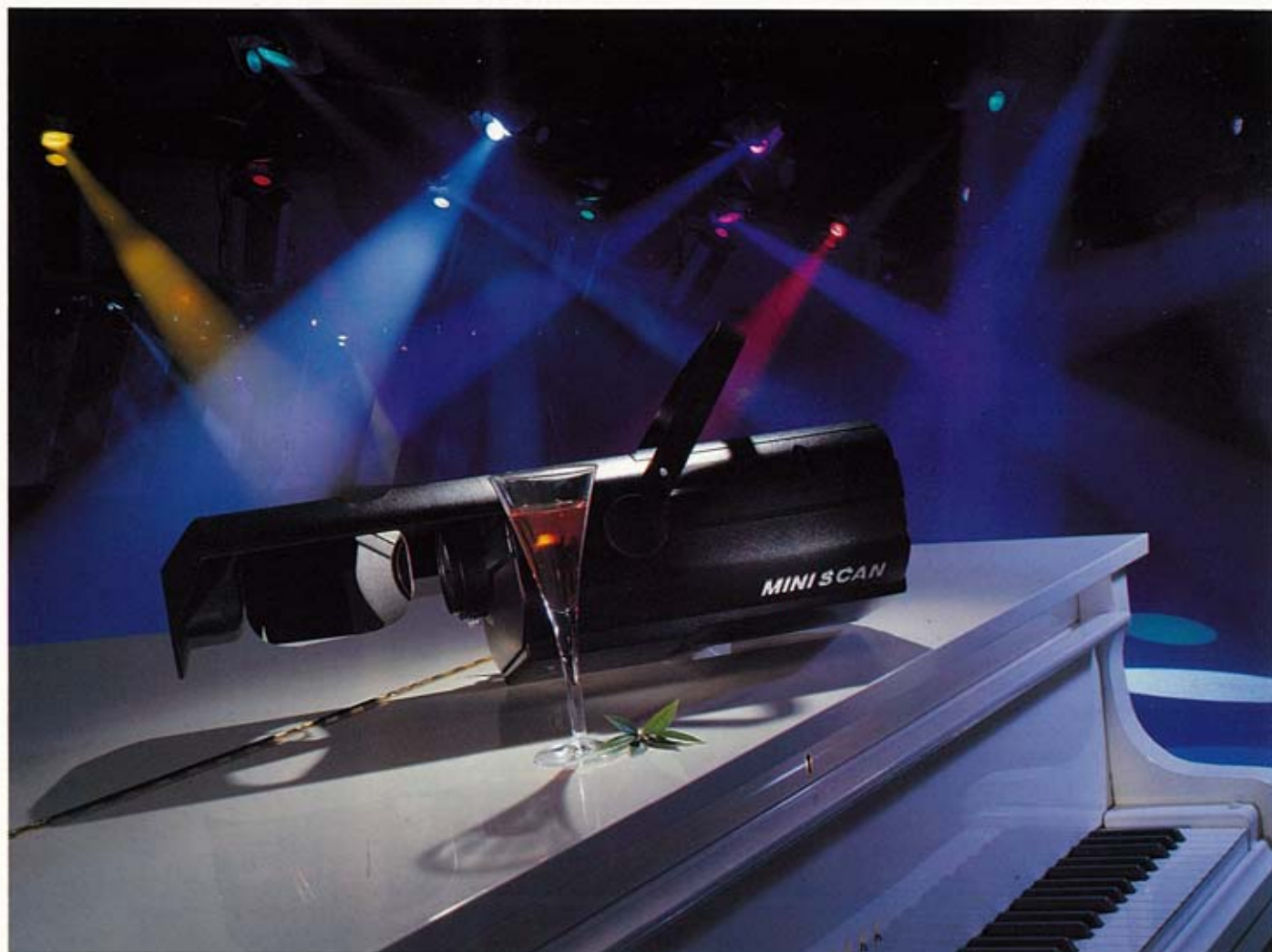
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Artick conditions: Felice Casollo strokes his 'Digilight' dimmer pack.

mirror, are **B & K Lighting** also of Germany who gave the first airing to 'Posi' (the name of which will surely have to change to avoid confusion with the Amptown product of similar name). Though information was sparse, the movement of the device was both impressively fast and positive as well as completely smooth and silent, as far as it was possible to tell in exhibition surroundings. B & K claim 50 colour mixes for the device and it has a variable iris and the lamp is 400MSR.

Now for the big one, **Clay Paky** who, with 15 new effects, will require all my poor facility for language to describe them. Fortunately, the overall count takes in individually named versions of similar devices. For example, 'Piper' which is based on the 'Miniscan' chassis comes in halogen and HTI 150W versions and offers the option of various effects from colour change, through something called 'graphic', to rotating gobos which to my mind was the most interesting. Similarly, 'Tiger' is based on the Polycolor casting in halogen, HMI 575 and 1200W versions and is also available in five different effect formats. These include those similar to the 'Piper' but with the addition of a multi-gobo rotator and liquid wheel options. It seems that some of these effects are available as accessories. Incidentally, Clay Paky have come up with a great sales aid to assist in the selection of rotating gobos and combinations. One set are printed on white card and another on a transparent overlay. Lay one over the other and Hey Gobo!



On the roof - Novalight's 'Booster', also dazzled from a Rimini seafront hotel during the event.



PLASA vice-chairman Paul Adams gets ShowCAD instruction from originator Mick Martin.



The big bang from Clay Paky - 'Bazooka' is a 1200W MSR searchlight.

'Atlas' is a development on the theme of the earlier 'Marte', it uses an HMI 575W lamp in a semicircular casting holding 14 lenses to generate a fan of concentrated beams which can be strobed or sequenced by a stepper motor driven shutter. Optional clip-on colour filters are available. 'Astroraggi Twin' sounds like a mutant, but is in fact a two lamp version of the famous 'hedgehog' effect (not a hedgehog with two heads!) with optional colour wheel. The two internally rotating lamps can be sequenced for additional oscillation. If you can pronounce it correctly you should get a second one free. 'Tornado' is the Clay Paky version of the centre piece mentioned earlier, and a particular favourite of the Hippodrome's Mick Parker, who has rushed home to take out a mortgage to buy a couple to ward off evil spirits. This is a six-headed hydra, providing independent control of the mirrors in pairs for pan and tilt plus dichroic colour change and shutter/strobe.

'Bazooka' is Clay Paky's attempt to make a searchlight using two versions of the HMI lamp, in place of the Xenon normally used for such applications, and packaged in a housing nearly two metres long! Unfortunately, the HMI cannot hold a candela to the Xenon, so in outdoor conditions, as seen at Baia Imperiale, this doesn't really quite come off. I can however see the indoor possibilities in big venues, but whether this market can sustain such a product I am not so sure. At the opposite end of the spectrum, Pin Scan is a brilliant little driven-fitting which moves a Halostar 12v 100W

pinspot through 360 degrees in the horizontal axis and 225 degrees of tilt. What is simply gorgeous about this fitting is the smoothness of movement in the acceleration and deceleration curves of the stepper motor control for which Pulsar's Paul Mardon is to be congratulated. What isn't so gorgeous is the price, which was causing some consternation in the Pulsar camp. During the show the retail price dropped by £200.00 which still left it at £950.00, which would buy an awful lot of pinspots. Similarly, the 'CP-Spot' which uses the same diecasting to create a standard lamp housing and is available in 6v 50W and 12v 100W versions, with a retail price of over £70.00 looked a tad on the high side. But great looking little fitting.

Stepping out of alphabetical order, but only because everybody knows that they occupy the same space, in every sense of the phrase, **Pulsar** also unveiled several new items. These included 'Data Pack' a long awaited 12 or 18 channel, wall or rack mounting dimmer pack with DMX512 or RS232 options on top of the regular analog. 'Masterpiece' is now optioned in a 48 channel version or with a screen driver and bass stepping facilities. 'Flexiflash' has metamorphosed into 'Rigi-Flash' and Pulsars Par lanterns are all now available in a polished silver finish.

This year **Coemar** decided, probably wisely, to step back from mass development and concentrate on putting across the current product range, especially 'Samurai' and 'Microscan' both of which they are now



Piano and PC partnership - 'Pro-Las' PC-based laser programming from ASM of Germany.



The Hydra which launched a thousand versions - the much cloned Novalite 'Galaxy' (née 'Asterix').



Chris Vlassopolous of Memotech with Mario Radice of Videesel, their Italian distributors.



The chill factor - High End's 'Cold Flow' heavy fog system.



Introducing the MA Scancommander to Italy. Thomas Stanger (left) of MA Lichttechnik with Ralph-Jörg Wezorko of Lighpower (centre) and Guiliano Luvisotto of Litec, Italy.

delivering much to the relief of distributors. And themselves! The use of a triple height open space for the main light show provided great geometry for the beams to do their magic, but as usual it was generally a mystery as to what one was actually watching, which is an issue requiring attention by several exhibitors. 'Microscan' was demonstrated very powerfully in a separate, semi-detached booth, in a move previously employed by Clay Paky. But I realised that it wasn't just the added darkness which was giving 'Microscan' an edge, because it uses the 400W MSR lamp as against the competition's 150W HTI. Whether this advantage would continue for the life of the lamp is, of course, another question.

Doughty Engineering continued the promotion of their overseas distributors at SIB in Rimini, by appearing with three new products on the stand of their Italian distributor **Litec srl**.



Cerebrum's John Lethbridge (right) with LSD's Chris Cronin.

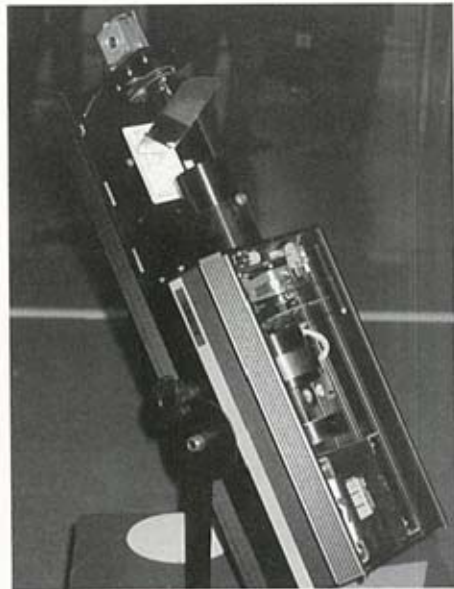


Pumping Ion: Andy Graves demonstrates the strengths of Pulsar's new 'Data Pack'.

The first Zodiac 45 is an updated version of the original Zodiac unit and is capable of lifting 150kgs to 4.5 metres. The unit has a lower loading height than its predecessor (1.7 metres) and is also lighter.

Nebula 33 is a medium duty wind up tripod stand which has a load capacity and a maximum height of 3.3 metres. As with the new Zodiac, the Nebula has a clutched winch and a secondary safety. Club 20 is a new addition to the tried and tested Club range, primarily designed for the Italian market. It features a low level tripod base assembly rising to a maximum height of 2 metres. Doughty have now launched 15 new products since January of this year, and promise major launches at PLASA in September.

I fell into **FAL** to find Paul Dodds still in full command, and surprisingly controlling part of his show from a QWERTY keyboard, which would have been most unlikely to occur in his previous situation. Between him and Avitec's Tony Kingsley, the UK FAL distributor, who fortuitously happened by at the right moment, I was fully updated on their 'Primoscan', yet another contender for the mini-market honours. Using a 250W MBI lamp (excuse my ignorance, but it's a new one on me, perhaps the manufacturers would like to send details), the luminaire offers five colours plus white with crossfading and 7-speed colour cycling, five gobos plus open, 7-speed strobe/shutter and microstepping on all functions via DMX, RS232 or analog. 32 of these units can be programmed and controlled from the computer-based control



Neat solution - Nisel's 'Bravo' with off mirror drives.



Fosphorescent - Fly's 'Fos' articulate projector.

mentioned earlier.

Genius, a company on the move with an additional UK distributor (see news this month) are also very much into rotating gobos with their 'Allegro' and 'Simple' mirror waggles with more subtle things from 'Carioca', 'Bis' and 'Light Flower'. However, I must say I was surprised to find, tucked away in the back of their catalogue, a whole range of followspots, fresnels, cycs, par lanterns and smoke machines. **Griven**, who made an impressive debut at Rimini some two years ago and are staying with WB Lighting after Coemar's departure, were also one of the companies with a multi-headed hydra-like centre piece.

High End Systems, appearing in Rimini for the first time with their new distributor, insiders **Sagitter** headed by ex-Clay Paky boss Giulio Savoldi and his wife Gabriella, again produced a mind-numbing show inside a massive open-sided stand which, to my mind, gives the viewer maximum vantage. After being dazzled by the brilliant colours of their performance and been pummeled by 'Dataflash', I felt as if I'd done a few rounds with Mohammed Ali. Once again, 'Emulator' impressed especially with its ability to project letters which enables a bank of these luminaires to spell out messages. While this may not be a very practical application for the laser simulator, it does give an indication of the current controllability of the device which was, presumably, the idea.

Although High End were keeping their powder dry for LDI as far as new product is



Playing the QWERTY's - A surprise picture of Paul Dodd at PC controls.



Anytronic's Bob Hall, with John Lethbridge and Mark Tonks of Cerebrum.

concerned, we were shown the production version of their heavy fog machine which is called 'Cold Flow' though no further information beyond that reported in the december issue was available.

Among the laser companies **Tarm**, of course, excelled but it was particularly pleasing to see **Laser Systems** exhibiting in their own right. Their stand display area was of a pyramid construction which created a different and interesting environment with a viewing area and raised platform for reception and seating. All materials were white as opposed to the usual black which enhanced the reproduction of the multicoloured images.

On display was the Magnum 9II RGB system with the latest graphics/timecode software together with the PC230 CAG graphics design station. Also displayed for the first time were the



Lampo's totem pole effect - but is it robust?

FX series of systems for the budget end of the market. The particular FX system on display was the new 1 watt Multicolour water-cooled system which retails for less than £20,000.

The Laser Systems stand at Rimini was built as a joint European effort primarily to save cost and improve efficiency but also to add more diverse design techniques. The structural materials were supplied and shipped from Laser Systems' Belgian agent with the control equipment supplied from the UK.

Espace, the French laser company were another first-time exhibitor at the show. **Lampo** also put on quite a show from a similar stand structure and I particularly liked the idea of their totem pole centre-piece called 'Orloggi'. However, when specifically demonstrated for us, much of this kit did not appear as robust as one might have hoped.



Flying the flag - Martin's new high power 'Robo-color' made the flags of nations.



Batmink's David Churches (centre) ties up a co-distributorship with Genius's Nicola Caldarolo. Also in picture are (left) Vincenzo Mangiapane and (right) Caterina Quagliarella of Genius and Grant Thomas of Batmink.

LED's stand was more inviting this year following suggestions from UK distributor Avitec. They were one of two companies, Genius being the other, who had managed to snaffu the Roundlux-type lamp, previously exclusive to Coemar, to create a whole range of tunnelled beam effects.

Yet more wagging mirrors, this time from **Lite Beam**, originators of 'Bunny' a previous headline grabber, this time with 'Swing 575,' though this looks more like a projector with a pan and tilt attachment which might not be such a bad idea, come to think of it. They also had a whole range of new prototype theatre lanterns and not so prototype controllers about which, surprisingly, no information whatsoever was forthcoming.

I found Gary Pritchard, globe trotting MD of

continued on page 35



Two into one does go - the RST Synchro Pitch CD controller which allows 'mixing' of two standard players, featured on the Outline stand.

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WORLD DOMINATION?

"We're looking at Monstrous Growth"
- Light & Sound Design's sales director Simon Austin

As I'd learned from my previous visit to LSD's spacious former bus depot HQ in Birmingham in 1988, this would be no ordinary day trip. They were mega rock and roll then. Now they are also a major manufacturer with a huge new production centre five or so miles away at Gravelley Hill, adjacent to Spaghetti Junction.

Christian Salvesen, the major trucking and storage combine, bought the business in 1991, the LSD directors cashing in their well-earned chips but staying on to run the new show. On the surface the traditional LSD flavour hadn't changed one iota. And I'm pleased to report that after a day touring the two establishments it hasn't changed deep down either. Managing director Steve Dawkes, from behind a massive desk, massively stacked with paperwork, told me: "The administration has been a nightmare, but it's also been fun. It's our business to run, but we can go straight through to the heart of the Christian Salvesen structure any time we need to."

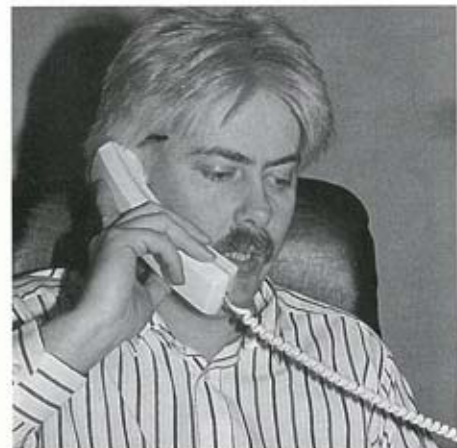
Soon after the take-over LSD spied Lumo Lighting, which had just ceased trading. The corporate response was positive and backing was immediately given for purchase of the equipment and intellectual properties. That move provided the impetus for LSD to go into manufacture in a big way and at the same time confirmed Christian Salvesen were deeply serious about getting involved in the entertainment equipment business.

"We got to the top in the rock and roll field, but we like to go on to new challenges," said Steve Dawkes, indicating a new ambition from the original directors of LSD.

The reorganisation is now nearing completion and needless to say has been a massive undertaking. The existing manufacture of scrollers, Par cans, trussing and the like had to be moved to the new site and join up with lorry after lorry load of ex-Lumo machinery and stock coming south from Manchester. I took a long look to see if I could discover any obvious signs of ageing on the face of general manager Peter Johns, but he just smiled like the rest of them.

Now, with only a few more staff to go through the casting routine - Johns is the local Job Centre's blue-eyed boy - Light & Sound Design's new double-fronted set-up is almost there and ready to frighten the rest of the manufacturing sector of the industry with its sheer capacity and range of products - even at its present level of prowess. (I'm assuming you know all about their concert touring side).

So, to give you the new perspective in full:



Steve Dawkes, managing director.



Simon Austin: "We're going to do the same for sales that we've done for rental."

head office and rental is based at Coventry Road, manufacturing at Gravelley Hill. That's the UK end. In the United States, president of Light & Sound Design Inc Nick Jackson supervises rental from a new and larger site in Los Angeles with the manufacturing facility sited in Dallas soon to be moved and incorporated within the LA operation.

To put more people into place, Simon Austin is sales director and Terry Lee production and product development director. Simon, Terry and Steve Dawkes are also vice presidents of the American operation. Tim Murch and Steve Harris are also vice presidents of LSD Inc. Chairman of the whole lot is Gordon Tourlemain, a main board director of Christian Salvesen who has special responsibility for the group's specialist hire activities.

My visit began with the usual briefing from Simon Austin and his statement about monstrous growth. He always talks big, but then he has a lot of reasons to. He's also well-known for a bit of semi-serious leg-pulling too. There are huge neon signs on two facing walls in his office: 'Love' and 'Sex'. They came from the

Prince tour. On his personal filing cabinet there's a printed Police clamping notice: 'Do Not Attempt To Move It'. He showed me their tour sheet for 1992. I'm not well up on big names in the touring field but there certainly didn't seem to be too many missing. "Who aren't you doing then?" I asked.

I thought we were going to get stuck into rock and roll but he talked just as much about manufacture as we left for the drive to Gravelley Hill Industrial Park.

70,000 square feet of space has been contrived out of a row of four modern factory/storage units. Here, Par cans are spun in numerous varieties and trussing and ground support systems manufactured. Add luminaires (ex Lumo-based), the long-established ColourMag colour changers, Molefay and cyc units, motor control systems, pantograph systems, cracked oil machines and dimmers and the list is still far less than definitive. The total number of products including variants will eventually be in the 250 to 300 range with a factory component count of over 25,000.

New product developments are already in



A part of the 70,000 sq ft. Gravelley Hill site.



John Hockley, machine shop manager at Gravelley Hill.



Peter Johns, Chris Cronin (sales manager for LSD and Total Fabrications products) and Terry Lee.

hand. A new, quieter and DMX/analogue version of ColourMag will be ready at the year-end. A new range of radial dimming shutters for their HMI range will soon be available. A complete range of colour, taking over from where Lumo had just begun, has already hit the streets.

According to Simon Austin they intend to be very aggressive in the television and film market. "We will go in right at the top level," he said. "We are head hunting our way into the TV and film area. Don't forget we've already got the biggest generator fleet in Europe with Aggreko, a fellow Christian Salvesen company, and it was through the Aggreko route that Christian Salvesen found LSD in the first place. One of our first joint moves between the two companies is to get the definitive power supply system for OB and outdoor lighting. People said we wouldn't make it in rock and roll but we did it. Now we'll do it in TV and film."

To bring calm out of chaos in the badging and marketing of product, Peter Boot (ex-Lumo) is in the middle of tidying up a new corporate LSD logo with the company's graphics people before getting back to his main task on exports.

The full sales team will involve at least eight people, five of whom are already in place. The UK will be split into areas and by product speciality. The strong relationship already established with Cerebrum Lighting will also continue.

With all this excitement I needed to steady my nerves. I retreated back to the relative sobriety of Steve Dawkes' office, with the idea of digging deeper into the Christian Salvesen involvement.

"There has been no change at the end of the day," continued Steve Dawkes. "Christian Salvesen, diverse though their operations might be around the world (the company is involved in distribution, manufacture and specialist hire), don't have any great involvement in the entertainment business, apart from Aggreko who are in the field with generators. Although greatly interested in the business, they've really left it to us because we've got the expertise."

There is the feeling of solid, long term commitment. Steve Dawkes: "I don't think they would have paid the sort of money that they paid for the company for a short term gain. I am sure they saw that there was life in a fairly new company - we're only 15 years old. I believe they saw there was a definite fork in the road for a new part of their future."

"If we need to get them involved for any reason, we do. If we want to make an acquisition then obviously we get them involved because they have all the expertise that's required."

"We all feel very comfortable. An illustration of this is that just six weeks after we did the deal with Christian Salvesen they backed us for a fair amount of money in the acquisition of Lumo Lighting. This showed great belief from their end in the guys down in Birmingham who are doing the work. I think it also indicates the faith they have not only in us but for the company and everyone we employ."

Back to Simon Austin: "It's fabulous. Christian Salvesen really do want to take on board all that the rock and roll business is about. They realise that they need to learn and find out about our business just as we need to learn and find out about their's. So nothing is rushed, everything is



Peter Boot.

by discussion. We're not invaded by millions of suits. We're still the same company that we ever were, but we're also learning better business skills.

"We're going to do the same for sales that we've done for rental," continued Austin. "We are the biggest in rental and we will be the biggest in sales, across the board. Our demands for product are ever greater, but the difference now is that we are also going to supply other people and in a very big way. Just watch this space in 1993."

Christian Salvesen paid £7.591 million as the initial purchase price of Light & Sound Design in July 1991. A deferred consideration of maximum £5.909 million could become payable if certain future growth objectives are exceeded.

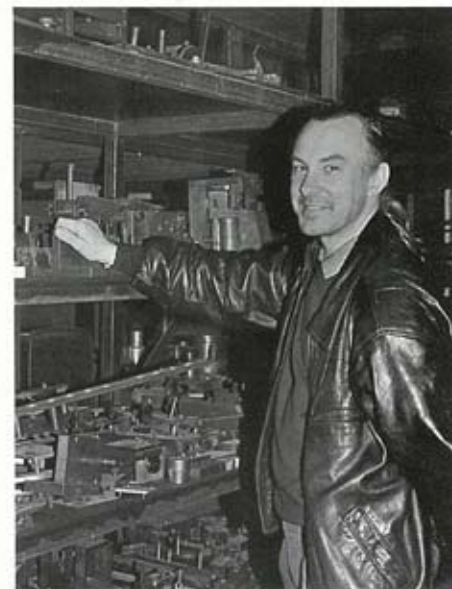
And you thought 'monstrous growth' was shooting a line?



Chris Cronin with Total Fabrication's latest folding truss designed to provide a combination of high load capacity with immense space saving. It can support over two tonnes across a 40 feet span and pack into less than 20% of the space required to house any conventional truss with similar load range. Sections come in eight feet lengths as standard and are designed to pack in groups of five.



Chris Millard, head of R&D.



Peter Johns with some of the ex-Lumo tooling equipment.



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Ben Weijters of Jac Van Ham with Graham Barron of Lite Structures and Carl Dodds.



Anytronics 'Megastar' strobe.

continued from page 30

Australian professional control systems company **LSC**, perched on a distributor's stand showing his various useful DMX interfaces. These include the 24 channel 'miniMUX' which goes one way, the 'miniDMUX' which goes the other and 'Linklite' which goes both ways. 'Softlink', a DMX softpatch of 256 control channels into 512 dimmers now has three DMX inputs making it more flexible in large installs. His latest product is 'Data Splitter' which is a self-contained active unit suitable for DMX or Avab protocols and turns a single input into four outputs, a particularly useful facility in a complex set-up.

The seemingly inexorable march of the **Martin Professional** new model army, under Captain Peter Johansen, continues with the further development of their new season's show performance as previewed at SIEL last month. Featuring a vast grid of 108 'Robocolors', Martin's mixing colour changer, all programmed up to generate national flags as a composite, (the Stars and Stripes with the added help of a 'Roboscan' projection), the result was so dramatic that Graham Barron, for one, wanted to take it back to the UK as excess baggage and suspend it over a dance floor in its entirety! The new high power version of Robocolor uses a Philips 200 MSD lamp and incorporates a faster shutter and mechanical dimmer and will retail in the UK for only £495.00

Nisel have a neat little scanning projector called 'Bravo' which is apparently made in Czechoslovakia, and is available with Osram HTI 400 or HLX 250 lamps. What was smart about it was the elegant drive system, much admired by Mode's Dick Steward who drew my attention to it, which avoids the normal principle of the pan motor having to carry the weight of the tilt motor also, since it is conventionally mounted to the back of the mirror, by using a push-me-pull-you drive bolted to the same plate



Mario Andraghetti with the small, but beautifully formed Spotlight 'Piccolo' compact followspot which makes a convenient effects projector.



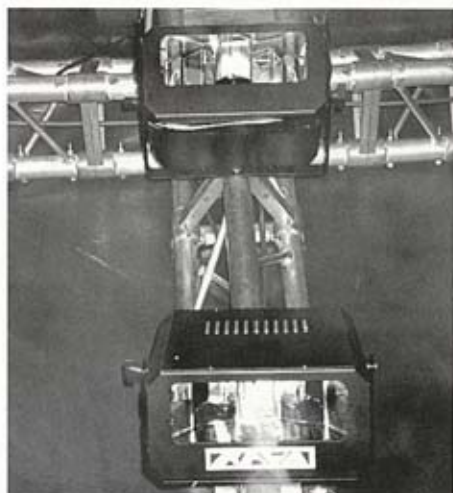
Complute controls on the Spotlight stand.

as the pan motor to perform the tilt function.

Novalight, who caused quite a stir last year, struck again with 'Booster' an HMI2500 directional lantern which uses rotating high temperature gobos to create startling, expanding and contracting star bursts of bright white light. Since it is intended for outdoor use, they stuck it on top of two hotels on the front at Rimini, including the 'Continental' in which we were staying. Clever that. It was the first thing I saw on arrival and the image has stayed with me ever since. Incidentally, congratulations to little Debbie Clayton of Nu-Light in Runcorn for patiently tracking the UK distribution for this highly innovative Italian company with which she has now been rewarded to add to her Fly portfolio.

Not far away from Martin, **Optikinetics** were in evidence promoting their 'Club Strobeflower' system which is set to go into production this month, and the 'Solar 575' with its four cassette rotator/changer attachment. This enabled them to demonstrate the projector, not just with the liquid wheel with which it has become synonymous, but also with a special 'Rose and Crown' cassette for which I hope they were paid a fee, though it only served to remind me of the previous nights' events often better left alone.

German sound company **Outline** showed a combined mixing and tracking control system for use with two standard CD players, which struck me as a good idea. Unfortunately, their stand was always too busy with aspiring



Arriviste effect light company Abstract introduced two new products, 'Mini Ray' and 'Mini Boom'.



Light Engineering's Cliff Wilding and Steve Demeza.

scratchers for me to have the opportunity to check it out properly.

Two other names for the seemingly endless list of wagging mirror contenders are **SGM** with 'Compact', available in HMI 575 and 1200 versions, offering superimposition of rotating gobos which caught my eye, and **Studio Due's** HMI 575 'Varybeam'.

Space Cannon have used pan and tilt drive technology to create their range of 'Black Devil' single lamp xenon searchlights, where they have been famous for their multi-head systems previously. 'Black Devil' has three lamp options from 1600 to 4000 watts.

Following the tradition of all manufacturers to keep major launches to their national shows, **Spotlight** of Milan were no exception. They introduced a range of fresnels and PC spots from 500 to 2500W called 'Combi' an 8 to 14 degrees variable beam followspot for 2000 or 2500W halogen lamps styled 'Vedette' and, best of all for my taste, a very practical diecast ultra-compact followspot for 1000 to 1200W TH or discharge lamps. Called 'Piccolo' so adaptable and practical is it, that it can be quickly turned into an effects projector by snapping a projection head into the gate, in place of the iris and framing mechanism. This provides motorization for a range of SFX including, as demonstrated, a liquid wheel though clouds, waves, flames etc are also available. Neat!

By the time you read this SIB review, I suppose we will have a new government in the UK. Whether this means a hung parliament, or a parliament with a well hung majority, let us hope that, whoever they are, they can lead us out of this wretched recession and that exhibitors, once again, will be able to see value for the massive investment in marketing required when appearing at such international fairs.



The Seleco HDHP-1250 high definition video front projector caused a serious stir of interest on the stand of Videesel.

MOBY DICK: A PRODUCER AT PLAY

Julian Williams on lighting: Simon Croft on sound

The reviews of Moby Dick have been mixed, but if you are interested in seeing a show where almost every possible bit of stage trickery is used, many in a very pantomime-like fashion, then you could well enjoy it. It is hyped and fast, and a majority of 'numbers' are given the full finale treatment. The foot is hardly ever lifted off the gas, and your eyes have to stay focused on the overall stage area. If the action continuous dulls down a bit then something somewhere will happen to jolt you back on course.

Simon Croft on the sound

Conceptually, the Cameron Mackintosh presentation of Moby Dick at the Piccadilly Theatre in London's West End could be short-formed as 'a musical St Trinians with a whale in it'. But from a sound reinforcement perspective it is a fairly complex proposition.

Written by Robert Longden and former Flying Picket Hereward Kaye, the musical was to be a 'small production' according to sound designer Martin Levan. It actually has an all singin' all dancin' cast of almost 30, supported by 25 channels of Sennheiser radio mics, the largest West End radio setup, just beating Joseph and the Amazing Technicolor Dreamcoat. In an ideal world it was 'not enough' said Levan, who would prefer to mic everybody if money permitted.

"In a high energy show like this, if you haven't got a mic you're dead really. Without the microphones, the stage is almost silent from the auditorium," he explained. "It's probably much quieter than you'd imagine. When you get something sounding quite natural, it's hard to tell how much amplification there is. The band

is a seven piece: three keyboard players, bass, drums, guitar and percussion. With the music making a determined move into disco territory at times, the foot mics of the old days wouldn't really be of any use."

Submixes from the keyboards are sent front of house via five Yamaha DMP11 rack mounting mixers. The players also monitor through Yamaha S22 enclosures powered by P1250 amplifiers. A total of 44 Sennheiser MKE2R microphones are used during the show, linked to 25 SK2012 transmitters and 1036 diversity sets. Sennheiser computer monitoring software, originally developed in the US, is used to check the status of every channel on an on-going basis. This runs on an Amiga computer and displays AF and RF levels for every mic if required.

Remaining with the input side of the system, Moby Dick is the first production where Levan has used the CD format to store sound effects. A Yamaha YPDR601 CD-R machine was chosen for use on site. During sound rehearsals and early performances, new CDs were recorded each day to accommodate any changes to the production. An advantage of the Yamaha CD recorder is that it allows new tracks to be added to an existing disc, an improvement over some systems which only allow 'one shot' recording.

Another 'first' is the Cadac J-type, the console that resulted from requirements initially specified by Levan. "It was very much what we wanted," he said. The Cadac events processor is used to trigger the CD machine and also produces MIDI commands that can be used to change the patches on outboard equipment, as well as the DMP11s mentioned above.

Another new feature is that 'it can be configured any way you want; the modules are not tied'. For Moby Dick, the console is laid out with 219 input modules in the main section and 30 at the side. The 12 sub groups and 24 way mix matrix is in the centre of the main section. Most of the show is mixed on the VCA masters under the subs. The sound engineer is Veronique 'Bique' Haddersley who sends, in effect, 22 different mixes from the output matrix.

There are 'close to 100' speakers in the theatre, arranged into two systems. The first is based on Apogee enclosures and the second, Levan's trademark, Tannoy dual concentrics without cabinets, coupled with Bose 303s for the bass. The Tannoys are used 'the same way as ordinary speakers but down to about 200 cycles'.

Levan has found that this way of using speakers produces a sound that is 'more natural' although he cannot quantify the mechanism at work. "Every enclosure has a lot of colouration to it. If you take the box away, you basically remove all that." The system is powered in by the 22 Yamaha PM4002s and 12 P2700s. In the outboard racks, there are 15 Yamaha Q2031 stereo graphic equalisers and six SPX1000 multi-effects units. Yamaha also appears in the form of 22 D1030 delays used on various mic channels and speakers for 'psycho-acoustic focusing'. Another Levan trademark, it makes use of the phenomenon first documented by Dr Haas.

The 'Haas effect' says that a listener perceives directionality by the minute difference in the time taken for a sound to reach the left and right ear. Experiments show that if a sound arrives at the left ear milliseconds earlier than at the right ear, it will be perceived as coming from the left side, even if it is louder on the right. This makes the normal volume-based pan pots on a mixing desk pretty blunt instruments when it comes to creating a stereo field.

Although radio mics are obviously a tremendous boon in improving clarity, they destroy any natural stereo field because the performers are a constant distance from their microphones, regardless of their physical position on stage. So Levan 'creates' space by using delays on the speaker system and also on the mics of individual performers, which accounts for the unusually high number of digital delay lines used. He said he tunes them 'completely by ear' rather than use an approach based on test equipment or mathematical formulae.

Levan has also been recording a cast album of the show, something he 'likes to get involved in as his background is studios'. Unusually, this was started in advance of the show opening, an unfortunate departure in some respects because 'considerable' changes were made to the production, right up to the last minute. However, work on the recording is likely to restart when a suitable studio is found nearby. The equipment for Moby Dick was supplied and installed by Farrahs.

Julian Williams on the lighting

Moby Dick is producer Cameron Mackintosh's first major musical to hit the West End via his Old Fire Station studio theatre in Oxford, and



The 59-channel Cadac J-type installed for Moby Dick at the Piccadilly Theatre, London. photos: Carlos Olms



The stage musical of Moby Dick is based on Herman Melville's book, 'in the spirit of Ronald Searle's St. Trinians'.

Photos: Michael Le Poer Trench.

also the first where he's been very closely involved in the actual production. Based on American novelist Herman Melville's book, the Piccadilly Theatre production, which opened mid March, comes in the spirit of Ronald Searle's St. Trinian's School for Girls. Set in the 1950s in a disused Edwardian swimming pool, the girls from St. Godley's endeavour to save their academy from closure. They attempt to raise cash by staging a musical - in their own bawdy way.

The set was designed by Paul Farnsworth and originally utilised the gallery that surrounds the intimate 150-seat Old Fire Station at Oxford and which had to be purpose-built into the Piccadilly. He has created a very effective environment with a host of the appropriate paraphernalia. Old wooden beams abound and the panelled gallery ballustrades are appropriately dressed with functional old light cans, Pattern 23s, 123s and large tin reflected lamps as footlights. On each side of the set is a drab broken tiled wall that runs out along the auditorium to the dress circle, and at the circle level a 30 feet gallery continues from the sides and across the rear of the stage area.

There are no moving lights! But there are still over 500 units coming from all directions and at every angle. It's all stock equipment. The stage rig consists of eight composite bars, and tucked into the 'junk' are four booms on each side with several Parcans on each. At gallery level, upstage, Lekos are neatly integrated into the set, aptly housed inside half a dozen changing locker cabinets!

The bulk of the equipment is on hire from Theatre Projects Services, and the instrument types used, having taken a quick look at the Rosco Lightwright schedule, are small quantities of many different units.

There are numerous lighting effects which include UV floods and gobos in rotation and yo-yo'd. Optical effects projected are from 10 Strand Pattern 252 2kW projectors and two Strand Cadenza EPs, carrying such effects as vapour trail, flames, storm clouds, rain and waves.

Over 50 Rainbow scrolling colour change units are in position on Parcans, Panis and Beamlights. 23 Par 36 4059X 100W Beamlights are strategically positioned in the walls of the set and as uplighters for the stage. A Strand 5kW Bambino fresnel is used as a powerful backlight in the centre of the stage.

The front of house equipment includes a special rig of around 60 mixed Parcans and Lekos, positioned above the audience. The lighting positions here have been built into the roof of the auditorium. Suspended above it is

another structure which supports various practicals including lamps suspended from it. For a specific effect this rig has to be capable of being shaken about for a storm sequence, more of which later.

The followspot operators are dressed appropriately as St. Trinian's girls, and they operate two short throw Pani units at circle level and the R&V 500W Beamlights above the Pros position.

Two Smoke Factory 'Skywalker' machines have been set to instantly provide either a trickle to create a 'haze' or as a smoke effect in any density. It can be plotted in accurately with associated lighting states on the Arri Imagine house board and reproduced in percentage terms through a combination of carefully timed fan motor and smoke cues. The system has been built into dedicated 'ducts' in the set. In addition, a Smoke Factory, battery powered, 'Scotty' unit is being used as a 'flaming raincoat'

effect.

Every trick in the book has been introduced into the show's format including ample use of stage traps, and the lighting plays a major role in keeping attention focused on stage. Such trickery includes a 3D gag and a miniature shadowgraph scene.

Howard Eaton's dedicated water ripple effects used in conjunction with White Light's optical waves provide an oceanic background to the set, albeit in the swimming pool! Units are positioned largely around the orchestra pit rail and under the gallery and projecting onto the walls.

There are a couple of neat scenes near the end of the show when light and sound together enhance the nautical flavour. When the typhoon hits the 'ship' the special front of house rig mentioned earlier is violently shaken. During a dark and foggy night an attack is launched on the monstrous Moby Dick who finally comes



The stage set for Cameron Mackintosh's new musical Moby Dick.

downstage centre to consume his prey. The whale is cleverly portrayed by the use of huge white umbrellas, held in a highly effective overall shape.

The lighting designers for Moby Dick were Andrew Bridge and Hugh Vanstone. However, due to difficulties created by changing production dates and the general jet-setting life-style of elite LDs, who have great difficulty in altering their diaries if just one segment of the year's planning goes out of sequence, I was only able to speak to the latter.

I asked Hugh what collaboration with another designer involves when there are the demands of such a high profile show.

"This collaboration is only possible because I have previously worked on five big shows as Andy's associate," he explained. "Our basic rule is to discuss everything. We have had our disagreements about things, but have always ended up with a compromise. When you have two artistic brains working on the same thing it has been agreed that one of you will have the final veto, and in this case it's Andy."

Cameron Mackintosh keeps a close eye on things and he spends a lot of time at rehearsals with the cast before the show gets to the theatre. From then on he is always present. "He has the reputation of having an amazing ability to recognise when something is wrong," continued Hugh. "He surrounds himself with experts to help him put anything right. His suggestions may not always be the right ones, but he prompts you to find a solution."

"Putting it simply, when you are working for the world's leading producer you feel quite a large responsibility to get things absolutely right. With him being in the stalls all the time, every

light you turn on had better be a good one, because he has given you the job and is watching.

"With this show he was very involved in Oxford. Cameron's involvement only begins after the creative team have come up with an initial concept. As a producer he has a very hands-on approach, and he's always coming round with suggestions and ideas to keep the whole thing bubbling along.

"It was very refreshing to work with him on 'Putting it Together' in Oxford, because there wasn't the pressure of it being a 'West End'



Sound designer Martin Levan, seated behind the new Cadac J-type.

production. One is inclined to be more experimental and perhaps take greater risks, in that situation, because you are working in a studio environment. It is easier when things are on a much smaller scale, and Cameron encourages experimentation."

Back to detail on Moby Dick at the Piccadilly, I asked Hugh where he and Andrew started off in terms of style.

"It's undoubtedly a big rig and it's a busy show, mainly because we are having to light nearly 100 feet of extra acting area," he explained. "One thing we didn't want to do was to design it as if it was by school girls. The design concept overall was to try and move in fairly bold strokes, creating a collage of naturalistic and surrealistic images. The show is extraordinary in the way it changes mood turning into a show within a show. It takes on a roller-coaster of emotions and locations. We had an open hand, and this allowed us to make it as colourful and dramatic as possible.

"Moving lights just wouldn't have fitted the style of this production. Scrollers are just about as high-tech as it goes. It's been fun to have a large but conventional lighting rig to do things with. Everything is used. Although the central acting area is small, you have to light all the other areas, and there is an awful lot of dressing to the set."

Next person on my list was chief production electrician Alistair Grant who came in to join chief electrician Chris O'May and his house crew in preparing the show. Mackintosh's productions have to be wired in as far as possible as a permanent installation when they reach London. They also have to be capable of being duplicated later around the world. Here it is the

rosco

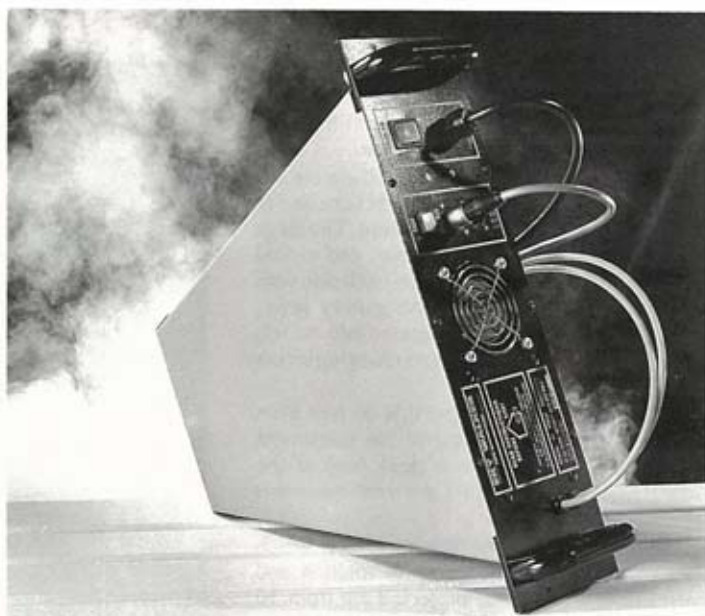
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It was either this or a picture of Moby Dick.

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SMOKE FACTORY FROM **M&M**

What will they think of next?



Hugh Vanstone and Cameron Mackintosh at the production desk.



Production electrician Alistair Grant working beside the tin reflected footlights, with the Rosco Lightwright programme on his PC. The Arri portable controller is alongside.

task of Alistair to ensure his rig meets all the regulations to do this. He had just three weeks to be ready, and fitted, in accordance with Westminster Council's requirements.

I suggested to him that with the pace in which such safety procedures were being implemented by the industry, it was up to them to influence the way these rigs are made safe. If they don't such measures could become impractical to a show, in a theatre situation, of this type and scale. For example, we are now up to the front of the Iron Curtain, as a fixed installation, from

the start of a show.

"After the initial three months, we have to put things in for the IE regulations, as a permanent installation on the whole rig," he explained.

"There is no way that you can design an installation to be completely hard-wired from the start as we need to allow the designer the ability to move things around in this period. Most of the lanterns are moved these days, it's part of the design process.

"The other problem is that we are putting these shows into theatres that have 50's-style

installations. You have outlets on the fly floor and so many dips, one phase in the air, one phase on the ground and one phase FOH. We are now trying to put in shows that are not necessarily lit in that format any more.

"Fundamentally, what we need to see are more patching facilities and flexibility. For example it would be an idea if we could put multicore outlets 'everywhere', terminating at a central patch room where the patch could be hard-wired for each show. The 1990s option should be saturation dimming."

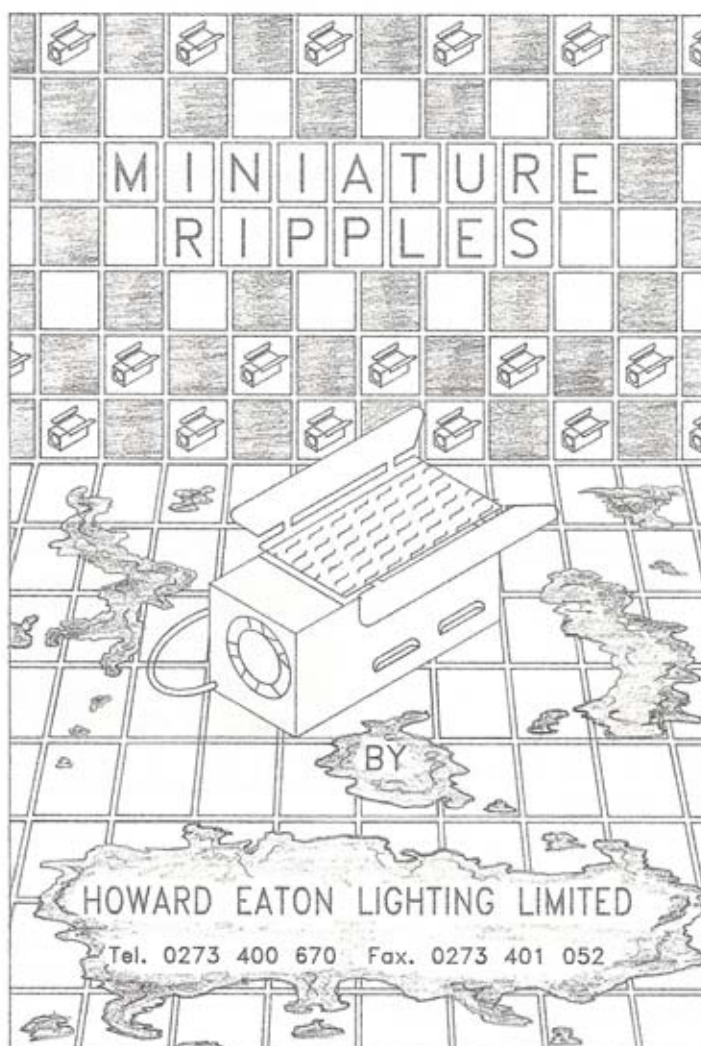
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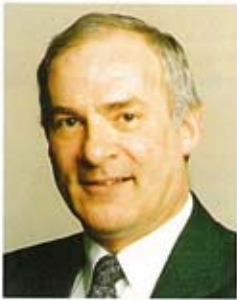
spectrum/ 'spektrəm/ n. (pl. -tra)
band of colours as seen in rainbow etc.;
entire or wide range of anything
arranged by degree or quality etc.⁶
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LIGHT Spectrum

Thorn Lamps by GE Thorn Lamps by GE Thorn Lamps by GE Thorn Lamps by GE Thorn Lamps by GE Thorn Lamps by GE Thorn Lamps by GE Thorn Lamps by GE

Lighting the way

In this issue of LIGHT Spectrum I would like to introduce you to a new culture within GE Lighting, the Speed of Light philosophy. Working faster and more efficiently rules supreme within the organisation. Finding ways to reduce time between an order received and an order delivered, speeding up response to customer's needs, speeding up product innovation - they all represent priority actions communicated by the Speed of Light logo. It certainly sums up the tempo here at Mitcham as we move closer to welcoming the Daventry and New Malden sales operations into the one, refurbished site. Building works, new computer and telecommunications systems - they're all well on schedule and later this month we shall be announcing the allocation of direct dial telephone numbers dedicated to specific sales regions. Bypassing the main switchboard makes for a faster, more efficient service.



Speed of Light aptly describes the pace also achieved at Northampton, the company's new £ multi-million warehousing and distribution centre. The staggered handling of product from different parts of the UK business is on target as laid down in the European distribution blueprint conceived by Matt Juka, the GE Lighting Manager responsible for setting up Northampton and the European central stocking facility based in Vienna.

Finally, I am pleased to report that business continues to thrive throughout this transition period. The first two months of the year for the wholesale and commercial sector shows a healthy increase over projected sales for the period. In the meantime, I trust you will enjoy reading our April issue of LIGHT Spectrum.

Clive Salmon *Business Manager Photo, Stage & Studio*



Distribution update

"We're all geared up and really looking forward to the day when we're fully operational", says Max Wright, Operations Manager at GE Lighting's new 180,000 sq-ft warehouse and distribution facility on the Brackmills Estate, Northampton. Against the national trend, Max is busily recruiting locally on a phased programme in line with the staggered

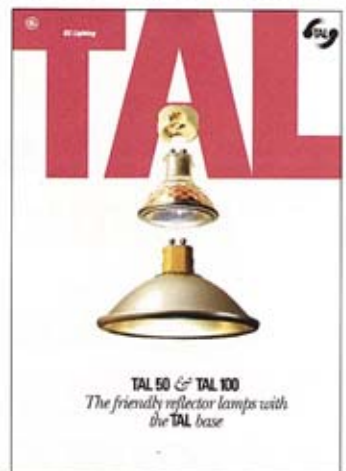
introduction of product from the various manufacturing locations. The majority of products produced by the Leicester and Enfield factories are already being handled to meet European orders. Deliveries to UK customers will take place when the full inventory of lamps is in place in mid-Summer.

The byword at Northampton - Speed of Light - is the ethos of the new company. When fully operational for example, a batch picking system will simultaneously select products for 58 customers, drastically cutting access time to each product location, a major efficiency improvement over the traditional one customer, one pick method.

The easy way Twist And Lock

Forget troublesome mirror lamp installations by using TAL, the innovative new cap and lampholder devised by GE Lighting. Just a simple twist action guides the circular lamphase into position with the pillars naturally finding the keyhole entries. Electrical contact is only effected after this locking procedure has been achieved. A full range of dichroic mirror lamps is available in the TAL system and a new brochure is now available.

There's a supporting poster too which details the total TAL range.



Select the best lamp with Performance Cones from over 100 GE reflector lamps

A Performance Cone is a visual indicator of the angle at which the intensity of a beam produced by a reflector lamp is at 50% of its peak. The Cone shows the degrees of angle, the level of peak illuminance (lux) and the beam diameter for planes at right angles at various distances (metres) from the lamp. Performance Cones ensure that the desired level and spread of light is delivered to the display, table etc. Thus the best lighting effect is achieved with the least and most effective use of energy.



Example 1

A table of 0.9m in diameter is to be illuminated by a lamp mounted 3 meters above it. A35W, M70 lamp will have a peak of 400 lux with a beam diameter of 0.95m.

Example 2

A table of 1.2m in diameter is to be illuminated by a lamp mounted 2m above it. A 50W, M58 lamp will have a peak of 388 lux with a beam diameter of 1.38m.

Example 3

A table of 3.6 x 1.2m is to be illuminated from a height of 2m. Three M58 lamps, spaced 1.38m apart would give a uniform level of 388 lux throughout.



Buy one and learn about the others!

The new multiple packs for GE's dichroic mirror lamps carry all the Performance Cones in the range. This will help the user to learn about the others and thus choose the most appropriate lamp.

Illustrated is a selection of Performance Cones of Lightstream 50mm dichroic Mirror Lamps

MUSIC FAIR 1992

John Offord reports from Frankfurt

The good news is that 1) many exhibitors here took real money on-stand in the form of written orders and 2) that there were as many new product launches as ever. However, being a born optimist (and possibly not a true journalist) I admit I didn't look out for any bad news. In last month's issue we reported positive news from SIEL in Paris. From the PLASA office I can tell you that our own show due to take place in September, is already nearing the highest-ever 1990 level. Does all this indicate that our industry has turned the corner out of recession?

Outwardly at least, Frankfurt Music Messe is always the same busy and extravagant show, and there's always something new. Recent re-building at the front end of this massive complex of halls means you've got a lot more metres to walk and the stop at the press centre now comes as something of a respite along the way. When you eventually get somewhere near Hall 9, the base of operations for professional audio, the adjacent Galleria always offers something different and vital in the way of presentation and musical content.

Inside the halls, business has to go on. And that means ever more development and fine tuning. We may have reached some sort of platform in technological development, but my God, the guys with the brains behind the product seem to go on tweaking and tweaking. So here's what you deserve: two days' worth of reporting on new products from the Messe halls - and in no particular order.

Amongst their range of equipment, **EMO Systems** showed two new cable testers. Following the increasing popularity of the Neutrik 'Speakon' loudspeaker connector, they have brought out the E448 cable tester specifically to test cables fitted with this connector. In addition an upgraded version of their popular E445 tester was introduced, packing even more useful features into the same



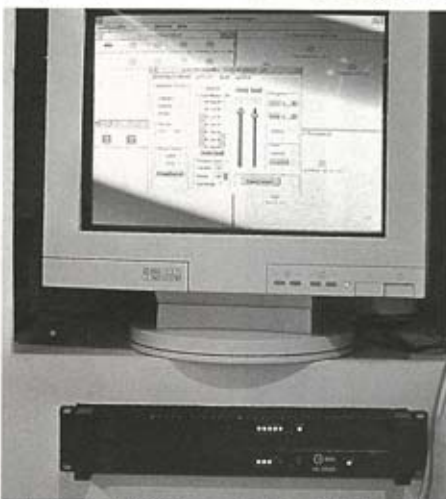
EMO's E448 cable tester.

compact box. Phono leads can now be tested as well as XLR and quarter inch jack leads, with fuse and lamp testing facilities. Director Mike Gentle reported that a German distributor for EMO products had now been agreed and several other European countries would shortly be added to their list of overseas distributors.

Featuring their unique radial chassis, **Volt Loudspeakers** launched their first 12" loudspeaker unit - the R3103. It looks totally different to the conventional style and gives the unit exceptionally low power compression. "The unit has a 75mm voice coil but performance equivalent to that of units with a 100mm coil," explained Volt's David Lyth. Designed for use as a bass/midrange unit in compact PA systems and musical instrument amplification, the R3103 is available in black, red, white or blue.

New from **C-Audio** and available from June is their MP1 75W per channel 1u packaged high performance monitoring power amplifier. It uses Minimum (signal) Path electronics to produce a unit with excellent transparent sonic qualities and a wide dynamic range, compatible with the latest digital recording media - according to the data - and is ideal for the driving of nearfield monitors in broadcast and recording studios, production facilities and mobiles, and for more general use in theatre, sound reinforcement and installation applications.

Also from C-Audio is a new range of 'intelligent' Mosfet amplifiers, the IA series. The basic amplifiers can have up to four audio plug-in option boards fitted including active



C-Audio's IA 3000 connected to a PC for remote monitoring and digital control.

crossovers, limiters, speaker processing and AES/EBU digital audio input modules. Full remote monitoring and digital control may be achieved by fitting the optional digital processor system allowing the amplifier to be connected via RS232, RS422, MIDI or high speed network to a personal computer. The network software is a user friendly Windows-based programme which allows up to 2000 amplifiers to be remotely controlled from the PC. Available now in 250, 450 and 650 watts per models, larger 1000 and 1500 watts per channel output power units are planned for production later this year.

Martin Audio launched their new LE 700 monitoring system. Based around the configuration of their earlier LE models, the new unit utilises a new concept in monitor horn design. Differential dispersion technology has allowed the design of a high frequency monitor horn which overcomes many problems normally associated with on-stage foldback systems. Units have been used to great acclaim on the recent Simple Minds and Status Quo tours.

Previously seen only as prototypes, **Wharfedale's** Force 9-P and Force 5 loudspeakers are now available. The first is a moulded polymer version of the established Force 9, and features a neat trapezoidal slot'n'stack option. The Force 5 joins its larger stablemates and extends the range of compact, high power speakers from the company. Their Force 9-BE, the dedicated electronic crossover/controller for the Force 9SB sub-bass system now comes with level adjustment facilities for perfect matching.

3G launched their Mynah range of professional mixing desks. In addition to the re-styled M8-2, 12-2 and 16-2 desks, the latest sub-group versions, the M8-4-2, M12-4-2 and M16-4-2 were shown. All models include phantom power operation and front panel mounted XLR/Line inputs and outputs.



The new 12" R3103 from Volt.



Gary Orrel with Wharfedale's latest line-up.



Sven Olsen with Martin Audio's new LE700 monitoring system.

Additionally, the M8-2 is available as a powered model (M8-2S) with a built-in 108 watts/channel @ 8 ohms amplifier.

HZ Audio Tech of Bath (England) launched their new HE300 loudspeaker system which comes in a moulded polyethylene enclosure and weighs only 16kg. The main driver is 12" and features an edgewound coil on a Kapton Polyimide former. A special bracket allows the speaker to become a variable angle floor wedge, a wall/ceiling mounted installation or a bar/cluster floor system. A similarly manufactured 600W sub-bass unit is due to follow in May.

Nexo's new speaker system, the PS110, is smaller than any of their previous systems, and combines with the dedicated PS TD controller and the optional LSub 500 to produce a versatile and cost effective answer to a broad range of applications. It can be driven safely by amplifiers of over 500W per channel, and yet is around half the volume and weight of a standard two-way trapezoidal cabinet. It is designed for arrayability but can also be a wedge monitor or low profile ceiling cabinet and the 80 x 45 degree horn can be rotated by the user to select the most suitable dispersion pattern for application. The front grille is magnetically attached for quick access and flying hardware is standard.

Celestion launched their Vintage 10 loudspeaker which 'marries old technology with new'. The 60 watt Vintage 10 has a light cone, designed to break up and produce the sweet distorted tones of the sixties, and the 10" speaker achieves this with the help of a premium size voice coil and magnet structure. Also launched was the SRC1 mark two version which is designed to power Celestion's SR1 enclosures to their maximum power output of 500 watts. Other features are improved EQ and limiting action.

The 'Bullet' is a compact mixing system from **TAC** that can be configured to suit a wide variety of applications in professional audio. Three chassis sizes are available for up to 32 inputs and basic configurations are either 2, 4 or 8 buss, all having 6 discrete auxiliary sends. Construction is fully modular and based around a hard bussing system. Consoles are available with modules to suit sound reinforcement, recording and video post production applications.

Fader people **Penny and Giles** are celebrating 25 years in the business and had their range of various precision controllers on show. The company offers no less than 1500 product

variations and their successful M3000 series of motorised linear faders are used by many leading console manufacturers such as SSL, GLW and Amek. Also on demo were the MRF range of motorised rotary faders and the Digital 12 bit linear faders.

Allen & Heath's new GS3 recording mixer was in pole position on the stand of Expotus. It is available in 16 and 24 channel formats, both with 8 group busses, 6 auxiliary sends, 4 stereo returns and external power supply. A GS3 'V' version with automated fading is currently being tested. "If we've got it right we'll go for an APRS launch," said A&H's Glenn Rogers.

New from **RCF** is their 5S constant directivity compact monitor. It provides excellent sound quality in a very compact format. The special box design and related accessories provide easy and versatile use in any configuration, and Phil Price of RCF UK reckons it has unlimited usage options. "It is a completely different design concept," he said, "and is the start of a whole new series. It will make a superb in-fill speaker." Also new from RCF was their L15S800 Lab Series high output 15" woofer. Long term power is 750W, program power 1,500W and peak 3,000W. To withstand the high mechanical stress a specially designed state of the art and exclusive RCF silicon spider suspension system is employed which guarantees long term stability and maximum linearity.

Stars for **Soundtracs** were two Solos: 'Live' and 'Midi'. Solo Live, the PA version, is a robust but compact 4 bus split console with the option of 16, 24 or 32 inputs and a comprehensive array of features for all aspects of live sound reinforcement. The 4 bus format allows for the groups to be used as stereo pairs for sub-grouping or for multi-zone speaker systems, and the mono out provides the mixed sum of the left and right outputs for central clusters. The four band EQ enhances sound quality and the pre-post selection available on the six auxiliary sends allows for those vital extra monitoring facilities when needed. Solo Midi is the recording version. Also launched by Soundtracs was their Tracmix 2, a new fader and mute automation system. At half the cost of Tracmix 1, the new version combines all the original features along with the latest hardware technology and Tracmix software. It will automate 64 channels as standard, read and write SMPTE, generate MIDI and even stores as MIDI information mutes executed at the console or system keypad.

Crest Audio had several new amplifiers to talk



Front centre: Allen & Heath's new GS3 recording mixer.



Nexo's new PX110 system.



Two from Crest Audio: the FCV440 (top) and 4601 power amplifiers.



Soundtracs' Solo 'Live' sound reinforcement console.



RCF's new 5S compact monitor.



HZ's new HE300 comes in a blue moulded polyethylene enclosure.

about. The PFA600 is a DC-powered two channel amplifier rated at 600 watts per channel into 4 ohms. Designed for high power sound reinforcement applications where AC mains power is either unavailable or impractical, it runs on 24 volts DC. Crest's FCV220 and 440 make up the new FCV Series of fan cooled amplifiers for the sound contracting market. Rated at 110 and 220 watts per channel respectively, they have fully isolated transformer coupled outputs for distributed lines and are priced at a 'cost-conscious' level. The 3301 and 4601 are the latest additions to Crest's Professional Series for touring sound, and were developed in conjunction with Electrotech and Maryland Sound Industries in the USA, to meet their specific demands for medium and high power amplifiers with full range capabilities but optimised for mid and high frequency applications.

Stage Accompany of the Netherlands showed their new SA8535 compact driver. The result of continual development from their SA8520 unit launched in 1986, the 8535 is the world's first neodymium ribbon tweeter. The output is more than 4 dB higher than its immediate predecessor, the 8526, say Stage Accompany, and the weight has been reduced to just 4.1kg. Also new was the SA1310 graphic equaliser, a 31 band mono 'constant-Q' unit.



AKG's new triangular Tri-Power mics.



The Tannoy range on the Tascam stand.



Larry Dane with Citronic's PSX4: prototype for a new generation of low cost amplifiers.

Audio-Technica had some very small offerings, including the tiny AT843 miniature unidirectional boundary microphone, which weighs just 32 grammes and uses the surface on which it is mounted to capture reflected sound. The same principle has been harnessed in the AT845 omnidirectional and AT847 unidirectional microphones, which are designed for unobtrusive flush mounting in television news desks. Both of these units require 48v phantom power whereas the boundary unit will also work with a 9v battery.

Fane Acoustics had shelves of product on their joint stand with Wharfedale. New pieces included the Colossus 15XB and 18XB drivers, the HT150D and HT104 integral constant directivity horns and the F Series glass fibre horns. Fane's Studio CX12PA and CX15PA now have a new titanium diaphragm as has the MD2151.

From **Carver Professional** come two new touring magnetic field power amplifiers, the PT-1800 and PT-2400. They are lightweight, compact and rugged with 50% input to output efficiency. Controls include dual power switches, sequence switches, dual level controls, XLR phasing, series and dual mono switching, clipping eliminator switch and ground lift.

On **Harman** the **JBL** M355 bass augmentation box for their M Series was previewed and **Urei** were showing their new active crossover networks, the LA10, LA12 and LA20.



Testing-out on Sennheiser.



Ever-changing projection was a feature of the CP&P Germany stand.



Live music in the Galleria.

Samson Technologies had two new products. Their UHF synthesized wireless system is a rack mount unit that offers dbx and 40 available channels within the 800MHz bandwidth. They launched themselves into the mixer market with their 2242 rack-mount mixer that features 22 inputs (16 mic and 6 stereo), 4-band EQ, six auxiliary sends, six auxiliary master level controls and six stereo effects returns for panning. It has 10 XLR mic inputs and six quarter inch stereo jack inputs.

The latest additions to **Carlsbro Electronics'** Alpha Series are the A112H and A115H. Powered by a single 12" loudspeaker, the A112H develops 150 watts into 8 ohms via a driver and a wide dispersion constant directivity horn. The A115H does the same, but via a single 15" driver with a slightly larger wide dispersion constant directivity horn.

RAMSA (Panasonic) pulled back the covers on a new digital multi-processor, the WZ-DM30 which combines all the electronics required at the output end of a rig in a single 2u case. This 20 bit product offers a dynamic range in excess of 100dB and very accurate control over the signal processing. A 240 x 64 dot 'big' LCD (a godsend to those of us with failing eyesight) is combined with a scrub wheel and nudge buttons to aid adjustment. The device can be controlled from a PC or Mac via MIDI and a more basic remot is also available. Four building blocks are used: compressor/limiter; mono 27 band graphic EQ; mono input delay with four outputs



David Catterall of Zero 88 (right) with Uli-Petzold of LMP, their German distributors.

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Peter (Stake) Farley (right) and Jim Khan with Studioma's new Diamond 82RB mixer.

and a four way crossover/four band parametric EQ. The user is presented with three operating modes which determine which functions are in the signal chain and all the controllable parameters can be stored in any of 16 locations.

RAMSA UK's Ian Sharpe told L+SI that they were very excited about this equipment, which is currently 'on trial' with Britannia Row in London. "We have high hopes for this compact unit which offers advanced features and a high specification that competing products will struggle to match," he said. In addition to the main attraction, RAMSA gave a second airing to their PLASA-launched four-buss mixing consoles and their economy-priced 1000 Series 400W and 200W per channel power amps.

This year was the most successful for Citronic in 10 years of presence at the show. New markets in the Far East and new distribution arrangements for some of the weaker parts of Europe were initiated, while the orders taken from new and established customers around the world were at a record high.

"The repercussions of this year's Music Messe have meant that we've had to boost our production capability and will mean more jobs," sales director Mike Gerrish told L+SI. "In the short term we have had to utilise some of our administrative personnel on production. The response from our staff has been terrific. After recession blues throughout 1991 it's been the boost we have been looking for."

Citronic's new PLX1000 power amplifier and VLX1000 line transformer module have been introduced in response to existing customer requests for high power, high quality 100v line systems. This system offers a frequency response of 20Hz to 20kHz at 1000 watts in a 2 x 500 watt configuration that is very competitive compared with the current market alternatives using multiple amplifiers. The PSX-4 power



Andrew Colley with Cloud Electronic's CXF and CXM mixers on the stand of Lichtronic Licht + Lampen.

amplifier on show at the exhibition was a prototype for a new generation of low cost amplifiers intended for the retail market to sell with Citronic's Remix range of mixers. This model uses a Thick Film Ceramic Hybrid which replaces 75% of the discrete components, significantly reducing the production cost, and enabling Citronic to offer exceptional cost/watt in a continuously rated RMS amplifier. The PSX-4 is expected to deliver 180 watts from each channel and orders are being taken for delivery in late May of this year. The UP2000 Remix Patch Bay is a new addition to Citronic's extensive range of Remix accessories that provides all the external inter-connection requirements for flight-cased Remix mixers and processors.

AKG launched their Tri-Power series of triangular microphones, developed, they say, using all the latest techniques to ensure everyone everywhere will be happy. CAD, CIM, computer modeling, holographic analysis et al were evidently employed somewhere along the design chain. The range includes the D3900, D3800, D3700 and D3700S vocal mics and the D3600, D3500 and D3400 instrument mics. The MMS (moving magnet system) handling noise rejection technique provides around 20dB better attenuation of handling noise than conventional shock mounts say AKG. There are numerous other features, as you might have guessed.

New from OHM Industries were four new loudspeakers: the LE12.2 has a 12" driver and tweeter 2 way passively crossed; the LE15.3 has a 15" driver, a 10" driver and tweeter, 3 way passively crossed; the LE18H is a horn loaded bass enclosure with 18" driver; the BR30 has two 15" drivers, a 2" compression driver (mid), and a ring radiator (high frequency).

Ecler of Barcelona showed their popular



Paul Adamson with part of the OHM line-up.



Vestax: a Mecca for the young.

MAC60 mixer range which now includes the MAC60S, a six channel mixer with 11 inputs and a digital special effects section with sampler and echo/reverberation.

The 'Gold Line' series of speakers from FBT of Italy is a modular system and comes with some neat Italian design extras. It is aimed at a wide range of applications through from professional concert use to discotheque installations. There are five basic models in the range and the company had organised a coup in arranging for them to be used for concerts in the Messe Hall Galleria between halls 8 and 9.

Audiomation Systems showed two new Uptown automation systems. The Series 990 is available in both recording and live formats and is currently being used in a couple of Broadway shows. The MIDI-based 600M system creates a hands-on interface for mixers that offer screen interface only, such as computer-based mixing and editing systems.

New British outfit PIC Systems Ltd launched its range of professional Mosfet power amplifiers and cabinets. The amps range from the baby PSA500 (250W per channel) through to the PSA20-30 (100W per channel). Included in their cabinets is the PS10F (1000W), a full range cabinet, and the sub-bass unit PSW14 (1400W).

EAW (Eastern Acoustic Works) had a host of new product. The SM200 is a high definition stage monitor system. It has a long list of special features right through to 'unrestricted sightlines' (minimal height above stage) and various powering options. The SM500 is a very high output version. The new MS63 and MS103 units offer 'ultimate fidelity' nearfield systems in a rugged and reliable system that EAW say will bring together the needs of both recording and live sound. The SB330 virtual array subwoofer is specifically engineered as part of a system including two EAW KF300 full range



Cable test: Richard Vickers (seated) and Sean Downey of Kelsey Acoustics



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The WZ-DM30 digital multiprocessor from Ramsa.



Wembley Loudspeakers' Paul MacCallum with Malcolm Cecil from Gamma Electronics.

loudspeaker systems and their MX300i CCEP signal processing unit. The SB330 extends the low frequency bandwidth of the system down to 35Hz. Its enclosure is designed to simplify the construction of horizontal arrays. Last on the list is the SB1000 special purpose large array subwoofer system which is designed for use with EAW's KF850 and KF1000 units in large touring sound array applications.

The **Studiomaster Diamond 82RB** is a rackmounting 8/2 mixer with three band fixed equalisation and two auxiliary mixes. All connectors, including balanced 48v phantom powered XLR inputs, are mounted on the back panel. Tape in/out with playback switch and mono summed output are also included. For larger applications, there is a Diamond 16/4/2/1 with four auxiliaries and PFL. Inputs are again balanced 48v phantom powered. Groups and masters use LED bargraphs, and outputs are unbalanced XLR. Both units use 60mm faders throughout.

On the huge stand of Mark IV Audio, **ElectroVoice** launched their new N/DYM microphone line, the Series B, quite naturally carrying on from Series A, with enhancements en route. For both live stage work and discotheque installation, the new EV sub-woofer S-181 is a twin component system that is equipped with the same 18" DL-18MT speaker as that used on their MT systems. It has a continuously rated handling capacity of 400 watts with pulse loading peaks of 1600 watts. Also from EV is a new active crossover, the EX-24, a new two-way stage system, the S-152, a stage monitor for guitarists (M-12G) and a Mic Line for beginners - two dynamic microphones made to retail in the lower price bracket.

Still with Mark IV, and for the owner of a compact PA system wishing to extend or upgrade an existing layout, the Sub 600 from **Dynacord** is billed as 'The Bassier Woofer'. Dynacord also introduced their DRP-15 stereo effect processor and a bass amp, the DSP 715. Additionally, Dynacord have branched out into processor-controlled public address systems. A feature of their new line is that the entire electronic system, including the processor control section, is accommodated inside the power amp.

A move into modular mixing consoles has seen a joint development between Dynacord and British company **DDA**. Consoles designed with 8 to 40 channels can be configured in accordance with individual requirements employing a diversity of frames and modules, the eight channel module also being available as a rack version. Currently three modules are available: the 2802 input module, the 2806 group module and the 2810 master module. Additional ones are 'on the way'. On their own, DDA launched their 'Profile' console for the



Hands-on Jands new ESP11 console: Debbie Potter of AC Lighting and Gernot Clausen of Multilite.

recording and mixing studio sector. It can be loaded with up to 56 modules and is equipped with a 24-channel bus.

Wembley Loudspeakers are now represented in Germany by **Haerle Lichttechnik** with product badged under their Audiotols banner. This follows original negotiations at LDI in Reno and a sign-up at SIEL in February. In the Audiotols range the Minicube and Maxicube keep their names, the 2820 bass cabinet becomes ATB118, the 2824 top cabinet becomes ATT310 and the Deuce cabinet becomes ATT212.

There was the usual scattering of lighting equipment again this year, mostly centred on the stands of the leading German distributors. However, as different reports in our pages over months past and present will cover the majority of new products, I've confined copy here to three new control systems premiered.

Celco came up with another revolutionary control console at the Frankfurt Musikmesse. Following on from the Navigator, but being biased more towards conventional lighting, the Pathfinder is a multi-purpose lighting console that has been designed to drive dimmers and colour changers - with a twist! It will be in full production from May. The neatly styled unit is equipped with 60 control channels, 512 dimmer/attribute channels, up to 480 memories and 120 sequences. It also features a comprehensive Theatre Playback facility consisting of up to 20 stacks of 99 entries each. Stacks can be 'played back' manually or automatically with dipless cross fade times of between 0.3s and 60s.

Any number of Pathfinders can be linked together to increase the available channel count by using MIDI in, out and thru ports. Alternatively, Pathfinders and Navigators can be linked together to offer a very powerful, flexible and easy to use system at a remarkable price. Furthermore the Pathfinder can be specified with MSC (MIDI Show Control) allowing synchronisation of cues and sequences to other equipment.

Further news from Celco is that they've appointed LMP Professional (LMP Lichttechnik's division for professional products) as their German distributors with sales manager Frank Rethmann taking care of things from LMP's new base in Ibbenbüren.

MA Lighting Technology launched their new MA-Scancommander - a special controller for all DMX-capable intelligent lighting fixtures on the stand of **Lightpower**, their world-wide distributors. It comes as a 19" desk with a built-in LCD screen which can control 16 moving lights with up to 15 channels power unit and offers many new innovations. By single or group keys it is possible to select which of the 16 units will be controlled simultaneously. For every feature the display lists the pre-programmed values so that, for example, a specific colour doesn't need to be adjusted every time but can be recalled by one of the 12 softkeys.

Movement of the lights can be controlled by encoder wheels, external mouse or trackerball. 36 preset positions can be recalled via the display or can be part of stored memories. Movement of the reflecting mirrors or of the complete lamps (both kinds of lamps can be controlled simultaneously) works with X-Y co-ordinates on stage, enabling a movement in followspot mode. Preset positions and initialisation allow a quick transfer of any complete light show to a new stage set-up.

58 keys recall memories, chaser effects and pre-programmed sequences with a total of up to 2000 pictures, which can be combined freely. A novelty is the free patch of DMX or analogue input to any function of the Scancommander, which gives the chance to remote control the console via a standard lighting board. Besides the easily used basic functions it also offers many special effects. Amongst such facilities are the pre-selectable triggerpoint for fades and the storage of complete Time Code or MIDI synchronised shows. Scancommander will be available soon and can be customised to user requirements.

Finally, on the stand of European distributor **AC Lighting**, Jands' Paul Mulholland showed their new ESP11 console, having carried it under his arm all the way from Australia. "It bridges the gap between ESP and Event," he told me. "It combines the simplicity in operation of ESP with the power of Event." For detailed information watch our coming Equipment News pages.

Having already visited SIEL in Paris and followed on from Frankfurt to SIB in Rimini (see separate feature) it was interesting to note the different sound levels permitted at the three events. SIEL was under control throughout and the Frankfurt Music Fair almost as good. The atmosphere at both was as charged as ever. Rimini was a totally different story; a head-banging session from one hall to the next. There's something we can learn from that.



MA Lighting's Werner Hauptvogel (right) explains Scancommander.



Presenting the Pathfinder: Celco's Mel Collins (left) with Frank Rethmann of LMP Professional.



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USITT CONVENTION 1992

Jason Barnes 'Networks' in Seattle

So, once again it's USITT annual Conference and Expo time. The furthest flung for me - Seattle - top left of the States, right near Canada, and facing out to the Pacific ocean, with Japan beyond. 11 hours on the plane delivered Britain's Derek Gilbert of Glantre Engineering, and me to the huntin', shootin' and fishin' centre of the Pacific North West.

On the short walk from hotel to Convention Centre, a banner proclaims 'USITT T-shirts While You Wait', the annual jamboree has begun. This is however, just the tip of the iceberg, for the next five days were to reveal the results of the time it takes (nearly two years) to plan and manage such an event. The trade show, though smaller, it seemed to me, than in previous years, still had over 80 exhibitors and round this static core, the flesh of the conference, the actual conferring is, I now discovered, referred to as Networking! Over 216 sessions - Institute meetings, breakfast exhibition openings, discussions, lectures, round tables tours and happy hours, led by 325 presenters and panelists, and attended by the 3,500 delegates, representing half the membership.

Britain's ABTT members number barely 1000. Comparisons are however, difficult. Unlike the ABTT, USITT is 80 per cent scholastic. The extensive commission structure and Board of Directors, consisting mainly of those in University and College drama faculties whose organisations look kindly, or blindly, upon time spent for the Institute, together with those from the manufacturing industries whose client base is that very academe. Add generous amounts of private time spent devoted to the work of the Institute, and one begins to see how it remains strong, healthy and active. They are supported by 133 sustaining and contributing members, traders principally.

How can we persuade British companies of the value of their Association, and of their Trade Show? Both ABTT and USITT seem to be losing the attendance of the glut of sound and lighting companies which punctuated so many years of



The Washington State Convention Centre, Seattle - home to USITT 1992.

shows. As a production manager, interested principally in scenery, to have a show where the air is not pierced through with either sound or light is a joy. However, I believe that corporate act of coming together once a year is vital for the theatre industry, and Lighting Dimensions International (LDI) does have a quiet exhibit section.

The stage profession is, however, becoming more prominent in USITT. A healthy proportion of production managers from non-school theatres attended their round table, and the redoubtable Elynmarie Kazle, producer at the Santa Monica Playhouse, and Vice Commissioner to Bill Flynn in theatre and production management, led a very successful stage management mentoring project.

Each student who signed up was allocated a professional for the week, with whom to network, exchange, discuss, or simply try the excellent real ales available in many of the micro-breweries. One of which offered 29 ales, brewed on the premises, largely using English hops, and guaranteed to be above 53 degrees fahrenheit - Whoopee! My student joined me to visit with a colleague mentor at his 1927 landmark Oriental Theatre, the 5th Avenue.

He had never seen a theatre of that size, let alone one of such exuberant decoration. I'm only sorry that the official Conference Bus Tour, which included the Seattle Rep, the Ballet's new conversion headquarters, and A.C.T. Theatre did not feature this splendid building, which now hosts a permanent Music Theatre Company. I have long campaigned for there to be much more theatre going, a sort of parallel theatre festival. The conference dates are announced years in advance, which should give the local theatres the chance to programme appropriately.

Elynmarie also hosted and presented the popular New Products Showcase, which this year included several audio products for the hearing impaired, following a change in the law regarding provision. The session followed the Fellows reception, and the informal table layout and refreshments gave the evening a swing.

Several lighting drafting packages were exhibited. London's Modelbox kept their Peter Byard busy in the full-time computer room throughout the week.

Afterwards I spoke to several of the companies who presented at the Showcase. Mark Russell

Weaver, of Technical Art 'works' explained that his lighting software is based on AutoCAD release 11 386 third party product called Light 'Works' which uses the AutoCAD, development system to create DBASE files from within AutoCAD, to manage all the paperwork associated with a lighting rig and production. "We also have an exclusive relationship with John McKimin the programmer of Lightwright to exchange database files into Lightwright files. Lightwright is a very popular product distributed by Rosco, but Light 'Works' database files may be read by any database manager that reads and writes DBASE 3 files, such as Paradox, Foxpro, or

Microsoft Excell. This makes us compatible with 90 per cent of the data management world.

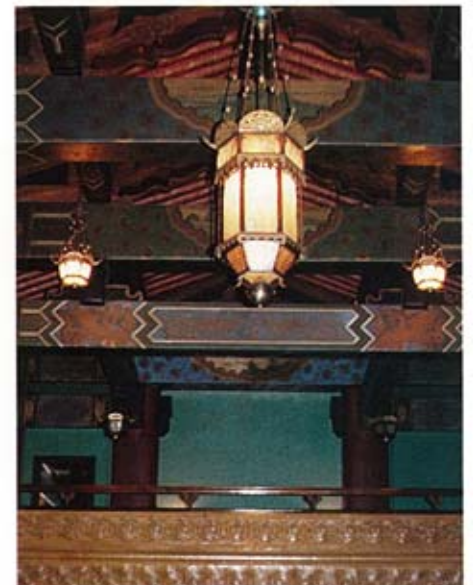
"We have a parametric drawing update function, or PDU, which will be released in the next couple of weeks, this will allow you to import raw database information, and Light 'Works' along with the user goes through an audit of the drawing so you can generate graphical drawing information from the database structure. For instance, you can add, delete or move an instrument in the database, call the parametric update function, and it will then work with the operator to update the drawing. If you want to update an instrument schedule because it suits you to work arithmetically, the system will re-draw the rig plan for you.

"We're working hard to establish Light 'Works' as a graphic and data management tool that really works flexibly. It is not a boxed product. We work with individual clients to customize the product using the benefit of any AutoCAD work already achieved - and incorporate this while maintaining the integrity of the database structure."

In a trade show of very moderate visual appeal, where very few stands had bothered



5th Avenue Theatre: The auditorium dome from which a writhing dragon vomits the chandelier.



The foyer ceiling of Seattle's Oriental Theatre, 5th Avenue.



Pictured left to right: Steve Norman, Pat Gallegos, Chris Rodger, Peter Rodgers and William Groener on the Strand stand.

with their own lighting, Mark's imaginative floor treatment, a blow-up of one of his computer drawn lighting rig plans caught my eye. It is interesting that the ABTT failed to award a stand of the year at their recent show. Movement, in my view, is the greatest eye-catcher, and the most arresting show stand I have seen was at Interior Design International, where a high-tech vacuum message system was being marketed, and the stand was enveloped in see-through piping, carrying day-glo message capsules.

On Saturday, I took advantage of a free trade floor continental breakfast, which seeing the difficulty of obtaining solid food in the morning - as opposed to the trendy coffee carts which occupy every Seattle street corner - was most welcome. The show had taken on a distinctly livelier tone. (Culinary note: I don't think Seattle's ever heard of over-easy, sunny side up or hash browns - aahhh.)

I talked, over excellent coffee, to the master electrician of the Norse Theatre, Palos Verde, California about using an IBM or Macintosh outside a lighting switchboard. "You can be using a lap-top computer, and change your patch from one venue to another. If you have cues in one place and you know some didn't work and you need to change the levels and you're too busy loading out to make the changes in the theatre's own board, you can sit at your lap top and do it. ATC boards have the same software as the IBM and we got the software when we bought the system. The screen you get on your computer looks exactly the same as you get on the board, so it's not all text or anything."

I asked if you could use this to do hook-up plots, colour plots and so on. "Oh yes. Any of the screens you get on your boards to work with, you can get on your PC - you can change the set-up of the computer you work with. For example, when the last theatre you were in has, say, 700 dimmers, and the theatre you are going into has 190, the light boards sometimes have problems recognising changes in dimmer. I've had people bringing in disks which wouldn't load up because the last theatre they were in was too big a set up for my board to handle. If they had the software they could sit there at their lap top and change the number of dimmers and

it would have saved us three hours in the load-in typing new cues into the board.

"In addition to that, once you have loaded the stuff into the lighting switchboard and then you make some further changes as you are working with the set and everyone's getting finished with the show, you can then load that back out into your computer, so that if the board crashes you've captured the show plot in case the operator was not backed-up. With the Macintosh it seemed that it was plugged directly into the back of the Strand board so that there wasn't even a disk between them. If you can get a printer somewhere, you can get a hard copy out of the Macintosh."

I approached Steve Norman of Strand Lighting, who had the new Macintosh software which interlinks with Strand's Mantrix MX board, know internationally as MX, but first he gave me an overview of their whole presentation. "For the first time in a while, we took the directive that every single thing in the booth would be mid-range or lower product, keeping with the USITT tradition, which is geared more to the university-oriented student, educational level clients and, of course, hard times are round the world in general, especially Europe and America.

"Every single product in this booth is inexpensive, from the control desks to the dimmers right on down to the luminaires. Most of the new products you see here were introduced at LDI in November, or before that. We are presenting three things primarily here which are the Mantrix LX a lower version of the MX, in fact, the LX is the lowest spec we've ever made at Strand, Mini Light Palette 90, again two kind of down graded versions of bigger father type, and C90 which won product of the year award in LDI in Reno, which is known throughout most of the 220 volt countries as EC90. The C90, just like the EC90 is a very intelligent dimmer product - we call it intelligent dimming because the dimmer bank can not only chat to luminaires in a studio or theatre if you have a personal computer, or in the case of EC90 you can chat back to a Galaxy and you can tell things about what's happening out in the studio. You can have load conversations, so that no matter how long a cable is from a dimmer bank to a luminaire, whatever voltage you programme, it will be there at the pigtail! We can even tell if a lamp is burned out." Could it then replace it throughout a plot? I asked. "Could be - we would prefer to do that from the lighting switchboard's own computer, on say the Galaxy's find and replace facility."

The LX is a two scene preset, very good for training. Would Steve agree? "The biggest thing I think is the whole concept of going from cue to cue, the whole crossfade, the whole directorial concept of moving from one picture of light, to another."



Alan Symonds, developer of the off-line editor.

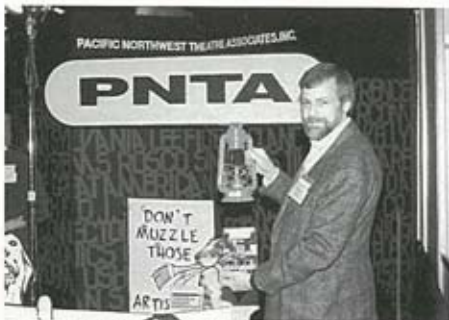
I was warming to this chap, who seemed curiously impressed when he learnt that I had trained on a 36-way Sunset. I did reflect that he was probably too young to have ever seen one. He dragged me back to the 20th century, to explain the latest flexibility conceived for the MX. "When we come up with new products like the Mantrix MX, it is a fairly high level computer use design, but as we can easily adapt, for instance what we're showing here with the MX is something called a terminal emulation, which means that you can take any PC, or Macintosh with some very simple share-ware software, plug it into the back of the MX, and you see a full screen path of all the information in the desk, we don't have to go to the expense of actually developing the whole monitor interface for it."

Now we turned to a further product on the stand. "On the left is the terminal emulation, on the right is a non-Strand product. Some time ago I started selling for Strategic Alliances, developers of innovative design tools. The company I actually worked with was called Lucida, and they developed the Express-Track which is a complete off-line emulation editing system, developed for the Light Palette series consoles, and for use on the Macintosh.

"The whole light plot for Miss Saigon was written in a hotel room. It was designed by a group of Broadway professionals, designers, master electricians and production electricians, and they sold it themselves. The product was nothing to do with Strand, other than we helped and encouraged them develop the concept.

"This particular programme is also an off-line editing tool, written for the Macintosh, and soon for the PC, developed by Alan Symonds who works for the theatre department of Harvard University. Again, this is not a Strand product, but we have helped where we could letting him show the product, which he calls Redline. It's driving the MX board, and to have an off-line editing tool for a low end board, is very unusual in the industry.

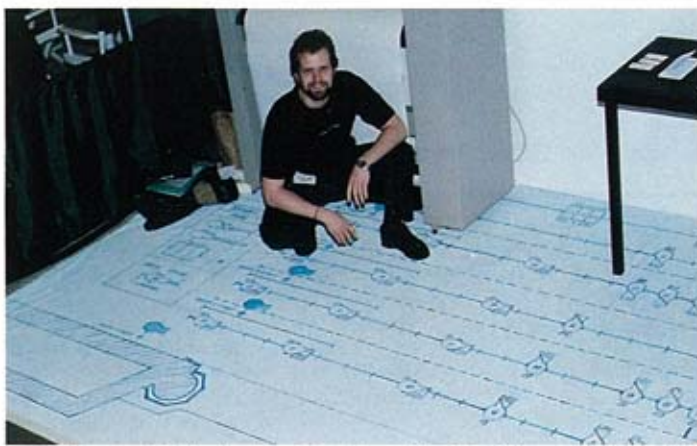
"The fact, of course, that many boards are now designed to be plugged up to separate computers has paved the way for this kind of software development. Without this, one would really be a step behind."



Pacific NorthWest's 'Magic Lantern'.



Modelbox's Peter Byard.



Mark Weaver of Technical Art 'Works' and the giant blow-up of one of his computer drawn lighting rig plans.

We looked then at the new range of Quartet spots, manufactured in Kirkcaldy, a four and a half inch range of luminaires, designed to go up to 650 watts, an unusually high light level for that size of lantern. A PC, a fresnel, a 25 degree fixed profile and 22 - 40 degree zoom profile. I was delighted to see some small spotlights. It seems that every season, since the passing of Patt 123s and 23s, replacement equipment is de-rigueur, and that with each year's development, spots have to be 10 per cent bigger to do the same job. With each increase, two further flying bars are eclipsed, seriously threatening one's ability to hang scenery at all, to say nothing of the sightline problems past gallery front lighting, in a courtyard theatre like the National Theatre's Cottesloe. Keep up the miniaturisation Strand.

I talked then to Alan Symonds, who is developing his off-line Macintosh software at Harvard, and hopes to have it available in June 1992, direct, or through Strand, which brought a surprised smile to Steve Norman's face! The particular advantage, it seemed to me, beyond dry plotting even an entire show, was to be able to back-up on the lap-top, in addition to whatever house back-up procedures may be. Let's hope that we can all play with it at PLASA.

During the New Product Showcase Mac Perkins of Pacific Northwest Theatre Associates Inc., Seattle, Washington, introduced the 'Magic Lantern', self-fading practical prop light source.

"We developed this for Seattle Opera last summer. They had called up and asked for three of them, which was enough to pay for the development costs, and as a result of their first successful use, we decided to market the product. It is actually the controlling circuit board, about an inch and an eighth square, a couple of switches, and this will deal with light sources up to 24 volt, 1 amp load. It has a positive modulated dimmer, so there's very low heat dissipation. If you've got 12 volts or above, I can change to a switching set of up to 15 amp, for a few dollars more. The unit uses a photo cell, which is usually mounted at the top of the property light fitting. It must, of course, be out of sight of the light source it's controlling, to avoid positive feedback. A great chance to avoid those risky induction loops, or radio circuits. There is a further revision on this with a little LED indicator so that you can set the sensitivity control."

What happens if you want to override the controlling circuit? "There is an override switch which will force the unit either on or off, with a tasteful fade time built into it, so that if an actor has some business where he has to extinguish or light a lamp onstage, he touches switch, and the lamp will either fade up or out at a pre-set speed." Available in the UK? "Possibly, through Rosco, though nothing's set yet." Well - I think Action Lighting's candle flickers teamed up with the Magic Lantern circuitry would be a winner.

On the new products side Alex Ciani of Anchor Continental Inc, Columbia, presented us with a new gaffer tape, Stage Tape, on poly-coated cloth (duct in the US), but with a new adhesive which is non-residue depositing. I tried pressing Mr Ciani's product onto the stand carpet, my sweater, his jacket, but the tape proved completely re-positionable, without shedding any glue.

"If you want to add a cable to some already fixed down to the floor, simply tear back the tape, add the extra cable and replace the tape. It's available in shiny and matt black, bright yellow, in four inch, six inch and eight inch all by 60 yards. The matt black is also available in two inch, selling as Showtime Tape, also re-positionable with further colours available soon. The two inch x 60 yards retails at \$9-\$10. Available in the UK? - not so far, but I was able to do some networking at the recent ABTT trade show, so here's hoping! I figure that to pay for six inch re-positionable up front, by the time you've relaid three x two inch strips three times during the fit up, you make money!"

Tyrone Revene of Rockeffects International, Las Vegas, Nevada, brought a bit of eyes and teeth glitz to the otherwise rigidly technical air of the trade show. He was showing streamer and confetti projectile systems, which had been chosen to punctuate the election of USITT's first woman president, Sarah Nash Gates, that night.

"These use small disposable CO₂ as a project medium to deliver loads to high altitudes in the most efficient way. These machines are considered state of the art now. The gas canisters are military, made only in Japan, and we have the effects made in Japan, Canada and USA. We are a fairly new company, but have superstar clients such as Diana Ross, Disney, David Letterman who follows Johnny Carson nightly, Frank Sinatra, Siegfried and Roy, David Copperfield. We have portable systems starting at 18 inches suitable for magician's bottle opening tricks, and larger automatic models. The smaller cannon were shaped as swords, for the Excalibur show.

Joseph Tawil of the Great American Market presented two recent additions to their range. A double gobo rotator entitle Twin Spin. It consists of a slip stainless steel motor driven in opposite directions, and designed to slip into the iris gate of any CCT Altman or Strand lantern. The motor is available in either 240 or 110 volt models, and the gobos rotate at 15rpm. The motor speed can be controlled from any dimmer, including a cheap home model which will control it down to 2RPM. I asked about the circlips retaining the gobos, and these stainless steel, locating into a machined groove. No mid-show graunching here.

Jo's second product is called the Beamer, weighs less than three pounds, is designed to slide onto any par can or ellipsoidal in either 7.5



Rockeffects bring 'eyes and teeth' glitz to the trade show with their confetti and streamer projectile units

inches, or 10 x 10 inch gel frame size. The unit is surmounted by a moving mirror of polished aluminium, which pans and tilts, the whole being slideable for focusing. Control is from any board producing 0 - 10volt DC signal analogue, or digital DMX 512, so most light boards can support the unit. The basic beamer is the same, only the required distribution box would change, depending on the control signal. The control and power cable are the same using a six core microphone cable, with a five pin cannon.

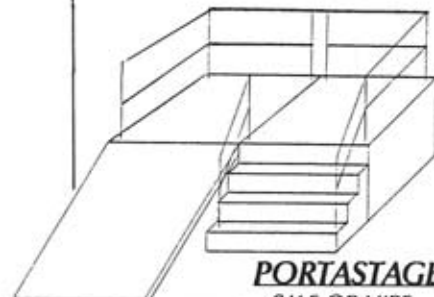
The Beamer is a low-cost, variable position light, which could be used to focus an otherwise inaccessible position, or as a remote followspot. A joy stick is available for this, which would then not need the distribution box.

Well, if the trade show and the convention, together with the panels I was on weren't sufficient excitement, the crowning buzz of the week was at the banquet, where after honouring most of Britain's John Bury, fresh from a meeting of OISTAT, we were then presented with Dr Ota Ornest, who having founded OISTAT, was for many years silenced by the Czech government. He had expected never to see America, and spoke warmly of the thrill of sharing his first visit with theatre colleagues from so many countries. With that, the closing speeches and another eruption from Tyrone Revene's glitter cannon, conference was over.

Next year, Wichita, Kansas. (Why does this bring a wry smile to the faces of all who hear?) I'll go just to find out . . .

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understand that £2million was being spent to get 'the most screwed up-looking video you could imagine'. Willie had worked with Carol Dodds on David Bowie's 'Sound & Vision' tour and he knew she was just the right person for the job. As the slogan for the tour is 'Everything you know is wrong', she was told to forget everything she knew about live video because this was going to be something altogether different.

The lighting rig is quite minimal despite the 10 trucks out on the tour. A lot of the backlight comes from the Vidiwalls as they are so bright and overpowering. In fact the first two numbers are really lit by the video and there is not much need for anything else. Apart from the Trabant cars, there are a couple of hundred Par cans and 17 followspots. Willie reckons his 'mega followspot' phase is coming to an end as - U2's 'Rattle & Hum' there were a legendary 31 followspots. There are a lot of LSD Colourmags which are controlled by Simon Carus-Wilson of LSD who Willie worked with on 'Sound & Vision'. Between them they have discovered a few interesting effects with the Colourmags. One such effect, a random speed chase, they call 'The Love Train'. They discovered on Bowie that if you have a block of Colourmags chasing through similar colours, at random speeds, the result is a wave-like, ripple effect.

Apart from that Willie says there is no real magic other than the new LSD mirrorstrobes which he believes are quite something. There are four 8sq ft Vidiwalls and 36 28" TV monitors which are placed all over the stage. There are two audiences trusses an idea Willie admits stealing from Allen Branton years ago. He will continue to light the audience because he feels it is such a good idea.

"The trusses feature ACL washes which give little pools of light and then there are the eight lights which first light up the whole room. There's also an ultra-violet house wash so you get everyone's vests glowing in the dark."

The control desk is an Avo QM180 which has recently replaced the Avo desk bought by the band in 1984, although the original panel, which is inscribed with U2 logos from previous tours, has been retained.

"I also used it on Bowie," said Willie. "It's good because it's not necessarily the most amazing board in the history of the world but it's like driving your own car. I know it really well - it's good and bad points."

Despite all the effects, Willie believes one of the best moments of the show is the song 'Angel of Harlem' when the band are on the B-stage with only acoustic guitars and absolutely no production. The B-stage, extending into the audience, is an idea Bono has wanted to use for several years although, on the first night, Willie says that he looked quite startled at being surrounded by audience. The 'Angel of Harlem' number points out that the band are not surrounded by masses of equipment because they need it, but rather that they want it.

U2 are financially secure enough to be able to take risks although it is important for this tour to make financial sense. The band actually bought the Philips Vidiwall gear because no rental company



The rig and stage with the specially adapted Trabant cars suspended in place.

owns that equipment. Now it looks like it was a good investment but at the time it was a big risk. Even in their position you have to admire their nerve.

"The Fly" is my favourite video moment but I think the most complete number of the show is 'Bullet the Blue Sky' the band, the lights, the sound and the Vidiwalls all work together into one real



Peter 'Willie' Williams.

scene. The cars are in very low, in what I call their death mode, and the Vidiwalls have 8ft high burning crosses on them. It's very powerful and I really like it because everything is overload. It came about by accident because one day we lost sync on one of the Vidiwalls and the cross went onto this berserk interference. Bono saw it and I knew that he was going to say he loved it. So we had to find a way of doing that to all of them.

"It's very hard to get away from your designs for songs from previous tours. A song like 'Pride', which I must have lit about a thousand times, is very difficult to do a completely different feel for. In 'Where The Streets Have No Name' we used to bring up the Vidiwall in red as a little visual joke. There's always one number in the set which is

troublesome and it really affects the way you perceive the song. You end up not liking the songs you can't do very well. At the moment 'End of the World' is the song I have a problem with."

Willie is rather amused by the fact that many people remember his shows because they do not have any Vari*Lites in them. He thinks they are fantastic instruments and certainly the best moving lights available but only very few people know how to really use them and consequently shows all look the same. That is why Willie loves using followspots in a big way because he has the variability of a moving light but it looks very different. It also forces him to be more creative hence the Trabants: the 'communist Vari*Lites'. There were times with this tour when Willie did wonder if he had created a stick to beat himself with. Designing a successful rig is difficult enough without also setting about designing the lighting instruments. Fortunately for us, Willie persevered and the result is one of the most innovative, stunning shows I've ever seen.

Willie's crew are full of praise both for him and LSD as I found out when I spoke to lighting technicians Matt Patterson and Firmin 'Tea Boy Extraordinaire' Moriarty.

"We have it easier than most road crews because the entire crew has been hand picked," explained Matt Patterson. "There are no guys who don't know what they're doing. It gives us more pressure to be the best because that's what people expect. Willie has got a really positive attitude and he is very hard to upset."

"LSD are giving great support to the tour," continued Firmin Moriarty. "If you need equipment, you get it. Sometimes you don't get such support on small tours which is understandable because money dictates everything. The lighting crew here work best if kept 10ft apart. It's a good idea to keep a distance from each other because we all think we know the best way to do every job there is!



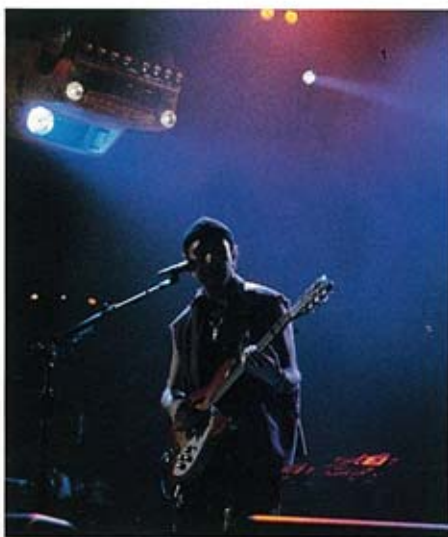
Monitoring desk below stage level.



U2's sound engineer Joe O'Herlihy at his Paragon console.



U2 on stage and in close up on the videowall.



Band member: 'The Edge'.



The Trabants or 'communist Vari-Lites' in action.

"It's easy to end up arguing over the best way to do things even though the end result is always the same. But the tour really is fun, especially the cars. There are plenty of crew and we really are a good team."

Sound

Joe O'Herlihy has been the sound engineer for U2 since September 1978 and he has consistently used Claire Brothers Audio as the sound service company.

"As far as I'm concerned they are the best sound company in the world right now," Joe stated. "During the last year I've been on an audio reconnaissance and I've visited different tours to see what other sound companies are using and what various productions are doing. I then make up my impressions before we decide to put the production together. Of all the shows I've seen I was still pretty much impressed with Claire Brothers and so they remained the service company for U2. It's never a foregone conclusion that they get the tour but as far as I'm concerned they provide the best sound."

The speaker system is Claire Brothers design Series 2 54s and for the indoor North American tour there are 86 boxes placed in a 360 degree hang because the shows on this part of the tour are in the round. The console is an ATI Paragon series board which is fairly new to the industry. It is a 56 input console coupled with stereo returns and it also has 16 sub groups, a total of 8 VCAs and a VCA master. The Paragon console is coupled with a CBA console which is a standard console with 32 inputs, eight stereo sub groups and six stereo returns.

For the support group, The Pixies, there is a separate board, separate electronics and all their own effects. The console is a Yamaha PM3000.

The stage situation is very unique as this is the largest monitoring system ever put together. It's such an intricate operation that there is a total of six

monitor consoles to incorporate the whole show. There is a separate monitor set up for the, in audience, B-stage because when the band move to that area, it is a difficult situation to deal with from a monitoring point of view.

Downstage there is a standard regular position for each of the three members of the band. The monitor engineer who deals with Bono, The Edge



The Avo desk panel inscribed with tour logos.

and Adam is Steve McCale, whilst Larry, the drummer, has his own monitor engineer, Dave Skaff. When any member of the band moves from the downstage area to the upstage area there is a joystick system that sends the monitor sound to wherever they are at any one given time. It basically follows the band around and is controlled by Steve McCale.

"It is the reason why there are so many inputs in the monitors," explained Joe. "We have a facility where the sound remains with them wherever they end up. It is a fairly unique thing because with this particular album there is a substantial amount of treatment, particularly on the voice, and you require specific sounds which need to be in place at all times."

For the first time, on the tour, ear monitors are being used particularly for The Edge and Bono.

From the B-stage point of view, it's an essential part of the whole set up as it enables them to be in time with the rest of the band who are playing 120ft away on the main stage. With in-ear monitoring they have an immediate sound in their ears.

The on-stage back line set up is standard issue from a studio point of view. The Edge has got four VOXAC30s and two Randell amplifiers and for any one given song there is a combination of events between them. It is a very intricate move because an awful lot of The Edge's guitar sounds are down to treatments, different echoes and different distortion patterns. Each amplifier has a designated sound so it's a combination of all those sounds that gives the unique 'Edge Sound'.

With the bass, some new JBL components have been used and Adam seems to be quite happy with them. Larry has always had a Yamaha connection and he's continued that by using a Yamaha Rock Tour series drum kit.

The microphones are a blend of various combinations with all the vocal mics being Shure Beta 58s. For the drum kit, Joe has experimented with quite a few different B & K mics using them for overhead cymbals. He also tried a combination of different sounds for trigger treatments and he's used some B & Ks for that. The amplifiers that The Edge uses are all Shure 57s.

As well as all of that there is what has become known as 'Des World' - the computer part of 'Edge World' which is situated underneath the stage right. It is here where varied sequences and samples are synchronised to the band. The Edge turns them on and off at the flick of a switch by his mic stand. A great effort has been made to keep the sequences for songs such as 'Zoo Station', 'The Fly', 'Mysterious Ways', 'End of the World' and 'Light My Way' as close as possible to the album.

"That in itself is a milestone for U2," said Joe. "At the same time it's U2 in the 90s as Achtung Baby was U2s reply to music of the 90s."



The band bought the Philips Vidiwalls, shown above and right, as no rental company they approached owned them.



Tom Petty

London

LD: Jim Lenahan

Dominated by a large, heavy-limbed tree, Tom Petty's lavish stage set is dressed in what can only be described as Victorian Eccentric. As with the current fashion for decorating with the bric-a-brac of a past era, the set is littered with images and icons of the last century. Totem Poles, old leather steamer trunks with brass fittings, cut glass chandeliers, and Baroque columns give an atmosphere more redolent of the Royal Geographical Society than a big rock show, Phileas Fogg or Harrison Ford would not look out of place here, nor, interestingly enough, does Tom Petty. These props (symbols to which we might ascribe some lasting value) function to involve the audience in a performance they obviously already hold in high regard. Like your grandfather's old armchair, everything about this show is reassuring and comfortable; not that this should be construed as indolence on the part of the artiste.

Jim Lenahan, responsible for both set and lighting design, does not allow himself easy options when bringing his ideas to realization. With this, his largest project in a long association with Tom Petty, he spent three months in advance work. The enormous tree centre stage (an inflatable over a scaffold frame) whilst simple in concept, poses a host of practical considerations; how to shape it in proportion, how to light both it and the performers to create a sense of depth, and most difficult of all, how to project past it onto a backstage screen.

Electing front projection as the only viable method (the stage set is over 40ft deep prohibiting rear projection) Jim had special slides made in reverse keystone effect to enable him to conceal the Pani BP4 projectors in the columns and position them far enough off stage to allow the audience a reasonably unrestricted view. Despite majoring in set design at the University of Florida, Jim admits he knows no easy formula to solve such problems and much of his three months was spent laboriously building and rebuilding 3D models of the tree.



A mass of assorted lighting creates colour combinations for Tom Petty.

photo: Mary Webb

Similarly, the lighting rig is a mass of assorted instruments, over 90 Lekos, 150 Pars and two types of colour changers Colormag and Color Fader. As well as the four Pani BP4s there are a further two 2kW RDS projectors, each chandelier has fully dimmable candles and, concealed within, a Par 64 with colour changer.

With control being provided by a Macintosh, an ETC Expression and an Avo QM500, John Coppen from Samuelson Concert Productions says the mixture of lamps and varying technologies has been very challenging. Backstage there are even more contraptions. Large sheets of Mylar stretched across metal frames, gently wafted by oscillating fans, have Molemags reflecting off them up onto the back screen giving quite delightful soft ripple lighting. This is just the sort of textural effect that Jim has typically brought to his work.

Historically, Jim found, upon leaving college in 1973, little demand for his skills in rock and roll,

(two or three risers being de-rigueur at the time) and so turned his hand to lighting. Fortunately for him times have changed and he is now able to bring his set design talents to the fore. His appearance, long grey hair and baggy sweater, makes him look somewhat eccentric, but don't be deceived, this man is witty, animated and enthusiastic about his work and talks excitedly about his ideas and influences.

Justifying his own extravagance he claims: "Too many stage sets touring currently tend to the cold hard metal look (all ramps and grille fronts) lacking any feeling or opportunity for sensitivity." He feels his own approach 'a cluttered warmth and humanity in design' would be especially suitable for a female performer and he cites Kate Bush and Enya, with their styles placed firmly in the ethereal and theatrical mould, as two artistes whose music evokes especially fantastic stage images to him.

Steve Moles

Wet Wet Wet

London

LD: Louis Ball

For the second time, 'Lucky' Louis Ball has been chosen as lighting designer for Wet Wet Wet. The last tour had a strong rock and roll influence with pyros, effects and nearly 600 Par cans. The current tour, to promote the album 'High On The Happy Side', is more low key and moody.

Louis describes his lighting rig as straightforward and simple, but effective. The Par cans number no more than 300 and there are several ACLs, which Louis particularly favours.

Along the front of the truss there are Molefays with colour changers to give a departure from the blinding white light. These are rarely used at full intensity and are especially useful at times of audience participation throughout the show. On the previous Wet Wet Wet tour, Louis used Starlites as he was working with Tasco but this tour was put out to tender and consequently secured by LSD and Vari-Lites. Hence the mixture of VL2Bs and VL4s.

At the rear of the stage stands a large projection screen which is used regularly during the show for a host of images created by gobos and custom-made slides projected from a 1k xenon projector. Most of the slides are taken from the album cover but the massive lips used for the song

'Lip Service' are particularly memorable.

The lasers take on a sort of short, sharp, shock, role, coming in bursts of 10 - 15 seconds so that there is no overkill. Louis maintains a nice contrast between the generic lighting, the Vari*Lites and the lasers. During the performance of the song 'Goodbye Girl' the lasers are bounced off a mirrorball to great effect.

The control desk is the relatively new Avo QM Diamond. Originally Louis requested an Avo QM500 but Light & Sound Design had a QM Diamond which they wanted on a test run, so they sent him both desks. Louis admits to being sceptical at first as he had become accustomed to the QM500 but after a run through on the Diamond, with Steve Warren of Avolites, he was extremely



Louis Ball's low key, moody, colour washes.



Short, sharp, shock treatment from the lasers.

pleased with its performance and intends to use it again.

The Wet Wet Wet 'High On The Happy Side' tour will continue through the year taking in Europe, Australia and, for the first time as a headlining band, the USA. The band return to the UK in July with a changed set and probably a redesigned rig which will no doubt keep Louis busy.

Sound-wise the out front system consists of 70kW of ElectroVoice MT4 and MT2 cabinets (including the delay system which was flying above the mix position). The main console front-of-house was a TAC SR9000, with a TAC SR6000 provided for effects returns and the support band mix. The sound engineer was Jim Ebdon. The monitor system is configured using SSE wedges with EV MT2 for sidefills, and mixed using a Midas XL3 console by Dave Morgan.

One noteworthy point is that SSE are now using the TOA Saori crossover system front-of-house which, because it is a digital unit, enables the system parameters to be adjusted under software control. The system allows for different memory presets of eq curves, gain ranges etc., allowing the system to be fundamentally changed at the push of a button.

This was particularly useful on Wet Wet Wet where the tone of the show changes mid set to an acoustic interlude. The engineer has a completely different system set up memorised in the Saori, pushes the button, and the parameters instantly change to suit the new requirements.

Crew List

Tour Manager - Dougie Souness
LD - Louis Ball
Sound Engineer - Jim Ebdon
Monitor Engineer - Dave Morgan
Vari*Lite Operator - Fraser Elisha
Lighting Crew Chief - Pete Bell



Atmospherics for lead singer Marti Pellow.

Lighting Crew - Darren Hodge, Rory O'Carol and John McLachlan

PA Crew - Steve Dando, Chris Trimby and Mark Hawley

Rigger - Phil Broad

Laser Crew - Richard Pearson, Nigel Pearson and Richard Indge

On Tour Fact File

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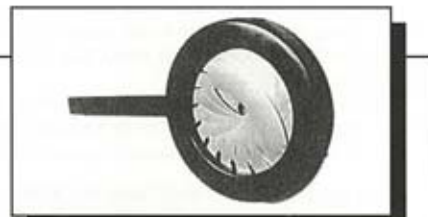
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BOOK REVIEW

The Stage Lighting Handbook

(Fourth Edition)

Francis Reid

A & C Black

ISBN 0-7136-3439-1

£11.99

The Stage Lighting Handbook first published in 1976 by Pitman (commissioned by Ian Herbert) grew out of a series of articles written for Strand's Tabs in the early 1970s - starting when Fred Bentham edited Tabs and continuing under Francis Reid's own editorship.

"The book was written as 'An Introduction to Stage Lighting,' explained Francis Reid and I was not entirely happy with the change to the Handbook because I felt it made it sound like a factual reference book whereas it is about the process of lighting."

The first edition ran a couple of reprints and when A & C Black acquired Pitman's theatre list in 1982, they immediately asked for a second edition. This also ran to reprints and was then revised for a third edition in 1987.

"Most of the obvious revisions for each edition have been in hardware: new spotlights, new controls, and changes in the way we light as this has developed," continued Francis Reid. "But the most important change has probably been the way I have tried to clarify explanations - leaving well alone when the explanation seems to work, but teasing away at areas which are more difficult to put into words. This has been helped enormously by the considerable amount of lecturing I do - one is constantly trying to find better ways of putting light into words and I have been considerably helped by feedback from my students around the world - as acknowledged in the book's prologue."

"This fourth edition is the biggest revision I have done. The second and third were prepared mainly by 'cut & paste', inserting new, additional or replacement sections. But this time I started by keying the whole of the third edition into my word processor - and there is nothing quite like physically copying a whole book with two fingers to make one think 'Hey, that's not very clear!' So, even something that looks superficially the same has probably been cleaned up."

The Stage Lighting Handbook has been co-published in the USA by Theatre Arts Books (now an imprint of Routledge) since the first edition and has penetrated all markets where English is spoken - and a few where it is not - apart from its translations into Swedish and Spanish. (A small batch of the first edition were bound upside down and, by the inevitable application of Murphy's Law, were shipped to Australia... but it evidently survived to sell well down under!)

"25,000 copies may not be much by Jeffrey Archer standards - but it's not bad for a specialist subject. A lot of people I teach or work with now tell me that they had the first edition as a Christmas present in their schooldays," said Francis Reid.

Francis Reid has two new and completely different stage lighting books on the way. A 700 entry glossary is now at the printers and will be launched by A & C Black at the PLASA Light and Sound Show (Drama Book Specialists in New York). Focal Press has commissioned (for 1993 publication) a book about studying lighting design through practical discovery projects using minimum resources in a studio situation.

The Theatre Skills Video Library

An Introduction to Stage Lighting

Techniques with Graham Walne

Part One - Concept, Planning, Equipment

Greenlight Production Co.

£120.00

Well, what a jolly good idea! Instead of booking someone to give a seminar, or attending pre-planned training sessions, it's now possible to introduce the principles of stage lighting almost from the comfort of your armchair. I say almost because at the price of this product, it is clearly aimed at academic institutions, and unless things have changed radically in the last 10 years armchairs don't generally feature highly on the list of facilities of the average college. Having said that, the price is obviously significantly lower than the equivalent cost of booking someone of Mr Walne's standing to present training seminars on a regular basis. As suggested, this production is Part 1 of, what is anticipated to be, a 10 part series covering, initially, theatre lighting. However, it is intended to branch out into other disciplines, e.g. television, in future programmes. This programme starts with the concept of stage lighting by providing an introduction from the lighting designer's point of view. It asks what is the purpose of lighting, what are the aims and goals of the designer and what are the limitations which will be placed on these desires? Graham then develops the early stages which will contribute towards the final lighting for the show by, for example, talking about the use of paintings to interpret the director's ideas on how the show should look. He addresses the use of models on which to experiment with real sources, and how this will help in understanding how the lights will behave in the theatre. He then talks about the use of plans and/or computer programs to show slices through the stage area to ensure that the angle of the overhead lamps is acceptable, before moving on to demonstrate the two classic approaches to theatre lighting, i.e. 3/4 keys (sorry about the telly terms) and cross-lighting. The concept of backlighting is then introduced. It is in these areas that one starts to appreciate the use of video as a medium, because the effect of these lighting approaches can be quite clearly seen on the screen.

We are then moved on into the uses of colour filters on light sources, with a very useful demonstration of the effect of various colours on both flesh tones and a colour chart, showing how the use of neutral colours in a limited rig situation could be used for both 'cold' and 'warm' scenes. Finally, we are shown the effect of dimming the source on selected colours. Moving on to the 'Equipment' section, Graham develops the idea of two basic 'families' of lights, i.e. floodlights and spotlights, with demonstrations of various types of luminaire. At last, I can now finally appreciate the difference between a fresnel and a PC, which is something I have wondered about for several years now! Following the demonstration of a Variable Profile Spot, we are shown the effect from the use of diffusion material and gobos with this type of luminaire. We are then whisked off to the Harlequin Theatre, where Graham interviews the chief electrician on his perception of designers, the types of show that are staged in this theatre and how they are lit. This part of the programme worked well, because it helped emphasise the scale of things in a real theatre, which is something I do not believe will fully come across to a student from plans. Finally, we are returned to the studio to develop the concept of the rigging plan, what information is required and how it should be presented. The quality of this production is very professional, although I am a little critical of the direction in one or two places. For example, during the demonstration on the uses of gobos, the camera cuts away from the luminaire back to Graham's

face, effectively missing the point of what he is talking about. I also felt that the lighting in the interview scenes left a little to be desired because although the presenter was adequately and evenly lit, the interviewee was not, though to be fair he was quite animated whilst speaking. However, this should not detract from the overall value of the programme, because Graham comes across very well indeed, with the quiet confidence of someone giving a lecture on a subject he understands perfectly. Consequently, this film should find favour wherever there is a requirement to teach people about stage lighting. Personally, I found it fascinating and it certainly filled in a lot of blanks from previous stage lighting training courses, particularly in the area of planning and how a designer would tie together the various requirements of directors, set designers, costume designers et al. Highly recommended. Now when is Part 2 due?

This product is available directly from Greenlight Productions, The Brighton Studios, Queens House, 12 Queens Square, Brighton, East Sussex BN1 3FD. Telephone (0273) 27448 Fax (0273) 21462.

Ian Lake

The Concise Oxford

Companion to the Theatre

Edited by Phyllis Hartnoll and Peter Found

Oxford University Press

ISBN 0-19866-1363

£19.95

A new edition of one of the most popular references on theatre was published on March 26th. It carries 2,500 entries on a wide range of topics. Obviously it carries a wealth of information on dramatists, actors and actresses, designers, producers, critics, theatre companies, festivals and the rest.

Although the listings are comprehensive on scenery, stage design, flying, staging and like subjects there is little on other technical aspects such as lighting and sound (for sound, see Acoustics). The two subjects each have an all-embracing piece with extended historical background. The lighting section was contributed by Fred Bentham and sound by Graham Walne.

But whilst (quite rightly) John Bury and Ralph Koltai, for instance, are included as stage designers it is appropriate to ask the editors if they plan to include our leading lighting and sound designers in the next edition.

Electrical Safety at Work - A Guide to the Regulations and Safe Practice

Chris Buck/Edwin Hooper

Paramount Press

ISBN 0 947 665 16 1

£12.00

This book is a development of the successful Practical Guide to the Electricity at Work Regulations by the same authors first published in 1990 and now out of print. It contains much additional commentary concerning those matters where, in the experience of the authors through lecturing widely on the new regulations, questions are most often asked. The opportunity has also been taken to update references to the Institution of Electrical Engineers (IEE) Wiring Regulations taking account of the new 16th Edition where appropriate.

A BETTER TYPE OF CONSOLE

Clive Green & Co continues to make the top marques in theatre mixing consoles but their Cadac J Type introduces a new element of affordability, reports Simon Croft



Clive Green: "radically different" design.

A cut price Cadac console occupies the same place in live sound mythology as Santa Claus or a free lunch. All three are attractive propositions but experience tells us that such kindness does not happen in real life. Yet the Cadac J-type exists and is, according to managing director Clive Green, "at least 30 per cent cheaper" than the E-type console, found in top end productions such as *Miss Saigon*.

The J-type was developed after consultation first with Martin Levan and then Andrew Bruce. Both sound designers specify Cadac for the majority of productions but could see a need for a less expensive system.

Levan subsequently specified the J Type for *Moby Dick*, now showing at the Piccadilly Theatre London, the subject of a separate feature in this issue, and has specified the console for two future productions in Toronto: *Joseph and the Amazing Technicolour Dreamcoat* and *Kiss Of The Spider Woman*. Bruce has specified a J-type for the next US production of *Miss Saigon* which opens in Chicago. In New York, Premier has selected the J-type for *Guys and Dolls*, which is in rehearsal at the time of writing, and *Five Guys Named Mo*, scheduled for later in the year.

Green is aware of "the enormous amount of trust" the designers place in Cadac when they order consoles that have been designed but are not yet in production. And yet it is not a new experience. March 27th 1984 is a date he recalls with a speed most of us reserve for our date of birth. It was the opening date of a show for which Levan had specified a new design of Cadac, which was actually ordered by Bruce's company Autograph Sound. That show was *Starlight Express*.

The responsibility born by Cadac was brought home to Green when he read in the newspaper that The Queen would be at the Gala Preview. The console was still in the workshop at the time. "Autograph went over to Cadac that year. The E-type came as a result of Andrew pushing me: the J came as a result of Martin pushing me. So we are being led by our customers."

While the new console is clearly up to customer expectations, it is still something of a culture shock to hear Green describe the J-type as no more than twice the price of a popular mass-produced desk. Cadac will soon produce a unit for stock in order to introduce the J-type to a broader range of sound hire companies. This all looks like a move down market but Green puts it down to "radically different" design and manufacturing methods in comparison to the E-type.

The change has led to streamlining in mechanical construction and assembly, circuit board design and the way in which the automation is implemented. The result appears to be a console that shares the E-type pedigree but with the ability to rearrange the module layout for each production. Sometimes, it is the simplest changes that make the most difference and this is certainly the case with the connectors used between the channel modules and the backplane.

Since 1968, Cadac has used ITT ISEP connectors on the vast majority of product. But this means that all the connectors in the frame have to be hand wired, an extremely time consuming business when there are 100 odd solder connections per channel. For this reason Green opted for the DIN 41612, a "standard rack and panel connector around for over ten years" for the J-type.

He has configured a plug, cradle and socket combination that allows ribbon cable to be used in place of rigid PCBs. At the same time, the sockets are secured to the frame so that removing one of the modules doesn't bring "a couple of feet of ribbon cable hanging off the end of it."

For Cadac, it has "revolutionised the production of the mixing console", allowing even the biggest frame to be completed in seven days instead of seven or eight weeks. There is no screened cable required in the frame itself, apart from customised versions which specify multiway connectors. Even the screened cable from the fader has been eliminated because the only audio to the fader panel drives the LED metering. The fader is used only to control the VCA in the module.

Cadac has its own motorised fader design. Although it employs parts supplied by Penny and Giles, it uses a different motor and drive system, which relies on nothing more esoteric than fishing line. "It doesn't break or stretch," Philip Jones notes with satisfaction. Tests have shown that the unit continues to function until the fader track wears out, which puts it on a par with manual faders. Mechanically, frames are built to very high standards but construction time is greatly reduced by the use of complex aluminium extrusions exclusive to Cadac.

Efficient R&D is extremely important for a small company because it cannot throw endless resources and technicians at a problem. At the



Tony Waldron: technical manager.



The English National Opera has recently installed a Cadac sound desk in its control position, seen here at the rear of the auditorium.



One of the largest Cadac E-type mixing consoles in use on *'Miss Saigon'* in London. Clive Green & Co's E-type system provides a total of 86 inputs to handle the sound of the 41-strong cast, the elaborate sound effects and 30 musicians.



Philip Jones with a motorised fader unit.

same time, the specialist manufacturer will have a limited number of units sold over which to recoup R&D investment.

Cadac employs 15 people and the majority of R&D is completed by Green, technical manager Tony Waldron and software designer Philip Jones. Astonishingly, the design of the J-type modules was turned around in just eight weeks. This was only possible because Waldron developed a system that ensured that the various elements of the design process were then undertaken by the most appropriate person and combined in the computer environment to eliminate duplication of effort. He wrote various software routines that allow work to be passed between the proprietary design packages used at Cadac.

Schematics can then form the basis of physical component layouts, which mate up with mechanical designs for the front panel. Once components are located, the design can be transferred to the Calay PCB router, where the 'incredibly fast' Carol places all the connections.

"The Calay machine is very good for PCB routing but it's old - it dates from 1973 - so it's not as user-friendly as systems made today," Waldron explained. "Its biggest advantage is that you can communicate with it from other software via a relatively simple text file." Apart from the inherent efficiency of the work flow,



Clive Green launches 'Concert' at the APRS show in July 1991.

the system ensures that all the parts actually fit together.

The linking software was developed over a period of 12 months, during which time the team also developed a one-off console for the Royal Opera House.

"We couldn't have done the J-type without this flow, in the time," said Waldron. Eight new main modules were designed, along with two variations of the fader configuration. "Best of all the accuracy was extremely good, something like 95 per cent first time." Not a bad achievement, considering the software was still being written while Green designed the first module.

The circuits embody some sophisticated techniques including four layer PCBs with tracks embedded in the centre of the sandwich. Extensive use is also made of balanced lines, which are implemented without cabling by running symmetrical tracks surrounded by the ground plane.

Paths on the other side of the board are run at right angles to prevent crosstalk. Internal balancing has become increasingly important to combat any possibility of interference from the internal computer circuits. But despite the more sophisticated control systems, Waldron reckons computer noise has been reduced to system level. Electronic balancing has now been adopted for all inputs, outputs and inserts.

Green says the change has eliminated the low frequency saturation problem presented by transformers.

An obvious difference between the E-type and J-type input boards is the overall reduction in cabling. The next generation will implement the same philosophy on the sub group boards which carry the 16x32 way matrix but for the first issue it was decided to "tolerate a little hand wiring".

Removing that wiring could lead to a 25 per cent reduction in manufacturing cost. Jones also continues to refine the central module, implementing changes suggested by user feedback. The J-type module does away with the interface box, allowing a PC to be plugged directly into the console. Internally the system is different as well, using parallel addressing and data distribution.

Beyond the J-type, there is the Concert, which has been unveiled in conceptual form but has yet to be engineered. "I'm rather looking forward to it now we've got these wonderful systems," says Waldron. The main concepts behind the Concert are high sonic integrity, protected by features such as subminiature switching relays rather than electronic switching in the signal path, combined with a recall system facilitated by localised nulling LEDs.

The first one is likely to go to the National Theatre in London. (Prestigious venues are an



The Cadac E-type owned by the Shiki Theatrical Company of Japan which was first commissioned during the Japanese Festival in London in September 1991. The E-type is now resident with Shiki in Japan.



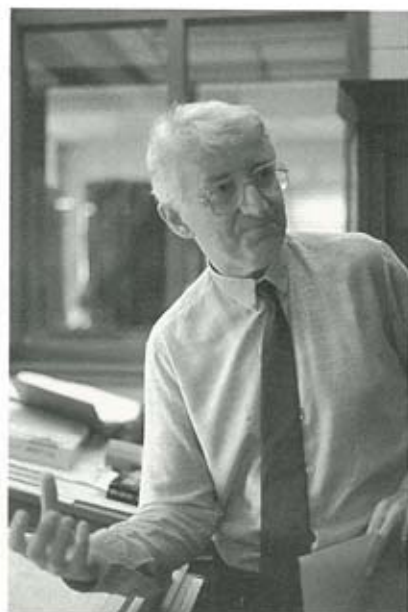
Clive Green & Co's 48-channel Cadac sound console, now in its ninth year mixing the successful musical *Starlight Express*. The Cadac was the first theatre sound console in the West End to feature computer control.



Clive Green explains the advantages of specially-designed extrusions.

important secondary market for Cadac, after shows. In addition to the Royal Opera House mentioned above, there is a Cadac at the English National Opera, and the Olivier Theatre, both again in London, among many venues world-wide).

Clive Green's first console designs were actually for the recording market. He joined Lansdowne Studios from Olympic Studios in 1967 and ended up building a console for them. Or rather, he built a pair, because Morgan Studios (now Battery) decided that they would like one as well. He also installed the first studio console automation system at Pye in 1976, a full two weeks before Neve put its first automation



Tony Waldron: into detail.

system into Air.

These days, Clive Green has no real interest in building desks for the studio market, although Cadac produces a rack mounting version of its equalisation system that has a certain following among rock 'n' roll engineers.

He believes that Cadac build the products customers want, while studios are "led by the nose" by manufacturers and fads. In such an environment, there is less use for the "bullet proof" engineering that theatre sound designers have learned to rely on. You could drive a tank over a Cadac power supply and with two fitted to a console, it is possible to unplug one of them in mid performance without disturbing the



The final touch. Chris Hall (right) checks out leatherette dust covers.

audience.

Actually, Green set his own bench marks for reliability back in his days at Lansdowne Studio. Although the electronics had been revamped, the console he built them was only decommissioned in 1989, 20 years after it was installed.

Green's regard for quality engineering reflects the harsh theatre environment in which his consoles are expected to perform without fault, night after night and sometimes for years on end. The J-Type series is made in the same mould, but at a price which may bring ownership of the Cadac marque into the grasp of more than a select few.

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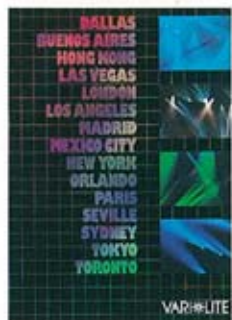
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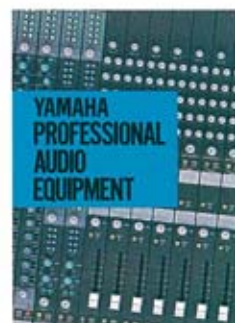
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PEOPLE

Gayle Dewinter has been appointed marketing services coordinator for the Lighting and Sound Division of Samuelson Group PLC. She has been involved in the marketing of the division, Vari-Lite Europe, Samuelson Concert Productions and Theatre Projects Services since its formation in August 1990. She has handled the PR associated with the addition of Samuelson Communications in July 1991 and is now involved in establishing Brilliant Stages and continues to raise the profile of the five companies that currently make up the Division. She succeeds Daryl Vaughan who is setting up his own promotions company after eight years with the group.



Gayle Dewinter



David Bissett-Powell

David Bissett-Powell, formerly the export sales director for Tannoy, has been appointed managing director of Martin Audio. He has been a director of Tannoy for 10 years and has worked within the Pro Audio industry for 20.

Siemens Lighting has appointed **Bob Bell** to the newly-created position of head of applications. He will coordinate the various departmental functions within the company. Prior to joining Siemens, he worked for many years at Thorn Lighting.

Essex-based Pro-Audio specialist Villa Audio have expanded their operation for 1992, and have made two recent appointments. **Stuart Hardy** takes on the post of sales and marketing manager for pro-audio equipment sales, professional installations and educational supplies. **Paul Eve** becomes logistics and administration manager responsible for production, dry rental logistics and accounts management.

Jane Dorling has joined Pulsar Light of Cambridge as publicity executive. She will be responsible for all aspects of advertising, public relations, sales promotions, exhibitions, art direction and print production.

Audio Technica have created a UK Pro-Audio division and appointed **Paul Maher** as national sales manager. Paul has spent many years at CIE of Nottingham and the last two as technical rep for Audio Technica. During his time he has piloted AT's new radio mics through the DTI approval process.

Rainbow Colour Changers have appointed **Chris Parry** to head their American division, Rainbow US. Chris is an experienced lighting designer with a long list of credits to his name including a Tony award nomination for Best Lighting and a New York Drama Desk award, both for Les Liaisons Dangereuses in 1987.

Mark Westbrook, formerly manager of Squire's Guildford branch and an engineer for County Sound's roadshow, has been appointed head of the Contracts Maintenance division.

A Service of Thanksgiving for the life of William Bundy O.B.E. will be held on Wednesday 29th April at 3pm at St Paul's Church, Covent Garden and afterwards at the Royal Opera House, Covent Garden.

Acquisition of Mercia Theatre Services

The directors of Luff Light & Sound have announced that, with the agreement of the directors of Mercia Theatre Services, Luff Light & Sound has acquired the whole of the issued share capital of Mercia - the East Midlands hire and sales company.

Simon Nickerson, the founder and principal director of Mercia Theatre Services, will continue as director of the company. He will be joined on Mercia's board by Luff's chairman, John Ball, and managing director, Michael Chuter.

For Luff Light & Sound, this marks the start of a UK expansion programme and gives it an immediate base from which to develop its presence in the counties of Leicester, Derby, Nottingham and Lincoln.

For Mercia, the deal both secures its financial future and gives it access to Luff's substantial stock of hire equipment, as well as to the buying power of one of the UK's major sound and lighting distributors.

Mercia Theatre Services will, for the time being, continue to trade from its current address, though a move to more substantial premises is anticipated in the near future. All current contracts and outstanding quotations will be honoured by the company, the release states.

Supermick Out on the Road

Supermick Lights has had to double its stock of Serious Mark 1 mist machines to cope with demand following the launch of its twin head version earlier in the year. The company's most recent long-term contract for the cracked oil machines is for two troupes of the Chippendales for whom Supermick developed a Serious Mark 1 remote control. The remote is now available for hire.

The company is also supplying mist machines and lighting equipment for the current European tours of Santana, Gypsy Kings and Shakespeare's Sister.

Supermick has also supplied the lighting for the current World Wrestling Federation (WWF) UK tour, including a special lighting system for the Sheffield show televised on BSkyB TV.

LETTERS

Canary Wharf

Dear Editor,

I should like to thank you for your excellent and informative article on the Canary Wharf 'Light Year' project which appeared in the February issue. I felt however that I should clarify one small item in respect of the use of an integrated external time clock within the Masterpiece control system.

Leisure Services (UK) Ltd took the decision to trigger the time-based show with a separate time clock for the following reasons:

(a) Accuracy! By using an external time clock synchronised to the atomic clock at Rugby, to trigger the start of both machines simultaneously, we were able to ensure that both machines started their chases at EXACTLY THE SAME INSTANT, this would not necessarily have been possible if we had used a manual start.

(b) Show Timing! The show, which started at 7pm, had six time dictated functions, namely the start at 7pm, the four hourly time spots from 8pm till 11pm, the 11.59pm time spot and the midnight time spot. Each time spot showed the exact time in the grid and from 11.59pm the display counted down in seconds to midnight.

(c) Synchronisation! By using an external clock in sync with the clocks used by laser companies the whole show was tied together in a practical and realistic manner.

As you can see our decision to use an external clock was based on sound reasoning and in no way detracts from the quality of the internal clock built into every Masterpiece, which was used every 15 minutes to break into the pattern being generated for the display to show the quarter hours on the clock.

I hope this clarifies our reasons for using the external timer and I would greatly appreciate the inclusion of this letter in your next edition.

Ian B de le Vingne
Chairman

Continental Lasers (UK) Ltd from Belfast have asked us to point out that they supplied all lasers on the site along with all cables pumps and plumbing necessary to operate the display. Image Systems and RSPV built the optic switching and installed the four 5 watt Argon lasers.



Pulsar Birthday Boy Derrick Saunders (centre) notches up the big six 0 in the company of colleagues Ken Sewell (left) and Paul Mardon.

Sound In Brief

JBL have provided a touring sound system worth £4,000 to Radio Lollipop, the charity based at Queen Mary's Hospital for Children in Carshalton. The system comprises four JBL 4731A full range Sound Power speakers, a C-Audio SR 707 power amplifier and two Art HD 31 3rd octave graphic equalisers.

The first 32 channel version of **Allen & Heath's** recently launched GS3 studio console (pictured below) has been installed at Lumina Music Studios in Chelsea. The studio is furnished with a substantial amount of sophisticated MIDI and signal processing equipment, and the new Allen & Heath desk was installed by Stockport-based Axis Audio.



Out Board Electronics, manufacturers of a range of dedicated automation systems for theatres and other live sound applications have fitted a 56 motorised fader automation system to a 40 input Soundcraft Europa console for the Broadway musical 'Metro'. Two 40 channel Europas form the heart of the sound system with one console having Out Board's motorised faders fitted on 20 input channels, group outputs, VCA masters as well as console matrix outputs and stereo effects returns. In addition all mutes are automated on both consoles which are linked for operation from a single SS1 Processor.

Communication specialists, **Auditel Systems Limited**, have been awarded a £200k contract from the Saudi Arabian Ministry of Interior in Riyadh. The contract covers custom-built microprocessor controlled microphone systems and six language simultaneous interpretation systems for council chambers linked by CCTV to two further systems installed in adjoining meeting rooms. An unusual feature of the individually gold plated delegate microphone units is that they rotate through 180 degrees to recess within the table surface when not required.

Sennheiser has supplied 143 HMD 410-6 headsets to Atron in Eire, as part of the completion of the refurbishment of Irish air traffic control facilities for Air Navigation Services. A lightweight mic and headphone combination unit, the HMD 410-6 were customised to meet the ATC's connector and press-to-talk switching systems.

Chrysalis Television has installed **Tannoy** System

12 loudspeakers in its new analogue edit suite as part of its £2million upgrade. The Camden-based post-production facility has added the new suite to its existing two composite multi-format suites to cater for its wide variety of broadcast work. It bought the pair of System 12 DMT Monitor Series loudspeakers from Tannoy dealer Michael Stevens & Partners. The System 12 midfield features the all new 12inch PcQ full-range, point source, dual concentric, DMT transducer.

Meriden Communications Industries Ltd has been awarded the sole UK representation for Barco-EMT, who are known for their studio equipment technology. A recent significant development is the implementation of the Musician data-comparison technique, a process that Barco-EMT have been working on with the Institut fur Rundfunktechnik (IRT) and Philips.

Barco-EMT is the first professional equipment manufacturer to adopt Musicam data compression into its digital-audio products and the company feels that it will be adopted as a world-wide standard in the future.

Marquee Audio have been busy again with an installation at the New Theatre at London's Kings College, which features a Soundcraft Delta 16/4/2 mixing console, JBL Sound Power speakers and C-Audio amplification. EMO, Yamaha and Denon also feature. As part of the launch for their new consumer sales division, the company will be introducing a comprehensive range of karaoke products at the forthcoming Pub, Club and Leisure show.

A new rock musical 'A Jack to a King' (below) opened recently at the compact Boulevard Theatre, in the heart of London's Soho, with a sound system designed and installed by **Autograph Sound Recording**. Based loosely on the theme of Macbeth, the show goes out entirely without the use of radio mics which Autograph's Bobby Aitken feels keeps the sound pressure level under control, whilst conveying the lively atmosphere of the material.



Shermann UK are also busy with installations of their own range of loudspeaker systems into such diverse venues as the Welsh Theatre Hafren, the Malaysian-based Golden Sands Fun Pub and Novotel Scandles, and in Thailand Dyntax Audio of Bangkok have equipped a conference centre and a

hotel in Chang-Mai, northern Thailand with Shermann systems.

Soundcraft have appointed newly-formed audio dealer VT Sound in Sao Paulo as its new distributor in Brazil.

In addition to the First Leisure sound contract at Paradox Disco-Tec in Brighton, **LSD Contracts** have also been engaged to install D.A.R.E. sound systems at Thee Place nightclub at the Rosnaree Hotel, Drogheda in Eire and at the busy Rutherford's nightclub on the pier in Worthing. Thee Place have opted for four D.A.R.E. TC 15 1kW sub bass enclosures and four D.A.R.E. Nx 10s 600 watt mid/high enclosures giving a total output of 4kW, whilst Rutherford has four D.A.R.E. TC 15 1kW sub bass backed by four flown 700 watt Nx 12s.

Yamaha's DMC1000 digital console was the focus of a seminar held recently at the London headquarters of audio suppliers HHB Communications. Representatives from TV and radio broadcasting, audio and video post production, music recording and mastering, audio-visual and theatre sound industries attended the seminar which covered the various applications of the digital console.



Terry Fujino (left) chief designer of Yamaha Digital Systems with Martin O'Donnell technical sales manager of HHB Communications.

Soundcraft at the Winter Olympics

When the Winter Olympics were held in Albertville, France last month, (see March L+SI) a large quantity of Soundtracs consoles aided in the transmission of sound recordings for the production and broadcast of television and radio reports covering the contest.

SFP (Société Française de Production) who were responsible for supplying sound and video equipment for 40% of the Olympic sites used a number of SPA and Megas Mix consoles to cover the men's downhill at Val D'Isere, the women's downhill at Meribel and ice skating at the Halle de Glace. The Soundtracs equipment was part of a full system designed, installed, maintained and operated by Bose contractors.



Martin's Canadian Distributor

Martin Professional of Denmark have appointed Jam Industries Limited as their Canadian distributor. Jam are a respected organisation in many fields including entertainment electronics. They are Canadian distributors of products produced by some of the world's leading manufacturers including Pearl and Korg. Pictured above are from left to right Martin Golden, Eddie Shenker, Peter Johansen and Gerard Cohen.



Who's for Cricket?

Gary Pritchard of LSC Australia (centre) had just asked Zero 88's Freddy Lloyd (left) and Chris Fenwick if they knew the World Cup cricket results! (Occasion was the Frankfurt Music Fair.)



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PLASA NEWS

Pressure on APIAD

At a meeting of the four members of the European Federation of Entertainment Technology (EFET) in Rimini during SIB last month, the British (PLASA), German (VPLT) and Dutch (DIN) associations put pressure on the Italian association APIAD to widen the scope of their organisation so that an equal exchange of information and assistance with trade development could be affected between the countries concerned.

Nicola Ticozzi of APIAD explained that APIAD was simply a promotion organisation for its member manufacturing companies, but that he would raise the subject of admitting importers and distributors to the membership at the next meeting of his association.

Florian von Hofen (VPLT), Piet Gomers (DIN), Tony Kingsley and John Offord (PLASA) all re-iterated that if the structure of APIAD could fall in line with that of their associations, a great deal more could be achieved on two-way trade and establishment of standards. Once a standardised situation had been achieved it was felt that EFET could assist in the establishment of trade bodies in other European countries, most notably Spain and France.

It was emphasised by Nicola Ticozzi that much of EFET's effort in the future should be in establishing new markets for European product in the American and South East Asian areas.



Newly co-opted to PLASA's executive committee, Steve Halsall (centre) receives congratulations from Wharfedale's Gary Orrell and Fane's Mike Wood.



PLASA's Anna Pillow with James Brooks-Ward of Philbeach Events on stand at SIB in Rimini last month.

L.D.I. 92 Dallas

PLASA has arranged DTI sponsorship and booked space in the 'quiet zone' at Lighting Dimensions International in Dallas (November 20-22, 1992).

British companies displaying British-made products will be entitled to 50% discount on costs of stand, space and services, making the Show excellent value at £83/m² for a stand. Travel grants worth £260 will also be arranged for exhibitors.

Eight members have already expressed interest in joining the group and non-members are very welcome too. PLASA will be charging a management fee of only £250 to non-members. Contact Anna Pillow at the PLASA office on (0323) 410335 for details.



Rimini prize trip: Andy Blackwell of Dial (centre) with Steve Jackson together with partner Debbie Bewick on the PLASA stand in Rimini. Steve was Dial's 'entertainment manager of the year' for 1991 and the prize - you guessed it - was a free trip to SIB.

More Rimini Action



Anna Pillow and Claudia Pratelli (interpreter) at work on the PLASA stand.



John Offord soon stopped using the broom when he realised it wasn't in the contract.



Members' base: John Offord of PLASA and Freddy Lloyd of Zero 88 in background with Steve Halsall (Wharfedale), Graham Moss (Avitec) and Dick Stewart (Mode).



Light Engineering's Steve Demeza (second right) gets an Italian lesson.

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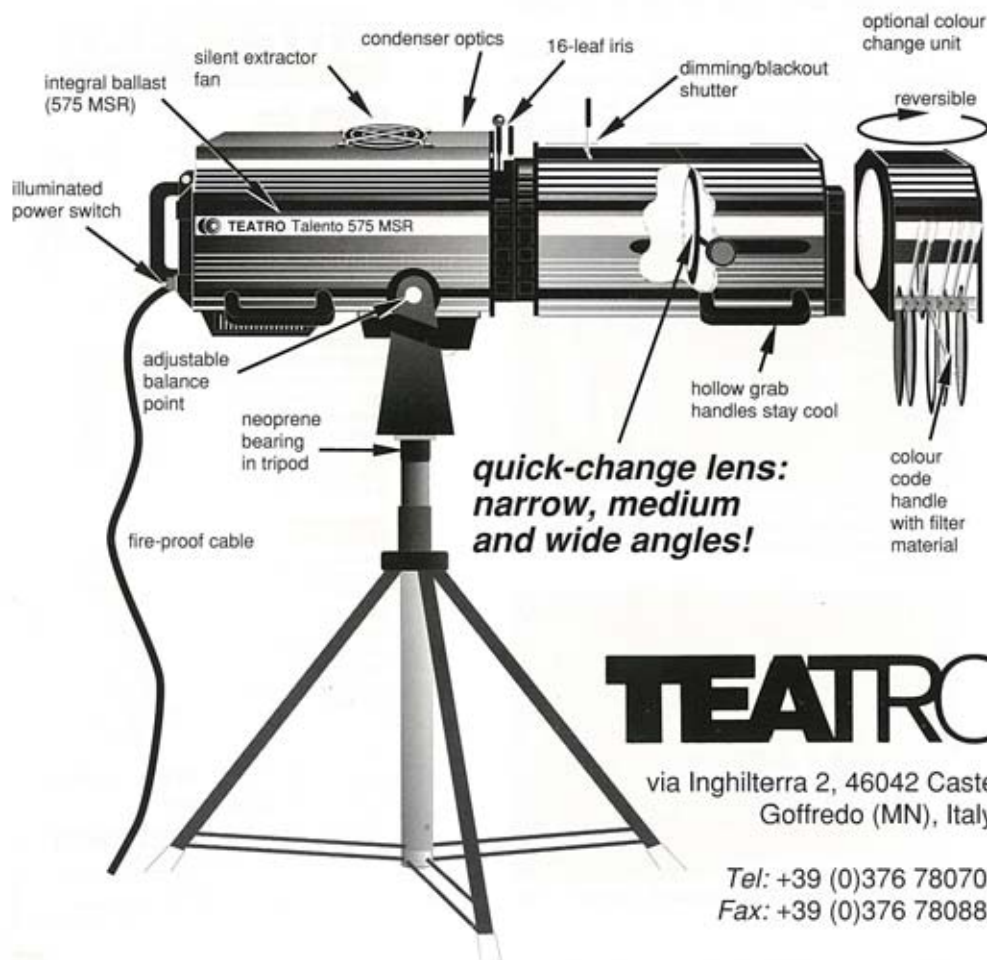
*Tony GOTTIER,
Lighting & Sound
INTERNATIONAL - May '90*

"Mike Lowe applied his own sure touch to Teatro's new range of followspots and came up with what may well amount to a mini revolution in the science. He recognised that zoom is probably a nonsense when it comes to limes. . ."

*Graham WALNE,
Lighting & Sound
INTERNATIONAL - July '90*

"The best product award went to the 'Talento' followspot from Teatro. As an ex Palladium Stelmar operator I approach all modern followspots with in-built scepticism, but the Talento does have a good mechanical dimmer and should prove very popular with small to medium venues."

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JBL Introduces New Subwoofer

JBL have now introduced the latest member of their Sound Power M Series range, the M355 subwoofer.

The unit comprises a 15" high power, high efficiency cone driver in a 'robust' cabinet. By the use of an external switch, the M355 can be used either with an internal passive crossover, or run actively via an external electronic crossover. According to Harman, the computer-aided design of the subwoofer gives accuracy in the bass response.



In keeping with the rest of the range, the M355 sports the same cabinet design as the M350 and M360. The sturdy construction is finished in a heavy duty grey vinyl wrap, and corner protection is achieved by using moulded end-caps both top and bottom. Incorporated into these end-caps is a rib system which allows secure stacking with any other unit in the range. As with all M Series speakers, the M355 can be used with JBL's existing MTA range of mounting hardware.

For further information contact Harman Audio in Slough, telephone (0735) 576911.

Yamaha Multi-Channel Amp

Yamaha have announced the release of a new power amplifier designed to partner several of their S-series enclosures, or similar 2-way speaker boxes.

The P4050 offers four channels of power and amplification available in a 1U rack mount unit.

Multiple operational configurations are available as a result of the arrangement of four input/four output channels, making the P4050 suited to both stage monitor and sound installation applications. In a four output channel configuration, the P4050 will deliver up to 50 watts per channel into eight ohms, or 70 watts into four ohms. When switched into two channel operation, power output is 140 watts into eight ohms. Alternatively a three channel mode provides two channels of 50 watts and a single bridged mode channel delivering 140 watts.

Other features include signal and clip indicators, decibel-calibrated input attenuators, barrier strip and balanced 1/4" jack input terminals and heavy-duty binding post type speaker terminals.

For further information contact Yamaha-Kemble UK Ltd in Milton Keynes, telephone (0908) 366700.

Showsaver From XTBA

A new addition to the Goddard DMXter, the DMX-512 test and diagnostic unit is now available.

The new 'Showsaver' option allows the DMXter to act as a lighting control back-up in addition to its existing facilities for DMX troubleshooting. The DMXter will store eight full memories 'snapshotted' from the DMX line or programmed and edited directly from the unit. Each memory can be given a 16 character name and a 0 to 30 second fade time. In play-back mode the DMXter will cross fade between any two memories in any sequence.

For further information contact XTBA in London, telephone 071- 700 0996

Shermann Series

February saw the release of three new 2-way units from pro-audio enclosure builders, Sherman UK.

The GX-110 has a 10" bass/mid driver with a horn loaded HF unit whereas the GX-112 and GX-M112 wedge feature identical componentry namely a 12" bass/mid driver and a 1" compression driver on Sherman's own horn flare. The GX-110 and GX-112 may be fitted with stand mount adaptors and with concealed flying attachments. These allow direct linking to Sherman's own lightweight flying bracket.

The company have also introduced a range of loudspeaker systems which will form the basis of their newly-launched GX-Series 2. The first Series 2 enclosures are upgrades of the company's larger Series 1 units the Commando, B2 15 and B2 18. The Series 2 models will feature 15" and 18" drive units fitted with 4" voice-coils and dual suspension.

The GX-Commando 2 is fitted with a new version of Sherman's horn loaded cone-midrange unit used in all Commando systems. GX-Series 2 B2 15 and B2 18 features some changes in the loading technique as well as the driver change mentioned previously. Further upgrades for the future will include the 3-way GX-Cub.

Shermann have also extended their range of closefield studio monitors with the introduction of the MX-208., featuring a 30mm Kevlar fibre inverted dome HF driver and an 8" Kevlar coned bass/mid driver in ported enclosure.

For further information contact Sherman Audio in Powys, telephone (0686) 622626.

Control into Infinity

Avitec have been appointed distributors of the American-made Infinity lighting control system manufactured by Meteor Lighting.

Using Meteor's own protocol called MMX, the hub of the system is a Master controller incorporating two 4-channel zones with touch override, eight additional flash/touch keys and a 32 scene programmable scene step memory with touch key access. Optional control expansion units include a 16-channel switch unit for motor control, or you can add more twin 4-channel units, up to a maximum of 64 channels in total.

Other add-ons include a record/playback interface, using standard VHS tape as the storage medium, and a programmable soft patch unit allowing the assignment of any key to any output channel. The 64-channel playback interface is also available in versions outputting standard analog or DMX512 which are retro-fittable into existing installations. The 4 x 10A switch packs are daisy-chained via a data link and are generally remoted from the controller, thus providing cost savings on long runs of mains cable.

Avitec state that in their view Infinity solves some of the problems of today's complex control systems by being clever but also simple to use.

For further information contact Avitec in Hitchin, telephone (0462) 458961.

Strand's Film and Studio

Strand Lighting are to launch a new generation of film, studio and location lighting this autumn.

Super Quasar uses either a 2500W MSR or single-ended HMI lamp and has been developed especially for location film and lighting applications. It has long throw, narrow angle capabilities and its axial optical system means it can provide the same peak intensity as a Sirio 6kW HMI in spot. It is supplied with four beam adjusting lenses and includes focus arrangements for additional beam control.



Sirio Twins provide a range of 575W, 1200W, 2500W and 4000W 'daylight' fresnels, equipped with twin lampholders for single-ended MSR/HMI lamps as well as holders for double-ended HMI lamps. Two Sirio Bambino fresnels have been created to take advantage of MSR lamps. The new 2500W and 4000W MSR heads are adaptations of the 1200W and 2500W Sirio heads to give more compact luminaires for ease of handling.

Electronic ballasts are now available for all HMI and MSR light sources from 575W to 18kW. Standard features include either flicker-free or quiet running changeover switches and a dimmer to reduce lamp intensity. This enables the colour temperature to be held constant whilst allowing dimming of MSR lamps or the colour temperature of HMI lamps to be balanced.



ENG kits have been produced by Strand in a range of three lighting kits designed specifically for news gathering applications. They are also suitable for location film lighting and general photographic lighting. The system offers a choice between 125W HMI to 200W MSR discharge sources or a 100W or 250W battery powered, or 300W mains tungsten source, with pistol-grip handles. Options include mains or battery-powered electronic ballasts, cased or belt batteries, battery chargers, stands, gaffer grips, filters, diffusers and adaptors.

Strand's EC90 digital dimming system and Light Palette 90 control desk, are both being manufactured with additional features, to meet broader market demands.

EC90 is now being produced in a high density, hard-wired version. The Light Palette 90 will feature more informative status and performance displays, with a better use of colour and a quick-load routine for the sub-masters, using the bump buttons.

For further information contact Strand Lighting Ltd in Isleworth, telephone 081-560 3171.

New Carlsbro Mixers

The CMX is one of a new generation of PA mixer/amps from Carlsbro Electronics, to incorporate 9-band graphic EQ with routing switch at both input and FX stages. An auxiliary channels with full stereo and 3-band EQ for tape or CD players, digital reverb, digital echo, anti-feedback controls, and a 60mm level fader at the monitor section, are further enhancements to the 150 watts per side 8/2 PA mixer/amp. The CMX also incorporates low impedance balanced line and high impedance inputs. Other features include pan control at the input and FX stages, LED bargraph indicators, and an 8-band stereo graphic EQ with level control.

Part of the same generation, Carlsbro's CDX 8/2 PA mixer/amp offers additional specifications in a 300 watts per side configuration. These include a unique echo regeneration control, a pair of eight segment bargraphs displaying FX status, and four FX select switches.

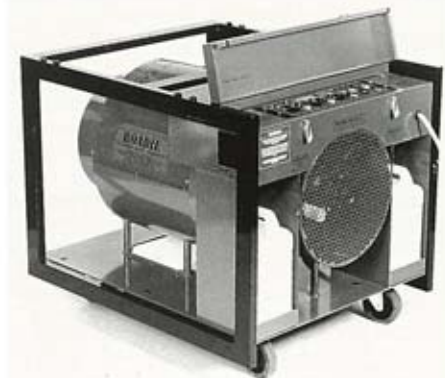
The CDX is also produced in a 12/2 format while the DMX offers identical specifications in a 16/2 format, without the addition of power amplifiers.

For further information contact Carlsbro Electronics in Kirkby-in-Ashfield, telephone (0623) 753902.

JEM Roadie

After nearly two years of research and development, JEM have developed what they claim to be 'the most powerful smoke machine in the world'.

The machine can deliver up to 10 times more smoke than conventional smoke machines thanks to heavy duty components including four 2500W high density compact cartridge heaters, four 180psi high pressure oscillating pumps fed from two 10 litre fluid bottles and a 400mm 5,000rpm fan.



Full control over smoke density is achieved by adjusting the fan speed and smoke output providing either a fine airborne haze or dense clouds. Full information about the machine including automatic fluid level sensing is presented to the operator on the comprehensive remote control panel.

Further details are available from JEM in Spilsby, telephone (0790) 54052.

Marantz Recordable CD

The most recent addition to HHB Communications Professional Audio Product Portfolio is the Marantz CDR1 recordable CD system for which they will act as exclusive UK distributors.

The Philips-manufactured Marantz CDR1 units are available ex-stock and can be delivered anywhere in the UK within 24 hours. International sourcing of blank 63 minute discs ensures a constant supply of recording media. For further details contact HHB Communications in London, telephone 081-960 2144.

**FURTHER PRODUCT
INFORMATION IS TO BE FOUND
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Lightpower Tripods

Lightpower of Paderborn have entered the market with two new telescope tripods. These models, designated ST 44 and ST 30 are specially constructed for spotlights, but are also able to bear other loads, such as speakers. For this, the ST 30 is particularly suited as it boasts a maximum lifting capacity of 60kg up to a height of three metres. The ST 44 bears the same weight, but up to a height of 4.40 metres.

Both tripods are constructed in zinc square-headed tubular steel. Different head adaptors ensure compatible usage with rectangular and round-crossbars as well as small triangle trusses. The hand-winch has a removable crank and in the event of defective cable, a strong securing pin will ensure that the load remains stable and not prone to fall down.

For further details contact Lightpower in Paderborn, telephone 49 525 14184.

Digital from Audio Logic

Audio Logic have announced the release of the D11 Digital Room Delay. The unit is a 1 in, 1 out digital delay intended for use in acoustical alignment of under-balcony or multiple-speaker applications. The maximum delay time is 1.28 seconds and the minimum delay increment is 1.25 milliseconds, according to the company.

The unit has a sample rate of 51.2kHz and a converter resolution of 16 bits for a dynamic range of greater than 90dB, and a frequency response of 20Hz to 20kHz +0/-2dB.

The input is electronically balanced and the output has XLR and barrier strip connectors. Screwdriver adjustable level controls are provided for the input and output. There is an eight segment LED level indicator on the input, and a clip indicator on the output which is equipped with a power-on bypass relay for glitch-free power-up. The product is housed in a 1U extruded Audio Logic chassis and features a Lexan front panel overlay. It has two rack mounting positions allowing installation of an optional security cover for the front panel.

Audio Logic have also introduced the D22 and D24 Programmable Alignment Delays.

For further details contact Harman Audio in Slough, telephone (0753) 576911.

NJD Logic 8000sb

Since the Logic 8000 lighting controller was released six years ago, live bands and mobile discos have been modifying it, and its later version the Logic 8000s, to make it suitable for stage use.



In response to this demand Nottingham-based NJD have introduced the 'Live Band' version of this controller, the Logic 8000sb. This band version has all the facilities of the standard version - a load handling capacity of 2400 watts per channel, 4800 watts maximum, built in lighting programs and individual dimming on each channel, but with the addition of twin Bulgin 8-way output connectors, a heavy duty low-temperature mains lead and 'blackout' and 'floodlight' sockets.

These additional connectors provide the versatility that the live artiste needs to control his lights single-handed (or, to be more accurate, single-footed). By adding two simple on/off footswitches (also available from NJD) the performer can override the lighting controller's operation, regardless of what it is doing, with either a complete floodlight with all channels lit or a blackout.

For more details contact NJD in Nottingham. Telephone (0602) 394122.

Total System Concept

Renkus-Heinz have recently introduced a new line of loudspeaker systems.

These new loudspeakers, called TSC (Total System Concept), have been developed as a complete family of performance matched systems. The C-2 is a high power, 3-way long throw trapezoidal cabinet designed specifically for use in large concert system arrays in conjunction with other members of the TSC loudspeaker family. The C-2 is only 49" high by 24" wide by 31.5" deep, weighs only 235lbs and delivers an output SPL of 133 dB from 40 to 20,000Hz.

The C-2 SUB is a perfect companion to the C-2 in any application requiring high levels of low frequency energy for emotional impact. It is identical to the C-2 in size and shape to simplify array construction and truck packing. Via the 2 x 18" woofers it will deliver an output SPL of 133dB from 30Hz to 100Hz. The C-3 is a compact 3-way medium throw trapezoidal cabinet with unprecedented power handling and output capabilities for its size. Designed primarily for front and side fills use within large systems or as the primary speaker in smaller systems, the C-3 is only 32.5" tall, 21" wide and 23.75" deep and weighs only 160lbs. Despite its small size, the C-3s driver complement gives a continuous programme power rating in excess of 1 kilowatt and a 131dB output SPL. The frequency response is 70Hz to 20,000Hz.

For further details contact R G Jones Sound Engineering in London, telephone 081-540 9881.

Community's VBS 412

Community's VBS series of subwoofers has a new addition: the VBS 412. Sharing the same footprint as the RS 880, the trapezoidal VBS 412 is 854mm high by 775mm wide by 572mm deep with a 22.5 degree cabinet pitch.

The VBS 412 is loaded with four straight excursion, triple spider, hardened cone, ferro-fluid cooled, 12-inch drivers and is capable of producing a motor force fully two times greater than other subwoofers of comparable size according to the company. With its 2000W program rating, the VBS 412 produces deeper bass (down to 35Hz) and low distortion.

In common with the rest of the VBS series, the 412 can be controlled and protected via the electronic system controller of the RS or N-series speakers it is used in conjunction with.

For further information contact The Sound Department Ltd in Cuxham, telephone (0491) 613901.

New Multidisc CD Player

The new CD3101 FPS multidisc CD player from Germany, which can store and access up to 100CDs, is to be distributed in the UK by Sound Management Services the proprietors of Databeat.

The CD3101 offers easy access and control over every track in its library and users may programme and store up to 100 personal multi-track selections which provide an appropriate music programme to reflect their changing moods. Each 'concert' can provide up to 100 hours of non-repetitive play in random or a specified order.



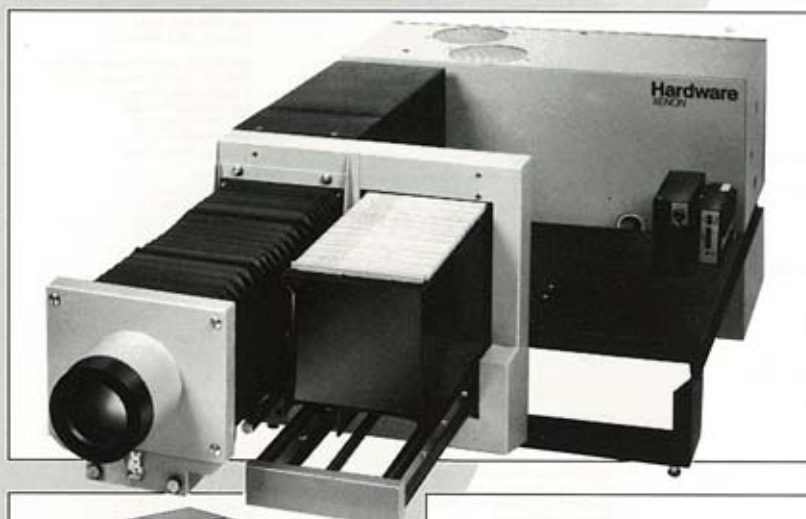
Discs are always organised in their racks and never need handling, thus reducing wear and contamination. The system is expandable by adding more player racks.

Databeat are offering an optional, software interface to complement the CD3101 which will enable users to access and control their music libraries with compatible PCs. For details contact Databeat in Newbury, telephone (0635) 521353.

Hardware Xenon

High power projection

SLIDE PROJECTORS FROM 600 TO 5000 WATTS



All Hardware Xenon projectors are portable and entirely automatic. The DHX models are also compatible with multi-image dissolve systems.

◀ **5000 Watts Xenon** - 75000 lumens
18 x 18,5 cm slides
Image up to 40 metres wide.
Designed for giant image projection in large auditoriums, onto monuments, châteaux, inflatable structures or any background created for special events.



▲ **600 Watts Xenon** - 4000 lumens
24 x 36 mm slides
Image up to 7 metres wide with this compact projector. Black-out not required, allowing ambient light to be used for note-taking during seminars.



▲ **1000 Watts Xenon** - 8000 lumens
24 x 36 mm and 6 x 6 cm slides
Image up to 10 metres wide, with a popular 24 x 36 mm version for multi-image use in conferences, sales conventions, etc...



▲ **XENON FOLLOW SPOTLIGHTS**
• high quality definition, thanks to 5-element lenses,
• optimized cooling of coloured filters, iris and gobos.

2000 Watts Xenon
Use range from 15 to 150 metres.

5000 Watts Xenon
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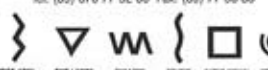
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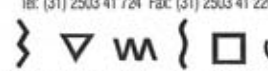
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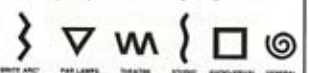
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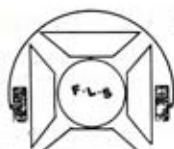
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VIEWPOINT

Graham Walne talks to Robert Nesbitt

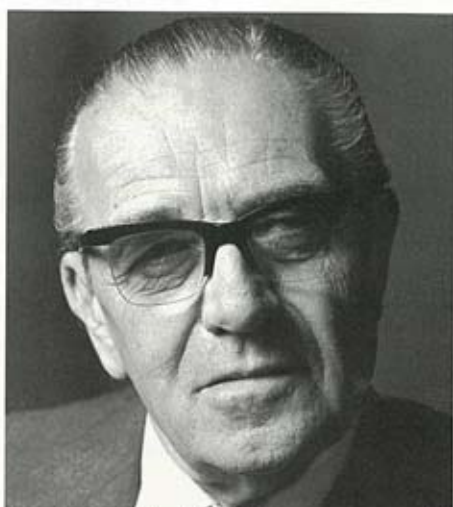
My Viewpoint has a nostalgic air about it since the first London production I staged was in 1932! It was a revue called 'Ballyhoo' at the Comedy Theatre with a cast of young talents including Richard Murdoch and George Sanders, and it was choreographed by Freddie (later Sir Frederick) Ashton. My original connection was as lyric and script writer, a function I had performed in my spare time for many of the revues and cabarets then in the West End. The consequences of this activity were that I had the opportunity of being at rehearsals and seeing the techniques of various directors, and you must remember that in those days there were no lighting designers, directors were expected to light the show, it said so in their contract!

When at short notice, the director of 'Ballyhoo' fell out, faced with a postponement and the possibility of losing the theatre, the management turned to me in desperation. With the enthusiasm one has at that age I rashly accepted the challenge and gave up my day job at a publishers. I knew I promptly had to elicit the tender mercies of Strand Electric, an action which proved to be the start of a long and beautiful friendship with their helpful staff, one of whom, a young man called Fred Bentham, had joined that year.

Fred Bentham was to have a significant effect on my lighting when, ten years later, his famous light console was installed at the Palladium for the spectacular revue 'Gangway'. This production gave me the opportunity to show what could be done with lighting rather than big scenic effects because the unique control, based on Compton's organ, allowed the lighting literally to be played like music, something controls appear to have forgotten until the hybrid rock systems of recent times. This kind of show one never dreamed of in the early 30s when lighting was still in Strand's 'red, amber and blue period' and when I was staging revues at the Vaudeville and Comedy Theatres for Andre Charlot. From him I learned a lot - he was not a big spender, but a great picker of talent who relied on style rather than extravagance in his productions.

The setting for Charlot's revues was usually a double false proscenium, two sets of silver grey tabs, a cyclorama, a built groundrow, and some gauzes. With such simplicity the lighting was vital for creating atmosphere and effect. Except for followspots there was very little FOH lighting, most being concentrated downstage without interfering with the cyclorama. On stage, apart from the usual battens and floats, there were six spots mounted on booms for cross lighting. Upstage a double banked groundrow was supplemented by two bars of German Schwabe lanterns, these were semi-cylindrical and capable of subtle and flexible colour changes on the cyc.

Although the effects we achieved were very good we've come a long way thanks to the computers of today, but the chance to make a real impact in lighting as far as I am concerned came in 1942 with the Bentham Light Console in the Palladium circle and with the maestro himself at the controls for the first two months of 'Gangway'. This



The name of Robert Nesbitt is synonymous with spectacle and style; he created the Dunes Hotel Showroom in Las Vegas and the Talk of the Town Theatre Restaurant in London, both models for all that came after them. He has directed literally dozens of Royal Variety Shows and other Royal Galas. In addition his big revues at the Palladium, the Coliseum and the Hippodrome have inspired generations of directors.

production was planned very much on the Charlot principle even though it was on the wide open spaces of the Palladium. We had an elegant proscenium, three sets of silver grey portals and a cyc, plus additional sets of black and velvet portals

and backcloth that dropped in to mask the greys.

I replaced the battens with four bars of Patt.56 Acting Areas in three colours, Strand 11 pink, 52 gold, and 18 blue, plus two bars of 16 floods and a double banked groundrow mounted on a special bridge to span the famous revolve. In addition there were colour change circle fronts and pros booms for the apron. The bars of AAs gave a series of narrow strips across the stage and were perhaps the forerunner of today's light curtain, lighting always seems to anticipate the manufacturers!

The Palladium rig was simple to focus and this was because, on the whole, it was so accessible. It has always worried me how long-winded, labour intensive and expensive the focusing can be. Not so long ago, Andrew Bridge, the most creative of lighting designers, said when showing his lighting plot for 'Phantom' that achieving it took 12 days or more - doubtless much of that time was spent adjusting and focusing.

Of course rock shows avoid much of this by the use of remote control lanterns and although they are vastly more sophisticated than they were, I still don't see these wonders in use in straight theatre except for effects. There must come a time when the technology will free up the designer to create at a console, mixing pan, tilt, focus, beam quality and colour. But meanwhile a more useful device might be a 'James Bond' -style backpack to enable the electrics to fly from bar to bar. Surely among the many progressive contributors to Lighting+Sound International someone will find the answer. I look forward to a demonstration at a not too distant Plaza Show!

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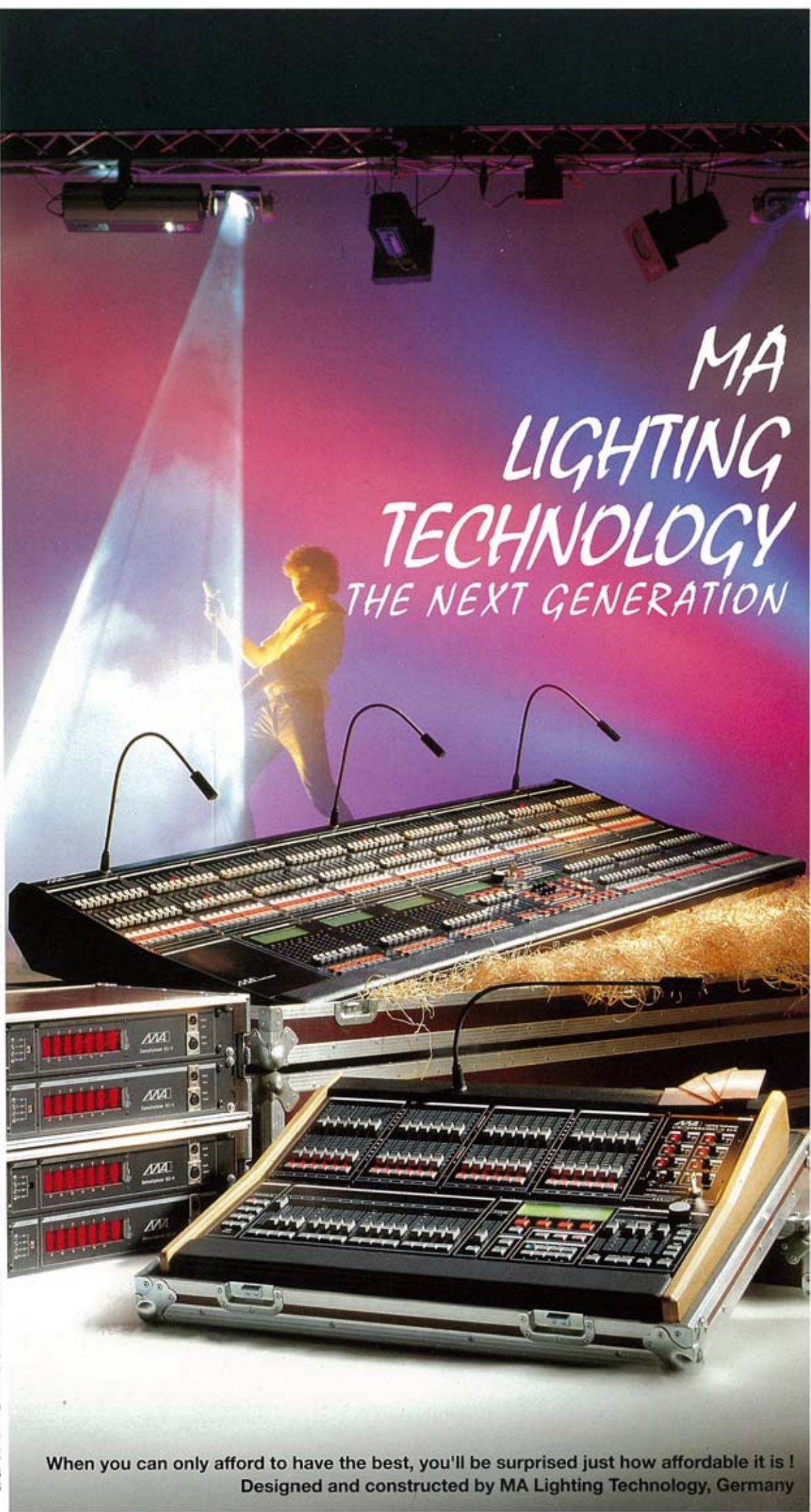
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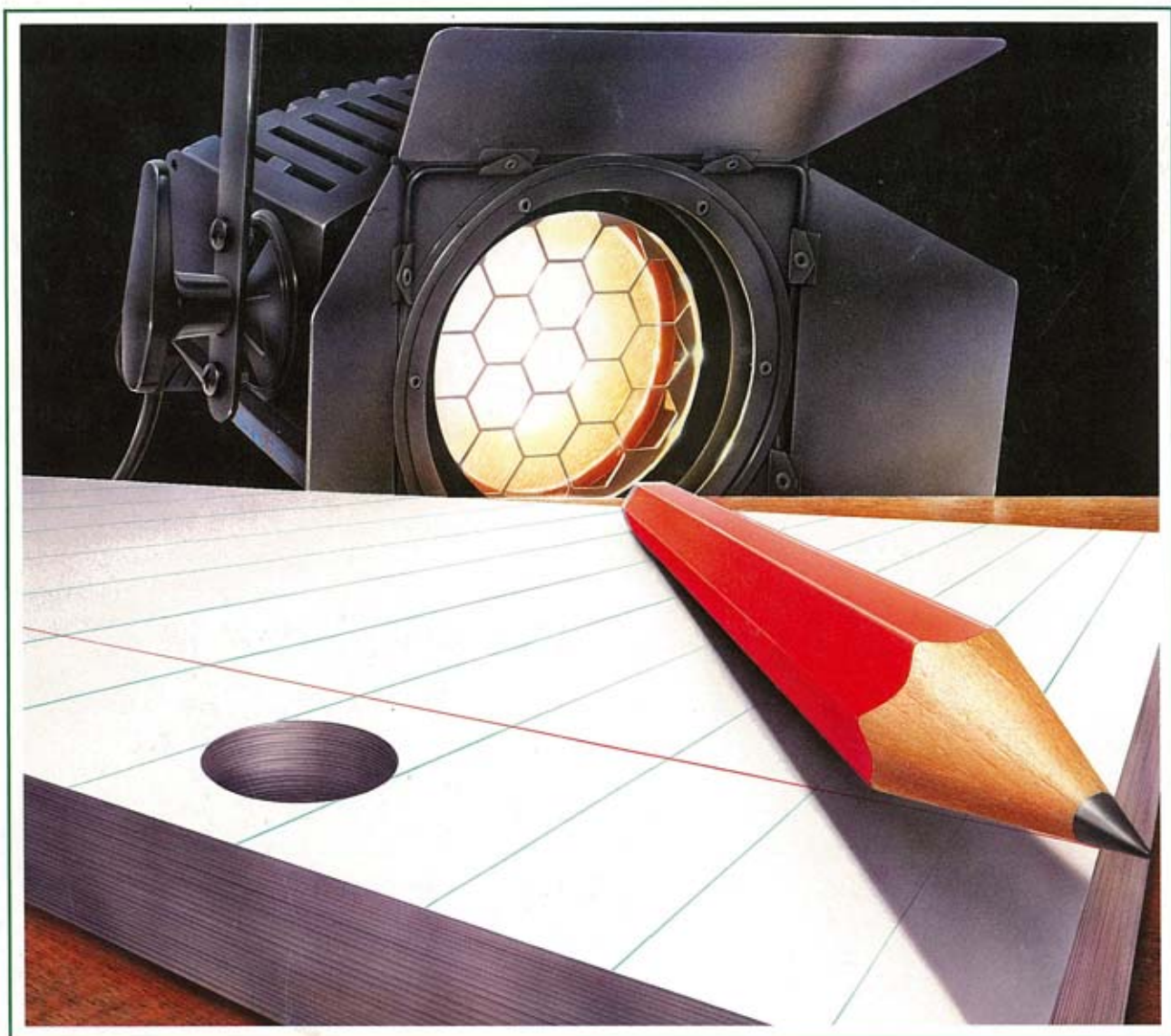


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