

LIGHTING+SOUND

International



CYRANO DE BERGERAC AT THE HAYMARKET

PHOTO: WYATT ENEVER

- David Hersey lights *Cyrano de Bergerac*: David Taylor reports
- Cerritos: Theatre Projects Consultants in southern California
- ShowCAD: assessment of an emerging Show Control System
- Graham Walne on lighting the Bolshoi at the Royal Albert Hall
- Company Profile: Yamaha and Pro Audio
- Going 'Live' at Madame Tussauds' Rock Circus

FEBRUARY 1993



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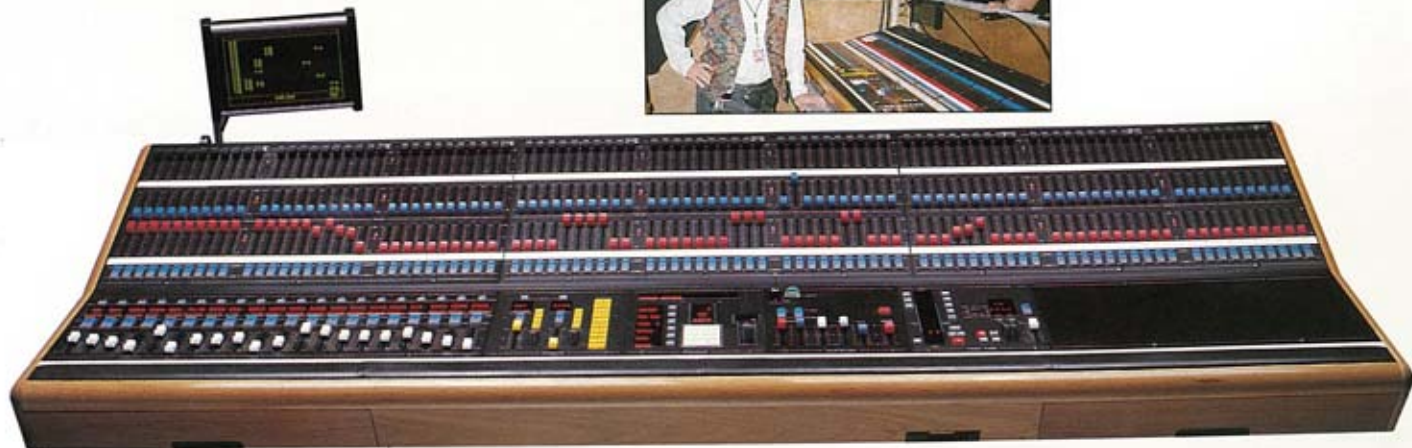
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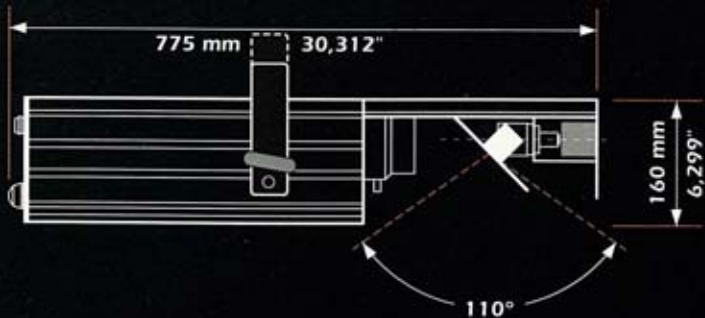
Lighting the World from Rock to Opera
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Wet Wet Wet UK Tour 92
Roxette UK Tour 92
The Wonder Stuff Tour 92



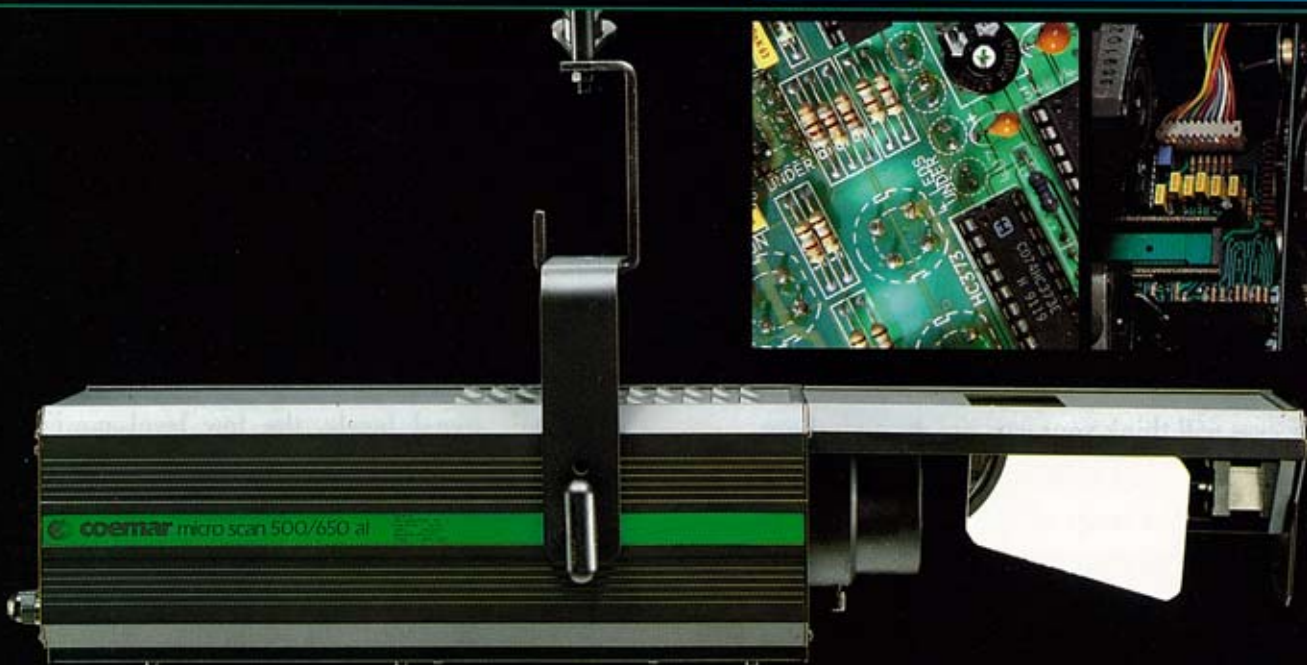
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LIGHTING+ SOUND *International*

FEBRUARY 1993

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LIGHTING SOUND *News* International

PLASA Show Promises More

PLASA Show organisers Philbeach Events are already searching for additional space at Earls Court 2 to satisfy demand from exhibitors. With seven months to go to the Show (12-15th September), there is only 400 sq.meters of prime stand space left to sell. Over 80 per cent of last year's exhibitors have signed up and there is already a waiting list for stands in certain areas.

Over 8,000 visitors attended the show last year with 15 per cent from overseas. The excitement already surrounding this year's event promises even higher levels of attendance from every sector of the industry, both from the UK and increasingly overseas. Further exhibitor and visitor information for the PLASA Light & Sound Show 93 is available from Philbeach Events Limited, Earls Court Exhibition Centre, Warwick Road, London SW5 9TA. Telephone 071-370 8215.

Vari-Lite LA Expands

Vari-Lite Los Angeles has moved to a brand new 15,000 square feet building in the Burbank/Glendale area of Los Angeles. "We felt it necessary to move closer to the studios and venues to better serve our clients," Susan Tesh, Vari-Lite Los Angeles sales manager told L+SI. "In the last couple of years, the number of shows in which we participated has tripled. With the advent of the VL5 wash luminaire, we anticipate that number to triple again."

The new Vari-Lite LA facility will be equipped with a full-feature demo room and design lab featuring the entire Vari-Lite product line, including MIDI-control, DDL spreadsheet programming, and DMX controlled VL5 wash luminaires and VL1 spot luminaires. Also on display will be the new Vari-Lite automated trussing system. In the future, Vari-Lite LA plans to provide an in-house CAD system for clients' use.

Vari-Lite LA is now located at 1620 Flower Street, Glendale, California 91201. It originally opened in April of 1988 to promote the use of automated lighting in the television, film and video markets. "Vari-Lite products are now a major part of lighting some of the most successful television shows produced," said Tesh. Shows noted include H.B.O.'s recent Neil Diamond Christmas special, David Copperfield's annual televised magic show and the recent Smith-Hemion produced Inaugural Gala featuring the one-time reunion of Fleetwood Mac.

Executive Changes at Strand Lighting

Strand Lighting has told L+SI that William Groener, executive vice president, USA Sales, has recently announced his decision to leave the company. Bill, during his many years with Strand, made significant contributions to the company and to the entertainment and architectural lighting industries.

Concurrently, Strand has announced that Peter Rogers, formerly director of sales for Strand has been appointed vice president of sales. Peter will have responsibility for all aspects of sales and sales support in the USA and South America.

NOB and Flashlight Get Together

The Netherlands Broadcasting Services Corporation (NOB) and the broadcast facilities company Flashlight of Utrecht have reached an agreement to effect closer co-operation in the exploitation of lighting facilities.

Through this acquisition NOB expects to reinforce its position in the TV-facilities market. The agreement between NOB and Flashlight will also give a healthy boost to the expansion of Nob in the European AV-market, the announcement stated. There will be no adverse consequences to Flashlight's independent status or to the board or employees of the company, L+SI was told.

Awaiting Sinatra



The Cerritos Center for the Performing Arts in southern California packed to the rafters for its opening night performance last month. The unique multi-purpose centre is the subject of a feature this month, starting on page 30.

Citronic 486 MIDI Sequencer



A rack mount computer with special applications for entertainment, leisure and theatrical lighting professionals has been created by Citronic, the Melksham-based pro audio specialists.

The Citronic PCX486DX provides, via any IBM compatible PC and software package, a flexible and fast response link for MIDI sequency and lighting control systems. In addition, images can be created within minutes for laser light shows for outdoor events, laser shows, nightclubs and discotheques.

Program execution is significantly enhanced by a true 'No Wait State' operational mode made possible by exclusive use in the support chip set of carefully selected devices which can match the CPU speed.

Complex lighting sequences, effects and laser images can all be created within remarkably short timescales. For example, laser programming company, London Laser, who are currently using the new Citronic PCX486DX, are claiming that programming time for creating specific images and sequences for its own client base has been reduced by over 75%.

Mike Yarrington of London Laser told L+SI: "It is possible to programme in a corporate logo, or other visual, and be able to project a forward image within an hour or so."

SHOWLIGHT COUNTDOWN

With less than three months to go to Showlight 93, make sure you book your place as a delegate before March 1st to take advantage of special rates.

For more information see pages 51/52 for full details and a booking form.

Action *News*

Hello Action Lighting I need some goods in a tearing hurry, can YOU deliver TODAY?



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LEE FILTERS		
No.	Sim	Com
HT004	176	
151		
154		
159		
104		
204		
147		
179, 134		
135		
158		
105 + 166		
182		
106		
176		
109		
107		
157		
193		
248		
107		
110		
110		
166 + 103		
113		
110 x 2		
203 + 111		
148		
136 + 170		
170 + 110		
126		
127		
136		
136		
137		
142		
180		
194		
181		
202		
202 + 203		
165		
161		
174		
161		
117		
196		
174 + 196		
132		
141		
118, 183		
117 + 203		
144 + 298		
117 x 2		
115		
122 + 202		
183 + 209		
132		
197		
195		
195		
121		
245		
138		
122 + 202		
183 + 209		
139		
210		
156		
101		
247		
128		
180 + 111		
218 + 136		
201		
202		
203 + 218		
120 + 176		
159 + 138		
202 + 122		

No.	Product description	Clo	162	159 - 153
602	Bastard Amber			
603	Warm Rose	212	103	
604	No Color Straw			
605	Pale Gold	206		
608	Warm Straw	HT010	147	237 + 248
609	Straw			
610	Light Flame			
611	Rose Amber		134	
612	Golden Amber	134	147	
613	Light Amber			
614	Flame	106	158	
615	Deep Straw			
618	Orange	HT019		
619	Fire	113		
620	Deep Salmon	106		
621	Light Red		153	
624	Pink	247	192	193 x 2
625	Pale Rose Pink			170 + 136
627	Rose Pink			
632	Salmon			
638	Light Rose Purple		HT052	
641	Lavender		180	HT058 x 2
644	Deep Lilac			
645	Indigo		117	
647	Pale Blue	202	HT063	
648	No Color Blue		201	
649	Booster Blue			
650	Light Blue	174		117 + 203
651	Light Steel Blue			136 + 174
652	Azure Blue			
653	Zephyr Blue	196	174	144 x 2
654	Daylight Blue			
655	Steel Blue			
656	Steel Blue			
657	Primary Blue			
658	Medium Green Blue	118	132	
659	Green Blue		195	
661	Medium Blue		245	
669	Pale Yellow Green	244		* 122 + 218
671	Light Green			
672	Moss Green		219	
676	Blue Green	209	156	
680	Light Grey			
682	Chocolate			

CINEMOID				
No.	Product description	Clo	Sim	Com
1	Yellow		HT010	
2	Light Amber	101	102	
3	Straw		HT013	
4	Med. Amber		HT015	
			179, 105	
			158	
			HT022	
5	Orange	106	182	
6	Primary Red		107	
			109	
7	Light Rose		110	
9	Light Salmon		192	
10	Middle Rose		111	
11	Dark Pink		148	128 x 2
12	Deep Rose		HT027, HT046	
		113	HT026	
13	Magenta			
14	Ruby	115	116	
15	Peacock Blue		117	
16	Blue Green		174	
17	Steel Blue		144	
			HT079, 118, 183	
18	Light Blue	119	195	* 120 + 165
19	Dark Blue			
20	Deep Blue			
		121		
		122		
21	Pea Green			
22	Moss Green			
23	Light Green			
24	Dark Green			
25	Purple			
26	Mauve			
27	Smoky Pink			
32	Medium Blue			
33	Deep Amber			
34	Golden Amber			
35	Deep Golden Amber			
36	Pale Lavender			
38	Pale Green			
39	Primary Green			
40	Pale Blue			
41	Bright Blue			
42	Pale Violet			
43	Pale Navy Blue			
45	Daylight			
46	Chrome Yellow			
47	Apricot			
48	Bright Rose			
49	Canary			
50	Pale Yellow			
51	Gold Tint			
52	Pale Gold			
53	Pale Salmon			
54	Pale Rose			
56	Pale Chocolate			
57	Pink			
58	Deep Orange			
60	Pale Grey			

No.	Product description	Clo	Sim	Com
62	Sky Blue		164	HT019, 157
63	Med. Red		166	203 + 218
64				
66	Pale Red			
67	Steel Tint		196	
68	Giselle Blue	103		
73	Straw Tint	151	245	
75	Pale Golden Rose			HT008
77	Green Tint			
78	Salmon Pink			

GAM COLOR				
No.	Product description	Clo	Sim	Com
110	Dark Rose		127	
120	Bright Pink		128	136 + 128
140	Dark Magenta		109	
155	Light Pink		110	
160	Chorus Pink		192	111 x 2
170	Dark Flesh Pink			
180	Cherry		110	
190	Cold Pink	107		
195	Nymph Pink		157, 193	
		148	HT046, 113	
220	Pink Magenta			156 x 2
235	Pink Red	106	HT026	
245	Light Red			182 + 106
			HT027	153 x 2
250	Medium Red XT			
260	Rosy Amber		182	
270	Red Orange	HT019	135	
280	Fire Red			
290	Fire Orange		151, 176, 156	
340	Light Bastard Amber	162	158	
345	Deep Amber		105	
350	Dark Amber		HT015, HT020, 179	
			206	
			134	
365	Warm Straw	147		223 + 205
375	Flame		104	
385	Light Amber		102	
			159	
			102	
			HT010	
			101	
			212	
			245	
			138	
510	No Color Straw			
520	New Straw			
540	Pale Green	121		
570	Light Green Yellow		139	
650	Grass Green		139	
655	Rich Green	122		* 115, 116
660	Med. Green		117	201 + 213
720	Light Steel Blue			
730	Azure Blue	118	183	
740	Off Blue		118	
			143	117 x 2
750	Nile Blue			117 x 2
760	Agua Blue			202 + 203
770	Christel Blue			
780	Shark Blue			
790	Electric Blue			
810	Moon Blue			
815	Moody Blue			
820				
850				
890				
905				
910				
920	Pale Lavender			
930	Real Colour			
940	Light Purple			
970	Special Lavender			
990	Dark Lavender			
995	Orchid			



KEY
 Clo: Close - Colour
 Sim: Similar - Lee
 Com: Com - be of a different

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White Light North Acquire Mainstage

White Light North in Halifax has purchased Mainstage Presentations' entire stock of hire equipment in a deal with managing director Mike Sweetland.

Mainstage Presentations' existing hire customers will now deal directly with White Light North at its Sowerby Bridge headquarters, although there will be a facility for all customers to collect small orders from Mainstage's offices by prior arrangement.

John Anderton of White Light North told L+S: "As well as providing a full service to Mainstage's existing hire customers, the deal means that White Light North is now in a position to offer an even greater range of hire equipment to its North of England customer base."

Sting at 4:1

Nick Sholem will once again be pre-programming the forthcoming Sting tour at 4:1 Studios in Battersea. In contrast to previous outings a decision has been made to transfer budget priorities from lighting to set design. To this end Nick has conceived a show dominated by a complex system of Kibuki drops across the back of the stage, separated into 10' sections. There is a potential for 42 different drops, though in practice they will be made in different combinations.

Intellabeams and Pars will provide the lighting and will be controlled by Flying Pig Systems' aptly named Whole Hog Desk, as will the Kibukis. Nick is especially keen to use the Whole Hog as it relieves him of a multiplicity of desks and operators and does not require a 'rocket scientist' to programme and run it. Alluding to both Windows and Apple Mac operating systems Nick told L+S: "The learning curve on operating this desk is so slight as to not interfere with what I'm paid for, which is being a lighting designer."

Going Live with Soundcraft

Soundcraft is to run a second residential course to focus on the basic skills of live sound engineering. Taking place on the 24th and 25th April in Manchester, the full programme will include professional advice on the art of positioning microphones and foldback/FOH speakers, use of EQ and dynamics and how to set up and operate console and PA systems. Hands-on time will be available for experiment with the Soundcraft range of mixing consoles. Attendance is strictly by ticket registration @ £85 per person which includes overnight accommodation and meals. Tickets are available without accommodation at £65, or on a per day basis at £40. For further details and a registration form contact Katrina Davis at Soundcraft on (0707) 665000.

Laser Media at Citywalk Club

'Wizards' Magic Club now under construction at Universal's City Walk project in Universal City, CA has contracted Laser Media of Los Angeles to manufacture and install a sophisticated array of laser lighting equipment.

Scheduled for completion this spring, 'Wizards' will brew up an interesting mix of magical entertainment including a custom produced laser performance which will open and close the club each evening. In between the laser spectacle, a variety of world class magicians will treat the audience to their own brand of magic.

"A great deal of our recent projects have been outside of California and the United States," Laser Media's Harvey Plotnick told L+S. "Having the opportunity to provide such a substantial laser system in the Los Angeles area is certainly exciting for us and we are very pleased to be involved with the entire Wizards Group."

Laser Media are well-known for their laser work in theme parks, nightclubs, shopping centres and architectural displays.

Their past projects include the Lagoon Show at Walt Disney's Epcot Center in Florida and the 'Festival Fountain' multi-dimensional feature at the Forum Shops retail complex in Las Vegas which incorporates audio-animatronics, lasers, water fountains and scenic projections which the company's Special Projects division produced and directed.

Martin Professional New Rental Division

Martin Professional have announced the setting up of a new rental division which will be based initially in Denmark, London and Miami.

From these three outlets the company plan to support rental companies with unlimited numbers of their projectors. In the first instance this will mean putting 600 Pro 218s into rental stock through the three outlets, along with 150 Pro 1220s.

All units will be flight-cased and 'ready to roll' and these packages will be backed up by spares and DMX interface, allowing the units to run off existing boards. The company have also launched a new service for Martin users - the 'Bulletin Board' - which will enable Martin customers to access up-to-the-minute technical information 24 hours a day.

In addition, customers can now talk to Martin via modem, simply by logging into the new Martin BBS using a PC or 2032 controller and a standard 1200-9600 Bulletin. This will give instant access to a range of data including news and technical information, new software, diagnostic software and on-line from Martin technicians. Users can also exchange complete lightshows with each other.

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Bill Platt

Bill Platt was born on 5th October and died suddenly on Saturday 30th January 1993.

Bill was a master of his craft. He came into the theatre business through the stage door, knowing nothing, and retired in September 1990 after 46 years of service as the longest reigning chief electrician, with a knowledge that was irreplaceable. He joined the London Palladium in 1941, and again in March 1948 after a three year spell in the Army at a time when Variety was the centre of entertainment. His career spanned the best years of this technical revolutionary era, including the introduction of coloured television lighting.

The Palladium stage and live transmission television shows of the 1950s and 60s established standards and techniques which became the criteria by which others would later be measured. Bill was loved by all who were privileged to be closely associated with him. He had the art of communication with others, from crew member to star performer. He would give his all to a production to achieve a high quality performance and expected the same commitment from his technical staff.

As a person dedicated to the electrical work of his theatre (he gave the best years of his life to it, and in particular to stage lighting and control), Bill was indispensable. With his inspiring attitude and unique code of discipline, he was able to obtain the very best from others. His great sense of humour and professionalism made working with him such a great pleasure. By nature, he was an optimist, and he never allowed any task to defeat him. He will be greatly missed. He both created and achieved the limelight and will be a hard act to follow. He leaves a daughter, Julie, and a son, Mark.

The funeral service will be at Eltham Crematorium on Thursday 13th February at 12.00pm. Flowers to Francis Chappel, High Street, Sidcup, Kent.

Julian Williams

Wybron Target UK

Colorado Springs-based Wybron hope by the end of March to have a Gel-string service in London, with the company's range of Colour Changers also available. Wybron president Keny Whwright told L+S: "We aim to improve our market share in Europe and this is the only way to do it." The UK operation will initially be handled by two people, with plans to set up further branches in the regions when appropriate. The move is a response to Wybron experiencing difficulty finding a suitable UK distributor to handle their products. "We really want to push the Colour Changers in the UK and for that we need dedicated people who can devote 100% of their time to promoting the products," he said.

Leisure Services Break-In

Westerham-based Leisure Services were the victims of a burglary in early February, when the following items were stolen from their premises:

- 1 Citronic Avon console
- 1 Citronic Tamar console
- 1 Pioneer PDM 601 multiplay CD
- 1 Denon 2000F twin CD player
- 3 Technics SL1210 turntables
- 2 Bose 802 speakers
- 2 Bose 802 speakers (ex-demo)
- 12 Canon V100 background speakers
- 1 Celestion SR1 speaker (why only one?)
- 2 Citronic PPX 900 amplifiers
- 1 HH M900 amplifier
- 1 QSC 1300 amplifier
- 2 Sansui graphic E.Q.'s
- 1 Rane complete spectrum analyser kit in
- 1 Peavey rack bag
- 1 19" amplifier flight case

A reward is being offered for information leading to the conviction of the burglars. For further details, please contact Leisure Services direct on (0959) 562254.

Discoscene

Sunday 14th March is the date for the third Discoscene Wales and West exhibition. Taking place at the Hilton National Hotel in Newport from 12.00 to 5.00pm, the show is designed to give visitors from all over Wales and the West of England an early year view of a wide range of sound and lighting equipment for installation and mobile use.

Two other spring shows are also in the offing. In mid April, there are plans for a first-time Discoscene South to be held in Southampton which will be styled on the other Discoscene events, and mid-May will see Discoscene North set up stall in Yorkshire. The date for this year's autumn 'Midlands' event, which will be under a new title to reflect the transition this show has now undertaken in its format, is set for Sunday 24th October. The venue will once again be the Edgbaston Banqueting Centre at the County Cricket Ground in Birmingham.

For further details on any of the above shows, contact organiser Terry Lees on 021-707 1925.

Didier Leclercq

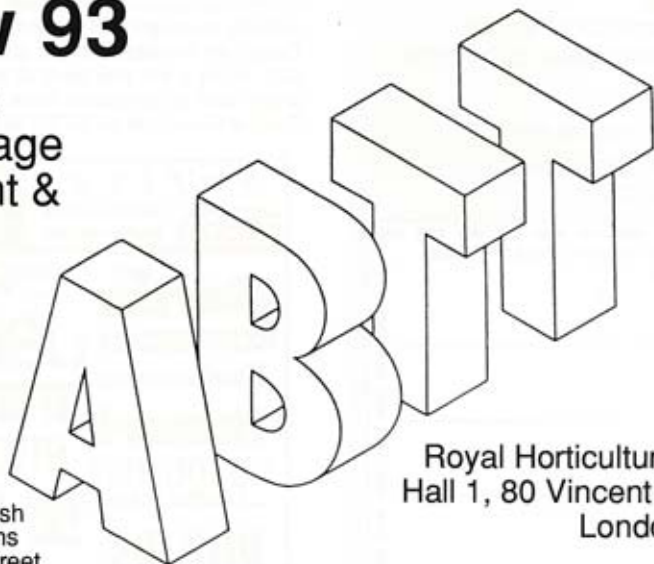
As L+S was going to press, news was recieved of the untimely death of Didier Leclercq, founding member of French company Telescan, who died on Friday 5th January at the age of 39, following a heart attack.

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Xylo Restructures

Xylo Ltd has stated that it is to stop manufacturing video effects products to concentrate on show design and project engineering. The team of designers behind the Turbine system have decided to cease manufacturing video effects hardware and will instead concentrate their efforts on multi-media show control and bespoke systems.

Having seen a substantial increase in export sales of the Turbine system during the past year, the home market has remained elusive. "The Turbine system has captured the imagination of club designers from Japan, through Europe, to the USA. However, it is clear that maintaining global product sales requires a volume production and marketing capability that Xylo could not sustain," explained managing director Tim Davies.

Xylo Limited, the manufacturing company, is being wound up and discussions are in progress with several companies interested in manufacturing and marketing the Turbine hardware. According to Tim Davies at least one of these might prove a surprise contender. An announcement will be made when discussions are concluded.

Xylo will now concentrate on show systems and projects that need the blend of systems expertise and production creativity. Xylo (Holdings) Limited, the majority shareholder of Xylo Limited, will be the vehicle for Davies and his colleagues and will fully support all existing installations. The

Lift off for Tomcat USA

Mitch Clark, president of Tomcat USA Inc, has reached an agreement with Stardrive Inc to manufacture and market the Starlift (a heavy lift self-erecting column) as a joint venture with Stardrive. The Starlift was formerly manufactured and sold under a licensing agreement with Hoffend & Sons.

Sylvania Emerges Independent

Sylvania Lighting International (SLI) have announced the completion of the purchase of the international lighting business of GTE Corporation.

"We are a new independent company, dedicated solely to the lighting market place and to providing state-of-the-art technology and the highest quality customer service," Norman Scoulas, president and chief executive officer of the newly formed entity, told L+SI.

SLI has strong financial backing from a consortium of independent major investors led and advised by Citicorp Venture Capital Ltd (CVC). As a result, SLI will have the capital investment necessary to be a global player in the lighting industry and to ensure its long-term growth and development, the announcement stated.

The world-wide operations of SLI include manufacturing plants, sales offices and distribution outlets in 35 countries in Europe, Latin America, the Far East and Australia. The group has approaching 6,000 employees and an annual turnover in excess of \$600 million. Its six international brands, including Sylvania, Claude, Concord, Le Dauphin, Linolite and Lumiance, are widely recognized, and this broad portfolio covers the entire range of lamps and fixtures from everyday use to highly specialised applications.

"Our strong technology foundation and heavy continuing investment in our advanced manufacturing processes and product development will enable us to provide a constant flow of new and innovative products," Norman Scoulas added.

"The quality and demonstrated dedication of SLI's sales force, its distribution and support service and technical expertise have consistently won high praise in industry surveys."

Lightfactor at Home

Lightfactor Sales are holding a series of open days from February 8th to 12th at their facility in Greenford. These events are designed to allow invited parties to participate in exploring the various aspects of products such as the Intellabeam 700HX, Dataflash, Emulator and Color Pro from Lightwave Research, Austin, Texas.

Other new products will be on show, including Trackspot and associated control options, the latest Dataflash control systems, and outdoor searchlights. With a shift in importance to control systems, visitors will also be able to view some of the new control options available, including the Compulite Animator and the Whole Hog from Flying Pig Systems.

Representatives from the respective manufacturers will be on hand to assist in the demonstrations and explanations. For details contact Lightfactor Sales on 081-575 8678.

Melville Go LA

Equipment rental and technical service company Melville Presentation Services is beginning 1993 with the opening of a Los Angeles office specialising in the supply of large screen projection and cameras. Melville already works throughout Europe providing a full range of staging services and sees the opening of an office in the States as a logical expansion of its work this side of the Atlantic for USA companies.

The Los Angeles office will be run by Warren Steadman who will act as Melville's contact in the USA. The new address is 12002 Ventura Place, 3rd Floor, Studio City, California 91604.

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People on the Move

In an effort to expand the level of customer service and meet increased market demands for Lightwave Research products, High End Systems has increased and restructured its sales department under the direction of president Bob Schacherl.

Laura Cowen and John McDowell are the two veteran international sales members. Richard Steele, formerly a domestic salesman for High End Systems, has moved to international operations. Rounding out the international sales department are newcomers Mike Cooper and Bill Milo.



High End Team: Bill Milo, Richard Cadena, Mike Cooper, Dusty Hudgins and Bob Finacle.

Domestic sales has also undergone several changes. HES salesman Richard Cadena, whose territory formerly included the north eastern United States, has been promoted to national sales manager. With the increased exposure of Lightwave Research products in the concert touring industry, veteran lighting designers Bob 'Flash' Finacle and Dusty Hudgins were logical additions to the domestic sales team. Robert Mokry, Sean Hoey and Craig Burross make up the remaining domestic sales team.

Production and marketing manager Louise Stickland is on the move. She left Neg Earth Lights at the end of January to pursue her career in press and public relations with Lightfactor Sales, and as a freelance journalist with Live magazine. Louise will also continue to design lighting and her next tour will be with Jesus Jones.

Chris Unwin was recently appointed factory manager at Carlsbro Electronics. He will be responsible for all areas of manufacturing within Carlsbro, and has already increased productivity at the factory.

Chris Pike, formerly of Optikinetics, has joined Coe-Tech as sales executive with special responsibility for Coemar and TAS products.

Vari-Lite Europe has recently appointed Andy Voller to the position of training manager. He will train technicians on the new VL5 wash luminaire, as well as programming new demos for clients who wish to see the luminaires in action at their HQ in Greenford.

Prince Upgrade

London's Prince Edward Theatre, first opened in 1930, has just re-opened following a four-month refurbishment project. Theatre specialist Autograph Sound Recording is providing sound system design and installation for the Broadway musical 'Crazy for You' - the first show to open in the renovated theatre.

Delfont Mackintosh, the theatre's owner, has invested over £3 million in the complete renovation of the 1690 seat venue. Autograph specified new cable runs in the auditorium to accommodate sound effect replay and delay loudspeakers. Multicore pull-through tubes and communication lines have also been provided, together with services to the dedicated mixing desk and amplifier positions.

The new design incorporates audio links to the front-of-house areas and a mains distribution system for audio and video installations. Autograph's experience of the venue also contributed to the work of Arup Acoustics, who were responsible for updating the auditorium acoustics.

News Shorts

The **USITT Conference and Stage Expo** will be held at the Century II Convention Center in Wichita, Kansas from March 17-20. To attend call (212) 924 9088; to book a stand call (203) 325 5011.

A trio of smaller scale exhibitions/events takes place in the UK in the Spring. First is the **Showlight** colloquium, due to be held in Bradford April 19-21 which has a supporting exhibit floor. This is followed by the annual **ABTT Trade Show** (April 29-30) which takes place at the Royal Horticultural Hall London. Moving a couple of weeks on, the same venue hosts the first **Live!** show (May 11-13). For details call PLASA for Showlight information (0323-642639), ABTT for the ABTT Trade Show (071-403 3778) and MLP Exhibitions about 'Live!' (0727 861821).

Canada's **International Lighting Exposition** due to take place at the Metro Toronto Convention Centre June 21-23 this year has announced that 150 manufacturers and suppliers from across North America and Europe have booked booth space. For more details call (416) 890 1846.

Soundtracs have acquired the whole issued share capital of **Spendor Audio Systems Ltd**. A press statement makes the claim that Spendor's concentration on the manufacture of studio monitor speakers for broadcast and hi-fi dovetails well with Soundtracs's manufacture of sound mixing consoles. Spendor's manufacturing facility will continue to operate independently.

Martin Audio's EM Series of professional loudspeakers have found favour in China. Guangzhou TV have taken delivery of EM 75 speakers and an EMX1 controller. The sale was contracted through Martin's Hong Kong distributors New Sound Studio.

New products now available on hire from **Trafalgar Lighting** include Strand Cantata 1200W profiles, Howie Battens, LED 'Concert' disco effect

units and F100 smoke machines. Trafalgar have also broadened the range of their mains distribution systems, most particularly for outside events use.

Cadac mixing consoles will have been around in the business for 25 years by the time the AES convention takes place in Berlin next month. Focal point on the Clive Green & Co stand will be their latest J-type.

Network Ltd have scooped three UK distribution deals in as many months. In January they took on Lab Gruppen amplifiers to add to Klark Teknik and Nexo. Paul Ward of Network told L+SI that Willow Communications secured their first Nexo sale in December after only three weeks as a dealer. This was for PC1000 loudspeakers for the prestigious Highgate House conference centre.

Reflex Sound and Light of Rotherham were responsible for supplying and installing sound and lighting for the refurbishment of Whitbread Leisure's 'Sticky Wickets' in Stockport, a 1000-capacity fun-pub, and hopefully the first in a chain of venues. A 6kW sound system is powered by C-Audio amplification.

Carlsboro Electronics won the 'Club PA' category award for its CDX 8/2 and 12/2 PA mixer amps in the Making Music magazine's annual readers' poll of the best musical equipment launched in 1992. The company's Stuart Mercer will be presented with the award at the Frankfurt Music Fair.

OHM have announced three major installations undertaken by MAM Communications. OHM speakers are now installed at the 'Bar Royale' in Camden Town, 'O'Bar' in Soho and at Bar Fontaine in Ipswich. On the 'rave' front, the 1,600 capacity Club Kinetic at Longton, Stoke-on-Trent has chosen two high powered OHM systems.

Raper & Wayman have also been busy on the sound installation front. At Middlesex University, conversion of a gymnasium to a theatre posed some problems with reflective surfaces. Solution was the utilisation of new Altec VIR horn and bass

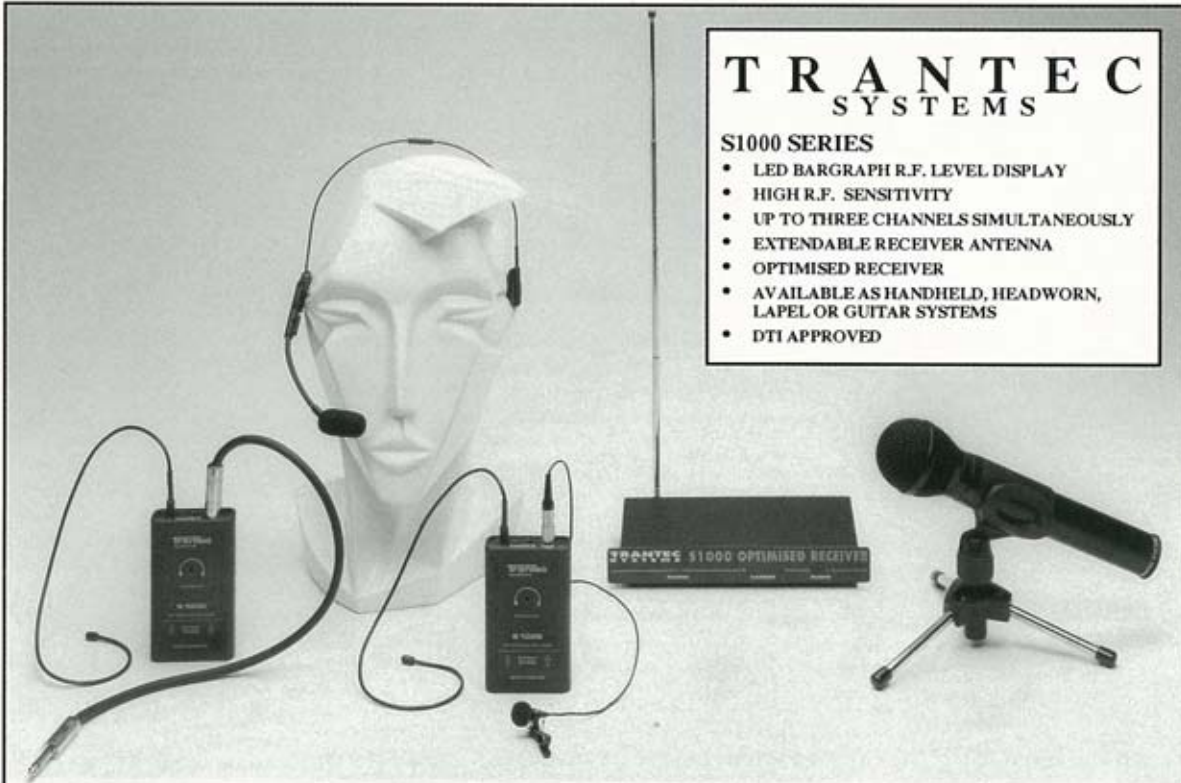
bin, only the third time the VIR has been used in a UK installation and the second involving R&W who also distribute the product.

Altec speakers (9872-8As) were also used for a new system at the Highgate Literary and Scientific Institute where high acoustic output is required but where space and aesthetics impose restrictions. At the Nag's Head Market in North London, R&W's Jon Raper chose University MLCT's driven by one of the new TOA BA-800 cassette amplifiers for a sound system for background music and announcements.

Altec speakers were chosen for 'installation' at the National Westminster Bank's Conference Centre in Bishopsgate, London. 9872-8As were again chosen, with an Altec 9444B amplifier, a 1700C mixer and an Oxmoor DEQII digital equaliser completing the line-up. Jon Raper had made the custom plastic padded 'bags' for the speakers to protect them during transport and storage.

The Maple Leaf Club, Southampton's new blues, jazz and soul venue, has opened its doors with a JBL-Soundcraft sound system designed, supplied and installed **Marquee Audio**. The club's 300 capacity Music Room has a dark and subdued nightclub look, lit by pinspots with raised wrap-round seating above the dance floor and bar. The corner-located stage is equipped with JBL Sound Power top cabinets flown from each side of the ceiling, complemented with JBL 4785 sub bass speakers. JBL Control 1s and a Denon CD multi-player system linked to the Music Room provide a laid-back sound for the members-only Club Room.

Latest news from the Greenford-based **Samuelson Group** is that Samuelson Concert Productions have acquired an RTS 36 way intercom system for the Paul McCartney tour, Theatre Projects Lighting have bought 16 cracked oil machines, whilst Theatre Projects Sound have bought a quantity of Deltamax 1152AF speakers and Samuelson Communications have purchased a number of Barco projectors.



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Laser Safety

Kent-based Sira Communications are organising a tutorial on Laser Safety in Entertainment and Display. Taking place on the 20th April at the Solotec Conference Suite in Bromley, the tutorial will cover the HSE's April publication of its revised guide on the safety of laser displays to amplify the new European standard now implemented as British Standard BS-EN:60825:1992. The tutorial is intended for persons having responsibility for the safe use of lasers for public entertainment or display.

The participation fee for this event is £223.25 inc VAT which includes tuition, lecture notes and lunch. For further details contact Sira in Chislehurst, telephone 081-467 2636.

Friedlander Sets Out His Stall

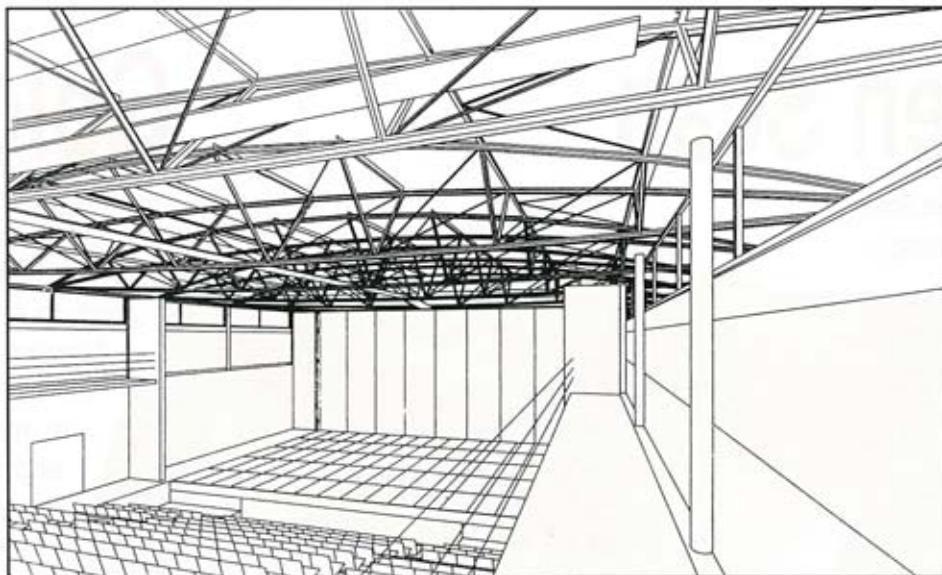
Steve Friedlander, well known in the UK as the American project consultant responsible for the performance systems planning and design at the International Conference Centre in Birmingham, has left acoustic specialists Artec Systems to set up his own firm, SFA, in West Brooklyn, New York.

SFA will specialize in theatre consultancy dedicated to the smaller client looking to achieve the maximum facility possible, generally on a tight budget. "Small theatre groups, who often struggle to produce good work in dismal conditions, deserve the opportunity to develop new facilities with knowledgeable assistance," Friedlander told L+SI. "SFA will be a small firm that will use the experience gained on 'larger' projects, to provide high quality services efficiently and economically to such clients." During the last 15 years, Friedlander plied his craft as production manager for the Hartford Ballet and the Lyric Opera of Dallas, prior to assuming his six year role at Artec.

Greenhouse Effect

The Conservatory Bar in the Royal Clifton Hotel, Southport has undergone a major sound and lighting refurbishment.

Envo-Tech, working in conjunction with Granada Communications Co, have transformed the Conservatory Bar into a high-tech dance venue using a combination of Toa sound and Coemar lighting. A total of 12 Toa cabinets are driven from a Formula Sound PM90 mixer, whilst on the lighting side, Lite Structures trussing harnesses a combination of TAS and Coemar effects lighting which rely on Multiform control and Anytronics dimmers. Envo-Tech also supplied a Jem Club 20 smoke machine.



Espace d'Albert

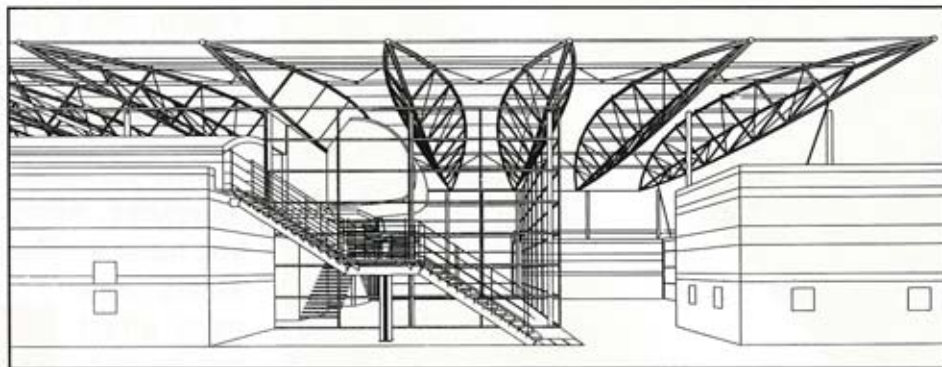
Albert, a small town of about 60,000 in the Somme area of northern France, saw a need for a community amenity which would accommodate a range of activities and needs. An open competition in late 1990 was won by UK architect Ian Ritchie Architects whose building has just opened amid much celebration and civic pride. Theatre Projects Consultants of London worked on the project as technical consultants.

The Centre is made up of three areas: a 600 seat theatre in two sections, 200 seats on a fixed gallery and a further 400 seats in fold-away bleacher seating format. At either end of the auditorium is a foyer and a competition gymnasium hall. Divided by acoustic walls, the three areas can also be combined to form one 1100 sq m space with 8m height to house exhibitions, banquets and

other cultural events. The space includes mezzanine internal galleries and a balcony which overlooks a boules area outside.

The high tech shed design reflects the historical agricultural economy of the town and its more modern local industries of metallurgy and aeronautics. The steel roof consists of 16 30m long trusses whose radiused top and bottom chords create a continuously changing sectional profile. The trusses are covered in a acoustic roof above the theatre and gymnasium, composed of varying density insulation, partially perforated profiled steel inner skin and profiled aluminium skin. The auditorium has been economically specified in line with the needs of the small scale companies who will play there.

Mecascenic were contracted to supply the rigging, and Roussele the lighting, sound and communication equipment.



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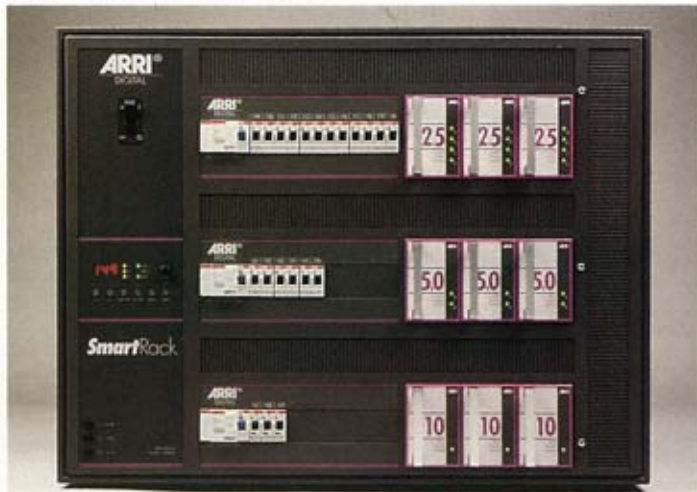
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Arri SmartRack



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

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

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

Cairo Gets Groovy With JBL

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

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

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

New Company Formed to Sell MBI in the UK

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

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

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

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

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INTERNATIONAL DISTRIBUTORS OF ENTERTAINMENT LIGHTING

White Light Appoint PATman

In line with a strict on-going policy of promoting electrical safety for stage lighting, White Light has appointed a consultant with the sole responsibility for amateur, educational and semi-professional theatre groups in the South East.

John Timmins, who has a strong background in stage management and lighting design, will be constantly available to schools, amateur and semi professional theatre societies for advice on equipment and lighting services, with a particular emphasis on safety requirements.

White Light is currently planning an on-going series of seminars and workshops to explain portable appliance testing. The open seminars will be held at both White Light's Fulham base and at specific venues in the South East. John Timmins' role will also include consultancy on the design and development of complete lighting systems or simply an update of existing equipment. In visiting theatre groups on an individual basis to discuss and advise on their needs, he will draw on White Light's 21 years experience in the theatre business.

SDC with Court

Due to increasing demand for Court products in the UK and overseas, The Sound Distribution Company Ltd of London have been appointed exclusive distributors for Court products in the UK and Europe.

SDC is part of the John Henry Enterprises organisation, and JHE have been hiring and supplying Court systems to major artistes worldwide for the last ten years. SDC are based at the company's 42,000 square feet complex in Brewery Road, London.

In charge of Court Sales is Papin Clout, assisted by Simon Orme. Technical support is handled by Dave Flockton and Aden Gregory. In charge of special projects sales is Robert Harding.

Managing director of Court Acoustics, Stephen Court, told L+S: "This is the culmination of a trend for the hire companies who have considerable 'hands-on' product experience to become more actively involved in product sales. We have been working with John Henry and his team for many years now, and SDC's staff and facilities in London combine to make this a very exciting project especially in view of the growing European market." SDC will be exhibiting the full Court product range at the Frankfurt Musik Fair in March. A report on the show will appear in the April issue of L+S.

Kaleidovision Deal



Kaleidovision, the designers and manufacturers of the new Kaleidolight video lighting system which was launched at the PLASA Light & Sound Show in September have struck a distribution deal with Owl Video Systems.

The deal means that the Kaleidolight is now available from Owl together with videowall and projection equipment. Hit band The Shamen used the Kaleidolight system on their recent UK tour to create visuals which were projected onto a huge screen positioned centre-stage, and is also to be found on the live 'Dial Midnight' TV series on LWT and the Jonathan Ross TV series 'Zoo'.

Le Pyro

Fox Fireworks are to open a new Paris office in April set up specifically for the co-ordination and presentation of one-off pyrotechnic spectacles and tours throughout Europe. In addition to using material exported from the United Kingdom, advantage will be taken of extensive links with French and Italian manufacturers.

Fox played a substantial part in the Euro Disneyland opening in April 1992 and were consultants to the project for two years in conjunction with Daniel Azancot of Eurodrop and Pierre-Alain Hubert of Sky-Art.

The development of the 'Pyro Tech' 160 channel multiplex firing system in conjunction with SL Organ Systems has been timed to coincide with the European expansion to enable Fox to control large and complex spectacles from distances up to 1.5 kilometres. Designed primarily to eliminate time-consuming bell-wire rigging, the system comes into its own in quick get-in situations and where stage and outdoor pyrotechnics require combined coordination.

For further details contact Fox in London, telephone 071-243 0981.

Vibrotica Maximus

The beneficial effects on the libido of the vibrating seat of Harley Davidson motorcycle is well chronicled and has long since passed into folklore. An enhanced version of this phenomenon is now available to all who visit Club Maximus in Leicester Square.

A combination of the phenomenal powers of the custom Turbosound sub-bass and the acoustic coupling of the banquette couches creates a sensation which brings tears to your eyes, we are told. Electroacoustic, the pro-audio company recently formed by Mike Novak and Jon Trotter, has completed the installation of a new sound system in this central London venue.

The system consists of six customised Turbosound TMS4 full range cabinets flown around the dancefloor with eight sub-bass loudspeakers at floor level. Crest P Series amplification and BSS control equipment complete the experience.

Teatro Go Logo

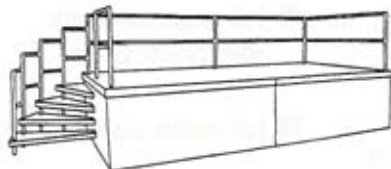


During the course of 1992 Mike Lowe bought Coemar and Bruno Dedoro's 50% shareholding in Teatro Srl and the shares of Teatro are now wholly owned by Mike and Penny Lowe. However, the close working relationship with Coemar has not changed and Teatro continues to jointly develop and market products with the company, who are also the prime manufacturers of Teatro luminaires.

To record this change Teatro Srl have developed a new logo to replace the familiar 'fresnel lens device', which is the property of Coemar Spa. The Teatro logo is designed to reflect the involvement of the company in 'creative lighting,' and there is a story behind the design. The shape of the device came from a serious request from a visitor to an American exhibition in Chicago in 1976 for a lantern which was capable of projecting a beam of light onto a surface in such a way that an object could pass between the source and the surface without interrupting the beam. This problem has been solved creatively in the design of the Teatro logo.

"The well known Teatro name will now be combined with the new logo to create an even stronger image for our young company with years of experience," Mike Lowe told L+S.

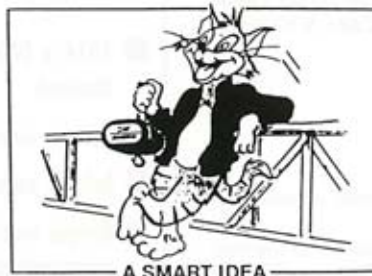
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Grand Job

LEAB Lilliehook Electronics from Sweden was contracted to provide the complete PA system to the Grand Hotel Europe in St. Petersburg (pictured above). The Grand was originally built in 1824 and has recently been completely renovated and refurbished. Various systems are utilised in different locations, but in the largest area, the Europe Restaurant, a Nexo PC system has been installed for use on both live and recorded sound.

Laser Grafix in Pantomime

Evidence that the face of traditional British panto has changed forever was presented recently at Brighton's Dome Theatre. The pantomime production with an all star cast, also featured a White Light seven colour laser, courtesy of Laser Grafix. Normally of 4.5watts output, the water-cooled Purelight unit was mounted at the rear of the stage and set to deliver two watts of output, providing special 'space age' effects for the traditional storyline. The laser effects were projected via twin gratings on the beam table, to a 30cm mirror ball and 24 target mirrors sited around the auditorium.

Laser Grafix have also been busy on other fronts having just won a major order from First Leisure for a comprehensive audio/visual package to be installed in the Tower Circus at Blackpool Tower. No less than four Coherent Purelight 7 colour lasers are specified, together with two 8-way optical tables. Over 60 mirrors will be installed in the building with control via a Prisma professional control and effects system with Prisma Topcon software. Laser Grafix' Nexus system will be fitted to four intelligent lighting units. Sound duties will be performed by JBL loudspeakers powered by Crest amplifiers and processed by BSS crossovers with Formula Sound mixing.

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ABTT Trade Show

The fifteenth ABTT Trade Show of backstage equipment, supplies and services returns to the Royal Horticultural Halls, Vincent Square, Westminster on 29th and 30th April, 1993. The exhibition will be open on Thursday 29th April from 11.00 am to 7.00pm and on the Friday from 10.00am to 4.00pm.

To date, companies which have confirmed that they will be exhibiting include Action Lighting, Autograph Sales, Aveline Walne Associates, Book Bazaar, Canford Audio, CCT Lighting, Doughty Engineering, Peter Evans Studios, Gradav Theatre Services, Hall Stage, Harkness Screens, Lee Filters, Light Processor, Marquee Audio, Modelbox, Northern Light, Pulsar, RB Lighting, Rosco, Selecon, Triple E, White Light and Zero 88, plus Lighting and Sound International.

Details of exhibition space still available can be obtained from Theatrical Trading in London on 071-403 3778.

Sound Dept Restyle

The Sound Dept are to focus on distribution of pro-audio equipment for the installation and live markets and to reinforce this move they have changed their trading style to T.S.D. Ltd. Withdrawal from the rental market will provide a more positive image to the UK customer base, say TSD. The company will distribute Community, BiAmp, Ashly, Galaxy Audio, Quam, IRP and Dawn products.

British Council Lighting Course

The British Council is running a course in Theatre Lighting: Design and Technology from the 1st-14th September at the joint venues of Edinburgh and London.

The course will examine the role of lighting in current staging practice with leading lighting designers discussing their approach to various styles of performance. The course coincides with two major events - The Edinburgh International Festival and the PLASA Light and Sound Show. The Director of Studies will be Francis Reid and the provisional programme includes contributions from Jenny Cane, Howard Eaton, Iain Mackintosh, Robert Ormbo, John B. Read, David Taylor and Chris Toulmin.

For further details, contact the British Council in London on 071-389 4406.



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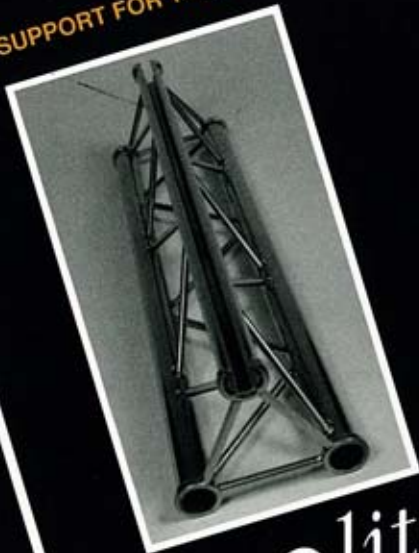
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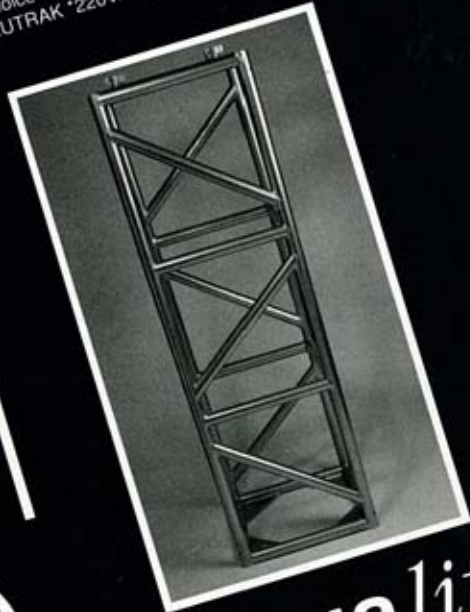
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BBC, Top of the Pops



CYRANO DE BERGERAC

David Taylor interviews lighting designer David Hersey on the set of the latest West End production

We mere mortals often look towards the world's leading lighting designers and offer up thanks for the titbits that filter down to us through the system - the new gel colour, the custom gobo, the Vari*Lite, the Digital Light Curtain; all developed on the back of the big budget musical, rock spectacular or chunky industrial and now available at a hire store nearby to enable us to do our job a little easier.

But David Hersey, whilst offering more new ideas and development of lighting technology during his epic career than most of the rest put together, has given us something else - over the last half decade he has created a new economy of lighting, a designed rig with just enough equipment to perfectly create the world he sees in his head. No frills, no bells and whistles just for the sake of it; just imagination with a beautiful small 'i'.

Cyrano de Bergerac opened at the Theatre Royal, Haymarket in December 1992, directed by Elijah Moshinsky with designs by Yale's stage design professor Michael Yeargan. The programme is the normal understated slate blue-covered fare for the Haymarket, but open it up, and, like the production, it glistens with a magic and charm that belies its 'straight play'



The moon is a full frame 18cm slide projected by a Pani BP2 with an 18cm lens. The moon shafts on stage are provided by Vari-Lite VL5s. Photos: Wyatt Enever

appearance. Cyrano looks like a big budget musical. It sounds like a Lucas film. It feels like you're there and it is a great story. John Wells has adapted the play by Rostand which tells of the big-nosed dueller and his un-requited love for the beautiful Roxanne (played by House of Elliott's Stella Gonet), who helps a young Gascon guard to win her love by writing his love letters and even impersonating the

astonishing thing to do in the West End and so the constraints became challenges.

He began work six weeks before the opening, aware that it was to be a highly visual production. "The team realised that the lighting was very important," said Hersey (in typical understatement), "but the hanging was quite tight." The set comprised some very large revolving towers, a number of huge flown

tongue-tied youth beneath Roxanne's moonlit balcony. The story has been told and filmed many times before, but this production is the most accessible and engaging, with Robert Lindsay as the large-proboscised one in superb swash-buckling mode. Hersey has worked with Elijah Moshinsky before on the Royal Opera House's Peter Grimes and with Michael Yeargan on Umbrellas of Cherbourg at the Phoenix Theatre. "I find it difficult to talk about lighting adequately, but I had a common vocabulary with these guys from previous work," explained Hersey.

The job arrived with a phone call and Hersey "as it was a great play and a beautiful theatre" launched straight in. The model was rough-designed already, but he felt that it was an



For the Balcony Scene (above left), a three dimensional ground row is used in front of a twin white back projection screen. The black sharktooth gauze is 'clouded' by the upstage Digital Light Curtains. There are cobblestone gobos on the deck and break-ups on the towers, and the actors, when on stage, are lit by a combination of VL5s and R&V beam lights. Cobblestone gobos as used in the Street Scene (above right).

pieces and a full size back-projection cyclorama with three-dimensional groundrow of the Paris skyline.

"I chose to light the show with Vari*Lite VL5s and DLCs (DHA Digital Light Curtains) very early on in the production development, because I knew I wouldn't be able to find the space for all the equipment I needed for the changes. The VL5s went in on the original plot and didn't move - although it took some effort to convince Elijah that I should have them on the proscenium booms."

The lighting design is remarkably simple - five on-stage lighting bars, supplemented with three hung ladders per side, well-filled perch positions and three bars upstage of the back-projection screen. Out front it is almost bare, with the two proscenium booms, a goal-post each side of the house and some lonely T-Spots on the front of the dress circle. The VL5s sit quietly and discreetly on the booms but provide a superb cross-light that is used throughout the show.

"They gave me my pocket of low cross-light," enthused Hersey, "and the whole show was built around it. Michael had given me a crack to get through at the proscenium so I lost the shadows. Originally I wanted to put some follow spots on the goal-posts but budget and the beauty of the Vari*Lites persuaded me otherwise."

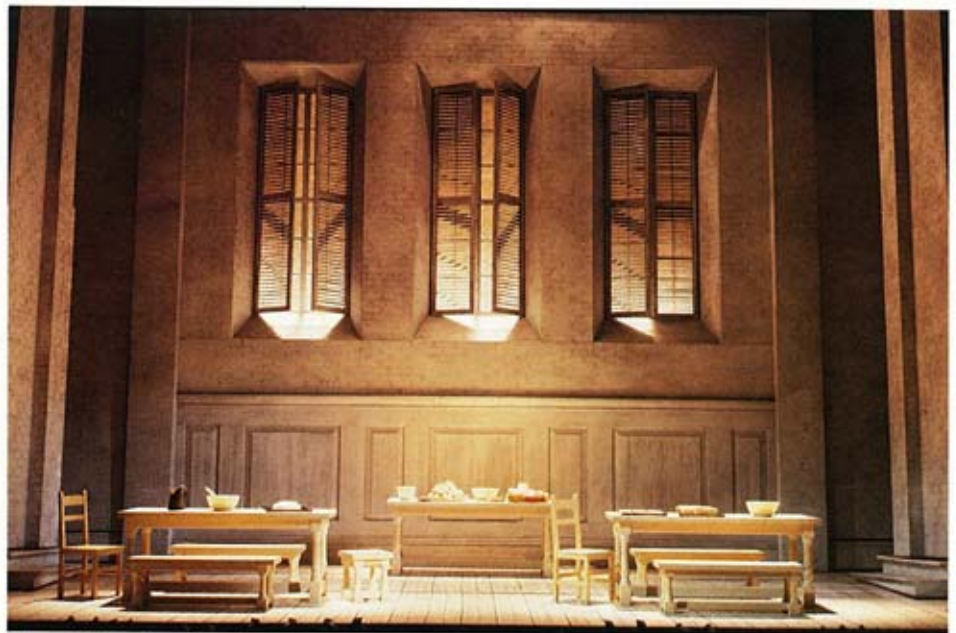
I sat through the show desperately trying to see the damn things move. But time after time they gently eased into a scene in a new colour without my seeing the wiggle. "The VL5s are silent . . . really," said Hersey. "I'd auditioned them a little while before beginning the show and they really did offer an opportunity for economy and accuracy. For this straight play the silence was important and they were bright enough for what I wanted to do. They are nominally equivalent to a Parcan and a scroller, but I could easily shift them into exactly the area I wanted, so the design became simpler and crisper."

All the VL5s had #2 lenses which performed exactly as Hersey wanted. "The #1 lens is very messy and the others are far too washy for what I wanted to achieve." The design thus evolved with a stunning European look of broad colour wash (helped by the beautiful cyc at the rear) with white or off-white soft edged beams keyed into it. The side light was the last element touched into the cues.

Hersey sat in on the last few rehearsals, mindful of the areas into which the Vari*Lites had been defined by the set. Four VL5s on the fifth electrics bar gave Hersey his legendary three-quarter backlight, freshening the actors from the expanse of the infinite cyclorama. "I was broadly clear about what the kit would achieve and I developed a hand-written cue synopsis in the rehearsals that paid attention to the likely positions of the moving equipment."

Asked about the colour accuracy of the VL5s Hersey reported that delicate tints were tricky. "The tungsten lamp in the VL5 is great but of course its colour temperature is down to 3200K. I needed 201 in the show and the only way to really get it with a VL5 is to put a piece of 201 in front of the luminaire. Sometimes the dichroic colour mix was a bit sluggish but we did manage to match the Vari*Lites to the DLC colours." There are a few live colour changes from the VL5s and Hersey wanted more, but he did not like the colours the mix went through getting there.

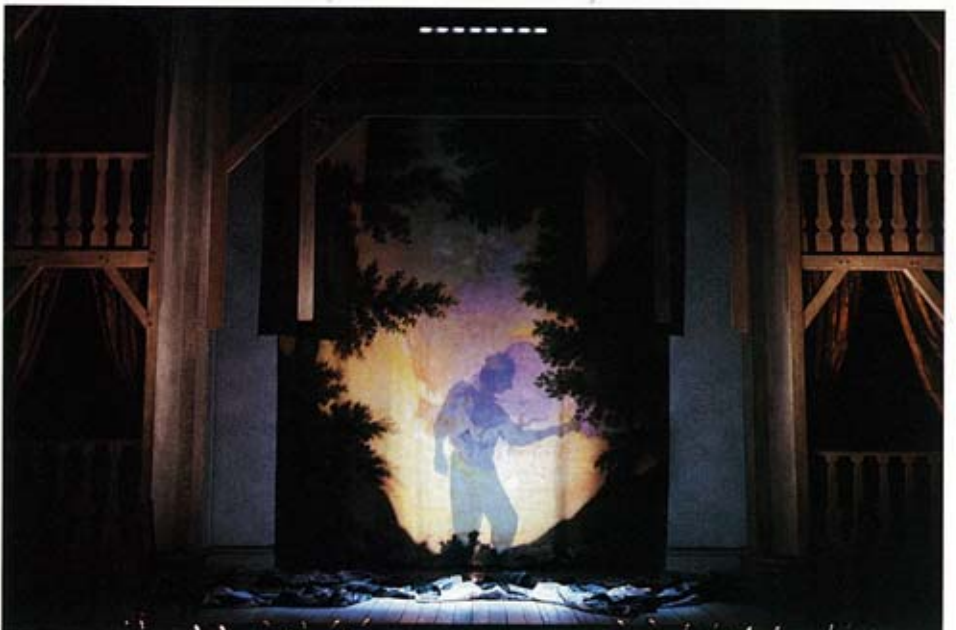
Moshinsky's version of the play comprises five acts taking the audience from a performance at the theatre de Bourgogne in 1640, through the Bakery of the Poets to



The windows for the Bakery Scene are lit by a combination of the US Digital Light Curtain and four VL5s. The tables are keyed with the DS Digital Light Curtain, with one section positioned on each table.



The Theatre Scene after Cyrano has pulled down most of the cloths.



The stage after Cyrano has trashed it. The shadow is from a 2K fresnel sans lens. The colour of the shadow is achieved with a Digital Light Curtain.

KEY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
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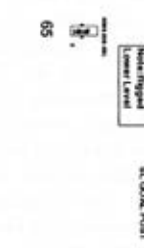
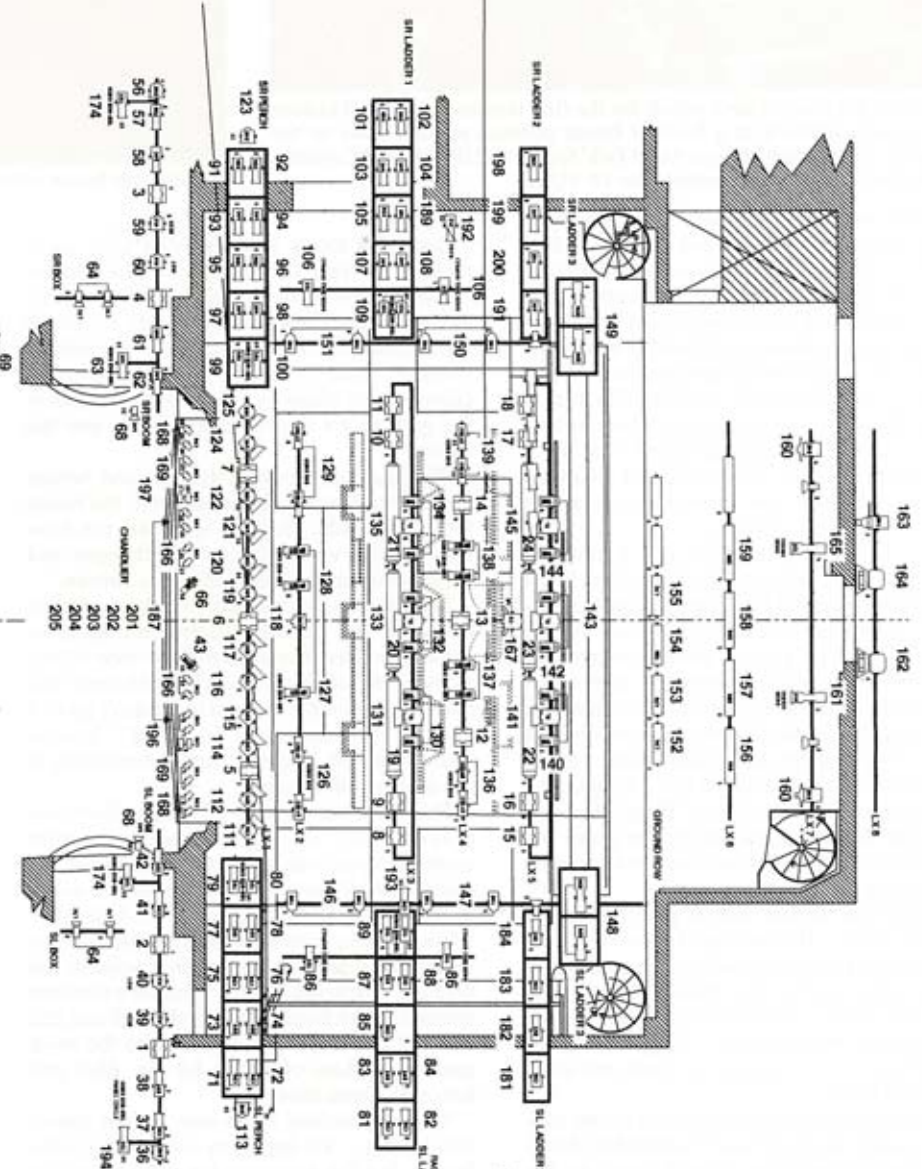
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DMA DESIGN TEAM
 1500 N. 10TH ST. SUITE 100
 DENVER, CO 80202

CRANO DE BERGERAC

Lighting By: DAVID HESSEY
 Designer: MICHAEL YANOV
 Director: ELIJAH GERSHBERG
 Producer: DANON WILSON
 Venue: THEATRE ROYAL HANNOVERST

SCALE: 1/8" = DIMC IN: FINAL
 DATE: 10/20/02 REV: 1/10/03
 DRAWN BY: MJC/DM



A view of the control desk which for the first time in Haymarket history has actually made it to a front of house position in the corner of the balcony. The Macintosh runs 'Light Talk' for the six Digital Light Curtains, whilst the Mini-Artisan controls the 18 VL5s.



A burnt out house with light shafts through what is left of the roof.

exquisitely intimate square in Old Marais where Roxanne offers her first kiss to Christian de Neuville from her ivy-strewn balcony. After the interval, uplifted by the optimism of the first half and, of course, a visit to the bar, we are brought down to earth with a bump with the horror of war vividly portrayed at the Siege of Arras. A violent battle in which Christian is killed dissolves into a unique passage of time sequence, with the stage actorless, moving us forward to the calm and solitude of a Parisian Convent 15 years later where Roxanne awaits her daily visit from Cyrano.

The opening of the show is a triumph of dynamic stage lighting. With no clear break between preset and the beginning of the play the warmth of the theatre houselights is supplemented by a gentle glow of amber from the boom VL5s washing onto the auditorium box fronts and a hanging chandelier complete with wiggly candle flickers on five dimmer circuits hanging low in the auditorium. Hersey is very fond of his 'Advance Bar' sitting on the floor at the front of the stage. "Originally I had only four Birdies at the side of the stage, but after I realised the sightlines were not impaired it just grew and grew."

I loved the 'period' look it gave me for the theatre scene." The on-stage theatre boxes are lit from this position as well as the auditorium boxes and Cyrano's first entrance from within the auditorium is when he swings down on a curtain pull onto the stage. "It gave me faces hanging in space and was so neat and tidy," enthused Hersey.

Similarly, the specific moments of the play that needed 'highlight' were handled by Reich and Vogel Beamlights tucked away on the booms and goalposts as well as overhead. "They have a sexy quality of light which is thick - you can reach out and hold it in your hand."

The Vari*Lite work hard in this show to give a subtle, but crisp key light in conjunction with the colour washes provided by the six ADB 2K fresnels and the six DHA DLCs. Those converted to the DLC philosophy find it easy to see how neatly the blocks of light thrown from the 12 volt VN5P Par 56 lamps, tinted by a choice of up to 20 colours, and able to tilt to any position on-stage, can be integrated into the base of a clear-stage lighting design.

Here, they excel, providing punchy backlight for the opening theatre scene, superbly uplifting sunlight through the three towering windows of the bakery (whilst three more DLCs align perfectly with the floor-covered tables inside), or performing solo during the time dissolve sequence before the

last act.

Both the DLCs and the Vari*Lite were plotted by Vari*Lite designer Nick Moran. Hersey used a Mini-Artisan for the VL5s and a Mac running LightMoves for the DLCs. "We all sat together in the stalls to plot," remembers Hersey, "but Triumph were eventually convinced to allow us to take out two seats in the gods to get the running console into the space."

The board op monitors the Mac and Artisan in performance but all are run from the house Gemini console. The VL5 levels are run from the Gemini, whilst the colour changes and focus moves are run from the Mini-Artisan.

Two 5kW fresnels hang on the eighth electric to handle the backlight, both with Rainbow colour scrollers. "I wanted to do in-view colour moves with the 5K scrollers," said Hersey, "but the output from the Gemini just wasn't up to it - too much stepping for my liking." In-view colour fades do, however figure prominently in the design of the show.

The final scene, and Cyrano's death are played out in the convent garden overshadowed with a huge tree. Hersey cut custom 'leafy breakups' gobos to the exact shape of the tree. Deployed in four 2kW Silhouette 15s with Rainbows on their snouts these gobos provide an emotive actor in the final act. The scroll strings comprise a run from Rosco 03 Dark Bastard Amber through Lee 202 and 201 colour temperature blue to the more saturated blues of Rosco 68 Sky Blue and Rosco 85 Deep Blue.

"I'm very excited by in-view colour shifts," said Hersey. "I'd begun to use them in Miss Saigon, but I'm exploring the potential of the very slow live colour temperature change." In Cyrano it is this subtle, almost sublime temperature change that raises the trembling lump in the audience's throat.

The simple brush strokes shift the drama into a higher emotional gear and the inherent reality of what Hersey is doing on the stage cannot help but suck the audience into the world of the play.

The leitmotiv of the play is the heavy moon which hangs hauntingly behind the action. Originally Hersey wanted a tracking projection, but he gradually grew to believe that it was the image that was important, not its performance. The moons that subtly perform are achieved by glass gobos in Silhouette 15s and an 18cm slide in a Pani BP2 with 18cm lens. "We did the calculations back in the office to get the image size fully expecting to have to revise it (you can do that when you own

the company that makes the gobos!). But when we got into the theatre it was bang on."

There is a superb synergy between Hersey and sound designer Paul Arditti whose immaculate soundscape punctuates and underscores the whole action. "I worked closely with Paul. He's awfully good and, of course, is a 'Macophile', like me!"

Hersey is never far from his Macintosh computer. Yeagan's designs for the show were worked on Autocad by Modelbox. Hersey received the plans in DXF format and transferred first to Minicad then to PowerDraw version 3.0 on which he draws his lighting plots at 1:50 scale. Daily draft plots were provided for the team, as well as full size rigging maps supplemented by the normal Hersey bookful of paperwork prepared on his database, Filemaker Pro.

"The young crews you get nowadays are so data literate now," said Hersey. "They all have computers and thus aren't frightened by the paperwork." Bill Wardroper was the production electrician for the show, and although Hersey unusually did not have an assistant, Wardroper provided a lot of the services normally attributed to a Hersey scribe.

"We had a couple of late nights but it was mostly clean days. This is the beauty of moving lights and pre-planning just like when we first had memory boards. We focused most of the 'generic' lighting," said Hersey in his rock and roll accent, "in a zoned manner, keeping the focus as simple as possible. The set provided a natural grid and we used that to help us with tracking the Vari*Lite moves."

"I like applying musical techniques to drama," summed up Hersey. "I treated it like an opera which is what it deserved. There are loads of cues, lots of links and inserts. I enjoyed the ingredients as well as the whole mix. I took a big look and broke it down."

This attention to detail is obvious in the beauty of the design. The details are the elements that other lighting designers can enjoy and analyse, taking them away to develop in their own style. Hersey thus continues to add to the quality and wealth of world lighting design that emanates from this country.

Cyrano de Bergerac

Theatre Royal ~ Haymarket

Directed by Elijah Moshinsky

Designed by Michael Yeagan

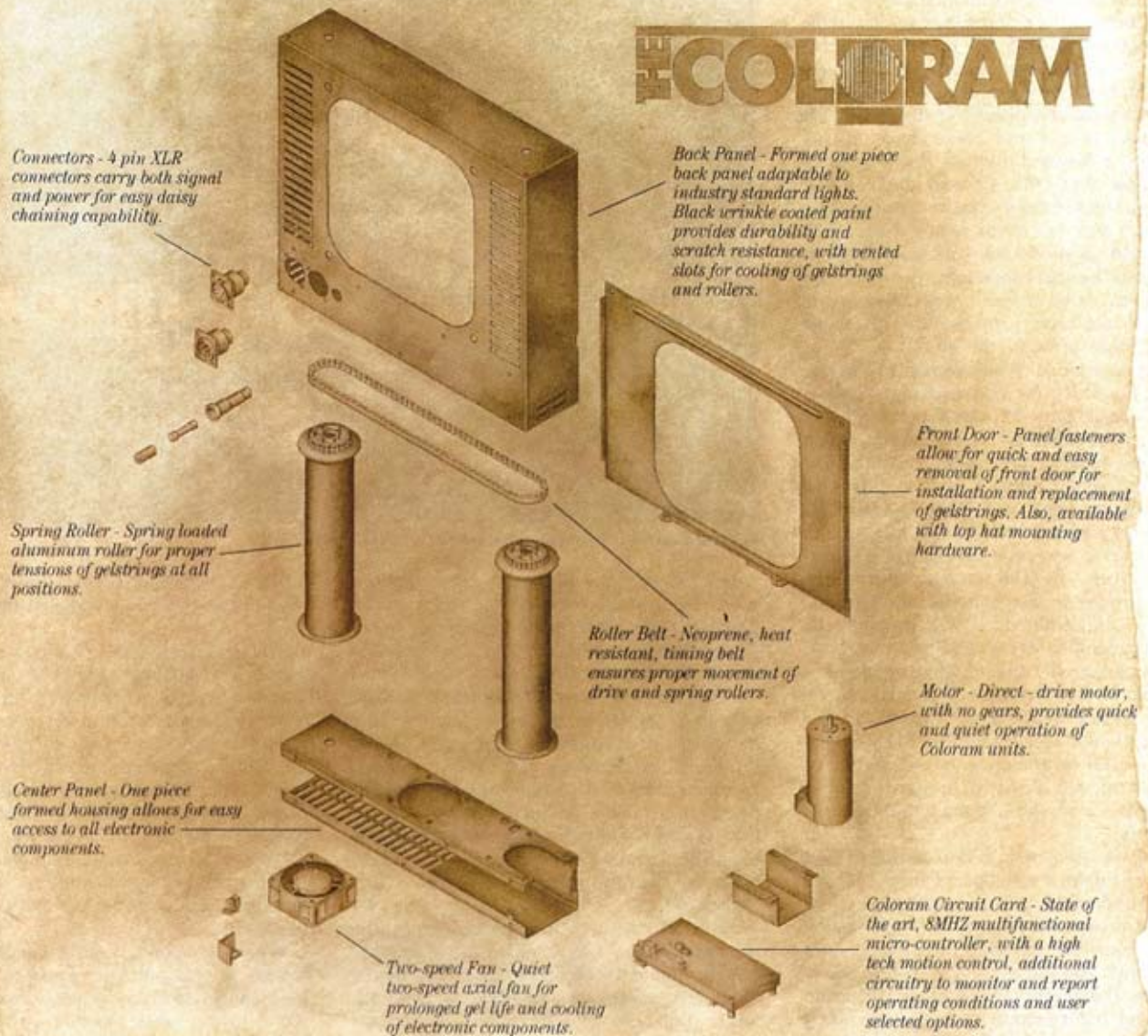
Lighting: David Hersey

Sound: Paul Arditti

*Vari*Lite Programming: Nick Moran*

Production electrician: Bill Wardroper

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DRAMATIC INVENTION

Ruth Rossington reports on Theatre Projects Consultants ambitious designs for the Cerritos Center for the Performing Arts

The southern Californian town of Cerritos, best known for its automalls, now harbours in its midst a unique performing arts centre with a completely flexible performance space.

The Center is the end result of studies in the early eighties, carried out by London-based Theatre Projects Consultants (led by technical project director Jerry Godden), who identified a need for three very distinctive spaces suitable for music, drama and conferences. By all accounts a forward-thinking town (with a population of 60,000), Cerritos could neither afford nor support three separate venues and an exhibition area, but it was keen to have a hall that would satisfy as many as possible of its cultural and business ambitions. The money for the project, a total of \$60m, was raised wholly from car sale taxes garnered from the huge automall that surrounds the site.

Using as a model Northampton's Derngate Centre, for which the company also acted as theatre consultants, TPC developed a scheme for the construction of an auditorium which could effectively 'metamorphose' into five different configurations. It was to prove an ambitious project, not least because no precedents had yet been set for this type of performance space and, in view of its complexities, an audacious undertaking, almost arrogant in the challenges it set itself.

The Arts Center itself was designed by architects Barton Myers who felt that apart from, or perhaps because of, some nondescript office blocks and an ocean of car parking, the town had no focal point. Thus their first challenge was to create a sense of place, which they achieved by arranging the Arts Centre as a series of pavilions with gardens and courtyards - a benign climate affording them this luxury.

This done, it was up to TPC to add 'heart' and in doing so unlock a complex Chinese Puzzle with the auditorium at its centre. The key to the design concept lies in the movable seating towers, floor lifts, movable proscenium lines and a flown acoustical concert ceiling above the stage. The logistics of the whole take some explaining, but it's worth staying for the ride if only to discover what the future holds for multi-purpose theatre design.



A focal point for Cerritos - a new Performing Arts Center.

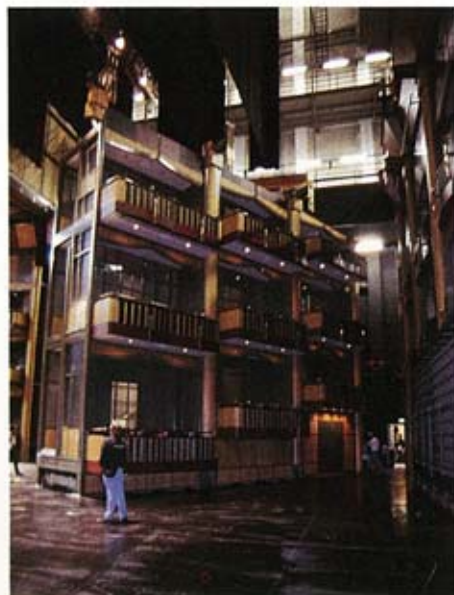
In summary, the five basic configurations work as follows: the arena and concert configurations allow for centripetal viewing of a central stage; the lyric format is designed for opera and large scale musical productions, (utilising an orchestra pit if needed); the drama format is similar to the Lyric, but uses the forward proscenium. The flat floor configuration houses community events, banquets and trade shows. Architecturally, Barton Myers had a choice when designing the interior of the auditorium: to either emphasise the technology of the moving parts or to make each configuration look permanent. They chose the latter.

At its largest in concert configuration, the shoe-box shape, according to the architects, brings to mind the Musikvereinsaal in Vienna. The seating towers form traditional boxes from which the culturally ambitious of Cerritos society can see and be seen. The fronts of the boxes help define the volume of the room,

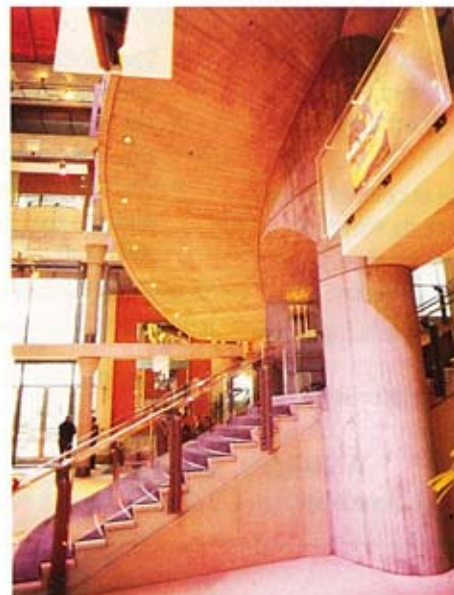
which is richly finished in light ash, a darker stained ash, and cherry and olive green painted steel.

The towers are constructed of tubular steel frames and lightweight concrete on metal deck floors. Electric winches enable the auditorium towers to be rotated 12 degrees inwards from their standard concert mode parallel to the walls of the auditorium to offer lyric or drama mode. The fascinating thing about the seating towers is that they move on air powered castors (the air is emitted from a perforated bag, lifting the tower off the ground 1/4 inch) which in essence allows them literally to 'float' across the auditorium, as do the four clusters of seating towers.

With such daring comes danger, and the design of this potential Pandora's Box has necessarily had to pay as much attention, if not more, to the safety element as it has to the technical aspects. Microprocessors co-ordinate the movements of the lifts and seating towers



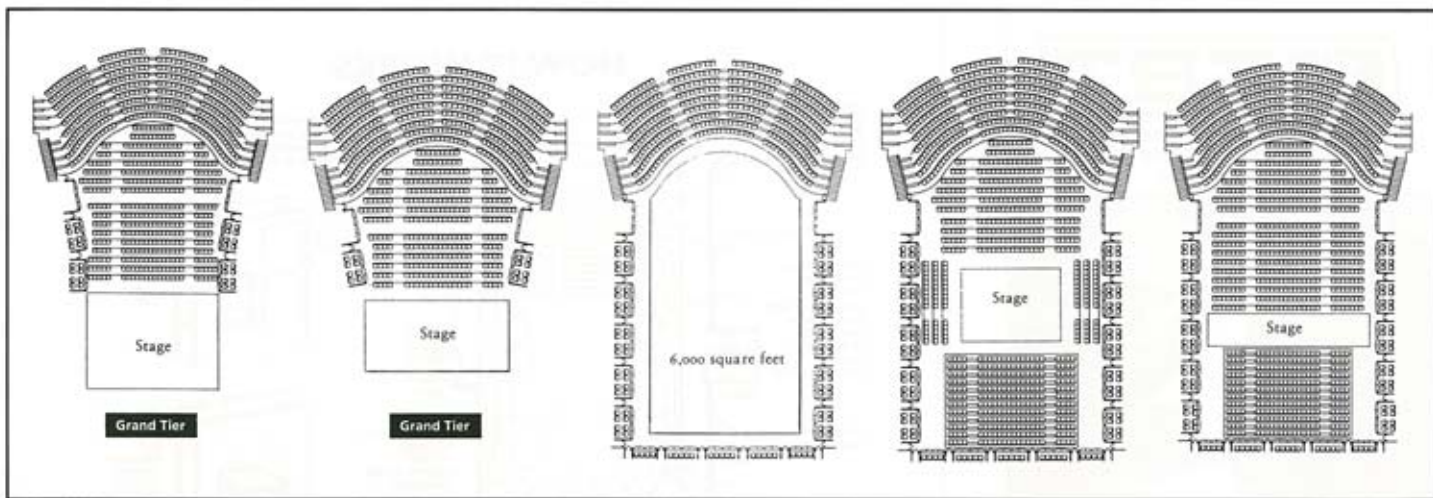
One of the movable seating towers 'en route'.



The main foyer.



One of the airbags which, when inflated, raises the movable towers so that they 'float' to new positions.



Multiple configurations: from left to right, lyric, drama, flat floor, arena and concert.

so that the error factor is effectively rendered obsolete so that, for example, the side stage towers do not tumble into the orchestra pit.

For TPC however, this wasn't the only consideration, for in Cerritos, the talk is not of a late train or miserable weather, but of the size of one's vibrations! As most of southern California is in Seismic Zone 4, roughly akin to half an hour on a highly active waterbed, a certain amount of TPC's technical innovation had to be geared towards stabilising the equipment. To this end hydraulic rams with steel pipe arms located between the backs of the auditorium towers and the side walls of the theatre, plus somewhat unique mechanical lock down actuators, provide seismic restraint.

When the auditorium seating towers (each weighing 150,000lbs) are rotated away from the side wall, hinged walkways known as jet ways link the audience entrances to the rear of the seating towers, and unless everything is as it should be, the processor controlled safety features come into play and prevent operation. The side stage seating towers are moved by electric traction drives on air castors between floor lock down positions, which again provide seismic restraint. The rear stage tower (weighing 225,000lbs) tracks up and down stage to form a fourth wall for the arena and concert configurations. From the tower base T-bar guides travel in floor slots and lock into position when it is stationary. Power, lighting and sound are delivered by cables supported from the rear wall of the theatre.

Suspended within the flytower is a flown concert ceiling made of three large steel and

laminated timber honeycomb panels. When not in use, these are rotated to lie in vertical planes and hoisted electrically to the underside of the gridiron. For the arena and concert configurations, the panels are lowered into place, rotated and locked together at the same level as the lighting bridges, these panels contain the concert lighting instruments. In addition to its visual effect, the ceiling acts as a blanket, closing off the absorptive soft goods in the stage house and thereby maximising reverberation.

Perhaps the most interesting aspect of the whole conundrum is 'The Flipper', a somewhat undignified name for what is probably a unique piece of purpose-designed theatrical hardware. Attached to the rear of the structural proscenium it rotates on pivots to three preset positions vertical to create the drama proscenium arch, angled to form the lyric proscenium or horizontal to lock the concert ceiling to the auditorium ceiling within a couple of minutes.

Weighing 27,000lb it is moved by an electric motor. Tracking side panels suspended from the flying system adjust the proscenium width between lyric (45ft wide) and drama (35ft wide) formats. All the seats at orchestra level are arranged on seating wagons, which move on air castors. These wagons may be repositioned to form the various auditorium configurations.

Acoustically, the auditorium is transformed by moving parts that change its volume and the reflectivity of its surfaces. In addition to the movable concert ceiling already mentioned, a free standing orchestra shell may also be used

to reflect sound towards the audience. Provided within the auditorium are acoustic banners and curtains which are intended to adjust the reverberation to accommodate a variety of uses. Electrically operated from a control panel in the sound room, the banners retract vertically into pockets beneath the ceiling line.

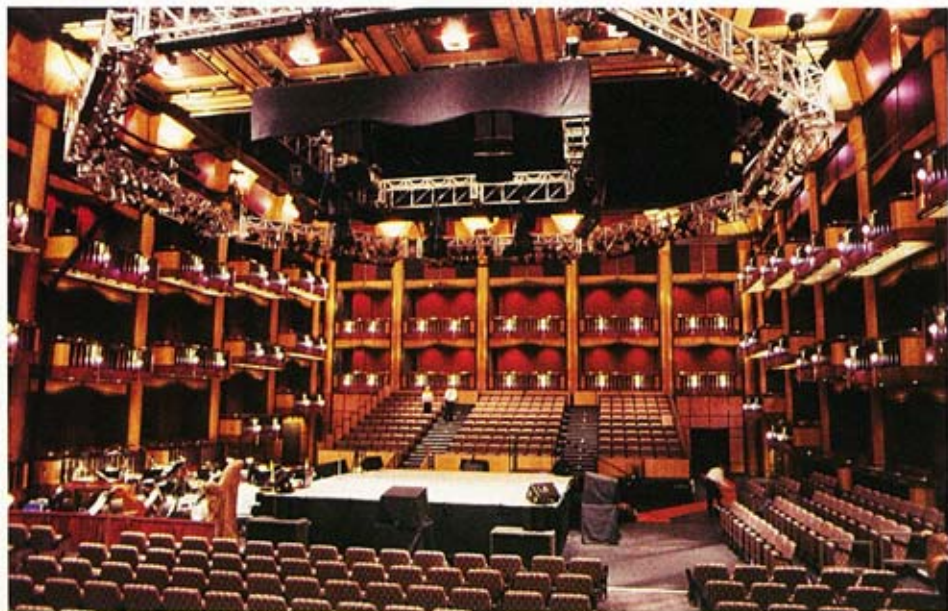
At the back of the boxes is a perforated metal screen, acoustically transparent at the upper boxes but reflective near the stage. Low frequency sound passes through these screens, bounces off the side walls of the auditorium, and re-enters the room. High frequency sound is reflected and scattered by the wooden panels on the box fronts. In addition to the sophisticated design of the 'architecture' of the auditorium, TPC have equipped the auditorium with the most advanced and sophisticated sound and lighting systems: theatre sound, technical intercom, video, a hard of hearing system and a portable sound system.

A Colortran Prestige 3000C console controls a 614 dimmer per circuit system with a Scenemaster 60 provided as back-up console for use on stage or other control positions. Other lighting consoles may connect to the in-house dimming system using the DMX/AMX interface. Colortran also dominates the stage lighting with over 350 ellipsoidals and a range of fresnels, cycs and Parcans in the mix. Two Strong short throw 2kW Super Troupers are included in the inventory.

On the sound side, a central speaker cluster is located above the orchestra lift immediately in front of the stage edge. The cluster, a mix of Turbosound TSE-211 and TSE-215 speakers, is normally stored above the auditorium ceiling and is lowered to its operating position by an electric hoist controlled from the sound control room. Delay speakers are installed in the ceilings at the rear of the parterre and balcony levels and incorporated into each of the boxes. In addition, the balcony is covered by delay speakers. A small portable voice cluster with JBL Control 1s can be suspended from beneath the stage orchestra ceiling panels for events requiring amplification upstage. The side proscenium loudspeakers, again Turbosound TSE-218 and TSE 211s, can be positioned on trolleys behind the two proscenium panels, and literally wheeled into position.

For events not requiring an in-house mix position, a console is provided in the main sound control room. This is a DDA 'D' Series with 24 inputs, eight matrix output modules and two auxiliary return modules. A semi permanent in-house sound position is created at the rear of the orchestra by swapping a seat wagon for a sound console wagon.

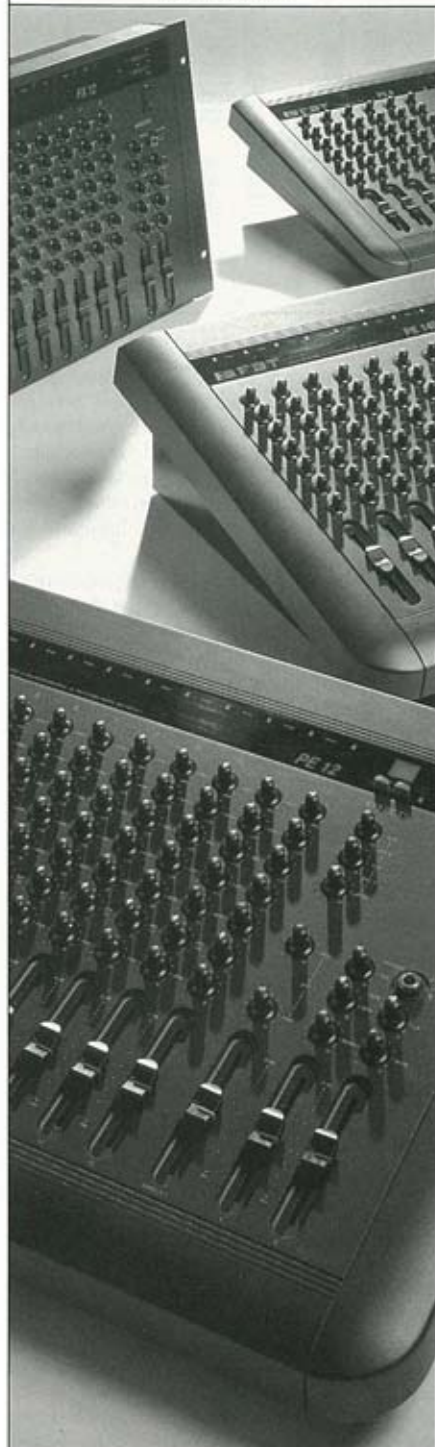
Again, it has a DDA console with 32 inputs, eight matrix output modules and two auxiliary



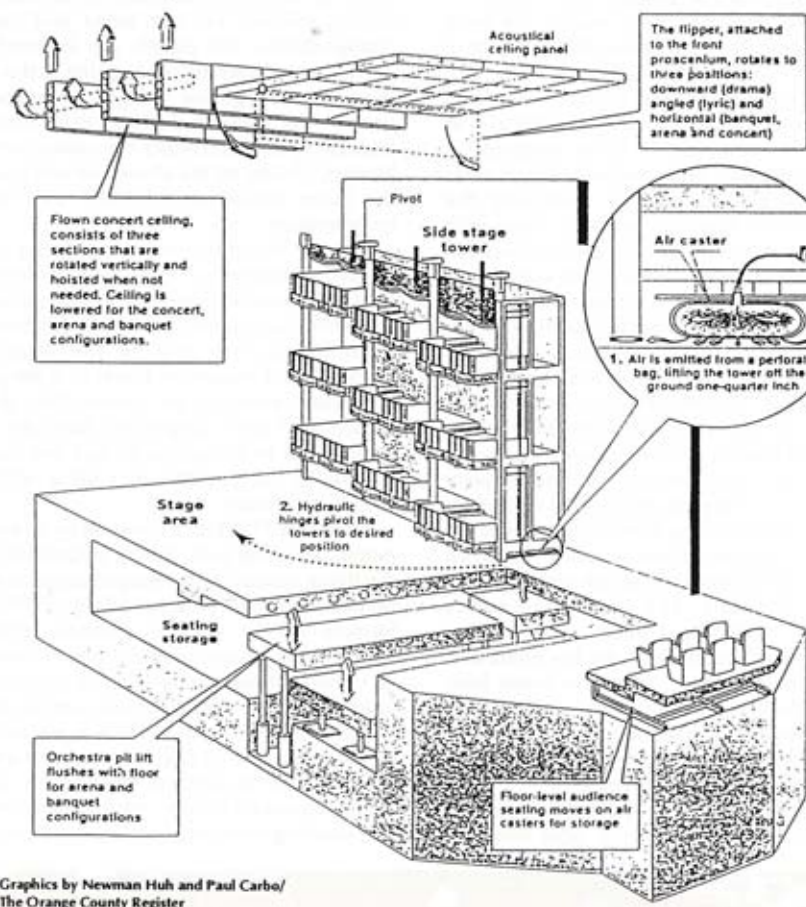
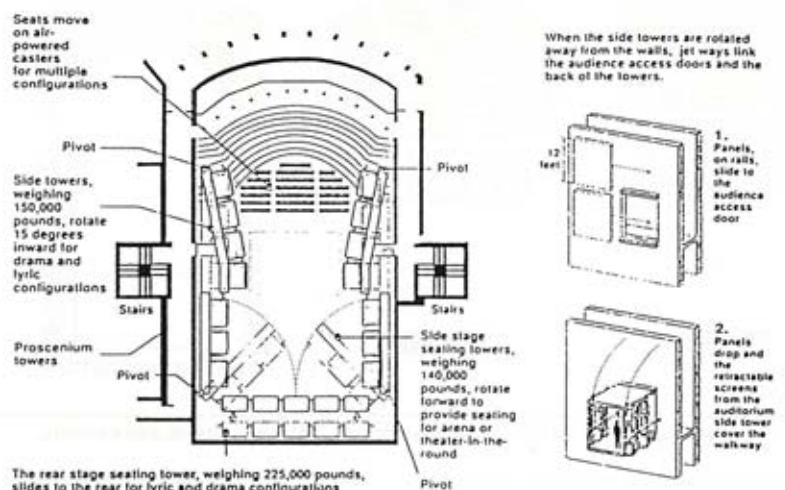
The Arts Center in arena format.

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return modules. In addition, a further foldback mixing console is provided with the same features as the in-house console. QSC and Crest amplification works with DBX, Aphex, Lexicon, and Klark Teknik hardware. 57 microphone lines are available at key positions for a mix of AKG, Shure and Neumann mics, with the microphone lines being split, when required, using an isolated transformer splitter. The auditorium is equipped with an FM headset system for the hard of hearing, with a Clear-Com four channel system providing the technical link.

TPC have also worked with Barton Myers in developing and designing the custom-built architectural lighting fixtures. In the theatre, the lighting falls into four categories: house, concert, stage and work lighting all controlled via dimmers with full memory, from the main

console at the rear, and from local panels around the stage and auditorium. With such a complex technical backdrop, it's no surprise that the Cerritos Center for the Performing Arts is already establishing its status as a venue of international calibre and a diverse range of artists are queuing up to perform there. At its opening last month, none other than Frank Sinatra took to the stage.

According to TPC, the Cerritos Center represents the beginning of a new era for flexible performance spaces, where one building can quickly adapt to provide a range of different usage options. The real test is to come. L+SI looks forward to running a news story one year from now to give you information on how many performances or presentations have taken place in Cerritos and in how many different formats.

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4,980,806; 5,010,659; 5,031,078; and 5,073,847. All other worldwide
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ON TOUR

Julio Iglesias

Sydney

LD: Peter Morse

The 'notorious' Latin crooner Julio Iglesias has recently begun his 'Starry Nights' tour with a lavish production designed by Peter Morse.

Resisting the temptation of disguise, I openly attended the show and, although not to my taste, Julio went down a storm with the ladies present. Personally, I found the overdressed, middle-aged women attempting to dance provocatively in front of him more entertaining. But then again the sound was particularly good and the lighting appropriate to the artiste.

For various reasons an interview was not attained on the night and it was my unfortunate task to awaken a bleary-eyed Michael Keller, the director for the tour, at his hotel the following morning. Despite feeling the effects of a particularly heavy after-show expedition to Sydney's famous crew hang-out 'Springfields' Michael was still enthusiastic about the show!

"The music is very hypnotic to the audience because the people are really taken in by Julio" explained Michael. "At first I thought it was strange because they weren't getting up and down dancing and I was used to shows like that, but by the end of the night it was amazing. He had the audience in the palm of his hand."

This is the first show that Peter Morse has designed for Julio Iglesias and before the first performance in Las Vegas there were two days of production rehearsals. A lot of ideas and input were contributed to the show by both Michael Keller and Matt Druzvik, who operates the Vari*Lites. In the USA the lighting plot included 48 Colour Faders, 8 VL5s, 20 VL2Bs, 24 VL4s and Telescans as well as 120 lamps in the rig. There were also plenty of ACLs with colour changers. For the Australian shows the new VL5s were not available and were substituted with VL4s with the



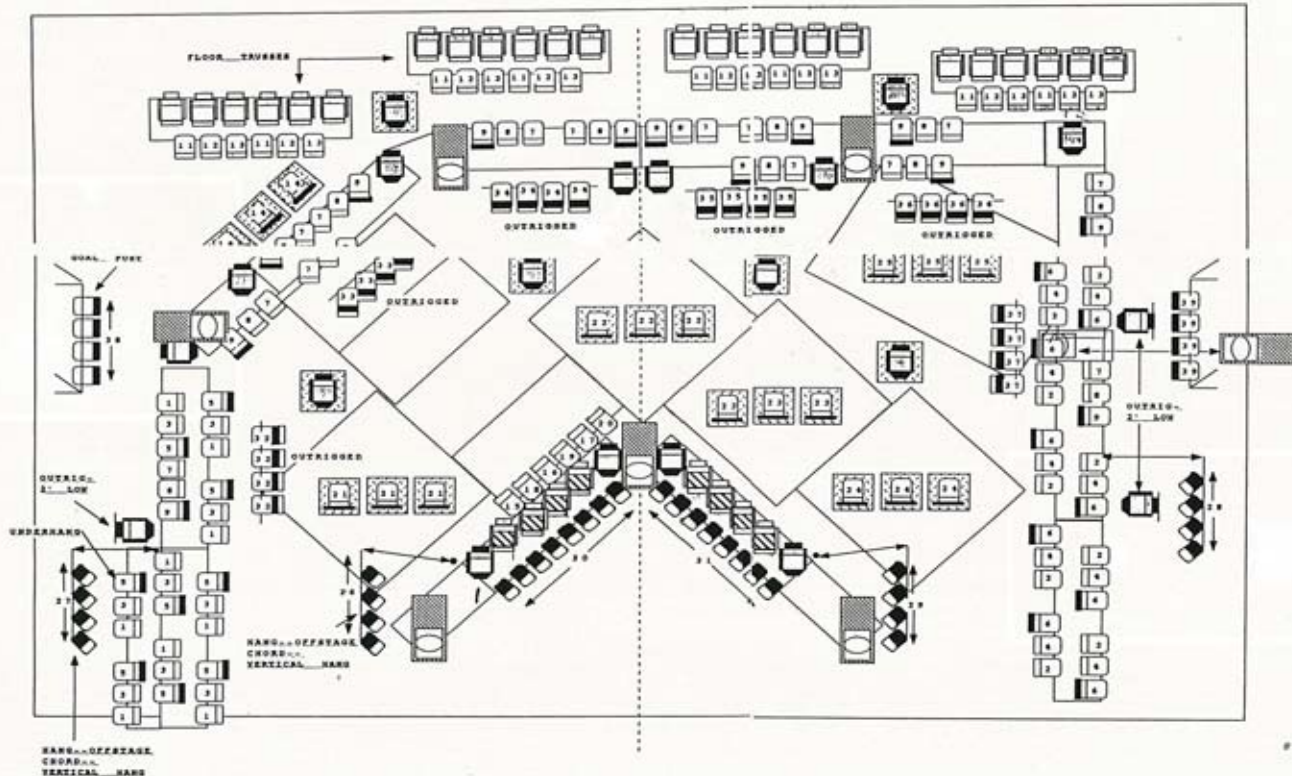
Buckets of sex appeal maybe, but even the old Latin crooner needs a little cosmetic assistance from the sound and lighting guys.

Telescans and Colour Faders also omitted. The floor count was also rearranged. "The USA show has Telescans with rotating gobos as well as the VL5," Michael told me. "I think at first that Julio was a bit apprehensive about so much technology up there but it has turned out very complementary to the music and he is very happy with it. On the first night in Las Vegas he stopped half way through the show and said 'I love these lights!' He then looked up at the Telescans, saw the little mirror and said 'Ooh, I can see myself!' He has a very good sense of humour.

"The new VL5 is an excellent product all the way through. It's been needed since they took the VL3 off the market. Having the VL5 is a nice

incandescent source, providing a warmer light. It's also a less expensive light so more readily available to the masses. It should work out really well and the way it's built is just phenomenal and so beautiful."

Peter Morse has long been associated with Morpheus but more recently he has tended to use Morpheus in tandem with Vari*Lites. This is the first time he's been able to use the VL5, and by all accounts and as evidenced by Keller's comments, he's very happy with their performance. When the tour returns to the USA for more shows, extra VL5s will be incorporated into the design. Michael Keller has found that not many lights are actually needed in the rig provided that the instruments up





Michael Keller (left) and Al Tucker.



The Morpheus/Vari*Lite combination at work.

there are versatile and can create a variety of looks.

"We tend to go for Celco boards," stated Michael Keller. "They are available worldwide which makes things much more convenient. They are extremely useful for this type of show because Julio plays anything, anywhere, at anytime. He's just decided that we are going to Puerto Rico in the New Year or maybe Chile! I think we are going to start carrying the Telescans internationally from now on because they are not available everywhere. If we are going to have a show that involves Vari*Lite, then we want the Telescans also because we are able to track them and Julio seems to want the whole show presented to his audience that way."

Julio Iglesias has a repertoire of about 25 songs and every night is different. Added to that is the fact that they are not in any set order and so things like programming the Vari*Lite become rather difficult. "You have to be in sync," said Michael. "When you hear the first two notes everybody is rushing to go to the first preset cue. It never gets

dull! I'm learning very quickly that certain eye moves or hand gestures mean certain songs. Julio will sometimes start a song for three or four bars and then change his mind. He times it to the way he feels the audience is reacting. It's really interesting and seems to work. Most nights, if he's real happy on stage he'll perform a song more than once, sometimes three times in the show. He'll change it just a bit - the wording or the tempo - and it's amazing how it works out.

"Because several of the songs are in Spanish at first we experienced difficulty with the cueing, particularly as none of the operators is fluent in Spanish. Now we're starting to key in on certain Spanish words. Most of the time we lock in but every so often we get the wrong one! Again it makes the show very energetic for us."

It was at this point that Michael decided he had better retire back to his bed and I was introduced to Al Tucker, sound engineer. Recently I've been making great efforts to include sound information in my articles but considering we are dealing with

noise I find many sound guys vocally shy. Al Tucker was no exception.

You got the impression that he found dealing with journalists more painful than a visit to the dentist! Al's excuse was that in the past he had been misquoted once too often by other magazines. Still, I managed to extract that he had previously worked with Whitney Houston, George Benson, Luther Vandross, Joe Jackson and Frank Sinatra. For Julio's show he's using a Midas XL3 with an extender for the monitor system and the new Yamaha PM4000 48 for front of house. Julio's special tool is reverberation so he's using Lexicon 480 and 224XL studio quality reverb units. "There isn't much to talk about - there's mics, wires and speakers," was all he would say!

For the next three months Julio Iglesias will be playing dates in North and South America. The crew have a comfortable tour with Julio recording a new album three days of the week and playing shows only at the weekend.

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SHOWCAD: THE PC TAKES CONTROL

Robert Halliday assesses an emerging Show Control System

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

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

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

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

The system first came to Cerebrum's attention in 1991, even though it was then completely text-based, it attracted the company's interest enough for them to propose taking the product on, subject to it being re-written to be graphics based. The new version was finished earlier this year, is now available, and has already been used for a show in Japan where it was run from the SMPTE time code on the sound-track, and live for a Swedish telethon, controlling some 60 moving lights. Its American distributors used it to run their display at this year's LDI show, and jointly won the award for best display. The system clearly



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

has something going for it, and with even a little hands-on experience, it quickly becomes clear what. All kinds of things which are tedious, complex or just plain difficult on other controls become very easy using ShowCAD.

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

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

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

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



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



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

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

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

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

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



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

move in two directions at once.

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

But the design details, such as being able to name each channel, are stunningly useful. And the point is Cerebrum are listening and reacting quickly to what people want. The day I was there, a new version of the system had arrived,

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

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

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

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BOLSHOI AT THE HALL

Graham Walne discusses his lighting for the Bolshoi Ballet

The word Bolshoi means big, an appropriate term for the theatre in Moscow which has an 80' wide proscenium arch and a 100' deep stage. As there are few theatres around the world of this size, when the Bolshoi Ballet tour they are quite accustomed to making some changes in their presentations. Nothing in their vast experience however could have prepared them for Derek Block's revolutionary vision of presenting them at London's Royal Albert Hall on a vast thrust stage. It is thought that this is the first time a classical ballet company has performed with the audience almost totally surrounding them as a consequence, with minimal scenic support.

The Bolshoi's head of design, Valeri Leventhal, and I, had last worked together on the Bolshoi's season in the USA in 1988 and had met more recently when I lit an opera at the Bolshoi itself in 1991. I was delighted to continue our association and to be asked to light this special season, relishing the many challenges that it presented. Valeri's design transformed the RAH.

A vast drop was erected across the platform end of the hall, effectively creating a tiny proscenium stage out of the existing concert platform, in front of which would be the thrust stage itself. The drop was painted to represent the Bolshoi's auditorium and required careful lighting to emphasise the candelabra and enrich the gold leaf. A structural proscenium, replicating not the Bolshoi's arch but their Romanov Royal Box, "so that our Royal Box can face yours", completed the picture.

The season comprised 12 ballet suites, each lasting about 40 minutes, and arranged in seven different selections of three suites to form the evening performances running over a period of five weeks; additionally 'Giselle' was presented in full on each Saturday matinee. This complex pattern of ballets dictated that it was to take three weeks to light, rehearse and open the entire programme, with potentially six different suites being either lit, rehearsed or performed each day.

Each was allotted a lighting session of about two to three hours which included any focusing specific to that in addition to the plotting of the cues, which averaged about a dozen. A short technical rehearsal in costume would then follow but not all the suites were afforded an



The Bolshoi Ballet in performance at the Royal Albert Hall. Above, and below, a selection of three of the 13 ballets performed ranging from the modern to the classical.

additional dress rehearsal. Remarkably the BBC Concert Orchestra did not rehearse in the RAH with the company but met them anew each opening night, albeit under Bolshoi conductors. For some selections therefore the first night was in reality the first time all the elements came together.

The cueing was perhaps the biggest casualty of language and national differences and the hiccups were only minimised by entering cue names (as well as numbers) into the faders' alphanumeric display (since the lighting stage manager stood next to the desk). Additionally, we asked the flyman to tell the lighting operator when drops were about to come since there was no communication between the lighting and flying stage managers!

The Bolshoi's motivation for the lighting changes was also curiously unsupportive of the

music, preferring instead to relate more to colour coding the characters, so the stage would change from blue to red as opposing armies replaced each other! Many cues were not given in sympathy with the musical timing but fortunately our operator, Dennis Gardner, not only reads music but also likes ballet and has worked with the Bolshoi before. Not surprisingly these combined cueing problems meant that Dennis preferred the total flexibility of manual fades despite the ease offered by programmed fades, tempting in view of the precise timings demanded. Dennis' rock-and-roll experience led him to write descriptions of the desk channels' function under each fader and I quickly found it more useful to ask for 'more blue backlight' rather than 'more 63 and 64 please'. The added bonus was that this method brought Dennis into the



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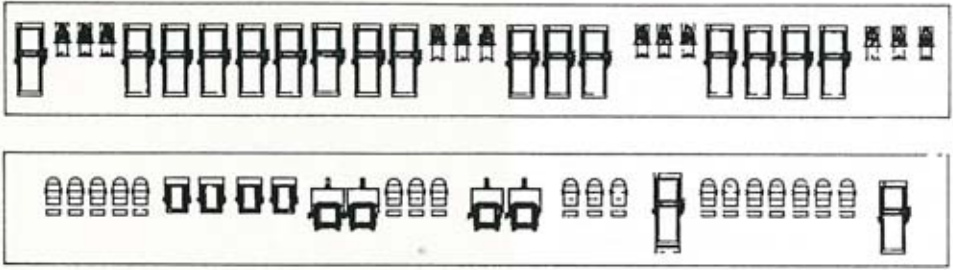
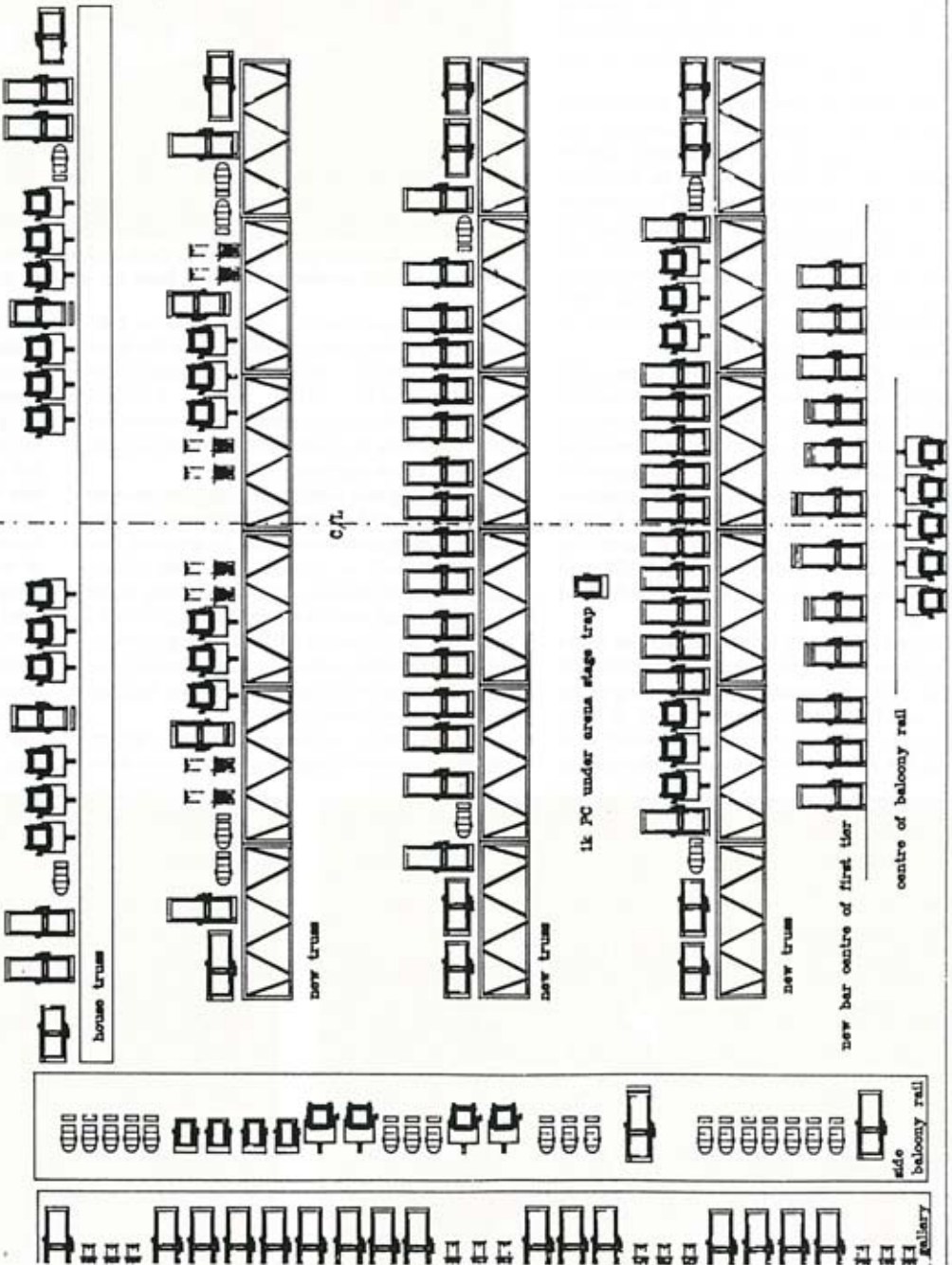
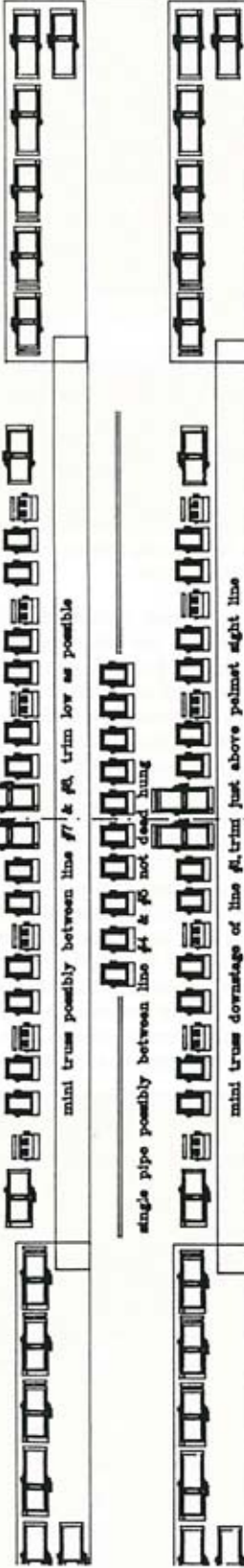
NOTES

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- DESK
- DIMMER
- GEL
- PRODUCTION
- BOLSHOI BALLETT
- DATE 28/12/02
- DESIGNER GRAHAM WALNE
- DRAWN
- 65b/p/p/1812

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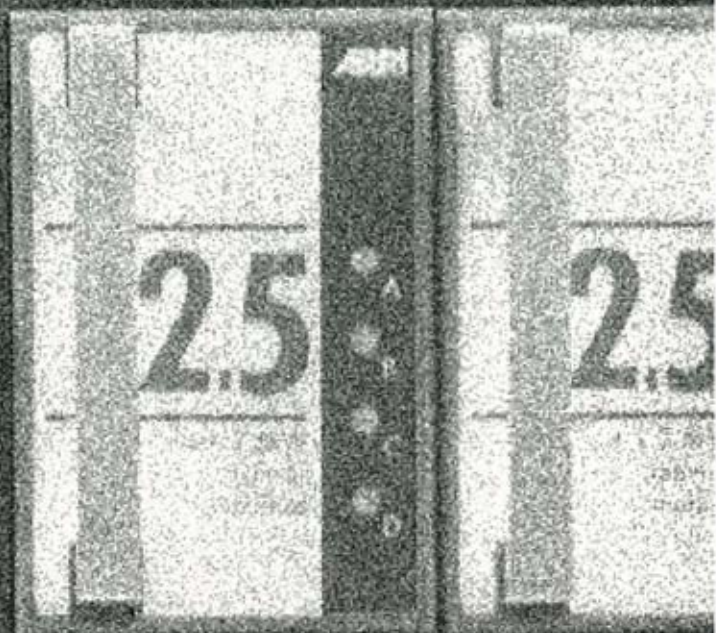
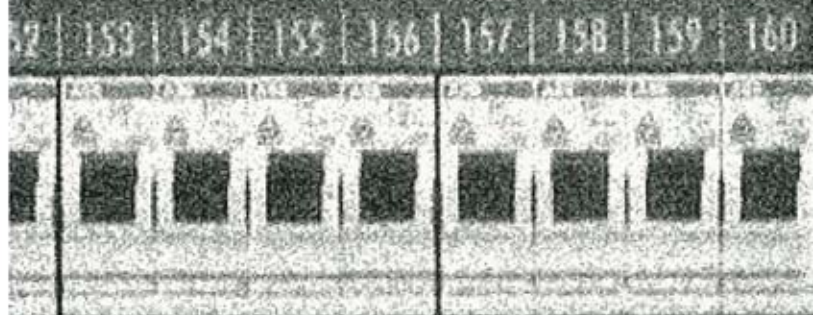
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Graham Walne's lighting plot for the Bolshoi Ballet.

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decision-making process and enabled him to comment on floor patterns from his perch high in the gallery.

With so many combinations of ballets, the event was above all else a triumph of planning and I became very conscious that there was a danger of the lighting resting on its logistical laurels rather than on its visual ones. My self-imposed brief was that with a crew of only three people, manual re-colouring and re-focusing from one suite to the next was out of the question. So I planned a rig of colour and gobo washes relieved by specials which would be focused once and never moved. The Bolshoi adapted to this very well despite being accustomed at home in Moscow to 50 electricians and geriatric remote control pan-tilt and focus.

With a potential of 12 different suites to be lit or performed within any 48 hour period, it was always clear that some kind of higher technology would have to be employed. This led us very quickly to Vari-Lite and specifically to the VL5 which was attractive because of its low noise and conventional theatre lamp, and that the intensity could be controlled through the main desk. Sadly, despite much effort by Samuelsons, our budget could not stretch to the large numbers of VL5s we would have required for the vastness of the RAH (the nearest throw was 65ft!) I then turned to Par-mounted scrollers, but knowing the Bolshoi's penchant for change, felt that any order of colours was bound to be wrong very quickly. I ended up arranging a double cover with a set of cool scrollers and a set of warm scrollers, reasoning that the cues generally cross-faded from warm to cool and vice-versa.

This in theory meant that I could then scroll the faded lamp to the next colour irrespective of where the desired colour had been placed in the sequence. This option again was far too costly. The day was saved by Dave Ridgeway of the rental house Neg Earth Lights, suggesting Pan Command's ColorFader, a device I had seen advertised in L+SI but knew little about. Demonstrations and a brief test on a pantomime, convinced me.

ColorFader is like all the best ideas - terribly simple - the base colour in each of three scrollers is perforated so that it lets through the increasing amounts of light as the scroll is advanced, thus varying shades of the first colour act on the second and so on. The result is an almost limitless range of possibilities. The PC which controls ColorFader comes pre-programmed with the Lee, Rosco and GamColor ranges (300 colours in all) so that all the designer needs to do is pick a colour number, and the device will snap or crossfade as required.

The only drawback is that there is some loss of intensity, especially with the deeper colours, but I felt that this was a trade-off for the instant flexibility offered and I put ColorFader into all 68 dance side-lights, mostly 110v VNPS Par 64s. Four more went on 2k Sils to provide lift in the centre of the drops backstage. Since each evening the theme could range from dramatic, lyrical, romantic, or sombre to sophisticated, we used colours from all three ranges in the PC, sometimes flashing through a range to compare.

Many of the colour choices were made by Dennis or Paul, whose knowledge of the Rosco and Gam ranges was better than mine; this was especially useful when my brain became bewildered at the numbers available to me and it was simply better for me to ask for 'more blue-less green' rather than try and recall a particular number. In this way much of the lighting realisation really was a team effort.

In terms of design, conventional dance side-light was out of the question because not only did the RAH not possess suitable positions (on the lower boxes) but in any case the audience on the opposite side of the thrust would have been dazzled. The only suitable side position was on the balcony front, a high angle for classical dance, and one which put more light onto the floor surface than the Bolshoi had ever seen before. The floor was to haunt us as we sought daily to achieve the evenness to which the Bolshoi were accustomed, whilst still trying to retain some texture and depth.

"Several late night debates highlighted the difference between theatre, which tends to accept the often limited resources it is given, and rock-and-roll which tends to provide what it needs."

Since the floor cloth had considerable painted shadows and was further being daily re-coloured by the ingrained rosin, we were fighting a losing battle. The rig was completed by 12 Molefays for the drops fitted with scrollers, although some translucent drops were also backlit by 5ks and 2k Sils. The main downlight and backlight was provided by 24 5ks with 16 2k Sils for gobo wash.

Complex events such as this bring out the best, and worst, in peoples' personalities. My involvement had been brought about simply because the Bolshoi requested me. However, many members of the production team, coming from the promoter's more usual concert and rock-and-roll background, lost no time in making it clear that there were suspicious of me because I came from theatre. Several late night debates highlighted the difference between theatre, which tends to accept the often limited resources it is given, and rock-and-roll which tends to provide what it needs. I therefore tended to question things less than I was expected to do, preferring to make the best out of what I had to work with.

My crew had no problem with this, particularly Paul Dexter, who had been somewhat thrust into the position of my assistant. Regular readers of L+SI will know that Paul is a distinguished LD in his own right and this made it possible for him to provide me with moral support in those moments when I felt my lighting methodology was constantly being placed under the microscope.

I find it interesting that few books yet refer in depth to the psychological needs of being part

of the so-called creative team and yet the demeanor, temperament, physiology and even dresscode, play a vital part in a successful design. One amusing difference between rock-and-roll and theatre comes in the crew's response to working at heights. My crew here thought nothing of crawling around 80' up in the air on the arena trusses but were less at ease 25' up the Tallescope!


Paul Dexter's experience contributed to the placing of the eight follow spots needed to cater for the audience's wide viewing angle. I had wanted rear truss spots but this was not possible and we had to settle for just two coming from the back corners of the gallery. The colour choice and operating was entirely in the hands of our Russian colleagues.

Whereas most Western ballet companies exclude the press before opening night, the production's promoter actively encouraged them to attend rehearsals: the result was widespread publicity - but at a price. Unaccustomed to the ways of the Bolshoi and in particular to the Russian's disturbing habit of discussing everything at full voice, the press reported conflict and discord. Additionally, they hated the abbreviated ballets, saying that the dances had thus been taken out of context.

The public of course were wiser and simply enjoyed a unique event and a rare opportunity of seeing young emerging talent. It seemed to me that the true classical pieces had to compromise for the thrust but conversely the more modern pieces used the space brilliantly and frequently brought cheers from the audience. Certainly Derek Block's stated aim, to present ballet to a new audience, was well met. Nightly we all encountered people enthusing about the transformation of the Royal Albert Hall and the pure fact of seeing one of the world's oldest and greatest ballet companies. Many people returning time after time had never before been into a theatre and this experience was for them, and for those who worked on the season, a seminal one.

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ROCKIN' AROUND THE CLOCK

Ruth Rossington reports on the new sound installation at London's Rock Circus

Piccadilly Circus is well-known for its technological displays; its high-rise electronic billboards have been beaming advertising messages to the traffic for many years. So it was only natural that Madame Tussauds should choose it as the home for one of its more ambitious projects, the Rock Circus, which took four years and a £10million investment to bring to life.

Based at the London Pavilion, which has assumed many mantles in its lifetime, Rock Circus, which opened in 1989, now keeps company with a mixture of tourist shops, cafes and virtual reality experiences.

For those who aren't familiar with the concept of Rock Circus, there's a heavy clue in the name. It presents its visitors with an encapsulated history of rock, from Buddy Holly to Madonna, relayed through a media mix of original footage, musical 'snapshots', waxworks, animatronics and a barrage of audio, video and lighting equipment. And even I, too young to remember the Old Grey Whistle Test, and too old to be a devotee of Top of the Pops, have to admit to a twinge of excitement at the prospect of coming face to face, albeit a wax one, with some of the legendary figures that have shaped the history of rock.

Such high expectations are not to be disappointed and whilst some might contend otherwise, I would be quite happy to stake my lot on the sound element of the presentation being the most crucial to the success of the venture. After all, it's what underpins the whole concept. Tussaud's are known for their innovative approach to entertainment, so it wasn't a surprise to learn that they had taken great pains to address the problem of sound at the exhibit.

As a result of this, the upstairs 360-seat revolving theatre has recently changed to 'live' sound with the installation of a new speaker-based sound system, featuring Meyer Sound cabinets and QSC amplifiers. The theatre itself is divided into three separate stages, each one seating just over 100 people. The captive audience then watches the show in one area and is then rotated to the next, for a second blast, before returning to the first stage for the finale.

The new system replaces the theatre's earlier Philips-based Synconore infra-red headphone installation which, although considered a good idea when first specified, eventually created



The star-studded first floor of Rock Circus, complete with fully equipped lighting rig and Electrosonic videowall.

more problems than it solved. One of the main reasons for change was the high incidence of theft, as the designer headphones rapidly became designer desirables. On one occasion Rock Circus waved goodbye to over 150 sets during a bomb scare evacuation. Just what people thought they'd do with infra-red headsets at home without the infra-red transmitters to go with them is anybody's guess.

A lesser problem, but still a thorn in the side, was that the headphone units required frequent battery changes which resulted in considerable wastage. The solution, in the form of a loudspeaker system which could provide the theatre area with more of a concert atmosphere, practically formed itself, and so Tussauds called in John Leonard, a freelance sound designer who'd consulted on earlier projects, and it was he who actively sought the involvement of sound specialists Autograph Sales at an early stage.

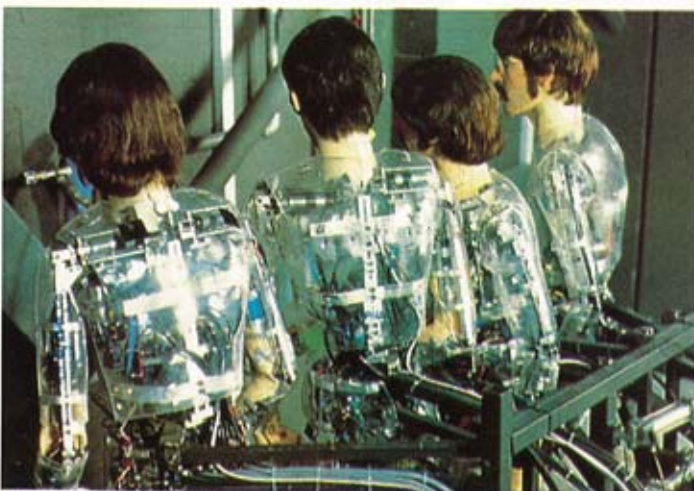
The changeover however was not an easy one. Because of Rock Circus's year round devotion to duty (10 hours a day, 363 days a year), the logistics of actually getting on site became an interesting equation for John Leonard, and left him and his team with no

option but to work overnight.

"The limited access was obviously a major problem during the installation, as we had to ensure that the change from headphones to loudspeakers was as seamless as possible," he explained. This wasn't the only hurdle that required surmounting.

"The acoustics of the theatre had been designed with headphones in mind and no allowances had been made for future upgrade to loudspeakers."

John Leonard certainly had his work cut out. The answer lay with the use of small, highly directional speakers which could provide a high degree of audio quality and be tucked away into relative oblivion. For Leonard, it was no contest and he opted for Meyer units having had considerable prior experience of them. Naturally enough, because the system is under such continual use, it also has to offer a very determined level of reliability. "The combination of Meyer Sound UPA and UPM models provides for excellent performance in both speech and music, with the units' small size rendering the installation practically invisible and their inherent reliability meeting the brief for almost continuous heavy duty



Above, a rare view of the Beatles, stripped down to their animatronic essentials and (right) ready for the go at the start of the theatre revolve sequence.



A Meyer cabinet (centre bottom) adorns the boudoir of a reclining Madonna and friend.

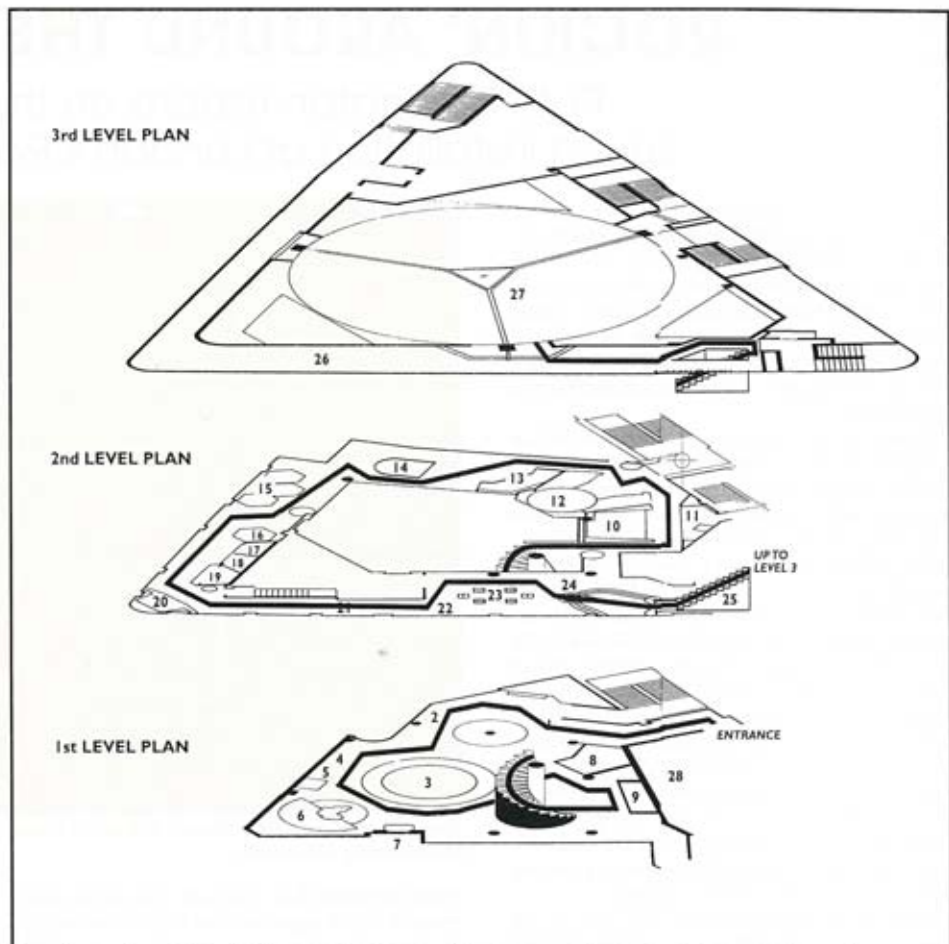
usage," said Leonard.

The use of a revolve leads to many problems and sound spillage between the three sections of the theatre, especially at low frequencies, has to be kept under strict control. This is where the directional characteristics of the Meyer speakers will earn their bread and butter. During our run-through in the theatre, the spillage, as far as I could tell, was non-existent. The obvious benefits have already made themselves felt, but what of others? For one, the infra-red headphones, still in use in the rest of the exhibit, are slightly rough around the edges with poor pick-up and occasional interference from other signals. Any improvement on that is worth having. For two, it creates a shared experience for the visitors who for the rest of the exhibit, whilst buckled in to their headphones, are actually wandering round in individual isolation. The only losers in all this are those who actually operate the revolve, and who previously enjoyed their work in peace and quiet. They now have the dubious honour of listening to musical classics ad nauseum.

The soundtracks used in the theatre are derived from laser discs, with the replay sequences referenced to SMPTE timecode. Autograph's equipment racks include a Fostex 4020 SMPTE/MIDI event controller, which produces switching codes to synchronise the loudspeaker sources with the theatre's 'animatronic' waxwork figures.

Clearly, the most challenging aspect of this is lip sync and John Leonard admits that this was a frustrating and time-consuming process, mainly because each time a slight adjustment was necessary, the engineer made the change, ran upstairs to the theatre, progressed the show to the relevant point (which could take anything up to half an hour) and if not completely satisfied was forced to repeat this procedure until entirely happy.

Producing a new laser master disc each time the sound track needs updating is an expensive proposition and as part of this project, John Leonard also installed an Akai S1100 sampler. This allows updates and additions to be loaded in directly from a DAT tape, drastically cutting



The three tiers of Rock Circus with the revolving theatre (top), and the two floors of waxwork exhibits below.

the turnaround time and expense of laser discs. The sampler responds to the system's timecode signals and is used for replaying Tim Rice's animatronic commentary.

Final switching of the loudspeaker, control electronics and amplifier combinations is performed by Autograph's custom Switcher Rack, which incorporates eight high performance relays, each capable of two million operations. (Sound for the rest of the exhibition comes from compact disc stereo sound which is fed into a transmitter and a modulator converts the sound into infra-red signals picked up by the special headsets.)

There are two large computers operating the theatre show. One operates the figures and the other controls the massive and complex system of lifts backstage, together with the lighting, slide projection and smoke generators.

The audio animatronic technology has been developed by The Tussauds Group and the figures have acrylic body shells surrounding the working electronics. Each movement is

individually computer programmed into the figures. A number of servo pneumatic valves within each provide the power to move the limbs, head, lips etc.

Taking all this into account and the fact that Tussauds are acknowledged pioneers in this field I have to admit that the appearance of the animatronics was a lot less sophisticated than I expected. It may be that as a frequenter of highly technical presentations my expectations have been falsely elevated to an unrealistic level. Of course, it's only a theory and the one I prefer is that Madame Tussaud's have not quite executed effectively what is potentially a very good concept. At the recent IAAPA amusement show in Dallas, it was very clear that animatronics have advanced to such a high degree of fluidity of movement and expression, that it actually made you look twice - and that is some feat. However, that being said, it didn't actually detract from the enjoyment. And that was down to the music and the improved means through which it was delivered.

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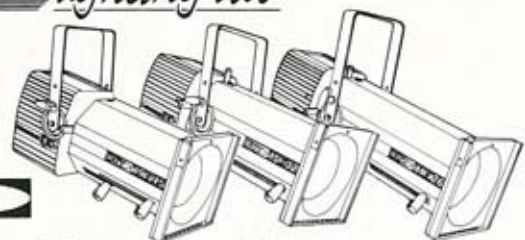
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EQUIPMENT *News*

Formula AVC2



The 'AVC2' intelligent volume control from Formula Sound, which was first shown in prototype form at PLASA 92, is now in production. According to the company, the unit offers no reduction in the dynamic range of the system under normal operating conditions, and there are no external controls for the operator to worry about, which means that tampering is minimised. Other features include an LED bar-graph meter which indicates attenuation level and an anti-tamper relay which can be connected to an external switch to improve system security. There is also provision to connect to an external time switch to switch between two output levels with the whole unit housed in a 19" rack mounting, 1RU case.

The AVC2 works as follows: If the average operating level is kept below the internally set threshold the AVC2 has no effect. If the average programme level exceeds the threshold the unit will reduce its output level. The level is reduced in discreet steps indicated by the LED bargraph meter on the front of the unit. The AVC2 fades between these steps and is almost undetectable in use. The more one tries to increase the volume the more the unit decreases it so that the system will barely change in perceived level. A clip indicator is provided to show when the input stage of the AVC2 is being over-driven. Reducing the input level will gently release the attenuation provided by the system.

For further details contact Formula Sound in

Vestax Synchroniser

The new MSX-2 Vestax Micro Synchroniser is designed for use with the new version MR-44S and MR66S multi-track recorders.

MSX-2 is a sync-signal generator using Vestax DCS technology that records data to the sync tracks of Vestax MTRs. When MSX-2 is used to start the Master Deck (with its own play, record etc), the Master will control and sync slaves with a high accuracy of only 50 Microseconds. If more than one slave is required, an additional MSX-2 can be added for each slave.

In this way an unlimited number of tracks can be synchronised. All slaves will lock within a few seconds. With the Smart Sync position pointer, the multitracks will sync correctly, even from the middle of a song. All previous versions of MR-44 and MR-66 can be used with MSX-2 after an optional upgrade kit has been factory fitted.

For details contact Vestax in Haslemere, telephone (0428) 653117.

Film Technology

Cirro-Lite (Europe) Ltd has launched the Kino Flo lighting system for film and video into Europe. The bulbs run at approximately twice the brightness of conventional high output tubes and are colour correct 3200K or 5500K. The system also features a remote flicker-free electronic ballast which can run a tube up to 75 feet away.

For further details contact Cirro-Lite in London, telephone 081-961 6996.

M Series Electronics

JBL have introduced a range of high performance, general purpose M Series signal processors. Currently comprising four units, namely two variable frequency electronic crossovers, a four-channel noise gate and a two-channel gated compressor/limiter.

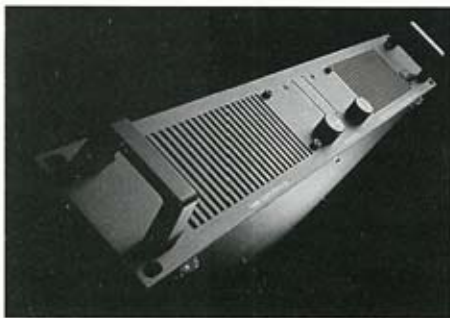
The M552 is a two-way stereo/three-way mono variable electronic crossover, and the M553 is a three-way stereo/four-way mono unit. With the exception of the additional channel on each mode of the M553, both models are identical in terms of features and specifications. A constant-directivity horn EQ allows for flat frequency response from the JBL 2360 Series and 2380 Series flat-front bi-radial horns, or other CD horns, while 24dB Linkwitz-Riley filters generate seamless transitions between loudspeaker components for improved HF driver protection as well as reduced lobing and phase distortion. LF summing combines both channels for subwoofer applications where only one mono channel is required. These features are combined with a 117dB dynamic range for lower noise and greater headroom.

The M644 is a four-channel 1U rack-mount noise gate noted for its broad threshold control range of -60 to +20dBu. Special features include external key inputs on each channel to allow gate triggering from external sources and a 115dB dynamic range with extremely low distortion.

The fourth unit in the range is the M712 dual channel gating compressor/limiter which offers the user total control over threshold, ratio, attack and release controls, as well as a gate with variable threshold for each channel.

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

LAB in UK via Network



The new LAB2000 is now available in the UK through Network, the exclusive UK distributor for Lab Gruppen amplifiers.

LAB2000 is a convertible power amplifier, designed specifically for concert touring and other high power mobile applications consisting of a two times 1000 watts, 12kg light-weight and two unit power amplifier. The unit was developed by Lab Gruppen using switch-mode technology, with a combination of biphasic DC to AC converters and high-current linear active filters. According to Network, tests have shown that the LAB2000 takes the same current from the AC-line as a conventional 1000W amplifier, but can deliver 2000W in sound power.

Separate minimum load selectors on the two LAB2000 channels solve the problem of different impedances and maximum power handling of the loudspeakers. It is possible to drive 1000W in 8 ohms on one channel and 1000W in 2 ohms on the other. In addition, Network will also handle the SS1300 amplifier.

For product details contact Network in London on 081-885 5858.

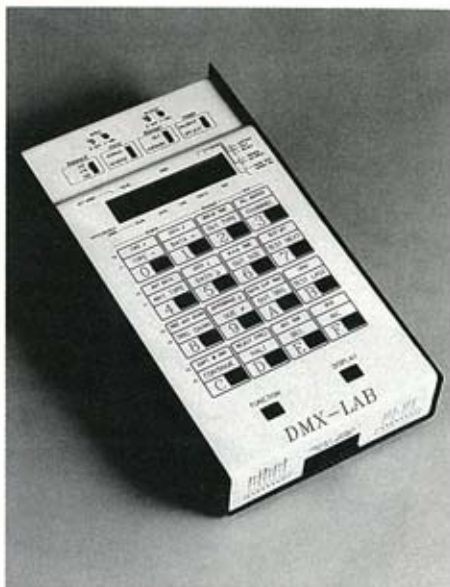
Viper in the UK

Laser Chorus has launched the 'Viper' in the UK with Laser Grafix as distributor. The new model will feature twin beams from a single unit, the first laser of its kind to feature two complete mirror scanning systems at both ends of a laser tube, according to the company.

The Viper will produce triangles, squares cones and flat scans in four strong colours of red, yellow, green and orange, and is capable of comprehensive programming or manual control via its dedicated 19" rack mounted controller. Up to 12 Vipers can be operated from a single controller, which would provide 24, 5mW coloured beams.

For information contact Laser Grafix in Royston, telephone (0763) 248846.

De-Bug DMX with DMX-LAB



As many people are beginning to realise, there appear to be a variety of versions of the DMX 512 protocol on the street. This can cause problems when, for example, a controller outputting the approved format is linked to a receiver, such as an automated luminaire, programmed for a 'dirty' DMX.

Now a solution is provided by AB Micro's DMX-LAB which can receive and transmit simultaneously with complete control over the output timing, refresh rate and start code, enabling reliable communication between all types of equipment and conversion of 'non-standard'.

Designed originally for development users, DMX-LAB is a combined tester/analyzer equipped with a high speed processor which can trap events in real-time for triggering 'scopes and logic analyzers, in order to pin-point elusive errors. With this handy device, its size is only 210mm x 110mm, a wide variety of trigger conditions can be selected to locate glitches, different start codes, number of channels and data values.

DMX-LAB comes complete with internal rechargeable batteries, back-lit LCD display, switchable termination and polarity. It should prove to be a useful tool for development engineers and road technicians alike. (L+SI will be covering this product in more depth in a forthcoming issue).

For further details contact AB Micro in London, telephone 071-923 0562.

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Scan PRO218

A NEW ACT AT AYLESBURY

Tim Frost assesses the first installation of Allen & Heath's GL3

From roller skating to Virginia Bottomley via table tennis, through to local operatics and craft fairs, you don't get much more multi-purpose than the current work load of the Aylesbury Civic Centre halls.

Technical manager Brian Drury has to keep up with the demands of each wildly different application. Some require a traditional stage layout, whilst others, such as the regular wrestling events, are in-the-round; and then there are the sales and roller disco which really defy any description. Not that he is complaining, mind.

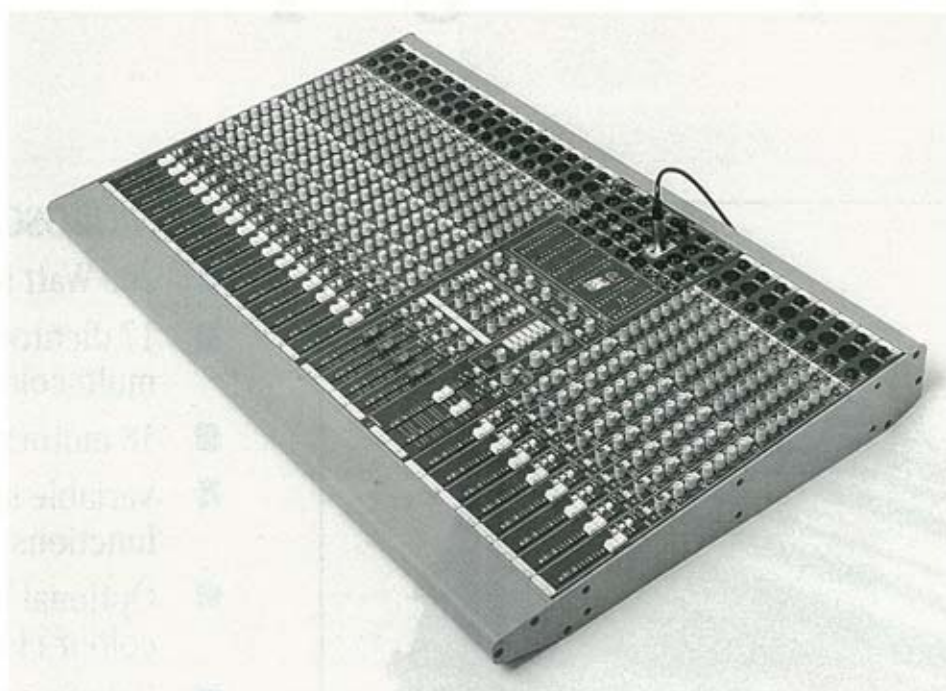
"We are doing so much work throughout the year, and in many respects, the very fact that we are multi-purpose is why we survive," he commented.

The hall has had sound systems of increasing complexity over the years, with the last one installed in the mid 80s. The installation that Brian has inherited has proved not to be the long-term unqualified success that maybe some had envisaged when it went in. A combination of a dramatic broadening of use of the hall, and technical problems at the later part of last year led Drury and his assistant, Pete Rogers, to urgently seek a new desk; one that would meet the demands of every conceivable 'performance' and a few more that they cannot yet envisage but are bound to come sooner or later.

The original desk was a custom designed affair with some very clever patching where patch channels were displayed on numeric LEDs. But apart from this patch system, its very basic facilities were simply not up to the demands of the job.

"The mixer was only 12-way with 4 outs," explained Brian, "with no sends or returns. If you wanted to use a line source like a CD you had to use the mic channels, so it was never versatile enough for what we needed. There were also other points such as the power supply being built into the box which caused some problems." But whilst they could just about busk along with the mixer's facilities and less than perfect performance for a while longer, unreliability soon forced the issue.

"It started developing faults," said Pete. "One night all the lights and indicators went out on it - fortunately the sound seemed unaffected that time." As one fault was repaired, another popped up its ugly little head. After spending nearly £800 on trying to keep the thing working it was decided that enough was enough; the



The 24 channel version of Allen & Heath's GL3 console.

desk had finally come to the end of its useful life.

Having made that decision, it was a matter of moving quickly to get a new desk that would meet the flexibility that they needed whilst fitting in within a 'reasonable' budget.

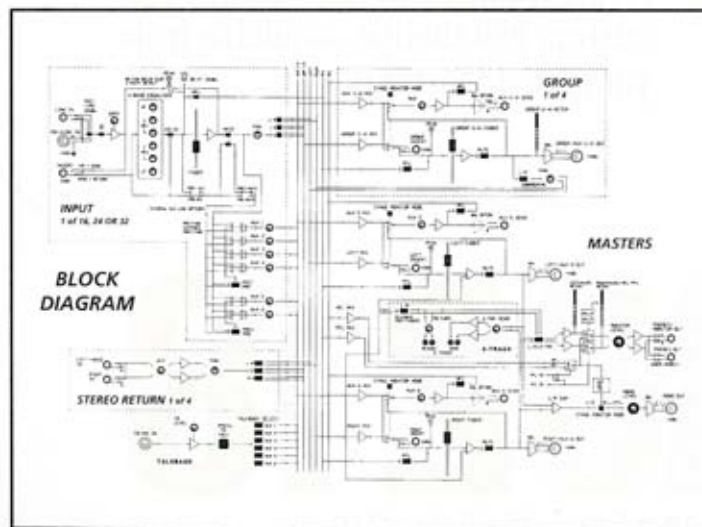
Drury approached several companies and found Ringwood based AJS Theatre Services offered the sort of service they needed. Amongst the alternatives that they considered were a Tascam unit and a Soundcraft Delta SR. But they finally came down in favour of the Allen & Heath GL3, becoming one of the first installations to use this new, highly flexible FOH/monitor desk.

Drury knew what facilities he needed in a desk for Aylesbury but at the start wasn't fully aware of the GL3. "We hadn't come across the GL3 before Mark Morley at AJS sent us a load of information on many desks, and at first sight I thought it was going to be a lot dearer. The only initial drawback was that the A&H isn't modular but we don't strictly need that. A&H does have an extra 8 input expander module, so we can expand up to 24 inputs at a later time, if we need to - and at a reasonable cost."

According to Brian, Mark Morley couldn't have been more helpful, sending over units so that they could try them out in the flesh rather than trying to compare facilities on paper. "To look at a piece of paper is no help," Brian commented. "You need to have it in front of you to play with and that's what AJS enabled us to do. When we looked at the GL3 we immediately wanted it because we realised it was so versatile."

The GL3 was in and running within two months of the decision to start looking for a new desk, and both technicians are very happy with it, even though there is still a lot to be done to the overall system and the desk has yet to be configured in its final format. At the moment the system is running completely from three of the desk's four groups and the main stereo left/right pair.

The stereo pair feeds the main auditorium cluster and one of the groups is used to route sound around the venue - to the foyers for example. The stage foldback at present is being driven from the first two group outputs, giving the facility stereo foldback for the first time, which has also meant the addition of a new



Sound control room: Brian Drury seated at the 16 channel GL3.

stereo graphic for the foldback system.

Eventually Brian will re-configure the foldback so that is driven from two of the Aux outputs. This will give him better control over the foldback mix and enable him to use the talkback facilities of the desk more effectively. "You've got a 'Talk' facility on each Aux group so we could then easily talk to the performers on stage which is another good reason to use the auxiliaries for stage monitoring."

Although versatility was the key to choosing the GL3, the more obvious advantages over the old desk (apart from working that is) are more mundane things such as a great deal more level out of the mixer, plastic long throw faders that don't need both hands to shift them and built-in stereo returns so the CD players and the cassette deck don't use up valuable mic inputs.

The EQ is liked too and the only minor niggle is the way the individual phantom on/off switches, placed by the channel mic/line button, work.

Brian commented. "We need to be able to select phantom powering by individual channel and that is there on the GL3. However, the switches are recessed so they are a little awkward to get to and you have to use something like a pen to push the button in. But that is offset by the fact that it would be difficult to accidentally switch it when pressing the mic/line switch."

With the installation of the new desk and re-appraisal of the whole of the system, it was also thought to be a good time to improve the wiring to and from the control room, especially as the existing wiring simply did not offer enough channels nor did it seem to be making the best of the additional performance offered by the new desk. Within a few weeks of the GL3 going in Brian and Pete were getting themselves dusty putting new multi-core tie-lines between the

stage and the box. For them it proved to be a bit of an eye-opener as they discovered a few oddities about the original cabling. The signal runs from the stage boxes used individual cables which had been run around the sides of the auditorium, instead of taking the much shorter direct route.

"We ran the desk on the old cabling for a month, but we were getting a lot of interference. The cables, which were all separate, took the longest route around the building possible and some of the foldback cables were in the same duct as mains cable so we changed all that too."

The new wiring gives them 24 stage tie lines installed using a pair of 12-way multi-cores; and by taking the shorter route these ended up being only 50m long. Further points are currently being placed at the rear of the auditorium and in the balcony so that they have mic points anywhere they are needed. The tie-lines come out of a wall box, which they then hook up to the GL3 using different coloured XLR leads making it very easy to

identify which mic outlet is feeding which input.

Other little wiring points came to light during their investigations. "When we looked at it, the foldback was being fed from just the bass end of the crossover so it was all bass, and the speaker system had been wired with just 2.5mm cable. It's little things like this that we discovered as we looked closer at the system."

Although budgets are tight, Brian considers that Aylesbury have been supportive of the needs of the technical department. There is a realisation that facilities must be good to attract both the acts and the public, especially as just 15 miles down the road Wycombe have opened up the Swan theatre with its brand new, sophisticated sound and lighting system. (See Lighting & Sound International, December 1992). "We rarely get things refused in the technical department because they now know we don't ask for it unless we really need it. As we increase the quality, people will be able to hear the difference and we don't want to lag behind - especially now the Swan is so close!



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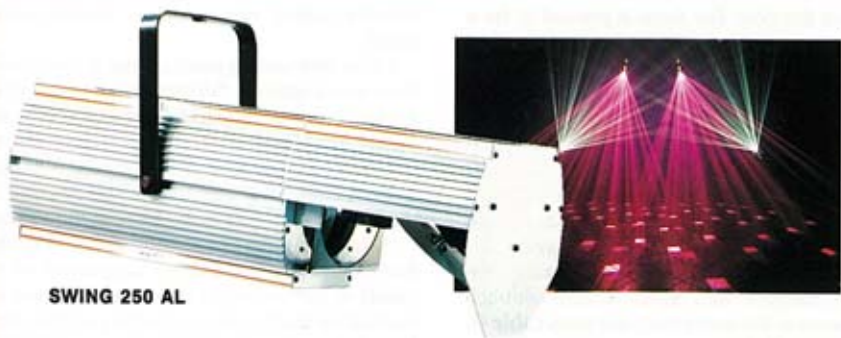
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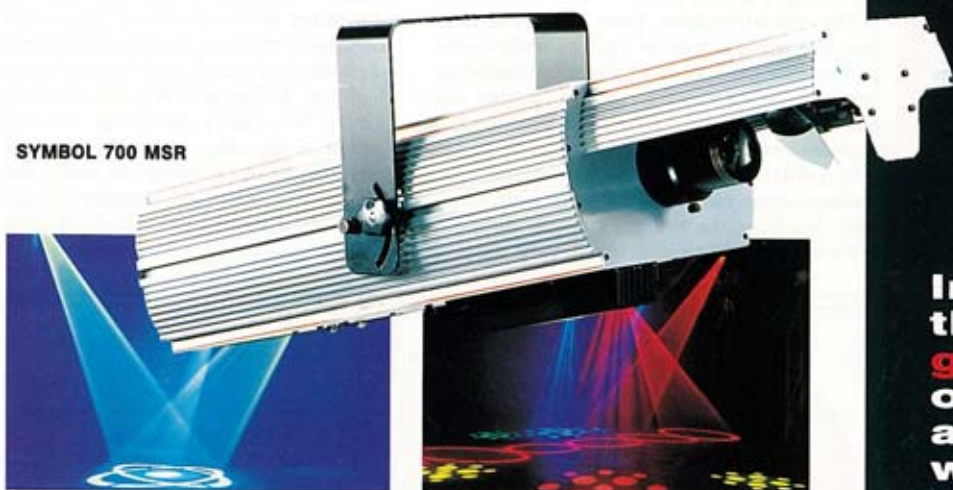


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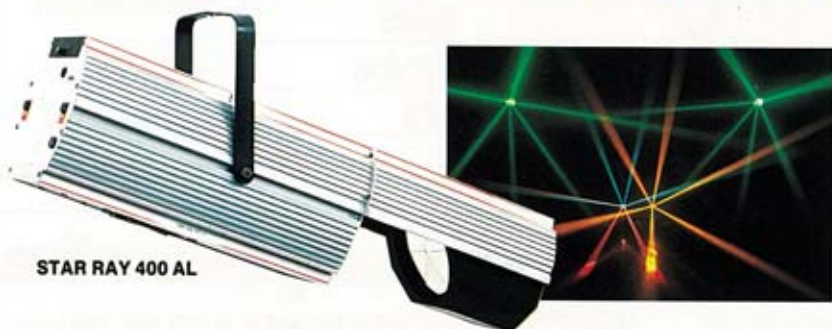
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YAMAHA AND PRO AUDIO

Simon Croft profiles Yamaha Kemble

Mention the name Yamaha to a sound engineer and the chances are that the product which springs to mind will be a mixing desk, a power amplifier or an outboard unit such as a digital reverb. But in the world at large, there is an equally good chance of the topic turning to pianos, trombones or even motorbikes. About the only thing that can be said for certain is that the product is almost invariably well designed, well made and well supported.

While Yamaha certainly has a broad product range, it also has an acute understanding of the markets in which it operates. Consoles like the PM4000 and the new PM4000M monitor desk could never be created by a 'jack of all trades' or some faceless corporation that had no understanding of its customers.

In reality, Yamaha's apparent diversity is a little misleading. The Japanese company started making musical instruments in 1887 and has now been involved in the pro audio sector for several decades.

Yes, there is a separate company that makes motorbikes and another that - snigger, snigger, makes bathroom suites for the home market, but by any reasonable measure Yamaha is something of a specialist.

The concept of specialisation within a broader structure also permeates Yamaha's distribution arrangements. In the UK, musical instruments and pro audio are handled by Yamaha Kemble Music (UK) Ltd, one of the earliest Japanese joint venture companies established in England.

Messrs Kemble and Ito are joint managing directors. It was actually Andrew Kemble's father that instigated the connection with Yamaha more than 25 years ago, his grandfather having founded the Kemble Piano Company as a manufacturer after the First World War.

"In the autumn of 1967 the Kemble Piano Company approached Yamaha to ask if they could distribute their electronic organs," explained Andrew Kemble. "Quite a few Kemble piano customers were also selling organs. Having asked them which organ company we could tie up with, they said the



Yamaha's Milton Keynes facility.

industry was dominated by American manufacturers who all had distributors or subsidiaries but there was this little company in the East called Yamaha that looked particularly interesting."

Agreement was struck and the first organs were delivered that year. In 1968, Kemble moved from London to Milton Keynes where it remains today, although it moved to purpose-built premises in 1984.

"In 1970, Yamaha took a minority shareholding in the company and it became a joint venture, continued Andrew Kemble. "At this point Yamaha pianos were added to the product mix; synthesisers, guitars and drums followed around 1972. "The next significant date is 1984 when, following rapid expansion, the company needed to be refinanced and restructured."

Yamaha made 'major investment' taking a majority shareholding in what became Yamaha Kemble. A separate company, Kemble & Co Ltd, began to make pianos for Yamaha. The Japanese manufacturer eventually took a majority shareholding in that company as well, which is now the European base for Yamaha piano making. In fact Kemble & Co has received a Queen's Award for Export, along with fellow Milton Keynes enterprise, amplifier manufacturer Jim Marshall.

Kemble says the perception of Japanese products has changed "enormously" over the years. Apart from the strong reputation Japanese manufacturers now enjoy for high quality, there is a high level of innovation. Yamaha uses a large amount of in-house designed and built LSI chips, the building block of today's digital products. Sale of chips to other

The new PM4000M

Available with 44 or 52 input channels, Yamaha's new flagship monitor board has the same four band parametric equalisation on inputs and output groups as the FOH PM4000. There are 22 group outs, of which 18 are mono and two are stereo; an increasingly popular inclusion. Each input has its own LED meter above the fader and this can be switched pre or post. There are also 22 main meters, the last four of which are also switchable to

a stereo pair, plus talkback and oscillator. There are eight VCA groups and eight assignable mute groups with mute safe switching. A few changes will be made between the prototype model currently in the UK and the production model. The colour coding on the master section will be changed to aid identification between the 16 individual outs and their equalisation sections. The VCA groups will be brought to the forward position and the 16 output faders moved next to the equalisation.

On the prototype, there is no separate group to stereo out but this will be fitted to the production model. There are currently two stereo faders on the stereo output and these will be changed for separate left and rights.

The UK price is anticipated to be 10-15% more than the PM4000 but this will depend on the exchange rate with the Yen.



Andrew Kemble, Yamaha's joint managing director.

electronics manufacturers is now a major business for Yamaha.

Pro Audio equipment joined the Yamaha Kemble product range in 1985. Although Yamaha as a manufacturer had developed a range of sound reinforcement oriented products from the 1960s onwards, it was not until 1985 that Kemble Yamaha formed a specific Professional Music division.

Pro Music is one of three principal sales areas, along with acoustic instruments and electronic keyboards, and Pro Music is itself divided into three areas: synths and hi-tech MIDI equipment, guitars and drums, pro audio.

Pro Audio is split into two again. One side deals with SR products such as the PM4000 and digital recording systems including the DMR8 mixer/recorder. The other side handles cassette-based multi-track recorders and other equipment which is distributed through musical instrument outlets.

In all, the Pro Music division accounts for around 25 members of the 100 Yamaha Kemble staff of which six are connected to pro audio. There are also central resources, such as sales support and service which are shared with other departments. As a marker for 1985, the Yamaha R1000 digital reverb had been around for about a year. The upmarket Rev 1 was already released and the Rev 7 was about to overturn all assumptions about the price/performance of high quality digital reverberation.

Enter Alan Martin, sales and marketing manager for Yamaha Pro Audio products, a man with such intense devotion to the product line it has been suggested that his bones carry the company name, like sticks of seaside rock.

He freely admits that he used the Rev 7 as a 'foot in the door'. Such was the impact of the unit, some manufacturers accused Yamaha of 'selling the unit at a silly price in order to buy market share,' an allegation Martin refutes.

"Rev 7 was one of the most profitable products we ever brought out and that was entirely down to our technology and manufacturing base. It had nothing to do with wanting to buy a market," said Martin. He then reeled off Yamaha professional products which have become 'industry standards': the DX7 synthesiser, NS10 monitor speakers, PM3000 front of house console . . . The point he is making is that market share has been gained through offering the right product and at the right time.

Yamaha does not deal directly with end users, a situation which Martin says can create



S1520 S PA speaker.

Yamaha in Europe

Yamaha is currently changing its pan-European policy, having recently disbanded its European headquarters in London. Some of the functions of the HQ have been transferred to Germany and some to Japan. Others have been transferred down to national level companies such as Yamaha Kemble.

Alan Martin states that The Corporation of Europe, as was, functioned as "a support and consultative body that dealt with information and market intelligence gathering which helped us evolve marketing ideals in each country, towards a common goal".

"The structure of Yamaha is product led," says Andrew Kemble. "Therefore the Pro Audio section at Yamaha Kemble liaises with the Pro Audio section at Yamaha Japan. "This is a very clear way of working and enables us to operate quite effectively in a lot of distinct markets."

As a practical example the central London R&D centre - where the company liaise with end users over product development - is part of the Electronic Music Division in Japan. Yamaha Kemble looks after the day-to-day administration because of its location but the central focus is controlled from Japan.

Martin: "The UK is considered a source not just of technology but also the creative source of many techniques. All you have to do is look at the influence of British producers on artistes across the world and you can understand why a Japanese manufacturer would want a British facility." The UK R&D centre is the only one in Europe and is unaffected by the dissolution of the European headquarters.

Unlike musical instruments, which are produced in regional varieties, the pro audio products are basically global. This includes software which may have been developed at the request of a specific client such as the BBC or Deutsche Grammophon (who have around 50 Yamaha DMC1000 digital mixing consoles) but will later be made available world-wide.

problems when dealing with an upper echelon of customers who expect a level of service many dealers are not geared up to provide.

"So we have to try very carefully to and maintain direct contact with our important customers, despite the fact that we have neither the responsibility or the right to take on the role of the dealer. However, we work closely with many of our dealers and we help out, although theoretically they should look after all of the customers."

To that end, Yamaha Kemble carries more than 16,000 different spares and several thousand product manuals. Yamaha Japan carries more than 3,000 spares but the UK operation can handle the vast majority of requirements.

It also runs help-lines for end users and there are people who spend most of their time in equipment-lined rooms, talking callers through operating routines and answering letters. "We

regard approachability as a priority. No customer, dealer or manufacturer is perfect and if there is a breakdown in communication it can look as if Yamaha doesn't care. Nothing could be further from the truth," explained Alan Martin.

"As a result, the Yamaha sales team spends a considerable amount of time in the field and is careful to form relationships with dealers who have the resources to back up the product they sell. Compared to the number of MI oriented hi-tech dealers in the UK, the number of Yamaha professional dealers who handle large scale installations and products like the PM4000 console is understandably small. But these dealers have completely different needs and Yamaha Kemble mirrors this in its own approach.

"We've an awful lot of product that sells fairly regularly but we may also sit on a stock of 50 power amps for two or three months and only sell a handful of them. Then, one month someone will want 60 power amps. We had to build up stock to meet that need. I would be shooting myself in the foot if I told someone that they had to wait five months before they could complete an installation."

As Martin speaks, he points a hand down lane D of the Yamaha Kemble warehouse in



The NS10 studio monitor.

Yamaha Acoustics

Much of the development work that surfaced in the Rev 7 came out of a computer model made by Yamaha Architectural Acoustics division to enable it to replicate acoustics arising from the geometry and construction materials within venues.

It was this design programme that became the basis for the chip in the Rev 7. So if the early reflections of the reverb unit sound good, it is probably because they are based on real-life venues.

Japan pays a great deal of attention to sophisticated sound systems and acoustic design, whether the venue is a theatre, wedding hall or just a large karaoke bar.



Alan Martin, sales and marketing manager.

Growing the Market

Yamaha Kemble's annual turnover is between £40 and 50 million, and the company estimates that 25p in every pound spent on musical instruments in the UK is spent on Yamaha products. This calculation includes the sale of instruments like violins, an area where Yamaha Kemble does not offer a product.

Andrew Kemble comments: "When you have a market share of that size what becomes critical is trying to grow the market, not notching up one or two more market share points."

"As market leader, we invest enormously in education with Yamaha music schools, and through promotion and advertising. The more we grow music making the more we grow the need for a lot of our pro audio products."

No figures are available for pro audio. The company states that the existence of the home recording market makes it difficult to break down. However, turnover is believed to be well into seven figures.

Dream date

One of the leading Yamaha-oriented live sound rigs is the system used for the London Palladium production of Andrew Lloyd Webber's 'Joseph and the Amazing Technicolor Dreamcoat'. As well as being one of the largest sound systems in a West End theatre, the Martin Levan specified rig is almost exclusively Yamaha, as far as mixing, processing and amplification is concerned.

Front of House is a 40 channel PM3000, with a 32 channel PM3000 for sub-mixing the orchestra. Additional sub mixers include digital DMP11 and analogue MV802 rackmount units. A digital DMR8 is used to automate the mix of 22 Sennheiser radio microphones. It also provides mix automation triggered via MIDI.

Signal processing includes 12 Q2031A graphic equalisers, six D1030 digital delay lines and four SPX1000 multi-effects units. The system is powered by 15 PC40002Ms.

The installation was carried out by Dimension Audio.

Milton Keynes. Pallets of equipment loom overhead on steel supports almost two storeys high, accessed by computerised fork lifts. Next to the power amps sits a batch of Rev 5 effects units, a device that many people think is discontinued.

"They were actually discontinued and within three months we had such an outcry because people had spec'd them," explained Martin. So we maintained production and run off small batches. People still spec them so they obviously do the job."

The NS10 nearfield monitor is next. Martin reckons that around 120 pairs go out every month and the rate of sales has not dropped despite the fact the design has been popular for around a decade.

A massive block is taken up with British-built PA speakers, which Yamaha Kemble supplies to many of its European counterparts. This includes the S1520S, a design based on

Yamaha's Active Servo Technology. A combination 1x15 and horn loaded compression driver, the cabinet can be used without any subwoofer and still be equalised to provide a flat frequency response to below 40Hz.

Alternatively, the S1520S can be rolled off below 100Hz for greater efficiency and a subwoofer employed. The cabinet is made by Leech and the drivers are a combination of Celestion with Foster horns.

According to Martin, these very listenable units are aimed at the quality market occupied by a number of name brand sound reinforcement manufacturers. "We tend to go for the mid market rather than the lowest common denominator, otherwise we would lose our edge."

Andrew Kemble says Yamaha's reputation has been built over the years on quality and innovation. "One of our tasks is to move that

perception on into new areas like broadcast, where we are relative newcomers.

"We have to be highly responsive and quick on our feet, working closely with Yamaha Japan to make sure the products coming through are right for the market, are innovative, are presented properly, and backed up with a first rate after sales service."

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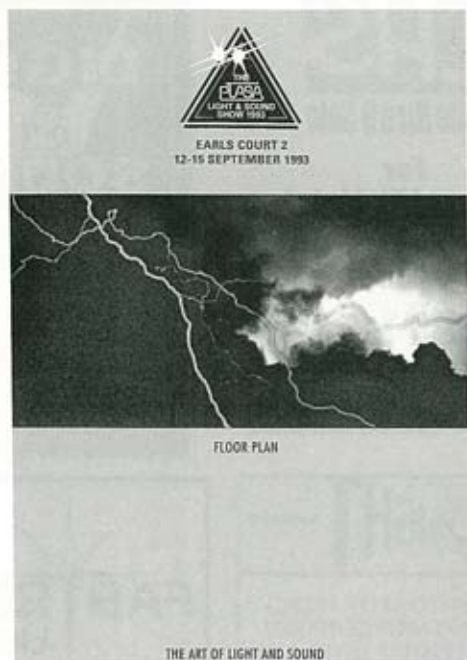
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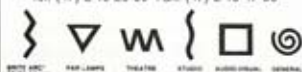
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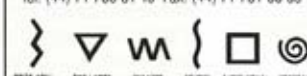
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VIEWPOINT

Paul Dodd on High Tech Without the Phobias

The Viewpoint in the November issue of Lighting and Sound International, and a subsequent letter in the January issue, combined with recent experiences, prompted me to address the following comments, observations and questions primarily to the discotheque oriented sections of our industry. This is where my own experience originates, but I believe the principles apply to all.

The intention is to add fuel to the current debate which hopefully will continue, thereby highlighting an area that clearly needs more attention and some action.

We are fortunate to be in the midst of an era of rapidly developing new high technologies, and are benefitting from its application in control systems. Unfortunately in our rush to embrace this sophistication we appear to have overlooked some areas that are vital to its usage.

The new generation of PC-based lighting controllers are extremely powerful and versatile allowing a multitude of different applications. Even though they may all be more than able to 'record a large set of numbers and play them back in the right order', those at the sharp end of lighting, the operators, know that this is merely a facet of good lighting and seldom sufficient in itself, whereas this facility found perfect application in the pre-recorded light shows I choreographed for the Martin Professional stand at the Lighting Dimensions show in Dallas.

I cannot accept this as the only function of a lighting control system in normal discotheque operation, and imagine that the same applies to many stage situations too.

I repeat my conviction that a computerised based system must allow easy and instant access to the lighting under its control whether through its own hardware or via interface to external devices. We must retain the spontaneity of expression and not kill the spark of creativity that separates human art from electro-mechanical repetition. Just how spontaneous can you be with a mouse or computer keyboard? - to say nothing of their vulnerability in the intemperate environment of a discotheque.

Does this highlight a gap between the developers and the operators of these systems and their perception of how a control system is to be used? Many developers rightly seek the assistance of, and input from, experienced operators, but often this appears to have influenced the functions within, as opposed to the operation of the control system.

The difference between functions and operation shows itself in other areas too. The suppliers and installers may well understand the functions of a control system and even teach an operator which buttons or keys to press, in which order to record scenes, environments, chases, etc. (yes, basically record and replay a large set of numbers), and even how to lay one chase on top of another.

Often however they have little understanding of



Paul Dodd has worked in the discotheque industry for 20 years, eight of which were spent designing and installing clubs in Norway. On returning to the UK in 1985 he joined Avitec as technical manager progressing to become Avitec's designer and AutoCAD pilot until his departure in 1992. Long associated with lighting design and operation, Paul Dodd has gained quite a reputation for his light shows and knowledge of lighting control and won the Lighting Dimension 'Lightshow of the Year' award in Orlando (1990). With experience that now embraces all aspects of effects lighting, Paul Dodd now operates as a freelance designer and consultant on an international basis.

why and when this may be advantageous, and therefore communicate only the technicalities and not the techniques of operation to the light jockey

who has to use the system. Joe Clubowner is then upset that he is not getting the standard of display he saw at the exhibition.

Even a well programmed system becomes repetitive if the operator either lacks the understanding, or is even 'locked out' of the ability to do more than merely replay what becomes no more than the large set of numbers.

We, as an industry, need to help the operator keep pace with the technology and the techniques involved in using it creatively. Pulsar have made a good start with their Masterpiece seminars and training video, although the latter makes only passing references as to why particular functions may or should be combined.

With the use of instruction manuals, many suppliers and installers are able to teach the how, but rarely is the why, and as a result the 'what-effects-you-can-create-when' explained. Would it not make sense and help to raise the overall standards of our industry for PLASA or BEDA, or a combination of the two, to run courses for our light operators to teach them the techniques of lighting - rather than the technicalities of individual controllers?

The ABTT have recognised the need and the advantages. Why can't we? After all Joe Clubowner often spends more than the cost of a Rolls Royce on his lighting; surely he deserves a qualified driver.

PC-based systems, such as the excellent ShowCAD, for example, are definitely the way of the future. But what use are they if through lack of understanding we are only using part of their powerful capabilities.

Technophobia is the fear of technology. The best weapons against fear are knowledge and understanding.

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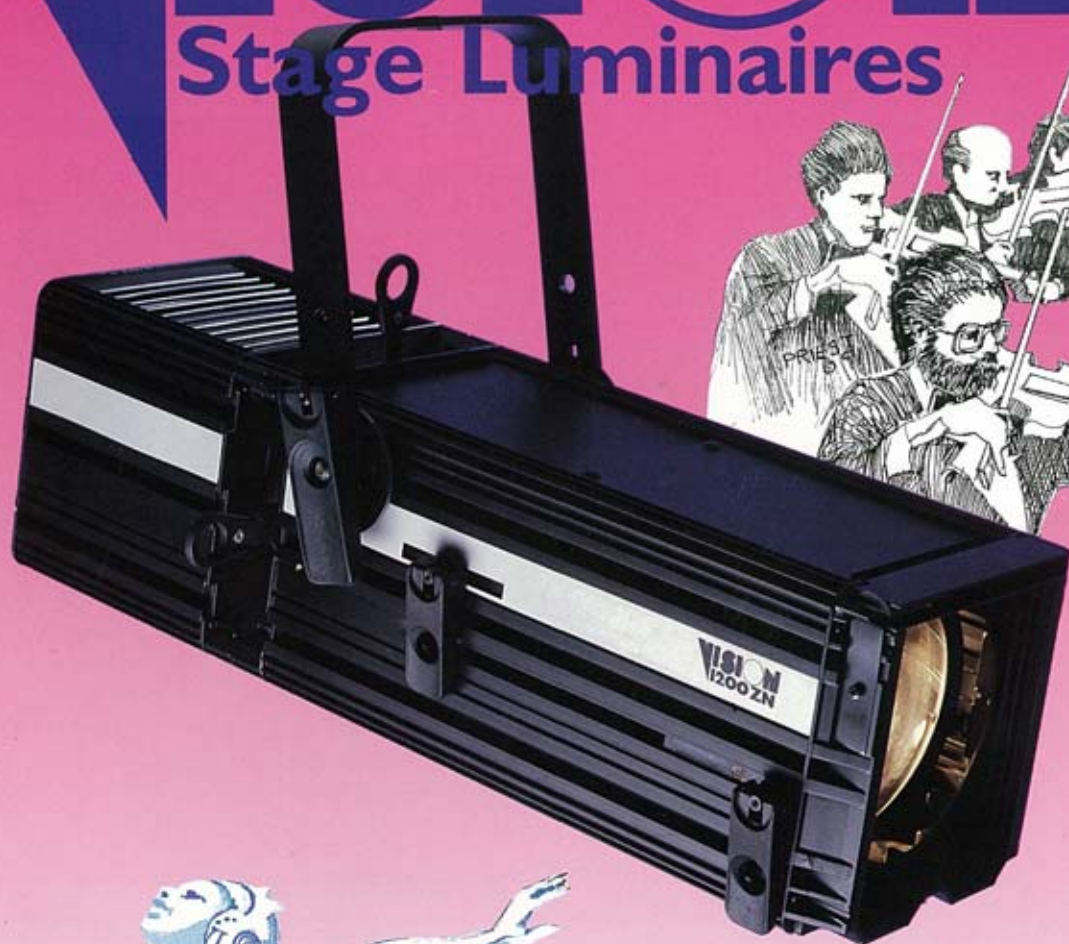
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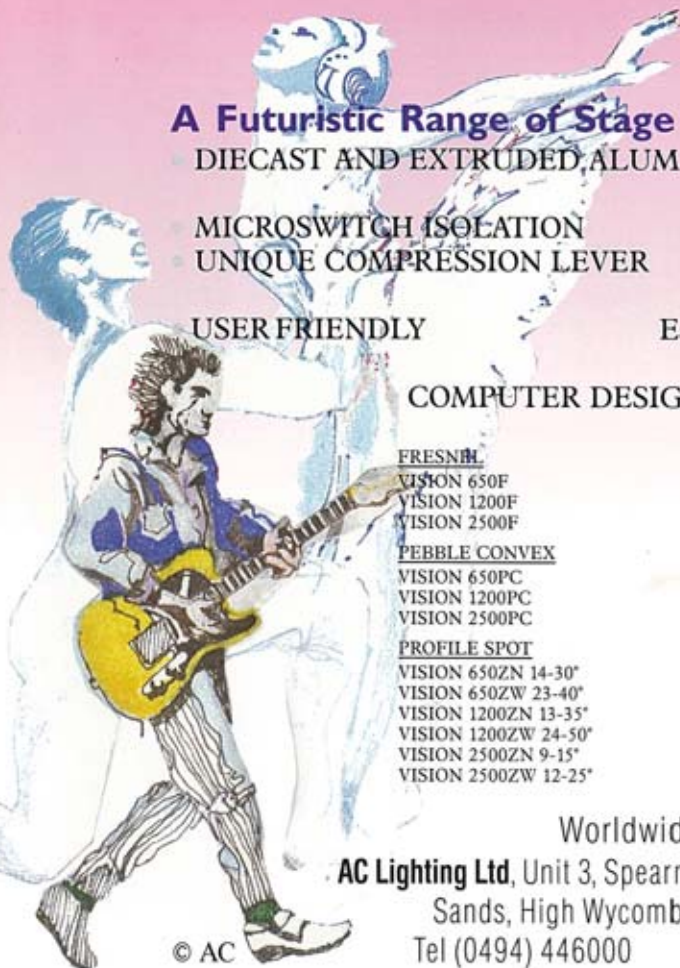
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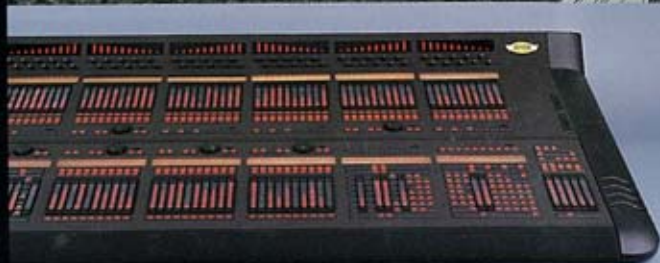
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