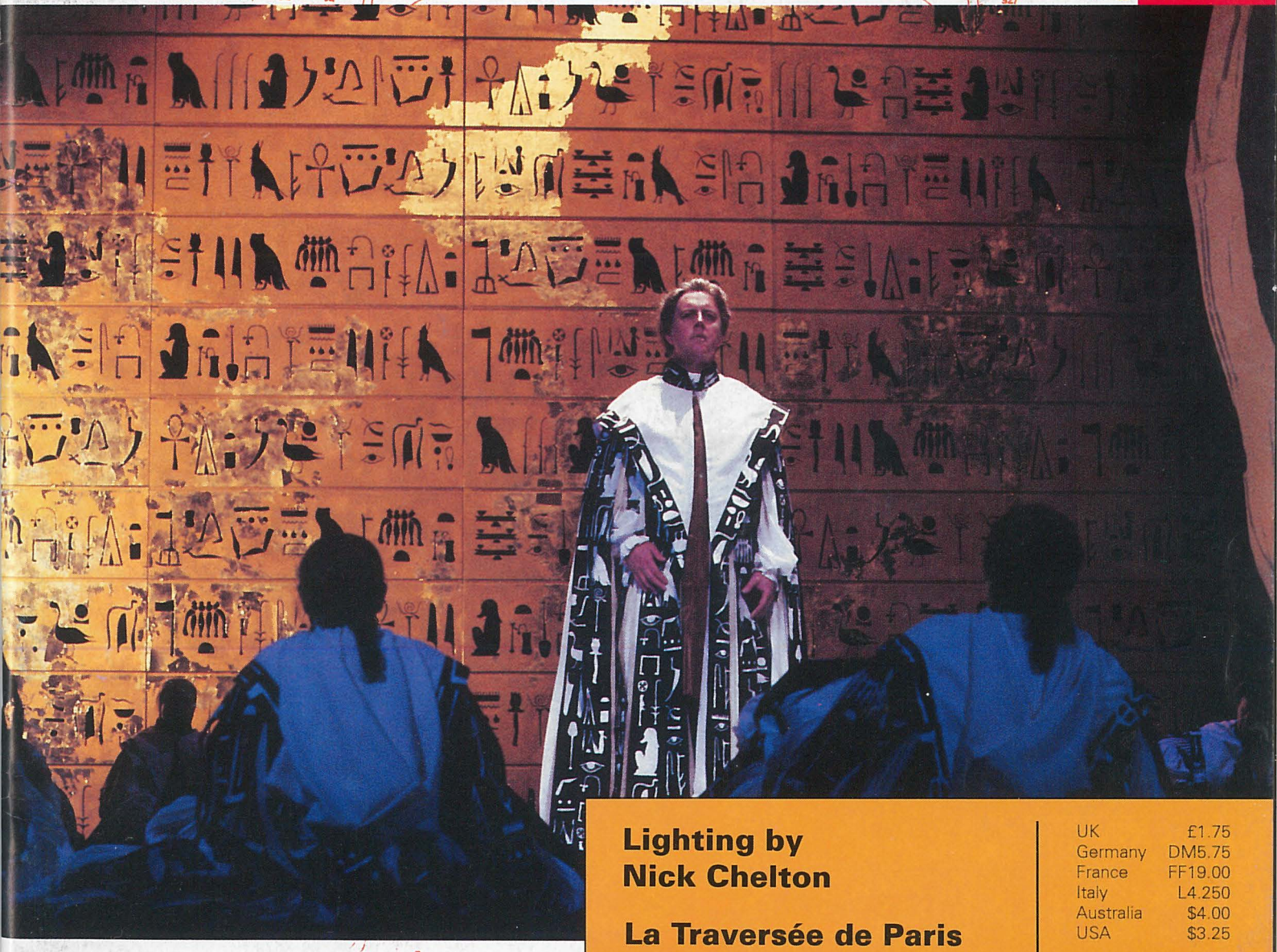
CUE INTERNATIONAL

THEATRE
OPERA
DANCE
FILM
TELEVISION
CLUBS
CONCERTS



Lighting by Nick Chelton

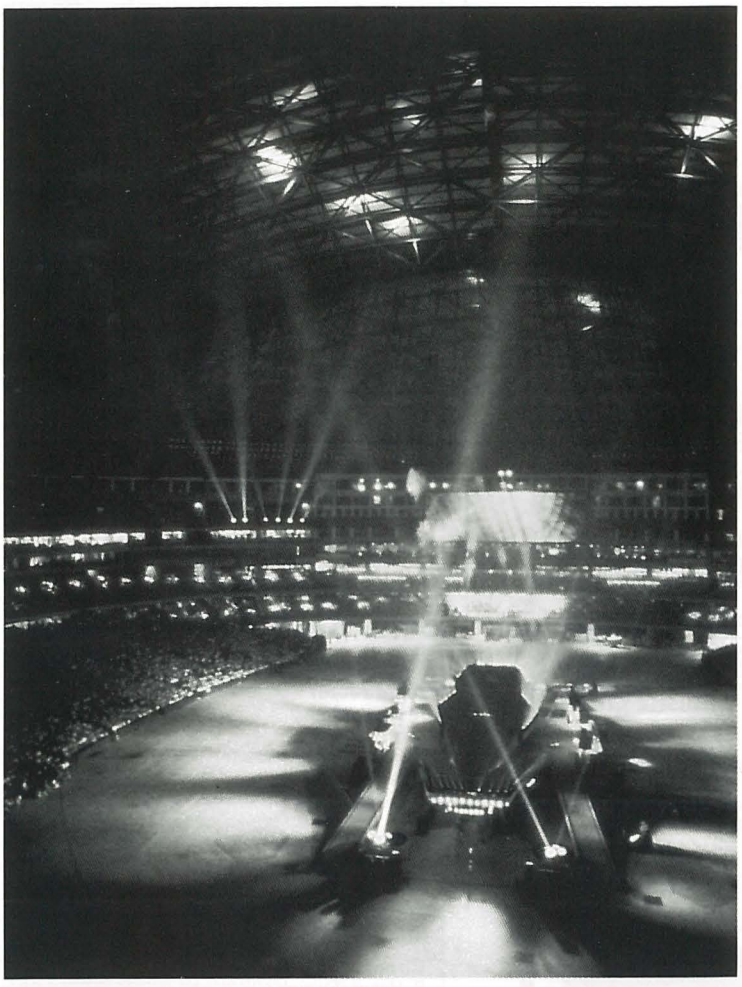
La Traversée de Paris

UK	£1.75
Germany	DM5.75
France	FF19.00
Italy	L4.250
Australia	$4.00
USA	$3.25

JANUARY/FEBRUARY 1990


VOYAGER
8.5 million beam candlepower in spot
2.5 million beam candlepower in flood
Voyager
The lamp is Osram's 400 watt HTI with 70 lumens per watt, 5600°K, 250 hours life in a focused glass dichroic coated reflector.
Special features include a precision made space age technology ballbearing slide for accurate and smooth lens movement from spot to flood and a solid state, instant restrike ballast and igniter package that is lightweight, reliable and proven.
See the stars with the Voyager, at your nearest Altman Dealer or contact Altman Stage Lighting Co., Inc., 57 Alexander Street, Yonkers NY 10701. Telephone: 914-476-7987 or 212-569-7777.
What's in a name...Everything when it's Altman.
ALTMAN STAGE LIGHTING CO., INC.
EUROPEAN INQUIRIES:
A.C. LIGHTING
SANDS, HIGH BUCKS, ENGLAND
TEL : (0494) 446000
FAX : (0494) 461024
AMPTOWN LICHTTECHNIK GMBH
HAMBURG, GERMANY
TEL : (040) 64600440-45
FAX : (040) 641 2503
PROLIGHT
MADRID, SPAIN
TEL : 471 7099
FAX : (91) 471 9703
ZILZ CONCERTS
COLOGNE, GERMANY
TEL : 0221 583031
FAX : 49 221 584399

Guess Which Major Event Uses Strong Spotlights?



A. Rolling Stones '89 Tour

B. The Toronto Sky-Dome Opening

C. The French Bicentennial Celebration – Paris

If you picked "A", you're right. If you picked "B", you're also right. If you picked "C"... right again. The fact is, producers and lighting directors responsible for important events, regardless of how large or how small, pick the light universally known as the standard of the industry.

Performers even ask for Strong in their contracts because they know that quality and dependability are built in to every spotlight we make. Solid construction. Flat, even, edge-to-edge briteness. An incredible beam of light. For 40 years now, we've been the spotlight that all others are measured against.

Over 50 Strong Gladiators (above and right) were used at the spectacular Toronto Sky-Dome Grand Opening.

FOR EUROPEAN INQUIRIES :

U.K.
A.C. Lighting
Unit 4
Spearmast Industrial Park
Lane End Road
High Wycombe Bucks, U.K.
HP124J6
Phone: 494 439076
Fax: 494 461024

France
A.D.D.E.
14, Rue Gorges Deloup
69009 Lyon, France
Phone: 33 78 64 22 39
Fax: 33 78 43 42 51

HANOVIA/BALLANTYNE OF OMAHA
STRONG INTERNATIONAL
STRONG/SIMPLEX
Wholly Owned Subsidiaries of Canrad Inc.

"Follow With The Leader"

4350 McKinley St. • Omaha, NE 68112 • (402) 453-4444
TELEX 484481 • FAX (402) 453-7238

Cue International

The magazine of international design, technology, and business for the performing arts and entertainment industry.

Theatre Opera Dance Film Television

Clubs Concerts

JANUARY/FEBRUARY 1990 NUMBER 63

Publisher/editorial director
Patricia MacKay

Editor
Ellen Lampert

Associate Editor
Andrew P. Shearer

Theatre editor
Michael Sommers

Film and television editor
John Calhoun

Associate editor/industry and technology
William Intemann

Contributors
Robert Anderson, Marilyn August, David Fingleton, Ruth E. Goldberg, Glenn Loney, Owen Levy, Michelle LoScotto, David I. Taylor

Advisory Board
Michael Hall, Martin Moore, Richard Pilbrow, Joel E. Rubin, James Twynam

Design director
Betty Binns

Art director
Michael B. Burchill

Production manager
Dale Serena

Associate publisher/Advertising director
Jacqueline Tien

Business manager
Pedro Peralta

Circulation director
R. Harvey Swaine

Assistant circulation manager
Jane Lusaka

Please address subscription enquiries to:
Cue International
5 River Park Estate
Berkhamsted
Herts HP4 1HL
England
(0442) 876661 Fax: (0442) 872279

Annual subscriptions are £10.50 within the UK, £13.00 elsewhere. Airmail, outside of Europe, £17.95.

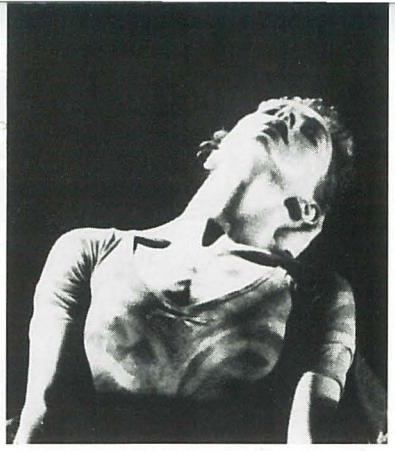
Cue International
Blanchard Works, Kangley Bridge Road,
Sydenham, London, SE26 5AQ England
(0) 1-659-2300 Fax: (0) 1-659-3153

Advertising and editorial offices:
135 Fifth Avenue
New York, New York, 10010 USA
212-677-5997 Fax: 212-677-3857

SOMMAIRE

CONTENTS

JANUARY/FEBRUARY 1990 / NUMBER 63



14

■

On the cover:
In the fall 89 production of *The Magic Flute* at the English National Opera, Bob Crowley's set comes alive under the lighting of Nick Chelton. Crowley's wall of hieroglyphics has a golden glow, achieved by the use of six Iris 4's with Rosco supergel 19 and 79.

●

En couverture:
Pour la production de The Magic Flute *à l'Opera National Britannique à l'automne 1989, les décors de Bob Crowley s'animent sous l'éclairage de Nick Chelton. Le mur d'hiéroglyphes de Crowley présente un brillant doré, réalisé grâce à l'utilisation de six Iris 4 à supergel Rosco 19 et 79.*

▼

Auf dem Titelbild:
Das Bühnenbild von Bob Crowley fur *The Magic Flute* im Herbst 1989 in der English National Opera wird vom Licht Nick Chelton zum Leben erweckt. Die Hyroglyphenmauer Crowleys beginnt mit Hilfe von sechs Iris 4's mit Rosco supergel 19 and 79 golden zu leuchten.

Cover photo:
RICHARD H. SMITH / DOMINIC PHOTOGRAPHY

●

Dans ce numero:
Nick Chelton réalise les éclairages pour la danse, le théâtre et l'opéra au Royaume Uni; trois nouveaux espaces multi-disciplinaires s'ouvrent au Centre Culturel de Hong Kong; un regard sur le passé, le présent et le futur de l'AVAB Elektronik AB; et une promenade à travers cinq siecles d'histoire Parisienne dans La Traversée de Paris.

▼

In dieser Ausgabe:
Nick Chelton beleuchtet Tanz, Theatre und Oper auf den Bühnen Grossbritaniens. Drei neue vielfach verwendbare Bühnen im Hong Kong Cultural Centre, ein Blick auf Vergangenheit, Gegenwart und Zukunft der AVAB Elektronik AB, und ein Gang durch fünf Jahrhunderte Pariser Geschichte in *La Traversée de Paris.*

INHALT

■ FROM THE EDITOR
● LE MOT DE LA REDACTRICE
▼ REDAKTIONELL

MAN AND MACHINE

From the opera houses of Great Britain to the Broadway stage, lighting designer Nick Chelton has lit productions ranging from the operas of Mozart to the one-woman vehicle, *Shirley Valentine*. In discussing Chelton's work, David I. Taylor of Theatre Projects Consultants discovered that Chelton's success may be due as much to his skill in managing people as in controlling light. "Not least he is a designer who manages people as well as lights," says Taylor, who watched Chelton at work during rehearsals for the English National Opera production of *The Magic Flute*. "It is a skill...that allows Chelton to cross over between the high dramatics of British operatic production and the commercial world of London's West End and Broadway."

Crossing over traditional boundries in French theatre is AVAB, the Swedish manufacturer of lighting control boards, such as the new Expert, which Robert Juliat recently installed at the Comédie Française in Paris. In fact, Juliat has installed AVAB equipment throughout France, from the Avignon Festival to the new Pyramid at the Louvre. San Francisco-based writer Dana Dubbs looks at the history of AVAB and its future business outlook in the changing European marketplace, while lighting consultant Bob Anderson provides a technical evaluation of both the Expert and Viking boards.

Crossing the Pacific Ocean to Hong Kong, associate editor Andrew P. Shearer takes us to the Hong Kong Cultural Centre which opened its doors on 5 November 1989. Looming dramatically on the Kowloon waterfront, this multi-theatre space is designed to bring the best in international performing arts to Hong Kong. The National Theatre's *Hamlet* was among the inaugural productions in the Centre's Grand Theatre, designed specifically to accommodate touring productions.

Meanwhile, backstage at the Palais Garnier, our American-in-Paris Lisa Nesselson visited the workrooms of Daniéle Fouache, who for the past eight years has been busily at work in an attempt to identify and catalogue the collection of jewels designed for Paris Opera productions. The job is so vast that Nesselson remarked, "on slow days, when French novelist Gaston Leroux's Phantom of the Opera was roaming the Palais Garnier with no pressing vendetta to attend to, the least he could have done was to give Fouache a headstart."

Other famous Parisian characters, from Danton to Chateaubriand, greet visitors at *La Traversée de Paris*, a five-century history of Paris-in-a-nutshell. Architect Patrice Noviant and a team of set designers, from both the theatre and film, have created a journey through Paris, from the banks of the Seine in the 16th century to a super-realistic 18th-century Palais Royal and a more abstract video-view of the 20th century. Perhaps Noviant's sense of his city's history brought him to celebrate its past in this exhibition at the base of the new white marble Grande Arche at La Défense.

Mark Loeffler and Bill Intemann report on new products introduced at the LDI89 trade show in Nashville, where the newest equipment and innovations were on display. But in the rapidly changing technological landscape we live in, we are constantly faced with the intricate — sometimes intimate, sometimes frustrating — relationship of man and machine.

From the time of Leonardo da Vinci when his advanced ideas outpaced the technology available to realize them, to today's times when technology has surpassed our wildest dreams, and we need at times to tame it, man and machine have constantly challenged each other. As we enter the 1990s, the relationship of man and machine will more than ever shape the way we work, and the manner in which man and machine communicate will determine the solutions to our future challenges.

Ellen Lampert

GERMANY/MEDIA

COLOGNE ANNOUNCES PLANS FOR A COMMUNICATIONS CENTER

The West German city of Cologne is getting ready for the 21st century. A former freight train yard on the fringe of the city center is being developed as Media Park Cologne, a multi-million deutsche mark state-of-the-art information and communications facility projected to be ready for initial occupancy in mid-1992.

Media Park is a 50 acre lot of land, where investors can buy parcels to build their communications centers. The site will house a mix of companies that provide complementary services. Occupants will have rental access to on-site radio, video, and film studios with ancillary sound and editing facilities; offices and dressing rooms; studios for computer animation; a music recording plant, and a professional theatre. There will also be educational and research departments incorporating a film archive.

The park will have something for everybody, according to producer Bernd Schaefers, who with Dr. Utz Ingo Küpper, is managing the project. They plan to offer the users of Media Park the most advanced technologies. "We will put up such a solid system that no one could install for themselves because no one could do it in this size," says Schaefers.

The media park, being designed along the lines of a world teleport, will provide fibre optics and I.S.D.N. systems as well as links to big data stations. Besides, they will will offer training, business services, and personnel. "This will give smaller companies access to things that only bigger companies can have," says Schaefers.

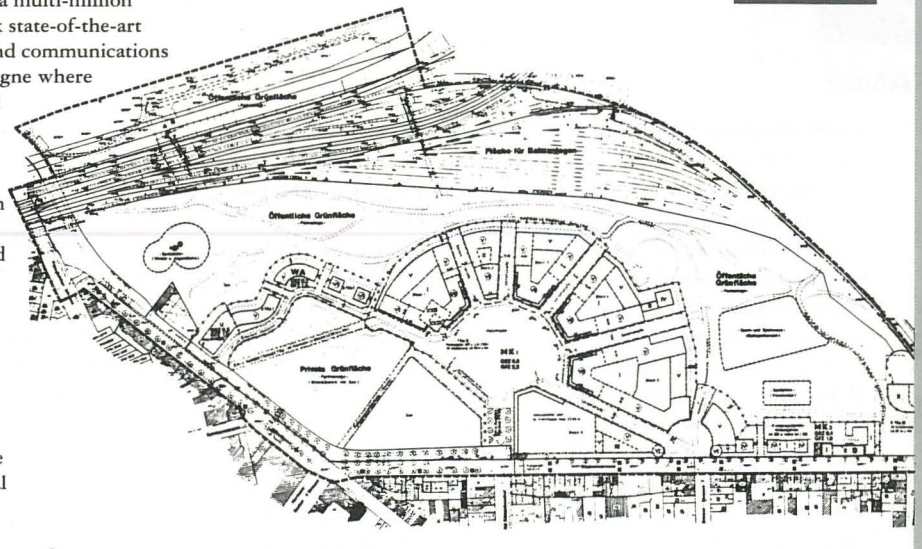
The impetus behind the media park was the City of Cologne itself which, seeing the potential for an under-utilized asset, purchased the land from the German railroad and then initiated development plans. This Rhine River city, already something of a communications center with five radio and television stations, 80 independent film and television production companies, and 130 publishing houses, is hoping to consolidate its place internationally with the media park, which when completed, will be the largest on the European continent.

Some three to four thousand people will be employed by the various Media Park companies and some 20,000 visitors a day are anticipated. In fact, the developers envision something of a miniature city with residential housing for about 1,000 people also being built as part of the park. Other amenities include a 12-screen cineplex and concert facilities.

Designing Media Park Cologne is architect Eberhard Zeidler, head of Zeidler Roberts Partnership of Toronto, winner among 103 entrants of an international competition. Though blocks ranging from 10,000 to 35,000 square meters will be sold to individual investors, all must adhere to the overall look proscribed by the architect.

When all the facilities are built and fully equipped the price tag for Media Park Cologne will be way over one billion marks.

OWEN LEVY



Media Park is a multi-million deutsche mark state-of-the-art information and communications facility in Cologne where occupants will have rental access to on-site radio, video, and film studios with ancillary sound and editing facilities; studios for computer animation; and a professional theatre. It is projected to be ready for initial occupancy in mid-1992.

CUESHEET

JANUARY

Lightshow, National Hall, Olympia, London. 7 - 11 January. Contact: Decorative Lighting Association Ltd., Bryn, Bishops Castle, Shropshire, UK, SY9 5LE, 058/84658. Fax: 058/84669.

Paris International Lighting Exhibition, Porte d'Versailles, Paris, 12 - 17 January. Contact: Servcies Exposants, CFE-Neuble, 22 Avenue Franklin-Roosevelt, 75008 Paris, France. 1/40764500. Fax: 1/45637824.

FEBRUARY

SIEL90, Porte de Versailles, Paris. 17 - 20 February. Contact: Bernard Becker-Blenheim, 22-24, Rue du Président Wilson, 92532 Levallois-Perret, Paris. 1/47-56-50-00. Fax: 1/47-56-12-67. UK exhibitors: 1/727-1929. Fax: 1/727-0834.

MARCH

ABTT/Glasgow, Scottish Exhibition and Convention Centre, Glasgow, Scotland. 14 - 16 March. Contact: Ethel Langspreth, ABTT, 4 Great Pulteney Street, London W1R 3DF. 1/434-3901.

Arts Without Frontiers, Scottish Exhibition and Convention Centre, Glasgow, Scotland. 14- 16 March. Contact: Conference Profile Ltd., 3/4 St. Andrew's Hill, London EC4V 5BY. 1/236-4938. Fax: 01/236-1889.

Musikmesse Frankfurt International, Frankfurt Fairgrounds, Frankfurt, West Germany. 21 - 26 March. Contact: Messe Frankfurt Ltd., PO Box 970126, 6000 Frankfurt 97, West Germany. 69/75750. Fax: 69/75756433.

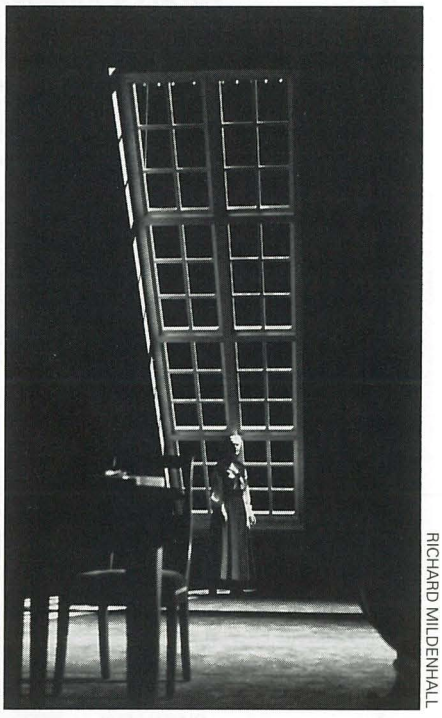
UK/LIGHTS

MOVING LIGHTS AT THE RSC

Chris Parry, lighting designer for *Les Liaisons Dangereuses* and *The Plantagenets* returned to the Royal Shakespeare Company's Barbican Theatre last September to light a new production of Ibsen's *The Master Builder*, designed by Richard Hudson and directed by Adrian Noble. Parry, who is currently teaching lighting at the University of California in San Diego, created a cold, Scandinavian world in his lighting design. Originally, the lighting inventory included a tracking HMI fresnel which pushed a high-intensity discharge beam through the large window in Hudson's simple but allegorical set. The unit described an arc behind the set and allowed for a strong and dominant key light to slowly sweep across the stage. The luminaire and carriage hand-winched and in one scene moved imperceptibly from one side of the stage to the other over thirty minutes or so. The effect was one of a developing scenario of inevitability, supported by the huge grandeur of the elements outside the window.

But late in rehearsals the 4kw HMI fresnel was replaced with a 5kw tungsten unit (from the RSC stock). Parry felt that the detailed work that he was doing elsewhere precluded the integration of the discharge source. Its movement was very important to the design. "It's alright in Europe where HMI's are used in groups or as the only source, but I just found it didn't mix with the rest of the detailed design. There is lot of Scandinavian verisimilitude — table lamp beams hitting the ceiling and such — the HMI just wouldn't merge, even with colour control filters. We needed the punch to make the moving key idea work." The 5kw fresnel has a single Lee 201 gel to harden its colour rendering.

DAVID I. TAYLOR



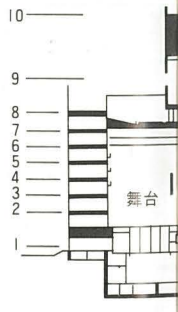
RICHARD MILDENHALL

■ In the RSC's production of *The Master Builder*, lighting designer Chris Parry used a 5kw tungsten unit to create a cold, Scandinavian world. His originial design included a 4kw HMI fresnel which was replaced by the tungsten unit because he found it didn't mix with the rest of his detailed design.

BOOKSHELF

Designing for the Theatre. By Francis Reid. A & C Black Ltd., 35 Bedford Row, London, WC1R 4JH, 1989.

After quite a wait, the grandfather of new British design, Francis Reid, has finally published a neat and concise textbook on theatre design that at last distills an approach to theatre that is democratic and productive, and that acknowledges both the need for creative illogicality and organisation in the design process. For the last few years, Reid has joked that he, "a lighting designer," was preparing a book on theatre design. But more than any other in the last twenty years of British theatre, Reid has constantly addressed and re-addressed the process of visual development in the theatre regardless of specific



1

JAPAN/ARCHITECTURE

A TOKYO RENAISSANCE

"Japanese people's closets are full, and their stomachs are full. People need spiritual richness as well as materialist affluence." These are the words of Uzuhiko Tanako, general manager of the Tokyu Bunkamura, a ¥21 million (US $160 million, UK £94 million) cultural village built by the business conglomerate, Tokyu Group. Tokyo has entered into something of a cultural renaissance, with the 2 September 1989 opening of the Bunkamura, and the planned October 1990 opening of the Metropolitan Art and Cultural Hall.

The Bunkamura is a huge complex covering 13,661 square meters of land. It consists of two halls — the 2,150-seat Orchard Concert Hall, and the 747-seat Theatre Cocoon — two movie theatres, a museum, a recording studio, and restaurants and shops. Architectural supervision is by Ishimoto Architect Design Office, with lighting consultant, Jo Nagahara & Associates, and design consultants, Sho Kimura and Kiyoteru Ishii.

The Orchard Hall is a shoebox-shaped auditorium with swept back balconies. The stage is 16.5 meters deep with a 24.5 meter grid and a proscenium with a maximum height of 10 meters and 16.4 meters wide. It is essentially a concert hall with an orchestra shell. However, standard stage machinery, supplied by Morihei Stage Construction Co., and Sansei Yusoki Co., and a 425-channel computerized dimmer system, supplied by RDS Corp., has been installed. When the hall opened in September with the Bayreuth Festival's production of *Tannhäuser,* critics commented on the rich acoustics. "From the start of the first note," wrote Miyoshi in *The Tokyo Newspaper*, "I was surrounded by sound as

discipline.

As both a 'doer' and a teacher the author is more than qualified to expound the role of design in the theater experience and Reid draws from an enormous base of research and experiment over the years. Thus the book, rather than attempting to teach "theatre design — the art" examines closely the whole design process, beginning with the role of the designer as a member of the creative team whose job it is to visually interpret a text or score with an environment that supports the performers.

To achieve this active and dynamic role the designer must understand his or her medium. Reid continues with a short overview of performance space types, illustrating his categories with excellent examples from around the world, both in photographs and in those fascinating exploded isometric views of Richard Leacroft.

After examining visual style and the relationship of realism and internal consistency to a designer's approach to a text, Reid jumps straight in with what many consider to be the core element of good design — space and time, the concepts of movement and manipulation of the theatre world during a performance. Equal weight is given to setting and the less concrete component, lighting.

Reid then continues with discussion of the practicalities of design on stage, including scheduling, budgets, building regulations, and the ubiquitous problem of sightline. The complexities of touring are also sensibly discussed, before the author addresses the design process.

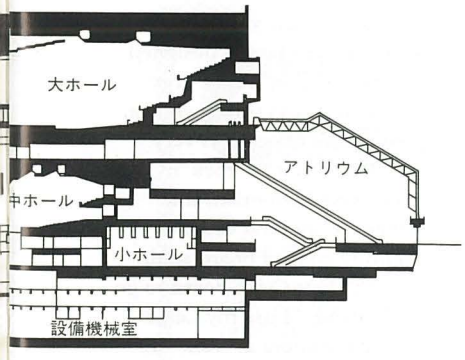
This chapter, which deals in detail with the normal scheme of designing for a production, is the most useful as teaching text since it draws together all the main monuments within design development and looks at the relationships between each step of the process. The "bauprobe" — the European practice of creating a full size mockup of a design on stage to test its feasibility and economic adaptability — is interestingly described, as well as the use of storyboards for design communication. Reid certainly has his finger on the pulse of modern British design.

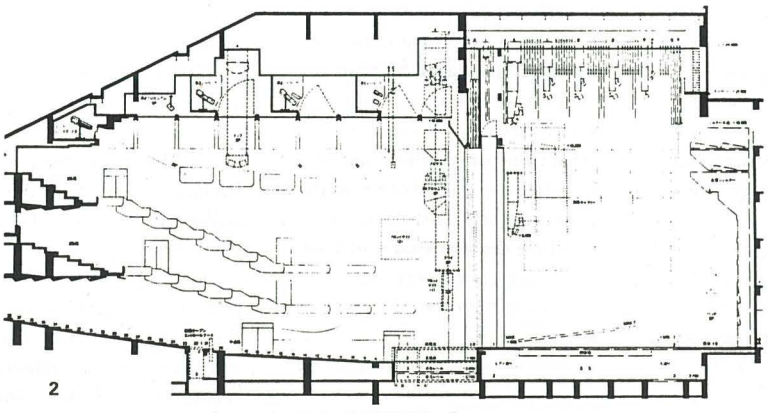
Later in the book he looks at the role of new technologies in the process of design, such as computer aided design, although Reid rightly stresses that computers can only aid design, not actually create it.

Designing for the Theatre concludes with a look at how one becomes a designer, comparing programmes in art schools and universities, and an agenda for developing a critical vocabulary. With a thorough glossary and a bibliography that rightly only lists Pilbrow and Reid under suggested lighting reading, *Designing for the Theatre* is a well-rounded and useful text book for those interested in the process of theatre design.

For those who often ask what it is that Francis Reid does, this book easily demonstrates that he has quietly done more to foster sensible design thought in British design over the last 15 years than anyone else.

DAVID I. TAYLOR





2

The 2 September 1989 opening of the Bunkamura, and the planned October 1990 opening of the Metropolitan Art and Cultural Hall has signaled something of a cultural renaissance in Toyko. Bunkamura is a ¥21 million (US $160 million, UK £94 million) cultural village with two halls — the 2,150-seat Orchard Hall (2) and the flexible 747-seat Cocoon Hall. The Metropolian Hall (1) consists of 4 different auditoria, ranging from a 300-seat thrust stage to a 1,887-seat concert hall.

rich and deep as breathing." The acoustic equipment was supplied by Yamaha Corp., and Sound Craft Inc.

The smaller Theatre Cocoon has a proscenium 12.7 meters high and 9 meters wide. The stage floor is entirely built of trap doors, allowing for flexible stage and seating configurations. The distance from the stage to the last row of seats is only 24 meters. Its lighting system has 328-channel computer dimmer control. A total of 600 CCT luminaires have been installed for the first time in Japan by RDS, who also provided the entire lighting system.

The Tokyo Metropolitan Art & Cultural Hall will consist of a 1,887-seat Concert Hall; a 850-seat proscenium theatre; a 450-seat flexible theatre; and a 300-seat thrust stage all accessed through a 28 meter high atrium. These theatres will be equipped with OCR (Optical Character Reader) lighting systems. This will be the first time that an OCR lighting system will be standard in a such a large facility. It will read lighting designer's paper work, and put it into computerized dimmer systems automatically. As lighting design is created on stage by the system, the designer can then adjust his actual design.

TOSHIRO OGAWA/APS

UK/DESIGN FACILITY

THE ROSCOLAB PAINT FRAME

On the 1st November 1989, Roscolab Ltd. of London opened a new facility for the scenic artist at their Sydenham, South London works — a large paint frame. This facility offers a large-scale, self-contained paint shop with one wall supporting a full width battened wood frame with an electronically-powered access platform.

The frame is 54' 6" wide and 25' high, with a centre apex section that extends to 30' high. Four wide gates open at the base to allow cloths and scenery to be easily loaded onto the hardwood batten frame. The rise and fall platform is the full 54' 6" in width and is 4' 6" deep. At the rear of the platform is a sensibly designed storage area which runs continuously across the work platform giving safe and useful storage on two levels. A solid upstand stops paints or buckets from being knocked or spilt and underneath power outlets with 13 amp plug sockets allow compressors and lighting to be used on the platform at any height. The ubiquitous paint-splattered radio will also benefit from this thought.

The platform travels smoothly and accurately to any height from ground level to the top of the frame and numerous safety devices are incorporated to ensure that the platform only moves when the gates are closed and clear and the operator is in full control. Up to six artists can use the platform at any time and the front edge lifts and folds back to allow wide scenery to be painted or artists to paint past their feet.

At floor level, a 60' by 35' scenery assembly and construction areas allows for unrestricted viewing of the full frame — a very important facility that is lacking on most other frames.

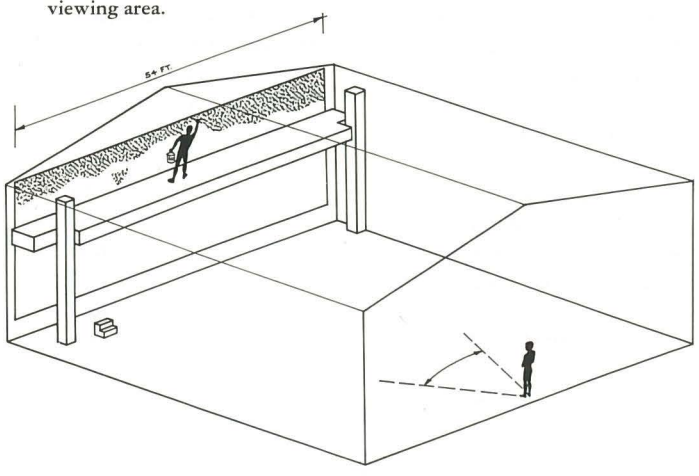
Managing director of Roscolab, Michael Hall, says, "We studied available facilities from a scenic artist's point of view and suspected that they had never really been consulted before about conditions they would consider ideal for development of a design on a full scale cloth or gauze."

The Paint Frame and the associated construction area have been in almost constant use since the launch. The users have been freelance scenic artists and set construction companies combining the use of the frame with painting flats, and theatres needing the unusual width of the frame. Long term lettings are being negotiated for the spring.

DAVID I. TAYLOR

■

The Rosco Paint Frame is 54' 6" long, 25' high with a 30' high centre section. The work area measures 60' by 35', providing an uninterrupted viewing area.



FINLAND/LIGHT

MODERN FINNISH CAVE ART

While primitive man drew animal shapes on the walls, modern man has more sophisticated means with which to decorate his caves. Witness the work of Finnish lighting designer Ekku Peltomäki who created *The Stream of Life*, an installation made of thirteen light sculptures, in a large cave 300 kilometers from Helsinki, near the border of the Soviet Union.

Commissioned by Finland's Retretti Art Center, the installation was based on Peltomäki's vision of poems by Eino Leino, one of Finland's most celebrated classical poets. "I wanted to recreate my visions of these poems using light on a combination of sand, water and stone, or in the air," says Peltomäki in describing the project, "and each sculpture is accompanied by text from poems by Eino Leino and music from the first and fourth symphonies by Sibelius."

Using the natural lighting of the 3,000 square meter cave as a background, Peltomäki used Thomas 1kw PARcans, Thomas PAR 64 and PAR 36 ACL's, Thomas PAR 36 pinspots, ADB and CCT 1kw profiles, 500w profiles with gobos, and 500w flood lights to create his light sculptures. Other effects were created with flicker candles, as well as a 6w argon laser. Main power came from a service building located 1,000 meters away.

Thousands of tiny serially wired white Christmas tree bulbs hidden in a sandy floor create the effect in *Growth*, one of the thirteen light sculptures. Slightly dimmed and running between two stone walls, the lights create a shimmering path leading to a cross of light in the distance.

The burst of colour in *Explosion* emanates from hundreds of meters of 3 mm florescent rope attached together at one end, then pulled tautly in many different directions. The effect is heightened by rocks coloured with florescent paint and light from 120 cm UV/Blacklight neon tubes.

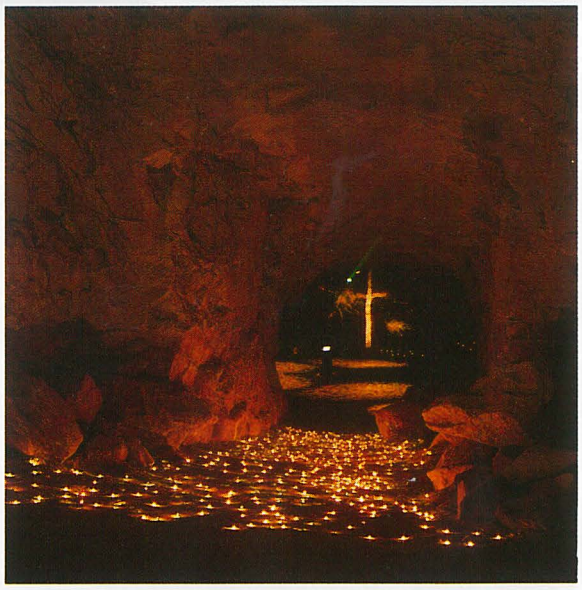
In an adjacent theatre, Peltomäki created an 8 minute laser art performance set to the Finlandia Symphony by Sibelius. His light show and special effects were considered a success, although he took a risk in using music so dear to the hearts of the Finns. Much of the show was pre-recorded, with two technicians at the controls of a Celco board.

A theatrical lighting designer in Helsinki, Peltomäki designed the Finnish production of Cats which ran from 1986-1989 at the Helsinki City Theatre. He has also designed lighting for touring dance companies such as Alvin Ailey and Paul Taylor on their visits to Finland, and he has designed operas ranging from Porgy and Bess to Verdi's *Requiem*. "My vision of opera is very similar to that for rock 'n' roll," says Peltomäki, the owner of the first Celco 60 lighting control board sold, and the first Celco board to go to Finland. "I use my Celco board for opera as well," he says, referring to his designs for the world premiere of *The Knife*, a modern opera by Heininen which was seen at the Savonlinna opera festival in Finland last summer.

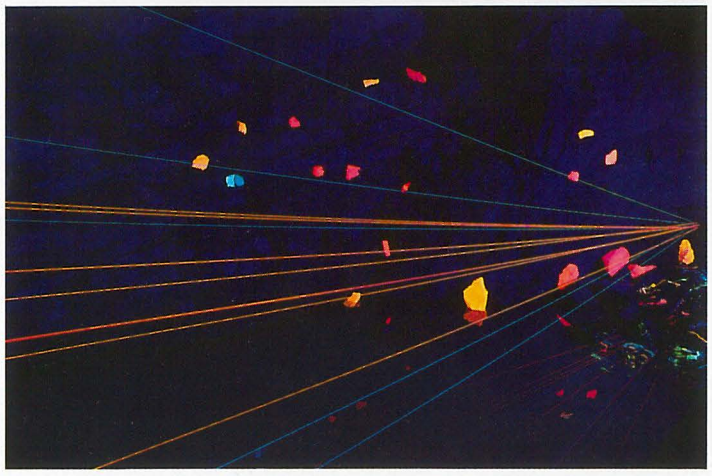
The Retretti cave installation was open for four months during the summer of 1989 and attracted 233,000 visitors.

ELLEN LAMPERT

Finnish lighting designer Ekku Peltomäki created *The Stream of Life,* a 13-part light installation in a cave 300 kilometers from Helsinki. *Growth* (1) used thousands of serial-wired Christmas tree lights hidden in the sand. *Explosion* (2) used hundreds of meters of 3mm florescent rope. Stones were painted with florescent paint, on top of which were blacklight neon tubes.



1

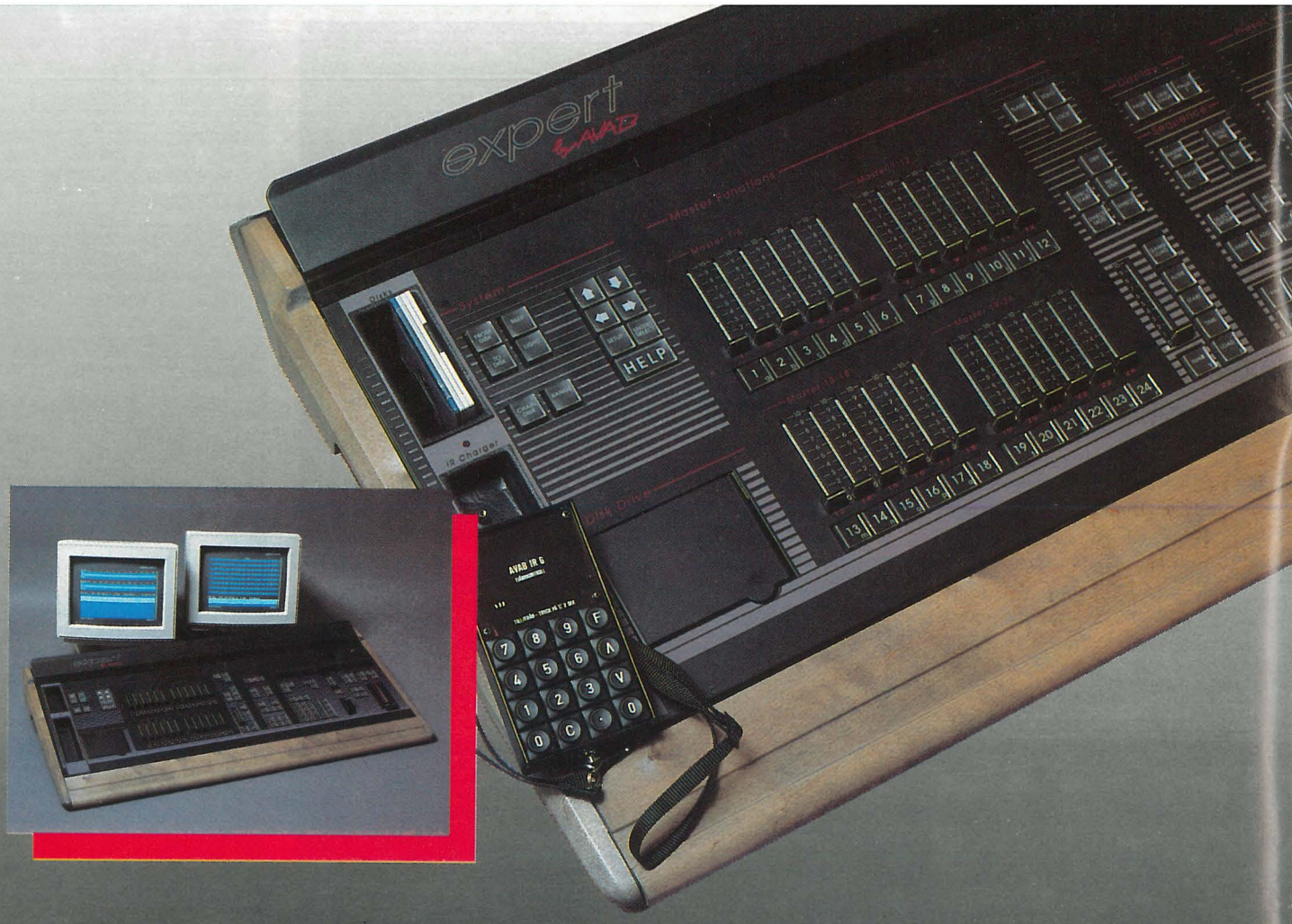


2

LIGHTS
Control Desk — Celco Series 2 30-channel
Avolites 30 CH/2kw dimmer rack
24 Thomas PAR 64 1kw
16 Thomas PAR 64 ACL's
3 Thomas PAR 64 Raylites
12 ADB 1kw fresnels
6 CCT 1kw Projector profiles
1 1500w effect projector

LASER & EFFECTS
4 Color Ray 2 Systems
Control Amstrad PPC 512
7w Argon laser American Laser Co. 909
5w Krypton laser American Laser Co. 909K
Optics Desk LM 10
7w Argon laser Spectra Physics 168
Optics Desk LMF 1

SOUND
Studiomaster 84 mixer
TEAC 4-track taperecorder
4 Bose 802
Yamaha 250w amps



the expert approach-
a lighting revelation

DMX512, AVAB, MIDI or ASCII, you name the language, the AVAB *expert* speaks it. *expert* is much more than just another lighting control system. It is the heart of any integrated performance system.

Video equipment, tape recorders and MIDI controlled equipment like sequencers and synthesizers all play important parts in today's live performances.

With *expert*, the lighting can be integrated with all of the other components. Taking further advantage of today's computer technology, you can load the lighting information down to a spreadsheet program in you personal computer for modifications.

expert has a number of modes of operation. Whether your previous board was an AVAB or another brand of lighting control system,

expert will give you the possibility to work the board exactly the way you used to.

expert is designed for all performance lighting applications, from the repertory theater to rock & roll world tours.

***expert* is available worldwide.**

expert by AVAB

AVAB Västra Hamngatan 1 411 17 Gothenburg Sweden
phone +46 31 179240 fax +46 31 111681 telex 27531 AVABGOT S

USA/CONFERENCE

SOVIET MASTERS AT USITT

The Soviet Union Center of OISTAT is sending a stellar delegation of designers, technical directors, and critics to the United States during April to deliver a series of master classes in scenic and costume design and theatre architecture at various teaching institutions in the US and at the annual conference of the United States Institute for Theatre Technology to be held in Milwaukee, Wisconsin 11-14 April, 1990.

Sponsored by the US Center of OISTAT and USITT, the delegation consists of Valeri Levental, chief designer at the Bolshoi Theatre and professor of design at the Moscow Art Theatre School; David Borovsky, chief designer of the Moscow Taganka Theatre and president of the Soviet Association of Stage Designers; Gedria Riashkute, chief costume designer of the Kaunas Musical Theatre in Lithuania; Vyacheslav Yefimov, technical director of the Moscow Art Theatre; Sergey Gnedovsky, architect and department head at the State Planning Ministry for Theatre Buildings; and Dr. Alla Mikhailova, a leading Soviet art critic and author of two books on stage design.

For information on the delegations' itinerary, the US Center OISTAT is at 119 West 57 Street, #911, New York, NY 10019. 212/757-5646. Fax: 212/307-5072.

USA/COSTUMES

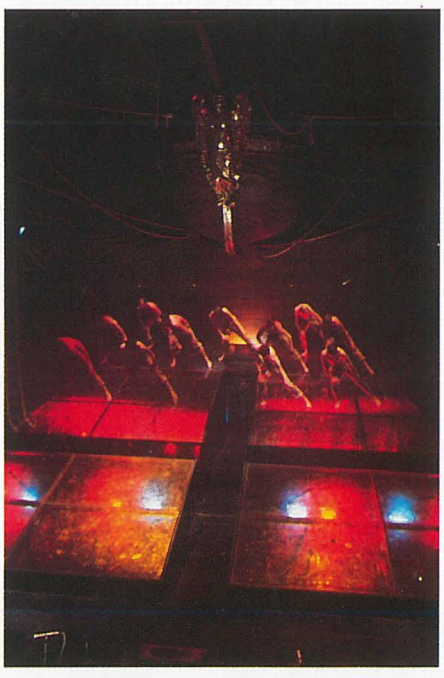
NAPOLEAN: FROM REVOLUTION TO EMPIRE

Turn-of-the-19th-century French haute-couture is on display at New York City's Metropolitan Museum of Art through 15 April 1990. *The Age of Napolean: Costume from Revolution to Empire* depicts period French costume from 1789 to 1815 — from the earrings in the shape of guillotines, and the blue, white, and red outfits inspired by the storming of the Bastille, to the Greek and Roman-inspired fashions brought back from the Egyptian campaign during the period of the French Consulat, to the court costumes and military uniforms of the Napoleanic Empire. Besides the 140 costumes, the collection includes jewelry, shoes, textile hangings, and paintings.

USSR/THEATRE

GLASNOST A-GO-GO

What could be more indicative of the cultural sharing going on between the East and the West than a Soviet rock musical? Well, wait no more, because the first Soviet rock musical is on the road. *Junon and Avos — The Hope,* having already played Paris and Amsterdam, is in New York from 5 January through 4 February. The musical, the adventures of a young Russian count who sails to San Francisco, is the work of director Mark Zakharov, librettist Andrey Voznesensky, and composer Alexey Ribnikov. Set designer Oleg Cheintsiss created a raked-acrylic floor lit from below with a number of different colored lights in order to create appropriate and various moods.



UK/PLATFORM

PROP MAKING AT THE COTTESLOE

In its continuing series of platforms looking at areas of technical work, on 17 January the Cottesloe Theatre at the National is hosting a workshop devoted to props.

On hand to talk about prop buying and prop making will be head of props at the National, Paul Neilson, and prop buyer, Yolanda Jeffries. Neilson and Jeffries will speak about such aspects of props as when it's appropriate to buy, and when it's appropriate to create a prop; how to work within a budget; how to create such ordinary props as fake food and furniture and such extraordinary props as the 24-foot high statue of David Neilson had to build or the fully operational, full-sized 1906 Oldsmobile he had to find.

Neilson and Jeffries will concentrate on the work done for the National's most recent works — *Bent,* David Hare's *Working on Racing Demon,* and the children's plays, *Whale* and *Tartuffe.*

Tickets for this event are £2.50. For further information, call the Box Office at 1/928-2252.

A ROYAL PRINCE IGOR

It's a production full of firsts. The first time costume designer Deirdre Clancy has worked at the Royal Opera House; ditto for set designer Liviu Ciulei. As well as the first time they have worked together as designers. And when Alexander Borodin's opera, *Prince Igor*, opens on 1 February 1990 at the Royal Opera House in Covent Garden, it will mark the first time since 1946 that the Royal Opera and the Royal Ballet have collaborated on a new production.

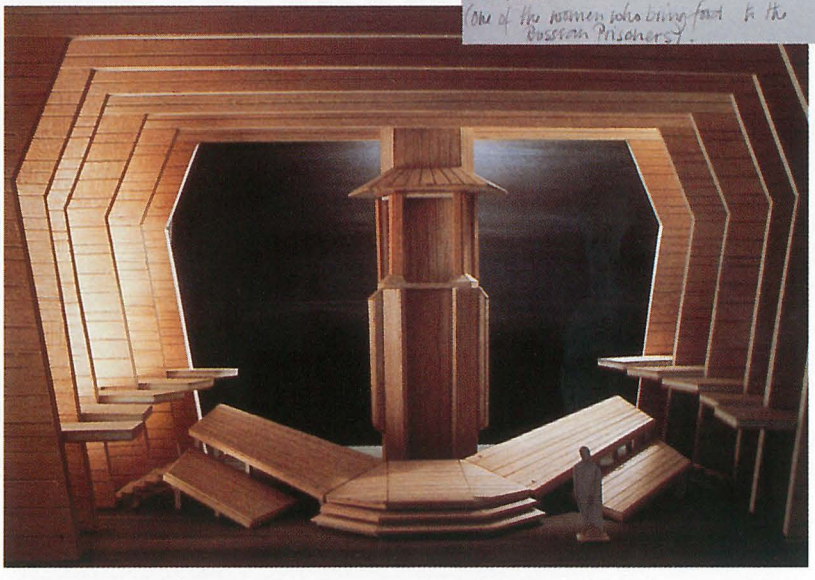
KATIE VANDYKE

KATIE VANDYKE

Also the first time that Clancy has worked with director Andrei Serban, P*rince Igor* will be the largest production she has ever designed. She has been shuttling between London and Rome supervising the construction of the more than 600 costumes *Prince Igor* requires. "The costumes for the principals, the ballet and the children are being built at the Royal Opera House costume shops," Clancy explains, "while the 500 costumes for the chorus and the extras are being made at Tirelli's in Rome.

"Italy may be the best country to make costumes. I like the Italian attitude toward design, their generosity in fabric, and willingness to use great colors." Once the costumes are completed, a team of fitters will come from Rome to put the final touches on at the Royal Opera House.

"I wanted a medieval look without it being a cliché," says Clancy, who looked at pictures of Russian folk costumes and then designed "her own version of the 11th century. The clothes are not copies of ethnic costumes, they were invented by me but they look convincing." Clancy used mostly natural fabrics, some with stencilling to achieve a patterned look.



"The set has a simple classical design," which according to Clancy gave her great freedom in terms of the costumes. Set designer Liviu Ciulei agrees that his set, like Clancy's costumes, has a Russian feeling without being too specific. "It could be a church, a fortified tower, or a bell tower," says Ciulei, the Roumanian-born director/designer, who has scheduled his trips to London around his teaching and directing duties at the New York University School of the Arts in New York City. "The set for P*rince Igor* has a modern, neutral look, with straight, angular lines, yet no historical or archaeological precision," says Ciulei, who specified unpainted English pine for the set which is being built by Bert Richman in Wimbledon. "The use of wood evokes 16th to 18th-century wooden churches, for a rough primitive spirit without specific folk details.

"Based on a ballad from the 14th century, *Prince Igor* is very much a 19th-century opera. It would be wrong to modernize it completely."

ELLEN LAMPERT

See the Difference.

Morpheus Lights

Morpheus Lights has achieved world-class status in the field of lighting production by supplying the PanCommand System — the most innovative and most advanced moving light system in the industry. Whether in concert touring, theatrical, or television productions, put this team to work for you and see the difference for yourself. Contact: Morpheus Lights, Inc., 1271 Alma Ct., San Jose, CA 95112, 408 295-4866

Morpheus and PanCommand — Combining Experience with Innovation.

A Magic Touch

BY DAVID I. TAYLOR

A bank of cyclorama floodlights and groundrows blast through a wall of Egyptian hieroglyphics, one of the more dramatic moments in Nick Chelton's lighting for *The Magic Flute* at the English National Opera. It is this daring that enables Chelton to push against English stage conservatism and build a lighting style that brings him to the notice of Britain's most innovative stage and opera directors.

In the fall 89 production of *The Magic Flute*, Bob Crowley's vast set sparkled under Chelton's direct and reflected light, with 2kw CCT silhouettes in a high, side front-of-house position reflected from a mirrorlex-type floor. Made of plastic with laser-etched cut-outs, the wall of hieroglyphics had a golden glow, achieved by the use of six Iris 4's with Rosco supergel 19 and 79 plus open whites, with a Svoboda light curtain, whose narrow beams provided a strong shaft of light that gave a bright edge to the cut-outs, giving the wall its metallic look.

Chelton is also not afraid to extend his designs outside of the realms of conventional theatre equipment. His vast design for the ENO's *Parsifal* included two massive low-pressure sodium streetlamps held securely behind the proscenium on each side. The orange lamps were powered up and covered with giant "socks" until the required cue. At the crucial moment of the opera, the light sources were revealed, flooding the stage with an intense, monochromatic light that washed out everything it illuminated. The whole scene was instantly changed in a way that was disturbing

■ LIGHTING ● ECLAIRAGE ▼ BELEUCHTUNG

NICK CHELTON HAS DESIGNS ON THE ENGLISH STAGE

■
Nick Chelton designed the lighting for *The Magic Flute* (left), for the English National Opera at the Coliseum in London. The Coliseum's large lighting rig is a far cry from Chelton's operatic beginnings with Kent Opera, but his skills were as present then as now.

●
Nick Chelton a créé les éclairages pour The Magic Flute *(à gauche) pour le English National Opera à Londres. Sa rampe d'éclairages est beaucoup plus importante que celle de ses débuts avec le Kent Opera, où son talent était déja àpparent.*

▼
Nick Chelton war der lighting designer für *The Magic Flute* (links) der English National Opera im Coliseum in London. Die Beleuchtungsmöglichkeiten konnten nicht weiter von denen entfernt sein, die Chelton in seinen Anfängen in der Kent Opera zur Verfügung standen, doch sein Können war damals so sichtbar wie heute.

■

PARcans figure strongly in Chelton's lighting rigs, allowing him to frequently revise the setting, particularly important when working with a repertory rig. They also provide a low-tech tool that is user-friendly. Chelton used 70 in his design of *The Magic Flute* (plot, right; 1, 2)

●

Les PARcans tiennent une place importante dans les éclairages de Nick Chelton, ce qui lui permet de modifier les effets fréquemment avec un plan de lumières de base. Les PARcans sont d'une utilisation très simple et facile. Chelton en a utilisé 70 dans son plan pour The Magic Flute. *(plan, à droit; 1, 2)*

▼

Chelton macht starken Gebrauch von PARcans, die ihm erlauben, häufig das setting zu verandern. Besonders wichtig wenn man mit einer Repertoire Beleuchtung arbeitet. Sie sind benutzerfreundliche low-tech Instrumente. Fur *The Magic Flute* benutzte Chelton siebzig PARcans. (plot, right; 1, 2).

RICHARD H. SMITH/DOMINIC PHOTOGRAPHY

1

and novel. The Royal Opera's *Un Re in Ascolto* benefitted from Chelton's developing interest in HMI, high wattage discharge lighting which flattened colour dynamics and simplified shadows on stage in a way that was impossible with conventional lighting. His use of Pani 2.5kw fresnels with automatic dimmer assemblies proved a new technique for broad brushstrokes of light.

PARcans figure strongly in Chelton's lighting today— for both *The Magic Flute* and *Parsifal* he used 70 PARcans in the rig. They permit him to flow with the tide of frequent revisions, particularly important when working with a repertory rig, as in the major opera houses. *Rusalka* at the ENO — a production very highly regarded by the opera and design fraternities alike — was lit in two hours per act.

When PARcans were first introduced into the UK, with the American productions of *Cabaret* and *Hair* in the late 60s, Chelton, then a 21-year-old lighting designer for the Northcott Theatre in Exeter recognized their potential. The dense beam, intensely bright punch, and ability to accurately push down colour from a distance onto the stage, offered him the chance to really control intensity and colour, and furthered his cause to sweep even the largest stage in strong beams of light. His lighting for the beach scene in the current West End and Broadway productions of *Shirley Valentine* uses one 5kw fresnel and a dozen PAR 64 narrow spots — all in open white.

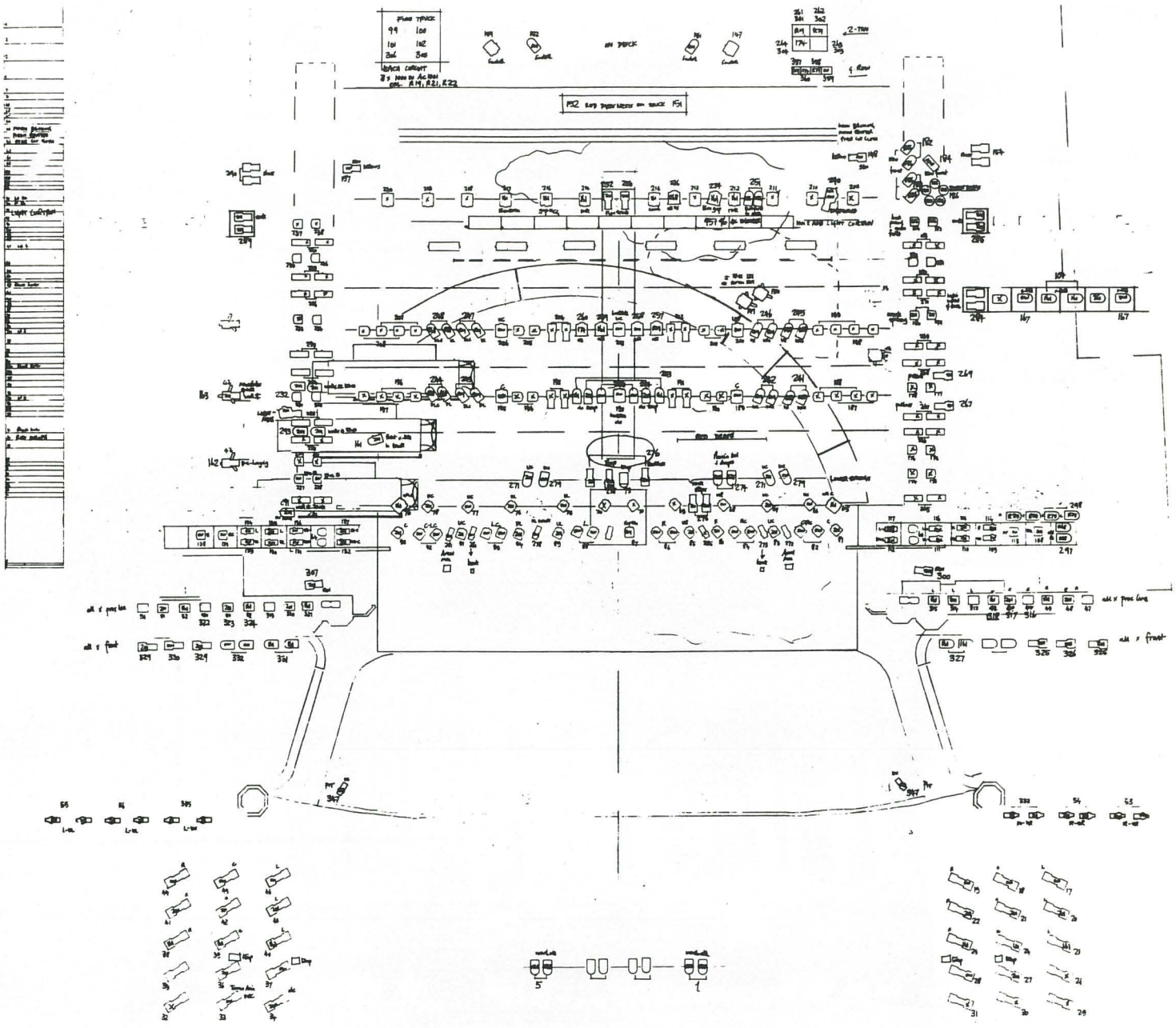
Chelton's favourite theatre is The Royal Exchange, Manchester— the "lunar module" structure that is free-standing within the vast exchange building in the North of England. Shows there are either nearly or completely in the round. "What is fascinating," says Chelton, "is that full visibility is not necessary because of the dimensionality of the space. I provide three sides of lighting with a rig that is offset by thirty degrees from the centre line. Small, punchy profiles and fresnels allow me to give good dramatic lighting from short

When PARcans were introduced into the UK Chelton, a 21-year-old designer for the Northcott Theatre, recognized their potential.

throws, but the space gently organizes the designs so that it is neat and tidy."

Until recently there was little movement between straight theatre and opera for either the audience or design teams, but the recent spectacular musicals in London have drawn away the showiest set designers from the field of opera. The good lighting designers have remained, and those, like Chelton, who have a strong reaction to the music have found the discipline of opera production rewarding.

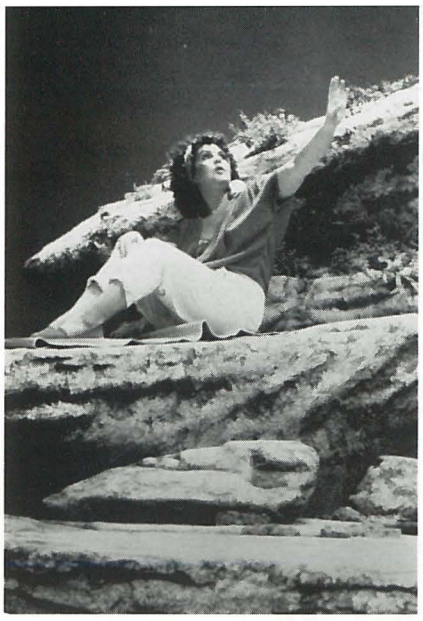
Chelton taught himself to read music. "Lighting designers were not allowed a score, because none of them could read it. We used to be given a libretto which we would mark up with our cues, most of which happened between the lines." Today, the designer, along with the other members of the creative team, receive scores interleaved with blank pages. Chelton develops his ideas away from the theatre by shutting himself way with the CD of a new opera, and storing up images for when he enters rehearsals. His notes are copious, and he scribbles over plans in order to assemble what is essentially a "shooting script" for what the audience will see. "Three-quarters of what will happen exists in note form before the



THE MAGIC FLUTE
LIGHTING NICK CHELTON
1.50
ENGLISH NATIONAL OPERA
LONDON COLISEUM

2

RICHARD H. SMITH/DOMINIC PHOTOGRAPHY



CATHERINE ASHMORE

1

2

CLIVE BARDA

3

■

Until recently, there was little movement between straight theatre and opera for either the audience or design teams, but the recent spectacular musicals in London have attracted the showiest set designers from the world of opera. Chelton (4) has designed for opera (3, *Un Re in Ascolto*), theatre (1, *Shirley Valentine*), and dance (2, *Ghost Dances,* Ballet Rambert).

●

Jusqu'a présent, il y avait très peu d'échanges entre les secteurs du théâtre et de l'opéra en ce qui concerne soit le public, soit les éclairagistes. Récemment, cependant, les grands spectacles à Broadway et dans le West End ont attiré les plus grands scénographes du monde de l'opéra. Chelton (4) a créé des éclairages à l'opéra (3, Un Re in Ascolto), *au théâtre (1,* Shirley Valentine) *et pour la danse (2,* Ghost Dances, *Ballet Rambert).*

▼

Bis vor kurzem gab es wenig Bewegung zwischem dem Theatre und der Oper, sowohl beim Publikum als auch bei den Designern. Doch die spektakulären Musicals der letzten Zeit haben ihren Reiz auf die Designer der Oper ausgeübt. Chelton (4) designte fur die Oper (3, *Un Re in Ascolto),* das Theatre (1, *Shirley Valentine)* und das Ballett (2, *Ghost Dances,* Ballet Rambert).

lighting session," insists Chelton. "I then offer the whole to the director in the theatre."

Chelton's lighting apprenticeship included a passage through the Theatre Projects stores and design office, an institution for many young designers in the late 1960s and early 70s. This helpful entry to the profession offered by Richard Pilbrow's hire operation has led not only to the uniformity of lighting style in London's West End today, but also to the perpetuation of the belief that handling equipment is a good way to learn lighting design. (A hypothesis not all agree with). "It was Pilbrow's aim to demystify lighting," Chelton remembers. "He separated the hardware from the software and used the former to process the latter."

After stints as assistant electrician at Nottingham Playhouse and chief electrician for the RSC's 1967 and 68 UK tours, Chelton returned to London "because I needed to be streetwise. It helped to have credibility in the relationships with those up the ladder, and those tucked away in the box."

The Royal Opera's *Un Re in Ascolto* benefitted from Chelton's interest in HMI, high wattage discharge lighting.

This desire to move on from electrician to artist was based firmly in Chelton's recognition of his own abilities. "Design was what I wanted, and after four years of freelance technical work I knew I had mastered the easy bit. I understood the basis for a working team in the theatre."

For Chelton, a new line of interest lies in the lighting of television drama. Having just lit his first straight television play on location he feels that he has more control over "the product" and that the framing elements allow for the exploration of better and more exciting lighting styles. The tapestry of dynamic lighting that he has learned to weave in the theatre is contained rather than restricted by television. Television to Nick Chelton allows for better management of his art, and thus, to better art.

KATIE VAN DYCK

4

A SELECTED NICK CHELTON DESIGNOLOGY

THEATRE

Royal Court: *The Farm, Life Class, What the Butler Saw, Bingo, Gimme Shelter, Byrthrite*
West End: *Three Sisters, The Bells of Hall, The Rear Column, Season's Greetings, Shirley Valentine, Curtains*
Broadway: *Shirley Valentine*
RSC: *The Way of the World; Love's Labour's Lost, Antony and Cleopatra, Julius Ceasar, The Wizard of Oz*
Royal Exchange, Manchester: *Heartbreak House, Don Carlos, Don Juan*
Lyric Hammersmith: *Medea*
Chichester Festival Theatre: *A Little Night Music*

DANCE

Ballet Rambert: *Prelude and Song, Ghost Dances, Berlin Requiem, Concertino*
Sadlers Wells Royal Ballet: *Wand of Youth, Gloriana*
London Festival Ballet: *The Seasons*
Cologne Tanz-Forum: *Cantata*

OPERA

Kent Opera: *Orfeo, Engene Onegin, Ulysses, La Traviata, The Beggars Opera, A Night at the Chinese Opera, Count Ory, Peter Grimes*
English National Opera: *Orpheus in the Underworld, Doctor Faust, Tosca, The Stone Guest, Pacific Overtures, The Barber of Seville, Rusalka, The Magic Flute, Eugene Onegin.*
Scottish Opera: *Don Giovanni, Oberon, Carmen, Iolanthe, Billy Budd*
Welsh National Opera: *The Makropoulos Case, Ernani*
The Royal Opera, Covent Garden: *Salome, Tannhauser, Samson, Un Re in Ascolto*

TELEVISION

Jericho/Channel 4: *Family*

THE HONG KONG CULTURAL CENTRE OPENS AS A WORLD-CLASS PERFORMANCE SPACE

The Jewel of Kowloon

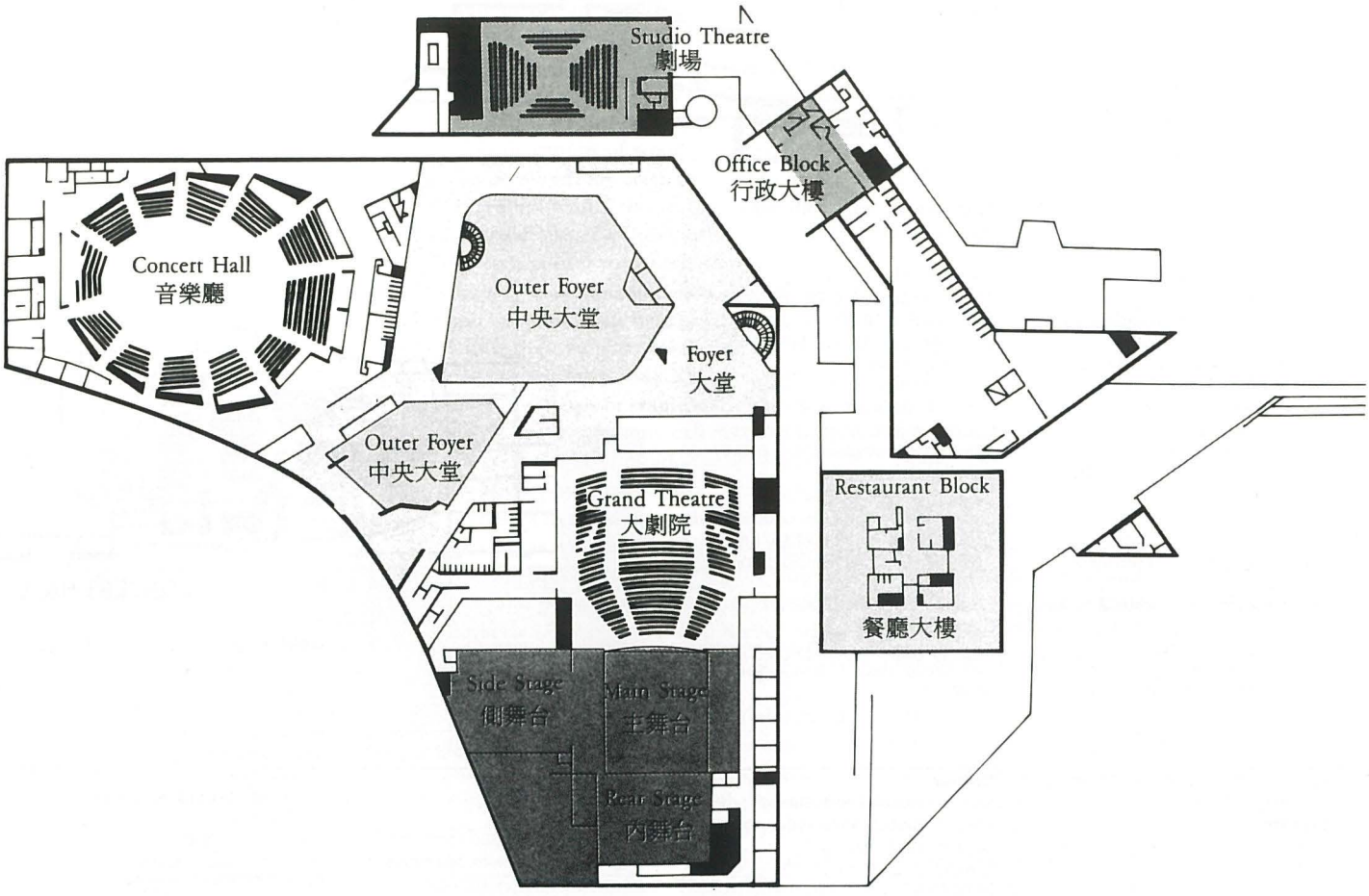
BY ANDREW P. SHEARER

Grand opera, high drama, world-class symphonies, and experimental theatre have come to the Far East in a big way. On 5 November 1989, the Hong Kong Cultural Centre opened with the sounds of Jessye Norman and the Hong Kong Philharmonic Orchestra. Towering over Kowloon's bustling waterfront, the Hong Kong Cultural Centre houses three different and diverse halls — a 2,200-seat Concert Hall, a 1,750-seat Grand Theatre, and a 300 to 500-seat Studio Theatre.

In the planning since 1975, this HK $600 million (UK £45 million, US $77 million) project is the design of Macau-native Jose Lei, director of the architectural services department, a branch of the Hong Kong government. According to supervising architect, P. L. Kwan, there was a group of over 50 consultants and designers responsible for the project. "We worked with acoustical consultants, theatrical consultants, structural consultants, various architects, on and on. Because the Centre was so long in the planning and building, the roster of the professionals involved was extensive." Technical director, Mark Taylor, who has been on board since September 1988 when he came from his post at the Hong Kong Academy of Performing Arts, cites UK-based John Wyckham Associates as light and stage consultants, Professor Harold Marshall from the University of Auckland as acoustics consultant, with Wagner-Biro of Austria supplying stage equipment, Strand supplying the lighting, and Philips, the sound.

The development of the Kowloon waterside district is a four phase project. Phase One was the Space Museum, which opened in 1980 and contains a 316-seat Space Theatre. The Cultural Centre represents Phase Two of the plan. Phase Three is the new Hong Kong Museum of Modern Art, which will be completed in 1991. The last phase is an open-aired garden.

But it is the Cultural Centre that officials hope will make Hong Kong the cultural capital of the arts in the Far East. The oval-sized Concert Hall, home to the Philharmonic, houses a 20 meter wide by 12.6 meter deep oak stage. According to technical director Taylor, the hall was designed "solely as a concert hall — no compromises were made when it came to acoustics." He



■

Almost 14 years in the planning, the Hong Kong Cultural Centre (left; floor plan, above), opened in November 89 on the Kowloon waterfront. It boasts a 2,200-seat Concert Hall, a 1,750-seat Grand Theatre, and a 300 to 500-seat Studio Theatre, together with exhibition areas, restaurants, bars, and other facilities. The Centre is the second phase of a four-phase waterfront redevelopment project. Phase One was a Space Museum. Phase Three is a Museum of Modern Art, and the last phase is a garden.

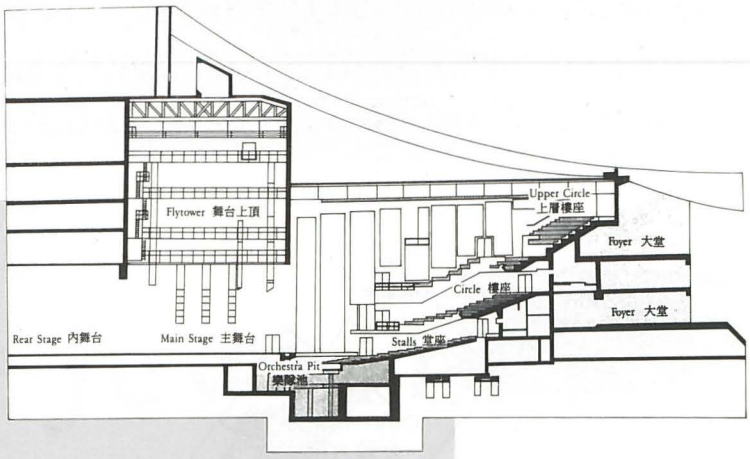
●

Avec presque 14 années de préparation, le Centre Cultural de Hong Kong (à gauche; plan, ci-dessus), a ouvert en Novembre 1989 sur les quais de Kowloon. Il comprend une salle de concerts de 2,200 places, un grand théâtre de 1,750 places et un studio-théâtre de 300 à 500 places, ainsi que des salles d'exposition, des restaurants, des bars et d'autres lieux. Le Centre est le deuxième volet d'un projet quadripartite d'urbanisme des quais. Le premier volet est un musée de l'espace, le troisième, un musee d'art moderne et le dernier un jardin.

▼

Im November 1989 wurde das seit 14 Jahren geplante Hong Kong Cultural Centre (links, Grundriss oben) am Kowloon Ufer eröffnet. Es hat einen Konzertsaal mit 2,220 Sitzen, ein Theatre mit 1,750 Sitzen und ein Studiotheatre mit 300 bis 500 Sitzen. Dazu kommen Ausstellungshallen, Restaurants, Bars usw. Das Centre ist die zweite Phase eines vier Phasen Uferentwicklungsprojektes. Phase eins war ein Weltallmuseum, Phase drei ist ein Museum fur moderne Kundst und Phase vier ist ein Park.

1



GRAND THEATRE

Stage

Proscenium — 15m (w) x 9m (h) x 19m (d); Stage lighting bridge and tower panels can adjust opening to a minimum of
10m (w) x 5.5m (h)
Stage width — Centreline to stage right counterweight frame - 12m; Centreline to stage left shutter - 13m
Depth — Rear of proscenium to rear stage shutter - 18m; rear of proscenium to upstage limit of grid - 17m
Height — Clear under fly floors - 11m; clear under grid - 25m.
Rearstage wagon — 16m (w) x 12m (d); compensating elevators to sink wagon flush with surrounding stage areas, downstage, and rearstage.
Rearstage — Opening -
16m (w) x 9m (w); width - 18m; depth - 14m min.
Sidestage — Opening -
12m (w) x 9m (h); width - 21m max. to 16m min.; depth - 15m max. to 12m. min.
Orchestra pit — small orchestra - 127 m^2 (gross); large orchestra - 165 m^2 (gross); depth — 455m maximum

Lighting

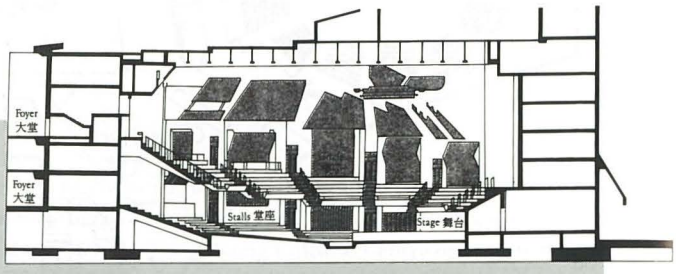
Profiles — 4 2kw Cadenza 8's; 49 2kw Cadenza 12's; 14 2kw Cadenza 19/23's; 62 1kw Harmony 12's; 78 1kw Harmony 15/28's; 10 650w Prelude 16/30's

Fresnel/Pebble Convex — 13 2kw Cadenza F's; 63 1kw Harmony F's; 10 650w Prelude PC's
Beamlights — 10 1kw PAR 64 CP/61 Rank Parblazers
Cyclorama top floodlights — 10 1250w 4-way Iris 4 units
Cyclorama groundrow floodlights — 8 625w Pallas1 single units; 8 625w Pallas 4 four-way units
Small floodlights and batten/groundrows — 10 200w Coda 500/1's; 11 200w Coda 500/4's; 25 500w Coda 500/4's; 10 500w Nocturne 500 'sun floods.'
Followspots — 4 2kw Xenon Supersol 2007SR's
Colour changers — 8 2kw Ranks; 40 1kw Ranks; 15 CCT Demultiplexer units

Sound

Central loudspeaker system at proscenium; dual-channel roll-on loudspeaker stacks on stage
Mainstage Control Console — Neve 5114 24/4/2/1 with 4-matrix outputs

2



CONCERT HALL

Stage

20m (wide) x 12.6m (deep);
Total usable area — 208 m^2
Height from auditorium floor — 95m; Orchestra risers — 20m, 40m, and 60m; 4-step choir risers for approx. 120 persons

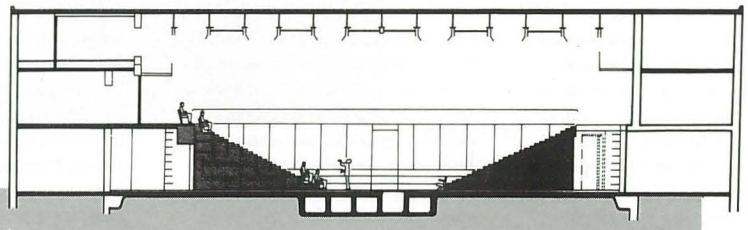
Lighting

Overhead dedicated orchestra lighting from suspended acoustic canopy; Fixed simple rig to provide some presentation lighting for variety, jazz, and popular music events; 2 Zenon 2kw followspots

Sound

Altec central loudspeaker system above front of platform; dual-channel roll-on loudspeaker stacks on platform; outlet for portable loudspeakers in platform, dual-channel feeds.
Main Control Console — Neve 5114 24/4/2/1 with 4-matrix outputs for use at auxiliary control position in rear of stalls
Stage Monitoring System — Yamaha MC 1608 monitoring console, 16 inputs, 8 outputs; 1/3 octave band graphic equalizer; 8-power amplification channels; 8 EV/FM 1502 wedge monitors.

3



STUDIO THEATRE

Stage

End Stage —18m (w) x 10m (d); seating approx. 294
Thrust Stage — 18m (w) x 17m (d); 430m stage depth,
930m thrust depth;
seating approx. 338

Centre Stage — 6m (w) x 5.5m (d); seating approx. 542
Transverse Stage — seating approx. 380

Lighting

120 way Galaxy control; 84 profiles; 20 fresnel/pebble convex; 20 beamlights; 16 cyclorama units; 16 groundrow units; 4 flood units; 22 colour change units; 4 demultiplexer units; 2 HMI 1200w followspots.

Sound

Distributed overhead loudspeakers; distributed wall-mounted loudspeakers for surround-sound;16 outlets in floor and at galleries for portable loudspeakers for sound reinforcement
Main Control Console — Neve 5455/16 with 4-matrix outputs

■

Flexibility and adaptability are the keys to the design of the Centre. The flexible proscenium of the Grand Theatre (section 1) allows for touring productions to perform without drastic design changes. The Concert Hall (below and section 2) boasts state-of-the-art sound, with acoustical curtains and a moveable acoustic canopy. The retractable seating of the Studio Theatre (section 3) allows for four seating patterns.

●

Flexibilité et adaptabilité sont les clés à succès pour la conception du Centre. Le proscenium adaptable du Grand Théâtre (Section 1) permet l'accueil de productions de tournées sans grand changement de décors. La salle de concert (ci-dessous et Section 2) utilise l'équipement sonore de pointe, les rideaux acoustiques et un plafond acoustique qui se déplace. Les sièges rétractables dans le studio-théâtre (Section 3) permettent quatre configurations de salle.

▼

Beweglichkeit und Anpassung sind die Grundlagen fur das Design des Centre. Die veränderbare Vorbühne des grossen Theaters (Abschnitt 1) erlaubt Tourneeproduktionen ohne schwierige szenische Umbauten. Der Konzertsaal (unten und Abschnitt 2) hat modernsten sound, durch akustische Vorhange und eine bewegliche akustische Decke. Im Studiotheatre gibt es vier Bestuhlungsvarianten (Abschnitt 3).

cites two features that cater to the hall's state-of-the-art sound. "There are absorbent acoustic curtains that can be lowered to vary the reverberation time for different types of music. Also, for the orchestra itself, there is an overhead adjustable acoustic canopy of wood and acrylic. This can be raised, lowered, or tilted to direct the sound within the orchestra pit. This way, the brass can hear the strings, the winds can hear the percussion, etc. It's there to make the orchestra comfortable, and the conductor has the freedom to adjust the canopy at his discretion. If we need to reinforce the sound for smaller chamber pieces or single artist presentation, a speaker system can descend from the roof. Sound limitations are very few."

There is also overhead dedicated orchestra lighting from the acoustic canopy, as well as a fixed simple rig to provide presentation lighting for variety, jazz, and popular music events. The hall boasts a 8,000-pipe, 93-stop Rieger organ from Austria, reportedly the largest such instrument in the Far East.

The Grand Theatre has been designed for drama, Western and Chinese opera, musicals, and films. It officially opened 6 November with Beethoven's *Fidelio* by the Cologne Opera with the Gürzenich Orchestra. Taylor boasts of the flexibility of the Grand Theatre. "The proscenium ranges in size from 10 to 15 meters wide, with a height of 5.5 to 9 meters. This flexibility allows touring productions to perform without drastic design changes." Andrew Peat, production manager for the Olivier Theatre in London, who brought the National Theatre's tour of *Hamlet* to Hong Kong from 22 - 25 December, agrees. "Working at the Centre has been quite a joy," he says. "Technically the space is very good — they mainly use Rank Strand lighting with a Galaxy desk, which is what we use at the Olivier. That enabled us to program the show in the UK. Generally, it was an easy transfer — the set was rebuilt with only minor alterations. Besides personnel, we only brought along furniture, props, and costumes." Taylor mentions that the smaller proportions of the stage were created specifically for Chinese opera, which is generally wide but not high.

The main stage is bordered by a 248 square meter rear stage and a 284 square meter side stage. The rear stage revolving wagon is 16 meters wide by 12 meters deep, with a 11 meter diameter. The electronically operated orchestra pit seats 110. It's 1,750 seats are divided into an auditorium and two balconies. Lighting is controlled by a 450 way Galaxy Control at the first circle. There are 217 profiles, 86 fresnels, 10 beamlights, 26 cyclorama units, and 48 colour change units. "There is an excellent cable system for lights and sound," says Taylor. "We don't have to run miles and miles of cable in the space — the cable infrastructure is already there."

The third auditorium is the flexible Studio Theatre, offering variable stage formats for small-scale productions, experimental theatre, and dance. It opened 6 November with a performance of Thorton Wilder's *The Matchmaker* by the Hong Kong Repertory Theatre. The retractable seating platforms in the space allow for a 39 square meter arena stage, allowing space for 542 seats; a 117 square meter thrust stage, leaving room for 338 seats; a 142 square meter end stage, with 294 seats; and a 203 square meter transverse stage, with 380 seats. Lighting is controlled by a 120 way Galaxy control, with 84 profiles, 20 fresnels, 20 beamlights, 16 cyclorama units, and 22 colour change units.

"The Studio Theatre is a very flexible space," says Taylor. "There is a technical gallery with lighting from all four sides; six bridges that go across from the sides of the technical gallery; and suspension grids above that from which we can attach scenery. Sound-wise, it's got surround-sound — sound on all four sides, overhead speakers, even underseat speaker facilities."

There has been a certain amount of criticism of the Centre for, amongst other things, the lack of windows in the offices and dressing rooms. Taylor attributes this to the designer's concept. "Lei wanted a monolithic structure — and that's what he built." But the complaints are quickly vanquished by the ovations. As Andrew Peat of the National says, "The space has a good feel to it — ample dressing rooms, generous backstage areas, a comfortable wooden floor, easy access. It's a really nice place to work."

Rembrandt versus Batman

BY HANS WOLFF

"Without light we can not see." This obvious and simple statement forms the background of our profession. Our job as manipulators of light gives us a great responsibility and, without being overly dramatic about it, I wonder if we realize this responsibility. In these days which are filled with so many thrilling new technologies, it has become difficult to maintain an incorruptible attitude towards our profession.

LIGHTING — THE INVISIBLE ART

In a time when the designer needs to create a high profile in order to get work, it is difficult to play a serving role. In the theatre, we have to support the content of the play and the work of the actors, all with the intention of calling as little attention as we can to ourselves. Lighting becomes not an art on its own, but a serving participant in the production.

To light a simple comedy with one set often requires a great deal of craftsmanship and easily ends up with 30 to 40 cues. "Invisible" perhaps for the audience, but essential for the production. Sadly, these are not the productions with which you get famous.

NEW AND NEWEST

New, and especially newest, is what counts in our profession. We have drifted into a rat race where the only thing that counts is to be the first, the newest, and the most original. The industry helps us with an endless stream of new, almost new, or almost newly copied products.

Jumping and bumping, turning and waving. It seems contemporary theatre can't survive without moving lights — no matter if it is a Mozart opera, a hard rock concert, or a television quiz show.

Formerly, we had the nervous flicker of the stroboscope and the boring patterns of the laser. Nowadays, no production seems complete without at least ten moving lights. You know the picture, bundles of light slowly brush past the set. Then during the refrain they move faster, rapidly changing colour, and projecting the well-known gobo with the dots. In the final chord, they come all together to form a dramatic backlight on the singer. Boring!

Honestly speaking, the first time I saw moving lights used I was deeply impressed, but now, I believe, they have become such a cliché.

Basicly, I think that's the main problem. We are confronted with an overkill of technology and we don't realize that technology alone doesn't make good theater or television. What we need are good and strong ideas.

EDUCATING DESIGNERS

Every magazine in our field prints articles on the subject, seminars in trade shows are dedicated to it, and nowadays everybody is convinced of the need for formal education for people planning on being lighting designers.

But sorry, I am not. I believe that our profession has to be learned in the old-fashioned way — in practice.

University doesn't teach you how to deal with hysterical actresses, or directors who haven't the slightest idea about light, or about set designers who think their set is the most interesting part of the picture, or about tired technicians.

Of course, lighting design has to do with technology, but the main part of this profession is dealing with people. You can be an expert in analyzing scripts, technical drafting and colour theories, but if you can't communicate, you will fail in this profession. The technical knowledge you need in this profession can be obtained in three or four weeks. To become a designer takes years.

I do believe a good designer needs a good education, but not a technical one. Perhaps architecture, history, or a more human-oriented study like philosophy.

But the best education is to work side-by-side with a designer. And the best designers have a busy practice and don't want to spend their lives in classrooms and university theatres. I realize that it is not always easy to have students around when you are at work — they ask the wrong questions at the wrong time, they spoil your drafting, and they aren't around when you need them.

Still, I think it is our responsibility to take care of the training of our successors. Because only in theatres and studios can they learn what lighting design is really about. Plus, students can challenge you to rethink your own opinions, they bring in fresh ideas necessary to brush up your routine, and, when they are without any talent, they can make your tea.

REMBRANDT VERSUS BATMAN

In conclusion, may I say that shadow making is our profession, in a sensitive and caring way — not blinded by the newest technology, but serving the production — not with the cheap tricks of *Batman*, but with the integrity and craftsmanship of Rembrandt.

Editor's Note: This piece is taken from a paper presented at Showlight 89, the international television, theatre, and film lighting colloquium, 15 - 17 May 1989 at the NOB TV Studio in the Netherlands. Hans Wolff is a leading Dutch lighting designer and theatre consultant based in Amsterdam.

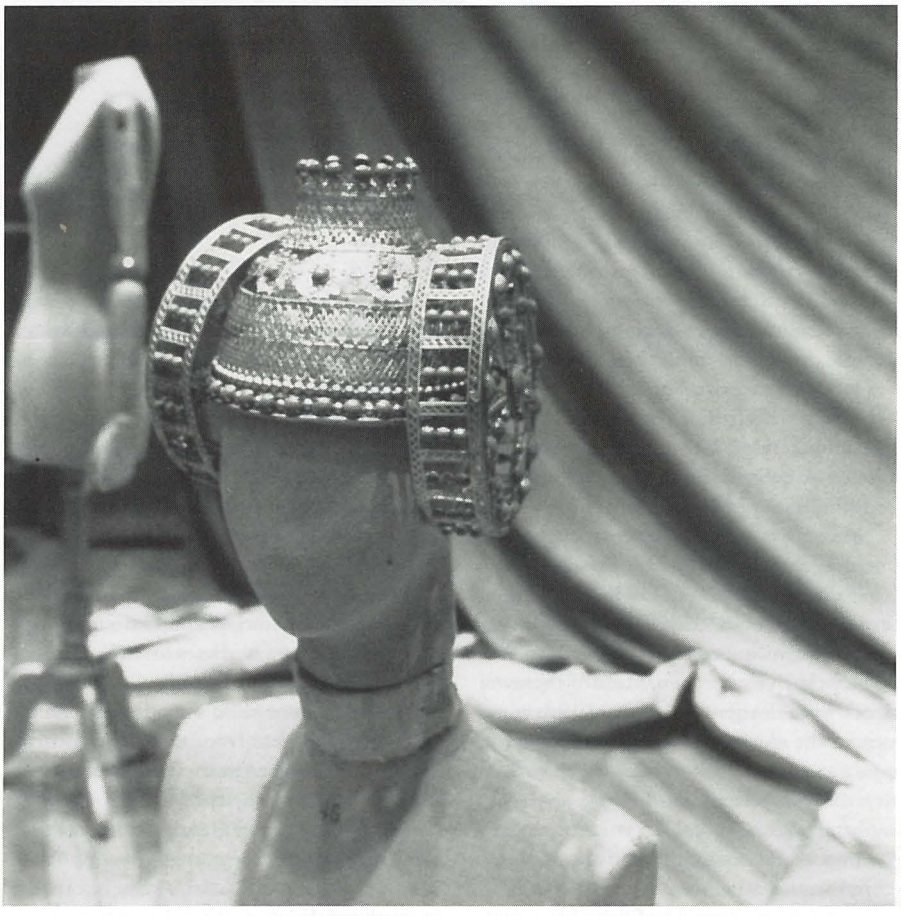
DANIELE FOUACHE CARES FOR THE PARIS OPERA'S CENTURY-OLD JEWELRY COLLECTION

Bijoux de l'art lyrique

BY LISA NESSELSON

For the past eight years, Danièle Fouache has been single-handedly wading through the unparalleled collection of costume jewelry designed for the performers who have held forth on the stage of the Paris Opera throughout modern history. Her mission — to figure out who wore what, when, and — as in the case of the least self-explanatory accoutrements — how. She finds it a challenging, endless, and thoroughly delightful task.

Fouache, whose post translates as "person responsible for the classification, restoration, exhibition, and carrying out of all relevant historical research pertaining to the collection of stage jewelry of the Paris Opera," was presented with a job that her employers figured would take "about a year." Eight years later, Fouache, now in her forties, sees no end in sight. "My first day on the job," explains Fouache, seated among packing crates in the high-ceilinged circular sanctum in the Opera House that serves as her workspace, "they unlocked a door and I was shown a regular Ali Baba's cave brimming over with treasure." Staunch theatrical tradition combined with garden variety nonchalance had conspired to create a colossal and completely uncatalogued assortment of one-of-a-kind accessories. "Each piece was retired for good once a given performer finished singing a role," explains Fouache. "Costumes are reused and loaned to other theatres, but the jewels never were. They'd just fling the stuff into the storage room — and this had been going on since the Opera opened in 1875!" Over 100 years of pearls, tiaras, crowns, filigree bodices, bracelets, belts, rings, and earrings lay lumped together



ERIC DIDYM

■ Since the Paris Opera opened in 1875, the exquisitely detailed costume jewelry worn on stage — pearls, tiaras, earrings, and headdresses (above) — had been unceremoniously dumped into a storage room after their use. Since 1981, Danièle Fouache has had the task of identifying, restoring, and categorizing this treasure trove.

● *Depuis l'ouverture de l'opéra de Paris en 1875, de parfaites imitations des joyaux, créées pour la scène — perles, tiares, boucles d'oreilles et diadèmes (dessus), ont été jetées à l'abandon dans un débarras. Depuis 1981, Danièle Fouache a pour mission d'identifier, de restaurer et de répertorier tous les trésors de cette caverne d'Ali Baba.*

▼ Seit der Eröffnung der Pariser Oper im Jahre 1875 wurde der feindetaillierte Kostümschmuck — Perlen, Tiaras, Ohrringe, und Kopfschmuckstücke (oben) — nach ihrer Benutzung sang — und klanglos in einen Lagerraum geworfen. Daniele Fouache hat siet 1981 die Aufgabe, den Inhalt dieser Schatzkiste zu identifizieren, restaurieren und kategorisieren.

■

Fouache (2) identifies the jewelry by studying the scenic designs and costumes sketches (1) preserved in the Opera's archives, assembled in over 200 volumes. Up until the 1950s, designers were required to deposit their designs with the Opera House.

●

Mme. Fouache (2) a pu identifier les bijoux en étudiant les maquettes des décors et des costumes (1) dans les archives de l'opéra, rassemblées dans plus de 200 volumes. Jusque dans les années cinquante, les décorateurs étaient obligés de laisser leurs dessins à l'opéra.

▼

Fouache (2) identifiziert den Schmuck, indem er die Bühnenbilder und Kostümskizzen studiert (1), die in über 200 Bänden in den Opernarchiven gesammelt sind. Bis rund 1950 mussten die Designers ihre Entwürfe im Opernhaus hinterlassen.

ERIC DIDYM

1

without identifying labels of any kind and without benefit of protective packing. "People didn't care much after the show was struck," explains Fouache. "They were busy with five or six productions at once and couldn't be bothered with carefully labelling and packing the goodies from the last opera.

"I meet a lot of creative types from the world's great theatres," says Fouache. "And they've told me that what we have here is the most extensive, most beautiful, and most unusual collection of costume jewelry they've ever seen. Most of these pieces were designed in the late 19th century, in the spirit of Napolean III, when appearances were essential. Jewels were incredibly important at the time, an importance they've lost."

Fouache boasts that there is not a single "copy" in the collection — every item is an original design created to fit the historical context of a particular opera while at the same time accentuating the personality of a specific actress or actor. She is quick to emphasize the difference between *bijoux fantasie* (what we think of as "junk" jewelry) and *bijoux de l'art lyrique,* the latter having been created "to be seen from a distance and linked to the libretto to give it another, totally operatic dimension."

Lyrical, or operatic jewelry, was assembled in the same time-honoured way that jewelers work with precious stones. This means that although the diamonds are only paste or strass, each one was cut and mounted by skilled independent jewelers who, working from elaborate sketches rendered in colour, executed designs specifically for the Opera. (Today, in contrast, all of the jewelry worn on stage is created entirely in-house.)

Fouache effuses about the enduring quality of the materials and craftsmanship of the jewelry she works with. While there is a smattering of authenticity — the collection contains a child's costume made of real silver and gold from the 17th century that had been worn at the King's private theatre — the majority of the jewelry is made of glass, tinted glass, paste, strass, brass, brass wire, copper, gold leaf, hollow beads, and hollow pearls."These bijoux are in great condition without having received any special care or attention. They were abandoned and ignored and yet they've held up beautifully. The colour in these stones is altogether unaltered. There was no glue used, so some of the stones have fallen out, but they're in great shape. These emeralds, opals, rubies, and amethysts, aren't real, but they're of rare quality." Fouache points out that contemporary costume jewelry, which is made of tinted glass or plastic, fades and chips in record time. "When restoring a piece, if we can't find a 19th-century stone to fit the bill, then the item remains as is," she says firmly.

To Fouache's continued amazement the gilding on even the oldest pieces is intact. And many of the delicate hollow pearls of yesteryear have also survived. "They don't make them this way anymore," says Fouache with an admiring sigh. "If you squeeze them, they crumble."

The great 19th-century wardrobe master and jewelry designer Eugene Lacoste is responsible for perhaps 25% of the collection in Fouache's care. "He went all the way to Egypt to make sketches so as to insure the authenticity of his work," says Fouache. "The quality and precision of his drawings, which we have in the library, is outstanding." That these stunning original documents have survived may be attributed to the fact that designers were once required to deposit their designs with the Opera House. This requirement was lifted in the 1950s and many designers have subsequently chosen to retain their original drawings for their personal collections or for eventual sale.

Fouache matches up her wares with the productions from whence they came by studying the scenic designs and costume

HARALD GOTTSCHALK

2

sketches preserved in the Opera's archives. "Luckily, I have a good memory," Fouache declares, referring to the fact that the often unwieldy documents, assembled in over 200 heavy bound volumes, are at one end of the enormous Palais Garnier and the jewelry room is at the other. But she is just as likely to make the connection in the most unlikeliest of places. She cites the incident when she was browsing through somebody's record collection a few years ago and spotted one of her unidentified pieces on the cover photo. The portrait of a woman singer, circa 1880, was all Fouache needed to make the proper connection with a Palais Garnier production of Verdi's *Aïda.*

Restoration can be as simple as polishing a tarnished fitting or as elaborate as restringing the hundreds of tiny hollow pearls that trim a tiara when the original binding thread has rotted away. "It looks easy enough," Fouache admits, "but it's extremely difficult and complicated." Every effort is made to retain the original fabric on pieces with cloth backing. Sorting and cleaning loose stones to prepare them for soldering is another painstaking task. "I'm exhausted, sweating, and filthy when I'm done," confesses Fouache.

Once a piece is completely cleaned and/or restored, it is photographed, and Fouache writes up a detailed description of it noting the title and performance dates of the show; the form and materials, specifying colours; where it has been or will be displayed; an estimated value (starting at 60,000 francs [UK £5,882; US $10,000] per piece) for insurance purposes; and whether or not the piece has been restored.

Each description also includes a number corresponding to the sturdy cardboard cartons where the pieces, wrapped in high quality tissue paper, are stored once they've been rescued and identified. Fouache's descriptive listings are then keyed into a computerized data base. "There are malcontents who say I'll no doubt expire before I've managed to catalogue the entire collection," jokes Fouache.

It's been less than two years since the jewelry collection, formerly under the jurisdiction of the Creation Department, was made a part of the collection of the Museum of the Paris Opera. Under this new, far more protected, status the pieces will never again be worn or cannibalized for spare parts. And there are, accordingly, no plans to move the collection to the new Opéra de la Bastille. Two books, one devoted to the Opera's jewelry collection and another highlighting its costumes, are currently in the works.

Although Fouache is a long way from cataloguing every object in her elegant and sparkly domain, she has been assembling theme exhibitions drawing on the collection for the past five years. "Jewelry is a revelatory tool for examining the era in which it was made and worn," she explains. "For example, the first thing they did during the French Revolution was to appropriate all the valuable jewelry, the gold, and the silver. It was all the rage for women to wear emblems of the Revolution, such as earrings in the shape of miniature guillotines, fashioned from worthless materials."

Two fairly recent developments should help this gem of a collection a great deal. Van Cleef & Arpels Perfums have become the official sponsor of the restoration, and the students of the Ecole de la Bijouterie de France, who are in training to become jewelers, have begun carrying out hands-on internships helping Fouache to restore individual pieces. "The students are totally enthusiastic about the chance to handle these wonderful old pieces, and they do an excellent job," says Fouache.

Now that the proven expediency of glue has taken the place of carefully wrought mounting, and plastic has been substituted for pearls, Fouache points out that the stage jewelry used today has no inherent or symbolic value. And while Fouache claims there is an undeniable magic on stage that results from wearing such authentic fakes, she also admits to the impracticality of re-employing the old jewelry -- "It's much too heavy. It would be impossible for the performers to carry out today's dynamic staging. In the heyday of the Opera, staging didn't matter. The singers just stood there and sang. We presented *Boris Godounov* not too long ago, and it would have been out of the question to re-use the crown we have here. The poor man wouldn't have been able to move — it weighs a ton."

The magic to which Fouache alludes is evident when the jewelry is not worn. "People respond to these pieces when they're put on display," she says having witnessed the wonderment on countless faces. "It's not a question of education or culture — it's a question of sensitivity. They're part of the French patrimony and we'll never see their equal again."

AVAB's Aurora Borealis

LOOKING AHEAD TO 1992

BY DANA DUBBS

It was a sound level indicator of all things — the Hög Ljudnivå — that introduced AVAB, the Swedish lighting company, to the world in 1971. "AVAB was the market leader for sound equalizers in the early to mid-70s" says current AVAB partner Hans Lau. "Because health organizations in Sweden are very concerned with sound, we made the Hög Ljudnivå, which cuts the power off if the decibel level gets too high. It was very popular among clubs."

But by the late 1970s, AVAB's focus had shifted to lighting. The company felt the field was more interesting than sound, and that it held more market opportunities. Today, sound products comprise less than five per cent of the company's total line.

Today, AVAB is a company worth 125 million Swedish kroners (UK £35 million; US $20 million), according to Lau, turning out such advanced products as computer-controlled lightboards, digital and analog dimmers, theatrical luminaires with high-precision optics, and rigging control systems. It owns four subsidiaries who are collectively known as the AVAB Group; operates four factories in Sweden, West Germany, and the United States; employs more than 200 people worldwide; and has a dealer network that spans Scandinavia and more than 30 other Western European nations, North America, and Australia.

In anticipation of 1992, AVAB is looking far beyond it's borders. It's current goal — globalization of its products. Under its new grand plan, AVAB will offer the same hardware version of a product in all countries, but that product will incorporate a user interface that can be easily adjusted to meet local needs. The move should make the company's products more accessible to users everywhere, while also improving AVAB's market effectiveness and operational efficiency. The company's first step in this direction is its Expert lightboard, introduced at USITT 1989, Calgary.

Among the manufacturer's strongest markets are the Scandinavian countries of Sweden, Norway, Finland, and Denmark. In those nations, AVAB competes with Strand, Lee Colortran, and ADB and has a 50% of market share for theatrical lighting controls among city and regional theatres. West Germany and France are also among AVAB's strongest markets for its total product line. AVAB chiefly competes with Strand in West Germany and with ADB and Strand in France.

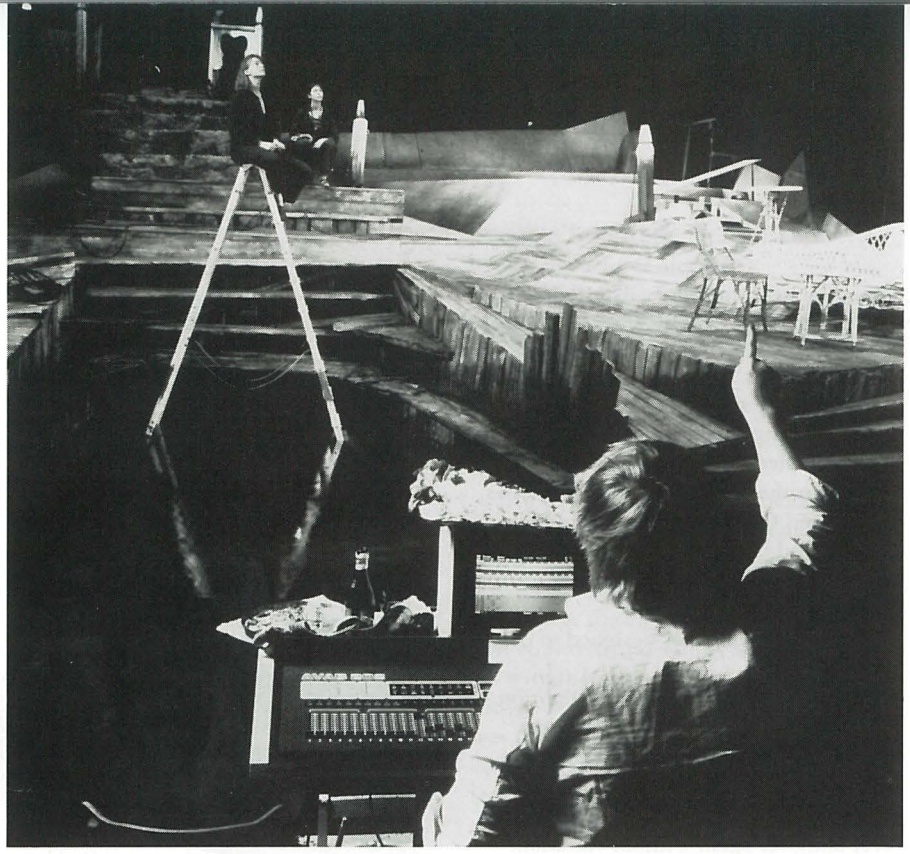
Of the company's six partners, three founded AVAB. President and founder Kent Flood is a former computer engineer and former owner of the touring company Teater Fem. He gained notoriety as the technical brain behind Tältprojektet, the touring theatre movement which performed in a circus tent throughout Sweden in the late 1960s.

Starting AVAB with Flood were vice-president and financial director Torsten Palm, a former structural engineer, and Ralph Dahlberg, the company's marketing director and a former filmmaker.

Partner Lau joined AVAB in 1979 with a Master's Degree in Business Administration from Bedriftsøkonomisk Institutt in Oslo. He ran the firm's operations in Norway for 10 years before becoming president of AVAB America Inc. Anders Ekvall, director of research and development, joined the firm in 1986 with a background in software and hardware engineering. New York lighting designer Samuel Scripps became a partner in the early 1980s.

Customer relations go beyond technical advice and product service. The firm typically contacts professionals during the initial phases of R & D.

AVAB imports components from around the world, but the firm develops and makes all its products in its own facilities. Research and manufacturing responsibilities are shared by AVAB's headquarters in Gothenburg, on Sweden's west coast, and a location in Uppsala. AVAB



Uppsala was formed in 1986 when the parent firm bought two companies which specialized in rigging and set design — Skandinavisk Lyftservice and S & M Teknik. Sales and rentals are handled in Stockholm and by AVAB subsidiary AVAB Norge A/S in Oslo.

Another subsidiary, Emil Niethammer GmbH, was formerly a West German lantern manufacturer. Acquired by AVAB in 1983, it is today the center for optical development and production of stage projectors, followspots, automated luminaires, and high-performance theatrical luminaires. AVAB America Inc. was started in San Francisco, California, in 1978, developing digital dimmers for the North American market and handling marketing activities throughout the continent.

More than 30 independent agents represent AVAB, with at least one located in every western European nation. "Agents operate differently in the different countries," says Lau. "In our larger markets, like France, Spain, and the United Kingdom, agents import our products and sell them to independent dealers. Most dealers have regular relationships with theatres and studios, and they handle all user needs. Dealers do everything from helping professionals to determine what products they might need, to taking their orders, handling shipping and overseeing installation." If desired, an AVAB engineer can supervise an installation and provide on-site training.

Niethammer serves as AVAB's agent in West Germany and works with local sales reps who call on the theatres. "In smaller markets, like Switzerland, Italy, and Holland, an agent often operates on a direct basis with the customer," says Lau.

This hands-on approach to the customer is, according to Lau, one of the reasons for AVAB's success. But customer relations go beyond technical advice and product service. The firm typically contacts professionals during the initial phases of research and development. AVAB's marketing department initiates product development by studying the industry and determining what's needed. Product engineers then go to end-users to learn what professionals want. A new product is test-marketed with a pilot series that's distributed to dealers and selected end-users. Most pilot products are tested in Scandinavia, France, and Germany, AVAB's strongest markets.

Looking to the future, Lau hints at AVAB's expanding interest in the architectural systems market. "In Europe, there's a growing understanding of lighting controls in office buildings, hotels, and exhibit halls," he says. "Some of these systems use the same parts that theatre-oriented systems use. We already have 70% of market share in Scandinavia, and we're looking at different ways of expanding our operations."

■

In anticipation of 1992 and a single European economic community, AVAB is planning on globalising its products — offering a user interface on its lightboards that can easily be adjusted to meet local needs. Among the company's strongest markets currently are the Scandinavian countries of Sweden, Norway, Finland, and Denmark (left, the AVAB 202 board at the Nationalteatern in Gothenburg, Sweden)

●

En anticipation de 1992 et d'un marché Européen communautaire, AVAB prévoit une stratégie marketing globale, en proposant un logiciel de jeux d'orgue qui soit adaptable à tous les besoins locaux. Parmi les marches les plus forts de la companie AVAB, se trouvent actuellement les pays scandinaves de la Suède, de la Norvege, de la Finlande et du Danemark. (à gauche, le jeu d'orgue AVAB 202 du théâtre national de Goeteborg en Suède)

▼

In Vorausschau auf Jahr 1992 und den vereinigten europäischen Markt, plant AVAB seine Erzeugnisse zu globalisieren. Es bietet fur seine lightboards ein user interface an, dass leicht örtlichen Bedingungen angepasst werden kann. Die skandinavischen Lander, Norwegen, Finnland, Schweden und Dänemark, sind derzeit die wichtigsten Märkte der Firma. (links; der AVAB 202 im Nationaltheatre Gothenburg in Schweden)

A TECHNICAL EVALUATION

BY BOB ANDERSON

Two decades ago the entertainment lighting world woke up to the idea that the computer industry could offer exciting ideas to replace the cumbersome mixtures of mechanical drives, multilever presetting, and analogue mastering that were the best the lighting industry could then provide for dimmer control. The prospect fascinated many excellent minds. After years of research, today's lighting designers have the choice of many alternative solutions. Notable among the leaders are the controls produced in Sweden by the Avab team.

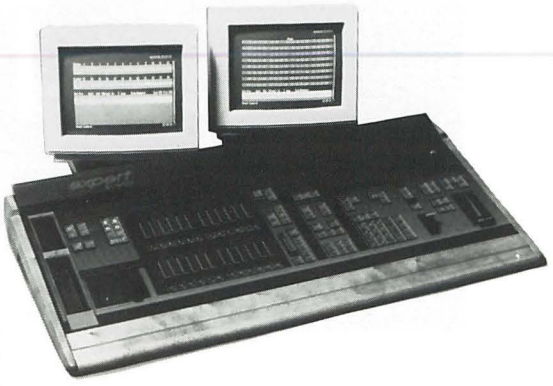
Avab Elektronik AB was founded in 1971 and was, and is, to quote their company profile, "dedicated to the design, manufacturing, and installation of state-of-the-art lighting control systems, luminaires, rigging control systems, and stage machinery for theatres." Their first notable design was AVAB 2000 which was launched in 1975, followed by 2001 two years later, and in 1981, the classic modular Viking system.

By 1981 the world leaders had produced many top specification computer-based lighting control systems. In Germany, Siemens had Sitralux, in the USA, Kliegl Brothers had the Performer series, and Strand Century had launched Light Palette, and in Britain, Rank Strand had progressed from DDM through MMS to Lightboard.

AVAB's Viking was designed to beat all these.

At this time, all mainstream lighting control thinking was based on theatre traditions. Create, experiment, rehearse, and refine — then, with all decisions committed to memory, perform the cues over and over again without variation. Control panels therefore divided naturally into separate sections for creating lighting looks, memorising the results, and performing the cues. The Viking design presented these as self-contained plug-in modules (as MMS had done before) that could be laid out on the control desk in any order. The system used keypad digital call-up for dimmer channels and wheel level adjustment and could accept two crossfade modules and three mixer modules and control up to 1,000 independent dimmers. Two types of performance modules were offered — a cross fade unit that progressed through cues in sequence, and a mixer unit with four controls for mixing and balancing memories. Two decisions were made, essential to the mode of operation, which distinguish the AVAB range from other designs. The outputs from the cross fade units and mixers combine with "highest precedence" logic, and control button operating sequences that obey the "reverse Polish" notation. These decisions have been applied consistently on all AVAB systems and determine many of their strength and peculiarities.

1



2

Viking^2 offers the best that Swedish ingenuity can devise for controlling the large numbers of dimmers in theatres, opera houses, and TV studios.

Also, unique to Viking was "The Voice of the Viking!" — an electronically synthesized speech output that chanted, "Are you sure?" or other robot-like

■

All the tricks of the modern business computer have been studied and borrowed for the Viking² lightboard (1) to help the lighting designer work as rapidly and efficiently as possible. It features the Screen Editor, allowing you to change any function seen on the monitor display at any time. AVAB's Expert board (2) is built around a design concept emphasizing improvised lighting control and MIDI based communication with the musical environment.

●

Tous les petits avantages de l'ordinateur d'aujourd'hui ont été étudiés et empruntés pour le jeu d'orgue Viking² (1) pour aider l'éclairagiste à travailler aussi rapidement et efficacement que possible. Il incorpore le Screen Editor qui permet de modifier à tout moment toutes les fonctions sur l'écran. Le jeu d'orgue Expert d'AVAB (2) est construit autour d'un concept qui met en avantage les effets d'éclairage improvisés et la communication MIDI avec l'environnement musical.

▼

Fur das Viking² lightboard (1) wurden alle Möglichkeiten die moderne business computer bieten in Betracht gezogen und übernommen, um dem lighting designer eine schnellere und effizientere Arbeit zu ermöglichen. Es hat einen Screen Editor, der es erlaubt jede Funkion zu jeder Zeit zu verändern, die auf dem monitor display gezeigt wird. Das Expert board (2) ist designet um grössere Lichtkontrolle und MIDI communication in Musicals zu ermöglichen.

warnings before permitting the operator to override earlier memories.

Within the discipline of these and other operating rules, Viking sets out to offer easy, flexible performance of rehearsed cues, and as many aids to composing and altering lighting looks as possible without complicating the basic operating technique.

All this was achieved in standard programming language on a standard commercial computer, so it has been possible to make continuing improvements over the eight years since Viking first appeared and simply supply customers with the new software on disk. In 1989, a major package of improvements was designed and offered as Viking². The only change needed to older systems apart from the new software is new labels for the push buttons.

A new approach to menu layout makes choice of operating variables fast and easy.

The new software for the Viking² provides more improvements to assist rehearsal than performances. The Viking can now learn fade profiles, the effects systems has been improved, and the layout of the channels on the screen can be altered by the user to taste, perhaps to provide a geographic mimic. Dimmer levels can now be tracked through cue memories and, when necessary, altered totally or selectively.

Viking² offers the best that Swedish ingenuity can devise for controlling the large numbers of dimmers now considered necessary in large theatres, opera houses, and big TV studios.

The latest AVAB system, launched in 1989, is the Expert. Expert controls up to 512 separate dimmers providing keypad channel access, a cross fade playback, 24 master faders, and comprehensive editing and effects options from a self-contained and well-styled desktop console. One or two colour VDUs are needed.

Channel control uses keypad access, all the usual combining aids, and a velocity fader. Moving the centre biased lever upwards starts the dimmer level increasing, and the further the lever is pushed, the faster the level changes. Moving the lever down produces the opposite result. Not as satisfactory, perhaps, as a wheel, but less expensive and quite appropriate to this application. As an option to "reverse Polish" logic, the "@ {at}" mode of operation used by other manufacturers can be easily selected. Crossfade operates exactly like Viking and has most of the same facilities for memorising fade times, delays, follow-on and sequences. During crossfades the dimmer level control acts as an accelerator/brake on the memorised speeds. Unlike Viking, the group or mixer masters are linear potentiometers but these can be loaded with memorised effects and related while in use to provide the hands-on mixing required for designer-operated pop concerts. To minimise the number of buttons on the panel some operations require holding one button while pressing another, but these are all obvious, logical operations. The two-colour VDUs are every bit as clear as the Viking displays and a new approach to menu layout makes choice of operating variables fast and easy. To save the need for an extra Qwerty keyboard, 26 of the master keys provide alpha characters as alternative outputs for entering cue text. Following modern mini-computer practice, a Help button on the desk produces on-screen explanations of the function and logic of any other button pressed, and even varies the explanation depending on the current state of the board.

System output is digital using either the AVAB system or the USITT DMX 512. Also, ports are provided to interface with standard personal computers to allow cue data to be prepared or corrected away from the console and MIDI ports so that the ever-growing range of MIDI hardware can be connected to exchange master and synchronising information. The well-known infra-red remote control established many years ago for Viking is a standard feature (with a charger slot built into the end of the desk) as are the disk drive, the excellent handbooks, and an ingenious built-in cover to protect the desk from dust and damage.

Altogether, another excellent system designer, as the name applies, for designers and operators who are already or want to become experts in the art and techniques of lighting presentation. Other companies will need to use their best efforts to compete.

AVAB WITH A FRENCH ACCENT

BY ELLEN LAMPERT

What do the Chaillot Theatre, the Comédie Française, and I.M. Pei's Pyramid have in common? The answer is Avab lighting controls installed by Robert Juliat, the French company that illuminates Paris. Founded in 1920 as a supplier of lanterns for the cinema, the company soon began to manufacture stage lighting for the live performances seen between the films. This activity quickly became the major part of their business, and over 70 years later Juliat is responsible for the lighting systems in many of the major theatres in and around Paris.

"We have a history of working with certain theatres, like Nanterre and Bobigny, known for their work in contemporary production" says Patrice Bouqueniaux , technical director at Juliat, who is also in charge of maintenance for the lighting equipment at the Avignon Festival each summer. For Avignon, Juliat has recently revamped the systems in many of the spaces used for the Festival. The new systems include portable Juliat Digiracks housing up to 240 circuits in the bigger theatres such as the Cour d'Honneur and the Aubanel Gymnasium. These systems represent the marriage of Juliat's advanced digital dimmer technology with the AVAB controls. Avignon is also equipped with eight AVAB 202 boards, provided by Juliat, who serve as the French distributor of AVAB. "Having the same board in several theaters is more practical, we can move them around as needed, and replace them quickly in case of a problem, " says Bouqueniaux. Avignon is serviced by Texen Lighting in nearby Aix-en-Provence, one of the dozen distributors for Juliat in France. "We have a unique system of distribution, with a network of agents all over France," according to Bouqueniaux. "Many of them are former technicians or technical directors who work directly with the theatres."

Juliat offers a range of services from concept to installation of its systems. Recent installations include the main theatres at both the Chaillot and the Comédie Française, both of which are now outfitted with three AVAB Expert boards, which are the first Expert boards produced, and the first installed anywhere in the world. "These theatres had extreme confidence in Juliat," says Jean-Louis Pernette, the company's marketing director. "They chose the AVAB Expert before it really even existed. They were willing to take a chance on a new product." At the Comédie Française, Juliat supervised a complete renovation of the lighting equipment, replacing the old ADB equipment with AVAB boards, installing new cable, and interfacing the system with special software made to order for the project. Moving into the Comédie Française and the Chaillot represents a transition for Juliat, bringing them into the more traditional circle of French theatre. "This marks the first alliance of technology with traditional theatre in France," says Pernette. Juliat also provided AVAB 202's for the rehearsal halls at the new Opéra de la Bastille.

Juliat first brought AVAB into France more than ten years ago, and according to Pernette, Juliat has since installed approximately 400 AVAB boards in France, with AVAB's competition in the French marketplace coming from ADB and Strand. "We have enjoyed a long-term faithful relationship with AVAB," says Pernette, "and work very closely with them." The AVAB boards are often paired with Juliat lighting instruments, one of the most popular being the profile spot with HMI lamp and plano convex lens.

■

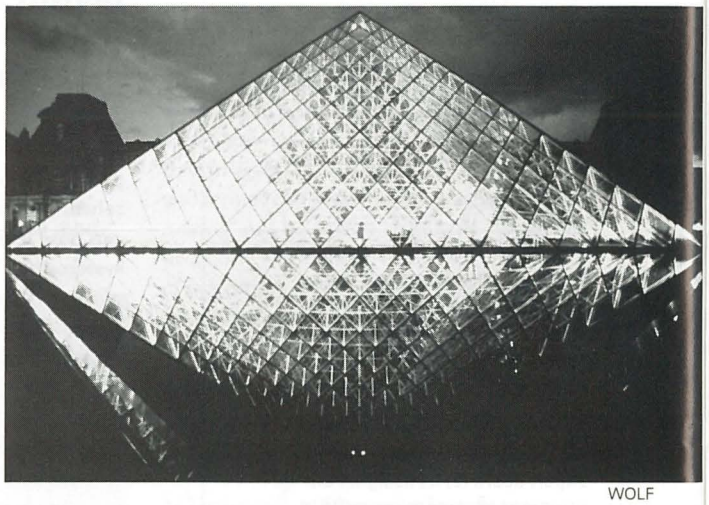
Juliat recently branched off into architectural lighting, including the I.M. Pei Pyramid at the Louvre Museum (below), where they used an AVAB 211 to shed light on archaeological ruins and an AVAB 202 for its auditorium.

●

Juliat s'est diversifiée dans plusieurs projets d'éclairage architectural y compris la Pyramide de I.M. Pei au Louvre (ci-dessous), où ils ont utilisé un AVAB 211 pour éclairer des ruines archéologiques, et un AVAB 202 pour l'auditorium.

▼

Juliat arbeiten sie auch in der Architekturbeleuchtung, so z. B. fur die I.M. Pei Pyramide im Louvre (unten). Dort benutzten sie einen AVAB 211 um archäologische Ruinen zu beleuchten und einen 202 fur das Auditorium.



WOLF

Moving off stage and into the architectural arena, Juliat has recently had a hand in lighting some of Paris' newest monuments, including the I.M. Pei Pyramid at the Louvre Museum of Art, where they used an AVAB 211 to shed light on the archaeological ruins unearthed on the building site, and installed an AVAB 202 with digital dimming system in a multipurpose auditorium. Other projects include the new Institute of the Arab World which graces Paris' left bank, and *La Traversée de Paris* exhibition at La Defense, where the lighting is also controlled by an AVAB 202 and digital dimmers.

A little piece of Magic

Lee Filters have introduced Colour Magic – a starter pack to introduce you to the versatile and colourful world of Lee's filter products.

The Colour Magic pack contain twelve sheets of high grade lightin filter, a cutter, and the formulae fo creating more than 50 other colours it's a palette of tones for the lighti professional.
Whether you want to bring a blush the heroine's cheeks, or a glow to sunset, or a wintry light to the cas ramparts – if it can be done w colour, it can be done with Lee Colour Magic.
Priced at just £7.50, Colour Mag an ideal introduction to the Lee ra and all its versatility.
And once Colour Magic has pr the performance of the Lee sys our pocket sized swatchbook will vide the key which will unlock the to the wider horizons of our wor colours and effects.

Lee CT's are right on target – every time

The Lee range of colour temperature filters is unrivalled in terms of accuracy and repeatable performance.

Lee Colour Temperature Blues and Colour Temperature Oranges are made using the first principles of colour physics, ensuring that each filter delivers a performance which is spectrally correct – and that means the right colour temperature, and an accurate colour, every time.

You've heard it all before from manufacturers, haven't you? Team of professionals blah, blah, blah. . . . . dedicated to one ideal, blah, blah, blah . . . . . all highly skilled blah, blah, blah . . . . . so for a change, we thought you'd like to see the Lee Filters team. They're having another great season.

We don't need to tell you we're the best

LEE Filters

A DIVISION OF LEE Colortran Ltd.

Central Way, Walworth Industrial Estate, Andover, Hampshire SP10 5AN,
Tel: (0264) 66245 England. Fax: (0264) 55058 Telex: 477259

■

"We've put the accent on actual sensation. Visitors will be walking on beaten earth, on cobblestones; they'll be spoken to by various characters, they'll move in and out of worlds which are different every time," says Patrice Noviant (right), who conceived *La Traversée de Paris,* a 7,000 square meter exhibit that traces five centuries of Parisian history (above, Victor Hugo and Gustave Flaubert guide visitors through a barricaded suburb, June 1848, designed by Marc Petitjean).

●

"Nous avons mis l'accent sur la sensation réelle. Les visiteurs se promèneront sur de la terre battue, des galets; différents personnages leur addresseront la parole, ils pénètreront et sortirerons de mondes différents à chaque fois," dit Patrice Noviant (à droit), qui a concu La Traversée de Paris, *une exposition de 7,000 mètres carrés qui retrace cinq siècles de l'histoire de Paris (ci-dessus, Victor Hugo et Gustave Flaubert guident des visiteurs à travers une banlieue barricadée, Juin 1848, crée par Marc Petitjean).*

▼

"Wir betonen das aktuelle Erleben. Die Besucher werden auf Erde und Kopfsteinpflaster laufen, verschiedene Schauspieler werden zu ihnen sprechen, sie werden völlig verschiedene Welten betreten," sagt Patrice Noviant (recht), der *La Traversée de Paris* entwickelte. Es ist eine 7,000 m² umfassende Ausstellung die fünf Jahrhunderte Pariser Geschichte präsentiert. (oben, Victor Hugo und Gastave Flaubert leiten die Besucher durch eine Vorstadt mit Barrikaden im Juni 1848, Design von Marc Petitjean.)

Paris Revisited

BY ELLEN LAMPERT

Heads rolling from the guillotine. A courtesan's bedroom. The storming of the Bastille. Barricaded streets. Napoleon triumphant. German troops marching through an occupied city. These are among the classic Parisian images created by a team of architects, set designers, and filmmakers for *La Traversée de Paris*, a tri-level, walk-through environmental exhibition that traces five centuries in the history of Paris.

La Traversée de Paris was conceived by Patrice Noviant, a 44-year-old Paris-born architect, who designs large-scale exhibitions rather than buildings. But his most recent effort, *La Traversée de Paris* is nestled in 7,000 square meters of space on three subterranean floors of the Grande Arche, a 36-story white marble arch-shaped building, the newest architectural monument in the French capital.

MARC LAFON

Completed for the July 1989 bicentennial celebration of the French Revolution, the Grande Arche at La Défense intrigued Noviant, who watched the construction from a nearby university where he teaches the history of architecture. He had long considered a historical exhibition looking at Paris from an architectural standpoint, with the Grand Palais Museum or the Tuileries Gardens as possible locations. Not originally thought of as a bicentennial project, *La Traversée de Paris* became one of the highlights of the summer of 1989.

"For centuries Paris has developed along an axis toward the west, with the Grande Arche now at the furthest boundary," says Noviant, who has a keen sense of his city's geography. "The choice of a site is important, as certain things happened in certain places, giving them symbolic and political importance. The Arche links the past with 1989," he explains, "and provides a place to leave the city in order to look at it."

Once the site was chosen, Noviant worked on the design of the exhibit with François Barré, Chairman of La Grande Halle at La Villette, producer of the highly successful 1987 *Cités-Cinés* exhibition. Like for *Cités-Cinés*, set designers were called upon to create the decor for *La Traversée de Paris*, using styles Noviant calls from "torrid realism to the abstract." *La Traversée de Paris* was designed and built in record time. Only nine months separated the initial study done in the fall of 1988 to the approval of the final budget in

■ EXHIBITIONS ● EXPOSITIONS ▼ AUSSTELLUNG

FRENCH ARCHITECT PATRICE NOVIANT TRACES THE HISTORY OF THE CITY IN *LA TRAVERSEE DE PARIS*

SPECIFICATION BOX:

Surface area and sets:
Total surface: 7,000 m2
1.3 million francs for sets
60,000 workshop hours
620 m2 of painted backdrop
400 m2 lake

Ground surfaces:
30 m2 of sand
150 tonnes of compacted soil
8 tonnes of asphalt
32 tonnes of cobblestones
45 m2 of floor tiles
300 m2 of wooden flooring

Cinema and audio-visual:
3 cinema screens
1 shadow-play video projector
videowalls
4 slide projectors using the Fabiani effect

Sound:
Infrared headsets
51 sound sources combining music and text
original score by Michael Nyman

February and the official opening in July 1989.

SAGA-Défense, a subsidiary of the Maxwell Communications Corporation and developer of commercial space at the Grande Arche, helped with the financing for *La Traversée de Paris*. The first feasibility study in 1988 called for a budget of 35 million francs (UK £3.5 million; US $6 million) to build the exhibit. "Everybody screamed at this original budget," according to Noviant, who notes "the space wasn't finished, there weren't even any floors, any electricity, or anything."

This sum was reduced to 22 million francs (UK £2.2 million; US $3.7 million) which included 13 million francs (UK £1.3 million; US $2.2 million) for the decor, 6 million francs (UK £588,000; US $1 million) for the creation of the soundtrack and films, and 3 million francs (UK £294,000; US $500,000) for salaries, including that of musician Michael Nyman, who was commissioned to create an original musical score.

Visitors (1,500-1,800 at the same time) to *La Traversée de Paris* wear headsets whose infrared beams activate a series of Philips sound "radiators" which emit a narration and music track related to each scene. "The sound stops at the barriers provided by the exhibit, such as walls, so that you only hear what you should hear," says Noviant, "a simple principle but hard to implement. We had problems with whistling in the beginning, and the system had to be regulated. We could have actually had a more complex system with two sound zones operating at the same time — one for the narration and one for the music — but this was done in too short a time."

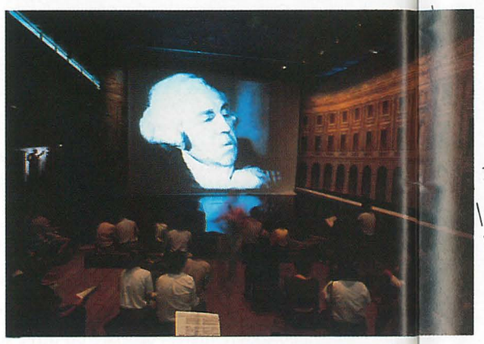
This five-hundred-year journey through Paris begins on the banks of the river Seine in the 16th-century. The dipping of oars in the water combines with animated conversation of Parisians traveling on a boat, looking at the buildings along the river's edge. Sounds echo as the boat passes under a bridge, and are drowned out by horse hooves clip-clopping on the wooden slats overhead. The realistic effect of moving scenery has been created by a special process known as the Fabiani Effect, in which a 30-meter painted mural has been photographed and then projected through a series of synchronised slides using four ceiling-mounted projectors. This effect can be projected on any surface and at variable speeds. The realism of the scene is heightened by the sandy floors and barrels which provide seating.

The startling realism of the Palais Royal section, where the decor is built on a 1-to-1 architectural scale, includes authentic wrought-iron railings built to withstand winds up to 60 miles-per-hour. "This is the most realistic of the scenes," says Noviant, "and we worked from the actual plans of the building in our design." Descending a full-scale staircase reveals lower level shops representing the Paris of 1787-89.

Following the cobblestones of the Faubourg Saint-Antoine, reports of the storming of the Bastille, speeches by Robespierre, Danton and Marat in the legislative assembly, and films of the Revolution projected in a large, crowded square, leads to the days of the Paris Commune. Realism is apparent in the cobblestones streets, half torn up to create barricades in front of

continued on page 41

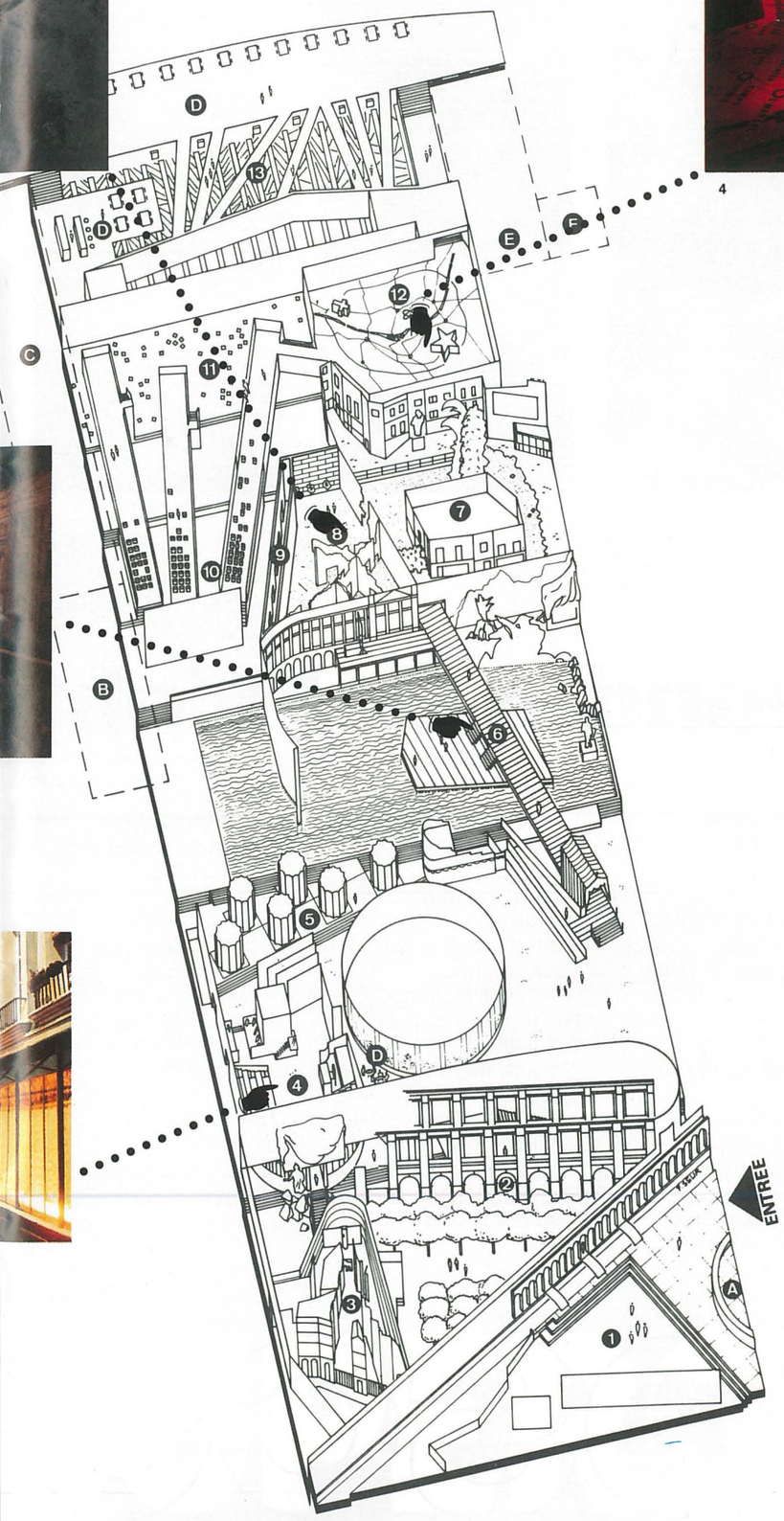
1



2

3

4



■

La Traversée de Paris takes visitors on a 13 part Parisian journey. Among the stops: 1789 — listening to news about the storming of the Bastille in July 1789, we walk along the Faubourg Saint Antoine (3);1793 — we watch extracts from classic films tracing the history of the Revolution and observe painted scenes commemorating the death of the king (2); 1871 — we see houses burned to the ground as a tribute to the Paris Commune (1); 1945 - 1970 — the city becomes a political backdrop as Parisians take to the streets to demonstrate a variety of causes (4).

●

La Traversée de Paris *convie les visiteurs à un voyage en 13 parties. Parmi les étapes: 1789 — à l'écoute de nouvelles concernant la prise de la Bastille en juillet 1789, nous marchons le long du Faubourg St. Antoine (3); 1793 — nous regardons des extraits de classiques du cinéma retracant l'histoire de la Révolution et observons des scènes peintes commémorant la mort du roi (2); 1871 — nous apercevons des maisons brulées à ras en commémoration de la Commune de Paris (1); 1945 - 1970 — la ville de Paris devient un décor de fond alors que les Parisiens descendent dans le rue pour manifester (4).*

▼

La Traversée de Paris schickt die Besucher auf eine Reise durch Paris in 13 Teilen. Unter anderem: man hört die Nachrichten über die Erstürmung der Bastille im Juli 1789, wir wandern Faubourg Saint Antoine entlang (3); 1793 — wir sehen Auszüge aus klassischen Filmen zur Geschichte der Revolution und betrachten gemalte Szenen in Erinnerung an den Tod des Königs (2); 1871 — wir sehen abgebrannte Häuser zur Zeit der Pariser Commune (1);1945 - 1970 — die Stadt wird zum politischen Hintergrund fur Demonstrationen der Pariser zu verschiedensten Anlässen (4).

The Lavender Gel Mob

Meet the mob that's moved into theatres, opera houses, television and nightclubs everywhere: the nine lavenders from the Supergel colour filter line up.

The lighter members of this mob, Supergel 52, Light Lavender and Supergel 54, Special Lavender, are so flattering to skin tones that they are widely used as lighting washes or as area lighting colours on performers. The cooler Supergel 53, Pale Lavender, is specified by lighting designers to maintain the appearance of "white" light when a fixture is dimmed.

Last year a gypsy joined the mob, Supergel 56, Gypsy Lavender. This vibrant colour is used in theatrical situations where strong, saturated colours are appropriate. It is based on a dye formulation which was originally developed for "Camelot". This year 356 Middle Lavender is added.

The most widely used of the Lavender Mob continues to be Supergel 57A, Lavender and 58A, Deep Lavender. Both are used often in dance and musical theatre to sculpt the performers, add three-dimensionality to the scenery and separate the performers from the background.

With all Supergel filters, the lavenders are body-coloured plastic to ensure stability and durability. They will hold colour longer than surface-coated filters and are truly 'self-extinguishing'.

The Supergel Swatchbook includes the full range of more than 100 colours. . . dye formulations developed with lighting designers and technicians over 76 years. A process which continues today.

roscolab

Roscolab Ltd., Blanchard Works, Kangley Bridge Road, Sydenham, London SE26 5AQ.
Tel: (01) 659 2300. Fax: (01) 659 3153. Telex: (01) 895 3352 ROSLAB G.
Also at New York, Hollywood & Madrid.

SUPERGEL

SIEL 90

8th INTERNATIONAL TRADE SHOW OF EQUIPMENT AND TECHNOLOGY
FOR ENTERTAINMENT AND LEISURE VENUES

&

5th THEATRICAL SERVICES EXHIBITION

February 17/20 - 1990
Parc des expositions Porte de Versailles - Paris - France

22 000 m^2 of exhibiting area
20 000 professional visitors
300 exhibitors

HAVE MADE SIEL THE N° 1 EVENT IN EUROPE FOR:

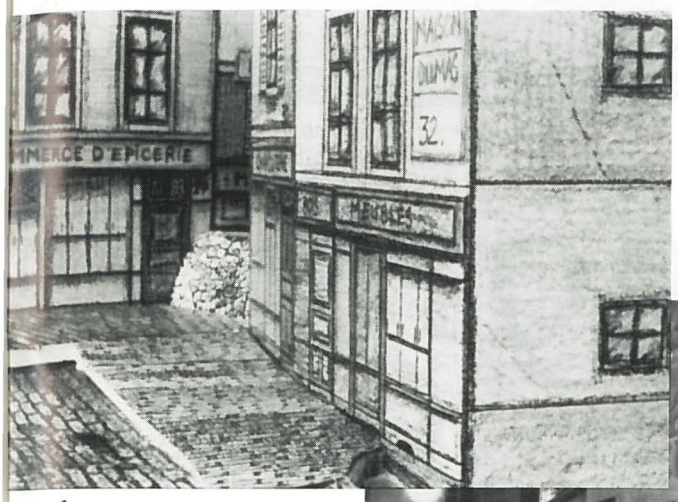
Sound - Lighting - Special effects - Acoustical equipment - Stage machinery - Vending machines - Decoration - Animation
Scenography - Gaming machines - Venue security systems - Video - Radio - Theme parks equipment.

To receive your FREE INVITATION for SIEL 90
please return the coupon below to :

BERNARD BECKER
BLENHEIM

22-24, rue du Président-Wilson - 92300 Levallois-Perret - France
Tel.: (33) 1-47 56 50 00 - Fax: (33) 1-47 56 12 67

COMPANY _____ GS
ADDRESS _____
NAME _____



1

2

■

Set designer Marc Petitjean worked with Patrice Noviant on the overall design of *La Traversée de Paris*. Petitjean created a model (1) representing his impression of the barricaded Paris streets and painted facades. The decor uses real Paris cobblestones lent by the city's warehouses (2).

●

Le décorateur Marc Petitjean a travaillé avec Patrice Noviant sur la conception globale de La Traversée de Paris. *Petitjean a créé un modèle (1) représentant ses impressions des rues barricadées et des facades peintes dans Paris. Le décor utilise de vrais galets de Paris prêtés par les entrepôts de la ville (2).*

▼

Bühnenbildner Marc Petitjean arbeitete mit Patrice Noviant am Gesamtdesign fur *La Traversée de Paris*. Petitjean baute ein Modell (1), dass seinen Eindruck von den verbarrikadierten Strassen und gemalten Fassaden von Paris widerspiegelt. Die Ausstattung benutzt echtes Kopfsteinpflaster, dass von der Stadt geliehen wurde (2).

continued from page 37

the painted facades. A series of 3-D photographs memorialize the Paris Commune, and serve as a break in the realistic decor of the exhibition.

"From the 1850s on, after the invention of photography, we let photographs and films tell the story, rather than architecture," says Noviant, in explaining the more abstract look of the modern sections. The final sections of *La Traversée de Paris* include a cinema with newsreel footage from 1920-1945, and videowalls projecting political events in Paris from 1945-1970.

"The decor for film and the theatre is the technique that best adapts to this kind of exhibit," according to Noviant, who worked with Barré on the choice of designers. Film production designer Marc Petitjean worked with Noviant on the overall design, with a team of designers and architects, including Mara Goldberg and Henri Rouvière, who had both worked on *Cités-Cinés*. "We are reaching out to a large public," says Noviant, who felt that the aesthetics of architects and plasticians might not be appropriate.

"For the cinema, the decor is specific to the scenario and secondary to the story," says Petitjean, "but here we tell the story with the decor." Petitjean, who created the barricades, cobblestoned streets, and houses of the Paris Commune section, used paintings and photographs as historical reference. The facades of the streets are painted wooden panels hung on floor-to-ceiling cables, and were built by Genre Eve Décor, one of thirty scene shops involved in the project. Located in Bordeaux, they worked from a model built by Petitjean. "We used theatrical and film scene shops for the decor," he explains, "and asked for bids from three or four companies. Some of the walls are wood with styrofoam used for depth, and others are cinderblock with painted plaster."

The first of the two barricades designed by Petitjean uses real cobblestones, lent by the city, on the bottom, giving way to styrofoam reproductions higher up. The second barricade is built on a curved wooden frame covered with a thin layer of real objects — from carriage wheels to pitchforks. "The exhibit is a mix of real and false," says Petitjean, referring to a real statue lent by the Rodin museum. "I don't like to make fakes of real things, except in the cinema where everything is false. Here we have the counterpoint of something real in the midst of all this fake decor."

The lighting for the exhibition was designed by Daniel Delannoy, a young French lighting designer, who worked frequently with director Patrice Chéreau. After his unexpected death in May 1989, "someone had to come in and finish the lighting," says Noviant, "but we never really achieved what Daniel wanted." The lighting includes 200 computer-controlled instruments run by an AVAB board.

Along the impressionistic itinerary of *La Traversée de Paris*, its visitors become the crowds of the city, making the exhibit a collective as well as an individual experience, linking architecture, visual arts, and the theatre. Noviant would like to export *La Traversée de Paris* to other places, as well as design future exhibits based on other cities. "I like to find what's essential in a city," he says, "what addresses itself to the world at large." For Noviant, producer as much as architect, has discovered that all the city's a stage.

A TECHNICAL WONDERLAND AT LIGHTING DIMENSIONS INTERNATIONAL 89

LDI89

BY MARK LOEFFLER AND BILL INTEMANN

It took a lot of flash and fog, but it wasn't all done with smoke and mirrors. The range and quality of products shown by exhibitors at Lighting Dimensions International 89, held at the Nashville Convention Center, 17 - 19 November 1989, was impressive.

Artifex came through as usual, with the unusual. Not only have they added variable diffusion glass block to their liquid crystal display offerings, but a few new tricks as well. As if IR reflective heat filters, fiber optic "fabric," and an APS Pattern Projection System and motion gobo effect for projecting color images weren't enough, they showed up with a miniature moving light.

Broadway lighting designer Richard Nelson with his Lucida Corporation team demonstrated the Express-Track Macintosh-based automated tracking program in the Strand Lighting booth. Emulating the Light Palette screen and inputting routine, the program allows the designer to quickly access phenomenal amounts of cue tracking information including channel, level, change direction and amount, as well as journal, script, and reference entry capabilities.

High End Systems came on strong with the biggest sound and light party on the floor. The ongoing high-energy show premiered Lightwave Research's Intellabeam high-intensity programmable motion-color-pattern projector and controller, Emulator simulated laser system, and synchronized Dataflash Xenon flashlamp system against a spectacular fiber optic curtain by Main Light, Inc.

■ LDI89 at the Nashville Convention Center (above), 17 - 19 November, featured an international array of exhibitors from 10 different countries, including the UK. Business was brisk at the Celco booth (1) while Le Maitre (2) was a smoking sensation at the fog-machine shoot-out.

Morpheus spawned Pan-Command Systems, Inc. exhibiting the new crossfading, variable-speed, programmable Color Fader scroller along with the PC Beam, PC Spot, Color Ranger, and Commander console.

Fiber optics were popular. Fibre Lite indicated the coming of a metal halide source. Lumenyte promised the addition of a metal halide source for enhanced brightness and lamp life. Acculite introduced the VLS 2000 dichroic color-changing fiber optic illuminator.

Searchlights were another hot property. Exterieur Nuit of Paris introduced a 22" diameter, computer-controlled 4,000w xenon searchlight. Skytracker showed a new programmable single-headed fixture and controller designed by ETI that will synchronize the movement of up to 16 units and a 14" 2Kw Xenon beam projector. Engineer Lighting presented Robo Search lights featuring a new 2kw Xenon unit with an improved shutter system and the Navi-2 controller for up to 200 cues for as many as 16 fixtures each.

Among other unique offerings, Uni Par was back with a full line of plastic PARcans, thriving after introducing their prototype at LDI88. Production Arts showed off the full line of Pani projectors, along with its own 32-slide, random access slide changer. In the O'Ryan Industries booth (demonstrating the Constellation Laser System and self-contained Laser-Star™ system) was perhaps the most unique product of all, the Shower Star light-up shower head.

In the fixtures department, Vari*Lite presented the new VL2B™ long throw spot luminaire with a 400w HTI lamp and enhanced optics, the VL4™ wash luminaire with full-range beam edge control and crossfadable Dichro-Tune™ colors, and the mini-Artisan™ backup board in the Vanco Booth. The new lights use a 400w HTI lamp and improved optics that was demonstrably brighter than a 1200w HMI unit.

Over at Arc Associates, Desisti Lighting

introduced reduced-size fresnels, available in both 6"/1.2kw and 10"/2.5kw versions. Developed in conjunction with Philips Lighting, they utilize the new Philips single ended HMI lamp.

Elektralite was showing the French Sapro line of effects lighting units, premiering the Sapro laser light system.

Lighting Methods displayed their newly acquired line of CCT fixtures, including the Pebble spotlight, a cross between a fresnel and an ellipsoidal, intended to provide a more intense, peaked and controlled beam without sacrificing the soft edge of a standard fresnel.

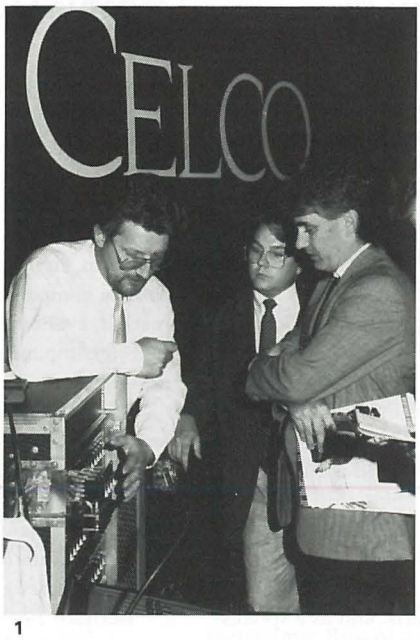
Travelling to Nashville from Taipei, the Kupo Company brought along their new color beam featuring a 300W ELH halogen lamp, and their beam scanner. Both units feature dichroic filters and glass gobos.

The new Banglite from Salvin has two MR-16's mounted side-by-side in a simple box, complete with barn doors and mounting bracket, to create a fairly intense light used to accent pauses and primary beats in music. The Banglite offers a choice of colors using dichroic filters.

Clay Paky set the pace for other programmable remote-focusing moving club-style light shows with the Golden Scan show driven by Pulsar's still-unique OSKA touch-screen video control console.

CCT Theatre Lighting presented the US debut of their new discharge followspot which has five lamp options including a 1200W Philips MSRHR.

Optec, teamed up with sister company Ness Imports, showcased OptiColor™, an externally controlled dichroic color-changing projector, in an elaborately programmed MIDI-driven light show teamed up with other UL-listed BeamScan, Pro*Mist™ and StrobeFlower™ effects.



1

Under the Apiad Italian trade association banner, club lighting fixture manufacturers like FAL, Fly, Lite Beam, Studio Due, ProgramSistem, and a host of others entertained passersby with every conceivable variation on moving lights.

Meteor Light & Sound showed their comprehensive product line, including one of the meanest looking spinning light shows on the floor.

On lasers, Science Faction featured tracer imaging on its special display screen material which allows an afterimage to linger for added depth and texture. Next door, LiCONiX showed its high-end high-power laser equipment, premiering the LiCONiX 5404AKS, a 4w white-light laser, featuring graphite rods, a tandem tube design and light weight power supplies.

Theatrical controls — ETC continues to draw interest with its consoles, including the "hands-on" Insight with ETCEDIT, full 72 or 108-channel manual and programmable capabilities and 32 user-definable Macro sequences, and the Microvision memory console with new effects, submastering, and MIDI capabilities.

NSI added the compact NCM 1600 memory controller and DLC 2400 memory dance lighting controller to its line of MIDI capable consoles. NSI's popular boards were in evidence around the floor, like in the Acculites and Optec exhibits.

Great American Market enjoyed attention for its Access Pro board aimed at the studio market with capacity for 96 submasters. The company also demonstrated the ETI-developed Panache memory board with 250 channels, 6 overlapping submasters, and designer remote capability, as well as Easy Rider for playback of "canned" lighting cues for architectural, theme park, and club uses.

Strand Lighting was on hand to demonstrate the new Light Palette 90 with dual color monitors, programmable macros, and an automated fixture console communication link. Also featured were the Parscan II addition to the Showchanger line of automated


2

ALL PHOTOS BY GENE BAGNATO

lighting equipment along with the PALS integrated Precision Automated Lighting System.

AVAB made the first North American presentation of their new Expert board which controls 512 dimmers with DMX or AVAB protocol, and features a MIDI port, built-in 3.5" disk drive for information storage and a wireless infra-red remote.

In addition to their MA-Light Control Desk (available in either 60, 90 or 120 channel versions with two pre-sets), Lightpower Showtechnik GMBH demonstrated the Major Golden Scan PC, their new software program for computer control of up to 60 Golden Scans.

Anytronics exhibited their range of lighting control systems and power packs such as the 19" rack-mounted Series 192.

Avolites displayed their new QM-500-TD digital memory console. Exploiting the ever-increasing television production industry, Avolites introduced the TV 12-25 DMX 512 dimmer module.

Celco's Gold, 60-channel Major and Baby lighting consoles were demonstrated along with Celco's new modular dimmer system. The company also announced a new Q-card memory storage system, utilizing non-magnetic storage technology.

Zero 88 displayed its Sirius 48 board, a smaller console with many of the features found on larger boards, including 48 channels with 2 manual presets, 99 programmable level memories, 9 programmable level chases, and timed crossfade in memory.

Teatronics premiered the rugged Comstar Genesis 6120 analog or multiplex 12Kw dimmer module, both specifically designed for studio use.

Smoke and fog generators once again created the atmosphere that has become an LDI trademark. Among the exhibitors of such products were Ness, MDG 3020, Martin, and Great American Market. At the Le Maitre/Icelectrics booth were a range of special effects machines including the Smoke Processor smoke machine and

continued on page 45

ABTT/Glasgow, SIEL, and SIB/MAGIS 1990

ABTT/GLASGOW

In anticipation of an international arts conference to be held in Glasgow, the Association of British Theatre Technicians is taking its show on the road. From 14 - 16 March 1990, ABTT will be at the Scottish Exhibition and Convention Center, with *Arts Without Frontiers,* a conference organised by the Arts Council of Great Britain, right alongside. This is the first ABTT show to take place in Scotland.

Glasgow holds other attractions for ABTT organisers. The city has been selected as Cultural Capital of Europe/1990.

Arts Without Frontiers is expected to attract over 600 arts professionals — professionals that ABTT/Glasgow expects to visit its trade show. Mike Smith, one of the organisers of the ABTT show, expects the bulk of visitors to come from the north of England, particularly, Scotland. While expectations are that the Glasgow show will be smaller than ABTT's annual London show, which in May of 1989 hosted 63 exhibitors and 2,200 attendees, Smith predicted that as many as 40 exhibitors will be on hand to demonstrate and showcase a variety of theatre, lighting, sound, and special effects equipment.

Arts Without Frontiers is designed to alert the arts world to the effects of 1992, when European Community trade barriers are lifted. Sponsored by the British Council and *The Sunday Times,* the conference delegates will discuss such topics as funding, broadcasting, taxation, employment and cultural identity.

Glasgow holds other attractions for ABTT organisers. The European Council of Ministers has selected Glasgow as the Cultural Capital of Europe/1990. Beginning at midnight 31 December 1989, Glasgow will stage a year of ambitious cultural events. Visitors to ABTT/Glasgow will be treated to an arts celebration that includes the classics of opera, dance, and music, as well as new and innovative projects.

For further information on ABTT/Glasgow, contact Ethel Langstreth at the Association of British Theatre Technicians, 4 Great Pulteney Street, London, W1R 3DF. Tel: 44/1/434-3901. For those interested in *Arts Without Frontiers,* applications can be obtained by Conference Profile Ltd., 3/4 St. Andrew's Hill, London EC4V 5BY. Tel: 44/1/236-4938.

ANDREW P. SHEARER

SIEL

With European economic unification just a couple of years away, organizers of SIEL 90, the 8th international trade show of equipment and technology for entertainment and leisure venues, are reaching beyond their traditional borders, tapping into the international marketplace for this year's roster of exhibitors and attendees. SIEL 90 will take place 17 - 20 February, 1990 at the Porte de Versailles, Paris, and as a spokesperson for Bernard Becker Blenheim, organisers of SIEL 90, states, "We want to make SIEL more international — more international exhibitors, and more foreign visitors."

To achieve this, organisers are engaged in an aggressive promotional campaign, such as international advertising and exhibiting at foreign trade shows. Last year, 6% of the 18,189 attendees and 10% of the 250 exhibitors were from countries besides France. These numbers are expected to increase in 1990.

During its four days, SIEL will provide a forum where buyers can view the complete range of entertainment and

"We want to develop the specific equipment for theme parks — artificial surfaces, gaming machines, inflatables."

leisure venue products and services, and see the latest technology, under one roof. SIEL showcases a wide range of sound and lighting equipment, video, special effects, stage machinery, sound proof equipment, synthetic surfaces, furniture, costumes, make-up, signage, and security systems. Service companies include those from animation, events promoters and organisers, record companies, architects, and designers.

SIEL 90 is complemented by the 5th annual Theatrical Services Exhibition. Under the premise that the theatrical sector is a specific field which needs special treatment, exhibitors will be presenting entertainment technology specifically designed for the stage.

Bernard Becker-Blenheim is also developing SIEL's coverage of the equipment side of the leisure industry. "While we already have exhibitors working with the leisure industry in sound or lighting equipment, for example," a spokeswoman

states, "we want to develop the specific equipment for theme parks — electric cars, artificial surfaces, gaming machines, and inflatables."

Because of this, SIEL 90 is expecting to attract a larger number of exhibitors and

"We want to make SIEL more international — more foreign exhibitors and visitors."

attendees from a diverse cross-section of the entertainment industry.

Stands are available in two versions: Space only, allowing exhibitors to build their own stand to their own specifications. The cost is FF1150 per square meter; and Shell scheme, a ready-built exhibition stand, with carpet, namboard, and spotlights, costing FF1290 per square meter.

For complete information concerning exhibiting or attending SIEL 90, contact Bernard Becker-Blenheim, 22-24, Rue du Président Wilson, 92532 Levallois-Perret, Paris. Phone: 33/1/47-56-50-00. Fax: 33/1/47-56-12-67 or 47-56-92-92. Telex: 614620 BLEHN. For UK exhibitors, contact Debbie Carlton at 44/1/727-1929. Fax: 44/1/727-0834.

ANDREW P. SHEARER

SIB/MAGIS

April in Rimini may not be April in Paris, but its the time and place for the 1990 editions of the SIB International Exhibition of Equipment and Technology for Discotheques and Dance-Halls and the MAGIS Exhibition of Equipment and Furnishing for Theatres, Cinemas, and Entertainment Venues to be held in the Rimini Trade Fair Centre from 1 - 4 April.

Rodolfo Lopes Pegna, president of the Rimini Trade Fair Corporation, organisers of SIB/MAGIS, confirmed his organization's intent to ensure that the events maintain the trend of constant growth they have experienced since their respective first editions. "SIB and MAGIS, coming up for their 8th and 4th annual editions respectively," says Pegna, "were set up to fill a gap in the international trade expo circuit — the world market needed a specialized show for each sector, and manufacturers were tired of finding themselves relegated to a section of a larger exhibition. The fact that we made the right decision is born out by a glimpse at our attendance figures, which have risen constantly since the start."

SIB and MAGIS 89 were visited by 13,045 trade visitors, a hefty 23% up on 88

SIB and MAGIS 89 were visited by 13,045 trade visitors, a hefty 23% up on 88 figures. 1,479 were from outside Italy.

figures. 1,479 of these specialized visitors were from outside Italy (a rise of 36% on the previous edition).

Mauro Malfatti, assistant manager of Fair Corporation, continued, "We're organizing SIB/MAGIS with the collaboration of the major representative trade association — SILB (The Italian Dance-Hall Owners' Syndicate) and AGIS (The Italian General Show Business Association) — so as well as being able to preview a comprehensive panorama of the very latest of the industry's technology and research, trade members can also participate in the very busy program of collateral events. In 1990, these will include debates and roundtable discussions on the sector's key talking points and problems, technical seminars, conferences, and shows."

Exhibitor and visitor information for SIB/MAGIS 90 can be obtained by contacting: Rimini Trade Fair Corporation, P.O. Box 33, 47037 Rimini, Italy. Tel: 541/782000. Fax: 541/774313. Tlx: 550844 FIERIM 1.

MICHELLE LOSCOTTO

continued from page 43

the Power Mist low-cost fogger. The Smoke Processor III uses a water-based smoke fluid, and features "instantaneous smoke" — the ability to use the machine at any time after initial heat-up with no idle cycle where re-heat would normally shut down the machine's operation.

Rosco brought along a new Rosco Fog Machine, the Model 1300. The new model differs from the Model 1500 primarily in the control capability — the control console on the new machine has been eliminated and operation is via a hand-held remote.

While JEM Smoke Machine Company Ltd., did not have its own booth, their machines were to be found at several booths on the floor, such as the Elektralite mini-nightclub.

Neon Modular Systems featured the Sparkler™, an acrylic-encased neon stick that seem to crackle in perpetual motion.

On rigging, Stardrive, Inc. exhibiting in the Acculites booth, showed a "coiled hinged link column system" for portable ground support of lighting trusses. Universal Manufacturing introduced square trussing, available in 5' and 10' lengths and 11", 14", and 18" widths.

There were several sound companies at the show including Wembley Loudspeakers displaying their MC2 Maxi Cube, a 2820 bass enclosure.

In addition to the exhibits on the show floor, special events included a fog machine shoot out at the nearby Tennessee Performing Arts Center, and a special tour of the Tennessee Television Network. A trip to the Grand Ole Opry added a taste of true Nashville flavor.

A series of thirty LDI seminars explored such subjects as new developments in MIDI technology, applications for moving lights, and techniques in lighting design from Broadway to the West End, from country and western music to international opera houses. Among the participants at the seminars were Peter Wynne Willson and Tony Gottelier of Wynne Willson Gottelier Limited, and LDs Chris Parry and Steve Kemp.

Attendance at LDI89 was 3,551 — an 18% increase over 1988, while the exhibit space increased 65% for a total of 373 booths. LDI90 is scheduled for 17 - 19 November 1990 in Orlando, Florida with visits planned to the MGM/Disney and Universal studios.

1

Beam me up, Scotty
The Masterlite Directional Beam System, manufactured by Rolight of Holland, is an attachment designed by PAR 64 stagelights, which adapts the light into a powerful, concentrated beam with rapid interchaning of 9 colours. The mirror lens allows the beam to be projected in all directions. The pan and tilt of the mirror are controlled via separate channels, as is the colour changer. Available through M & M LIGHTING, 87 Gloucester Ave., London, NW1 8LB, 1/722-4147.

2

A pro cabinet
The Cerwin CVX 253 loudspeaker is suitable for the large scale touring P.A. or for club use. Inbuilt crossovers are switchable for passive or active two or three-way operation. Bass is available from twin 15 inch coupled bass drivers. The 253 employs dual woofers for 6dB greater maximum acoustic output over the low frequency range. Available through AVITEC ELECTRONICS, 80/81 Walsworth Road, Hitchin, Herts, UK, SG4 9SX. 0462/58961.

3

An IQ of 2000
With the aid of the new Crown IQ System 2000, it's now possible to monitor and control up to 2,000 amplifiers, at the touch of a key. The IQ System 2000 can be run in conjunction with Crown Macro-Tech power amps and either a Mac or IBM computer. Heart of the system is Crown's IQ Interface which operates in tandem with one Crown IQ-P.I.P. card for every amp hooked up to the system. SHUTTLESOUND, Unit 15, Osiers Estate, Osiers Rd., London SW181EJ.1/871-0966. Fax: 1/870-9300.

4

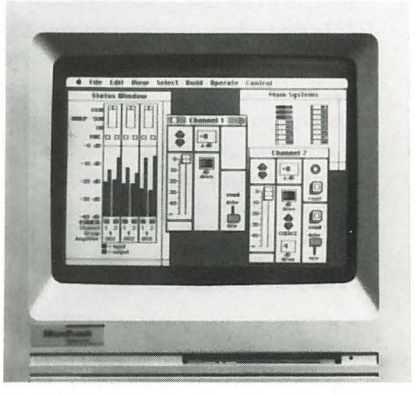
MEQ equalisers
DigiTech has introduced three new programmable graphic equalizers all offering 99 memory locations, EQ curve comparison function, independent MIDI access to each channel, and plus or minus 12dB of cut and boost — the 28-band MEQ 28 mono (one-third octave graphic), the MEQ 14 stereo (two-thirds octave); and MEQ 7 four channel (1 1/3 octave graphic). Available through JOHN HORNBY SKEWES, Salem House, Garforth, Leeds, LS25 1PX, UK. 0532/865381.

5

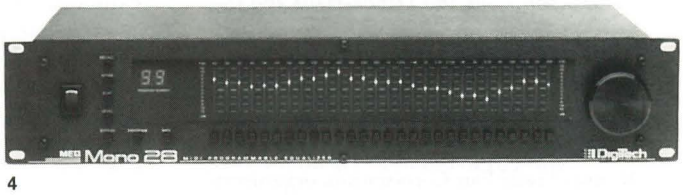
Sky Art
The STX 4,000w system is a 22" diameter, computer-controlled searchlight. Individual or multiple STX fixtures are attached to the computer via a single data wire. Custom software allows pre-programming, adjust and memorization for each STX in speed, tilt, focus, and shutter mode. Combinations of movements are possible to provide 360° in pan and 180° in tilt. Using a 4,000w xenon lamp, the STX system operates on 208 or 380 V.A.C., 3-phase power, with a single, multi-wire cable connecting head to power supply. EXTERIEUR NUIT, 48, rue Montmartre, 75002, Paris, France, 331.45.08.19.19. Fax: 331.40.26.42.52.

1

2



3



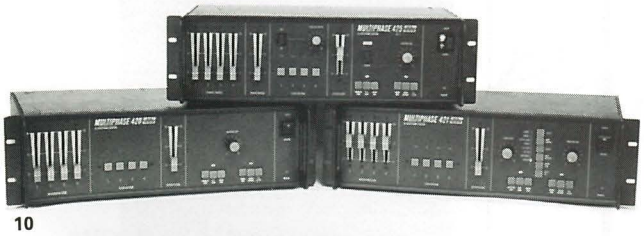
4

6

7

8

9



10

6

See spot move

The Gamma Lite Mover System from Avitec Productions, a high power projector spot system, gives instant colour changes and moves the light beam in two planes by means of a front mounted mirror system. The head uses the HMI 575 lamp, with nine dichroic colours plus white, together with six gobos. The touch sensor control system drives up to sixteen Lightmovers. AVITEC ELECTRONICS, 80/81 Walsworth Road, Hitchin, Herts, UK SG4 9SX. 0462/58961

7

Legal levels

The SL100 Sound Level Control System, designed in response to legislations governing safe sound pressure levels, maintains complete audio transparency up to a maximum input level, preset by the installer. Once this level is exceeded, and SL100's warning indication has been ignored, audio signals passing through will be attenuated. Control functions are set internally at installation. CITRONIC LTD., Bowerhill Melksham SN12 6UB, Wiltshire, UK. 0225/705600.

8

A marriage made in heaven

Electro-Voice has married the twin advanced technologies of neodymium and Manifold Technology. The result is the N/Dym 1/2 MT, combining the output of two drivers and a single exit, eliminating need for two or more horns to cover the same area. This produces twice the acoustic output and the same sonic qualities as single compression drivers. Frequency: 500 - 20,000 Hz. Long-term power capacity: 100w over 24 hrs. SHUTTLESOUND, Unit 15, Osiers Estate, Osiers Rd., London, SW18 1EJ.1/871-0966. Fax: 1/870-9300.

9

A touring board

Avolites' QM 500-TD theatre desk has localised intelligent displays, giving names and indication of memories, effects, and timed playbacks, and leaving the integral electro-luminescent display uncluttered. It negates the need for operator to change focus between external v.d.u. and board. Features: 600 memories accessible on 20 Cue faders, effects, and timed playbacks; split time playback with hi-resolution bar-graph display; 180 desk channels to 512 dimmers; 40 true diplesscrossfade stacks. AVOLITES, 184 Park Ave., London, NW10 7XL. 01/965-8522.

10

Multiform Multiphase

Multiform Lighting announces the release of updated versions of their Multiphase 420 series of lighting controllers. All models in the range include an integral 4-channel dimmer section of 1kw or 2kw per channel combined with an effects section tailored to the requirements of different applications. Various features of the different models include an additional 8-chase pattern and a preset master with autofade and blackout. MULTIFORM LIGHTING, Bell Lane, Uckfield, East Sussex, TN22 1QL. 0825/3348.

■

In the next issue:
Cue International takes you to Glasgow, the European Culture City of 1990 — we look at the Scottish Ballet and Opera; an interview with Scotland's leading director/designer, Philip Prowse; and a look at Glasgow's newest performance space, the Glasgow International Concert Hall. Also, a profile of the Italian lighting company, Coemar.

●

Dans le prochain numero:
Cue International vous emmène à Glasgow, la capitale européenne de la culture en 1990 — un regard sur le Scottish Ballet et Opera; une interview avec Philip Prowse, le metteur en scène en pointe en Ecosse; et un regard dans les coulisses sur la salle de spectacles la plus récente à Glasgow, le Glasgow International Concert Hall; et un profil de l'entreprise d'éclairages Italienne, Coemar.

▼

In der nächsten Ausgabe:
Cue International geht nach Glasgow, die Europäische Kulturstadt des Jahres 1990; ein Blick auf das Scottish Ballet und Opera; ein Interview mit dem führenden schottischen Regisseur und Designer Philip Prowse; ein Blick von Schottlands neuester Buhne, die Glasgow International Concert Hall. Ein Bericht über die italienische Beleuchtungsfirma Coemar.

AD INDEX

17 of the top 20 grossing acts of 1988 used AVOLITES control.

Top 20 Grossing Acts Of The Year*

Acts	No. Of Shows	Attendance	Gross
1. PINK FLOYD	37	1,267,594	$27,813,077
2. AEROSMITH	115	1,379,912	$22,096,003
3. GRATEFUL DEAD	67	1,165.151	$21,529,265
4. VAN HALEN'S MONSTERS OF ROCK	18	783,143	$19,843,283
5. DEF LEPPARD	83	1,122,642	$19,047,747
6. GEORGE MICHAEL	47	548,700	$17,341,073
7. BRUCE SPRINGSTEEN	43	776,045	$16,994,425
8. 'SOUTH PACIFIC'	245	519,504	$12,890,051
9. AC/DC	68	769,152	$12,519,305
10. WHITESNAKE	60	715,918	$12,033,353
11. BARRY MANILOW	119	463,274	$10,186,351
12. STING	50	504,515	$ 9,057,774
13. ROBERT PLANT	45	529,183	$ 9,056,011
14. INXS	45	528,901	$ 8,873,463
15. AMNESTY INTERNATIONAL: HUMAN RIGHTS NOW!	6	265,632	$ 8,744,784
16. MICHAEL JACKSON	21	354,252	$ 8,357,424
17. JOHN COUGAR MELLENCAMP	27	419,341	$ 7,337,372
18. MOSCOW CIRCUS	109	509,748	$ 6,932,368
19. ELTON JOHN	17	287,856	$ 6,361,084
20. 'THE ULTIMATE EVENT': WITH FRANK SINATRA, SAMMY DAVIS JR. & LIZA MINNELLI	8	122,368	$ 5,756,210

AVOLITES

The Proven Performer

AVOLITES USA, INC.
9700 Owensmouth Avenue Unit B
Chatsworth, CA 91311
Tel: (818) 709-1116 Fax: (818) 709-0153

*Reprinted from PERFORMANCE Magazine

AVOLITES PRODUCTION COMPANY, LTD.
184 Park Avenue London NW10 7XL
Telephone: 01-965-8522 Telex: 24652 SPOTON G
Fax: 01-965-0290

When you want the best, ask for it.

Call it by name. The Great American Pattern.

Best designs. Best quality. Best service.

You can expect the best from The Great American Pattern: Distinctive, usable graphics in sizes to fit the broadest range of fixtures. A product manufactured to rigid specifications, insuring highest quality for the most demanding professional applications. Reliable service — all Pattern orders ship the day they are received. Write or call for the Catalog.

GREAT AMERICAN PATTERNS ARE MADE IN THE U.S.A.

THE GREAT AMERICAN PATTERN

826 N. COLE AVENUE HOLLYWOOD CA 90038
213/461-0200 • TWX 910 494 1233 • FAX 213/461-4308

GREAT AMERICAN PATTERNS ARE AVAILABLE FROM THESE FINE DEALERS:
AUSTRALIA: Concert Lighting Systems, Tel: 03 529 5019, FAX 03 529 2629. **FRANCE:** Dimaphot, Tel: 1-47-23-98-87, FAX 1-47-23-40-44. **HOLLAND:** Corne-Light, Tel: 31-020-97-96-86, FAX 31-020-97-79-86. Flashlight, Tel: 30-62-58-14, FAX 30-62-59-34. **HONG KONG:** Engineering Impact, Tel: 3-7110222, FAX 3-7642543. **NEW ZEALAND:** Spotlight Systems, Tel: 64 9-789354, FAX 64 9-780542. **U.K.:** AC Lighting, Tel: 0494-446000, FAX 0494-461024. **WEST GERMANY:** Haussmann, Tel: 4940-660896, FAX 4940-665071. Zilz Concerts GmbH, Tel: 221-58-30-31, FAX 221-58-43-99.