

# LIGHTING+SOUND

*International*



Trillite in motion—part of Optikinetics' stunning light show at SIB Rimini.  
(see Contents page 5)

PLASA

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# MEMORY LIGHTING CONTROLS

## including Guide to Technical Comparison

**LIGHTING SOUND**  
*International*  
**Survey**

### ADB Theatre and TV Lighting

Leuvensesteenweg 585,  
B 1930 Zaventem, Belgium.  
Telephone: (2) 722.17.11  
Telex: 22154.

#### F20

A totally new memory control launched in March 1986 and first shown at SIEL Paris in April. It is a 120 channel board with multi-use application.

#### F28

The ADB F28 was first introduced in 1984, and is adaptable from 120 to 168 channels. A large modular board, it contains seven main control modules, that can be linked together to suit clients' use requirements. Ideal for the large theatre/opera house situation, it can also be adapted for the lighting control requirements of major television studios. Its production and design came about as the result of a user-survey instigated by ADB at the research and development stage.

Note: due to postal strikes in Belgium we were unable to obtain full information and pictures of the ADB controls, and the above boards are therefore not included in our survey chart in this supplement.

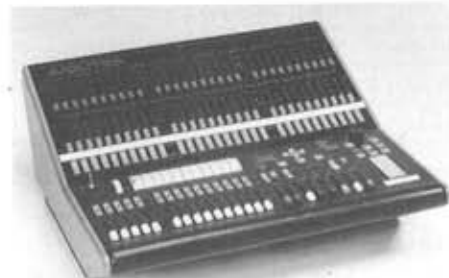
### Avolites Production Co. Ltd.

184 Park Avenue, London NW10 7XL.  
Telephone: 01-965 8522.  
Telex: 24652 SPOTON G.

#### Rolacue Series

The Rolacue series of memory consoles represents an important part of the new generation of Avolites control consoles. It has been designed specifically to offer powerful and flexible programming facilities in smaller applications, where budgets can often be limited.

Although Rolacues offer comprehensive facilities including rapid Memory and Chase Modification and Preview, they are extremely simple to operate even for someone approaching memory consoles for the first time. All Rolacues are linkable and have the facility to save and load information via 3.5 inch Disk Drive. This allows access to large numbers of channels without the commitment to an extremely large console.

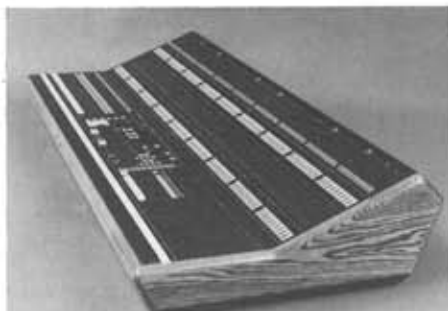


For all but the largest applications the Rolacue series provides very powerful and flexible control of light in an easy to use extremely cost effective format.

#### QM 500 Series

Designed as the successor to the extremely successful 8100 series, the QM 500 series was launched in early 1984 with the three preset 90 channel version. Within the two years of its production the QM 500 series has become an accepted standard throughout the world where powerful, versatile control of large numbers of channels is required.

The design philosophy behind the QM 500 is that the hardware should be sufficiently flexible to adapt to the inevitable developments in software and operating procedures. This has meant that although there has been a process of continual improvement in specification brought about in close consultation with designers and operators who have used QM consoles, many upgrades have been retrofittable to all consoles.



With the introduction of the 180 channel QM 500 has come a revised operating procedure which makes the QM series even more flexible and straight forward to programme and operate.

Built to satisfy the most demanding control requirements of today's leading lighting designers, the QM series offers a unique combination of extremely powerful memory capacity and instant 'hands on' access, providing the operator with almost limitless means to create the perfect combination of technology and art.

#### Ultra-Chase

The Ultra-Chase offers an efficient and compact method of controlling complex, multi-channel special effects. This desk's central processor unit provides multi-functional facilities and is programmed in a "user friendly" method with prompting instructions through each stage from the Alpha-Numeric display. There are 20 patterns, each of up to 100 steps, with step cross-fade time being programmable. Step cross-fade time may be adjusted whilst unit is running by means of a manual over-ride control.



Incorporated in the unit are full editing facilities, pattern linking, direction reversing and "bounce" keys and L.E.D. output mimic. The desk panels are standard 19" rack mounted and the unit is finished in an oak cabinet.

### CCT Theatre Lighting Limited

Windsor House, 26 Willow Lane,  
Mitcham, Surrey CR4 4NA.  
Telephone: 01-640 3366.

Telex: 946648.

(AVAB Elektronik AB - Sweden).

#### AVAB 201

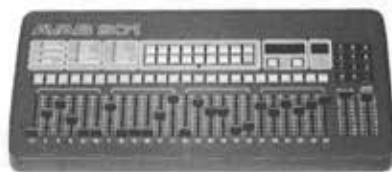
The AVAB 201 is a powerful micro computer controlled lightboard at a lower price than many manual systems with little more than elementary facilities. The broad range of facilities and flexibility of its mode selection controls includes special features for many areas of use.

Bands and Clubs: individual or mixed presets; hand cross-fades or foot pedal; programmable chase and light organ systems.

Audio Visual Presentations: speakers infrared remote control of pre-programmable sequences.

Video and TV Broadcast Studios: pre-programmable lighting groups plus stored or 'hands on' preset and sequence control.

Schools and Meeting Halls: can be used as straight forward manual preset for individual circuits or programmed groups. For the more ambitious lighting designer, all the other functions are readily available.



Theatres: The most demanding professional lighting designers will find the AVAB 201 to be remarkably powerful system. The programmable fade times, automatic times and multiple pre-setting are unique in such a small system. The soft patch option for up to R8 dimmer channels and the extensive special effects functions make the AVAB 201 an effective micro computer system.

Full specification details are on the system analysis.

#### AVAB 202

For those who want to go beyond the scope of the 201 system the AVAB 202 is ready to meet the most demanding of technician/designer needs. Never before has so much lighting control flexibility been squeezed into such a small package, and never before has such an attractive package had an equally attractive price—a combination that is exceedingly hard to beat, say CCT.

The 202 uniquely combines the reassuring "hands-on" feeling of a manual lightboard with all

## Memory Control Technical Comparison

- denotes facility available
- denotes optional extra or add-on
- information not supplied

	Date first introduced	Number Manufactured	Major Users	Theatre	TV	Disco	Rock/Touring	A.V.	Amateur	Educational	Portable	Installation	Number of Channels	Number of Dimmers	Number of Memories	Proportional Patch	Modular Control Panels	Number of Playbacks	Number of Simultaneous Fades	Manual Presets	Programmable Special Effects	Number of Sequences	T
ADB F20	-	-																					
ADB F28	-	-																					
Rolacue 30 Channel	1984		●	●	●	●	●	●	●	●	●	30	Inf.	105		15	21	2	10	350	1		
Rolacue 60 Channel	1985		●	●	●	●	●	●	●	●	●	60	Inf.	155		20	26	2	10	350	1		
Q.M. 500 90 Channel	1984		●	●	●	●	●	●	●	●	●	90	Inf.	500	●	20	32	3	20	1360	2		
Q.M. 500 180 Channel	1986		●	●	●	●	●	●	●	●	●	180	Inf.	500	●	20	32	1/2	20	1360	2		
Ultra Chase	1982		●	●	●	●	●	●	●	●	●	90/120	Inf.	20	●	20			20/36	100/70	1/2		
AVAB 201	1982	250 +	●	●	●	●	●	●	●	●	●	120/24	128	100	●	26	200	24		10	20	10	
AVAB 202	1985	120 +	●	●	●	●	●	●	●	●	●	240	240	unlimited		26	26	24		10	20	10	
AVAB Viking	1982	60 +	●	●	●	●	●	●	●	●	●	1000	1000	999	●	2	4	12		10	20		
Series 2 Thirty	1984		●	●	●	●	●	●	●	●	●	30		40	○	10	10	10	2	4	160	1	
Series 2 Thirty with soft options	1986		●	●	●	●	●	●	●	●	●	30		150	○	10	10	10	2	8	792	8	
Series 2 Sixty	1984		●	●	●	●	●	●	●	●	●	60		300	○	20	20	20	2	8	792	1	
Series 2 Sixty with soft options	1986		●	●	●	●	●	●	●	●	●	60		300	○	20	20	20	2	8	792	8	
Series 2 Ninety	1984		●	●	●	●	●	●	●	●	●	90		450	○	30	30	30	2	8	792	1	
Series 2 Ninety with soft options	1986		●	●	●	●	●	●	●	●	●	90		450	○	30	30	30	2	8	792	8	
Series 2 Gold	1986		●	●	●	●	●	●	●	●	●	90		450	○	30	30	30	2	24	2376	24	
MicroFILE	1983	150	●		●	●	●	●	●	●	●	40		550		4	5		1	200	550	4	
Concept	1982	20	●	●					●	●	●	120	120	200		3	3						
Microlite 200	1984	21	●	●	●				●	●	●	960	1800	1500	●	24	24	12	24				
Microlite 2	1985	86	●	●	●	●	●	●	●	●	●	240	480	1500	●	8	8	4	10	1500	1500	8	
Micron X	1985	24	●	●	●	●	●	●	●	●	●	120	144	1500	●	6	6	2	●	999	999	6	
Micron	1983	60	●	●	●	●	●	●	●	●	●	120	144	999	●	6	6	4	●	999	999	6	
Spirit	1986	10	●	●		●	●	●	●	●	●	120	144	999	●	5	5	2	●	999	999	5	
System II	1984		●	●	●		●	●	●	●	●	150	512	300	●	2	2	10	1	300	300	2	
Prestige 1000	1985		●	●	●	●	●	●	●	●	●	100	200	200	●	4	4	24	1	200	200	4	
Prestige 2000	1985		●	●	●		●	●	●	●	●	200	400	300	●	4	4	24	1	300	300	4	
Prestige 3000	1985		●	●	●		●	●	●	●	●	400	800	400	●	4	4	24	1	400	400	4	
Touchstone	1986	50	●	●	●	●			●	●	●	96	96	350		1	1		1	99	99	1	
Pulsar BBC Micro	1985	100	●	●	●	●	●	●	●	●	●	36	36	1000	●	2	3		var.	100	1		
Sitalux K40	1984	11	●	●					●	●	●	768	768	400	●	1	10	10	10 + 2	200	400	10	
Sitalux B40	1981	21	●						●	●	●	768	768	400	●	1	500	10	2	100	400	1	
Tempus M24	1983	600 +	●	●		●	●	●	●	●	●	120	120	199		1	6			1	199	1	
Tempus M24 FX	1983	200 +	●	●	●		●		●	●	●	120	120	8		8				1	8	1	
Gemini	1985	100 +	●	●	●		●	●	●	●	●	180	384	200 +	●	2	24	8		99	255	10	
Galaxy 2 Studio	1984	50 +	●						●	●	●	768	768	200 average	●	4	24	34		99	255	10	
Galaxy 2 Premier	1984	25 +	●						●	●	●	768	768	200 average	●	4	24	34		99	255	10	
Galaxy 2 Arena	1981	125	●						●	●	●	768	768	200 average	●	4	24	34					
Mini Light Palette		120	●	●			●	●	●	●	●	200	384	var. on channels moving each cue	●	3	3	10		100	80	3	
Lightboard M	1986		●	●	●	●			●	●	●	96	384	224	●	4		48	●	224	96	2	
Light Palette 2	1984	40	●	●			●	●	●	●	●	800	1536	var. on channels moving each cue	●	6	6	9		100	80	15	
Lightboard XP	1986		●	●			●		●	●	●	4000	4000	var. on channels moving each cue	●	8	256	48					
Tigers Eye	1986	4	●	●	●	●			●	●	●	60	240	350	●	2	17	15	17	999	99	2	
Eclipse	1983	300	●	●	●		●	●	●	●	●	24 - 120		multiples of 48 or 200	●		2	x8	2	x8	x200	x200	
Lightmaster 1200 MkII	1982	1300	●	●	●	●	●	●	●	●	●	12	2	16				2	16	16	1		





# AVAB 201 & 202 from CCT.

extremely powerful, micro-computer controlled lightboards at a price which is below that of many manual systems



Facilities on the AVAB 202 include

- 26 group masters
- 48,96,120,192,240 control channels
- Memory expansion
- Disc dump standard or option
- I.R. Remote control
- Printer option
- Controls Digital Dimmers or analogue via Supermux
- R.G.B. monitor
- Chase effect 10 programmable patterns
- Sound to Light input, 10 programmable patterns

Full details of these and "VIKING" — the ultimate control from

# CCT

## theatre lighting

WINDSOR HOUSE, 26 WILLOW LANE, MITCHAM, SURREY, CR4 4NA. TEL. 01-640 3366 TELEX 946648

the refinements only a computer lightboard can offer. The faders can be used to set individual channel levels or to master entire presets. With the split crossfader crossfades can be executed manually. Fade times can be modified with "joystick". There is fingertip access to every aspect of the lighting program.



The 202 seriously challenges much larger and more expensive lightboards by offering well thought-out features in compact form at an affordable price. Virtually all programming functions can be combined with no practical limitations. Flash a light organ effect, for instance, or set up a conditional loop in the sequence of presets which in themselves contain chase programmes. Override the sequence of presets, master critical channels or make last-minute corrections during playback. In short, however intricate the production, whatever the challenge, the 202 ensures trouble free lighting control.

AVAB has designed the 202 as an extremely versatile control system with enough software capability to handle any lighting situation. The special effects so important to stage performances complement the submastering functions which are indispensable to television lighting. Even though one type of production, more than the other, may utilize certain portions of the software, the 202 makes them all accessible in one interactive package. Even that 'once-a-year' effect that used to mean extra peripheral devices is no problem for the 202.

### AVAB Viking

Viking is the "ultimate" control board for theatre and TV. The over-riding conceptual idea was to collect as many control functions as possible and monitor them from a single source equipped to handle multiple uses and tasks. The operator can build Presets, while a member of the lighting crew focuses instruments with the remote controller. At the same time the lighting designer revises his plot. The multi-task capability of Viking extends the possibilities even further. Fades within fades, special effects, remote controlled lighting instruments, color changers, stage rigging and verbal cues to the followspot operators—all simultaneously!

AVAB has solved the critical problem of speed by using the main computer to relegate a wide range of different functions to several microprocessors and monitor the results. Yet Viking is a truly modular system, which can easily expand to meet increasing demands.



Even without remote control of lighting instruments or rigging control, Viking is a superior lightboard. Multiple sequences of presets, automatic submaster assignments during playback, programmable special effects and dimmer curves, manual override or timed fades and textual labelling of groups and presets are all part of Viking's standard software.

### Celco Ltd.

distributed by Cerebrum Lighting (Sales and Hire) Ltd.

The Stage and Lighting Effects Centre, 168 Chiltern Drive, Surbiton, Surrey KT5 8LS.

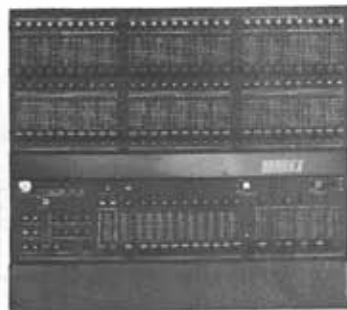
Telephone: 01-390 0051.

Telex: 892337 Celco G.

and for U.S. Sales by Celco Inc., 30B Banfi Plaza North, Farmingdale, NY 11735 USA.

### Series 2 Thirty

The Series 2 Thirty may be the smallest in the Celco range but, in common with the larger Series

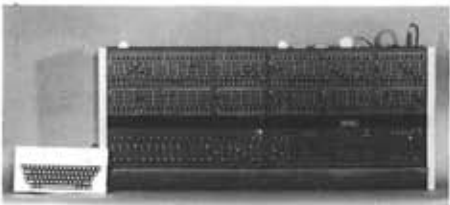


2 boards, it shares the same design philosophy and attention to detail—thereby making it the ideal choice for the smaller production. Many Series 2 Thirtys are in use every day of the year either on their own, or joined to another Series 2 board by the flexible linking facility.

For those requiring additional memory capacity and multi-sequence capability, Celco have developed an easily installed softoptions Package. It is probably the most powerful lighting boards for its size in the world.

### Series 2 Ninety and Sixty

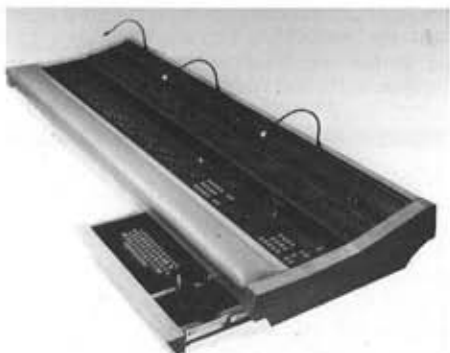
Sharing a common operating procedure, the Series 2 Ninety and Sixty have become the standard lighting boards for many designers, directors and operators the world over. Both boards feature instant access to programming and modification routines as well as alpha numeric displays, automatic time fades and cassette/computer interfaces. They will also accept a more powerful softoptions package.



Like all the Series 2 Range, they have proved themselves extremely robust in operation, even under the most arduous tour conditions. Building reliable state of the art electronics into an indestructible chassis can be a designer's nightmare, but Celco have dedicated themselves to the principle that the product should be exceptional, both in its reliability and in its visual aesthetics.

### Series 2 Gold

The flagship of the Celco range, including a host of innovative features combined with traditional craftsmanship, Series 2 Gold will appeal to the exclusive few who command the best in lighting control boards available.



With a cabinet which is hand built to each client's specification from a selection of the finest natural woods and genuine English leather hides, Series 2 Gold sets the standard to which other manufacturers aspire, say Celco. In operation, they allow the designer to execute lighting plots that, until today, would have been pure fantasy—thereby ensuring the designer remains at the forefront of his field.

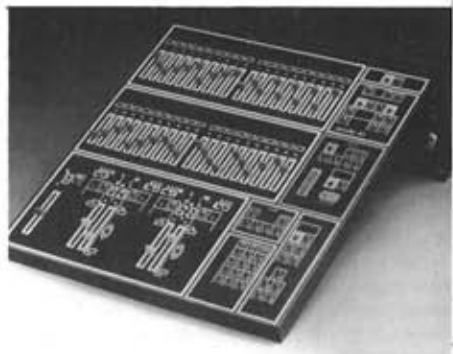
### Concord Controls Limited

Unit 3, Dawson Road, Mount Farm,  
Milton Keynes MK1 1LH.  
Telephone: (0908) 644366.

### MicroFILE 40

The MicroFILE 40 is a stand alone, 9 show, 550 state, 40 channel memory lighting control desk. Although simple to operate, it includes sophisticated features for the more experienced user. Ideally suited for the larger installation, its small size and light weight also make it ideal for portable use. The desk has 550 in-built memories, 4 play-backs with dipless cross fade, 40 way manual preset with channel mimics and many other features.

The MicroFILE 40 uses the static principle of lighting where a balance of lighting is memorised. Thus, when a balance of lighting is set up, it is stored and a state can be altered or played back without affecting other states. These states are



then held as memories which can contain a single state or a sequence of states (a chase). Each state is unique and is identified by its show number and memory number.

Controls for each type of operation are grouped together for ease of operation and functional areas are identified by different colours. The desk contains a low voltage dual power supply, two 20mm anti-surge fuses and two green indicators which are normally lit when the desk is in operation and which are visible without removing any covers.

### D.E.W.

Maybank Road, South Woodford,  
London E18 1ET.  
Telephone: 01-504 5832.  
Telex: 8951031 DEWLEC G.

### Concept

Concept is unique in its range, say D.E.W. and is the "lighting operator's friend", offering basic facilities that are both simple to understand and simple to use, and reliable. There are two manual and one dipless auto playbacks, separate key pads for channel and memory control, and positively no dual function buttons. It can control up to 120 dimmer channels, with 200 full capacity memories, plus the separate option of library storage on standard 3 1/2 inch mini disks.

Additional facilities include individual preview of memory, playbacks and combined output, memory modification, blind plotting, memorised fade times, playback and channel flash, and sequence and cue insertion. An optional companion unit incorporates a 10 group control system for



use as preset or back-up facilities, in conjunction with a miniature plug matrix panel. Six of the ten groups can be selectively switched to a plug-in cartridge special effects unit offering a wide range of chase, sound to light and timed fading patterns.

Concept is for the amateur and professional alike, say D.E.W. for venues involving peripatetic operators.

**FOR DETAILS OF  
ADVERTISING RATES  
ring (0323) 642639**

**or write to L+S, PO Box 628  
Eastbourne, East Sussex BN21 2PZ**

### Eurolight Limited

10/16 Mercer Street,  
London WC2H 9QE.  
Telephone: 01-836 7877.  
Telex: 888941 LCCI Eurolight.

### Microlite 200

This is the most sophisticated of all Eurolight control systems and is usually built to customer specification. Software capabilities are available which allow the client to 'design' his own version of Microlite 200. So far, 5 systems have been supplied to major venues in the UK, and each unit has been built to meet the requirements of the chief electrician at the venue concerned, for example John Reason at Birmingham Hippodrome, Paul Saunders at Half Moon and John Holding at Manchester Opera House.

Microlite 200 is actually 2 completely separate control systems usually housed in one wooden console. The systems can be slaved together for very large productions or used independently at touring venues to run one show on the main system whilst pre-plotting the next show on the second system. The unit features all the standard Eurolight software facilities of groups, effects, soft patching, disk loading, multiple playbacks, recordable times etc., with the option of curve profile, dimmer profile, automatic assignment, dimmer output display, alpha numeric keyboard, CPM operating facilities and many more. With all the complexity and sophistication that Microlite 200 can offer, it is very simple to operate and is very low in cost.

### Microlite 2

This is the latest version of the popular Microlite range of memory control systems. Microlite 2 can now control up to 240 channels or 480 dimmers and has the added advantage of full channel to channel patching, channel to dimmer patching, and proportional intensity patching.



The major advance over earlier systems is the addition of a new auxiliary computer with its own power supply and demultiplexer. This auxiliary computer can act as a stand-alone system for back-up purposes or can be linked to the main system to provide 10 extra playbacks or group masters. Memories recorded in either system can be transferred to the other and the integral visual display unit can be used to display either system. A new group function that allows the main crossfade playback to run effects in or out of sequence enhances the operator facilities.

Microlite 2 is now equipped with a 3 inch micro floppy disk drive as standard with capability to store 10,000 different memories per disk and also the capability to load selected information from each disk, i.e. just patch, just channel or just memory information or everything contained on a disk. It is supplied complete with 2 demultiplexers, interfaces for a printer, riggers control and external display as standard equipment. Cost for the system has changed very little since its launch in 1983.

### Micron X

This is a special version of the popular Micron lighting control that features a demultiplexer drive to feed the dimmers. The manual console input is



also demultiplexed along the same cable. Micron X was developed for use in bigger venues and also for rental companies where demultiplexer systems save large amounts of control cabling. It has all the standard facilities of the standard Micron, but has extra software to enable Micron X to offer better patching facilities, easy connection to audio visual equipment and will allow it to control motors and effects very simply by use of external control low voltage control gear.

Micron X is also particularly suitable for television studios and outside broadcast use when connected up to a small manual console because the console can be programmed to operate as a sub-master panel with its own soft patching, which allows fast control of individual lanterns or groups of lanterns within each play-back memory. Micron X is available in modules of 48 channels up to a maximum capacity of 144 channels.

#### Micron

Micron was developed for use in smaller venues that need sophisticated and easy to use memory

control that is easily connectable to existing equipment and is at relatively low cost. With this in mind, Micron, in its standard form, provides analogue input and output, and will connect to all makes of voltage drive dimmers.

Micron includes as standard a micro floppy disk drive built into the rear panel, high resolution visual display, and effects playbacks with chase and full soft patching. Full facilities are provided for up to 6 simultaneous playbacks, each memory containing its own recordable fade in, fade out, delay-in and wait-out-time. Micron can record the output from most makes of manual console that may exist in the venue, and therefore will allow operators used to operating manual systems to easily adapt to the memory control system. Micron has been installed in over 40 theatres in the UK and over 140 worldwide since its original launch. It is available in modules of 24 channels (input and output) up to a maximum size of 120 channels.

#### Spirit

Spirit is the latest product to emerge from Eurolight. It has been designed primarily for education users, rental companies and venues that have no permanent staff. It provides identical operating facilities to the Micron, but features a graphic display that tells the operator how to use each function. This ensures even the most experienced operator, or children interested in lighting control, can use the sophisticated facilities to achieve the lighting picture required without having to be concerned about how and why it has been produced. Once they are used to operating the system, the graphic display can be disregarded and the spirit used like a normal control system.

Spirit has already been sold to 5 major drama



colleges in addition to several education authorities for use in polytechnics and schools. It is completely portable, so it can be used in the classroom for teaching purposes as well as in the venue. Software is capable of easy modification for specific customer requirements. Spirit is available in modules of 24 channels up to 72 channel maximum system size.

#### Lee Colortran

Manchester Road, Kearsley,  
Bolton BL4 8RL.

Telephone: (0204) 73373.

Telex: 63433.

#### System Two

The System Two memory desk from Lee Colortran was designed to update and replace the very popular Colortrack desk, and was launched in Spring 1984. More than 50 units have been sold worldwide, and 25-30 of these are in use in Europe.

## Microlite 2

the new  
all purpose  
system.



We are still selling well—but now live in Covent Garden.  
Send for full details of our new extended range of systems.

**eurolightmsl**

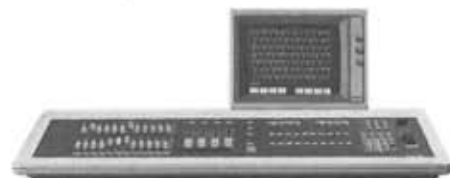
10-16 Mercer Street, London WC2 9QE.  
Tel: 01-836 7877 Contact Nick Mobsby or Derek Coe.



A feature of System Two is its small footprint and integral Green Screen VDU, enabling it to be packed into a flight case for portable use. System Two can soft-patch up to 512 dimmers to 150 control channels and a handheld remote is provided to access all dimmers, channels and cues.

#### Prestige 1000

Lee Colortran's Prestige series of microprocessor-based lighting control systems are the world's most flexible and technically-advanced desks, say the company. Launched last summer, over a hundred were sold in the first few months.



Prestige 1000 controls up to 200 dimmers on at least 100 channels, with the facility to record and recall up to 200 cues and groups. Special 'soft' screen keys enable simple recording and editing of cues, groups, submasters, effects, patch and set-up by calling up pre-designated functions. Position keys allow the user to view any part of a large spreadsheet display through the 'window' of the high-resolution amber VDU.

Prestige 1000 also features 24 pile-on overlapping submasters for manual control of complete stage looks. Bump buttons instantly activate any of 12 submasters on demand.

#### Prestige 2000

Prestige 2000 from Lee Colortran advances microprocessor-based lighting control systems for the theatre and television industries to a new level. The Series 2000, with high resolution colour VDU, controls up to 400 dimmers on up to 200 channels, and records up to 390 cues or groups.



In addition, a powerful Special Effects program and bump buttons on 12 of 24 submasters provide one of the most flexible consoles on the market. Together with these features, Prestige's easy record and edit capability—assisted by 'soft' screen keys which focus the user's attention to commands which are useful in a particular display—make the console one of the easiest to use for complex and sophisticated lighting control duties. Optional hand-held remote, hard copy printer and designer's remotes are available.

#### Prestige 3000

Completing the Prestige range from Lee Colortran is the Prestige 3000, which controls up to 800 dim-



mers through 400 channels. It will be the most technically-advanced and versatile microprocessor-based console on the market when it is launched in the UK in early Summer, say Lee Colortran.

Available as an option on both Prestige 2000 and Prestige 3000 is the remarkable Magic Sheet, which is a unique designer's remote. The Magic Sheet, which is activated by an electronic touch pen, enables lighting directors and designers to build complex lighting sequences away from the console room and using graphic representations rather than screen-based numeric codes.

As well as giving greater freedom to concentrate upon creative rather than technical considerations when building sequences to be recorded, the Prestige Magic Sheet also proves invaluable during live TV shows when the touch pen's active and simple control instantly enables lighting control to match on-stage requirements.

#### Pancan

25 Powis Terrace, London W11 1JJ.

Telephone: 01-221 1455.

Telex: 268141 METMAC G.

#### Pancan Touchstone

A very straightforward memory controller with excellent programmable facilities. Chase, follow-on and timed presets are able to be played back in any order and at any time. Complex effects can be built up from basic presets and edited easily.



As a lighting controller the unit's low cost and simplicity make it ideal for all small theatres, schools and discos/cabaret venues; it is easy to learn and provides built in effects.

As a driven lighting controller, for which it is specifically designed, it is fast and straightforward to programme. Pan, Tilt, Colour and Level or Iris are grouped for each head and Patch may be utilised to combine movements of several heads for that cue. The ability to run long groups of presets or a repeating sequence makes innovative moving lighting effects very easy to set up. The external sync. allows rock lighting to be timed to sound events.

#### Pulsar Light of Cambridge Limited

Henley Road, Cambridge CB1 3EA.

Telephone: (0223) 66798.

Telex: 81697.

#### Lighting Control for BBC Micro

The Pulsar Stage Lighting Control Package enables a standard BBC Micro with a minimum disc system to control dimmer packs old and new which use 0-10 volt control signals. (A Voltage Translator to



convert 0 to +10 volts into 0 to -10 volts can be supplied.) In practice this covers most dimmers currently installed.

There are 36 channels per interface, and interfaces may be chained to cover up to 546 channels by setting the start address of each one with the DIL switches on its back panel. The Transmission Protocol allows 128 pages of 120 channels each—for future expansion!

This popular, and highly cost-effective package is already proving very popular for use within educational establishments, and customers will be able to trade in their master discs for the latest up-dated version at realistic prices say Pulsar.

#### Siemens Limited

Siemens House, Windmill Road, Sunbury-on-Thames, Middlesex TW16 7HS.

Telephone: (09327) 85691.

Telex: 8951091 SIELON G.

#### Sitralux K40

The Siemens Sitralux K40 is designed for use in theatres, television studios, and multi-purpose halls. Micro-processor hardware extension



enables the unit to be expanded from the usual 120-240 circuits usually provided. Peripherals like a printer, second master panel, or conventional or wireless remote control can be provided.

#### Sitralux B40

The B40 is designed for service in professional theatres, opera houses, and large installations in multi-purpose halls. It offers an enormous and hitherto unknown variety of lighting possibilities. Despite its wide scope, the B40 is surprisingly quick and easy to operate, whilst clear layout of the equipment enables the operator to take in any situation at a glance. The heart of the system is a standard Siemens mini-computer with peripherals such as floppy disc unit, printer etc. as well as conventional or wireless remote control. A B40 is due to be installed at the Royal Opera House in London in late summer.

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## Strand Lighting

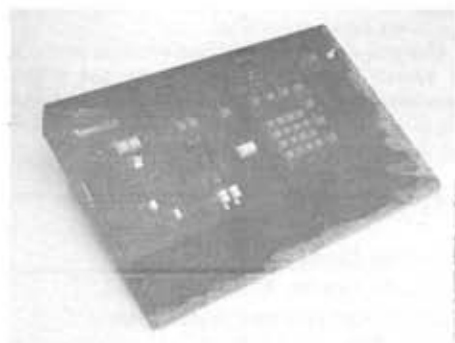
PO Box 51, Great West Road, Brentford, Middlesex TW8 9HR.

Telephone: 01-568 9222.

Telex: 27976.

### Tempus M24

M24 is a small, lightweight, self-contained memory lighting control for small stages and temporary lighting rigs. The console is available in two versions, both with multiplex control, for up to 72 or 120 dimmers. The control has been specifically designed to incorporate the latest operational requirements of individual and group channel control, recorded fade times and fade types (3 are available), and multiple fades whilst retaining a fast and simple method of operating. The system can be used proficiently within an hour, and a User's Guide is supplied, which complements the Operator's Handbook, to clearly explain the fundamentals of memory lighting control to the inexperienced user.



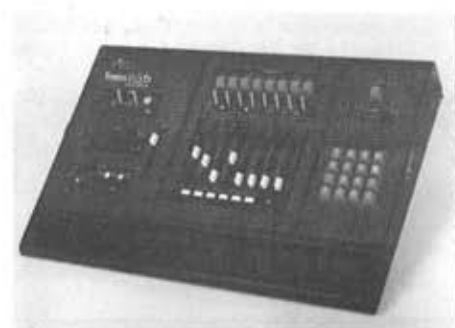
The M24 system, including dimmer demultiplex electronics, is very flexible and can operate with a wide range of dimmer types and makes. A special feature is the ability of M24 to integrate into an existing manual fader desk installation. The manual and memory desks operate in tandem, with the M24 having master control of all outputs and the ability to record from the preset desk.

For AV presentations, M24 is equipped with a selection of power-up options; which include a choice of automatic start configurations, and the ability to receive remote instructions to perform lighting changes in synchronisation with other equipment.

M24 is an inexpensive, professional lighting control and the cost of a complete installation is not burdened by expensive peripherals: a basic M24 is equipped as standard to use domestic monochrome TV as a video monitor, and portable cassette recorder becomes the M24's library storage unit.

### Tempus M24 FX

M24 FX is an inexpensive memory control offering basic group control and special effects for up to 120 dimmers. Although it was designed as an optional part of the M24 system, M24 FX is a stand-alone control which has been installed in many small clubs, discos and can be found in many hire stocks for basic control of large temporary lighting rigs.



Any of the 120 dimmers may be patched onto one or more of the eight master faders. An easy-to-use keypad selects the dimmer number and switches the dimmer on or off in the preselected fader store. A LED mimic indicates which dimmers are active in any of the eight stores, and a special feature provides a sequential display of only those dimmers which are on in any store, jumping over all the channels that are not under control.

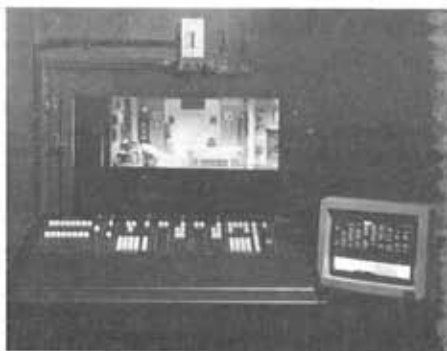
In addition to the dimmer-to-fader function of the M24 FX, a special effects package is included which offers automatic control of the dimmers selected on the eight faders. Panel controls adjust the intensity of an effect, the type, speed and length of a chase, the speed and mark-space ratio of a flash effect, as well as a fire flicker effect and a 3 channel sound to light generator, and six faders are fitted with individual bump buttons for manual effects.

When an M24 FX is linked to a host M24, the faders may be 'downloaded' with dimmer numbers from the stage output, and in the unlikely event of a failure of the M24, the FX desk will automatically take control of the dimmers and provide sufficient lighting to continue a performance.

### Gemini

Gemini is a compact, transportable or fixed memory lighting control which is particularly suited to the requirements of touring and concert lighting where direct operation, fast set-up and sophisticated effects are of primary importance.

Incorporated within the Gemini console are the main control panel, 80 group memory back-up, floppy disc and special effects system. A separate colour VDU completes the package which controls up to 384 dimmers soft patched to Gemini's 180 channels which may in turn be assigned to use any number in the range 1-999. Two numerical keyboards are used to separate the channel access and memory address functions enabling instructions to several parts of the system to be instigated at the same time.



Each memory may be recorded on any memory number in the range 0.1 to 999.9, and in addition to channel intensity, the memory stores split fade times, wait time (for automatic follow-ons) and fade type: either crossfade, movefade or dimfade.

Twin playbacks can process up to 24 simultaneous fades, and panel indicators show the active memory numbers, whilst LED bargraphs display the progress of the fade. In addition to the comprehensive playbacks, Gemini is equipped with eight submasters which can hold any combination of memories or individual channels for manual lighting changes or effects. The outputs of eight submasters add together, and they may be reloaded simultaneously during the show.

Gemini's programmable effects system is fully integrated with the main operation of the board, and effects may be started automatically from the main playback memory sequence, or manually at will. Up to 99 separate effects may be recorded. Six categories of effect are available, and each parameter of the effect may be programmed with the help of a prompting VDU screen. Separate times may be entered for each step of a 255 step

chase, or the step timing may be programmed to operate from a control panel knob, or to follow the beat of music as the operator taps a 'step' button. Once programmed, the effects panel will control up to ten effects at once, without degrading the Gemini's ability to control channels, record, transfer information to disc, print, process multipart fades and most importantly, to edit any effect in progress. And, in line with the basic operating philosophy of the system, which gives the operator total control all the time, all running effects may be overridden, faded out or stopped manually at any time.

### Galaxy 2 Arena

Galaxy is a modular memory control which is ideally suited to controlling any lighting installation of between 120 and 768 channels. The output can interface with a wide variety of positive and negative analogue dimmers or, alternatively, any of Strand's range of multiplexed dimmers.

The three versions of Galaxy 2 (the Arena, Studio and Premier) cover the wide span of lighting needs from theatre to TV to clubs and concert halls, and the modular style of the system enables each desk to be accurately 'tailored' to individual needs.



Galaxy 2 Arena is specifically intended for theatres and public halls where a comprehensive yet uncomplicated lighting control is required. The system comprises a control 'pod' with a selection of control panels, a processor crate, and peripheral equipment such as VDU monitors, floppy disc library storage, alpha keyboard, back-up system and remote controls. Galaxy 2 Arena can accommodate many simultaneous control actions which enables two separate 'pods' to be in use at the same time—one in a control room and the other in the stalls for example—whilst several hand-held control units are in use.

A direct, simple-to-use, approach to the control is easy to learn, and an abundance of panel displays and illuminated push buttons keeps the operator informed of the status of the control at all times. Special features include geographic numbering of channels, decimal point memory numbers, memory renumbering, programmable dimmer profiles, temporary and permanent memory updating (to replace or alter the levels of channels), and text recorded with memories.

### Galaxy 2 Studio

This TV system grew from the original Galaxy control, and with the addition of a new playback panel and a specific TV program, Galaxy 2 Studio



provides the type of spontaneous control required by TV studios around the world. Whilst offering control of up to 768 channels and all the benefits of a sophisticated, user-configured system, Galaxy 2 Studio expands the concept of fast, direct action and manual control present with the other Galaxy 2 systems.

In comparison with a theatre version of Galaxy, the TV variant typically has only one playback with faders replacing the wheels for easier control of manual fades. The two playback output stores (Live and Preset) are equipped with controls to directly set memories into the stores at will. Additional displays on the control panel provide information about the contents of individual submasters.

Another feature of TV lighting control is the need for constant adjustment, updating and replanning of the lighting states prior to the recording of the program. Galaxy 2 Studio specifically addresses these problems with a host of updating functions which may correct lighting balances either individually or through a range of memories.

The modular concept of Galaxy has an added bonus for TV studios. The system may be operationally subdivided to provide separate control of two areas of a studio. As the Galaxy may have up to four channel controls, any of these can be used to control selected channels in one area without affecting the lighting in the second area. Colour-coded icons beside each channel number indicate the channel control panel to which the channel is routed.

#### Galaxy 2 Premier

The Premier version of Galaxy 2 continues the powerful mixture of modularity and comprehensive control of up to 768 dimmers, but this system's versatility lies in the range of facilities which have been added for the larger theatres and opera stages in particular.



In addition to Premier's extended channel control facilities, a special 'Theatre Playback' panel provides access to each part of a six-part fade, and recorded fade types, wait and split delay times can be used to create a sophisticated 'processional' multipart fade with ease. A unique feature is the Premier Galaxy 'Learn Profile' system which copies a manually performed fade exactly, with any discrete changes of direction, speed, delays etc. During performance, the Galaxy Premier repeats the 'manual' cue exactly as it was originally played, and the system is equipped to change the speed of the fade or re-record parts of the profile immediately.

The success of Gemini's programmable effects system has enabled us to expand Galaxy 2 Premier to include this new feature. The 99 effect, 255 step programmable system now operates with Galaxy's 768 channels and ten submasters, and includes a new 'pause' facility which temporarily halts any or all of the ten possible simultaneous effects.

For customers who prefer a graphical type of channel entry, Galaxy 2 Premier is also equipped with a Geographic Button Mimic option, where all channels are represented by illuminated switches to display the state of the stage lighting and to

provide direct access to individual, or groups of channels.

The alpha-numeric keyboard is included in the Premier system to provide access to more complex disc and print facilities and to edit patch information, cue times and fade profiles.

#### North American Strand Products:

##### Light Palette 2

The unrivalled success of Strand North America's Light Palette was founded on its advanced control facilities and compact design. Committed, as ever, to a policy of continued development, Strand improved the Palette design by incorporating many additional features suggested by users in theatre, hire companies and TV studios throughout the U.S.

Light Palette 2 is the natural complement, and successor, to the original Light Palette. Set into a stylish solid wooden console, Palette 2 incorporates an ultra-fast version of the proven DEC minicomputer to control an even higher number of channels and dimmers: 1536 dimmers may be soft-patched to the 800 possible control channels. Twin, colour VDUs display a running cue sheet as well as a simultaneous display of channel levels, or any one of a number of 'interrogation' screens.

The new operating program not only offers improvements and additions to the original system, but it also offers a choice of operational style: theatrical or T.V. orientated. The T.V. program version develops the ideals of spontaneous control whilst offering greater use of playback controls as overlapping (pile-on) submasters.

##### Mini Light Palette

The size of this table-top console belies its impressive power. For within the compact and portable package exists the major elements of a full Light Palette system.

The control panel includes the command keys, display and set-up controls, playback and submasters found on all the Light Palette systems. Two monochrome monitors are incorporated within the console and a floppy disc drive unit is fitted into the front edge of the Mini Light Palette.

The Mini Light Palette is extremely popular in medium-sized theatres, schools and universities throughout the USA and Canada, and the Strand CD80 multiplex standard output of the system makes it ideal for the stocks of hire companies enabling them to offer a flexible, powerful and very compact lighting control system.

##### Lightboard XP

Lightboard XP has recently been launched in North America, and will be making its European debut later this year. Designed as Strand Lighting's 'flagship' memory lighting control, Lightboard XP combines all the advantages of a modular control format with a computing concept borne of this decade in preparation for the next: namely a distributed processor system using high level programming language. Strand has invested heavily in creating the first computer language specifically tailored to the needs of the entertainment industry. This produces a wealth of benefits including a fast and flexible operating system, an infinitely expandable catalogue of facilities, and a simple means for the operator to programme the installation or show.

The XP will top the range of controls on both sides of the Atlantic and offers a compact, attractive console with integral alpha-numeric displays, twin colour monitors, and multiple playback panels and submasters. Inherent in the design of the system is a multitasking procedure which accommodates the simultaneous control from up to eight separate control positions; an important factor when the system may be installed in an environment where up to 4000 dimmers are distributed throughout several stages or studios.

In addition to its huge capacity for controlling

the intensity of light, the Lightboard XP will address the colour and position of any remotely controlled spotlights, and in preparation for the preferences and demands of lighting designers now and in the future, XP is ready to accept all the latest designer aids, including an interface to a personal computer for plotting in advance, graphic design tablets, and even spoken commands.

##### Lightboard M

Lightboard M is a new memory control desk from Strand Lighting North America which follows in the famous footsteps of the Mantrix 25 with Memory: the new system, which was chosen to control the lighting for one of the pavilions at EXPO 86 in Vancouver, combines the spontaneity of a manual desk with the advanced features of memory system.

The modular two-preset manual control can be expanded to a maximum of 96 channels which will control an impressive 384 dimmers through an internal soft-patch network, or a massive 768 dimmers with the help of an expansion module.

The smart, functional and compact custom control surface may be constructed to include any selection of channel and submaster modules for direct manual control of groups of channels and prerecorded memories.

But the power of this new system lies in its programmable special effects system which integrates totally with the manual and memory-assisted effects to produce a fully functional theatrical and rock lighting desk in a single compact package.

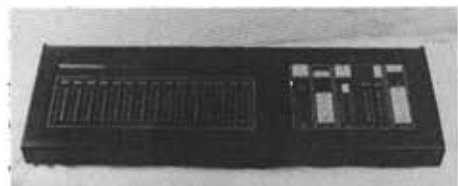
#### Touchstone Technology

85/87 Norwood High Street,  
London SE27 9JS.

Telephone 01-761 7798.

##### Tigers Eye

Tigers Eye is a sophisticated and comprehensively designed control unit aimed at modern multi-purpose venues requiring fast set-up and complex effects. The unit provides 15 submixes which may be used simultaneously with the diplex memory fader. Flash, Timed and Cue'd submix presets and channels and separate Chase, Sequence and Memory facilities are provided. The Touch Sensitive fader control provides set-up and editing facilities which are easier to use and faster in use than any other system available. There is no practical limit to the number of effects cues and a typical show may consist of 50 chase/sequences and 200 other cues.



The desk is light and very portable and may be carried easily by one person. The proportional patch and immediate manual preset control enables complex and predictable, live and effects lighting to be quickly preset, tested and altered during performance—dramatically reducing technical periods and making good modern lighting design possible even for rushed one-nighters.

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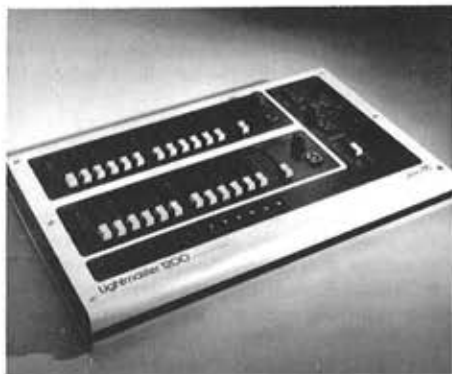
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**Zero 88 Lighting Limited**  
Hart Road, St. Albans, Herts AL1 1NA  
Telephone: (0727) 33271.  
Telex: 22521 ZLIGHT G.

#### Lightmaster 1200

The Lightmaster 1200 is a 2-preset lighting desk with all the features expected of a modern design, the brief for which was to produce a desk with an easy-to-learn matrix memory system, avoiding the confusing and expensive pin patch matrix, and with the ability to use the memory also as a comprehensive chaser.



Each preset master group has an overall level fader, a flash to full button, and an autofade control (1 to 10 seconds and 'off'). Each channel has a flash to full button which may be disabled by the flasher on/off switch. A dead black out (DBO) switch is provided which turns off all the desk outputs but does not destroy the memory or prevent programming.

Several 1200s may be connected together with one acting as master and the others as 'slaves' with the preset master group controls on the 'master' desk operated for all the desks and the 'slave' master controls being disabled.

In addition to these features, the 1200 has a fifteen step programmable on/off memory, a feature that is unique for a desk in this class, with the ability to be programmed 'blind' (i.e. without affecting lighting being controlled by the presets). The memory contents may be saved over long periods by fitting a battery in the compartment provided.

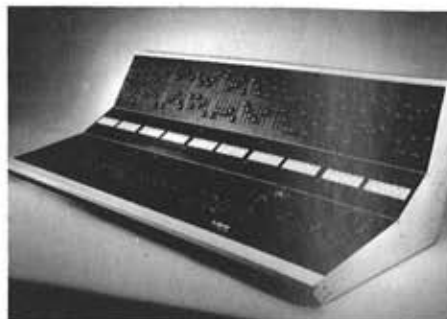
#### Eclipse

The Eclipse system took hold of new ideas, added proven methods and a radical re-think that has produced a remarkable package of lighting control for use where speed and simplicity of operation are the main criteria.

Zero 88 developed the system to offer the best of the manual fader board but at the same time have all the advantages of memory whilst retaining "hands-on" operation, combining the simplicity of the fader with the sophistication of the microprocessor. It is completely modular in the true sense of the word, where not only can the number of channels be extended, but the memory control is divided into self-contained panels.

This combined system has the advantage over the memory board of 'instant access' and fast plotting, thereby making it the ideal tool for multi-purpose use. It is extremely fast and simple to operate—and a desk that not only the beginner can use, but which the expert also finds quick and extremely rewarding.

As techniques and technology has developed, Zero 88 produce up-dated information to users,



giving full information on new advances that can be incorporated into the system. The Eclipse is now available from 24 channels in increments of 12 up to a maximum of 96 channels in a touring frame, or 120 channels in a sloping frame.

**PLASA**

For full details of  
membership of  
**Professional Lighting  
and  
Sound Association**  
contact

Roger Saunders,  
1 West Ruislip Station,  
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