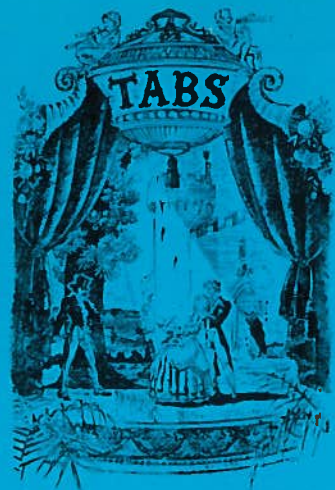


TABOS

NOT TO BE
REMOVED FROM

Stage Lighting International
Spring 1975





TABS

Spring 1975 Volume 33 No. 1

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Saying Sooth

In every theatre, waiting in the wings, ever ready to leap on stage at the drop of a crystal ball, there is a *Soothsayer*. Whatever the cue, his response is the same: *Woe, Woe, and Thrice Woe*. Hardly surprising perhaps, for is not theatre supposed to hold a mirror up to nature, to be a microcosm of life, to . . . ? And we live in a world where doomsday is just around the corner, where the Media shout *Woe!* the banner headlines scream their disaster predictions and Vivaldi introduces a procession of Telly Pundit committees who offer woe in philosopher's clothing. We live in a world where no news is good news and good news is no news. And the media protest that they are our servants, that they tell us what we want to hear.

It is therefore a brave TABS editor who takes up his crystal ball to soothsay the future; the bravery lies not in looking ahead but in finding a cheerful prospect.

Our cheer extends to the present; we do not hanker for the good-old bad-old days of theatre and its lighting. We rejoice in the legacy of buildings, scripts and scores that have survived but we are convinced that theatre in general and lighting in particular are now far better than ever before. This could be a pinnacle with theatre poised for a slippery descent, but surely destiny is a matter for positive control rather than woeful soothsaying.

There is only one thing that can really go wrong with Theatre and that is a failure to communicate with the audience. If we have any woeful warning to sound, it is that we think we detect an occasional tendency to forget, ignore, even despise the audience who are the reason for theatre. But the point has not yet been reached where it is necessary to sound the clarion call for an audience liberation movement.

The history of lighting has been an accelerating growth of the ability to control the lighting environment, and the future of lighting must be to achieve greater control. In terms of intensity control the ultimate is now so close that for practical purposes it has arrived, but colour and direction have barely started.

Lighting is still held in chains by the theatre industry's historical dependence on abundant cheap labour rather than capital investment: lighting equipment is primitive because it has been traditionally cheap.

The days of a labour intensive theatre are over and in terms of efficient working on a repertoire stage, we believe that a focusing improvement of, say, 5 seconds per lantern can justify considerable capital outlay.

Thus we predict that the next step forward in lighting technique could, should (? must) be to achieve the same standards in less time. And the progress to Valhalla will be higher and yet higher standards achieved in less and yet less time! And when we refer to lighting achievements we are not merely concerned with lighting rehearsal and opening night. That is often an easy matter compared with the problems of fast economic accuracy on performance 37 in repertoire.

Light is a partnership of machine and man (and let us hasten to add that we use the word man in its widest mankind sense for we are too fond of women to fly chauvinist colours from our pigsty). The future of lighting lies in the development of equipment and the development of its users. Learning to light is becoming too big a subject to be left to trial and error experiments on live actors and audiences: we predict the growth of proper sophisticated training facilities. We also predict that equipment will become more mechanically sophisticated but apart from possible small gains from computer design of reflectors, we suspect that conventional optics has reached its peak—and a far from dizzy peak at that.

For a breakthrough we have to invoke the fringes of fantasy. Light is a waveform and waveforms can be deflected electronically. Why must pan, tilt and focus be adjusted physically? Can this not be done electronically? If visible light frequencies are inconvenient for electronic control, why not deflect at an intermediate frequency between power input and light output? Why use a colour filter? Can we not break up the spectrum electronically? Fantasy? Perhaps. But not so fantastic for those who have graduated from Grandmaster to Digital Memory in a surprisingly few years.

So how does the TABS *Soothsayer* summarise the future as seen in his crystal ball? **Highly trained expensive lighting men playing highly sophisticated expensive equipment in an efficient imaginative theatre which communicates with its audience.**

In the Eye of the Beholder

Robert Bryan compares his stage and television lighting of *Idomeneo* at Glyndebourne

Opera is probably the most absurd medium of all the Art forms and paradoxically, probably the most beautiful. At its best it has all the elements of good theatre; vocally more exciting than the spoken voice, musically more exciting than almost anything else, and visually as challenging and exciting as any theatrical presentation. The paradox is of course that all these elements when assembled together can make the whole enterprise, viewed rationally, a fairly absurd business. It is working in this medium that I have very happily found myself for the past five or six years. Fortunately for those of us who work in opera the past few years has seen greater recognition of "local talent" in the shape of directors, designers and singers. A good example of this has been the appointment of John Cox as artistic director at Glyndebourne, and in recent years marvellous designs at Glyndebourne from Michael Annals and John Bury. This last season saw a production of *Idomeneo* at Glyndebourne directed by John Cox and designed by Roger Butlin.

Idomeneo is generally considered to be one of the most difficult of all Mozart operas, both musically and dramatically. It has a classical heroic theme, immensely difficult to sing and equally taxing to stage. Staging the opera provides three main areas of difficulty. Firstly there are several locales requiring fast changes to and fro; secondly, the drama is very static in nature a lot of the time, requiring the audience to concentrate on the one, two or four singers on stage; thirdly, these intimate scenes suddenly burst into full choral ones with attendant action.

In order to satisfy these several demands Roger Butlin conceived a most intriguing design dominated by a series of metallic rings surrounding a ramp which ran the full 60 ft. depth of the stage. (The set was variously described as the Giant Toast Rack or the new Victoria Line extension.) At a point just under half-way up the ramp there were a series of seven circular gauzes manipulated from off-stage machinery so that the gauzes could do a "X-fade" change. This made for very quick "in view" changes of scene. The gauze designs were taken from Turner paintings and depicted the various locales demanded by the opera. For the Triumph scene ending Act I and the Temple scene ending Act III, the full ramp was used. The two "furioso" scenes in the opera are two storm sequences; one shipwreck scene early in Act I and the monster sequence ending Act II. For these, the ramp behind the main gauzes was removed and the sequences played behind and in front of the main gauze-bank. This in essence was the setting for our *Idomeneo*. In effect the design proved to be highly evocative, providing us with harbours, sea shores, temples, storms, triumphs and "downfalls". It was not altogether received with critical acclaim, but I suspect, as with many non-traditional operatic designs, that it will be hailed as a great innovation in future seasons.

Lighting *Idomeneo* proved to be a most interesting exercise. Roger Butlin and myself have worked together on many shows, consequently our "wavelengths" were tuned in and it was a matter of deciding how we were going to achieve the visual sense we knew we wanted, within

what limitations there are in any repertoire lighting rig. We have a basic rig at Glyndebourne which up to now seems to serve us very well. In no sense is it a saturation rig so that we do a major refocus to "tapes"* for every show. I have a team of six in the lighting department, myself plus five. I use the word "team" deliberately because that is precisely how we operate. This encourages untold ribald comments about the lighting, some of which I even act on! There is a fair amount of discussion about how to achieve the various effects we need (depending on whose "round" it is), but ultimately, of course, the responsibility is mine. We find this a most pleasant way to work giving us some highly satisfactory results. I have deliberately digressed here in order to give a little background to the lighting set-up at Glyndebourne.

As one can see from the photographs *Idomeneo* was, to say the least, a rather difficult piece to light. Fortunately certain initial misgivings relating to lit rings throughout, proved to be unfounded, and indeed they needed light in order for them to tie in with each scene. The technique of lighting the piece came from motivating each scene from the particular gauze being used at the time. In that sense the thinking was fairly straight-forward. What was difficult was to get the right balance between brightly lit rings and the correct amount of light reaching the singers on-stage. The photographs of both stage and television rigs show that the bulk of on-

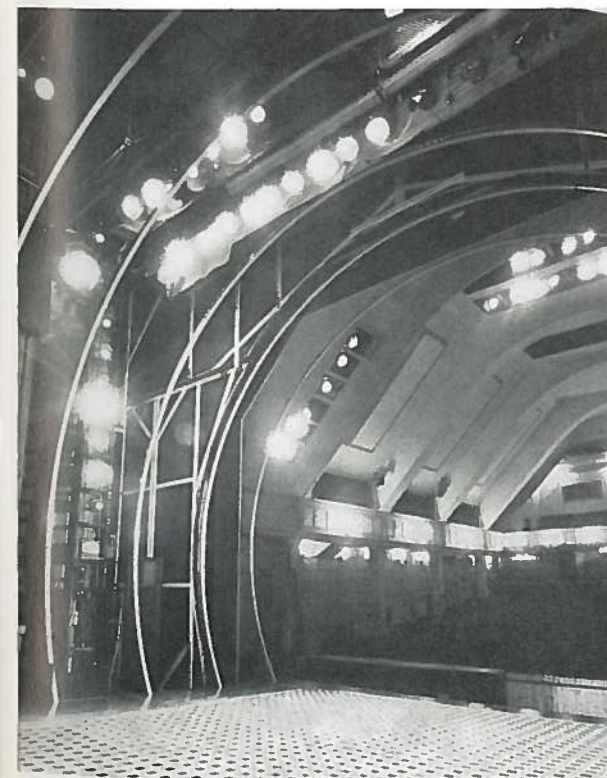
* In a later issue this year, TABS will describe and illustrate this interesting method of light focusing on a bare stage in repertoire theatres.



A feature of the new Glyndebourne Festival Opera production of *Idomeneo* is Stephen Jetten's beautiful gauze realisation of the Turner paintings which Roger Butlin incorporated into the design. In this TABS, Robert Bryan discusses his lighting for both the stage production and its subsequent television recording. The cover illustrates the use of the full depth of the raked set with its perspective metal rings, and the picture above shows one of the mid-stage circular gauzes in use. All Glyndebourne photographs are by Guy Gravett.

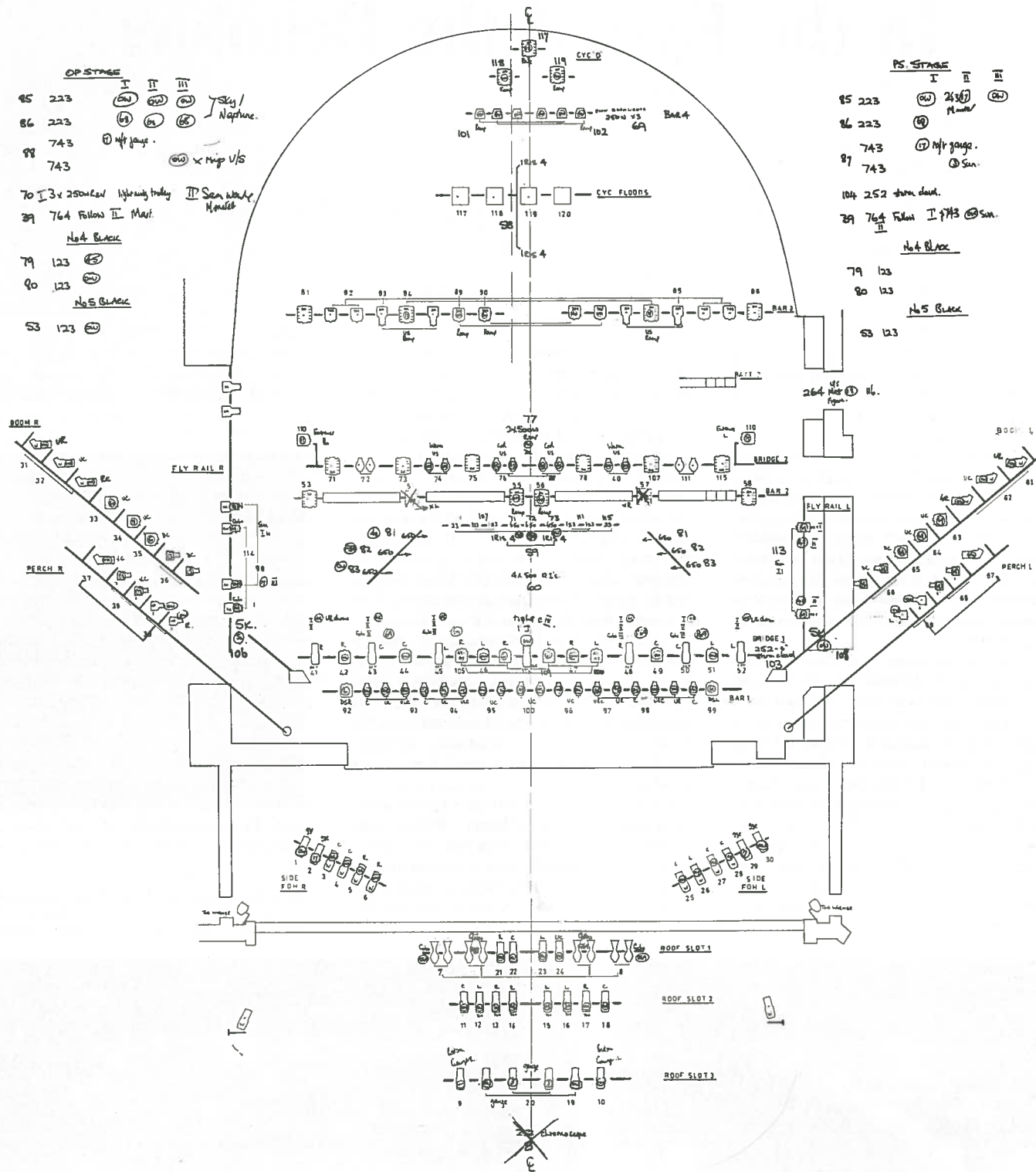
Editor: Francis Reid

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(Above) TV Production: FOH positions. Some 5 kW's are focused for audience shots and 2 kW for orchestra shots. 10 kW on camera rostrum used for lighting rings. At the back of the balcony, the lighting control box is to the right and sound control is to the left.

(Left) Stage Production: FOH and stage positions. FOH Roof Bridges and Side Slots with Patt. 764s and Patt. 264s. Bridge 1 with Bar 1 under. Down left Boom. (Note: Stage floor "holy" for underlighting. Lightning Blitzgerat and CCTV monitor on boom.)



Idomeneo: Stage Lighting Layout.

stage lighting was outside the rings. Consequently one had initially to be very careful just how much spill there was on the rings. BAR 1 and the FOH had the only luminaires which could focus inside the "tunnel". Thus traditional areas of motivation such as cross light and backlight, seemed to be a little uncertain. In the event, theatrically that is, I went for 5K units high and to the side to provide the basic key lights. For television we had to dull down the rings drastically to prevent light "flair" in the camera lens, and we doubled up on wattage for key lights.

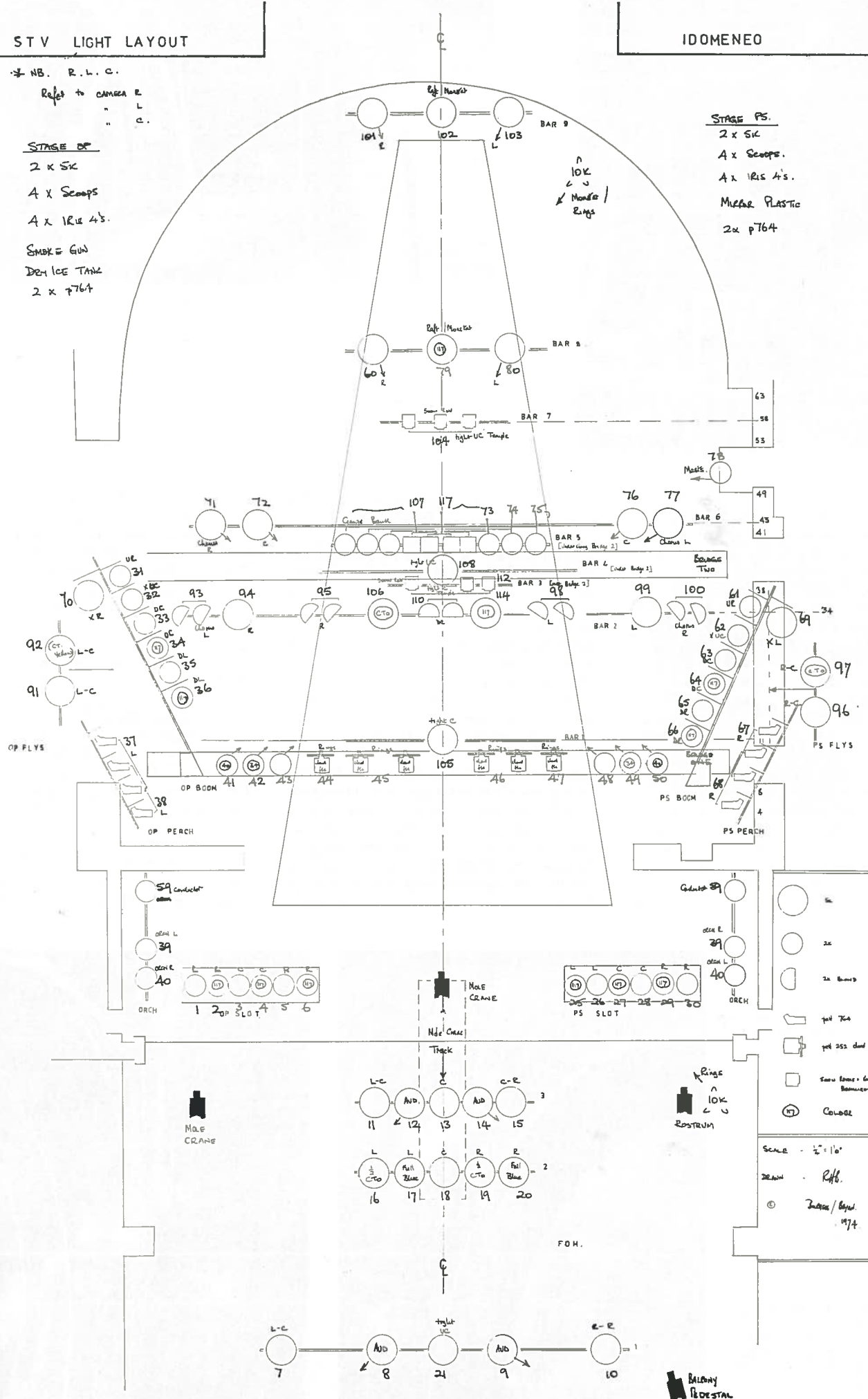
Since this article is concerned with Stage/Television lighting techniques, I would briefly like to point out a few similarities and differences that occur to me between the two media. Having worked on the lighting of several operas with my very good friends from Southern Television, Hedley Versey and Bill Burgess, I am convinced that we all start from the same basic premise. There is a scene, it has to be lit primarily to see people, and it has to be motivated with good taste and a sense of realism. (At which point the question of realism or abstraction takes over

depends entirely on the dramatic style.) The crucial difference between television and the stage is that of the human eye or a TV camera lens. This may seem a very obvious statement to make, but it is one which is absolutely fundamental to the two techniques of lighting. When we light the stage we are lighting for a perpetual "long shot". We tend to shift the emphasis of concentration by shifting the emphasis of light, hence the use of many lighting Qs. In television the camera does all that for us. The biggest problem we find in lighting stage/television productions in the theatre

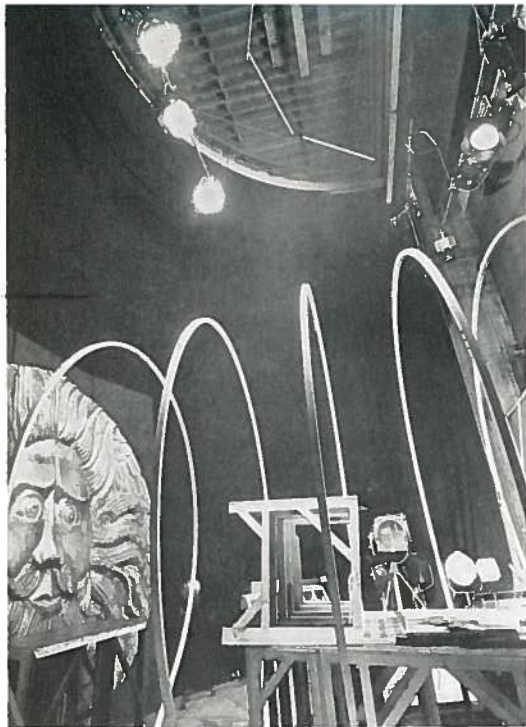
STV LIGHT LAYOUT

→ NB. R.L.C.
Refer to camera R L C.

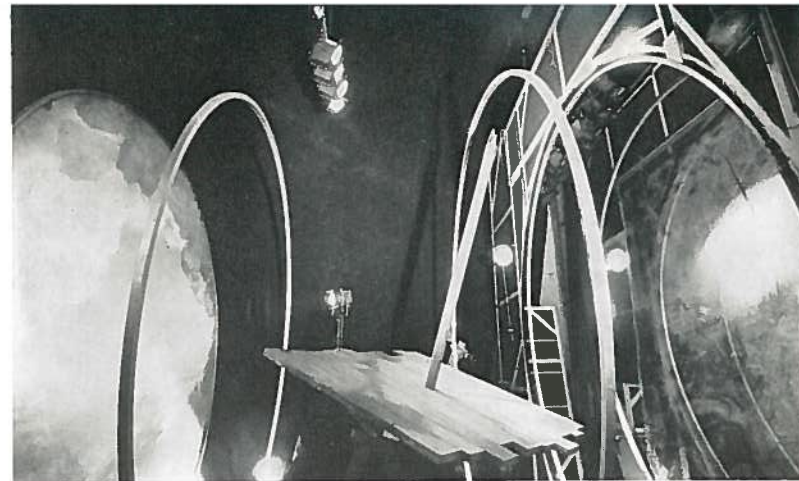
STAGE OP
2 x 5K
4 x Scoops
4 x IRIS 4's.
SMOKE GUN
DOLBY ICE TANK
2 x p764



Idomeneo: Television Lighting Layout.



(Left) TV Production: Upstage backlights. Upstage ramp sections and Neptune flat from Act III. 5 kW Fresnels on bars and floor stands (photo prior to focusing.)



(Above) Stage Production: Upstage backlights. Raft in position for Act I with upstage sky gauze. (Note: Very low dead on bars to get under curved headers.)

is the differing amounts of light required for long shots and close-ups. In order to satisfy the exposure for these two we tend to "ride" the shots, i.e. manually alter levels as the shots are called. This of course means close liaison between Dave Heather, the director, and the lighting department, but it seems to work very well. We also need to learn a lot of the shots. Fortunately, we do have quite a generous rehearsal time. Dave Heather has always asked us to light the TV shows as near to the stage production as possible, i.e. to try and get the same feeling into the scenes. This particularly applies to the long shot situation where the scene registers as a whole. In order to achieve this for *Idomeneo*, Bill Burgess and myself decided that the two layouts should be similar in the positioning of equipment. The luminaires differ in their power and controllability of course. It seems to me that television's worst enemy is the lack of

control of the light beam out of a lantern; (Rank Strand please note, a 5K profile, please).

The main acting area for *Idomeneo* was that amount of stage from the prosc. arch up to the main gauze bank. Theatrically there was a basic left- centre- right coverage from the FOH, Bridge 1 and Bar 1 in double colour open white and 45. Also a boom coverage of X-stage, centre and own-side, again with a double colour possibility. In addition to these were specials and heavier colour washes from the FOH and Bridge 1. Bridge 2 and the upstage bars were used for front and back-light upstage of the gauze bank. For the TV we used two FOH bars for lighting the main acting area covering camera right to centre and camera left to centre. A small focusing point here. For the stage I focused the FOH in order to give a two-lantern coverage everywhere: but for Television the focusing was absolutely

straight on to avoid peculiar nose shadows—that old close-up again.

The use of three 5Ks on the FOH bars did give us a modicum of changeability. Thus the two outer lanterns gave a complete coverage and the centre one just did stage centre. This meant that for certain scenes we could just use the centre one and dispense with the outer two so enabling us to lose extraneous light. We had three FOH bars in all. Two of the three bars were open white acting light, the third gave us colour washes. The FOH side slots and the stage booms mirrored pretty well their uses in stage and TV. We had a reasonably hefty backlight bar on stage, essential for TV. It was at a fairly ludicrous angle but there was no other place to put one, we just had to make it work—and we did.

The gauze banks were treated in much the same way for both media. For the stage production I used CCT 650 Fresnels,

very carefully focused so as to avoid ring shadow on the gauzes (Andrew Bridge made a reasonable attempt to get them right every time!). In the TV set-up we used Mole 2Ks and Ianiro ½ Iris 4s, but the offending ring had to be struck because it was impossible to eliminate shadow and keep the amount of light required on the gauzes. (The ring was replaced for the full ramp scenes before each "take" on them.)

Upstage of the gauze bank was "specials" time. This area was used for the full ramp scenes and for the two shipwreck and Monster scenes. The full ramp scenes were backlit from six Reiche and Vogel 500w beamlights upstage, and four Patt. 743 downstage giving a two colour wash of open white and 40. Backlighting for the stage was very restricted because of five masking false prosceniums. These got progressively smaller, as did the rings, in order to maintain a sense of perspective upstage. So that people could be lit adequately I had small detachable booms made which slotted on to the back of the blacks, carrying Patt. 23s and Patt. 123s. Life was somewhat easier for the TV in that we were able to dispense with the curved header tops off the blacks. This meant that the lighting was not impeded. Fortunately, the cameras never "saw" the tops of the masking. We were able to use 5K frontlight and four 5K backlights covering this upstage area. The side lighting of Patt. 23s and Patt. 123s was replaced by Scoops on stands. During the final Temple scene I was able to effectively underlight the whole ramp area. This revealed the tiny chequerboard flooring of the ramp and gave a jolly good ethereal atmosphere to the scene. After a lot of "clever" ideas, such as putting a small lamp under each hole! I finally decided to split Ianiro Iris 4 cyc. units to Iris 2s and reverse them. This gave a marvellous spread of white light under the ramp. For the TV we quadrupled the number of units under the ramp—resulting in a good deal of smoking ramp! I hasten to add that there was a degree of asbestos sheeting about the place.

The first storm sequence of the opera comes early on in the first act, and indeed we started the TV production with this sequence. Upstage of the main gauze bank was a raft with sailors (chorus) on and around it. Downstage of the main storm gauze was the full chorus (excluding drowning sailors, that is). Our initial idea was to herald the storm with an electric discharge across one or two rings. However, it finally evolved that we would need 20,000 volts and risk burning up the singers. The latter we could have coped with, the former proved to be impossible. Instead, the lightning was done collectively from carbon arc machines, quartz floods, and blitzgerats. A good deal of dry ice round the raft covered over the floor and with the correct amount of "gloom" we managed to make the sequence work. Televisually we did pretty much the same thing. We had three carbon arc f/x for lightning, and instead of one Patt. 252 storm cloud f/x we used six. The raft was lit from 5Ks

overhead and a floor 5K with a scoop upstage to rimlight.

Dry ice was also used in copious quantities in the Monster sequence. A smashing Butlin creation in the true Turner tradition revealed itself through gauzes lit from a Patt. 252 sea wave f/x and stand Patt. 243s and Patt. 223s. A little overhead backlight just gave form to the beast. The Patt. 252 f/x was just not on for the telly, so Bill Burgess devised some mirror plastic, which we lit from a 5K coloured 117 and a floor stage LX gently pulsating the mirror. Again floor stands did the bulk of the work, 5Ks this time. Surprisingly the 150w PARs inside the eyes did both for stage and cameras.

Preceding the Monster sequence was another shipwreck, this time depicted by rocking flown masts. In the season we got away with just three Patt. 764s here. I had to be careful not to get light spill on

to the Monster immediately upstage of the flown mast. With co-operation from Racks we got away with four Patt. 764s and an overhead 2K in the TV setup. A great relief to all.

May I make a small plea as a conclusion to this article. It seems very evident that there ought to be much more dialogue between lighting designers in theatre and television. I am convinced that we have so much in common and can give exchange of so many ideas in both design and materials to each other, that such a dialogue can do a tremendous amount for both our fields. Maybe if the television lighting designers formed a society similar to the Society of British Theatre Lighting Designers an easier pathway of communication could be opened. In any event, can we all get together somehow, even if it's only in the nearest pub!

Brighter 35mm Projection

35 mm slides are an exciting projection medium. The projected material is easy to prepare and much much cheaper than the larger slides of conventional scenic projectors. The projectors are compact and have integral large capacity slide magazines—an important factor since projection techniques are often the answer in productions which require a large number of fast changes of location, atmosphere or commentary. The basic problem is that old old projection cry *not enough light through the hole*. The traditional solution is a souped-up Carousel where the soup has been of varying sophistication, quality, fan-noise and fire-risk. A new solution is the *Optical Radiation Corporation High Intensity Slide Projection System*. The projector is based on the American Ectographic Carousel and uses a 750 watt (220/240volt 50Hz) Xenon lamp. With a 100mm f2.8 lens, 4,000 lumens is attainable, and with a 1 kW Xenon lamp, 5,500 lumens becomes possible. The projectors do not take the European barrelled lenses and at the moment the shortest



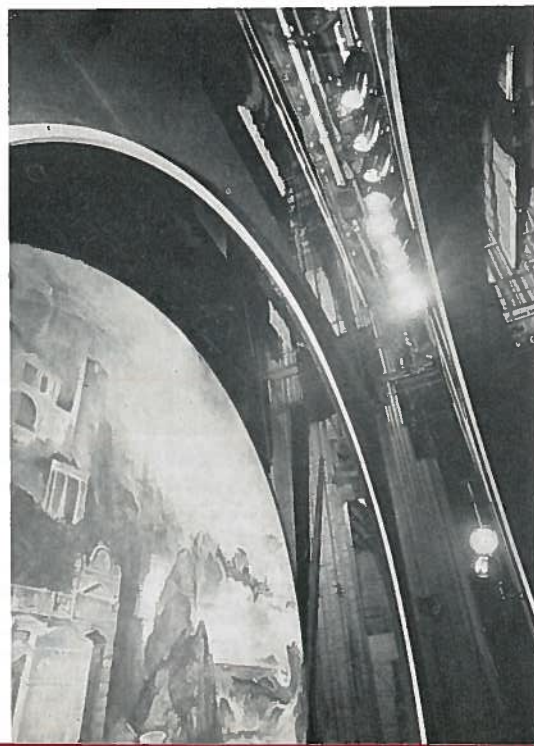
The Xenographic 500 High Intensity Projector is a single automatic projector able to accept up to 140 slides and to provide 4,000 lumens in the superslide format.

practicable focal length lens is 35mm, although it is hoped that in due course the Aga 15mm wide angle lens (see TABS, Vol. 32, No. 1) will be available in a suitable mount. The projector is available in the two formats illustrated. Both systems include autofocus and are suitable for remote control. No special ventilation is required. The European distributors are *Electrosonic*.



The Xenographic 512B has two projector heads and gives a cut or adjustable dissolve change between slides.

(Right) Stage Production: Gauze lighting. Bridge 2 with 9 CCT Fresnels on underslung bar. Detachable boom slotting into special fittings on scenery for quick repertoire changeovers.



(Far right) TV Production: Gauze lighting. Bridge 2 with six 2 kW Fresnels and two ½ Iris 4s on underslung bar. (Note: Fly gallery key lights and carbon arc for lightning on the boom.)



Fond Memory Brings the Light

FRANCIS REID

A couple of years ago, I wrote in *TABS* of my own favourite theatre form—the mechanised Stadttheater complex which makes me and my children wish that Norwich was, theatrically speaking, in Germany. This remark was a throwaway—an aside for future development . . . perhaps even a peg on which to hang the tale of my next visit to Germany.

I am a friend of DDM. If a fairy godmum offered me wish-fulfilment for my ideal theatre—a Reidspielhaus—my order of priorities would be: (1) an AUDIENCE with chairs; (2) WORDS with music; (3) ACTORS with musicians; (4) a ROOF with walls; and (5) a DDM with a few handfuls of 23. The peripherals like proscenium arches, electronic sound, foyers, costumes, Fresnels and wigs could follow later—much later.

In bygone *TABS*, the expression *lovable switchboard* has often been used in relation to DDM. I prefer *friendly switchboard* because a good lighting control must couple a friendly outside with a logical inside and while the process of falling in love might involve some momentary assessment of external friendliness, inner logic rarely prevails even if it is considered. DDM is friendly because it has playable pushes and smiling scales but an unemotional computerised heart that beats logically to execute its operator's artistic decisions in scientific terms. No question that stage lighting is one of the subtler marriages of art and science: there are switchboards that perform a shotgun function to this liaison, but DDM is a friendlier catalyst. My enthusiasm may carry overtones of a confectionery commercial, but I offer no apology and seek no forgiveness: enthusiasm is the blood of living theatre.

But why do I digress from German

Theatre to DDM Control? Is there a link? Yes—quite simply that in Germany, DDMs like June are “bustin’ out all over”. So I went to see how my favourite friendly switchboard was enjoying German theatrical life. Gerd Ohlmer, who has developed Strand influence in Germany from half-a-dozen sheets of Cinemoid to switchboards by the dozen, supplied me with a map suggesting a journey from Bremerhaven to Munich along a winding trail with stopovers in almost every city of theatrical note to see a Rank Strand installation. I opted out of this *Strandfahrt*: my brain and my senses work much too slowly to cope with a five theatres per day whistlestop tour. So I took a leisurely look at three different sizes/types of German theatre town: their only common feature being a DDM in the control room.

THEATER BADEN-BADEN is not a typical German stage. There is an absence of machinery and very little wing space. I felt quite at home: in size and equipment it is very like a British stage apart from the lighting bridge, perch-towers, and lighting galleries (under the fly floors) to facilitate repertoire working. The 1862 auditorium is superlatively beautiful and I would consider mortgaging my soul to attend a performance of *Così fan Tutte*: but the theatre now has only a resident drama ensemble although it opened with Berlioz's *Beatrice et Bénédicte* under the composer's baton.

The problem of hiding an FOH control room has been overcome and the desk and wings are in a very playable format. This DDM is unique in having dual means of channel-level control: in addition to the normal rocker action for raise/lower, the centre push on the channel rockers can be used to select that channel to a *digital*

wheel. I like it and would have it on my personal model. And incidentally, while I am standing up to be counted, let me also say that on my personal switchboard (whatever the make or type) I would always opt for an individual control per channel. O.K. . . . so perhaps this does mark me out as an unadaptable over-forty set-in-his-ways chap. But I play my switchboard and I have individual note controls on my flute.

BÜHNEN DER STADT KÖLN is at the other end of the German Theatre Scale. Not perhaps at the extreme end of that scale for although the Köln stages are vast and mechanised by the standards of any country outside Germany, the degree of mechanisation has not reached the ultra-sophistication discussed by Frederick Bentham under the title “Das ist alles Möglich!” in *TABS*, Vol. 30, No. 3 (and later translated in *Bühnentechnische Rundschau*). The Köln theatre complex has an Operahouse and Playhouse enclosed, with shared workshops, within a modern building. The DDM, in a newly formed frontal control room replaces the Playhouse manual Bordini which had a restricted view through a side auditorium wall slot. Being a repertoire house, the control incorporates a cassette long-term memory and a teleprinter will provide a print-out of any cue-state on request.

STÄDTISCHE BÜHNEN MÜNSTER is my favourite kind of German Theatre—the kind of theatre that I would like to see in Norwich. A mixed programme theatre where the payroll includes singers, actors, dancers, and the city's symphony orchestra. Where the main theatre can play *White Horse Inn* yesterday, *Shakespeare* tonight, and *Don Giovanni* tomorrow; while in the same three days the smaller stage offers

Spielplanvorschau für Dezember 1974

GROSSES HAUS		KLEINES HAUS	
* Premiere <i>Boccaccio</i> , Operette von Franz von Suppé	● Frei 20.00	So 1.12.	
* <i>Wie es euch gefällt</i> , Komödie von William Shakespeare	Ju-RI B 19.30	Mo 2.12.	19.30 Ju-RI A <i>Der Tod des Handlungsreisenden</i> , von Arthur Miller
* <i>Wie es euch gefällt</i>	CTGA + frei 20.00	Di 3.12.	
* <i>Boccaccio</i>	CTGD + frei 20.00	Mi 4.12.	20.00 Mi-Abo + frei <i>Der Tallisman</i> , von Johann Nepomuk Nestroy
* Gastspiel: <i>Majestäten</i> , von Jean Anouilh	● Do + frei 20.00	Do 5.12.	
* Gastspiel: <i>Majestäten</i>	● Fr A + frei 20.00	Fr 6.12.	19.30 Ju-RI E <i>Der Tod des Handlungsreisenden</i>
* Gastspiel: <i>Majestäten</i>	● Frei 20.00	Sa 7.12.	20.00 Sa-Abo + frei <i>Der Tallisman</i>
* <i>Nathan der Weise</i> , von Gotthold Ephraim Lessing	Sch w + frei 20.00	So 8.12.	20.00 frei <i>Der Tallisman</i>
* <i>Wie es euch gefällt</i>	Ju-RI E 19.30	Mo 8.12.	
* <i>Im weißen Rößl</i> , Operette von Benatzky	Di + VeBo + frei 20.00	Di 10.12.	
* 1. Symphoniekonzert — Gasikonzernt	Mi-Abo + frei 20.00	Mi 11.12.	
* 2. Symphoniekonzert — Gasikonzernt	Do-Abo + frei 20.00	Do 12.12.	19.30 Ju-RI A <i>Die tollen Zwanziger</i> , Eine literarisch-musikalische Revue
* 3. Symphoniekonzert — Gasikonzernt	Do-Abo + frei 20.00	Do 12.12.	19.30 Ju-RI A <i>Die tollen Zwanziger</i> , Eine literarisch-musikalische Revue
* Gastspiel: <i>Majestäten</i>	● Frei 20.00	Fr 13.12.	20.00 frei <i>Popkonzert</i>
* <i>Wie es euch gefällt</i>	Sa A + frei 20.00	Sa 14.12.	20.00 frei <i>Ballettabend</i> (Werke von Prokofjew, Maler, Bartók)
* <i>Im weißen Rößl</i>	CTGF + frei 20.00	So 15.12.	
* <i>Im weißen Rößl</i>	VeBo + frei 20.00	Mo 16.12.	20.00 Pr-Abo + frei ● <i>Premiere: Elektra</i> , Tragödie von Sophokles
* <i>Nathan der Weise</i>	Sch w + frei 20.00	Di 17.12.	19.30 Ju-RI A <i>Die tollen Zwanziger</i>
* <i>Im weißen Rößl</i>	CTG C + frei 20.00	Di 17.12.	20.00 frei <i>Ballettabend</i>
		Do 19.12.	
		Fr 20.12.	19.30 Ju-RI B <i>Der Tod des Handlungsreisenden</i>
<i>Boccaccio</i>	Sa B + frei 20.00	Sa 21.12.	20.00 frei ● <i>Premiere: Die Stühle</i> , von Eugène Ionesco
<i>Boccaccio</i>	SchNa + VeBo + frei 19.30	So 22.12.	20.00 frei <i>Elektra</i>
		Mo 23.12.	20.00 frei <i>Die Stühle</i>
		Di 24.12.	
* <i>Premiere: Der Rosenkavalier</i> , Oper von Richard Strauss	● Mi + VeBo + frei 19.00	Mi 25.12.	20.00 frei <i>Der Tallisman</i>
* <i>Im weißen Rößl</i>	frei 20.00	Do 26.12.	20.00 frei <i>Die tollen Zwanziger</i>
* <i>Don Giovanni</i> , Oper von Wolfgang Amadeus Mozart	Fr C + frei 19.30	Fr 27.12.	20.00 frei <i>Die Stühle</i>
* <i>Brüderchen und Schwesterchen</i> *)	11.00, 14.00, 17.00	Sa 28.12.	
* <i>Der Rosenkavalier</i>	CTGF + frei 19.00	So 29.12.	20.00 frei <i>Elektra</i>
* <i>Wie es euch gefällt</i>	CTGD + frei 20.00	Mo 30.12.	20.00 frei <i>Mensch allen mault die Mensch</i> , Plattdeutsche Komödie von Günther Siegmund
* <i>Im weißen Rößl</i>	frei 15.00	Di 31.12.	15.00 frei <i>Die tollen Zwanziger</i>
* <i>Im weißen Rößl</i>	frei 19.00	Di 31.12.	19.00 frei <i>Die tollen Zwanziger</i>

*) Alle weiteren Termine des Musicals für Kinder siehe umseitig

ÄNDERUNGEN VORBEHALTEN

Die Vorstellungen im Kleinen Haus beginnen ab 1. Dezember (von Ausnahmen und Jugendvorstellungen abgesehen) generell um 20.00 Uhr.

* Termine des Kindermusicals „Brüderchen und Schwesterchen“ siehe Rückseite

Ballet, *Arthur Miller*, and *Pop*. With such repertoire performances on seven nights each week plus the accompanying schedule of daily rehearsals (to say nothing of day-time children's shows) the mechanical stage becomes a necessity. The oft-forgotten fact of repertoire is that it is not just the problem of changing from one night's performance to the next; there is a change into and out from the daily rehearsals of new works in production.

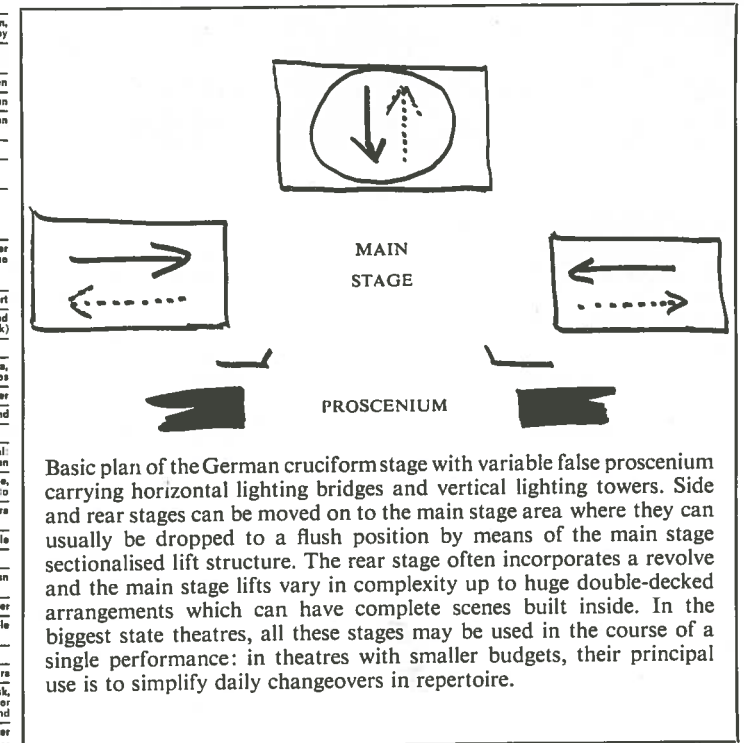
For me, the marvellous fact of German Theatre is that every centre of any population has a resident drama and music organisation making the performing arts as freely available on the municipal stage as the literary arts are available in the municipal library or the visual arts in the municipal gallery. Over a five-year span, any child or adult with a subscription series can be sure of experiencing something approaching a total spectrum of classic and modern world staging. To little me, living in a country which to all practical purposes has no *lyric* theatre, this is Valhalla indeed.

The DDM in Münster is beautifully situated in a roomy control suite originally built to house a “walk-about” control of earlier technology. There is a very good feeling of contact with the stage. Watching dress rehearsals of Suppé's *Boccaccio*, I was impressed by the relaxed atmosphere and the simplicity and immediacy with which channel levels were modified and recorded. And the simplicity with which

the master cassette was amended at the end of the rehearsal. There can be no doubt whatsoever that any form of repertoire working demands a memory system and that this can be justified on all grounds: artistic, economic and humanitarian.

POSTSCRIPT

Although Germany pioneered many of the modern controlled lighting techniques that are now the basis of international lighting methods, I sometimes think that I detect two basic schools of lighting thought in today's world: the German School and the Anglo-American School. In particular the concept of a *Lighting Designer* does not yet seem to be acceptable in German Theatre: there is a feeling that the lighting man and his equipment is acceptable provided that they do not interfere with the working of the stage machinery. On the other hand, Anglo-American lighting developments have taken place with something approaching total disregard for the problems of repertoire changes. So? The answer is, surely, that we must cross-fertilise. By talking and working together, in each other's theatres, we can mutually advance the development of stage lighting. Equipment is advancing faster than the artistic use that we make of it: surely a reverse situation would be more healthy.



Basic plan of the German cruciform stage with variable false proscenium carrying horizontal lighting bridges and vertical lighting towers. Side and rear stages can be moved on to the main stage area where they can usually be dropped to a flush position by means of the main stage sectionalised lift structure. The rear stage often incorporates a revolve and the main stage lifts vary in complexity up to huge double-decked arrangements which can have complete scenes built inside. In the biggest state theatres, all these stages may be used in the course of a single performance: in theatres with smaller budgets, their principal use is to simplify daily changeovers in repertoire.

In both DDM Systems the individual channel rocker pushes are in a wing to the operator's left. The Pin-Patch Back-up and Cassette Repertoire storage is in the wing to the right. Both systems also have a teleprinter print-out. In addition the Münster System has an extension of the master desk containing work-light switching and a stage manager's cue panel.



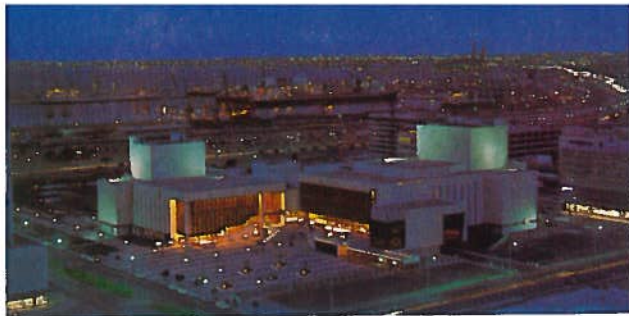
SCHAUSPIELHAUS KÖLN (240 CHANNEL)



STÄDTISCHE BÜHNEN, MÜNSTER (200 CHANNEL)

A list of West German cities with permanent theatre companies. Those in capitals have both musical and dramatic ensembles, the remainder have drama only. (Compiled by *TABS* from *Oper 1974* and *Theater 1974*)

- | | |
|----------------|------------------|
| AACHEN | KARLSRUHE |
| Baden-Baden | KASSEL |
| AUGSBURG | KIEL |
| Bamberg | Kleve |
| Bad Godesberg | KOBLENZ |
| BERLIN | KÖLN |
| BIELEFELD | KONSTANZ |
| Bochum | KREFELD- |
| BONN | MÖNCHEN-GLADBACH |
| BRAUNSCHWEIG | LANDSHUT-PASSAU |
| BREMEN | LÜBECK |
| BREMERHAVEN | LÜNEBURG |
| Bruchsal | MAINZ |
| Castrop-Rauxel | MANNHEIM |
| Celle | Marburg |
| COBURG | Massbach |
| DARMSTADT | Moers |
| DETMOLD | Memmingen |
| Dinslaken | MÜNCHEN |
| Dinkelsbühl | MÜNSTER |
| DORTMUND | Neuss |
| DÜSSELDORF | Neuwied |
| DUISBURG | NÜRNBERG |
| ESSEN | OBERHAUSEN |
| Esslingen | OLDENBURG |
| FLENSBURG | OSNABRÜCK |
| FRANKFURT | Paderborn |
| FREIBURG | PFORZHEIM |
| GELSENKIRCHEN | REGENSBURG |
| Göttingen | Reutlingen |
| GIESSEN | SAARBRÜCKEN |
| HAGEN | STUTTGART |
| HAMBURG | Trier |
| HANNOVER | Tübingen |
| HEIDELBERG | ULM |
| Heilbronn | WIESBADEN |
| HILDESHEIM | Wilhelmshaven |
| HOF | WUPPERTAL |
| Ingolstadt | WÜRZBURG |
| KAISERSLAUTERN | |



Cape Town Conference

Constructing a successful technical theatre conference is no easy task, but South Africa scored a bullseye at first attempt. For, make no mistake, this was a model exercise in terms of those three essential ingredients: location, organisation, and content.

Location

Cape Town is a theatrical city. Traditionally its hovering mountain has been likened to a table, but to a theatre-man's eye it is surely more suggestive of the ultimate in fly-towers. And there are quiet hidden squares that would grace a Mozart wind octet. And there is the Nico Malan Theatre Centre: theatre conferences just have to be held in theatres—hotel conference suites and the traditional trappings of conventional conventioning do not a sympathetic symposium make. The 1971 Nico Malan (built in 26 months!) includes an opera house, a playhouse, and dramatic foyers, an audiences theatre, an actors' theatre, and a technicians' theatre—and all in proportion. Not all new theatres *feel* right, but this one does.

the programme in an exemplary theatrical way. Will Jan du Toit and his entire Nico Malan staff please take a curtain call (wearing those welcoming smiles which they miraculously maintained throughout these August days).

Content

The danger in a theatre technology symposium is that it will run towards either of two extremes: pedantically detailed discussions of minor specialist problems where few of the participants are prepared to look beyond their own experience or academic discussions on philosophies so fundamental that no factual matters are admissible as evidence. Cape Town had none of this: it was all honest stuff directly related to the function of the Theatre Technologist as a catalyst in the equation Audience plus Actor equals Theatre.

Spaced throughout the programme were good nuts and bolts discussions on specific problems of making a production happen; led by Jan Nel (Safety), Hubert Bongers (Maintenance), John T. Baker (Lighting

Overseas Lighting speakers include Wolfgang Bergfeldt from Germany describing control developments and the Editor of TABS giving his view on what lighting was about and where it was going. Dr. Gerhart Rindauer of the International Music Centre in Vienna discussed the interplay of Television and Stage: a matter of some concern in South Africa, a country where Television is gearing up for its first ever appearance.

The performing theatre tends to view theatre academics with some suspicion. The title "professor" can be a negative asset at a meeting of practical technologists but Professor Robert Mohr disarmed the cynics by giving a star acting performance in his discussion of what the Director expects from the Technician. And his words were all good sense: it was what we all believe what many of us think we are actually doing, but what few of us achieve.

A recurring theme throughout was the importance of training stage technologists. The formal case was put in a masterly presentation by Michal Grobbelaar, Pre-



Organisation

The basics of conference organisation are inherently present in a well-run well-equipped well-designed theatre. The ability to produce endless coffee (and stronger fluids as the day progresses), to serve 400 delegates with meals, to not merely arrange beds but to meet delegates individually from aircraft/trains/cars and transfer them to the correct bed, to run model information services, to produce an edited printed transcript almost before the last vote of thanks has died away . . . all this and much more . . . BUT, above all, to stage manage

Design) and Bill Smuts (Production Management), all of them technologists involved in the day-to-day workings of the Nico Malan. The Centre's architect, Maciek Miszewski, spoke of South Africa's accelerating extensive building programme for housing the theatrical arts. Modestly he spoke of "some of the good and bad points of the Nico Malan Theatre Centre worth noting for the future": there are few bad points in the Nico and there are even fewer architects who would acknowledge possible problem areas much less draw attention to them. The Nico Malan will stand up well to the passage of time.

sident of SAITT (South Africa Institute of Theatre Technology) and after the subject had cropped up in most discussion sessions, the Symposium ended with a unanimous resolution supporting the establishment of extensive training facilities leading to recognised qualifications.

Thus the Cape Town gathering reaffirmed that fundamental truth of theatre technology: despite increasing reliance on modern science to provide machinery to replace manual drudgery, *Living Theatre* arises out of an interaction between Audience, Actor and Technologist rather than technological device. F.R.



The effect of the proposed theatre development on the Edinburgh skyline (as viewed from the west end of Princes Street).

Towards an Edinburgh Opera House

Edinburgh has contrived to remain at the top of the international Festival league for some 28 years without having a Civic Opera House. The world's leading opera companies have struggled to mount their productions in the King's Theatre: a delightful Edwardian building but possessing a pitless auditorium and a wingless stage. However, after some hassle with the Royal Fine Arts Commission over the height of the proposed fly-tower in relation to the Usher Hall dome and the Castle, the scheme has been given the go-ahead for design completion in the spring of 1975. It is anticipated that building will start at the end of 1976 for completion four years later and this would allow for a triumphal opening to the 1981 Festival.

The new theatre will be linked with existing buildings to form a Performing

Arts Centre. In addition to the proposed 1,400-seat lyric theatre for opera, ballet and spectaculars, the scheme includes an entirely new stage and renovated front-of-house facilities for the Lyceum Theatre, although its period auditorium will be preserved intact. There will also be a 250-seat studio theatre and the complex will include the existing Usher Concert Hall.

To enable maximum flexibility in the use of the lyric theatre, its fly-tower will extend over the orchestra pit area and the fire curtain will fall on the pit rail (i.e. on the audience side of the orchestra). The pit itself will comprise a series of lifts for adaptability and the walls and flown ceiling in this area will be demountable.

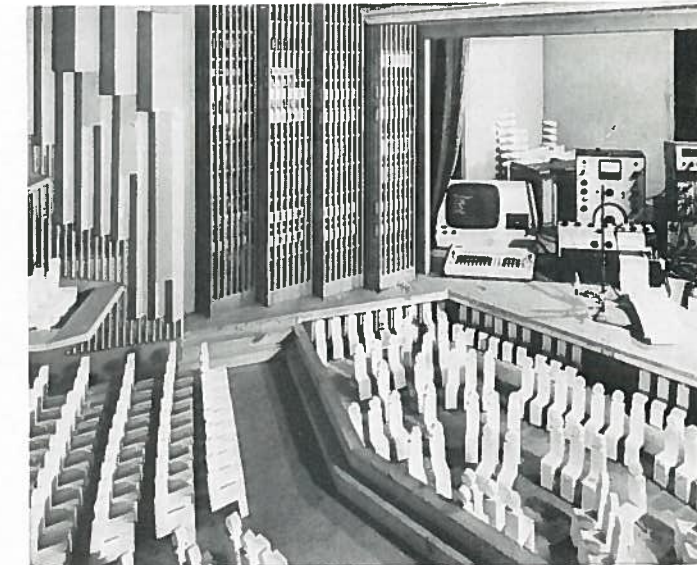
A unique feature of the design process is

the construction of a model one-eighth of full size which will be used for tests of the acoustics, and of the air movement of the heating and ventilating systems. Not only the sizes but the acoustical characteristics of the model (such as surface absorption of sound) are "to scale". The sounds used for test purposes will be of wavelengths one-eighth as long as those of voices or orchestral instruments—indeed most of the test sounds will be too high-pitched to hear. By slowing the tape recording down 8 times, they will be reduced to normal pitches—but this does not matter very much since most of the analysis will be by a computer which does not have ears anyway. The budget for the model and test programme is £33,000 of which approximately £12,000 represents the cost of model building and instrumentation.

Eighth-scale model of the auditorium for acoustic and climatic tests. (The detail of the wall treatments is provisional and merely stands for something which will be there but has yet to be designed.)



The pit and stage area with a selection of the test gear.





Edinburgh International Festival

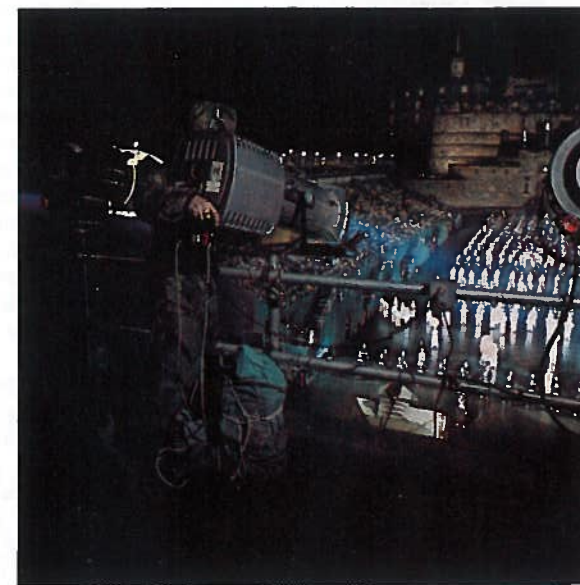
The Edinburgh Festival has many known statistics: number of visitors, number of seats sold, number of bus tickets, etc. But how many dimmer channels are there? How many Pattern 23 spots? How many cues? What was the total connected load? If all the lighting plots were laid end to end, would they stretch from Brentford to Kirkcaldy? TABS offers a sheet of Tartan Cinemoid for the first set of correct answers received.

Taking a camera to the 1974 Festival, TABS was faced with a choice (ignoring concerts and exhibitions) of some two dozen official stage productions and upwards of a score of unofficial Fringe productions. TABS chose to concentrate on the non-proscenium staging which has been a feature of the Edinburgh Festival since Tyrone Guthrie mounted *The Thrie Estaites* in the Church of Scotland Assembly Hall in 1948. Guthrie's work on this improvised thrust stage and subsequently at Stratford, Ontario, has directly inspired much of the international move away from proscenium staging of drama in the past 25 years.

Photographs by A. L. Hunter.



Bert Donaldson checks the Tattoo lighting control



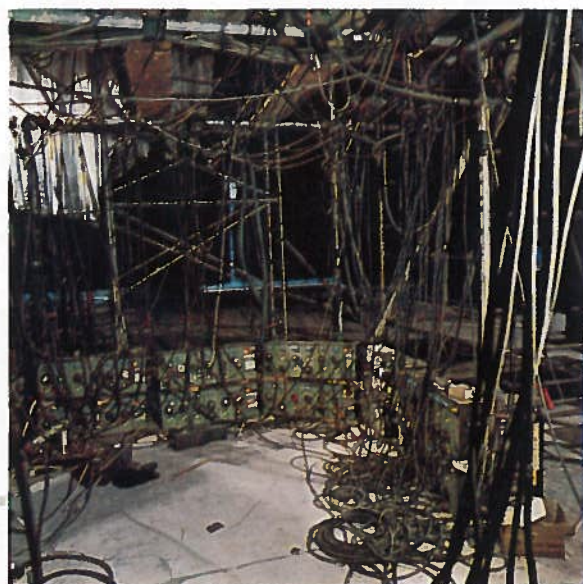
Follow-spot operator's view

TATTOO

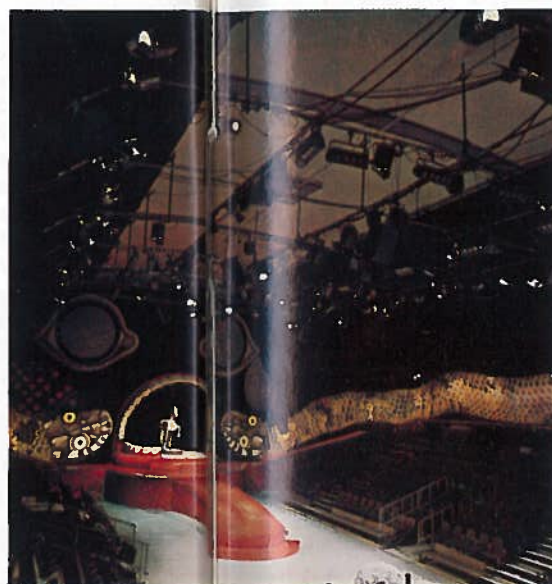
Lighting has always been a dramatic feature of Brigadier J. A. Sanderson's Tattoo production on the esplanade of Edinburgh Castle. Over the years, the lighting team of Colonel Douglas Spratt (Lighting Designer), Bert Donaldson (Edinburgh Corporation) and Mike Smyth (Rank Strand) have continued to develop the lighting installation which now includes some 14 Patt. 765 CSI Follow Spots (including several special long-range versions) and 30 Ianiro 5 kW Fresnels to light the actors plus a vast number of Tungsten-Halogen floods to light the castle.



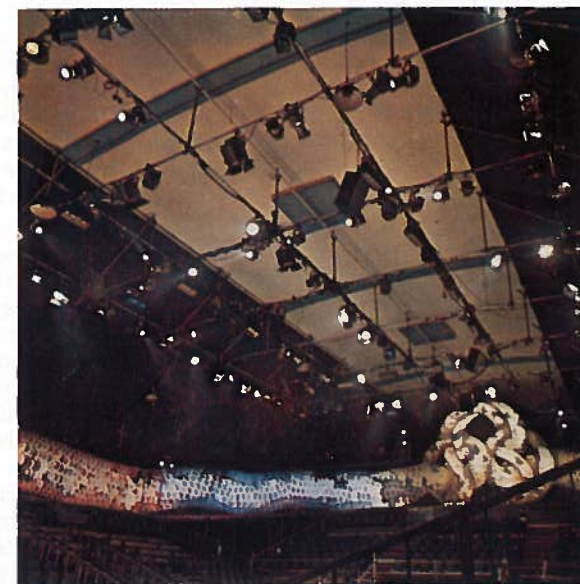
Ice Rink Control Room



Dimmer Room



The Monster's Head



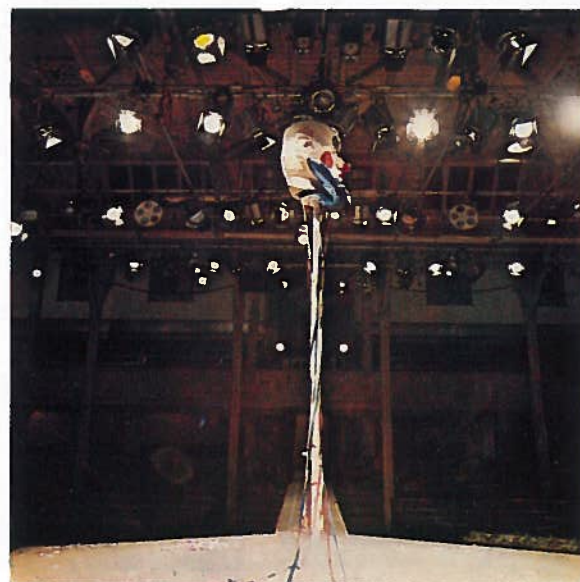
... and its Tail

ICE RINK

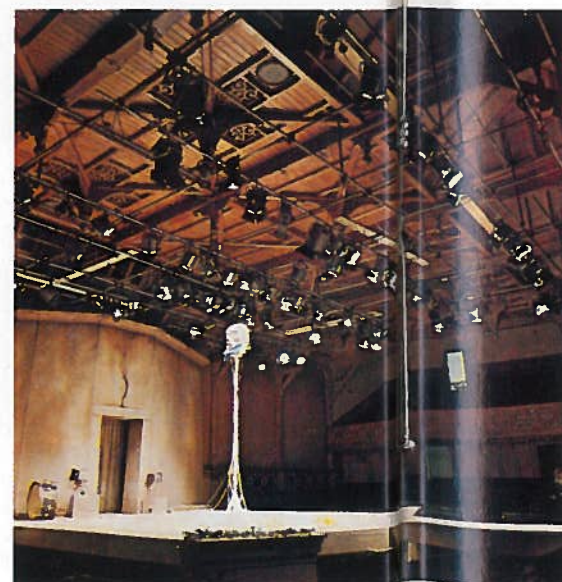
Theatre-in-the-Round is often thought of as an intimate staging form. *The Fantastical Feats of Finn MacCool* was an Epic-in-the-Round with the acting area consisting not only of the central arena but also a peripheral platform encircling the audience at the rear of the seating tiers. This outer acting area ring was linked with the main area by means of a ramp from the monster's mouth and by the gangways through the seating. A lot of light to direct the audience's attention and create theatrical atmosphere in the bleak Haymarket Ice Rink.

Lighting by Andre Tammes
Installation by Northern Light (On the Spot) Ltd.

Assembly Hall from the stage



Assembly Hall stage



Junior 8 Controls in the YWCA



F.O.H. in the YWCA



ASSEMBLY HALL

The Assembly Hall stage is redesigned and built each year to the specific requirements of the production. The Actors Company productions of *The Bacchae* and *Tartuffe* extended the traditional Guthrie thrust until it became a transverse stage bisecting the auditorium.

Lighting by Mick Hughes
Installation by Rank Strand Electric

YWCA

Every possible hall is pressed into theatrical service for the Festival Fringe. The YWCA was a home in 1974 for three different companies offering nine separate productions with an average of five performances per day.

Ten Days to Tabs

JOHN WYCKHAM

The applause is thunderous; breaking out two whole bars before the final chord emerges from the orchestra pit. Stage Manager, with one eye on Prima Donna and one on score, reaches out for "go" button to lower house tabs. Pom—pom pom pom—pom pom pom, pom-ching-pom-ching pom pom-ching pom ching pom, ching pom-pom-pom pom-pom-ching—"PUSH". The tabs start to fall on typical "Verdi ending" to highly successful first act; and they fall; and fall, and fall! As the counterweight bar reaches stage level Stage Manager calls Flyman; or thinks he does! Tabs start to rise again—dead slow!

Electrician seated out front at his organ (CDII, 1960 model remote controlled electro-mechanical stage lighting console) receives a "green" from Stage Manager and promptly "fast fades to blackout"! Leastways that is his intention, until speed selector knob on fourteen-year-old monster comes off in his hand! Fast fade to blackout becomes ten-second dim!

Stage Manager, now somewhat ruffled, calls Flyman to "get 'em up" and to Electrician, "Call lights", at the same time pressing "bar bells" with spare thumb, thus warning Front of House of impending invasion.

Fireman Bert stands in the OP corner, having just ascended to stage level from evening "fry-up" in basement cubby-hole. Fireman Bert knows his opera well; he also knows his job. The Safety Curtain must be lowered in view of the audience at least once during every performance.

The stage lights dim; the tabs rise; the bar bells ring!

The safety curtain descends; Prima Donna steps forward! The stage lights fade up; the bar bells ring! From Prompt Corner, Stage Manager literally throws himself onstage. Bar bells ring! Tabs descend; Stage lights start to fade; safety curtain gathers speeds on its downward journey; bar bells ring!

Safety Curtain hits stage, shudders and proceeds to rise again! The tabs rise; the call lights snap full on; the bar bells ring. Prima Donna takes "picture call" of astounding novelty and originality—in semi-recumbent pose, striking Stage Manager with fists whilst latter drags her bodily upstage away from certain decapitation by safety curtain. The bar bells ring! Fireman Bert clutches madly for Safety Curtain brake, misses, and releases the drencher! The bar bells ring—and ring—and ring . . .

Theatre Consultant reaches out dazedly, desperate to stop it all; particularly that bloody bell! He knocks over glass of water on bed-side table, half-drowning somnolent figure of Lady Wife beside him. His waving hand eventually finds

alarm clock "stop" button and silence ensues; save only for the drip . . . drip . . . drip, of last of water falling onto Lady Wife's pillow. "Still dark? Strange! It must be midnight! Who set that flipping clock? What day is it? Tuesday! Hells Bells—Euston—in 40 minutes!"

A shave, a taxi and tube train later, Theatre Consultant is able to relax and unravel his wits over British Rail banger and piece of lightly buttered leather. Whatley Junction, half an hour behind; Picklily Station Manford 90 minutes ahead. Project—major renovations to 2,000 seat, commercially owned, No. 1 Touring Theatre. Problems—extension of orchestra pit; improvements to dressing rooms; the theatre management!

Let's see now. Tuesday. Fairly straightforward day, but onward journey to Bradchester and Boltingham on Wednesday, might be difficult. Where's the itinerary? Ah! Thank heavens for Ideal Secretary! What's this? Typewritten note—underlined in red and pinned to rail, air and self-drive car tickets. "Don't forget; TABS article to be in Editor's hands Friday week—ten days from now! If you could put it on cassette and post it while you are away, I'll have a draft for you to read on Friday."

Good! Do that; get it out of the way in plenty of time. What's the train stopping for? Broken down? not again! Half an hour late! Hell! Have another piece of leather—with marmalade!

Manford 40 minutes late—raining (naturally)—queue for taxi. At last—the Empire Theatre. Forbidding exterior; darkened foyers; bolted doors; Victorian Management! "Theatres should be opened only thirty minutes before curtain up! Good Managers will keep the public outside the building until the last possible moment!"

How to find the Manager. Stage Door? No! The box office—separate building. "My name's Theatre Consultant. I have an appointment with Theatre Manager."

Depressing office; depressing Theatre Manager; ruled from head office a hundred miles away. Cup of lukewarm coffee—cracked smile; cracked cup! "Yes, we want to increase the size of our orchestra pit to attract the big national subsidised companies. Ballet and Opera."

"Splendid, but if you're intending to take in the bigger companies you will also have to do something about your dressing-room accommodation."

"Well, we are actually decorating them at the moment. Our Stage Manager and staff are doing all the work themselves; both of them!" "We try to keep one room out of use every week."

"I don't mean merely decoration, but the

actual spaces available."

"We have plenty of space. This is a very large theatre."

"For a company of 130?"

"Well we had 110 in the dressing-rooms for pantomime last year."

"I'm afraid the sort of dressing-room congestion you've been able to get away with in the past is no longer acceptable to twentieth century performers and staff."

"Well, I think you'll have to refer that to head office. I've only been told about the orchestra pit."

The problems inherent in enlarging most orchestra pits are not at first sight apparent to the uninitiated. Apart from the obvious need to provide adequate space for the maximum anticipated number of musicians, whatever may be the musical combination, there are questions of sightlines from the front of the stalls; the height of the conductor's podium; the degree of overhang by the stage itself; the sightlines from musicians at the rear of the pit to the conductor; the acoustic properties of the new pit, heating, ventilation, etc.

The meeting and survey lasts three hours, with interval for lunch. At 5 p.m., having promised to submit detailed scheme to Theatre Manager and his Head Office within two weeks, Theatre Consultant also surveys the dressing room accommodation and promises to come up with a scheme for extensions and improvements.

Hotel—hot bath—clean shirt—back to the Empire Theatre. Performance of *Marriage of Figaro* by Highland Opera Company. Given seat in stalls by Theatre Manager, and freedom to roam about auditorium during the performance. From front stalls, woodwind sound very weak. In the absence of suitably large orchestra pit half the orchestra seated at lower level of small pit; remainder at stalls level—rows of seats having been removed. This undoubtedly contributes to the imbalance. The need for a proper pit obvious.

Act two—rear stalls—voices very clear, but string and bass sounds very weak; woodwind appears to predominate. Deep circle and balcony overhang, together with shallow seat rake a possible cause.

Act three—upper circle—orchestral balance satisfactory—voice intelligibility poor. Ventilation system noise intrusive.

Late supper with Opera Company Director and thence to bed. Look at itinerary for Wednesday. Oh hell—only nine days for that TABS article. . . .

Self-drive hire car hums happily along dual carriageway between Manford and Bradchester; journey barely thirty miles; virtually impossible by rail. The Citadel theatre, now in tenth year of life, stands sentinel over town square; a monument to munificence of latterday Council, inflexibility of reinforced concrete and arrogance of firm of noted architects.

Theatre Consultants have existed in the British Isles for at least two decades and

the Society of Theatre Consultants for rather more than one. A telephone call to London—a modest expense in 1964—would have produced list of Theatre Consultants, their qualifications and experience, by return of post. In 1974, the essential alterations will probably amount to more than the original total cost of the building. To be fair—perhaps Arrogant Architect was not at the time aware of the existence of this breed, whose professional status and Code of Conduct permits only collective promotion by the Society itself.

Contented City Treasurer, Energetic Engineer and Relaxed City Architect give Theatre Consultant facts, figures, plans and elevations. T.C. sighs with relief. "A rhythmic team; anxious to atone for sins of omission of their predecessors! If only they'd been around when theatre was planned ten years ago."

The meeting goes with a swing; City Treasurer waxes positively lyrical in condemnation of the building:

The stage is too shallow,
The grid is too low,
The prosc is too narrow;
We want you to know
That there's space at the back
For extending the site;
Could you please help in putting
The Citadel right?

I'll certainly try,
But, without being funny,
I must warn you now
You'll need plenty of money!
For though you may think
It's the "jily I'm gilding",
I'm certain the whole
Rear of House needs rebuilding!

The dressing rooms plans
On the drawing before us
Don't show enough space
For a musical chorus.
The door widths are such
That a girl can't get in
To the corridor wearing
A large Crinoline.

The absence of showers
And the scarceness of loos 'll
One day catch you out
With a blatant refusal
By all types of artiste,
For even one night,
To visit your theatre
'Til you put it right.

We thank you, Consultant
For making this point
Will you think up a scheme
For improving the joint?
Be quick as you can,
For there's no doubt about it,
We cannot continue,
Much longer without it.

The Finance Committee's
Convened for next week;
Their formal approval
We urgently seek.
We gather you're expert;
We know that you're right!
Please put your proposals
On paper—TONIGHT!

Fifty miles to Boltingham—wet road; getting dark. Hope car doesn't pack up! Exhaust sounds rough!

Extraordinary how people expect everything done immediately! Worse still, the bigger the project the shorter the notice!

The Polydor theatre presenting *This Happy Breed* on thrust stage. Interesting! But why has Stage Designer gone out of his way to set it in what is really a proscenium setting without wings? Likewise, Director has orientated most of the action towards centre block of seats.

Side seat—deliberately chosen—confirms view that "thrust" is really an actors' form and not particularly pleasant for more than about 60 per cent of the audience. Spend most of Act I cogitating on the words "Alf—Tuesday", scrawled in chalk on back panel of particularly nasty 1930 sideboard directly in line of sight. Poor production; house full; what price local taste? Ponder over likely reception for next weeks' offering—*Rock O'hello!*

Interval study of audience flow and habits, together with managerial methods. Cold night; theatre warm. Pleasant atmosphere in coffee lounge; queue for counter service precipitates thoughts about pre-ordering technique, adopted at the bar.

Toilets show signs of wear, as does entrance foyer carpet. Pennywise or pound foolish? The building generally looks older than its four years of life. Many seats loose on their mountings; main door has obviously been re-hung at least once; exterior paintwork in poor condition. The building was noteworthy, at the date of its opening, for the speed of the designers and builders and the modest final cost. It shows!

Curtain down to riotous applause. Good to see existence of theatre amply justified. Supper with Theatre Director in Club Room. Homely affair; cheerful surroundings. One good hot dish followed by excellent cheese board, washed down with pleasant carafe of Chateau Plonk. Thence into the night—twenty-mile drive back to Bradchester, thereby completing day's triangular trip; park hire car; fall thankfully into high-speed bed en route for Glasburgh. Time—o-one-double-o; ten minutes over a "wee dram" to think about TABS article. Think! Think! Think! No TABS article to-night! "Tiddley tum, tiddley tum; tiddley tee; tiddley tee; not very far, not very far; fiddle de dee, suck it and see" z . . . zzz!!

Heavy hammering hails the dawn. Fumble for light switch. Steward cheerily thrusts tray of tea into the berth. "Seven o'clock Sorrrh! Glasburgh in thirty minutes." He's right; but omits to say that arrival will be 68 minutes late!

Porridge for breakfast—with sugar and cream! "Bloody Sassenach! He'll be calling for kippers and custard next!" An hour to go before first meeting; time to read the morning papers, No! Better draft that TABS article. Success—300 words in an hour—only 3,700 to go!

The architectural practice of McFardle, McCringle, MacNeedle and Smith is long established, prestigious and prosperous. Their reception area is smothered in "blow ups" showing four high-rise office blocks, two factory developments, a power station, a hospital, an award winning civic centre

and two urban housing schemes; making them well fitted to design a theatre! "Steady now T.C.! Let us not pre-judge!"

Excellent coffee; comfortable conference room; Caledonian courtesy! The scene set for elementary lessons in tact, persuasion and understanding; the gentlemanly art of human communication.

A theatre for audience capacity of 350, designed to take every type of attraction from drawing-room comedy to epic drama; or wind ensemble to brass band, has little chance of success in all of these by reason alone of the necessary degree of acoustic compromise. To include such a project as an integral part of what is basically a sports centre only complicates the issue. To make it share concourses with ice rinks and swimming pools whilst being buried beneath a bowling alley or a rifle range, is a folly which could surely only be perpetrated by people who never go to theatres? The mind boggles at the cost alone of adequate acoustic separation.

"You see, T.C. this was the client's brief."

"Heaven preserve us; you do need help don't you? May I see the brief?"

"Well, actually, it was never written down! No! Wait; I think there was a letter from the Town Clerk."

The meeting continues in atmosphere which is a mixture of apology, contrition and pulchritudinous verisimilitude. T.C. will write a report on the state of the scheme so far. What a pity his services have been sought so late in the day, etc.

Hasty lunch of haggisburger and chips, washed down with two nips of Glen Clyde, then on to Regal Theatre other side of town.

Timber grid—too low; fly floors (ex hemp) too wide; no safety curtain; no sprinkler system; small orchestra pit; no stage lighting control. Good auditorium; excellent acoustics! Backstage, antiquated dressing-rooms for 100; toilets for ten! Theatre 1870—cinema 1930—bingo 1960—turn it into a repertoire theatre in six months please! Abracadabra! I'm a prestidigitatious Theatre Consultant. Now you see me! Now you don't! In my left hand—thirty tons of grid steel; in my right a stage lighting bridge! Under my thumb—the Chief Fire Prevention Officer—I must be joking!

"Ah; but in my hip pocket a Mini 2 and that'll get you thru—the noo—henny!, What's that Mr. Technical Director? Not big enough? Well what had you in mind? There's plenty of choice. With apologies to Rogers and Hammerstein, these are some of my favourite things:

A J.P. might suit you; with dimmers thrice twenty,
For medium theatres I think that is plenty,
For bigger ones 80, controlled by SP
Would satisfy Michael, or Francis, or me!
Cross fade faster;
Preset Master;
You can quote from me,
Snap it or dim it,
There's almost no limit
Except that it won't—make tea!

If you've more money than sample a Threaset, A Punch Card with wings, or a Luminous Pre-set;

Perhaps if you're plotting ends up in a mess You might be persuaded to try MMS.

Joe and Charlie
Often parley
Over DDM,
Whilst Richard at night
Flies his National "kite"
It's the "ultimate" but—what then?

"Let me know what you want, by return of post. I enclose a stamped addressed sheet of number 7 Pink for your reply!"

Two sonic suitcase searches, a sensuous frisking by "butch" airport security lady, a skyward stagger and, 40 minutes later, an earth-bound dive. T.C. "hits the deck"—twice! Once for each pilot! It's Heathwick Airport and eventually he is escalated into the arms of the second woman to clap hands on him that day—Lady Wife!

Homeward journey from airport somewhat "cool". T.C. had promised to take Lady Wife out to dinner, direct from the airport, but had forgotten agreement to attend Redgate Borough Council—Theatre Sub-Committee meeting, to "speak to the Brief for the new theatre." Domestic disaster! Efficient secretary had telephoned as Lady Wife dressed for dinner. For a few moments she was no lady!

Four hours later T.C. slinks into darkened bedroom. No decision from Theatre Sub-Committee; no dinner; no wife (leastways to speak to); no TABS article. Seven days to go.

First time in the office for three days; bound to be hellish. Presently (8.30 a.m.) peaceful, but wait until phones start ringing! Mountain of mail; dictate fifteen letters in twenty minutes, check six Architects' Instructions; glance at three sets of plans and mark for close study by Tony Structures and John Services.

Opt for second go at TABS article. That does it! Verdi might have written accompaniment to the next two hours! TABS—phone—TABS—phone—TABS—phone—TABS—phone—TABS—phone, etc., etc.

(Repeat until ready, then dead segue into the year's longest telephone call.)

"The Civic Centre Project Co-ordinating Officer from the London Borough of Murkton calling! "I'd like to discuss the programme for the theatre part of the scheme and I'm anxious to ensure that all members of the design team understand the problems."

"I have"—he relates with relish—"to ensure that the Scheme Design and Cost Plan for the theatre part of the Civic Centre is submitted to:

The Theatre Sub-Committee of the Town Council;
The Recreation Committee;
The Management Committee;
The Education Committee;
The Finance Committee;
The Town Planning Committee;
A Full Council Meeting;
The Arts Council of Great Britain—Housing the Arts Committee;

ABTT, Theatre Planning Committee;
The Theatres' Advisory Council;
The Local Arts Association;
The British Film Institute;
The Central Council for the Disabled;
The Public at Large.

If, after that thoroughly democratic procedure there is any of the Design Team's original work left, his job is—so he confides as the minutes tick by—to ensure that the design is fit for licensing under:

The Theatres Act 1968;
The Cinema Act of 1952;
The Cinematograph Registration Acts of 1955 and 1958.
The local authority Licence Regulations and Rules of Management for places of public entertainment.
The Licensing Court procedures for licensing buildings selling beers, wines and spirits for consumption on the premises.

Additionally, he reminds that, being in the Greater London Area, the finished building should comply with:

The Home Office Manual 1934;
The Fire Precautions Act 1971;
Technical Regulations for Places of Public Entertainment 1965;
British Standards;
British Standard Codes of Practice;
Local Bye-Laws 1967;
Public Health Acts of 1936 and 1961;
Town and Country Planning Act;
The National Building Regulations 1972;
London Building Act;
London Constructional Bye-Laws;
The Institution of Electrical Engineers Regulations;
The Factories Act 1961;
The Offices, Shops and Railway Premises Act 1963.

One is sympathetic to his problem and expresses amazement that theatre buildings ever get completed in the British Isles and no surprise that so many original bright and exciting ideas get watered down into compromised nonentities!

Almost six o'clock. Don't be late tonight! Guess what—an evening at the theatre with Lady Wife! Must keep up with the trends in stage production; to say nothing of visiting newly completed masterpiece of British theatre building. Thence to bed. Thank heavens for the weekend . . . a chance to finish TABS article?

The weekend! the glorious British weekend! 48 hours of freedom and relaxation in the bosom of most cherished of possessions—the family! Perhaps!

Early breakfast; then how about a day's fishing? Only 45 minutes to the river. A quick call to Water Bailiff confirms conditions good! Just call into the office en route, to take in mail. Fatal mistake! The phone rings! Answer it? Yes! No! Yes! No! Yes!

"Hello, T.C. here" . . .
"So glad I got you, T.C. Desperate for ten more copies of the Brief for Council Meeting on Monday."

One and a half hours running off Brief; punching, binding and parcelling. Bang goes morning's fishing, but make it to the river in time for brief lunchtime "rise".

Nine feet of split cane; 30 yards of brown plastic; nine feet of 3x nylon; hackled Wickham on No. 14 hook and . . . peace!

Perhaps TABS article should attempt to explain why fishing and theatre consultancy are complementary. How that problems of sightlines can suddenly be solved after two or three quiet hours gazing into crystal waters of Hampshire chalk stream; how that—woosh! Missed him! Concentrate, T.C.!

Forty-five mile drive home; bath; change of clothing; change of scene. In company with Lady Wife, a concert at the Roxy Cinema. Beethoven, Brahms and Tchaikovsky—all very traditional—sponsored by local enthusiasts to raise funds for long overdue theatre and concert hall for district. Acoustics of the Roxy go a long way to proving the need! Noise Criteria levels must be in excess of 35 when ventilation plant is in full operation.

Sunday is private—or should be! A day "en famille"; but . . . guess what? . . . a telephone call (cheap period, of course) just as the roast beef arrives on table! Chairman of the Inverlocherty Theatre Board to discuss agenda for meeting . . . the following day! Perhaps they don't eat luncheon in that part of the world!
5.0 p.m. pack for night sleeper to Inverlocherty. Berth number C11! Damn! Must tell Efficient Secretary about railway carriages with square wheels.

Theatre in Inverlocherty half built; site meeting lasts three hours; Fred and George up from home office; detail; detail; detail.

"Steel shortage! Can we change dimension of grid slats to size which is readily available?"

Change in design of stage lighting control room to suit design of console, now modified by manufacturer.

"Couldn't this item have been specified in detail in the Bill of Quantities?"

"That was three years ago! We don't like fitting obsolescent stage lighting controls into newly built theatres!"

Electrical Contractor subsides in a welter of innuendo about delays, variations and claims. It is rumoured, though probably untrue, that Electrical Contractor makes no profit on his contracts—only on claims!

Afternoon meetings with Town Chamberlain, Burgh Architect and Town Clerk. Quick "high tea" before evening attendance at monthly meeting of Theatre Board. Full Agenda. Appointment of Director uppermost in all minds; only a year to go before opening. Board anxious to draw up detailed estimates and programme for first year of operation.

The meeting drags on for nearly three hours leaving T.C. barely 10 minutes to join his square-wheeled bed to the South. Can't sleep—perhaps no bad thing—TABS article starts to emerge—at last. A panoramic amalgam of theatrical vicissitudes seen through the eyes of a polytechnical consultant. That should slay 'em in the aisles!

A day in the office—pleasant prospect—tempered by sudden realisation that only three working days away is the start of fourteen-day tour of European theatres, including two East European cultural exchange lectures on behalf of British Council! Impressive itinerary lies topmost on an equally massive backlog of mail for attention. Twelve cities in fourteen days!

At last—half the TABS article dictated onto cassette from almost indecipherable scrawl and ready for typing.

Model maker arrives with advent of the day's first cup of coffee. Good timing. Detailed discussion ensues.

There is little doubt that scale models often sell schemes, especially to "lay committees." They are also of inestimable value in working out problems of ambience and artistic profundity in theatrical presentations. A 1:50, or better still 1:25 scale model of every proposed new theatre stage and auditorium is vital for appreciation of the technical problems—particularly related to actor/audience relationship—and often serves to give the Design Team Members, themselves, a fuller understanding of what is proposed. In proscenium theatres the first three or four rows of seats and the first eight to ten feet of stage depth are areas critical to the success of most designs. A large scale model of this particular section is extremely helpful. Larger, complete auditoria models, often at 1:10 or even 1:8 scale are now becoming popular where acoustic calculations are of paramount importance. There is some scepticism about the real value of acoustic model tests, but this is gradually receding as the practice becomes commonplace and more accurate.

Model Maker leaves as Office Staff and Associates gather for full day of meetings to review current workload. Such meetings intended to take place weekly but, according to commitments of those involved, are something of a movable feast. T.C. relieved at opportunity to spend a day in the office and to get some "real" work done. Long agenda!

Item—consideration of latest scheme for stage lighting installation at Castlebridge. To patch or not to patch? Lengthy discussion—as usual—about F.O.H. lighting positions. Whether or not to spend a great deal of money trying to conceal hardware or, expose and be damned!

Item—check over manufacturers' production drawings for orchestra pit lift at Inverlocherty. Lugs for securing floor joists somewhat inadequate. Discussion about manufacturers' ability to meet Main Contractor's programme. The whole nutty problem of Nominated Sub-Contractors comes under review again.

Whilst nominations for specialist manufacturers or suppliers is inevitable in most theatre building it lays the client open to increased risk of claims from the Main Contractor and can also put the Consultant in an invidious position.

Item—consideration of Services Consultant's report on Gas versus Oil as

main fuel for the new theatre in Townley. Discussion as to whether both should be considered.

Item—discussion on draft Schedule of Accommodation for proposed repertory theatre at Alderworth. Total recommended area appears to be in region of 4,200 sq. metres. Current average building cost for theatres, compounded from the Cost of New Construction Index and Tender Price Index, puts likely final cost in excess of £1m. Economies obviously necessary to bring scheme back nearer to budgeted £½m.

Item—lunch! cold collation, designed to enable the meeting to continue more or less uninterrupted.

Item—reports from two site meetings considered. Interesting comparisons. Both theatres similar in Brief, size and degree of completion, but—Main Contractor "A" more or less on programme, bending over backwards to complete on time, co-operative over Nominated Sub-Contractors and artists, tradesmen and others engaged by the Employer. Main Contractor "B" well behind schedule—claims, claims, claims (his legal department obviously working overtime)—citing everything possible, except himself, for causing the delays—the weather, strikes, material shortages, the Government, the architects, the consultants; even the Employer (with his permission) showing visitors over the site. "Well, you see, such visits cause delays! The men stop work to look at the visitors!"

Item—consider technical reports from two shabby Victorian theatres applying for improvement grants. Discuss priorities! Is new orchestra pit more important than dressing-room improvements? Would stage lighting installation survive another year?

Late afternoon the meeting ends with report from Company Accountant. How to get clients to pay up? Civic authority "X" pays on the nail but, alas, that job now virtually finished. Authority "Y" takes up to four months.

"How about charging Interest?"

A thought; discuss with Legal Adviser. The worst client is he who engages one on a very small job—offering as a "carrot" a bigger one—then won't pay up on the former. He usually gambles on the cost of suing him exceeding the value of the disputed account.

Office closes. Heavens—barely time to draft the second half of that now infamous article and dash home to host a dinner party.

Two days left before leaving for Europe; the first of these away from office. Sixty-mile drive; lengthy meeting with Notable Architect, briefed to design adaptable theatre for professional repertoire company. Such theatres always tricky—hitherto considered only partially successful—usually expensive. Competent and adventurous client insists that past prejudices be overcome and that Theatre Consultant convinces Notable Architect that it can be done. Can he succeed where others have failed? It may take several meetings.

Hasty lunch; onward by road a further twenty miles to deliver lecture at School of Stage Design. Study students' models. Mistakes of twenty years ago still being repeated!!

Six-thirty—short drive to nearby railway station; meet London train. Five feet six of shapely, dark-eyed glamour sails through ticket barrier in evening attire! T.C. and Lady Wife retire to nearby hostelry for former to change into D.J. and both to enjoy Campari Sodas before four acts of Puccini. Two reasons for being present—new production of favourite opera—first production using new orchestra pit.

Twenty-four hours to the "off". Check first draft of the TABS article—correct and amend, cut and return for re-typing. Morning mail brings news of two major jobs postponed—probably cancelled. Bang goes any profit for this year!

General depression overcome by first Design Team meeting for new 500-seat theatre in Bellhampton. Ideal set-up. Client has money; site; general Arts Council approval. The brief—a good one; architects and other consultants have all worked with T.C. before. Situation promising; long may it last!

Six p.m. Ideal Secretary stays late—sign mail—check itinerary, hotels, tickets, list of contacts, passport, visas, traveller's cheques and cash. Lecture notes and box of 35 mm transparencies materialise from nowhere and—a miracle of high-speed retype—second draft of that article. Check it; further cuts and remarkably few corrections! "Can you get it in tonight's post—with a note?"

"Dear Ed,
Proof of pudding always in eating! Indigestion tablets enclosed with compliments."

Friday—noon—40,000 feet—Richard was right, this steak is Polystyrene! . . . Fifteen minutes to touch down—check itinerary—what's this? Another of Ideal Secretary's little notes!
"FPB phoned to say your article for SIGHTLINE must be in his hands two days after you return—and he doesn't move deadlines! Have a good trip!"

The author is principal of John Wyckham Associates and chairman of the Society of Theatre Consultants

Commission Internationale d'Éclairage

The quadriennial conference of the Commission Internationale d'Éclairage will be held in London from 10th–17th September 1975. The summer number of *TABS* will include an article by the Chairman of the C.I.E. Studio and Stage Lighting Experts Committee and multi-lingual definitions of the CIE Luminaire Symbols.

Plotting LP in the new Her Majesty's, Sydney

by MELVIN CONDER

The author is Lighting Designer for J. C. Williamson Theatres Ltd., Australia.

The overall design of the system, and choice of the type of control, was governed by mainly economic factors—having just lost a major theatre through fire, at a time when business was not exactly at its peak, we had to find a way to rebuild and re-equip at minimum cost. A DDM was out of the question, as the cost was out of proportion to the overall budget for the building, and so, as a second choice, our thoughts wavered between an LP and a Lightset.

There seemed to be no one who could give any substantial advice as to which was preferable, and so, after some discussions with Strand, we settled for the Australian version of the LP, which has an additional control, in the form of an All Red Off. This means one can raise some circuits on White, raise further circuits on Red, go All White and then cancel Red, giving the effect of transferring from Red to White—an ersatz form of Lightset.

We did not fully equip the board, for two reasons. The first was the old bit about economics, the other was that since this theatre is part of a circuit, there was little point in straining the resources to achieve an installation that was far and above anything else that any other of our theatres could offer. At the same time, we allowed for ample future expansion, so as to be able to cope with any improvements that any other theatre may come up with.

An auxiliary board was included, solely because it happened to be there already. It

was an old SR board which had been in use in the old theatre. It is certainly to Strand's credit that this unit sat in ten feet of water for thirty-six hours, and came out none the worse for wear. Anyway, somewhat against the will of Strand, the control panel was rebuilt to match the new board, the variac controls were replaced with Miniset dimmers, and the master controls, then being all low voltage, were able to be situated on the main desk. This arrangement has proved to be a constant boon as, apart from the additional circuits available, odd items such as curtain lighting can be carried on the auxiliary which saves occupying one of the presets for this purpose. Incidentally, in replacing the variacs, we included a third one in the mid-position. This gives us, in effect, three additional presets.

There seemed no question that plotting was a most important factor, and we put in a great deal of time and effort to designing a workable system. Whilst it is similar to most in having a preset and an action sheet, there the similarity ends. There are three of these sheets on each page, and each can be turned separately. This means that the first page consists initially of sheets 1, 2, and 3. Once having finished with 1, it is turned over, and we then have sheets 2, 3, and 4. When 2 is finished and turned we have 3, 4, and 5, and so on. The secret is, of course, to know which is the next sheet, and the answer we came up with was to colour them differently. Papers

with different coloured sides are somewhat scarce, but we found, and settled for, blue and white. The first page is all white—turn the first sheet and it becomes blue—the START is from the change of colour. Turn the second sheet and the same thing happens—the top two sheets are now blue, the bottom one white. If you start from the change of colour the white sheet is 3, the first blue sheet 4, and the second blue sheet 5. After 3 is finished the whole page is blue, and the process repeats itself.

The other innovation (we think) is that the tens are written in permanently, so that only the digits have to enter when plotting, this not only saves time, but also space, since dimmers 110, 112 and 116 take up no more space than dimmers 1, 2, and 6.

There is no point in denying that we have had our problems since taking over this installation, but they have been almost entirely due to our lack of experience with it. We are learning as we go along, but so far it would seem that the main problem is a rapid succession of cues, and the only answer appears to be more rehearsal time.



The Foyer of Her Majesty's, Sydney—opened 30th November, 1973. The history of Sydney's Her Majesty's Theatre dates from 1887 and this is the fourth building, all of which have been under the management of J. C. Williamson Theatres. Following the disastrous fire which destroyed the previous Her Majesty's in 1970, Williamson's Directors took the financially courageous step of launching the new theatre building as a commercial enterprise which did not attract any support from Government subsidies.

We are overcoming this by recording the cues on tape, so that we can rehearse them at leisure—one point in favour of audio cueing, as opposed to light cueing.

Suffice it to say that the board has coped with every production we have been faced with since its inception, and they have been many and various. During this time we have used every facility on the board, not because we wanted to, but because we needed to. Even the Copy facility, which was recently claimed in TABS to be useless, has been used to good effect, in this way:

- (1) Raise some circuits on (say) Preset II. Have further circuits set at their level, but not selected.
- (2) Raise further circuits (those referred to on II) on (say) Preset I.
- (3) Copy I to II. Preset I can then be cancelled and used again.

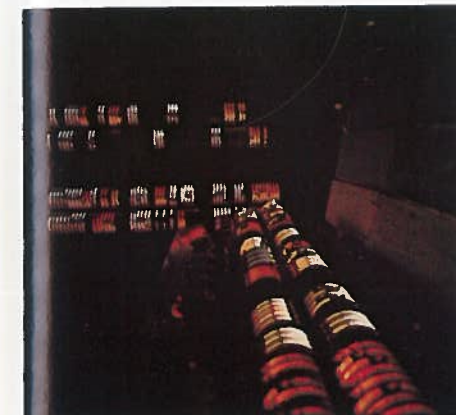
I will not pretend that this is done all the time, but on the occasions when it is used

it is a valuable asset. I am still not sure of the relative values of LP and Lightset, the ideal would be one that combined the facilities of both, an improbable possibility, but I have been wondering about a board of this type, with Copy facilities on some presets, and Transfer facilities on the others.

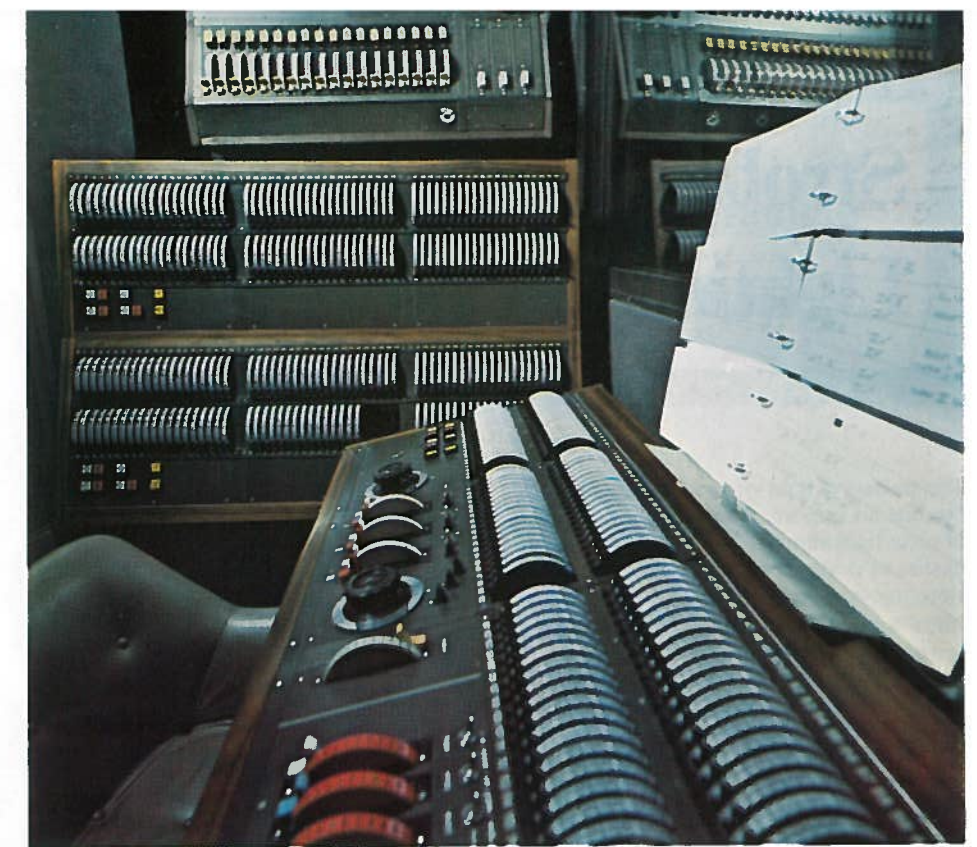
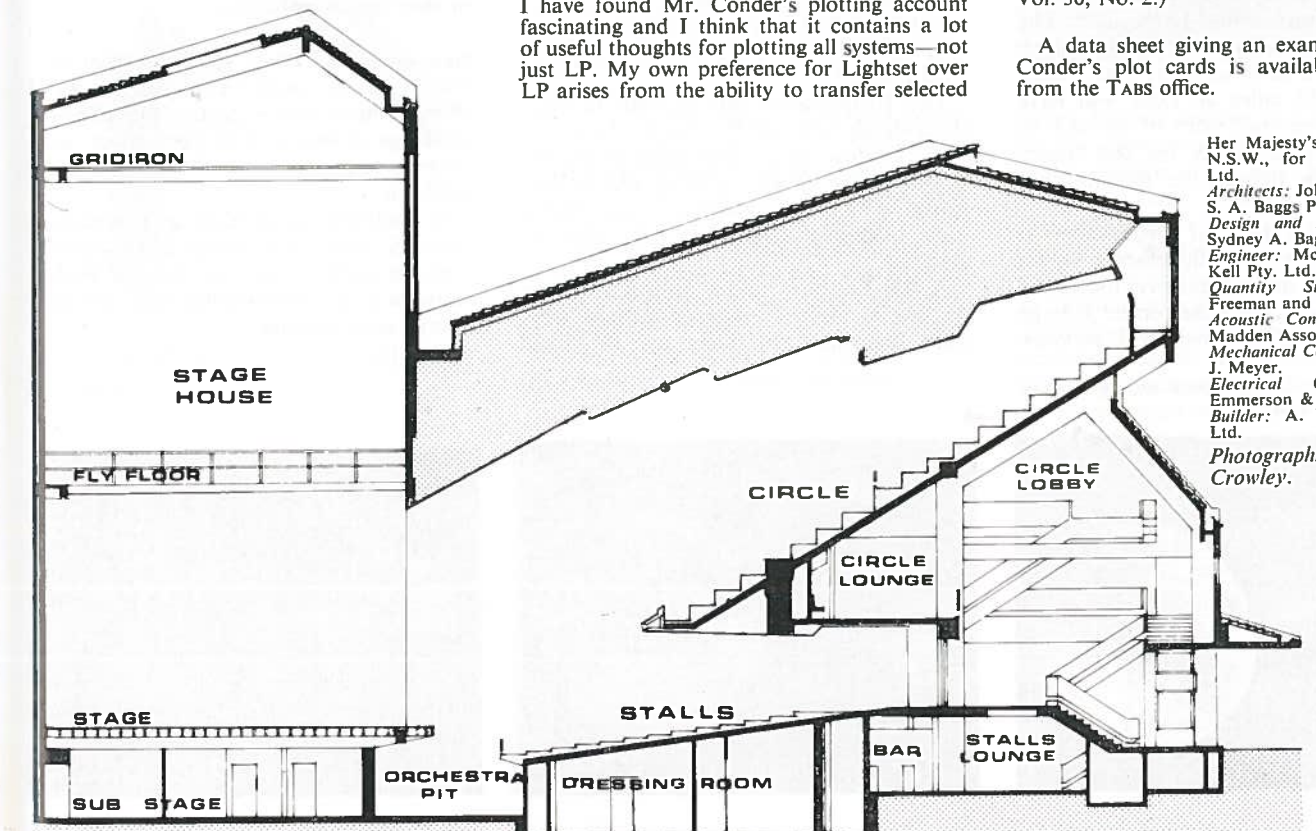
To summarise, the board can handle anything that one can throw at it, provided the operator is competent, and—and this is important—that there is sufficient rehearsal time available. This board was commissioned in company with the opening of a new theatre, and a new show, and frankly it all proved too much to contend with at the one time.

Even so, some measure of its success may be adjudged from the fact that we are in the process of installing another of these boards in our other major theatre, in Melbourne.

One last note, if the photographs look a little strange, please don't blame the photographer. As usual we had to fit into the building after everyone else—we finished



The individual channel control lever scales light up white and/or red to indicate their master selection.



120-channel Luminous Preset control desk in Her Majesty's, Sydney. The 18-channel Saturable Reactor auxiliary control can be seen on top of the preset wing and the plot sheets are the special type devised by Melvin Conder.

up in the right place, but space is a little limited. Only by tailoring the dimensions of the desk and wing was it possible to fit the board into the booth at all. Strand claim it is the smallest version they have ever built—I have seen inside it, and I am convinced it is the smallest version that ever could be built!

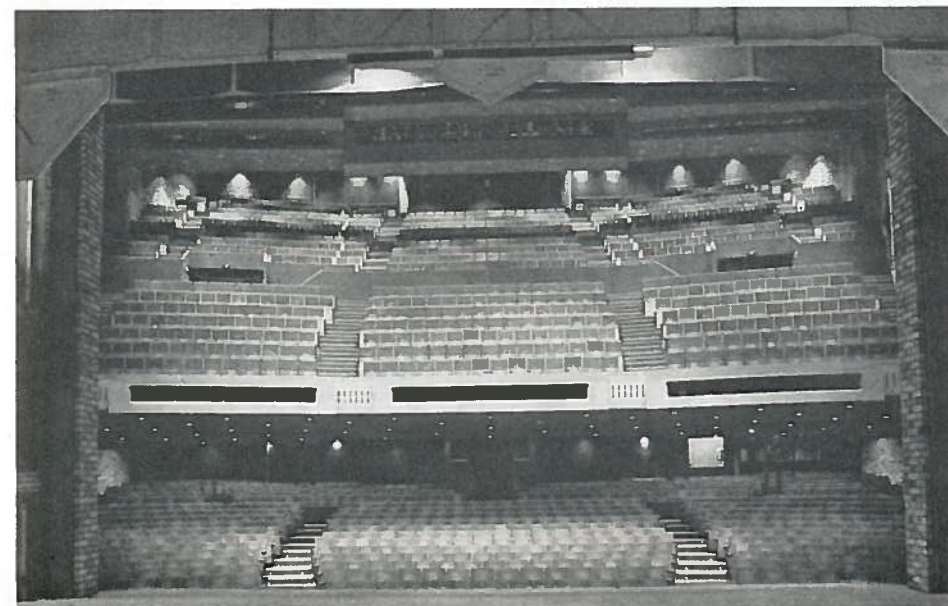
It is not a DDM, but at the price, how could it be? It is not the ultimate, but it is ours, and we like it.

Editor's Note: As a sometime Lightset operator I have found Mr. Conder's plotting account fascinating and I think that it contains a lot of useful thoughts for plotting all systems—not just LP. My own preference for Lightset over LP arises from the ability to transfer selected

circuits from white to red. The Australian method of going All White followed by Red Cancel means that black levels cannot be set for later tight moments in the show: in fact in operating Lightset I very rarely use either All Red or All White and consequently I hardly ever clear down the levels on any preset. In a memory world these details may seem of minority interest, but to us happy band of manual switchboard operators they are fascinating itself. If I ever get to Sydney, my first call will certainly be to the control room at Her Majesty's: I know that I will find real theatre people inside. (For a description of the Editor's personal method of plotting Lightset, see TABS, Vol. 30, No. 2.)

A data sheet giving an example of Melvin Conder's plot cards is available on request from the TABS office.

Her Majesty's Sydney—An actor's view. The auditorium 90 ft. (max. depth) by 103 ft. (max. width) has a seating capacity of 1,492 (stalls 660, circle 832). The orchestra pit (capacity 65 musicians) has mechanically adjustable height platforms for use as auditorium or stage extension. Proscenium opening is 40 ft. and the stage width wall to wall is 93 ft. with 54 ft. between fly galleries. The proscenium is 27 ft. high with the grid at 70 ft. above stage. Depth from apron to back wall is 48 ft. 6 in. with 40 ft. between the setting line and last counterweighted hanging set.



Her Majesty's Theatre, Sydney, N.S.W., for J. C. Williamson Ltd.
Architects: John W. Roberts and S. A. Baggs Pty. Ltd.
Design and Project Architect: Sydney A. Baggs.
Engineer: McMillan Britton & Kell Pty. Ltd.
Quantity Surveyor: George Freeman and Associates.
Acoustic Consultant: James A. Madden Associates.
Mechanical Consultant: Herman J. Meyer.
Electrical Consultant: Ray Emmerson & Associate.
Builder: A. W. Edwards Pty. Ltd.

Photographs by Paul Crowley.

Stroboscopes for Illusion Lighting

FRANK DAWE

The pulsating light of the stroboscope has become an important and exciting element of most light shows. This is because regular flashes of intense light create the illusion of slow motion when directed towards a moving person, such as a dancer.

The name STROBOSCOPE is derived from two Greek words meaning "whirling watcher". This description suited the first stroboscope using slots in a rotating disc or drum which was held between the eye and the moving subject, thus producing a sequence of brief views.

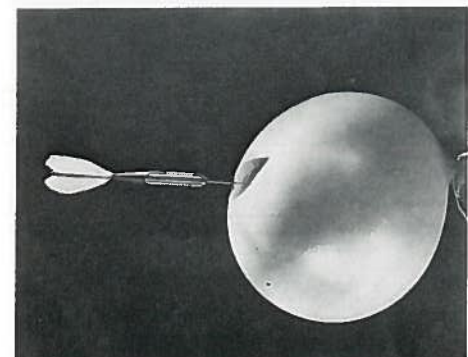
Stroboscopes are widely used in industry for measuring speed and analysing motion of rotating machinery. These operate at flash rates of several hundred a second. For the relatively slow speeds in dancing and human movement much slower flash rates are necessary. Stroboscopes for the entertainment field have a flash rate variable from about 1 to 15 flashes per second.

TYPES OF STROBOSCOPE

Most of the stroboscopes used for entertainment are based on the designs developed by industry. They require a special lamp filled with gas which glows brilliantly when subjected to an electric discharge. Xenon gas is employed as it glows with a blue/white colour similar to daylight. The important characteristic is the very short duration of the flash, so short that a train travelling at 50 miles an hour will have moved only one-hundredth of an inch in this time. This accounts for the frozen effect of strobe lighting on moving subjects.

An alternative type of stroboscope is available that employs fluorescent tubes. This has several advantages over the xenon type. The fluorescent tubes cover a large area of illumination—they will produce

Bursting balloon—5 single flash photographs at slightly different times.



ultraviolet light—the tubes have a long life and the replacements costs are low. The disadvantage is that the fluorescent tube has a relatively long flash duration and does not therefore produce the sharp frozen movement effect.

APPLICATIONS

Strobe dancing has become very popular due to the unnatural frozen positions in which a dancer appears when illuminated by the flashing light of a stroboscope. The movements have a jerky appearance similar to the early silent movies.

For this application it is only necessary to operate a stroboscope at about 5 flashes a second and direct it towards the dance floor. For the best effect the general lighting should be dimmed whilst the strobes are in action.

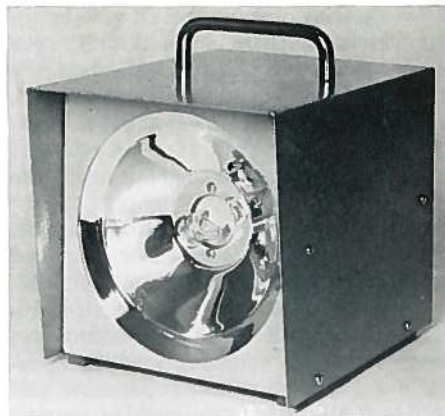
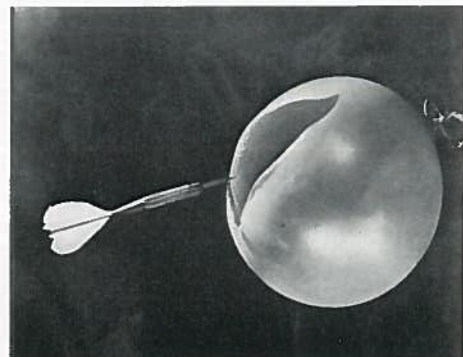
A stroboscope may also be used at a fast rate to give a dramatic flicker effect when projected on to a band, on to a stage dance act or to show the fast hand movements of a drum player. The strobe light can be made to flash in time with the beat of the music or at a slightly different rate for a pulsing rhythm effect.

Stroboscopes should be installed widely spaced at ceiling level so that they do not shine directly into the eyes.

For large halls several stroboscopes can be inter-connected so that they operate synchronously.

Two stroboscopes can be made to flash alternatively in a flip-flop mode. This produces shadow effects that jump from side to side of the dancers. Fitting the stroboscopes with two different colour filters adds changing colour to the moving shadows.

A full rainbow colour system involves the use of three stroboscopes fitted with green, blue and red filters and switching



Low power stroboscope (Lightomation Freeze-flash).

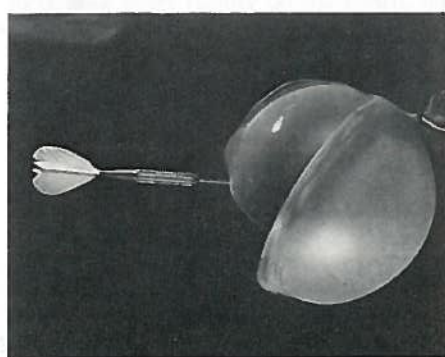


Rainbow strobe effect showing a different colour for three movement positions.

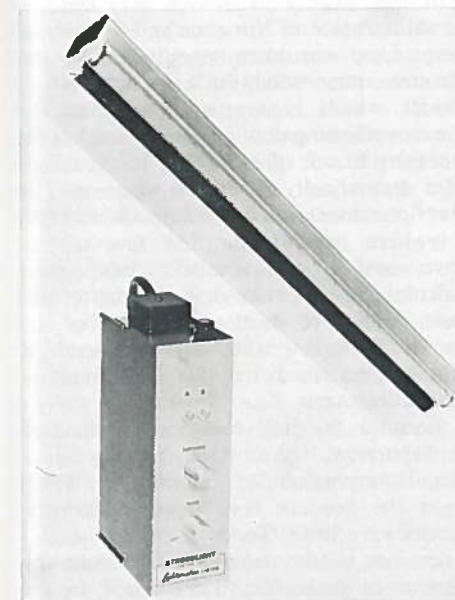
these sequentially by a special control unit. This produces rainbow coloured images of all movements and is particularly effective for stage displays. For best effect with strobe colours the general lighting must be very dim.

In addition to producing a repeating rhythmic flash it is possible to operate from an audio system so that the flashes occur in exact synchronism with the beat or crescendo passages.

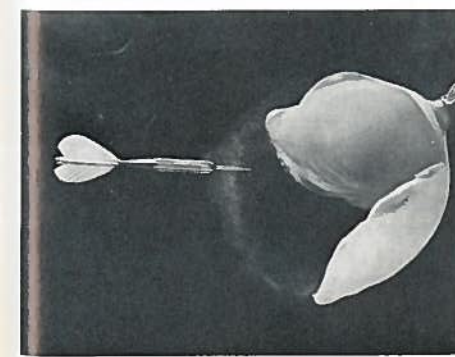
The instantaneous combination of an



Girl dancing—5 flashes.



Fluorescent tube stroboscope (Lightomation Strobolight).

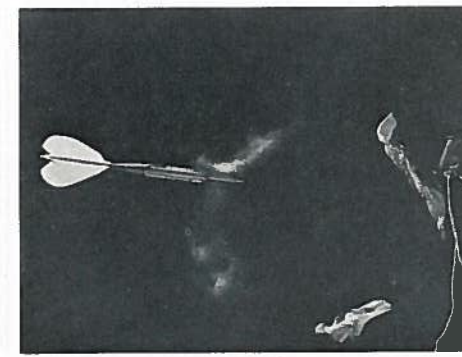


impulsive sound and an intense flash of light provides one of the most dramatic effects in strobe lighting.

MEDICAL ASPECT

The human body has many periodic or rhythmic relationships. One of these occurs in the brain at a rate of about 10 or 12 a second. The eye, seeing a brilliant light flashing at this rate, can sometimes produce a sense of sickness. A person who is subject to fits can have these brought on by prolonged subjection to a light flashing at this rate. It is for this reason that the Greater London Council insists that flash rates below 8 per second must be employed.

In his many years of experience with stroboscopes the author is not aware of any personal injury resulting from the use of flashing lights. However, the flashing light is a strain on the eyes, so its use should be restricted to short periods at a time. This restriction is not so important for stroboscopes using fluorescent tubes.



Programme Lights

If the curtain falls for a scene change of longer than about 30 seconds, most audiences like to consult their programmes: especially in the opera house where the performance may be in an unfamiliar language. It is customary to provide reading light by bringing the houselights to somewhere around half their normal intensity, but it is very difficult to find a level which is bright enough for reading, yet significantly dark enough to prevent the



thirsty brigade leading a stampede to the bar for a premature interval. The solution to this problem at the Nico Malan Theatre Centre in Cape Town is to provide a completely separate lighting installation for programme reading purposes. These lights are built-in to the seating and consist of an aluminium cylinder with sliding cap containing a dome-shaped lens of press moulded perspex. The cylinders are fixed with wood screws into the arm rests of chairs pre-wired in the factory. For public safety the system uses dimmer-controlled low voltage (24 volt AC), and this is also convenient for meeting the requirements of a miniature lamp with long life (5 watts). The aisle chairs also have downlighters which light the row letters and steps: on power failure these automatically change-over to 24 volt DC battery.

Architects: Kent Miszewski Hockly & Partners. Partnership Hannes van der Merwe. Consulting Electrical Engineers: C A du Toit & Partners.

Dear Octopus

CLIFF DIX

A REQUIEM FOR THE RESISTANCE DIMMER

At a time when the resistance dimmer is on a fast fade to black-out, it is perhaps interesting and fitting to take a look at the ubiquitous Junior 8. The Junior 8, a name which conjures up in the mind of many a theatre electrician memories of times when their fourth left arm slipped during a cross-fade and caused a curious red splodge to appear in the centre of an otherwise blue cyc.; memories of vainly attempting to switch from the "dim" mode to "full-on" without the audience noticing that irritating flicker as the contacts passed through the "off" position; memories of how well the coffee kept hot when balanced on top of the faders; memories of the ear-shattering rattle and squeak as a team of operators faded to full-up using every available hand, foot, and suitable length of wooden batten.

Ah! If it were but a memory, for absence makes the heart grow fonder! But no. Spare a thought if you will, as you read this ensconced behind the gleaming miniaturised computer-memored wonder of modern science that is your board, for the countless amateur groups in the world whose hard pressed electricians are regularly confronted with a mess of black spaghetti leading to a row of solid steel and bakelite, overloaded overheated and squeaking Junior 8s.



What, in retrospect, if anything, could have been done to improve the Junior 8? Certainly for many years it performed an essential role in the amateur theatre. Well, in the first place the switching arrangement seems to have been ill-advised: an OFF/DIM/ON arrangement would make more logical sense. It was foolish, moreover, in view of the almost universal acceptance of 15 amp plugs and sockets in theatres, to issue the Junior 8 with 5 amp sockets—inconveniently placed at that, on a panel which slopes in such a way that an ill-fitting plug is encouraged to fall out during the most delicately subtle sunset effect.

The effect of age on these boards has

been to invalidate any statement that lighting should be seen and not heard: after all in most amateur theatres the soundproofed lighting box at the back of the auditorium is conspicuous by its absence. With the best will and the most loving maintenance in the world sheet steel is not a quiet substance to do snappy changes on. (Lubrication of the slider contacts with graphite dust helps considerably, but grease and oil should be avoided unless the theatre smoke machine has broken down.) Those who have peered at the stage over the top of a Junior 8 through a shimmering heat haze or have carried the units over long distances (and who hasn't) may doubt the



advisability of the suggestion that the standard dimmer could have been 2K instead of 1K—but think how many extra arms we *wouldn't* have needed to grow.

But for all these drawbacks who can be sure that the comparable modern devices will last as long? With progress as it is, my betting is that a selection of tired old Junior 8s will gaze from the wings of some small amateur stage and grin broadly right across their patch boards to see on these pages a requiem for the Mini 2. I foresee some bored board operator of the future stuffing his subminiature dimmers into his pocket and recounting to his young friends how in the good old days three-quarters of the entertainment in the theatre was in the lighting box, and how the electrician used to go home covered in good honest sweat. How the incredibly short-haired schoolboys gazing intently with posed concentration over their shoulders at an invisible stage in the publicity photos manage to stay so clean is a mystery to me.

Exit the Junior 8, we therefore commend thy windings to the heap.

Epitaph:

If God had intended man to work a Junior 8, he would have been born an Octopus.

SHALL WE THRUST

FRANCIS
REID

The average school hall is often a pretty depressing sort of place in which to contemplate the production of drama. A letterbox stage with enough grey borders to fill a Palace of Varieties and a series of grey legs, shrunken unequally at the cleaners, suspended on a strange swivel device which is supposed to adapt to various masking configurations but has an uncanny knack of swivelling to reveal all at a dramatically unsuitable moment. The flat floor does nothing to help vision from anywhere beyond the first few seating rows and if the acoustics have been calculated at all, then that calculation has been briefed to deaden the noise of the multitude during the sundry assembled rituals prescribed by the Parliamentary Education Acts.

Because the hall has been designated multipurpose, the onstage lighting has a large proportion of minifloods which light the borders very brightly and the actors very little. To draw the audience's attention to the frame rather than the picture is perhaps anti-dramatic? In the better halls, there is no chandelier between the FOH spots and the stage: even so, the proscenium opening is often wider than Drury Lane and the few spots on the side walls have some trouble in covering the stage. Where they do, the shadows produced are life size and fascinating—but hardly helpful in focusing on the dramatic action.

What can we do with such a stage? One temptation must be to say "Forget it!" And why not? Why not move the action out into the body of the hall? Put the audience on two sides, three sides or four sides; perhaps put some audience on the stage. The more a stage thrusts into the audience, the fewer are the rows of seats

required. Up to three rows, it is possible to have both actors and audience on a flat floor. More than three rows and it becomes necessary to raise either the actors or the audience. Intimacy is usually helped by raising the audience rather than the actors and certainly raising the audience helps to keep light out of the spectator's eyes. What are the lighting problems? What are the basic differences in lighting thrust as an alternative to lighting proscenium? Firstly some things are easier. Because the actor is closer to the audience, we need less light. Then because the audience are no longer looking at a framed picture, there is less problem with the possible flattening effect of front light: thrust acting is very dimensional. Also, it is very difficult to act in a small corner of the playing area of theatre-in-the-round, so we are less likely to use light to select stage areas.

Therefore, the primary requirements of thrust or arena lighting are *illumination* and *atmosphere*. Atmosphere is normally obtained in any theatrical situation by balancing (a) light and shade and/or (b) colour. Atmosphere is often conjured up by the contrast between the extremes of light and no light or more likely the balance between light and not-so-much light. In thrust staging, atmosphere by light and shade is difficult to achieve because of the differently balanced pictures that would be offered to different segments of the audience. Because the front light for one section of the audience will be the backlight for a second section and the side light for a third, it is usually necessary to keep a fairly uniform intensity balance from all parts of the lighting compass: and that compass requires light from at least as many sides of the acting area as there are blocks of audience, up to a maximum of four sides when we reach the full audience encirclement of theatre-in-the-round.

Thus atmosphere becomes a matter of colour balance between cool and warm: and indeed with a Mini 2 control, one may use the two presets to make permanent balances in cool and warm colours respectively and run the entire performance by changing the proportional mix of cool and warm masters according to the changing emotional needs of the play.

And so the main problem becomes illumination. In a school hall, the convenient position for spots is normally on the walls and the problem is often to obtain sufficient height to stop the beam shining in the audience's eyes. Where are the ideal positions? What are the ideal angles? These must be the subjects for a future, longer, illustrated TABS discussion. Meanwhile two practical suggestions: the best type of lantern for school hall arena staging is the Fresnel with barndoors, and the best mounting is high horizontal scaffoldbars rather than inflexible and expensive individual brackets. Good Thrusting!

TABS WOULD LIKE TO HAVE PHOTOGRAPHS OF NON-PROSCENIUM SCHOOL HALL PRODUCTIONS.

Tabman's Diary

a personal
view

Nairobi Stopover

Flattered to find my credit on an old London playbill incorporated into the bar décor at the Intercontinental. A 24-hour visit to Nairobi is ludicrously short but leaves deep impressions. A city of light and space with some stunning modern architecture. The pleasant National Theatre has a preserved vintage Applebee Strand lighting installation but alas no permanent company. Nairobi's drama is supplied by Annabel Maule in the modern *Donovan Maule* theatre built by her parents: a comfortable intimate auditorium linked to a very practical stage. Enjoyable performance of *Roar Like a Dove*. Ken Mason edits a programme which many grander theatres could study with benefit. But the day's lighting experience is the equatorial sunset: the smoothness of the fast fade combined with the lengthening of the shadows. I could not do it on a switchboard. Well, not unless I had a Divine Dimmer Memory.

Jo'burg Jottings

Oh, the rigours of an August winter in Johannesburg! There is ice in a shaded corner of Malcolm Maclean's garden but a parasol is required to protect Tabman from broiling in the noonday sun. Who is Malcolm Maclean? Mr Strand South Africa. And being a good RADA trained technician, he makes barbecuing a steak to perfection seem as easy as getting soft edges from a 764. . . . There is usually no easier way of killing folk art than by putting it on a stage, particularly a proscenium stage with painted scenery and no side lighting booms. But the all-African-cast long-running musical *Ipi Tombi* is a splendid cross-fertilisation between folk art and conventional performing art which should knock 'em for six on Broadway and Shaftesbury Avenue. . . . There were so many blood bags in *The Happiness Cage* at the Alexander Theatre that I had my eyes shut for a large part of the evening; when I was able to look, the lighting seemed very good. . . . Super Mavis Taylor production of *Where Has Tommy Flowers Gone?* at the Arena—an experimental theatrical space with an appropriately irreverent lighting style.

Crucible Memories

I have always felt that one of the basic virtues of memory systems lies in the possible use of "composition memories" as building blocks for the light plot. This is a particular possibility in open staging where many of the acting areas are divorced from the scenic areas. Interesting to find on my first visit to Sheffield Crucible that Richard Pilbrow's original concept of a 3-lamps (120 degree separation) per area system is working well and that stock composing memories are filed prior to

lighting rehearsals. *Calamity Jane* went like a bomb (in the UK rather than US sense) and so I forgive the crippling seating arrangements.

Unilanter Simplicity

Wandering into a lunch-time *Miss Julie*, I claim to have stumbled upon the smallest lighting rig of the Edinburgh Festival, perhaps even in the history of stage lighting: a solitary 60-watt bulb on a flex suspension. This lighting was very effective, encompassing the hyper-erotic pair with their two semicircular audience rows: proof that the only criteria for good lighting is success in finding the appropriate style.

Opera Buffet

Handel's bassoonist John Frederick Lampe lies buried within earshot of the stage of Edinburgh's Moray House College of Education. What better reason for reviving Lampe's burlesque opera *The Dragon of Wantley* with its poignant aria "Soon my stays will burst with sobbing"? The opera-buffe was preceded by an opera-buffet of period dishes washed down by liberal flagons of claret cup. Perhaps this is why I cannot recall the lighting: certainly the ambience of the evening was complete.

Toasted Thyristors

Drinking the health of Strand at a 60th birthday gathering in Drury Lane was an occasion for musing over the ten years since the Golden Jubilee (then marked by a special TABS edition which we plan to repeat for the Centenary in 2014). What was the most fundamental development in stage lighting during the past ten years? Memory? Tungsten-Halogen? Compact-Source-Iodine? Rank? As I sipped that 1964 Strand Champagne in the Dorchester, my mind had strayed once or twice to whether the new fangled thyristor dimmers which I had on order (a theatrical first for both Strand and Europe) would actually work. In 1974, who would install anything else! Thyristors have been the key to considerable lighting liberation and must be the toast of this latest Strand decade.

Theater de Brakke Grond

The experimental theatres that work seem to be building conversions: there is but a slim chance of sitting down at an architectural drawing board and producing a successful theatre studio on a cleared site. Amsterdam's *Theater de Brakke Grond* is a good conversion example: no one would have thought to design this as a rectangle with wrap-around single-row balconies with gold balustrades and red walls. But it is everything that I would want to experiment in staging. *Jungle Opera* made so much contact with my balcony seat

that I barely noticed that I do not understand one word of the Dutch language.

Audio-visual Wax

Waxworks frighten me (I think it is the glazed look in the eyes—like an actor who is insensitive to his light and his audience), but I had read about Madame Amsterdam Tussaud in 1971 TABS. So I took a glass of Dutch courage and, after some confusion with a wax commissioner, hurried through the "Gallery of the Famous" with but a passing nod to Fidel Castro and Mata Hari. The rest of the Tussaud exhibition is not so much a waxworks, more an audio-visual triumph designed by Timothy O'Brien with dramatic lighting by Charlie Bristow and his wagonload of minispots. The star of Tussauds is the *Garden of Delights* with practically no wax, just an evocation of Hieronymus Bosch with a super Guy Wolfenden tape.



Down with the Proscenium

This paragraph should have been an account of the lighting of *West Side Story* on an installation of two bracket handles, 4-tracker portables, two minis and with a handful of slider dimmers in place of the customary partridge in its pear tree. That story is, however, upstaged by the proscenium arch of Dublin Olympia which chose to crash down into the stalls within half-an-hour of Tabman finishing the lighting and proceeding to his bottled stout lunch. If a performance or indeed a rehearsal had been in progress, the result would have been a major disaster in terms of human life on a scale that does not bear thinking about. The theatre was empty, so the event is merely a tragedy of theatre architecture: the Olympia was old and inconvenient but I will cope with age and inconvenience in return for atmosphere. The show, of course, went on. The opening that very night in a suburban cinema was made possible by the herculean efforts of *Bourke Strand Electric* who contrived to install switchboard, lanterns and follow spots before you could say "Stand by Elex Q.1." A letter from Percy Corry provides a postscript. "Sorry to note that

somebody on Olympus (Shakespeare perhaps) reacted so vigorously against your *West Side Story* in Dublin. I suppose the open-stage fanatics will regard it as a divine omen. Down with the proscenium!"

Effects Move

There are many puritanical chaps (and chappesses) around who only wish us to enter a theatre for the good of our minds or perhaps occasionally for the good of our souls. I theatre-go for magic and so I would gladly have attended the grand opening of TSL's new effects emporium—even without the promise of flowing gin. The cabbages and oranges have moved out of Covent Garden: the long-term result will be a proper stage for the Royal Opera House but an immediate bonus is that Eddie Biddle and Lou Burroughs have a spacious new central London home for their effects goodies including psychedelic balls, projected weather to suit all forecasts, and waltzing carousels with the fabulous wide angle lenses which caused so much interest in TABS Spring 74. If it moves, Eddie Biddle can make it.

Taking the Waters

No point in going to Baden-Baden just to look at the Theatre. Got to take the waters and have to report that there is nothing wrong with them that a drop of gin would not put right. Waking up with a hangover no problem as I can segue into a bath with an extra set of taps for thermal spring water: the bathroom notice advising limited immersion in these radioactive waters is good marketing. I was by far the youngest and most able-bodied person at the afternoon concert by the Kur Orchestra—a fine musical body whose rendition of *Walpurgisnachtmusik* was more distinguished for its meticulous execution than its evocation of the supernatural. Tone of the Casino somewhat lowered by the poster announcing BINGO ABEND.

Projection Power

Stunning demonstration of the power of the Pani BP4 HM1 projector (TABS, April 1974, p. 19). Projection of standard water and cloud effects from back of Köln Opera House to the very dark blue house tabs (distance of 28 metres). Projected image so strong that it was still just possible to see it with 2 kW spot beams superimposed from the FOH ceiling bridge. Wow!

Erarbeiten

My command of the German language is not extensive: much of it consists of phrases culled from opera libretti, and these are of somewhat limited application. However, I have acquired this new word which I would like to offer to the international vocabulary. There is no direct English translation, but *Erarbeiten* des-

cribes a method of theatre working that many of us are familiar with: design and production by trial and error. Build or rehearse something so that it can be fiddled with, added to, subtracted from or otherwise amended—and preferably by a committee.

Modern Theatre Technology— a Trading of Gods

A comment from Mr. D. Schauffer of the Department of Speech and Drama, University of Natal.

Recent developments in theatre technology seem to confirm a notion I have held for some time concerning the state of the theatre in our present society. It appears that the general concept of what a theatre constitutes, as a form in space, rests upon certain pillars of faith. These tenets include the belief that "theatre" is a building with a power supply, and that this building should have a roof. Inside this building an audience will assemble and will be provided with and will be restricted to a seating area which will define a fixed relationship between viewer and performer. When it comes to developing equipment for this building it is entirely understandable that his equipment should be designed to cater primarily for the needs of the most general form of this relationship, which is to say that factors of intensity, beam spreads, rigging systems, control systems, etc., cater more particularly for the needs of the Renaissance Court theatre form known as the Proscenium Arch theatre than for flexible theatre forms, street theatre forms, open-air theatres or for peripatetic theatre forms (which cannot utilise a conventional power supply).

Implicit in all this is the recognition that the technician in the theatre develops, refines, and extends the possibilities of the established order of things. This may lead to some extremely ingenious and ever more sophisticated ways of switching a light on and off for example, but does little to foster enquiry into other forms of light or other forms of power. The comment remains true for the whole field, of course, not only for light.

The oil crisis has sparked off some development of battery-operated cars, but what sort of crisis will spark off innovative movements in theatre technology?

In my view the theatre technician is or should be regarded as being as much an artist as the rest of his Theatrical colleagues. To be an artist he must be allowed to challenge the assumptions of the past and he must be given the freedom to experiment and to lead an appreciation of things beyond the known.

I do not believe that this is possible in our society as theatrical technological development is in the hands of the commercial sector who simply cannot afford to foster to any significant extent unprofitable lines. It is part of the most elementary commercial instinct to cater for the known demand and this serves to entrench the *status quo*. Theatre-in-the-Round is essentially non-commercial from the point of view of the box-office and as for the free, unsubsidised street theatre it is perhaps the last form of the theatre left to us that still pays homage to Dionysus alone rather than a mixed homage both to Dionysus and to Mammon.

In viewing a new memory system for lighting control, the technician in me celebrates a logical and welcome advance of the known, the manager in me covets the new toy, the designer in me welcomes a new range of possibilities, but the essential artist in me cries "Long live Anarchy".