



# TABS

June 1971 Vol. 29 No. 2



# TABS

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Cover picture: "Sarajevo Assassination".  
Production in-the-round at the  
Narodno Pozoriste, Belgrade.  
See page 72.

## Brief Encounter

One of the hazards of lecturing and writing on theatre design are the letters from students. Is this another admission of the generation gap—age eschewing the natural demands of youth. Not so, the students in question are architectural students and if anyone is at fault it is their elders, who should know better. Let us quote directly but reserve to the writer an anonymity as complete as that promised to censored Britons by H.M. Registrar General.

The letter begins; "I am a student at the above College and at present am engaged in my final design project, an Arts Centre. Part of the complex I am designing will be an adaptable auditorium which will serve as a theatre for drama, ballet and opera, also as a minor concert hall and film theatre. I also want it to be capable of adaption to theatre with open stage." Not unnaturally he goes on, "At present I am experiencing some difficulty in achieving the desired degree of flexibility with regard to seating and staging arrangements."

One had hardly begun wondering how many the auditorium is supposed to seat, especially as it has to take opera in its stride, when another letter turned up demanding 400 seats. But alas, this was no help as this latter Arts Centre adaptable auditorium request came from a quite different part of the country. Are we going

too far if we state that the combination of the four words "Arts", "Centre", "Adaptable" and "Auditorium" may constitute as great an architectural peril as those other four "High", "Rise", "Tower" and "Block"? The latter has already hit the headlines as the great unloved but we believe we have a runner-up in our candidate. Let us not pretend that the danger lies only at student level.

Fat books are published, committees sit and conferences do whatever it is conferences are supposed to do but the nature of an Arts Centre remains unclear. It is quite otherwise with the second half of the quartet. There is a host of material to prove that an adaptable auditorium for 400 or more seats is a rotten idea and that a theatre into which opera will fit is not fit for drama. To this add the need sometimes for an open stage, preferably thrust or in-the-round to get a close actor/audience relationship. Then mix-up thoroughly by requiring convertibility to cinema screen which demands a rigid confrontation with no side seats and an audience no nearer than the tenth row. This then is the brief we encounter. Surely it is time that, at least in the places where architects are taught, such projects are exposed as the nightmares they really are.

## Chromatics

Members of the Colour Group meet from time to time in one of the lecture theatres of Imperial College. The proceedings are—not unnaturally for a body with such a name—colourful. The discourse is of orgies of paint and dye matching, where every hue of the rainbow is trapped and detailed for repeated delectation of users far and wide. It is easy to imagine the pride with which the painter discovers that the tin for today's job outside Acacia Mansions contains the exact hue with which he liberally bedecked the pillar box

opposite Shangri-La yesterday. It does not matter whether we live in W1P 6AE or WC2E 8JH or BS12 4HG the Post Office red is identical. In a like manner the variegated chroma for pants hot or cold are readily identified. That an essential feature of these garments can be evoked by a series of curves will cause no surprise. Such things are known as chromaticity curves and members of the Colour Group can be seen licking their lips and living life to the full with nothing more inspiring than a series of CIE co-ordinates before them.



To the rest of us there is nothing more colourless than a CIE colour co-ordinate—unless it be the theatres in which the lectures are held. Whence comes the notion of housing the seats of learning in such clinical surroundings? The walls are plain white, the fluorescent light is of the whiter than white “no” variety. What woodwork there is around is of the sad washed-out kind or else a chilly plastic imitation.

Only the seating represents any improvement. This can be both comfortable and workmanlike (even elegant?) if one obtains it from that firm which is so good at stage lighting! However, whereas the most popular Cinemoid colour filter for stage lighting by far is bright red (No. 6) the most used colour for lecture theatre seating would appear to be “tan” or a “neutral grey”. Why should not the seats be gay and colourful—the walls also? Why do architects insist on providing a strength-through-misery ambience in our universities and colleges? Our school hall had hard

### It Doesn't Work

Of course it works. There is only one possible counter, “What doesn't?” Back comes the retort, “IT doesn't and we have complained many times about IT”. Now this is interesting, even sad, but gets one nowhere at all. To be helpful it is necessary to know what to pull out, push in, amputate or even transplant. It is no good going to the doctor saying “I have got a pain.” One has to go on and locate it as above or below the belt and thereafter become even more specific. The more specific the more probable a remedy.

So too with stage lighting equipment. It is no help to be told that something is unsatisfactory or that “the old equipment we had before” was better. No one can diagnose on such slender evidence. It could be that the plaintiff does not like this new switchboard because it is standing on his toe whereas the old one did not. Far-fetched, you may say, but this editorial is prompted by a complaint about one of our System JP switchboards. This, although it has 3 presets, is sufficiently simple and

seats but there were mosaics on the walls and the organ pipes had those strange stencilled patterns on them with which Victorian organ-builders'-gothic was so liberally bedecked. The eye could take relief, could wander and explore in the dusty gloom, a splendid ray of sunshine could be expected to make an exciting if transitory entry betwixt panes of stained glass. The level of light upped and downed in the most irresponsible manner—no regular fifty cycles of true white here.

Colour and excitement are essential to all of us but especially to the young. Why coop them up in white and under white? On a recent visit to Brunel University we noticed that the students had taken matters into their own hands, the white walls had been defiled overnight with paint squirted from aerosols. “Defiled”? Not really, for although the students were not artists but engineers the hasty patterns were quite pretty—in fact they were chromatic!

modest as to make both technical and operational failure improbable to say the least—certainly a failure as comprehensive as “IT (i.e. all forty dimmers) doesn't work”. Indeed when the sophisticated System IDM memory system at the London Coliseum had to be withdrawn for some months because some of IT “didn't”, System JP carried manfully the burden of looking after 200 dimmers—five times the number the system was intended for!

Probing further, this particular JP switchboard “Only has forty dimmers, and we need sixty”. The other vexation arose from the difficulty of lighting part of the acting area without spilling all over the stage and the white cyclorama—always a problem on a shallow stage and one not helped when as in this case a Fresnel spot with a large diameter lens was used!

As Bertrand Russell might have said but didn't, “Contrariwise if it was so, it might be; and if it were so, it would be; but as it isn't, it ain't. That's logic”.



### Per Ardua ad Cavum in Terra

*David and Roberta Lyons\**

The University of Essex campus is in a valley, with two small lakes stepping down to the library building and then a series of squares around which the university buildings are arrayed. It was necessary to provide a retaining wall for the lowest lake and a continuation at lake level of the uppermost square. The architect's brief was simple: fill the resulting void beside the library with a theatre suitable for drama and music, the roof to be the continuation of the square.

He succeeded. The result is a pleasant, 220-seat, fixed-form theatre with good sight-lines and excellent acoustics; a very workable building indeed with some interesting, even exciting, features and some sad and typical drawbacks.

The form is open end with a small asymmetrical thrust. It is the sort of stage that would delight a professional and force an amateur producer into interesting movement patterns. The stage is backed by a massive permanent cyclorama, which is the supporting wall for the dressing-room floors behind it. The cyclorama was conceived by the architect as a keyed-brick surface. It is now a neutral grey Tyrolean finish. Against dark oak stage and walls, black ceiling, black seating and orange house carpeting, the effect is quite imposing.

*\* Mr. Lyons comes from Canada and is a lecturer in the Computing Science Department of the University of Essex. His wife, Roberta, is an M.Phil. student in the Department of Literature.*



The lines of sight carry into the wings but legs have been provided to ameliorate this.

Wings lead one to a discussion of wing space. There is not enough. The very crowded prompt wing has a cue board, the main tabs crank and a passageway to the down-stage entrance, the prompt-side perches and the crush area. The three 20-channel thyristor dimmer racks were also to be placed in this 6 ft. deep space, but they have been hidden in a cleaner's closet. The O.P. wing is much more spacious and provides access to a scene dock and a small flat-storage area. The two wings are connected behind the cyclorama by a space 3 ft. wide at its narrowest.



The theatre is under the raised promenade to the right of the building shown.

I have tried to convey the impression that on the house side of the cyclorama all is well. We have four entrance possibilities; the wings and two entrances in the false side-auditorium walls just to the house side of the stage, where two seats can be removed to provide access to the stage. We have good lighting and sound installations with some possibility of expansion. Audience facilities are reasonable and the seating is comfortable. The side walls, which are dark-stained wood, tunnel the attention down onto the stage and the matt black ceiling, which is continuous from auditorium to stage, creates a sense

of unity between the two and of seclusion from life outside.

On the other side of the cyclorama, all is not so well. I don't know how an architect could provide them in such a small hole but the theatre has no rehearsal space and no workshop. We are without a green room and our storage and working areas for sets and costumes are minimal. Backstage noise containment will be difficult, impossible without the legs. There is dressing room space for 32 and, blessedly, two showers and two toilets. The four dressing rooms are on two levels above the stage and a single staircase debouches into the 3 ft. backstage corridor.

The building's path to completion has indeed been arduous. At the time of writing the theatre hand-over date is Tomorrow and . . . —but I won't complete the quotation. It is always difficult for architects to work with lay committees, and potential theatre-users were soon invited to participate. Change requests were generated at a furious rate. The two downstage entrances were added and the two dimmer racks moved from the wing and a third (fairly empty) rack provided for expansion. The cyclorama was surfaced and a path created from the prompt wing to the crush area. The light and sound booths (apt word) were enlarged and combined.

The first thing that concerned me when I invaded the theatre committee was the lighting power available. I wanted at least 100 kW. Unfortunately only 86 kW were available at the sub-station and for the sake of economy only 40 kW were to be installed. Then I discovered that the air-conditioning plant would only handle 20 kW: no Brecht in the summertime!

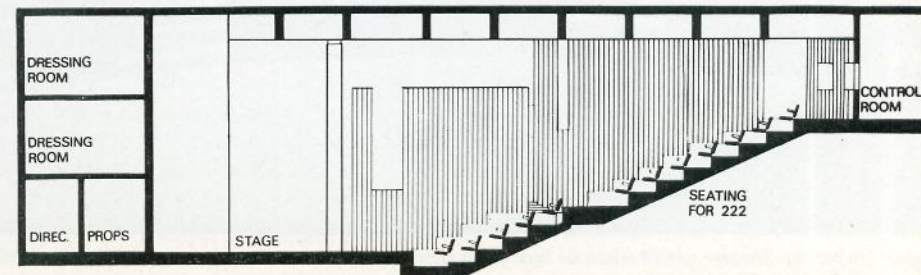
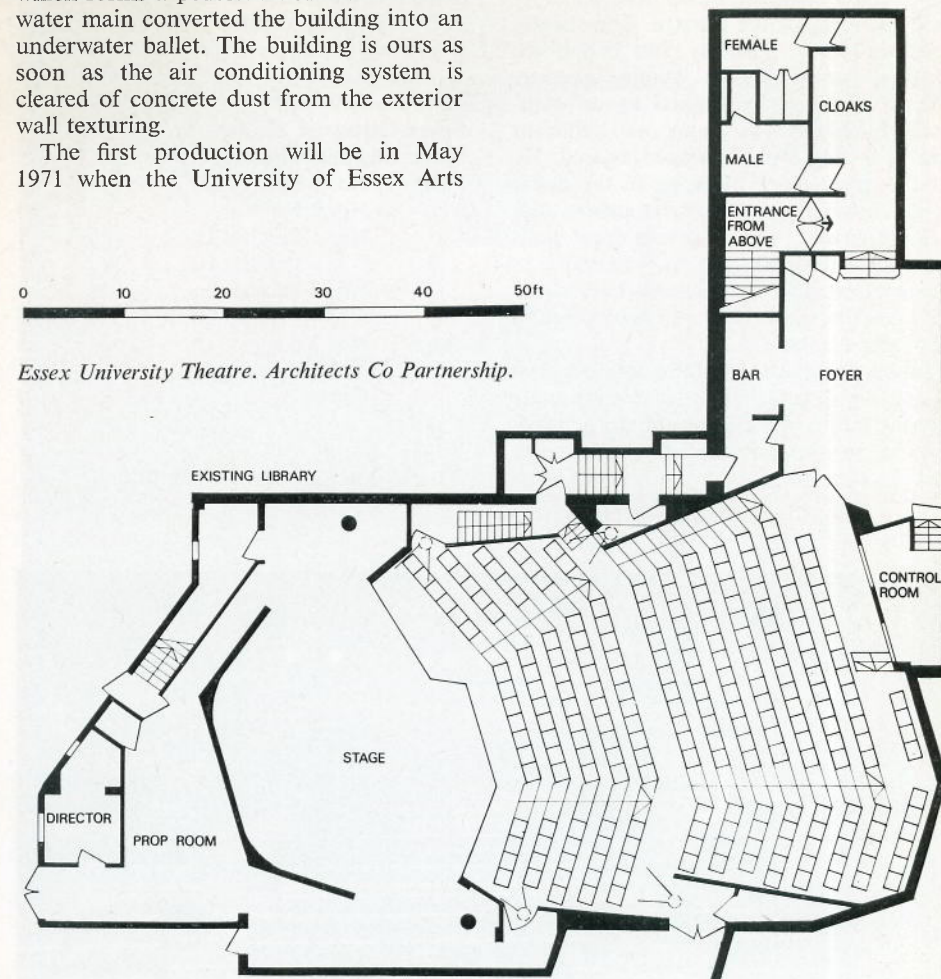
The cabling philosophy was changed to ensure that plenty of sound, light and potential television cable was installed leaving the equipment to be purchased as funds became available. The stage floor surface was changed from polished maple to matt dark-stained pine and a sink added to the wardrobe. The miniscule (8½ ft. cube) workshop was turned into the theatre director's office and the diminishing contingency fund was watched with anxiety.

The troubles were not only in design. The building completion date has been greatly delayed by difficulties with the roof which forms a pedestrian surface. A burst water main converted the building into an underwater ballet. The building is ours as soon as the air conditioning system is cleared of concrete dust from the exterior wall texturing.

The first production will be in May 1971 when the University of Essex Arts



Essex University Theatre. Architects Co Partnership.





Festival takes place. As well as several outside productions and some music, there will be a production of a student-written play that will demand much from the technical facilities of the theatre. The theatre director, Kevin O'Malley, has laid down some sound principles about booking. The theatre may be booked by any university member as long as sufficient rehearsal time can be booked as well. He is very interested in drawing in the talent of all university members, students, staff and employees, and involving local non-university residents as well, intending to create a theatrical community which would help give the university an easier place in the wider community.

I think some lessons can be learned from this history. It is perhaps unwise to insinuate a theatre into what is essentially a landscaping project. The need for earlier user participation (and at a university, users

are primarily students) has been quite well demonstrated. Nevertheless we are moving from an unsuitable and unsafe (for drama) lecture theatre into a workable, pleasant and interesting theatre that should serve drama well at Essex.

#### Essex University Theatre

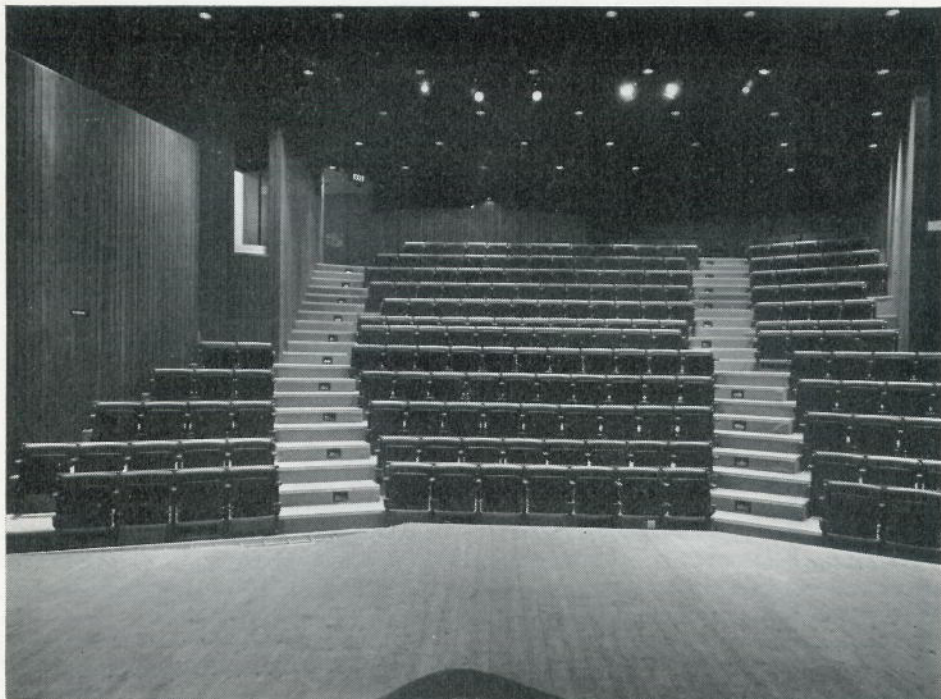
##### Stage Lighting Circuits

FOH	No. 1 bar	10
	No. 2 bar	10
	No. 1 Perches L.	5
	Perches R.	5
	No. 2 Perches L.	5
	Perches R.	5
Stage	No. 3 bar	5
	No. 4 bar	5
	Dips	10

##### Control

SP 60/3 preset

30 × 1-kW and 10 × 2-kW (fitted)



Essex University Theatre. Auditorium as seen from rear stage. The missing seat on the left is in front of one of the new stage entrances.



## No bloody flies

Tom Kelly<sup>1</sup>

Hilton Edwards stood on the stage of what was to be the Dublin Gate Theatre and said to Michéal MacLiammóir: "Here's the snag! Look up! See? No flies! No bloody flies!"<sup>2</sup> The year was 1929. Forty-two years later, after a Government-sponsored refurbishing, there were still no flies. But now there was a theatre, the Gate Theatre, its life no longer flickering on and off with every financial breeze.

In a city whose theatrical life was dominated by the Abbey<sup>3</sup>, the Gate has

played a role as important as the opposition party plays in Parliament. While the Abbey looked inwards, a hot-house of patriotic creativity, the Gate's policy was to let in the light of international classics. In 1930 the Gate's first production was Ibsen's *Peer Gynt*; in 1971, about 350 productions later, it opened after repairs with Anouilh's *It's Later Than You Think*.

When the Minister for Finance, Mr. Charles Haughey, offered a subsidy to the Hilton Edwards, Michéal MacLiammóir

<sup>1</sup>Tom Kelly is a Dublin man who spent seven years working in television in Canada, after which he worked as head of TV lighting in Irish television. Then he became a producer, producing drama and documentaries. This year he goes back to Canada to do some film work.

<sup>2</sup>From *All for Hecuba*, by Michéal MacLiammóir.

<sup>3</sup>*Tabs* Vol. 24, No. 3.



Dublin Gate Theatre Productions, there was an immediate dilemma. The Gate lived in a building which was high on the list of those buildings worthy of conservation. The needs of conservation and the needs of a theatre are not always compatible. In the decisions which followed, conservation won hands down, though the theatre came out of the fray with *some* compensations.

The first difficulty was that the site size was fixed. There was no going sideways to get more wing space. The total width of the stage is now 40 ft. so when a 32-ft. proscenium is used, only 8 ft. is left for wings, 4 ft. on each side. Nor could the architects—Michael Scott & Partners—go upwards to add the missing flies, because the roofline could not be raised. The roof itself almost scuttled the whole enterprise—and indeed the Gate itself—when it turned out to be riddled with dryrot. But the Government decided to bite on the bullet and, out of a total of £45,000 spent on the refurbishing, the roof repairs swallowed up £20,000.

The theatre squats on top of a ballroom. The ballroom is a beautiful Georgian room in its own right, with a splendid plaster ceiling. It was this very ceiling, located directly beneath the theatre floor, which presented the next problem. The problem was—and is—one of sound. When a play has the nerves of its audience stretched taut, the pop group in the ballroom below are likely to turn their amplifiers up even higher, and once more an act of dramacide is committed. Nothing can be done about it. Adequate soundproofing is not possible without harming the ballroom ceiling.

But in spite of unsolved drawbacks, Mr. Hilton Edwards is particularly pleased with some of the improvements. In addition to his formidable directing talents, Mr. Edwards is perhaps the best stage lighting designer to work in Dublin. It was he who first introduced spotlights into general use in the city. Understandably the replacement of the old bracket-handled dimmer-board with a new 60-way, fully loaded, 3 preset console has filled him with glee. Previously only an artistic octopus could operate the lights with any fluidity. In

addition, and after a lot of traditional soul-searching, the control was shifted from the wings up to a front-of-house booth. For the first time the operator can see the stage properly.

A new feature is that there is now access to the stage apron from both sides. The architects achieved this by using a cavity behind the side walls of the stage into which he introduced a narrow passageway connecting upstage with downstage, off-stage, as it were. An artist may now exit through the french doors upstage, and enter the apple orchard on the apron. This was not possible hitherto. Another very useful new feature is the variable proscenium width. Black panels travel on tracks in the stage floor, permitting the stage width to be anything from 24 to 32 ft.

There are dressing rooms for two male and two female principal artists. Other dressing rooms are up two flights of stairs. There are sufficient showers for the whole cast to shower simultaneously—provided it's a one-man show. And for the first time the theatre boasts a Green Room. Also, for the first time the manager has an office of his own, though he still half expects to be turfed out to make way for a carpenter's shop or a prop-store.

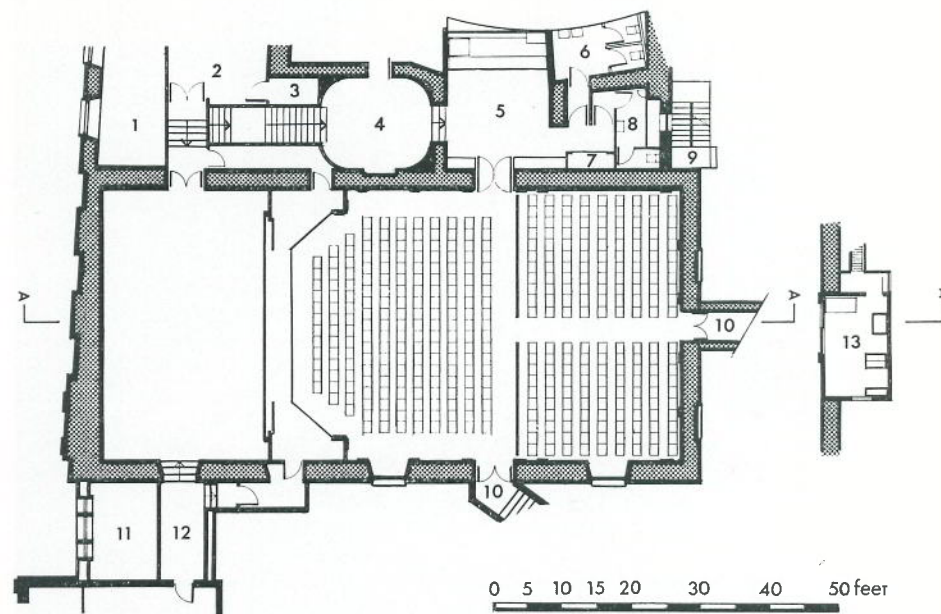
Off the auditorium, at the head of the entrance stairway, is situated a Narcissistic coffee-bar, whose whole back-wall is covered with a photo-blowup of a Malton print showing the exterior of the theatre. There are very few seats in the coffee-bar, so the people must be packed vertically, threaded together by their buzz to make that special between-act excitement.

The auditorium itself has undergone the greatest transformation. It seats 383 people, the first row of whom the stage curves to embrace with its apron arms. But most important of all the auditorium creates a mood, a sense of occasion. In this magnificent Georgian room, a cinema screen would sit uneasily, and a television would be a vulgarity. To be in this room matters; to be in this room is to matter. The architects were meticulous in their concern for the spirit of the original. It was designed in 1785 by Richard Johnston as a part of his Assembly Rooms, built on to the Cassels-



SECTION A A

- |                   |                            |
|-------------------|----------------------------|
| 1. Green Room     | 8. Men's Toilet            |
| 2. Scene Dock     | 9. Actors' Escape Stairs   |
| 3. Store          | 10. Emergency Exit         |
| 4. Foyer          | 11. Void                   |
| 5. Bar            | 12. Lobby                  |
| 6. Women's Toilet | 13. Control Room (above 3) |
| 7. Cloaks         |                            |



Gate Theatre, Dublin.  
Architects: Michael Scott and Partners.



designed Rotunda Lying-in Hospital, and intended to coax funds for its support from the glittering socialites who lived across the road in their spacious townhouses. Missing pilasters have been restored and the ornate plaster ceiling with its patterns of squares, octagons and triangles made by the famous Dublin stuccodores, the Francini brothers, at a time when Dublin was growing at a faster rate than London, have been freshened and repaired. Buffs and earth reds and blue-black were the colours used.

Houselights were needed so they might as well be beautiful. Hanging from the resplendant ceiling are four Waterford crystal chandeliers. The maintenance task which they involve is gallantly shouldered by the management for the sake of the lustre which the chandeliers give that

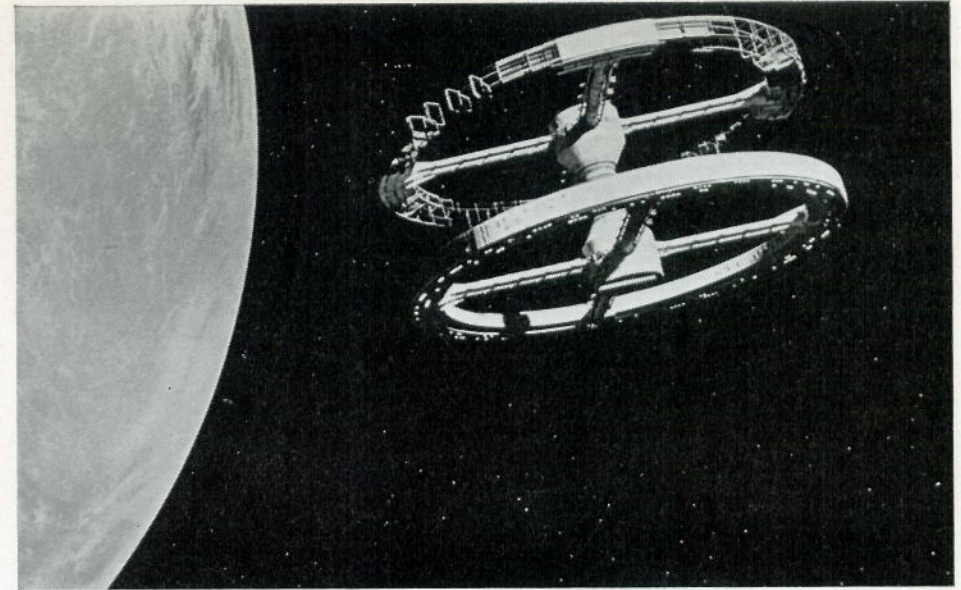
gracious auditorium. Each night these chandeliers are dimmed from the control booth, the new curtains part, and the players proceed to deepen the hold which the Gate Theatre has earned in the hearts of Dubliners.

**Gate Theatre Dublin  
Stage Lighting Circuits**

F.O.H.	14 Patt. 264 Spots
	9 Patt. 223 Spots
No. 1 Bar	10 Patt. 23 Spots
	5 Patt. 123 Spots
Cyc	18 Patt. 60 Floods
Flys	4 Patt. 223 Spots
Portable	4 Patt. 223 Spots
	4 Patt. 60 Floods
Control	SP/60 3 Preset System
	60 2 kW Thyristor Dimmers



Gate Theatre, Dublin. Operator's view from control room showing S.P.60 3- preset control desk.



From the Metro-Goldwyn-Mayer presentation—A Stanley Kubrick production 2001: A Space Odyssey.

## Theatre Lighting 2000: A Darkling View

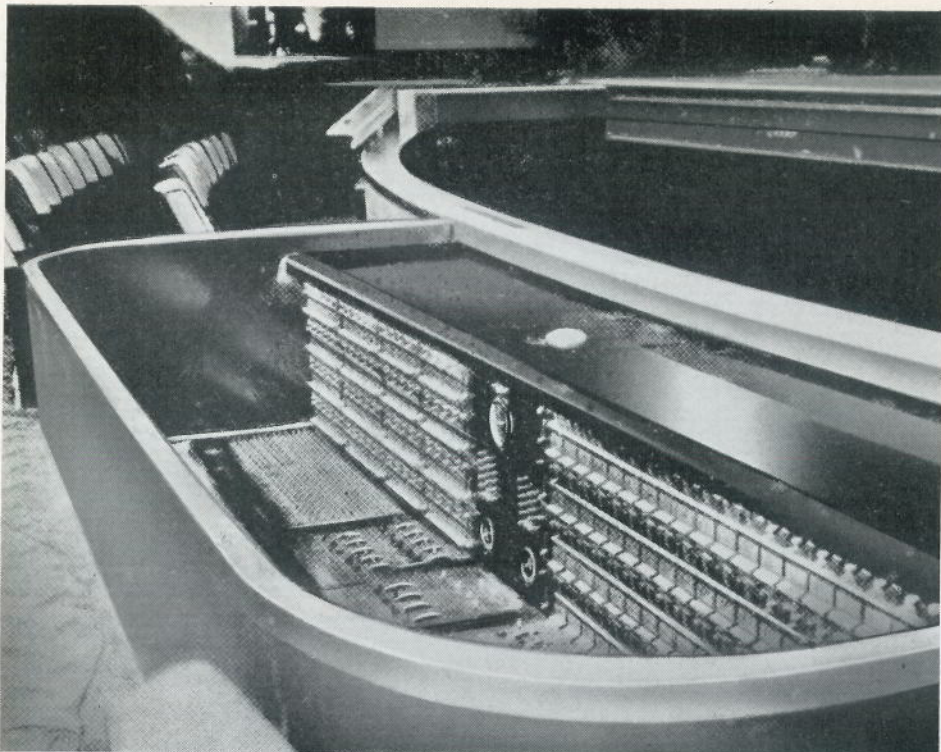
Frederick Bentham<sup>1</sup>

The best way of going forwards is to go backwards. One reason for saying this is that such a sentence is perverse and therefore may attract the attention of those—I suspect they constitute the majority—who yawn at the thought of the future especially as far ahead as this. For it is only one year short of the year 2001 when, if you recall, space age travel was routine and carried no greater peril than landing up in a prolonged psychedelic show instead of on the planet Saturn. The blame for this hijack did not lie at the door of any human however. It was HAL 9000, the computer, that pulled this slow one. The message for theatre in the year 2000 might

well be “cave canem” which being translated could mean “beware computers in tin boxes”. Perhaps this is what first comes to mind on looking far into the future. “Far” well I shall be ninety-nine, I don’t hope; and my elder son forty-nine—the vulnerable age for executives; but will it be that age then? Fortunately he has no plans to become an executive anyway. Will the term “executive” even be used if there are any? Terms change but do jobs change; is it really true that marketing

<sup>1</sup>The text of a paper for “Lighting 2000”, the International Colloquium of the Illuminating Engineering Society held in New York this May.





1933. Radio City Music Hall, New York. This veteran control by General Electric, situated in a special pit in front of the orchestra, is still in daily use. The controls for the 314 channels are seen as sets of five levers side by side with a separate rehearsal lever under each.

is a recent invention? Of course not—it is the term “marketing” that constitutes the invention. So it is that when we examine the forces which may tend to shape theatre lighting in the year 2000, we must differentiate between invention of equipment and processes, and invention in language.

This distinction is particularly necessary in the case of theatre where the emphasis is on novelty and is tied in with fashion. What one may find is that fashion goes round in circles and production is only superficially influenced by technical development—the changes that distinguish today’s production fashion from yesterday’s would have happened anyway and owe nothing to inventors like myself who have for thirty, forty or more years been developing lighting equipment. Broadway and its shows are still put on or trouped on the road (if that is the expression) with

control equipment that in any other country in the world would be housed in a museum. The “piano” board there belongs to pre-1914. On the other hand Germany led the world in stage lighting control for decades (though I don’t go much for its more recent manifestations). Yet whose theatre has exercised the greater influence?

In trying to determine the shape of the development curve of things to come it is reasonable, in view of the hiatus caused by World War II, to go back to the year 1933. This was the year I joined Strand Electric. It was also the year that Radio City Music Hall opened. General Electric’s 314-channel preset control was a quite remarkable engineering achievement for that time and it is still there and working. Presetting was a difficult process in those days and the cumbersome thyatron-controlled saturable reactor the only true way of



1935. Youth playing the Strand Light Console. The semi-circular rows of stop keys select the dimmer channels for operation from the master keyboards. Memory group selection is by piston under each keyboard.

providing it. This method was so expensive as to put it out of court in Britain, where it would not in any case have suited me as it bred a lot of levers and grouping switches which made it large. Once it is no longer possible for a single operator to reach everything without leaving his seat the “playable” character of the control vanishes.

So it was that I turned to the organ console for inspiration and used it over the years with but slight modification. The largest controls were of 216 channels but more would have been perfectly possible. The organ console influence has persisted in all my major work since and even turns up in my latest, the 360-channel control with computer action. The two photographs taken in 1935 and in 1971 a couple of weeks or so ago indicate this debt. The resemblance to the organ console is not just a matter of physical shape it is

present in the philosophy behind the control systems. They must be playable.

By “playable” I mean that they must have that instrumental quality which permits improvisation, composition and finally interpretation when repeating the result—an interpretation influenced performance after performance by the act of taking part in a live show. To give an extreme example if the show plays in a lower key on a particular occasion, not only will the tempo of the changes be affected but the lighting might not come up to the full levels as plotted. This would not be the result of conscious action on the part of the player at the control but because, being a member of a team (which includes the audience incidentally), this is the way he had to feel it at the time.

From this it can be seen that lighting performance reproduced exactly, like a



gramophone record, is not what I require of a switchboard. Yet this exactitude is inherent in the instant dimmer memory systems of today. Another influence which I abhor is the numerical approach to lighting. The very notion of calling up channel number 179 or 85 is anathema to me—while to think in terms of a whole series of numbers as representing a group or family of lighting is out of the question. Artists as a whole do not tend to think in figures; their memory, short and long term, is visual; it operates in terms of patterns. It is difficult for the figure-conscious—the engineers and accountants—to realise the sheer loathing that many artists have deep down for numbers. In any case it is patterns of light that are put down on the stage and the logical corollary is a pattern (of light) at the switchboard itself. This is the philosophy behind the use of illuminated rocker tablets in my latest control to display channels in action and to operate them. It is this that I hope will make the control “lovable”<sup>2</sup>—something to caress rather than punch up.

I do not want to go into this in depth since lighting control is a speciality given to but few initiates to be able to argue. An important point I do want to make is that my latest control contains little that I would not have done in 1935 if it had been technologically and economically possible. The fact that we did not have dimmer presetting in Britain was not because we did not want it but because we could not have it. This was the reason why our memory action—yes we had it in 1935 (instantly-adjustable organ combination-pistons)—why our memory action did not attempt to incorporate dimmer intensity information. Indeed one had constantly to explain to the layman—the theatre people—that my Light Console memory pushes did *not* do this. It was only engineers who knew what was not possible.

In the intervening years it is the engineers who have come to believe that everything is possible and the layman to doubt. It is interesting to speculate on what we would have thought in the thirties would be our common dimmer of today. The principle

<sup>2</sup>*Tabs Vol. 29, No. 1.*

of chopping the waveform was already there in the gas-filled triode (a thermionic valve) and that of the semi-conductor in copper oxide rectifiers—both devices having just come into tentative service. But I do not remember a hint of anything as sensational as our present dimmer—the SCR or thyristor—until late 1958. In 1964 we could still only afford to use it in Europe for de-luxe installations such as the Royal Opera House, Covent Garden, but costs have come right down. Parallel with this has been the fantastic development in electronic components and circuitry. As what can be done expands so the size of the means to do it contracts.

In 1952 I saw for the first time an electronic computer—rooms full of it. Known as “Leo”, we gazed in wonder as it decided how best to distribute cream buns, meat pies, sausages and the like to the many branches of J. Lyons. Today the computer heart (memory and processor) for my latest lighting control occupies a mere 20 × 9 × 26 inches.

Do I understand it? The answer is Emphatically No! but it can be made to understand me and my control needs. This is where the latest technical jargon, the word “software”, enters the theatre. This really is a new concept in lighting control, not merely a new expression.

Using a computer in this way one can write a brief, a specification or rather a programme for the way lighting control is to carry out its varying instructions. An initiate known as the “programmer” takes these words, and turns them into the kind of pidgin-English the computer understands—a nightmare telegraphese.

For the first time the lighting control inventor is free. No longer does the nature of the circuitry make suggestions or impose restraints. In my first control of 1935 I had to make the best of what the technology, then economically practicable, enabled me to do. Ever since it has been a case, as each new development in equipment came along, of reconciling that mixture of advantages and drawbacks which made up its character. All “hardware”, electronic and mechanical, has pronounced characteristics of behaviour, and the circuits built around it also take on



1971. Veteran playing the Rank Strand lovable computer. Individual rocker tablet controls for 240 channels are on the wing. Dimmer memory controls and numerical selector to break sequence is on the left of the desk and the playback controls on the right.

certain characteristics. Further, once a circuit is designed and connected up, to change its character or to vary the job it has to do even slightly can be very difficult indeed.

By comparison the “software” approach of the computer is a flexible affair capable of change and modification. If this has just become so now it will be even more true of computers in the year 2000. Perversely however the freer one becomes, the more difficult it is to decide what we want to do. We have so to speak been depending on technical imprisonment for creative inspiration, we now have think lighting control without any guide but the process of lighting. We all know what a difficult task it is to design an ideal theatre on a blank sheet of paper, no site boundaries, no brief—just a statement “design an ideal theatre”. Well this is the

position now with stage lighting control but it is not the position with regard to the equipment it controls—luminaires, lanterns or instruments, call them what you will.

It is an extremely odd thing that at the other end of the circuit, where the thing that produces the light hangs, there has been no fundamental progress at all since the thirties. Fresnel spots, profile spots, beamlights, effects projectors were all there then and any changes since have been relatively modest. Claim what the lamp manufacturers like, there has been but a small increase in lamp efficiency (lumens per watt) and tungsten halogen is only what ought to have happened decades ago. It should not have to be worthy of remark that lamps now maintain light output and colour temperature throughout life but rather that it is strange that they did not. It is only now, fluorescent lamps having



passed the theatre by, that a compact source—the mercury halide lamp—has turned up with the kind of increase in efficiency, nearly fourfold, that we have been looking for.

Of course the actual lamp source is only a small part of the problem; can it really be true that there is no new optical principle to be tapped? Are we still to find thirty years hence only the Fresnel lens, the ellipsoidal reflector, and the condenser and objective? Will the only way of varying the shape of the beam still be by blanking-off part of it with shutters and masks? Above all are we in the year 2000 still going to have hundreds of such luminaires, suspended above and in front of the stage—every one of which has to be personally visited in order to coax out of its red-hot body the direction and kind of light we require?

The arrival of what Richard Pilbrow has aptly called a “Multi-lantern Complexity”<sup>3</sup> has been a curious story. As the individual pieces of equipment have become more refined, taking up less space and giving more light, more of them have come to be used. Thus invention has not reduced the quantity thought to be necessary; on the contrary it has increased it. Seemingly man will only use ten spotlights if that is all he can get into the space and/or that is all he can afford. Relax these disciplines for but a moment and the number swings into the hundreds. Whether rightfully or wrongfully cannot be explored here but I must remark in passing that the best light needs a good dollop of gloom to see it by.

The “Multi-lantern Complexity” first developed in the United States because it was there that baby spotlights were born. Stanley McCandless could write in 1932 of a method of lighting the stage<sup>4</sup> beginning with the object to be lit—the actor—and work from there to the instruments needed

but in those instruments there lay the seeds of anarchy. Even though they in their subsequent hordes were going to be hobbled on that continent by the inflexible flexibility of American patching.<sup>5</sup>

In Europe where patching has been but slightly used it may be forced on us by repertoire playing. If a single commercial play for a West End run needs hundreds of precisely and specially directed lighting instruments then it follows that plays in the subsidised National or Civic theatres also need that treatment. The fact that the most appropriate way of working in those theatres is repertoire cannot be allowed to interfere. That it is good for actors and audiences to play repertoire and bad for lighting and scenery, is a nuisance which has to be overcome. In this context patching, to select lights specific to a production, may be helpful in keeping the number of dimmers or at any rate dimmer controls within sensible limits.

No-one can be happy in principle with the labour involved in rigging and setting a multi-lantern complexity in the first place or in repeatedly re-rigging and re-setting it afterwards. In consequence there is much talk of mechanical servo in this connection and installations do exist (some quite elderly) which have used something of the sort in part. But do we really imagine an entire stage lighting installation so fitted—even in the year 2000? Is it possible to imagine the degree of finesse necessary to position, pan, tilt, focus, frame and colour each light source—all remotely? We can easily envisage the control end of it, even the automatic recording of all these states, but surely the mechanical side buffeted by scenery and other hazards would require a team of skilled mechanics constantly on the go. This team could easily be more expensive and more difficult to find than the stage hands it is intended to replace. The question then arises, is there any other contribution the super-servoed installation could make? From the artistic point of view it has been said that, for example, the beams of light could move with the action across the stage instead of today’s method of cross fading from one pool formed by a group of spotlights to another pool.

Alternatively reduction in the number of lighting instruments might result, if mechanical re-positioning to a predetermined new setting went on automatically after the lamp was extinguished. This usage would resemble the Eastern European practice with operator-handled tungsten spots—a direct descent from the days when spotting (i.e. highlighting not necessarily “following”) was only possible with the few arcs.

There used to be optimists who thought that scenery could be carried around as a small box of slides. One has always been hearing legends of great increase of picture brightness and indeed, in a case like the recent special 4 kW Xenon scene projector for *The Knot Garden* at the Royal Opera House, Covent Garden, there has been a spectacular increase. But this also extends to the size, complexity and cost of the equipment to do the job. However, if elsewhere most projected images remain somewhat wraith-like it is only a matter of time before the mercury-halide lamp or some such development will provide real power. Where does that get us? The fact that it may not be necessary to put paint on a cloth to get the perspectives of a Bibiena is not of itself a contribution to theatre. Nor is it likely that greater imagination than that of Josef Svoboda can be brought to projection—whatever the resources. It may well be that in him we have had our Shakespeare of projection already. It is notable that in a recent interview it was the lack of time rather than of the right equipment that vexed Svoboda.<sup>6</sup>

It is at this point appropriate to consider what motivates the creation of equipment. I believe the answer is the equipment itself. More and more I become convinced that lighting begat lighting and equipment begat equipment and they are unlikely to fertilise

<sup>3</sup>Theatre Crafts, *January/February*, 1971.  
<sup>4</sup>*Tab*s Vol. 21, No. 2, *Sept.* 1963.

one another. But unlikely though this is, it is even more improbable that lighting exists to serve the play or the audience—if that is what or who the play is there for. Most developments seem to exist as a means of gratifying those that use them. Years ago I wrote not too seriously an article<sup>7</sup> “What is a theatre for?” and came to the conclusion that it was for the artists who worked there “pro bono artisto”. When, however, as in the Covent Garden production of *The Knot Garden* already referred to, twenty-four of the very best seats in that house—slap in the centre of the grand tier—are taken for the scene projectors then the ultimate answer is “a theatre is for the equipment housed therein”. The best view of the show is obtained by the equipment making that show!

It has been said of organ recitalists that they run a grave danger of not listening to themselves. In other words they are so busy that their actions constitute a kind of ballet which is complete as an end in itself. They think the performance is smooth because one action follows smoothly from another, whereas the end product—the music—is jerky with a lot of slowing up to take the corners so to speak. I have often thought this happens in stage lighting—particularly in my speciality—colour music. The composer or executant is so busy being a virtuoso—that he fails to recognise which part, if any, of the virtuosity has made its target—the audience.

From all this the question arises—Is “lighting” really necessary? If this is a legitimate question today then it will be even more relevant thirty years on. This great finesse, this playing upon hundreds of spotlights—by one man using the most advanced computerised luxury or by a gang using dozens of “piano” boards on Broadway as may still be the case—does this matter a “tiddler” or, since this lecture is intended for America, “a dime”?

<sup>3</sup>A “Multi-lantern complexity” by Richard Pilbrow. *Tab*s Vol. 25, No. 3.

<sup>4</sup>A Method of Lighting the Stage, by Stanley McCandless, 1932.

<sup>5</sup>“Crosspatch or Inflexible Flexibility” by Frederick Bentham Theatre Design and Technology, Number 7 (Dec. 1966).



# Square One

Francis Reid

In the "good" old days, standard stage lighting was a straightforward business of flat colour washes. Of course throughout the ages there have been the occasional multi-wick and multi-mantle complexities but until quite recently an awful lot of lighting consisted of battens, floats and wing floods.

Now this may not have been a "selective, atmospheric, dimensional, illumination appropriate to the particular production style" but it was *jolly quick!*

As recently as 13 years ago I toured a pantomime round the Number Threes where I handed out the lighting plot—written on the backs of box office cards—to the Chief Electrician on a Monday morning and collected it from him on the following Saturday night. It was perhaps just as well that this was the sole extent of my lighting duties for as well as being company manager, carpenter and the entire stage management staff, I kept popping on as the demon (Oh, the joys of a green lime and blue floats to a quarter!). And for the benefit of those who keep asking, "How do I become a lighting designer?", I should perhaps add that my wife was the wardrobe mistress and pregnant and that we considered our joint salary of £18 (half pay for rehearsals) to be one of the more lucrative engagements of the year.

Now it may seem that I am advocating a return to the days of battens and floats with perhaps a bar of spots for specials, but Oh! No! No! This type of lighting would be totally unacceptable now and indeed it is possible that tatty lighting was a substantial factor in the death of Music Hall and Commercial Repertory. Much of the drama and light entertainment on "the box" uses the actors (and their scripts) of the old Number Two and Three touring circuits and their acceptability as entertainment owes much to the presentation team, especially the lighting supervisor.

We have I think learned to produce good lighting with the directional spotlights now available to us; but to do so we need *time*. This time can be made available in the

upper reaches of professional theatre but such theatre is the very tip of a huge iceberg of stage lighting users. Where is lighting time to be found in a multi-use hall for the one-night-stand play, for the variety bill, for the end of term prizegiving, for the symphony concert, for the . . . ?

In a situation which demands everything, from bright white, shadowless illumination for music stands to colour subtleties which will give clean presentation to a no-scenery production, we rightly recoil from an installation of flooding equipment. But in offering a good spotlight layout to such a stage we are making available a *possibility* of good lighting—but a possibility which can only be realised with the expenditure of time and experience. In the average situation on such a stage, this time/experience is only likely to be possessed by one drama group who will achieve artistic marvels but after their last performance will leave the equipment with specialised settings totally useless for other functions!

The joy of flooding equipment was its "back to square one" approach. It did not (indeed it could not) be focused or angled; you just hung it up, plugged it in and it was ready to produce all the lighting that it was capable of producing by just juggling with the dimmers. It is this "back to square one" approach that we must apply to the lighting equipment of a multi-use stage.

The standard approach to this problem has been to compromise by placing a number of floods amongst the spots on the principle that, no matter how the spots are set, if you turn on the floods you will get some sort of light for the Mayor's speech. Unfortunately, these floods will throw more light on to the adjacent borders than onto His Worship! I think that the time has come to try to push forward a bit and attempt to devise installations where the spots can be reset easily to standard "square one" positions.

Take for a moment the operational possibilities of the colour-wash flooding of the old variety stage. Their 3-colour mixing

of red, white and blue, arose not from patriotism but because of the difficulty of getting enough "full-up" light from the primaries red, green, blue. Thus a variety plot consists of the following possibilities:

- (a) Red stage
- (b) Blue stage
- (c) Colours (red and blue together)
- (d) BO and focus (i.e. lime only)
- (e) FUF (full-up finish—i.e. the lot.)

Indeed variety artists still carry plots written in these terms and I have found in practice that they contain within their wording all the key information necessary to light their act in terms of the biggest professional multi-lantern complex.

Similarly many many of the plays that we stage require an overall "warm" coverage and an overall "cool" coverage. Most cues consist of shifting the tonal emphasis between cool and warm or concentrating the action—which on a small stage with bad sight lines boils down to "taking down the edges". An orchestral concert consists basically of white vertical down light and a prize-giving is basically the same plus enough F.O.H. to help us see the Governors' faces without dazzling them.

I would therefore like to offer up a possible layout for a multi-use stage where much of the equipment has "back to square one" positions to which it can be reset after more exotic use.

Instruction on resetting the equipment should be given by the equipment installation firm to the stage electrician (perhaps backed up by a series of Polaroid reference photographs). The cost of this instruction would surely be borne by an enlightened civic authority desiring to get the maximum use from their expensive installation; and I am always a little surprised that the Arts Council when paying for equipment do not concern themselves that arrangements are made for optimum usage.

Although most of the equipment has basic settings to which it must be returned, there should be little or no restriction on the resetting of lanterns by specific users when time is available.

## LAYOUT

Thirty control channels of 2 kW maximum. Highly desirable that all channels feeding the stage area are on same phase. For smaller stages the units could be rated at 500 watt. As the stage increases in size certain units (as indicated) should be uprated to 1 kW.

### *Front-of-House Lighting—Side*

Pair of profile spots (54—pale rose) cover downstage centre in warm.

Pair of profile spots (17—steel) cover downstage centre in cool.

Four profile spots pick up the corners in a neutral colour (36 lavender) which blends in both warm and cool situations.

One special each side to be set as necessary for any production requiring it.

### *Front-of-House Lighting—Centre*

Because the side walls in such halls are usually too far to the side in relation to the proscenium, it is desirable to provide some "fill" light from a central ceiling position close to the stage. Such positions often have access problems, but this becomes easier with the advent of long-life tungsten-halogen lamps. The suggestion is a pair of (7—light rose) Fresnels to flood the entire stage front and a profile spot with colour wheel focused to centre stage.

### *On-stage Lighting—Bar One*

Three Fresnels in pink (7) focused vertically downwards to produce a wash of warm light on the stage but not on the borders.

Three Fresnels doing the same thing in blue (61).

Four spots (54—pale rose) set to flood across the stage in a "face-lighting" wash.

Two "specials" to be set as required.

### *On-stage Lighting—Bar Two*

A pair of down-lighting Fresnels in pink (7).

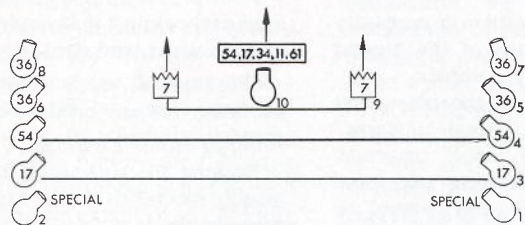
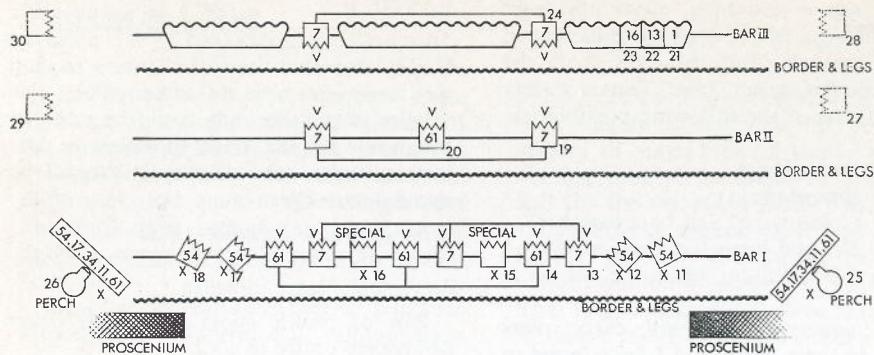
A single down-lighting Fresnel in blue (61).

### *On-stage Lighting—Bar Three*

Three sections of 3-colour batten to flood backcloths, drapes, etc.

A pair of downlighting Fresnels in pink (7).





**Note:**

- (1) All units 500 W.
- (2) All circuits 2 kW.
- (3) For larger stages, all F.O.H. and stage units marked "X" should be uprated to 1 kW units.
- (4) V = set vertically.

**On-stage side lighting**

One profile perch spot each side with colour wheel, focused across front of the stage.

Four "dip" plugs available for extra equipment.

**USAGE**

*Plays* (subject to time available)

Use basic cover circuits 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 17, 18, 25, 26.

Set circuits 15, 16.

Reset circuits 14, 13, to face-lighting angles.

Reset circuits 19, 20.

Set circuits 1 and 2.

Rearrange as much of the installation as time permits to special requirements!

**Variety**

Basic pink cover—circuits 9, 13, 19, 24.

Basic blue cover—circuits 14, 20.

Colour variations—circuits 10, 25, 26, 21, 22, 23.

Full up. Above circuits plus 4, 5, 6, 7, 8, 11, 12, 17, 18.

Cross lighting from lamps on stands—circuits 27, 28, 29, 30—would add interest.

**Pop**

Put kinky colours (for example 25, 26, 13, 16, 62, 20, 39, 35) into circuits 1, 2, 15, 16 and possibly circuits 27, 28, 29, 30. Connect some of these circuits and/or 10, 25, 26 to a sound/light convertor.

Use circuits 9, 13, 14, 19, 20, 24 discreetly for full-up conditions (by contrast with your kinky colours, they will now appear almost white!).

**Orchestral Concerts**

Take colours out of circuits 14, 13, 19, 20, 24 and the resultant wash will light the music without shining in the players' eyes.

**Speechmaking**

Use circuits 13, 19, 24 (7—pink).

Take colours out of circuits 14 and 20.

Use as much F.O.H. (particularly circuits 9 and 10) as you dare without incurring the Chairman's displeasure.

And when you have finished tonight's show—set it all back to square one!

CIRCUIT	LOCATION	LANTERN	COLOUR	FOCUSING
1	Auditorium side wall	Profile	Optional	Special
2		"	"	"
3		2 × Profile	17	Centre Downstage
4		"	54	" "
5		Profile	36	Right Downstage
6		"	36	Left Downstage
7		"	36	Left Downstage
8		"	36	Right Downstage
9	Auditorium Centre	2 × Fresnel	7	Flood Downstage
10		Profile	Colour Wheel	Centre Downstage
11	Bar I	Fresnel	54	Upstage Left & Centre
12		"	54	Upstage Right & Centre
13		3 × Fresnel	7	Vertical
14		"	61	"
15		Fresnel	Optional	Special
16		"	"	"
17		Fresnel	54	Upstage Left & Centre
18		"	54	Upstage Right & Centre
19	Bar II	2 × Fresnel	7	Vertical
20		Fresnel	61	"
21	Bar III	Batten	1	Flood Backcloth
22		"	13	" "
23		"	16	" "
24		2 × Fresnel	7	Vertical
25	Perch	Profile	Colour Wheel	Across Stage
26		"	" "	" "
27	Dips	For accessory and special lighting		
28				
29				
30				

N.B. "Left" and "Right" refer to actors' left and right.



# Theatre History and Architecture

**World Theatre—an illustrated history.** By Bamber Gascoigne. 340 pages, 31 colour, 290 black and white illustrations. Ebury Press, 1968. £3.50.

**The Development of the Playhouse—"A Survey of Theatre Architecture from the Renaissance to the Present".** By Donald C. Mullin. 186 pages, 292 illustrations, University of California Press, 1970. £7.00.

Bamber Gascoigne calls his book both an illustrated history of the theatre and a history of theatre illustrations. It is a success on both scores and, at £3.50, a bargain. In sumptuous coffee-table style (printed in Japan) the author has collected a wonderful array of every sort of pictorial material excepting playbills and ground plans. For the student of theatre architecture there are contemporary engravings and prints of every period of playhouse, and, equally valuable, a most literate and concise review of the style in those countries and periods that produced the different playhouses. Three omissions: first, the Cockpit theatre of Inigo Jones—the Carolingian link between pre-Commonwealth and Restoration theatre—which has recently been researched<sup>1</sup>; second, a proper emphasis on the influence on the seventeenth/eighteenth century proscenium and doors peculiar to the English playhouse of English acting and playwrighting; and third, any reference whatsoever to Terence Gray, the man who, at the Festival Theatre Cambridge from 1926 to 1933, put into practice many of the theories of Craig and made possible developments in open and end-staging techniques by Guthrie, Marshall and others.

There are three new contributions to the classic conundrum of what was the Elizabethan playhouse really like: first, the parallel between the theatre of Shakespeare and the theatre of his Spanish contemporary Lope de Vega by way of illustration of the

Iain Mackintosh

recently discovered and restored Almagro Theatre in Spain and of a ground plan of another (these are worth a book full of well timbered artist's impressions by Walter Hodges or Irwin Smith); second, the plans and drawings of the Schouwburg of 1637 in Amsterdam, house of Johannes de Witt; and third, discussion and illustration of the Nuremberg Fechthaus of 1627, an all-purpose theatre to house "all sorts of fencing shows, comedies and bear-baiting".

Donald C. Mullin's book is for the specialist—and that means any architect, client, theatre director or technical adviser who may build a theatre or part thereof. Being an American publication written by an American the book is expensive and at times heavy going. It is about proscenium playhouses<sup>2</sup> and so makes only quick reference in the last chapter to arena, thrust and end stages and, thank goodness, makes a well reasoned argument that it is the *architectural* demands of their very different auditoria that makes them incompatible. This displays the adaptable theatre building for the chimera that it is.

In the author's view the architect's job is not only to design a theatre which reflects the living tradition of a theatre company's style of playing and production but also to provide a space for performer and partner which will *enhance* the aesthetic experience of the latter. This is a serious survey, therefore, of the gradually changing aesthetics of design rather than a mere catalogue of decorative styles or technical innovations. And since the subject is the proscenium theatre the most interesting theme is how the true proscenium play-

house, where the audience's contact lies with the actor as Man, evolved into the picture frame stage, where the audience's contact is with the actor as part only of a Scenic Environment.

There are ten chapters: "Rome Revisited" to "Yesterday, Today and Tomorrow". The 292 illustrations, nearly all contemporary with the buildings, include a very high proportion of ground plans, sections and engravings of interiors as opposed to exteriors and scenic reproductions. Since the aim is to link text to contemporary visual records the chapter on Elizabethan Theatre is a failure—an offer to "reiterate some of the arguments and conclusions of the last ten years" omits altogether Hotson and his daring conjecture of arena stages and transverse houses. And Mullin's suggestion that Webb and Inigo Jones never completed the Cockpit has been refuted by Professor Glynn Wickham.

Elsewhere things go better, and the chapter on post-Commonwealth to pre-1830 English theatre is the best short review to date of the Restoration and Georgian playhouse but for the omissions of the restored Georgian Theatre, Richmond, Yorks, the renovated Theatre Royal, Bury St. Edmonds, and the much mangled Theatre Royal, Bristol. There is one illustration (Fig. 107), an engraving of the Adam Brothers' Covent Garden interior of 1775 which is incorrectly captioned as Shepherd's interior of the same theatre in 1772.

Play throughout is made of the pundits. Vitruvius' second century dissertation on theatre design, acoustics and "scene" building reads as dogmatically as an A.B.T.T. guidesheet and the disaster of the playwright/architect Vanburgh with the 1705 theatre on His Majesty's site shows how wrong the well-qualified expert can be. Then there is the triumph of Wagner as a theatre architect. Text and illustrations of the Bayreuth Festspielhaus of 1836 ghosted by Otto Buckwald, show this playhouse to be not only the first ever single-tier fan-shaped auditorium with perfect sight lines but also probably the most successful at solving the problems of how to

modulate the side walls of such auditoria rather than leaving them like the sides of a cinema, tube station or warehouse.

But perhaps Mullin is most interesting on the late eighteenth century and early nineteenth century French playhouses where men like Victor Louis and Ledoux made a breakthrough in design by ingeniously removing the pillars from the auditoria. This breakthrough later enabled less talented men to shift the bulk of the spectators from the sides which were close to the actors, towards the centre far away, on deep cantilevered shelves. The picture-frame stage was now possible, born of the new delusions of scenic grandeur coupled to the greed for getting more seats on to the same site. Heavy baroque decorations around the frame itself and around a few side boxes with ridiculous sight lines broke up the otherwise empty flank walls, walls that were in the earlier playhouses papered with people in a continuous encircling sweep. Nowadays this development is being consciously reversed. Perhaps the design of future playhouses may relate to those of an earlier period when the audience was not glued goggle-eyed to a picture frame of illusion but sat around three sides of a room *into* which the actor entered past stylised scenery or through real doors in the area where auditorium and playing area were subtly merged. And if a return is to be made to forestage entrances with encircling arms of shallow circles (vide the Barbican) then in the earlier chapters of Mullin's survey, those on French and Italian play or opera houses, the architect will find the subtle distinctions in sight and in sound between ellipse, circle, horseshoe, lyre and rectangle.

This is a book then for those who believe that the basics of theatre design have long been established. This is not a book for those who think old playhouses mere "curious collections of posts and upholstered boxes" and that new forms of theatres like soap or washing powder are endlessly "new", "revolutionary", "improved" or even "relevant".

And lest the reader believe that author and reviewer be the Peter Simples of theatre architecture, here is something more universal: a rather edited summary of Mullin's

<sup>1</sup>By Professor Glynn Williams ("Elizabethan Theatre"—a collection of Essays and Papers published in 1969).

<sup>2</sup>Rather strange, since Mr. Mullin's article "Some Guidelines for Theatre-in-the-Round" (TABS, Vol. 24, No. 3) was in our opinion the best article on this subject that we have ever read.—ED.



catalogue of Six Deadly Sins of theatre architecture. One, the error of archaeology often leading to geometric arcs of seating, the stiff and formal Greco-Roman plan that creates the reverse of the mood demanded by either contemporary dramatic events or the classic English repertoire; two, the errors of drawing board architecture, forcing theatres into squares, circles, trapezoids or hexagons; three, the lure of the mass audience leading to huge single tiers where those that are more democratic than others need telescopes; four, the mechanical magic box of the engineer, stupefying the audience by means of

lighting equipment, lifts and trucks where the optimum positioning of equipment outweighs the doubtful aesthetic effect of putting the audience in the middle of a maze of gantries, slots, etc.; five, theatre of sculpture where the external shapes seen on the covers of architectural or technical journals govern the interiors; six, theatre as the glory of the latest building skill—last century the iron cantilever, tomorrow geodesic domes or inflatable bubbles.

Perhaps the Editor of TABS will award prizes for placing certain recent and imminent (not necessarily eminent) British theatres into these categories?

## Stage Planning 1971

A TABS Publication issued free and post free by Rank Strand Electric.

The booklet *Stage Planning* which has run to nine editions and some 50,000 copies, has been revised yet again. This time the revisions have been extensive—one reason being that we have taken the opportunity to add a new chapter and to incorporate certain chapters from the booklet the late Stephen Joseph wrote for us, *Planning for New Forms of Theatre*. The result is sixty-two pages which cover the requirements of small scale theatres and halls both of the proscenium type and of the open stage variety. Pursuing the logic of the latter, namely the intention to provide close actor/audience relationship, we have concentrated in detail on the needs of theatre-in-the-round (centre stage or arena as it is sometimes called). But general advice is included on other open stage forms, particularly a warning as to the way scenery is liable to crop up in such theatres however strong the initial resolution to keep it out. The booklet of course makes the point that the proscenium theatre is the theatre for changeable scenery, and that in consequence the success of such a theatre must be judged by its ability to handle it.

An appendix deals with suggestions for seating, folding or retractable rostrums

where it is necessary to vary the purpose or the form of the hall, or where, as in a drama workshop, experiment is an essential part of the room's purpose.

All equipment described in the booklet whether lighting, curtain tracks and other stage equipment, drapes, retractable seating tiers and seating can be supplied and installed by Rank Strand, who also manufacture most of it.



## Romeo and Juliet at East 15

by Geoffrey Haley\*

East 15 Acting School is housed in a rather splendid Georgian mansion and it is set in five acres of land. The rooms of the house being of large dimension lend themselves well to the role of studios for mime, dance and speech, etc. "Hatfields", as the house is called, is in Loughton, Essex, quite close to Epping Forest. During my stay at East 15 there were approximately eighty students undergoing the three-year course and it was the third-year group that were presenting a production to the public of *Romeo and Juliet*, in their own theatre, the Corbett.

The theatre stands a little way from the house itself, and is in fact a delightful old Sussex barn dating back to the fourteenth century. The barn originally stood in the little village of Ditchling and it shows, I think, great courage and imagination on the part of East 15 that they moved the barn piece by piece to Loughton and re-erected it on the present site.

As money became available two dressing rooms were added at one end of the barn, plus two toilets and two showers. Above the dressing rooms, there is a small

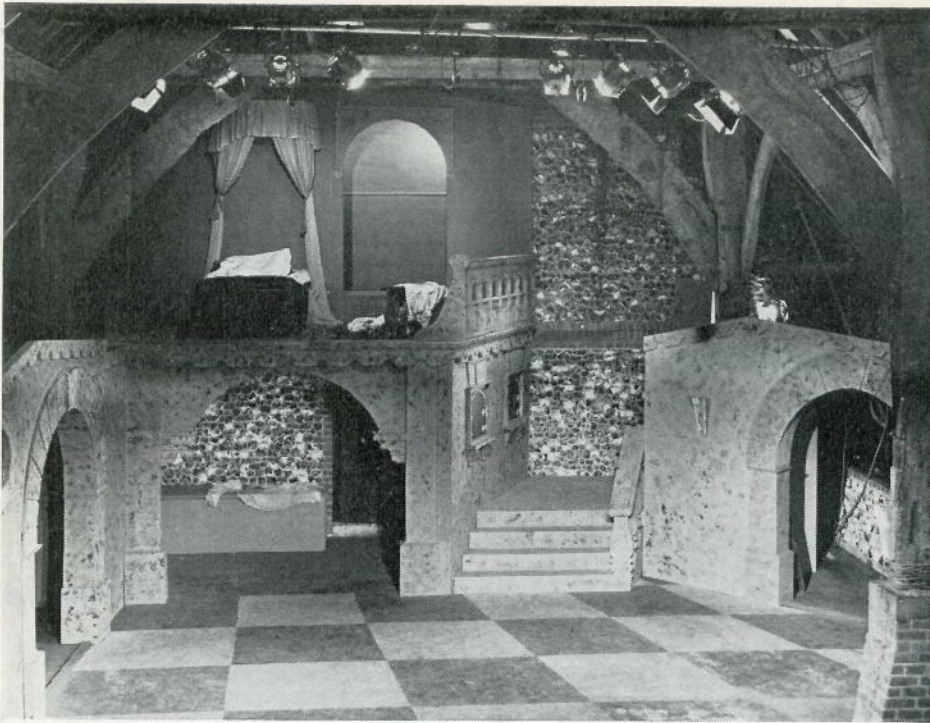
\*Geoffrey Haley is a freelance lighting designer and stage manager based in Bradford.

rehearsal room and on top of this, in the loft, there is room to store tabs, etc. The theatre will seat an audience of one hundred, the seating being on eight raised steps, so everybody has a good view of the acting area. A prop room is accommodated in the space under the seating. The main roof supports which are of timber stand in about 6 ft. from the outer walls and the stage area measures roughly 18 ft. between the pillars and the same in depth. In the middle of the back wall there is a set of double doors and these are repeated 9 ft. up the wall, and do in fact lead into the rehearsal room.

The foyer is attractive and inviting, with the ceiling beams left untreated apart from a coat of clear varnish, and the walls also in their natural state of flint stone. Comfortable seating is provided by low chairs of simulated black leather, there is a small cloakroom and the foyer is completed by a bar. The cost of the barn which was bought in 1965 was £1,000 and the total cost of additions to date comes to £31,000. There are plans for workshops in the future as and when money becomes available.

My role in the production was that of





Romeo and Juliet in the Corbett Theatre.

stage manager and lighting designer. It represented a big break from the more conventional proscenium type of theatre that I had been used to working in however, and the very shape and fabric of the barn lent itself enormously to the show in hand.

Rehearsals went on for a fortnight prior to opening and there was early consultation with Ian Taylor the director, a tutor at the School, Sally Cresser the costume designer, and Manfred Hilke the set designer, whose models helped a lot in choosing of lanterns and colours to be used. These were then committed to paper on a scale of half an inch to the foot. As many rehearsals were attended as stage management would allow.

The set was of a "multipurpose" design and it was roughly divided into two areas; a balcony of course and the main acting area down stage—this main area being

used for numerous scenes. The general colour was deep brown with amber. Down stage left and also down right there was an archway. To the front of the stage and to the right facing the audience there was a doorway which among other things represented the entrance to the tomb at the end of Act 5. Under the balcony it was possible to store props and a coffin and this area also served for entrances.

The switchboard and sound equipment were sited at the back of the auditorium, but as there was no way in which to communicate with the back-stage area one felt rather cut off from what was going on. The switchboard itself was of the screw-down bracket-handle type and dated back about 30 years or so. It is hoped that money is shortly to be available for a Rank Strand SP40, but speaking personally it would have been nice to have had it for *Romeo*.



Auditorium of Corbett Theatre at E.15.

The existing lighting was not really adequate for the task in hand, but I was fortunate in being allowed to hire additional spots making the totals shown in the lighting plan and schedule on page 67.

The layout of the rig ran thus: six Patt. 264s went out front, two of them being wide angle. As there was a lack of height they tended to come rather more flat on than one would have liked, so I set two of them closer to the stage and crosslit with them, thus providing some profile lighting. These two spots plus two at the back were coloured in No. 47 apricot. The remaining pair at the back were wide angle and, coloured in No. 5 red, were used to flood the stage giving what I call "colour additive". This type of lighting would have been better coming from the No. 1 bar, but this was not possible for a number of reasons.

There were four hanging bars including

one over what might be called the apron. On this bar were the Patt. 252 projectors, plus a pair of Patt. 233s in double 61 slate blue which were used exclusively for the tomb scene at the end of Act 5. The No. 1 bar consisted of two Patt. 223s and six Patt. 123s, the colours being a mixture of 3 straw and 51 gold; this bar was used to light the main acting area. Bar 2 had just two lamps on it, the pair of Patt. 243s in 5a deep orange. This was the back-lighting bar and was used quite a lot in the full up scenes.

The last bar, No. 3, had on it one Patt. 123 as an acting area, coming straight down on to the top of the steps; the rest of the spots on this bar (four Patt. 123s and two Patt. 23s) were used just for the balcony, the colours being a mixture of cool blues and slightly warmer pinks. As the balcony was already raised up by 8 ft. to meet up with some upper doors in the back wall, the



lens height was rather too low, being a mere 10 ft., but as the eaves of the roof were coming together at this point there wasn't a great deal we could do.

On stage a Patt. 223 in 47 apricot up left lit actors making exits and entrances. Down left there was another Patt. 223 in 3 straw; this was used for cross lighting and also, on very low check, to act as weak sunlight for a scene early in the morning. On stage right centre coming through the arch there was a wide-angle Patt. 264 also in 3 straw. This counterbalanced the stage-left Patt. 223, and these two lanterns helped enormously in the full-up scenes.



(left) Bar for bottles.



(right) Bars for F.O.H. spots

suggest intense warmth, coupled with a feeling of slight bawdiness, lots of food, wine and voluptuous women. There is a line in the text mentioning the heat of the room. To try and create this heat I used both the Patt. 243s on bar No. 2 on full back flood in 5a deep orange, then purely for illumination the No. 1 bar plus the F.O.H. which were virtually full up. To complete the picture and also to pick out the richness of the costumes, there was the "colour additive" of six red from the front, plus the side lighting. The reader may think that this all looked rather "Technicoloured" but in fact it worked out very well and the feeling of warmth and richness was achieved.

The six Patt. 137 floods were used for backings, i.e. three went under the balcony, one went down stage right behind the door facing the audience and the remaining two went up on the balcony backing leading into the rehearsal room. In line with the apron bar there was a short perch boom either side, each containing a pair of linked Patt. 23s and two single Patt. 123s. The Patt. 23s were in No. 9 light salmon and the 123s were in No. 61 slate blue.

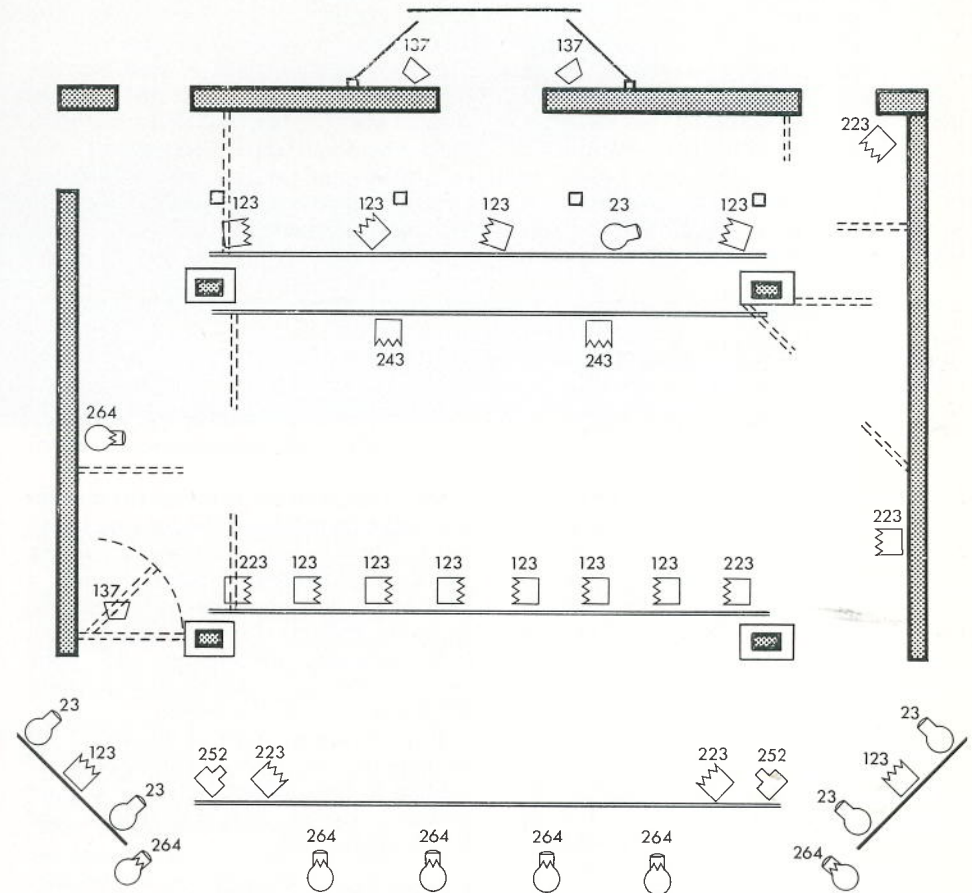
Certain scenes were fairly straightforward when it came to lighting—the market scene and Friar Lawrence's cell for instance. The banquet in Capulet's house had to

My favourite scene was the balcony scene with Romeo climbing over the orchard wall under Juliet's bedchamber. The scene opened in a blackout and then the projectors were gently faded in to full. The slides were painted to represent trees, branches and leaves thrown slightly out of focus so as not to be too distracting. The result was a rather nice hazy picture over the stage but not over Juliet's bedchamber.

The colour used in the projectors was again a mixture of No. 15 peacock and 61 slate, the overall effect being one of dappled moonlight through the branches. As already mentioned the bedchamber was lit in pinks and blues and produced, I think, a feminine, delicate, effect which contrasted well with the cool of the orchard. The only other lighting used in these scenes was the acting area Patt. 123

in double No. 17 steel, which caught Romeo as he stood at the top of the steps and under Juliet's window.

The tomb scene at the end of the play was lit from the apron bar by the pair of Patt. 223s, each covering the opposite side of the stage, the beam being contained by the use of the barndoors. The drugged body of Juliet was picked out gently in a double No. 17 steel from No. 1 bar. In



Romeo and Juliet Lighting Layout

Patt 123 500 W Fresnel	Patt 264 1,000 W Bifocal
Patt 223 1,000 W Fresnel	Patt 137 150 W Flood
Patt 243 1,000 W Fresnel	Patt 252 1,000 W Projector
Patt 23 500 W Profile	



addition there was also one perch spot from each side in blue to light the churchyard. All these lamps were well checked down, thereby helping to deepen the gloom and murk of the situation.

In certain scenes real fire torches were used and, although I was assured by everyone concerned that this was in order, I still felt that if a fireman had walked in he would have had a fit at the sight of naked flames and belching smoke. The torches were of a simple construction, being old baked-bean tins fixed to short poles. The whole was then disguised with wire fretting and the poles covered with lengths of sash cord to give them some body. There were several suggestions as to how the flames should be produced, but we eventually settled for fire lighters, which had a match applied to them just before an entrance. Needless to say there were fire buckets at various points around the stage—just in case. For a number of reasons

we didn't have all the torches (four in all) until the dress rehearsal and consequently they tended to play havoc with the low key lighting in the tomb scene. With practically all the cast on stage for the final few minutes, complete with blazing torches, I decided to just creep in two of the F.O.H. to help justify the amount of light from the torches. These spots were on point one. Although the extract fan had to be put on as soon as the audience had left the theatre, in fact the large amounts of smoke helped if anything to create a claustrophobic effect. The smoke also worked well in the banquet scene.

From a lighting point of view then the overall picture turned out to be quite close to what had been visualised. Naturally there were some scenes which didn't come off one hundred per cent, but by and large I found it a rewarding, satisfying and, for me, unusual experience.

## Television Lighting 2000 or even 1984!

K. R. Ackerman<sup>1</sup>

I will first of all assume that Television in the year 2000 remains a major medium of entertainment, information and education. I will also assume that lighting directors as a breed will still exist with their habit of making unreasonable demands on lighting technology, and that labour costs will continue to rise at an alarming rate.

The most important contribution to television lighting which can be expected long before the year 2000 will come not from the lighting engineer, but from the camera or camera tube designer. For we can confidently expect that in the next few years studio light levels will come down to 75 foot candles (800 lux), and there they can be expected to stop. So lighting 2000 can be said to be lighting 2000 watt rather than the 5000 or 10,000 watt of today. Then lighting directors will be able to concentrate on lighting as an art and not a struggle to provide illumination.

But to concentrate on his art the director will make demands on the lighting installation. These demands can be fairly simply stated. The lighting director requires a light of the type he wants, in the position he wants, with his choice of light distribution, intensity and colour. All these variables should be capable of adjustment by him at a touch of a button.

How far are we short of this ideal? Let us consider the three main aspects of lighting in turn, namely Intensity Control Systems, Lamps and Luminares and Positional Control.

### *Lighting Control Systems*

There have been impressive developments in dimmer systems over recent years both

<sup>1</sup> Mr. Ackerman has been actively engaged in the planning and installation of lighting and scenery handling equipment in BBC television studios for many years.



*Colour Television Lighting 1970—BBC Television Centre, London. View from studio floor.*

in Europe and in North America. The thyristor (SCR) has now superseded all the earlier types. You will remember the arguments over the relative merits of auto-transformers, magnetic amplifiers, thyatrons, and saturable reactors and others already forgotten or recalled with nostalgia. Computer technology now makes possible systems which can memorise the intensity of several hundred luminaires and recall them in 100 or more different combinations. Facilities for changing from one cue to the next by crossfading, adding, subtracting or substituting are readily available and the control panel can be admirably compact. Six of the BBC's main colour studios have been equipped with such systems.

You may well ask, what more could one want, have we not already reached the ultimate? I can't think of many facilities

which aren't available, but the limitation lies now in the mental agility of the operator who in my view should be, and in Europe normally is, the lighting director himself. I'm not suggesting that the lighting director is usually a moron, but he may have to think of the hoist number, the studio circuit number, the dimmer channel number, the intensity level number . . . when all he was really interested in was reducing the shadow on the chin of President Nixon, or improving the visibility of the cleavage of Goldie Hawn.

If we get rid of patch panels this number problem is reduced because dimmer number and studio circuit number become the same, and I don't mean that you should turn your lighting grids into outsize patch panels, but instal one dimmer per luminaire, then we are part way there. With the cost of thyristor dimmers still falling and with





Colour Television Lighting 1970—BBC Television Centre, London. View from studio gantry.

computer memories eliminating the problem of the size of the desk, this step is already possible. In fact in the BBC studio in Glasgow, which is just being completed, we found that the extra dimmers required cost little more than the patch panel itself so we eliminated it and solved at the same time a dimmer room space problem.

So lighting control systems have made impressive advances, but the lighting director is not primarily concerned with the elegance of the machine, but with the pictorial result. Is it too far fetched to propose that by the year 2000 he will be able to "paint" his picture on the face of a picture monitor with a "light pen", adding a little pink here or softening an unflattering nose shadow there.

#### Lamps and Luminaires

If we continue the argument that hardware is an obstacle, a frustration which gets between a lighting artist and his art; we should not be looking for more and yet

more varieties of ever more sophisticated lamps and luminaires, but for the universal instrument which can be spotlight or soft-light, profile projector or effects projector. Once more it can be claimed that significant progress has been made in this direction. Virtually all BBC colour studios are equipped with a multipurpose luminaire which can be spotlight or softlight 2½ kW or 5 kW, changes being effected by means of a pole. Not fingertip control perhaps, but a measure of remote control at least. By changing the lamps the range can be further altered to 1¼/2½ kW. But colour can only be added by fitting cumbersome colour frames to selected luminaires and adjustment of barndoors is still by "bashing" them with a pole. Also specialist luminaires in small quantities are still required for profile projection and effects projection. So there is still plenty of scope for the ingenuity of the luminaire designer. Lamp technologists have also made important contributions to these advances.

Tungsten halogen lamps with their constant colour temperature through life, and small size are today almost universal, and twin filaments in these small envelopes have added enormously to their versatility. If discharge lamps with their high "efficacy" are to be widely adopted in the television studio then they must be capable of dimming, instant restriking, require a negligible amount of control gear and of course be inexpensive. And while I am throwing out challenges to the technologists, when will someone design a non-fading colour medium or filter which can stand up to really high temperatures?

#### Positional Control

Let us restate the aim. "A light in the position he wants, of the type he wants at a touch of a button." Well, if we have the universal luminaire the type is no problem; but position clearly is. Other people want to use the studio space—cameramen, actors and scene designers to name but a few.

So there's not much of the floor left for us. We've also got to share the overhead space with flown and suspended scenery. It's not surprising that there are almost as many suspension systems as there are studios. It's my view that any system which claims to be appropriate for today, let alone the 1980s, which is not motor operated and which does not include power operated hoisting facilities for scenery is damned as inadequate.

BBC main colour studios are all equipped with electrically hoisted bars which vary between 4 and 8 ft. in length and the longer ones have our "Universal luminaire" suspended on pantographs to permit individual height adjustment. Each luminaire can be panned, tilted, focused and moved along the bar by means of a pole, and this same pole can change it from softlight to spotlight or from 2½ to 5 kW. Between the rows of lighting bars

are tracks in the grid in which run trolleys with load hooks powered by electric motors and used for scenery suspension.

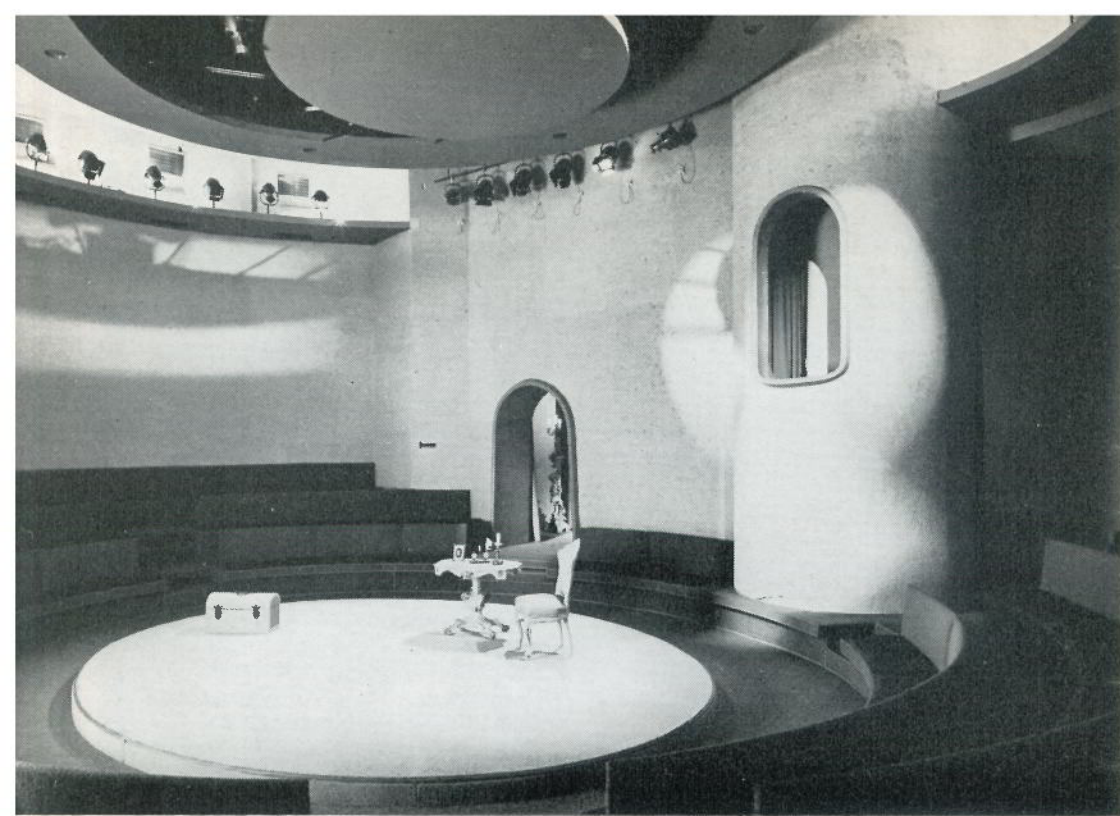
Ever since Sol Cornberg equipped a studio in New York in the early 1950s in which the pan, tilt, and focus of the luminaires was by full remote control, studio lighting planners have talked of this as the ultimate aim. Apart from problems of cost and reliability, without full control over the barndoor the whole exercise seemed unjustified. Recent developments in Europe and the U.K. suggest that many of these problems are on the way to solution. It is possible that after years of extreme technical conservatism it will be the film studios which will be the first to adopt this development and not television where most of the pace setting has occurred in recent years.

The ideal positional control system then is a motorised point suspension with horizontal traction and fitted with a Universal luminaire with remote control of all its functions including colour change. Without doubt should this Nirvana be achieved a computer would be required to instruct these automata where to go and what to do. So all the lighting supervisor would have to do would be to feed in his lighting plot. But then drawing up lighting plots is a tedious business. Why not . . . !!??

It's time somebody brought me back to earth. Television lighting is there for the programmes and not to provide a lighting engineer's dreamworld. Perhaps we would have done better investing all this money in training better lighting directors, for in these days of "cost benefit analysis" isn't that the most promising way of providing a better product for the customer—the viewer?

*\*The author would like to thank the Director of Engineering of the BBC for permission to publish this article.*





## Narodno Pozoriste, Belgrade

*J. T. Wood*

Readers will recollect that in our September issue of TABS (Vol. 3 No. 28), we illustrated the visit of a party of engineers from those attending the D.Th.G. Conference in Ulm in July 1970. During that visit and afterwards at the Conference itself, a young Yugoslav engineer discussed the plans of a theatre-in-the-round which was being constructed in Belgrade and which was due to open in the autumn.

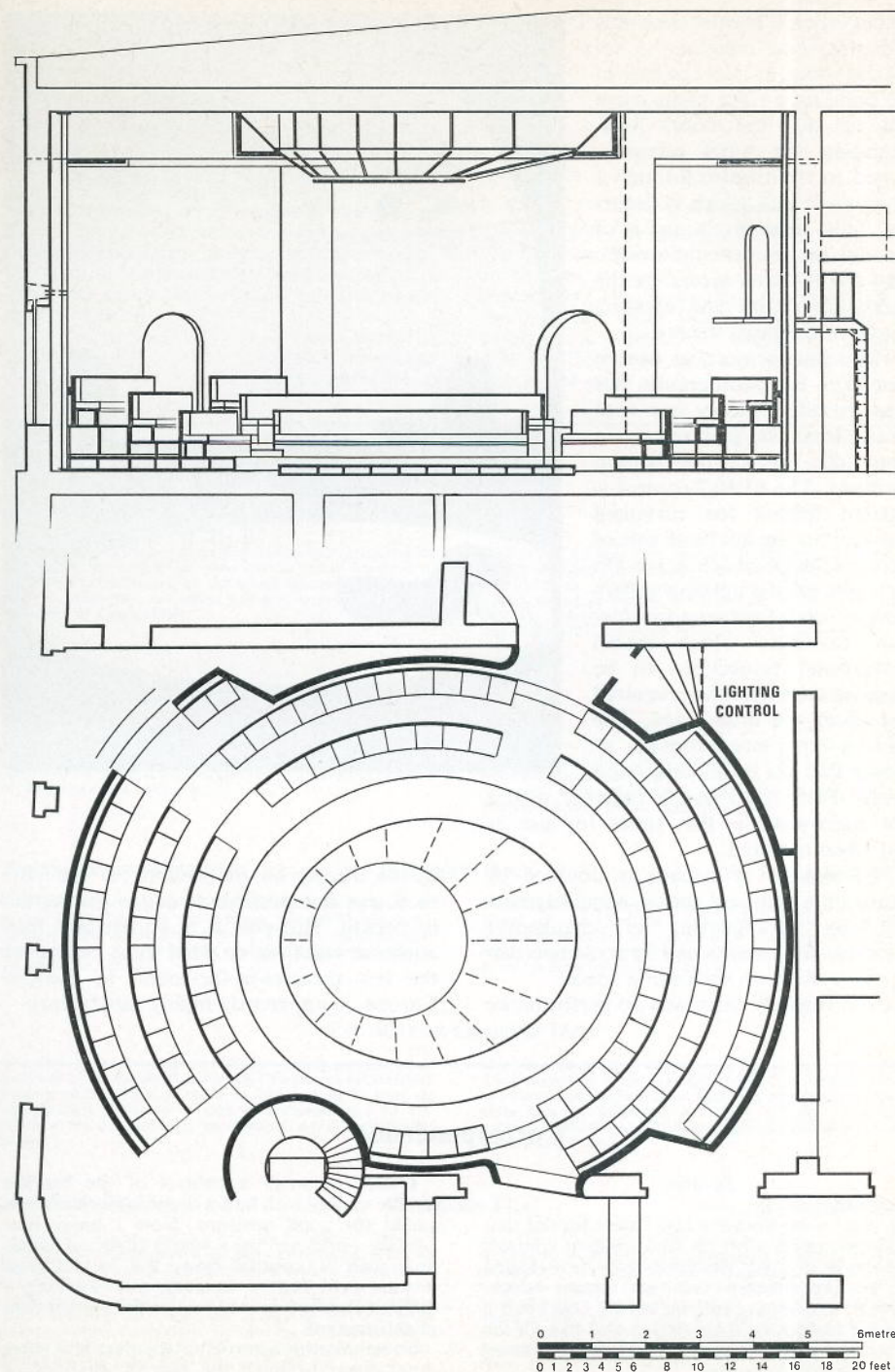
In the original design he had proposed normal 1kW and 2kW focus spots as the use of profile spots had not been appreciated. A visit to our demonstration area soon caused the plan to be modified con-

siderably and a new layout was readily agreed using 500 watt units throughout.

It says quite a lot for State control and buying when red tape can be cut to enable the equipment to be chosen, ordered, delivered and installed in time for an October opening but in fact this occurred.

We had little information as to the building itself, but fortunately the author had the chance to visit Belgrade recently and was able to see the actual results and also to persuade the engineer, Mr. Marcovic, to send some photographs which are reproduced in this issue.

The theatre which seats 102 forms part



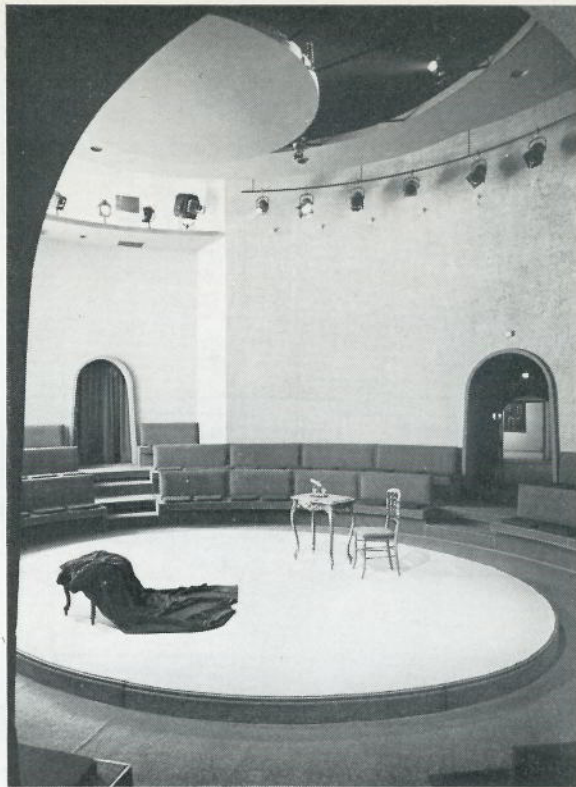


of the National Theatre ensemble and was, one imagines, a rehearsal room. It is at the rear of the building on the main street and on the first floor. After ascending the stairs access is gained to the theatre through a large crush hall which is decorated most attractively and is of similar size to the auditorium. The artists have access to the back-stage rooms and dressing rooms of the large theatre.

The whole project, as can be seen from the photographs, has been executed simply but with great effect. The pictures give a clear idea of all the lantern positions. The SP40/2 control is situated behind the curtained archway on the left hand side of the view shown on our cover. On each side on the lighting gallery there is room for two projectors with carousels which enable background projections to be made on the walls when required and these are often used. The lighting equipment consists of twenty Patt. 23 profile spots and twenty Patt. 123 Fresnels together with a few narrow-angle lens tubes for use as and when required.

The number of circuits is doubled by means of a plug and socket panel together with an arrangement of changeover switches. All circuits end in sockets either on the walls or in the ceiling space.

Unfortunately there was no performance



## Correspondence

### Lovable

Dear Sir,  
It's nice to see from the last TABS editorial that someone agrees with me that lighting controls need to be lovable. Modern boards have tended to be like modern cars and trains—sleek, efficient and totally lacking in fun. One visits a theatre and looks at the board and like all the others it's a grey—or worse still green—enamel desk, totally unlovable.

I used to work a control of the bracket handle variety with half a dozen slider dimmers added for good measure. Now I know that nobody—not even me—would advocate installing such a control now, but nevertheless it was great fun to operate, and working a difficult show on it used to give me a great deal of satisfaction.

Somehow the controls of the past few years don't seem to have the human qualities of

in the theatre on the evening of the visit so it was not possible to judge the results in person. However it is understood that audience reaction, to what must be one of the few theatres-in-the-round in Eastern Europe, is apparently highly satisfactory.

those of ten years ago. Recently I visited a theatre with a CD; every now and then the desk is polished and pulled out to dust round the back. How many SP controls, say, are treated thus. That board was treated rather as one might treat a family retainer of some length of service.

I look forward to meeting your lovable computer. If your promises are kept, it will be the first computer-type machine I have looked forward to meeting on anything other than the purely practical level. Why not start a trend and put it in a nice wooden cabinet instead of a metal or, much worse, wood grained plastic one.

Yours sincerely,  
PHILIP L. EDWARDS  
Northolt, Middlesex.

### Circling the Square

We would like to apologise to Alfred Emmet of the Questors Theatre, Ealing, for the fact that in the last issue of TABS we spelt his name incorrectly. This is all the more sad because in the very letter which accompanied his presentation copy of that magazine the "m"s and the "t"s bore their just relationship the one to the other.

## Synopses

### Brief Encounter

Les centres artistiques avec des auditoriums ajustables présentent des problèmes dans les meilleures conditions, mais c'est actuellement un des sujets favoris de these des futurs architectes; les plans entrent nettement dans le domaine de l'impossible.

Hallen für Aufführungen und Ausstellungen aller Art mit mehrzweckigen Zuschauerräumen sind sowieso schwierig zu entwerfen. Wenn aber, wie es neuerdings öfter vorkommt, derartige Baupläne als Thesen für das Abschlussjahr im Architekturstudium aufgegeben werden, so grenzt das offensichtlich an den Bereich der Unmöglichkeit.

### Chromatiques

L'auteur de plusieurs commentaires sur les imperfections du béton brut critique ici l'architecture froide de plusieurs bâtiments scolaires et universitaires, qui en optant pour la fadeur du blanc et du gris ignore la variété et la richesse de la gamme des couleurs.

### Chromatics

Der Verfasser, der sich oft über die Defekte von Sichtbeton ausgedrückt hat, kritisiert jetzt die Gefühllosigkeit der Bauart vieler Universitäten und Schulen. Es wird hauptsächlich das nüchterne Weiss und Grau gewählt und die Mannigfaltigkeit und Lebhaftigkeit, die der Farbigkeit zugehen ist, wird ignoriert.

### Chromatik

### Fonctionnement impossible

L'éditeur implore le cher lecteur d'examiner la question avant de déclarer un jeu d'orgue "incapable de fonctionner". Peut-être demande-t-il à son "malade" non seulement de prendre son lit et de marcher, mais encore de sauter et s'envoler.

### It Doesn't Work

Der Redakteur fleht den geneigten Leser an, zu überlegen, bevor er ein Stellwerk als unbenutzbar betrachtet. Vielleicht erwartet er von seinem "Patienten" nicht nur, dass er sein Bett nimmt und wandelt, sondern sogar dass er in die Luft springt und fliegt.

### Es funktioniert nicht

### Per Adua ad Cavum in Terra

Les plans pour le nouveau théâtre à scène ouverte pour musique et drame de l'Université d'Essex ont été dessinés pour combler l'espace entre la librairie et le mur de soutènement d'un lac. Il sera non seulement à la disposition de l'Université, mais aussi de la population locale.

Der Plan des neuen Theater für Musik und Drama für die Universität Essex mit 220 Sitzen und offener Bühne soll eine Lücke zwischen der Bibliothek und der Stützmauer eines Sees ausfüllen und soll nicht nur der Universität dienen, sondern zur Beteiligung der Einwohnerschaft der Umgebung führen.

### No Bloody Flys

Le théâtre "Gate"—célèbre rival de l' "Abbey Theatre" de Dublin—a été équipé à nouveau et restauré. C'est un site très étriqué et ce fait, joint au besoin de préserver le bâtiment tel qu'il était au dix-huitième siècle a rendu impossible l'installation d'un cintre dans les dessus lequel toutefois est amplement compensé par le charme et l'atmosphère de l'endroit. En tout cas le "Gate" n'ayant jamais en de dessus ne remarquera guère leur absence après s'en être passé voici déjà quarante ans.

### No Bloody Flys

Das Gate Theatre, der berühmte Konkurrent des Abbey Theatre in Dublin, ist unlängst wiederhergestellt und neu ausgestattet worden. Wegen Platzmangel und weil das Gebäude im Originalstil des 18. Jahrhunderts erhalten werden sollte, war es nicht möglich, einen Schnürboden einzurichten, aber dessen Abwesenheit wird ausgiebig durch den Charme und die Stimmung des alten Hauses ausgeglichen. Da das Theater in 40 jähriger Existenz nie einen Schnürboden besessen hat, wird man ihn wohl auch jetzt nicht vermissen.

### Was, kein Schnürboden?



## Eclairage théâtrale 2000: vue personnelle

M. Bentham examine les progrès réalisés au cours des trente dernières années dans l'éclairage scénique et leur influence probable dans les trente prochaines années. Il incite les nouveaux experts de l'éclairage à ne pas s'arrêter aux tendances des découvertes techniques actuelles, mais de voir ce qui est souhaitable dans ce domaine et d'exercer tout leur pouvoir le réaliser.

## Theatre Lighting 2000

## Bühnenbeleuchtung 2000, eine persönliche Ansicht

Frederick Bentham macht sich Gedanken über den Fortschritt der Bühnenbeleuchtung in den letzten 30 Jahren und den Einfluss, den die nächsten 30 Jahre auf diese Kunst ausüben konnte. Er fordert die neuen Beleuchter auf, nicht einfach den Tendenzen der neusten Erfindungen zu folgen, sondern sich zu überlegen, was auf Gebiet wünschenswert ist, und dieses nach bestem Vermögen zu fördern.

## Recommencer à zéro

Au milieu de diverses réminiscences, l'auteur présente un plan d'éclairage à usage multiple, avec 30 circuits ( $\times 2kW$ ) de gradateurs de lumière, capables de satisfaire les diverses exigences d'une scène à multi-usage avec un minimum de modifications. Après chaque représentation, le tout retourne à la position première et est prêt pour la prochaine séance

## Square One

## Immer neu anfangen

Der Verfasser erklärt seinen Vorschlag für einen vielzweckigen Beleuchtungsplan mit 30 ( $\times 2 kW$ ) Verunkelstromkreisen, der imstande ist, den verschiedenen Möglichkeiten einer mehrzweckigen Bühne mit minimalen Änderungen gerecht zu werden. Nach jedem Stück wird alles wieder zum Originalzustand zurückgewandelt und dann ist das Gerät beim nächsten Stück zum Neuanfang bereit.

## Lu pour vous

Deux ouvrages sur l'histoire du théâtre, abondamment illustrés, sont passés en revue. L'un est une étude américaine sur le théâtre d'avant-scène par M. Donald Mullin, l'autre une étude moins esotérique sur le théâtre par M. Bamber Gascoigne. Dans ses commentaires détaillés, le critique donne libre cours à sa façon de voir.

## Theatre History and Architecture

## Kritiken

2 Werke über die Geschichte des Theaters, beide vielfältig illustriert, werden behandelt. Donald Mullin's amerikanisches Buch über Prosceniumtheater und Bamber Gascoigne's weniger esoterischer Überblick werden so gründlich durchgenommen, dass die Ansichten des Kritikers reichlich zum Spiel kommen.

## Roméo et Juliette par East 15

## Romeo and Juliet at East 15

## Romeo und Juliet bei East 15

Une grange du 14<sup>e</sup> siècle, transportée du Sussex, sert de théâtre à l'East 15 Acting School à Loughton (100 places). L'auteur et directeur général de la récente production "Roméo et Juliette" décrit quelle a été sa contribution en tant que dessinateur de l'éclairage, dans un cadre aussi pittoresque.

Eine von Sussex transportierte Scheune aus dem 14. Jahrhundert dient der Schauspielschule East 15 als Theater in Loughton in der Grafschaft Essex. Es hat 100 Sitzplätze.

Der Verfasser, der Regisseur beschreibt, wie er in diesen eigenartigen Milieu die Beleuchtung für das vor kurzem aufgeführte Stück Romeo und Juliet ausgeführt hat.

## Éclairage de Télévision 2000 ou 1984!

Le directeur d'éclairage exige une lumière du type qu'il a besoin dans la position désirée dans son choix de distribution de lumière, d'intensité et de couleur. Toutes ces fonctions lui devraient idéalement être disponible par le contrôle de son doigt. Le rapport discute la différence entre la réalité actuelle et l'idéal proposé et donne des exemples de l'usage et de technique d'éclairage dans les studios de BBC.

## Television Lighting 2000 or even 1984!

## Beleuchtung beim Fernsehen 2000

Der Beleuchtungsdirektor braucht an Beleuchtung genau den Typ, die Stellungen, die Lichtkegel, die Intensitäten und die Farben, wie sie ihm am besten dienen. Idealerweise sollen all diese mit Fingerspitzen steuerbar sein. Dieser Report zeigt, wie weit wir noch von diesem Idealzustand entfernt sind und beschreibt die jetzige Arbeitsweise und Beleuchtungstechnik in den Studios der British Broadcasting Corporation.

## Narodno Pozoriste, Belgrade

Description d'un petit théâtre en arène qui fait partie de l'ensemble du Théâtre National à Belgrade. De cent deux places seulement et ayant fréquemment recours à la projection, c'est là probablement un des rares théâtres de ce genre dans les pays de l'Est.

Ein kleines Theater wird beschrieben, das eine ganz runde Bühne besitzt. Es gehört zum Nationaltheaterensemble, hat nur 102 Sitze und gebraucht viel Projektion. Es soll wohl eins der ganz wenigen derartigen Theater in einem östlichen Land sein.

## Courrier

Affection. Dans le domaine des contrôles de l'éclairage, l'auteur commente les nouvelles tendances.

## Correspondence

Ein Beitrag über die wachsende Einstellung gegenüber Lichtsteuergeräten und Erinnerungen über vergangene Zeiten.

## Korrespondenz