

# TABS

SEPTEMBER 1968 VOL. 26 No. 3





Cover picture: Theatre at Mull, photograph 'Scottish Field'

## Editorial

The telly is too good	..	..	..	..	..	..	2
The five extra bits in the bush	..	..	..	..	..	..	3
Look here upon this picture	..	..	..	..	..	..	4
Novel Adaptability in the City by Roderick Ham	..	..	..	..	..	..	5
Slainte Mhath in Mull	..	..	..	..	..	..	10
The Vandyck Theatre, Bristol University by Peter Woodham	..	..	..	..	..	..	12
Stage Lighting in the 19th Century by Brian Legge	..	..	..	..	..	..	17
Stage Lighting and Theatre by Frederick Bentham	..	..	..	..	..	..	24
Book Reviews	..	..	..	..	..	..	34
Correspondence	..	..	..	..	..	..	36

## The telly is too good

Your Editor was reflecting after yet another visit to Germany on the curious disparity between the number and scale of the theatres built in Germany and in what is, even in these days of Scots and Welsh nationalism, referred to as the United Kingdom. Projects for theatres abound but how few have been built. Of course we as a country are short of money, but what nonsense this is as a reason for not building theatres. We all as individuals suffer from a lack of money but this does not prevent us from having those things we are most keen on. The amateur photographer gives up something to obtain his camera, the hi-fi enthusiast manages to practise his obsession, even the week-end motorist has and uses his car although all the scales are weighted against him.

Why is it we cannot afford theatre in Britain, that so many of our towns and cities whether ancient or modern have no theatre or even a cinema? Take the average new town, what do you find?—

an architectural precinct or two containing a Chinese restaurant and a Wimpy bar with a smell of reconstituted onions and musak. No cinema, but perhaps a stage in the multi-purpose hall of the technical college. Nothing to do after dark but to perambulate the precinct which since it was planned all of a piece soon holds no surprises. Is it a wonder that everyone rushes home to be glued to the telly?

Only at Billingham in Yorkshire is there any example of the kind of thing we ought to be building all over the country. There at least there has actually been built, not just talked about or exhibited as a set of plans or an ingenious model, but actually built and working—a glorious sports centre with restaurants and a theatre. For a £5 family subscription there is something for everyone, somewhere it is fun to go to. Why do not other towns provide these things? The simple answer is because most people are quite content to go home to the telly. Why are they content to go home to the telly? Here again the simple answer is that it is so good. What, those three programmes? Yes, you just try looking at television elsewhere—America for example—and you will soon see why people there think there are better things to do.

## The five extra bits in the bush

For many years now virtually all television viewers have been accustomed to seeing a travesty of the transmitted pictures. In any article in TABS which made any reference to studio lighting for picture quality your Editor had promptly to add a footnote that the picture referred to was the one on the studio monitor and not that on the set at home. The missing feature on which so much depended was a stabilised black level and at last the firm of Bush has been advertising the fitting to their sets of the extra electronic circuit to provide a black level clamp.

Before we go on it may be necessary to state that neither Strand Electric nor your Editor have any financial connection with Bush whatever; we do not even sell TV sets—it is a tale with a true TABS moral we set out to tell. To get on with it. Without this extra circuitry the blacks in the picture vary in an erratic manner. In a so-called blackout or in dark night scenes the picture goes grey. The only time a real black appears is when the picture contains roughly the same amount of white as black somewhere or other. A Bush set with this circuit was picked out in the C.A.'s *Which* report as giving an outstanding picture though they went on to say that the sound was poor. Both remarks your Editor finds to be true, for he possesses that particular model. Now the sad thing is that the extra expense involved is comparatively slight when compared with the cost of the set, yet apparently makers believe that in today's competitive world they dare not risk it. They go on to claim that people do not complain or demand the black level or better sound. Strangely enough this seems to be true. Except for the experts people say they get a marvellous picture and it sounds fine. Like the modern menu the conditioning



began with the printed word. It is not necessary for the product in question to carry out the promise.

Of course it may be said that there are no absolute standards to apply when judging the taste of roast chicken or the quality of its picture and its sizzling sound when it appears on television but what of more practical down-to-earth matters? Chromium plating is a marvellous method of *protecting* metal. No modern car owner can believe this—for him chromium is something that needs protecting. Rustproofing also passes his machine by and he cannot even rely on that well-known metal protector “paint”, for the coats of paint are so thin that they need something to protect them.

We cannot put this right in TABS but is there something in our own line which shows the insidious results of the competitive rat race? The answer, of course, is that there is. For example, the absurdly short lantern tails of 2 ft. 6 in. These are never long enough. But the addition of a couple of shillings could cause the loss of an order for hundreds of spotlights—alas! In competitive tendering for the common bread and butter lines who is there in the town hall, or wherever, to make a stand for the extra two feet—only the real user at the top of a ladder will ever know what those two feet can mean.

### “Look here, upon this picture, and on this.”

*Daily Mail*, 29th April 1967.

This deplorably misconceived production of *The Flying Dutchman* looks no better now than when it was booed last season.

Sean Kenny's electrically-driven raft poses more problems than it solves, the Dutchman arrives by Polaris submarine and the essential contrast of Senta's cosily domestic habitat is scarcely suggested.

*The Times*, 17th May 1968

... pleasure at seeing a *Gotterdammerung* that is truly lit (by Charles Bristow) rather than darkened—including Norns who visibly wind their skein of rope...

To have brought off so convincing a *Gotterdammerung* on a stage no larger than that of the King's Theatre, Glasgow, is more than a triumph; it is a miracle.

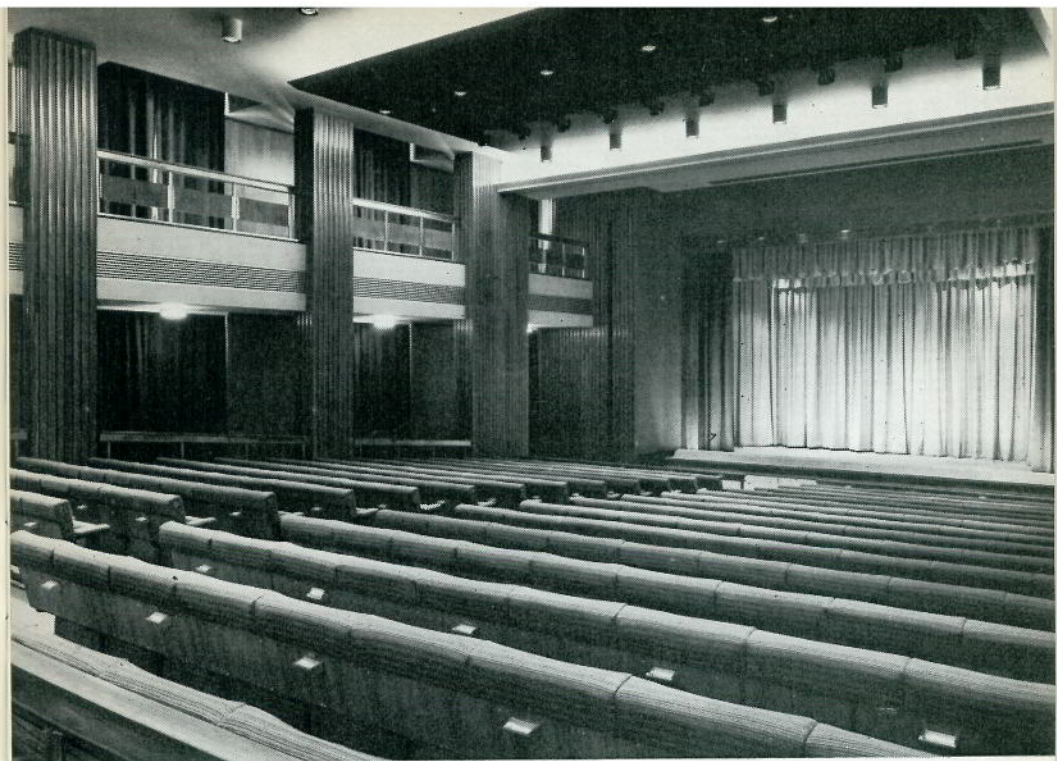
*The Observer*, 30th April 1967.

Clifford Williams's controversial production of *The Flying Dutchman* was revived at Covent Garden on Friday, looking, to those of us who were seeing it for the first time, surprisingly uncontroversial and unexceptionable.

Sean Kenny's designs, which I have heard described in abusive terms, are clear, bold and effective. . . . From the purely visual angle, it seems an impressive realisation—in every sense of the word—of an essentially realistic opera.

*The Observer*, 18th May 1968

Michael Knight's sets cramp an already small stage and their vaguely modernistic shapes seem singularly unevocative, particularly when exposed under the all revealing glare of Charles Bristow's lighting.



## NOVEL ADAPTABILITY IN THE CITY

by Roderick Ham, A.R.I.B.A., A.A.Dipl.

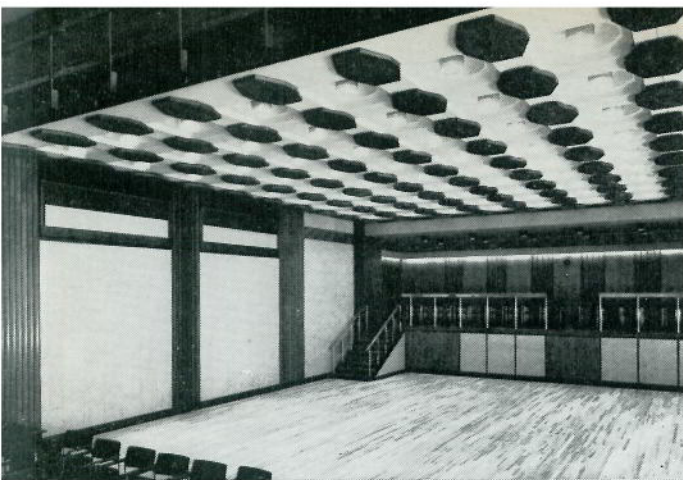
Much as we would like to see all theatres purpose designed as such, with perfect sight lines and a carefully considered audience to stage relation, there will always be a demand for halls where all kinds of activity can take place, including amongst many others, theatrical presentations.

Schools, villages and small towns can seldom afford more than one hall where they expect to be able to hold dances, jumble sales, speech days, whist drives, banquets, film shows, concerts and the occasional play. Reconciling the conflicting demands of all these different functions within one space is a task which usually forces agonising compromises. The theatrical use of the hall, though it may not be the most frequent, is certainly the most exacting and it is this use that suffers most from the compromises which have to be accepted.

The great stumbling block is the flat floor necessary for so many purposes but which kills any hope of the hall working even passably as a theatre. Reasonable sight lines are such an essential part of watching a performance that some attempt must be made to provide raised seating in any space that claims to be suitable for stage plays.

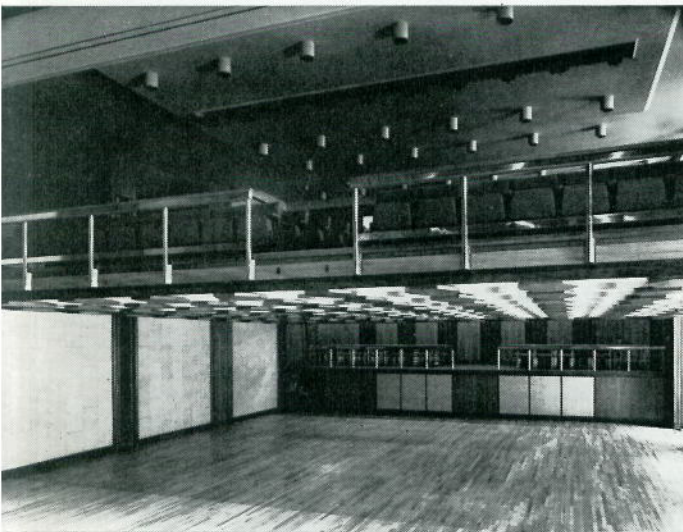
Various mechanical methods have been devised to convert flat floors into raked seating and some have actually been built. Probably





*Hall into Theatre  
in three.*

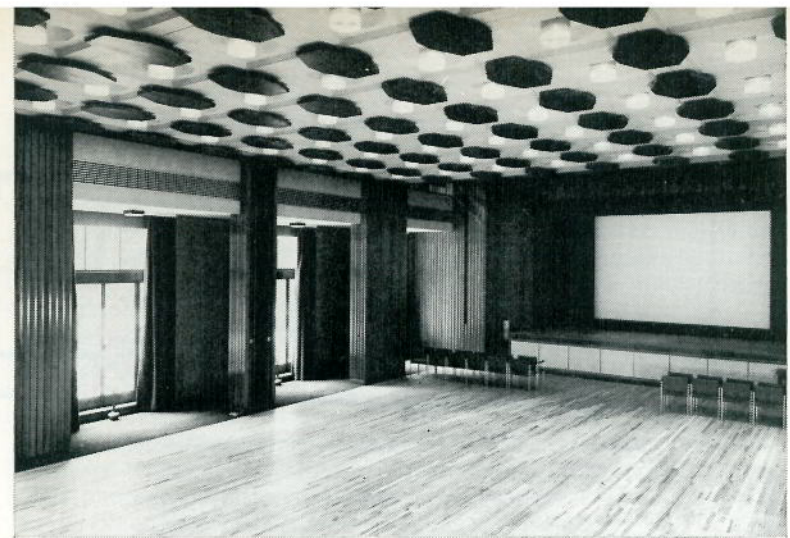
*Fig. 1*



*Fig. 2*



*Fig. 3*



*Fig. 4*

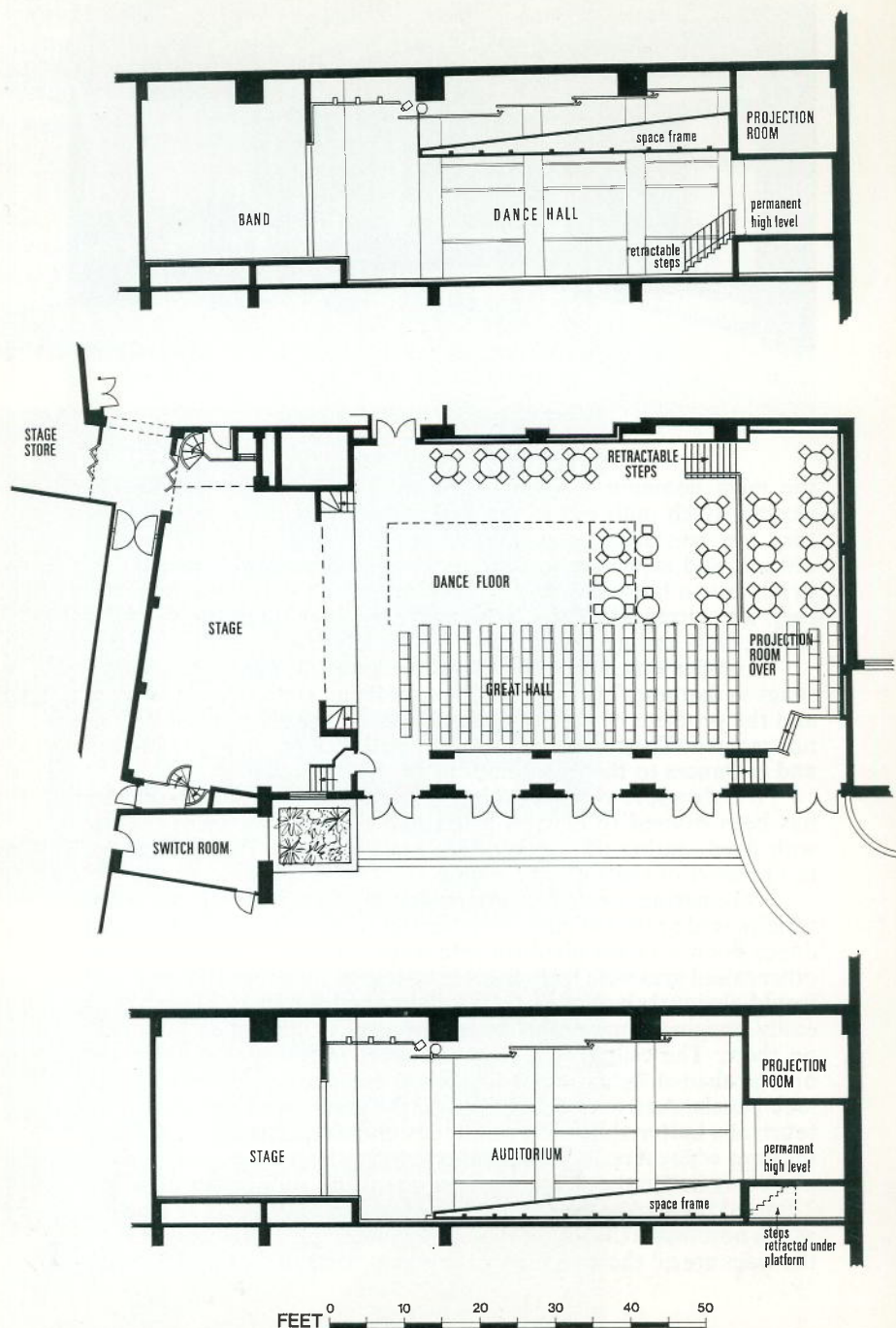
the most common method is the use of some form of bleacher seating which pulls out of the wall. When these are merely benches they are reasonably economical, but not very comfortable. It is difficult and expensive to fold away really comfortable seating and in any case a fair amount of space is taken up by the bleachers when they are retracted. They have probably been most successful in school halls and gymnasias.

Another way is to make the whole floor tilt, but there are many snags to that one. There is the labour of fixing all the seats afterwards and the problem of providing storage space for them when they are not wanted. Then there are the difficulties of providing safety rails and entrances to the raked floor at the right levels.

It is therefore very refreshing to find that an entirely new method has been devised to convert a flat floored hall into an auditorium with fixed seating on a rake. This has been done in a private hall in the heart of the City of London.

On entering, one's first impression is of a typical municipal hall which could be part of many civic centres (Fig. 4). There is a flat maple dance floor, a raised platform with stage curtains at one end and another raised area with steps leading up to it at the other end (Fig. 1). It would obviously be very useful for dances and banquets, but one could easily imagine some unfortunate company struggling to put a play on there. The ceiling is a somewhat elaborate coffered affair with orange shaded lights in each coffer and a pattern of coffin-shaped teak panels. And here lies, or hangs, the great secret, because at the touch of a button this whole ceiling descends (Fig. 2) in eight minutes to the floor where it rests on the timber panels which are pads with shock absorbers inside them. On top is revealed the auditorium floor with 270 fixed tip-up seats raked from the front to meet the rear platform which now forms the rear of the auditorium (Fig. 3). The balustrades at the sides are all there with only a few gaps to be slotted in. The balus-





trade which edges the rear platform now sinks down so as not to interrupt the sight lines at the back. Just about everything that can be mechanised is. The steps which led to the rear platform have already disappeared under power and there are two boxes, or a minstrel gallery, which can move out from the wall about three feet. Curtains and light-tight blinds are all motorised. The lowering of the auditorium floor reveals a projection box for films and a small gallery where another 12 people can sit.

The thin end of the wedge near the stage has a balustrade running along its edge which now forms a rail to the orchestra pit, if such is needed. Alternatively, another 36 people can be seated in there.

The mechanism which raises and lowers the floor consists of four large screw jacks, normally hidden behind the wood panelling. In the photograph one of the jacks has been uncovered. The system was designed and installed by Mole Richardson Ltd. and Lift & Engineering Ltd.

Up to now, the hall has been used for a dance and film shows. Live performances have to wait for the dressing-rooms and stage ancillaries to be completed and these are part of the rest of the building which is still under construction. When used for films, one point was noticed which may crop up when live shows are staged. Some of the shiny surfaces, particularly of the balustrades which are of plate glass and stainless steel, can cause troublesome reflections. The glass of some of these has already been covered with clip-on textured fibreglass panels to eliminate this trouble.

The stage is well equipped but space is, of course, limited. There is a permanent revolve, retractable footlight trough (power operated), and a roller cinema screen. The main lighting control is front of house in the projection room and there is a supplementary lighting control back stage with closed circuit TV to assist in lighting for non-theatre occasions such as meetings and dances. In the centre of the City where site values are as high as anywhere in the world, if not higher, it is obviously sensible to make use of every inch of space and to install machinery to assist in achieving this end. There are not so many organisations who can afford mechanisation on this scale, and if space had been available it would be interesting to know whether two halls, one flat and one raked, could have been provided for a similar investment. This seems a very good solution in this particular instance, but it should not be the signal for a general "let's fly the auditorium movement" amongst those who want multi-purpose halls.

#### Multi-purpose Hall—City of London.

<b>Stage lighting circuits</b>	FOH:	20
<i>Control</i>	No. 1 Bar:	15
MGP/60 2 preset 14 group	Rear Bar:	5
85 kW Mains 240 Volts	Flys:	10
	Dips:	10

## SLAINTE MHATH IN MULL

Our cover picture is of the Mull Little Theatre, run by Barrie and Marianne Hesketh, seven miles from Tobermory in the Isle of Mull. Now in its third season it has formed a non-profit-making parent company, The Dervaig Arts Theatre Ltd., and also a fund-raising Little Theatre Club.

The policy is "first-class theatre, presented without compromise, to the very highest possible standard that can be achieved with the means available".

This year there are three distinct programmes—a total of seven plays—in repertory, the first of these is *The Tempest* and their newsletter says:

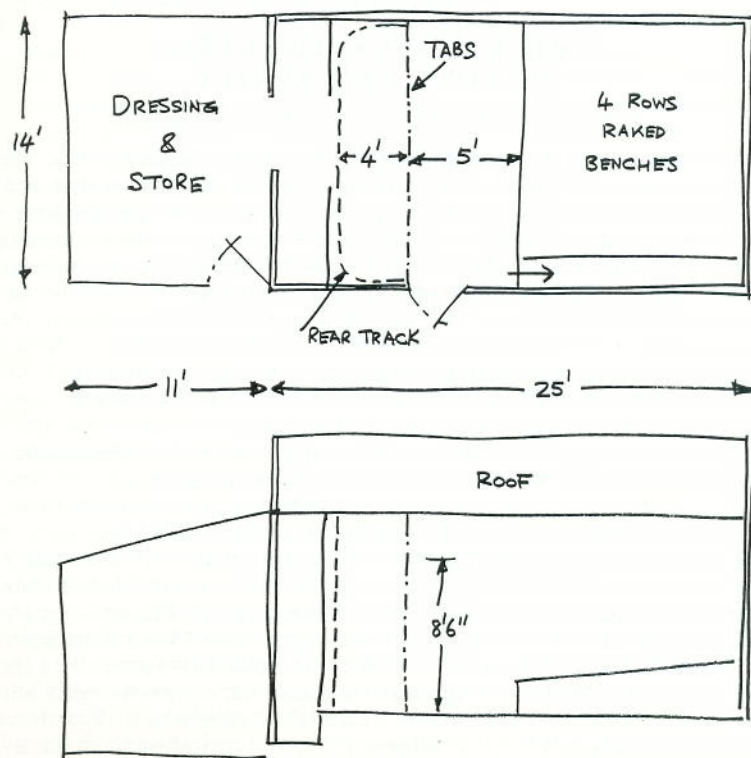
"*The Tempest* has been produced right from the start with the possibility of a tour in mind. A full company *Tempest* would obviously be an uneconomic proposition for small and widely scattered communities such as we hope to serve—but the play, as it were, displayed and adapted (though not at all severely cut in the process) for two actors only is a very different and much more practical cup of tea. In our version therefore Barrie plays the Boatswain, Gonzalo, Prospero, Ferdinand, Antonio, Sebastian and Alonso. Miranda is played by Marianne. Caliban, Trinculo, and Stephano are life-sized puppets appliqued on to black curtains, with hollow heads and arms. For the two main knock-about comedy scenes the two actors stand behind the black curtains with their heads and hands inside the puppets—while Barrie's voice on a tape recorder copes with the script at these points. Ariel is a series of puppets—a sort of dancing bird in the first instance, which Barrie tosses about from hand to hand as he talks to it, a harpy with wings and claws lowered from the flies in the second, a wave of the sea in the third and (the easiest piece of construction we have invented to date) completely invisible to all save Prospero's eyes in the last. Ariel's speeches are spoken off stage by Marianne, except when they have to go on the tape recorder for production reasons.

"The Crew, and the Quality, in the shipwreck scene will all, with the exception of the Boatswain and Gonzalo, be on the tape recorder—in theory playing it safe down below till the weather improves. The second scene is beautifully straightforward with the long Prospero/Miranda duologue—in this production freely illustrated with lantern slides. The following Sebastian/Gonzalo/Antonio/Alonso bits Barrie does quite simply by talking to himself. Alonso is grand, tall, and vague. Sebastian is tall, villainous and squints. Antonio is shorter than the other two—a sort of George Sanders baddie, but thick with it. Gonzalo—honest Gonzalo—is a Hesketh old man. A speciality of the house one might say. As Barrie puts it, this is *The Tempest* told as a story with all the 'he said' and 'she said' bits left out. We have been fortunate with the setting in that we have discovered a source of supply of very cheap nylon net, in numbers of pretty and indefinable colours. So our set is composed

entirely of this material. A basic light sea green covers our existing brown curtain box set, and produces an effect which we hope the willing imagination will see as rain, or sunshine through mist, as the occasion demands. Changes of scene mean drawing lengths of different colours appliqued with trees, rocks, etc., over the basic drapes. Even the appliques will be done in the nylon net so everything is semi-transparent. It works well, gives a feeling of lightness and space to our tiny acting area, is inexpensive, and when the time comes, will be tough enough to travel." Some idea of the effect of this production is conveyed by Jeremy Randall in *The Times* when he says "... I preferred the Mull *Tempest* to the full scale production I saw in Oxford."

The acting area is 14 ft wide by 9 ft. deep with an opening 8 ft. 6 in. high in a building 14 ft. by 25 ft. seating 35 on four rows of benches. There is a small annexe for dressing-rooms and scenery at the rear. Lighting is home-made plus two Patt. 45s "we have borrowed". Lighting control is a main black-out switch on the wall "reachable while we are still on stage so that we can work it".

Management, production, cast and staff—Mr. and Mrs. Hesketh, and they also run a guest house and three children as well.







## THE VANDYCK THEATRE BRISTOL UNIVERSITY

by Peter Woodham (Production Manager RADA)

The temporary sign outside says "Vandyck Theatre," but the Department of Drama of the University of Bristol insists that it is a laboratory and thus silences one's objections to an approach pathway which forces the audience into single file. There is nothing laboratory-like about the foyer, however; one enters on balcony level, whence an open staircase in pale wood leads down to the 14-ft. wide main concourse running the full 58-ft. length of the auditorium, with cloakroom counter and coffee bar. Access to the auditorium is by two double doors either side at the rear, and one close to the proscenium. In practice, the entire stalls audience uses the last entrance, since the seating of lightly upholstered stackable chairs is mounted on a retractable seating unit, with a single centre aisle. The usual arrangement for a proscenium production is to have 1-ft. risers, giving an excellent view of the stage, and seating around 100. If the unit is pulled out to its fullest extent, with 6-in. risers, it extends to 39 ft., giving 13 rows of 3 ft. width each. As the stage is on the same level as the auditorium, the unit, in any of its forms, can be moved into the stage area or one can use the unit for the actors, and arrange the audience on stage. A further arrangement is to return to the 1 ft. or 18 in. risers and build tiers for seats in the wings, backed by flats on stage left to mask the counterweights and provide access for the actors, and thus achieve a thrust or Elizabethan stage. With this arrangement, and including the balcony,

the capacity is around 140. On two successive nights I saw *The Three Sisters* presented in proscenium form, and Kyd's *The Spanish Tragedy* in the Elizabethan setting, complete with tiring house balcony. Both types of settings and seating worked admirably.

On the stage itself one is struck by the odd shape, the enormous fly floor 18 ft. high running all round the central acting area, and by the pillars supporting this floor. One learns that this is a conversion of a printing factory, and that basically all that has been done is to remove two pillars, cut out the entire proscenium wall, cut a hole 40 ft. wide by 20 ft. deep in the first floor, giving this area of completely free stage space below, and build a fly tower. The result is remarkably successful; there is ample width between the fly galleries, and if one is prepared to accept the 18 ft. head room under the gallery, one can extend the depth by a minimum of a further 8 ft. There are the square pillars to contend with, but there is 18 ft. between the centre ones, and it is a poor designer who cannot avoid or incorporate them, and they can form a useful support on occasions. The wing space of an average 16 ft. on the right and 10 ft. on the left is generous for any conversion, and there is a compensating area upstage left of 18 ft. by 10 ft., where a ramp leads to the stores and student concourses.

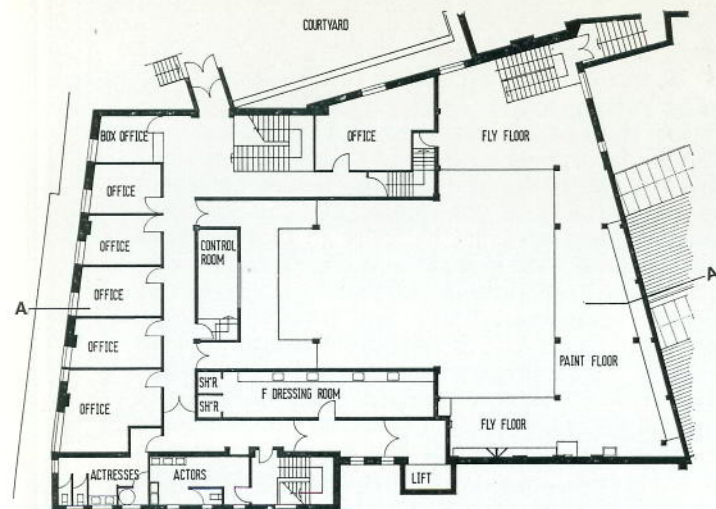
There is a full set of 24 counterweights in the grid, and this feature is only marred by the sky-line planning restrictions which limited the tower height. A flying height of 36 ft. could be considered inadequate, but the sight lines allow for a deep house border, and since the intention is not to build highly elaborate flown sets, no great masking problems have been encountered and 16-ft. units can be successfully flown out of sight. The prompt corner is roomy, well equipped with shelves, and, best of all, recessed into the proscenium wall. It contains the controls for the roller safety curtain and drencher—although a private laboratory whose audiences are drawn only from the University, Old Vic Theatre Club and Bristol Arts Centre, the authorities decided it was a theatre after all and must have a safety curtain.

The two large dressing rooms are excellently appointed, with two showers in each as well as wash basins. They are both on stage left, one above the other, and the only disadvantage is that to reach stage right, actors must go either through the foyer or across the back of the stage. The latter course rarely presents a problem, since it is unusual to set to the back wall.

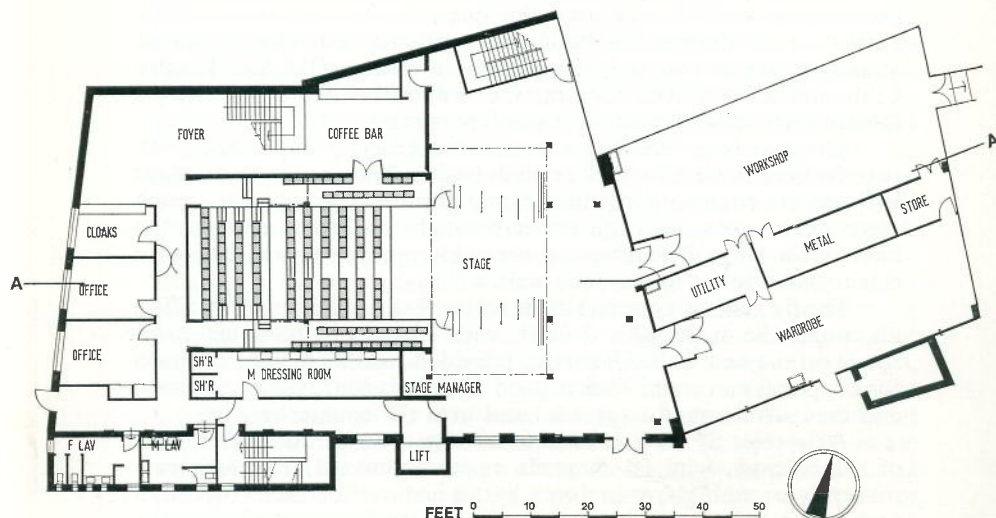
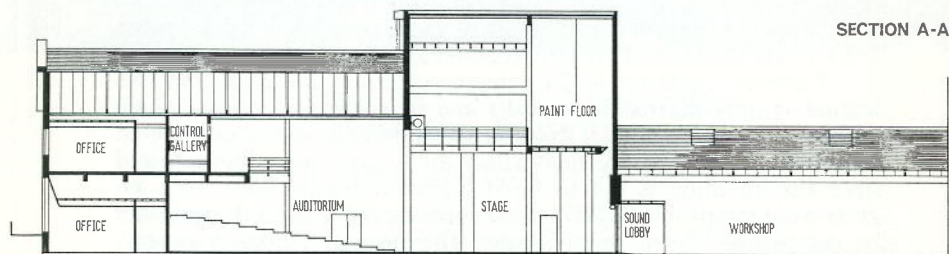
The fly gallery is a remarkable feature—a great piazza extending all round the stage with a 36-ft. wide electrically-operated paint frame on the rear wall. The artist, provided with large solid cabinets for his paint, can stand back a good 12 ft. to admire his handiwork, and then stroll round to give a hand with the counterweights.

A 3-preset SP 80 is situated in a large control room at the rear of the balcony, with 60 channels as yet connected. The only permanently wired lanterns are on a barrel just outside the proscenium arch. Access to this is by a cat-walk at kneeling height below the

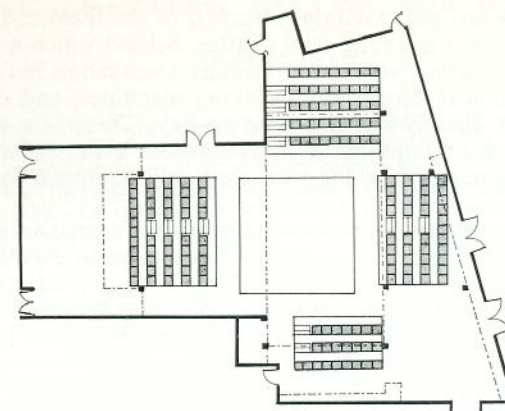




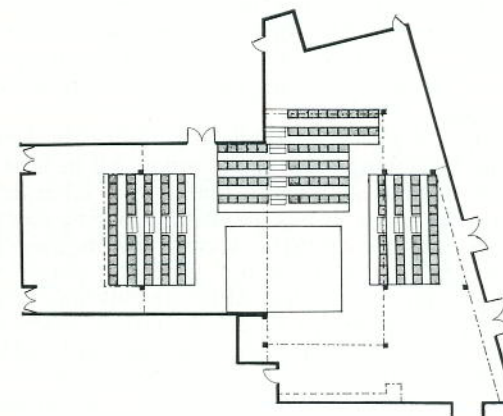
*Vandyck Theatre.  
Architects:  
Department of  
Architecture,  
University of  
Bristol. Top plan  
shows gallery and  
fly floor level.  
Bottom plan shows  
stage floor level set as  
Georgian Theatre  
with scaffolding used  
to extend seating  
down side walls at  
level of raised stage  
and gallery (175  
seats).*



FEET 0 10 20 30 40 50



*Stage floor level set as theatre in the round, acting area 20 ft. x 20 ft. (150 seats).*



*A three-sided arena form (145 seats).*

auditorium ceiling. There are three such transverse cat-walks with socket outlets on the walls at either side—the rear one being reached by a small step ladder or an energetic scramble from the balcony arms—and they are linked by a central one running up and down. This arrangement allows lanterns to be hung anywhere on the cat-walks, or suspended below them on vertical booms. For auditorium lighting, four Patt. 123s directed vertically cover the entire area and effectively conceal (blinder fashion) the works under the ceiling. The stage is provided with wall plugs and fly-plugs which again allows for great flexibility, and spots can be placed anywhere round the fly galleries.



There are enviable facilities attached to the theatre. In the rear wall of the stage is a sliding steel shutter, behind which are two sets of double doors, effectively soundproofing a workshop 56 ft. by 24 ft., fully equipped with large wood-working machines, and opening at the other end directly on to a loading bay. There is a metalwork shop with brazing equipment and an enormous lathe, and a wardrobe only slightly smaller than the workshop and equipped to the same high standard.

The development is not yet complete. Professor Douglas Jones, M. Farmer and John Mosse of the Department of Architecture of the University have had the invaluable day-to-day advice of Dave Machin, the Production Manager and Jennifer Bolt, Set and Costume Supervisor, in planning the scheme which was originally for a "room" for the Drama Department to do experimental work in. The approximate cost of the building work has been £35,000, and about £16,000 on furniture and non-scientific equipment. The allocation for scientific equipment is a further £35,000, of which one third remains to be spent. There is to be a design and model room, more lighting, another mobile retractable seating unit for the stage right wings. The lift is to be repaired to give access to wardrobe stores, and the existing very effective but *ad hoc* sound equipment is to be replaced with an elaborate stereo set-up, still in the design stage.

Here, then, is a gem of a theatre complex on a small scale, with just about everything, and one is interested in how it is used. Two things are emphasised; firstly that it is a laboratory for the Drama Department alone. It has no visiting touring companies and the University's amateur dramatic society has its own theatres in the Union. Secondly, that it is not used for purely vocational training, either artistic or technical, although this may be introduced when the new Special Honours Course in Drama starts in October this year. Actors, designer, costumer, stage manager and technicians for a production are recruited from the Department on a largely volunteer basis. Technical instruction is given, but at present is of necessity limited to the time available from academic studies. The students are learning about Drama and they have an excellent theatre to experiment with. They have similar facilities in the radio, TV and film studios of the Department. After three years they take a degree, and not until then do they have to decide what use they wish to put their experience to. I may be forgiven, on my return to R.A.D.A., for feeling that I had come down from the ivory tower into the somewhat less well-equipped factory.

#### Bristol University, Vandyck Theatre.

##### Stage lighting circuits

##### Control

SP 80 3 preset

(62 dimmers fitted)

144 kW mains 240 volts

FOH:	20
Spot Bar:	12
Flys:	20
Dips:	8

## STAGE LIGHTING IN THE 19th CENTURY

by Brian Legge

"What wonderful things might not be produced by the light, when not dispensed in that equal manner and by degrees, as is now the custom. Were it to be played off with a masterly artifice, distributing it in a strong mass on some parts of the stage, and depriving others, as it were, at the same time, it is hardly credible what effects might be produced thereby: for instance a *chiaroscuro* for strength and vivacity not inferior to that so much admired in the pictures of Rembrandt."

Algarotti who wrote this over 200 years ago was one of the first of that long line, continuing to the present day, who could visualize the great possibilities of stage lighting. He too believed that the artist was frustrated by the indifference of the men of science but the nineteenth century was to bring many technical innovations.

At the beginning of the 19th century stages were illuminated by Argand oil burners for the footlights and for the side lights (at each entrance between the scenery grooves) and by chandeliers overhead. The basis of the Argand burner, introduced in the latter part of the previous century, was to replace the solid round wick with a hollow ring wick and to add the still-familiar glass chimney; together these allowed complete combustion of the oil vapour. For stage use the glass chimney was often of coloured glass. Even then it would seem that the excessive use of strong colour could not be resisted as Garrick was publicly criticised by Gainsborough for using strong-coloured light at Drury Lane.

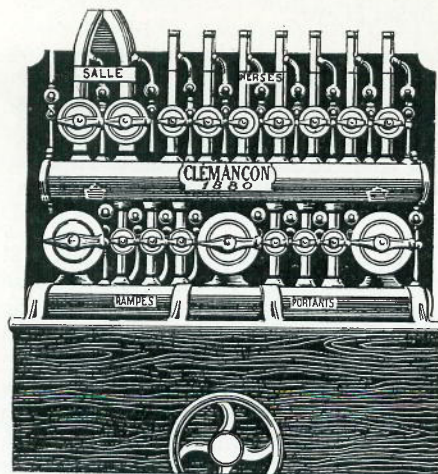
William Murdoch had lit his house at Redruth in Cornwall by coal gas in 1778, also a factory at Soho, Birmingham, in 1798. The promotion of coal gas for lighting was taken up by Winsor and his first public demonstration was at The Lyceum theatre in 1803 following Madame Tussaud's first exhibition of waxworks in London. However, Winsor was promoting coal gas for street lighting, not stage lighting, but "being a man of sanguine and enthusiastic temper, his strong statements probably tended to retard rather than advance the new art". Winsor had a row of gas lamps in front of the colonnade of Carlton House for King George III's birthday in 1807, but the first general use of gas street lighting did not take place until Christmas Day, 1814.

In 1817 Covent Garden, Drury Lane and The Lyceum were all lit by gas. The first complete installation, for both auditorium and stage, would seem to be that of Drury Lane on September 6th. *The Times* newspaper of that date provides some interesting details:

A very considerable improvement, we think, will be found in the introduction of gas-lights on the sides of the stage, on which there are 12 perpendicular lines of lamps, each containing 18, and before the proscenium a row of 80. The advantage anticipated from these lights consists mainly in the facility with which they can be instantly arranged so as to produce more or less of illumination, according to the particular description of the scene.



It would appear that the piped gas supply was not entirely satisfactory, for in October 1828 Covent Garden started to manu-



Jeu d'orgue à gaz: Modèle plus perfectionné datant de 1880.

facture their own gas on the premises and built two gasometers. In view of the close proximity to both Drury Lane and The Lyceum it is probable that all three theatres would have been fed off the same main pipe and would therefore either have suffered the same disturbance, or even caused it! Covent Garden soon found that their gas was even less reliable and five weeks later, after blaming "the mischievous agency of some malignant and interested persons", had to close the theatre for a

week to remove the plant. While this was being done there was an explosion at one of the gasometers which killed two workmen. The week's closure was extended to a fortnight and on December 3rd the public were assured that:

The Gasometers and Apparatus for making Gas are destroyed and no Gas will be manufactured within the walls of the Theatre. The Circles of Boxes will be illuminated with Wax. The lights in the front of the Stage, and every internal avenue to Box, Pit, and Galleries will be produced by the agency of the purest oil.

The last London theatre to adopt gas lighting was the Haymarket where candles and oil lamps were used until April 1843. The terms of the lease had prohibited the introduction of gas.

An article on the word "theatre" in the 1867 edition of *Chambers's Encyclopaedia* contains the following description of the stage lighting installation of a century ago:

An interesting point on the stage is the prompt corner, from which the prompter has command of all the lights of the house, and bells to warn every man of his duty at the proper moment. He has a large brass plate, in which a **number of handles are fixed, with an index to each, marking the high, low, &c, of the lights**; and as each system of lights has a separate main pipe from the prompt corner, each can be managed independently. . . .

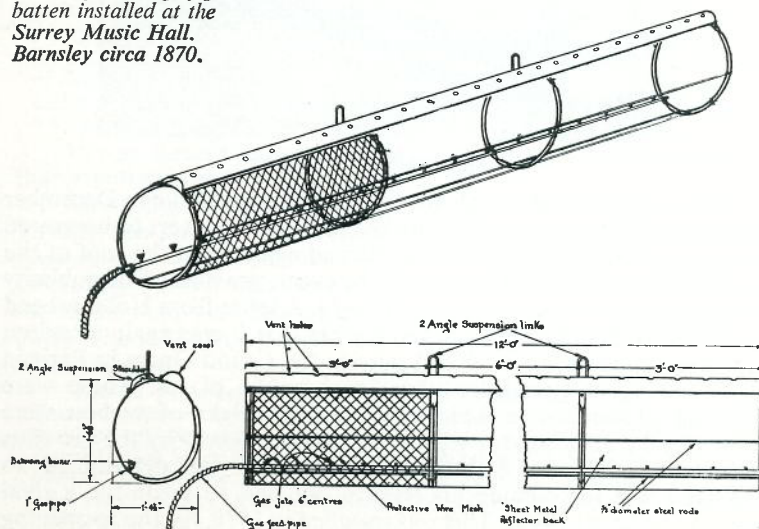
The house, or auditorium department, is generally lighted by means of a large lustre or sun-light in the centre of the ceiling, and much of the effect of the building depends on how this is managed. There are also smaller lights round one tier of the boxes at least. The proscenium is lighted by a large lustre on each side, and by the foot-lights, which run along the whole of the front of the stage. These are sometimes provided with glasses of different colours, called mediums, which are used for throwing a red, green, or white light on the stage, as may be required. The stage is lighted by rows of gas-

burners up each side and across the top at every entrance. The side-lights are called *gas-wings*, or *ladders*; and the top ones, *gas-battens*. Each of these has a main from the prompt corner. They can be pushed in and out, or up and down, like the scenery. There is also provision at each entrance for fixing flexible hose and temporary lights, so as to produce a bright effect wherever required. The mediums for producing coloured light in this case are blinds of coloured cloth. Another means of producing brilliant effects of light is the lime-light, by which, together with lenses of coloured glass, bright lights of any colour can be thrown on the stage or scenery when required.

The limelight was the invention of Capt. Thomas Drummond, R.E., who was involved in the trigonometrical survey of the British Isles, in particular Northern Ireland. This invention, the mixture of oxygen and hydrogen gases impinging on a small area of a piece of lime and heating it to incandescence, had been placed at the focus of a parabolic reflector and had allowed him to signal from Antrim to Ben Lomond in Scotland, a distance of 95 miles. Details were first published in the *Philosophical Transactions* for 1826 where he described how he had achieved a light 83 times brighter than that of the brightest part of the flame of an Argand burner. In its popular form, for magic lanterns and stage lighting, coal gas was substituted for hydrogen. The limelight had an exceptionally long run in the theatre for it was still in regular use in London theatres in the first decade of the present century. The incandescent lime was also the inspiration behind the development of the incandescent gas mantle first patented in 1885, too late to save gas from being ousted by electricity for stage lighting.

In 1809, while lighting by gas was still a novelty, the carbon arc had been demonstrated by Sir Humphrey Davy. At that time, and for the next 50 years, the only source of electric power was by

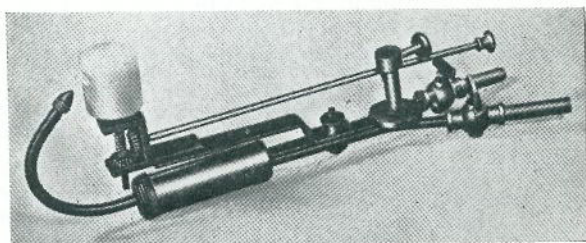
Working drawing of gas batten installed at the Surrey Music Hall. Barnsley circa 1870.





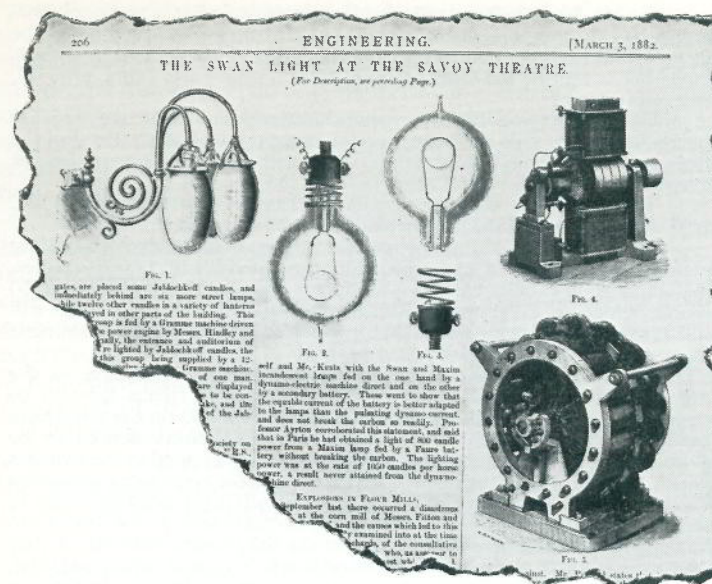
chemical decomposition, the primary battery. However, this inconvenient and very bulky power supply did not deter development of the new electrical science. Spectral analysis, the electric motor, and the electric clock were all developed before the dynamo. Various methods of mechanically feeding a pair of carbons were devised in the 1850s so that the carbon arc could compete with the steady and continuous light provided by coal gas and the Argand oil burner. A milestone in the development of the electric arc was in 1858 when the South Foreland lighthouse was illuminated by a self-feeding carbon arc in a prismatic lens system (the invention of M. Augustin Jean Fresnel 25 years before) and the current was supplied by an Alliance machine; this was one of the first to generate electrical energy by mechanical motion and was an early magneto-electric machine which had permanent field magnets. *Chambers's Encyclopaedia* 1862 records that the electric arc had been used in magic lanterns and also for unsuccessful experiments in street lighting.

John Hollingshead, the manager of the original Gaiety Theatre, was always alert to the gimmick or controversy which would bring newspaper attention to his theatre. One of his early exploits, in 1869, was to have a carbon arc, fed by primary batteries, fixed to the top of the theatre to light the Strand towards Charing Cross. In his *Gaiety Chronicles* he writes that, "The effect was worth the cost, from an advertising point of view, but I discontinued it long before its novelty had been exhausted."



A simple limelight mechanism.

The same source reveals that there was a gas strike in December 1872 and that the central London theatres had to revert to borrowed oil lamps. Hollingshead lit up the Strand again from the roof of the Gaiety. *The Morning Post* reported the event, providing free publicity for the Gaiety, but referred to a limelight. A letter from Hollingshead published in *The Standard* makes it clear that it was again a carbon arc. Arc lamps were introduced outside the Grand Opera in Paris in 1877 and soon spread to other local public places. These were Jablochkoff candles in which two parallel sticks of carbon were separated by an insulator which was melted slowly by the arc thus self-feeding the two carbons. Hollingshead was determined to acquire some for outside his theatre but had to settle for a rival system, the Lontin light. This was installed in 1878, for the re-opening



of the theatre after redecoration and this time the power source was an "enormous revolving magnet and electrical coil" weighing about four tons; all for six arcs!

Two years later Joseph W. Swan demonstrated his incandescent lamp in Newcastle. This "sub-division of the electric arc" was reported in the issue of *Engineering* for October 29th, 1880, which quotes his own words as follows:

Electric lighting by incandescence is just as simple as arc-lighting is difficult; all that is required is a material which is not a very good conductor of electricity, highly infusible and which can be formed into a wire or lamina, and is neither combustible in air, or if combustible, does not undergo change in a vacuum.

It was Swan's process for producing the filament of carbon that was the secret of his success.

The full story of the installation of Swan lamps at the Savoy Theatre has already been reprinted in TABS\* from a later issue of *Engineering*. The auditorium was lit in October and the stage in December 1881. Concurrent with the Savoy auditorium installation the Swan light was being installed, at the Grand Opera House in Paris. The following extracts are from the October 21st, 1881, issue of *Engineering*:

One of the most interesting trials of the applicability of the various systems of electric lighting to the illumination of theatres and large interiors, has this week commenced in Paris, by the electrical illumination of the Grand Opera House. Seven different systems simultaneously are working in various parts of the building, three of which derive their light from the electric arc, three are systems of incandescence, and one occupies an intermediate position between the two. . . .

\*TABS Vol. 20, No. 2



... To Mr. Swan of Newcastle, has been intrusted what must be acknowledged to be the most important lighting at the Paris Opera, for it is by the Swan light that both the auditorium and the stage will be lighted, and these two together constitute the Opera House, all the other parts being, after all, but accessories. ...

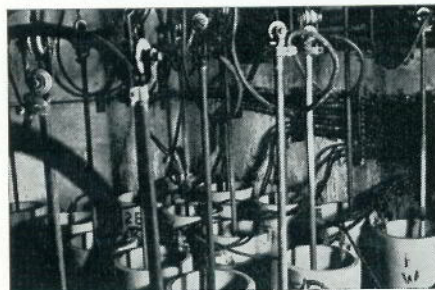
... The Swan lamps will be in two sets, one attached to the great chandelier of the auditorium or *salle du théâtre*, and another on the stage in front of the footlights; it is probable however that others will be added later on for the illumination of the scenery and other parts of the stage. ...

... The whole of the Opera installation has been carried out (by) Mr. Henry Edmunds, one of the proprietors of the Swan patents. ...

... There are three (of these) circuits on the chandelier, each embracing 200 lamps, and having an aggregate luminous intensity of 12,000 candles, taking lamps at 20 candles each as a moderate average. This will replace 750 gas lamps which usually illuminate the great chandelier. The stage lights will at first consist of another set of 200 ... and will have an average luminous intensity of about 4000 candles.

The incandescence system of lighting is especially applicable to the illumination of theatres and other places where scenic effects have to be produced, and where the lights both in the auditorium and on the stage have to be turned up or down in accordance with the effects desired to be produced. To meet this requirement Mr. Edmunds has applied to the switches by which the lights are controlled, a series of variable resistances consisting of frames containing spirals of iron wire. Each switch is provided with four of these resistance frames, and by switching the current through one, two, three or four together, five different intensities of the light can be insured, or they can be extinguished altogether and immediately relighted when required. The value of this facility for theatrical installations is obvious; in fact the control of the illumination within a theatre is absolutely essential, and it is difficult to imagine any arrangement by which electric lighting on the arc system can be applied to such installation.

After the Savoy installation every new theatre built in London had the electric light. Only a month after the completion of the



*Liquid dimmers taken from the Garrick Theatre after nearly 70 years service.*

Savoy installation "the sunlight of electricity" was installed at the Alhambra, but during the 1880s each theatre had to generate its own supply for there was no public supply. With rapid development of the dynamo electricity was at last competitive with gas and the self-feeding carbon arc became a common sight in the streets.

The Palace Theatre was the last in London to retain its own 110-volt generating plant; this was still in use in 1904. There were three 120 h.p. Williams engines direct coupled to Siemens's shunt-wound dynamos for the performance load and a 60 h.p. set for other times. The Palace was built for D'Oyly Carte and opened in 1891 as the Royal English Opera House. Ten years before D'Oyly Carte's Savoy Theatre had had, in effect, five dimmers, although the Con-

tinental term regulator would be more appropriate as control was by varying the output of six small dynamos which provided the exciting current to the six power generators. The Palace had 29 Lyons liquid-type dimmers. The battens were wired for two-colour circuits, but there was still only one circuit for the hanging lengths. There were also hand-fed carbon arcs on the perches and on the fly galleries, these all being fed from a master switch adjacent to the dimmer handles.

Nearly ten years later, in 1903, when the New Theatre opened, they had four colour circuits in the battens with white, amber, red and blue lacquered carbon filament lamps. A contemporary account states that "this arrangement has the advantage of giving plenty of scope for artistic colour blending for which Sir Charles Wyndham's electrician Mr. Howey is well known". Early colour mixing with 32 c.p. maximum lamps! At the same period Drury Lane had no fewer than 11 three-colour battens.

Hollingshead's Gaiety Theatre was destroyed in the development of Kingsway and the Aldwych but was rebuilt nearby, opening in 1904. The new Gaiety was the only London Theatre where the auditorium lights could be dimmed but then only to half light.

There were seven three-colour circuit battens fed for the first time from the grid so that the cables did not obstruct the beams from the side arcs. These side arcs and their operators had a special gallery below each fly gallery. The perches had oxy-hydrogen limelights supplied from storage tanks in the basement. Resistance dimmers for fixed loads and liquid dimmers for variable loads were both tracker-wire operated from controlling handles arranged on colour shafts. These handles, also those at the New, the Alhambra and Drury Lane, all had devices to allow them to self-release from the shaft at the extremity of travel. The New Gaiety board also had switches to allow any circuit to be fed from a by-pass supply independent of the master switch for each colour.

In the early 1900s the Alhambra was today's equivalent of the London Palladium. The seven battens, the hanging lengths and the footlight were all for three-colour circuits. There were also three arcs on each perch, and five arcs on each fly-rail. It is the fly-rail arcs that prove the old adage that there is nothing new in the theatre, for instead of the normal lens these had large parabolic reflectors—pageant lanterns 30 years before they were invented!

The developments of the succeeding years have already been more ably told in these pages by Basil Dean, C.B.E., in Vol. 20, No. 3, and in "Fifty Years in Stage Lighting", which was the sub-title of Vol. 22, No. 1. In the 19th century stage lighting was mainly multiple source floodlighting, positioned as near to the acting area as possible because of the low power, and this was supplemented by relatively few limelight or carbon arc spotlights. Now the situation is reversed. What will the end of the 20th century bring? One thing that is certain is that basically it will all have been done before, somewhere, somehow in spite of the difficulties.





## STAGE LIGHTING AND THEATRE

by Frederick Bentham

*Many readers may be aware of a recently fought-off attempt to take over Strand by Rank. One of the objections to this was that the special relationship of our staff to theatre people (the "stage-struck" working for the "stage-struck") would be jeopardised by becoming a small part of a vast organisation. A special Shareholders' Edition of TABS Vol. 26 No. 2 was issued to illustrate the relationship of Strand to Theatre. Making no attempt for once to hide our light we reprint for our wider readership the following article written for it.*

It has always intrigued me to look over the current list of Strand jobs for it drives home Shakespeare's *All the World's a Stage* and suggests a complement, All the World has Stages. Theatre or live entertainment is something the world has been unable to do without for a time span against which the cinema or television scarcely registers. Even they for all their technical ingenuity depend for the most part on the theatre trained.

To declare theatre is dying because commercial theatre scarcely exists nowadays outside London's West End and New York's Broadway is to misunderstand the nature of theatre. There has never been a time of more active growth and this has been faithfully reflected in the growth of Strand Electric. London is now the centre of theatre, and Strand is not just a manufacturer and supplier to it

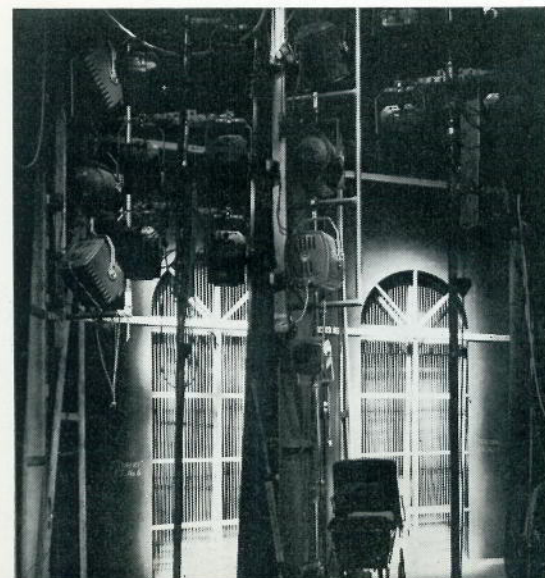


Strand Lighting Control at the London Palladium.

but part of it—one of the active agents in creating this London centre. Stage lighting is *technical engineering* in the service of *fashion*. A combination of continual technical development with constant striving for something new in artistic presentation. Characteristic of the influence of stage lighting on production methods is the use of optical projection of scenery, instead of painted scenery, so well shown in the recent production of *Boots with Strawberry*

Backstage at the National Theatre (Old Vic) London.

Lighting equipment and control for "The Three Sisters". Batley Variety Club—The Deb Set.







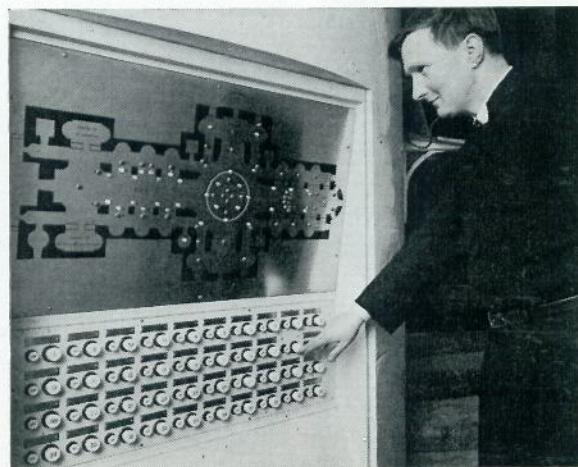
*Getting to know it  
(and us) early.*

*(Right) "Black and  
White Minstrels"—  
projected cloud  
effects in BBC T/V  
Theatre.*

*Jam at the Playhouse, Nottingham. (TABS, Vol. 26, No. 2.)*

The reason why stage lighting occupies such an important place is because it keys off everything in the visual half of the theatre. The word "theatre" is by O.E.D. definition "a place for viewing", no mention of hearing. People ask each other "What did you see last night at Drury Lane?" This is one in the eye for Shakespeare or Pinter but one up for us.

The influence of stage lighting extends beyond just seeing. It may have to suggest time of day—evening, dawn or sunset; mood—gay, sad, or horrific: it may have to charm us or alienate us. It may have to conceal more than it reveals, draw attention here but play down there. It has to change before our eyes, sometimes to draw attention but at others in the manner now referred to in advertising as subliminal. It is all this that leads to an installation of hundreds of spotlights—"a multi-lantern complexity" to quote Richard Pilbrow in TABS, Vol. 25, No. 3. These are quite usual and no matter



*Lighting control and  
mimic diagram in  
St. Paul's Cathedral.*

*(Right) Festival  
Theatre, Pitlochry,  
Scotland.*



what kind or size of theatre it is it will have as many of them as possible. We manufacture all these.

To make this lot expressive—to be able to paint the stage with light—the many circuits come back not only to switches but to dimmers. The dimmers are the unique theatre device. Ever since the first stage was lit throughout with electricity (Savoy Theatre 1881) dimmers have been vital. There were only six then and now two hundred or more are not uncommon to an installation. We manufacture all kinds of dimmers, but in addition we have pioneered the high degree of ergonomic sophistication represented by the modern stage lighting control. The new one for the Sadler's Wells Opera, at the London Coliseum this autumn, will have 240 dimmers and a System IDM instant magnetic memory holding 250 preset lighting pictures at a time.

In this type of thing we are employing the most advanced computer and electronic technology but to serve theatre's peculiar needs. Out know-how in this, said he modestly, is second to nobody. This latest IDM type of dimmer control has excited wide interest and Strand installations of this type are going into places as scattered as Ottawa, Quebec, Vancouver, Manila, Budapest, Oslo, Schweinfurt

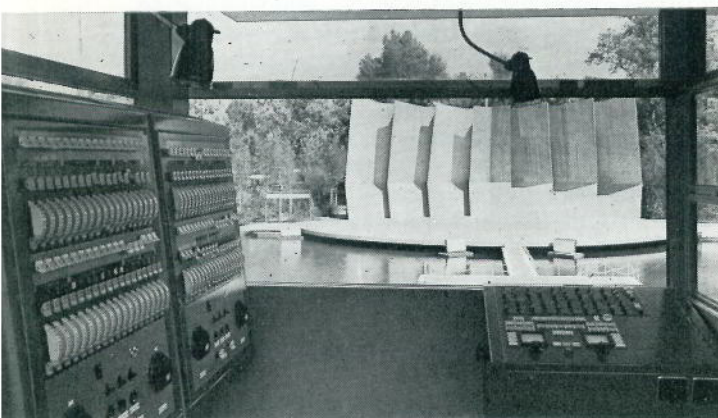
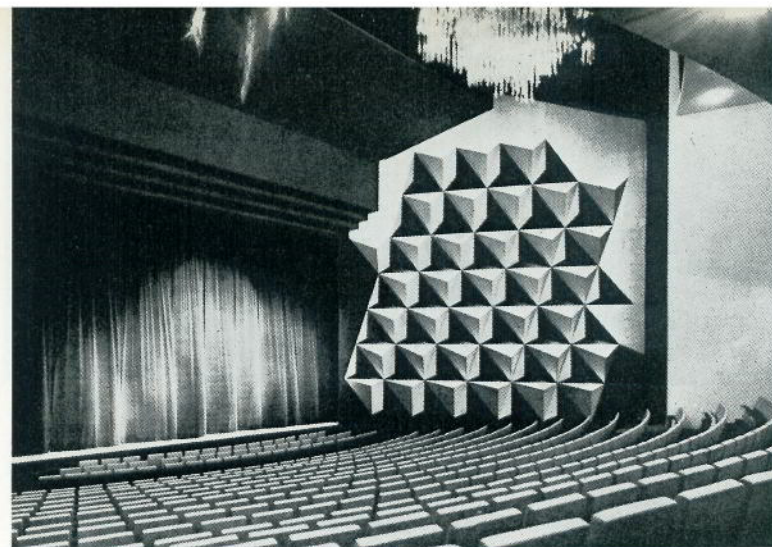






*(Left) Restored  
Georgian Theatre,  
Bury St. Edmunds.*

*(Right) Stadttheater  
Schweinfurt,  
Germany.*



*Open-air Theatre,  
Vienna.*



*Avon Theatre,  
Stratford, Ontario.*

and Rotterdam. The move towards the export of really sophisticated Strand control began during the war with the Lisbon Opera House, followed just after the war with the new Opera House in Ankara and then in contrast the National Theatre in Iceland. All these also included the complete lighting—spotlights and all—and this is more often than not the case. At home we go further for we often do the whole wiring installation—certainly the stage but frequently for the whole building, as for example the Royal Opera House, Covent Garden, or the Royal Albert Hall or in the many Mecca ballrooms. This cannot happen overseas but helps us to go there to supervise others.

Many of the theatre schemes are cultural centres with more than one theatre. There are three in the National Arts Centre, Ottawa, and two in the Philippines Cultural Centre, Manila. However, even where theatres remain resolutely single it is not unusual to find us collecting other theatres in the same town. A further one—the Araneta in Manila, three in Rotterdam, the two in Gothenburg plus a further two theatres in the great Park Avenue Hotel there. Stage lighting is not uncommon in hotels; witness the Mayfair Hotel, the various Hiltons, the Montreal Bonaventure, and our latest installation of this kind is very elaborate indeed and is to be found in Houston, Texas. John Read the lighting designer writes—“... good to see Strand Electric equipment in every restaurant in Stockholm.” Theatres turn up in the strangest of places. A very comprehensive stage lighting installation was put in by us not long ago in the Casino Theatre, Beirut. As a counterbalance we also did the Unesco theatre in Beirut. The Municipal theatre, Nicosia, either has or is about to have a Strand installation, so is the Dar-es-Salaam Little Theatre.

To me the Palais theatre, St. Kilda, is more intriguing than the Canberra Theatre Centre under the Southern Cross, but we did both.





*East Sydney Technical College. Conversion of former cell block to theatre.*

Also an extraordinary conversion of an old jail into a theatre and a modern school theatre which looked like a jail when finished. School halls used as occasional theatres, sometimes as very bad ones, for amateur performances are commonplace. It is nice to note that we are to supply the stage lighting to Eton on the one hand and to the Aga Khan Secondary School, Uganda, on the other. More specific use of the drama in education has led to the development of the "drama space". Strand has lit a number of these and indeed has published a book on their use for the National Association of Drama Advisers. Some schools now have regular theatres in which professional companies can and do play. This is particularly the case in North America and our Canadian job list has an increasing number of these. At University level the new theatres get elaborate indeed and this applies even back in Britain as the University College, London described in detail in the last issue of TABS, showed. That same issue also provided a description of the theatre built by an amateur company for themselves at St. Albans. A number of theatres specifically for amateurs have been built, the most elaborate being that just opened in Newport, Monmouthshire. Some forty new theatres have been built since the war in Britain. Particularly interesting is that recently completed at Billingham which forms part of a two-million-pound recreation centre of the type often talked about, but here it actually exists and is the shape of things to come.

*Waterloo University, Ontario.*



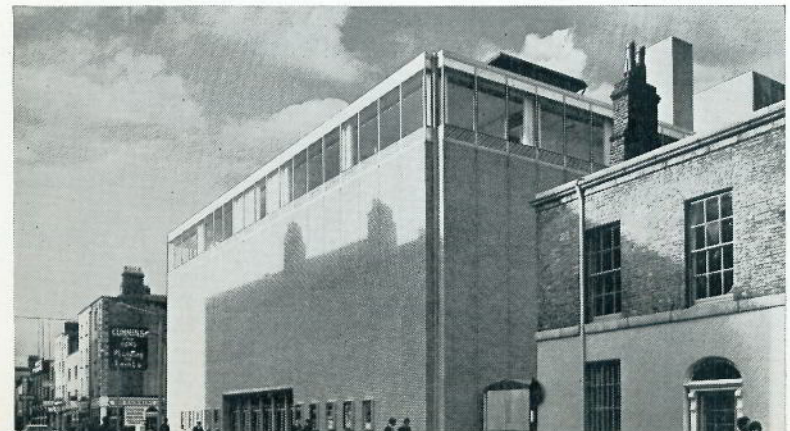
*Billingham Forum Community Centre.*

Of projects for theatre building there is a fine array, one for the Barbican home for the Royal Shakespeare Company in the City of London was described in our last issue of TABS and the National Theatre project for the South Bank in the issue before that. At the same time modernisation of existing theatres goes on. The Globe Theatre, London is to have an IDM control whilst Pitlochry is having an L.P. The latter form of control has recently been installed in the Theatre Royal, York and The Coventry Theatre.

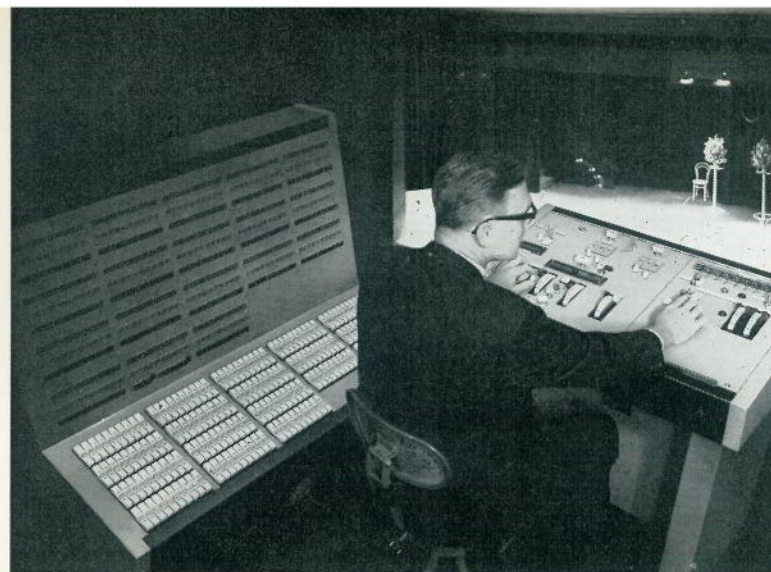
It was our specialist knowledge of lighting control used expressively with dimmers which enabled us to pioneer television lighting controls. This began with two for Alexandra Palace in 1936 but really got going in 1955. Ten years later we had equipped all television studios in Britain, both BBC and commercial ITV companies. Abroad we have installations in or in hand for Australia, Canada, Czechoslovakia, Denmark, Finland, Germany, Holland, Malaya, Norway, the Philippines, Sweden and Yugoslavia. Particularly newsworthy is the one to go in this summer in Prague. Television centres invariably mean a complex of several studios. Cinema studio lighting technique associated with the traditional use of camera in "short takes" which led to the perpetuation of archaic electrical control arrangements explains why television with its production budgets so much tighter in time and money had to turn to theatre.

In its turn the theatre will always have an advantage over television. The very range of scale encourages experiment and

*The Abbey Theatre, Dublin.*







*Magyar Operaház, Budapest.*

*Lighting control and mimic diagram, BBC T/V Centre, Studio 6.*

therefore ensures vitality. Such experiment may at the one end of the scale involve only two actors in a small room and an audience of less than fifty as at Mull while at the other end there can be something as elaborate as *Moses and Aaron* at Covent Garden. Indeed theatre goes bigger than that and it is not unreasonable to consider the popular mass exhibitions as theatre. This could apply to the annual *Daily Mail* Ideal Home one at Olympia for which Strand have done the special feature lighting and the gardens since the early 'thirties. This is at its most obvious at Montreal Expo '67 and shows very well in the COI photograph of James Gardner's work for the British Pavilion which heads this article.

One could be hard and sum up *all* these exhibitions as so much advertising and yet the public go year after year. The reason is that

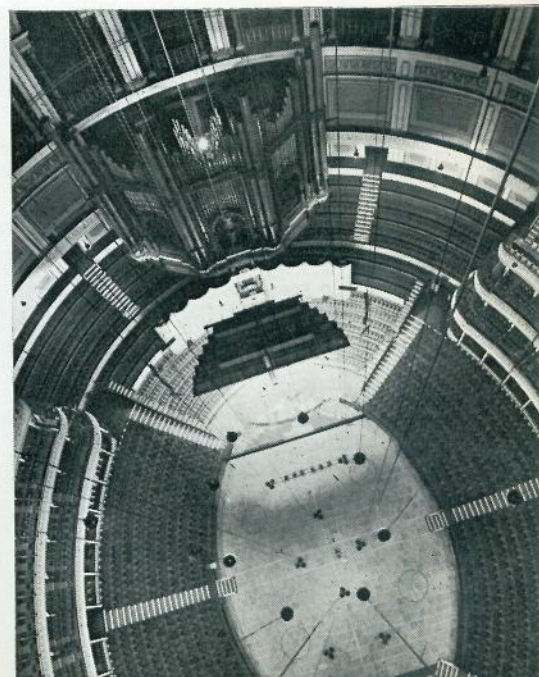
*One of the IDM/R Lighting Controls for the Canadian Centre for the Performing Arts, Ottawa.*

it is popular theatre, actors and actresses delivering their lines, or improvising, amid décor and device while the audience mills around.

This conveys, I hope, the sense of theatre bursting out all over and carrying with it stage lighting. Indeed in one of the latest manifestations it is the stage lighting—solo minus play or players—which has become the rage. I refer of course to that strange phenomenon, the spread of what are now known to the public as “psychedelics” but which have been known to theatre people since the turn of the century as “optical effects”.

A less obvious use for Strand lighting equipment is shown by St. Paul's Cathedral, Coventry Cathedral and the new Liverpool Cathedral. Michael Northen writes—“... thought I would have a look in St. Pauls, as I hadn't seen the new High Altar, which is quite magnificent. Said to myself given the chance to light this, I'd put Patt. 23s in the canopy. Go up and have a look to see what they have done if anything. I needn't have bothered, sure enough Strand had already done it, with Patt. 23s. There must be somewhere I can go without seeing a Strand Electric lamp hanging up, but I am beginning to doubt it.” —Also as the photograph p. 26 shows they have found that we have the best method of controlling lights in the vast church from a central position and can show on a mimic diagram whether they are on or off without having to climb up umpteen stairs to see. This same principle has also been adopted by the new Roman Catholic cathedral in Liverpool. Theatre also turned up there for we had to make in our scenery workshops a temporary stage round the central altar as well as carry out our more normal role of supplying and rigging special lighting. Theatre began with religious festivals so this takes us full circle, but in any case we need not be apologetic, for we have shortly to deliver one of our latest IDM systems to control the heavens—in a new Planetarium in Vancouver.

*Hampton Court Palace—temporary fit-up for ballet Strand wireman's view, Royal Albert Hall. performed in honour of President Sunay of Turkey. Photo courtesy BICC Ltd.*





## BOOK REVIEWS

**"New Theatre Forms"—Stephen Joseph. Pitman. 40s. 144 pages 8vo. illus.**

This was Stephen Joseph's last book, and a very useful book it is. For such a comparatively slim volume, it more than lives up to the promise of its chapter headings. The author begins with a quick but comprehensive survey of the origins and development of the theatrical occasion. At each stage, he reminds us of the kinds of space that had been evolved for the theatrical celebration.

Following this introduction, we are given an informative and analytical chapter on Centre Stages, Thrust Stages, End Stages and one on other new forms. The last third of the book is devoted to more general matters, treated more generally—adaptable theatres, multi-purpose halls, seating and sight-lines, stage lighting. At the very end there is a useful section in which Stephen Joseph reflects on the economic implications of running various kinds and sizes of theatre.

The many new theatre forms dealt with are well described and covered by clear and informative drawings. A special value of this book is that we are taken behind the plans to the motivation: an attempt is made to assess what the creators of the new forms are trying to do.

We are particularly fortunate, I think, that Stephen Joseph managed to complete the work before his most untimely death. He has placed on record for us much of the early history of mid-twentieth century theatre development in Britain and the United States: but for him we might well have had to wait for some American Ph.D. dissertation in the twenty-first century.

Those many people who knew Stephen personally will find this very much his book; he shines through on every page. There are typical Joseph flashes of insight, revealing and questioning, the old bees in his bonnet and some new ones, too; his overstatement, of course, but above all his basic good humour and tolerance. We can forgive him the irritation he causes in his attempt to make us swallow concepts like "thrust stages" or "linear projection"; these foibles are far outweighed by the illumination he brings to the whole area he surveys.

Technical readers of TABS will relish this Joseph quip:

"To many Englishmen there is something foreign about technical competence. The Germans put lights in the right places, and the Americans perhaps. But in England artistic endeavour is a privilege of the middle classes and it can only escape the scorn of the upper classes (who may occasionally want to dabble) by being rigorously unpractical. To know how to focus a spotlight belongs to the lower orders, who really could not be consulted when building a theatre. Explain it how you will, few theatres in England have well designed stage lighting systems. And the worst sufferers are those with unusual forms of staging, from forestages to, worst of all, centre stages. Enclosed stages are easier to light, of course, because the techniques were worked out ages ago and all we need do now is to put these new-fangled spotlights on the same old gas barrels."

I see the publishers' blurb says the new forms "are not merely architectural variants but affect designers and producers as well as actors and playwrights". No mention of audiences! Stephen Joseph never makes the mistake of missing out the major participant in the theatrical occasion: he is quite clear what the theatre is for.

"Theatres are buildings where actors and audiences meet. The relationship between the two parties may be infinitely various, and each variation of stage within theatre implies a difference in this relationship. Build each form of theatre well and a whole feast of relationships becomes available, some of them very special to the palate and exciting to the playgoer."

One more quotation. A gay, typically Joseph flight of fancy.

"Not many people planning a theatre at present would want to consider a standing audience, and for this very reason it is worth saying something in its favour . . . The main advantage of standing is that you can move easily

to get a better view of the actors, either because they have shifted from one acting area to another, or because one actor may be masking another. Sometimes, particularly if the play is long, to be able to move about keeps the blood circulating and prevents cramp: this may seem a frivolous remark, but even the comfortable seats of a modern theatre can become unbearable at times, and one reason for having intervals is to give people a chance to move about if they want to . . . I must add that watching many recent productions I have often wished that I were not imprisoned in a seat and could escape without being noticed."

We are all indebted to Stephen for a most useful and happy book to remember him by. No one in the least interested in the theatre of our time should be without it.

JOHN ENGLISH

**"The Art of Stage Lighting"—Frederick Bentham. Pitman. 70s. 448 pages illus.**

No single person has exerted a stronger influence over stage lighting techniques in Britain during the past thirty or so years than Frederick Bentham.

Being in technical control of a firm holding a virtual monopoly of the supply of our lighting equipment places one in a very strong position. But we must remember that Strand Electric have won and retained their position largely as a result of Bentham's insight into the art of Theatre and its technical requirements.

Of course, in our pubs and on our perches, we have often muttered dark thoughts against the man: in my case against what I regarded as his inability to see the importance of presetting over grouping (although we changed sides at the time of the first IDM model!) and most of us gnashed our teeth when we were told that we did not need our beloved pageant lanterns any more.

But Fred Bentham understands the theatre and cares deeply about it and many of the things we have muttered about have turned out to be for our own good in the end: such as the rationalisation of the lantern range which has made them cheap enough for us to indulge in *multi-lantern complexities* to our heart's content.

Bentham has also for many years been the author of our standard books on stage lighting. Lighting is something which is much easier to do than to talk about, but it will come as no surprise to anyone who has heard Bentham talk that his new book, *The Art of Stage Lighting*, is first and foremost extremely readable.

The main difficulty in writing such a book is that it must appeal to and hold the interests of everyone from the newly appointed lady producer of a small amateur society to the Chairman of the Society of British Theatre Lighting Designers. The book meets this challenge very well, its scope covering everything from basic facts to controversial theories in a way which I must keep emphasising is very readable indeed.

Personally I should like to have had a little more emphasis on style in lighting: the casual reader might be excused for thinking that the choice between subtle and heavy contrasts in light and shade was a personal matter rather than one related to the stylistic requirements of a particular production. The book does say this, but perhaps not strongly enough.

The other problem which has been surmounted in writing this book is that whereas the catalogues offer us a suitable range of equipment for carrying out current lighting practice, most theatre lighting work has to be done with a mixture of equipment surviving from all electrical periods between *transistor* and *brass and mahogany*.

Fortunately the author has not adopted a historical approach and we are spared a detailed tracing of the development of equipment: rather he has presented us with the facts of present practice, explained former practice wherever it seems apt or has left us an equipment legacy, and given us a few pointers to the future.

I acquired the basic facts of my profession (and indeed the urge to belong to it) from a reading of Mr. Bentham's earlier books: I have learned a lot from this one and I shall continue to return to it from time to time.



Lighting is as much an art as a science and any approach to it must be subjective as well as objective: the success of this book lies in the fact that while its author can be objective whenever necessary, his subjective judgments bear the theatrical insight and sincerity of Fred Bentham.

FRANCIS REID

## CORRESPONDENCE

Dear Sir,—The article by Norman Branson in *TABS*, Vol. 26, No.1, describing Wennington School, Wetherby, gives a brief description and photographs of a very unusual lighting grid and thereby raises the question of priorities for grid design in flexible theatres.

To light several stage forms it must be possible to move the lanterns between several hanging positions unless the theatre is rich enough to afford a "saturation" rig. Once the hanging positions have been chosen the lanterns have to be "set", focused and coloured. These operations are very much more critical than the choice of hanging position and they are usually subject to many minor readjustments after the first trial rig. So my choice of priorities would sacrifice the ease of positioning the lantern to ensuring subsequent easy access to the adjustment knobs and colour runners.

Mr. Branson solved this problem admirably when he equipped Questors Theatre with lighting bridges (see *TABS*, Vol. 24, No. 2) and having worked there since the opening, I can only see the Wennington School as a step backward. Admitted, the article does not say how the lanterns are adjusted—perhaps they are fitted with Polestar controls, but how far can this help with a Patt. 23S? To have to lie face down and reach through a 2 in. wide slot directly above a hot lamp seems too big a price to pay for the often unwelcome freedom to hang the lantern anywhere in space. And surely the only sensible way to adjust the lower lanterns shown in the bottom picture on p. 13 needs the stepladder that you did not need to hang the thing in the first place?

However, maybe I have got it all wrong and the design is exactly what this sort of school needs. But before it is copied throughout the land perhaps *TABS* could investigate and publish a comparison of the two systems. We at Questors are especially interested since, in a recent *A.B.T.T. News Letter* (Vol. 2, No. 3) Mr. Branson states that if he were to build our theatre again, he would "insist on having a television grid" and remove "the awkward catwalks which the Questors are cluttered with".

BOB ANDERSON, Lighting Manager: Questors Theatre, Ealing

Dear Sir,—Mr. Philip L. Edwards' article on his impressions of the Toynbee Theatre from the visitor's point of view (Vol. 26, No. 2), followed most aptly on the heels of my own from the Management's (Vol. 26, No. 1). His account of one group's sojourn at Toynbee, though untypical, does illustrate to what extent a student may expect to benefit from the experience and his comments on the physical advantages and shortcomings are all fair and accurate.

Far more accurate, in fact, than the second paragraph of my previous article, where, due to my lazy use in the first draft of that tiresome abbreviation "etc.", which somehow sneaked through into the final print, the official purpose of the Drama Centre was abbreviated out of existence. May I therefore take this opportunity to quote in full the programme's nutshell explanation: "The theatre is maintained as a drama centre for the London Education Service. To foster proficiency in all branches of stage-craft, groups are encouraged under the supervision of the Theatre Manager to undertake all the work in connection with the presentation and running of their productions."

On which note the Toynbee story may now rest . . . for the time being.

DONALD WALKER, Director, Toynbee Theatre