

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.

To make space for this article in this Shareholders' TABS, I have had to "spike" an article of mine in the current issue. This put forward the notion that exhibitions, whether the annual *Daily Mail* one at Olympia for which Strand have done the special feature lighting and the gardens since the early 'thirties, or the recent "Electronics and Automation" one, are extensions of theatre. This is at its most obvious in an international Exposition like last year's Montreal Expo '67. Borrowing my own words:

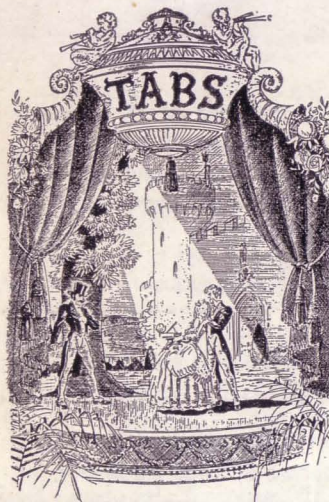
"One could be hard and sum up *all* these exhibitions as so much advertising and yet the public go year after year. The reason is that it is popular theatre, actors and actresses delivering their lines, or improvising, amid décor and device while the audience mills around them. This is and has been (since 1851?) the "other theatre", the theatre in which the audience are not tied to their seats to confront the stage, the theatre of audience participation. By comparison the theatre of Gropius and his disciples is a tame non-starter.

"The extraordinary thing about the Theatre Colloquium also in Montreal last year was the number of speakers who carried on at length, usually in French, on "le Théâtre libre" in which the director could do anything and the audience be anywhere. The theatre where by every device known to man (many in fact not known to engineers), the actor, audience, décor, acoustic ambience would change so that the audience could be placed within the play or without the play, or as one sometimes suspected made to do without the play. There were torrents of stimulating or boring verbiage depending on whether one likes that kind of thing. Yet apparently it occurred to hardly anyone that this theatre of the future was there working by the mile in the vast Expo a matter of minutes away."

This conveys, I hope, the sense of theatre bursting out all over and carrying with it stage lighting and growth for us at Strand.

A less obvious use for Strand lighting equipment is shown by St. Paul's Cathedral, Coventry Cathedral and the new Liverpool Cathedral. St. Paul's is severely practical, our spotlights light the high altar; as the photograph 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.

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TABS

SHAREHOLDERS' SPECIAL



TABS

Published for the Theatre
Strand Electric, London,
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Minneapolis and Toronto

STRAND ELECTRIC HOLDINGS LIMITED SPECIAL EDITION FOR SHAREHOLDERS

The articles on page 3 and 9 have been written to assist you in appreciating the real nature of your Company. The other articles which we hope will be equally helpful are taken from the current issue of our journal TABS (Vol. 26 No. 2). Some 20,000 copies of TABS are distributed throughout the world four times a year to customers and others interested in the theatre, each of whom must have requested it in the first place and have kept us up to date with his address.

EDITOR & DIRECTOR.

Cover picture: One of the scenes by Patrick Robertson for
Boots with Strawberry Jam at Nottingham Playhouse.

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THE STAGE LIGHTING BUSINESS

Strand Electric's business is theatre first and foremost. It was founded by two theatre electricians in 1914 and those who design and sell its products are there because they feel a call to this specialist business. Theatre is live entertainment and its requirements and techniques are at the opposite pole to cinema and it is this that has been responsible for Strand's near monopoly on the stages of the one and virtual non-appearance in the studios of the other. Television has in its production techniques split equally between theatre and cinema and Strand has completely monopolised the theatre half. The Strand Electric cloud effect is as big a cliché in TV production as “that seagull” record has been in radio drama. Because Strand did every lighting control in every TV studio in the 1955-66 development period it is their controls that the TV operators are used to and on whose ergonomic formulas future controls are specified. However, even theatre alone represents a vast market, for its range covers the whole of *live entertainment* from the Royal Opera House to the lowest strip club in Soho. Theatre as education and entertainment is world-wide and is both professional and amateur.

Strand's successful record of progress has to be seen against continual post-war financial stringency and restriction in respect of special building for entertainment in Britain. Wherever a new building of this kind arises it is their lighting which is used.

This number is small compared with the many projects which sooner or later have to get under way. The importance of theatre in our culture is now fully recognised. These schemes range from the National Theatre on the South Bank and the City's own Arts Centre at the Barbican through variants of every size and shape. The majority of theatre buildings now are Civic, but this does not alter the validity of Strand Electric's approach for it is theatre people that will direct and use them—it is the entertainers that will have to entertain.

New building apart there is much work to be found in existing buildings. Stage lighting is *technical engineering* in the service of *fashion*. This combination of continual technical development with the constant striving for something new in artistic presentation provides an infallible source of revenue, for it means that no theatre need ever be regarded as completed. A lighting installation has to be altered, extended or completely replaced to enable a show to be put on in the style of the day. Each time a theatre is re-equipped, more lighting goes in—lighting levels continue to rise and the control needed becomes more sophisticated.

To take advantage of the opportunity presented by the theatre it is not sufficient to let engineers interpret customer requirements. Stage lighting is an art and the pace is made by becoming a theatre man and thereby anticipating the need before it arises. The customer is then guided into accepting the solution ready to hand. This actually happens at all levels—for example, the only readily available

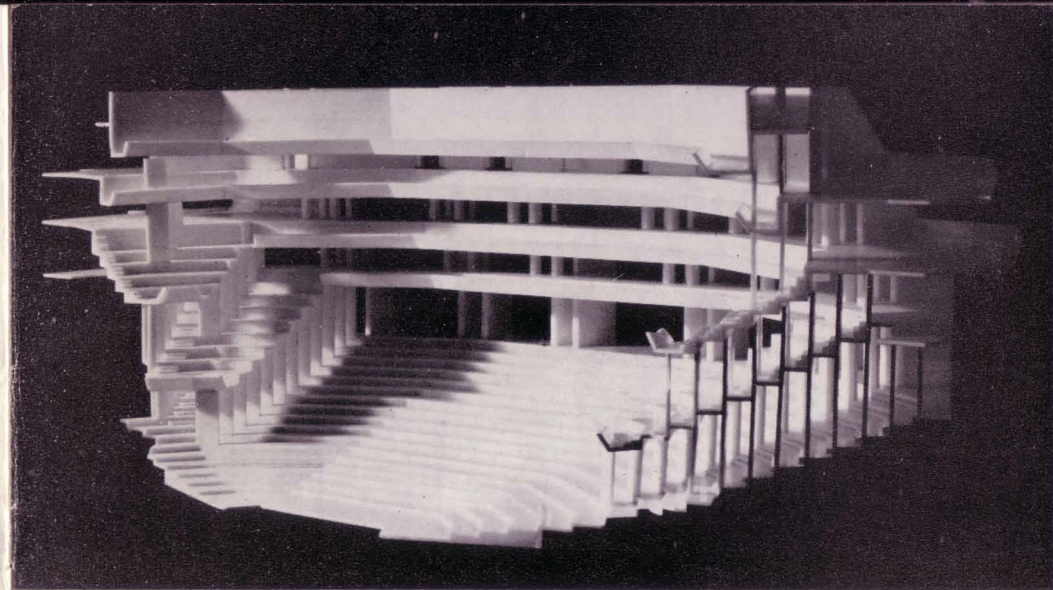
way people can learn to use lighting is from Strand lectures and publications such as this journal TABS. The secret of Strand's specialist business is that it is the "stage struck" working among and for the "stage struck". The result is as tailors would say "bespoke lighting", but good care is taken that it is built up of mass-production items arrived at in anticipation of demand.

It is interesting comment that not one of the giant companies has been able to run a successful stage lighting department which completely caters for theatre. The work is too personal. Several have tried over the years.

Cinemoid, for which Strand have the entertainment agency everywhere, is recognised as the theatre colour medium. Theatre demand increases all the time and this plus colour television means that Cinemoid can be sold as fast as it can be manufactured. It is, in fact, manufacture that is limiting further expansion of this market at the moment. Cinemoid has two great advantages; it is a consumable product which has to be replaced regularly and secondly it is a foot in the door for other products.

It was Cinemoid that forced the door into German theatre; modern stage lighting began for Europe in Germany and Europe has been locked to their school of lighting. It is only since the war that Britain (and that could only mean Strand Electric) has been able to prise first this, then that European theatre away from German traditional practice and thus win them over to the type of equipment it is best able to supply. Success, particularly in Scandinavia, has been considerable, but the possibilities for future expansion are still very great. In all this London's new image as the centre of theatre of all kinds is, in spite of the lack of new buildings, increasingly helpful.

The position in North America is somewhat similar, for that continent has been dominated by United States stage lighting practice. With a foothold in Toronto it has been necessary to determine how far to try to conform and how far to convert. The most important event has been the order for the National Arts Centre in Ottawa (three theatres) where it has been the advanced nature of Strand equipment which obtained the order. In other words it was won because the equipment did not follow common American practice. This is to be the show job of North America, and cannot but help prospects in the United States where a beginning has only just been made. The big jobs are not only rewarding financially, but they provide publicity and other orders follow. Competition is very strong in the States, but there is an immense amount of work of this kind there, and indeed all over the world. The latest Branch to be established is in Hong Kong and it has already had remarkable success. Once more due to the representative—a theatre enthusiast—the type of man who likes working for Strand Electric. He is fitted neither by training nor inclination to take his place in a large organisation, but he suits Strand fine.



ROYAL PROGRESS AT THE BARBICAN

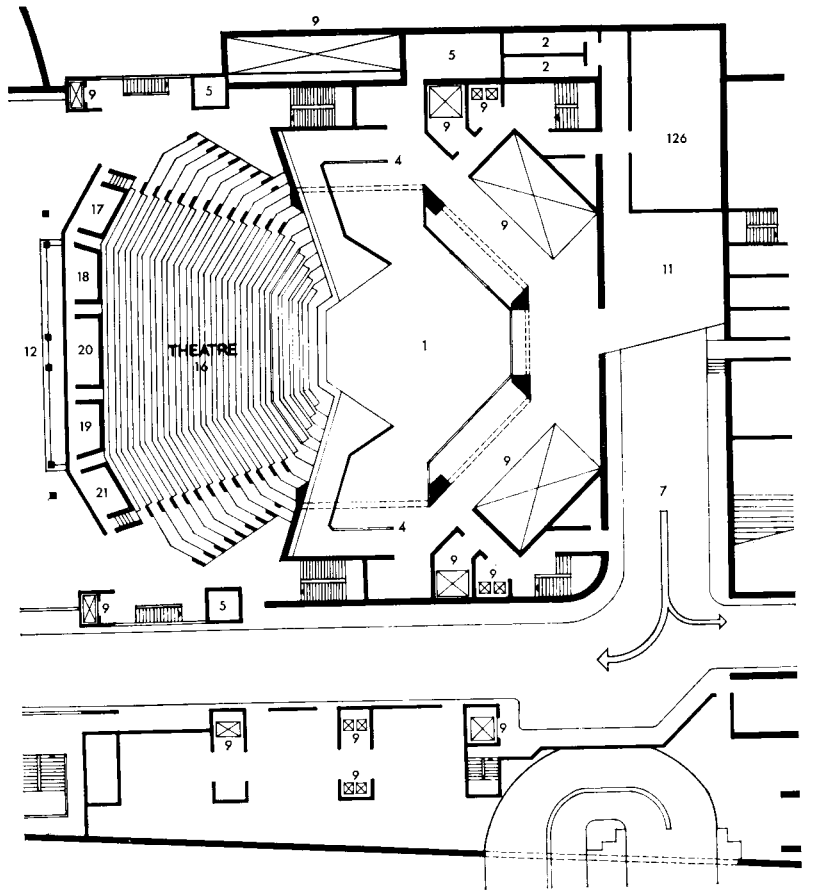
by The Editor

In the December 1966 issue of TABS we analysed in some detail the proposals for auditorium and stage as presented in a scene designer type of model redolent of Peter Hall and John Bury. Since then the architects (Messrs. Chamberlin, Powell & Bon) have been busy, and plans, together with architectural models, have been on view as an exhibition in London's Guildhall and backed up by a lavishly illustrated report.

It is not usual for TABS to concern itself with areas beyond the auditorium and stage but it should be mentioned that the theatre which is to be the London home of the Royal Shakespeare Company forms part of an Arts Centre in the City which will house the Guildhall School of Music (which itself includes a multi-form theatre of 400 or so seats), a concert hall seating about 2,000, a public lending library, an art gallery and a studio-cinema seating about 375.

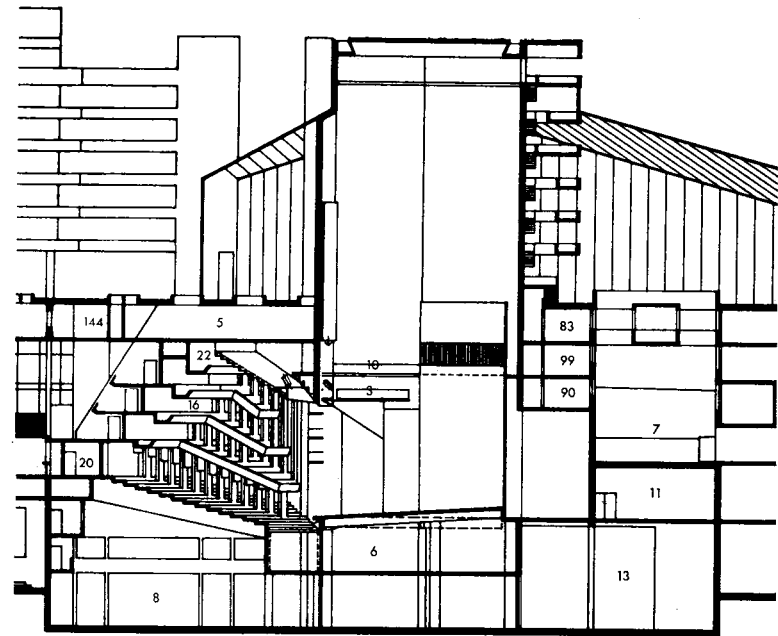
A particular feature which gladdens the heart of your editor, in view of his strictures on the wind-swept Great Wide South Bank in our last issue, is the covered access from two London Transport Underground stations and from the car parks.

It is now possible to see the way it is intended in the theatre to bring the shallow balconies round the sides in such a manner that areas "papered with people" remove any sense of side walls. The shape of this auditorium (seating 1,250) makes an interesting contrast to Mr. Lasdun's proposals for the National *open* Theatre described and illustrated in the last issue of TABS. In that case the 1,165 seats were bestowed in terrace formation "bowl-shaped" while in this case shallow balconies coming right round at the sides give a wide

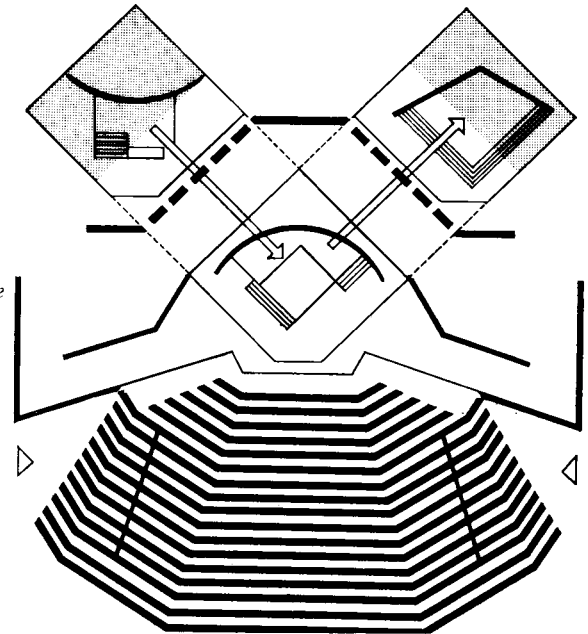


Architects: Chamberlin, Powell and Bon

- | | |
|-------------------------|--------------------------|
| 1. Acting Area | 16. Main Auditorium |
| 2. Lavatories | 17. Staff Box |
| 3. Lighting Floors | 18. Lighting Control |
| 4. Wing Space | 19. Sound Control |
| 5. Service Areas | 20. Projection Box |
| 6. Stage Mezzanine | 21. Stage Manager's Box |
| 7. Access Road | 22. Lighting Gallery |
| 8. Rehearsal Room No. 2 | 83. Maintenance Wardrobe |
| 9. Lifts | 90. Dressing Room |
| 10. Fly Floors | 99. Dressing Room |
| 11. Practice Room No. 1 | 126. Artists' Green Room |
| 12. Bars | 144. Press Office |
| 13. Scene Store | |



Plan and section of proposed theatre at the Barbican with (right) plan of stalls showing stage with means by which stage sets may be changed. Tinted areas represent lifts to scene dock below.



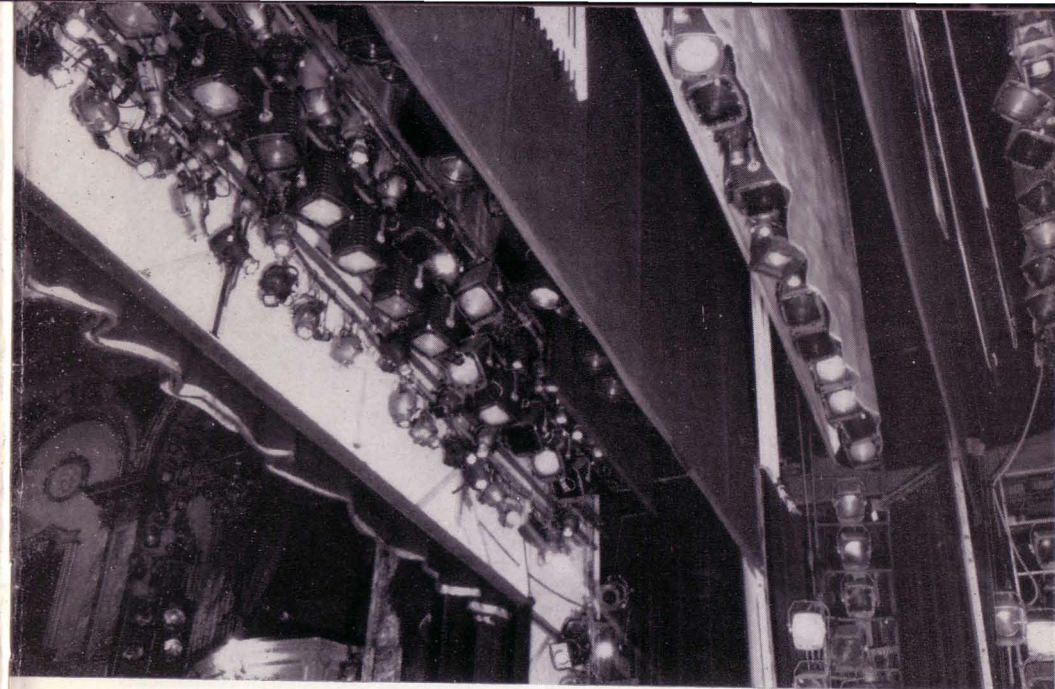
range of angle but ensure that all seats are within 65 ft. of the "point of command", a position defined by Peter Hall as being about 8 ft. behind the front of the stage.

There is in fact a proscenium line with a straight fire curtain falling on its front edge yet no one could possibly suggest that it will feel like a barrier. It is as wide as the auditorium itself and as high as the ceiling and both in the architectural model and the half-inch scenic model there is no sense of frame. Talking sense there obviously must be one, for that is where the walls end and the full scenic facility takes over. It is the focus of the seats that is largely responsible for making a stage feel part of an auditorium. That is why multi-form so-called adaptable theatres do not and cannot work. Any fixed nucleus of seating is bound to be focused wrongly for some forms and when all seating moves as great chunky wagons or rostrums, the focus is spoiled for all forms. Here at the Barbican much care has obviously been taken over both focus and distance; with audience and actors on the downstage area hanging together although this stage is not designed in thrust form.

To cater for the World Theatre season and other users, the edges at the proscenium line move on—*closing* to make a proscenium *opening* of 35 ft. This will obviously have to be a second class form with side seats out of action and seating reduced to "about 950". The front rows can also be removed when an orchestra pit is formed, an arrangement not needed for the Royal Shakespeare productions. These front seats are Peter Hall's modern "groundlings" on bench-type seating while in the centre of the topmost balcony (the lighting gallery) there are now to be places for 40 students—the "hirelings" presumably. Whether students and young England will be prepared to occupy either of these places in the London of the future is open to question, on the contrary they may expect "drive-in" facilities for their electric mini-runabouts.

The stage is raised so that the seats in the main area of the stepped auditorium really do get the best view. As to the stage itself most of the features described in our previous issue are still apparent; the Bury screens and so forth. He explained, however, that it is intended to "hinge" the stage floor at the front edge so that a one-in-eight rake can be applied mechanically. When flattened out there is also to be provision to drop the floor the necessary few inches to permit trucking. There are two large backstage areas 45° to the left and right of the stage axis from which and to which large built scenic arrangements can appear and disappear.

So there it is all ready *to be* built, the only question that remains is *the question*—the money. It is to be hoped that the building of the Barbican theatres and the South Bank theatres will become a competition to see who can complete the job first—the City of London on the one hand and the nation plus the G.L.C. on the other. What a splendid thing it would be if the City—that square mile which is the financial centre—should set out to win, because it would show that the city fathers really know what finance is for.



STAGE LIGHTING AND THEATRE

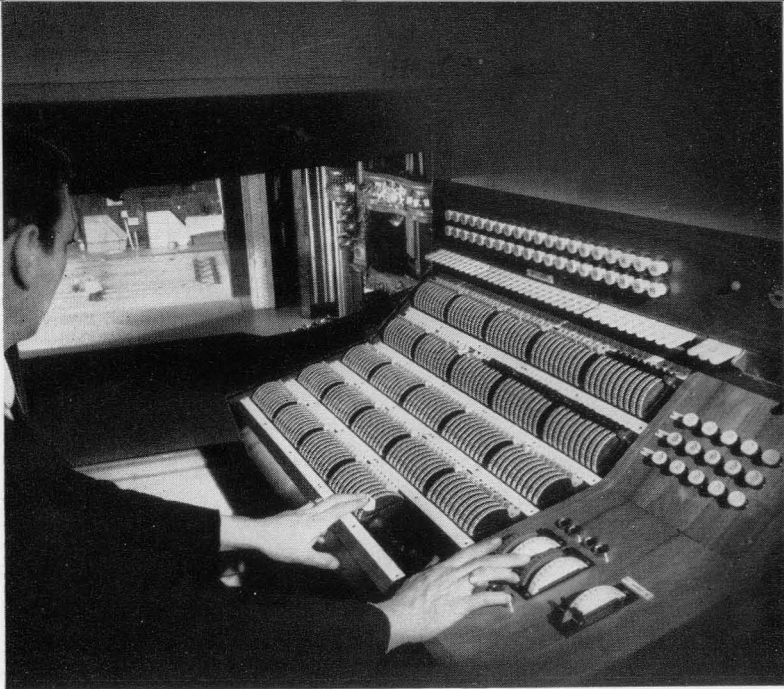
by Frederick Bentham

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 but part of it—one of the active agents in creating this London centre. 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 on pages 18 and 19. Theatre people from overseas call on Strand to see what we are doing.

In our Head Office Demonstration Theatre we act as host to British Council delegations, to twice yearly meetings of television engineers and monthly to the Association of British Theatre Technicians.

The reason why stage lighting occupies such an important place is because it keys off everything in the visual half of theatre. The

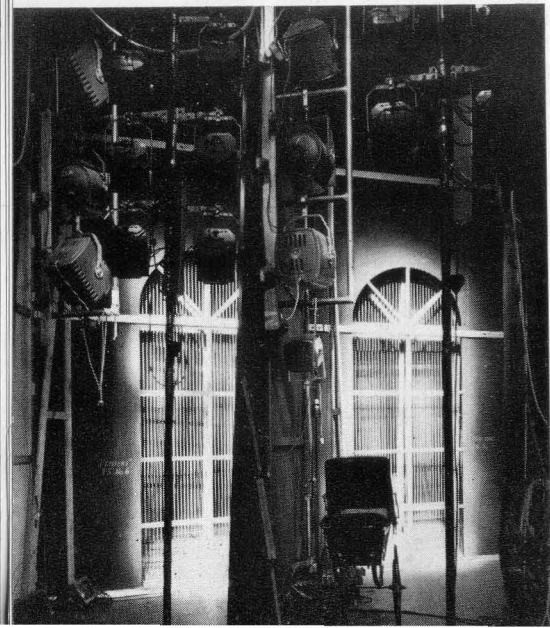


Strand Lighting Control at the London Palladium.

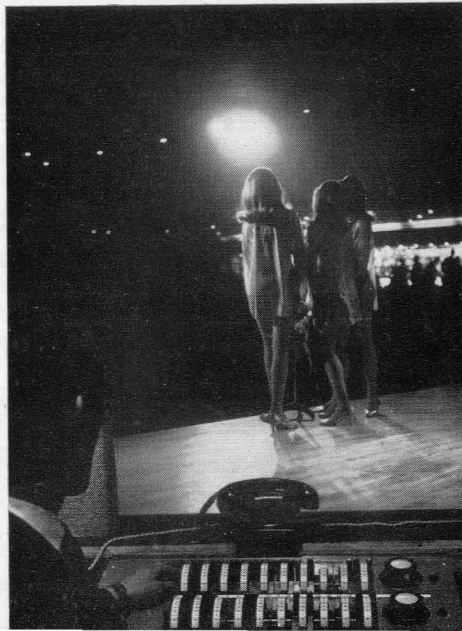
word "theatre" is by O.E.D. definition "a place for viewing", no mention of hearing. People ask each other "What did you see last night at Drury Lane?" This is one in the eye for Shakespeare or Pinter but one up for us at Strand!

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

Backstage at the National Theatre (Old Vic) London. Lighting for "The Three Sisters".



Batley Variety Club—The Deb Set.

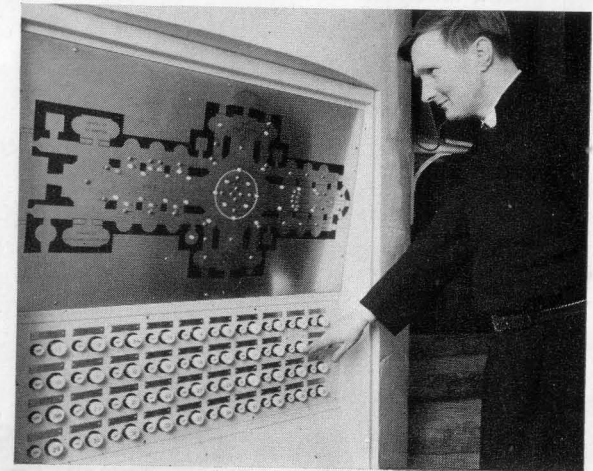


Getting to know it (and us) early.

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 such as that in Her Majesty's Theatre at the head of this article. These are quite usual and no matter 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,

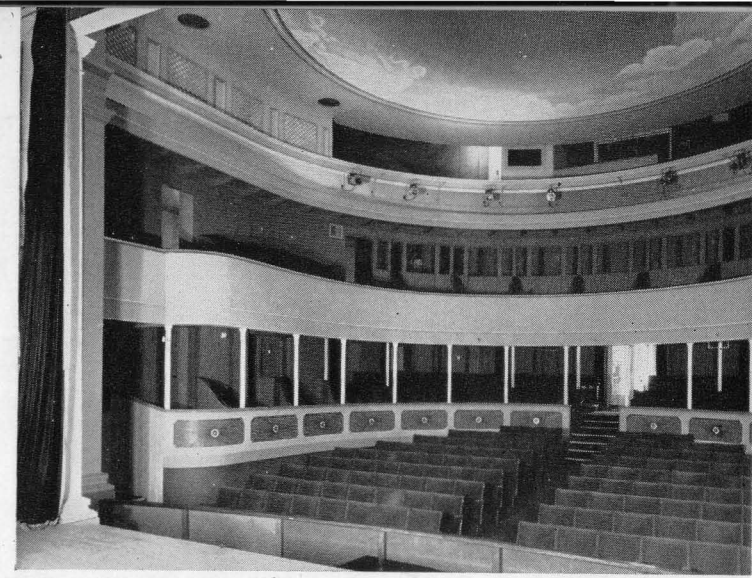
Lighting control and mimic diagram in St. Paul's Cathedral.





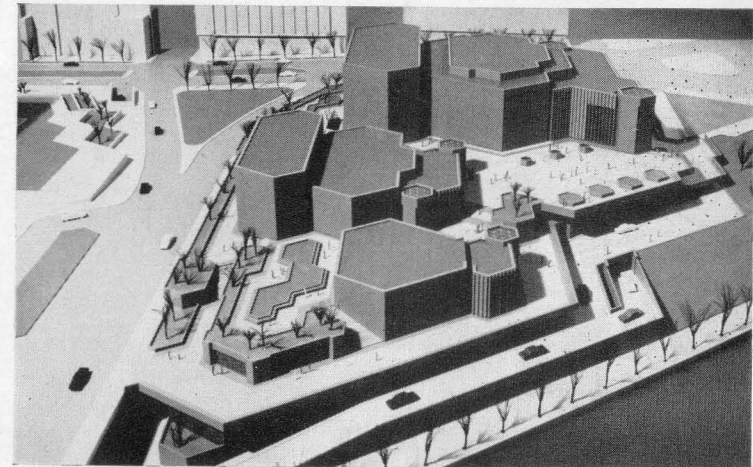
(Left) "Black and White Minstrels"—projected cloud effects in BBC T|V Theatre.

(Right) Restored Georgian Theatre, Bury St. Edmunds.



when they move to the London Coliseum this summer, will have 240 dimmers and an instant magnetic memory (System IDM) which can hold 250 pictures each composed of 32 steps of intensity in respect of each dimmer. Associated with this, the lighting for the various operas can also automatically and permanently be stored in a library of punched paper tape on reels. These in turn can be used automatically to re-programme the control when a particular opera returns to the repertoire. In this type of thing we are employing the most advanced computer and electronic technology but to serve theatre's peculiar needs. Our 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 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.

Canadian Centre for the Performing Arts, Ottawa—model of the three theatres now nearing completion.



(Left) Festival Theatre, Pitlochry, Scotland.

(Right) Avon Theatre, Stratford, Ontario.



All these also included complete Strand 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 Aranetor, in Manila, three in Rotterdam, the two in



Olympia as Theatre, Ideal Home Exhibition, 1968.

Gothenberg 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. Theatres turn up in the strangest of places. A very comprehensive Strand stage lighting installation was put in not long ago in the Casino Theatre, Beirut. As a counter-balance 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.

(Turn to page 34)



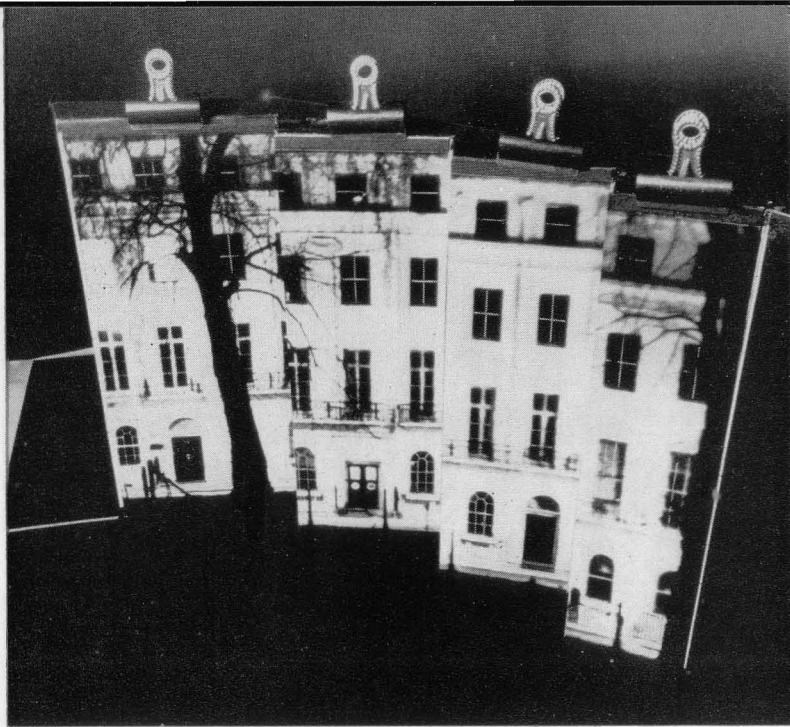
“BOOTS WITH STRAWBERRY JAM” at the Nottingham Playhouse

by B. E. Bear

Being TABS this is not a review of the production which has had wide coverage in the national press, but of the part played by Patrick Robertson's designs. Mr. Robertson is head of design at Nottingham Playhouse.

The show, a musical biography of Shaw, is a series of short episodes, and the demand for 24 scenes obviously influenced the treatment but, and this is the success of the design, the result has a style and validity of its own whilst still being essentially a part of the production. It is not to be admired as an ingenious way to do 24 scenes but as an attractive and effective way to do any one of them. Nor does repetition of the method become stale, such is the variety of visual images from formal patterns to realistic woodlands and city squares.

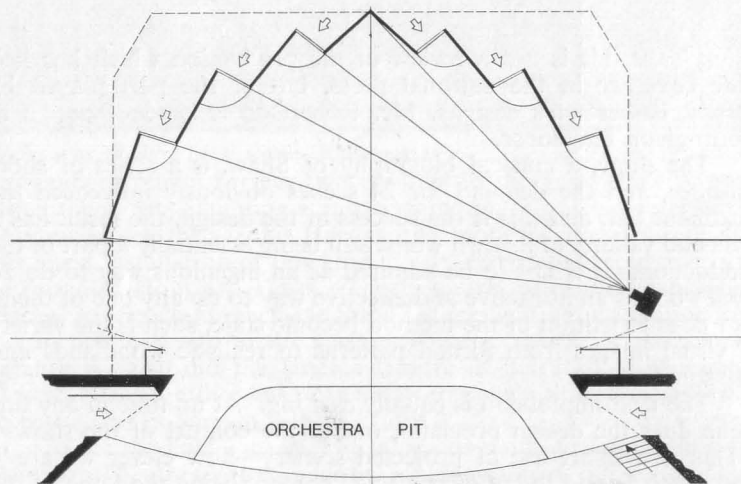
The next impression is equally exciting. At no time in any one scene does the design proclaim, out of the context of the show—“This is a smart use of projected scenery—how clever we are”. Too much is said today of projected scenery being the hope of the



"Boots with Strawberry Jam." Design by Patrick Robertson, production slides by Allan Hurst, Nottingham.

Above: Lantern slide positive on glass, made from four photographs clipped as shown.

Below: Basic plan showing screens with interconnecting mirror with doors (↓). Projector shown on P. side only with curtain masking for truck entrance O.P. Both projector and entrance were in fact duplicated on the other side.



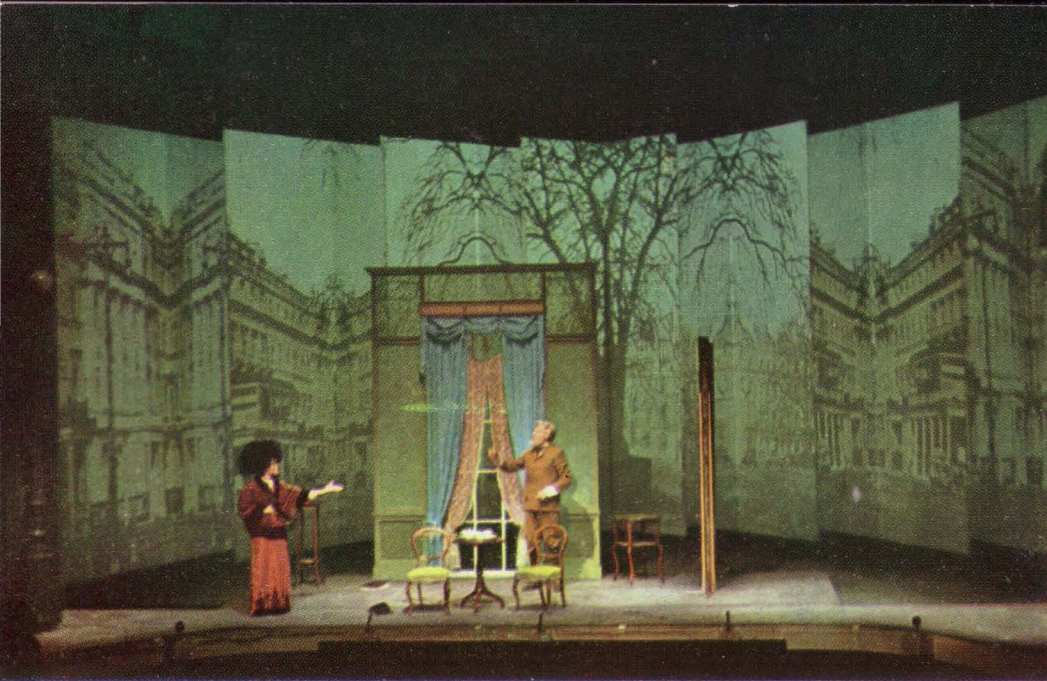
future and a lot of what is done is nothing but lantern slide décor, without the "magic". In this case I deny that it was possible to tell the difference from periaktoi scene changes until the number of changes made the number of sides suspiciously large.

Here the projection becomes an integral part of the flats—it sticks—and it is only the extensive repertoire of different scenes offered that tells us that they are not, nor could they have been, painted. A glance at the plan will emphasise why this is so. A projected picture is focused on the four flats each side from the fly gallery opposite—so far a normal technique. The space between these flats is needed for entrances—a traditional method. But here across these gaps Robertson has put complete mirror flats at right angles to the surface on which the projections appear. Thus each projected picture is duplicated in the mirror and the flat appears to run back to twice its actual size, no mirror being evident. This immediately gives the message that this cannot be a projection because half of each flat is apparently behind another. Entrances are made through the mirror as the bottom section is a concealed door. Luckily for the design "Mirralite", a stretched plastic, was available which gives a perfect "front silvered" reflection, and has not the impossible handicap of the weight of glass.

The projections are used on their own and also as backgrounds for small settings on trucks downstage and a proper balance has



Close up of stage showing built scene with projected background of large cameos.

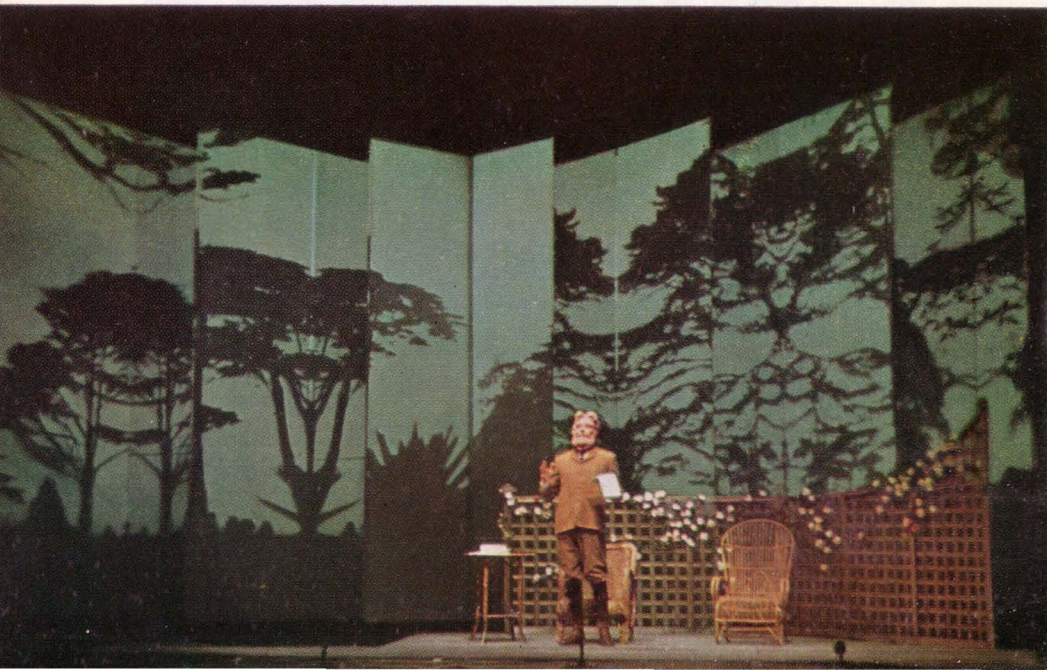


been kept in the lighting (Geoffrey Mersereau) so that at no time was the picture swamped, even when there was a full-up scene with 50 kW directed at the actors.

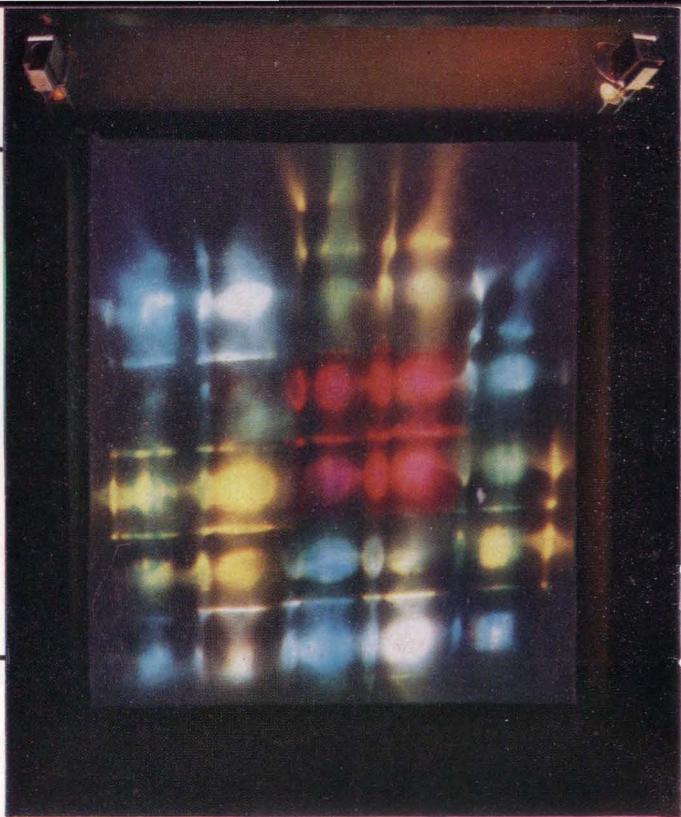
There had been a lot of detail work in planning and making the slides and the result is the true art and craft of scene design. Just as the solid theme and variations of Sean Kenny's set for *Oliver!* had the busy Dickensian life running over, under and through it and was the focus of the production, so Robertson's theme and



light variations give, with the costumes by Rosemary Vercoe, a great style to this production which was directed by Wendy Toye. John Neville who has done so much good in the new Playhouse at Nottingham is to be congratulated on putting on this show and, although as I said at the beginning this is not a review, on his playing of George Bernard Shaw with a masterly make-up. Just as the scenery was unrecognisable as to its true origin so too this G.B.S. needed the programme to tell us who was playing him.



INTO
SOMETHING
RICH
AND
STRANGE



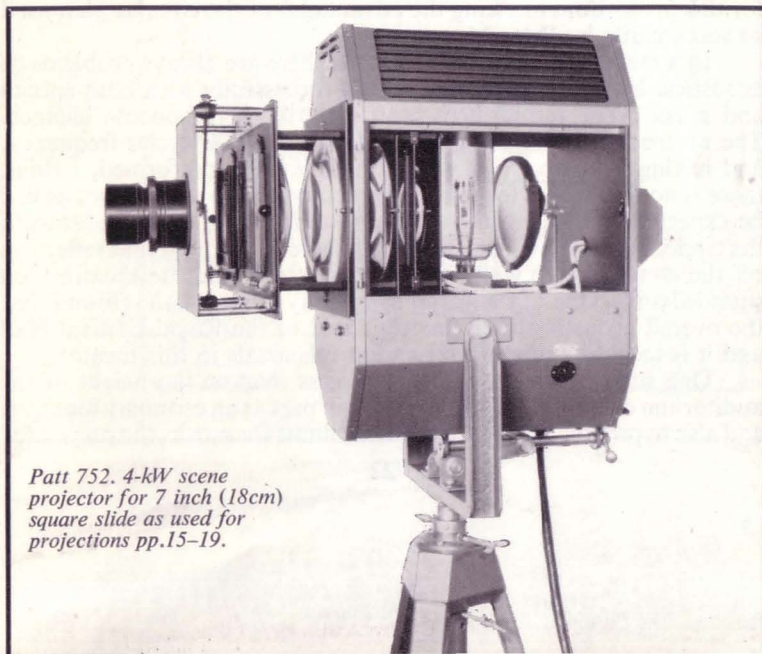
Two effects produced by the new miniature optical "Kaleidospot" discs used on the Patt 102 100w or the Patt 202 250w (opposite top) projector.



Patt 202 250-watt Mini-effects projector complete with built-in transformer for 24 volt tungsten halogen lamp.

The two colour effects shown opposite and the scene projection at Nottingham Playhouse (pp. 15-19) show the range of theatrical work expected from modern effects projectors. This kind of thing has always been a feature in Strand Electric's catalogues from their very beginnings. The two latest are shown on this page. Above is the Patt. 202 for use with a 250-watt tungsten halogen ("quartz") lamp which is complete with built-in transformer. This and the Patt. 102 100-watt Kaleidospot use miniature optical effects discs to provide both naturalistic moving effects like clouds and flames as well as a fascinating range of "psychedelic" colour effects, two moments of which are shown opposite.

The large projector below takes a 7-in. square slide and uses a 4-kW lamp. This is a scene projector and as such was used at Nottingham to give the effects on the preceding pages. Among other places it is also used at the Royal Opera House, Covent Garden—most recently for projection on cyclorama during the opera *Midsummer Marriage*, but its use by Joseph Svoboda was also illustrated in TABS last September (Vol. 25, No. 3). Other Strand Effects optical projectors are Patt. 252, 2 kW and the Patt. 152, 4 kW.



Patt 752. 4-kW scene projector for 7 inch (18cm) square slide as used for projections pp.15-19.

UNIVERSITY COLLEGE THEATRE

by Martin Carr

As far as London is concerned, I for one welcome this theatre with enthusiasm because it will be available not only to the University societies, but to any other group, amateur or professional, that can arrange a booking. For once a properly designed and fully equipped theatre will be available in the centre of London to house many of the "fringe" theatrical activities for which at the moment there are no alternatives to St. Pancras Town Hall or the Scala, whose very existence is now in jeopardy.

The U.C.L. Theatre seats 599 maximum, arranged in stalls and single balcony. For the first time in London, continental-type seating has been permitted and this alone would be sufficient reason for enthusiasm. The back-to-back row spacing is 3 ft. 4 in., and there is plenty of room to pass without disturbing those already seated. There are three exits to either side of the stalls, in which are 16 rows, each of 30 seats. The rows are gently curved, but the curve is not positive enough to give a sense of encirclement when the open stage is in use.

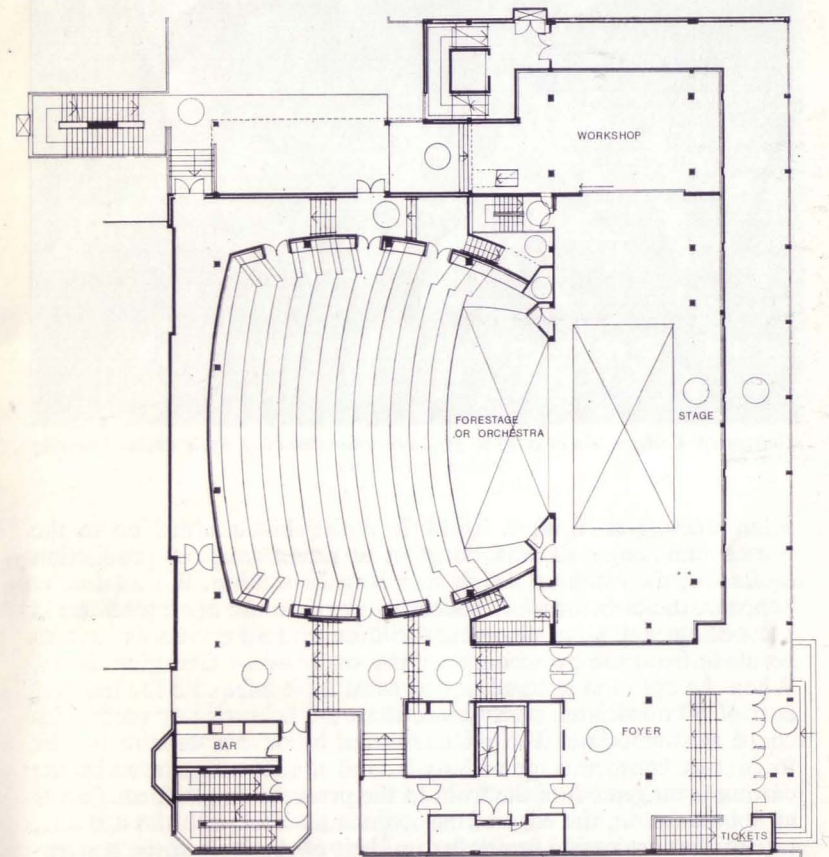
In the balcony the curve is very pronounced, and this does "encircle" the open stage; here the rake of the tiers is very steep—almost too much one would say for those who dislike heights. With a few seats placed on the horns of the curve close to the stage, the feeling is very much one of intimacy and contact. For both proscenium and open stages these side seats give a suggestion of "in the round" viewing which I personally have found most enjoyable. The lines of sight from the circle are astonishingly good when you consider that the projection of the apron can be up to 18 ft. from the proscenium line.

If this auditorium has the feeling of being a "mini" Nottingham, then I put this as a credit to Fello Atkinson, the architect, for this his wisdom in seeing the advantages of the circular plan used so successfully by Peter Moro.

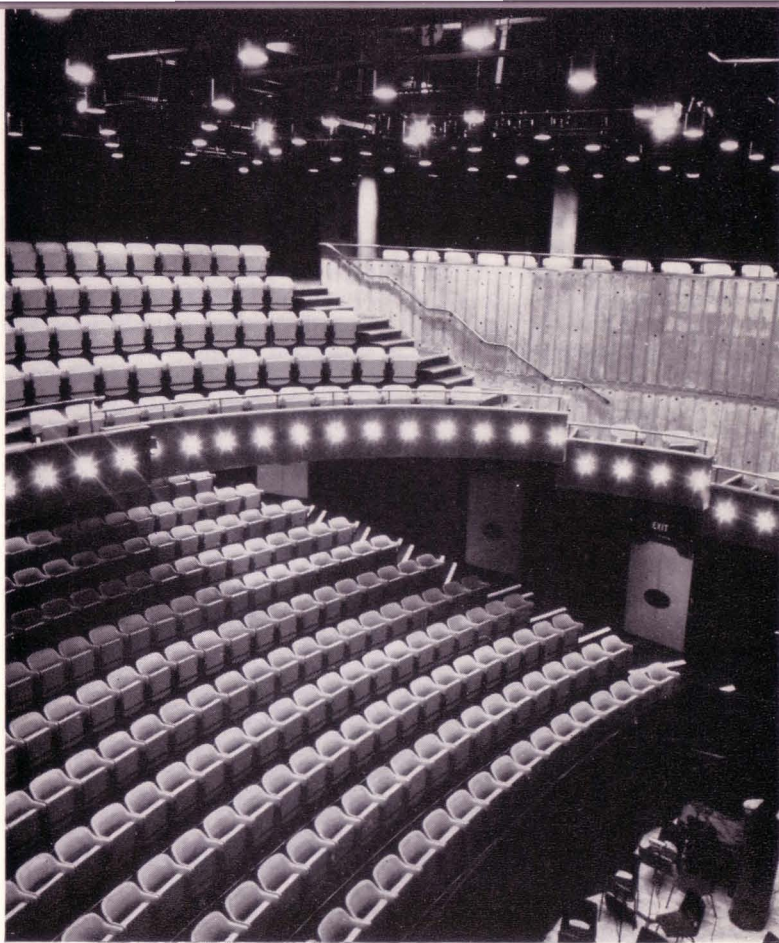
In a multi-use theatre of this scale, there are always problems of acoustics. How can the architect deal successfully with both speech and music? The results here seem to strike a reasonable balance. The reverberation time is given as 1.5 sec. at 100 cycles frequency, and having heard both opera and a play being performed, I think there is no doubt that for speech the acoustic is as satisfactory as can be expected. For opera the singers sounded dead from underneath the circle, but on moving up to the higher level, I found that reflection off the concrete side walls improved matters, and the theatre then sounded alive. One of the major symphony orchestras has found that the overall acoustic closely matches that of the Royal Festival Hall and it is to hold many of its London rehearsals in this theatre.

One reason for the acoustic success may be the height of the auditorium ceiling. One presumes that in part as an economy measure, and also to provide the required extra volume for music, the suspended

ceiling originally planned was scrapped, and the lighting catwalks—and very extensive these are—are exposed, leaving an open void above. In order to tidy up the appearance of this area, which houses a variety of service ducts, the auditorium lighting is suspended at catwalk level and provides a "blinder" effect. The resulting glare may be a little too much for comfort, but it is certainly effective in masking out the absence of a conventional ceiling. As a bonus economy, the F.O.H. spotlights get unrestricted coverage of the stage—of particular importance in the open form. However, I was very aware of the lack of side lighting F.O.H. positions for both proscenium and open stage forms. The open stage really does provide



University College Theatre plan.
Architects: Fello Atkinson ARIBA, James Cubitt and Partners.



University College Theatre view of auditorium showing open ceiling lighting bridges and blinders.

a large acting area, 42 ft. by 18 ft. When this is added on to the proscenium stage as was done in a recent student production of *Becket*, the resulting acting area is truly exciting. But as usually happens, the director who chooses to work on the open platform is left without any scene-changing facilities, and all entrances have to be made from the proscenium or the small token Georgian doors. When the apron is lowered, it can form a pit adequate for the best part of 60 musicians, surely more than the acoustics or economics could accommodate. The pit does then become a definite barrier to contact between stage and stalls, and this is exaggerated by the curious arrangement of the front to the proscenium platform. For, as at Southampton, the edge of the stage is set back into the opening, rather than projecting somewhat in front of the arch in the conventional manner.

One is conscious that the backstage area is not equal in quality



University College Theatre view of stage showing orchestra pit in action.

to the auditorium. In depth the fly tower does not cover the full stage area, and the proscenium opening is of modest width by today's standards. The grid is adequately high (60 ft.) and is fully equipped with double purchase counterweights. A scene dock on the O.P. side contains a paint frame but there is no other storage space or workshop. The dressing rooms are frankly a disappointment, and some A.B.T.T. advice could have been used here.

But in spite of the occasional deficiencies I like this theatre. It has atmosphere, and it is comfortable, and the equipment is on a scale not to be found anywhere else in the country in a theatre of this type. The architect estimates £200/250 thousand—an exact figure for the theatre alone is not possible—and to me this is good value for money, even if the awkwardness of the site has resulted in some curious architecture. But for once one can be enthusiastic about a university theatre, and this in itself is something to cheer about.



St. ALBANS, THE ABBEY THEATRE

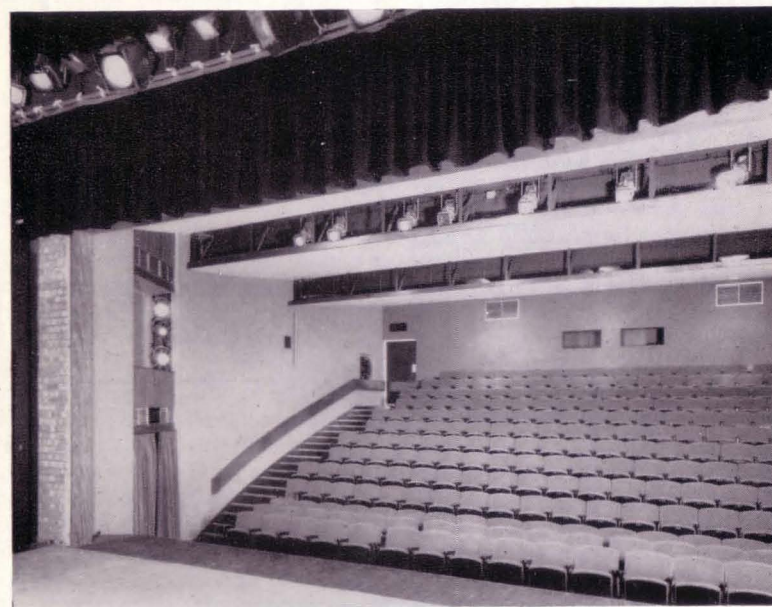
by Brian Benn

The relationship between client and architect, sometimes known as the theatre of non-communication, has been nicely resolved by the Company of Ten. Antony Moyes the architect has been a working member of the group for some years, where he relaxes by painting scenery, so that he was in the special position of knowing the company and its needs and intentions very well indeed. Purely by chance the company also counts amongst its members a solicitor, a brace of quantity surveyors, several dozen electricians and other skills, and a B.B.C. sound engineer. All this talent has added up to create the new Abbey Theatre which opened on April 15th, just over a year from the start of construction.

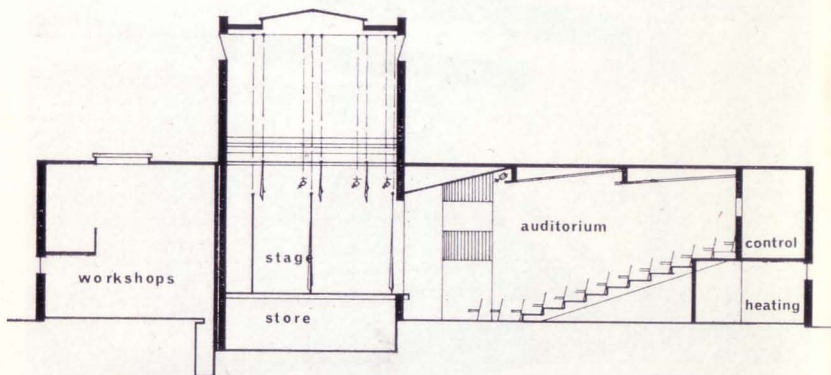
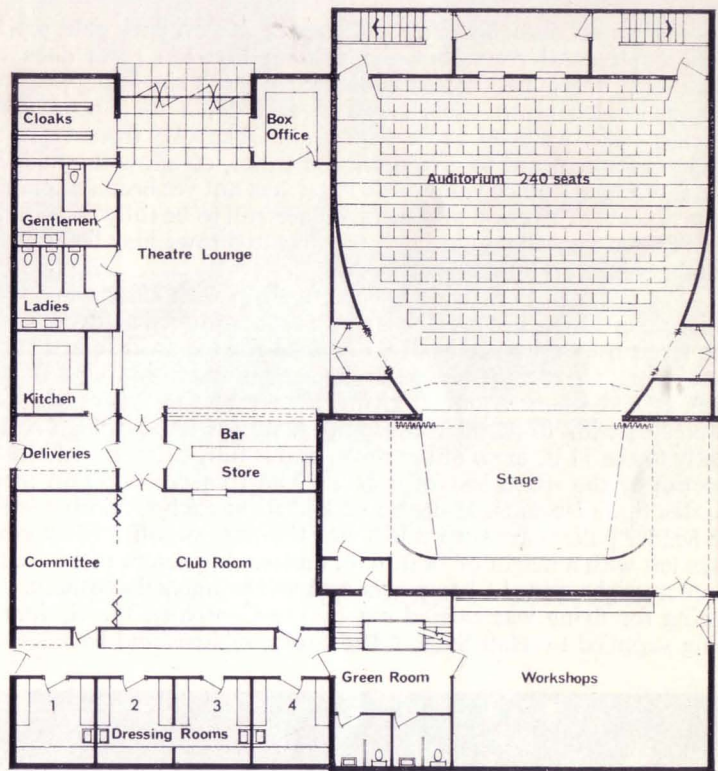
The building cost £30,000, and the fittings, furnishings and services added another £16,000. What they have got for their money and an enormous outlay of members' man-hours is a building with a handsome and economical exterior and a carefully planned and detailed interior. Its main function is to be the home and playhouse for the Company, which has 300 active members together with 800 members of the Theatre Club. The group has been giving at least six main productions per season, five running for a fortnight and one for a week. The new theatre has stimulated great local interest in live entertainment and it is intended that The Abbey will be available for professional and educational lettings and for visits of other amateur companies.

The auditorium holds an audience of 240 on dark gold seating in 13 continental rows, but the spacing between rows does not permit easy access past seated audience. It has a single stepped rake and the muted green walls curve in and down to a proscenium opening 24 ft. wide by 11 ft. 6 in. high. The two front rows are designed for removal to give orchestra space, or allow the addition of a forestage. Rather wisely this latter has not yet been designed as the problems of erection and storage have still to be fully considered. Sightlines are excellent although the first two rows may feel left out of happenings up by the backcloth.

The stage is 46 ft. wide and 20 ft. deep with clear wing space each side of 11 ft. The surface is tongue and grooved softwood, with one large trap up stage centre, designed for the swift interment of the Company's upright piano. It is the firm intention to cut further traps as and when required, giving access to the full-width stage basement, with 10 ft. of headroom. A fly tower 34 ft. high relates neatly to the 11 ft. or so of the pros., and is fully utilised without the expense or the space loss of a grid. The roof construction incorporates three I-beams, at centre and 14 ft. to each side, from which the header pulleys are suspended, and the sets lead off to the fly-rail, stage left with a height of 14 ft. 6 in. under. At present there are five counterweight sets, 12 hemp sets and three winched spotbars. All rigging for flying was carried out by the Company, the equipment being supplied by Hall Stage. The choice of lines and bars seemed



St. Albans Abbey Theatre, view from stage.



Abbey Theatre, plan and section.
 Architect: Antony Moyes of Michael Meacher and Partners.

rather lightweight for a wide variety of uses. Rigging and maintenance of pulleys is by means of an "access" type scaffolding, a somewhat tedious and alarming prospect at a height of 34 ft.

Upstage right, through double doors, is a large workshop with one wall fitted with pulleys for paint-frame work, and ample power supplies, well-lit and heated. Visiting companies may find difficulty of access with large flats or set pieces, due to the small doorways both on to stage and from outside (7 ft. high by 5 ft. wide).

Upstage left, through a stage entrance with efficient light-and-sound trap, is a small Green Room, with an imposing open staircase leading up to a well-appointed wardrobe workroom, large and pleasant to be in. Main wardrobe storage is in built-in cupboards in the dressing room corridor. There are four identical rooms, with a total of spaces for 16 artists, though some "doubling-up" could be done without undue crowding. The dressing rooms have access also to the dressing room/club room. This has the same plan as the stage and is intended for social purposes and rehearsals, and an interesting secondary function as a studio theatre. The room has been designed windowless, and with one end fitted with a curtain to give a small acting area. Audience and actor entrances are separate, and the power and circuitry are fitted for the addition of a small slider dimmer board and spotlights from Company stock.

The stage lighting/sound control room is at the back of the auditorium, with a clear view of the stage. A Strand J.P. 60 is fitted, with 40 channels connected. Circuit wiring was carried out by the client's members, as was the design and fitting of the stereophonic sound system. All stage lighting circuits terminate in three large patch panels at downstage right. Bars plug direct, and other circuits terminate near the patch panels in trunking and short flexible tails with 15-amp BS plugs. The panels are positioned about 12 ft. from the floor, as it was felt that this would keep them clear of scenery and action, but surely with such a small number of circuits available, re-patching during a show will become necessary and a trifle difficult. There is a large selection of ancient and modern on the equipment side, and there are three internally wired bars hung on winches. F.O.H. lighting positioning is poor, in two ceiling slots, 12 and 24 ft. out from the pros. line.

The first and last impressions of the Abbey are gained from the warmly coloured and roomy foyer. A capacity house will find mingling space and be catered for speedily from a bar 18 ft. in length. The plate glass entrance doors give a fine view across a wooded valley to the Cathedral.

The Abbey Theatre is a good building with a few shortcomings well compensated by a wealth of good thinking well carried out. But a theatre is nothing without the people who give it life and purpose. There is an air of quiet competence about the Company of Ten that leads one to believe that if they ever really find this theatre wanting they will just go ahead and put it right.

OBJECT ALL SUBLIME . . .

by Philip L. Edwards

In March of last year, I first made my acquaintance with the reputation of the Toynbee Theatre in the East End of London. "The theatre," I was told, "is owned by the Inner London Education Authority." I was later to learn that it is a "school of stagecraft" and is available to all amateur groups. At this time I was also told that the theatre "has lots of equipment and has an enormous old switchboard".

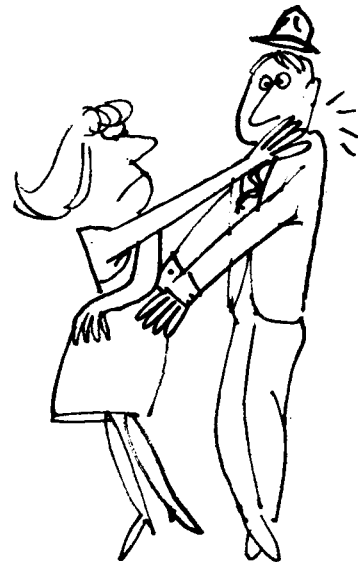
I found that the "enormous switchboard" (apparently a 36-way bracket handle board) had metamorphosed into a J.P. 60 three preset desk but with only 40 dimmers fitted. The board is sited on the prompt side perch in such a way that the operator has his back to the audience. The "lots of lighting equipment" I certainly found, spanning a fair period from early Patt. 56 acting area floods to modern Patt. 264 bifocal spots. On this visit I did not see the scenery stock but I did have a brief glimpse of the workshop.

I came away laden with duplicated handouts. Most of these were severely practical being stage and lighting plans and lists of scenery items available, etc. I must confess to being rather put off by one or two of the handouts which referred to such things as "a spirit of adventure and experiment" and using the theatre to "its most exciting extent". In my experience such phrases are mainly used by rather "intellectual" people about complex, modern plays which are unintelligible and not the least entertaining. I am one of those "uneducated" people who still think of the theatre as entertainment.

I must say that in the event I found little evidence of this "intellectual" approach at the Toynbee. The staff were all helpful and pretty well down to earth.

Shortly after this visit, the show was changed to *The Mikado*, the reason being the all too common one that a number of people in the society were interested only in Gilbert and Sullivan shows and, therefore, left for the period of the modern show leaving the society with insufficient cast.

I then filed the set designs for *Free as Air* (for future use perhaps?) and discussed *The Mikado* with the producer. The only



"... rather put off by one or two of the handouts."

things the producer specified were that the set should have several levels and that there should be a door flat downstage prompt with a raised section in front of it.

From this and a list of the available flats and rostra, I drew up a set design. I aimed at a fairly geometric set but *not* a symmetrical one. I had intended to fill in the back of the upstage rostra with a spidery hedge of twigs with coloured blossoms attached. I felt that this would give a contrast to the otherwise solid and geometric nature of the set. In the event, this hedge never came about due to the difficulty of fireproofing the twigs. It was replaced with a lattice which had a creeper painted upon it and which was liberally decked with blossoms. These, in fact, were made by lady members of the cast during breaks in rehearsals. I think that this sort of thing is valuable in persuading the cast that the technical side is really a part of the show and not an addition.

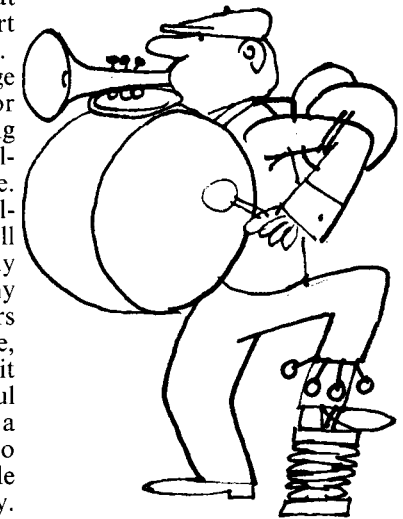
The next step was to arrange for the workshop to be available for painting the set and constructing the few items that were not available from the stock in the theatre.

Since the workshop was available for only three weekends, all the work had to be carefully planned. It was carried out by my colleagues and I with members of the society. On the whole, they seem to have enjoyed it and I feel that this is a useful asset to the social life of a society—it being impossible to talk while rehearsing but not while painting and constructing scenery.

Unfortunately, it is not often possible for a society to build its own sets and the societies who are able to use the Toynbee Theatre and other theatres with workshops should make the most of the opportunity they have to get away from hired scenery which can never exactly fit a production simply because it has to serve so many.

As I mentioned there is an orchestra pit. It is a pleasant change to have the orchestra where it belongs instead of the usual state where it occupies the stalls floor immediately in front of the stage and thereby obstructs the view from the front few rows.

I was surprised when I supplied the theatre with plans of my set and lighting rig to find that this was something unusual. Apparently, even when they have the advantage of a good workshop, very few amateur companies bother to make proper plans. I know that one can get a surprising amount of information on the back of



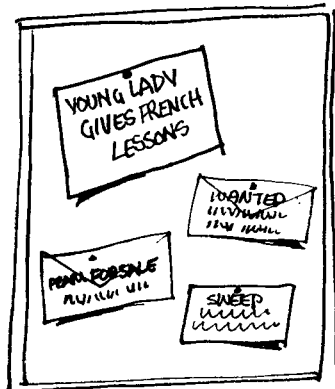
"... the technical side is really a part of the show."



“... a pleasant change to have the orchestra where it belongs.”

an envelope but a proper plan has the advantage of being easily readable by anyone and there is also the little point of alterations being made in a set or lighting rig simply because the envelope is torn.

It is worth noting here that working in a theatre with an adequate stock of lanterns and colours does speed up the rigging process no end and also meant that I did not make any trips to Kennington.* While these are usually fairly pleasant, they do consume valuable time.



“... one can get a surprising amount of information on the back of an envelope.”

The rigging of the set and lighting went off without any real hitch. As these things do, it took a little longer than expected but was completed in good time for the final dress rehearsal. A number of alterations were made to the original lighting layout design to save time in rehangng equipment. The only change from my design which I now regret was that I left the colours that the theatre normally uses in the cyclorama equipment. I could not get exactly the effect required with these and I was not happy as a result with the cyc. at all throughout the production.

The low height of the stage caused complications with top masking, especially as I had batten three dropped well in to allow use of three Patt. 23s with cloud

slides on the cyc. As an aside, these took about three hours to set properly thus proving the rarely appreciated fact that optical effects should never be used unless adequate time is available for setting them.

My lighting followed fairly normal lines. I avoided a suggestion that I should project suns and moons on the cyc. in rapid succession for Yum Yum's solo at the start of Act 2 on the grounds that such things, in my opinion, though obviously not everyone's, are reminiscent of village hall drama at its very worst. The only unusual feature was the use of a pair of lanterns (Patt. 123) to light the house tabs before the show, thus performing the job which the much-despised floats do so well and providing a touch of “atmosphere” for the audience.

The two dress rehearsals passed without serious incident. The orchestra, being professional, provided no trouble in contrast to many amateur orchestras.

The next item of interest was on the afternoon of the first performance when in moving a ladder I smashed one of the shades on the property fittings. These had been bought from one of the large multiple stores to ensure that replacements could be obtained easily. This was all very well except that the whole of East London closes early on a Thursday. As a result, I had a hair-raising taxi ride to the West End and back. The driver had obviously realised that I was in a hurry and several times on the return journey I wondered if I and the shade would make it intact.

So far as running the lighting of the show was concerned, I found that the control was a pleasure to use. I decided that the most logical way to treat each cue was as a complete preset change—except for fading the lanterns lighting the house tabs which were both on one circuit. This method worked well as the operator—usually myself—had to worry only about timing the cues, having set the presets up in advance in a slack period.

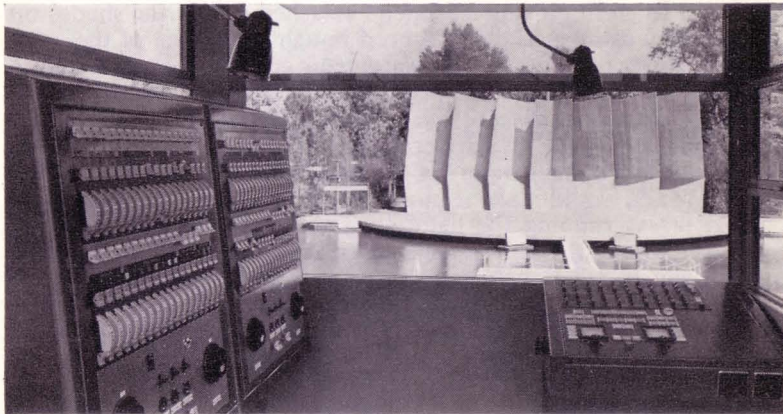
The only major snag in the lighting was the discovery shortly before the last performance that one of the front of house Patt. 264 lamps had failed. This illustrated another defect of the theatre. It is impossible to get at the F.O.H. equipment without rigging a “zip-up” staging, and as a result the lighting on the last night had to include a certain amount of guessing of levels to correct for the absence of the failed spot.

So there we are, three performances; a lot of hard work by a lot of people and apparently three contented audiences. As I have said it was very pleasant to work in such a well-equipped theatre and workshop—by amateur standards anyway. The show had its ups and downs; it certainly was not as deadly serious as this article.

* Strand Electric's London hire dept., address: 271 Kennington Lane, S.E.11. Tel.: 01-735 7811.

Stage Lighting and Theatre—continued from page 14.

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 supplied 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 Advisors. 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 on pages 22–25 of this Shareholder's Special issue



Open-air Theatre, Vienna.

of TABS, shows. This same issue, pages 26–29, also provides 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. An amateur—Philip Edwards—describes on pages 30–33 some of the detailed planning of lighting that goes into a modern amateur production. Some forty new theatres have been built since the war in Britain and our installations are in the lot. 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.

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 is described on pages 5–8. Meantime we are putting a new



Magyar Operaház, Budapest.



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

installation with IDM memory control into the Royal Shakespeare Theatre at Stratford-upon-Avon replacing the Strand one of 1952. This had replaced the Strand one of 1932 which went in at the time that theatre was built.

It was our specialist knowledge of lighting control used expressively with dimmers which enabled us to conquer television. This began with two controls 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, 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

Hampton Court Palace—temporary fit-up for ballet performed in honour of President Sunay of Turkey.

Strand wireman's view, Royal Albert Hall. Photo courtesy BICC Ltd.

