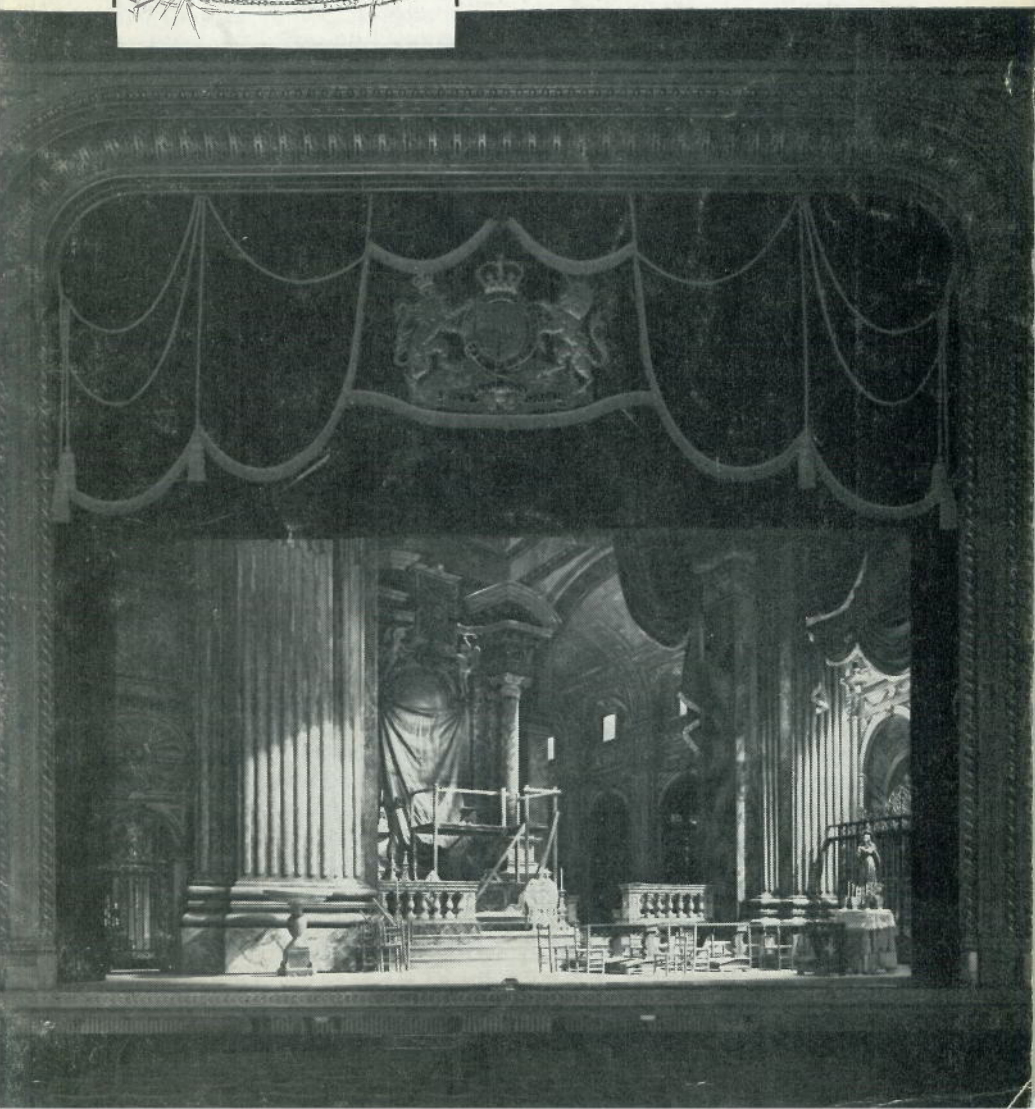




TABS

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Theatre Consultants

The role of theatre consultant has been well known abroad for many years, but in Britain, although a few individuals have given greater or lesser amounts of advice over the years, they have each worked in isolation and, to say the least, sporadically. Theatre planning may cover anything from a great Civic Opera House right down to a small alteration for the local village hall to convert its platform into something that could just be called a stage. It is customary to blame the architect for all the undoubted ills that have afflicted stages, but to whom could he turn for advice?

Theatre people at the top of their profession are notorious individualists and the advice tendered by one of them when a

theatre was in the planning stage may be cursed by his successor when such advice takes all too physical form after the place has been built.

For many years now, certain members of Strand Electric have found themselves having to answer an inner compulsion to comment on aspects of stage and theatre plans which, from sheer experience, they knew to spell disaster. Such advice when tendered was sometimes resented by the architect whose philosophy was "lighting men should mind their own business of lighting." Others have welcomed the guiding hand and the inevitable quiz as to "what the stage is for?" and "how it is to be used" and "in which case wouldn't it perhaps be better . . . ?"

In the last two or three years the architect or client has been able to turn to the Association of Theatre Technicians (ABTT) for general advice and comment, the appropriate committee being set on the job. This is an extremely valuable service, but of course it cannot provide the detailed attention and supervision some jobs may require. The formation of a "Society of Theatre Consultants" has just been announced and it is their aim to regularise the situation and to provide to those who require it a list of qualified theatre consultants.

So far, so good. However, like everything in its very early stages it can only be welcomed with "modified rapture". What is a qualified theatre consultant; how did he qualify? In these early days there can be no recognised training, no examinations, nothing resembling the professional qualifications of an architect or engineer. The schedule of theatre consultants is simply made up of those who claim they do, or have done, this kind of work and whose claims are recognised by others who make similar claims in respect of themselves. Almost a mutual admiration society. At this point, lest it might appear that this editorial is inspired by sour grapes it must be said that this pen is wielded by a fully paid-up member of this select group.

This last remark may raise an eyebrow—a member of Strand Electric a consultant—how can he be independent? The answer is of course that at the moment it would be difficult to make a living just theatre consulting. Some may be earning a living as architects, as scene designers, as stage directors, or working in various stage equipment firms. The fact is that at the moment at the beginning—knowledge and experience must be tapped wherever it can be found if our stages—all of them—of the future are to be right. So long as the Society of Theatre Consultants lists the other activities of their members and gives an indication of the specialities of each, all will be well. For some considerable time, if ever, no consultant will be omnipotent—equally versed in all facets of the theatre and in consequence theatre consultants will have in their own and their clients' interest to consult other theatre technicians, and this is where the ABTT, the Association of Theatre Technicians, will still be invaluable.

Architects' Journal Guide to Design of Theatres

A remarkable landmark in the history of the architects' role in the theatre, said by some to be *diabolus ex machina*, is the publication this summer of eight special supplements week after week in the *Architects' Journal*. The names of Peter Moro, Norman Branson, Eric Jordan, Peter Jay and others are sufficient warrant for its authority, but as if this were not enough, certain committees of the ABTT have been able to view and comment on the early drafts. Architects will, of course, have been busy sticking these supplements in their SfB files but, for others, it is good news to know that the whole set in bound form will be available from the ABTT in the Autumn. Further, it is intended to issue additions and revisions as time goes on. We have asked Mr. Basil Dean to review the guide in our next issue.

Musolux or Chromosac ?

We thought our readers would like warning of a new horror that the twentieth century has in store. Already life is made a misery nearly the world over, as Percy Corry relates later in these pages, by drooling or jingling music which either oozes from the static installation of the gullible or shrieks from the transistors of the selfish. Bad enough, but worse is to come. Someone has discovered that the "Thyristor" dimmer can readily be tied onto the sound equipment in order to regulate colour lighting to provide a visual accompaniment to the music. There is nothing new in this, such automation has been done before. What is new, and bodes so ill is that such dimming equipment is now relatively inexpensive so we may expect before long to find lights of hotels, restaurants, supermarkets, aerodromes and planes to suffer from the visual jitters—Lumiere et Son in fact.

Autumn Lecture Programme

Due to the world-wide circulation of TABS, the programme of the London Demonstration Theatre is no longer published in these pages. Details of this programme and of the Illustrated Recorded Lecture service are available as a separate leaflet.

Tabs Binders and Index

TABS binders of the do-it-yourself variety with stiff dark green covers and gold lettering are available, together with an index to recent issues, from Head Office, price 7s. 6d., post free UK.

Leonard Applebee

An Appreciation by Stanley Earnshaw

I first met Len Applebee in 1923 when, as a youth of nineteen, I joined the Company and reported to him for duty in his tiny office. For an hour or so we smoked his cigarettes as he talked enthusiastically of theatre, business, cross-country running, tennis, swimming and rowing, especially the rowing of Vesta Club of which he was an experienced member. Then he abruptly dismissed the pleasantries and we got down to work. I soon realised he was a man of terrific drive and abounding energy, expecting others to go at his pace. He loved the job, would tackle anything that came his way no matter how difficult or unfamiliar, and would work the clock round when necessary.

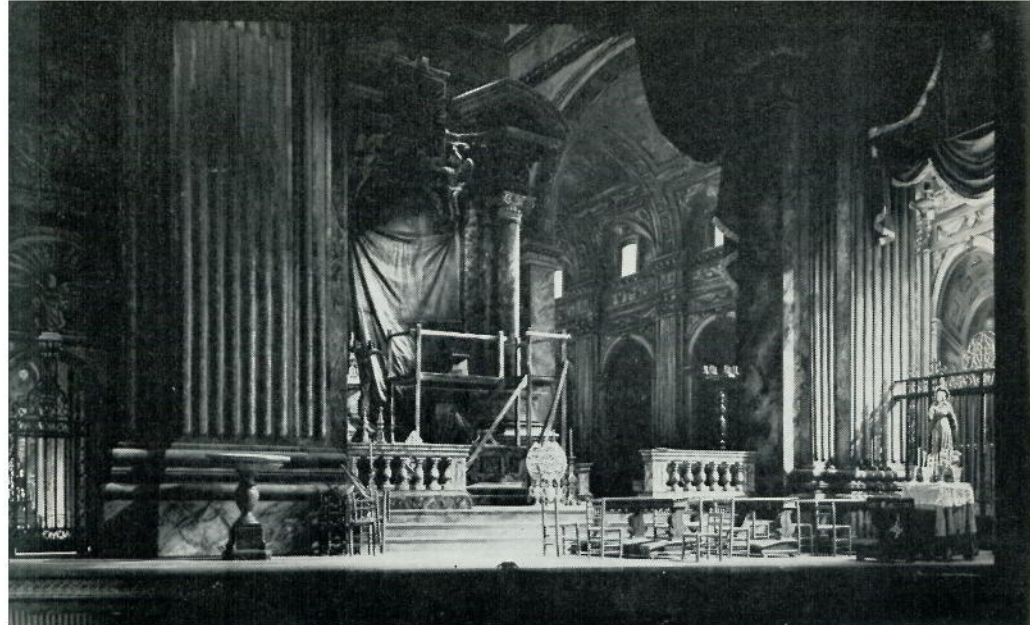
Having theatre people as parents he always accepted without question the rule that "the show must go on" and would not allow anything to prevent it from doing so.

Applebee was a theatre enthusiast with a remarkably catholic approach, Music Hall, Musicals, Shakespeare, Ballet or Opera (including The Ring!), all were greeted with discerning enthusiasm. Whatever the local entertainment, wherever in the world he was at the time, Len had to sample it!

He was responsible for the design of much of the Company's equipment in the very early days. For many years he was General Sales Manager and was a director from 1945 until his retirement in 1957. During his thirty-five years with Strand Electric he made a considerable contribution to the developing techniques of stage lighting. He became a well-known figure in the entertainment industry all over the British Isles and in many other countries. For seven years he was Chairman of the Stage Lighting Committee of the Commission Internationale De L'Éclairage; he was an early Fellow of the Illuminating Engineering Society of which he was made an honorary member on his retirement.

Applebee was well known as a lecturer on theatre lighting and in fact came out of retirement to make a last appearance in this role as recently as February last when he took part in a programme of reminiscences as part of our Golden Jubilee programme. He was also present at the celebration party on March 17th.

Len Applebee had a full and useful life which he enjoyed to the full. Always he would lend a **helping hand where and when** it was needed. Those who knew him best will always have grateful and affectionate memories of an outstanding personality. Could any of us hope for more?



Act I "Tosca" Covent Garden production by Zeffirelli and decor by Renzo Mondiardino.

HOW THE NEW LIGHTING CONTROL FOR THE ROYAL OPERA WAS DESIGNED

by Frederick Bentham

So, the Covent Garden installation, the largest ever carried out by Strand Electric, is finished—or at least has opened on time, it will not be finished for some while yet. How to celebrate this event in TABS? Certainly not by setting out to detail all its wonders and all the things we think it could do. The appropriate way is to try to put the whole thing in a human perspective and therefore I propose to tell you the story as I know it.

The story began over thirty years ago when I found myself just missing the Covent Garden boat. My own Light Console was then only represented by diagrams and a model and certainly would never have been made at the short notice required. Strand Electric, on April 20th, 1934, opened what was to me a timid and conservative control but was to them a revolutionary and sensational piece of apparatus. My role was confined to operating the cyclorama end of the switchboard as colour mixing was then a mystic and secret rite. The installation was the responsibility of L. G. Applebee, with Moss Mansell and Jim Jordan helping out on the control; Bill Pepworth did the wiring. The total contract—control, dimmers, lighting equipment and stage wiring seems from the account books to have cost £9,343 13s. 4d.

When I joined Strand I suppose the three theatres I most wanted to design the control for were Covent Garden, Drury Lane and the London Palladium. There was also a chance in the super cinema stage show then popular. This frankly confessed ambition does much to explain the peculiarities of my invention—the Light Console—for it will be noticed that all three theatres were devoted to spectacle and I obviously did not feel at all strongly then about the form of control for straight theatre. After some years first the Palladium, then Drury Lane fell to the Light Console, but by the time Covent Garden was ready once again for a new control no one but a lunatic would put forward a Light Console for the job. Yet I have a feeling it could nevertheless still make a good showing at that type of work.

Although there was talk of a new lighting control for Covent Garden for many years I suppose active design began when the bars in the West End, frequented by theatre people, began to carry rumours that Covent Garden was going to have a German control. As there are many such bars there were many such rumours.

It is fairly well known that the stage door of Covent Garden Opera House is at the other end of the same Floral Street where Strand Electric took up residence in 1924 and have remained ever since. Not surprisingly the suggestion that there should be a German switchboard at the other end of their very own street was regarded by the Strand directors as a kind of lese-majesty.

Personally, while not liking the idea, I could always see the sense of it. A large proportion of the guest directors, designers and so forth were bound to come from opera houses either in Germany or under German technical influence. Thus, when tempers got frayed during a lighting rehearsal—as is bound to happen whatever the switchboard—the Stage Director could reply: "But Herr Doktor Scheinwerfer, the Buhnenbeleuchtungsfernsteuerung* ist by Siemens—just like your very own Deutsches Opernhaus." The Herr Doktor would probably retort: "But the Buhnenbeleuchtungsfernsteuerungsmeister†, they are not so good—they stink." But one would at least be halfway there, or so the theory goes.

In fact the operator is the key to the problem, for the Siemens switchboard is designed for German operators working in a direct line of switchboard tradition now over half a century old. There is no such tradition here and in consequence we can design afresh to follow wherever the techniques available today may lead.

The German tradition of switchboard design began with tracker wire operated liquid dimmers, then similar operation of special Schwabe resistances and finally of the Bordoni multi-way transformer. The Siemens switchboard which the Royal Opera House proposed to have is a very ingenious solution to the problem of

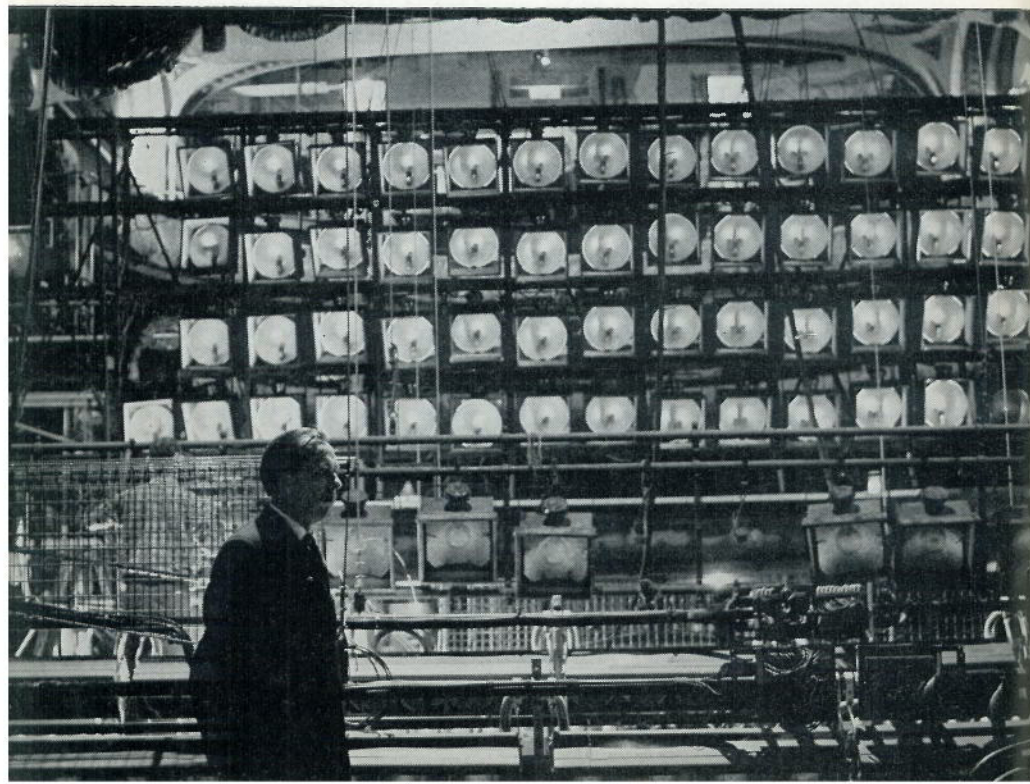
*=Remote stage lighting control.

†=Operator of above.

reconciling traditional control as represented by the trained operators and existing lighting plots in the Continental repertoire with the need for progress as represented by dimmer presetting, etc. To do this Siemens use an all-electric magnetic amplifier dimmer but with an electro-mechanical desk. The main desk in fact resembles the standard control regulator of tradition, but miniaturised to the extent of reducing lever centres from $1\frac{3}{4}$ in. to 1 in. This in turn is driven through a servo network to preset levels as represented by another desk housing four or eight preset levers (four is more usual). Much as I admire this Siemens solution of their problem, I did not wish to see it at Covent Garden Opera for several reasons. Firstly, because I had always wanted to design their control and did not want to be stymied again. Secondly, because I do not feel that an *electro-mechanical desk* operating all-electric dimmers is correct today. Having personally for years used *electro-mechanical dimmers* with all-electric desks it was time to say good-bye to mechanics for good if we were to take the next big step forward in lighting control.

As already pointed out, our Opera House has never embraced the German lighting tradition so there seemed no reason to start

William Bundy with cyclorama flood bank lowered in for alteration. These lanterns and the frame date from the 1934 installation.



now, but there is yet another difference between our opera house and the German—it is also a ballet theatre. The Royal Ballet is not just adjunct to the opera, it is a world-famous company enjoying equal status with the opera company. Covent Garden has thus to become at one moment our ballet theatre—our Bolshoi; at the next, one of the great (though not in size!) Opera Houses of the world.

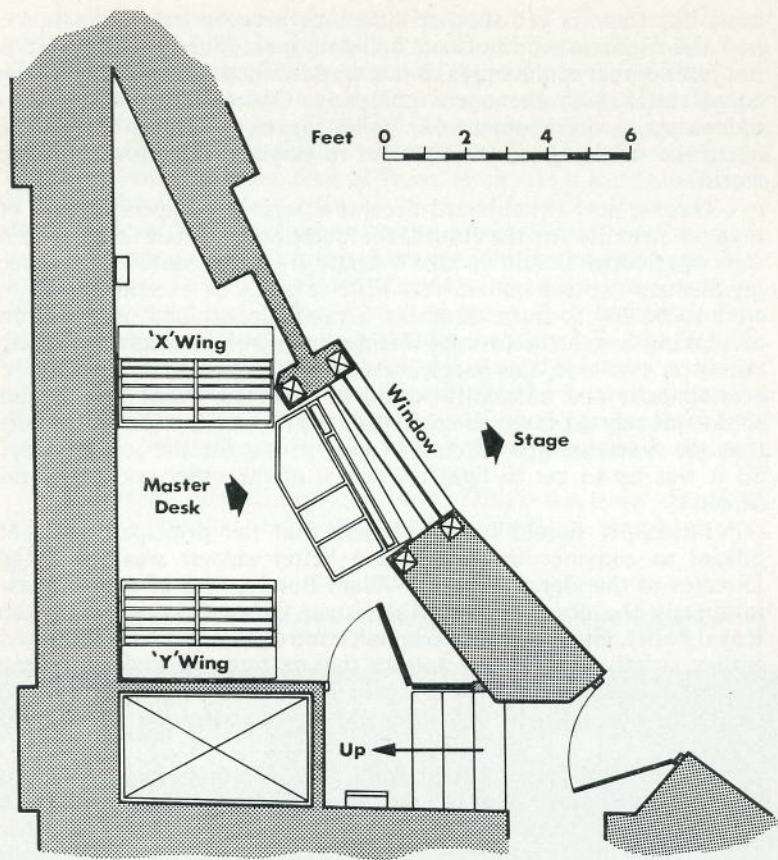
Once a new switchboard became a serious prospect instead of a vague promise for the future, the question that had to be settled was what form should it take? Apart from the stated preference for Siemens control we had very little to guide us except that there were to be 200 or more dimmers. Strand Electric had no intention of making a control to copy Siemens control principles. Leaving ethics on one side, the people best able to make a Siemens board economically and efficiently would be Siemens. What Strand had to do was rely on my own creative conceit which arrogantly told me that the Siemens type of control was wrong for the job anyway! So it was up to me to fight the battle of the other end of Floral Street.

I think it should be stated here that the principal technical official to convince that we had a better answer was the Stage Director of the Opera House, William Bundy, who of course knew intimately the needs of both the Royal Opera Company and the Royal Ballet. His choice of a German control was, as I have indicated earlier, strictly logical. Any notions that patriotism should intervene is sheer nonsense—the Royal Opera House has an artistic duty to secure the best talent or equipment wherever in the world it may be found.

Let us now turn to the design process which was to lead to what is for Strand anyway, the present felicitous situation. The question of the dimmer to use was quite simple—the thyristor (silicon controlled rectifier) was to hand and just the job. Although the newest dimmer, we had already considerable experience of this dimmer in various experimental installations and a large permanent one for television in Holland was giving good results, with others to follow for Cologne and Paris. Two-hundred-and-forty 5 kW variable load dimmers could easily be achieved and fitted into the space available.

The design of the new lighting layout to be fed by those dimmers was obviously the province of William Bundy and his assistant, Martin Carr, and Bill McGee the chief electrician. This meant concentration could be on the control system to operate the dimmers—the desk.

Right from the start it was apparent that wherever the control desk went space was going to present an acute problem—not for us (if we got the job) would be the spacious control suites of the new German opera houses. Ultimately a site was found at Grand Tier level in what could be spared from a ventilation duct. The result



Plan view of control room. Rectangle bottom left is a vent to duct for the theatre. Note unfortunate position of access door which separates one of the two wings from the master desk.

is the tiny irregular shaped room shown above. So tight is the space that the only way we could get the photograph (page 11) was by building a mock-up of the room at our works and leaving out the two walls nearest the camera! With all the planning will in the world it was only when the room was complete (some three weeks before we were due first to use the control) that we could be sure of its exact dimensions.

The size of the room was apart from any other consideration going to limit the job to four dimmer presets (i.e. four dimmer levers to each of the 240 dimmer channels), 960 levers in all. There was also much ancillary apparatus to get in there as well. Four-colour change on 36 spotlights with two preset switching and display of colours in use, elaborate communications, etc.

The only way a large installation like this can, when using all-electric dimmers, survive on four presets only is by provision of infinitely variable groups within the presets. Thus Glyndebourne, with four presets to only 120 dimmers, has facilities to set the control up into three groups and preset a further three to replace these at the touch of a master switch. Would something like this do at Covent Garden? I rather thought not since it has always been my practice right from the days of the Light Console thirty years ago to provide for many adjustable groups using Compton organ combination action, and it is this action known as memory action, which has enabled us to keep the number of presets down.

To provide "memory group" action to all-electric dimmers is far from easy since, unlike the electro-mechanical dimmer systems we have always used for our big jobs, the dimmers require to be fed with some control current all the while otherwise they will blackout. This problem had at this time just been solved in our system known as C/AE and two jobs, one for Cologne TV and the other for Paris were in the earlier stages of construction.

Lighting control at Covent Garden (faked at Gunnersbury works because of lack of space for camera shot). Controls over window are mainly for sound communication.



Regular visitors to our Head Office demonstration theatre will have been aware that the control console there has been going through a series of violent changes at regular intervals for the past two years. The system was now ready but had to be demonstrated on such a fearsome array of stopkeys, pilot lamps and dimmer levers that it is not surprising that it engendered a high degree of no-enthusiasm in the beholder. For this system to gain acceptance it had to await the special luminous lever designed for it—a matter of many months tooling delay.

Meanwhile, the other system already adopted for Glyndebourne was explored for Covent Garden—largely because it was easier to explain with nothing there! Unfortunately it became all too apparent to Bundy and I that it would not work out for Covent Garden. The reason it would not work out for this job is so interesting in its implications, especially in the United States, that it is worth going into in some detail.

To find out what the new control ought to be able to do we were lent the plots for a variety of different types of production in the repertoire. There was the Zefferelli *Cavalleria Rusticana* as an

recent production of *Götterdämmerung*, described and illustrated in TABS.* There were several others. It was some of the ballets which had the most rapid change plots; *Antigone* being a pretty representative example: 29 cues in 23 minutes, with the longest interval between any of them $2\frac{1}{2}$ minutes. I felt that if we could solve *Antigone* then the job was mastered.

All the opera and ballets were plotted on large sheets of paper showing graphically against a time scale the dimmer movements and the degree of check for each. The graphs were then examined to find in them a pattern of groups. The awful truth became apparent, there was no such pattern—ever! This is why I said earlier our discoveries had implications for the United States. In Europe it is customary to provide very large numbers of dimmers and group-up at the controls one way or another. In America the practice is to have relatively few dimmers and patch up groups of circuits to them to suit each production. Thus a particular dimmer will have several circuits grouped to it. Using such a system here would mean re-patching after every lighting cue for no groups remained for longer than one lighting cue nor did they ever repeat again.

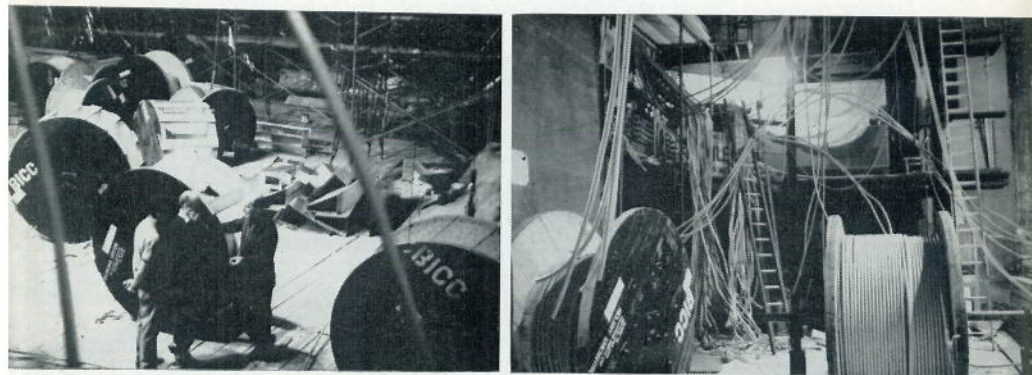
This meant, whether Covent Garden liked to admit it or not, the “memory” groups of system C/AE was essential as this was the only way a large number of groups could be both set up rapidly and brought into play without taking up extra space—which was not to be had anyway. Ultimately 40 memories were adopted and these can easily be reset in the interval if necessary or, indeed, in any pause in the plot.

The control as ultimately designed is a variant for four presets instead of the customary two of the television system C/AE referred to earlier and there remained to prove first to ourselves and then to Covent Garden that it was the system for them.

To do this the old team B and FPB† that is B. E. Bear and myself, went once more into action. The various plots were transferred to special sheets devised by us so that we could literally “work” the control on paper. It could be said to resemble a system of accountancy sheets in which instead of keeping check on the movement of money it was the movement of dimmers and the whole lot had finally to balance. These account sheets were then turned into operational working plots and a mock-up of the control made on which Messrs. Bundy, Carr and McGee were able to work our plots themselves, albeit without any stage lighting. They were then able to write their own plots using our format. To make sure of the virtuosity of the control other plots from other theatres were subjected to the same treatment and other members of Strand Electric not in at the birth, including Paul Weston who had to see the control to its completion, were now brought in. This plotting method will also be useful in the early days of using the new control

* See TABS, Vol. 21, No. 3.

† See Golden Jubilee TABS, Vol. 22, No. 1.



George Clark, foreman (right), with his lieutenants Johnny Porter and Derek Porch. Alongside wiring in progress. The various cables on the drums and “draped” around are rigid aluminium-covered multi-core, not flex!

example of slow dawn changes lasting the whole duration of the opera. This type of change was identified as “processional”, since successive lighting cues began before the earlier cues were completed. The cues overlapped and built up very slowly to a great climax. A climax which, incidentally, on the old installation had the nasty habit of bringing out one phase of the supply company’s main feeder fuses!

Other types of lighting changes were represented by *Magic Flute*, a production in which gauzes were extensively used and the

but doubtless once the board becomes familiar to its operators they will be able to discard it for something simpler.

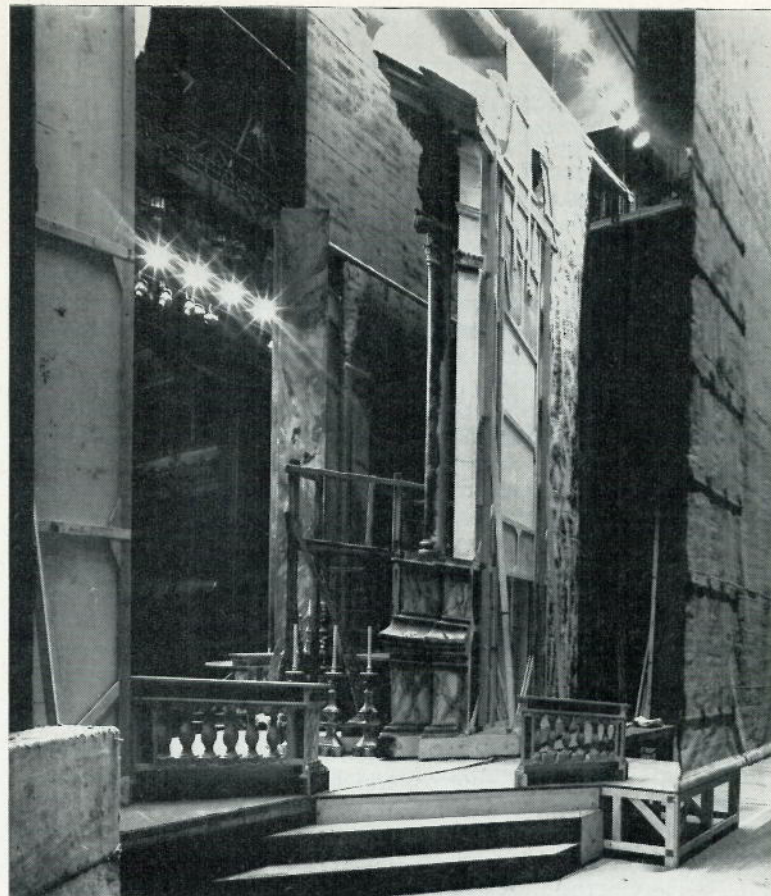
The Opera House switchboard order was finally placed in October 1963 and the task was now to get the equipment finished and installed in time. The worst feature was the fact that the theatre was only to be closed from midnight May 23rd to August 4th, when rehearsals began again. This was particularly a strain on the contracts department under Frank Church who had to re-wire the stage to the specification of W. M. Bennett, of Mackness & Shipley. The order for this was received on May 16th, 1964, the rest of the building to the same consulting engineer's specification having been begun earlier after competitive tender in the previous May.

To my mind such a short closed period on so large an installation to such a high standard is not really fair on all those who it nevertheless stimulates to work like Trojans. There is no margin of safety in respect of time, there is too much reliance on luck. One wonders if we would have been given even that much time in a closed theatre if it had not been for the demolition and reconstruction of the balcony and gallery. I do not think hard work of itself is unpleasant, in fact the reverse applies, but the pace can be such that work becomes a worry. It may sound strange to say, but I believe that a job of this importance should be a real pleasure. Certainly I have got a lot of pleasure from the time I took up the challenge which finally led to the basic design.

It is now time to predict the effect of our new installation on the lighting at the Royal Opera House and it is here that the difference between writing a publicity handout and an article for Strand Electric's own magazine TABS comes in. I have to say in these pages I do not think that the new installation will make much difference at all! The stage may be considerably brighter, but will it be better lit? And will it take less time to light?

The answer will depend on many things, the obvious one being it all depends who is "doing" the lighting at the time. There is, however, more to it than that, a very large installation such as this which has to handle a large repertoire of both opera and ballet will take some time to get used to. Whether it is the new lighting control itself or a relatively small component, such as one of the several hundred Patt. 264 Bifocal spots with its eight framing shutters instead of four, it will be familiarity that will enable one to get the best work from it.

Familiarity is the last thing likely to be present in this case. The installation is not yet handed over complete even though it has to be used for rehearsals, nor will it be complete even when the place opens on September 4th. Also as with a new orchestra, or a new repertory company, it takes time for its members to run in and become a team. Although a good part of the effectiveness of the lighting orchestra will depend on its instruments (the qualities designed into the various spotlights, control, etc.) the human element, the direction and using of them, is in human hands. Georg



Act I "Tosca", off-stage. The view which Mme. Callas saw as she made her entrance.

Solti and the orchestra he directs use familiar instruments each and everyone of them. William Bundy and his lighting orchestra of necessity use instruments the majority of which are completely unfamiliar to them. Due to technical progress this installation has to be in advance of its time so that it can avoid being behind the times ten years later on. Alas for progress already the dating of this creation lovingly described by me in this article is being hastened by completely new developments from the same stable.

Only the lighting control has been described in this issue, other features of this important installation will appear in December TABS.

PROJECT FOR CENTRE 42

Herbert Marshall the well-known director and theatre consultant has been responsible, along with the late Leo De Syllas as architect, for the suggestions for this unusual theatre to be housed in a very special one-time railway engine shed. Mr. Marshall precedes their combined report with the following personal note.

It is a sad prologue to the publication of our projected designs for Centre 42 that I should have to record the fact that my collaborator, architect Leo De Syllas, tragically died in a motor car accident in Tunisia, only a few months ago. To me it was not just a personal loss of a dear friend, but also of a wonderful partner in this fascinating project. I have worked with architects, both here and in India, and found that my work with Leo was the happiest that I have had. Maybe because in the thirties I knew him as one of the Angry Young Men who gathered around us at Unity Theatre when I was virtually its artistic director and started its Training School. He was one of those who was about in the days when many other brilliant youngsters began their artistic work in our group. He was associated with many brilliant architectural projects and buildings, but perhaps this scheme may give him a niche in our memory.

As regards the project itself, it was a very happy thing that I was able to formulate the brief in association with Arnold Wesker in Centre 42 before an architect was actually appointed. One of the facts that have emerged in the practice of building theatres—a very recent occupation in England—is the necessity of a proper briefing of the architect *before* he actually starts designing. Otherwise work is subsequently made much more complex, difficult and expensive. In this case Leo was given a complete briefing by myself; but another factor entered, which made it an interesting and fascinating project. We did not start with a square of paper or a bare plot of land. We started with an historic monument. And of course quite often limitations of this kind can severely cramp one's style, but as Goethe once said *the master is revealed by the limitations he overcomes* and it seemed to us that in this particular case we had some very happy limitations. We had a building of unique design and unique dimensions and within this framework we had to design a home for Centre 42.

It will be seen that in the project for Centre 42 not only is there a multi-purpose theatre but in addition, access to a vast foyer, which will also be an exhibition hall.

One of the crying shames of the average theatre in England is that when the audience pour out of the auditorium, they are squeezed like sardines in the most ridiculous, cramped spaces. This is noticeable even in such a modern theatre as Chichester and something that one finds only adequately dealt with in the Continental theatres—the Paris Opera of course is the obvious example. So here in Centre 42 we have utilised the wonderful gallery, which has a diameter of 160 ft. and a walking width of 40 ft. to give us what

will probably be the most unique exhibition hall in England. Yet at the same time it is planned that this will be the foyer of the theatre so that the audience will not only have plenty of space to promenade, but at the same time will be able to see any exhibition shown at the time.

As to the projected theatre itself, here to my mind the most interesting thing is that it is a drama theatre primarily, and therefore should above all have intimacy. One of the factors which lead to theatre in the round is the idea that it brings the actor into closer contact with the audience and makes the whole production more intimate; but in designing theatres, both in the arena and the round type, there is a tendency to negate this by making distances so vast that the actor is no longer in intimate contact—Chichester is a case in point where the audience should not go beyond the central circulating gangway. Beyond this it is far too vast and no longer is there an intimate feeling, nor does the audience wrap around the acting area. I stipulated here in Centre 42 that there should not be more than five or six hundred seats and that is the basis of the plans shown, though I must admit that since then Arnold Wesker has asked us to try and increase the seating capacity, for the inevitable reason—box office takings! And just before Leo died, we were in fact working on that very demand by increasing the seating to a maximum of about seven hundred.

Notes on the Preliminary Design for Centre 42 by Leo De Syllas and Herbert Marshall

The designs show an adaptation of the Roundhouse, Camden Town Road. This building, which was the second structure of this type to be built on the site, was erected in 1846 to house and service railway engines and is today scheduled as a National Monument and protected accordingly. It consists of a 24-ft. high brick drum 168 ft. in diameter. It is covered by a conical slated roof carried on an inner colonnade of cast iron pillars forming a ring in the interior 80 ft. in diameter. The roof structure is supported by a magnificently detailed series of cast iron trusses and the ring of columns is connected by a series of cast iron arches.

Centre 42's programme and the Theatre Consultant's* detailed brief called for a building which would accommodate a variety of activities so arranged they all would be related to each other, while any one use can be pursued independently at any time. The focal point of the building will be a theatre which must be as adaptable as possible, and to this end the design has been arranged to allow for a theatre using an orthodox apron stage with a rear stage and a wide cyclorama, as well as a theatre in the round accommodating spectators on all sides. The theatre is to be adaptable for use as a cinema. The full requirements of dressing rooms, rehearsal areas

* *Herbert Marshall himself.*

and technical areas are also accommodated. In addition, the other activities of the Centre are served by a restaurant and general purpose hall which can also be used for dances and small concerts, a large art gallery which can also be used as an art studio and workshop and general exhibition gallery. The Centre's administrative and club rooms have also been accommodated, including a games room.

In adapting the existing building to this use the architects and the theatre consultants have had to take into account the restrictions imposed by the structure and the desirability of allowing the magnificent nineteenth century engineering of the interior to be hidden to the least possible extent. A later conversion of the building, when it ceased to be an engine shed, incorporated a heavily built wooden gallery round the outer ring, and the designs have tried to incorporate as much of this gallery in the new use as possible in order to economise in the expense of alteration. In principle, the present designs show that all the accommodation required can be fitted into the Roundhouse but the studies are of a preliminary nature and are not put forward with any degree of detail or finality. Present laws regulating the arrangements of theatres for fire escape and general planning principles have been taken into account. A great deal of further detailed work and study will have to be undertaken to convert the present designs to a final project, but it has been possible to show that all the needs of Centre 42 can be accommodated within the building.

In designing the theatre the major problem has been to evolve an auditorium which can be adapted to apron stage with cyclorama use and a full theatre in the round. Due to the existence of the ring of cast iron columns it is possible to accommodate a 26-ft. deep open stage with a cyclorama in front of the columns, or screens in between, or a cyclorama 18 ft. behind the ring of columns, giving a total stage depth of 45 ft. The arrangement therefore concentrates on a large apron stage with a stage revolve and a rear stage behind the line of columns some 20 ft. deep. With this arrangement the auditorium will seat 575 people and the whole of the cast-iron arched structure with the columns is visible. The design tries to minimise the interruption of the structure and of the iron trusses carrying the roof above, but in order to get proper acoustic conditions a number of adjustable deflectors will be suspended from the roof structure and will be capable of being moved to allow for variations in the acoustic conditions of the auditorium. The structure and LCC regulations prohibit the possibility of a fixed proscenium or flying scenery, but sets can be moved on to the apron stage or the rear stage in front of the cyclorama up to a height of 24 ft.

The conversion of the orthodox apron stage auditorium to a theatre in the round is achieved by placing 100 seats of the main auditorium on a revolving floor. This floor turns through 180° and a further 72 seats can be accommodated by extensions of the revolving

structure, making a total of 647. The whole of this part of the auditorium is then elevated 4 ft. so that the last line of seats in the main auditorium are brought to the same level as the stage when used as a theatre in the round.

The main entrance and service entrance to the building have been arranged from the forecourt to the building off the Camden Town Road. A stage and goods entrance is also arranged from the ramp which forms the approach to the railway sidings. No details are given of the exact site boundaries of the property as these are not yet established.

The architects and the theatre consultant would like to acknowledge their indebtedness to three architectural students, Messrs. Davies, Pratt & Hobbs, at the Architectural Association School of Architecture, for the use of their superbly prepared measured drawings of the existing building on which these designs have been based.

U.S.I.T.T. FOURTH ANNUAL CONFERENCE

Report by Philip Rose

The United States Institute for Theatre Technology held its fourth Annual Conference in New York over the week-end of April 25th-26th.

The scene was the Barbizon-Plaza Hotel, and the theme "Today's Theatre—Yesterday's or Tomorrow's?"—enough, one would think, to start and sustain an argument in any gathering of people concerned with the theatre.

With sharpened pencil I sat waiting for the "Off" on Saturday morning determined to record as much as my fast longhand would permit. By the middle of the afternoon I had the idea that the needle was stuck, and by lunch time on Sunday was convinced of it. Speaker after speaker kept returning to the same point—that, between the idea to build a theatre and its fulfilment, things had and do go wrong. Interspersed were speakers telling us where, how and why.

It is apparent that any attempt to give a chronological report of the proceedings would be lengthy and somewhat repetitious. All I can do, therefore, is to distill the essence of what was said by a lot of people in a little time. Unfortunately, I had to miss most of the Sunday afternoon session, but the postscript by Wally Russell will complete the picture.

The first question discussed was—"What is the role of the theatre specialist as consultant in the conception, design and building of a theatre?" It was fairly clear from the outset that strong, but widely varying views, were held on this question.

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Before discussing his role, it would have helped to have had the animal defined. Incidentally, I was sorry to note the absence of one

or two people known in the North American theatre consulting field. Their comments on many of the things discussed would have made interesting listening.

It was apparent that specialists come in a wide variety of shapes and sizes, from the theorist with his box of tricks to the essential practitioner who knows the sobering problems of touring a heavy road show through a succession of civic joys.

The more that was said the more unlikely became an agreed definition of theatre specialist, let alone his role. Can one man be an expert in numerous fields? A theatre is a complex building with a much wider scope than the narrow spectrum suggested in the term "theatre specialist". It was obvious that there are several experts to be involved—staging (scenery handling), lighting, acoustics—apart from the usual heating and air-conditioning consultants. The question was posed—"Who is to employ these experts—the client or the architect?" Someone has to receive their recommendations and judge when areas of seeming conflict arise. Some wondered if the architect, who may be building his first theatre, is the one to bear the responsibility of judgment. Where a knowledgeable client is involved there can be no doubt that, as captain of the team, the architect has the traditional responsibility. But who are the people building theatres today? Not individuals as of old but almost entirely civic and educational bodies who having handed their brief to the architect, move to the sidelines. Because of this, some speakers felt that the client, being the one in need of expert advice, should be the one to employ the theatre specialist.

At this point, one answer was forcefully but most charmingly stated by a lady from the floor. She felt that the best way to ensure a satisfactory theatre, whatever its form, was for the client to engage a man of the theatre, not a theorist, but someone vitally concerned and working in the theatre. She cited the success of Stratford, Ontario, with Sir Tyrone Guthrie at the helm throughout its conception, design, construction and early working years and the Guthrie Theatre in Minneapolis, of course. Other people, like Michel St. Denis and Whitehead, she suggested, are the sort of people well qualified to represent the client with the architect and team working for him—a *theatre generalist* as another speaker suggested. This was an interesting comment. Surely, however, to remain valid as theatre specialists, these people must actually work in the theatre and earn a living doing so. Once they decide to become career experts there may be a loss in their practical value. In fact, I doubt whether those she mentioned would ever want to work other than in the theatre.

That there is an urgent need to ensure good theatre design and construction, there is no doubt. A number of speakers representing civic and college theatres recounted frightening tales of their theatres. In some cases architects had completely ignored the recommendations and facility requirements put forward by future users of the building. One speaker pointed out that the cost of correcting

one unbelievable *faux pas* would have paid for the services of a top flight specialist.

Even where theatre consultants had been used, elementary mistakes had been made. There are stages where the width reduces as the depth increased, giving the hardest boiled stage manager apoplexy when faced with hanging his show; stages without toilet facilities; and one recently constructed civic theatre with the dressing rooms six floors from the stage. Another, hardly credible, without front lighting or even facilities for its installation.

One university theatre world-famous for its mechanical adaptability was discussed at length by two speakers. Both had had practical experience with the building since its completion. Each had a list of things which shouldn't or should have been and—as a final blow—mentioned that of the many permutations theoretically possible for the theatre, the proscenium form had been by far the most used.

"Why, why did things go wrong?" was the cry of these speakers and others. Who were these people asking this question? Not architects, not consultants, they were, without exception, users of the theatre—directors, performers, designers and technicians. The very people, one would think, would be the first to be consulted and listened to. They didn't presume to say what form of theatre was best. Their yardstick was simple—is it a theatre?—does it work? Sadly, in too many of the cases discussed, their answers appeared to be "No" to both questions.

No one attempted to define a theatre, although several speakers came close to it when comparing some of the clinically antiseptic structures which have mushroomed in recent years with the living buildings of a past era such as the Walnut Street Theatre in Philadelphia, and the Schubert in New York. This wasn't nostalgia, but reflected that a successful theatre, whatever its stage form, must be a living practical building; that performers and audiences must be in complete communion and there must be elegance creating a sense of occasion for the audience.

In spite of the several types of theatre discussed, little was said as to which form was the most satisfactory. It was apparent that those designed to be all things to all men end up as nothing to no one or at best, are used in one basic form only. One speaker dared, without contradiction, to state that for flexibility, a well designed proscenium stage took a lot of beating.

I suspect that the Conference posed more questions than it answered. From some experiences recounted it is apparent that some of the glib philosophies underlying much modern theatre building on this continent are unsound.

That the U.S.I.T.T. is doing an excellent job was borne out by the balanced cross section of the people present—from clients and architects, experts of all kinds, through every type of user to manufacturers. It was painfully apparent that the U.S.I.T.T. has a great deal to do before every theatre built in North America is perfect

for its proposed application. Whilst the spread of technical knowledge is important, it would seem that at the moment what is required more than anything, is the creation of the right approach to theatre planning and construction on the part of clients and architects. The latter came in for some strong criticism at the Conference although those present gave it out as well. Whilst they find the design of a theatre a stimulating challenge, they must be given practical advice and terms of reference if they are not to develop homicidal tendencies. One alleged that in preparing an architectural brief, clients receive contradictory suggestions from potential users, indicating that theatre people can't even agree themselves on basic needs. This was doubted, but it did indicate that in seeking information of this nature, clients and architects should be selective. Needs proposed by those of the opera and ballet worlds will differ in some respects to the needs proposed by those of the Drama indicating the difficulty of attempting to please all with a single hall.

And what theatre form is best? The answer would seem to be any which is practical within its intended scope. It is no good expecting a 3,500-seat auditorium to be as successful for presenting Drama as one seating 800. Conversely, ballet and opera in an 800-seater is **unsound economics**. So before one spends millions on a mechanical marvel of theatrical adaptability, pause a while—it may be cheaper to build more than one theatre to serve a community—each at least has a good chance of working.

All in all, a worthwhile and an obviously necessary Conference with congratulations due for a well-organized and well-run two days.

In the absence of Mr. Rose on Sunday afternoon Mr. Wally Russell reports as follows:

Sunday afternoon at the U.S.I.T.T. Conference proved to be as fascinating as New York sightseeing!

A director designer from the Washington Arena theatre spoke concerning some of the problems he had encountered with "theatre in the round" there. The theatre seats 700 and has about seven rows of seats surrounding the stage.* Acoustical difficulties were reported when an actor faced away from one of the banks of seats but these had been partially overcome by using a sound reinforcement system which amplified the actor's voice and fed it through a speaker in the opposite direction to that which he was facing at the moment. The microphones suspended overhead were in front of the actor and the speakers behind him. It was stated that this theatre was most suitable for spectacle type theatre since an intimate scene, while close to some people, was a great distance from others. Difficulties had also been encountered with the strange rigging system and the awkward catwalk system for the lighting which proved

* A plan of this theatre appears on page 26.

very limiting from the lighting design point of view, although the original intent was the opposite.

In contrast was a description of the McCarter theatre in Princeton, New Jersey, by its young energetic technical director. The programme undertaken there resulted in the theatre being used two or three times a day every day with children's or students' matinees, movies, classical drama concerts, etc. all in a traditional proscenium theatre. Extensive slides showed the flexibility of the design and acting styles used including a modest thrust stage over the orchestra pit on some occasions. A Stratford-Ontario-Shakespearean balcony structure was built as scenery and used quite often, reportedly with great success.

STAGE LIGHTING FOR THEATRE IN THE ROUND

by Stephen Joseph

This is a difficult subject to write on succinctly since there has been little opportunity for people to gain the experience from which a reasonable body of facts might be collected and even in theory there is a very wide range of possibilities. There is then plenty of scope for people to disagree. However, by limiting these notes to cover the particular experiences gained from one series of lighting installations, and only briefly considering other arrangements, a degree of clarity may be achieved. Of course the results will often be arbitrary and dogmatic, but where they are so the alternatives should appear the more readily. The notes that follow, then, deal with a specific system and it will certainly be unacceptable to many people. Much of the system derives from experience of lighting proscenium stages, but neither these nor other forms of open stage are considered here; the basic idea of the systematic approach comes from *A Method of Lighting the Stage** by Stanley McCandless although theatre in the round is not touched on in the book. As far as possible the separate factors of the system will be given in a logical order, but their value may only become manifest when the whole series of notes is considered together.

A theatre in the round intended for use as a professional playhouse is best served by a capacity between 250 and 400, and these will be the limits taken for granted here unless otherwise indicated. In the Victoria Theatre, Stoke-on-Trent, for example, 350 people are accommodated in five rows (Fig. 1).

The acting area may be as small as 12 ft. by 15 ft. for an audience of 50 people. The theatre in the round at Scarborough, with an audience capacity of 248, has an acting area of 12 ft. 6 in. by 18 ft.; this is too small for many plays. Normally the acting area will be

* A Method of Lighting the Stage, Stanley McCandless, Theatre Art Books, New York.

about 18 ft. by 24 ft., and this may be taken as an optimum size. A bigger acting area will begin to destroy one of the characteristics of this form of theatre—the close physical proximity of audience to actors. The same seems likely to apply to other forms of open stage, and a reasonable criticism of the Festival Theatre in Chichester is that the acting area is too big.*

In section across stage and auditorium the acting area should be at the lowest level, and the four rows of seats must be raised in steps† (Fig. 2).

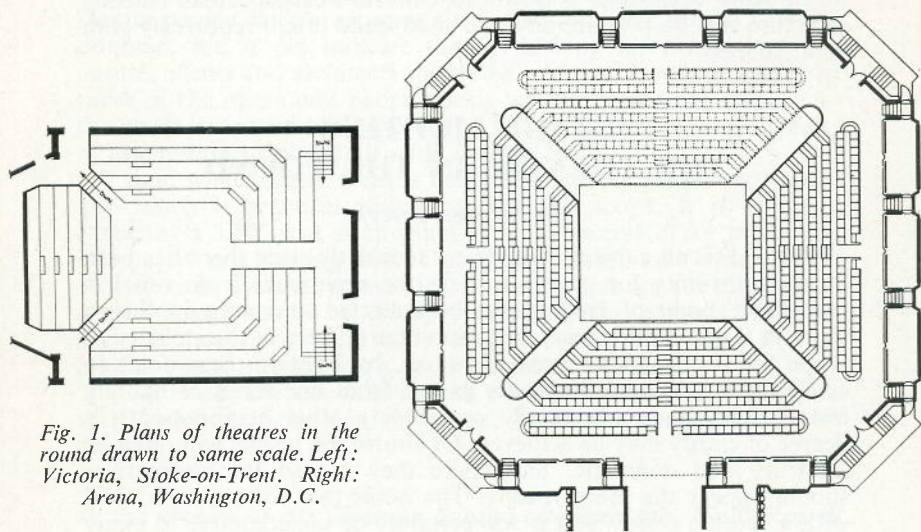


Fig. 1. Plans of theatres in the round drawn to same scale. Left: Victoria, Stoke-on-Trent. Right: Arena, Washington, D.C.

In this country it is usually required that a public theatre should have a secondary or emergency lighting system and that the lights from this system, as well as exit lights, should be on all the time an audience is in the theatre. This requirement is likely to be awkward in the comparatively small volume of a theatre in the round, making it impossible to achieve a blackout on the acting area, which will remain lit even when the stage lighting is out. If the Fire Officer agrees, a reasonable alternative is to install a secondary lighting system that comes on automatically when there is a mains failure and may be switched on at other times if required. Such systems are readily available. Again, the Fire Officer may agree to specially restricted lighting focused on to gangways, which, together with exit lights will provide sufficient spill into the rest of the auditorium for reasonable safety in emergencies. This is a matter of common-sense and co-operation between the people concerned.

* See also page 24 for a report on the theatre in the round in Washington, D.C.

† See "Planning for New Forms of Theatre" by Stephen Joseph published by Strand Electric.

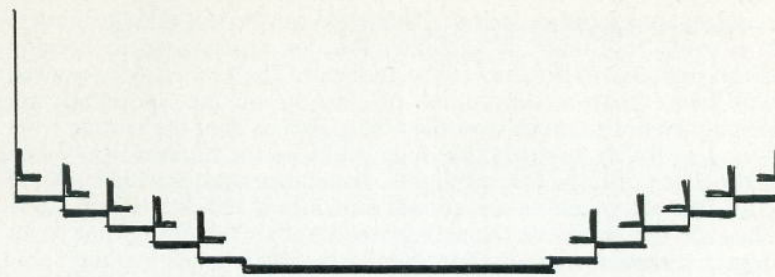


Fig. 2. Section through a theatre in the round of about 350 capacity in 5 rows. Acting area at lowest level, first row raised 6 in., other rows rising by 1 ft. each. Seating levels are 3 ft. deep.

We can now examine the specific business of lighting the stage.

Firstly, stage lighting for theatre in the round will normally come from spotlights. Floodlights and battens have virtually no application and will not be further mentioned. The most suitable lantern is a soft edge spotlight with a fresnel lens and a beam that can be adjusted within the approximate limits of 15° to 45°, and using a 500-watt lamp; for example, the Strand Patt. 123 baby Fresnel spot. In theatres of the smallest sort a 250-watt lamp may be used in this lantern; for theatres of the largest size the Fresnel Spot Strand Patt. 223 with a 1,000 watt lamp may be preferred.

Profile spots and other lanterns and lamps may also be useful, and some attention will be drawn to them when they might be preferred. But the general scheme can be most simply described by restricting reference to one sort of lantern. Note that the Strand Patt. 264 uses a 1,000-watt lamp and has adjustable hard/soft edges, very useful for theatre in the round work, though it is likely to remain more expensive than the ordinary soft edge lantern.

When positioning the spotlights ensure that in elevation the angle between the horizontal and the light beam is about 45° (see Fig. 3). If it is much more than 50° awkward shadows begin to be formed, particularly round the actors' eyes. Note that this applies in any form of theatre, but don't forget that it may be an effect positively

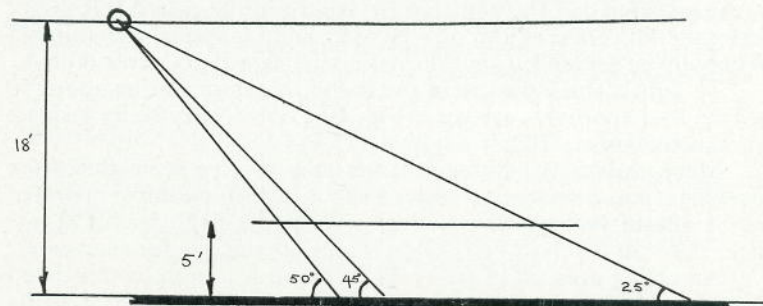


Fig. 3. Section showing critical lighting angles.

required on special occasions. The angle can be less than 45° , but if it is much less than 25° difficulty may be experienced in keeping direct light out of the eyes of the audience. The beam angle required will mean that a substantial proportion of the spotlights are positioned not so much over the acting area as over the seating rows—and probably towards the outer walls of the auditorium. When arranging positions for spotlights, remember that the light should cover the actors and in elevational drawings it is worth taking a line about 5 ft. 6 in. above the acting area level and ensuring that beam angles spread along this line. Similarly, when adjusting the spotlights for lighting a play, the producer will ensure that actors' faces are lit though he may be misled by the patterns of light on the floor itself.

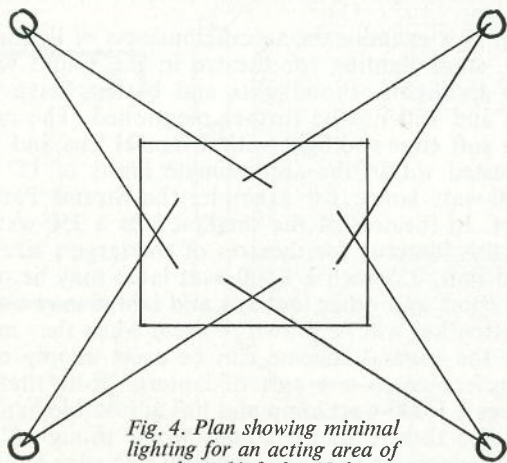


Fig. 4. Plan showing minimal lighting for an acting area of about 12 ft. by 15 ft.

It is not usual to fit colour filters to spotlights to the extent that is common practice for proscenium stage work. For the latter, one of the important functions of colour is to help emphasise the solidity of three-dimensional objects (including actors). But owing to the proximity of the audience in theatre in the round this is not necessary. Of course colour may be used, and for special effects it will frequently be demanded; but the main scheme will not depend on it.

To light a small theatre in the round, accommodating about 50 people, four spotlights are used (Fig. 4). Control may be by a single resistance dimmer. This is minimal.

More ambitious lighting schemes may involve six, eight or ten spotlights; two dimmers, or better still the excellent control provided by the Strand Junior 8 board which will handle eight circuits at one time. 250-watt lamps in Patt. 23 spotlights are suitable for such work.

An acting area of 18 ft. by 24 ft. requires a more complicated lay-out, and here the basic lighting scheme begins to come into its own. Roughly speaking this consists of dividing the acting area into

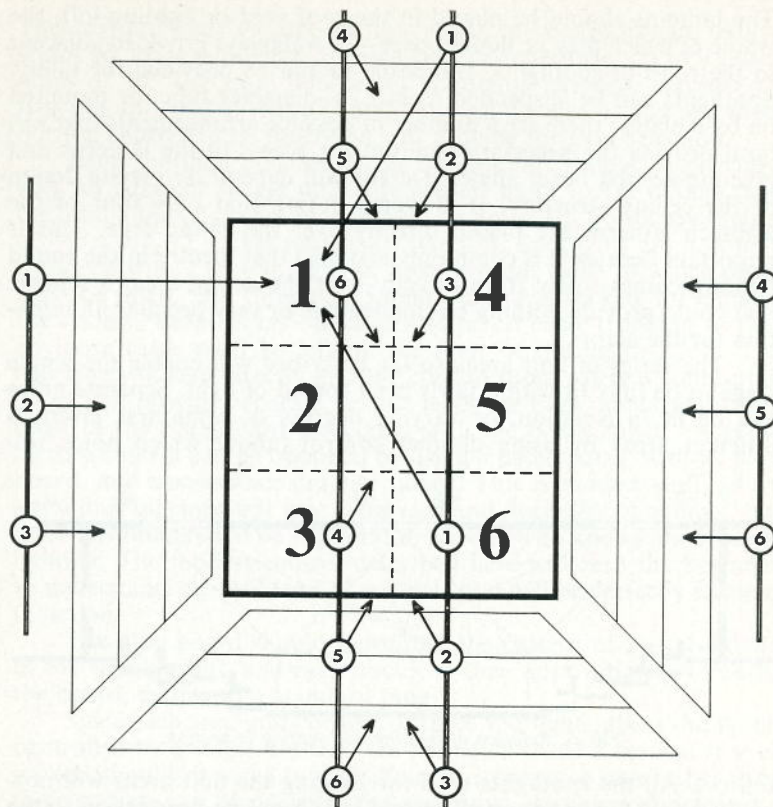


Fig. 5. Plan showing arrangement of area units to light the stage. The acting area is divided into six sections, each of which is lit by three spotlights. The arrangement suggests four troughs in the lighting loft. (Note that only four out of the eighteen lanterns are actually over the acting area.)

separate units each of which will be lit independently but employing the same relative lantern lay-out, as will be described (Fig. 5).

Beam angles in elevation have already been dealt with. In plan a satisfactory distribution of spotlights is achieved by having 120° separation. Alternative arrangements, such as 90° or 60° separation, are perfectly possible, with their particular advantages and snags, but 120° is recommended for simplicity, efficiency and economy and will be the only plan dealt with here. Each area unit, then, is lit by three spotlights; single spotlights are seldom used except for special effects. The plan is probably best related to the seating rows as shown, so that when area units are arranged to cover the whole acting area, advantage is taken of minimal spill (Fig. 6) into the audience. Ignoring, for the present, the many alternatives and possibilities available, but taking the factors so far recommended, a basic lighting scheme consisting of six area units can now be suggested.

The lanterns should be placed in the roof void or lighting loft, the whole of which may be floored over—or walkways provided adjacent to the rows of spotlights. Handrails should be provided for safety. Spotlights can be suspended from 2 in.-diameter tube, or mounted on base plates; there are a number of possible arrangements that will both provide the necessary facilities for access to the lanterns and give the desired beam angles. Details will depend on precise design of the ceiling structure. It is worth noting that only four of the eighteen lanterns are placed directly over the acting area. This is important because it is commonly assumed that theatre in the round lighting comes solely from directly over the acting area, a scheme that could provide nothing but inadequate or very peculiar illumination for the actors.

The series of unit areas so far described will enable the whole stage to be fully lit with a fairly even spread of light. Separate areas can be lit in isolation, or varying degrees of brightness given to different areas by using dimmer control (about which notes will

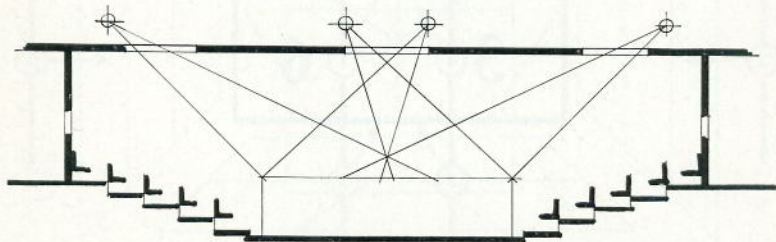


Fig. 6. Relation of lighting and seating in section.

follow). All the spotlights used for lighting the unit areas will normally be set for optimum effect and left from one production to the next without any adjustment. Special effects, beyond the range of the area units, will be provided by using additional lighting.

Extra lighting may be needed to cover entrances and to increase the definition of the acting area, and further lighting troughs will probably be necessary for these purposes. Extra lighting will be required for such purposes as indicating sunlight, or daylight streaming through a window, artificial light from on-stage lamps, specially confined areas, and for colour effects. It is not possible to anticipate all the needs of a wide repertoire of plays, but a sensible calculation can be based on the provision of a dozen extra spotlights for these purposes. Use profile spotlights in each case. A diffuser glass can easily be slipped into a profile spot* to provide a soft edge when required; narrow angle or wide angle lenses can be added, and a variety of diaphragms will help to achieve all sorts of effects. Since theatre in the round can handle plays in repertoire with comparative ease (not having the scenic storage problem of a proscenium theatre), this may be part of its policy—as it is at the Victoria

* Unless of course a Patt. 264 Bifocal Spot is used.

Theatre and the Theatre in the round at Scarborough. Allow about six extra spotlights for each play in repertoire, up to a maximum of 30. The total number of spotlights has now reached 60. It is not anticipated that all spotlights will be used at any one time, but the control to be described will provide for easy selection.

Each spotlight position in the lighting loft should be provided with an adjacent socket outlet. However, more socket outlets than the total number of spotlights should be provided. For 60 spotlights, provide, say, 72 socket outlets and circuits. Spotlights are normally equipped with 2 ft. 6 in. tails of heat resistant cable to which plugs must be fitted. Use three-pin, 5-amp plugs and sockets throughout the system. Each socket outlet should be on cable trunking so that no loose cable need be left on the floor of the lighting loft. The trunking will lead directly into the control room where a connecting panel will provide separate flexible leads for each circuit and carry them to the plug board associated with the patch panel. A satisfactory control can be obtained by using a patch panel, with its plug board, and a resistance dimmer board. This is modest stuff. More ambitious schemes will give extra ease and flexibility of control, but these advantages will be apparent to anyone who knows about stage lighting. The modest control described here will help the beginner to understand the problems of control—and will be perfectly efficient in action.

The plug board should reproduce the pattern of socket outlets in the lighting loft, and each circuit is then appropriately wired to the board, ending in a standard plug.

Since each area unit consists of three spotlights, these should be controlled by a single dimmer. On the patch panel a vertical row of sockets should be wired to each dimmer. In practice four rather than three sockets can be provided for each row; resistance dimmers are available to cope easily with a variable load of 1,000/2,000 watts, and special lights may often be used in relation to particular area units. Thus a total of twelve dimmers will usually be satisfactory for the sort of installation we have been describing. It allows up to 48 of the 60 available spotlights to be used at any one time. Further, the patching panel can be employed for rearrangements of the lights under control not only for each play but also, if required, during a play from cue to cue. Thus all 60 spotlights might be used during a single performance.

The architectural requirements of this system are fairly simple and straightforward, depending on a few principles, and calling for no complicated technical devices. And although only one example has been given in any detail it should illustrate a method that can be extended to other cases—of bigger or smaller theatres, theatres of different shapes—without too much difficulty. But any method is a matter of personal preference, and there is no sense in pretending that this one will meet everyone's expectations. Equally, it is impossible to give a simple account of every alternative and variant. This one is at least based on practice and experience.

AROUND THE WORLD IN SIXTY-THREE

by Percy Corry

Part 1

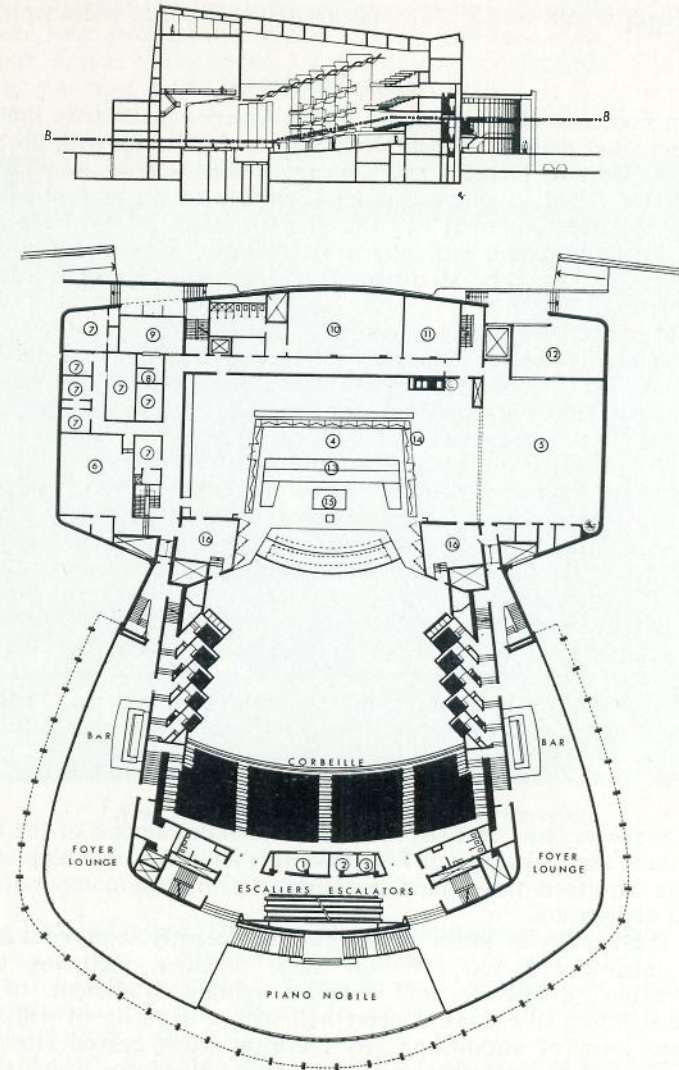
In sixty-three days during the Autumn of 1963 I travelled westward from London to London, via Canada, U.S.A., Australia, South Africa and Greece. The intention was to combine study of theatre development with tourism. Tourism fought a losing battle with theatre.

Travel that was mainly by jet-propulsion provided ample opportunity to study the décor of many airports, to fly above numerous cloud-snowfields, to glimpse solid-looking seas, and to enjoy impressive panoramas from above normal bird's-eye viewing altitudes. Clear skies revealed Greenland's icy mountains, the Rockies, and the Cascade Range: there were distant views of the Golden Gate, Sydney Harbour, the Australian bush, the African veldt and the Swiss Alps. It was possible to see numerous cities looking like architects' models, with multi-coloured cars crawling about like insects. At night, patterned acres of fairy lights proclaimed towns that would prove, at close prosaic quarters, to have succumbed to the universal mania for upward-thrusting anonymity.

The people, mostly speaking English, with varying accent and emphasis, were basically identical, sharing the same sort of aspirations, needs, fears and good fellowship. I have pleasant recollections of friendly taxi-drivers. There was Georges, the mature French-Canadian, whose cheerful philosophy and uninhibited curiosity made the journey to Montreal Airport a complete delight; the keen-eyed young man in Minneapolis (hobbies: geology and gardening) who was so enthusiastic about the cold winters in those parts; the University graduate whose degree in metallurgy seemed sadly superfluous to his job of conveying me to a suburb of Perth, W.A. There was also the George who piloted me round Piraeus, bitterly eager for a change of Government. He got it, of course.

The pleasant fall in North America was followed (after I had gained a Neptune equatorial certificate and lost a whole Sunday *en route*) by the warm sunny springtime of Australia and South Africa, where there were masses of delightful flowers, both wild and tamed. It was not easy to accept the absurdity of a northerly noon-day sun, but it was seen with welcome frequency: it was a rare joy to a Briton to be able to ignore the existence of a raincoat for weeks on end.

Theatrically speaking, in all the places visited there seemed to be a common pattern of development, with only differences of degree. There was little need to adjust lecture patter to audiences in America, Australia or South Africa. Both in number and in response, the South African audiences were the most flatteringly keen. In Bloemfontein, a coach-load of enthusiasts had travelled from Kimberley, 100 miles away, and in Durban a contingent from Pietermaritzburg travelled 60 miles each way. I can only hope they thought it was worth it.



La Grande Salle, Place des Arts
KEY TO PLAN

- | | |
|----------------------|---------------------------|
| 1. Lighting Control | 9. Stage Entrance |
| 2. Radio Control | 10. Women's Dressing Room |
| 3. Announcers' Booth | 11. Costumes |
| 4. Stage | 12. Loading Area |
| 5. Side Stage | 13. Stage Elevators |
| 6. Green Room | 14. Orchestra Shell |
| 7. Dressing Rooms | 15. Piano Elevator |
| 8. Office | 16. Forestage |

I thought it well worth while travelling thousands of miles to meet them.

Across America

When Frederick Bentham and I visited America in 1961 we limited our activities mainly to New York State and Ontario, with fleeting visits to Boston, Niagara and Chicago. Whenever we were at all critical or failed to enthuse about Canadian towns and cities, we were told that Montreal was the place to see. On this occasion, crossing the continent with intermediate stops, it seemed compulsive that the first should be Montreal: also, it had a new theatre nearing completion.

Montreal's volunteer publicity agents were justified. The citizens are, of course, bi-lingual, with a slightly assertive preference for speaking French. This preference appeared to be having an unfortunate effect on the Place des Arts due to open a month after my visit. The opening was, in fact, long delayed by a dispute about who had the right to negotiate for those who were to perform in this new theatre. As the workers of the world failed to unite in time, the Covent Garden Opera Company did not give its intended performance at the opening. When I was there the scenery had arrived and was on the incomplete stage, looking as disconsolate as only stacked scenery can look.

The Place des Arts is to be a group of buildings provided to house varied arts. The first is the opera house/concert hall seating 3,000, with a proscenium opening 67 ft. wide and 30 ft. high. It was in the state of chaos usual at the eleventh hour of a new theatre: it is sad that it was not merely the clock that struck at the twelfth hour.

Ontario

In a previous issue of TABS there was a detailed review of the new theatre at the University of Waterloo. It is an interesting adaptation of the Stratford three-sided open stage plan to a comparatively small auditorium.

The Faculty of Music in Toronto has recently acquired a large new theatre with full orthodox stage facilities, including wide proscenium, a fly-tower and excellent lighting equipment. In the same building is a small concert hall with a capacity of 450 in a theatre form of auditorium. Its platform, with curved front, is large enough for intimate open-stage productions, for which there are very adequate lighting facilities.

Before the opening of the 1963 Stratford season, the stage structure had been altered, and I was able to see a performance of *A Comedy of Errors*, excellently presented in *Commedia dell'arte* style. The rear portion of the acting area and the structural background have been widened appreciably. The main stage area and its height remain unchanged. The change is good: it helps to widen the angle of viewing. (For photographs see TABS, Vol. 21, No. 3.)

Commedia dell'arte treatment seem to be fashionable at present. There were productions in this style at Stratford, Ont., Stratford, Conn., and at Minneapolis, Minn., running concurrently: Stratford, Eng., was also in the fashion, of course.



"Arms and the Man" staged at Waterloo University.

Minneapolis

The Tyrone Guthrie Theatre was dealt with in the December, 1963, issue of TABS. Unfortunately, a printer's error escaped notice. "An attractive exterior" appeared as "unattractive exterior". Regrettably, it is not possible to blame somebody else for faulty proof-reading. I can only apologise.

My visit coincided with the annual convention of the American Educational Theatres Association, in which I was invited to take part. Delegates from all over America and visitors from elsewhere discussed every aspect of theatre for several days. There was a brilliant opening address by Dr. Harold Taylor, who warned educationalists of the dangers of reducing the arts to academic subject status, and claimed that poetry and music and drama should be studied just for the hell of it. He was cheered to the echo, possibly most enthusiastically by those most in need of the warning.

British Columbia

Vancouver is a delightful city and is as British as Montreal is French. The Queen Elizabeth Theatre and its adjoining Playhouse are new. The theatre, which also serves as a concert and conference hall, has a capacity of 2,813. The stage is 65 ft. deep (plus an apron-lift of 15 ft.) and 120 ft. wide: the proscenium opening is 75 ft. wide and 33 ft. high: height to grid is 90 ft.: there are 70 sets of counterweighted lines. A "concert shell" accommodates 100 instrumentalists plus a chorus of up to 300, and the orchestra pit is big enough to hold 55 musicians. The underground car-park will take 300 cars. There is a large attractive restaurant. Opera, ballet, musicals and symphony orchestras can be well presented. The stage lighting, 380 circuits patched to ninety 6 kW dimmers, is remotely controlled from a curious position in the centre of the front rows of seats. Excellent for the operator's viewing but perhaps a trifle distracting for the customers. Obviously, this is a theatre for spectacular productions and large audiences. As it is not suitable for intimate drama, an attractive Playhouse, with a seating capacity for 647 has also been included. This has a fan-shaped auditorium and a curved apron-lift. The stage is 75 ft. wide and 31 ft. deep: proscenium is 47 ft. by 18 ft. Even without an audience, the theatre has a pleasing, intimate atmosphere. It was stated that for the more popular shows the seating capacity was too low. Something between 700 and 800, it was suggested, might have been better.

The British Columbia University, built on an extensive and well-wooded campus, has also acquired a nice new theatre seating 450, nearing completion at the time of my visit. It has a large stage with a rather small revolve: no doubt the latter will be fun to use but it would seem to be rather restricted in its usefulness.

"Tyrone Guthrie" theatre, Minneapolis. Note asymmetric auditorium, balcony and stalls left, terrace only right.



"Norma" at the Queen Elizabeth theatre, Vancouver.

Victoria, on the island of Vancouver, is even more British than Vancouver City. The importance of my visit was obscured by the presence of London's Lord Mayor, who was planting a tree in what will be Victoria's new Civic Centre. This will include a theatre which is being transformed from an Edwardian Music Hall of typical British pattern of the period into a modern Playhouse.

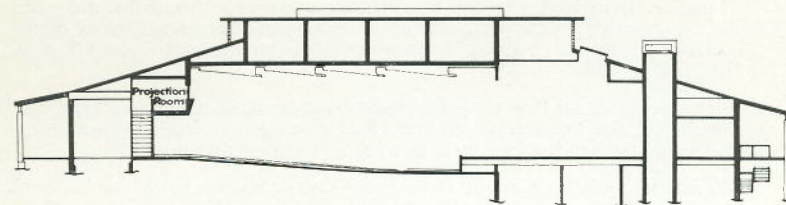
California

With the friendly assistance of James Jewell, not the partner of Ben Warriss but a well-known stage consultant in San Francisco, I was able to see several new theatres built for Junior Colleges in California. They were all excellent little theatres, with large well-equipped stages. The auditorium of the Cabrillo Junior College is a typical example. The stage in this theatre is also fairly typical, except for its lack of full flying space. James Jewell is an enthusiastic advocate of the motor-driven single line hoists as an alternative to counterweighted suspension lines, and it was not surprising, therefore, to find this system adopted in several of these new college theatres in California. The system dispenses with the need for an

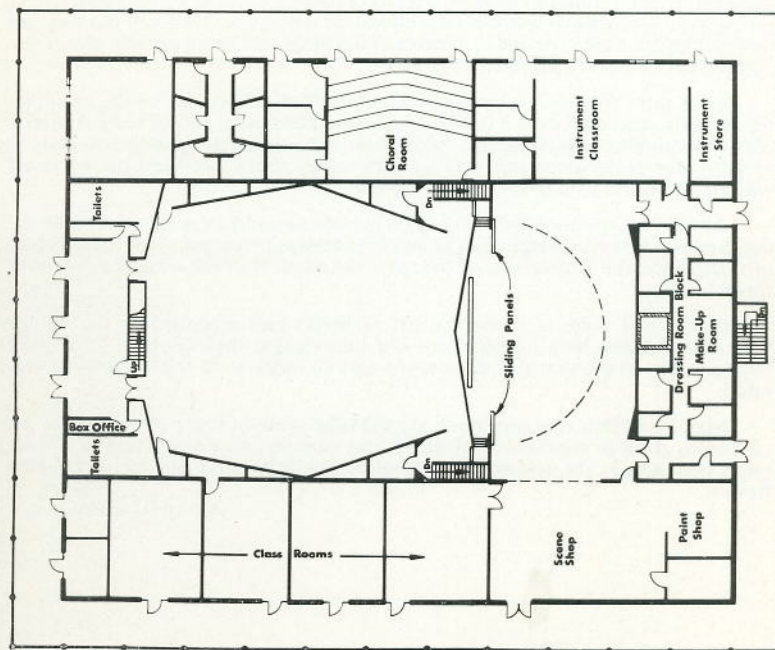
actual grid as the hoists can operate on girders fixed at roof level. The hoists are controlled from a panel at stage level, with mimic indication of the travel of the lines. Suppression of motor noise can present problems. Although this system removes the restriction of having the lines in parallel rows, it was noted that most of the lines were, in fact, used in that way. It would seem that flexibility of position has limited demand and that a greater number of fixed hoists, each operating a set of lines (usually four), could be a justifiable economy.

It was interesting to attend, on a warm September evening, a dress rehearsal of *Antony and Cleopatra* in the Berkeley University's Greek Theatre. The players were a combined "town and gown" company of talented amateurs. Although the University has this large, open-air, modern theatre of Graeco/Roman style, it does not yet possess a modern indoor theatre. The University's indoor performances are given on a fit-up stage.

The number of new educational theatres now being built or planned for California is most impressive. And they are all efficient theatres, not ill-equipped multi-purpose assembly halls. I was informed by a delegate to the convention at Minneapolis that the University of Texas actually has five theatres. Of course, Texas is



FEET 0 5 10 20 30 40



Plan and Section, Cabrillo Junior College, California. Photo of auditorium opposite.



at least five times the size of England, and possibly five times as wealthy. But we have more than five times their population!

Percy Corry's Report will be concluded in our December issue.

BOOK REVIEW

Scene Painting and Design, Stephen Joseph, Sir Isaac Pitman 25s.

Surprisingly, Stephen Joseph has written a book on Scene Painting and Design. Surprisingly, because the author is well known for his advocacy of the "Theatre in the Round", a stage form which has comparatively little to do with the title of this book.

Surprisingly again, for this very reason the book is delightful. Over and over again, the author confesses to his beliefs which gives a liveliness and informality to the text which keeps it far away from dullness and boredom.

Of course, the subject matter is not really dull or boring, but in the hands of somebody less enthusiastic than Stephen Joseph it could so easily have been. This, then, is a most recommendable book.

It is divided into nine chapters, though really it is in 3 parts.

The first discusses scenery with regard to stage and theatre and gives many good tips to the would-be designer. The second deals with the making of scenery, giving a comprehensive introduction into stage carpentry, painting and lighting by word and picture. The last in a series of drawings and photographs, shows the application of scenery to certain plays.

I was sorry that in this last section the play that was chosen as the example, was a fairly unknown one; I felt it would have been more fun to have chosen a play on everybody's wave length. Moreover, I thought that the solution arrived at within the proscenium arch was not very happy; I am sure the author himself was more pleased with his set in the Round.

All through the book Stephen Joseph puts the designer as a creative force in the theatre first; however, at all times scenery is a means to an end. The architecture of the theatre, the atmosphere of the play, the comfort of the audience are never forgotten.

At the end there is a selective list of books recommended by the author "for the pleasure they give and for the information they contain", followed by a glossary of scenery and stage terms and an index as to the contents of this book.

May I add that this very book should take pride of place in any future list of books, it gives continuous pleasure and contains so much know-how that many designers in the amateur theatre will draw inspiration and encouragement from it.

GRAHAM HEYWOOD