

# TABS

Published in the interests of the Amateur Theatre  
by  
The Strand Electric and Engineering Co. Ltd.

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TABS is published in April, September and December. All correspondence relating thereto should be addressed to The Editor at Head Office. Ordinary business communications should in all cases be addressed to the office of the Area in which the correspondent is situated.

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## AUTUMN LECTURE PROGRAMME

“Colour Music,” Demonstration and Talk. } Friday, October 17th, 1958.  
By Frederick Bentham. } (This demonstration is already fully booked.)

“Colour Music,” Demonstration and Talk. } Thursday, October 23rd, 1958.  
By Frederick Bentham.

“Basic Stage Lighting,” 1958-59 Edition. Demonstration and Talk. } Monday, November 3rd, 1958.  
By Frederick Bentham.

“Effects—Optic and Pyrotechnic.” } Wednesday,  
Tricks of the trade demonstrated by } November 12th, 1958.  
some of those “in the know.” }

“Lighting the Scene,” Recorded Lecture Version. } Thursday, November 20th, 1958.  
In attendance to answer questions: }  
William Lorraine and Frederick }  
Bentham.

“Stage Planning and Equipment,” } Thursday, November 27th, 1958.  
Lecture with Lantern Slides. }  
By P. Corry.

“Colour Music,” Demonstration and Talk. } Tuesday, December 9th, 1958.  
By Frederick Bentham.

“Colour Music,” Demonstration and Talk. } Thursday, December 11th, 1958.  
By Frederick Bentham.

### Colour Music

“Colour Music” has been promised for some time now and indeed was postponed from last April. The evening will consist of a talk by Frederick Bentham illustrated on the original Light Console of 1936, which is being brought out of its retirement and connected to the existing theatre dimmer bank for the purpose. The proportions of talk to actual playing will be determined, according to Mr. Bentham, by the amount of practice he is able to put in, and therefore the degree of dexterity it is possible to obtain after an interval of eighteen years. (The last recital he gave on a Light Console was in 1940 in Lisbon.) He hopes to accompany some Wagner, Tchaikovsky, Schubert and Stravinsky on appropriate settings.

The demand for tickets for the postponed show last April was very large and we got into difficulties over seating right away. One of the difficulties posed by the “Colour Music” demonstration



is the need for everyone to have a good view of the stage. We are, therefore, limiting the number of each audience to fifty. Already we have well over 100 bookings to carry over from the postponed demonstration of last April. These people will be issued with tickets for new dates automatically and naturally have first claim, and in consequence the first evening must be announced as fully booked. In view of demand we would ask everyone who finds they cannot attend on the date for which they hold a ticket to return it immediately. We cannot afford to use our normal method which is to book 120 per demonstration, with the result that the theatre is filled to its normal capacity of eighty. The wastage on free shows is obviously high. However on one occasion, "Lighting the Scene," we were caught out when, as some may remember, we were packed from floor to ceiling—everybody turned up.

### Effects—Optic and Pyrotechnic

Among the most intriguing facets of stage lighting are the special effects attachments; the boxes labelled "flames" or "rain." Usually these fail to produce anything of the sort unless some skill and patience are brought to their adjustment and their placing in the stage picture. To those "in the know," several effects can be extracted from even one box. It is intended that these magicians shall demonstrate and instruct in their arts.

Although one would imagine that very few plays present any excuse for these side dishes, it is a fact that there is a very considerable traffic in them, particularly in the hire department.

To these effects will be added gauze illusions, silk flames, black light and the rest. After questions, the various pyrotechnic bangs, flashes and smoke will be shown. After which the audience will no doubt be only too pleased to leave the theatre for the sanity of the atomic age outside.

### Lighting the Scene

Owing to the occupation of the stage by the special "Colour Music" set-up, we cannot produce the full version of this demonstration this autumn. We are, therefore, using the recorded lecture version which only entails the use of colour slides. However, both Mr. Lorraine and Mr. Bentham will be in attendance to answer questions.

### RECORDED LECTURES

The lecture "Lighting the Scene" has met with a great welcome and copies have been going to and fro from Head Office ever since its introduction a year ago. At first sight, a mere collection of slides in colour illustrating the various steps to be taken in lighting a box set would appear rather dry. However, it is a fact that the commentary recorded spontaneously without a script is very live and full of personality. The two speakers have well differentiated voices, do not think alike, and form perfect foils one for the other in discussion.

We have had many enthusiastic comments, and among these the remarks of our New Zealand agents, Joan and Russell Reid Ltd., are representative.

"... we really must congratulate all concerned with the making of it. It is not only very fine in quality all round, but it is as well informative, makes its points clearly and is done so brightly that it 'goes down' well and at the same time 'gets across'. For my part I feel I know Mr. Bentham, Mr. Lorraine and of course 'Katherine and John' very well indeed now. I expect I'm going to know them even better in the months to come."

We will have a second recorded lecture available from January 1st next. This time Messrs. Corry and Bentham co-operate on "Basic Stage Lighting and Equipment." The lecture as before lasts one hour.

There is no charge for the slides and tape except the return postage and a 1 guinea registration fee payable on booking. These fees are handed over directly to the Actors' Orphanage charity.

Applications from bona fide amateur societies, etc., rather than individuals, are preferred and should be addressed to Publicity Department and marked "Recorded Lecture." Full details of presentation technique will then be sent with our reply.

### WEST COUNTRY REPRESENTATIVE



Strand customers in Cornwall, Devon, Somerset, Dorset, Wiltshire, Gloucester, Hereford, Monmouth, Radnor, Brecknock, Glamorgan, Carmarthen, Cardigan and Pembroke will be interested to know that Mr. B. R. Webb will be resident in Bristol to attend to their requirements. Mr. Webb will already be known to a number of customers in this area, as he has for some time been dealing with South West matters from Head Office.

Since he joined the Strand Electric in 1949 he has been associated with many professional theatres, the latest being the new Belgrade Theatre, Coventry. Edinburgh University and a number of technical colleges up and down the country have also occupied him from time to time, as also have many schools. Those in the West Country including Blandford, Weymouth, Swanage, Bridport, Exeter, Clifton and many others. Mr. Webb's experience should enable him to give advice on stage lighting installations, large and small, and his earlier work in electrical contracting before joining Strand should put him in the position of being able to co-operate with the electrical trade to the full. Mr. B. R. Webb's address is now 56, Fouracre Crescent, Downend, Bristol. Telephone Number: Bristol 651460.



## MOSS MANSELL

*We regret to announce the death last June of Moss Mansell, one of the three founders of Strand Electric.*

*Mr. H. O. Jordan writes:*

I joined Moss Mansell in 1919 when the industry was getting into its stride after World War I.



The "Guvnor," as we called him, was a hard man to please, he never spared himself or anyone else, he demanded 100% from everyone. He was perhaps a little remote to me in those early days, it was as the years passed that I really got to know Moss Mansell the man.

He was a hard-headed business man, tough, uncompromising, but always fair, a clever engineer, ingenious and inventive\*; he knew what he wanted and usually

got it. We had our good times and our bad. We faced disaster together at the time of the 1931 fire when all seemed lost. His courage and leadership carried us through. We shared many experiences together, seeing great developments in the industry.

Behind the tough exterior there was a man, I think a great man, a kindly friendly person, somewhat shy, a great humanitarian who took a great personal interest in all of us. One could go to him for help or advice and never be refused. Mind you, it was not always easy, he would want to know all the "ins" and "outs," and if you deserved it you would get a wiggling. Nevertheless, the help was always forthcoming.

To me he was much more than a friend, his kindness, understanding and sympathy on all matters over the years was such that I came to regard him with that same love, respect and affection as a son would have for his father. I owe him a lot and consider it a great privilege to have been associated with him. He was a man one could look up to, respected and beloved by all. I have suffered a great loss and the world will be a much poorer place for his passing.

\* The electro-magnetic clutch which has been the backbone of all the larger Strand remote control dimmer installations was invented by Moss Mansell in 1929.

## AN AMERICAN LOOKS AT THE GERMAN THEATRES

*by Edward F. Kook*

*As hinted in last April's "Tabs," your editor who had recently made a tour of German theatres, has wished to include an article on this phenomenon.*

A recent visit of Mr. Ed Kook to the Brussels Exhibition and thence to some of these theatres has provided a novel slant on the subject. Mr. Kook is an American business man who might have come straight off our stage, so well does he measure up to our ideas of this tough character. However, Mr. Kook really does belong to the theatre, for he is President of Century Lighting Inc., one of the principal United States companies whose business is stage lighting and all that arises therefrom. Behind his very stern eye for the main chance there lies an intense love and enthusiasm for the theatre and we are very fortunate indeed in our contributor.

The cities visited included Dusseldorf, Bochum, Cologne, Hamburg, Mannheim, East and West Berlin; in Austria, the Vienna Staatsoper. It was an arduous but extremely interesting trip.

I concerned myself with all aspects of the theatre and with stage lighting equipment in particular. This report aims to convey a general, overall impression. But one specific impression prevails. It is the evident similarity, to the point of being almost identical, of the stage designs and stage machinery of all the theatres visited.

First, in Germany and in Austria the theatre is a subsidised community operation. This subsidy may be government funds, municipal, federal, or both. My reaction to such a community operation is that it involves or implies some kind of censorship, or some sort of taboos or restrictions, even if self-imposed, and certainly the absence of a completely free atmosphere and of personal creative freedom for the artist.

I could sense the evidence of this lack of freedom. What I was seeing and hearing on the stage were the operas of Wagner, Verdi, Puccini only. These created the feeling that revivals only were performed. There was a sameness in selection and performance. I did not feel the excitement that a new work evokes. I did feel, however, that scenic art was being regenerated, especially because of the use of a great deal of projection.

Seeing so many new buildings made me think that not to the victor, but to the vanquished go the new theatres. This may seem like a cynical comment, but after all, I was seeing so many theatres that were built during the last eight years, and so many more that were in the process of being constructed, whereas the only new theatre to which I could refer in the great city of New York was the



Barrymore Theatre, erected in 1927. I could not discuss American stage facilities in the Barrymore or any American theatre, other than the Music Hall.\* (I could, however, tell them that the Barrymore housed "Street Car Named Desire" and other great plays such as the one in it now, "Look Homeward Angel," and that to me is more important than new theatres housing old shows.)

Not just one lyric theatre but sometimes two are found in these small German cities. That is an amazing situation. Wherever we went, and I have mentioned the cities we visited, the theatre was new or had been renovated or was in the process of being completed.

The architects of the past, like Hasait and Linnebach and Littman and Kaufmann, were scene designers or technicians who worked in opera houses. They worked in the theatre and learned the problems first hand. While I did not check on the contemporary group, Bode, Weber, Graubner, Volker and Grosse, I think that if they are not of the opera theatre, certainly their collaborator, Professor Unruh, is. Wherever we inspected a new opera house, invariably Unruh was a prominent member of the architectural staff (Mannheim excepted). This is interesting and revealing. It explains to me the sameness of all German stage facilities.

It raised the question: Will it be the same wherever we go? The circumstance of one man doing all the machinery layouts had to result in a similarity. This thought pressed me all the while I was in Germany. Every theatre had a turntable—some were larger, others smaller. Each stage floor had built in stage lift platforms—some more, others fewer. All were equipped with rolling cycloramas; storage space to the right, to the left, and in the back; and accompanying platform stages with rollers, moved by electrically controlled motors.

This doesn't necessarily mean that such uniformity is bad; but the equipment being alike, available and abundant, may it not have the tendency to regiment all the minds in all the theatres by forcing designers to use the machinery so readily at hand? And while every stage was completely equipped, I cannot, with the exception of an improved lens system, report any surprises in new equipment or new techniques.

The renowned Professor Unruh, who has a great reputation and a long theatre experience, is a specialist of the first order. Let me describe his method of operation. He not only acts in a creative role with the architect, but he also undertakes the placement of the operating staff.

There is in this a good lesson for us to learn; for through his selection of experienced personnel, competent operation and maintenance of the facilities is ensured. A knowledgeable technician with a positive attitude is wisely linked to the intricate machinery. It does not guarantee artistic results, but where a capable man is at

\* Radio City Music Hall, New York. A colossal cinema-theatre, famous for the lavish stage spectacles which form part of the show, opened in 1933 (Editor).

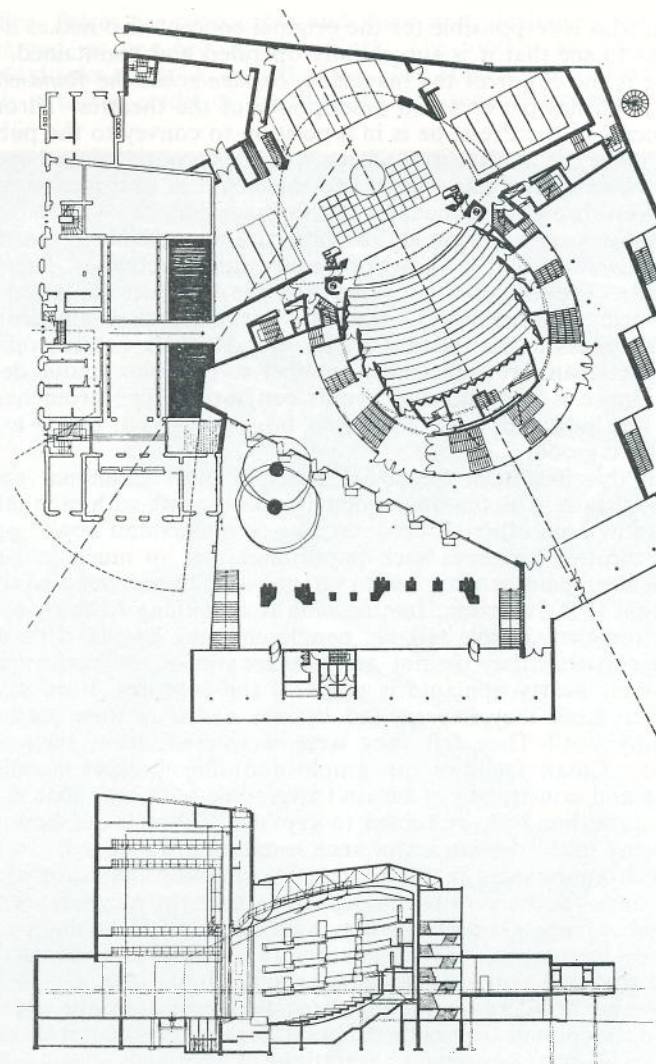


FIG. 1. Plan and section Opera-Theatre, Munster (population 118,000).

hand to handle the devices, it does increase the chances. A staff of this kind sets the artist's mind at peace and heightens his confidence. It permits him to work free of the fear of the mechanical instruments. The person assigned to the machinery possesses a feeling for it and takes pride in his work. It is made to work well. Thereby, Professor



Unruh, who is responsible for the original concept also makes it his business to see that it is successfully operated and maintained.

He is the editor of the magazine, *Bühnentechnische Rundschau*, which publishes pictures and descriptions of the theatres. Through such access to the Press, he is in a position to convey to the public, whose money it is, that it has been wisely appropriated and spent. The work of individuals is cited and the technical staff receive commendation through the medium of this magazine.

Theatres are well located. They may not be in the busiest section, but are always within the heart of the city and its activities. They are accessible. The feeling is conveyed that the architect has given the public prime consideration. Adequate parking area is allotted for cars. Entrances to the theatres are large and numerous. Box offices, which are clean, are sufficient in number to eliminate undue delay. Lobby space is plentiful and avoids congestion. The promenades, which are long and wide, clean and brightly lighted, create a gay and festive mood.

All this heightens the social pleasure and communal spirit. Because theatre is a community activity, people talk with each other. They know each other. It becomes easy to understand how "going to the theatre" assumes such importance, not so much to go to a particular opera or play, but to go, not only to see, but also to be seen; that is my reaction. Intermission is something to enjoy too—people together, people talking, people enjoying people. This does not suggest that they do not get pleasure out of the performance itself; their hearty applause is proof of the contrary. I am saying that everything they experienced besides added to their pleasure. And why not? They felt they were welcomed, from their very entrance. Cloak facilities are ample and the checkers handle it quickly and courteously. One isn't overcome with fear that a fine coat will be bundled, or forced to cry out: "Watch out how you handle my hat!" Irritations of such a nature are avoided.

Such annoyances in the States, are common and start at the wrong time—at the very beginning. They force the playgoer into an unreceptive mood, upsetting him and making him unhappy. In Germany these psychological factors are carefully considered. The theatre seats are comfortable, auditorium lighting is in a high key, and whether you like the architecture—the decoration, the accessories and the colours—is beside the point, for that is a matter of taste. Of this you may be certain: everything is spotlessly clean—seats, floors and walls. Such care in upkeep is possible only in an economy where help is cheap. I want to stress this point especially, because if we are to call in German consultants, they must be made familiar with the high labour costs in our economy. For if they are not aware of such matters, recommendations which are otherwise sound can prove impractical.

Sandwich and soft drink counters are properly manned and well managed. There may be a jam at the first intermission, when there is a rush by the hungry who made the theatre direct from their

office. Prices are reasonable and there is no feeling of being overcharged, as one gets in New York. The food is satisfactory—the cold drinks are cold; so is the beer. The audience is well served and this is to the credit of the theatre's personnel. Somehow everyone

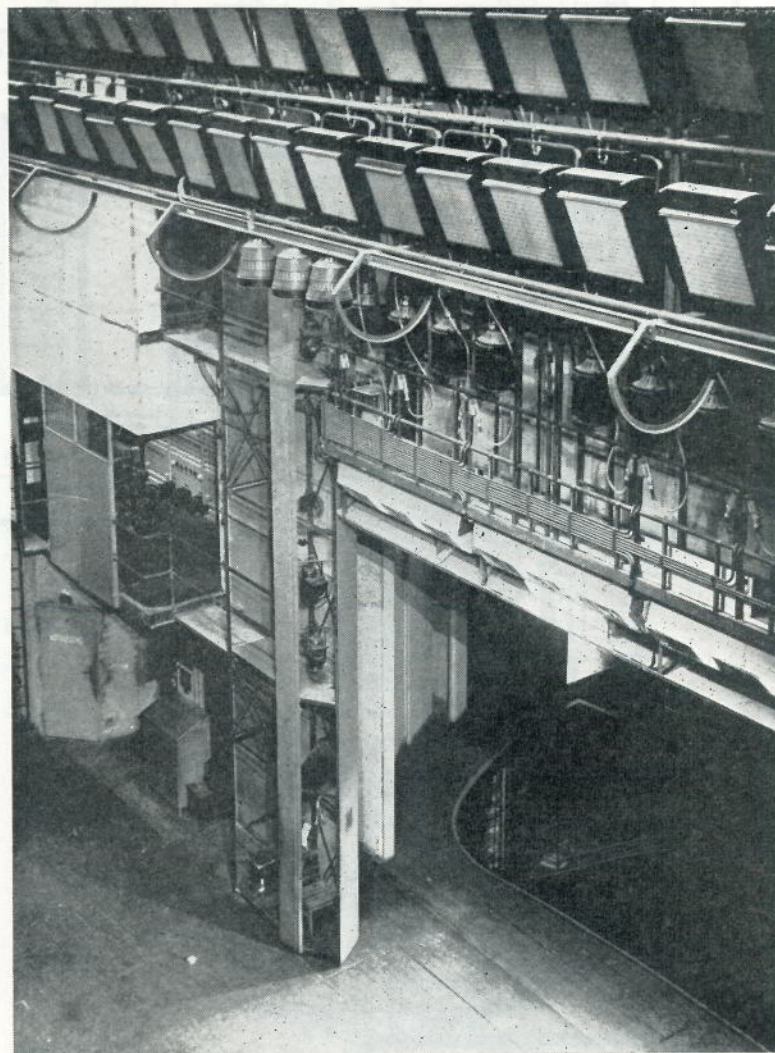


FIG. 2. View of stage manager's corner showing typical lighting towers. Medium-sized theatre in Aachen. Photo Maschinenfabrik Wiesbaden AG.



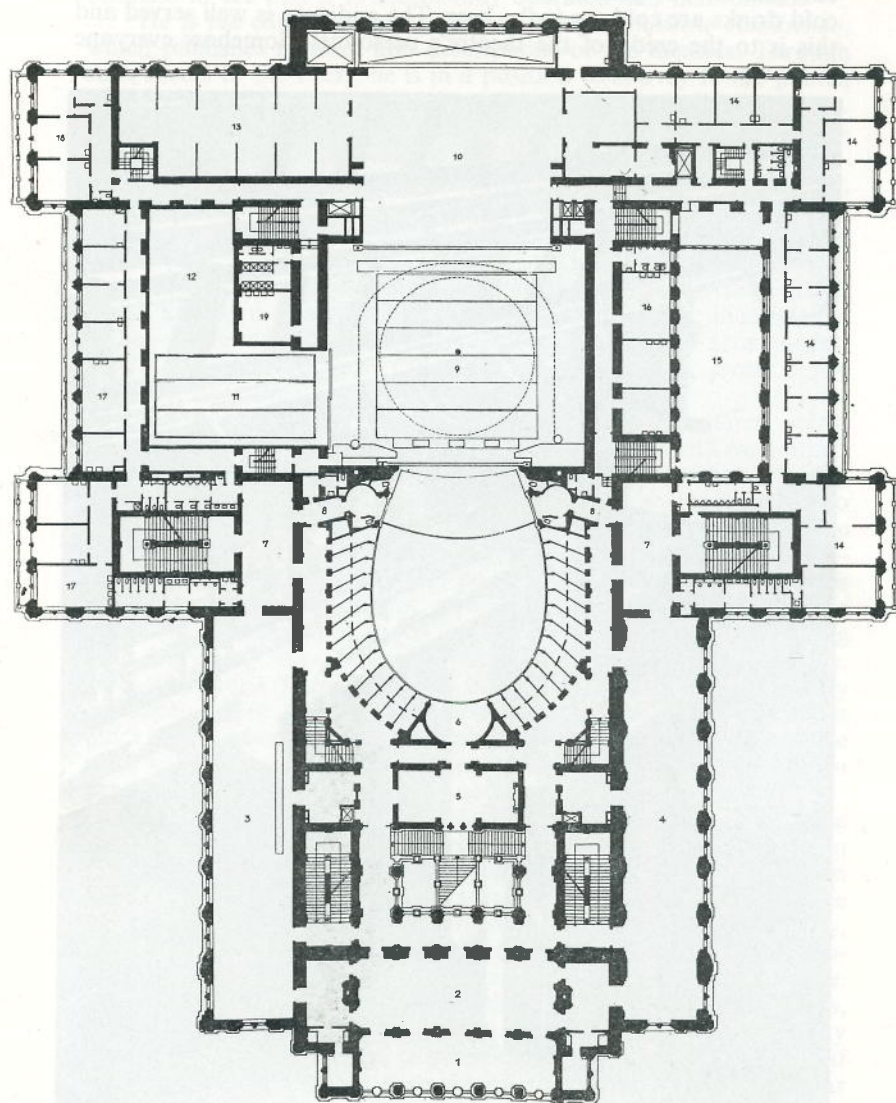
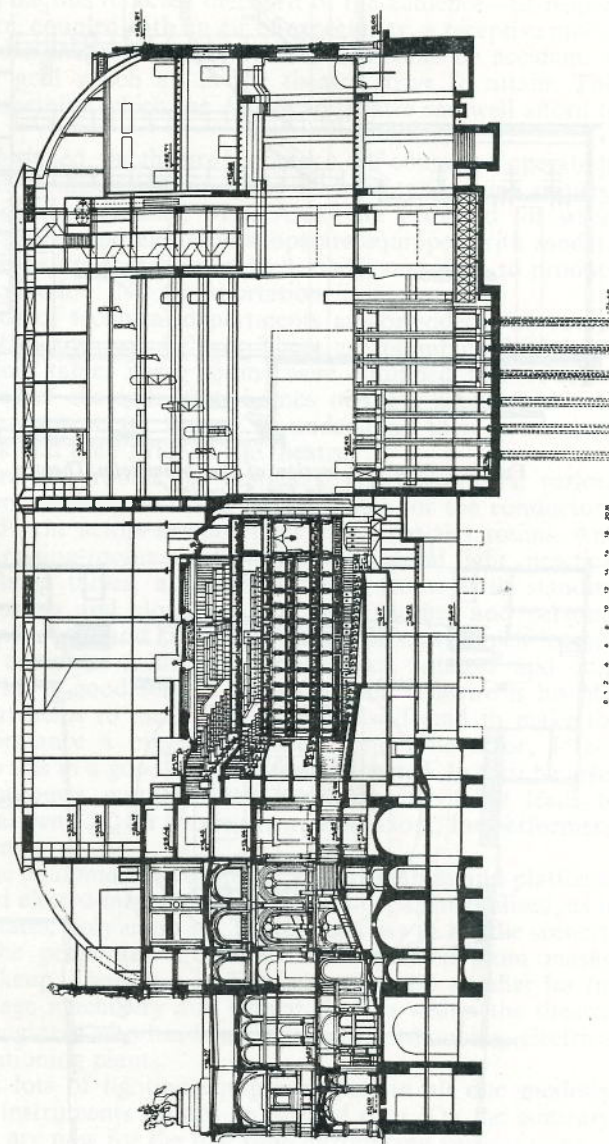


FIG. 3. Plan and section, Vienna Opera House.

*Note the small area of the auditorium compared to that allocated to back stage and front of house, foyers, etc.*





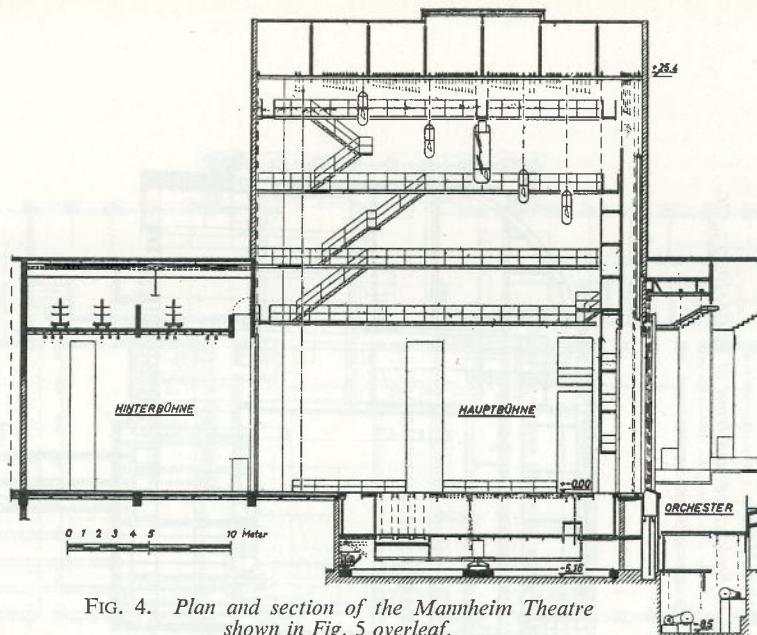
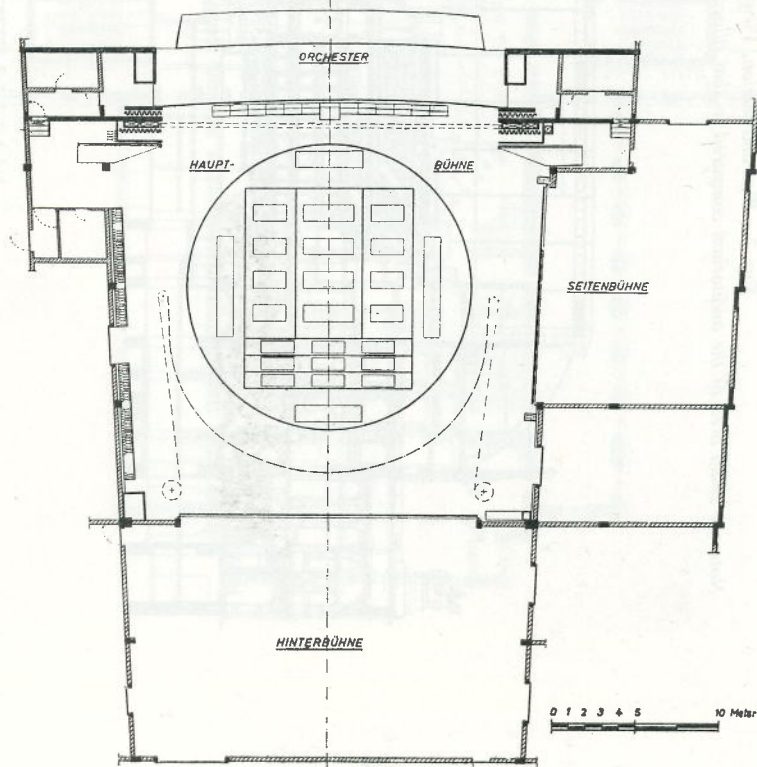


FIG. 4. Plan and section of the Mannheim Theatre shown in Fig. 5 overleaf.



seems to be on time, even when the performance starts as early as 6.30 p.m. To me this reflected the spirit of the audience—its respect for the theatre, coupled with an air of expectancy, a receptive mood. What more can the actor wish? It does not come by accident. It must be the goal which all in the theatre strive to attain. This practice is something which the American theatre can well afford to copy.

As it is designed, the theatre becomes a self-contained operation. The standard facilities include space to build and paint scenery, properties, costumes, masks, wigs. Areas are provided for warehousing. Carpentry and electrical shops are equipped with modern tools. The means are thereby provided, under one roof, to produce an entire production. No transportation is involved.

The heads of technical departments are provided with rooms which are clean and well lighted. There are plumbing facilities, a chair, a writing table. Some rooms were equipped with couches. One wondered if the individual homes of these people had such modern improvements. It is easy to understand their good spirit towards work and their pride in the theatre.

There are also rooms for designers, choreographers, various stage directors, and in the opera houses suites for the conductors. For rehearsals, the actors are provided with large airy rooms. And the actors' dressing-rooms are furnished with good light, practical mirrors, dressing tables, a means to wash (some with standing showers), drawers and closets to put away clothes and personal belongings under lock and key, a key that is one's own, a self-locking door. Such complete facilities evoke respect, interest and consideration. This is good for the actor's morale. Theatre is his life. Anything that helps to make it a good life will tend to make the actor's performance a bigger and better one. The actor, I feel, must react to this in a good way. He feels respected. In turn he gives respect. It becomes mutual. Such mutuality inevitably leads to lasting mutual benefits, for producers and directors, for performers, for the audience.

The stage equipment is complete. The turntables and platforms are controlled electro-mechanically. Work is departmentalised, as in the United States, only more so. There are crews to handle scenery, others for the properties. Costumes are separated from masks, wigs and makeup. There is a staff for electricians, still another for the upkeep of stage machinery and similar devices within the theatre. There is an engineer who heads up the heating, plumbing, electrical and air-conditioning plants.

There is lots of lighting equipment but, in all due modesty, the German instruments do not go beyond ours. On the contrary, the Germans are now for the first time introducing various types of elliptical and Fresnel spotlights. The equipment is much larger than the American type. However, when labour costs rise, the need to automate will force a change in size of equipment, and at such a time the devices will be made smaller. Also German bulbs are



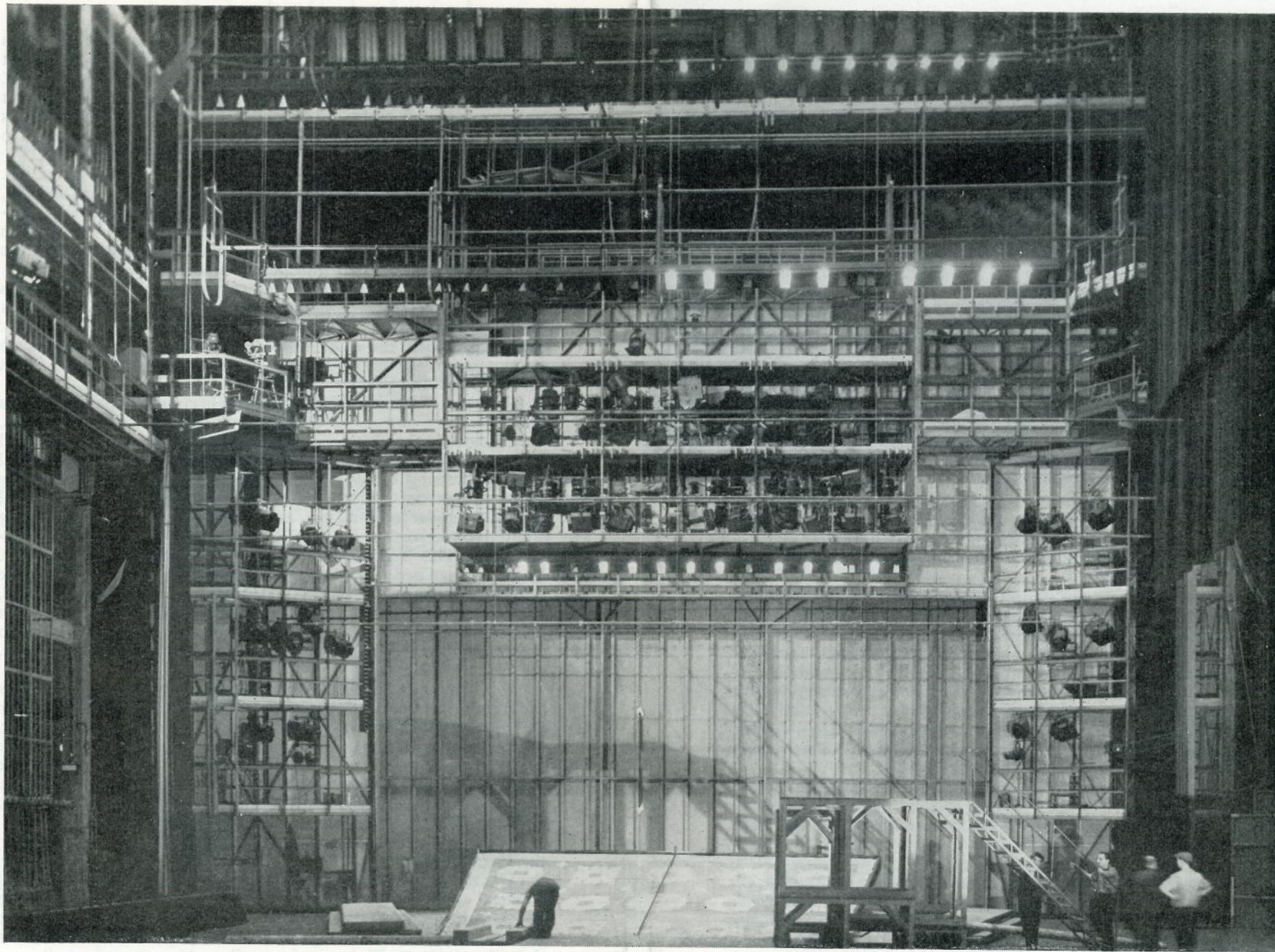


FIG. 5. View of control room FOH Mannheim showing lighting controls. Desk nearest camera controls mag., amplifier dimmers and the far desk gives four dimmer presets.



larger. Bigger bulbs force larger equipment, which is naturally heavier too. Their stages are much larger; wider and deeper. The American stage averages a maximum of 30 ft. in depth. The Germans boast of 65 to 75 ft., with as much space again on either side and in the back.

I want to dwell a bit now on the adaptable type of forestage. It is to be found in theatres that are utilised for drama as well. I suppose this stems from a desire to break out of the picture-frame stage. The platforms of the forestage are the sectionalised floor of the orchestra pit. By means of electrically driven lifts, these sections are raised to stage-floor level and, with the apron, become the forestage.

Lighting of the forestage is direct and simple. The lights are situated in the ceiling beam, as well as in slots in the side walls, all ahead of the proscenium arch. Lighting from the booth (projection room) in the front of the house may also be applied. This is identical with the practice in the United States except that we use the boxes and the balcony facia.

All theatres are equipped with fixed, permanent and uncealed footlights, wired in four colour circuits. Overhead and behind the asbestos curtain there are three hanging bridges, tiered one above the other (Fig. 5). To these are attached a quantity of spotlights of different types, sizes, lenses and wattages; also manually operated follow-spots. Operators gain access from a permanent stairway from the grid floor. It should be noted that fluorescent and Xenon floods and strips are sometimes mounted to the first set of bridges. These are used to light the cyclorama. While both of these types of lamp sources are known in the United States, they have yet to be installed in our theatres for stage purposes.

There is a great deal of projection equipment at many locations. The art of painting in miniature and on glass is further advanced in Germany than in the United States. There are two and sometimes three additional bridges spaced approximately 8 to 10 ft. apart and running upstage, to which are attached similar types and sizes of spots and floods. Independent of these lights and spaced at 8 to 10 ft. centres, running the approximate width of the proscenium opening are four coloured circuit 500-watt borderlights (battens), used for blending and tonal light. There are tormentor perches (towers moving on and off stage (Fig. 2)) downstage both left and right of stage, on which are manually operated follow and stationary spotlights. In addition, one finds any number of lighting instruments mounted on portable stands and located on either side of the stage, usually attended by operators.

One is struck by the vast amount of lighting equipment. It would appear that the German technician believes in the principle of saturation. This practice reduces the tedious and time-consuming process of re-hanging lights. Furthermore, since productions change nightly, it is evident that the equipment used for one production is not refocused for another. Still, it is hard to understand why such

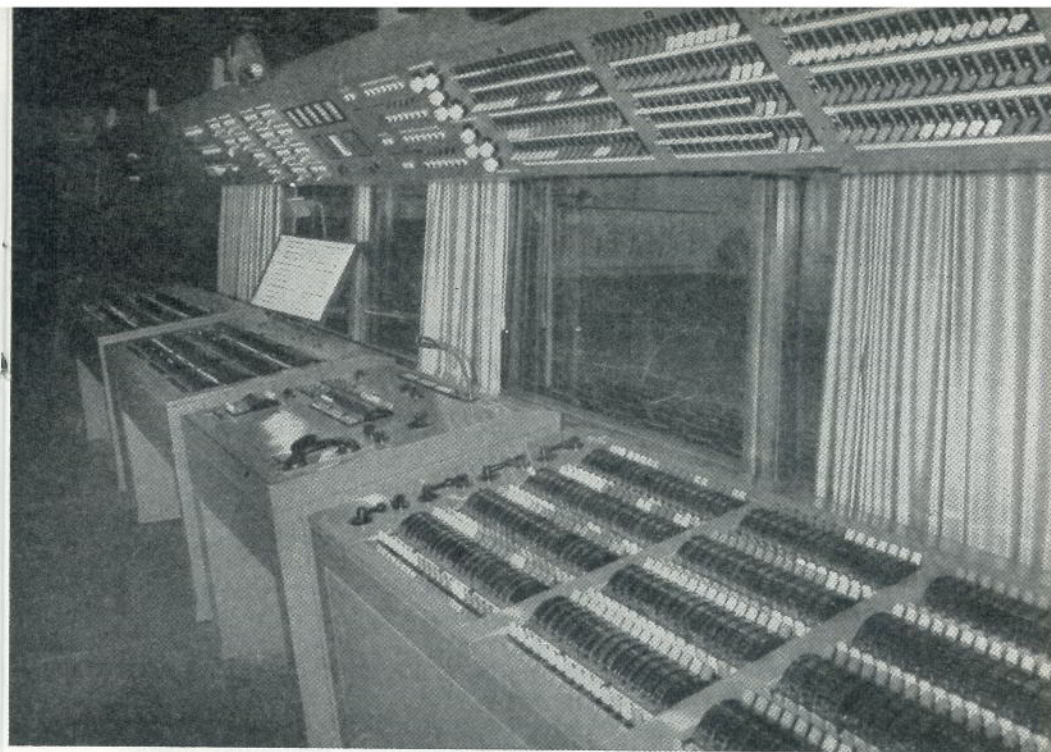


FIG. 6. Stage side of proscenium with five curtains lowered showing towers and lighting bridges. National Theatre, Mannheim. Photo Maschinenfabrik Wiesbaden AG.

vast amounts of lighting equipment are needed. Too many units seemed not to be in use.

The various control devices at the console are much larger than the American types. Bigger devices create larger consoles, which mean more space and several switchboard operators, a condition not to be tolerated in the United States. But in Germany this is of no consequence, for labour is cheap and space is abundant. Operation of their boards necessitated no less than two men, and sometimes three or four. Comparing like types of equipment and an equal number of lighting cues, the one American electronics switchboard with which I am most familiar provides ten presets\*; the German system eight. The American console occupies  $4\frac{1}{2}$  ft., the German design, 20 ft.

One evening we went to the Vienna Staatsoper, where we met Von Karajan. He was conducting "Otello." He discussed control equipment. This is Von Karajan's comment about the German electrician: "They really know their operas—which means they know their business. When I raise my hand they respond as does the musician in the orchestra. They know every note, even those of the soloist who may play a French horn. I get a feeling that just like the

\* Century-Izenour (CI) System. See TABS, Vol. 15, No. 2, Sept. 1957, page 30, Fig. 3.



man who is playing the musical instrument, these electricians play at the switchboard, in time and with the same preciseness. I feel that they perform as part of my orchestra. Can you imagine how much better they might be with one of your boards? Remember, sometimes there are several men at these boards. Yours requires, if I remember correctly, only one."

This beautifully illustrates a point, and Von Karajan said it only because it is so. And it pointedly underscores the keen interest of the electrician in opera.

The only two companies in Germany that fabricate boards with electronic tubes or magnetic amplifiers are the A.E.G. and Siemens. An unusual and interesting projection lens system was seen in Berlin. This system provides 180° spread, which means an image of 3 ft. at a distance of 1 ft. and in that proportion. However, we didn't have a chance to examine the extent of distortions or the smoothness of field because of inadequate facilities at the stage lighting equipment plant (factory).

Summing up the German activity, I want to emphasise again that the architect and his staff are people who know what is required for the audience, stage artists and technicians, for the front of the house and backstage, both ahead and behind the footlights. Responsible and experienced heads are consulted from the first planning periods. Architects confer and seek to learn the basic requirements, which they carefully consider. Beautifully made models are studied and criticised.

I ask: How is it possible to design and equip a stage without permitting the Director to express his needs, his concepts? For it is the Director who dictates the style of production, who creates the atmosphere, the tempo, the rhythm. He is the initiator and the "creative spectator in advance of the fact."

I cannot close without reference to the self-supporting commercial theatres—the legitimate theatre in the United States where, I believe, the artist for all the physical handicaps of small stages and few facilities, is as free as a bird in the air, more than in any other of the performing arts. There is no censorship in our theatre, no governmental regulations. There is vigour and variety, and true freedom of expression in our theatre. We have developed a concept of musical comedy that is distinctly American in character. While I have described the abundance of theatres and machinery in Germany, indirectly I have lamented the lack of these in our land. But it is not enough to think only of material improvements. I should remember that the "fabulous invalid" is not so feeble as to be without the spark of truly creative imagination. I recall that there emerge each year a few new plays; some young, fresh and vital talents.

Robert Edmond Jones once said that the best thing would be for the playwright, the actor and the director to be placed on a bare stage on which no scene could be set; without turntables, treadmills or platforms; and then to be told to write, direct and act for such a stage. He believed, and I think there is a large amount of truth in

this, that in a short while there would emerge the most exciting theatre in the world. Abundance of equipment does not good theatre make—that is, not alone. Probably absence of it is not as great a boon as Jones implied either.

While any new theatre we build should be built with an awareness of what exists in the new European theatres, it should primarily be guided by an awareness of what we ourselves want and of what we have already achieved. We have vital creative talent in greater abundance than any other country. And I am convinced that this source of creativity should generate the design of our theatres, rather than letting the design of foreign theatres dictate to our talent.

\* \* \*

## ENGLISH AND AMERICAN THEATRES COMPARED

*To help our readers who are not familiar with New York Theatre Buildings and who may be surprised to find that they are far from the largest and best equipped in the world, the Editor has written a short commentary which endeavours to show where our own theatres fit in the scale of things. It is important to remark that outside the commercial theatre in the U.S.A. there exist some fabulous (or so they appear to us) theatres built for universities and schools. It is hoped to publish a report on these before long.*

The commercial theatre centres on New York. Walking around these theatres which is very easy as they are grouped almost together, one sees the same London play titles and often the same stars on the bills as here. It is a two-way traffic.

The theatres themselves on Broadway are in some ways less satisfactory and more cramped than many of our own. Outside the auditorium there is very little space and, as smoking is not allowed inside (hurrah!) during the interval, there is a mad retreat to inhale in the narrow corridors, foyers and thence to the bitter cold of the pavement outside. In quite a few of our theatres, on the other hand, there is room to move and in some—Drury Lane for example—there is splendid spaciousness. Though even in this theatre it is dangerous to deposit one's cloak (old mac!) unless one is prepared to miss the last lines of the play or be regimented into a long and discouraging line by the powdered wigs.

In New York, if I recall aright, only soft drinks (and these grudgingly) are available. And there is also a strange system in which a voice not to be denied insists that you "check your coats"; when obeyed, however, the attendant obstinately refuses to take your hat. In London, drinks are there in reasonable sufficiency, provided one does not require anything exotic like ice or cellar cool. But what of food? In the West End only Covent Garden does any sort of justice to this need, and I must confess I enjoy both it and the coffee there.



Only at the Royal Festival Hall, which is of course not a theatre, and has no stage, have we the generous amenities of the German theatres which Mr. Kook describes. By the way, there are some commercial theatres in Germany, and in those that I have seen the scale is much like their fellows in New York, London or Paris.

Backstage, London scores over New York because we can provide quite a range of stage sizes, some of them very big. Nowhere, however, have we (no, not Covent Garden, Stratford-on-Avon, not even Glyndebourne!), anything to compare with the German's mechanical stage in size and equipment.

London is also one up on New York in the matter of the stage electrical installation. Although permanent stage lighting equipment is somewhat scanty no less than twelve London theatres have been fitted with remote control dimmer installations and a proper wiring layout since the war. Most of these have 100 or so dimmers and several many more. The control facilities on the later models are naturally better than the earlier ones, but all could claim to be able to be run (as distinct from rehearsed) by one operator. Seven of these controls are situated front of house so that the operator can see the stage.

In New York the house board is but a token and reliance must be placed on a portable set-up for each production.

The absence of these remote controls in New York is due to the system on which the theatre there is run and not to any lack of American companies to provide them.

While London can claim several theatres since the Barrymore of 1927—the Savoy, Adelphi, Saville and Piccadilly come to mind—I must not suggest that there is any cause at all for complacency. No theatre has been built since the war and the refurbishment of the Old Vic is on a slight scale. It seems desirable to bring in the Belgrade Theatre, Coventry, at this point. How does this compare with the German enterprises? First, the financial scale is very small and the place where this has pinched most is back stage. There is insufficient depth, height, wing space and workshop space. The foyers, however, encourage the civilised approach to the theatre—a sense of occasion. The auditorium, particularly the stalls floor, is excellent. There is a really clear free-view of the stage and to me this counts more than atmosphere, intimacy, tradition and all the rest. I could not relax and completely surrender myself to the splendours of “Don Carlos” at Covent Garden recently because my stall, like most of the others, did not provide an unobstructed view of the stage.

The new German theatres provide an excellent view, and even if their proscenium arrangements tend to push the show upstage, I can see and I go to the theatre and the opera to see. And do you know that when the new Questors theatre is built, if the sight lines are dodgy and make me sit on the edge of my seat, I shall not like the place in spite of all that the crowned heads of the theatre may declaim about this great experiment.

EDITOR

## POLYTHENE

Used instead of gauze to create a dream-like effect at a performance of a Masque, “The Vision of Dame Christian,” at St. Paul's Girls' School, March, 1958



Polythene sheeting was found to be an effective substitute for gauze in creating the illusion of a vision. The pieces were joined together by means of heating the two edges with a small flame and then pressing them together. “Rufflette” tape was machine-stitched on to the top and hooks inserted just as in an ordinary curtain. It was found to run smoothly and almost noiselessly.

To give the required state of semi-transparency a fairly heavy quality polythene was used. It was drawn to and fro during a blackout. Lighting upstage of it consisted of two floods, offstage right and one left, one at ground level, one at head-level or above, one 1,000-watt spot in the wings and a flood upstage centre.

To introduce and dismiss the vision scene a “swirling mist” lantern effect was projected on to the polythene from behind it. Care had to be taken to prevent F.O.H. lighting from touching the sheeting and so causing a shiny effect. The figure of the character to whom the vision came could be easily discerned sitting downstage between audience and polythene.



## SON ET LUMIÈRE AGAIN

by Frederick Bentham

It is claimed that more than 130,000 people saw this entertainment last year. That is 130,000 people paid 5s. at least, probably to sit on the grass and see a show lasting a mere 45 minutes in weather that was often doubtful or disastrous. Why did they go and did they enjoy themselves and feel they had their money's worth? The forces of advertising unleashed by the *Daily Telegraph* might well answer the first question and the answer to the second is that they did enjoy their novel experience. Most people I have talked to seemed to have been pleased with the floodlighting—"it was pretty" or "all those changes were marvellous." The novelty apparently lay in *changing* floodlights, which takes us back to the early 1930s on the Carreras' factory façade in Camden Town (Mornington Crescent). One person at least (I met her by chance last week) has an abiding memory of the wonderful marriage of sound and light "as the boats came up the river". She was so captured that she was "at that moment transported right round to the river frontage in spirit".

I am sorry I was not satisfied nor pleased; I was bitterly disappointed and sat in a state alternating between intense irritation and sheer despair. The most beautiful of floodlighting could not for one moment have pacified me. Because to me, *Son et Lumière* is not floodlighting, it is Sound and Light welded together as one experience. My eyes are not to be kept pleasantly occupied while my ears attend to a dramatic story. Each thing I see and hear must be so joined in a "3D" effect that I am not aware of looking or hearing; the result must be an emotion almost unbearably moving. This is a difficult target, as I well know; was it in fact ever the target that the inventor, M. Robert-Houdin, set himself.

According to the programme of this year's Greenwich:

"The aim of *Son et Lumière* is to capture the past of a building, using its façade as a vast canvas washed by a continuously changing display of coloured lighting, while dialogue and music dramatise significant episodes of its history."

Taking over the writing of this article at the last minute, so to speak, I have not had time to seek out the pronouncements of M. Robert-Houdin himself, but I can only say that I hope the above statement owes nothing to him. I know, perhaps by instinct, what the aim should be, and if a single sentence definition is necessary, I would say: "*Son et Lumière* is the dramatic use of Light and Sound to evoke the emotions locked up by history in a building or locale."

It is not lighting and colour variations as an accompaniment to music—that would be colour music. It is not random if beautiful lighting changes while a script and music dramatise history—that is merely floodlighting while someone has left an overloud radio on. It is not the lighting up of particular parts of a building while the

script gives the "gen" on them—that would be documentary lighting.

Using my definition above, the following conditions must be fulfilled.

1. The building or locale must have historical interest—the more it is already known to visitors the better. Further, such history must be of itself capable of stirring emotion—sorrow, pride, wonder, and so forth.

2. The building or locale must have a potential for great lighting variation (not necessarily for beautiful effects). Further, it must occupy a large area of the field of view. Unless this last condition is fulfilled, the audience is always going to be presented with a larger area unlit than lit in the grand climax, due to the large area of dark sky, etc.

3. It must be dark before the show begins and the "house lights" must be of low intensity and so trained as not to spill on the show area. There must be plenty of light for a grand climax, though this will not necessarily mean a large wattage. A very little light goes a long way when the eye is dark adapted in an area with little competitive illumination.

4. The various lighting effects, used singly and in build-up to climax, must all be striking (theatrical) rather than well balanced. The technique used for the normal sustained floodlighting is very different from that required by *Son et Lumière*. In the former, there is one picture seen perhaps for hours, perhaps for days, or even for years. In *Son et Lumière* there are many pictures, each of which must be well differentiated from the others as they are transitory. Over-emphasis of particular areas or features is therefore desirable, rather than otherwise, to make fleeting pictures memorable. The over lighting of parapets, turrets, etc., to high levels draws the eye and scores a visual hit which would be intolerable in fixed floodlighting.

5. The Sound reproduction must be *perfect*, the correct volume to overwhelm the audience in musical fortissimo is essential. There must be no sense of mechanical reproduction in the music. I do not consider the speech quality so important and certainly stereophonic effects must take second place to quality. A fine amplifier and speaker array for normal sound distribution comes before extra sets of speakers in strange places. By all means have the latter, but not at the expense of the former. When they are there, use them with restraint; there is all too much dodging the sound about for its own sake.

6. The script should never have to stand alone for its dramatic effect. If there is no lighting effect for a particular episode then it should not be in. This is a rule that, alas! may often have to be broken as an essential linking event took place somewhere else in history. These absent moments belong to a narrator and should never be acted out.

I think acting should anyway be minimal, the object being to



trigger the emotions only and leave it to the light and music to carry them on. Unlike in the theatre, the events happened *here* and the suffering and joy are already imprisoned in these very walls and only need release. The technique of narrator and one or two speakers to recite a particular character's actual words seems ideal. This is the technique of Bach's *St. Matthew Passion* and Handel's *Messiah*, for example. Words should be few and because they are few must be outstanding. Contemporary chronicles, the Authorised Bible and W. Shakespeare, Esq., give us plenty to choose from.

In lighting changes the important word is change. I have already spoken in general terms of the pictures themselves—the visual repertory of the building. These are peculiar to each building, but whatever their nature there still remains the linking up using the dimmers. The impression I get is that dimmers are regarded as slow switches, used to avoid shocking the eye. In fact, they are the only weapon we have to make a series of lighting changes expressive. The rate of change, the bringing of a particular picture to a low intensity only are vital forces.

Dimmers should not be used to balance the lighting within a particular picture, because to ask the operators to do this kind of work (using what is inevitably a simplified control) when changes take place at the rate of one or two or more a minute is unreasonable. However, using a couple of master dimmers there is no reason why the whole of the lighting forming a picture should not be held at levels other than full. This gives one or two extra variations from each picture. The very low levels might in particular be very effective in giving mystery in the early part of the show—partial revelation of form in dim light only. By the way do not give away the full-up climax too early.

It is not possible to overrate the possibilities of varying speeds in a fade or crescendo. A gradual build up to a climax over the duration of a piece of music can take minutes rather than the usual seconds. At the opposite end of the scale, there is no need for all changes to take place on the dimmers, a sudden switch cut or swop of one picture for another may be dramatically more suitable and gives a change of pace.

FIG. 1. Versailles. The windows of the Hall of Mirrors run along the first floor centre. Note advantage of water foreground, this water also contains some of the famous fountains.

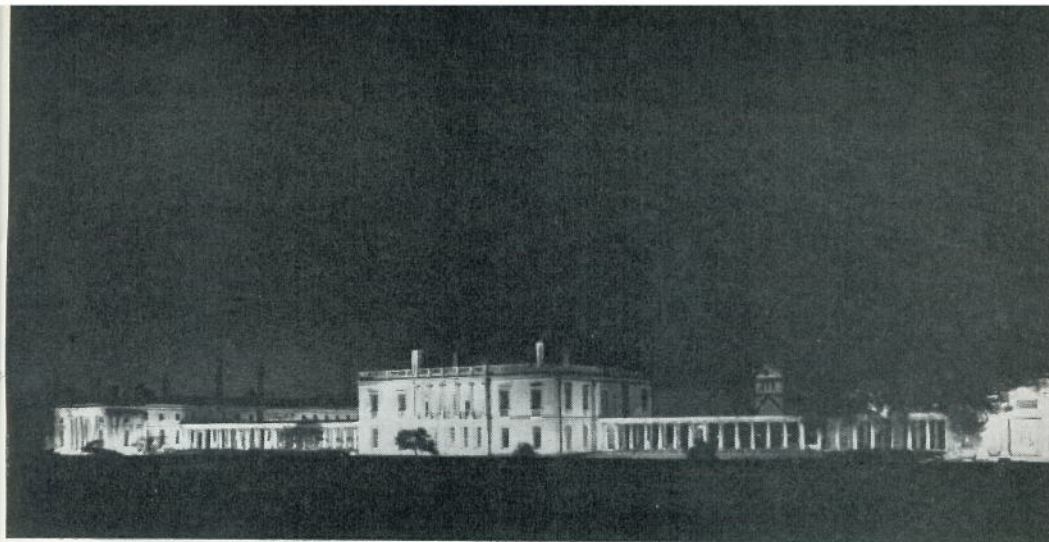
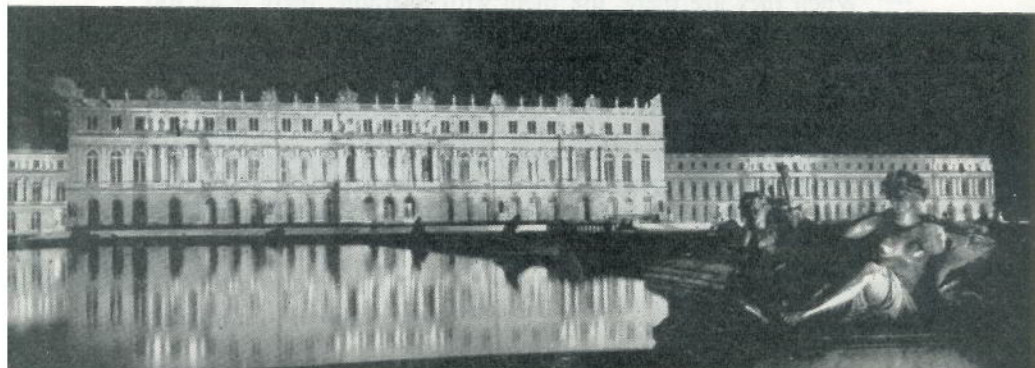


FIG. 2. Greenwich. Aspect with Queen's House in foreground used for the displays this year and last year. Note large area of dark sky. Photo courtesy Atlas Lighting.

All the above are ideals, probably difficult of attainment, and to these must be added the need for the entertainment to take place somewhere where the public are likely to want to do the journey to see it. This angle, together with advertising, raising the money, etc. are business problems outside the scope of this article. However, I would say in passing that many people will have to decide that *Son et Lumière* is not for them in their stately home—architecture and/or remoteness will defeat them. Cathedrals are more likely subjects, but whoever goes in for it they should not try and do it on the cheap. The sound and lighting are not accessories, they are the whole show.

With the ideals set out above, is there any *Son et Lumière* production which satisfies me and fulfills those conditions. The answer is "Yes, at Versailles."

Firstly, the Palace is enormous (500 metres wide) and spectacular with plenty of variety and is relatively close to the audience (Fig. 1).

Secondly, it is saturated in well-known history, for example, Louis XIV held sway there and when one hears his footsteps nothing is more probable. There is even plenty of dramatic history right up to the present time with the famous treaty and, rather to my surprise, the visit of our own George VI.

The lighting equipment is lavish and is properly controlled, while the stereophonic sound effects are *perfect*. Among the extras are the fountains and some excellent effects lighting of the interior of the Hall of Mirrors.

When I saw the show, the first half took place on the Palace and then the audience turned round for the second half on the vista down the park. Distances do not register in the dark, they merely dwarf such things as the fountain of the Pool of Apollo seen at a range of 700 or so metres. Trees also eat up light, so the result was to end in a low key and leave a sense of anticlimax.



When my colleague, B. E. Bear (who was responsible for the lighting at Gloucester), visited Versailles last year, the park vista formed the first section, which must be a great improvement. Incidentally, he put Versailles at the head of all the displays he visited in France (see TABS, Vol. 16, No. 1, April, 1958). All in all one finds it difficult to cavil at the fare provided at Versailles, and there can be no doubt that "A toutes les glories de la France" is *Son et Lumière* in the grand manner and a really exciting experience.

Now what about England; well, of course, the first displays were Greenwich and Woburn last year. Greenwich was staged by the French, but failed to come up to expectation for reasons which are equally valid for this year's production and will be dealt with later. Woburn was killed by the building before it began, as the façade chosen is mediocre and it does not help that part was pulled down in recent times, leaving the end walls soled and heeled. Furthermore, the house is sunk in relation to the audience which further reduces its impact. Nor was the history at Woburn likely to rouse and thrill.

This summer there are four displays to be seen at the time of writing: Greenwich, Cardiff Castle, Ragley Hall and Gloucester Cathedral. It so happens that at the first two the lighting is by Atlas and the last two by Strand. However, questions of lighting equipment technique are of quite secondary importance and I leave them outside the scope of the present article. Therefore, whose equipment is used does not for this purpose matter. All of us will agree that remote control is essential so that lighting changes can be co-ordinated, using finger-tip facilities, group mastering, and so forth.

Although I have been concerned with the art of "colour music" for longer than perhaps anyone else in this country, I have had nothing to do with the lighting for any *Son et Lumière* anywhere. I can, therefore, judge first objectively the relative merits of the four displays, and secondly subjectively, as measuring up to my own ideas set forth earlier. Some of these ideas come from colour music and will be demonstrated this autumn and will therefore be wide open for criticism by others in their turn.

In point of fact, Ragley has had to rely on standard portable interlocking resistance boards, but the other three are remote. An all-electric system is more suitable for the present purpose than an electro-mechanical as it is more readily set up and housed temporarily. Whether the dimmer units are chokes or electronics can make no operational difference to the control panel.

How do the four displays stand? Well, without any hesitation whatever my palm goes to Gloucester, and it is, of course, the cathedral that is responsible. Here is the essential material for *Son et Lumière* as I see it; a lovely and historic building (capable of much lighting variation) which stands in a visually dominant relationship to the audience. A little too dominant perhaps; one could have done with slightly more distance to avoid too much looking up, but it is a good fault.



FIG. 3. Gloucester. Most viewpoints allow the cathedral to tower over one even more than in the photo. All the same the visual impact shown here completely dwarfs Fig. 2. Photo by courtesy of Gloucestershire Newspapers Ltd.

Compare the photograph of Greenwich (Fig. 2) with Gloucester (Fig. 3). Which is more dramatic, even when only seen on the page. The Queen's house at Greenwich is a beautiful building, small in scale, and its visual repertory can only be beauty. On the other hand, Gloucester, thanks to its tracery, pinnacles, etc., can, under certain lighting, appear a delicate fairyland and the next moment solid and enduring. It has the immense dramatic potential we need.



Is it possible to go wrong at Gloucester? Of course it is, but it would more likely be in the direction of not enough restraint and self-discipline—the hand of the artist is essential. At Greenwich, the material is not there and I feel that much blame attaches to M. Robert-Houdin for ever undertaking the show last year and thus launching this entertainment in England falsely. If he as inventor says Greenwich is a suitable *Son et Lumière* site then I can only say with conviction that he is wrong. The buildings are being tackled from the wrong way round. The task should have been refused unless the river aspect had been permitted. From the river (Fig. 4) the emotions of the eye could have been fully served and this could well compensate for the historical poverty of the actual Wren and Inigo Jones buildings. It is to me quite impossible to light a script, quite three-quarters of which takes place before the buildings we see on the site were in fact built. Incidentally, this year when at last the Queen's House can be illuminated in its own right for the first time, a bad lighting misconception allows the colonnade either side (of much later date) also to be lit. Surely this is the one time when light can concentrate all attention on the Queen's House and allow the rest to sink into oblivion.

The sound is good, but subject to echo, for which I suppose the site is responsible. On the other hand, the use of different speech positions seems random and without significance. Surely it is quite improper to light the normal scene at a time when the sound comes from the back of the heads of the audience. Why in any case did the sound come from there?

I found a lack of decision in the working of the lighting changes, a tendency to meander into a particular effect. Indeed, the majority of changes did not lock up to anything in the script. For this, the uninspiring task of illustrating history on a building which was not there may have been responsible. All the same it is strange that, after the Wars of the Roses have been properly shown by a white and red colonnade side by side, upon the announcement of the House of Tudor the whole lot should turn white; red surely. Again, house lights from the Observatory spilling on to the Queen's House do not make an auspicious beginning.

At Cardiff the sound was so good that I mistook a tolling bell for the real thing. On a dubious night at Cardiff a good audience had turned out and I think enjoyed themselves. The changes to my critical eye were too loose but again the script set terrible problems. To tell the truth my Welsh Border history is so weak and my dislike of the conception of Dia, who as well as being narrator pops up in every period dramatised, was so great that I cannot speak objectively. Mr. Peter Wood in *The Stage* recently complained of lack of technical development. To my mind it is script development we lack and both Greenwich and Cardiff at any rate prove this. Technically, Greenwich and Cardiff are way ahead of their scripts. Incidentally I was glad to see that the temptation to use only fluorescent green on the trees had been resisted in most instances.



FIG. 4. Greenwich, showing right-hand side of the riverfront vista. This vista culminates with the Queen's House in the background, unfortunately not shown in this photograph.

Mr. Charles Brewer is the driving force behind the Gloucester display, *Golden Legend*—the words *Son et Lumière* do not appear. He is also producer and script writer.

At Gloucester the night I was there the sound was bad, being neither loud enough for the music nor free from distortion, though I understand this is now being attended to. There is rather too much acting out of scenes, especially where the events did not take place at the cathedral. There are, in other words, places in the script impossible to light. Musically, the use of bits from the *Unfinished Symphony* did not seem happy in a cathedral close. Very few musical passages were long enough, there was altogether too much speech.

There was all the lighting variation in form and colour one could wish, and the sequence which builds up gradually from "I know that my Redeemer liveth" through Hallelujah Chorus (curse the sound alas!) to the bells themselves ringing out from the tower, with the cathedral lit inside and out, is a sure fire winner and most moving.

The end when the bells stop is indecisive as some cathedral lighting remains on, and I am certain the moment the bells cease the cathedral should be blacked out. From the absolute darkness the audience lights should then be gradually dimmed up. With the vanished lighting

"The solemn temples, the great globe itself  
Yea all which it inherit, shall dissolve  
And like this insubstantial pageant faded  
Leave not a rack behind."

Shakespeare leads us to Ragley, where Mr. Corry as script writer, illuminator and producer calls on the same author to



establish "this blessed plot, this demi paradise, this other Eden." Faced with slender material, both in the fabric and in history, he uses only a narrator, sound effects and music for a show which is much shorter than the others, as it lasts only 20 minutes.

The sound of the first night was not loud enough for me, but my complaint resulted in the fitting of new output transformers and all should now be well.

Ragley is an intimate show which would please as a charming interlude in the course of a summer evening's car or coach drive. It is not the stuff to insist on a pilgrimage at all costs, braving all perils for an unique experience. Gloucester is such an experience and is a MUST for all who are interested in the dramatic use of light. It is a great pity that the distance between Ragley and Gloucester does not permit the use of the first as a curtain raiser in the same night. The life of a *Son et Lumière* critic consists in hanging around at extraordinary late hours with an array of pullovers and rain-proofs, in case, waiting for darkness. September is the best month bringing, as it does, a 9 p.m. lights up.

With weather in mind, I feel *Son et Lumière* inside would have much to commend it. Westminster Hall always has been my first choice. A venue such as this would not dissipate resources over a large area and would therefore have a much greater range of expression and intensity. The House of Commons could effectively burn down outside its windows, and what an inspiration in all the history those very walls have seen. I for one could not resist Westminster Hall.

There are many suitable subjects which nevertheless would lose by, or be unable to cope with, an audience. Here television might step in. It nearly did a few years ago during a B.B.C. visit to the galleries and apartments at Hampton Court. But for the perpetual spiel of the commentator we might well have seen the ghost, when rounding one of those half-lit corners. The background history could be given before and after, but for goodness sake leave the place to speak for itself through what we see.