

# TABS

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## Editorial

Discipline .. .. .	2
Self Annihilation or Good Council .. .. .	3
The Secret Service .. .. .	4
A Numbing Experience for Some by Norman Marshall .. .. .	5
La Maison De La Culture De Grenoble by Elidir Davies, FRIBA .. .. .	8
Craigie College Theatre, Ayr by Martin Carr .. .. .	14
What's in it for the Customer? by Frederick Bentham .. .. .	19
Weston-Super-Mare Playhouse Theatre by Reg Webb .. .. .	31
National Arts Centre Ottawa .. .. .	35
Lancaster University Nuffield Theatre Studio by Kenneth Parrott .. .. .	36
Correspondence .. .. .	44

Cover picture: Fish eye lens view of the 2,300-seat Opera House at the National Arts Centre, Ottawa, see also page 19. Architects: Affleck, Desbarats, Dimakopoulos, Lebensold and Sise.

## Discipline

London which includes us, has recently enjoyed an unusual treat—a rare theatrical experience. This sprang from what most of us have known to be the backbone of the theatre—discipline. Nothing except rehearsal and a precise knowledge of what one is at can ensure that the public obtain the maximum from true professionals, in this case ten of them. Julian Wylie said many years ago, “Nothing will be right until seen and rehearsed”, and it is a sad thing that today, to some, theatre deliberately means negligible or nil rehearsal. No collection of professional players has the right to rely on improvisation—the spirit of the moment—because this means that at other performances the paying customers may get something less than what they paid for. Even when the content is just abuse from stage to audience; if that is the vital message it must be made at all other performances.

These solemn thespian musings are provoked by an unforgettable evening which began inauspiciously. “Another American Company new to London.” “What do they do?” “Ballet—a programme of divertissements to musique concrète”. “Must we? How long does it go on for and how many are they?” “A couple of

hours; ten dancers, just plain cyclorama, black legs with a simple lighting layout.” This last got us, for relying as we do on sales of stage lighting for our living we take a perverse joy in seeing people using it very little. So off to the old Sadlers Wells Theatre in Rosebery Avenue to land up in a house crowded from floor to ceiling. The previous week it was said they were almost giving the tickets away. The result was sheer enchantment, musique concrète, divertissements and all forgiven—even those dreadful American programme notes. And the recipe—discipline. That is sheer professionalism and rehearsal, nothing left to chance. Impossible to describe or to photograph, the ballets of Alwin Nikolais are perfect theatre; only mucked up perhaps when in one item the spoken word was allowed to intrude.

Here were the “ubermarionettes” of Gordon Craig with lighting such as he wrote about but never could have achieved. But not for Alwin Nikolais a mechanical thing like a marionette—he realises that the perfect instrument of expression, utterly reliable, is the human being—the professional disciplined and rehearsed. All, dancers, flymen, electricians were moving with superb timing at the behest of one mind—that of Alwin Nikolais. Costume, décor, lighting, musique concrète and all were conceived in that mind.

What was it all about? What was the message? The answer to the second question was “no message”. For that Nikolais be praised and we only hope we are right. No symbology no socio (or anti-socio) theatrewise integration—just disciplined entertainment.

## Self Annihilation or Good Council

Recently the Council of the British Drama League met and the main item of the agenda was to vote itself—the Council that is—out of existence. At first sight this may seem an odd, even selfish way to celebrate the Golden Jubilee, fifty years, of the B.D.L. Other jubilation is however promised.

What was this ceremony of mass suicide like it may be asked? Was there an anguished minority imploring a reprieve, another chance to show what they couldn't do? Did even those avid for self-destruction while hardening their hearts to such craven pleas nevertheless have difficulty in suppressing the odd tear or two when Chairman Marshall pronounced the words “The Council is dead”?

TABS is everywhere in the theatre of course and can report from the inside of the suicide club. There were no dissentients, on the contrary a general air of gaiety pervaded all. The only reason why champagne was not drunk was that no one had provided any.

No lemmings here, the members of the B.D.L. Council knew exactly what they were doing. Like all other formal councils of this type the distinguished names find it rather a bore on the odd occasions when they get around to attending. The trouble is that all the real



work has been done and the fun has been had elsewhere by the paid staff, executive, general purposes, technical committee or whatever. Then, simply because the particular society or association constitution says so, everything has to be submitted for rubber stamping by men who can hardly spare the time and are hastily reading the minutes of the last meeting in the faint hope of getting a clue as to what the present one is all about.

Fortunately few ever succeed in this and thus most of them remain silent so as not to make asses of themselves. Every such gathering of course, has the odd vocalist determined to improvise on a line equally applicable to marmalade or electronics. (Both can, after all, present sticky problems.) All he or she can in fact do is to delay the proceedings, for the only motion a majority of members of Council are really interested in at any one time is a motion towards the exit door. Unlike the local government council chamber this is not the place for debate. The good member of Council is a name who knows how to be silent and does not fret that he does not even have to use his pen to sign anything.

What about the use of the pen as a rubber stamp? The British Medical Association are protesting about the immense waste of time while doctors are required by officialdom to certify what they cannot in fact certify, minor ailments and absences. In another sphere directors sign millions of documents the content of which they cannot possibly check. Managers sign the travelling and entertainment exes of other ranks when all the time the only journey that can be exactly monitored is a journey to the Moon. And yet even here we are not sure. Suppose Messrs. Armstrong, Aldrin and Collins put in a docket "to entertaining Venusian trade delegation", who is to check what really happened on the dark side? Do the accountants launch another rocket to find out? To judge by some organisations the answer could be "Yes", Meantime Hurrah! for Marks and Spencer who trust their sales staff to go into the stock rooms to replenish their counters: Hurrah! for the B.M.A. who would trust people to know when they do not feel well enough to work that day; finally, of course, Hurrah! for the late Council of the British Drama League.

#### The Secret Service

In the December 1966 issue of *Theatre Design and Technology* the official organ of the U.S.I.T.T. (the American equivalent to the A.B.T.T.) a rumour was started by Ned Bowman, its editor. Since then the rumour has grown overseas until it finally came to these Isles of the broken coast and broken banks set in the silvery sea. In his journal *Amateur Stage* of October 1968 Roy Stacey began: "This (TABS) admirably reflects the style of its editor. . . ." In *Light and Lighting* July this year in a review of *The Art of Stage Lighting*, we find, "Most of these pages are as lively as a TABS editorial . . . the style is the man."

We consulted that book itself and there it was in print again, a confession by the man himself that he writes these editorials, the editor indeed. At least all can see why so many Bentham articles have hogged the best subjects and key positions in TABS. Was ever such low cunning revealed? Perhaps not, but in justification it can be pleaded that there was a tradition in the old Strand that the editor of TABS should be anon. This moment in time when we become Rank Strand Electric and move on to far greater expansion than we have ever known, it seems only fair to all concerned to make known who is responsible for such strong opinions. So here are the facts.

TABS was begun by Hugh Cotterill who produced 40 issues. He then handed over to Bentham whose first number was September 1957 and who has produced 40 plus issues so far. Does he do only this? **Emphatically, No! Does he produce it all alone? Equally emphatically, No!** First of all during his period there have been 88 other contributors, many of them coming up with further doses from time to time, and of these the record is held beyond question by Percy Corry with 26 contributions in this period and goodness knows how many before that. Then again there is B. E. Bear, painstaking reader and assistant editor, and finally Twynam who "does the layouts" and then pulls them to pieces again with never a protest. These are the team—part-timers all.

## A NUMBING EXPERIENCE FOR SOME

by Norman Marshall

"Adolphe Appia, Prophet of the Modern Theatre," by  
Walther R. Volbach. Wesleyan University Press (\$12.50)

It is an extraordinary fact that an almost unreadable book revolutionised ideas about décor and lighting in the European theatre. The book was Adolphe Appia's *Die Musik und die Inszenierung*, published in 1899. It is a baffling confusion of Teutonic philosophy, metaphysics and romantic mysticism out of which, at a first reading, Appia's theories only occasionally and dimly emerge. Fortunately the book contained a series of designs which so vividly revealed his ideas on scenery and lighting that it was unnecessary to read the book to understand them.

Appia was nearly forty when the book was published. He had never worked in the theatre. Trained as a musician, his ambition was to direct operas as well as to design them. It was a role for which he was singularly unfitted because he was morbidly shy and had an unconquerable stammer. But at least, he thought, he could become a designer. Significantly, his first step towards achieving this was to get permission to attend lighting rehearsals at the Vienna Opera to learn



about lighting equipment and stage mechanism. He made lighting plots for many of the designs in his book, and his sketches show exactly the lighting effects which could be achieved. These designs are not reproduced in Mr. Volbach's book, presumably because *Music and the Art of the Theatre* was published at long last in an English translation in America in 1960, thirty-two years after Appia's death. Instead, Mr. Volbach gives us sketches of Appia's later projects and photographs of some of the operas he was commissioned to design and light as a result of the interest aroused by his book.

Most valuable of all the illustrations are ten photographs (taken in the actual stage lighting, a rare feat among photographers even today) which show exactly how Appia designed and lit *The Rheingold* at the Municipal Theatre in Basle in 1924. At a casual glance these might be photographs of a recent production at the Royal Shakespeare or Covent Garden—proof of how familiar we have become nowadays with the method of staging which Appia (not Craig) was the first to evolve and put into practice. In fact, perhaps by now, we are growing a little tired of all those productions which, rigidly rejecting the slightest suggestion of realism, set an arrangement of neutral coloured rostrums, steps and ramps against a neutral background and illuminate the varying acting areas in pools of light. This, in essence, was the method which Appia evolved. The audience at Basle disliked it quite as much as the La Scala audience in Milan had disliked Appia's settings for *Tristan and Isolde* which Toscanini had engaged him to design. Both audiences resented being deprived of the lushly realistic Wagnerian productions to which they were accustomed, and on some evenings there were angry demonstrations of disapproval. Fortunately critics, theatre directors and designers from all over Europe, came to see the Basle production and very soon its influence was evident in some of the more sophisticated opera houses in other countries.

Looking at the photographs of this production, and reading some of the praises written about it at the time, one marvels how Appia achieved so much with lighting equipment which Mr. Volbach mildly describes as "imperfect". Only two of the spotlights had any strength, and these had so much spill that a funnel had to be attached to them when a narrow beam was required. There were only four lamps which could be fitted with colour filters. The rest of the equipment consisted of floats and battens and some arclights at the back of the first circle. There was no cyclorama, just a conventional skycloth. Yet with these meagre resources, Appia created effects which were praised for their visual splendours, the dramatic contrasts of brilliant light and deep shadow, the use of light from many angles, and the evocation of the changing mood of the music by subtle changes in the lighting.

For some theatre people and some critics too, it might be a numbing experience to read this book. It would make them realise

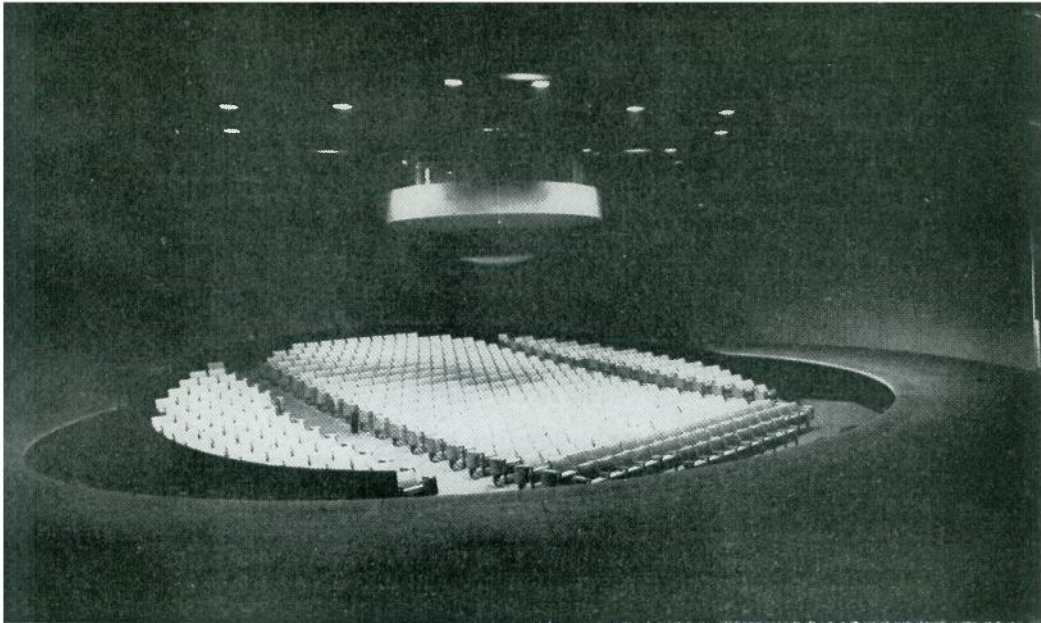
that much of what in England is regarded as *avant-garde* is not nearly so original as they imagine it to be. Take for example, the present trend to design theatres which smooth away any demarcation between actor and audience. At Hellerau in 1912 Dalcroze opened a six-hundred seater theatre designed by Appia so that "a single room embraced both actor and audience". There was no front curtain. Appia considered it "a ridiculous and barbarous phenomenon". But the scrupulously fair-minded Mr. Volbach is careful never to claim for Appia an innovation which was not completely his own, so he reminds us that in the 1830s Immermann at Dusseldorf converted his theatre to what we now call a thrust stage, "an innovation which carried him little artistic esteem and even less financial success".

Most theatrical historians give Appia the credit of introducing slide projection into the theatre. Mr. Volbach, while recognising that the use of projection was Appia's greatest asset in his aim to eliminate realism, points out that the "laterna magika" was first used in a theatre by Athanasius Kircher at the end of the seventeenth century; that Appia probably knew about Robert Smith's "ocular harpsichord" in the mid-eighteenth century, and certainly learned a great deal from the "Chase Electric Cyclorama" of 1890 and the new method of projection Loie Fuller introduced at the Paris World Fair in 1900.

Today, some directors and designers, including Peter Brook and Sean Kenny, are demanding "a place of performance" which has none of the features of an ordinary theatre—just "an empty space". It sounds very novel and up to date, but Appia long ago was advocating just this—"a plain large room with an area left free for spatial settings". He called it "The Living Space" or "The Rhythmic Space". Mr. Volbach shows two of Appia's sketches for this. In one of them, the wall of a room is converted into the exterior wall of the house simply by projecting upon it a leafy tree, which was exactly what was done in the Chichester production of *Uncle Vanya*.

The first illustration in Mr. Volbach's book is from Wagner's production of *The Valkyrie* in 1876, a realistic perspective scene (very fine of its kind) representing all that Appia sought to destroy. The last illustration is the Rock of the Valkyries in Wieland Wagner's production at Bayreuth in 1954, a setting obviously inspired by Appia, a fact which was warmly acknowledged in the programme. The irony of it is that during Appia's lifetime, the Wagner family persistently refused even to look at the designs which he made with Bayreuth in mind.





## LA MAISON DE LA CULTURE DE GRENOBLE

*by Elidir Davies, FRIBA*

This Regional Centre of the "Department Des Alpes", was the first department in France to build a new Theatre Centre, known as "La Maison De La Culture". Previous centres such as those at Le Havre, Caen and Bourges, had added to or adapted existing structures. This new theatre was built to be used at the time of the Olympic Games (Winter Sports) which were held in 1967/8, and was financed by the city and the French Government on a fifty-fifty basis, at a cost of approximately two million pounds.

The architect, Andre Wogenscky, from Grenoble, makes the following statement regarding the building: "The Maison De La Culture is one where the population must feel at home, it is the place where each gives and each receives, no matter what their age, race, or their work." The flat land on which the building has been located, has been raised on the main approach side to provide a large theatre plateau. In this way the public have a greater sense of isolation from the traffic routes, and this especially applies to the restaurant and the public areas within, when greater vistas of the surrounding mountains are enjoyed. The main structure is of reinforced concrete construction, and clad externally with prefabricated enamelled sheeting, in black and white. It was the intent of the architect that internally the concrete structure, wherever possible, be revealed, likewise the metal ventilation trunking and exposed metal staircases. The dramatic décor which has been used in colouring these exposed surfaces and

materials, against the light marble floors used throughout in the public area, and bright coloured carpets in the theatres and public rooms, results in a very attractive blend of sophistication and the organic.

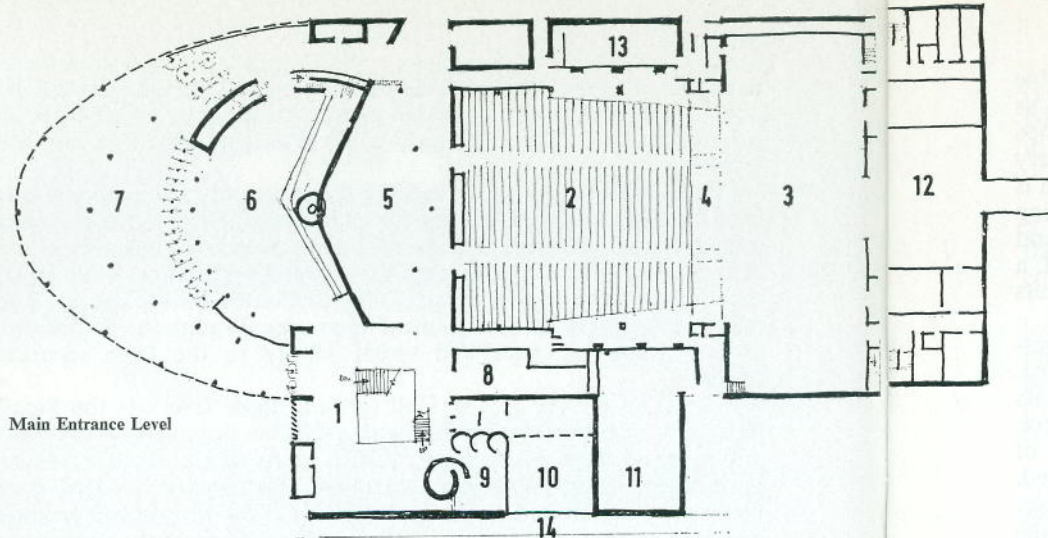
The general layout of the four theatres and public rooms has been carefully planned, so that the public circulating to the different units are not confused. The use of a main pedestrian ramp from the car park to the main entrance of the building (at first floor level) together with internal stairs and lifts, facilitates ease of access. The main entrance hall with its central open area through the two floors, gives a sense of space and visual clarity to the four separate theatres.

Leading off the Lower Hall (ground floor level), is the Small Theatre or cinema, seating 320, with a shallow sloping carpeted floor and a raised stage, 40 ft. wide by 30 ft. deep with a stage loft over, permitting the installation of curtains. The theatre is capable of being used for limited stage productions having wing space on only one side—the alternative use is that of cinema, cabaret, concerts or conferences. The seats are designed with single pedestal support and can be easily removed and, when necessary replaced with single pedestal tables. The stage lighting, sound and cinema projection rooms are at the rear of the theatre.

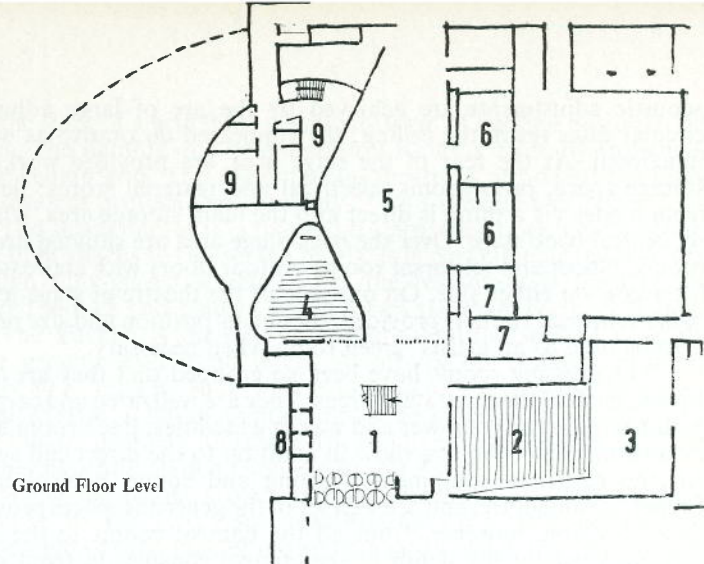
The Television Theatre which is permanently open to the public (without charge) seats approximately 100 persons—the theatre is wedge-shaped and the wide spacing of the seats permits the audience to move "in" and "out" with the minimum of interference, the theatre's only form of lighting is at floor level. Alongside this Television Theatre is a large exhibition gallery, entirely artificially lit. Leading off the gallery are the separate clubrooms which are provided for the different theatre club interests. In the main entrance hall at this level are the offices of General Information, Box Office and cloakrooms.

Leading off the Upper Hall is the Large Theatre, designed to present theatre, concerts, ballet and variety, and entered via a large foyer (separate from the main hall). This theatre seats 1,200 persons, one half on a shallow curved floor, the remainder on a flat floor (there are no balconies in any of the four theatres). The stage which is 120 ft. wide by 48 ft. deep has a proscenium opening 90 ft. wide, though this can be closed down to 60 ft. A forestage of 12 ft. can be lowered to form an orchestra pit. From the main stage diminishing wedge-shaped side stage areas return approximately half the distance of the auditorium on both sides. The main stage lighting and house lighting, sound control rooms together with cinema projection, and re-winding rooms are situated at the rear of the theatre. The circulation corridor, which surrounds the theatre at this control level, connects the main artists' dressing rooms, and administration offices and provides easy access to the stage area and to the two front of the house lighting positions and vertical light slot which are situated close up to the proscenium. In the main auditorium of the theatre,

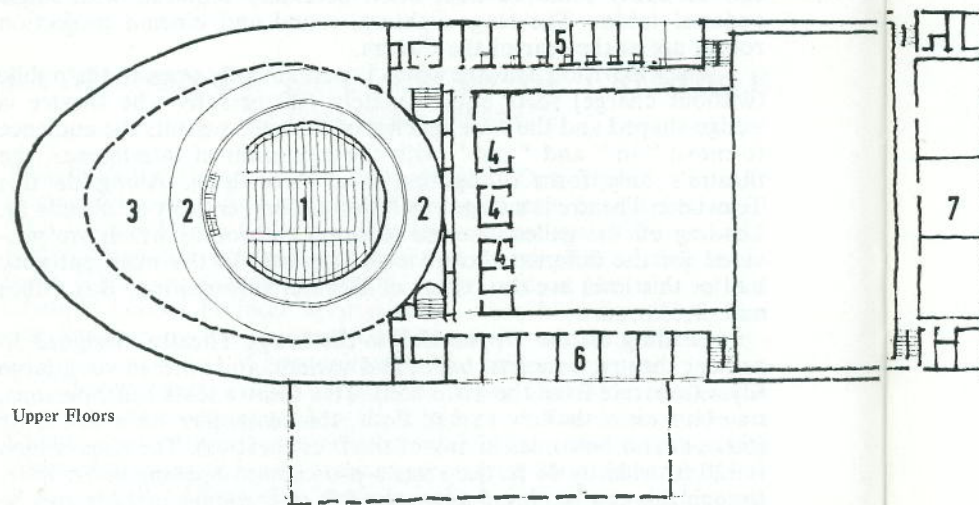




Main Entrance Level

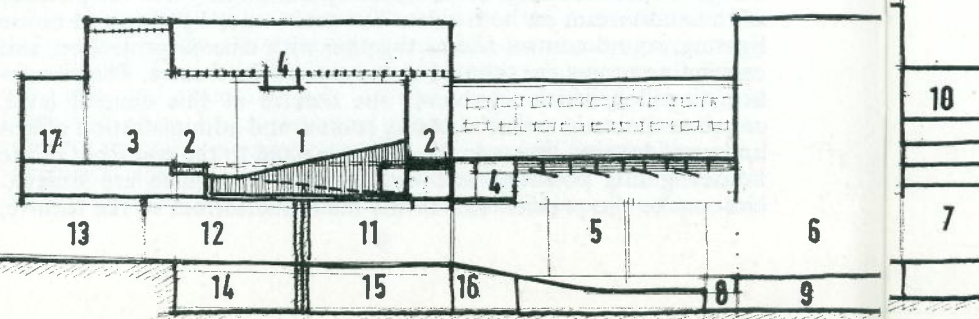


Ground Floor Level



Upper Floors

Section



#### Main Entrance Level

1. Entrance hall
2. Large Theatre
3. Stage
4. Orchestra
5. Foyer
6. Restaurant
7. Covered area
8. Cloakrooms
9. Discotheque
10. Library
11. Loft over stage, (Small Theatre)
12. Workshops, Scenery Stores and Technicians' Stores
13. Rehearsal or Green Room
14. Ramp (external)

#### Ground Floor Level

1. Entrance hall
2. Small Theatre
3. Stage
4. Television Theatre
5. Exhibition Gallery
6. Members' Club Rooms
7. Lavatories
8. Box Office and Information
9. Kitchens

#### Upper Floors

1. Experimental Theatre
2. Revolving Stage
3. Fixed Stage
4. Lighting and Sound Control (Large Theatre)
5. Dressing Rooms (on four floors)
6. Administration Offices
7. Wardrooms, Dressing Rooms, Serving Rooms and Rehearsal (on four floors)

#### Section

1. Experimental Theatre Auditorium Revolve
2. Stage-revolve
3. Fixed stage
4. Light and Sound Control
5. Large Theatre
6. Stage
7. Workshop and Stores
8. Orchestra
9. Under stage
10. Wardrobe and Rehearsal
11. Foyer
12. Restaurant
13. Covered Terrace
14. Television Theatre
15. Exhibition Gallery
16. Members' Club Rooms
17. Back stage

*La Maison De La Culture  
De Grenoble  
Architect: Andre Wogenscky.  
Sketch plans by Elidir Davies.*



acoustic adjustments are achieved by the use of large adjustable circular discs set in the ceiling; they appeared decorative as well as functional. At the rear of the stage area, are provided workshops storage space, prop rooms, electrical and material stores; delivery from lorries via a ramp is direct into the main storage area, which is set central back stage. Over the back-stage area are situated dressing rooms, offices and rehearsal rooms on four floors with staircase and lift access on either side. On one side of the theatre at stage level, a ballet rehearsal room is provided, though its position and size permits it to be used as an artists' green room when necessary.

The dressing rooms have been so grouped that they are accessible to each of the three stage areas. They are well fitted and carpeted, each having its own shower and washing facilities. Each room has its own recording of the live show in addition to the direct call system. All the electrical equipment, lighting and sound control are of French manufacture, and are well set in the generous spaces provided. Ease of vision, however, from all the control rooms to the stage, was hindered by the depth of the control consoles in front of the windows.

The "Discotheque" with access directly from the main entrance, has three listening cabins for two or three persons and one for five or six persons. All the cabins are circular, and from each music can be relayed into the small theatre (situated below) for collective listening.

The Library, again leading off the main hall, is entered through a series of three-window screens, set in a staggered position, and at the same time used for exhibition purposes. These screens protect and provide isolation of sound, yet provide ease of access. The library is a room approximately 32 ft. square, with a large gallery on one side. The exterior wall of the room is fully glazed and opens out on to a loggia roof-garden; it is equipped for lectures and reading, and the books are easily accessible and contain most of the recent editions of theatre and allied publications, with a generous selection of international periodicals and papers. The library and the discotheque adjoin each other and one is able to choose and listen to a record, while one is turning the leaves of a book of art or a music score or perusing the latest number of a review.

The experimental theatre seats 530 persons (located above the main entrance level). The main circular concept of the theatre provides for both the audience (or auditorium) and the stage to revolve through 180 degrees lending itself to various forms of presentation and décors, even exhibitions.

The auditorium, which is designed on a central pillar, provides access only at the base of the raked seating area. There is no secondary access at the rear of the theatre. The revolving stage, approximately 15 ft. wide, extends on to a fixed oval stage, approximately 40 ft. deep, when set on its central axis. The revolves can separately revolve at different speeds, but from experience, the noise of the movement has proved to be an irritation. The whole of the ceiling

is in the form of a grid from which any form of lighting positions can be set. The lighting and sound control room is centrally suspended in the ceiling grid. This experimental theatre is at present the home of a resident professional company, "La Comédie Des Alpes".

The snack bar, as it is referred to, provides a permanent service from light snacks to full served meals. It is part circular in form, and through fully-glazed screen doors, the restaurant is open to the covered terrace and plateau which forms the main entrance level.

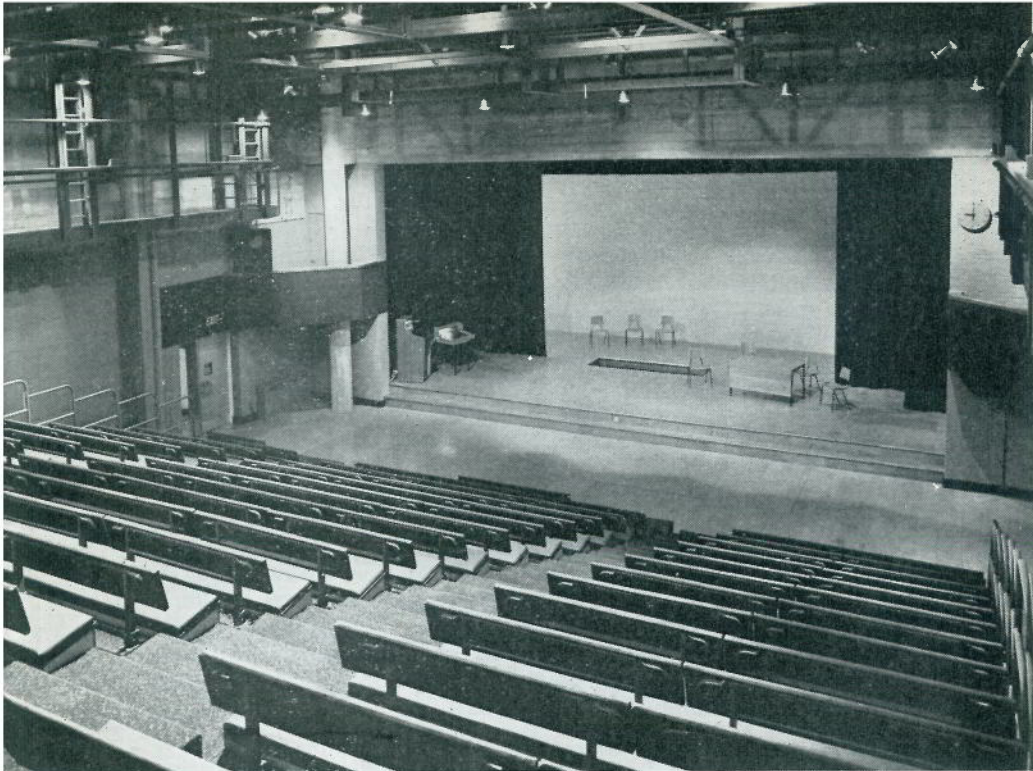
The kitchen is directly underneath, and the serving is at the lower ground level (road level). A nursery for children, approximately 40 ft. long by 30 ft. wide is located on a level with the experimental theatre; it has in addition a roof deck play area. It is available to all theatre members and caters for children from 3 to 6 years of age. It is permanently staffed from 2 p.m. till 7 p.m.

While the whole project is very interesting and proving most attractive to the large club membership supporting it, one was disappointed at the lack of dramatic quality which the large theatre itself presented, and one wondered how soon it would be before the revolving auditorium of the experimental circular theatre would be found stationary. The many single-step (one riser) levels created by the architect in the lower main entrance hall, have already proved a dangerous hazard, and one is grateful for our own theatre regulations which require a minimum of three risers.



*The large theatre with flexible stage, side stages and orchestra platform.*





## CRAIGIE COLLEGE THEATRE, Ayr

*by Martin Carr*

To be asked to design one theatre in a lifetime is an ambition achieved by few enough architects. To be commissioned to design and build two theatres concurrently, and to the same basic brief must be rare indeed for any architect.

In the last issue of TABS the new theatre at Callendar Park College of Education, Falkirk, was described, and now that a similar building for the twin sister Craigie College, Ayr, has been completed by the same design team it is interesting to compare the two results.

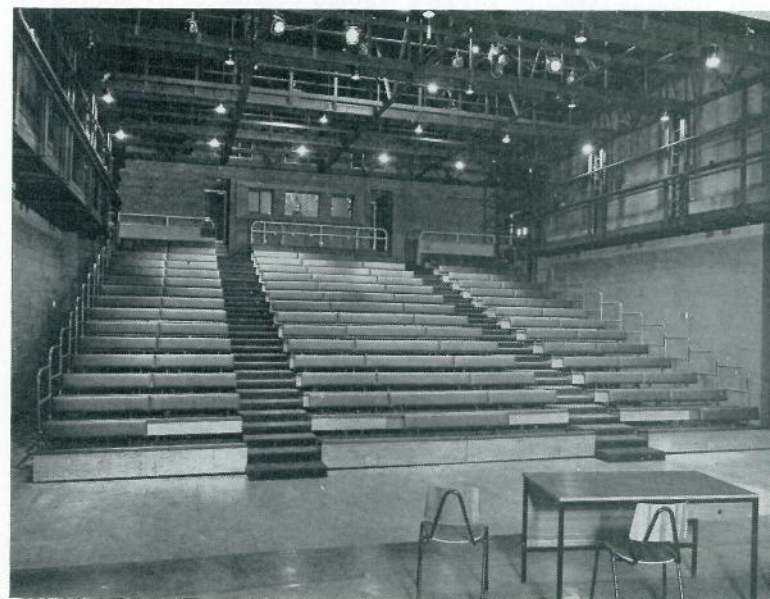
The general brief for the two theatres was the same; the seating capacity must be not less than 315 (one year's student intake), the theatres must be designed to the standards required for places of public entertainment, and at the same time must function for both drama instruction and mass lecturing. Since both colleges were constructed in a common building system it might be supposed that the theatres would have distinct similarities, but this is not the case and the difference lies in the attitudes of the two principals and their governing bodies.

Whereas at Callendar the theatre is buried in the middle of a teaching block and is surrounded by classrooms and a TV studio, at Craigie it stands proud and isolated, a complete contrast to the remainder of the college with a fiercely independent structure in brick and concrete somewhat reminiscent in its style to the Queen Elizabeth Hall—but let me hasten to add that this is not meant as a criticism.

The contrast continues as one enters the foyer at Craigie, which is unashamedly theatrical in flavour with textured brick finishes and dramatic lighting used to good effect. There is no feeling that this is part of an educational establishment—it is a theatre.

Inside the auditorium one sees the real difference in approach of the two clients. Whereas at Falkirk the layout is conventional, the arrangements very practical, but the atmosphere weighted in favour of the lecture function, at Ayr the feeling is one of "workshop" conditions, but with an essentially theatrical flavour. This impression is heightened by an effective colour scheme of purple, grey, blue and a marvellous red shot-silk curtain.

The client's wish was for an adaptable theatre—dreaded word—but one in which the maximum capacity would be provided for the end stage form. This poses some considerable problems, the full capacity being needed for lectures and film shows, not to mention concerts and opera performances, whilst at the same time space is required for traverse and centre stage experiment. The chosen solution was to provide a conventional proscenium stage, but one in





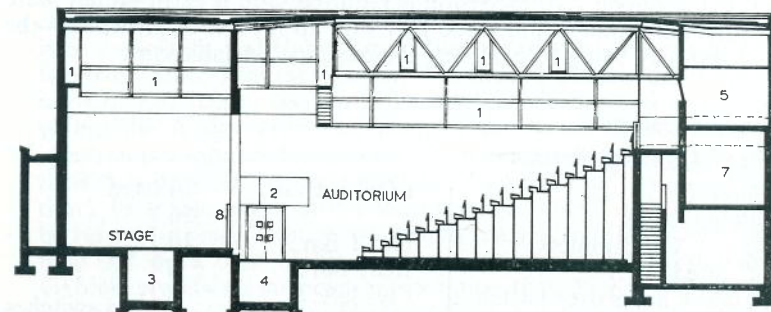
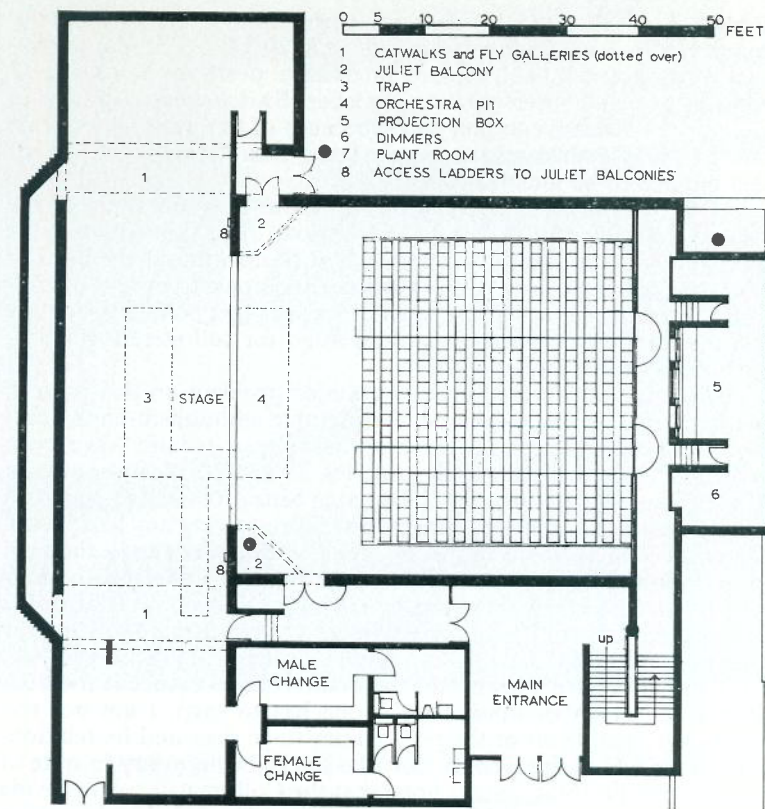


The spacious control room at Craigie which houses the 3 preset 40 channel lighting console. The dimmers are just visible in the room beyond.

which the arch could be virtually ignored because of its size (36 ft. by 16 ft.), connected to an auditorium in which all the seating would be on retractable banks. Thus for centre staging the main 320-seat bank can be partially retracted and additional retractable banks (not yet installed) are brought into use along the side walls. To complete the rectangle a portable unit will be placed either on the stage for large-scale work, or on the orchestra pit covers for greater intimacy.

Because of the need for rapid transition from one form to another chairs were avoided and seating is on padded benches with folding backrests, and these are firmly attached to the rolling platforms which are driven by electric motor. The whole operation is said to take 80 seconds, but with a reported structural deadweight of 45 tons to manoeuvre there has been not surprisingly a little trouble with the flexible drive. To carry the superimposed load transmitted through small wheels a substantial floor surface was needed, and this is formed of three-quarter inch plywood on T & G boarding on pier supported joists. The aim was to give a measure of flexibility to the floor when used for centre stage work, and it will be interesting to see how the surface stands up to use.

Flexibility in lighting is achieved through the provision of four cross catwalks spanning the auditorium roof, and two side catwalks at slightly lower level. There is no ceiling, and overhead catwalks are



Drama/Lecture Theatre, Craigie College, Ayr.  
Architects: A. B. Buchanan Campbell, F.R.I.B.A., F.R.I.A.S.  
Consultant: Martin Carr, Theatre Consultants Services.



double-sided. For the proscenium stage there is a conventional layout of dips and fly gallery circuits, and for all but a few permanently connected F.O.H. circuits alternative positions are available through two and three position switches. Switches were chosen in preference to a conventional patch because of the need for extreme care in using a three-phase supply for a flexible layout. Switches also happen to be much cheaper!

The control room is pleasantly spacious and the dimmers are located conveniently in an adjacent room. The control room is accessible via a ladder through the plant room without the need to pass through the auditorium. Technical equipment is very similar to that described for Falkirk with a 3-preset forty-channel lighting console, two channel sound console fitted for full stereo working, S.M. desk and lecture console.

Shortage of money has been a major problem on this project, but thanks to careful work and considerable enthusiasm on the part of all concerned most of the essentials for a theatre have been provided. These include full fly galleries, an orchestra pit for at least 16 musicians, Juliet Balconies, a trap area beneath the stage, generous wing spaces and a grid structure capable of sustaining any likely load. Regrettably there is no fly tower, but the 28 ft. height to the roof girders should be practical for most productions likely to be presented here. There are two dressing rooms with toilet facilities, and a future programme of building envisages the construction of further facilities for both artists and public around the existing shell. Acoustic tests have shown that the auditorium is excellent for both drama and chamber music, but if one has to carp, I am not too happy with the detail of the proscenium stage riser and its relationship to the line of the arch. A riser was felt to be necessary in spite of the need for flexibility, and I hope that the College will soon provide for themselves a removable apron extension. Nevertheless I now see that some degree of permanent apron would improve appearances—probably only a 2 ft. extension is required, and if extra money were forthcoming this would come half way up my list of priorities—the first priority being to complete the technical installations.

### Craigie College

#### Stage Lighting Circuits

<i>Control</i>	FOH catwalk	14 fixed	
SP40/3 Preset		26	} c/o switches
40 × 2 kW dimmers	No. 1 Bar:	10	
(22 fitted)	Rear Bar:	4	
Patch: Changeover switch	Flys left:	5	
26 channels	U.S. bridge:	3	
to 59 outlets	Stage floor:	7	
80 kW 240 volts	Auditorium floor:	2	
	Trap:	2	



*The Theatre in the National Arts Centre, Ottawa.*

## WHAT'S IN IT FOR THE CUSTOMER?

*by Frederick Bentham*

Recently a B.B.C. Television planning engineer who happens to be in his spare time a lighting man at what can be termed one of the country's leading amateur theatres asked this very question. He had been curious to hear how Strand Electric was progressing after the takeover. Since July 1st this year The Strand Electric and Engineering Co. Ltd. trades as Rank Strand Electric Limited, a company within the Audio Visual Division of the Rank Organisation. His question is a salutary reminder to the new amalgamation as to where their first duty lies. "Their duty?" Who are the "they" in question? In a vast organisation the ultimate "they" will of necessity be remote indeed. Though we should remark that the Rank Chairman did do a tour of his new acquisition and liked our Covent Garden premises and position so much that 29 King Street is to remain our headquarters. Thanks be for that because it is the heart of theatreland, the centre of the entertainment world. London with its theatres, two opera houses, concert halls, cinemas, galleries, night clubs, strip clubs and all the rest, is the very centre and we remain slap in the middle of it.





*Light in-the-round: Victoria, Stoke-on-Trent.*

Our premises, two town houses of the eighteenth century at the front and a nineteenth century warehouse at the rear, provide the right background for a firm which must apply the latest electronics or production techniques to the service of an art as old as man himself. The theatre, I like to think, had its origin in stage lighting not as many fondly imagine in the spoken word. Once fire had been discovered, man seated in his cave was all set to go. Long before he had enough words to exchange a single idea, man would with his two hands entertain his audience with a shadow using the flickering fire as source. There in "Caverna Magika" theatre began, the walls animated with impressions of creatures later to be classified when language became precise by scientists as the "species bunny rabbit" and "genus dicky bird".

Seeing that this two-dimensional theatre approximated to the cinema this seems as good occasion as any to make the point that it was in that particular form of entertainment that the Rank Organisation began. The Shepherds Bush Pavilion, the Regal, Edmonton, and the Odeon, Leicester Square, to name three of the cinemas

*Lighting the London Palladium pantomime. Photo: The Times.*



*Stormy back projection: The Flying Dutchman at the London Coliseum.*



*Some prop. fittings for hire.*

which appeared in our Jubilee issue of TABS are all Rank houses. Like ourselves some of these are undergoing change better to fit them to the needs of today. The extensive rebuilding involved in the process known as "twinning" has brought with it another age of cinema construction. Along with this goes projection and sound equipment of a high degree of sophistication both on account of the wide screen techniques and the need to put on a good show using minimal expert staff. It is curious that at this moment in time when closures and threats of closure of both live theatre and shadow theatre hit the headlines, behind scenes one knows of a great deal of activity. The next decade may well be identified in history as the Age of Theatre Building. Certainly we find our work cut out in TABS to keep up with new theatres actually built each quarter in Britain and so far we have not touched cinema theatres in these pages at all.

To return to "What's in it for the customer?" one can answer "better service", not perhaps here and now but certainly once the new machine gets run in. Strand's reputation in this direction has been slipping for some time now and demand particularly from overseas has strained the old Strand resources. Vastly increased factory space plus recruitment of technical, particularly electronic, skills will get the equipment designed and made.

More representatives, the idea of your local area man, should give a personal attention not in the past always possible and often not economic when possible from London and those few centres we had established. The range of equipment they now have to offer has also greatly increased.



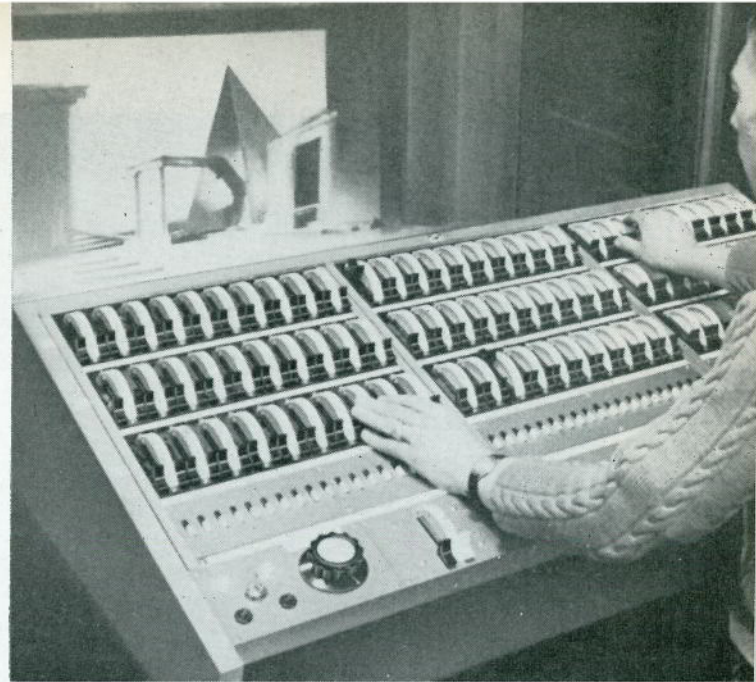
Circumstances caused us in the September last year issue of TABS to display rather less than our usual modesty. This plus the Jubilee issue of March 1964 have made it clear that we did the stage lighting and lighting control at the Royal Opera House, Covent Garden. It will also be well known that we did the electrical installation not only the stage lighting circuits but the entire building from top to bottom, from the portico in Bow Street to the stage door among the vegetables in Floral Street. What will, however, come as a complete surprise is to learn that we also supplied the carpets there; yet that is just the effect of the recent expansion of Strand Electric into Rank Strand Electric. One could go further and say that should the Opera House need new tabs or require reseating that too we can do.

At first sight seats and carpets make a strange package when combined with stage lighting, but closer examination shows the logic of it. For some years now Strand Electric in the guise of Watts and Corry have been equipping stages with tracks, and the other suspensions that go to make up a complete stage rig. Out in the auditorium or the hall the curse of **too much daylight has been** removed by supplying blackout curtains—thus making it possible for people who live in glass houses to throw stage lighting beams. We have also been accustomed once again as Watts & Corry, to making retractable rostrums to remove that other curse of the multi-purpose hall the flat floor for dancing—that certain way of ensuring that the majority of the audience will get an obstructed and poor view of the stage. Having raised the floor with retractable stepping what more logical than to complete the job by putting carpets and seats thereon. And this we can now do.

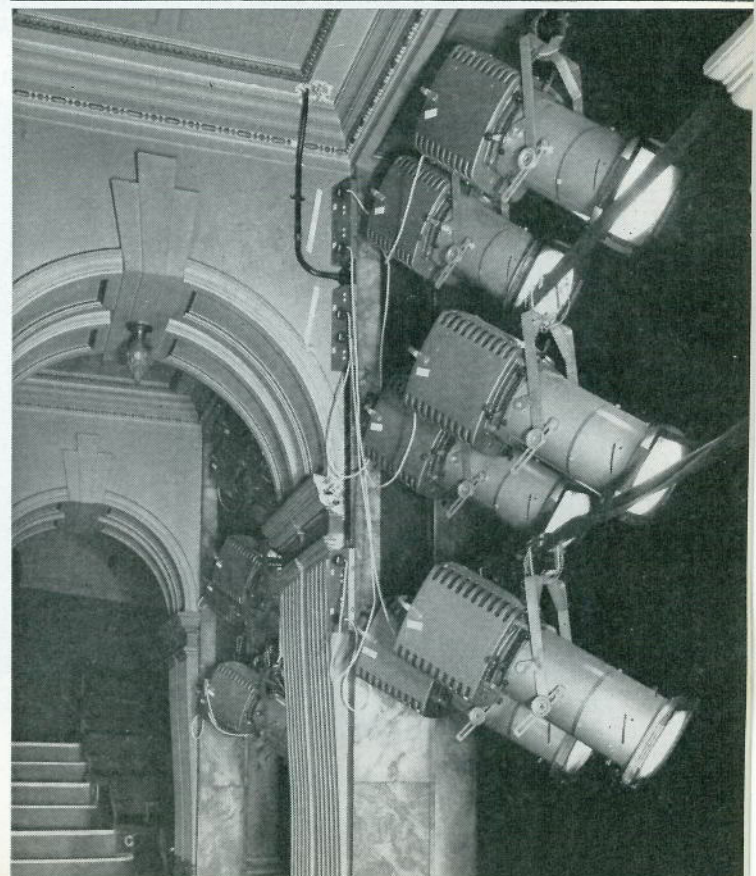
The new Gulbenkian Theatre in the University of Kent at Canterbury shows this at work, for seating and lighting are by Rank Strand Electric. University suggests that other theatre—the lecture theatre, and here the target is the blackboard, and target is literally the word, for it has long been a target of abuse. The truth is that while no one in their senses would consider printing a book with white letterpress on black pages—unless they wanted to ensure no one read it—children and students have had, for centuries, to study from just this. A hasty scrawl on top of the improperly rubbed out labours of all those yesterdays on a board which even its pristine condition presents the worst possible ground for seeing—namely black. And yet students never revolted at this! Anyway, now black is white and we are in the era of the Rank Strand Electric white board. Upon this many colours can be used and we can assure you from personal experience that it is fine for electrical diagrams. It can also be pressed into service as a screen should you wish to project slides or a Strand cloud effect. This is not as improbable as it may sound, for lectures on stage lighting are not unknown in university lecture theatres.

Lecture theatres can also make good theatres. This is because

*Lighting control at  
Gravesend Civic  
Centre.*



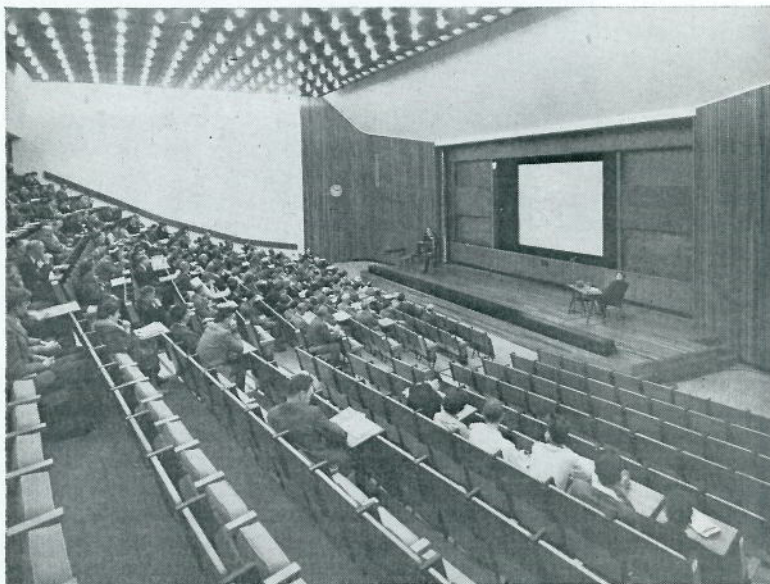
*2 kW Bifocal spots:  
London Coliseum.*





lecture theatres must be well stepped in order to see any demonstrations and so forth. The size is usually better than the acres of flat floor in Great Hall or whatever it may be called. The problem of the clutter at the lecturer's end is solved by what is known as the Rank Strand Electric teaching wall. This, at first sight, vast edifice of blackboards (whiteboards!) and screen, can be made to move out of the way well clear to one side or otherwise disappear. Whether the motive power comes from a finger on a push button or a good muscular shove is a matter of the scale of enterprise. Once out of the way there can be a stage as large and as well equipped as could be desired—Rank Strand Electric stage lighting, tabs, legs, borders and all. If the idea of all those curtains is too redolent of proscenium theatre for the particular taste there is no reason why the stage should not be planned as an open one because the teaching wall can be made freestanding. At the same time the writing desk to each seat can also fold out of the way in much the same manner as the dining room table vanishes in an aircraft.

There must be stage lighting positions out front in such a dual purpose lecture theatre and this is no bad thing anyway. A lot of demonstrations greatly benefit from the use of lighting that can be adjusted and directed to suit. There is nothing more adaptable than the modern stage lighting installation and even if it is only a question of solo lecturer plus slides, the lecturer can hold his audience much better if a spotlight is set to enable his face to be seen. Discreet pools of light to cover his movement from lectern to screen are all readily



*Mobile teaching wall, seating and stage lighting in lecture/drama theatre: Manchester College of Science and Technology.*



*Seating and Lighting: Kent University theatre.*

possible. There is no excuse for those all too common reflector lamp installations with the light shining down hit and miss vertically. Nor of course is there an excuse for bashing the lights on and off between slides and speech—so often accompanied by random flickerings as fluorescent tubes of assorted ages unofficially decide whether to strike or not. A dimmer is the only proper way to change lighting. Dimmer systems are in any case essential where theatre is intended and a comprehensive modern preset control must be installed to cover not only today's demands but those of the future; for production—no matter how simple and basic the original intention—always grows in complication. A small panel duplicating in a simple way just the essential dimmer controls can remove the necessity for a trained operator or skill in day-to-day use.

While fluorescent lighting is appropriate to some of the uses of a multi-purpose hall, perhaps even in a lecture-theatre and can with care be dimmed, a better solution is a second lighting system using tungsten lamps. These can provide a much better atmosphere when the place is used for entertainment. In spirit such lighting must be at the opposite pole to the lighting associated with industry. The lower levels of tungsten in the auditorium also help the pictures on stage and screen to make by contrast a brighter impression when the time comes to put up the stage lights and take out the house.

Not all impressions are visual and speaking for myself I am all too conscious of the impression that the seating in some lecture



theatres and halls can make. It is apparently no longer necessary that these should continue to be based on the misère seats of cathedral and monastery. Even in churches there has been a move towards more comfortable seating while in the new buildings for my old school they have, I am told, classrooms with all-over carpeting. Think of it; in my day they had scarce made provision for us to see—those blackboards were one reason, of course! and the other, Waterhouse, the famous architect, put his Hammersmith Road façade before adequate windows and daylight.

Talking of schools reminds me to impart the news that the Eton college theatre which appeared in TABS last March has in addition to our lighting equipment row upon row of our *Viceroy* seats. Whether these seats were chosen as a memorial to past glories, Lord Curzon, or merely that the price was right I have been unable to ascertain. Our best seat is the *Viscount*, and I can testify it is a very comfortable seat, for I sat in it on my recent visit to the Gulbenkian theatre in Kent University.

Another seat is the *Classic* with an evocation of those enduring things that one finds at Epidauros. It is perhaps unnecessary to point out that our *Classic* does not require the importation of marble.

One wonders what is the ritual in naming a seat. I look forward to being invited when our latest is launched. Mind you, I can hardly afford to be critical here for my Cinemoid colour names and lantern pattern numbers are held by many to be wayward, to say the least.



Theatre comfort: Coventry Swimming Pool.

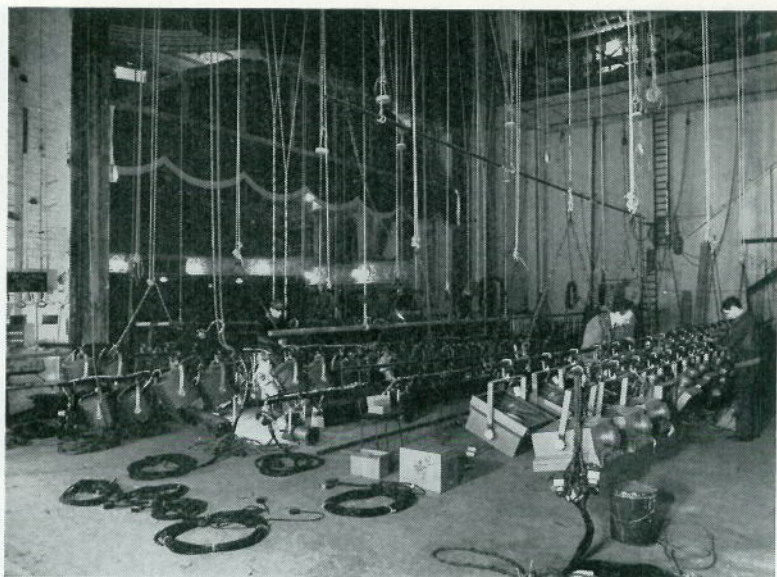


School stage lighting at Snaresbrook.

On the practical side a comfortable seat is not the same as a "good seat". It is the architects sight lines which will make it that, and we could still have a good seat even if a spring was poking into the base of the spine. Indeed there are theatre pundits who pronounce that for "theatre" to survive (they do not equate this with "audience"), everyone must be jammed together on hard benches or even sit on the floor. This the same pundits show no sign of doing themselves. Clarity of sight line is the most important parameter for a good seat, but distance from the stage is another. This is a negative parameter—what we do *not* want is distance. Thus the well padded, deep back appropriate to the luxury cinema can be a nuisance in a theatre; when on a stepped floor it can restrict leg room even at 3 ft. back-to-back spacing. Comfort may not necessarily equate with thickness although the deep armchairs with reposing club member may evoke that image—at any rate in the minds of the elderly. In a theatre we increase the back-to-back spacing at our peril, one must reduce the distance from the stage whereas in the cinema the distance is of little account—the ice-cream girl will get there in the end.

In this connection I have recently learned from a very much younger generation that they do not welcome "free theatre" and resent being split from boy friend and the rest of the party by the haphazard availability of seats left. It also takes longer to fill the house—to find the gaps. Of course we used to have this "free theatre" half a century or more ago. Seats were not numbered in pit or gallery and there was something known as "early door" for





*Hire fitup backstage at the Shaftesbury.*



*Television scenery by Rank Strand Electric.*



*Television lighting control: NDWR Hamburg.*

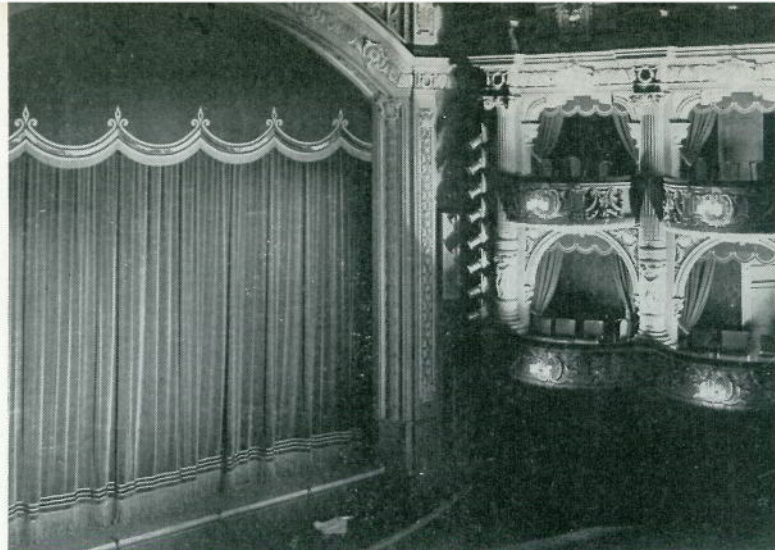
which an extra sixpence was paid to give one the pick of the seats.

All these are practical things and it must not be thought that because it is fashionable to produce plays in which you do not know where you are that it is also a good thing not to know where you are when you enter the auditorium. Practical also extends to the seats; these have to take a lot of hard knocks.

While it is possible to write of seating in TABS with considerable joy—after all I wanted originally to be an architect before ever I took up lighting—when it comes to draperies I feel a great unease.

“How many borders?” is a grim question to answer. Nor is a large display of legs something to enthuse over in this context. These things are maskings, something to stop you seeing the regions beyond, and the truth is that the better the design—of theatre, of scenery and of lighting, the less masking will be necessary. If we, the audience, are so placed as to be focused on the acting area, we shall not be tempted to look beyond, for it will require a conscious effort to do so. The trouble is that in so many halls, and in a not inconsiderable number of theatres, those in the stalls find their gaze directed at the regions over the poor player rather than at the stage he struts and frets his hour upon. The design of a stage setting should be inside-out, rather than outside-in. Preoccupation with masking leads to this latter approach because one is thinking of the edges first. Then again, if one has a set of drapes across the top and down the sides, what colour should they be? Silver-grey will ensure they take light nicely—but that is just the trouble, they will be more effective at it than the human face and that is really what we are there to see. However, curtain sets in silver-grey with coloured side lighting are generally admitted to make a good background for band shows





*The tabs, the seats, the carpet and of course those spotlights:  
Shaftesbury Theatre, London.*

and variety acts—what deep reason is there for that?

All this is subtle stuff and indeed some is and some isn't, but all these things require expertise. The laying out of seating like the laying out of lanterns requires training. In my gay way I can write an article like this one without ever being held to account for inaccurate detailing, but it is in the detailing that so many require help. By now the reader may be imagining vast retraining schemes in Rank Strand Electric. Those who have always had their eyes on the lights above now gaze intently at their boots not to see if they are clean but because they are standing on a carpet and this they must study. Likewise the experts who have spent a lifetime happily crawling on all fours under and over chairs may perhaps be discovered frantically reading back numbers of *TABS* or even purchasing "The Art of..." in the hopes of becoming a Joe Davis or a Charles Bristow. Not so, I am happy to tell you; advice on stage lighting and the like will come from a stage lighting man even at local level and on the other items from a man who feels he has a good seat, has an affection for legs at so much a yard and believes that carpeting 'tis a consummation devoutly to be wished. Personally, whilst I am antipathetic to row upon row of legs and borders each of which mimics in its plushy way the proscenium I must admit to a strong liking for house tabs. Ensconced in a comfortable seat, feet stretched out unobstructed on the well-carpeted floor, with an equally unobstructed view of the crimson house tabs lit in the glow of a footlight, I am once again in a theatre. At that moment of excited anticipation, it would not matter to me if the seat, the carpet, the tabs or the lighting—yes, even the lighting—were not by Rank Strand Electric; but they all could be, they certainly could be—remember that!

## WESTON-SUPER-MARE PLAYHOUSE THEATRE

*by Reg Webb*

This new Theatre opened in July, replacing the original building built in 1899 as a covered Market Hall and later converted into a Concert Hall to hold 500 persons at one level in 1946. On August 21st 1964, a fire destroyed all but the front and side walls which had subsequently to be pulled down.

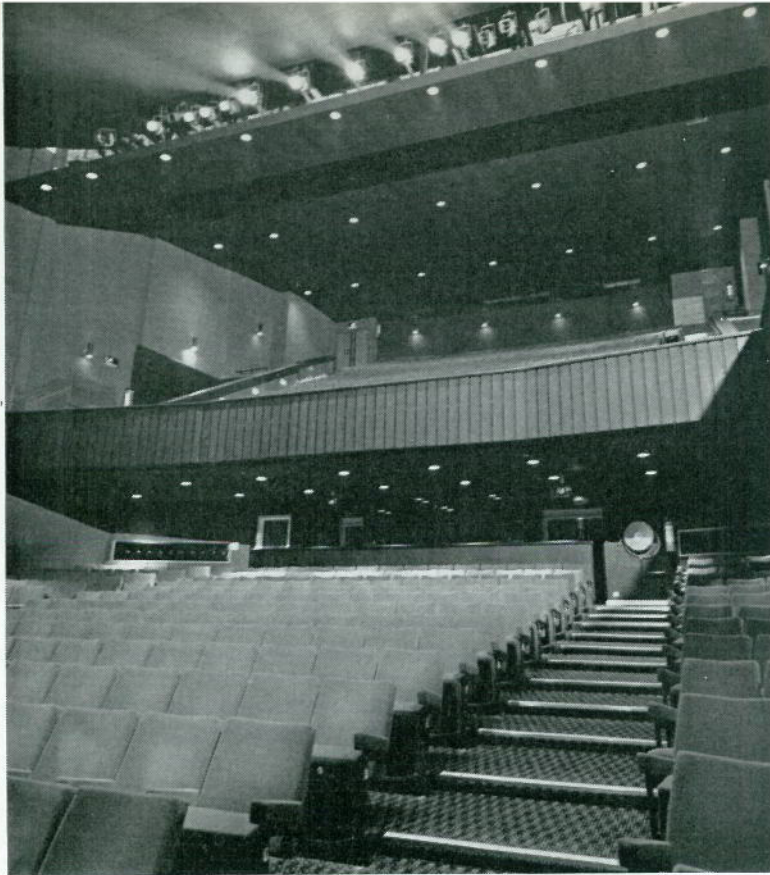
It should be appreciated that the planning was determined by the extremely tight dimensions of the existing site flanked on each side by shops and other business premises, but I would hasten to add that this in no way detracts from the pleasant and warm atmosphere in this delightful Theatre. The architects, W. S. Hattrell and Partners, have endeavoured to provide a compact theatre, providing the audience with adequate but not extravagant amenities and stage facilities which will house professional theatrical entertainment comparable with any of its size in the country.

Entrance to the Playhouse is through a draught lobby where the box office is situated, thence into a large foyer with cloakroom facilities. A staircase leads from the foyer to a concourse providing two entrances to the stalls; the staircase continues to give access first to a large bar and refreshment area 37 ft. by 19 ft. and then to the circle which is again approached by two entrances—thus easy approach from both parts of the house to the refreshment area is attained. A separate staircase from the bar leads to a large committee or club room.

The auditorium seats 672, of which 368 are at stalls level and 304 in the circle including three boxes. It is carpeted over the whole area and the seating is well spaced; this is preferred to expensive décor, nevertheless the treatment of the wall surfaces with a careful selection of paint colours is quite pleasing. An orchestra pit with lift is installed, allowing as alternatives an additional 28 portable seats or a forestage as circumstances demand. Heating and ventilation of the auditorium is by means of a fully balanced Plenum system, which is really silent in action, whilst the remaining areas of the theatre are heated by low pressure hot water and mechanical extract where required.

A particular problem was posed by the need for auditorium exits at the stage end. Acquisition after some difficulty of land to the actor's right of the stage not only prevented encroachment on the limited space but made possible a good scene dock with rehearsal room and plant room over it. The balcony extends along one side wall to form an exit way. This makes the auditorium asymmetric in layout, but this is more apparent on the plans than in the place itself. Indeed, not only has the maximum feeling of width been extracted from the narrow site but the auditorium even manages to suggest a fan shape. From personal experience of the speech acoustic I can say that it is very good.





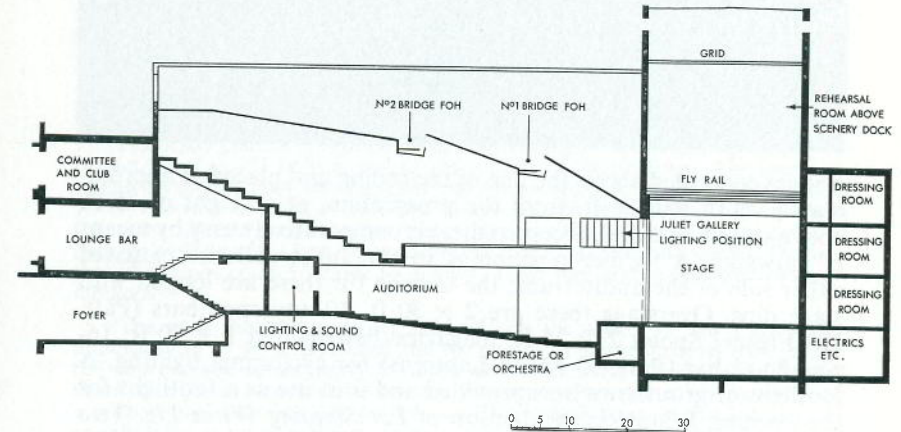
The stage area (58 ft. by 28 ft.) should be adequate for all types of production envisaged, however wing space at actors left is through necessity very limited at 9 ft. 6 ins. A 30 line counterweight system is installed and Fly galleries provided at each side. The rear wall of the stage has been rendered and has been kept clear, considerable vigilance being necessary, of pipes and trunkings which would have prevented it being used as a permanent cyclorama should the need arise. The counterweight system can be operated both from stage floor level and fly floor level. This removes the problem of separate manning in productions which do not justify it. Incidentally, it is in the nature of this seaside town show business to have a mixture of runs for several weeks and of short dates.

Seven dressing rooms are spaced over three floors at the rear of stage thus providing a good sound barrier from the outside world. All are equipped with wash basins, dressing tables, lighted mirrors and costume hanging equipment. In addition a green room could be used as an extra changing room. The rehearsal room leads off at second floor level. Understage the wardrobe is housed with laundry, the dimmer room with 3 x 20-way thyristor racks, orchestra store,

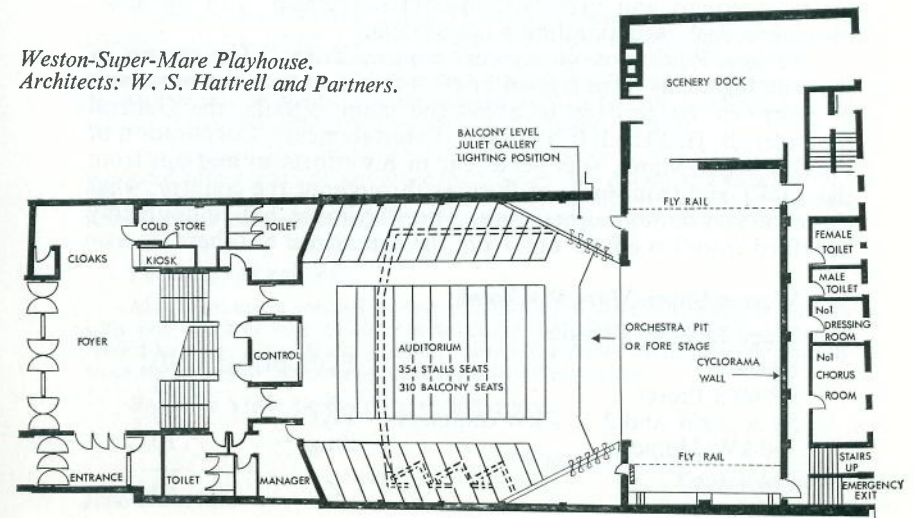
stage staff cloaks and general storage—plus, of course, the boiler house and fuel store.

Stage lighting control is from a 60-channel 3 preset desk situated in a spacious control room with full length window at the rear of the stalls which provides an excellent view of the stage and in addition houses the sound equipment.

The 60 lighting circuits are allocated 20 F.O.H. 30 overstage and 10 at stage floor level. Six effect motor circuits are provided—two each side on fly galleries and two stage floor level. Front of house lighting (Patt. 264 Bi-Focal Spots) is situated on two lighting



*Weston-Super-Mare Playhouse.*  
*Architects: W. S. Hattrell and Partners.*







bridges concealed above the line of the ceiling and placed at approximately 20 ft. and 36 ft. from the proscenium, at a height of 25 ft. above stage floor level, access to them is comparatively easy by means of catwalks. A further position is in the Juliet galleries, situated either side of the auditorium; the circuits for these are looped with stage daps. Overstage there are 2 x 30 ft. 10-way spot bars (Patt. 223 Fresnel Spots) 2 x 24 ft. magazine battens and 1 x 30 ft. 16-way flood bar (Patt. 60 Flood Lanterns) for cyclorama lighting. A footlight or groundrow was provided and is in use as a footlight for the opening Brian Rix production of *Let Sleeping Wives Lie*. Two Patt. 265 Halospot lanterns are available as follow spots.

The sound system comprises one record deck but with provision for two systems and twin tape machines, together with the stage manager's desk incorporating a cue system.

Francis Reid wrote in a recent copy of TABS, "The success of the building stems from a good brief"; this is so true, for in pursuit of priorities, or perhaps to avoid the many pitfalls, the General Manager, B. H. Flavell (Catering & Entertainments, Corporation of Weston-Super-Mare), was persistent in his efforts to find out from the ABTT and from users of theatres throughout the country, what the necessary requirements were. The Playhouse has undoubtedly benefited from his efforts and from the experience of others.

#### Weston-Super-Mare Playhouse Stage Lighting Circuits

Control	FOH Bridge I	10
SP/60 3 Preset	" "	II 10
58 x 2 kW and 2 x 5 kW dimmers	Flys	30
160 kW 240 volts	Stage	10
		60

#### National Arts Centre Ottawa

We had intended to treat this important theatre and opera house complex fully in the pages of this issue and indeed had promised to do so. Unfortunately, except for our cover picture and that on page 19 the only material we have received from Canada so far has been the kind of thing issued as general press handouts plus the usual umpteenth copy photographs and poorly reproduced miniaturised plans. We hope to be able to give the subject proper TABS treatment one day.

Suffice it for the moment to quote Wallace Russell, the well-known theatre consultant and lighting man who is now general manager there.

Gentlemen,—I thought it might be useful to record my impressions after using the IDM/R system in Ottawa for the first time.

I must say that the system performed beyond my most optimistic predictions. In fact I feel as if I only scratched the surface of the potential. The speed of setting levels and cues was fantastic and ranges from 50 per cent of previous systems down to as much as one-third. The rockers proved excellent and one soon found that the old potentiometers were forgotten. The ability to see the live cue in green on the rockers and the incoming cue in red was especially useful. The fact that alterations could be made so easily to these cues and re-recorded was just fabulous.

The most fascinating aspect I found was the ability to use a cue from another show to set a basic level, use the master to adjust the level then record the new cue and subsequently to adjust certain dimmers to new levels, record again, and presto, one had the new cue. You know also how many cues require a proportional fade from a previous cue. This is duck soup on this board—one merely takes the master down, records, and you have the new cue. Remember painstakingly adjusting 50 dimmers? Again, one can adjust levels of individual dimmers subsequently if required.

I can see the need for a new approach to design to make use of the capability of the system such as setting in advance various pictures, say all dimmers full front of house, blue to full, etc., on various cues, recalling and blending with the use of inhibitors and masters and finally recording the cue. In other words, all kinds of mixing procedures can be used to establish a cue quickly. Then, of course, the final result is simply recorded.

The operators can't believe how good the system is. The fidelity of recall, the speed with which one can move from cue to cue, the speed with which one can set dimmers to requested levels, the monitoring of live and incoming cues, and of course the avoidance of the fantastic amount of writing that used to be done.

I could go on and on.

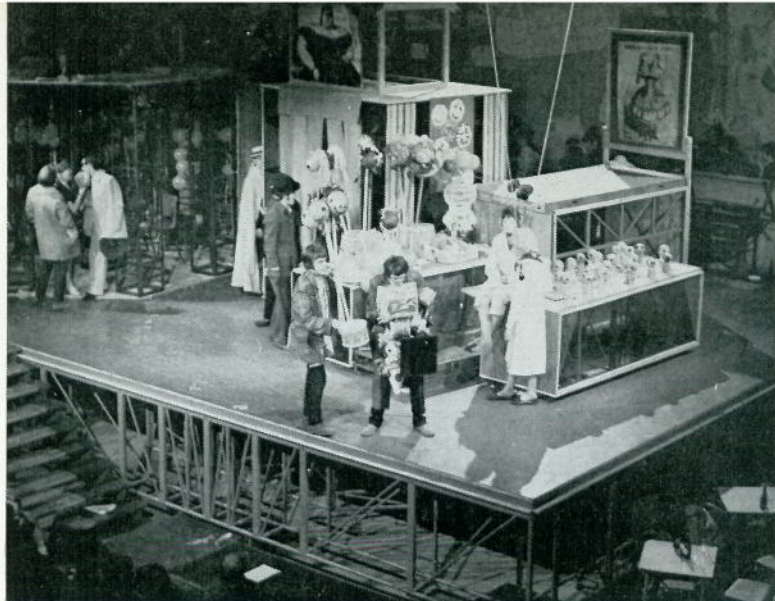
May I just say in conclusion that of course all of these things were done with only one operator who could concentrate on the artistic effect rather than on record-keeping. There is no question also of the result being better artistically since the saving in time means more time for artistic work.

*Bravo* for a new dimension in stage lighting.

WALLACE A. RUSSELL,  
General Manager.

June 13th 1969.





## THE NUFFIELD THEATRE STUDIO IN THE UNIVERSITY OF LANCASTER

by Kenneth Parrott

'It is liberty alone which fits men for liberty.' *W. E. Gladstone.*  
'So it is that we do or do not find that we should or should not  
employ or reject a large or small stage or arena.' *Editor of TABS.*

Neither was discussing the Nuffield Theatre Studio in the University of Lancaster and, to be scrupulously fair to the Editor of TABS, this highly untypical example of his style was the closing text of a sermon on muddled intentions. (I refer to the leader from TABS, Volume 24, No. 3.) Yet that same sermon offered the following homily: "For adaptability is compromise and man is never stimulated by compromise. Decide on the form of theatre that you want and stick to it." Imagine my embarrassment when I have to reveal that the form we wanted was the adaptable one, and that we not only stuck to it but derive from it both stimulus and pleasure to exceed our expectations.

In the hope of preserving this note from the Editor's wrath-filled waste paper basket, let me recall that on that same Sunday morning he not only took pleasure in braces and their miraculous success in holding up trousers (an achievement it would be churlish for a mere belt man to deny) but also warned us against "the alternative arguments intended to endorse but which only cloud and fog until the beauty of the original concept, its clarity is lost. . . ."

Sir, the University briefed its architects, Messrs. Shephard and Epstein, to provide "an open space in which movable stages can be built, with a roof capable of carrying scenery in many different positions, and electrical services at a great number of different points on floor, ceiling and walls, so that various schemes of lighting can

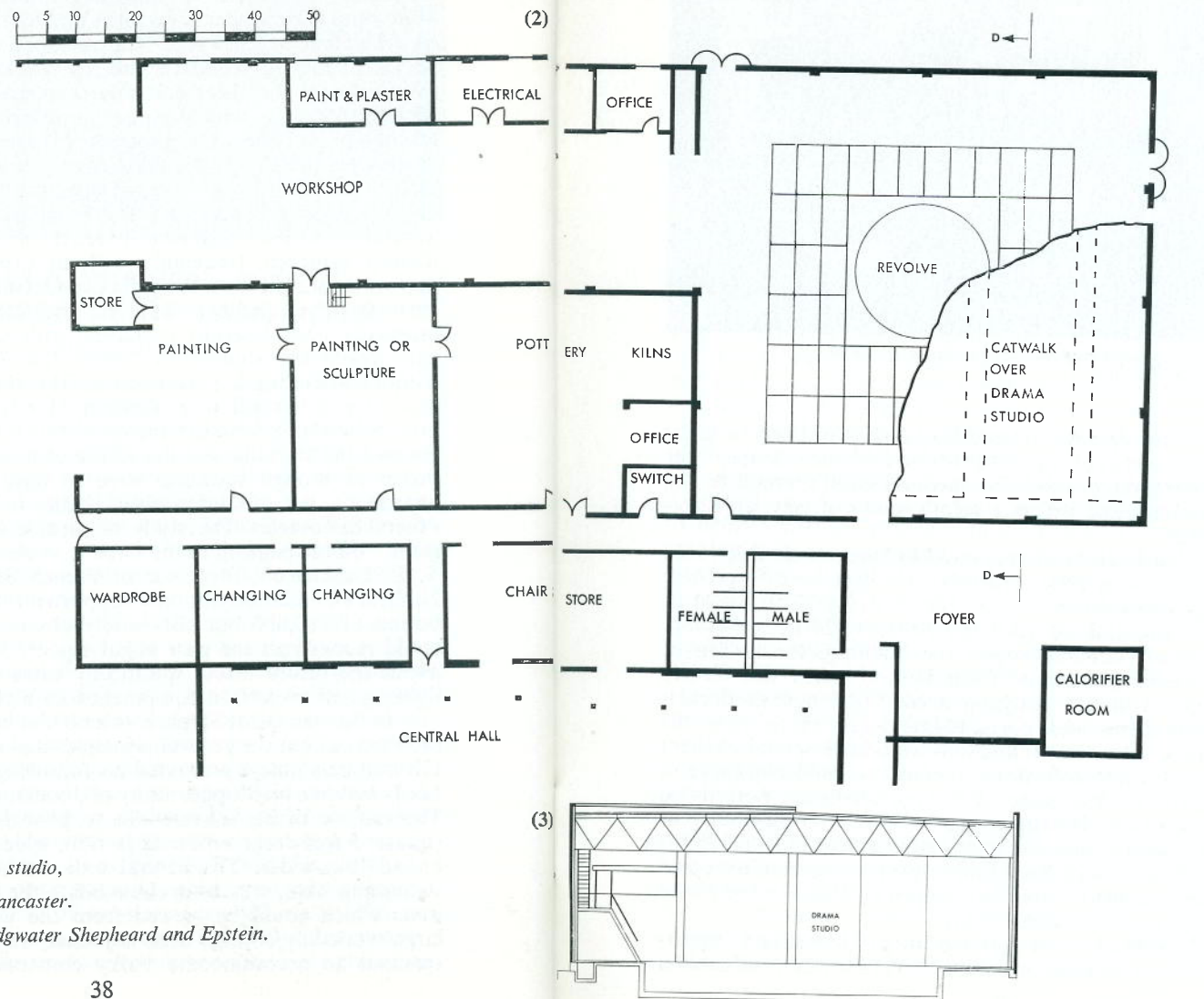
be tried. The basic internal requirement is flexibility; there must be no permanent structure on the floor; stages and auditoria would be simulated by dry-building or the assembly in different forms of simple units." (A fly tower was specifically excluded because, apart from the likelihood of its exceeding cost-limits, there are several nineteenth or early twentieth century theatres of conventional design within a few miles, either in Lancaster or Morecambe.)

We have yet to trace the original concept to its source. In the formulation of areas of immediate development for this young University (first students enrolled in 1964) a high priority was given to a building which would "allow practical scholarly investigation of the history of world theatre, by reconstruction of the physical conditions of the theatre at any moment of its past" (i.e. stages, décors and, to a limited extent, auditoria). This, in its nature, is essentially an area for experienced specialists, related to post-graduate research. At the same time it became a declared intention of both the English and French Departments to offer a new approach, in undergraduate teaching, to the study of dramatic texts. The generally accepted academic practice of examining plays on their literary evidence, frequently without experience of the works in performance, has encouraged misunderstanding and established a currency of unqualified opinion. The tidiness of the printed text, especially when liberally garnished with examinable footnotes, has encouraged the student to believe that he can "know" a play without attending a performance. The theatre professional knows how rare is the gift to evaluate a play from its script alone. The literary academic who can recognise this is even rarer. Yet the teaching and the learning and the sitting of examinations continues. It is rather as though scientists were to have no practical laboratory experience, but to confine their studies to linguistic descriptions of others' discoveries. The study of theatre requires its laboratory, to get it "off the page on to the stage", to chant the slogan of Professor T. E. Lawrenson, Professor of French Studies at Lancaster. The Nuffield Foundation not only supported this intention with a contribution of £80,000 but also wisely observed that a building which could reconstruct the past might equally be capable of speculation about the future. Most specifically came strong advice to include lighting and projection equipment to a high standard.

In the meantime Stephen Joseph had been retained to advise the architects about the general principles that should govern the design. His untimely illness prevented his following the project through and I only had one brief opportunity of discussing his intentions with him. The essence of his scheme was to provide a sunken area, 50 feet square, 5 feet deep, with a 12 ft. 6 in. wide perimeter surrounding it on all four sides. The central area, rather like a square, empty swimming bath, was to accommodate the architectural reconstructions which could be viewed from the walk-way surrounding. A large workshop/storage area adjoined, 80 ft. by 35 ft. deliberately spacious to accommodate bulky constructions which might well



- (1) Section: This shows an earlier arrangement of bridges. There are now five, one on each wall and 3 intermediates. These are joined by 8 moving bridges as described on page 41.
- (2) Plan: There are fifty-four removable floor sections covering the 5 ft. deep well area. The revolve and its immediate surround can be moved anywhere within the well. The theatre studio is part of a building which includes Central Hall.
- (3) Section D-D: The control room and access to lighting bridges shown on left.



*Nuffield theatre studio,  
University of Lancaster.  
Architects: Bridgwater Shephard and Epstein.*





*Bailrigg Fair, opening production of the Nuffield Theatre Studio.  
Photo: Lancashire Evening Post.*

recur in the teaching pattern. Seating was not considered of great importance, and he believed that a turn-round of one "shape" per term was the fastest practicable. The vacation month would be the striking and building time before a term's study of, say, an Elizabethan playhouse.

By the time that I had been appointed as Director (in July 1967) construction work was in hand. The 50 ft. by 50 ft. by 5 ft. pit was **dug and tanked. Around it was to go the 75 ft. by 75 ft. by 24 ft. "box" of the studio and the 80 ft. by 30 ft. by 24 ft. workshop.** After assessing likely demands upon the building, the notion of flexibility as something achieved from term to term was clearly inadequate. Apart from the teaching needs (all language departments at undergraduate and postgraduate level) there were the likely provisions for student productions and, an essential element in a University far from professional theatre, a significant space in the programme for a wide range of live performances, both home produced and imported. Having already enjoyed the flexibility of the L.A.M.D.A. theatre, and contemplating a space (75 ft. by 75 ft.) roughly equal to four average West End stages put together, it seemed reasonable to set a target of flexibility judged in hours or less: over the lunch-hour or at worst in half a day.

The critical problems were: (1) the floor; (2) access to superstructure; and (3) the lighting installation. (1) However valuable a

5 ft. deep pit could be (and experience has proved a considerable value) a flat floor 75 ft. by 75 ft. was essential as a norm. (2) With frequent "excavation" likely to disturb floor level, access to what would elsewhere be grid or fly floor was equally essential. Both these problems were the starting point of some highly valued contributions from Mr. H. A. Clifford of Messrs. Hall Stage Equipment Ltd. I asked for a floor that would be level, but excavatable, with never more than two men needed to move it. I also asked for access aloft, independent of any ladder work from below. The level floor came in the form of 8 ft. by 4 ft. sections, acoustically insulated against reverberation, set on to metal "hurdles". The true level of the base of the pit was achieved by metal channels being installed as a datum level and concrete being poured around and between them. ("Was achieved" is the understatement of the enterprise. Our space age seems doomed to endure a building industry that can no longer use either a spirit level or a straight edge or fail to turn pale at sensational terms like plus or minus  $\frac{1}{16}$ th.) One quarter of the pit is filled by a revolving stage unit (variable speed, remotely controlled) 25 ft. square. This is itself movable manually and easily.

Access aloft is in two forms. There is a system of fixed cat-walks (at 18 ft. from floor level which means either at 5 ft. 6 in. or 6 ft. below roof level) around all four walls and across three spans east-west. This leaves four bays about 14 ft. in span, which are fitted with two bridges each set in rails and capable of being moved, (manually and easily) in an east-west direction. These eight bridges are each well able to sustain either six persons or a substantial lighting rig; or to provide strong but mobile working platforms from which to reach any part of the gridded roof.

For the solution to critical problem (3), the lighting installation, it seemed wise to call at 29 King Street. The difficulties were simple to define: how to achieve readily accessible supply points over a considerable area (at high and low level) without recourse to a giant control board. I wanted to provide for a small localised "stage" (or indeed two or three simultaneous rigs) as well as for a high level of lighting over a large area suitable either for complex production requirements or for film and television work. It was vital that provision for large-scale work should not make the installation overpowering for simpler needs. The adopted solution was a **100-way LP board controlling 172 circuits. 44 circuits are permanently "fixed" to the board, while the other 92 are wired through a patch panel.** Most circuits are 2 kW, but ten 5 kW (also patchable locally) are included. In addition we have a 20-way portable control desk which can be fed to any convenient selection of circuits. This small board, which has three multi-plug connection points in various parts of the building, offers the valuable facility of being able to get in close to a small production when operation from the control room would be deadeningly remote; it also provides for control in the workshop area, which is a useful additional staging space, otherwise out of range of the control room. In retrospect it



all sounds easy and quite straightforward. In fact there were a great many problems of detail to resolve, not least in reconciling the demands of phasing without sacrificing operating logic. By August 1968 Ivor Dykes had joined me as Chief Technician and he shares my gratitude to Mr. F. W. (Tubby) Martin for his painstaking work not only in giving us what we wanted, but improving it.

We now have an installation that can serve a solo recital as easily as the Fair which we staged to open the theatre in March 1969. The building was surrounded by side-shows typical of a modern fair ground and a large L shape was excavated from the pit. Three main "stages" were employed through each evening for a constantly changing programme which included a brass band, folk singers, fire-eating belly dancers and a music-hall finale. The centre piece of the event was an edited version of *Bartholomew Fair* done in modern dress emerging from the context of the total event. The Pig Woman's stall did SRO business nightly with genuine roast pork, set against a sequence of projections of seventeenth and eighteenth century prints from a pattern 752 on to a 100 ft. cyc. cloth. To encourage the audience to move freely (from the bar to the play or from stage to side-show) seating was limited. (The 5 ft. deep pit provides a modern analogy to the Elizabethan groundlings' position.)

In fact, we have provision for 650 seats. 400 chairs are interspersed with bench seating which employs some versatile construction units made by Halls. Related to the module of the floor units these frames roughly resemble a square section variation on a Meccano theme. They can be used to make a proscenium arch, a high tower, a sturdy rostrum or rows of seat units. Since working space and storage areas are interchangeable, versatility has a further reward in economy of space. The other seating facilities are in the form of (1) metal framed trucks at 1 ft. 6 in. and 3 ft. height, in lengths again related to our standard module; (2) a system of four tiers designed to fit into the walls of the 5 ft. deep pit, but also capable of standing free on normal floor level.

I am delighted to record that despite the toughness of Hall's engineering, nothing takes more than two men to move and our target of "over the lunch-hour or at worst in half a day" has been achieved. Even during the run of the opening production it was possible to re-shape the studio for experiments in choreography during the day-time. By the time that this article reaches you we expect to have had two concurrent productions in the studio (Grotowski's Laboratory Theatre and a tour from the Mermaid). Not simultaneously performing of course, but each able to be set up and rehearsed without disturbing "stage" or seating for the other.

The essence of the building's flexibility is the decision to have *nothing* fixed. As Michael Warre showed recently, it is no longer necessary to limit flexible theatres to a couple of hundred seats. With the experience of the Nuffield Theatre Studio at Lancaster I would approach with confidence the design of a fully flexible theatre seating 1,000. Our principal advantage lies in having no preferred

formation suggested architecturally. With that freedom the production design can simply and logically determine disposition of the audience. The studio can accommodate a vast range of theatrical performance from a poetry reading to grand opera. Acoustically, we gave the building a severe test with the B.B.C. last spring. On the same day John Williams gave a recital, proving a razor-sharp clarity without loss of warmth; and Mike Gibbs' orchestra gave a programme of big-band modern jazz, showing that the hall will enjoy the impact of full-bodied sound without ever seeming drenched or over-reverberant. The microphones responded with pleasure and we can safely plan the use of the studio for recordings. At the time of writing, the sound system is still being installed. The desk will provide eight channels with three masters, serving a permanent installation of microphone input and speaker outlet points distributed through the studio. Two 16 millimetre movie projectors will be fed through the main sound system to achieve an exceptional quality of cinema sound.

A particular area of experiment is the use of film and still projection as part of production technique. A recent essay was a script by Philip Mackie originally written for Granada Television about the British in India entitled *Kindly Leave the Raj*. We thought it transferred eagerly from the TV studio into ours. Apart from actors, singers and a band the production was a stimulating obstacle course for movie projectors vying for attention on three screens with a Pattern 752, a Pattern 252 and a Leitz Pradovit.

It is no doubt for the good of our soul that the next "problem" will be the Valenciennes Passion play and a reconstruction of a Mahelot décor for the Hotel de Bourgogne. So many exaggerated claims that are made for "new" forms of theatre would pale beside even a glance at forms known to us only from paintings or sketches. This exceptionally versatile building will make possible the detailed, life-sized reconstruction of many of the most important historic forms; what better context for future development?

## Lancaster University Nuffield Theatre Studio Stage Lighting Circuits

### Control

LP 100 3 preset

90 × 2 kW Thyristor dimmers

10 × 5 kW Thyristor dimmers

200 kW 240 volts

Socket outlets generally distributed:

44 × 2 kW (pairs of outlets) fixed

46 × 2 kW (pairs of outlets) via patch to 92 positions

10 × 5 kW locally switched to 36 positions



### Jean Rosenthal

SIR,—May I, through the medium of TABS on behalf of The Society of British Theatre Lighting Designers and her many friends in this country, express an appreciation of the late Miss Jean Rosenthal.

Although a contemporary of Miss Rosenthal, I cannot claim to have been a personal friend, having met her only once in Covent Garden.

Even at such a short meeting her integrity, sincerity and artistic flair were apparent and I felt privileged to meet her. I first heard her name as far back as 1933 and her work in the theatre has always been highly acclaimed and synonymous with the highest possible standards.

As readers may know, I was responsible for re-creating many of her lighting designs in this country and perhaps the most exciting was that for *West Side Story* which, like her work with Martha Graham, won world-wide acclaim.

I remember Mr. Fred Bentham, who attended the U.S.I.T.T. Colloquium in Toronto of the world's leading theatre designers and technicians, telling me that the day Miss Rosenthal took her place on the platform she received a standing ovation from the entire assembled company, a unique and unusual tribute to a great artist.

Her death, at a comparatively young age, with so much creative genius to spread around, was a great shock to all who knew her and had worked with her. She will be greatly missed, but always remembered, and the standard she set should be an inspiration to all creative people in the theatre.

JOE DAVIS,  
*Globe Theatre.*

### Good Friday Music

Sir,—Your admirable editorial (June TABS—Good Friday music) does not mention one of the more depressing aspects of a lighting operator's job: that for most of the time he is operating a plot conceived by someone else. The sensitive operator often feels (knows?) that the lighting is ghastly and he becomes hardened to setting the speed, closing his eyes, and pressing the button on cue.

This aspect of theatre practice drove me to lighting design and caused the Editor of TABS to seek sanctuary in the rarefied atmosphere of the demonstration theatre at 29 King Street where he could practice his craft free from the plots of lighting designers and the quirks of directors newly graduated from Oxbridge.

But a glance in the crystal ball shows that the future outlook for operators is rosy (or at least 54 if not yet 7 or 11). Except for the declining world of the West End and the expanding world of TV stars at the seaside, the roles of operator and lighting designer will be combined. The future pattern of our theatre will be based on out-of-London repertoire where the productions will be lit and operated by the lighting designers. It seems likely that an ever-increasing proportion of West End shows will originate in the regional repertoire theatres and will be lit in London by the lighting men from the originating theatres. In this case, of course, a conventional type operator will be used to run the show.

The technical means are now available for the lighting man to pick up his control desk and sit beside the director in the stalls at rehearsal. I have tried this and am convinced that the only solution for repertoire is for one man to light, supervise the focusing on change-over and operate.

I am obviously a member of the last generation of free-lance lighting designers, but I suspect (alas!) that there will be many more generations of conventional type operators in the London theatre: and we all hope for the sake of future control design that the Editor of TABS will not be the last operator resident at 29 King Street.

FRANCIS REID,  
*Maldon, Essex.*