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Cover picture: Yvonne Arnaud Theatre, Guildford.

" The Finest Theatre in Europe " or Think Before You Write

A bold headline recently appeared in print announcing emphatically " The Finest Theatre in Europe ". This is probably not the first time that this outrageous claim has been made and, in spite of this editorial, will certainly not be the last. The theatre in this instance was the Yvonne Arnaud of Guildford. Now there are many things to be said in favour of this theatre, as readers of this issue of TABS can judge for themselves, but to claim it as the finest theatre, merely in Britain, would provoke some dissent and the query, "Finest for what?" It is not the finest if you want 750 seats or a thrust stage. Even if it were given to man to make such an award objectively and without passion it would be worthless.

It may be argued that such overstatement is common currency in the more lowly press and one must turn to the responsible press for responsible opinions. ". . . the main theatre, which has already acquired the world's most up-to-date lighting control system." Whence comes this statement? The answer is from *The Times*, no less. What standards did their correspondent apply in order to make this statement in respect of a theatre in Finland and how expert is he in forming judgements in this very specialist field? The trouble about these ill-considered statements in the area of one's own specialist knowledge is that it makes one distrust the rest of the paper's content.

Stanley

After the press conference on the National Theatre project, the BBC's reporter for the 7 p.m. *Radio Newsreel* was able to include among the novel treats in store for those who one day will go to the 1,100-seater " one room " main auditorium " three-dimensional scenery instead of flats and a backcloth ".

In *Theatre World* of April 1965 we are told that " many features will be embraced in the quite remarkable structure which will make Bromley's the best-equipped theatre in the country ". Did David Poulson ever say this or anything like it, however excited he may have been by the promise of his new theatre? What practical man of the theatre, such as he, can really believe that " It will be mechanised to a fantastic degree . . . the longest time needed to change from one full set to another will be sixteen seconds! " " At the press of a button these stages will be set in motion . . . another will initiate a whole string of lighting changes." " Settings for all these (plays) can be at the ready. A touch of the button will be all that is needed."

Thanks to this style of treatment and the technical cliché, what could be a useful, interesting and descriptive article becomes so much rubbish, all the worse for being in print. We are back in the souvenir programme of the latest super-cinema of the thirties in which, among the rest of the syrup, the *mighty organ* could reproduce all the sounds of the cathedral organ, orchestra or dance band, and this from a mere five extended ranks.

We of TABS, working as we do in the supply and manufacture of technical equipment, are all too well aware of the debased art of the copywriter. Stern steps have been taken to root out all trace of it from TABS and to keep it in check in our literature and advertising. We may not, alas! be so successful in future in respect of the latter, for there is a legend that one cannot sell anything in America without this kind of language. However, so long as this editor reigns he undertakes to keep the pages of TABS free of this contamination. Are we saying that all overstatement is a bad thing? Certainly not; one of our regular contributors is very fond of its use to provoke. One must use a mighty verbal heave to jerk thinking out of its rut. This, however, is quite different from the verbal soporifics of the advertiser and his pseudo-technical writing.

Today we live in an age of technical marvels and each new invention may be even more remarkable, but not necessarily more useful in a certain or perhaps any context. Our job as writers is to set what each development can do against the complete background so that its significance can be properly assessed. Claim too much now and there is no language left when the real thing comes along, as in the normal course of technical development it certainly will, sooner or later.

INTERNATIONAL AGREEMENT IN PRAGUE

A meeting of C.I.E.* expert committee E.3.1.9.2 was held at the invitation of the Czech National Committee of the C.I.E. over Easter in Prague. The hospitality and arrangements offered by our hosts were indeed generous. None more so than exemplified by the question, " What theatre shows would you like to see? " The list available for April, just one month among the many, not a special festival, was so staggering that we reproduce a facsimile overleaf.

Thirty-six operas were produced for 49 performances. Fifteen ballets were presented for 32 performances and 63 dramas achieved 234 performances. All this was in 15 theatres and a footnote to the programme states that the full programmes of all 28 Prague theatres may be had on application on the phone.

Careful examination of the facsimile programmes is recommended, for everything is there! In addition, there are concerts and a very active cinema. A point to note is that the three main theatres do not specialise; each taking opera, ballet and drama—ancient and modern—in their stride.

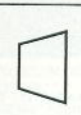
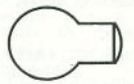
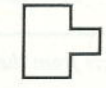
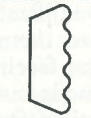
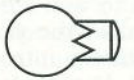
However, work was done as well and the most important from the point of view of TABS readers was the acceptance of certain basic symbols for what the C.I.E. is prone to call " luminaires ", but we in the theatre know as " lanterns ". The actual members present were from Belgium, Czechoslovakia, France, Israel, U.K., U.S.S.R., and an observer from East Germany. Although the United States was represented on this occasion only by a written report, the delegate from Israel had trained in theatre over there and was able to be of considerable assistance. The meeting continued the work of two years ago in Vienna, when delegates from all the 20 countries of the C.I.E. attended the fiftieth anniversary (four-yearly) conference. The actual definitions of the equipment now represented by symbols were then approved. Readers will have noticed for some time now, for example, the use of the expression " Profile Spotlight " instead of " Mirror Spotlight " in the pages of TABS. The symbols suggested by several countries had considerable common ground and the amiable way in which the divergencies were cleared up could well have served as a model to other conferences. Each of us had to surrender something and each of us had something adopted. Not only had the symbols to reconcile nations, but also the rather different worlds of theatre and television. The same basic symbols are to be used for both and delegates from both were present.

The symbols and their translations will come up for ratification at the full C.I.E. conference in Washington in 1967. At the same time a good beginning should be made on the same task in respect of dimmers and control systems. Meantime however, the A.B.T.T. have adopted the symbols and definitions and it is to be hoped that everyone, whatever their personal preferences, will make a practice

* *Commission Internationale d'Eclairage.*

Definitions for Proposed Symbols

Additional Strand Electric definitions in italic.

FLOODLIGHT A lantern with a beam angle of 100 degrees or more and with a cut-off not less than 180 degrees.		
SPECIAL FLOODLIGHT Unit with a specified beam angle (less than 100 degrees) and a specified cut-off angle.		
REFLECTOR SPOTLIGHTS Lanterns with simple reflector and adjustment of beam angle by relative movement of lamp and mirror.		
SEALED BEAM LAMP		
LENS SPOTLIGHT Lantern with simple lens and with or without reflector and capable of adjustment of beam angle by relative movement of lamp and lens.		
FRESNEL SPOTLIGHT As a lens spotlight, but with stepped lens providing a soft edge to the beam.		
PROFILE SPOTLIGHT Lantern giving hard edged beam which can be varied in outline by diaphragms, shutters or silhouette cut-out masks.		
EFFECTS SPOTLIGHT Lantern with optics designed to give an even field of illumination of slide and well defined projection of detail using suitable objective lenses. The slide can be of moving effects type or stationery.		
SOFTLIGHT A lantern of sufficient area to produce a diffuse light causing indefinite shadow boundaries. *For stage lighting purposes this is taken to cover batten flooding equipment, two such symbols being joined by a line.*		
BIFOCAL SPOTLIGHT *As Profile spotlight above, but fitted with two sets of shutters or other such means at the gate so that the profile may be composed of either hard or soft edges or a combination of both.*		

theatres

THE NATIONAL THEATRE, Prague 1, Národní tř. 2, tel. 23-12-51.

Evening performances begin at 7.30 p. m. (O — opera, B — ballet, X — drama, * — foreign language programmes may be obtained upon request from the attendants.)

1. Thu. **L. Janáček: From the House of the Dead** O
2. Fri. **I. Stravinskij: Firebird — Petroushka** B
3. Sat. **B. Smetana: The Kiss** (at 2 p. m.) O* **B. Smetana: Dalibor** O*
4. Sun. **Bros. Čapek: From the Life of Insects** X
5. Mon. **G. Verdi: Othello** O
6. Tue. **W. Shakespeare: Romeo and Juliet** X
7. Wed. **B. Martinů: Julietta** O
8. Thu. **A. Melikov: Legend of Love** B*
9. Fri. **E. Suchoň: Krútňava** O
10. Sat. **L. Janáček: Katya Kabanova** O
12. Mon. **W. Shakespeare: Romeo and Juliet** X
13. Tue. **A. Dvořák: Dimitrij** O
14. Wed. **W. Shakespeare: Hamlet** X
15. Thu. **G. Verdi: Othello** O
16. Fri. **W. Shakespeare: Romeo and Juliet** X
17. Sat. **B. Smetana: The Bartered Bride** (at 2 p. m.) O* **A. Dvořák: Rusalka** O*
18. Sun. **Bros. Čapek: From the Life of Insects** (also at 2 p. m.) X
19. Mon. **S. Prokofjev: The Stone Flower** (at 2 p. m.) B **B. Smetana: The Bartered Bride** O*
20. Tue. **L. Janáček: Her Stepdaughter (Jenufa)** O
21. Wed. **Bros. Čapek: From the Life of Insects** X
22. Thu. **B. Smetana: The Devil's Wall** O*
23. Fri. **Bros. Čapek: From the Life of Insects** X
24. Sat. **W. Shakespeare: Midsummer Night's Dream** X
25. Sun. **S. Prokofjev: Cinderella** (at 2 p. m.) B **O. Ostrčil: John's Kingdom** B
26. Mon. **W. Shakespeare: Hamlet** X
27. Tue. **Bros. Čapek: From the Life of Insects** X
28. Wed. **A. Dvořák: Rusalka** O*
29. Thu. **B. Smetana: The Bartered Bride** O*
30. Fri. **J. Hanuš: Prometheus** (première) O

SMETANA THEATRE, Prague 1, Tř. Vítězného února, tel. 22-39-38.

Evening performances begin at 7.30 p. m.

1. Thu. **J. E. Massenet: Don Quixote** O
2. Fri. **L. v. Beethoven: Fidelio** O.
3. Sat. **G. Rossini: The Barber of Seville** (at 2 p. m.) O

For full programmes of all 28 Prague theatres call telephone number 5-44444.

E. Schulhoff: The Sleepwalker, S. Prokofjev: The Prodigal Son, G. Gershwin: Rhapsody in Blue B

4. Sun. **G. M. Weber: Der Freischütz** (at 2 p. m.) O **Z. Vostřák: Viktorka, R. Leoncavallo: Comedians** B — O
5. Mon. **R. Strauss: Rosenkavalier** O
6. Tue. **P. I. Tchaikovski: Swan Lake** B
7. Wed. **G. Verdi: Don Carlos** O
8. Thu. **L. v. Beethoven: Fidelio** O
9. Fri. **G. Verdi: Aida** O
10. Sat. **B. Smetana: The Bartered Bride** (at 2 p. m.) O* **G. Verdi: Rigoletto** O
11. Sun. **Sofokles: Elektra** (guest performance of the Grece theatre) X
12., 13. **Euripides: Medea** (guest performance of the Grece theatre) X
14. Wed. **P. I. Tchaikovski: The Nutcracker** B
15. Thu. **R. Wagner: Lohengrin** (at 6.30 p. m.) O
16. Fri **E. Schulhoff: The Sleepwalker, Z. Vostřák: Viktorka, G. Gershwin: Rhapsody in Blue** B
17. Sat. **J. E. Massenet: Don Quixote** (at 2 p. m.) O **B. Martinů: Istar, K. Slavický: Moravian Dance Phantasy, W. Bukový: Conscience** B
18. Sun. **R. Wagner: The Flying Dutchman** (at 2 p. m.) O **G. Puccini: Gianni Schicchi, R. Leoncavallo: Comedians** O
19. Mon. **G. Verdi: Don Carlos** (at 2 p. m.) O **P. I. Tchaikovski: Eugene Onegin** O
20. Tue. **R. Strauss: Rosenkavalier** O
21. Wed. **P. I. Tchaikovski: The Nutcracker** (at 3.30 and 6.30 p. m.) B
22. Thu. **P. I. Tchaikovski: The Queen of Spades** O
23. Fri. **B. V. Asafjev: The Fountain of Bakhchisarala** B
24. Sat. **B. Smetana: Two Widows** (at 2 p. m.) O* **L. v. Beethoven: Fidelio** O
25. Sun. **G. Puccini: Gianni Schicchi, R. Leoncavallo: Comedians** (at 2 p. m.) O **G. Puccini: Tosca** O
26. Mon. **R. Wagner: Lohengrin** (at 6.30 p. m.)
27. Tue. **A. Dvořák: Jakobin** O*
28. Wed. **P. I. Tchaikovskij: Swan Lake** B
29. Thu. **G. Verdi: Aida** O
30. Fri. **L. v. Beethoven: Fidelio** O

TYL THEATRE, Prague 1, Železná ul. 11, tel. 22-32-95.

Evening performances begin at 7.30 p. m.

1. Thu. **W. Shakespeare: Merry Wives of Windsor** X
3. Sat. **M. Frisch: Andorra** X
4. Sun. **L. Holberg: Jeppe paa Bierget** X
5. Mon. **A. Miller: The Death of a Salesman** X
6. Tue. **W. A. Mozart: Marriage of Figarro** O
7. Wed. **C. Goldoni: Le Barusse Chiozzotte** X
8. Thu. **T. Williams: A Streetcar Named Desire** X
9. Fri. **J. B. Molière: Tartuffe** (first performance) X
11. Sun. **J. B. Molière: Tartuffe** X
12. Mon. **W. A. Mozart: The Magic Flute** O
13. Tue. **L. Holberg: Jeppe paa Bierget** X
14. Wed. **W. A. Mozart: Don Giovanni** O
15. Thu. **J. B. Molière: Tartuffe** X
16. Fri. **G. Rossini: The Barber of Seville** O
17. Sat. **M. Gorki: Dostigaiev and the Others** (at 2 p. m.) X **J. B. Molière: Tartuffe** X
18. Sun. **T. Williams: A Streetcar Named Desire** X
20. Tue. **W. Shakespeare: Merry Wives of Windsor** X
21. Wed. **L. Holberg: Jeppe paa Bierget** X
22. Thu. **J. B. Molière: Tartuffe** X
23. Fri. **W. A. Mozart: The Seraglio** O
24. Sat. **T. Williams: A Streetcar Named Desire** X
25. Sun. **W. Shakespeare: Twelfth Night** X
26. Mon. **L. Holberg: Jeppe paa Bierget** X
27. Tue. **T. Williams: A Streetcar Named Desire** X
28. Wed. **J. B. Molière: Tartuffe** X
29. Thu. **M. Gorki: Dostigaev and the Others** X

CZECHOSLOVAK ARMY THEATRE, Prague 2, náměstí Míru, tel. 25-24-52.

Evening performances begin at 7.30 p. m.

K. Čapek: The War of Salamanders 2., 7., 10., 16. and 30th
J. Anouilh: The Lark 3., 13., 24. and 29th
H. Kipphardt: The Oppenheimer Case 11., 14., 18., 23. and 28th
J. Robert: Marie Octobre 17., 22. and 25th
F. Dürrenmatt: Visit of an Old Lady 19th (2.30 p. m.)

CHAMBRE THEATRE, Prague 1, Hybernská 10, tel. 22-28-19.

Evening performances begin at 7.30 p. m.

F. D. Gilroy: Who Will Save the Cowboy 3. and 24
F. Dürrenmatt: Romulus the Great 4., 11., 14., 21.
T. Wilder: Our Town 5., 12. and 20.
Faulkner-Camus: Requiem for a Nun 7., 18. (at 3 p. m.) and 25. (at 3 p. m.)
R. Rolland: Of Love and Death 8., 11. (3 p. m.), 13., 19.
H. Ibsen: Hedda Gabler 15., 19. (3 p. m.), 22., 26., 29.
F. Dürrenmatt: The Physicists 27.

COMEDY, Prague 1, Jungmannova 1, tel. 23-10-26.

Beginning at 7.30 p. m.

P. A. Bréal: Huge Ears 3., 27.
W. Hildesheimer: Sacrificed Helena 4., 8., 11. (3 p. m.), 13., 19.
V. Sardou - E. de Najac: Let us Divorce 5., 7., 10., 18. (3 p. m.), 25.
O. Wilde: The Importance of Being Earnest 6., 11., 14., 19. (3 p. m.), 24., 28.
F. Marceau: The Egg 10. (3 p. m.), 12., 17., 20. and 24. (3 p. m.)
G. B. Shaw: The House of Broken Hearts 15., 18., 21., 22., 26., 29.

ABC THEATRE, Prague 1, Vodičkova 28, tel. 24-88-60.

M. Achard: L'Idiote 3., 5., 11., 12., 14., 18., 20., 21.
W. Wycherley: Madam from the Country 4., 11. (3 p. m.), 19.
G. Arout: Gog and Magog 6., 10., 15., 19. (3 p. m.), 22., 24., 26., 29.
J. Brandon-Thomas: Charley's Aunt 7., 18. (3 p. m.), 25., 28.
A. Watkyn: Mr. Dodd has a Date 8., 13., 17., 27.

REALISTIC THEATRE OF Z. NEJEDLÝ, Prague 5, Kirovova 57, tel. 54-50-27.

T. Williams: Summer and Smoke 1., 4., 12., 27.
D. Turner: Semi-detached 8., 16., 30.
M. Dostoievski: The Idiot 10.
E. O'Neil: Mourning Becomes Electra 13., 20., 28.
R. Viviani: L'Imbroglione Onesto 18., 23., 25.

S. K. NEUMANN THEATRE, Prague 8, Rudé armády 34 tel. 829-92.

Evening performances begin at 7.30 p. m.

N. Simon: Barefoot in the Park 1., 15., 18., 30.
E. Albee-Cullers: Ballad of a Sad Café 2., 9., 27.
E. Albee: Who is Afraid of Virginia Woolf 3., 14., 16.
J. Hartog: Canopied Bed 4., 13., 17., 19.
F. Hochwälder: Castle in the South 7., 21.
F. Kafka: The Castle 10., 11., 23., 28.

E. F. BURIAN THEATRE, Prague 1, Na poříčí 28, tel 24-12-19.

R. Thomas: Eight Wives 1., 8., 24.
A. Christie: Unexpected Visitor 2., 13., 25.
K. Čapek: R.U.R. 3., 6., 15., 18., 22.
T. Williams: Tattooed Rose 4., 7., 17., 23.
J. B. Priestley: The Treasure 11., 19., 28.
A. Miller: Incident in Vichy 29., 30.

KARLÍN THEATRE OF MUSIC, Prague 8, Křižíkova 10, tel. 22-08-95.

Evening performances at 7.30 p. m. Saturdays and Sundays at 7 p. m. and 3.30 p. m.

F. Loewe: My Fair Lady 1.—4., 6.—8., 10., 11., 26.—29.
Harburg - Saidy - Lane - Voskovec + Werich: Finian's rainbow 17.—19., 22.—25.

SPEJBL AND HURVÍNEK MARIONETTES, Prague 2, Římská 45, tel. 25-10-58.

Evening performances at 7.30 p. m.

M. Haken - M. Kirschner: Hearty Metamorphosis 1., 6., 8., 13., 17., 22., 27., 29.

THEATRE "NA ZÁBRADLÍ", Prague 1, Anenské nám. 5, tel. 24-81-31.

Beginning at 8 m. p.

E. Ionesco: Baldheaded Singer and Lesson 1., 13., 25., 26.
S. Beckett: Waiting for Godot 2., 14.
A. Jarry: King Ubu 6., 20., 23., 30.
Pantomime by L. Fialka's group:
The Road 3., 10., 15., 17.
Etudes 4., 7., 18., 19., 27., 29.
Pantomime on the Rails 8., 16., 28.

SEMAFOR, Company of the State Theatre Studio, Prague 1, Václavské nám. 28, tel. 22-64-24.

Beginning at 7.30 p. m.

The Sect 3., 6., 9., 10., 11., 13., 14., 21., 25.
Six Wives 1., 4., 15.—17.
Twenty — F. Havlík orchestra 5., 7., 8.
Pilarová - Gott Recital 18., 19., 20., 23., 24., 26.—30.

BALLET STUDIO PRAGUE, Company of the State Theatre Studio, at the MUSICAL THEATRE OF NUSLE, Křesomyslova ul., **tel. 93-07-44, 93-36-90.**

Beginning at 7.30 p. m.

Variations 2., 6., 10.
Contrasts 23., 26., 29.

ALHAMBRA THEATRE, Prague 1, Václavské nám. 5, tel. 22-33-55.

Daily except Mondays at 9 p. m. The restaurant in operation from 7.30 p. m.

Attention Photo — show 1—30th.

Facsimile of extracts from the Prague theatre list for April 1965.

of using them. Qualifications of wattage, direction, beam angle can easily be added to them. The forms have deliberately been made simple enough for freehand drawing, but Strand Electric propose now to have stencils cut in two scales, one for use on architects' plans and the other for the much larger ½ in. plans that scene designers like to use. These will be available at a nominal charge before the end of the year. The Bifocal twin gate (hard and soft) Profile spot newly introduced by Strand Electric and unknown elsewhere has been given the symbol shown alongside and the definition below by us for the sake of completeness!

This may seem a lot of satisfaction over a few symbols on paper, but such symbols can transcend the barriers of language in a way that even a photograph of a lantern itself may not do, simply because the optical system may be far from clear from the exterior. The layout of the Tufts Theatre, page 34 of the last issue of TABS, used the new symbols as far as was possible in the time available. In fact, of course, the Profile spot, as now decided should have had a circular body and not an ellipsoidal one, this being one of the recent points of amendment. Symbols can be blacked in for small-scale printing when desired.

BRIEFING FOR A NEW THEATRE

John A Brownrigg BA., ARIBA

John Brownrigg is a partner of Scott Brownrigg and Turner, Architects, of Guildford, and was responsible for the Yvonne Arnaud Theatre.

The Editor has asked me to give my views on the development of a brief for a new theatre. I believe he is acting under the illusion that, somewhere, sometime, an architect does in fact get a clear brief for such a job and is in a position before he starts work to know exactly what he is doing, and then only has to get on with the job of providing answers to the clearly set problems laid before him. He should know better!

How different are the facts in my experience, and I suspect that almost all architects who have had anything to do with theatre design will bear me out. (Just look, for example, at the story to date of the new National Theatre to be.)

In the case of the Yvonne Arnaud Theatre at Guildford the early story was very confused and much of it is best forgotten, but a few facts leading up to the architects' final instructions may be given. Firstly, we have one great advantage about which there was no question whatsoever. We were presented with an extremely good site, albeit a rather difficult one. By chance and good fortune the site that was finally made available by the Borough of Guildford was the very one that I had selected in my mind's eye for a possible theatre, together with Patrick Henderson, who was then running the Guildford Rep., some ten or fifteen years before.

With this site in hand the Theatre Trust summoned their architect and, after much discussion, instructed him that, as a good theatre had just been built at Middlesborough for £50,000, he was to provide a theatre for Guildford, containing everything they wanted, for £80,000! The brief at this stage was no more than "Prepare us a scheme including all that is required for a theatre seating about 500 persons, with all possible amenities, for £80,000."

The architect incurred a certain amount of displeasure by suggesting that this might not be possible in view of the complexities of the site, rising prices, and his own conviction that this sum would be likely to prove inadequate to provide a theatre of even the minimum standard that would be suitable for Guildford.

Instructions had been given, however, and a scheme was produced, which even pared to barest essentials and looked at in the most optimistic light was likely to cost £100,000. The architect was insulted by being told that he had clearly built up his proposals to match a figure he had given earlier as the lowest that should possibly be considered. He reacted strongly, as, fortunately, did certain other members of the Trust, and after much heart-searching

Yvonne Arnaud Theatre, Guildford. Note lighting slots in ceiling and partially occupied lighting bar and brackets on side wall.

and further prolonged discussions it was finally decided that the only sensible approach to the problem was to design the sort of theatre that was really wanted, see how much it would cost, and not revert to anything less satisfactory unless it could be clearly shown that the money could not be raised.

And so it was decided. Of brief there was still only the vaguest outline. Seating capacity could now be increased to more than 500, but it was still agreed not to plan a large theatre. Ancillary accommodation should be the best possible, but cost must still be kept to the minimum. There was consultation on practical points with Eric Longworth, who was then managing the old Repertory Theatre in North Street, but otherwise the architect was left to develop the details of the brief himself.

In doing this he followed certain guiding principles. Firstly, space was to be all-important. Equipment and finishes could be added and improved, but the basic three-dimensional structure, once completed, was likely to remain the same for ever.

Secondly, in spite of temptations to the contrary, the theatre would not discard traditional and tried design for experimental forms. If any form considered could not include the traditional it should be discarded as imposing unacceptable limitations on theatrical presentation. As Frederick Bentham has wisely said, the traditional theatre is still the most adaptable theatre of all.*

* TABS, Vol. 21, No. 3.

Thirdly, and this, though obvious, has proved a line of approach which is surprisingly useful if not often followed, a particular effort was made to discover and profit by previous mistakes and shortcomings. Let me say at once, in case this might appear somewhat smug, that though we have managed to steer clear of certain mistakes which came to our notice, we made plenty of our own.

And so a brief was built up, partly in the form of sketches—auditorium shape, seating arrangements and so on, and partly in the form of a schedule of accommodation. At the same time safety requirements and regulations were studied and a schedule drawn up of all the items particularly affecting this building.

Plans and descriptions of other theatres were studied and visits made to as many as possible. Talks were held with all sorts of people who had special knowledge of all aspects of theatre, producers, directors, managers, stage managers, caterers, fellow architects, professional consultants, right through to electricians, stage hands and office staff. Their comments were invaluable, most particularly where they produced constructive suggestions to overcome some real shortcomings which had been experienced.

The brief and the new outline proposals continued to develop together, resulting in finally approved sketch plans, substantially the project now built.

A detailed cost plan was prepared by the Quantity Surveyors, which showed that the cost was about 20 per cent. higher than the new target figure of £200,000, including professional fees. Drastic economies were made to specifications and certain items omitted (subsequently, as is the nature of things, reinstated) until it was

Yvonne Arnaud Theatre, Guildford. Showing contact between stage and auditorium even when apron stage is not used. Sound and lighting control room at rear of stalls.

Yvonne Arnaud Theatre, Guildford. Setting by Brian Currah for Thark *(Ben Travers) seen from rear of stalls.*

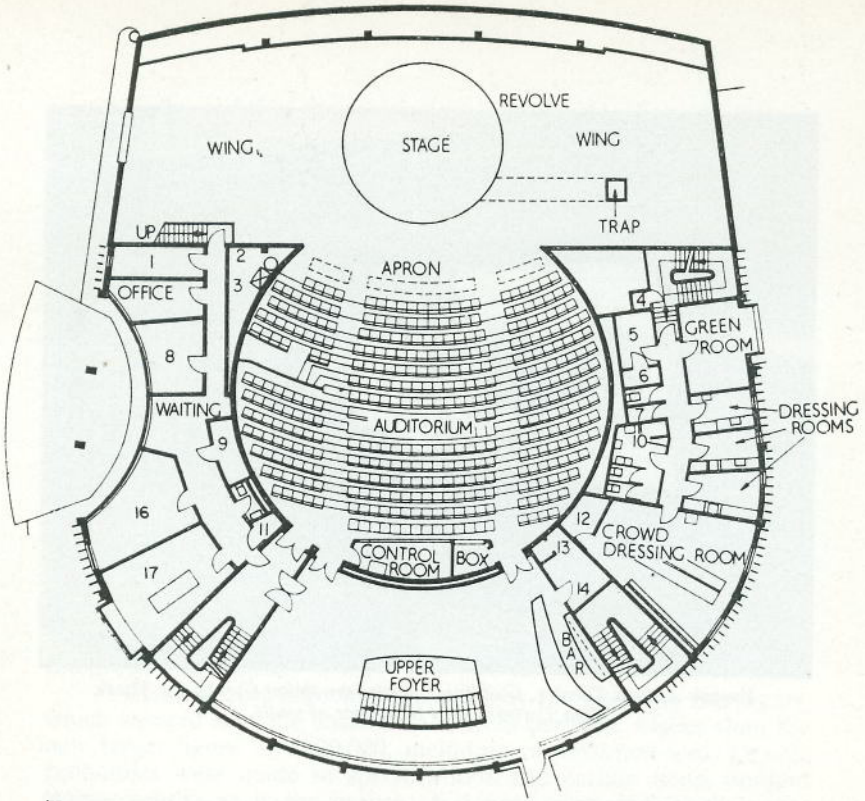
considered that the proposals were within the cost limits. The tender finally accepted bore this out.

By this time, the appeal organizer, Capt. Nicholas Kempson, R.N., had shown that sufficient funds could be raised and so the building commenced.

It was when the building was half completed that the snags in briefing procedure became apparent, for it was only then that Laurier Lister was appointed as Director and Administrator, and he, of course, had some valuable things to say. These fell into two categories, those which anyone experienced in theatre would see as the building took shape, but which would hardly be apparent to the non-architect from drawings alone, and those which were particular to his own plans for running the theatre and the way he wished productions to be mounted in it. Certain changes were therefore made at this stage, such as provision for an orchestra pit for twenty-two players, the addition of a revolve and the correction of certain minor items of planning.

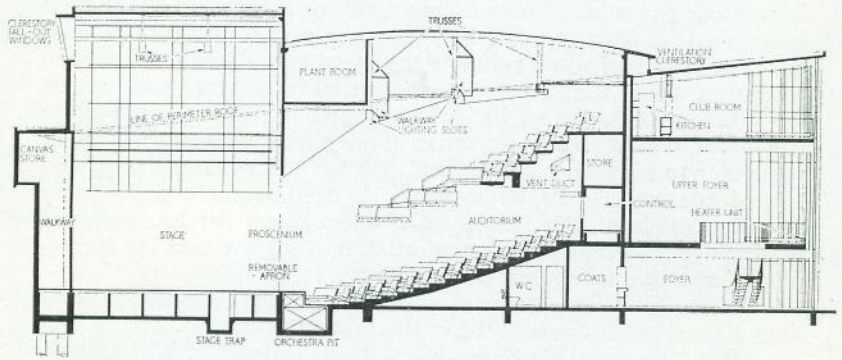
These things inevitably involved a greater increase in cost than if they had been included in the first instance.

Here, of course, is one big lesson to be learned. It is absolutely essential, if this sort of thing is to be avoided, that the person who is to be responsible for running the theatre should be available for



Yvonne Arnaud Theatre, Guildford. First floor plan at upper foyer level with main access to the auditorium. Scale $\frac{1}{30}$ in. = 1 ft.

1 *Secondary battery room*
2 *Boiler flue*
3 *Air duct*
4 *Phone*
5 *Kitchen*
6 *Store*
7 *Shower*
8 *Manager*
9 *Stationery*
10 *Lavatories*
11 *Cleaner*
12 *Trunks*
13 *Service lift*
14 *Bar store*
16 *Secretaries*
17 *Administrators & Boardroom*



Section showing the formation of auditorium in relation to back stage areas. Scale $\frac{1}{30}$ in. = 1 ft.

consultation with the architect from the earliest formative stages of the project right through to its conclusion. In the case of the Yvonne Arnaud Theatre there is no doubt that it would, in some respects, be a better theatre and certainly have certain features more acceptable to its Director had his appointment been made much earlier.

In this way some mistakes could have been avoided. There are others, however, which may be inevitable in a building form whose pattern is evolving as freely and as rapidly as that of the theatre, and of which so few examples are currently being built. But these are not necessarily the mistakes the so-called experts delight in pointing out. Some of the criticisms made have been of items specifically demanded by the client or imposed by conditions which could not be avoided. On the other hand, no critic has pointed out the unsatisfactory pass door arrangements, which only came to light when it was found that artists have to make a circuitous pilgrimage to reach the front of house from their dressing rooms or from back stage.

There are other problems which only arise once the theatre is operating and there is the quite unavoidable difficulty that no two experts will, in any case, agree on all points.

For the benefit of others, here are a few matters which could have been improved, but in most cases only on a larger site or at a greater expense.

The stage tower could be higher and extended above the wings. The dressing rooms would have been better nearer the stage had it been possible. The arrangement of the filling in of the orchestra pit and the forming of the apron stage by rostra is a cumbersome one and it is hoped one day to afford a lift here as the excellent one at Southampton University Theatre. There is a problem to overcome in the transmission of noise from foyers to auditorium via the auditorium doors. A seat spacing of 2 ft. 6 in. from row to row is not sufficiently generous for real comfort.

In the days this theatre was being conceived, it was not really foreseen what would evolve. The theatre, it must be remembered, was originally designed as a small local repertory theatre. Nor too, at that time, was factual material readily available. Since then much good work has been done, notably by the ABTT, in formulating data for the theatre designer, which has been published in the *Architects Journal* and in book form.* This is invaluable.

But, a word of warning, things move fast in the theatre world and it is one where the mere following of precedent can be more than usually dangerous and sterile. What cannot be set down or stated in factual terms is the element of imagination necessary in the approach to the task of designing a theatre. This, and enthusiasm, is as necessary both to the architect and his client as the formulation of a good working brief.

* "*Theatre Planning*," *published by A.B.T.T., 9 Fitzroy Square, W.1. Price one guinea, post free.*

LIGHTING BY LINNEBACH

A Reminder of an Old Technique

What shall we do about the cyclorama? Should we have a cyclorama? What colour should a cyclorama be? It's surprising how often the word crops up in discussions of theatre work, whatever the scale. Originally it described an all-embracing semi-circular sky cloth around the stage of the large continental opera houses. It had great height and was so designed that an impression of infinite distance could be achieved. Such scenery as was used would stand in atmospheric space. On this scale it worked. It was, after all, some 100 ft. from the first row of the audience. But on a smaller stage designed so that actors are able to maintain a close rapport with their audience, the effect of distance sought for is not achieved—the surface of the material looks what it is, lit as it is, nor, as Stephen Joseph argued in TABS, Vol. 22, No. 4, is it necessarily needed even if by now it means only a plain back wall. Nevertheless there will be the need for suggestions of " outdoors " whether behind windows or arches or through " another part of the wood, later ".

The plain sky is often unconvincing and has led to the over use of optically projected moving clouds to give *verismo*—seldom successfully. During a recent production by the English Stage

Company of *The Seagull* these were employed, albeit behind small windows high up in the back wall of the setting. Despite a compelling performance on the stage, they still won regrettably, as we heard behind us the *sotto voce*, " Look! The clouds are moving."

Some break up of a clear sky cloth, cyclorama wall or whatever is, however, still desirable and this need has led us actively to revive the use of the " Linnebach Effect ",* indeed to feature it in our " Lighting Rehearsal " demonstration. It is a very old idea and in fact, the angel's wings behind Henry Ainley in *Tobias and the Angel* at the Westminster Theatre in 1931 and illustrated in TABS,† were produced in this way. It was also the basis just before and just after the war of the Penumbrascope which cross faded several involved patterns in colour. Unfortunately the Linnebach effect is still not generally enough known and this is sad as it is particularly suitable for the small stage and for a limited use, but many may find the simple usage inspires further experiments.

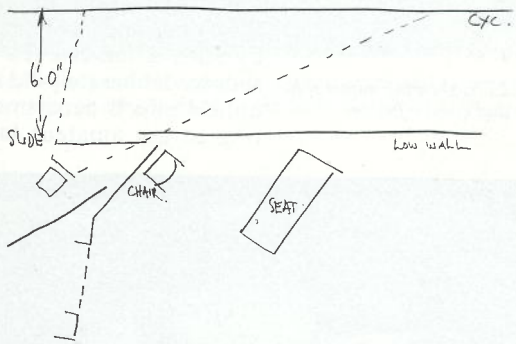


Fig. 1. Plan of open air setting for Lighting Rehearsal with Linnebach lantern situated behind flat on left of picture. Some Cyc. lighting added from Patt. 60 high up on right.

Optically the Linnebach effect needs a compact source lamp in a housing with a blackened interior, no reflector or lens, but preferably some adjustable shutters on the front. These shutters must be capable of being angled as well as being pushed in and out as their purpose is to confine the beam to the slide. The slide is not part of the lantern itself and the expression is something of a misnomer.

The Linnebach lantern is a shadowgraph and silhouette cut-outs could be placed between it and the surface on which they are to

* *Adolf Linnebach (1876–1944) was Technical Director in the Munich Opera from 1923 to 1944 and was a pioneer of many lighting methods, among which was the one that carries his name. This dates from the early part of the century.*

† TABS, *Vol. 22, No. 1.*

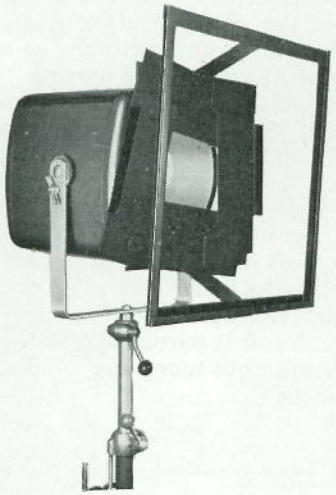


Fig. 2. Patt. 233L showing adjustable mask and colour frame.

appear. As everyone knows who has played around as a child making animal and other fantasies between a light source and a wall, the nearer to the screen and the further from the source, the clearer, but smaller the picture. The slide thus has to vary both in size and in distance from the lantern, which explains why it is much better to keep it separate. Fortunately, for most effects, poor definition only is required and the slide can be roughly 3 ft. 6 in. × 2 ft. 6 in. and 1 ft. or 2 ft. away from the projector.

The photograph at the head of this article shows a typical Linnebach effect in our theatre, the clouds and sky being produced by such a lantern. To make this slide we deliberately did not use our optical effects department, preferring to use amateur talent, so to

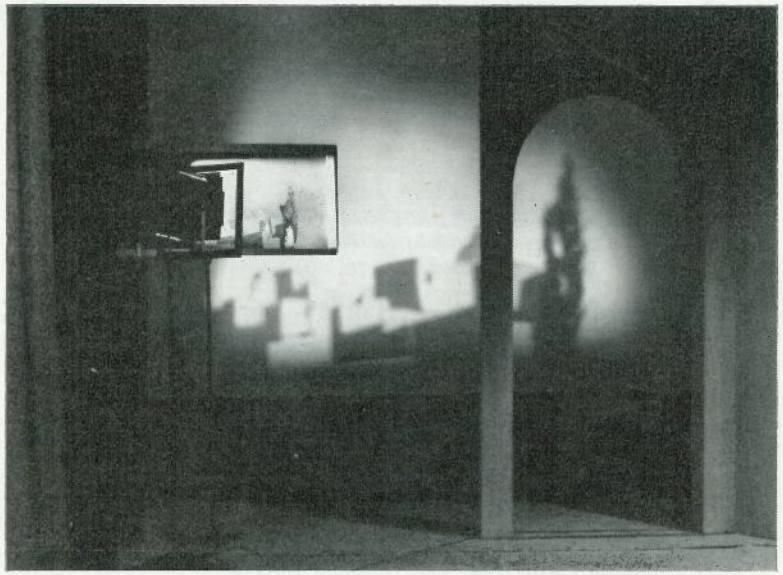


Fig. 3. Projected background of City on the Hill. *Design made by applying cut pieces of " Cinemoid " to one framed sheet of 17 Blue. Image would normally be thrown more to the right as lantern and slide would be " off stage ".*

Fig. 4. View of cloud projection showing lantern, slide and resulting image. Again this would normally be thrown more to the right to appear as on page 14.

speak. This was essential in order to prove anyone can do this job. Fig. 2 shows the Strand Linnebach projector, a special modification of the Patt. 223 housing to be known as the Patt. 223L. In front of this goes the slide, in the present instance a piece of $\frac{1}{10}$ in. thick Perspex* 3 ft. × 2 ft. fixed into a standard telescopic stand. The design was painted on the slide using Photopak, a photographic blanking out, brown coloured material which will appear black on the screen. Provided the slide is clean, almost any painting material will take, and if transparent colour is used then the projected effect will be coloured accordingly. For colour effects pieces of Cinemoid can be cut out and stuck on, as in Fig. 3. Alternatively, if tinting not accurately located is required, as in sunset or dawn clouds, bits of broken Cinemoid can be added in an extra frame spaced just forward of the projector.

Fig. 3 shows a design carried out in cut-out pieces of Cinemoid mounted in turn on a sheet of clear Cinemoid, the whole being carried on a wooden frame. The big surprise is how little light is needed. A 500-watt T1 lamp will suit in many instances and at the most a 1,000-watt T5 lamp. Which is used depends on the level of the main stage lighting and in our present example producing a picture 18 ft. × 12 ft. with 5,000 watts devoted to the rest of the

** If the authorities do not like Perspex then Oroglass may be used or even Cinemoid in a large frame.*

stage a 500-watt lamp was ample. Of course, direct acting area light must be kept off the backcloth, but scatter and spill tends not to be critical due to the patterned projection. Unwanted stray light and shadows are far more obvious when there is a plain, evenly lit background.

It is convenient to have the projector set-up at stage level except in those rare instances where there may be a side platform or perch to the stage. This means that projection will usually be at an acute angle from the side. Forms can be matched by keeping the slide more or less parallel to the screen, but the picture on the screen may be wedge shaped and subject to distortion of shape.

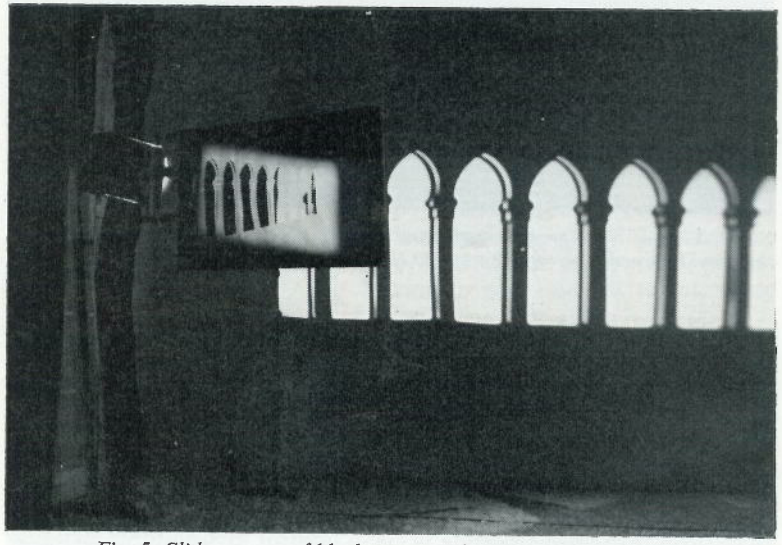
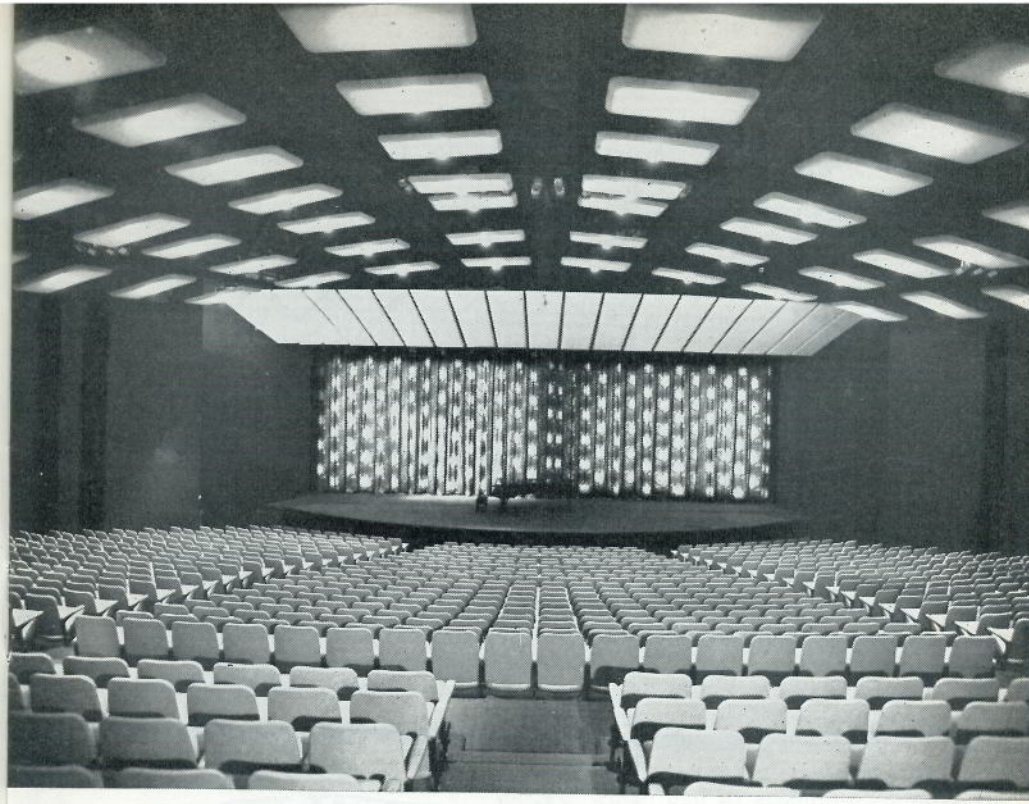


Fig. 5. Slide cut out of black paper and corrected for distortion.

However, on a slide as large as this, the main features of the design can be laid in by trial and error on site. These can then be used for guidance as the detail is filled in elsewhere while the setting up of the scenery or a rehearsal proceeds.

Fig. 5 shows a row of arches cut out of black paper, which can either be used by themselves or as an extra slide to frame in the city on the hill shown in Fig. 3.

To sum up, once the Patt. 223L is acquired, and at list £17 10*s*. 0*d*. this is not difficult, a whole range of new lighting effects is available for expenditure of a little ingenuity. Owing to the wide spread, no stage is too small and with the device, those who prefer a visual background can give their own and their audiences' imagination full rein.

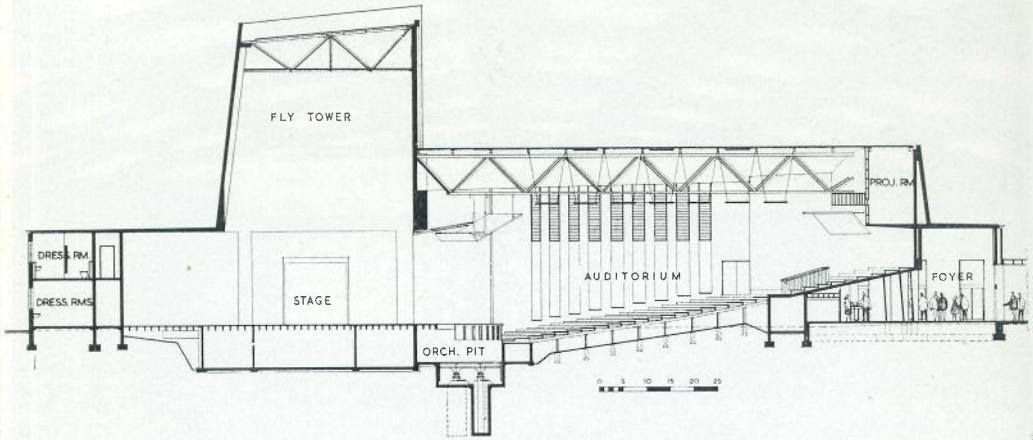


THE CANBERRA THEATRE CENTRE

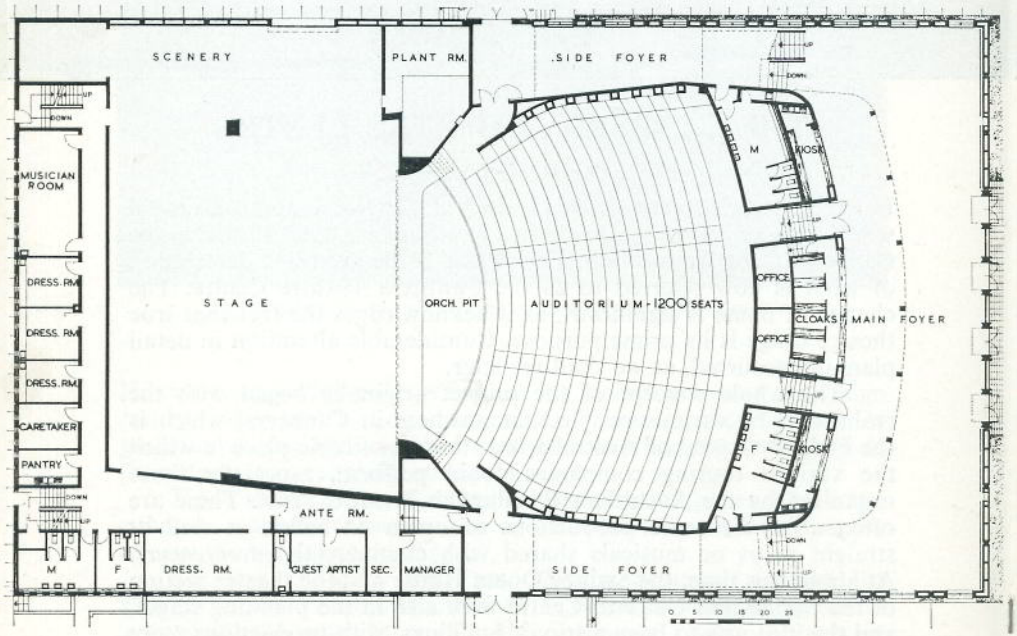
by Denis Irving

In Percy Corry's recent article (TABS, Vol. 22, No. 4) about his rapid world tour, reference was made to a new building, then known as the Canberra Civic Auditorium. This article is the promised description of what is now referred to as the Canberra Theatre Centre. The change of name is significant, as it acknowledges the fact that true theatre usage is its prime purpose. Considerable alteration in detail planning occurred, as we shall see later.

The whole concept of the project originally began with the realisation by various people that nowhere in Canberra, which is the Federal Capital of Australia, was there a suitable place in which the various touring companies could perform, especially those organised by the Australian Elizabethan Theatre Trust. These are often quite elaborate productions of opera or ballet, as well as straight plays or musicals shared with commercial *entrepreneurs*. At about this time, the Sydney Opera House and the theatre section of the Melbourne Cultural Centre were also in the planning stages, and the idea was to have a trio of buildings, with productions more or less interchangeable. As the Sydney building has now become too elaborate and far removed from conventional techniques and the Melbourne project is still a huge file of papers as far as the



Canberra Theatre Centre. Longitudinal section.



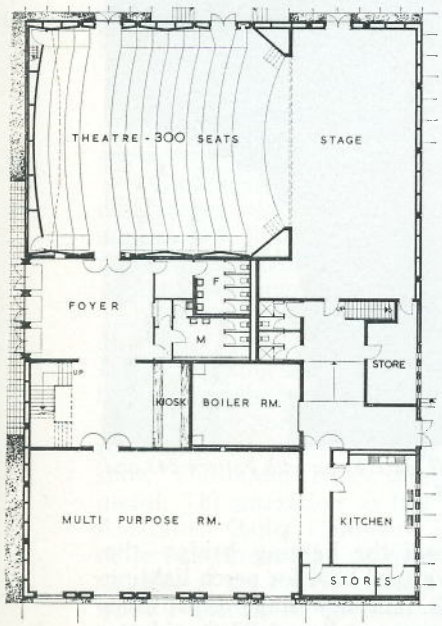
Ground floor plan and alongside plan of the Playhouse situated in the smaller building referred to above.

theatres are concerned, the Canberra Theatre Centre is now out on its own.

There are two parts to the complex linked by a covered way. In the smaller building, apart from several very pleasant exhibition-cum-conference rooms, is a small theatre known as the Playhouse. This seats 312 and has a stage 57 ft. wide by 26 ft. deep overall, with a " proscenium " 32 ft. wide. This latter is formed by curving in the side walls and ceiling, with no formed arch, thus giving the appearance more of an end stage with wing space. There is about 6 ft. above the stage, but no flying height.

The stage lighting consists of Patt. 23 Profile spots F.O.H. hung from a bar above a continuous slot in the ceiling, plus three bars over the stage with the usual mixture of Fresnel and Profile units and some baby floods for base lighting and non-theatrical stage uses. Control is by a 36-way saturable reactor board, the control cabinet being located in the projection room at the rear of the theatre.

That the Playhouse was included in the Centre is surely a tribute to the thoroughness of the original brief from the committee, set up by the National Capital Development Commission, to advise on the cultural needs of Canberra. They studied the problem properly and concluded that repertory or amateur productions were essential and would be lost in the larger theatre, which had to accommodate ballet and symphony concerts as well as musicals. The economies of multi-multi purpose were not for them.

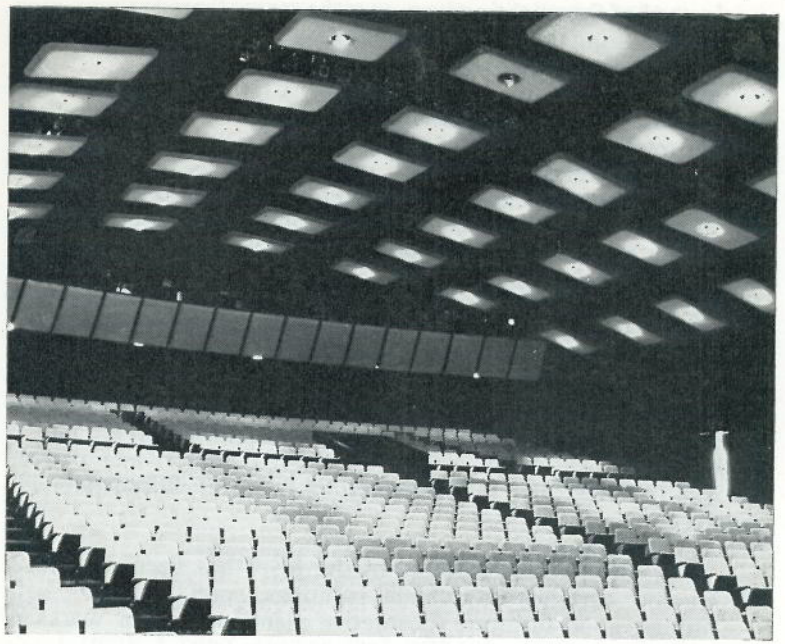


The main part of the Centre is, however, the theatre. This seats 1,200 in one single " sweep " up and has a very pleasant first impression to anyone walking in. To reduce costs, the ceiling is not fully lined, but has a number of 6 ft. × 4 ft. plaster panels hung below truss level. These are off-white and also carry the house lights. As everything above is painted black, the effect is to obliterate the duct work and wiring, etc., quite well. It's pretty certain that these are also intended to assist the acoustics in an auditorium with a relatively low ceiling.

The stage was originally designed with full flying height, a proscenium width adjustable from 56 ft. to 36 ft., a working depth of 34 ft. from the setting line plus a 5 ft. apron and 13 ft. deep orchestra lift. The adjustable proscenium is retained, and is effected

Canberra—view of prompt side showing F.O.H. Box Room with Pattern 243 and 263 lanterns.

by means of sliding panels hung from the lighting bridge—the whole being upstage of the act drop. Vertical bars for perch lighting move in and out with the side panels. The new stage dimensions overall are 61 ft. from setting line to rear wall and 97 ft. side to side, but the design of the stage tower puts the last counterweight line 32 ft. from the setting line. The stage is of course flat. The orchestra lift gives the usual three options of pit, auditorium floor



Auditorium, Canberra Theatre Centre.

or apron levels, but is hydraulically operated and far too slow for use during a performance or even an interval change.

Great care has been taken with the acoustic design of the auditorium, which is notably free from dead spots or other audience annoyances. Specially designed baffles are built into the side walls and are intended to be adjustable to tune the building to suit its various performances.

The original design as a civic auditorium, with its shallow stage and deep apron, led to the specification of a high proportion of F.O.H. lighting equipment—56 of the 120 dimmers were allocated for this purpose, and a total of 46 profile spots and 18 Fresnel spots were used. Fortunately, early consultation with the architect resulted in excellent locations for these units, as the photographs show. The booms either side above the exit doors are particularly useful. The alteration to full theatre use, with a triple bill by the Australian Ballet Company as opening performance, meant that more equipment than originally intended was needed on stage, and so some of the F.O.H. circuits are paralleled to feed outlets on stage when required. In addition, 60 sets of scenery counter-weighting had to be crammed in where only 40 were allowed for—a folding sound shell for concert work and its associated three-step rostrum are now struck and stowed away when not in use, instead of being flown.

Instead of four lighting bars over the stage, there are now nine, five of these being flood or magazine equipment and the others spot bars with 40 outlets on each.

The lighting control is a 120-channel C.D. organ type console with 2 presets 14 memories familiar in so many of London's theatres. The console is in a room at the rear of the auditorium and the electro-mechanical servo-operated dimmer bank is under the rear stage area. Also at the rear of the auditorium is a full set of Todd-AO 70 mm. projectors, two motor-fed Sunspots for following, the sound reinforcement equipment and provision for a TV control area for direct telecasts.

Generally, the building is very pleasing and is full of artistic activity. There is a large foyer in which paintings can be exhibited, plus an art gallery and meeting rooms, including one large one for banquets or dances, complete with musicians' gallery. As the plan shows, the foyer is large and comfortable, yet no unnecessary money has been spent on elaborate architectural finishes, which are mostly oiled Western Australian jarrah (a dark-red timber) and painted concrete or brick. The following extract from an official publicity booklet says:

> " The final enrichment of the foyer has been done with window curtains, brightly lit paintings, special hanging light fittings, good furniture, decorative plants and other works of art."

There is no doubt that theatre is very much alive in Australia, and the National Capital Development Commission and the architects, Messrs. Yuncken Freeman Architects, have made a fine contribution to the growing number of theatre buildings available. The total cost was £A600,000 (including £A150,000 for full air-conditioning).

So, after four years of consultation and planning and only two years on site, the Canberra Theatre Trust inherits a fully-paid up cultural centre from the Federal Government and with an opening season of the Australian Ballet Foundation sets out to justify the hopes of its founders. It must be a good sign that this season is presented in conjunction with the Elizabethan Theatre Trust on the one hand and with Williamson Theatres, the leading commercial impresarios, on the other, since the theatre is designed to accept all types of entertainment. This it must do, and so intends, as it has been estimated that to succeed financially 15 per cent of the city's population will be required to attend as regulars. For the small Playhouse there is already an existing amateur repertory which hopes to grow up with its new home.

Surely the real triumph is not in the putting up of a theatre where none existed, but in planning and building for a variety of forms at the beginning. Thus the encouragement of new ventures will not leave them to wither in an unsuitable building.

STUDIO THEATRE — CANNON HILL

by John English

Interviewed by the Editor

Editor: *As you know, you had a go in TABS* some years ago now, when you first described your Cannon Hill enterprise and what you intended to do, and here at last is the first visible instalment of this. The question I would like to ask first is, who will use it?*

John English: The first instalment is a studio building. It's a permanent part of the centre but is intended to serve the older age groups, young people of between 15 and 25. This is, I suppose, largely a student population. I expect the average age to be about 20 or 21 and there will be many students; undergraduates, theatre students, music students, art students, and also a number of ordinary folk as well, young apprentices, shop girls, office girls. An intelligent young section of the population, under 25. An adult not a children's thing.

Are these young people let loose and left there to their own devices or do they have supervision, and if so what sort of supervision? Is there any sense of teaching them to use the place?

I think I can't answer that without defining, a little more precisely, the purpose of the building. It is a studio building. Its main structural feature is a centrally placed theatre studio because this is the art where all arts meet. The heart of the building is a large studio with an interconnected theatre workshop, which can be an extension. It is surrounded by studios and working places for the visual arts, for sculpting, for pottery, for crafts, and a part of it is devoted to music. The intention is that activity should flow from one to the other and a great part of the use of the building will be in the making of things like ballad opera for instance, in which the whole can be composed and put together and the costumes and the scenes designed, the lighting conceived and practiced and this kind of thing. Now this is a creative activity and will take up, I suppose, about half the space and time in the studios. The other half is to be taken up in the process of preparation, the training in other words. It's hoped that a lot of self-generating activities will arise in small, reasonably disciplined groups. A group would get together and say, " We want to undertake a production of such and such a kind." This involves selecting the producer, selecting the designer, and all that. So, you see, this falls outside of your definition of them being " let loose " on it. Also, in the practical courses of training in all departments of theatre craft and technique, in the arts and in production and acting, there will be a core of

* TABS, *Vol. 19, No. 3.*

experienced, practiced people. We expect to get a " leader-student " relationship, one experienced leader or instructor to ten members of the club. This is a club, by the way, and nothing here will be training for earning a living or passing an examination.

Mentioning clubs, the audience, insofar as there is an audience, will be drawn from the members of the club, not the public?

Yes, but one of the things we hope to achieve is to create an atmosphere in which there is much practice for practice sake. Other artists know this. A group of musicians doesn't attempt to show itself off in public before a thing is ready. The first thing a group of theatre people do when they get together is fix a date for the performance and this has to happen whether it is ready or not. We propose to reverse this, and the whole place is really intended for the satisfactions of work and of rehearsals. The time will come when somebody will say, " Yes, this is worth showing to somebody else." They would show it first of all to other members of the club who were not primarily concerned with the theatre. You may then decide that this is good enough to show to other people, so you invite people in from outside. You can give performances in the Studio Theatre as it is designed to be a performance place when necessary, or the whole thing could be lifted out and put in one of the other theatres on the site. But primarily it is a working space, a place for rehearsals.

So the other theatres may, in fact, be public theatres at times?

Of course. All the other auditoria, the concert halls and cinemas, are in a sense public theatres. At least two-thirds of the performance time there, and this means a lot because there will be performances morning, afternoon, and evenings, is to be devoted to the work of resident professional companies. About a third of it is to be devoted to the work of young people themselves. There will also be the resident youth theatre companies and ballet companies and so forth from the Midlands and also visiting companies, e.g. Michael Croft's National Youth Theatre Company and so forth.

Does this mean that initially while this first instalment of yours is the only instalment, you will have to use it rather differently than you will when you have the final enterprise, or at least the next theatre?

Indeed it does. You'll know that the whole centre is devoted to the idea that you've got to get people to know what theatre is about. You've got to start to introduce it at the highest standard to children. Until the first larger auditorium is ready—the Cygnet Theatre—the Studio Theatre will have to serve during the daytime for performances to children. Although the building has been designed to satisfy the licencing requirements for this purpose, we shall not in fact licence it for public performance because of certain other considerations. We want to be free to do performances week-

ends and be free from any restrictions on the plays. But in the first two years certainly it will have to serve as a small theatre of rather unusual form during the daytime and as a rehearsal studio-workshop in the evenings and at week-ends.

Returning to the student use—the training that goes on here is not in any sense a training for a career in theatre?

No, it's not intended as that. How we stop it being supplemental to training for a career I don't know. There are in the Midlands a number of theatre schools and I'm quite sure that students who are taking professional training will come here just as the professional music students and art students will. They will not only do other things, but will pursue their own craft. I would suspect that under certain circumstances they will gain more out of this than they would in their schools. But this is not the intention. There will be a certain amount of training to serve the theatre generally. For instance, one would hope to raise the standards of production, stage management and lighting and so forth, in performances in schools, in youth clubs and community centres. It may well be that this studio would be a suitable place for basic training of professional electricians and lighting engineers. I wouldn't be at all surprised.

Oh! but going back to the building and sticking to the interior, the working studio, the first thing that would strike us, especially with your past record as an open-stager, is the rather curious insistence that the building shall be capable of doing a proscenium stage. What particular form do you envisage it being most used as?

I would suspect that it will end up by being used mainly in what I call an arena form. This is a form in which the re-enactment of the drama is surrounded roughly on three sides by the real world of the audience and on the fourth side by a theatrical world. I know that nobody else means that by " arena stage ". But to get back to the design of the theatre space itself, we start here on the assumption that nobody at present is really anxious to crystalise the actor-audience relationship in any theatre. So we've deliberately created an environment in which this relationship has to be re-thought out on every occasion. One is given no fixed stage, no fixed auditorium. There are a number of possibilities and complete freedom to light the drama from every position and to serve it technically. Entrances can be arranged from every direction, even from below. This is the key to it, I think, to create a completely flexible environment, in which everybody has to think afresh, " I want to present this kind of theatrical experience; how shall I arrange the elements for it? "

Curiously enough, as previous experiments have shown, and I have in mind St. Mary's, Twickenham, the easiest part to shift in*

* TABS, *Vol. 21, No. 1.*

this scale of enterprise is the seating; a few rostrums and you're home and dry. Some of the more worrying points are ones that on the surface appear simpler, such as lighting, and I wonder if you could explain how you're setting about that technical aspect. If we agree that the seating can be moved around, especially when there's a different use between one time of day and another, how are you going to cope with the flexibility of the technical equipment?

Well, of course the first point is to be able to put lights anywhere where you need them and to get at them. So the theatre is roughly square in plan (about 45 foot square) and it has a lighting gantry at about 12 ft. up all the way around it. Lighting bars stretch from it and the ceiling is covered not only by a theatrical grid, but by crawl-ways on which lighting again can be suspended. So one can put a source of light of virtually any size in any position and get at it to adjust it. The point you make about difference in daytime and evening use is provided by the simple means of having more than one circuit. It's wired on A and B circuits, so that you can have two lots of apparatus and simply change over your control gear. The A set would be used, perhaps, for a fixed repertoire of performances during the day and the B set entirely for experimental use at night, and you don't disturb the rigging and setting up of your lighting.

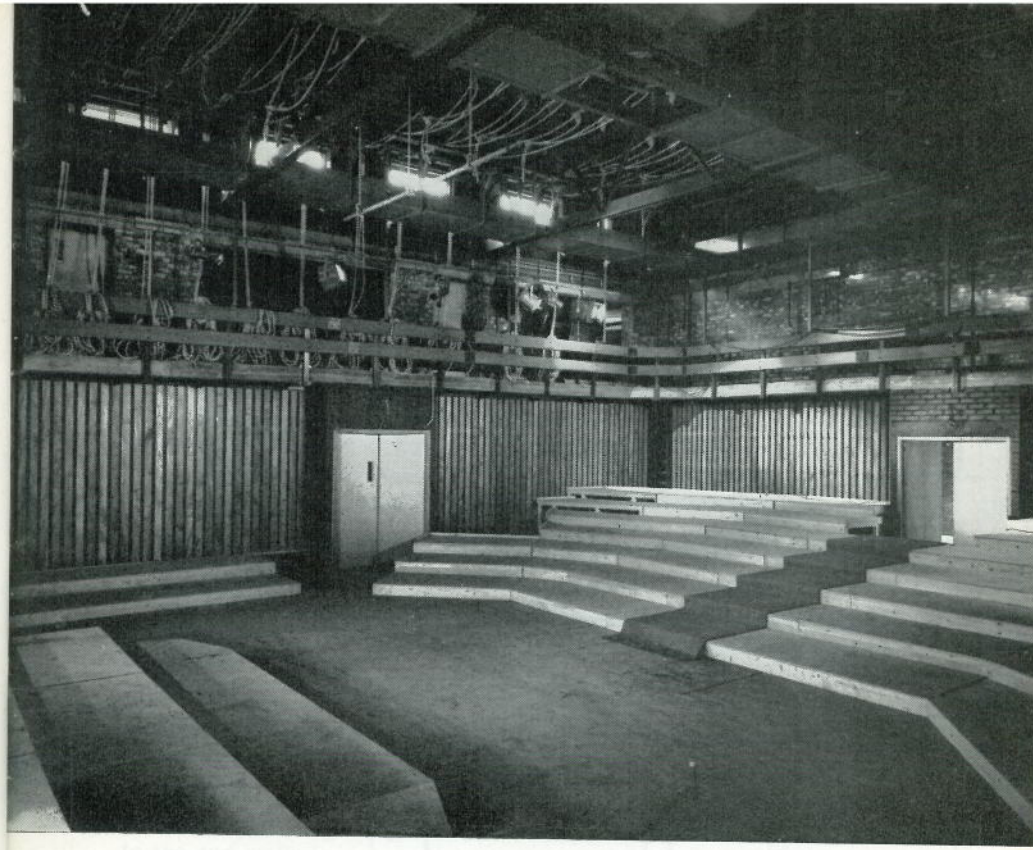
Mentioning the crawl-ways, this of course is something that sounds a bit hair-raising. I take it this was forced on you? You wouldn't normally advocate crawling along the lighting bridges.

I think in this particular studio building we wanted to get a fairly low profile, but one would have liked an extra 3 ft. to have made them walk-ways. A fair amount of thought has gone into the design of them. They have solid floors, for instance, so you don't drop spanners and pliers down below, and cable trays to keep them free, and they really are reasonably commodious. One would have liked to have complete walk-ways with 7 ft. headway over the whole area, but given a certain building height, I think it was better to allow space below the lighting bridges rather than have extra space sbove.

What are you providing to rig scenery?

One has evaded making immediate decisions about this by providing a theatrical grid with about two-thirds on hemp lines and one-third on winch lines over the whole area. This also extends over something which we haven't mentioned so far, the interconnected workshop area. This is an area of about the same size as the theatre studio and is connected with it by an opening which can, if necessary, be turned into a proscenium arch opening.

It is the workshop that evokes the thought when one first glances at your plans that the place is a proscenium theatre.

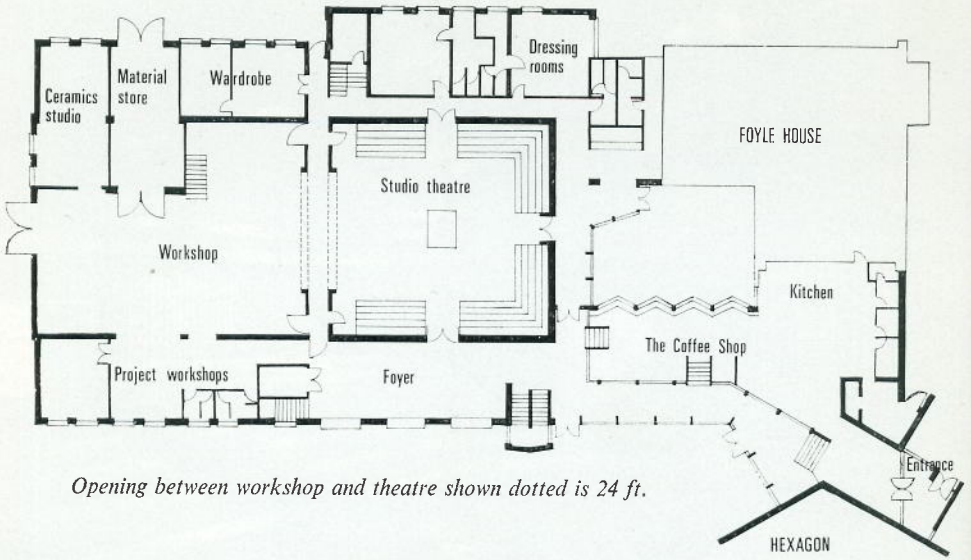


Cannon Hill, Birmingham. View of Studio theatre.

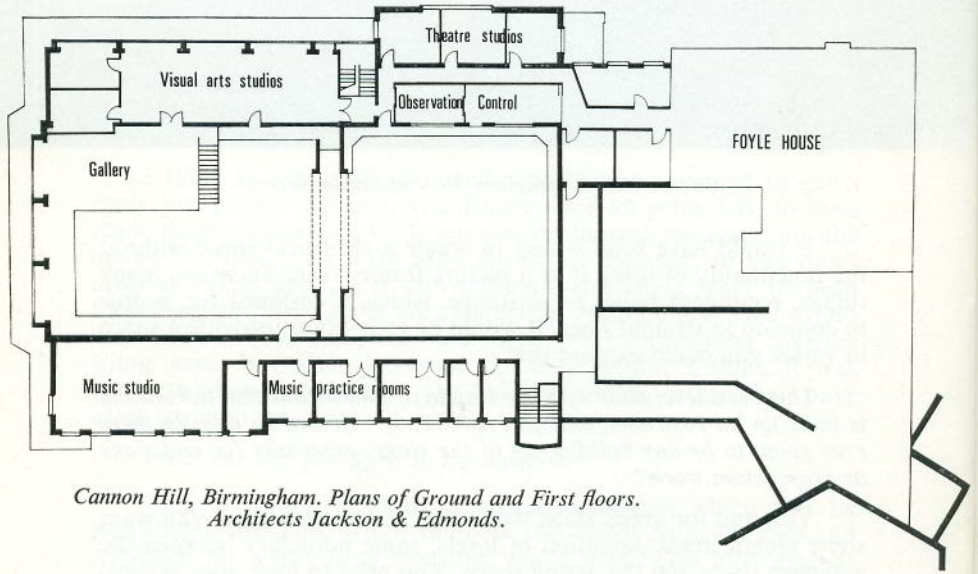
It would have been wrong to create a theatrical space without the potentiality of using it as a picture frame stage. There are many things, rectilinear ballet for instance, which is designed for people to come on in straight lines. It would be folly not to provide a space in which you could explore that.

There is a level floor with one trap in it. This means that the seating is built up on rostrums, and you've already referred to this. Is there ever going to be any building-up of the stage, especially for end stage or proscenium work?

Yes, and for arena stage work also. Certainly I think you want some architectural definition of levels, some boundary between the audience space and the acting space. You need to look after vertical sight lines too. It's proposed to have a waggon stage 24 ft. × 24 ft., which will be about 18 in. high, with a stepped approach. This can be used in the picture frame position or rolled into the arena position or rolled further into a central stage position, but it is substantially lower than any conventional stage. I am sticking to the criterion that the ideal vertical sight line gives an angle of repose for the



Opening between workshop and theatre shown dotted is 24 ft.



Cannon Hill, Birmingham. Plans of Ground and First floors. Architects Jackson & Edmonds.

Schedule of Outlets

Gallery	*16 pairs of outlets*		*A & B Rigs.*
Rear wall	*8 pairs of outlets*		*A & B Rigs.*
Proscenium	*8 pairs of outlets*		*A & B Rigs.*
Floor at Prosc. end	*8 pairs of outlets*		*A & B Rigs.*
Workshop area	*8 pairs of outlets*		*A & B Rigs*.*

* Connection by plugging built-in jumpers to studio outlets on rear wall.

spectator of about 15° below the horizontal. An 18-in. high stage will achieve this.

What determined the particular size and shape of this studio?

I think it had to be first of all square in plan; which it is. I have a thing about designing theatrical spaces on anthropological moduli, in other words strides, in measures of 3 ft. I think this is very important; an actor moves in strides. The overall size was then arrived at by getting an adequate space in the centre for an acting area which is about eight strides. Then there must be an adequate real world envelopment of audience, which is a minimum of three rows when it's used completely in the round. There must also be some dividing area between the acting space and the audience, some kind of moat or simple separation, say two strides.

When set with three rows for theatre in the round, what would the seating capacity be?

We can get 250 in that form. If we use the studio as the auditorium of a picture frame theatre, we can get very nearly 300. In arena form, which is the most extravagant in terms of using space for theatrical purposes, we can get just about 200.

The reason for the arena seating so little is that the stage encroaches on the seating area.

It tends to take a kind of wing space too, at the side of the arena instead of getting the seats wrapping right the way round to the end walls.

What is the distance between the two walls which look so like a proscenium and the height of that opening?

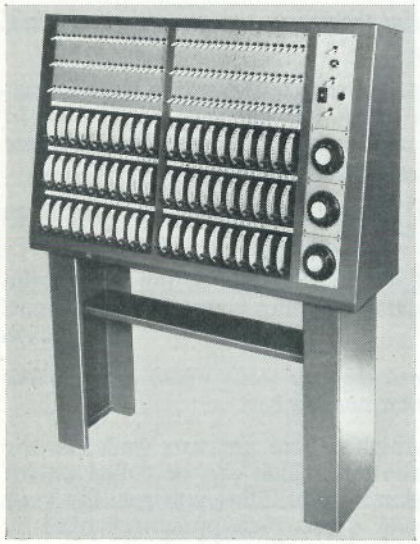
Twenty-four ft. wide, 18 ft. high. There are two walls, as the plan shows, with two central shutters which can be rolled out of the way as in a film or television studio. Thus you get, for your picture frame arrangement, a brick proscenium opening backed by a brick tormentor with two permanent perch positions.

How many lighting circuits are there?

There are 40 channels with three presets controlling 40 pairs of outlets. This isn't the whole story because there are A and B pairs to each channel so that you have two distinct sets of apparatus with changeover switches in the control room. You can use the same control gear over again for A or B shows. Also, obviously you don't want to lock up outlets in the picture frame stage area which for most of the time are not going to be of any use, so the outlets in that area are connected back via jumper leads to certain of the outlets in the theatre studio proper. If you want to use these extension circuits on the picture frame stage, you simply plug them into certain of the existing outlets.

The First Junior Preset

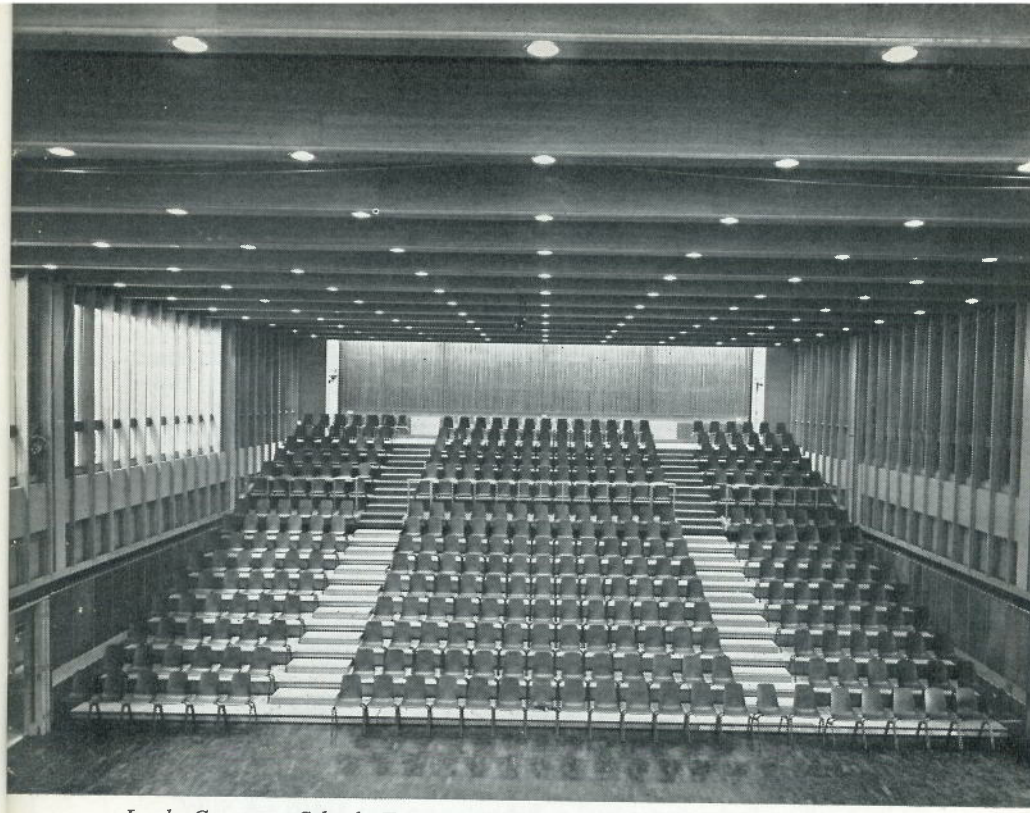
The lighting control at Cannon Hill above breaks new ground. Hitherto remote control in its least expensive form employed a saturable reactor dimmer. This dimmer, otherwise known as a Choke control, gave poor variable load performance and needed expensive additions to enable it to give true presetting. Recently it has become possible to use a solid state device known as a Thyristor (or Silicon Controlled Rectifier). This in the new Strand standard Junior model provides variable load dimmers of 1 kW or 2 kW with a remote control desk of 3 presets complete for appreciably less cost than the reactor in its simplest control form with but a single lever per dimmer. Not only this, but the equipment itself is far more compact and much lighter in weight.



The standard models are JT20, JT40/3, JT60/3. These use one, two and three standard racks respectively. Dimmers can be 1 or 2 kW and give the same curve at any load from 60 watts to the total. Some racks or dimmers on racks can be omitted as an initial economy measure and fitted later on site, no special skill being required for the purpose.

The control units are always supplied with a full set of levers. The units are floor standing complete with masters and are of such a height that they can be used conveniently without alteration either by a seated or a standing operator. In the first case the unit becomes a wing to be used alongside any table, plot desk or shelf that may be acquired or even knocked up by the local carpenter. Used the second way the top of the unit itself can be used for the plot and plotting.

The Junior Thyristor control with its models for up to sixty variable load dimmers and three presets represents the ultimate development in control for the scale of theatre which in the past has had to rely on a Saturable Reactor system. The important thing to gain maximum economic advantage and rapid delivery is to keep to the standard Junior models without change since these can be made against stock orders. The Thyristor form of dimmer is also available with special control desks covering greatly increased numbers of dimmers.



Leeds Grammar School. Temporary seating and stepping (light risers) fully extended to join permanent balcony seating (dark risers).

LEEDS GRAMMAR SCHOOL

by Stephen Joseph

A description of the hall, part of a block of new buildings, for which the architects were G. Alan Burnett and Partners. The author of this article was theatre consultant to the architects.

This is a multi-purpose hall, though its uses are limited. It provides a considerable area of flat floor, and also serves as a theatre. I hope I have already roused the prejudices of most people who have seen too many awful monsters called multi-purpose halls to believe that they can ever be anything other than no-purpose halls. And I hope that the description I shall give of this particular example will convince some people that the beast can be tamed.

In plan, the hall is a rectangle of approximately 100 ft. × 50 ft. As will be seen from the drawing, the length is divided so that about a quarter is taken up with a permanent balcony of raked seating, a further quarter provides for movable tiers that can either be extended to continue the balcony (and on which stackable seating can be put out) or retracted under the balcony. The remaining half of the hall has a flat floor, and folding rostrums may here be used either

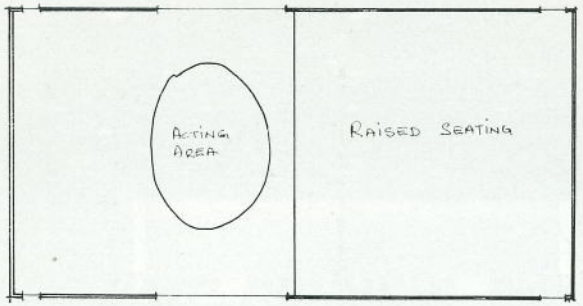
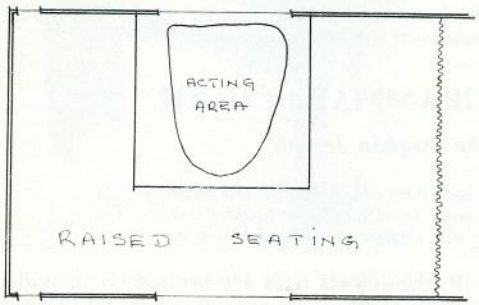


Fig. 1
Open end stage using the whole hall.

Fig. 2
Formal transverse stage.



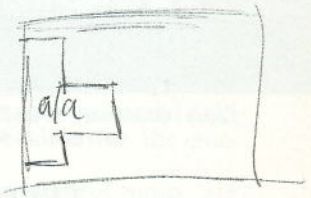


Fig. 3
Thrust stage.

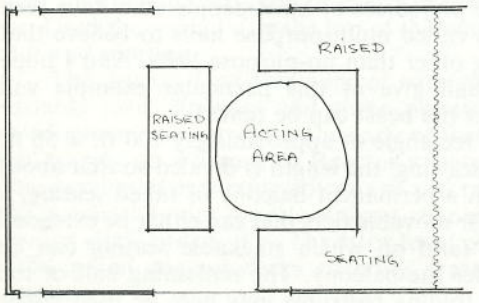


Fig. 4
Centre stage.

to provide further seating accommodation (in conjunction with stackable chairs), or to build up a scenic acting area.

There is no proscenium arch. A curtain track has been provided in case the school feels strongly that a curtain may be necessary for the production of some play.

The balcony itself can be curtained off from the rest of the hall; the curtain disappears into a recess in the wall, and need not be seen until it is required in use. At the end of the hall away from the balcony there is a small gallery whose main function is as a passage way; it also anticipates the requirement in the near future of an organ, whose pipes will be massed up here; and it provides extra auditorium accommodation when required; and, possibly an additional acting area.

For assembly purposes there are a number of ways of using the hall. With the movable tiers extended, and seating rows in front of them, a small dais can be put up at the end of the hall, which then seats about 600. Variations on this pattern, for instance, arranging some seats on a broad platform to face the bulk of the audience, can easily be arranged. For a short session more people can be accommodated by leaving the tiers retracted and using the flat floor for a standing audience of 1,000—quite appropriate for the brief formal meetings first thing in the school day.

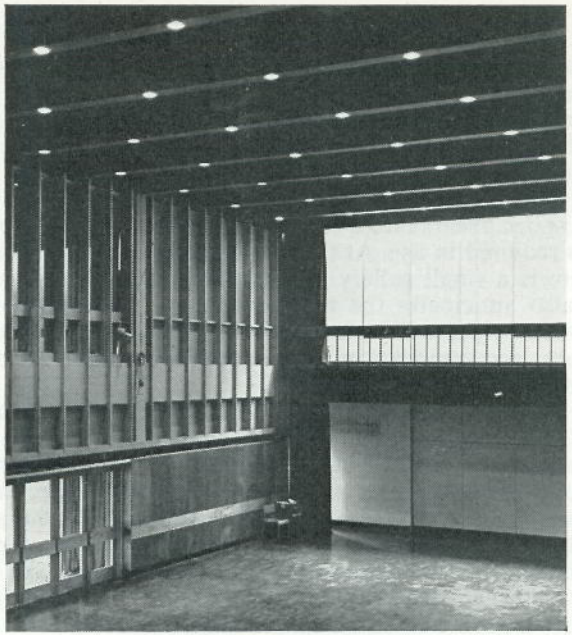
For functions where a flat floor is required, an area of about 75 ft. × 50 ft. is available. For drama the hall can be used in a number of different ways.

With the tiered seating extended, a fairly well-raked auditorium is immediately provided, seating about 350. The acting area will be immediately in front of the seating, occupying, say, the next quarter of the hall and leaving the last quarter as a back stage area. This arrangement will make it possible to put up conventional flats for a box set, to build a three-dimensional setting, to use the rostrums for different levels against a background of space, or simply to bring the actors on without any scenic devices at all. Cloths can be hung from the ceiling (which will be explained in a moment) by spot lines, but there is no flying facility. The definition of the acting area will depend on spotlights, here and with each of the different staging arrangements used.

If the balcony seating is closed off by the curtain, rostrums can be set up to provide forms of theatre such as a transverse stage, a thrust stage, a centre stage, peripheral staging, and so on.

The hall is set in the centre of the new block, and has classrooms on two sides. This has the advantages that the auditorium and acting areas can be approached from several different directions (and external circulation is easy), and that the hall is comparatively free of windows. There is enough daylight, mainly from clerestorey windows, to meet official requirements, but blackout for theatre purposes can be simply achieved without the general appearance of the hall being changed by large curtains.

The ceiling of the hall is made up of a series of beams, above



Leeds Grammar School. "Stage end."

which are catwalks, and above these again is the ceiling proper. The catwalks serve to carry spotlights; along each catwalk there is a run of trunking, punctuated by socket outlets. Spotlights may be plugged in, without having to run cable, in any of 66 different positions. The positions of the socket outlets have been calculated so that all the likely forms of staging may be adequately lit.

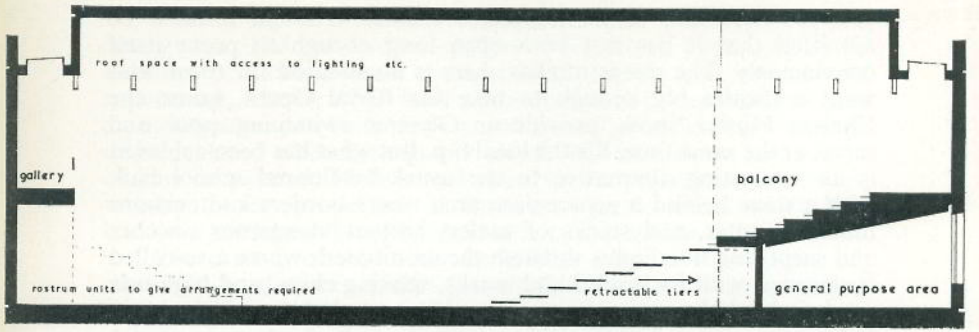
In addition to the socket outlets on the catwalks, there are two outlets on each side wall, and four more on the gallery. This gives a total of 74 available positions for lighting. Pattern 23 and 123 spotlights have been used, and the number of them can be varied from production to production. A basic supply of 24 lanterns has been provided.

The control room is on one side of the hall, and commands a reasonably good view. The control is effected through a plug desk (where each of the circuits terminates), a patch panel and a number of Junior-8 boards.

In the control room there is also sound reproducing equipment, consisting of a four-way mixer/amplifier, tape deck, record player and microphone. Two loudspeakers are housed in the ceiling void. Microphone sockets are provided on each side of the hall.

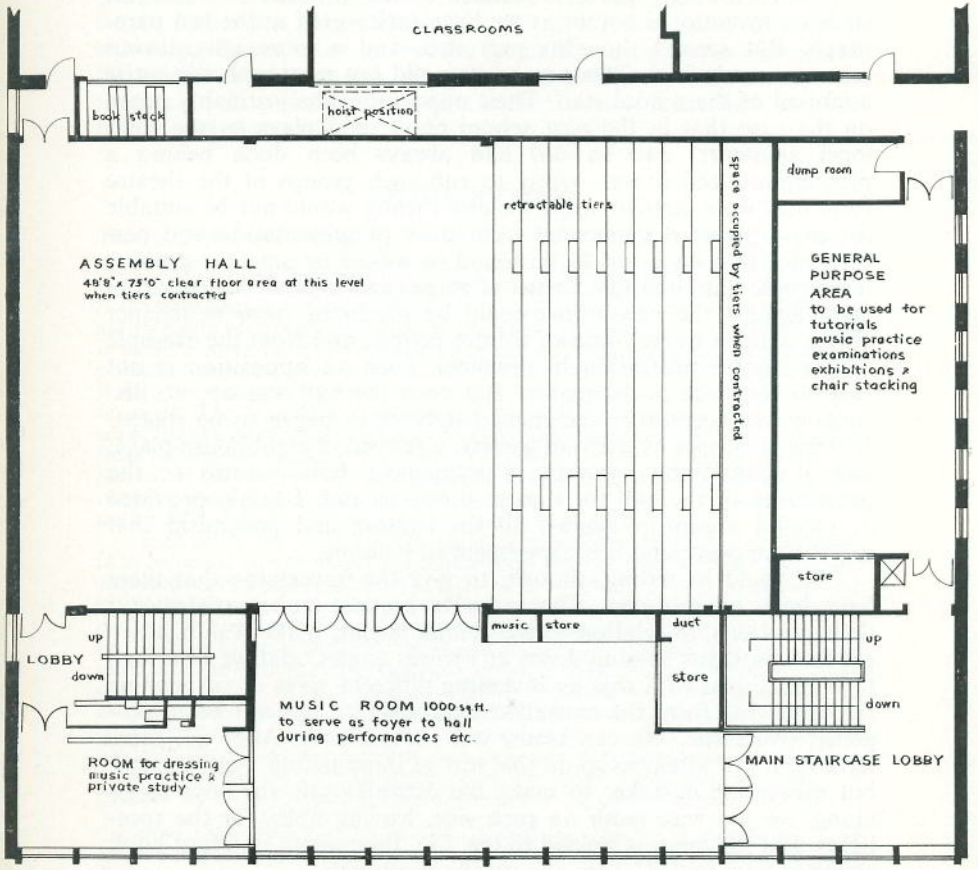
The ceiling arrangement makes it possible to let in spot lines for the purpose of suspending scenic units, but no special arrangements have been made for this. Access to the catwalks is by a vertical ladder in the control room.

In operation the hall seems to serve reasonably well as a multi-



Scale 1 inch = 20 feet

Longitudinal Section and Plan of Assembly Hall, Leeds Grammar School.



Scale 1 inch = 20 feet

purpose hall, and as an adaptable theatre. Though it must be admitted that it has not been open long enough to prove itself convincingly. The size is modest; here is no solution for those who want a theatre big enough to take the Royal Opera, house the Chelsea Flower Show, provide an Olympic swimming pool and serve, at the same time, for the local rep. But what has been achieved is an interesting alternative to the usual flat-floored school hall, with a stage behind a proscenium arch where borders and curtains make a clutter, and stacks of useless battens, dangerous winches and surprising floodlights threaten the uninitiated; where a so-called cyclorama, with its black hand marks, missing chips, and high-tide mark (school cleaners are not allowed to go up ladders), is the main justification for calling the thing a stage; and whose main excuse is that, after all, during a play most of the audience cannot see what is happening.

When the hall was first planned it was intended to build just such a conventional horror as we have caricatured in the last paragraph. But second thoughts prevailed, and a more adventurous scheme was devised. This new scheme did not meet with the entire approval of the school staff. Their opposition was justifiably based on the case that in the past school plays (and plays by the staff, local amateurs, and so on) had always been done behind a proscenium, and it was wrong to rob such groups of the theatre form they were familiar with; the new theatre would not be suitable for most plays; it demanded techniques of presentation and performance that were not to be found in school or amateur groups; few people liked the new forms of stage (and a good deal of argument against the new forms could be produced from newspaper critics, articles by well-known theatre people, and from the example of the theatre profession in practice). Such an opposition is not easy to persuade in discussion. But once the hall was up, no discussion was necessary; and immediately plays began to be staged. *Waiting for Godot* by the staff society, a festival of eight house-plays, and a considerable amount of excitement bore witness to the practicality of the hall for theatre purposes and, I think, provided a splendid argument against all the caution and pessimism that might have prevented this experiment in building.

It would be wrong, though, to give the impression that there have been no mistakes. The catwalks are not quite satisfactory; their positions, in relation to the ceiling beams, make it difficult to get the spotlights shining down at various angles, and we have had to try and deal with this by inventing different ways of suspending the spotlights from the catwalks. The difficulty has not been altogether overcome. We can blame our inexperience. After all, there have been few attempts to do this sort of thing before. And a small, but distressing mistake: to make the catwalks safe for boys to go along, we put wire mesh on each side, leaving holes for the spotlights. But the mesh is welded to the 2 in. tube—so a standard hook clamp is now fouled! This one can be dealt with.

I don't know what to do about the floor covering over the acting area. The polished wood floor is not ideal. There can be no question of tacking down a stage cloth and, in spite of years of experiment, I know of no floor covering that is big enough to cover an acting area, can be folded up and stored away, is cheap enough to be replaced when damaged or worn, and that either looks right or can be painted. In future, I must try to persuade someone to investigate the properties of linoleum—good, thick, ship's lino laid on a softwood floor; but lino is not fashionable at present.

There are probably other faults that I am not yet aware of; more will be discovered. But I don't think any of them invalidate the idea. They only point to improvements for next time.

To summarise, the hall has an area of fixed sloping seats at balcony level; an area of extendable tiers; half the floor area left for staging—without permanently raised stage or proscenium arch; portable rostrum units to achieve additional seating rows for several forms of theatre; stage lighting in the ceiling void, accessible from catwalks. This is more or less the formula and, provided it is mixed by sensible architects (G. Alan Burnett & Partners are surely not unique?) it is possible to build a small multi-purpose hall of some charm and practicality.

BOOK REVIEW

Theatre Design and Technology. *1117CL Pittsburgh University. $6 per annum.*

So TABS at last, after sixty-seven issues, has a rival, not that this is admitted in the publicity which ends after declaring aims virtually the same, " As such it is the only English language journal ". A small point; the real word is ally, for authoritative literature in the English language on the technical aspects of theatre is hard to come by. The Germans have had their *Buhnentechnische Rundschau* published alternate months for many years now. The trouble about *BTR* is that it is so German, and I do not mean only in language, though that is of course a nuisance. The theatres and equipment described therein are on the German scale, the like of which is never seen or likely to be seen apart from the occasional freak in English-speaking countries. Then there is *Acta Scaenographica*, the journal of the Institute of Scenography in Prague. I shall not make the obvious remark which derives from its contents being in the Czech language, though, unlike *BTR*, they do provide brief summaries in English.

First of all, the U.S.I.T.T.* are to be congratulated on their venture, which is to be issued quarterly and will enable them to weld together their necessarily scattered membership. It is a big task for a voluntary society to launch and maintain some thirty-two pages American quarto four times a year. The content of the first issue is promising and I must say my particular favourite is " Planning for Lighting Control Systems " by David Thayer. This subject is at one and the same time the most narrowly specialist technical of all and yet touches all. There cannot be anyone in the theatre who has not suffered directly or indirectly, for example, from lighting rehearsals and rehearsals with lighting. The ability to understand what can be reasonably expected of the operator and his particular lighting control and thus temper one's demands with sweet reason would save more heartaches and frayed tempers than any other single thing by itself. Yet because the lighting control uses electricity it becomes technical and people

* *United States Institute for Theatre Technology, founded at roughly the same time and equivalent in its aims to our A.B.T.T. (Association of British Theatre Technicians).*

who have driven to their work in a machine many times more complex and requiring of its operator more hairsbreadth instant decisions (life and death at that) than any stage lighting control, refuse even to try to understand the latter. How many lighting designers, be they directors, scene designers, stage managers, or even specialists in only that craft, visit the particular control to understand what it can do and how. The matter is of course complicated, particularly in the United States, by manufacturers' refusal to admit that their latest and greatest has any limitations. Thus catch phrases like " infinite preset " or " lighting at the touch of a push button " replace accurate technical definition. This is sad because, in spite of the enquiry so ably initiated by Mr. Thayer in his article, it is going to be the manufacturers that make the running. It has to be, because of competition at home and abroad. The endeavour by a particular firm to sell as many controls as possible is what keeps the price down and acts as a channel of new ideas. Even if some committee manages to make a statement as to the ideal control, I cannot see it imposing its will on its own country, let alone the world outside. Certainly a particular British organisation, which is suitably staffed to be able now to discuss in technical committee what they want, manage thereby to raise the price to them of such equipment by at least 50 per cent simply because it is special to them, and may one add, no one else wants it in exactly that form.

All we can hope for is an addition to the literature of the subject and, as this is scant, it will be welcome on this count alone. Again it may prevent some enthusiast from thinking that what he is doing is original and therefore flogging down some well-worn path. While on the subject of the technical, let us hope that the U.S.I.T.T. and its journal will set high standards of exact statement.

The first issue of *Theatre Design and Technology* also contains a report on that most controversial enterprise the Loeb, Harvard by one who has worked there—Dick Land. This is just what a journal such as this should do, but in the process it must not pull any punches nor must the report be too long, otherwise important points get lost. It seems that a summary of pros and cons within a rigid framework will be an essential appendix to the general article itself. For example, a wealth of information is often conveyed in a couple of lines by the now world-renowned University of Pittsburgh bibliography. *Recent Publications on Theatre Architecture.* The new journal has a flying start in the fact that it is to publish this as part of its regular issues.

Architecture itself gets a good airing in the first of two articles by the U.S.S.R. architect V. Bykov, reprinted with several diagrams from an official Soviet architecture periodical. Mr. Bykov shows a great deal of no-enthusiasm both for the theatre project conceived around some great mechanical gimmick and for the type of theatre designed outside-in. In these latter the requirements of the theatre proper fight a losing battle with the exterior. The Sydney Opera House, needless to say, figures prominently among the examples he gives. In contrast, Mannheim finds favour and so indeed does Stratford Ontario, but with a black mark for the latter as it excludes any possibility of conventional proscenium staging. We have to wait for the second instalment to see examples of theatres from the U.S.S.R. In earnest of these two very large projects are illustrated, which suggests that adaptability raises its head there. With adaptability we come full circle and return to the Loeb. Mr. Land tells us that the brief given to the architect there stated, " The building should not be so architecturally exciting and excited as building that the plays produced will be overshadowed by their frame ". This same principle was not realised at the Loeb and either has not been or is unlikely to be realised in most of the examples given by Mr. Bykov so far.

FREDERICK BENTHAM

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